U.S. Department of Transportation
Federal Highway Administration

Design Estimate Participant Guide

Contents

1. Disclaimer

2. Introduction to Using the Participant Guide

The Participant Guide helps you get started with the process of creating an engineer's estimate and quickly navigate through the various key processes of engineer's estimate.

The options selected for use in this guide are for instructional purposes to showcase the entire lifecycle of an engineer's estimate. Field selections, other than the ones used in this guide, could possibly lead to a varied workflow and may not be covered in this guide. For additional information on the application, refer to the User Guide or Masterworks Online Help available with the application.

Note: You may notice screenshots containing information added throughout the document, even in places where a new empty screen would typically be displayed. This practice eliminates the need for multiple images, allowing a single screenshot to convey the essential details required to proceed with the work effectively.

3. Bid Estimate Information

One of the important stages in project development is cost estimation. An estimate establishes the baseline of the project cost at different stages in the development of the project. It provides an estimation of the project cost based on the available information.

To ensure a competitive contracting environment, the engineer's estimate reflects a fair and reasonable cost of the project. It contains sufficient details to reflect the actual estimate of a project.

The **Bid Estimate Information** or **Design** module enables you to create and manage engineer's estimates.

The **Bid Estimate Information** module enables you to perform the following tasks:

- Create multiple milestone estimates
- Manage pay items
- Assign funding rules
- Perform a unit price search using historical data

While you can create multiple estimates for a project, only one can be moved to the **Final Estimate** workflow status. The final estimate is available for creating bid advertisements in the **Bidding** module.

The functional flow for bid estimate management is as follows:

1. 3. Bid Estimate Information
    - 3.1. View a Bid Estimate
2. 3.2. Engineer's Estimate
    - 3.2.1. Create an Engineer's Estimate
    - 3.2.2. Manage Engineer's Estimate Items
    - 3.2.3. Finalize an Engineer's Estimate
    - 3.2.4. Perform workflow actions to implement the business process for engineer's estimates

Bid Estimate Information Permission Matrix

This section provides information on the roles and corresponding permissions for the respective forms.

Table 1: Table 1 – Bid Estimate

Role	View
Administrator	Yes
Project Viewer	Yes
Design Component Lead	Yes
Designer	Yes
Lead Designer	Yes
Design QA/QC	Yes

Role	View
Highway Design Manager	Yes
Project Manager	Yes
A/E Designer	Yes
A/E Lead Designer	Yes
A/E Manager	Yes
Acquisitions	Yes
Construction Component Lead	Yes
Construction Admin Staff	Yes
Construction Engineer	Yes
Highway Construction Manager/QA QC	Yes
Construction Operations Engineer	Yes
Inspector	Yes
Assistant Project Engineer	Yes
Project Engineer	Yes
Regional Engineer	Yes

Table 2: Table 2 – Engineer's Estimate

Role	Create	Edit	View	Delete	Audit Log
Administrator	Yes	Yes	Yes	Yes	Yes
Project Viewer	–	–	Yes	–	–
Design Component Lead	Yes	Yes	Yes	Yes	Yes
Designer	Yes	Yes	Yes	Yes	–
Lead Designer	Yes	Yes	Yes	Yes	–
Design QA/QC	–	–	Yes	–	–
Highway Design Manager	Yes	Yes	Yes	Yes	–
Project Manager	Yes	Yes	Yes	Yes	–
A/E Designer	Yes	Yes	Yes	Yes	–
A/E Lead Designer	Yes	Yes	Yes	Yes	–
A/E Manager	Yes	Yes	Yes	Yes	–
Acquisitions	–	–	Yes	–	–
Construction Component Lead	–	–	Yes	–	–
Construction Admin Staff	–	–	Yes	–	–
Construction Engineer	–	–	Yes	–	–
Highway Construction Manager/QA QC	–	–	Yes	–	–
Construction Operations Engineer	–	–	Yes	–	–
Inspector	–	–	Yes	–	–

Role	Create	Edit	View	Delete	Audit Log
Assistant Project Engineer	–	–	Yes	–	–
Project Engineer	–	–	Yes	–	–
Regional Engineer	–	–	Yes	–	–

3.1. Viewing a Bid Estimate

Prerequisites

The role of the logged-in user must be any of the following:

- Administrator
- Project Viewer
- Design Component Lead
- Designer
- Lead Designer
- Highway Design Manager
- Project Manager
- A/E Designer
- A/E Lead Designer
- A/E Manager
- Construction Component Lead
- Construction Admin Staff
- Construction Engineer
- Highway Construction Manager QA/QC
- Construction Operations Engineer
- Inspector
- Assistant Project Engineer
- Project Engineer
- Regional Engineer
  For more information on role-specific permissions, refer to Table 1 – Bid Estimate Permission Matrix.

Overview

Once a project is saved for the first time, a bid estimate is automatically created with the same specification book (standard items table) and measurement system as selected in the **PROJECT DETAILS** page. Once a bid estimate is created, the **Engineer's Estimate** form is enabled to enter milestone estimates.

Only one bid estimate is available for a project.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

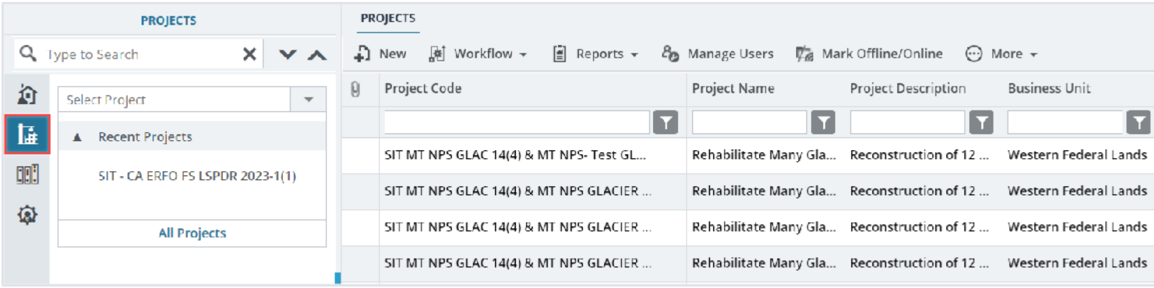


Figure 1: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

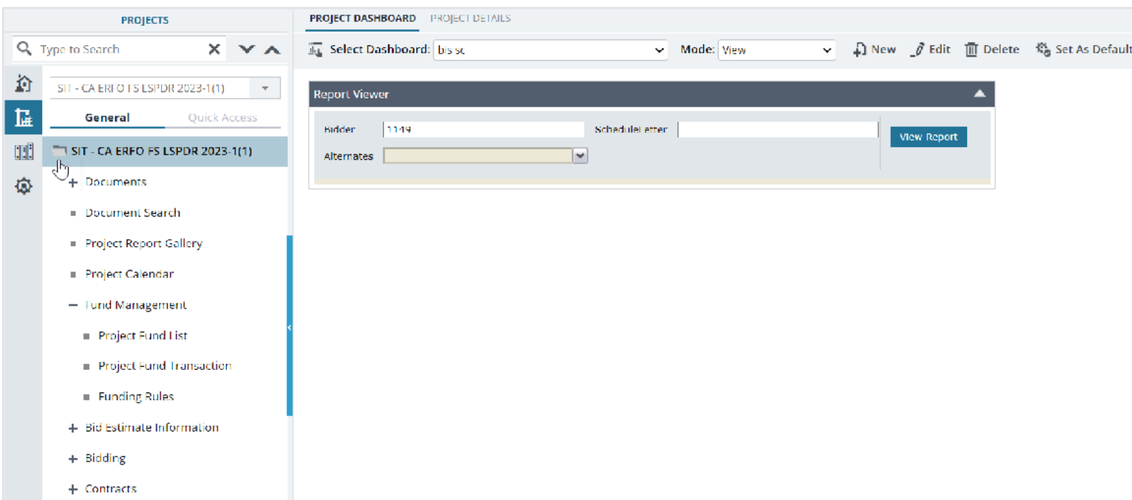


Figure 2: Expanding Projects Folder

3. Click **Bid Estimate Information**, and then select the record.

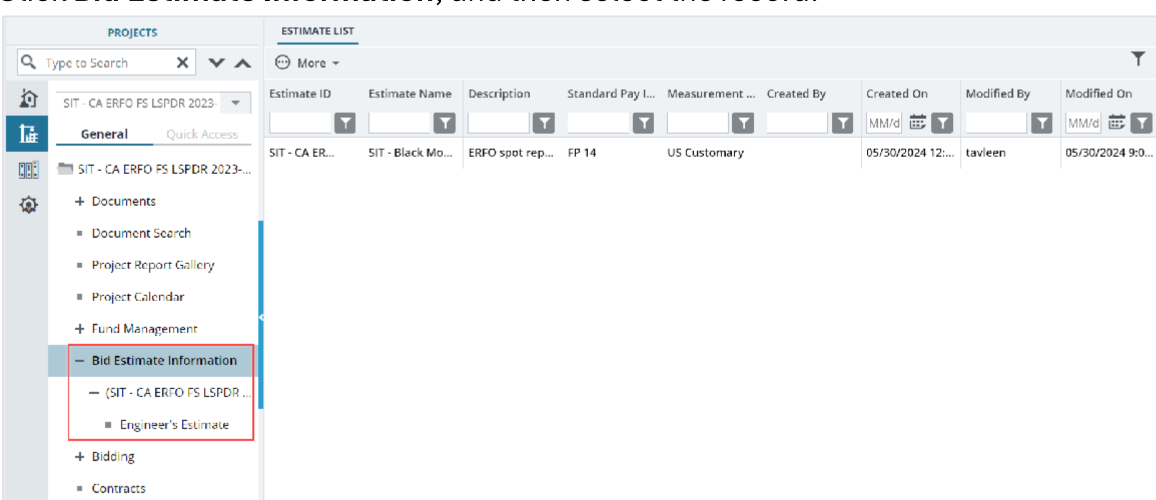


Figure 3: Navigation to Bid Estimate Information

Alternatively, perform the following steps:

a. Expand **Bid Estimate Information**.
b. Click the next available folder.
   The **BID ESTIMATE DETAILS** page is displayed.

4. Click **View**.

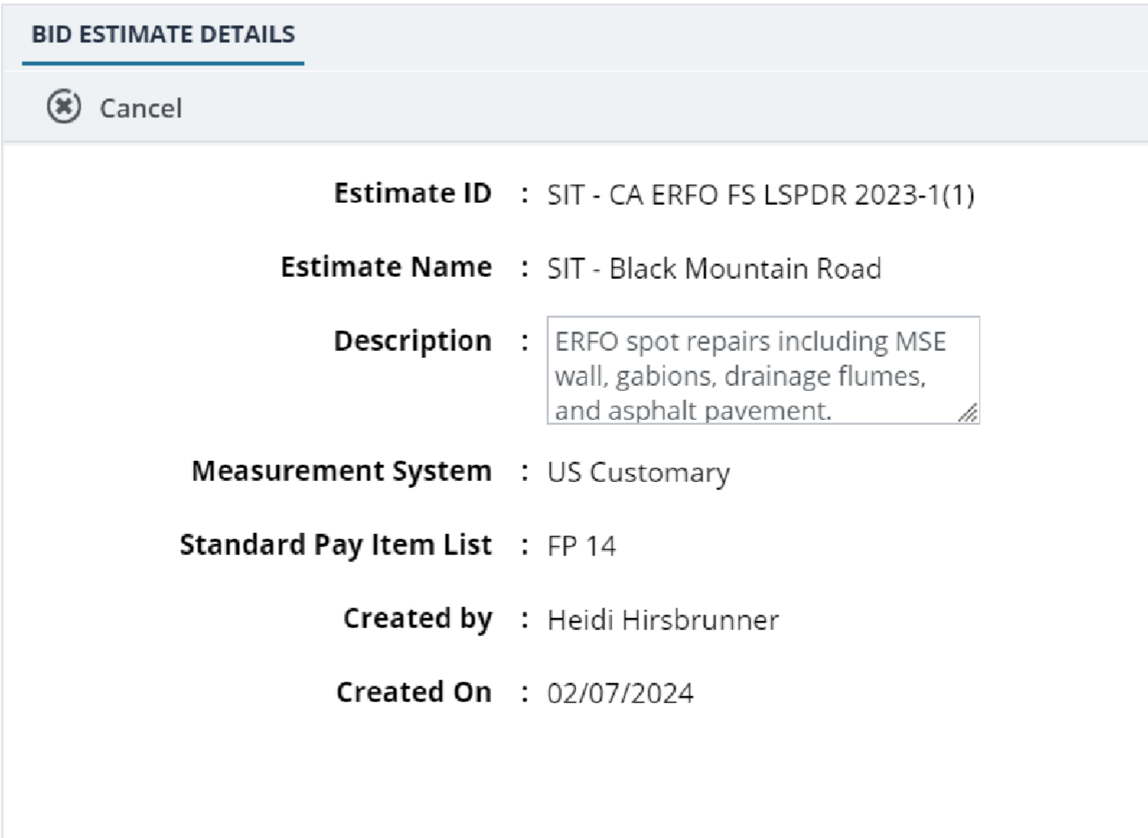


Figure 4: Bid Estimate Details Page

The **BID ESTIMATE DETAILS** page displays the following information:

Field	Description
Estimate ID	The identification number of the bid estimate. The information is retrieved from the **Project Code** field in the **PROJECT DETAILS** page.
Estimate Name	The name of the bid estimate. The information is retrieved from the **Project Name** field in the **PROJECT DETAILS** page.
Description	The description of the bid estimate. The information is retrieved from the **Project Description** field in the **PROJECT DETAILS** page.
Measurement System	The measurement system of the bid estimate. The information is retrieved from the **Measurement System** field in the **PROJECT DETAILS** page.

Field	Description
Standard Pay Item list	The standard pay item list of the bid estimate. The information is retrieved from the **Standard Items Table** field in the **PROJECT DETAILS** page.
Created by	The first and last name of the logged-in user.
Created on	The date on which the project is created.

3.2. Engineer's Estimate

The **Engineer's Estimate** form enables you to create and manage multiple milestone estimates for the project.

You can perform the following tasks:

- 3.2.1. Create an engineer's estimate
- 3.2.2. Manage engineer's estimates items
- 3.2.3. Finalize an engineer's estimate

3.2.1. Creating an Engineer's Estimate

The Engineer's Estimates form enables you to create an itemized summary of estimated costs for a project.

You can create an engineer's estimate in two ways:

- 3.2.1.1. Create an engineer's estimate manually
- 3.2.1.2. Copy an engineer's estimate

3.2.1.1. Creating an Engineer's Estimate Manually

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Design Component Lead
- Designer
- Lead Designer
- Highway Design Manager
- A/E Manager
- A/E Lead Designer
- A/E Designer

- Project Manager
  For more information on role-specific permissions, refer to Table 2 – Engineer's Estimate Permission Matrix.

Overview

You can create as many engineer's estimates as required until any of these records are moved to the **Final Estimate** workflow status.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

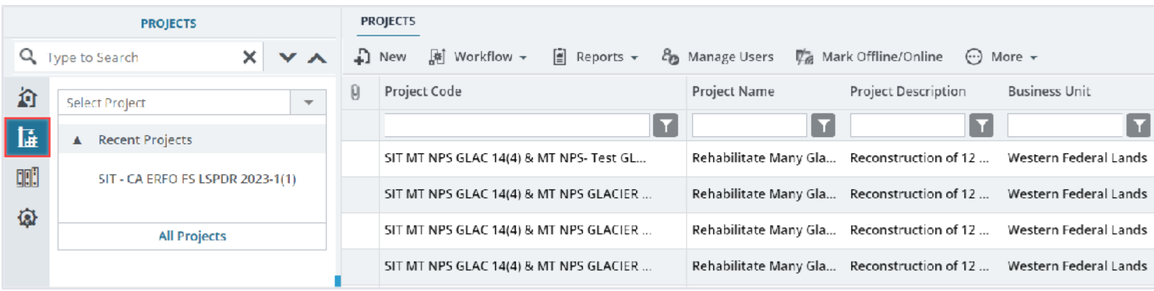


Figure 5: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

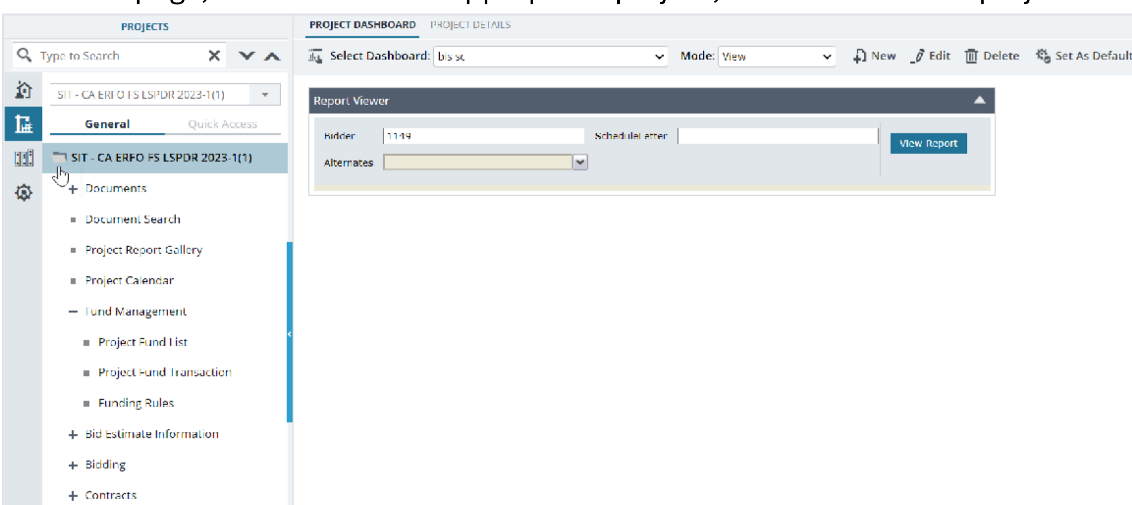


Figure 6: Expanding Projects Folder

3. Expand **Bid Estimate Information**, and then click **Engineer's Estimates**.

   The **ENGINEER'S ESTIMATE** list page is displayed.

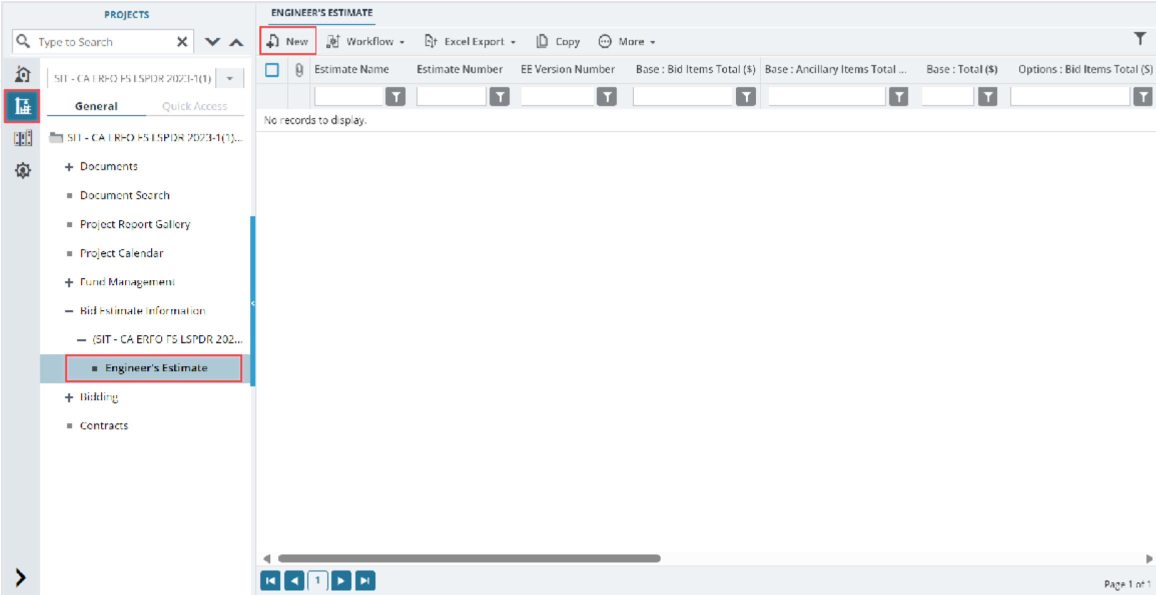


Figure 7: List Page of Engineer's Estimate

4. Click **New**.

   The **ENGINEER'S ESTIMATE DETAILS** page is displayed.

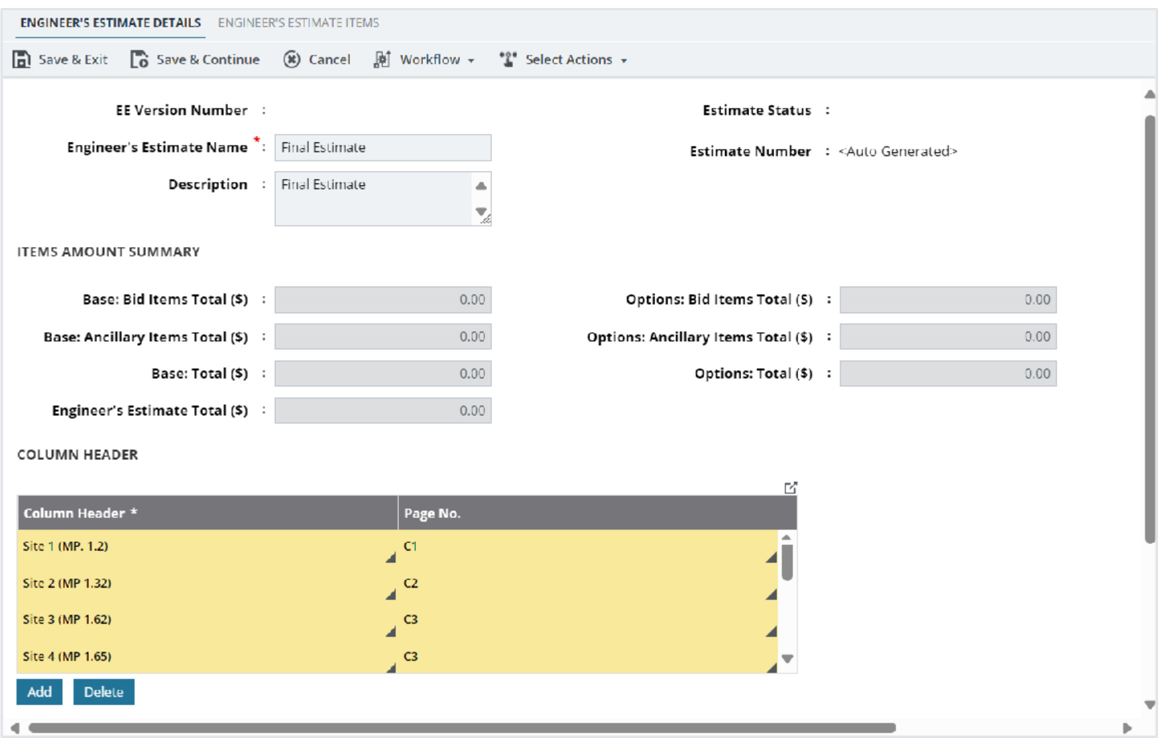


Figure 8: Engineer's Estimate Details Page

The **ENGINEER'S ESTIMATE DETAILS** page displays the following information:

Field Name	Description
EE Version Number	The revision number created on the Final engineer's estimate. The value is automatically populated as EE Version-1, EE Version-2, and so on. For example, while performing the workflow action for an **Advertisement**, if a revision of engineer's estimate is initiated, then the current final engineer's estimate is assigned **EE Version-1** and a new engineer's estimate is automatically created as **EE Version- 2**. For more information on advertisement, refer to the **Advertisement** section in the **Acquisition and e-Bidding PG**.
Estimate Status	Current workflow status of the engineer's estimate. The value is updated based on the workflow validation defined in the Section 3.2.4. Engineer's Estimate Workflow Status.
Estimate Number	On saving the record, a unique identification number for the engineer's estimate is automatically generated.

5. In the **Engineer's Estimate Name** field, enter a name for the estimate.

6. In the **Description** field, enter a description for the engineer's estimate.

7. To categorize items into respective column headers, in the COLUMN HEADER section, perform the following steps:

   a. Click **Add**.
   The **New COLUMN HEADER** dialog box is displayed.

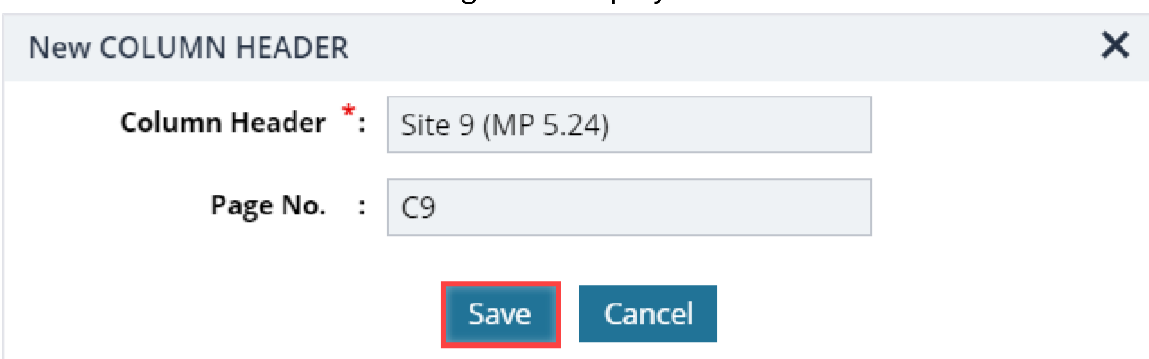


Figure 9: New Column Header Dialog Box

   b. In the **Column Header** field, enter the name of the header.

   c. In the **Page No**. field, enter the page number for the header.

d. Click **Save**.

> **Note**:
>
> - If multiple column headers are added, then the column headers are displayed in ascending order of the page number and irrespective of its date of creation.
> - Do not add an **Allowance Column Header**. If allowance quantities are included in the pay items, the system will automatically generate the Allowance column in the Summary of Quantities.

8. Optionally, in the **ATTACHMENTS** section, upload or link related files.
   For information on attachments, refer to Section 4.1. Attachments.

9. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

   On saving the record, the record will be available in the **Draft** workflow status.
   Once the engineer's estimate items are added in the **ENGINEER'S ESTIMATE ITEMS** tab, the fields in the **ITEMS AMOUNT SUMMARY** section are automatically updated.

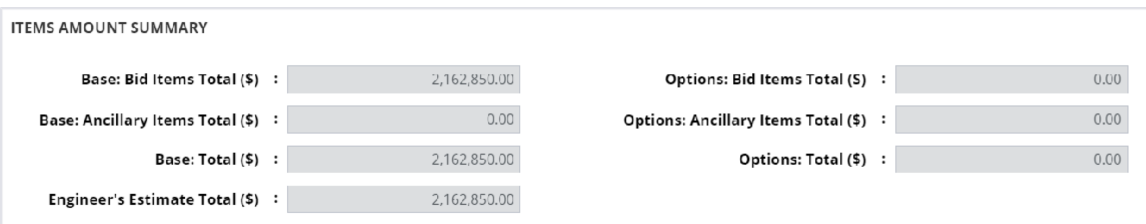


Figure 10: Items Amount Summary Section

The following table provides the information on each field:

Field Name	Description
Base: Bid Items Total ($)	Sum of all items for which the **Bid Type** is selected as Bid and the **Option** checkbox is not selected for the schedule.
Base: Ancillary Items Total ($)	Sum of all items for which the **Bid Type** is selected as Ancillary and the **Option** checkbox is not selected for the schedule. **Note**: Ancillary Items are the FLH Incentive pay items such as material incentives, roughness, partnering, etc.
Base: Total ($)	Sum of bid items and ancillary items for Base schedules.
Engineer's Estimate Total ($)	Sum of all bid items and ancillary items for Base and Option schedules. Calculated as: Base: Total ($) + Options: Total ($) **Note**: If there are alternate containers, then only the highest amount from the items under the container is considered.

Field Name	Description
Options: Bid Items Total ($)	Sum of all items for which the **Bid Type** is selected as Bid and the **Option** checkbox is selected for the schedule.
Options: Ancillary Items Total ($)	Sum of all items for which the **Bid Type** is selected as Ancillary and the **Option** checkbox is selected for the schedule.
Options: Total ($)	Sum of bid items and ancillary items for Options.

For information on adding items to an engineer's estimate, refer to Section 3.2.2.2. Adding Items to an Engineer's Estimate.

3.2.1.2. Copying an Engineer's Estimate

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Design Component Lead
- Designer
- Lead Designer
- Highway Design Manager
- A/E Manager
- A/E Lead Designer
- A/E Designer
- Project Manager

  For more information on role-specific permissions, refer to Table 2 – Engineer's Estimate Permission Matrix.

Overview

The **Copy** feature available in the **ENGINEER'S ESTIMATE** list page enables you to copy any milestone estimate from the same project or any other project in Masterworks.

You can copy the details of a selected engineer's estimate to create a new engineer's estimate with a new name and estimate number. The workflow status of the new engineer's estimate is set to the first workflow status as defined for engineer's estimates.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

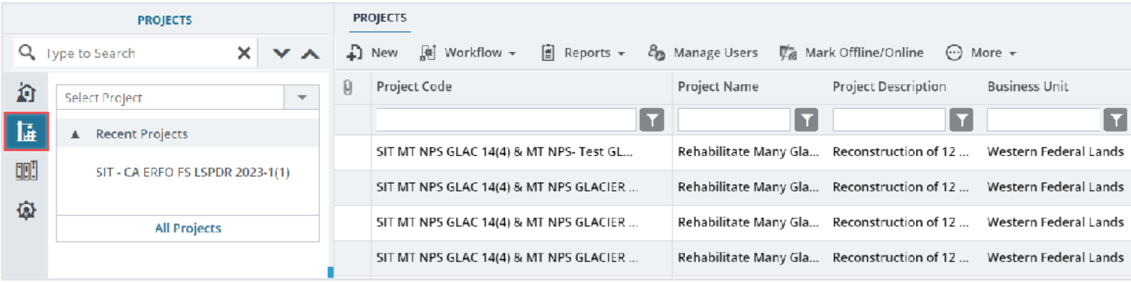


Figure 11: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

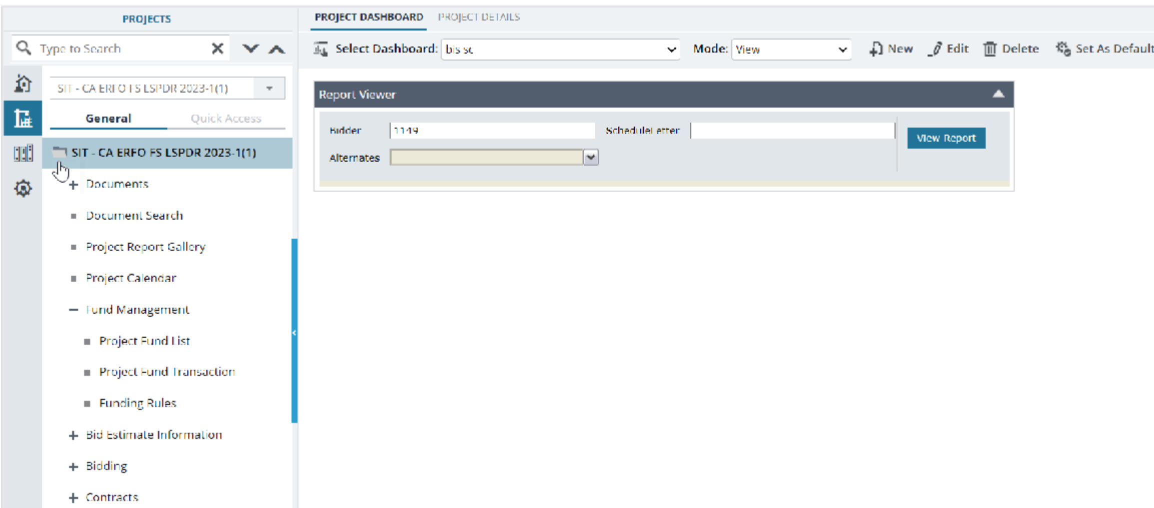


Figure 12: Expanding Projects Folder

3. Expand **Bid Estimate Information**, and then click **Engineer's Estimates**.

   The **ENGINEER'S ESTIMATE** list page is displayed.

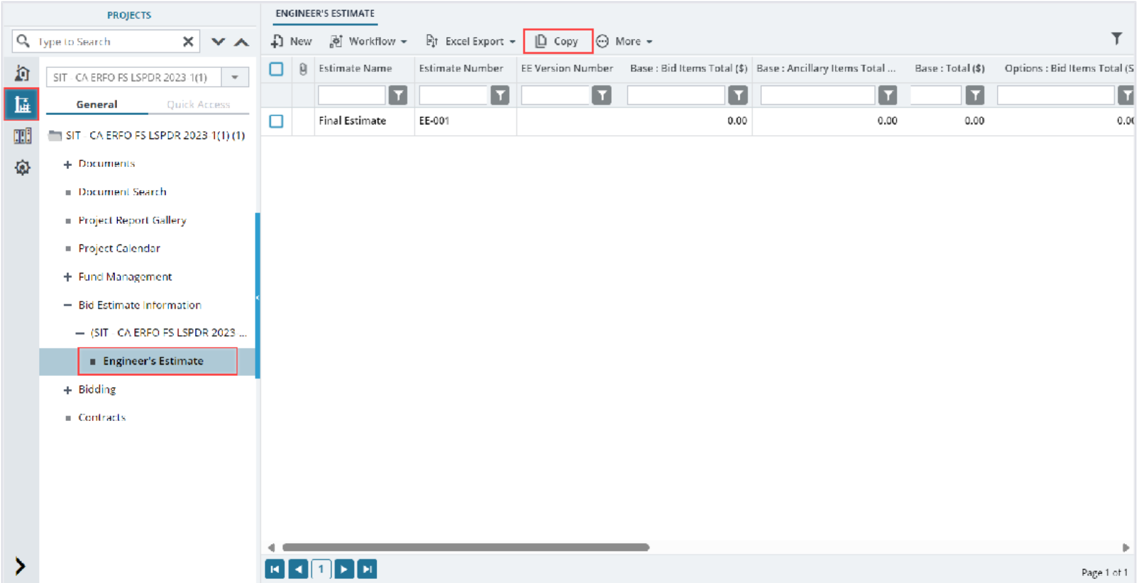


Figure 13: List Page of Engineer's Estimate

4. In the list page, click **Copy**.

   The **ENGINEER'S ESTIMATE COPY** page is displayed.

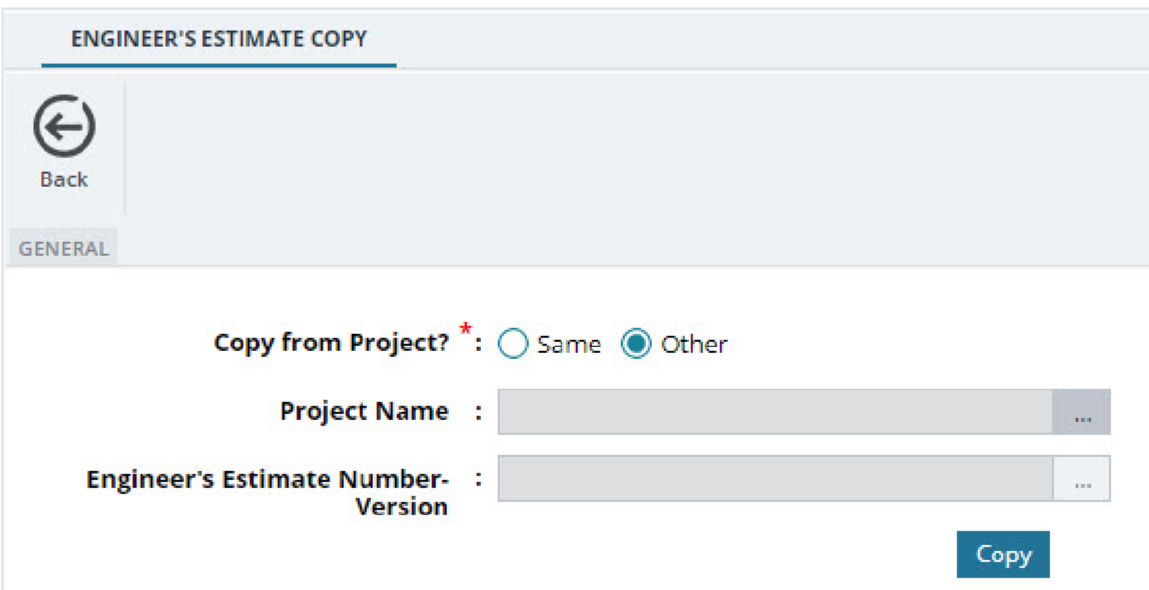


Figure 14: Engineer's Estimate Copy

5. Provide the appropriate information in the fields, as described in the following table:

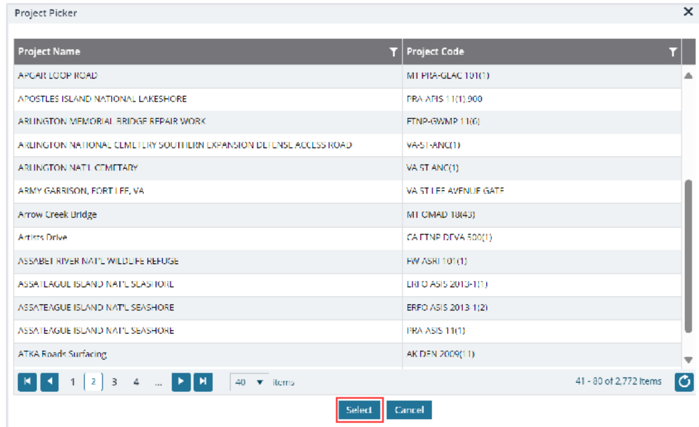
<table>
<tr><th>Field Name</th><th>Description</th></tr>
<tr><td>Copy from Project?</td><td>Select the appropriate option.
Available options are Same and Other.
If Other is selected, then the Project Name field is displayed.
To select the project, perform the following steps:
a. Click ...
The Project Picker dialog box is displayed.


Figure 15: Project Picker Dialog Box

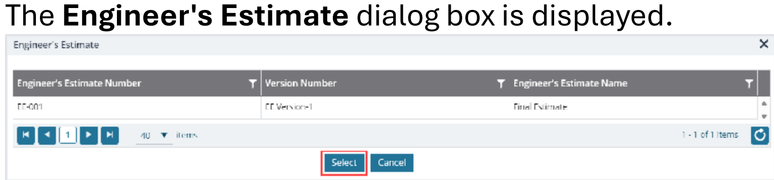
b. Click the appropriate project, and then click Select.
Available options are the projects to which you are invited and have the same Standard Items Table and Measurement System.</td></tr>
<tr><td>Engineer's Estimate Number-Version</td><td>To select the engineer's estimate version number, perform the following steps:
a. Click ...
The Engineer's Estimate dialog box is displayed.


Figure 16: Engineer's Estimate Dialog Box

b. Click the appropriate version of the engineer's estimate, and then click Select.
Available options are based on the selection made in the Copy from Project? field.
If Same is selected, then it displays all the versions of the engineer's estimate created in this project.
If Other is selected, then it displays all the versions of the engineer's estimate created for the respective project.</td></tr>
</table>

6. Click **Copy**.
   On successful copying of the engineer's estimate, a success message is displayed.

Note:

- A new engineer's estimate record is automatically created with a sequential number for the **Estimate Number** field.
- All the information from the selected version of the engineer's estimate is copied to the newly created engineer's estimate except the values in the **Engineer's Estimate Name** and **Description** fields.
  To update these fields, in the **ENGINEER'S ESTIMATE** list page, select the appropriate record, click **Edit**, and then add the necessary information fields.

7. Click **Back** to return to the **ENGINEER'S ESTIMATE** list page.
   You can now add or remove estimate items. For information on managing estimate items, refer to Section 3.2.2. Managing Engineer's Estimate Items.

3.2.2. Managing Engineer's Estimate Items

In an engineer's estimate, you can add standard items from the library and temporary items manually.

Note: The **Total Amount ($)** field in the **Engineer's Estimate Items** tab displays the summation of only bid items. Ancillary items are excluded.

You can manage containers to categorize the engineer's estimate items. The following section explains the process of managing containers:

- 3.2.2.1. Manage containers

You can add engineer's estimate items in various ways:

- 3.2.2.2.1. Add a single estimate item
- 3.2.2.2.2. Add multiple estimate items

Additionally, you can perform the following tasks:

- 3.2.2.2.3. Add sub items to an estimate item
- 3.2.2.3. Perform Unit Price Search
- 3.2.2.4. Perform Ad-hoc Unit Price Search
- 3.2.2.6. Associate a funding rule to an estimate item

3.2.2.1. Managing Containers

You can create containers in an engineer's estimate to categorize estimate items. You can also delete an entire container to remove items of that container from the engineer's estimate.

The following topics explain the process of managing containers:

- 3.2.2.1.1. Create a container
- 3.2.2.1.2. Delete a container

3.2.2.1.1. Creating a Container

Prerequisites

An Engineer's Estimate record is available in the **Draft** workflow status.

Overview

You must create containers to categorize the engineer's estimate items. You cannot add new items without creating containers.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

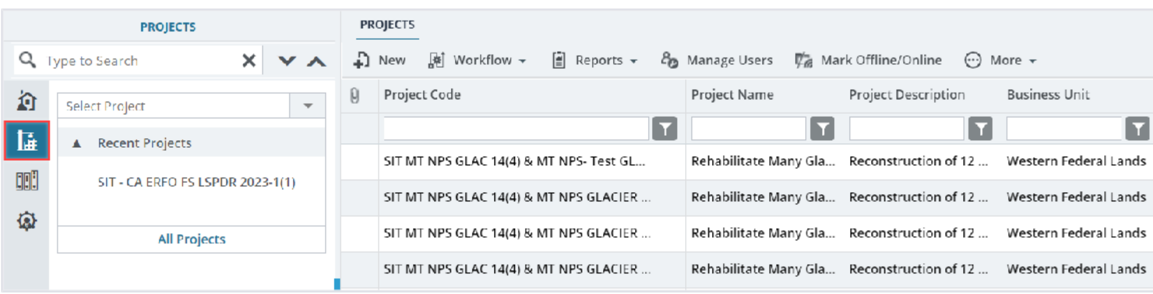


Figure 17: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

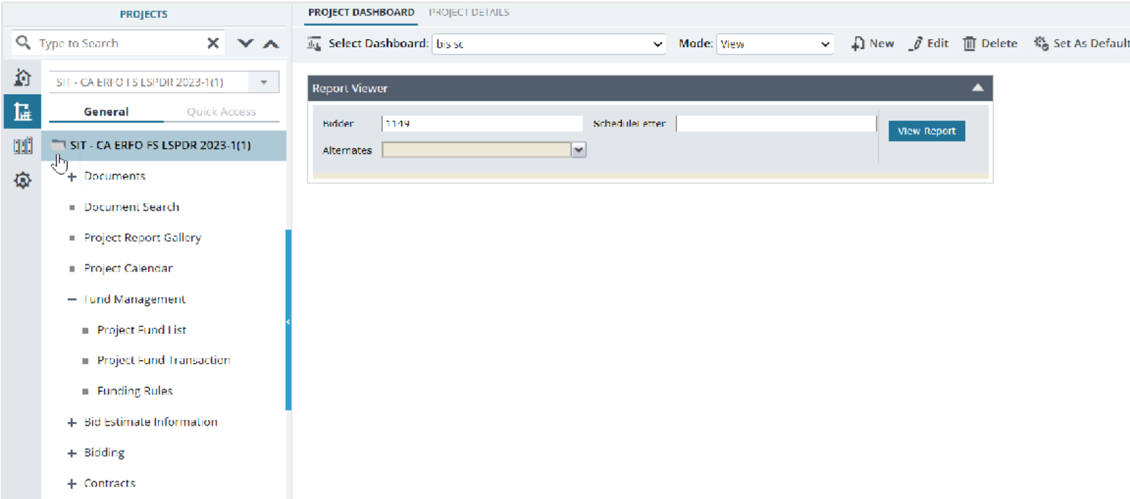


Figure 18: Expanding Projects Folder

3. Expand **Bid Estimate Information**, and then click **Engineer's Estimates**.
   The **ENGINEER'S ESTIMATE** list page is displayed.

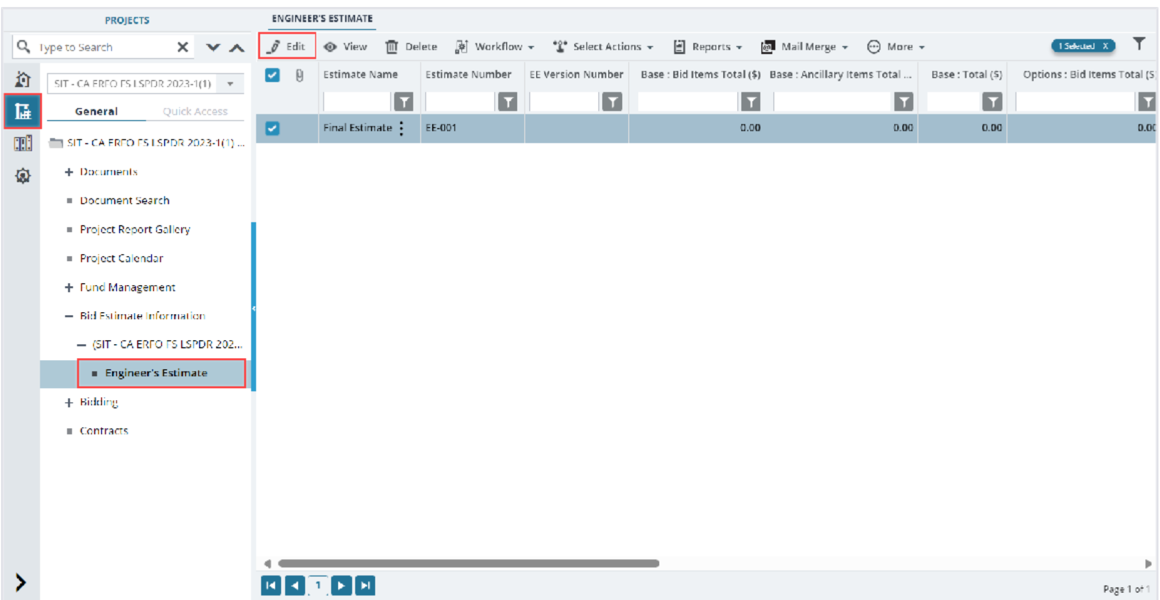


Figure 19: List Page of Engineer's Estimate

4. In the list page, select the appropriate record to create a container, and then click **Edit**.
   The **ENGINEER'S ESTIMATE DETAILS** page is displayed.

