BUILDER™ Work Configuration Guide

Version 3.5.3

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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.



Using this Guide

This guide explains how to use standards, policies, policy sequences, and prioritization schemes to configure automatic generation of work plans in the Sustainment Management System with BUILDER™.

New in this Version

Note: The $BUILDER^{TM}$ Work Configuration Guide is the only one of the printed end user guides that required a change for Version 3.5.3 of the product.

Version 3.5.4 of the Sustainment Management System with BUILDER restores the **Funding Restrictions** tab at **Work Configuration > Funding**. This documentation reflects this change in the **Funding** chapter. See especially the section <u>"Funding Restrictions Tab" on page 125</u> in the topic <u>"Add a Funding Stream" on page 120</u>.

Prerequisites

This guide assumes you are already familiar with the following guides, which can be downloaded from the user support site:

- BUILDER™ Getting Started Guide
- BUILDER™ Inventory Guide
- BUILDER™ Condition Assessment Guide

Companion Guides

The following guides are available at the user support site to assist with related tasks:

- BUILDER™ Reference Data Guide
- BUILDER™ Work Planning Guide

About Work Configuration

Work Configuration Overview

With your Building inventory, condition assessment, and functionality data in place, you can begin to truly manage the work in your facility/Building using BUILDER's powerful tools. Condition assessment data is used to plan maintenance and repair work at the Component-Section level, and functionality assessment data is used to plan modernization work at the Building and Functional Area level.

Work Configuration is a Prerequisite for Creating Work Plans

Before the assessment data can be used in an automated process to determine work requirements for your inventory, the following must be created:

- Condition standards
- Condition policies
- One or more condition policy sequences
- Functionality standards (if functionality assessments are performed)
- Functionality policies (if functionality assessments are performed)
- One or more functionality policy sequences (if functionality assessments are performed)

The tools listed above will determine the work requirements. However, because funding amounts may be less than the total of work requirements, you will also want the following:

• One or more prioritization schemes

Using Condition Standards, Policies, and Policy Sequences

The condition index (CI) and remaining service life (RSL) properties of a Component-Section are excellent metrics to consider when planning maintenance, repair, and replacement projects. This section presents concepts for using the CI and RSL measures to help automate the process of identifying which Component-Sections in your inventory need attention.

Intuitively, when the CI value is high, no work action needs to be taken. When the CI value is low, repair or replacement is necessary. Somewhere between the high and low values of the CI range is a value of the CI that is a threshold, or a point at which your decision would change from no activity to initiating a work item. This threshold value might be the same for all Component-Sections, or it might vary depending upon how critical a particular Section is to the overall Building. For

example, a CI of 80 might be the threshold for an air handling unit, while a CI of 65 might be the threshold for an interior door.

Additionally, these thresholds may vary from Building to Building. A headquarters Building might have a threshold CI of 85 for interior doors, while a warehouse might have a threshold CI of 65 for interior doors. Similarly, there is a threshold value for determining whether to repair or replace a Section. This threshold value is a ratio of the repair cost to the replacement cost (in BUILDER it is assumed that the cost of repair is variable, increasing as the CI decreases). When the ratio is below the threshold the Section will be replaced.

When you establish a set of threshold values like those described above, an automated process can use these thresholds to search the entire inventory and identify Sections whose metrics indicate where work should be initiated. With this BUILDER-generated list, you can anticipate the location of condition deficiencies and plan to correct them before failure occurs.

If condition assessments are completed regularly, the CI trend analysis can estimate when the threshold CI will be reached, several years before it actually happens. This is valuable information for preparing out-year budgets. In addition, because the search of your inventory is exhaustive, no potential problems "fall through the cracks." All of this supports a very proactive management strategy.

The concepts presented in the preceding paragraphs can be implemented using BUILDER's <u>standards</u>, <u>policies</u>, and <u>policy sequences</u>.

Condition Standards

Condition standards are sets of threshold values that determine whether or not work is needed when applied to a particular Component-Section.

Condition Policies

Condition policies are rules that define, by property, which Component-Sections will use which condition standards.

Condition Policy Sequences

When a single Component-Section is covered by more than one condition policy, a policy sequence establishes the order of precedence for applying policies so that only one condition standard is chosen for each Component-Section.

Example

Here is a simple example of how condition standards, condition policies, and policy sequences are used to assign thresholds to every Component-Section:

- Suppose that you have decided that your inventory contains certain Sections that you want to maintain at a CI of 80 or above, or that repair is required when the CI falls below 80. Also, you have decided that if the cost of repairing such a Section is more than 70% of its replacement cost, then you will replace it rather than repair it. These decisions are represented in a condition standard a set of threshold values. You create that condition standard and call it "High." Your inventory also contains some Sections for which 60 is to be the threshold CI. You create that condition standard and call it "Low."
- To apply these condition standards, you must <u>create condition policies</u> that link them to specific Component-Sections. You may want administrative Buildings to be maintained under the "High" condition standard and warehouses to be maintained under the "Low" condition standard. You would create a condition policy that links the respective standard with the appropriate Buildings. You might also want all of the Sections of an HVAC System in any Building to be maintained under the "High" condition standard. You would create another condition policy that links the "High" condition standard with HVAC systems. Note that a policy may not specify standards for every category, such as in the example of the HVAC condition policy which does nothing to determine condition standards for the other Systems in a Building.
- If you want to apply only these two condition policies, several problems arise. You must <u>create a policy sequence</u> to take care of these problems. First, the two policies mention nothing about the condition standards for training facilities other than the HVAC system. The overall process must be able to determine a condition standard for every Component-Section. To address this problem, a policy sequence has a default condition standard that is used if none of the selected condition policies apply. The default condition standard is one of the standards you have created, and you designate it as the default.
- Second, both condition policies apply to HVAC systems in warehouses. The first sets the condition standard at "Low" and the second sets it at "High." The overall process must be able to select one and only one condition standard for each Component-Section. To address this problem, the policy sequence lists, in the order of their application, all of the condition policies that are to be used. If the HVAC policy is listed after the warehouse policy, then the HVAC policy prevails and the condition standard will be "High." If the warehouse policy is listed after the HVAC policy, then the warehouse policy prevails and the condition standard will be "Low." That is, the last policy in the list governs the applicable Component-Sections.

Using Functionality Standards, Policies, and Policy Sequences

The functionality index (FI) of Buildings (BFI), of Functional Areas (FAFI) and of the individual functionality issues are excellent metrics to consider when planning modernization projects. Additionally, the Building Performance Index (BPI) property is an excellent metric to consider when planning for facility/Building reconstruction. This section presents concepts for using the FI measures to identify which Buildings and Functional Areas in your inventory need modernization and concepts for using the BPI measure to identify which Buildings in your inventory need to be reconstructed.

Intuitively, when the FIs and BPI values are high, no modernization or reconstruction is necessary. When any of these values are low, modernization or reconstruction is necessary. Somewhere between the high and low values of each measure is a value that is a threshold, or a point at which your decision would change from no activity to initiating a work item. This threshold value might be the same for the FIs and BPI, or it could be different for each. For example, 70 might be the threshold value for the BCI and FAFI, but 50 might be the threshold value for the individual functionality issues and the BPI in the same Building. Additionally, these thresholds may vary from Building to Building. A headquarters Building might have a threshold BFI of 80, while a warehouse might have a threshold BFI of 60.

When you establish a set of threshold values like those described above, an automated process can use these thresholds to search the entire inventory and identify Buildings and Functional Areas whose metrics indicate where modernization or entire Building reconstruction should be initiated. With this BUILDER-generated list, you can pinpoint the location of functionality and performance deficiencies and plan to correct them. In addition, because the search of your inventory is exhaustive, no potential problems "fall through the cracks." All of this supports a very proactive management strategy.

The concepts presented in the preceding paragraphs can be implemented using BUILDER's standards, policies, and policy sequences.

Functionality Standards

Functionality standards are sets of threshold values that determine whether or not work is needed when applied to a particular Building and/or Functional Area.

Functionality Policies

Functionality policies are rules that define, by property, which Buildings and Functional Areas will use which functionality standards.

Functionality Policy Sequences

When a single Building or Functional Area is covered by more than one functionality policy, a policy sequence establishes the order of precedence for applying policies so that only one functionality standard is chosen for each Building.

Example

Here is a simple example of how functionality standards, functionality policies, and policy sequences are used to assign thresholds to every Building:

- Suppose that you have decided that your inventory contains certain Buildings (with Functional Areas) that you want to maintain at a BFI, FAFI, and issue FIs of 80 or above, or that modernization is required when any of the FIs fall below 80. Also, you have decided that if the BPI falls below 70, then reconstruction of the facility/Building will be required. These decisions are represented in a functionality standard a set of threshold values. You create that functionality standard and call it "High." Your inventory also contains some Buildings for which 60 is to be the threshold for all the FIs and the BPI. You create that functionality standard and call it "Low."
- To apply these functionality standards, you must create functionality policies
 that link them to specific Buildings and/or Functional Areas. You might, for example, want administrative Buildings (and all Functional Areas in those Buildings) to be maintained under the "High" functionality standard, and housing Buildings (and all Functional Areas in those Buildings) to be maintained under the "Low" functionality standard. You would create a functionality policy that links the respective standard with the appropriate Buildings. You might also want all the display Functional Areas (in all Buildings) to be maintained under the "High" functionality standard. You would create another functionality policy that links the "High" functionality standard with display Functional Areas. Note that a policy may not specify standards for every category, such as in the example of the display area policy which does nothing to determine functionality standards for the Functional Areas other than display areas in all Buildings.
- If you want to apply only these two functionality policies, several problems arise. You must create a policy sequence to take care of the problems. First, the two policies mention nothing about the functionality standards for non-display Functional Areas in Buildings that are not administration or housing. The overall process must be able to determine a functionality standard for every Functional Area in every Building. To address this problem, a policy sequence has a default functionality standard that is used if none of the selected functionality policies apply. The default functionality standard is one of the standards you have created, and you designate it as the default.

• Second, both functionality policies apply to display areas in administration and housing Buildings. The first sets the functionality standard at "Low" and the second sets it at "High" for housing Buildings. The overall process must be able to select one and only one functionality standard for each Building. To address this problem, the policy sequence lists, in the order of their application, all of the functionality policies that are to be used. If the housing policy is listed after the display area policy, then the housing policy prevails and the functionality standard will be "Low." If the display area policy is listed after the housing policy, then the display area policy prevails and the functionality standard will be "High." That is, the last policy in the list governs the applicable Functional Areas and/or Buildings.

Using Prioritization Schemes

Your work prioritization scheme(s), when designed properly, will ensure that planning efforts and funding allocations can be directed to the most important items.

Order of Standards, Policies, and Policy Sequences

In order for SMS work plans to function correctly, <u>standards</u>, <u>policies</u>, <u>and policy</u> <u>sequences</u> must be created and implemented in the proper order.

1. Standards

Work configuration must start with *standards*. Standards are numbers that act as *work triggers* and *inspection triggers*.

2. Policies

Policies apply the *standards* to specific inventory attributes such as System type or RSL.

3. Policy Sequences

Policy sequences determine the priority order in which the policies are applied.

Standards

About Standards

Defining standards is the first step in <u>work configuration</u>. Standards set threshold values for inventory properties or attributes such condition indexes, functionality indexes, and remaining service life. When a threshold is crossed, this can trigger an action in BUILDER such as initiating an inspection or generating a work item.

What do Standards Do?

Standards are the foundation of work configuration. They set threshold values for inventory attributes. For example, a particular, named standard can specify that no inventory item should have a condition index lower than 70. When combined with a set of defined policies and a one or more specified policy sequences, the threshold value defined in a standard can, when crossed, trigger an action in BUILDER such as initiating an inspection or generating a work item.

Details

Any standard that you define for a particular Organization in the standards tree will be available throughout that Organization's scope; that is, available to all inventory items located beneath that Organization in the tree.

Therefore, if you are at a Site (for example) in the standards tree and do not see a "plus" box next to the **Condition Standards** folder or **Functionality Standards** folder indicating the presence of one or more standards in the folder, this does *not* necessarily mean that no standards are available for use at that Site. If standards have been defined at one or more parent Organizations above that Site, then all of those standards will be available for use at that Site when defining policies.

Next Step

After defining standards using information found at the links below, the next step in work configuration will be to define policies. Policies apply the standards to specific inventory attributes. (For more information on policies, see "About Policies" on page 34.)

Task Links

"Add a Condition Standard" on the next page

"Edit a Condition Standard" on page 16

"Condition Standard Data" on page 18

"Delete a Condition Standard" on page 22

"Add a Functionality Standard" on page 24

"Edit a Functionality Standard" on page 28

"Delete a Functionality Standard" on page 31

Information Link

"Work Configuration Overview" on page 5

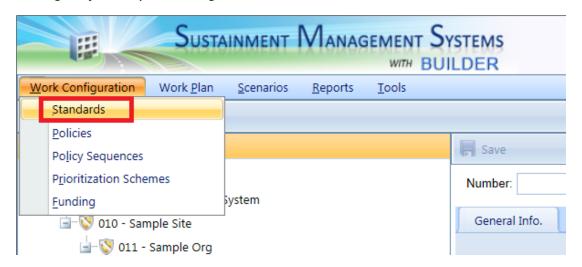
Add a Condition Standard

Standards can be applied Organization-wide, or they can be set Site by Site. This topic shows how to add a condition standard.

Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

Navigate to Standards

To navigate to the window where you can add a condition standard, select **Work Configuration > Standards** from the main menu, as pictured below. You will be brought to the Standards window, with the Standards navigation tree at the left, showing only the top level Organization.



About the Standards Tree

By selecting **Standards**, you will leave your current navigation tree (Inventory, Condition, or Functionality) and enter the Standards tree. An indication of this change is the **Return** button on the left side of the main toolbar:



In the Standards tree, every Organization and every Site has a **Condition Standards** folder and a **Functionality Standards** folder. When you first enter the Standards screen, only the top level Organization will show these folders.

By expanding the tree at the Site or Organization level, folders for condition and functionality standards will appear. From these folders, new condition or functionality standards can be added and the existing standards can be viewed and edited.

Standards Toolbar

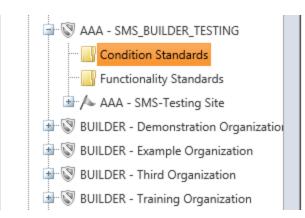
In the Standards window, the main toolbar will show the following options:

- Return. Closes the Standards window.
- Save. Saves changes made to the standards.
- Add. Initiates adding a new standard.
- X Delete. Deletes the selected standard.

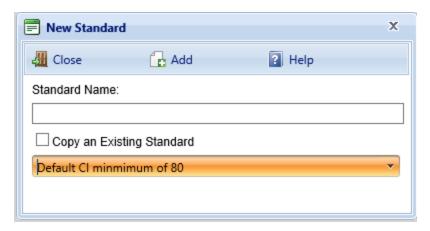
Create a New Condition Standard

To create a new condition standard,

 Navigate in the tree to the Condition Standards folder for the desired Organization or Site, and select it. This should cause the Add button on the toolbar to become visible.



2. Activate the **Add** button on the toolbar. *The "New Standard" popup window will appear.*

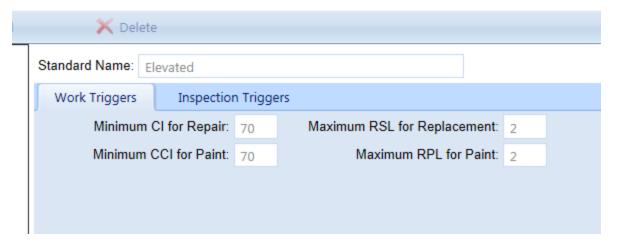


3. In the **Standard Name** text box, enter a name for the standard. The name must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- 4. Optional: If you want to copy data from an existing standard to the new one, first mark the **Copy an Existing Standard** checkbox, Next, from the dropdown list, select an existing standard to copy.
- 5. Activate the **Add** button on the popup toolbar. (Alternatively, activate the **Close** button to cancel the operation and close the "New Standard" popup window.)

When you activate the **Add** button, the standards window will appear in the content pane and you can input data for the standard at the **Work Triggers** and **Inspection Triggers** tabs. These tabs will be described in the topic "Condition Standard Data" on page 18.



Enter Required Data

For the required data to be entered for the condition standard, see <u>"Condition</u> <u>Standard Data" on page 18</u>.

Save

After adding data for a condition standard, make sure to activate the **Save** button on the toolbar to retain the information.

After saving, you can do any of the following:

- select a standard to edit it ("Edit a Condition Standard" on the next page)
- re-select the Condition Standards folder to add a new standard to it
- navigate to another folder
- exit the Standards window by activating the Return button

Exit Standards (Optional)

If you wish to exit the Standards area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

- "Edit a Condition Standard" on the next page
- "Condition Standard Data" on page 18
- "Delete a Condition Standard" on page 22
- "Work Configuration Overview" on page 5
- "About Standards" on page 11

Edit a Condition Standard

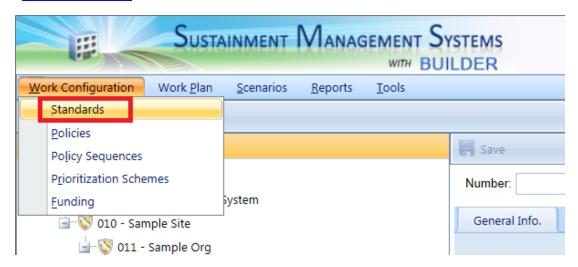
This topic shows how to edit an existing condition standard.

Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

After a condition standard has been added, you can access the standard and edit its data.

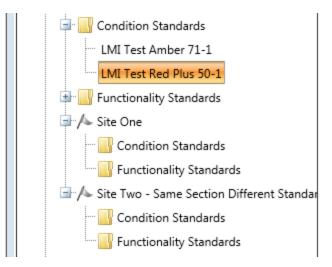
Access the Condition Standard

1. Navigate to the window where you can edit a condition standard by selecting **Work Configuration > Standards** from the main menu. You will be brought to the Standards window. An indication of this change is the **Return** button on the left side of the main toolbar. If you are unfamiliar with the Standards window and navigation tree, you can read more at About the Standards Tree.

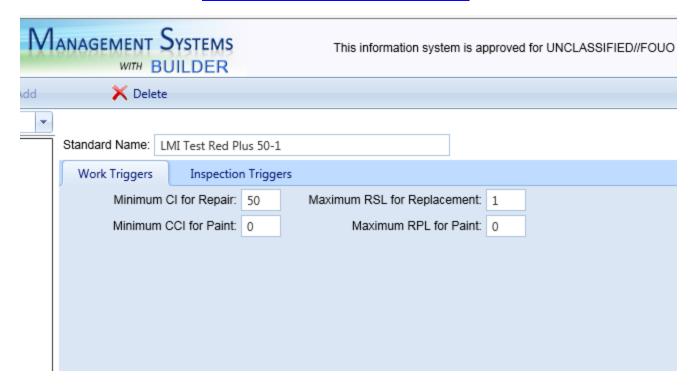


2. Navigate in the Standards tree to the **Condition Standards** folder for the desired Organization or Site.

3. Select the condition standard you wish to edit.



The standards window will appear in the content pane as shown below, and data can be input or changed for the standard (instructions below at "Edit Condition Standard Data" below).



Edit Condition Standard Data

Condition data can be added or edited in the standard at the **Work Triggers** and **Inspection Triggers** tabs. See "Condition Standard Data" on the next page.

Also, the name of the condition standard may be changed, if desired. This is done in the **Standard Name** field above the tabs.

Save

After editing the data, activate the **Save** button on the toolbar to save your changes to the condition standard.

After saving, you can do any of the following:

- select another standard to edit it ("Edit a Condition Standard" on page 16)
- re-select the Condition Standards folder to add a new standard to it
- navigate to a different folder
- exit the Standards window by activating the Return button

Exit Standards (Optional)

If you wish to exit the Standards area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

- "Condition Standard Data" below
- "Add a Condition Standard" on page 12
- "Delete a Condition Standard" on page 22
- "Work Configuration Overview" on page 5
- "About Standards" on page 11

Condition Standard Data

This topic explains details about the data to be entered into a condition standard.

Condition data can be added or edited in the standard at the **Work Triggers** and **Inspection Triggers** tabs, described below.

Optionally, the name of the condition standard may be changed. This is done in the **Standard Name** field above the tabs.

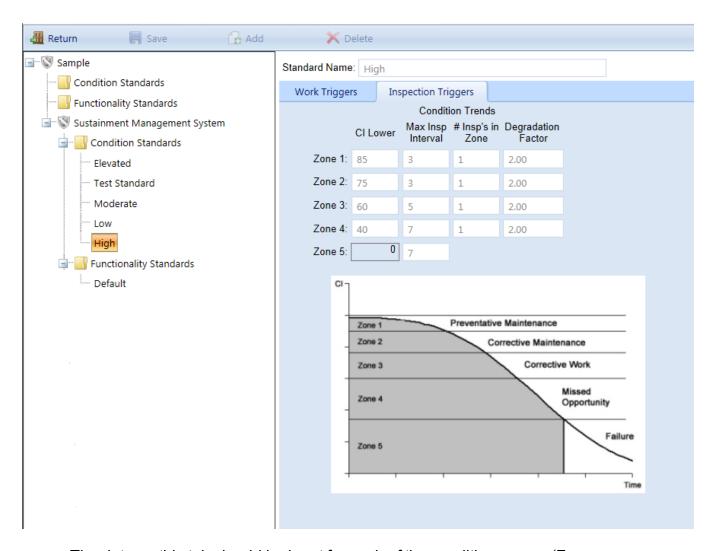
Work Triggers Tab

When creating a condition standard you must enter a set of work triggers, or thresholds, to initiate work items for the inventory of your Building. The following data is required for each work trigger:

- Minimum CI for repair: Enter the threshold value for the condition index.
 For Sections with a CI above this value, no work item is triggered. For Sections with a CI below this value, a work item is triggered.
- Maximum RSL for replacement: Enter the threshold value for remaining service life. For Sections with a RSL above this value, replacement would not be considered as an option unless it is more cost effective to replace than to repair.
- Minimum CCI for paint: Enter the threshold value for the coating condition index. For painted Sections with a CCI above this value, no paint work item is triggered. For painted Sections with a CCI below this value, a paint work item is triggered.
- Maximum RPL for paint: Enter the threshold value for remaining paint life.
 For painted Sections with a RPL greater than this value, no paint work item
 is triggered. For painted Sections with a CCI less than this value, a paint
 work item is triggered.

Inspection Triggers Tab

The **Inspection Triggers** tab is pre-loaded with default data points. You may edit this data as desired to determine (1) when condition assessments should be performed and (2) the type of condition assessment to perform. The Inspection Triggers feature makes use of the Knowledge-Based Inspection Scheduling tool.



The data on this tab should be input for each of the condition zones. (For an explanation of each condition zone, see Section 2.5, **Condition Zones**, in the **Overview** chapter of the manual referenced immediately below.)

Resource: ERDC/CERL SR-18-7, Knowledge-Based Condition Assessment Reference Manual for Building Component-Sections, is available by download from the SMS community user's group website at https://www.sms.erdc.dren.mil (at the website, see PRODUCTS > BUILDER > Downloads).

The data to be entered for each condition zone includes:

- **CI Lower**. Enter the lower bound of the CI range of the condition zone. Providing the lower bound for each zone breaks the condition curve as shown in the screen above.
- **Maximum Inspection Interval**. Enter the maximum amount of time, in years, between condition assessments in each condition zone.

