BUILDER™ Getting Started Guide

Version 3.5.2

Disclaimers and Restrictions

Disclaimer



This program is furnished by the U.S. Army Corps of Engineers Engineering Research and Development Center - Construction Engineering Research Laboratory (ERDC-CERL) and is accepted and used by the recipient with the express understanding that the United States Government, the U.S. Army Corps of Engineers, and ERDC-CERL make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the information and data contained in this program or furnished in connection therewith, and the United States shall be under no liability whatsoever to any person by reason of any use made thereof. This program is a property of ERDC-CERL. The recipient agrees not to assert any proprietary rights therein or to represent this program to anyone as other than a government property; furthermore, this program can only be copied for legitimate backup purposes by the user.

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.

Copyright Warning

The computer program described in this documentation is protected by copyright law and international treaties. Unauthorized reproduction or distribution of the program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.

Protected by the following U.S. Patents: 7,058.544; 7,734,488; 7,769,568.

Documentation Copyright ©2019 US Army Corps of Engineers (USACE). All rights reserved.

Table of Contents

Welcome to BUILDER™			
About the Sustainment Management System	4		
BUILDER Account Setup	5		
Understanding the BUILDER™ Inventory Hierarchy	6		
Icon Colors	6		
Levels of Hierarchy	7		
How To Navigate BUILDER™ 3.5	9		
User Links	10		
Main Menu and Toolbar	11		
Navigation Pane	12		
Content Area	14		
User Preferences	15		
Recognizing Common BUILDER Icons	17		
Inventory Icons	17		
Task and Form Icons	18		
How to Use Online Help	22		
Online Help Table of Contents			
Context-Sensitive Help	24		
Index	24		
Glossary	26		
Contact the Help Desk			
See Version Information	28		
Remote Inspection and Inventory Entry Using BuilderRED	29		
What is BuilderRED?	29		
Collecting Inventory Data	29		
Performing Inspections			
Export Data to BuilderRED			
Import Data from BuilderRED to BUILDER	39		
About BUILDER Permissions Roles	44		

Index	55
Glossary	47
Master Planner	46
Work Planner	45
Inspection Supervisor	45
Inspector	45
Inventorior	44
Administrator	44

Welcome to BUILDER™

BUILDER, part of the Sustainment Management System, provides facility managers with the tools needed 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.

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

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 at https://www.sms.erdc.dren.mil.



About the Sustainment Management System

The Sustainment Management System (SMS) Version 3.5.2 was developed 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 Webbased 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.

BUILDER Account Setup

A BUILDER Administrator will set you up with a user account that has a particular level of user privileges. For details on the levels of user privilege, see <u>"About BUILDER Permissions Roles"</u> on page 44.

Once you have an account and are logged in, you can access User Preferences via a link at the upper right hand corner of the home screen to do any of the following:

- · change the unit of measure
- · clear all the locks on the database records
- change the default view in the navigation pane of BUILDER's main page
- change the email address associated with your account
- change the password to your account
- register a CAC for use to log into BUILDER

To do any of these things, refer to "User Preferences" on page 15.

Understanding the BUILDER™ Inventory Hierarchy

The hierarchy that has been designed and built out in a given BUILDER implementation is shown in the <u>navigation pane</u> 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)

A Site

Complex

Facility / Building

★ 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*, which can be downloaded from the SMS community user's group website at https://www.sms.erdc.dren.mil.

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 the "Working with Organizations" chapter in the *BUILDER™ Inventory Guide*.

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 the "Working with Sites" chapter in the *BUILDER™ Inventory Guide*.

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 the "Working with Complexes" chapter in the BUILDER™ Inventory Guide.

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 the "Working with Buildings" chapter in the BUILDER™ Inventory Guide.

Systems, Components, and Sections

In BUILDER, a Building is divided in to Systems, then further divided into Components, following the UNIFORMAT II system shown in the "BUILDER Systems and Components" section of the Inventory documentation. BUILDER Systems equate to Level 2 Group Elements, and BUILDER Components equate to Level 3 in the UNIFORMAT classification.

