AASHTOWare Project Preconstruction™
AWP-PreCon

Version 4.2.2 Rev 034

VDOT Training Manual

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Access Requirements and Procedures

Users needing access to VDOT's AWP-Preconstruction estimating software MUST do the following before access is granted:

1. **Take the required 1-day Live Online class via MS Teams.**
   Class registration found here: https://virginiadot.csod.com
   Class name = AWP-Preconstruction (Virtual Class)

2. **Consultant Specific:** Identify & determine your VDOT Supervisor, this is someone that accepts the VDOT work you are doing. This VDOT (full-time employee) person must agree to sponsor you.

3. **Submit fingerprints & pass a CHRC background check**
   This software is considered sensitive so all users must pass this background check, vetted by VITA and the Virginia State Police. Note: Consultants will incur a fee.

4. **Open & Maintain a COV (Commonwealth of Virginia) login/password through VITA.**
   Note: the password must be updated routinely or access is automatically disabled.
   a. VDOT = every 90 days
   b. Consultant = every 42 days

5. **Submit a SARA request for AWP-Precon access**
   A SARA request is submitted for AWP-Precon access with the appropriate role and control group assigned. The user's access in AWP-PreCon must match the permission level (Role) in SARA.

6. **Each User is assigned a Control Group and 1 or more AWP Role(s)**
   Control groups are assigned based on the user's location (VDOT district, division or consulting firm). Roles are assigned based on the user's least amount of access required. Both are managed by the AWP-Precon Administrator in User/CG master list

Support / Help

Purpose	Name	URL
All AWP-PreCon Questions & Support	**eConstruction Portal**	https://covgov.sharepoint.com/sites/VDOT-CON-eConPortal-External
COV login/password Management	**VITA (VCCC) Customer Care Center** **866-637-8482**	https://www.vita.virginia.gov/it-support/ https://virginia.okta.com/ VCCC@vita.virginia.gov

Manual Revision Summary

Date	Page	Revision Description
June 2022	2	Added Access Requirements and Procedures
	2	Updated Support/Help table
	3	Added Revision Summary Page
	10	Added OKTA url
	15	Added link to the master list for Control Groups (CG)
	22	Reordered list of required fields. New required field added = Project Type
	26	Updated Figure 4
	30	Corrected Controlling chapter number from 8 to 9
	30	Updated Project Type table list; field is now required; revised RAAP & SAAP text
	31	Removed link to Progress Scheduled Category document
	31	Added Progress Schedule Category chart (moved from deleted App H)
	38	Updated 1st paragraph to include all counties that a project touches.
	53	Reordered list of required fields. New required field added = Project Type
	61	Updated Project Type table list; field is now required
	61	Revised RAAP & SAAP text
	61	Corrected Controlling chapter number from 8 to 9
	62	Added Progress Schedule Category chart (moved from deleted App H)
	78	Updated Activity Codes; Removed Utilities and Demolition Activity codes
	83-84	Added 5.1.1 section for Item Field Descriptions
	96	Updated Pre-Defined Fund package graphics & Federal Cust ID field requirement
	100	Removed step 6
	102	Updated Figure 6 graphic
	XX	Removed Appendix H (moved to chart in Chp 2 & 3)

Table of Contents

1. GETTING STARTED

The AWP-Preconstruction software is a Web application designed to run on Google Chrome or Microsoft Edge. The Internet Explorer browser should not be used. To run AWP-PreCon successfully, please use the recommended settings below.

1.1.1 Internet Browser Settings

All users should use the Google Chrome browser when using AWP-Preconstruction, per the VDOT Information Security Officer dated 2/27/2020. Users will experience font and field issues when using the Internet Explorer browser, due to VITA security restrictions for Windows 10 fonts.

1.1.2 Navigation

This user's guide can be printed, allowing readers to navigate the document by using the table of contents, chapter numbers, and page numbers. Viewing this user's guide in pdf format provides additional opportunities for navigation.

Note: Adobe Reader must be installed on your workstation in order to view this document as a pdf file. You can download the latest version of Adobe Reader from the Adobe website: http://www.adobe.com/

When you view the user's guide as a pdf file, you can use the Bookmarks panel on the left side of the Adobe Reader window to navigate within the document. The Bookmarks panel contains an outline of the section headings used in the document, similar to a table of contents. Bookmarks function like hyperlinks. You can click a bookmark to display the related page in the right pane of the Reader window.

The pdf version of the user's guide also contains hyperlinks throughout the text. You can click a hyperlink to view a different page that describes related features or tasks. Entries in the table of contents are also linked to the related pages in the document.

Finally, viewing the user's guide as a pdf file enables you to use the search features in Adobe Reader. To display the search field, click the **Edit** menu and click **Find**, or you can press CTRL+F. Type a word or phrase in the search field, and press Enter. Adobe Reader displays the first instance of the word or phrase you entered. You can click the **Next** and **Previous** buttons to view each additional instance.

1.1.3 Using Online Help

The AASHTOWare Project Help system provides a wealth of information immediately available to you while you work. Understanding how the Help system works makes it easier to find the information you need.

The Help system is *context sensitive*, which means that when you click the **Help** button on a component in the software, the system provides information about the functionality of that component only. Each Help page provides links to other Help pages containing related information.

The Help system also contains topics that are more general in nature and not linked to a specific component in the software. You can navigate the entire Help system by clicking the **Contents** link in the top left corner of any Help page, or by clicking the **Help** button on the Menu Bar.

The Contents pane is organized by business category and uses expandable and collapsible books and pages to display the list of topics available in the Help system. This pane helps you navigate through the hierarchy of topics to find a desired category and subject.

Click a book to expand it, and then click the page you want to see. The system displays the page in the right pane of the browser window.

NOTE: the Online help is NOT VDOT specific, this training manual serves specifically for VDOT requirements.

