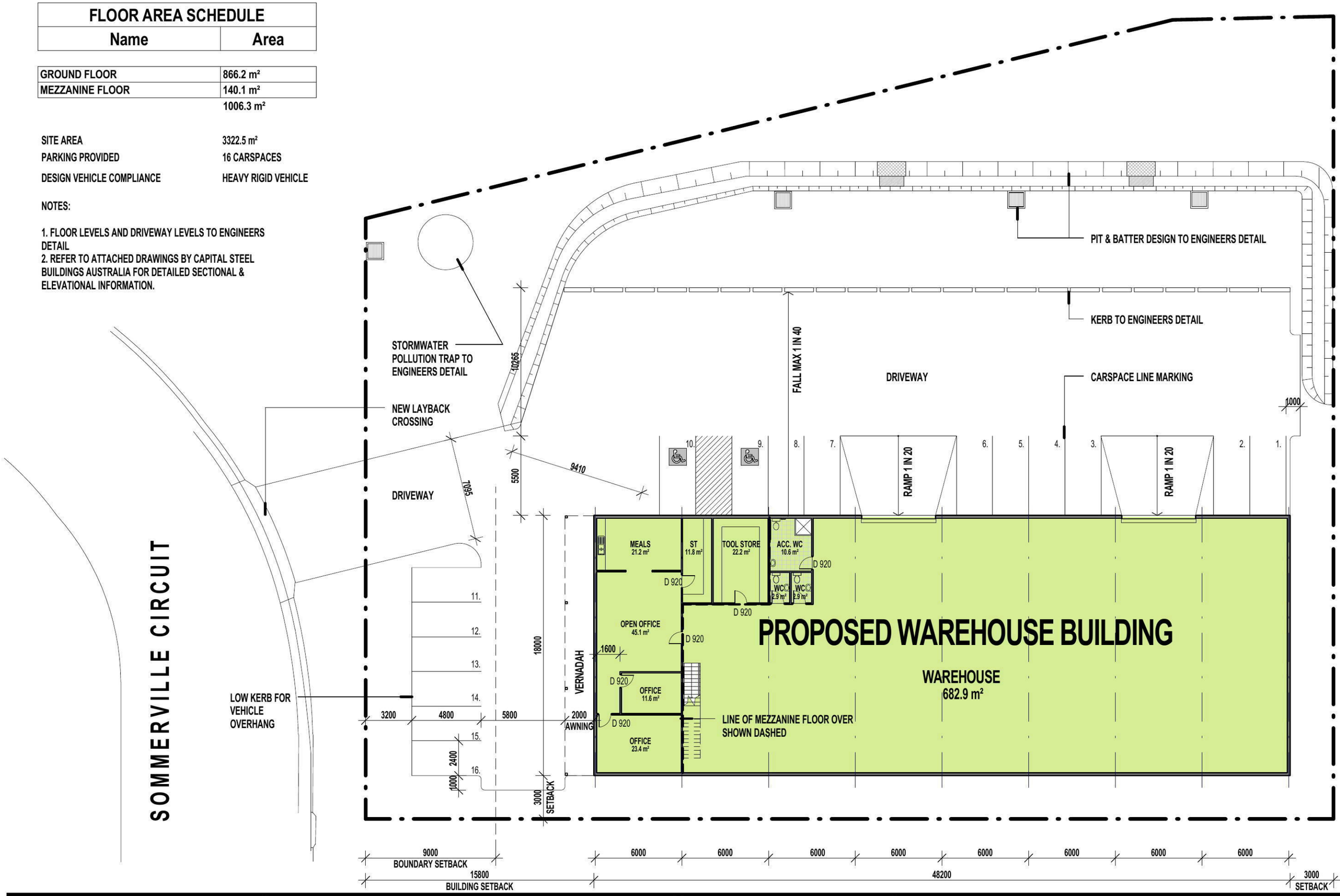
FLOOR AREA SCHEDULE	
Name	**Area**
GROUND FLOOR	866.2 m²
MEZZANINE FLOOR	140.1 m²
	1006.3 m²

SITE AREA	3322.5 m²
PARKING PROVIDED	16 CARSPACES
DESIGN VEHICLE COMPLIANCE	HEAVY RIGID VEHICLE

NOTES:

1. FLOOR LEVELS AND DRIVEWAY LEVELS TO ENGINEERS DETAIL
2. REFER TO ATTACHED DRAWINGS BY CAPITAL STEEL BUILDINGS AUSTRALIA FOR DETAILED SECTIONAL & ELEVATIONAL INFORMATION.



ISSUE	DATE	AMENDMENT
A	02-01-2014	DA SUBMISSION

PROJECT
PROPOSED WAREHOUSE BUILDING
ADDRESS
33 SOMMERVILLE CIRCUIT, EMU PLAINS, NSW, 2750

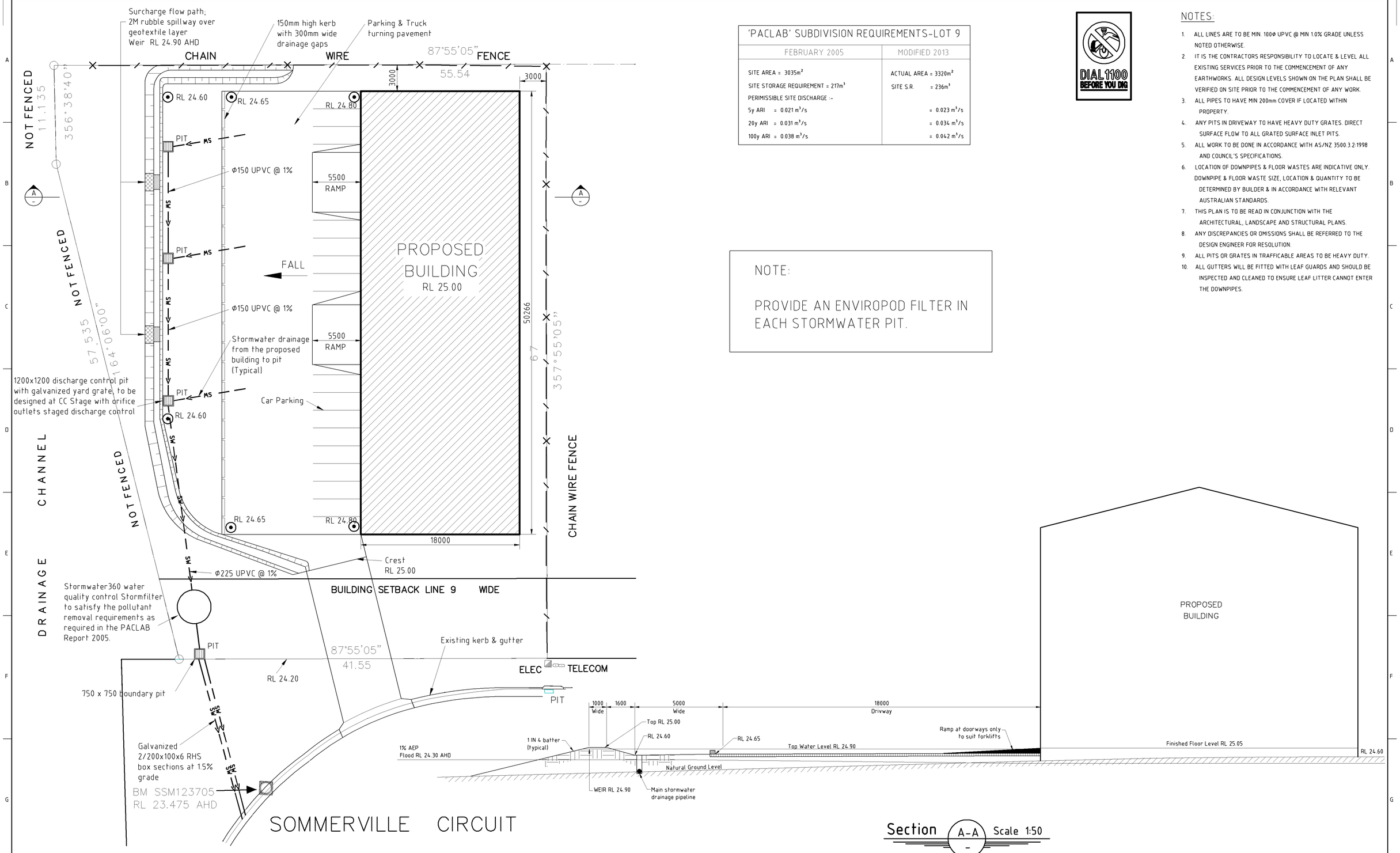
CLIENT
STIMSON CONSULTING SERVICES

Morson Group pty ltd
NOMINATED ARCHITECT - P F MORSON
REGISTRATION NUMBER 8100
ACN 159 480 056, ABN 41 159 480 056
E: peter@morsonassociates.com
M: 0439 477 181
PO Box 170, Potts Point, NSW 1335

SCALE 1 : 250
DATE JAN 2014
NORTH

SHEET NAME: SITE PLAN
DRAWING NUMBER: **DAO1**

A
ISSUE NO.



Section A-A Scale 1:50

'PACLAB' SUBDIVISION REQUIREMENTS-LOT 9

FEBRUARY 2005	MODIFIED 2013
SITE AREA = 3035m²	ACTUAL AREA = 3320m²
SITE STORAGE REQUIREMENT = 217m³	SITE S.R. = 236m³
PERIMISSIBLE SITE DISCHARGE :-	
5y ARI = 0.021 m³/s	= 0.023 m³/s
20y ARI = 0.031 m³/s	= 0.034 m³/s
100y ARI = 0.038 m³/s	= 0.042 m³/s

NOTE:

PROVIDE AN ENVIROPOD FILTER IN EACH STORMWATER PIT.

DIAL 1100 BEFORE YOU DIG

NOTES:

1. ALL LINES ARE TO BE MIN. 100Φ UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON THE PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
4. ANY PITS IN DRIVEWAY TO HAVE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK TO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3.2:1998 AND COUNCIL'S SPECIFICATIONS.
6. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
9. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
10. ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES.

Issue	Date	Amendment	Checked

AMENDMENTS

Note:
1% AEP Flood level
RL 24.30 AHD

The Contractor to verify all dimensions on site before commencing work.
All figured dimensions given are to be taken in preference to scaling.

PAPER SIZE A1
PRINT SCALE A1x100

This drawing shall be read in conjunction with any Architectural Drawings and Specifications and any other relevant documents. Any discrepancy shall be referred to the Engineer for written confirmation of any variation prior to construction of that particular element. NOTE :- The long term satisfactory performance of the works as designed depends on full adherence to these engineering details and notes.

STORMWATER DRAINAGE CONCEPT PLAN

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED BY THE ENGINEER

DATE : 22/12/2013

DESIGN INFORMATION
REFER TO PACLAB REPORT DATED FEBRUARY 2005.
THE ON SITE DETENTION STORAGE IS ABOVE GROUND WITH A MAXIMUM WATER DEPTH OF 300MM AT LAWN AREA PITS.

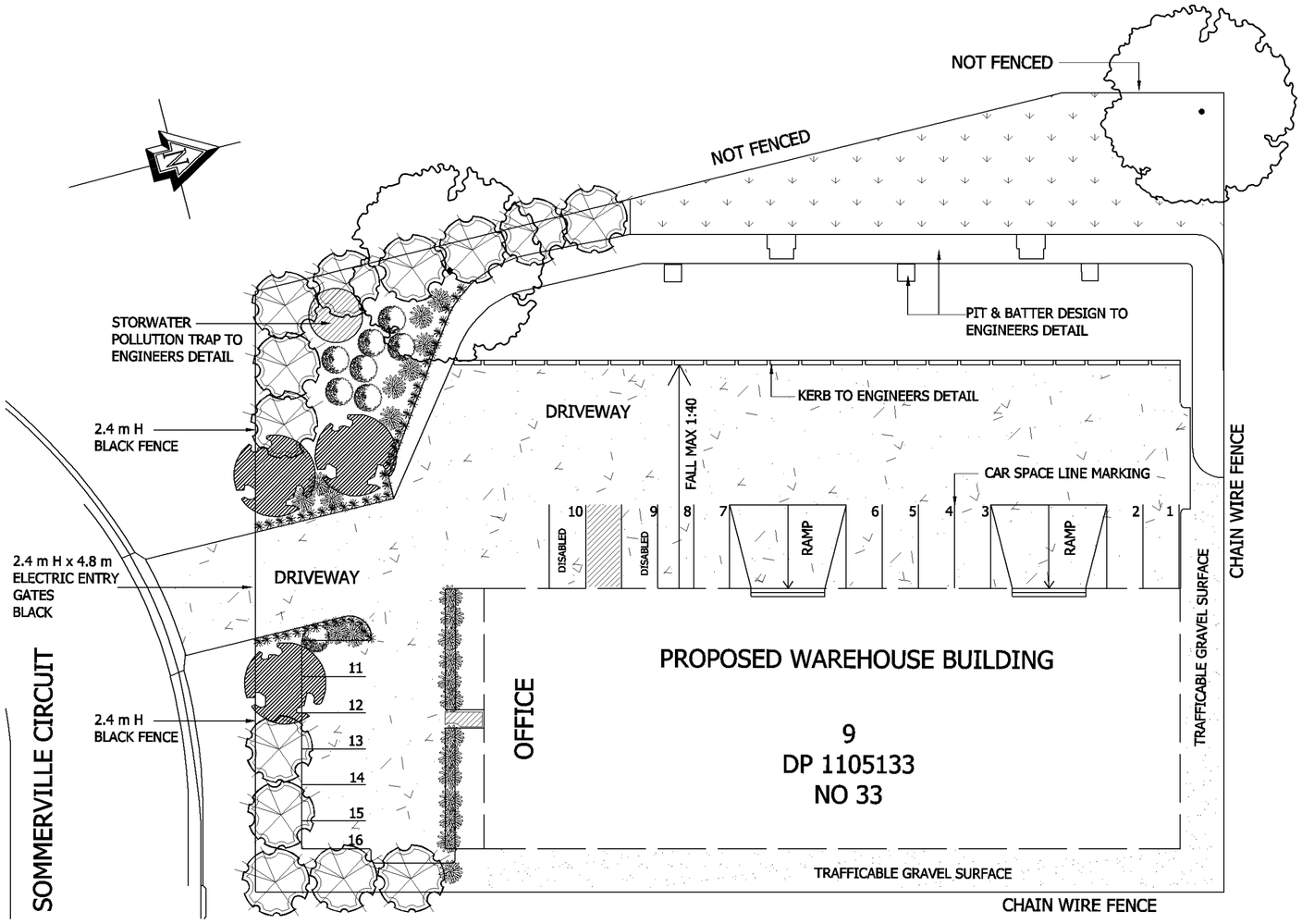
PRINTED 22/12/2013

PAPER SIZE A1
PRINT SCALE A1 X 100

PROPOSED BUILDING AT LOT 9
IN DP 1105133,
33 SOMMERVILLE CIRCUIT,
EMU PLAINS, NSW.

DESIGN BY R.D.W.	DETAILS BY GRN
CHECKED	DRAWING No. 2013/154/D1
SCALES 1:50	DATE Dec 2013 ISSUE -

WILLIAMS CONSULTING ENGINEERS AUSTRALIA P/L.
CONSULTING CIVIL AND STRUCTURAL ENGINEERS.
78 St Johns Road, Blaxland, NSW. 2774 — Post Office Box 79, Blaxland, NSW. 2774 — PHONE : 02-47395765 Mob : 0425307531 — EMAIL : ralph@wcea.com.au
5000 Channel Highway, Gordon, TAS. 7150 — Post Office Box 79, Middleton, TAS. 7163 — PHONE : 03-62921788 — EMAIL : ralph@wcea.com.au



LANDSCAPE SPECIFICATIONS

LANDSCAPE- SOFT SURFACES

1. GENERAL

a. All work has to be carried out according to all relevant BCA requirements, Australian Standards and Local Council requirements.
b. No Trees to be removed for building purposes.
c. Protect retained and maintained and neighbouring trees & their roots from disturbance. Avoid compaction with heavy machinery.
d. Top soil to be piled up before building works.
e. Remove all builder's debris before commencing landscape works.

2. WEED ERADICATION

a. Eradicate weeds prior building and landscape works.
b. Remove woody weeds and treat grass and weed growth with glyphosate to manufacturers recommended rate.

3. COMPOST AND TOP SOIL

a. Provide well rotted vegetative material, mushroom compost or animal manure, free from chemicals, grass and weed growth.
b. Provide Top soil mix as per Australian Standards requirements.
c. It is recommended to ease the establishment of plants to spread organic matter (compost or manure) to a depth of 50mm. Rotovate and level with standard garden mix to a depth of 50mm all planting areas.

4. FERTILISER

a. Provide proprietary fertilisers, delivered to the site in sealed bags, marked to show manufacture or vendor, weight, fertiliser type,N-P-K ratio, recommended rates.
b. Preferably fertilise with organic pellets at manufacturers recommended rate, at planting and throughout the growing season.

5. MULCHING

a. Provide mulch which is free of deleterious and extraneous matter such as stones, soil, weeds and sticks.
b. Place mulch clear of plant stems, and rake to an even surface flush with the surrounding finished levels at 75mm depth.
c. In areas affected by termites, cypress mulch is highly recommended.

6. IRRIGATION

a. Irrigation is recommended and to be a type of drip line or similar.
b. To be install by professionals.

***PLEASE CONSULT LANDSCAPE WORK DETAILS OF PLANTING AND MULCHING

LANDSCAPE-PLANTS

1. GENERAL CHARACTERISTICS

a. All plant to be labelled (species or variety stated), unless substitution is approved because availability.
b. Provide plants with the following characteristics:
- Large healthy root system, with no evidence of root curl, restriction or damage.
- Vigorous, well established, free from diseases and pests, of good form consistent with the species or variety.
- Hardened off, not soft or forced, and suitable for planting in the natural climatic condition prevailing at the site.
c. Trees:
- Provide trees which, unless required to be multi-stemmed, have a single leading shoot.
d. Plant containers:
- Supply plants in weed-free containers of the required size..

2. STORAGE

a. Timing:
- Deliver plant material to site on a day by day basis, and plant immediately after deliver.
- In the impossibility to plant immediately, the plant should be watered every day.

