



Everyone's Smart University

Project (Spring 2021)

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Residential House

1. Introduction:

The project is end-to-end residential house building, will be built on 6996 sq ft land. It is 3 story house, first floor will contain the outdoor area, the kitchen, pantry, family room and two formal living rooms and 2 bathrooms. The second floor will contain 3 master bedrooms, an office, and a playroom. The third floor will contain an outdoor area, setting indoor area, and the laundry room. As the project planner and scheduler, I aim to finish the project in 20 months, with 2 months variance period.

As the project is in the planning phase, we plan to meet the project schedule goals by using the right communication tools by creating the weekly project dashboard and presenting monthly updates to senior management to follow our updates like Gantt chars and use the critical path method.

My plan for the project is to start from the ground up, first to prepare construction site and pour foundation then complete rough framing and rough plumbing, electrical and air conditioning then completing drywall and interior fixtures. Then move to the exterior finishes and finish interior trim, install hard surface flooring, and finish mechanical trims then install bathroom fixtures, mirrors, shower doors, finish flooring and exterior landscaping. Finally, we can do the final Walk-Through. Plus, in each phase we plan to do a walk-through to enable the right people to see the right orders.

In this research I will be describing and showing how the project team will be giving and outline of the project scope using a work breakdown structure during the kick-off meeting. A work breakdown structure is a chart or document use to organize project work into a list of work packages or activities and tasks to stay on track on schedule to meet the project goals. Using a visual tool with the team to lay out all tasks we must accomplish and organize it in a multiple levels and each step shows them a vision of our deliverable and an easy way to be achieved the goal of the project on time.

2. Literature review:

2.1 Outline the project to the team:

For outlining the project during planning for the project team is a very important step, visual aids and diagrams are so important in this stage of the project.

During this stage, the project should be studied, and planed and be developed to ensure its implementation using the available data, then the Activity List and the Work Breakdown Structure - WBS were defined. In this stage, you must determine the time (Duration) and resources (Resources) needed to implement this activity, and then draw the chart that represents the project. [1]

2.2 Importance of Work Breakdown Structure:

The Work Breakdown Structure (WBS) divides the entire project into its component elements to establish a framework for effective management control of the project scope, schedule, and budget. It is a product-oriented, hierarchical depiction of all work elements required to accomplish the entire work scope of the project. Project Managers are responsible for the creation of a WBS.

The WBS, or the Work Breakdown Structure, is essential as part of a project's lifecycle and timeline. An important part of project planning, the WBS begins with a hierarchy of tasks and levels that help to identify how the project will flow within a designed timeline set by the project manager. The Project Management Institute defines the WBS as, *"Representing the sum total decomposition of all work that the project encompasses, from beginning to end."* [2]

The purpose of the WBS is to provide a structural view of the project and its work.[3]

2.3 WBS dictionary:

WBS dictionary is a document that gives all detailed information about project deliverables, activity, and scheduling of each component in the Work Breakdown Structure (WBS). The WBS Dictionary describes each component of the WBS with

milestones, deliverables, activities, scope, and sometimes dates, resources, costs, quality.

In the construction project plan, a description of the project work that will be used as a reference for the implementation of the construction project is required. In fact, there are many construction projects, especially road projects that are not in accordance with the plan in terms of time and cost. For that, we need WBS (Work Breakdown Structure) and its dictionary as a project implementation reference in order to define project activities to the resources. [3]

2.4 RACI

RACI stand for Responsible, Accountable, Consulted, and Informed. Each letter represents a level of responsibility. RACI chart is a simple matrix that project managers and planners use to assign tasks, responsibilities, and milestones for each project team member. Using RACI chart in project planning will set clear expectations about project roles and responsibilities. That way all tasks clearly defined so we avoid arguing between members or having more than one member working in the same task.

3. Methodology:

In this research, a qualitative approach was the method adopted. With primary and secondary data gathering. Knowing the effectiveness of outlining the project for the team. Using WBS and RACI chart to clarify and outline the project for the team is one of the most important tools to communicate with the project team members. The overall process of the proposed methodology is presented in Fig.1 under Work Breakdown Structure and Table.1 under RACI Matrix.