- **Number of Inspections in Zone**. Enter the *maximum* number of condition assessments that should be performed in each condition zone.
- Degradation Factor. Enter the ratio of the maximum relative rate of deterioration to the expected rate of deterioration when a condition assessment is
 triggered. That is, if the deterioration rate were set to 2, any measured deterioration rate greater than twice the expected rate would trigger another
 inspection.

Save

After adding data for a condition standard, make sure to activate the **Save** button on the toolbar to retain the information.

After saving, you can do any of the following:

- select a standard to edit it ("Edit a Condition Standard" on page 16)
- re-select the Condition Standards folder to add a new standard to it
- navigate to another folder
- exit the Standards window by activating the Return button

Exit Standards (Optional)

If you wish to exit the Standards area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Add a Condition Standard" on page 12

"Edit a Condition Standard" on page 16

"Delete a Condition Standard" on the next page

"Work Configuration Overview" on page 5

"About Standards" on page 11

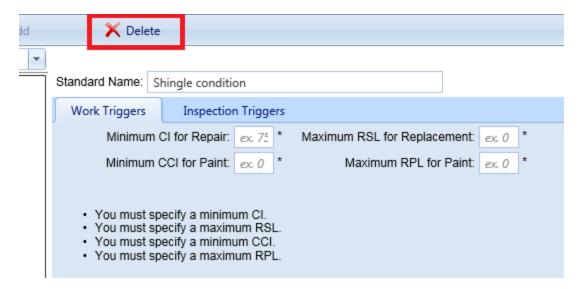
Delete a Condition Standard

Permissions Note: This action requires Master Planner or Administrator permission for the relevant location in inventory.

Option A: Delete in the Content Pane

If the condition standard you wish to delete is currently showing in the content pane, simply activate the **Delete** button on the toolbar. You will be presented with a confirmation popup before the standard is deleted.

Problems? If you are at the **Work Triggers** tab and no or insufficient data has been entered into the condition standard, the program may require you to complete the data entry before allowing the standard to be deleted.

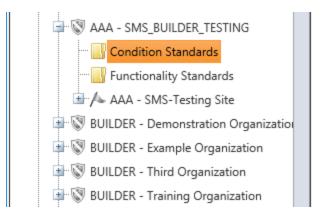


If the condition standard is not showing in the content screen, see Option B immediately below

Option B: Delete Starting in the Navigation Tree

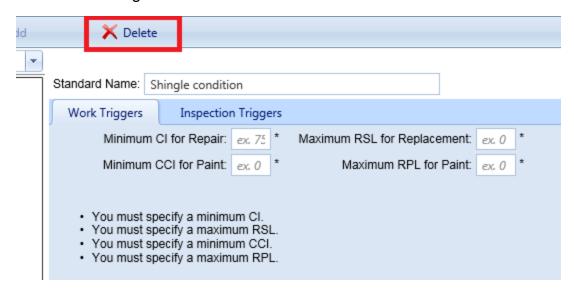
If the condition standard is not showing in the content screen, navigate to the standard and then delete it, as described here:

- Select Work Configuration > Standards from the main menu, if you are not already in the Standards tree.
- 2. Navigate the Standards tree in the navigation pane until you reach the desired standard, and select it.



3. When the standard appears in the content pane, activate the **Delete** button on the toolbar. You will be presented with a confirmation popup before the standard is deleted.

Problems? If you are at the **Work Triggers** tab and no or insufficient data has been entered into the condition standard, the program may require you to complete the data entry before allowing the standard to be deleted.



Exit Standards (Optional)

If you wish to exit the Standards area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Add a Condition Standard" on page 12

"Edit a Condition Standard" on page 16

"Condition Standard Data" on page 18

"Work Configuration Overview" on page 5

"About Standards" on page 11

Add a Functionality Standard

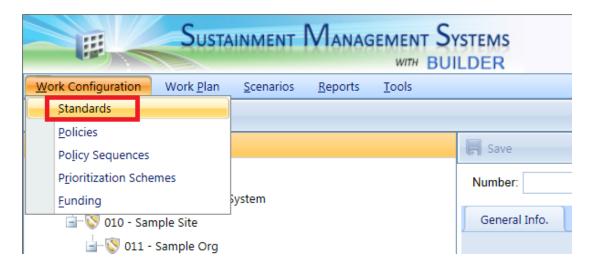
Standards can be applied Organization-wide, or they can be set Site by Site. This topic shows how to add a functionality standard.

Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

Navigate to Standards

To navigate to the window where you can add a functionality standard, select **Work Configuration > Standards** from the main menu, as shown in the illustration below.

You will be brought to the Standards window, with the Standards navigation tree at the left, showing only the top level Organization.



About the Standards Tree

By selecting **Standards**, you will leave your current navigation tree (Inventory, Condition, or Functionality) and enter the Standards tree. An indication of this change is the **Return** button on the left side of the main toolbar:



In the Standards tree, every Organization and every Site has a **Condition Standards** folder and a **Functionality Standards** folder. When you first enter the Standards screen, only the top level Organization will show these folders.

By expanding the tree at the Site or Organization level, folders for condition and functionality standards will appear. From these folders, new condition or functionality standards can be added and the existing standards can be viewed and edited.

Standards Toolbar

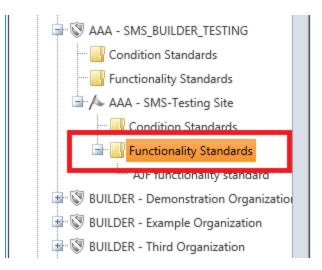
In the Standards window, the main toolbar will show the following options:

- **A Return**. Closes the Standards window.
- | Save. Saves changes made to the standards.
- 🔓 Add. Initiates adding a new standard.
- X Delete. Deletes the selected standard.

Create a New Functionality Standard

To create a new functionality standard,

 Navigate in the tree to the Functionality Standards folder for the desired Organization or Site, and select it. This should cause the Add button on the toolbar to become visible.



2. Activate the **Add** button on the toolbar. *The "New Standard" popup window will appear.*



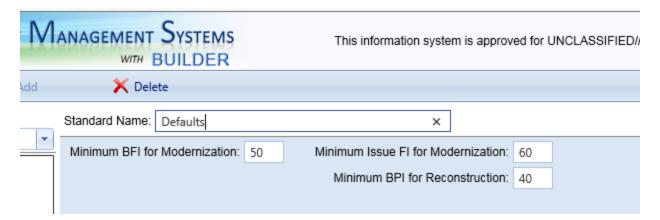
3. In the **Standard Name** text box, enter a name for the standard. The name must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- Optional: If you want to copy data from an existing standard to the new one, first mark the Copy an Existing Standard checkbox, Next, from the dropdown list, select an existing standard to copy.
- 5. Activate the **Add** button on the popup toolbar. (Alternatively, activate the **Close** button to cancel the operation and close the "New Standard" popup window.)

Note: If the **Add** button is grayed out, this may mean that you do not have the appropriate permissions Role covering that location in inventory.

When you activate the **Add** button the standards window will appear in the content pane, and you can input data for the standard (instructions below at the topic "Condition Standard Data" on page 18.).



Enter Required Data

For each functionality standard, you must enter a set of work triggers, or thresholds, to initiate modernization work in Buildings at the Site or Organization selected; alternatively you may proceed with the default values provided.

- **Minimum BFI for Modernization.** Enter the threshold value for the BFI. For Buildings with a BFI above this value, no modernization work is triggered. For Buildings with a BFI below this value, modernization work is triggered.
- Minimum Issue FI for Modernization. Enter the threshold value for the FIs
 for each individual functionality issue. For issues in the Building with an FI
 above this value, no modernization work is triggered to correct the issue.
 For issues in the Building with an FI below this value, modernization work is
 triggered.
- Minimum BPI for Reconstruction. Enter the threshold value for the BPI.
 For Buildings with a BPI above this value, no work is triggered. For Buildings with a BPI below this value, the Building will be scheduled for demolition and reconstruction.

Save

After adding the required data, activate the **Save** button on the toolbar.

After saving, you can do any of the following:

- select a standard to edit it ("Edit a Functionality Standard" below)
- re-select the Functionality Standards folder to add a new standard to it
- navigate to a different folder
- exit the Standards window by activating the Return button

Exit Standards (Optional)

If you wish to exit the Standards area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Edit a Functionality Standard" below

"Delete a Functionality Standard" on page 31

"Work Configuration Overview" on page 5

"About Standards" on page 11

Edit a Functionality Standard

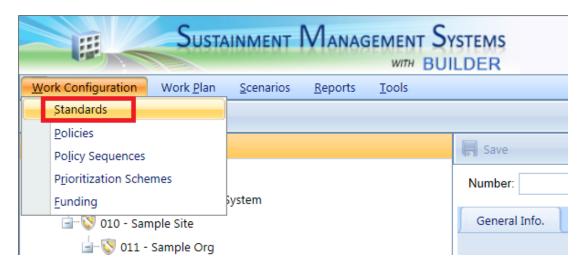
This topic shows how to edit an existing functionality standard.

Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

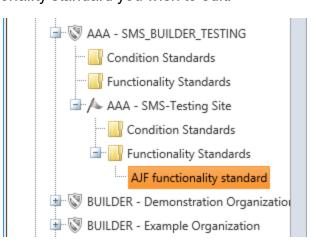
After a functionality standard has been added, you can access the standard and edit its data.

Access the Functionality Standard

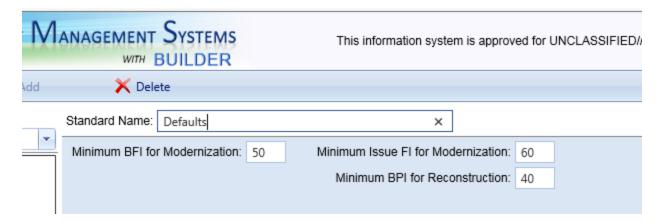
1. Navigate to the window where you can edit a functionality standard by selecting **Work Configuration > Standards** from the main menu. You will be brought to the Standards window. An indication of this change is the **Return** button on the left side of the main toolbar. If you are unfamiliar with the Standards window and navigation tree, you can read more at About the Standards Tree.



- 2. Navigate in the Standards tree to the **Functionality Standards** folder for the desired Organization or Site.
- 3. Select the functionality standard you wish to edit.



The standards window will appear as shown below and data can be input or changed for the standard (instructions below at "Edit Functionality Standard Data" on the next page).



Edit Functionality Standard Data

Each functionality standard has a set of work triggers, or thresholds, to initiate modernization work in Buildings at the Site or Organization selected. These can be edited, following the guidelines listed below:

 Name. Enter or edit the functionality standard's name, which must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- **Minimum BFI for Modernization.** Enter the threshold value for the BFI For Buildings with a BFI above this value, no modernization work is triggered. For Buildings with a BFI below this value, modernization work is triggered.
- Minimum Issue FI for Modernization. Enter the threshold value for the FIs
 for each individual functionality issue. For issues in the Building with an FI
 above this value, no modernization work is triggered to correct the issue.
 For issues in the Building with an FI below this value, modernization work is
 triggered.
- Minimum BPI for Reconstruction. Enter the threshold value for the BPI.
 For Buildings with a BPI above this value, no work is triggered. For Buildings with a BPI below this value, the Building will be scheduled for demolition and reconstruction.

Save

After editing the data, activate the **Save** button on the toolbar to save your changes to the functionality standard.

After saving, you can do any of the following:

- select another standard to edit it ("Edit a Functionality Standard" on page 28)
- re-select the Functionality Standards folder to add a new standard to it
- navigate to a different folder
- exit the Standards window by activating the Return button

Exit Standards (Optional)

If you wish to exit the Standards area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Add a Functionality Standard" on page 24

"Delete a Functionality Standard" below

"Work Configuration Overview" on page 5

"About Standards" on page 11

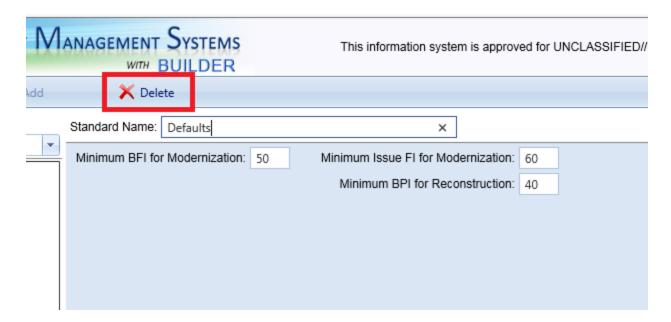
Delete a Functionality Standard

Permissions Note: This action requires Master Planner or Administrator permission for the relevant location in inventory.

Option A: Delete in the Content Pane

If the functionality standard you wish to delete is currently showing in the content pane, simply activate the **Delete** button on the toolbar. You will be presented with a confirmation popup before the standard is deleted.

Problems? If you are at the **Work Triggers** tab and no or insufficient data has been entered into the condition standard, the program may require you to complete the data entry before allowing the standard to be deleted.

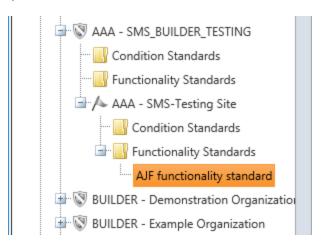


If the functionality standard is not showing in the content screen, see Option B immediately below.

Option B: Delete Starting in the Navigation Tree

If the functionality standard is not showing in the content screen, navigate to the standard and then delete it, as described here:

- 1. Select **Work Configuration > Standards** from the main menu, if you are not already in the Standards tree.
- 2. Navigate the Standards tree in the navigation pane until you reach the desired standard, and select it.



3. When the standard appears in the content pane, activate the **Delete** button on the toolbar. You will be presented with a confirmation popup before the standard is deleted.

Exit Standards (Optional)

If you wish to exit the Standards area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Add a Functionality Standard" on page 24

"Edit a Functionality Standard" on page 28

"Work Configuration Overview" on page 5

"About Standards" on page 11

Policies

About Policies

The second step in work configuration, after defining standards, is to define policies. Policies apply the standards to specific inventory items.

What do Policies Do?

After work configuration <u>standards</u> have been defined, *policies* apply the standards to specific inventory items. Policies are based on standards.

Examples

For example, you might want administrative Buildings to be maintained under the "High" condition standard and warehouses to be maintained under the "Low" condition standard. You would create a condition policy that links the respective standard with the appropriate Buildings.

As another example, you might want all of the Sections of an HVAC System in any Building to be maintained under the "High" condition standard. You would create another condition policy that links the "High" condition standard with HVAC Systems. That policy would not apply to any other System type.

Details

Note: When defining a policy, you have available to you not just standards (if any) that are defined at the location where you are defining the policy, but also any and all standards that have been defined at one or more parent Organizations above your location. All available standards will show in each dropdown list in the policy's **Standard** column.

Any policy that you define for a particular Organization in the policies tree will be available for use throughout that Organization's scope; that is, available to all inventory items located beneath that Organization in the tree.

Therefore, if you are at a Site (for example) in the policies tree and do not see a "plus" box next to the **Condition Policies** folder or **Functionality Policies** folder indicating the presence of one or more policies in the folder, it does *not* necessarily mean that no policies are defined for inventory items at that Site. If policies have been defined at one or more parent Organizations above that Site, then all of those policies will be available for use at that Site. For example, they will show as available when defining one or more policy sequences.

Next Step....

After defining policies using information at the links below, the next step in work configuration will be to define at least one policy sequence. When more than one policy can apply to a given inventory item, a policy sequence is required to prevent a conflict, so that only one standard is used in determining whether a work (or inspection) trigger is to be activated. (For more information on policy sequences, see "About Policy Sequences" on page 77.)

Task Links

"Add a Condition Policy" below

"Edit a Condition Policy" on page 50

"Delete a Condition Policy" on page 54

"Add a Functionality Policy" on page 56

"Edit a Functionality Policy" on page 70

"Delete a Functionality Policy" on page 74

Instructional Links

"About Condition Policy Attributes" on page 43

"About Functionality Policy Attributes" on page 62

"Work Configuration Overview" on page 5

Add a Condition Policy

Condition policies can be made to apply Organization wide, or they can be set Site by Site. This topic shows how to add a condition policy.

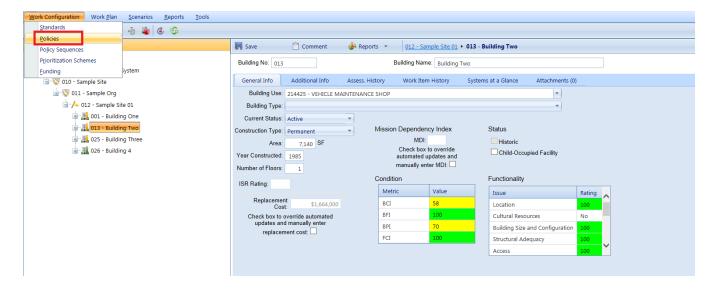
Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

Navigate to the Policies

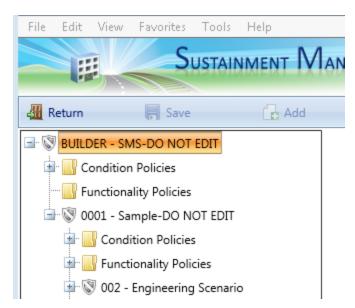
If you've already navigated to the needed location, you can skip to <u>"Create a New Condition Policy"</u> on page 37.

To navigate to the folders where you can add or edit policies,

1. Activate **Work Configuration > Policies** in the main menu. You will be brought to the Policies window, with the Policies navigation tree at the left, showing only the top level Organization.



2. Expand the tree to show folders for condition and functionality policies. At these folders, new condition or functionality policies can be added and the existing policies can be viewed and edited.



Policy Toolbar Options

On the toolbar above the policies navigation tree, only the toolbar options that are available at your current tree location will show as active; others will be grayed out.

- Return. Closes the Policies window.
- | Save. Saves changes made to the policies.
- 🔓 Add. Initiates adding a new policy.
- X Delete. Deletes the selected policy.

Create a New Condition Policy

To create a condition policy,

1. Select the appropriate **Condition Policies** folder on the tree. *This should cause the Add button on the toolbar to become visible.*

Having difficulty? If needed, see "Navigate to the Policies" on page 35 for how to navigate to a condition policy.

2. Activate the **Add** button on the toolbar. *The "New Policy" popup window will appear.*

Note: the Organization or Site level at which you are adding a policy denotes the level at which that policy can be applied. The policy can be applied at that Organization or Site level, or at any node in the tree that is beneath it.

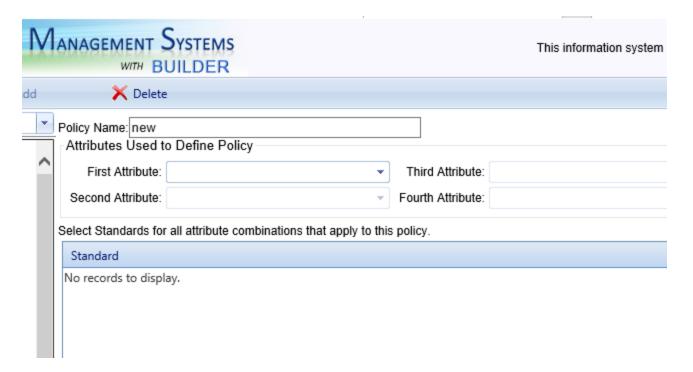


3. Enter a name for the policy in the **Policy Name** text box. The name must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- If you want to copy data from an existing policy to the new one, mark the Copy an Existing Policy checkbox and select from the dropdown list an existing policy to copy.
- 5. Activate the **Add** button on the popup window toolbar. *The policy window will open as shown below.*

Note: If the **Add** button is grayed out, this may mean that you don't have the appropriate permissions Role covering that location in inventory.



6. Enter data for the policy, as described in "Required Condition Policy Data" below. Depending on the attribute(s) you select, the area of the screen below **Standard** will display different options. Before you select the first attribute, this area will display the phrase "No records to display."

Required Condition Policy Data

When you add a new condition policy, you must do the following to provide the data needed by the policy:

Select Attributes Used to Define the Policy

CAUTION: Even though the attribute selection can be edited after the policy is created, this can lead to unintended consequences that are time-consuming to fix when there is more than one attribute. It is advisable to spend time in advance, before creating the condition policy, adequately thinking out the selection of attributes needed.

1. Select between one and four attributes to define the condition policy. These are selected consecutively as First Attribute, Second Attribute, Third Attribute, and Fourth Attribute. These attributes are simply field properties pertaining to the inventory item being evaluated. See the topic "About Condition Policy Attributes" on page 43 for more detail about each attribute available. The selection of attributes takes place at the top of the condition policy content screen.

2. For each attribute you select from the dropdown list in the field, the appropriate options will appear in the content pane.

IMPORTANT: If you will be using more than one attribute in the policy, delay selecting Standards until you have designated all of the attributes that you plan to use.

3. If the option listing is quite long, you will be given the option at the bottom of the screen to choose a page size (number of items listed per screen) appropriate to your computer screen size and resolution. A listing of page numbers will appear at the bottom of the screen to assist in navigating through the options.

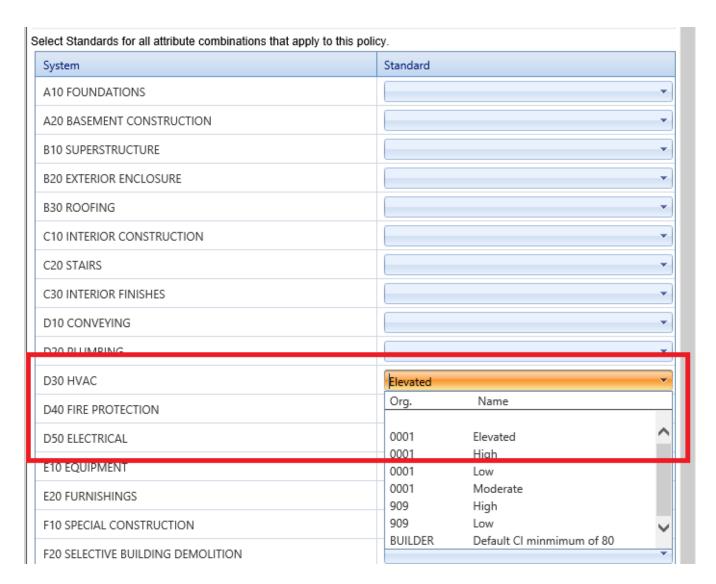
Select Standards

After selecting *all* of the attributes you plan to use for the policy, *then* select the Standards to be applied to some or all of the options presented for the attribute, or combination of attributes, selected for the policy.

Note: In most cases, you will not need to select a standard for each and every possibility presented.

Policy Using One Attribute

If the policy makes use of just one selected attribute, use the dropdown lists in the **Standard** column to apply standards to one or more of the options presented for that attribute. The example shown below is from the **System** attribute, used by itself:

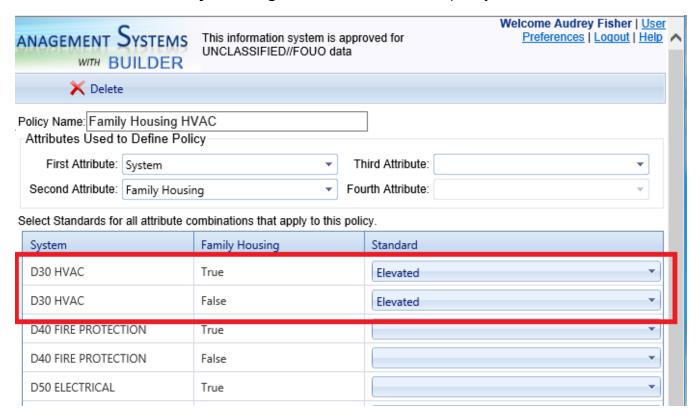


Policy Using Multiple Attributes

IMPORTANT: If you are using more than one attribute in the policy, delay selecting Standards until all applicable attributes have been selected. This is because when attributes are used in combination, a grid of attribute combinations will be presented (which is better), instead of option lists for each attribute separately.

