Construction Project Checkpoint 3

This is the last of the three checkpoints associated with this project. Your task is to produce, and submit to Blackboard, by the due date, a parts list and assembly instructions of the structure you designed. You are also required to submit the minimum of two pages report detailing the work you did on the project.

Note: I do not want you to describe the steps you took to create your individual parts, or how you placed the components on the workplane. I want to gain an understanding of what you experienced during the three different checkpoints.

A scoring rubric is provided at the end of these instructions.

This checkpoint is worth 100 points.

Tasks:

1. For checkpoint 3, go to the 3-D version of the building you created in Tinker Cad, separate the parts, and download the disassembled image to your computer so you may find it later. This was explained in checkpoint 2.

2. Copy and paste the image into MS Word, or other word processing software you have. You need to manipulate the image so you can add text to the image indicating the name of each component. In MS Word, right click on the image and look for the "wrap text" icon. Click on that, and click on the "behind text" option. This will allow you to add text boxes (located in the insert tab, far right side), and arrows (found under shapes).

3. You will create a parts list. All you must do is label the parts you created. For clarity purposes you only need to identify one of each component. Once you have completed that, copy, and paste the image to another Engineering Notebook page. This will be your assembly instruction sheet. Please be sure to include the steps needed to assemble the parts. You do not have to be that precise with the instructions. Just give me enough detail so I understand the basics on assembly. An example is provided below.

Note: If you did not complete the rough sketch required for Checkpoint 1, but include it with this assignment, I will go back and give you credit for that assignment.

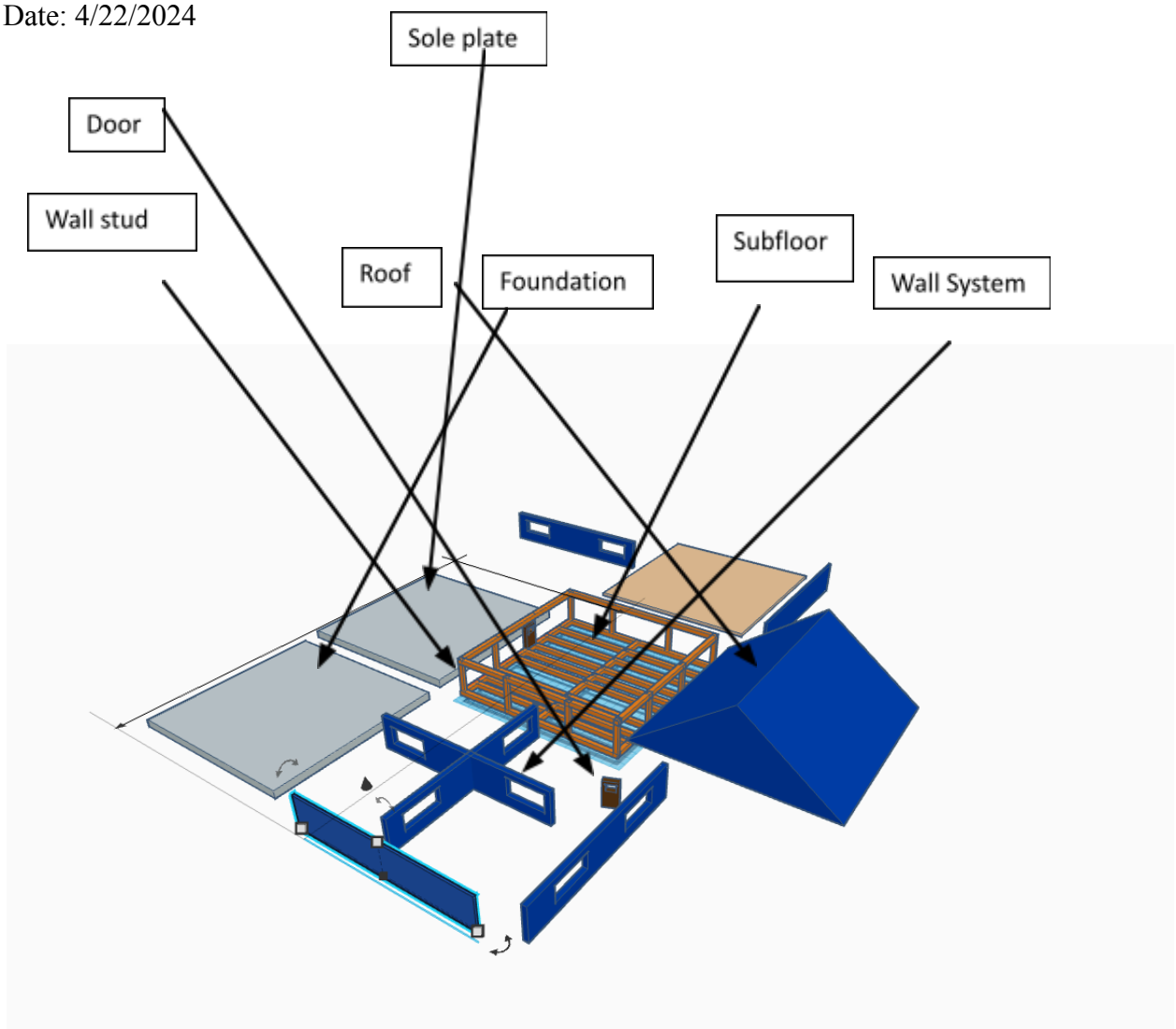
Name of Project: Building Construction
Student Name: Stephen Cobb
Date: 4/22/2024

