

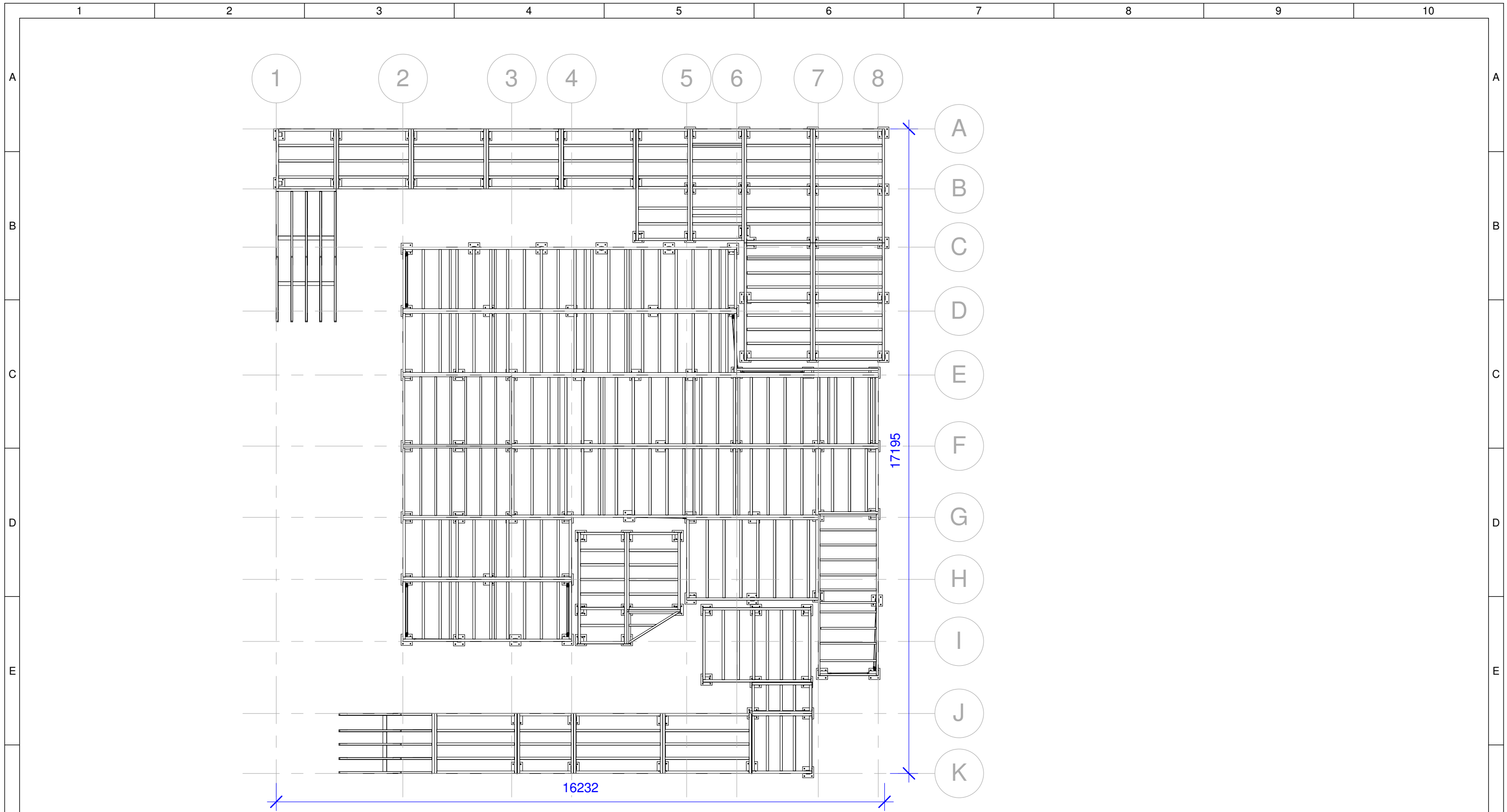
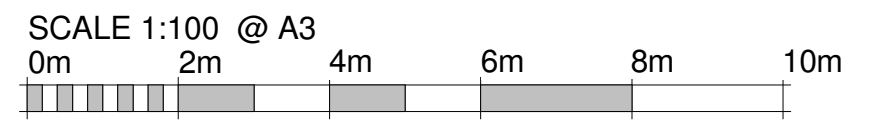


1	2	3	4	5	6	7	8	9	10
Structural Drawing List				Structural Drawing List					
Sheet		Sheet Name		Drawn By		Checked By			
ST-000-01	STRUCTURAL DRAWINGS ASSEMBLY			J.W.YEAP	A.FITZSIMMONS				
ST-000-02	STRUCTURAL SIGN-OFF			L. FAIDUTTI	R.PRANDALOS				
ST-000-03	STRUCTURAL SIGN-OFF			L. FAIDUTTI	R.PRANDALOS				
ST-000-04	STRUCTURAL SIGN-OFF			L. FAIDUTTI	R.PRANDALOS				
ST-000-05	STRUCTURAL SIGN-OFF			R.PRANDALOS	C.MCDOWELL				
ST-001-01	SUBFLOOR LAYOUT			A.FITZSIMMONS	R.PRANDALOS				
ST-001-02	HOUSE FOUNDATION SPACING			A.FITZSIMMONS	R.PRANDALOS				
ST-001-03	DECK FOUNDATION SPACING			A.FITZSIMMONS	J.W.YEAP				
ST-001-04	FOUNDATION PIER LABELS			A.FITZSIMMONS	T.MCCARTHY				
ST-001-05	FOUNDATION PIER STYLE LAYOUT			A.FITZSIMMONS	J.W.YEAP				
ST-001-06	SUBFLOOR BRACING LAYOUT			A.FITZSIMMONS	C.MCDOWELL				
ST-002-01	FLOOR LOAD DISTRIBUTION TO PIERS			A.FITZSIMMONS	T.MCCARTHY				
ST-002-02	WALL LOAD DISTRIBUTION TO PIERS			A.FITZSIMMONS	T.MCCARTHY				
ST-002-03	ROOF LOAD DISTRIBUTION TO PIERS			A.FITZSIMMONS	J.W.YEAP				
ST-002-04	HOUSE PIER REACTIONS			A.FITZSIMMONS	J.W.YEAP				
ST-002-05	DECK PIER REACTIONS			A.FITZSIMMONS	R.PRANDALOS				
ST-003-01	PIER ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-003-02	PIER HEAD STYLES 1-4			A.FITZSIMMONS	J.W.YEAP				
ST-003-03	PIER HEAD STYLES 5-7			A.FITZSIMMONS	J.W.YEAP				
ST-003-04	PIER HEAD STYLES 8-9			A.FITZSIMMONS	J.W.YEAP				
ST-003-05	PIER HEAD STYLES 10-13			A.FITZSIMMONS	J.W.YEAP				
ST-003-06	PIER HEAD STYLES 14-15			A.FITZSIMMONS	J.W.YEAP				
ST-003-07	PIER HEAD STYLES 16-18			A.FITZSIMMONS	J.W.YEAP				
ST-003-08	PIER HEAD STYLE L6-S4-22			J.W.YEAP	A.FITZSIMMONS				
ST-011-01	STRUCTURAL HOUSE FLOOR ASSEMBLY			A.FITZSIMMONS	L.FAIDUTTI				
ST-011-02	STRUCTURAL DECK ASSEMBLY			K.BANDY	A.FITZSIMMONS				
ST-012-01	HOUSE SUBFLOOR FRAMING			A.FITZSIMMONS	C.MCDOWELL				
ST-012-02	FRONT DECK / COURTYARD FRAMING			K.BANDY	A.FITZSIMMONS				
ST-012-03	BACK DECK FRAMING			K.BANDY	R.PRANDALOS				
ST-012-04	DECK FRAMING SCHEDULE			J.W.YEAP	R.PRANDALOS				
ST-013-01	SUBFLOOR / DECK FRAMING PROPERTIES			R.PRANDALOS	A.FITZSIMMONS				
ST-016-01	STRUCTURAL WALL ASSEMBLY			R.PRANDALOS	J.ROTH				
ST-017-01	STRUCTURAL WALL LAYOUT			J.W.YEAP	A.FITZSIMMONS				
ST-017-02	STRUCTURAL WALL LAYOUT			A.FITZSIMMONS	J.W.YEAP				
ST-018-01	TYPICAL ENDUROFRAME WALL			R.PRANDALOS	A.FITZSIMMONS				
ST-019-01	ENDUROFRAME WALL STUD CAPACITIES			R.PRANDALOS	A.FITZSIMMONS				
ST-021-01	STRUCTURAL ROOF ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-021-02	STRUCTURAL ROOF TRUSS LAYOUT			A.FITZSIMMONS	J.W.YEAP				
ST-021-03	TYPICAL ENDUROFRAME TRUSS			R.PRANDALOS	A.FITZSIMMONS				
ST-021-04	TRUSS CONNECTION SPECIFICATION			R.PRANDALOS	A.FITZSIMMONS				
ST-021-05	TRUSS CONNECTION CAPACITIES			R.PRANDALOS	A.FITZSIMMONS				
ST-101-01	ISOMETRIC HOUSE STRUCTURE			A.FITZSIMMONS	J.W.YEAP				
ST-101-02	ISOMETRIC STRUCTURAL FLOOR			J.W.YEAP	A.FITZSIMMONS				
ST-101-03	ISOMETRIC STRUCTURAL WALLS			A.FITZSIMMONS	J.W.YEAP				
ST-101-04	ISOMETRIC STRUCTURAL ROOF			A.FITZSIMMONS	J.W.YEAP				
ST-102-01	STRUCTURAL SECTIONS AND ELEVATIONS			J.W.YEAP	R.PRANDALOS				
ST-102-02	EAST ELEVATION			A.FITZSIMMONS	R.PRANDALOS				
ST-102-03	SOUTH ELEVATION			A.FITZSIMMONS	R.PRANDALOS				
ST-102-04	WEST ELEVATION			A.FITZSIMMONS	R.PRANDALOS				
ST-102-05	NORTH ELEVATION			A.FITZSIMMONS	J.W.YEAP				
ST-102-06	STRUCTURAL SECTION VIEW 1			A.FITZSIMMONS	J.W.YEAP				
ST-102-07	STRUCTURAL SECTION VIEW 2			A.FITZSIMMONS	J.W.YEAP				
ST-102-08	STRUCTURAL SECTION VIEW 3			J.W.YEAP	R.PRANDALOS				
ST-201-01	STRUCTURAL SUBFLOOR BLOW UP			A.FITZSIMMONS	C.MCDOWELL				
ST-201-02	STRUCTURAL FULL BLOW UP			A.FITZSIMMONS	C.MCDOWELL				
ST-202-01	TYPICAL SUBFLOOR CONNECTIONS			A.FITZSIMMONS	R.PRANDALOS				
ST-203-01	TYPICAL FLOOR MEMBER CONNECTION			A.FITZSIMMONS	R.PRANDALOS				
ST-203-02	TYPICAL FLOOR MEMBER CONNECTION			A.FITZSIMMONS	R.PRANDALOS				
ST-203-03	TYPICAL FLOOR MEMBER CONNECTION			A.FITZSIMMONS	Checker				
ST-204-01	FLOOR TO WALL ASSEMBLY OVERLAP			A.FITZSIMMONS	J.W.YEAP				
ST-204-02	FLOOR TO WALL ASSEMBLY NON-OVERLAP			A.FITZSIMMONS	J.W.YEAP				
ST-205-01	WALL TO WALL PARALLEL ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-205-02	WALL TO WALL PARALLEL ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-206-01	WALL TO WALL PERPENDICULAR ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-206-02	WALL TO WALL PERPENDICULAR ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-207-01	WALL TO TRUSS ON STUD ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-207-02	WALL TO TRUSS ON STUD ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-208-01	WALL TO TRUSS OFF STUD ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-208-02	WALL TO TRUSS OFF STUD ASSEMBLY			A.FITZSIMMONS	J.W.YEAP				
ST-301-01	SECOND SKIN WALL ISOMETRIC			R.PRANDALOS	C.MCDOWELL				
ST-302-01	SECOND SKIN WALL SITE PLAN			R.PRANDALOS	C.MCDOWELL				
ST-302-02	SECOND SKIN WALL AIR CAVITY DETAILS			R.PRANDALOS	C.MCDOWELL				
ST-303-01	SECOND SKIN WALL WEST ELEVATION			R.PRANDALOS	C.MCDOWELL				
ST-303-02	SECOND SKIN WALL SOUTH ELEVATION			R.PRANDALOS	C.MCDOWELL				
ST-303-03	SECOND SKIN WALL EAST ELEVATION			R.PRANDALOS	C.MCDOWELL				
ST-304-01	SSW TYPICAL BRACKETS ASSEMBLY			R.PRANDALOS	C.MCDOWELL				
ST-304-02	HOUSE BRACKET DETAIL - EAST / WEST			R.PRANDALOS	C.MCDOWELL				
ST-304-03	HOUSE BRACKET DETAIL - SOUTH			R.PRANDALOS	C.MCDOWELL				
ST-304-04	CONCRETE ANGLE BRACKET DETAIL			R.PRANDALOS	C.MCDOWELL				
ST-305-01	WEST HOUSE BRACKET LOCATION			R.PRANDALOS	C.MCDOWELL				
ST-305-02	WEST HOUSE BRACKET DETAIL			R.PRANDALOS	C.MCDOWELL				
ST-305-03	SOUTH HOUSE BRACKET LOCATION			R.PRANDALOS	C.MCDOWELL				
ST-305-04	EAST HOUSE BRACKET LOCATION			R.PRANDALOS	C.MCDOWELL				
ST-306-01	WEST CONCRETE BRACKET LOCATION			R.PRANDALOS	C.MCDOWELL				
ST-306-02	WEST CONCRETE BRACKET DETAIL			R.PRANDALOS	C.MCDOWELL				
ST-306-03	SOUTH CONCRETE BRACKET LOCATION			R.PRANDALOS	C.MCDOWELL				
ST-306-04	EAST CONCRETE BRACKET LOCATION			R.PRANDALOS	C.MCDOWELL				
ST-311-01	HOUSE BRACKET AND STEEL FRAME OVERLAY			R.PRANDALOS	C.MCDOWELL				
ST-311-02	HOUSE BRACKET AND STRUCTURAL TYPICAL DETAIL			R.PRANDALOS	C.MCDOWELL				
ST-321-01	WEST HOUSE BRACKET REACTIONS			R.PRANDALOS	C.MCDOWELL				
ST-321-02	SOUTH HOUSE BRACKET REACTIONS			R.PRANDALOS	C.MCDOWELL				
ST-321-03	EAST HOUSE BRACKET REACTIONS			R.PRANDALOS	C.MCDOWELL				
ST-321-04	WEST CONCRETE BRACKET REACTIONS			R.PRANDALOS	C.MCDOWELL				
ST-321-05	SOUTH CONCRETE BRACKET REACTIONS			R.PRANDALOS	C.MCDOWELL				
ST-321-06	EAST CONCRETE BRACKET REACTIONS			R.PRANDALOS	C.MCDOWELL				
ST-322-01	SSW PIER LAYOUT AND REACTIONS			R.PRANDALOS	C.MCDOWELL				
ST-322-02	SSW PIER AND CHANNEL CONNECTION			R.PRANDALOS	C.MCDOWELL				
ST-323-01	SSW BOTTOM CHANNEL LAYOUT			R.PRANDALOS	C.MCDOWELL				
ST-323-02	SSW TOP CHANNEL LAYOUT			R.PRANDALOS	C.MCDOWELL				
ST-331-01	PANEL 1 TO 7 MANUFACTURING			R.PRANDALOS	C.MCDOWELL				
ST-331-02	PANEL 8 TO 15 MANUFACTURING			R.PRANDALOS	C.MCDOWELL				
ST-331-03	PANEL 16 TO 21 MANUFACTURING			R.PRANDALOS	C.MCDOWELL				
ST-331-04	PANEL 22 TO 25 MANUFACTURING			R.PRANDALOS	C.MCDOWELL				

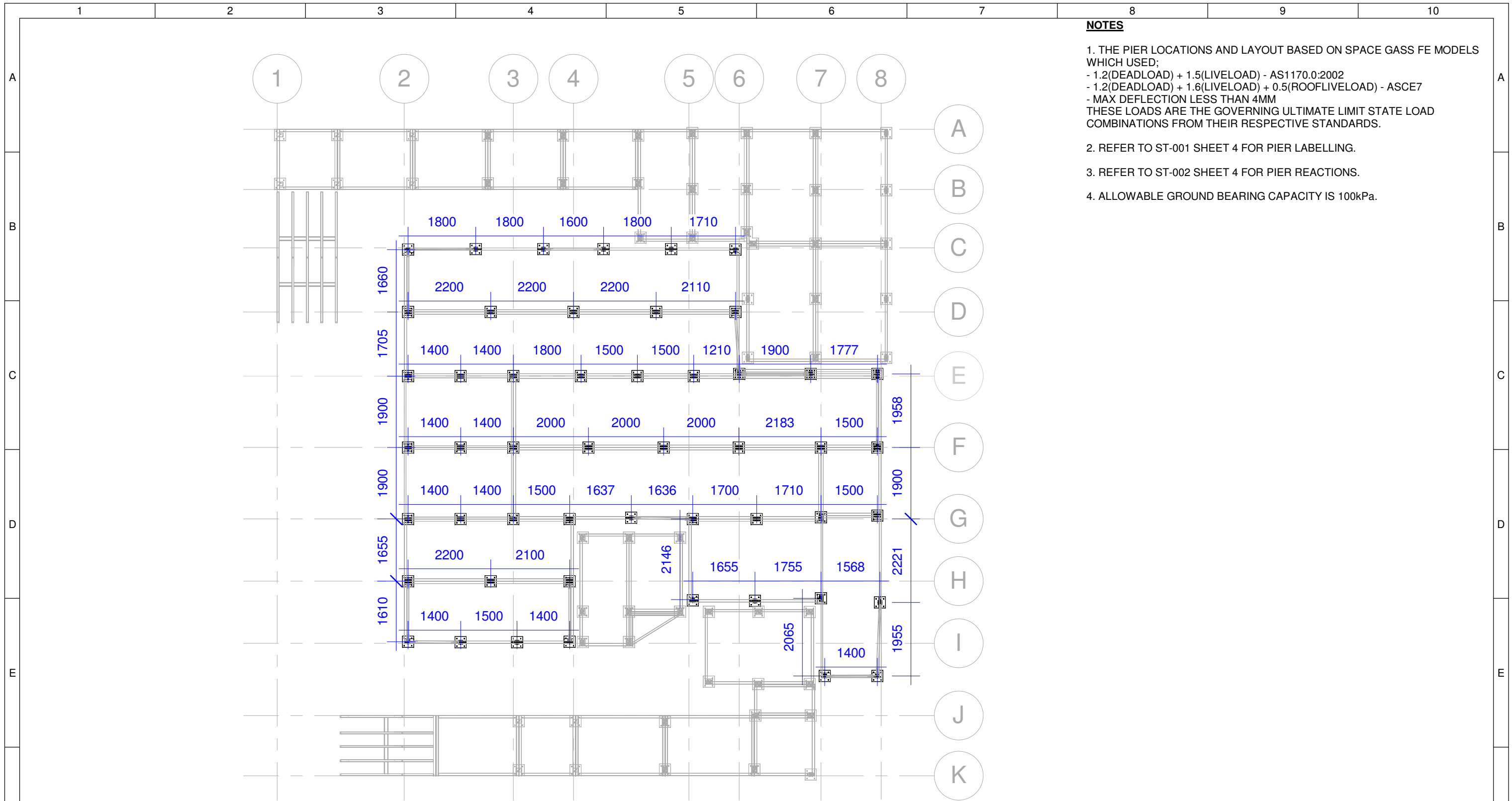
 <p>Desert Rose Team UOW Australia - Dubai</p>	Team:	TEAM UOW	Client: <p>Dubai Electricity and Water Authority</p> 	AMENDMENTS			COPYRIGHT		STRUCTURAL DRAWINGS ASSEMBLY ST-000																	
	Address:	UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN		CHECK	1.	Updated to As-Built	14/09/18	JW	RP											None; Project is Public
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Contact:	sd-2018@uow.edu.au www.desertrosehouse.com.au	SHEET: 01 OF 05	CHECKED A.FITZSIMMONS		DATE 12 May, 2018																					
					SCALE @ A3																					



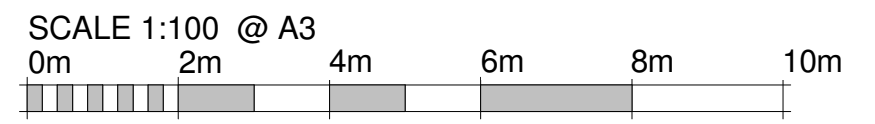
1 Full Subfloor Layout
1 : 100



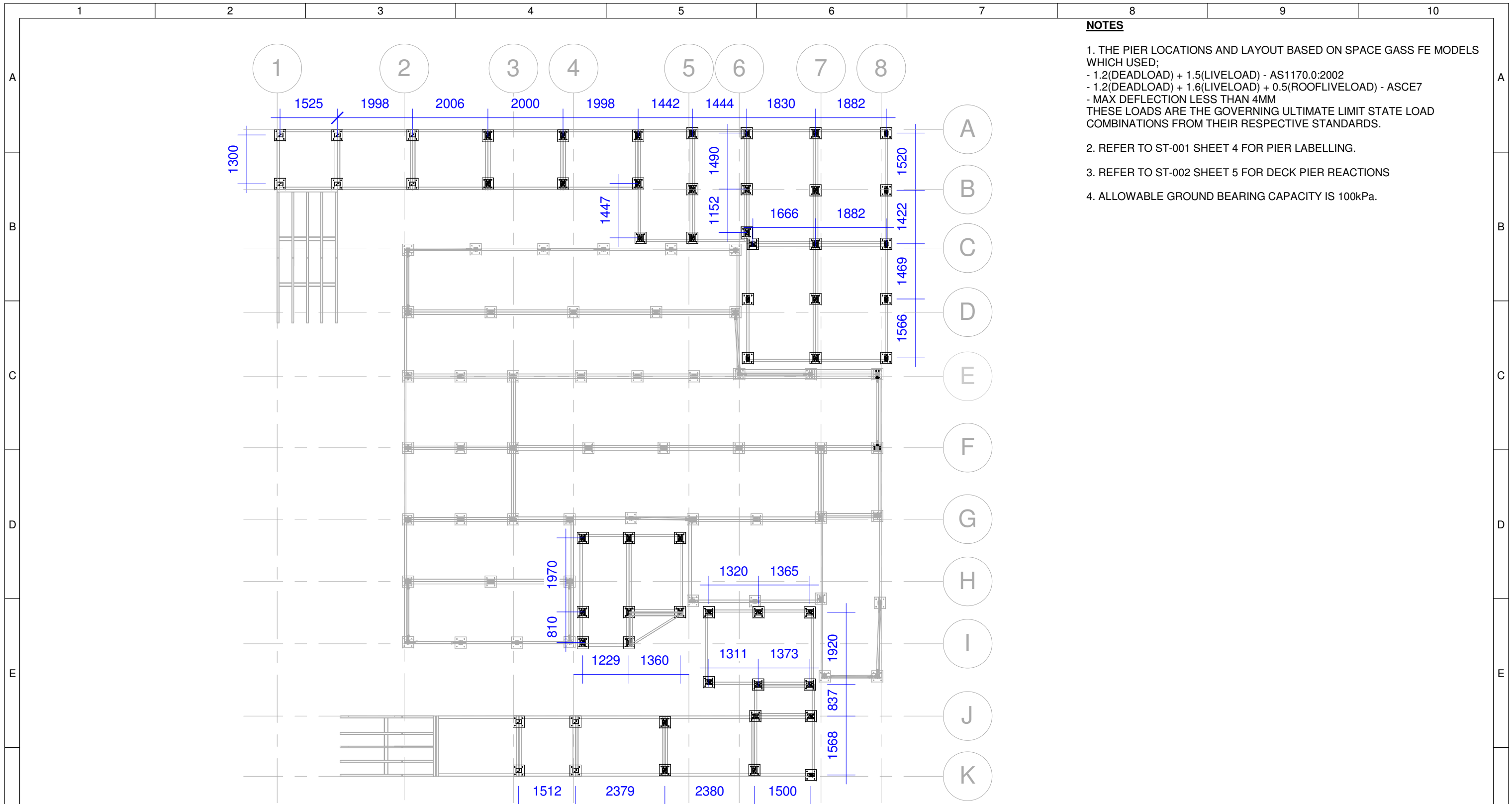
	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT None; Project is Public		 NORTH	SUBFLOOR LAYOUT													
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK			1	Updated to As-Built	14/09/18	JW	RP	<table border="1"> <tbody> <tr> <td>LOT</td> <td># M</td> </tr> <tr> <td>DRAWER</td> <td>A.FITZSIMMONS</td> </tr> <tr> <td>CHECKED</td> <td>R.PRANDALOS</td> </tr> <tr> <td>DATE</td> <td>21 March, 2018</td> </tr> <tr> <td>SCALE</td> <td>1 : 100 @ A3</td> </tr> </tbody> </table>	LOT	# M	DRAWER	A.FITZSIMMONS	CHECKED	R.PRANDALOS	DATE
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DATE	21 March, 2018																						
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1 House Foundation Spacing
1 : 100

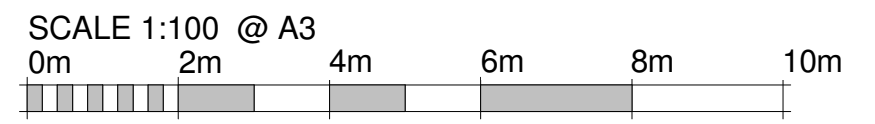


	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT None; Project is Public			HOUSE FOUNDATION SPACING																		
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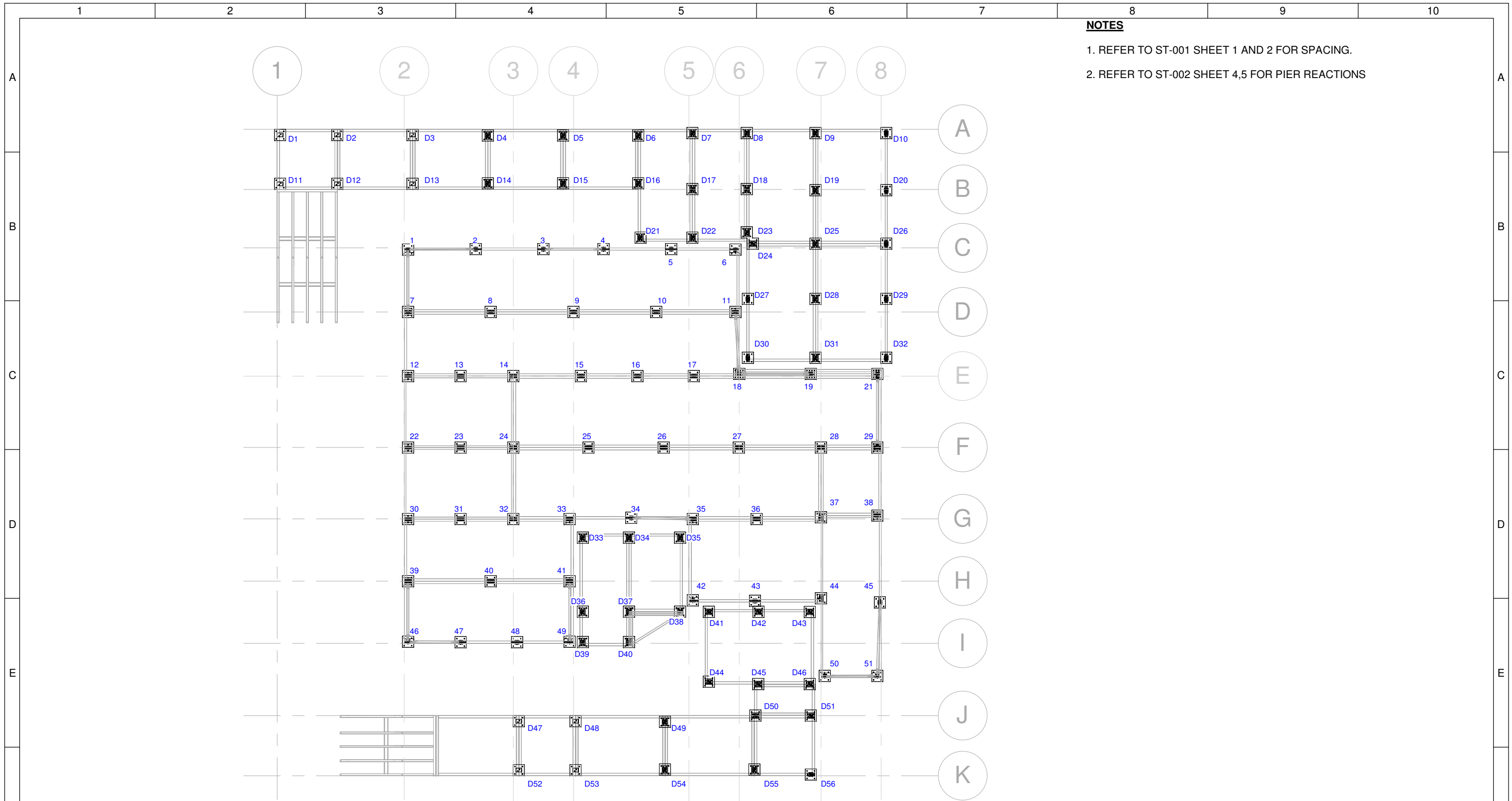


- NOTES**
1. THE PIER LOCATIONS AND LAYOUT BASED ON SPACE GASS FE MODELS WHICH USED;
 - 1.2(DEADLOAD) + 1.5(LIVELOAD) - AS1170.0:2002
 - 1.2(DEADLOAD) + 1.6(LIVELOAD) + 0.5(ROOFLIVELOAD) - ASCE7
 - MAX DEFLECTION LESS THAN 4MM
 THESE LOADS ARE THE GOVERNING ULTIMATE LIMIT STATE LOAD COMBINATIONS FROM THEIR RESPECTIVE STANDARDS.
 2. REFER TO ST-001 SHEET 4 FOR PIER LABELLING.
 3. REFER TO ST-002 SHEET 5 FOR DECK PIER REACTIONS
 4. ALLOWABLE GROUND BEARING CAPACITY IS 100kPa.

1 Deck Foundation Spacing
1 : 100



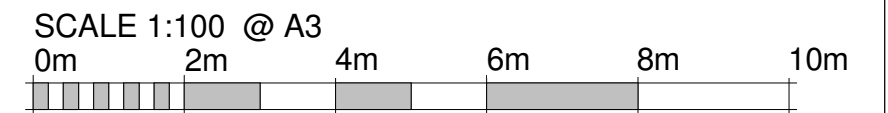
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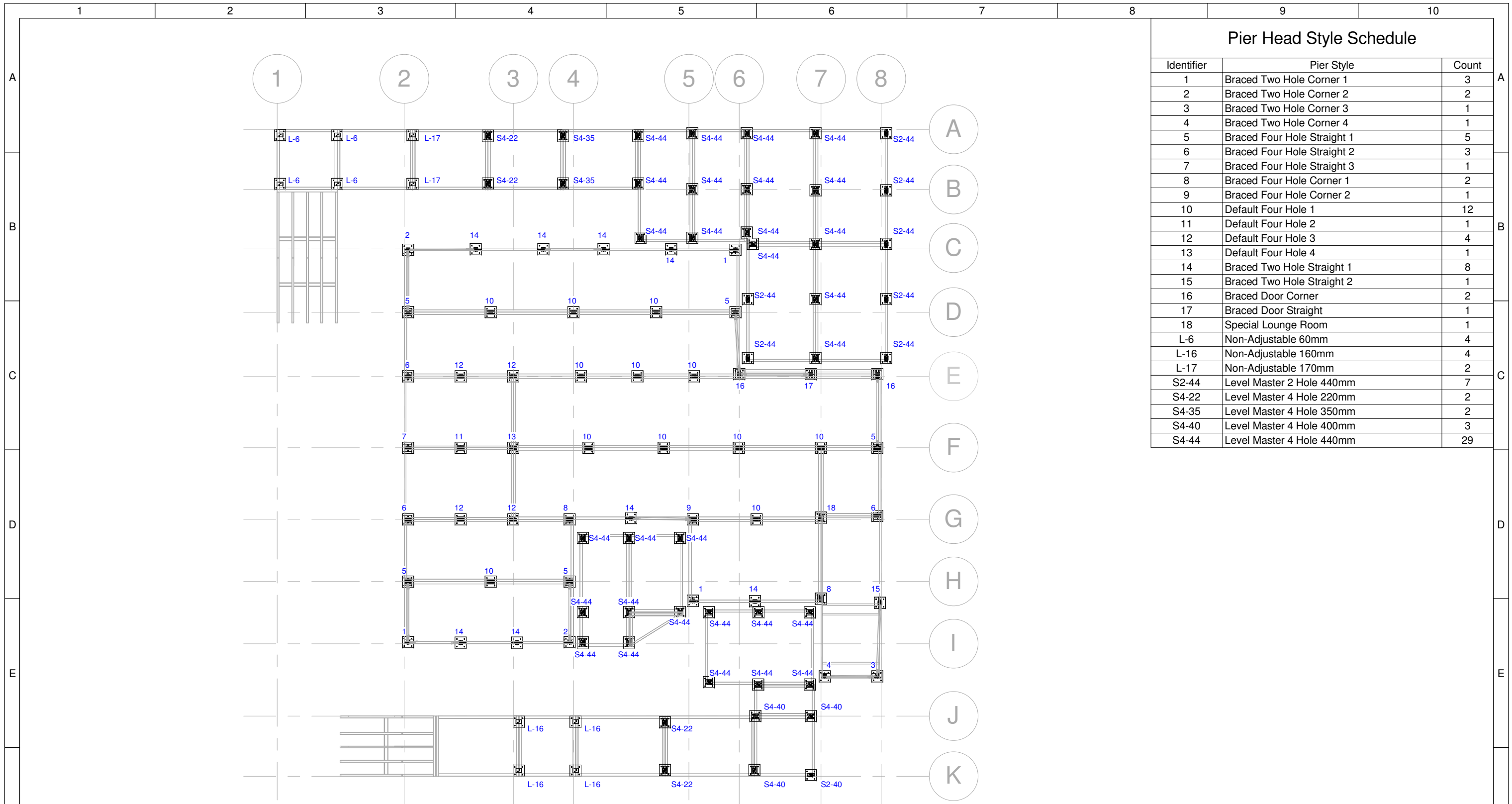
NOTES

1. REFER TO ST-001 SHEET 1 AND 2 FOR SPACING.
2. REFER TO ST-002 SHEET 4,5 FOR PIER REACTIONS

1 Foundation Pier Labels
1 : 100

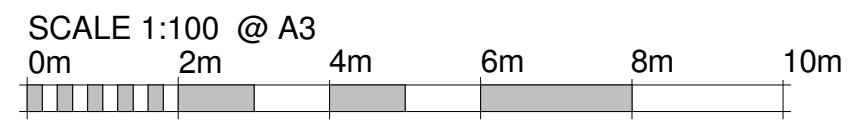




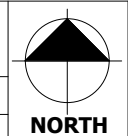
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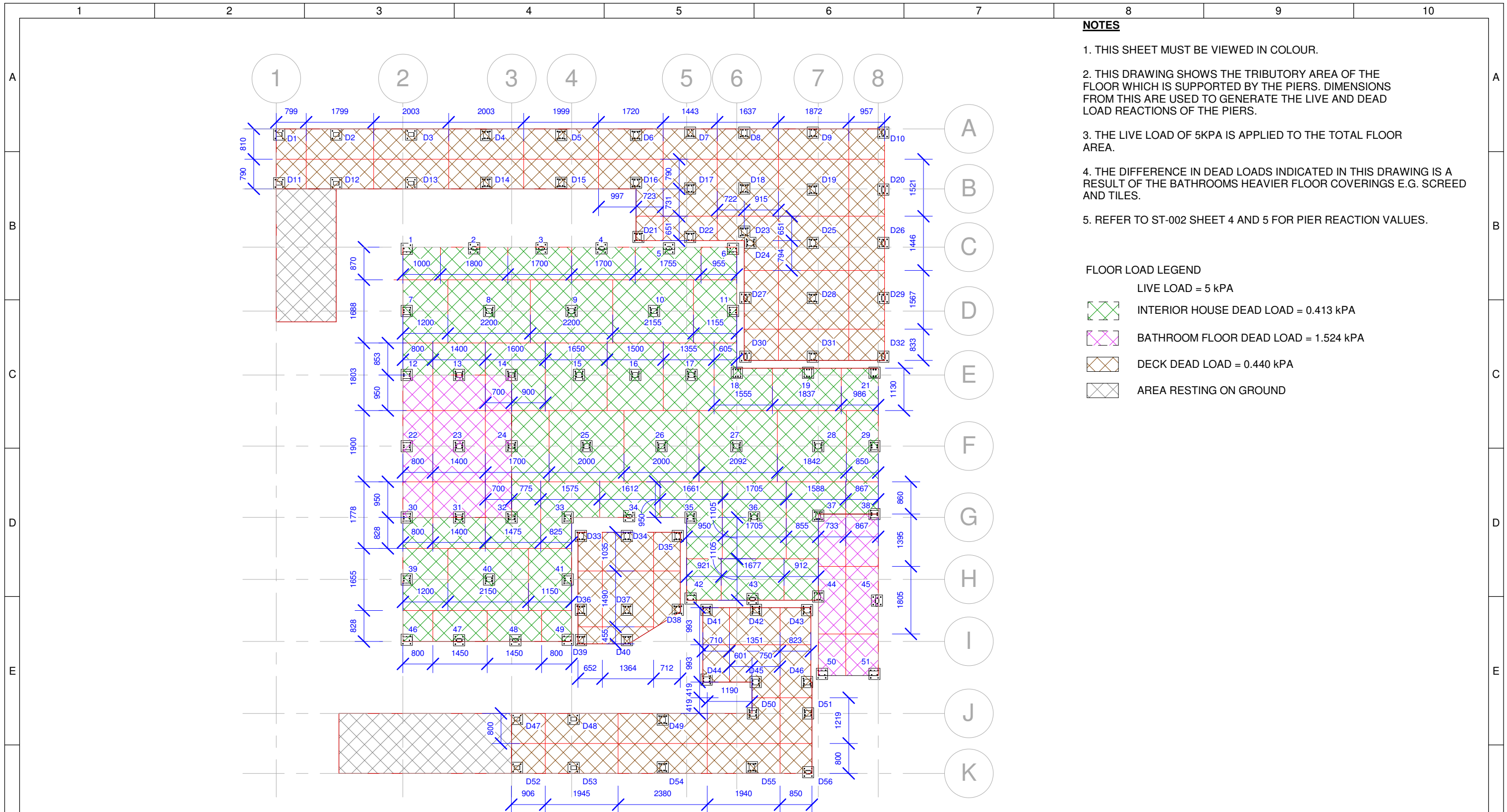


1 Foundation Pier Style Layout

1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS			COPYRIGHT None; Project is Public		 NORTH FOUNDATION PIER STYLE LAYOUT															
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3.	Updated to As-Built	14/09/18	JW	RP																			



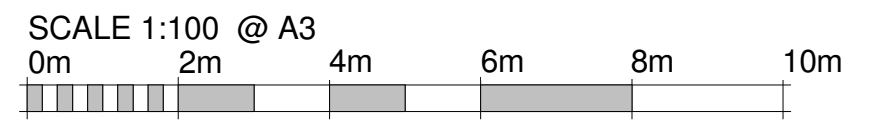
NOTES

1. THIS SHEET MUST BE VIEWED IN COLOUR.
2. THIS DRAWING SHOWS THE TRIBUTORY AREA OF THE FLOOR WHICH IS SUPPORTED BY THE PIERS. DIMENSIONS FROM THIS ARE USED TO GENERATE THE LIVE AND DEAD LOAD REACTIONS OF THE PIERS.
3. THE LIVE LOAD OF 5KPA IS APPLIED TO THE TOTAL FLOOR AREA.
4. THE DIFFERENCE IN DEAD LOADS INDICATED IN THIS DRAWING IS A RESULT OF THE BATHROOMS HEAVIER FLOOR COVERINGS E.G. SCREED AND TILES.
5. REFER TO ST-002 SHEET 4 AND 5 FOR PIER REACTION VALUES.

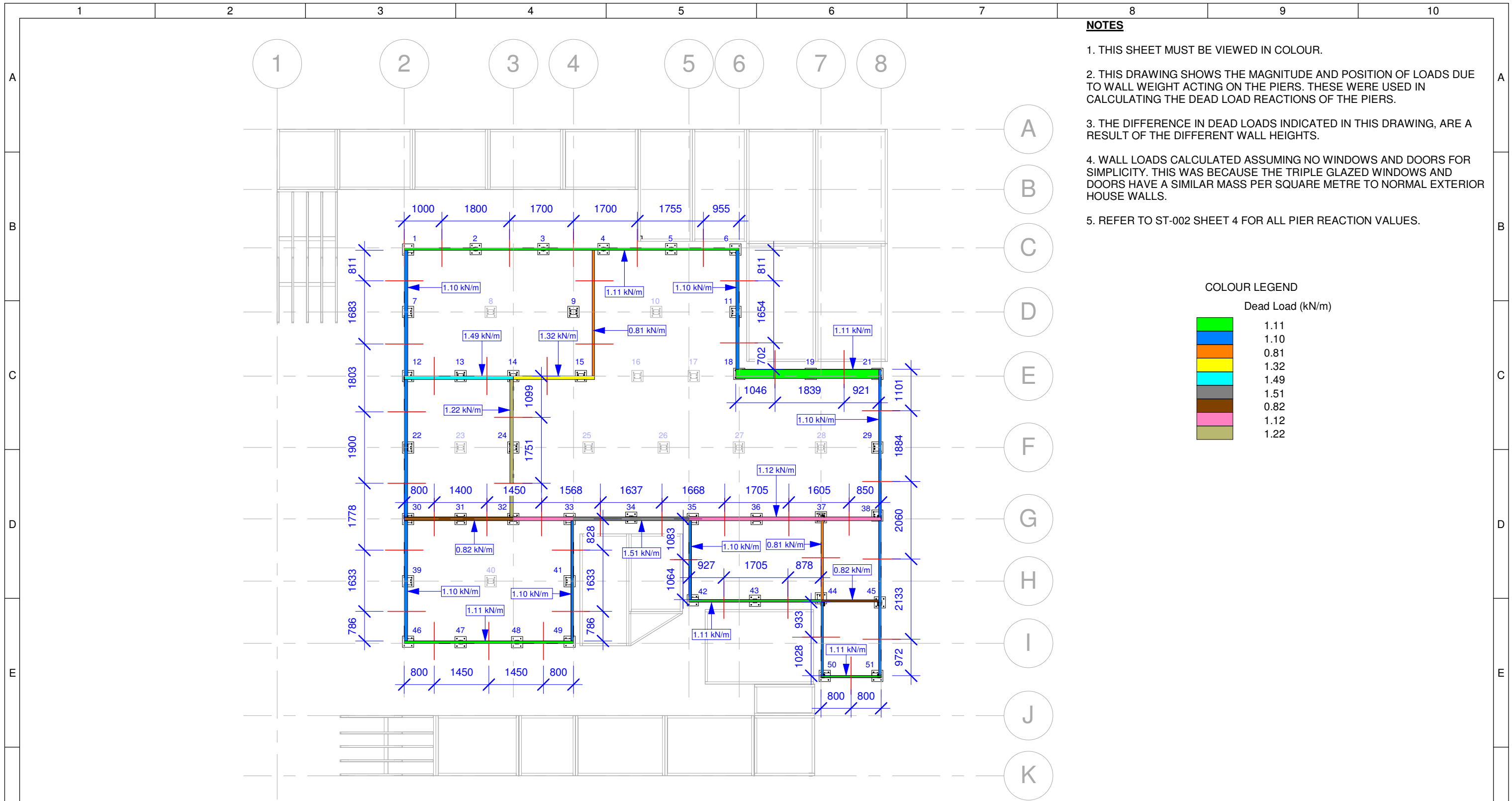
FLOOR LOAD LEGEND

- LIVE LOAD = 5 kPA
- INTERIOR HOUSE DEAD LOAD = 0.413 kPA
- BATHROOM FLOOR DEAD LOAD = 1.524 kPA
- DECK DEAD LOAD = 0.440 kPA
- AREA RESTING ON GROUND

1 Floor Load Distribution to Piers
1 : 100

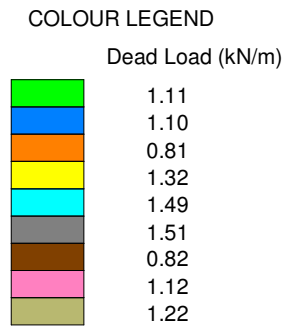


	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT None; Project is Public			FLOOR LOAD DISTRIBUTION TO PIERS																							
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Hide walls, amended notes with live loads.</td> <td>05/05/18</td> <td>AF</td> <td>JW</td> </tr> <tr> <td>2</td> <td>Included decking, hatched appropriate areas including end deck.</td> <td>12/09/18</td> <td>AF</td> <td>JW</td> </tr> <tr> <td>3</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK			1	Hide walls, amended notes with live loads.	05/05/18	AF	JW	2	Included decking, hatched appropriate areas including end deck.	12/09/18	AF	JW	3	Updated to As-Built	14/09/18	JW	RP	<table border="1"> <tbody> <tr> <td>LOT # M</td> <td></td> </tr> <tr> <td>DRAWER</td> <td>A.FITZSIMMONS</td> </tr> <tr> <td>CHECKED</td> <td>T.MCCARTHY</td> </tr> <tr> <td>DATE</td> <td>21 March, 2018</td> </tr> <tr> <td>SCALE</td> <td>1 : 100 @ A3</td> </tr> </tbody> </table>	LOT # M		DRAWER	A.FITZSIMMONS	CHECKED	T.MCCARTHY	DATE
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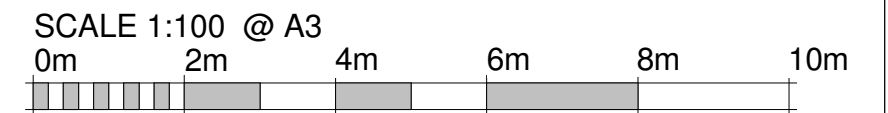


NOTES

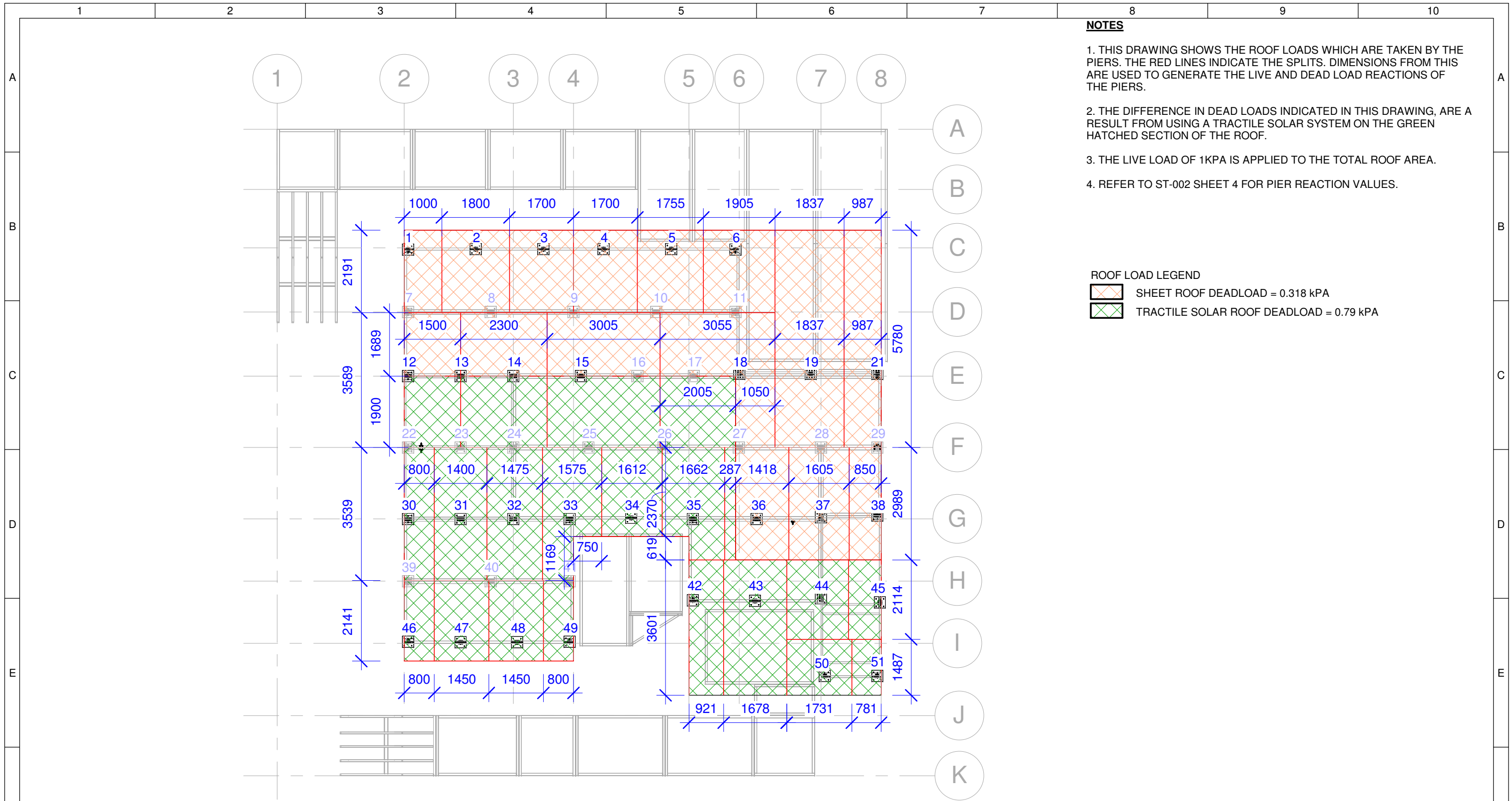
1. THIS SHEET MUST BE VIEWED IN COLOUR.
2. THIS DRAWING SHOWS THE MAGNITUDE AND POSITION OF LOADS DUE TO WALL WEIGHT ACTING ON THE PIERS. THESE WERE USED IN CALCULATING THE DEAD LOAD REACTIONS OF THE PIERS.
3. THE DIFFERENCE IN DEAD LOADS INDICATED IN THIS DRAWING, ARE A RESULT OF THE DIFFERENT WALL HEIGHTS.
4. WALL LOADS CALCULATED ASSUMING NO WINDOWS AND DOORS FOR SIMPLICITY. THIS WAS BECAUSE THE TRIPLE GLAZED WINDOWS AND DOORS HAVE A SIMILAR MASS PER SQUARE METRE TO NORMAL EXTERIOR HOUSE WALLS.
5. REFER TO ST-002 SHEET 4 FOR ALL PIER REACTION VALUES.



1 Wall Load Distribution to Piers
1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Hid walls, amended notes, added line load annotation.</td> <td>05/05/18</td> <td>AF</td> <td>JW</td> </tr> <tr> <td>2.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Hid walls, amended notes, added line load annotation.	05/05/18	AF	JW	2.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED T.MCCARTHY DATE 21 March, 2018 SCALE 1 : 100 @ A3	 NORTH WALL LOAD DISTRIBUTION TO PIERS SHEET: 02 OF 05 ST-002
	REV.	DESCRIPTION	DATE	DRAWN	CHECK															
1.	Hid walls, amended notes, added line load annotation.	05/05/18	AF	JW																
2.	Updated to As-Built	14/09/18	JW	RP																
<p>1 2 3 4 5 6 7 8 9 10</p>																				



NOTES

1. THIS DRAWING SHOWS THE ROOF LOADS WHICH ARE TAKEN BY THE PIERS. THE RED LINES INDICATE THE SPLITS. DIMENSIONS FROM THIS ARE USED TO GENERATE THE LIVE AND DEAD LOAD REACTIONS OF THE PIERS.
2. THE DIFFERENCE IN DEAD LOADS INDICATED IN THIS DRAWING, ARE A RESULT FROM USING A TRACTILE SOLAR SYSTEM ON THE GREEN HATCHED SECTION OF THE ROOF.
3. THE LIVE LOAD OF 1KPA IS APPLIED TO THE TOTAL ROOF AREA.
4. REFER TO ST-002 SHEET 4 FOR PIER REACTION VALUES.

ROOF LOAD LEGEND

- SHEET ROOF DEADLOAD = 0.318 kPa
- TRACTILE SOLAR ROOF DEADLOAD = 0.79 kPa



1 Roof Load Distribution to Piers

1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Changed fill region colours.</td> <td>14/05/18</td> <td>RP</td> <td>JW</td> </tr> <tr> <td>2</td> <td>Added subfloor framework as an underlay, including deck.</td> <td>12/09/18</td> <td>AF</td> <td>JW</td> </tr> <tr> <td>3</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Changed fill region colours.	14/05/18	RP	JW	2	Added subfloor framework as an underlay, including deck.	12/09/18	AF	JW	3	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED J.W.YEAP DATE 21 March, 2018 SCALE 1 : 100 @ A3	 NORTH SHEET: 03 OF 05	ROOF LOAD DISTRIBUTION TO PIERS <h1>ST-002</h1>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK																					
1	Changed fill region colours.	14/05/18	RP	JW																						
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	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																									

House Pier Reactions														
Pier Number	Floor Area (m2)	Floor Live Load (kN)	Floor Dead Load (kN)	Wall Dead Load (kN)	Roof Area (m2)	Roof Live Load (kN)	Roof Dead Load (kN)	Total Dead Load (kN)	AS1170.0 SLS (kN)	AS1170.0 ULS (kN)	ASCE 7 ULS (kN)	Largest Load (kN)	Required Plate Side Length for SLS (m)	Supplied Square Plate Side Length for SLS (m)
1	0.87	4.34	0.36	2.06	2.19	2.19	0.70	3.13	9.66	13.55	11.79	13.55	0.311	0.4
2	1.56	7.81	0.66	2.00	3.94	3.94	1.25	3.91	15.66	22.32	19.16	22.32	0.396	0.4
3	1.48	7.38	0.62	1.89	3.72	3.72	1.18	3.69	14.79	21.08	18.10	21.08	0.385	0.4
4	1.48	7.38	0.62	2.58	3.72	3.72	1.18	4.38	15.48	21.92	18.92	21.91	0.393	0.4
5	1.52	7.62	0.64	1.95	3.85	3.85	1.22	3.81	15.27	21.77	18.68	21.77	0.391	0.4
6	0.57	2.84	0.24	2.01	6.01	6.01	1.91	4.16	13.01	18.27	12.55	18.27	0.361	0.4
7	2.03	10.13	0.85	1.86				2.71	12.84	18.45	19.47	19.47	0.358	0.4
8	3.72	18.58	1.56					1.56	20.14	29.74	31.60	31.60	0.449	0.5
9	3.72	18.58	1.56	1.38				2.94	21.52	31.40	33.26	33.26	0.464	0.5
10	3.64	18.20	0.53					1.53	19.73	29.13	30.95	0.95	0.444	0.5
11	1.95	9.75	0.82	1.86				2.68	12.43	17.84	18.82	18.82	0.353	0.4
12	1.44	7.21	1.44	3.17	2.87	2.87	1.64	6.26	17.37	23.87	21.72	23.87	0.417	0.5
13	2.52	12.61	2.53	2.09	5.02	5.02	2.86	7.48	23.03	32.92	29.16	32.92	0.480	0.5
14	2.88	14.42	1.95	3.38	5.74	5.74	3.27	8.60	29.80	41.81	37.50	41.81	0.546	0.6
15	2.97	14.87	1.25	2.26	10.78	10.78	6.15	9.66	35.31	50.06	40.77	50.06	0.594	0.6
16	2.70	13.52	1.14					1.14	14.65	21.63	22.99	22.99	0.383	0.4
17	2.44	12.21	1.03					1.03	13.23	19.54	20.76	20.76	0.364	0.4
18	2.39	11.97	1.18	2.09	10.96	10.96	5.30	8.57	31.51	44.69	34.92	44.69	0.561	0.6
19	2.08	10.38	0.87	2.04	10.62	10.62	3.38	6.29	27.28	39.04	29.46	39.04	0.522	0.6
21	1.12	5.58	0.47	2.29	5.70	5.70	1.81	4.58	15.86	22.41	17.27	22.41	0.398	0.4
22	1.52	7.60	2.32	2.09				4.41	12.00	16.68	17.44	17.44	0.346	0.4
23	2.66	13.30	4.05					4.05	17.34	24.80	26.13	26.13	0.416	0.5
24	3.23	16.15	2.82	2.32				5.01	21.29	30.39	32.01	32.01	0.461	0.5
25	3.80	19.00	1.60					1.60	20.60	30.42	32.32	32.32	0.454	0.5
26	3.80	19.00	1.60					1.60	20.60	30.42	32.32	32.32	0.454	0.5
27	3.97	19.87	1.67					1.67	21.54	31.81	33.80	33.80	0.464	0.5
28	3.50	17.50	1.47					1.47	18.97	28.01	29.76	29.76	0.436	0.5
29	1.62	8.08	0.68	2.04				2.72	10.79	15.37	16.18	16.18	0.329	0.4
30	1.42	7.11	1.44	2.62	2.83	2.83	2.25	6.30	16.24	22.47	20.35	22.47	0.403	0.5
31	2.49	12.44	2.54	1.16	4.95	4.95	3.93	7.61	25.00	25.21	31.50	35.21	0.500	0.5
32	2.2	13.11	1.84	1.45	5.22	5.22	4.14	7.43	25.75	36.40	32.49	36.40	0.507	0.6
33	2.18	10.89	1.18	2.95	4.70	4.70	3.73	7.87	23.46	32.83	29.22	32.83	0.484	0.5
34	1.53	7.66	0.64	2.43	3.82	3.82	3.03	6.11	17.59	24.55	21.49	24.55	0.419	0.5
35	2.61	13.05	1.42	2.14	4.53	4.53	3.59	7.15	24.73	34.96	31.73	34.96	0.497	0.5
36	3.47	17.36	1.46	1.90	5.09	5.09	2.76	6.11	28.56	41.01	37.65	41.01	0.534	0.6
37	3.23	16.17	2.31	2.69	4.80	4.80	2.36	7.35	28.31	40.27	37.08	40.27	0.532	0.6
38	1.77	8.83	1.87	3.23	2.54	2.54	1.25	6.35	17.71	24.67	23.01	24.67	0.421	0.5
39	1.97	9.83	0.83	1.80				2.63	12.46	17.91	18.89	18.89	0.353	0.4
40	3.52	17.62	1.48					1.48	19.10	28.20	29.97	29.97	0.437	0.5
41	1.88	9.42	0.79	1.80				2.59	12.02	17.25	18.19	18.19	0.347	0.4
42	1.04	5.18	0.43	2.26	3.32	3.32	2.63	5.32	13.82	19.13	16.33	19.13	0.382	0.4
43	1.89	9.43	0.79	1.86	4.92	4.94	3.92	6.57	20.94	29.44	25.45	29.44	0.458	0.5
44	2.58	12.89	3.18	3.59	3.48	3.48	2.76	9.53	25.89	35.98	33.79	35.98	0.509	0.6
45	1.84	9.18	2.80	3.03	1.83	1.83	1.46	7.28	18.29	25.25	24.33	25.25	0.428	0.5
46	0.68	3.38	0.28	1.82	1.71	1.71	1.36	3.46	8.55	11.79	10.41	11.79	0.292	0.3
47	1.22	6.12	0.51	1.61	3.10	3.10	2.46	4.59	13.81	19.34	16.85	19.34	0.372	0.4
48	1.22	6.12	0.51	1.61	3.10	3.10	2.46	4.59	13.81	19.34	16.85	19.34	0.372	0.4
49	0.68	3.38	0.28	1.82	1.71	1.71	1.36	3.46	8.55	11.79	10.41	11.79	0.292	0.3
50	0.75	3.73	1.14	2.05	3.68	3.68	2.92	6.10	13.51	18.43	15.12	18.43	0.368	0.4
51	0.88	4.41	1.34	1.99	1.16	1.16	0.92	4.25	9.82	13.45	12.73	13.45	0.240	0.3

 <p>Desert Rose Team UOW Australia - Dubai</p>	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED J.W.YEAP DATE 21 March, 2018 SCALE @ A3	HOUSE PIER REACTIONS ST-002	SHEET: 04 OF 05
	REV.	DESCRIPTION	DATE	DRAWN	CHECK											
1.	Updated to As-Built	14/09/18	JW	RP												

NOTES

1. ASCE7 ULS LOAD CASE OF 1.2*DEADLOAD + 1.6*LIVELOAD IS THE GOVERNING CASE CONSIDERED, AS SUCH IS THE ONLY CASE INCLUDED IN THIS LOAD TABLE.

