Requirements Management Plan and Traceability Matrix

Energy Efficient House

**Version 0.1**

# Revision History Table

Table 1

|  |  |  |  |
| --- | --- | --- | --- |
| Version Number | Version Date | Added By: | Revision Description |
| 0.1 | 17-Mar-2010 | JM | Document created |
|  |  |  |  |

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# Introduction

This document describes the guidelines used by a project to establish standard requirement documents, requirement types, requirement attributes, and traceability. It defines a strategy for managing requirements and serves as a resource for all persons participating in the project.

## Purpose

The purpose of this plan is to establish and document a systematic approach to organizing, and documenting the requirements of the product. This plan also establishes the process to maintain agreement between the customer and the project team on the evolving and changing requirements of the product.

## Scope

This plan provides guidelines for the management of requirements for a typical multidisciplinary project at ABC Construction.

## Definitions, Acronyms, and Abbreviations

Table

|  |  |
| --- | --- |
| Term | Explanation |
| Product Feature | A Product Feature is a capability or characteristic of a system that directly fulfills a Stakeholder Need, which is documented in a project’s Vision document. A Feature is a summary of an entire set of behaviors, but does not describe those behaviors. |
| Stakeholder | A stakeholder is defined as anyone who is materially affected by the outcome of the project. Effectively solving any complex problem involves satisfying the needs of a diverse group of stakeholders. Stakeholders will typically have different perspectives on the problem, and different needs that must be addressed by the solution. |
| Stakeholder Need | The Stakeholder Needs is a business or operational problem (or opportunity) that must be fulfilled in order to justify purchase or use. This is the highest level of requirement, also known as a “Need”. |
| Baseline | A reviewed and approved release of artifacts that constitutes an agreed basis for further evolution or development and that can be changed only through a formal procedure, such as change management and configuration control. |

## References

Applicable references are:

* "Energy Efficient House" Project Plan
* "Energy Efficient House" Requirements Specification

## Overview

This document contains specific details and strategies for managing the requirements of design and construction projects at ABC Construction. The document details how requirements are organized and administrated within a project. It also describes how requirements will be identified, assigned attributes, traced, and modified.

The document also describes the change management processes for requirements, including the workflows and activities associated with maintaining control of project requirements.

# Requirements

## Requirements Planning

The requirements elicitation was conducted by analyzing "Effective Insulation", "High-Performance Windows", "Efficient Heating and Cooling Equipment", "Lighting and Appliances", "Third-Party Verification" published by ENERGY STAR (a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy).

Also, marketing surveys and focus group studies were conducted in order to obtain size, square footage and the style of the house to be built.

Please refer to the "Energy Efficient House” Requirements Specification for more information.

## Requirements Tracking

Requirements are and will be tracked manually by the project manager. No special software shall be used.

## Requirements Reporting

Any significant changes to the requirements shall be communicated to the project stakeholders via weekly Status Reports. For more information please see the "Communications Management" section of the Project Plan.

# Configuration Management

## Change Initiation

After the Requirements Specifications and the Project Plan are baselined all scope changes must go through the change management process (see Figure 1).

Figure



## Change Impact Analysis

The following factors shall be considered and analyzed when assessing the change requests:

* Impact on blueprints, bills of materials, technical drawings, design documents, project documents
* Technical work to be done by engineers, construction crew, developers, architects, etc.
* Management work to be done (project manager’s time)
* Documentation to be updated
* Meetings you need to conduct (everyone involved)
* Impacts on the sequence, dependencies, effort and duration of all the tasks in the project plan
* Impact on budget
* Impacts on areas like marketing, public relations, customer support, training, etc.
* Impacts on all other areas of project management including quality, communications, etc.
* Cost of assessing the change request (will be charged to the customer irrelevant of whether the change request has been approved or rejected).

## Change Tracing, Tracking and Reporting

All change requests shall be communicated to the project stakeholders via weekly Status Reports. For more information please see the "Communications Management" section of the Project Plan.

Also, all impacted documents including Requirements Specification and the Project Plan shall be updated accordingly.

## Change Authorization Levels

All change requests have to be approved by:

* VP Marketing - Tameka Finnen
* Senior Architect - Nelson Hauk
* Director, Sales - Kelly Winnett

# Requirements Prioritization Process

All requirements have been prioritized based on the following model:

* Must Have - means that failure to implement the requirement will result in the failure of the entire project.
* Should have - important requirements, but failure to implement the requirement does not automatically imply failure of the project.
* Nice-To-Have - a desirable but not extremely important requirement.

# Requirements Traceability Matrix

Table

|  |  |
| --- | --- |
| Features | Requirements |
| F 1.0 | R 1.1 |
|  | R 1.2 |
|  | R 1.3 |
|  | R 1.4 |
|  | R 1.5 |
|  | R 1.6 |
|  | R 1.7 |
|  | R 1.8 |
|  | R 1.9 |
| F 2.0 | R 2.1 |
|  | R 2.2 |
|  | R 2.3 |
|  | R 2.4 |
|  | R 2.5 |
| F 3.0 | R 3.1 |
|  | R 3.2 |
|  | R 3.3 |
|  | R 3.4 |
| F 4.0 | R 4.1 |
| F 5.0 | R 5.1 |
| F 6.0 | R 6.1 |
|  | R 6.2 |
|  | R 6.3 |
|  | R 6.4 |
|  | R 6.5 |
|  | R 6.6 |
|  | R 6.7 |
|  | R 6.8 |
|  | R 6.9 |
|  | R 6.10 |
|  | R 6.11 |
|  | R 6.12 |
|  | R 6.13 |