5. Click the **ENGINEER'S ESTIMATE ITEMS** tab.
   The **ENGINEER'S ESTIMATE ITEMS** list page is displayed.

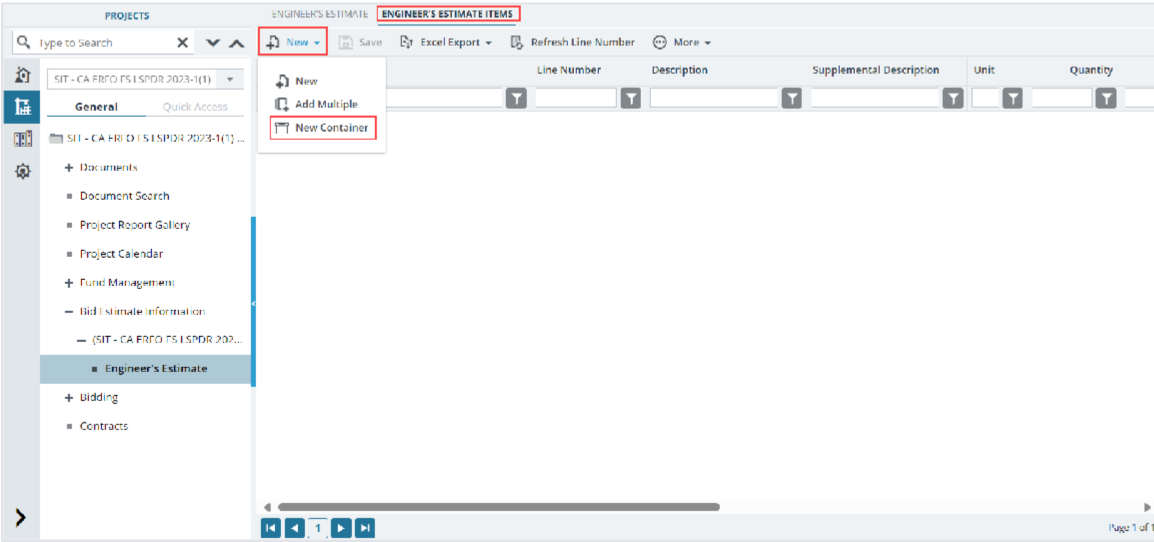


Figure 20: Engineer's Estimate Items List Page

6. Click **New**, and then click **New Container**.
   The **CONTAINER** page is displayed.

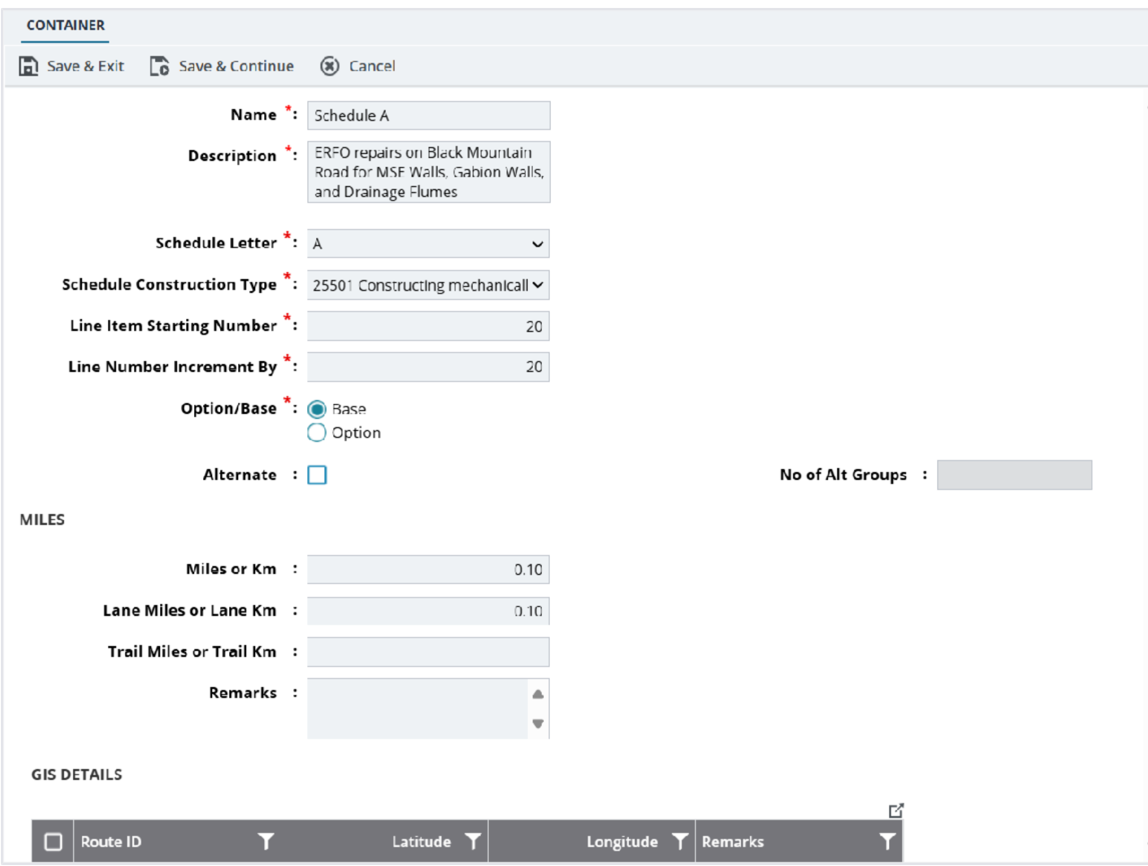


Figure 21: Container

7. Provide the appropriate information in the fields, as described in the following table.

Field Name	Description
Name	Enter a name for the container.
Description	Enter a description for the container.
Schedule Letter	From the drop-down list, select a unique letter. Available options are letters from A to Z. **Note**: You cannot reuse the same letter in the same engineer's estimate.
Schedule Construction Type	From the drop-down list, select the appropriate schedule construction type. Available options are 20101 Clearing, 20102 Clearing and grubbing, 20301 Removal of bridge, 20401 Grading work only, etc. The drop-down list displays the active schedule construction types defined in the **Schedule Construction Type** catalog of the library.
Line Item Starting Number	Enter the starting number for pay items that will be added to the container. Normally the starting line number is set to 20. (If the container has hundreds of pay items, consider setting the starting line number to 10). **Note**: • You must enter positive numbers without any decimals. • Line numbers cannot exceed 4 digits. The line numbers for all the items inside a container is calculated based on the line item starting number and the increment counter. The line numbers are assigned based on the order in which the items are added. However, by selecting **Refresh Line Number** in the **Engineer's Estimate Items** page, the line numbers will be recalculated so that the pay items are in pay item number order. **Note**: If items are added inside an **Alternate** container, then the line numbers are the same for all the items appended with suffix A, B, C, and so on.
Line Number Increment By	Enter a number to define the increment counter for the line item starting number. Normally the line number increment is set to 20. (If the container has hundreds of pay items, consider setting the line number increment to 10). You must enter positive numbers without any decimals. **Note**: You must enter positive numbers without any decimals.

Field Name	Description
Option/Base	Select the appropriate option.
Alternate	Select the check box to ensure alternate sub-containers are automatically created. The number of Alternate containers is defined in the 'No. of Alt Groups' field. The name of the Alternate sub-containers will be Alternate 1, Alternate 2, and so on.
No of Alt Groups	Enter the appropriate number to create alternate containers. **Note**: You can enter any value within the range of 1 to 9.

8. In the **MILES** section, provide the appropriate information in the fields, as described in the following table.

   Note: Miles and Lane Miles fields must be filled prior to marking an estimate as Final Estimate.

Field Name	Description
Miles or Km	Enter a positive number with up to two decimal places.
Lane Miles or Lane Km	Enter a positive number with up to two decimal places.
Trail Miles or Trail Km	Enter a positive number with up to two decimal places.
Remarks	Enter any remarks, if applicable.
Field Name	Description

9. To add location details of the container, in the **GIS DETAILS** section, perform the following steps:
   a. Click **Add**.
   A row is added.

Figure 22: GIS Details

   b. In the **Route ID** column, enter the route identification number of the location.

   c. In the **Latitude** column, enter the latitude coordinates.

   Note: You can enter any value within the range of -90 to 90.

   d. In the **Longitude** column, enter the longitude coordinates

   Note: You can enter any value within the range of -180 to 180.

e. In the **Remarks** column, enter any remarks, if applicable.

Upon adding the information for the respective fields, the information is automatically saved.

Optionally, perform the following steps as applicable:

- To modify the information for any line item, click the respective fields of the appropriate line item and make the necessary changes.
- To delete any line item, select the appropriate line item, click **Delete**, and then click **OK**.

10. To add bridge information, in the **BRIDGE DATA** section, perform the following steps:

a. Click **Add**.

A row is added.

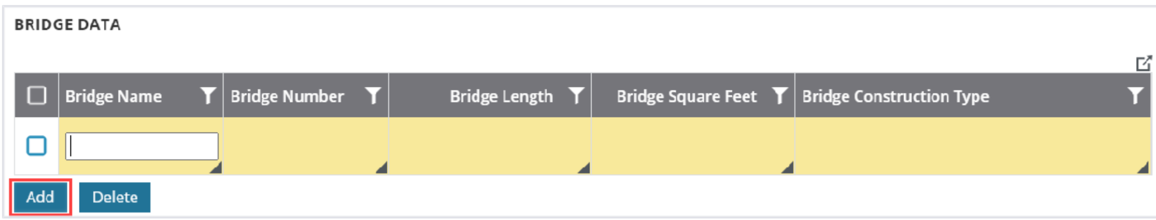


Figure 23: Bridge Data

b. In the **Bridge Name** column, enter the name of the bridge.

c. In the **Bridge Number** column, enter the identification number of the bridge.

d. In the **Bridge Length** column, enter the length of the bridge.

Note: You must enter any positive number with up to two decimal places.

e. In the **Bridge Square Feet** column, enter the area of the bridge.

Note: You must enter any positive number with up to two decimal places.

f. In the **Bridge Construction Type** column, select the appropriate bridge construction type.

Available options are 55001 Bridge Construction - Concrete, 55002 Bridge Construction - Steel, 55002 Bridge Construction - Timber, etc.

The drop-down list displays the active bridge construction types defined in the **Bridge Construction Type** catalog of the library.

Upon adding the information for the respective fields, the information is automatically saved, and a new line item is automatically created.

Optionally, perform the following steps as applicable:

- To modify the information for any line item, click the respective fields of the appropriate line item and make the necessary changes.
- To delete any line item, select the appropriate line item, click **Delete**, and then click **OK**.

11. Click **Save & Exit** to return to the items list page.

    Optionally, click **Save & Continue** to save the container and continue on the same page. Click **Cancel** to exit the page.

3.2.2.1.2. Deleting a Container

Overview

On deleting a container, the items in the container are also deleted from the engineer's estimate.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

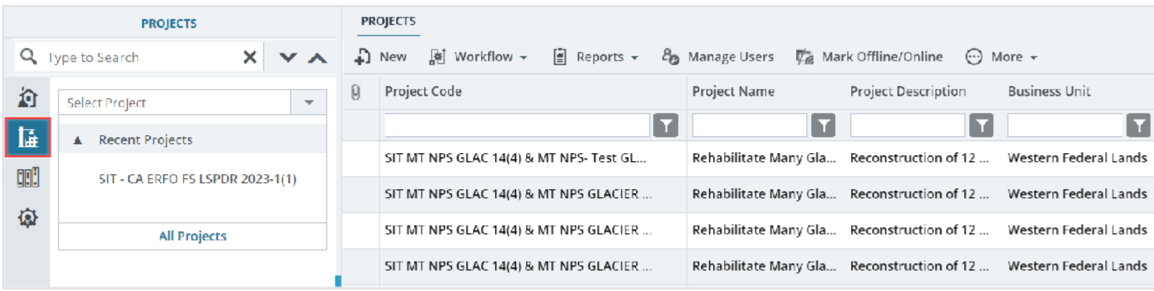


Figure 24: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

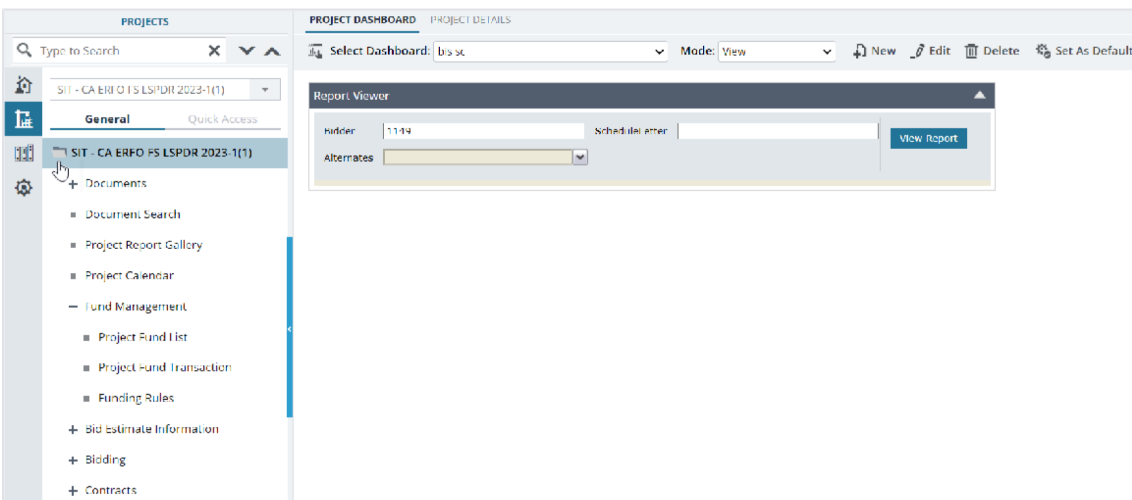


Figure 25: Expanding Projects Folder

3. Expand **Bid Estimate Information**, and then click **Engineer's Estimates.**
   The **ENGINEER'S ESTIMATE** list page is displayed.

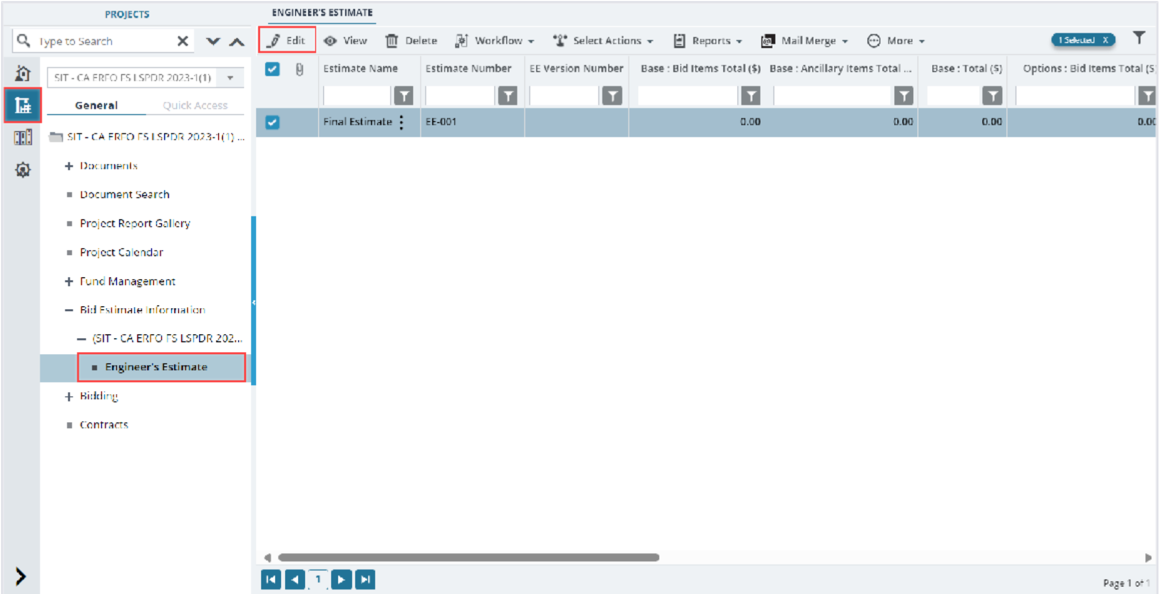


Figure 26: List Page of Engineer's Estimate

4. In the list page, select the appropriate engineer's estimate, and then click **Edit**.
   The **ENGINEER'S ESTIMATE DETAILS** page is displayed.

5. Click the **ENGINEER'S ESTIMATE ITEMS** tab.
   The **ENGINEER'S ESTIMATE ITEMS** list page is displayed.

6. Select the appropriate container, click **Delete**, and then click **OK**.

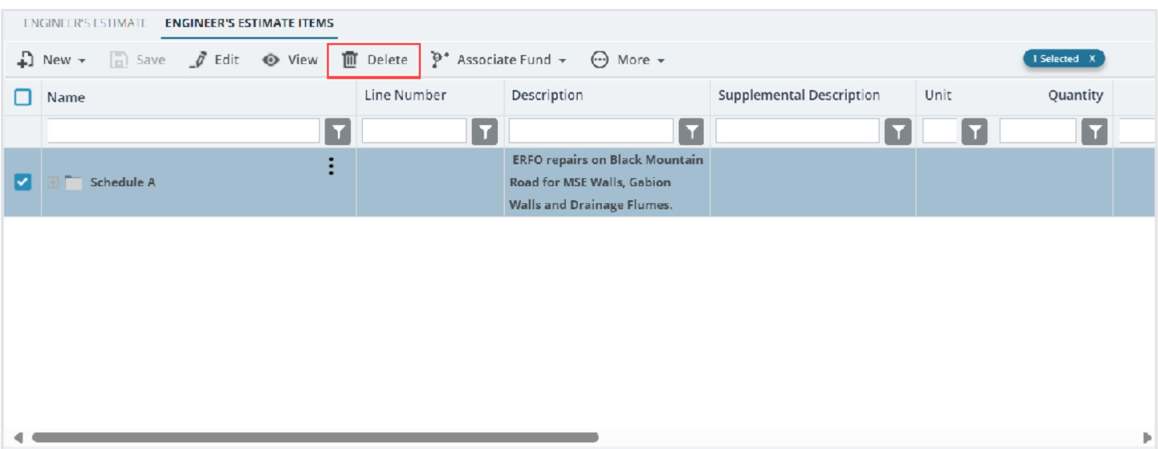


Figure 27: Delete Container

The container and the items in the container are deleted from the engineer's estimate.

3.2.2.2. Adding Items to an Engineer's Estimate

You can add estimate items to an engineer's estimate in the following ways:

- 3.2.2.2.1. Add a temporary estimate item manually or a single estimate item from the library
- 3.2.2.2.2. Add multiple estimate items from the library

3.2.2.2.1. Adding an Engineer's Estimate Item

Prerequisites

- In the **ENGINEER'S ESTIMATE ITEMS** page, an appropriate container is available. For information on creating containers, refer to Section 3.2.2.1.1. Creating a Container.
- The role of logged-in user must be any of the following:
    - Administrator
    - Design Component Lead
    - Designer
    - Lead Designer
    - Highway Design Manager
    - A/E Manager
    - A/E Lead Designer
    - A/E Designer
    - Project Manager

    For more information on role-specific permissions, refer to Table 2 – Engineer's Estimate Permission Matrix.

Overview

You can only add items inside a container.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

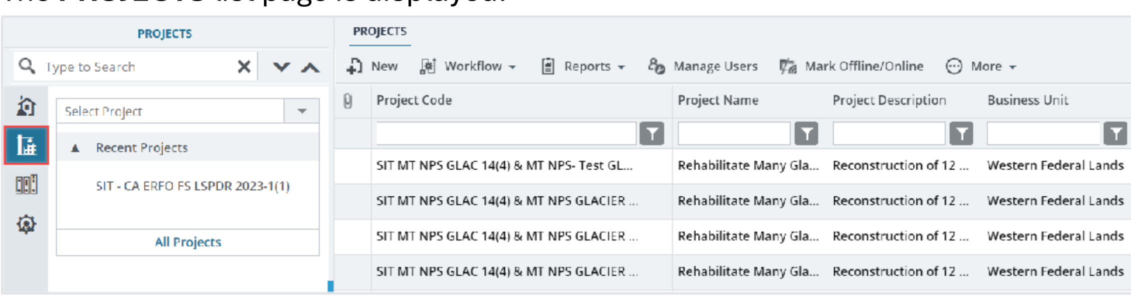


Figure 28: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

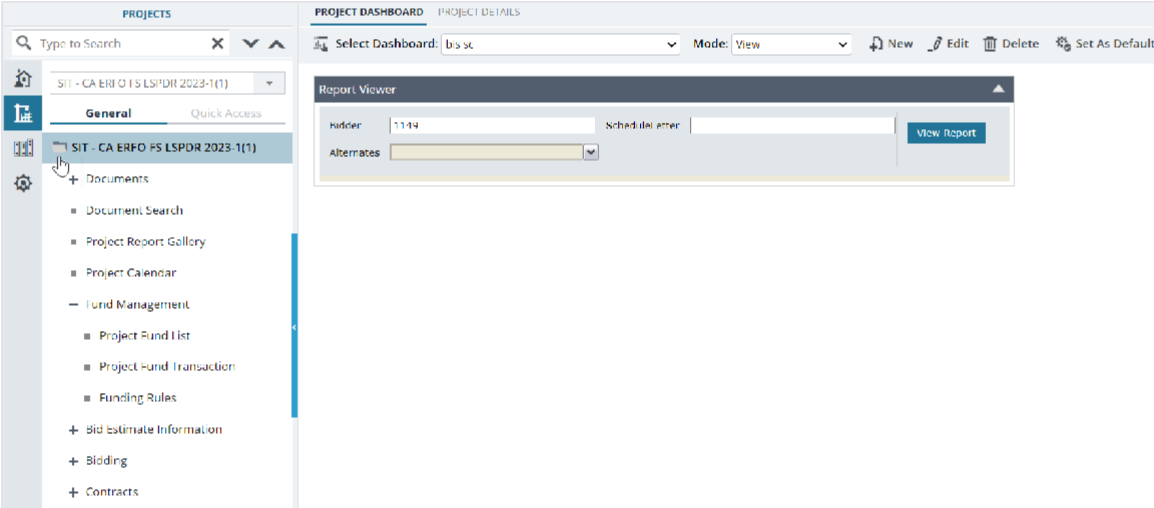


Figure 29: Expanding Projects Folder

3. In the navigation pane, expand **Bid Estimate Information**, and then click **Engineer's Estimates**.
   The **ENGINEER'S ESTIMATE** list page is displayed.

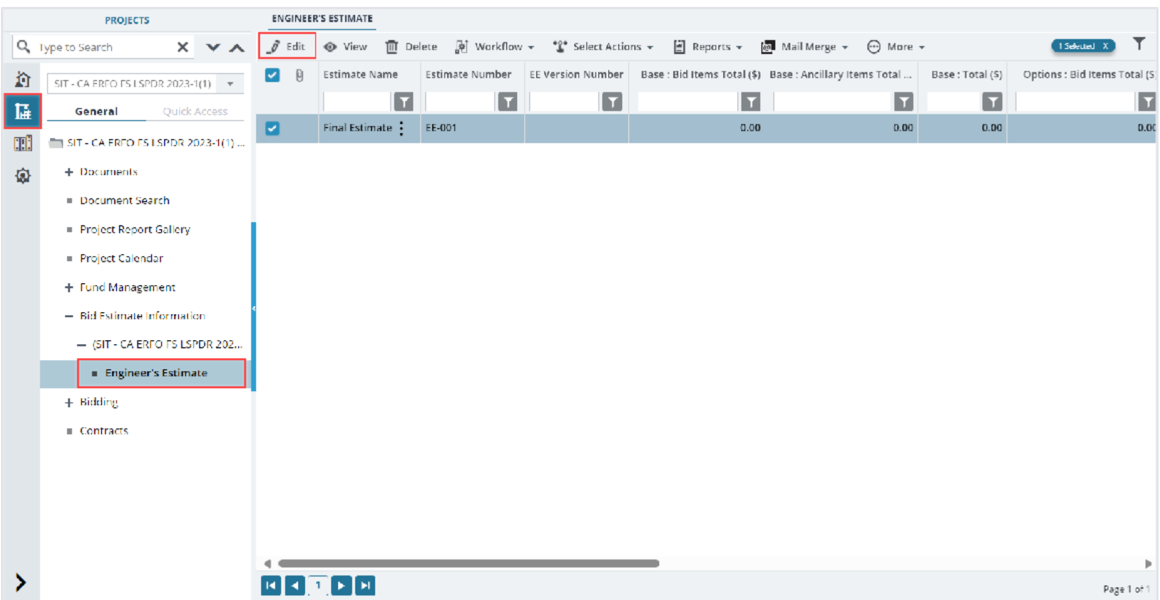


Figure 30: List Page of Engineer's Estimate

4. In the list page, select the appropriate record to add an item, and then click **Edit**.
   The **ENGINEER'S ESTIMATE DETAILS** page is displayed.
5. Click the **ENGINEER'S ESTIMATE ITEMS** tab.

6. In the list page, select the appropriate container, click **New**, and then click **New**.

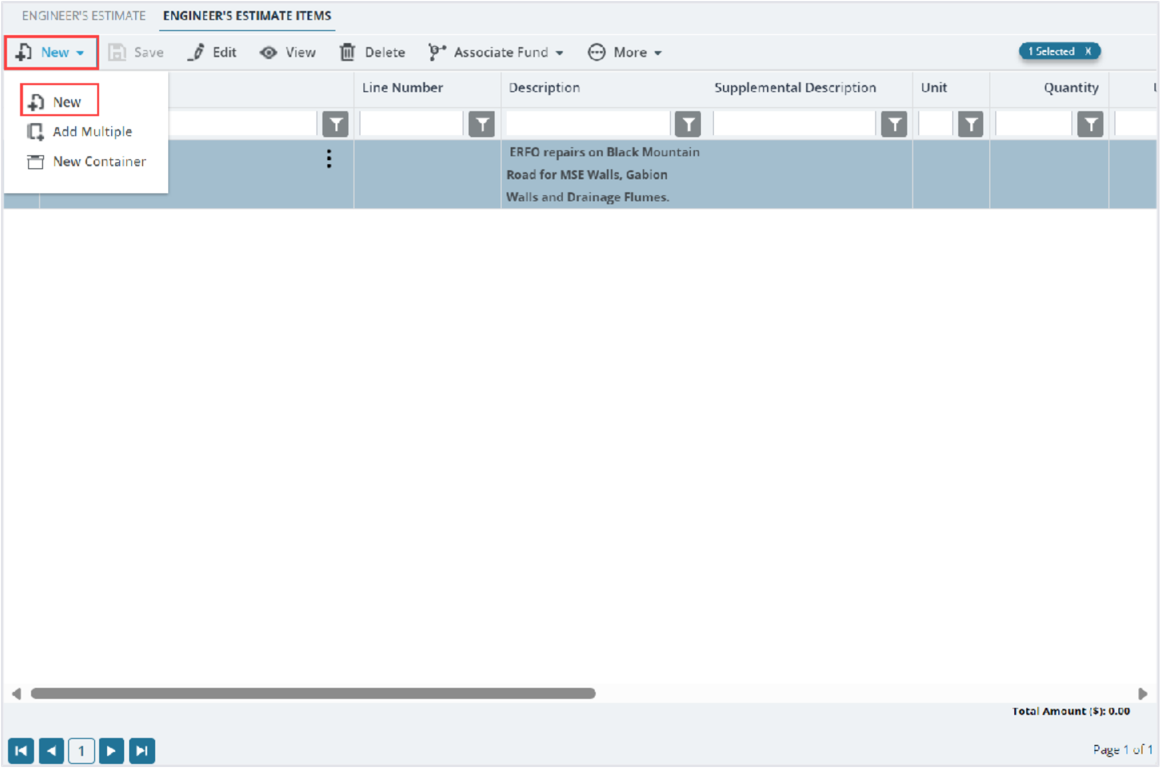


Figure 31: Add Item

The **NEW ITEM** page is displayed.

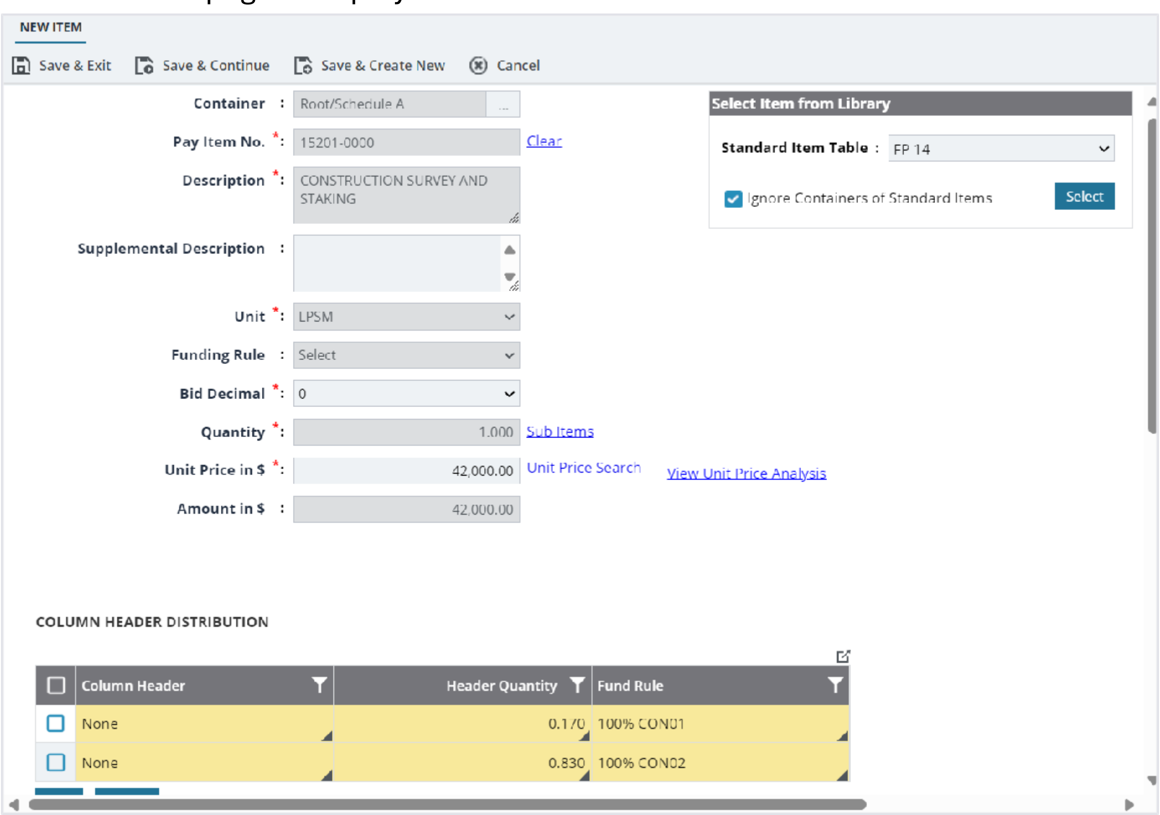
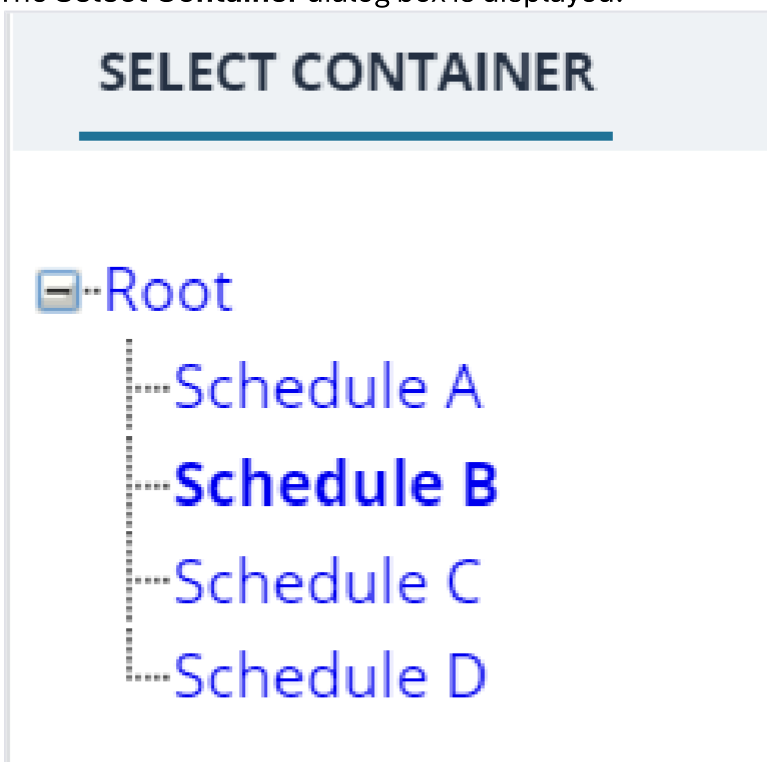


Figure 32: New Item

The **NEW ITEM** page displays the following information:

Field Name	Description	Comments
Standard Item list	The standard items table selected for the project.	**Note**: You cannot edit these fields.
Ignore Containers of Standard Items	By default, the check box is selected to ensure containers of standard items are not added.	

7. Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Container	The name of the container selected in the **ENGINEER'S ESTIMATE ITEMS** list page is displayed. To select a different container to categorize items, perform the following steps: a. Click . The **Select Container** dialog box is displayed.  *Figure 33: Select Container Dialog Box* b. Click the appropriate container.
Pay Item No.	To select an item from the library, perform the following steps: a. In the **Select Item from Library** box, click **Select**.

<table>
<tr><th>Field Name</th><th>Description</th></tr>
<tr><td></td><td>

The **Please select an Item** dialog box is displayed.

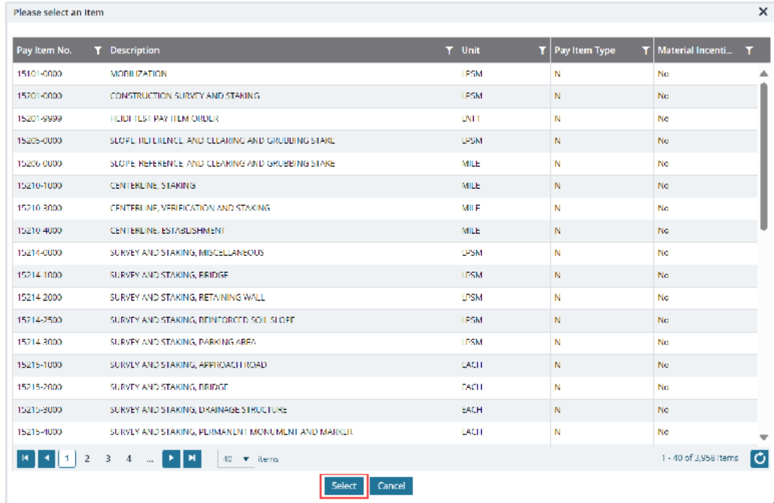


Figure 34: Please Select an Item Dialog Box

Items are displayed in the ascending order of the pay item number and based on the **Standard Items Table** and **Measurement System** defined in the project details page.

b. Click the appropriate item, and then click **Select**.
The **Pay Item No.**, **Description**, **Unit**, **Bid Decimal**, **Pay Item Type**, **Bid Type**, **Force Quantity**, and **Material Incentive** fields of the selected item are automatically updated based on the item details provided for the item in the library.
If an item added from library has the **Material Incentive** field selected as **Yes**, an item is automatically added with the following information:

<table>
<tr><th>Field Name</th><th>Description</th></tr>
<tr><td>Container</td><td rowspan="2">The value as specified for the parent item.</td></tr>
<tr><td>Pay Item No.</td></tr>
<tr><td>Description</td><td>The same description as the parent item appended with (Quality).</td></tr>
<tr><td>Unit</td><td>The value is displayed as LPSM, irrespective of the parent item unit.</td></tr>
<tr><td>Funding Rule</td><td>If a default funding rule is assigned to the project, then the same funding rule is displayed.
Otherwise, the field is blank.</td></tr>
<tr><td>Bid Decimal</td><td>The value as specified for the parent item.</td></tr>
<tr><td>Quantity</td><td>If the Unit field is LPSM or CTSM, then 1 is displayed.
Otherwise, the field is blank. It is always LPSM for a Material Incentive.</td></tr>
</table>

</td></tr>
</table>

<table>
<tr><th>Field Name</th><th>Description</th></tr>
<tr><td></td><td>
<table>
<tr><th>Field Name</th><th>Description</th></tr>
<tr><td>Column Header Quantity</td><td rowspan="4">These fields are blank.</td></tr>
<tr><td>Supplemental Description</td></tr>
<tr><td>Designer Notes</td></tr>
<tr><td>Summary of Quantity Remarks</td></tr>
<tr><td>Pay Item Type</td><td>The pay item type is QM.</td></tr>
<tr><td>Bid Type</td><td>The bid type is Ancillary.</td></tr>
<tr><td>Contract Quantity</td><td>It is selected as No.</td></tr>
<tr><td>Force Quantity</td><td>It is selected as No.</td></tr>
<tr><td>Force Unit Price</td><td>It is selected as No.</td></tr>
<tr><td>Material Incentive</td><td>The checkbox is unchecked.</td></tr>
</table>
To update the necessary fields for an ancillary item, refer to the appropriate rows in this table and steps 9 and 11, as applicable.

Note:

You can add only one mobilization item per schedule.
If the item is not added from the standard items library, then the manually entered item is considered a temporary item. This field is editable only for temporary.

</td></tr>
<tr><td>Description</td><td>Note: This field is editable only for temporary items.
Enter the temporary description of the item.
If you have selected the item from the library, then the item description is displayed based on the Measurement System defined for the project.
Measurement systems are defined in the Measurement Systems catalog of the library.</td></tr>
<tr><td>Supplemental Description</td><td>Enter additional description specific to the item.
Enter the supplemental description in parenthesis, for example: (Wetland seed mix), (Wall #2), etc.</td></tr>
<tr><td>Unit</td><td>Note: This field is editable only for temporary items.
Select the unit of measure for the item.
Available options are based on the Measurement System selected for the project. For example, ACRE, CTSM, CUFT, CUYD, DAY, etc.
Measurement systems are defined in the Measurement Systems catalog of the library.</td></tr>
<tr><td>Funding Rule</td><td>Based on the following criterion, the value in the Funding Rule field is displayed:

If the unit of the item is LPSM or CTSM and if only one fund rule is added in the COLUMN HEADER DISTRIBUTION section, then the Funding Rule field is automatically updated from the COLUMN HEADER DISTRIBUTION section.
If multiple fund rules are used, then the Funding Rule is displayed in the Sub Items page.

</td></tr>
</table>

Field Name	Description
	Note: To navigate to the sub items page, ensure the sum of quantities from the **Header Quantity** column of the **COLUMN HEADER DISTRIBUTION** section header quantities is **1.** • If the unit of the item is not **LPSM** or **CTSM**, the **Funding Rule** field is automatically updated from the **FUND RULE SUMMARY AND ALLOWANCE** section only if one fund rule is used in the respective section. If multiple fund rules are used, then the **Funding Rule** is displayed in the **Sub Items** page. • If a mobilization item is added then the **Funding Rule** field is editable. Select the appropriate fund rule from the drop-down list. Available options are active and approved funding rules defined for the project in the **Funding Rules** form. However, if you want to define multiple funding rules, you can define it in the **Sub Items** page. For more information on defining fund rules for sub items, refer to Section 3.2.2.2.3. Adding Sub Items for Mobilization item. **Note**: You can change the funding rule of an item at any time. For more information on associating funding rules, refer to Section 3.2.2.6. Associating a Fund Rule to an Estimate Item.
Bid Decimal	Enter appropriate value for the item. For the items added from the library, the value is displayed from the library. However, you can modify the value of the item as necessary. Available options are 0 to 3. **Note**: • If you modify the value of this field after entering the quantity, then the value in the **Quantity** field is erased, and you have to manually enter the quantity of the item again. • The **Bid Decimal** field defines the maximum number that is allowed after the decimal for an item.
Unit Price in $	Enter the cost per unit. **Note**: Upon entering the values in the Quantity and Unit Price in $ fields, the Amount in $ field displays the total amount of the item. It is calculated as: Quantity x Unit Price in $ Additionally, using the Unit Price Search feature, you can determine the best price for the item based on historical pricing data and by specifying inflation. To use the Unit Price Search feature, refer to Section 3.2.2.3. Unit Price Search.

Upon adding the details in the **COLUMN HEADER DISTRIBUTION** and **FUND RULE SUMMARY AND ALLOWANCE** sections, the **Quantity** field of the item is automatically updated.

Note: Based on the following criterion, the value in the **Quantity** field is displayed:

- The value is displayed as **1** if the **Mobilization** check box is selected for the item added from the standard items library.
- If the unit of the item is **LPSM** or **CTSM**, then the value is displayed as **1**.
- If the unit of the item is not **LPSM** or **CTSM**, the value is displayed as the sum of quantities from the **Total Used** column of the **FUND RULE SUMMARY AND ALLOWANCE** section.
  For information on adding the details in the **FUND RULE SUMMARY AND ALLOWANCE**, refer to Fund Rule Summary And Allowance.

Only after adding the details in the **COLUMN HEADER DISTRIBUTION** and **FUND RULE SUMMARY AND ALLOWANCE** sections, the system automatically creates sub items for that item. The quantity of the item is calculated as the sum of all the sub items added.
For information on adding sub items, refer to Section 3.2.2.2.3. Adding Sub Items.

Note: You can create sub items manually only for those items for which the **Mobilization** field is selected in the standard items library.

8. If the item added from library has the **Mobilization** check box selected, then certain field values are automatically updated.

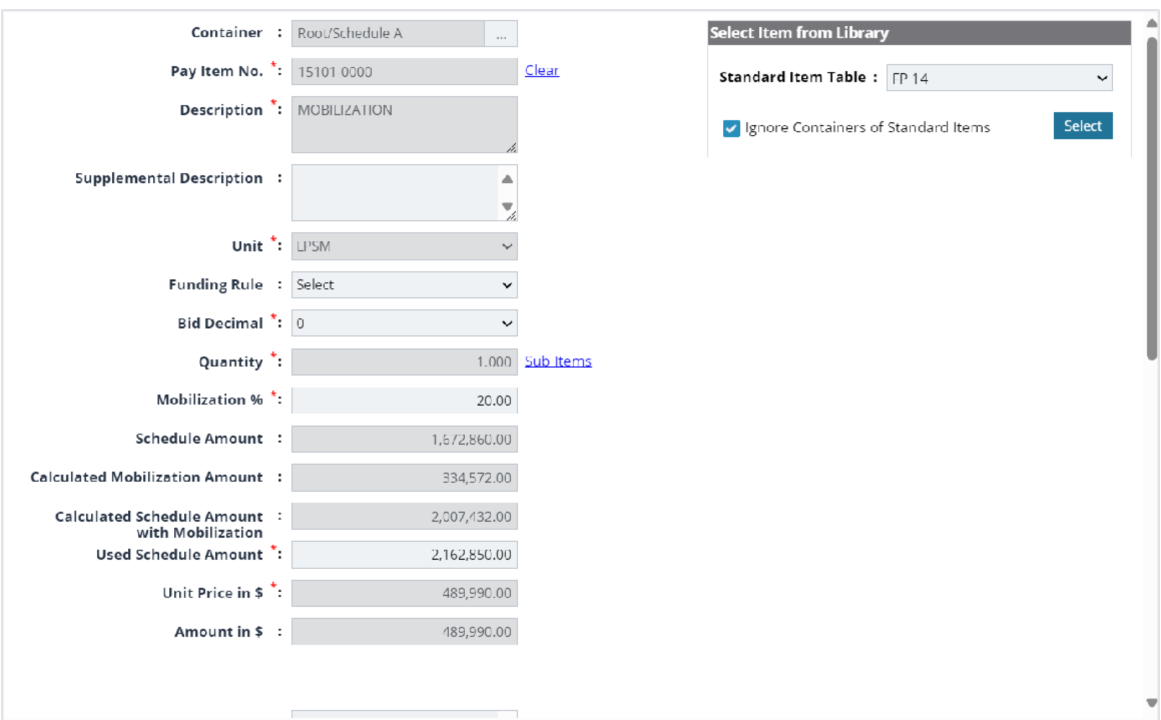


Figure 35: Mobilization Item

The following table provides the information displayed in the **NEW ITEM** page:

Field Name	Description
Schedule Amount	Sum of amount of all items included in the schedule except the current item. **Note**: • On modifying the amounts or deleting any items in the Schedule or the Alternate Containers under this schedule, the **Schedule Amount** is updated. • If alternate containers are available, then only the highest amount for each alternate container is considered.
Calculated Mobilization Amount	It is calculated as: Schedule Amount x Mobilization % / 100
Calculated Schedule Amount with Mobilization	It is calculated as: Schedule Amount + Calculated Mobilization Amount
Unit Price in $	It is calculated as: Used Schedule Amount – Schedule Amount. **Note**: This field does not update on any change in other items in the schedule.
Amount in $	It is calculated as: Quantity x Unit Price in $.

Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Mobilization %	Enter the mobilization percentage.
Used Schedule Amount	Upon adding the value in the **Mobilization %** field, the field is automatically updated with the same amount as displayed in the **Calculated Schedule Amount with Mobilization** field. Optionally, enter the used schedule amount. **Note**: The **Used Schedule Amount** amount cannot be less than the **Schedule Amount**.

9. To distribute the item quantity into different headers, in the **COLUMN HEADER DISTRIBUTION** section, perform the following steps:
   a. Click **Add**.
   A row is added.

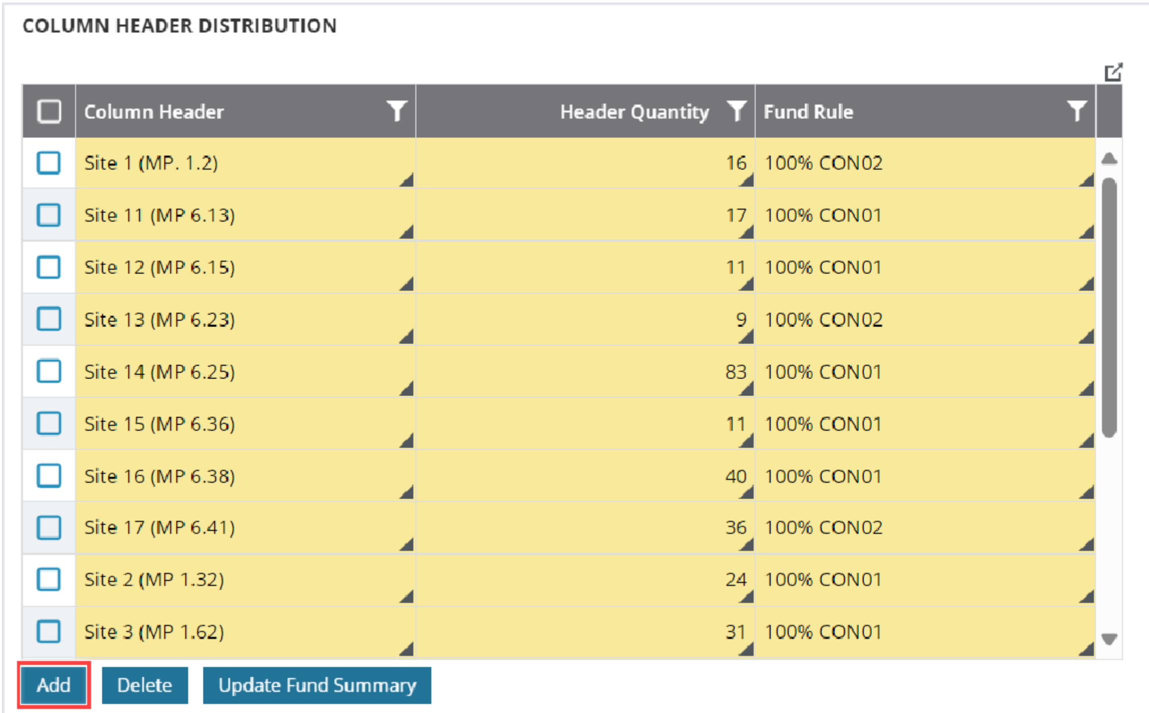


Figure 36: Column Header Distribution

   b. Double-click the **Column Header** column and select the appropriate header.
   Available options are column headers defined in the **COLUMN HEADER** section in the **ENGINEER'S ESTIMATE DETAILS** page.
   Note: You can select the same header multiple times. Also, if no column header is required, then select **None**.
   c. Click the **Header Quantity** column and enter the appropriate quantity for the item.
   Optionally, use the button to change the value.

   Note: If the unit of the item is **LPSM** or **CTSM**, then ensure the sum of quantities from the **Header Quantity** column of the **COLUMN HEADER DISTRIBUTION** section is **1.**

   d. Double-click the **Fund Rule** column and select the fund rule for the item.
   Available options are active and approved funding rules defined for the project. For more information on funding rules, refer to the **Funding Rules** section in the **M03 Fund Management PG.**
   For items with two or more fund rules in the **COLUMN HEADER DISTRIBUTION** section, on saving the record, the **Sub Items** page is automatically updated.

To view the updated sub items page, click **Sub Items** adjacent to **Quantity** field. The **SUB ITEMS** page is displayed.

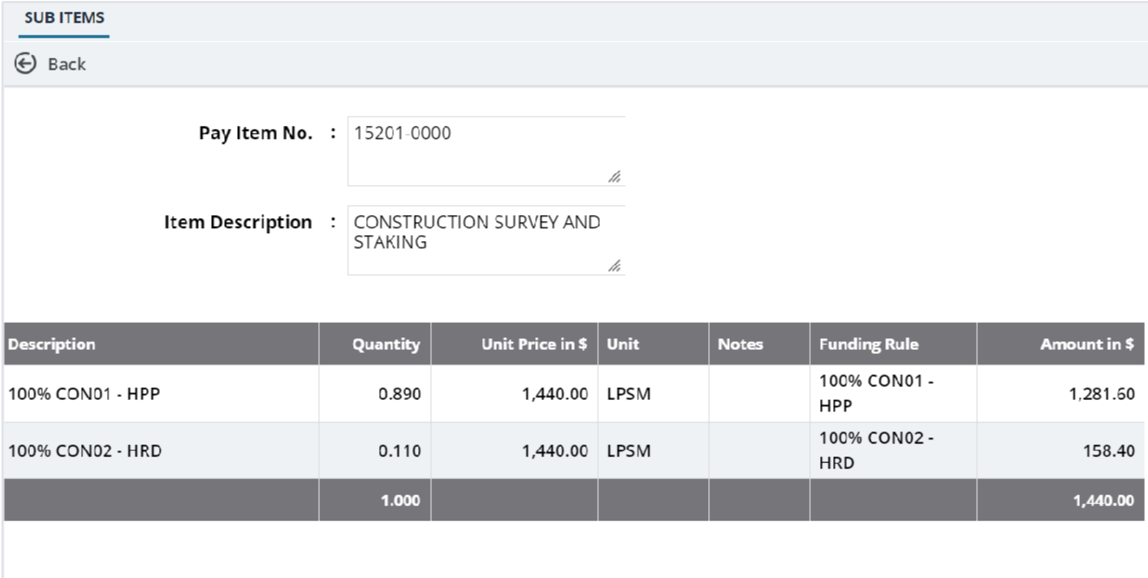


Figure 37: Sub Items Page

The **SUB ITEMS** page displays the following information:

Column Name	Field Name	Description
–	Pay Item No	The pay item number specified for the parent item.
–	Item Description	The description specified for the parent item.
Description	–	The value as displayed in the **Fund Rule** column of the **COLUMN HEADER DISTRIBUTION** section.
Quantity	–	The value as displayed in the **Header Quantity** column of the **COLUMN HEADER DISTRIBUTION** section. **Note**: Only if a sub item with the same fund rule already exists, then the quantity is updated.
Unit Price in $	–	The unit price specified for the parent item.
Unit	–	The unit specified for the parent item.
Funding Rule	–	The value as displayed in the **Fund Rule** column of the **COLUMN HEADER DISTRIBUTION** section.