1.1.4 Search

The Search pane provides a rapid full-text search of all the topics in the Help system. To display the Search pane from any Help page, click the **Search** button in the top left corner next to the **Contents** button. To perform a search, type your search criteria in the **Search** input field on the toolbar, and click the **Go** button. To search for a phrase, enclose the phrase in quotes in the **Search** field.

The system performs the search and automatically opens the Search pane, which displays a list of the topics in which the search text appears. Topics are ranked in order of best match. Click on a topic to display the page in the right pane of the browser window.

You can also perform a search in the Search pane itself by clicking on the **Search** tab.

1.2 Logging On & Off

VDOT’s AWP-PreConstruction resides in a Cloud hosted environment and works in conjunction with VITA’s Multi-Factor Authentication (MFA) also known as Okta, which provides a second authentication for all users.

To Log into AWP-Preconstruction:

1. Open the recommended browser and navigate to:

   https://vdot-pr-prod.infotechinc.com/
   or
   https://virginia.okta.com/

2. Enter your credentials:

   Username: **(Network ID)@vdot.virginia.gov**
   Network ID is typically firstname.lastname
   Password: **your temporary or current password from Vita**

3. Choose an MFA (OKTA) Authentication method:

   There are 3 methods, they are:

   i. Google Authenticator – Code provided on an App installed on your phone **(Recommended)**
   ii. SMS Authenticator – Code sent via Text message
   iii. Voice Call Authenticator – Code sent via a phone call

   https://vccc.vita.virginia.gov/vita?id=vita_kb_article&sys_id=090583da1bc43410621beb5ce54bcbff

4. Enter the code provided and click Verify
5. The AWP Dashboard & your Home screen opens and you begin your work in Precon.

To Log Off, click the Logout Button, in the upper right corner.

1.3 The Dashboard

When you log on to the system, the software opens on the dashboard. You can also go to the dashboard at any time by clicking the **Home** button on the Menu Bar.

The dashboard contains one or more components. Each component is identified by a title set within a blue header bar. Each component provides access to the information and processes required for a specific area of your agency's work. The components you see on your dashboard are those that match the specific areas of responsibility assigned to your active role. See Understanding Your Role and Using Components for more information.

The following example shows the dashboard as it might appear for a system administrator. Keep in mind that some of the components shown in the example might not be available for you depending on your active role and which AWP modules are current.

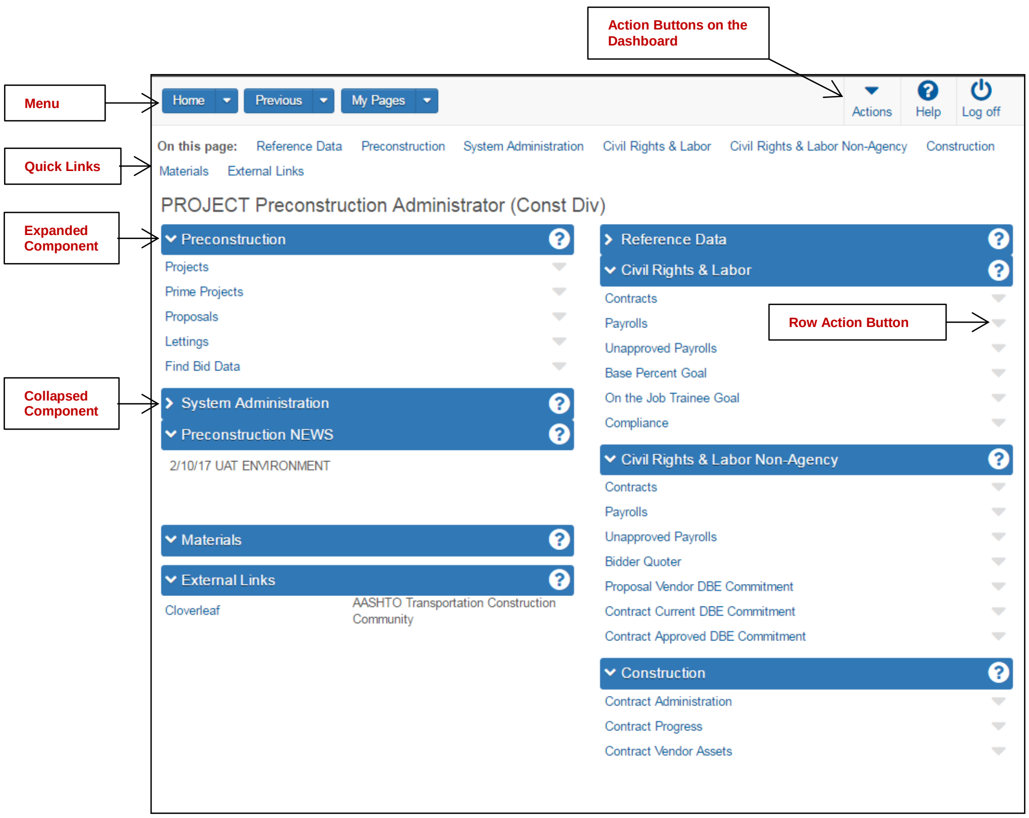


Figure 1 - The Dashboard

The dashboard includes these standard features:

- **Menu Bar** — The system displays the Menu Bar at the top of every webpage in the system. The buttons and menus on this bar help you to move quickly through the system to visit the pages and components you use most often.
- **Home Page News** — This component provides important VDOT specific information.
- **External Links** — This component provides links to websites you use outside of the AASHTOWare Project application.

1.3.1 Menu Bar

The system displays the **Menu Bar at the top of every webpage** in the system.