2. BASE PLATES SIZES TO SUITE SLS REACTIONS. SQUARE BASE SIDE LENGTH CALCULATED TO MEET 100kPa GROUND BEARING CAPACITY.

Deck Pier Reactions

Pier	Area (m2)	Dead Load (kN)	Live Load (kN)	AS1170 SLS (kN)	ASCE7 ULS (kN)	Square Base Side Length for SLS (m)
D1	0.647	0.29	3.24	3.521	5.52	0.3
D2	1.457	0.64	7.29	7.927	12.43	0.3
D3	1.622	0.71	8.11	8.826	13.84	0.3
D4	1.622	0.42	8.11	8.826	13.84	0.3
D5	1.619	0.71	8.10	8.808	13.81	0.3
D6	1.393	0.61	6.97	7.579	11.88	0.3
D7	1.169	0.51	5.84	6.358	9.97	0.3
D8	1.326	0.58	6.63	7.213	11.31	0.3
D9	1.516	0.67	7.58	8.249	12.93	0.3
D10	0.755	0.34	3.88	4.217	6.61	0.3
D11	0.631	0.28	3.16	3.434	5.38	0.3
D12	1.421	0.63	7.10	7.731	12.12	0.3
D13	1.582	0.70	7.91	8.608	13.49	0.3
D14	1.582	0.70	7.91	8.608	13.49	0.3
D15	1.579	0.70	7.90	8.691	13.47	0.3
D16	1.887	0.83	9.44	10.267	16.10	0.4
D17	2.195	0.97	10.97	11.94	18.72	0.4
D18	2.490	1.10	12.45	13.545	21.23	0.4
D19	2.847	1.25	14.24	15.489	24.28	0.4
D20	1.456	0.64	7.28	7.918	12.41	0.3
D21	0.471	0.21	2.35	2.56	4.01	0.3
D22	0.939	0.41	4.70	5.11	8.01	0.3
D23	1.184	0.52	5.92	6.439	10.03	0.3
D24	1.184	0.52	5.92	6.439	10.09	0.3
D25	2.707	1.19	13.54	14.726	23.09	0.4
D26	1.384	0.61	6.92	7.528	11.80	0.3
D27	1.434	0.63	7.17	7.8	12.23	0.3
D28	2.933	1.29	14.67	15.958	25.02	0.4

Deck Pier Reactions

Pier	Area (m2)	Dead Load (kN)	Live Load (kN)	AS1170 SLS (kN)	ASCE7 ULS (kN)	Square Base Side Length for SLS (m)
D29	1.500	0.66	7.48	8.158	12.79	0.3
D30	0.762	0.34	3.81	4.146	6.50	0.3
D31	1.559	0.69	7.80	8.483	13.30	0.3
D32	0.797	0.35	3.99	4.337	6.80	0.3
D33	0.675	0.30	3.37	3.671	5.76	0.3
D34	1.412	0.62	7.06	7.68	12.04	0.3
D35	0.737	0.32	3.69	4.009	6.28	0.3
D36	0.971	0.43	4.86	5.285	8.29	0.3
D37	2.032	0.98	10.16	11.056	17.33	0.4
D38	1.061	0.47	5.30	5.771	9.05	0.3
D39	0.297	0.13	1.48	1.614	2.53	0.3
D40	0.621	0.27	3.10	3.376	5.29	0.3
D41	0.705	0.31	3.53	3.835	6.01	0.3
D42	1.342	0.59	6.71	7.298	11.44	0.3
D43	0.817	0.36	4.09	4.446	6.97	0.3
D44	0.662	0.29	3.31	3.604	5.65	0.3
D45	1.656	0.73	8.28	9.008	14.12	0.4
D46	1.162	0.51	5.81	6.322	9.91	0.3
D47	0.725	0.32	3.62	3.943	6.18	0.3
D48	1.556	0.69	7.78	8.465	13.27	0.3
D49	1.904	0.84	9.52	10.358	16.24	0.4
D50	1.866	0.82	9.33	10.152	15.92	0.4
D51	1.036	0.46	5.18	5.637	8.84	0.3
D52	0.725	0.32	3.63	3.943	6.18	0.3
D53	1.556	0.69	7.78	8.465	13.27	0.3
D54	1.904	0.84	9.52	10.358	16.24	0.4
D55	1.552	0.68	7.76	8.443	13.24	0.3
D56	0.680	0.30	3.40	3.699	5.80	0.3



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au



AMENDMENTS

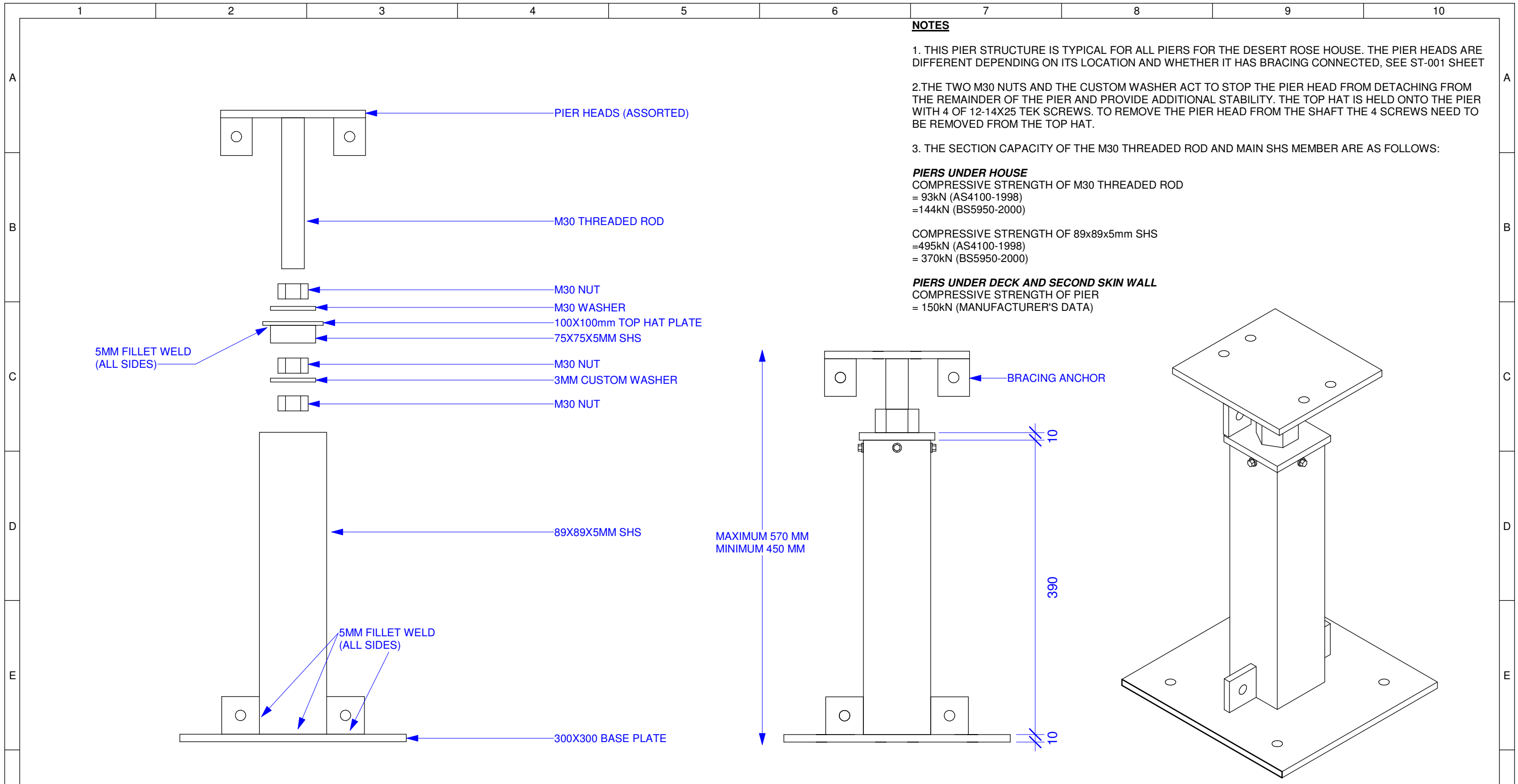
REV.	DESCRIPTION	DATE	DRAWN	CHECK
1.	Updated to As-Built	14/09/18	JW	RP

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 LOT # M
 DRAWER A.FITZSIMMONS
 CHECKED R.PRANDALOS
 DATE 12 September, 2018
 SCALE @ A3

DECK PIER REACTIONS

SHEET:
05 OF 05

ST-002



NOTES

1. THIS PIER STRUCTURE IS TYPICAL FOR ALL PIERS FOR THE DESERT ROSE HOUSE. THE PIER HEADS ARE DIFFERENT DEPENDING ON ITS LOCATION AND WHETHER IT HAS BRACING CONNECTED, SEE ST-001 SHEET

2. THE TWO M30 NUTS AND THE CUSTOM WASHER ACT TO STOP THE PIER HEAD FROM DETACHING FROM THE REMAINDER OF THE PIER AND PROVIDE ADDITIONAL STABILITY. THE TOP HAT IS HELD ONTO THE PIER WITH 4 OF 12-14X25 TEK SCREWS. TO REMOVE THE PIER HEAD FROM THE SHAFT THE 4 SCREWS NEED TO BE REMOVED FROM THE TOP HAT.

3. THE SECTION CAPACITY OF THE M30 THREADED ROD AND MAIN SHS MEMBER ARE AS FOLLOWS:

PIERS UNDER HOUSE

COMPRESSIVE STRENGTH OF M30 THREADED ROD
 = 93kN (AS4100-1998)
 = 144kN (BS5950-2000)

COMPRESSIVE STRENGTH OF 89x89x5mm SHS
 = 495kN (AS4100-1998)
 = 370kN (BS5950-2000)

PIERS UNDER DECK AND SECOND SKIN WALL

COMPRESSIVE STRENGTH OF PIER
 = 150kN (MANUFACTURER'S DATA)

1 Pier Exploded Side View
1 : 5

2 Pier Side View
1 : 5

3 Pier Isometric View

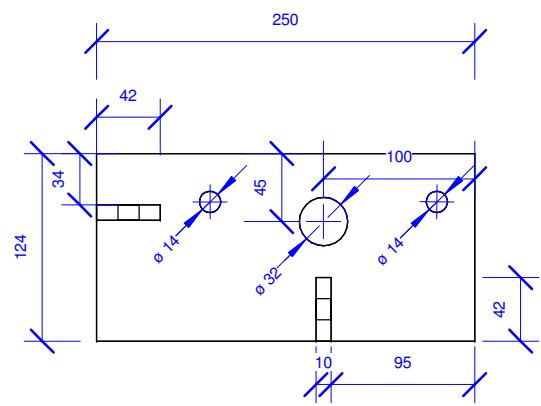
	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT None; Project is Public		SHEET: 01 OF 08	PIER ASSEMBLY ST-003		
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK			1.	Updated to As-Built
REV.	DESCRIPTION	DATE	DRAWN	CHECK								
1.	Updated to As-Built	14/09/18	JW	RP								

Pier Head Style Schedule

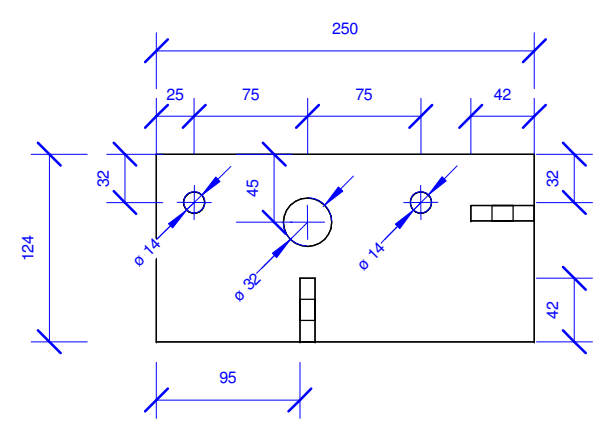
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2	Braced Two Hole Corner 2	2
3	Braced Two Hole Corner 3	1
4	Braced Two Hole Corner 4	1
5	Braced Four Hole Straight 1	5
6	Braced Four Hole Straight 2	3
7	Braced Four Hole Straight 3	1
8	Braced Four Hole Corner 1	2
9	Braced Four Hole Corner 2	1
10	Default Four Hole 1	12
11	Default Four Hole 2	1
12	Default Four Hole 3	4
13	Default Four Hole 4	1
14	Braced Two Hole Straight 1	8
15	Braced Two Hole Straight 2	1
16	Braced Door Corner	2
17	Braced Door Straight	1
18	Special Lounge Room	1
L-6	Non-Adjustable 60mm	4
L-16	Non-Adjustable 160mm	4
L-17	Non-Adjustable 170mm	2
S2-44	Level Master 2 Hole 440mm	7
S4-22	Level Master 4 Hole 220mm	2
S4-35	Level Master 4 Hole 350mm	2
S4-40	Level Master 4 Hole 400mm	3
S4-44	Level Master 4 Hole 440mm	29

NOTES

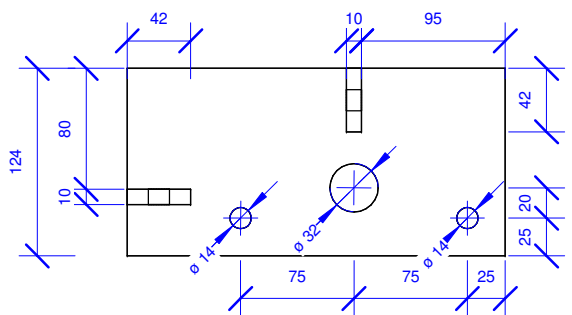
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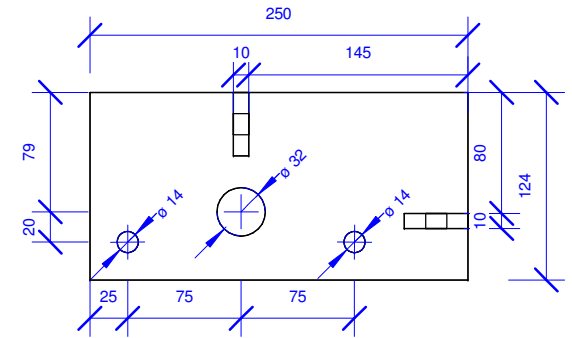
1 Braced Two Hole Corner 1
1 : 5



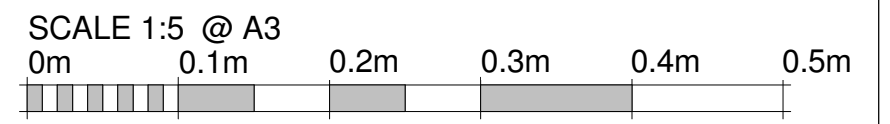
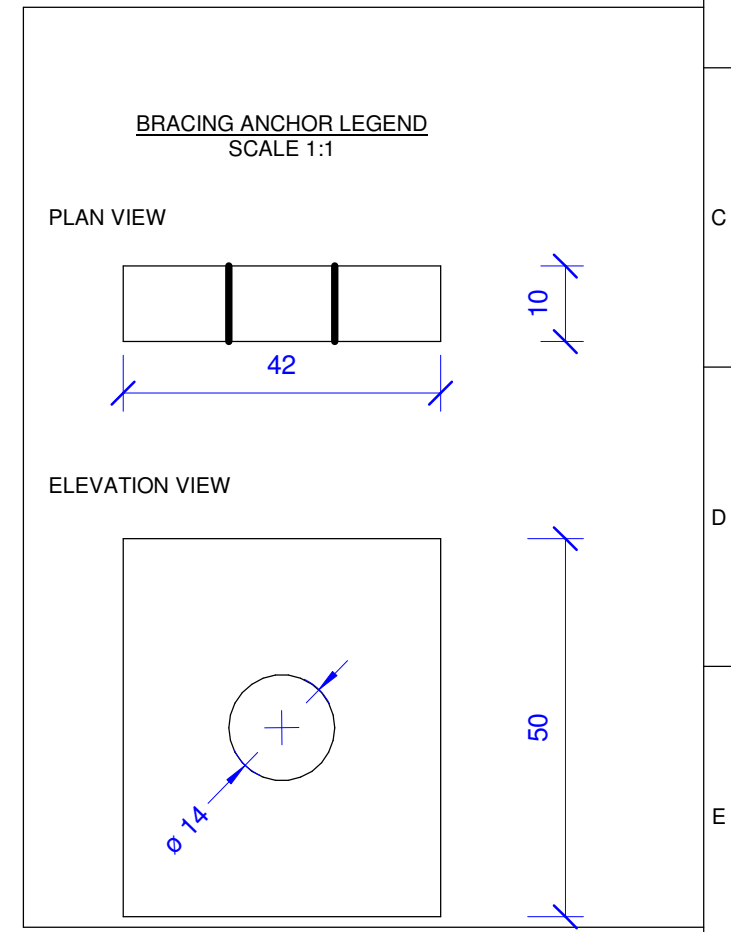
2 Braced Two Hole Corner 2
1 : 5




3 Braced Two Hole Corner 3
1 : 5



4 Braced Two Hole Corner 4
1 : 5



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
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Contact: sd-2018@uow.edu.au
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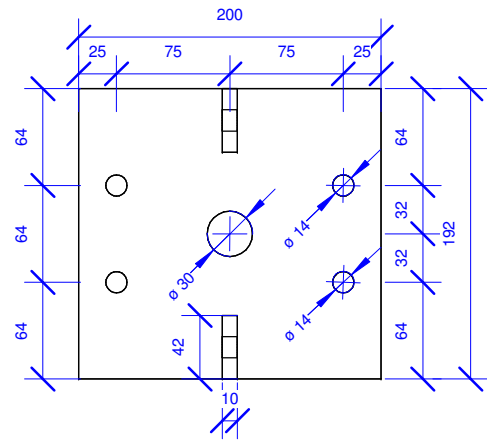
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PIER HEAD STYLES 1-4
ST-003
SHEET: 02 OF 08

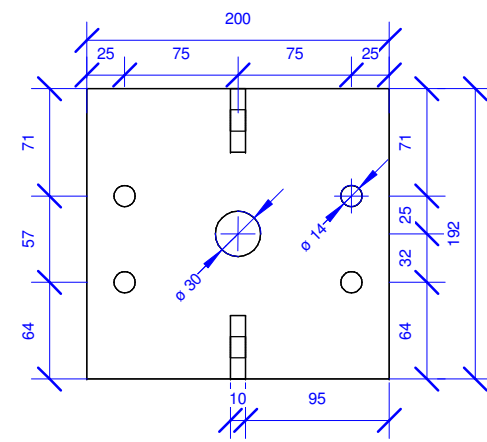
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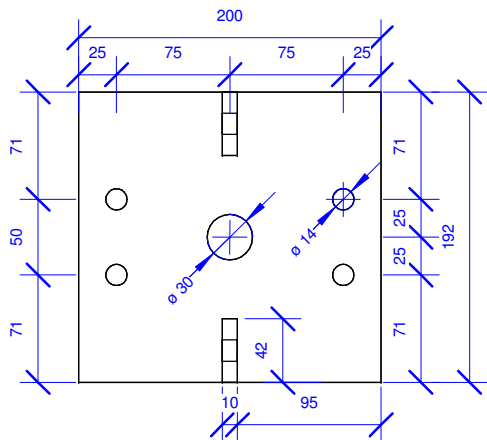
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Identifier	Pier Style	Count
1	Braced Two Hole Corner 1	3
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8	Braced Four Hole Corner 1	2
9	Braced Four Hole Corner 2	1
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13	Default Four Hole 4	1
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16	Braced Door Corner	2
17	Braced Door Straight	1
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L-16	Non-Adjustable 160mm	4
L-17	Non-Adjustable 170mm	2
S2-44	Level Master 2 Hole 440mm	7
S4-22	Level Master 4 Hole 220mm	2
S4-35	Level Master 4 Hole 350mm	2
S4-40	Level Master 4 Hole 400mm	3
S4-44	Level Master 4 Hole 440mm	29



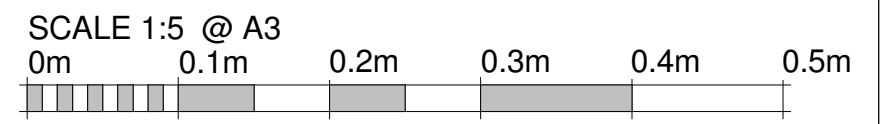
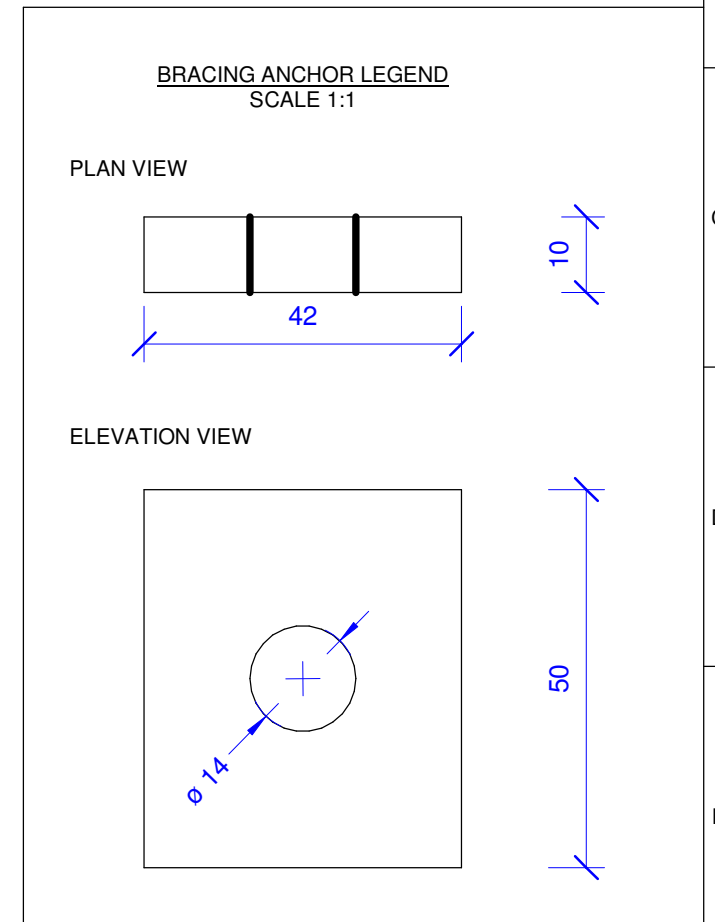
1 Braced Four Hole Straight 1
1 : 5



2 Braced Four Hole Straight 2
1 : 5



3 Braced Four Hole Straight 3
1 : 5



Team: TEAM UOW
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 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
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CHECKED J.W.YEAP
DATE 21 March, 2018
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PIER HEAD STYLES 5-7

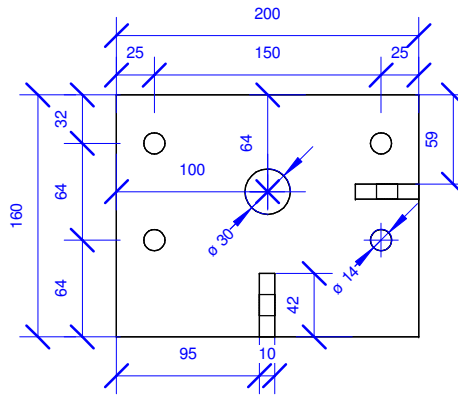
SHEET:
03 OF 08

ST-003

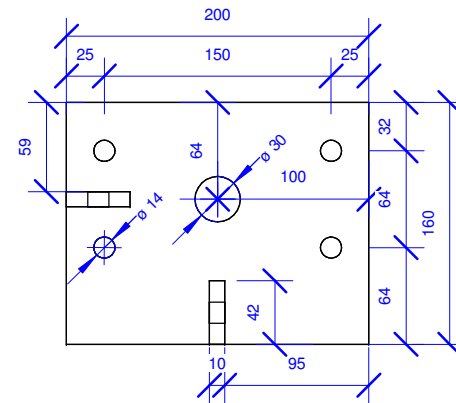
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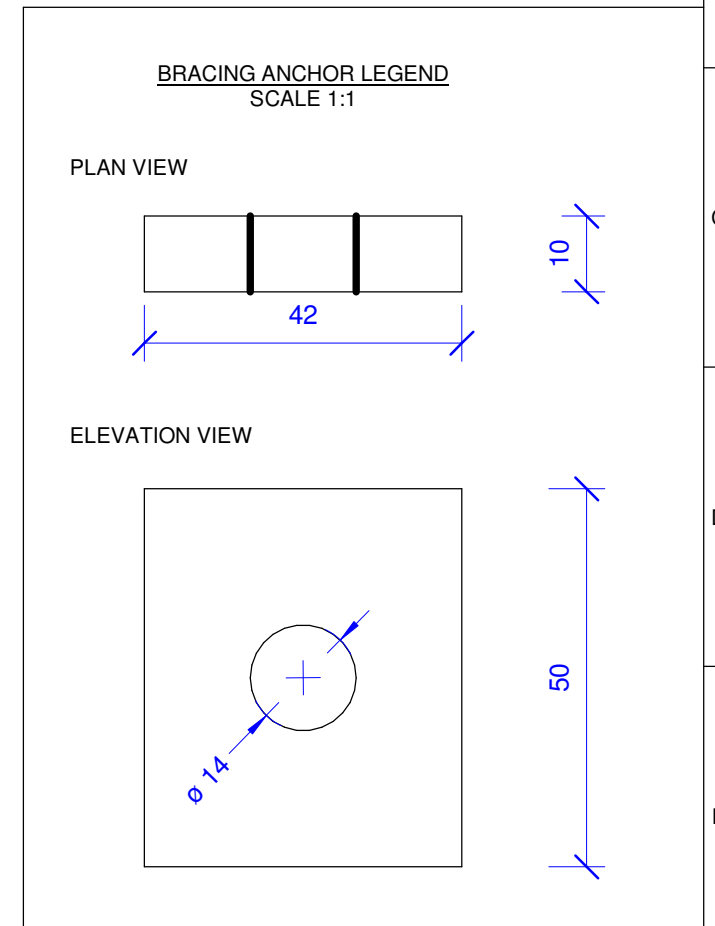
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1
1 : 5
Braced Four Hole Corner 1



2
1 : 5
Braced Four Hole Corner 2

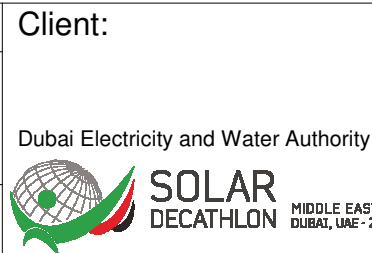


Bracing Detail
1 : 1

SCALE 1:5 @ A3



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522
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CHECKED J.W.YEAP	
DATE 21 March, 2018	
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SHEET:
04 OF 08

PIER HEAD
STYLES 8-9

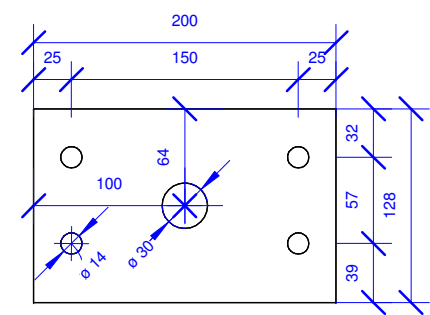
ST-003

Pier Head Style Schedule

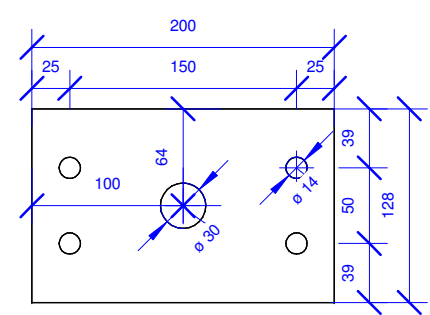
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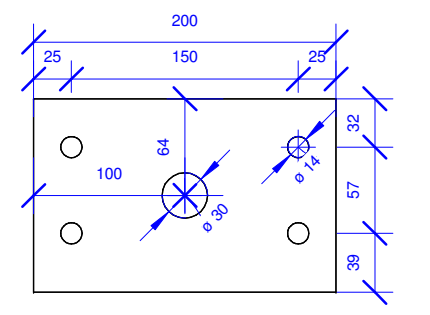
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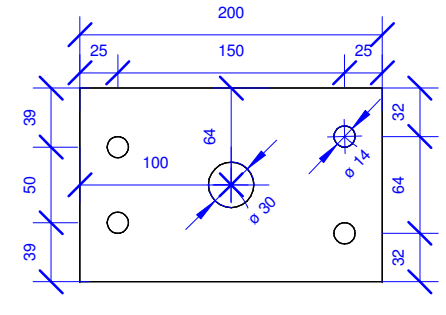
1 Default Four Hole 1
1 : 5



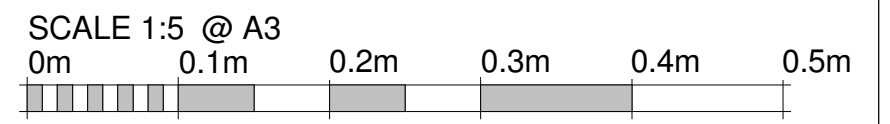
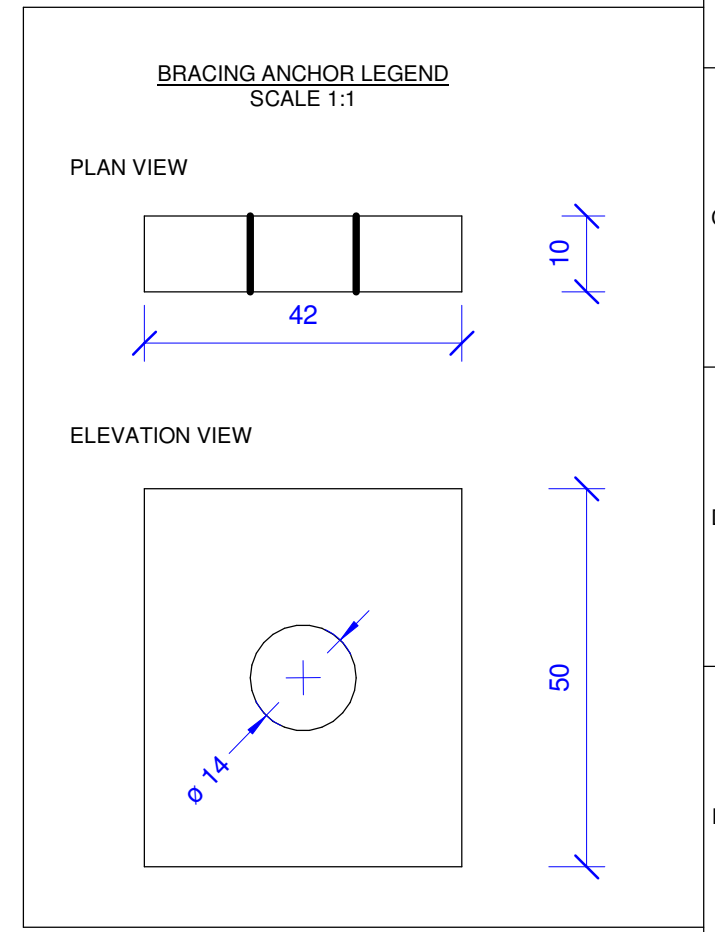
2 Default Four Hole 2
1 : 5



3 Default Four Hole 3
1 : 5



4 Default Four Hole 4
1 : 5



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
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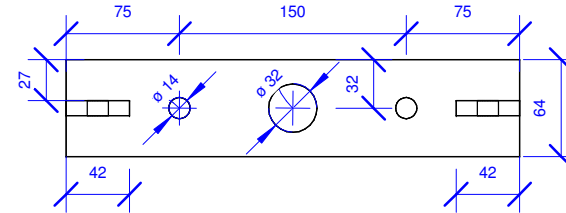
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PIER HEAD STYLES 10-13
ST-003
 SHEET: 05 OF 08

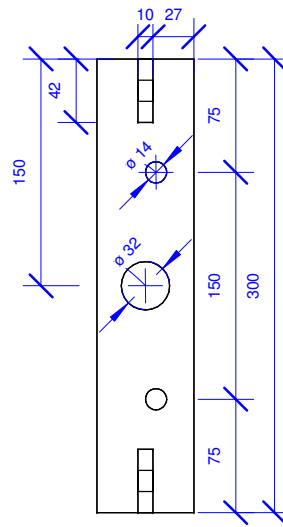
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S4-44	Level Master 4 Hole 440mm	29

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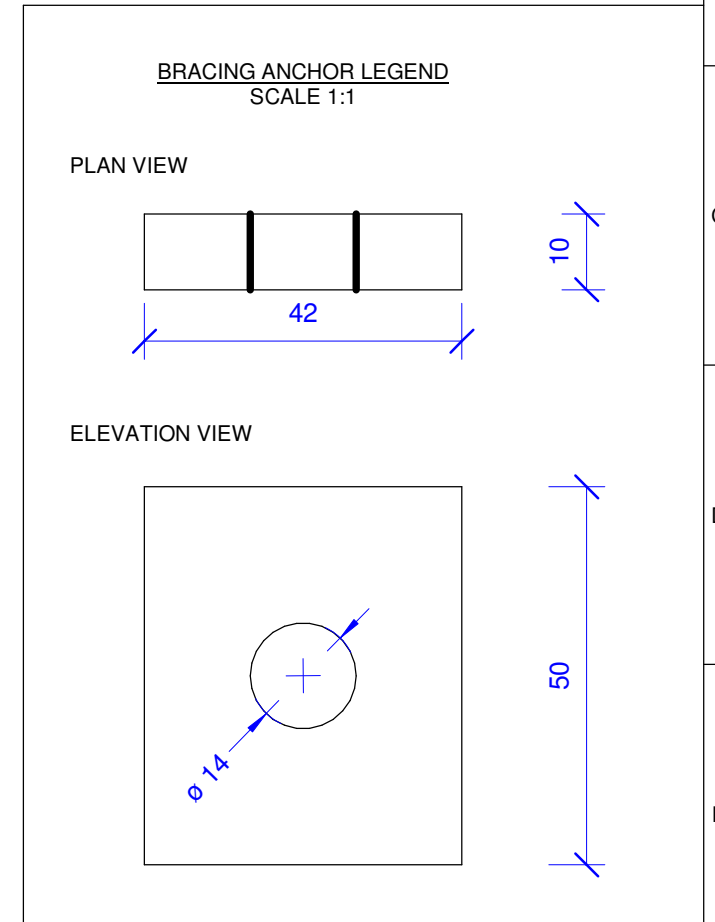
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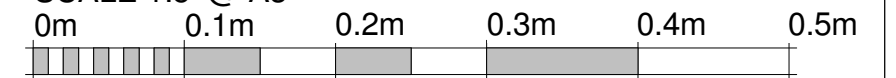
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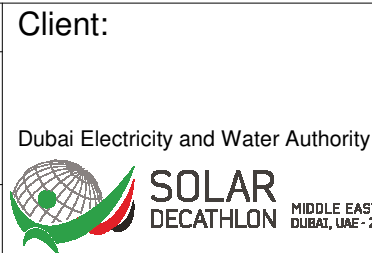
2 **Braced Two Hole Straight 2**
1 : 5



SCALE 1:5 @ A3



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06 OF 08

**PIER HEAD
STYLES 14-15**

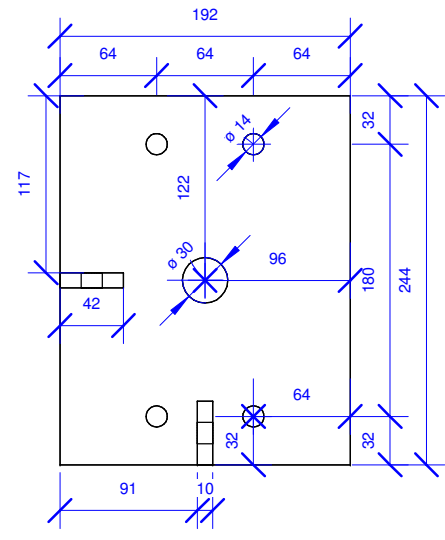
ST-003

Pier Head Style Schedule

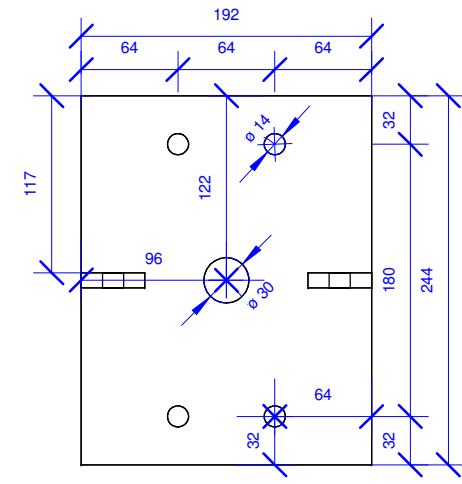
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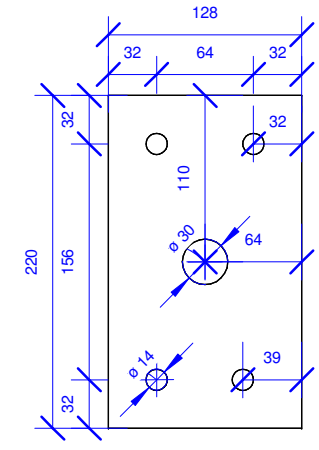
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- HATCHED AREAS INDICATE WHERE THE BRACING ANCHOR IS WELDED TO THE PIER HEADS.



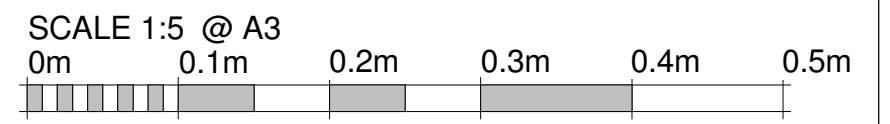
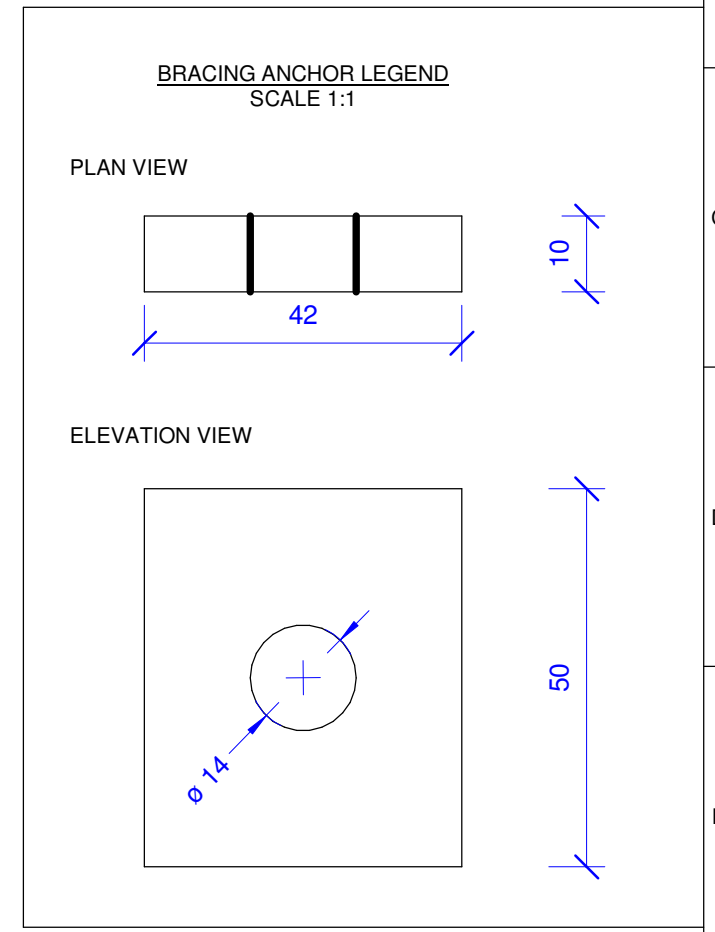
1 Braced Door Corner
1 : 5



2 Braced Door Straight
1 : 5



3 Special Lounge Room
1 : 5



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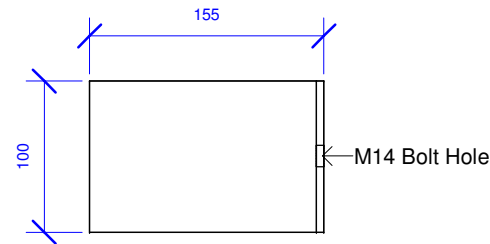
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PIER HEAD STYLES 16-18
ST-003
 SHEET: 07 OF 08

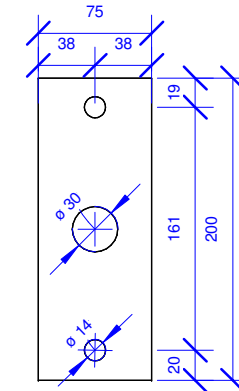
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NOTES

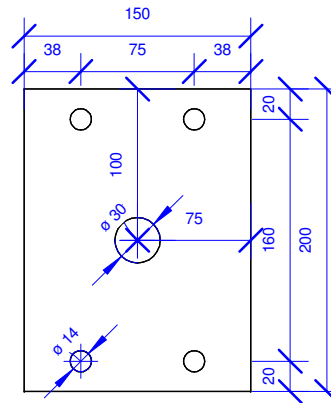
- ALL DIMENSIONS ARE AS SHOWN. THERE ARE TWO DIFFERENT SIZED HOLES, 14MM AND 32MM. THE 14MM IS FOR THE M12 BOLTS THAT CONNECT THE PIERS TO THE FLOOR. THE 32MM HOLE IS FOR THE M30 THREADED ROD USED FOR ADJUSTMENT OF THE PIER HEIGHTS WHICH IS PLUG WELDED TO THE PIER HEAD.
- L6, L16, L17 ARE PIER HEADS WELDED DIRECTLY TO THE 89X89X5mm SHS. THESE PIERS ARE SITUATED AROUND THE LOWEST PARTS OF THE RAMPS.



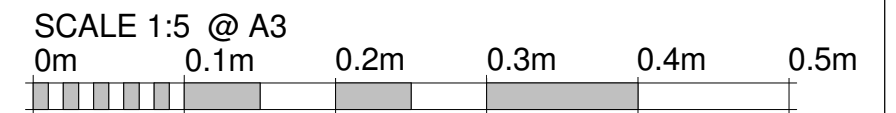
1 Non-Adjustable
1 : 5



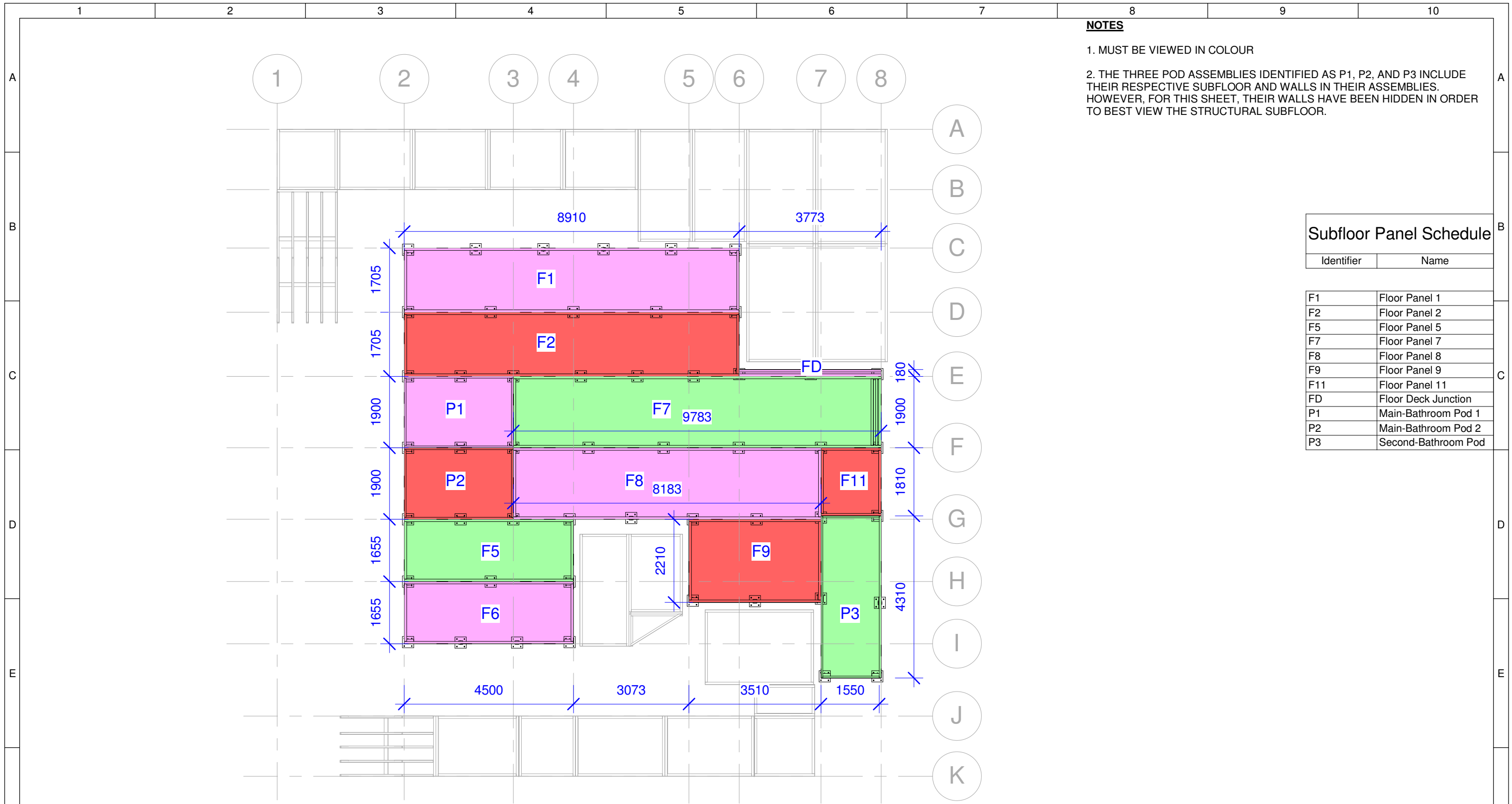
2 Level Master 2 Hole
1 : 5



3 Level Master 4 Hole
1 : 5



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT None; Project is Public		PIER HEAD STYLE L6-S4-22									
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK		1.	Updated to As-Built	14/09/18	JW	RP	<table border="1"> <thead> <tr> <th>LOT</th> <th># M</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	LOT	# M	
REV.	DESCRIPTION	DATE	DRAWN	CHECK														
1.	Updated to As-Built	14/09/18	JW	RP														
LOT	# M																	



NOTES

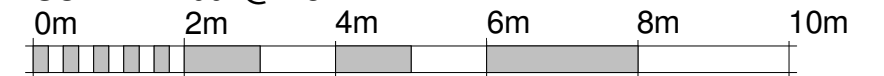
- MUST BE VIEWED IN COLOUR
- THE THREE POD ASSEMBLIES IDENTIFIED AS P1, P2, AND P3 INCLUDE THEIR RESPECTIVE SUBFLOOR AND WALLS IN THEIR ASSEMBLIES. HOWEVER, FOR THIS SHEET, THEIR WALLS HAVE BEEN HIDDEN IN ORDER TO BEST VIEW THE STRUCTURAL SUBFLOOR.



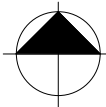
Structural House Floor Assembly

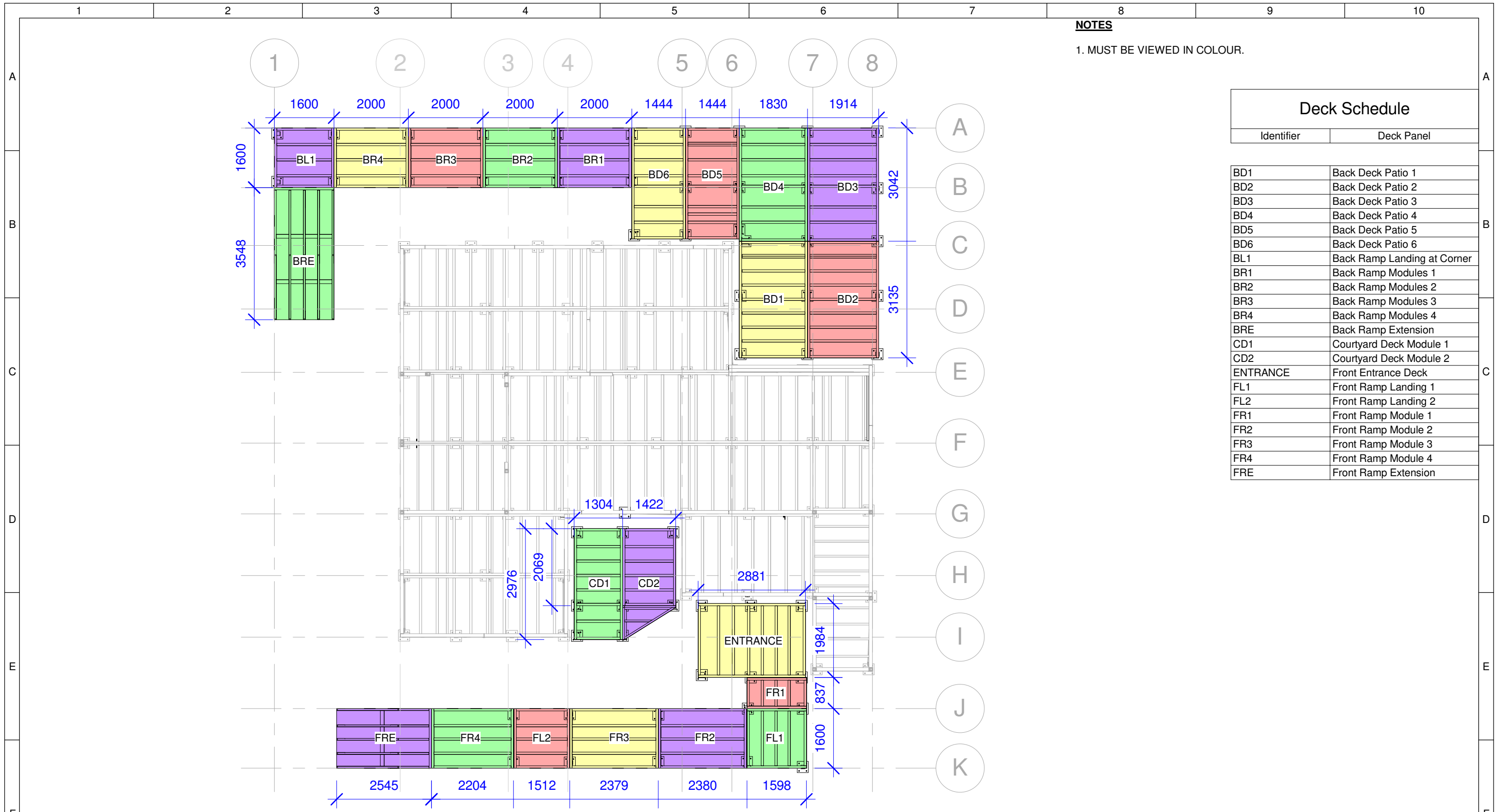
1

1 : 100

SCALE 1:100 @ A3



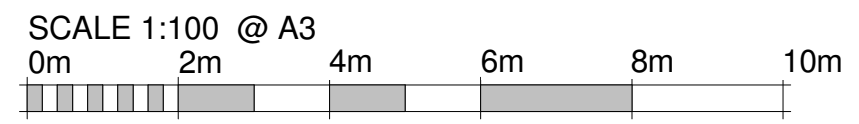
 <p>Desert Rose Team UOW Australia - Dubai</p>	<p>Team: TEAM UOW</p> <p>Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522</p>	<p>Client: Dubai Electricity and Water Authority</p> 	<p>AMENDMENTS</p> <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>2.</td> <td>Change scale to 1:60 for best fit</td> <td>08/04/18</td> <td>AF</td> <td>CM</td> </tr> <tr> <td>3.</td> <td>Added shading to panels to easily identify their boundaries</td> <td>05/05/18</td> <td>AF</td> <td>RP</td> </tr> <tr> <td>4.</td> <td>Changed scale to 1:75 to allow for grid lines</td> <td>05/05/18</td> <td>AF</td> <td>JW</td> </tr> <tr> <td>5.</td> <td>Changed scale to 1:100.</td> <td>12/09/18</td> <td>AF</td> <td>JW</td> </tr> <tr> <td>6.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	2.	Change scale to 1:60 for best fit	08/04/18	AF	CM	3.	Added shading to panels to easily identify their boundaries	05/05/18	AF	RP	4.	Changed scale to 1:75 to allow for grid lines	05/05/18	AF	JW	5.	Changed scale to 1:100.	12/09/18	AF	JW	6.	Updated to As-Built	14/09/18	JW	RP	<p>COPYRIGHT None; Project is Public</p> <p>LOT # M</p> <p>DRAWER A.FITZSIMMONS</p> <p>CHECKED L.FAIDUTTI</p> <p>DATE 21 March 2018</p> <p>SCALE 1 : 100 @ A3</p>	 <p>NORTH</p>	<p>STRUCTURAL HOUSE FLOOR ASSEMBLY</p> <p>ST-011</p> <p>SHEET: 01 OF 02</p>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK																															
2.	Change scale to 1:60 for best fit	08/04/18	AF	CM																																
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<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>	<p>5</p>	<p>6</p>	<p>7</p>	<p>8</p>	<p>9</p>	<p>10</p>																											



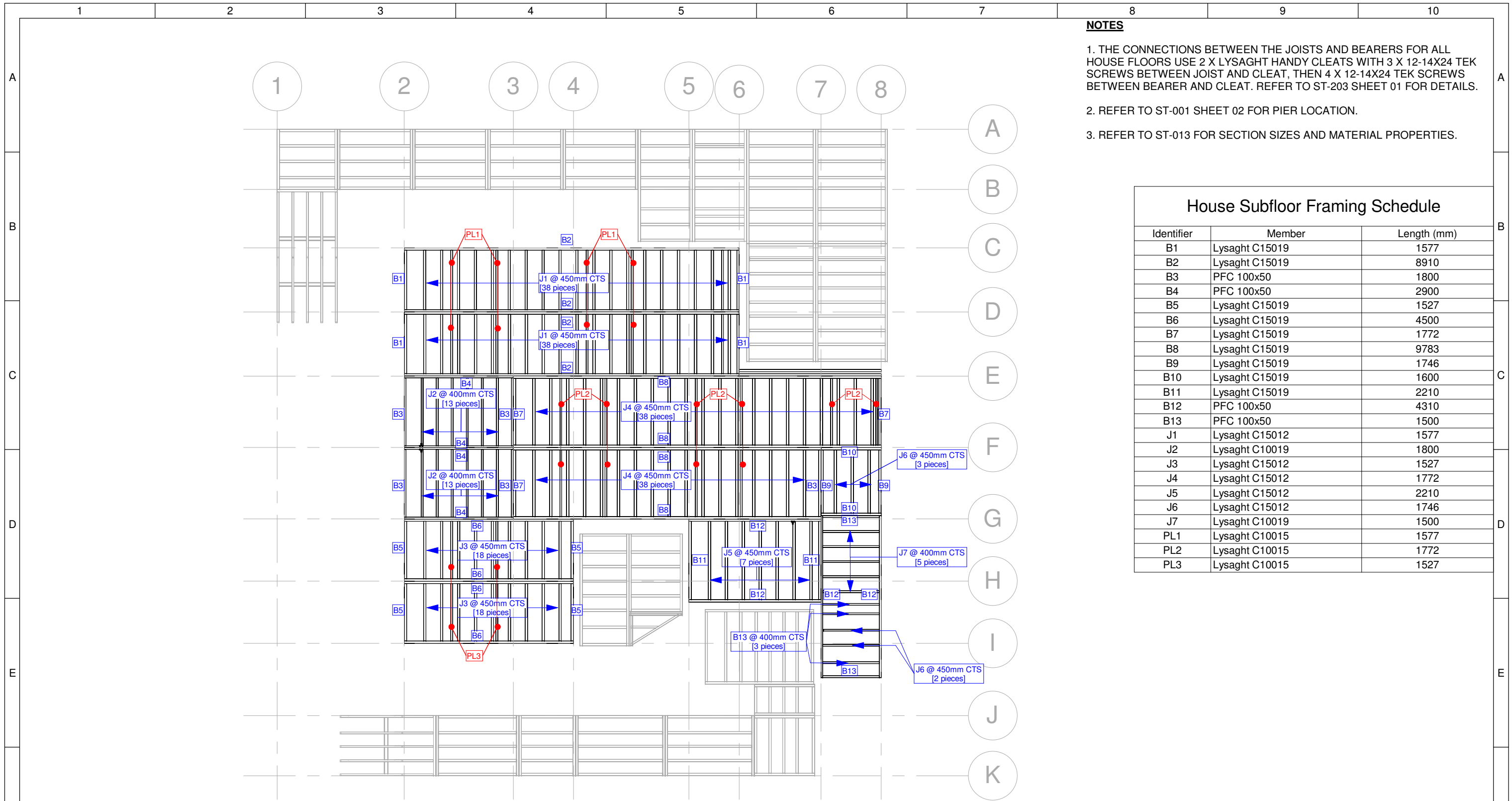
NOTES
1. MUST BE VIEWED IN COLOUR.

Deck Schedule	
Identifier	Deck Panel
BD1	Back Deck Patio 1
BD2	Back Deck Patio 2
BD3	Back Deck Patio 3
BD4	Back Deck Patio 4
BD5	Back Deck Patio 5
BD6	Back Deck Patio 6
BL1	Back Ramp Landing at Corner
BR1	Back Ramp Modules 1
BR2	Back Ramp Modules 2
BR3	Back Ramp Modules 3
BR4	Back Ramp Modules 4
BRE	Back Ramp Extension
CD1	Courtyard Deck Module 1
CD2	Courtyard Deck Module 2
ENTRANCE	Front Entrance Deck
FL1	Front Ramp Landing 1
FL2	Front Ramp Landing 2
FR1	Front Ramp Module 1
FR2	Front Ramp Module 2
FR3	Front Ramp Module 3
FR4	Front Ramp Module 4
FRE	Front Ramp Extension

1 Deck Layout
1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER K.BANDY CHECKED A.FITZSIMMONS DATE 12 September, 2018 SCALE 1 : 100 @ A3	 NORTH SHEET: 02 OF 02	STRUCTURAL DECK ASSEMBLY <h1>ST-011</h1>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK											
1.	Updated to As-Built	14/09/18	JW	RP												



NOTES

1. THE CONNECTIONS BETWEEN THE JOISTS AND BEARERS FOR ALL HOUSE FLOORS USE 2 X LYSAGHT HANDY CLEATS WITH 3 X 12-14X24 TEK SCREWS BETWEEN JOIST AND CLEAT, THEN 4 X 12-14X24 TEK SCREWS BETWEEN BEARER AND CLEAT. REFER TO ST-203 SHEET 01 FOR DETAILS.
2. REFER TO ST-001 SHEET 02 FOR PIER LOCATION.
3. REFER TO ST-013 FOR SECTION SIZES AND MATERIAL PROPERTIES.

