ENGINEERING PORTFOLIO

HOA THAI HUYNH - B. ENG. (CIVIL)

GENERAL NOTES:

I AM CURRENTLY EMPLOYED AS A STRUCTURAL ENGINEER IN THE RESIDENTIAL ENGINEERING DEPARTMENT. STRUCTERRE DOMINATES THE RESIDENTIAL ENGINEERING MARKET IN PERTH. THEY STRIVE TO CONTINUE TO EXPAND THEIR BUSINESS TO BRISBANE, SYDNEY AND MELBOURNE. MY MAIN DUTIES INCLUDE:

1. PRODUCE STRUCTURAL DESIGNS FOR SINGLE AND DOUBLE STORY HOUSES TO COMPLY WITH PART 3.2, 3.4 & 3.11 OF THE BCA 2016 INCLUDING RELEVANT AUSTRALIAN STANDARDS.
2. PRODUCE FOOTING DESIGNS TO COMPLY WITH AS 2870-2011.
3. PRODUCE FRAMING AND WALL BRACING DESIGNS TO COMPLY WITH AS 1684.2-2010, AS1684.4-2010, & AS 1720.1-2010.
4. PRODUCE DESIGNS OF SLEEPER, MASONRY RETAINING WALL AND ARTICULATION JOINTS TO COMPLY WITH AS 4678-2002 AND 4773.1-2010.
5. PRODUCE SWIMMING POOL STRUCTURAL AND HYDRAULIC DESIGNS TO COMPLY WITH AS 2783-1992, AS 1926.3-2010, AND AS 1926.1-2012.

NOTE:

PROJECTS IN THIS PORTFOLIO ARE ORGANIZED BY LOCATION.

NOTE:

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. ENG. (CIVIL)

SHEET INDEX

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N/A

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

COVER SHEET

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

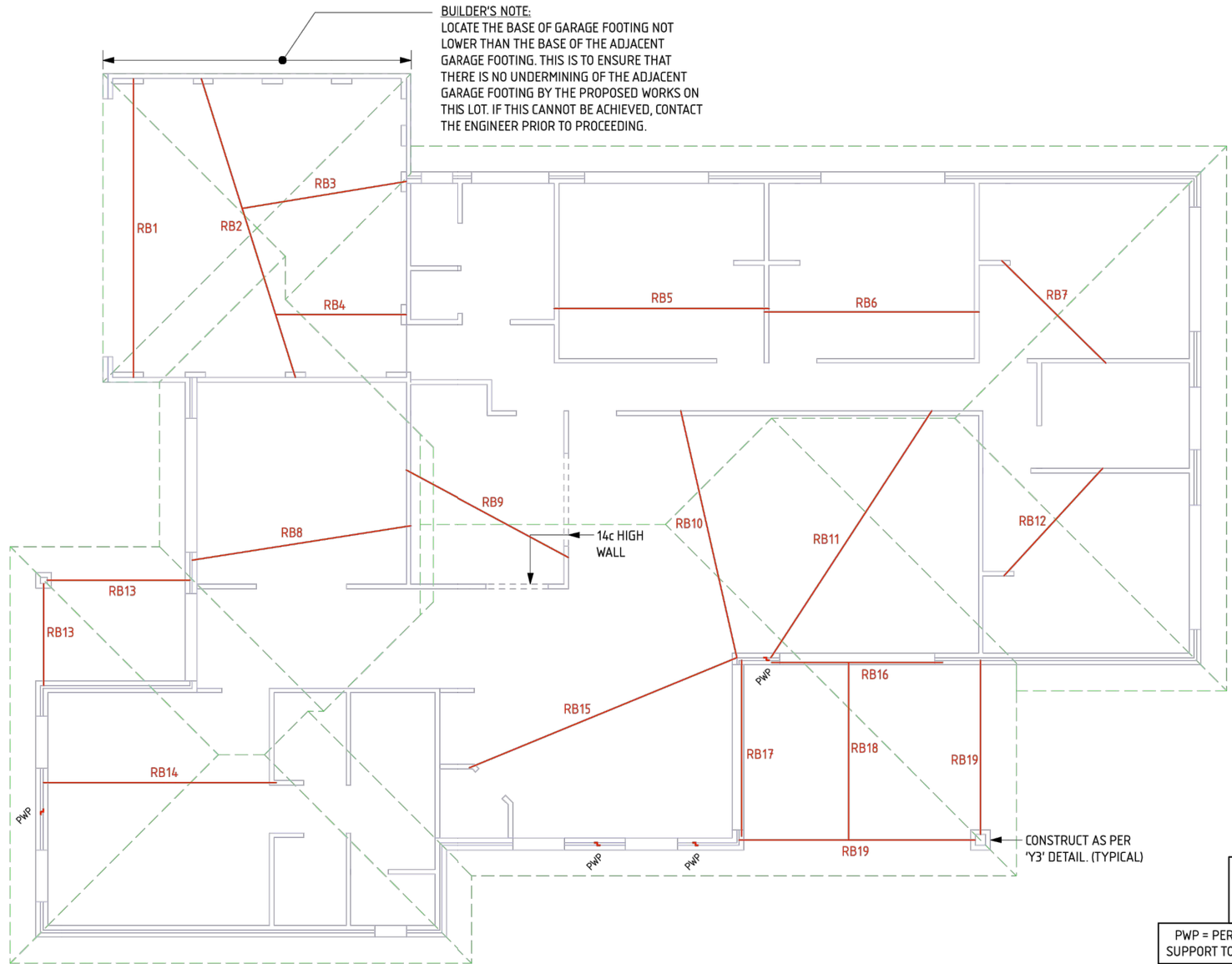
ALL PROJECTS ARE LOCATED IN AUSTRALIA.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-000	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

ROOF MEMBER SCHEDULE

RB1	200 UB 18
RB2	200 UB 22
RB3	240 x 45 WESBEAM LVL OR 240 x 42 SMART LVL 15 OR 150 UB 14
RB4	200 x 45 WESBEAM LVL OR 200 x 42 SMART LVL 15 OR 150 UB 14
RB5	300 x 45 WESBEAM LVL OR 300 x 42 SMART LVL 15 OR 150 UB 14
RB6	300 x 45 WESBEAM LVL OR 300 x 42 SMART LVL 15 OR 150 UB 14
RB7	200 x 45 WESBEAM LVL OR 200 x 42 SMART LVL 15 OR 150 UB 14
RB8	300 x 45 WESBEAM LVL OR 300 x 42 SMART LVL 15 OR 150 UB 14
RB9	240 x 45 WESBEAM LVL OR 240 x 42 SMART LVL 15 OR 150 UB 14
RB10	360 x 63 WESBEAM LVL OR 360 x 58 SMART LVL 15 OR 180 UB 16
RB11	200 UB 18
RB12	200 x 45 WESBEAM LVL OR 200 x 42 SMART LVL 15 OR 150 UB 14
RB13	MIN 200 x 45 WESBEAM LVL OR MIN 200 x 42 SMART LVL 15 OR 150 UB 14
RB14	360 x 63 WESBEAM LVL OR 360 x 58 SMART LVL 15 OR 150 UB 14
RB15	180 UB 16
RB16	300 x 45 WESBEAM LVL OR 300 x 42 SMART LVL 15 OR 150 UB 14
RB17	300 x 45 WESBEAM LVL OR 300 x 42 SMART LVL 15 OR 150 UB 14
RB18	300 x 45 WESBEAM LVL OR 300 x 42 SMART LVL 15 OR 150 UB 14
RB19	360 x 63 WESBEAM LVL OR 360 x 58 SMART LVL 15 OR 180 UB 16



ROOF PLAN

TIMBER ROOF NOTES

1. ALL TIMBERWORK TO BE IN ACCORDANCE WITH
   (a) AS1684 - 'RESIDENTIAL TIMBER FRAMED CONSTRUCTION'.
   (b) AS1720.1 - 'TIMBER STRUCTURES PART 1: DESIGN METHODS'.
   (c) NATIONAL CONSTRUCTION CODE.
2. ALL FABRICATION AND ERECTION OF STEELWORK TO BE IN ACCORDANCE WITH AS4100 - STEEL STRUCTURES CODE.
3. ALL WELDING TO BE IN ACCORDANCE WITH AS1554 - PT 1 - WELDING OF STEEL STRUCTURES.
4. ALL DETAILS TO BE CHECKED AND SITE MEASURED, AS REQUIRED, PRIOR TO ORDERING. CHECK ANY DISCREPANCIES WITH THE ENGINEER.
5. ROOF TO BE TIED DOWN TO RESIST UPLIFT, AS REQUIRED IN AS1684 - TIMBER FRAMING CODE.
6. ALL STEELWORK (INCLUDING FASTENERS) TO BE TREATED IN ACCORDANCE WITH CLAUSE 3.4.4.4 "CORROSION PROTECTION" OF THE NATIONAL CONSTRUCTION CODE.
7. SPLAY STEEL BEAMS WHERE REQUIRED, TO SUIT ROOF PITCH. MIN END HEIGHT TO BE 60 mm.
8. TIMBER TO TIMBER CONNECTION TO BE VIA 10 PL ANGLE CLEAT AND 2M16 BOLTS TO EACH LEG. U.N.O.
9. TIMBER TO STEEL CONNECTION TO BE VIA 10 PL CLEAT FULLY WELDED TO WEB OF STEEL BEAM. FIX TIMBER BEAM TO CLEAT VIA 2M16 BOLTS U.N.O.
10. STEEL TO STEEL CONNECTION TO BE VIA 10 PL CLEAT FULLY WELDED TO WEB OF CONTINUOUS STEEL BEAM FIX INTERSECTING STEEL BEAM TO CLEAT VIA 2M16 BOLTS U.N.O. ALTERNATIVELY, STEEL BEAM MAY BE FULLY WELDED.
11. STEEL TO TIMBER CONNECTION TO BE VIA 10PL END PLATE FULLY WELDED TO END OF STEEL BEAM. FIX END PLATE TO TIMBER BEAM VIA 4M16 BOLTS U.N.O. (MAXIMUM SIZE OF STEEL BEAM TO BE 180 UB 16).
12. PARAPET FLASHING TO BE OVER PARAPET, NOT THROUGH. ALL GUTTERS, FLASHING AND CLADDING TO ARCHITECTURAL DETAILS.
13. ROOF BEAMS TO BE PLACED HORIZONTALLY AND MAY BE USED TO SUPPORT INDEPENDENT CEILING MEMBERS.
14. ALL STRUTTING BEAMS TO BE LATERALLY RESTRAINED IN ACCORDANCE WITH AS1684 AND TO MANUFACTURER'S REQUIREMENTS.

USE SL52/63 MESH. ALL OTHER SLAB AND FOOTING DETAILS AS PER PREVIOUSLY ISSUED DETAIL.

PWP = PERTH WIND POST. REFER TO "GP205 - SUPPORT TO WALL" DETAIL FOR FIXING DETAILS.

CERTIFICATION OF MASONRY WALLS DESIGNED TO COMPLY WITH AS3700 AND PROVISION p2.1 OF THE NCC.

WIND CLASSIFICATION: N1

ROOF COVER: TILED

IT IS THE RESPONSIBILITY OF THE BUILDER TO INFORM THE OWNER OF THE IMPORTANCE OF MAINTAINING EXTERNAL STRUCTURAL TIMBERS

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

ROOF FRAMING PLAN (PERTH, WA)

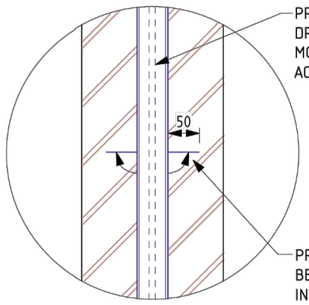
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

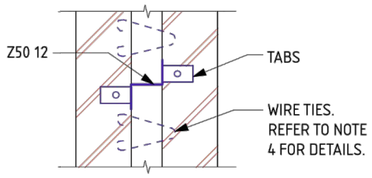
THIS IS A TYPICAL PROJECT IN PERTH, WEST AUSTRALIA. THE ROOF FRAMING IS DESIGNED IN COMPLIANCE WITH AS 1684.2-2010, AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING THE CAD PACKAGE VECTORWORKS.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-100	0

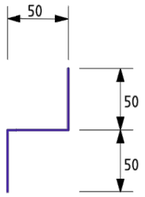
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



DETAIL A 1:10



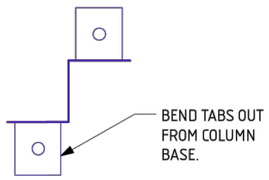
SECTION B 1:10



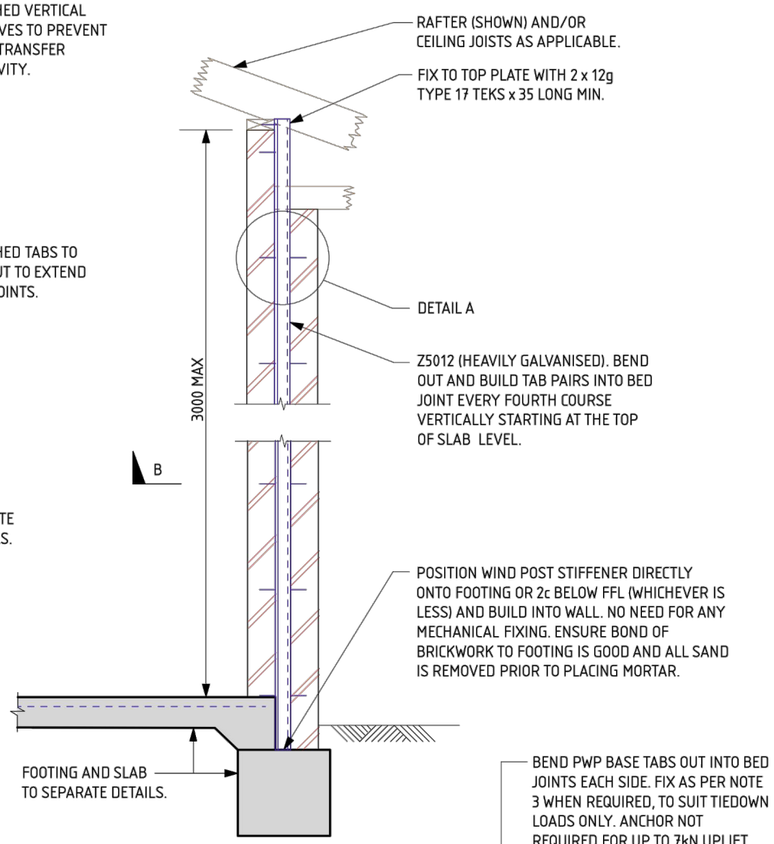
Z5012

PERTH WIND POST 1:5

MANUFACTURE FROM G250 1.2 STEEL.

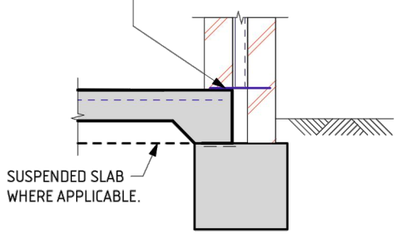


PWP BASE TABS 1:5

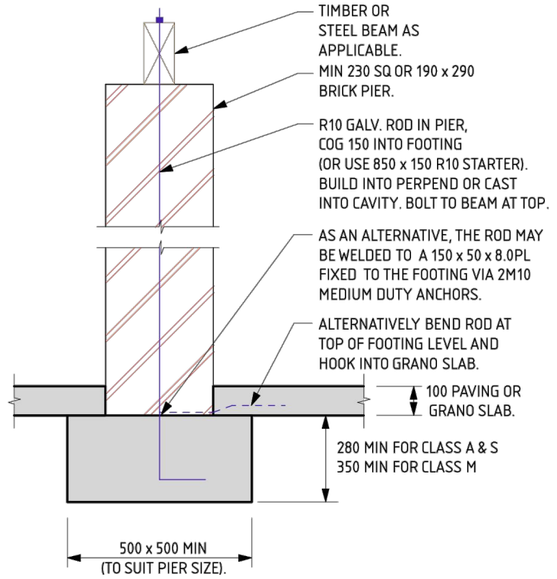


SUPPORT TO WALL DETAIL 1:20

PERTH WIND POST - PWP

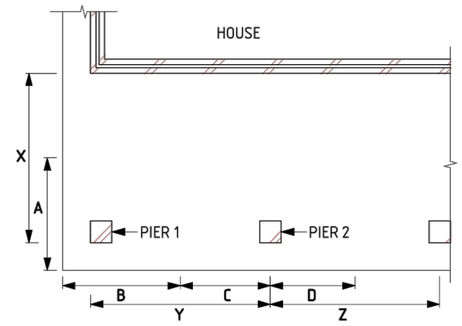


PWP BASE TAB OPTION DETAIL 1:20



EXTERNAL BRICK PIER DETAIL

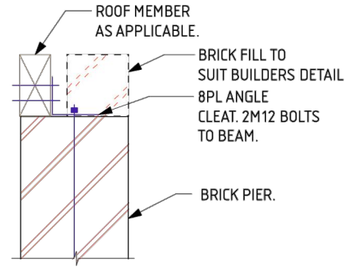
NOTE: MIN 450mm SAND UNDER FOOTING FOR CLASS M SITES (SEE NOTE 3 BELOW)



VERANDAH PLAN 1:100

PIER 1
ROOF AREA = A x B
WHERE
A = X/2 + EAVES
B = Y/2 + EAVES

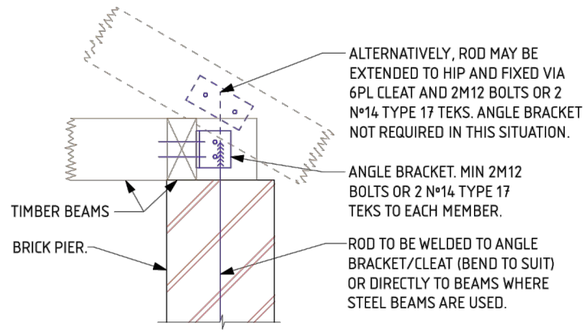
PIER 2
ROOF AREA = A(C + D)
WHERE
A = X/2 + EAVES
C = Y/2
D = Z/2



ALTERNATIVE
TOP FIXING DETAIL A

NOTES:

1. REMOVE ALL TOPSOIL, VEGETATION AND DELETERIOUS FILL MATERIAL FROM THE BUILDING AREA.
2. SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.07mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR DEPTH OF PAD.
3. A MIN OF 150mm OF SAND REQUIRED UNDER FOOTINGS FOR CLASS A & S SITES. MIN 450 SAND REQUIRED UNDER FOOTING FOR CLASS M SITES.
4. BRICK PIER DESIGNED TO SUPPORT MAX 10m² FOR METAL ROOF AND 15m² FOR TILE ROOF.
5. ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA TO SITE DRAIN. (DRAIN TO LOCAL AUTHORITY STORM WATER SYSTEM WHERE APPROPRIATE).
6. EXCAVATIONS FOR PLUMBING NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER.
7. CONCRETE TO CONFORM WITH AS 3600.
8. BLENDED CEMENT TO CONFORM WITH AS 3972.
9. ALL CONCRETE TO BE N20/20/80.
10. CURE CONCRETE FOR 7 DAYS MINIMUM.
11. THE DETAIL ONLY PROVIDES LIMITED LATERAL STABILITY. IF THE OVERALL ROOF STRUCTURE DOES NOT PROVIDE LATERAL STABILITY TO THE STRUCTURE, CONTACT THE ENGINEER FOR ADVICE.
12. ALL MASONRY SHALL COMPLY WITH AS 3700. ENSURE ALL PERPENDS ARE FULLY MORTARED. SPECIFICALLY, PERPENDS CONTAINING REINFORCING RODS.



ALTERNATIVE
TOP FIXING DETAIL B

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

ROOF FRAMING DETAILS (PERTH, WA)

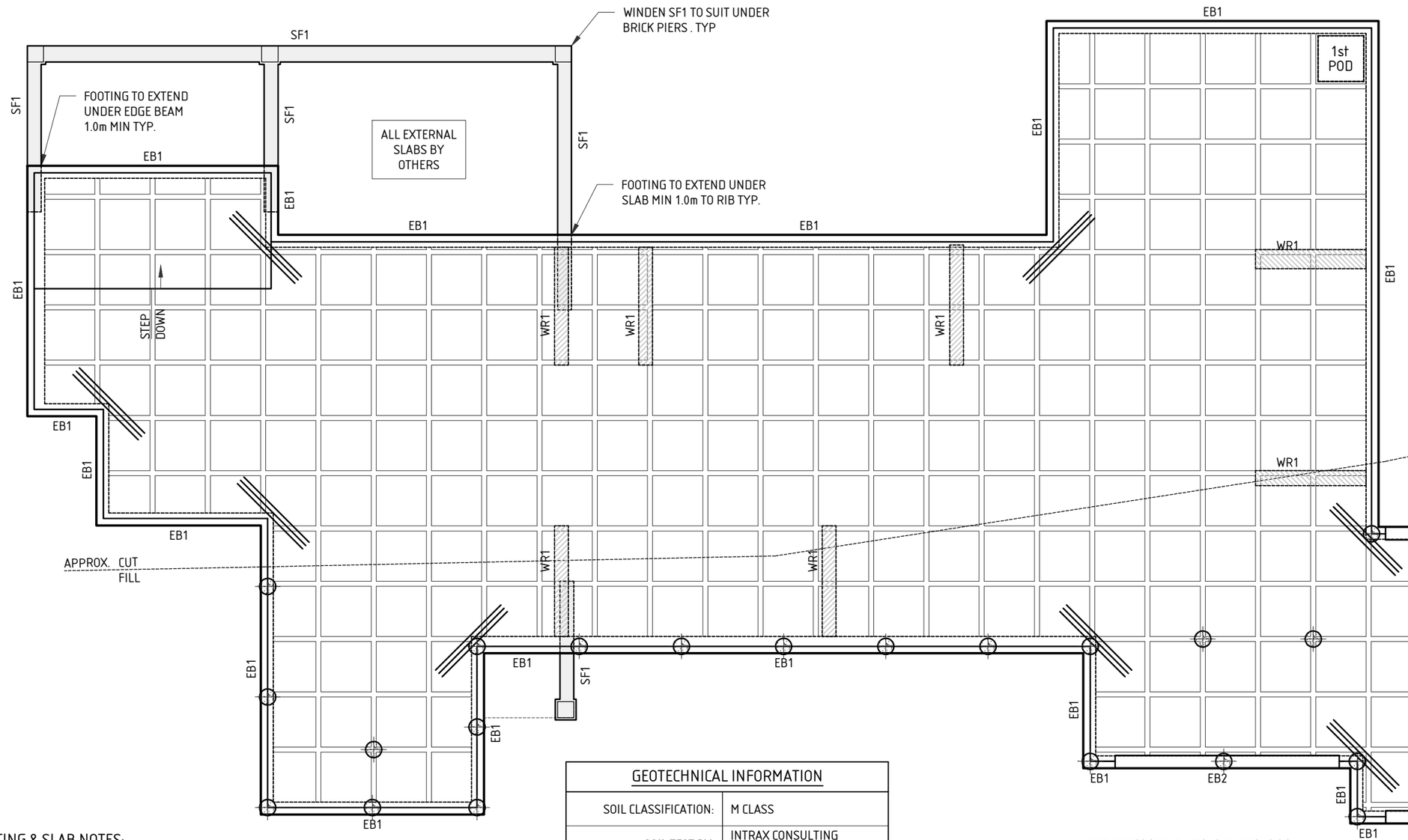
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN PERTH, WEST AUSTRALIA. THE ROOF FRAMING IS DESIGNED IN COMPLIANCE WITH AS 1684.2-2010, AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING THE CAD PACKAGE VECTORWORKS.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-101	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



SLAB DESIGN SUMMARY (U.N.O)

'bh' BOX HEIGHT (mm)	225
BOX SIZE (mm)	1090 x 1090
'st' SLAB THICKNESS (mm)	85
'od' OVERALL DEPTH (mm)	310
'bw' BEAM WIDTH (mm)	270
'rw' RIB WIDTH (mm)	100
SLAB REINF'T	SL82
100mm RIB REINF'T	1-N12 BTM or Equiv.
270mm BEAM REINF'T	3-N12 BTM or 3-L11TM BTM

REINF'T FOR BEAMS WIDER THAN 300mm

WIDTH (mm)	TOP	BOTTOM
301 - 370	1-N12 or Equiv.	3-N12 or Equiv.
371 - 480	2-N12 or Equiv.	4-N12 or Equiv.
481 - 600	3-N12 or Equiv.	5-N12 or Equiv.