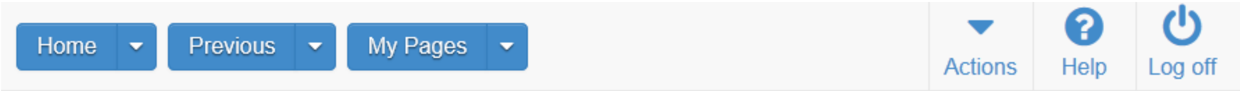


Figure 2 - The Preconstruction Menu Bar

The left side of the Menu Bar contains these buttons and menus:

- **Home** - Clicking this button takes you to the dashboard for your active role.
  Clicking the down arrow opens the Home menu, which contains an indicator for your active role (bold text with a check mark) and lists all the roles assigned to you. This menu allows you to switch roles from any location in the system. When you switch roles, you remain on the component where you were working unless the new role does not have appropriate security rights, in which case the system takes you to the dashboard.
- **Previous** - Clicking this button returns you to the last page you visited in the system using your active role. Clicking the down arrow displays a list of links to the most recent pages you visited in your active role. Previous Activity Overview, you can access a much longer list of links to previously viewed pages. Clicking a link takes you to that location in the system.
- **My Pages** - Clicking this button takes you to the My Page Overview component, where you can manage frequently used (or *favorite*) pages for your active role. You can add pages as favorites from any location in the system by clicking the down arrow and selecting **Remember this Page**.

The right side of the Menu Bar contains these buttons and menus:

- **Actions** - Clicking this button opens a menu of actions you can take within the system. The actions that are listed are limited to those that are relevant for your active role. When you select an action, the system automatically takes you to the component in the system where the action can be performed.
- **Help** - If your agency has recorded agency Help, clicking this button takes you to a separate browser window containing online help for your active role. If agency Help has not been recorded, clicking this button takes you to the Welcome page of the standard online Help.
- **Log off** - Clicking this button ends your session.

1.3.2 Quick Links

Quick links are displayed in blue text below the Menu Bar and above the webpage title. These links allow you to quickly jump to application pages related to the current page. Your Role will determine which of these quick links you have access to.

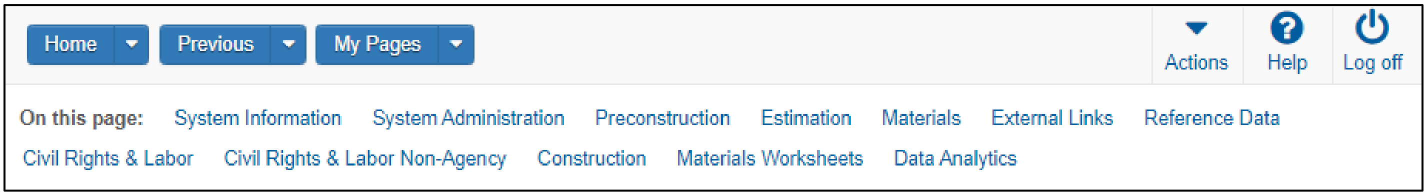


Figure 3 - Quick Links below the Menu Bar

If you are on a page that contains multiple components, quick links preceded by the label **On this page** are displayed for each component on the page. When you click one of these quick links, the system automatically scrolls the page to the location of the component.

1.3.3 Hypertext Links

Hypertext links can be located anywhere on an application component, including a field value, and are identified by blue text. When clicked, a link takes you to another component or page, usually one containing more detailed information than what is available in the current component. After you have clicked a link, it changes from blue to purple to remind you that you have already visited that link.

Note: In a list, when you add a new row in which one of the field values is a hypertext link, the link is disabled until you save the new record.

1.3.4 Alternate Paths

Keep in mind that all of the various navigational elements, such as hypertext links, quick links, recent pages, and **Actions** menus, can all provide different ways of accomplishing the same task. The same command might be accessible from an **Actions** menu or as a link. For example, to access the Project Overview component, you can click the **Projects** link on the Preconstruction component, or you can select **Open** from the **Actions** menu on the Projects row. Both methods of navigation achieve the same result. Feel free to explore the system and find the ways of navigation that are best for you.

1.3.5 Using Bookmarks

You can bookmark specific pages in the software just as you would for any other website. However, if you have not yet logged on to the system, clicking a bookmark will take you to the logon page rather than the bookmarked page.

1.3.6 Icons

Icons are small images throughout the system that either convey information or can be clicked to perform an action. For example, a red asterisk icon indicates a required field. An eraser icon in a Quick Find search box can be clicked to reset search criteria. This table shows some of the common icons used in the system:

Icon	Usage
	The eraser icon appears in Quick Find search boxes after criteria is entered. You can click the icon to reset the search criteria
	This magnifying glass icon at the left side of a field indicates an auto-complete field. Auto-complete fields display a filtered list of field values based on the first few characters you type. You can press Enter to show all values.
	A red asterisk indicates a field where data entry is required.
	The actions icon appears on **Actions** buttons that you can click to display an **Actions** menu. Actions menus provide access to commands and functions you can perform on data.
	The red X icon appears on **Delete** buttons that you can click to remove newly added rows that have not been saved. Clicking a **Delete** button removes the row immediately.
	The trash can icon appears on the **Mark for Deletion** button that you can click to remove saved rows. When you click the **Mark for Deletion** button, the button changes to an **Undo** button. The row is removed only when you save the changes.
	The undo icon appears on **Undo** buttons that you can click to reverse an action, such as deleting a saved row.
	The help icon appears on **Help** buttons that you can click to display the online Help system.
	The calendar icon is displayed on the right side of a date field. You can click the calendar icon to display a calendar where you can pick a date as the field value.

Figure 6 - System Icons

1.3.7 Viewing Previous Activity

The Previous Activity Overview contains a list of links to the most recent pages and components you visited using your active role. To display the Previous Activity Overview, click the down arrow on the **Previous** button on the Menu Bar, and select **View Previous Activity**.

Each row contains a link to the previously visited page, the date and time of the last visit, and an **Actions** button. The list is sorted by most to least recently visited.

