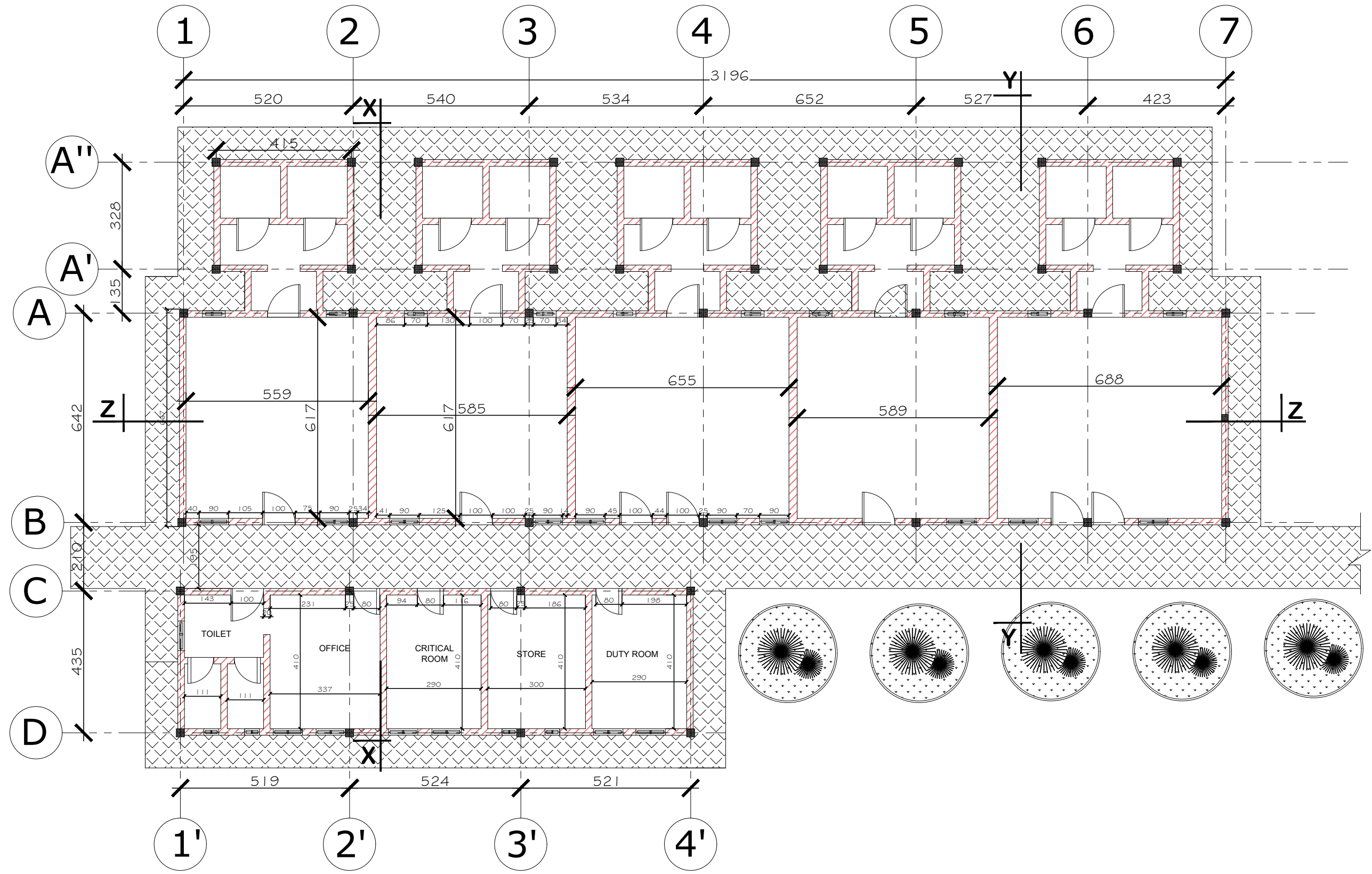


**VOLUME 3**  
**TECHNICAL SPECIFICATIONS**

# PEDIATRIC WARD RENOVATION FOR ST. LUKAS HOSPITAL

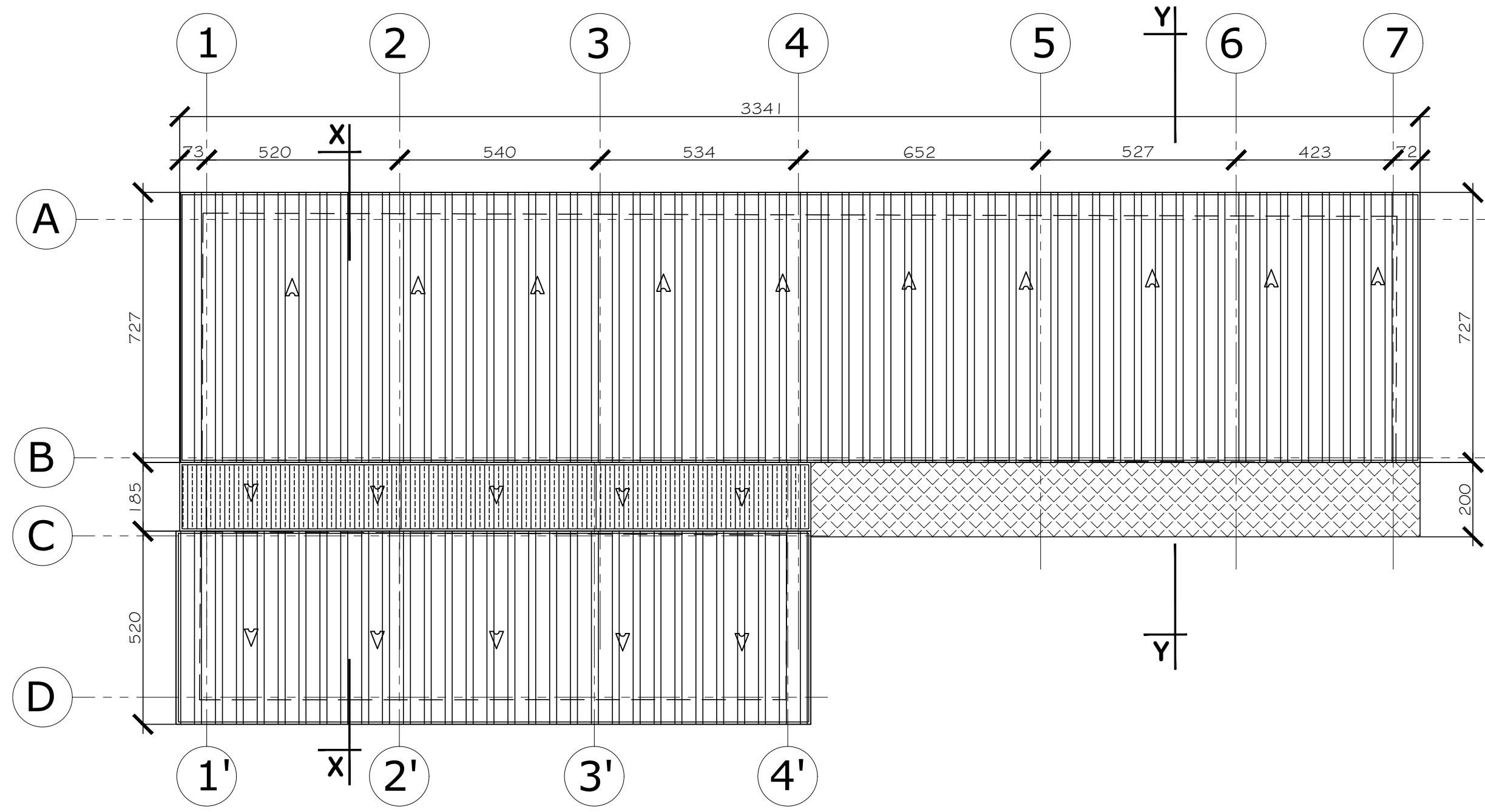
**JULY 2022**

				EMPLOYER:	CONTRACTOR:			BY		NAME	DATE	TITLE:		SCALE	N/A	
					<b>TBA</b>			DESIGNED	ABENEZER	12/05/2022	- Cover Page		UNIT	CM		
0	26/07/2022	Abenezer	For Approval				CHECKED	ABENEZER	12/05/2022			PLOT	A3			
REV.	DATE	BY	DESCRIPTION	PROJECT NO.: C.I.E	PROJECT: ST. LUKAS HOSPITAL RENOVATION Pediatric Ward Renovation			APPROVED	ABENEZER	12/05/2022	DOC. NO.	SL-HP-PDW-AR - 2022	REV.	0	SHEET	00/06
