BIM Report Final

CON251 - 60441

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INTRODUCTION

For this project we were tasked to design and create a house for an address in Mesa, Arizona. The goal of this project was to use BIM tools to model and show a design and estimate of design for a potential house in Mesa. This was to be achieved using my 1600 square foot model of a potential house to use as a guide for takeoffs to create the estimate for construction. This project was completed using BIM tools. BIM, which is short for building information modeling, is a way of planning out jobsites and projects that can cut down on material waste and save time and money in the completion of a project. The use of BIM tools allowed me to design a floor plan and envision the house while also getting the information I needed to give an estimation of the build. Without BIM I would not have been able to give an accurate estimate and I would not have been able to create a fully visible model up to scale.

DESIGN/CONSTRUCTIBILITY

Design is an important aspect of project success. Without the design I would not have been able to create an amazing and perfectly open floor plan with the required 2 bed and 2 bath house with a fully furnished kitchen and dining and living room. The design allowed me to plan where the doorways should be and how to have sinks and faucets in the house that don't get in the way of anything else. Some of the challenges addressed were how to properly create a design with the limited space available and how to design a functional household within the requirements. Without the use of design none of this would have ever reached the level that it is at right now. Design in my opinion is the most important aspect of this project. Design overall is one of the most important aspects of a project.

BIM TOOL USAGE / RECOMMENDATION

In this project I used Revit, Bluebeam Revu, SketchUp, Excel, Word, and Microsoft Project. Revit was used to create in this project to create and design a 1600 square foot home

which met all the requirements of this project due to the home having two bedrooms, two bathrooms, a kitchen, a living room, and a dining room. Bluebeam Revu was used in this project to take takeoffs of dimensions and areas of the floorplan of the home created in Revit. This is shown in the pictures section below. Bluebeam Revu allowed for accurate information to be found and collected and was crucial to estimate. Sketchup was used in this project to create a jobsite plan and to see what machinery and amenities were needed and the placement of the home in the location. Excel was used to create a cost estimate in this project which was used from the values taken in the takeoffs in Bluebeam Revu. Word was used in this project to create this BIM report which you are reading right now. Microsoft Project was used in this project to create a schedule and day to day plan for the full creation of the house from start to finish. All of these tools streamlined the process of completing and creating the project. Each application has its use which works with the next to speed and plan out the project perfectly and efficiently. BIM tools help this project have a proper estimate in time and money and to have a project idea that can be modified at any point of time. These tools allowed for improved efficiency, accuracy and team collaboration in the creation of this home. Overall, I enjoyed using all the tools in this class however, my favorite tool to use in this class was Bluebeam Revu and SketchUp. I liked using Bluebeam Revu due to the amount of information you can collect and the ease of access it allows. I liked using SketchUp because it is unlike another cad software I have been using for my degree. SketchUp Makes it easy to match plans and easy to design out what is needed and its 3d warehouse makes it easy to find what you need. Overall. All the tools in this class were amazing but those are the two that stood out to me.

