

# BUILDER™

## Getting Started Guide

Version 3.3.12

*June 16, 2017*

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# Welcome to BUILDER™

BUILDER, part of the Sustainment Management System, provides facility managers with the tools they need to generate the greatest impact from maintenance and rehabilitation activities, and to plan and defend maintenance budgets.

The primary measure used in BUILDER is the *condition index* (CI) rating, using a 0-to-100 point scale. After real property inventory has been subdivided into hierarchical levels of increasing fineness, down to the Component-Section level, the condition index for each Component-Section is computed from inspection data that records the type, severity, and density of each distress found.

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*Deterioration curves, developed from experience over time, show the optimal point at which work should be done to avoid more costly rehabilitation projects later.*

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Another measure available in BUILDER is the *functionality index* (FI), also on a 0-to-100 point scale in keeping with the SMS design philosophy. It is computed from assessment data that records the functionality issues present in a building. Based on the severity and density of those issues, building modernization requirements can be identified.

Based on condition index and/or functionality index scores, BUILDER can generate recommended work items automatically. Using cost books associated with BUILDER, cost estimates are attached to the work items. Managers can then choose which work items to fund. The cost of *not* funding work items can be determined using Scenarios.

With the assistance of the Scenarios simulation engine included as part of BUILDER, managers can develop long-range work plans based on a sound investment strategy. By providing an objective description of condition (a core BUILDER functionality) and an automated means of exploring various options under different budget scenarios (Scenarios), BUILDER and Scenarios together make multi-year work plans easier to formulate and funding requests easier to justify. The goal is optimal facility performance for the dollars invested.

For information, announcements, links to documents, and discussion forums, visit the [SMS Community User's Group Website](https://www.sms.erdc.dren.mil) at <https://www.sms.erdc.dren.mil>.



Developed by U.S. Army ERDC-CERL  
6/15/2017

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### ***Hold-Harmless Statement***

ERDC-CERL makes no guarantee as to the precision of the predictive elements of the BUILDER™ or ROOFER™ software. ERDC-CERL shall not be held responsible for damages or losses which are due to facility mismanagement decisions based upon predicted outcomes of facility asset performance from the BUILDER™ or ROOFER™ software.

### ***Information Re-Use Restrictions***

End Users are strictly forbidden from re-using any information from the BUILDER™ or ROOFER™ system (compiled code or stored data) to provide similar capabilities in other tools. End Users may use the report outputs and may access their own inventory data, as stored in the database, to facilitate their own organization's business management practices. Any other use of or access to the data is strictly forbidden.

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## About the Sustainment Management System

The Sustainment Management System (SMS) Version 3.3.12 is the newest version under development by the U.S. Army Corps of Engineers at its Engineering Research and Development Center–Construction Engineering Research Laboratory (ERDC-CERL) in Champaign, IL.

Depending on a user's needs and licensing, the SMS framework provides Web-based access to the latest versions of BUILDER™ and/or ROOFER™, automated tools that support engineering and facility management decisions regarding when, where, and how best to maintain buildings and their key components.

While the Sustainment Management System has been developed for military installations, it is applicable for any organization with facility management responsibilities. License agreements providing access to the SMS technology are available from multiple providers.

## What's New in BUILDER™

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This topic describes changes made in BUILDER 3.3 and its incremental versions through 3.3.12.

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**Note: SMS with BUILDER no longer provides support for IE9, Internet Explorer version 9.** You should use Internet Explorer version 10 or greater to access SMS with BUILDER.

### BUILDER 3.3.12

- **Session Timeout**

The default period of inactivity that triggers session timeout has been changed from 20 minutes to 10 minutes.

**Note:** In the Web.session.config file, the system administrator can configure the length of inactive time that triggers session timeout. The default 10-minute setting can be altered by changing "10" in the line <sessionState mode="InProc" cookieless="false" timeout="10" />. DoD system administrators should note that the SMS makes no distinction between admin and non-privileged accounts, and should consult Rules SV-83865r1\_rule and SV-83867r1\_rule from the Application Security and Development **STIG**<sup>1</sup> before configuring this value.

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<sup>1</sup>Security Technical Implementation Guide (DoD)

- **User Accounts**

1. Changes to user accounts are now saved in audit records.
2. Changes to user accounts now trigger e-mail notifications to administrators.

- **Inspections**

Multiple inspections on the same day are now all used to compute condition indexes

- **FCI**

The formula used to calculate the Facility Condition Index (FCI) has been changed from that used by the Federal Real Property Council to a formula that produces a value on the 0-100 scale. Using the new formula, a higher number indicates better condition, rather than the reverse as with the previous version of the formula. The change of formula for calculating the FCI took place in Version 3.3.10.

### **BUILDER 3.3.11**

- **Functionality**

1. The Egress Wizard is operational.
2. Functionality calculations now ignore non-numeric values.
3. Only non-null functionality question weights factor into overall assessment scores for certain assessment types.

### **BUILDER 3.3.10**

- **Inventory Tree**

1. Deleting a node on the navigation tree no longer collapses the tree.
2. Organizations added to the inventory tree now appear immediately after being added.
3. Buildings on which Functionality Assessment has been performed can now be deleted (bugfix).

- **Exports to BuilderRED (BRED)**

In previous BUILDER versions, non-image attachments could cause an export with images to fail. Non-image attachments are now filtered out of exports to BuilderRED. These non-image attachments will still be present and visible in BUILDER.

- **Reports**

Multiple Standard Reports can now be run without first closing and reloading the "Standard Reports" popup window.

- **Inspections**

The Estimated CSCI on a new Green+ inspection now matches the inspection CSCI.



- **Cost Books**

Cost books can again be edited at the Component-Section level.

- **Permissions**

Master Planners can again delete Organizations and Sites.

### **BUILDER 3.3.9**

- **Nightly Rollup Enhancements**

Priority of the nightly rollup has been increased, to avoid deadlocks. Also, the speed of rollups has been increased.

- **Scenarios and Work Generation Synchronization**

The start date for Scenarios and work generation has been standardized so that results for the current fiscal year are now identical.

- **SQL Impact database deprecated**

The SQL "Impact" database has been deprecated and can safely be deleted.

### **BUILDER 3.3.8**

- **Deleting Sections**

When a Section is deleted, any corresponding work items are also deleted.

- **Permissions**

*Inspectors and Inventorisors* no longer have permission to delete a Building.

- **User Checkout**

At the Building screen, Systems at a Glance tab, there is a new column labeled "User Checkout" that lets users know if the System is checked out for BuilderRED use, and if so by whom. (Introduced in Release 3.3.3.)

### **BUILDER 3.3.7**

- **Exports to BRED**

When BUILDER 3.3.7 data is exported to BRED, the exported BRED files can not be accessed by BuilderRED versions previous to BuilderRED 3.3.7. See [Impact of Upgrading from Version 3.3.6](#).

- **Permissions**

*Inspection Supervisors* no longer have permission to delete Buildings/Facilities.

- **Work Items**

Work items treated as completed in Scenarios are now marked "Budgeted" instead of "Awaiting Funds".

### **BUILDER 3.3.6**

- This release contains bug fixes only.

### BUILDER 3.3.5

- **Login Improvement**

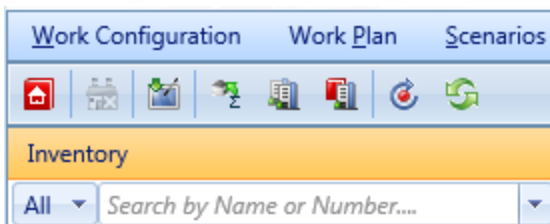
The self-service password reset feature now supports an alternate email for authentication purposes.

- **RSS**

The login page can now display messages via an RSS subscription. Messages allow system administrators to post announcements directly on the login page, for example to notify users about service outages.

- **Permissions**

1. *Inspection Supervisors* can now perform Rapid Inspections.
2. *Work Planners* can now create and run Scenarios.
3. *Master Planners*: A search bar is now available to Master Planners. The search bar offers direct navigation to items in the inventory, condition, and functionality trees. The search bar supports partial word search.



**Note:** Do NOT press **Return** after typing the search term.

### BUILDER 3.3.4

- This release contains bug fixes only.

### BUILDER 3.3.2 and 3.3.3

- **Facility Summary Tab Enhancements**

The following enhancements have been made at the Facility Summary tab at the Site and Complex levels of inventory:

1. Users can navigate via hyperlink directly to a facility in the list.
2. The Facility Summary data is now sortable.
3. At the Site level, a column has been added to identify Complex. This makes it easier to identify the locations of facilities within the Site.

### BUILDER 3.3.1

- **Login Improvement**

User accounts no longer have a uniqueness requirement for users' first and

last names. The User Name must still be unique. For example, there can now be two users named "John Smith" as long as their User Names are different.

### **BUILDER 3.3.0**

- **Functionality Improvements**

1. Functionality Assessment questions allow image attachment.
2. BuilderRED (BRED) now supports functionality assessments.

- **Account Management/Support**

Users can now reset their own passwords when they've been forgotten. The account's email address must be set before this feature can be used.

- **Login Improvement**

Users no longer need to configure their browser's popup blocker settings to exempt BUILDER.

## **Impact of Upgrading from Version 3.3.6**

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This topic documents the impact of upgrading from BUILDER and BuilderRED (BRED) 3.3.6 on the import and export of BRED files. If you don't use BuilderRED, the impact described here does not apply.

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**Note:** In this explanatory section, "older" BRED files means BRED files created with BUILDER Versions 3.3.0 through 3.3.6. "Older" versions of BUILDER and BuilderRED means Versions 3.3.0 through 3.3.6.

With the first upgrade of BUILDER from Version 3.3.6 to a more recent version, the underlying software formatting of BRED (BuilderRED) files created by BUILDER Versions 3.3.7 and later will change. You will not be able to use older versions of BuilderRED to work on BRED files created by BUILDER Version 3.3.7 or later. Therefore, you should carefully consider (1) the timing of upgrading from BUILDER and BuilderRED Version 3.3.6, and (2) whether your organization wishes to establish any procedures to minimize confusion about compatibilities. See [An Approach To Consider](#) below for an example of such a procedure.

If there will be a need to work with both pre-upgrade and post-upgrade BRED files, contact your BUILDER support representative before upgrading from BuilderRED Version 3.3.6.

**Note:** BUILDER Versions 3.3.7 through 3.3.12 will continue to accept import of BRED files created with older versions of BUILDER. Older

BRED files you have outstanding can always be imported back into BUILDER.

### ***Upgrade BUILDER First***

Best practice is to upgrade BUILDER from Version 3.3.6 *before* you upgrade BuilderRED from Version 3.3.6 to a higher version number. The BuilderRED upgrade may either be done immediately after the BUILDER upgrade, or it may be delayed.

### ***Before Your BuilderRED Upgrade***

Before upgrading from BuilderRED 3.3.6, you will be able to work only on BRED files created with BUILDER versions prior to 3.3.7.

If you have not yet upgraded from BuilderRED Version 3.3.6 and have time for some advance planning, see ["An Approach To Consider" on page 1](#) below.

### ***After Your BuilderRED Upgrade***

Once you have upgraded from BuilderRED 3.3.6, you will be able to work on BRED files created with BUILDER Version 3.3.7 or later. You will *not* be able to work on older BRED files.

After the upgrade, you will still be able to import older BRED files back into BUILDER. Then you can re-export them from your newer version of BUILDER and work on them.

### ***Details***

#### **What Works**

1. After your system has been upgraded from BUILDER 3.3.6, you will continue to be able to import outstanding BRED files back into BUILDER, regardless of whether they have been created using a post-3.3.6 version of BUILDER or an older version of BUILDER.
2. After you upgrade from BuilderRED 3.3.6, you will continue to be able to import outstanding BRED files back into BUILDER, regardless of whether they have been created using a post-3.3.6 version of BUILDER or an older version of BUILDER.
3. If you delay upgrading from BuilderRED 3.3.6, you will be able to work directly on your outstanding BRED files with BuilderRED. However, you will not be able to use your BuilderRED to work on BRED files created using BUILDER Version 3.3.7 or later, until you upgrade.

## **What Doesn't Work**

1. **Working on Old with the New Won't Work.** After upgrading from BuilderRED Version 3.3.6, you will not be able to use BuilderRED 3.3.7 or later to continue work on older, outstanding BRED files in . *What to do:* First, import the older BRED file back into your newer, updated version of BUILDER. Then re-export the information to BuilderRED, creating a fresh BRED file.
2. **Working on New with the Old Won't Work, Either.** If, after upgrading BUILDER from Version 3.3.6, you delay upgrading your version of BuilderRED, you will not be able to use your older version of BuilderRED to work on BRED files generated by BUILDER Version 3.3.7 or later.

## ***An Approach To Consider***

If you are comfortable delaying creation of new BRED files for a period of time, you can (a) upgrade BUILDER from Version 3.3.6, but (b) delay upgrading BuilderRED for that period, using it as a transition time for Inspectors and inventory takers to complete their in-progress work on older BRED files using the older version of BuilderRED, and to import them into BUILDER. Any older BRED files not completed during the transition period can be handled as follows: import them into the newer, upgraded version of BUILDER; then, after BuilderRED is upgraded from version 3.3.6, re-export them from the newer version of BUILDER to be worked on in the newer version of BuilderRED.