1	2			3	4	5	6	7	8							



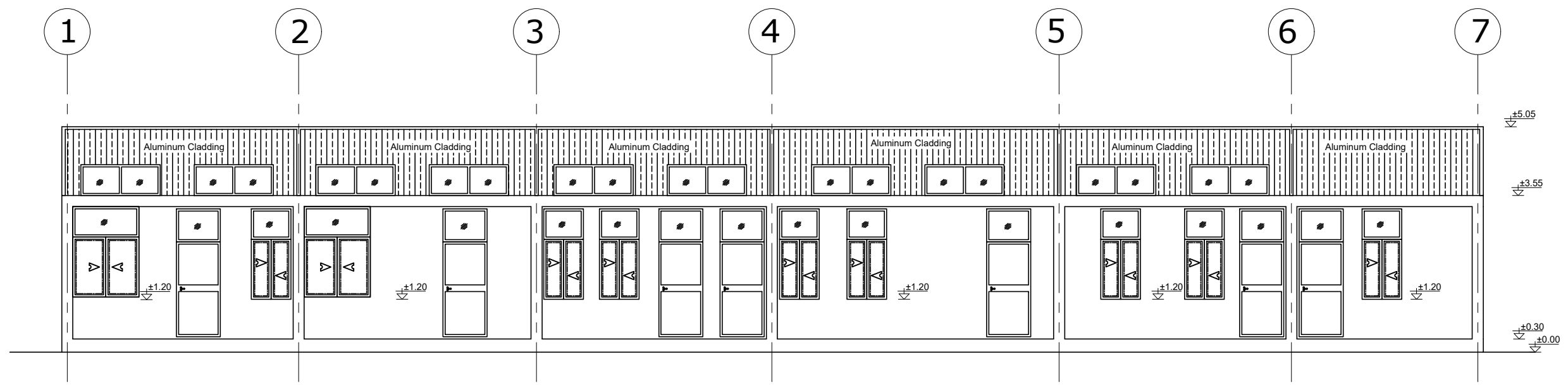
# PEDIATRIC BLOCK FLOOR PLAN

				EMPLOYER:	CONTRACTOR:	BY	NAME	DATE	TITLE:		SCALE	N/A		
					<b>TBA</b>	DESIGNED	ABENEZER	12/05/2022	- GROUND FLOOR PLAN		UNIT	CM		
1	26/07/2022	ABENEZER	FOR APPROVAL			CHECKED	ABENEZER	12/05/2022			PLOT	A3		
REV.	DATE	BY	DESCRIPTION	PROJECT NO.: C.I.E	PROJECT: ST. LUKAS HOSPITAL RENOVATION Renovation of Pediatric Ward.	APPROVED	ABENEZER	12/05/2022	DOC. NO.	SL-HP-PDW-AR - 2022	REV.	0	SHEET	01/08
1	2	3	4	5	6	7	8							