For information on sub items for the item whose unit is not **LPSM** or **CTSM**, refer to step 10.b.

e. To add allowance quantities and distribute the funds for the item, click **Update Fund Summary**.
   Note: This option is not available if the **Unit** of the item is **LPSM** or **CTSM**.
   A row is automatically added to the table in the **FUND RULE SUMMARY AND ALLOWANCE** section for each **Fund Rule** selected in the **COLUMN HEADER DISTRIBUTION** section.

FUND RULE SUMMARY AND ALLOWANCE

Fund Rule	Funding Rule Total (before Allowance %)	Allowance %	Allowance	Total with Allowance	Total Used	Updated Allowance
100% CON01	250	0.00	0	250	250	
100% CON02	140	20.00	28	168	170	

Figure 38: Fund Rule Summary and Allowance

The following information is displayed in the **FUND RULE SUMMARY AND ALLOWANCE** section.

Column Name	Description
Funding Rule	The fund rule as selected in the **Fund Rule** column of the **COLUMN HEADER DISTRIBUTION** section.
Funding Rule Total (before Allowance %)	Sum of header quantity for the respective **Fund Rule** of the **COLUMN HEADER DISTRIBUTION** section.
Allowance	It is calculated as: Allowance % x Funding Rule Total (before Allowance %) / 100
Total with Allowance	It is calculated as: Sum of header quantity for the respective fund rule + Allowance
Updated Allowance	It is calculated as: Total Used - Sum of header quantity for the respective fund rule

f. Optionally, to delete a row, in the **COLUMN HEADER DISTRIBUTION** section, perform the following steps:

i. Select the appropriate record, and then click **Delete**.

A confirmation message is displayed.

ii. Click **OK**.

g. If any changes are made in the **COLUMN HEADER DISTRIBUTION** section, then the **FUND RULE SUMMARY AND ALLOWANCE** section must be updated with the latest changes. To redistribute the funding summary, click **Update Fund Summary**.

The **FUND RULE SUMMARY AND ALLOWANCE** section is updated with the latest changes. Based on the changes made, in the **FUND RULE SUMMARY AND ALLOWANCE** section, the following details are updated:

- If **Header Quantity** is updated, the **Funding Rule Total (before Allowance %)**, **Total with Allowance**, and **Updated Allowance** columns of the respective Fund Rule are automatically updated.
- If **Fund Rule** is updated, the fund rule of the respective row is updated.
- If any row is deleted from the **COLUMN HEADER DISTRIBUTION** section, then the changes are reflected in the **FUND RULE SUMMARY AND ALLOWANCE** section.

  Similarly, if a new row is added in the **COLUMN HEADER DISTRIBUTION** section, the changes are reflected in the **FUND RULE SUMMARY AND ALLOWANCE** section.

10. To update the allowance percentage and total fund used for the item, in the **FUND RULE SUMMARY AND ALLOWANCE** section, perform the following steps:
    Note: Negative values must not be entered in any of the fields.

    a. In the **Allowance %** column, double-click and enter the allowance percentage of the fund rule. Optionally, use the button to change the value.
    Based on the allowance percentage entered, the value in the following columns are automatically calculated:

Column	Description
Allowance	It is calculated as: Allowance % x Funding Rule Total (before Allowance %) / 100
Total with Allowance	It is calculated as: Sum of quantities funded by the respective Fund Rule + Allowance

Note: Totals is displayed for all numeric fields except the **Allowance %** field.

    b. In the **Total Used** column, click and enter the total fund used.
    Based on the value entered, the following details are updated:

- The **Updated Allowance** column is calculated as: Total Used - Sum of quantities funded by the respective Fund Rule.
- The **Quantity** of the item is automatically updated.
- For items whose units are not **LPSM** and **CTSM**, if there are two or more fund rules added in the **COLUMN HEADER DISTRIBUTION** section, then on saving the record, the **Sub Items** page is automatically updated.
  To view the updated sub items page, click **Sub Items** adjacent to **Quantity** field. The **SUB ITEMS** page displays the following information:

Column Name	Field Name	Description
–	Pay Item No	The pay item number specified for the parent item.
–	Item Description	The description specified for the parent item.
Description	–	The value as displayed in the **Fund Rule** column of the **FUND RULE SUMMARY AND ALLOWANCE** section.
Quantity	–	The value as displayed in the **Total Used** column of the **FUND RULE SUMMARY AND ALLOWANCE** section.
Unit Price in $	–	The unit price specified for the parent item.
Unit	–	The unit specified for the parent item.
Funding Rule	–	The value as displayed in the **Fund Rule** column of the **FUND RULE SUMMARY AND ALLOWANCE** section.

11. Provide the appropriate information in the fields, as described in the following table:

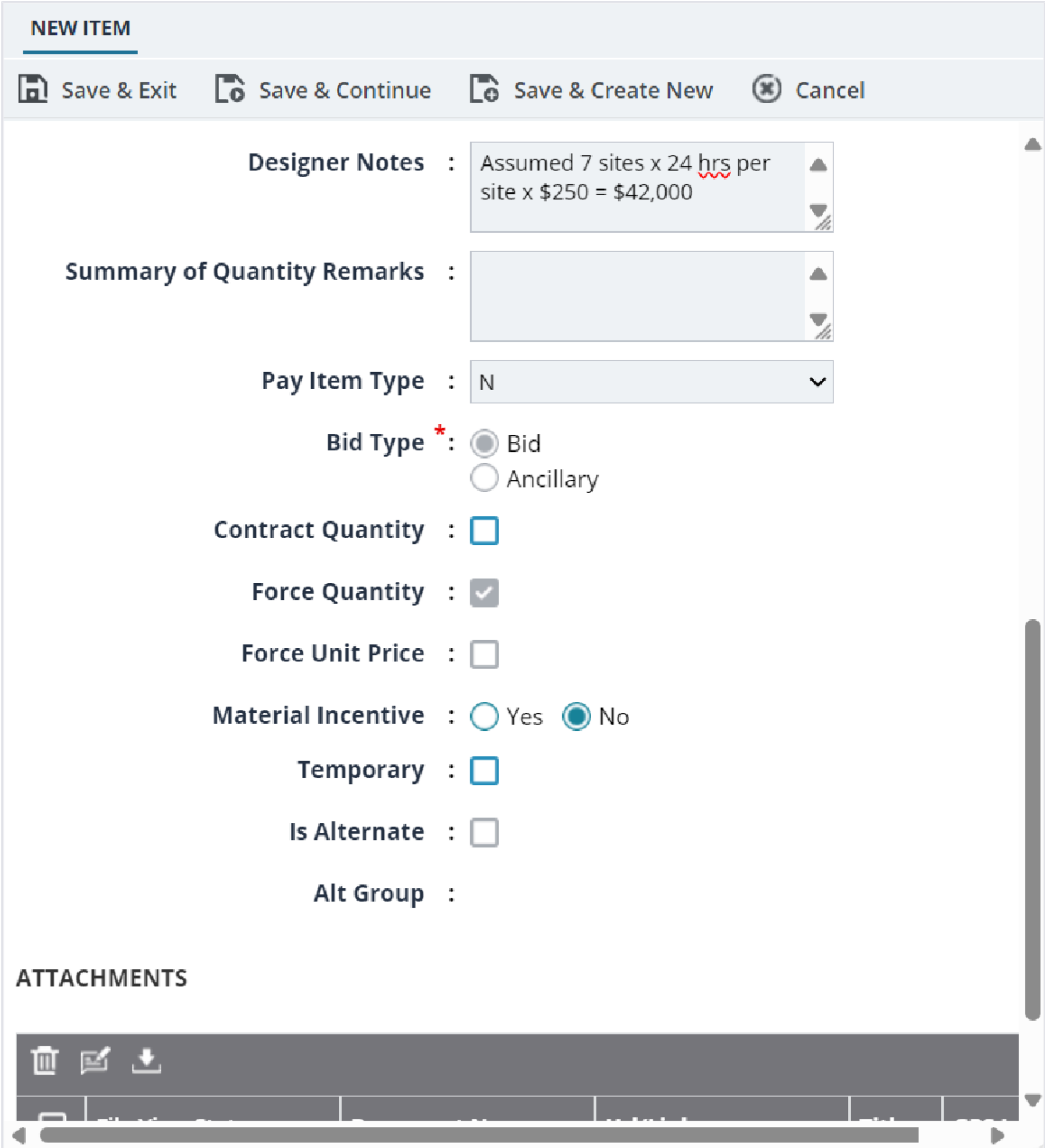


Figure 39: New Item Page (as you scroll down the page)

Field Name	Description
Designer Notes	Enter the designer notes for the item.
Summary of Quantity Remarks	Enter any remarks for the summary of the quantity.
Pay Item Type	Select the appropriate type of pay item. Available options are N, NM, NR, QM, etc. The drop-down list displays the active pay item types defined in the **Pay Item Type** catalog of the library. The item type is displayed automatically if you have selected the item from the library.

Field Name	Description
Bid Type	Select **Bid** if the item should be considered for the bid advertisement. Otherwise, select **Ancillary**. By default, the option **Bid** is selected. The bid type is displayed automatically and not editable if you have selected the item from the library.
Contract Quantity	Select the check box to track the contract quantities in Engineer's Estimate report.
Force Quantity	The check box is automatically selected and is not editable if you have selected the item from the library.
Force Unit Price	The check box is automatically selected and is not editable if you have selected the item from the library.
Material Incentive	An option is automatically selected and is not editable if you have selected the item from the library. This field determines if the item involves any incentives for the contractor based on the quality of the material.
Temporary	The check box is automatically selected if the item is added manually using the **New** button. The check box is automatically selected if the item is added manually using the New button.
Is Alternate	The check box is automatically selected if the container selected for the item is an alternate container.
Alt Group	The name of the container if the container selected for the item is an alternate container.

12. Optionally, in the **ATTACHMENTS** section, upload or link related files.
    For information on attachments, refer to Attachments.

13. To save the item, perform any of the following steps, as applicable:

    - Click **Save & Exit** to return to the item list page.
    - Click **Save & Continue** to save the item and continue on the same page.
    - Click **Save & Create New** to save the current item and continue creating new items.

    Click **Cancel** to discard the added information and exit the page.

3.2.2.2.2. Adding Multiple Engineer's Estimate Items

Prerequisites

In the **ENGINEER'S ESTIMATE ITEMS** page, an appropriate container is available. For information on creating containers, refer to Creating a Container.

Overview

To save time and effort, you can add multiple pay items at once from the library to the engineer's estimate.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

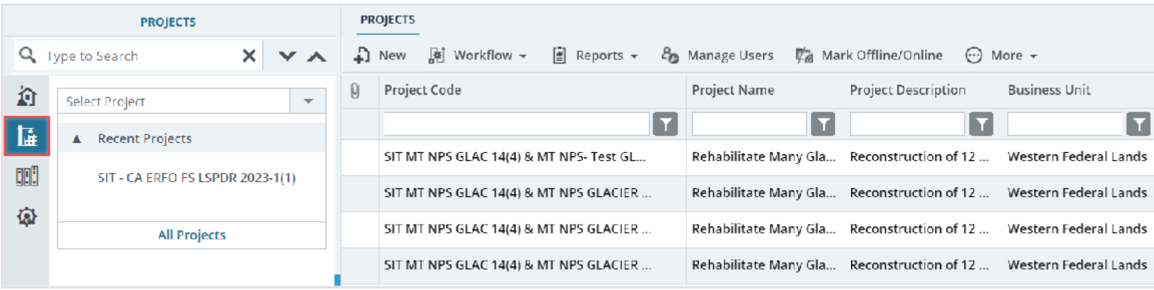


Figure 40: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

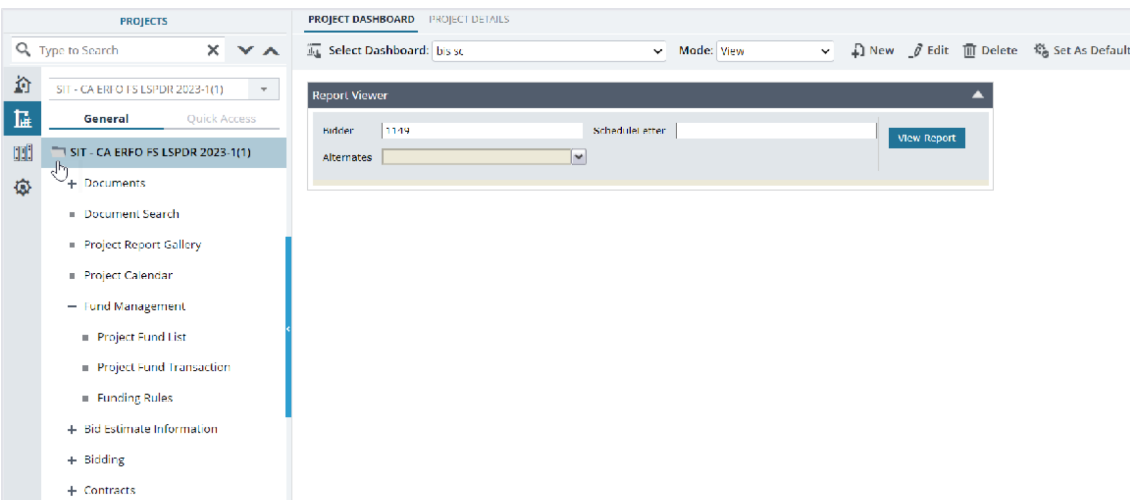


Figure 41: Expanding Projects Folder

3. In the navigation pane, expand **Bid Estimate Information**, and then click **Engineer's Estimates**.
   The **ENGINEER'S ESTIMATE** list page is displayed.

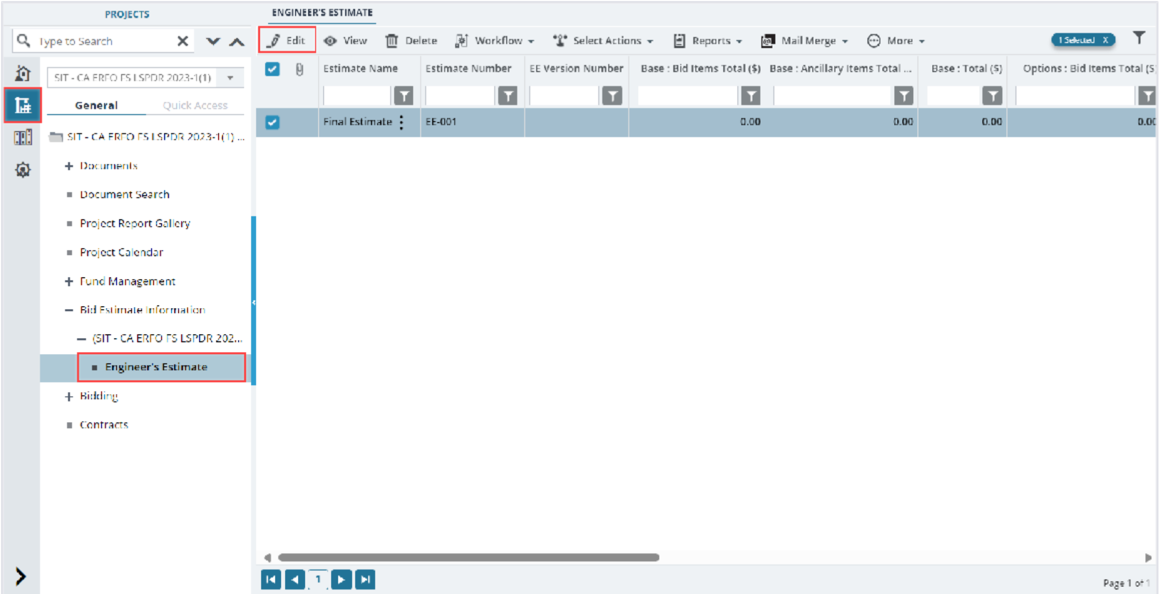


Figure 42: List Page of Engineer's Estimate

4. In the list page, select the appropriate record to add an item, and then click **Edit**.
   The **ENGINEER'S ESTIMATE DETAILS** page is displayed.

5. Click the **ENGINEER'S ESTIMATE ITEMS** tab.
   The **ENGINEER'S ESTIMATE ITEMS** list page is displayed.

6. In the list page, select the appropriate container, click **New**, and then click **Add Multiple**.

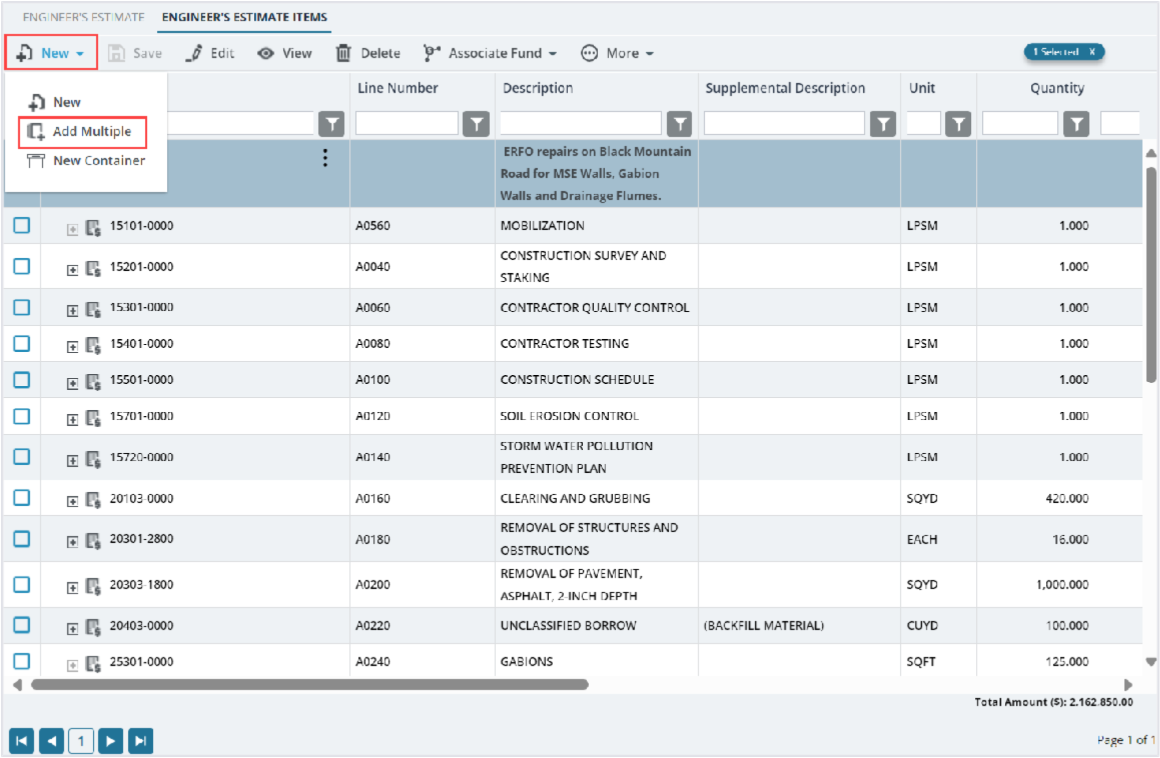


Figure 43: Add Multiple

The **ADD STANDARD ITEMS** page is displayed.

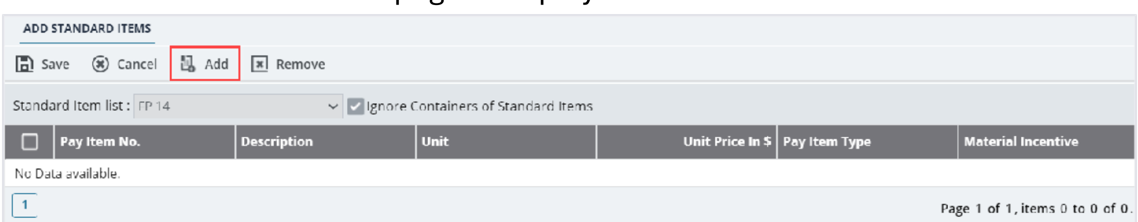
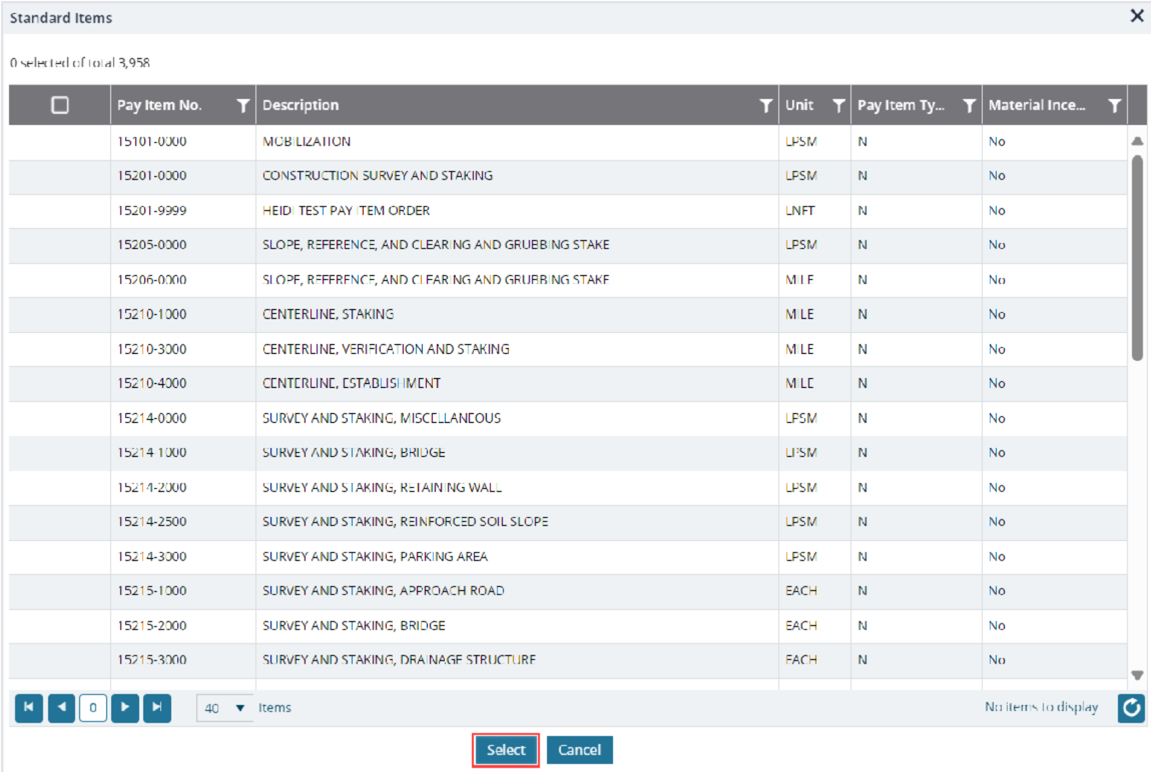


Figure 44: Add Standard Items

7. Click **Add**.

   The **Standard Items** dialog box is displayed.



	Pay Item No.	Description	Unit	Pay Item Ty...	Material Ince...
	15101-0000	MOBILIZATION	LPSM	N	No
	15201-0000	CONSTRUCTION SURVEY AND STAKING	LPSM	N	No
	15201-9999	HEIDI TEST PAY ITEM ORDER	LNFT	N	No
	15205-0000	SLOPE, REFERENCE, AND CLEARING AND GRUBBING STAKE	LPSM	N	No
	15206-0000	SLOPE, REFERENCE, AND CLEARING AND GRUBBING STAKE	MILE	N	No
	15210-1000	CENTERLINE, STAKING	MILE	N	No
	15210-3000	CENTERLINE, VERIFICATION AND STAKING	MILE	N	No
	15210-4000	CENTERLINE, ESTABLISHMENT	MILE	N	No
	15214-0000	SURVEY AND STAKING, MISCELLANEOUS	LPSM	N	No
	15214-1000	SURVEY AND STAKING, BRIDGE	LPSM	N	No
	15214-2000	SURVEY AND STAKING, RETAINING WALL	LPSM	N	No
	15214-2500	SURVEY AND STAKING, REINFORCED SOIL SLOPE	LPSM	N	No
	15214-3000	SURVEY AND STAKING, PARKING AREA	LPSM	N	No
	15215-1000	SURVEY AND STAKING, APPROACH ROAD	EACH	N	No
	15215-2000	SURVEY AND STAKING, BRIDGE	EACH	N	No
	15215-3000	SURVEY AND STAKING, DRAINAGE STRUCTURE	EACH	N	No

Figure 45: Standard Items Dialog Box

8. Select the appropriate items, and then click **Select**.

   Note: You can add only one mobilization item per schedule.

9. Click **Save**.

   The selected items are available in the **ENGINEER'S ESTIMATE ITEMS** list page.

   Note: To update item information, refer to Section 3.2.2.2.1. Adding an Engineer's Estimate Item.

3.2.2.2.3. Adding Sub Items for Mobilization item

Prerequisites

- The role of logged-in user must be any of the following:
  - Administrator
  - Design Component Lead
  - Designer
  - Lead Designer
  - Highway Design Manager
  - A/E Manager
  - A/E Lead Designer
  - A/E Designer

- Project Manager

  For more information on role-specific permissions, refer to Table 2 – Engineer's Estimate Permission Matrix.
- The **Mobilization** item must be selected from the library.

Overview

You can divide an item into sub items to distribute the amount from different fund sources. If sub items are defined for an item, the quantity of the item is calculated as the sum of the quantities of the sub items.

Note: If the item from the library is not a **Mobilization** item, then you can define the sub items from the following sections:

- The **COLUMN HEADER DISTRIBUTION** section in the **ENGINEER'S ESTIMATE ITEMS** tab, for the items whose units are **LPSM** or **CTSM**. For more information, refer to Sub items for units as LPSM and CTSM.
- The **FUND RULE SUMMARY AND ALLOWANCE** section in the **ENGINEER'S ESTIMATE ITEMS** tab, for the items whose unit are not **LPSM** or **CTSM**. For more information, refer to Sub items for other units.

Steps

1. For **Mobilization** item, adjacent to the **Quantity** field, click **Sub Items**.

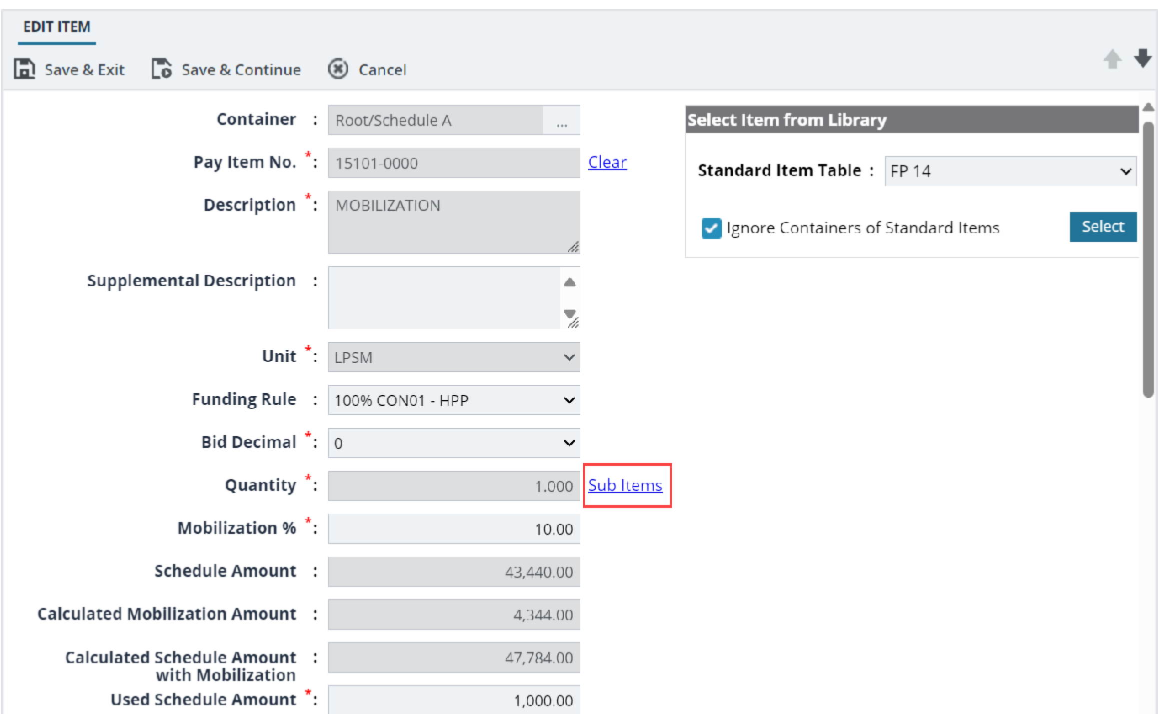


Figure 46: Sub Items Option

The **SUB ITEMS** page is displayed.

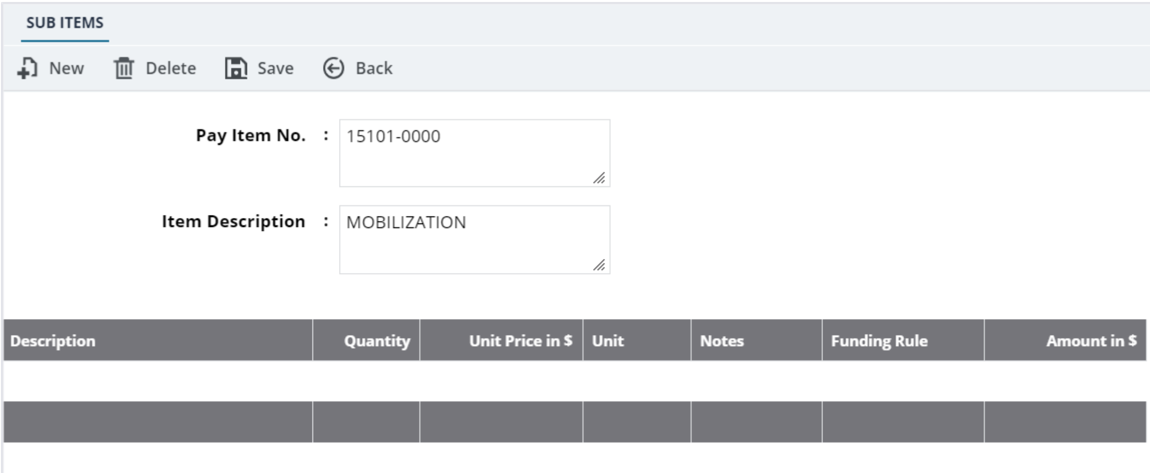


Figure 47: Sub Items Page

The following information is displayed:

Field Name	**Description**
Pay Item No	The pay item number of the item.
Item Description	The description of the item.

2. Click **New**.

   A row is added to the table.

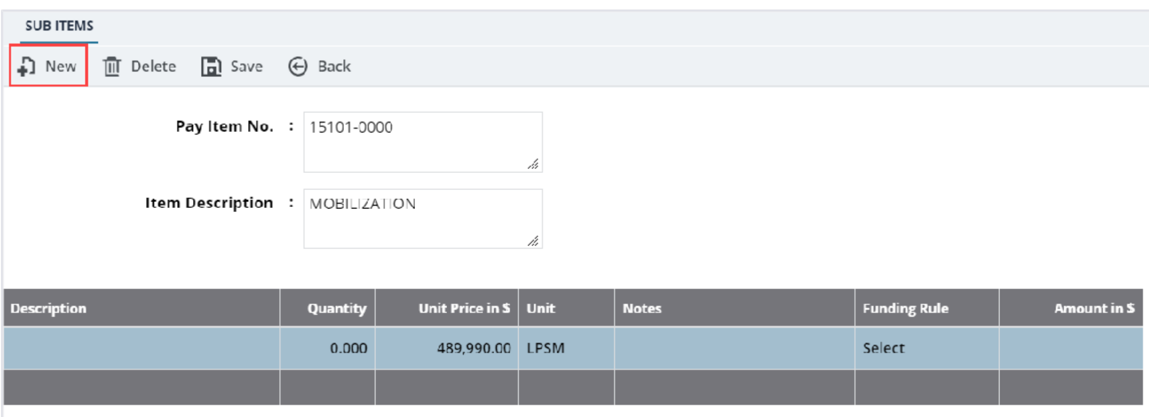


Figure 48: Add Sub Item

The table displays the following information:

Field Name	**Description**
Unit Price in $	The unit price specified for the item.
Unit	The unit of measure specified for the item.
Funding Rule	The funding rule specified for the item. **Note**: You can modify the value as necessary.

3. In the **Description** column, double-click the row and enter the description for the sub item.
   Note: Normally, the description entered must be the assigned funding rule.

4. In the **Quantity** column, double-click the row and enter the quantity for the sub item.

5. In the **Notes** column, double-click the row and enter appropriate notes for the sub item, if applicable.

6. Click **Save**.
   Upon saving the sub item details, the **Amount in $** column displays the amount of the sub item based on the **Quantity** value specified for the sub item and the **Unit Price in $** value specified for the item.
   Optionally, to delete an item, perform the following steps:

   a. Select the appropriate item.
   b. Click **Delete**, and then click **OK**.

   Note:

   - The quantity of the **Mobilization** item is always 1.
   - If the **Unit Price in $** value is not specified for the item, then the **Amount in $** column displays 0. However, once a value is entered in the **Unit Price in $** field, the **Amount in $** column is automatically updated.

7. Click **Back** to return to the item page.
   Note: Once mobilization sub items are added to an item, you can modify the quantity of the item by editing the quantities of the sub items only.

3.2.2.2.4. Copying and Pasting Items from a Container

Prerequisites

- In the **ENGINEER'S ESTIMATE ITEMS** page, an appropriate container is available. For information on creating containers, refer to Section 3.2.2.1.1. Creating a Container.
- An item exists in the container. For more information on adding items to a container, refer to Section 3.2.2.2.1. Adding an Engineer's Estimate Item.
- The workflow status of the record must be **Draft**.
- The role of logged-in user must be any of the following:
  - Administrator
  - Design Component Lead
  - Designer
  - Lead Designer
  - Highway Design Manager
  - A/E Manager

- A/E Lead Designer
- A/E Designer
- Project Manager

For more information on role-specific permissions, refer to Table 2 – Engineer's Estimate Permission Matrix.

Overview

You can copy items and sub items from one container to another container.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

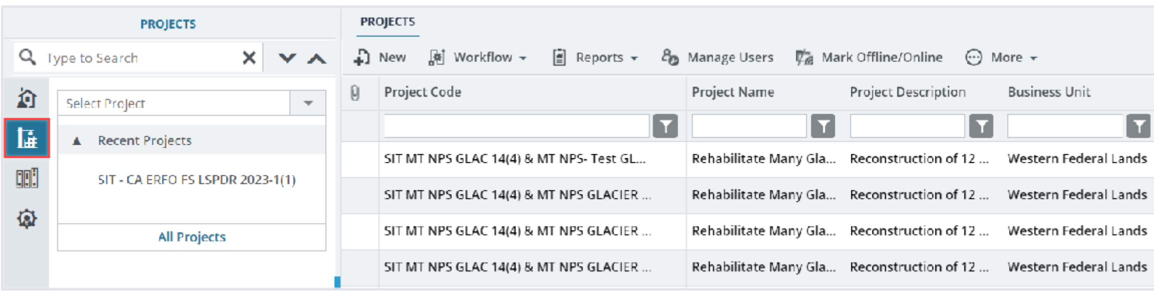


Figure 49: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

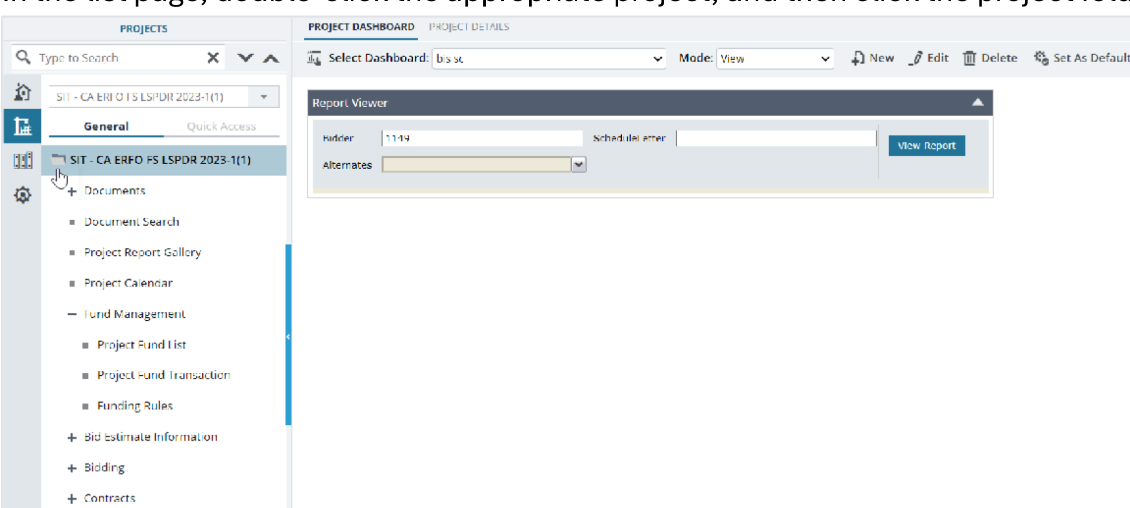


Figure 50: Expanding Projects Folder

3. In the navigation pane, expand **Bid Estimate Information**, and then click **Engineer's Estimates**.
   The **ENGINEER'S ESTIMATE** list page is displayed.

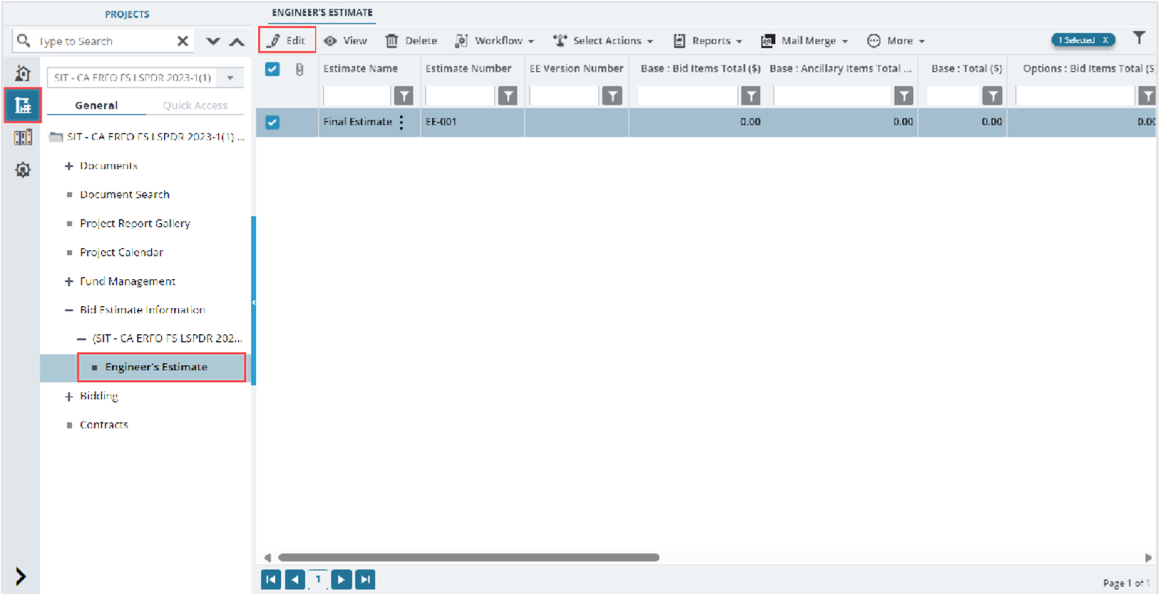


Figure 51: List Page of Engineer's Estimate

4. In the list page, select the appropriate record to add an item, and then click **Edit**.
   The **ENGINEER'S ESTIMATE DETAILS** page is displayed.

5. Click the **ENGINEER'S ESTIMATE ITEMS** tab.

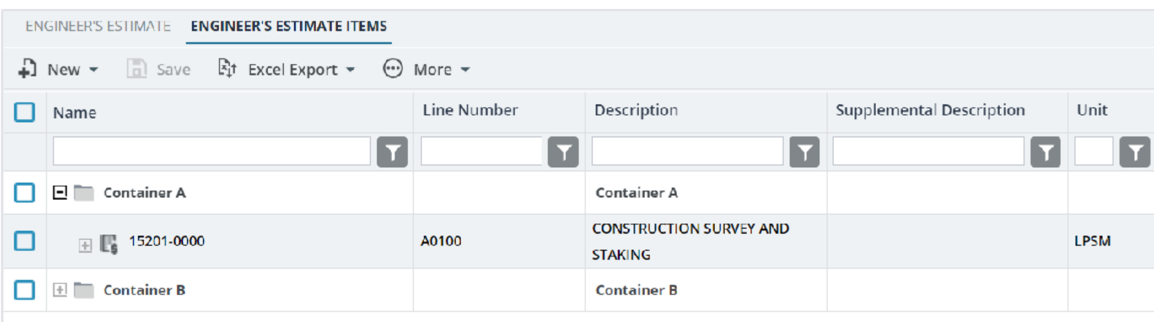


Figure 52: Engineer's Estimate Items Tab

6. To copy the item, perform the following steps:

   a. Expand the container, select the required item, click **More**.
   b. Click **Actions**, and then click **Copy Items** or **Copy Sub Items**.
      Note: While copying an ancillary item from one container to the other, ensure to select the base bid items corresponding to the ancillary item. In case of base bid items, ensure to select the ancillary items.

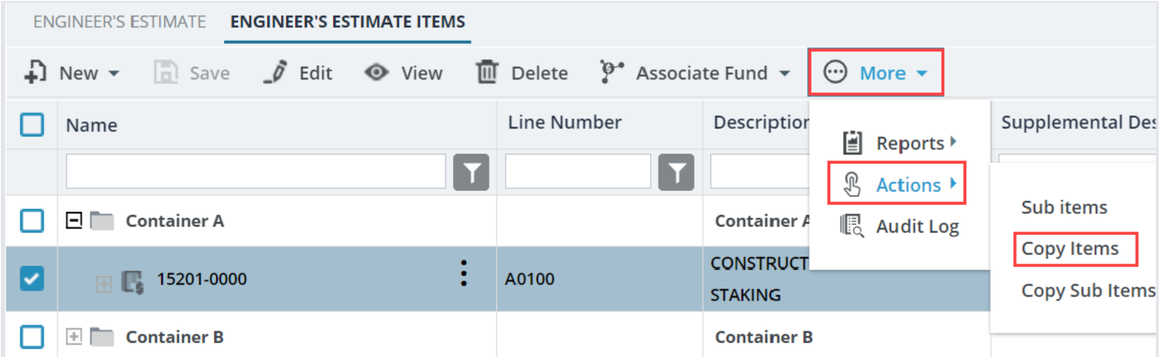


Figure 53: Copy Items

7. To paste the item to the destination folder, perform the following steps:

    a. Select the required container, click **More**.

    b. Click **Actions**, and then click **Paste Items.**

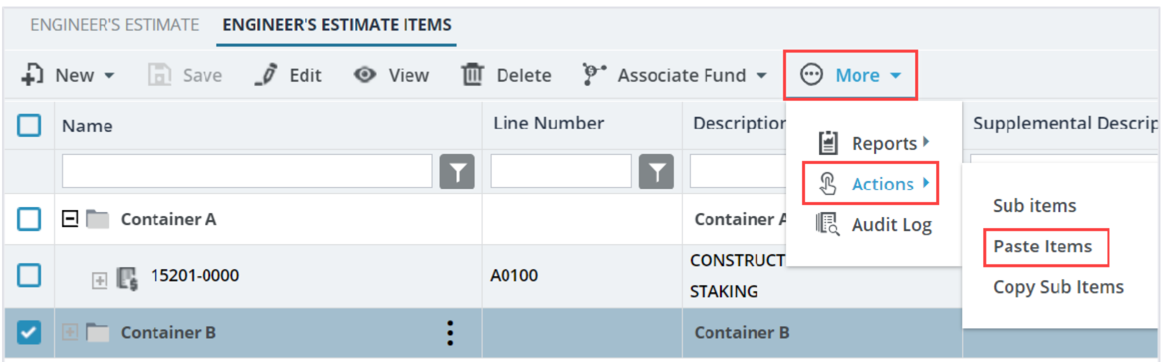


Figure 54: Paste Items

    A confirmation dialog box is displayed.

    c. Click **OK**.

    The item is copied and pasted to the container.

8. Click **Save**.

3.2.2.3. Using the Unit Price Search

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Design Component Lead
- Designer
- Lead Designer
- Highway Design Manager
- A/E Manager
- A/E Lead Designer

- A/E Designer
- Project Manager
  For more information on role-specific permissions, refer to Table 2 – Engineer's Estimate Permission Matrix.

Overview

The **Unit Price Search** feature enables you to search the price of the item in other projects bids and then select the appropriate search result values to generate a suggested unit price.

You can perform the following tasks:

- Search for pay items based on specified filter criteria
- Export the search results in an Excel workbook
- Estimate the unit price for items based on historical price data and by specifying inflation index
- View the plotting of the prices on a chart (Price against Quantity)

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

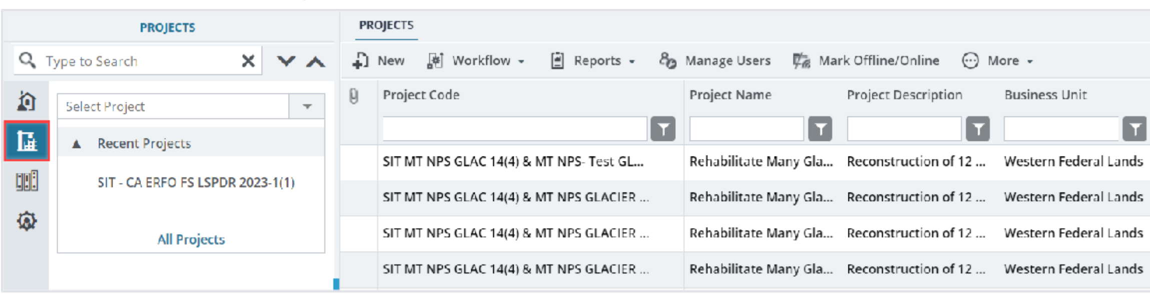


Figure 55: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

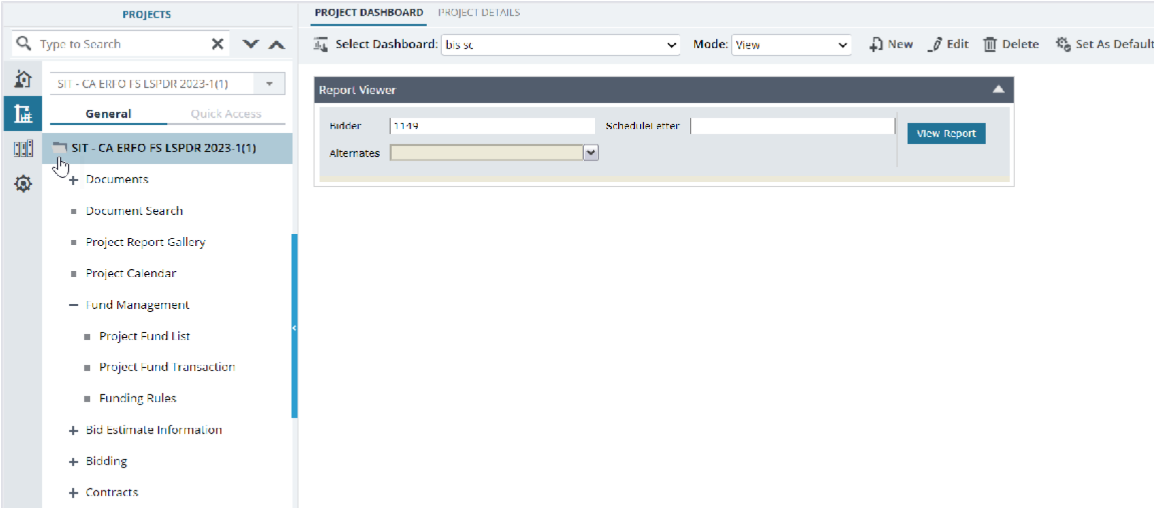


Figure 56: Expanding Projects Folder

3. In the navigation pane, expand **Bid Estimate Information**, and then click **Engineer's Estimates**. The **ENGINEER'S ESTIMATE** list page is displayed.