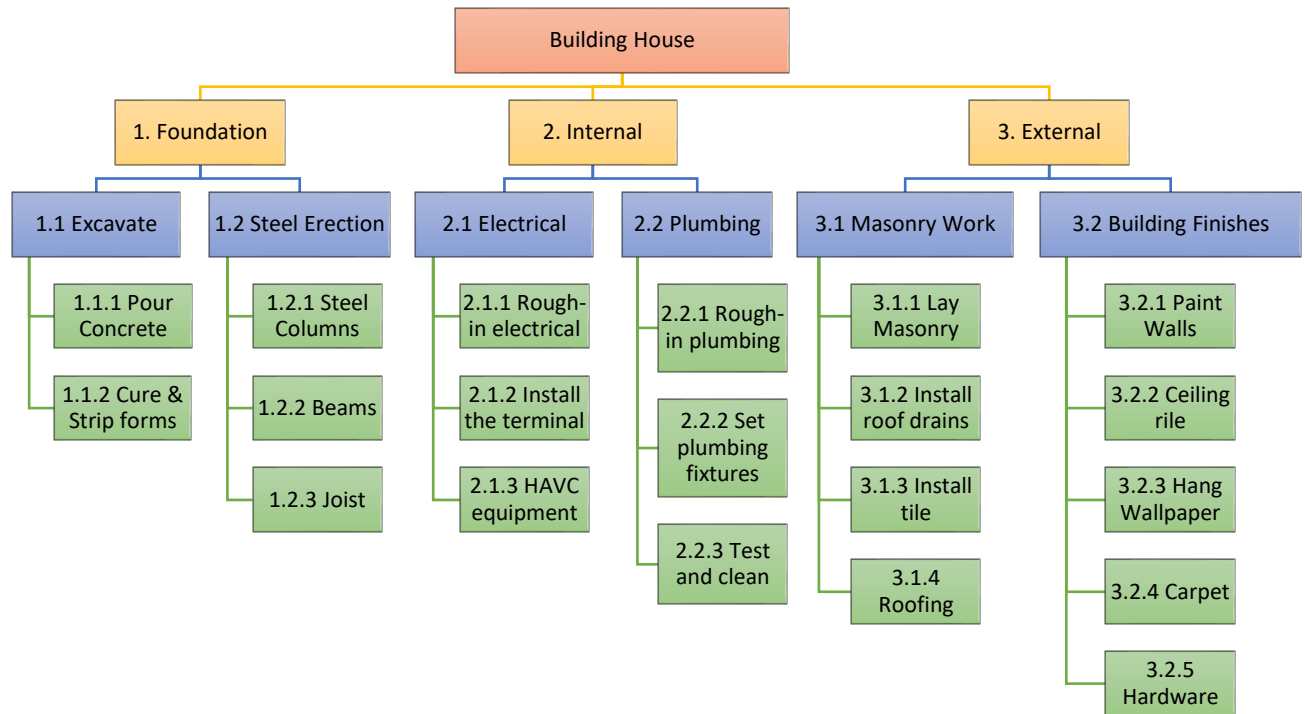
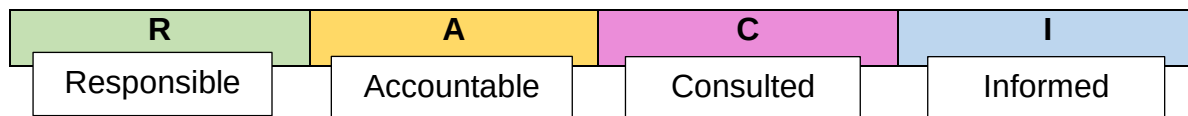


FIGURE 1. WORK BREAKDOWN STRUCTURE



Deliverables / Project Activity	Project Manager	Consultant	Architect	Contractor	Client
Define functional and aesthetic needs	I	I	C	I	R
Risk assessment	A	R	I	C	I
Define performance requirements	A	R	I	I	I
Create design	A	C	R	I	C
Execute construction	A	C	C	R	I
Approve construction work	I	I	C	C	R

TABLE 1. RACI MATRIX

4. Results and discussion:

As a result, outlining the project to the team is a significant step in all project. Using WBS and RACI chart as tools to outline the project is a must in my opinion, because using figures and visual charts will help explaining the project steps and details more coherently which makes it easier for the team to understand it. RACI matrix will clarify all responsibilities

5. Conclusion:

At the end, each project manager or project planner has a different way of showing and outlining the project to the team. From my side using work breakdown structure, WBS dictionary and RACI chart is my go-to when it comes to this point of the project.

6. References:

1. Al Abassi Ghalib, Noor Burhan Mohammed. (2013). Project Management.
2. T. Rajani Devi, V. Shobha Reddy. (2012). Work Breakdown Structure of the Project.
3. L.S.R Supriadi, B Wisusatama, and Y. Latief. (2007). Development of work breakdown structure (WBS) dictionary for road construction works.