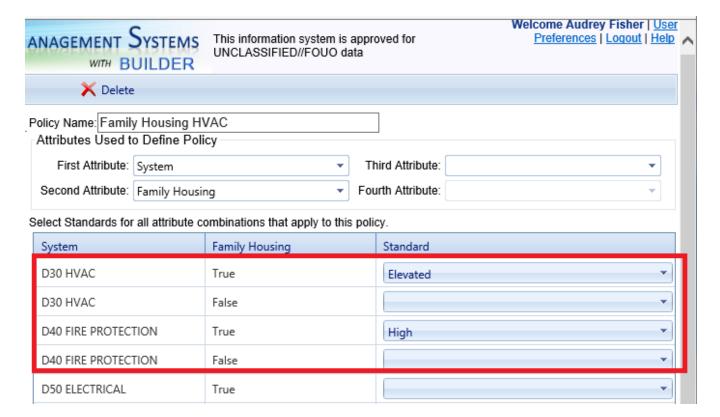
1. Once all attributes have been selected, a grid will appear in the lower part of the policy content screen that shows a grid that takes into account all possible combinations of the attributes selected for the policy. The number of options in the grid will be the result of multiplying the number of options available for each attribute selected in the policy. For example, 21 (number of Systems) x 6 (number of options for Building Number of Floors x 2 (any

- True/False attribute) = 252 grid options.
- You don't need to select a condition standard for every combination. Combinations for which no standard is specified are simply not dictated by the policy; the default standard defined by the selected <u>policy sequence</u> will be applied.
- 3. The screenshot below shows the consequence of not waiting for all attributes to be selected before applying standards in policies using multiple attributes. In the section above, "Policy Using One Attribute" on page 39, the example shows selecting the "Elevated" standard for HVAC. Below is what results when the "Elevated" standard is selected for the HVAC system before the Family Housing attribute is added to the policy:



Note in the screenshot above that the "Elevated" standard has been applied to both the "True" and "False" case for the **Family Housing** attribute, when it should actually be applied only to the "True" case.

 The screenshot below shows the correction made to HVAC, and the "High" standard applied to the Fire Protection System for the **Family Housing** attribute only.



5. Additional attributes: If a third attribute, **Building Number of Floors**, had been selected before applying standards, there would be the option of selecting, for example, the "Elevated" standard for the **Fire Protection System** in **Family Housing** having a **Building Number of Floors** of three or more (applied to the tiers "3 Floors," "4 Floors," "5 to 10 Floors," and "More than 10 Floors"), and the "High" standard applied to "1 Floor" or "2 Floors." Each additional attribute used in a policy multiplies the number of options

Save

IMPORTANT: After adding or editing a policy, make sure to activate the **Save** button in the toolbar to save the changes to the policy.

WARNING: Saving will not happen automatically, so you may lose data entries if you fail to save.

Exit Policies (Optional)

If you wish to exit the Policies area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Edit a Condition Policy" on page 50

"About Condition Policy Attributes" below

"Delete a Condition Policy" on page 54

"Work Configuration Overview" on page 5

About Condition Policy Attributes

This topic lists the inventory item attributes that can be selected from when setting up work management policies and explains how to use them alone or in combination.

A condition policy can be based on any one, two, three, or four attributes pertaining to the inventory item(s) that will be evaluated by the policy. If you are creating a policy containing more than one attribute, be sure to familiarize with the section "About Combining Condition Policy Attributes" on page 50.

Some of the attributes shown in the dropdown list will have characteristics and options that make them similar but not identical to one or more other attributes. This is because the attribute options have been customized for different user groups with similar but not identical inventory groupings and analysis needs.

Note: It might not be necessary to designate a standard for each and every value range listed for your selected attributes. In Policy Sequences, a default condition standard is set for items that do not have a condition standard set for them in a policy. If a **Standard** field is left blank, the default standard specified under Policy Sequences will be used.

Available Policy Attributes

The same policy attributes are available for condition policy attributes and for <u>functionality policy attributes</u>, but the examples given may differ.

- Building Construction Type. When you select this attribute, you will be
 presented with the four Building Construction Types: "Permanent," "Semipermanent," "Temporary," and Leased." Using the dropdown lists in the
 Standard column, designate a condition standard for each. Example1
- Building Historic. When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the Standard column, designate a condition standard for each. Example²
- Building Number of Floors. When you select this attribute, you will be presented with an entry form divided into the following categories: "1 Floor," "2 Floors," "3 Floors," "4 Floors," "5 to 10 Floors," and "More than 10 Floors." Using the dropdown lists in the Standard column, designate a condition standard for each category desired. If a Standard field is left blank, the default standard specified under Policy Sequences will be used. Example³
- Building Type. When you select this attribute, you will be presented with a listing of various building frame types such as "Concrete Shear Walls" and "Steel Light Frame." Using the dropdown lists in the Standard column, designate a condition standard for each. Example⁴
- Building Use Category. When you select this attribute, you will be presented with a listing of Building Use Categories. The broad categories listed here are those with one-digit category codes, the Building Functionality Group. Using the dropdown lists in the Standard column, designate a condition standard for each category desired. Example⁵
- **Building Vacant.** When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the **Standard** column, designate a condition standard for each. Example⁶
- Building Year Constructed. When you select this attribute, you will be presented with tiers describing the Building's year of construction (ten years

¹An example of setting up a condition policy based on this attribute is the case where you want to set a lower condition standard for Component-Sections in a temporary Building or facility.

²An example of setting up a condition policy based on this attribute is the case where you want to set the condition standard to High or Elevated for Component-Sections in a historic building.

³An example of setting up a condition policy using this attribute is the case where you might want to designate a higher condition standard for fire protection systems in buildings more than two stories high.

⁴An example of setting up a condition policy using this attribute is the case where you want to maintain the fire protection System in a wood frame Building ("Wood, Commercial and Industrial" and "Wood, Light Frame") to a higher standard than in other Buildings.

⁵An example of setting up a condition policy based on this attribute is the case where you want medical Buildings to be maintained at an Elevated condition standard, whereas supply structures such as warehouses can be maintained at a lower condition standard. If you wish to identify Building Use more specifically, you can use a different attribute such as Facility Category Code or Facility Use (CatCode). Each of these is described further below in this list. This example is fleshed out in more detail in <MadCap:xref href="WM_Example_Condition_Policy_Setup.htm">Examples of Condition Policy Setup</MadCap:xref>

⁶An example of setting up a condition policy based on this attribute is the case where you want to maintain a vacant Building at a lower standard than one that is occupied.

- per tier, plus "Before 1900" and "Unknown"). Using the dropdown lists in the **Standard** column, designate a condition standard for each. Example 1
- Child-Occupied Facility. When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the Standard column, designate a condition standard for each. Example²
- Component. This attribute allows you to specify a standard for each Component available to the program. When you select "Component" as one of your attributes, you will be presented with a long list of Components. Each line shows the number (in UNIFORMAT II format) and name of a Component. Using the dropdown lists in the Standard column, designate a condition standard for each Component desired.

Tip: A time-saving measure to consider is to use **System** as one of your attributes, and then to designate a standard here only for those Components whose standard should differ from the standard set for the **System** they are in.

Note: You can find a table showing UNIFORMAT II Component ("Level 3") numbers in the Inventory section of the documentation, under "BUILDER Systems and Components." In the PDF documentation, refer to the *BUILDER Inventory Guide*, Version 3.5.2 or later.

- Component Importance Index (CII). When you select this attribute, you
 will be presented with tiers showing ranges of decimal values for the Component Importance Index (CII), plus a tier for the value 1. Using the dropdown lists in the Standard column, designate a condition standard for each
 tier desired. Example³
- Current Area CI. This attribute refers to the CI of a Functional Area. The
 attribute may be used as part of either a condition policy or a functionality
 policy. When you select this attribute, you will be presented with tiers showing ranges of values for the Functional Area's CI. Using the dropdown lists
 in the Standard column, designate a condition standard for each tier
 desired.
- Current Area FI. This attribute may be used as part of a condition policy; it
 is not restricted to use in a functionality policy. When you select this attribute, you will be presented with tiers showing ranges of values for the

¹An example of setting up a condition policy based on this attribute is the case where you decide to maintain progressively older Buildings at progressively lower standard levels.

²An example of setting up a condition policy using this attribute is the case where you want to maintain certain Systems to a higher standard in a child-occupied facility.

³An example of setting up a condition policy based on this attribute is the case where you want to apply higher condition standards to components with a larger CII value.

Functional Area's functionality index (FI). Using the dropdown lists in the **Standard** column, designate a condition standard for each tier desired. Example 1

- Current Building CI. you will be presented with tiers showing ranges of values for the CI of the Building as a whole. Using the dropdown lists in the Standard column, designate a condition standard for each tier. Example²
- Current Building FCI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the Building's Facility Condition
 Index (FCI). Using the dropdown lists in the Standard column, designate a
 condition standard for each tier.

Note: In BUILDER, the formula for the FCI is one *minus* the ratio of repair needs to replacement cost, which translates to a Building with a higher FCI being in better condition than a Building having a lower FCI.

- Current Building FI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the Building's FI. Using the dropdown lists in the Standard column, designate a condition standard for each
 tier desired. Example³
- Current Building Min Issue FI. The "Min(imum) Issue FI" attribute refers to
 the FI of the functionality issue that scores the lowest in a functionality
 assessment. The issue so identified can be referred to as the "controlling
 issue." When you select this attribute, you will be presented with tiers showing ranges of values that the lowest-scoring FI might have. Using the dropdown lists in the Standard column, designate a condition standard for each
 tier desired.

Note: An alternative approach that also targets a specific functionality issue is to create a policy based on a specific functionality issue of your choice, rather than basing the policy on whatever issue scores the lowest. For example, you could create a rule that "Access" is not allowed to go below a particular score.

¹An example of setting up a condition policy based on this attribute is the case where you don't want a lot of work items generated for an area that is poorly performing its intended functionality, because the area may soon be due for modernization or other changes. Therefore, you might hold a functional area with a low FI to a much lower condition standard than usual. ²An example of setting up a condition policy based on this attribute is the case where you want to apply a standard with more frequent inspections to CI tiers in the middle of the range, where catching a problem early and fixing it promptly will usually make a greater difference than in the top tiers, where problems are less likely to occur, or the bottom tiers where the item is closer to the end of its useful life.

³An example of setting up a condition policy based on this attribute is the case where you don't want a lot of work items generated for a Building that is poorly performing its intended functionality, because the Building may soon be due for modernization or demolition. Therefore, you might hold a Building with a low FI to a much lower condition standard than usual.

- Current Building PI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the Building's performance index
 (BPI). Using the dropdown lists in the Standard column, designate a condition standard for each tier desired. Example 1
- Current Component CI. When you select this attribute, you will be presented with tiers showing ranges of values for the current Component's CI (BCCI). Using the dropdown lists in the Standard column, designate a condition standard for each tier desired.
- Current Section CCI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the current Section's coating condition index (CCI). Using the dropdown lists in the Standard column, designate a condition standard for each tier desired.
- Current Section CI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the current Section's CI (CSCI).
 Using the dropdown lists in the Standard column, designate a condition
 standard for each tier desired.
- Current System CI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the current System's CI (SCI). Using
 the dropdown lists in the Standard column, designate a condition standard
 for each tier desired.
- Estimated Work Cost. This attribute is used for <u>Prioritization Schemes</u> only.
- Facility Category (Army ISR). When you select this attribute, you will be
 presented with the three-digit facility category groupings used by Army ISR.
 Using the dropdown lists in the Standard column, designate a condition
 standard for each category grouping desired.
- Facility Category Code. When you select this attribute, you will be presented with a listing of facility category codes. Using the dropdown lists in the Standard column, designate a condition standard for each category code desired.

Tip: A time-saving measure to consider is to use the broader attribute "Building Use Category" as one of your attributes, and then to designate a standard here only for those Facility Category Codes whose standard should differ from the standard set for the broader **Building Use Category** they also belong to.

¹An example of setting up a condition policy based on this attribute would be similar to using current Building FI: you might not want a lot of work items generated for a Building with a low PI. If this is the case, you could hold a Building with a low FI to a much lower condition standard than usual.

- Facility Category Group (Army ISR). When you select this attribute, you
 will be presented with a listing of Facility Category Groups used by Army
 ISR. (Each of these has a code beginning with the letter "F.") Using the dropdown lists in the Standard column, designate a condition standard for each
 Category Group desired.
- Facility Mission Area (Army ISR). When you select this attribute, you will
 be presented with a listing of the five Facility Mission Areas used by Army
 ISR. Using the dropdown lists in the Standard column, designate a condition standard for each Facility Mission Area desired.
- Facility Mission Dependency Index (MDI). When you select this attribute, you will be presented with a listing of tiers of scores for the facility's MDI.
 The higher the MDI of a Building or other facility, the more critical it is to the mission. Using the dropdown lists in the Standard column, designate a condition standard for each tier desired. Example 1
- Facility Name. When you select this attribute, you will be presented with a
 list of facilities by name. Using the dropdown lists in the Standard column,
 designate a condition standard for each facility desired. Using this attribute,
 you can target individual facilities.
- Facility Subcategory (Army ISR). When you select this attribute, you will
 be presented with a listing of three-digit Facility Subcategories used by
 Army ISR. Using the dropdown lists in the Standard column, designate a
 condition standard for each subcategory desired.
- Facility Type. [Building/Pavement] When you select this attribute, you will
 be presented with a list of two facility types: "Building" and "Pavement."
 Using the dropdown lists in the Standard column, designate a condition
 standard for each.
- Facility Use (CatCode). See Facility Category Code.
- Family Housing. When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the Standard column, designate a condition standard for each. An example of setting up a condition policy using this attribute is the case where you want to maintain certain systems, such as HVAC, to a higher standard in the case of Family Housing = "True." In this example case, you would use the Family Housing attribute in combination with an additional attribute, System. See "Policy Using Multiple Attributes" on page 40 in the topic "Add a Condition Policy" on page 35 for how to combine attributes successfully.
- Section Component Type. When you select this attribute, you will be presented with a listing of various specifications such as equipment volume

¹An example of setting up a condition policy based on this attribute is the case where you want to set increasingly higher standards for facilities with increasingly higher MDIs.

or performance capacities, or tiers of pipe diameters. Using the dropdown lists in the **Standard** column, designate a condition standard for each item desired.

Section Material/Equipment Type. When you select this attribute, you will
be presented with a listing of the material types available for ComponentSections, ordered by number.

C301001 CONCRETE WALL FINISHES
C301002 PLASTER WALL FINISHES
C301003 GYPSUM WALLBOARD FINISHES
C301004 TILE & TERRAZZO WALL FINISHES

Using the dropdown lists in the **Standard** column, designate a condition standard for each Section Component Type desired.

- Section Remaining Service Life. When you select this attribute, you will
 be presented with tiers showing ranges of values for the Section's remaining service life (RSL). Using the dropdown lists in the Standard column,
 designate a condition standard for each tier desired. Example¹
- Section Year Built/Installed. When you select this attribute, you will be
 presented with tiers describing the Section's Year Built /Installed (ten years
 per tier, plus "Before 1900" and "Unknown"). Using the dropdown lists in the
 Standard column, designate a condition standard for each tier desired.

 Example²
- Section Years Since Inspection. When you select this attribute, you will
 be presented with tiers describing the amount of time passed since the
 latest inspection of the Section (ranging from "Less than 6 months ago" to
 "More than 5 years ago." Using the dropdown lists in the Standard column,
 designate a condition standard for each tier desired. Example³
- System. This attribute allows you to specify a standard for each System
 available to the program. When you select System as one of your attributes,
 you will be presented with a list of Systems. Each line shows the number (in
 UNIFORMAT II format) and name of a System. Using the dropdown lists in
 the Standard column, designate a condition standard for each System
 desired.

¹An example of setting up a condition policy based on this attribute is the case where you would want to apply a low condition standard to an inventory item that has a short RSL and is expected to be replaced soon.

²An example of setting up a condition policy based on this attribute is the case where you decide to maintain progressively older Sections at progressively lower standard levels, because they are closer to being replaced.

³This attribute could be used to step up inspections for Component-Sections that have not been recently inspected.

Note: You can find a table showing UNIFORMAT II System ("Level 2") numbers in the Inventory section of the documentation, under "BUILDER Systems and Components." In the PDF documentation, refer to the *BUILDER Inventory Guide*, Version 3.5.2 or later.

- Work Activity. This attribute is used for Prioritization Schemes only.
- Work Completion Year. This attribute is used for Prioritization Schemes only.
- Work ROI. This attribute is used for Prioritization Schemes only.

About Combining Condition Policy Attributes

When you use more than one attribute to define a policy, BUILDER will construct a grid that takes into account all possible combinations of the attributes selected for the policy. The number of options in the grid will be the result of multiplying the number of options available for each attribute selected in the policy. For example, 21 (number of **Systems**) x 6 (number of options for **Building Number of Floors** x 2 (a True/False attribute) = 252 grid options.

You can see how additional attribute selections—especially those with a large number of options—can amplify the size of the grid you will need to deal with when applying standards to the desired combinations of options, so be careful in designing your policy.

When applying standards, you will rarely need to select a condition standard for every possible combination of options. Combinations for which no condition standard is specified are simply not dictated by the policy; the default standard defined at <u>Policy Sequences</u> will be applied.

Instructions for combining condition policy attributes can be found at <u>"Policy Using Multiple Attributes"</u> on page 40 in the topic <u>"Add a Condition Policy"</u> on page 35.

Edit a Condition Policy

This topic shows how to edit an existing condition policy.

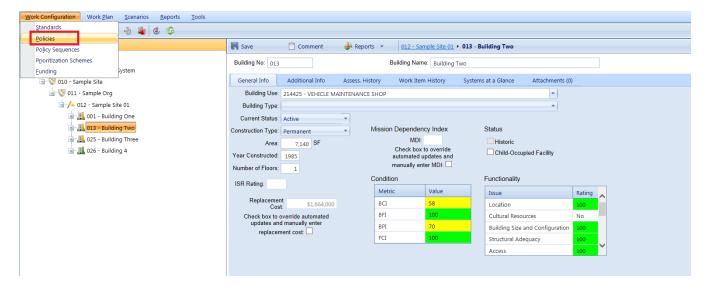
Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

Navigate to the Policies

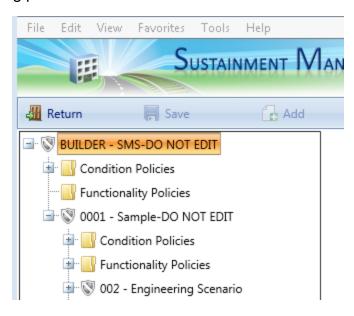
If you have already navigated to the needed location, you can skip to <u>"Edit Condition Policy Data" on the next page</u>.

To navigate to the folders where you can add or edit policies,

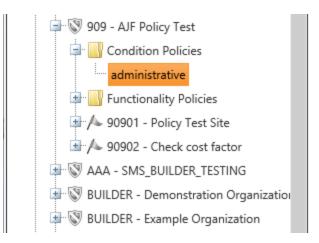
1. Activate **Work Configuration > Policies** in the main menu. You will be brought to the Policies window, with the Policies navigation tree at the left, showing only the top level Organization.



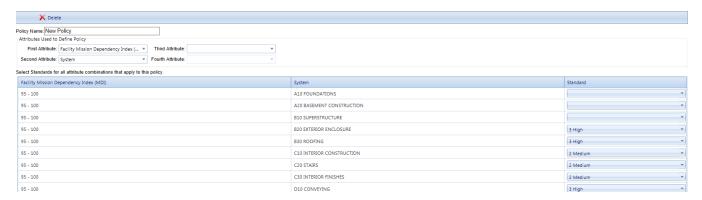
2. Expand the tree to show folders for condition and functionality policies. From these folders, new condition or functionality policies can be added and the existing policies can be viewed and edited.



- 3. Navigate in the Policy tree to the **Condition Policies** folder for the desired Organization or Site.
- 4. Select the condition policy you wish to edit.



The policies window will appear in the content pane as shown below, and data can be input or changed for the policy (instructions at <u>"Edit Condition Policy Data" below</u>).



Policy Toolbar Options

On the toolbar above the navigation tree, only the toolbar options that are available at your current location will show as active; others will be grayed out.

- **A Return**. Exits Policies and returns you to your previous location.
- | Save. Saves changes made to the policy.
- 🔓 Add. Initiates adding a new policy.
- X Delete. Deletes the selected policy.

Edit Condition Policy Data

The following data can be edited in a condition policy:

 Name. The policy's name must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- Attribute selection used to define the Policy. Making changes to the attribute selection after standards data has been entered is not a good idea. Thinking out the attribute selection in advance is better.
 - 1. Add an Attribute. You can add an attribute to a previously created condition policy. However, if you already applied standards to some of the options listed for existing attributes in the policy, these will apply to each and every option for your newly added attribute where your new attribute intersects the standard-defined options of the existing attributes. This may or may not be desirable. In the example given at "Select Standards" on page 39 in the topic "Add a Condition Policy" on page 35, when the True/False attribute Family Housing was added to a policy where the "Elevated" standard had already been applied to the HVAC System, the "Elevated" standard was applied to both the HVAC System/Family Housing="True" combination and the HVAC System/Family Housing="True" combination. In this case, impact was minimal because the added attribute only had two options.
 - 2. *Delete an Attribute.* You can delete an attribute from a previously created condition policy.

For more detail about available policy attributes, see <u>"About Condition Policy Attributes" on page 43</u>.

• Standards applied to the attributes or attribute combinations. Assign condition standards to the various combinations of values of these field properties, so that when a Section's hierarchy has field properties matching a given combination of values, it will use the condition standard for that combination. The grid at the bottom of the window will show all combinations of the attributes selected. You do not need to select a condition standard for every combination. Combinations for which no condition standard is specified are simply not dictated by the policy; the default standard defined at Policy Sequences will be applied.

You can see more information about combining attributes at <u>"About Combining Condition Policy Attributes" on page 50</u> in the topic <u>"About Condition Policy Attributes"</u> on page 43.

Save

IMPORTANT: After adding or editing a policy, make sure to activate the **Save** button in the toolbar to save the changes to the policy.

WARNING: Saving will not happen automatically, so you may lose data entries if you fail to save.

Exit Policies (Optional)

If you wish to exit the Policies area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Add a Condition Policy" on page 35

"About Condition Policy Attributes" on page 43

"Delete a Condition Policy" below

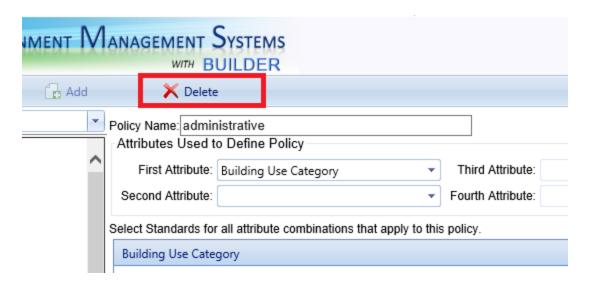
"Work Configuration Overview" on page 5

Delete a Condition Policy

Permissions Note: This action requires Master Planner or Administrator permission for the relevant location in inventory.