House Subfloor Framing Schedule

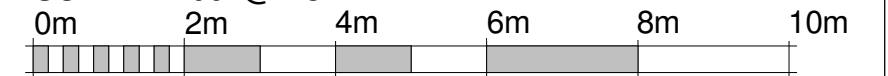
Identifier	Member	Length (mm)
B1	Lysaght C15019	1577
B2	Lysaght C15019	8910
B3	PFC 100x50	1800
B4	PFC 100x50	2900
B5	Lysaght C15019	1527
B6	Lysaght C15019	4500
B7	Lysaght C15019	1772
B8	Lysaght C15019	9783
B9	Lysaght C15019	1746
B10	Lysaght C15019	1600
B11	Lysaght C15019	2210
B12	PFC 100x50	4310
B13	PFC 100x50	1500
J1	Lysaght C15012	1577
J2	Lysaght C10019	1800
J3	Lysaght C15012	1527
J4	Lysaght C15012	1772
J5	Lysaght C15012	2210
J6	Lysaght C15012	1746
J7	Lysaght C10019	1500
PL1	Lysaght C10015	1577
PL2	Lysaght C10015	1772
PL3	Lysaght C10015	1527

Structural Subfloor Member Layout

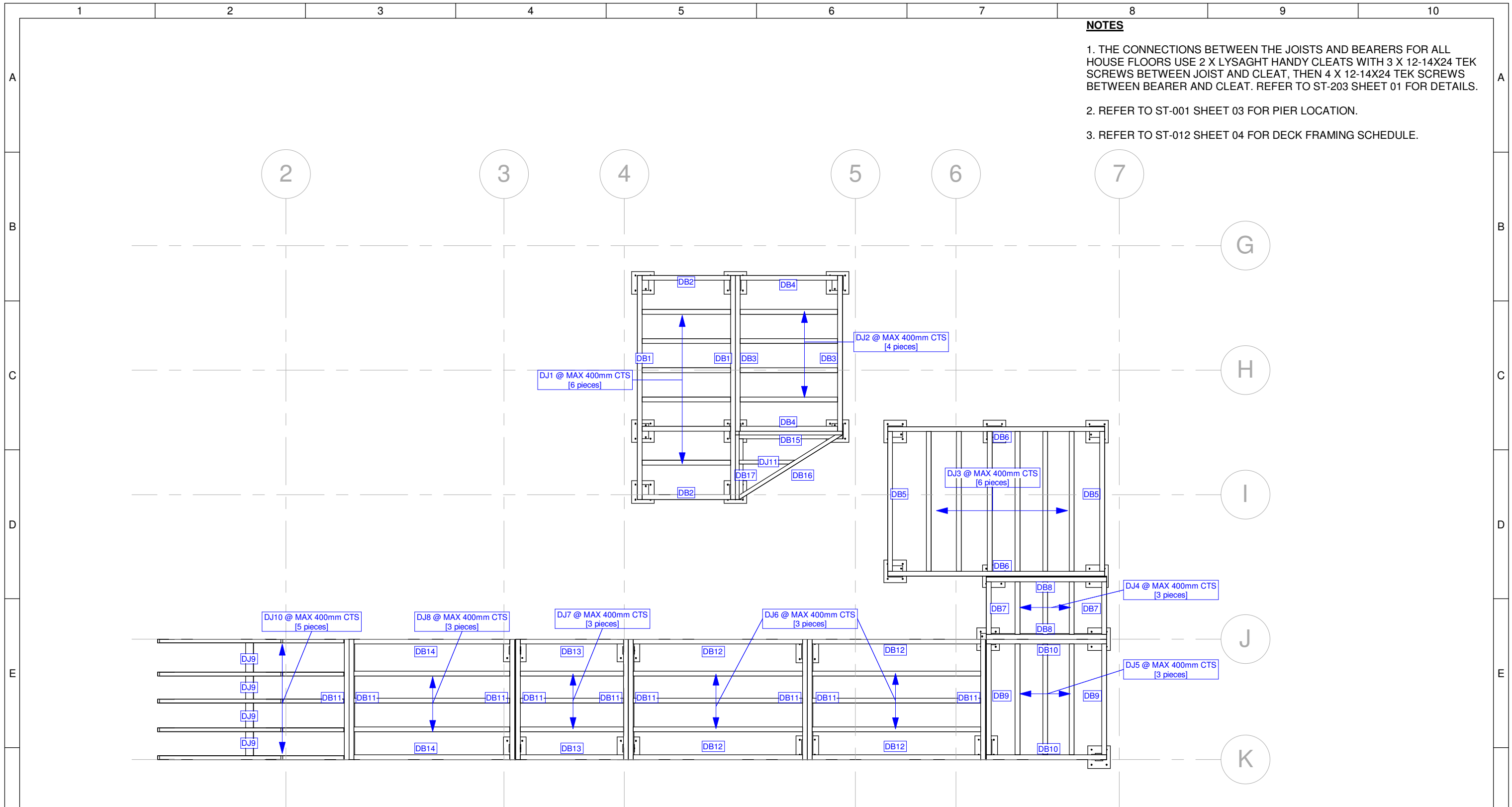
1

1 : 100

SCALE 1:100 @ A3



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Added labels to plant room members, correctly labeled BDO</td> <td>21/03/18</td> <td>AF</td> <td>CM</td> </tr> <tr> <td>2.</td> <td>Revised labels</td> <td>06/05/18</td> <td>JW</td> <td>AF</td> </tr> <tr> <td>3.</td> <td>Revised labels</td> <td>14/09/18</td> <td>AF</td> <td>RP</td> </tr> <tr> <td>4.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Added labels to plant room members, correctly labeled BDO	21/03/18	AF	CM	2.	Revised labels	06/05/18	JW	AF	3.	Revised labels	14/09/18	AF	RP	4.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED C.MCDOWELL DATE 21 March 2018 SCALE 1 : 100 @ A3	 NORTH SHEET: 01 OF 04	HOUSE SUBFLOOR FRAMING <h1>ST-012</h1>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK																										
1.	Added labels to plant room members, correctly labeled BDO	21/03/18	AF	CM																											
2.	Revised labels	06/05/18	JW	AF																											
3.	Revised labels	14/09/18	AF	RP																											
4.	Updated to As-Built	14/09/18	JW	RP																											
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																														



NOTES

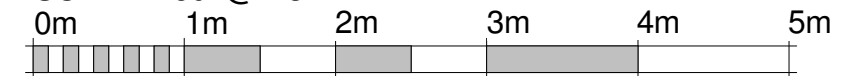
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2. REFER TO ST-001 SHEET 03 FOR PIER LOCATION.
3. REFER TO ST-012 SHEET 04 FOR DECK FRAMING SCHEDULE.

Front Deck / Courtyard Member Layout

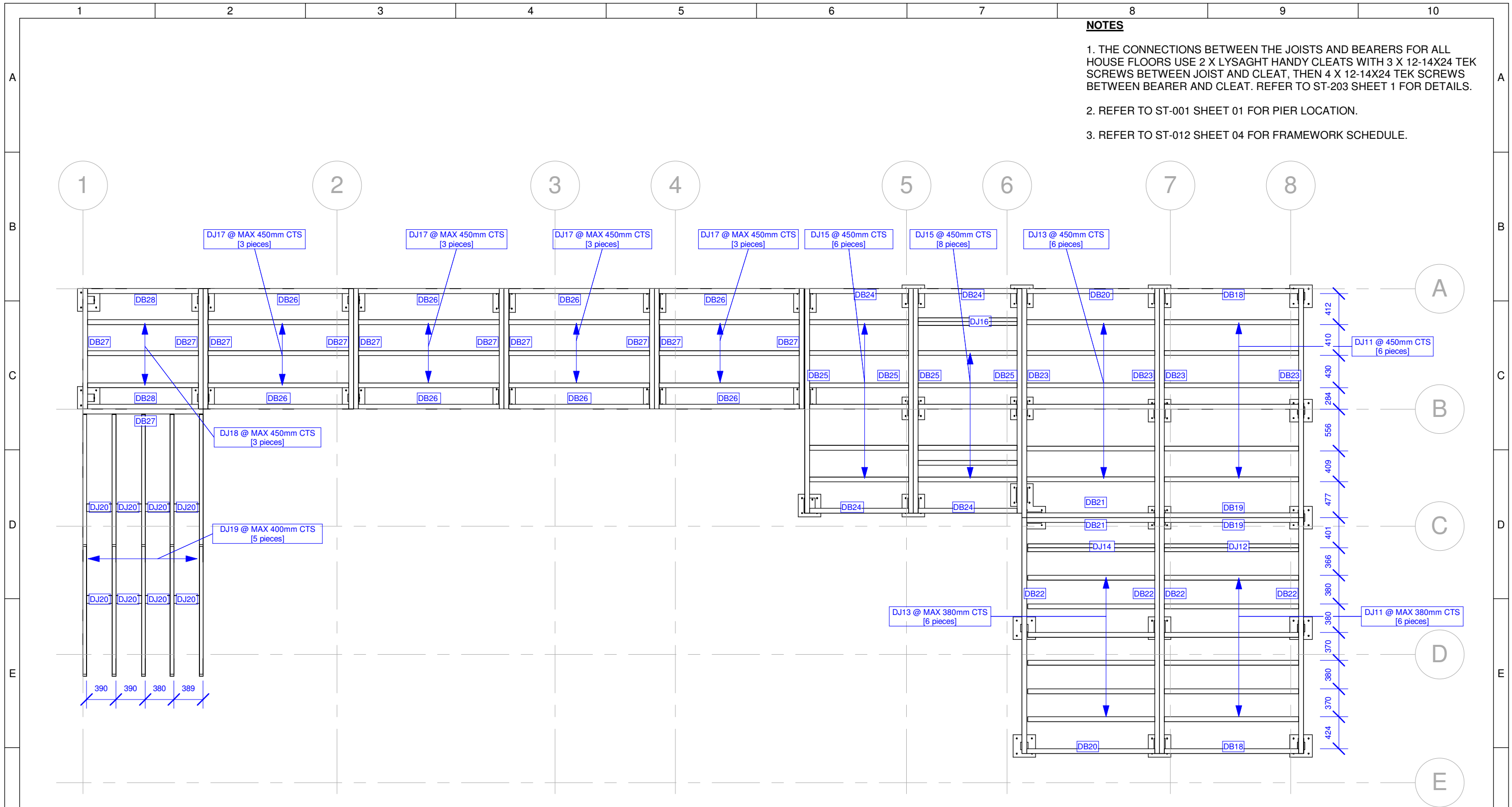
1

1 : 50

SCALE 1:50 @ A3



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Revised labels</td> <td>14/09/18</td> <td>AF</td> <td>RP</td> </tr> <tr> <td>2.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Revised labels	14/09/18	AF	RP	2.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER K.BANDY CHECKED A.FITZSIMMONS DATE 12 September, 2018 SCALE 1 : 50 @ A3	 NORTH SHEET: 02 OF 04	FRONT DECK / COURTYARD FRAMING <h2>ST-012</h2>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK																
1.	Revised labels	14/09/18	AF	RP																	
2.	Updated to As-Built	14/09/18	JW	RP																	
1	2	3	4	5	6	7	8	9	10												



NOTES

1. THE CONNECTIONS BETWEEN THE JOISTS AND BEARERS FOR ALL HOUSE FLOORS USE 2 X LYSAGHT HANDY CLEATS WITH 3 X 12-14X24 TEK SCREWS BETWEEN JOIST AND CLEAT, THEN 4 X 12-14X24 TEK SCREWS BETWEEN BEARER AND CLEAT. REFER TO ST-203 SHEET 1 FOR DETAILS.
2. REFER TO ST-001 SHEET 01 FOR PIER LOCATION.
3. REFER TO ST-012 SHEET 04 FOR FRAMEWORK SCHEDULE.

1 Back Deck Member Layout
1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Adjusted annotations</td> <td>14/09/18</td> <td>AF</td> <td>RP</td> </tr> <tr> <td>2.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Adjusted annotations	14/09/18	AF	RP	2.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER K.BANDY CHECKED R.PRANDALOS DATE 12 September, 2018 SCALE 1 : 50 @ A3	 NORTH BACK DECK FRAMING SHEET: 03 OF 04 ST-012
	REV.	DESCRIPTION	DATE	DRAWN	CHECK															
1.	Adjusted annotations	14/09/18	AF	RP																
2.	Updated to As-Built	14/09/18	JW	RP																

NOTES

1. REFER TO ST-013 FOR SECTION SIZES AND MATERIAL PROPERTIES.

Front Deck / Courtyard Framing Schedule

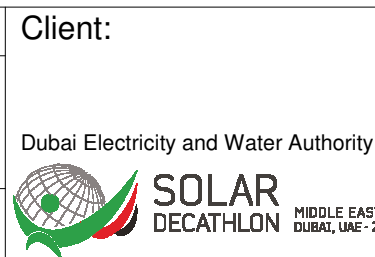
Identifier	Member	Length (mm)
DB1	Lysaght C15019	2890
DB2	Lysaght C15019	1179
DB3	Lysaght C15019	2070
DB3	Lysaght C15019	1300
DB5	Lysaght C15019	1862
DB6	Lysaght C15019	2885
DB7	Lysaght C15019	700
DB8	Lysaght C15019	1600
DB9	Lysaght C15019	1475
DB10	Lysaght C15019	1600
DB11	Lysaght C15019	1600
DB12	Lysaght C15019	2242
DB13	Lysaght C15019	1376
DB14	Lysaght C15019	2075
DB15	Lysaght C10015	1424
DB16	Lysaght C10015	1620
DB17	Lysaght C10015	910
DJ1	Lysaght C15015	1179
DJ2	Lysaght C15015	1300
DJ3	Lysaght C15015	1862
DJ4	Lysaght C15015	700
DJ5	Lysaght C15015	1475
DJ6	Lysaght C15015	2242
DJ7	Lysaght C15015	1376
DJ8	Lysaght C15015	2075
DJ9	Lysaght C10015	312
DJ10	Lapped Lysaght C10015	2482
DJ11	Lysaght C10015	740

Back Deck Framing Schedule

Identifier	Member	Length (mm)
DB18	Lysaght C15019	1786
DB19	Lysaght C15012	1786
DB20	Lysaght C15019	1702
DB21	Lysaght C15012	1702
DB22	Lysaght C15019	3135
DB23	Lysaght C15019	3042
DB24	Lysaght C15019	1316
DB25	Lysaght C15019	2983
DB26	Lysaght C15019	1863
DB27	Lysaght C15019	1600
DB28	Lysaght C15019	1472
DJ11	Lysaght C15012	1786
DJ12	Lysaght C15012	1786
DJ13	Lysaght C15012	1702
DJ14	Lysaght C15012	1702
DJ15	Lysaght C15012	1316
DJ16	Lysaght C15012	1316
DJ17	Lysaght C15012	1863
DJ18	Lysaght C15012	1472
DJ19	Lysaght C15012	3486
DJ20	Lysaght C15012	390



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au



AMENDMENTS				
REV.	DESCRIPTION	DATE	DRAWN	CHECK
1.	Updated to As-Built	14/09/18	JW	RP

COPYRIGHT
 None; Project is Public
LOT # M
DRAWER J.W.YEAP
CHECKED R.PRANDALOS
DATE 12 September, 2018
SCALE @ A3

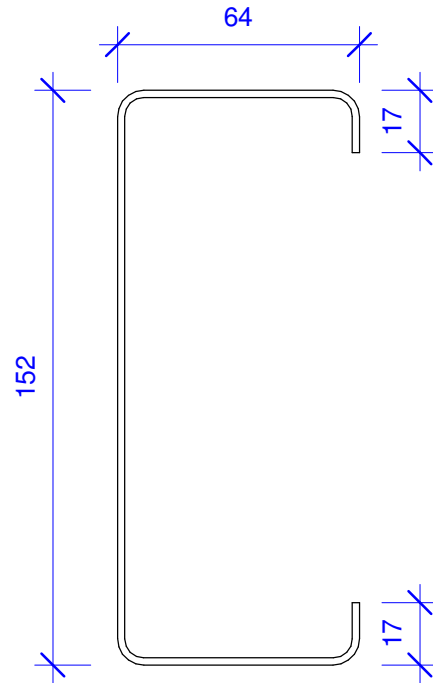
DECK FRAMING SCHEDULE

SHEET:
04 OF 04

ST-012

NOTES

1. REFER PROJECT MANUAL - STRUCTURAL DESIGN CALCULATIONS FOR DETAILED CALCULATIONS TO OBTAIN MEMBER CAPACITIES SHOWN.



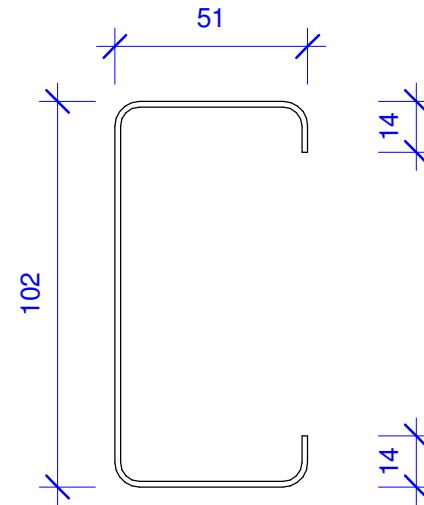
DIMENSIONS OF C15019 AND C15012

BASE METAL THICKNESS:
 C15019 = 1.9mm
 C15012 = 1.2mm

GRADE 450 HOT-DIPPED ZINC-COATED STEEL
 MIN. YIELD STRENGTH = 450MPa
 MIN. TENSILE STRENGTH = 480MPa

SECTION MOMENT CAPACITY (AS/NZS4600-2005)
 C15019 = 8.83kNm
 C15012 = 4.78kNm

SHEAR CAPACITY (AS/NZS4600-2005)
 C15019 = 18.52kN
 C15012 = 10.0kN



DIMENSIONS OF C10019 AND C10015

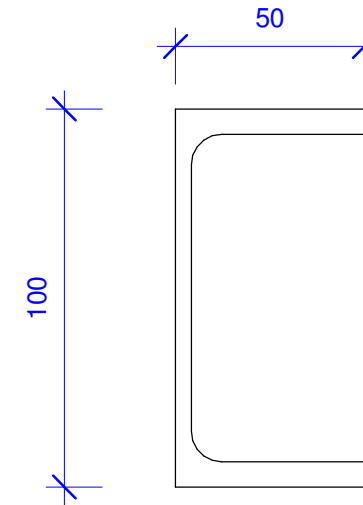
NOTE: C10015 IS A NON-STRUCTURAL MEMBER

BASE METAL THICKNESS:
 C10019 = 1.9mm
 C10015 = 1.5mm

GRADE 450 HOT-DIPPED ZINC-COATED STEEL
 MIN. YIELD STRENGTH = 450MPa
 MIN. TENSILE STRENGTH = 480MPa

SECTION MOMENT CAPACITY (AS/NZS4600-2005)
 C10019 = 4.98kNm

SHEAR CAPACITY (AS/NZS4600-2005)
 C10019 = 45.54kN



DIMENSIONS OF PFC100x50

FLANGE THICKNESS = 6.7mm
 WEB THICKNESS = 4.2mm
 ROOT RADIUS = 8.0mm

GRADE 300PLUS MILD STEEL
 MIN. YIELD STRENGTH = 320MPa

SECTION MOMENT CAPACITY (AS4100-1998)
 PFC100x50 = 9.36kNm

SECTION MOMENT CAPACITY (BS5950-2000)
 PFC100x50 = 12.1kNm

SHEAR CAPACITY (AS4100-1998)
 PFC100x50 = 68.04kN

SHEAR CAPACITY (BS5950-2000)
 PFC100x50 = 75.6kN



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au



AMENDMENTS

REV.	DESCRIPTION	DATE	DRAWN	CHECK
1.	Included member sizes and materials properties.	14/09/18	JW	RP
2.	Updated to As-Built	14/09/18	JW	RP

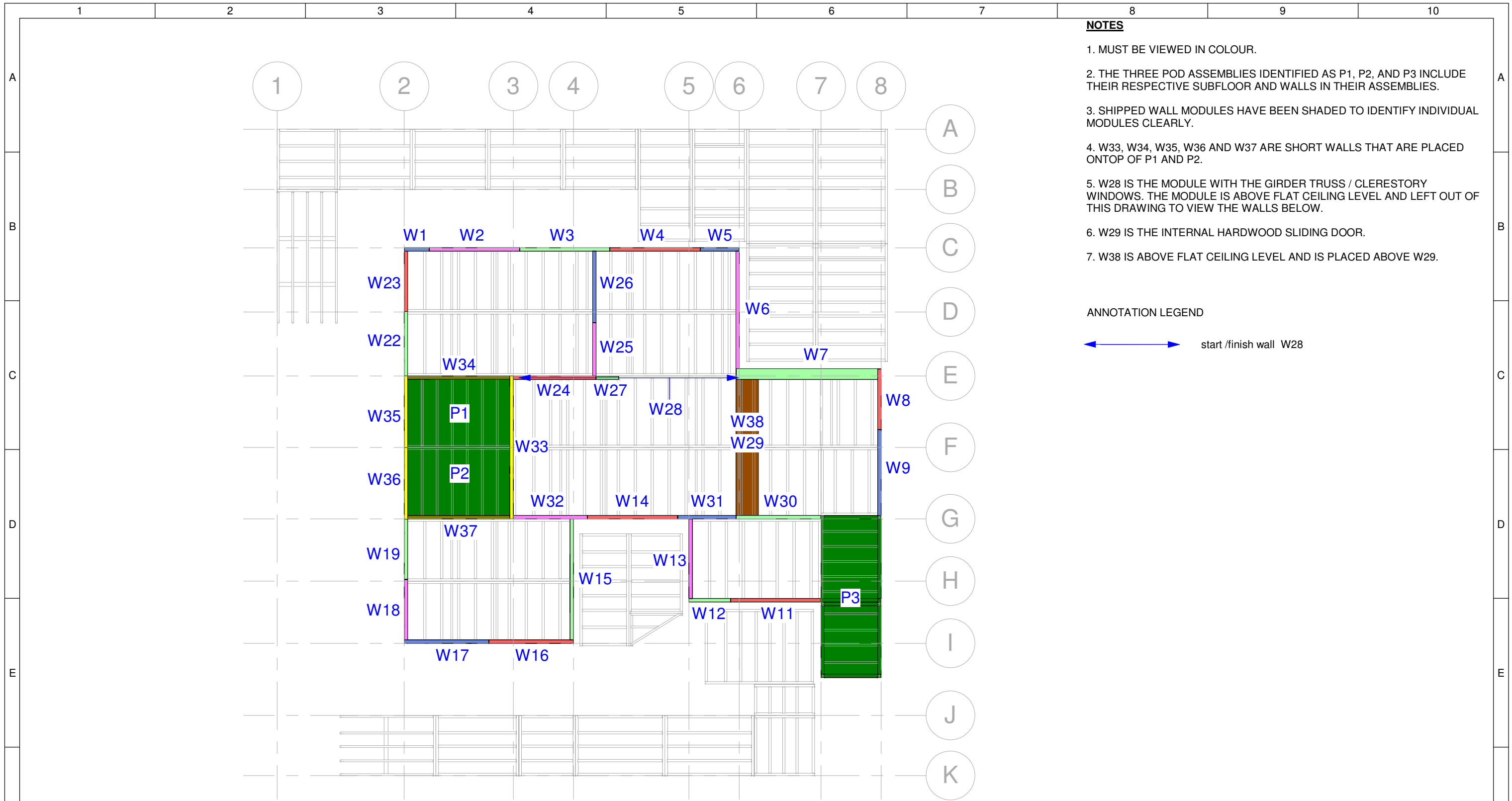
COPYRIGHT
 None; Project is Public

LOT # M
 DRAWER R.PRANDALOS
 CHECKED A.FITZSIMMONS
 DATE 10 September, 2018
 SCALE 1 : 2 @ A3

SHEET:
 01 OF 01

**SUBFLOOR /
 DECK FRAMING
 PROPERTIES**

ST-013



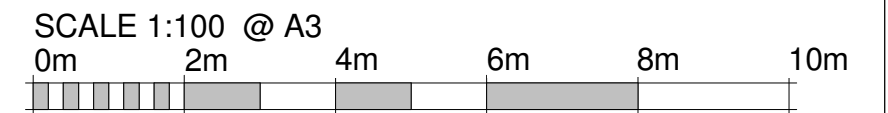
NOTES

1. MUST BE VIEWED IN COLOUR.
2. THE THREE POD ASSEMBLIES IDENTIFIED AS P1, P2, AND P3 INCLUDE THEIR RESPECTIVE SUBFLOOR AND WALLS IN THEIR ASSEMBLIES.
3. SHIPPED WALL MODULES HAVE BEEN SHADED TO IDENTIFY INDIVIDUAL MODULES CLEARLY.
4. W33, W34, W35, W36 AND W37 ARE SHORT WALLS THAT ARE PLACED ONTOP OF P1 AND P2.
5. W28 IS THE MODULE WITH THE GIRDER TRUSS / CLERESTORY WINDOWS. THE MODULE IS ABOVE FLAT CEILING LEVEL AND LEFT OUT OF THIS DRAWING TO VIEW THE WALLS BELOW.
6. W29 IS THE INTERNAL HARDWOOD SLIDING DOOR.
7. W38 IS ABOVE FLAT CEILING LEVEL AND IS PLACED ABOVE W29.

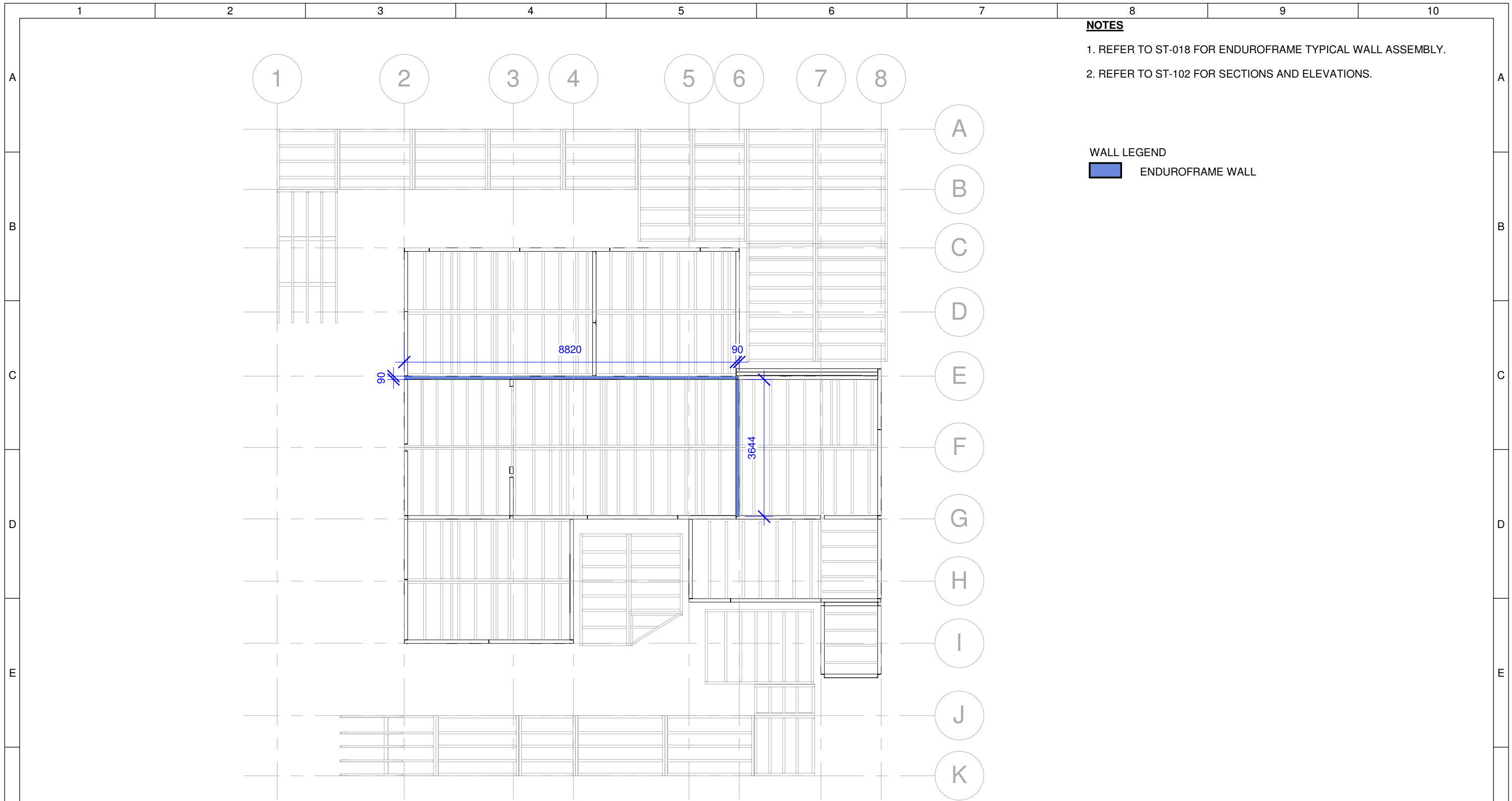
ANNOTATION LEGEND

← → start /finish wall W28

1 Structural Wall Assembly
1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED J.ROTH DATE 11 September, 2018 SCALE 1 : 100 @ A3	 NORTH SHEET: 01 OF 01	STRUCTURAL WALL ASSEMBLY <h1>ST-016</h1>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK											
1.	Updated to As-Built	14/09/18	JW	RP												



NOTES

1. REFER TO ST-018 FOR ENDUROFRAME TYPICAL WALL ASSEMBLY.
2. REFER TO ST-102 FOR SECTIONS AND ELEVATIONS.

WALL LEGEND

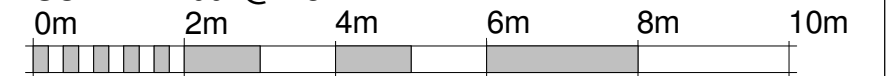
ENDUROFRAME WALL

Structural Wall Layout - Flat Ceiling Level

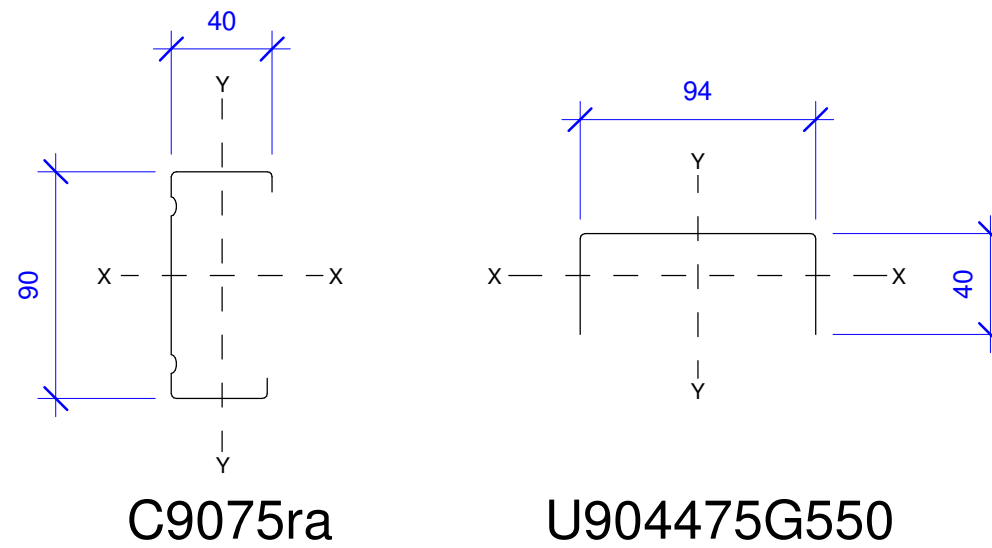
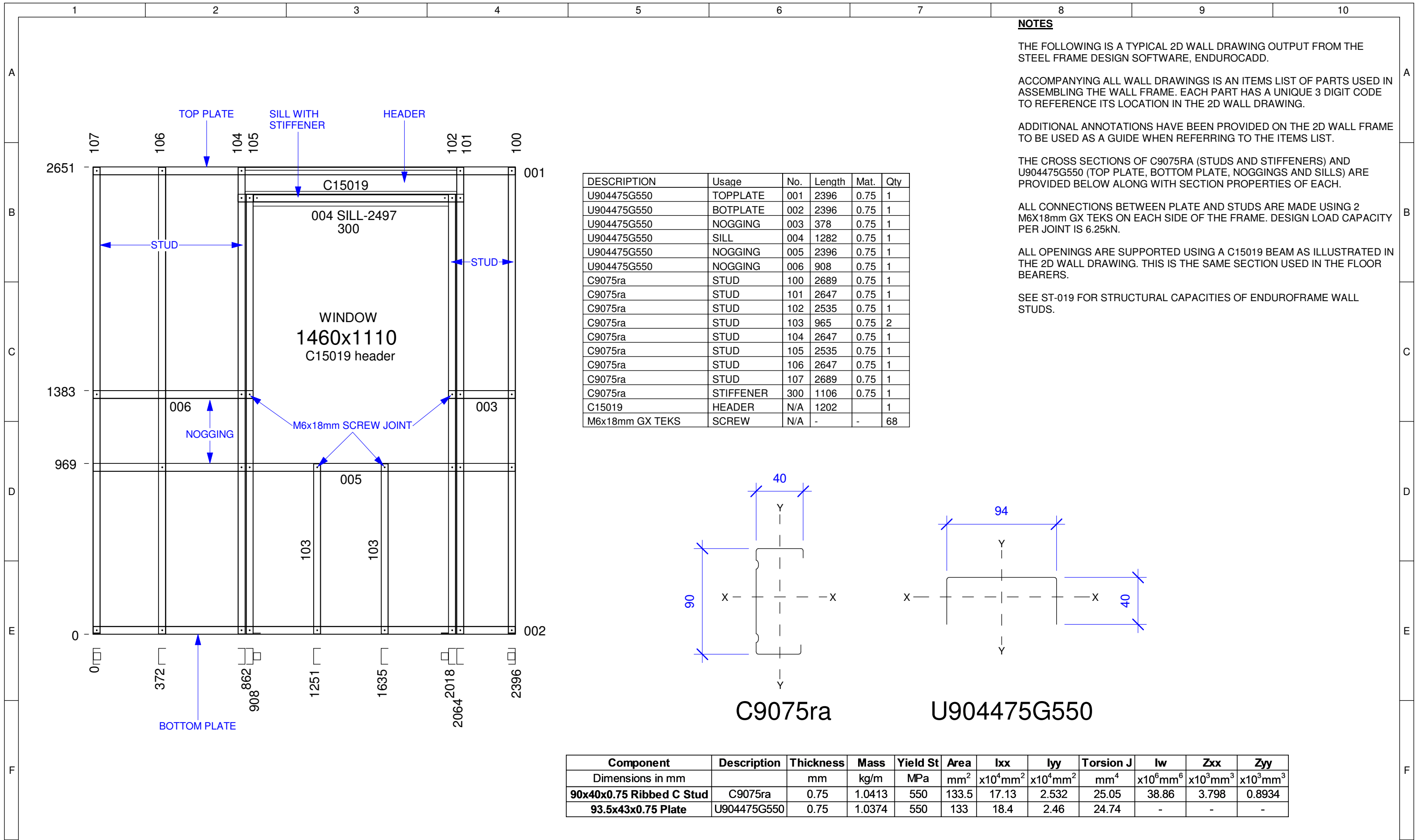
1

1 : 100

SCALE 1:100 @ A3



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS			COPYRIGHT None; Project is Public		<p>NORTH</p>	STRUCTURAL WALL LAYOUT									
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK			1.	Updated to As-Built	14/09/18	JW	RP	<table border="1"> <thead> <tr> <th>LOT</th> <th># M</th> </tr> </thead> <tbody> <tr> <td>A.FITZSIMMONS</td> <td></td> </tr> </tbody> </table>	LOT	# M	A.FITZSIMMONS
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LOT	# M																	
A.FITZSIMMONS																		



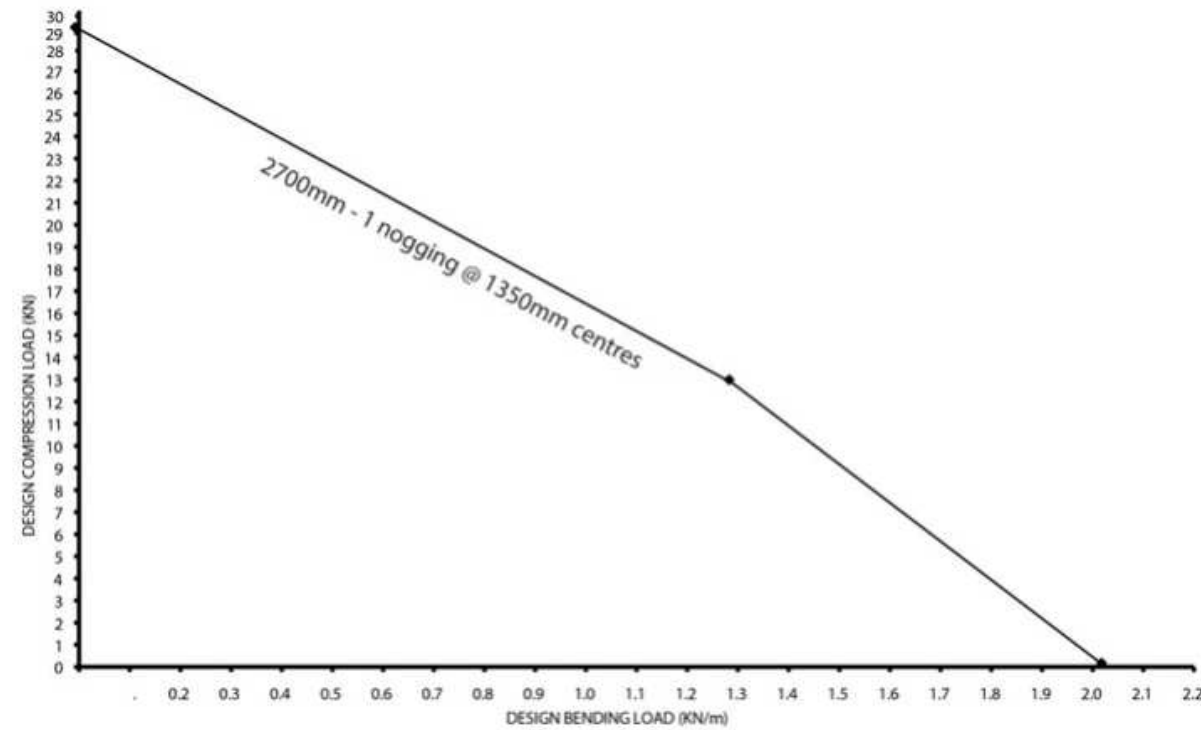
Component	Description	Thickness	Mass	Yield St	Area	Ixx	Iyy	Torsion J	Iw	Zxx	Zyy
Dimensions in mm		mm	kg/m	MPa	mm ²	x10 ⁴ mm ²	x10 ⁴ mm ²	mm ⁴	x10 ⁶ mm ⁶	x10 ³ mm ³	x10 ³ mm ³
90x40x0.75 Ribbed C Stud	C9075ra	0.75	1.0413	550	133.5	17.13	2.532	25.05	38.86	3.798	0.8934
93.5x43x0.75 Plate	U904475G550	0.75	1.0374	550	133	18.4	2.46	24.74	-	-	-

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated information.</td> <td>14/09/18</td> <td>RP</td> <td>AF</td> </tr> <tr> <td>2.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated information.	14/09/18	RP	AF	2.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED A.FITZSIMMONS DATE 21 March, 2018 SCALE NTS @ A3	TYPICAL ENDUROFRAME WALL ST-018 SHEET: 01 OF 01
	REV.	DESCRIPTION	DATE	DRAWN	CHECK															
1.	Updated information.	14/09/18	RP	AF																
2.	Updated to As-Built	14/09/18	JW	RP																

Stud Bending Loads

Wind Region	Ultimate Limit State Wind Speed (m/sec.)	Ultimate Limit State Wind Pressure (kPa)	Bending load (kN/m) 600mm stud spacing
N1	34	0.62	0.37
N2	40	0.86	0.52
N3	50	1.35	0.81

FIGURE 9 - Design Load Capacity Curve for Unribbed C 90 x 0.75mm (Limit State) - Cladding: LYSAGHT PANELRIB



Load Capacity Curves for Unribbed Plain Cee 90 x 0.75mm Open Stud - Cladding: Panelrib

NOTE - The 90 x 0.75 stud capacity interaction diagram was derived from the full scale testing of wall panels consisting of plasterboard screwed on the internal face and PANELRIB screwed on the external face. The capacity interaction curve can be used for clad construction on the external face with Plasterboard on the internal face.

90x0.75 Unclad Capacities	
Height mm	kN
2700	15.21

The factors used to derive the capacity curve from test data is based on the TRUECORE® material supplied and tested with fairly consistent mechanical properties. The capacity curve will not be suitable for materials having lower or inconsistent material properties.

NOTES

THE FOLLOWING ARE EXTRACTS FROM ENDUROFRAMES WALL DESIGN MANUAL.

CALCULATED ULS WINDWARD WALL PRESSURE = 0.704kPa. REFERRING TO TABLE, 0.86kPa WIND PRESSURE RESULTS IN STUD BENDING LOAD OF 0.52kN/m. NOTE, STUDS IN DESERT ROSE ARE SPACED AT NO MORE THAN 570mm.

DATA FOR UNRIBBED C9075ra STUD GIVEN HOWEVER DATA IS STILL APPLICABLE AS RIBBED STUDS (USED IN DESERT ROSE) HAVE A LARGER COMPRESSION AND BENDING CAPACITY. ALL WALL FRAMES ARE CLADDED WITH 9mm PLYWOOD DEPICTING CLAD CONSTRUCTION.

COMMON STUD HEIGHT WITHIN THE DESERT ROSE IS APPROXIMATELY 2650mm. THE LOAD CAPACITY OF 2700mm HIGH C9075ra STUDS (ASSUMING NO CLADDING) IS 15.21kN.



Desert Rose
Team UOW
Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522

Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

Client:

Dubai Electricity and Water Authority



AMENDMENTS

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LOT # M

DRAWER R.PRANDALOS

CHECKED A.FITZSIMMONS

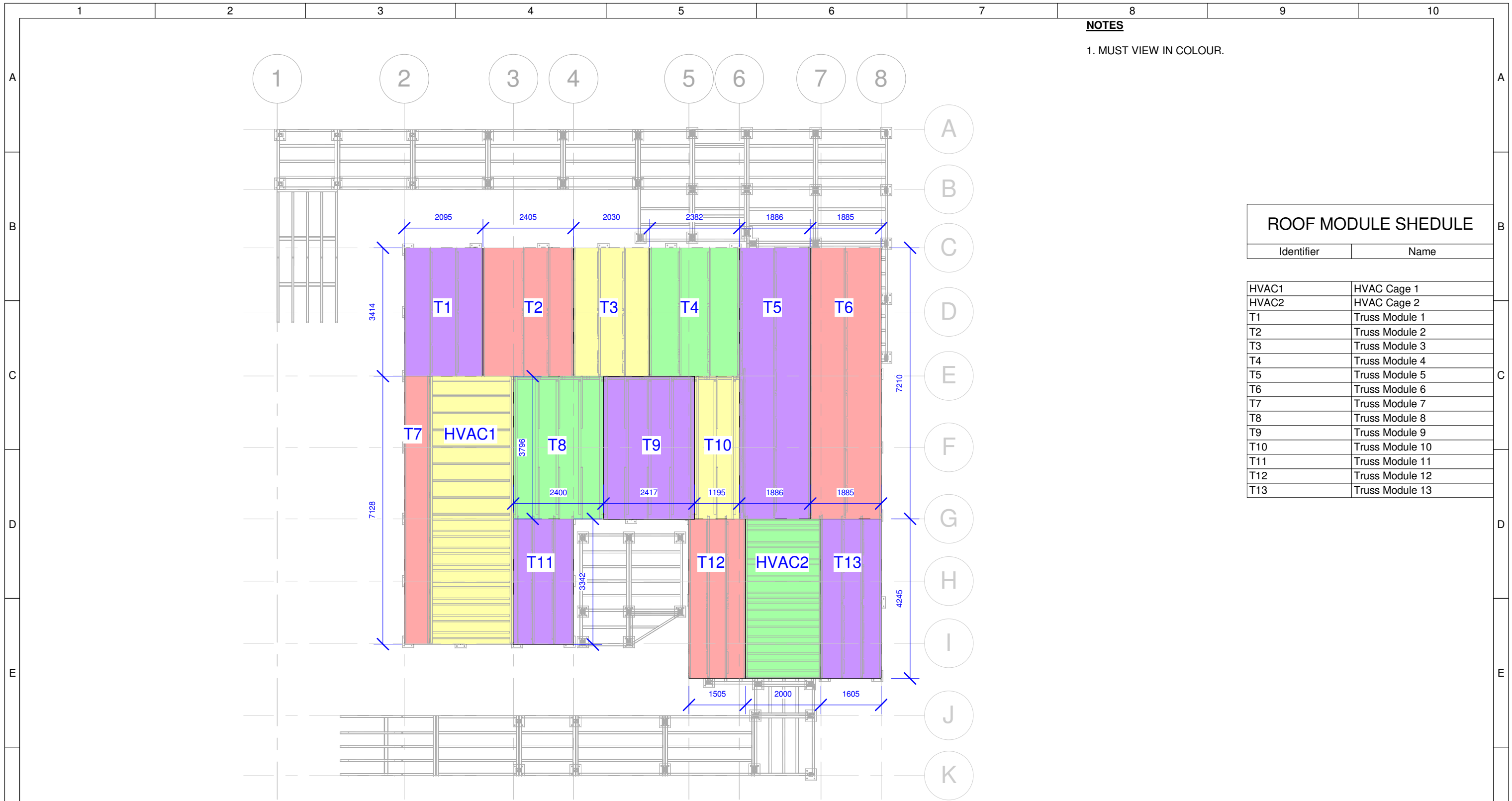
DATE 21 March, 2018

SCALE NTS @ A3

**ENDUROFRAME
WALL STUD
CAPACITIES**

SHEET:
01 OF 01

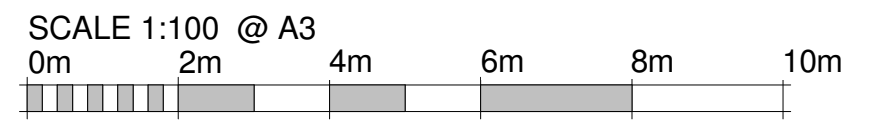
ST-019



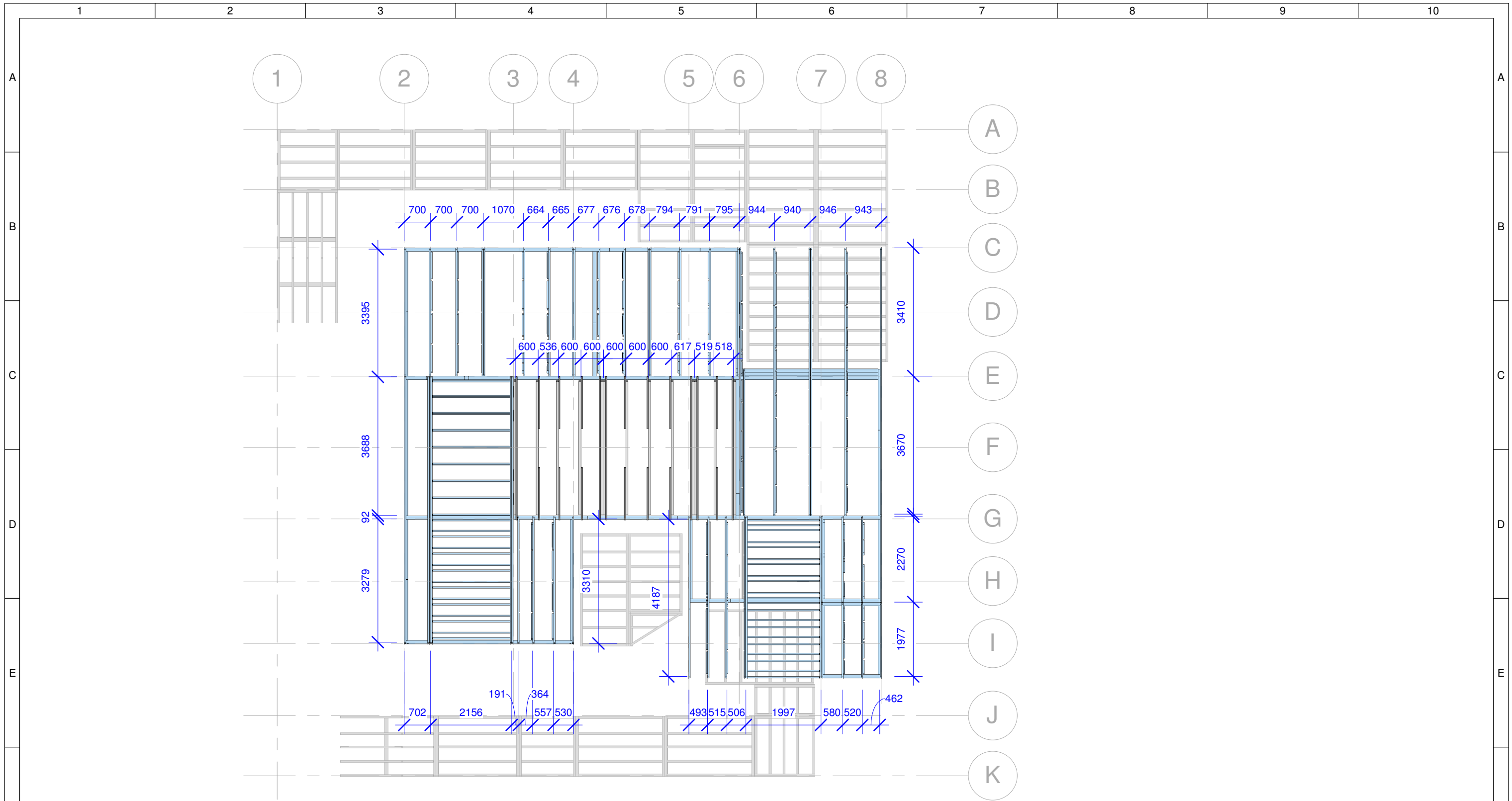
NOTES
1. MUST VIEW IN COLOUR.

ROOF MODULE SHEDULE	
Identifier	Name
HVAC1	HVAC Cage 1
HVAC2	HVAC Cage 2
T1	Truss Module 1
T2	Truss Module 2
T3	Truss Module 3
T4	Truss Module 4
T5	Truss Module 5
T6	Truss Module 6
T7	Truss Module 7
T8	Truss Module 8
T9	Truss Module 9
T10	Truss Module 10
T11	Truss Module 11
T12	Truss Module 12
T13	Truss Module 13

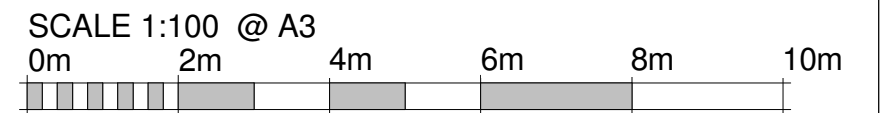
1 Structural Roof Assembly
1 : 100



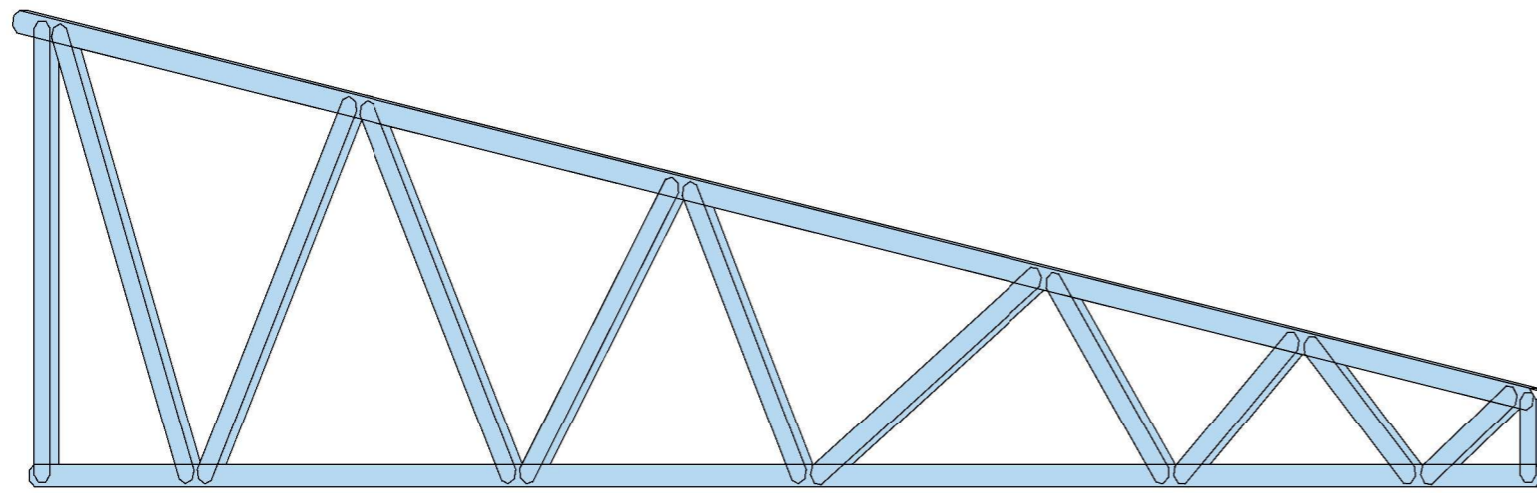
	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS			COPYRIGHT None; Project is Public			STRUCTURAL ROOF ASSEMBLY														
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Included deck as underlay.</td> <td>12/09/18</td> <td>JW</td> <td>RP</td> </tr> <tr> <td>2.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN			CHECK	1.	Included deck as underlay.	12/09/18	JW	RP	2.	Updated to As-Built	14/09/18	JW	RP	<table border="1"> <thead> <tr> <th>LOT</th> <th># M</th> </tr> </thead> <tbody> <tr> <td>A.FITZSIMMONS</td> <td>J.W.YEAP</td> </tr> </tbody> </table>	LOT	# M
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LOT	# M																						
A.FITZSIMMONS	J.W.YEAP																						



1 Structural Roof Truss Layout
1 : 100



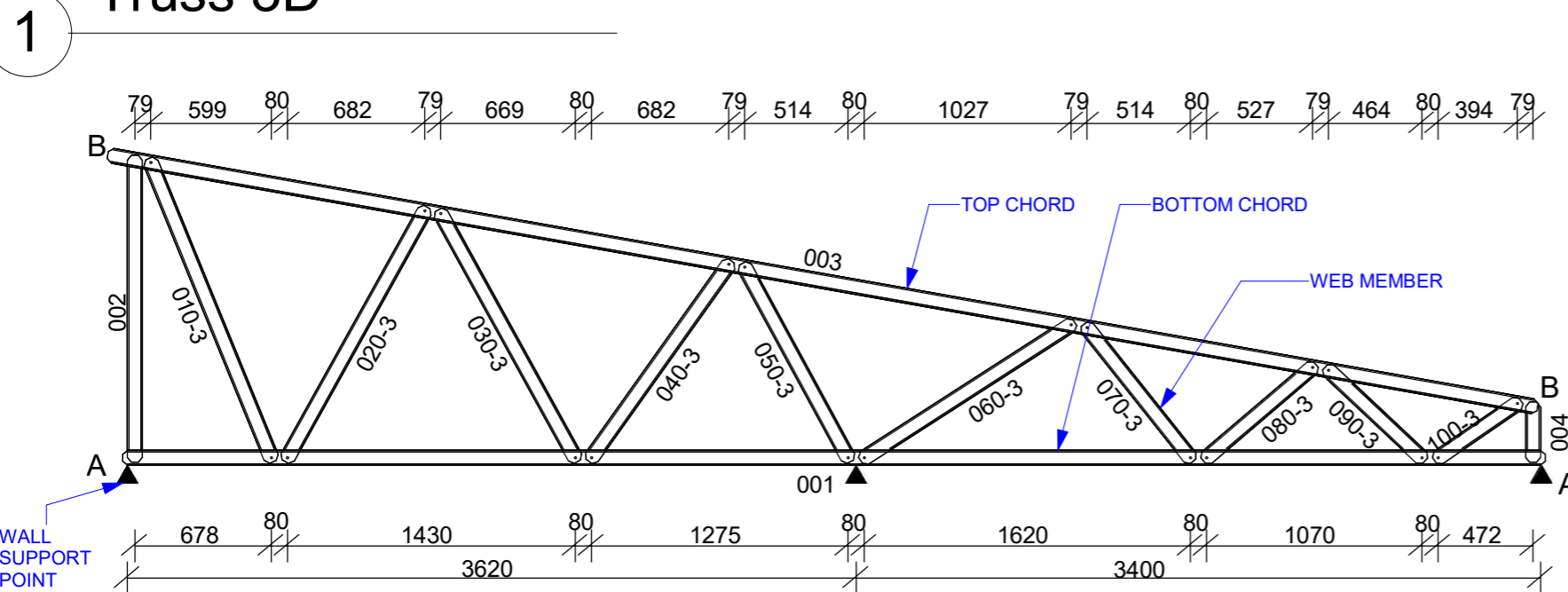
	Team: TEAM UOW	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT			STRUCTURAL ROOF TRUSS LAYOUT ST-021
	Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522		Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	REV.	DESCRIPTION	DATE	DRAWN	CHECK		
			1.	Included deck as underlay.	12/09/18	AF	RP	LOT # M		
			2.	Updated to As-Built	14/09/18	JW	RP	DRAWER A.FITZSIMMONS		
								CHECKED J.W.YEAP	SHEET: 02 OF 05	
								DATE 21 March, 2018		
								SCALE 1 : 100 @ A3		



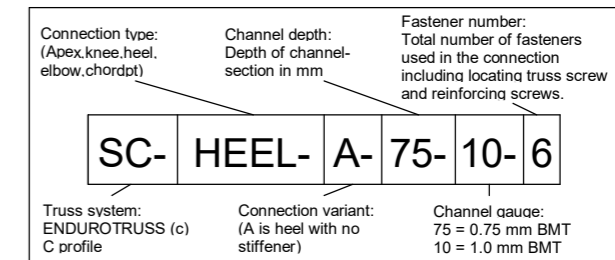
NOTES

1. THE FOLLOWING IS A TYPICAL 2D TRUSS DRAWING OUTPUT FROM THE STEEL FRAME DESIGN SOFTWARE, ENDUROCAD.
2. ENDUROCAD IS SELF CERTIFYING. ALL TRUSS DESIGN IS CARRIED OUT WITHIN THE SOFTWARE ANALYSING THE TRUSSES TO 46 ULS LOAD CASES AND 30 SLS LOAD CASES. THE INPUT PARAMETERS AND OVERALL DESIGN HAVE BEEN CHECKED AND SIGNED OFF BY ENDUROFRAME'S STRUCTURAL ENGINEERS.
3. ACCOMPANYING ALL TRUSS DRAWINGS IS A PARTS LIST USED IN ASSEMBLING THE TRUSS. EACH PART HAS A UNIQUE 3-DIGIT CODE TO REFERENCE ITS LOCATION. THE FOURTH NUMBER INDICATES THE NUMBER OF SCREWS AT EACH END OF THE MEMBER.
4. ALL TRUSS MEMBERS ARE C7575ra MEMBERS. THE CROSS SECTION OF THE MEMBER AND ITS SECTION PROPERTIES ARE PROVIDED BELOW.
5. ALL TRUSSES USED IN DESERT ROSE REQUIRE A MINIMUM OF 2 SCREWS PER CONNECTION. THE FIRST IS A MEMBER LOCATING SCREW IN THE PRE-PUNCHED HOLES (TRUSSTITE) AND THE SECOND IS A REINFORCING SCREW (12-14x20-HEX). IN THE EXAMPLE TRUSS BELOW, A MINIMUM OF 3 SCREWS (1 x TRUSSTITE AND 2 x 12-14x20-HEX) ARE REQUIRED AT ALL WEB TO CHORD JOINTS.
6. SCREW LOCATIONS ARE DIAGRAMMATIC ONLY. REFER CONNECTION SHEET FOR DETAILS (ST-021 SHEET 04).
7. FOR JOINT CONNECTION CAPACITIES, SEE ST-021 SHEET 05.

