

PROPOSED RESIDENCE

LOT.94 AERIAL AVENUE, TORQUAY

GENERAL

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT'S 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 OR ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- G2. ALL DIMENSIONS ARE TO BE OBTAINED FROM THE ARCHITECT'S DRAWINGS OR FROM SITE. ENGINEER'S DRAWINGS MUST NOT BE SCALED.
- G3. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.
- G4. MATERIAL AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH THE RELEVANT SAA CODES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- G5. THE APPROVAL OF A SUBSTITUTION BY THE ENGINEER IS NOT AN AUTHORIZATION FOR AN EXTRA. ANY EXTRA INVOLVED MUST BE TAKEN UP WITH THE ARCHITECT BEFORE WORK COMMENCES.
- G6. THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS:-

AREA	LIVE LOAD
FLOOR	15 kPa
ROOF	0.25 kPa 'OR' (1.8/A + 0.12) WHICHEVER IS GREATER
BALCONY (IF APPLICABLE)	2.0 kPa

- G7. FOUNDATION MATERIAL TO BE APPROVED BEFORE POURING CONCRETE FOR A SAFE BEARING CAPACITY OF: 80kPa.....RAFT SLAB
100kPa.....STRIP FOOTING

STRUCTURAL STEELWORK

- S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 1250 AND/OR AS4100.
- S2. WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554.
- S3. HIGH STRENGTH BOLTING SHALL BE IN ACCORDANCE WITH AS 1511.
- S4. TWO COPIES OF THE SHOP DETAIL DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEERS AND APPROVAL OF SAME OBTAINED BEFORE COMMENCING FABRICATION. APPROVAL WILL NOT COVER DIMENSIONS OR LAYOUT.
- S5. THE CONTRACTOR SHALL PROVIDE AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED SUCH TEMPORARY BRACING AS IS NECESSARY TO STABILIZE THE STRUCTURE DURING ERECTION.
- S6. CAMBER TO STRUCTURAL STEEL ROOF BEAMS, TRUSSES, PORTALS, ETC., TO BE 2mm FOR EVERY 1M OR SPAN UNLESS OTHERWISE NOTED.
- S7. ALL CLEAT AND DRILLING FOR FIXING OF TIMBER MEMBERS, ETC., TO BE PROVIDED BY FABRICATOR.
- S8. EXCEPT WHERE OTHERWISE SHOWN CONNECTIONS SHALL HAVE 6mm CONTINUOUS FILLET WELDS, 2-M16 8.8/S BOLTS IN 1.5mm CLEARANCE HOLES AND 10mm THICK CLEAT PLATE.
- S9. CONCRETE ENCASED STEELWORK SHALL BE WRAPPED WITH SLAB FABRIC, UNLESS OTHERWISE SHOWN.
- S10. STEELWORK SHALL BE THOROUGHLY WIRE BRUSHED AND GIVEN ONE SHOP COAT OF APPROVED PRIMER EXCEPT THAT NONE SHALL BE APPLIED AT CONTACT SURFACES WHERE H.S. BOLTS USED.
- S11. ALL STEEL BEAMS AND LINTELS ARE TO HAVE 100mm MIN. END BEARING UP TO 1.0m & 150mm MIN. END BEARING OVER 1.0m, UNLESS OTHERWISE NOTED.
- S12. STEEL FRAMING MUST BE PROTECTED FROM CORROSION WHERE REQUIRED IN ACCORDANCE WITH BCA 2013 3.4.2.2

CONCRETE

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
- C2. CONCRETE COVER TO ALL REINFORCEMENT (FINISHES NOT INCLUDED).

ELEMENT	FORMED AND SHELTERED	FORMED AND EXPOSED	NO FORM WORK
SLABS AND WALLS	20mm	30mm	65mm
BEAMS	25mm	40mm	65mm
COLUMNS	40mm	50mm	75mm
FOOTINGS		65mm	75mm

- C3. CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH AND MUST NOT BE REDUCED OR HOLED IN ANY WAY WITHOUT THE ENGINEER APPROVAL.
- C4. DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
- C5. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE PROPERLY FORMED AND LOCATED TO THE APPROVAL OF THE ENGINEER.
- C6. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
- C7. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- C8. REINFORCEMENT SYMBOLS:-
L LOW DUCTILITY BARS TO AS 4671: 2001
N NORMAL DUCTILITY BARS TO AS 4671: 2001
E SEISMIC (EARTHQUAKE) DUCTILITY BAR TO AS 4671: 2001
THE NUMBER FOLLOWING THE BAR SYMBOL IS THE NOMINAL BAR DIAMETER IN MILLIMETRES.
- C9. CAMBER TO BEAMS AND SLABS SHALL BE 2mm FOR EVERY 1M OF SPAN UNLESS OTHERWISE NOTED.
- C10. ALL CONCRETE SHALL BE GRADE 20MPa - 100mm SLUMP (U.N.O.)
- C11. ALL REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION SO AS NOT TO BE DISPLACED DURING CONCRETING ON APPROVED BAR CHAIRS AT 1.0m MAX CRS BOTH WAYS. WHERE REQUIRED PROVIDE SUPPORT BARS N16 AT 1.0M MAX CRS.
- C12. CONCRETE TO BE KEPT FREE OF SUPPORTING BRICKWORK BY TWO LAYERS OF A SUITABLE MEMBRANE (MALTHOID, ETC.), OR AS DIRECTED BY THE ENGINEER. VERTICAL FACES OF CONCRETE TO BE KEPT FREE BY 10mm THICKNESS OF BITUMINOUS CANITE.
- C13. WHERE WALLS ARE NON-LOAD BEARING AT EITHER HORIZONTAL OR VERTICAL FACES THEY SHALL BE SEPARATED FROM CONCRETE OR BRICKWORK BY 10mm THICK CANITE.
- C14. ALL REINFORCEMENT FOR ANY ONE POUR SHALL BE COMPLETELY PLACED AND TIED PRIOR TO INSPECTION BY THE ENGINEER OR ARCHITECT. NO CONCRETE SHALL BE POURED UNTIL REINFORCEMENT HAS BEEN INSPECTED AND APPROVED.
- C15. WHERE SLABS AND BEAMS ARE TO SUPPORT BRICKWORK OVER, FORMWORK AND PROPS MUST BE REMOVED BEFORE COMMENCEMENT OF BRICKWORK.
- C16. TRENCH MESH IN BEAMS TO BE LAID CONTINUOUSLY WITH EACH LAYER BEING LAPPED FOR ITS FULL WIDTH AT INTERSECTIONS AND FOR A MINIMUM OF 500mm AT SPLICES. THE TRENCH MESH SHALL BE OVERLAPPED BY THE WIDTH OF THE FABRIC AT T & L JUNCTIONS.
- C17. AS A GENERAL POLICY, INTRAX DO NOT RECOMMEND THE USE OF POLISHED CONCRETE. THE OWNER SHOULD BE MADE AWARE BY THE BUILDING DESIGNER AND BUILDER THAT CONCRETE IS A NATURAL MATERIAL AND THE POSSIBILITY OF SURFACE CRACK FORMATION MAY OCCUR AND CANNOT BE GUARANTEED EITHER IN THE SHORT OR LONG TERM. WE HIGHLY RECOMMEND CURING THE SLAB USING AN APPROVED CURING SPRAYED MEMBRANE.

BRICKWORK

- B1. THE UNCONFINED COMPRESSIVE STRENGTH OF A BRICK UNIT TO BE MIN. OF 15MPa AND COMPRESSIVE STRENGTH OF MASONRY TO BE A MIN. OF 5.4 MPa
- B2. THE MORTAR MIX FOR BRICKWORK SHALL BE 1:1:6
- B3. FOR NON-LOAD BEARING WALLS SEE NOTE C13.
- B4. ARTICULATION (OR EXPANSION) JOINT SPACING MUST BE IN ACCORDANCE WITH AS4773.1 - 2010, AS4773.3 - 2010 & TECHNICAL NO 61 (AUG 2008) FOR ARTICULATED WALLING UNLESS NOTED OTHERWISE.
- B5. ALL WALL TIES MUST BE GALVANISED.

STRUCTURAL TIMBER

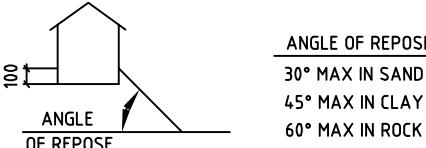
- T1. ALL TIMBER FRAMING IS TO BE IN ACCORDANCE WITH AS 1684-2010 RESIDENTIAL TIMBER FRAMED CONSTRUCTION.
- T2. ALL TIMBER STRESS GRADES NOMINATED SHALL BE IN ACCORDANCE WITH THE RELEVANT CODES AND MEANS THE STRUCTURAL QUALITY OF A TIMBER SECTION (REFER TO AS 1720).
- T3. TIMBER SHALL BE STORED AND HANDLED SO AS NOT TO BE DETRIMENTAL TO THEIR PERFORMANCE OR DAMAGE THEM. REFER APPENDIX I AS 1684-2-2010
- T4. ALL TIMBER SHALL BE DRY, IE: LESS THAN 15% MOISTURE CONTENT AT THE TIME OF CONSTRUCTION AND SHALL BE PROTECTED AND/OR TREATED AS NOTED.
- T5. ALL TIMBER BEAMS AND LINTELS ARE TO BEAR ON DOUBLE STUDS (ONE JAMB AND ONE BEARING STUD), UNLESS OTHERWISE NOTED.
- T6. BEAMS/STUDS HAVING MORE THAN 1 MEMBER TO BE NAIL LAMINATED TOGETHER IN ACCORDANCE WITH AS 1684-2010.

FRAMING

- F1. PROVIDE SOLID BLOCKING (45 WIDE x D-25 DEEP) SECURELY NAILED TO JOISTS/RAFTERS (D=DEPTH OF JOIST/RAFTER) AT 1800 MAX. CRS.
- F2. ALL EXTERNAL OR EXPOSED STEELWORK TO BE HOT DIP GALVANISED OR PAINTED TO ARCHITECTS DETAILS U.N.O.
- F3. WATERPROOFING TO ARCHITECTS DETAILS
- F4. ALL TIMBER FRAMING & BRACING NOT SHOWN TO COMPLY WITH AS1684 TIMBER FRAMING MANUAL.
- F5. ALL BRICKWORK LINTELS TO ARCHITECTS DETAILS. ALL BRICKWORK LINTELS TO COMPLY WITH F.3.3.5 OF B.C.A 2013 VOLUME 2.
- F6. ALL BEAMS/GIRDER & HIP TRUSSES TO BE SUPPORTED ON DOUBLE STUDS EACH END U.N.O.
- F7. ALL LINTELS TO BE SUPPORTED ON SINGLE STUD AND JAMB STUD U.N.O.
- F8. ALL TRUSSES & WALL FRAMES TO MANUFACTURES DESIGN & DETAILS.
- F9. TRUSS DIRECTION ASSUMED AS SHOWN (IF APPLICABLE). CONTACT THIS OFFICE IF DIFFERENT TRUSS LAYOUT IS USED SO LINTELS ETC CAN BE REDESIGNED (IF REQUIRED).
- F10. ALL TIMBER LINTELS TO BE DESIGNED BY THE TRUSS MANUFACTURER. TYPICAL U.N.O.
- F11. BUILDER TO SUPPLY MANUFACTURERS TRUSS LAYOUT TO THIS OFFICE FOR APPROVAL PRIOR TO CONSTRUCTION. TRUSS DESIGN MUST BE IN ACCORDANCE WITH AS1720 AND AS1684. TRUSS FABRICATOR/BUILDER IS RESPONSIBLE FOR PROVIDING ADEQUATE ROOF/WALL BRACING TO ENSURE STABILITY OF THE STRUCTURE IN ACCORDANCE TO AS1684.
- F12. ALL INTERNAL WALLS TO BE NON-LOAD BEARING (TYPICAL) UNLESS HATCHED OTHERWISE ON PLANS.

FOOTING: ANGLE OF REPOSE

- A1. FOOTING MUST NOT UNDERMINE EXISTING FOOTING OR BE UNDERMINED BY PROPOSED EXCAVATION.
- A2. ENSURE ADEQUATE ANGLE OF REPOSE AT ALL TIMES (REFER DETAILS BELOW).
- A3. NOTIFY THIS OFFICE IF FOOTING UNDERMINE OCCURS.
- A4. PIPE DEPTH & LOCATION MUST BE CONFIRMED PRIOR TO CONSTRUCTION.



Client:
DERBYSHIRE

Project:

Drawing:
GENERAL NOTES

SITE DRAINAGE

- D1. AT THE TIME OF THE PREPARATION OF THIS DOCUMENT, IF THE DRAINAGE DESIGN WAS NOT PREPARED OR CERTIFIED BY THIS OFFICE THEN THE DRAINAGE SYSTEM MAY NEED TO BE DOCUMENTED BY A SUITABLY QUALIFIED PERSON TO COMPLY WITH AS2870-2011. THE DRAINAGE DESIGNER SHOULD ENSURE THAT THE ELEMENTS OF THE DRAINAGE SYSTEM DESIGN ARE CONSIDERED WITH RESPECT TO THE PROPOSED FOOTING SYSTEM. WE RECOMMEND THAT INTRAX CONSULTING ENGINEERS OR AN EQUIVALENT CERTIFIED PRACTITIONER, REVIEW ALL THE DOCUMENTATION TO ENSURE COMPLIANCE.
- D2. SITES SHOULD BE DRAINED SO THAT WATER CANNOT POND AGAINST OR NEAR THE HOUSE. THE GROUND IMMEDIATELY ADJACENT TO THE HOUSE SHOULD BE GRADED TO FALL 50mm OVER THE FIRST METRE. WHERE THIS IS IMPRACTICAL (IE: ON SEVERAL SLOPING SITES) USE A.G. DRAINS ADJACENT TO FOOTINGS WHERE THE GROUND FALLS TOWARDS THE BUILDING.

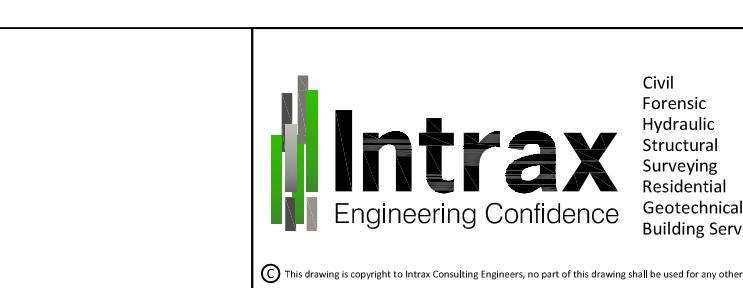
INSPECTIONS

ALL STRUCTURAL WORK MUST BE INSPECTED AND APPROVED IN WRITING PRIOR TO ANY WORK PROCEEDING. 48 HOUR MIN. NOTICE IS REQUIRED FOR ALL INSPECTIONS.