3. EXCAVATION

a. Excavate a plant hole for each plant large enough to accept the root ball plus 0.1m³ of backfilling with top soil.
b. Do not plant in unsuitable conditions such as extreme heath or drenching rain.

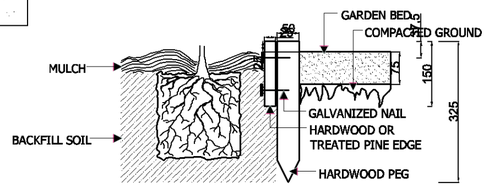
4. WATERING

a. Timing:
- Thoroughly water plants before planting and after planting, and as requested to maintain growth rates free of stress.
- Water with an emphasis on the root ball.
b. Fertilising: In planting beds and individual plantings, place fertiliser pellets on the surface around plants at the time of planting.

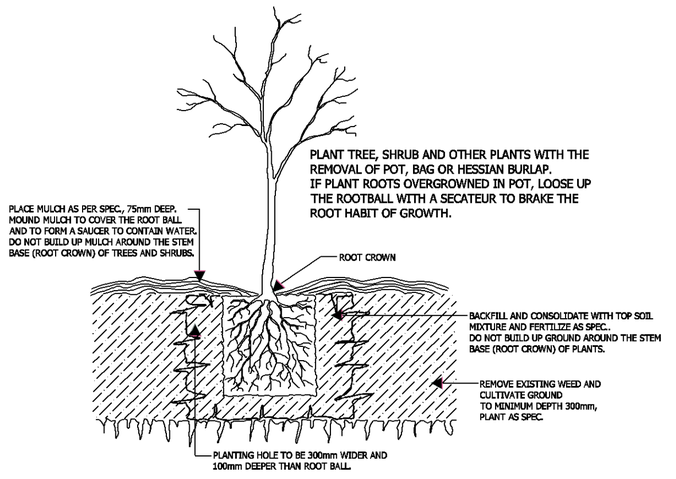
5. STAKES

a. Material: Hardwood, straight, free from knots and twists, pointed at one end.
b. Stakes sizes: For plants 1000 to 2500mm high: 2 stakes 50mmX50mmX1800mm per plants.
c. Ties: Provide ties (hessian webbing) fixed securely to the stakes, one tie at half the height of the main stem, other necessary to stabilise the plant.

***PLEASE CONSULT LANDSCAPE WORK DETAILS OF PLANTING AND MULCHING

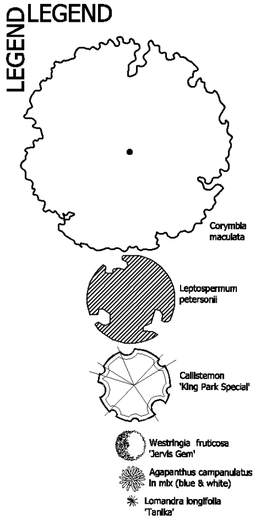


TIMBER EDGING OF GARDEN BEDS
1:10



TREES, SHRUBS & PERENNIALS PLANTING
SCALE: 1:20

LEGEND



PLANTING SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	MATURE HEIGHT (m)	MATURE WIDTH (m)	POT SIZE (mm)	QTY	SPACING (m)
	TREES						
CM	Corymbia maculata	Spotted Gum	15-30	6-12	75L	2	As shown
LP	Leptospermum petersonii	Lemon Scented Tea-Tree	3.5-8	3-5	300	3	As shown
	SHRUBS & SMALL TREES						
CK	Callistemon 'King Park Special'	Bottlebrush	4	3.5	250	13	3000
WFJ	Westringia 'Wynyabbie Gem'	Australian Rosemary	1.5	1.5	200	8	As shown
	GRASSES & PERENNIALS						
AC	Agapanthus campanulatus	Lily-of-the-Nile	0.6-1.2	0.6-1.2	100	24	As shown
LLT	Lomandra longifolia 'Tanika'	Mat Rush	0.5	0.5	140	48	3/m²
PC	Pennisetum clandestinum	Kikuyu Grass	(approx. 150 m² to be mowed)				

PLEASE NOTE:
ALL GARDEN BEDS ARE COMPOSED WITH INDIGENOUS AND NON-INDIGENOUS PLANTS RESISTANT TO DROUGHT CONDITIONS
(Approx. **180**m²)

INDIGENOUS
Corymbia maculata
Callistemon 'King Park Special'
Leptospermum petersonii
Lomandra longifolia 'Tanika'
Westringia 'Wynyabbie Gem'

NON-INDIGENOUS
Agapanthus campanulatus
Kikuyu Grass

Anne L'Heureux Jardins
ABN 70 331 510 800
P.O. Box 8200
Werrington County, NSW 2747
Mob. 0409 277 440
Fax. 02 4730 4982
lheureuxanne@yahoo.com.au

PROJECT: RAIL WORKS AUST
33 SOMMERVILLE CIRCUIT
EMU PLAINS, NSW 2750

LANDSCAPE PLAN

SCALE:	DATE:	DRAWN :	DWG NBR:
1:200 @A2	18-01-2014	A. L'Heureux	1/1

General Notes

GENERAL

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL THE ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAYBE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT FOR DECISION BEFORE PROCEEDING WITH THE WORK

ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE ENGINEER'S DRAWING SHALL NOT BE SCALED.

DURING CONSTRUCTION THE CONTRACTOR SHOULD BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NOT PART SHALL BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.

WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT SAA CODES INCLUDING ALL THE AMENDMENTS AND THE LOCAL STATUTORY AUTHORITIES EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

THE APPROVAL OF THE SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER.

ALL DIMENSIONS ARE IN MILLIMETERS UNO ALL LEVELS ARE EXPRESSED IN METERS

THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING
LIVE LOADS & ADDITIONAL DEAD LOADS (TO AS/NZS 1170.1)

AREA SUBJECT TO LOADING	LIVE LOAD - Distributed (kpa)	LIVE LOAD (kN)
GENERAL AREAS	1.5000	1.8000
OFFICE	3.00	2.7000
ROOF	0.25	1.4000

WIND LOADS: (TO AS/NZS 1170.2)

**** REFER TO THE SPECIFICATION SHEET FOR DESIGN LOADS ****

FOR EARTHWORKS AND FOUNDING CONDITIONS REFER TO SITE SPECIFIC GEOTECHNICAL REPORT AND DISCREPANCIES BETWEEN THE GEOTECHNICAL REPORT AND THE FOLLOWING NOTES SHALL BE REFERRED TO THE ENGINEER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.

STRUCTURAL STEEL WORK

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100.

QUALIFICATION OF WELDING PROCEDURE AND PERSONNEL SHALL CONFORM TO SECTION 4 OF AS1554 .1. NON DESTRUCTIVE TESTING OF WELDS SHALL INCLUDE 100% VISUAL INSPECTIONS AND ADDITIONAL TESTING AS SHOWN AS SHOWN ON THE DRAWINGS

ALL WELDS SHALL BE 6 mm CONTINUOUS FILLET TYPE SP UNO. BUTT WELDS WHERE INDICATED ON THE DRAWING SHALL BE COMPLETED PENETRATION WELDS AS DEFINED IN AS1554.1.

BOLT DESIGNATION:

4.6/S - COMMERCIAL BLOTS OF GRADE 4.6 TO AS1111 TIGHTENED TO A SNUG TIGHT FIT

8.8/S - HIGH STRENGTH STRUCTURAL BLOTS OF GRADE 8.8 TO AS1252 TIGHTENED TO A SNUG TIGHT FIT

8.8/TB HIGH STRENGTH STRUCTURAL BLOTS OF GRADE 8.0 TO AS1252 FULLY TENSIONED TO AS1511 AS A BEARING JOINT.

8.8/TF- HIGH STRENGTH STRUCTURAL BLOTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS1511 AS A FRICTION JOINT WITH A FACING SURFACES LEFT UNCOATED

HIGH STRENGTH TB AND TF BOLTS SHALL BE INSTALLED USING APPROVED LOAD INDICATING WASHERS

GUSSET PLATES SHALL 10 mm THICK, UNO.

THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS IS NECESSARY TO STABILIZE THE STRUCTURE DURING ERECTION

THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL WHETHER OR NOT DETAILED IN DRAWINGS.

CONCRETE ENCASED STEEL WORK SHALL WRAPPED WITH F41 FABRIC AND SHALL HAVE 50 mm COVER UNO ON THE DRAWINGS

STEEL WORK NOT CONCRETE ENCASED, SHALL HAVE THE FOLLOWING SURFACE TREATMENT IN ACCORDANCE WITH THE SPECIFICATION UNO:

ELEMENT	SURFACE CLEANING	PRIMING
ALL STEEL WORK BUILT-IN TO BRICK WORK AND EXTERNAL STEEL WORK	TO AS1650	HOT DIPPED GALVANIZED
ALL INTERNAL STEEL WORK	HAND / POWER TOOL TO CLASS 1 OF AS1627	ALKYD PRIMER ZINC PHOSPHATE

WHERE SEALED TUBE MEMBERS ARE TO BE HOT DIPPED GALVANIZED , THE FABRICATOR SHALL PROVIDE ALL DRILL HOLES AS NECESSARY.

THE CONTRACTOR SHALL PREPARE AND SUBMIT TWO (2) COPIES OF ALL WORKSHOP DRAWINGS FOR APPROVAL. FABRICATION SHALL NOT COMMENCE UNTIL APPROVAL HAS BEEN OBTAINED

ALL TRANSPORTS AND ERECTION DAMAGE, SITE WELDS ETCH SHALL BE REINSTATED TO AN EQUIVALENT FINISH TO ACCIDENT STEEL WORK

MASONRY

ALL WORKMANSHIP AND MATERIAL S SHALL BE IN ACCORDANCE WITH AS 3700

THE DESIGN STRENGTH OF MASONRY SHALL BE

EXPOSURE CALCIFICATION TO AS 3600	MASONRY COMPRESSIVE STRENGTH MPa (f'm)	MASONRY SALT RESISTANCE GRADE	DURABILITY CLASSIFICATION OF BUILT-IN COMPONENTS	MORTAR MIX	
				GP PORTLAND CEMENT LIME SAND	f'c MPa
A1 / A2	>6.3	GENERAL PURPOSE	RE: (GALVANIZED)	1.0 : 1.0 : 6.0	2.8000
B1	>6.3	GENERAL PURPOSE	RE: (GALVANIZED)	1.0 : 1.0 : 6.0	2.8000
B2	>6.7	EXPOSURE	RE: (STAINLESS)	1.0 : 1.5 : 4.5	2.8000

ALL MASONRY WALLS SUPPORTING SLABS AND BEAMS SHALL HAVE A PER-GREASED TWO LAYER GALVANIZED STEEL SPLIT JOINT BETWEEN CONCRETE AND MASONRY.

ALL MASONRY WALLS SUPPORTING OR SUPPORTED BY CONCRETE FLOOR SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE

NO LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE ABOVE BY 20 mm THICK CLOSED CELL POLYTHENE STRIP

MASONRY SHALL BE ARTICULATED IN ACCORDANCE WITH TECHNICAL NOTE 61 FROM THE CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA. VERTICAL CONTROL JOINTS SHALL NOT EXCEED 6 METERS MAXIMUM CENTER AND 4 METERS MAXIMUM FROM CORNERS IN MASONRY WALLS AND BETWEEN NEW AND EXISTING BRICKWORK.

MASONRY RETAINING WALLS ARE TO BE BACK FILLED WITH EITHER OF THE FOLLOWING MATERIALS -COARSE GRAINED SOIL WITH LOW SILT CONTENT

-RESIDUAL SOIL CONTAINING STONES
-FINE SILT SAND
-GRANULAR MATERIALS WITH LOW CLAY CONTENT

BLOCK WORK

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700

REINFORCED CONCRETE BLOCK WORK SHALL COMPLY WITH THE FOLLOWING UNO
-BLOCKS : GRADE 15 CONFORMING TO AS1500
-MORTAR : 1 CEMENT / 0.25 LIME / 3 SAND
-PROVIDE CLEANOUT HOLES AT BASE OF WALL & ROD CORE HOLES TO REMOVE PROTRUDING MORTAR FINS
-CORE FILLING : f'c = 20 MPa, 10 AGG, 230 SLUMP /- 30 mm
-COVER : 55 mm MINIMUM FROM OUTSIDE OF BLOCK WORK.

BACK FILL TO RETAIN WALLS TO BE FREE DRAINING GRANULAR MATERIAL, UNO PROVIDE SUBSOIL DRAIN BEHIND WALL AND AT WEEP HOLES

VERTICAL CONTROL JOINTS SHALL BE PROVIDED AT 10 m MAX CENTRE'S

NO ADMIXTURES SHALL BE USED WITH OUT THE WRITTEN APPROVAL OF THE ENGINEER

Slab & Footings Notes

Bulk earthworks

The site shall be stripped a minimum depth of 50 mm under pavements and buildings all existing fill organic material. Refuse and roots shall be removed.

After approval, the excavated sub grade level shall be proof rolled for a minimum 6(six) passes using a vibrating roller, minimum weight ten tones. Soft wet and unsuitable spots shall be removed and replaced by approved site material as directed by the superintendent. The sub shall be compacted to not less than 100% standard dry density ration within ±2% of the optimum moisture content in the accordance with AS1289 5.1.1 and 5.4.1

Where fill is required to achieve road pavement sub grade level, it shall be approved ripped sandstone having maximum particle size of 75 mm unless directed otherwise it shall be place in 150 mm loose layers and compacted to not less than 100% standard dry density with in ±2% of the optimum moisture content in accordance with AS1289 5.11 and 5.4.1

All batters shall be in 4 maximum Uno.

Sub grade preparation

For slabs on ground and raft slabs

The site shall be excavated to the levels shown on relevant drawings.

The site shall be stripped to minimum of 50 mm expose residual material prior to fill operation all existing fill, organic matter, refuse and roots shall be removed, except if approved engineer fill is present.

Proof roll the excavated area before filling areas of local softening revealed during excavation or stripping shall be compacted to 100% standard dry density ration to AS1289 5.1.1

Clay material free of organic material from cut areas may be used as engineering fills provided that it has been tested. All imported selected fill shall be tested and approved by engineer

All fill shall be compacted to not less than 98% standard dry density ratio within ±2% of the optimum moisture content in accordance with as AS1289 5.1.1 and 5.4.1

All select road base and hard-core filling showing under slabs on drawings shall be compacted to not less than 98% modified dry density ratio with in ±2% % of the optimum moisture content in accordance with as AS1289 5.1.1 and 5.4.1

All filling shall be conducted under the supervision of the project geotechnical engineer, who shall supply certificates of compaction for the site .

Footings

Strip and pad footings have been designed for a safe bearing value of 150 KPA into stiff clay. Uno, bored piers have been designed for a safe end bearing value of 250 KPA into stiff clay with a skin friction of 25 KPA Uno .

Foundation material shall be inspected and approved in writing by a geotechnical engineer for the above safe bearing pressure before placing concrete.

For founding conditions refer to geotechnical report reference by

Slabs on ground have been designed for min CBR 10 in accordance with cement & concrete association, concrete industrial floor & pavement design Uno.

Sub grade shall be inspected and approved in writing by a geotechnical engineer for the above CBR .

Reinforced concrete

All workmanship and materials shall be in accordance with AS3600 current edition with amendments, except where varied by contract documents

Concrete components and quality shall be as follows Uno.

CONCRETE ELEMENT	SLUMP (MM)	MAX. SIZE	*CEMENT*	F'c AT 28 DAYS - MPA	ADMIXTURE
FOOTINGS	80	20	*A*	*25*	-
PIERS & CAPS	80	20	*A*	*25*	-
SLAB ON GROUNDS	80	20	*A*	*25*	-
SUSPENDED SLABS	80	20	*A*	*25*	-
WALLS & COLUMNS	80	20	*A*	*25*	-

Minimum clear concrete cover to reinforcement including ties and stirrups shall be as follows

CONCRETE ELEMENT	CAST AGAINST FORMS COMPLYING WITH CURRENT *SAA* CODE		NO FORMWORK
	IN SHELTERED LOCATION (MM)	EXPOSED TO GROUND OR WEATHER (MM)	
PAD FOOTINGS	-	65	*75*
STRIP FOOTINGS	-	50	*65*
PIERS & CAPS	-	65	*75*
COLUMNS	35	50	*75*
WALLS	20	40	*65*
BEAMS	25	40	*65*
SLABS	25	40	*65*

Cover to reinforcement shall be obtained by the user of approved bar chairs. All chairs shall be spaced at 1000 ct's maximum.

All concrete shall be mechanically vibrated. Vibrators shall not be used to spread concrete.

Size of concrete elements does not include thickness of applied finishes.

No hole or chases other than those shown on the structural designs shall be made on concrete members without the prior approval of the engineer.

Construction joints where not shown shall be located to approval of the engineer. All construction joints shall be scrabbled over the whole face and any unsound material removed.

Reinforcement is represented diagrammatically. It is not necessarily shown in true project.

Splices in reinforcement shall me made only in the position shown or as approved by the engineer where lap length is not shown. It shall be sufficient to develop the full strength of reinforcement as specified in AS3600. Cages and hooks shall be standard unless shown otherwise.

Welding of the reinforcement will not be permitted unless shown of structural drawings or approved by the engineer

Pipes or conduits shall not be place within the concrete cover to reinforcement without the approval of the engineer.

Reinforcement symbols

N -donates deformed grade 500 normal ductility reinforcing bars to AS/NZS 4671
R - donates plain round grade 250 normal ductility reinforcing bars to AS/NZS 4671
SL - donates deformed grade 500 low ductility reinforcing mesh to AS/NZS 4671
RL - donates deformed grade 500 low ductility reinforcing mesh to AS/NZS 4671
L--TM - donates deformed grade 500 low ductility trench mesh to AS/NZS 4671

All reinforced fabric shall comply with AS1303 and AS1304 and shall be supplied in flat sheet.

Slab & Footings Notes - Cont.

Reinforced concrete - cont

Splices in fabric, the outermost transverse wires shall be overlapped by at least the spacing of these transverse wires plus 25 mm

Exposed corners shall be 20 mm chamfered Uno.

All reinforcement shall be inspected by superintendent or engineer prior to placing concrete.