In the Content Pane

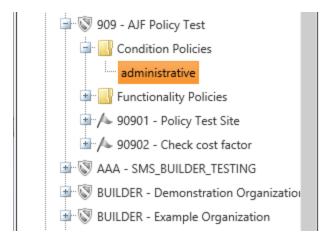
If the policy you wish to delete is currently showing in the content pane, simply activate the **Delete** button on the toolbar. You will be presented with a confirmation popup before the policy is deleted.



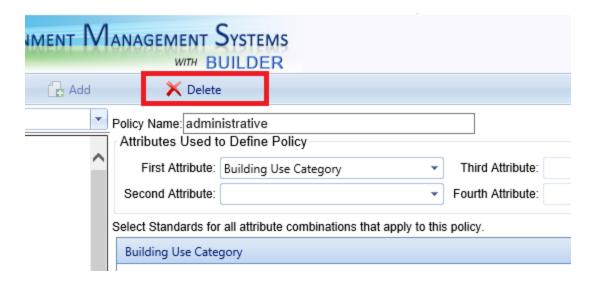
Starting in the Navigation Tree

If the policy is not showing in the content screen, navigate to the policy and then delete it, as described here:

- 1. Select **Work Configuration > Policies** from the main menu, if you are not already in the Policies tree.
- 2. Navigate the Policies tree in the navigation pane until you reach the desired policy, and select it.



3. When the policy appears in the content pane, activate the Pelete button on the toolbar. You will be presented with a confirmation popup before the policy is deleted.



Exit Policies (Optional)

If you wish to exit the Policies area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

- "Add a Condition Policy" on page 35
- "Edit a Condition Policy" on page 50
- "About Condition Policy Attributes" on page 43
- "Work Configuration Overview" on page 5

Add a Functionality Policy

Functionality policies can be made to apply Organization wide, or they can be set Site by Site. This topic shows how to add a functionality policy.

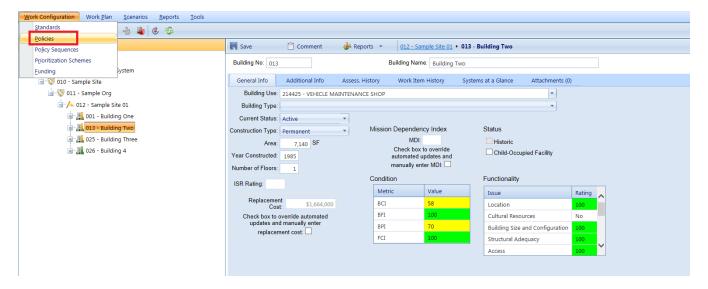
Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

Navigate to the Policies

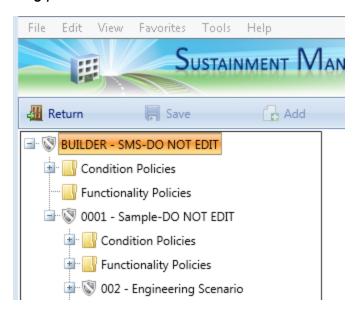
If you've already navigated to the needed location, you can skip to <u>"Create a New Functionality Policy"</u> on the next page.

To navigate to the folders where you can add or edit policies,

1. Activate **Work Configuration > Policies** in the main menu. You will be brought to the Policies window, with the Policies navigation tree at the left, showing only the top level Organization.



2. Expand the tree to show folders for condition and functionality policies. From these folders, new condition or functionality policies can be added and the existing policies can be viewed and edited.



Policy Toolbar Options

On the toolbar above the navigation tree, only the toolbar options that are available at your current tree location will show as active; others will be grayed out.

- **4** Return. Closes the Policies window.
- Save. Saves changes made to the policies.
- Add. Initiates adding a new policy.
- X Delete. Deletes the selected policy.

Create a New Functionality Policy

To create a functionality policy,

- 1. Select the appropriate **Functionality Policies** folder on the tree. *This* should cause the **Add** button on the toolbar to become visible.
- 2. Activate the **Add** button on the toolbar. *The "New Policy" popup window will appear.*

Note: The Organization or Site level at which you are adding a policy denotes the level at which that policy can be applied. The policy can be applied at that Organization or Site level, or at any node in the tree that is beneath it.



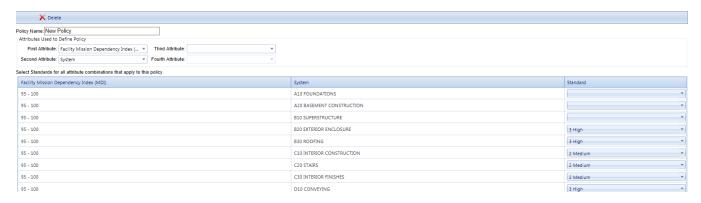
3. In the **Policy Name** text box, enter a name for the policy. The name must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- If you want to copy data from an existing policy to the new one, mark the Copy an Existing Policy checkbox and select from the dropdown list an existing policy to copy.
- 5. Activate the **Add** button on the toolbar. *The policy window will open as shown below.*

Note: If the **Add** button is grayed out, this may mean that you do not have the appropriate permissions Role covering that location in inventory.

6. Enter data for the policy, as described in the section <u>"Required Functionality</u> Policy Data" below.



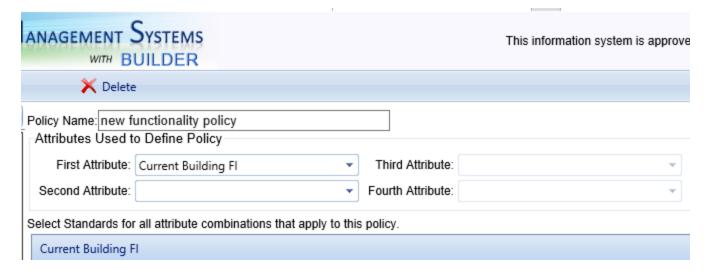
Required Functionality Policy Data

When you add a new functionality policy, you must do the following to provide the data needed by the policy:

Select Attributes Used to Define the Policy

CAUTION: Even though the attribute selection can be edited after the policy is created, this can lead to unintended consequences that are time-consuming to fix when there is more than one attribute. It is advisable to spend time in advance, before creating the functionality policy, adequately thinking out the selection of attributes needed.

Select between one and four attributes to define the policy. These are selected consecutively as First Attribute, Second Attribute, Third Attribute, and Fourth Attribute. These attributes are simply field properties pertaining to the inventory item being evaluated. See the topic "About Functionality Policy Attributes" on page 62 for more detail about each attribute available. The selection of attributes takes place at the top of the functionality policy content screen as shown below.



2. For each attribute you select from the dropdown list in the field, the appropriate options will appear in the content pane.

IMPORTANT: If you will be using more than one attribute in the policy, delay selecting Standards until you have designated all of the attributes that you plan to use.

3. If the option listing is quite long, you will be given the option at the bottom of the screen to choose a page size (number of items listed per screen) appropriate to your computer screen size and resolution. A listing of page numbers will appear at the bottom of the screen to assist in navigating through the options.

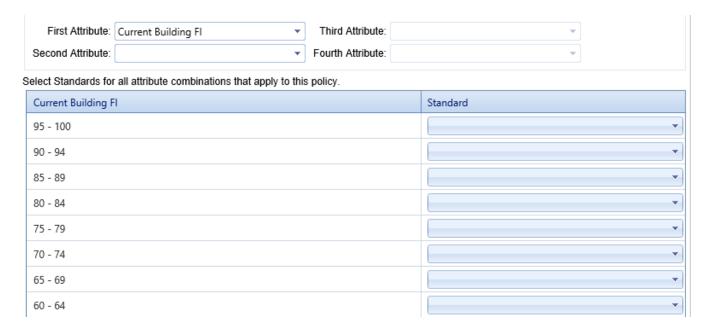
Select Standards

After selecting *all* of the attributes you plan to use for the policy, *then* select the Standards to be applied to some or all of the options presented for the attribute, or combination of attributes, selected for the policy.

Note: In most cases, you will not need to select a standard for each and every possibility presented.

Policy Using One Attribute

If the policy makes use of just one selected attribute, use the dropdown lists in the **Standard** column to apply standards to one or more of the options presented for that attribute. The example shown below is from the **Current Building FI** attribute, used by itself:



Policy Using Multiple Attributes

IMPORTANT: If you are using more than one attribute in the policy, delay selecting Standards until all applicable attributes have been selected. This is because when attributes are used in combination, a grid of attribute combinations will be presented (which is better), instead of option lists for each attribute separately.

- 1. Once all <u>attributes have been selected</u>, a grid will appear in the lower part of the policy content screen that displays all possible combinations of the attributes selected for the policy. The number of options in the grid will be the result of multiplying the number of options available for each attribute selected in the policy. For example, 20 (number of tiers available for the Current Building FI attribute) x 9 (number of tiers available for Estimated Work Cost) = 180 grid options.
- You do not need to select a functionality standard for every combination.
 Combinations for which no standard is specified are simply not dictated by the policy; the default standard defined by the selected <u>policy sequence</u> will be applied.

Save

IMPORTANT: After adding or editing a policy, make sure to activate the **Save** button in the toolbar to save the changes to the policy.

WARNING: Saving will not happen automatically, so you may lose data entries if you fail to save.

Editing a Functionality Policy

After a functionality policy has been added, you can edit its data by selecting the policy on the tree. When you are finished editing, make sure to activate the **Save** button on the toolbar to save changes made to the functionality policy.

For more detail on editing a functionality policy, see <u>"Edit a Functionality Policy"</u> on page 70.

Exit Policies (Optional)

If you wish to exit the Policies area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Edit a Functionality Policy" on page 70

"About Functionality Policy Attributes" below

"Delete a Functionality Policy" on page 74

"Work Configuration Overview" on page 5

About Functionality Policy Attributes

This topic lists the inventory item attributes that can be selected from when setting up work management policies and explains how to use them alone or in combination.

A condition policy can be based on any one, two, three, or four attributes pertaining to the inventory item(s) that will be evaluated by the policy. If you are creating a policy containing more than one attribute, be sure to familiarize with the section "About Combining Functionality Policy Attributes" on page 69.

Some of the attributes shown in the dropdown list will have characteristics and options that make them similar but not identical to one or more other attributes. This is because the attribute options have been customized for different user groups with similar but not identical inventory groupings and analysis needs.

Note: It might not be necessary to designate a standard for each and every value range listed for your selected attributes. In Policy Sequences, a default condition standard is set for items that do not have a condition standard set for them in a policy. If a **Standard** field is left blank, the default standard specified under Policy Sequences will be used.

Available Policy Attributes

The same policy attributes are available for <u>condition policy attributes</u> and for functionality policy attributes, but the examples given may differ.

- Building Construction Type. When you select this attribute, you will be
 presented with the four Building Construction Types: "Permanent," "Semipermanent," "Temporary," and Leased." Using the dropdown lists in the
 Standard column, designate a condition standard for each. Example¹
- Building Historic. When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the Standard column, designate a condition standard for each. Example²
- Building Number of Floors. When you select this attribute, you will be presented with an entry form divided into the following categories: "1 Floor," "2 Floors," "3 Floors," "4 Floors," "5 to 10 Floors," and "More than 10 Floors." Using the dropdown lists in the Standard column, designate a condition standard for each category desired. If a Standard field is left blank, the default standard specified under Policy Sequences will be used. Example³
- Building Type. When you select this attribute, you will be presented with a listing of various building frame types such as "Concrete Shear Walls" and "Steel Light Frame." Using the dropdown lists in the Standard column, designate a condition standard for each. Example⁴

¹An example of setting up a condition policy based on this attribute is the case where you want to set a lower condition standard for Component-Sections in a temporary Building or facility.

²An example of setting up a condition policy based on this attribute is the case where you want to set the condition standard to High or Elevated for Component-Sections in a historic building.

³An example of setting up a condition policy using this attribute is the case where you might want to designate a higher condition standard for fire protection systems in buildings more than two stories high.

⁴An example of setting up a condition policy using this attribute is the case where you want to maintain the fire protection System in a wood frame Building ("Wood, Commercial and Industrial" and "Wood, Light Frame") to a higher standard than in other Buildings.

- Building use Category. When you select this attribute, you will be presented with a listing of building use categories. The broad categories listed here are those with one-digit category codes, the Building Functionality Group. Using the dropdown lists in the Standard column, designate a condition standard for each category desired. Example¹
- Building Vacant. When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the Standard column, designate a condition standard for each. Example²
- Building Year Constructed. When you select this attribute, you will be
 presented with tiers describing the Building's year of construction (ten years
 per tier, plus "Before 1900" and "Unknown"). Using the dropdown lists in the
 Standard column, designate a condition standard for each. Example³
- Child-Occupied Facility. When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the Standard column, designate a condition standard for each. Example⁴
- Component. This attribute allows you to specify a standard for each Component available to the program. When you select "Component" as one of your attributes, you will be presented with a long list of Components. Each line shows the number (in UNIFORMAT II format) and name of a Component. Using the dropdown lists in the Standard column, designate a condition standard for each Component desired.

Tip: A time-saving measure to consider is to use **System** as one of your attributes, and then to designate a standard here only for those Components whose standard should differ from the standard set for the **System** they are in.

Note: You can find a table showing UNIFORMAT II Component ("Level 3") numbers in the Inventory section of the documentation, under "BUILDER Systems and Components." In the PDF documentation, refer to the *BUILDER Inventory Guide*, Version 3.5.2 or later.

¹An example of setting up a condition policy based on this attribute is the case where you want medical Buildings to be maintained at an Elevated condition standard, whereas supply structures such as warehouses can be maintained at a lower condition standard. If you wish to identify Building Use more specifically, you can use a different attribute such as Facility Category Code or Facility Use (CatCode). Each of these is described further below in this list. This example is fleshed out in more detail in <MadCap:xref href="WM_Example_Condition_Policy_Setup.htm">Examples of Condition Policy Setup</MadCap:xref>.

²An example of setting up a condition policy based on this attribute is the case where you want to maintain a vacant Building at a lower standard than one that is occupied.

³An example of setting up a condition policy based on this attribute is the case where you decide to maintain progressively older Buildings at progressively lower standard levels.

⁴An example of setting up a condition policy using this attribute is the case where you want to maintain certain Systems to a higher standard in a child-occupied facility.

- Component Importance Index (CII). When you select this attribute, you
 will be presented with tiers showing ranges of decimal values for the Component Importance Index (CII), plus a tier for the value 1. Using the dropdown lists in the Standard column, designate a condition standard for each
 tier desired. Example¹
- Current Area CI. This attribute refers to the CI of a Functional Area. The
 attribute may be used as part of either a condition policy or a functionality
 policy. When you select this attribute, you will be presented with tiers showing ranges of values for the Functional Area's CI. Using the dropdown lists
 in the Standard column, designate a condition standard for each tier
 desired.
- Current Area FI. This attribute may be used as part of a condition policy; it
 is not restricted to use in a functionality policy. When you select this attribute, you will be presented with tiers showing ranges of values for the Functional Area's functionality index (FI). Using the dropdown lists in the
 Standard column, designate a condition standard for each tier desired.
 Example²
- Current Building CI. you will be presented with tiers showing ranges of values for the CI of the Building as a whole. Using the dropdown lists in the Standard column, designate a condition standard for each tier. Example³
- Current Building FCI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the Building's Facility Condition
 Index (FCI). Using the dropdown lists in the Standard column, designate a
 condition standard for each tier.

Note: In BUILDER, the formula for the FCI is one *minus* the ratio of repair needs to replacement cost, which translates to a Building with a higher FCI being in better condition than a Building having a lower FCI.

• Current Building FI. When you select this attribute, you will be presented with tiers showing ranges of values for the Building's FI. Using the drop-

¹An example of setting up a condition policy based on this attribute is the case where you want to apply higher condition standards to components with a larger CII value.

²An example of setting up a condition policy based on this attribute is the case where you don't want a lot of work items generated for an area that is poorly performing its intended functionality, because the area may soon be due for modernization or other changes. Therefore, you might hold a functional area with a low FI to a much lower condition standard than usual.

³An example of setting up a condition policy based on this attribute is the case where you want to apply a standard with more frequent inspections to CI tiers in the middle of the range, where catching a problem early and fixing it promptly will usually make a greater difference than in the top tiers, where problems are less likely to occur, or the bottom tiers where the item is closer to the end of its useful life.

- column, designate a condition standard for each tier desired. Example²
- Current Building Min Issue FI. The "Min(imum) Issue FI" attribute refers to the FI of the functionality issue that scores the lowest in a functionality assessment. The issue so identified can be referred to as the "controlling issue." When you select this attribute, you will be presented with tiers showing ranges of values that the lowest-scoring FI might have. Using the dropdown lists in the Standard column, designate a condition standard for each tier desired.

Note: An alternative approach that also targets a specific functionality issue is to create a policy based on a specific functionality issue of your choice, rather than basing the policy on whatever issue scores the lowest. For example, you could create a rule that "Access" is not allowed to go below a particular score.

- Current Building PI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the Building's performance index
 (BPI). Using the dropdown lists in the Standard column, designate a condition standard for each tier desired. Example³
- Current Component CI. When you select this attribute, you will be presented with tiers showing ranges of values for the current Component's CI (BCCI). Using the dropdown lists in the Standard column, designate a condition standard for each tier desired.
- Current Section CCI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the current Section's coating condition index (CCI). Using the dropdown lists in the Standard column, designate a condition standard for each tier desired.
- Current Section CI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the current Section's CI (CSCI).
 Using the dropdown lists in the Standard column, designate a condition
 standard for each tier desired.
- Current System CI. When you select this attribute, you will be presented
 with tiers showing ranges of values for the current System's CI (SCI). Using

⁴An example of setting up a condition policy based on this attribute is the case where you don't want a lot of work items generated for a Building that is poorly performing its intended functionality, because the Building may soon be due for modernization or demolition. Therefore, you might hold a Building with a low FI to a much lower condition standard than usual. ²An example of setting up a condition policy based on this attribute is the case where you don't want a lot of work items generated for a Building that is poorly performing its intended functionality, because the Building may soon be due for modernization or demolition. Therefore, you might hold a Building with a low FI to a much lower condition standard than usual. ³An example of setting up a condition policy based on this attribute would be similar to using current Building FI: you might not want a lot of work items generated for a Building with a low PI. If this is the case, you could hold a Building with a low FI to a much lower condition standard than usual.

the dropdown lists in the **Standard** column, designate a condition standard for each tier desired.

- Estimated Work Cost. This attribute is used for Prioritization Schemes only.
- Facility Category (Army ISR). When you select this attribute, you will be
 presented with the three-digit facility category groupings used by Army ISR.
 Using the dropdown lists in the Standard column, designate a condition
 standard for each category grouping desired.
- Facility Category Code. When you select this attribute, you will be presented with a listing of facility category codes (at the time of this writing, 75 screens of content at 50 items per screen). Use the dropdown lists in the Standard column to designate a condition standard for each category code desired.

Tip: A time-saving measure to consider is to use the broader attribute "Building Use Category" as one of your attributes, and then to designate a standard here only for those Facility Category Codes whose standard should differ from the standard set for the broader **Building Use Category** they belong in as well.

- Facility Category Group (Army ISR). When you select this attribute, you
 will be presented with a listing of Facility Category Groups used by Army
 ISR. (Each of these has a code beginning with the letter "F.") Using the dropdown lists in the Standard column, designate a condition standard for each
 Category Group desired.
- Facility Mission Area (Army ISR). When you select this attribute, you will
 be presented with a listing of the five Facility Mission Areas used by Army
 ISR. Using the dropdown lists in the Standard column, designate a condition standard for each Facility Mission Area desired.
- Facility Mission Dependency Index (MDI). When you select this attribute, you will be presented with a listing of tiers of scores for the facility's MDI.
 The higher the MDI of a Building or other facility, the more critical it is to the mission. Using the dropdown lists in the Standard column, designate a condition standard for each tier desired. Example 1
- Facility Name. When you select this attribute, you will be presented with a
 list of facilities by name. Using the dropdown lists in the Standard column,
 designate a condition standard for each facility desired. Using this attribute,
 you can target individual facilities.

¹An example of setting up a condition policy based on this attribute is the case where you want to set increasingly higher standards for facilities with increasingly higher MDIs.

- Facility Subcategory (Army ISR). When you select this attribute, you will be presented with a listing of three-digit Facility Subcategories used by Army ISR. Using the dropdown lists in the **Standard** column, designate a condition standard for each subcategory desired.
- Facility Type. [Building/Pavement] When you select this attribute, you will be presented with a listing of two facility types: "Building" and "Pavement." Using the dropdown lists in the Standard column, designate a condition standard for each.
- Facility Use (CatCode). See Facility Category Code.
- Family Housing. When you select this attribute, you will be presented with "True" and "False." Using the dropdown lists in the Standard column, designate a condition standard for each. An example of setting up a condition policy using this attribute is the case where you want to maintain certain systems, such as HVAC, to a higher standard in the case of Family Housing = "True." In this case, you would use the Family Housing attribute in combination with an additional attribute, System. See "Policy Using Multiple Attributes" on page 40 in the topic "Add a Condition Policy" on page 35 for how to combine attributes successfully.
- Section Component Type. When you select this attribute, you will be
 presented with a listing of various specifications such as equipment volume
 or performance capacities, or tiers of pipe diameters. Using the dropdown
 lists in the Standard column, designate a condition standard for each item
 desired.
- **Section Material/Equipment Type.** When you select this attribute, you will be presented with a listing of the material types available for Component-Sections, ordered by number.

C301001 CONCRETE WALL FINISHES
C301002 PLASTER WALL FINISHES
C301003 GYPSUM WALLBOARD FINISHES
C301004 TILE & TERRAZZO WALL FINISHES

Using the dropdown lists in the **Standard** column, designate a condition standard for each **Section Component Type** desired.

 Section Remaining Service Life. When you select this attribute, you will be presented with tiers showing ranges of values for the Section's remain-

- column, designate a condition standard for each tier desired. Example²
- Section Year Built/Installed. When you select this attribute, you will be presented with tiers describing the Section's Year Built /Installed (ten years per tier, plus "Before 1900" and "Unknown"). Using the dropdown lists in the Standard column, designate a condition standard for each tier desired. Example³
- Section Years Since Inspection. When you select this attribute, you will
 be presented with tiers describing the amount of time passed since the
 latest inspection of the Section (ranging from "Less than 6 months ago" to
 "More than 5 years ago." Using the dropdown lists in the Standard column,
 designate a condition standard for each tier desired. Example⁴
- System. This attribute allows you to specify a standard for each available
 System. When you select System as one of your attributes, you will be
 presented with a list of Systems. Each line shows the number (in
 UNIFORMAT II format) and name of a System. Use the dropdown lists in the
 Standard column to designate a condition standard for each System
 desired.

Note: You can find a table showing UNIFORMAT II System ("Level 2") numbers in the Inventory section of the documentation, under "BUILDER Systems and Components." In the PDF documentation, refer to the *BUILDER Inventory Guide*, Version 3.5.2 or later.

- Work Activity. This attribute is used for <u>Prioritization Schemes</u> only.
- Work Completion Year. This attribute is used for Prioritization Schemes only.
- Work ROI. This attribute is used for Prioritization Schemes only.

About Combining Functionality Policy Attributes

When you use more than one attribute to define a policy, BUILDER will construct a grid that takes into account all possible combinations of the attributes selected for the policy. The number of options in the grid will be the result of multiplying the number of options available for each attribute selected in the policy. For example, 21 (number of **Systems**) x 6 (number of options for **Building Number of Floors** x 2 (a True/False attribute) = 252 grid options.