PREPARATION OF SUB-BASE FOR SLABS ON GROUND

- P1. CLEAR AREA UNDER SLAB OF ALL TOP SOIL CONTAINING HUMUS AND VEGETABLE MATTER 100mm MIN.
- P2. PROVIDE FILL UNDER SLAB WHERE REQUIRED TO PRODUCE FINISHED LEVELS AS SHOWN ON PLANS.
- P3. FILLING USED IN THE CONSTRUCTION OF A SLAB, EXCEPT WHERE THE SLAB IS SUSPENDED, SHALL CONSIST OF CONTROLLED FILL OR ROLLED FILL AS FOLLOWS:
 - (a) CONTROLLED FILL IS MATERIAL THAT HAS BEEN PLACED AND COMPAKTED IN LAYERS BY COMPACTION EQUIPMENT WITHIN A DEFINED MOISTURE RANGE TO A DEFINED DENSITY REQUIREMENT. EXCEPT AS PROVIDED BELOW, CONTROLLED FILL SHALL BE PLACED IN ACCORDANCE WITH AS3798. SAND FILL UP TO 0.8 M DEEP, WELL COMPAKTED IN NOT MORE THAN 0.3 M THICK LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT. A SATISFACTORY TEST FOR SAND FILL NOT CONTAINING GRAVEL SIZED MATERIAL IS THE ACHIEVEMENT OF A BLOW COUNT OF 7 OR MORE PER 0.3 M USING THE PENETROMETER TEST DESCRIBED IN AS1289.6.3.3. NON-SAND FILL UP TO 0.4 M DEEP, WELL COMPAKTED IN NOT MORE THAN 0.15 M LAYERS BY A MECHANICAL ROLLER SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT. CLAY FILL SHALL BE MOIST DURING COMPACTION.
 - (b) ROLLED FILL CONSISTS OF MATERIAL COMPAKTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 0.6 M COMPAKTED IN LAYERS NOT MORE THAN 0.3 M THICK FOR SAND MATERIAL OR 0.3 M COMPAKTED IN LAYERS NOT MORE THAN 0.15 M THICK FOR OTHER MATERIAL.
NOTE: THE DEPTHS OF FILL GIVEN IN THIS CLAUSE ARE THE DEPTHS MEASURED AFTER COMPACTION.
- P4. A 50mm MIN. BASE COURSE OF PACKING SAND SHALL BE SPREAD OVER THE SUB-BASE AND TO BE THOROUGHLY ROLLED AND COMPAKTED TO A SMOOTH LEVEL SURFACE. THE SAND SHALL BE MOISTENED PRIOR TO THE PLACEMENT OF A 0.2mm POLYTHENE MEMBRANE IN 3600mm MIN. WIDE SHEETS LAPPED 150mm AND JOINED WITH 75mm WIDE PRESSURE SENSITIVE TAPE. THE TAPE SHALL BE LAID UNDER ALL SLABS AND WALLS IN CONTACT WITH THE GROUND.
- P5. THE TOTAL FILL BENEATH THE SLAB PANELS MUST NOT EXCEED 600mm, IE. THE SUM OF EXISTING FILL PLUS ANY NEW FILLING PLACED TOGETHER MUST NOT EXCEED 600mm MAX.

P2	PRELIMINARY ISSUE	19.10.15	R.S.
P1	PRELIMINARY ISSUE	16.09.15	R.S.
Rev.	Remark/Comment	Date:	Appr.



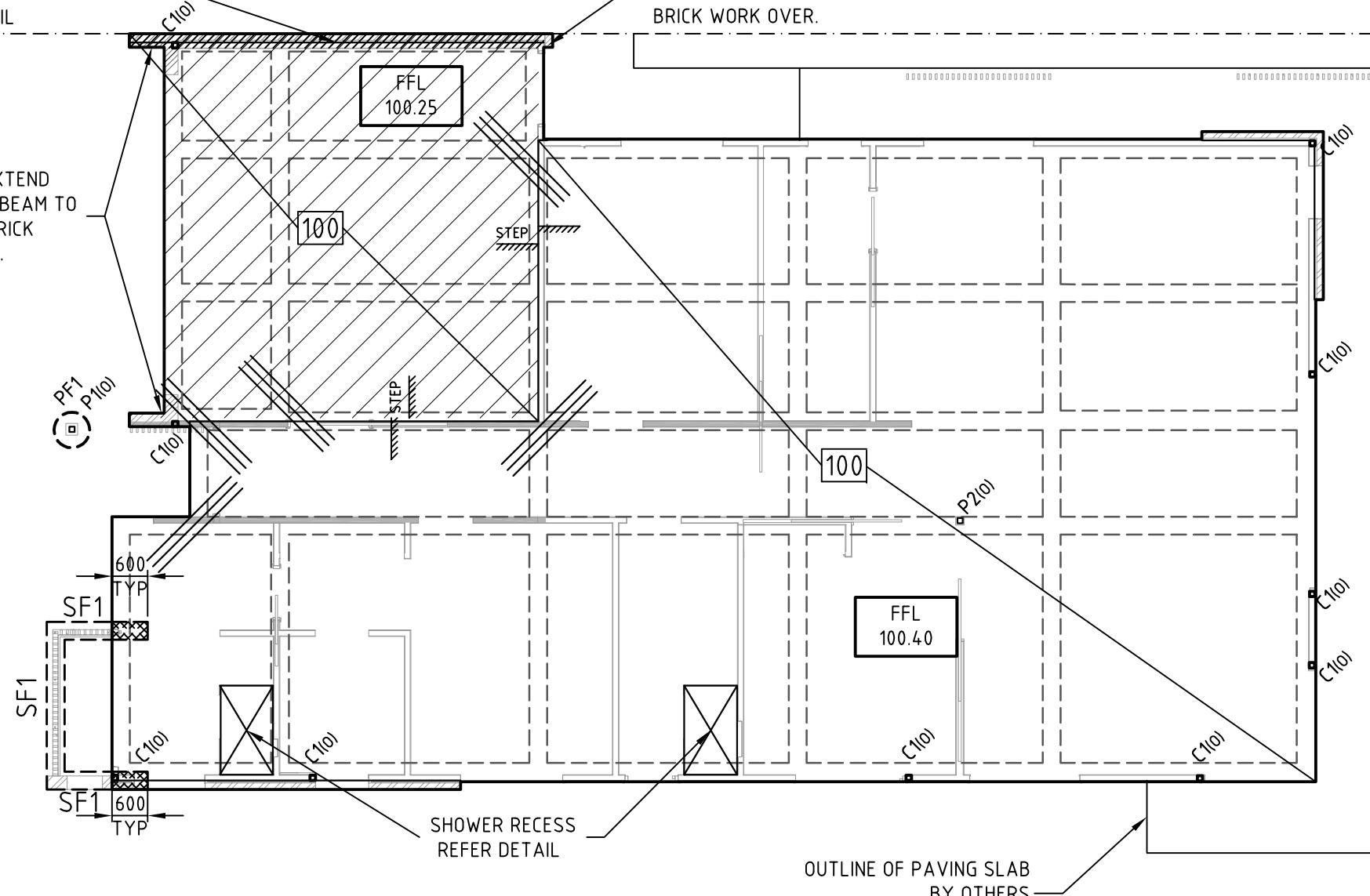
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VIC 3205 03 8371 0100
Geelong 03 5221 8282
New South Wales 02 4869 5666
Queensland 07 3813 5617
South Australia 08 8165 0122
A.B.N. 31 106 481 252
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PRELIMINARY ISSUE NOT FOR CONSTRUCTION		
Designed: P.E.	Scale (A3): N/A	
Drawn: B.Z.	Date: SEP.15	
Checked: R.S.	Sheets: 18	
Project No. 67522	Drawing No. S1	Rev. P2

HATCHING DENOTES GARAGE
RETAINING WALL. IF REQUIRED
REFER DETAIL

LOCALLY EXTEND SLAB
EDGE BEAM TO SUPPORT
BRICK WORK OVER.

LOCALLY EXTEND
SLAB EDGE BEAM TO
SUPPORT BRICK
WORK OVER.



SITE BOUNDARY

GROUND FLOOR SLAB PLAN

SCALE = 1:100

LEGEND

INTERNAL LOAD BEARING WALLS OVER

BRICKWORK OVER

TIMBER STUD WALLS OVER

DENOTES SLAB SETDOWN

SF1 300 WIDE x 600 DEEP STRIP FOOTING WITH
3-L12TM TOP & BOTTOM. FOUNDED 100mm INTO
NATURAL CLAY

PF1 600 DIA. CONCRETE PAD FOOTING REFER DETAIL

100 100 THICK CONCRETE RAFT SLAB, SL82 TOP WITH 30mm COVER ON 0.2mm POLYTHENE MEMBRANE (LAPPED 200 AND TAPED AT JOINTS) OVER 50mm COMPACTED PACKING SAND.

SLAB BEAMS TO BE 500 DEEP x 300 WIDE TYPICAL WITH 3-L11TM TOP & BOTTOM U.N.O.

EDGE & LOAD BEARING BEAMS MUST BE FOUND 100 MIN. INTO CLAYEY SANDY GRAVELLY SILT., PROVIDE 15MPa BLINDING CONCRETE IF REQUIRED TO ACHIEVE FOUNDING DEPTH.

PROVIDE 3-L12TM TOP x 2000 LONG TRIMMERS AT ALL SLAB RE-ENTRANT CORNERS TYPICAL U.N.O.

MEMBER SCHEDULE

MARK	SECTION	REMARKS/CONNECTIONS
DB1	2 - 90 x 45 F7 KD PINE	
DJ1	90 x 45 F7 KD PINE	AT 300 CRS. 300 MAX OVERHANG
LD1	90 x 45 F7 KD PINE	FIX TO TIMBER FAME WITH M8Ø BATTEN SCREWS TO EACH STUD
S1	100 x 100 CONCRETE STUMP	

NOTE: THIS SLAB DESIGN HAS TAKEN TREE EFFECT
(IDENTIFIED AT THE TIME OF SOIL INVESTIGATION) INTO
CONSIDERATION. OVER THE PROPOSED BUILDING AREA,
BUILDER TO REMOVE ALL TREES AND TREE
ROOTS/MATERIAL. ANY SOFT OR LOOSE MATERIAL THAT
DOES NOT RESPOND TO COMPACTION SHOULD BE
EXCAVATED TO ACHIEVE A FIRM WORKING BASE. FILL
HOLES WITH NON POROUS FILL COMPACTED IN 150mm MAX
LAYERS.

NOTE: LOT 95 VACANT AT TIME OF DESIGN ANY
DISCREPANCIES CONTACT ENGINEER

NOTE: SITE RETAINING WALLS ON BOUNDARY IF REQUIRED
BY OTHERS U.N.O.

NOTE: USE APPROPRIATE FLEXIBLE BEDDING MORTAR FOR
BRITTLE COVERINGS WHERE BRITTLE AREA (EG. CERAMIC
TILES) IS GREATER THAN 16m². ALTERNATIVELY THE
LAYING OF TILES (WITH FLEXIBLE ADHESIVE) SHOULD BE
DELAYED FOR AT LEAST 90 DAYS.

NOTE: IF THIS FOOTING IS TO BE CONSTRUCTED 1.0m OR LESS
AWAY FROM EXISTING FOOTING/ BUILDING THEN THIS
OFFICE IS TO BE CONTACTED FOR FURTHER ADVICE.

REFER TO RECOMMENDATIONS & SITE INVESTIGATIONS:

COMPANY: INTRAX CONSULTING ENGINEERS PTY LTD
REF. No.: 67522
DATED: 17.09.2015
CLASS: M (AS 2870-2011)

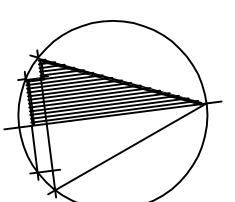
REFER TO ARCHITECTURAL WORKING DRAWINGS:

COMPANY: DERBYSHIRE
REF. No.: 14-66
DATED: 19.10.2015

REFER TO CIVIL/DRAINAGE DESIGN DRAWINGS:

COMPANY: N/A
REF. No.: N/A
DATED: N/A

THE DESIGN SHOULD BE READ IN CONJUNCTION
WITH THE DOCUMENTATION REFERENCED ABOVE.



Intrax
Engineering Confidence

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35 Bank Street South Melbourne
VIC 3205
03 8371 0100

Geelong 03 5221 8282
New South Wales 02 4869 5666
Queensland 07 3813 5617
South Australia 08 8165 0122

A.B.N. 31 106 481 252
www.intrax.com.au

Client:
DERBYSHIRE

Project:

Drawing:
GROUND FLOOR SLAB PLAN

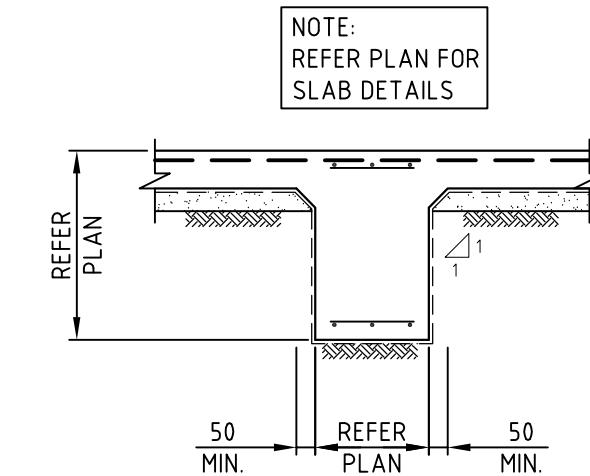
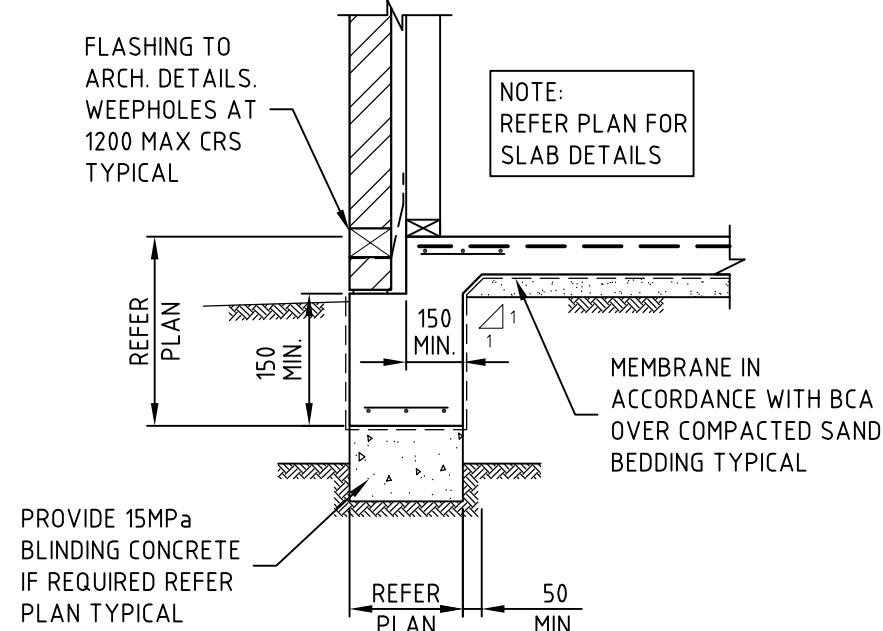
PRELIMINARY ISSUE NOT FOR CONSTRUCTION

Designed: P.E.	Scale (A3): AS NOTED	
Drawn: B.Z.	Date: SEP.15	
Checked: R.S.	Sheets: 18	
Project No.	Drawing No.	Rev.
67522	S2	P2

P2	PRELIMINARY ISSUE	19.10.15	R.S.
P1	PRELIMINARY ISSUE	16.09.15	R.S.
Rev.	Remark/Comment	Date:	Appr.

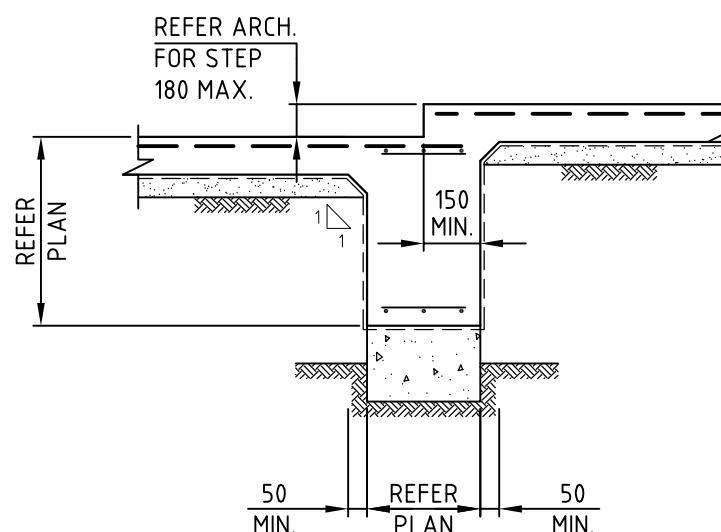
SLAB NOTES:

1. SLAB REINFORCEMENT TO BE LAPPED NOT LESS THAN 225mm OR 2 CROSS WIRES. SUPPORT MESH ON BAR CHAIRS AT 1000mm MAXIMUM SPACING IN BOTH DIRECTION.
2. BEAM/RIB REINFORCEMENT TO BE LAPPED AND TIED A MINIMUM OF 500mm AT SPLICES. LAP FULL BEAM WIDTH AT RIB INTERSECTIONS.
3. REINFORCEMENT SHALL BE FIXED IN POSITION BY BAR CHAIRS OR APPROVED SIMILAR.
4. THE CONCRETE SHALL BE TRANSPORTED, PLACED, VIBRATED AND CURED IN ACCORDANCE WITH GOOD BUILDING PRACTICE.