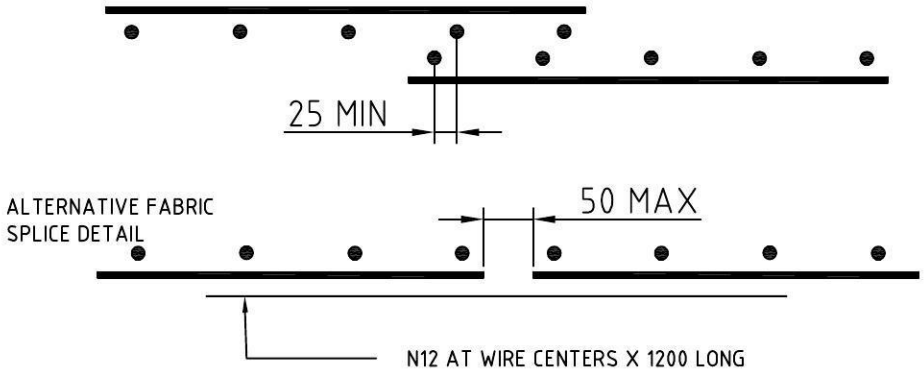
All slab concrete to be cured in an approved manner for a minimum of 7 days

All formwork and props for slabs and beams shall be removed before construction of any masonry walls or partitions on the floor.

All abbreviations are in accordance with AS100

Formwork shall not be stripped until concrete has achieved a minimum strength of 20 MPa. The concrete slab and beams shall be temporarily back propped until the concrete has achieved 28 days by strength and any propping to higher level forms have been removed .

Where a suspended slab is to be supported off a suspended slab below, written approval shall be obtained from the engineer prior to any site works.



Control Joints

Sawn Control Joints (SJ) shall be placed at column centers, at a maximum of 6.0m centers in each direction, with the ratio of the panel short side not to exceed 1.5:1.

Every second mesh wire to be cut along Sawn Control Joint line.

Sawn Joints shall be filled with an approved joint sealant.

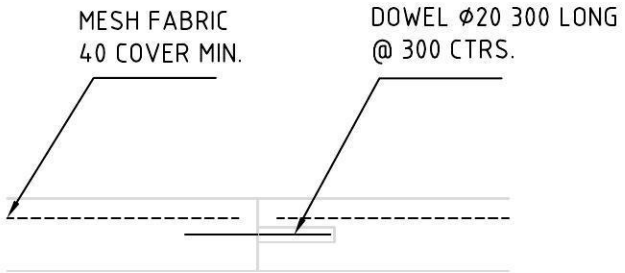
Construction Control Joints (CJ) shall be located at column centers, at a maximum of 18.0m centers in each direction.

Dowels R10 x 400mm long to be located @ 300mm centers along Construction joint.

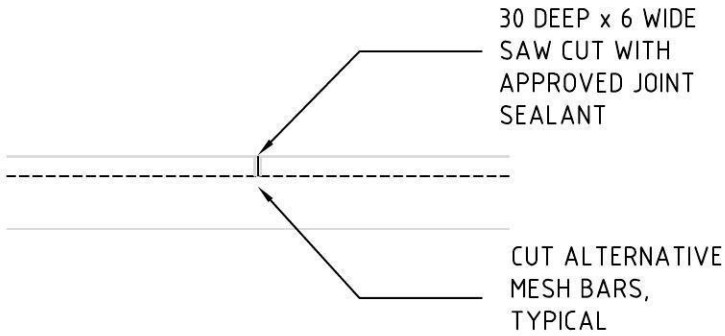
Grease and cap one half only of each Dowel.

NO ADMIXTURES SHALL BE USED WITH OUT THE WRITTEN APPROVAL OF THE ENGINEER

Control Joint Detail:

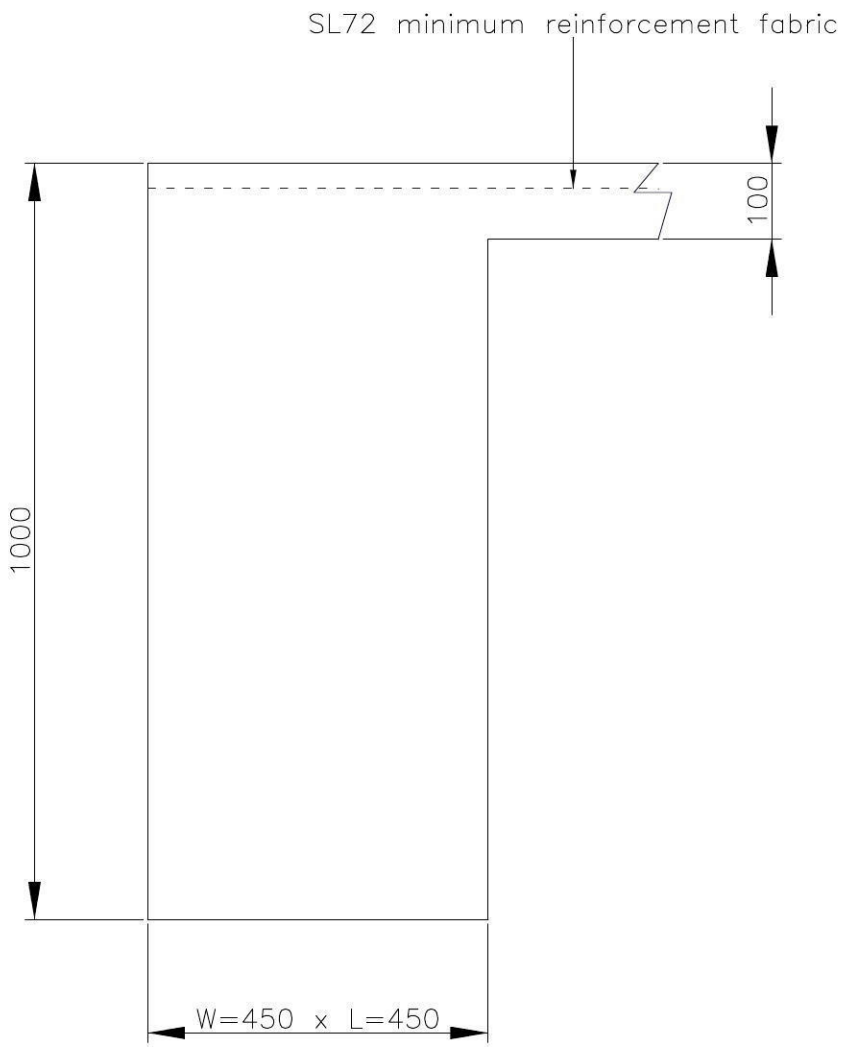


DETAIL
1:20
CONTROL JOINT DETAIL
18.0m MAX. CENTRES



DETAIL
1:20
SAWN JOINT DETAIL
6.0m MAX. CENTRES

The concrete details supplied in this engineering, must adhere to the Slab and Footing notes on the pages provided.



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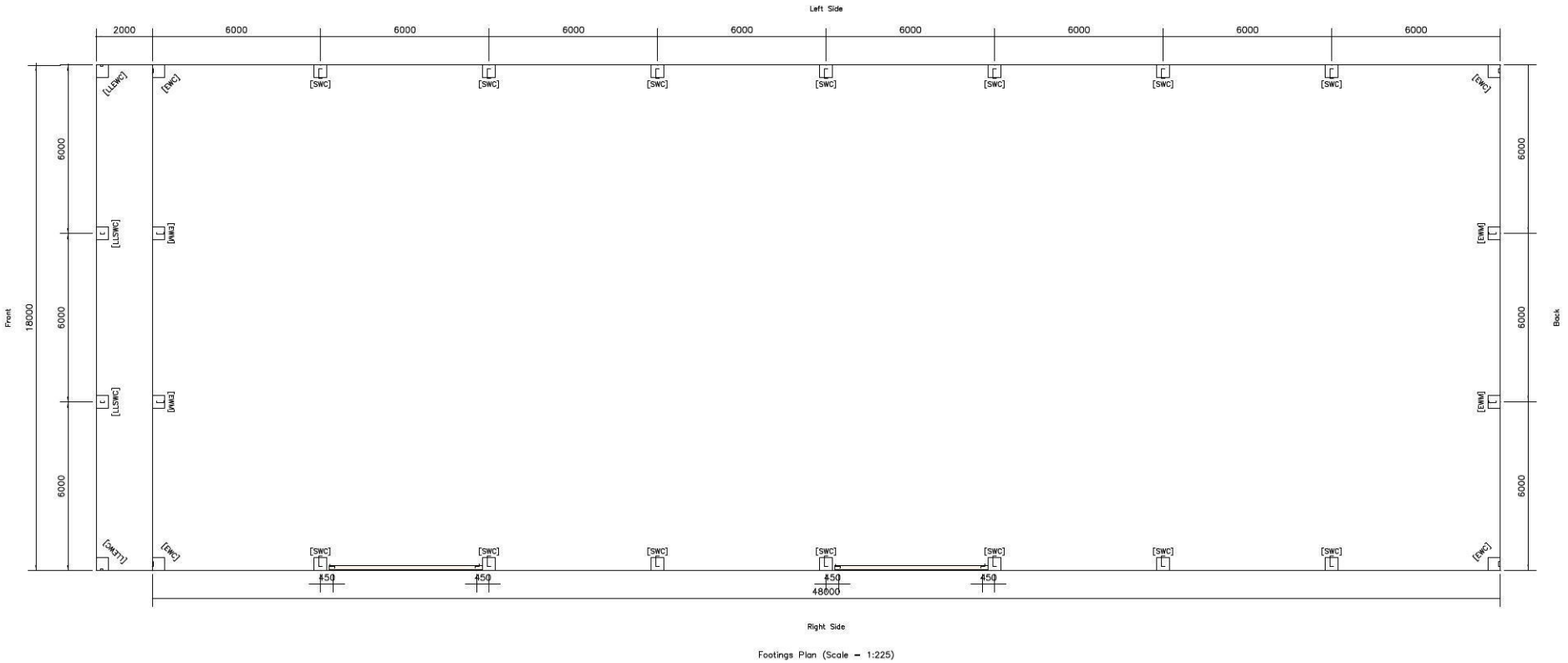
Email: info@capitalsteelbuildings.com.au

Supplied By: CSB - South West Sydney
Phone 02 4647 1055 Fax 0
Unit 2/14 Porrende Street, NARELLAN, NSW, 2567. Australia.

Customer: John Parsons
33-35 Summerville Circuit , Emu Plains



Footings Plan (Scale = 1:225)

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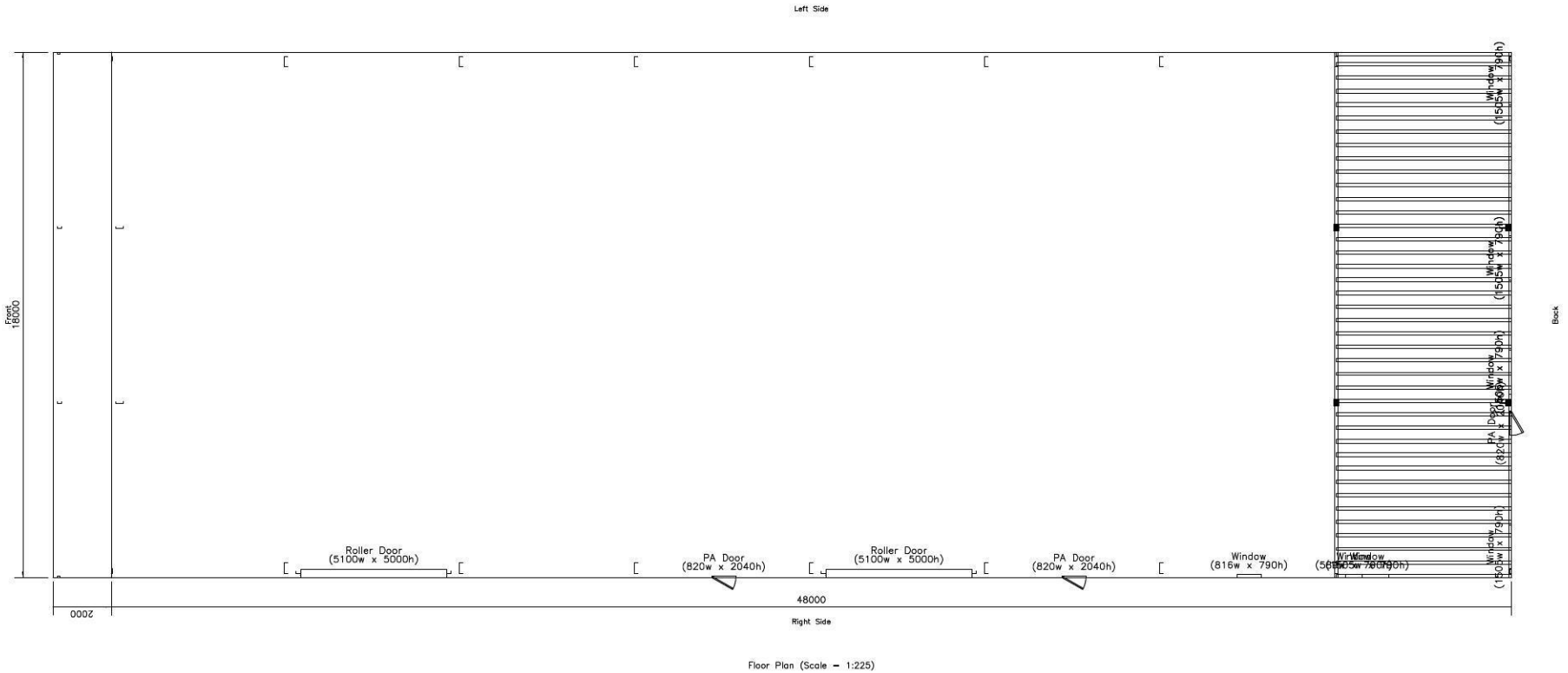

Floor Plan (Scale – 1:225)

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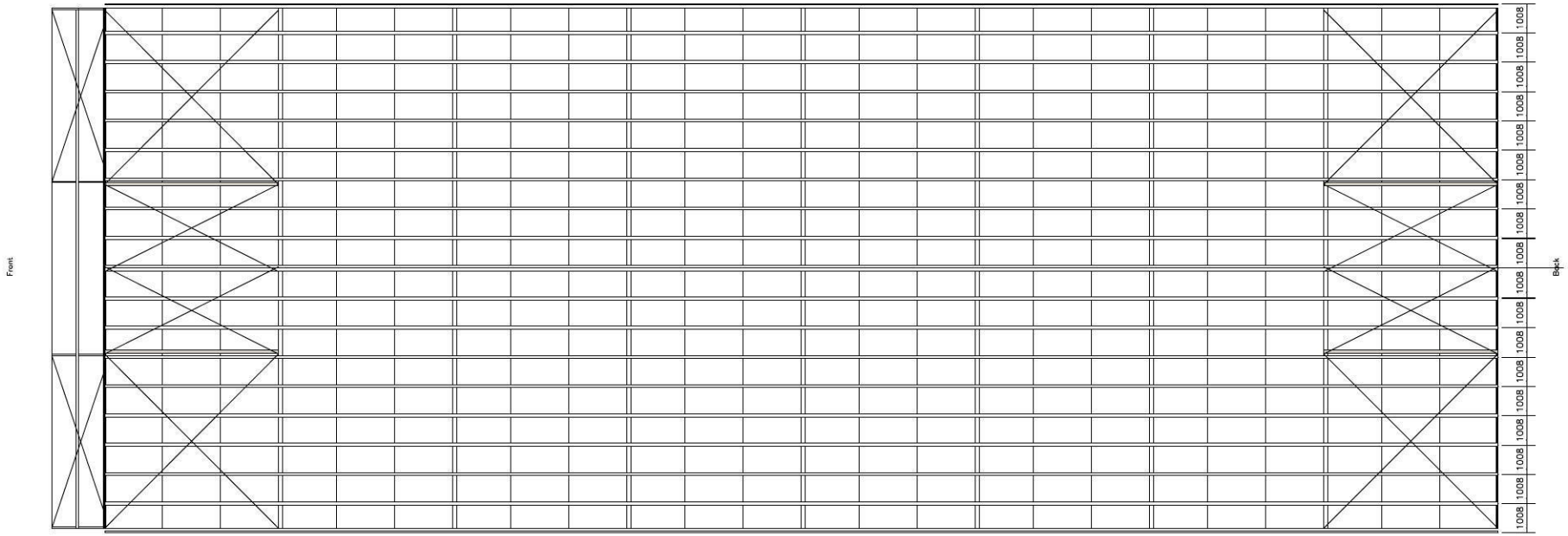
Left Side



Right Side

Roof Plan (Scale – 1:225)

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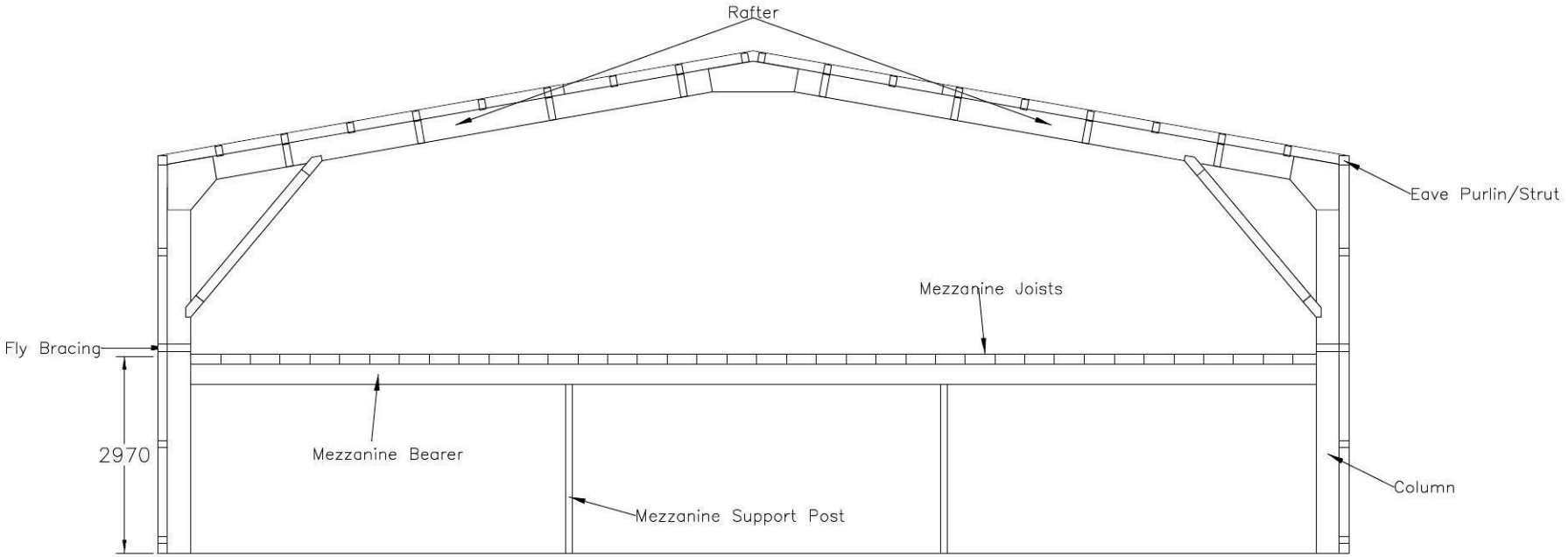

