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SOFTWARE REQUIREMENT SPECIFICATION

**IEAG**

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| **Prepared for:** | **Submission Date:**  19 sep 2017 |

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# Introduction

This section gives a scope description and overview of everything included in this SRS document. In addition, the purpose of this document is described. The purpose of this document is to give a detailed description of the requirements for the “IEAG” software. The document will illustrate the purpose and complete declaration for the development of the system. This document is primarily intended to be proposed to a customer for approval, and a reference for the development team to develop the first version of the system.

## Overview of the Document

The remainder of this document includes five chapters. The second chapter provides an overview of the system functionality. The chapter further elaborates how the system manages the four user types. The third chapter provides the requirements specification in detailed terms, and descriptions of the different system interfaces. Different specification techniques are used in order to specify the requirements more precisely for different audiences. The chapter has described the complete requirement specification put forward by the client. We have assessed them, and converted them to business logic. The business logic describes the functionality of each module/system. The fourth chapter provides the system architecture used to develop the system. The fifth chapter describes the non-functional requirement of the system users. The sixth chapter provides the data flow diagram.

## General Coding Standards

While evaluating the code of the application developed, Verbat noticed some irregularities. Evaluating the whole code base is an arduous task at this point, given the short timespan that was availed to Verbat. Hence, the findings presented are based after spot checking the code.

### Coding standards

#### Readability:

* Code blocks are not separated out. This makes it difficult to understand the logic flow or differentiate between the different control structures
* Indentation of code to show different control structures (if, else, while and other loops) begin and end, and where the code within them is?
* Naming conventions used were consistent and good
* Function names were occasionally not in accordance with what they did (ambiguous)
* Commenting was very irregular and seemed to be sparse for many functions
* Naming conventions, spacing etc. seemed to be different across different parts of the code
* Hard coding of status variables, table names, validation messages etc. were also interspersed within the code

### Security

The application seemed to be missing security measures such as

* XSS filtering
* CSRF protection
* Input data validation
* Include files not hidden properly

# General description

## Assumptions & Dependencies

One assumption of this application is that it will be using a compatible browser connected to Internet, which we have specified in section 4.1.

The upload and download of documents/ files will depend on the internet speed. We assume the internet speed for the users would be adequate for uploading/downloading files of large size. In case the speed is not adequate/stable, downloads/uploads may be interrupted.