¹An example of setting up a condition policy based on this attribute is the case where you would want to apply a low condition standard to an inventory item that has a short RSL and is expected to be replaced soon.

²An example of setting up a condition policy based on this attribute is the case where you would want to apply a low condition standard to an inventory item that has a short RSL and is expected to be replaced soon.

³An example of setting up a condition policy based on this attribute is the case where you decide to maintain progressively older Sections at progressively lower standard levels, because they are closer to being replaced.

⁴This attribute could be used to step up inspections for Component-Sections that have not been recently inspected.

You can see how additional attribute selections—especially those with a large number of options—can amplify the size of the grid you will need to deal with when applying standards to the desired combinations of options, so be careful in designing your policy.

When applying standards, you will rarely need to select a condition standard for every possible combination of options. Combinations for which no condition standard is specified are simply not dictated by the policy; the default standard defined at <u>Policy Sequences</u> will be applied.

Instructions for combining condition policy attributes can be found at <u>"Policy Using Multiple Attributes" on page 61</u> in the topic <u>"Add a Functionality Policy" on page 56</u>.

Edit a Functionality Policy

This topic shows how to edit an existing functionality policy.

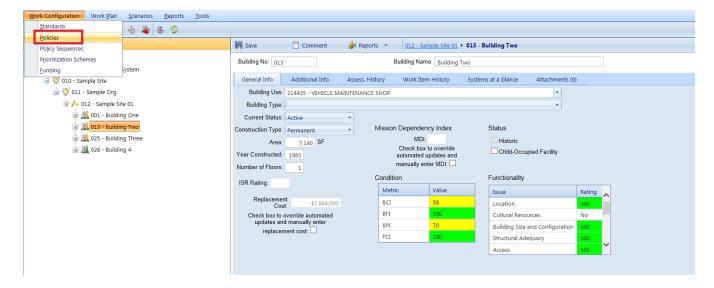
Permissions Note: This action requires Work Planner permission or above for the relevant location in inventory.

Navigating to the Policies

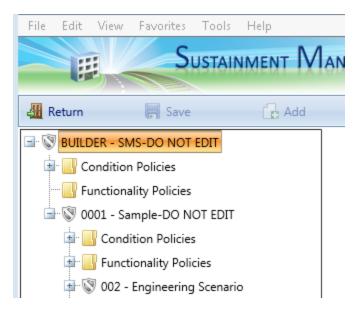
If you have already navigated to the needed location, you can skip to <u>"Edit Functionality Policy Data" on page 72</u>.

To navigate to the folders where you can add or edit policies,

1. Activate **Work Configuration > Policies** in the main menu. You will be brought to the Policies window, with the Policies navigation tree at the left, showing only the top level Organization.

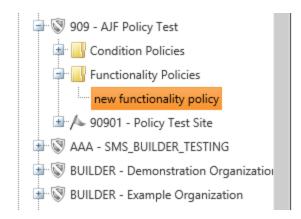


2. Expand the tree to show folders for condition and functionality policies. From these folders, new condition or functionality policies can be added and the existing standards can be viewed and edited.

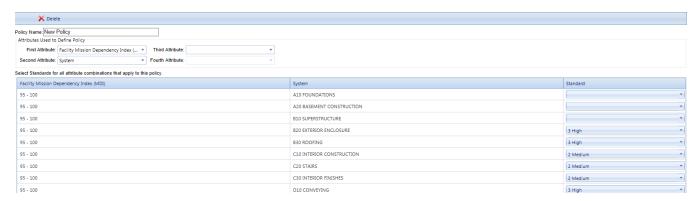


3. Navigate in the Policy tree to the **Functionality Policies** folder for the desired Organization or Site.

4. Select the functionality policy you wish to edit.



The policies window will appear in the content pane as shown below, and data can be input or changed for the policy (instructions at "Edit Functionality Policy Data" below).



Policy Toolbar Options

On the toolbar above the navigation tree, only the toolbar options that are available at your current location will show as active; others will be grayed out.

- **All Return**. Exits Policies and returns you to your previous location.
- Save. Saves changes made to the policies.
- 🔓 Add. Initiates adding a new policy.
- X Delete. Deletes the selected policy.

Edit Functionality Policy Data

The following data can be edited in a functionality policy:

• Name. The policy name must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- Attribute selection used to define the Policy. Making changes to the attribute selection after standards data has been entered is not a good idea. Thinking out the attribute selection in advance is better.
 - 1. Add an Attribute. You can add an attribute to a previously created functionality policy. However, if you already applied standards to some of the options listed for existing attributes in the policy, these will apply to each and every option for your newly added attribute where your new attribute intersects the standard-defined options of the existing attributes. This may or may not be desirable. In the example given at "Select Standards" on page 39 in the topic "Add a Condition Policy" on page 35, when the True/False attribute Family Housing was added to a policy where the "Elevated" standard had already been applied to the HVAC System, the "Elevated" standard was applied to both the HVAC System/Family Housing="True" combination and the HVAC System/Family Housing="True" combination. In this case, impact was minimal because the added attribute only had two options.
 - 2. *Delete an Attribute.* You can delete an attribute from a previously created functionality policy.

For more detail about available policy attributes, see <u>"About Functionality Policy Attributes"</u> on page 62.

• Standards applied to the attributes or attribute combinations. Assign functionality standards to the various combinations of values of these field properties, so that when a Section's hierarchy has field properties matching a given combination of values, it will use the functionality standard for that combination. The grid at the bottom of the window will show all combinations of the attributes selected. You do not need to select a functionality standard for every combination. Combinations for which no functionality standard is specified are simply not dictated by the policy; the default standard defined by the policy sequence used will be applied.

Save

IMPORTANT: After adding or editing a policy, make sure to activate the **Save** button in the toolbar to save the changes to the policy.

WARNING: Saving will not happen automatically, so you may lose data entries if you fail to save.

Exit Policies (Optional)

If you wish to exit the Policies area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

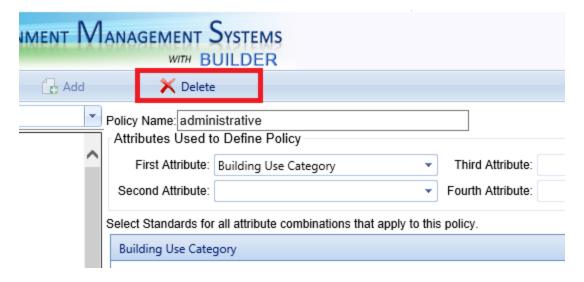
- "Add a Functionality Policy" on page 56
- "About Functionality Policy Attributes" on page 62
- "Delete a Functionality Policy" below
- "Work Configuration Overview" on page 5

Delete a Functionality Policy

Permissions Note: This action requires Master Planner or Administrator permission for the relevant location in inventory.

In the Content Pane

If the policy you wish to delete is currently showing in the content pane, simply activate the **Delete** button on the toolbar. You will be presented with a confirmation popup before the policy is deleted.



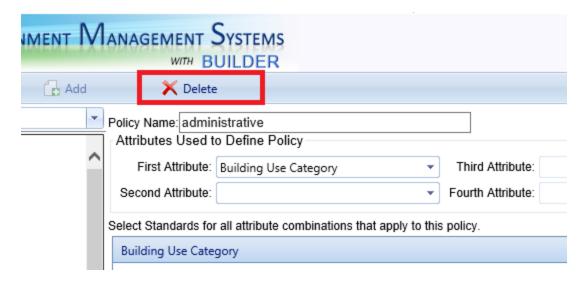
Starting in the Navigation Tree

If the policy is not showing in the content screen, navigate to the policy and then delete it, as described here:

- 1. Select **Work Configuration > Policies** from the main menu, if you are not already in the Policies tree.
- 2. Navigate the Policies tree in the navigation pane until you reach the desired policy, and select it.



3. When the policy appears in the content pane, activate the Pelete button on the toolbar. You will be presented with a confirmation popup before the policy is deleted.



Exit Policies (Optional)

If you wish to exit the Policies area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

- "Add a Functionality Policy" on page 56
- "Edit a Functionality Policy" on page 70
- "About Functionality Policy Attributes" on page 62
- "Work Configuration Overview" on page 5

Policy Sequences

About Policy Sequences

The third step in work configuration, after defining policies, is to define one or more policy sequences. A policy sequence performs two essential functions: (1) It defines a default standard to be used when there is no active policy that designates a standard for a given Component-Section. (2) It specifies the order in which policies will be applied; this prevents conflicts between policies.

What do Policy Sequences Do?

After work configuration <u>standards</u> and <u>policies</u> have been defined, one or more *policy sequences* will determine the priority order in which the policies are applied by BUILDER.

Another essential function of a policy sequence is that it identifies a default condition standard and a default functionality standard to be used in cases where a Component-Section is not explicitly "covered" by a policy.

Define Default Standards (Required)

In a policy sequence, specification of a default condition standard and a default functionality standard is mandatory. The selection dropdown lists for these defaults have no blank space. If you do not select a standard, the first one in the list will be used as the default.

Best Practice Recommendation: It is typically best to create a policy sequence at the top level of your policy sequence tree, and there define a catch-all default condition standard, as well as functionality standard, to be used. More applicable defaults can be set at lower locations in the tree, if appropriate. It is optional to select policies in this top-level policy sequence; setting the defaults is what is most important at this location.

With respect to policy sequences, and thereby the default standards that will be used when BUILDER finds no applicable policy in the "Selected Policies" list for a given inventory item, inheritance rules will dictate which policy sequence rules. That is, a default standard specified in a policy sequence lower in any given branch of the policy sequence tree will override defaults defined above it in the tree.

Determine Which Policies Are Available To Be Applied

If a policy is not included in any policy sequence, BUILDER will not apply it to anything in the inventory. Because of this, policy sequences not only govern the priority order in which policies are applied, they also govern which policies (if any) are not available to be applied at all.

A policy that does not appear in any policy sequence is still present in BUILDER but not active.

Note: A policy that is listed in a policy sequence might still never be applied to any Component-Section simply because the conditions (values of the inventory property attributes compared to settings defined in the standards, as well as its priority order in the list of policies) do not trigger its use.

Determine the Priority Order of Policies (Optional)

This section addresses the ordering of policies within a policy sequence, and which will apply at run time.

Each policy sequence can define a priority ordering of one or more selected policies in a list. Both condition and functionality policies may be included in the same list.

A policy lower in the list has lower priority with respect to its application than a policy above it in the list. BUILDER will apply the first policy in the list that applies to the inventory item being evaluated.

Note: It is possible for a policy sequence to exist just to define default standards for condition and functionality, in which case the **Selected Policies** area is left blank.

If no policies are present in the **Selected Policies** area then the default standards, which are also set in the policy sequence, will be used if the policy sequence is activated.

Policy sequence activation depends both on inheritance rules and on which policy sequence has been selected at the **General Information** tab for the Organization or Site (1) containing the given inventory item and (2) closest in the inventory tree to it. If no policy sequence has been assigned to the closest Site or Organization, then which inventory level, of those which have a policy sequence assigned, takes precedence will be decided according to inheritance rules.

Which Policy Sequence Ultimately Applies

Inheritance rules will dictate which policy sequence has priority. That is, a policy sequence located lower in any given branch of the policy sequence tree will, at run time, override the ones above it in the tree.

About Creating Policy Sequences

You may create multiple policy sequences. The application of a specific policy sequence could potentially result in a work plan that differs from one generated using a different policy sequence, even one listing the same policies, because each may assign different standards for the Component-Sections, Functional Areas, and Buildings in your inventory.

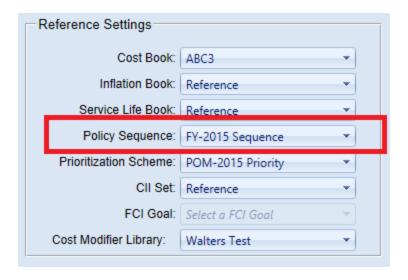
Any policy that has been defined at a particular Organization in the policies tree will be available for selection in any policy sequence throughout that Organization's scope. When defining a policy sequence, you have available to you not just policies (if any) that are defined at the location where you are defining the policy sequence, but also any and all policies that have been defined at one or more parent Organizations above your location. All available policies will show in the **Available Policies** column.

How To Assign a Policy Sequence to an Organization or Site

Multiple policy sequences may be defined, but a maximum of one policy sequence can be assigned to any given Organization or Site at its **General Information** tab.

Note: Any policy sequence that is not selected at any Organization or Site in the inventory is automatically inactive.

Assigning a policy sequence to an Organization or a Site is not done in the policy sequences tree; it is done at the **General Information tab** for that Organization or Site, in the **Reference Settings** area of the screen:



If no policy sequence is currently selected, "Select a policy sequence" will appear in the dropdown box, and the next closest policy sequence higher in the tree will apply, following the rules of inheritance.

Next Step

Standards, policies, and policy sequences together allow you to generate candidate work items for one or more years into the future. However, if the combined dollar amount estimated for all of these work items exceeds the budget available, you will also want to (1) define prioritization schemes and (2) list funding streams.

Task Links

"Add a Policy Sequence" below

"Edit a Policy Sequence" on page 84

"Delete a Policy Sequence" on page 86

Instructional Link

"Work Configuration Overview" on page 5

Add a Policy Sequence

A policy created for any given Organization node in the asset tree is available to all Organizations and Sites below that node. Using a policy sequence, you can manage the potentially large number of policies available.

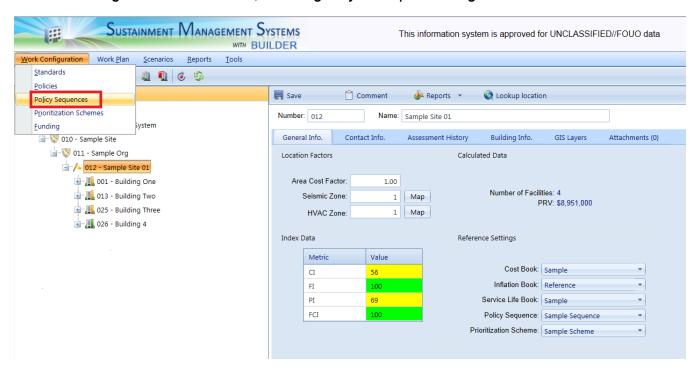
Adding a policy sequence gives you two capabilities:

- To select which available policies to apply at the current location in the inventory tree.
- 2. To dictate the order in which the selected policies are applied.

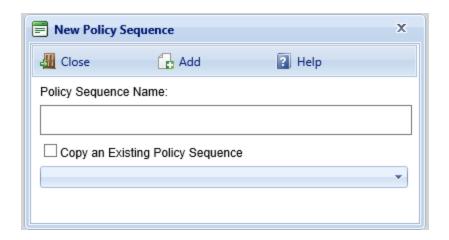
If no policies are applied, then the default condition standard or default functionality standard will be applied.

To add a policy sequence,

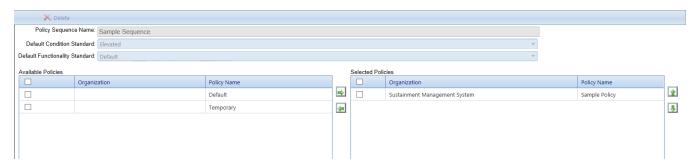
1. Activate **Work Configuration > Policy Sequences** at the main menu. You will be brought to the Policy Sequences window, with the Policy Sequences navigation tree at the left, showing only the top level Organization.



- 2. Navigate anywhere in the Policy Sequences tree up to the topmost Organization containing the policies you wish to put in order. (Do not navigate to an Organization that does not contain the desired policies.)
- 3. Select an Organization or Site.
- 4. Activate the **Add** button on the toolbar. The "New Policy Sequence" popup window should appear.



- 5. Enter a name for the policy sequence in the **Policy Sequence Name** text box. The name must be unique and is limited to 50 alphanumeric characters.
- 6. If you want to copy data from an existing policy sequence to the new one, mark the **Copy an Existing Policy** checkbox and select from the dropdown list an existing policy sequence to copy.
- 7. Activate the **Add** button on the popup window toolbar. *The policy sequence window will open as shown below*.



8. Enter data for the policy, as described in <u>"Required Policy Sequence Information" below.</u>

Policy Sequences Toolbar Options

- **A Return**. Closes the Policy Sequences window.
- | Save. Saves changes made to the policy sequences.
- 🔓 Add. Initiates adding a new policy sequence.
- X Delete. Deletes the selected policy sequence.

Required Policy Sequence Information

When you add a new policy sequence you must enter the following data:

• **Name.** The name of the policy sequence name must be unique and is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

- Default Condition Standard. From among the standards you have previously created, select a condition standard to be the default. Because the
 application of the policy sequence must be able to determine a standard for
 every Building and Functional Area in your inventory, if none of the policies
 in this policy sequence apply to a given Section then the default standard is
 used.
- Default Functionality Standard. From among the standards you have previously created, select a functionality standard to be the default. Because the application of the policy sequence must be able to determine a standard for every Building and Functional Area in your inventory, if none of the policies in this policy sequence apply to a given Section then the default standard is used.
- Selected Policies. Select the policies in the "Available Policies" list that you wish to add to the policy sequence, and use the green right arrow button move them to the "Selected Policies" list. To remove a policy from the "Selected Policies" list, use the green left arrow to move it back into the "Available Policies" list. You may choose to have no selected policies at all, in which case all inventory will use the default standard.

IMPORTANT: If there are no Selected Policies in your policy sequence, all inventory will use the default standards identified in the policy sequence.

• Order of Application. To change the order of application of policies in the "Selected Policies" list, select a policy and use the green up and down arrow buttons to move it in the list. Arrange the list so that each succeeding policy in the list overrides earlier policies in the list. That is, the last policy in the Selected Policy list governs the applicable Component-Sections, Functional Areas, and Buildings. "Applicable" Component sections are those that have a standard defined for them in that policy.

Note that you may create multiple policy sequences. The application of a specific policy sequence could potentially result in a work plan that differs from another policy sequence because each may assign different standards for the Component-Sections, Functional Areas, and Buildings in your inventory.

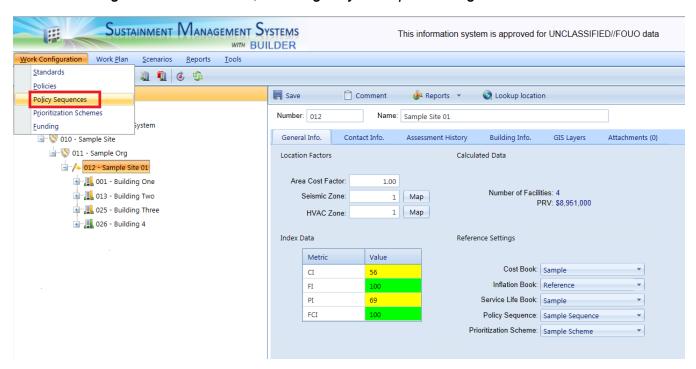
Related Links

- "Edit a Policy Sequence" below
- "Delete a Policy Sequence" on page 86
- "Work Configuration Overview" on page 5

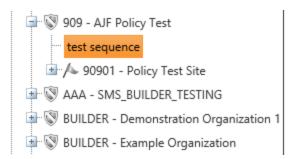
Edit a Policy Sequence

To edit a policy sequence,

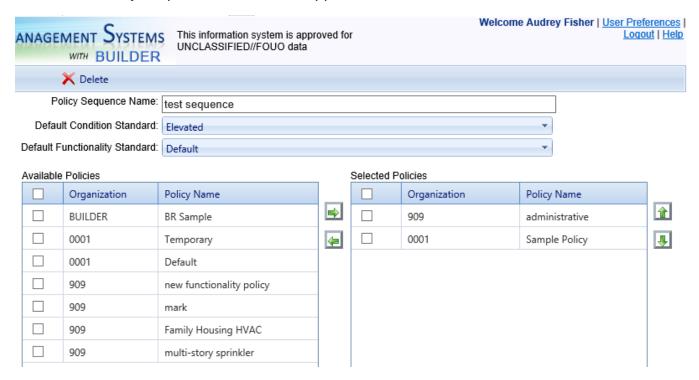
1. Select **Work Configuration > Policy Sequences** at the main menu. You will be brought to the Policy Sequences window, with the Policy Sequences navigation tree at the left, showing only the top level Organization.



2. Navigate to the desired policy sequence in the tree, and select it.



The Policy Sequence window will appear.



- 3. Using the left and right arrows, you can add policies to the "Selected Policies" table, or remove policies from the "Selected Policies" table.
- 4. Using the up and down arrows, you can change the order of policy application. Note that a policy lower in the list will override the policies farther up in the list with respect to all items that have a standard defined for them in that policy.
- 5. You can also change the default condition standard and/or the default functionality standard listed for the policy sequence.

Toolbar Options

- Return. Closes the Policy Sequences window.
- Save. Saves changes made to the policy sequence(s).
- Add. Initiates adding a new policy sequence.
- Delete. Deletes the selected policy sequence.

Edit Policy Sequence Data

Any of the following data in a policy sequence may be edited:

 Name. The policy sequence name must be unique and is limited to 50 alphanumeric characters.

- Default Condition Standard. Select a condition standard from among the standards you have previously created to be the default. The application of the policy sequence must be able to determine a standard for every Component-Section in your inventory. If none of the policies in this policy sequence apply to a given Section, then the default standard is used.
- Default Functionality Standard. Select a functionality standard from among the standards you have previously created to be the default. The application of the policy sequence must be able to determine a standard for every Building and Functional Area in your inventory. If none of the policies in this policy sequence apply to a given Section, then the default standard is used.
- Selected Policies. Select the policies in the "Available Policies" list that you wish to add to the policy sequence, and use the green right arrow button to move them to the "Selected Policies" list. To remove a policy from the "Selected Policies" list, use the green left arrow to move it back into the "Available Policies" list. You may choose to have no selected policies at all, in which case all inventory will use the default standard.

IMPORTANT: If there are no Selected Policies in your policy sequence, all inventory will use the default standards identified in the policy sequence.

• Order of Application. To change the order of application of a policy in the "Selected Policies" list, select the policy and use the green up and down arrow buttons to move it in the list. Arrange the list so that each succeeding policy in the list overrides earlier policies in the list. That is, the last policy in the Selected Policy list governs the applicable Component-Sections, Functional Areas, and Buildings. "Applicable" Component sections are those that have a standard defined for them in that policy.

Related Links

"Add a Policy Sequence" on page 80

"Delete a Policy Sequence" below

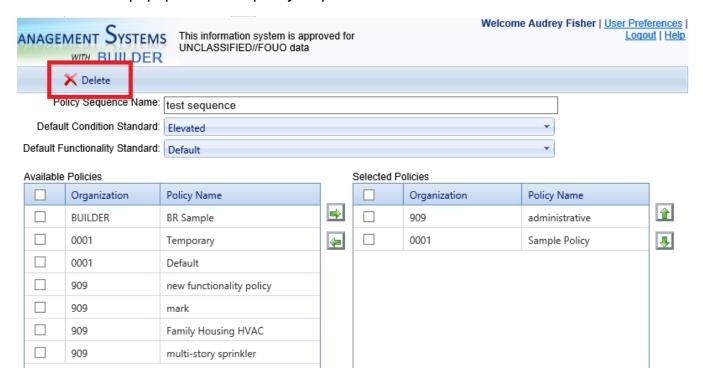
"Work Configuration Overview" on page 5

Delete a Policy Sequence

Permissions Note: This action requires Master Planner or Administrator permission for the relevant location in inventory.