# Setting up your BUILDER Account

A BUILDER Administrator will set you up with a user account that has a particular level of user privileges.

Once you are logged in, you can access the [User Preferences](#) (the link is at the upper right hand corner of the main screen) to do any of the following:

- Change your user email address
- Change your password
- Register your smart card or CAC to be able to use it to log in (optional)
- Change the default view you wish to see when you start the program.
- Set your preferred unit of measure (English vs. metric).

To do any of these things, refer to the [User Preferences](#) topic.

# Understanding the BUILDER™ Inventory Hierarchy

The hierarchy that has been designed and built out in a given BUILDER implementation is shown in the [navigation pane](#) at the left hand side of the BUILDER screen. Click on the "plus" boxes to expand the inventory tree shown there.

The levels of hierarchy available in a BUILDER inventory tree are as follows:

Top node: This will be a single Organization or a single Site. The topmost position can not be shared; only one Organization or Site can be at the topmost level.



Organization (Having an Organization level is optional; if the top node is a Site, there can be no Organization in the tree)



Site



Complex



Facility / Building



System



Component



Section

Each of these levels is described briefly under headings below.

## Icon Colors

Condition and functionality metrics used in BUILDER are communicated upwards through the hierarchy in weighted fashion. At each level of the hierarchy, the condition or functionality index for that level provides an understanding of the average condition/functionality of the real property contained in all the inventory items under the specified Organization, Site, Complex, Building, System, or Component. The value of the index will determine whether the inventory icon for any given inventory item appears as green, amber, or red. Gray indicates that no assessment has been recorded in BUILDER for anything under that asset.

The meaning of green, amber and red condition indexes are given in the *BUILDER Condition Assessment Guide*.

## Levels of Hierarchy

### ***Top node***

Your inventory tree will have one and only one "node" at the top, typically named for your service branch, installation, or company. This can only be an Organization or a Site.

### ***Organization***

Organization is the highest possible level in the inventory tree. However, it is not a required level. Depending on the scope of your BUILDER implementation, it is possible to start with the Site level instead.

Unlike the other hierarchical levels, the Organization level may be nested more than one deep. When designing the inventory tree before implementing and filling out your inventory, it is important to accommodate in the inventory tree the highest possible Organization level you may want to expand to in the future. For more detail, see the section on implementation planning .

In the hierarchy tree, an Organization can have either (a) one or more Sites, (b) one or more Organizations, or (c) both created underneath it.

For more information about this hierarchical level, see [Working with Organizations](#).

### ***Site***

The level below Organization is the Site, which usually refers to a geographic location. The Area Cost Factor is one of the Location Factors that is set at the Site level. Other features that are set at the Site level are:

- Seismic Zone
- HVAC Zone

*In practice, a Site as a whole will typically have a facility manager who is responsible for day-to-day management of the Site, often with the assistance of subsidiary personnel.*

Just as an Organization can have one or more Sites and/or other Organizations created underneath it, in the SMS hierarchy a Site can have any combination of Complexes and/or Buildings beneath it.

For more information, see [Working with Sites](#).

### ***Complex***

A Complex is an optional grouping of Buildings or facilities. This feature is particularly useful for groupings of Buildings with similar Building Use types or



locations.

**Note:** Grouping Buildings into a Complex is done after creating the Buildings, not before.

For more information, see [Working with Complexes](#).

### ***Facility / Building***

A Building is a stand-alone building or other facility. At this level in the hierarchy, you can see details such as year constructed, size/area, condition indexes, and work item history. Attachments such as floor plans and photographs can be associated with the Building level.

For more information, see [Working with Buildings](#).

### ***Systems, Components, and Sections***

In BUILDER, a Building is divided into Systems, then further divided into Components, following [ASTM UNIFORMAT II](#). Systems equate to Level 2 Group Elements, and Components equate to Level 3 in the UNIFORMAT classification.

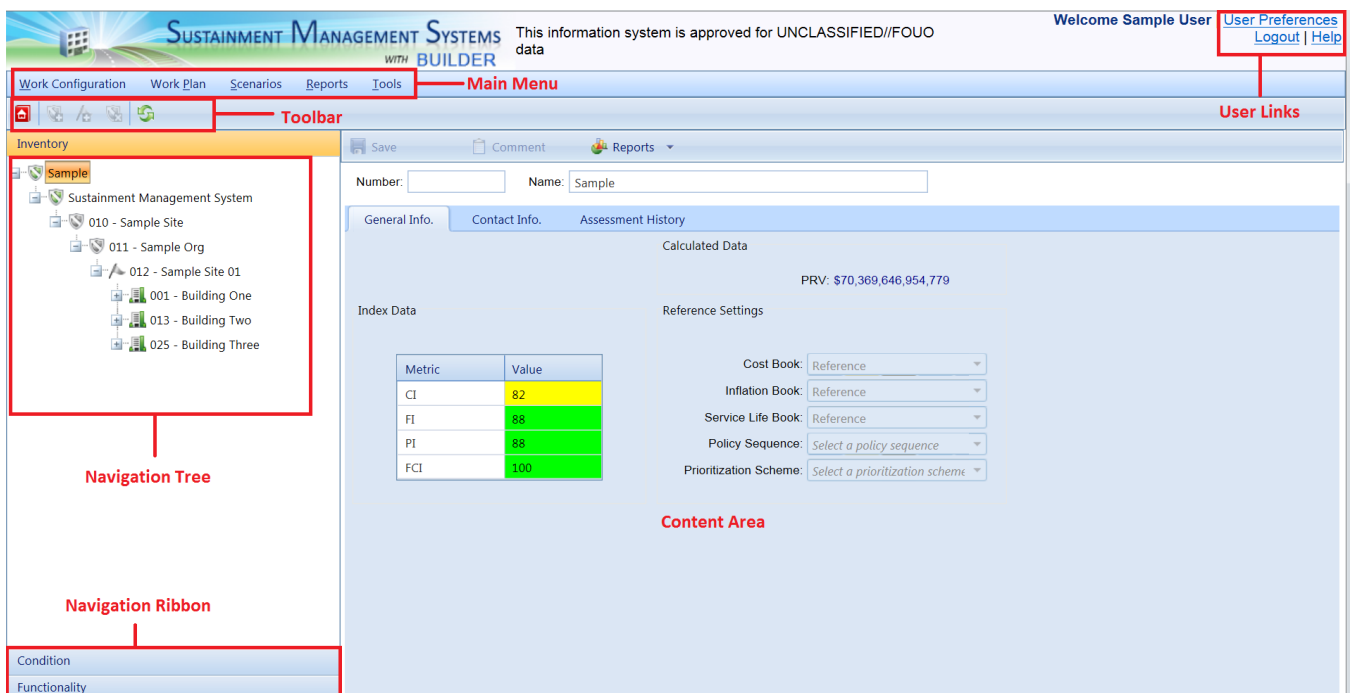
Components are then divided into Component-Sections, also called Sections. It is at the Section level that inspection information is recorded into BUILDER.

# How To Navigate BUILDER™ 3.3

This topic

- Introduces the layout of the BUILDER screen.
- Gives a brief overview of the main menu options and user links.
- Introduces the Inventory, Condition, and Functionality navigation trees.

After you have logged into BUILDER 3.3, a screen similar to the one shown below will appear:



The BUILDER user interface has the following main areas, each of which is described in greater detail below:

- User Links
- Main Menu
- Main Toolbar
- Navigation Ribbon
- Navigation Tree
- Content Area

## User Links

The **User Links** area (upper right) offers these options:

- **User Preferences.** This option allows you to change the unit of measure; to clear all the locks on the database records; or to change the password to your database.
- **Logout.** Selecting this option causes you to log out of (sign off from) BUILDER. After logging out of BUILDER, you will no longer be able to view or edit data until you are logged back in.
- **Help.** This option gives you access to a sub-list of multiple user Help options:
  - **Context-Sensitive Help.** Select this to launch a context-sensitive help file pertaining to the current BUILDER screen.
  - **Table of Contents** for the online Help documentation. To reach the Contents, first select **Index** in the dropdown list. This will bring you to a Welcome page. In the navigation pane at the left you can choose between (1) **Contents**, (2) the **Index**, and (3) a **Glossary**.
  - **Index.** Selecting this option will bring you to a Welcome page. In the navigation pane at the left you can choose between (1) **Contents**, (2) the **Index**, and (3) a **Glossary**.
  - **Glossary.** To reach the Glossary, first select **Index** in the dropdown list. This will bring you to a Welcome page. In the navigation pane at the left you can choose between (1) **Contents**, (2) the **Index**, and (3) the **Glossary**.
  - **Contact Help.** This option will open an Outlook window for submitting a ticket to BUILDER support. Alternatively, it will enable some other form of access as determined by your specific BUILDER support representative.
  - **About BUILDER.** Select this to open a popup window showing version information pertaining to your BUILDER software. To close the popup window, select the **OK** button in the popup.

## Main Menu

The Main Menu has the following options:

- **Work Configuration.** Clicking **Work Configuration** will give you a dropdown list providing you with the work configuration options for Standards, Policies, Policy Sequences, Prioritization Schemes, and for Funding. In each of these areas, the **Return** button, located above the navigation pane, will return you to the Main Menu page.
- **Work Plan.** Clicking **Work Plan** brings you to the table of details about each work plan item. For more information, see *Add a Work Item* in the Work Planning section of the documentation. From the work plan, the **Return** but-

ton (located above the navigation pane) will return you to the Main Menu page.

- **Scenarios.** Clicking **Scenarios** allows you to create or manage a Scenario (under the "Management" option) or perform Scenario Analysis/Visualization. In each of these areas, the **Return** button, located upper left, will return you to the Main Menu page.

**Note:** Microsoft Silverlight 5 is required for Scenario Management to operate.

- **Reports.** Clicking **Reports** brings up a pop-up box listing report formats to choose from. The **Close** button (in the upper left corner of the pop-up box) will return you to the Main Menu page. You can learn more about reports from the topics showing how to select a report, generate a report, and export a report.
- **Tools.** Clicking **Tools** will allow you to import data from BuilderRED to BUILDER or to import an image archive; perform **Administration** (Application Settings, Security, and Manual Condition Rollup); or access a **Library** (Cost Books, Inflation Books, Service Life Books, or Component Importance Indexes). In each of these areas, the **Return** button, near the upper left corner of the screen, will return you to the Main Menu page.

## Toolbar

The options displayed on the toolbar will vary, depending on the currently active level (Organization, Site, Complex, etc.).

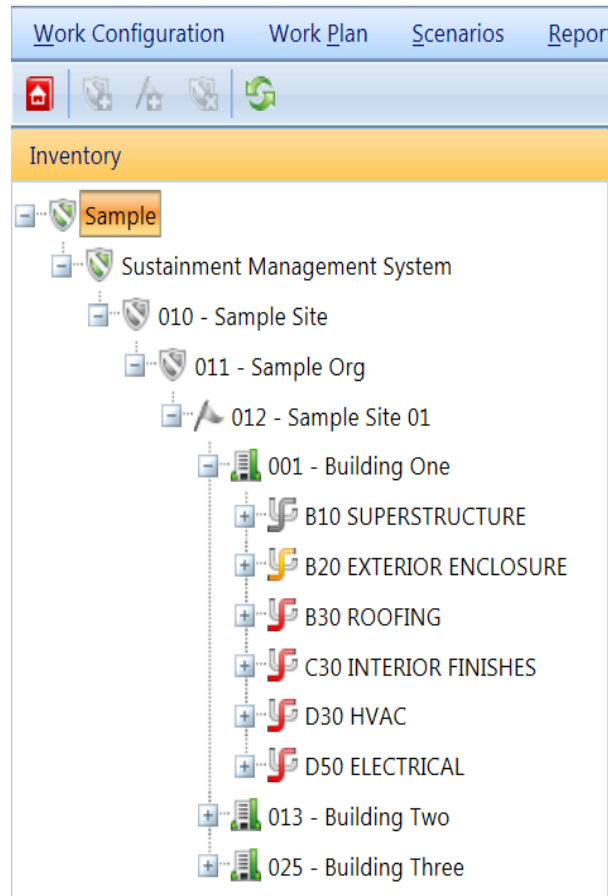
## Navigation Ribbons

In the left viewing pane, which is the navigation pane, the navigation ribbons allow you to quickly select between the following navigation trees:

- **Inventory.** The Inventory tree is the default view in the navigation pane. If either the Condition or the Functionality ribbon is highlighted instead of Inventory, then activating the Inventory ribbon will replace that tree with the Inventory tree. Navigating the Inventory tree and using it to select tasks to perform is described in the next section, [Navigation Tree](#).
- **Condition.** Activating the Condition ribbon will show the condition assessment tree in the navigation pane. Navigating the Condition tree and using it to select tasks to perform is described in the next section, [Navigation Tree](#).
- **Functionality.** Activating the Functionality ribbon will show the functionality assessment tree in the navigation pane. Navigating the Functionality tree and using it to select tasks to perform is described in the next section, [Navigation Tree](#).