# Functional requirement

## Requirement Summary

The application will have the following core components:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Issue key** | **Summary** | **Jira Status** | **Implementation Status** | **Comments** |
| **IPD-9** | **RFI** | **To Do** | Yes |  |
| *IPD-1* | *Add new RFI* | *Done* | Yes |  |
| *IPD-2* | *View RFI* | *Done* | Yes |  |
| *IPD-3* | *Edit RFI* | *Done* | Yes |  |
| *IPD-4* | *Respond to RFI* | *Done* | Yes |  |
| *IPD-5* | *Delete RFI* | *Done* | Yes |  |
| *IPD-6* | *Export RFI List to PDF* | *Done* | Yes |  |
| *IPD-7* | *Send email from RFI* | *Done* | Yes |  |
| *IPD-8* | *Notification email for RFI* | *Done* | No | Not clear |
| *IPD-89* | *Add Status buttons and functionality to RFI Form* | *Done* | No | Can’t find any status button |
| *IPD-90* | *Update the values of 'From' and 'To' fields of RFI* | *Done* |  | Access the fields from Contacts and Company table in RFI and display the corresponding values in the drop-down fields of 'From ' and 'To' can’t find Contacts and Company table |
| *IPD-536* | *RFI List Page comments* | *To Do* | No | Requirement not clear |
| *IPD-537* | *RFI Add New Page comments* | *To Do* | No | Requirement not clear |
| **IPD-28** | **Transmittal letter** | **In Progress** | yes |  |
| *IPD-58* | *Add a new transmittal letter.* | *Testing* | yes |  |
| *IPD-242* | *View/Edit/Delete/Respond* | *To Do* | yes |  |
| *IPD-243* | *Notification* | *To Do* | No | Notification option is present there, but not sure about the functionality because requirement is not clear |
| *IPD-244* | *Email* | *To Do* | yes |  |
| *IPD-245* | *PDF* | *To Do* | yes |  |
| *IPD-246* | *Attachment* | *To Do* | yes |  |
| *IPD-247* | *Form Design* | *Done* | Yes |  |
| *IPD-248* | *Folder Structure* | *To Do* | No | Not clear |
| *IPD-249* | *Show Links* | *To Do* | yes |  |
| *IPD-250* | *Filtering/ Search by Transmittal # and Description* | *To Do* | yes |  |
| *IPD-740* | *Transmittal letter item - Assets* | *To Do* | No | Requirement not clear |
| **IPD-29** | **Minutes of Meeting (MOM)** | **To Do** | Yes |  |
| *IPD-222* | *Add New MOM* | *To Do* | yes |  |
| *IPD-223* | *List page actions: View/Edit/Delete/Respond/Draft* | *To Do* | NO | No Draft Button |
| *IPD-225* | *Notification* | *To Do* | yes |  |
| *IPD-226* | *Email* | *To Do* | Yes | Email option is present, but unable to check the functionality |
| *IPD-227* | *PDF* | *To Do* | yes |  |
| *IPD-228* | *Export to Concern* | *To Do* | yes |  |
| *IPD-229* | *Linking with Transmittal Letter* | *To Do* | yes |  |
| *IPD-230* | *Create Next MOM* | *To Do* | No | Some buttons are missing |
| *IPD-231* | *Form Design* | *Done* | yes |  |
| *IPD-233* | *Folder Structure* | *To Do* | No | Not clear |
| *IPD-234* | *List page: Filter and Search* | *To Do* | yes |  |
| *IPD-251* | *Attachment* | *To Do* | No | Can’t find |
| *IPD-409* | *List page: Flags* | *To Do* | yes |  |
| *IPD-410* | *List page: Create and fill List* | *To Do* | No | not clear |
| *IPD-411* | *View page behavior* | *To Do* | No | not clear |
| *IPD-412* | *Add/Edit page behavior* | *To Do* | yes |  |
| *IPD-413* | *Response page behavior* | *To Do* | yes |  |
| *IPD-414* | *Header* | *To Do* | No | not clear |
| *IPD-415* | *Body - Part 1* | *To Do* | No | not clear |
| *IPD-416* | *Body - Part 2* | *To Do* | No | not clear |
| *IPD-417* | *Body - Part 3* | *To Do* | No | not clear |
| *IPD-418* | *Minutes Action Items* | *To Do* | yes |  |
| *IPD-419* | *Minutes Action Items - Edit page* | *To Do* | yes |  |
| *IPD-420* | *Add/Edit page: button Close* | *To Do* | No | Can’t find |
| **IPD-43** | **Punch List** | **Done** | yes |  |
| *IPD-297* | *Add New* | *To Do* | yes |  |
| *IPD-298* | *View/Edit/Delete* | *To Do* | yes | Edit and Delete is there but no view |
| *IPD-299* | *Notifications* | *To Do* | No | Notification option is present there, but not sure about the functionality because requirement is not clear |
| *IPD-300* | *Email* | *To Do* | yes |  |
| *IPD-301* | *PDF* | *To Do* | yes |  |
| *IPD-302* | *Form Design* | *Done* | yes |  |
| *IPD-303* | *Filtering/ Search* | *To Do* | yes |  |
| *IPD-304* | *Show Links* | *To Do* | No |  |
| *IPD-305* | *Export to Concerns* | *To Do* | No | pdf and email is there |
| *IPD-306* | *Create Inspection Request* | *To Do* | No | Can’t find |
| *IPD-1020* | *Closing logic for Punch list items* | *To Do* | No | Can’t Find |
| **IPD-44** | **Inspection Request** | **To Do** | yes |  |
| *IPD-333* | *Add New* | *To Do* | yes |  |
| *IPD-334* | *View/Edit/Delete* | *To Do* | No | Only edit and delete. No View |
| *IPD-335* | *Notifications* | *To Do* | No | Notification option is present there, but not sure about the functionality because requirement is not clear |
| *IPD-336* | *Email* | *To Do* | yes |  |
| *IPD-337* | *PDF* | *To Do* | yes |  |
| *IPD-338* | *Form Design* | *Done* | yes |  |
| *IPD-339* | *Filtering/ Search* | *To Do* | yes |  |
| *IPD-340* | *Link to Transmittal Letter* | *To Do* | No |  |
| *IPD-341* | *Export/ Import* | *To Do* | No |  |
| *IPD-342* | *Export to Concerns* | *To Do* | No | Pdf and email is there |
| *IPD-355* | *Attachment* | *To Do* | No |  |
| *IPD-356* | *Show Links* | *To Do* | No |  |
| *IPD-357* | *Linking to: Engineering, Material, Procurement Register, Payments, Daily Report, Vendor Register, NCR, Punch List* | *To Do* | No |  |
| **IPD-48** | **Areas of concern** | **To Do** | Yes |  |
| *IPD-517* | *List Page* | *Done* | yes |  |
| *IPD-518* | *Add New* | *Testing* | yes |  |
| *IPD-519* | *View/Edit/Delete/Respond* | *Done* | No | View, Edit and Delete is there. But no respond |
| *IPD-520* | *Notification* | *To Do* | No | Notification option is present there, but not sure about the functionality because requirement is not clear |
| *IPD-521* | *Email* | *To Do* | Yes |  |
| *IPD-522* | *PDF* | *Done* | Yes |  |
| *IPD-523* | *Design* | *Done* | No | Not Clear |
| *IPD-524* | *Attachments* | *Done* | No | Can’t attach files while adding new areas of concern |
| *IPD-525* | *Export to Risk Register* | *To Do* | Yes |  |
| *IPD-526* | *Category (dd)* | *To Do* | No | Not clear |
| *IPD-527* | *Search/Filtering* | *Done* | Yes |  |
| **IPD-1023** | **Priced BOQ- BIM** | **To Do** | Yes |  |
| *IPD-1024* | *Form Design* | *Ready* | No |  |
| *IPD-1025* | *Import Export* | *To Do* | yes |  |
| *IPD-1026* | *View/Edit/Delete* | *To Do* | No | No edit |
| *IPD-1027* | *Filtering* | *To Do* | yes |  |
| *IPD-1028* | *Email & PDF* | *To Do* | yes |  |
| *IPD-1029* | *Attachment* | *To Do* | No | Can’t find attachment |
| *IPD-1030* | *Notification* | *To Do* | No | not clear |
| **IPD-1031** | **Monthly BOQ - BIM** | **To Do** | yes |  |
| *IPD-1032* | *Form Design* | *Ready* | Yes |  |
| *IPD-1033* | *Import Export* | *To Do* | yes |  |
| *IPD-1034* | *View/Edit/Delete* | *To Do* | No | View and Edit is working. Delete button is there, but can’t select a file for deleting an item |
| *IPD-1035* | *Filtering* | *To Do* | Yes |  |
| *IPD-1036* | *Email & PDF* | *To Do* | yes |  |
| *IPD-1037* | *Attachment* | *To Do* | No |  |
| *IPD-1038* | *Notification* | *To Do* | No | Notification option is present there, but not sure about the functionality because requirement is not clear |
| **IPD-1039** | **Engineering Log - BIM** | **To Do** | Yes |  |
| *IPD-1040* | *Form Design* | *Done* | No |  |
| *IPD-1041* | *Import Export* | *To Do* | Yes |  |
| *IPD-1042* | *View/Edit/Delete* | *To Do* | No | View and Edit is working. Delete button is there, but can’t select a file for deleting an item |
| *IPD-1043* | *Filtering* | *To Do* | Yes |  |
| *IPD-1044* | *Email & PDF* | *To Do* | yes |  |
| *IPD-1045* | *Attachment* | *To Do* | No |  |
| *IPD-1046* | *Notification* | *To Do* | No | Notification option is present there, but not sure about the functionality because requirement is not clear |
| *IPD-1047* | *Revision Tab* | *To Do* | No |  |
| **IPD-1048** | **Material Log - BIM** | **To Do** | Yes |  |
| *IPD-1049* | *Form Design* | *To Do* | No |  |
| *IPD-1050* | *Import Export* | *To Do* | No |  |
| *IPD-1051* | *View/Edit/Delete* | *To Do* | No | View and Edit is working. Delete button is there, but can’t select a file for deleting an item |
| *IPD-1052* | *Filtering* | *To Do* | Yes |  |
| *IPD-1053* | *Email & PDF* | *To Do* | Yes |  |
| *IPD-1054* | *Attachment* | *To Do* | No |  |
| *IPD-1055* | *Notification* | *To Do* | No | Notification option is present there, but not sure about the functionality because requirement is not clear |
| *IPD-1056* | *Revision Status* | *To Do* | No |  |
| **IPD-1057** | **Procurement Log -BIM** | **Ready** | Yes |  |
| *IPD-1058* | *Form Design* | *Ready* | No | Not able |
| *IPD-1059* | *Import Export* | *To Do* | yes |  |
| *IPD-1060* | *View/Edit/Delete* | *To Do* | No | No edit |
| *IPD-1061* | *Filtering* | *To Do* | yes |  |
| *IPD-1062* | *Email & PDF* | *To Do* | yes |  |
| *IPD-1063* | *Attachment* | *To Do* | No | Can’t find edit |
| *IPD-1064* | *Notification* | *To Do* | No | not clear |
| **IPD-1065** | **Vendor Log - BIM** | **To Do** | Yes |  |
| *IPD-1066* | *Form Design* | *Ready* | No |  |
| *IPD-1067* | *Import Export* | *To Do* | yes |  |
| *IPD-1068* | *View/Edit/Delete* | *To Do* | No | Can’t find edit |
| *IPD-1069* | *Filtering* | *To Do* | yes |  |
| *IPD-1070* | *Email & PDF* | *To Do* | yes |  |
| *IPD-1071* | *Attachment* | *To Do* | No | Can’t find attachment |
| *IPD-1072* | *Notification* | *To Do* | No | not clear |
| **IPD-1082** | **Method Statement Submittal Log - BIM** | **To Do** | Yes |  |
| *IPD-1083* | *Form Design* | *Ready* | No |  |
| *IPD-1084* | *Import Export* | *To Do* | yes |  |
| *IPD-1085* | *View/Edit/Delete* | *To Do* | No | No edit |
| *IPD-1086* | *Filtering* | *To Do* | yes |  |
| *IPD-1087* | *Email & PDF* | *To Do* | yes |  |
| *IPD-1088* | *Attachment* | *To Do* | No | Can’t find attachment |
| *IPD-1089* | *Notification* | *To Do* | No | not clear |
| **IPD-1104** | **Area Of Concern - Contracts Template** | **To Do** | No |  |
| *IPD-1105* | *Form Design* | *Ready* | No |  |
| *IPD-1106* | *View/Edit/Delete* | *To Do* | No |  |
| *IPD-1107* | *Email & PDF* | *To Do* | No |  |
| *IPD-1108* | *Attachment* | *To Do* | No | Can’t find attachment |
| *IPD-1109* | *Notification* | *To Do* | No | not clear |
| *IPD-1110* | *Links* | *To Do* | No | Not clear |
| **IPD-1160** | **Delay - Construction Platform** | **To Do** | Yes | Can’t Find Attachment |
| **IPD-1163** | **Safety - Construction management** | **To Do** | Yes | Can’t Find Attachment |
| **IPD-1165** | **Progress Measures - Construction Management** | **To Do** | Yes | Can’t Find Attachment |