Cross Section (Scale = 1:100)

Capital Steel Buildings Australia
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Email: info@capitalsteelbuildings.com.au

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Phone 02 4647 1055 Fax 0
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Customer: John Parsons
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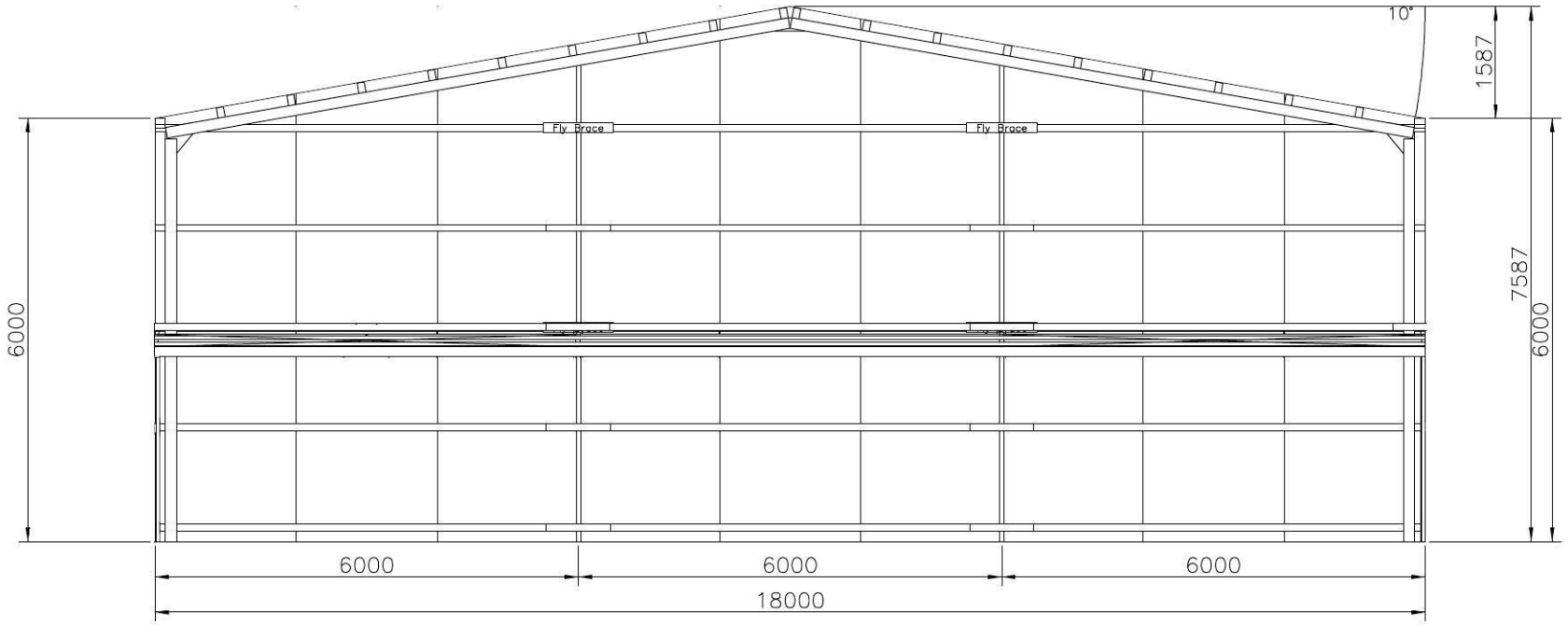

Front Elevation Frame (Scale = 1:100)

Capital Steel Buildings Australia
PO Box 54, Narellan 2567
Email: info@capitalsteelbuildings.com.au

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Phone 02 4647 1055 Fax 0
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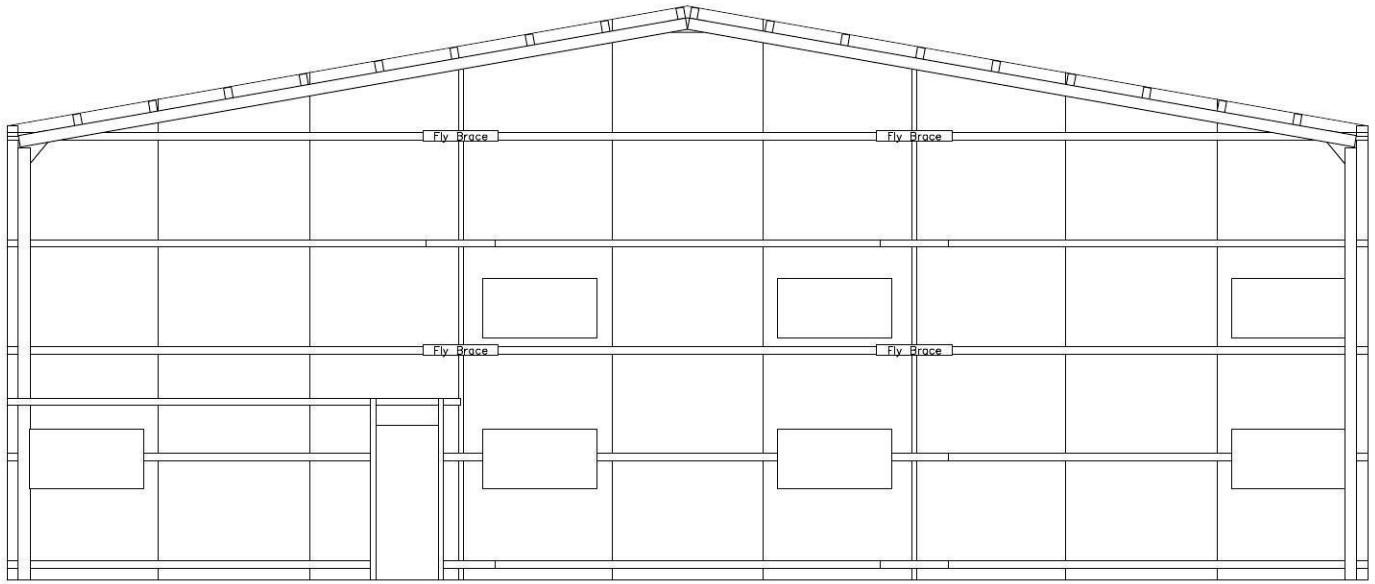

Back Elevation Frame (Scale = 1:100)

Capital Steel Buildings Australia
PO Box 54, Narellan 2567
Email: info@capitalsteelbuildings.com.au

Supplied By: CSB - South West Sydney
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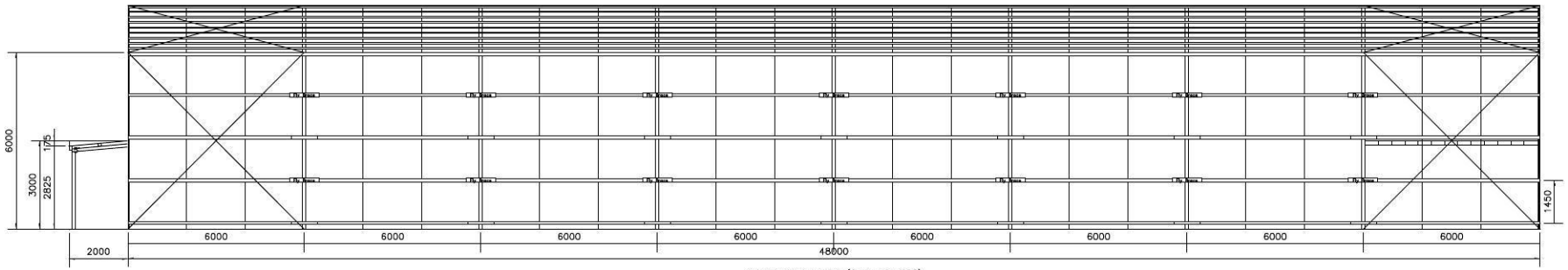
Customer: John Parsons
33-35 Summerville Circuit , Emu Plains

x1

x1



Left Elevation Frame (Scale = 1:225)

Capital Steel Buildings Australia
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Email: info@capitalsteelbuildings.com.au

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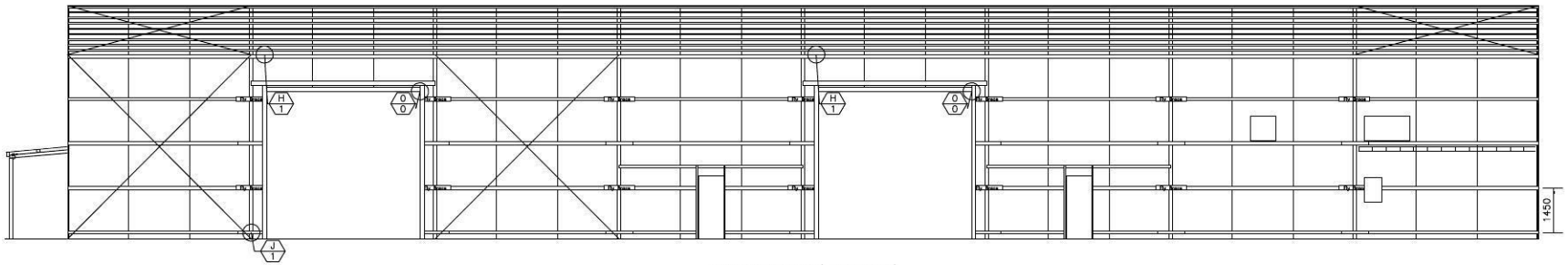
Customer: John Parsons
33-35 Summerville Circuit , Emu Plains

x1 x1



Right Elevation Frame (Scale = 1:225)

Capital Steel Buildings Australia
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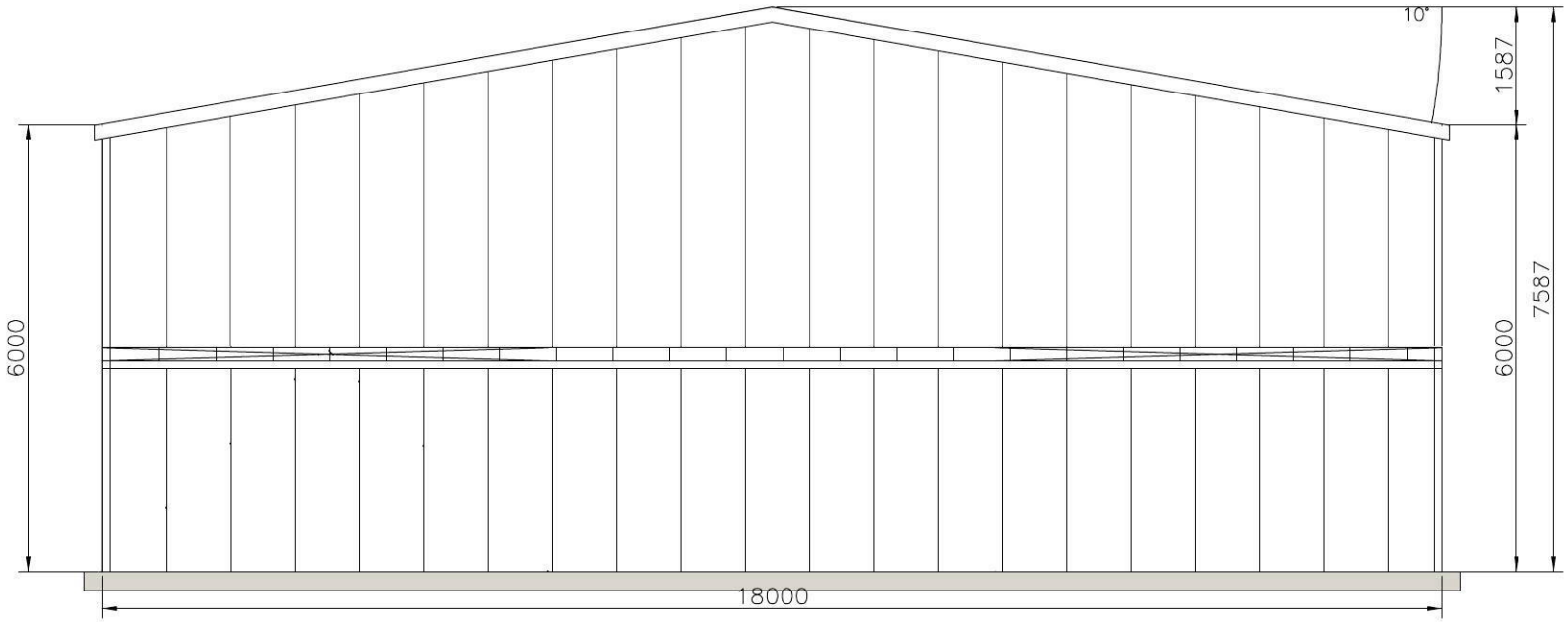
Customer: John Parsons
33-35 Summerville Circuit , Emu Plains



Front Elevation (External)

Capital Steel Buildings Australia
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Email: info@capitalsteelbuildings.com.au

Supplied By: CSB - South West Sydney
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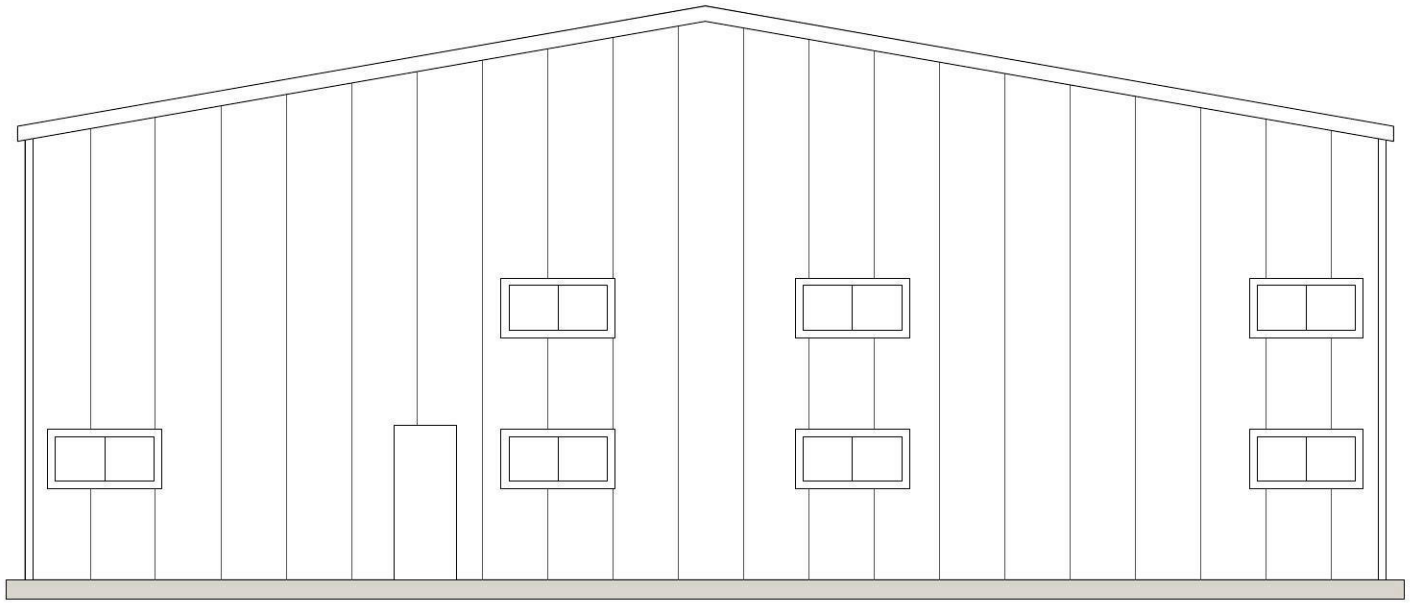
Customer: John Parsons
33-35 Summerville Circuit , Emu Plains



Back Elevation (Scale = 1:100)

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Customer: John Parsons
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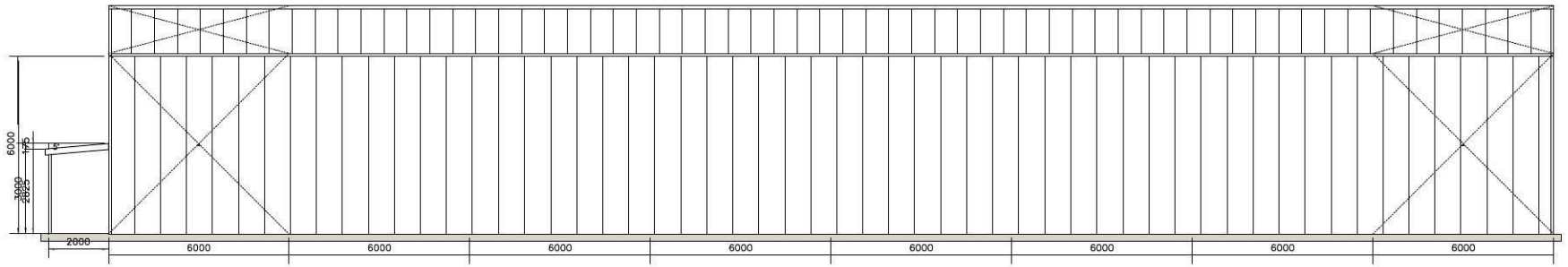

Left Elevation (Scale = 1:225)

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Email: info@capitalsteelbuildings.com.au