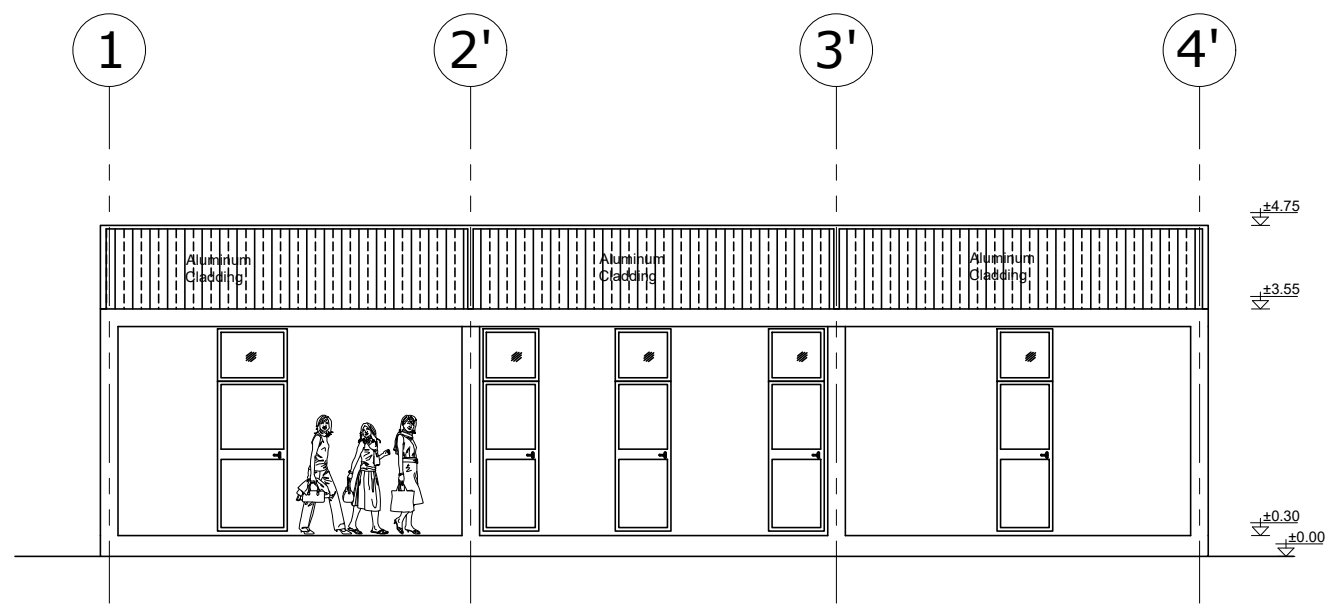


# ROOF PLAN

				EMPLOYER:	CONTRACTOR:	BY	NAME	DATE	TITLE:			SCALE	N/A			
					<b>TBA</b>	DESIGNED	ABENEZER	12/05/2022	- ROOF PLAN			UNIT	CM			
						CHECKED	ABENEZER	12/05/2022				PLOT	A3			
1	26/07/2022	ABENEZER	FOR APPROVAL	PROJECT NO.: C.I.E		PROJECT: ST. LUKAS HOSPITAL RENOVATION		APPROVED	ABENEZER	12/05/2022	DOC. NO.	SL-HP-PDW-AR - 2022	REV.	0	SHEET	02/08
1	2	3	4	5	6	7	8									