**User**

The user has the overall access to the application. The features and functionalities of user are:

* Login
  + User shall login with a predefined username and password.
  + User shall select country and project name to access the application.
* Bim Process Management.
  + User Shall manage BIM Platform
* Construction Management
  + User shall manage modules
  + User shall manage Reports
* Contract management
  + User shall manage Reports
  + User shall manage Forms
  + User shall manage Executive reports
* Logout:
  + User shall logout from the system.

## Requirement Specification

### Login

It allows only authorized users to access the application. After entering login details - email ID and password fields, user has to click ‘Sign In’ button. Once ID and password are validated, the user is given access to the application. If login fails, an error message will show as “Invalid email id or password”.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.2.1.1 | * Email Id * Password * Sign In Button |  |
| 3.2.1.2 | * If access denied for three times, it shall redirects to Forgot password page |  |

### Logout

It allows only authorized users to logout from the application. After clicking logout user will be redirected to the login page.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.2.2.1 | * Logout Button |  |

### Forgot Password

If the user forgets the password, it can be retrieved by clicking the ‘Lost your password?’ link. A click on this link will ask the user to enter registered email ID. A password reset email will then be sent to the user in his registered email ID.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.2.3.1 | * Email ID * Submit Button * Cancel Button |  |
| 3.2.3.2 | * On entering invalid email id, system throws an error message. |  |

## User Dashboard

User shall access BIM Process management, Construction management and Contract Management through Integrated Project Delivery(IPD).

### BIM Process Management

User shall access BIM Process Management from Integrated Project Delivery. Through BIM Process Management user shall manage BIM Platform.

### Construction Management

User shall access Construction Management from Integrated Project Delivery. In Construction Management, User can manage modules and Report.

### Construction Management Dashboard

User shall access Modules and Report of Construction Management from Construction Management Dashboard.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.1 | * View Project information * View Project Progress Payment * View Engineering Delays * View Cash flow diagram * Manage risk analysis Table |  |

#### Modules

User shall manage modules from the Construction Management dashboard. Modules shall have many submenus. They are Document Control, Engineering, Procurement, QA/QC, Project Controls, Cost Management, Risk Analysis, Delay, Health and Safety and Executive Report. Users have the access to all these sub menus.

#### Document Control

User shall manage Document control from the Modules menu. From Document Control users can access Transmittal Letter, Minutes of Meeting and Request For Information.

#### Transmittal Letter

User shall manage(Add/Edit/View/Delete/Respond) Transmittal Letter from Transmittal letter page. User can send email of the added transmittal letter and also can download the transmittal letter in pdf format. User can filter transmittal letter assigned to that particular user. User can search for a particular transmittal letter from the search box. Transmittal letters will be displayed in a table format and each transmittal letter will have a link connected to some other pages.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.3.1 | * Add a new transmittal letter * Manage(View/Edit/Delete/Respond) Transmittal Letter * View Notifications * Email Transmittal letter * Links to other pages |  |

##### Add Transmittal Letter

User shall create new transmittal letter by selecting Add new button from the Transmittal letter page. A form gets displayed in the window wherein user can enter transmittal letter details. Some of the fields could not be edited as it is displaying automatically. In the Transmittal letter page, any number of files can be attached. After filling the fields, user can either submit the form or can draft it. Drafted item will display in the transmittal letter table with a flag icon. Back button in the Add Transmittal letter page redirects to transmittal letter listing page.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.3.1.1 | User add transmittal letter on the website with the following information   * Client * Project Name * Project No * Consultant * Contractor * PMO * Record No * Date * Transmittal No. * Subject * Revision No. * Details * Issued to (list box) * Site location * Prepared by   User can add transmittal letter item on the website with the following information   * Item No * Form Type (Drop down) * Form ID & Name (Drop down) * Type (Drop down) * Attachment (Drop down) * Purpose of issue (Drop down) * Notes * Save button * Distribution (Check box)   User can attach files with the following information   * File Description * Select File * Add button * Draft button * Submit Button |  |

##### Search Transmittal letter

User shall search for a transmittal item from the search field of the transmittal letter. User should enter a value and click on to search button. Clear button helps the user to clear the search result.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.3.2.1 | User can search transmittal letter item with the following information   * Search box * Search button * Clear button |  |

##### Email Transmittal letter

User shall email the transmittal letters by clicking Email button from the page. On clicking Email button, a new window displays wherein users need to select the receivers address and should mention the subject of the Email. Two buttons will be there in the Email Window Send and Clear button. Send button sends the transmittal letter to the corresponding address by displaying a message on the screen and the clear button clears all the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.3.3.1 | User can Email transmittal letter item with the following information   * From * To (Drop down) * CC * BCC (Drop Down) * Subject * Content * Send button * Clear button |  |