FOOTING DESIGN SUMMARY

FOOTING TYPE	DEPTH (df)	REINFORCEMENT
SF1	450mm	3-L11TM TOP & BTM WITH R6 TIES @ 900 CTS
SF2	450mm	4-L11TM TOP & BTM WITH R6 TIES @ 900 CTS
PF1	600mm	NONE (MASS CONCRETE)

FOOTING & SLAB NOTES:

F.S.1. CUT/FILL LINE SHOWN IS APPROXIMATE ONLY. IF NOT SHOWN, SITE SCRAPE SHOULD SUFFICE TO CREATE BUILDING PLATFORM. CONTACT THIS OFFICE IF OTHERWISE.

F.S.2. WIDENED RIBS (WIR) TO BE PLACED UNDER PLY BRACING/LOAD BEARING WALLS AND POINT LOADS.

F.S.3. BUILDER TO CONFIRM SERVICES DO NOT AFFECT STRUCTURE BEFORE COMMENCING WORK ON-SITE. CONTACT THIS OFFICE IF OTHERWISE.

F.S.4. SCREW PIERS WITH A MIN. SWL OF 50 kN MAY BE USED AS AN ALTERNATIVE TO BORED PIERS AND AT 2400 CTS.

F.S.5. TERMINATE TO DAMP PROOFING MATERIAL AT FINISHED GROUND OR PAVING LEVEL.

F.S.6. ALL FOOTINGS TO BE FOUNDED 200mm INTO RECOMMENDED FOUNDING MATERIAL (RFM) U.N.O

GEOTECHNICAL INFORMATION

SOIL CLASSIFICATION:	M CLASS
SOIL TEST BY:	INTRAX CONSULTING ENGINEERS Pty. Ltd.
REFERENCE #:	60668
DATE:	30/09/14
LEVEL 1 COMPACTION:	N/A
RECOMMENDED FOUNDING MATERIAL (RFM):	NATURAL VERY STIFF SILTY SANDY CLAY
MINIMUM BEARING CAPACITY	100 kPa

EXPOSURE CLASSIFICATION

STRUCTURAL STEEL	MEDIUM

FOOTING & SLAB PLAN

SCALE 1:100

CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS = 20MPa
RFM = RECOMMENDED FOUNDING MATERIAL
DO NOT SCALE OFF ENGINEERING DRAWINGS. IF IN DOUBT, ASK

DENOTES CONCRETE BORED PIERS UNDER FOOTING & SLAB
Auger Size: 350Ø | Depth into RFM (mm): 200

LEGEND

EB1 - EB2	EDGE BEAM
WR1	WIDENED RIB
SF1	STRIP FOOTING
//	DENOTES 2000mm lg 3-N12 or 3-L11TM CRACK CONTROL BARS, TIED TO UNDERSIDE OF SLAB TOP MESH.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100

ALL PROJECTS DESIGNED AND DRAFTED BY
HOA THAI HUYNH - B. Eng. (Civil)

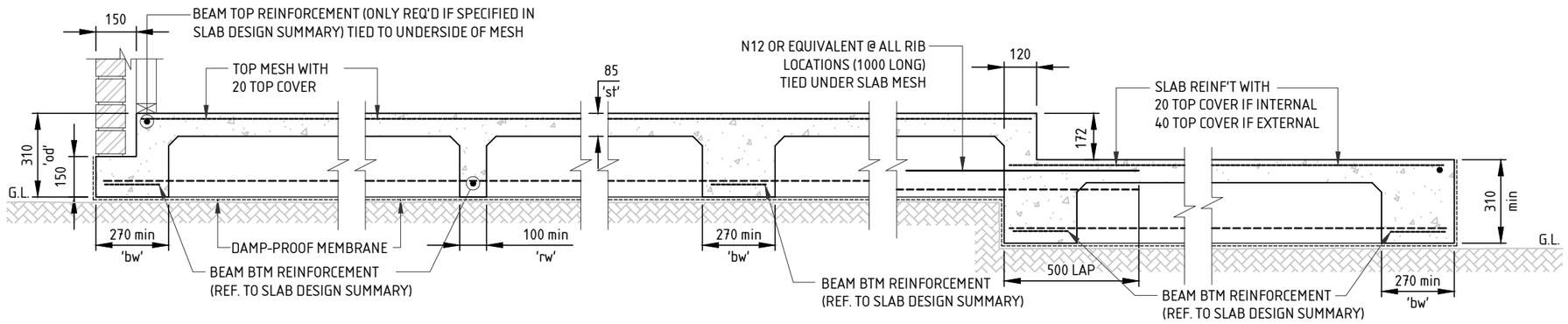
PROJECT
DRAFTING AND DESIGN

FOOTING & SLAB PLAN (BRISBANE, QLD)

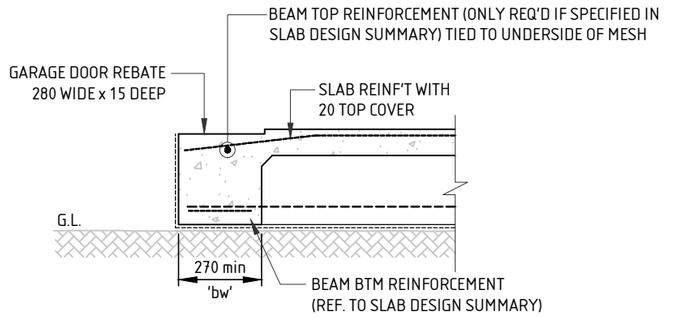
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A TYPICAL PROJECT IN BRISBANE, QUEENSLAND.
THE SLAB IS DESIGNED IN COMPLIANCE WITH AS 2870-2011.
I PRODUCED THE DRAWINGS USING AUTOCAD.

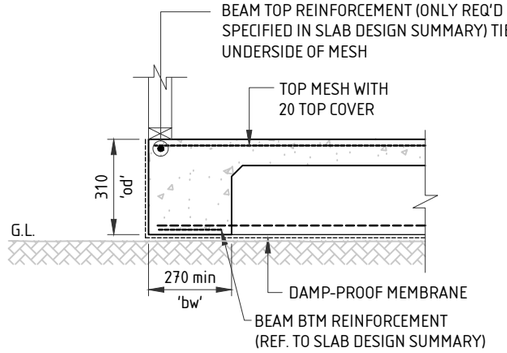
REFERENCE NO.	SHEET NO.	REV
PF060618	S-200	0



TYPICAL EDGE BEAM - EB1 | INTERNAL RIB | WIDENED RIB - WR1 | STEPPED BEAM - SB1 | VERANDAH BEAM - VB1



GARAGE ENTRY EDGE BEAM - EB2



CLAD FRAME EDGE BEAM - EB3

NOTE - FOR ALL REINFORCEMENT, POD SIZE AND LOCATION REFER TO FOOTING & SLAB PLAN

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

FOOTING & SLAB DETAILS (BRISBANE, QLD)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN BRISBANE, QUEENSLAND. THE SLAB IS DESIGNED IN COMPLIANCE WITH AS 2870-2011.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-201	0

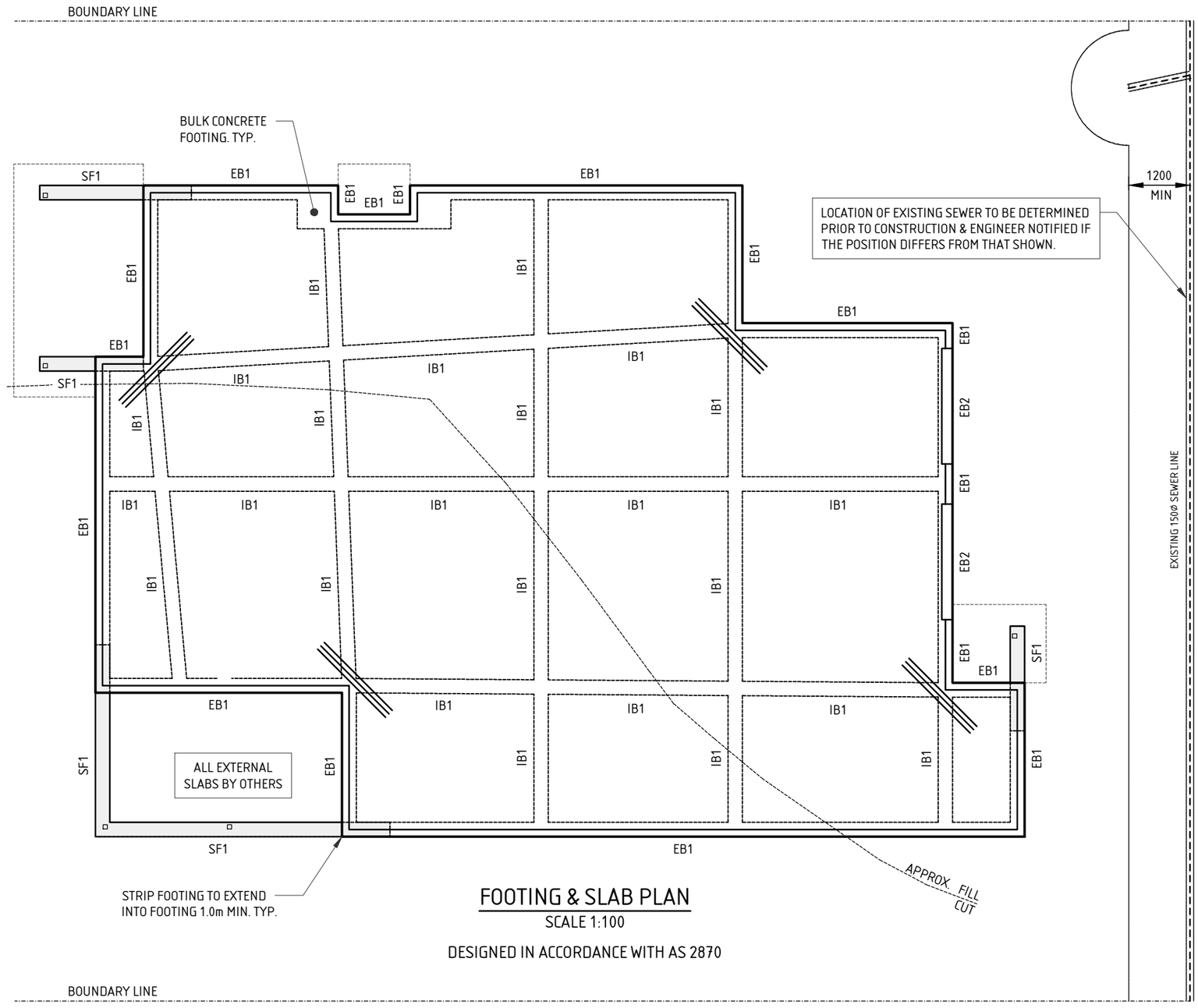
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

SLAB & FOOTING SCHEDULE	
'st' SLAB THICKNESS (mm) U.N.O	100
'od' OVERALL DEPTH (mm) U.N.O	425
'ew' EDGE BEAM WIDTH (mm) U.N.O	300
'iw' INTERNAL BEAM WIDTH (mm) U.N.O	300
'sd' STRIP FOOTING DEPTH (mm) U.N.O	500
'sw' STRIP FOOTING WIDTH (mm) U.N.O	300
SLAB REINF. / TOP COVER (mm) U.N.O	SL82 / 20
BEAM (EB/CEB/IB) BTM REINF.	3-L11TM or 3-N12
BEAM (EB/CEB/IB) TOP REINF.	1-N12
BEAM FITMENTS	N12 @ 900
STRIP FOOTING (SF1) REINF.	3-L12TM TOP & BTM.
CONC. GRADE / SLUMP / AGG	20 MPa / 100mm / 20mm
CORE-FILL GRADE / SLUMP / AGG	20 MPa / 200mm / 10mm

GEOTECHNICAL INFORMATION	
SOIL CLASSIFICATION:	H1 CLASS
SOIL TEST BY:	STRUCTERRE WBA Pty. Ltd.
DATE:	09/10/14
JOB NO:	37299-14GS
RECOMMENDED FOUNDING MATERIAL:	STIFF SANDY SILTY CLAY - CONTROLLED FILL

NOTES:
THE CUT/FILL LINE SHOWN IS APPROXIMATE ONLY. IF VARIES PLEASE CONSULT ENGINEER FOR FURTHER ADVICE.
SLAB THICKENINGS (ST1) TO BE PLACED UNDER PLY BRACING WALLS AND POINT LOADS.
DO NOT SCALE OFF ENGINEERING DRAWINGS

LEGEND:	
EB1 - EB2	EDGE BEAM
IB1	INTERNAL BEAM
SF1	STRIP FOOTING
///	DENOTES 2000mm lg 3-N12 CRACK CONTROL BARS, TIED TO UNDERSIDE OF SLAB TOP MESH.



FOOTING & SLAB PLAN

SCALE 1:100

DESIGNED IN ACCORDANCE WITH AS 2870

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

FOOTING & RAFT SLAB PLAN (BRISBANE, QLD)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN BRISBANE, QUEENSLAND. THE RAFT SLAB IS DESIGNED IN COMPLIANCE WITH AS 2870-2011.
I PRODUCED THE DRAWINGS USING AUTOCAD.

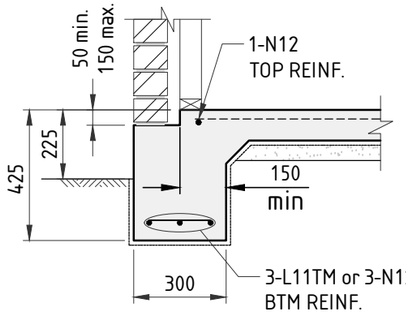
REFERENCE NO.	SHEET NO.	REV
PF060618	S-202	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

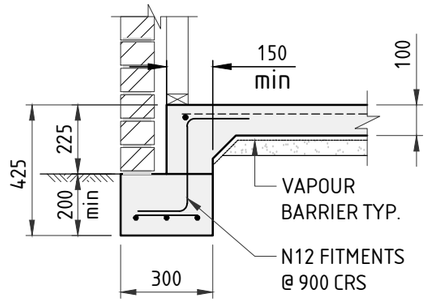
SLAB & FOOTING SCHEDULE	
'st' SLAB THICKNESS (mm) U.N.O	100
'od' OVERALL DEPTH (mm) U.N.O	425
'ew' EDGE BEAM WIDTH (mm) U.N.O	300
'iw' INTERNAL BEAM WIDTH (mm) U.N.O	300
'sd' STRIP FOOTING DEPTH (mm) U.N.O	500
'sw' STRIP FOOTING WIDTH (mm) U.N.O	300
SLAB REINF. / TOP COVER (mm) U.N.O	SL82 / 20
BEAM (EB/CEB/IB) BTM REINF.	3-L11TM or 3-N12
BEAM (EB/CEB/IB) TOP REINF.	1-N12
BEAM FITMENTS	N12 @ 900
STRIP FOOTING (SF1) REINF.	3-L12TM TOP & BTM.
CONC. GRADE / SLUMP / AGG	20 MPa / 100mm / 20mm
CORE-FILL GRADE / SLUMP / AGG	20 MPa / 200mm / 10mm

NOTES:

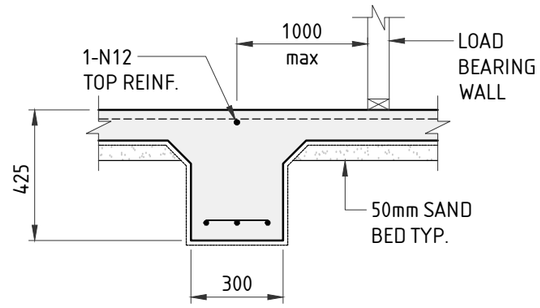
1. IF A MIN. OF 75mm OF CONCRETE IS EXPOSED AFTER LANDSCAPING, NO FURTHER TREATMENT AT PERIMETER IS REQ'D TO PROVIDE TERMITE PROOFING.
2. IF FOOTINGS ARE POURED SEPARATELY TO THE SLAB, FITMENTS SHALL BE USED TO CONNECT SLAB TO FOOTING.
3. PROVIDE 50mm COVER TO REINFORCEMENT U.N.O



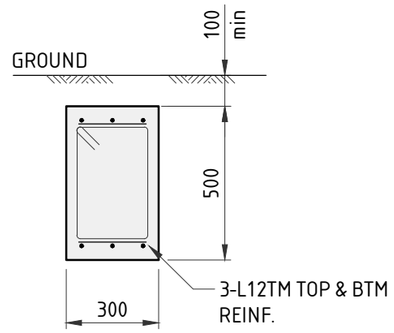
EB1 - EDGE BEAM
SCALE 1:20



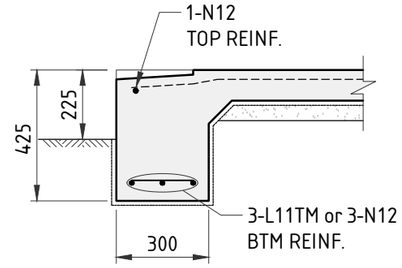
EB1 - EDGE BEAM
(DOUBLE POUR OPTION)
SCALE 1:20



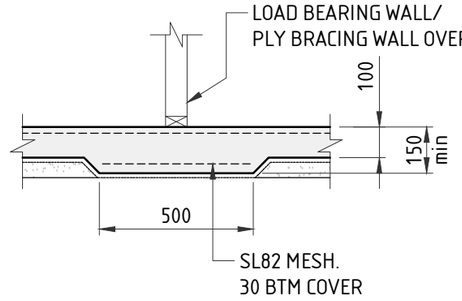
IB1 - INTERNAL BEAM
SCALE 1:20



SF1 - STRIP FOOTING
SCALE 1:20



EB2 - GARAGE EDGE BEAM
SCALE 1:20



ST1 - SLAB THICKENING
SCALE 1:20

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)	

PROJECT
DRAFTING AND DESIGN

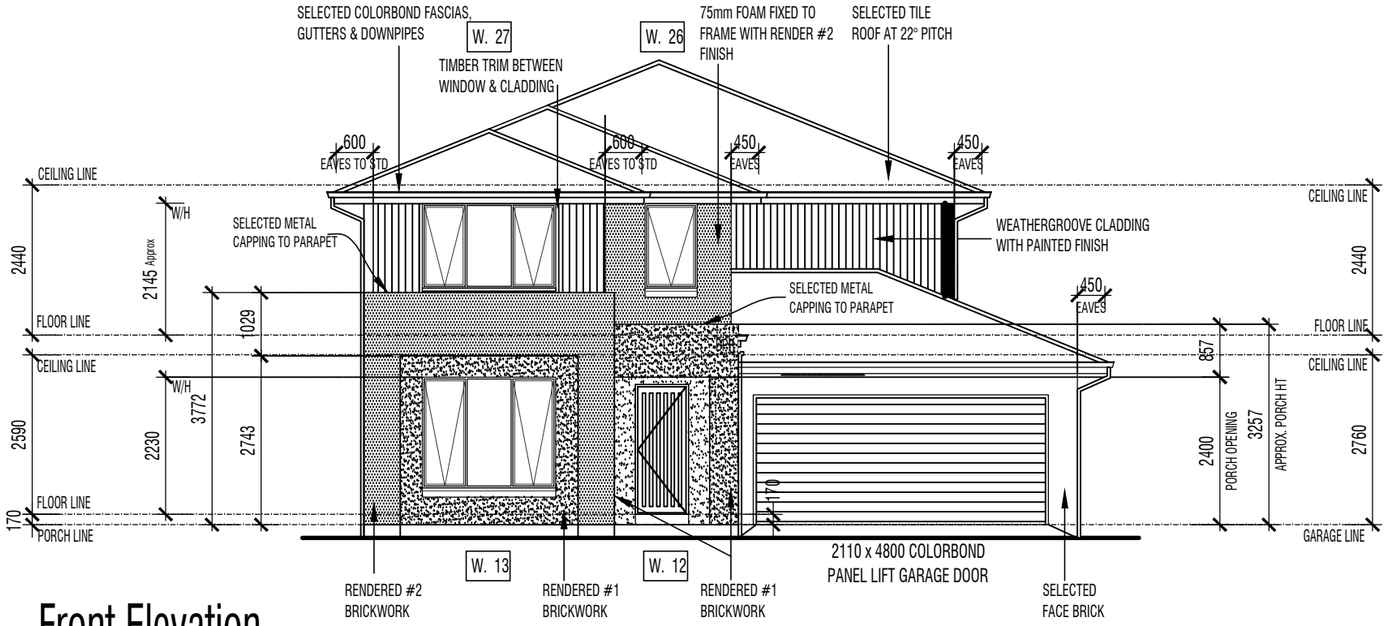
FOOTING & RAFT SLAB DETAIL (BRISBANE, QLD)

ENGINEERING PORTFOLIO

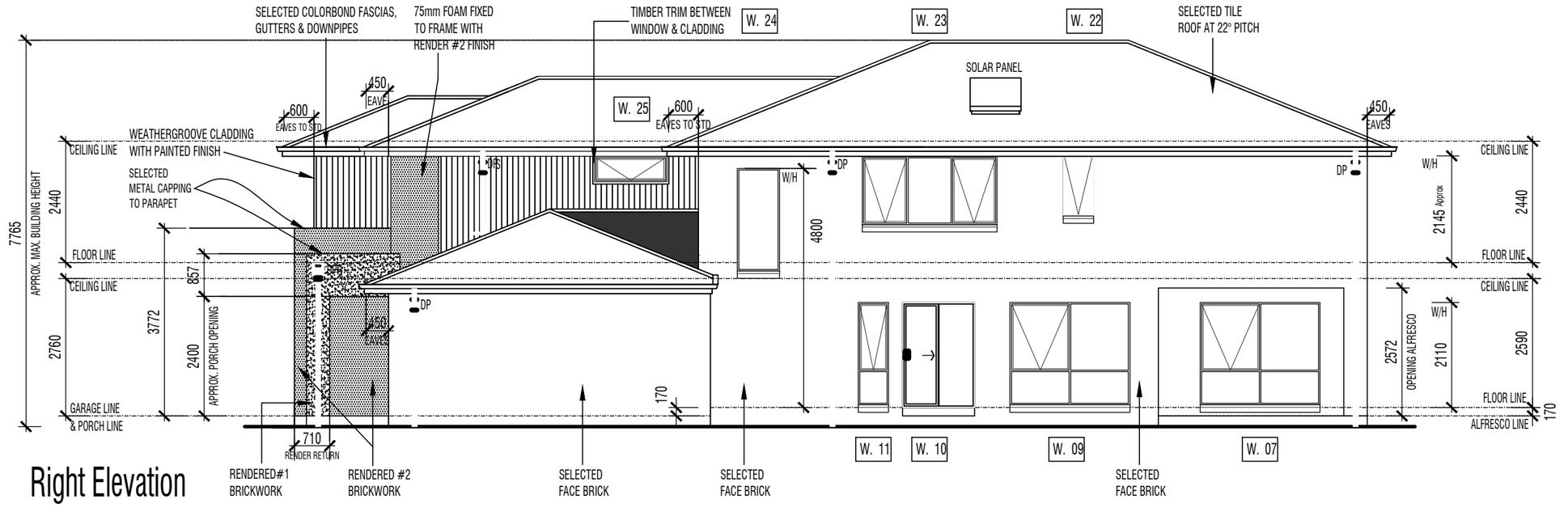
PROJECT DESCRIPTION
THIS IS A TYPICAL PROJECT IN BRISBANE, QUEENSLAND. THE RAFT SLAB IS DESIGNED IN COMPLIANCE WITH AS 2870-2011.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-203	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