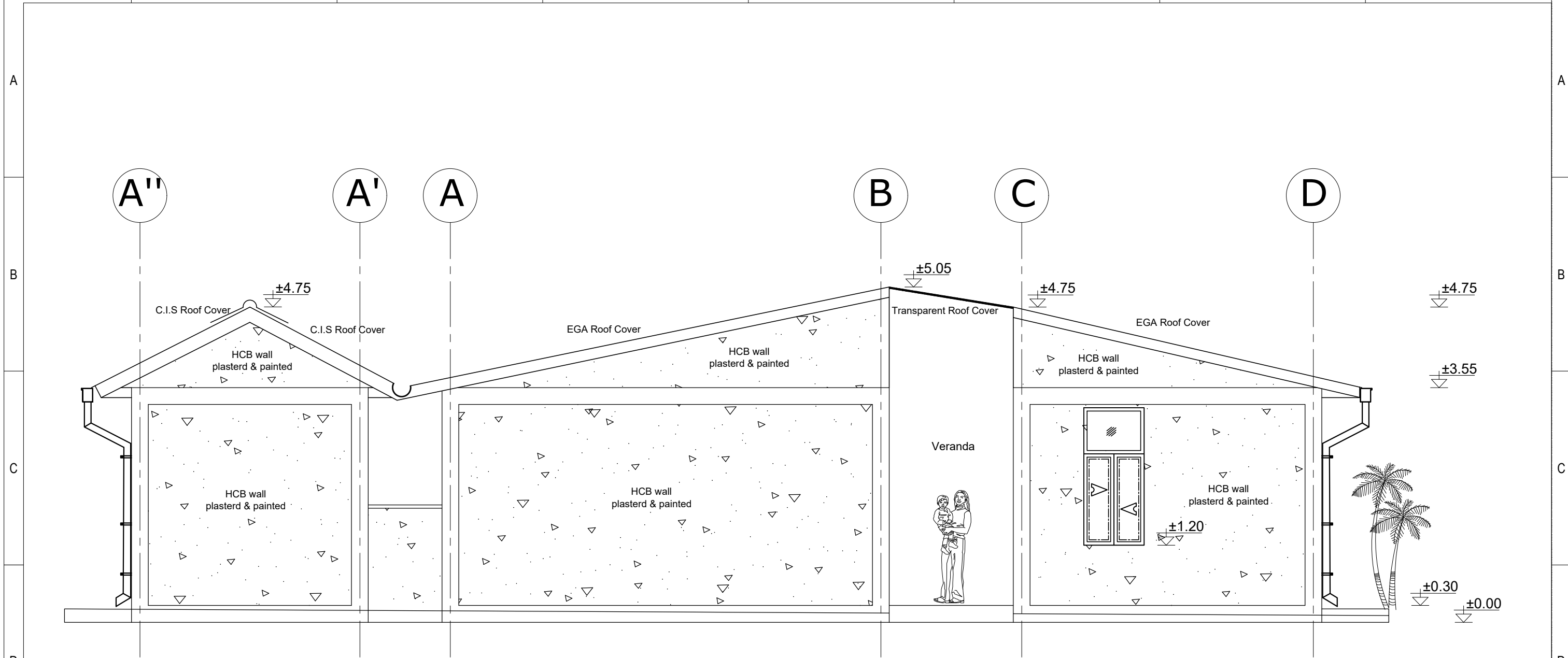


FRONT ELEVATION FOR BLOCK A



FRONT ELEVATION FOR BLOCK B

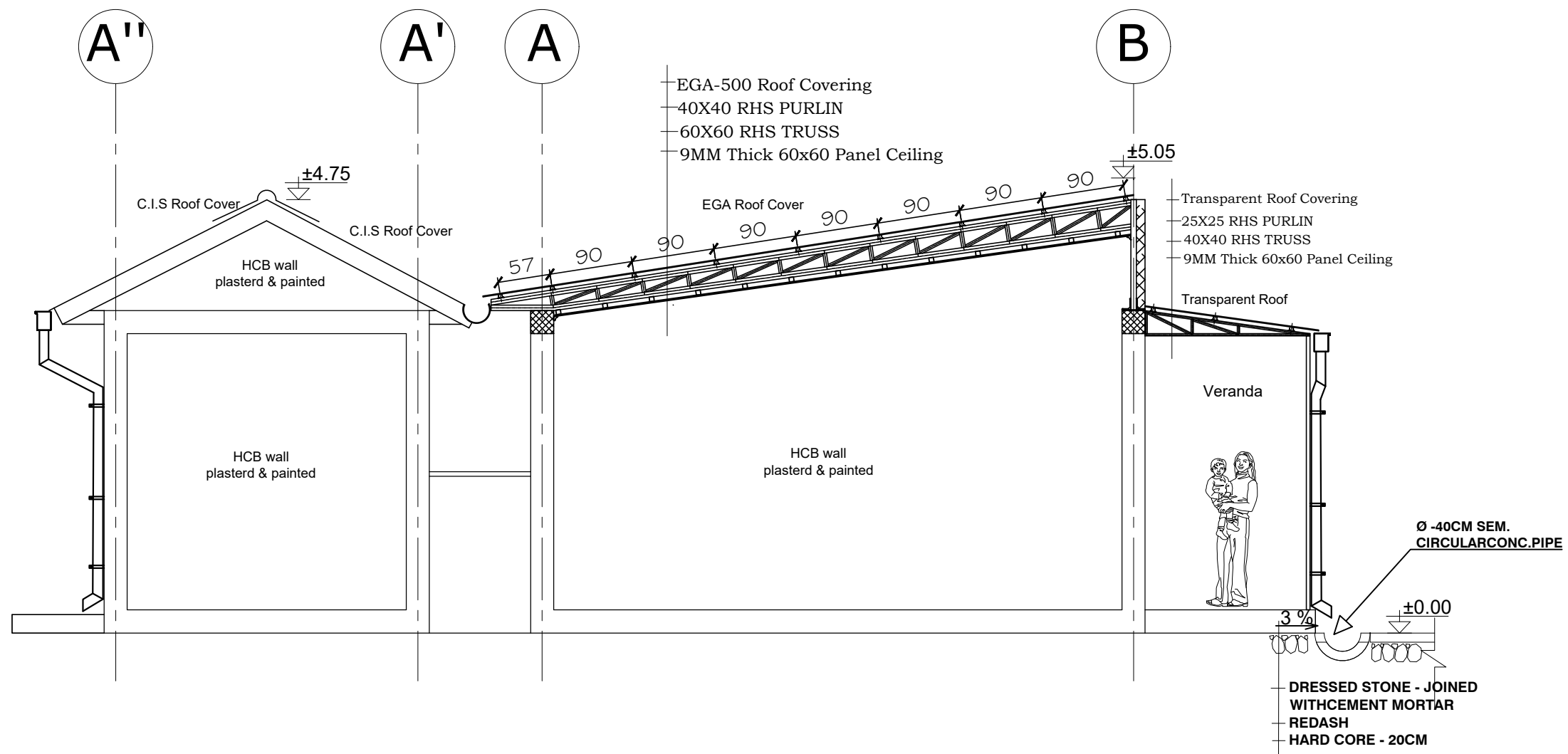
				EMPLOYER:	CONTRACTOR:			BY	NAME	DATE	TITLE:			SCALE	N/A			
				<b>TBA</b>			DESIGNED	ABENEZER	21/04/2022	- GROUND FLOOR PLAN			UNIT	CM				
							CHECKED	ABENEZER	21/04/2022				PLOT	A3				
1	26/07/2022	ABENEZER	FOR APPROVAL	PROJECT NO.: RMCH			PROJECT: ST. LUKAS HOSPITAL RENOVATION Pediatric ward Renovation			APPROVED	ABENEZER	21/04/2022	DOC. NO.	SL-HP-PDW-AR - 2022	REV.	0	SHEET	03/08
1	2	3	4	5	6	7	8											