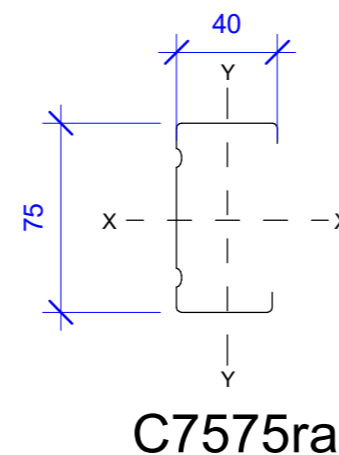
Truss 3D



Connection Table		
A	HEEL HS	SC-HEEL-HS-F-75-75-3
B	APEX HS	SC-APEX-HS-F-75-75-3



PARTS LIST									
DESCRIPTION	No.	LENGTH	BMT	QTY	DESCRIPTION	No.	LENGTH	BMT	QTY
C7575ra	001	7064	0.75	1	C7575ra	080	736.3	0.75	1
C7575ra	002	1524.2	0.75	1	C7575ra	090	679.9	0.75	1
C7575ra	003	7211.2	0.75	1	C7575ra	100	521.1	0.75	1
C7575ra	004	299.6	0.75	1	TRUSSTITE-17x13-18				24
C7575ra	010	1627.9	0.75	1	SCREW-12-14x20-HEX				48
C7575ra	020	1447.3	0.75	1					
C7575ra	030	1428.9	0.75	1					
C7575ra	040	1221.8	0.75	1					
C7575ra	050	1120.8	0.75	1					
C7575ra	060	1265.1	0.75	1					
C7575ra	070	869.9	0.75	1					



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au



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REV.	DESCRIPTION	DATE	DRAWN	CHECK
1.	Revised information, added 3D truss	14/09/18	RP	AF
2.	Updated to As-Built	14/09/18	JW	RP

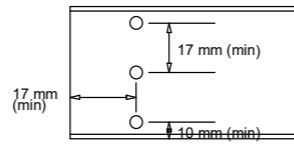
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SHEET:
 03 OF 05

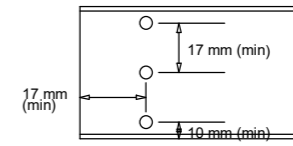
TYPICAL ENDUROFRAME TRUSS
ST-021

TRUSS CONNECTIONS USED IN DESERT ROSE TRUSSES

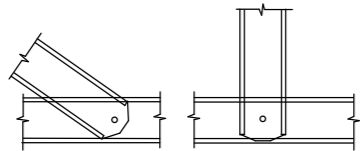
Minimum screw-spacing = 17 mm
 Minimum distance from end of part = 17 mm
 Minimum distance from edge of part = 10 mm



Minimum screw-spacing = 17 mm
 Minimum distance from end of part = 17 mm
 Minimum distance from edge of part = 10 mm

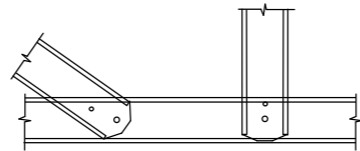


SC-WEB-CHORD-1



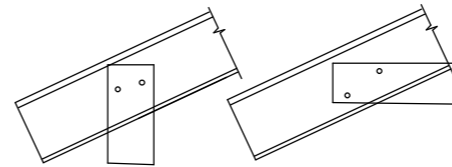
1x TRUSSTITE

SC-WEB-CHORD-2



1x TRUSSTITE + 1 x 12-14 x 20 HEX SCREW
 (16MM MIN EDGE DISTANCE)

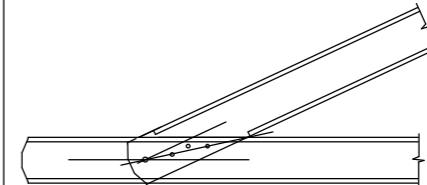
SC-PROP-75-75-2
 (CHORD SUPPORT - SHEAR CON.)



(TYPICAL APPLICATIONS)

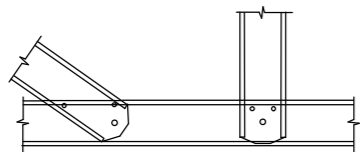
2X12-14X20 HEX SCREW CHORD TO BRACKET

SC-CHORDPT-A-75-75-4



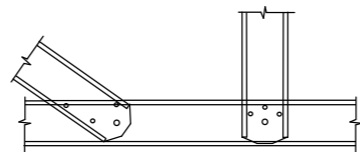
TRUSSTITE + 3X12-14X20 HEX SCREWS

SC-WEB-CHORD-3



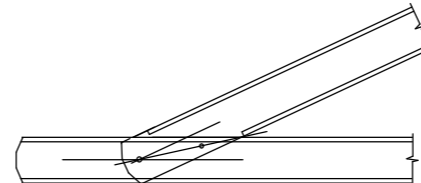
1x TRUSSTITE + 2 x 12-14 x 20 HEX SCREW
 (16MM MIN EDGE DISTANCE)

SC-WEB-CHORD-4



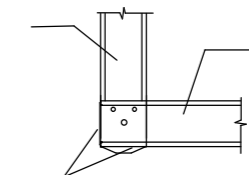
1x TRUSSTITE + 3 x 12-14 x 20 HEX SCREW
 (16MM MIN EDGE DISTANCE)

SC-CHORDPT-A-75-75-2



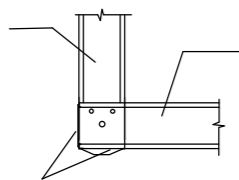
TRUSSTITE + 1X12-14X20 HEX SCREWS

SC-HEEL-HS-F-75-10-3



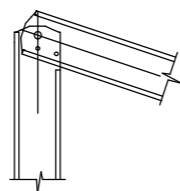
1x TRUSSTITE + 2 x 12-14 x 20 HEX SCREW

SC-HEEL-HS-F-75-75-3



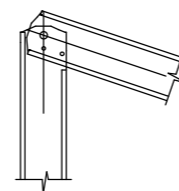
1x TRUSSTITE + 2 x 12-14 x 20 HEX SCREW

SC APEX-HS-F-75-75-3



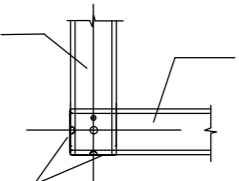
TRUSSTITE + 2X12-14X20 HEX SCREWS

SC APEX-HS-F-75-10-3



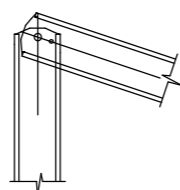
TRUSSTITE + 2X12-14X20 HEX SCREWS

SC-HEEL-HS-75-75-2



TRUSSTITE + 1 X12-14X20 HEX SCREW

SC-APEX-HS-75-75-2



TRUSSTITE + 1X12-14X20 HEX SCREWS

Endurocadd 9.14.7 16-03-2018

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Desert Rose
 Team UOW
 Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522

Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

Client:

Dubai Electricity and Water Authority



AMENDMENTS

REV.	DESCRIPTION	DATE	DRAWN	CHECK
1.	Updated to As-Built	14/09/18	JW	RP

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LOT	# M
DRAWER	R.PRANDALOS
CHECKED	A.FITZSIMMONS
DATE	21 March, 2018
SCALE	@ A3

TRUSS CONNECTION SPECIFICATION

SHEET:
04 OF 05

ST-021

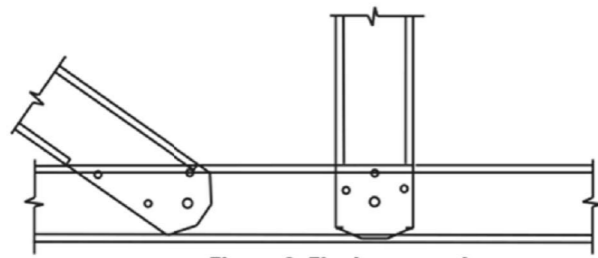


Figure 2: Flush connections

Flush Connections - 5mm gap

Web thickness	Chord thickness	Fastener	Limit state capacity (kN) Compression	Limit state capacity (kN) Tension
0.75	0.75	1 x Truss screw	1.83	4.24
0.75	0.75	1 x Truss screw+ 2 x #12-14 x20	4.65	8.67
1.00	1.00	1 x Truss screw + 2 x #12-14 x20	7.34	12.90

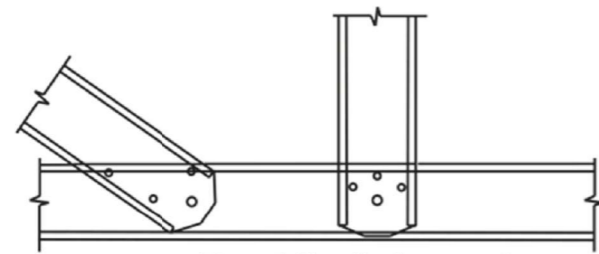


Figure 3: Non-flush connections

Non Flush connections

Web thickness	Chord thickness	Fastener	Limit state capacity (kN) Compression	Limit state capacity(kN) Tension
0.75	0.75	1 x Truss screw	4.24	4.24
0.75	0.75	1 x Truss screw + 2 x #12-14 x20	8.67	8.67

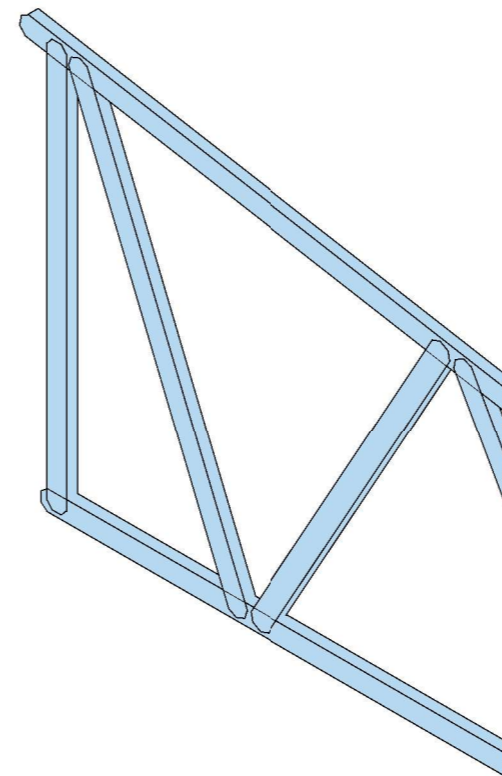
NOTES: 1) Truss screw 17-13 x18 , Trilobular Thread, 2) The above capacities are based on tests conducted at Lysaght R & T laboratory
3) The design capacities of screws must comply with the values shown in the tables above.

Mechanical properties of Connector - fastener (as published by manufacturers)

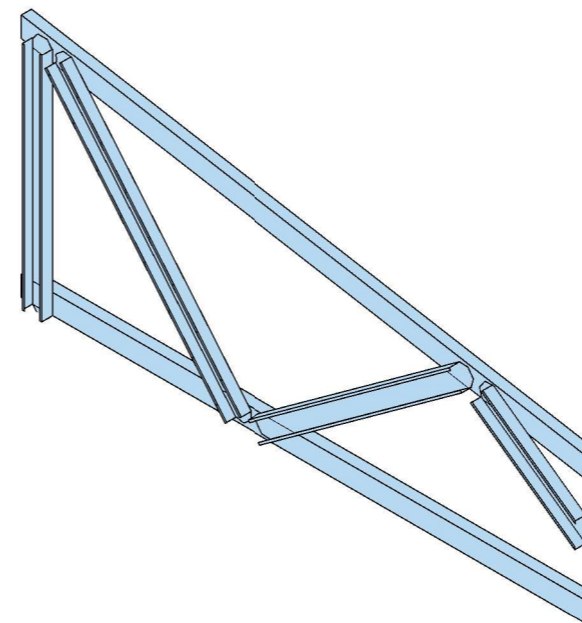
Fastener Type	Single shear strength	Axial Tensile strength	Torsional shear strength
17-13 x18 Trilobular thread	18000 N	42000 N	42000 N
12-14 x 20 Hex head Teks	8800 N	15300 N	13.2 Nm

NOTES

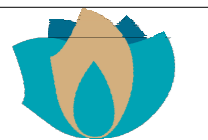
1. JOINT CONNECTION CAPACITIES GIVEN IN THE FOLLOWING TABLES. ALL WEB AND CHORD THICKNESS ARE 0.75mm. ALL OTHER WEB AND CHORD JOINTS NOT RELEVANT TO DESERT ROSE HAVE BEEN REMOVED IN THE TABLE.
2. FLUSH TRUSSES ARE USED WHERE CLADDING IS FIXED TO TRUSSES. NON-FLUSH TRUSSES USED ELSEWHERE DUE TO HIGHER JOINT CAPACITY AS FLANGES OF WEB MEMBERS EXTEND TO CHORDS.
3. 17-13x18 TRILOBULAR THREAD FASTENER IS WHAT IS CALLED A 'TRUSSTITE' IN ST-021 SHEET 03.



1 Flush Truss Connection



2 Non-Flush Truss Connection



Desert Rose
Team UOW
Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522

Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

Client:

Dubai Electricity and Water Authority



AMENDMENTS

REV.	DESCRIPTION	DATE	DRAWN	CHECK
1.	Updated to As-Built	14/09/18	JW	RP

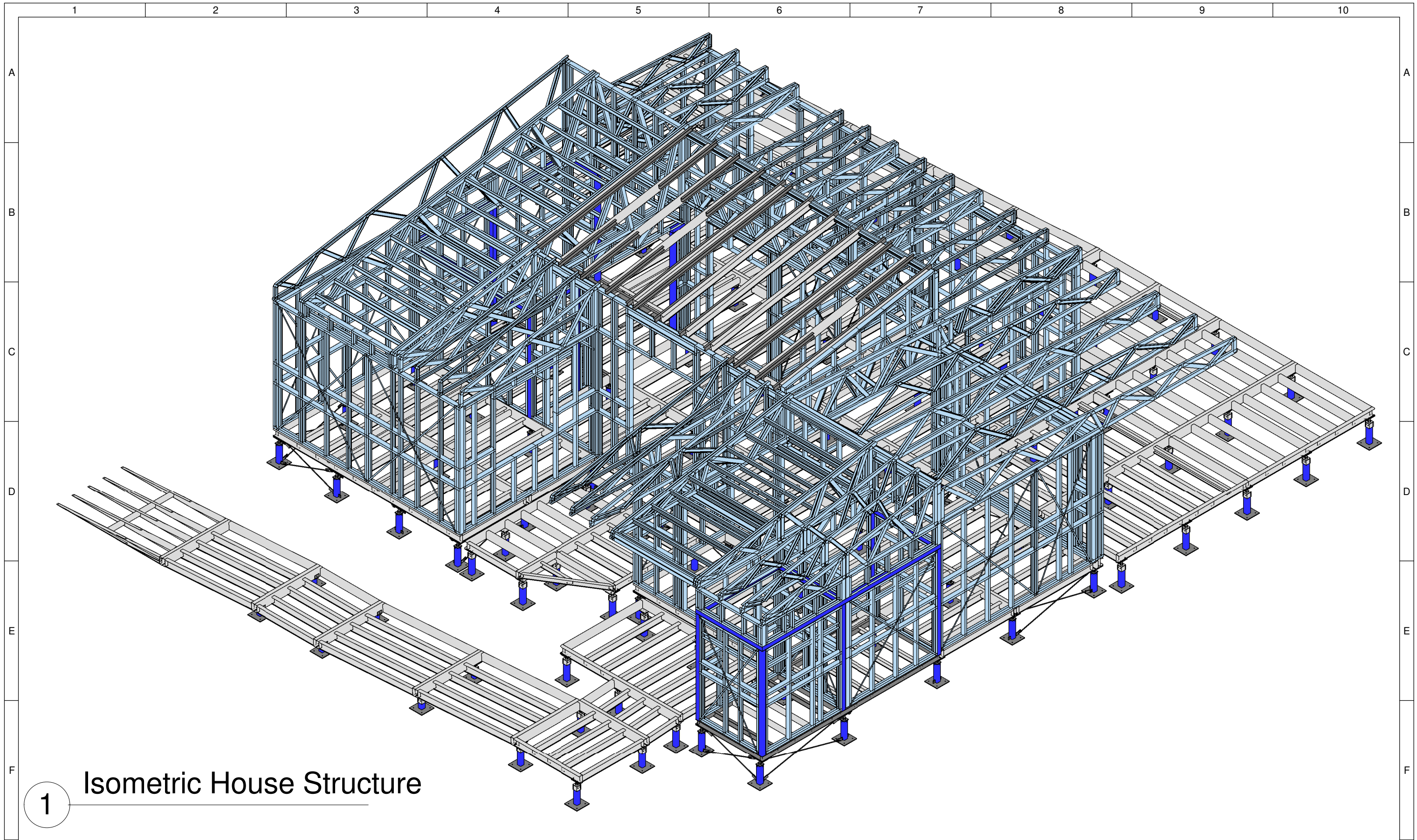
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LOT # M
DRAWER R.PRANDALOS
CHECKED A.FITZSIMMONS
DATE 14 September 2018
SCALE @ A3

TRUSS CONNECTION CAPACITIES



SHEET: 05 OF 05

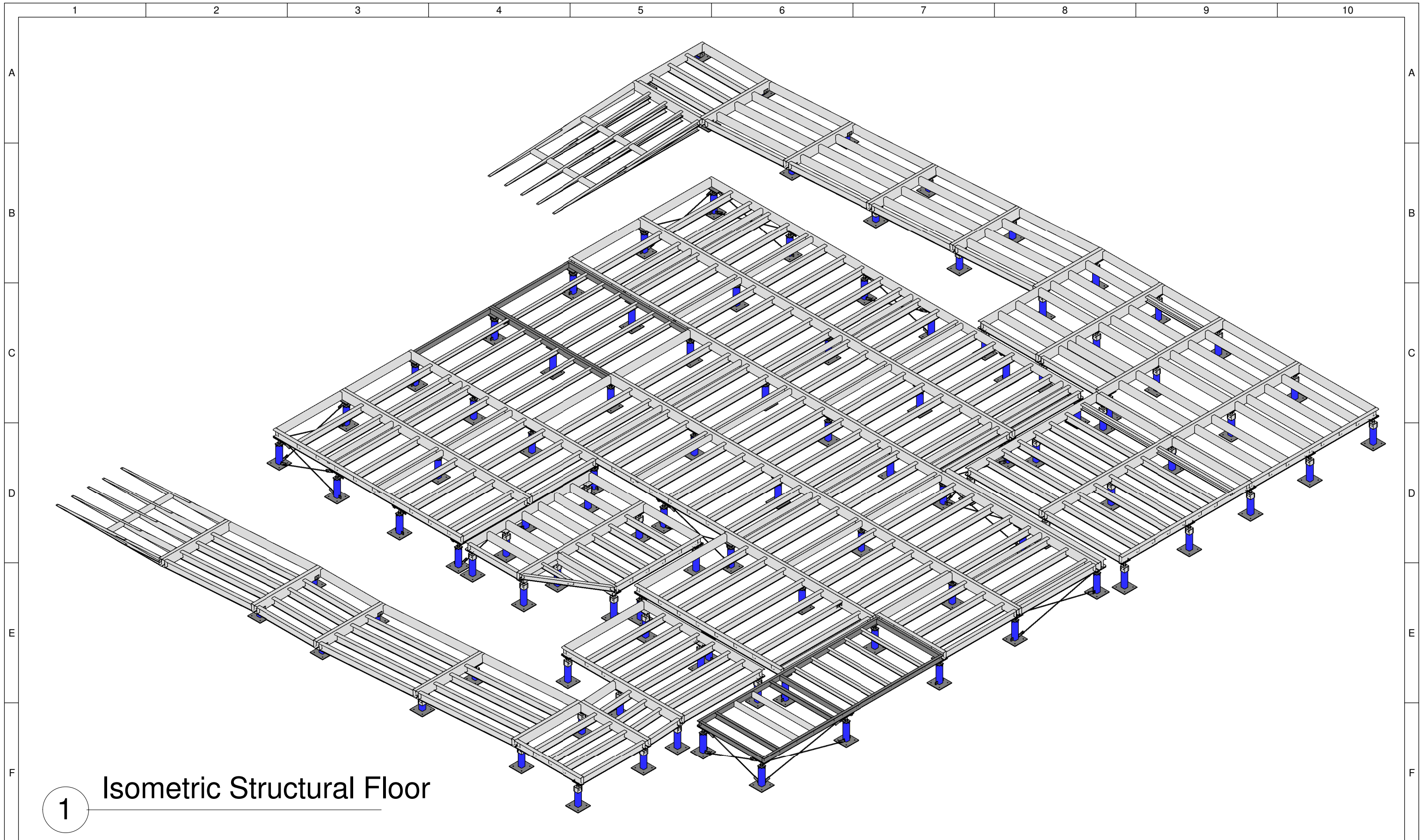
ST-021





1

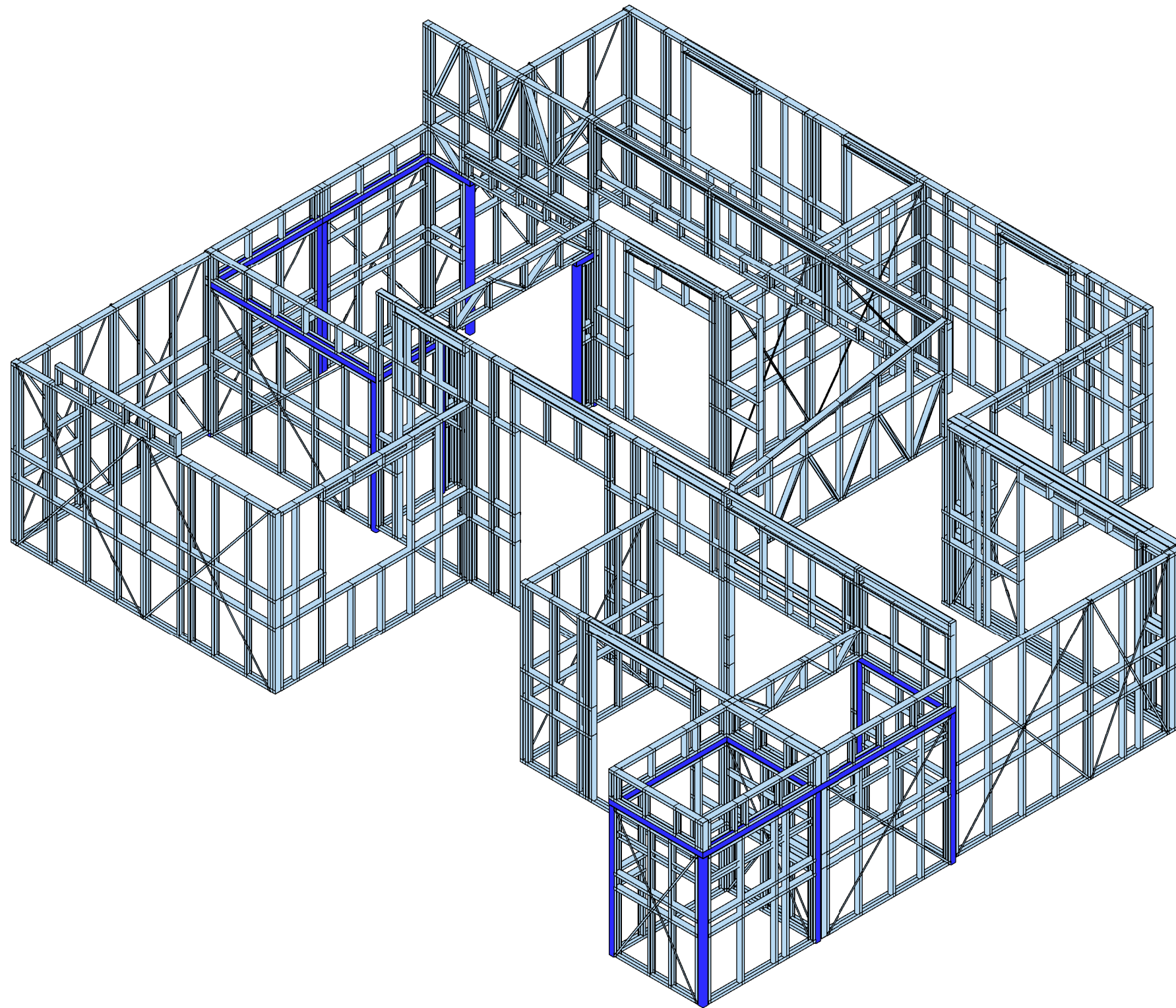
Isometric House Structure

 <p>Desert Rose Team UOW Australia - Dubai</p>	<p>Team: TEAM UOW</p>	<p>Client: Dubai Electricity and Water Authority</p> 	<p>AMENDMENTS</p> <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>				REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	<p>COPYRIGHT None; Project is Public</p>		<p>ISOMETRIC HOUSE STRUCTURE</p>
	REV.		DESCRIPTION	DATE	DRAWN	CHECK													
1.	Updated to As-Built	14/09/18	JW	RP															
<p>Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522</p>	<p>Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au</p>			<table border="1"> <thead> <tr> <th>LOT</th> <th># M</th> </tr> </thead> <tbody> <tr> <td>A.FITZSIMMONS</td> <td></td> </tr> </tbody> </table>	LOT	# M	A.FITZSIMMONS		<p>SHEET: 01 OF 04</p>	<p>ST-101</p>									
LOT	# M																		
A.FITZSIMMONS																			
				<p>CHECKED J.W.YEAP</p>	<p>DATE 21 March, 2018</p>	<p>SCALE @ A3</p>													



1 Isometric Structural Floor


 Desert Rose Team UOW Australia - Dubai	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>			REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER J.W.YEAP CHECKED A.FITZSIMMONS DATE 21 March, 2018 SCALE @ A3		ISOMETRIC STRUCTURAL FLOOR ST-101 SHEET: 02 OF 04
	REV.	DESCRIPTION	DATE	DRAWN	CHECK													
1.	Updated to As-Built	14/09/18	JW	RP														
Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																		



1 Isometric Structural Walls



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Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

Client:
 Dubai Electricity and Water Authority


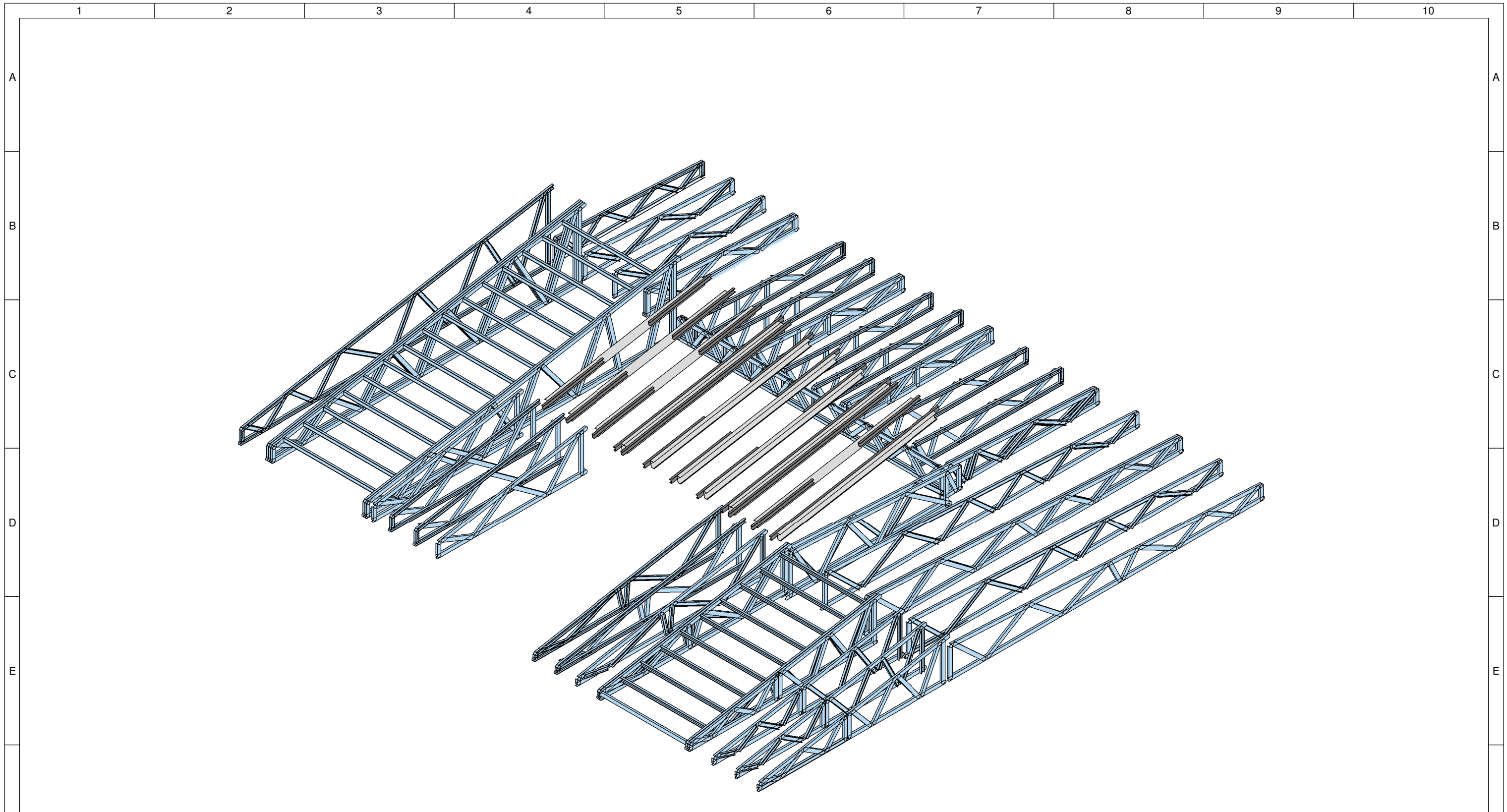
AMENDMENTS						
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1.	Updated to As-Built	14/09/18	JW	RP		

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DRAWER	A.FITZSIMMONS
CHECKED	J.W.YEAP
DATE	21 March, 2018
SCALE	@ A3



**ISOMETRIC
 STRUCTURAL
 WALLS**

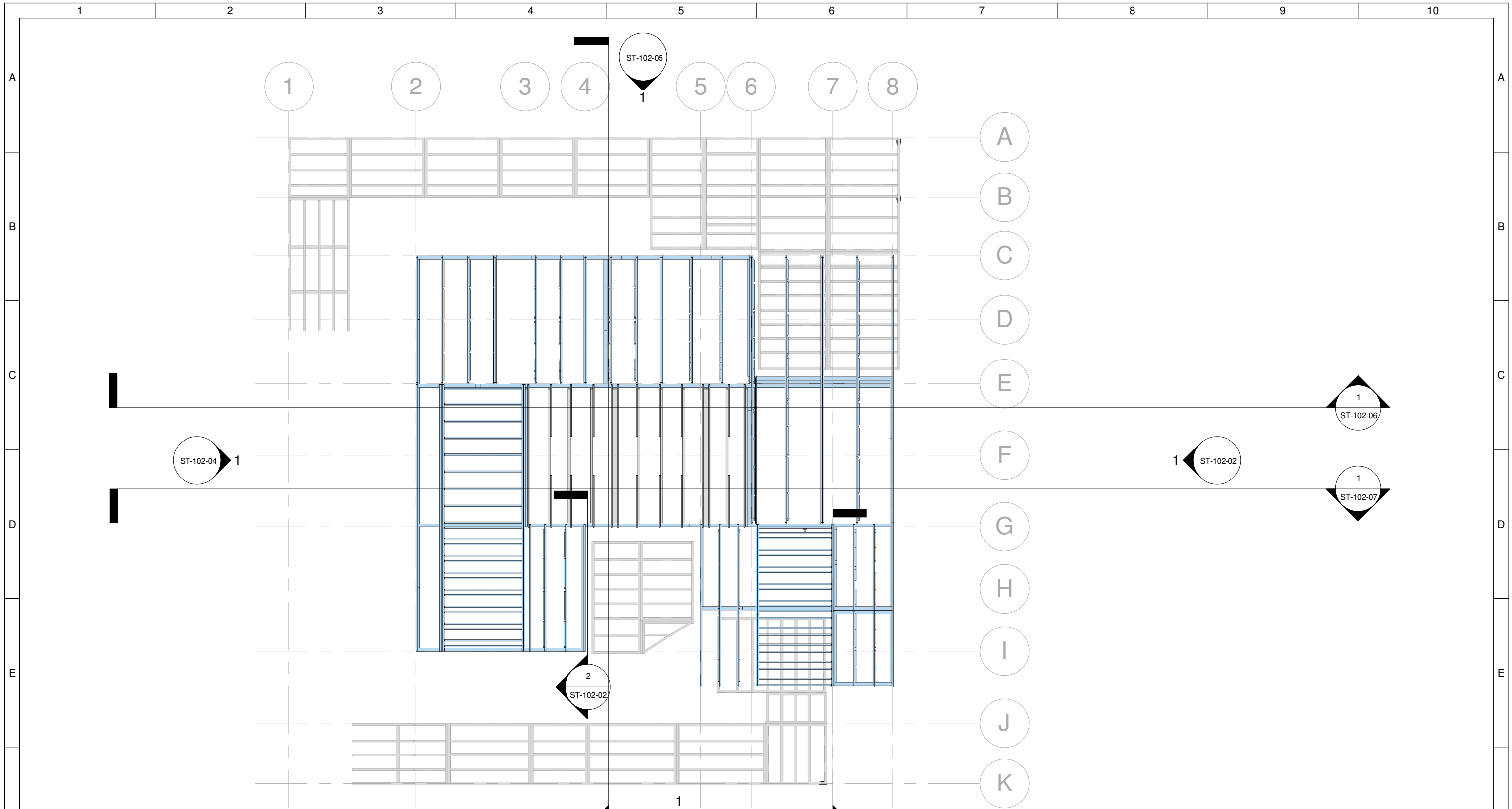
SHEET:
 03 OF 04

ST-101

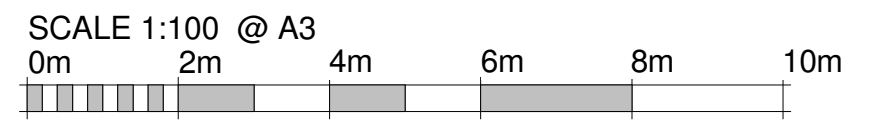


1 Isometric Structural Roof

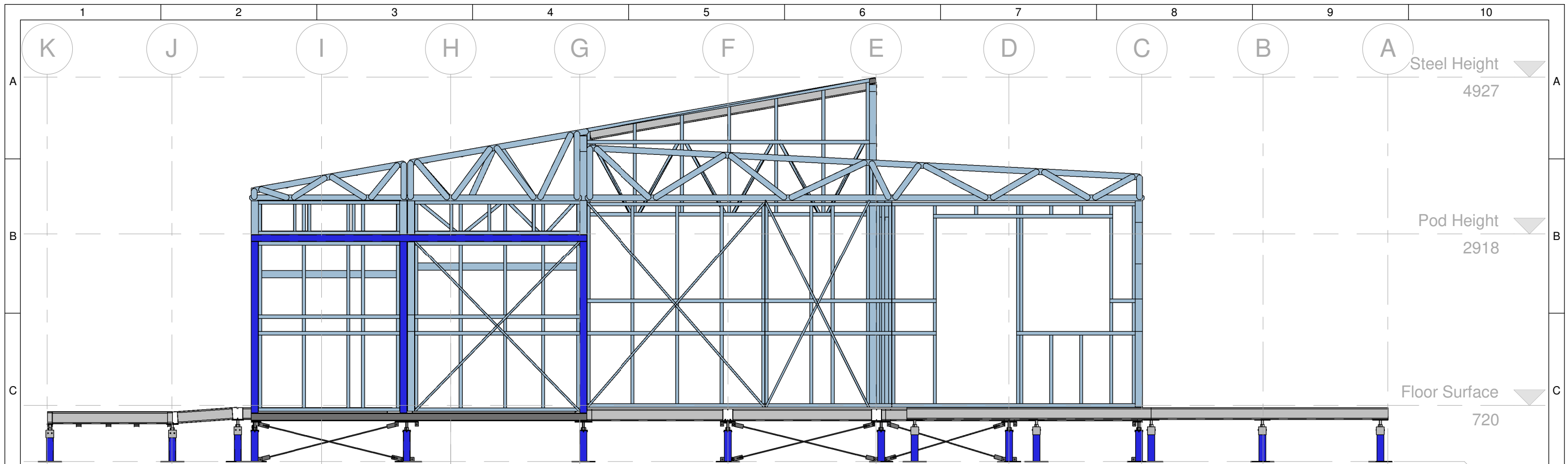
 <p>Desert Rose Team UOW Australia - Dubai</p>	<p>Team: TEAM UOW</p>	<p>Client: Dubai Electricity and Water Authority</p> 	<p>AMENDMENTS</p>				<p>COPYRIGHT</p>		<p>ISOMETRIC STRUCTURAL ROOF</p>					
	<p>Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522</p>		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK		1.	Updated to As-Built	14/09/18	JW	RP
REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1.	Updated to As-Built	14/09/18	JW	RP										
<p>Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au</p>								<p>LOT # M</p> <p>DRAWER A.FITZSIMMONS</p> <p>CHECKED J.W.YEAP</p> <p>DATE 21 March, 2018</p> <p>SCALE @ A3</p>	<p>ST-101</p>					



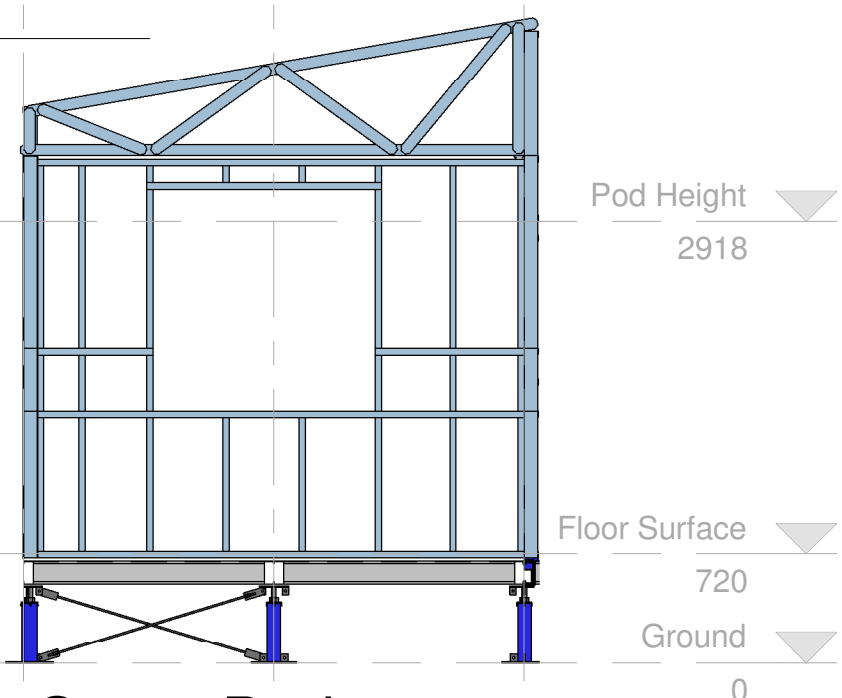
1 Structural Section Elevation
1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority	AMENDMENTS			COPYRIGHT None; Project is Public		 NORTH	STRUCTURAL SECTIONS AND ELEVATIONS										
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN			CHECK	1.	Updated to As-Built	14/09/18	JW	RP	<table border="1"> <thead> <tr> <th>LOT</th> <th># M</th> </tr> </thead> <tbody> <tr> <td></td> <td>J.W.YEAP</td> </tr> </tbody> </table>	LOT	# M	
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1.	Updated to As-Built	14/09/18	JW	RP															
LOT	# M																		
	J.W.YEAP																		



1 East Elevation
1 : 50



2 East Elevation - Spare Bedroom
1 : 50



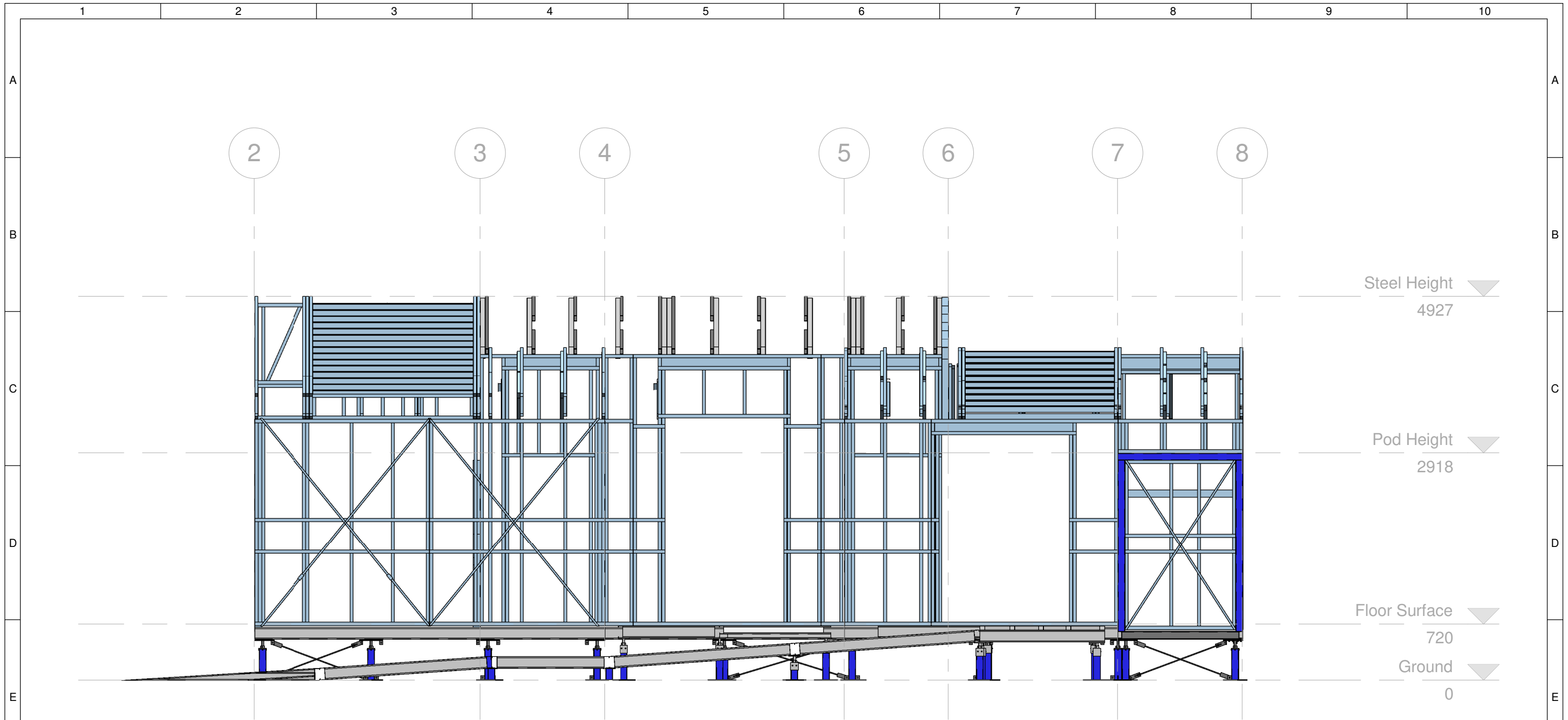
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REV.	DESCRIPTION	DATE	DRAWN	CHECK
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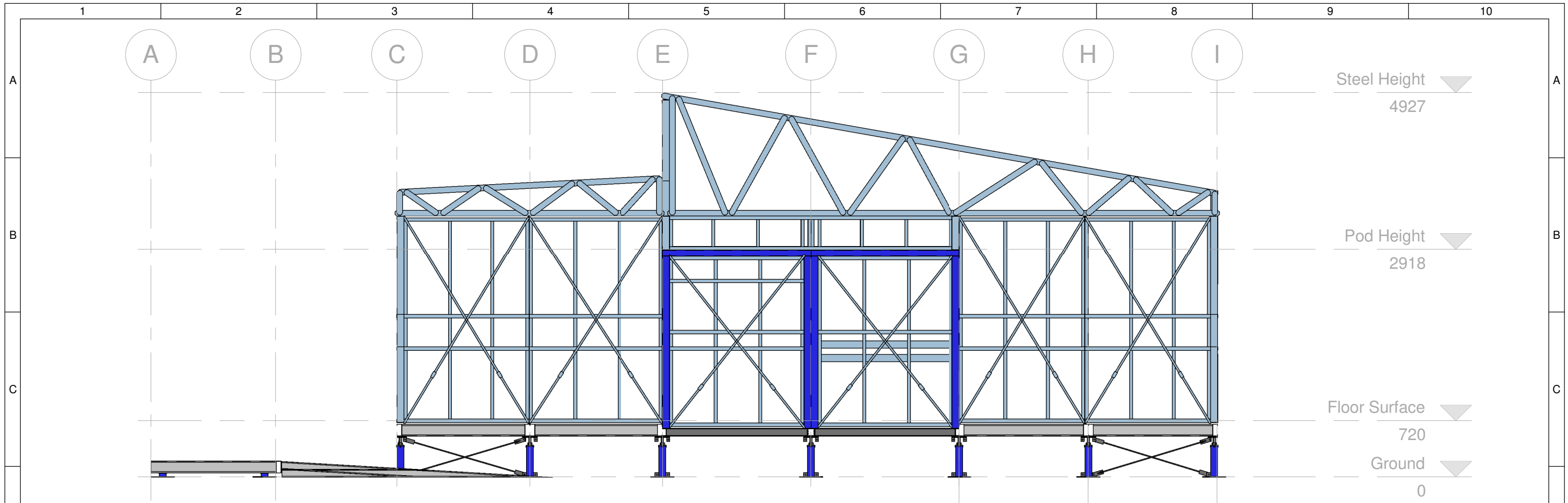
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DATE	21 March, 2018
SCALE	1 : 50 @ A3

EAST ELEVATION
 SHEET: 02 OF 08
 ST-102

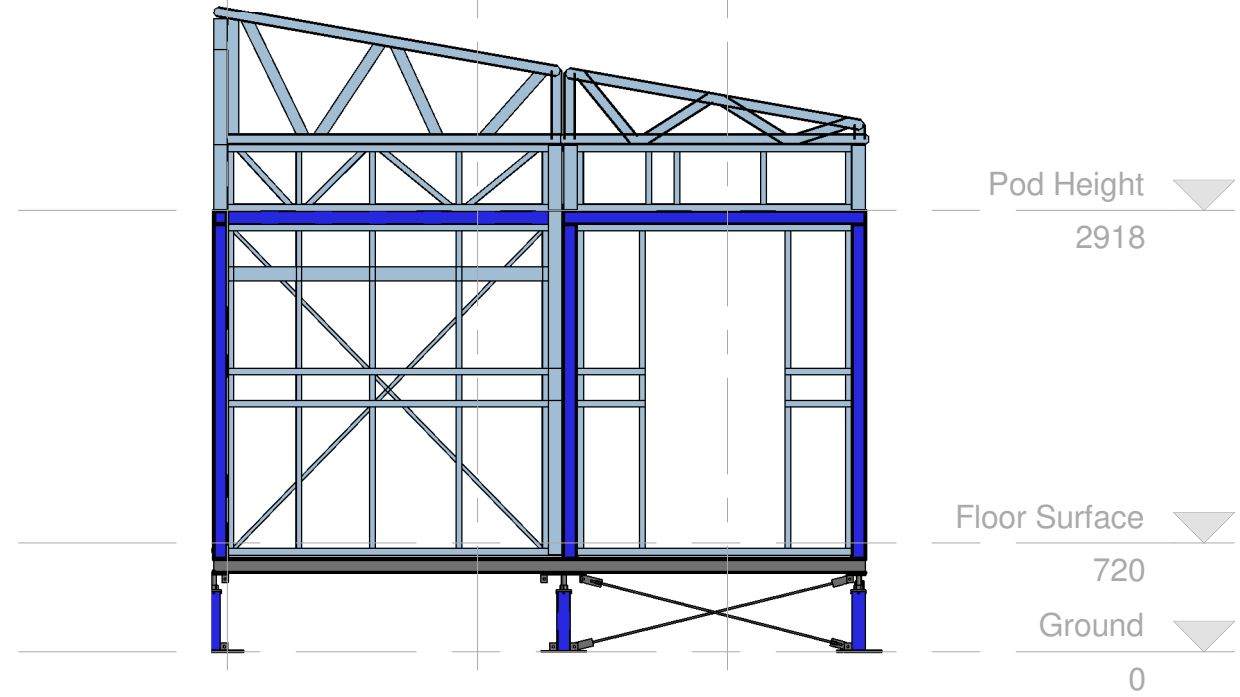


1 South Elevation
1 : 50



 Desert Rose Team UOW Australia - Dubai	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>				REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED R.PRANDALOS DATE 21 March, 2018 SCALE 1 : 50 @ A3		SOUTH ELEVATION ST-102 SHEET: 03 OF 08
	REV.	DESCRIPTION	DATE	DRAWN	CHECK														
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Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																			

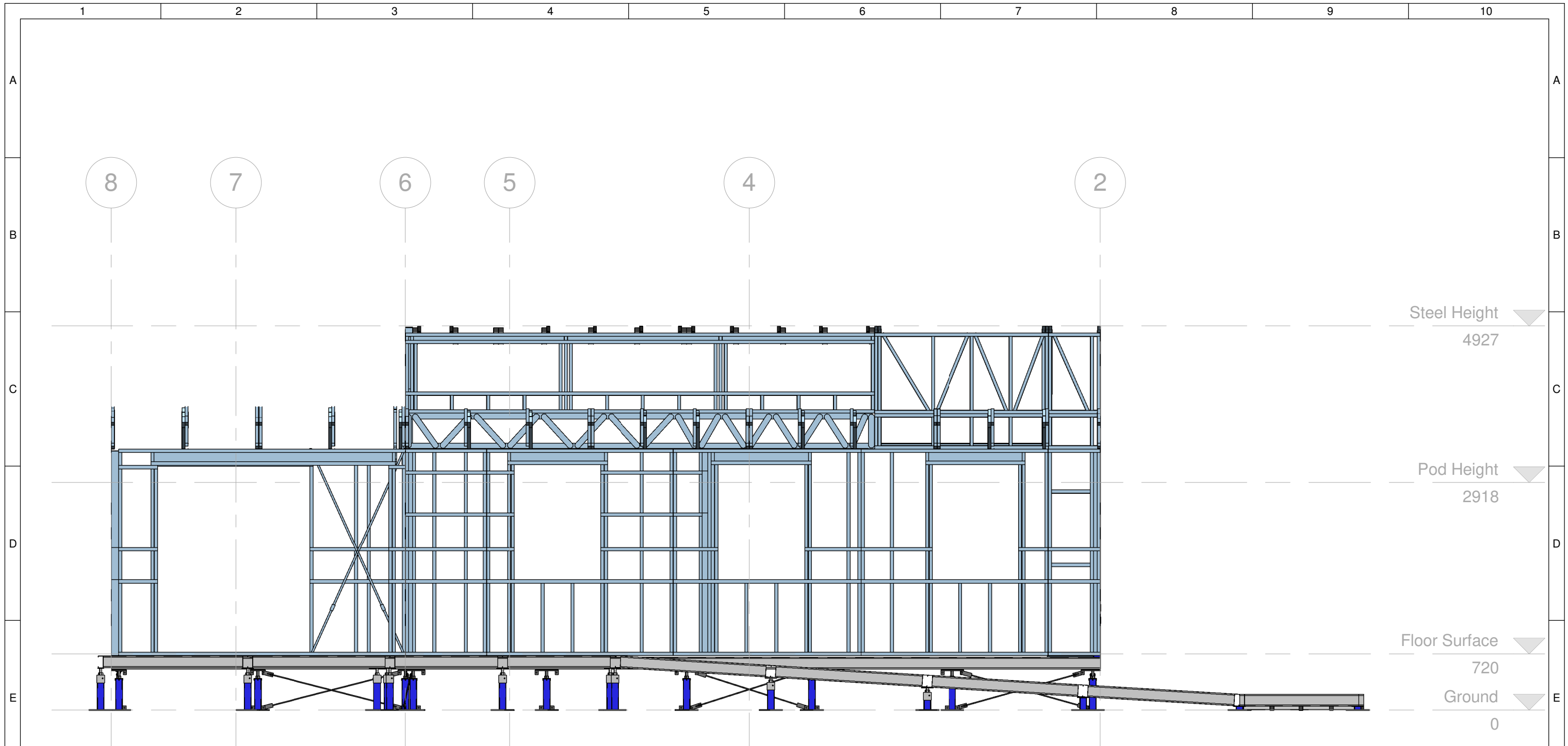


1 West Elevation
1 : 50





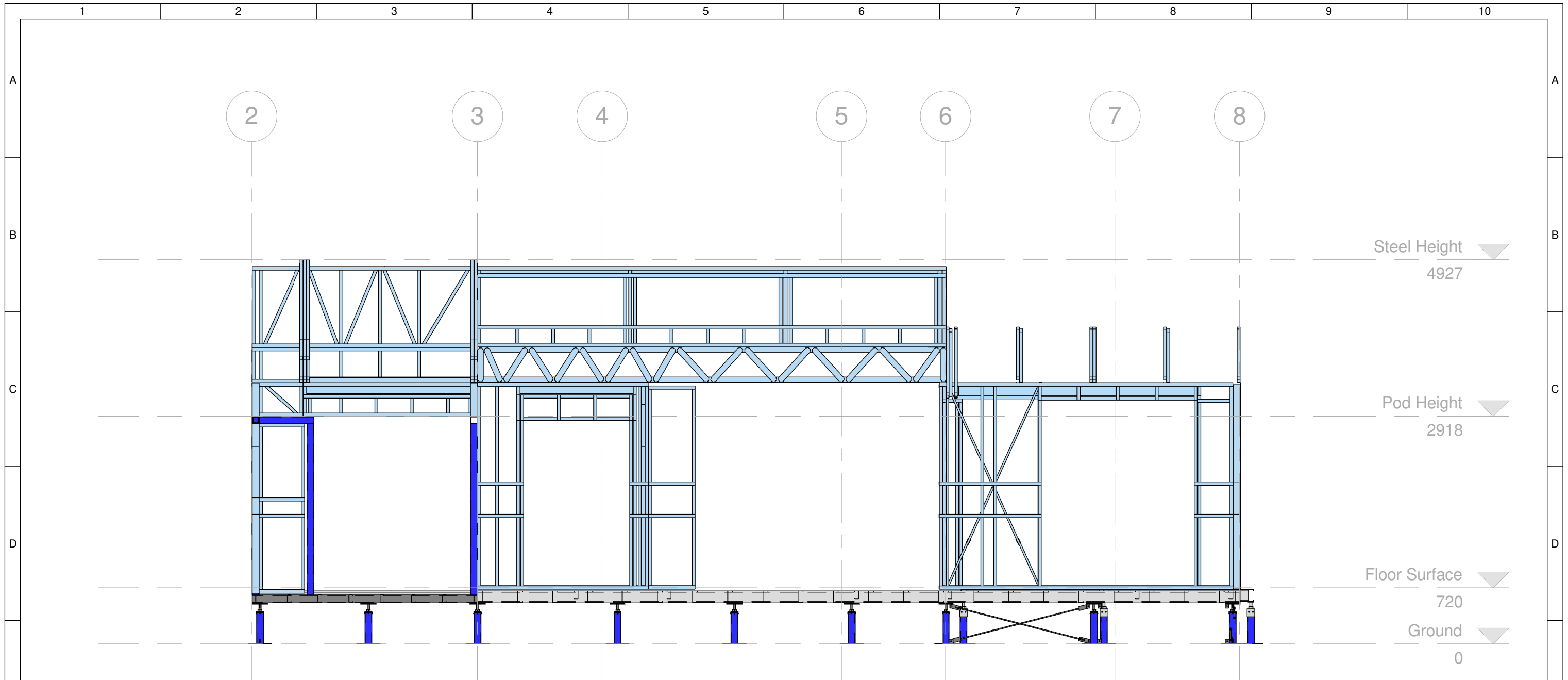
2 West Elevation - Entrance
1 : 50

 Desert Rose Team UOW Australia - Dubai	Team:	TEAM UOW	Client:	AMENDMENTS			COPYRIGHT		WEST ELEVATION ST-102
	Address:	UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522		Dubai Electricity and Water Authority	REV.	DESCRIPTION	DATE	DRAWN	
Contact:	sd-2018@uow.edu.au www.desertrosehouse.com.au		1.	Updated to As-Built	14/09/18	JW	RP	LOT # M	SHEET: 04 OF 08
								DRAWER A.FITZSIMMONS	
								CHECKED R.PRANDALOS	
								DATE 21 March, 2018	
								SCALE 1 : 50 @ A3	





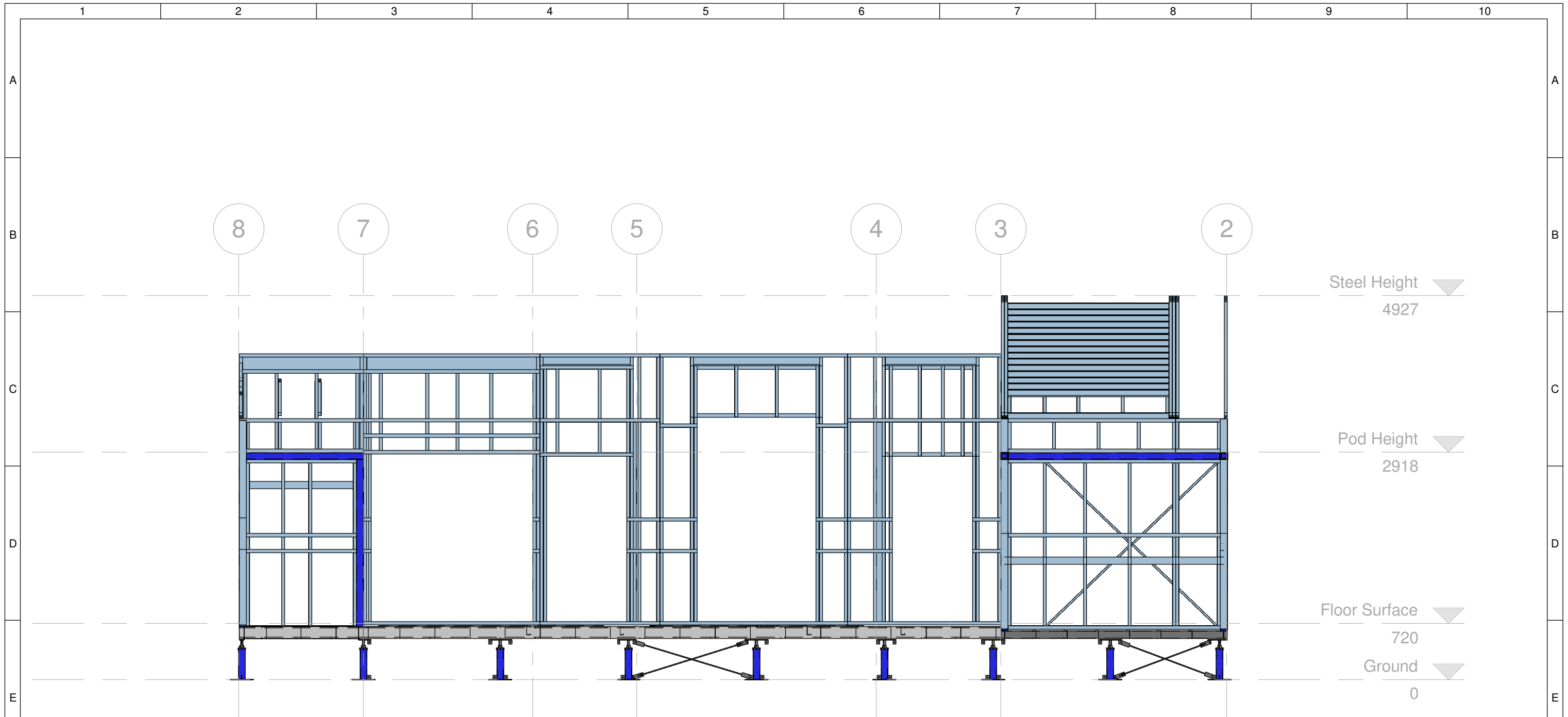
1 North Elevation
1 : 50

 Desert Rose Team UOW Australia - Dubai	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED J.W.YEAP DATE 21 March, 2018 SCALE 1 : 50 @ A3	SHEET: 05 OF 08	NORTH ELEVATION <h1>ST-102</h1>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK											
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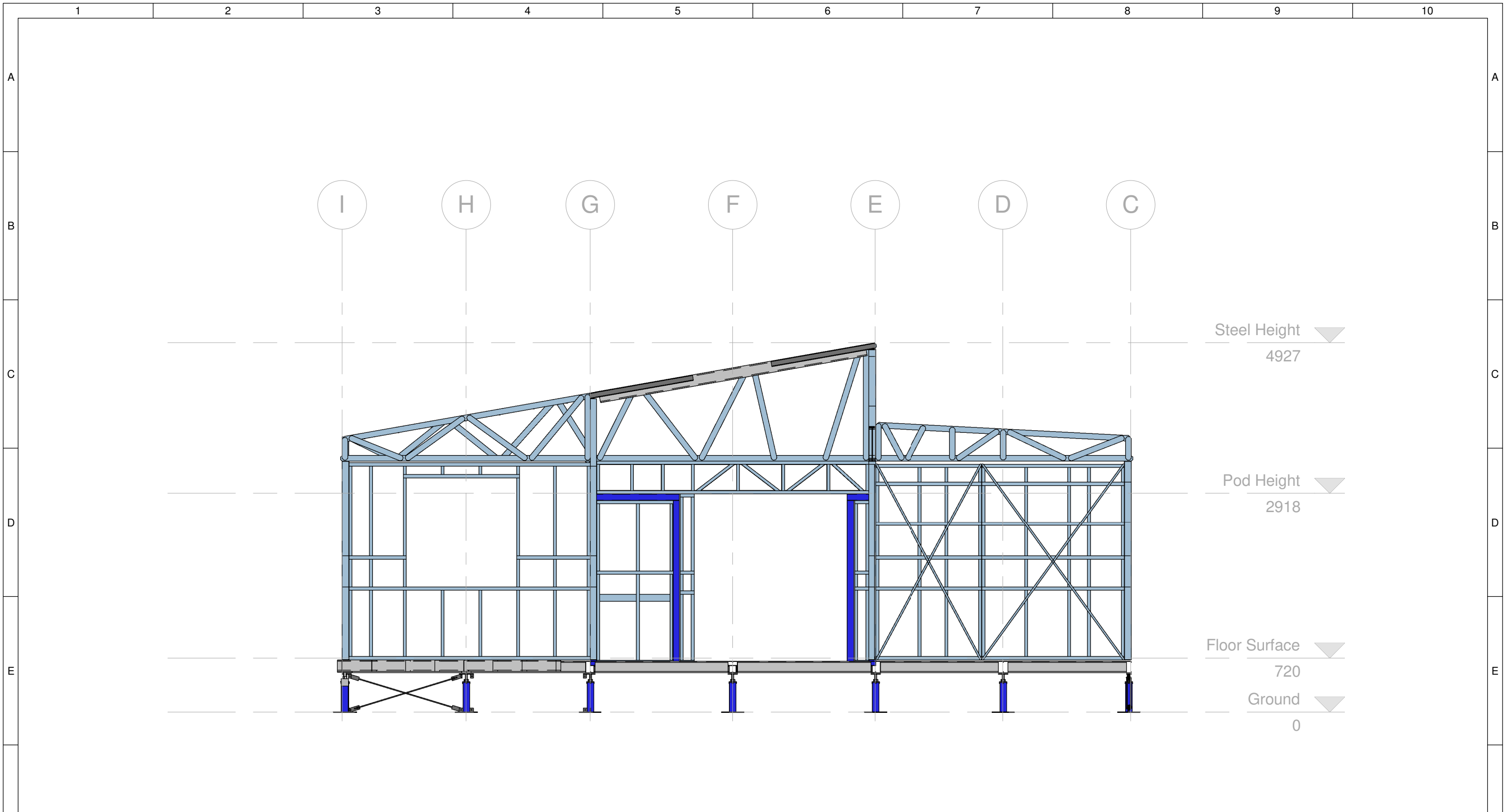
1 Structural Section View 1
1 : 50