#### Minutes of meeting

User shall manage(Add/Edit/View/Delete/Respond/Draft) Minutes of Meeting from Minutes of Meeting page. User can email Minutes of Meeting and also can download Minutes of Meeting in pdf format. User can filter Minutes of Meeting assigned to that particular user. User can search for some particular minutes of meeting from the search box. Minutes of meeting will be displayed in a table format.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.4.1 | * Add new minutes of meeting * Manage(View/Edit/Delete/Respond/Draft) Minutes of meeting * View Notifications * Email Minutes of meeting * Links to other pages * Export minutes of meeting to concern * Linking with transmittal letter * Manage(Add/Edit/View/Response) page behavior * Edit minutes action item |  |

##### Add New Minutes of Meeting

User shall create new minutes of meeting by selecting Add new button from the Minutes of Meeting page. A form gets displayed in the window wherein user can enter Minutes of meeting details. Some of the fields could not be edited as it is displaying automatically. In the new form different sections are there, like Basic details, Attendees, Issued to, Minutes and attachments. Attendees include the details pf peoples who attended the meeting. User can select attendees from the drop down list and the selected attendees will be displayed in the table. Issued to include the list of people to whom the minutes the issuing. Minutes includes the details of action taken after the meeting. And the attachments the files that should be attached for minutes. In the Minutes of meeting page, any number of files can be attached. After filling the fields, user can either submit the form or can draft it. Drafted item will display in the minutes of meeting table with a flag icon. Back button in the Add minutes of meeting page redirects to minutes of meeting listing page.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.4.1.1  3.3.3.4.1.2  3.3.3.4.1.3  3.3.3.4.1.4  3.3.3.4.1.5  3.3.3.4.1.6  3.3.3.4.1.7 | User add minutes of meeting on the website with the following information   * Client * Project Name * Project No * Venue * Revision * Subject * Meeting type (Drop down) * Meeting number * Meeting date (calendar) * Start time (Clock) * End time (clock) * Minutes by * Approved by (drop down) * Introductory note   User can add attendees by selecting from the drop-down box of select attendees and clicking Add button to add the selected attendees in the table.  User can add Issued to by selecting from the drop-down box of select issued to and clicking Add button to add the selected attendees in the table.  User add minutes on the website with the following information   * Item number * Action item * Action By * Due Date (Calendar) * Status * Notes   User can add any number of minutes  Added minutes will display in the table  User can attach files with the following information   * File description * Select your file link * Add button * Draft button * Submit button |  |

##### Search Minutes of meeting

User shall search for minutes from the search field of the minutes of meeting. User should enter a value and click on to search button. Clear button helps the user to clear the search result.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.4.2.1 | User can search minutes with the following information   * Search box * Search button * Clear button |  |

##### Email Minutes of meeting

User shall email the minutes of meeting by clicking Email button from the page. On clicking Email button, a new window displays wherein users need to select the receivers address and should mention the subject of the Email. Two buttons will be there in the Email Window Send and Clear button. Send button sends the minutes of meeting to the corresponding address by displaying a message on the screen and the clear button clears all the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.4.3.1 | User can Email minutes of meeting with the following information   * From * To (Drop down) * CC * BCC (Drop Down) * Subject * Content * Send button * Clear button |  |

##### Linking with Transmittal letter

Minutes of meeting can be linked with transmittal letter by selecting Transmittal letter button from the MOM page. Linking can be done by selecting a particular minutes from the minutes of meeting table. After clicking the Transmittal Letter button, page redirects to Transmittal Letter Item Bucket. In the Transmittal Letter Item Bucket page, user need to select the transmittal letter item number from the drop-down list in order to link the MOM. After selecting an item number, user can click save and continue button to save the link. User can click on Add to new, for creating new transmittal letter for linking with MOM. Else user can click on to Add to draft button to draft it.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.4.4.1  3.3.3.4.4.2  3.3.3.4.3.3 | User can link mom with transmittal letter after selecting a transmittal letter item number  Selected minutes of meetings will display in the table of transmittal letter item basket   * Save and Continue button * Add to new button * Add to draft   User can add new transmittal letter from transmittal letter item basket for linking MOM with new transmittal letter. |  |

#### Request For Information

User shall manage(Add/Edit/View/Delete/Respond) Request for Information from Request for Information page. User can send email of the Request for information and also can download the request for information in pdf format. User can filter or request for information. Request for information will be displayed in a table format and each request for reference will have a link connected to some other pages. Request for information has the option to export RFI list to PDF.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.5.1 | * Add a new Request for Information * Manage(View/Edit/Delete/Respond) Request for reference * View Notifications * Email request for reference * Links to other pages |  |

##### Add Request for information

User shall create new request for information by selecting Add new button from the Request for information page. A form gets displayed in the window wherein user can enter request for information details. Some of the fields could not be edited as it is displaying automatically. In the Request for information page, any number of files can be attached. After filling the fields, user can either submit the form or can draft it. Drafted item will display in the request for information table with a flag icon. Back button in the Add Request for information page redirects to request for information listing page.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.5.1.1  3.3.3.5.1.2 | User add request for information on the website with the following information   * Project Name * Project No * From * To * Category (Drop down) * Priority (drop down) * Revision * Reference * Drawing reference * Grid reference * Building (drop down) * Discipline (drop down) * Level (drop down) * Zone (drop down) * Remarks * Cc * Information Requested * Reason Requested * Comment   User can add links on the website with the following information   * Select module (drop down) * Description * Notes * Add button   User can click on to the Add button to add the entered links in the table  User can attach files with the following information   * File Description * Select File * Add button * Draft button * Submit Button |  |

##### Search Request For Information

User shall search for a Request for information item from the search field of the Request for information. User should enter a value and click on to search button. Clear button helps the user to clear the search result.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.5.2.1 | User can search request for information item with the following information   * Search box * Search button * Clear button |  |

##### Email Request For Information

User shall email the Request for Information by clicking Email button from the page. On clicking Email button, a new window displays wherein users need to select the receivers address and should mention the subject of the Email. Two buttons will be there in the Email Window Send and Clear button. Send button sends the Request For Information to the corresponding address by displaying a message on the screen and the clear button clears all the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.5.3.1 | User can Email Request For Information item with the following information   * From * To (Drop down) * CC * BCC (Drop Down) * Subject * Content * Send button * Clear button |  |

##### Linking with Transmittal letter

Request for information can be linked with transmittal letter by selecting Transmittal letter button from the Request for information page. Linking can be done by selecting a Request for Reference item from the Request for Reference table. After clicking the Transmittal Letter button, page redirects to Transmittal Letter Item Bucket. In the Transmittal Letter Item Bucket page, user need to select the transmittal letter item number from the drop-down list in order to link the Request for Reference. After selecting an item number, user can click save and continue button to save the link. User can click on Add to new, for creating new transmittal letter for linking with Request for Reference. Else user can click on to Add to draft button to draft it.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.5.4.1  3.3.3.5.4.2  3.3.3.5.4.3 | User can link Request for Reference with transmittal letter after selecting a transmittal letter item number  Selected Request for Reference will display in the table of transmittal letter item basket   * Save and Continue button * Add to new button * Add to draft   User can add new transmittal letter from transmittal letter item basket for linking Request for Reference with new transmittal letter. |  |

#### Engineering

User shall manage Engineering from the Modules menu. From Engineering users can access Engineering log.