Option A: Delete in the Content Pane

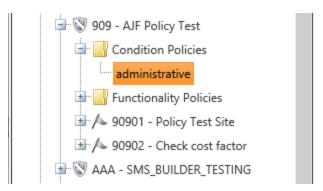
If the policy sequence you wish to delete is currently showing in the content pane, simply activate the **Delete** button on the toolbar. You will be presented with a confirmation popup before the policy sequence is deleted.



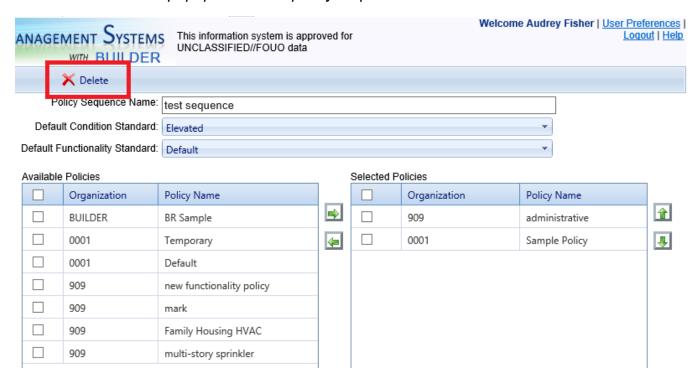
Option B: Delete Starting in the Navigation Tree

If the policy sequence is not showing in the content screen, navigate to the policy sequence in the tree and then delete it, as described here:

- Select Work Configuration > Policy Sequences from the main menu, if you are not already in the Policy Sequences tree.
- 2. Navigate the tree in the navigation pane until you reach the desired policy sequence, and select it.



3. When the policy sequence appears in the content pane, activate the Delete button on the toolbar. You will be presented with a confirmation popup before the policy sequence is deleted.



Exit Policy Sequences (Optional)

If you wish to exit the Policy Sequences area and return to your previous location, activate the **Return** button on the toolbar:



Related Links

"Add a Policy Sequence" on page 80

"Edit a Policy Sequence" on page 84

"Work Configuration Overview" on page 5

Prioritization Schemes

About Prioritization Schemes

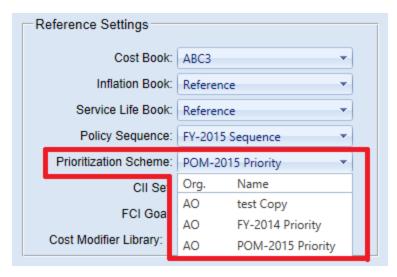
The fourth step in <u>work configuration</u> is to create one or more prioritization schemes that will prioritize work items during the work planning phase. Prioritization schemes use *objectives* and *measures* to define the relative importance of various properties pertaining to the work candidates so that your work planning and funding allocations can be directed to the most important items.

After you have identified work candidates using standards, policies, and policy sequences, the next step is to create at least one *prioritization scheme* so that your work planning and funding allocations can be directed to the most important items, reflecting your priorities.

If you have constructed a work plan for a given year, you will need to prioritize it so that your planning efforts and funding allocations can be directed to the most important items. BUILDER allows you to do this using a work prioritization scheme. This prioritization scheme will be created as part of the work configuration process, then implemented during work planning.

The BUILDER work prioritization method uses a simple additive utility function to calculate a score for each work item and to rank the work items from highest score (most important) to lowest (least important). It does this by allowing you to outline and weight your objectives and to identify specific properties of the work item that can be used as measures of how well a work item meets a particular objective.

After a work prioritization scheme has been created, the user can select it in BUILDER in the **Reference Settings** area at the **General Information** tab:



Reference settings are available both at the Organization and at the Site level.

With a work prioritization scheme that you have tested and calibrated, you will be able to prioritize and rank your work plan using a quick, objective, repeatable, and representative method with the touch of a button.

Task Links

Add a Work Prioritization Scheme

Edit a Work Prioritization Scheme

Delete a Prioritization Scheme or Objective

Instructional Link

"Work Configuration Overview" on page 5

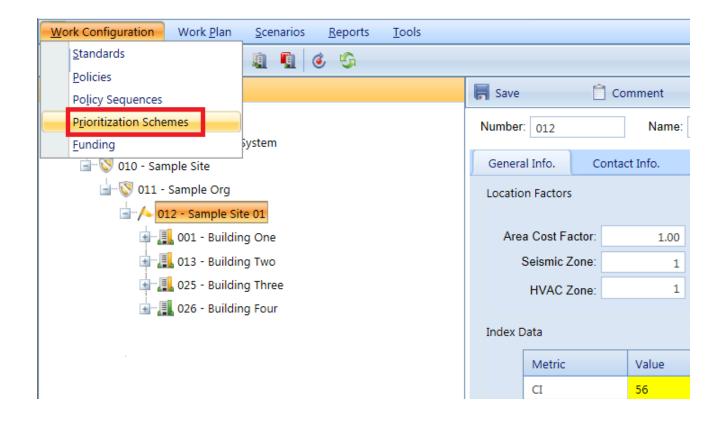
Add a Work Prioritization Scheme

This topic shows how to create a work prioritization scheme that allows work items to be prioritized according to properties specified and weighted in the scheme.

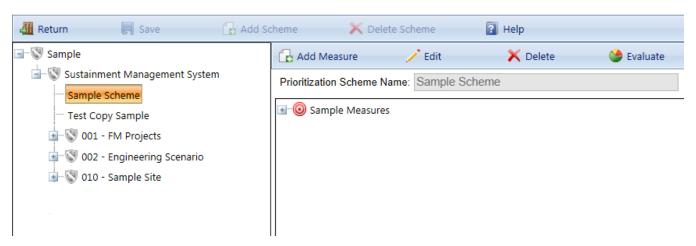
Note: In addition to setting work priorities using one or more prioritization schemes, there is another option available that can be used in addition to prioritization schemes. Namely, in the work plan table at the **Work Plan Items** tab, you can mark the checkbox in the **Must Do** column. This forces the corresponding work activity to be funded before all other competing work items that are not marked as "must do."

Navigate to Prioritization Schemes

To navigate to the window where you can add a prioritization scheme, select **Work Configuration > Prioritization Schemes** from the main menu.



The Prioritization Schemes screen will appear.



For a description of the prioritization scheme shown above, see the <u>Prioritization</u> <u>Example</u>. The prioritization example also includes an example scoring of a work item using the example shown.

Prioritization Schemes Toolbar Options

- Return. Closes the Prioritization Scheme window.
- Save. Saves changes made to the prioritization schemes.

- Add Scheme. Initiates adding a new prioritization scheme.
- **Delete Scheme**. Deletes the selected prioritization scheme.
- Help. This button is not currently connected.

Add a Prioritization Scheme

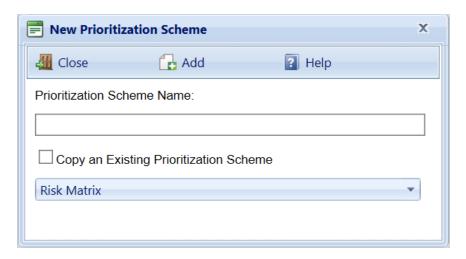
You can create as many prioritization schemes as you like. When you are ready to prioritize a work plan, you will simply choose, in the Reference Settings area at the Site or Organization's **General Information** tab, the prioritization scheme you wish to use. You may, in fact, wish to try out several different schemes and then compare the resulting prioritized lists.

To create a new prioritization scheme,

1. Activate the **Add Scheme** button on the window toolbar.



The "New Prioritization Scheme" popup window will appear.



2. In the **Prioritization Scheme Name** field, enter a unique name for the new scheme, which is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

3. Activate the **Add** button in the popup window toolbar.

Name the Main Objective

Initially after creating a prioritization scheme, only the Main Objective will appear in the scheme. The main objective can be reworded (see <u>"Edit an Objective" on page 96</u>), and subobjectives can be added to it (See <u>"Add a Subobjective" below</u>)

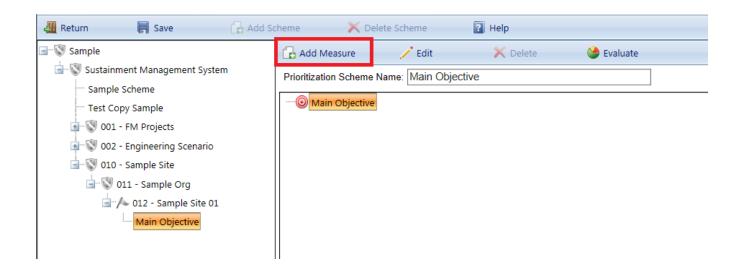
Note that when you are creating a new prioritization scheme you are able to copy an existing scheme. If you have a prioritization scheme that you have fine tuned and accept as the standard scheme to use, then the ability to copy it can be very useful. If you want to experiment with recalibration of the weights and measures, you can do so with a copy and not destroy your original values. To copy an existing scheme, mark the **Copy an Existing Prioritization Scheme** checkbox, select the scheme to copy from the dropdown list, and activate the **Add** button on the toolbar.

Additionally, there is no way to cancel changes for prioritization schemes. Changes are saved to the database when they are made, and the changes overwrite previous data. A safe way to experiment with a particular prioritization scheme is to copy it by creating an entirely new scheme and then edit with the copy and leave the original alone.

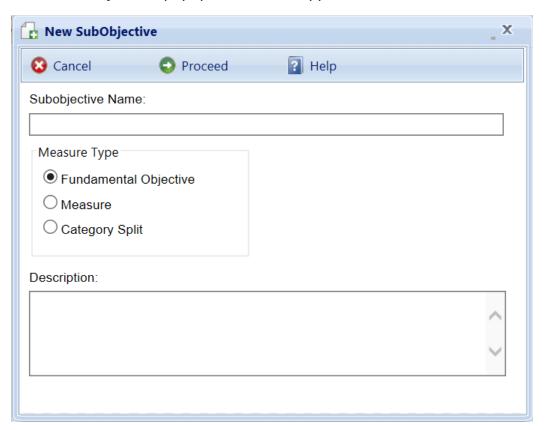
Add a Subobjective

To add a subobjective to an objective on the tree,

- 1. Select the objective.
- 2. Activate the **Add Measure** button on the content screen toolbar.



The "New SubObjective" popup window will appear:



Enter Required Data

To create the subobjective, the following data must be recorded:

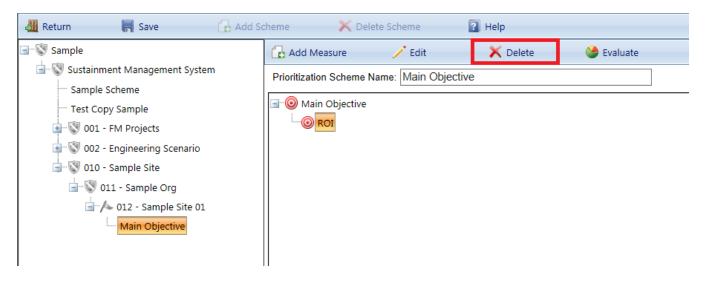
- Node name. Enter the name of the objective that will appear in the tree.
- Measure Type. Choose the type of objective is to be created from the three available types:
 - Fundamental Objective. This is a statement of one of the things you
 are trying to accomplish with the work plan. It is primarily used to help
 you outline your thoughts so that you eventually are able to identify
 properties (measures) in your inventory that you will consider when prioritizing the individual work items.
 - Measure. A measure is a property of the work item or of the inventory hierarchy of the work item's Component-Section. A work item's overall score in the prioritization scheme is fundamentally determined by the values of the work item's properties that are used as measures in the scheme, the point values assigned to those particular values, and the relative weights of the objectives.
 - Category Split. See Using Category Splits below for a further description of category splits.
- Measure/Split Category. If you select "Measure" or "Category Split" as the
 type of objective, select the category to associate with the measure or split,
 either Building or General. If a fundamental objective is chosen as the measure type, this field will not appear.
- Available Measures. If you select "Measure" or "Category Split" as the type
 for this objective, then you will also have to choose the measure to associate the measure or split. The available measures in the dropdown list
 depends on the Category Split or Measure category chosen. If a fundamental objective is chosen as the measure type, this field will not appear.

In addition to this required data, you have the option to add a Description of the new objective, which is limited to 255 alphanumeric characters. When all of the information has been entered, activate the **Proceed** button to create the objective. If you do not wish to create the objective, activate the **Cancel** button.

Delete an Objective

To delete an objective from the tree:

- 1. Select the objective on the tree.
- 2. Activate the **Delete** button in the content area toolbar.

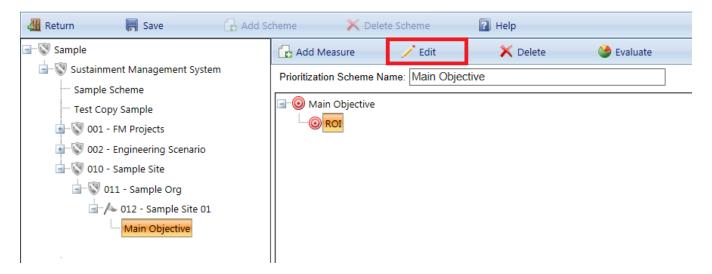


It is important to note that if you delete an objective, the entire subtree under the objective will be deleted as well.

Edit an Objective

To edit the name or description of an objective:

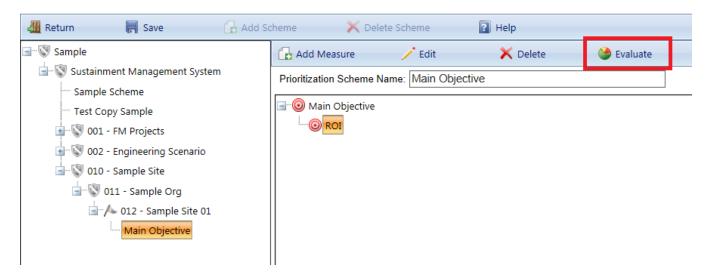
- 1. Select the objective on the tree.
- 2. Activate the **Edit** button.



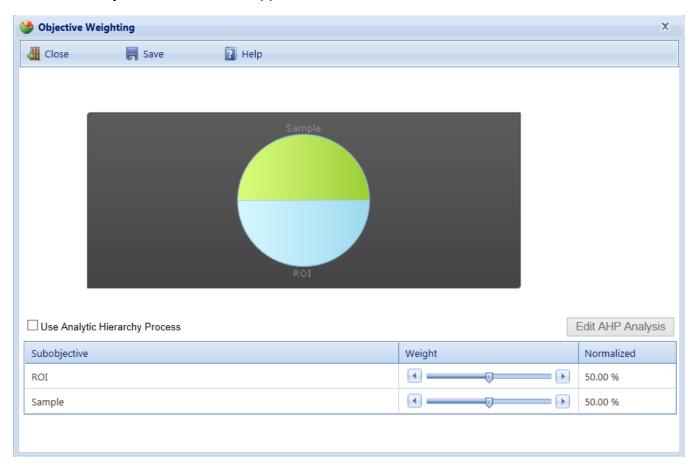
It is important to note that once an objective is created, you may not change the measure type, category, or measure itself, but you can change the node name.

Evaluate a Fundamental Objective

To record the relative weights of the children of an fundamental objective, select the fundamental objective, select it, and activate the **Evaluate** button.



The Objective window will appear:



The children of the fundamental objective will be listed in a grid along with their weight. The default setting for the **Weight** is 100 for all children. That is, all children are equally important to the parent. You may adjust the weights by doing one of the following:

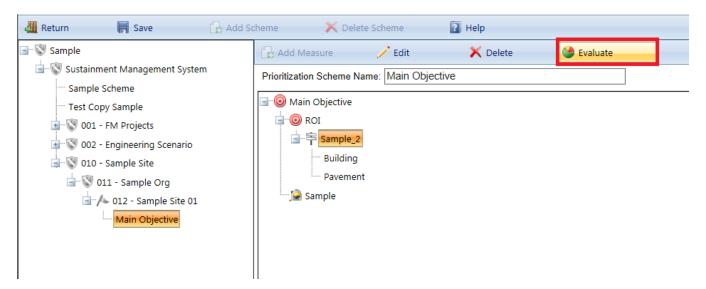
- a. Enter a number between 0 and 100 in the **Weight** column.
- b. Or, mark the "Use Analytic Hierarchy Process" checkbox, then activate the **Edit AHP Analysis** button. The AHP process allows you to establish the weights by doing a binary comparison of the field values. See the topic "Using the Analytic Hierarchy Process" for a description of this method.

Make sure to activate the **Save** button to save changes.

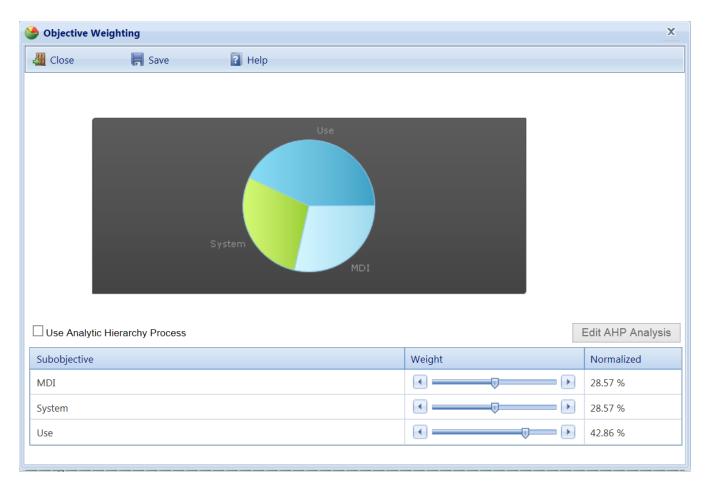
Note: Each of these methods results in a normalized weight (which cannot be edited) that is calculated so that the sum of the weights is 100%. This is done by dividing each of the individual weights by the sum of all of the weights.

Evaluate a Measure

To assign points to the various values of a measure, select the measure, and then activate the **Evaluate** button.



The Measure Evaluation window will appear:



The possible field values for the measure will be listed in a grid, along with their assigned Point Value. The default point value is 100 for all field values. That is, initially they are equally important. You can edit the point value to adjust the weights by doing one of the following:

- a. Enter a number between 0 and 100 in the Weight column.
- b. Alternatively, mark the "Use <u>Analytic Hierarchy Process</u>" checkbox, then activate the **Edit AHP Analysis** button. The AHP process allows you to establish the weights by doing a binary comparison of the field values. See <u>Using the Analytic Hierarchy Process</u> for a description of this method.

Use the **Save** button to save changes or the **Cancel** button to return to the previously saved weights.

Note: Each of these methods results in a normalized weight (which cannot be edited) that is calculated so that the sum of the weights is 100%. This is done by dividing each of the individual weights by the sum of all of the weights.

About Using Category Splits

A category split, denoted by the icon in the Objectives Tree, is associated with a field property in the work item hierarchy and is used when you want to vary how the priority score is computed based on the work item's value for this field property. The subobjectives of a split can only be the various values of the field property.

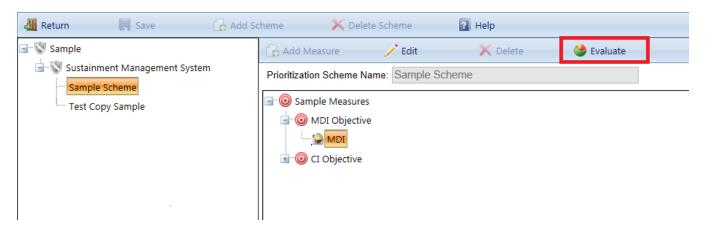
The subobjectives of a split are called categories. The categories identify which subtree will be used based on the associated field's property value. When the algorithm that calculates the score comes to a split, only the single branch of the tree under the split corresponding to the work item's property value as a category will be used. The screen below shows an example of a split in a prioritization scheme:



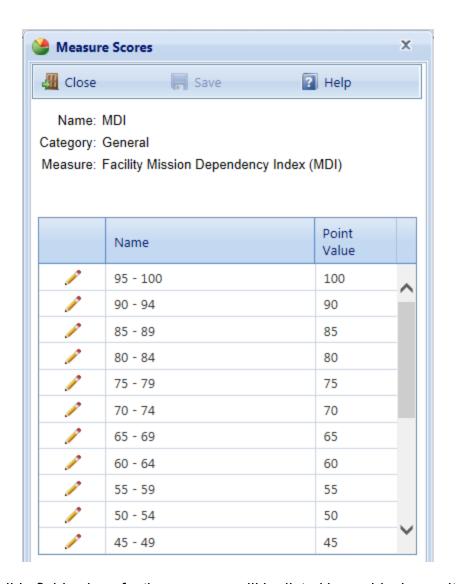
The category split in this example is Type of Work. The associated field is work activity, which has 6 possible values: "Repair," "Replace," "Paint," "Remove," "Add/Install," and "Alter." A category split generally has an added category named "Otherwise," which is the branch of the tree used if the value of the field differs from all of the other listed values. In this case, "Remove," "Add/Install," and "Alter" will use the "Otherwise" category. When you first create a split, all of the possible values of the field are listed as categories under it. If you delete a category, then items with that field property value will use the "Otherwise" category.

In the example above, the work item's CI and RSL are used as the measures for both "Repair" and "Replace." However, the point values assigned to the fields varies by type of work. To replace a Component-Section, the most cost-effective time would be indicated by a very low CI and little or no remaining service life. To repair a Component-Section, the most cost-effective time would be indicated by a mid-range CI and a long remaining service life. The Type of Work split allows the computation of the score to proceed selectively. Since only one of the categories will be used, the relative weights of the categories under a split are calculated differently from other types of objectives.

To assign points to the various values of a split, navigate to the split on the tree, select it, and activate the **Evaluate** button.



The "Measure Scores" popup window will appear:



The possible field values for the measure will be listed in a grid, along with their assigned Point Value. The default point value is 50 for all field values. That is, initially they are equally important. You can edit the point value to adjust the weights by doing one of the following:

- a. Enter a number between 0 and 100 in the Weight column.
- b. Alternatively, if the number of field values is less than 25, mark the "Use <u>Analytic Hierarchy Process</u>" checkbox, then activate the **Edit AHP Analysis** button. The AHP process allows you to establish the weights by doing a binary comparison of the field values. See <u>Using the Analytic Hierarchy Process</u> for a description of this method.

Use the **Save** button to save changes or the **Cancel** button to return to the previously saved weights.

Note: Each of these methods results in a normalized weight (which cannot be edited) that is calculated so that the sum of the weights is 100%. This is done by dividing each of the individual weights by the sum of all of the weights.

Related Links

Edit a Work Prioritization Scheme

Delete a Prioritization Scheme or Objective

About Prioritization Schemes

Prioritization Example

In the example prioritization scheme shown above, the outline of objectives begins with the Main Objective, in this case a simply worded "Do the right work at the right time." The Main Objective is the starting point of the prioritization scheme. It cannot be deleted, but you are able to edit its wording by right clicking it on the tree and choosing the Edit option. The Main Objective is divided into two subobjectives:

- "Work on the most important items first."
- "Do the work at the most cost-effective time."

Each of these three items in the tree is a fundamental objective, represented by the icon. A fundamental objective is a simple statement of one of the things you are trying to accomplish. Fundamental objectives are used in the tree to help you outline your thoughts about what is important and how it should be measured. Each fundamental objective can be further refined by subobjectives. In the example, the two objectives for each fundamental objectives are:

- System and Use for "Work on the most important items first."
- CI and RSL for "Do the work at the most cost-effective time."