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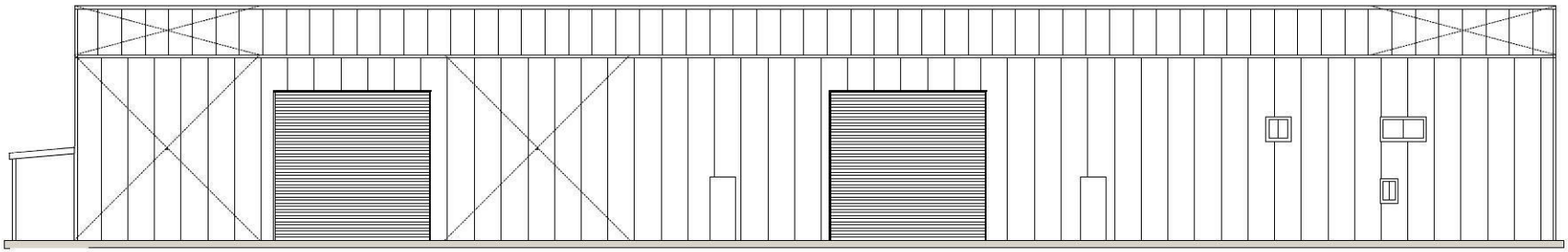
Customer: John Parsons
33-35 Summerville Circuit , Emu Plains



Right Elevation (Scale = 1:225)

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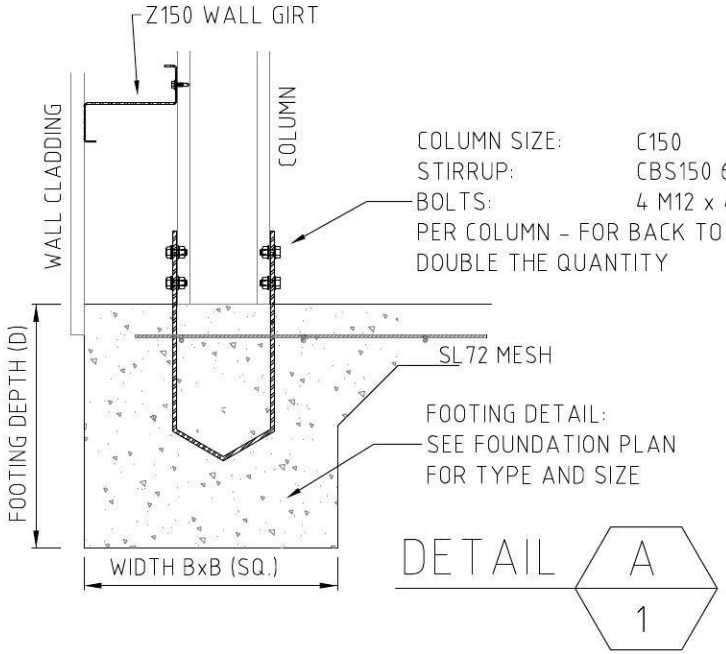
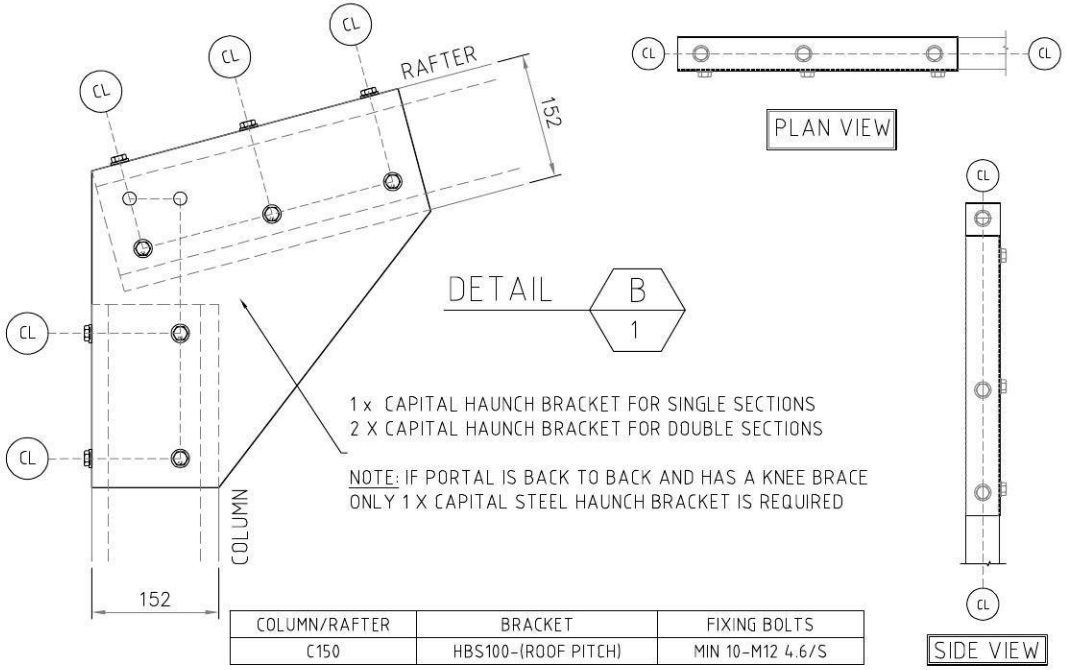
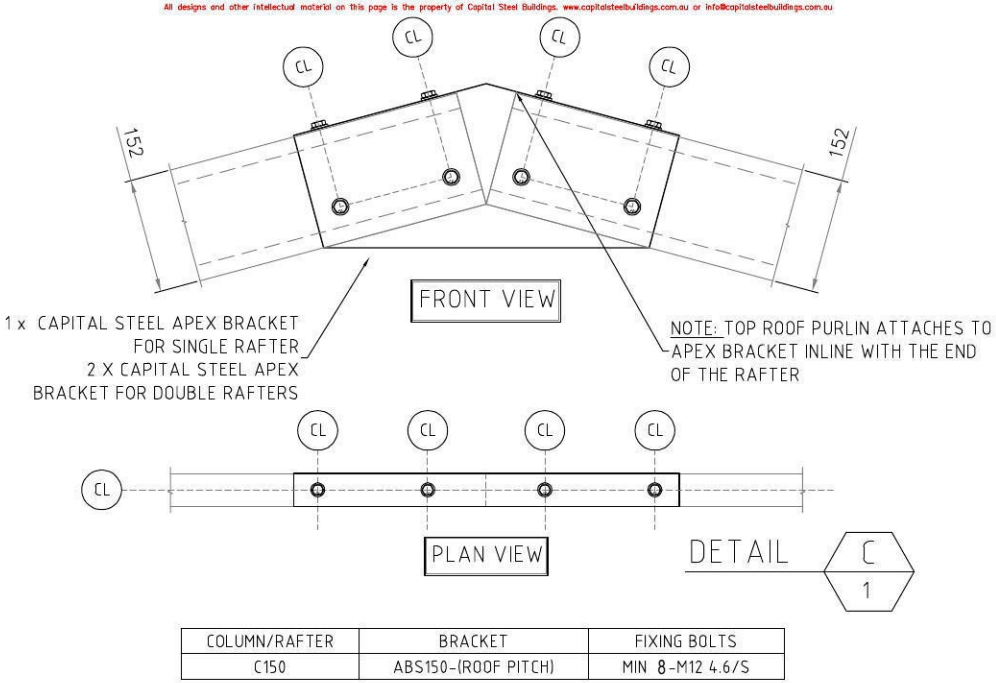


DATE:	08.01.2013	Title:	Drawing No.
REVISION:	01	COLUMN BASE CONNECTION	ABCST150-150



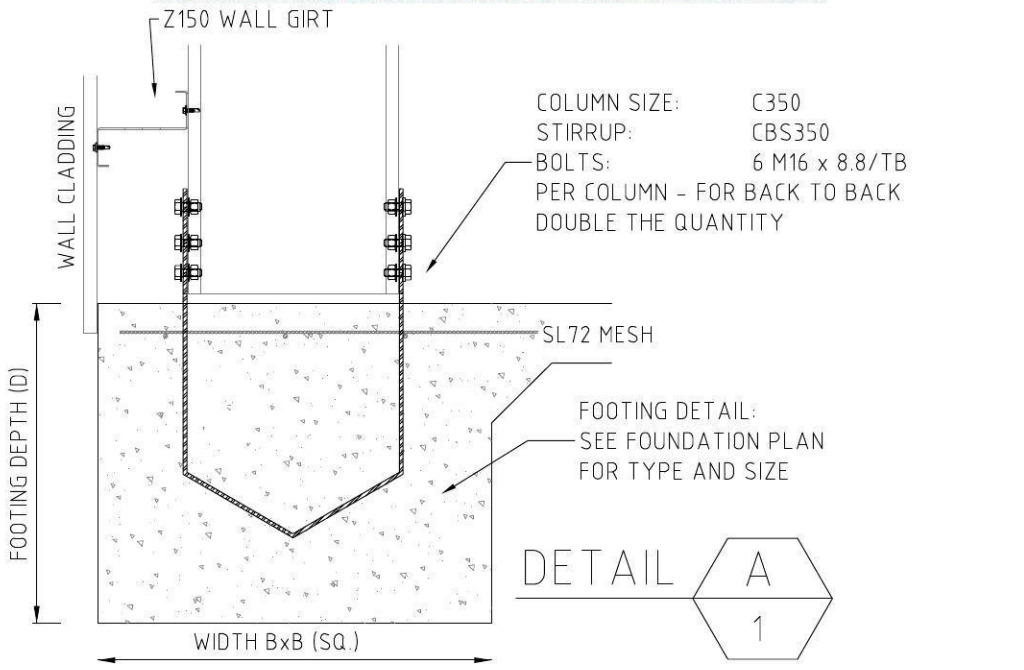
COLUMN/RAFTER	BRACKET	FIXING BOLTS
C150	HBS100-(ROOF PITCH)	MIN 10-M12 4.6/S

DATE:	03.01.2013	Title:	Drawing No.
REVISION:	01	HAUNCH CONNECTION	AHB150

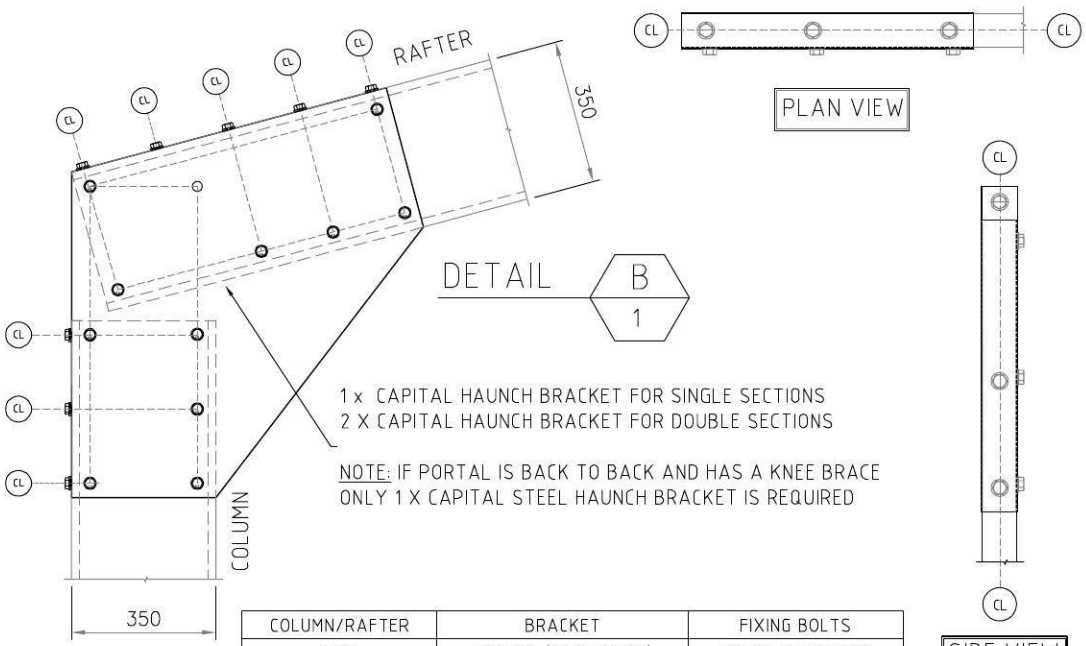


COLUMN/RAFTER	BRACKET	FIXING BOLTS
C150	ABS150-(ROOF PITCH)	MIN 8-M12 4.6/S

DATE:	03.01.2013	Title:	Drawing No.
REVISION:	01	APEX CONNECTION	AAB150

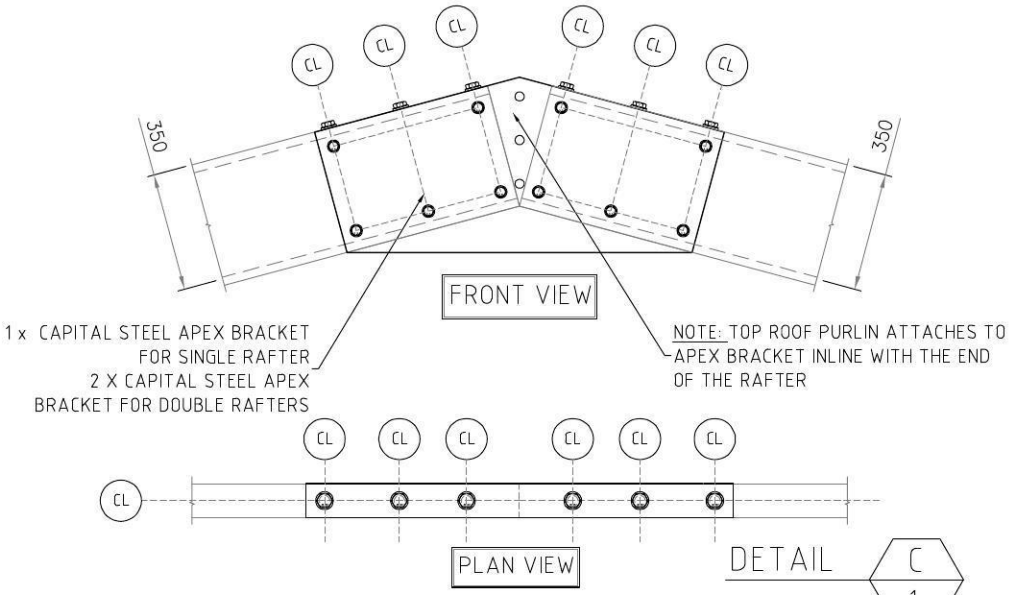


DATE:	08.01.2013	Title:	Drawing No.
REVISION:	01	COLUMN BASE CONNECTION	ABCST350-150



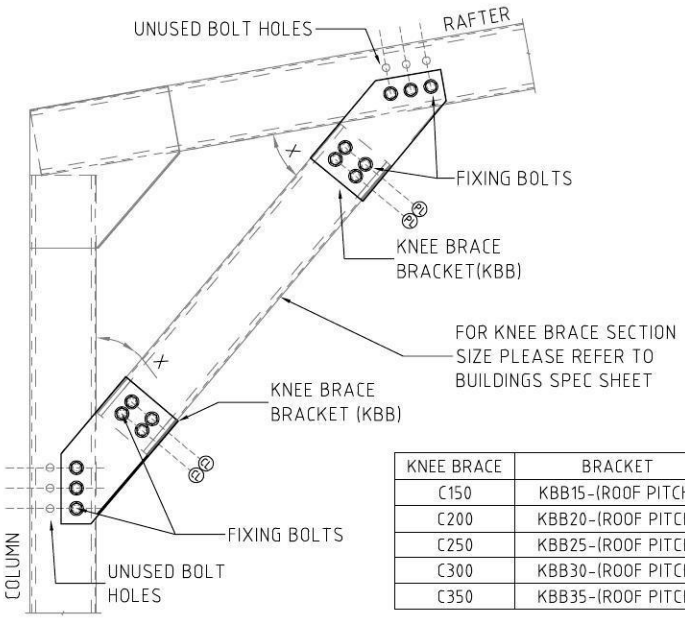
COLUMN/RAFTER	BRACKET	FIXING BOLTS
C350	HBS350-(ROOF PITCH)	MIN 16-M16 8.8/TB

DATE:	03.01.2013	Title:	Drawing No.
REVISION:	01	HAUNCH CONNECTION	AHB350



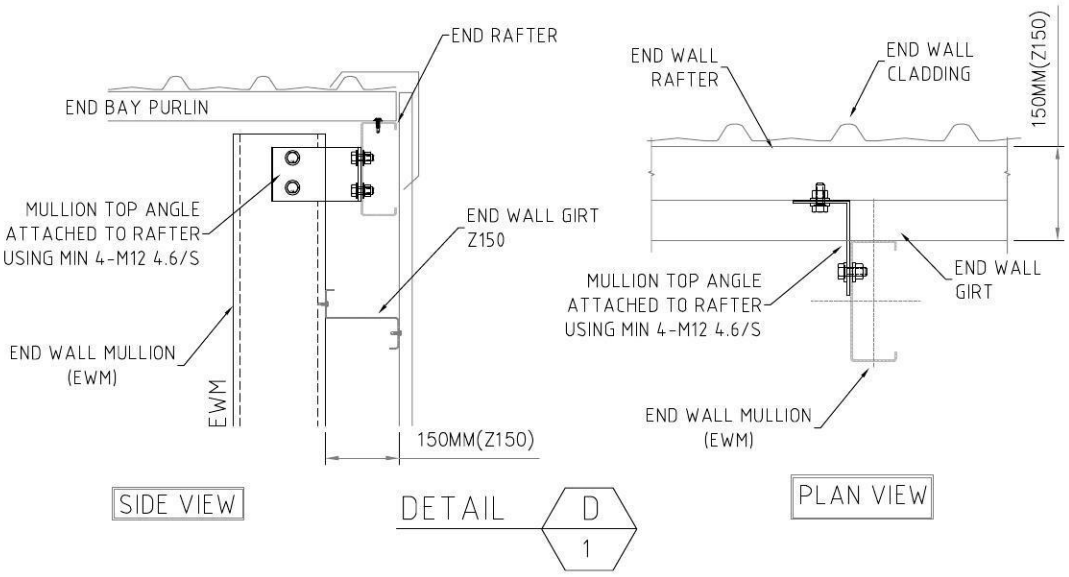
RAFTER	BRACKET	FIXING BOLTS
C350	ABS35-(ROOF PITCH)	MIN 16-M16 x 8.8/TB