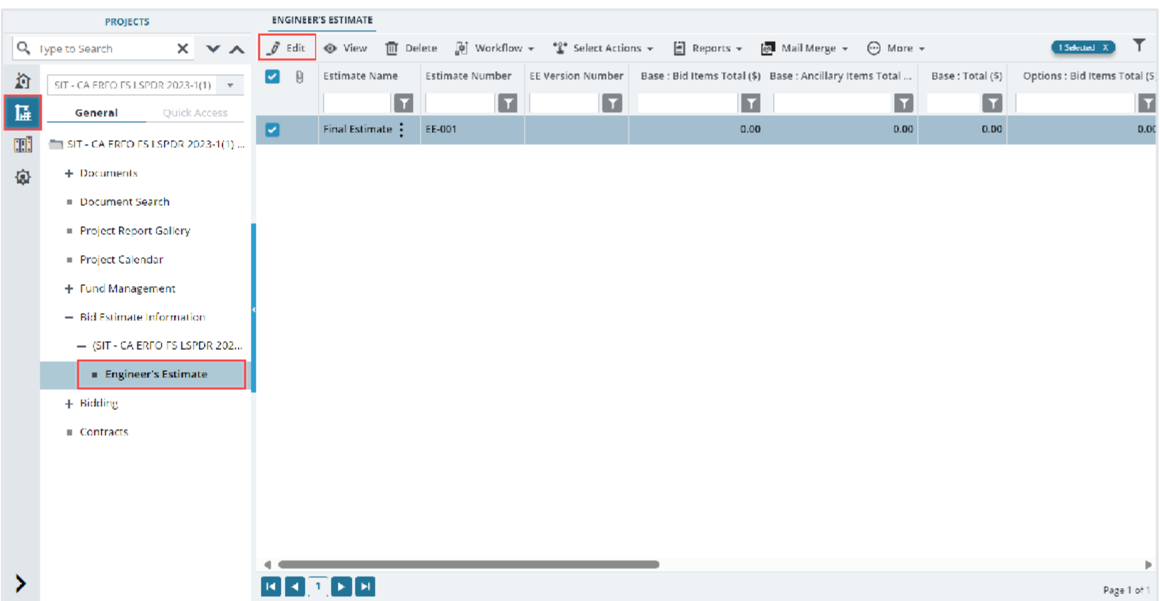
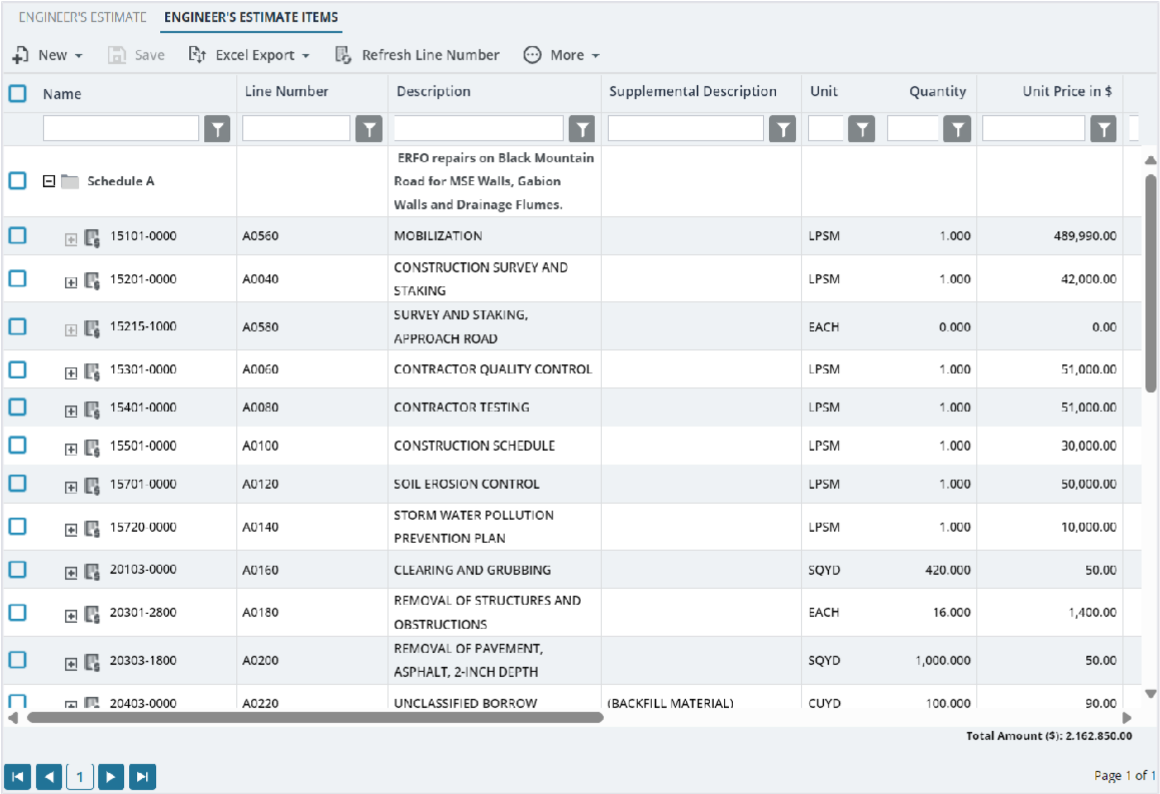


Figure 57: List Page of Engineer's Estimate

4. In the list page, select the appropriate record to add an item, and then click **Edit**. The **ENGINEER'S ESTIMATE DETAILS** page is displayed.

5. Click the **ENGINEER'S ESTIMATE ITEMS** tab.



Name	Line Number	Description	Supplemental Description	Unit	Quantity	Unit Price in $
Schedule A		ERFO repairs on Black Mountain Road for MSE Walls, Gabion Walls and Drainage Flumes.				
15101-0000	A0560	MOBILIZATION		LPSM	1.000	489,990.00
15201-0000	A0040	CONSTRUCTION SURVEY AND STAKING		LPSM	1.000	42,000.00
15215-1000	A0580	SURVEY AND STAKING, APPROACH ROAD		EACH	0.000	0.00
15301-0000	A0060	CONTRACTOR QUALITY CONTROL		LPSM	1.000	51,000.00
15401-0000	A0080	CONTRACTOR TESTING		LPSM	1.000	51,000.00
15501-0000	A0100	CONSTRUCTION SCHEDULE		LPSM	1.000	30,000.00
15701-0000	A0120	SOIL EROSION CONTROL		LPSM	1.000	50,000.00
15720-0000	A0140	STORM WATER POLLUTION PREVENTION PLAN		LPSM	1.000	10,000.00
20103-0000	A0160	CLEARING AND GRUBBING		SQYD	420.000	50.00
20301-2800	A0180	REMOVAL OF STRUCTURES AND OBSTRUCTIONS		EACH	16.000	1,400.00
20303-1800	A0200	REMOVAL OF PAVEMENT, ASPHALT, 2-INCH DEPTH		SQYD	1,000.000	50.00
20403-0000	A0220	UNCLASSIFIED BORROW	(BACKFILL MATERIAL)	CUYD	100.000	90.00

Total Amount ($): 2,162,850.00

Page 1 of 1

Figure 58: Engineer's Estimate Items Tab

6. Perform either of the following, as applicable:

- To create a new item, in the items list page, select the appropriate container, click **New**, and then click **New**. For more information, refer to Adding an Engineer's Estimate Item.
- To edit details of an item, select the appropriate item, and then click **Edit**.

7. Adjacent to the Unit Price in $ field, click Unit Price Search.

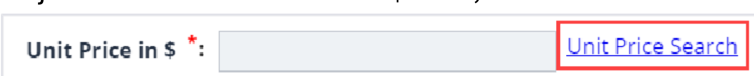


Figure 59: Unit Price Search Option

The **UNIT PRICE SEARCH** page is displayed.

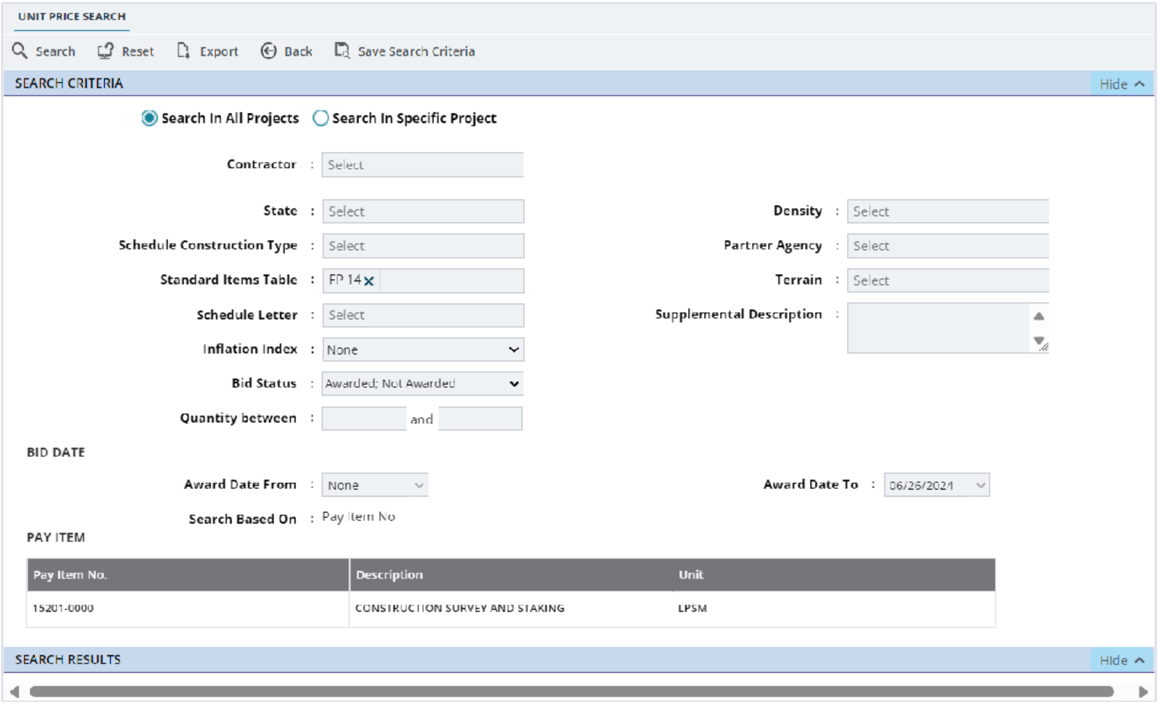


Figure 60: Unit Price Search

The **PAY ITEM** table displays the selected item.

In the **BID DATE** section, the **Search Based On** field displays **Pay Item No**.

8. Provide the necessary in the fields, as described in the following table:

Field Name	Description
Search In All Projects or Search in Specific Project	Click any of the following options, as applicable: • **Search In All Projects**: To search unit price data in estimates and bids across all the projects in the application. • **Search in Specific Project**: To search unit price data in estimates and bids from a specific project.
Contractor	From the multi-select drop-down list, select the appropriate contractors. Alternatively, enter the name of the contractor, and then from the list of contractors, click the appropriate contractor. Available options are active contractors defined in the **Contractor Details** catalog of the library. If the field is empty, then Masterworks searches for all bids of all contractors.
Project Code	**Note**: This field is available only if the **Search in Specific Project** option is selected. From the multi-select drop-down list, select the appropriate FLH project numbers.

Field Name	Description
	Available options are active and inactive projects to which the user is invited. **Note**: If the project is a private bid, then the data will not be displayed in the Search Results. To enable the search activity, it is mandatory to select at least one project.
State	From the multi-select drop-down list, select the appropriate states. Available options are AK, AL, AR, AS, AZ, etc. The drop-down list displays the active states or territories defined in the **State/Territory** catalog of the library.
Schedule Construction Type	From the multi-select drop-down list, select the appropriate schedule construction types. Available options are 20101 Clearing, 20102 Clearing and grubbing, 20301 Removal of bridge, 20401 Grading work only, etc. The drop-down list displays the schedule construction types defined in the **Schedule Construction Type** catalog of the library.
Standard Items Table	From the drop-down list, select the appropriate standard items table. By default, it displays the standard items table of the current project. Available options are FP24, FP14, and FP03. The drop-down list displays the standard item tables defined in the **Standard Items Table** catalog of the library.
Schedule Letter	From the multi-select drop-down list, select the appropriate schedule letters. Available options are letters from A to Z.
Inflation Index	From the drop-down list, select the appropriate inflation index. Available options are BLS Non-Residential Construction, 2.0 National Highway CCI, etc. The drop-down list displays the construction inflation indices defined in the **Construction Inflation Indices** catalog of the library. Based on the selected inflation index, Masterworks automatically calculates the inflation percentage (%) that is displayed for the appropriate records in the **Search Results** section. Inflation % is calculated as: (Inflation Rate for the latest year – Inflation Rate for the year of the Award Date) ÷ Inflation Rate for the year of the Award Date.
Bid Status	From the multi-select drop-down list, select the appropriate bid status or modify the default selection.

Field Name	Description
	Available options are **Awarded**, **Not Awarded**, **Engineer's Estimate**, and **Cancelled**. If **Engineer's Estimate** is selected, then the search result displays the engineer's estimates in the **Final Estimate** workflow status, and the award date of the bid in that project is used to calculate the inflation. **Note**: It is not recommended to use the Engineer's Estimate Unit prices to develop a Suggested Unit Price.
Quantity between	Enter the range of quantity in the consecutive two numeric fields. **Note**: The entered numbers must be greater than 0. Based on the numbers entered in the two numeric fields, the search result displays only those records where the item quantity is within this range. If the item quantity is converted from a different spec book or measurement system, then the converted quantity must be within the same range.
Item Quantity	Displays the current quantity of the selected item.
Density	From the multi-select drop-down list, select the appropriate densities. Available options are Rural and Urban. The drop-down list displays the active densities defined in the **Density** catalog of the library.
Partner Agency	From the multi-select drop-down list, select the appropriate partner agencies. Available options are BIA, BLM, BOR, NPS, etc. The drop-down list displays the active partner agencies defined in the **Partner Agency** catalog of the library.
Terrain	From the multi-select drop-down list, select the appropriate terrains. Available options are Level, Mountainous, and Rolling. The drop-down list displays the active terrains defined in the **Terrain** catalog of the library.
Supplemental Description	Enter any additional description specific to the pay item.

9. To define the additional filter criteria, in the **BID DATE** section, provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Award Date From	From the drop-down list, select the appropriate award date from which the search result must be displayed.
Award Date To	From the drop-down list, select the appropriate award date until which the search result must be displayed.

10. Click **Search**.

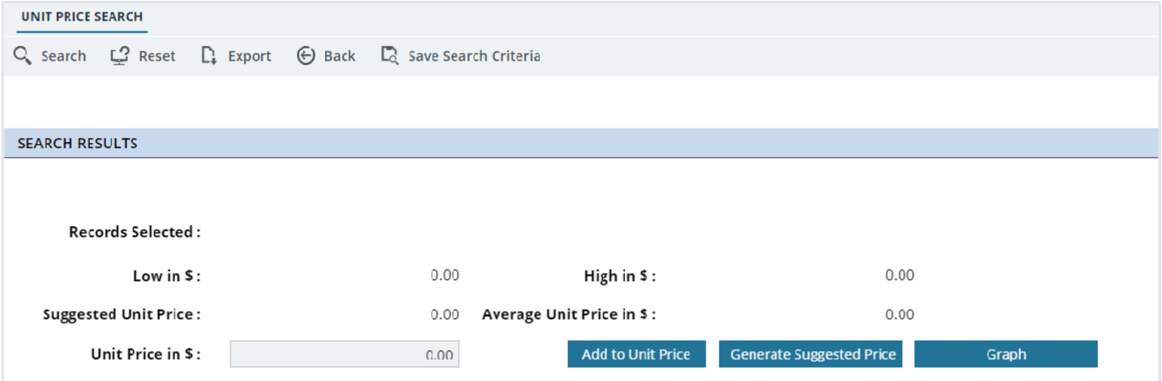


Figure 61: Search Results

The **SEARCH RESULTS** section displays the following information:

Note: Unit Price Search considers only those projects in which the **Privacy** field is selected as **Data is Public** in the published advertisement.
The search results primarily display the values based on the common Standard Items Table selected for projects and the filter, next it provides details of scenarios where Standard Items Conversion has happened in Crosswalk tables. If all three tables (FP03, FP14, and FP24) are selected in the Standard Items Table filter, then no crosswalk details are displayed.
The search results are also sorted and displayed based on the following:

- Bid award date in descending order
- Schedules in ascending order of schedule names
- Bid status

Field Name	Description
Records Selected	The number of records selected from the search results.
Low in $	The lowest unit price from the selected records.
High in $	The highest unit price from the selected records.
Suggested Unit Price	The suggested unit price calculated based on the regression analysis for the item.
Average Unit Price in $	The average unit price calculated from the selected records.
Unit Price in $	The average unit price of the item. The **Suggested Unit Price** value is copied to this field when you click **Generate Suggested Price**. Alternatively, you can edit the value, if necessary. **Note**: Ensure the added price is not a negative value.

11. To generate suggested unit price for the pay item, select the check boxes for the appropriate records, and then click **Generate Suggested Price**.
The **Unit Price in $** field is updated with the average unit price.

12. To view the pay items trend chart that displays the price to quantity graph, click **Graph**.

13. Optionally, perform any of the following steps, as applicable:

- To copy search results to an Excel workbook, click **Export**.
- To reset the search criteria, click **Reset**.
- To save the search criteria for the engineer's estimate, click **Save Search Criteria**.

14. To copy the suggested price as the unit price of the item, click **Add to Unit Price**.
    The item's page is displayed, and the **Unit Price in $** of the item is set as the suggested price.

15. Upon clicking **Add to Unit Price**, all search criteria, selected results, and suggested unit prices are stored in the system. You can see the stored values if you perform a unit price search for the same item in the future. When you perform the unit price search for the same item again and save the updated suggested unit price, then all the search criteria and results are automatically updated to the latest used values.
    To view the unit price analysis performed, click **View Unit Price Analysis** adjacent to the **Unit Price in $** field.
    The **VIEW UNIT PRICE ANALYSIS** report is generated in a new browser tab.
    The details displayed in the report are based on the actions performed during the unit price search.
    Note: If you copy an engineer's estimate, then all the search criteria and selected results associated with it are also copied.

3.2.2.4. Using the Ad-Hoc Unit Price Search

Overview

The **Ad-Hoc Unit Price Search** feature enables you to quickly determine the unit price of any pay item based on historic data. This feature enables consultants and other designers to prepare engineer's estimates for work orders that are not tracked under a project in Masterworks.

Steps

1. In the module menu, click **Home**.
   The **ENTERPRISE DASHBOARD** page is displayed.

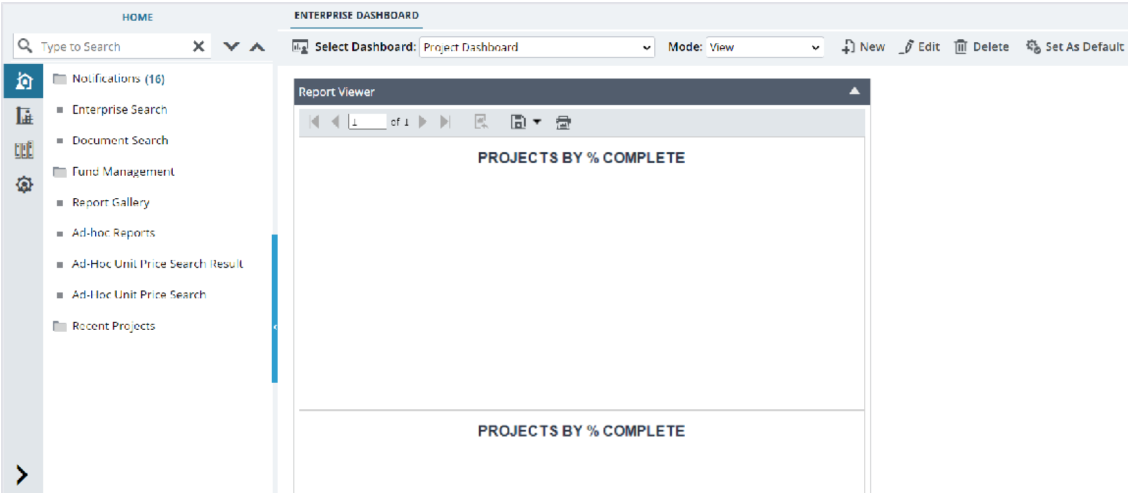


Figure 62: Enterprise Dashboard

2. In the navigation pane, click **Ad-Hoc Unit Price Search**.

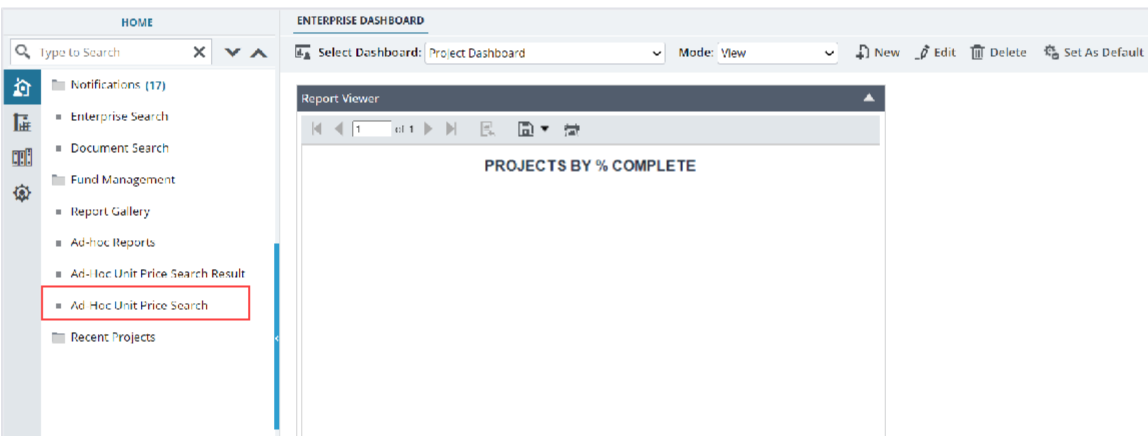


Figure 63: Navigation to Ad-hoc Unit Price Search Form

The **UNIT PRICE SEARCH** page is displayed.

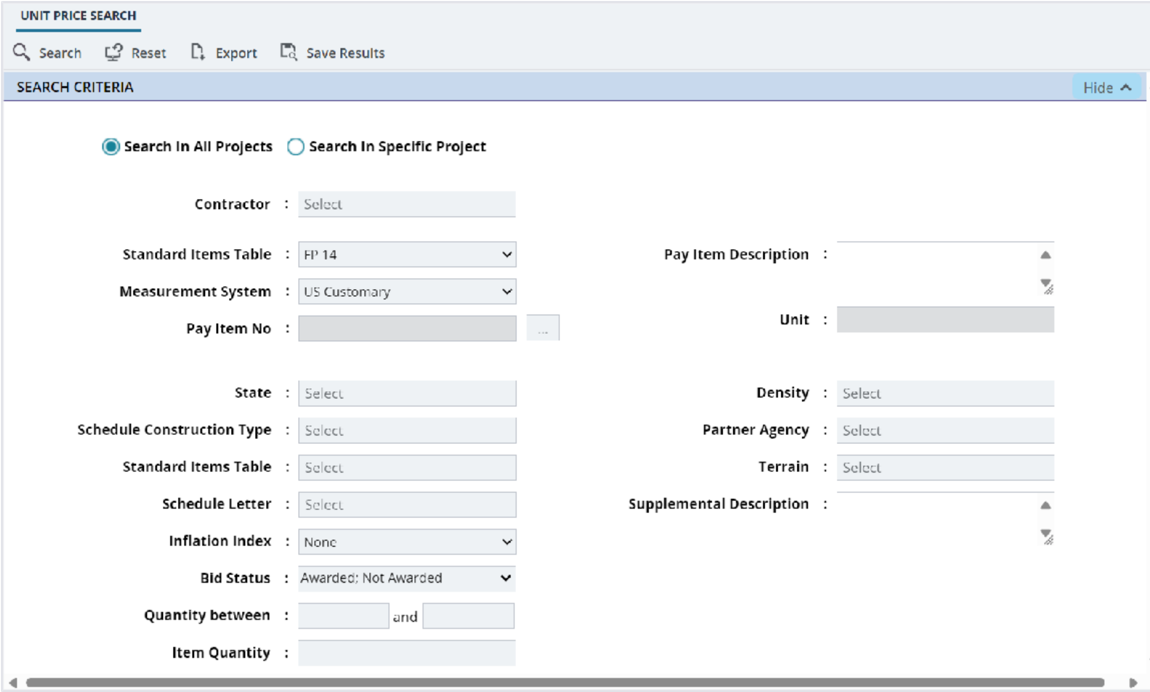


Figure 64: Unit Price Search

3. To define the search criteria, provide the appropriate information in the fields, as described in the following table.

Field Name	Description
Search In All Projects or Search in Specific Project	Click any of the following options, as applicable: • **Search In All Projects**: To search unit price data in estimates and bids across all the projects in the application. • **Search in Specific Project**: To search unit price data in estimates and bids from a specific project.
Project Code	**Note**: This field is displayed only if the Search in Specific Project option is selected. From the multi-select drop-down list, select the appropriate FLH project numbers. Available options are active and inactive projects with data privacy as **Public** to which the user is invited. To enable the search activity, it is mandatory to select at least one project.
Contractor	From the multi-select drop-down list, select the appropriate contractors. Alternatively, enter the name of the contractor, and then from the list of contractors, click the appropriate contractor. Available options are active contractors defined in the **Contractor Details** catalog of the library.

Field Name	Description
	If the field is empty, then Masterworks searches for all bids of all contractors.
Standard Items Table	By default, the latest standard items table defined in the **Standard Items Table** library catalog is displayed. Optionally, from the drop-down list, select the appropriate standard items table. Available options are standard item tables defined in the **Standard Items Table** catalog of the library.
Measurement System	By default, **US Customary** is displayed. Optionally, from the drop-down list, select the appropriate measurement system. Available options are measurement systems defined in the **Measurement Systems** catalog of the library.
Pay Item No	To select a pay item number, perform the following steps: a. Click .... The **Pay Item No** dialog box is displayed. Available options are standard items defined in the selected standard items table that is defined in the **Standard Items Table** catalog of the library. b. Select the appropriate pay item. **Note**: Based on the selection of the **Pay Item No**, the value of the **Pay Item Description** and **Unit** fields are displayed.

4. To define the filter criteria, provide the appropriate information in the fields, as described in the following table:

Field Name	Description
State	From the multi-select drop-down list, select the appropriate states. Available options are active states or territories defined in the **State/Territory** catalog of the library.
Schedule Construction Type	From the multi-select drop-down list, select the appropriate schedule construction types. Available options are schedule construction types defined in the **Schedule Construction Type** catalog of the library.
Standard Items Table	From the multi-select drop-down list, select the appropriate standard items tables. Available options are standard item tables defined in the **Standard Items Table** catalog of the library.
Schedule Letter	From the multi-select drop-down list, select the appropriate schedule letters. Available options are letters from A to Z.
Inflation Index	From the drop-down list, select the appropriate inflation index.

Field Name	Description
	Available options are the construction inflation indices defined in the **Construction Inflation Indices** catalog of the library. Based on the selected inflation index, Masterworks automatically calculates the inflation percentage (%) that is displayed for the appropriate records in the **Search Results** section. Inflation % is calculated as: (Inflation Rate for the latest year – Inflation Rate for the year of the Award Date) ÷ Inflation Rate for the year of the Award Date.
Bid Status	From the multi-select drop-down list, select the appropriate bid status or modify the default selection. Available options are **Awarded**, **Not Awarded**, **Engineer's Estimate**, and **Cancelled**. If **Engineer's Estimate** is selected, then the search result displays the engineer's estimates in the **Final Estimate** workflow status, and the award date of the bid in that project is used to calculate the inflation. **Note**: It is not recommended to use the Engineer's Estimate Unit prices to develop a Suggested Unit Price.
Density	From the multi-select drop-down list, select the appropriate densities. Available options are active densities defined in the **Density** catalog of the library.
Partner Agency	From the multi-select drop-down list, select the appropriate partner agencies. Available options are active partner agencies defined in the **Partner Agency** catalog of the library.
Terrain	From the multi-select drop-down list, select the appropriate terrains. Available options are active terrains defined in the **Terrain** catalog of the library.
Supplemental Description	Enter any additional description specific to the pay item.
Quantity between	Enter the range of quantity in the consecutive two numeric fields. **Note**: The entered numbers must be greater than 0. Based on the numbers entered in the two numeric fields, the search result displays only those records where item quantity is within this range. If the item quantity is converted from a different spec book or measurement system, then the converted quantity must be within the same range.
Item Quantity	Enter the appropriate quantity of the item being searched.

5. To define the additional filter criteria, in the **BID DATE** section, provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Award Date From	From the drop-down list, select the appropriate award date from which the search result must be displayed.
Award Date To	From the drop-down list, select the appropriate award date until which the search result must be displayed.

The **Search Based On** field displays **Pay Item No**.

6. Click **Search**.
The **SEARCH RESULTS** section displays the following information:

Note:
The search results are also sorted and displayed based on the following:
- Bid award date in descending order
- Schedules in ascending order of schedule names
- Bid status

Field Name	Description
Records Selected	The number of records selected from the search results.
Low in $	The lowest unit price from the selected records.
High in $	The highest unit price from the selected records.
Suggested Unit Price	The suggested unit price calculated based on the regression analysis for the item.
Average Unit Price in $	The average unit price calculated from the selected records.

The dynamic grid displays the information based on the defined search criteria.

7. To generate suggested unit price for the pay items, click the check boxes for the appropriate records, and then click **Generate Suggested Price**.

8. To view the pay items trend chart that displays the price to quantity graph, click **Graph**.

9. Optionally, perform any of the following steps, as applicable:

   - To copy search results to an Excel workbook, click **Export**.
   - To reset the search criteria, click **Reset**.

   Note: The **Standard Items Table** and **Measurement System** values are retained.

10. To save the search results, click **Save Results**.
    The search results are saved as a record in the **Ad-Hoc Unit Price Search Result** form.
    For more information, refer to Section 3.2.2.5. Accessing the Ad-Hoc Unit Price Search Result.

11. Click **Back** to return to the **ENTERPRISE DASHBOARD** page.

3.2.2.5. Accessing the Ad-Hoc Unit Price Search Result

Overview

The **Ad-Hoc Unit Price Search Result** contains the log of the saved ad-hoc unit price search results listed under the User's Username. Only the most recent Ad-Hoc Unit Price Search result by a specific user will be saved.

It contains all the information provided in the **Ad-Hoc Unit Price Search** page while searching for the unit price of the required item.

The Ad-Hoc Unit Price Search Result form has the information saved in the following sections:

- Item Details
- Search Criteria
- Bid Date
- Search Results

Steps

1. In the module menu, click **Home**.
   The **ENTERPRISE DASHBOARD** page is displayed.

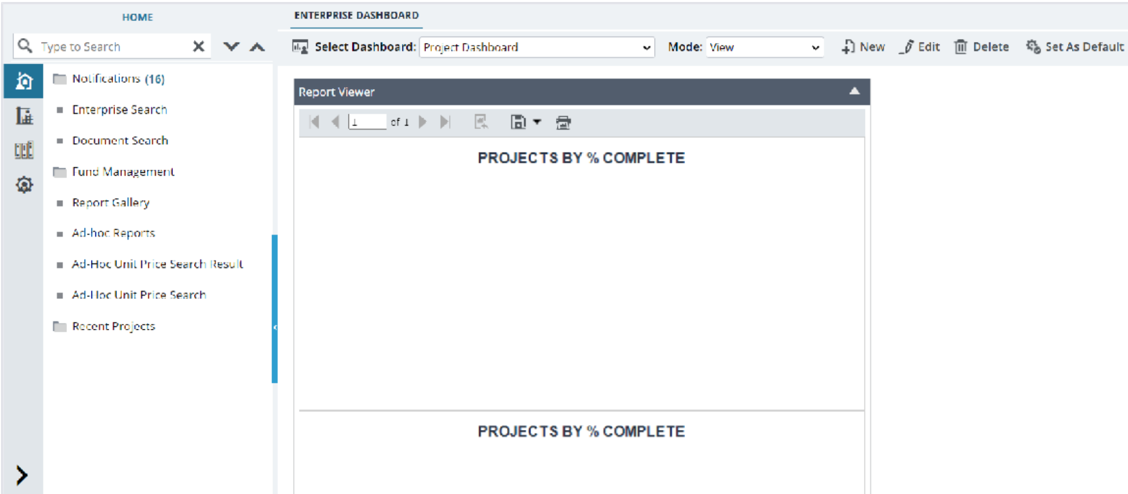


Figure 65: Enterprise Dashboard Page

2. In the navigation pane, click **Ad-Hoc Unit Price Search Result**.

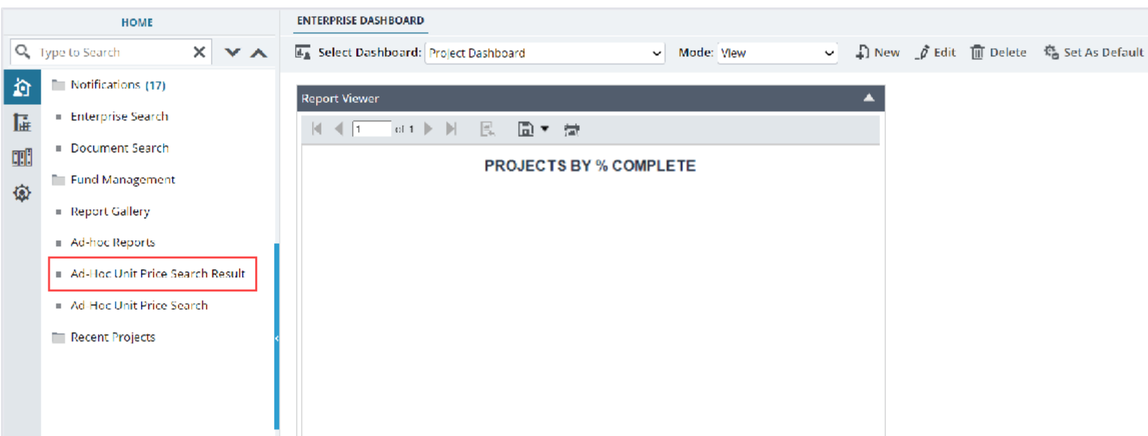


Figure 66: Navigation to Ad-Hoc Unit Price Search Result Form

The **AD-HOC UNIT PRICE SEARCH RESULT** list page is displayed.

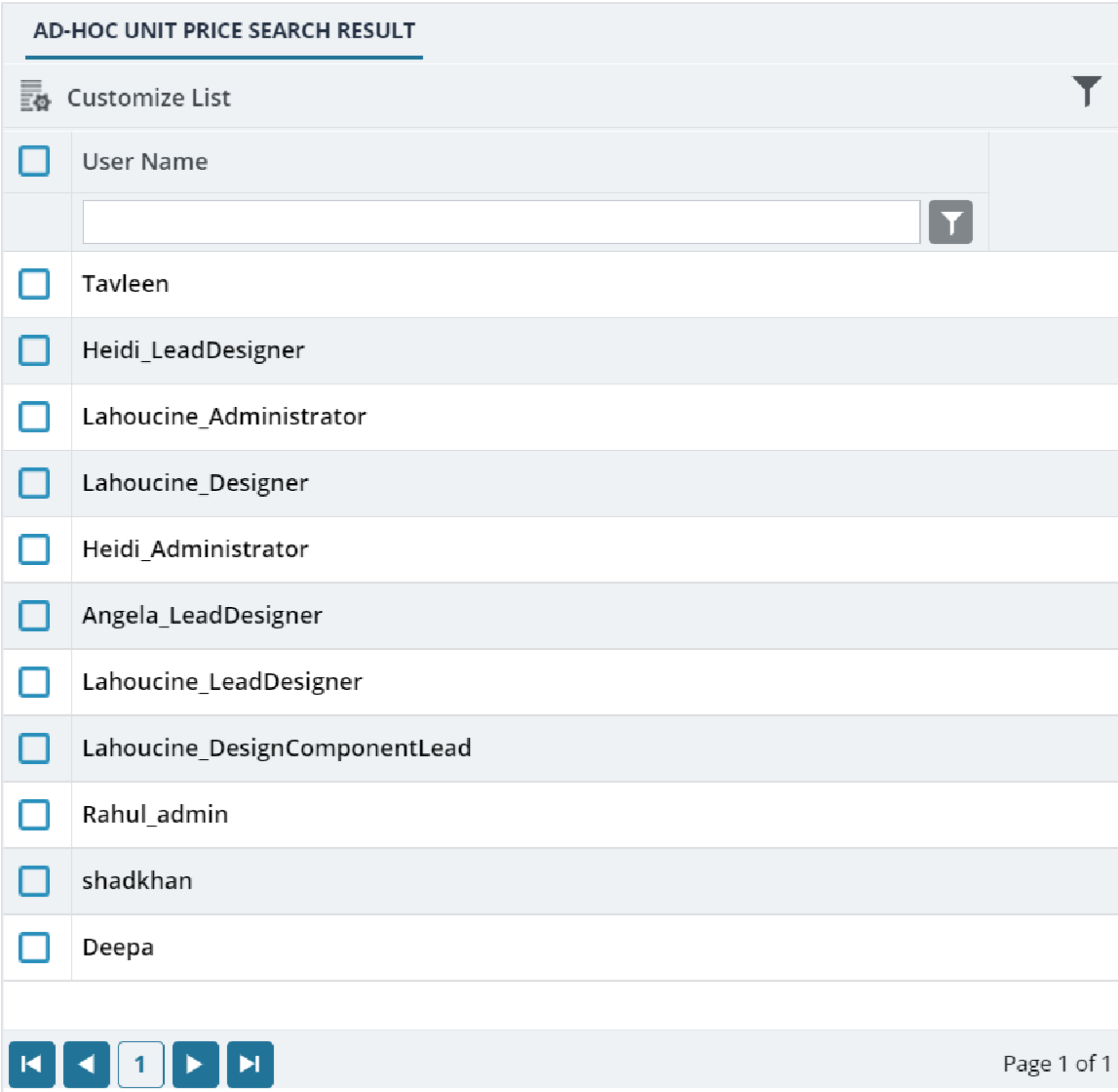


Figure 67: List Page of Ad-Hoc Unit Price Search Result

3. To view the details of the result, select the appropriate result and click **View**.

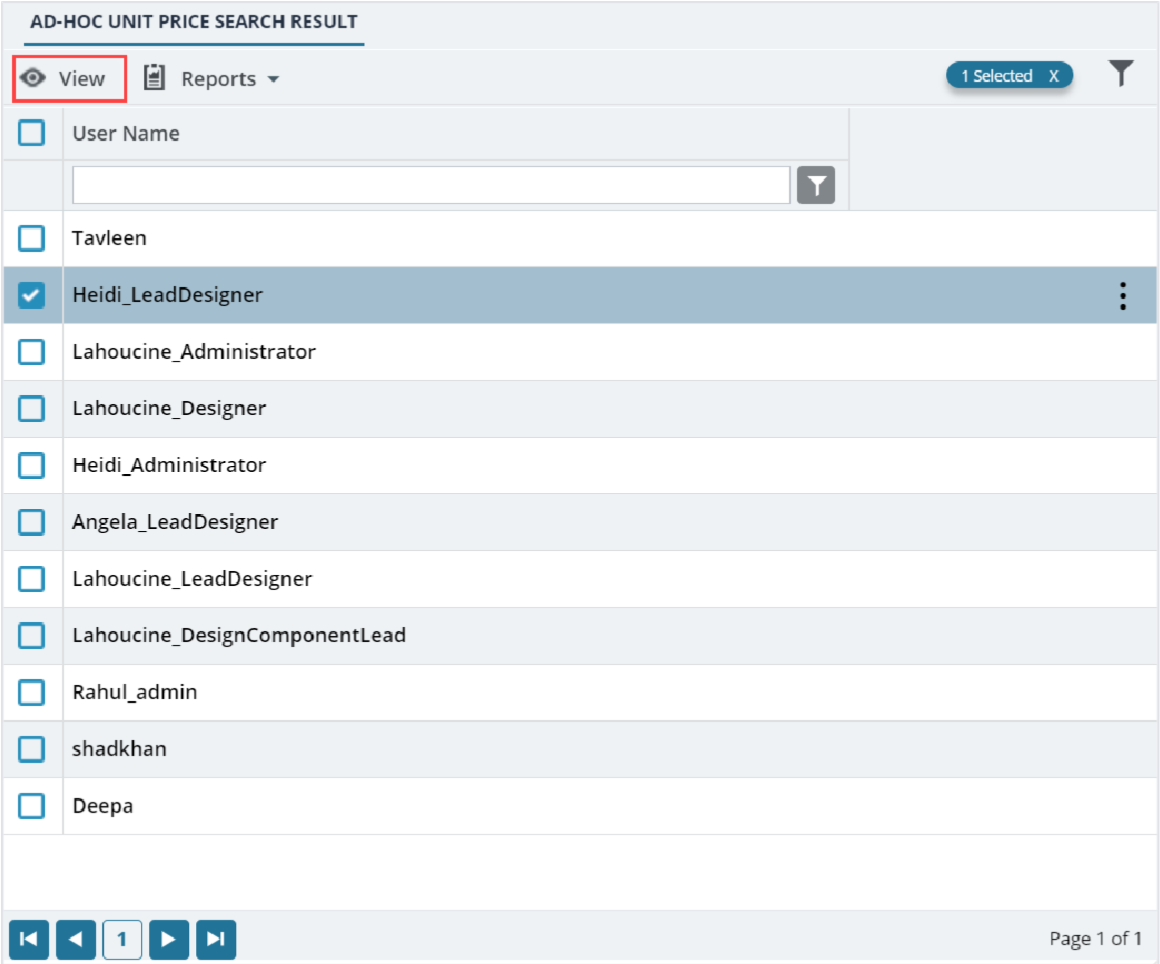


Figure 68: Selecting the Record to View

The **AD-HOC UNIT PRICE SEARCH RESULT** details page is displayed.

Note: By default, the latest search results are displayed

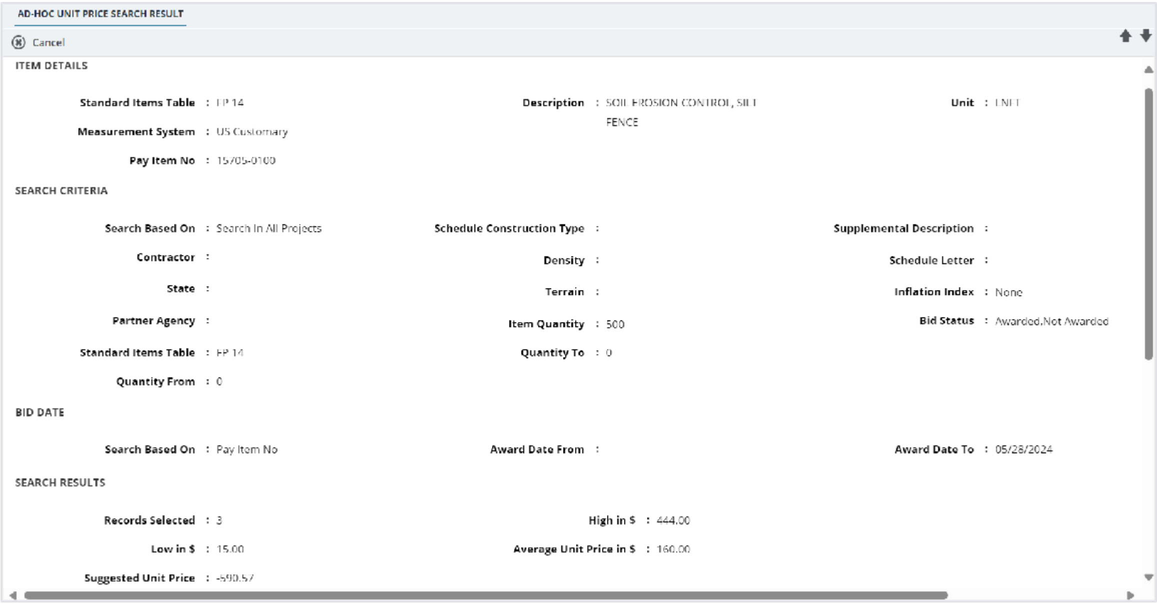


Figure 69: Ad-Hoc Unit Price Search Details Page

4. To view the previous or next unit price search results, click .

3.2.2.6. Associating a Funding Rule to an Estimate Item without Sub Items

Prerequisites

- The role of the logged-in user must be any of the following:
  - Administrator
  - Design Component Lead
  - Designer
  - Lead Designer
  - Highway Design Manager
  - Project Manager
  - A/E Designer
  - A/E Lead Designer
  - A/E Manager

  For more information on role-specific permissions, refer to Table 2 – Engineer's Estimate Permission Matrix.
- Funding rules are created and approved for the project. For more information on creating a funding rule, refer to the **Funding Rules** section in the **M03 Fund Management PG**.

Overview

You can associate a funding rule with multiple estimate items.

Note: This feature is not applicable for sub items. For information on associating funding rule to sub items, refer to 3.2.2.2.3. Adding Sub Items for Mobilization item.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

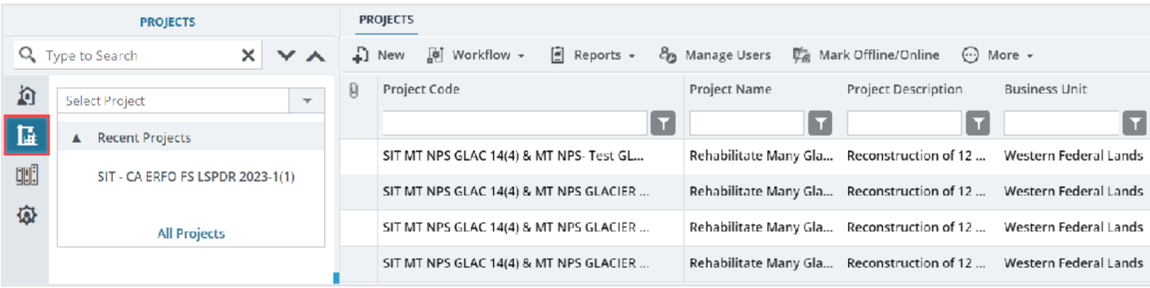


Figure 70: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

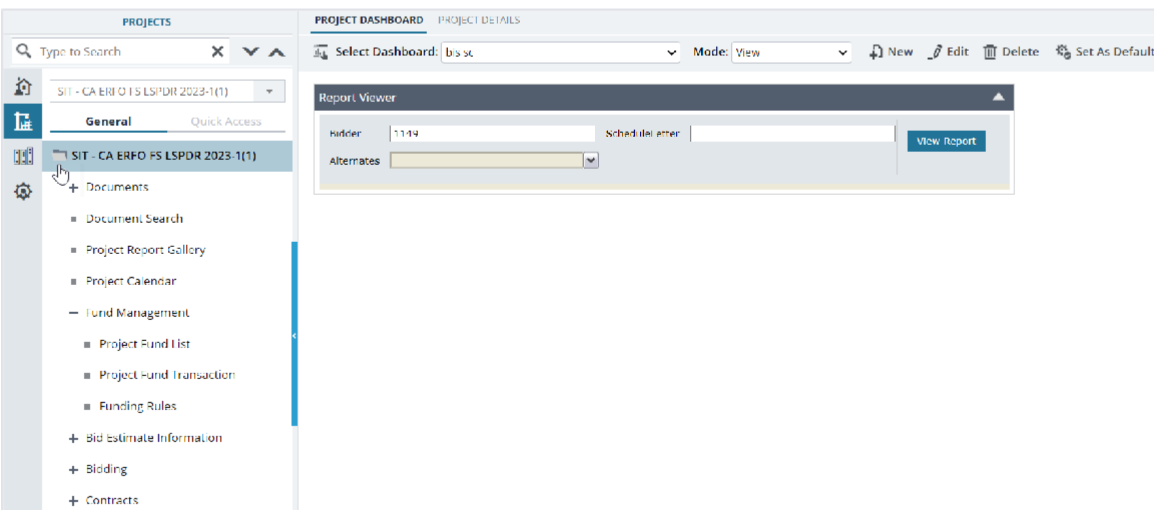


Figure 71: Expanding Projects Folder

3. In the navigation pane, expand **Bid Estimate Information**, and then click **Engineer's Estimates**.
   The **ENGINEER'S ESTIMATE** list page is displayed.