# LEFT SIDE ELEVATION

				EMPLOYER:		CONTRACTOR:		BY			TITLE:		SCALE	
						<b>TBA</b>		DESIGNED			- GROUND FLOOR PLAN		N/A	
								CHECKED					UNIT	
								APPROVED			DOC. NO.		PLOT	
1	26/07/2022	ABENEZER	FOR APPROVAL	PROJECT NO.: C.I.E		PROJECT: ST. LUKAS HOSPITAL RENOVATION		21/04/2022			SL-HP-PDW-AR - 2022		A3	
REV.	DATE	BY	DESCRIPTION	PROJECT NO.: C.I.E		Renovation of Pediatric ward		21/04/2022			REV. 0		SHEET 04/08	
1	2			3	4	5	6	7	8					

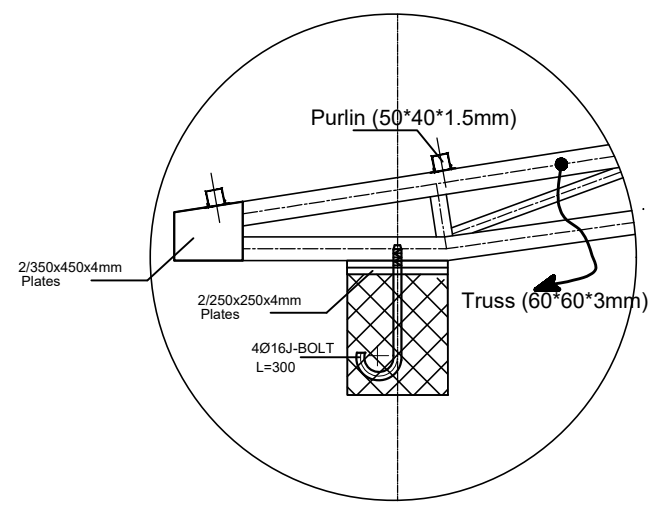
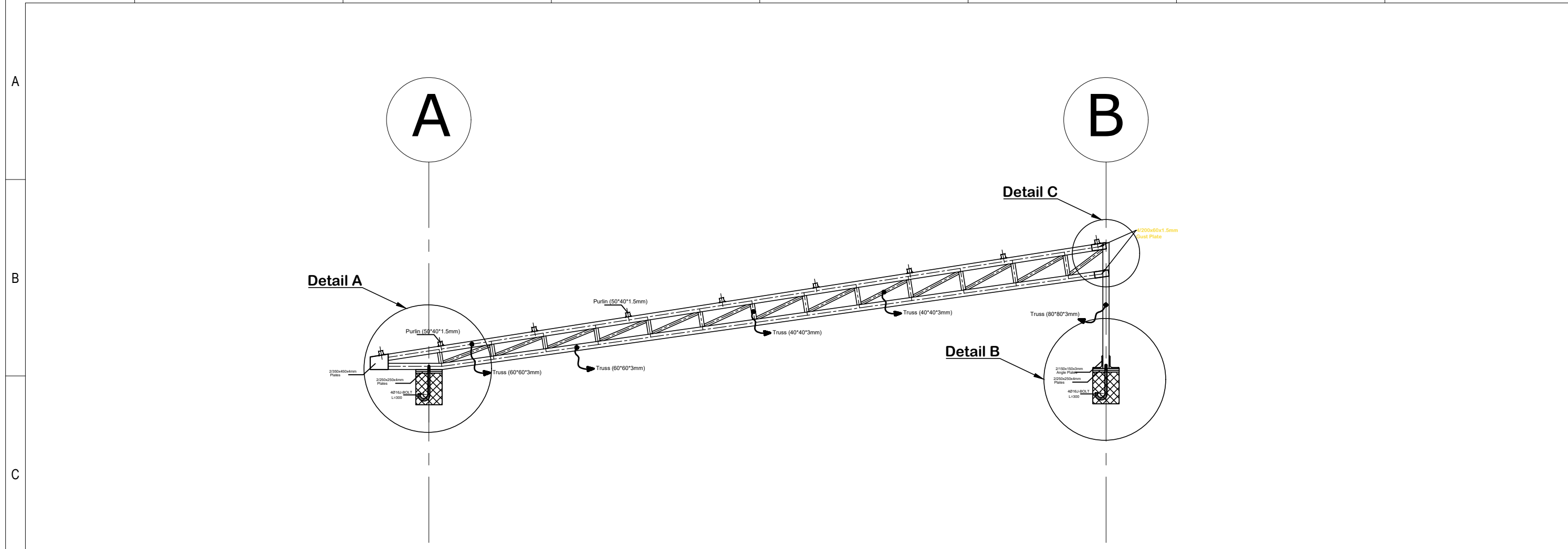