 Desert Rose Team UOW Australia - Dubai	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>			REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED J.W.YEAP DATE 12 September, 2018 SCALE 1 : 50 @ A3		SHEET: 06 OF 08	STRUCTURAL SECTION VIEW 1 ST-102
	REV.	DESCRIPTION	DATE	DRAWN	CHECK														
1.	Updated to As-Built	14/09/18	JW	RP															
Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																			





1 Structural Section View 2
1 : 50

 Desert Rose Team UOW Australia - Dubai	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>			REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED J.W.YEAP DATE 12 September, 2018 SCALE 1 : 50 @ A3		SHEET: 07 OF 08	STRUCTURAL SECTION VIEW 2 ST-102
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Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																			

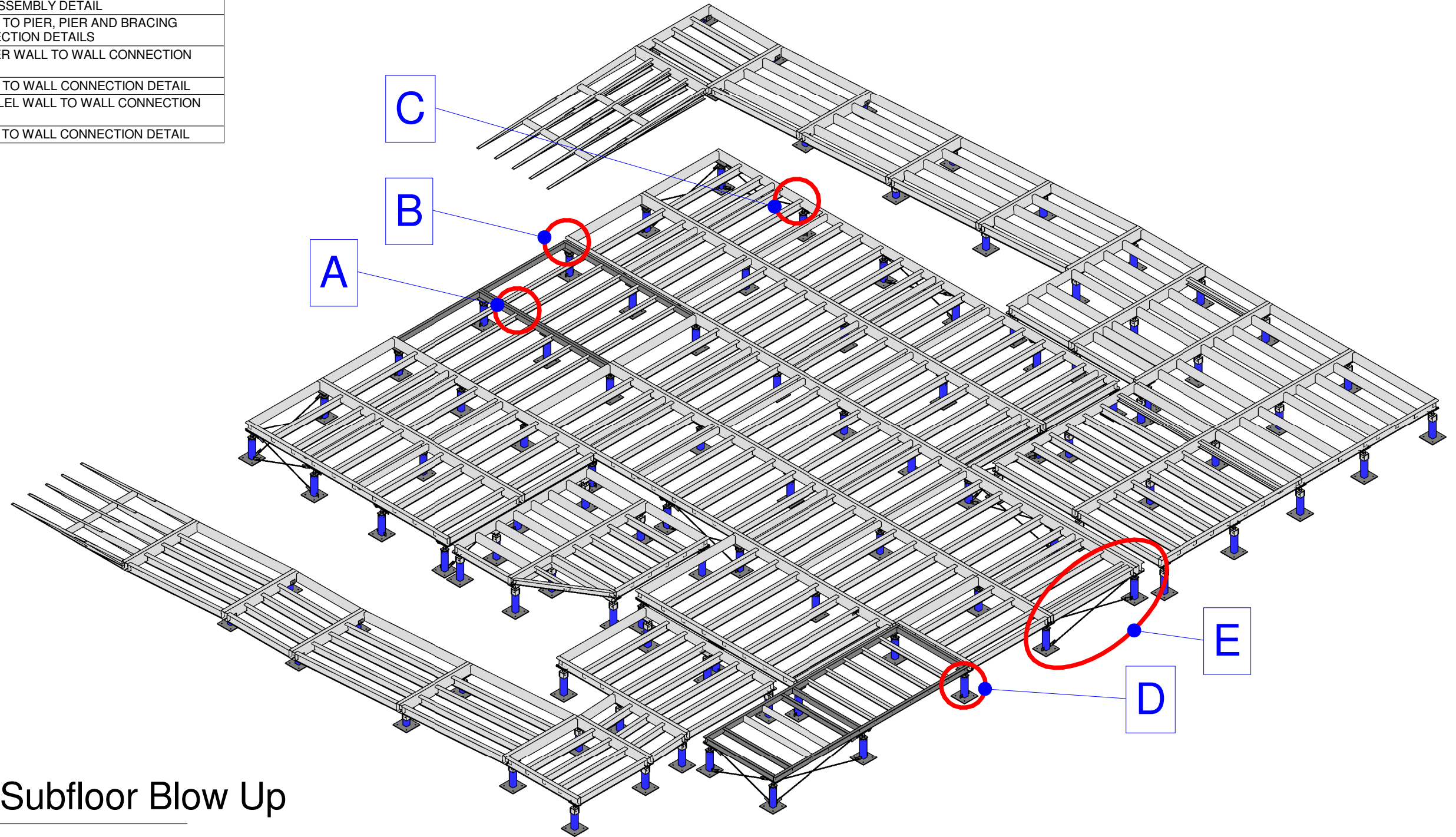


1 Structural Section View 3
1 : 50

 Desert Rose Team UOW Australia - Dubai	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>			REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER J.W.YEAP CHECKED R.PRANDALOS DATE 12 September, 2018 SCALE 1 : 50 @ A3		STRUCTURAL SECTION VIEW 3 ST-102 SHEET: 08 OF 08
	REV.	DESCRIPTION	DATE	DRAWN	CHECK													
1.	Updated to As-Built	14/09/18	JW	RP														
Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																		

Blow up Schedule

Identifier	Sheet Reference	Description
A	ST-203 Sheet 2	POD BEARER AND JOIST CONNECTION DETAIL
B	ST-203 Sheet 3	POD BEARERS CONNECTION DETAIL
C	ST-203 Sheet 1	FLOOR / DECK BEARER AND JOIST CONNECTION DETAIL
D	ST-003 Sheet 1	PIER ASSEMBLY DETAIL
E	ST-202	FLOOR TO PIER, PIER AND BRACING CONNECTION DETAILS
F	ST-206	CORNER WALL TO WALL CONNECTION DETAIL
G	ST-204	FLOOR TO WALL CONNECTION DETAIL
H	ST-205	PARALLEL WALL TO WALL CONNECTION DETAIL
I	ST-207 and ST-208	TRUSS TO WALL CONNECTION DETAIL



1 Structural Subfloor Blow Up



Desert Rose
Team UOW
Australia - Dubai

Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

Client: Dubai Electricity and Water Authority
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AMENDMENTS						
REV.	DESCRIPTION	DATE	DRAWN	CHECK		
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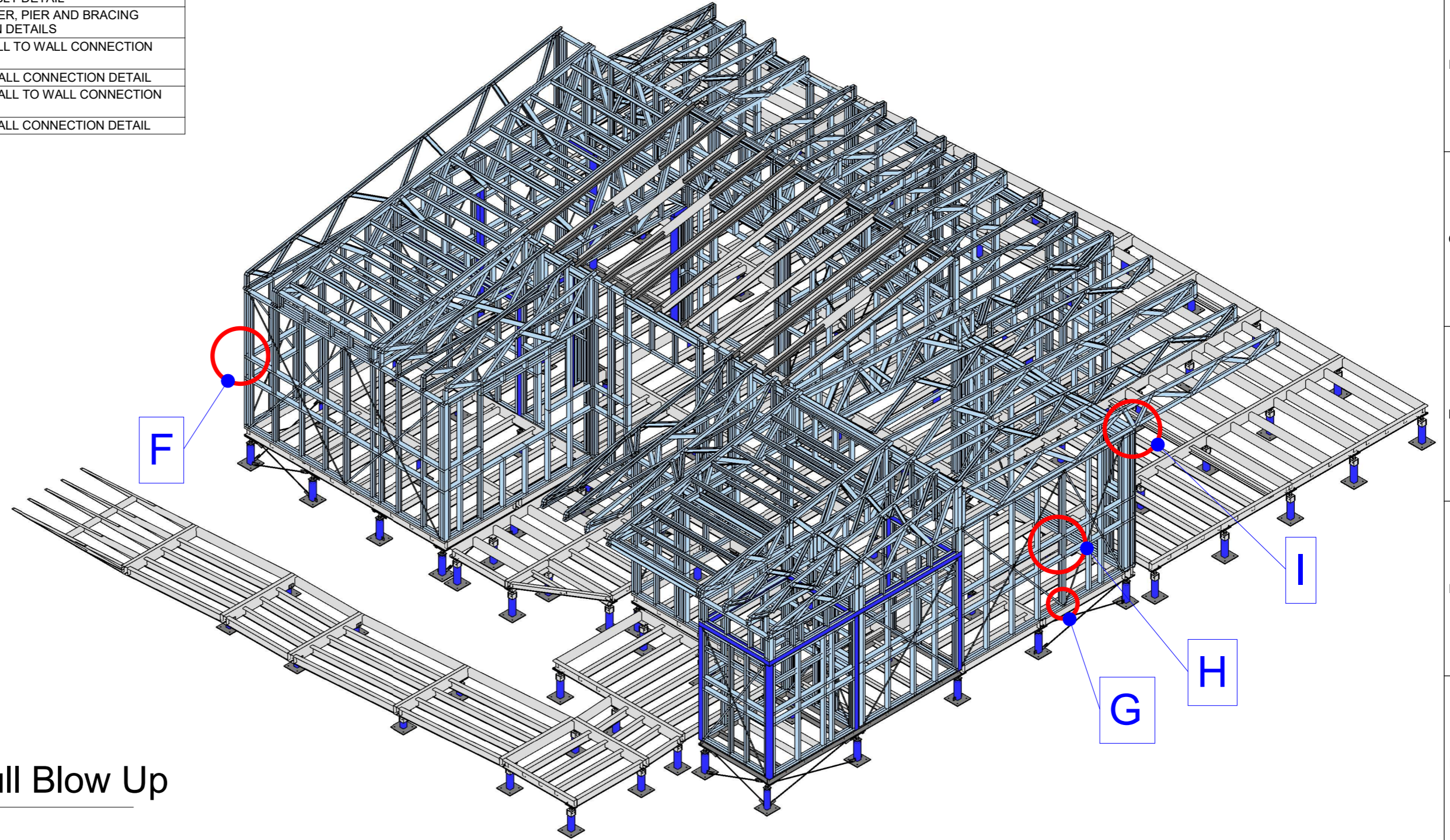
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DRAWER A.FITZSIMMONS
CHECKED C.MCDOWELL
DATE 21 March, 2018
SCALE @ A3

SHEET:
01 OF 02

STRUCTURAL SUBFLOOR BLOW UP
ST-201

Blow up Schedule

Identifier	Sheet Reference	Description
A	ST-203 Sheet 2	POD BEARER AND JOIST CONNECTION DETAIL
B	ST-203 Sheet 3	POD BEARERS CONNECTION DETAIL
C	ST-203 Sheet 1	FLOOR / DECK BEARER AND JOIST CONNECTION DETAIL
D	ST-003 Sheet 1	PIER ASSEMBLY DETAIL
E	ST-202	FLOOR TO PIER, PIER AND BRACING CONNECTION DETAILS
F	ST-206	CORNER WALL TO WALL CONNECTION DETAIL
G	ST-204	FLOOR TO WALL CONNECTION DETAIL
H	ST-205	PARALLEL WALL TO WALL CONNECTION DETAIL
I	ST-207 and ST-208	TRUSS TO WALL CONNECTION DETAIL



1 Structural Full Blow Up



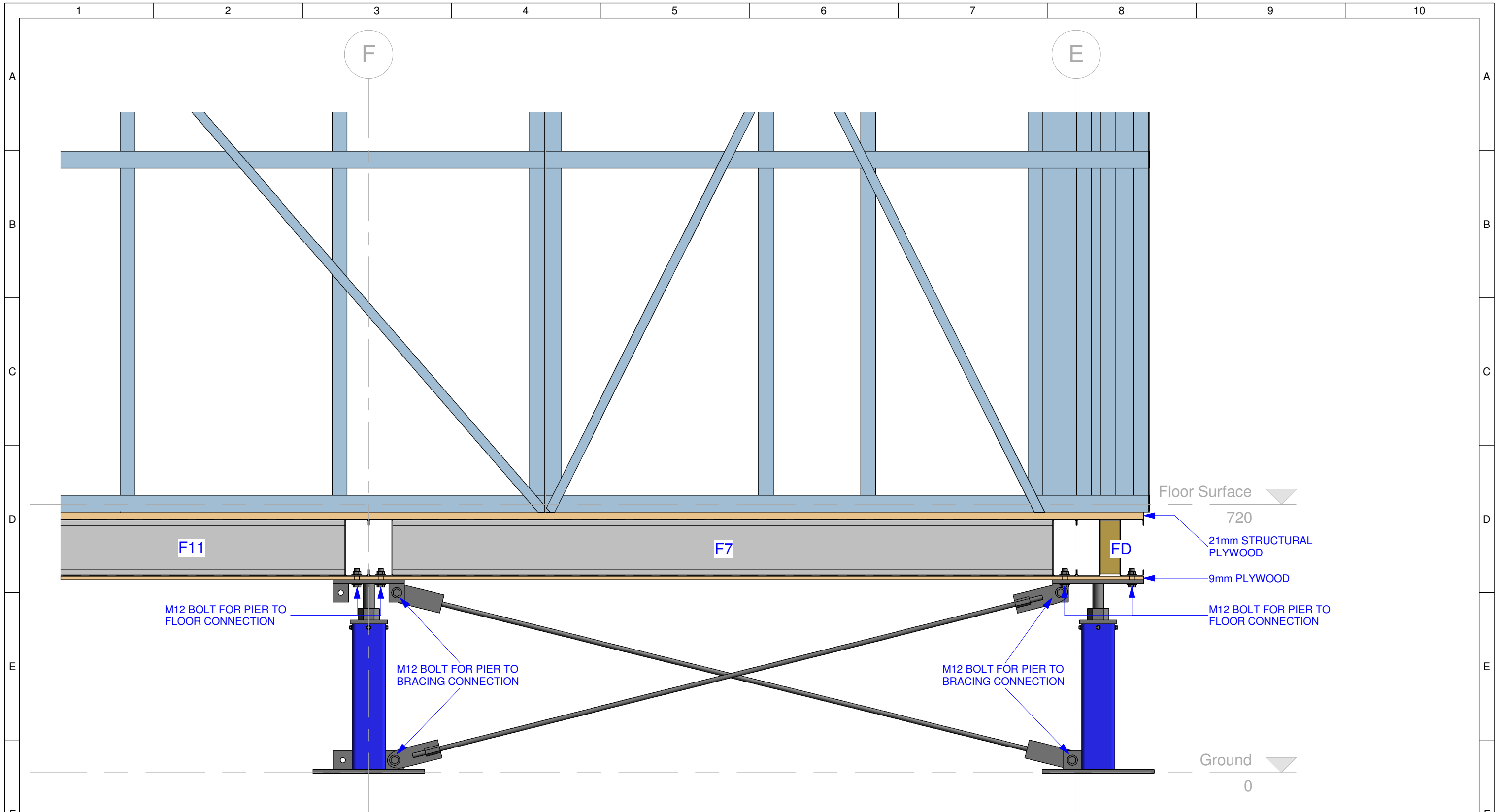
Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
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AMENDMENTS				
REV.	DESCRIPTION	DATE	DRAWN	CHECK
1.	Updated to As-Built	14/09/18	JW	RP

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CHECKED C.MCDOWELL
DATE 21 March, 2018
SCALE @ A3

STRUCTURAL FULL BLOW UP
ST-201
 SHEET: 02 OF 02

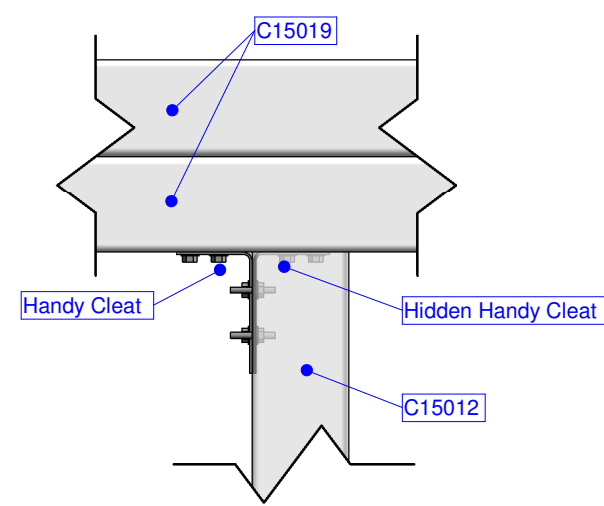


1 Pier Connection Detail
1 : 10

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED R.PRANDALOS DATE 21 March, 2018 SCALE 1 : 10 @ A3	TYPICAL SUBFLOOR CONNECTIONS ST-202 SHEET: 01 OF 01
	REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1.	Updated to As-Built	14/09/18	JW	RP											
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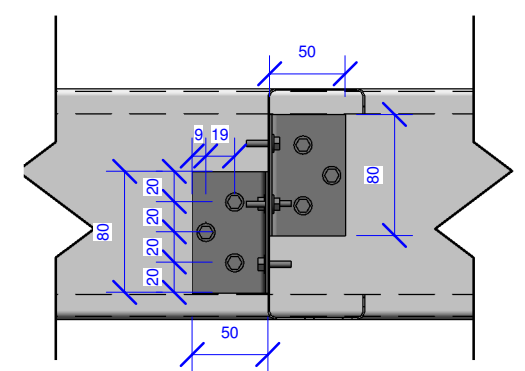
NOTES

1. THIS SHEET SHOWS TYPICAL CONNECTION DETAILS FOR BEARERS AND JOISTS. LIGHT GAUGE STEEL CEE PURLINS ARE USED AS THE BEARERS AND JOISTS IN THE SUBFLOOR STRUCTURE.
 2. THE LYSAGHT HANDY CLEAT IS MODELLED WITHOUT STIFFENERS. REFER TO IMAGE 4 FOR APPEARANCE OF ACTUAL CLEAT WITH STIFFENER.
 3. ALL CONNECTIONS ARE MADE WITH 2 X LYSAGHT HANDY CLEATS WITH 7 x 12-14x20 SCREWS.
 4. REFER ST-202 SHEET 02 FOR CALLOUT LOCATION.
 5. HANDY CLEATS ARE 1.6mm THICK AND MADE OF GRADE 300 GALVANISED STEEL.
- MINIMUM YIELD STRENGTH = 300MPa
 MINIMUM TENSILE STRENGTH = 340MPa
- NOMINAL BEARING CAPACITY (SINGLE HANDY CLEAT) = 4.04kN (AS/NZS 4600-2005)
 NOMINAL SHEAR CAPACITY (SINGLE HANDY CLEAT) = 7.62kN (AS/NZS 4600-2005)

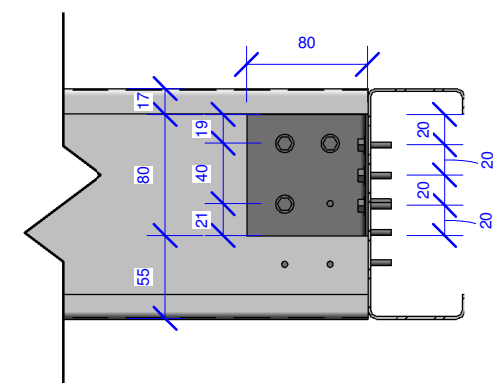


Handy Cleat

1 Handy Cleat Connection Plan
1 : 5



2 Handy Cleat Front
1 : 5



3 Handy Cleat Side
1 : 5



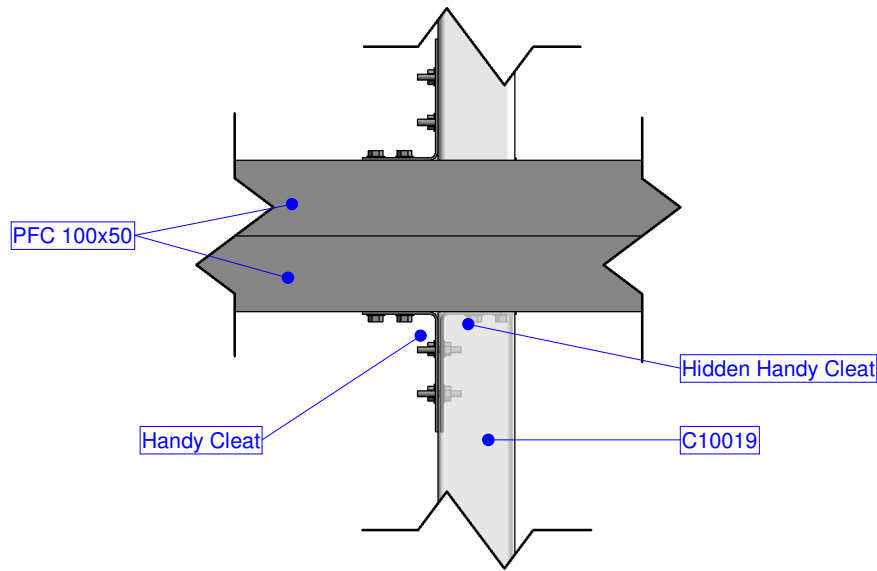
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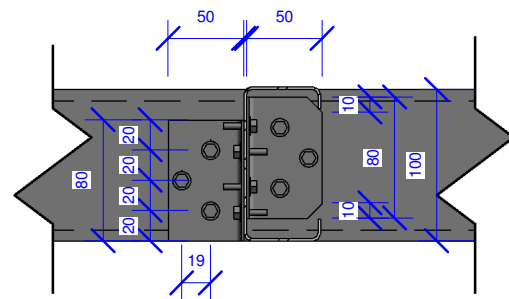
AMENDMENTS					
REV.	DESCRIPTION	DATE	DRAWN	CHECK	
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CHECKED R.PRANDALOS
DATE 21 March, 2018
SCALE 1 : 5 @ A3

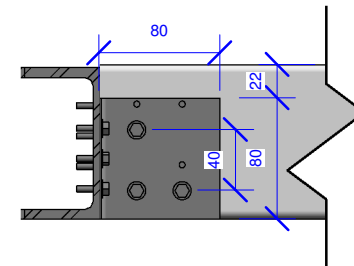
TYPICAL FLOOR MEMBER CONNECTION
ST-203
 SHEET: 01 OF 03



1 Pod Handy Cleat Plan
1 : 5



2 Pod Handy Cleat Front
1 : 5



3 Pod Handy Cleat Side
1 : 5

NOTES

1. THIS SHEET SHOWS TYPICAL CONNECTION DETAILS FOR BEARERS AND JOISTS. IN THE PODS, LIGHT GAUGE STEEL CEE PURLINS ARE USED AS THE JOISTS AND HOT ROLLED PFC IS USED AS THE BEARERS IN THE SUBFLOOR STRUCTURE.

2. THE LYSAGHT HANDY CLEAT IS MODELLED WITHOUT STIFFENERS. REFER TO IMAGE 4 FOR APPEARANCE OF ACTUAL CLEAT WITH STIFFENER.

3. ALL CONNECTIONS ARE MADE WITH 2 X LYSAGHT HANDY CLEATS WITH 7 x 12-14x20 SCREWS.

4. REFER ST-202 SHEET 02 FOR CALLOUT LOCATION.

5. HANDY CLEATS ARE 1.6mm THICK AND MADE OF GRADE 300 GALVANISED STEEL.

MINIMUM YIELD STRENGTH = 300MPa
MINIMUM TENSILE STRENGTH = 340MPa

NOMINAL BEARING CAPACITY (SINGLE HANDY CLEAT) = 4.04kN
(AS/NZS 4600-2005)

NOMINAL SHEAR CAPACITY (SINGLE HANDY CLEAT) = 7.62kN
(AS/NZS 4600-2005)



Desert Rose
Team UOW
Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522

Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

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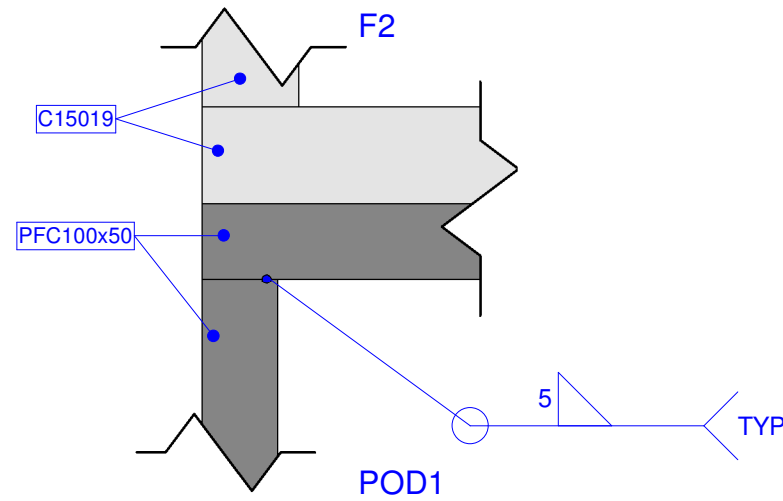
TYPICAL FLOOR
MEMBER
CONNECTION

SHEET:
02 OF 03

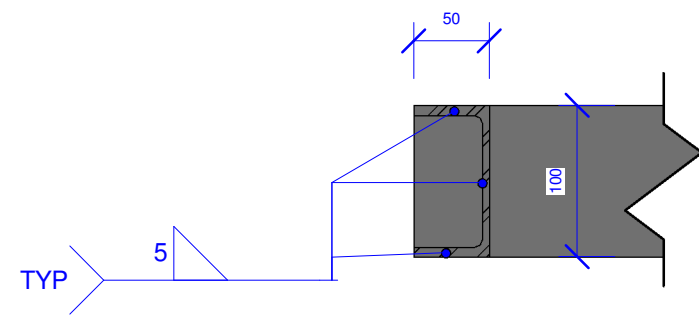
ST-203

NOTES

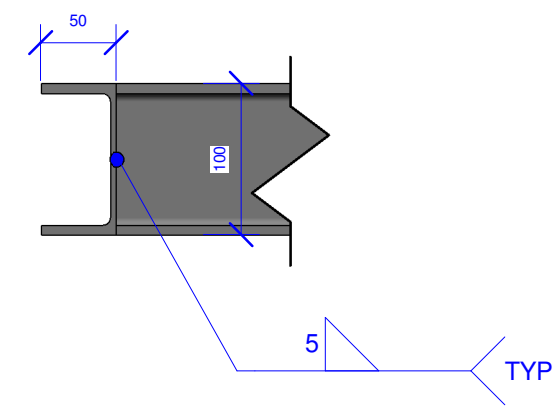
1. THIS SHEET SHOWS TYPICAL CONNECTION DETAILS FOR BEARERS TO BEARERS IN THE PODS. ALL BEARERS ARE HOT ROLLED PFC. SEE ST-013 FOR SECTION SIZE AND MATERIAL PROPERTIES.
2. REFER ST-201 SHEET 02 FOR CALLOUT LOCATION.
3. WELD IS 5MM FILLET WELD ALL AROUND THE CONNECTION.
4. F2 REFERS TO FLOOR PANEL 2 NEXT TO POD 1



1 Pod Subfloor Weld Plan
1 : 5




2 Pod Subfloor Weld Front
1 : 5



3 Pod Subfloor Weld Side
1 : 5



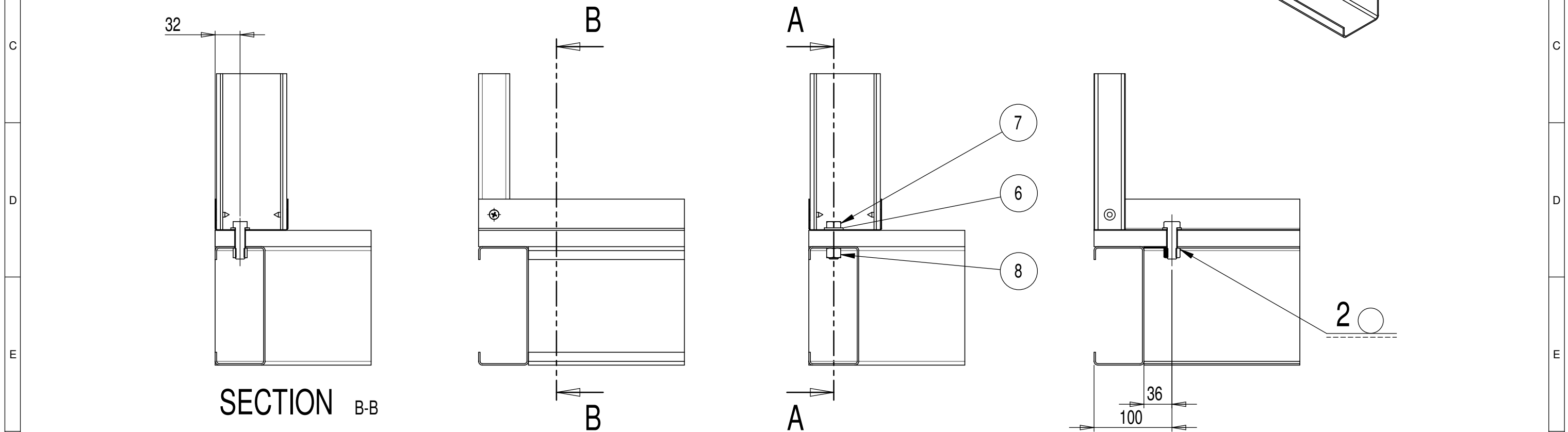
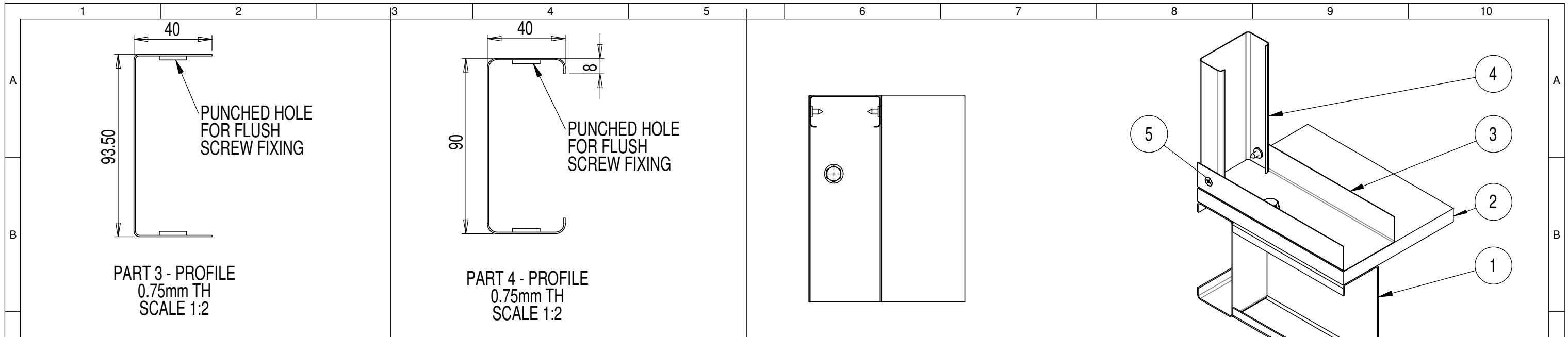
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Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
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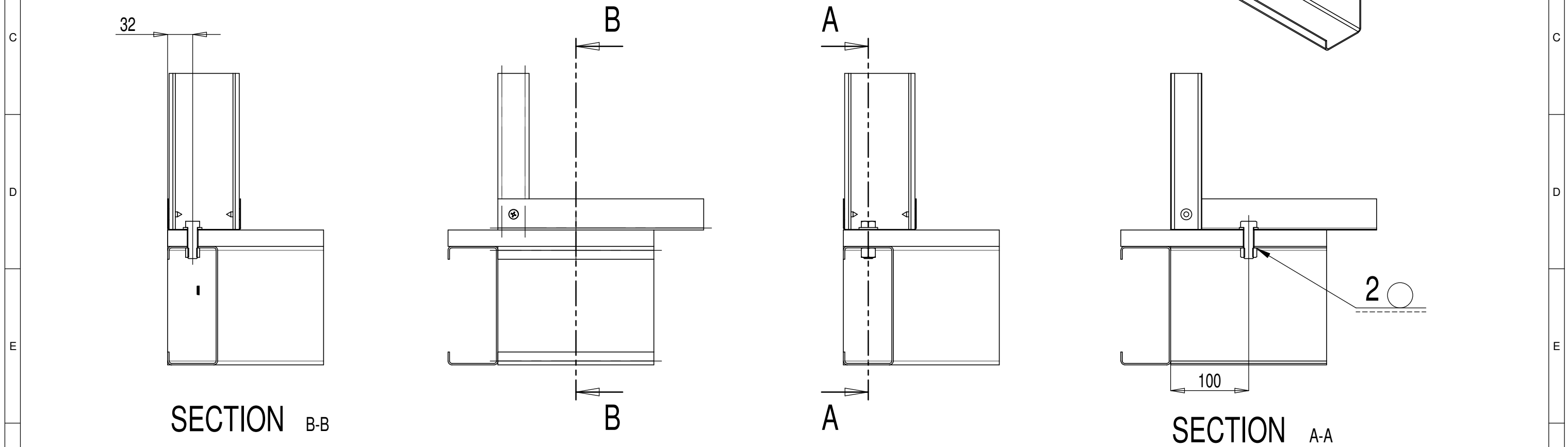
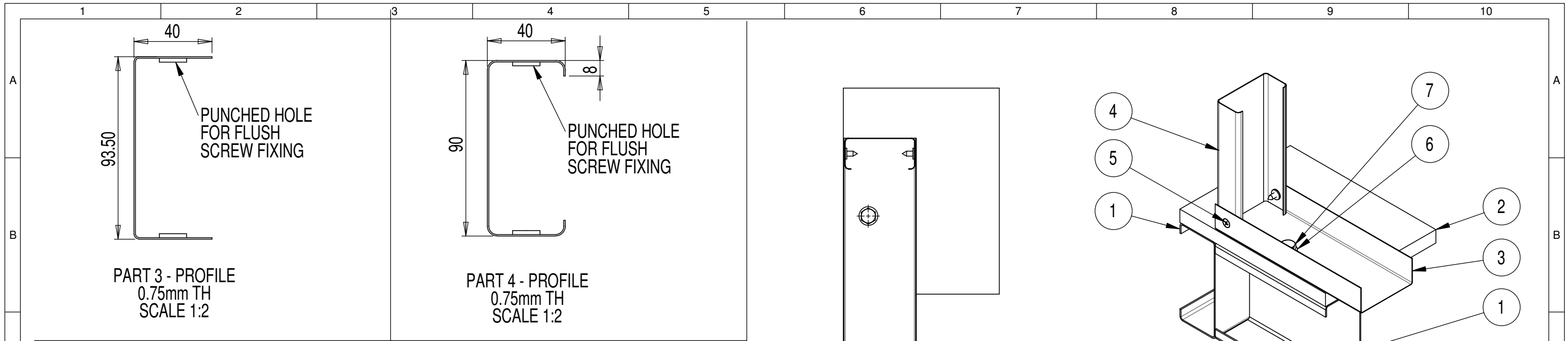
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TYPICAL FLOOR MEMBER CONNECTION
ST-203
 SHEET: 03 OF 03



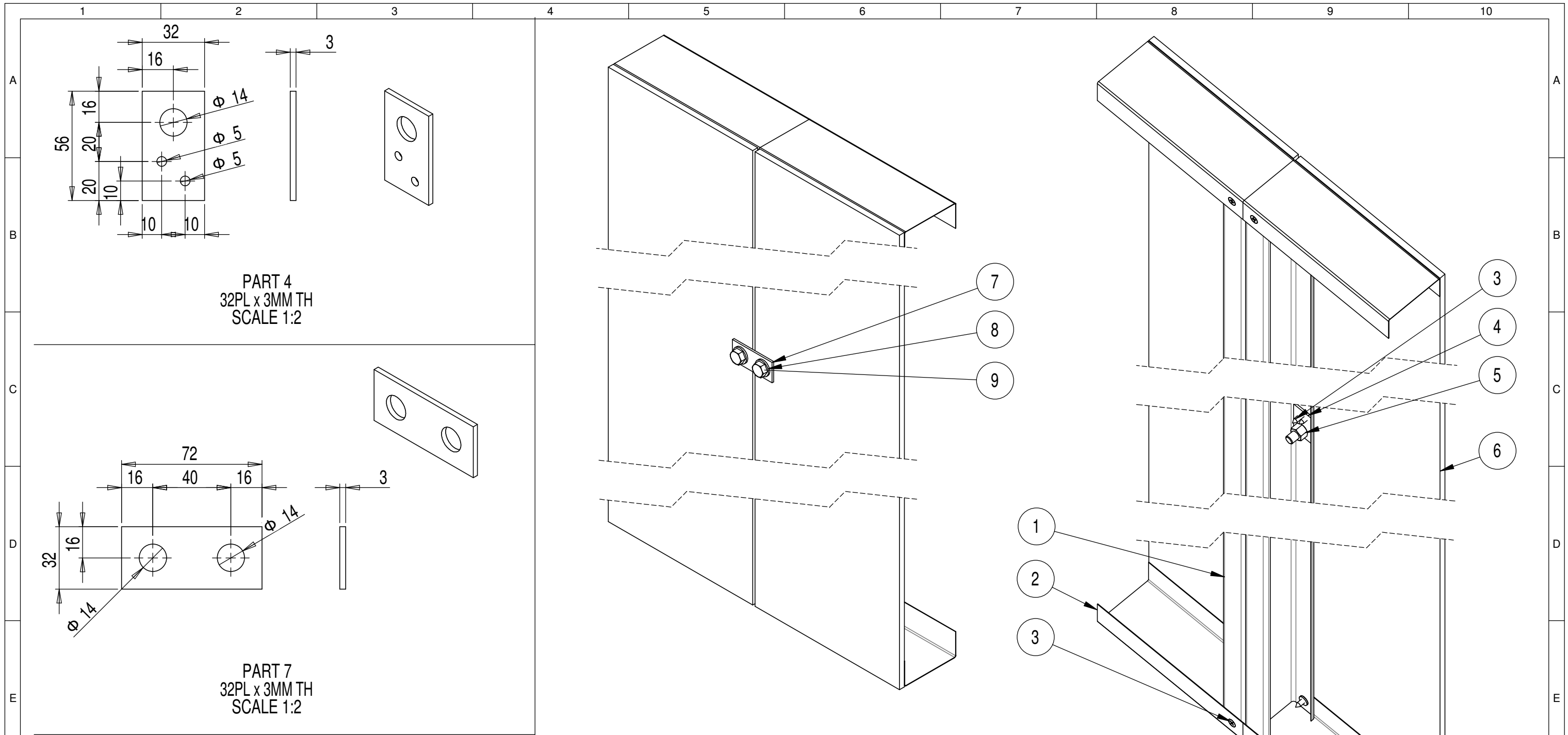
ITEM NO.	PART NUMBER	QTY.	ITEM NO.	PART NUMBER	QTY.
1	C15019 FLOOR BEARER	2	5	M6x18mm GX TEK SCREW	2
2	21mm STRUCTURAL PLYWOOD	1	6	M12 GALVANISED WASHER	1
3	WALL BOTTOM PLATE	1	7	Gr4.6 M12x40mm GALVANISED BOLT	1
4	WALL STUD	1	8	GALVANISED M12 NUT	1

<p>Desert Rose Team UOW Australia - Dubai</p>	<p>Team: TEAM UOW</p> <p>Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522</p> <p>Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au</p>	<p>Client: Dubai Electricity and Water Authority</p>	<p>AMENDMENTS</p> <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	<p>COPYRIGHT None; Project is Public</p> <p>LOT # M</p> <p>DRAWER A.FITZSIMMONS</p> <p>CHECKED J.W.YEAP</p> <p>DATE 21 March, 2018</p> <p>SCALE As Indicated @ A3</p>	<p>FLOOR TO WALL ASSEMBLY OVERLAP</p> <p>SHEET: 01 OF 02</p> <p>ST-204</p>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK										
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ITEM NO.	PART NUMBER	QTY.	ITEM NO.	PART NUMBER	QTY.
1	C15019 FLOOR BEARER	2	5	M6x18mm GX TEK SCREW	2
2	21mm STRUCTURAL PLYWOOD	1	6	M12 GALVANISED WASHER	1
3	WALL BOTTOM PLATE	1	7	Gr4.6 M12x40mm GALVANISED BOLT	1
4	WALL STUD	1	8	GALVANISED M12 NUT	1

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Updated to As-Built</td> <td>14/09/18</td> <td>JW</td> <td>RP</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1.	Updated to As-Built	14/09/18	JW	RP	COPYRIGHT None; Project is Public LOT # M DRAWER A.FITZSIMMONS CHECKED J.W.YEAP DATE 21 March, 2018 SCALE As Indicated @ A3	FLOOR TO WALL ASSEMBLY NON-OVERLAP ST-204 SHEET: 02 OF 02
	REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1.	Updated to As-Built	14/09/18	JW	RP											
1	2	3	4	5	6	7	8	9	10						



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	WALL STUD		2	6	9mm PLYWOOD		2
2	WALL BOTTOM PLATE		4	7	WALL TO WALL FIXING PLATE		1
3	M6x18mm GX TEK SCREW		12	8	M12 GALVANISED WASHER		2
4	NUT SUPPORT PLATE		2	9	M12x40mm GALVANISED BOLT		2
5	GALVANISED M12 NUT		2				



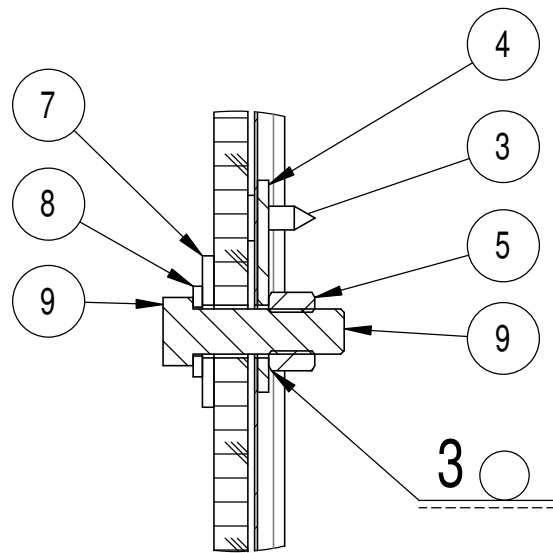
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Address: UNIVERSITY OF WOLLONGONG
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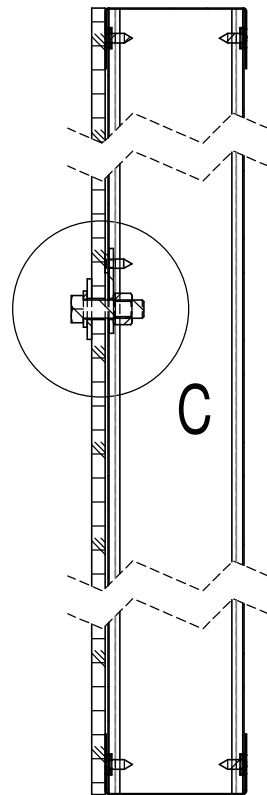
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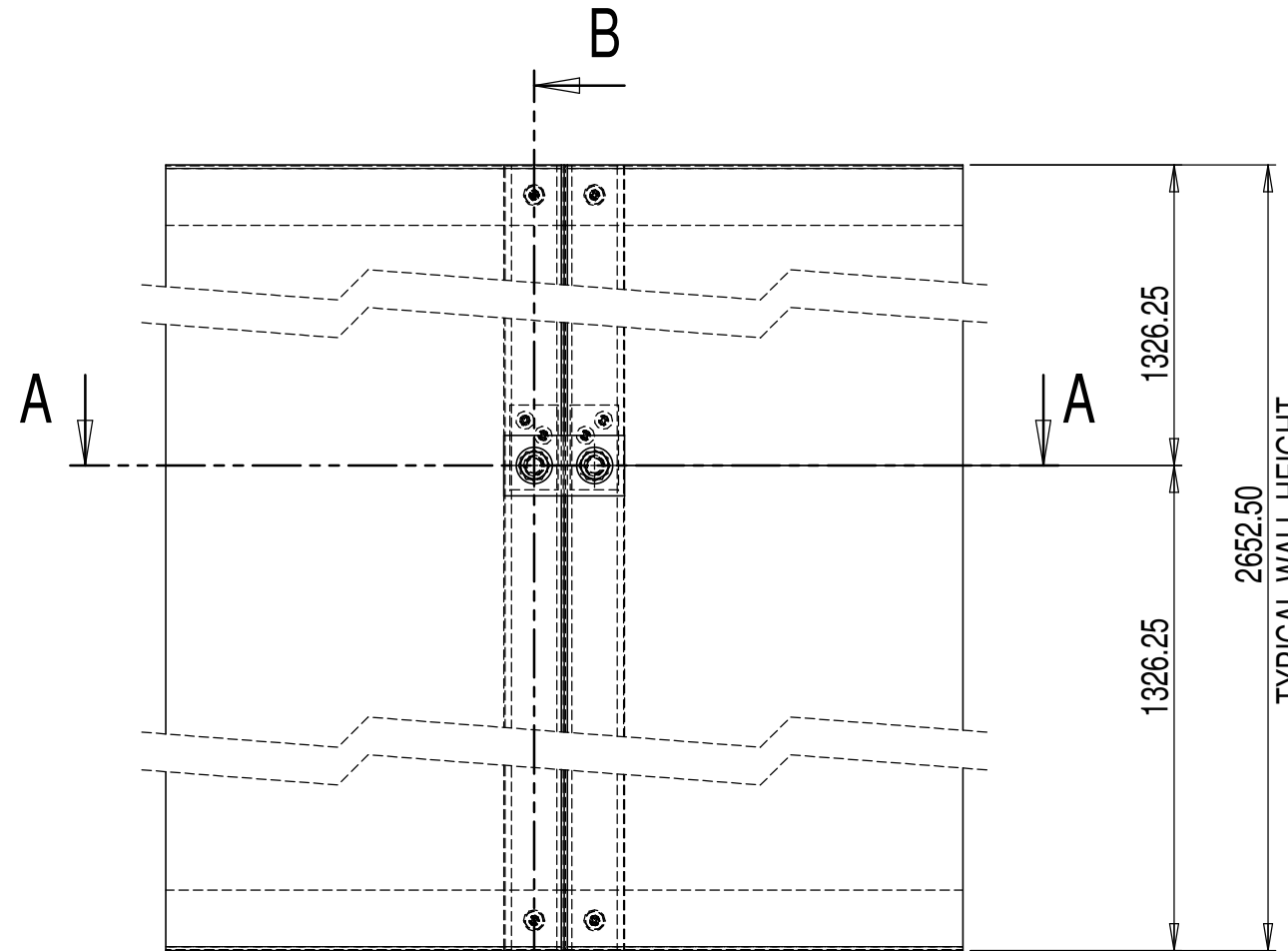
WALL TO WALL PARALLEL ASSEMBLY
ST-205
 SHEET: 01 OF 02



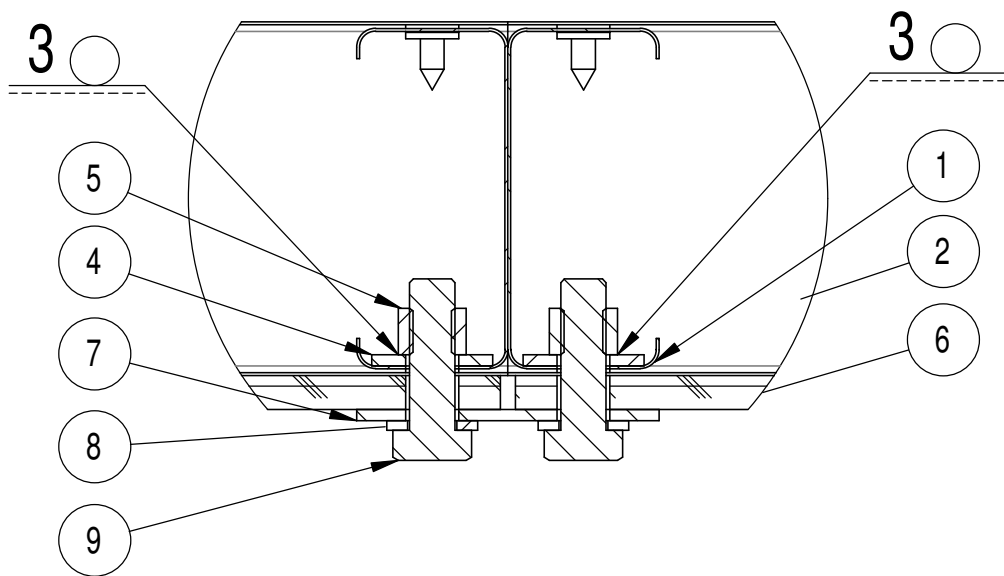
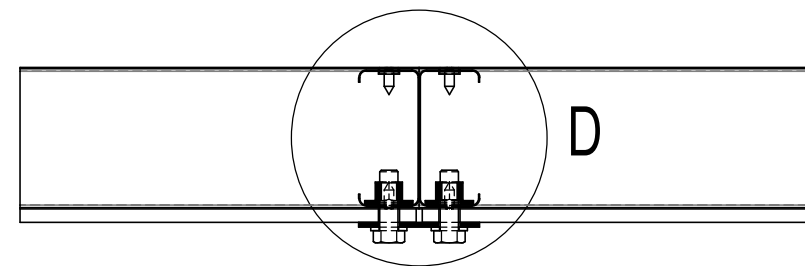
DETAIL C
SCALE 1:2



SECTION B-B
SCALE 1:5



SECTION A-A
SCALE 1:5



DETAIL D
SCALE 1:2



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Australia - Dubai

Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

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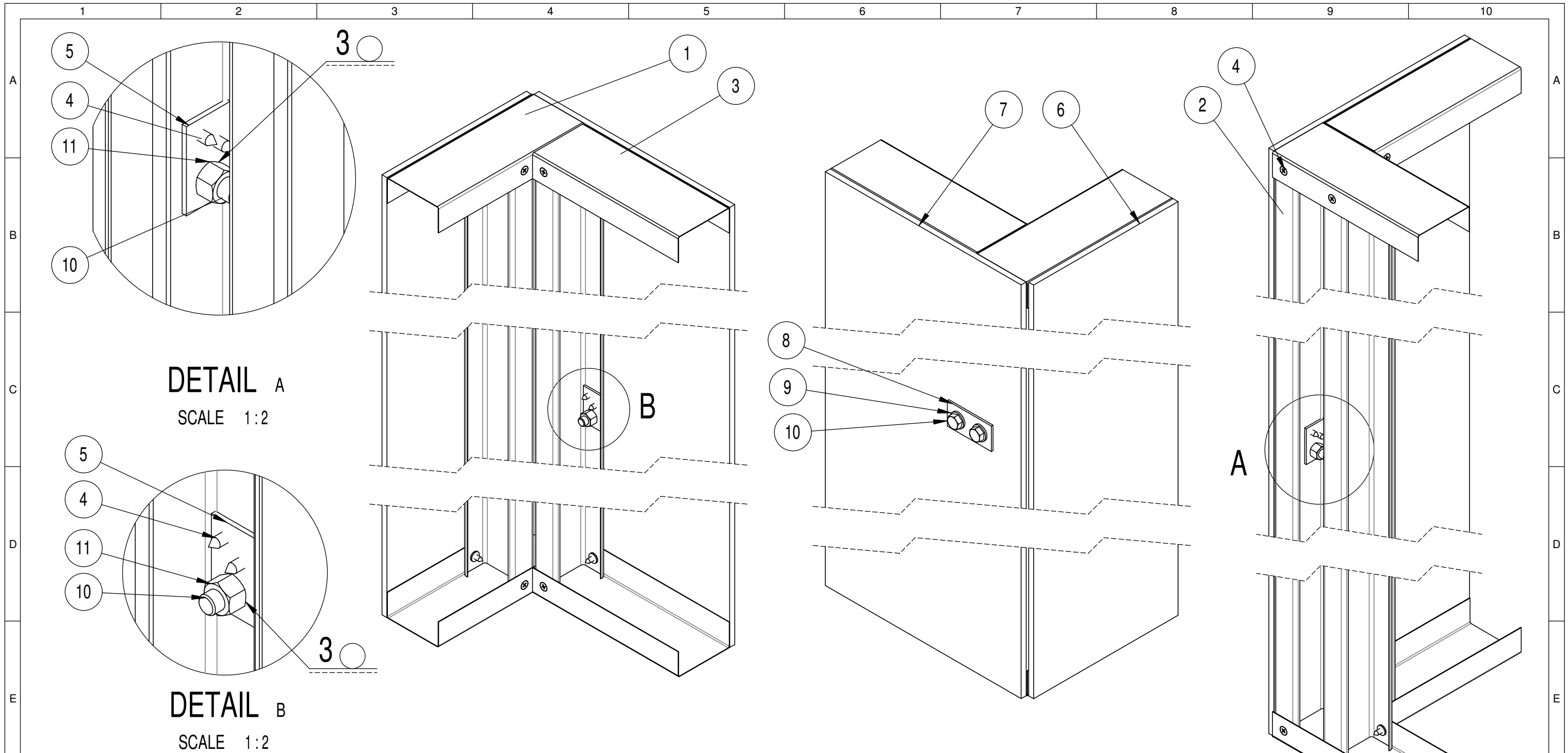
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SHEET:
02 OF 02

**WALL TO WALL
PARALLEL
ASSEMBLY**

ST-205



DETAIL A

SCALE 1:2

DETAIL B

SCALE 1:2

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	WALL TOP PLATE 1		2	7	9mm PLYWOOD 2		1
2	WALL STUD		3	8	WALL TO WALL FIXING PLATE		1
3	WALL TOP PLATE 2		2	9	M12 GALVANISED WASHER		2
4	M6x18mm GX TEK SCREW		16	10	M12x40mm GALVANISED BOLT		2
5	NUT SUPPORT PLATE		2	11	GALVANISED M12 NUT		2
6	9mm PLYWOOD 1		1				



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Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
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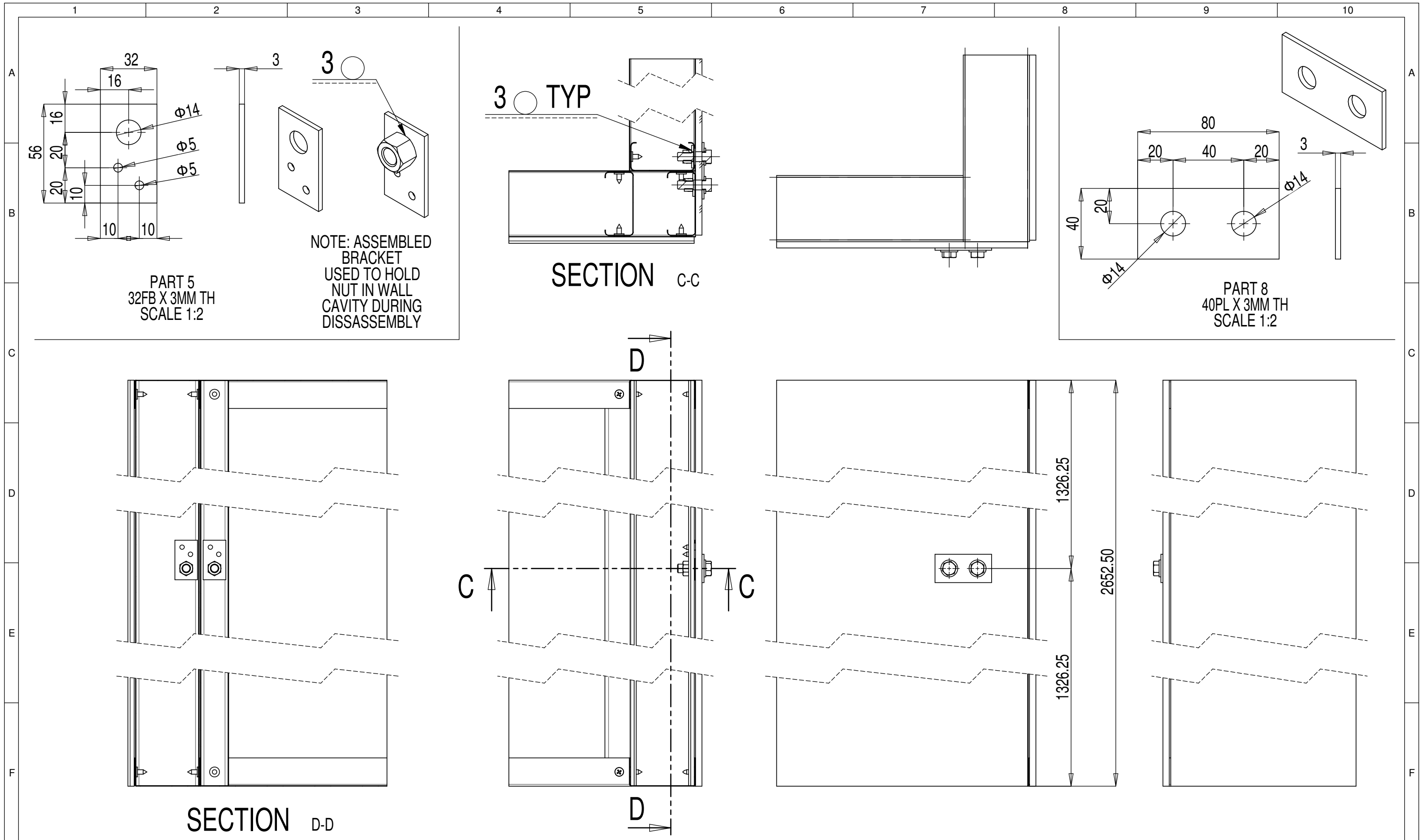
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WALL TO WALL PERPENDICULAR ASSEMBLY

