STATEMENT OF WORK: BERM PROJECT

This section of the document will describe all of the features for a version 1.0 release of the product known as “BERM”. These features are based on discussions that were documented in previous meetings with Faithful+Gould. The estimates and timelines are based on this current knowledge set. Any additions or changes will affect the timeline and cost estimates.

1.1 Sections

The software application can be broken into 5 broad sections in which all features can be grouped.

1. Dashboard
2. Security
3. Organization Management
4. Asset Management
5. Capital Planning
6. Reports

1.1.1 Dashboard

The dashboard is the home screen where all users of the system will begin. This screen provides an executive level overview that provides high-level statistics that aid in business decision making. Each sub-view in the dashboard will have links that allow a user to “drill-down” to get further details. The following is an example of what should be displayed on the screen. The final details will be defined at a later date.

1.1.1.1 Backlog Matrix

A table of items sorted by priority, system, category, etc

1.1.1.2 Region Average FCI

1.1.1.3 Portfolio List

A list displaying all portfolios that the user has permission to view

1.1.1.4 Important Action Items

Upcoming projects or important requirements

1.1.1.5 Dynamic Site Map

A Google map view or equivalent widget showing the site aerial view that will list all buildings and include basic information

1.1.2 Security – Role Based Access Control

The application will support **role-based** access control. This means that access permissions are associated with the concept of a **job function**. A **User** gains access via assigned to a **role**. Role based access will allow functionality permissions which can be assigned or revoked at any time with an administrator account (or super administrator). Access to specific assets or "buildings" within the portfolio must also be controllable with a specific Role.

- A user is assigned to **one and only one role** in the system at a time. This requirement will simplify the user's experience.
- **System Roles** are predefined by the system and cannot be changed. There are two: **Super Admin** and **Admin**.
- **Custom Roles** are defined by the end user. There is one custom, client specific role by default called **Member**.

Example:

A client may wish to have three different roles created. In this example, there are 5 buildings, with two groups. There are also 5 custom roles that are specific to this client.

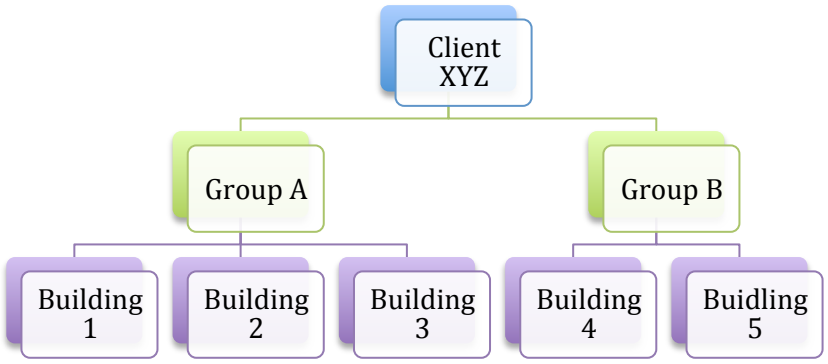

Figure 1 - Buildings within 2 groups

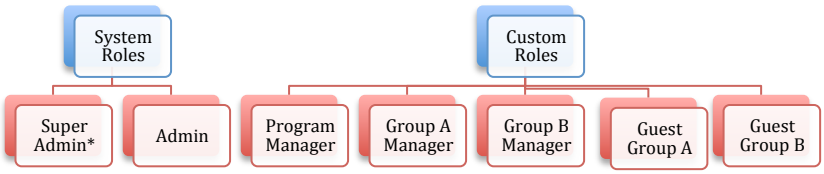

Figure 2 - Example User Roles for Client

*** Remember that Super Admins are only available to F+G so this role is not visible to clients.**

In Figure 2, a client may have 5 different roles that will support job functions at the organization.

Program Manager – Read-write permissions for everyone
Group A Manager – Read-write permissions for buildings in group a
Group B Manager – Read-write permissions for group b
Group A Guest – Read-only for Group A buildings
Group B Guest – Read-only for Group B Builds

By setting up these different roles, Client XYZ can manage access to building details based on job descriptions of people working with the system. Program Managers can see everything. Group A Managers can only manage group a buildings. Guests can only read information so data is only managed by those with permission.