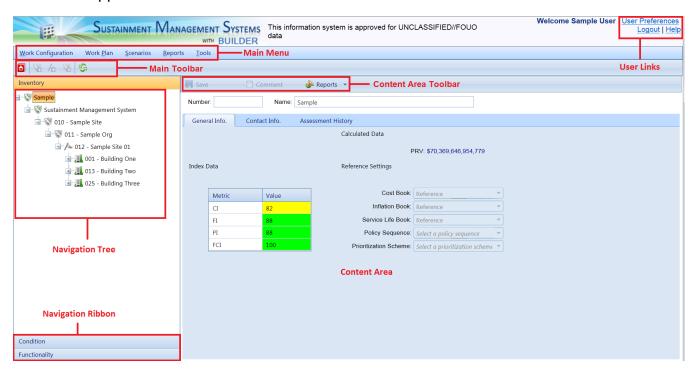
Components are then divided into Component-Sections, also called Sections. It is at the Section level that inspection information is recorded into BUILDER.

How To Navigate BUILDER™ 3.5

This topic

- Introduces the layout of the BUILDER home page.
- 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 BUILDER3.5, 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 and Toolbar
- Navigation Pane
- Content Area

User Links

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

- User Preferences. This option allows you to do any of the following:
 - change the unit of measure
 - clear all the locks on the database records
 - change the default view in the navigation pane of BUILDER's main page
 - change the email address associated with your account
 - change the password to your account password
 - register a CAC for use to log into BUILDER

Note: To do any of these things, refer to "User Preferences" on page 15.

- 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 user 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 and Toolbar

Main Menu

The main menu has the following options:

- Work Configuration. Activating Work Configuration will give you a drop-down 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. Activating 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 button (located above the navigation pane) will return you to the Main Menu page.
- Scenarios. Activating 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. Activating 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. Activating 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.

Main Toolbar

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

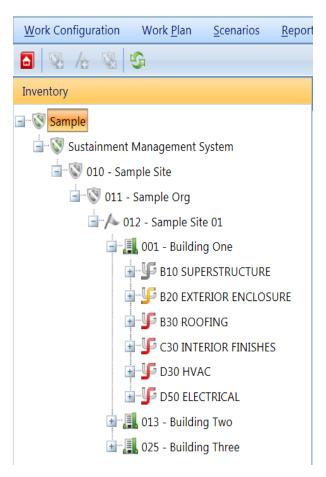
Navigation Pane

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



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 above 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.

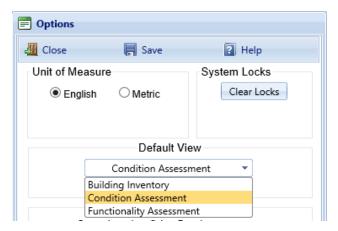
After an inventory level is selected in the tree, right-clicking it with the mouse will cause a sub-menu to drop-down providing you with task options for the selected level. Which options appear depends on whether you are in the inventory, condition, or functionality tree.

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).

Change Default Navigation View

The inventory tree is the default view in the navigation pane. To change your default view to the condition tree or functionality tree,

- Activate User Preferences in the User Links.
- 2. Activate the dropdown list in the "Default View" section of the user links "Options" popup.



3. Select the desired default view (single click is sufficient in IE).

Content Area

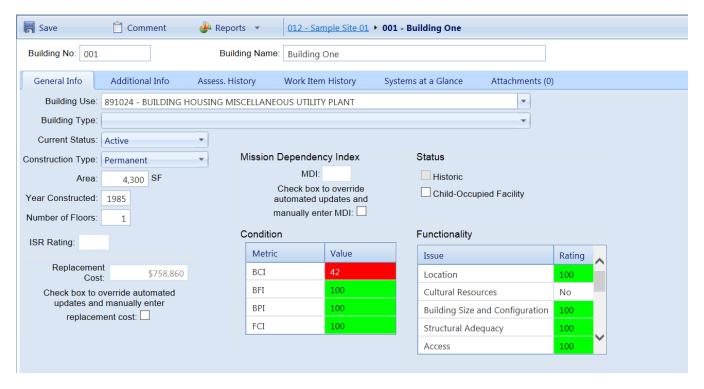
The content area displays specific information pertaining to the current item selected in the navigation tree.

