Modular Sterile Cleanroom 100% Hardware Status Update

Logan Bennett Michelle Borzick Gia Neve Aaron Reynoza



Updated Gantt Chart

Cleanroom					Project start: Wed, 3/27/2024	Status: On Track			
Logan Bennett, Michelle Borzick,	Gia Neve, Aaron Ro	eynoza			Display week: 0				
TASK	ASSIGNED TO	PROGRESS	START	END	Mar 18, 2024 Apr 1, 2024				
Finalized Testing Plan						Damaged FFU n			
Obtain Testing Equipment		100%	3/12/24	3/22/24		replaced			
Finalized Testing Plan		100%	3/14/24	3/22/24		replaced			
Hardware Status Update 100%									
Cleanroom Frame Manufactured/Assembled	All	100%	2/28/24	3/25/24					
Gowning Room Frame Assembled	All	100%	2/28/24	3/25/24					
Polycarbonate Sheets Installed	All	100%	2/28/24	3/25/24					
Vinyl Doors Installed	All	100%	2/28/24	3/25/24					
FFUs Installed	All	100%	2/28/24	3/25/24					
Support Beams in Place	All	100%	2/28/24	3/25/24					
Draft of Poster									
Poster Draft		20%	3/1/24	3/30/24					
Initial Testing Results									
Obtain Testing Equipment	Michelle	50%	3/25/24	4/10/24					
Perform Testing		0%		4/10/24					

lock: needs

Figure 1: Updated Gantt Chart March 2024

Michelle Borzick, Modular Sterile Cleanroom, 3-27-24

Design Efforts

CAD Updates: Addition of Gowning Room, Doors, and Cleanroom Support Beams



Figure 2: Cleanroom CAD at 67% Update

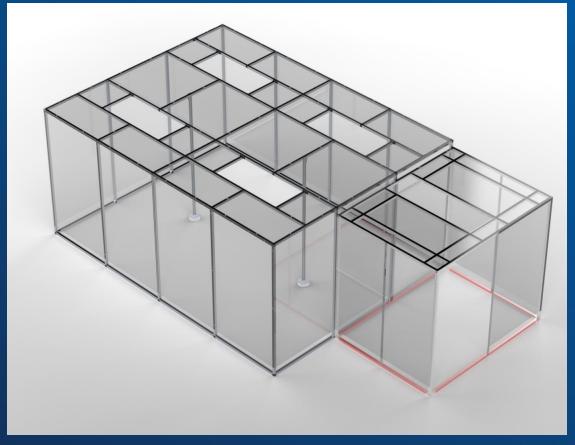


Figure 3: Updated Cleanroom and Gowning Room CAD

Aaron Reynoza, Modular Sterile Cleanroom, 3-27-24

Design Efforts

Design Updates:

 Support Beams were placed to minimize deflection of the connectors under the FFUs



Figures 4 & 5: Support Beams

Purchasing Plan

18	80/20 T-Slot Extrusions	4	2x 11.5ft & 2x 6ft	Aluminum	Ryans Garage	N/A	N/A	N/A	Donated	Yes
19	Aluminum Square tubing	2	2x 8ft	ALuminum	Machine shop	N/A	N/A	N/A	\$108.71	Yes
20	Bolts		40 x 2.5", 20 x 1" , 25 2"	steel	Home Depot	812210 865658 2420	N/A	N/A	\$30.00	Yes
21	Nuts	55	1/4" x 20			801826	N/A	N/A	\$10.00	Yes
22	Support Beam Base	2	2 tops, 2 bottoms			4689864		N/A	\$80.00	Yes
Total Cost									\$10,543.49	
Total Cost										
									Percentage Purchased:	100.00%

Figure 6: Purchasing BOM

Gia Neve, Modular Sterile Cleanroom, 3-27-24

Manufacturing Plan

0.10	ZZ VORIORCZ	4	10p. 2 1101C3 01 11		Aleminen	ream.	0.4	2/ 10/ 2024	NAO MOETINE SHOP	0.4	4	103
	16" X 48" X 96" Clear Polycarbonate Sheets		Hole placement, Bottom wall removal	CT	Polycarbonate	Team	30	2/18/2024	Dr. Becker's Lab	30	31	Yes
G	Steel Beams	33	Hole placement TBD		Powder Coated Steel	Team	9	2/18/2024	Dr. Becker's Lab	9	33	Yes
	Drill Template Beam		Beams to hold hole guides		Wood	Team	0.5	2/9/2024	Dr. Becker's Lab	0.5	4	Yes
•	Hole Guides Single		3D printed holes guides for drill press		3D Printed Filament	Team	12	2/9/2024	Michelle's House	12	2	Yes
	Hole Guides Double		3D printed holes guides for drill press		3D Printed Filament	Team	12	2/9/2024	Michelle's House	12	2	Yes
	Cut 1"x1" AL											
	beams to size . Cut 80/20		Cutiing to size				0.5			0.5	2	Yes
	Extrusions		Cutiing to 87"		Aluminum		0.5	5/25/2024	Machine Shop	0.5	2	Yes
	Total Qty:	121					91.1		P		1	
									Percentage Manufactured:	100.0%		

Figure 7: Manufacturing BOM

Logan Bennett, Modular Sterile Cleanroom, 3-27-24

Demonstration



Figure 5: Completed Cleanroom and Gowning Room



Figure 6: Completed Cleanroom and Gowning Room

Logan Bennett, Modular Sterile Cleanroom, 3-27-24

Demonstration



Michelle Borzick, Modular Sterile Cleanroom, 3-27-24

THANK YOU!