## Navigation Tree

The Navigation Tree, in the left-hand viewing area, allows you to select the different levels of the tree and to view data related to that level in the content area. Shown below is an example of the inventory tree.



Here, the tree can be expanded by activating the "+" next to an inventory level or collapsed by activating the "-" next to an inventory level. To select a particular inventory level, left or right-click it. The information pertaining to that inventory level will be displayed in the content area.

After an inventory level is selected in the tree, right-clicking it with the mouse will cause a sub-menu to drop-down providing you with task options for the selected level. Which options appear depends on whether you are in the Inventory, Condition, or Functionality tree.

**Note:** The example illustration shown above is for the inventory tree. The condition assessment and functionality assessment trees are navigated in the same manner, but the items that appear at lower levels of the tree will differ. For example, in the Functionality tree, the only

level below Building is functional area (where one or more of these have been created in connection with a Building).

## Content Area

The content area displays specific information pertaining to the current item selected in the navigation tree. Shown below is an example of what would appear in the content area if a Component-Section was selected in the inventory navigation tree. If you wish to view information pertaining to a different item, navigate the tree to that item and select it by clicking on it.

Save Comment Reports 012 - Sample Site 01 001 - Building One

Building No: 001

Building Name: Building One

General Info

Additional Info

Assess. History

Work Item History

Systems at a Glance

Attachments (0)

Building Use: 891024 - BUILDING HOUSING MISCELLANEOUS UTILITY PLANT

Building Type:

Current Status: Active

Construction Type: Permanent

Area: 4,300 SF

Year Constructed: 1985

Number of Floors: 1

ISR Rating:

Replacement Cost: \$758,860

Check box to override automated updates and manually enter replacement cost: ☐

Mission Dependency Index

MDI:

Check box to override automated updates and manually enter MDI: ☐

Condition

Metric	Value
BCI	42
BFI	100
BPI	100
FCI	100

Status

☐ Historic

☐ Child-Occupied Facility

Functionality

Issue	Rating
Location	100
Cultural Resources	No
Building Size and Configuration	100
Structural Adequacy	100
Access	100












# Recognizing Common BUILDER Icons













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Listed below are the common command, toolbar, and menu buttons you will encounter when using BUILDER, along with their definitions. It's a good idea to become familiar with these icons before using BUILDER.

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## Inventory Icons

-  - ADD ORGANIZATION: Click to add a new Organization to the inventory.
-  - DELETE ORGANIZATION: Click to delete a selected Organization from the navigation tree.
-  - ORGANIZATION: Click this icon on the navigation tree to access data about a particular Organization. The icon color (Gray, Green, Yellow, Red) reflects the condition of the Organization.
-  - ADD SITE: Click to add a new Site under an Organization in the inventory.
-  - DELETE SITE: Click to delete a selected Site from the navigation tree.
-  - SITE: Click this icon on the navigation tree to access data about a particular Site. The icon color (Gray, Green, Yellow, Red) reflects the condition of the Site.
-  - ADD COMPLEX: Click to add a Complex to a Site.
-  - DELETE COMPLEX: Click to delete a selected Complex from the navigation tree.
-  - COMPLEX: Click this icon on the navigation tree to access data about a particular Complex. The icon color (Gray, Green, Yellow, Red) reflects the condition of the complex.
-  - ADD BUILDING: Click to add a new Building to a Site.
-  - DELETE BUILDING: Click to delete a selected Building from a Site.












-  - BUILDING: Click this icon on the navigation tree to access data about a particular Building. The icon color (Gray, Green, Yellow, Red) reflects the condition of the Building.
-  - ADD SYSTEM: Click to add a System to a Building.
-  - DELETE SYSTEM: Click to delete a selected System.
-  - SYSTEM: Designates a System.
-  - ADD COMPONENT: Click to add a Component to a System.
-  - DELETE COMPONENT: Click to delete a selected Component.
-  - COMPONENT: Designates a Component.
-  - ADD SECTION: Click to add a Section to a Component.
-  - DELETE SECTION: Click this button to delete a selected Section.
-  - SECTION: Designates a Section.
-  - ROLLUP: Click to manually roll up performance metrics for a selected Building, Complex, Site, or Organization.
-  - REFRESH: Click to refresh the inventory tree to reflect the latest data edits. Note that refreshing the tree collapses all expanded nodes.

## Task and Form Icons



### *General*

-  - SAVE: Click to permanently save and store changes to the data in the content area or popup window.
-  - COMMENT: Click to add a comment about a particular inventory item.
-  - NEW: Click to create a new record. The type of record to be created is determined by where the NEW button is located.
-  - EDIT: Click to edit a selected record. This icon is available in multiple contexts within BUILDER.






-  - IMAGES: Click to add, view, or delete an image. The scope of the image is determined by the hierarchical level at which you activate the button. When the Images button is visible in color on the toolbar, it can be activated to manage images of the item displayed in the window. For example, the item could be a Building or a Section.
-  - CHECK SPELLING: Click to check spelling in document.
-  - OK: This check mark designates acceptance in the comments box.
-  - DELETE: Click to delete a selected record. The record to be deleted is determined by where the DELETE button is located.
-  - LOCKED RECORD: This indicates that the selected record is locked. When it is locked, the record cannot be edited. This may be the case either because the record is checked out or the user does not have permission.
-  - UNLOCKED RECORD: This indicates that the selected record is unlocked. See also LOCKED RECORD.
-  - CANCEL: Click to cancel the defined operation.
-  - PROCEED: Click to proceed with the defined operation.
-  - CLOSE/RETURN: Click to close a particular popup window or form.
-  - HELP: Click to access context specific help within a particular window or form.
-  - CALENDAR: Click to select a date from a calendar to populate a date type field.





## **Reports**

-  - REPORTS: Click to select and view standard reports. The types and scope of the reports are determined by where the REPORTS button is located. A REPORTS button in the window toolbar is used for reports on the item displayed in the window.
-  - EXPORT REPORT: Click to export the report being viewed.




## ***Import/Export***

-  - IMPORT: Click to import your data.
-  - EXPORT: Click to export your data.
-  - EXPORT TO BRED: Click to export your data to a BUILDER Rapid Entry Data (BRED) file.




## ***Inventory Methods***



-  - COPY INVENTORY TO ANOTHER BUILDING: Click to copy inventory to another building.
-  - RAPID INVENTORY ESTIMATION: Click to get a Rapid Inventory Estimation.
-  - BUILDING TEMPLATE: Click to bring up a list of available building templates.
-  - CREATE INVENTORY USING TEMPLATE: Click to create an inventory using a template.

## ***Work Configuration***

-  - EVALUATE: Click to assign weighting points to the various values of a measure. (A measure is a type of objective.)
-  - OBJECTIVE: Objective or sub-objective in a prioritization schema. Click to access the Objective data.
-  - MEASUREMENT: Measurement belonging to an objective or sub-objective in a prioritization schema. Click to evaluate a measurement.

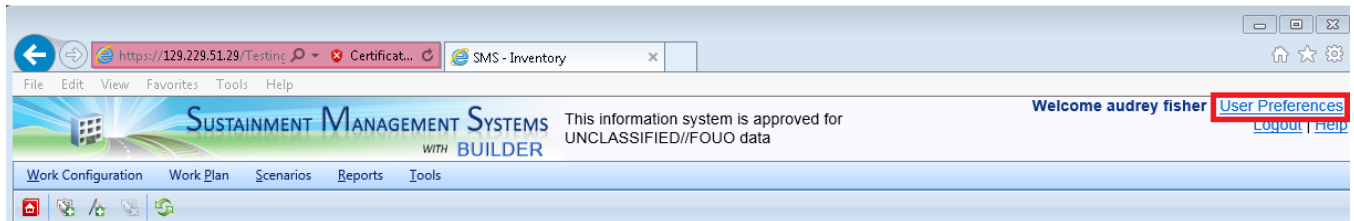
## ***Work Plan***

-  - GENERATE ITEMS: Click to generate analysis results. This may be for inspection schedules, work items, or Scenarios.
-  - PRIORITIZE: Click to prioritize work items according to the active prioritization scheme. The prioritization scheme created in the **Work Configuration > Work Prioritization** area will prioritize and rank your work plan in a quick, objective, repeatable, and representative method with the touch of this button.
-  - RANKINGS: Click to view the rankings of the work items in your work plan.

-  - FUND ITEMS: Click to apply funding to work items according to their priority.
-  - EXPORT: Click to export work items to an Excel spreadsheet.

# User Preferences

The User preferences window allows you to change your default view, to change the unit of measure, to clear all the locks on the database records, or to change the password to your database. To edit the user preferences, select [User Preferences](#) from the top right hand corner of the home page.



The User Preferences window will appear:

A screenshot of the 'Options' window, which is a modal dialog box with a title bar containing 'Options' and standard window controls. The window is divided into several sections. At the top, there are three buttons: 'Close', 'Save', and 'Help'. The 'Unit of Measure' section has two radio buttons: 'English' (selected) and 'Metric'. The 'System Locks' section has a 'Clear Locks' button. The 'Default View' section has a dropdown menu currently set to 'Building Inventory'. The 'Email Address' section contains two text input fields labeled 'Current: Email:' and 'Confirm:', with a 'Change Email' button below them. The 'Security' section has two text input fields labeled 'Password:' and 'Confirm:', with a 'Change Password' button below them. Below the password fields, there is a message: 'The password cannot match any of the previous 10 password(s). The password must be at least 8 character(s) long. The password can be no longer than 16 character(s) long.' At the bottom of the window, there is a 'Register CAC' button and the instruction 'Insert CAC before clicking!'.

From this window, the following data can be edited:

- **Unit of Measure.** Select the unit of measure, **English** or **Metric**, to be used for the database.
- **System Locks.** Click the **Clear Locks** button to clear all the user locks and allow for all data to be edited.
- **Default View.** Expand the dropdown list and select between Building Inventory, Condition Assessment, and Functionality Assessment as your default view when using BUILDER.
- **Email Address.** Your current email address will appear above the two text boxes. To change your email address,
  1. Enter the new address in the first text box.
  2. Enter the new email address again in the second text box to confirm it.
  3. Click the **Change Email** button.
- **Security.** If you wish to change your login password,
  1. Enter the new password.
  2. Retype it to confirm.
  3. Click the **Change Password** button.
- In the Security section, you also have the option to register a smartcard (CAC) to log in with.

### ***How To Save Your New User Preferences***

After editing any of the data, activate the **Save** button to save your changes to the database.

### ***How To Cancel User Preference Changes***

- A. If you have not clicked the **Save** button, you can simply activate the **Close** button (upper left corner of the User Preferences options window) to exit the User Preferences options window without saving your changes.
- B. If you already clicked **Save**, then you will need to change the options back to the way you want them, and activate **Save**.

### ***How to Exit the User Preferences Options Window***

**IMPORTANT:** Make sure to save any changes you want before exiting. With the exception of changing your email or password, changes to the User Preferences options are *not* saved until you activate the **Save** button.

Click the **Close** button to close the User Preferences window.