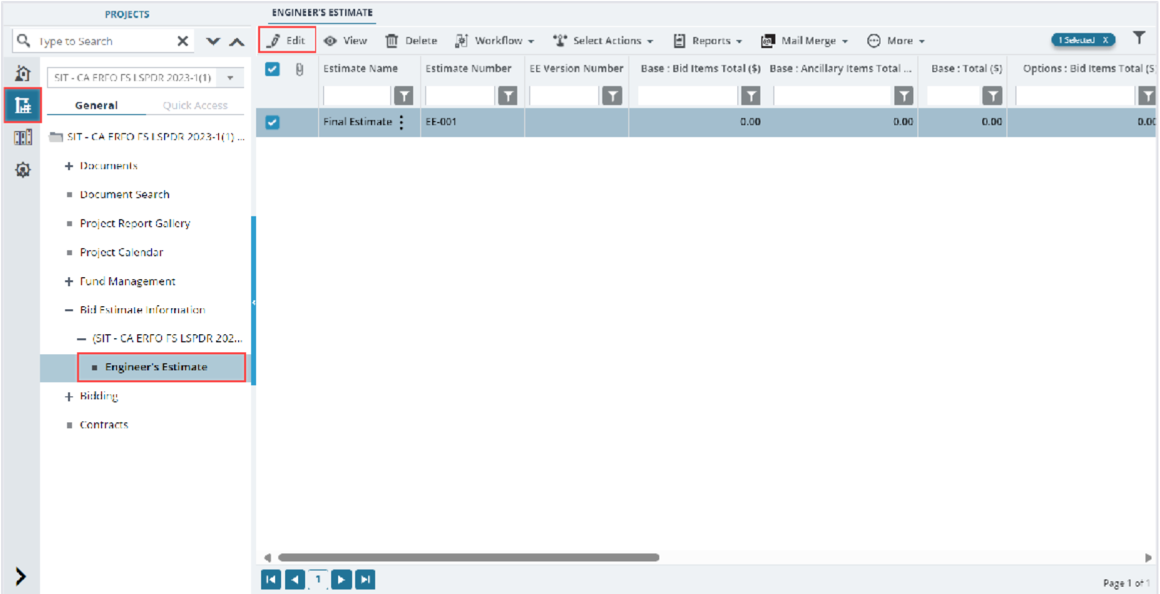


Figure 72: List Page of Engineer's Estimate

4. In the list page, select the appropriate record, and then click **Edit**.
   The **ENGINEER'S ESTIMATE DETAILS** page is displayed.
5. Click the **ENGINEER'S ESTIMATE ITEMS** tab.
   The **ENGINEER'S ESTIMATE ITEMS** list page is displayed

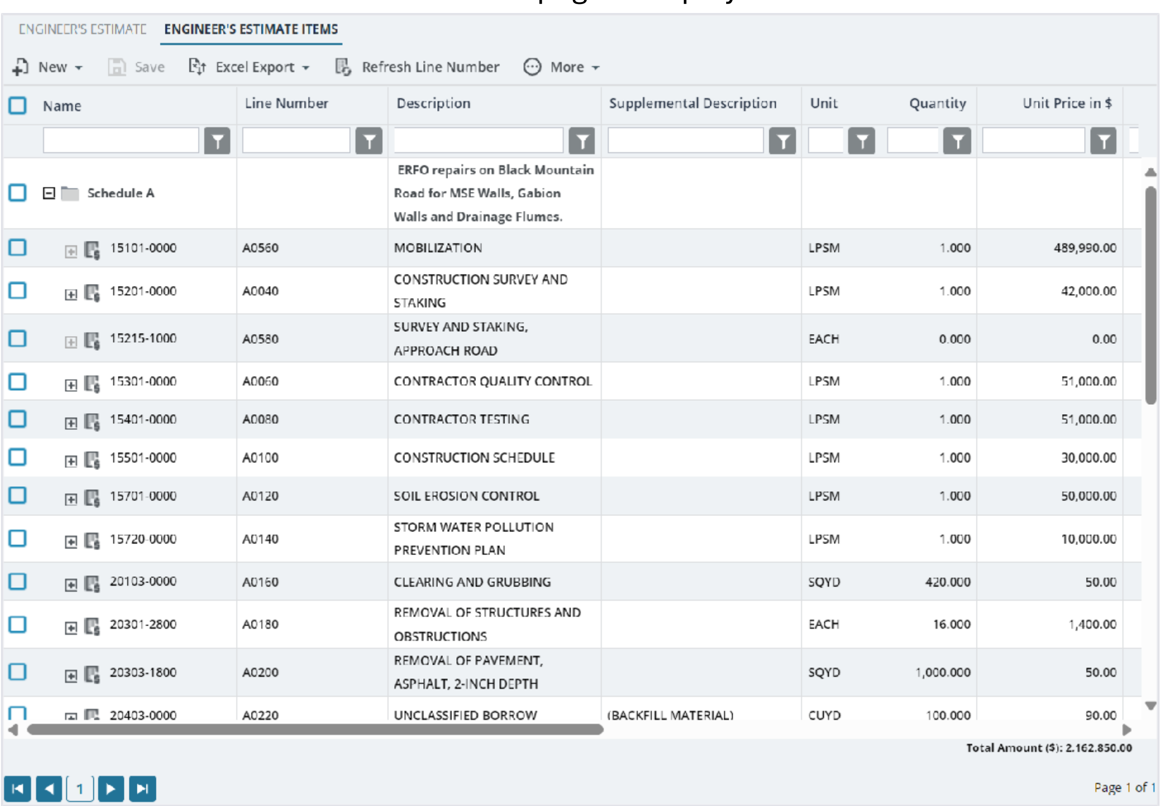


Figure 73: Engineer's Estimate Items Tab

6. To associate a funding rule, select the appropriate items, or select the appropriate containers to select all items in the selected containers.

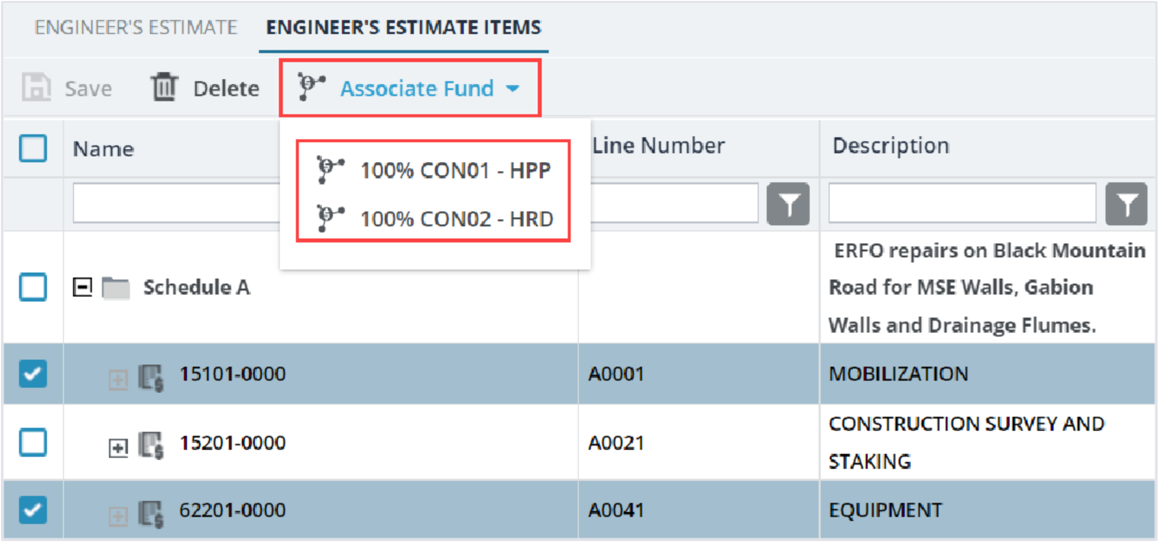


Figure 74: Associate Fund

7. Click **Associate Fund**, and then click the appropriate funding rule.

Note: You cannot associate fund rules to items prefixed with ⊞ from the list page. This indicates that the parent item contains sub items, and fund rules for sub items are defined at the item level.

Available options are active and approved funding rules that are defined for the project.

3.2.3. Finalizing an Engineer's Estimate

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Design Component Lead
- Designer
- Lead Designer
- Highway Design Manager
- A/E Manager
- A/E Lead Designer
- Design QA/QC

Overview

This section explains the positive and forward workflow actions to reach the **Final Estimate** workflow status. To move an **Engineer's Estimate** record through the defined workflow, perform the following steps:

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

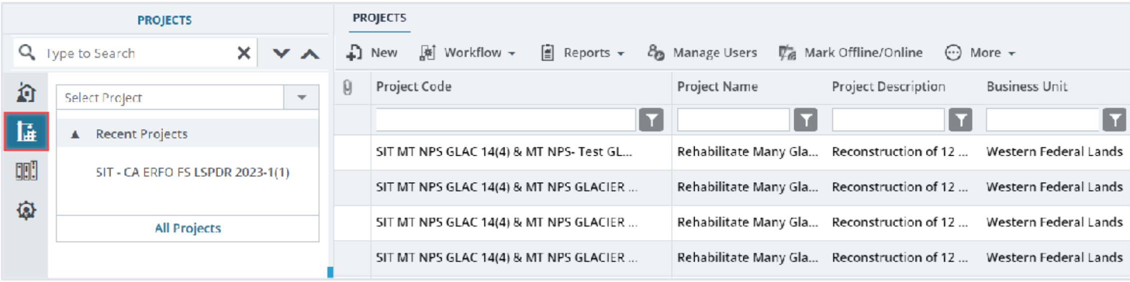


Figure 75: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

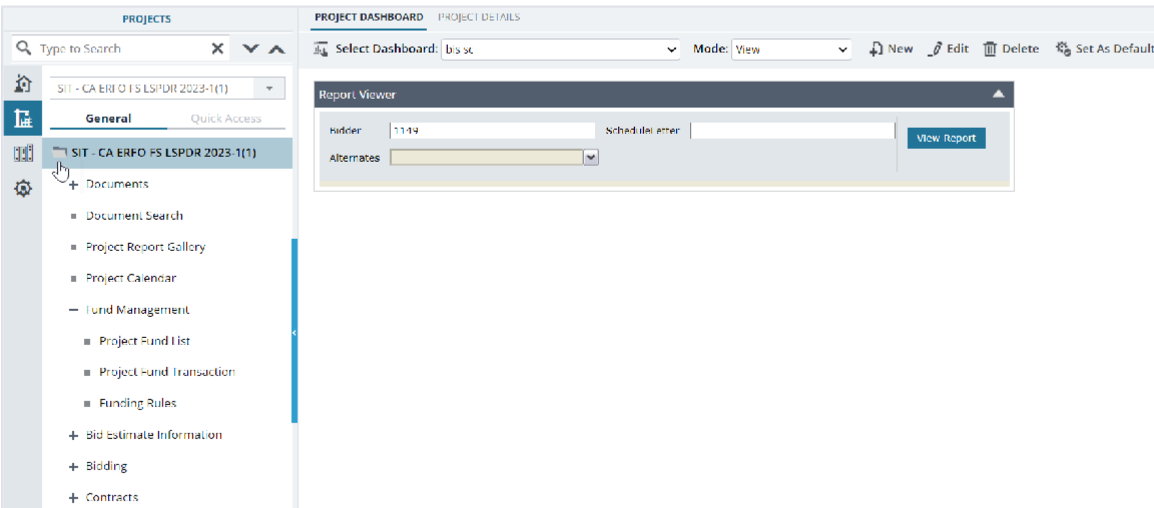


Figure 76: Expanding Projects Folder

3. In the navigation pane, expand **Bid Estimate Information**, and then click **Engineer's Estimates**. The **ENGINEER'S ESTIMATE** list page is displayed.

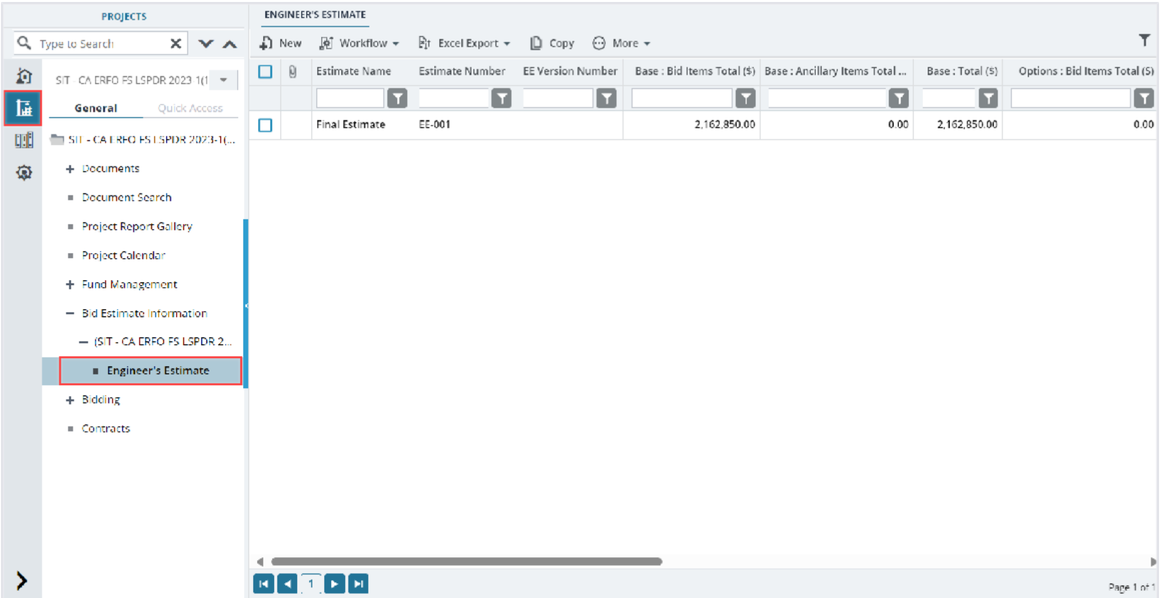
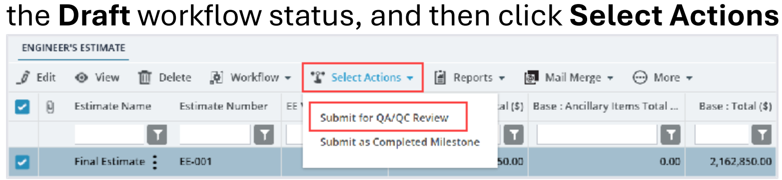
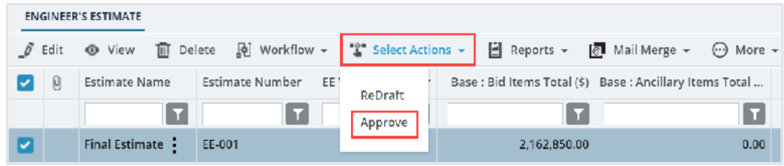
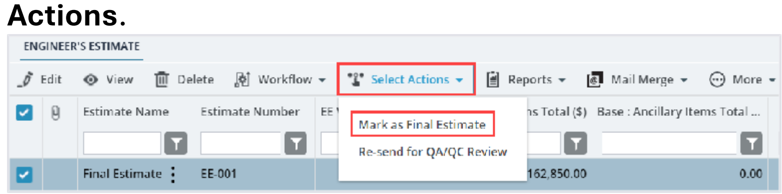


Figure 77: List Page of Engineer's Estimate

4. To submit the **Engineer's Estimates** record for review and to obtain approval from project stakeholders, perform the following steps:

Phase	Role	Workflow Steps
1	• Administrator • Design Component Lead • Lead Designer • Highway Design Manager • A/E Manager • A/E Lead Designer	**Note**: To move the **Engineer's Estimate** to the **QA/QC Review** workflow status, ensure all items are added with the unit price, quantity, and funding rule. a. In the list page, select the appropriate record that is in the **Draft** workflow status, and then click **Select Actions**.  *Figure 78: Workflow Action – Submit for QA/QC Review* b. Click **Submit for QA/QC Review**, and in the **Masterworks** dialog box, click **OK**. The workflow status of the record is set to **QA/QC Review**. Once the record is moved to the **QA/QC Review** workflow status, an email notification is sent to users assigned with Lead Designer role.
2	• Administrator • Highway Design Manager • Lead Designer	a. In the list page, select the appropriate record that is in the **QA/QC Review** workflow status, and then click **Select**

Phase	Role	Workflow Steps
	• Design QA/QC	**Actions.**  *Figure 79: Workflow Action – Approve* b. Click **Approve**, and in the **Masterworks** dialog box, click **OK**. The workflow status of the record is set to **QA/QC Approved**. Once the record is moved to the **QA/QC Approved** workflow status, an email notification is sent to users assigned with Designer role.
3	• Administrator • Designer • Lead Designer • Highway Design Manager	**Note**: To move the **Engineer's Estimate** record to the **Final Estimate** workflow status, ensure the following: • All the temporary items are removed from the estimate. • The **Miles** and **Lane Miles** fields must not be blank for any containers. a. In the list page, select the appropriate record that is in the **QA/QC Approved** workflow status, and then click **Select Actions**.  *Figure 80: Workflow Action - Mark as Final Estimate* b. Click **Mark as Final Estimate**, and in the **Masterworks** dialog box, click **OK**. The workflow status of the record is set to **Final Estimate**.

3.2.4. Engineer's Estimate Workflow Status

The following table provides the workflow status (current and subsequent status) of the **Engineer's Estimate** record.

For information on setting a workflow status to the next status, refer to Section 4.3. Workflow Status Transitions.

Phase	Current Workflow Status	Action Stakeholders	Action	Subsequent Workflow Status	Comments
1	Draft	• Administrator	Submit for QA/QC Review	QA/QC Review	To move the **Engineer's Estimate** record to the **QA/QC Review** or **Completed**

Phase	Current Workflow Status	Action Stakeholders	Action	Subsequent Workflow Status	Comments
		• Design Component Lead • Lead Designer • Highway Design Manager • A/E Manager • A/E Lead Designer	Submit as Completed Milestone	Completed	workflow status, ensure all items are added with the unit price, quantity, and funding rule. If an engineer's estimate was revised through Advertisement or Amendment, you cannot perform the **Submit as Completed Milestone** action. **Note**: Once the record is moved to the **QA/ QC Review** workflow status, you cannot edit it and an email notification is sent to users assigned with Lead Designer role. Only **Submit as Completed** Milestone for early milestone estimates (i.e. 30%, 70%, 95%, etc) that will not be the final estimates, advertised milestone estimate.
2	Completed	• Administrator • Design Component Lead • Lead Designer • Highway Design Manager • A/E Manager • A/E Lead Designer	ReDraft	Draft	-
3	QA/QC Review	• Administrator • Highway Design Manager	ReDraft	Draft	-
			Approve	QA/QC Approved	Once the record is moved to the **QA/QC Approved** workflow status, an email

Phase	Current Workflow Status	Action Stakeholders	Action	Subsequent Workflow Status	Comments
		• Design QA/ QC			notification is sent to users assigned with Designer role.
4	QA/QC Approved	• Administrator • Designer • Lead Designer • Highway Design Manager	Mark as Final Estimate	Final Estimate	**Note**: Mark an estimate as Final only if it is ready for Advertisement. To move the **Engineer's Estimate** record to the **Final Estimate** workflow status, ensure the following conditions are met: • All the temporary items are removed from the estimate. • No records are available in the **Final Estimate** workflow status. • The **Miles** and **Lane Miles** fields must not be blank for any containers. If any estimate is in the **Archived** workflow status, you can move only the record that was created through Acquisitions revision to the **Final Estimate** workflow status. After the record is moved to the **Final Estimate** workflow status, the following changes occur: • You cannot create a new estimate. • You cannot move any existing record to the **Final Estimate** workflow status.
			Re-send for QA/QC Review	QA/QC Review	-
5	Final Estimate	<System Automated>	-	Archived	If users assigned with the Acquisitions role initiate an

Phase	Current Workflow Status	Action Stakeholders	Action	Subsequent Workflow Status	Comments
					engineer's estimate revision from the **Bidding** module, the previous **Final Estimate** record is automatically moved to the **Archived** workflow status.

3.3. Generating Engineer's Estimate Reports

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Project Viewer
- Design Component Lead
- Designer
- Lead Designer
- Design QA/QC
- Highway Design Manager
- Project Manager
- A/E Designer
- A/E Lead Designer
- A/E Manager
- Acquisitions
- Construction Component Lead
- Construction Admin Staff
- Construction Engineer
- Construction Operations Engineer
- Inspector
- Assistant Project Engineer

Overview

Based on the roles assigned to you, you can generate reports that illustrate various types of information.

Steps

1. In the module menu, click **Projects**.
   The **PROJECTS** list page is displayed.

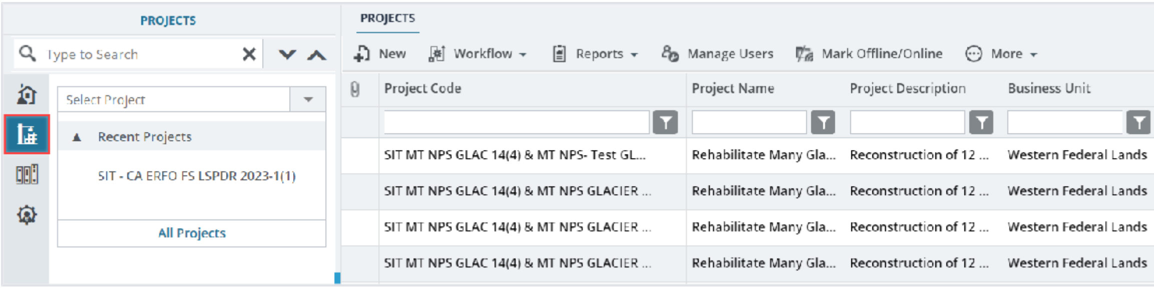


Figure 81: Navigation to Projects Module

2. In the list page, double-click the appropriate project, and then click the project folder to expand it.

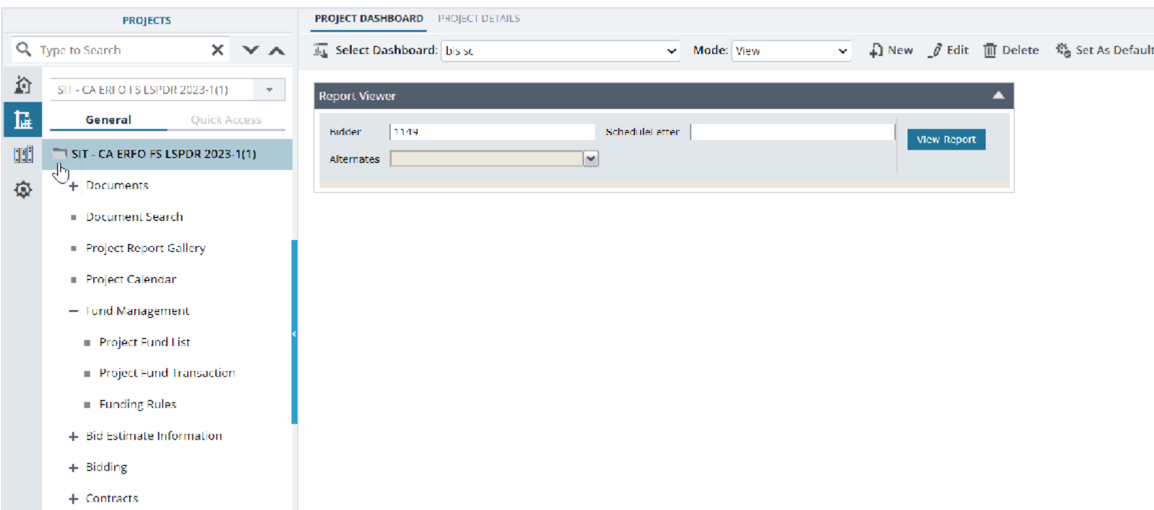


Figure 82: Expanding Projects Folder

3. In the navigation pane, expand **Bid Estimate Information**, and then click **Engineer's Estimates**.
   The **ENGINEER'S ESTIMATE** list page is displayed.

4. You can generate a report from the **ENGINEER'S ESTIMATE** list page or the **ENGINEER'S ESTIMATE ITEMS** tab.

- To generate a report from the **ENGINEER'S ESTIMATE** list page, in the list page, select the appropriate record, click **Reports**, and then click the appropriate report.

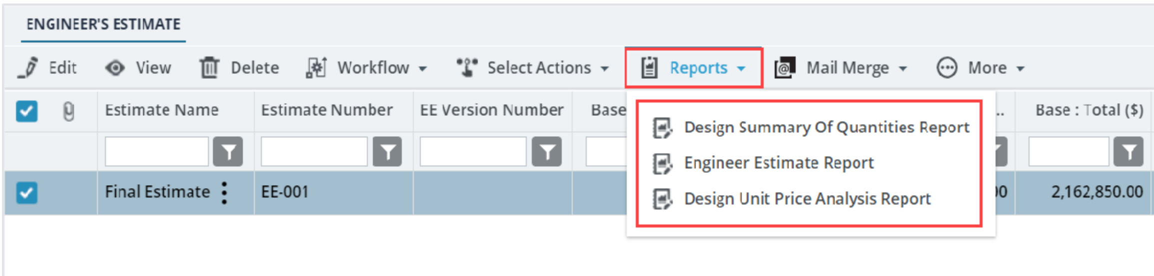


Figure 83: Engineer's Estimate List Page Reports

- To generate a report from the **ENGINEER'S ESTIMATE ITEMS** tab, perform the following steps:

  a. In the **ENGINEER'S ESTIMATE** list page, click **Edit** or **View**, as applicable. The **ENGINEER'S ESTIMATE DETAILS** page is displayed.
  b. Click the **ENGINEER'S ESTIMATE ITEMS** tab, click **Reports**, and then click the appropriate report.

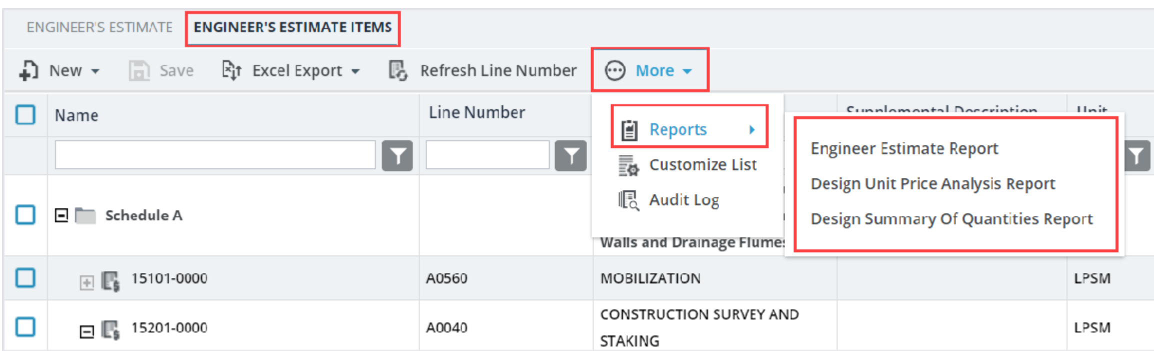


Figure 84: Engineer's Estimate Items Tab Reports

The report is generated and displayed.
You can generate the following reports:

- Design Summary Of Quantities Report
- Engineer Estimate Report
- Design Unit Price Analysis Report

For more information on the various report features available, refer to Section 4.2. Standard Report Functions.

4. Appendix

4.1. Attachments

You can upload or link files in the **Documents** folders to every record. You can also upload any number of attachments, regardless of size, to a record or while performing workflow actions for a record.

The following sections explain how to upload or link, access, and download attachments in a form or workflow:

- 4.1.1. Attaching a File to a Form
- 4.1.2. Attaching a File to a Workflow
- 4.1.3. Accessing and Downloading Attached Files
- 4.1.4. Deleting Attached Files

You can annotate and delete attachments.

4.1.1. Attaching a File to a Form

You can upload files to a form and link a file in the **Documents** folders of a form.

Note: The **Upload** and **Link New Document** option is the most preferred and used method to link files to a form by the FLH team.

The **Project Fund List** form is used for illustration purposes.

Uploading Files to a Form

To upload files, perform the following steps in the **ATTACHMENTS** section:

1. Click **Upload Document**.

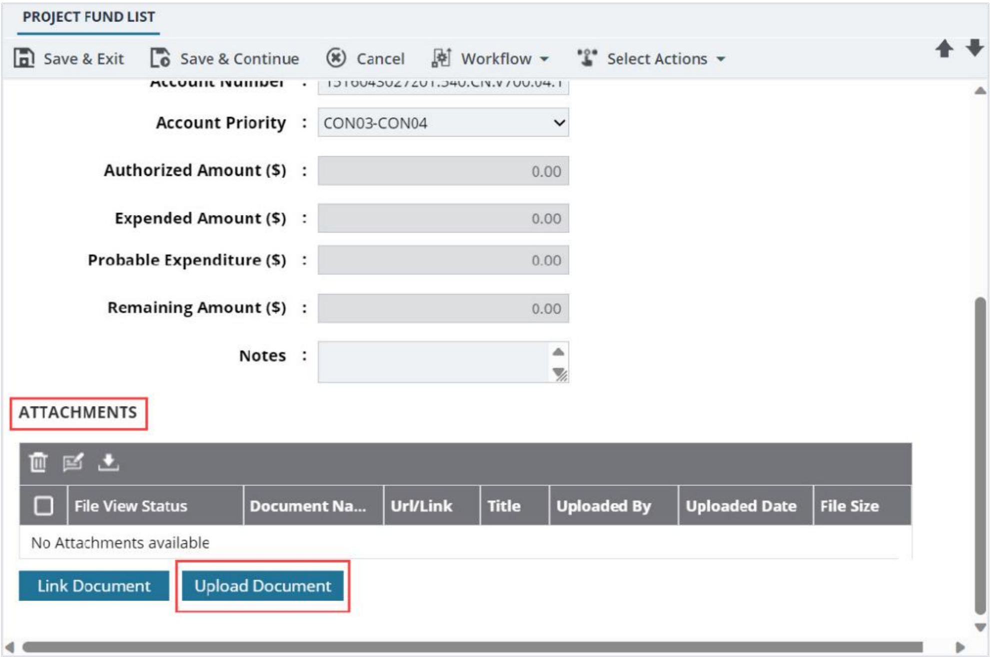


Figure 85: Using Upload Document Option

The **Open** dialog box is displayed.

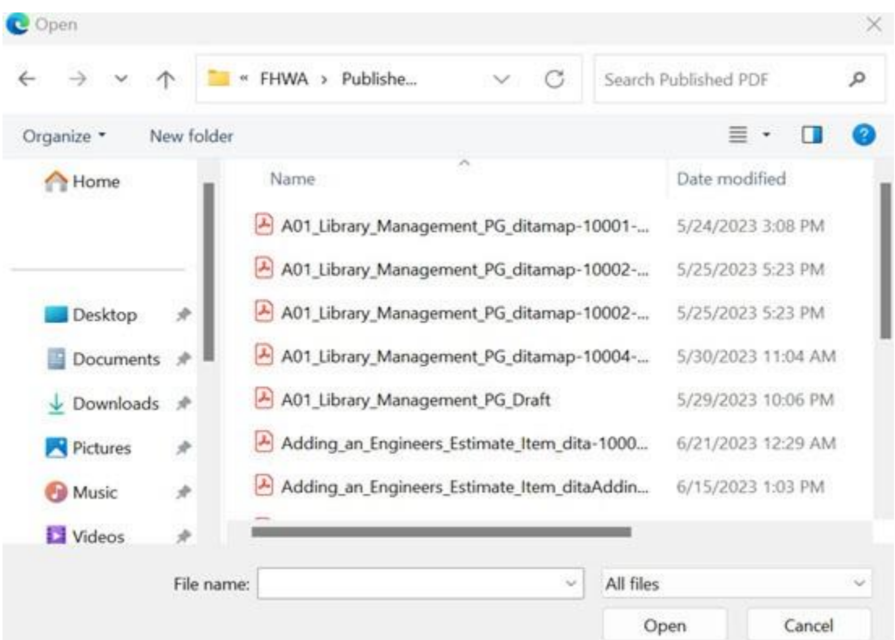


Figure 86: Open Dialog Box

2. To upload a single file, click the appropriate file.
   Optionally, to upload multiple files, press and hold **CTRL**, and then click the appropriate files.

3. Click **Open**.

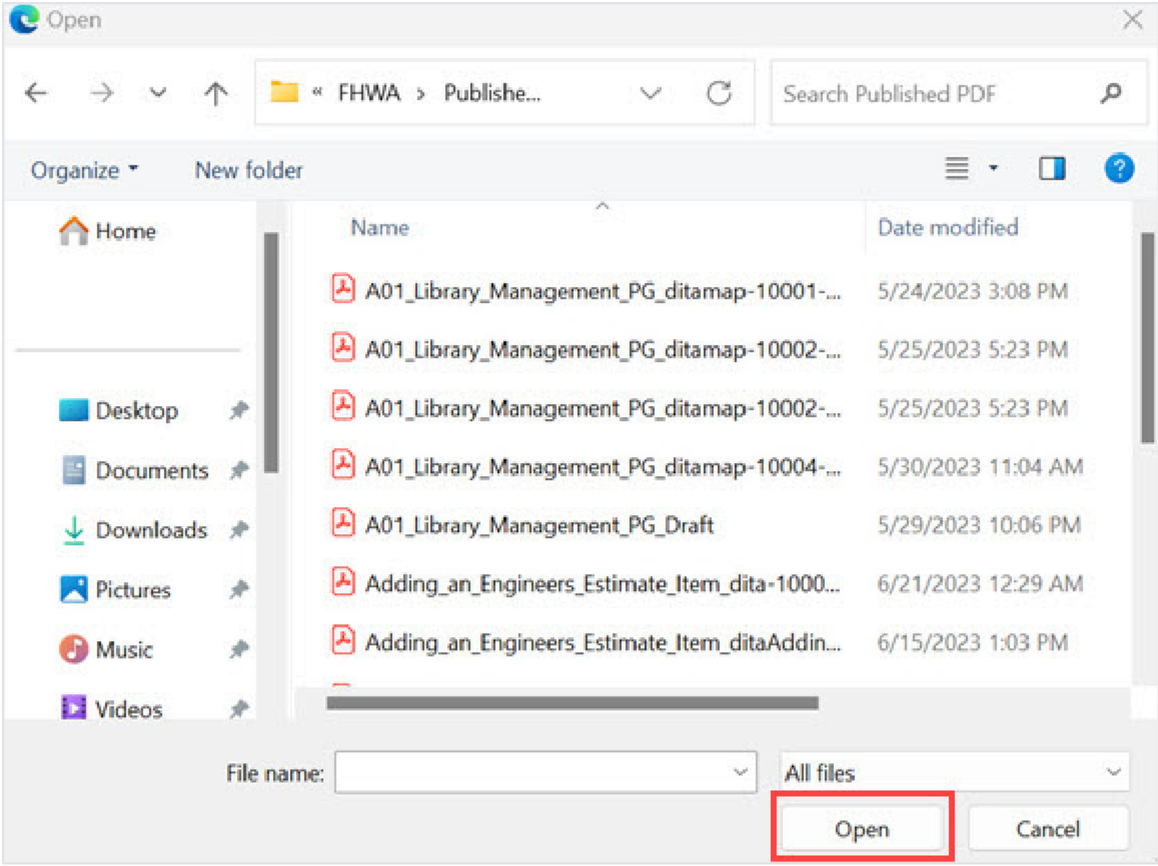


Figure 87: Open Option

The files are uploaded to the form and displayed in the **ATTACHMENTS** section.

4. The name of the file is updated in the **Title** column.
   Optionally, in the **Title** column, enter the tiles for the files attached.

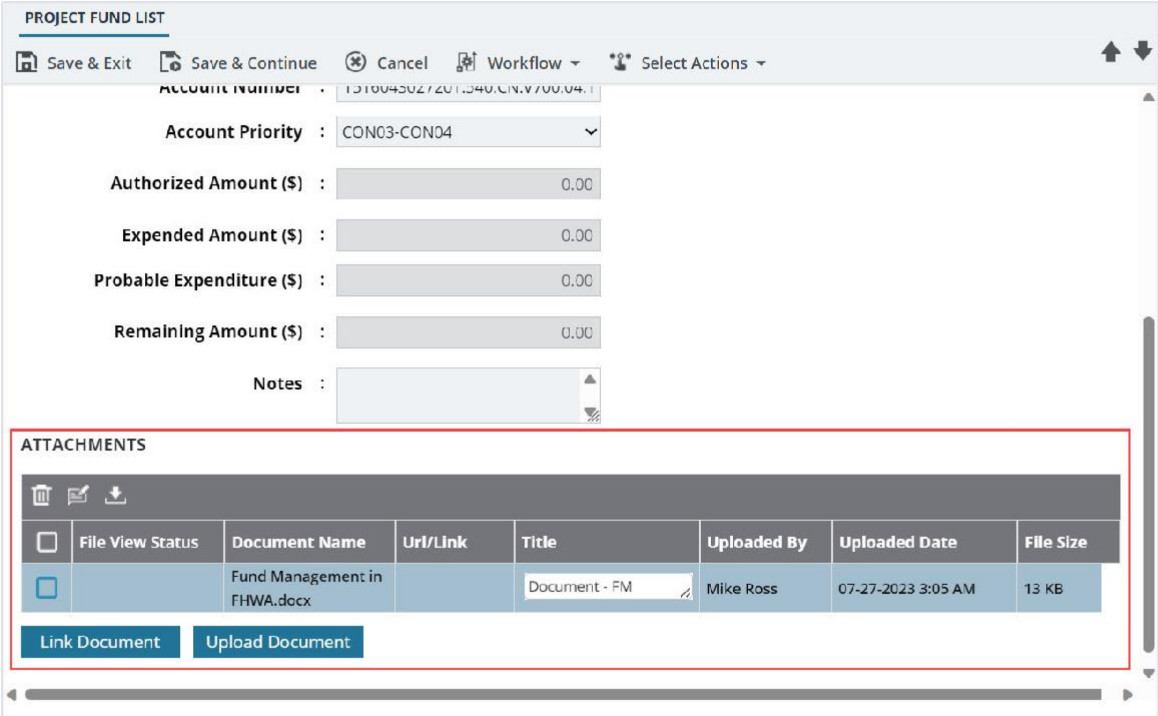


Figure 88: Uploaded File

Linking a File to a Form

You can link a file to a form using any of the following options:

- **Masterworks Document:** This option enables you to link files available in the document folders of a project or contract. The document folders are available based on the selected document folder structure in the **PROJECT DETAILS** page.
  Note: This option helps users avoid uploading the same files multiple times in a project.
- **Upload and Link New Document:** This option enables you to upload new files to the document folders of a project or contract and link them to the respective form. The document folders are available based on the selected document folder structure in the **PROJECT DETAILS** page.
  Note:
  - This option helps users upload new files into the document folder structure from the respective form without navigating to the document folder.
  - The **Upload and Link New Document** option is the most preferred and used method to link files to a form by the FLH team.
- **External Document:** This option enables you to link files from an external location.

Linking a File to a Form – Masterworks Document Option

To link a file available in the Documents folders, perform the following steps:

1. In the **ATTACHMENTS** section, click **Link Document**.

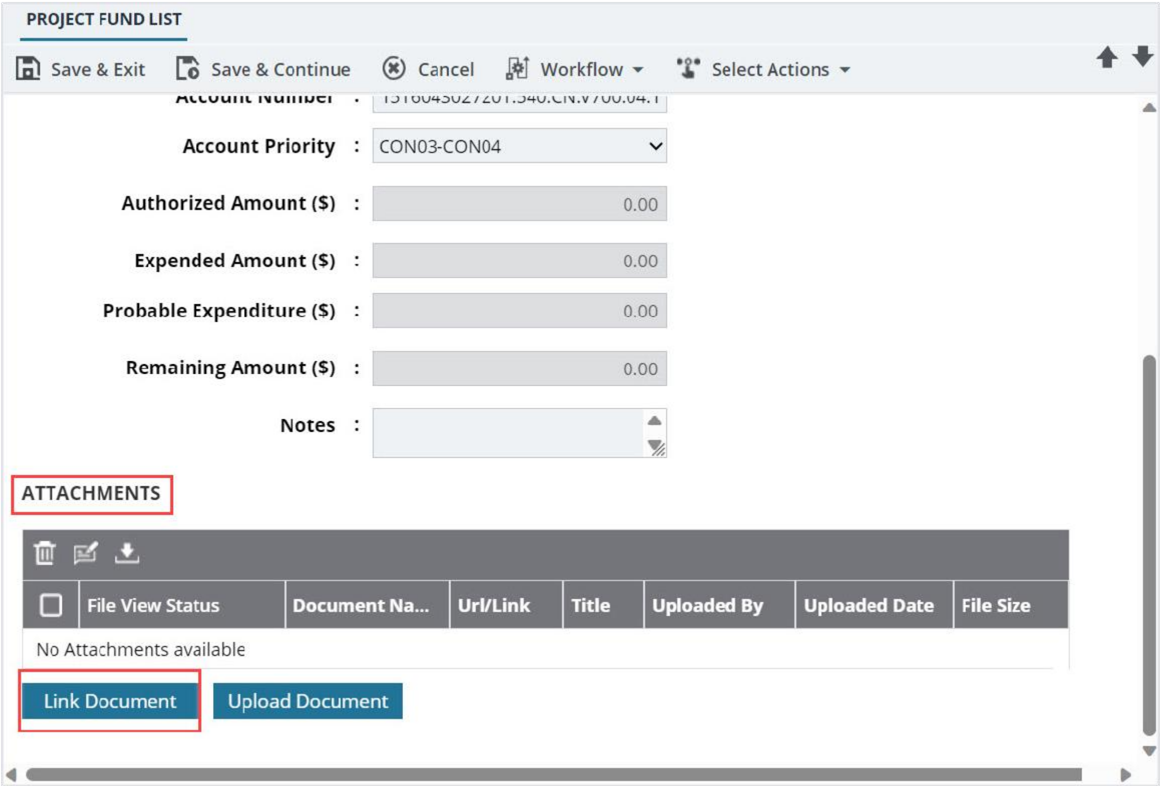


Figure 89: Using Link Document Option

The **Link Document** dialog box is displayed.

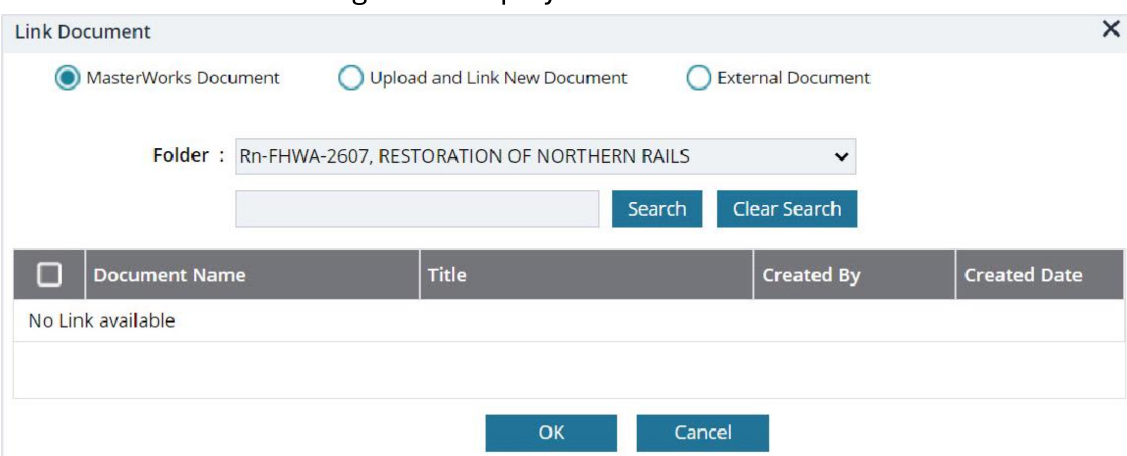


Figure 90: Link Document Dialog Box

2. Click **Masterworks Document**.

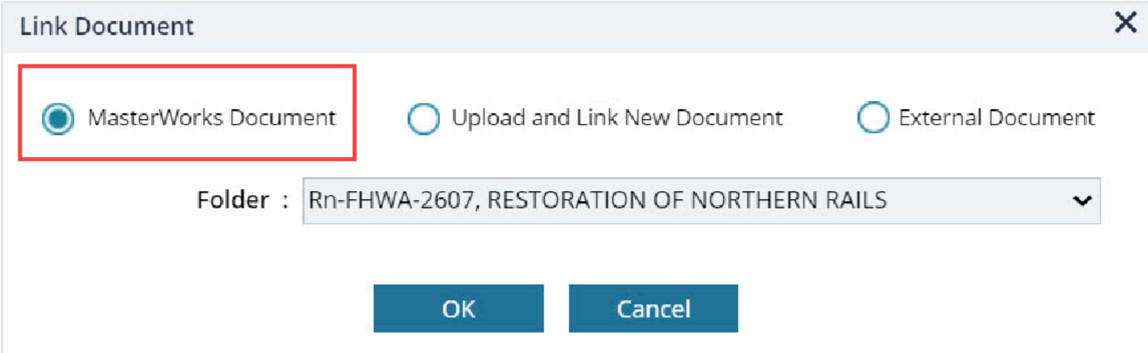


Figure 91: Using Masterworks Document Option

3. In the **Folder** drop-down list, select the appropriate document folder where the files exist. The list of files in that folder is displayed.

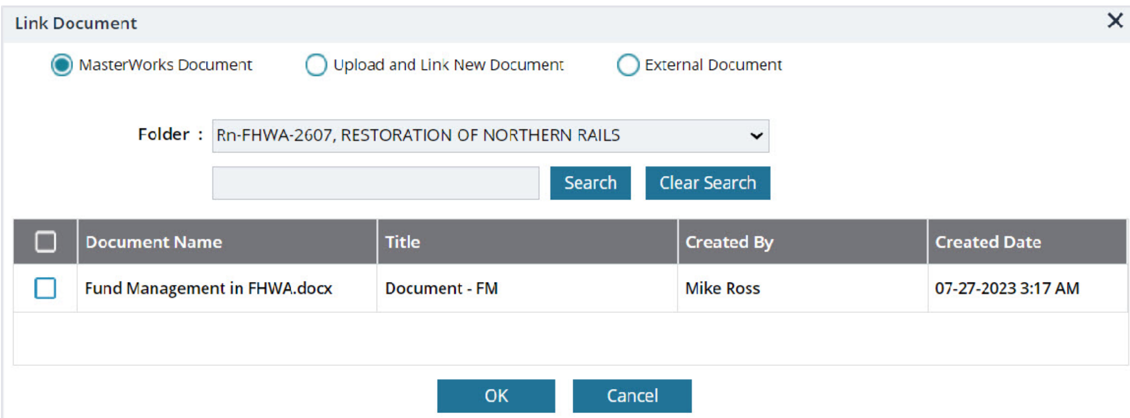


Figure 92: List of Documents

4. Perform any of the following steps, as applicable:

- From the list of files, select the appropriate files.
- To search for a file, in the box, enter any search criteria for the file, click **Search**, and then select the appropriate files.

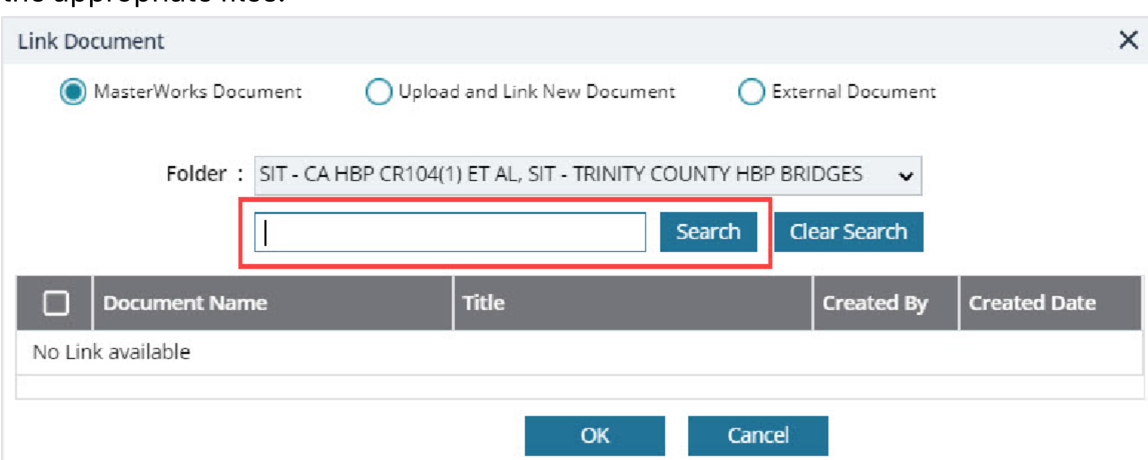


Figure 93: Using Search Option

You can specify search criteria such as the extension of the file type, the date or time the file was uploaded, the name or title of the file, or the username of the user who uploaded the file.

- Optionally, to view all the files in the selected folder, click **Clear Search**.

5. Click **OK**.

The files are linked to the form and are displayed in the **ATTACHMENTS** section.

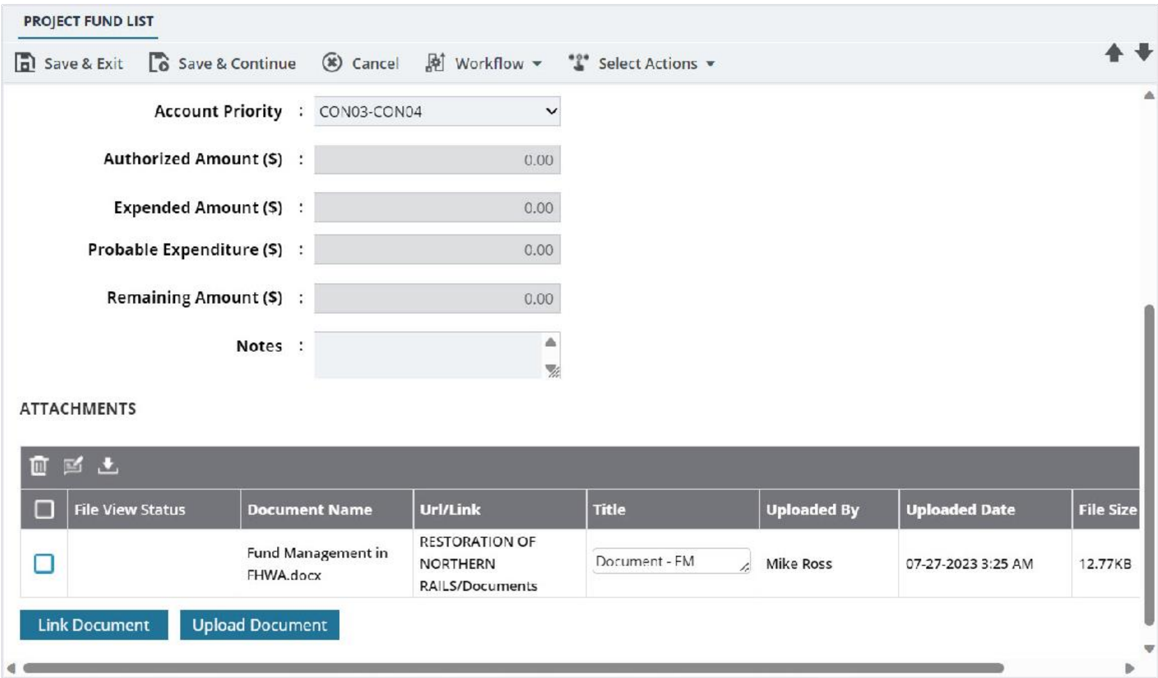


Figure 94: Linked Document

Note: The **Url/Link** column displays the path to the folder where the document is available. You can click the folder path to open the folder.