Front Elevation



Right Elevation

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

ARCHITECTURAL ELEVATIONS 1 (MELBOURNE, VIC)

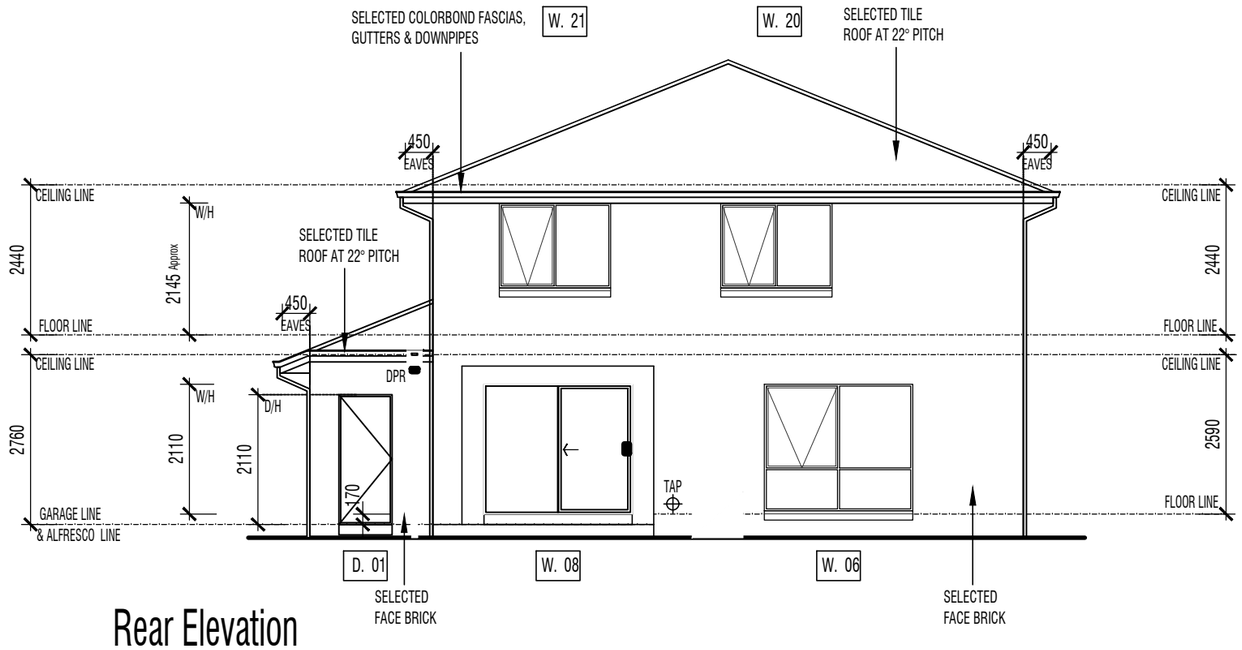
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

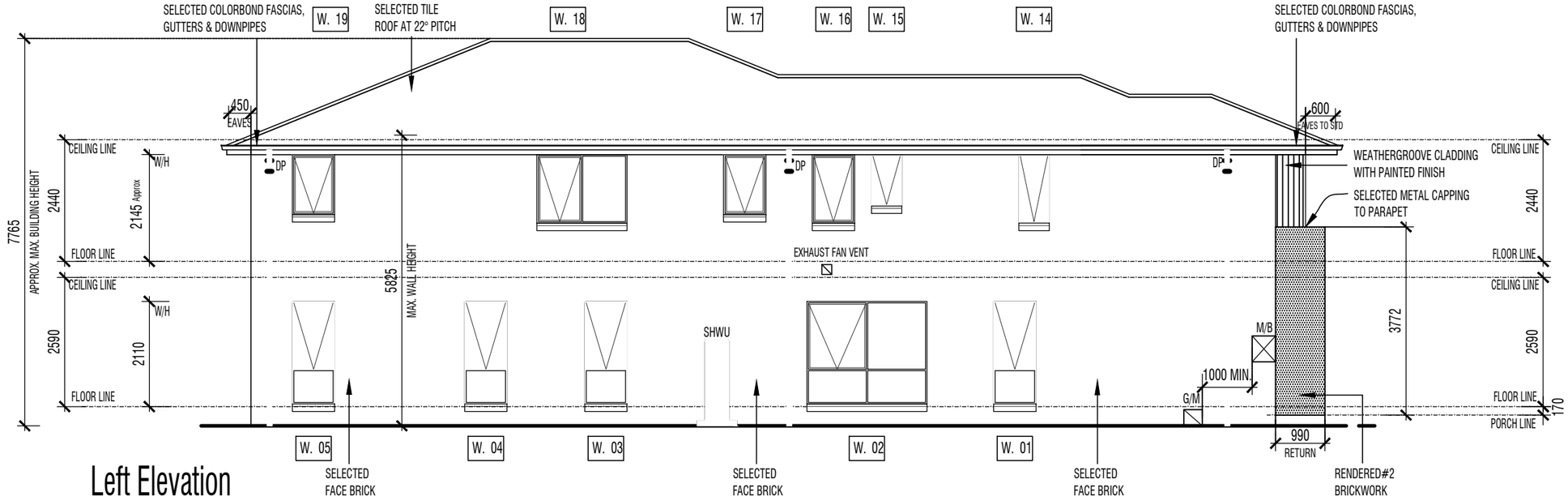
THIS IS A TYPICAL DOUBLE STORY HOUSE DESIGN IN MELBOURNE, VICTORIA.
OUR CLIENTS SEND US ARCHITECTURAL DRAWINGS IN AUTOCAD FORMAT. WE PROVIDE FULL STRUCTURAL DESIGNS FROM THE GROUND UP.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-300	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



Rear Elevation



Left Elevation

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

ARCHITECTURAL ELEVATIONS 2 (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL DOUBLE STORY HOUSE DESIGN IN MELBOURNE, VICTORIA.
OUR CLIENTS SEND US ARCHITECTURAL DRAWINGS IN AUTOCAD FORMAT. WE PROVIDE FULL STRUCTURAL DESIGNS FROM THE GROUND UP.

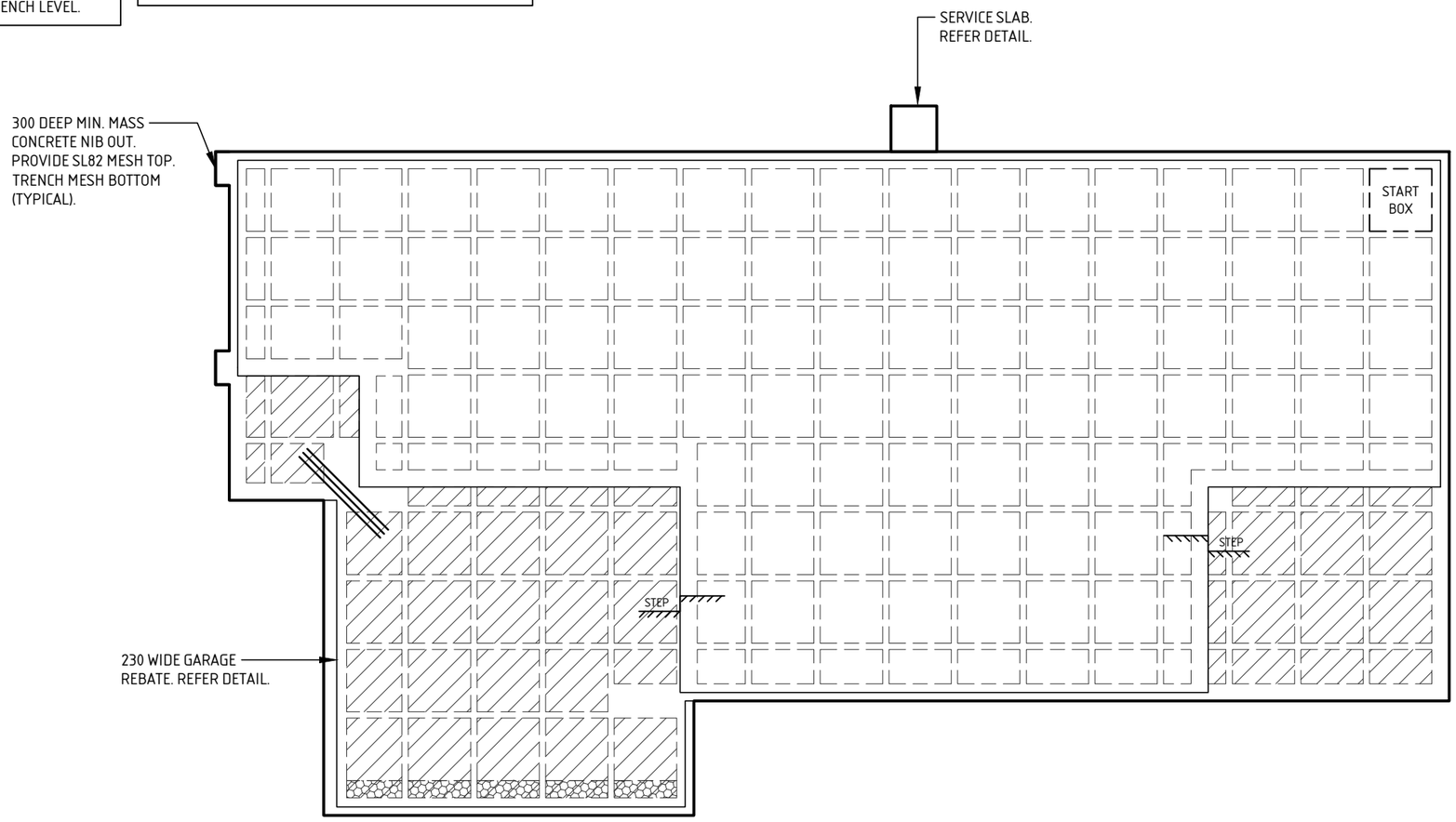
REFERENCE NO.	SHEET NO.	REV
PF060618	S-301	0

EDGE BEAM FOUNDING DEPTH:

UNLESS SUPPORTED ON PIERS/PILES ALL EDGE BEAMS SHALL BE FOUNDED ONTO FIRM NATURAL SOIL WITH A BEARING CAPACITY OF AT LEAST 50 kPa OR ON CONTROLLED FILL. LOCALLY DEEPEN OR PROVIDE BLINDING CONCRETE AS REQUIRED.
OPTIONAL LEVELING BEDDING SHALL NOT BE USED UNDER EDGE BEAMS DEEPENED BELOW BENCH LEVEL.

BEAM & RIB REINFORCEMENT NOTE:

ALL BEAMS or INTERNAL RIBS WIDER THAN SPECIFIED IN WAFFLE SLAB SCHEDULE SHALL BE REINFORCED WITH AN ADDITIONAL BAR TOP & BTM. FOR EVERY 100 INCREASE IN WIDTH. REFER INTERNAL RIB REINF'T FOR BAR SIZE. ENSURE ALL EDGE BEAM REINF'T CONTINUES TO FIRST INTERNAL RIB OR AS SHOWN ON PLAN (TYPICAL).



WAFFLE SLAB SCHEDULE		
BOX SIZE		1090 x 1090
BOX HEIGHT	'bh'	225mm
SLAB THICKNESS	'st'	85mm
OVERALL DEPTH	'od'	310mm
EDGE BEAM WIDTH	'bw'	300mm
INTERNAL RIB WIDTH	'rw'	110mm
INTERNAL BEAM WIDTH	'ib'	300mm
SLAB REINF'T		SL72 MESH TOP
INTERNAL RIB REINF'T		1-N12 BAR BTM.
EDGE BEAM REINF'T		3-L12TM or 3-N12 BARS BTM
INTERNAL BEAM REINF'T		3-L12TM or 3-N12 BARS BTM

GEOTECHNICAL INFORMATION	
SOIL TEST BY:	
CIVIL GEOTECHNICAL SERVICES	
SOIL CLASSIFICATION:	M
DATE:	01.10.2017
REFERENCE NO:	011017G
LEVEL 1 COMPACTION:	N/A
MIN. BEARING CAPACITY	50 kPa

SITE PREPARATION NOTES

1) REMOVE SURFACE SOIL CONTAINING GRASS, ROOTS, AND ORGANIC MATTER FROM THE BUILDING AREA INCLUDING TOP 100mm OF EXISTING FILL.
2) ROLL THE WORKING SURFACE. IF SOFT SPOTS ARE ENCOUNTERED, THIS OFFICE SHALL BE CONTACTED IMMEDIATELY FOR ADDITIONAL REQUIREMENTS.
3) CUT AND/OR FILLED (OR SITE SCRAPED) SITE TO FORM A LEVEL BENCH .
4) ANY FILLING PLACED AS PART OF CUT/FILL OPERATIONS SHALL BE COMPACTED AT OPTIMUM MOISTURE CONTENT IN 150mm MAXIMUM LAYERS, BY REPEATED ROLLING IN ORTHOGONAL DIRECTIONS, IN ACCORDANCE WITH AS2870-2011 Clause 6.4.2. THE MAXIMUM DEPTH OF COMPACTED FILL SHALL NOT EXCEED 300mm. IF FILL EXCEEDS 300mm OR BUILDING PLATFORM IS SOFT OR SUSPECT THEN CONTACT THIS OFFICE FOR ADDITIONAL REQUIREMENTS.

FOOTING LEGEND	
	DENOTES WAFFLE BOX TO BE SETDOWN. REFER FOOTING DETAILS.
	DENOTES WAFFLE BOX EXTENSION. 300 MAX. EXTENSION FOR SINGLE STOREY. 200 MAX. EXTENSION FOR DOUBLE STOREY.
STEP	DENOTES STEP IN SLAB. REFER FOOTING DETAILS.
	DENOTES 2000 LONG 3-N12 or 3-L11TM CRACK CONTROL or CANTILEVER BARS, TO BE TIED TO UNDERSIDE OF TOP SLAB MESH.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100
ALL PROJECTS DESIGNED AND DRAFTED BY	
HOA THAI HUYNH - B. Eng. (Civil)	

PROJECT

DRAFTING AND DESIGN

FOOTING & SLAB PLAN (MELBOURNE, VIC)

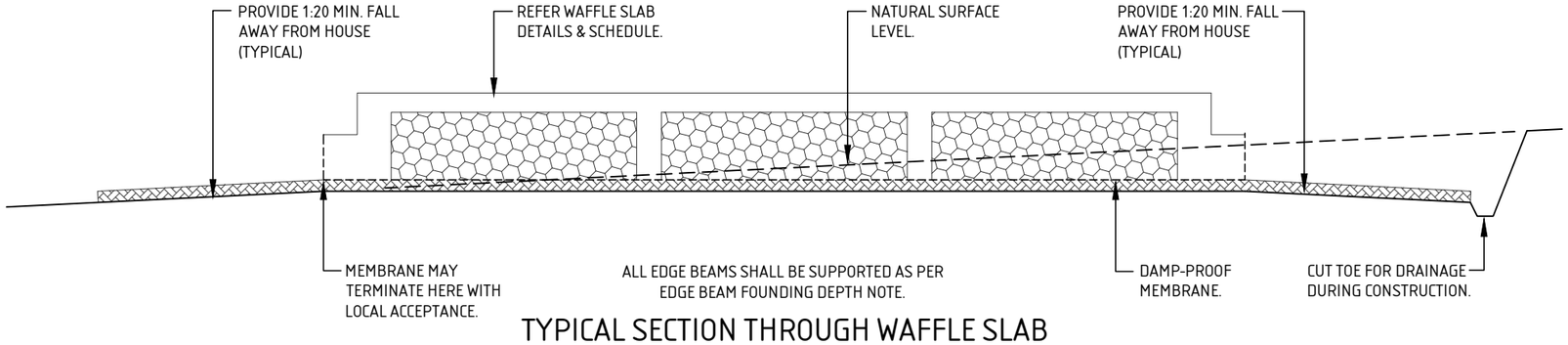
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

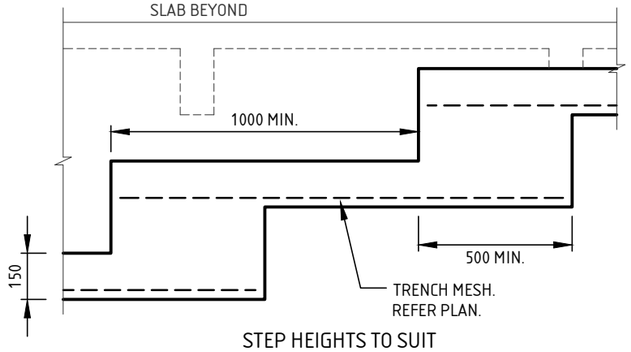
THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE SLAB IS DESIGNED IN COMPLIANCE WITH AS 2870-2011.
I HELPED CREATE THIS RESIDENTIAL DESIGN TEMPLATE WHILE WORKING AS THE MELBOURNE TEAM CAD MANAGER.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-302	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

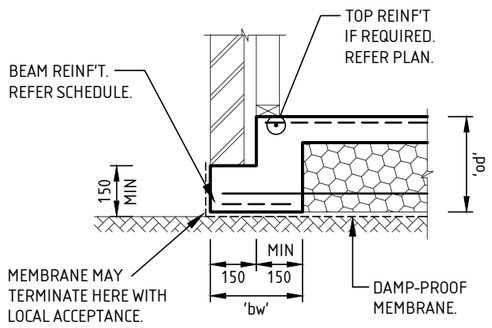


TYPICAL SECTION THROUGH WAFFLE SLAB

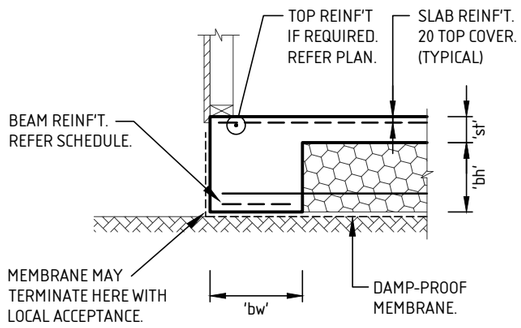


STEP HEIGHTS TO SUIT
STEP LOCATIONS TO BE CONFIRMED ON SITE

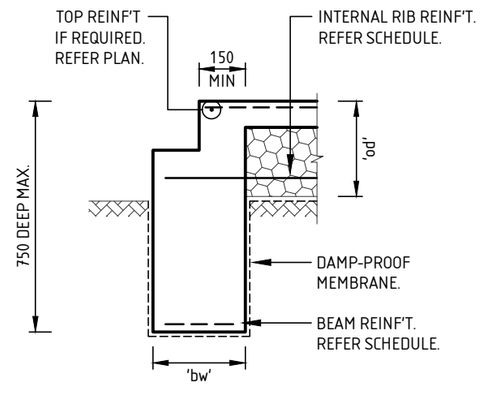
EDGE BEAM STEPPING DETAIL



BRICK VENEER EDGE BEAM

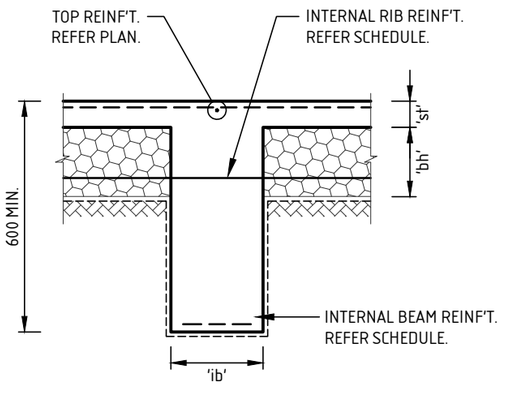


CLADDING EDGE BEAM



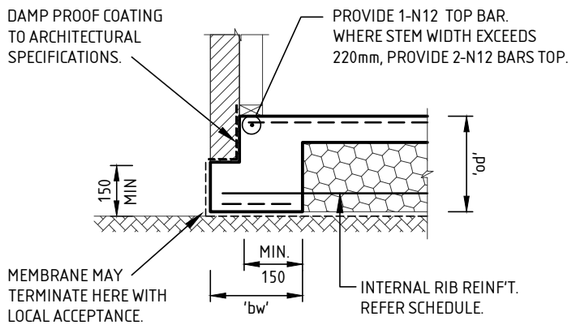
750mm MAX. DEPTH

DEEPENED EDGE BEAM

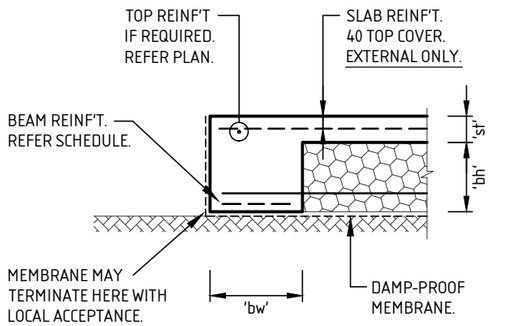


WHERE REQUIRED

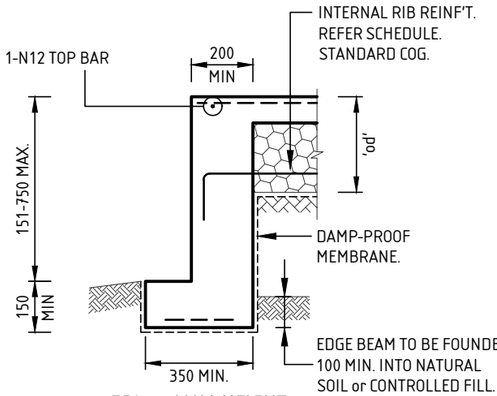
DEEPENED INTERNAL BEAM



CLADDING VENEER EDGE BEAM

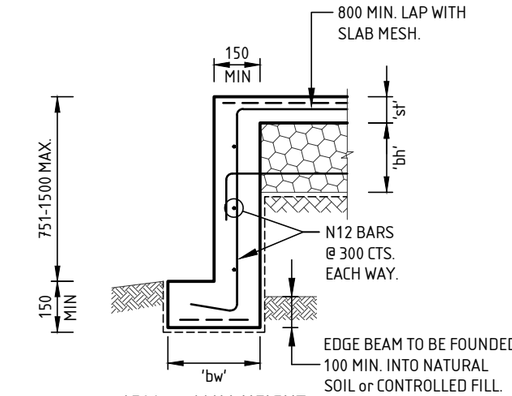


PORTICO/ALFRESCO EDGE BEAM



750mm MAX. HEIGHT

DEEPENED REBATE



1500mm MAX. HEIGHT

DEEPENED REBATE

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

FOOTING & SLAB DETAILS (MELBOURNE, VIC)