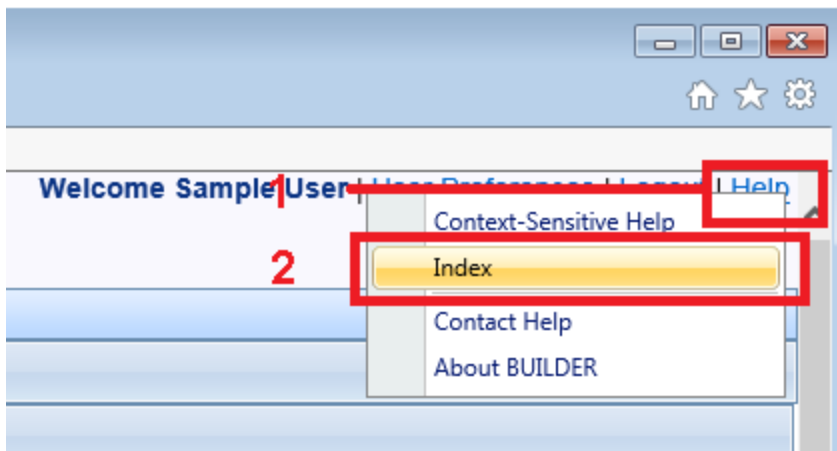
# How to Use Online Help

Online Help can be accessed by selecting [Help](#), then

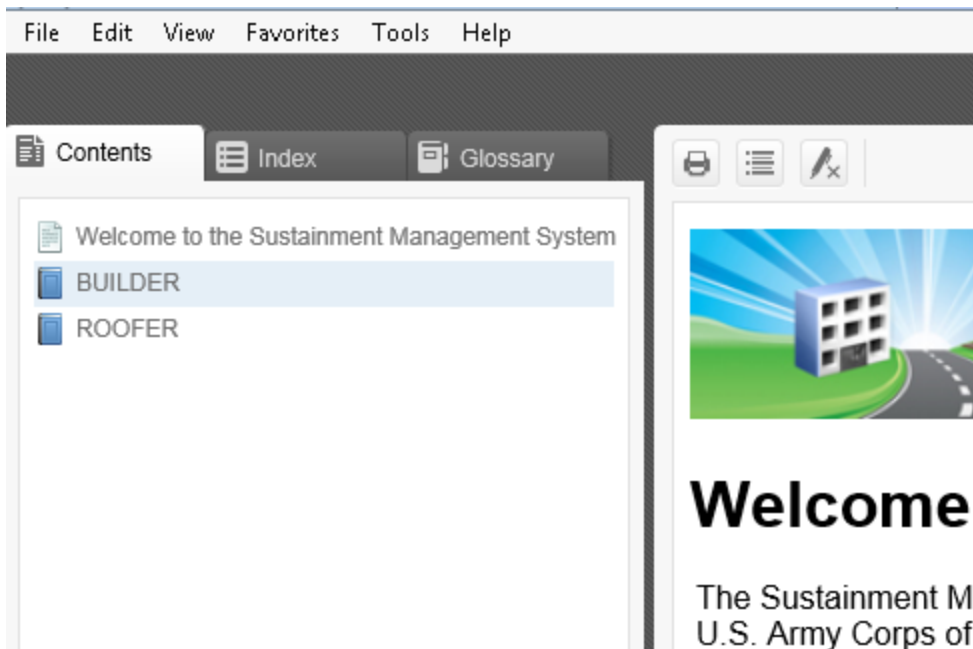
## Online Help Table of Contents

To open the online help Table of Contents,

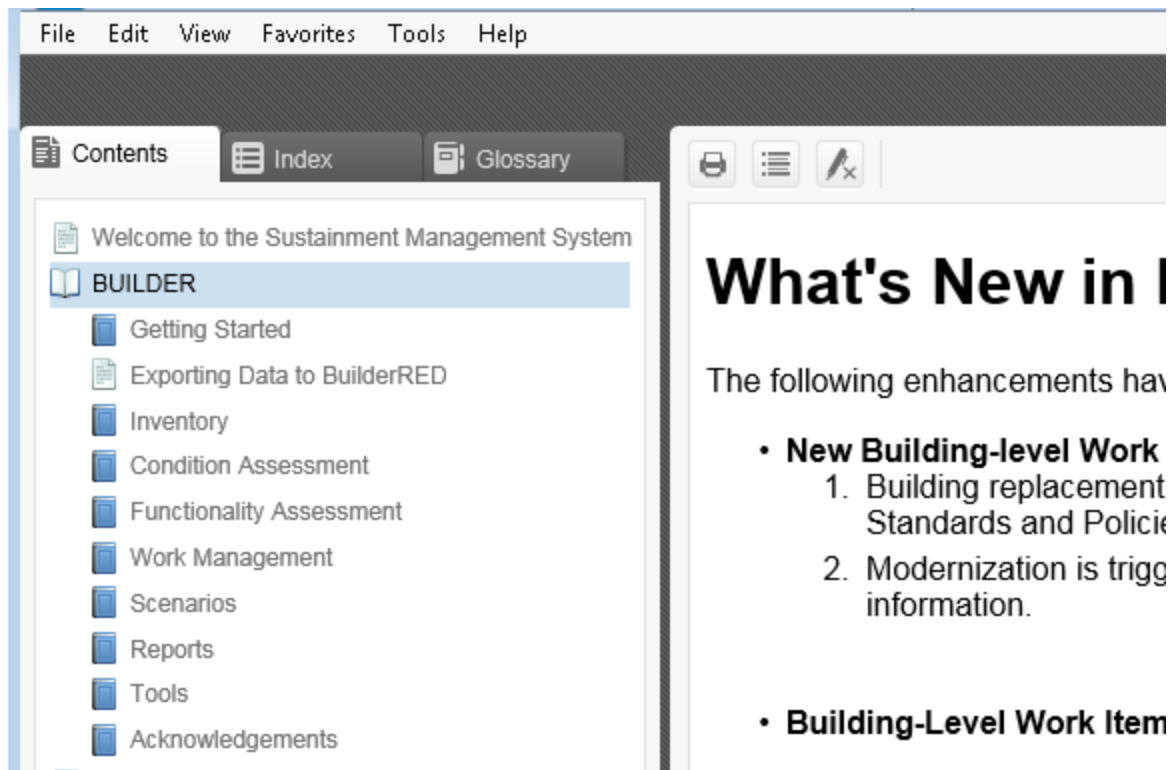
1. Select [Help](#) in the User Links area at the upper right of the main screen.
2. Choose **Index** from the dropdown list.



This will open a Welcome page that has at the left, in the navigation pane, tabs for (1) the online Help **Contents**, (2) the **Index**, and (3) the **Glossary**.



To expand the Table of Contents, activate any closed blue book icon to expand that area of the Table of Contents. By contrast, activating a page icon will open that topic.



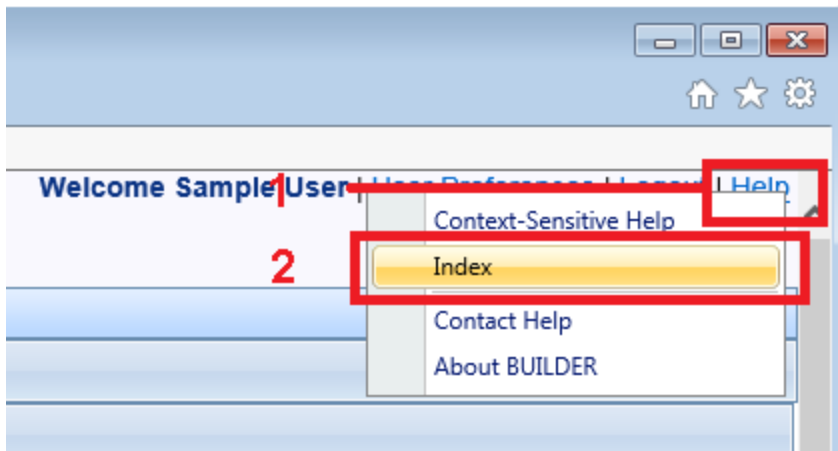
## Context-Sensitive Help

Selecting **Context-Sensitive Help** from the [Help](#) dropdown list should take you directly to a documentation topic that is helpful for a likely task that users might want to perform at the current location. Additionally, the Help Table of Contents will be displayed at the left.

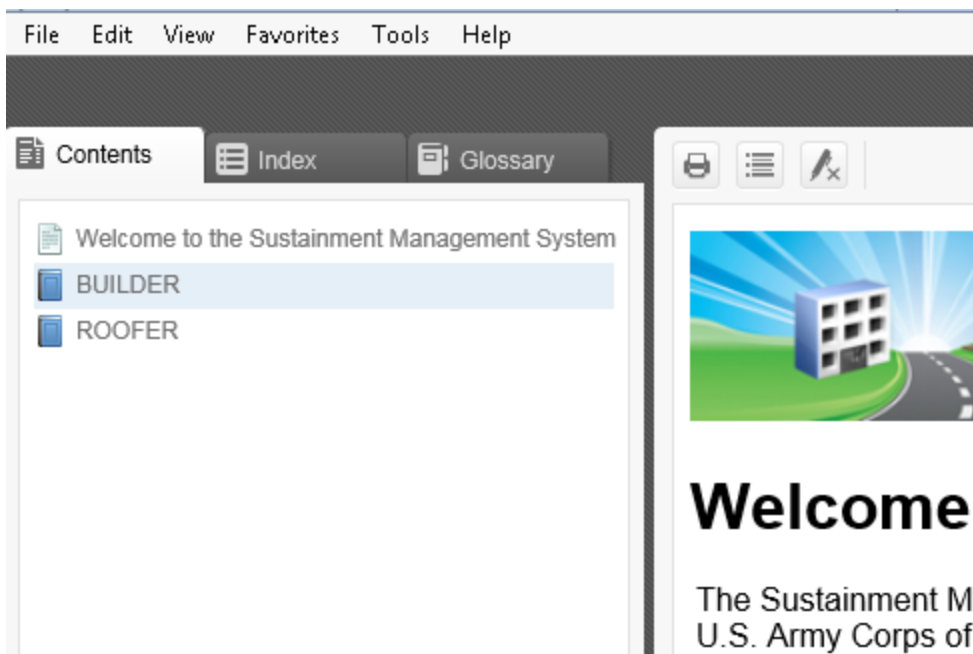
## Index

To open the Index,

1. Select [Help](#) in the User Links area at the upper right of the main screen.
2. Choose **Index** from the dropdown list.

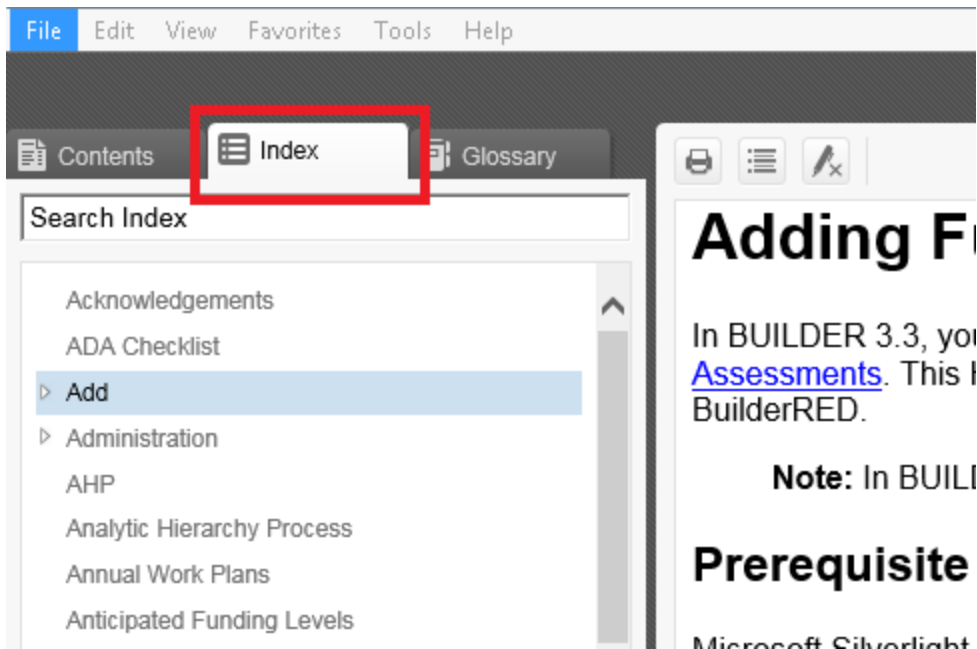


This will open a Welcome page that has at the left, in the navigation pane, tabs for (1) the online Help **Contents**, (2) the **Index**, and (3) the **Glossary**.



Select the **Index** tab to open the Index.

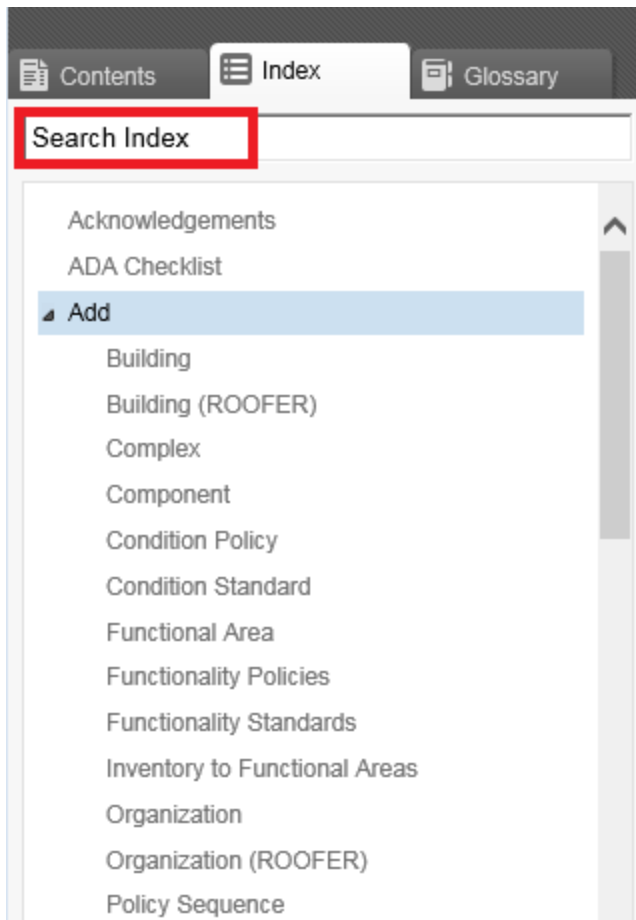




From here you can look for an item in one of two ways:

- a. Click the Search box (where the text "Search Index" is initially entered) and type in the item you are looking for.
- b. Alternatively, browse the alphabetical list of index entries.