These items are a different type of objective called a measure, represented by the icon. A measure is an objective associated with a field property in the work item's hierarchy (Site, Complex, Building, System, Component, Section, work item). Certain values of the field property are more desirable than others. In the example, the importance of a work item can be measured by considering what Building System is involved and what the Building's Use Type is. For example, repairing an air-handling unit in an administrative Building might generally be ranked higher than repairing an interior wall in a warehouse. Similarly, the work item's Section

CI and RSL will provide measures for how well a work item meets the objective of doing the work at the most cost-effective time.

At each level of the tree, you assign weights to the fundamental objectives and points to the measures so that an algorithmic approach can be used to calculate a score for each work item. Here is a description of how the scoring is done for the previous example:

- The measures are what really count in the scoring. Each of the measures
 can accumulate from 0 to 100 points for each work item. The points for each
 measure are determined by the work item's field value for that measure and
 a point system you specify for that measure.
- The fundamental objectives are used to establish the relative importance of the measures in the overall scheme. Each time an objective is subdivided into new subobjectives, you must make a decision as to the relative weights of the new items under the objective. For example, the objective "Work on the most important items first" has two children, System and Use. You may decide that System and Use are of equal value to consider for the parent objective, in which case their weights will both be 0.5. On the other hand, you may decide that how you use the Building is twice as important as the particular System involved, in which case Use has relative weight 0.667 and System has weight 0.333. Note that the sum of the relative weights of the children of an objective must equal 1.0.
- To calculate a score for a given work item, calculate the relative weight of each measure by taking the product of its weight and the weights of all its predecessors in the tree. Assign the points for each measure by looking at the corresponding field value for the work item. The overall score is then computed as the sum of the products of relative weight times point value of the measures. The overall score of a work item will be in the 0-100 range. The sum of the overall relative weights of the measures will be 1.0.

An Example of the Scoring

Here is an example of how the scoring is computed using the prioritization scheme shown below, which includes a split, for a work item where:

- Type of Work = Repair
- Use = Administrative (corresponding to 90 points)
- System = HVAC (corresponding to 70 points)
- Section CI = 68 (corresponding to 100 points)
- RSL = 7 (corresponding to 100 points)

Note that the weights connected by blue lines must each sum to 1.0 since they are at the same level. The Main Objective always has weight 1.0. Type of Work has weight 1.0 because it is the only child of its parent. The relative weights of the four measures used in this computation (subtrees for Replace, Otherwise, Paint are ignored since this is a repair item) are:

Weight of Repair RSL = 1.0 * 0.5 * 1.0 * 1.0 * 0.5 = 0.25

Weight of Repair CI = 1.0 * 0.5 * 1.0 * 1.0 * 0.5 = 0.25

Weight of System = 1.0 * 0.5 * 0.4 = 0.2

Weight of Use = 1.0 * 0.5 * 0.6 = 0.3

Note that the sum of the relative weights 0.25 + 0.25 + 0.2 + 0.3 = 1.0. The work item's priority score, using W for the corresponding relative weight and P for points, is calculated as:

Score = (WRepair RSL * PRepair RSL) + (WRepair CI * PRepair CI) + (WSystem * PSystem) + (WUse * PUse)

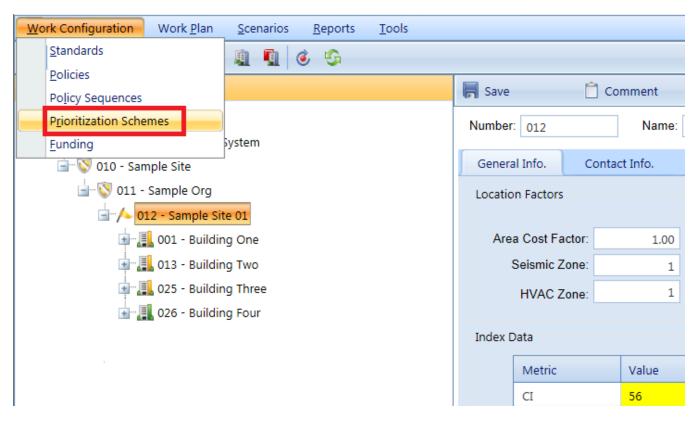
Score = (0.25 * 100) + (0.25 * 100) + (0.2 * 70) + (0.3 * 90) = 91.0

Edit a Work Prioritization Scheme

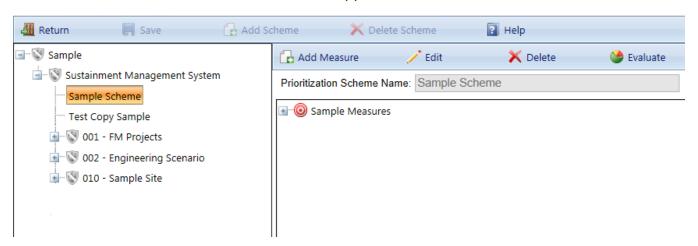
Note: In addition to setting work priorities using one or more prioritization schemes, there is another option available that can be used in addition to prioritization schemes. Namely, in the work plan table at the **Work Plan Items** tab, you can mark the checkbox in the **Must Do** column. This forces the corresponding work activity to be funded before all other competing work items that are not marked as "Must do."

If you have constructed a work plan for a given year, you will need to prioritize it so that your planning efforts and funding allocations can be directed to the most important items. BUILDER allows you to do this using a work prioritization scheme. The BUILDER work prioritization method uses a simple additive utility function to calculate a score for each work item and to rank the work items from highest score (most important) to lowest (least important). It does this by allowing you to outline and weight your objectives and to identify specific properties of the work item that can be used as measures of how well a work item meets a particular objective. With a work prioritization scheme that you have tested and calibrated, you will be able to prioritize and rank your work plan in a quick, objective, repeatable, and representative method with the touch of a button.

To create or edit a prioritization scheme, select **Work Configuration > Prioritization Schemes** starting at the main menu.



The Prioritization Schemes screen will appear.



For a description of the prioritization scheme shown above, see the <u>Prioritization</u> <u>Example</u>. The prioritization example also includes an example scoring of a work item using the example shown.

Toolbar Options

- Return. Closes the Prioritization Scheme window.
- Save. Saves changes made to the prioritization schemes.
- Add. Initiates adding a new prioritization scheme.
- **Delete**. Deletes the selected prioritization scheme.

Add a Prioritization Scheme

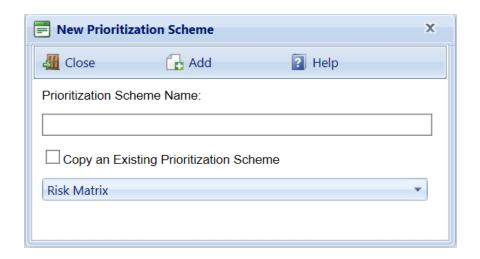
You can create as many prioritization schemes as you like. When you are ready to prioritize a work plan, you will simply choose, in the Reference Settings area at the Site or Organization's **General Information** tab, the prioritization scheme you wish to use. You may, in fact, wish to try out several different schemes and then compare the resulting prioritized lists.

To create a new prioritization scheme,

1. Activate Add Scheme on the window toolbar.



The "New Prioritization Scheme" popup window will appear.



Enter a unique name for the new scheme, which is limited to 50 alphanumeric characters.

Note: You may wish to keep the name much shorter than the allowed 50 characters in order to minimize wraparound in the name when it's displayed in the tree.

3. Activate Add on the toolbar.

Initially after creating a prioritization scheme, only the Main Objective will appear in the scheme. The main objective can be reworded (see **Editing an Objective** below) and subobjectives can be added to it (See **Adding a Subobjective** below)

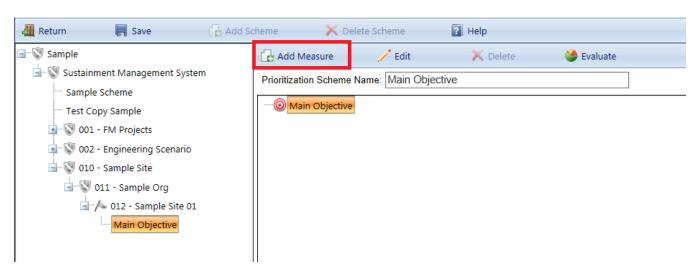
Note that when you are creating a new prioritization scheme you are able to copy an existing scheme. If you have a prioritization scheme that you have fine tuned and accept as the standard scheme to use, then the ability to copy it can be very useful. If you want to experiment with recalibration of the weights and measures, you can do so with a copy and not destroy your original values. To copy an existing scheme, mark the **Copy an Existing Prioritization Scheme** checkbox, select the scheme to copy from the dropdown list, and activate **Add** on the toolbar.

Additionally, there is no way to cancel changes for prioritization schemes. Changes are saved to the database when they are made, and the changes overwrite previous data. A safe way to experiment with a particular prioritization scheme is to copy it by creating an entirely new scheme and then edit with the copy and leave the original alone.

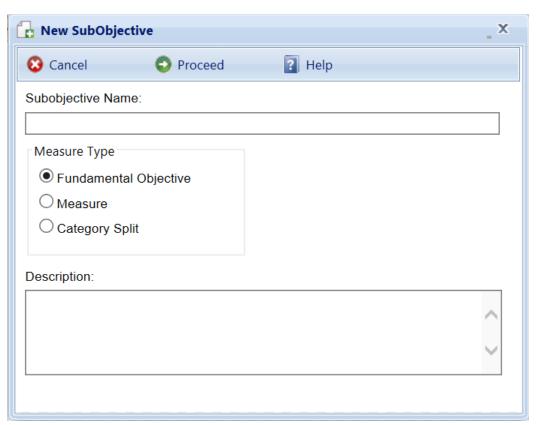
Add a Subobjective

To add a subobjective to an objective on the tree,

- 1. Select the objective.
- 2. Activate Add Measure on the content screen toolbar.



The "New SubObjective" popup window will appear:



To create the subobjective, the following data must be recorded:

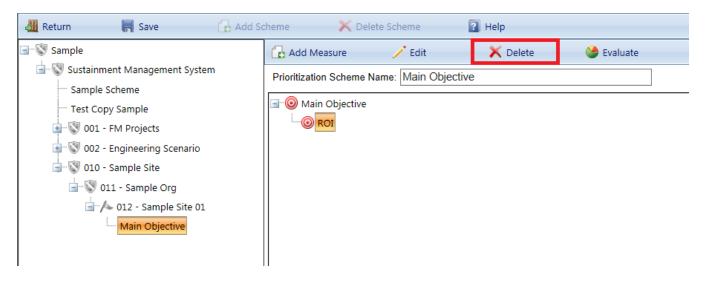
- Node name. Enter the name of the objective that will appear in the tree.
- Measure Type. Choose the type of objective is to be created from the three available types:
 - Fundamental Objective. This is a statement of one of the things you
 are trying to accomplish with the work plan. It is primarily used to help
 you outline your thoughts so that you eventually are able to identify
 properties (measures) in your inventory that you will consider when prioritizing the individual work items.
 - Measure. A measure is a property of the work item or of the inventory hierarchy of the work item's Component-Section. A work item's overall score in the prioritization scheme is fundamentally determined by the values of the work item's properties that are used as measures in the scheme, the point values assigned to those particular values, and the relative weights of the objectives.
 - Category Split. See Using Category Splits below for a further description of category splits.
- Measure/Split Category. If you select "Measure" or "Category Split" as the
 type of objective, select the category to associate with the measure or split,
 either Building or General. If a fundamental objective is chosen as the measure type, this field will not appear.
- Available Measures. If you select "Measure" or "Category Split" as the type
 for this objective, then you will also have to choose the measure to associate the measure or split. The available measures in the dropdown list
 depends on the Category Split or Measure category chosen. If a fundamental objective is chosen as the measure type, this field will not appear.

In addition to this required data, you have the option to add a Description of the new objective, which is limited to 255 alphanumeric characters. When all of the information has been entered, activate the **Proceed** button to create the objective. If you do not wish to create the objective, activate the **Cancel** button.

Delete an Objective

To delete an objective from the tree:

- 1. Select the objective on the tree.
- Activate the **Delete** button.

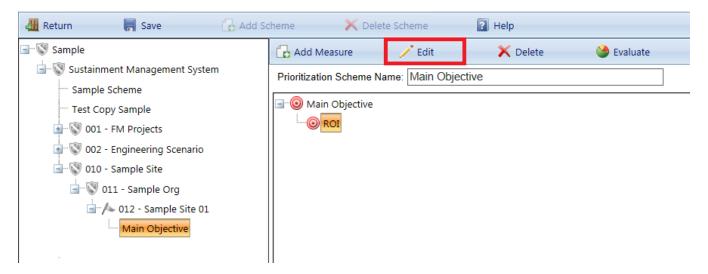


It is important to note that if you delete an objective, the entire subtree under the objective will be deleted as well.

Edit an Objective

To edit the name or description of an objective:

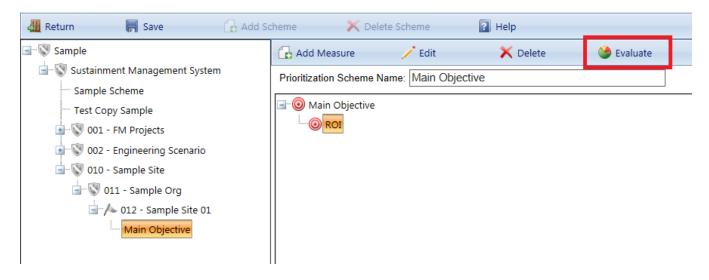
- 1. Select the objective on the tree.
- 2. Activate the **Edit** button.



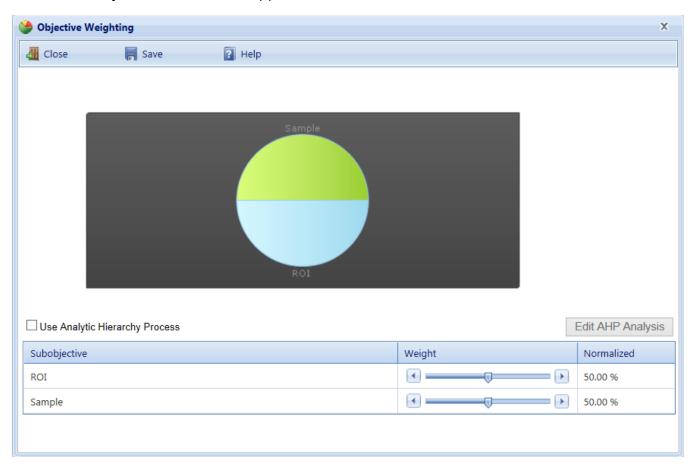
It is important to note that once an objective is created, you may not change the measure type, category, or measure itself, but you can change the node name.

Evaluate a Fundamental Objective

To record the relative weights of the children of an fundamental objective, select the fundamental objective, select it, and activate the **Evaluate** button.



The Objective window will appear:



The children of the fundamental objective will be listed in a grid along with their weight. The default setting for the **Weight** is 100 for all children. That is, all children are equally important to the parent. You may adjust the weights by doing one of the following:

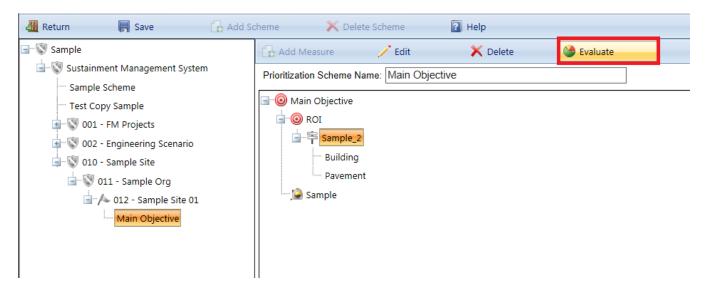
- a. Enter a number between 0 and 100 in the Weight column.
- b. Or, mark the "Use Analytic Hierarchy Process" checkbox, then activate the Edit AHP Analysis button. The AHP process allows you to establish the weights by doing a binary comparison of the field values. See Using the Analytic Hierarchy Process for a description of this method.

Make sure to activate the **Save** button to save changes.

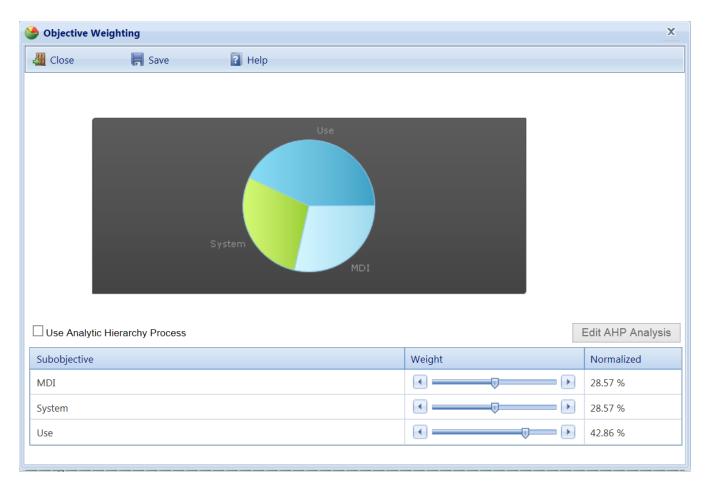
Note: Each of these methods results in a normalized weight (which cannot be edited) that is calculated so that the sum of the weights is 100%. This is done by dividing each of the individual weights by the sum of all of the weights.

Evaluate a Measure

To assign points to the various values of a measure, select the measure, and then activate the **Evaluate** button.



The Measure Evaluation window will appear:



The possible field values for the measure will be listed in a grid, along with their assigned Point Value. The default point value is 100 for all field values. That is, initially they are equally important. You can edit the point value to adjust the weights by doing one of the following:

- a. Enter a number between 0 and 100 in the Weight column.
- b. Alternatively, mark the "Use <u>Analytic Hierarchy Process</u>" checkbox, then activate the **Edit AHP Analysis** button. The AHP process allows you to establish the weights by doing a binary comparison of the field values. See Using the Analytic Hierarchy Process for a description of this method.

Use the **Save** button to save changes or the **Cancel** button to return to the previously saved weights.

Note: Each of these methods results in a normalized weight (which cannot be edited) that is calculated so that the sum of the weights is 100%. This is done by dividing each of the individual weights by the sum of all of the weights.

About Using Category Splits

A category split, denoted by the icon in the Objectives Tree, is associated with a field property in the work item hierarchy and is used when you want to vary how the priority score is computed based on the work item's value for this field property. The subobjectives of a split can only be the various values of the field property.

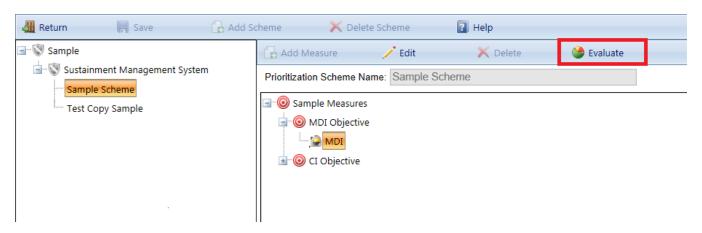
The subobjectives of a split are called categories. The categories identify which subtree will be used based on the associated field's property value. When the algorithm that calculates the score comes to a split, only the single branch of the tree under the split corresponding to the work item's property value as a category will be used. The screen below shows an example of a split in a prioritization scheme:



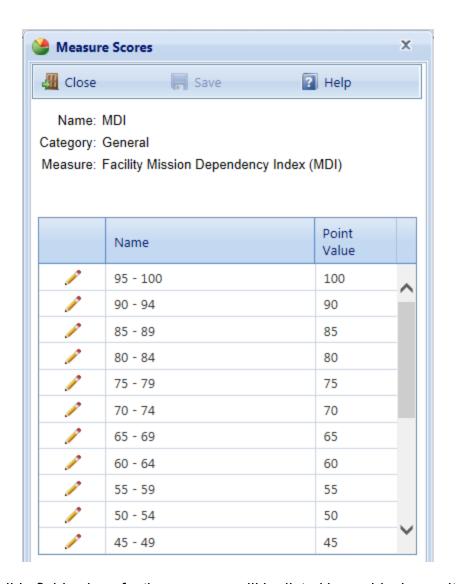
The category split in this example is Type of Work. The associated field is work activity, which has 6 possible values: "Repair," "Replace," "Paint," "Remove," "Add/Install," and "Alter." A category split generally has an added category named "Otherwise," which is the branch of the tree used if the value of the field differs from all of the other listed values. In this case, "Remove," "Add/Install," and "Alter" will use the "Otherwise" category. When you first create a split, all of the possible values of the field are listed as categories under it. If you delete a category, then items with that field property value will use the "Otherwise" category.

In the example above, the work item's CI and RSL are used as the measures for both "Repair" and "Replace." However, the point values assigned to the fields varies by type of work. To replace a Component-Section, the most cost-effective time would be indicated by a very low CI and little or no remaining service life. To repair a Component-Section, the most cost-effective time would be indicated by a mid-range CI and a long remaining service life. The Type of Work split allows the computation of the score to proceed selectively. Since only one of the categories will be used, the relative weights of the categories under a split are calculated differently from other types of objectives.

To assign points to the various values of a split, navigate to the split on the tree, select it, and activate the **Evaluate** button.



The "Measure Scores" popup window will appear:



The possible field values for the measure will be listed in a grid, along with their assigned Point Value. The default point value is 50 for all field values. That is, initially they are equally important. You can edit the point value to adjust the weights by doing one of the following:

- a. Enter a number between 0 and 100 in the Weight column.
- b. Alternatively, if the number of field values is less than 25, mark the "Use Analytic Hierarchy Process" checkbox, then activate the Edit AHP Analysis button. The AHP process allows you to establish the weights by doing a binary comparison of the field values. See the topic "Using the Analytic Hierarchy Process" for a description of this method.

Use the **Save** button to save changes or the **Cancel** button to return to the previously saved weights.

Note: Each of these methods results in a normalized weight (which cannot be edited) that is calculated so that the sum of the weights is 100%. This is done by dividing each of the individual weights by the sum of all of the weights.

Related Links

Add a Work Prioritization Scheme

Delete a Prioritization Scheme or Objective

About Prioritization Schemes

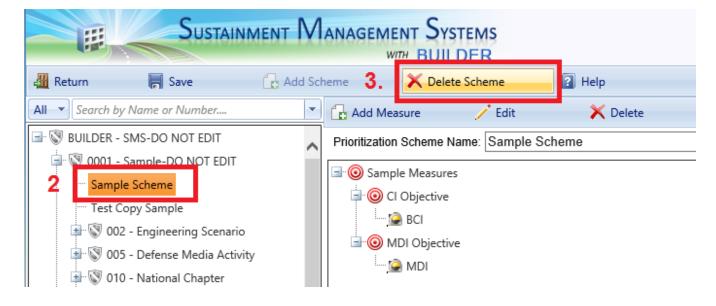
Delete a Prioritization Scheme or an Objective

Use the instructions given in this topic to delete either (a) an entire prioritization scheme, or (b) a selected segment of a prioritization scheme's main objective/subobjective tree, which will delete from a given subobjective all the way down the rest of that branch of the main objective/subobjective tree.