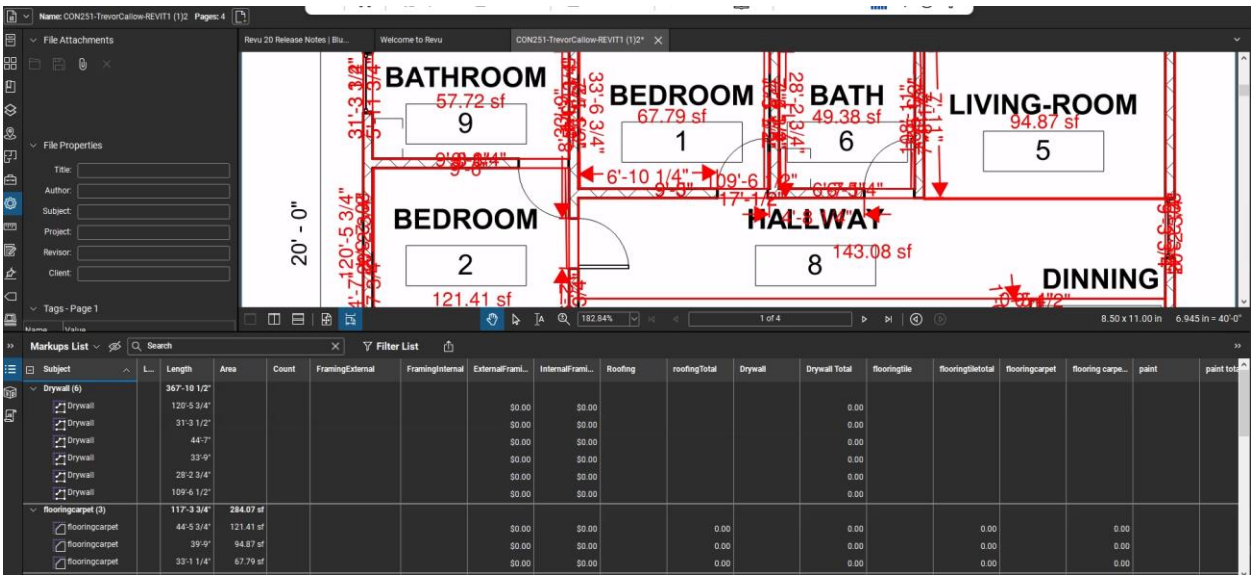
CONCLUSION

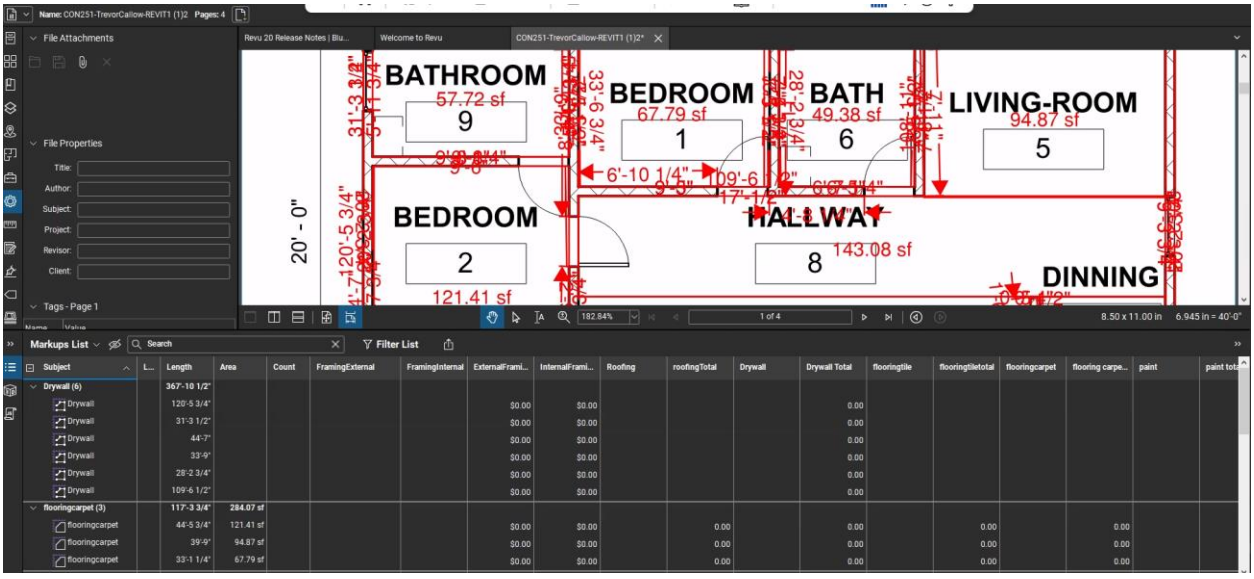
In conclusion, this project was completed successfully due to the use of BIM tools and software programs. BIM tools allow for the project to be streamlined and to allow for a proper

estimate and design to be created. This project utilized a variety of tools which allowed for amazing execution of all requirements and allowed for an easy process of creating and designing my home.

PICTURES/DATA

BLUEBEAM TAKEOFF DATA (7 Pictures)





flooringtile (5)	208'-6 3/4"	421.74 sf										
flooringtile	31'-3 1/4"	57.72 sf			$0.00	$0.00	0.00	0.00	0.00	0.00		
flooringtile	28'-1 3/4"	49.38 sf			$0.00	$0.00	0.00	0.00	0.00	0.00		
flooringtile	67'-9"	143.08 sf			$0.00	$0.00	0.00	0.00	0.00	0.00		
flooringtile	24'-10 3/4"	38.75 sf			$0.00	$0.00	0.00	0.00	0.00	0.00		
flooringtile	56'-5 3/4"	132.81 sf			$0.00	$0.00	0.00	0.00	0.00	0.00		
FramingExternal (1)	120'-5 3/4"			$5.60	$674.63							
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Roofing (1)						120'-5 3/4"	809.41 sf		40'-0"	20'-2 3/4"		
Roofing			1		a18803_asu	120'-5 3/4"	809.41 sf		40'-0"	20'-2 3/4"		

FramingInternal (8)	48'-2 1/4"											
FramingInternal	7'-11 1/4"				$0.00	$0.00		0.00				
FramingInternal	8'-11"				$0.00	$0.00		0.00				
FramingInternal	6'-10 1/4"				$0.00	$0.00		0.00				
FramingInternal	7'-11"				$0.00	$0.00		0.00				
FramingInternal	4'-8 1/4"				$0.00	$0.00		0.00				
FramingInternal	7'-11"				$0.00	$0.00		0.00				
FramingInternal	1'-6 3/4"				$0.00	$0.00		0.00				
FramingInternal	2'-5"				$0.00	$0.00		0.00				
paint (5)	322'-2 3/4"											
paint	120'-5 3/4"				$0.00	$0.00		0.00