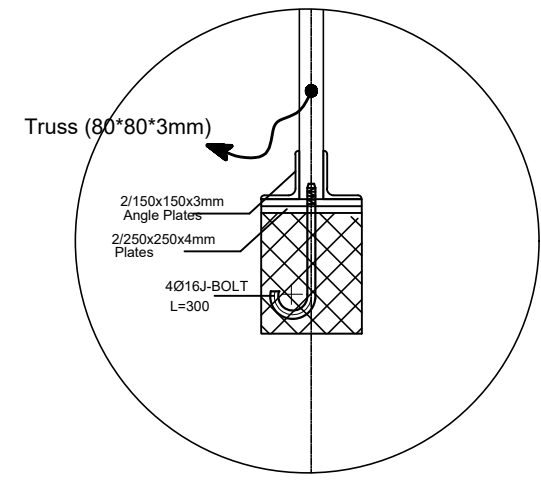
## SECTION Y-Y

				EMPLOYER:	CONTRACTOR:	BY	NAME	DATE	TITLE:			SCALE	N/A	
					<b>TBA</b>	DESIGNED	ABENEZER	21/04/2022	- GROUND FLOOR PLAN			UNIT	CM	
						CHECKED	ABENEZER	21/04/2022				PLOT	A3	
1	26/07/2022	ABENEZER	FOR APPROVAL	PROJECT NO.: C.I.E	PROJECT: ST. LUKAS HOSPITAL RENOVATION Pediatric Ward Renovation	APPROVED	ABENEZER	21/04/2022	DOC. NO.	SL-HP-PDW-AR - 2022	REV.	0	SHEET	06/08
1	2	3	4	5	6	7	8							

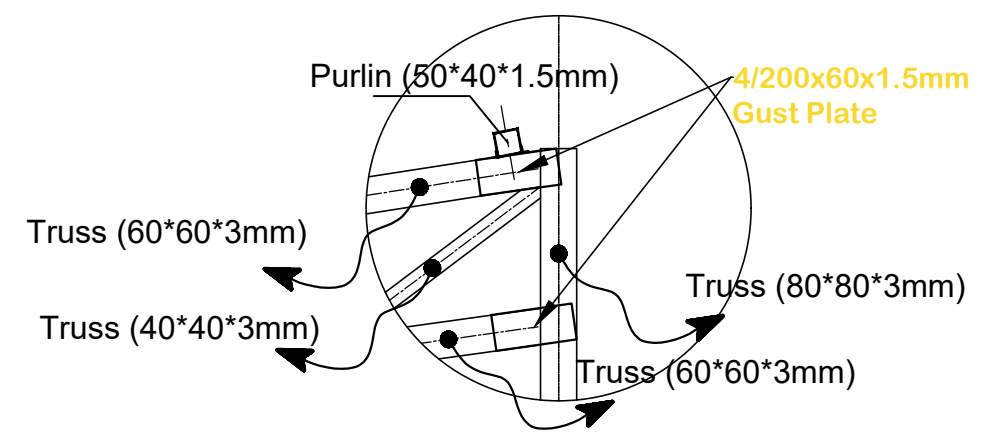




**Detail A**

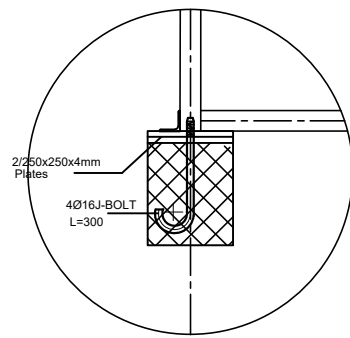
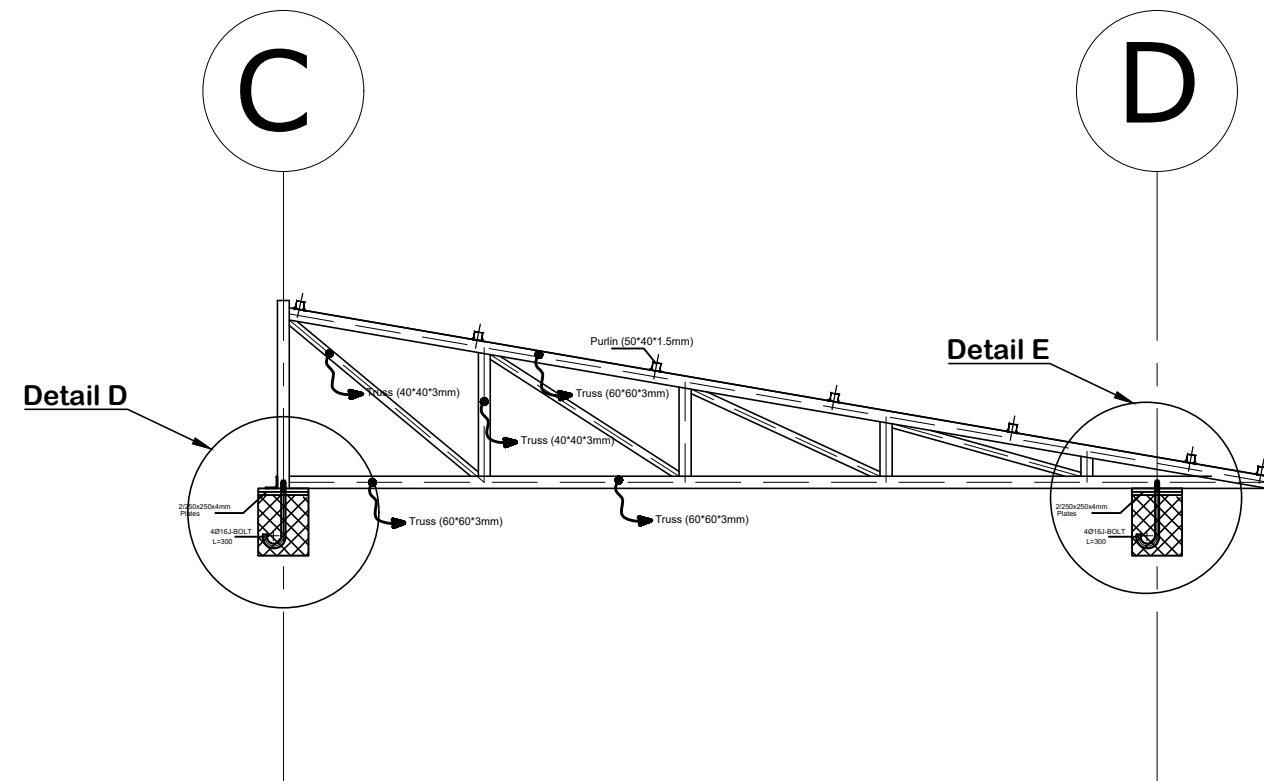