Content Area Toolbar

The content area toolbar offers options that apply only to what is being displayed in the content area.

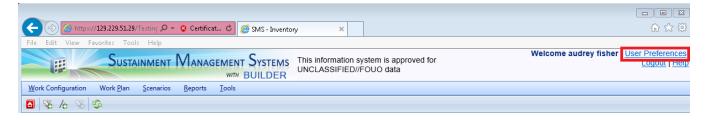
Sample Content Area View

Shown below is an example of what would appear in the content area if a Component-Section was selected in the inventory navigation tree.

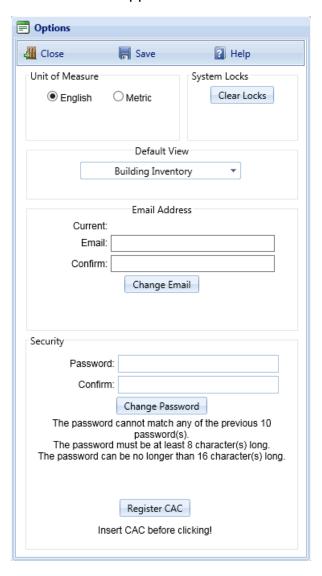


User Preferences

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, activate the <u>User</u> Preferences link at the top right hand corner of the home page.



The User Preferences window will appear:



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. Activate 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.
 - Activate the Change Email button.
- Security. If you wish to change your login password,
 - 1. Enter the new password.
 - 2. Retype it to confirm.
 - 3. Activate 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 activated 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 activated **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.

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

Recognizing Common BUILDER Icons

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.

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.
- S S S S 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.
- A DELETE SITE: Click to delete a selected Site from the navigation tree.
- A-A-A 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.
- a 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.
- 4 ADD SYSTEM: Click to add a System to a Building.
- JELETE SYSTEM: Click to delete a selected System.
- \$\mathbb{F}\$ SYSTEM: Designates a System.
- X ADD COMPONENT:. Click to add a Component to a System.
- \Re DELETE COMPONENT: Click to delete a selected Component.
- **X** COMPONENT: Designates a Component.
- U ADD SECTION: Click to add a Section to a Component.
- UP 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.
- G 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.
- Lack 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.
- \$\square\$ CHECK SPELLING: Click to check spelling in document.
- OK: This check mark designates acceptance in the comments box.
- X 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.
- I UNLOCKED RECORD: This indicates that the selected record is unlocked. See also LOCKED RECORD.
- **2** 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.
- II 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

- P-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.
- **1** EXPORT REPORT: Click to export the report being viewed.

Import/Export

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

Inventory Methods

- **Q** COPY INVENTORY TO ANOTHER BUILDING: Click to copy inventory to another building.
- ** RAPID INVENTORY ESTIMATION: Click to get a Rapid Inventory Estimation. *** support discontinued ***
- 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

- OBJECTIVE: Objective or sub-objective in a prioritization schema. Click to access the Objective data.
- MEASUREMENT: Measurement belonging to an objective or subobjective 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.
- III 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.