6. In the **Title** column, enter the titles for the linked files.

Linking a File to a Form – Upload and Link New Document Option

To upload a file to a folder in the **Documents** folder structure and link the file to the respective form, perform the following steps:

Note: The **Upload and Link New Document** option is the most preferred and used method to link files to a form by the FLH team.

1. In the **ATTACHMENTS** section, click **Link Document**.

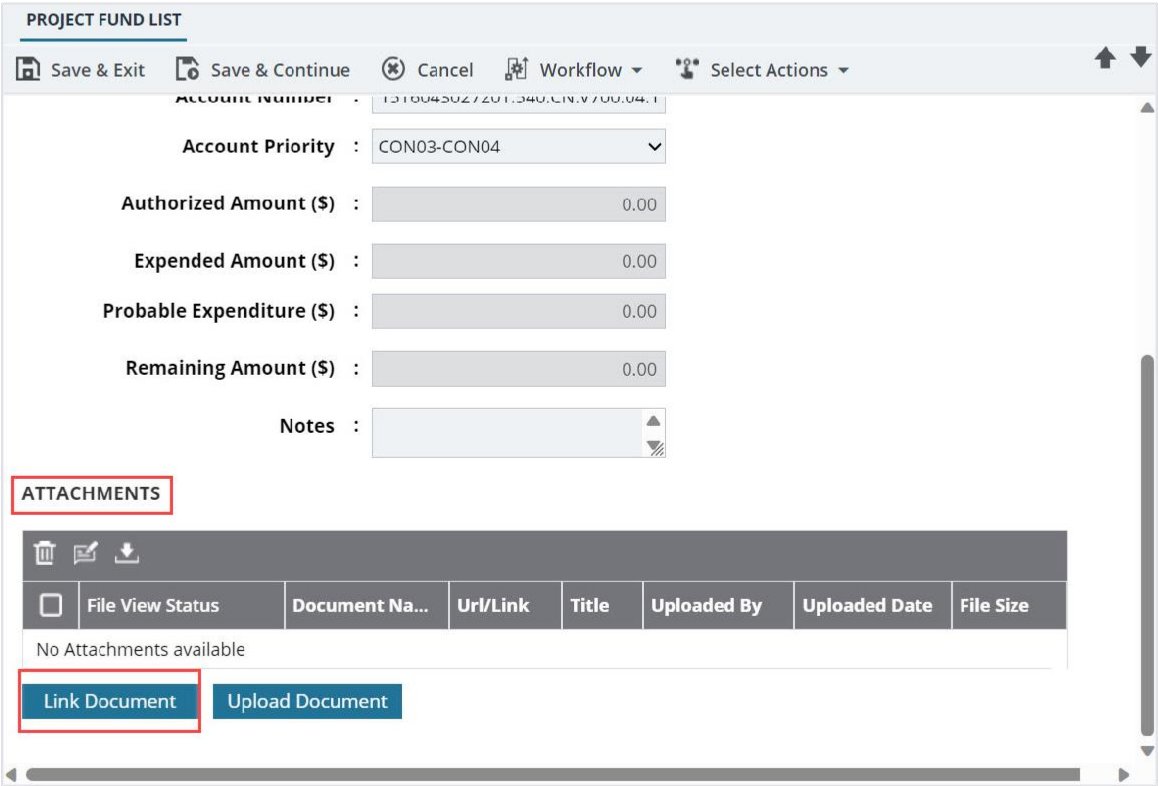


Figure 95: Using Link Document Option

The **Link Document** dialog box is displayed.

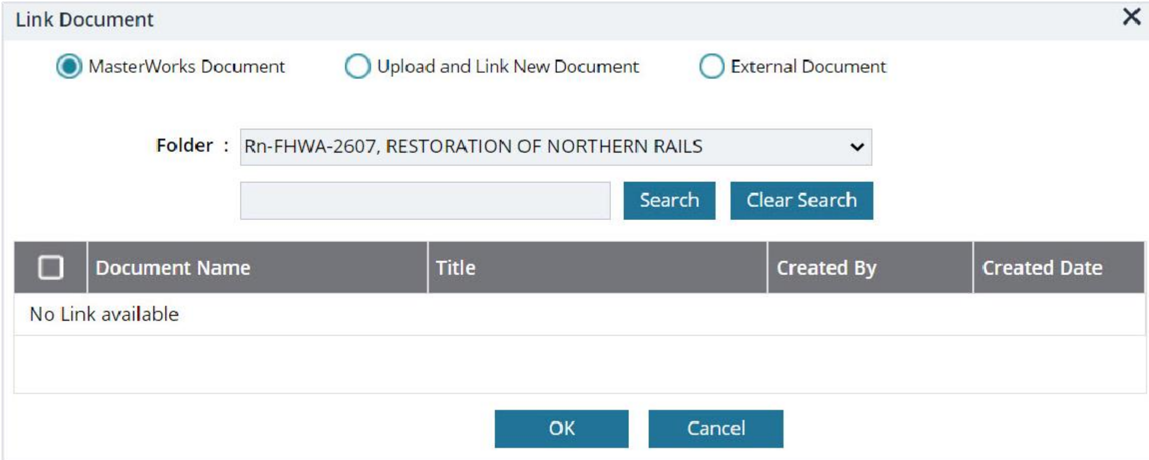


Figure 96: Link Document Dialog Box

2. Click **Upload and Link New Document**.

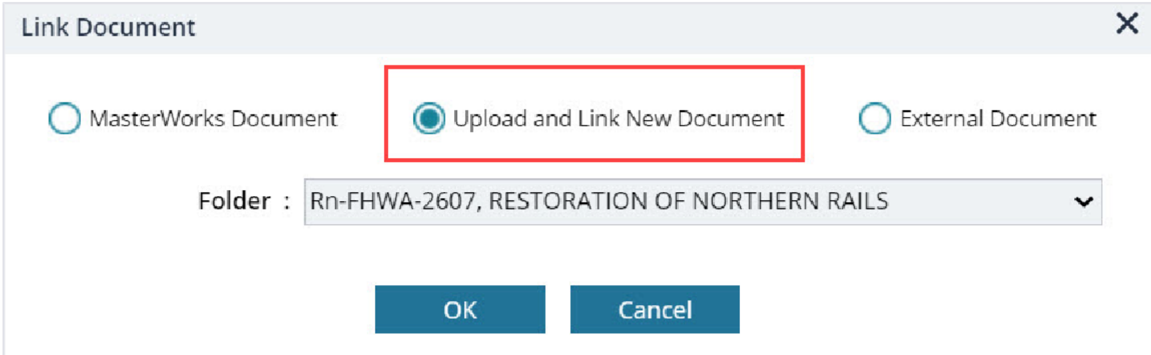


Figure 97: Using Upload and Link New Document Option

3. In the **Folder** drop-down list, select the appropriate folder to upload files.

4. Click **OK**.
   A confirmation dialog box is displayed.

5. Click **OK**.
   The **NEW DOCUMENT** page is displayed.

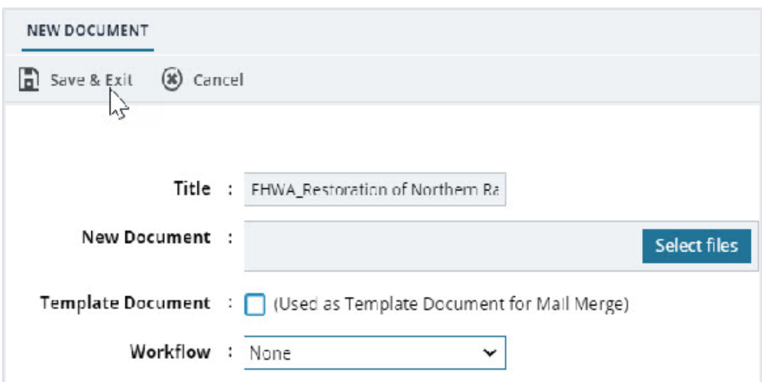


Figure 98: New Document Page

6. To upload files, in the **New Document** section, drag and drop the appropriate files.
   On uploading and saving the files, the files are uploaded to the selected folder in the **Folder** drop-down list and linked to the respective form.

7. In the **Title** column, enter the titles for the linked files.

Linking a File to a Form – External Document Option

To link a file to an external storage system, perform the following steps:

1. In the **ATTACHMENTS** section, click **Link Document**.

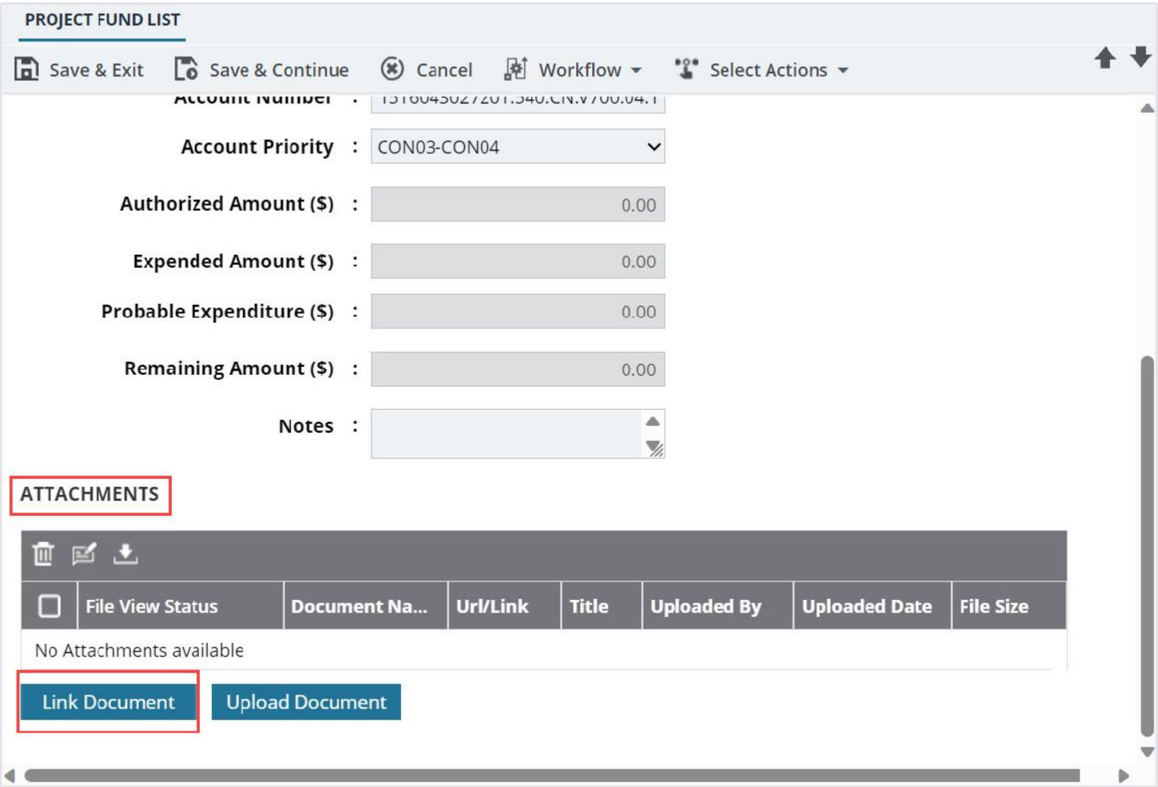


Figure 99: Using Link Document Option

2. Click **External Document**.

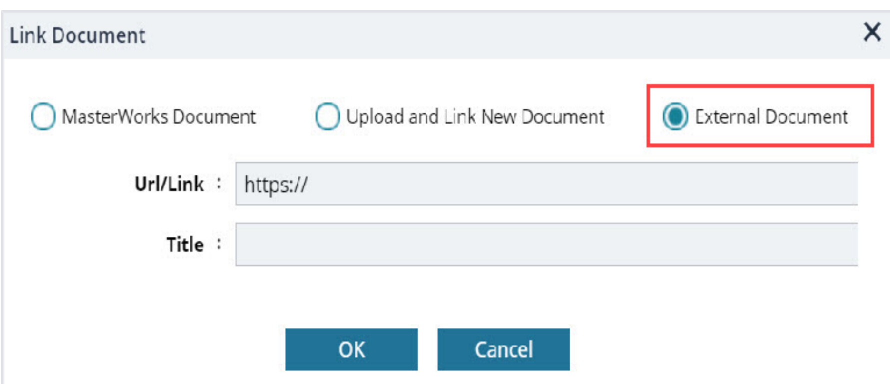


Figure 100: Using External Document Option

3. In the **URL/Link** box, enter the URL to the file in the external storage system.

4. In the **Title** box, enter the title for the linked file.

5. Click **OK**.

   The file is linked to the form and is displayed in the **ATTACHMENTS** section.

4.1.2. Attaching a File to a Workflow

Overview

You can upload files to the specific records of a form while performing a workflow action. The **Project Fund List** form is used for illustration purposes.

Steps

1. In the list page of a form, select the appropriate record.

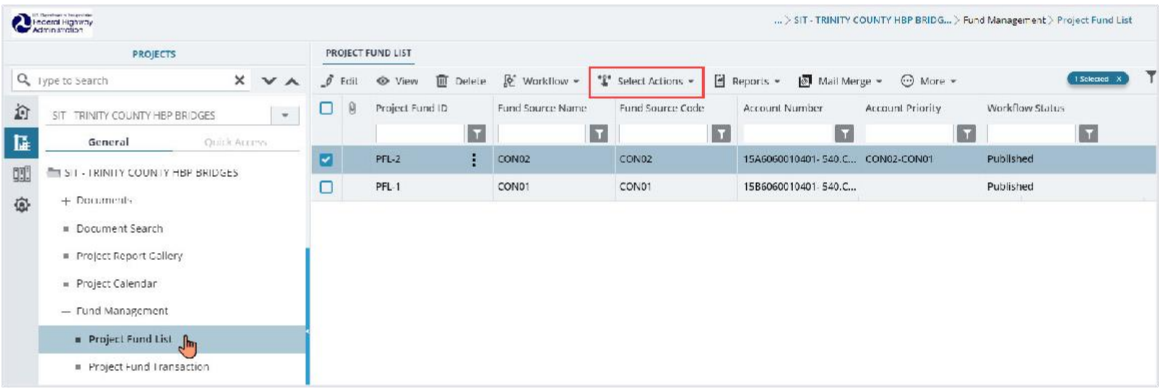
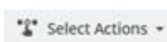


Figure 101: Using Select Actions Option

2. Click **Select Actions**  , and then click the appropriate workflow action. The **Masterworks** dialog box is displayed.

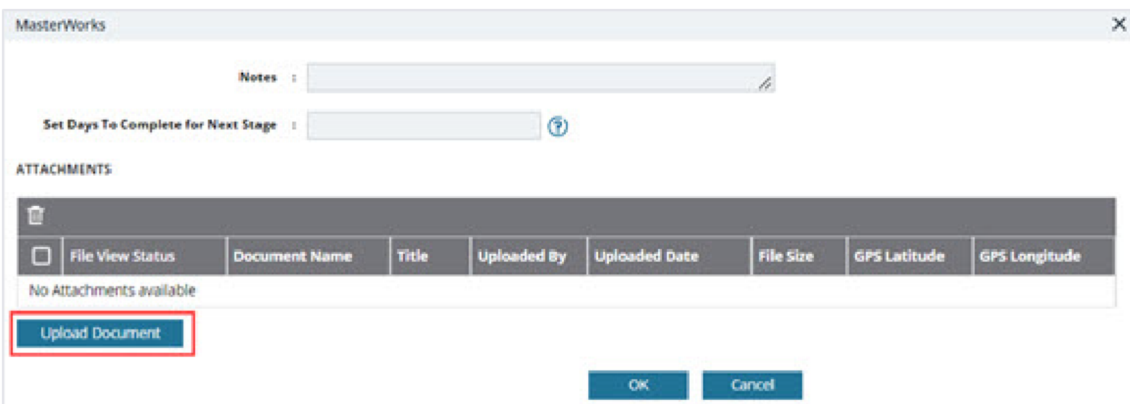


Figure 102: Masterworks Dialog Box

3. In the **ATTACHMENTS** section, click **Upload** Document.

   The **Open** dialog box is displayed.

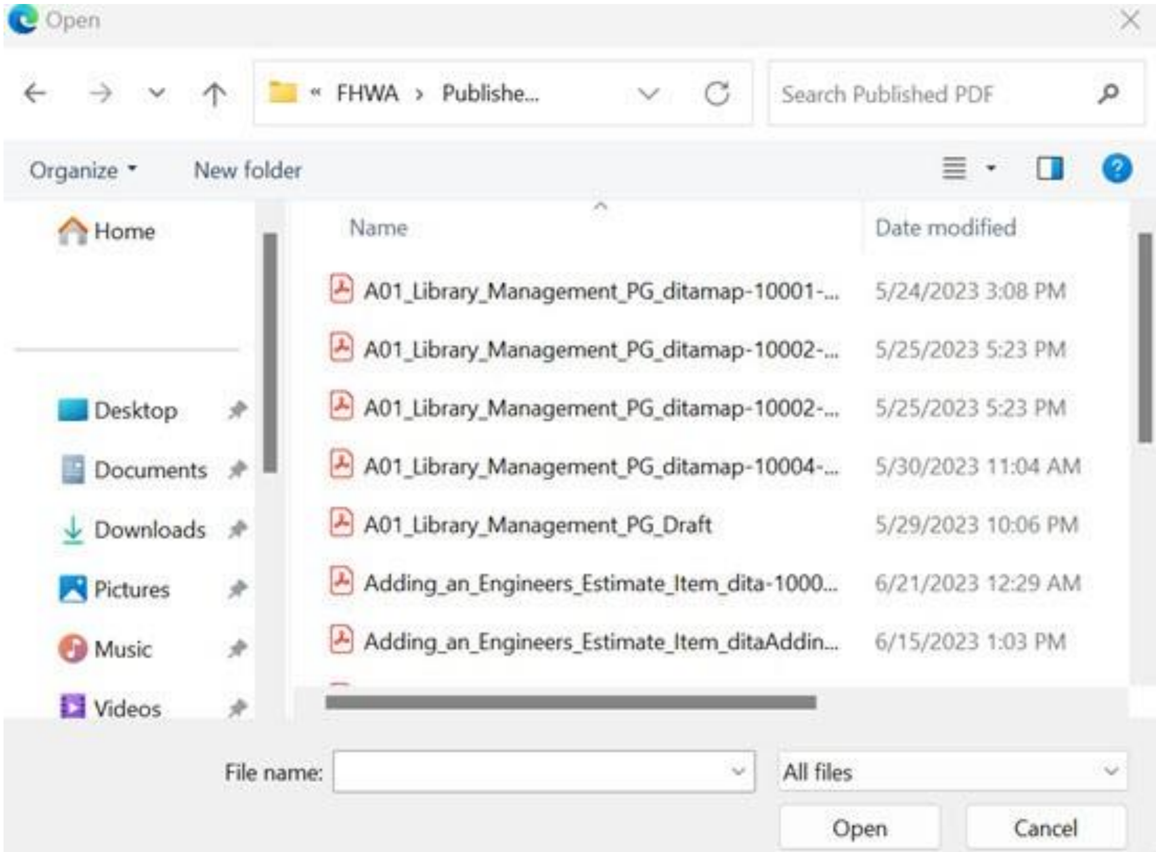


Figure 103: Open Dialog Box

4. To upload a single file, click the required file.

   Optionally, to upload multiple files, press and hold **CTRL**, and then click the required files.

5. Click **Open**.

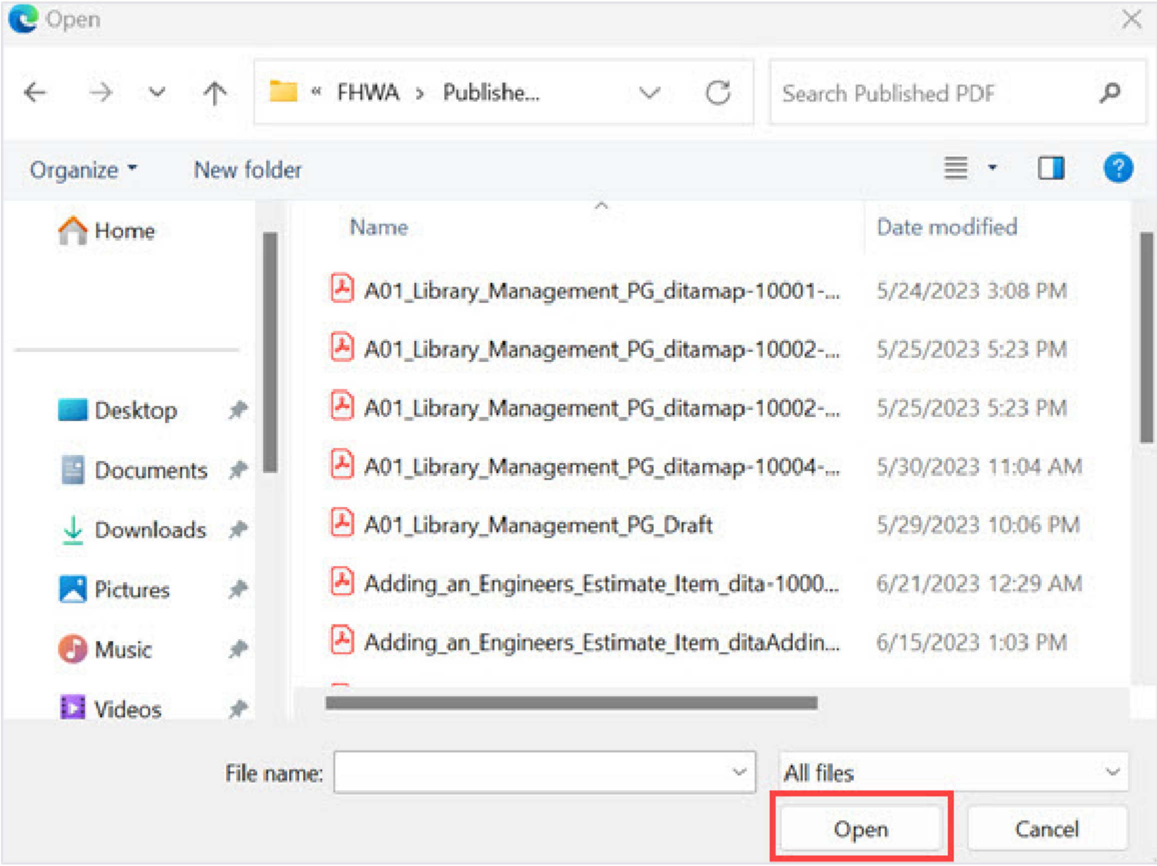


Figure 104: Figure 104: Using Open Option

The name of the file is automatically updated in the **Document Name** column.

6. Optionally, in the **Title** column, enter the title for the attached file.

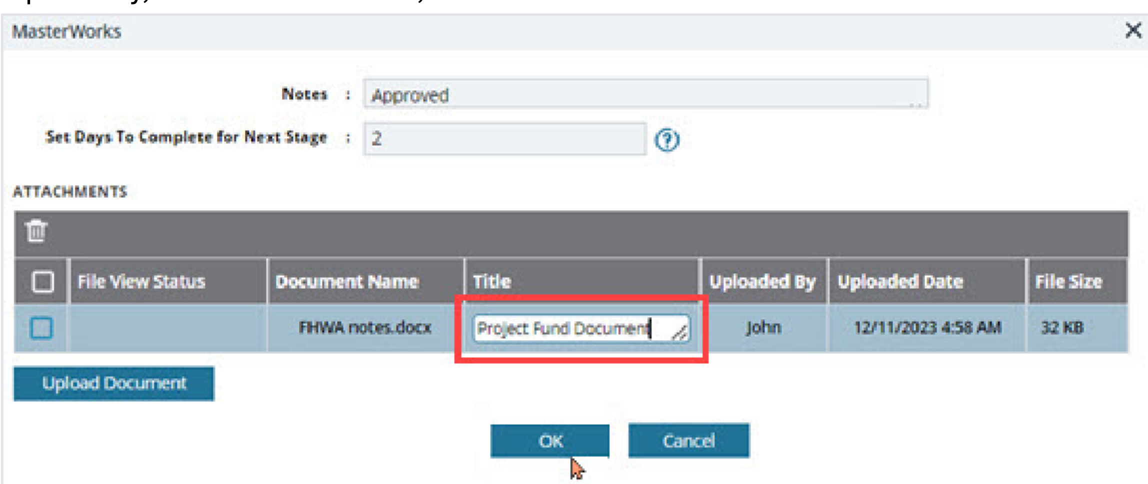


Figure 105: Updating Title for the Attached File

7. Click **OK**.

You can access the attached file from the Workflow Status and History dialog box. For more information, refer to Section 4.2.2. Viewing the Workflow History.

4.1.3. Accessing and Downloading Attached Files

You can access files that are attached to forms and workflows.
The **Project Fund List** form is used for illustration purposes.

- To access files attached to a form (from the list page):
  1. In the navigation pane, click the required form.

     The form list page is displayed.

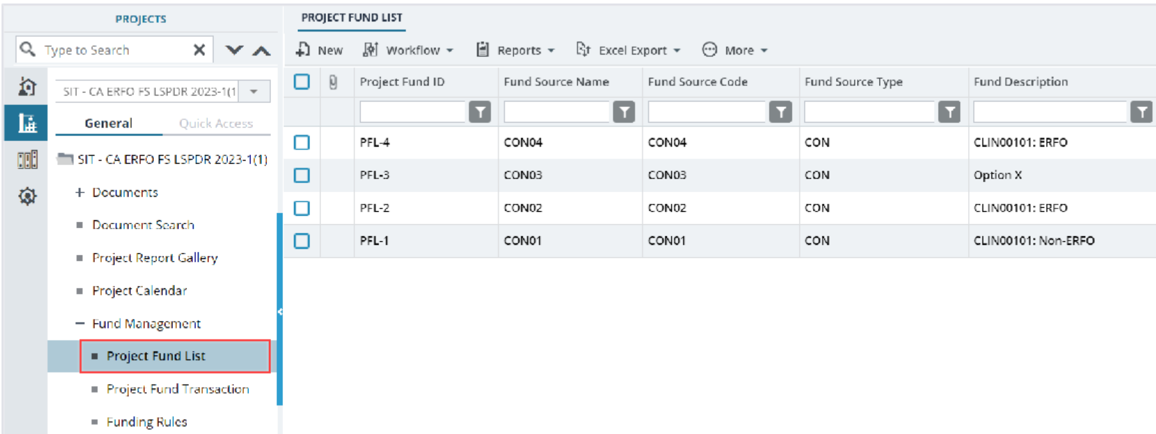


Figure 106: Project Fund List Page

  2. Click **More**, and then click **Attachments**.

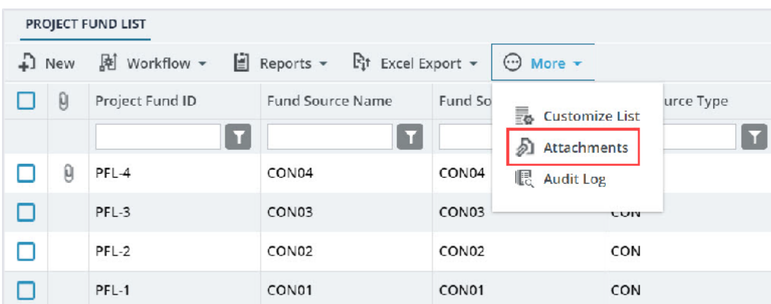


Figure 107: Using Attachments Option

The attachments of all the records are listed.

Figure 108: List of Attachments

Optionally, to view files attached to a record, select the appropriate record and then click **Attachments**.

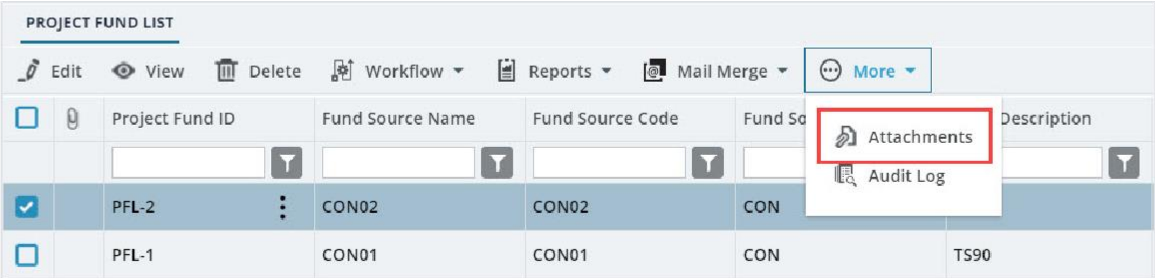


Figure 109: Viewing Files Attached to a Record

- To access and download files attached to a record (from the details page):
  1. In the navigation pane, click the appropriate form.

     The form list page is displayed.

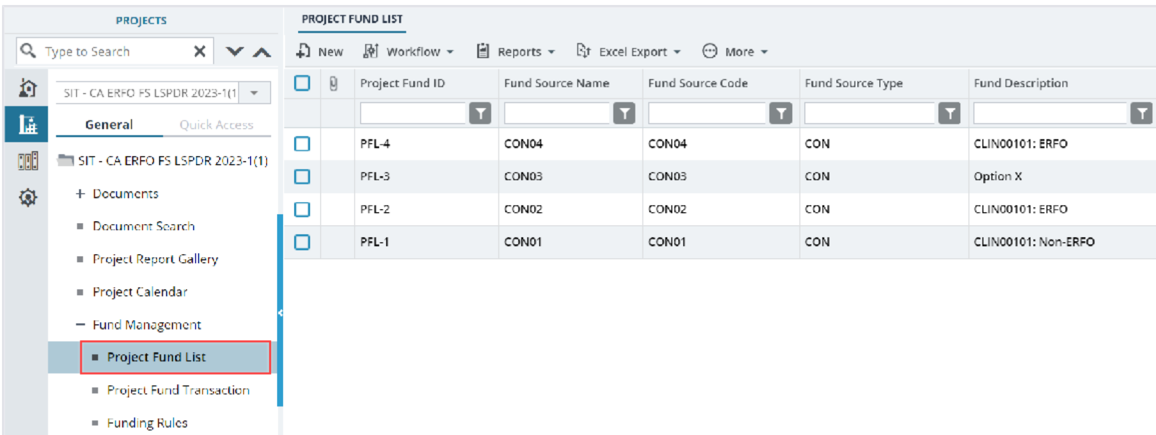


Figure 110: Project Fund List Page

  2. In the list page, select the appropriate record, and then click **View**.

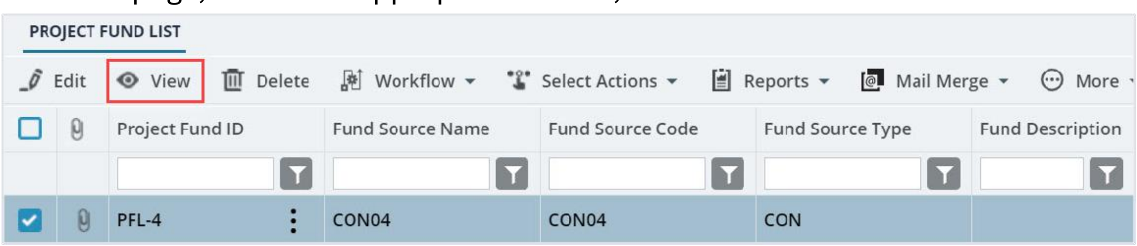
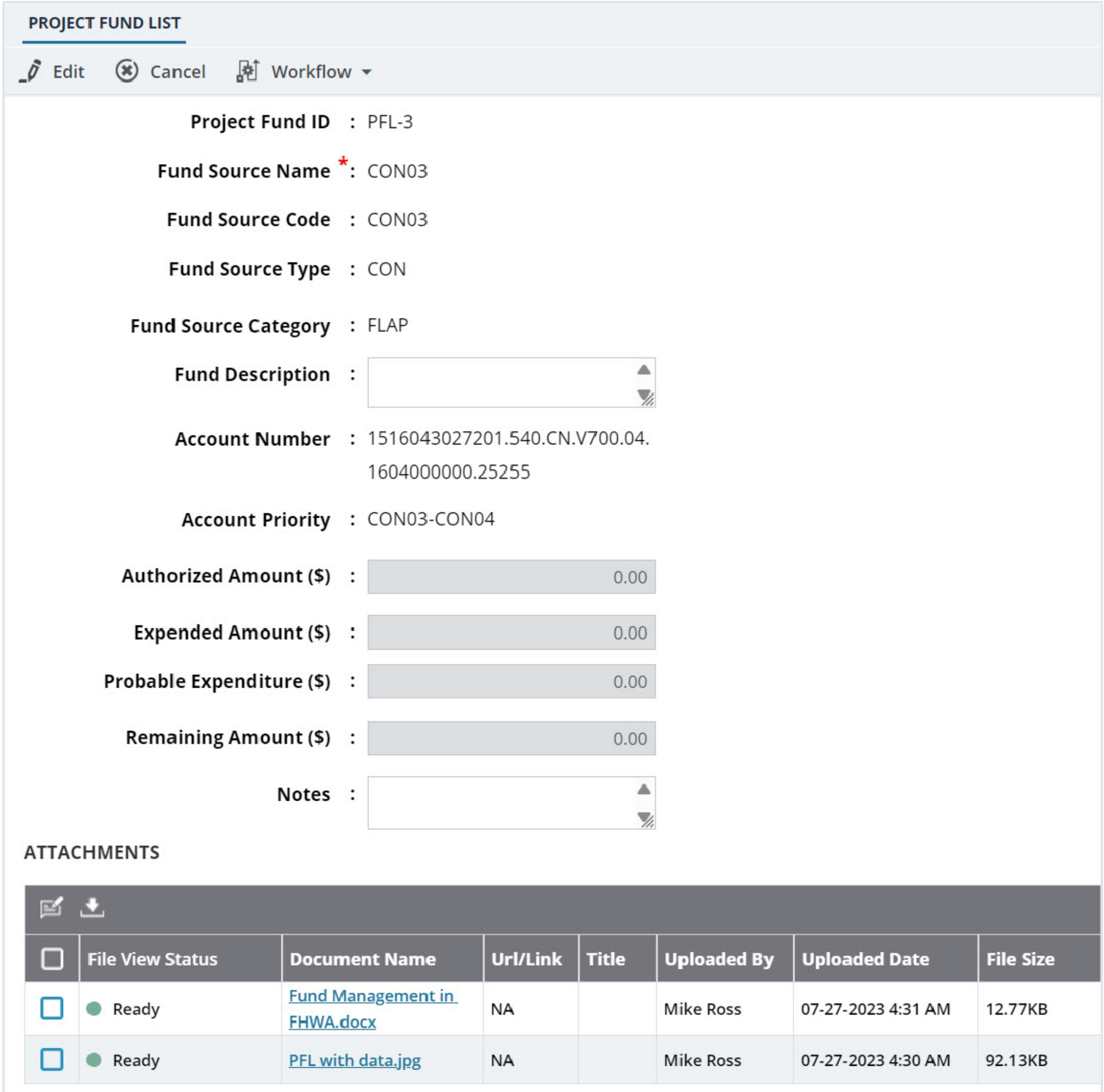


Figure 111: Using View Option

The form details page is displayed.



PROJECT FUND LIST

Edit | Cancel | Workflow

Project Fund ID : PFL-3

Fund Source Name * : CON03

Fund Source Code : CON03

Fund Source Type : CON

Fund Source Category : FLAP

Fund Description :

Account Number : 1516043027201.540.CN.V700.04.1604000000.25255

Account Priority : CON03-CON04

Authorized Amount ($) : 0.00

Expended Amount ($) : 0.00

Probable Expenditure ($) : 0.00

Remaining Amount ($) : 0.00

Notes :

ATTACHMENTS

	File View Status	Document Name	Url/Link	Title	Uploaded By	Uploaded Date	File Size
	Ready	Fund Management in FHWA.docx	NA		Mike Ross	07-27-2023 4:31 AM	12.77KB
	Ready	PFL with data.jpg	NA		Mike Ross	07-27-2023 4:30 AM	92.13KB

Figure 112: Project Fund List Page in View Mode

3. In the **ATTACHMENTS** section, select the appropriate files, and then click .

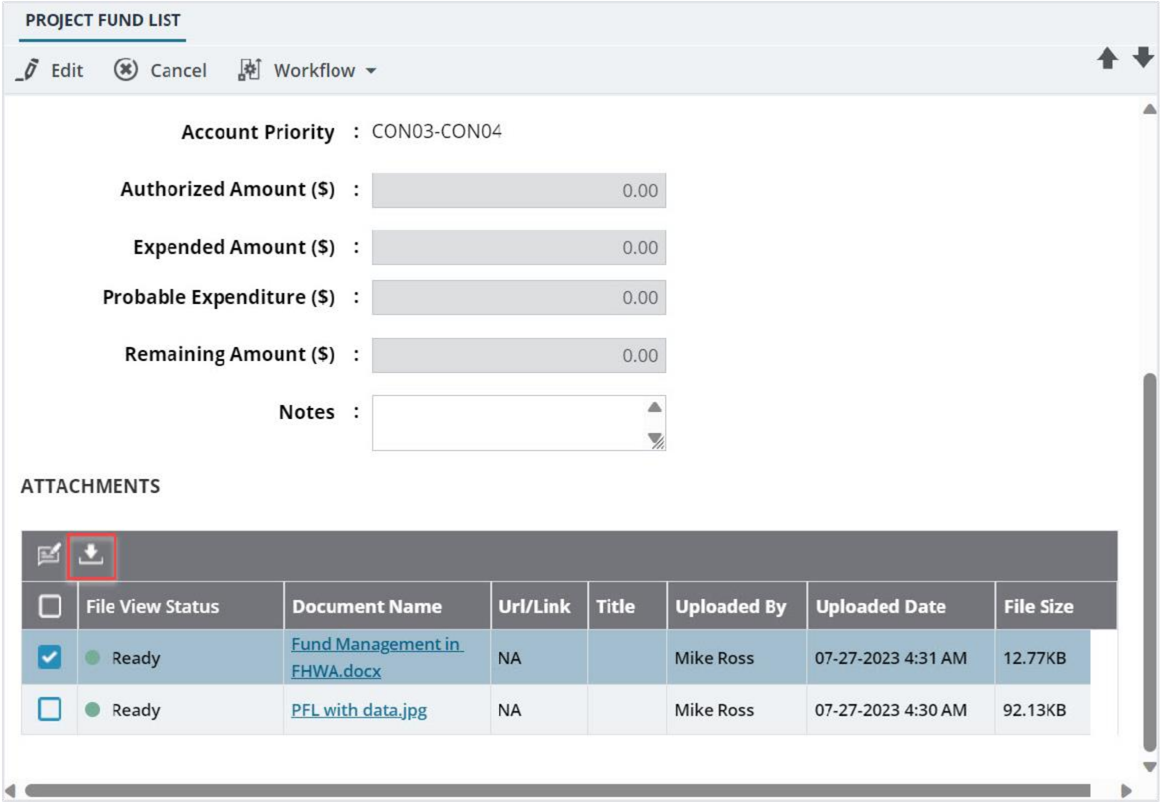


Figure 113: Using Download Option

- To access and download files attached to a workflow:
  1. In the navigation pane, click the appropriate form.

     The form list page is displayed.

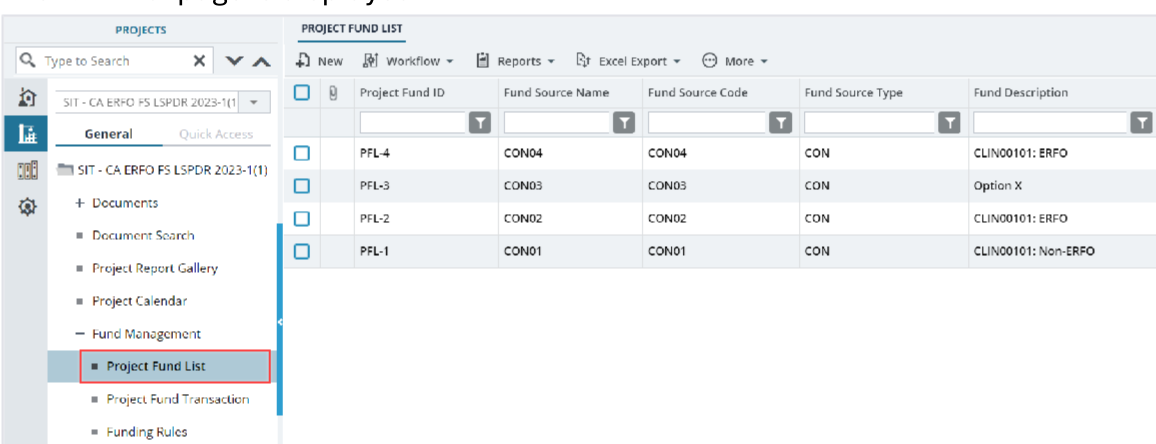


Figure 114: Project Fund List Page

2. In the list page, select the appropriate record.
3. In the **WORKFLOW** group, click **History**.

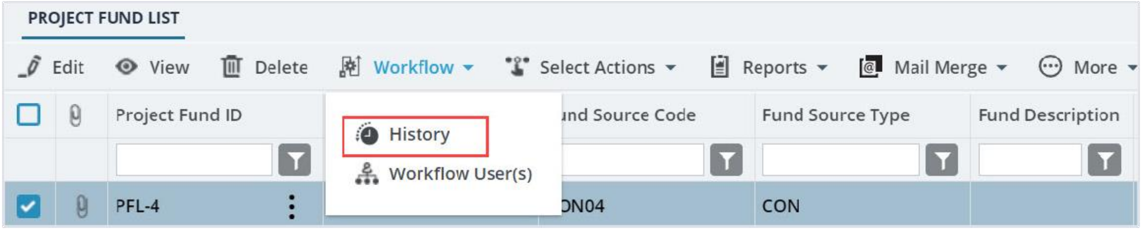


Figure 115: Using History Option

The **Workflow Status & History** dialog box is displayed.

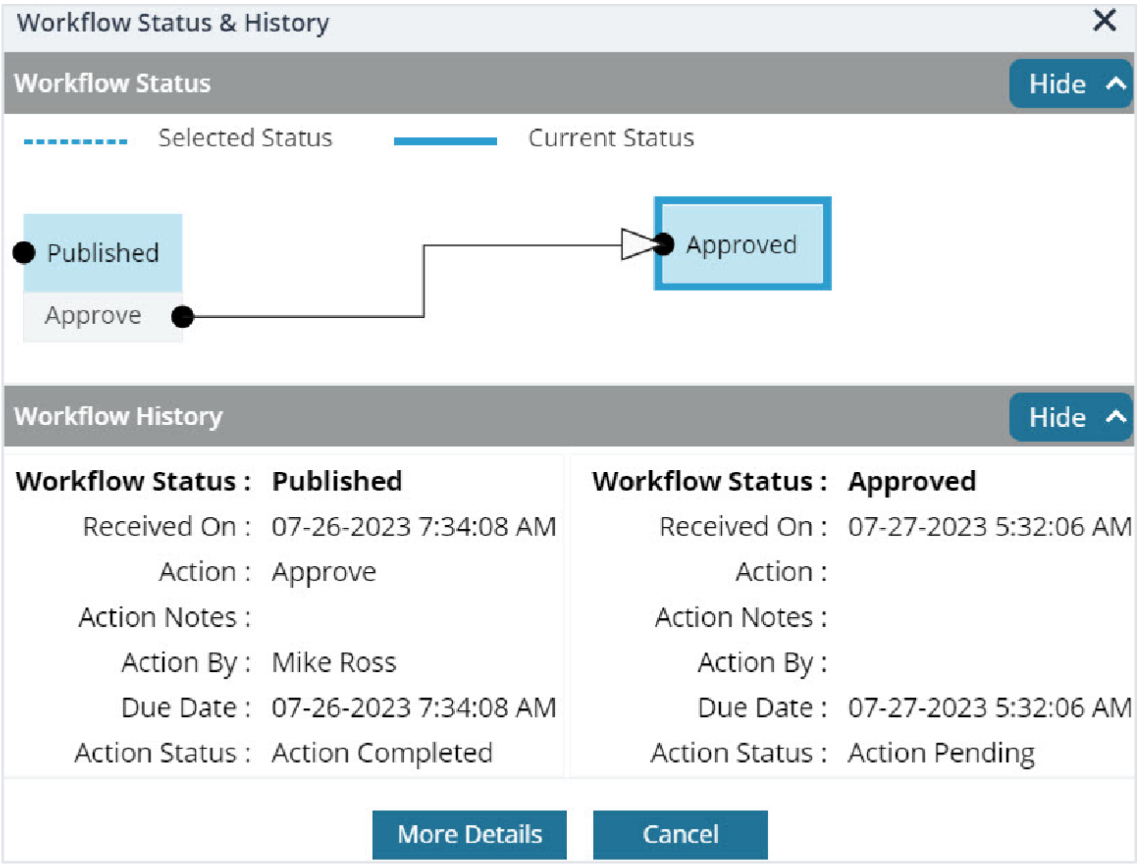


Figure 116: Workflow Status & History Dialog Box

4. To view all the attachments and complete workflow history, click **More Details**.

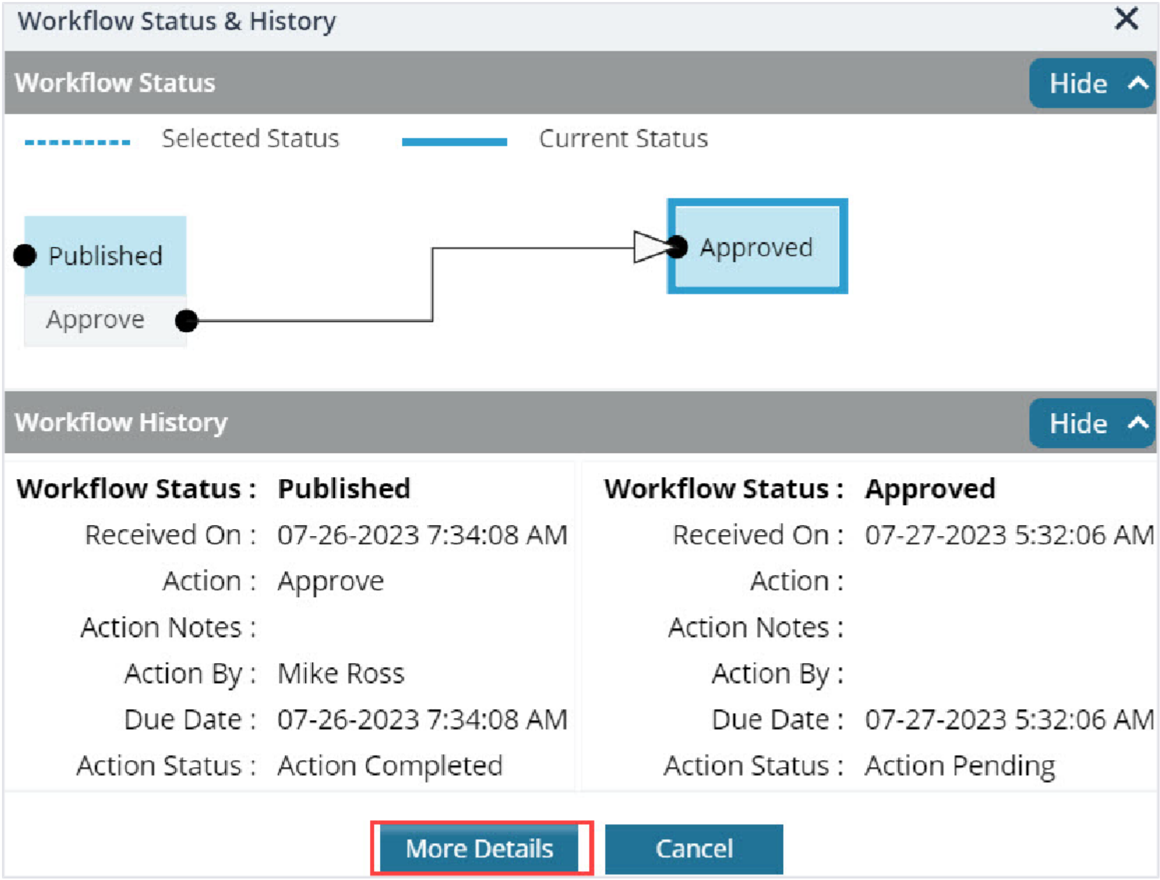


Figure 117: Using More Details Option

The **History** page is displayed.