#### Engineering Log

User shall manage(Edit/View/Delete) Engineering Log from Engineering Log page. While viewing Engineering log, user can download pdf or can email the details of Engineering log separately. User can send the list of all Engineering Logs items through email and also can download the Engineering Log items in pdf format. User can filter and search Engineering Logs. Engineering Log will be displayed in a table format and each Engineering Log will have a link connected to some other pages. User can Import or Export Engineering logs.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.7.1 | * Manage(View/Edit/Delete) Engineering Log * Import and Export Engineering Log * Filtering and searching * View Notifications * Email Engineering Log * Links to other pages |  |

##### Search Engineering Log

User can search Engineering log from the Engineering log page. User shall enter values in the fields and click on to search button for searching in the Engineering log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.7.1.1  3.3.3.7.1.2 | User can search Engineering log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Search button * Cancel button   Search result will display below the search field in a table. |  |

##### Advance Search Engineering Log

User can do advance search on Engineering log from the Engineering log page. User shall enter values in the fields and click on to search button for searching in the Engineering log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.7.2.1  3.3.3.7.2.2 | User can do advance search on Engineering log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Zone (drop down) * Drawing Number * Drawing Title * Submission activity ID * Approval Activity ID * Planned Submission Date * Planned Approval date * Current status code (drop down) * Current Status (drop down) * Issued by * Issued to * prepared by * Search button * Cancel button   Search result will display below the advanced search field in a table. |  |

##### Import Engineering Log

User shall import Engineering log by clicking Import button from the Engineering Log page. On clicking Import button, a page gets displayed wherein user need to select a file and then click on to Import button to import the file. User shall go back from the import page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.7.3.1 | User can import file by browsing a file and clicking Import button. |  |

##### Export Material Log

User shall export material log by clicking Export button from the Material Log page. On clicking Export button, a page gets displayed wherein user need to select some details and then click on to Download button to Export the file. User shall go back from the Export page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.7.4.1 | User can Export file from the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Download |  |

#### Procurement

User shall manage Procurement from the Modules menu. From Procurement users can access Material Log, Procurement Log, Vendor log and Method Statement Submittal Log.

#### Material Log

User shall manage(Edit/View/Delete) Material Log from Material Log page. While viewing a Material log, user can download pdf or can email the details of material log separately. User can send the list of all material Logs items through email and also can download the material Log items in pdf format. User can filter and search Material Logs. Material Log will be displayed in a table format and each Material Log will have a link connected to some other pages. User can Import or Export material logs.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.9.1 | * Manage(View/Edit/Delete) Material Log * Import and Export Material Log * Filtering and searching * View Notifications * Email Material Log * Links to other pages |  |

##### Search Material Log

User can search material log from the material log page. User shall enter values in the fields and click on to search button for searching in the material log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.9.1.1  3.3.3.9.1.2 | User can search material log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Search button   Search result will display below the search field in a table. |  |

##### Advance Search Material Log

User can do advance search on material log from the material log page. User shall enter values in the fields and click on to search button for searching in the material log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.9.2.1 | User can do advance search on material log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Zone (drop down) * Material submittal number * Category package title * Family * Material submission ID * Material approval ID * Planned submission date (calendar) * Planned approval date (calendar) * Current status code (drop down) * Current status (drop down) * Issued by * Issued to * All prepared by * Search button * Close button   Search result will display below the advanced search field in a table. |  |

##### Import Material Log

User shall import material log by clicking Import button from the Material Log page. On clicking Import button, a page gets displayed wherein user need to select a file and then click on to Import button to import the file. User shall go back from the import page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.9.3.1 | User can import file by browsing a file and clicking Import button. |  |

##### Export Material Log

User shall export material log by clicking Export button from the Material Log page. On clicking Export button, a page gets displayed wherein user need to select some details and then click on to Download button to Export the file. User shall go back from the Export page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.9.4.1 | User can Export file from the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Download |  |

#### Procurement Log

User shall manage(Edit/View/Delete) Procurement Log from Procurement Log page. While viewing a Procurement log, user can download pdf or can email the details of Procurement log separately. User can send the list of all Procurement Logs items through email and also can download the Procurement Log items in pdf format. User can filter and search Procurement Logs. Procurement Log will be displayed in a table format and each Procurement Log will have a link connected to some other pages. User can Import or Export Procurement logs.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.10.1 | * Manage(View/Edit/Delete) Procurement Log * Import and Export Procurement Log * Filtering and searching * View Notifications * Email Procurement Log * Links to other pages |  |

##### Search Procurement Log

User can search Procurement log from the Procurement log page. User shall enter values in the fields and click on to search button for searching in the Procurement log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.10.1.1  3.3.3.10.1.2 | User can search Procurement log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Search button   Search result will display below the search field in a table. |  |

##### Advance Search Procurement Log

User can do advance search on Procurement log from the Procurement log page. User shall enter values in the fields and click on to search button for searching in the Procurement log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.10.2.1 | User can do advance search on Procurement log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Zone (drop down) * Category package title * Family * MR Number * Supplier * P O Number * All prepared by (drop down) * Search button * Close button   Search result will display below the advanced search field in a table. |  |

##### Import Procurement Log

User shall import Procurement log by clicking Import button from the Procurement Log page. On clicking Import button, a page gets displayed wherein user need to select a file and then click on to Import button to import the file. User shall go back from the import page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.10.3.1 | User can import file by browsing a file and clicking Import button. |  |

##### Export Procurement Log

User shall export Procurement log by clicking Export button from the Procurement Log page. On clicking Export button, a page gets displayed wherein user need to select some details and then click on to Download button to Export the file. User shall go back from the Export page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.10.4.1 | User can Export file from the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Download |  |

#### Vendor Log

User shall manage(Edit/View/Delete) Vendor Log from Vendor Log page. While viewing a vendor log, user can download pdf or can email the details of vendor log separately. User can send the list of all vendor Logs items through email and also can download the vendor Log items in pdf format. User can filter and search Vendor Logs. Vendor Log will be displayed in a table format and each Vendor Log will have a link connected to some other pages. User can Import or Export Vendor logs.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.11.1 | * Manage(View/Edit/Delete) Vendor Log * Import and Export Vendor Log * Filtering and searching * View Notifications * Email Vendor Log * Links to other pages |  |

##### Search Vendor Log

User can search Vendor log from the Vendor log page. User shall enter values in the fields and click on to search button for searching in the Vendor log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.11.1.1  3.3.3.11.1.2 | User can search Vendor log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (dsrop down) * Search button   Search result will display below the search field in a table. |  |