Delete a Prioritization Scheme

To delete an entire prioritization scheme

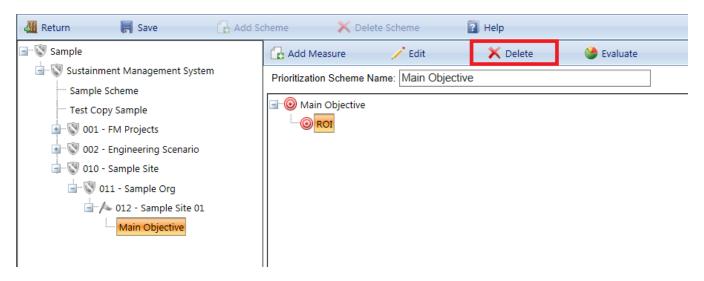
- 1. Make sure that you are in the Prioritization Scheme navigation tree.
- 2. Select the desired scheme in the tree.
- Activate **Delete Scheme** on the main toolbar. This is above the content area toolbar.



Delete an Objective

To delete an objective from the tree:

- 1. Select the objective on the tree.
- 2. Activate **Delete** on the content area toolbar.



It is important to note that if you delete an objective, the entire subtree under the objective will be deleted as well.

Related Links

Add a Work Prioritization Scheme
Edit a Work Prioritization Scheme
About Prioritization Schemes

Funding

About Funding Streams

The fifth and last step in <u>work configuration</u> is to enter information about funding streams that can then be used when running a work plan. How you configure the funding, along with <u>prioritization</u>, will determine which work items will receive funding in a given year.

After you have identified work candidates using standards, policies, and policy sequences, then created a prioritization scheme so that your work planning and funding allocations can be directed to the most important items, the next and last step is to define, at the Site level, funding streams that can be applied to work items.

A *funding stream* consists of a *funding source* plus specification of *funding levels* for up to ten years into the future.

Funding streams can be set up at **Work Configuration > Funding** from the main menu. More limited options to edit funding streams are also available within Scenarios.

Task Links

Add a Funding Stream

Edit a Funding Stream

Delete a Funding Stream

Enter or Edit Anticipated Funding Levels

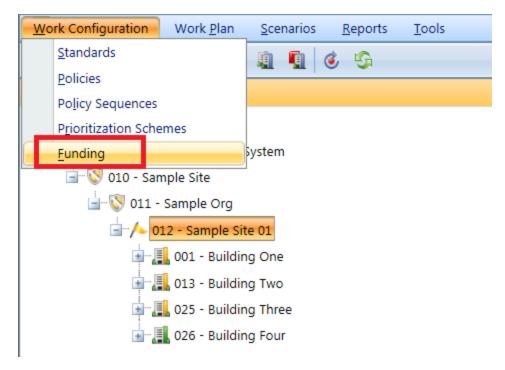
Add a Funding Stream

This topic describes the steps needed to add a funding stream that can be used to fund work items; how to associate it with a Site; how to establish restrictions on what the funding stream can be used for; and how to set funding precedence for situations where a work item satisfies the restrictions (selection criteria) of more than one funding source.

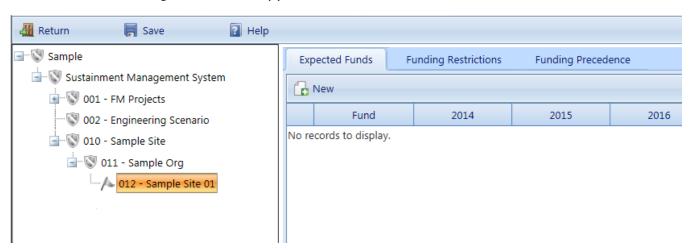
Select a Site

Before adding a funding stream, first select the Site to apply the funding stream to, as follows:

1. Select **Work Configuration > Funding** from the main menu.



The Funding window will appear.



2. Navigate the tree at the left of the screen and select the Site you wish to add the funding stream to.

Enter Funding Information

After selecting the Site in the tree, you can use the tabs in the content area to set

- the funding levels (at the Expected Funds tab),
- funding restrictions (at the Funding Restrictions tab), and
- <u>funding precedence</u> (at the **Funding Precedence** tab)

Further description of each tab is provided below.

Note: If you plan to use Scenarios in SMS BUILDER, the funding sources and amounts you enter here will be used as initial defaults for each Scenario you create. You may, as an alternative, edit the amounts in the Scenario itself, but if you do so, you will not be able to add new funding sources, change their restrictions, or change their precedence order in a Scenario. For more information refer to the online documentation about Scenarios.

Expected Funds Tab

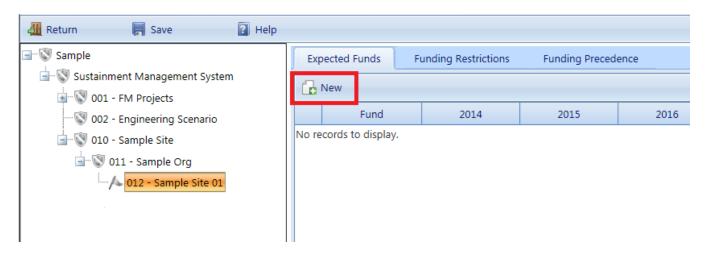
If no funds have yet been associated with the selected Site, there will be no entries in the Expected Funds table, just the message "no records to display."

The instructions below assume that you have already navigated to the Funding window and to the desired Site in the Funding tree, as described at the <u>"Select a Site" on the previous page</u> heading above. The default tab, **Expected Funds**, should be active.

Add a Funding Stream

To add a funding stream that can be applied to work items during the work planning phase,

1. Activate **New** on the content area toolbar.



The "New Funding Source" popup window will appear.



- 2. Enter the name of the funding source you wish to add. The name is limited to 50 alphanumeric characters and must be unique.
- 3. Confirm or cancel: Activate the **OK** button in the popup window. This will add the new funding source to the table of funding streams. Alternatively, if you wish to cancel the operation, activate the **Cancel** button in the popup window.
- 4. After you confirm the new funding source, you will be brought back to the **Expected Funds** tab. Your newly created funding stream should appear in the Expected Funds table as a new record (row).

Enter Funding Amounts

To enter monetary amounts of funding,

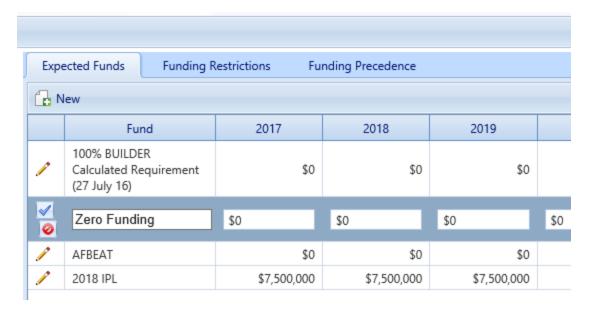
1. In the row containing the funding stream you just added, activate the pencil icon in the left column of the Expected Funds table.



The Expected Funds table will remain on the screen, but its appearance will change.

2. Enter funding levels for all years desired.

Note: You can also change the name of the funding stream here.



- 3. **IMPORTANT:** After completing your funding level entries, be sure to activate the Update button (blue checkmark icon) at the left, to accept the entries. Alternatively, to cancel, activate the red Cancel button (looks like a "do not enter" sign). You will be returned to the view that shows only the pencil icon (s) in the first column of the table.
- 4. Finally, activate Save on the main toolbar.

Funding Restrictions Tab

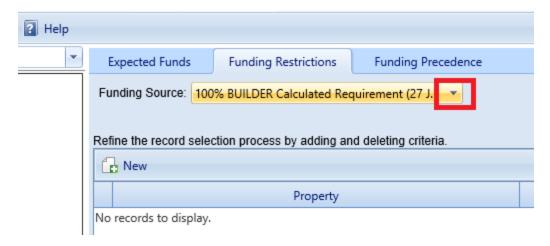
The **Funding Restrictions** tab allows you to establish selection criteria that determine whether or not a given funding source can be used for a particular work item. This tab allows you to identify properties that a work item must have in order to use the selected funding source.

The instructions below assume that you have already navigated to the Funding window and to the desired Site in the Funding tree, as described at the <u>"Select a Site"</u> on page 121 heading above.

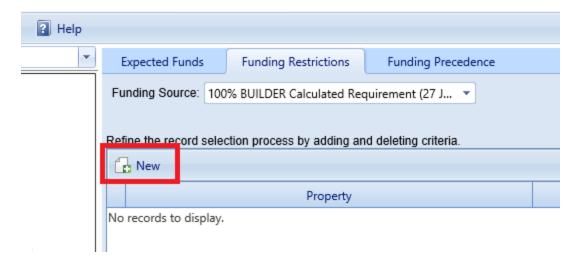
Enter a Funding Restriction Selection Criterion

To add a funding restriction selection criterion,

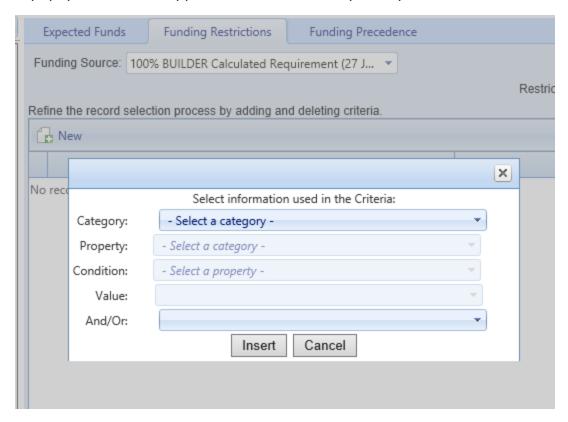
- 1. Activate the **Funding Restrictions** tab.
- 2. Select the funding source from the dropdown list.



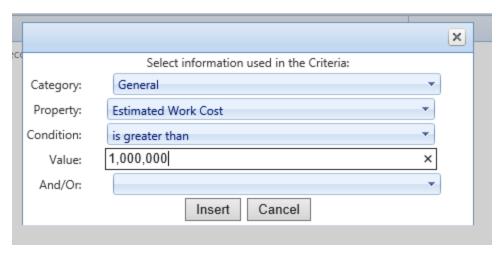
3. Activate the New button.



A popup window will appear that contains multiple dropdown lists.

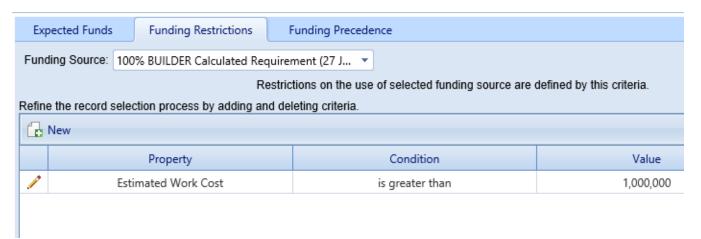


4. Make selections from the dropdown lists to define a selection criterion. For example:



5. If you will be adding another selection criterion, choose **And** or **Or** from the dropdown list in the last field. If you will not be adding another selection criterion, this field may be left blank.

- 6. Confirm or cancel: Activate the **Insert** button at the bottom of the popup window to activate the criterion you have just defined. See "Combining Funding Restrictions Criteria" below. Alternatively, if you instead wish to cancel it, activate the **Cancel** button.
- 7. Once you have activated **Insert**, the criterion you defined will appear as a record (row) in the Funding Restrictions table.



8. **IMPORTANT:** Before navigating away from the **Funding Restrictions** tab, be sure to activate **Save** on the main toolbar to retain your additions to the Funding Restrictions table.

Combining Funding Restrictions Criteria

The last dropdown list in the popup window where you define each funding restrictions criterion is the selection between **And** and **Or**, labeled **And/Or**. Your selection will determine how the criterion will combine with the next criterion that follows it.

The last criterion that you list in the Funding Restrictions table does not need to have a selection made between **And** and **Or**.

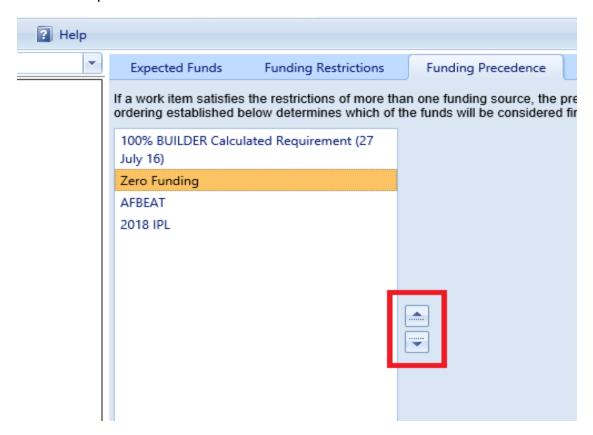
Funding Precedence Tab

After the funding sources, the amounts, and the criteria for using sources are set, the only remaining step in configuring funding is to specify how the automated process will determine which funding source to use if a work item satisfies the restrictions (selection criteria) of more than one funding source.

When funds are allocated during the work planning phase, the first funding source listed at the **Expected Funds** tab will be checked first, then the second, and so on until funding is found or the list is exhausted. The **Funding Precedence** tab provides a means of establishing the order of precedence among the funding sources available to a work item.

To change the order of the funding sources,

- 1. Select a funding source from the list at the **Funding Precedence** tab.
- 2. Use the up and down arrows to move it in the list.



3. When satisfied with the order of the funding sources, activate **Save** on the main toolbar.

After saving, if you return to the **Expected Funds** tab, you will see that it reflects the new precedence order that you created.

Related Links

"Edit a Funding Stream" on the facing page

"Delete a Funding Stream" on page 136

Enter or Edit Anticipated Funding Levels

"About Funding Streams" on page 120

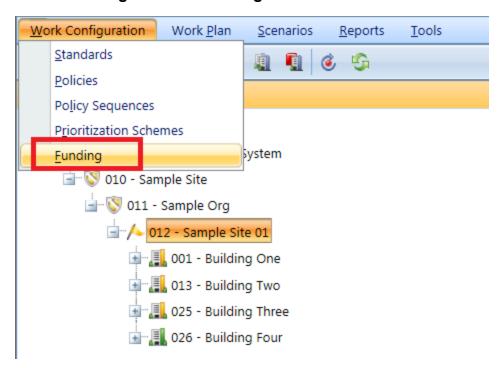
Edit a Funding Stream

This topic describes how to edit an existing funding stream by changing funding levels, changing or deleting funding restrictions, or re-ordering the funding precedence that determines funding precedence in situations where a work item satisfies the selection criteria(set at the **Funding Restrictions** tab) of more than one funding source.

Select a Site

Before editing a funding stream, first select the appropriate Site, as follows:

1. Select **Work Configuration > Funding** from the main menu.



The Funding window will appear.



- 2. Navigate the tree on the left of the screen and select the Site for which you wish to change or delete a funding stream. After selecting, you can use the tabs in the content area to do any of the following:
 - edit funding levels (at the Expected Funds tab),
 - delete a funding stream (at the Expected Funds tab),
 - edit <u>funding restrictions</u> (at the **Funding Restrictions** tab), and
 - change <u>funding precedence</u>. (at the **Funding Precedence** tab)

Further description is provided below.

Deleting an entire funding stream is also described in "Delete a Funding Stream" on page 136.

Expected Funds Tab

The **Expected Funds** tab provides an editable list of funding sources and amounts for the next ten years. At this tab, you can edit the funding levels expected for each year for any given funding source.

The editing instructions below assume that you have already navigated to the Funding window and to the desired Site in the Funding tree, as described above in <u>"Select a Site" on the previous page</u>. The default tab, **Expected Funds**, should be active.

Edit Funding Levels

To edit funding levels,

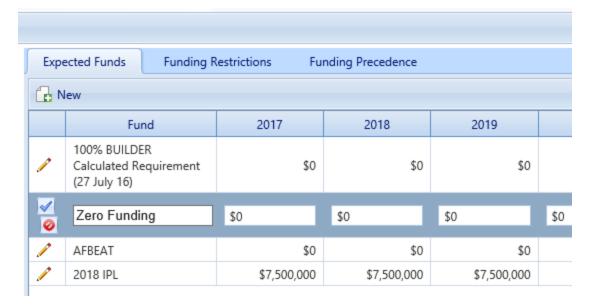
1. Activate the pencil icon in the left column of the Expected Funds table.



The Expected Funds table will remain on the screen, but its appearance will change.

2. Edit funding levels for all years desired in the table.

Note: You can also change the name of the funding stream here.

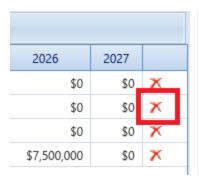


- 3. Confirm or cancel: After completing your changes to the funding source, be sure to activate the blue checkmark icon ("Update") at the left to accept the changes made. Alternatively, to cancel, activate the red "do not enter" icon ("Cancel"). You will be returned to the view that shows only the pencil icons in the first column of the table.
- 4. When you are finished editing the funding levels for all desired funding sources listed, or simply wish to save, activate **Save** on the main toolbar.

Delete a Funding Stream

To delete an entire funding stream at the Expected Funds tab,

- 1. Locate that funding source's row in the Expected Funds table.
- 2. Activate the red "X" in the rightmost column, just after the column showing the last year of funding listed.



You will be presented with a confirmation popup before the deletion is made.

Edit Funding Restrictions

The instructions below assume that you have already navigated to the Funding window and to the desired Site in the Funding tree, as described above in <u>"Select a Site"</u> on page 129.

Edit a Funding Restriction Criterion

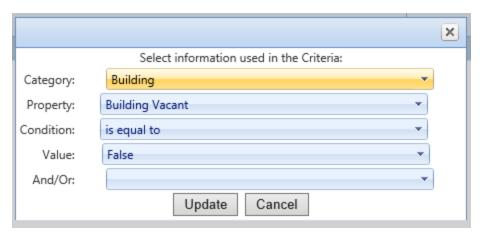
To edit an existing funding restriction criterion,

 At the Funding Restrictions tab, activate the pencil icon for the funding restriction you wish to edit.

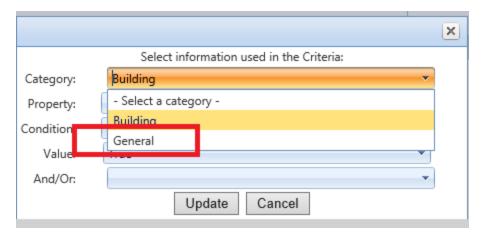
A popup window will appear that contains multiple dropdown lists.

2. Edit selections from the dropdown lists as desired.

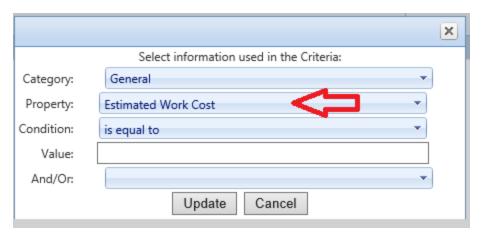
• For example, start with the following restriction definition:



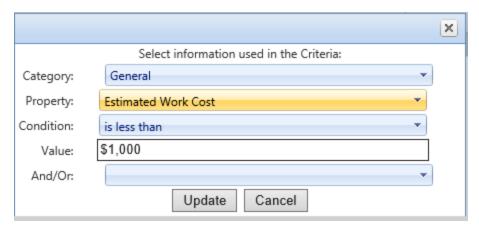
• Activate the dropdown list for **Building**, and select **General** instead:



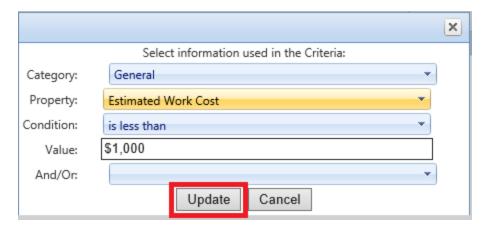
• Note that the **Property** field has changed (to the first property in the property dropdown list for the **General** category):



Make changes:



 Confirm or cancel: When satisfied with the changes made, activate the **Update** button at the bottom of the popup window to accept the changes. Alternatively, if you instead wish to cancel the changes, activate the **Cancel** button.



Before navigating away from the Funding Restrictions tab, be sure to activate Save on the main toolbar to retain your changes to the Funding Restrictions table.

Combining Funding Restrictions Criteria

The last dropdown list in the popup window where you define each funding restrictions criterion is the selection between **And** and **Or**, labeled **And/Or**. Your selection will determine how the criterion will combine with the next criterion that follows it.

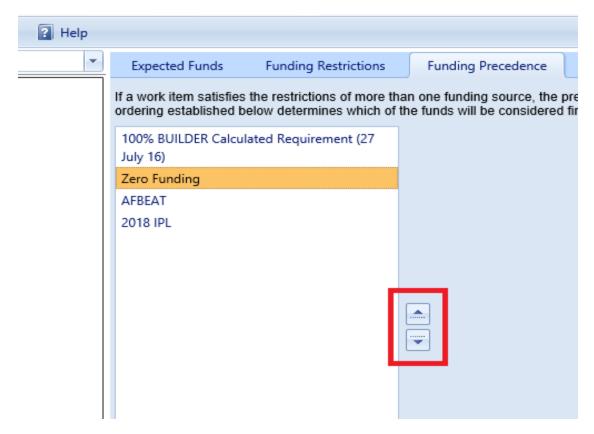
The last criterion listed in the Funding Restrictions table does not need to have a selection made between **And** and **Or**.

Edit Funding Precedence

When funds are allocated during the work planning phase, the first funding source listed at the **Expected Funds** tab will be checked first, then the second, and so on until funding is found or the list is exhausted. The **Funding Precedence** tab provides a means of changing the order of precedence among the funding sources available to a work item.

To change the order of the funding sources,

- 1. Select a source, as shown in the screenshot.
- 2. Use the up and down arrows to move it in the list (see the red box in the screenshot).



3. When satisfied with the order of the funding sources, activate **Save** on the main toolbar.

After saving, if you return to the **Expected Funds** tab, you will see that it reflects the new precedence order that you created.

Related Links

"Add a Funding Stream" on page 120

"Delete a Funding Stream" below

Enter or Edit Anticipated Funding Levels

"About Funding Streams" on page 120

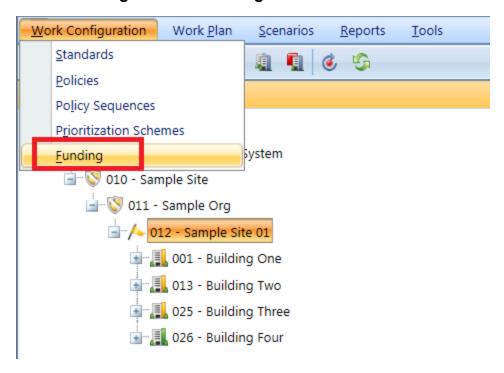
Delete a Funding Stream

This topic describes how to delete an existing funding stream.

Select a Site

To delete a funding stream, first select the Site that the funding stream is applied to, as follows:

1. Select **Work Configuration > Funding** from the main menu.



The Funding window will appear.



2. Navigate the tree on the left of the screen and select the Site in which you wish to delete a funding stream.

Delete a Funding Stream at the Expected Funds Tab

To delete an entire funding stream at the **Expected Funds** tab,

- 1. Locate that funding source's row in the Expected Funds table.
- 2. Activate the red "X" in the rightmost column, just after the column showing the last year of funding listed.



You will be presented with a confirmation popup before the deletion is made.

Related Links

"Add a Funding Stream" on page 120

"Edit a Funding Stream" on page 129

Enter or Edit Anticipated Funding Levels

"About Funding Streams" on page 120

Glossary

Administrator

A user with BUILDER or ROOFER 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 better reflect 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 (SCIs), 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 collection of work items and/or work projects planned for a Building, Site, Complex, 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 items to be manageed, prioritized, funded, and executed as a single work effort. The work items selected for the work project need not be in the same System or even in the same Building. An example of a work project would be a renovation effort that affects multiple Systems in a Building.

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