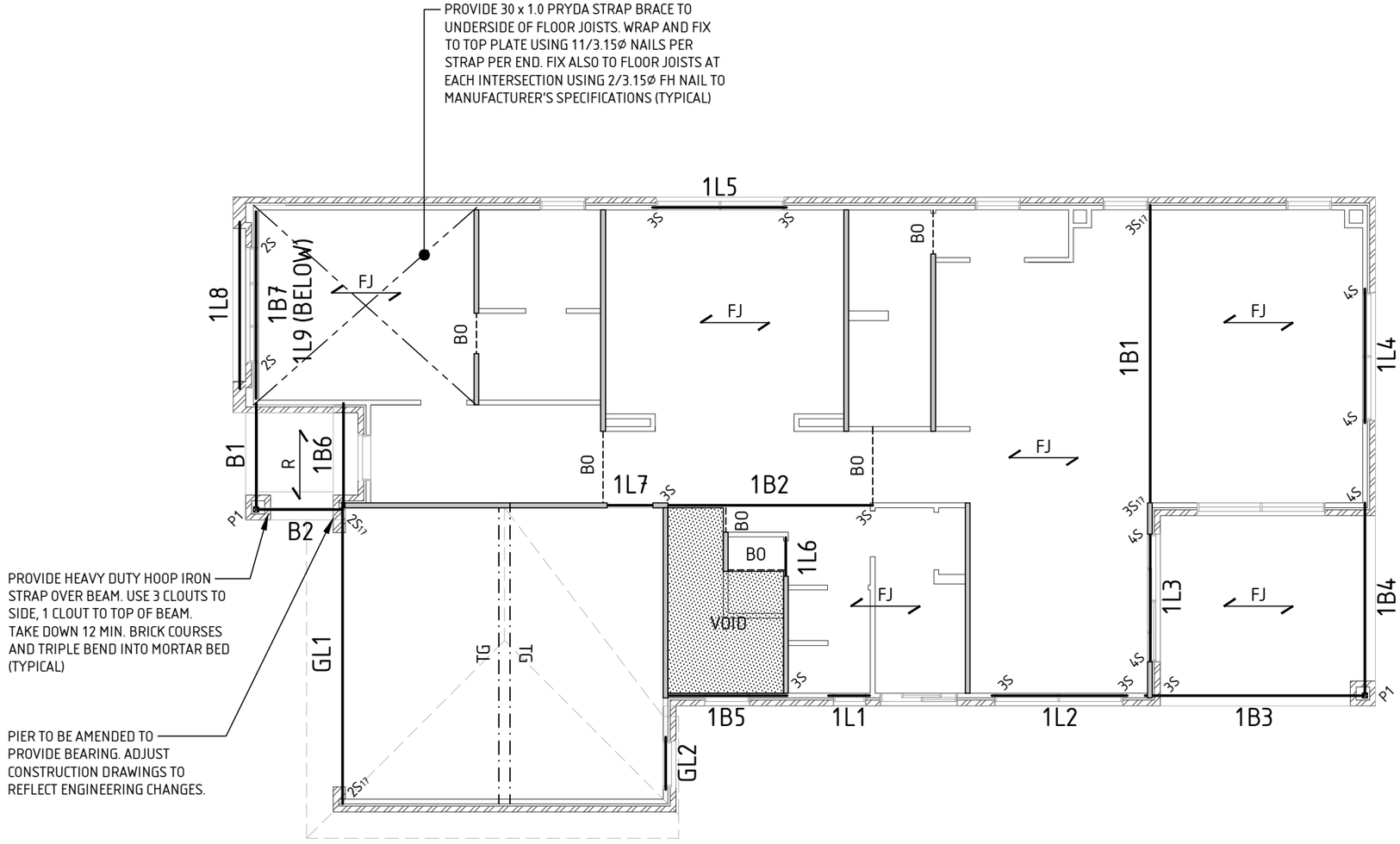
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE SLAB IS DESIGNED IN COMPLIANCE WITH
AS 2870-2011.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-303	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



MEMBER SCHEDULE		
LABEL	MEMBER SIZE	COMMENTS
FJ	FLOOR JOISTS	TO MANUFACTURER'S DESIGN AND SPECIFICATIONS
R	RAFTERS	TO MANUFACTURER'S DESIGN AND SPECIFICATIONS
GL1	360x63 HYSPAN & 150x100x10 UA. + 50x10 PL.	REFER DETAILS
GL2	150x45 HYSPAN	
1L1	130x45 HYSPAN	
1L2	300x45 HYSPAN	
1L3	300x45 HYSPAN	
1L4	300x45 HYSPAN	
1L5	300x45 HYSPAN	
1L6	130x45 HYSPAN	
1L7	130x45 HYSPAN	
1L8	200x10 PL (H) + 200x10 PL (V)	REFER DETAILS
1L9	1B7 & 100x100x10 EA.	
1B1	300 PFC	
1B2	300x63 HYSPAN	
1B3	2/360x45 HYSPAN & 200x10 PL (H) + 200x10 PL (V)	REFER DETAILS 110mm END BEARING
1B4	360x45 HYSPAN & 200x10 PL (H) + 200x10 PL (V)	REFER DETAILS 110mm END BEARING
1B5	2/45x90 F17 KDHW	WIND BEAM BELOW WINDOW
1B6	300x45 HYSPAN	
1B7	300x45 HYSPAN	CONT. SPAN
B1	150x45 HYSPAN & 200x8 PL (H) + 150x8 PL (V)	REFER DETAILS 110mm END BEARING
B2	150x45 HYSPAN & 200x8 PL (H) + 150x8 PL (V)	REFER DETAILS 110mm END BEARING
P1	90x90 F5 TREATED PINE	TIMBER POST ON GALVANISED STIRRUP
TG	TRUNCATED GIRDER TRUSS (LOCATION ASSUMED)	REFER TO MANUFACTURER'S DESIGN & SPECIFICATIONS

BEAMS & LINTELS DESIGNED BY STRUCTERRE TO HAVE DOUBLE STUDS (2S) TO EACH END UNLESS NOTED OTHERWISE, REFER FRAMING DETAILS. TRUSS SUPPORT BY OTHERS.

BEAMS & LINTELS DESIGNED BY STRUCTERRE TO HAVE DOUBLE STUDS (2S) TO EACH END UNLESS NOTED OTHERWISE, REFER FRAMING DETAILS. TRUSS SUPPORT BY OTHERS.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

FIRST FLOOR FRAMING PLAN (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

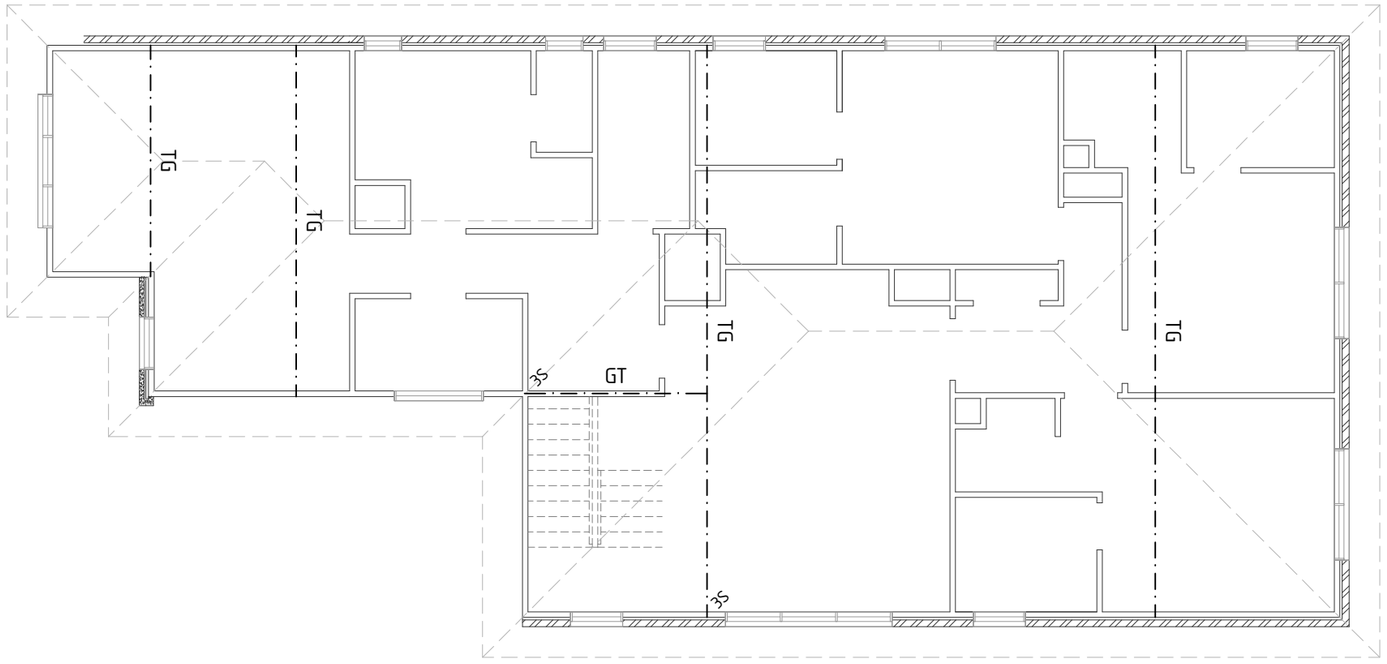
PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE FRAMING DESIGN COMPLIES WITH AS 1684.2-2010, AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-304	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

MEMBER SCHEDULE		
LABEL	MEMBER SIZE	COMMENTS
TG	TRUNCATED GIRDER TRUSS (LOCATION ASSUMED)	REFER TO MANUFACTURER'S DESIGN & SPECIFICATIONS



BEAMS & LINTELS DESIGNED BY STRUCTERRE TO HAVE DOUBLE STUDS (2S) TO EACH END UNLESS NOTED OTHERWISE, REFER FRAMING DETAILS. TRUSS SUPPORT BY OTHERS.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)	

PROJECT

DRAFTING AND DESIGN

ROOF FRAMING PLAN (MELBOURNE, VIC)

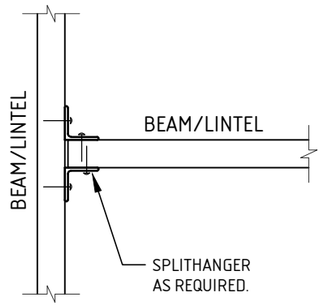
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

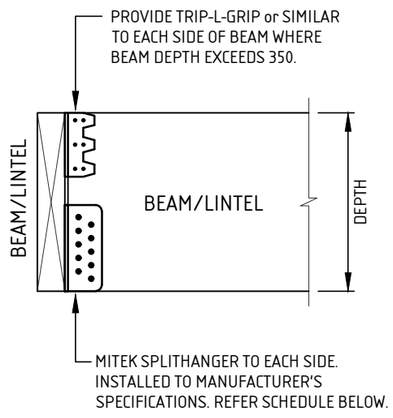
THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE FRAMING DESIGN COMPLIES WITH AS 1684.2-2010, AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-305	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



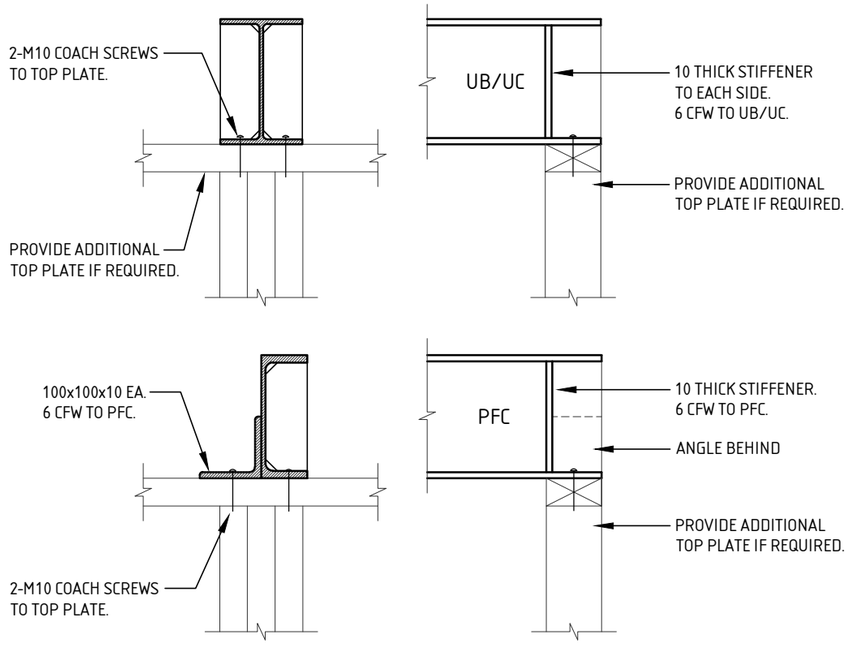
SPLITHANGER CONNECTION
TIMBER TO TIMBER PLAN VIEW
(UNLESS NOTED OTHERWISE)



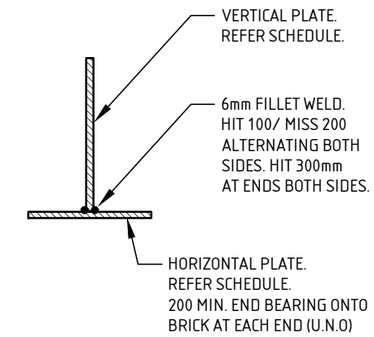
BEAM DEPTH	SPLITHANGER	NO. OF *SCREWS
170 - 190	SPH140	6
200	SPH180	8
240 - 400	SPH220	10

*MSA1430 MITEK No.14x30 LONG ANTI-SPLIT SELF DRILLING HD GALVANISED SCREWS TO EACH FACE OF SPLITHANGER.

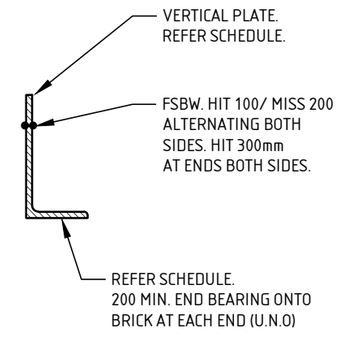
SPLITHANGER CONNECTION
TIMBER TO TIMBER DETAIL
(UNLESS NOTED OTHERWISE)



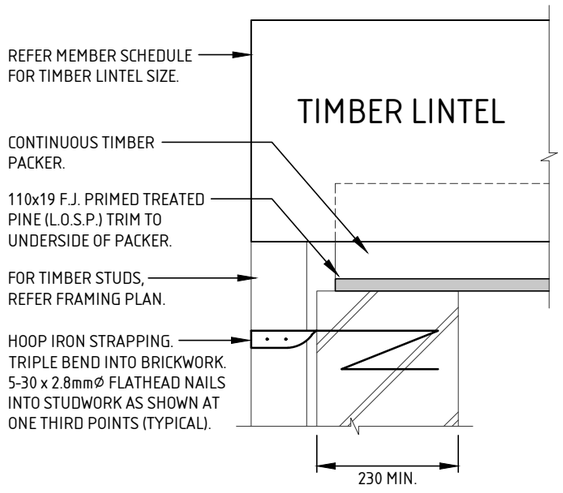
STEEL TO TOP PLATE
(UNLESS NOTED OTHERWISE)



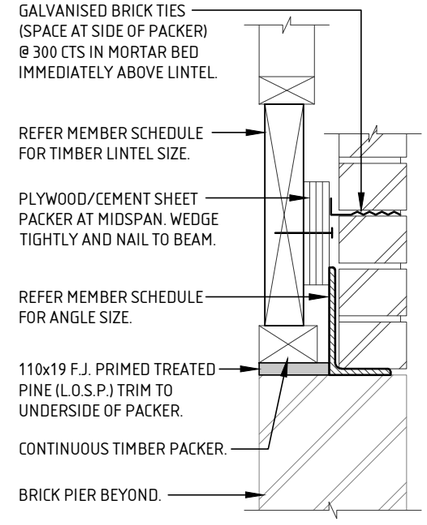
WHERE OVERALL LENGTH EXCEEDS 2.5m
PROP AT MID SPAN UNTIL BRICKWORK
OVER IS A MINIMUM OF 3 DAYS OLD
TYPICAL 'INVERTED TEE'
(UNLESS NOTED OTHERWISE)



WHERE OVERALL LENGTH EXCEEDS 2.5m
PROP AT MID SPAN UNTIL BRICKWORK
OVER IS A MINIMUM OF 3 DAYS OLD
FABRICATED ANGLE
(UNLESS NOTED OTHERWISE)



TIMBER & ANGLE STRAPPING DETAIL



TIMBER & ANGLE DETAIL

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY
HOA THAI HUYNH - B. Eng. (Civil)

PROJECT
DRAFTING AND DESIGN

FRAMING DETAILS (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE FRAMING DESIGN COMPLIES WITH AS 1684.2-2010,
AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-306	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

THIS BUILDING HAS BEEN DESIGNED FOR A WIND CLASSIFICATION OF N1.

WALL BRACING LEGEND	
BR1-BR5	REFER BRACING DETAIL SHEETS

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)	

PROJECT

DRAFTING AND DESIGN

GROUND FLOOR WIND BRACING PLAN (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

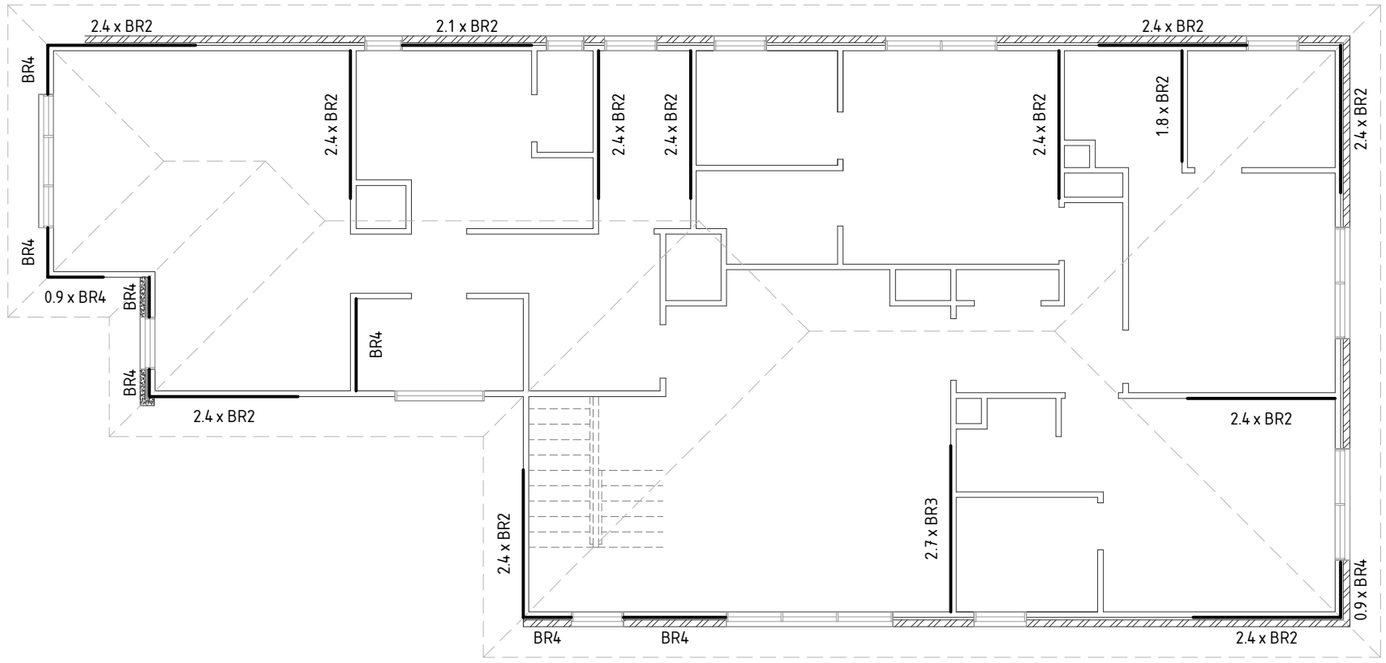
PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE BRACING DESIGN COMPLIES WITH AS 1684.2-2010, AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-307	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

THIS BUILDING HAS BEEN DESIGNED FOR A WIND CLASSIFICATION OF N1.



WALL BRACING LEGEND	
BR1-BR5	REFER BRACING DETAIL SHEETS

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

FIRST FLOOR WIND BRACING PLAN (MELBOURNE, VIC)

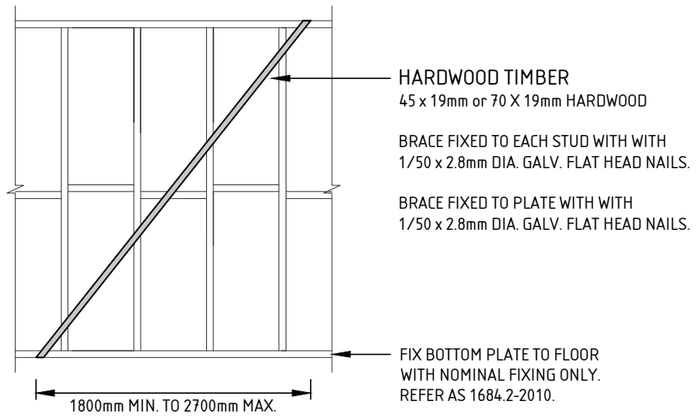
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE BRACING DESIGN COMPLIES WITH AS 1684.2-2010, AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-308	0

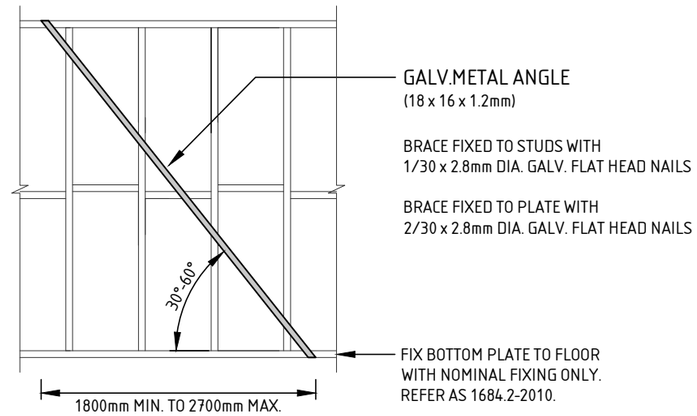
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



OPTION A

(BRACING CAPACITY - 0.8 kN/m)

BR1 BRACE DETAILS



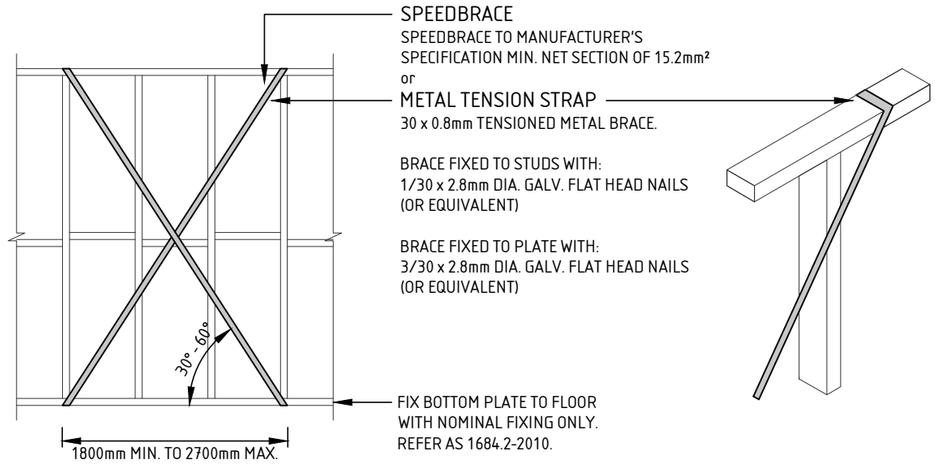
OPTION B

(BRACING CAPACITY - 0.8 kN/m)

BR1 BRACE DETAILS

NOTE

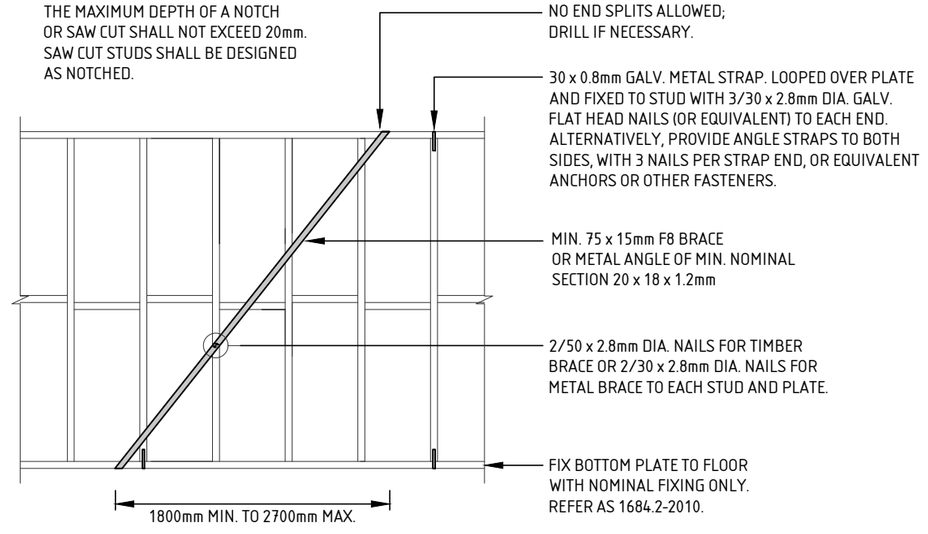
THE MAXIMUM DEPTH OF A NOTCH
OR SAW CUT SHALL NOT EXCEED 20mm.
SAW CUT STUDS SHALL BE DESIGNED
AS NOTCHED.