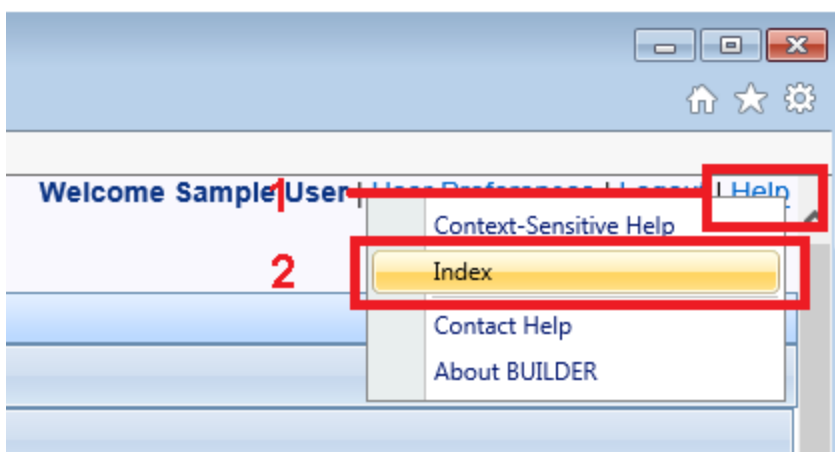
Selecting a term in the index entries that has a white arrow to the left of it will show sub-entries for that term. (The white arrow will turn black when the sub-entries are shown.)



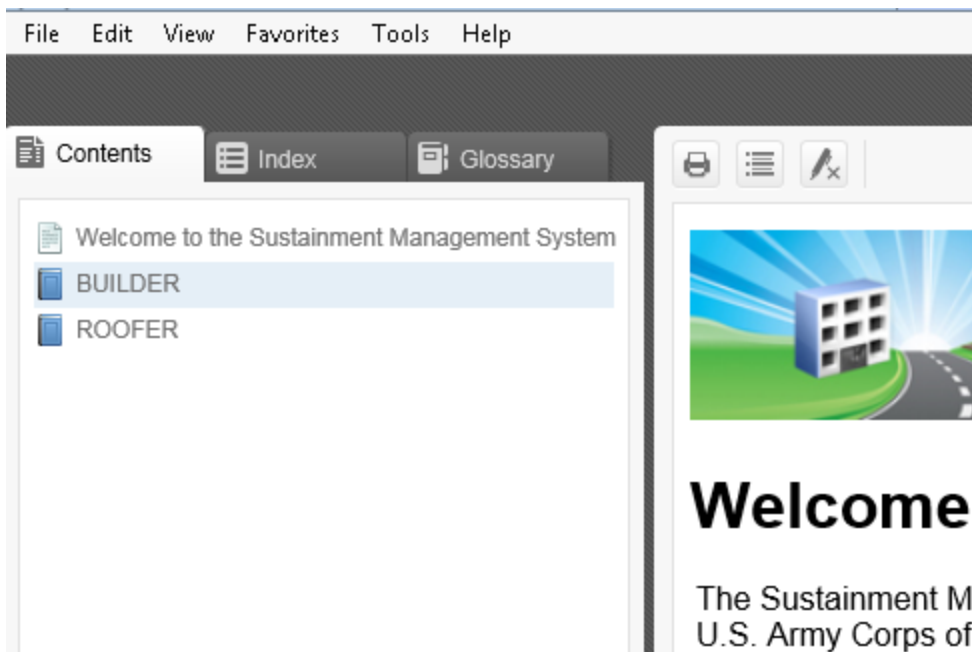
## Glossary

To open the Glossary,

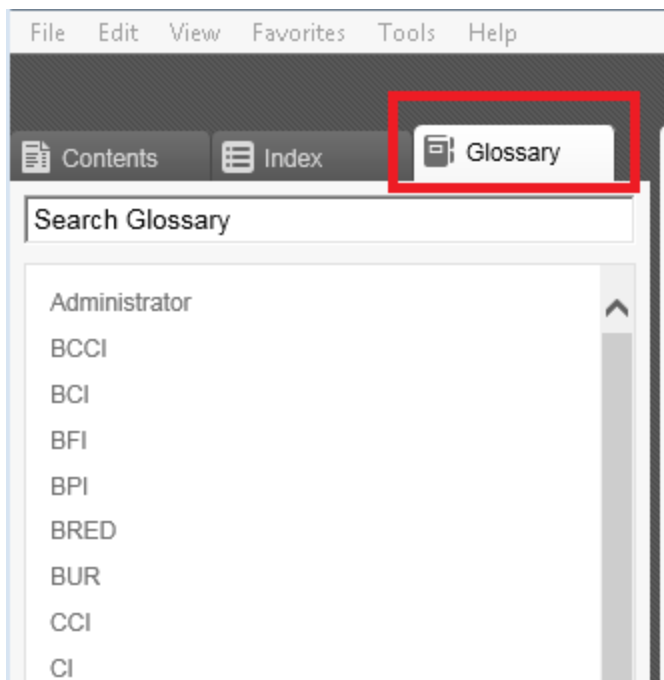
1. Select [Help](#) in the User Links area at the upper right of the main screen.
2. Choose **Index** from the dropdown list.



This will open a Welcome page that has at the left, in the navigation pane, tabs for (1) the online Help **Contents**, (2) the **Index**, and (3) the **Glossary**.



To use the Glossary, select the **Glossary** tab, then enter or select the acronym or term you wish to see defined.



## Contact the Help Desk

To send a help request to your SMS support representative,

1. Select [Help](#) in the User Links area at the upper right of the main screen.
2. Choose **Contact Help** from the dropdown list.

Generally a help request is sent through Microsoft Outlook, but the procedure may vary depending on the support procedures your SMS provider follows. If you don't have Microsoft Outlook active on your device or computer, a wizard will help you activate it.

## See Version Information

To see the version number for your product, and for other "About" information, select the last option in the list of [Help](#) options. A popup window with the information will appear.

**Note:** The About popup window also provides a link to the SMS Support website.

To close the popup, activate the **OK** button.

# Remote Entry of Inventory and Inspection Data Using BuilderRED

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This topic

- Introduces the BUILDER Remote Entry Database (BuilderRED) tool.
  - Provides the download location.
  - Explains briefly what the tool can do.
  - Links to topics giving detailed instructions for exporting to and importing from BuilderRED.
- 

## What is BuilderRED?

The BUILDER™ Remote Entry Database (BuilderRED, or BRED) is an optional tool designed for use with BUILDER. It allows you to (1) capture and collect inventory and inspection data using a Windows tablet or laptop as you walk through a Building, and then (2) later, load that data into the BUILDER database.

You can download BRED from the **PRODUCTS > BUILDER > Downloads** section of the [SMS Community User's Group Website](#), under the heading **BUILDER Remote Entry Database (BRED)**.

## Collecting Inventory Data

When performing inventory, Buildings and their subparts can be created in BuilderRED, then imported into BUILDER. If the Buildings have already been created in BUILDER, they can be exported to BuilderRED, where inventory details can be entered on-site, then imported back into BUILDER.

## Performing Inspections

Inspectors can use BuilderRED to enter condition assessment data in BUILDER format and then import it into BUILDER. Standard functionality assessments are also built into BuilderRED. These assessments can be initiated and filled in in the field, then imported into BUILDER.

## Export and Import

The following topics cover how to [Export Data to BuilderRED](#) and [Import Data from BuilderRED](#).

## Export Data to BuilderRED

You can choose to export database items to BuilderRED (aka BRED) either (a) with or (b) without the images that are linked to these items.

**WARNING:** In BUILDER releases prior to 3.3.10, non-image files such as PDFs may prevent *all* images from exporting to BuilderRED or importing into BUILDER from BuilderRED. This [known issue of image export from BUILDER](#) is due to file size precautions: overlarge files can cause the export to fail.

Below are some recommendations for best practices to follow to help ensure successful and less time-consuming export of files to BuilderRED:

**Best Practice Recommendation #1:** Be sure to observe the 30-day [time limit on editing inspections](#) and re-importing them into BUILDER, or the time limit in effect for your implementation of BUILDER if it differs from 30 days.

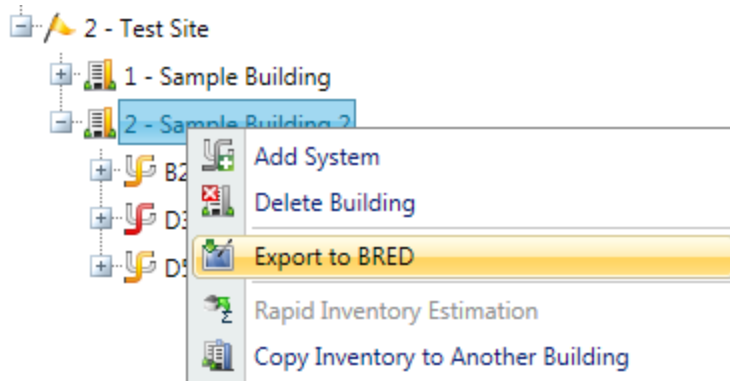
**Best Practice Recommendation #2:** Some Facilities (Buildings) within your Site can already contain several hundred photos. If you know beforehand that you will not need to view or edit these existing photos in BuilderRED, the best practice is to just download the BRED file without images.

**Best Practice Recommendation #3:** 800 pixels is the recommended maximum width and maximum height for images to be used in BuilderRED.

The next section describes how to export both database information and images to BuilderRED. For instructions on exporting database information without images, see [Export Data to BuilderRED](#).

### ***Export Database Information and Images to BuilderRED***

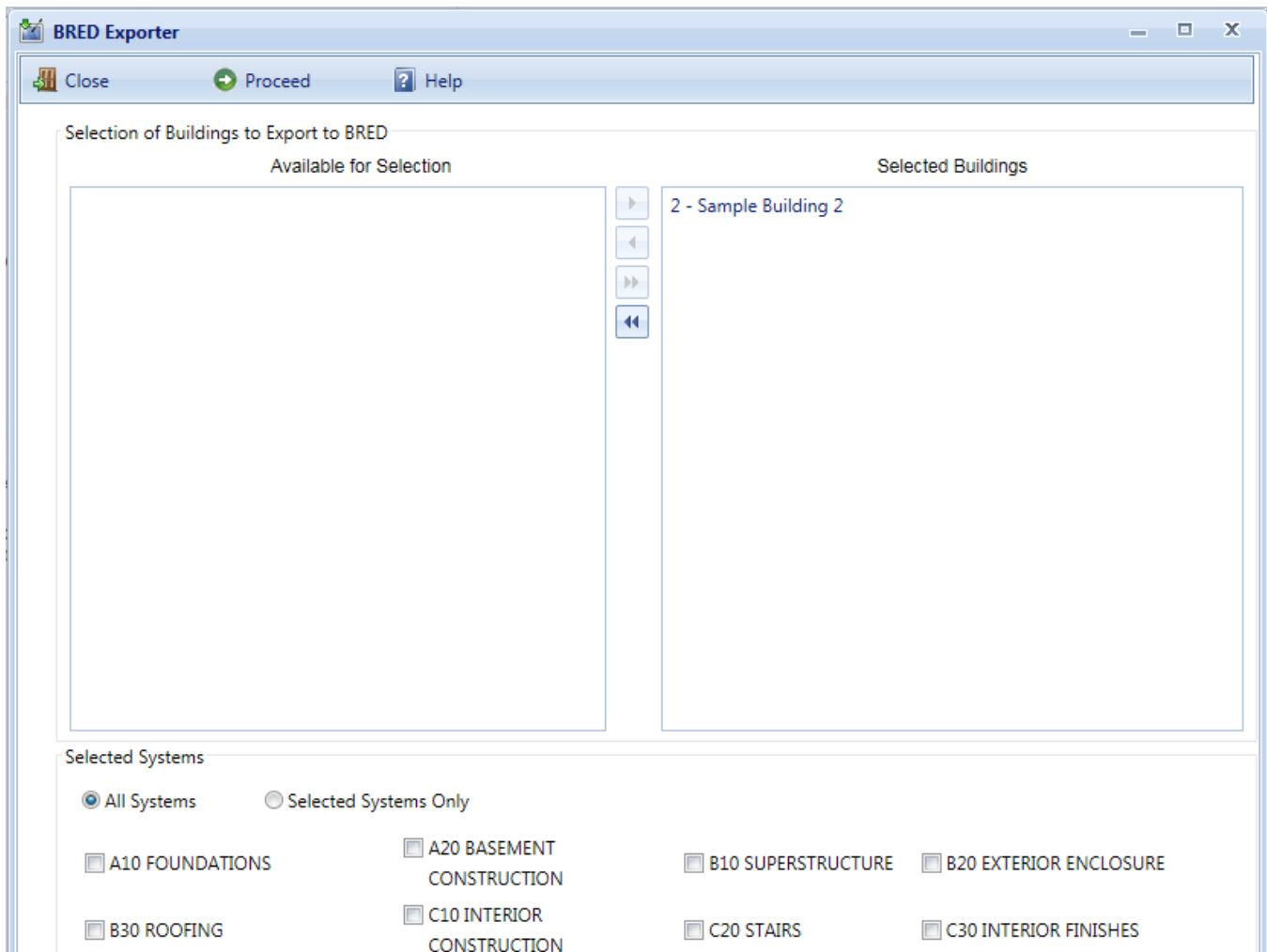
1. In the BUILDER navigation tree, right-click the lowest level node (Site, Complex, or Building) that contains the items you wish to export.
2. Select the “Export to BRED” option:



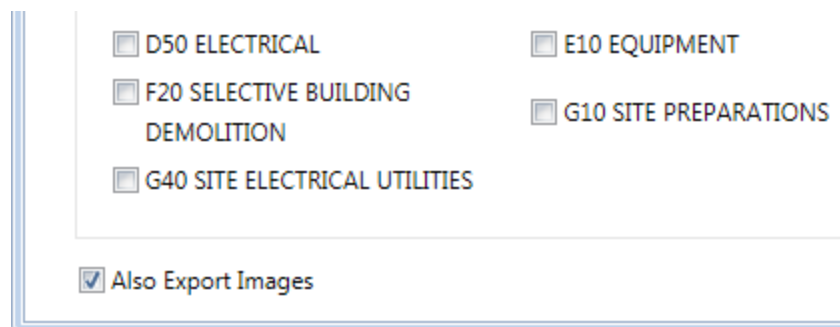
3. In the BRED Exporter window, highlight the Building(s) you want to export, using the arrows to move Buildings in or out of the Selected Buildings list. Click here to see different ways you can select Buildings.<sup>1</sup>

1

All Buildings:	Activate the double arrow.
One Building:	<ol style="list-style-type: none"> <li>1. Select the Building.</li> <li>2. Activate the single arrow.</li> </ol>
Multiple Buildings, contiguous in the list:	<ol style="list-style-type: none"> <li>1. Select the first Building.</li> <li>2. Press and hold <b>SHIFT</b>, then select the last Building.</li> <li>3. Release <b>SHIFT</b>.</li> <li>4. Activate the single arrow.</li> </ol>
Multiple Buildings, not contiguous in the list:	<ol style="list-style-type: none"> <li>1. Select the first Building.</li> <li>2. Press and hold <b>CTRL</b>, then select each subsequent Building desired.</li> <li>3. Release <b>CTRL</b>.</li> <li>4. Activate the single arrow.</li> </ol>
To deselect a highlighted Building from the list:	<ol style="list-style-type: none"> <li>a. Press and hold <b>CTRL</b>, then select the Building.</li> <li>b. Alternatively, you can wait until the Building has been moved to the right-hand column under "Selected Buildings", then select the Building, and activate the single arrow pointing to the left. This will move the Building back into the "Available for Selection" column.</li> </ol>

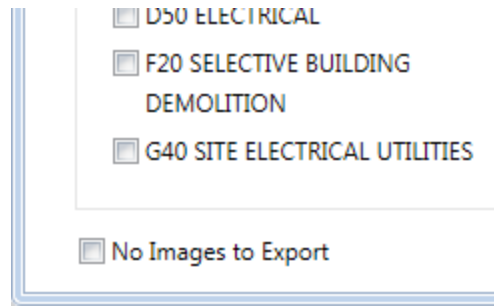


4. Once the desired Buildings are in the Selected Buildings column, do one of the following in the lower section of the BRED Exporter window:
  - a. Choose “All Systems” (radio button; this is the default), or
  - b. Select specific systems (using radio button and checkboxes).
5. (Optional) In order to download images with the BRED file, you must select “Also Export Images” at the bottom of BRED Exporter Window, as shown below:

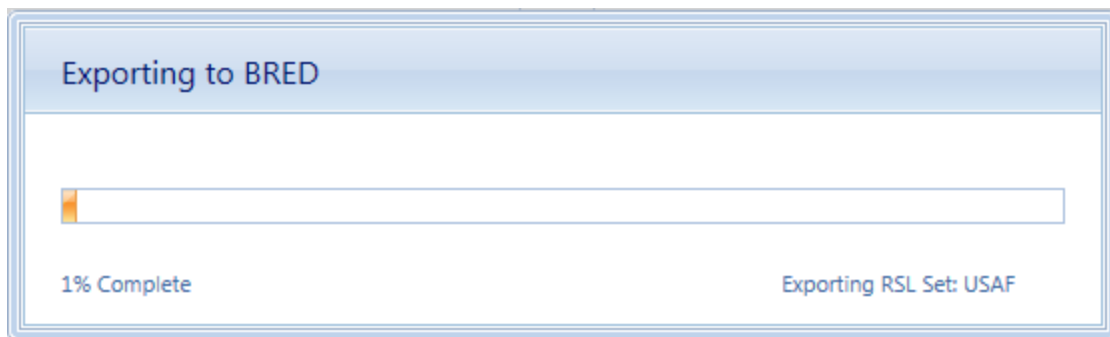




**Note:** If instead of “Also Export Images” you see “No Images to Export” it means that the Building(s) you have selected to export do(es) not currently have any images:



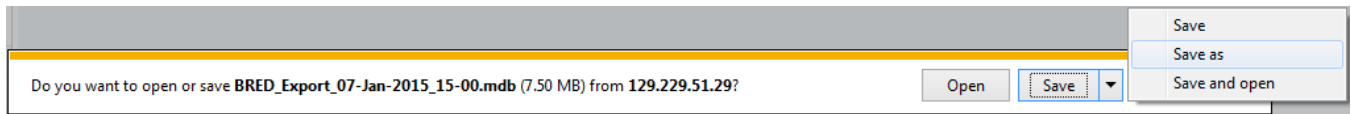
6. To start the export, click the **Proceed** button near the top of the window. A progress bar will display as the BRED database file is downloaded:



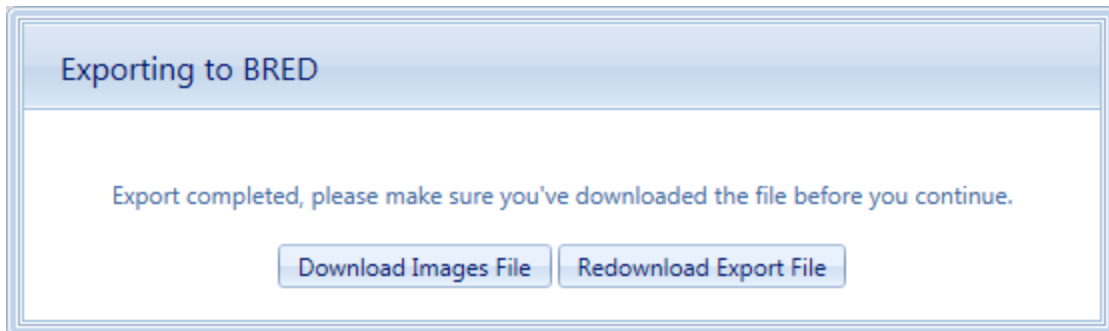
By clicking the **Proceed** button, the following tasks are accomplished:

- A Microsoft Access database is created, which will be identified by the path and name you choose after the export has completed. The database will contain the inventory and condition assessment data for the selected systems in the buildings in the Selected Buildings list. This database is accessible to a computer with the BRED software, where inventory and/or condition assessment data can be recorded. Once complete, this file can be imported into BUILDER to add the new data to the database.
- The building inventory records of the selected systems that were exported are locked so changes cannot be made to them in BUILDER while being edited with BRED. The records are unlocked when the BRED data is imported back into the database.

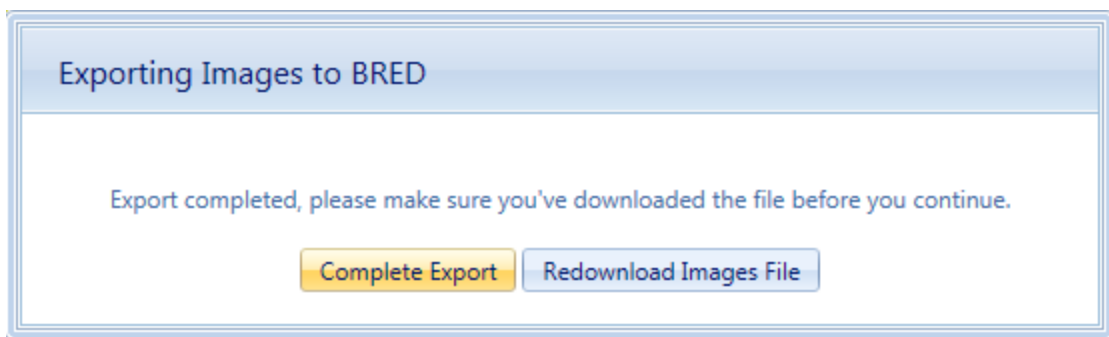
7. After the database file has successfully downloaded, select the “Save As” option to choose a file location for it:



8. If the BRED file did not download correctly, select “Redownload Export File.” Otherwise, select “Download Images File” to start the second download (the download of the images file into BRED):



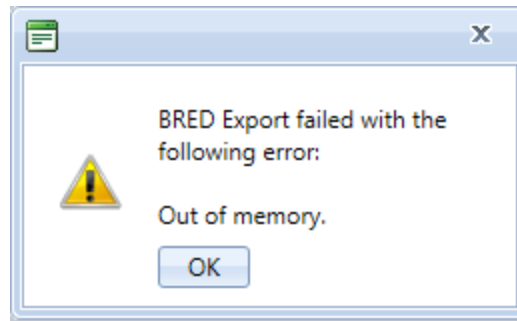
9. After the second download completes, click “Save As” and choose the **same file location** as your BRED database file.
10. Lastly, select “Complete Export” to finish the export process:



### Time Limit on Editing Inspections

Once the export is complete, you can use BuilderRED to collect Inventory data or perform Inspections. Note that it is a common standard to have a 30-day time limit from the date of an Inspection to edit the Inspection or the comments in it. This time limit applies both in BuilderRED and after the data has been imported back into BUILDER.

## Known Issue with Image Export from Builder



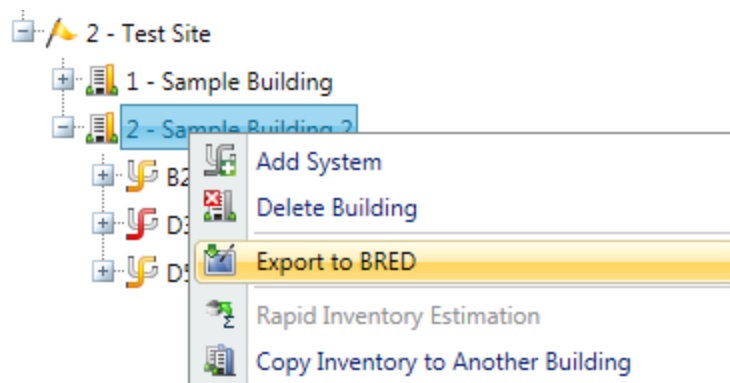
This issue applies to versions of BUILDER 3.3.9 and older.

If the BRED Export error message shown above displays after you try to download the image file from BUILDER, that indicates that somewhere in the exported files there is an attachment (such as a PDF, an Excel file, etc.) that is not an image. The workaround is to export the Building(s) without images.

### ***Export Database Information Alone to BuilderRED***

This section outlines the procedure to export data from BUILDER to BuilderRED without any of the associated image files.

1. In the BUILDER navigation tree, right-click the lowest level node (Site, Complex, or Building) that contains the items you wish to export.
2. Select the "Export to BRED" option:



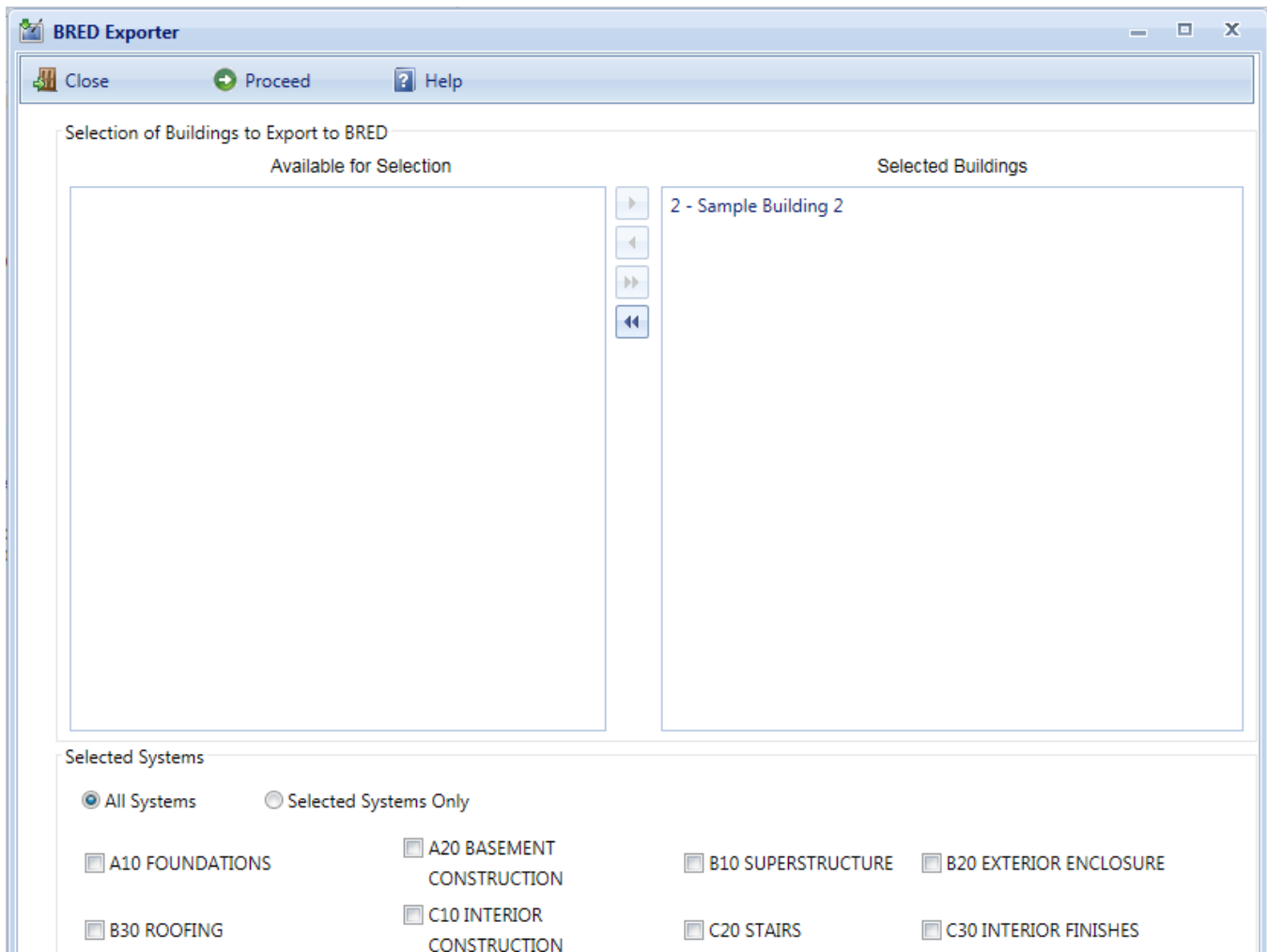
3. In the BRED Exporter window, highlight the Building(s) you want to export, using the arrows to move Buildings in or out of the Selected Buildings list.