To navigate to a previously visited page, click the **Page Title** link in the appropriate row. To delete an

activity from the list, select **Delete** from the **Actions** menu on the activity row.
To reverse the delete action, click the **Undo** button. Click **Save** when to apply your changes to the system
.

1.3.8 Viewing My Pages

The My Page Overview component contains a list of all the pages you have added to your My Pages list for your active role. To add a page to the My Pages list for your active role, first navigate to the page you want to add. Next, click the **My Pages** arrow on the Menu Bar, and click **Remember this Page**. The page is added to the My Pages list for your active role.

To display the My Page Overview, click the **My Pages** button on the Menu Bar. The component lists all of the pages you added when logged in with the same user role that is currently active.

To delete a page from the list, select **Delete** from the **Actions** menu on the page's row. When you are finished, click **Save** to apply your changes to the system.

1.4 Understanding your Role

A user *role* is a name associated with a collection of security access rights to the information contained in system components. Roles combine the permissions needed for several related tasks and allow you more efficient access to the parts of the system you need. Roles are designed by your agency and assigned to you by your system administrator.

All users of the system are assigned at least one security role. Many users have multiple roles, but you can only use one role at a time. Therefore, you are always limited to the security access rights of your *Active Role*.

To see which of your roles is currently active, click the down arrow on the **Home** button on the Menu Bar. The **Home** menu lists all of the roles that are currently assigned to you. Your active or current role appears at the top of the list with a check mark beside it.

You can switch your active role at any time by clicking another role on the **Home** menu. By selecting a different role, your permissions and security access are changed to reflect the areas you need to access to perform your duties in the new role. When you switch roles, the system continues to display the component where you were working unless the new role does not have appropriate security rights, in which case the system takes you to the dashboard.

If you are assigned multiple roles that have responsibilities for multiple approvals at different stages of the same workflow or approval process, you can only perform the approval corresponding to the authority of your Active Role. If the approvals are sequential, however, the system allows you to switch roles without leaving the approval component.

1.5 VDOT Control Groups

VDOT has an additional security level for all Users called **Control Groups**. This is the Organization field under each System User account. The control group restricts user's access to see ONLY the Projects, Primes or Proposals in their unique control group. The control groups are assigned based on VDOT District, Division or Consulting firm which is maintained by the AWP-Preconstruction Administrator. A list can be found here: Precon_CONTROLGROUP_List_202205.xlsx

1.6 Using Components

The web-based AASHTOWare Project system displays information in application components. A *component* is a container for the information and business functions on an application webpage. Components are made up of elements such as fields, lists, and links. An application webpage can contain one or more components. Some components contain a list of tabs along the left side, each of which corresponds to a subset of information related to the component entity.

> **Note:** To protect the information contained in your agency's system, components and webpages only display the information and action features for which your active role has been assigned access.

Each component includes these features:

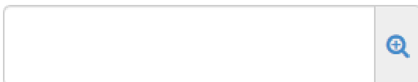
- A blue header is displayed across the top of the component. The component header can contain several features, including the title of the component, a **Save** button, an Actions button, a Help button, and an expand/collapse button. The header might also contain contextual information related to the data contained in the component.
- A vertical scroll bar is included on the right side of any component that contains more content than can be viewed in the browser window.
- The most common elements found on components are fields in which information can be recorded.
- Most components contain lists of rows for a type of data, such as projects or proposals.
- Components with lists contain a variety of filters to make it easier to find specific rows. For more information about the different kinds of filters you can use and customize.
- Actions menus allow you to choose a function or process to perform on data.
  Most components contain multiple types of **Actions** menus. All Actions menus provide access to the files and links attached to the active entity row.
- Selection modal windows are used throughout the system to make it easier for you to add one or more rows of data to another entity (for example, to add projects to a proposal).
- Keyboard keys have limited functionality in components. The **Tab** key can be used to move from one field to the next, the **Enter** key can be used to scroll through a drop down list of values in a field, and the arrow keys can be used to scroll through lists of rows.
- Many components contain tabs arranged vertically on the left side of the component. Clicking each tab displays the fields and information on that tab. Clicking the **Save** button on a tabbed component saves the information on all of the tabs at once.

1.6.1 Working with Fields

Fields are the most common element found within components. Information can be recorded in fields. You can move from one field to another by pressing the **Tab** key or moving your pointer to the field and clicking the left mouse button.

A component can contain one or more of the following types of fields:

- *Text boxes* contain textual characters of any type. Some text boxes are capable of storing multiple rows of text. This type of text box includes a magnifying glass button on the right side of the box. Clicking this button opens a secondary text window that allows you to view and edit the text in a larger area. In this window you can use standard Windows editing commands like cutting (CTRL+X), copying (CTRL+C), and pasting (CTRL+V). When you are finished editing text, click the **Apply** button or press the Escape key to close the text window.



- *Numeric fields* contain only numeric characters. For all non-key numeric fields, the system automatically inserts and corrects the placement of commas and justifies values to the right when you leave the field.
- *Auto-complete fields* are like text boxes except that they automatically display a filtered list of field values based on the first few characters you type into the field. Auto-complete fields are indicated by a magnifying glass icon at the beginning of the field.

Pressing the **Enter** key without typing any characters returns the first ten rows in that list, displayed as a drop-down menu. To build the list, the system searches for ID and Name/Description values. By default, the first ten rows that match the entered criteria are returned. At the end of the returned list, there is a link to display the next available set of rows and a count of the total number of rows matching the search criteria. A scroll bar allows you to move up and down through the returned list. Pressing the up or down arrow key populates the field with the previous or next value in the drop-down menu. To populate the field, click the appropriate value from the drop-down menu.

- *Date and Date/Time fields* include a calendar button next to the field. Click the calendar button to display a calendar from which you can select a date to populate the field instead of typing the date manually.