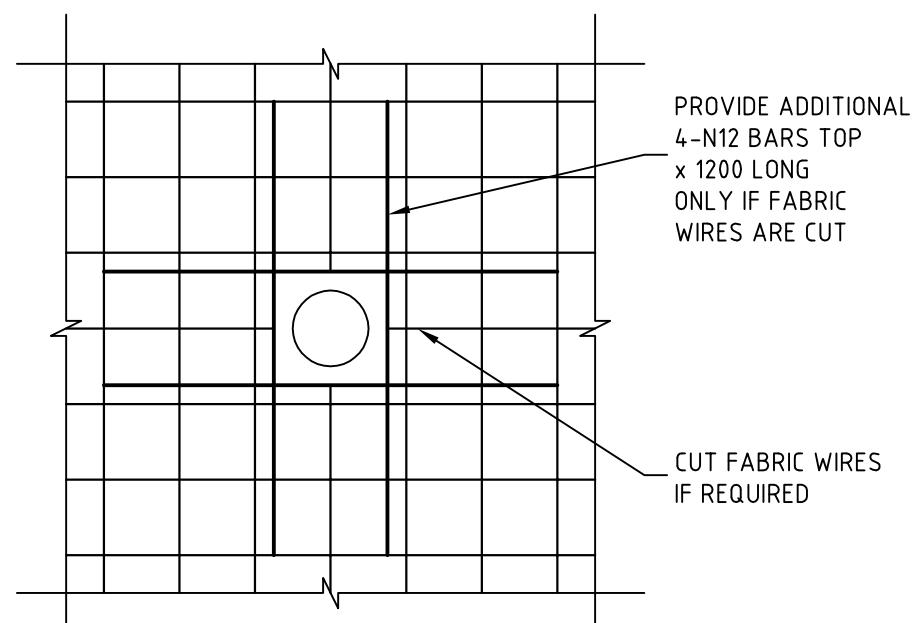
TYPICAL EXTERNAL RIB DETAIL

SCALE = 1:20



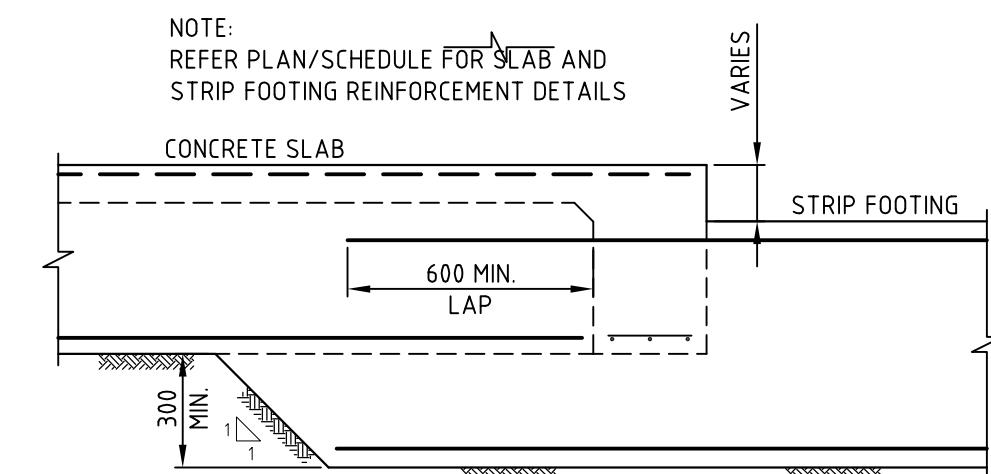
TYPICAL STEPDOWN AT INTERNAL RIB DETAIL

SCALE = 1:20



TYPICAL SLAB ON GROUND PENETRATION DETAIL

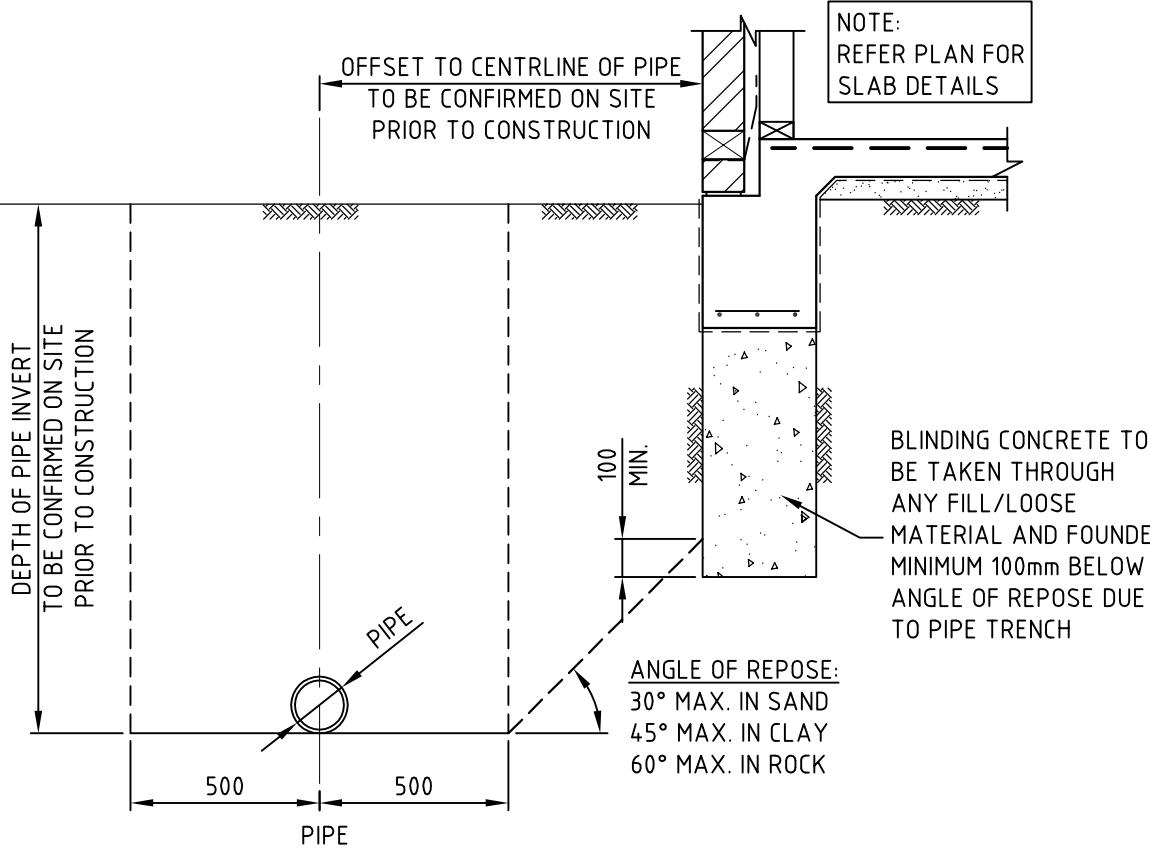
SCALE = NTS



TYPICAL STRIP FOOTING TO SLAB EDGE BEAM CONNECTION DETAIL

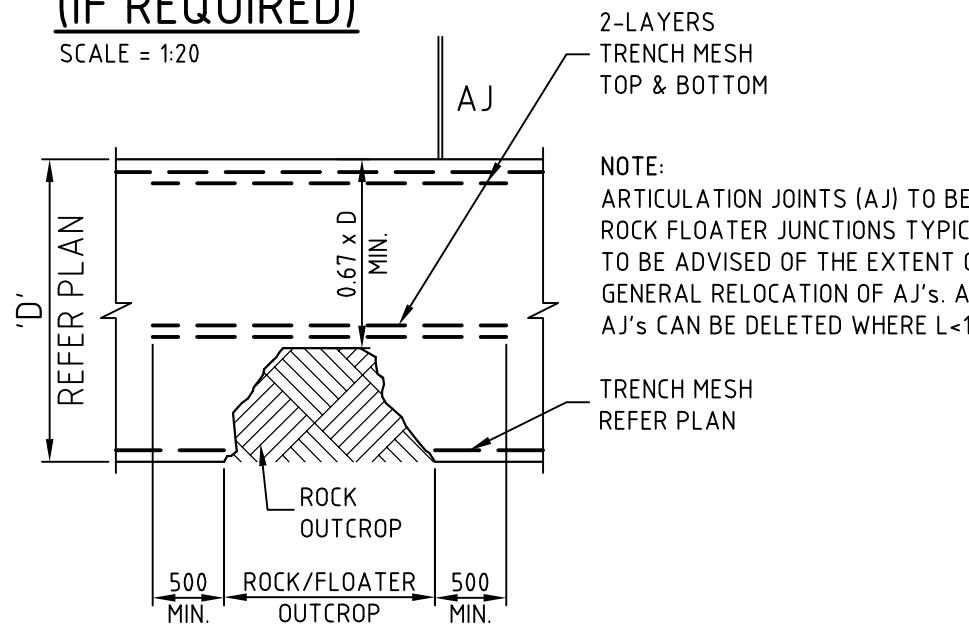
SCALE = 1:20

P2	PRELIMINARY ISSUE	19.10.15	R.S.
P1	PRELIMINARY ISSUE	16.09.15	R.S.
Rev.	Remark/Comment	Date:	Appr.



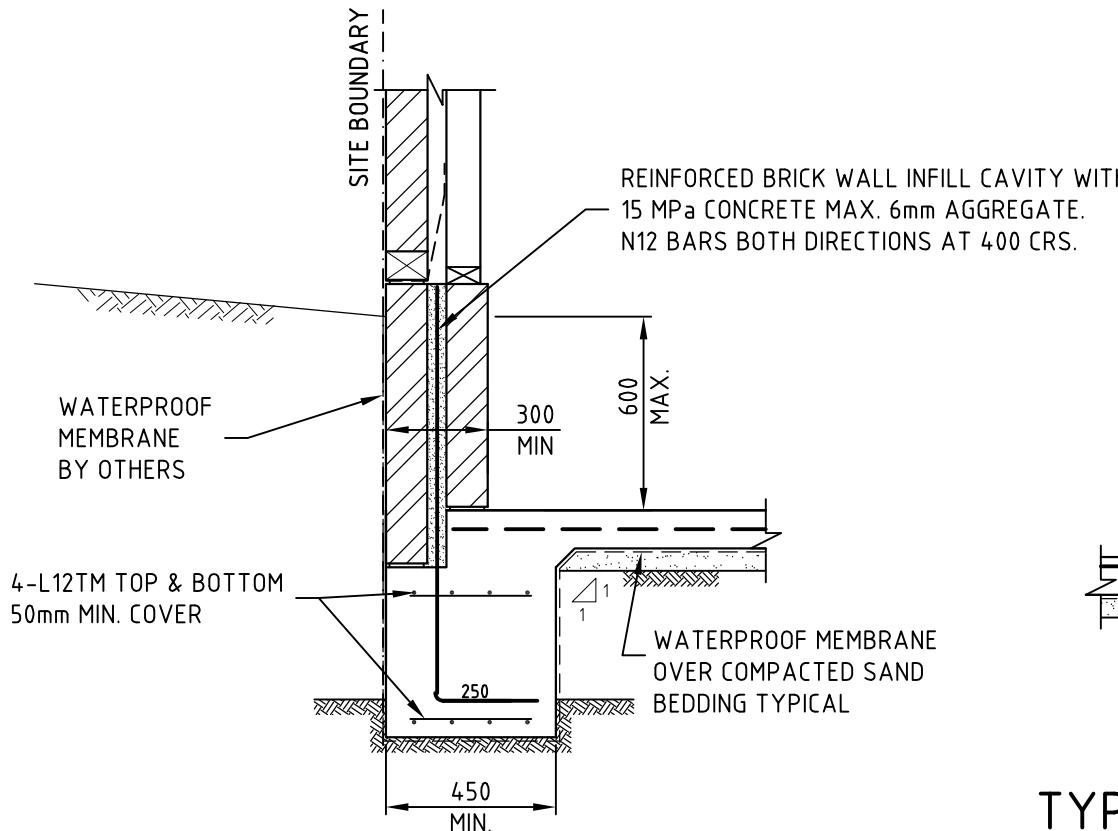
**TYPICAL ANGLE OF REPOSE DETAIL
(IF REQUIRED)**

SCALE = 1:20



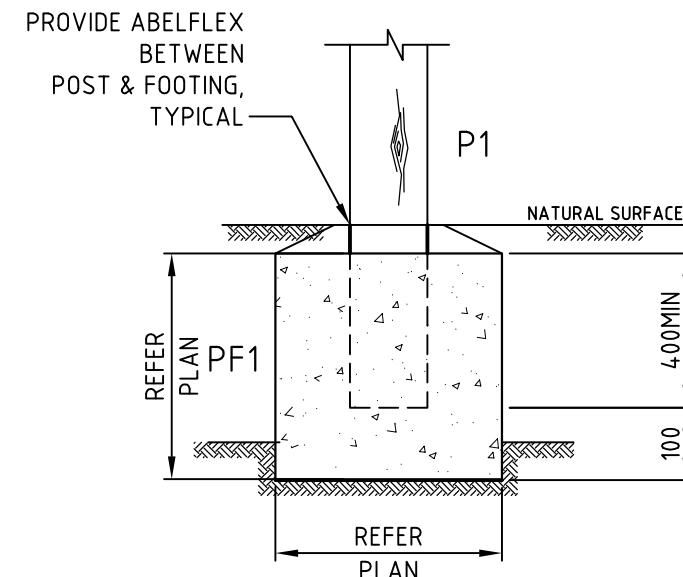
**DETAIL WHERE ROCK FLOATER
'LOCALLY' PROJECTS INTO FOOTING**

SCALE = NTS



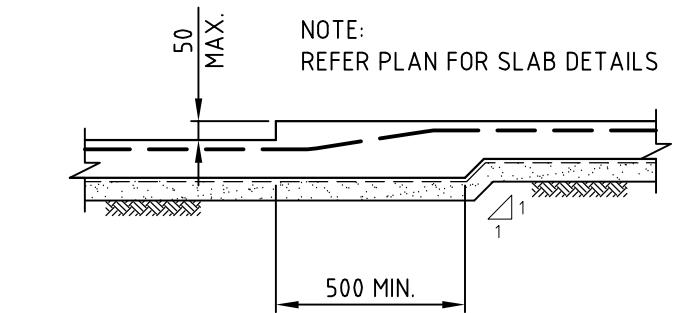
**BRICK RETAINING WALL
DETAIL(IF REQUIRED)**