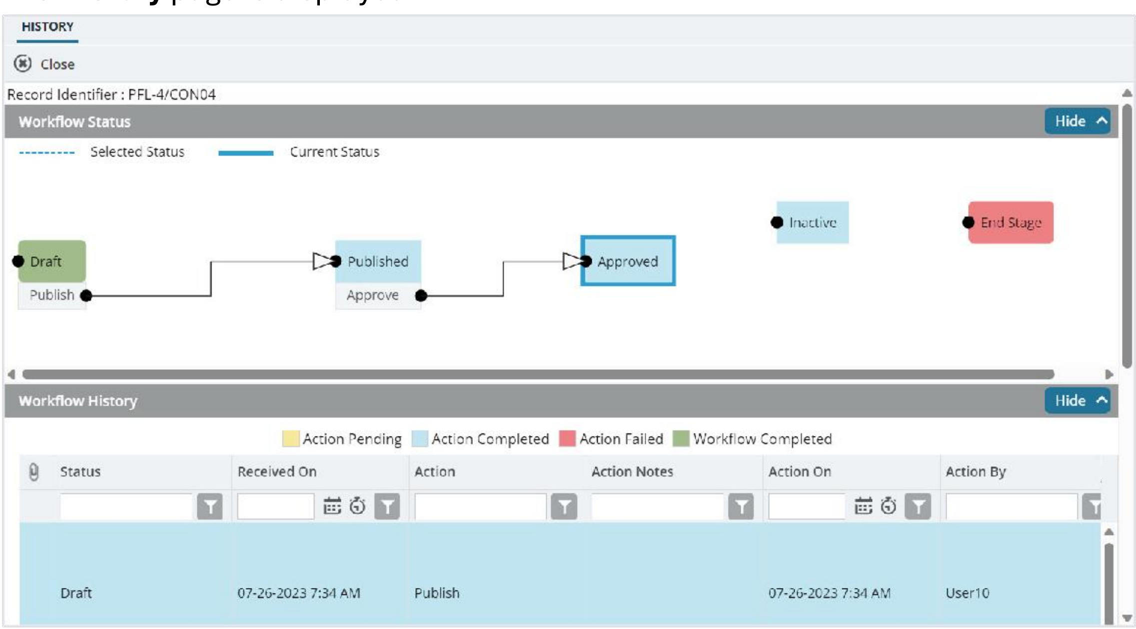


Figure 118: History Page

5. In the **ATTACHMENTS** section, select the appropriate documents, and then click .

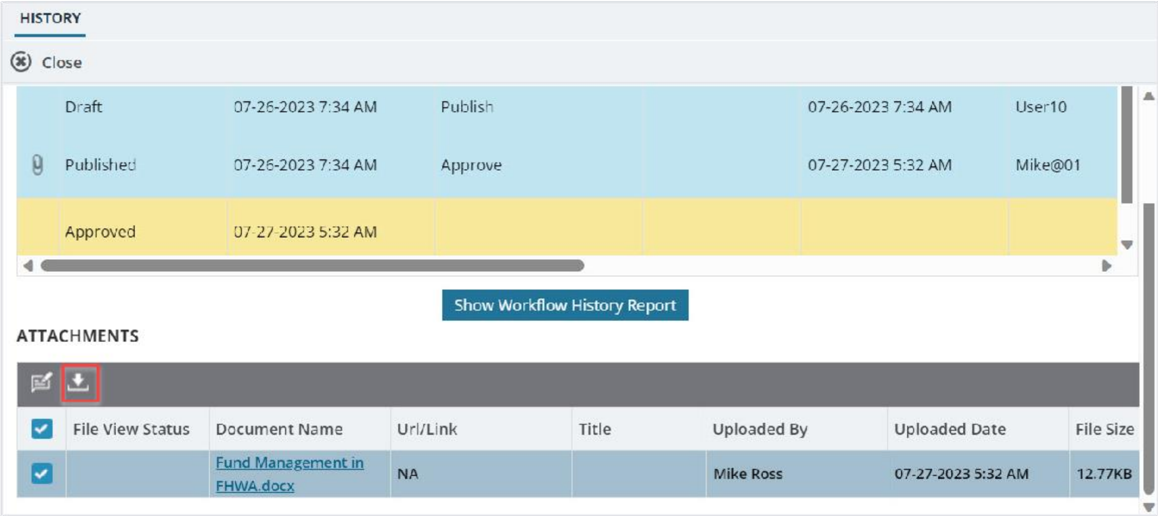


Figure 119: Using Download Option

4.1.4. Deleting Attached Files

Prerequisites

You can delete a file only if you have attached it.

Overview

You can delete files that are attached to forms. You cannot delete files that are attached while performing a workflow action.
The **Project Fund List** form is used for illustration purposes.

Steps

1. To access the appropriate file attached to a form to be deleted, perform the following steps:

   a. In the navigation pane, click the appropriate form.
   The form list page is displayed.

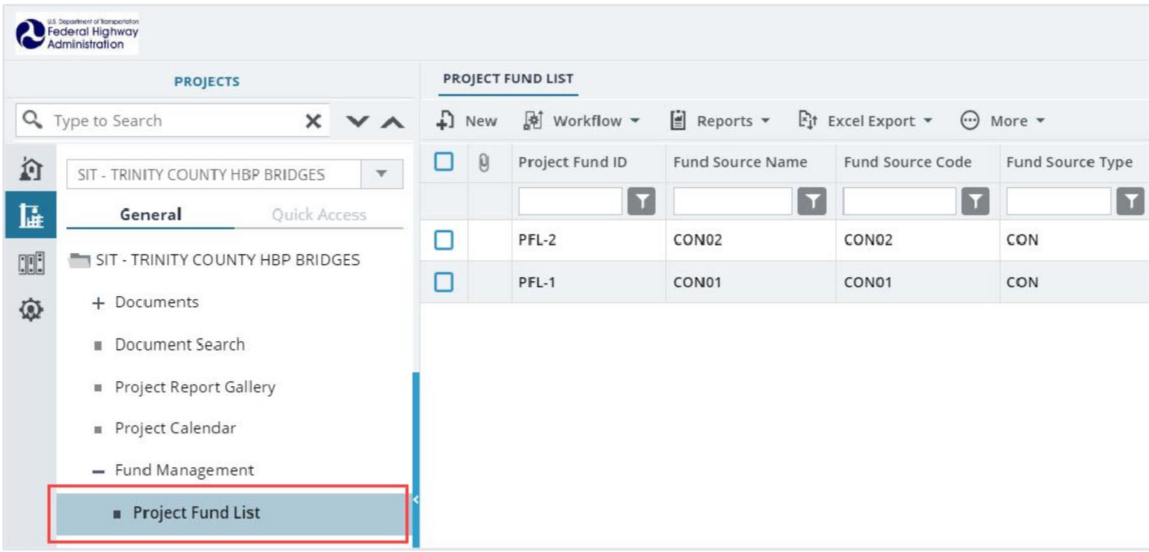


Figure 120: Project Fund List Page

   b. Click **More**, and then click **Attachments**.
   The attachments of all the records are listed.

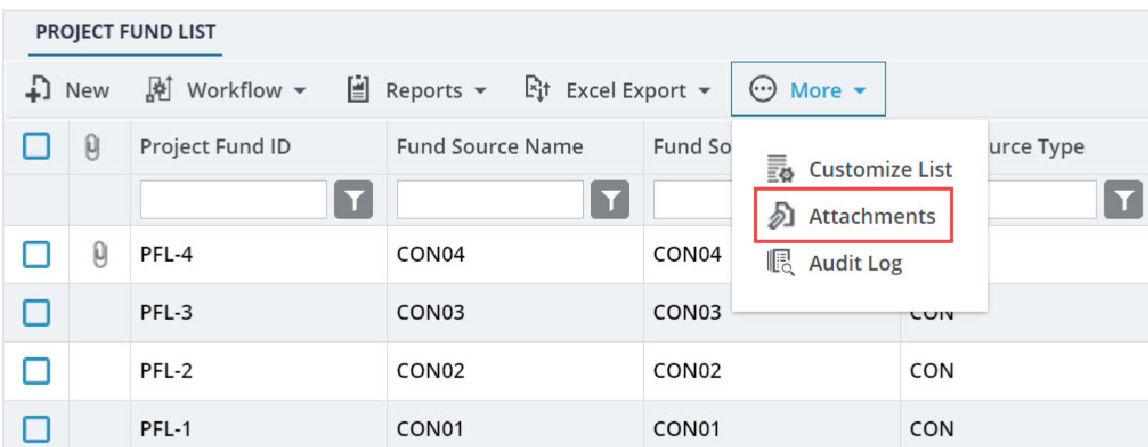


Figure 121: Using Attachments Option

   Various document management features are available for attachments.

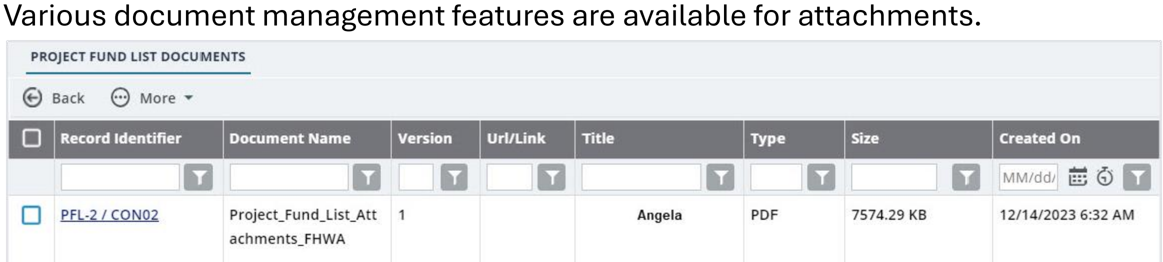


Figure 122: List of Attachments

2. To delete an attachment, select the appropriate file, and then click .

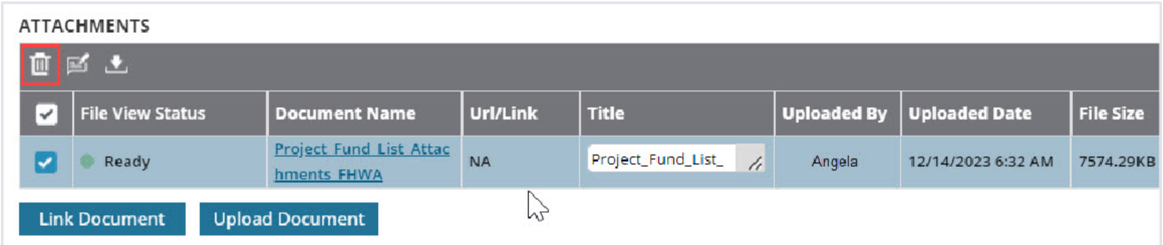


Figure 123: Using Delete Option

4.2. Standard Report Functions

Performing all report-related activities is similar in procedure throughout the application.
All tasks that you can perform are based on the roles assigned to you in a project and the permissions granted to the roles.
For information on roles, refer to **Security Roles** in the **A02 Administrator Guide**.
The standard report functions include the following:

- 4.2.1. Generating and Viewing Reports
    - 4.2.1.1. Generating a report
    - 4.2.1.2. Printing a report
    - 4.2.1.3. Saving a report in various formats
    - 4.2.1.4. Updating report to view the latest information
- 4.2.2. Subscribing to a report
- 4.2.3. Unsubscribing to a report

4.2.1. Generating and Viewing Reports

You can generate reports for different information views for all the forms in the application.
Masterworks enables you to use report filters to generate reports with specific information.
You can perform the following report functions:

- 4.2.1.1. Generating a report
- 4.2.1.2. Printing a report
- 4.2.1.3. Saving a report in various formats
- 4.2.1.4. Updating report to view the latest information

4.2.1.1. Generating a report

Overview

You can generate various reports that comprise information based on the roles assigned to you and the various projects to which you are invited.

For a few reports, you can use the filter criteria to provide information for the relevant fields and generate the reports.

The **Project Fund List** form is used for illustration purposes.

Steps

1. Perform any of the following steps, as applicable:

    - In the form list page, click **Reports**, and then click the appropriate report.

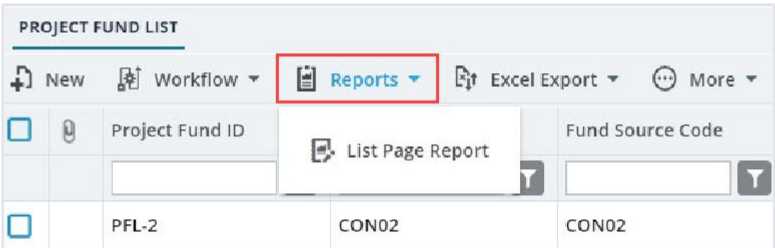


Figure 124: Using Reports Option

    - In the project navigation pane, click **Project Report Gallery**, and then double-click the appropriate report.

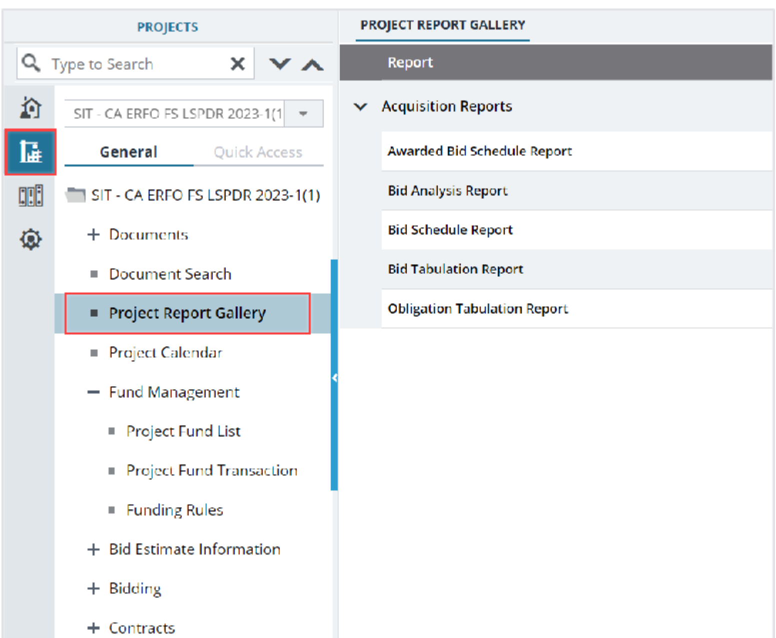


Figure 125: Project Report Gallery Navigation Page

- In the project navigation pane, expand the contract folder, click **Contract Report Gallery**, and then double-click the appropriate report.

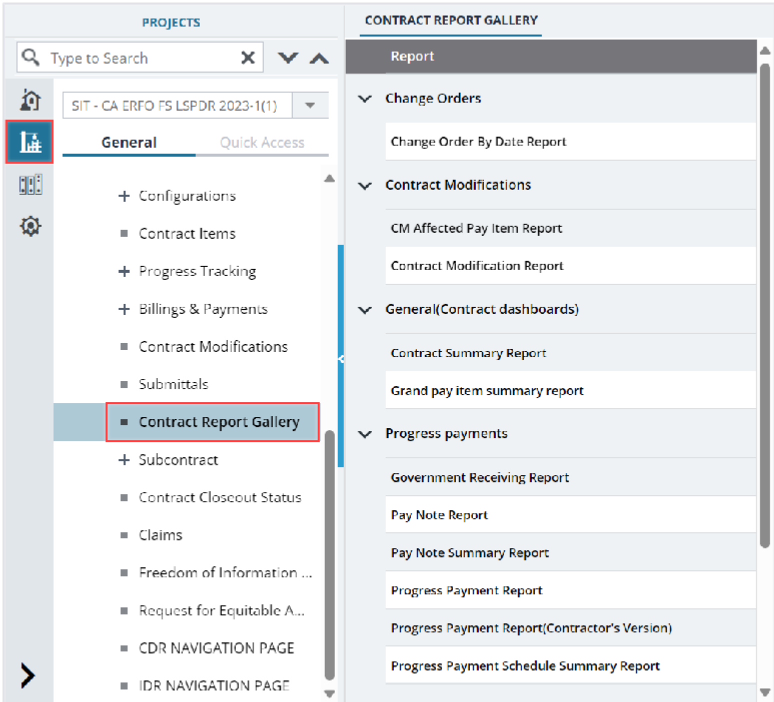


Figure 126: Contract Report Gallery Navigation Page

2. If filtering options are necessary, select the appropriate information in the relevant fields, and then click **View Report**.

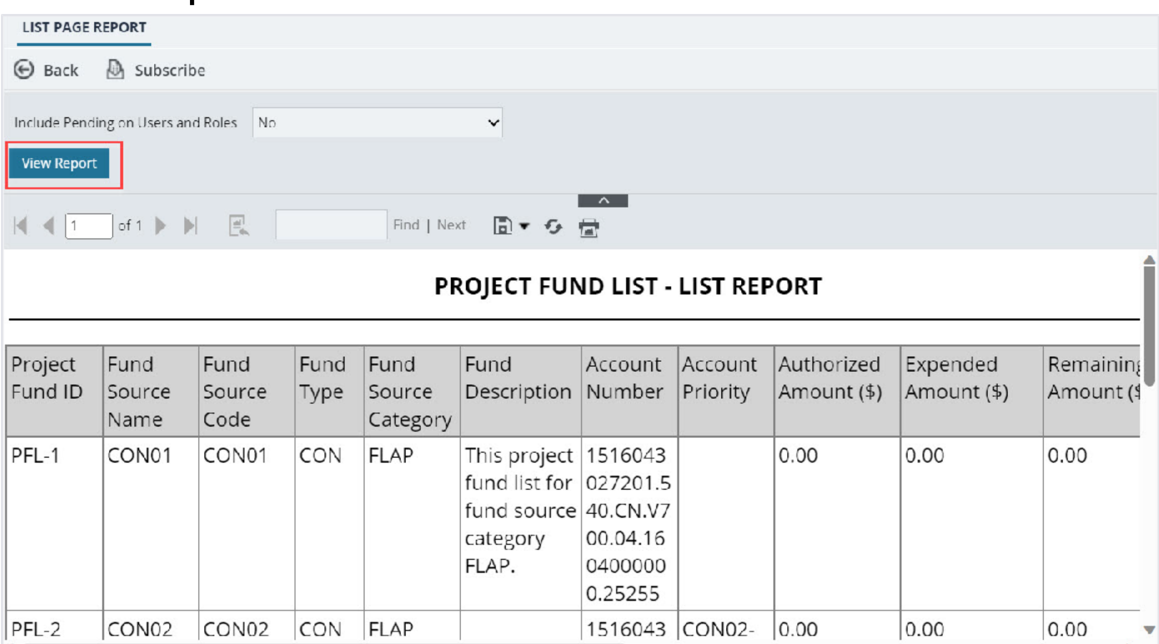


Figure 127: Using View Report Option

The report is generated and displayed.

4.2.1.2. Printing a Report

Steps

1. Generate the required report.
   For more information, refer to Section 4.2.1.1. Generating a Report.
2. In the report toolbar, click **Print Report** .

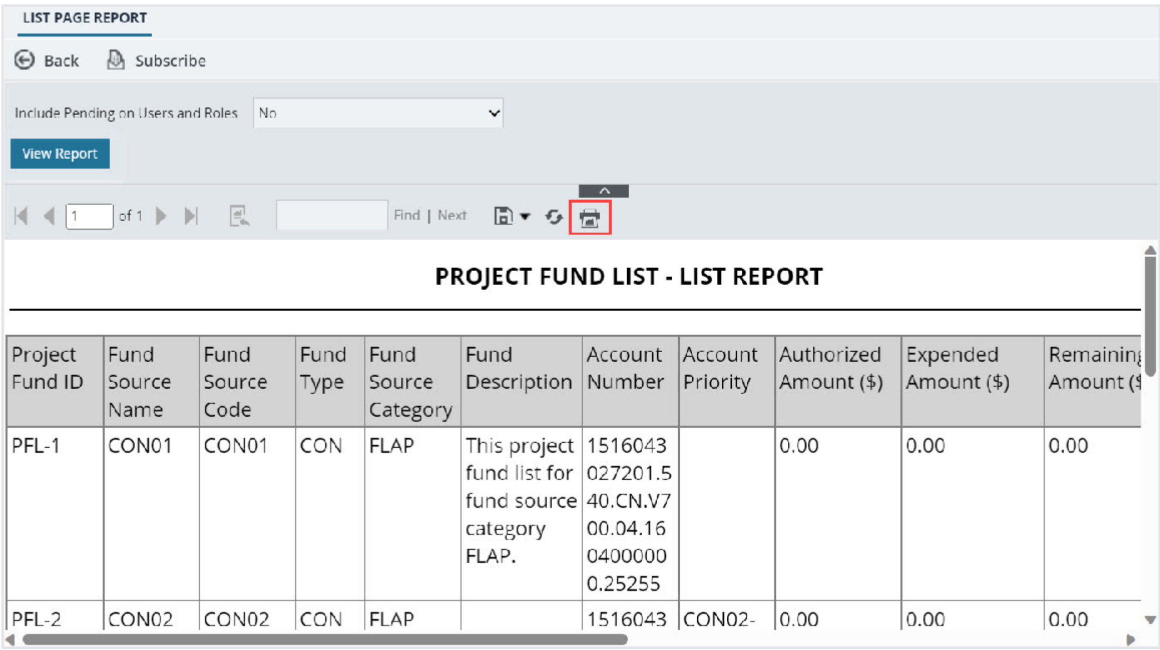


Figure 128: Using Print Report Option

4.2.1.3. Saving a Report

Steps

1. Generate the required report.
   For more information, refer to Section 4.2.1.1. Generating a Report.
2. In the report toolbar, click **Export**, and then click the required option.

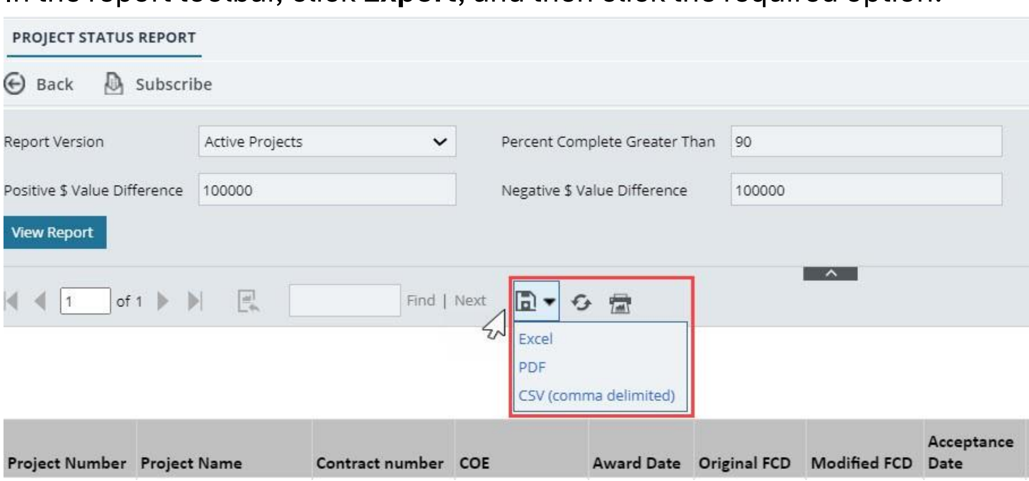


Figure 129: Exporting a Report

4.2.1.4. Viewing Latest Information in a Report

Steps

1. Generate the required report.
   For more information, refer to Section 4.2.1.1. Generating a Report.
2. In the report toolbar, click **Refresh**

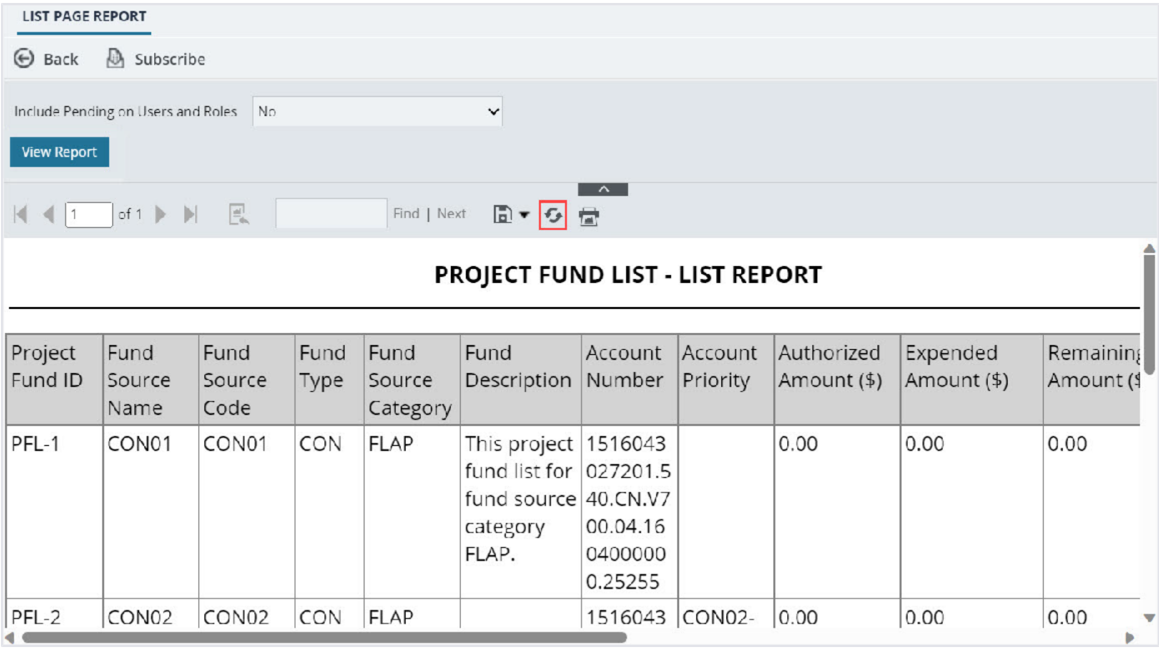


Figure 130: Using Refresh Option

4.2.2. Subscribing to Reports

Prerequisites

- You must have access to the report.
- The logged-in user is assigned with the permission to generate the report.

Overview

You can subscribe to reports, and subscribed reports are delivered to the specified email addresses or saved in the specified file location. You can configure subscriptions so that the reports are delivered periodically in the specified format.

Additionally, you can create multiple subscriptions for a single report with varied subscription options.

You can subscribe to a report using any of the following methods:

- Email: The report is delivered through email to the specified email addresses in the specified formats.

  Note: Only Masterworks registered email address is allowed to receive the subscribed reports.

- File Share: The reports are saved to the specified location in the specified formats

Note: Users with the appropriate permission can subscribe themselves or others to a report. Only users with the **Administrator** role can remove or end an active subscription once it is created.

Steps

1. Open a report, and then click Subscribe.

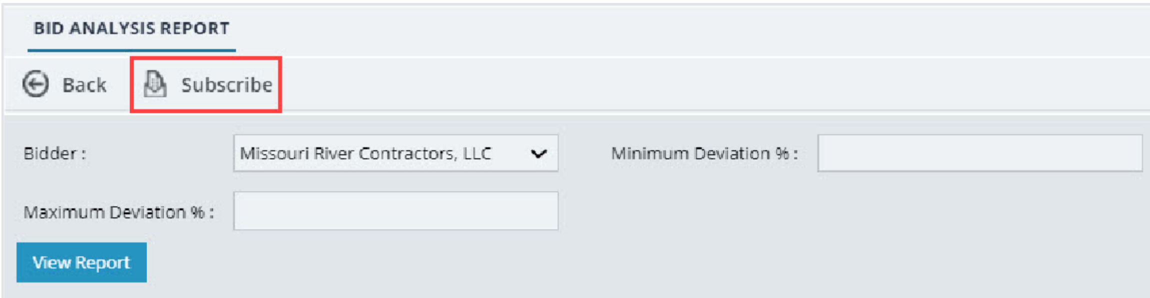


Figure 131: Subscribing a Report

The subscription dialog box is displayed.

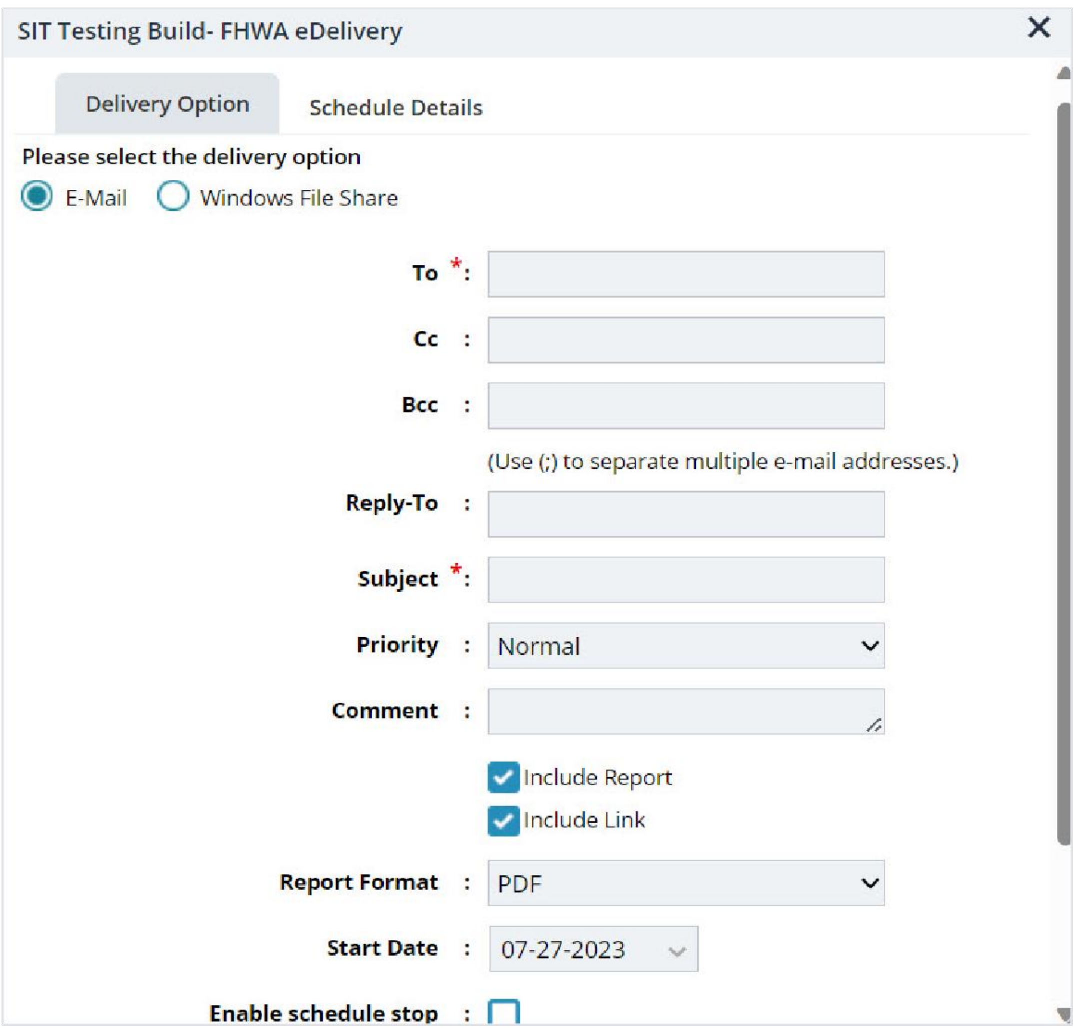


Figure 132: Subscription Dialog Box

Note: To subscribe to a report, you must fill the fields with red asterisks.

2. In the **Please select the delivery option** section, perform either of the following steps, as applicable:

- Click **E-Mail** to receive the report through email.
- Click **Windows File Share** to save the report to the specified location.

3. Based on the delivery option selected, perform the following steps:

E-Mail	Windows File Share
a. In the **To** box, enter the email addresses of the recipients of the report. b. In the **Reply-To** box, enter the email addresses of the recipients to whom the reply email must be delivered. c. In the **Subject** box, enter the name of the report or any other appropriate subject for the email. d. From the **Priority** drop-down list, select the priority of the email. If the selected priority is High, the email will be sent as a High Priority notification. e. In the **Comment** box, enter any comment for the email. Comments are included in the body of the email. f. Select the **Include Report** check box to deliver the report in the selected format as an email attachment. g. Select the **Include Link** check box to deliver the link to the report in the report delivery email. The recipient can view the report on the application only if the recipient has the required permissions on the report. h. From the **Report Format** drop- down list, select the format in which the report must be generated and delivered to the specified email addresses. i. From the **Start Date** list, click the date from when the report must be delivered. j. Select the **Stop this schedule on** check box, and then select the date	a. In the **File Name** box, enter the file name for the report. b. Select the **Add** a file extension when the file is created check box to save the report file name with the extension of the file format as required for the report. c. In the **Path** box, enter the path of the shared file location where the report must be saved. **Note**: To configure the shared file location in the application, you must provide the file path location to the **Administrator**. d. From the **Report Format** drop-down list, select the format in which the report must be generated and saved. e. In the **Credentials** used to access the file share section, enter the credentials to access the shared location and save the report. f. From the **Overwrite** options section, click any of the following options: • Overwrite an existing file with a newer version - When saving the report at the file location at the scheduled time, if a file with the same name exists, then the existing file is overwritten by the latest report. • Do not overwrite the file if a previous version exists - When saving the report at the file location at the scheduled time, if a file with the same name exists, then the report is not overwritten by the latest report, and the report is not saved at the file location.

E-Mail	Windows File Share
until when the report must be delivered.	• Increment file names as newer versions are added - When saving the report at the file location at the scheduled time, if a file with the same name exists, then the latest report is saved with the same name appended with a sequential number. g. From the **Start Date** list, click the date from when the report must be saved. h. Select the **Stop** this schedule on check box, and then select the date up to when the report must be saved at the file location.

4. To set the frequency of report delivery, click the **Schedule Details** tab.

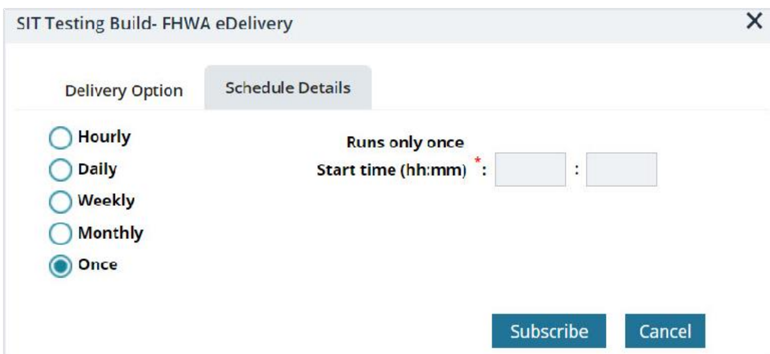


Figure 133: Schedule Details Tab

5. From the delivery frequency options, click the appropriate option:

Option	Description	Steps
Hourly	The report is delivered every preset number of hours.	a. Click **Hourly** in the delivery options list. b. In the **Run the schedule every** section, enter the frequency of report delivery: i. In the **hours** and **minutes** boxes, enter the time period in hours and minutes the report must be periodically delivered. ii. In the **Start time (hh:mm)** box, enter the time (in 24-hour format) the report delivery must begin.
Daily	The report is delivered once on preset days, or periodically as defined.	a. Click **Daily** in the delivery options list. b. In the schedule definition section, enter the frequency of report delivery:

<table>
<tr><th>Option</th><th>Description</th><th>Steps</th></tr>
<tr><td></td><td></td><td>Click Every Weekday to get the report delivered on all weekdays, from Monday to Friday.
Click Repeat after this number of days, and then, then in the box, enter the number of days to get the report delivered periodically once every specified number of days.
c. In the Start time (hh:mm) box, enter the time (in 24-hour format) the report must be delivered.</td></tr>
<tr><td>Weekly</td><td>The report is delivered every preset number of weeks on preset days of the week.</td><td>a. Click Weekly in the delivery options list.
b. Click Repeat after this number of weeks, and then in the box, enter the number of weeks to get the report delivered periodically once every specified number of weeks.
c. In the On day(s) section, select the days on which the report must be delivered.
d. In the Start time (hh:mm) box, enter the time (in 24-hour format) the report must be delivered.</td></tr>
<tr><td>Monthly</td><td>The report is delivered monthly on preset days of a selected week.</td><td>a. Click Monthly in the delivery options list.
b. Select the months when the report must be delivered.
c. Click one of the following options to schedule the delivery of the report:
On week of the month
i. From the list of weeks, select the week the report must be delivered.
ii. In the On day(s) section, select the days the report must be delivered in the week previously selected.
On Calendar day(s)
In the box, enter the number of days of the month the report must be delivered, starting from the current day. For example, if the current day is the 12th of a month, and the calendar days set is 10, then the report is sent for 10 days from the 12th of every selected month.
d. In the Start time (hh:mm) box, enter the time (in 24-hour format) by when the report must be delivered.</td></tr>
</table>

Option	Description	Steps
Once	The report is delivered once on the current day.	In the **Start time (hh:mm)** box, enter the time (in 24-hour format) by when the report must be delivered.

6. Click **Subscribe**.

   The report is delivered as scheduled.

   Note: Only users with the **Administrator** role can unsubscribe to reports.

4.2.3. Unsubscribing to Reports

Prerequisites

You are assigned the Administrator role.

Overview

You can stop the delivery of a subscribed report by unsubscribing to that report. Only a user with the Administrator role can delete report subscriptions.

Steps

1. In the module menu, click **Administration**.

   The **ADMINISTRATION** page is displayed.

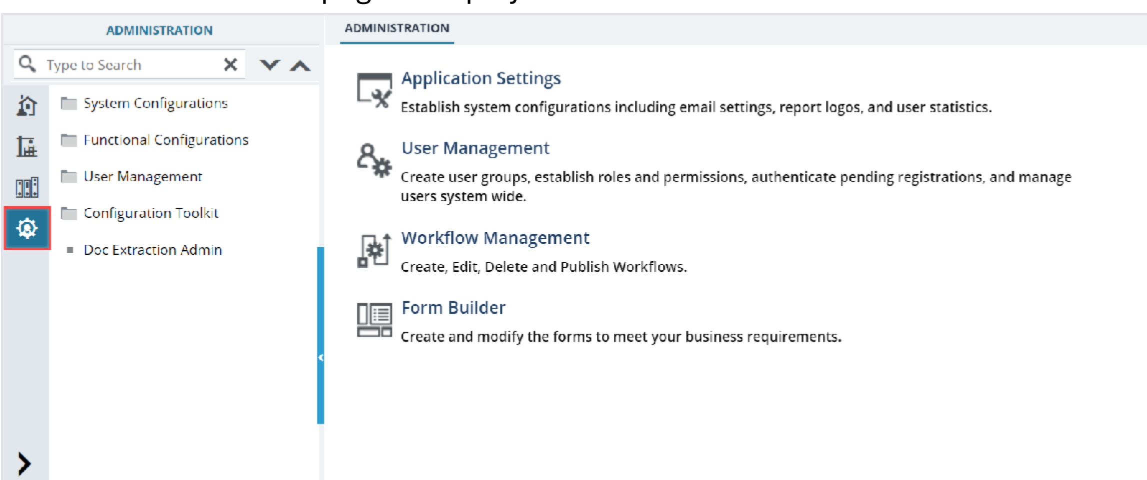


Figure 134: Administration Page

2. In the navigation pane, expand **Functional Configurations**, expand **Report Management**, and then click **Report Subscriptions**.

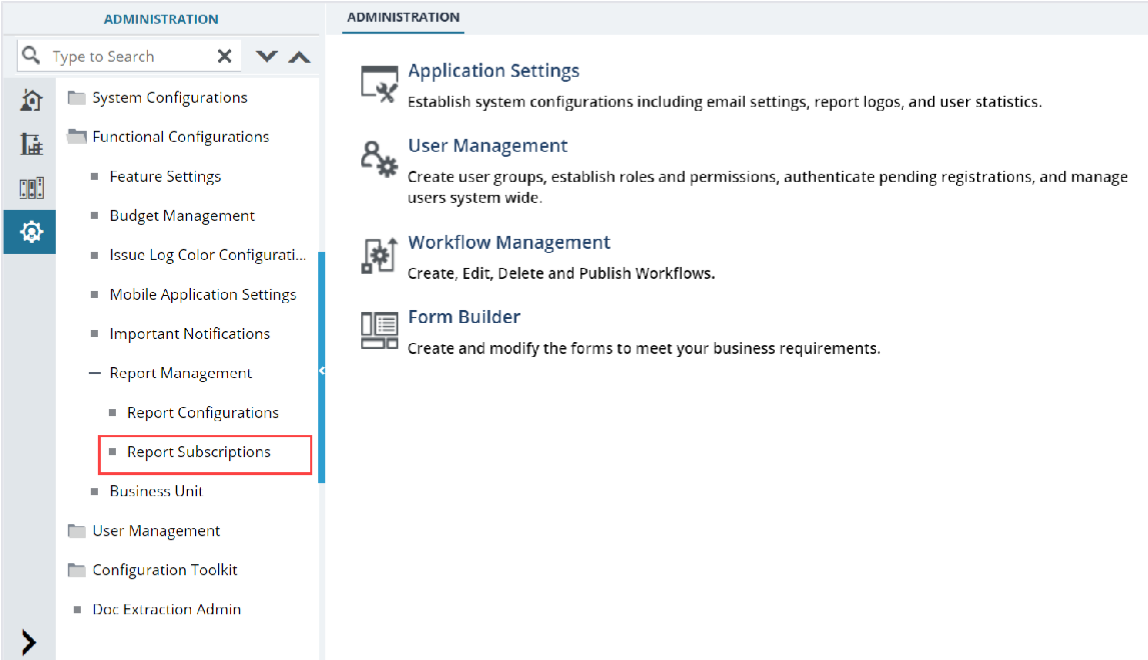
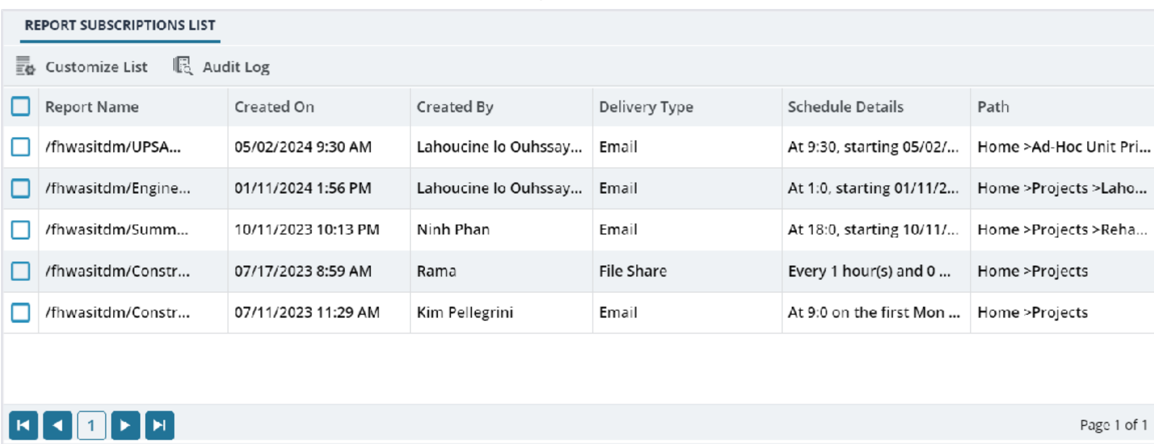


Figure 135: Navigation to Report Subscriptions

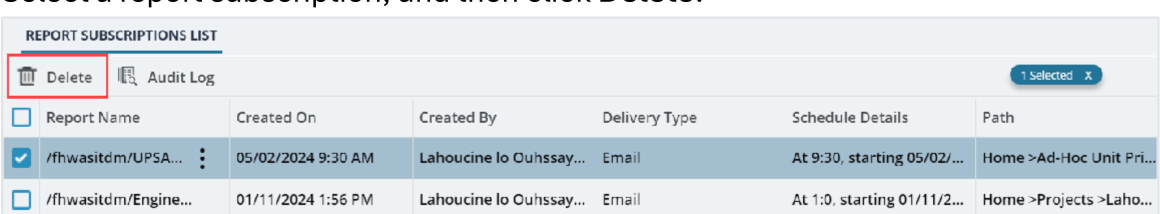
The **REPORT SUBSCRIPTIONS LIST** page is displayed.



Report Name	Created On	Created By	Delivery Type	Schedule Details	Path
/fhwasitdm/UPSA...	05/02/2024 9:30 AM	Lahoucine lo Ouhssay...	Email	At 9:30, starting 05/02/...	Home >Ad-Hoc Unit Pri...
/fhwasitdm/Engine...	01/11/2024 1:56 PM	Lahoucine lo Ouhssay...	Email	At 1:0, starting 01/11/2...	Home >Projects >Laho...
/fhwasitdm/Summ...	10/11/2023 10:13 PM	Ninh Phan	Email	At 18:0, starting 10/11/...	Home >Projects >Reha...
/fhwasitdm/Constr...	07/17/2023 8:59 AM	Rama	File Share	Every 1 hour(s) and 0 ...	Home >Projects
/fhwasitdm/Constr...	07/11/2023 11:29 AM	Kim Pellegrini	Email	At 9:0 on the first Mon ...	Home >Projects

Figure 136: Report Subscriptions List Page

3. Select a report subscription, and then click **Delete**.



Report Name	Created On	Created By	Delivery Type	Schedule Details	Path
/fhwasitdm/UPSA...	05/02/2024 9:30 AM	Lahoucine lo Ouhssay...	Email	At 9:30, starting 05/02/...	Home >Ad-Hoc Unit Pri...
/fhwasitdm/Engine...	01/11/2024 1:56 PM	Lahoucine lo Ouhssay...	Email	At 1:0, starting 01/11/2...	Home >Projects >Laho...

Figure 137: Delete Option

A confirmation message is displayed.

4. Click **OK**.
   The selected report subscription is deleted, and delivery of the report is stopped for the user who was subscribed to the report.

4.3. Workflow Status Transitions

A workflow automates a business process for stakeholders to evaluate a form, make decisions, and then take an appropriate action. Workflows comprise various status, and each status is transitioned to the next workflow status through actions taken by stakeholders of the current workflow status. Transitioning a workflow status to the subsequent workflow status is performed in the way of a workflow action.

The following topics describe the various workflow related tasks:

- 4.3.1. Performing Workflow Status Transitions
- 4.3.2. Viewing the Workflow History
- 4.3.3. Selecting Workflow Users
- 4.3.4. Associating a Workflow

4.3.1. Performing a Workflow Action

Prerequisites

- A workflow is associated with the record.
- You are an action stakeholder for a particular status in the workflow.
- You are invited to the project.
- You have editing permission for the form or document.
- A workflow action is pending for you.

Overview
When a workflow action is performed on a record, the record is moved from the current workflow status to the subsequent workflow status. A workflow status is transitioned to the subsequent workflow status based on the workflow action conditions defined.

Steps
1. Open a form list page or document list page.
   Note: You can view the workflow status of a record in the **Workflow Status** column of the list page.

2. Perform any of the following steps, as applicable:

- Select the appropriate record.

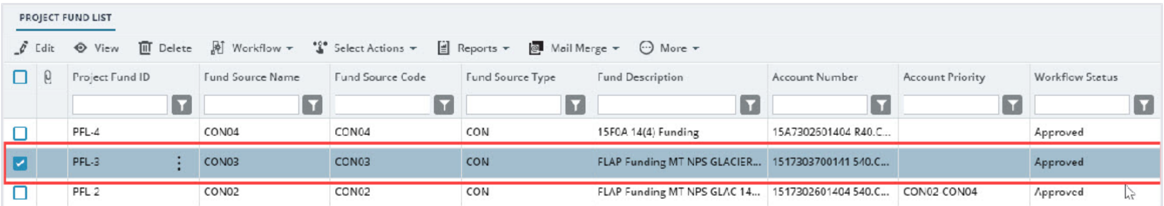


Figure 138: Selecting a Record

- Select multiple records that are in the same workflow status and have the same workflow associated with them.

Figure 139: Multiple Records with Same Status

- Select the appropriate record, and then click **Edit**.

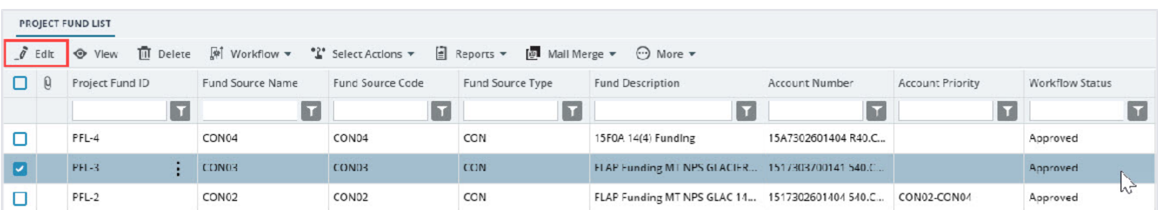


Figure 140: Editing a Record

The **Project Fund List** page is displayed.