Click here to see different ways you can select Buildings.<sup>1</sup>

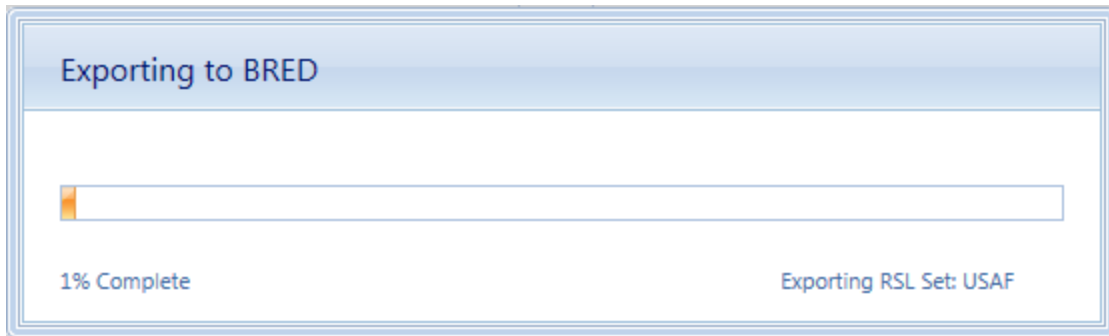
---

1

All Buildings:	Activate the double arrow.
One Building:	<ol style="list-style-type: none"><li>1. Select the Building.</li><li>2. Activate the single arrow.</li></ol>
Multiple Buildings, contiguous in the list:	<ol style="list-style-type: none"><li>1. Select the first Building.</li><li>2. Press and hold <b>SHIFT</b>, then select the last Building.</li><li>3. Release <b>SHIFT</b>.</li><li>4. Activate the single arrow.</li></ol>
Multiple Buildings, not contiguous in the list:	<ol style="list-style-type: none"><li>1. Select the first Building.</li><li>2. Press and hold <b>CTRL</b>, then select each subsequent Building desired.</li><li>3. Release <b>CTRL</b>.</li><li>4. Activate the single arrow.</li></ol>
To deselect a high- lighted Building from the list:	<ol style="list-style-type: none"><li>a. Press and hold <b>CTRL</b>, then select the Building.</li><li>b. Alternatively, you can wait until the Building has been moved to the right-hand column under "Selected Buildings", then select the Building, and activate the single arrow pointing to the left. This will move the Building back into the "Available for Selection" column.</li></ol>

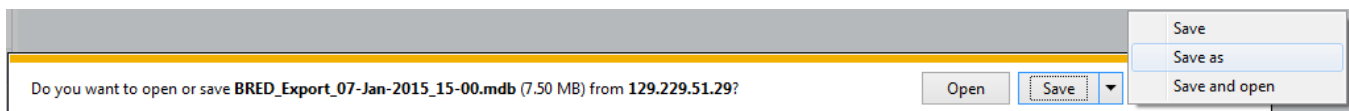


4. Once the desired Buildings are in the Selected Buildings column, do one of the following in the lower section of the BRED Exporter window:
  - a. Choose “All Systems” (radio button; this is the default), or
  - b. Select specific systems (using radio button and checkboxes).
5. In order to download the BRED file without downloading the associated images, make sure that the “Also Export Images” checkbox at the bottom of the BRED Exporter Window is *not* checked.
6. To start the export, click the **Proceed** button near the top of the window. A *progress bar will display as the BRED database file is downloaded:*

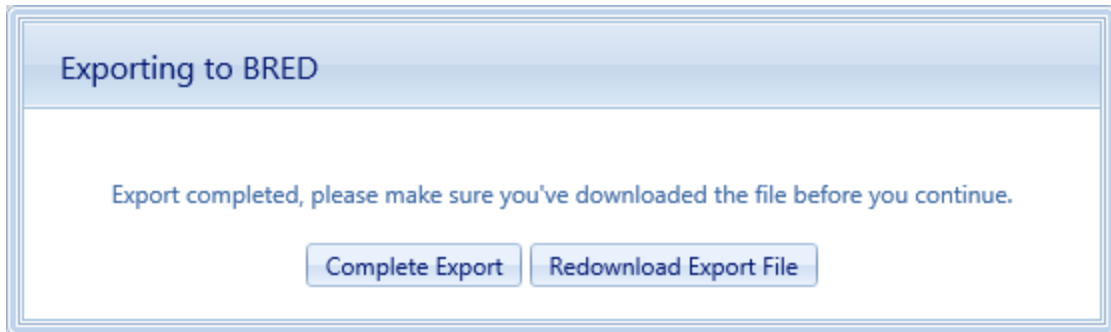


By clicking the **Proceed** button, the following tasks area accomplished:

- A Microsoft Access database is created, which will be identified by the path and name you choose after the export has completed. The database will contain the inventory and condition assessment data for the selected systems in the buildings in the Selected Buildings list. This database is accessible to a computer with the BRED software, where inventory and/or condition assessment data can be recorded. Once complete, this file can be imported into BUILDER to add the new data is added to the database.
  - The building inventory records of the selected systems that were exported are locked so changes cannot be made to them in BUILDER while being edited with BRED. The records are unlocked when the BRED data is imported back into the database.
7. After the database file has successfully downloaded, select the “Save As” option to choose a file location for it:



8. If the BRED file did not download correctly, select “Redownload Export File.” Otherwise, select “Complete Export” to finish the export process:



### **Time Limit on Editing Inspections**

Once the export is complete, you can use BuilderRED to collect Inventory data or perform Inspections. Note that it is a common standard to have a 30-day time limit from the date of an Inspection to edit the Inspection or the comments in it. This time limit applies both in BuilderRED and after the data has been imported back into BUILDER.

## **Import Data from BuilderRED to BUILDER**

### ***Overview of the Import Process***

In order to load data collected using BRED into the BUILDER database, you will need to import the database from BRED into BUILDER. It is important to note that the database file containing your new data must be loaded so that the BUILDER program has access to its path and can complete the importing process.

If you added new images during Inventory or Inspections, then importing your information back into BUILDER will be done in two steps: (1) importing the BRED database into BUILDER, and (2) importing the image archive file.

These two steps may be followed by an optional third step: (3) performing a manual condition rollup. This step is optional because the system performs automated rollups nightly.

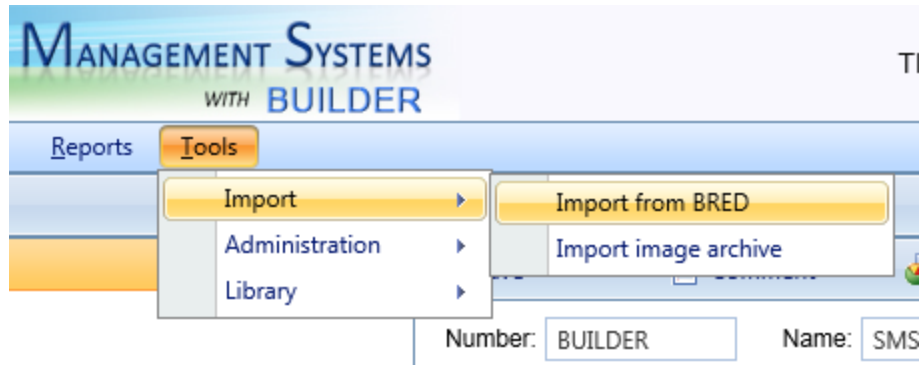
If you have no images to import, then you can go straight from importing the BRED database information into BUILDER to [performing a rollup](#).

### ***How To Import Database Information***

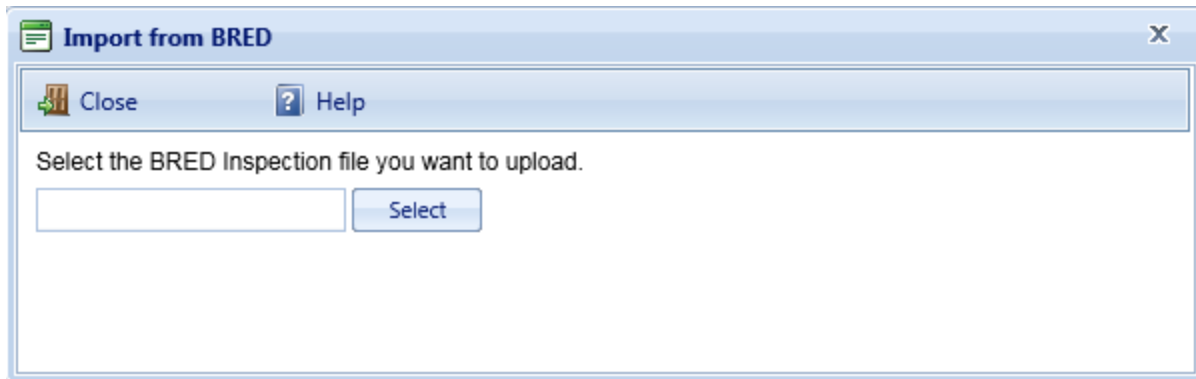
After you have finished adding, editing, and deleting Inventory and/or Inspections data, the updated database must be imported back into BUILDER, to assess the condition of the installation and to plan maintenance and repair.

To import database information into BUILDER from BuilderRED:

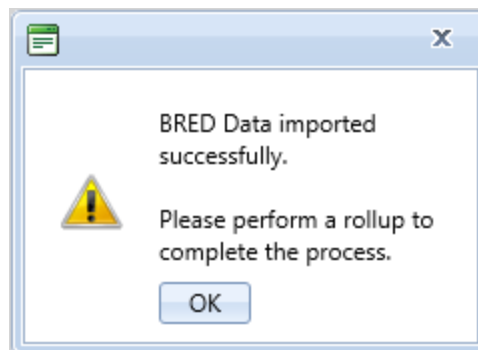
1. Save all changes to the database in BuilderRED.
2. Open BUILDER.
3. Select **Tools > Import > Import from BRED** starting at the main menu.



*The "Import from BRED" popup window will appear:*



4. Locate the database you wish to import, by either (a) entering the full path and file name in the text box or (b) clicking the **Select** button, navigating to the database file, and selecting it.
5. All changes to the database will be imported into BUILDER and you will see a popup window with the following message:





6. If you don't have any images to be imported into BUILDER, activate **OK**. You are finished with the import, and can [perform a rollup](#) if you wish.
7. **IMPORTANT:** If you have images to import from BuilderRED, it is recommended that you NOT click **OK** to perform a manual condition rollup at this point. Instead, close the popup box by activating the "x", then follow the instructions in the next section:

### ***How To Import Images***

The process of importing images makes use of an image archive file that has the extension .bredpackage. By default, the image archive file has the same name as the .mdb BRED data file containing the imported data, except for the extension.

**WARNING:** It is very important that the name of the image archive file match the name of the .mdb data file. If you rename one of these files, be sure to rename the other one identically (except for the extension). Images will not be found by the BRED (.mdb) file if the .bredpackage file name doesn't match.

To import images into BUILDER from BuilderRED:

1. If you have new images that need to be imported from BRED, this procedure needs to be done *after* importing the database information (see section above).
2. Select **Tools > Import > Import image archive** starting at the main menu. *(The "Import image archive" popup window will appear.)*
3. Locate the image ("bredpackage") file corresponding to the database you just imported, by either (a) entering the full path and file name in the text box or (b) clicking **Select**, navigating to the database file, and selecting it. The image archive will be in the same location as the database file, and similarly named except that the extension is .bredpackage instead of .mdb.
4. When you see the message "Upload successful," close the "Import image archive" window. Follow with a manual condition rollup as warranted (see next section).