**Detail B**

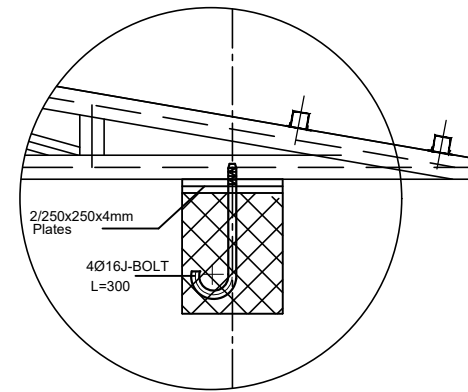


**Detail C**

				EMPLOYER:	CONTRACTOR:	BY	NAME	DATE	TITLE:			SCALE	N/A			
					<b>TBA</b>	DESIGNED	ABENEZER	21/04/2022	- GROUND FLOOR PLAN			UNIT	CM			
1	26/07/2022	ABENEZER	FOR APPROVAL				CHECKED	ABENEZER	21/04/2022				PLOT	A3		
REV.	DATE	BY	DESCRIPTION	PROJECT NO.: C.I.E	PROJECT: ST. LUKAS HOSPITAL RENOVATION Pediatric Ward Renovation			APPROVED	ABENEZER	21/04/2022	DOC. NO.	SL-HP-PDW-AR - 2022	REV.	0	SHEET	07/08
1	2			3	4	5	6	7	8							



**Detail D**



**Detail E**

				EMPLOYER:	CONTRACTOR:			BY	NAME	DATE	TITLE:		SCALE	N/A		
					<b>TBA</b>			DESIGNED	ABENEZER	21/04/2022	- GROUND FLOOR PLAN		UNIT	CM		
1	26/07/2022	ABENEZER	FOR APPROVAL				CHECKED	ABENEZER	21/04/2022			PLOT	A3			
REV.	DATE	BY	DESCRIPTION	PROJECT NO.: C.I.E	PROJECT: ST. LUKAS HOSPITAL RENOVATION Pediatric Ward Renovation			APPROVED	ABENEZER	21/04/2022	DOC. NO.	SL-HP-PDW-AR - 2022	REV.	0	SHEET	08/08
1	2			3	4	5		6		7			8			

**SUMMARY OF BILL OF QUANTITIES**

**FOR**

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**PEDIATRIC WARD ROOF REHABILITATION**

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**ST. LUKAS HOSPITAL**

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<b>1 CLEARING &amp; DEMOLISHING WORK .....</b>	<b>Birr</b>	
<b>2 CONCRETE WORK.....</b>	<b>Birr</b>	_____
<b>3 STEEL WORK .....</b>	<b>Birr</b>	_____
<b>4 CARPENTRY &amp; JOINERY.....</b>	<b>Birr</b>	_____
<b>5 ALMUNIUM WORK .....</b>	<b>Birr</b>	_____
<b>6 ELECTRICAL WORK.....</b>	<b>Birr</b>	_____
<b>7 PAINTING.....</b>	<b>Birr</b>	_____

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**Total .....** **Birr** **-**

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**15% VAT .....** **Birr** **-**

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**Grand Total .....** **Birr** **-**

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Item No	Description	Unit	Qty	Unit Rate	Amount
<b>1.0 CLEARING &amp; DEMOLISHING WORK</b>					
1.01	Dismantle and remove existing corrugated iron sheet (CIS)cover. price shall includes removing all the pins & purlin and store unserviceable surplus material and stacking of serviceable material with in 500 meters lead as directed by Engineer-in-charge.	M <sup>2</sup>	354.60		
1.02	Dismantle existing gutter. price shall include disposal of unserviceable surplus material and stacking of serviceable material with in 500 meters lead as directed by Engineer-in-charge.	lm	101.60		
1.03	Dismantle existing down pipe. price shall include disposal of unserviceable surplus material and stacking of serviceable material with in 500 meters lead as directed by Engineer-in-charge.	Pcs	20.00		
1.04	Dismantle and remove existing roof truss and store the materials at the approved location. Price shall include dismantling all components of a single truss and purlin on the truss section.	Pcs	11.00		
1.05	Dismantle and remove existing ceiling and related fixtures. The price shall include all the necessary demolishing activities that required for new installation and disposal of unserviceable surplus material and stacking of serviceable material with in 500 meters lead as directed by Engineer-in-charge.	M <sup>3</sup>	325.60		
1.06	Chisel and remove top tile beam and column connection points and make the section ready to embed 30cm long j-bolt. The contractor shall gain approval from the lead engineer on the location and size of concrete to be demolished. Price shall include temporary protection and support for top tile beam to prevent cracks.	Pcs	22.00		
<b>TOTAL CARRIED TO SUMMARY .....</b>					
<b>2.0 CONCRETE WORK</b>					
2.01	Reinforced concrete quality C-25,360 kg of cement/m3 filled in to form work and vibrated around rod reinforcement Price shall include formwork.	M <sup>3</sup>	4.00		
2.02	Apply three coats of plastering in cement mortar (1:3)Price shall include exposed surface of beams & column,pre-cleaning and preparation of the surface.	M <sup>2</sup>	100.00		
<b>TOTAL CARRIED TO SUMMARY .....</b>					
<b>3.0 STEEL WORK</b>					
3.01	Prepare & erect steel roof structure all as shown on the detail drawings. Apply two coats of antirust paint. Price includes all necessary preparation work such as cleaning, wire brushing ,connecting plates, bolts, nuts, angle iron, reinf bars finally two coats of anti-rust paint.& all the necessary accessories.				
	<b>A. RHS &amp; SHS</b>				
	1) RHS 80 X 80 X 3mm	Kg	150.00		
	2) RHS 60 X 60 X 3mm	Kg	850.00		
	3) RHS 50 X 40 X 3mm	Kg	400.00		
	4) RHS 40 X 40 X 3mm	Kg	550.00		
	5) RHS 25 X 25 X 3mm	Kg	250.00		