SCALE = 1:20



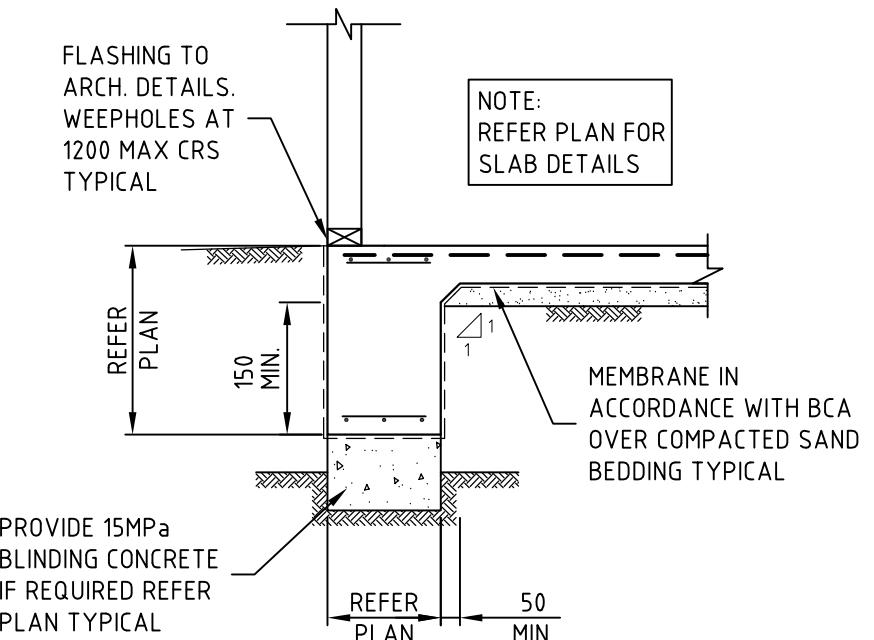
TYPICAL P1 ON PF1 DETAIL

SCALE = 1:20



**TYPICAL RECESS/SETDOWN AT
NO INTERNAL RIB DETAIL**

SCALE = 1:20



TYPICAL EXTERNAL RIB DETAIL

SCALE = 1:20

P2	PRELIMINARY ISSUE	19.10.15	R.S.
P1	PRELIMINARY ISSUE	16.09.15	R.S.
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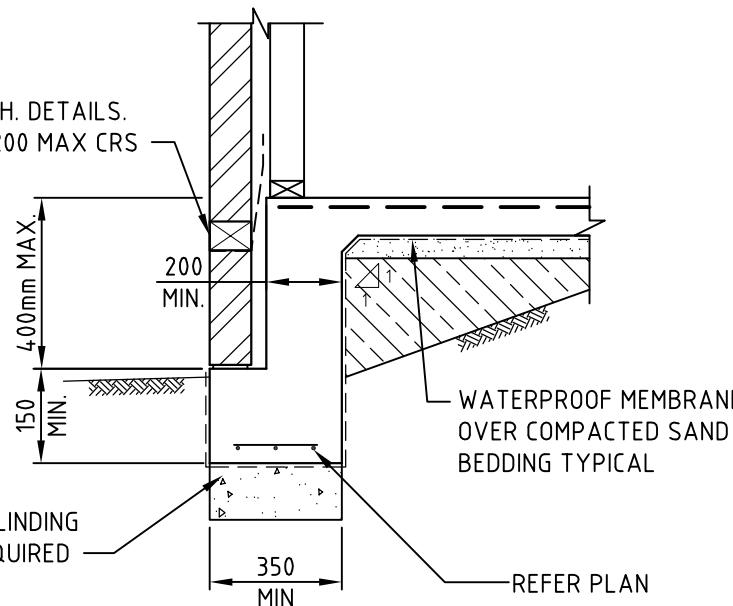
FLASHING TO ARCH. DETAILS.
WEEPHOLES AT 1200 MAX CRS
TYPICAL

PROVIDE 15MPa BLINDING
CONCRETE AS REQUIRED
TYPICAL

(DEEPENED UPTO 400 MAX)

TYPICAL EXTERNAL RIB WITH DEEPENED REBATE DETAIL

SCALE = 1:20



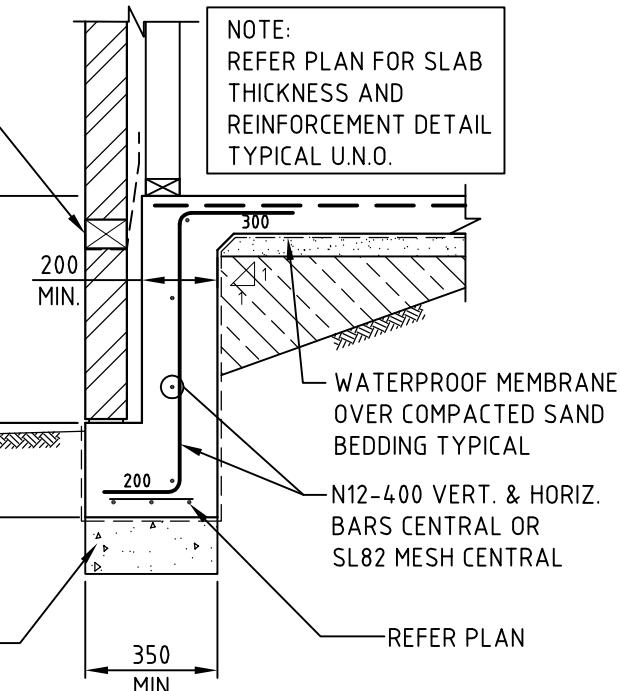
FLASHING TO ARCH.
DETAILS. WEEPHOLES
AT 1200 MAX CRS
TYPICAL

PROVIDE 15MPa
BLINDING CONCRETE
AS REQUIRED
TYPICAL

(DEEPENED BETWEEN 401mm TO 1200mm)

TYPICAL EXTERNAL RIB WITH DEEPENED REBATE DETAIL

SCALE = 1:20



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NOTE: ALL LINTELS TO BE SUPPORTED BY
2-90x45 MGP10 STUDS EACH END, U.N.O

NOTE: ROOF BRACING BY OTHERS U.N.O.

NOTE: FOR BRICKWORK ABOVE OPENINGS REFER
TO ANGLE LINTEL SCHEDULE.

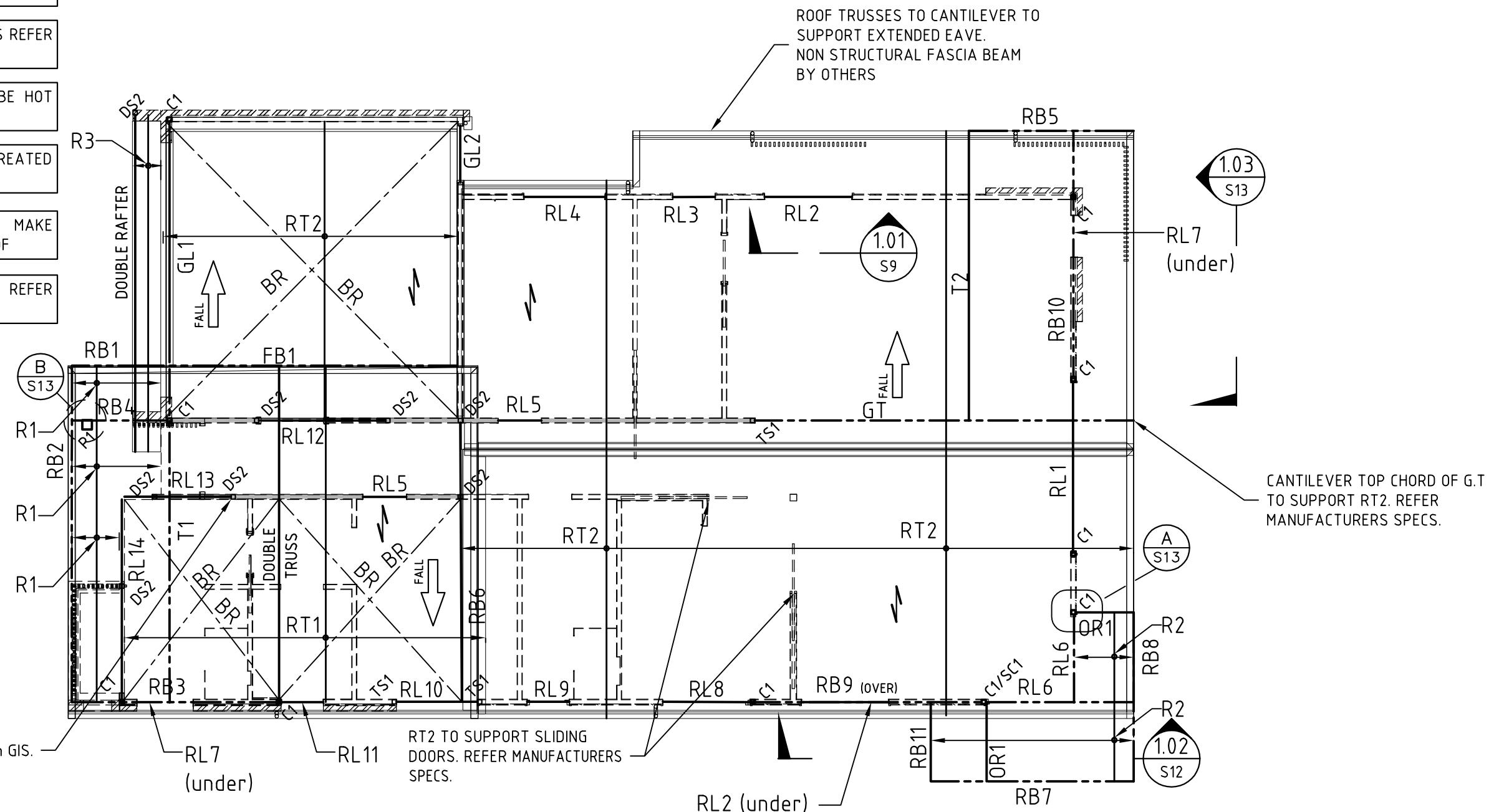
NOTE: ALL EXPOSED STEELWORK TO BE HOT
DIPPED GALVANISED.

NOTE: ALL EXPOSED TIMBER TO BE TREATED
OR, DURABLE SPECIES.

NOTE: TRUSS MANUFACTURER TO MAKE
ALLOWANCE FOR SOLAR PANELS ON ROOF

NOTE: FOR STUD WALL HEIGHT > 3.6m REFER
TABLE ON DWG S7

TIE DOWN RL13 AT DS2
LOCATION WITH 30x1.0mm GIS.
4 NAILS EACH SIDE



ROOF PLAN

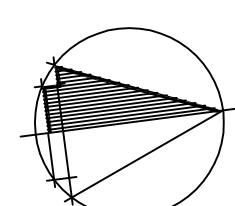
SCALE = 1:100

LEGEND

- BRICKWORK UNDER
- TIMBER STUD WALLS UNDER
- INTERNAL LOAD BEARING WALLS UNDER
- DENOTES DIRECTION OF RAFTERS/ROOF TRUSSES.

NOTE: REFER MEMBER SCHEDULE ON S7

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Client:
DERBYSHIRE

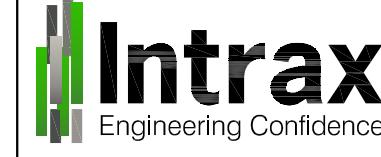
Project:

Drawing:
ROOF PLAN

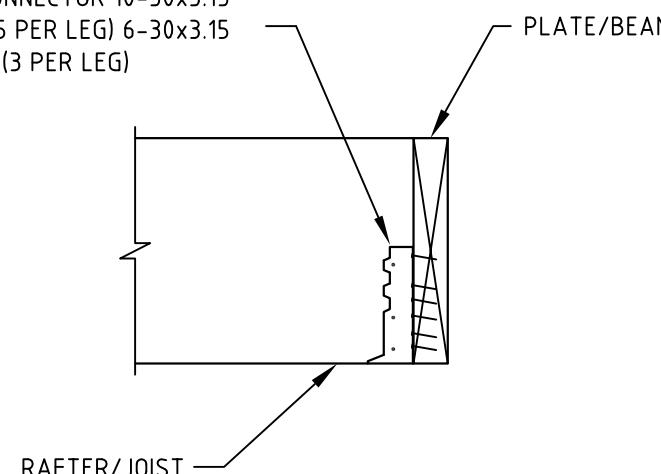
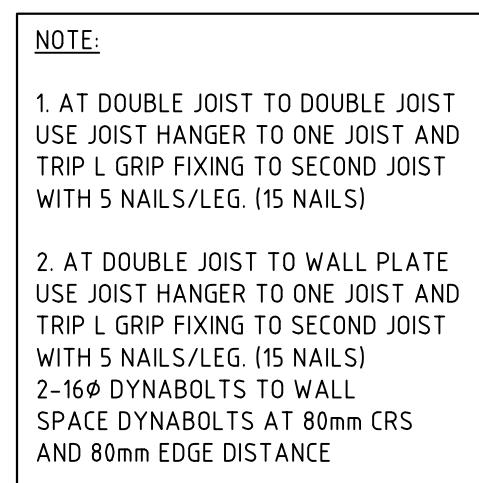
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Project No. 67522	Drawing No. S6
	Rev. P2

MEMBER SCHEDULE			MEMBER SCHEDULE			WALL FRAMING SCHEDULE WALLS > 3600mm, <4500mm	
MARK	SECTION	REMARKS/CONNECTIONS	MARK	SECTION	REMARKS/CONNECTIONS	STUDS	90 x 45 F17 KD HW AT 450 CRS.
GL1	200 x 75PFC+200x10 PLATE	REFER DETAIL	RB10	200PFC	1500 MAX CANTILEVER 4100 BACKSPAN	TOP PLATE	2-90 x 35 F17 KD HW
GL2	90x45 MGP10		RB11	240x45 F7 KD PINE		BOTTOM PLATE	90 x 45 F17 KD HW
RL1	2/360 x 45 HYSPAN LVL		T1	TRUSS DESIGNED BY TRUSS MANUFACTURER TO SUPPORT RB1.		NOGGINS	90 x 35 F17 KD HW AT 1350 CRS.
RL2	190 x 45 MGP10		T2	TRUSS DESIGNED BY TRUSS MANUFACTURER TO SUPPORT RB5.			
RL3	90 x45 MGP10		R1	300 x 45 HYSPAN LVL	RAFTERS AT 600CRS. TREATED IF REQUIRED. RAKED TO SUIT ROOF PITCH.		
RL4	190 x 45 MGP10		R2	120 x 45MGP10	RAFTERS AT 900 CRS		
RL5	120 x 45 MGP10		OR1	180PFC	REFER DETAILS		
RL6	300PFC	3000 MAX CANTILEVER 4900 BACKSPAN	RT1	ROOF TRUSSES BY OTHERS	WITH EXTENDED TOP CHORD REFER ARCHITECTURAL & MANUFACTURERS DESIGN & DETAILS		
RL7	90 x 45 MGP10	NON LOAD BEARING	RT2	ROOF TRUSSES	BY OTHERS		
RL8	190 x 45 MGP10		C1	89x89x5.0 SHS (C350)			
RL9	90x45 MGP10		DSx	REFER TO TIMBER STUD SCHEDULE ON DETAIL PAGE	SAME APPLIES TO TSx/QSx/FSx		
RL10	190 x 45 MGP10		GT	GIRDER TRUSS	LOCATION TBC BY TRUSS MANUFACTURER		
RL11	90 x 45 MGP10	NON LOAD BEARING	P1	200 x200 F7 KD TREATED PINE POST	OR EQUIVALENT SPECIES		
RL12	2-240 x 45 HYSPAN LVL		P2	90 x90 F7 KD PINE POST			
RL13	2-360x45 HYSPAN LVL	700 MAX CANTILEVER 1400 BACKSPAN	C1	89x89x5.0 SHS (C350)			
RL14	2-360x45 HYSPAN LVL		DSx	REFER TO TIMBER STUD SCHEDULE ON DETAIL PAGE	SAME APPLIES TO TSx/QSx/FSx		
RB1	140 x 45 F7 KD PINE		GT	GIRDER TRUSS	LOCATION TBC BY TRUSS MANUFACTURER		
RB2	180 x 75PFC	1400 MAX CANTILEVER 6200 BACKSPAN	FB1	FASCIA BEAM	BY OTHERS		
RB3	180 x 75PFC	1300 MAX CANTILEVER 3300 BACKSPAN					
RB4	180 x 75PFC	400 MAX CANTILEVER 1700 BACKSPAN					
RB5	2 - 240 x 45 F7 KD PINE	1300 MAX CANTILEVER 2600 BACKSPAN					
RB6	2-240 x 45 HYSPAN LVL	CONTINUOUS OVER DS2					
RB7	2-240x 45 F7 KD PINE	1300 MAX CANTILEVER 3200 BACKSPAN					
RB8	2-240x63 HYSPAN LVL	1700 MAX CANTILEVER 2000 BACKSPAN					
RB9	250 x 90PFC	3200 MAX CANTILEVER 4900 BACKSPAN					