OPTION A

(BRACING CAPACITY - 1.5 kN/m)

BR2 BRACE DETAILS



OPTION B

(BRACING CAPACITY - 1.5 kN/m)

BR2 BRACE DETAILS

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

WIND BRACING DETAILS 1 (MELBOURNE, VIC)

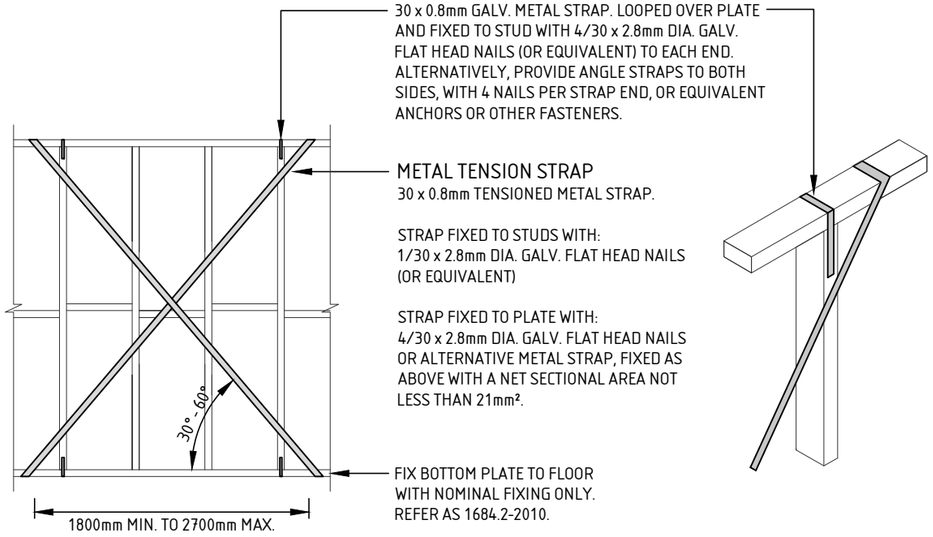
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
THE FRAMING DESIGN COMPLIES WITH AS 1684.2-2010,
AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-309	0

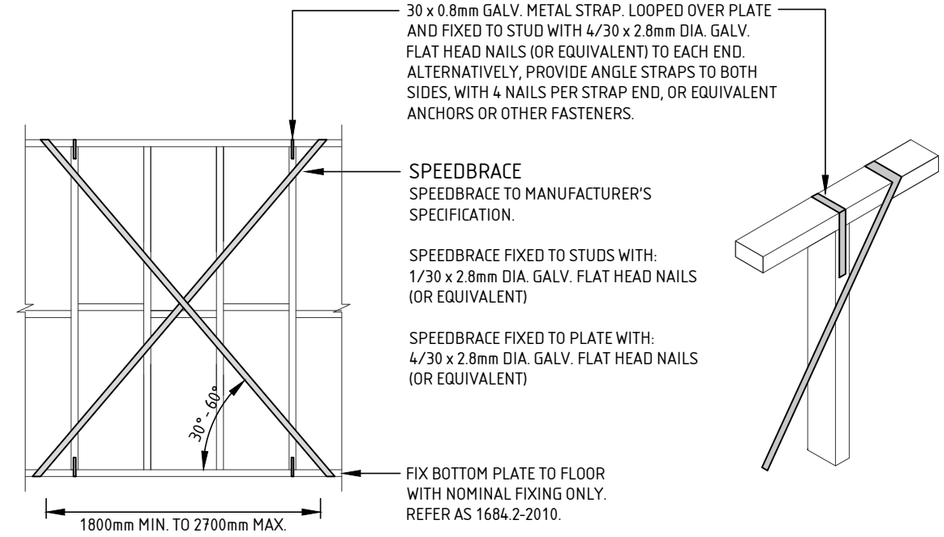
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



OPTION A

(BRACING CAPACITY - 3.0 kN/m)

BR3 BRACE DETAILS



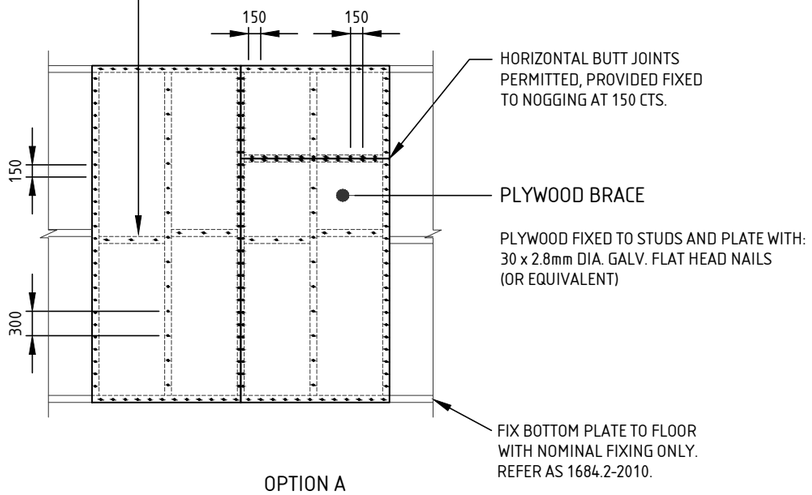
OPTION B

(BRACING CAPACITY - 3.0 kN/m)

BR3 BRACE DETAILS

WHERE REQUIRED, ONE ROW OF NOGGINGS STAGGERED OR SINGLE LINE AT HALF WALL HEIGHT.

MINIMUM PLYWOOD THICKNESS (mm)		
PLYWOOD STRESS GRADE	450mm STUD SPACING	600mm STUD SPACING
No nogging (except horizontal butt joints)		
F8	7mm	9mm
F11	4.5mm	7mm
F14	4mm	6mm
F27	3mm	4.5mm
One row of nogging		
F8	7mm	7mm
F11	4.5mm	4.5mm
F14	4mm	4mm
F27	3mm	3mm

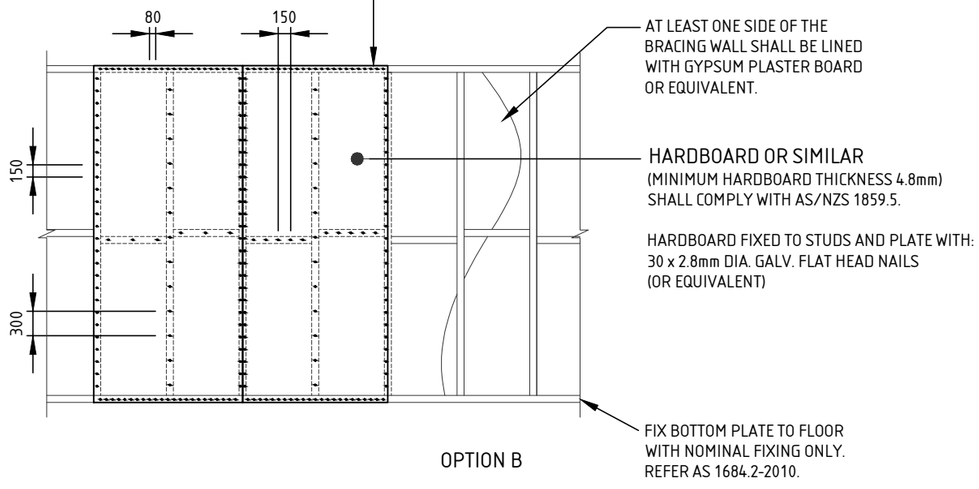


OPTION A

(BRACING CAPACITY - 3.4 kN/m)

BR4 BRACE DETAILS

NAILS SHALL BE LOCATED 10mm MIN. FROM VERTICAL EDGES AND 15mm MIN. FROM THE TOP AND BOTTOM EDGES. MAX. STUD SPACING 600mm. BRACING PANEL MIN. WIDTH 900mm.



OPTION B

(BRACING CAPACITY - 3.4 kN/m)

BR4 BRACE DETAILS

ONLY FOR MINIMUM BRACING LENGTH OF 900

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

WIND BRACING DETAILS 2 (MELBOURNE, VIC)

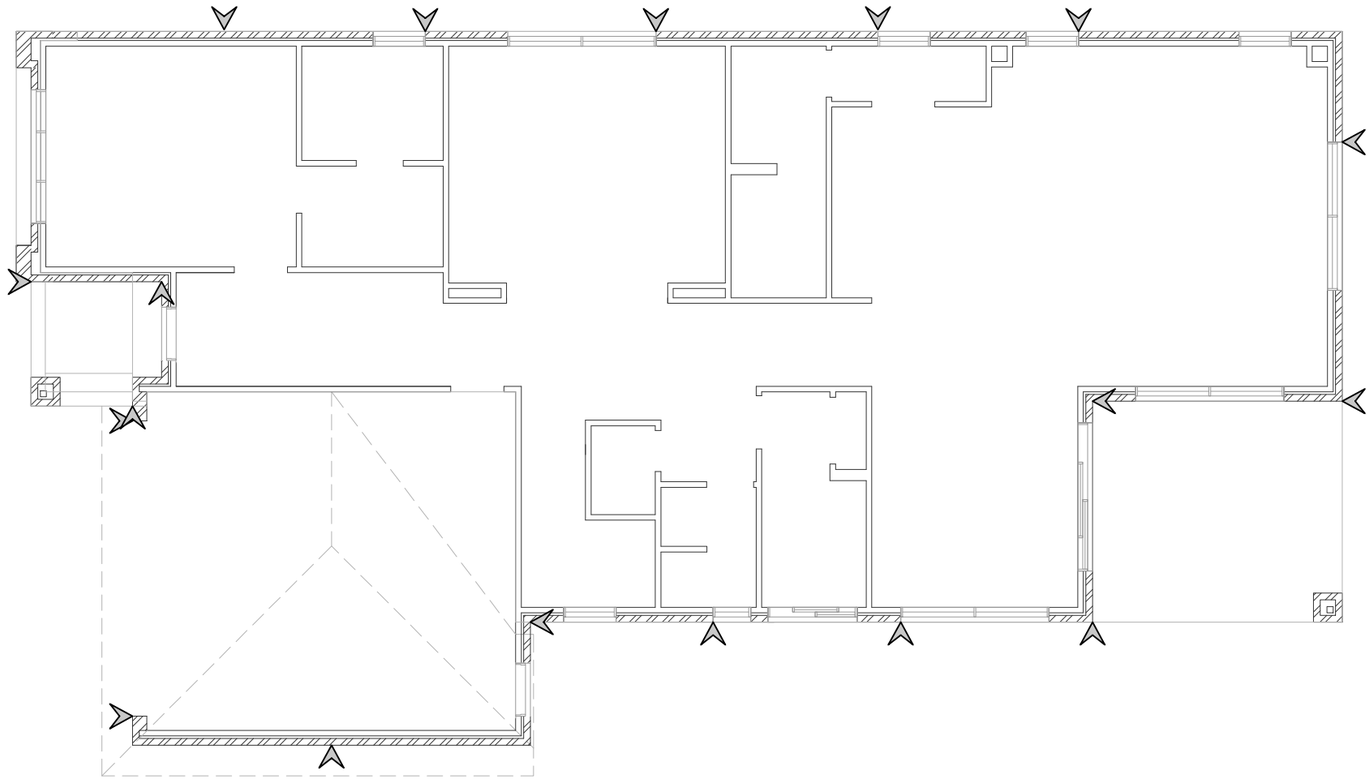
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA. THE FRAMING DESIGN COMPLIES WITH AS 1684.2-2010, AS1684.4-2010, and AS 1720.1-2010.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-310	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



ARTICULATION LEGEND	
^	DENOTES LOCATION OF ARTICULATION JOINTS IN THE MASONRY WALLS (DO NOT SCALE). ALL ARTICULATION JOINTS SHALL BE CONSTRUCTED FOR THE FULL HEIGHT OF THE WALL. REFER TO ARTICULATED MASONRY NOTES.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

GROUND FLOOR ARTICULATION PLAN (MELBOURNE, VIC)

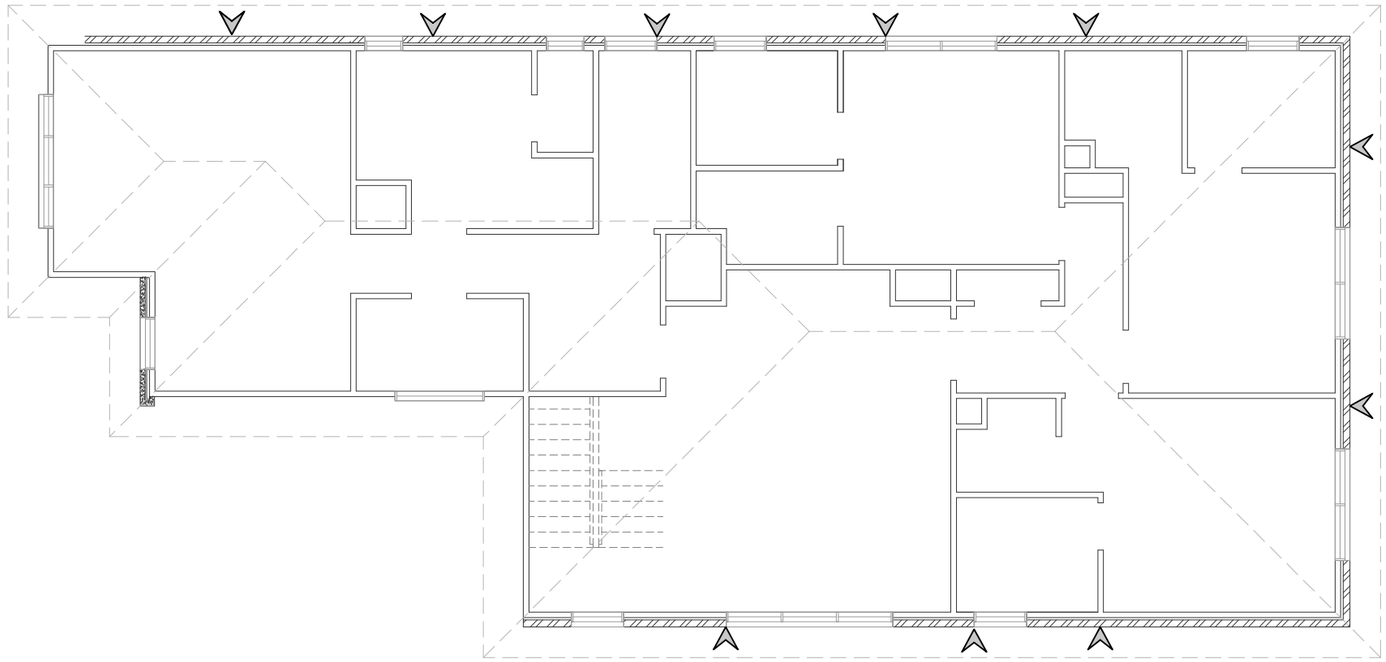
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA. ARTICULATION JOINTS COMPLY WITH AS 4773.1-2010 FOR MASONRY IN SMALL BUILDINGS.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-311	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



ARTICULATION LEGEND	
^	DENOTES LOCATION OF ARTICULATION JOINTS IN THE MASONRY WALLS (DO NOT SCALE). ALL ARTICULATION JOINTS SHALL BE CONSTRUCTED FOR THE FULL HEIGHT OF THE WALL. REFER TO ARTICULATED MASONRY NOTES.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

GROUND FLOOR ARTICULATION PLAN (MELBOURNE, VIC)

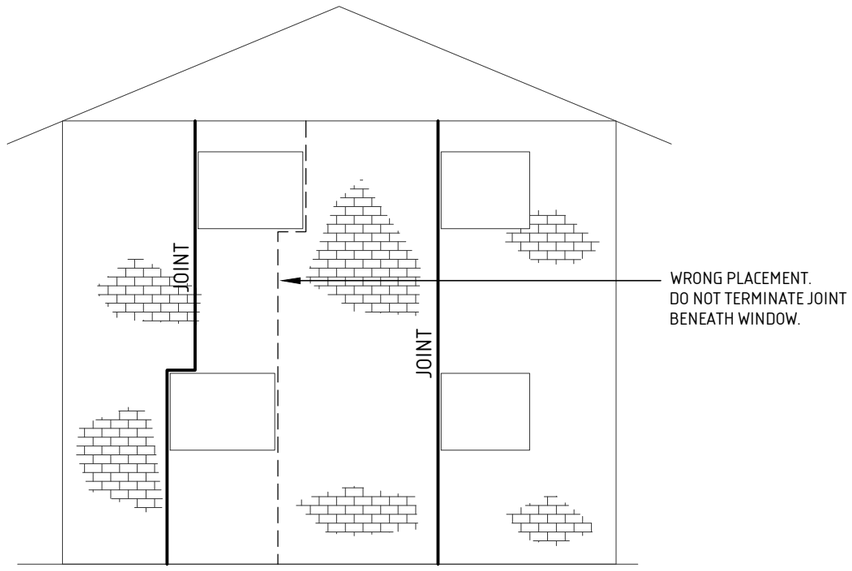
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
ARTICULATION JOINTS COMPLY WITH AS 4773.1-2010 FOR MASONRY IN SMALL BUILDINGS.
I PRODUCED THE DRAWINGS USING AUTOCAD.

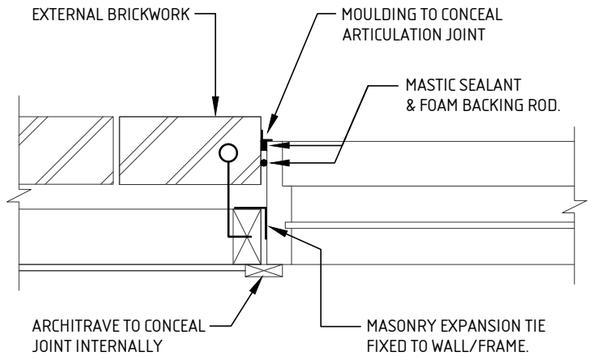
REFERENCE NO.	SHEET NO.	REV
PF060618	S-312	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



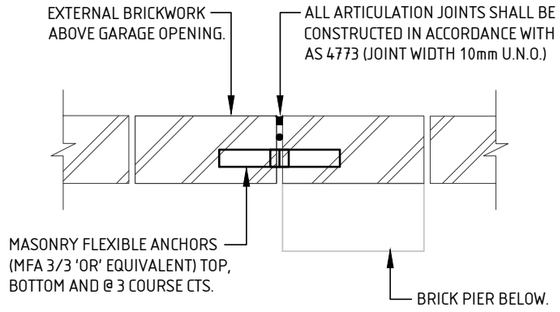
TYPICAL 2 STOREY BRICK VENEER HOUSE

ACCEPTABLE ARTICULATION JOINT LOCATIONS



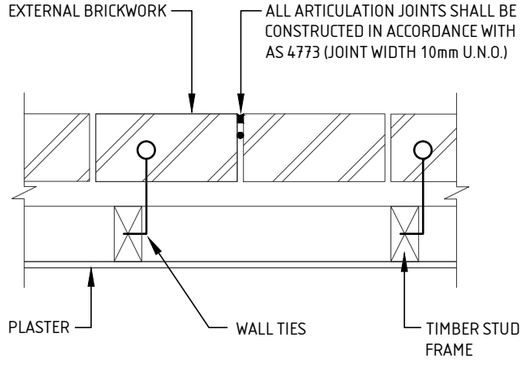
BESIDE OPENINGS

BRICK VENEER EXTERNAL WALL ARTICULATION JOINT DETAIL



WHERE 2 COURSES OF BRICKWORK EXIST
THE OUTER COURSE SHALL BE TIED

GARAGE OPENING ARTICULATION JOINT DETAIL



BRICK VENEER EXTERNAL WALL ARTICULATION JOINT DETAIL

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N.T.S

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

MASONRY ARTICULATION DETAILS (MELBOURNE, VIC)