DATE:	03.01.2013	Title:	Drawing No.
REVISION:	01	APEX CONNECTION	AAB350



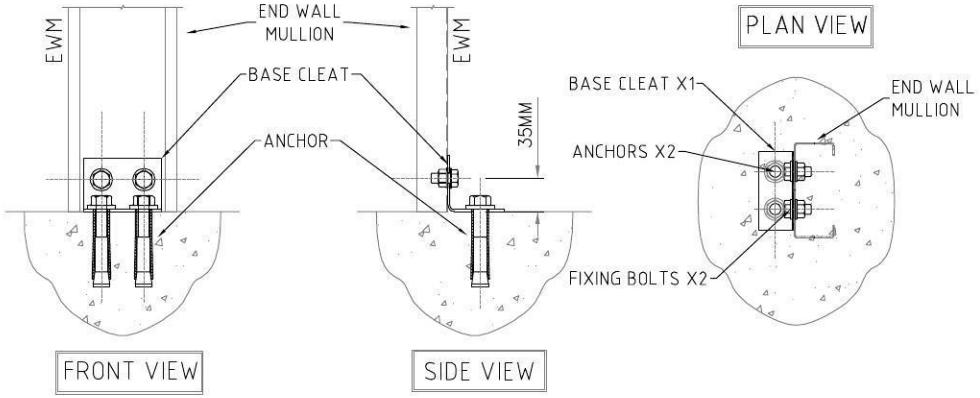
KNEE BRACE	BRACKET	FIXING BOLTS
C150	KBB15-(ROOF PITCH)	MIN 7-M16 8.8/TB PER BRACKET
C200	KBB20-(ROOF PITCH)	MIN 7-M16 8.8/TB PER BRACKET
C250	KBB25-(ROOF PITCH)	MIN 7-M16 8.8/TB PER BRACKET
C300	KBB30-(ROOF PITCH)	MIN 7-M16 8.8/TB PER BRACKET
C350	KBB35-(ROOF PITCH)	MIN 7-M16 8.8/TB PER BRACKET

DATE:	03.01.2013	Title:	Drawing No.
REVISION:	01	KNEE BRACE CONNECTION	ASKBC-350



NOTE: FOR END WALL MULLION SPACINGS PLEASE CHECK THE FLOOR PLAN DRAWING FOR POSITIONING

DATE:	02.01.2013	Title:	Drawing No.
REVISION:	01	END WALL MULLION TOP CONNECTION	MCT-150



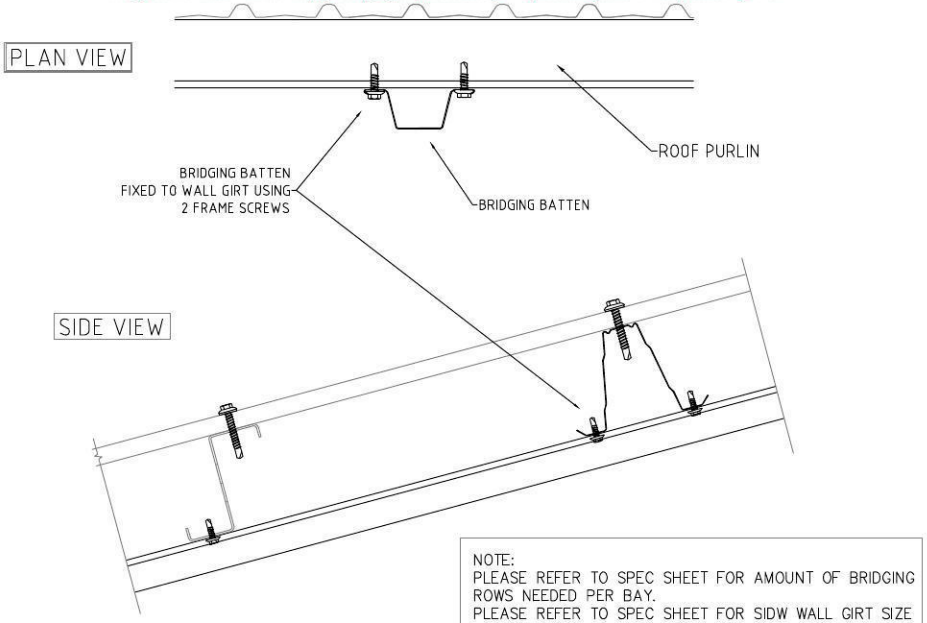
MULLION	CLEAT	ANCHOR	FIXING BOLTS
C100	50 X 50 X 3	2 X M12 X 90	2-M12 4.6/S
C150	75 X 50 X 3	2 X M12 X 90	2-M12 4.6/S
C200 < 4M BAY	75 X 65 X 3	2 X M12 X 90	2-M16 4.6/S
C200 > 4M BAY	75 X 65 X 6	2 X M16 X 110	2-M16 8.8/TB
C250	75 X75 X 6	2 X M16 X 110	2-M16 8.8/TB
C300	90 X 90 X 6	2 X M20 X 115	2-M16 8.8/TB
C350	105 X 105 X 6	2 X M20 X 115	2-M16 8.8/TB

DETAIL E 1

DATE: 02.01.2013
REVISION: 01

Title: MULLION BASE CONNECTION

Drawing No. AMBC

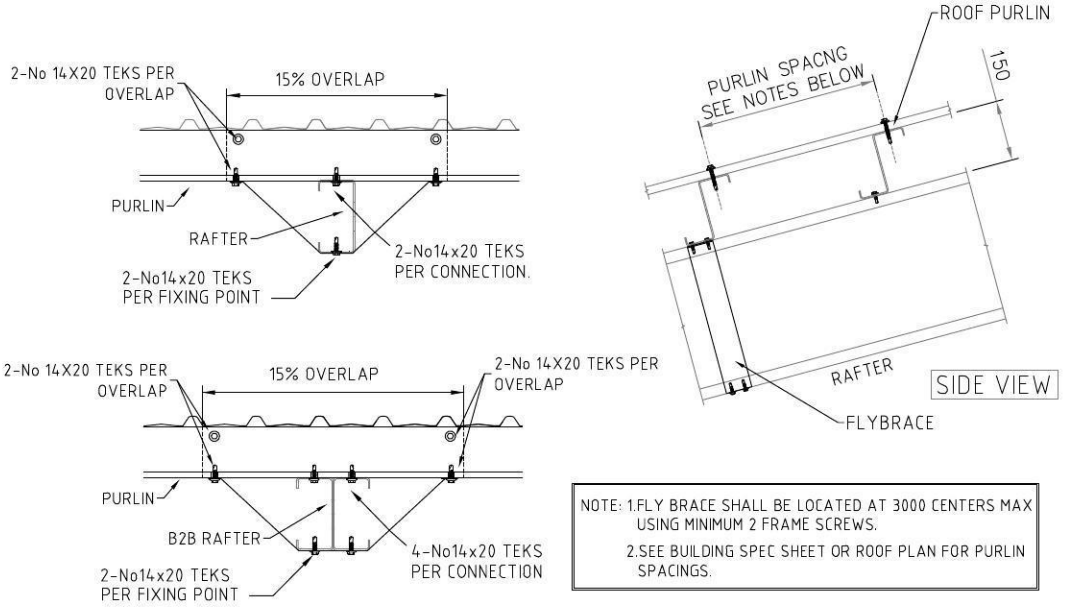


NOTE:
PLEASE REFER TO SPEC SHEET FOR AMOUNT OF BRIDGING ROWS NEEDED PER BAY.
PLEASE REFER TO SPEC SHEET FOR SIDW WALL GIRT SIZE AND SPACINGS.

DATE: 02.01.2013
REVISION: 01

Title: BRIDGING CONNECTION

Drawing No. ABRDGAC



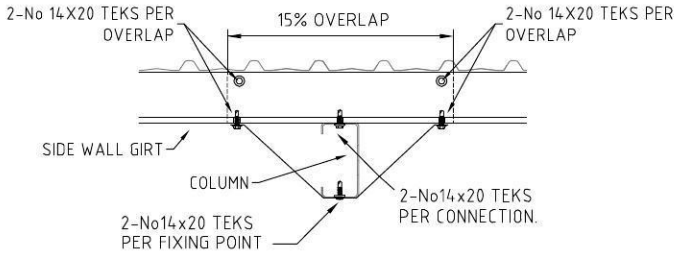
NOTE: 1.FLY BRACE SHALL BE LOCATED AT 3000 CENTERS MAX USING MINIMUM 2 FRAME SCREWS.
2.SEE BUILDING SPEC SHEET OR ROOF PLAN FOR PURLIN SPACINGS.

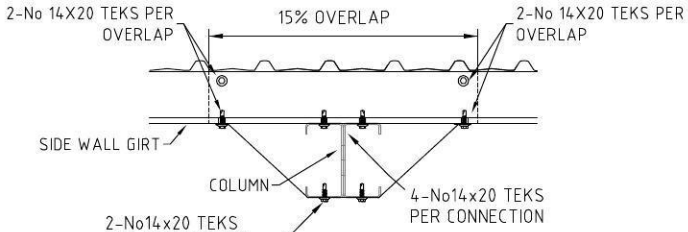
DATE: 02.01.2013
REVISION: 01

Title: ROOF PURLIN CONNECTION

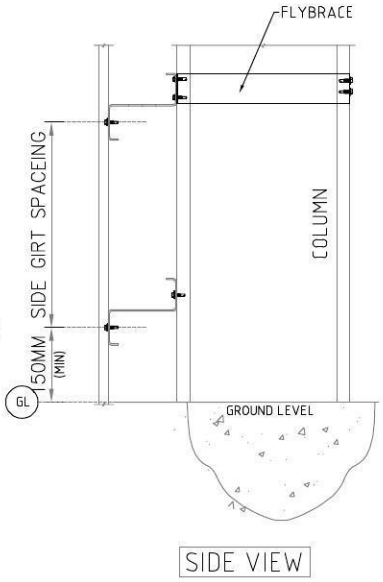
Drawing No. APC-150

PLAN VIEW

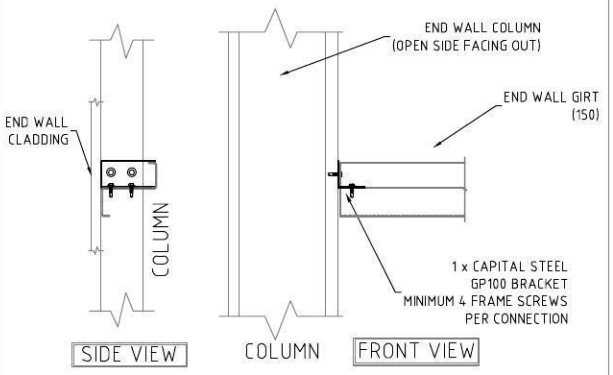


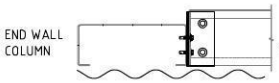


FLY BRACE SHALL BE LOCATED AT 3000 CENTRES MAX ON COLUMNS AND RAFTERS



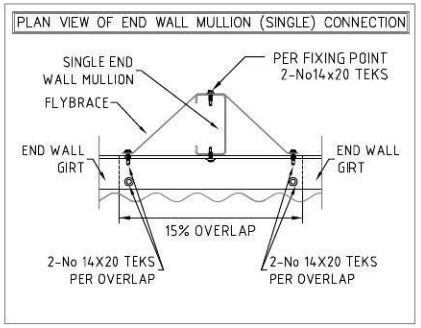
SIDE VIEW

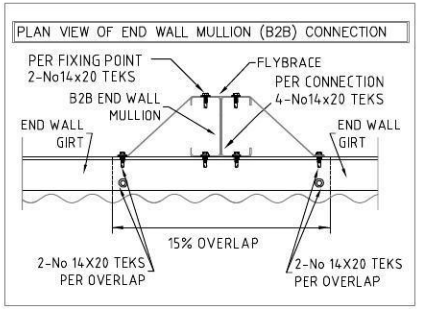




PLAN VIEW OF END COLUMN CONNECTION

NOTE :FLY BRACING SHALL BE LOCATED AT 3000MM CENTERS MAXIMUM ON MULLIONS





DATE: 02.01.2013
REVISION: 01

Title: SIDE WALL GIRT CONNECTION

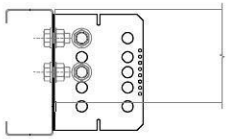
Drawing No. ASGC-150

DATE: 02.01.2013
REVISION: 01

Title: END WALL GIRT CONNECTION

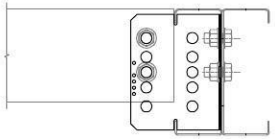
Drawing No. AEWG-150

END RAFTER CONNECTION



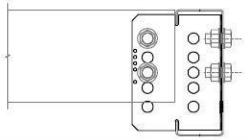
CROSS SECTION OF A–A

INTERNAL RAFTER CONNECTION (B2B)



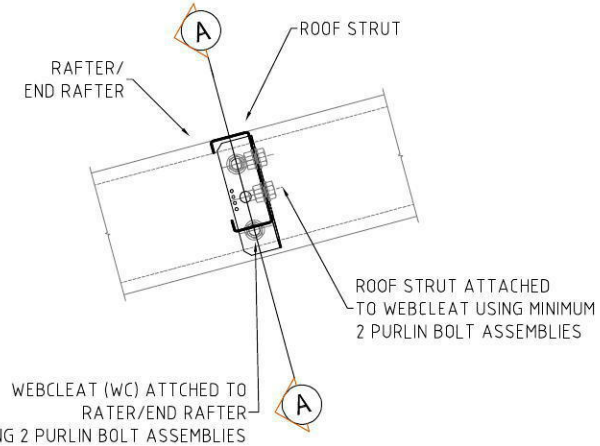
CROSS SECTION OF A–A

INTERNAL RAFTER CONNECTION SINGLE

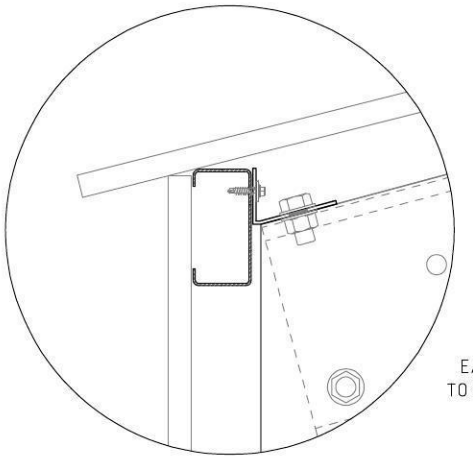


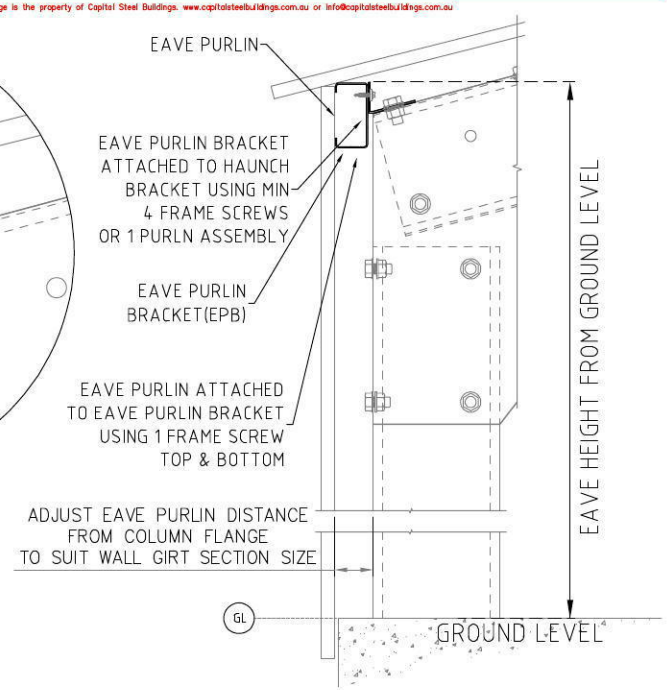
CROSS SECTION OF A–A

INLINE PURLIN BOLT SCHEDULE	
PURLIN	BOLTS PER CONNECTION
C100	4-M12x4.6/S
C150-200-250-300-350	4-M16x4.6/S



NOTE :ROOF STRUTS WILL BE PUNCHED TO ATTACH TO WEBCLEAT'S.
RAFTERS WILL NEED TO BE MANUALLY DRILLED TO ATTACH THE WEBCLEAT'S.