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							67522	S7
								Rev. P2

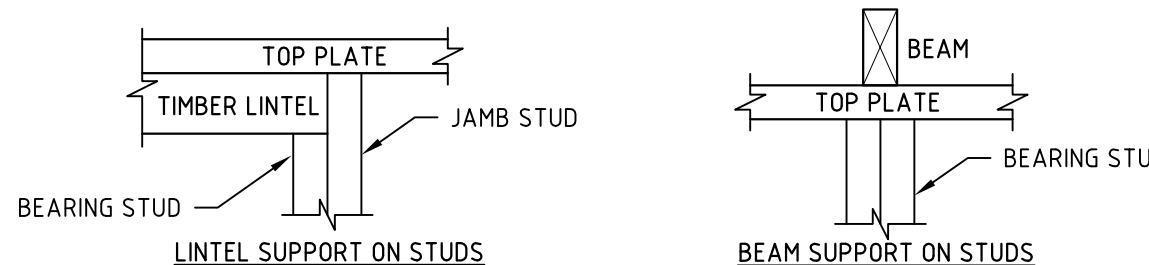
JOIST HANGER TIMBER CONNECTOR 10-30x3.1
NAILS TO PLATE/BEAM (5 PER LEG) 6-30x3.1
NAILS TO RAFTER/JOIST (3 PER LEG)



TYPICAL TIMBER TO TIMBER RAFTER/JOIST CONNECTION

SCALE = 1:1

ALL STUDS SHALL BE NAIL LAMINATED IN ACCORDANCE WITH AS1684.2		DS1	DS2	DS3	DS4	TS1	TS2	TS3	QS1	QS2	FS1	FS2
		90x45	90x45	70x45	120x45	90x45	90x45	70x45	90x45	90x45	90x45	90x45
		MGP10	F17 KD HW	F17 KD HW	MGP10	MGP10	F17 KD HW	F17 KD HW	MGP10	F17 KD HW	MGP10	F17 KD HW
LINTEL	NO. OF BEARING STUD	1	1	1	1	1	1	1	2	2	2	2
	NO. OF JAMB STUD	1	1	1	1	2	2	2	2	3	3	3
BEAM	NO. OF BEARING STUD	2	2	2	2	3	3	3	4	4	5	5



TIMBER STUDS SCHEDULE

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Project:	
Drawing:	DETAIL SHE

ANGLE LINTEL SCHEDULE (L)		
BRICK LINTEL SPAN (mm)	BRICK HEIGHT	
	800mm MAX.	3200mm MAX.
0 - 900	100 x 100 x 6 EA	100 x 100 x 8 EA
901 - 1600	100 x 100 x 6 EA	100 x 100 x 10 EA
1601 - 2100	100 x 100 x 6 EA	150 x 100 x 10 UA
2101 - 2600	150 x 100 x 8 UA	150 x 100 x 10 UA + 50 x 10 EXT. PL
2601 - 3100	150 x 100 x 8 UA	150 x 100 x 12 UA + 75 x 12 EXT. PL
3101 - 3600	150 x 100 x 12 UA	N/A

NOTES

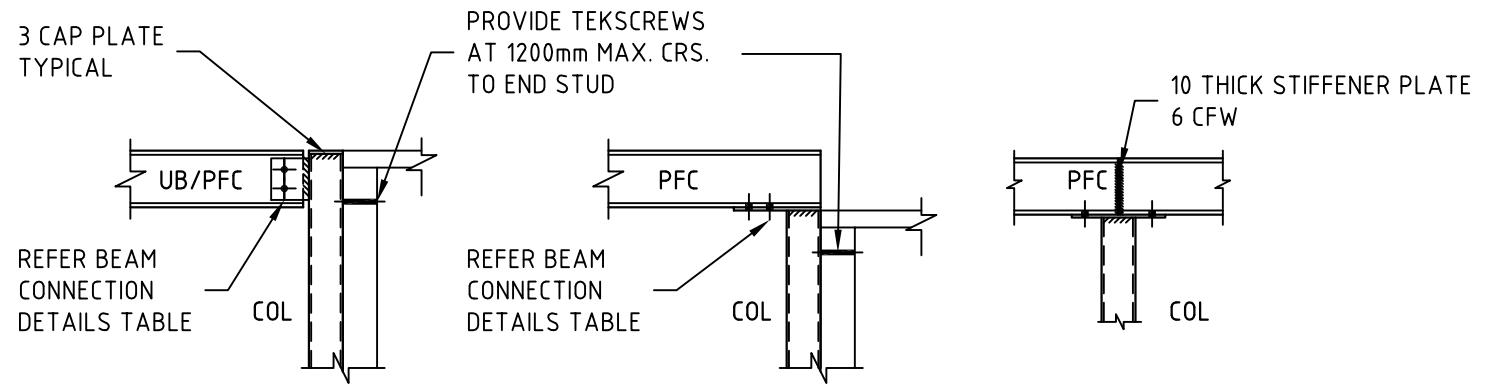
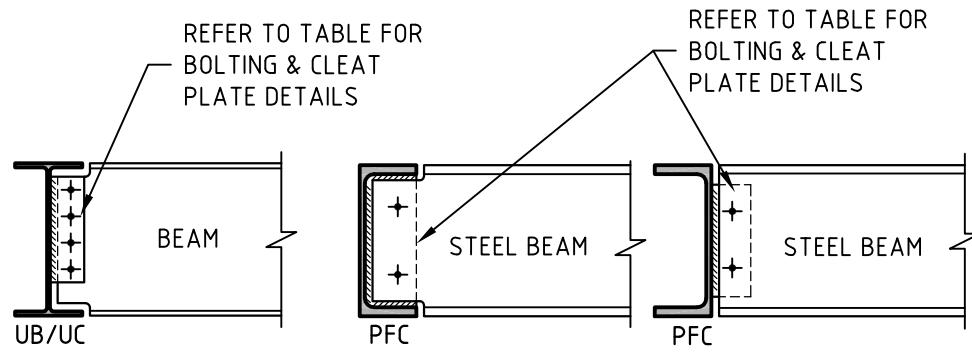
- NOTES:

 1. PROVIDE LINTEL TO EACH MASONRY LEAF
 2. SET ANGLES WITH LONG LEG VERTICAL
 3. LINTELS, EXCEPT FOR INTERNAL WALLS TO BE HOT DIP GALVANISED

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BEAM CONNECTION DETAILS		
MEMBER SIZE	BOLTS REQUIRED	CLEAT PLATE THICKNESS
UPTO 200UB/PFC	2-M16 8.8/S BOLTS	10mm
UPTO 250UB/PFC	2-M16 8.8/S BOLTS	10mm
UPTO 360UB/PFC	3-M20 8.8/S BOLTS	10mm

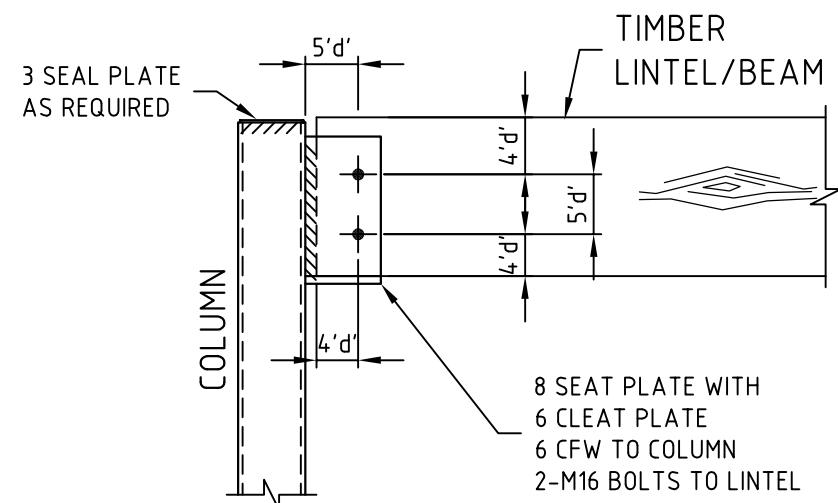
NOTE: TYPICAL FOR ALL CONNECTIONS (U.N.O. ON DETAILS).

BEAM CONNECTION DETAILS		
MEMBER SIZE	BOLTS REQUIRED	CLEAT PLATE THICKNESS
UPTO 200UB/PFC	2-M16 8.8/S BOLTS	10mm
UPTO 250UB/PFC	2-M16 8.8/S BOLTS	10mm
UPTO 310UC/380PFC	3-M20 8.8/S BOLTS	10mm

NOTE: TYPICAL FOR ALL CONNECTIONS (U.N.O. ON DETAILS).

STEEL BEAM TO STEEL BEAM CONNECTION DETAILS

SCALE : NTS



STANDARD STEEL BEAM TO COLUMN DETAILS

NOTE:

1. DETAILS ARE TO BE USED UNLESS NOTED OTHERWISE ON THE DRAWINGS TYPICAL
2. TOP PLATE LOCATION IS INDICATIVE ONLY

TIMBER BEAM/LINTEL TO STEEL COLUMN CONNECTION DETAIL - WITH SEAT PLATE

SCALE 1:10



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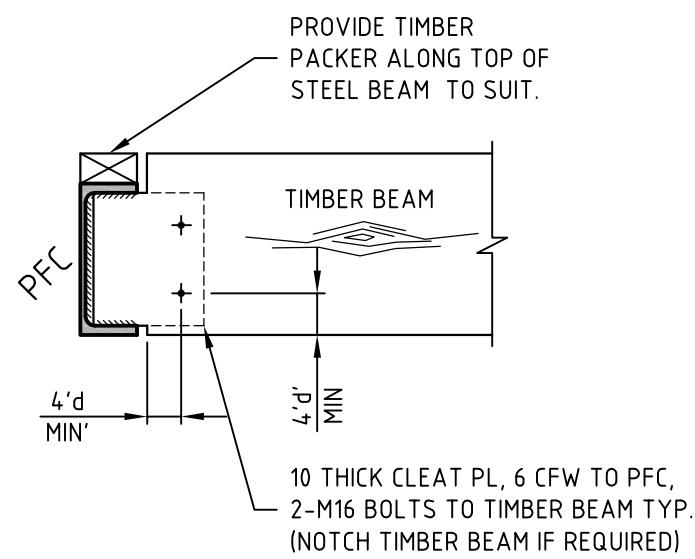
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Drawing:
DETAIL SHEET 6

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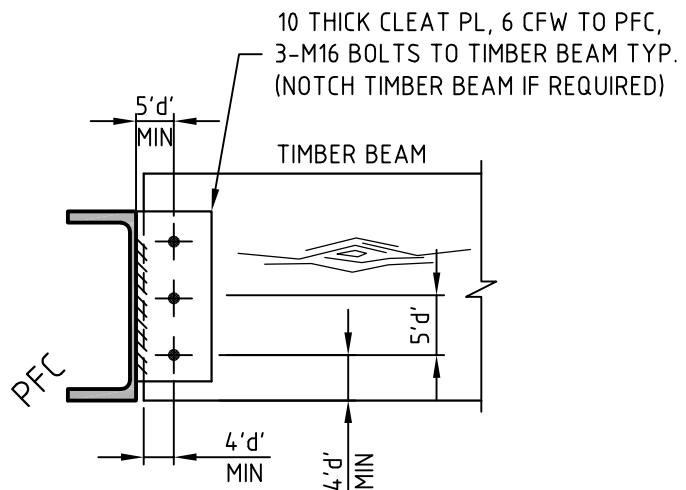
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NOTE: 'd'-DENOTED BOLT DIAMETER