1.1.2.1 System Roles

The application will have **two** system wide roles that cannot be changed.

1.1.2.1.1 Super Admin

This role has full privileges across the entire application and is used for setup by trusted F+G users only. Can access and manage data for any client in the system. This role can access and modify any piece of data within the system across **all clients** including **meta data** (data field types and names). Only **Super Admin** roles can assign users to specific clients. Super Admin users are not assigned to a particular client and thus should never be given to a client.

1.1.2.1.2 Admin Role

Restricted to modifying all portfolio information associated with one or more **clients**. An admin **can** mange meta data (data types and field names). Only assigned

to client users with the highest level of authority. Admins can manage all users including other admins. Admins can manage custom roles for its assigned client. Admins can create other Admins.

1.1.2.1.3 Custom Roles

An **Admin** or **Super Admin** can create new roles for a client. A super admin has the additional ability to assign this role to a particular client. An **Admin** can only create roles for it's assigned client. A custom role will have a name and read, write, or read-write privileges for a group of assets. A custom role can be restricted to a subset of data within the scope of one client with read, write, or both types of permissions on a per asset basis.

1.1.2.1.3.1 Member Role (Default Role)

This role is created by default for each client. It has basic read permissions for an entire client portfolio (all buildings). This is the default user level that new users are assigned to. A member user must belong to one **client**. A member cannot manage other user's role assignments or custom role permissions. Unlike **System Roles**, this **Custom Role** can be assigned.

1.1.2.2 Audit Trail

All user behavior is logged and accessible to Admin and Super Admin roles. Admins will only have access to audit trail data associated for its assigned client.

1.1.3 Organization Management

Each client will have an organizational hierarchy with up to **6 asset groups**. The system could support many more, but for usability reasons, the system should restrict this to a reasonable number.

Below is an example of an organizational group hierarchy

- **GA Board of Education (Client)**
- Region
- University
- College
- Department
- **Building (Asset)**

Features

- Add/Edit/Delete organization groups
- Move a group and all children (and grandchildren) to a new parent

1.1.4 Asset Management

Asset management is the core functionality of the system. This section includes all of the actions required to browse, view, and edit the specific data of the assets. There are and within those

1.1.4.1 Organization Tree

The organization tree shows all organization groups and assets in a "tree hierarchy" for easy browsing. Selecting a parent, will list all child asset requirements. Selecting a single asset will show all requirements under that particular asset.

1.1.4.2 List View

The list view Asset lists can be filtered and sorted via a grid view from the base asset management screen. Clicking on a specific row, will take the user to a detail view.

1.1.4.3 Detail View

The detail view will allow a user to modify and view data associated with each asset.

1.1.4.4 Data Fields

Assets can have up to 100 different data fields. Each data field can be one of the following types: **String**, **Date**, **Number** (formatted), **text blobs,** or **binary data** (photos, PDFs, etc). Fields can also have predefined default values and descriptions. Fields may also be hidden. The field label and predefined values are customizable by **Super Admin and Admin roles only**.

Asset data fields will include the following at a minimum:

- Asset Number
- Asset Name
- Asset Current Replacement Value (Date Basis)
- Asset Current Replacement Value Inflated (Calculated)
- Asset GSF
- Asset NSF
- Asset Use Type (Customizable drop-down)
- Asset Location Labor Index
- Asset Location Materials Index
- Cover Photo
- Current Needs Index
- Current FCNI

1.1.5 Asset Data

Assets have two types of data: **Asset Requirements** and **Asset Components**

1.1.6 Asset Requirements

Requirements are children of a specific **Asset** and can have up to **100 different data fields**. Each data field can be one of the following types:

1. **String** (up to 255 characters)
2. **Date**

3. **Number** (formatted)
4. **Text** (arbitrary length)
5. **Binary Data** (Photos, PDFs, etc)

Fields have the following meta data associated with it:

1. **Default Value (Predefined Data Type) –** The default value that should be assigned.
2. **Description (String) –** definition of the field
3. **Hidden (Boolean) –** if true, this field is not visible in reports or read only interfaces.