SHEET: 01 OF 02

ST-206



NOTE: ASSEMBLED BRACKET USED TO HOLD NUT IN WALL CAVITY DURING DISSASSEMBLY

PART 5
32FB X 3MM TH
SCALE 1:2

PART 8
40PL X 3MM TH
SCALE 1:2

SECTION C-C

SECTION D-D

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Australia - Dubai

Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
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SOLAR DECATHLON
MIDDLE EAST
DUBAI, UAE - 2018

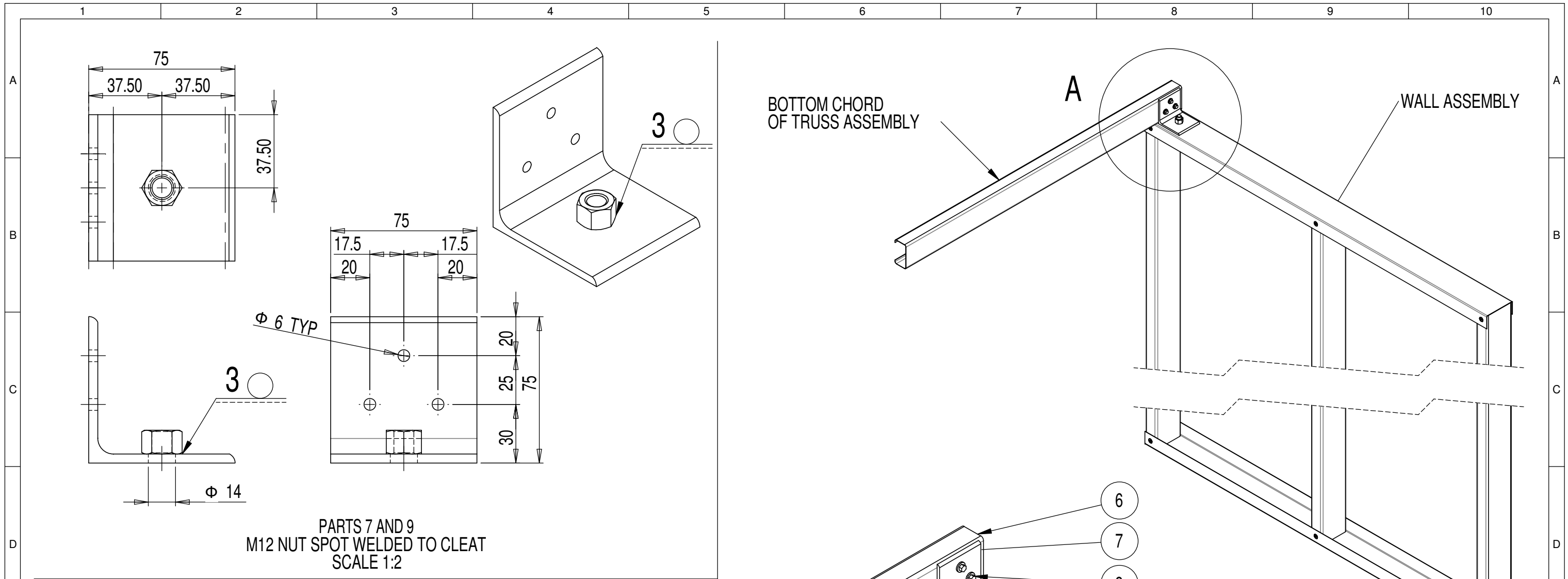
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DATE	21 March, 2018
SCALE	As Indicated @ A3

WALL TO WALL PERPENDICULAR ASSEMBLY

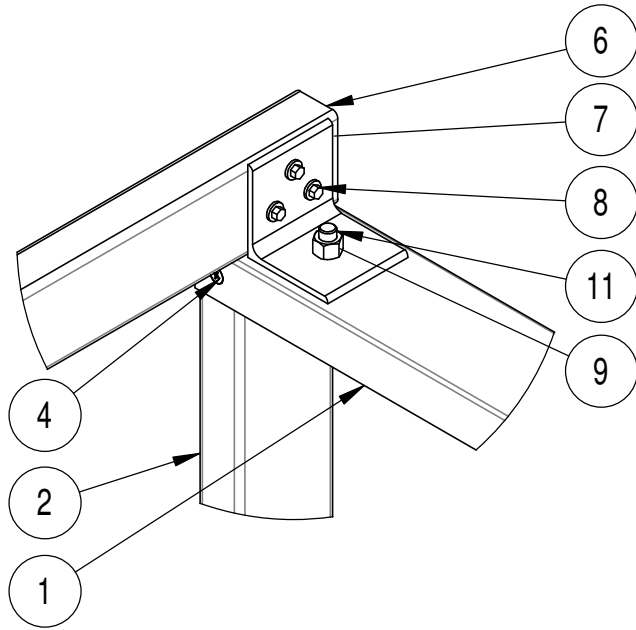
SHEET: 02 OF 02

ST-206



BOTTOM CHORD OF TRUSS ASSEMBLY

WALL ASSEMBLY



DETAIL A

SCALE 1:5

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	WALL TOP HAT		2
2	WALL STUD		3
3	WALL NOGGING		2
4	M6x18mm GX TEK SCREW		24
5	9mm PLYWOOD		1
6	TRUSS BOTTOM CHORD		1
7	75x75x5mm EA x 75mm		1
8	BUILDEX 14-12x42mm METAL TEK		3
9	GALVANISED M12 NUT		1
10	M12 GALVANISED WASHER		1
11	M12x40mm GALVANISED BOLT		1



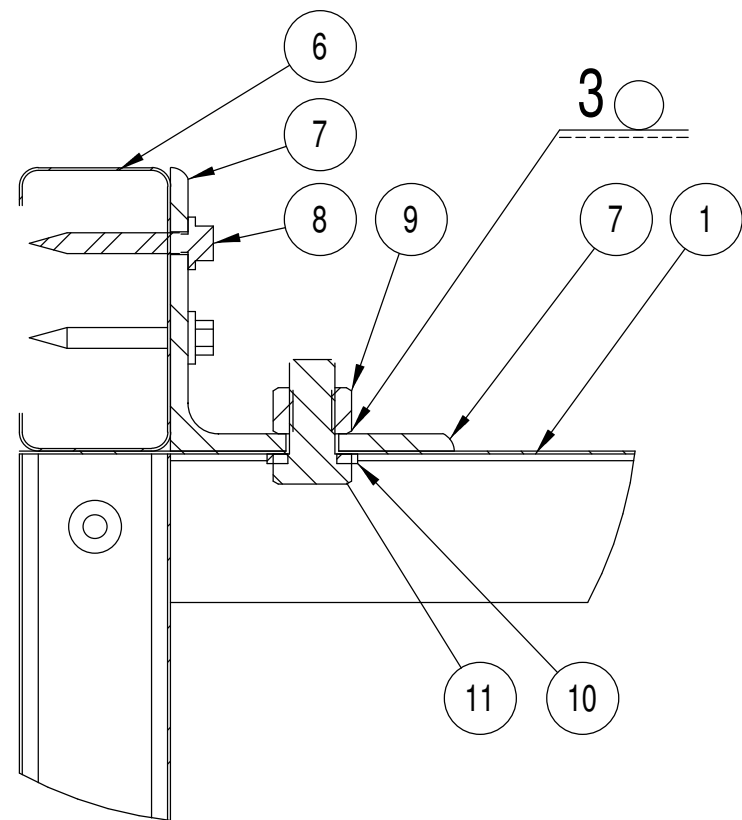
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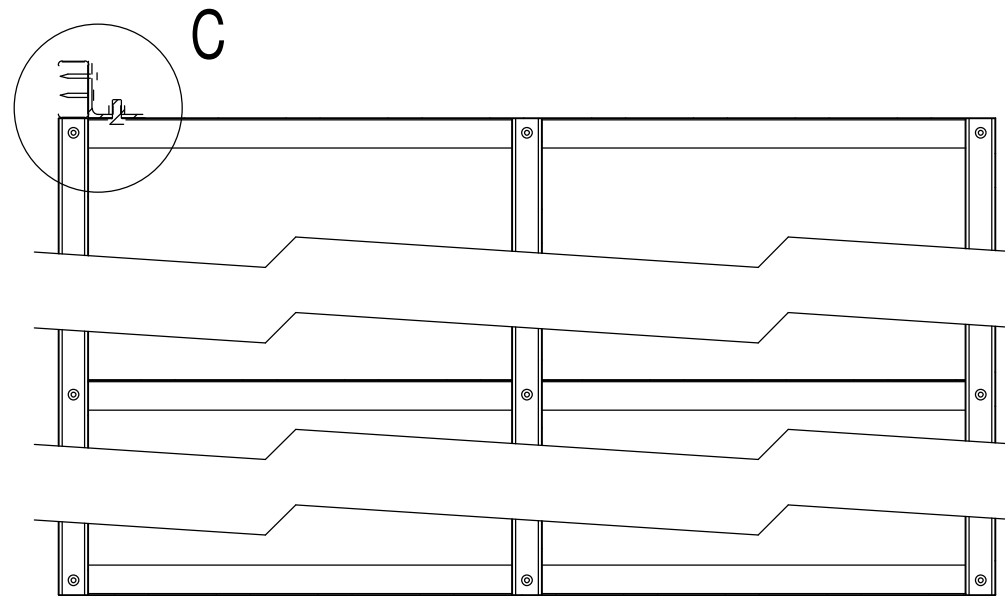
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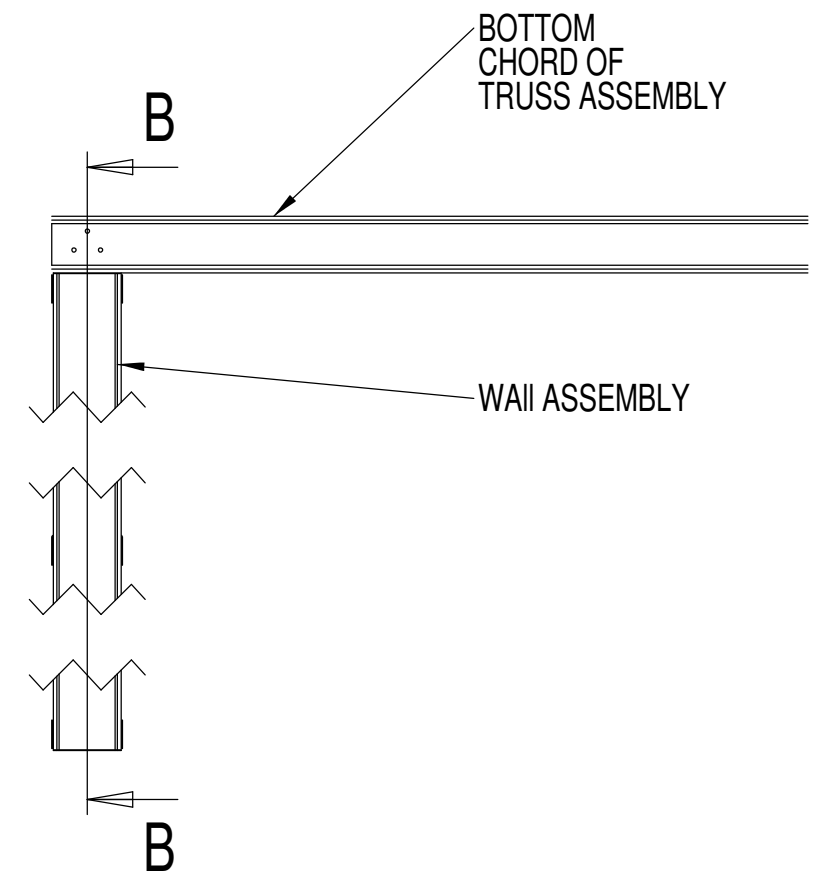
WALL TO TRUSS ON STUD ASSEMBLY
 SHEET: 01 OF 02
ST-207



DETAIL C
SCALE 1:2



SECTION B-B
SCALE 1:10

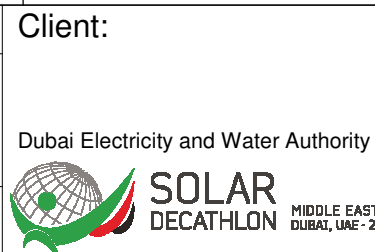


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	WALL TOP HAT		2
2	WALL STUD		3
3	WALL NOGGING		2
4	M6x18mm GX TEK SCREW		24
5	9mm PLYWOOD		1
6	TRUSS BOTTOM CHORD		1
7	75x75x5mm EA x 75mm		1
8	BUILDEX 14-12x42mm METAL TEK		3
9	GALVANISED M12 NUT		1
10	M12 GALVANISED WASHER		1
11	M12x40mm GALVANISED BOLT		1

NOTE: PART 7 IS FIXED TO THE BOTTOM CHORD OF THE TRUSS ASSEMBLY USING 3 OFF PART 8. PART 9 IS SPOT WELDED TO PART 7 TO HOLD THE NUT DURING DISSASSEMBLY. DURING ASSEMBLY THE TRUSS IS LOWERED ONTO THE WALL ASSEMBLY AND PARTS 10 AND 11 ARE INSTALLED TO FIX THE TRUSS ASSEMBLY TO THE WALL ASSEMBLY.



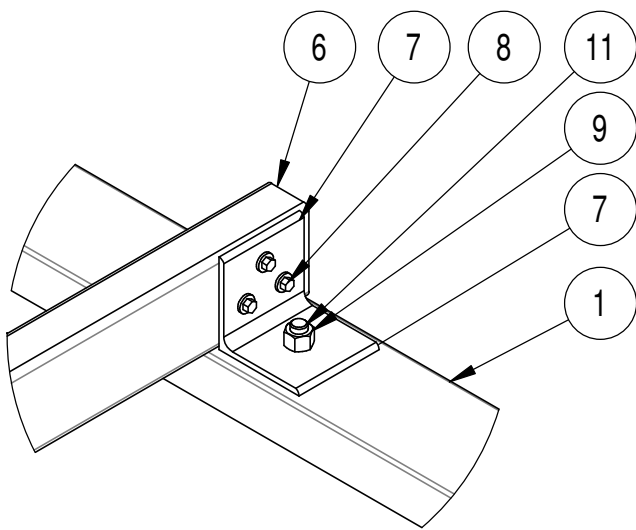
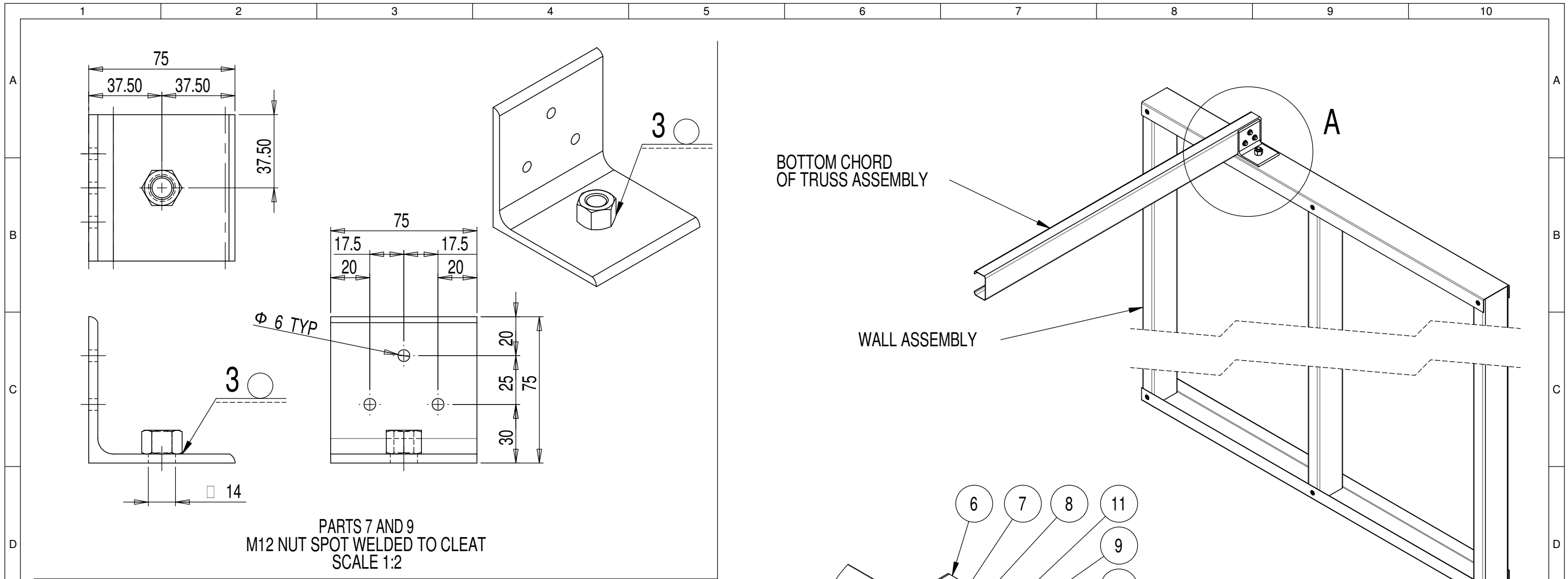
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**WALL TO TRUSS
ON STUD
ASSEMBLY**
SHEET:
02 OF 02
ST-207



DETAIL A
SCALE 1:5

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	WALL TOP HAT		2
2	WALL STUD		3
3	WALL NOGGING		2
4	M6x18mm GX TEK SCREW		24
5	9mm PLYWOOD		1
6	TRUSS BOTTOM CHORD		1
7	75x75x5mm EA x 75mm		1
8	BUILDEX 14-12x42mm METAL TEK		3
9	GALVANISED M12 NUT		1
10	M12 GALVANISED WASHER		1
11	M12x40mm GALVANISED BOLT		1



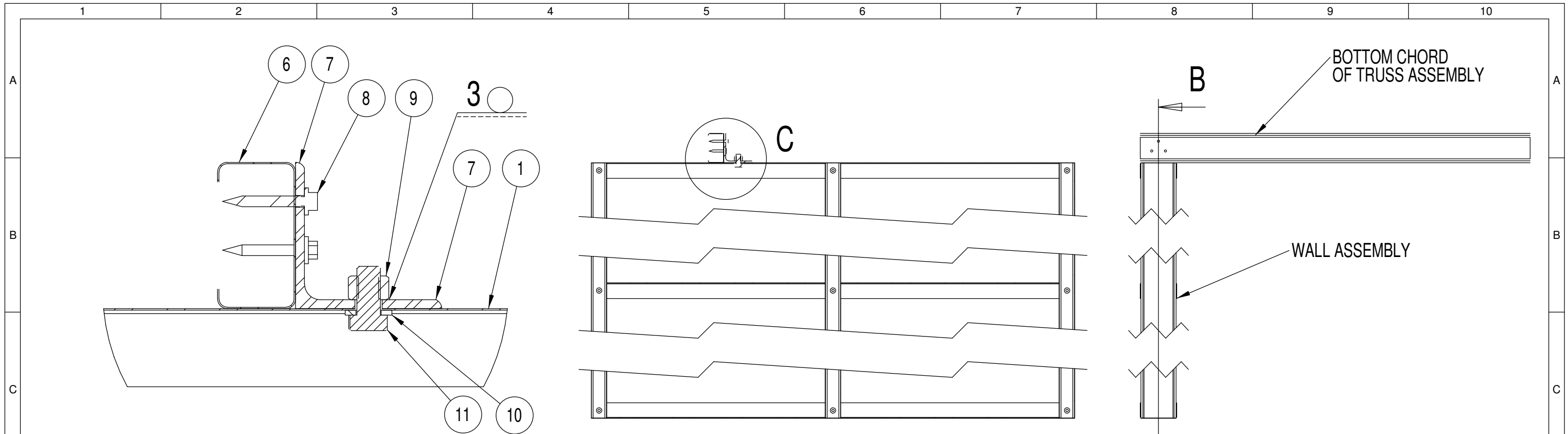
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SCALE As Indicated @ A3

WALL TO TRUSS OFF STUD ASSEMBLY
ST-208
 SHEET: 01 OF 02



DETAIL C
SCALE 1:2

SECTION B-B
SCALE 1:10

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	WALL TOP HAT		2
2	WALL STUD		3
3	WALL NOGGING		2
4	M6x18mm GX TEK SCREW		24
5	9mm PLYWOOD		1
6	TRUSS BOTTOM CHORD		1
7	75x75x5mm EA x 75mm		1
8	BUILDEX 14-12x42mm METAL TEK		3
9	GALVANISED M12 NUT		1
10	M12 GALVANISED WASHER		1
11	M12x40mm GALVANISED BOLT		1

NOTE: PART 7 IS FIXED TO THE BOTTOM CHORD OF THE TRUSS ASSEMBLY USING 3 OFF PART 8. PART 9 IS SPOT WELDED TO PART 7 TO HOLD THE NUT DURING DISSASSEMBLY. DURING ASSEMBLY THE TRUSS IS LOWERED ONTO THE WALL ASSEMBLY AND PARTS 10 AND 11 ARE INSTALLED TO FIX THE TRUSS ASSEMBLY TO THE WALL ASSEMBLY.



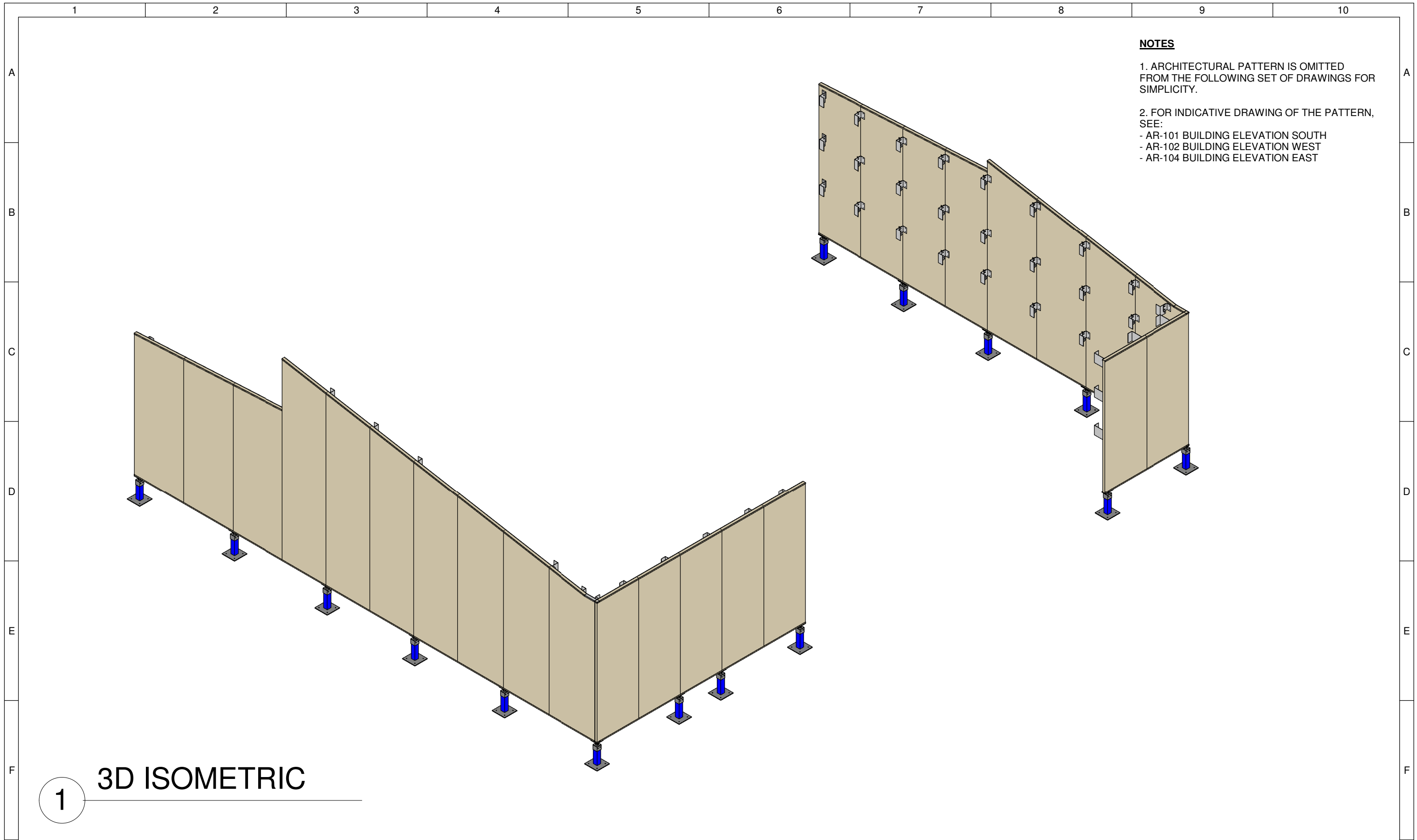
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SOLAR DECATHLON MIDDLE EAST DUBAI, UAE - 2018

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SCALE As Indicated @ A3

WALL TO TRUSS OFF STUD ASSEMBLY
ST-208
 SHEET: 02 OF 02





NOTES

1. ARCHITECTURAL PATTERN IS OMITTED FROM THE FOLLOWING SET OF DRAWINGS FOR SIMPLICITY.

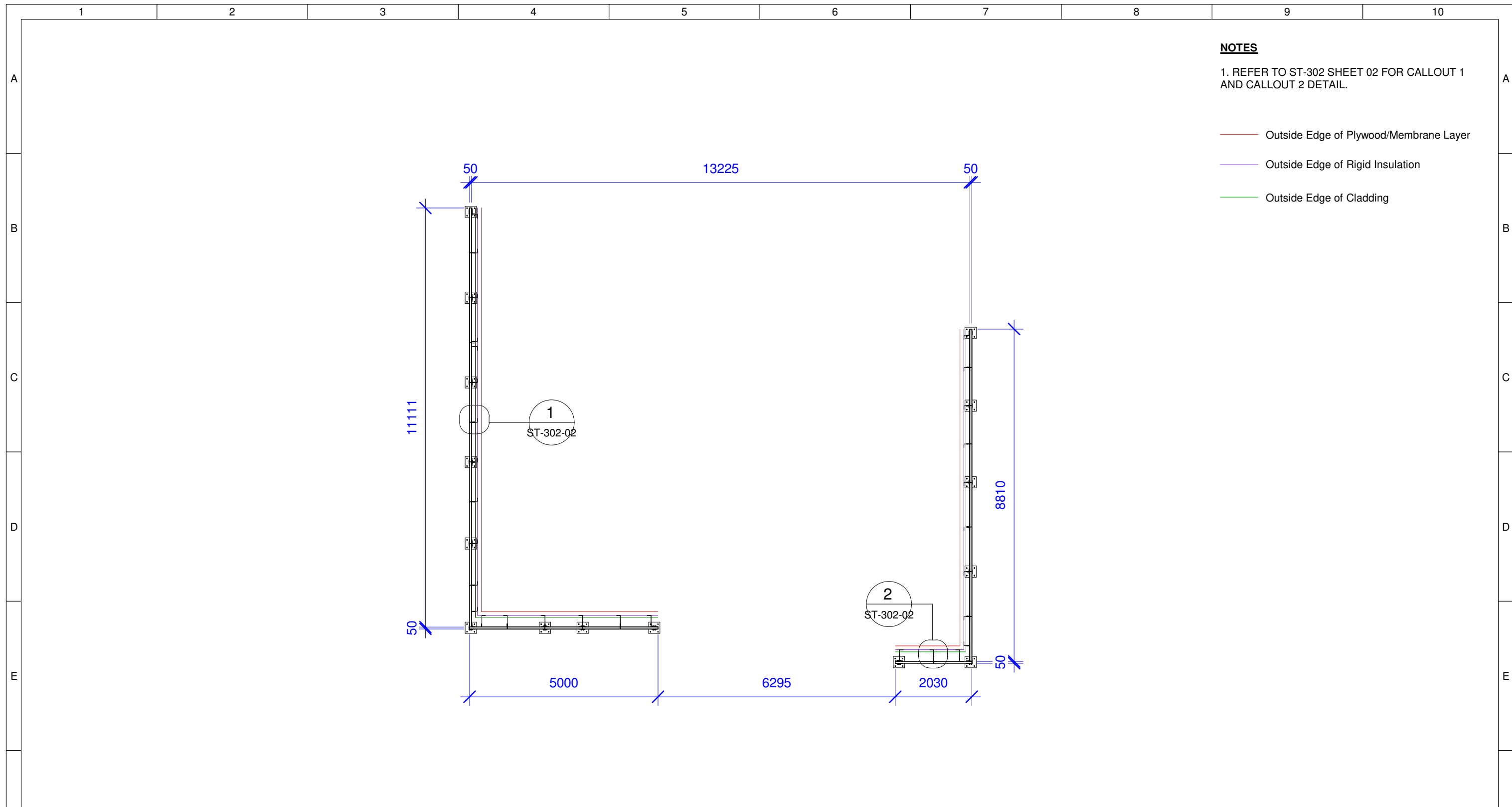
2. FOR INDICATIVE DRAWING OF THE PATTERN, SEE:

- AR-101 BUILDING ELEVATION SOUTH
- AR-102 BUILDING ELEVATION WEST
- AR-104 BUILDING ELEVATION EAST

1 3D ISOMETRIC

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	<p>Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522</p>		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK		1	Updated to As-Built.	15/09/18	RP	CM
REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1	Updated to As-Built.	15/09/18	RP	CM										
<p>Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au</p>	<p>SCALE NTS @ A3</p>	<p>DRAWER R.PRANDALOS</p>	<p>CHECKED C.MCDOWELL</p>	<p>DATE 27 May, 2018</p>										

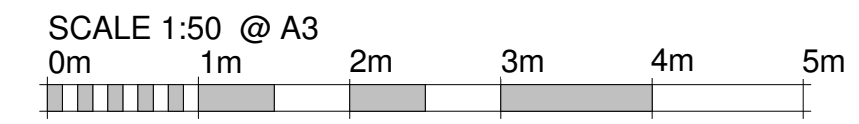
ST-301



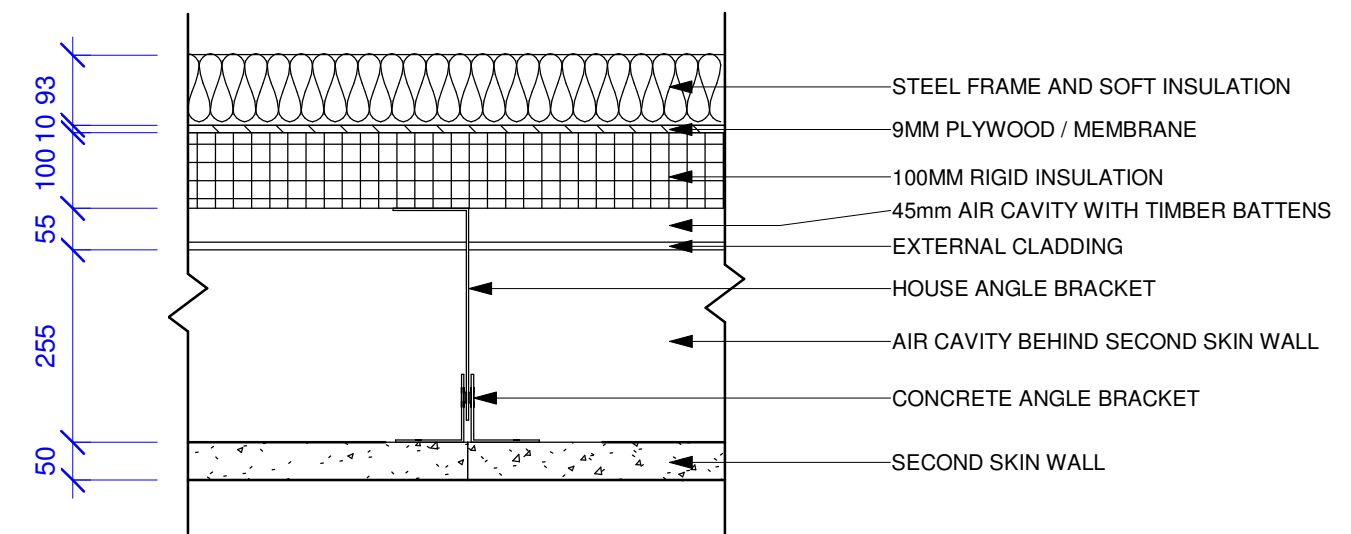
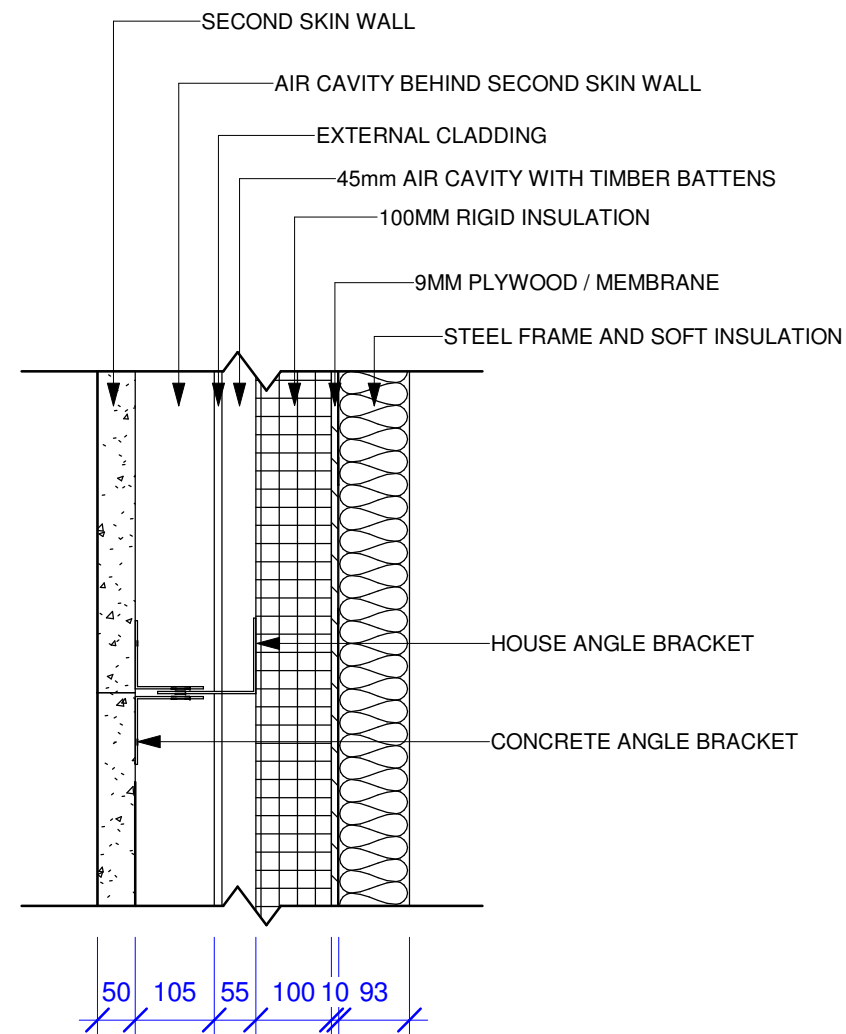
NOTES
 1. REFER TO ST-302 SHEET 02 FOR CALLOUT 1 AND CALLOUT 2 DETAIL.

- Outside Edge of Plywood/Membrane Layer
- Outside Edge of Rigid Insulation
- Outside Edge of Cladding

1 Second Skin Wall Site Plan
 1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT None; Project is Public		 NORTH	SECOND SKIN WALL SITE PLAN																			
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Simplified dimensions. Added 2 callout details. Scale now 1:100.</td> <td>07/09/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK			1	Simplified dimensions. Added 2 callout details. Scale now 1:100.	07/09/18	RP	CM	2	Updated to As-Built.	15/09/18	RP	CM	<table border="1"> <tbody> <tr> <td>LOT</td> <td># M</td> </tr> <tr> <td>DRAWER</td> <td>R.PRANDALOS</td> </tr> <tr> <td>CHECKED</td> <td>C.MCDOWELL</td> </tr> <tr> <td>DATE</td> <td>27 May, 2018</td> </tr> <tr> <td>SCALE</td> <td>1 : 100 @ A3</td> </tr> </tbody> </table>	LOT	# M	DRAWER	R.PRANDALOS	CHECKED	C.MCDOWELL	DATE	27 May, 2018
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DRAWER	R.PRANDALOS																												
CHECKED	C.MCDOWELL																												
DATE	27 May, 2018																												
SCALE	1 : 100 @ A3																												



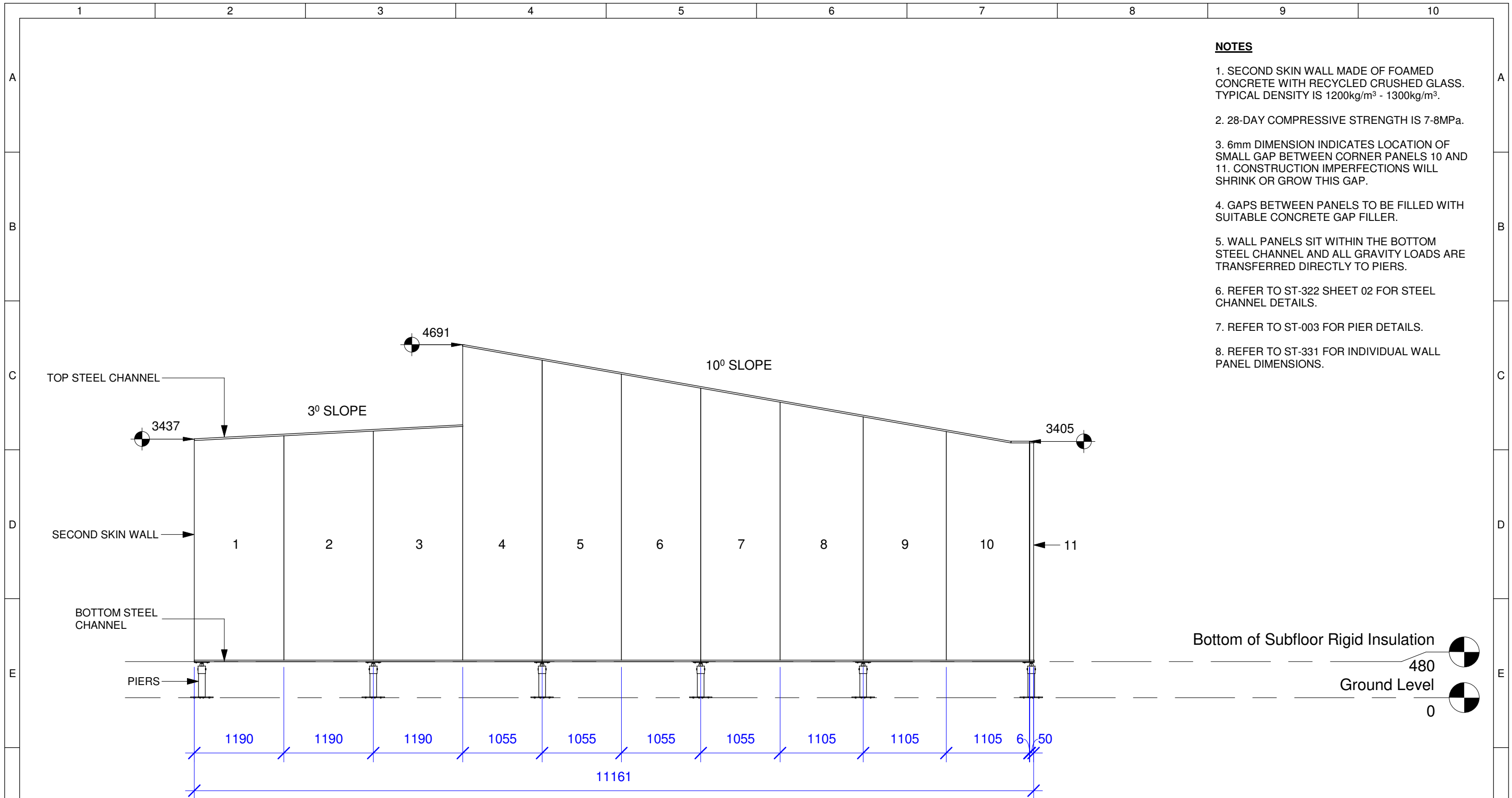
NOTES

- EAST WALL AIR CAVITY HAS THE SAME DIMENSIONS AS THE WEST WALL CAVITY (DETAIL 1).
- REFER ST-304 SHEET 02 AND 01 FOR HOUSE ANGLE BRACKET DETAIL.
- REFER ST-304 SHEET 04 FOR CONCRETE ANGLE BRACKET DETAIL.
- HOUSE ANGLE BRACKET PLACED ON RIGID INSULATION AND FASTENED TO STEEL FRAME OR WOOD NOGGINGS USING MINIMUM 4 X 14-10X175MM TYPE 17 SCREWS.
- FOR FURTHER EXTERIOR WALL DETAILS, REFER TO AR-341.

1 West Wall Air Cavity - Plan
1 : 10

2 South Wall Air Cavity - Plan
1 : 10

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Added hatching to better distinguish wall layers.</td> <td>11/09/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Added hatching to better distinguish wall layers.	11/09/18	RP	CM	2	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 7 September, 2018 SCALE 1 : 10 @ A3	SECOND SKIN WALL AIR CAVITY DETAILS ST-302 SHEET: 02 OF 02
	REV.	DESCRIPTION	DATE	DRAWN	CHECK															
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2	Updated to As-Built.	15/09/18	RP	CM																
1 2 3 4 5 6 7 8 9 10																				



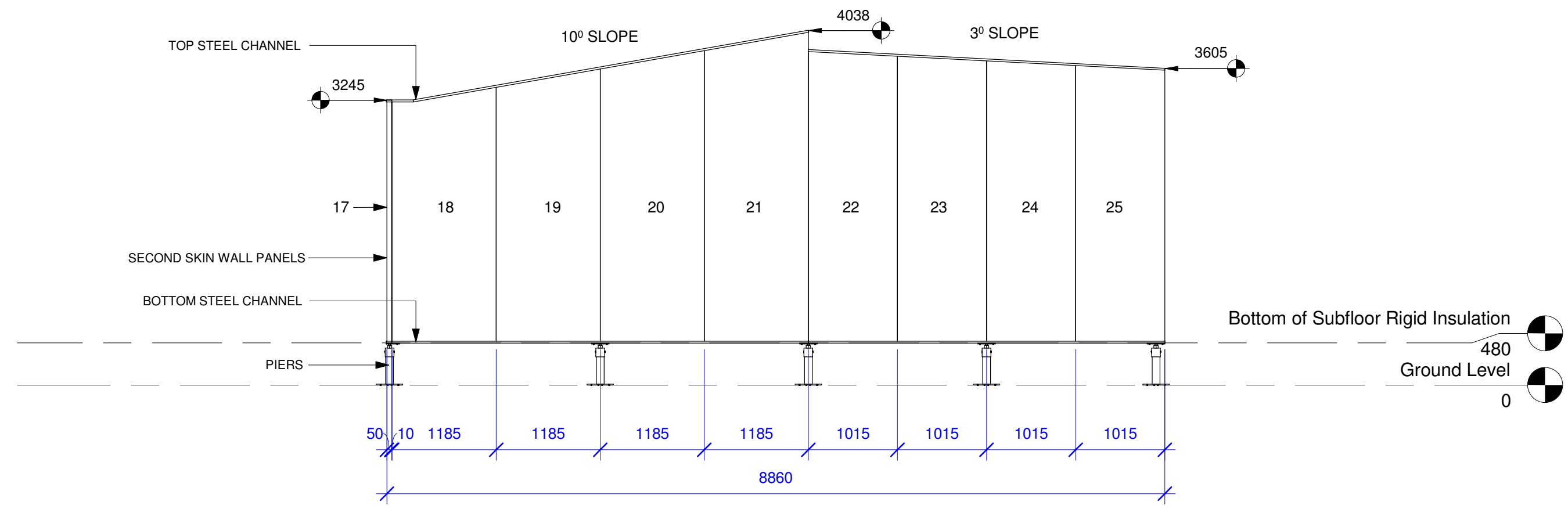
- NOTES**
1. SECOND SKIN WALL MADE OF FOAMED CONCRETE WITH RECYCLED CRUSHED GLASS. TYPICAL DENSITY IS 1200kg/m³ - 1300kg/m³.
 2. 28-DAY COMPRESSIVE STRENGTH IS 7-8MPa.
 3. 6mm DIMENSION INDICATES LOCATION OF SMALL GAP BETWEEN CORNER PANELS 10 AND 11. CONSTRUCTION IMPERFECTIONS WILL SHRINK OR GROW THIS GAP.
 4. GAPS BETWEEN PANELS TO BE FILLED WITH SUITABLE CONCRETE GAP FILLER.
 5. WALL PANELS SIT WITHIN THE BOTTOM STEEL CHANNEL AND ALL GRAVITY LOADS ARE TRANSFERRED DIRECTLY TO PIERS.
 6. REFER TO ST-322 SHEET 02 FOR STEEL CHANNEL DETAILS.
 7. REFER TO ST-003 FOR PIER DETAILS.
 8. REFER TO ST-331 FOR INDIVIDUAL WALL PANEL DIMENSIONS.

1 West Elevation
1 : 50



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Adjusted widths to simple dimensions. Amended panel 10 design.</td> <td>11/06/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Moved model down 18mm to match architectural model.</td> <td>07/09/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>3</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Adjusted widths to simple dimensions. Amended panel 10 design.	11/06/18	RP	CM	2	Moved model down 18mm to match architectural model.	07/09/18	RP	CM	3	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 27 May, 2018 SCALE 1 : 50 @ A3	SECOND SKIN WALL WEST ELEVATION ST-303 SHEET: 01 OF 03
	REV.	DESCRIPTION	DATE	DRAWN	CHECK																				
	1	Adjusted widths to simple dimensions. Amended panel 10 design.	11/06/18	RP	CM																				
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3	Updated to As-Built.	15/09/18	RP	CM																					

NOTES

1. SECOND SKIN WALL MADE OF FOAMED CONCRETE WITH RECYCLED CRUSHED GLASS. TYPICAL DENSITY IS 1200kg/m³ - 1300kg/m³.
2. 28-DAY COMPRESSIVE STRENGTH IS 7-8MPa.
3. 10mm DIMENSION INDICATES LOCATION OF SMALL GAP BETWEEN CORNER PANELS 17 AND 18. CONSTRUCTION IMPERFECTIONS WILL SHRINK OR GROW THIS GAP.
4. GAPS BETWEEN PANELS TO BE FILLED WITH SUITABLE CONCRETE GAP FILLER.
5. WALL PANELS SIT WITHIN THE BOTTOM STEEL CHANNEL AND ALL GRAVITY LOADS ARE TRANSFERRED DIRECTLY TO PIERS.
6. REFER TO ST-322 SHEET 02 FOR STEEL CHANNEL DETAILS.
7. REFER TO ST-003 FOR PIER DETAILS.
8. REFER TO ST-331 FOR INDIVIDUAL WALL PANEL DIMENSIONS.



1 East Elevation
1 : 50

	Team: TEAM UOW	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT		SECOND SKIN WALL EAST ELEVATION ST-303																						
	Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Amended widths to simple dimensions. Fixed incorrect heights.</td> <td>30/05/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Updated panel 18 design and panel widths, cleaned annotations.</td> <td>11/06/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>3</td> <td>Moved model down 18mm to match architectural model.</td> <td>07/09/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>4</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>			REV.	DESCRIPTION	DATE		DRAWN	CHECK	1	Amended widths to simple dimensions. Fixed incorrect heights.	30/05/18	RP	CM	2	Updated panel 18 design and panel widths, cleaned annotations.	11/06/18	RP	CM	3	Moved model down 18mm to match architectural model.	07/09/18	RP	CM	4	Updated to As-Built.	15/09/18	RP	CM
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Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au				DRAWER	R.PRANDALOS	CHECKED		C.MCDOWELL	SHEET: 03 OF 03																						
						DATE		27 May, 2018																							
						SCALE		1 : 50 @ A3																							

1 2 3 4 5 6 7 8 9 10

A
B
C
D
E
F

A
B
C
D
E
F

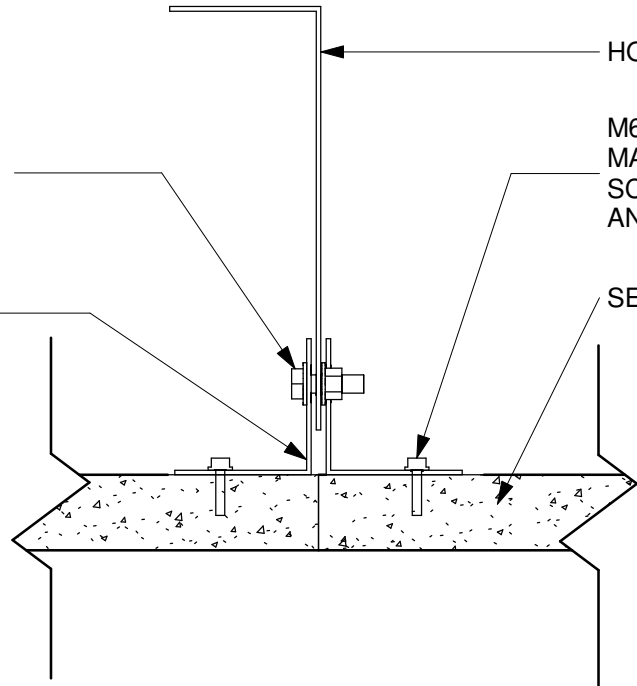
M12x40mm BOLT,
WASHERS, NUT
ASSEMBLY

HOUSE BRACKET

M6x30mm
MASONRY
SCREW
ANCHOR

CONCRETE
BRACKET

SECOND SKIN WALL



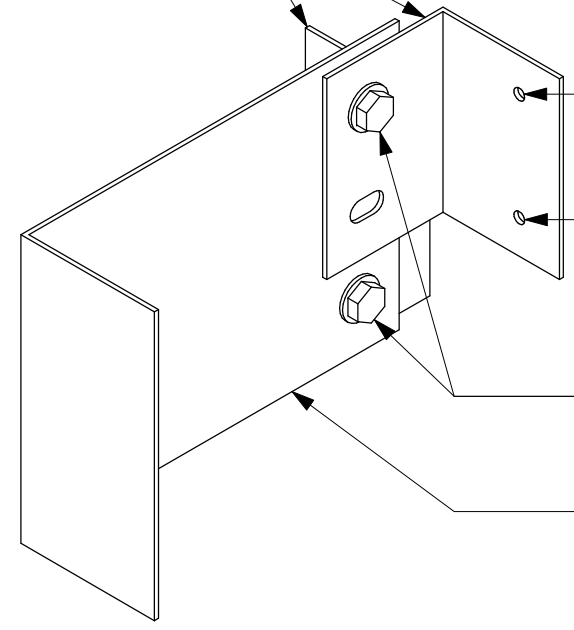
TOP

CONCRETE BRACKET

HOLE FOR
M6x30mm
MASONRY
SCREW
ANCHOR

M12x40mm BOLT,
WASHERS, NUT
ASSEMBLY

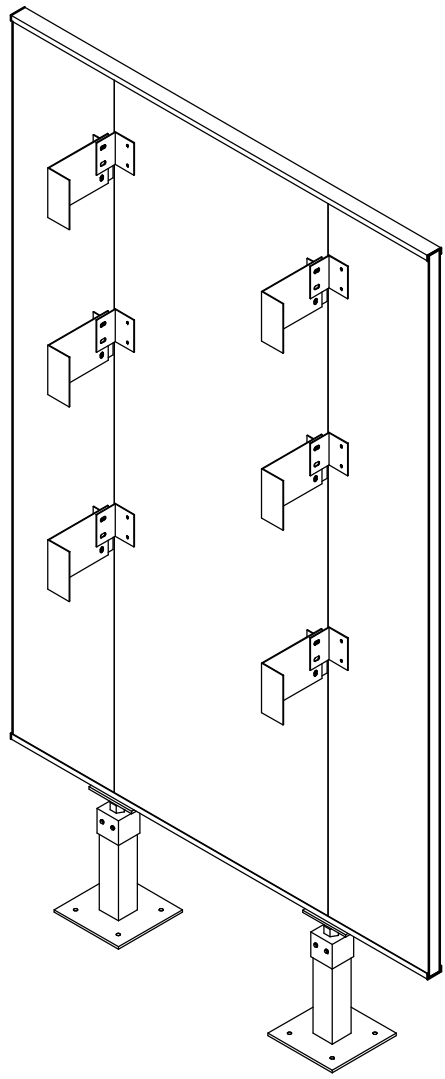
HOUSE BRACKET



3D ISOMETRIC

NOTES

1. DRAWING TITLE "SSW" = SECOND SKIN WALL
2. THE FOLLOWING BRACKET ASSEMBLY DETAILS ILLUSTRATE THE SUPPORT STRUCTURE FOR THE SECOND SKIN WALL.
3. FOR VISUAL CLARITY, SECOND SKIN WALL AND MASONRY ANCHORS HIDDEN FROM FRONT VIEW OF BRACKETS ASSEMBLY.
4. REFER ST-304 SHEET 02 AND 03 OF HOUSE BRACKET DETAILS.
5. REFER ST-304 SHEET 04 FOR CONCRETE BRACKET DETAILS.