Designer Signature and printed name Stephen Cobb	Component/System Name Building construction
Witness signature and printed name:	Page number: 2

Assembly Instructions:

1. Set foundation
2. Build walls using a sole plate, wall studs, and a top plate, placed at 16 apart
3. Install subfloor inside wall system
4. Place windows and doors into locations as shown
5. Install roof

Name of Project: Building Construction breakdown
Student Name: Stephen Cobb
Date: 4/22/2024



Designer Signature and printed name Stephen Cobb	Component/System Name house breakdown
Witness signature and printed name:	Page number: 3

Submit to CANVAS by the due date posted in the course schedule. No late submissions will be accepted for this assignment.

Written Report

Throughout these three checkpoints I ran into a lot of trouble. Tinker cad is not a program where you can log on and just figure everything out. What was hard for me was aligning everything and making sure it was perfect. It was so frustrating making everything perfect, but it was worth it because the house did come together at the end of the day. Another thing that was difficult was creating the holes for the windows and doors.

In the beginning of this class we started check point 1 and that was not too hard, it was just the drawing everything straight and clean. It reminded me of high school days, so I really liked it. The house turned out well on paper, I could add a garage, windows, and doors it was probably one of the easier check points because it was just the drawing and the writing.

Checkpoint two is where I ran into trouble because that is when I got really sick but had to complete it. I knew how to do some things on tinker cad from the chess pawn and the cup I made for the first assignment, but man was there a lot more that

goes into a house. From the foundation to the walls it was all kind of difficult trying to get it all to line up together. It was a learning experience for sure because it taught me how to be patient while creating everything and spacing it out. There were some frustrations, but it all worked out in the end and the house looked fine to me.

Check point three was not too bad because I just had to tear everything apart to show that everything was there. It is clear that I met all the requirements needed to make the grade desired for the final check point. Hopefully all that hard work paid off and I get a good grade because it was not easy.

In the end I did learn a lot from this class and there was a lot of helpful information that I did not know I needed. The one thing that I will take away is that I am not an engineer. But this class did teach me how to problem solve because putting together a house took a lot of that. Now that everything is complete it was not that bad, I think it was just stressful because it was my first time. Would I do it again? Yes, if my grade deepened on it. I am one to embrace the struggle, so I like to work under pressure and make sure everything is up to the specifications of the professors needs. This is my house, hopefully it is right because it took a lot of hard work thank you.

Construction Project Design

Grading Rubric

Using the Tinker Cad 3-D software previously used in week one, you will perform an individual assignment, demonstrating the ability to utilize a web-based, 3-D design application (Tinkercad). The purpose is to have students develop a building structure.

Summarize the characteristics of each vehicle system through rough sketches, written reports (as applicable), graphics, and conceptual models (Tinker CAD).

Requirement Summary	**61-80**	**46-60**	**26-45**	**16-25**	**0-15**
Written Report (Reflection)	Student report provided deep, and meaningful reflection, identifying the processes encountered throughout the steps of the technological and engineering design aspects of the project. Contributions were insightful and constructive. The student can apply concepts from course readings, class discussions, and activities.	The student report showed some reflection during the project, which were based on experiences encountered. Contributions were mostly insightful and constructive. Occasionally, comments are too general or not relevant to the project.	The student report did not contribute to the reflection in an insightful manner. Reflections were sometimes constructive, with occasional signs of insight. Comments not always relevant to the project.	The student report showed little engagement in communicating via reflection. Reflections were not informative, and gave little valuable information relating to student learning. Lack relevance/connection to the project.	The student put little-to-no effort in the written reflection portion of the assignment.
	61-80	**46-60**	**26-45**	**16-25**	**0-15**

Requirement Summary					
Development of sketches, assembly instructions, and 3-D Images for each vehicle system	Rough sketch of structure was detailed and provided insight into the original concept of the design. Student applied concepts from previous activity in developing individual, and overall building components using 3-D software. Images were properly labeled, parts list was complete, detailed assembly instructions were provided, and were clear to understand.	Rough sketch of structure was not detailed and did not provide insight into the original concept of the system design. Student attempted to apply concepts from previous activity and did create system components using 3-D software. Images were not properly labeled, and assembly instructions were provided, but not completely clear to understand. .	Rough sketch of structure was not provided or was of little value to the system design process. Student did not apply previous learning to developing individual, and overall system components using 3-D software. Images were not labeled, and assembly instructions were not provided.	Student did not use 3-D software to design system components. 3-D images were not completed, were missing, or not labeled, and assembly instructions were not provided, or were unclear, and confusing.	The student never participated in this part of the project, did very little work. Submitted incomplete work on the rough sketches or 3-D images, including parts, and assembly instructions.
Requirement Summary	**95-120**	**61-95**	**41-60**	**21-40**	**0-20**