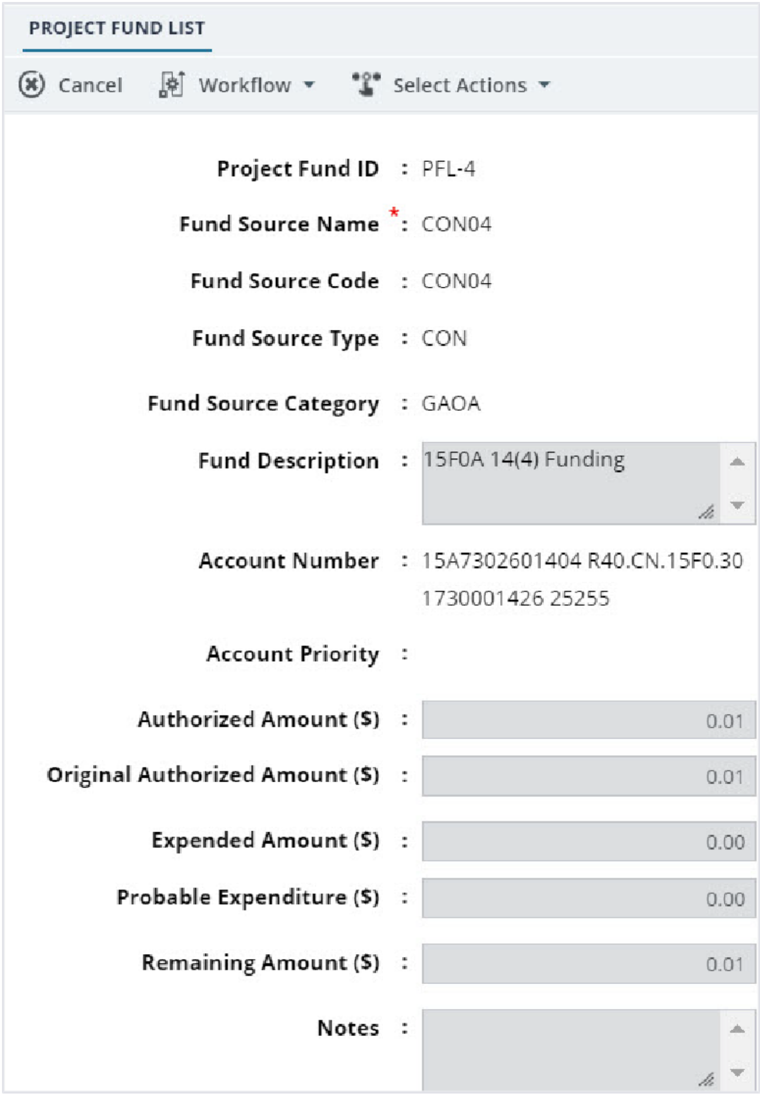
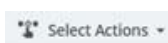


Figure 141: Project Fund List Page

2. Click **Select Actions** 

, and then click the appropriate workflow action.

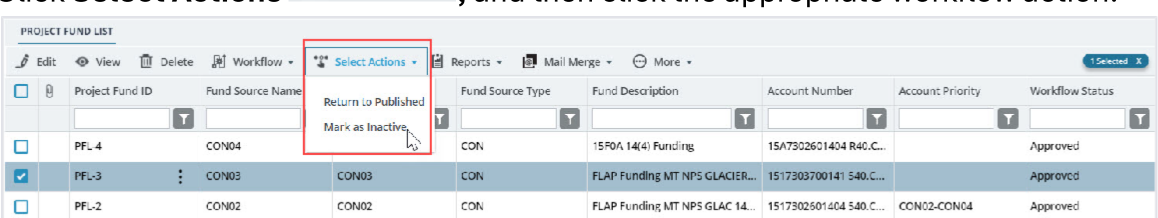


Figure 142: Using Select Actions Option – List Page

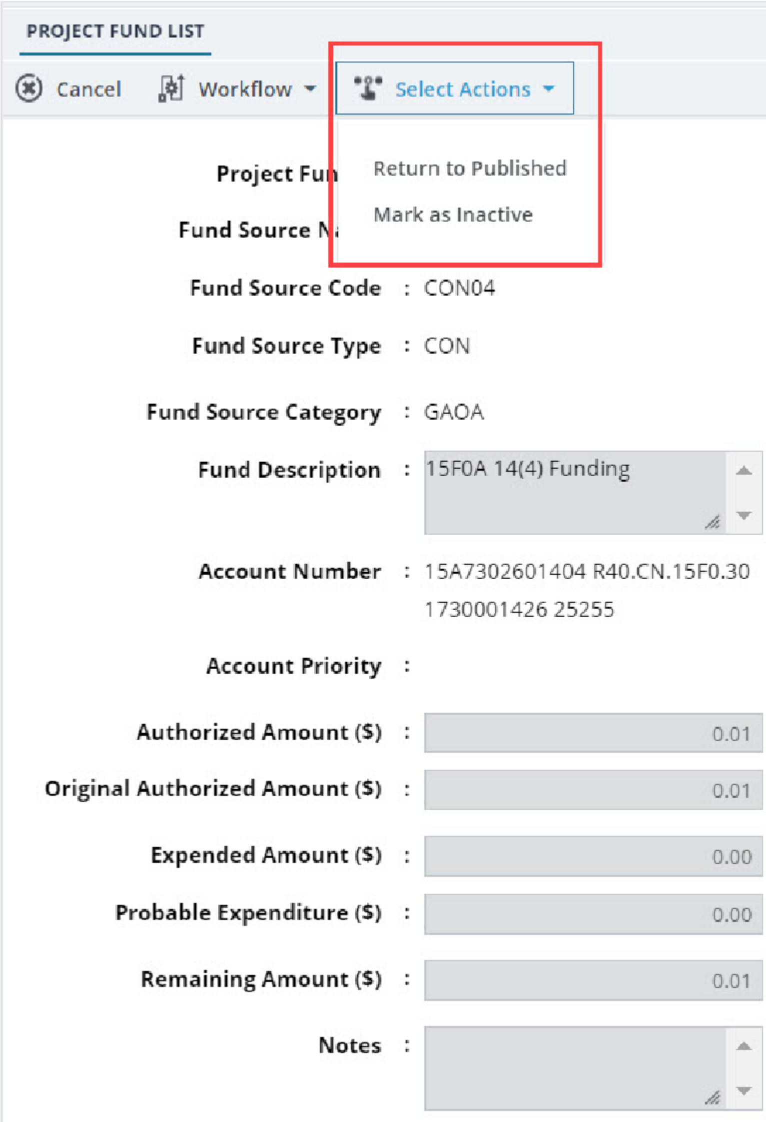


Figure 143: Using Select Actions Option – Details Page

Available actions are based on the definition of the associated workflow. The **Masterworks** dialog box is displayed.

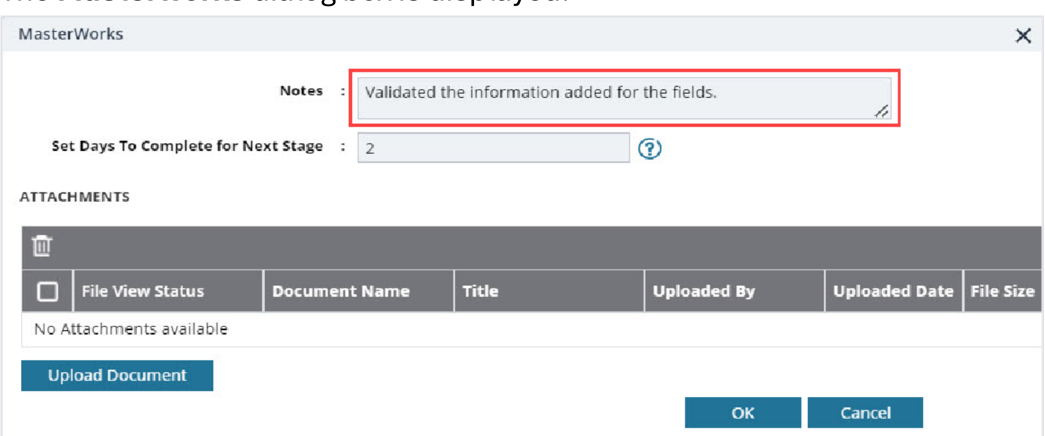


Figure 144: Masterworks Dialog Box

4. Optionally, in the Notes field, enter the notes for the workflow transition.
   You can access these notes from the **Workflow History** dialog box.

5. In the **Set Days To Complete for Next Stage** field, enter the number of days by when the workflow action of the next workflow status must be completed.

Note:

- The number mentioned in this field determines the due date to complete the workflow action for the next workflow status.
- If the field is empty, the application applies the default number of days set for the respective workflow.
- If you want to override the default days set for the respective workflow, you need to enter the appropriate number in this field.

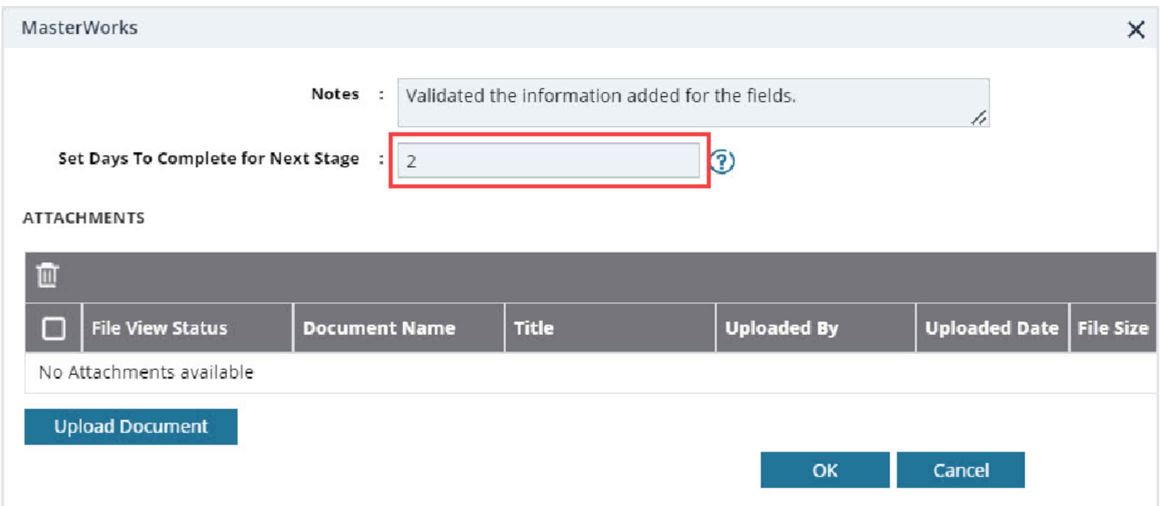


Figure 145: Set Days To Complete for Next Stage

6. Optionally, in the **ATTACHMENTS** section, you can upload or link related files.
   For information on attachments, refer to Section 4.1. Attachments.
   You can access these documents from the **Workflow History** dialog box. For more information, refer to Section 4.3.2. Viewing the Workflow History.

7. Click **OK**.

Note:

- You cannot revert certain workflow status to the previous workflow status.
- You cannot edit or select certain fields in a form based on the current workflow status of the record.

4.3.2. Viewing the Workflow History

Prerequisites

A workflow is associated with the record.

Overview

You can view the business process progression of a record in the workflow history of the record. The following details are available in the workflow history of every record:

- Action taken at every workflow status
- Date the workflow action was performed
- Notes entered when the workflow action was performed
- User name and user ID of the users who performed a workflow action
- Documents attached during workflow transitions

The **Project Fund List** form is used for illustration purposes.

Steps

1. In the list page of a form, select the appropriate record.

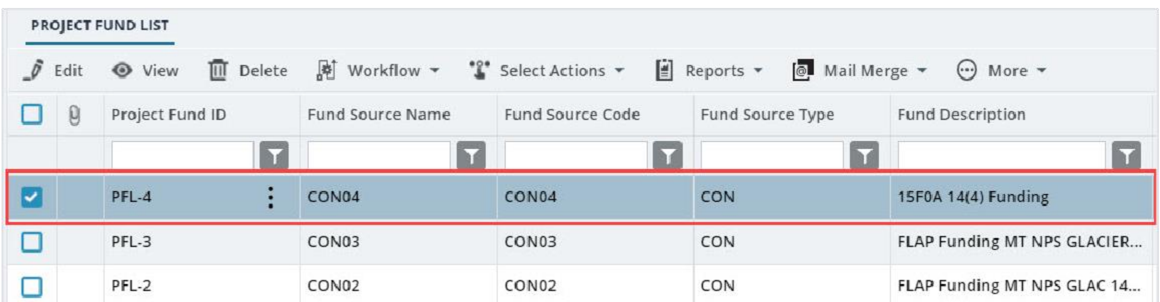


Figure 146: Selecting a Record

2. Click **Workflow**, and then click **History**.

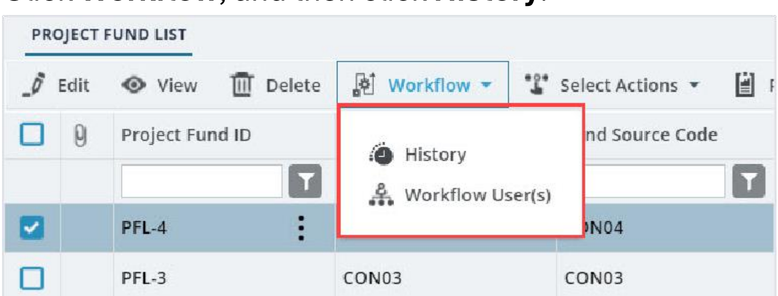


Figure 147: Using History Option

The **Workflow Status & History** dialog box is displayed.

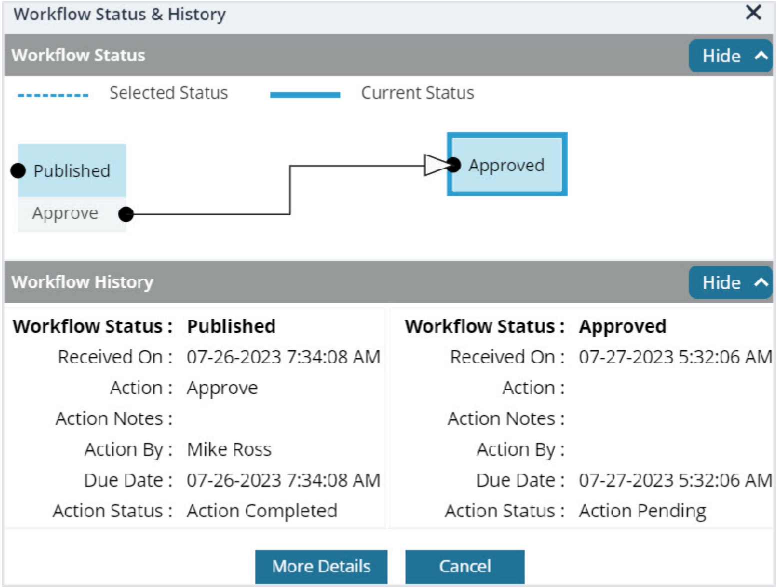


Figure 148: Workflow Status & History Dialog Box

The **Workflow Status** section displays the current and the previous workflow statuses.
The **Workflow History** section displays the details of the workflow statuses.

3. To view the complete workflow history, click **More Details**.

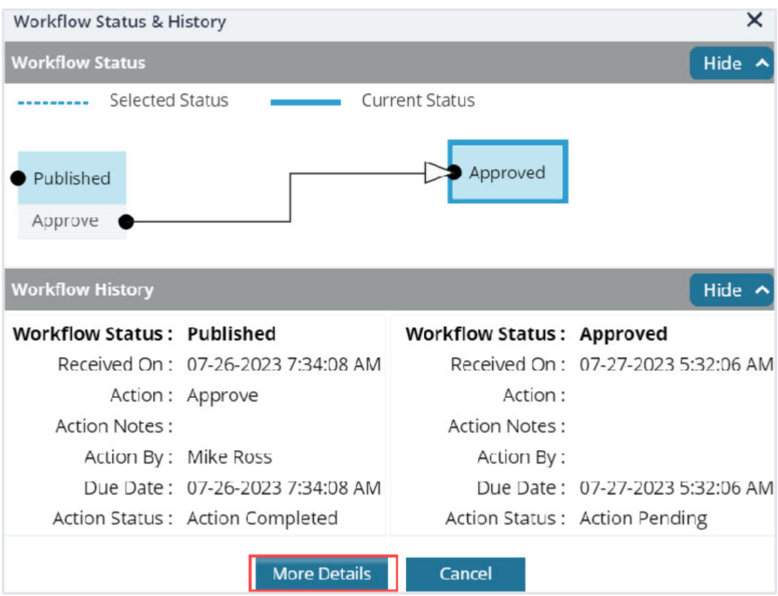


Figure 149: More Details option

The **History** page is displayed.

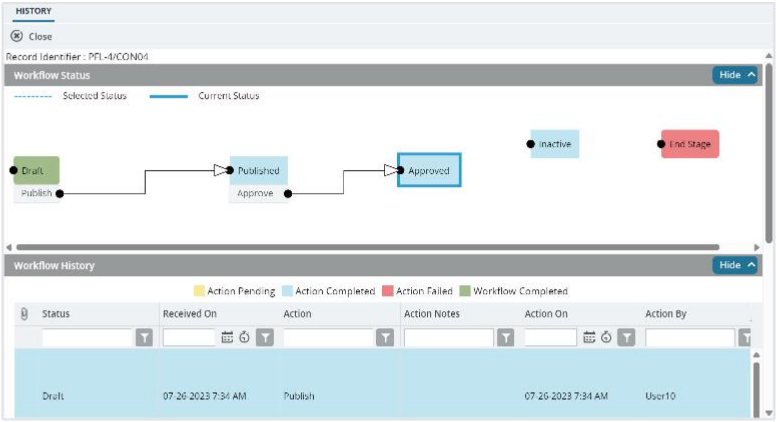


Figure 150: History Page

The **Workflow Status** section displays the progression of the workflow through the various statuses. The **Workflow History** section displays the details associated with each of the workflow statuses. The **ATTACHMENTS** section displays the list of documents attached when users performed workflow actions on the selected record.

4. To view details associated with any of these workflow statuses, click the appropriate workflow transition record in the **Workflow Status** section.

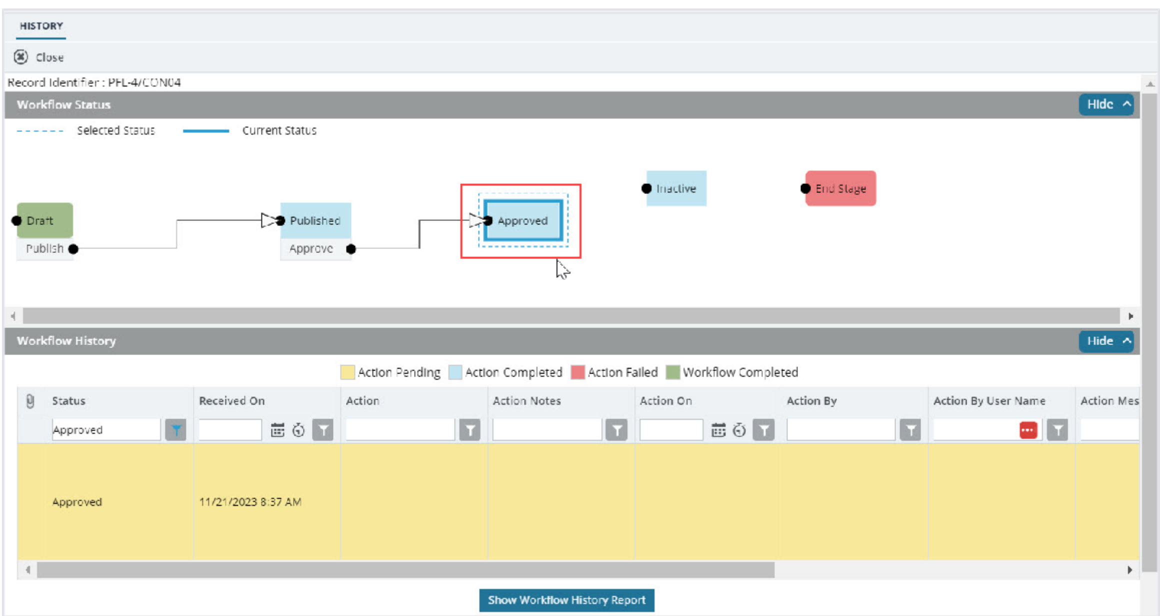


Figure 151: Workflow Status Section

The **Workflow History** section displays the details associated with the selected workflow statuses. The **ATTACHMENTS** section displays the files uploaded during the workflow transition of the selected workflow statuses.

5. To open an attachment, in the **ATTACHMENTS** section, in the **Document Name** column, click the required file name.

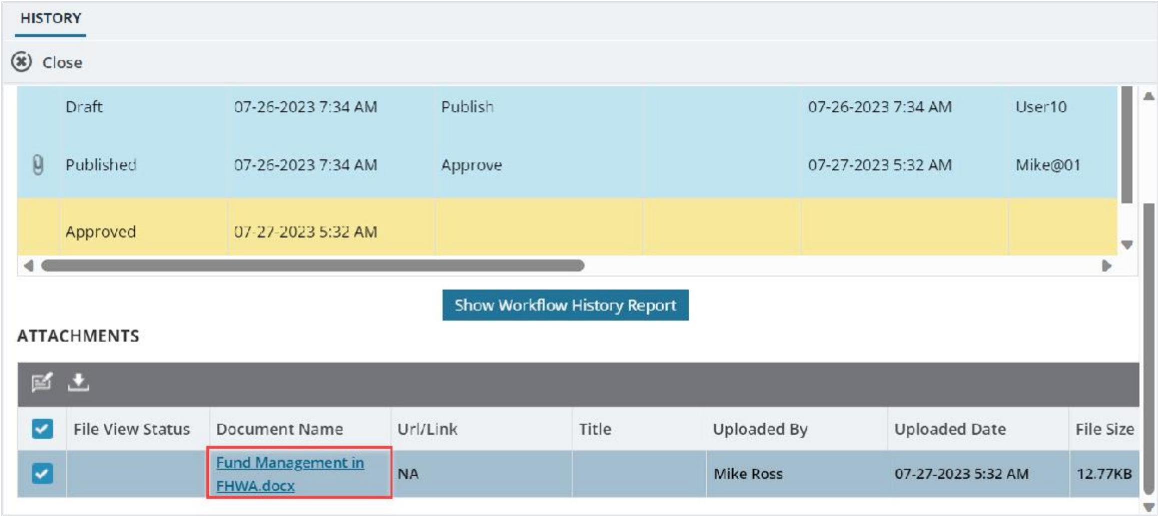


Figure 152: Clicking Document Name

The document is opened in the application viewer.

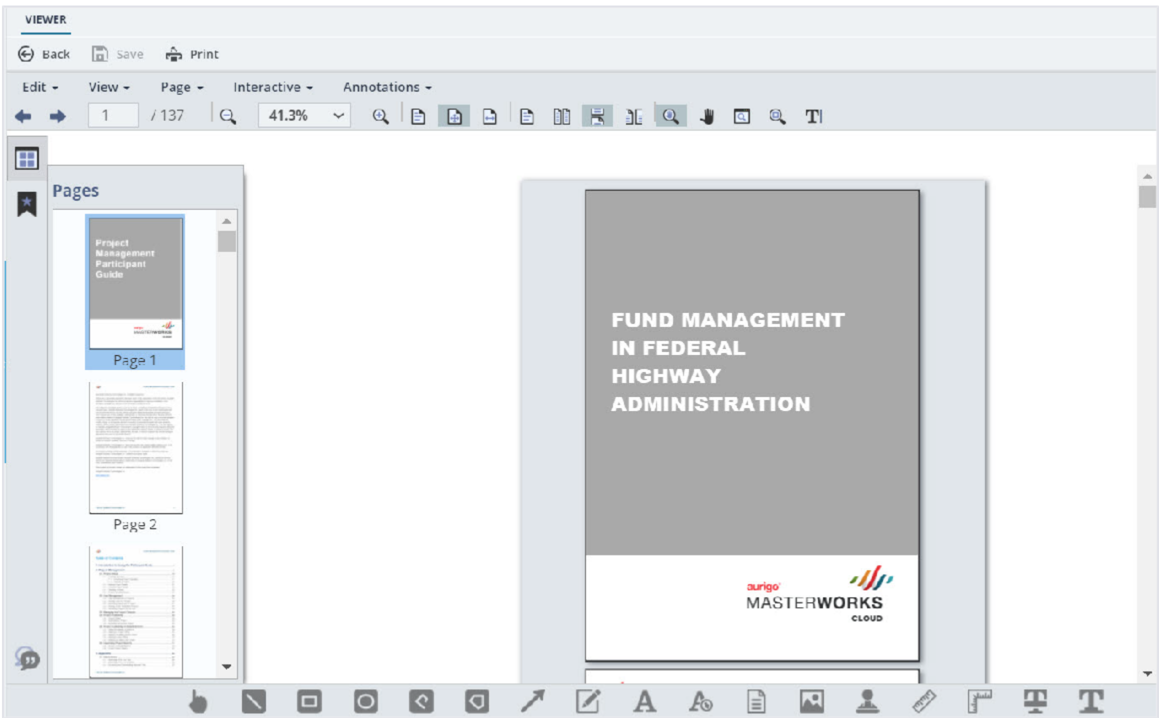


Figure 153: Viewing a Document in the Application Viewer

6. To view the workflow history as a report, click **Show Workflow History Report**.

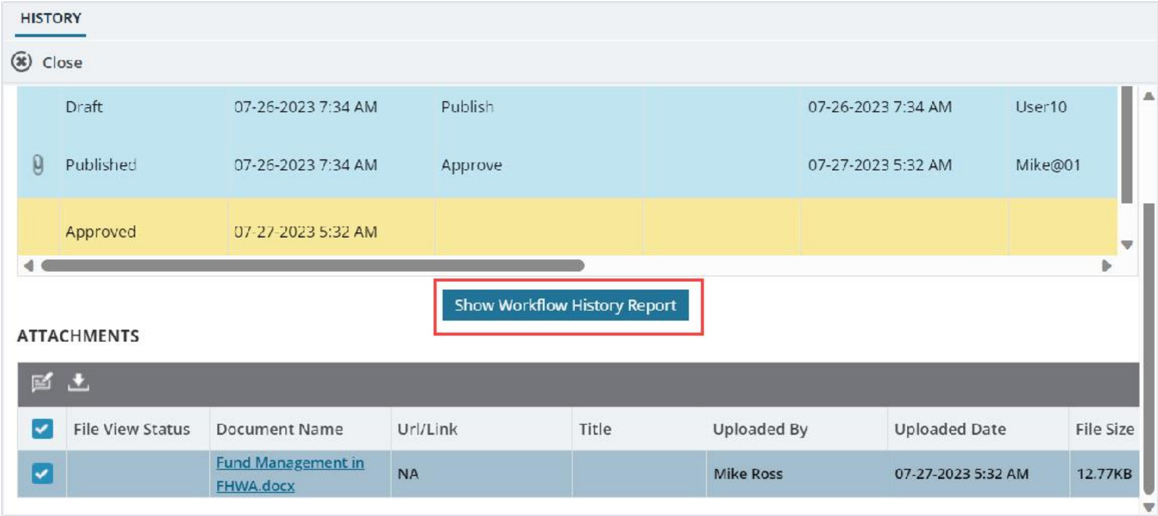


Figure 154: Using Show Workflow History Report Option

The **Workflow History Report** is displayed.

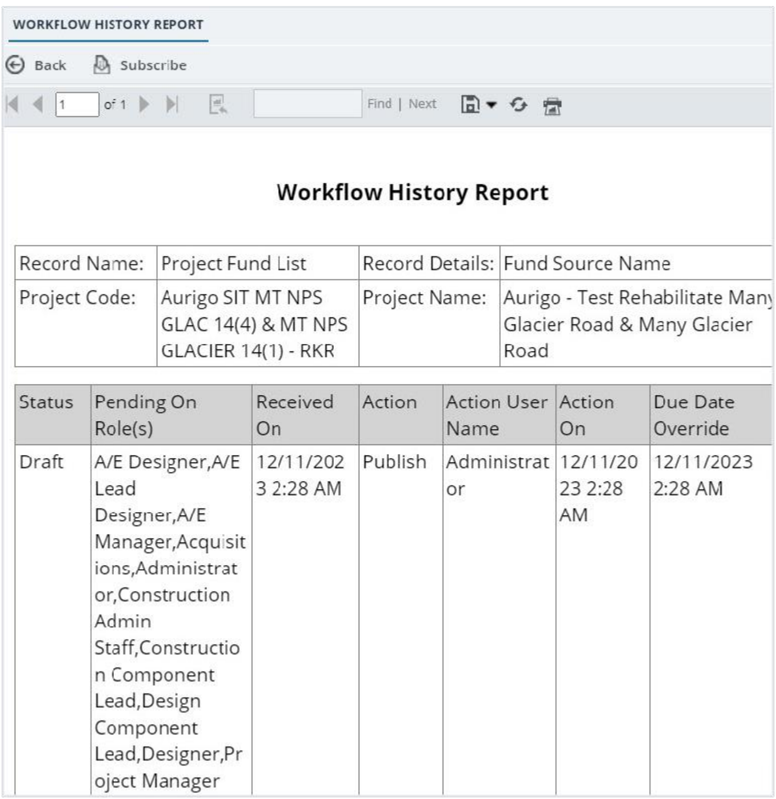


Figure 155: Workflow History Report Page

4.3.3. Selecting Workflow Users

Prerequisites

Workflows are published for the form.

Overview

At any workflow stage, you can select specific users to mandatorily take an action at the defined workflow stage. These selected users must perform an action at the defined workflow stage to move the workflow to the subsequent workflow stage. Only selected workflow users can perform the workflow action.

For document folders in the Document Management module, users selected at a folder level are applicable to all sub-folders and document records within them. Additionally, you can select users at a sub-folder level and at a document record level.

The **Project Fund List** form is used for illustration purposes.

Steps

1. To select users in the workflow of a module or document folder, perform the following steps:

    a. In the list page of a form or the list page of a document folder, click **Workflow**, and then click **Workflow User(s)**.

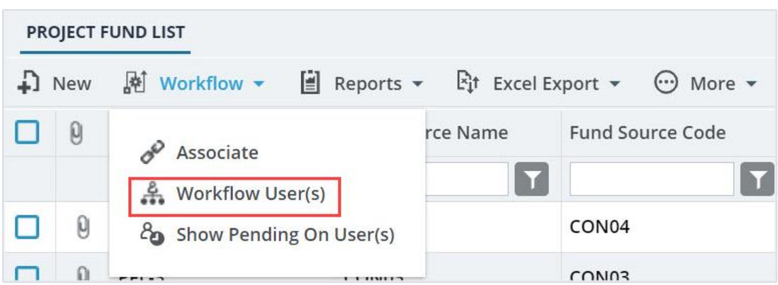


Figure 156: Using Workflow User(s) Option

    b. From the **Available Workflows** drop-down list, select a workflow.
    The published workflows associated with the form are displayed.

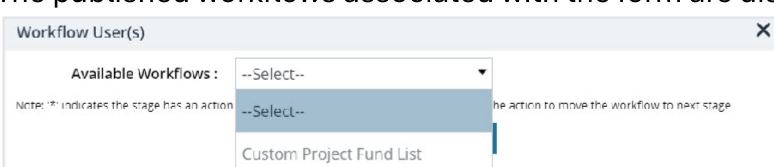


Figure 157: Published Workflows

The **Workflow User(s)** table is displayed.

The list of stakeholders for each stage and role is displayed.

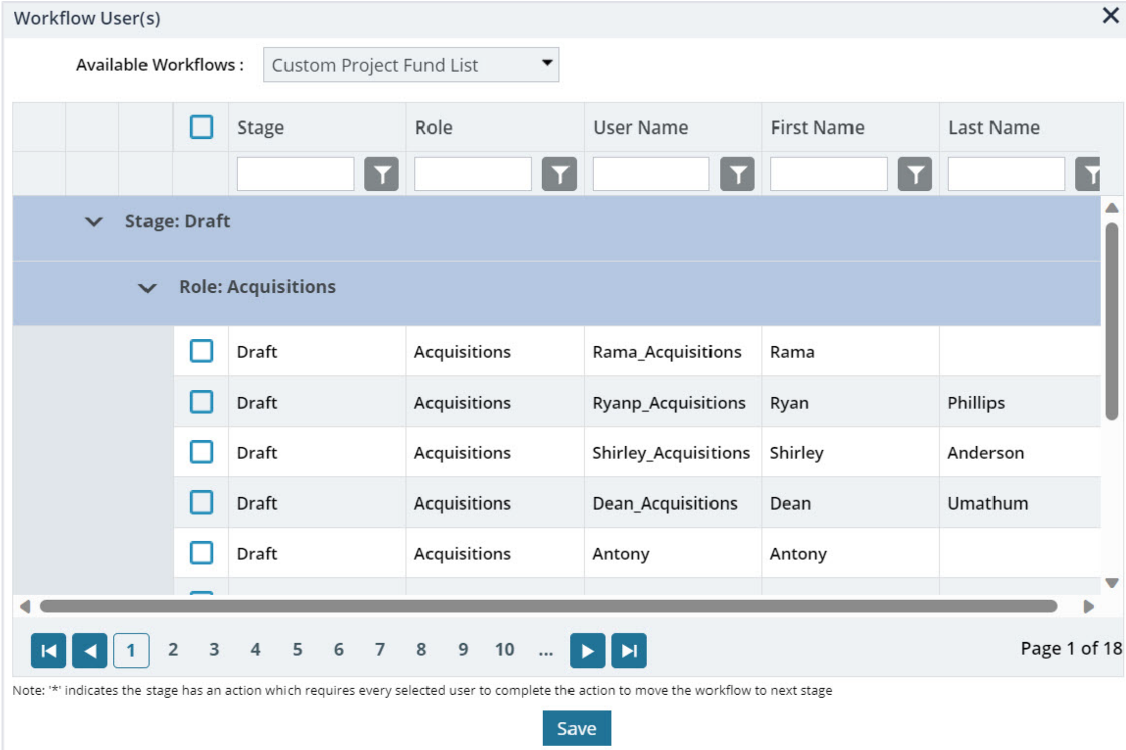


Figure 158: List of Stakeholders

2. Alternatively, to select users in a workflow for a record of a form or a document, perform the following steps:

   - Select a record, click **Workflow**, and then click **Workflow User(s)**.

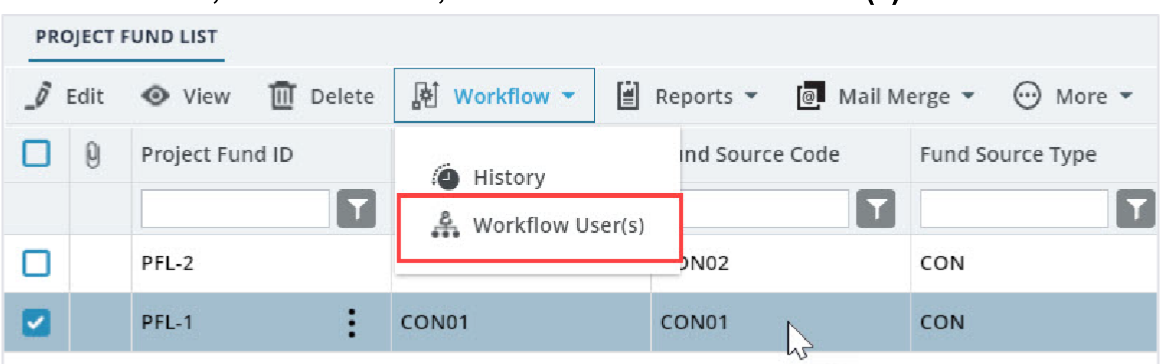


Figure 159: Using Workflow User(s) Option

The **WORKFLOW USER(S)** page with the associated workflow of the record is displayed.

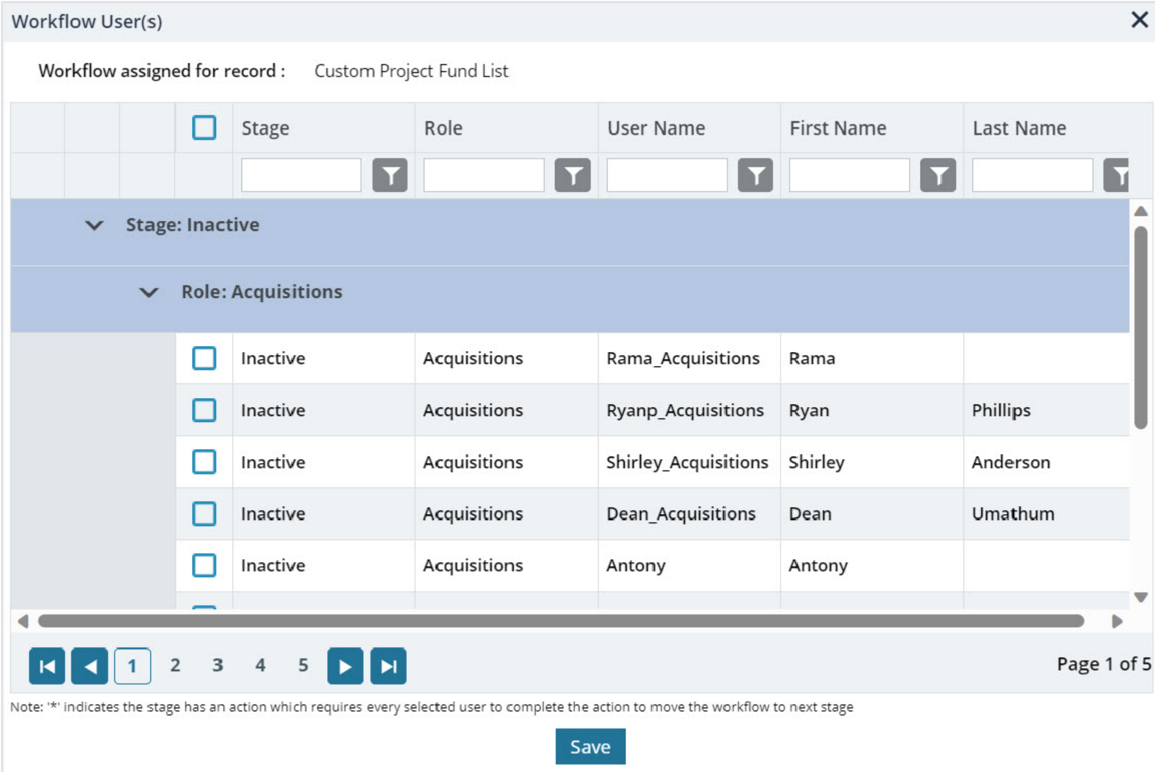


Figure 160: Workflow User(s) Page

Only workflow stages following the current workflow stage are displayed, and the list of stakeholders for each stage is displayed.

3. Select the users for each stage to add to the workflow.

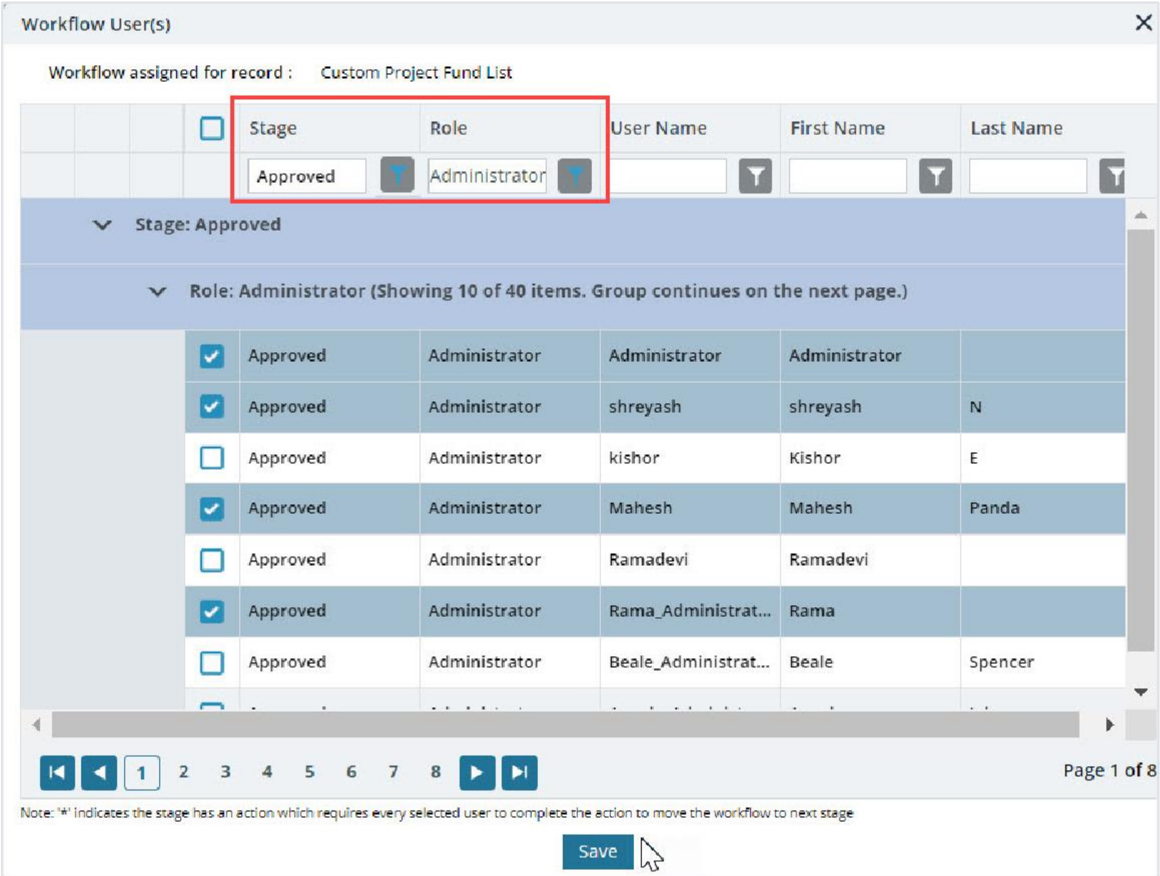


Figure 161: Using Filter Option

Optionally, you can filter the users using the following filters:

- Stage
- Role
- User Name
- First Name
- Last Name

4. Click **Save**.

   Based on the defined workflow, any or all selected users must perform the workflow action on the selected record.

   The **WORKFLOW HISTORY** page displays the workflow actions performed by all users across all stages of the workflow.

4.3.4. Associating a Workflow

Prerequisites

- Workflows are published for the form.
- The logged-in user is assigned Administrator role.

Overview

Once a workflow is published as the default workflow for a form, every record of the form that is created in every project is associated with its default workflow. You can change the default workflow of a form. The newly associated workflow is effective for this form only in this project. New records created for this form in this project are associated with the newly selected workflow.

The **Project Fund List** form is used for illustration purposes.

Steps

1. In the navigation pane, click a form to open.

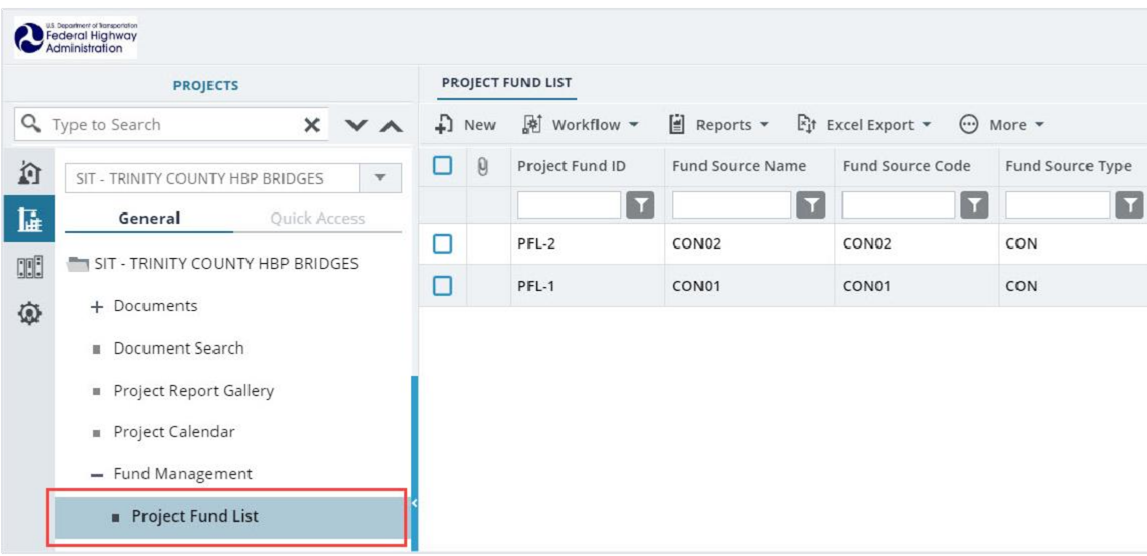


Figure 162: Selecting a Form

2. Click **Workflow**, and then click **Associate**.

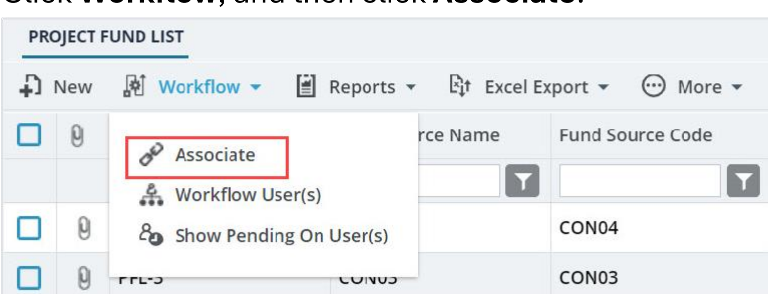


Figure 163: Using Associate Option

The **Workflow Association** dialog box is displayed.

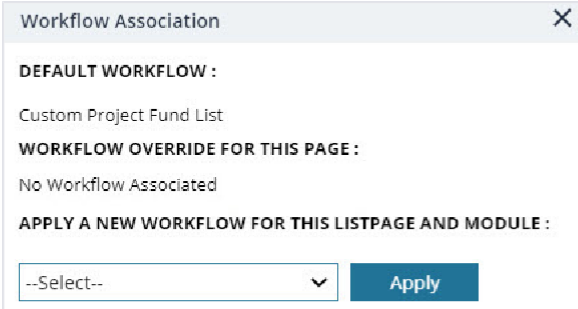


Figure 164: Workflow Association Dialog Box

The **DEFAULT WORKFLOW** section displays the workflow name of the form that is marked as default for the form in the application.

3. To associate a different workflow to the form in the project, from the **APPLY A NEW WORKFLOW FOR THIS LISTPAGE AND MODULE** drop-down box, select the workflow to associate with the form for the project.

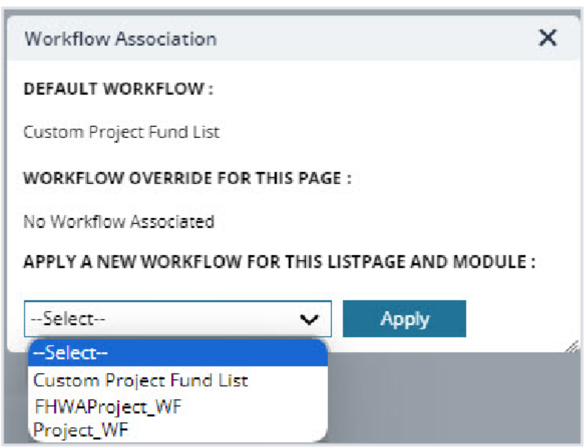


Figure 165: Using Applying a new Workflow for this List Page and Module Option

Available options are the published workflows for the respective form.

Upon selecting the workflow, the **WORKFLOW OVERRIDE FOR THIS PAGE** field displays the current workflow that is associated with the form for the project.

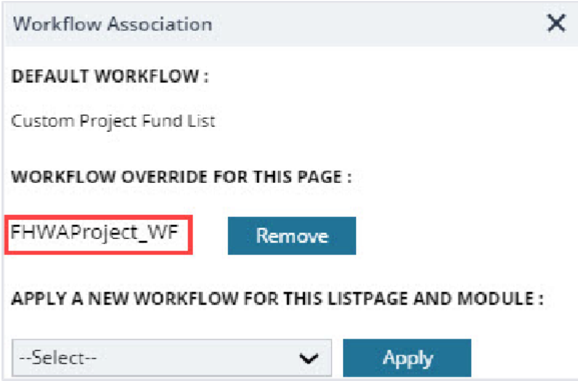


Figure 166: Updated Workflow Override for this Page Field

If no selection is done in the **APPLY A NEW WORKFLOW FOR THIS LISTPAGE AND MODULE** field, then the **WORKFLOW OVERRIDE FOR THIS PAGE** field displays **No Workflow Associated**.

4. Optionally, to reset the workflow of the form for the project to the default workflow as defined for the form in the application, click **Remove** adjacent to the **WORKFLOW OVERRIDE FOR THIS PAGE** field.

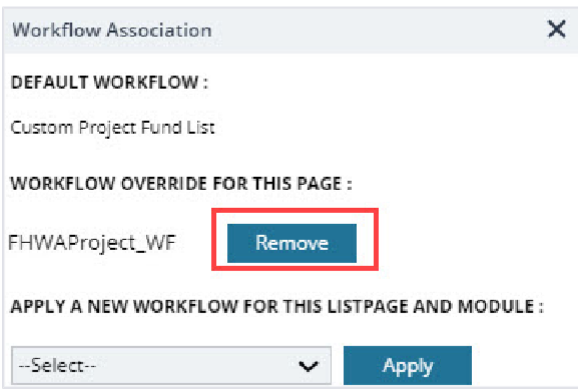


Figure 167: Resetting to Default Workflow

5. Click **Apply** to save the changes.
   The workflow properties are associated with the form.
   The selected workflow is associated with the newly created records of this form within the project.