The system default date format is MM/DD/YYYY and the system default time format is the 12-hour format with AM or PM designation.

Note: The value you enter in a date field must be valid and reasonable (for example, it should not exceed 99 years in the future).

- *Drop-down list boxes* include a down arrow next to the field. Click the down arrow to display a list of possible field values.

Click an item in the list to populate the field. A scroll bar is available when needed to scroll through the list of values. Typing a letter cycles the values through all of the values that start with that letter. If there are no values that start with that letter, the value in the select box will not change. After you have clicked the scroll bar, pressing the up or down arrow key scrolls through the open drop down list.

- *Non-editable fields* display information without a text box. You cannot change the information in this type of field.
- *Check boxes* are square boxes that can be selected or cleared by positioning the mouse pointer over them and clicking the left mouse button. Check boxes are used to turn an option on or off.
- *Combined fields* display read-only pieces of information derived from multiple fields, but treated as a single field on the page.
- *Agency fields* look and behave like any other field, but have been customized for purposes specific to your agency. For this reason, these fields differ among agencies and, unless your agency has created custom agency Help, these fields are not documented in the online help system or this user's guide.

1.7 Overview, Summary, Tabs and Quick Links

All the major components in Preconstruction are accessed the same way, with the same navigation method used for all of the major Preconstruction Components: Projects, Prime Projects, Proposals and Lettings.

1. You **start at the Dashboard** and **select the major component: Projects, Prime Projects, Proposals and Lettings.**
2. **Clicking on the component** will take you to that **component's Overview screen**. At this point, you can **search** for and **select** the specific Project, Prime Project, Proposal or Letting.
   - At the component's Overview screen you can also add a new Project, Prime Project, Proposal or Letting.
3. Once you have **found** your specific Project, Prime Project, Proposal or Letting, you can **click on its link** which opens in the **Summary screen** where information can be edited.
4. The Summary screen, as are most other screens, is arranged by Tabs, with each tab containing information related to the name of the tab.

1.8 Using the Quick Find Search Box

A Quick Find search box is a part of each component that contains a list.

- It **searches all rows** in the list for a string of text and then **displays only rows with fields containing that string**. The search begins automatically once the **third character** is entered and the text entered will remain there until you click the  button.

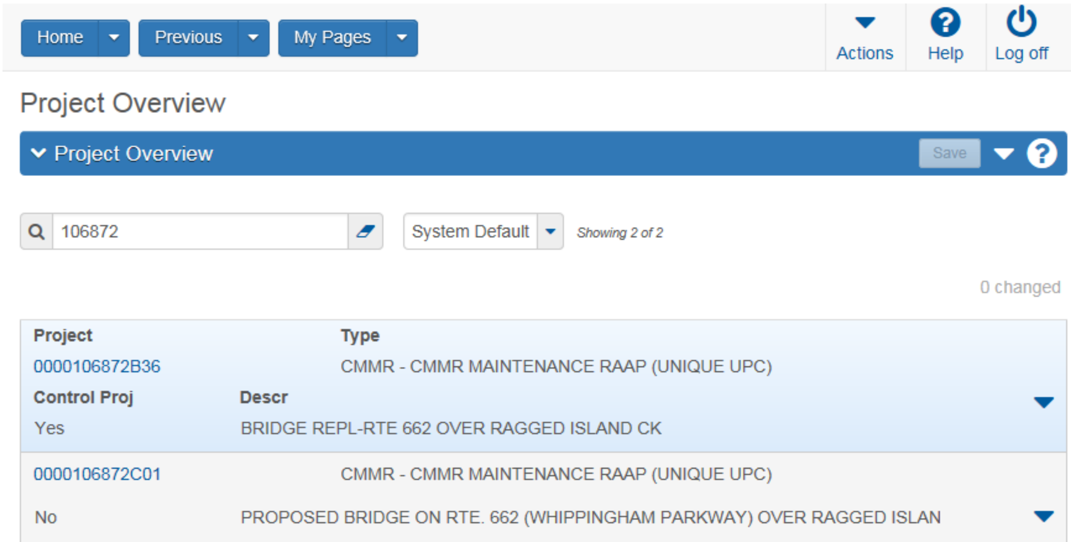


Figure 7 – Project Overview Search box

Follow these steps to use the **Quick Find search box:**

1. **Click in the Quick Find search box** for a list that you want to filter.
   - For example, in the Project Overview screen, the list being searched is the list of projects.
2. Type the **string of characters** you want to **match** or use as a delimiter. The Quick Find filter is **not case-sensitive.**
   - After you type at least three characters and wait a moment, the system refreshes the list and displays the rows that contain the string of characters you entered.
   - The search criterion creates a temporary filter.
3. If you want to **remove a row from the list of search results**, select **Exclude from Search Results** on the Actions Menu for that row.
   - **The row is removed from the list of search results.**
   - You can exclude additional rows as needed.

2. PROJECTS

This chapter covers creating, changing and deleting projects. Please note that the specifics for entering Maintenance-funded projects are provided in Chapter 3.

2.1 Responsibility

Whether you, the user, actually initiate the creation of the project or wait to receive your copy from another user; can be determined by the three cases described below:

Case 1: The Project Manager will create the project and make copies to move to the control groups of the other designers/disciplines involved.

- Before copies of the project are sent out, a Prime Project should be created and all of the projects (both the original and any copies) associated to the Prime Project.

Case 2: The designer (who is not a Project Manager) will not create the project. They will find their copy of the project in their listing of projects once the Project Manager has made a copy in their control group. The designer will review this project as submitted to him/her and make appropriate revisions.

- If the designer does not have the project in their project listings, they should contact the Project Manager.

Case 3: The designer will create a new project(s) if not provided by the Project Manager and the Project Manager will be responsible for adding the project(s) to the Prime.