	<b>B. Metal Plates</b>				
	1) 250 X 250 X 4mm	Pcs	44.00		
	2) 200 X 60 X 1.5mm	Pcs	28.00		
	3) L150 X 150 X 3mm	Pcs	14.00		
	4) 350 X 450 X 4mm	Pcs	14.00		
	<b>C. J-bolts</b> Supply and install galvanized 16mm thick J-bolt (300mm long )as shown on the drawing.	Pcs	88.00		
3.02	Roof covering in EGA-500 sheet including roof ridge cover fixed to 50x40mm RHS purlin at 90cm c/c by means of J-bolt screw. Roof cover measured in horizontal projection. Price shall include the necessary fittings and accessories as per the design.	M <sup>2</sup>	354.60		
3.03	Supply and install transparent fiber Roof covering sheet including roof ridge cover fixed to 50x40mm RHS purlin at 90cm c/c by means of J-bolt screw. Roof cover measured in horizontal projection. Price shall include the necessary fittings and accessories as per the design.	M <sup>2</sup>	60.00		
3.04	Supply and fix G-28 flat metal sheet gutter connecting the two roofs as per the detail drawing. Price shall include metal bracket support and all other necessary accessories.Devt. length =820 mm	lm	52.00		
3.05	Supply and fix110mm diameter PVC down pipe as per the drawing, price shall include metal strap supports c/c 900mm, wire strainer and all other necessary accessories	lm	45.00		
	<b>TOTAL CARRIED TO SUMMARY .....</b>				
	<b>4. CEILING WORK</b>				
4.01	All structural members shall be well seasoned, straight and free of any harmful defects. Each truss joint shall be connected with band iron and truss shall be firmly anchored to tie beam with ϕ 6mm plain bars. Price includes plain bars and approved 3 coats of anti termite paint to trusses & purlins.  a) 5X7 cm zigiba purlin.	ml	264.00		
4.02	Providing and fixing White colored 600mmx600mm Panel ceiling tiles grid system with 15mm wide T-section flanges, wihite colour 15mm gird to comprise main runners spaced at 1200mm centre to centre securely fixed to structural soffit by approved hangers at 1200mm maximum centre to centre and not more than 150mm from spliced joints. The last hanger at the end of each main hanger should not be greater than 600mm from adjacent wall. Flush fitting 1200mm long cross tees to be interlocked between main runnders at 600mm centre to from 1200x600mm modules. Cut cross tees longer than 600mm require independent support. 600x600mm modules to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200mm cross tees. Perimeter trim to be armstrong trulok wall angle or channel secured to walls at 450mm maximum centres. The rate shall include cutting of the tiles for light fixtures/A.C. and providing necessary and additional frame work for fixing the same. Wherever channels are cut in this process, additional support shall be made for proper stability	M <sup>2</sup>	354.60		
	<b>TOTAL CARRIED TO SUMMARY .....</b>				

<b>5.0 ALMUNIUUM WORK</b>					
5.01	Providing and fixing aluminum work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminum sections shall be smooth, rust free, straight, mitered and jointed mechanically wherever required including cleat angle, Aluminum snap beading for glazing / paneling, C.P. brass /stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing be paid for separately) :				
	a) supply and install 6mm thick Aluminum wall cladding for external wall. Price shall include all the required fittings and accessories for full installation to the employers satisfaction	M <sup>2</sup>	45.96		
	b) supply and install aluminum windows (700mm x 160mm). Price includes all the required fittings and accessories for the successful installation and operation of the window. Price shall also include light shades made from 1.5mm thick aluminum panels arranged in a horizontal pattern to protect excess light.	Pcs	12.00		
<b>TOTAL CARRIED TO SUMMARY .....</b>					
<b>6.0 ELECTRICAL WORKS</b>					
6.01	Re-install existing lighting fittings on the approved locations to symmetrical fit with proposed new lighting points. The lighting fittings and switches shall be replaced if found to be not working. Price shall include maintenance of electrical wire and required fittings.	Pcs	18.00		
6.02	Provide and install complete ceiling mounted light fixture, 18W LED lamps of approved quality, complete with electrical installations. The lights fixture shall be hanging type for the include ceilings.	Pcs	20.00		
6.03	Provide and install a ceiling suspended fan of approved quality including all electrical connections, wires, speed control switch PVC tubes etc.	Pcs	9.00		
<b>TOTAL CARRIED TO SUMMARY .....</b>					
<b>7.0 PAINTING &amp; GYPSUM WORK</b>					
	Apply three coats of approved quality oil paint . Price shall include pre - cleaning & preparation of the surface. Paint type should be water resistance.				
7.01	To internal plastered wall surface.	M <sup>2</sup>	365.00		
7.02	Ditto as item 7.01 to external plastered wall surface, external beams and columns.	M <sup>2</sup>	250.00		
7.03	Providing and fixing 10.0mm thick Gypsum board wall surfaces in plain. Price shall include cutting the Gypsum board for light fixtures/A.C. and providing necessary and additional frame work for fixing the same.	M <sup>2</sup>	45.90		
<b>TOTAL CARRIED TO SUMMARY .....</b>					