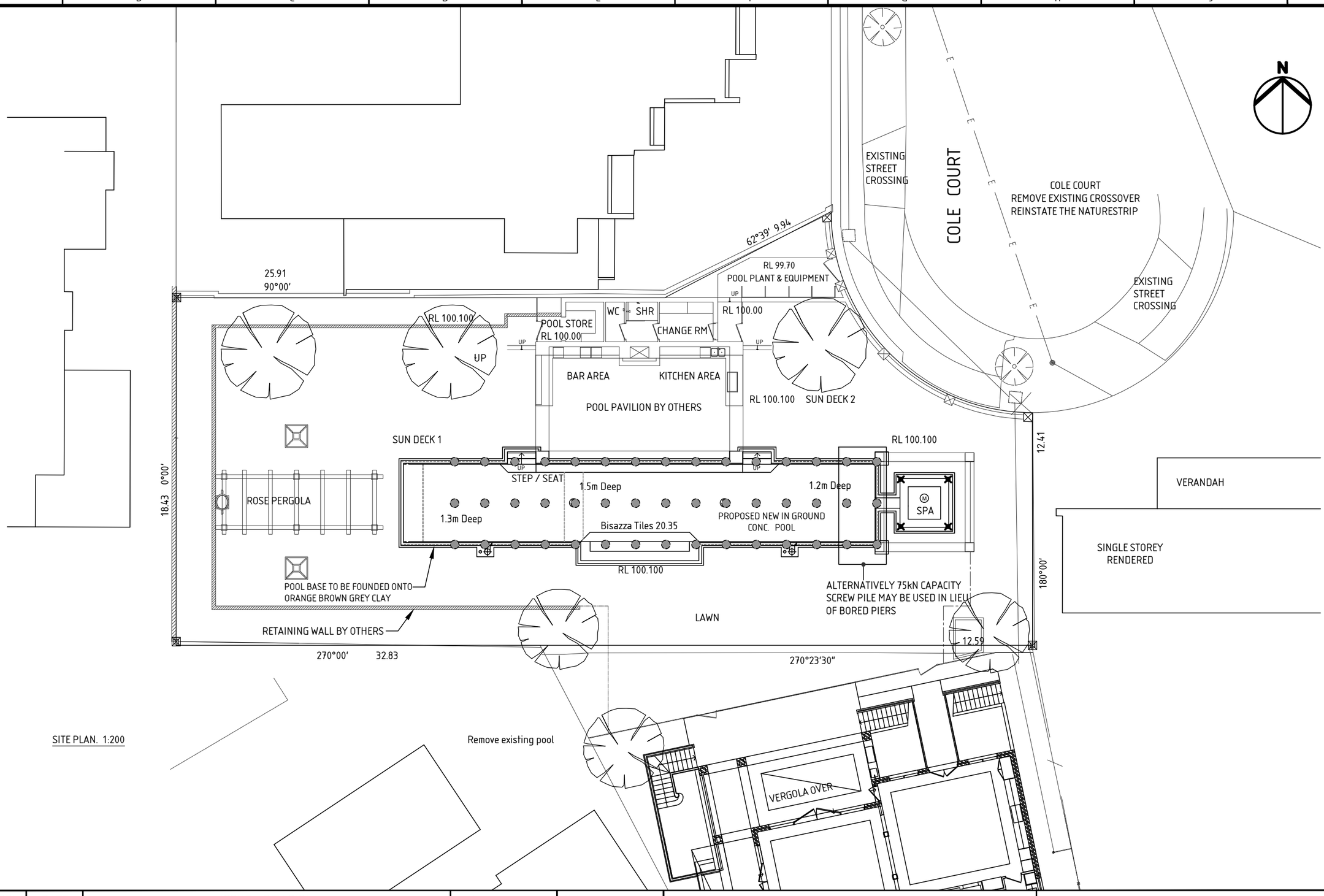
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN MELBOURNE, VICTORIA.
ARTICULATION JOINTS COMPLY WITH AS 4773.1-2010 FOR MASONRY IN SMALL BUILDINGS.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-313	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



SITE PLAN. 1:200

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:200

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

SWIMMING POOL SITE PLAN (MELBOURNE, VIC)

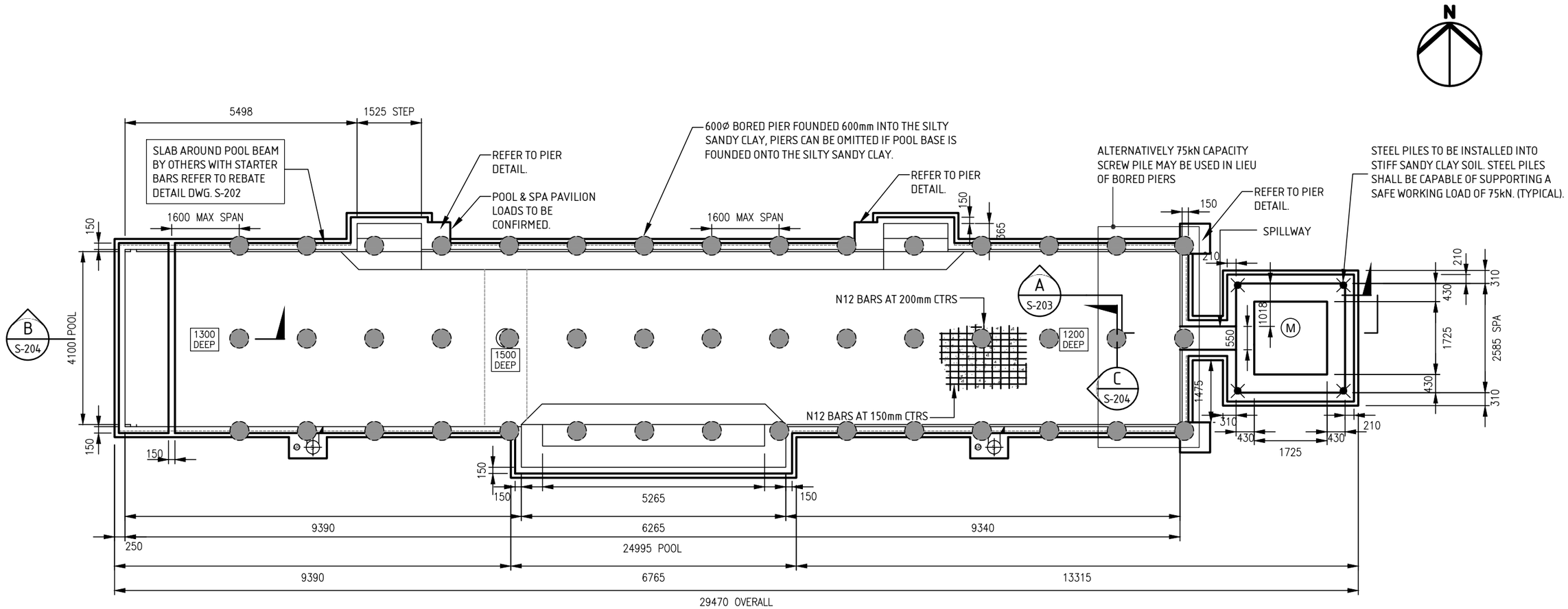
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

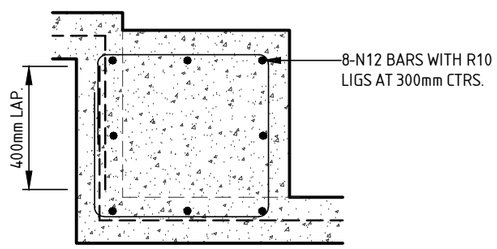
THIS IS A SWIMMING POOL PROJECT IN MELBOURNE, VICTORIA.
I AM CURRENTLY THE MELBOURNE SWIMMING POOL TEAM LEADER.
I CO-CREATED THIS SWIMMING POOL DESIGN TEMPLATE FOR MELBOURNE.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-400	0

NOTE:
DEPTH TO FOUNDING STIFF SILTY CLAY VARIES SIGNIFICANTLY & MAY BE UP TO 5.1m BELOW EXISTING GROUND SURFACE. REFER TO GEOTECH REPORT.



POOL PLAN. 1:100



TYPICAL PIER DETAIL

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT
DRAFTING AND DESIGN

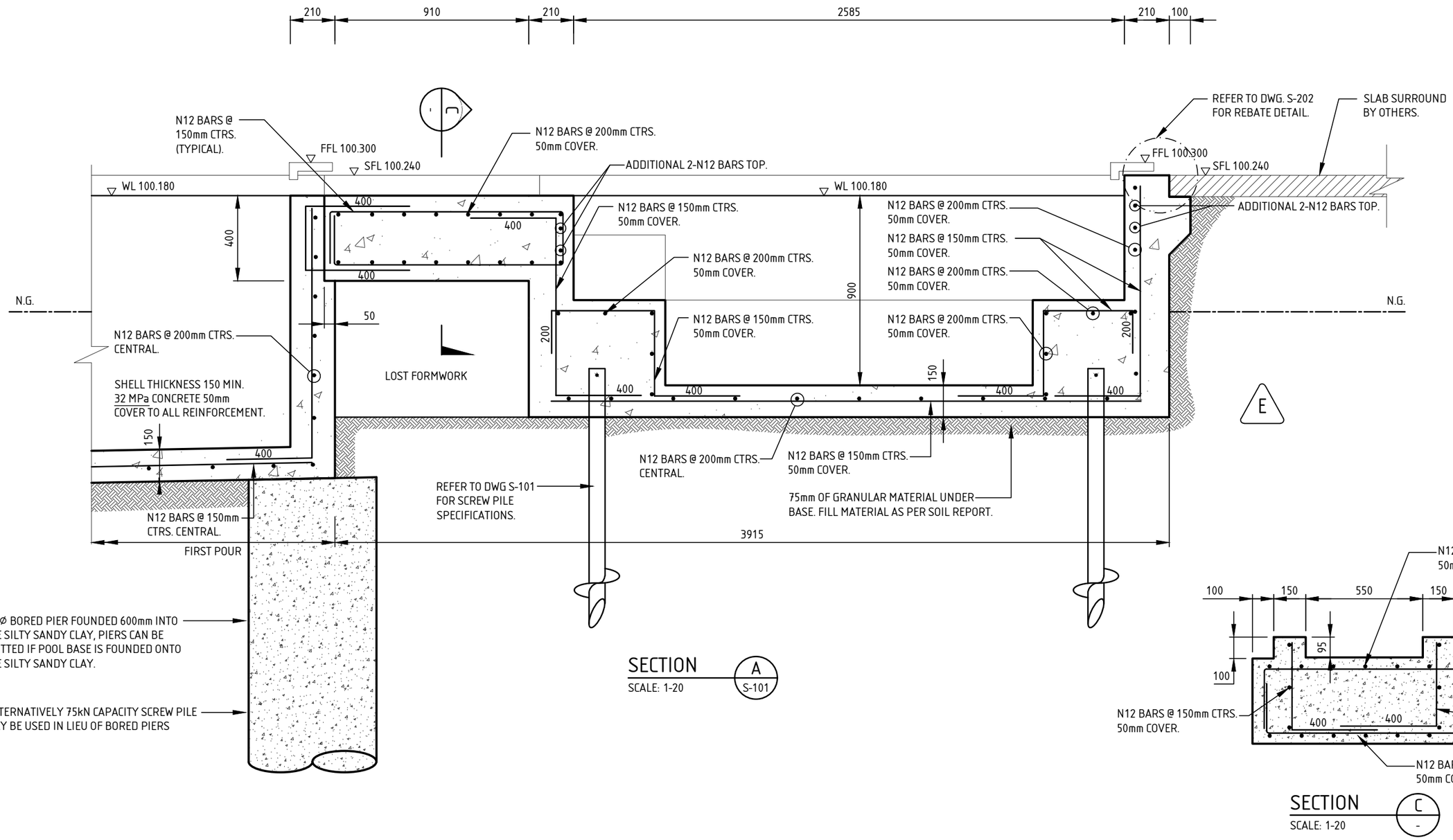
SWIMMING POOL PLAN (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A LARGER POOL PROJECT IN MELBOURNE, VICTORIA. THE POOL IS OVER 16.5m IN LENGTH. IT IS NO LONGER GOVERNED BY AS 2783 (AUST. STANDARD FOR THE USE OF REINFORCED CONCRETE FOR SMALL SWIMMING POOLS), WE HAD TO USE AS 3735 (AUST. STANDARD FOR CONCRETE STRUCTURES RETAINING LIQUID).

REFERENCE NO.	SHEET NO.	REV
PF060618	S-401	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



SECTION A
SCALE: 1-20
S-101

SECTION C
SCALE: 1-20
-

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:20
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT
DRAFTING AND DESIGN

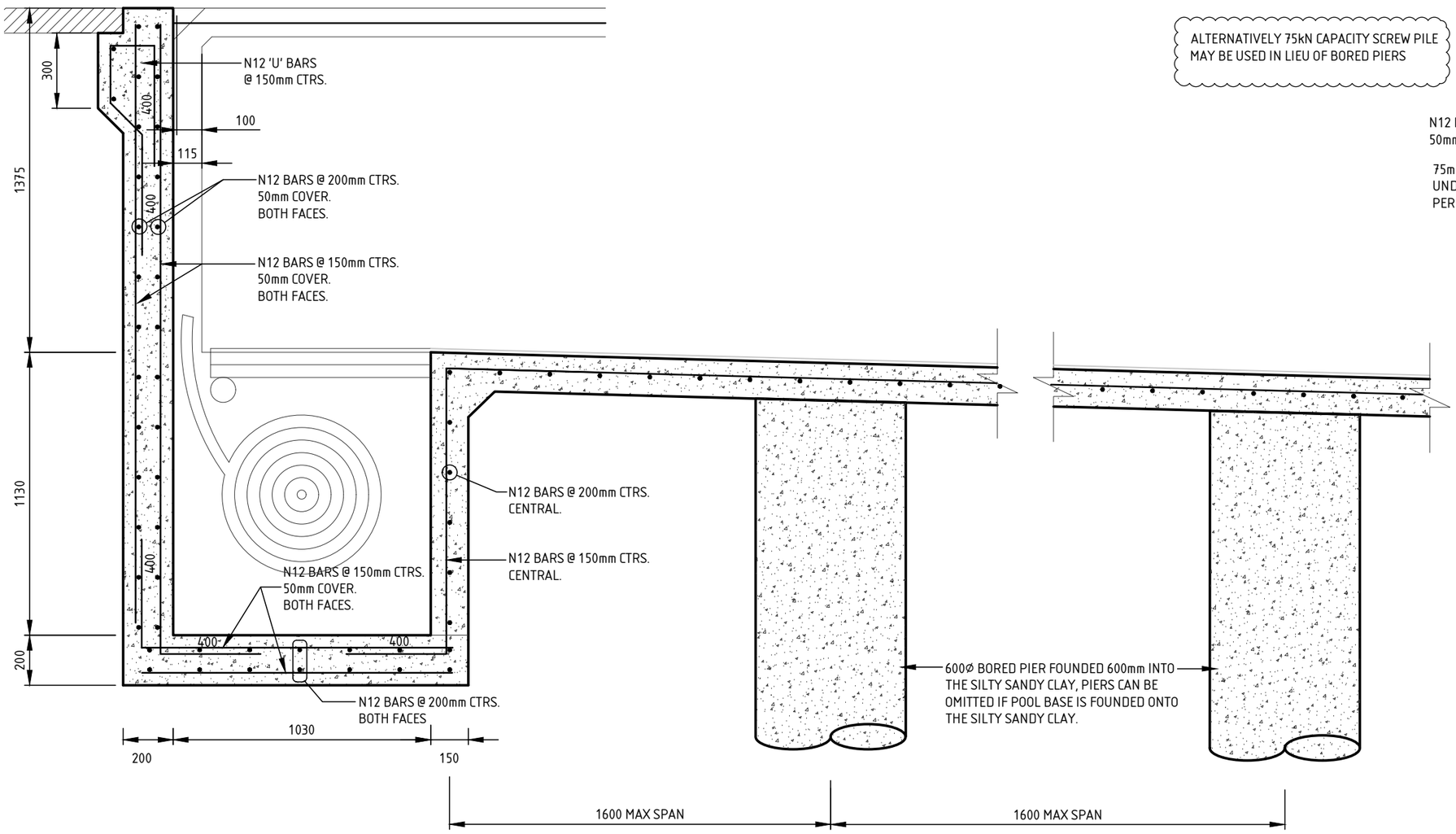
SWIMMING POOL DETAILS 1 (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A LARGER POOL PROJECT IN MELBOURNE, VICTORIA. THE POOL IS OVER 16.5m IN LENGTH. IT IS NO LONGER GOVERNED BY AS 2783 (AUST. STANDARD FOR THE USE OF REINFORCED CONCRETE FOR SMALL SWIMMING POOLS), WE HAD TO USE AS 3735 (AUST. STANDARD FOR CONCRETE STRUCTURES RETAINING LIQUID).

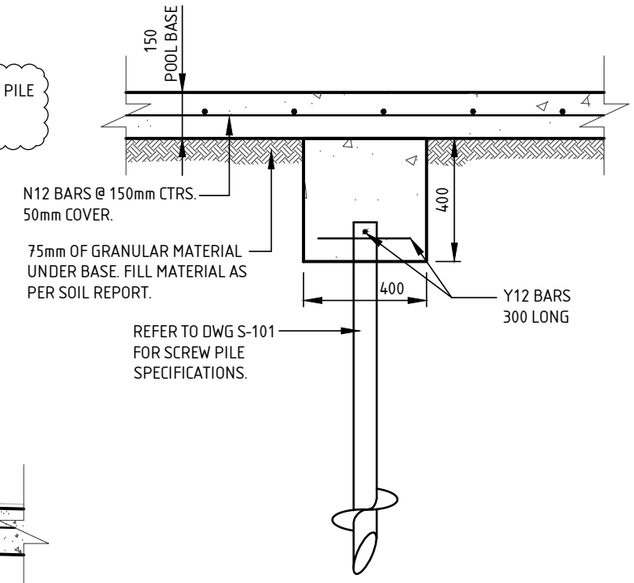
REFERENCE NO.	SHEET NO.	REV
PF060618	S-402	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



SECTION B
SCALE: 1-20
S-101

ALTERNATIVELY 75kN CAPACITY SCREW PILE
MAY BE USED IN LIEU OF BORED PIERS



SECTION C
SCALE: 1-20
S-101

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:20
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT
DRAFTING AND DESIGN

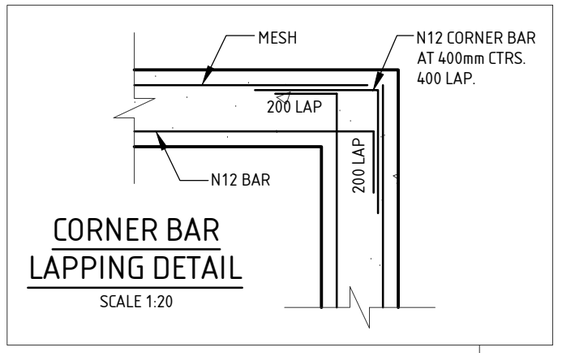
SWIMMING POOL DETAILS 2 (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A LARGER POOL PROJECT IN MELBOURNE, VICTORIA. THE POOL IS OVER 16.5m IN LENGTH. IT IS NO LONGER GOVERNED BY AS 2783 (AUST. STANDARD FOR THE USE OF REINFORCED CONCRETE FOR SMALL SWIMMING POOLS), WE HAD TO USE AS 3735 (AUST. STANDARD FOR CONCRETE STRUCTURES RETAINING LIQUID).

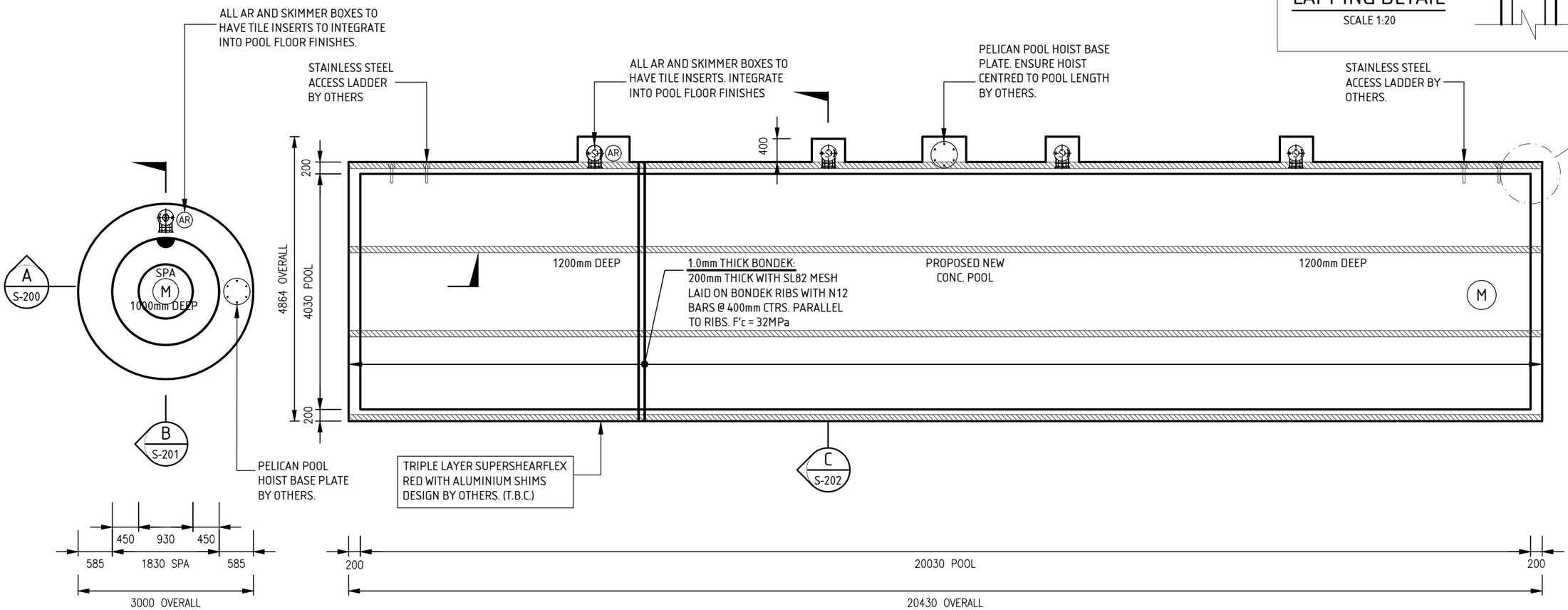
REFERENCE NO.	SHEET NO.	REV
PF060618	S-403	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



CORNER BAR LAPPING DETAIL

SCALE 1:20



POOL PLAN. 1:75

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:75

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

SWIMMING POOL PLAN (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

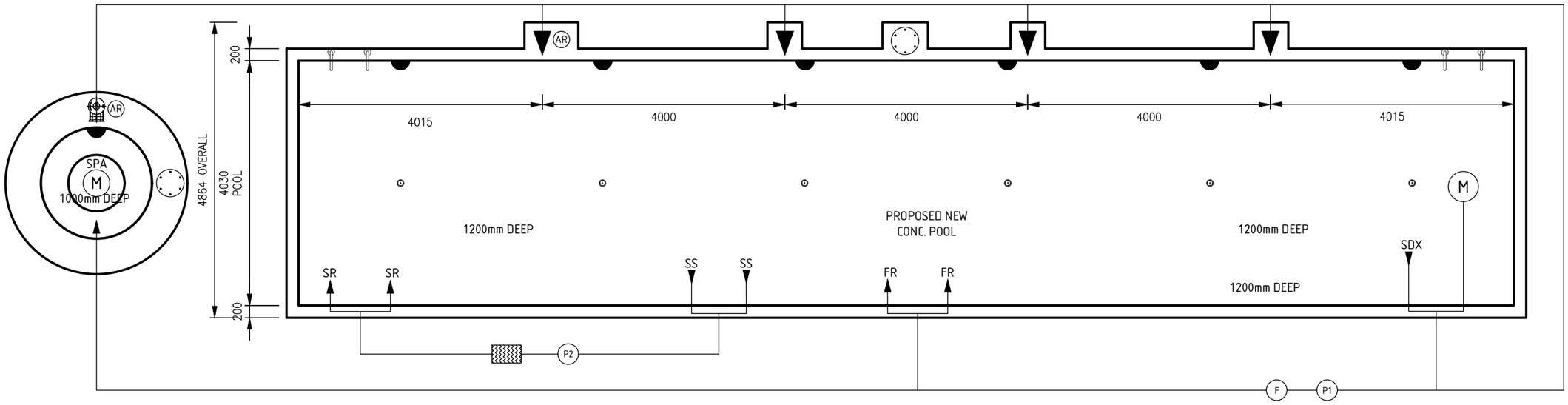
THIS IS A TYPICAL COMMERCIAL SWIMMING POOL PROJECT IN MELBOURNE, VICTORIA. THE POOL SHELLS ARE GENERALLY ON TOP OF A RESIDENTIAL COMMERCIAL BUILDING. GENERALLY THESE POOLS SIT ON A NUMBER OF ISOLATOR SPRINGS WHICH HAVE CHANNELS RUNNING OVER THE TOP OF THEM. THE POOL BASE IS POURED ON BONDEK THAT ACTS AS LOST FORM WORK BETWEEN THE CHANNELS.

