Deliverable E- Project Plan and Cost Estimate

GNG 1103 - Engineering Design

Faculty of Engineering – University of Ottawa

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Introduction

From the most recent client interview with Monique Manatch, our team was able to show her our most recent modified sketches with dimensions. Monique was able to give us constructive feedback based on what she saw in our drawing and make useful suggestions on improvements that could be made in the future. First, she suggested that the roof should be angled at a greater slope. She also mentioned the solar panel should be angled as well, to make it more effective to prevent snow build up in the winter. Furthermore, she suggested that we insulate the vents and make sure the flooring and the panel for the house will prevent to mice from entering. We were able to make the necessary adjustments from this client meet and reorganize our final design. We are now moving into the next stage, which involves a cost estimates and researching the right type of material we need. More importantly, we will begin the construction of our first prototype.

Project Plan

- Gather materials for prototype 1 (Jason)
- Design prototype 1 made from house scraps (Jason)
- Analysis of critical components or systems (All)
- Design prototype 2 using AUTOCAD (Herb)
- Analytical numerical or experimental model (All)
- Gather materials for prototype 3 (Herb)
- Design prototype 3 (Jason, Herb, Sara, Evan, Puwen, Zhaoqi)

Gantt Diagram of Project Plan:

	0	Task Mode	Task Name 👻	Duration ,	• Start •	Finish 🗸	Predecessors	, Resource Names	r 2018 5 8 11	14 17	20 23 26	November 29 1 4	2018	13 16 19	22 25 28	December 2018		16 1
7		*	Gather Materials for prototype 1	1 day	Mon 10/15/18	Mon 10/15/18		Jason		Jason								
В		*	Gather Materials for prototype 3	1 day	Mon 10/15/18	Mon 10/15/18		Herb		Herb								
1		1 0	Design Prototype 1 made from house scraps	1 day	Fri 10/19/18	Sun 10/21/18	7	Jason		t	📑 Jason							
3		*	Deliverable F	0 days	Sun 10/21/18	Sun 10/21/18		Evan, Herb, Puwen, Sara, Zhaoqi		♦ 10/21								
2		*	Analysis of critical components	1 day	Sun 11/4/18	Sun 11/4/18		Evan				(1	van					
5		*	Deliverable G	0 days	Sun 11/4/18	Sun 11/4/18	13	Evan, Herb, Jason, Puwen, Sara, Zha				*	1/4					
3		8	Design Prototype 2 using CAD	6 days	Mon 11/5/18	Sun 11/11/18		Herb					He	erb				
4		*	Analytical, numerical or experimental model	1 day	Sun 11/11/18	Sun 11/11/18		Sara					ta Si	ara				
10		*	Deliverable H	0 days	Sun 11/11/18	Sun 11/11/18	5	Evan, Herb, Jason, Puwen, Sara, Zha				÷ 1	11/11	-				
6		*	Design Prototype 3	8 days	Mon 11/12/1	Wed 11/21/18		Evan, Jason, Herb, Puwen, Zhaoqi, S							Evan, Jason,	Herb, Puwen, Zh	naoqi, Sara	
11	H	-	Deliverable I	0 days	Fri 11/23/18	Fri 11/23/18	10	Evan, Herb, Jason, Puwen, Sara, Zha							11/23			
9		*	Design Day	0 days	Mon 11/26/1	Mon 11/26/18	6	Evan, Jason, Herb, Puwen, Zhaoqi, S							\$ 11/2	5		
12		8	Deliverable J	0 days	Sat 12/15/18	Sat 12/15/18	11	Evan, Herb, Jason, Puwen, Sara, Zha										o 12/1

File of project plan has been included in the submission of Deliverable E as an .mpp file.

Project Scope

The goal of this design consists of constructing a functional greenhouse. A sturdy wooden structure will be constructed in the following month with polythene sheets to house vegetation for the full season. The structure should survive harsh winds and heavy snow falls.

Bill of Materials:

ltem Number	Part Name	Description	Quan tity	Unit Cost	Total Cost
1	CANFOR 2x6x8 SPF Dimension Lumber	2x6x8	4	\$5.40	\$21.60
2	RESOLUTE 2x4x8 SPF Dimension Lumber	2x4x8	30	\$3.65	\$109.50
3	Vent Hood For Exhaust - Plastic - 4" - White	4 inch	1	\$7.49	\$7.49
4	Solar Panel	3x2	1	Free (supplied by uOttawa)	Free
5	Polyethylene Sheets	10ft x 1000 square ft	1	\$52.47	\$52.47
6	Corrugated Roofing Panel in clear	26in x 12 ft	1	\$32.97	\$32.97
7	Plywood	4x8	1	\$16.25	\$16.25
8	Concrete blocks		4	Free (supplied by lab coordinator)	Free
	TOTAL				\$240.28

Conclusion

The scheduling of this project has been created on *Microsoft Project* to efficiently display the scheduling of the group in a gantt table. The tasks have been assigned and our expected due dates have been established. There is now clear organization of events for the rest of the project.

A list of materials has been gathered for the construction of prototype 3. The quantity of materials and the prices have been obtained and tabulated in the table above. Summing the values, our total cost is \$240.28. This value is below our budget which works with our monetary constraints.