DATE: 02.01.2013
REVISION: 01

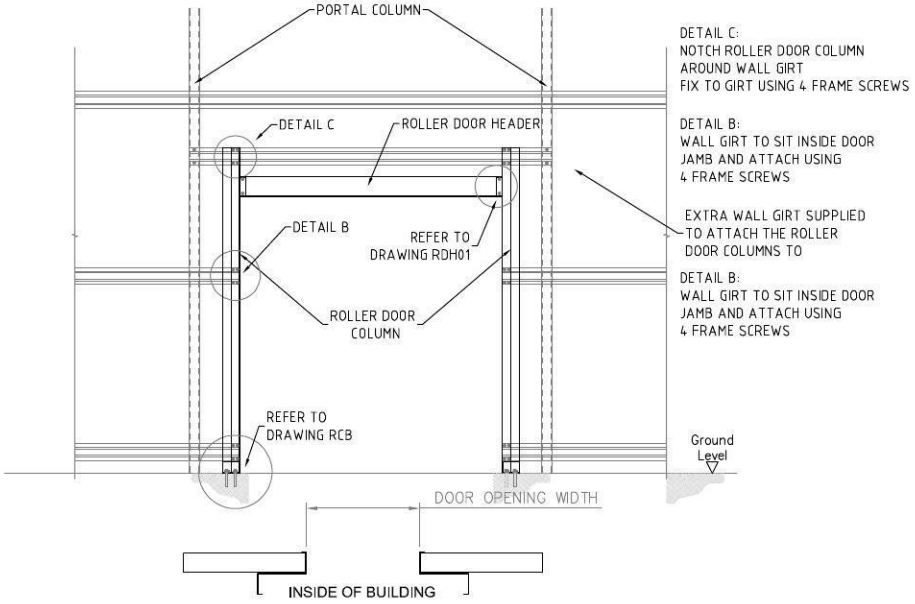
Title: ROOF/EAVE STRUT CONNECTION

Drawing No. ARSC

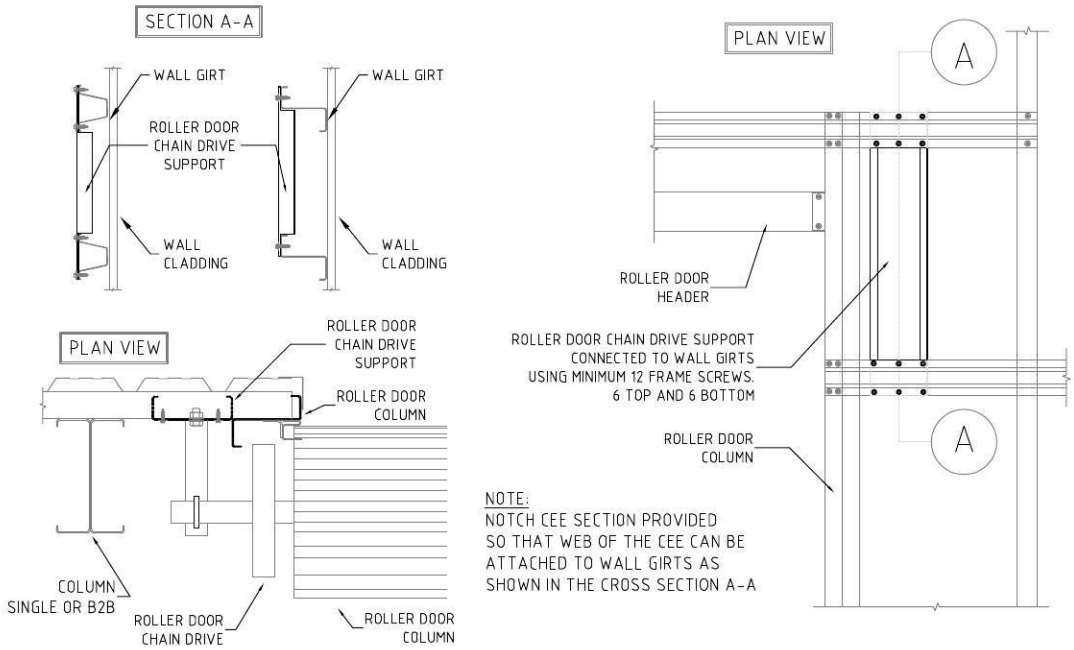
DATE: 02.01.2013
REVISION: 01

Title: EAVE PURLIN CONNECTION

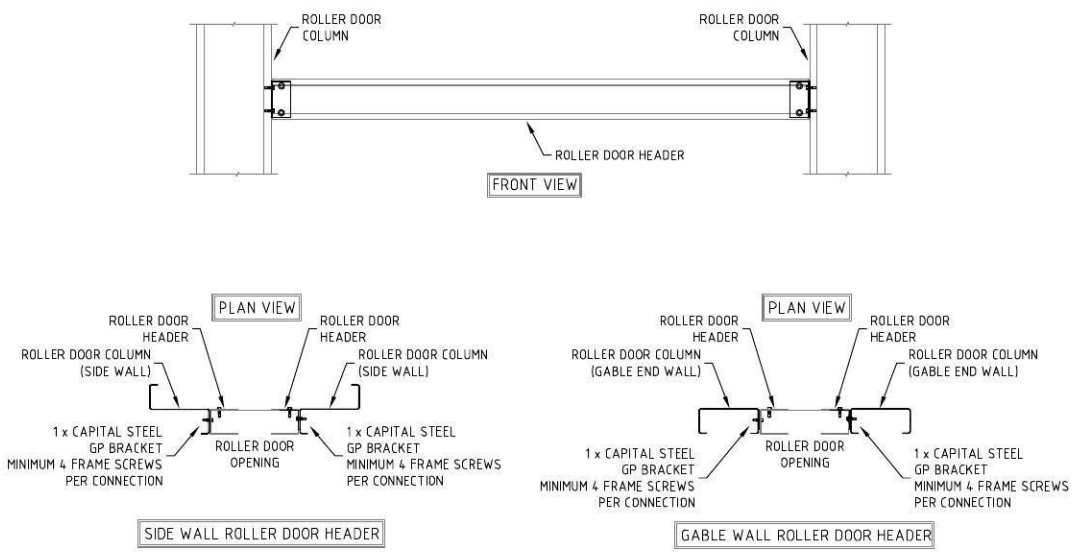
Drawing No. AEPCSWG150



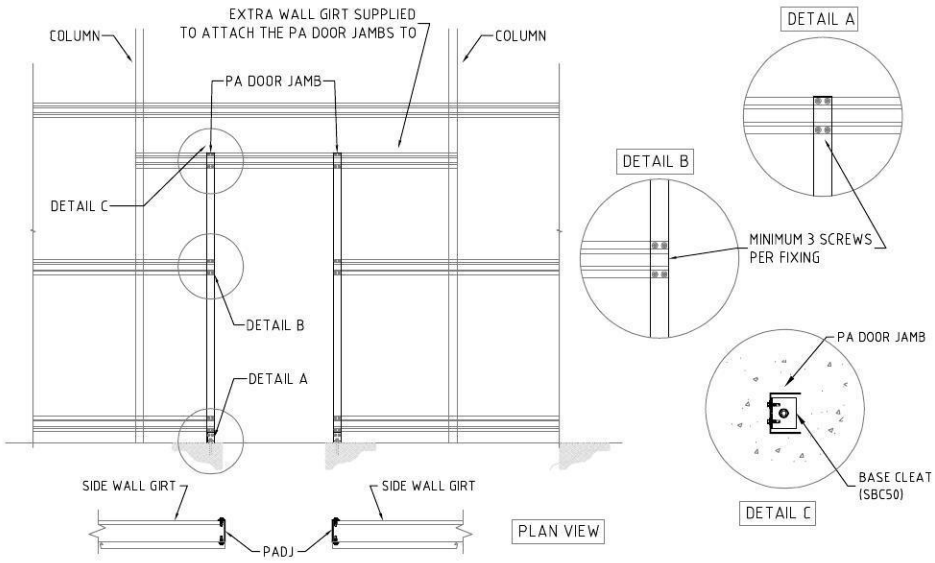
DATE: 02.01.2013	Title: SIDE WALL ROLLER DOOR FRAME	Drawing No. ASWRDC150
REVISION: 01		



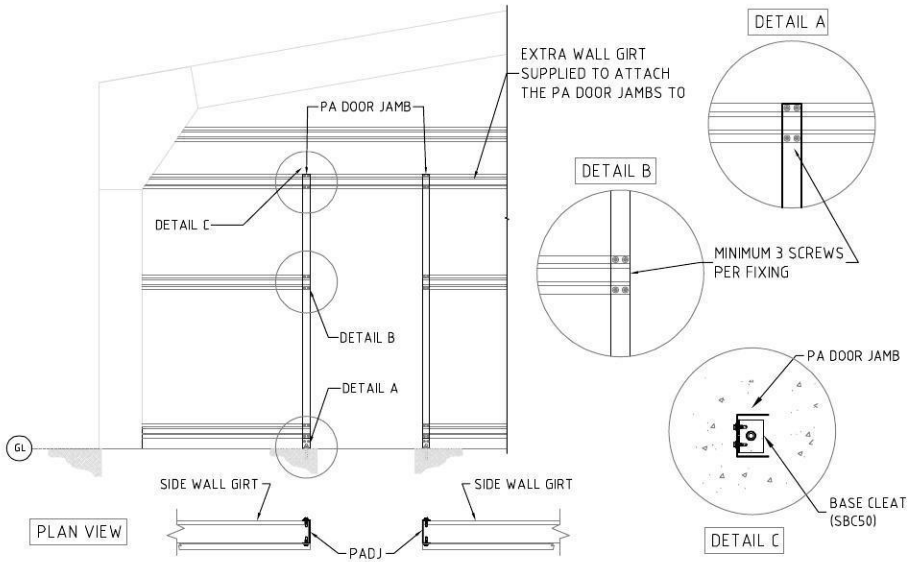
DATE: 02.01.2013	Title: ROLLER DOOR CHAIN SUPPORT DETAIL	Drawing No. ASWRDCDS
REVISION: 01		



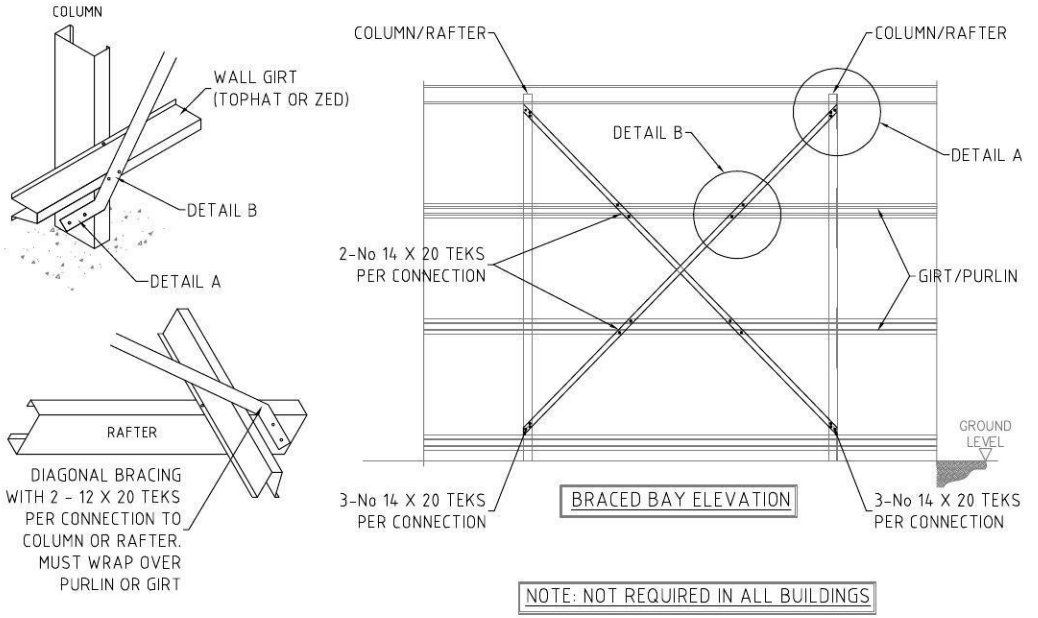
DATE: 02.01.2013	Title: ROLLER DOOR HEADER	Drawing No. ARDHSW
REVISION: 01		



DATE: 02.01.2013	Title: SIDE WALL - PA DOOR CONNECTION	Drawing No. ASWPAD150
REVISION: 01		

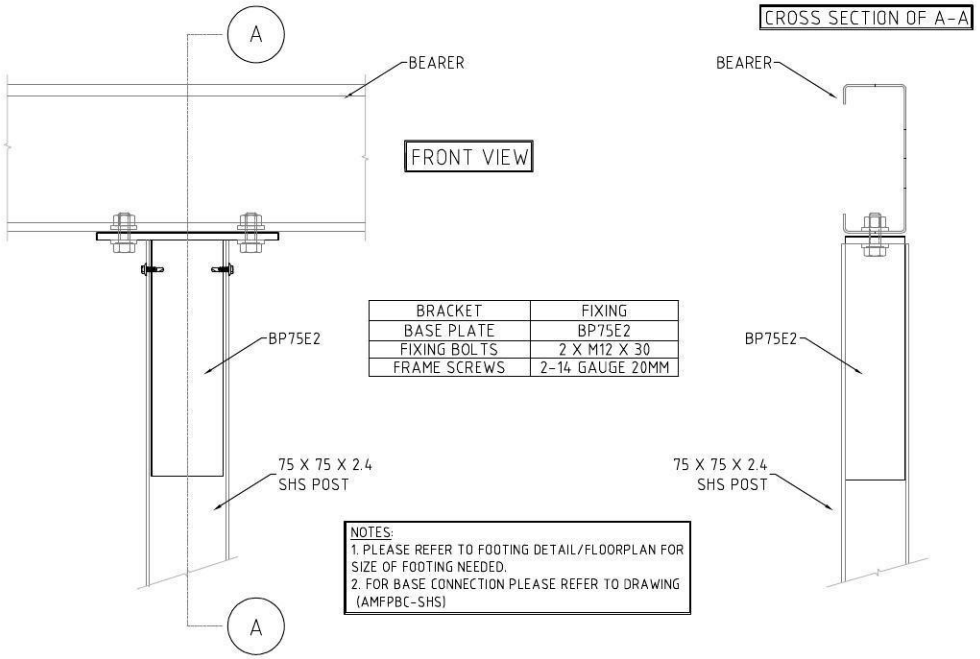


DATE: 02.01.2013 REVISION: 01	Title: GABLE WALL - PA DOOR CONNECTION	Drawing No. AGEPAD150



NOTE: NOT REQUIRED IN ALL BUILDINGS

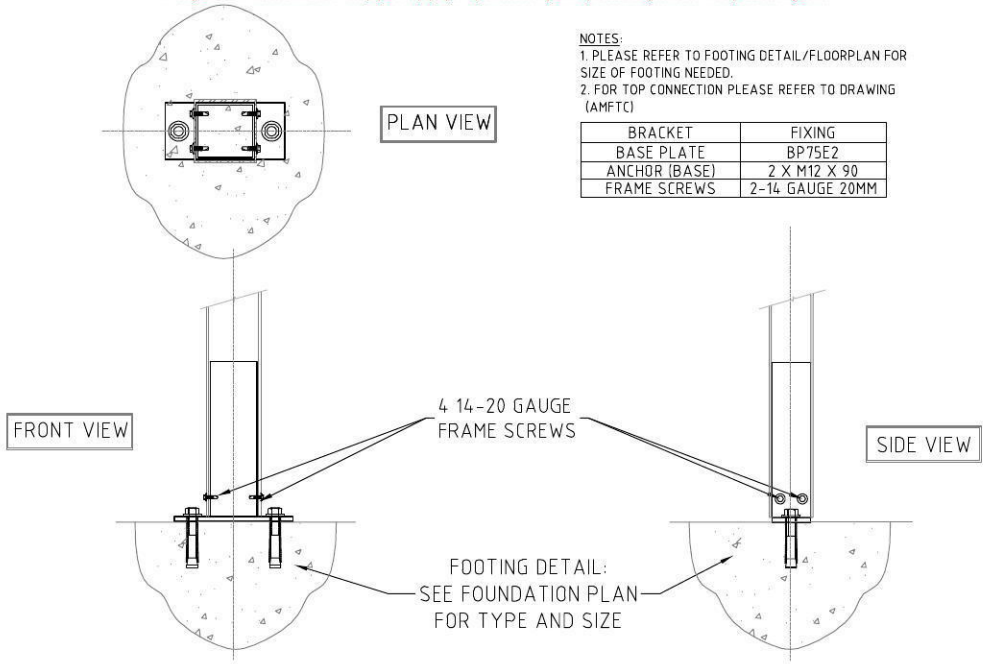
DATE: 02.01.2013 REVISION: 01	Title: DIAGONAL WALL & ROOF BRACING	Drawing No. ADBC



BRACKET	FIXING
BASE PLATE	BP75E2
FIXING BOLTS	2 X M12 X 30
FRAME SCREWS	2-14 GAUGE 20MM

NOTES:
1. PLEASE REFER TO FOOTING DETAIL/FLOORPLAN FOR SIZE OF FOOTING NEEDED.
2. FOR BASE CONNECTION PLEASE REFER TO DRAWING (AMFPBC-SHS)

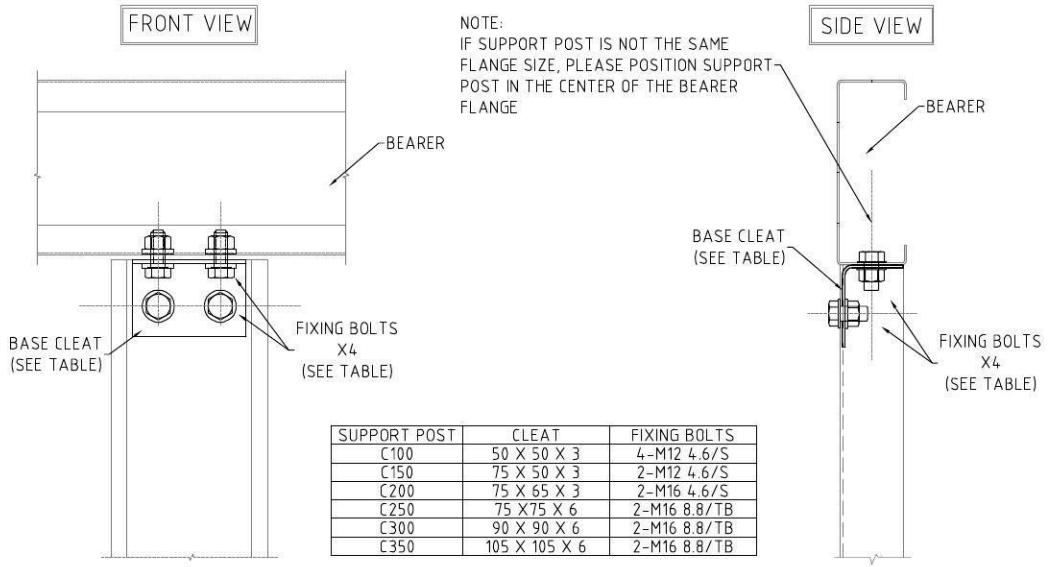
DATE: 02.01.2013 REVISION: 01	Title: MEZZANINE SHS SUPPORT POST CONNECTION	Drawing No. AMFPTC-SHS



NOTES:
1. PLEASE REFER TO FOOTING DETAIL/FLOORPLAN FOR SIZE OF FOOTING NEEDED.
2. FOR TOP CONNECTION PLEASE REFER TO DRAWING (AMFTC)

BRACKET	FIXING
BASE PLATE	BP75E2
ANCHOR (BASE)	2 X M12 X 90
FRAME SCREWS	2-14 GAUGE 20MM

DATE: 02.01.2013 REVISION: 01	Title: MEZZANINE SHS SUPPORT POST CONNECTION	Drawing No. AMFPBC-SHS



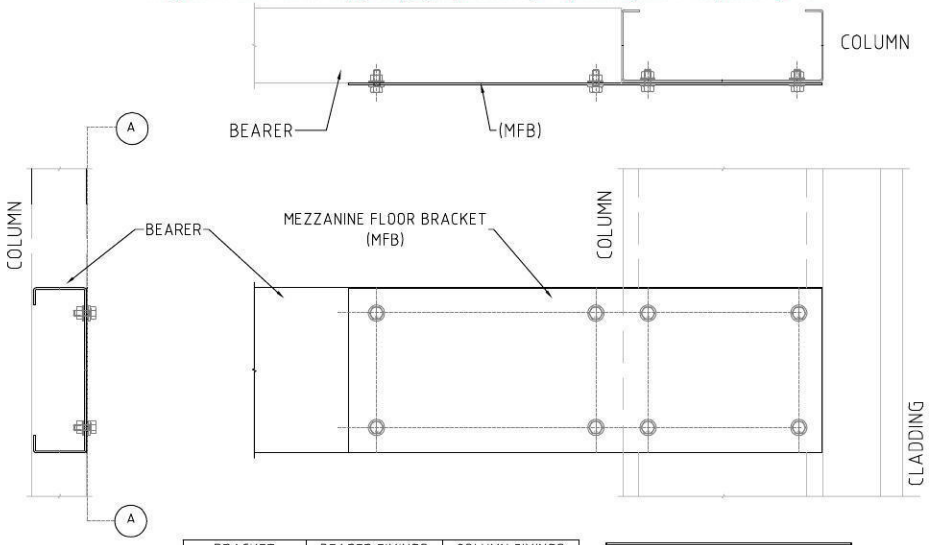
SUPPORT POST	CLEAT	FIXING BOLTS
C100	50 X 50 X 3	4-M12 4.6/S
C150	75 X 50 X 3	2-M12 4.6/S
C200	75 X 65 X 3	2-M16 4.6/S
C250	75 X75 X 6	2-M16 8.8/TB
C300	90 X 90 X 6	2-M16 8.8/TB
C350	105 X 105 X 6	2-M16 8.8/TB

NOTES:
1. PLEASE REFER TO BUILDING SPEC SHEET FOR SUPPORT POST MEMBER SIZE.