TIMBER BEAM TO STEEL BEAM CONNECTION DETAILS

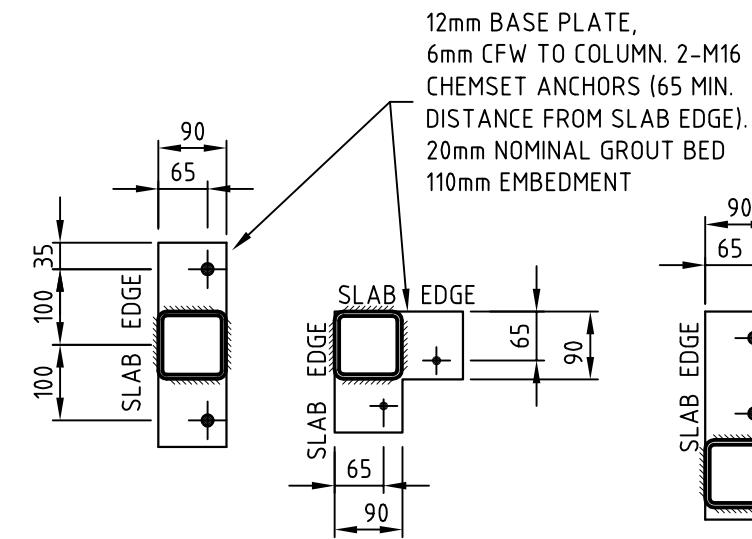
SCALE 1: 20



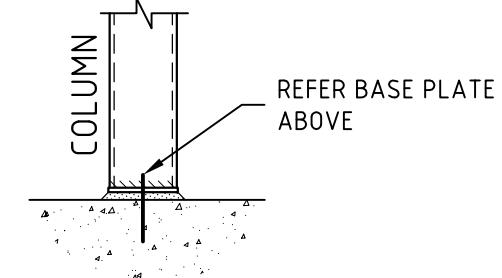
NOTE: 'd'-DENOTED BOLT DIAMETER

TIMBER BEAM TO STEEL BEAM CONNECTION DETAILS

SCALE 1: 20



BASE PLATE PLAN
SCALE 1: 10

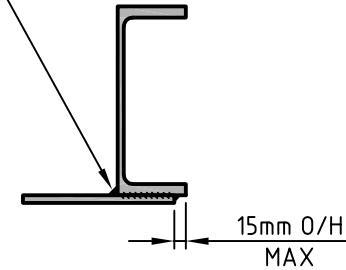


TYPICAL COLUMN BASE CONNECTION DETAILS

NOTE: FOR INTERNAL COLUMN BASE PLATE
BOLTS TO BE LOCATED ON THE
CENTER OF THE BASE PLATE

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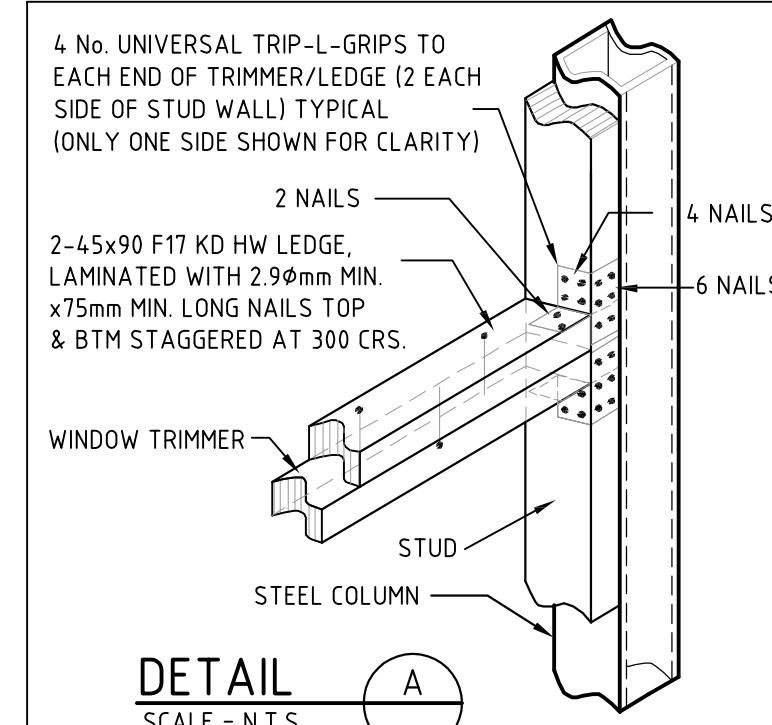
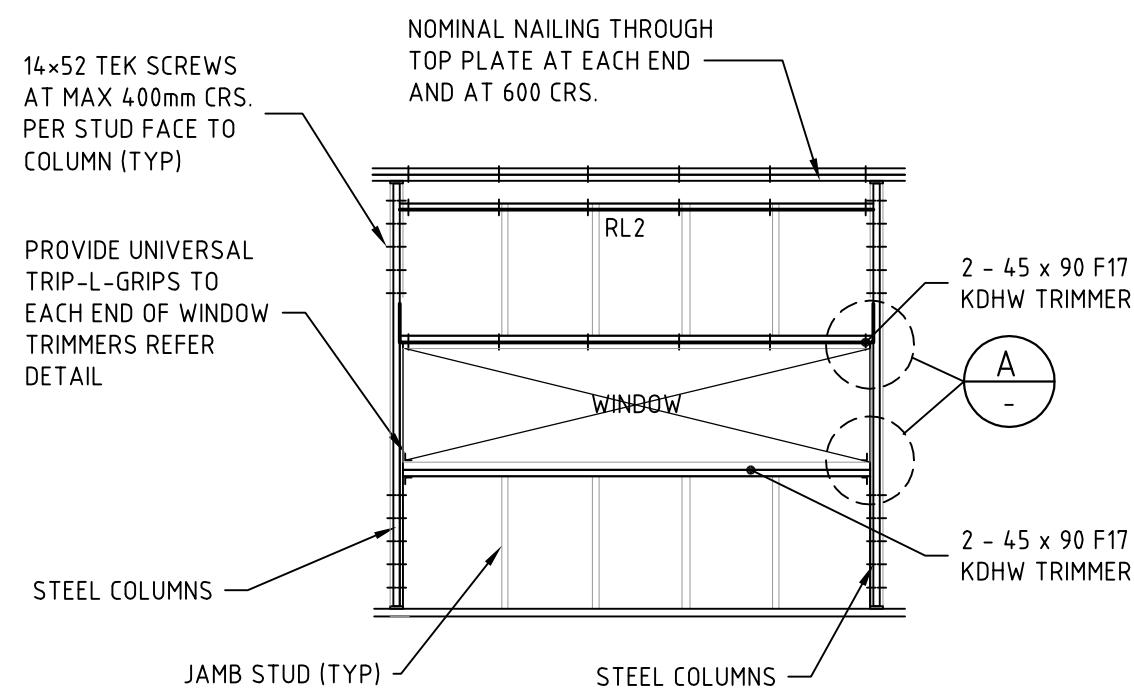
6 CFW, 300 EACH
END EACH SIDE THEN
HIT 200 MISS 200



LINTELS TO BE PROPPED AT
MID SPAN UNTIL BRICKWORK
IS A MINIMUM OF 3 DAYS OLD.

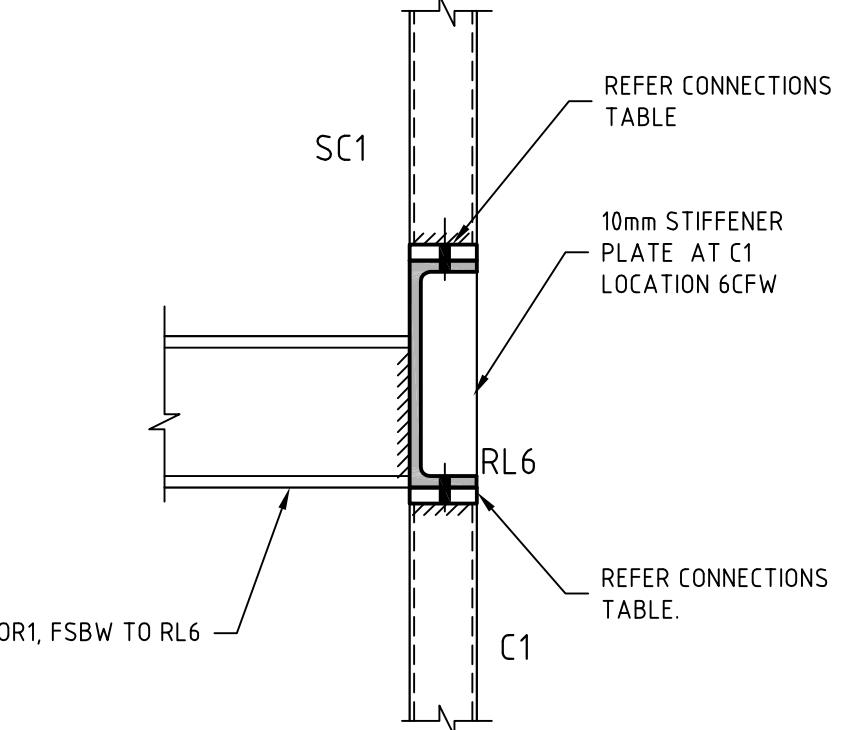
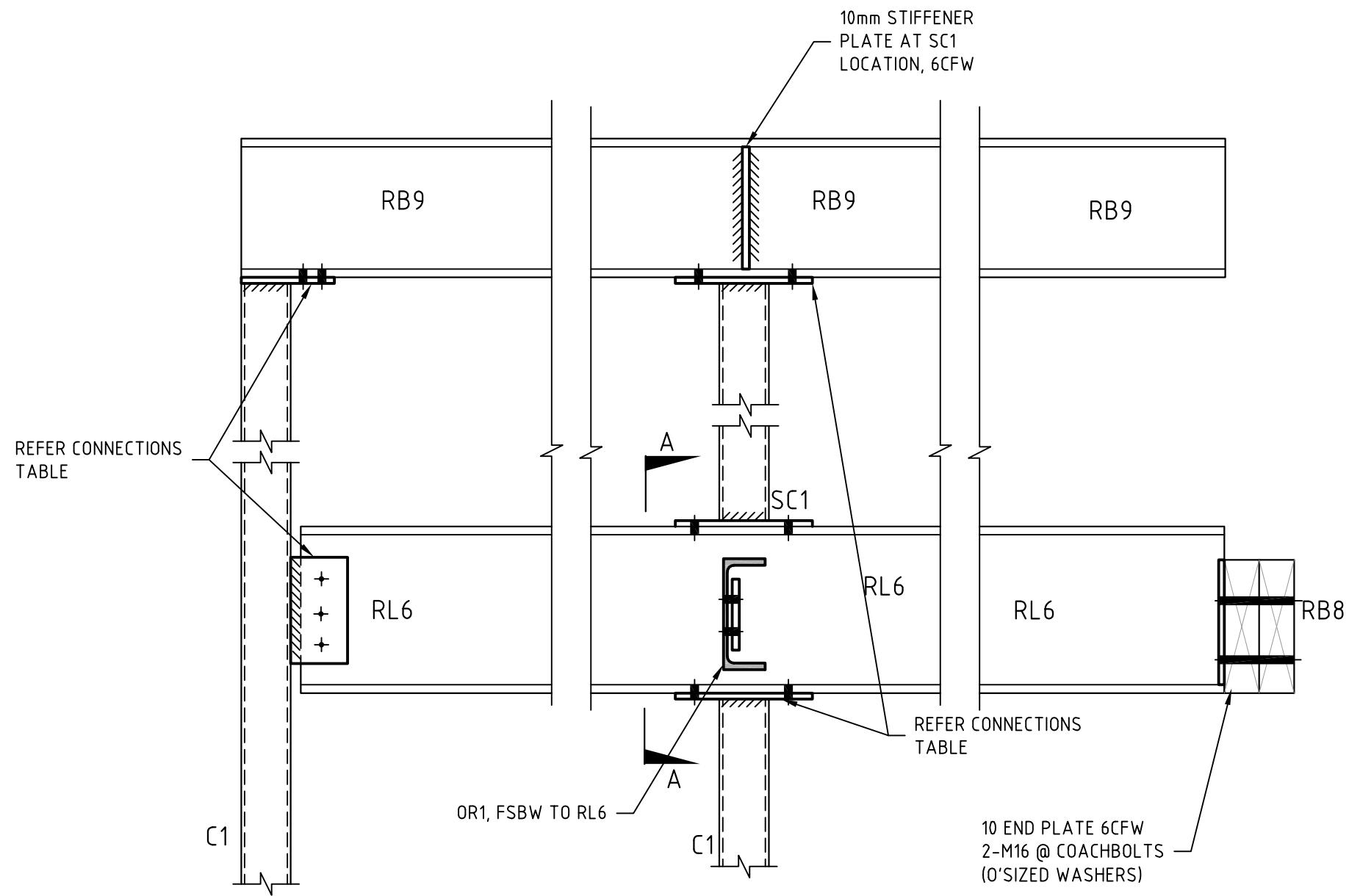
PFC/PLATE LINTEL DETAIL

SCALE 1:10



SECTION
1:100
S6

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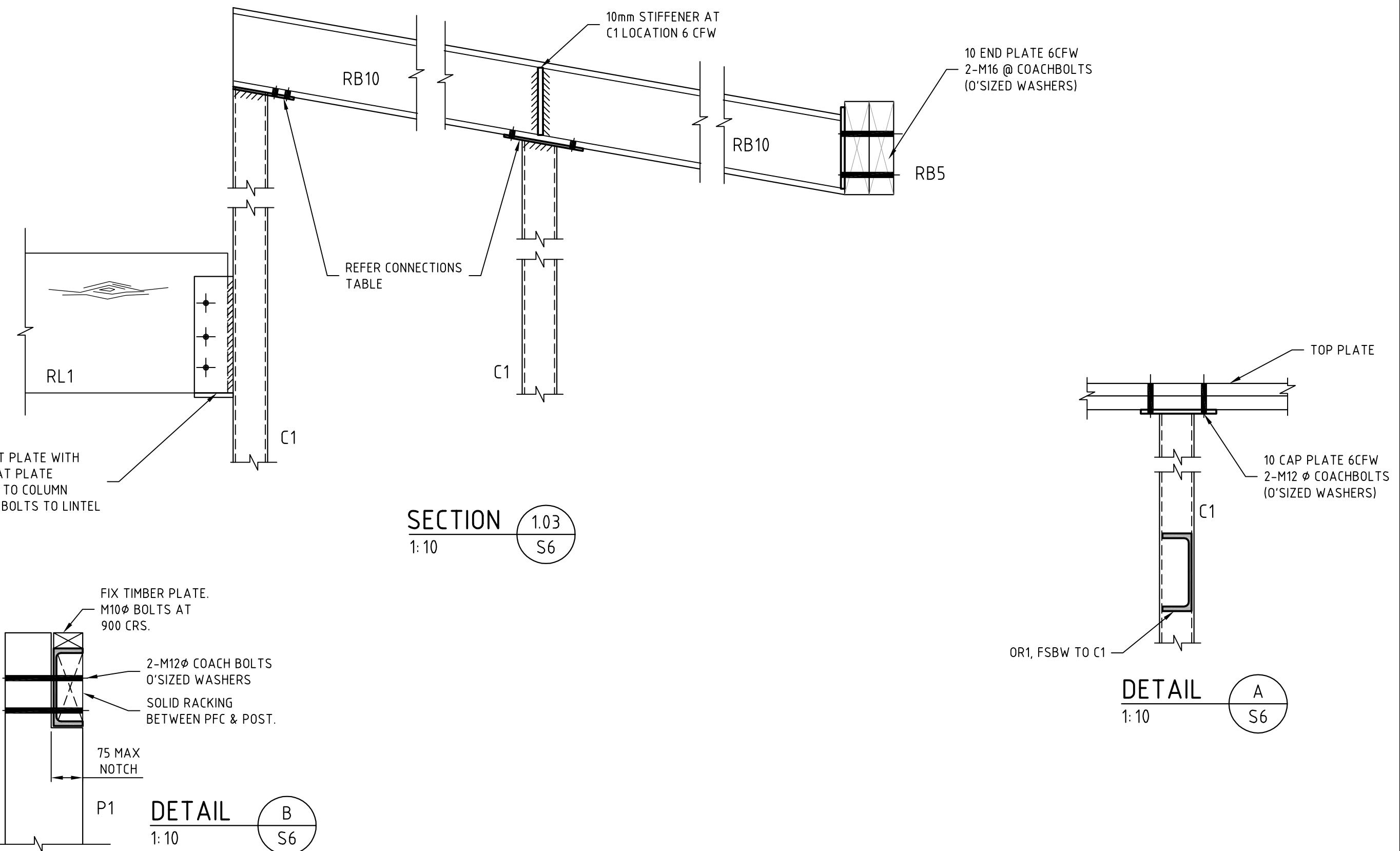


SECTION A-A

1:10

SECTION 1:10
1.02 S6

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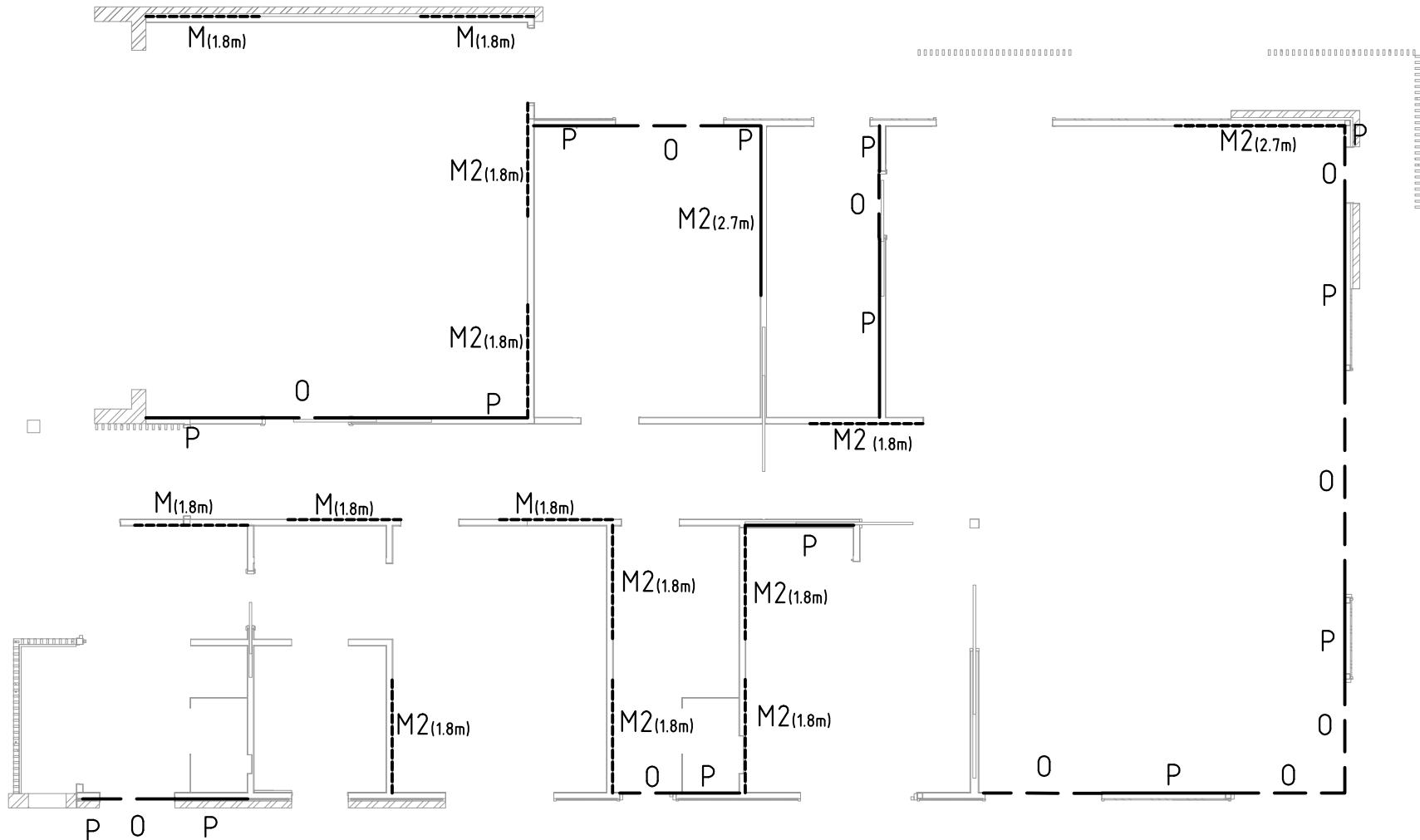
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67522 **S13** **P2**



BRACING LEGEND

M - 1.5kN/m CAPACITY METAL STRAP BRACING
 M2 - 3.0kN/m CAPACITY METAL STRAP BRACING
 P - 6.0kN/m CAPACITY PLYWOOD BRACING
 O - PLYWOOD BRACING OVER ALL WALL AREA,
 AROUND OPENINGS

BRACING UNITS TO BE FIXED IN ACCORDANCE WITH
 RESIDENTIAL TIMBER FRAMED CONSTRUCTION
 MANUALS AS 1684.2-2010

REFER TO TYPICAL DETAILS

WIND RATING - N2

MAXIMUM DESIGN GUST WIND SPEED FOR THIS SITE IS 40 M/S
 WIND SPEED CALCULATION (VH) FOR USE IN ULTIMATE LIMIT
 STATE DESIGN ONLY.
 CALCULATED IN ACCORDANCE WITH THE LIMITATIONS AS IN AS
 4055, SECTION 2.1.