Case 4: For a "stand-alone" project (a project in which no other division will be involved), the designer will create the project(s). A Prime Project must be created, and the project(s) associated to it.

2.2 Field Entry and Case requirements.

All text entered in any and all fields in Precon must be UPPER case, that includes the letters in Project, Prime and Proposal ID's (names).

*Please use **all UPPER CASE** for **ALL fields** in Precon.*

2.3 Creating a New Project

The Add Project function creates a new Project and opens on the **General** tab, which allows you to add basic information for the new project.

- Click on **Projects** from the Preconstruction Dashboard located on the Home page**.**
- **Click the Project Overview Action button** and **click Add.**
- Fill in **only the required fields on the General tab**.
- Please see **Appendix A** for proper naming conventions.

*Please use **all UPPER CASE** for **ALL fields** in Precon.*

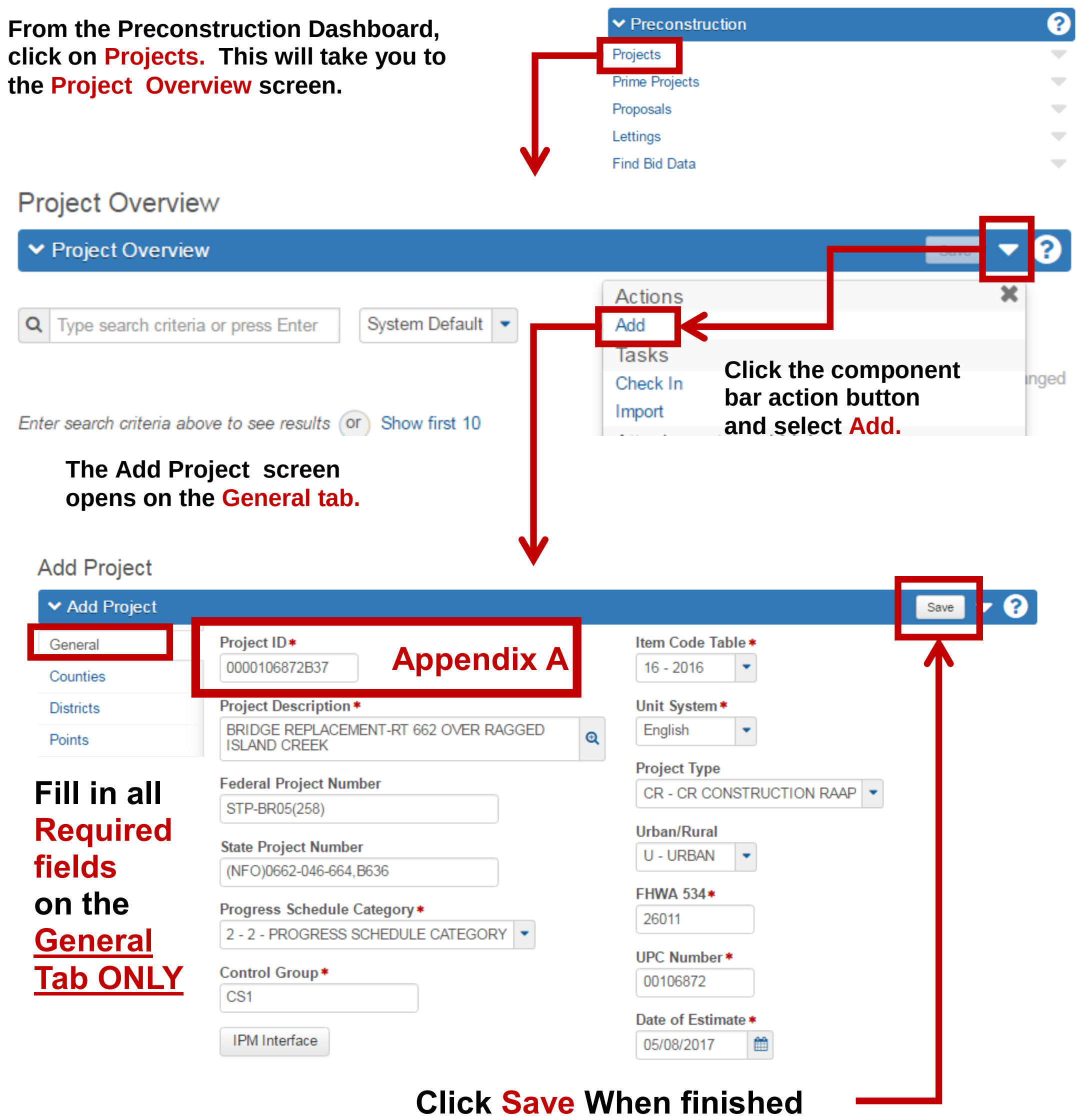


Figure 1 - Adding a New Project from the Project Overview screen

The Add Project screen requires entry of only the minimum required fields (on the General Tab ONLY) for the database to determine if the Project ID is unique, once the new project is saved then the user will complete the remaining fields and tabs.

The following fields are required (indicated by a **red asterisk** *) when adding a new Project:

1. Project ID (See Appendix A for proper naming conventions)
2. Project Description
3. Progress Schedule Category
4. Control Group
5. Item Code Table
6. Unit System
7. Project Type
8. FHWA 534
9. UPC Number **(<u>MUST be 8 digits</u>, add leading zeros to the UPC number**)
10. Date of Estimate (auto fills current date)

The **Add Project screen will display four tabs**: General, Counties, Districts and Points.

- The remaining Project Summary tabs – Road Segment, Bridge Segment and Workflow should not be filled in when Adding a project.
- To save the newly added project, click the **Save** Save **button** found on the right side of the Add Project header.

Saving the Project and Correcting Errors

When the required fields on the General tab of the Add Project screen have been completed or when you are ready to save your data, click the **Save** 

button to insure that all information entered has been saved.