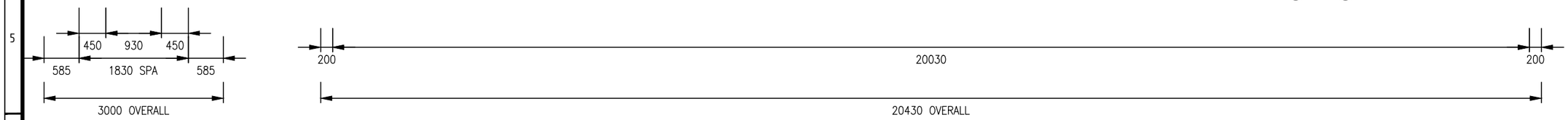
REFERENCE NO.	SHEET NO.	REV
PF060618	S-404	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

NOTES:
SKIMMER LOCATION & PUMP RETURNS TO BE DETERMINED BY BUILDER.
SOLAR SUCTION & RETURN LOCATIONS BY BUILDER.

NOTE:
HYDRAULIC LAYOUT TO BE CONFIRMED.





HYDRAULIC PLAN. 1:75

LEGEND

- M — ACTIVE MAIN DRAIN
- P1 — FILTER PUMP
- F — FILTER
- SKIMMER
- P2 — SOLAR PUMP
- SOLAR ARRAY
- POOL LIGHTS
- AR — AUTO RELIEF VALVE
- SS — SOLAR SUCTION

POOL DESIGN SUMMARY	
POOL VOLUME:	96800L (approx.)
TURN AROUND TIME:	7hrs
SUCTION PIPE DIAMETER:	50mm
DELIVERY PIPE DIAMETER:	50mm
DISTANCE FROM POOL TO FILTER:	10m (approx.)
FILTER PUMP:	Pentair WhispaFlow 2200
INFLOOR CLEANING PUMP:	TBC.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:75

ALL PROJECTS DESIGNED AND DRAFTED BY
HOA THAI HUYNH - B. Eng. (Civil)

PROJECT
DRAFTING AND DESIGN

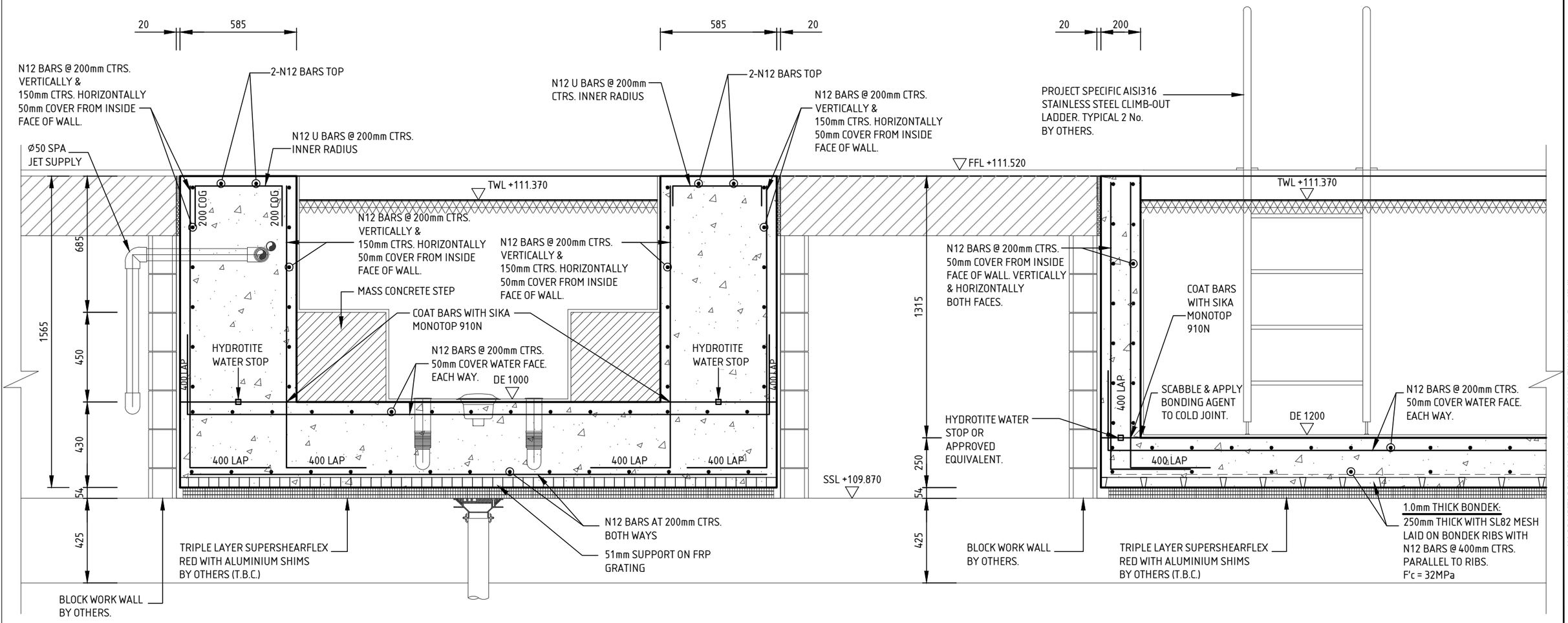
HYDRAULIC PLAN (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A TYPICAL COMMERCIAL SWIMMING POOL PROJECT IN MELBOURNE, VICTORIA.
THE HYDRAULIC LAYOUT IS DESIGNED IN COMPLIANCE WITH 1926.3-2010 & 1926.3-2011. I ALSO PROVIDE COMPUTATIONS FOR THE PUMPS.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-405	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



SECTION A

SCALE: 1:20

S-101

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:20
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

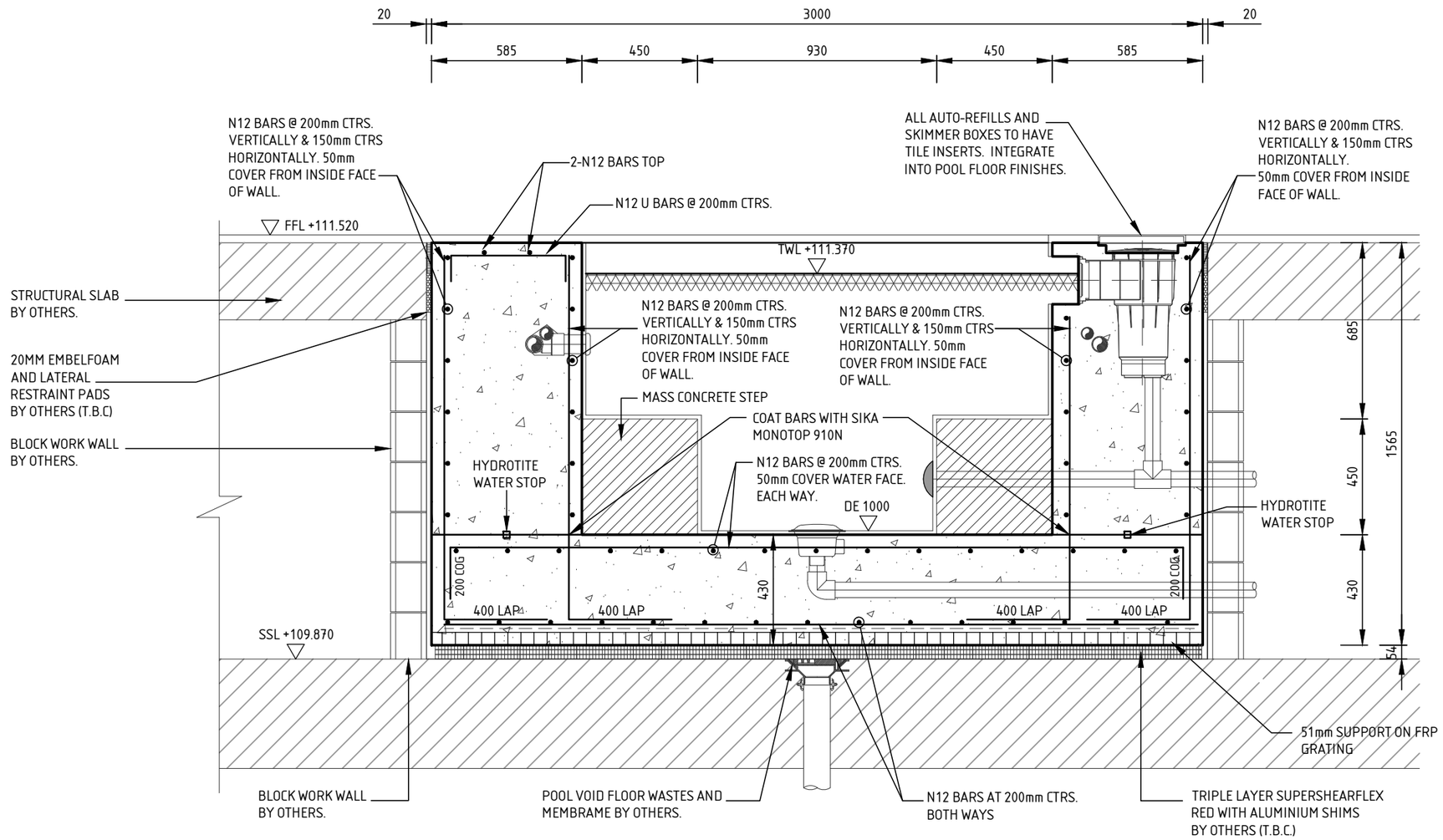
SWIMMING POOL DETAILS 3 (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

GENERALLY, THE POOL IS VERY SHALLOW, APPROX. 1200mm DEEP, AND HAS N-12 BARS @ 200 CENTERS IN BOTH FACES OF THE WALLS SO STRENGTH IS RARELY AN ISSUE. POOL BASE IS USUALLY APPROX. 250mm THICK BONDEK.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-406	0



SECTION B
SCALE: 1:20
S-101

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:20
ALL PROJECTS DESIGNED AND DRAFTED BY	HOA THAI HUYNH - B. Eng. (Civil)

PROJECT
DRAFTING AND DESIGN

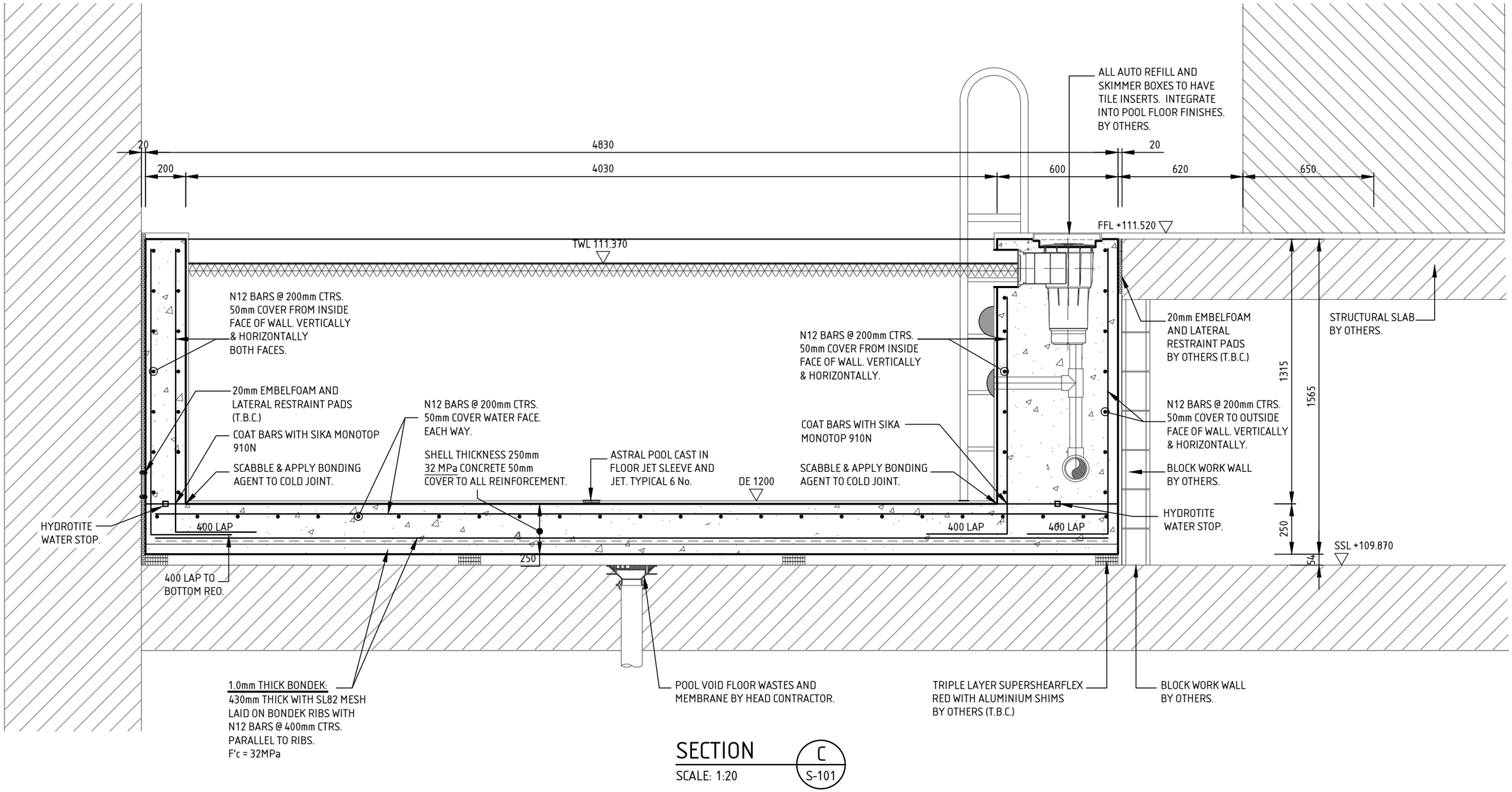
SWIMMING POOL DETAILS 4 (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
USUALLY THEY ARE A BOX AND POUR, FOR EXAMPLE, POUR THE FLOOR FIRST AND THE WALLS SECOND. SO PARTICULAR DETAIL NEEDS TO BE GIVEN TO THE CORNER DETAILS.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-407	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



SECTION C

SCALE: 1:20 — S-101

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:20

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

PROJECT: DRAFTING AND DESIGN

SWIMMING POOL DETAILS 5 (MELBOURNE, VIC)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION: THIS POOL IS OVER 16.5m IN LENGTH. IT IS NO LONGER GOVERNED BY AS 2783-1992 (AUST. STANDARD FOR THE USE OF REINFORCED CONCRETE FOR SMALL SWIMMING POOLS), WE HAD TO USE AS 3735-2001 (AUST. STANDARD FOR CONCRETE STRUCTURES RETAINING LIQUID).

REFERENCE NO.	SHEET NO.	REV
PF060618	S-408	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

7. ENGINEER SHALL BE ADVISED IF EXCAVATION IS IN FILL OR IF EXCESSIVE GROUND WATER IS ENCOUNTERED.
8. SUPPORTING SOIL TO BE STABLE NATURAL GROUND OF UNIFORM MOISTURE CONTENT, WITH SAFE BEARING CAPACITY OF 150 kPa.
9. WHERE IT IS CONSIDERED THAT GROUND WATER CAN BUILD UP TO A LEVEL 500 mm ABOVE THE EXCAVATION, ADEQUATE DRAINAGE SHALL BE PROVIDED UNDER THE POOL FLOOR.
10. CONCRETE TO HAVE A MINIMUM DESIGN STRENGTH F'c = 25 MPa AT 28 DAYS. CONCRETE TO BE PNEUMATICALLY APPLIED.
11. UPON COMPLETION OF CONCRETING, THE HYDROSTATIC VALVE IS TO BE CHECKED TO ENSURE EFFECTIVE AND PROPER OPERATION.
12. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED BY BAR CHAIRS AT APPROX 1m CRS. VERTICALLY AND HORIZONTAL.
13. REINFORCEMENT SHALL BE STRUCTURAL GRADE DEFORMED BAR GRADE 250S OR 500N, IN ACCORDANCE WITH A.S.4671, AND SHALL BE SPLICED WITH MIN. LAP OF 500mm.
14. ALL REINFORCING BARS SHALL COMPLY WITH AS 4671. ALL FABRIC SHALL COMPLY WITH AS 4671 AND SHALL BE SUPPLIED IN FLAT SHEETS. ALL BARS SHALL BE SPLICED WITH MIN. LAP OF 500mm.
15. REINFORCING SYMBOLS:
    - N - DENOTES GRADE D500 HIGH STRENGTH DEFORMED BARS TO AS4671.
    - S - DENOTES GRADE S250 STRUCTURAL DEFORMED BARS TO AS4671
    - R - DENOTES GRADE R250 HOT ROLLED PLAIN BARS TO AS4671.
    - SL - DENOTES HARD-DRAWN WIRE SQUARE REINFORCING FABRIC TO AS4671.
    - RL - DENOTES HARD-DRAWN WIRE RECTANGULAR REINFORCING FABRIC TO AS4671.
    - L - DENOTES HARD-DRAWN WIRE TRENCH MESH TO AS4671.

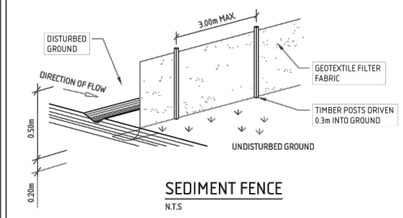
THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES.

16. WATER FACE REINFORCEMENT TO HAVE 65mm CONCRETE COVER. REAR FACE REINF. TO HAVE 65 mm COVER.
17. SPLICES IN BOND BEAM BARS TO BE STAGGERED.
18. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF CURRENT SAA CODES (IN PARTICULAR AS4671, AS2783, & AS3600), BY-LAWS AND ORDINANCES OF THE LOCAL GOVERNMENT AUTHORITY.
19. ENGINEER SHALL BE ADVISED OF SURCHARGE FROM NEARBY BUILDINGS OR EXTRA WEIGHT BEARING UPON POOL WALLS FOR APPROVAL OR RECOMMENDATIONS.
20. THE WALL SHALL NOT BE EXPOSED AND OUT OF THE NATURAL GROUND LEVEL FOR MORE THAN 900 mm, MEASURED FROM THE TOP OF THE BOND BEAM.
21. THE CONCRETE SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR AT LEAST 10 DAYS AFTER PLACING.
22. ANY VARIATION IN THE ABOVE MENTIONED CONDITIONS SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL OR RECOMMENDATIONS.
23. THESE DRAWINGS DO NOT INCLUDE FINISHES AND FITTINGS. AND SHALL BE READ WITH THE CONTRACT DOCUMENTS.
24. ENGINEER SHALL BE NOTIFIED IF THE EXCAVATION COULD EFFECT ADJACENT STRUCTURES AND SERVICES.
25. ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600mm COMPACTED IN LAYERS NOT MORE THAN 300mm FOR SAND MATERIAL OR 400mm COMPACTED IN LAYERS NOT MORE THAN 150mm FOR OTHER MATERIAL.

A	+150
B	+150
C	+150
D	+150

SITE CALCULATIONS		
	SQM	%
SITE TOTAL	834.77m²	
PROPOSED HOUSE	278.61m²	
PROPOSED DRIVEWAY	89.45m²	
PROPOSED POOL	41.2m²	
TOTAL COVER	409.26m²	49.02%

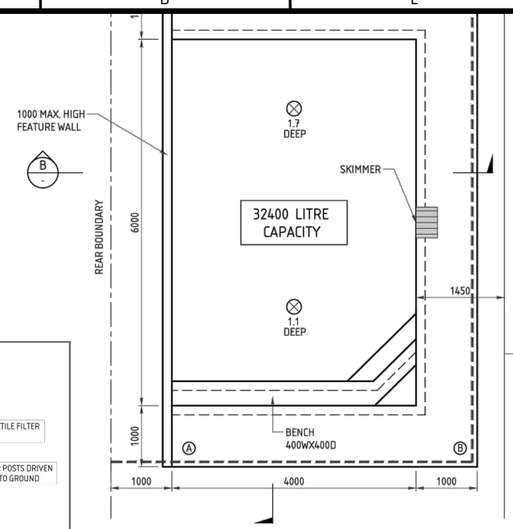
NOTE:
WINDOWS & DOOR OPENINGS ONTO POOL ARE TO BE MADE SAFE AND CHILDPROOF TO AS 1926.1-2012.
BOUNDARY POOL FENCE TO BE 1800mm MIN. HIGH



SEDIMENT FENCE
N.T.S

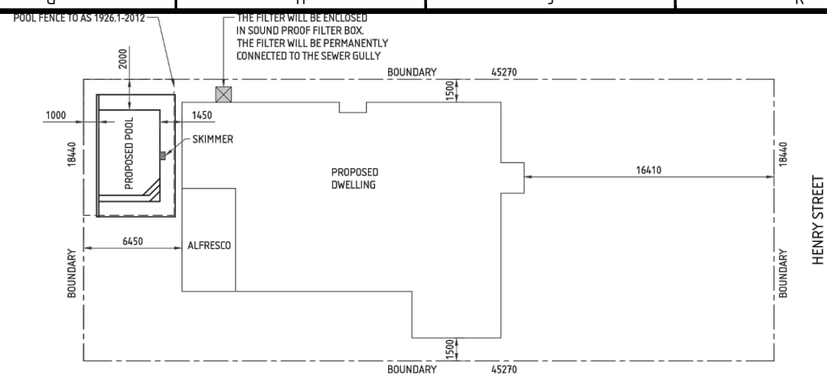
SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE STANDARDS OF THE SOIL CONSERVATION OF NSW.
2. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
3. SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300mm WIDE X 300mm DEEP TRENCH.
4. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60 % FULL OF SOIL MATERIALS, INCLUDING THE MAINTENANCE PERIOD.
5. ALL DISTURBED AREAS SHALL BE REVEGITATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
6. SOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREA WHERE WATER MAY CONCENTRATE.
7. FILTER SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT BETWEEN POST AT 3.0m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.