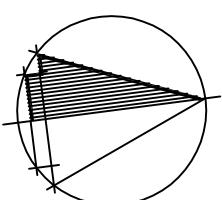
ALTERNATIVE METHOD

OTHER BRACING METHOD IS PERMISSIBLE TO BE
 ADOPTED IN LIEU OF SPECIFIED BRACING METHOD
 TO PROVIDE EQUIVALENT CAPACITY AND MUST BE
 INSTALLED IN ACCORDANCE WITH AS1684.2-2010

GROUND FLOOR BRACING PLAN

SCALE = 1:100

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GROUND FLOOR BRACING PLAN

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TENSIONED GALVANISED METAL STRAPS

WITH MINIMUM THICKNESS OF 0.8mm AND

MINIMUM NET SECTION OF 15mm²

FIXED TO STUDS WITH 1-30x2.8Ø GALVANISED

FLAT-HEAD NAIL (OR EQUIVALENT)

FIXED PLATES WITH 3-30 x 2.8Ø GALVANISED

FLAT-HEAD NAILS (OR EQUIVALENT) (BEND

STRAPS OVER WALL PLATES AND NAIL)

PLATES UP TO 38mm THICK

- 2/75 x 3.05mm NAILS @

MAX. 600 CTS OR

PLATES 38mm TO 50mm THICK

- 2/90 x 3.05mm NAILS @

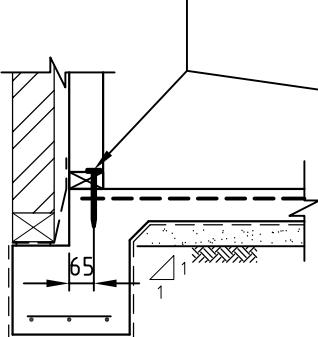
MAX. 600 CTS

FLOOR LEVEL

FLOOR JOIST

**BOTTOM PLATE TO
FLOOR JOIST DETAIL**

FIX ONE 75mm MASONRY NAIL
(HAND-DRIVEN AT SLAB EDGE)
SCREW OR BOLT TO THE BOTTOM
PLATE, MAXIMUM SPACE 1200mm CRS.



**BOTTOM WALL PLATE TO
CONCRETE SLAB FIXING DETAIL**
DETAIL A-A

**DOUBLE DIAGONAL METAL TENSION STRAPS
(BRACING CAPACITY - 1.5 kN/m)**

SCALE: NTS

DENOTED AS M ON PLAN.

GALVANISED METAL ANGLE BRACE - (20x18x1.2mm)

2-30 x 2.8Ø NAILS TO EACH STUDS AND PLATES

NO END SPLITS ALLOWED;
DRILL IF NECESSARY.

30 x 0.8 GALV. STRAP
3-30 x 2.8Ø NAILS TO
EACH END OF STUD.
(TYPICAL)

GALVANIZED
METAL ANGLE
(20 x 18 x 1.2) BRACE

OR

NOTE:
THE MAXIMUM DEPTH OF A
NOTCH OR SAW-CUT SHALL
NOT EXCEED 20mm.
SAW-CUTS STUDS SHALL
BE DESIGNED AS NOTCHED.

30 x 0.8 GALV. STRAP
3-30 x 2.8Ø NAILS TO
EACH END OF STUD.
(TYPICAL)

1200 MAX.

1200 MAX.

BRACED WALL SECTION
1800 TO 2700

1200 MAX.

BRACED WALL SECTION
1800 TO 2700

**DIAGONAL METAL ANGLE BRACES
(BRACING CAPACITY - 1.5 kN/m)**

SCALE: NTS

DENOTED AS M ON PLAN.

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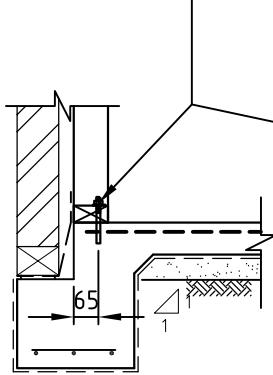
METAL STRAPS TO PLATE FIXING

30 x 0.8mm METAL STRAP LOOPED OVER PLATE AND FIXED TO STUD WITH 4-30 x 2.8φmm FLATHEAD NAILS TO EACH END.
ALTERNATIVELY PROVIDE SINGLE STRAP TO BOTH SIDES, WITH 4 NAILS PER STRAP END, OR EQUIVALENT ANCHORS OR OTHER FASTENERS.

TENSION GALVANISED METAL STRAPS

NOMINAL 30 x 0.8mm GALV. STRAP (OR EQUIVALENT)
NAILED TO PLATES WITH 4-30x2.8φ GALVANISED FLATHEAD NAILS TO EACH END
2 NAILS TO EACH STUD AND 4 NAILS TO THE STRAP RETURN OVER TOP OF PLATE & UNDER BOTTOM PLATE,
STRAPS MUST BE PROPERLY TENSIONED.

FIX ONE 75mm MASONRY NAIL (HAND-DRIVEN AT SLAB EDGE) SCREW OR BOLT TO THE BOTTOM PLATE, MAXIMUM SPACE 1200mm CRS.

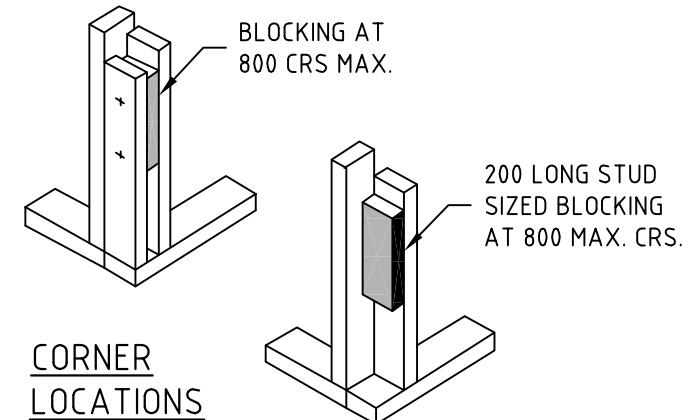
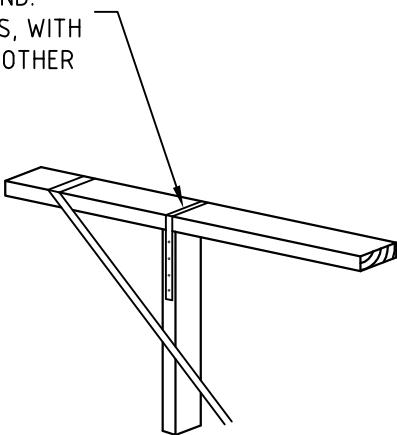
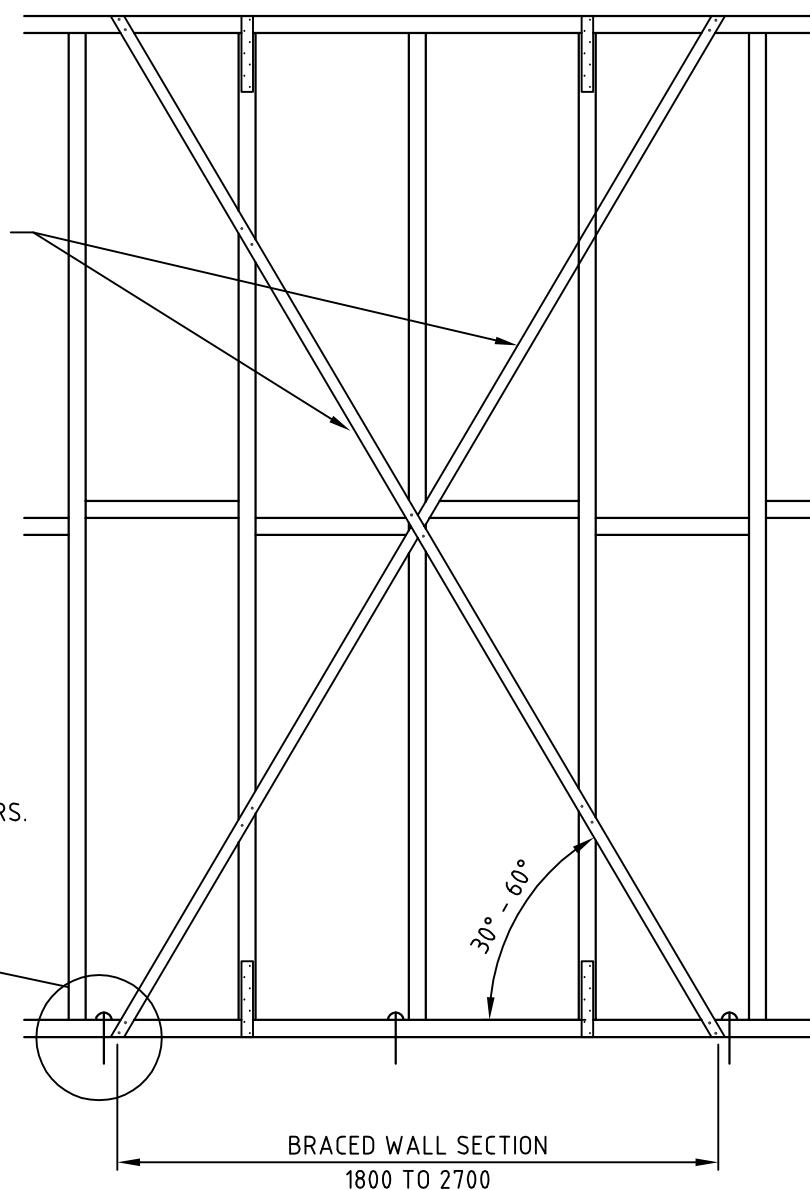


DOUBLE DIAGONAL METAL TENSION STRAPS (BRACING CAPACITY - 3.0 kN/m)

SCALE: 1:20

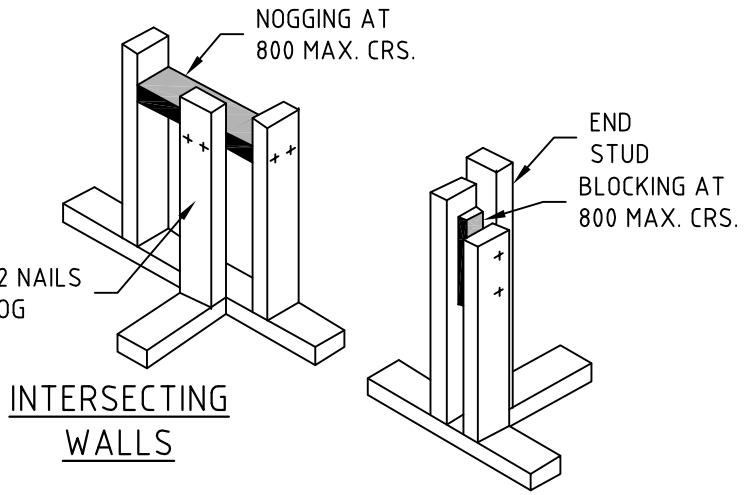
DENOTED AS M2 ON PLAN.

BOTTOM WALL PLATE TO CONCRETE SLAB FIXING DETAIL
DETAIL A-A



CORNER LOCATIONS

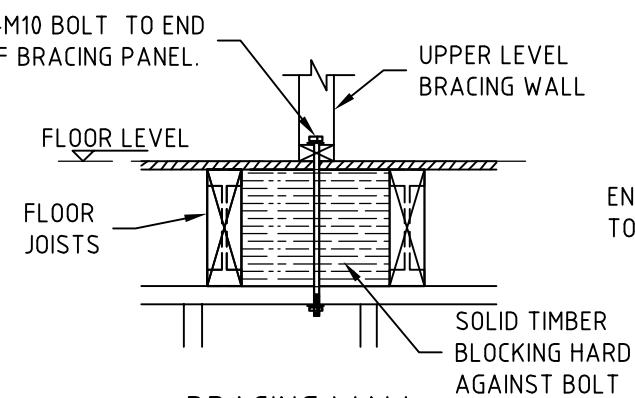
2 NAILS THOUGH EACH STUD TO BLOCKING OR NOGGING.



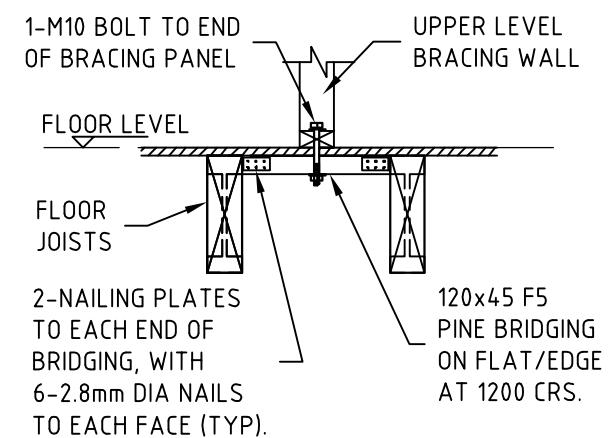
INTERSECTING WALLS

WALL JUNCTION DETAIL

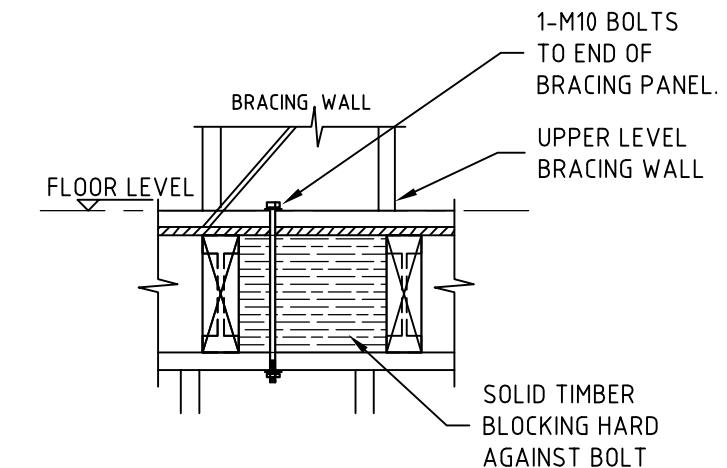
(APPLIES TO ALL BRACING TYPES)



BRACING WALL PARALLEL TO JOISTS (INTERNAL BRACING WALL SHOWN)



BRACING WALL PARALLEL TO JOISTS (NO STUD WALL UNDER)

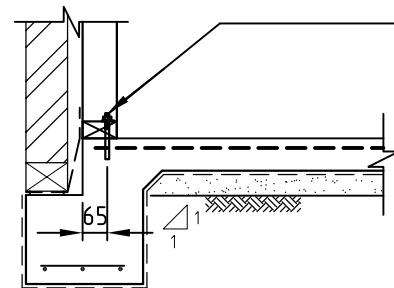


BRACING WALL AT PERPENDICULAR TO JOISTS

P2	PRELIMINARY ISSUE	19.10.15	R.S.
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Rev.	Remark/Comment	Date:	Appr.