##### Advance Search Vendor Log

User can do advance search from the Procurement log page. User shall enter values in the fields and click on to search button for searching in the Vendor log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.11.2.1 | User can do advance search on Vendor log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Zone (drop down) * Category package title * Family * PO Number * Supplier * PL Number * Origin * Mode of Shipment * All prepared by (drop down) * Search button * Close button   Search result will display below the advanced search field in a table. |  |

##### Import Vendor Log

User shall import Vendor log by clicking Import button from the Vendor Log page. On clicking Import button, a page gets displayed wherein user need to select a file and then click on to Import button to import the file. User shall go back from the import page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.11.3.1 | User can import file by browsing a file and clicking Import button. |  |

##### Export Vendor Log

User shall export Vendor log by clicking Export button from the Vendor Log page. On clicking Export button, a page gets displayed wherein user need to select some details and then click on to Download button to Export the file. User shall go back from the Export page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.11.4.1 | User can Export file from the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Download |  |

#### Method Statement Submittal Log

User shall manage(Edit/View/Delete) Method Statement Submittal Log from Method Statement Submittal Log page. While viewing a Method Statement Submittal log, user can download pdf or can email the details of Method Statement Submittal log separately. User can send the list of all Method Statement Submittal Logs items through email and also can download the Method Statement Submittal Log items in pdf format. User can filter and search Method Statement Submittal Logs. Vendor Log will be displayed in a table format and each Method Statement Submittal Log will have a link connected to some other pages. User can Import or Export Method Statement Submittal logs.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.12.1 | * Manage(View/Edit/Delete) Method Statement Submittal Log * Import and Export Method Statement Submittal Log * Filtering and searching * View Notifications * Email Method Statement Submittal Log * Links to other pages |  |

##### Search Method Statement Submittal Log

User can search Vendor log from the Vendor log page. User shall enter values in the fields and click on to search button for searching in the Method Statement Submittal log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.12.1.1  3.3.3.12.1.2 | User can search Method Statement Submittal log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Search button   Search result will display below the search field in a table. |  |

##### Advance Search Method Statement Submittal Log

User can do advance search from the Method Statement Submittal log page. User shall enter values in the fields and click on to search button for searching in the Method Statement Submittal log. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.12.2.1 | User can do advance search on Method Statement Submittal log in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Zone (drop down) * Method Statement Submittal * Method Statement Description * Category package title * Family * Planned Submission date * Planned Approval Date * Current Status Code * Current Revision Status * Issued By * Issued To * All prepared by (drop down) * Search button * Close button   Search result will display below the advanced search field in a table. |  |

##### Import Method Statement Submittal Log

User shall import Method Statement Submittal log by clicking Import button from the Method Statement Submittal Log page. On clicking Import button, a page gets displayed wherein user need to select a file and then click on to Import button to import the file. User shall go back from the import page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.12.3.1 | User can import file by browsing a file and clicking Import button. |  |

##### Export Method Statement Submittal Log

User shall export Method Statement Submittal log by clicking Export button from the Method Statement Submittal Log page. On clicking Export button, a page gets displayed wherein user need to select some details and then click on to Download button to Export the file. User shall go back from the Export page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.12.4.1 | User can Export file from the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Download |  |

#### Cost Management

User shall manage Cost from the Modules menu. From Cost management users can access Financial performance, Priced BOQ and Monthly BOQ.

#### Priced BOQ

User shall manage(Edit/View/Delete) Priced BOQ from Priced BOQ page. While viewing a Priced BOQ, user can download pdf or can email the details of Priced BOQ separately. User can send the list of all Priced BOQ items through email and also can download the Priced BOQ items in pdf format. User can filter and search Priced BOQ. Priced BOQ will be displayed in a table format and each Priced BOQ will have a link connected to some other pages. User can Import or Export Priced BOQ.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.14.1 | * Manage(View/Edit/Delete) Priced BOQ * Import and Export Priced BOQ * Filtering and searching * View Notifications * Email Priced BOQ * Links to other pages |  |

##### Search Priced BOQ

User can search Priced BOQ from the Priced BOQ page. User shall enter values in the fields and click on to search button for searching in the Priced BOQ. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.14.1.1  3.3.3.14.1.2 | User can search Priced BOQ in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (dsrop down) * Search button   Search result will display below the search field in a table. |  |

##### Advance Search Priced BOQ

User can do advance search from the Priced BOQ page. User shall enter values in the fields and click on to search button for searching in the Priced BOQ. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.14.2.1  3.3.3.14.2.2 | User can do advance search on Priced BOQ in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Zone (drop down) * Category package title * Product ID * Description * All prepared by (drop down) * Search button * Close button   Search result will display below the advanced search field in a table. |  |

##### Import Priced BOQ

User shall import Priced BOQ by clicking Import button from the Vendor Log page. On clicking Import button, a page gets displayed wherein user need to select a file and then click on to Import button to import the file. User shall go back from the import page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.14.3.1 | User can import file by browsing a file and clicking Import button. |  |

##### Export Priced BOQ

User shall export Priced BOQ by clicking Export button from the Priced BOQ page. On clicking Export button, a page gets displayed wherein user need to select some details and then click on to Download button to Export the file. User shall go back from the Export page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.14.4.1 | User can Export file from the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Download |  |

#### Monthly BOQ

User shall manage(Edit/View/Delete) Monthly BOQ from Monthly BOQ page. While viewing a Monthly BOQ, user can download pdf or can email the details of Monthly BOQ separately. User can send the list of all Monthly BOQ items through email and also can download the Monthly BOQ items in pdf format. User can filter and search Monthly BOQ. Monthly BOQ will be displayed in a table format and each Monthly BOQ will have a link connected to some other pages. User can Import or Export Monthly BOQ.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.15.1 | * Manage(View/Edit/Delete) Priced BOQ * Import and Export Priced BOQ * Filtering and searching * View Notifications * Email Priced BOQ * Links to other pages |  |

##### Search Monthly BOQ

User can search Monthly BOQ from the Monthly BOQ page. User shall enter values in the fields and click on to search button for searching in the Monthly BOQ. To search for a particular item based on date, user need to check mark on Design or As-Built. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.15.1.1  3.3.3.15.1.2 | User can search Monthly BOQ in the website with the following information   * Design (check box) * Start Date (calendar) * Finish Date (calendar) * As Built (Check box) * Start date (Calendar) * Finish Date (calendar) * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Search button   Search result will display below the search field in a table. |  |

##### Advance Search Monthly BOQ

User can do advance search from the Monthly BOQ page. User shall enter values in the fields and click on to search button for searching in the Monthly BOQ. Cancel button cancels the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.15.2.1  3.3.3.15.2.2 | User can do advance search on Monthly BOQ in the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Zone (drop down) * Category package title * Product ID * Description * Construction activity id * All prepared by (drop down) * Search button * Close button   Search result will display below the advanced search field in a table. |  |

##### Import Monthly BOQ

User shall import Monthly BOQ by clicking Import button from the Monthly page. On clicking Import button, a page gets displayed wherein user need to select a file and then click on to Import button to import the file. User shall go back from the import page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.15.3.1 | User can import file by browsing a file and clicking Import button. |  |

##### Export Monthly BOQ

User shall export Monthly BOQ by clicking Export button from the Monthly BOQ page. On clicking Export button, a page gets displayed wherein user need to select some details and then click on to Download button to Export the file. User shall go back from the Export page on clicking Go Back button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.15.4.1 | User can Export file from the website with the following information   * Building (drop down) * Discipline (drop down) * Level (drop down) * System (drop down) * Download |  |

#### Risk Analysis

User shall manage Risk Analysis from the Modules menu. From Risk Analysis users can access Areas of Concern.