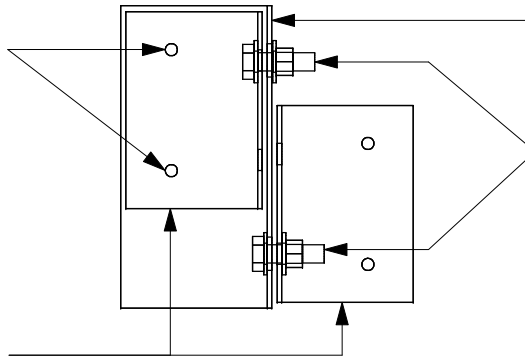
3D FULL ASSEMBLY

HOLES FOR
M6x30mm
MASONRY
SCREW
ANCHOR

HOUSE BRACKET

M12x40mm BOLT,
WASHERS, NUT
ASSEMBLY

CONCRETE
BRACKET



FRONT

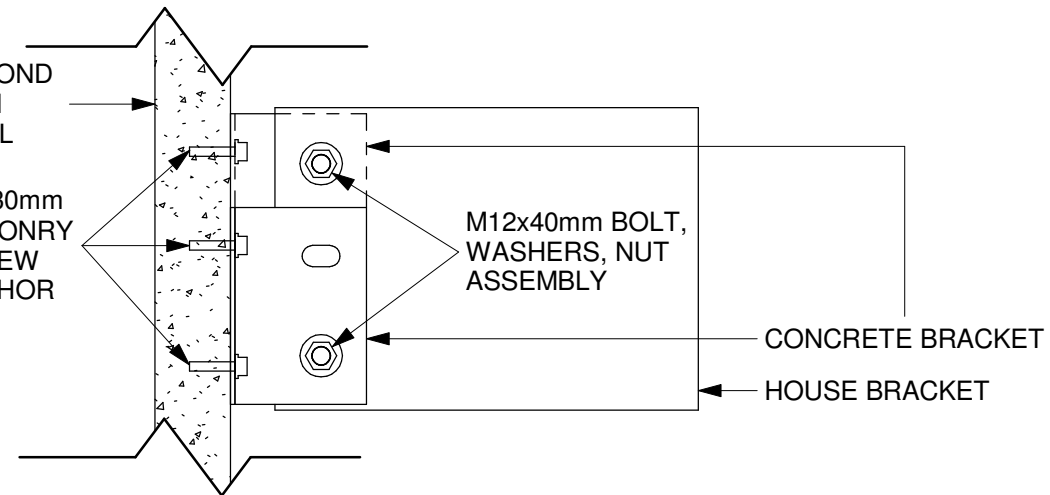
SECOND
SKIN
WALL

M6x30mm
MASONRY
SCREW
ANCHOR

M12x40mm BOLT,
WASHERS, NUT
ASSEMBLY

CONCRETE BRACKET

HOUSE BRACKET



SIDE

House and Concrete Bracket Assembly Details

1
1 : 5



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

Client: Dubai Electricity and Water Authority
SOLAR DECATHLON MIDDLE EAST
DUBAI, UAE - 2018

AMENDMENTS				
REV.	DESCRIPTION	DATE	DRAWN	CHECK
1	Updated to As-Built.	15/09/18	RP	CM

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DRAWER R.PRANDALOS
CHECKED C.MCDOWELL
DATE 12 September, 2018
SCALE 1 : 5 @ A3

SSW TYPICAL
BRACKETS
ASSEMBLY

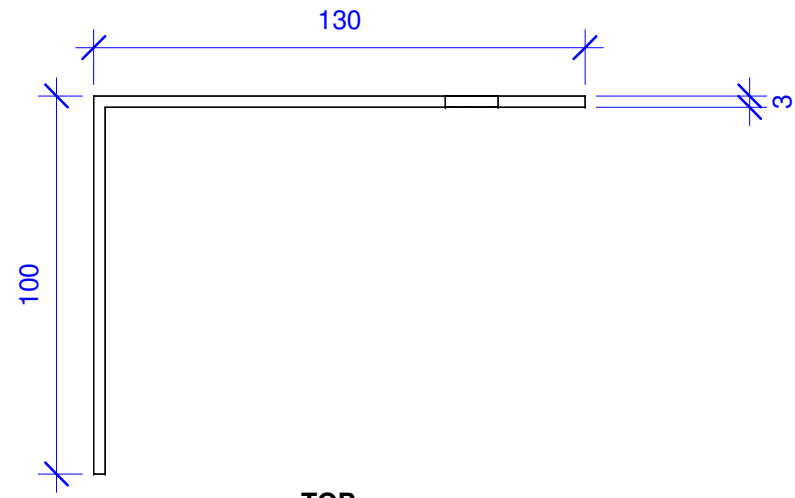
SHEET:
01 OF 04

ST-304

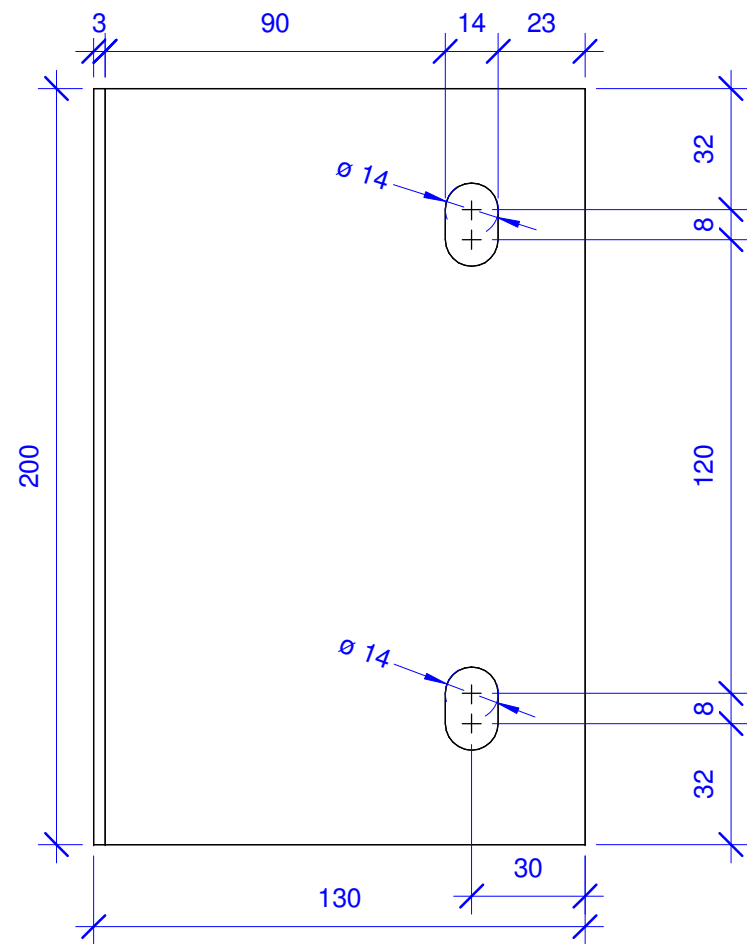
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G

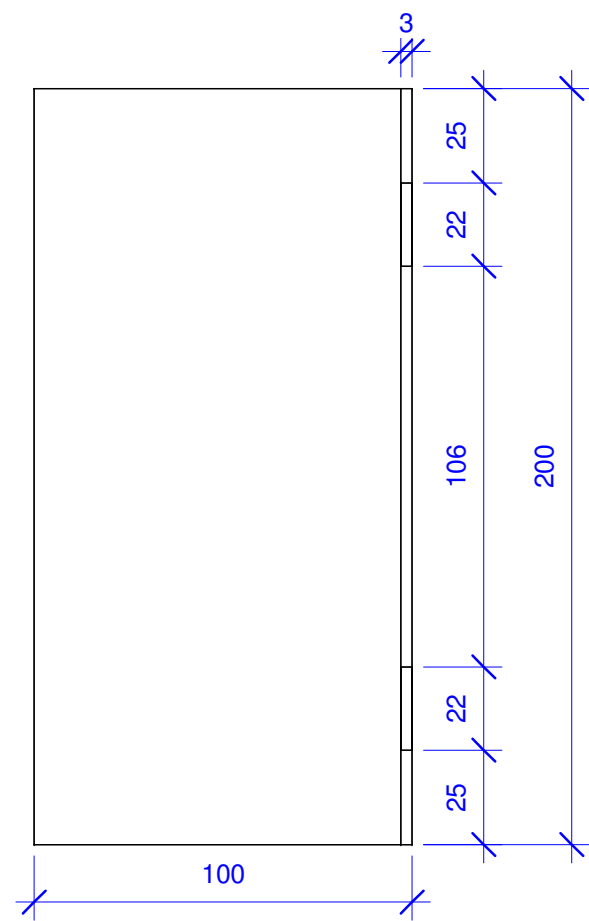
G



TOP



FRONT



LEFT SIDE

NOTES

- 1. ANGLE HOUSE BRACKET SHOWN IS FOR THE EASTERN AND WESTERN FACES OF THE HOUSE.
- 2. BRACKETS MANUFACTURED FROM 3mm GRADE 300 GALVANISED STEEL.
- 3. QUANTITY: 64

1

HOUSE BRACKET DETAIL - EAST / WEST

1 : 2



Team: TEAM UOW
 Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
 Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

Client: Dubai Electricity and Water Authority
 SOLAR DECATHLON MIDDLE EAST DUBAI, UAE - 2018

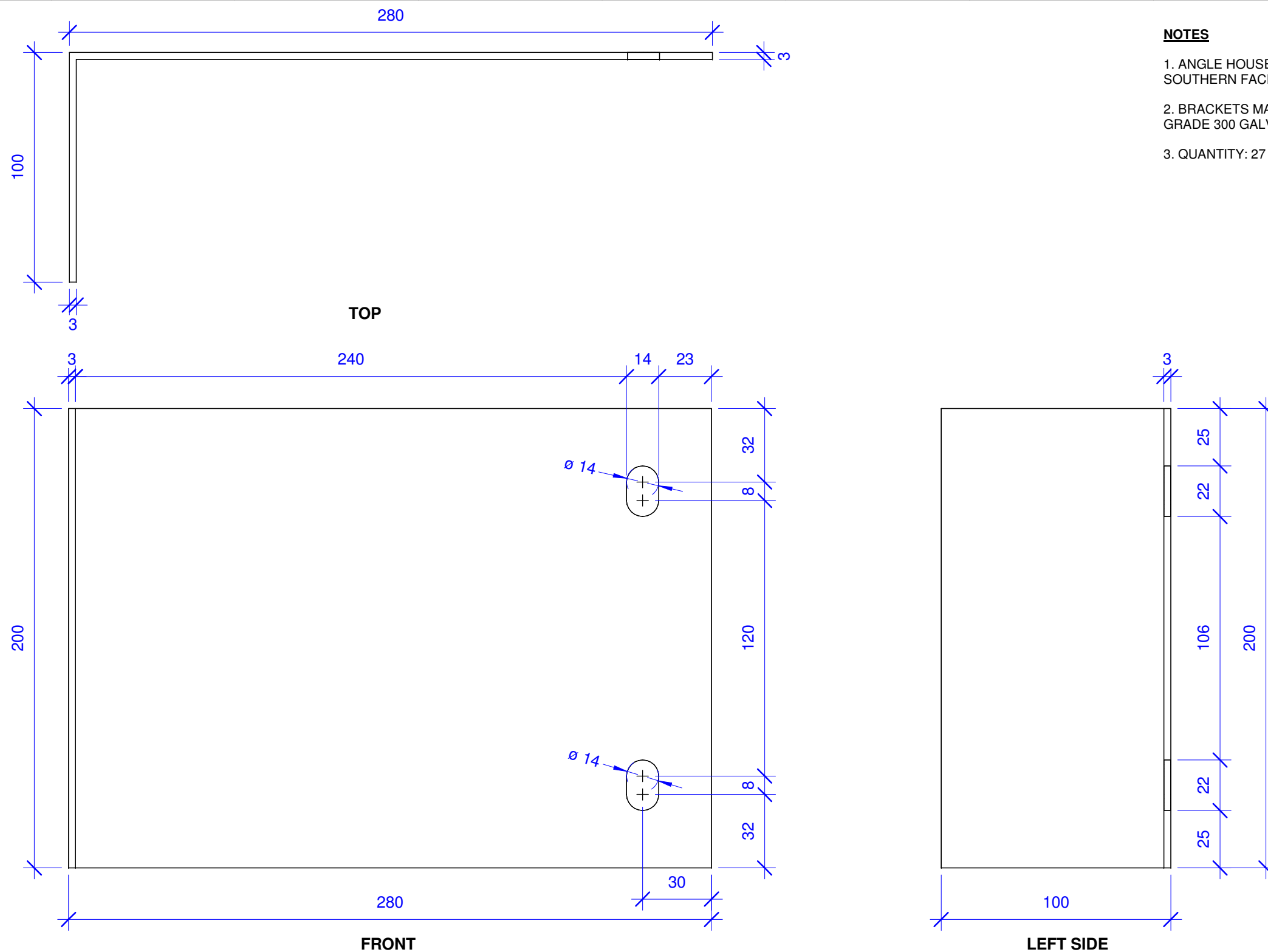
AMENDMENTS				
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2	Updated to As-Built.	15/09/18	RP	CM

COPYRIGHT	
None; Project is Public	
LOT	# M
DRAWER	R.PRANDALOS
CHECKED	C.MCDOWELL
DATE	8 June, 2018
SCALE	1 : 2 @ A3

**HOUSE BRACKET
 DETAIL - EAST /
 WEST**

SHEET:
 02 OF 04

ST-304



- NOTES**
1. ANGLE HOUSE BRACKET SHOWN IS FOR THE SOUTHERN FACE OF THE HOUSE.
 2. BRACKETS MANUFACTURED FROM 3mm GRADE 300 GALVANISED STEEL.
 3. QUANTITY: 27

HOUSE BRACKET DETAIL - SOUTH

1

1 : 2



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

Client: Dubai Electricity and Water Authority

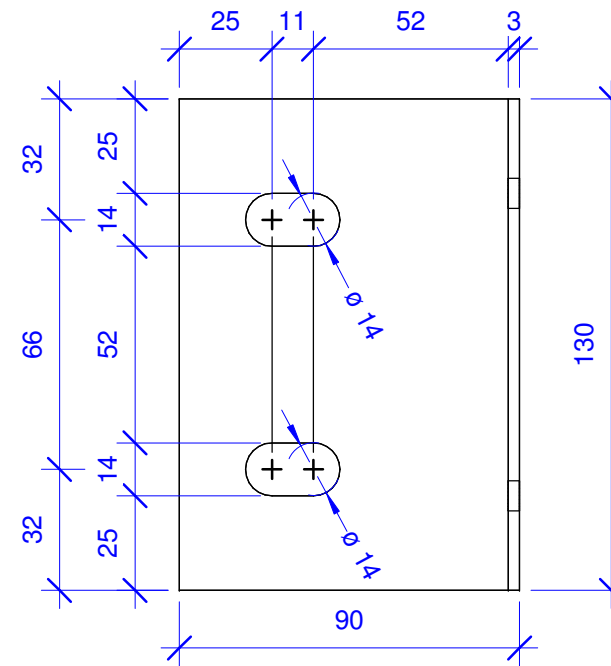
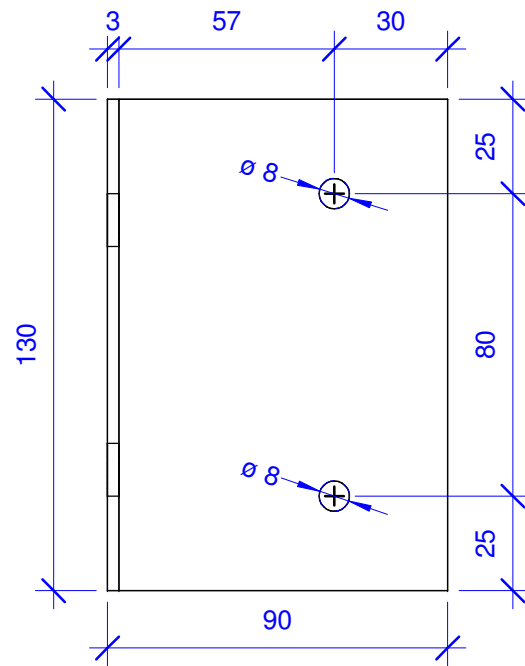
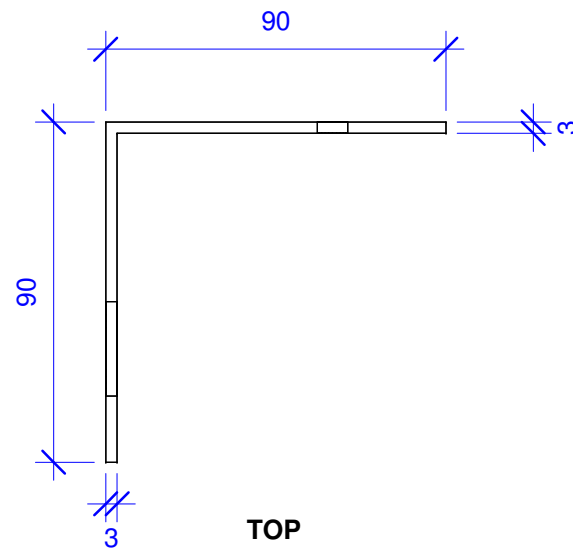
AMENDMENTS				
REV.	DESCRIPTION	DATE	DRAWN	CHECK
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2	Updated to As-Built.	15/09/18	RP	CM

COPYRIGHT	
None; Project is Public	
LOT	# M
DRAWER	R.PRANDALOS
CHECKED	C.MCDOWELL
DATE	11 June, 2018
SCALE	1 : 2 @ A3

HOUSE BRACKET
DETAIL - SOUTH

SHEET:
03 OF 04

ST-304



NOTES

1. CONCRETE ANGLE BRACKETS SHOWN ARE CONNECTED TO THE SECOND SKIN WALL PANELS ON WESTERN, SOUTHERN AND EASTERN FACES OF THE HOUSE (ALL FACES).
2. BRACKETS MANUFACTURED FROM 3mm GRADE 300 GALVANISED STEEL.
3. QUANTITY: 157

1

Concrete Angle Bracket Detail

1 : 2



Desert Rose
Team UOW
Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
WOLLONGONG
NSW, AUSTRALIA 2522

Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

Client:

Dubai Electricity and Water Authority



AMENDMENTS

REV.	DESCRIPTION	DATE	DRAWN	CHECK
1	Changed bracket thickness from 5mm to 3mm.	08/07/18	RP	CM
2	Changed masonry anchor hole from 10mm to 8mm.	08/07/18	RP	CM
3	Added elongation to M12 bolt hole.	07/09/18	RP	CM
4	Updated to As-Built.	15/09/18	RP	CM

COPYRIGHT

None; Project is Public

LOT # M

DRAWER R.PRANDALOS

CHECKED C.MCDOWELL

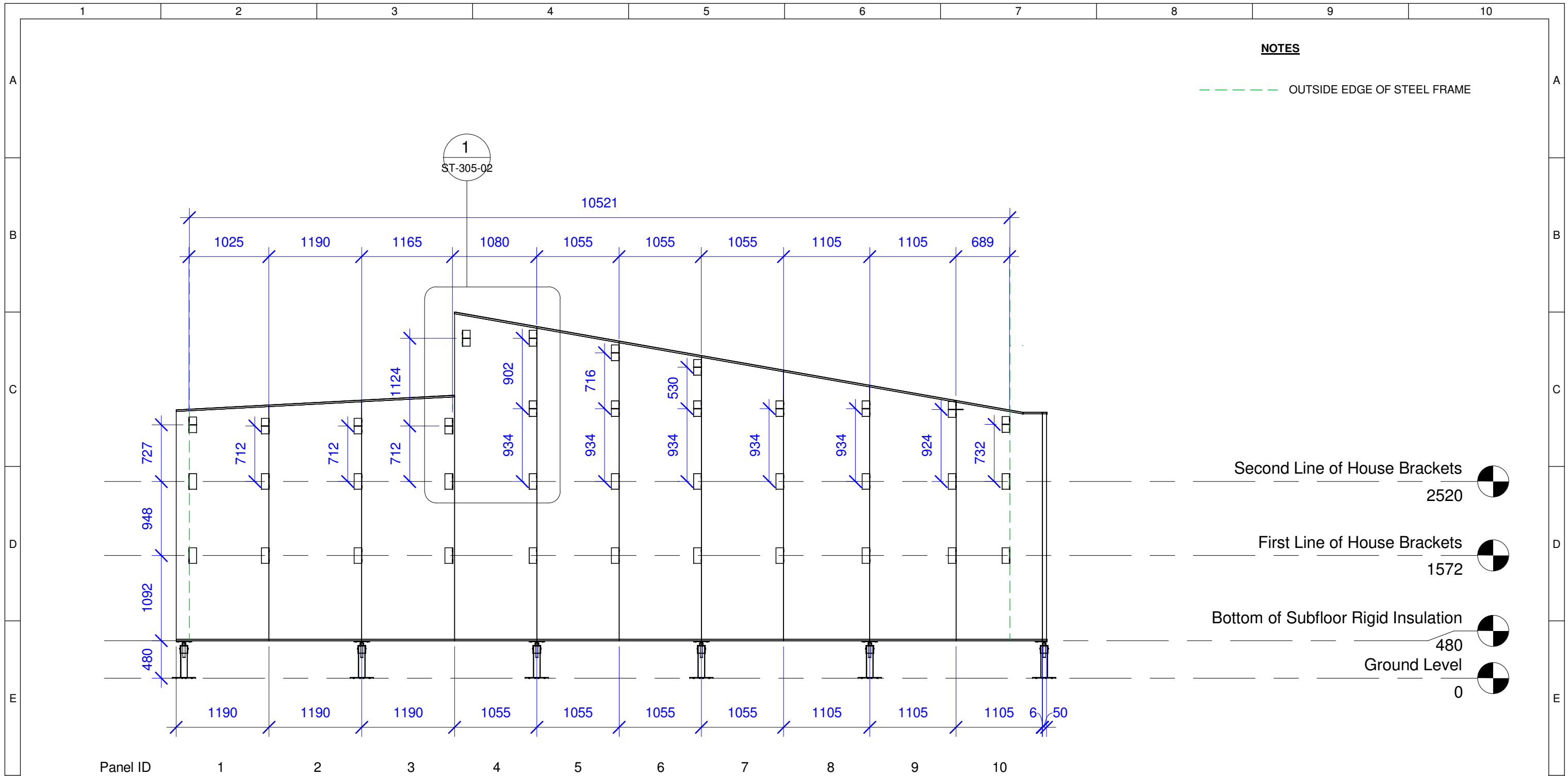
DATE 11 June, 2018

SCALE 1 : 2 @ A3

CONCRETE ANGLE BRACKET DETAIL

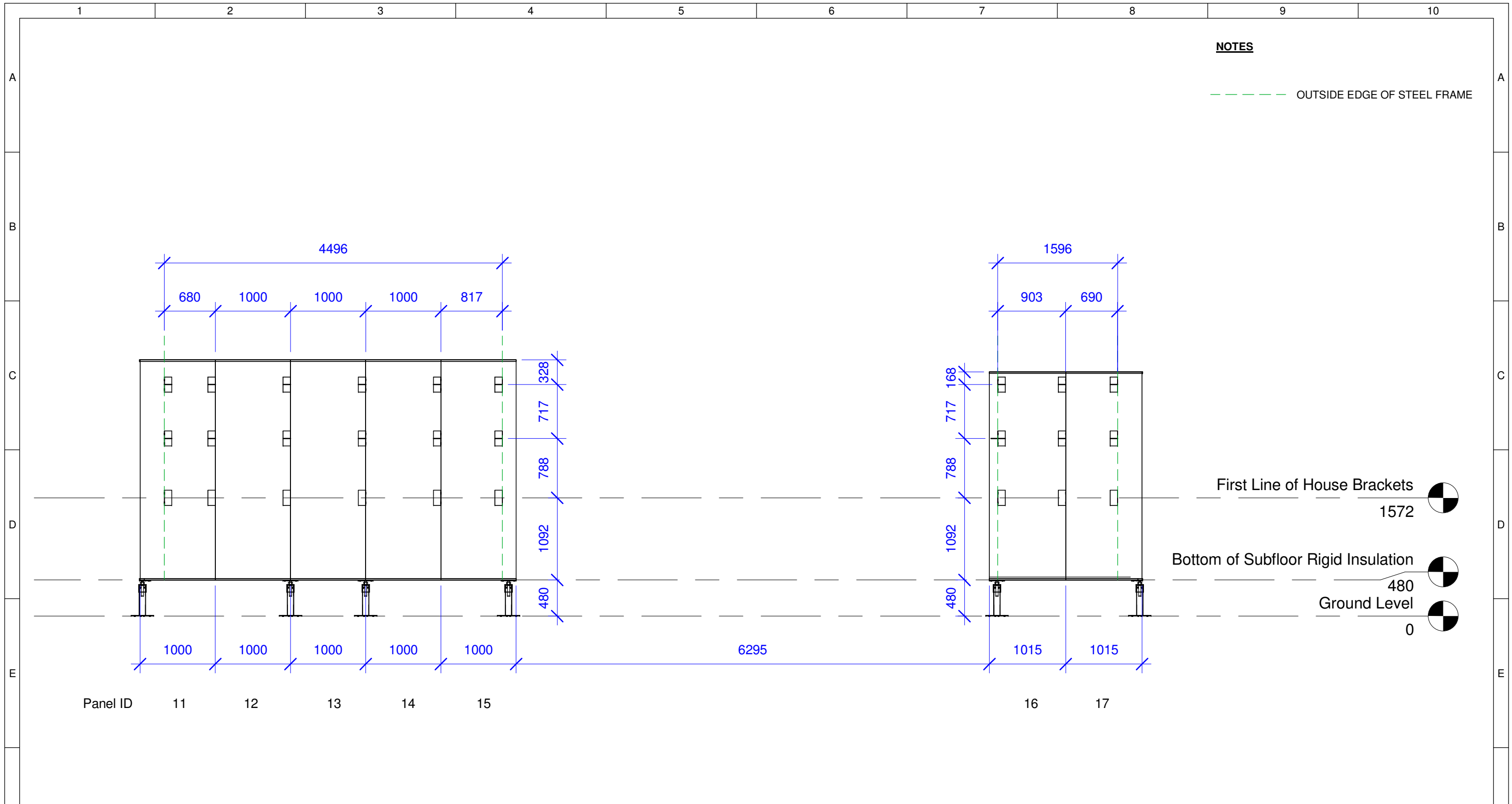
SHEET: 04 OF 04

ST-304



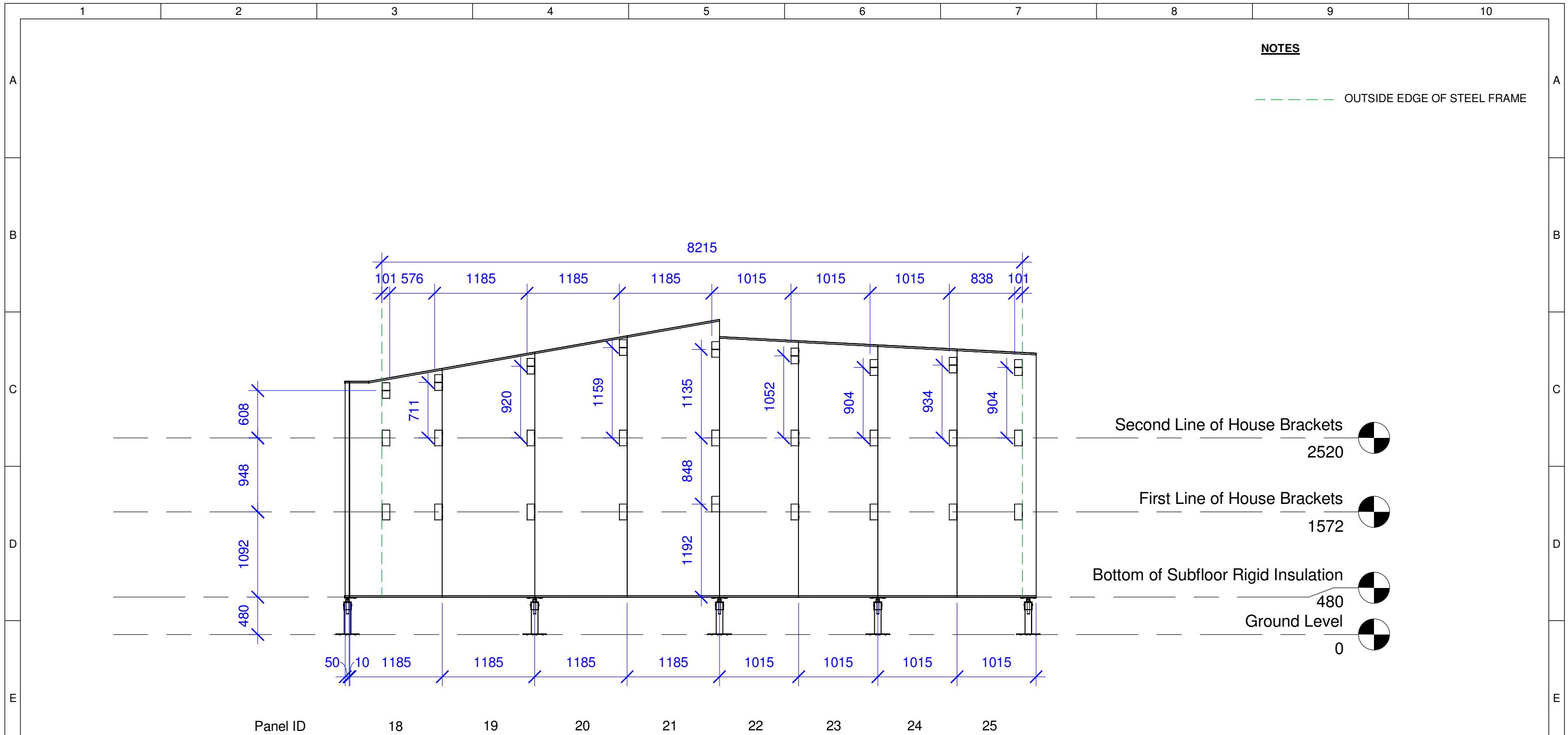
1 West House Bracket Locations
1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Added steel frame ref. lines and width between folded brackets.</td> <td>24/05/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Amended 3rd line of brackets to avoid overlapping wall/truss.</td> <td>28/07/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>3</td> <td>Amended panel 1, 4 and 10 brackets.</td> <td>01/08/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>4</td> <td>Added callout detail of panel 4 brackets.</td> <td>09/09/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>5</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Added steel frame ref. lines and width between folded brackets.	24/05/18	RP	CM	2	Amended 3rd line of brackets to avoid overlapping wall/truss.	28/07/18	RP	CM	3	Amended panel 1, 4 and 10 brackets.	01/08/18	RP	CM	4	Added callout detail of panel 4 brackets.	09/09/18	RP	CM	5	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 11 June, 2018 SCALE 1 : 50 @ A3	WEST HOUSE BRACKET LOCATION ST-305
	REV.	DESCRIPTION	DATE	DRAWN	CHECK																														
1	Added steel frame ref. lines and width between folded brackets.	24/05/18	RP	CM																															
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Desert Rose Team UOW Australia - Dubai	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au				SHEET: 01 OF 04																														



1 South House Bracket Locations
1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Added steel frame ref. lines and width between folded brackets.</td> <td>24/05/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Added steel frame ref. lines and width between folded brackets.	24/05/18	RP	CM	2	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 11 June, 2018 SCALE 1 : 50 @ A3	SOUTH HOUSE BRACKET LOCATION ST-305 SHEET: 03 OF 04
	REV.	DESCRIPTION	DATE	DRAWN	CHECK															
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2	Updated to As-Built.	15/09/18	RP	CM																



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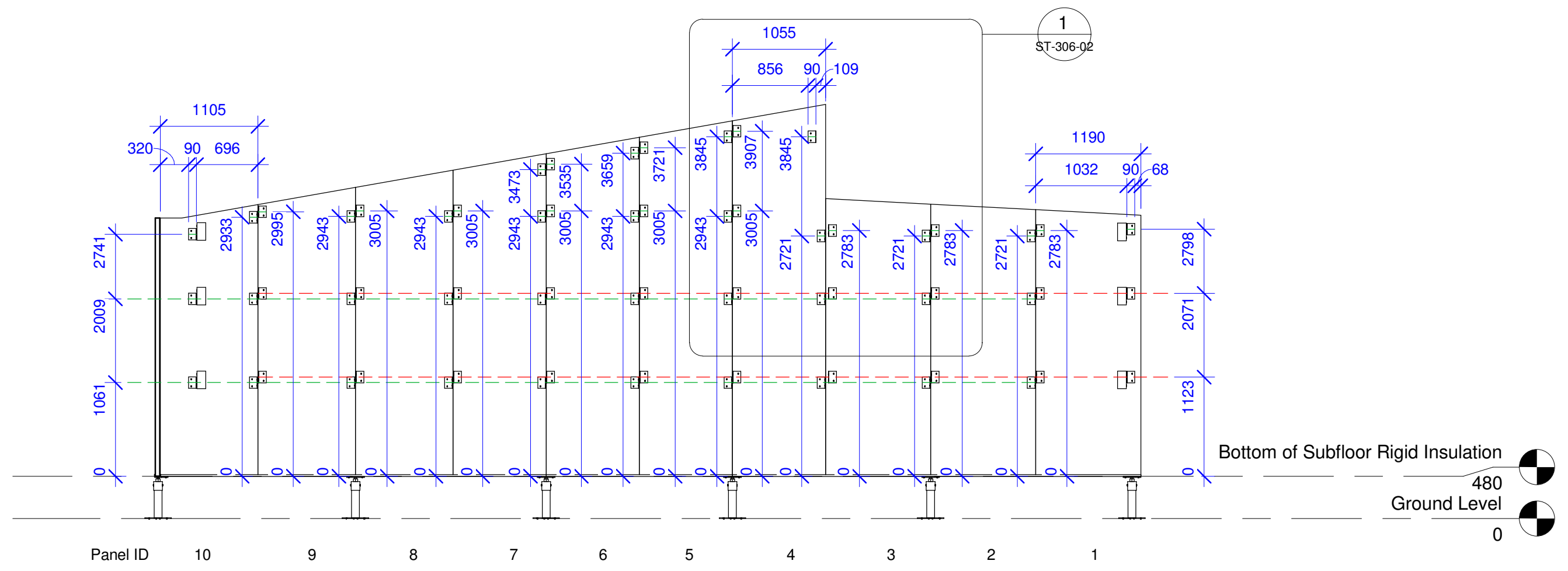
East House Bracket Locations

1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS				COPYRIGHT None; Project is Public		EAST HOUSE BRACKET LOCATION ST-305																			
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Added steel frame ref. lines and width between folded brackets.</td> <td>24/05/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK		1	Added steel frame ref. lines and width between folded brackets.	24/05/18	RP	CM	2	Updated to As-Built.	15/09/18	RP	CM	<table border="1"> <thead> <tr> <th>LOT</th> <th># M</th> </tr> </thead> <tbody> <tr> <td>DRAWER</td> <td>R.PRANDALOS</td> </tr> <tr> <td>CHECKED</td> <td>C.MCDOWELL</td> </tr> <tr> <td>DATE</td> <td>11 June, 2018</td> </tr> <tr> <td>SCALE</td> <td>1 : 50 @ A3</td> </tr> </tbody> </table>	LOT	# M	DRAWER	R.PRANDALOS	CHECKED	C.MCDOWELL	DATE	11 June, 2018
REV.	DESCRIPTION	DATE	DRAWN	CHECK																								
1	Added steel frame ref. lines and width between folded brackets.	24/05/18	RP	CM																								
2	Updated to As-Built.	15/09/18	RP	CM																								
LOT	# M																											
DRAWER	R.PRANDALOS																											
CHECKED	C.MCDOWELL																											
DATE	11 June, 2018																											
SCALE	1 : 50 @ A3																											

NOTES

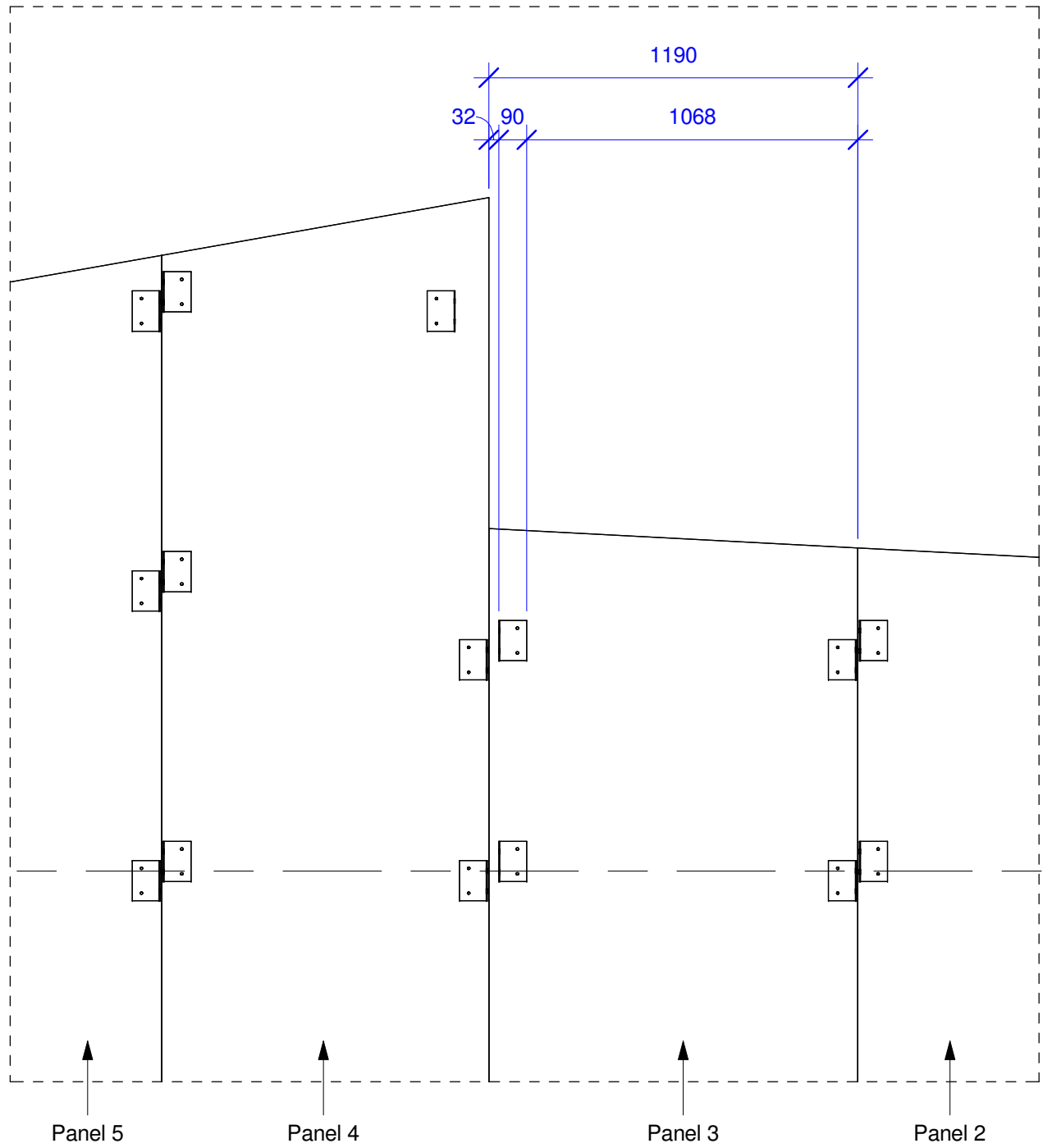
1. THIS DRAWING IS A SECTION VIEWING THE BACK SIDE OF THE WALL.
2. CUMULATIVE (ORDINATE) DIMENSIONS USED. ORIGIN IS FROM BOTTOM EDGE OF EACH PANEL.
3. WHERE HORIZONTAL DIMENSIONS ARE SPECIFIED, THESE ARE EXACT POSITIONS OF THE CONCRETE BRACKETS. ALL OTHER BRACKETS MUST BE OFFSET 5mm IN FROM LONG EDGES OF PANELS.



1 West Concrete Angle Bracket Locations

1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Added callout detail of panel 3 brackets.</td> <td>11/09/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Added callout detail of panel 3 brackets.	11/09/18	RP	CM	2	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 12 August, 2018 SCALE 1 : 50 @ A3	WEST CONCRETE BRACKET LOCATION <h2>ST-306</h2> SHEET: 01 OF 04
	REV.	DESCRIPTION	DATE	DRAWN	CHECK															
1	Added callout detail of panel 3 brackets.	11/09/18	RP	CM																
2	Updated to As-Built.	15/09/18	RP	CM																
Desert Rose Team UOW Australia - Dubai	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au																			



NOTES

1. THIS DRAWING IS A SECTION VIEWING THE BACK SIDE OF THE WALL.

2. REFER TO ST-306 SHEET 01 FOR ALL WEST CONCRETE BRACKET LOCATIONS.

Second Line of House Brackets
2520

1 Panel 3 Concrete Bracket Detail
1 : 20



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

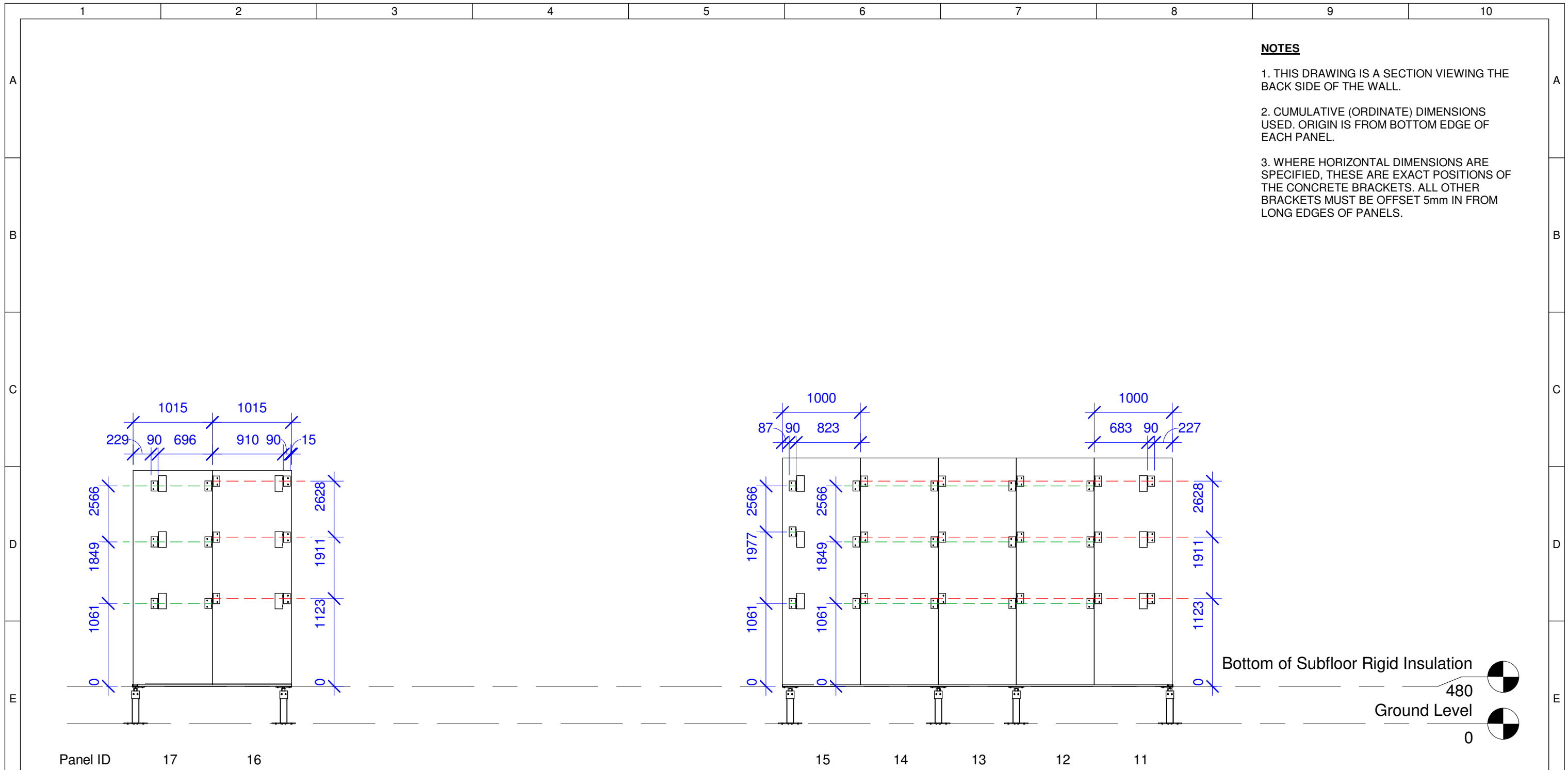
Client:
 Dubai Electricity and Water Authority

 SOLAR DECATHLON MIDDLE EAST DUBAI, UAE - 2018

AMENDMENTS				
REV.	DESCRIPTION	DATE	DRAWN	CHECK
1	Updated to As-Built.	15/09/18	RP	CM

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LOT # M
DRAWER R.PRANDALOS
CHECKED C.MCDOWELL
DATE 11 September, 2018
SCALE 1 : 20 @ A3

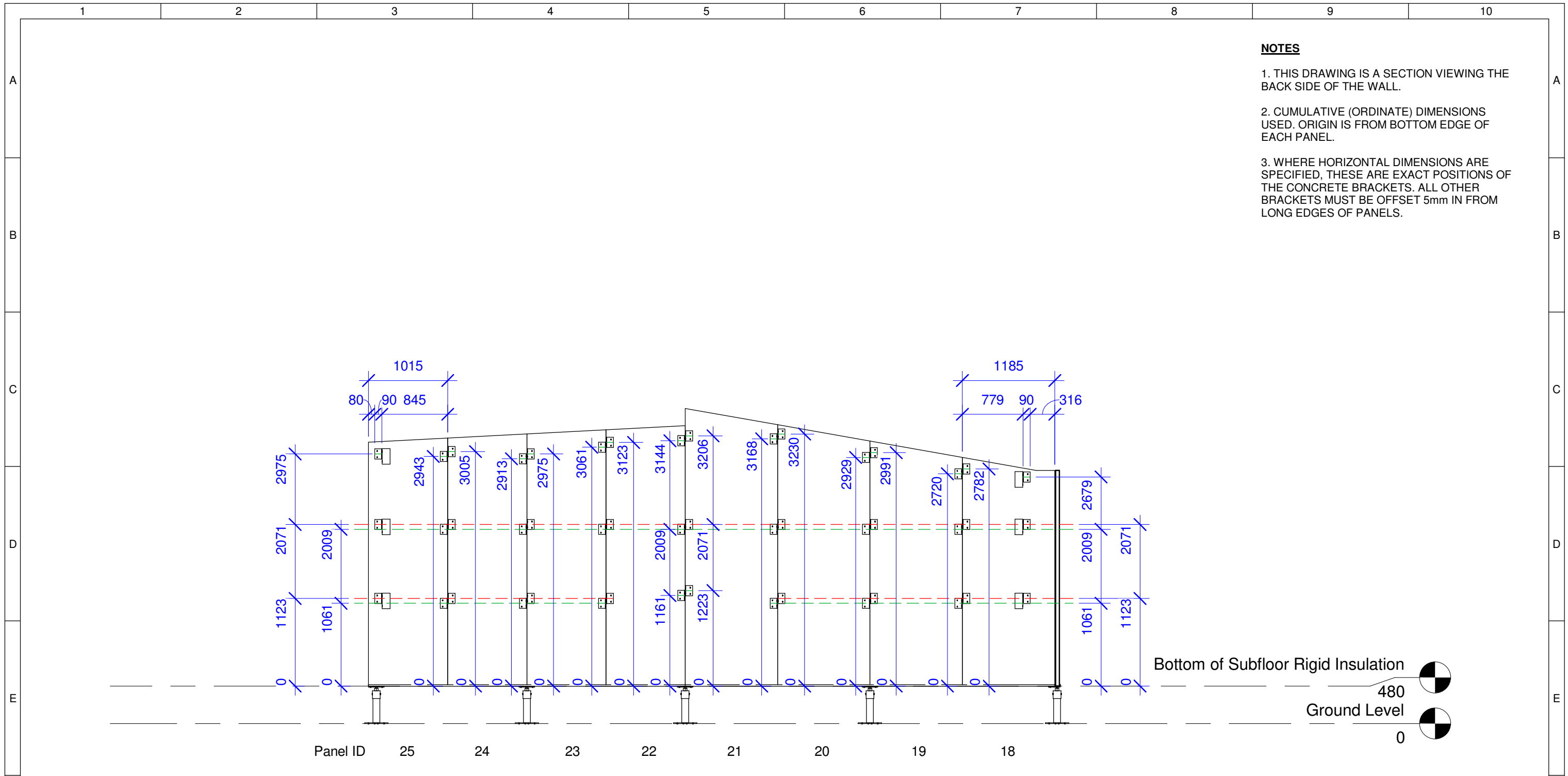
WEST CONCRETE BRACKET DETAIL
ST-306
 SHEET: 02 OF 04



1 South Concrete Angle Bracket Locations

1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Moved panel 15 middle bracket up 128mm.</td> <td>19/08/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>2</td> <td>Corrected error in dimensions on middle line of concrete brackets.</td> <td>19/08/18</td> <td>RP</td> <td>CM</td> </tr> <tr> <td>3</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Moved panel 15 middle bracket up 128mm.	19/08/18	RP	CM	2	Corrected error in dimensions on middle line of concrete brackets.	19/08/18	RP	CM	3	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 12 August, 2018 SCALE 1 : 50 @ A3	SOUTH CONCRETE BRACKET LOCATION <h2>ST-306</h2>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK																				
1	Moved panel 15 middle bracket up 128mm.	19/08/18	RP	CM																					
2	Corrected error in dimensions on middle line of concrete brackets.	19/08/18	RP	CM																					
3	Updated to As-Built.	15/09/18	RP	CM																					
			SHEET: 03 OF 04																						

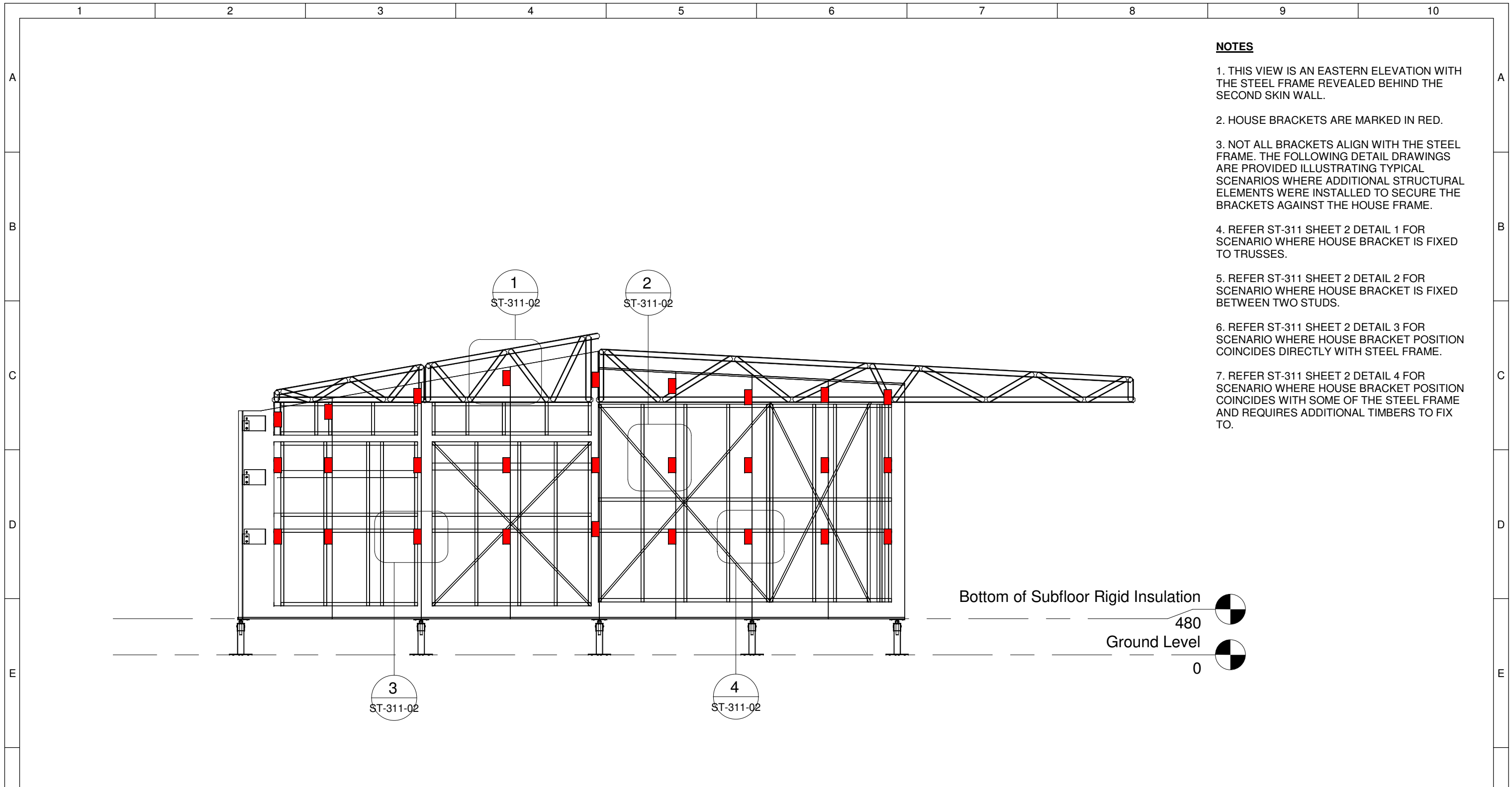


1

East Concrete Angle Bracket Locations

1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 12 August, 2018 SCALE 1 : 50 @ A3	EAST CONCRETE BRACKET LOCATION <h2>ST-306</h2>	SHEET: 04 OF 04
	REV.	DESCRIPTION	DATE	DRAWN	CHECK											
1	Updated to As-Built.	15/09/18	RP	CM												
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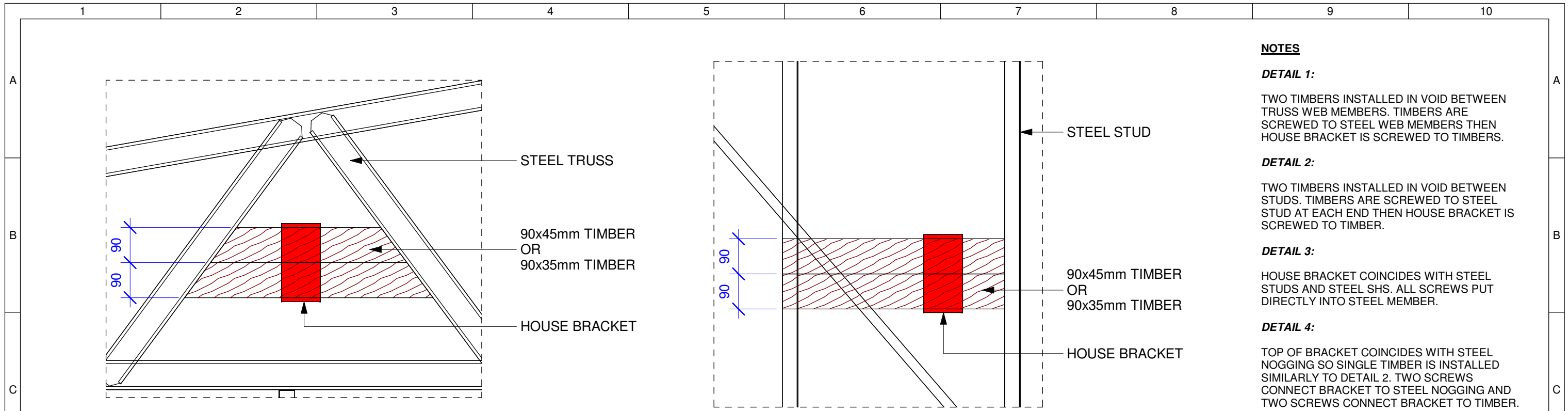
NOTES

1. THIS VIEW IS AN EASTERN ELEVATION WITH THE STEEL FRAME REVEALED BEHIND THE SECOND SKIN WALL.
2. HOUSE BRACKETS ARE MARKED IN RED.
3. NOT ALL BRACKETS ALIGN WITH THE STEEL FRAME. THE FOLLOWING DETAIL DRAWINGS ARE PROVIDED ILLUSTRATING TYPICAL SCENARIOS WHERE ADDITIONAL STRUCTURAL ELEMENTS WERE INSTALLED TO SECURE THE BRACKETS AGAINST THE HOUSE FRAME.
4. REFER ST-311 SHEET 2 DETAIL 1 FOR SCENARIO WHERE HOUSE BRACKET IS FIXED TO TRUSSES.
5. REFER ST-311 SHEET 2 DETAIL 2 FOR SCENARIO WHERE HOUSE BRACKET IS FIXED BETWEEN TWO STUDS.
6. REFER ST-311 SHEET 2 DETAIL 3 FOR SCENARIO WHERE HOUSE BRACKET POSITION COINCIDES DIRECTLY WITH STEEL FRAME.
7. REFER ST-311 SHEET 2 DETAIL 4 FOR SCENARIO WHERE HOUSE BRACKET POSITION COINCIDES WITH SOME OF THE STEEL FRAME AND REQUIRES ADDITIONAL TIMBERS TO FIX TO.

Bottom of Subfloor Rigid Insulation 480
 Ground Level 0

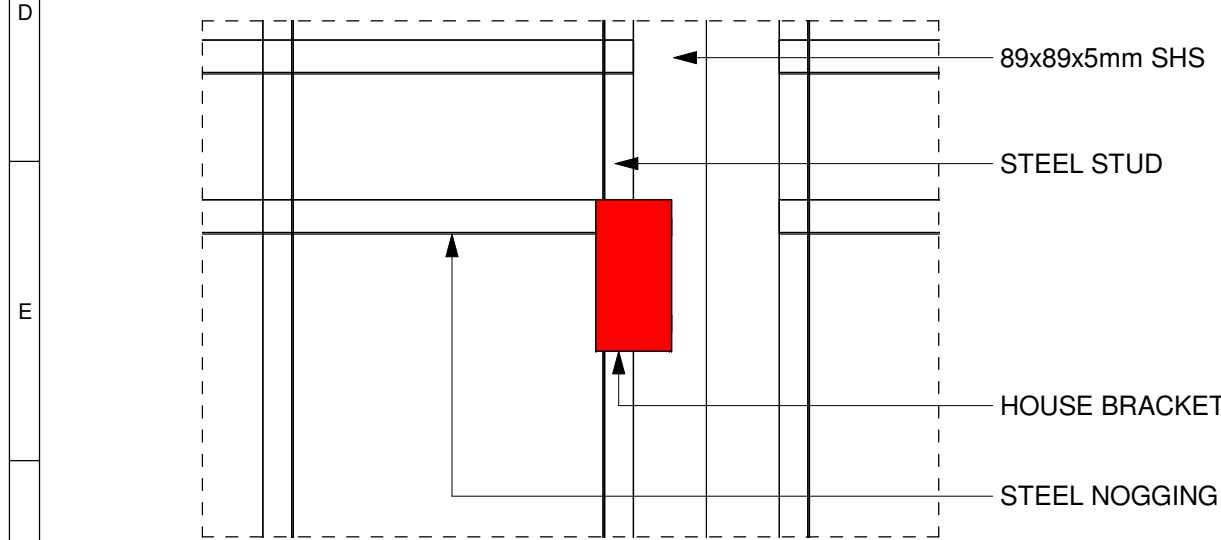
1 House Bracket and Steel Frame Overlay
 1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 11 September, 2018 SCALE 1 : 50 @ A3	HOUSE BRACKET AND STEEL FRAME OVERLAY ST-311 SHEET: 01 OF 02
	REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1	Updated to As-Built.	15/09/18	RP	CM											

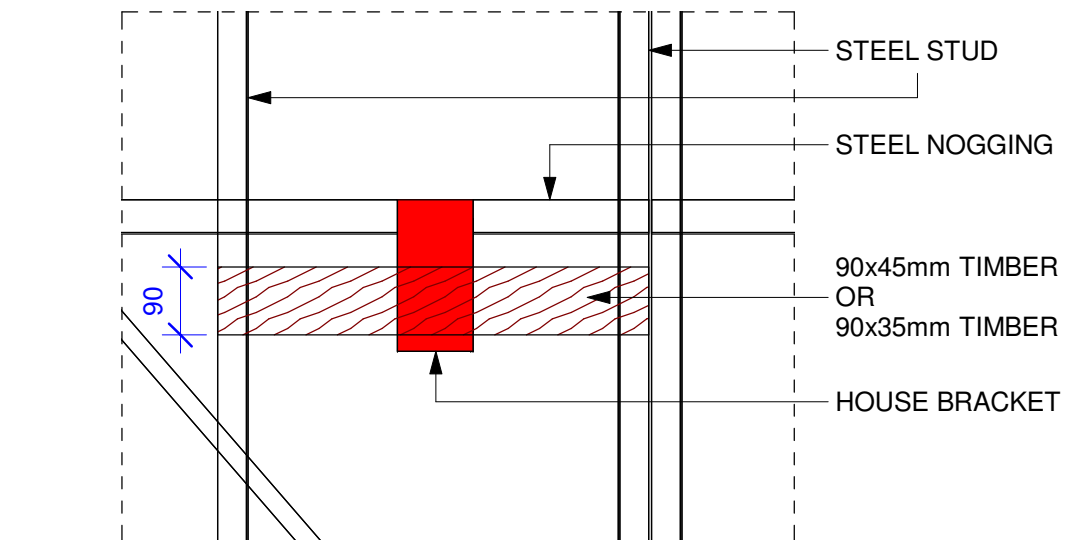


1 House Bracket and Truss
1 : 10

2 House Bracket and No Stud
1 : 10

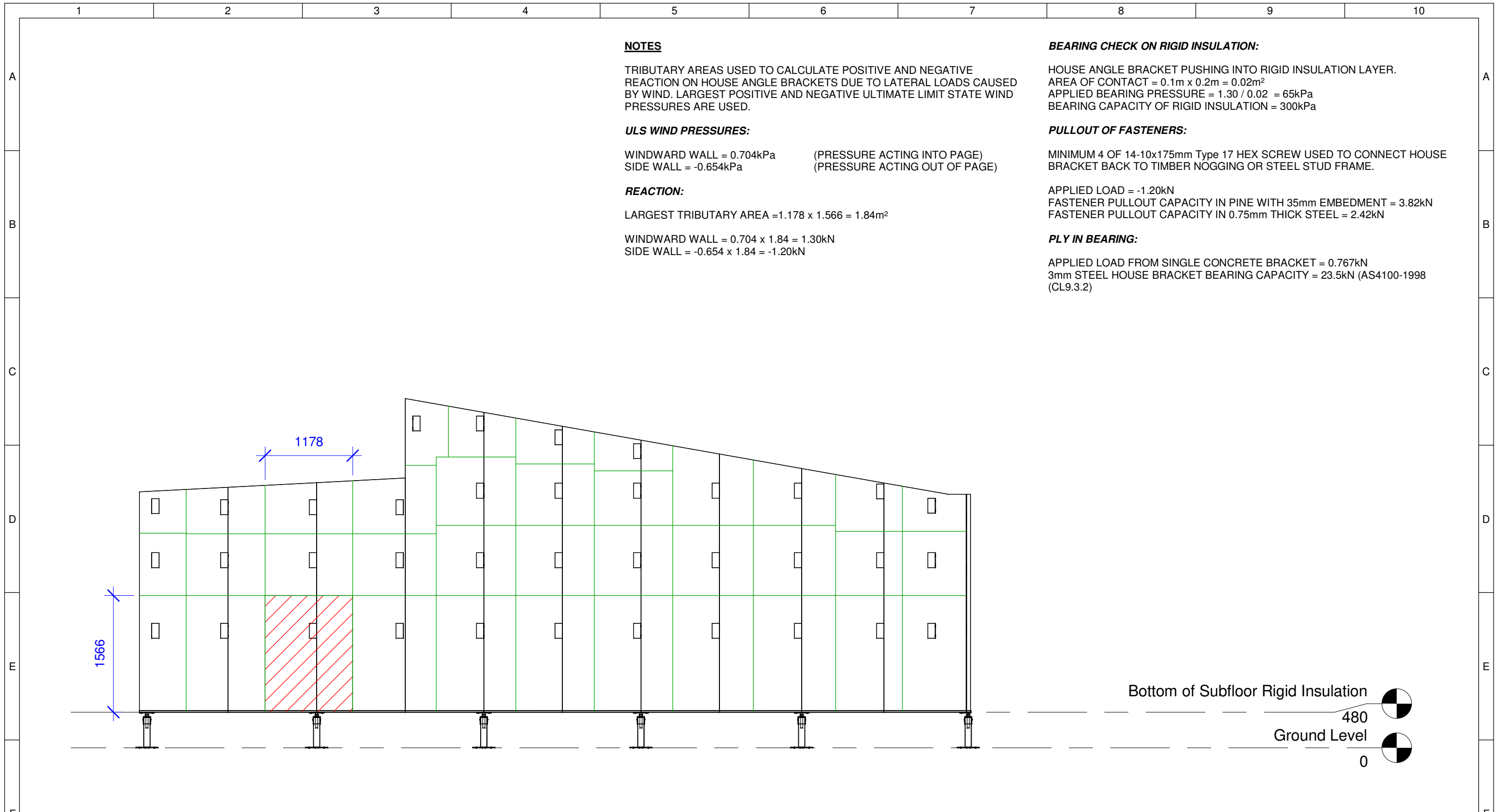


3 House Bracket and Stud / SHS
1 : 10



4 House Bracket and Steel Nogging
1 : 10

	Team: TEAM UOW	Client: Dubai Electricity and Water Authority 	AMENDMENTS			COPYRIGHT		HOUSE BRACKET AND STRUCTURE TYPICAL DETAIL ST-311	
	Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522		REV. DESCRIPTION	DATE	DRAWN	CHECK	None; Project is Public		
	Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au		1 Updated to As-Built.	15/09/18	RP	CM	LOT # M		DRAWER R.PRANDALOS
							CHECKED C.MCDOWELL		SHEET: 02 OF 02
							DATE 11 September, 2018		
					SCALE 1 : 10 @ A3				



NOTES

TRIBUTARY AREAS USED TO CALCULATE POSITIVE AND NEGATIVE REACTION ON HOUSE ANGLE BRACKETS DUE TO LATERAL LOADS CAUSED BY WIND. LARGEST POSITIVE AND NEGATIVE ULTIMATE LIMIT STATE WIND PRESSURES ARE USED.

ULS WIND PRESSURES:

WINDWARD WALL = 0.704kPa (PRESSURE ACTING INTO PAGE)
 SIDE WALL = -0.654kPa (PRESSURE ACTING OUT OF PAGE)

REACTION:

LARGEST TRIBUTARY AREA = 1.178 x 1.566 = 1.84m²

WINDWARD WALL = 0.704 x 1.84 = 1.30kN
 SIDE WALL = -0.654 x 1.84 = -1.20kN

BEARING CHECK ON RIGID INSULATION:

HOUSE ANGLE BRACKET PUSHING INTO RIGID INSULATION LAYER.
 AREA OF CONTACT = 0.1m x 0.2m = 0.02m²
 APPLIED BEARING PRESSURE = 1.30 / 0.02 = 65kPa
 BEARING CAPACITY OF RIGID INSULATION = 300kPa

PULLOUT OF FASTENERS:

MINIMUM 4 OF 14-10x175mm Type 17 HEX SCREW USED TO CONNECT HOUSE BRACKET BACK TO TIMBER NOGGING OR STEEL STUD FRAME.