DATE: 02.01.2013
REVISION: 01

Title: MEZZANINE SUPPORT POST TOP CONNECTION

Drawing No. AMFESPTCS



BRACKET	BEARER FIXINGS	COLUMN FIXINGS
(MFB)	4 X M16 8.8TB	4 X M16 8.8TB

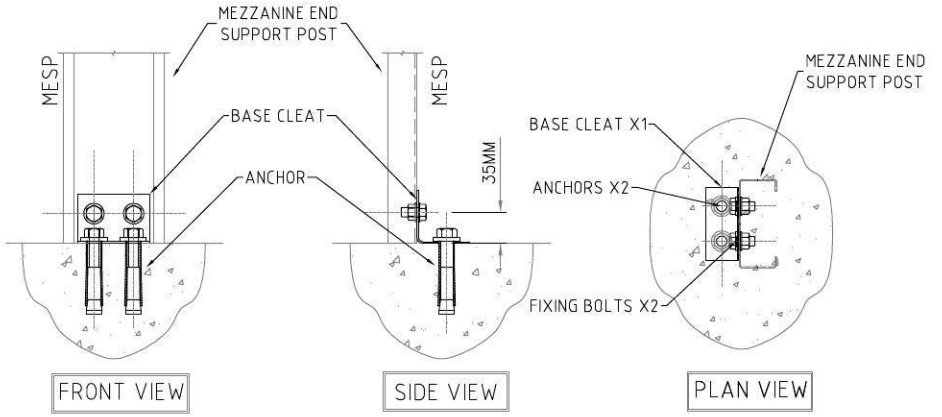
CROSS SECTION OF A-A

NOTES:
1. PLEASE REFER TO BUILDING SPEC SHEET FOR BEARER AND JOIST MEMBER SIZE.
2. IF BEARERS OR COLUMNS ARE BACK TO BACK THEN (MFB) IS BOLTED IN BETWEEN EITHER.

DATE: 02.01.2013
REVISION: 01

Title: MEZAANINE BEARER CONNECTION

Drawing No. AMFBSC



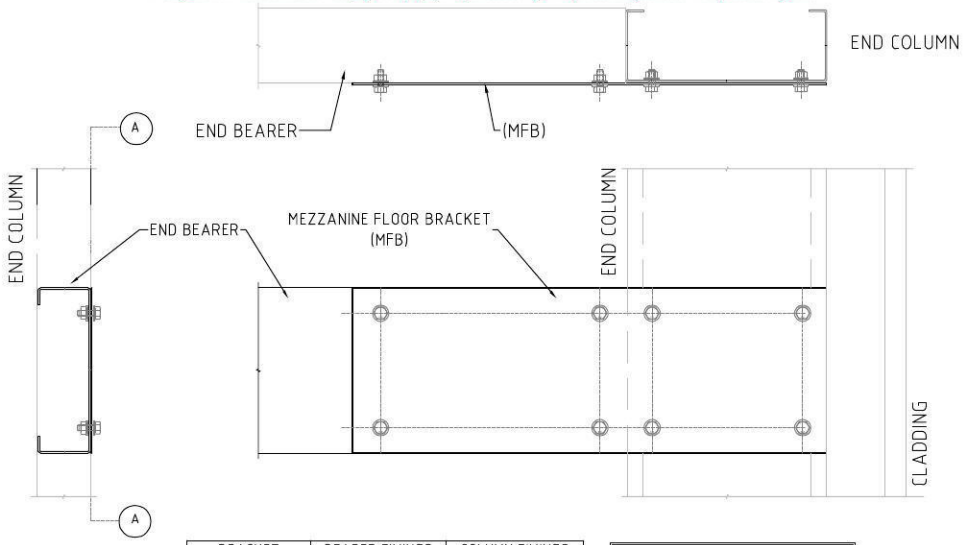
MULLION	CLEAT	ANCHOR	FIXING BOLTS
C100	50 X 50 X 3	2 X M12 X 90	2-M12 4.6/S
C150	75 X 50 X 3	2 X M12 X 90	2-M12 4.6/S
C200 < 4M BAY	75 X 65 X 3	2 X M12 X 90	2-M16 4.6/S
C200 > 4M BAY	75 X 65 X 6	2 X M16 X 110	2-M16 8.8/TB
C250	75 X75 X 6	2 X M16 X 110	2-M16 8.8/TB
C300	90 X 90 X 6	2 X M20 X 115	2-M16 8.8/TB
C350	105 X 105 X 6	2 X M20 X 115	2-M16 8.8/TB

NOTES:
1. PLEASE REFER TO BUILDING SPEC SHEET FOR MEZZANINE SUPPORT POST MEMBER SIZE.

DATE: 02.01.2013
REVISION: 01

Title: MEZZANINE SUPPORT POST BASE CONNECTION

Drawing No. AMFESPBC



BRACKET	BEARER FIXINGS	COLUMN FIXINGS
(MFB)	4 X M16 8.8TB	4 X M16 8.8TB

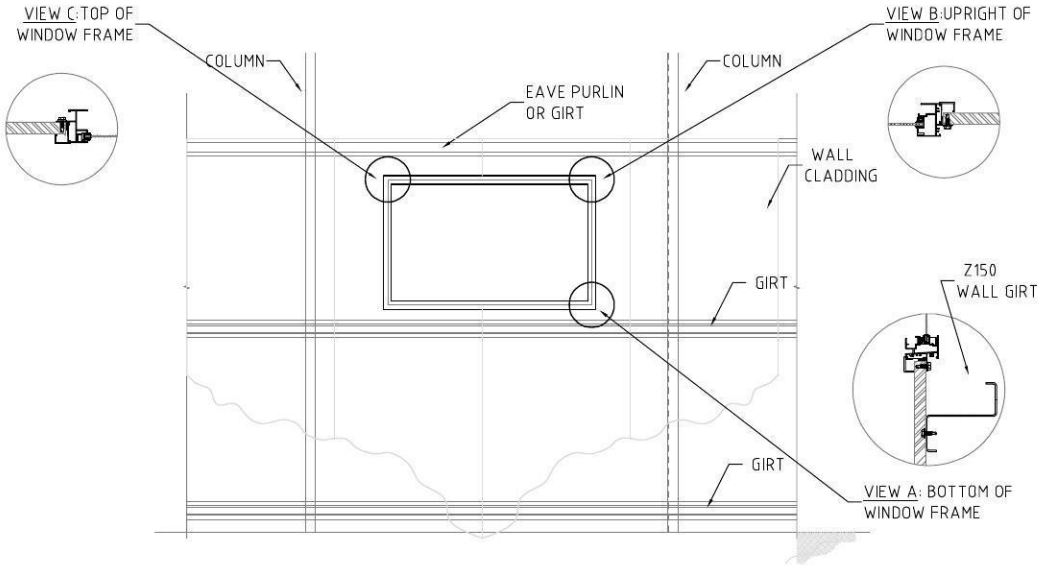
CROSS SECTION OF A-A

NOTES:
1. PLEASE REFER TO BUILDING SPEC SHEET FOR BEARER AND JOIST MEMBER SIZE.
2. IF BEARERS OR COLUMNS ARE BACK TO BACK THEN (MFB) IS BOLTED IN BETWEEN EITHER.

DATE: 02.01.2013
REVISION: 01

Title: MEZAANINE END BEARER CONNECTION

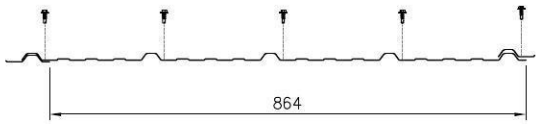
Drawing No. AMFEBCS



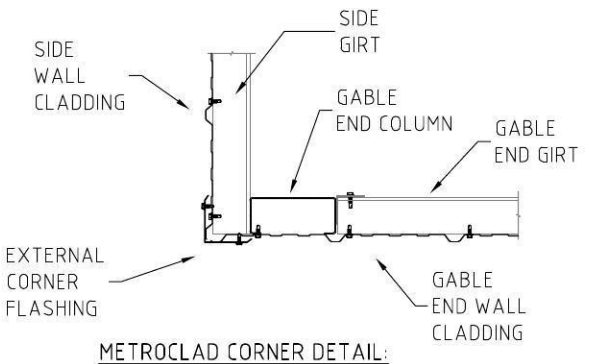
NOTES:
CUT WINDOW OPENING 10MM BIGGER THAN ACTUAL WINDOW SIZE.
CUTS FOR WINDOWS ARE DONE AFTER THE WALL IS CLAD, SO AS TO PLACE THE WINDOW BETWEEN THE RIBS OF THE SHEETS.

DATE: 02.01.2013	Title: WINDOW - SIDE WALL	Drawing No. AWFSW150
REVISION: 01		

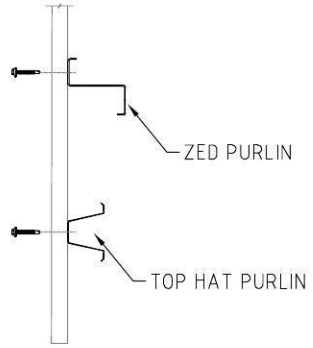
METROCLAD - FASTENING SCHEDULE



METROLL METROCLAD:
COVERAGE: 864
THICKNESS: 0.35 OR 0.42



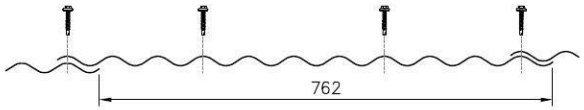
METROCLAD CORNER DETAIL:



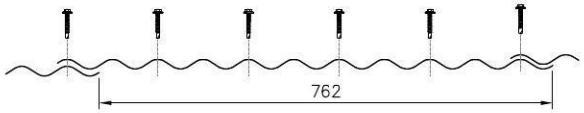
METROCLAD FIXING DETAIL

DATE: 02.01.2013	Title: METROCLAD WALL CLADDING	Drawing No. WCMC
REVISION: 01		

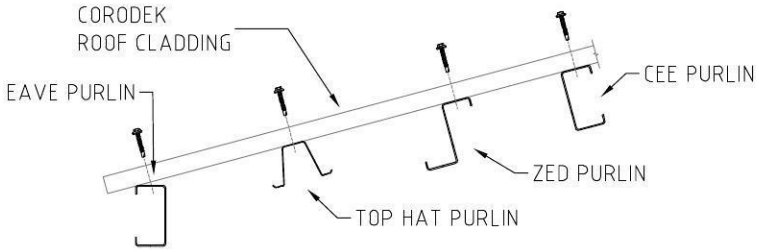
CORODEK - INTERMEDIATE FASTENING SCHEDULE



CORODEK - EAVE FASTENING SCHEDULE

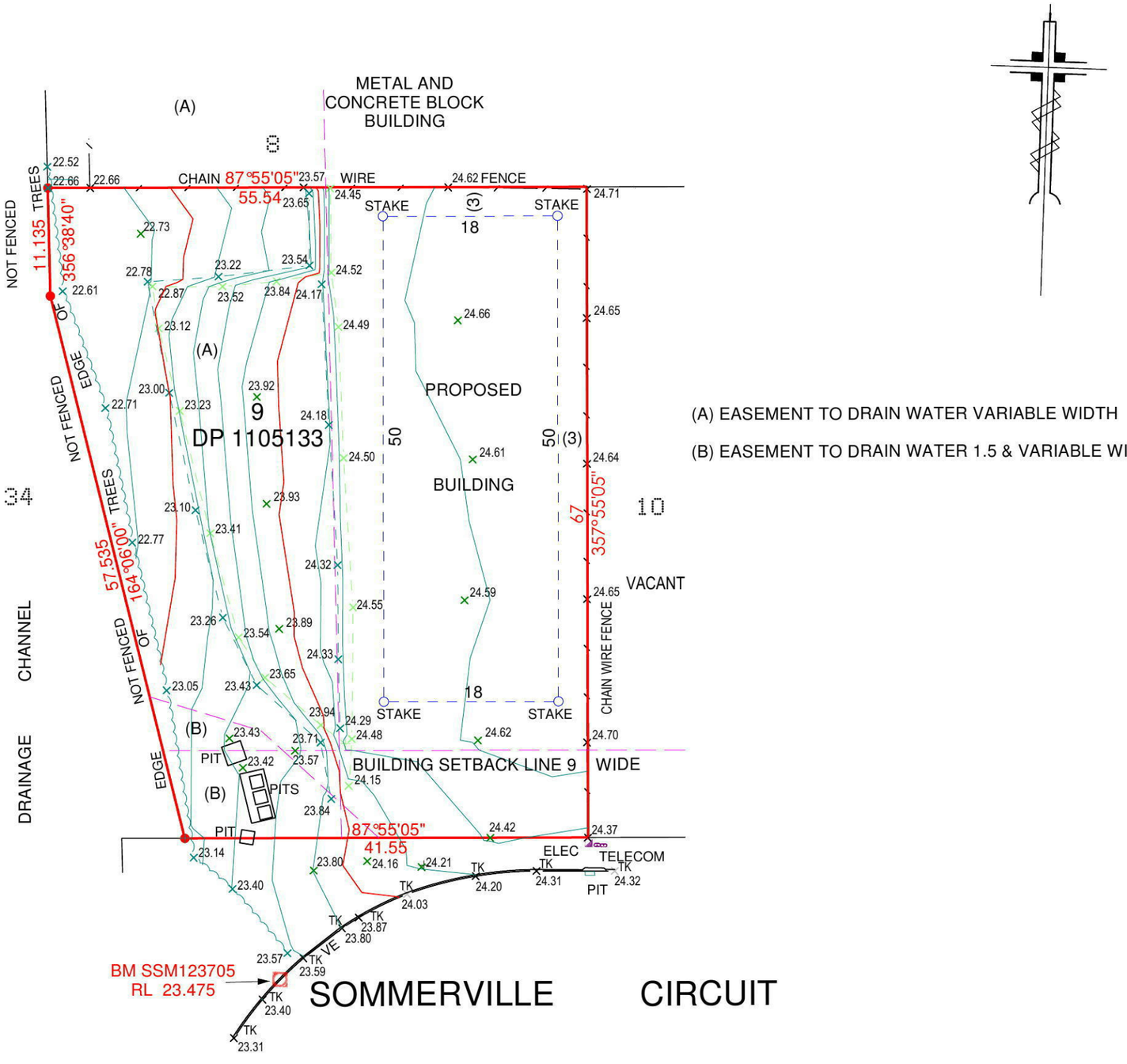


CORODEK:
COVERAGE: 762
RIB HEIGHT: 16
THICKNESS: 0.42 OR 0.48



CORODEK PURLIN FIXING DETAIL:

DATE: 02.01.2013	Title: CORODEK ROOF CLADDING	Drawing No. RCCD
REVISION: 01		



(A) EASEMENT TO DRAIN WATER VARIABLE WIDTH

(B) EASEMENT TO DRAIN WATER 1.5 & VARIABLE WIDTH

NOTES:

* The position of features are indicative only.
* Services shown hereon have been located where possible by field survey. Prior to any excavation or construction on the site, the relevant authority should be contacted for possible location of any other services including those which may be underground.
* 101.50 indicates natural surface level.
* Contours shown depict the general topography. They do not represent exact levels other than at spot levels shown.
* Relationship of improvements to boundaries is diagrammatic only. Where offsets are critical they should be confirmed by further survey.
* Bearings and distances are by title only. No boundary investigation has been carried out.
* The shapes, sizes, position, heights and species of trees are approximate only. Further field inspection should be carried out where tree details are considered to critically affect design.
* Origin of levels, SSM 93288 RL 24.67 adopted

PLAN SHOWING DETAIL, LEVELS & CONTOURS OVER LOT 9 IN DP 1105133 KNOWN AS N°33 SOMMERVILLE STREET,EMU PLAINS

Client:
John Parsons
14 Lemon Gum Ct
BLUE HAVEN 2262

FREEBURN W E SURVEYING

MATTHEW FREEBURN
LAND, ENGINEERING & MINING SURVEYOR
SUITE 2, 1st FLOOR, "SURVEYOR HOUSE"
2 CASTLEREAGH STREET
PENRITH 2750

Telephone 02 4721 2289
Fax 02 4721 5646
email
matthew@freeburnsurveyors.com

Date: 11/11/2013	Ref: 34073	Sheet 1 of 1
Scale 1: 500	Datum: AHD	Contour: 0.2m
Surveyor: DC/DF	Drawn By: DC/DF	Checked: MF
CC6 - SURVEY 5 - DWG 34073		A3 SHEET