#### Areas Of Concern

User shall manage(Add/Edit/View/Delete/Respond) Areas of concern from Areas of concern page. User can send email of the added Areas of concern and also can download the Areas of concern in pdf format. User can filter Areas of concern assigned to that particular user. User can search for a particular Areas of concern from the search box. Areas of concern will be displayed in a table format and each Areas of concern will have a link connected to some other pages.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.17.1 | * Add a new Areas of concern * List all added Areas of concern * Manage(View/Edit/Delete/Respond) Areas of concern * View Notifications * Email Areas of concern * Download Areas of concern in pdf format * Export to risk register * Category (dd) * Search or Filter Areas of concern |  |

##### Add Areas of concern

User shall create new Areas of concern by selecting Add new button from the Areas of concern page. A form gets displayed in the window wherein user can enter Areas of concern details. Some of the fields could not be edited as it is displaying automatically. In the Areas of concern page, any number of files can be attached. After filling the fields, user can either submit the form or can draft it. Drafted item will display in the Areas of concern table with a flag icon. Back button in the Add Areas of concern page redirects to Areas of concern listing page.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.17.1.1 | User add Areas of concern on the website with the following information   * Record No. * Area of concern * Reason for concern * Action Required by (drop down) * Category (drop down) * Target date (calendar) * Measures taken * Project Control Manager * FIDIC reference (drop down) * Prepared by * Notes * Comment   User can attach files with the following information   * File Description * Select File * Add button * Draft button * Submit Button |  |

##### Email Areas of concern

User shall email the Areas of concern by clicking Email button from the page. On clicking Email button, a new window displays wherein users need to select the receivers address and should mention the subject of the Email. Two buttons will be there in the Email Window Send and Clear button. Send button sends the transmittal letter to the corresponding address by displaying a message on the screen and the clear button clears all the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.17.2.1 | User can Email Areas of concern item with the following information   * From * To (Drop down) * CC * BCC (Drop Down) * Subject * Content * Send button * Clear button |  |

##### Export to Risk Register

Areas of Concern can be exported to Risk Register by clicking Export to Risk Register button from the Areas of Concern page. Exporting can be done by selecting some particular areas of concern from the Areas of Concern table. After clicking the Export link, page redirects to Risk analysis page. In the Risk Analysis page, user need to fill a form and also the user can view the reports from the same page. Searching is possible from the report tab. User can send email or download risk analysis table item. From the same page user can add data date. Added dates will display in the Report table.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.17.3.1  3.3.3.17.3.2  3.3.3.17.3.3  3.3.3.17.3.4  3.3.3.17.3.5 | User can fill the form with the following details   * Month (calendar) * Year (calendar) * Select button * Id * Category (drop down) * Data raised * Raised by (drop down) * Description of risk (drop down) * Recommended Measures to be taken * Action required by (drop down) * Likelihood Rating * Impact Rating * Priority score * Force majeure (drop down) * Remarks * Save * Button   Added details will display below the form in a tabular structure.  User can manage (edit/delete) risk analysis table  User can search Risk analysis items from the report tab.  User can send email or download risk analysis items in pdf format from the report tab. |  |

##### Search Area of Concerns

User can view the list of Area of concerns item in a table. From the list page user can filter and search particular item. On clicking search button after entering values, search result will display in the table. Clear button clears all the search result.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.17.4.1 | User can Filter or Search Areas of concern item with the following information   * Status (drop down) * Category (drop down) * Search * Search button * Close button |  |

#### Report

User can view the report of all modules from the Report menu. From the Report menu, user can view the data either in tabular form or in graphical form.

#### QA/QC

QA/QC is an option under reports to view the statistics of NCR, Inspection Request and Punch List. User shall manage all the statistics.

#### Inspection Request Statistics

User shall manage(Add/Edit/View/Delete) Inspection Request Statistics from Inspection Request Statistics page. User can send email of the added Inspection Request Statistics and also can download the Inspection Request Statistics in pdf format. User can search for a particular Inspection Request Statistics from the search box based on date. Inspection Request Statistics will be displayed in a table format and each Inspection Request Statistics will have a link connected to some other pages.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.20.1  3.3.3.20.2 | * Add a new Inspection Request Statistics * List all added Inspection Request Statistics * Manage(View/Edit/Delete) Inspection Request Statistics * View Notifications * Email Inspection Request Statistics * Download Inspection Request Statistics in pdf format * Export to risk register * Link to transmittal letter * Export/Import Inspection Request Statistics * View links * Linking to Engineering, Material, Procurement Register, Payments, Daily Report, Vendor Register, NCR, Punch List * Search or Filter Areas of concern   User can add data date. On clicking add data date, page redirects to report page of inspection request. |  |

##### Add Inspection Request Statistics

User shall create new Inspection Request Statistics by entering value from the Inspection Request Statistics. After filling the fields, user can save the data. Saved item will display in the table below the form.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.20.1.1 | User add Inspection Request Statistics on the website with the following information   * Discipline (drop down) * Open * Close * Save button |  |

##### Search Inspection Request

User shall search for Inspection Request from the search field of the Report tab in Inspection Request. User should enter month and year and then click on to select button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.20.2.1 | User can search inspection request with the following information   * Month (drop down) * Year (drop down) * Select button |  |

##### Cumulative Search

User shall perform cumulative search for Inspection Request from the cumulative search field of the Report tab in Inspection Request. User should enter beginning and ending month and year for searching and then click on to select button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.3.20.3.1 | User can cumulative search inspection request with the following information   * From month (drop down) * From year (drop down) * To month (drop down) * To year (drop down) * Cumulative button |  |

##### Inspection Request Report

Report tab helps the user to view the data in graphical format. NCR Statistics table can be viewed from the Reports tab.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.20.4.1 | * User can search from the reports * Perform cumulative search * Email reports * Download reports in pdf format * Open * Close * Save button |  |