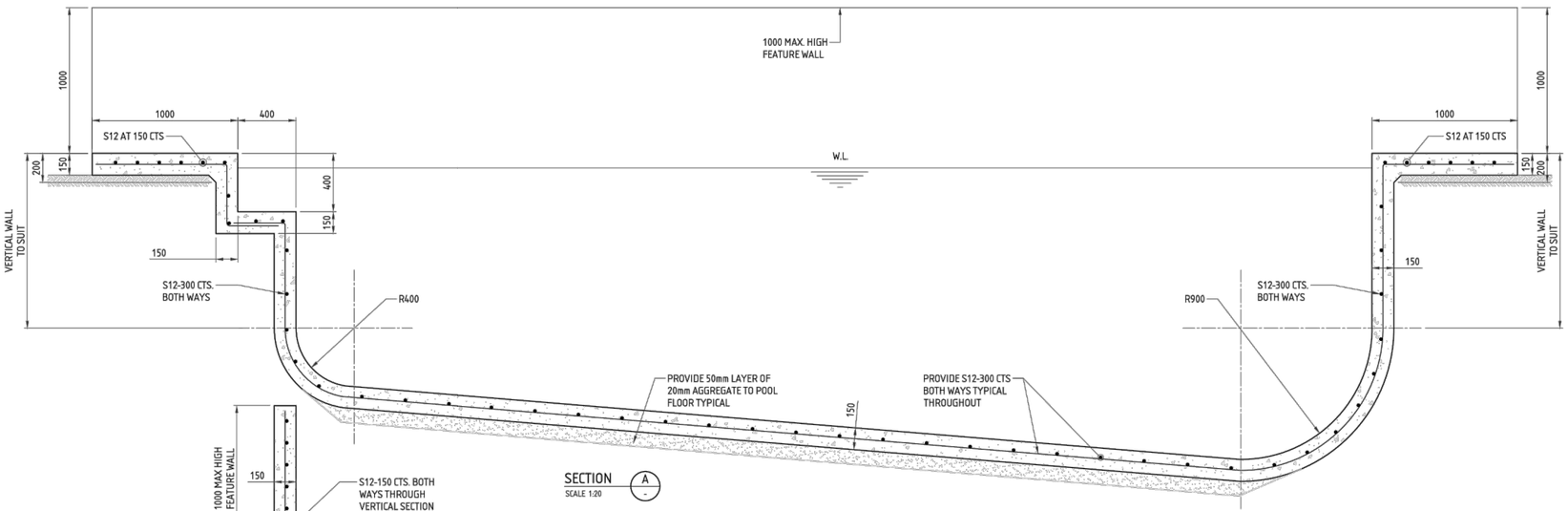


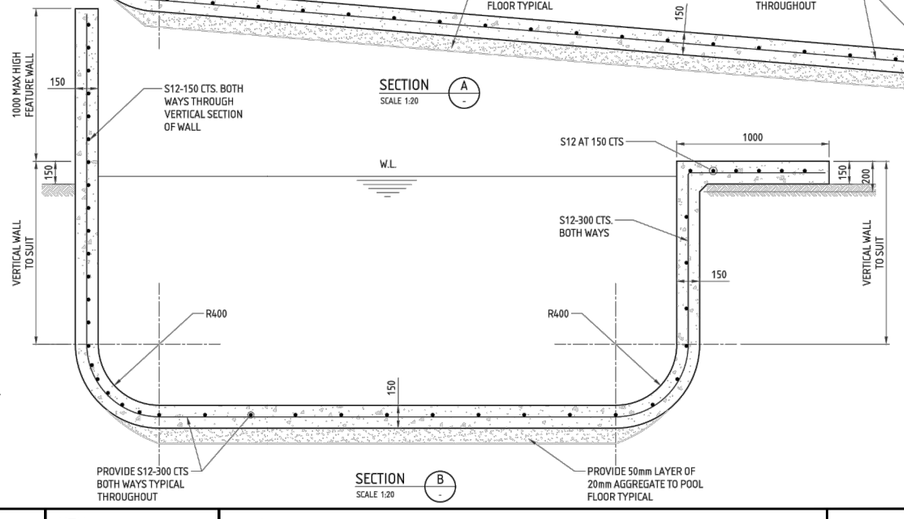
PROPOSED POOL
SCALE 1:50

THE FILTER WILL BE ENCLOSED IN SOUND PROOF FILTER BOX. THE FILTER WILL BE PERMANENTLY CONNECTED TO THE SEWER GULLY.



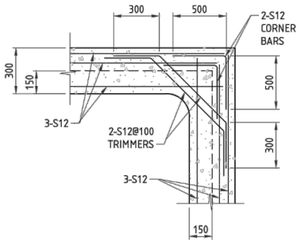
SITE PLAN
SCALE 1:200



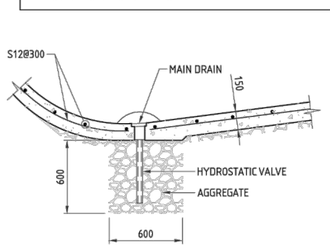


SECTION A
SCALE 1:20

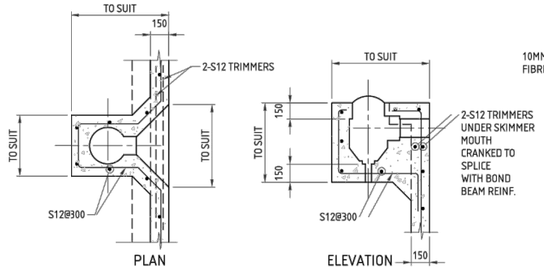
SECTION B
SCALE 1:20



BOND BEAM CORNER DETAIL



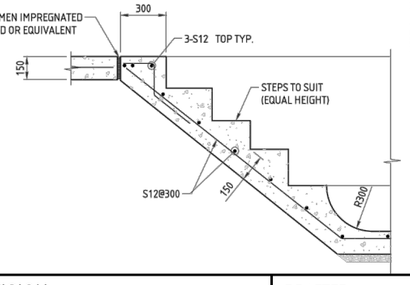
MAIN DRAIN DETAIL



PLAN

ELEVATION

SKIMMER BOX DETAILS



REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N/A
ALL PROJECTS DESIGNED AND DRAFTED BY	
HOA THAI HUYNH - B. Eng. (Civil)	

PROJECT
DRAFTING AND DESIGN

POOL NOTES, PLANS AND DETAILS (SYDNEY, NSW)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A PROJECT IN SYDNEY, NEW SOUTH WALES.
THE SWIMMING POOL IS DESIGNED IN COMPLIANCE WITH AS 2783-1992 & 1926.1-2012.
I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-500	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

SLAB DESIGN SUMMARY (U.N.O)

'bh' BOX HEIGHT (mm)	225 & 150
BOX SIZE (mm)	1090 x 1090
'st' SLAB THICKNESS (mm)	85
'od' OVERALL DEPTH (mm)	310 & 235
'bw' BEAM WIDTH (mm)	270
'rw' RIB WIDTH (mm)	100
SLAB REINF'T	SL72
100mm RIB REINF'T	1-N12 BTM
270mm BEAM REINF'T	2-N12 BTM or 3-L11TM BTM

REINF'T FOR BEAMS WIDER THAN 300mm

WIDTH (mm)	TOP	BOTTOM
301 - 370	1-N12	3-N12
371 - 480	2-N12	4-N12
481 - 600	3-N12	5-N12

PIER DESIGN SUMMARY (U.N.O)

MEMBER	PIER SPACING (mm)
EDGE BEAMS	2100
INTERNAL & STEP BEAMS	2400 x 2400 GRID
INTERNAL RIBS	2400 x 2400 GRID

FOUNDATIONS	PIER Ø (mm)	SOCKET DEPTH (mm)
STIFF CLAY	450	500
SHALE	400	200
ROCK	300	100

FOOTING DESIGN SUMMARY

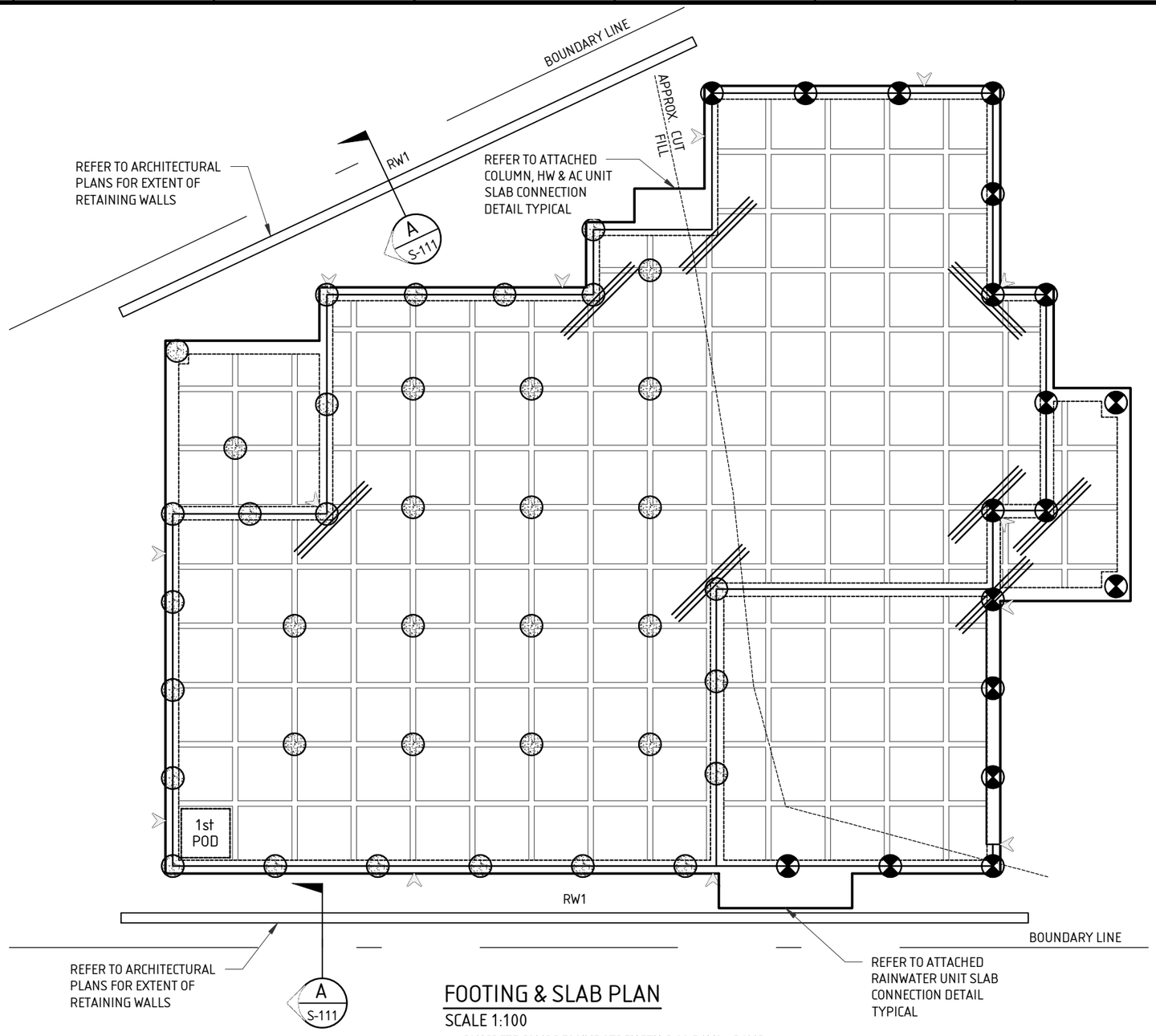
FOOTING TYPE	DEPTH (df)	REINFORCEMENT
TYPE A	450mm	3-L11TM TOP & BTM WITH R6 TIES @ 900 CTS
TYPE B	450mm	4-L11TM TOP & BTM WITH R6 TIES @ 900CTS
PAD P1	600mm	NONE (MASS CONCRETE)

GEOTECHNICAL INFORMATION

SOIL CLASSIFICATION:	M (DESIGN M)
SOIL TEST REFERENCE:	AWG 36484
DATE:	24/11/14
FOUNDING MATERIAL:	CONTROLLED FILL
SAFE BEARING CAPACITIES (SWL)	
SLAB & FOOTINGS	100 kPa
PIERS	Ø450 WITH A 500 SOCKET INTO CONTROLLED FILL WITH A MIN. CAPACITY OF 150kPa

EXPOSURE CLASSIFICATION

STRUCTURAL STEEL	MEDIUM



FOOTING & SLAB PLAN

SCALE 1:100

- CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS = 32MPa
- 50mm CHAIRING SHOULD BE USED FOR MESH
- 4 BAR CHAIRS PER FULL WAFFLE POD
- LAP MESH IN ACCORDANCE WITH DETAIL ON DRG S-102
- TOP COVER TO BE FROM TOP OF REINFORCEMENT
- DO NOT SCALE OFF ENGINEERING DRAWINGS. IF IN DOUBT, ASK

LEGEND

DENOTES 2000mm lg 3-N12 or 3-L11TM CRACK CONTROL BARS, TIED TO UNDERSIDE OF SLAB TOP MESH.

CONCRETE BORED PIERS. REFER PIER DETAILS FOR FOUNDING REQUIREMENTS

DENOTES CONCRETE PIERS FOR ADJACENT AFFECTING TREES TO BEARING CAPACITY SPECIFIED IN FOUNDATION DESIGN SUMMARY AND WITH A MIN. DEPTH OF 2000 OR TO ROCK.

DENOTES APPROX. LOCATION OF ARTICULATION JOINTS IN THE MASONRY WALLS (DO NOT SCALE). EXACT LOCATION OF ARTICULATION JOINTS SHOULD BE READ OFF ARCHITECTURAL DRAWINGS. ALL ARTICULATION JOINTS SHALL BE CONSTRUCTED FOR THE FULL HEIGHT OF THE WALL. REFER TO DETAILS.

CONCRETE SLAB PLAN

THE SLAB HAS BEEN DESIGNED FOR A VERY SALINE CLASSIFICATION

- CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS = 32 MPa
- PROVIDE A HIGH IMPACT RESISTANT MEMBRANE WHICH HAS A CONTINUOUS BRANDING WITH THE WORDS 'AS 2870 CONCRETE UNDERLAY, 0.2mm - HIGH IMPACT RESISTANCE'. INSTALLED & TERMINATED AT FINISHED GROUND OR PAVING LEVEL COVER TO REINFORCEMENT PROTECTED BY DAMP PROOFING MEMBRANE SHALL BE AS FOLLOWS:
- INTERNAL SURFACE - 20mm.
- EXTERNAL SURFACE - 30mm. COVER TO UNPROTECTED EXTERNAL SPACE - 50mm.

FOOTING & SLAB NOTES:

F.S.1. CUT/FILL LINE SHOWN IS APPROXIMATE ONLY. IF NOT SHOWN, SITE SCRAPE SHOULD SUFFICE TO CREATE BUILDING PLATFORM. IF IN DOUBT PLEASE CONSULT ENGINEER FOR FURTHER ADVICE.

F.S.2. BUILDER TO CONFIRM SERVICES DO NOT AFFECT STRUCTURE BEFORE COMMENCING WORK ON-SITE. CONTACT THIS OFFICE IF OTHERWISE.

F.S.3. SCREW PIERS WITH A MIN. SWL OF 50 kN MAY BE USED AS AN ALTERNATIVE TO BORED PIERS AND AT 2400 CTS.

F.S.4. TERMINATE TO DAMP PROOFING MATERIAL AT FINISHED GROUND OR PAVING LEVEL.

F.S.5 150 PODS MAY BE USED IN GARAGE, PORCH AND ALFRESCO AREAS.

TREE INFLUENCE NOTE:

IN ORDER TO MAINTAIN 'NORMAL' MOISTURE CONDITIONS FOR THE LONG TERM SUSTAINABILITY OF THE DWELLING, WE SUGGEST THAT ANY TREES/ROOT SYSTEMS BE REMOVED FROM THE SITE IF THEY ARE WITHIN THE ZONE OF INFLUENCE OR IN CLOSE PROXIMITY TO PROPOSED DWELLING, BACKFILL AND COMPACT ROOT SYSTEM AREAS TO COMPLY WITH NOTE F4, DWG S-001 DURING THE REMOVAL PROCESS. IF THIS CANNOT BE ACHIEVED CONTACT THIS OFFICE PRIOR TO COMMENCING WORK ONSITE AS FURTHER ENGINEERING MAY BE REQUIRED. THIS MAY INCLUDE BUT IS NOT LIMITED TO ADDITIONAL PIERING AND/OR ISOLATION TRENCHES TO ACT AS ROOT BARRIERS.

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:100

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

FOOTING & SLAB PLAN (SYDNEY, NSW)

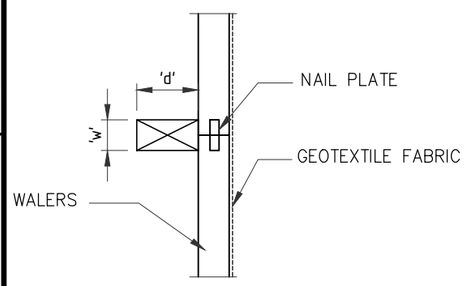
ENGINEERING PORTFOLIO

PROJECT DESCRIPTION

THIS IS A TYPICAL PROJECT IN SYDNEY, NEW SOUTH WALES. THE SLAB IS DESIGNED IN COMPLIANCE WITH AS 2870-2011. I PRODUCED THE DRAWINGS USING AUTOCAD.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-501	0

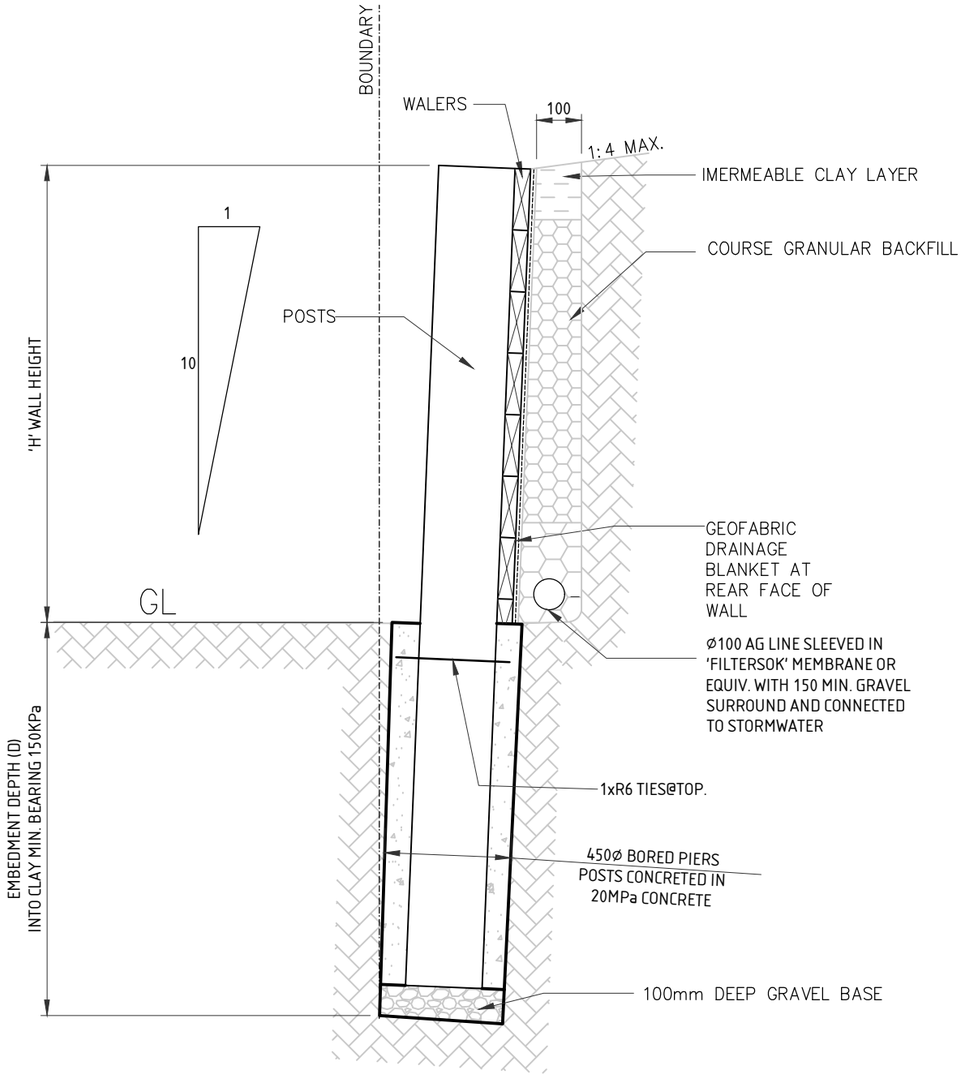
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)



TYPICAL POST DETAIL

NTS

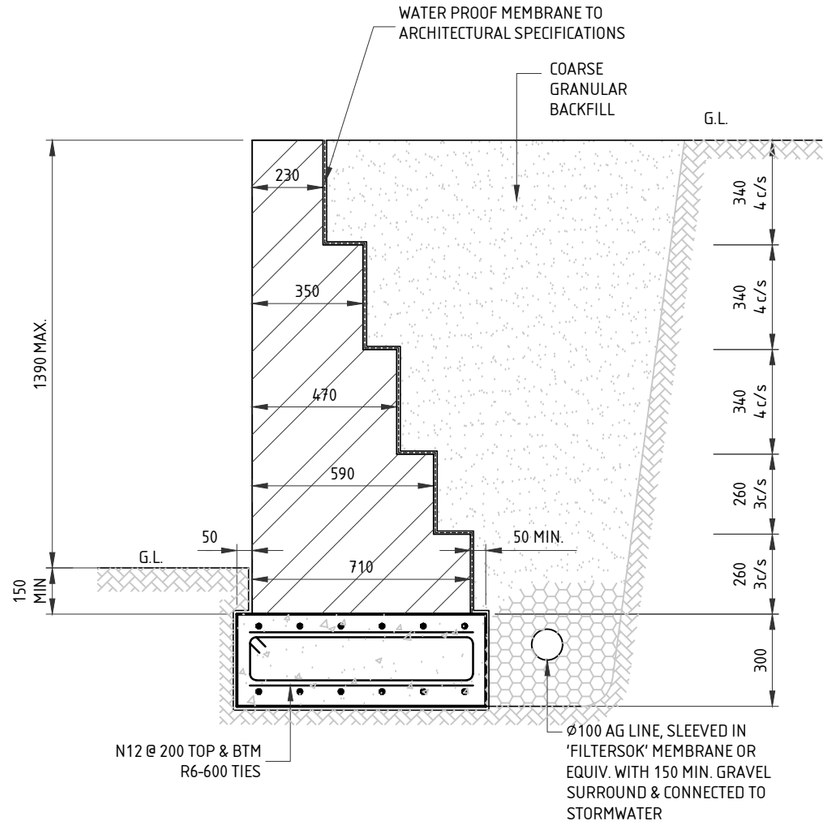
RETAINING WALL SCHEDULE STRATA: STIFF CLAY SUBGRADE & BACKFILL				
DISTANCE BETWEEN POST CENTRES 1200				
WALL HEIGHT 'H'	800	1000	1200	1400
EMBEDMENT DEPTH 'D'	1000	1400	1600	1800
POST SIZE	75dx 200W	100dx 200w	200dx 100W	2/200d x100W
WALERS	200dx 50W	200dx 50W	200dx 50W	200dx 75W



SLEEPERS RETAINING WALL TYPICAL SECTION (RW1)

NOTE: ALL TIMBER SHALL BE MIN. GRADE F7 CCA H5 LEVEL TREATED PINE.
PLACE BACKFILL NO SOONER THAN 3 DAYS AFTER PLACING CONCRETE

SECTION A
SCALE NTS S-101



ALTERNATIVE BRICK RETAINING WALL DETAIL (RW1)

NOTE: THICKNESS OF WALL TO BE REDUCED FROM THE
BOTTOM AS THE HEIGHT OF THE WALL DECREASES.
PROVIDE ARTICULATION JOINTS AT MAX. 8m FOR
THE FULL HEIGHT OF THE WALL. REFER TO DETAILS

SECTION A
SCALE 1:20 S-101

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	1:20

ALL PROJECTS DESIGNED AND DRAFTED BY

HOA THAI HUYNH - B. Eng. (Civil)

PROJECT

DRAFTING AND DESIGN

RETAINING WALL DETAILS (SYDNEY, NSW)

ENGINEERING PORTFOLIO

PROJECT DESCRIPTION
THIS IS A TYPICAL PROJECT IN SYDNEY, NEW SOUTH WALES. THE RETAINING WALL IS DESIGNED IN COMPLIANCE WITH AS 4678-2002.

REFERENCE NO.	SHEET NO.	REV
PF060618	S-502	0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)

THANK YOU FOR VIEWING MY PORTFOLIO!

THE END.

HOA THAI HUYNH - B. ENG. (CIVIL)

REV	ENG	DRW	DATE	ISSUE / REVISION
0	HTH	HTH	06/06/18	ISSUED FOR BUILDING PERMIT

DRAFTED	HTH
ENGINEER	HTH
DATE	06/06/18
SCALE @ A3	N/A
ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)	

PROJECT: DRAFTING AND DESIGN

PROJECT DESCRIPTION:

ENGINEERING PORTFOLIO

REFERENCE NO.: PF060618

SHEET NO.: S-000

REV: 0

ALL PROJECTS DESIGNED AND DRAFTED BY HOA THAI HUYNH - B. Eng. (Civil)