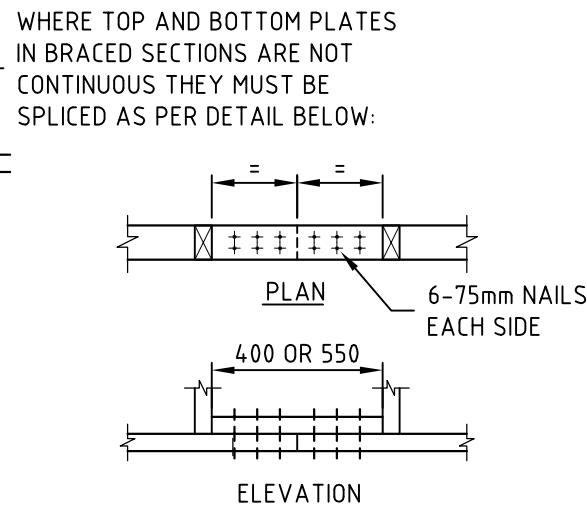
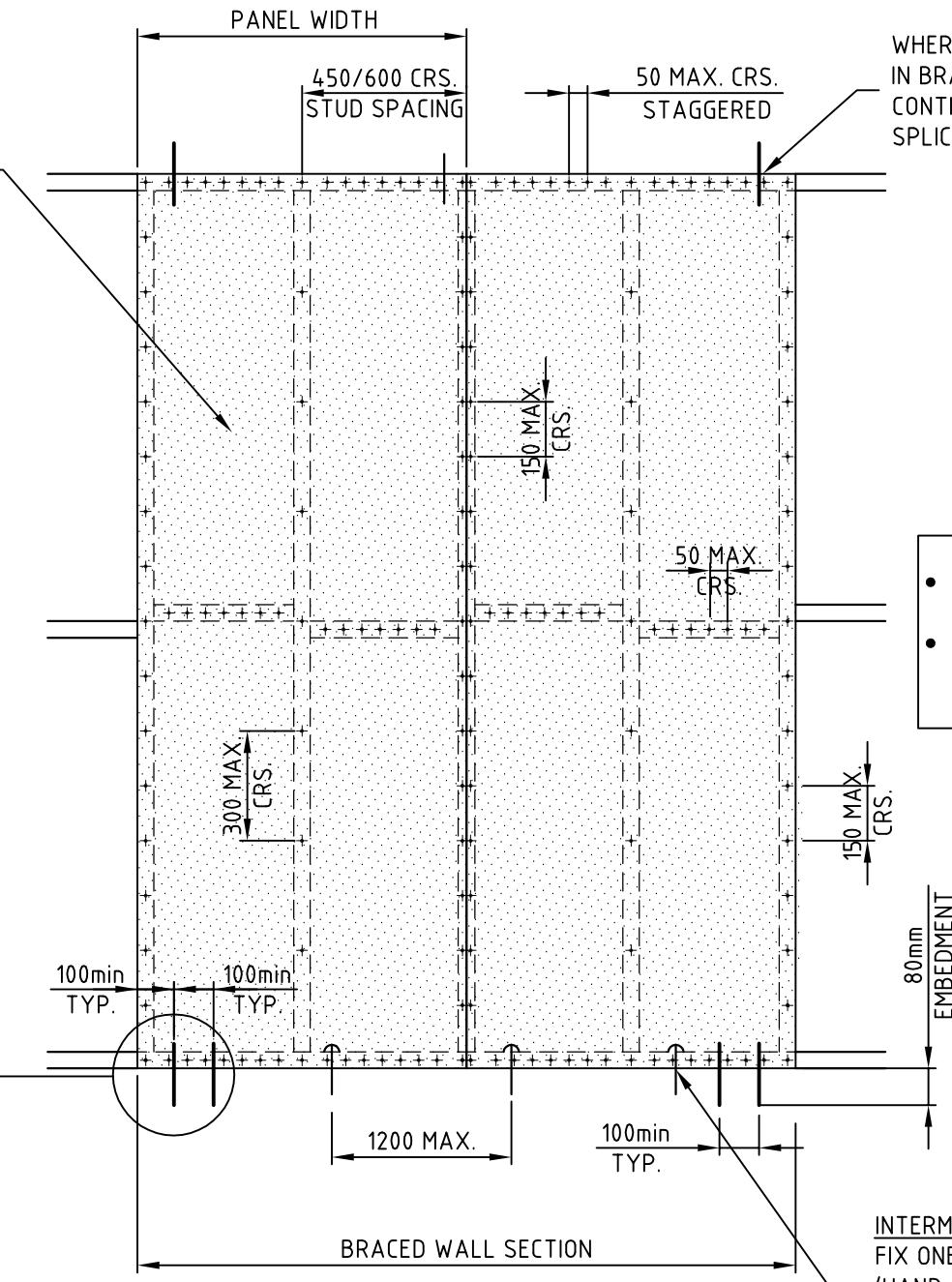
FIXING TO TIMBER FRAME:
PAA APPROVED STRUCTURAL
PLYWOOD FIXED WITH 3.15Ø x 30
GALV. FLATHEAD NAILS AT 50 CRS.
TO TOP AND BTM. WALL PLATES. &
NOGGINGS
150 CRS. TO STUDS AT VERT. EDGES.
300 CRS. TO INTERNAL STUDS.

MINIMUM PLYWOOD THICKNESS (mm)		
PLYWOOD STRESS GRADE	STUD SPACING (mm)	
	450 CRS	600 CRS
F8	7	9
F11	6	7
F14	4	6
F27	4	4.5



BOTTOM WALL PLATE END FIXINGS:
2-M8 CHEMSET (ALTERNATIVELY
EXCALIBUR SCREWBOLT OR APPROVED
EQUIVALENT) TO EACH END OF BRACED
SECTION.

BOTTOM WALL PLATE TO
CONCRETE SLAB FIXING DETAIL
(END FIXING)



- NOTES:**
- SPLICE PLATE MUST BE SAME SIZE & STRESS GRADE AS TOP & BOTTOM PLATES
 - WHERE TOP & BOTTOM PLATES IN BRACED SECTIONS ARE DISCONTINUED, THEY MUST BE SPLICED AS SHOWN IN THIS DETAIL

TYPICAL TOP & BOTTOM PLATE SPLICE DETAIL

INTERMEDIATE FIXING
FIX ONE 75mm MASONRY NAIL
(HAND-DRIVEN AT SLAB EDGE) TO
THE BOTTOM PLATE, MAXIMUM
SPACE 1200mm CRS. (EACH CORNER IF
PANEL WIDTH IS LESS THAN 1200mm)

PLYWOOD WALL BRACING (BRACING CAPACITY - 6.0 kN/m)

SCALE: NTS

DENOTED AS P ON PLAN.

Client:
DERBYSHIRE

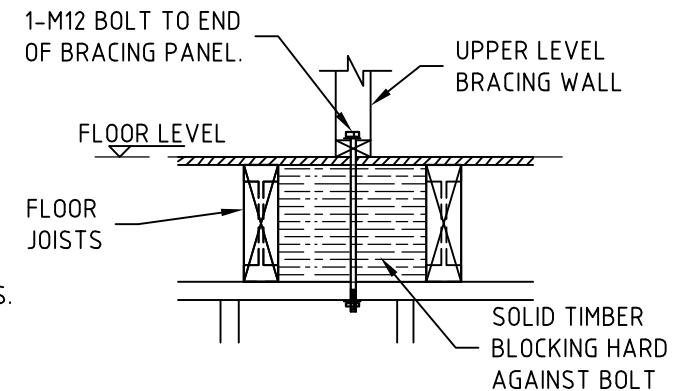
Project:

Drawing:
DETAIL SHEET 13

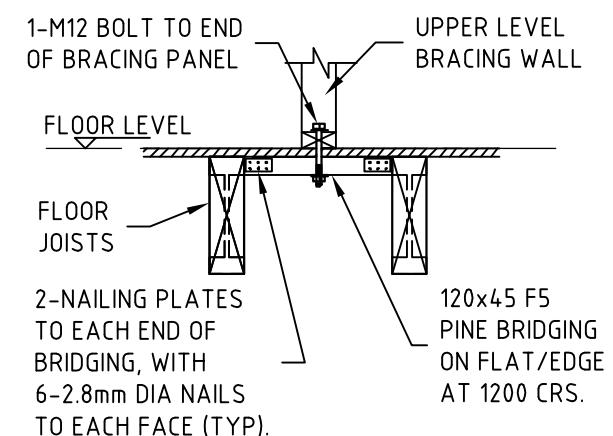
PRELIMINARY ISSUE NOT FOR CONSTRUCTION

Designed: P.E.	Scale (A3): AS NOTED
Drawn: B.Z.	Date: SEP.15
Checked: R.S.	Sheets: 18
Project No. 67522	Drawing No. S17
Rev. P2	

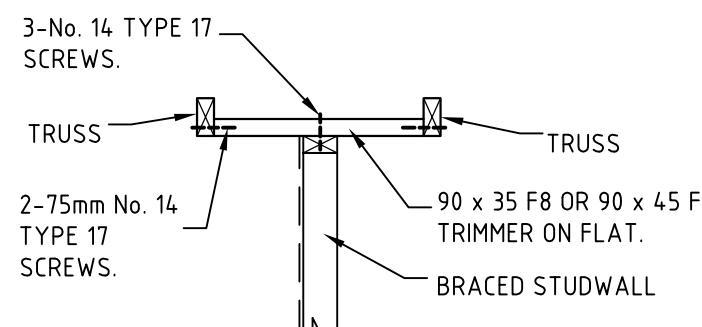
P2	PRELIMINARY ISSUE	19.10.15	R.S.
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**BRACING WALL
PARALLEL TO JOISTS**
(INTERNAL BRACING
WALL SHOWN)



**BRACING WALL
PARALLEL TO JOISTS**
(NO STUD WALL UNDER)

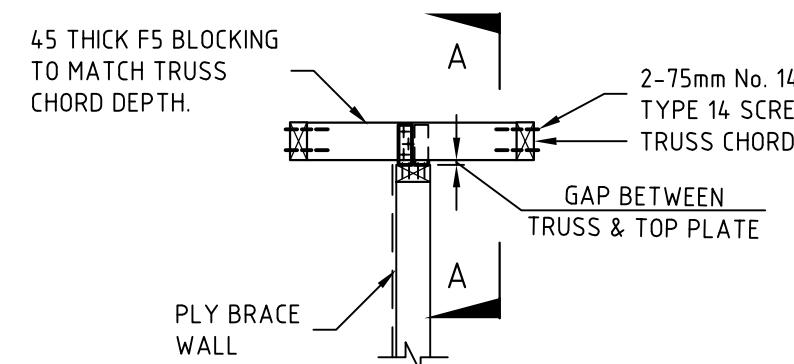


TYPICAL BRACED WALL
PARALLEL TO ROOF TRUSSES

SCALE 1: 20

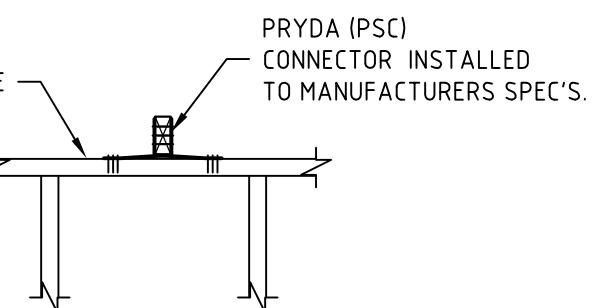
NOTE:

FOR TRUSS ROOFS, NAILS OR SCREWS THROUGH THE TOP PLATE SHALL BE PLACED IN HOLES THAT PERMIT FREE VERTICAL MOVEMENT OF THE TRUSSES.

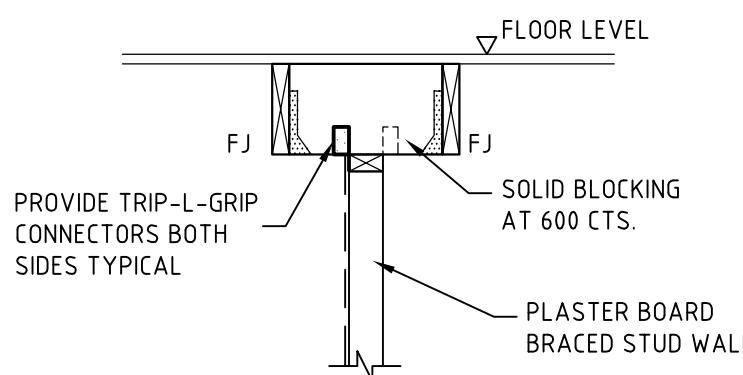


(ALTERNATIVE) TYPICAL BRACED
WALL PARALLEL TO TRUSS ROOF

SCALE 1: 20

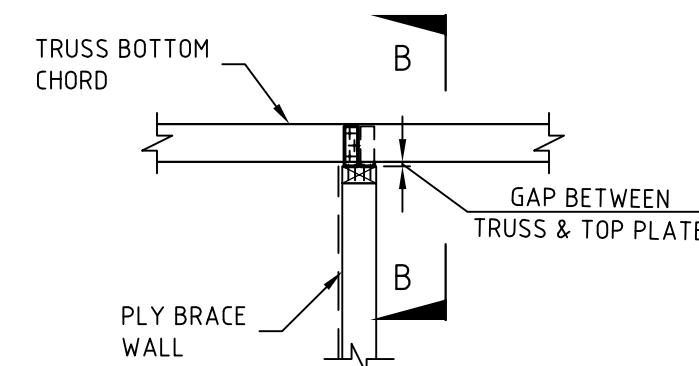


VIEW A-A



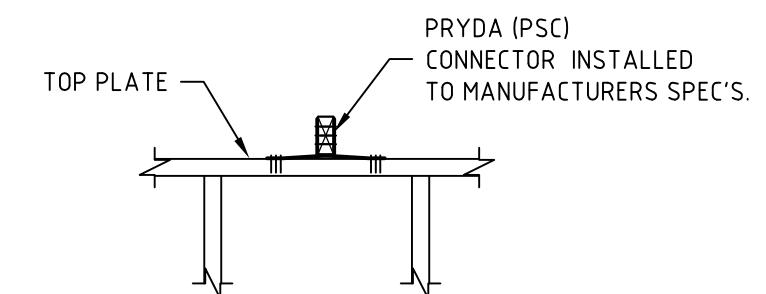
TYPICAL BRACED WALL
PARALLEL TO FLOOR JOISTS

SCALE 1: 20



(ALTERNATIVE) TYPICAL BRACED WALL
PERPENDICULAR TO TRUSS ROOF

SCALE 1: 20



VIEW B-B

P2	PRELIMINARY ISSUE	19.10.15	R.S.
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