APPLIED LOAD = -1.20kN
 FASTENER PULLOUT CAPACITY IN PINE WITH 35mm EMBEDMENT = 3.82kN
 FASTENER PULLOUT CAPACITY IN 0.75mm THICK STEEL = 2.42kN

PLY IN BEARING:

APPLIED LOAD FROM SINGLE CONCRETE BRACKET = 0.767kN
 3mm STEEL HOUSE BRACKET BEARING CAPACITY = 23.5kN (AS4100-1998 (CL9.3.2))

Bottom of Subfloor Rigid Insulation 480
 Ground Level 0

1 West House Bracket Reactions
 1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 9 September, 2018 SCALE 1 : 50 @ A3	WEST HOUSE BRACKET REACTIONS ST-321 SHEET: 01 OF 06
	REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1	Updated to As-Built.	15/09/18	RP	CM											
1 2 3 4 5 6 7 8 9 10															

NOTES

TRIBUTARY AREAS USED TO CALCULATE POSITIVE AND NEGATIVE REACTION ON HOUSE ANGLE BRACKETS DUE TO LATERAL LOADS CAUSED BY WIND. LARGEST POSITIVE AND NEGATIVE ULTIMATE LIMIT STATE WIND PRESSURES ARE USED.

ULS WIND PRESSURES:

WINDWARD WALL = 0.704kPa (PRESSURE ACTING INTO PAGE)
 SIDE WALL = -0.654kPa (PRESSURE ACTING OUT OF PAGE)

REACTION:

LARGEST TRIBUTARY AREA = 1.000 x 1.486 = 1.49m²

WINDWARD WALL = 0.704 x 1.49 = 1.05kN
 SIDE WALL = -0.654 x 1.49 = -0.97kN

BEARING CHECK ON RIGID INSULATION:

HOUSE ANGLE BRACKET PUSHING INTO RIGID INSULATION LAYER.
 AREA OF CONTACT = 0.1m x 0.2m = 0.02m²
 APPLIED BEARING PRESSURE = 1.05 / 0.02 = 53kPa
 BEARING CAPACITY OF RIGID INSULATION = 300kPa

PULLOUT OF FASTENERS:

MINIMUM 4 OF 14-10x175mm Type 17 HEX SCREW USED TO CONNECT HOUSE BRACKET BACK TO TIMBER NOGGING OR STEEL STUD FRAME.

APPLIED LOAD = -0.97kN
 FASTENER PULLOUT CAPACITY IN PINE WITH 35mm EMBEDMENT = 3.82kN
 FASTENER PULLOUT CAPACITY IN 0.75mm THICK STEEL = 2.42kN

PLY IN BEARING:

APPLIED LOAD FROM SINGLE CONCRETE BRACKET = 0.655kN
 3mm STEEL HOUSE BRACKET BEARING CAPACITY = 23.5kN (AS4100-1998 (CL9.3.2))



1 South House Bracket Reactions

1 : 50



Desert Rose
 Team UOW
 Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522

Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

Client:

Dubai Electricity and Water Authority



AMENDMENTS

REV.	DESCRIPTION	DATE	DRAWN	CHECK
1	Updated to As-Built.	15/09/18	RP	CM

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 LOT # M
 DRAWER R.PRANDALOS
 CHECKED C.MCDOWELL
 DATE 11 September, 2018
 SCALE 1 : 50 @ A3

**SOUTH HOUSE
 BRACKET
 REACTIONS**

SHEET:
 02 OF 06

ST-321

NOTES

TRIBUTARY AREAS USED TO CALCULATE POSITIVE AND NEGATIVE REACTION ON HOUSE ANGLE BRACKETS DUE TO LATERAL LOADS CAUSED BY WIND. LARGEST POSITIVE AND NEGATIVE ULTIMATE LIMIT STATE WIND PRESSURES ARE USED.

ULS WIND PRESSURES:

WINDWARD WALL = 0.704kPa (PRESSURE ACTING INTO PAGE)
 SIDE WALL = -0.654kPa (PRESSURE ACTING OUT OF PAGE)

REACTION:

LARGEST TRIBUTARY AREA = 1.185 x 1.566 = 1.86m²

WINDWARD WALL = 0.704 x 1.86 = 1.31kN
 SIDE WALL = -0.654 x 1.49 = -1.22kN

BEARING CHECK ON RIGID INSULATION:

HOUSE ANGLE BRACKET PUSHING INTO RIGID INSULATION LAYER.
 AREA OF CONTACT = 0.1m x 0.2m = 0.02m²
 APPLIED BEARING PRESSURE = 1.31 / 0.02 = 66kPa
 BEARING CAPACITY OF RIGID INSULATION = 300kPa

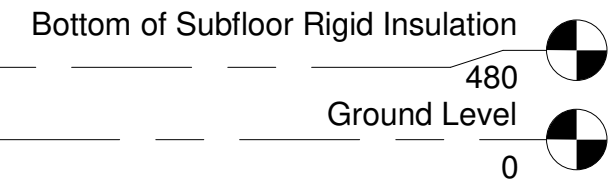
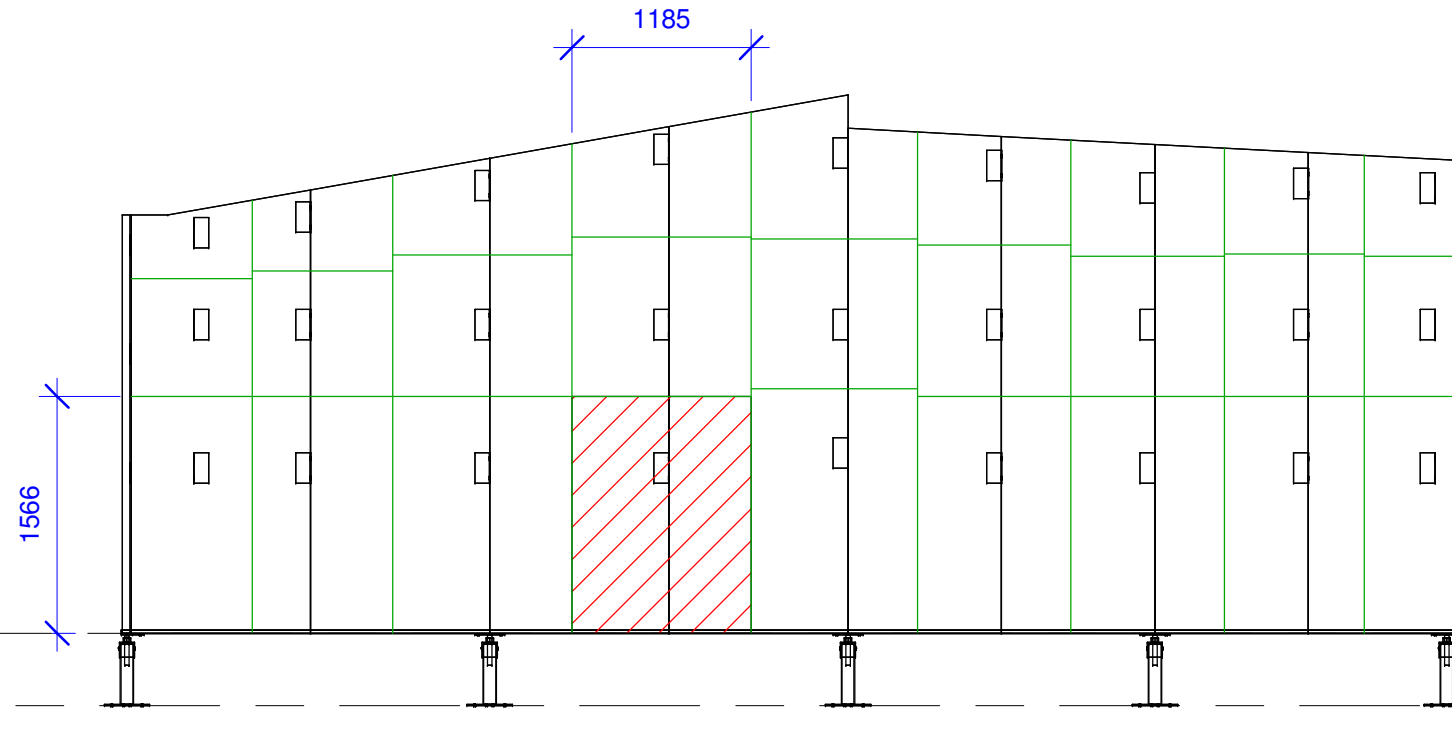
PULLOUT OF FASTENERS:

MINIMUM 4 OF 14-10x175mm Type 17 HEX SCREW USED TO CONNECT HOUSE BRACKET BACK TO TIMBER NOGGING OR STEEL STUD FRAME.

APPLIED LOAD = -1.22kN
 FASTENER PULLOUT CAPACITY IN PINE WITH 35mm EMBEDMENT = 3.82kN
 FASTENER PULLOUT CAPACITY IN 0.75mm THICK STEEL = 2.42kN

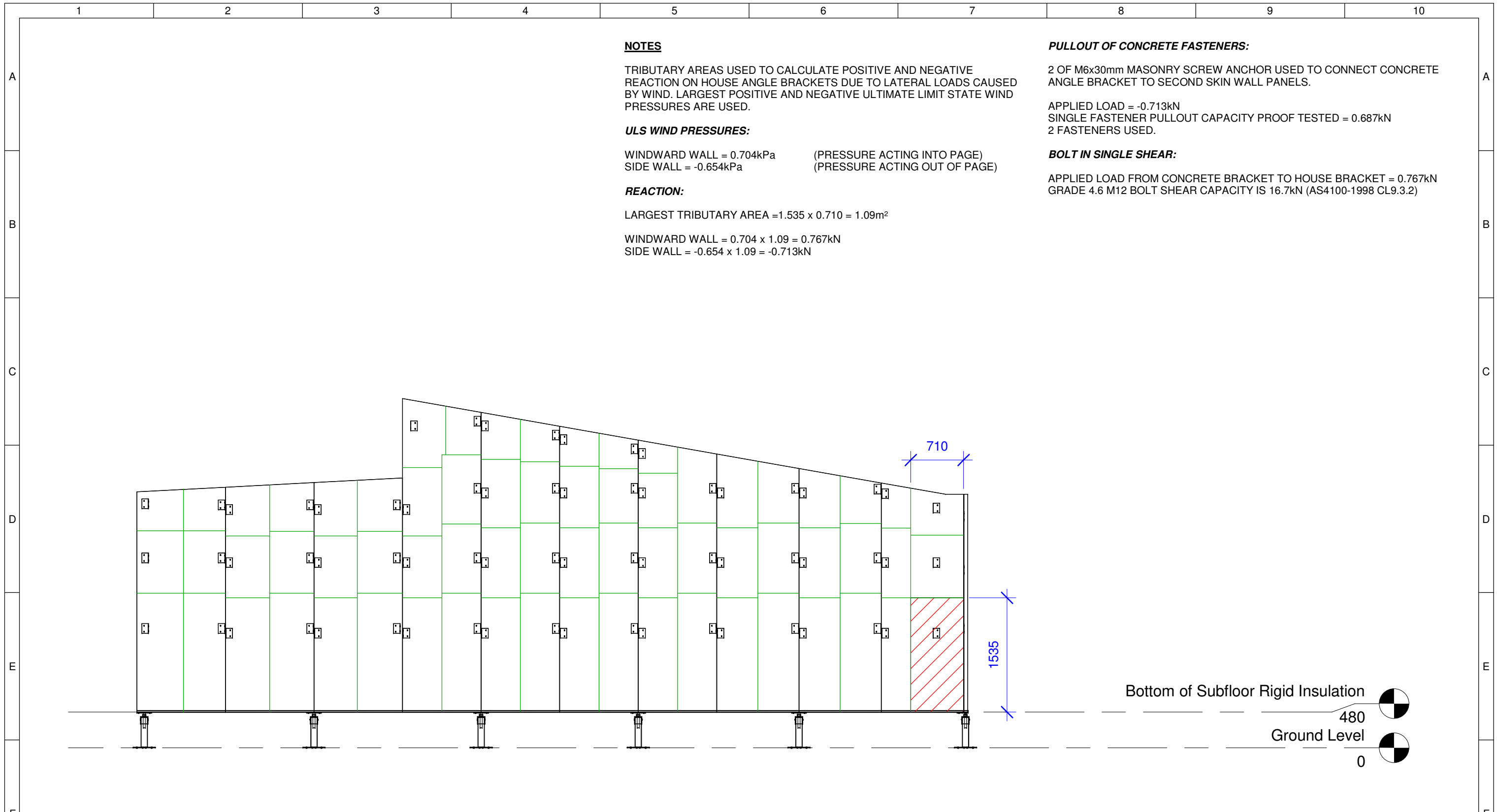
PLY IN BEARING:

APPLIED LOAD FROM SINGLE CONCRETE BRACKET = 0.845kN
 3mm STEEL HOUSE BRACKET BEARING CAPACITY = 23.5kN (AS4100-1998 (CL9.3.2))



1 East House Bracket Reactions
 1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 11 September, 2018 SCALE 1 : 50 @ A3	EAST HOUSE BRACKET REACTIONS SHEET: 03 OF 06 ST-321
	REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1	Updated to As-Built.	15/09/18	RP	CM											
1	2	3	4	5	6	7	8	9	10						



NOTES

TRIBUTARY AREAS USED TO CALCULATE POSITIVE AND NEGATIVE REACTION ON HOUSE ANGLE BRACKETS DUE TO LATERAL LOADS CAUSED BY WIND. LARGEST POSITIVE AND NEGATIVE ULTIMATE LIMIT STATE WIND PRESSURES ARE USED.

ULS WIND PRESSURES:

WINDWARD WALL = 0.704kPa (PRESSURE ACTING INTO PAGE)
 SIDE WALL = -0.654kPa (PRESSURE ACTING OUT OF PAGE)

REACTION:

LARGEST TRIBUTARY AREA = 1.535 x 0.710 = 1.09m²

WINDWARD WALL = 0.704 x 1.09 = 0.767kN
 SIDE WALL = -0.654 x 1.09 = -0.713kN

PULLOUT OF CONCRETE FASTENERS:

2 OF M6x30mm MASONRY SCREW ANCHOR USED TO CONNECT CONCRETE ANGLE BRACKET TO SECOND SKIN WALL PANELS.

APPLIED LOAD = -0.713kN
 SINGLE FASTENER PULLOUT CAPACITY PROOF TESTED = 0.687kN
 2 FASTENERS USED.

BOLT IN SINGLE SHEAR:

APPLIED LOAD FROM CONCRETE BRACKET TO HOUSE BRACKET = 0.767kN
 GRADE 4.6 M12 BOLT SHEAR CAPACITY IS 16.7kN (AS4100-1998 CL9.3.2)

Bottom of Subfloor Rigid Insulation 480
 Ground Level 0

1 West Concrete Bracket Reactions
 1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 9 September, 2018 SCALE 1 : 50 @ A3	WEST CONCRETE BRACKET REACTIONS ST-321 SHEET: 04 OF 06
	REV.	DESCRIPTION	DATE	DRAWN	CHECK										
1	Updated to As-Built.	15/09/18	RP	CM											
<p>1 2 3 4 5 6 7 8 9 10</p>															

NOTES

TRIBUTARY AREAS USED TO CALCULATE POSITIVE AND NEGATIVE REACTION ON HOUSE ANGLE BRACKETS DUE TO LATERAL LOADS CAUSED BY WIND. LARGEST POSITIVE AND NEGATIVE ULTIMATE LIMIT STATE WIND PRESSURES ARE USED.

ULS WIND PRESSURES:

WINDWARD WALL = 0.704kPa (PRESSURE ACTING INTO PAGE)
 SIDE WALL = -0.654kPa (PRESSURE ACTING OUT OF PAGE)

REACTION:

LARGEST TRIBUTARY AREA = 1.517 x 0.611 = 0.93m²

WINDWARD WALL = 0.704 x 0.93 = 0.655kN
 SIDE WALL = -0.654 x 0.93 = -0.608kN

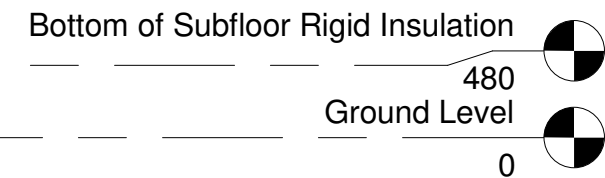
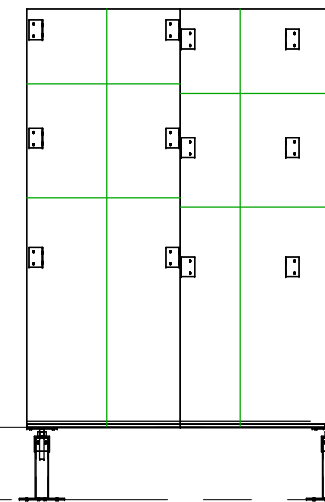
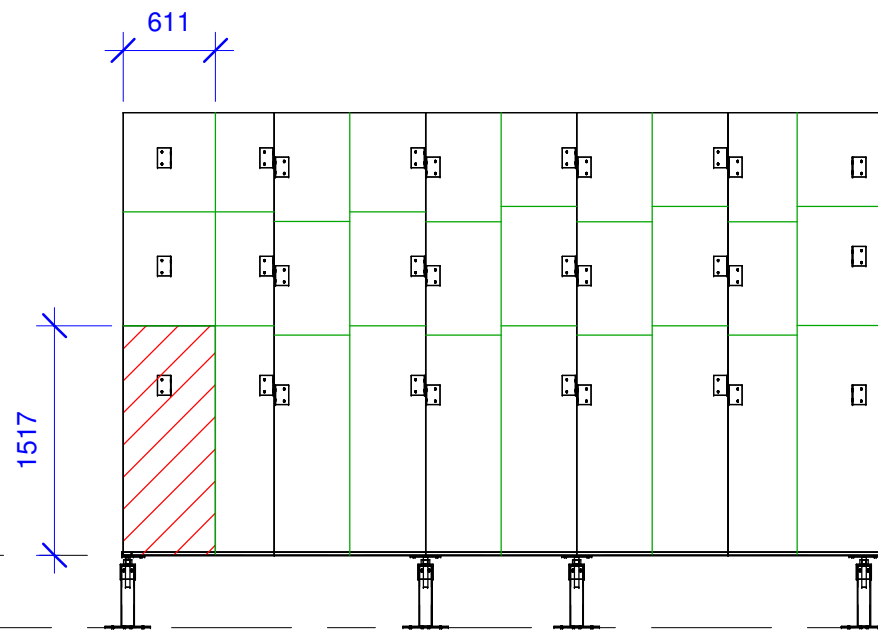
PULLOUT OF CONCRETE FASTENERS:

2 OF M6x30mm MASONRY SCREW ANCHOR USED TO CONNECT CONCRETE ANGLE BRACKET TO SECOND SKIN WALL PANELS.

APPLIED LOAD = -0.608kN
 SINGLE FASTENER PULLOUT CAPACITY PROOF TESTED = 0.687kN
 2 FASTENERS USED.

BOLT IN SINGLE SHEAR:

APPLIED LOAD = 0.655kN
 GRADE 4.6 M12 BOLT SHEAR CAPACITY IS 16.7kN (AS4100-1998 CL9.3.2)



1 South Concrete Bracket Reactions
 1 : 50

	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 										
	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>		REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Updated to As-Built.	15/09/18	RP	CM
	REV.	DESCRIPTION	DATE	DRAWN	CHECK							
1	Updated to As-Built.	15/09/18	RP	CM								
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SOUTH CONCRETE BRACKET REACTIONS
ST-321

SHEET:
05 OF 06

NOTES

TRIBUTARY AREAS USED TO CALCULATE POSITIVE AND NEGATIVE REACTION ON HOUSE ANGLE BRACKETS DUE TO LATERAL LOADS CAUSED BY WIND. LARGEST POSITIVE AND NEGATIVE ULTIMATE LIMIT STATE WIND PRESSURES ARE USED.

ULS WIND PRESSURES:

WINDWARD WALL = 0.704kPa (PRESSURE ACTING INTO PAGE)
 SIDE WALL = -0.654kPa (PRESSURE ACTING OUT OF PAGE)

REACTION:

LARGEST TRIBUTARY AREA = 1.597 x 0.748 = 1.20m²

WINDWARD WALL = 0.704 x 1.20 = 0.845kN
 SIDE WALL = -0.654 x 1.20 = -0.785kN

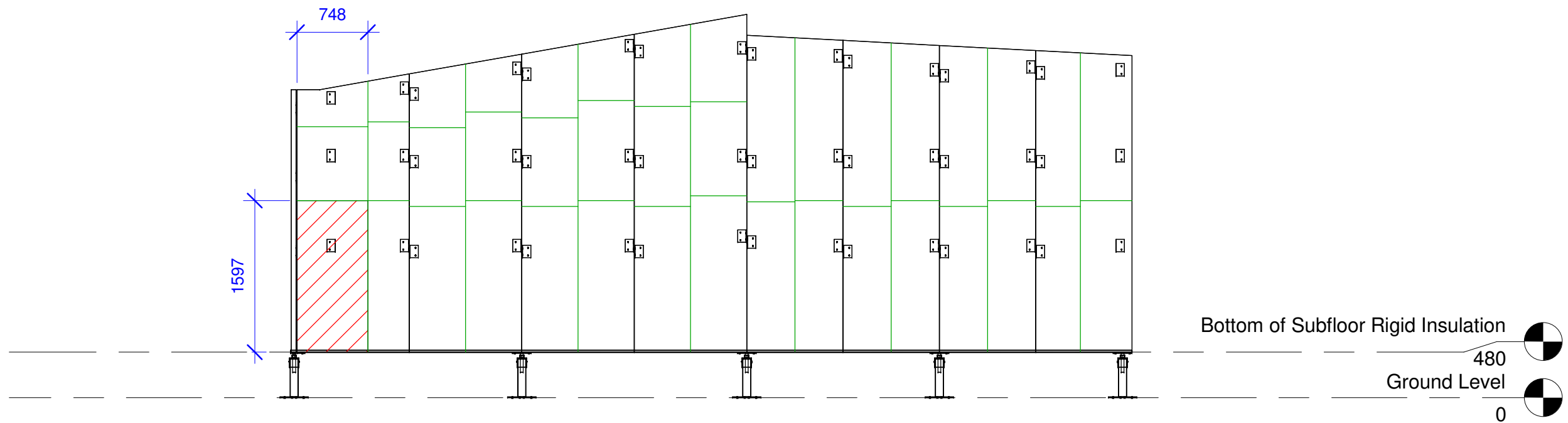
PULLOUT OF CONCRETE FASTENERS:

2 OF M6x30mm MASONRY SCREW ANCHOR USED TO CONNECT CONCRETE ANGLE BRACKET TO SECOND SKIN WALL PANELS.

APPLIED LOAD = -0.785kN
 SINGLE FASTENER PULLOUT CAPACITY PROOF TESTED = 0.687kN
 2 FASTENERS USED.

BOLT IN SINGLE SHEAR:

APPLIED LOAD = 0.845kN
 GRADE 4.6 M12 BOLT SHEAR CAPACITY IS 16.7kN (AS4100-1998 CL9.3.2)



1

East Concrete Bracket Reactions

1 : 50



Desert Rose
 Team UOW
 Australia - Dubai

Team: TEAM UOW

Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522

Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

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CHECKED C.MCDOWELL

DATE 11 September, 2018

SCALE 1 : 50 @ A3

**EAST CONCRETE
 BRACKET
 REACTIONS**

SHEET:
 06 OF 06

ST-321

NOTES

1. DRAWING TITLE "SSW" = SECOND SKIN WALL

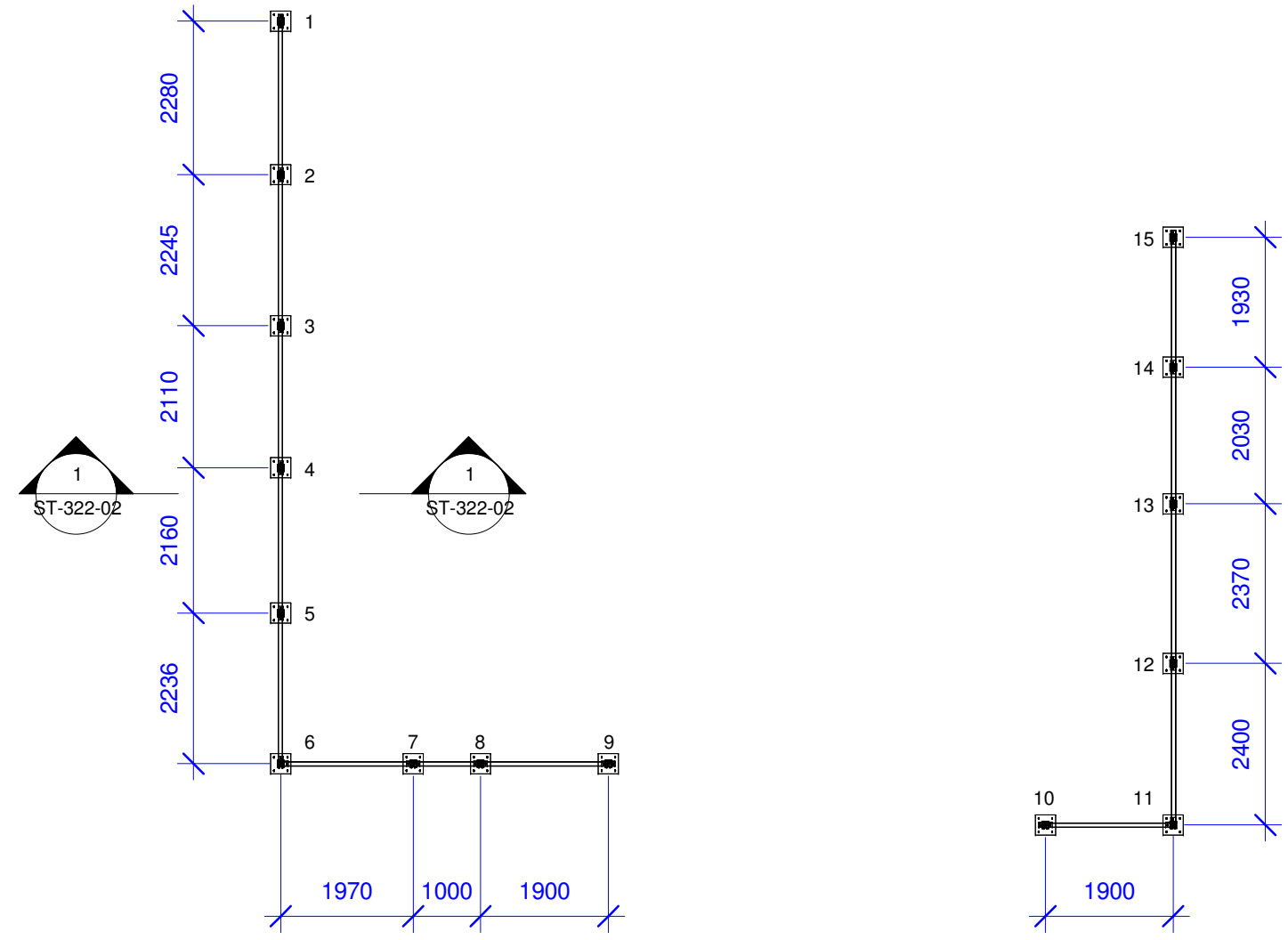
PIER LAYOUT:

CENTRE TO CENTRE SPACING OF PIERS SHOWN.

PIER REACTIONS:

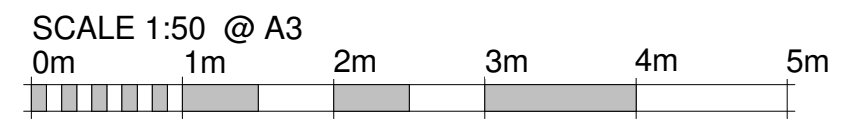
LOAD COMBINATIONS (AS1170.0-2002)
 SLS: G
 ULS: 1.35G

ALL PIER REACTIONS SATISFY DESIGN
 GROUND BEARING CAPACITY OF 100kPa WITH
 A 300x300mm PIER BASE PLATE.

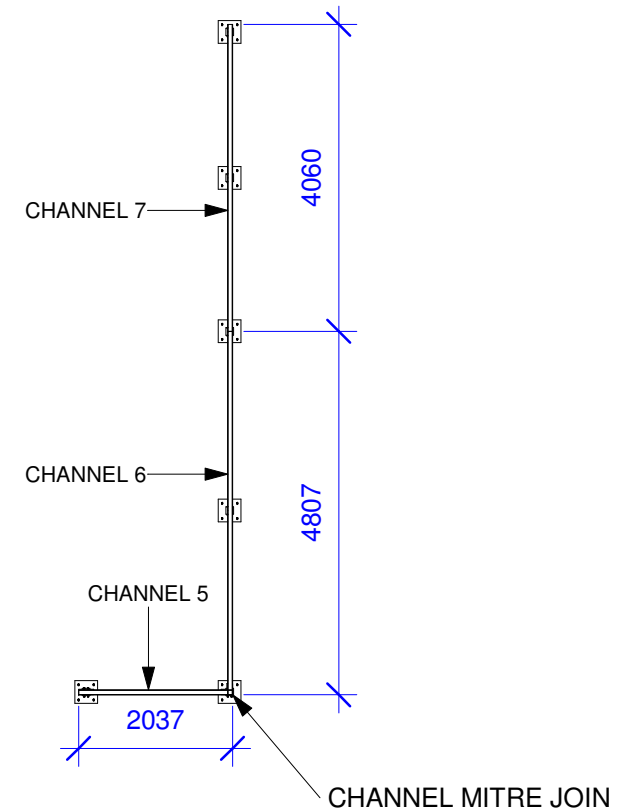
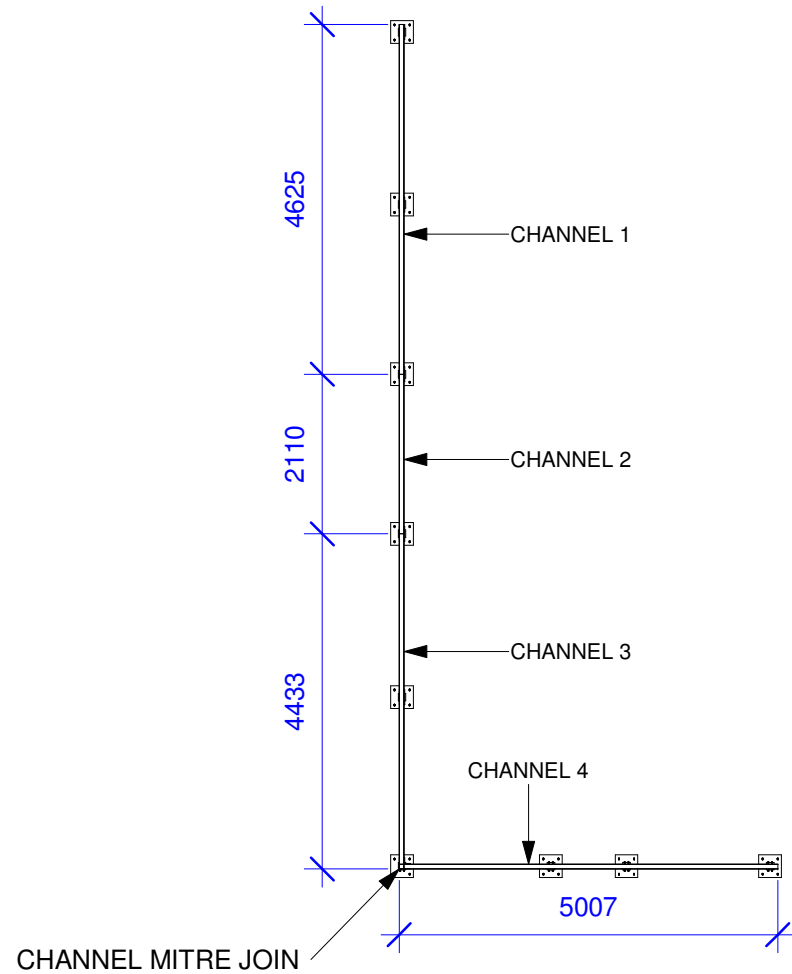


Second Skin Wall Pier Reactions				
Pier Number	Reaction (kN)	Factored Reaction SLS (kN)	Factored Reaction ULS (kN)	Largest Bearing Pressure (kPa)
1	2.30	2.30	3.10	34.5
2	4.74	4.74	6.40	71.1
3	5.49	5.49	7.41	82.3
4	4.98	4.98	6.72	74.7
5	4.46	4.46	6.02	66.9
6	3.93	3.93	5.31	59.0
7	2.83	2.83	3.83	42.5
8	2.83	2.83	3.83	42.5
9	1.89	1.89	2.55	28.2
10	1.81	1.81	2.45	27.2
11	3.99	3.99	5.39	59.9
12	4.81	4.81	6.49	72.1
13	4.81	4.81	6.50	72.2
14	4.24	4.24	5.72	63.6
15	2.07	2.07	2.79	31.0

1 Pier Layout
 1 : 100



	Team: TEAM UOW Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au	Client: Dubai Electricity and Water Authority 	AMENDMENTS <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Updated to As-Built.</td> <td>15/09/18</td> <td>RP</td> <td>CM</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECK	1	Updated to As-Built.	15/09/18	RP	CM	COPYRIGHT None; Project is Public LOT # M DRAWER R.PRANDALOS CHECKED C.MCDOWELL DATE 19 August, 2018 SCALE 1 : 100 @ A3	 NORTH SHEET: 01 OF 02	SSW PIER LAYOUT AND REACTIONS <h1>ST-322</h1>
	REV.	DESCRIPTION	DATE	DRAWN	CHECK											
1	Updated to As-Built.	15/09/18	RP	CM												



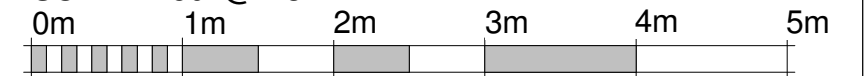
- NOTES**
- DRAWING TITLE "SSW" = SECOND SKIN WALL
 - STEEL CHANNEL IS GRADE 450 GALVANISED STEEL WITH DIMENSIONS:
 - THICKNESS = 2.5mm
 - WEB WIDTH = 64mm
 - FLANGE HEIGHT = 22mm
 - FOR PIER SPACING, REFER TO ST-322 SHEET 01.
 - FOR PIER AND CHANNEL CONNECTION DETAIL, REFER TO ST-322 SHEET 02.

1

Bottom Channel Layout

1 : 100

SCALE 1:50 @ A3



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 Address: UNIVERSITY OF WOLLONGONG WOLLONGONG NSW, AUSTRALIA 2522
 Contact: sd-2018@uow.edu.au www.desertrosehouse.com.au

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SOLAR DECATHLON MIDDLE EAST DUBAI, UAE - 2018

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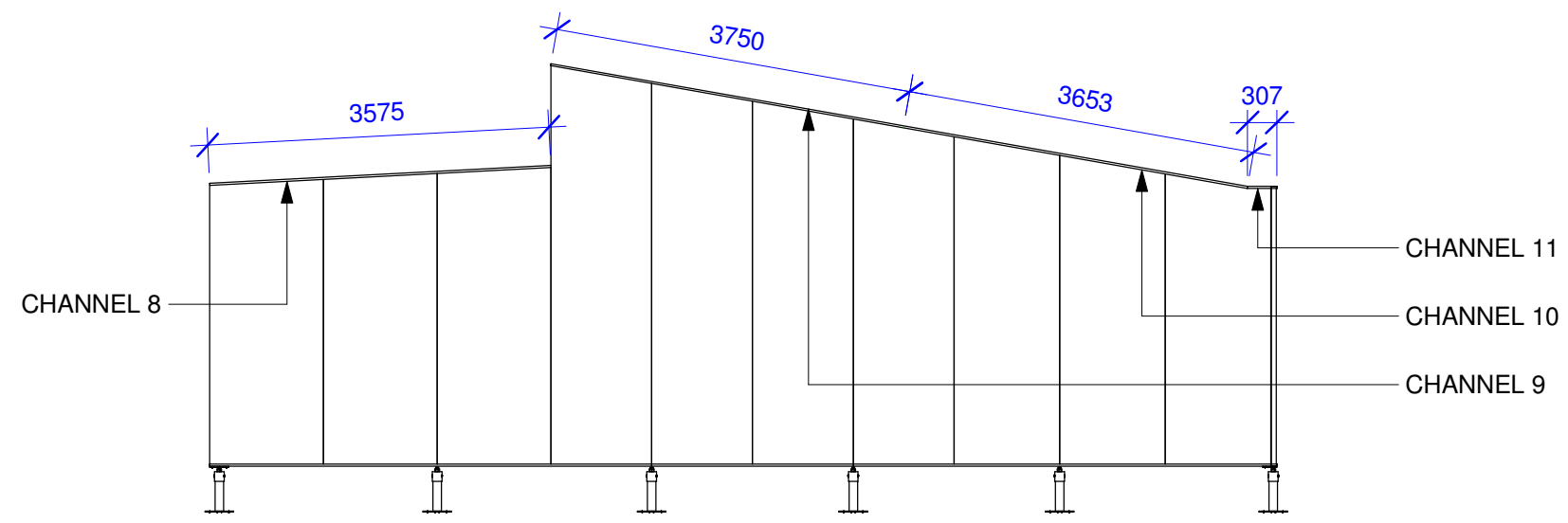
NORTH

SHEET: 01 OF 02

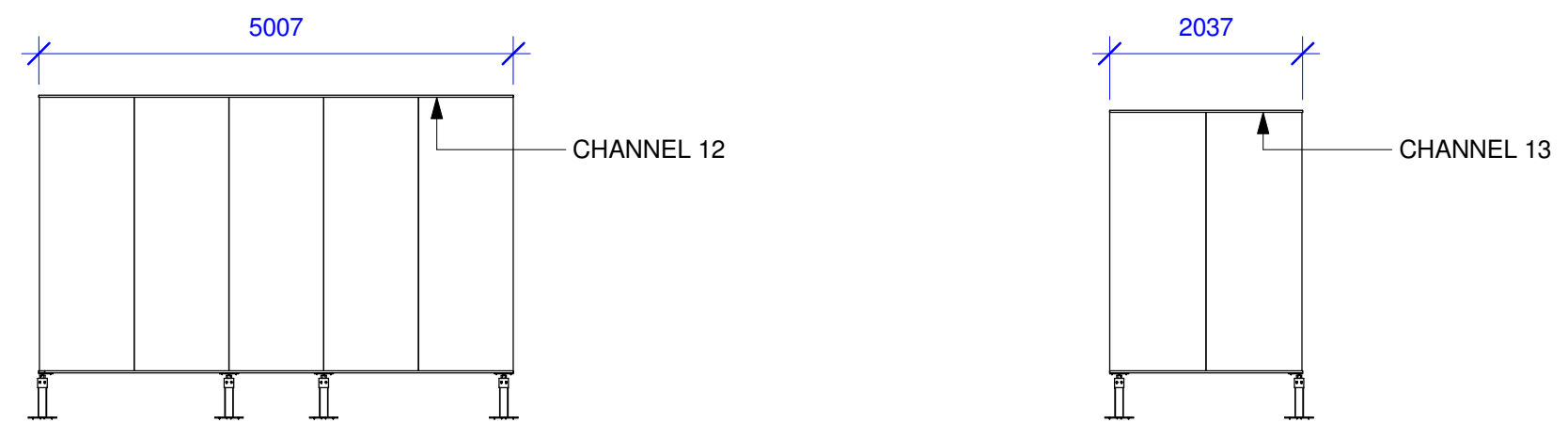
SSW BOTTOM CHANNEL LAYOUT

ST-323

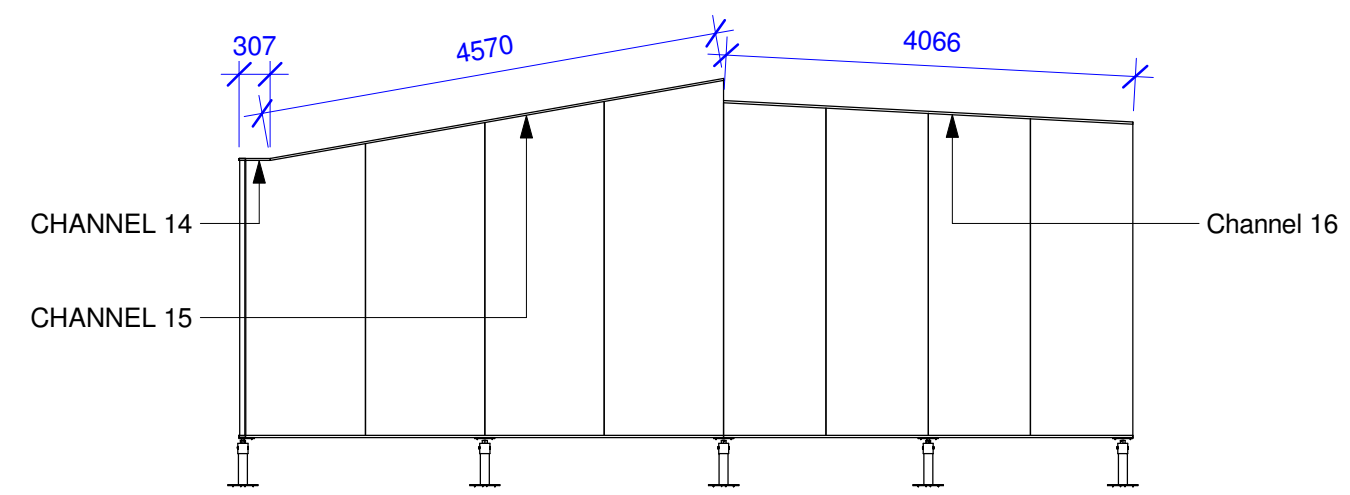
1 West Top Channel Layout
1 : 75



2 South Top Channel Layout
1 : 75



3 East Top Channel Layout
1 : 75



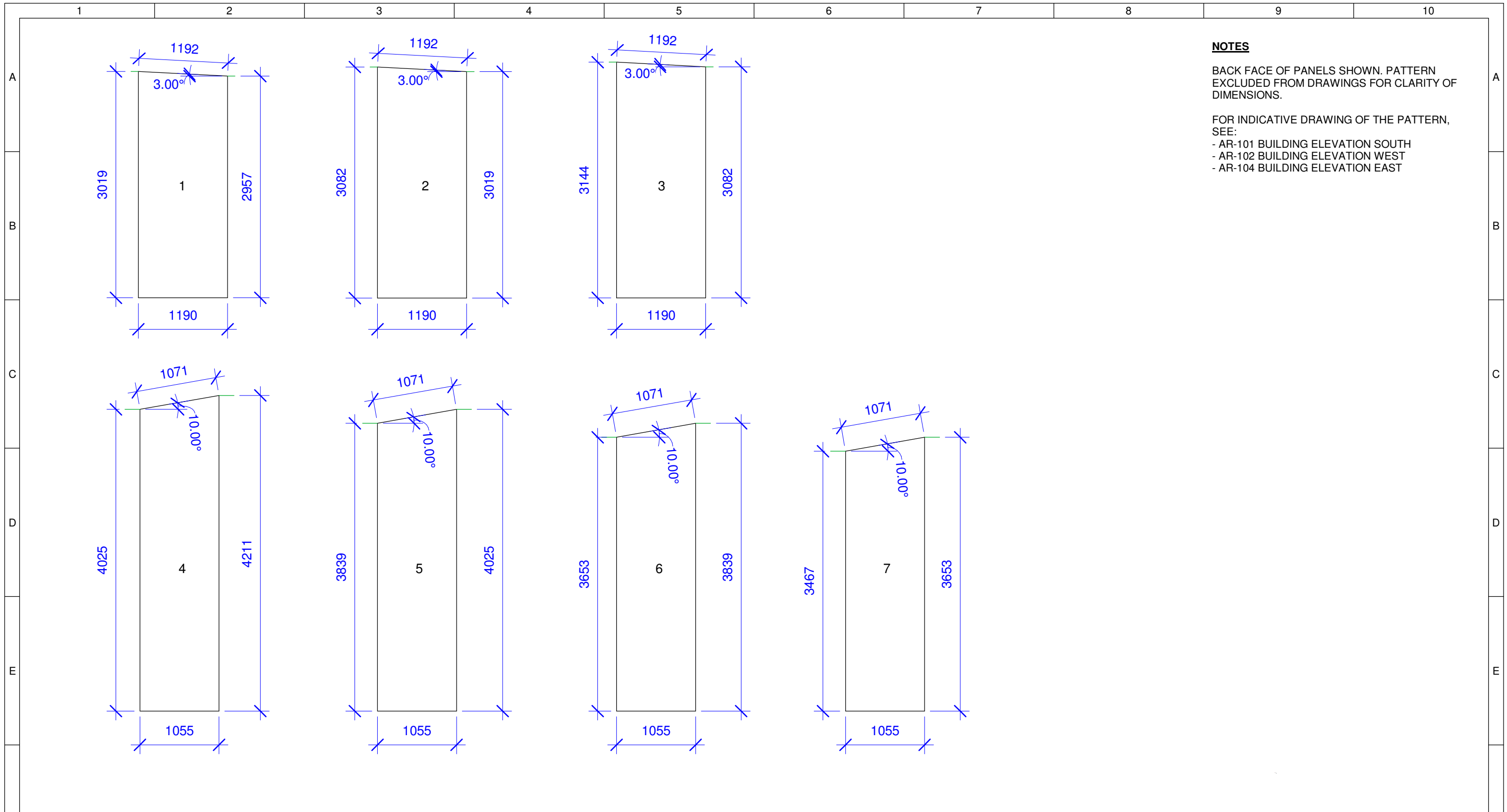
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Address: UNIVERSITY OF WOLLONGONG
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NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
www.desertrosehouse.com.au

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SCALE	1 : 75 @ A3

SSW TOP CHANNEL LAYOUT
ST-323
SHEET: 02 OF 02



NOTES
 BACK FACE OF PANELS SHOWN. PATTERN EXCLUDED FROM DRAWINGS FOR CLARITY OF DIMENSIONS.

FOR INDICATIVE DRAWING OF THE PATTERN, SEE:
 - AR-101 BUILDING ELEVATION SOUTH
 - AR-102 BUILDING ELEVATION WEST
 - AR-104 BUILDING ELEVATION EAST

Panel 1 to 7 Manufacturing

1 : 50



Desert Rose
 Team UOW
 Australia - Dubai

Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
Contact: sd-2018@uow.edu.au
 www.desertrosehouse.com.au

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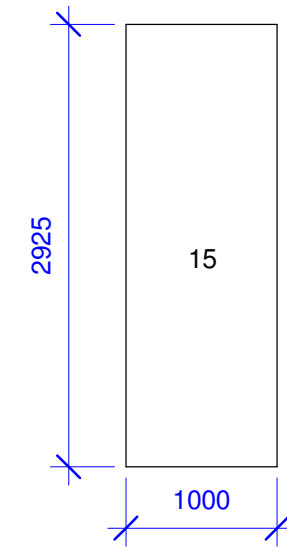
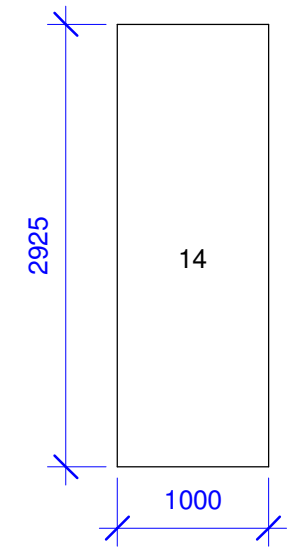
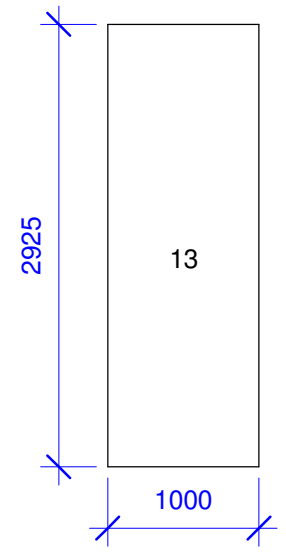
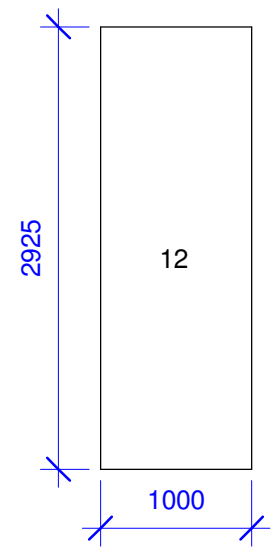
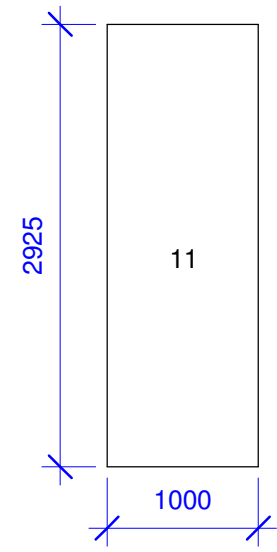
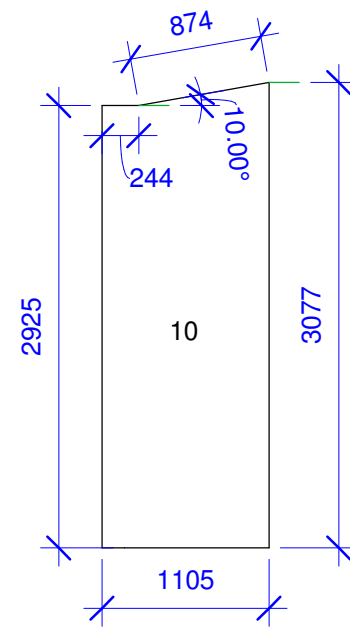
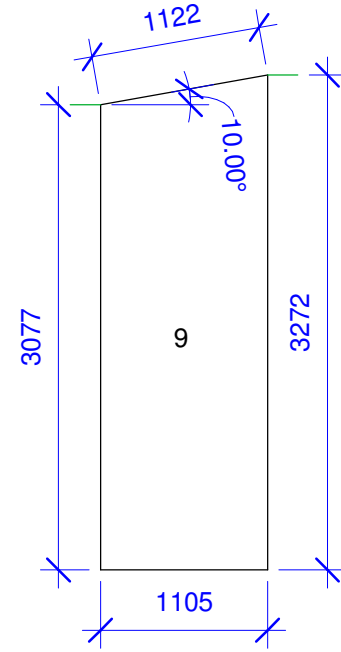
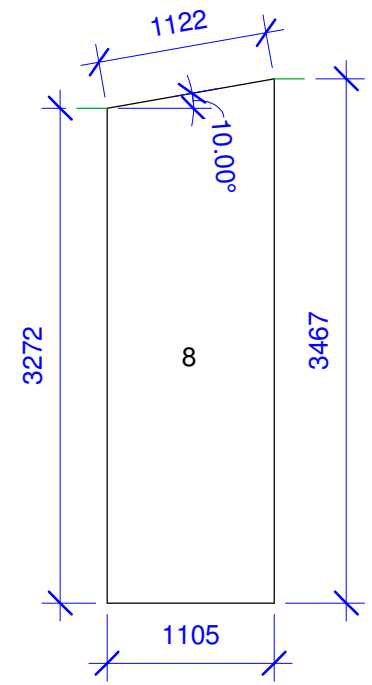
**PANEL 1 TO 7
 MANUFACTURING**

SHEET:
 01 OF 04

ST-331

NOTES
 BACK FACE OF PANELS SHOWN. PATTERN EXCLUDED FROM DRAWINGS FOR CLARITY OF DIMENSIONS.

FOR INDICATIVE DRAWING OF THE PATTERN, SEE:
 - AR-101 BUILDING ELEVATION SOUTH
 - AR-102 BUILDING ELEVATION WEST
 - AR-104 BUILDING ELEVATION EAST



Panel 8 to 15 Manufacturing

1 : 50



Desert Rose
 Team UOW
 Australia - Dubai

Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
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 www.desertrosehouse.com.au

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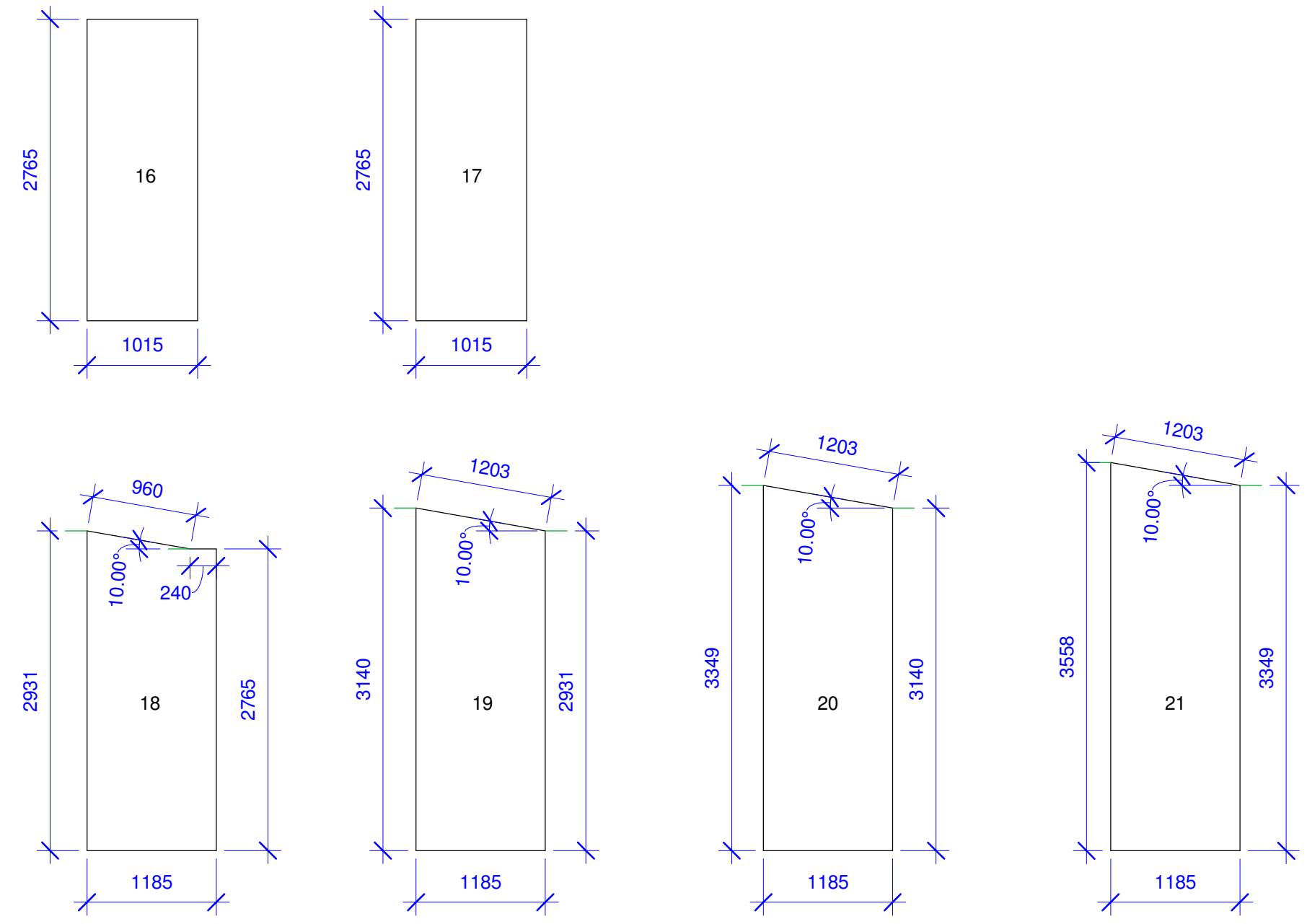
**PANEL 8 TO 15
 MANUFACTURING**

SHEET:
 02 OF 04

ST-331

NOTES
 BACK FACE OF PANELS SHOWN. PATTERN EXCLUDED FROM DRAWINGS FOR CLARITY OF DIMENSIONS.

FOR INDICATIVE DRAWING OF THE PATTERN, SEE:
 - AR-101 BUILDING ELEVATION SOUTH
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 - AR-104 BUILDING ELEVATION EAST



Panel 16 to 21 Manufacturing

1 : 50



Desert Rose
 Team UOW
 Australia - Dubai

Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
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 www.desertrosehouse.com.au

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**PANEL 16 TO 21
 MANUFACTURING**

SHEET:
 03 OF 04

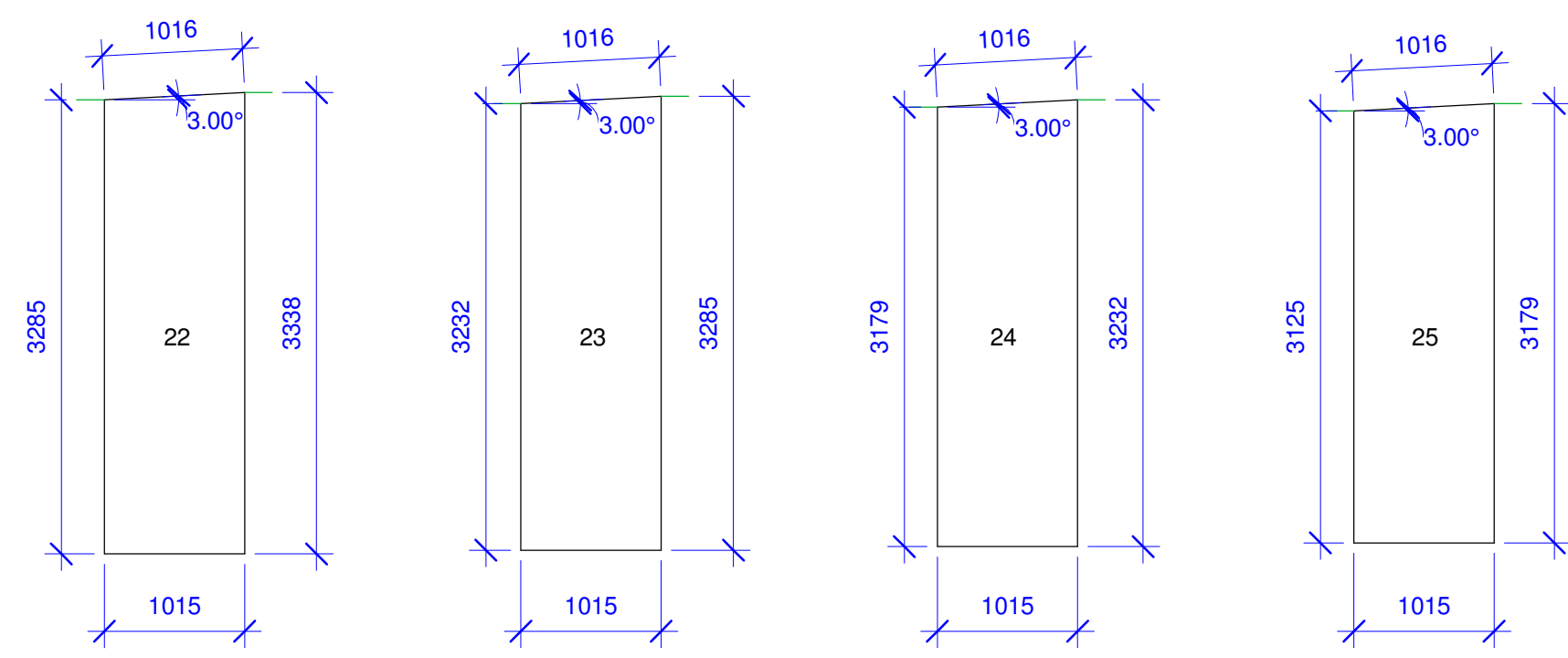
ST-331

NOTES

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FOR INDICATIVE DRAWING OF THE PATTERN, SEE:

- AR-101 BUILDING ELEVATION SOUTH
- AR-102 BUILDING ELEVATION WEST
- AR-104 BUILDING ELEVATION EAST



Panel 22 to 25 Manufacturing
1 : 50



Team: TEAM UOW
Address: UNIVERSITY OF WOLLONGONG
 WOLLONGONG
 NSW, AUSTRALIA 2522
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**PANEL 22 TO 25
MANUFACTURING**

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04 OF 04

ST-331