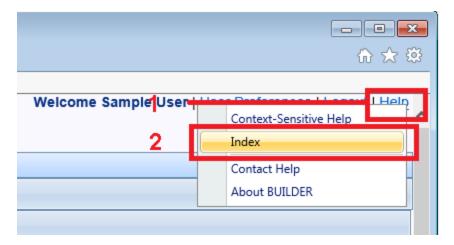
How to Use Online Help

Online Help Table of Contents

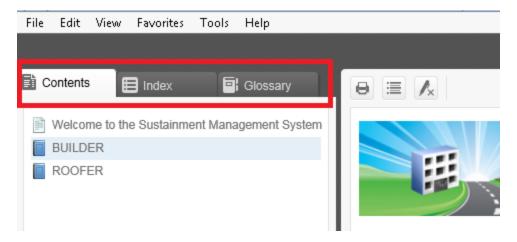
Open Table of Contents

To open the table of contents for the online help documentation,

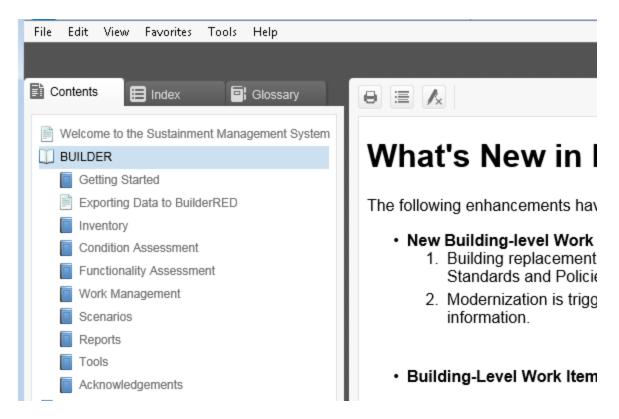
- 1. Select Help in the User Links area at the upper right of the main screen.
- 2. Choose Index from the dropdown list.



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**. The **Contents** tab is open by default.



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



Hide or Unhide Table of Contents

Hide

To hide the navigation pane containing the table of contents (or index or glossary), activate the arrow button halfway down the window, between the navigation and content panes:



The content pane will expand into the navigation pane space, and a right-pointing arrow button will appear halfway down the left edge of the window.

Unhide

To re-open the table of contents, activate the right-pointing arrow button.



Context-Sensitive Help

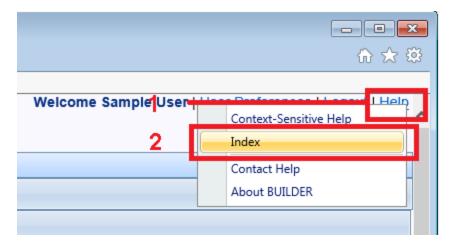
Selecting **Context-Sensitive Help** from the <u>Help</u> dropdown list options should take you directly to a documentation topic that is helpful for a likely task that users might want to perform at the current location. Additionally, the online help Contents will be displayed at the left.

Index

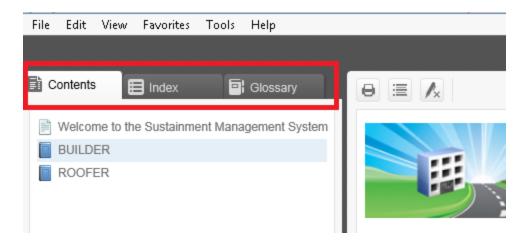
Open Online Help Index

To open the Index,

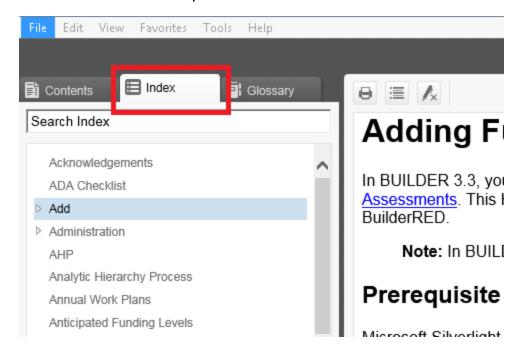
- 1. Select <u>Help</u> in the User Links area at the upper right of the main screen.
- 2. Choose Index from the dropdown list.



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**. The **Contents** tab is open by default.



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

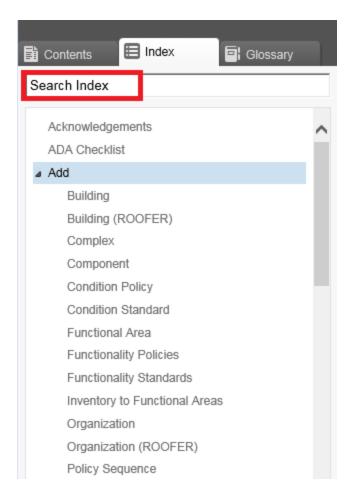


Search the Online Help Index

You can look for an item in the online help index in either 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 right-pointing arrow to the left of it will show sub-entries for that term. (The white arrow will turn black and tilt when the sub-entries are shown.)