- If you have completed all required field criteria satisfactorily and the Project ID (PCN) is a unique number, the project will be added/saved.
- The Project ID field can be changed as long as you are on the Add Project screen, even if the project was previously saved on that screen.
- Once you navigate away from the Add project screen, then you can only return to that project by way of the Project Summary screen. **The Project ID field will convert to display-only and cannot be changed.** This ensures unique Project ID's in the database.
- If a required field was not filled-in or incorrect data entered at a field which is supported with a reference table, an **Error** box will display. For example, if you left a required field blank or entered invalid data, you will see an **Error** box at the top giving information as to what field was left blank or contains an invalid value.
- If you attempted to create a project with a Project ID already in existence in the Precon database, you will see an **Error** box with the message that the Project ID (the primary key) is already being used by another project. A project could already exist in another control group with the Project ID you have just attempted to create. Precon will not allow duplicate Project IDs.

Note: when any errors are presented, they may **only show up one at a time**, so you may have to go through **several corrections** before a save is successful.

<u>Errors must be corrected before the new project record will be saved/created.</u>

2.4 Complete Remaining Fields

Now that you have created & saved your Project and the required fields on the General tab, **click the Overview link**, enter the new project's UPC Number and complete the remaining tabs; **Counties**, **Districts**, **Points**, **Road Segment**, **Bridge Segment** and **Workflow** tabs.

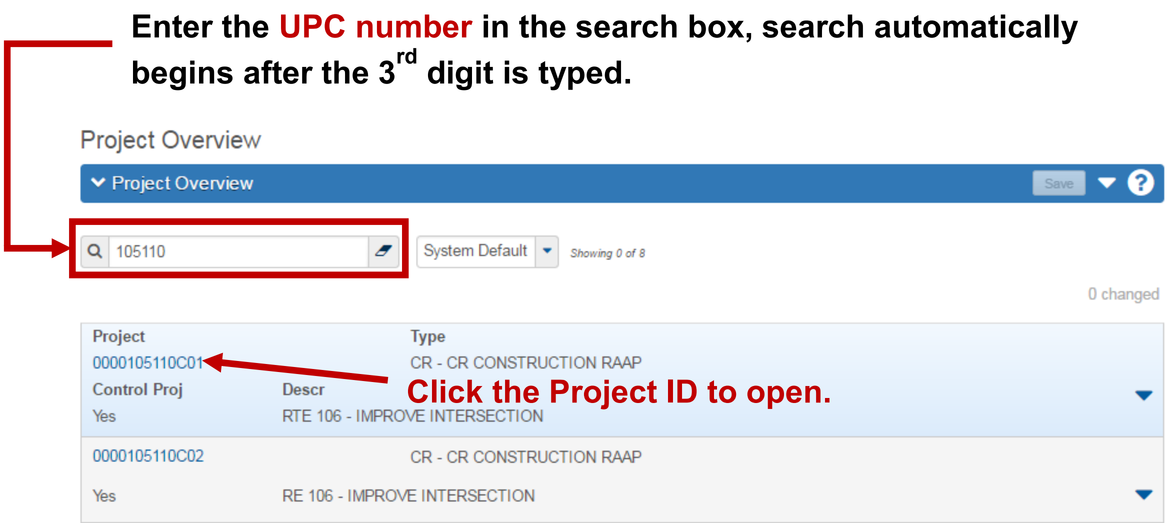


Figure 2 - Retrieving a Project from the Project Overview Screen

To complete the Project:

1. Click on the **Overview quick link** at the top left of the Add Project screen or click on the **Home button** and then click on **Projects** from the Preconstruction Dashboard located on the Home page**.**
    - This will take you to the **Project Overview screen.**
2. Clear out the Search by **clicking on the eraser**, and then **enter the UPC Number.**
3. The **Project Summary row** will open. Click on the **Project ID** to open your Project.

2.5 Project Quick links

Quick links are displayed in blue text below the Menu Bar and above the blue component bar. These links allow you to quickly jump to application pages for the project.

All but the Wage Decisions quick links are discussed in later chapters.

- Users do not need to enter Wage decisions information at the project level.

  That information is added in the Proposal. See chapter 9 for details

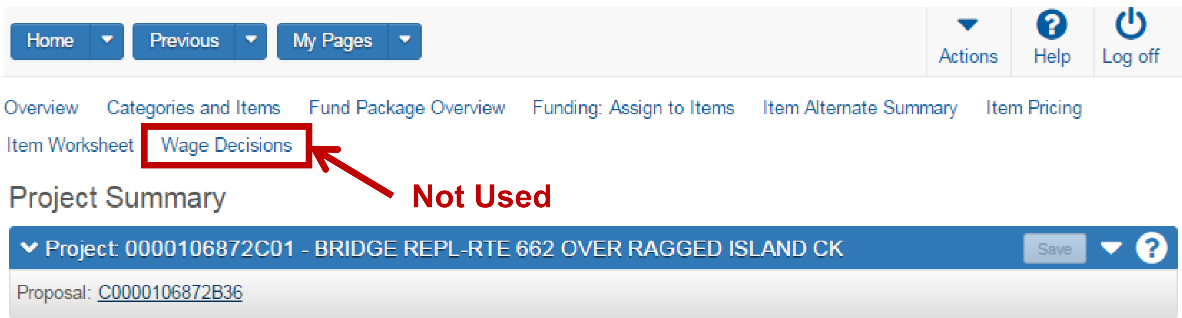


Figure 3 – Project Quick Links

2.6 General Tab

Figure 4 - The General Tab Field Information

Use the **[TAB] key** to move between fields and enter the project information on the General tab.

Some fields have **Reference Tables.** As you [TAB] to such a field, a drop-down arrow will appear. A selection MUST be made from the available choices in the table.