##### Email Inspection Request Report

User shall email the Reports by clicking Email button from the page. On clicking Email button, a new window displays wherein users need to select the receivers address and should mention the subject of the Email. Two buttons will be there in the Email Window Send and Clear button. Send button sends the transmittal letter to the corresponding address by displaying a message on the screen and the clear button clears all the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.20.5.1 | User can Email Reports with the following information   * From * To (Drop down) * CC * BCC (Drop Down) * Subject * Content * Send button * Clear button |  |

#### Punch List Statistics

User shall manage(Add/Edit/View/Delete) Punch List Statistics from Punch List Statistics page. User can send email of the added Punch List Statistics and also can download the Punch List Statistics in pdf format. User can search for a particular Punch List Statistics from the search box based on date. Punch List Statistics will be displayed in a table format and each Punch List Statistics will have a link connected to some other pages.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.21.1  3.3.3.21.2 | * Add a new Punch List Statistics * List all added Punch List Statistics * Manage(View/Edit/Delete) Punch List Statistics * View Notifications * Email Punch List Statistics * Download Punch List Statistics in pdf format * Export to concerns * Create Inspection Request * Search or Filter Areas of concern   User can add data date. On clicking add data date, page redirects to report page of punch list. |  |

##### Add Punch List Statistics

User shall create new Punch List Statistics by entering value from the Punch List Statistics. After filling the fields, user can save the data. Saved item will display in the table below the form.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.21.1.1 | User add Punch List Statistics on the website with the following information   * Discipline (drop down) * Open * Close * Project completion date (calendar) * Save button |  |

##### Search Punch List

User shall search for punch list from the search field of the Report tab in punch list. User should enter month and year and then click on to select button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.21.2.1 | User can search punch list with the following information   * Month (drop down) * Year (drop down) * Select button |  |

##### Cumulative Search

User shall perform cumulative search for punch list from the cumulative search field of the Report tab in punch list. User should enter beginning and ending month and year for searching and then click on to select button.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.3.21.3.1 | User can cumulative search punch list with the following information   * From month (drop down) * From year (drop down) * To month (drop down) * To year (drop down) * Cumulative button |  |

##### Punch List Report

Report tab helps the user to view the data in graphical format. NCR Statistics table can be viewed from the Reports tab.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.21.4.1 | * User can search from the reports * Perform cumulative search * Email reports * Download reports in pdf format * Open * Close * Save button |  |

##### Email Punch List Report

User shall email the Reports by clicking Email button from the page. On clicking Email button, a new window displays wherein users need to select the receivers address and should mention the subject of the Email. Two buttons will be there in the Email Window Send and Clear button. Send button sends the transmittal letter to the corresponding address by displaying a message on the screen and the clear button clears all the entered data.

| **REQUIREMENT ID (RID)** | **DESCRIPTION** | **COMMENTS** |
| --- | --- | --- |
| 3.3.3.21.5.1 | User can Email Punch List item with the following information   * From * To (Drop down) * CC * BCC (Drop Down) * Subject * Content * Send button * Clear button |  |

# Other Requirements

This section contains all of the functional and quality requirements of the system. It gives a detailed description of the system and all its features.

## User Interface

The user interface will be responsive.

*Browser Compatibility*

The application developed will be compatible with the browsers listed below:

1. Internet Explorer 11
2. Mozilla Firefox 50 or above
3. Chrome 50 or above

## Hardware Interface

Since the application is web-based, it is not dependent on any designated hardware, and it does not have any direct hardware interfaces. However, we recommend the specification mentioned below for the best output.

* Computer with Microsoft Windows XP Professional SP3/Vista SP1/Windows 7 or 8 OS
* Processor: 2.6 GHZ Intel Pentium IV or equivalent
* Memory: 2GB
* Disk Space: 1 GB of free disk space

## Technology for development/Hosting

The application shall be developed using the set of tools/technology listed below.

Technology Stack:

* Web Languages – PHP, JQuery, HTML5, CSS
* Protocol and Ports - HTTP (80), HTTPS (443)
* Database – MS SQL
* Server – Apache
* Operating System – Windows

# Non Functional requirement

## Documentations

|  |  |
| --- | --- |
| **ITEM** | **RESPONSE/COMMENT** |
| Project documentation requirements | * Requirements document * Functional specification document |
| Training  Requirements | Training will be provided for installing (including application migration) and using the application for users if required |

## Security

Hardware and network security will be dependent on the selected cloud/hosting service provider’s infrastructure and credentials.

* The system shall use secure sockets in all transactions that include any confidential customer information.
* The system shall automatically log out all customers after a period of inactivity.
* The system shall confirm all transactions with the customer’s web browser or mobile apps.

## Data Storage

* The user interfaces shall never display a customer’s password. It shall always be echoed with special characters representing typed characters.
* The user interfaces shall never display a customer’s credit card number after retrieving from the database. It shall always be shown with just the last four digits of the credit card number.
* The system’s back-end servers shall never display a customer’s password. The customer’s password may be reset but never shown.
* The system’s back-end servers shall only be accessible to authenticated administrators.

|  |  |
| --- | --- |
| **ITEM** | **REQUIREMENT** |
| Handling Sensitive Data | Insensitive data such as company name, documents processed, relevant dates, noncompliance data. could be stored in the database as plain text  Passwords will be encrypted. |
| Security Threats  Prevention | The application will be hosted on a web server that implements SSL (HTTPS). Passwords will be encrypted. Protection against SQL injection will be implemented  Protection against Cross browser hacks and cross-site scripting (XSS) will be implemented. |
| Access Control | Access control for the application will be Role based. Individual users will be authenticated with passwords and authorized to access different parts of the site depending upon assigned roles. |
| HTTPS | Application will support both HTTP and HTTPS. |
| Changing Passwords | User will be allowed to change password by providing his original password and typing the new password 2 times. |
| Forgotten Passwords | Forgotten passwords can be reset by providing an email address attached to the account. A token-based link with expiry will be send to the email for reset of the password. |

## User Inputs

|  |  |
| --- | --- |
| **ITEM** | **REQUIREMENT** |
| Auto-Generated  IDs | Auto generated ID’s will be used within a database context. Passwords may be auto generated for the user. |
| Boundary Conditions | Birth year values should be checked for boundary conditions. |

## Usability

|  |  |
| --- | --- |
| **ITEM** | **REQUIREMENT** |
| Documentation | User manuals and other relevant documents will be provided. |
| Time Zones | The prototype application will have UAE Standard Time as its time zone. Time zones cannot be configured in the current version of the application. Where ever applicable system date and time will be used to represent logical/business/calendar dates. |
| User Interface | The application developed will be best viewed in the resolution 1280px by  768px. The application will be responsive and will be available for mobile |
|  | devices as well as on a desktop web browser |
| Tab Sequence | Forward and backward tab sequences will be maintained in the form. |
| Transactions | Transactions will be ACID (Atomic, Consistent, Isolated and Durable) where required. |

We look forward to hearing from you soon and hope that you will give us the privilege to work with you in meeting your business goals. Thank you.

Thank You



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