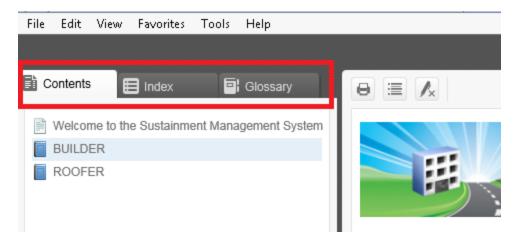
Glossary

To open the Glossary,

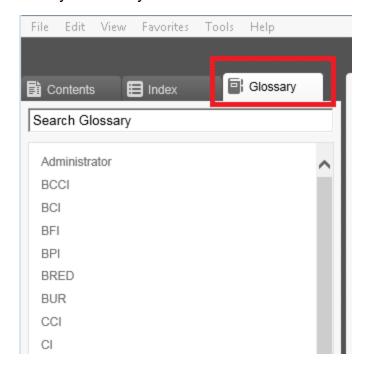
- 1. Select Help in the User Links area at the upper right of the main screen.
- 2. Choose Index from the dropdown list.



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**. The **Contents** tab is open by default.



3. 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 of options.

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 **About BUILDER** in the list of <u>Help</u> options. A popup window with the information will appear.

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

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

Remote Inspection and Inventory Entry Using BuilderRED

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 SMS community user's group website at https://www.sms.erdc.dren.mil. Navigate to PRODUCTS > BUILDER > Downloads and look 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 out in the field, then imported into BUILDER.

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.

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.

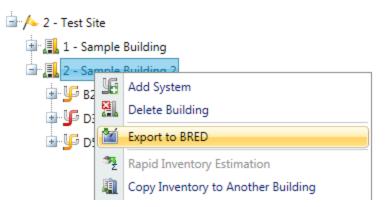
Best Practice Recommendation #2: Some Facilities (Buildings) within your Site can already contain several hundred photos. If you know beforehand that you will not need to view or edit these existing photos in BuilderRED, the best practice is to just download the BRED file without images.

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 Database Information Alone to BuilderRED.

Export Database Information and Images to BuilderRED

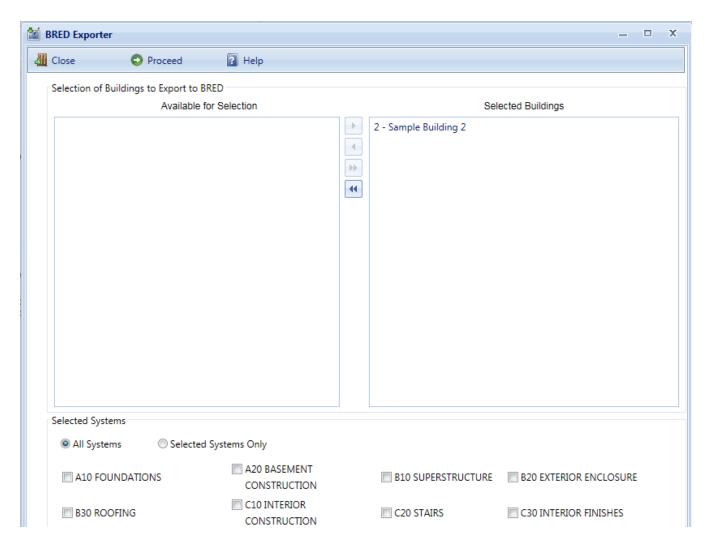
- 1. In the BUILDER navigation tree, right-click the lowest level node (Site, Complex, or Building) that contains the items you wish to export.
- 2. Select the "Export to BRED" option:



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

1

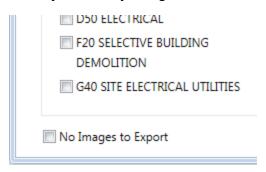
All Buildings:		Activate the double arrow.
One Building:	1.	Select the Building.
	2.	Activate the single arrow.
Multiple Buildings, contiguous in the list:	1.	Select the first Building.
	2.	Press and hold SHIFT , then select the last
		Building.
	3.	Release SHIFT.
	4.	Activate the single arrow.
Multiple Buildings, not contiguous in the list:	1.	Select the first Building.
	2.	Press and hold CTRL, then select each sub-
		sequent Building desired.
	3.	Release CTRL.
	4.	Activate the single arrow.
To deselect a high- lighted Building from the list:	a.	Press and hold CTRL , then select the Build-
		ing.
	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
		ing to the left. This will move the Building back into the "Available for Selection"
		column.



- 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:



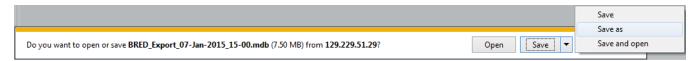
6. To start the export, click the **Proceed** button near the top of the window. *A progress bar will display as the BRED database file is downloaded*:



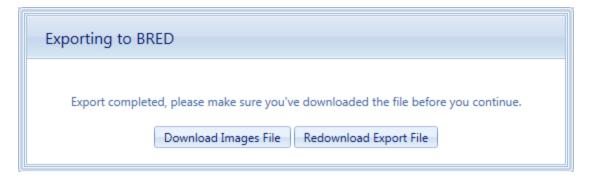
By clicking the **Proceed** button, the following tasks area accomplished:

- 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.

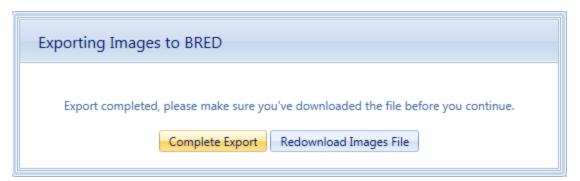
7. After the database file has successfully downloaded, select the "Save As" option to choose a file location for it:



8. If the BRED file did not download correctly, select "Redownload Export File." Otherwise, select "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



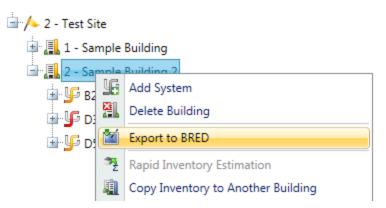
This issue applies to versions of BUILDER 3.3.9 and older.

If the BRED Export error message shown above displays after you try to down-load 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.

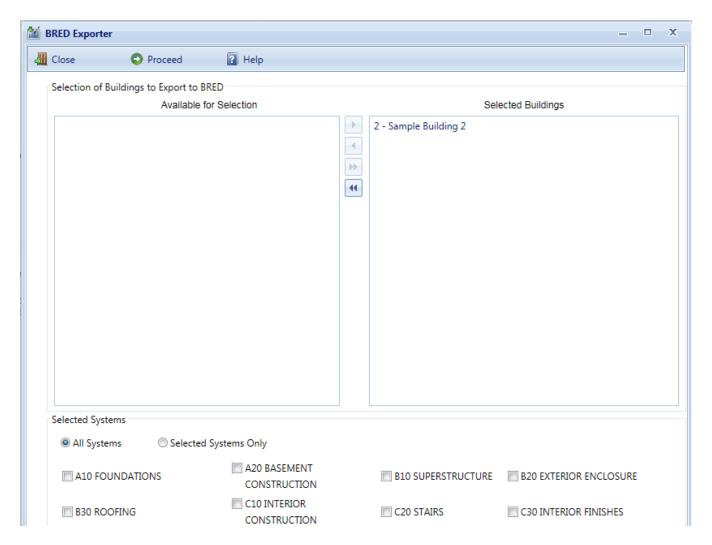
- 1. In the BUILDER navigation tree, right-click the lowest level node (Site, Complex, or Building) that contains the items you wish to export.
- 2. Select the "Export to BRED" option:



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

1

All Buildings:		Activate the double arrow.		
	1.	Select the Building.		
One Building:		Activate the single arrow.		
		Select the first Building.		
Multiple Buildings, contiguous in the list:		Press and hold SHIFT , then select the last		
		Building.		
	3.	Release SHIFT.		
	4.	Activate the single arrow.		
Multiple Buildings, not contiguous in the list:	1.	Select the first Building.		
	2.	Press and hold CTRL, then select each sub-		
		sequent Building desired.		
	3.	Release CTRL.		
	4.	Activate the single arrow.		
To deselect a high- lighted Building from the list:	a.	Press and hold CTRL, then select the Build-		
		ing.		
	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 point-		
		ing to the left. This will move the Building		
		back into the "Available for Selection" column.		
		COTUTTITI.		

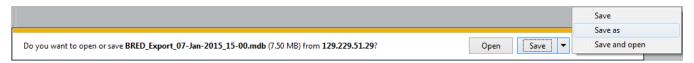


- 4. Once the desired Buildings are in the Selected Buildings column, do one of the following in the lower section of the "BRED Exporter" window:
 - a. Choose "All Systems" (radio button; this is the default), or
 - b. Select specific systems (using radio button and checkboxes).
- 5. In order to download 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*:

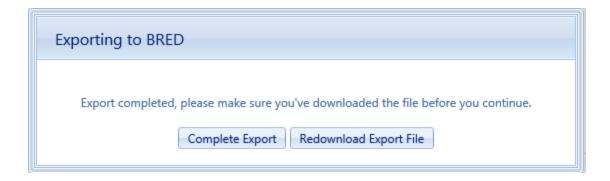


By clicking the **Proceed** button, the following tasks area accomplished:

- 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.

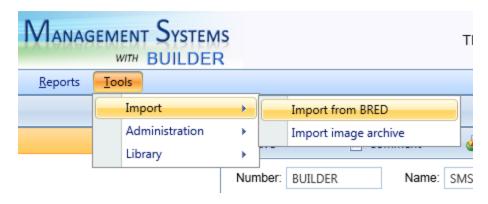
If you have no images to import, then you can go straight from importing the BRED database information into BUILDER to performing a rollup.

How To Import Database Information

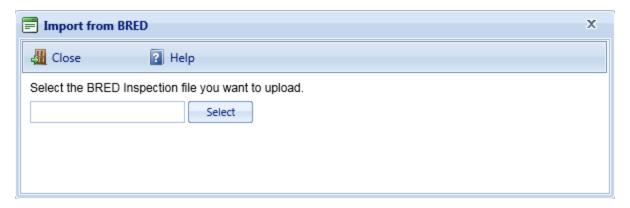
After you have finished adding, editing, and deleting Inventory and/or Inspections data, the updated database must be imported back into BUILDER, to assess the condition of the installation and to plan maintenance and repair.

To import database information into BUILDER from BuilderRED:

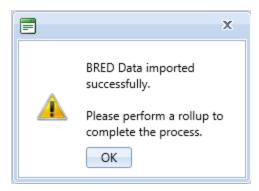
- 1. Save all changes to the database in BuilderRED.
- 2. Open BUILDER.
- 3. Select **Tools > Import > Import from BRED** starting at the main menu.



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 <u>perform a rollup</u> 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:

- 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 from BuilderRED 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 need to do a rollup only if

- one or more cost books or other reference books have changed, or
- 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:

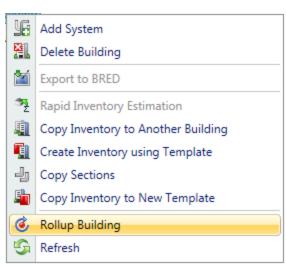
- · condition indexes
- · functionality indexes
- · performance indexes

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:

 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.

Glossary

Administrator

A user with Administrator Role can administer users, assign users to Roles, and change software 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.

ATFP

Antiterrorism Force Protection

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' Cls, 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

CI

Condition Index

CII

Component Importance Index. This index may be used to rank the relative importance of components against one another. An example of its use is in Work Configuration to hold different Component-Sections to different thresholds, or to prioritize them differently based on relative importance.