## ***Should I Perform a Rollup after Import?***

The items you import are unlocked as soon as the import is complete, whether you do a manual condition rollup or not. However, the Condition and Functionality Indexes will not yet have been updated.

If you only performed inventory with BuilderRED, you don't need to do a rollup unless:

- The cost books or other reference books have changed.
- You wish to see updated PRVs or RSLs immediately instead of waiting on BUILDER's automated rollup (performed overnight).

If you entered inspection data in BuilderRED, performing a rollup after the import is completed allows you to see the changes in the following indexes right away:

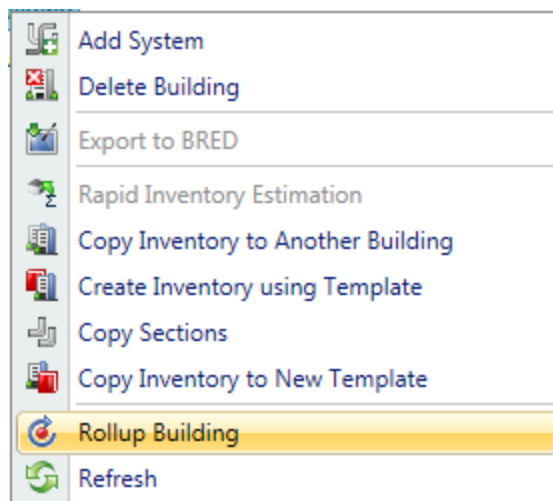
- Condition Indexes
- Functionality Indexes
- Performance Indexes


If you do not perform a rollup at this time, the SMS will do the rollup automatically overnight, and the updated index figures will be available the next day.

## **How To Perform a Manual Rollup after Importing from BuilderRED**

To perform a manual rollup, do one of the following:

- a. Right-click on the affected Building (or Complex, if multiple Buildings were exported from the same Complex). Then select **Rollup Building** or **Rollup Complex**.



- b. Alternatively, select the Building (or Complex, if multiple Buildings were exported from the same Complex) and click the Rollup icon  on the toolbar.

You have the option to roll up the entire Site in similar fashion, but be aware that a Site rollup can take an extremely long time. It would typically be less time consuming to sequentially select the applicable Complexes and Buildings for manual rollup.

# About BUILDER Permissions Roles

**WARNING:** The privileges assigned to each user Role tend to change somewhat over time. Therefore, although the capabilities listed below under each Role will be mostly correct, they might not be 100% accurate at this time.

Each user is assigned to one or more Roles. Roles are allowed varying degrees of program access rights in the software system. The possible Roles include:

## Administrator

A BUILDER Administrator can perform the following functions relating to system administration and user management:

- Administer users
- Assign users to Roles
- Change application settings
- Design the specifications to be met by user passwords
- Clear record locks

To reduce the chance of data loss, the following functions can only be performed by an Administrator:

- Delete an Organization
- Delete a Site
- Delete a Complex

In order to perform these deletions, the Administrator must also have sufficient non-Administrator privileges in order to access the Organization, Site, or Complex to be deleted.

**Note:** If the Organization, Site, or Complex is empty of contents, it may also be deleted by a Master Planner with specific permission for the relevant location in inventory.

## Inventorior

An Inventorior can perform the following functions:

- Add a Building
- Add and delete inventory items at all levels below Building
- Input and edit inventory information at the Inventory screens (all levels)
- Generate reports

**Note:** An Inventorior has no access to either the Condition tree or Functionality tree.

**Note:** An inventorior can not check out or import a BRED file; this needs to be done by an Inspection Supervisor or above.

## Inspector

In addition to all the rights of an Inventorior, an Inspector can perform the following functions:

- Add an inspection
- Input and edit inspection information at the Condition Assessment screen
- Add a functional area and add inventory to it
- Edit a functional area
- Delete a functional area
- Add, edit, or delete a functional assessment

**Note:** An inspector can not check out or import a BRED file; this needs to be done by an Inspection Supervisor or above.

## Inspection Supervisor

In addition to all the rights of an Inspector, an Inspection Supervisor can perform the following functions:

- Import and export data to and from BuilderRED
- Add inspection schedules
- Perform Rapid Inspection

**Note:** An Inspection Supervisor does not have permission to delete Buildings/facilities.

## Work Planner

A Work Planner can perform a large number of functions directly related to work planning, plus some additional privileges. In addition to all the rights of an Inspection Supervisor, a Work Planner can perform the following functions:

- Delete a Building
- Enter or change RSL (Remaining Service Life)
- Delete an inspection (condition assessment)

Work planning functions that can be done by Work Planner or above are as follows:

- Add and edit work plans
- Add and edit a Scenario
- Copy a Scenario to a work plan
- Add and edit standards
- Add and edit policies
- Add and edit policy sequences
- Add and edit prioritization schemes
- Add and edit cost books
- Add and edit funding

## **Master Planner**

In addition to all the rights of a Work Planner, a Master Planner can perform the following functions:

- Generate multi-year work plan Scenarios
- Edit any and all data saved by other users of the program
- Add an Organization
- Add a Site
- Add a Complex
- Delete standards
- Delete policies
- Delete policy sequences
- Delete prioritization schemes
- Delete cost books
- Delete service life books

Master Planner is the highest level of non-Administrator user privileges.

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## **Project Management**

Lance Marrano

## **Engineering**

James Allen, PE

Louis "Buddy" Bartels, PE, PMP

Michael Grussing, PE, PhD

Bil G. Hawkins, PE, PMP

Brenda Mehnert

Samuel Vance, PE, PMP, LEED AP

Matthew Walters, PMP

Clint Wilson, PE

## **Software Development**

Kyle Blocher

Eric Brady

KiSung Chon

Brody Finney

Parthasarathy Iyengar

Joseph Karbarz

Sujay Kodamala

Paul Paisley Mahern

Eric Nielsen

Ponnu Pannappa

Austin Powell

Robert Sievers

Bryson Taylor

Daniel Wilson

## **Technical Writing**

Audrey Fisher

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### **Engineering**

D. R. Uzarski, PhD, PE

L A. Burley, PhD

S L. Hunter

J R. Martin

Jason Schneider

### **Software Development**

Carol Subick (BUILDER Version 2.0 and 2.1)

Advanced Information Service (BUILDER Version 1.0)

Intelligent Information Technologies, Inc. (BUILDER Version 1.1 and 2.0)

John Almy (BUILDER Version 3.0)

James Johnson (BUILDER Version 3.2)

John Jurewicz (BUILDER RED Version 1.0)



Dan McCue (BUILDER Version 3.2)  
Kirk McGraw (BUILDER Version 1.0)  
Jeff Morton (BUILDER Version 1.0)  
Russ Northrup (BUILDER Version 3.1)  
Matthew Richards (BUILDER Version 3.0)

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John Borland  
Makesha Bradford  
Robert Butler  
Nicholas Byrnes  
Ryan Culton  
Laura Dean  
Trey Edwards  
James Gerrald  
Eric Gould  
Richard Humphries  
John Jurewicz  
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Na'ilah Kituku  
Joann Lavrich  
Eric Lawson  
Heather Lawson  
Yoon Lim  
Jason Martin  
Doug Milburn  
Carrie Olson  
Paul Pawlenko  
Teresa Pin  
Ronnie Pride  
Elizabeth Rutherford  
Michael Smejkal  
Ryan Smith  
Michelle Svetlic  
Verge Temme

Christina Vogel  
Phil Weightman  
Chuck Wittleder  
Jeff Zahorak

# Glossary

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**Administrator**

A user with Administrator Role can administer users, assign users to Roles, and change ROOFER configuration settings.

**Area Cost Factor**

A multiplier that adjusts national average labor/material/equipment costs to local costs. For example, in a remote area with high shipping costs and a tight labor market, the Area Cost Factor might be 1.3. The Area Cost Factor is generally a number between 0.8 and 1.2 for continental U.S. locations, but it can be even greater than 2.0 in high-cost geographic locations.

**BCCI**

Building Component Condition Index - a condition rating for the target Building Component. For each Component, the BCCI is computed by taking the average of its Sections' CIs, weighted by replacement cost

**BCI**

Building Condition Index - a condition rating for the overall Building. For each Building, the BCI is computed by taking the average of its Systems' CIs, weighted by replacement cost.

**BFI**

Building Functionality Index - computed from the results of a functionality assessment.

**BPI**

Building Performance Index - a measure of a Building's overall performance, derived from a weighted combination of the BCI and BFI. where the lower of the two values is given two-thirds of the weight and the higher of the two values is given one-third of the weight. If no functional assessment has been performed, the BFI is assigned a value of 100.

**BRED**

BUILDER Remote Entry Database (BuilderRED)

**BUR**

Built-up Roofing

**CCI**

Coating Condition Index

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**CI**

Condition Index

**CII**

Component Importance Index

**CM**

Corrective Maintenance

**CMC**

Component material category

**Complex CI**

Complex Condition Index - a condition rating for the target Complex. The Complex CI is computed by taking the average of the BCIs of each Building in the Complex, weighted by replacement cost.

**CSCCI**

Component Section Coating Condition Index

**CSCI**

Component-Section Condition Index - a condition rating for the target Component-Section. For both condition assessment types, distress survey and direct rating, the CSCI is computed by first calculating a deduct value from the assessment data and subtracting the deduct value from 100. The deduct value computation differs for each condition assessment method.

**Equipment Make**

The series, collection or line that the equipment is included in, if applicable. For example, a Trane gas furnace might be designated as S9V2, XC95, or XV95.

**ERDC-CERL**

U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory

**ESC**

Emergency Service Calls

**FAFI**

Functional Area Functionality Index

**FCA**

Facility Condition Assessment

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**FCI**

ROOFER: Flashing Condition Index BUILDER: The Facility Condition Index is a relationship between the cost of deferred M&R work and the Plant Replacement Value (PRV). BUILDER uses the following formula for FCI that produces a value between 0 and 100, where a higher value indicates better condition:  $FCI = [ 1 - ( \$\text{repair needs} / \$\text{PRV} ) ] \times 100$ .

IMPORTANT: Some organizations define FCI differently, as simply  $\$ \text{repair needs} / \$\text{PRV}$ , which should yield a result less than or equal to 1.0 where policy dictates that repair costs for an asset must not exceed the asset's replacement value.

**FI**

Functionality Index

**HPSB**

High Performance and Sustainable Building

**ICI**

Insulation Condition Index

**Icon Color**

Icon color designates the condition of an SMS element, or whether it has yet been inspected at all. If the icon is gray, no inspection has been performed. Red, amber, and green icons indicate a red-, amber-, or green-level average condition of all sublevels below the designated icon, assuming that a rollup has been performed.

**Inspection Supervisor**

A user with Inspection Supervisor Role has all the rights of an Inspector, and can also create roof inspection schedules

**Inspector**

Person who performs inspections to be input into BUILDER or ROOFER. As a permissions Role, Inspectors can input and edit inventory information in Inventory mode, and can input and edit inspection information from the Condition Assessment screen.

**Inventorior**

A user with Inventorior Role can add and edit records below the Building level.

**KBI**

Knowledge-Based Inspection

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**M&R**

Maintenance and Rehabilitation

**Master Planner**

A user with Master Planner Role has all the rights of a Work Planners, and can also generate multi-year work plan scenarios, and edit any and all data saved by other users of the program. Master Planner is the highest level of user privileges.

**MCI**

Membrane Condition Index

**MDI**

Mission Dependency Index - measures the relative importance of a Building

**N/A**

Not Applicable

**PI**

Performance Index. See also: BPI. The Performance Index is a weighted combination of the CI and the FI values, with the lower of the two being given two-thirds of the weight and the higher of the two values being given one-third of the weight.

**PM**

Preventive Maintenance

**PMI**

Preventative Maintenance Inspection

**PRV**

Plant Replacement Value. For an inventory item above the Building level, this number will be the aggregate of the PRV of all Buildings included in that item.

**RCI**

Roof Condition Index

**RML**

Remaining Maintenance Life

**RPIE**

Real property installed equipment

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**RSL**

Remaining Service Life

**SCCI**

System Component Condition Index - a condition rating for the System Component<

**SCI**

System Condition Index - a condition rating for a Building System. For each System, the SCI is computed by taking the average of its Components' CIs, weighted by replacement cost.

**Site CI**

Site Condition Index - a condition rating for the target Site. The Site CI is computed by taking the average of the BCIs of each Building at the Site, weighted by replacement cost.

**SMS**

Sustainment Management System

**SOW**

Statement of Work

**SP**

Single Ply

**SR**

Shingle Roofing

**SRM**

Sustainment, Restoration, & Modernization

**STIG**

Security Technical Implementation Guide (DoD)

**SUCI**

Sample Unit Condition Index

**UM**

Unit of Measure. Examples: Each; English; Metric.

**Work Planner**

A user with Work Planner Role has all the rights of an Inspection Supervisors, and can also create and edit work plans, standards, policies, prioritization schemes, and RSL and cost books.





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