Meta data can be customizable by the **Super Admin or Admin** role only.

Asset Requirements will be organized according to **Uniformat II's 4 level hierarchies** plus Faithful+Gould's fifth level of classification. The hierarchy can be customized by the **Super Admin or Admin role** to exclude specific Uniformat elements and organize specific elements at any of the following Uniformat Levels:

- Level 1 Major Group Elements
- Level 2 Group Elements
- Level 3 Individual Elements
- Level 4 Sub Elements
- Level 5 Faithful+Gould Systems and Components

The following data values will be customizable via a **Super Admin**:

- Predefined Estimated Useful Life
- Material Base Unit Cost
- Labor Base Unit Cost
- Unit Type
- Year of Installation
- Calculated Useful Life
- Estimated Remaining Useful Life

Requirement data fields will include the following at a minimum:

- Uniformat Code
- Priority
- Category
- Classification
- Photo
- Title
- Detailed Project Description
- Multiple line cost table
- Cost fields to include task, unit, base material cost, base labor cost
- Up to five optional cost mark-ups defined at an administrative level

- Optional fields that are customizable at an administrative level
- Project cost summary tab that shows total indexed cost, any applicable mark-ups, any applicable inflation and grand total

1.1.7 Asset Components

Asset Components are children of a specific **Asset** and can have up to **20 different data fields.**

Each data field can be one of the following types:

6. **String** (up to 255 characters)
7. **Date**
8. **Number** (formatted)
9. **Text** (arbitrary length)
10. **Binary Data** (Photos, PDFs, etc)

Fields have the following meta data associated with it:

4. **Default Value (Predefined Data Type) –** The default value that should be assigned.
5. **Description (String) –** definition of the field
6. **Hidden (Boolean) –** if true, this field is not visible in reports or read only interfaces.

Components will be organized according to Uniformat II's 4 level hierarchy plus Faithful+Gould's fifth level of classification. The hierarchy can be customized by the **Super Admin** role to exclude specific Uniformat elements and organize specific elements at any of the following Uniformat Levels:

- Level 1 Major Group Elements
- Level 2 Group Elements
- Level 3 Individual Elements
- Level 4 Sub Elements
- Level 5 Faithful+Gould Systems and Components

The following data values will be customizable via a **Super Admin**:

- Predefined Estimated Useful Life
- Material Base Unit Cost
- Labor Base Unit Cost
- Unit Type
- Year of Installation
- Calculated Useful Life

- Estimated Remaining Useful Life

1.1.7.1 Data Field Groups

Data fields can be grouped into different sets. A data field may belong to only one data field group. Groups can be collapsed to simplify the interface. The state of the group views will be saved to the user's settings. This solution takes the place of an "advanced" vs. "simple" view.

1.1.7.2 Excel Import

Asset data can be imported from a CSV or tab delimited file. The import tool will require specific list of column names to work. The column name must match the name of the field in the asset.

1.1.7.3 Asset Groups

Assets can be assigned to one or more groups for organizational purposes.

1.1.8 Capital Planning Module

The end user of the platform will seek to utilize the body of data as a decision-making tool and project management tool. The ability to bundle specific **Asset Requirements** into packaged **Projects** and then track the status of the Project through the various stages of funding, commitment, and implementation.

1.1.9 Financial / Condition Forecast Module

The end user of the platform will seek to utilize the body of data as a financial forecasting model and budgeting tool. Users will have the ability to forecast future condition indices and total future Requirement backlog based on current Requirement backlog given multiple funding scenarios and various future inflation rates. Each Requirement will have a date basis and each Asset Replacement Value will have a date basis to facilitate calculations displayed in 'today's dollars'.

1.1.10 Queries

User will have the ability to run Queries within each module of the system, i.e. Assets, Requirements, and Components. Queries can be run on any data field or any combination of data fields within each module. Query results will be exportable to Excel via a CSV export.

1.1.11 Reports

A variety of different reports will be available to users. Faithful+Gould will define the required, specific reports at a later date. Reports may be viewed in the browser as html or downloaded as a PDF, Excel file, or Word document.