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. The CSCI is computed by using the assessment data to calculate a deduct value, then subtracting that deduct value from the maximum possible rating of 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 Call

FAFI

Functional Area Functionality Index

FCA

Facility Condition Assessment

FCI (ROOFER)

Flashing Condition Index. In ROOFER the FCI, as determined by inspection and/or algorithm, is used in the calculation of the Roof Condition Index (RCI).

FEMA

Federal Emergency Management Agency

FΙ

Functionality Index

HABS

Historic American Buildings Survey

HAER

Historic American Engineering Record

HPSB

High Performance and Sustainable Building

IAQ

Indoor air quality

ICI (ROOFER)

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 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

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.

MBH

1,000 BTU/hour

MCI (ROOFER)

Membrane Condition Index

MDI

Mission Dependency Index - measures the relative importance of a Building

MOA

Memorandum of Agreement

MOU

Memorandum of Understanding

NAGPRA

Native American Graves Protection and Repatriation Act

PCBs

Polychlorinated biphenyls

PCI (ROOFER)

Panel Condition Index. The PCI is one component making up the Roof Condition Index (RCI) for a metal panel roof, along with the Insulation Condition index (ICI) if applicable, and the Flashing Condition Index (FCI).

ы

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

PΜ

Preventative Maintenance

PM inspection

Preventative maintenance inspection

POM

Program Objectives Memorandum

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 (ROOFER)

Roof Condition Index

RML

Remaining Maintenance Life

RPIE

Real property installed equipment

RSL

Remaining Service Life

SCCI

Subcomponent condition index, produced when using direct rating in a preventative maintenance (PM) inspection

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' Cls, weighted by replacement cost.

SCI (ROOFER)

Substrate Condition Index

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, and Modernization

STIG

Security Technical Implementation Guide (DoD)

Stop gap repair

Repair that will keep the CI at its current level for one year, without further deterioration.

SUCI

Sample Unit Condition Index

UM

Unit of Measure. Examples: Each; LF (linear feet)

Work item

A discrete work activity applied to a single managed object such as a Component-Section, intended to improve its life cycle performance.

Work plan

A multi-year collection of work items and/or projects planned for a Site or Organization.

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.

Work project

A grouping of work itemss to be manageed, prioritized, funded, and executed as a single work effort.

Index

A					
Administrator 44					
В					
ь					
BRED See BuilderRED					
BUILDER Remote Entry Database (BRED) See BuilderRED					
BuilderRED					
capabilities 29					
export data to 29					
import data from 39					
import images from 41					
rollup after import 42					
C					
Content area 14					
location on the BUILDER screen 9					
Content area toolbar					
location on the BUILDER screen 9					
Copyright 2					
D					
Disclaimer 2					
E					
Export					
BuilderRED data 29					

G Glossary

open Glossary in Online Help 26

Н

Help

BUILDER Help index 24 context-sensitive help 24 open Glossary 26 open table of contents 22

ı

Import

BuilderRED data 39 images from BuilderRED 41

Index

BUILDER Help index 24
Inspection Supervisor user role 45
Inspection tools See also BuilderRED
Inspector user role 45
Inventorior user role 44

Inventory hierarchy 6

M

Main menu 11

location on the BUILDER screen 9

Main toolbar

location on the BUILDER screen 9

Master Planner 46

	N		
Navigating BUILDER 9			
Navigation			
content area 14			
main menu 11			
navigation ribbons 12			
navigation tree 12			
Navigation tree			
location on the BUILDER screen 9			
	_		
	O		
Online help 22			
	P		
	Г		
Permissions 44			
Administrator 44			
Inspection Supervisor 45			
Inspector 45			
Inventorior 44			
Master Planner 46			
Work Planner 45			
	_		
	R		
Roles 44			
	т		
	1		
Table of contents			

open 22

U

User links 10
location on the BUILDER screen 9
User permissions roles 44
User preferences 15

W

Welcome 2
Work Planner user role 45