GENERAL TAB FIELD DESCRIPTIONS:

Project ID Required: The Project ID (formerly PCN) may consist of as many as 13 characters (14 characters are required for maintenance-funded (Maintenance Division) projects). Refer to **Appendix A** for Project ID instructions. (Once the project is completed and added to the database, this field becomes display-only and cannot be changed.) All letters must be capitalized.
Examples: 0000109813C01, 0000110328N01

Project Description Required: For all projects (other than bridge), enter the description of the type of work being performed on this project. The description from iPM is the best source. For Bridge projects, enter the description from the front sheet title block from the plan set.

City/Cnty: Select County or City in which the project is located from the drop-down menu which should match the State Project Number. Appendix C & D includes County & City codes and appropriate conversions when required.
Ex.: Project number is 0615-047-169. County/City Code is 047.

Pavement Type: Select the appropriate code from the drop-down menu.

Pavement Type Code	
Code	**Description**
ASPH	Asphalt Concrete
BITC	Bituminous Concrete
BITP	Bituminous Penetration
COMB	Combination Asphalt & Concrete
GRDE	Grade & Drained Earth
GRVL	Gravel or Stone
MIXB	Mixed Bituminous
OTHR	All Others
POCC	Portland Cement Concrete
PRIM	Primitive
UNIM	Unimproved

Project Status: Status of the project. Select the appropriate code from the drop-down menu.

Project Status Table	
Code	**Description**
CE	Conceptual Estimate
CON1	Construction (1st Submission)
CON2	Construction (2nd Submission)
FI	Field Inspection
LAS	Passes to LAS
PE	Preliminary Engineering
PFR	Preliminary Field Review
PH	Public Hearing
RWS	Right of Way Stage
SR1	Secondary Roads Project Initiative
SYP	Six Year Plan

Project Work Type: Select the appropriate code from the drop-down menu.
See Appendix E for a complete listing.

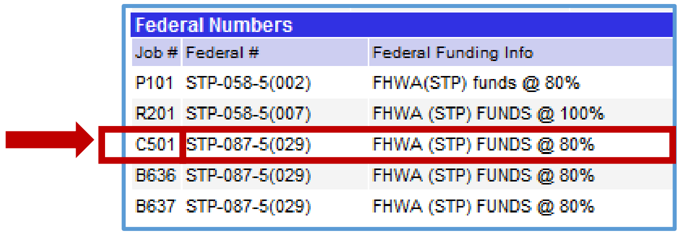
Project Item Totals: This field populates automatically.

UPC Num Required: Enter the UPC number of the project. **This field must have 8 digits, please add leading zeros to the UPC number to attain 8 digits in this field**. Note: this field must match in all Projects under a Prime.

Estimator: This field designates the individual performing the independent Evaluative Estimate and the Plan Review in the Construction Division. Leave this field blank.

Designer: This field designates the individual entering the estimate in AWP-Precon. Select your name from the drop-down menu. **Note**: All VDOT users should have their name in the list. If your name is not in the list please contact the AWP-Precon Administrator found in the Getting Help section. Consultants shall select their firm/company name in this list which matches their Control Group number.

Job Number (C#, B#, CREW): This field is derived from the last numbers of the State Project number and can be found in IPM Pool tab under the Federal Numbers. Select the appropriate code from the drop-down menu. Example below from iPM. Users will select the CXXX for roadway, utilities, traffic, etc disciplines. Bridge projects will use the BXXX in the list.



Federal Numbers

Job #	Federal #	Federal Funding Info
P101	STP-058-5(002)	FHWA(STP) funds @ 80%
R201	STP-058-5(007)	FHWA (STP) FUNDS @ 100%
C501	STP-087-5(029)	FHWA (STP) FUNDS @ 80%
B636	STP-087-5(029)	FHWA (STP) FUNDS @ 80%
B637	STP-087-5(029)	FHWA (STP) FUNDS @ 80%

Control Group Required: The control group is the security designation that dictates what project(s) users have access to. This field populates automatically with your control group when creating new projects. The data in this field may be changed in order to transfer a project to another person/control group.

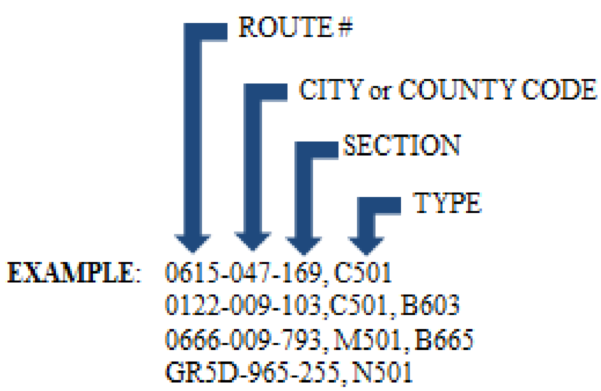
IPM Interface button: Refer to section 2.6.1 for complete details. Please note this feature only functions within VDOT networks.

Project Validation button: This is a VDOT specific project validation that should be run in conjunction with the System Validation. The button is located at the bottom of the General tab within an open Project. This Validation must be run for every Precon Project.

Item Code Table Required: Select from the drop-down menu. This coincides with the current Road and Bridge Specifications manual.

Unit System Required: Defaults to E (English Project). Note: Metric is no longer used.

State Project No.: Enter the state project number complete with dashes, commas, etc.
Types starting with R or P (For example R201 and P101) should not be used.



Federal Project No: Enter the Federal Project Number, if applicable, in its entirety, complete with dashes, parentheses, etc. If the project is not federally-funded, enter NONE. **Ex.:** NH-5401(876)

Federal Oversight: Select the appropriate code from the drop-down menu.

FO = Federal Oversight
NFO = No Federal Oversight
N/A = State Project

Federal ID: Enter only the **numbers** from the Federal Project Number, with no punctuation, no alpha characters, and seven digits maximum.

If the project **does not have a Federal Project Number** enter “NONE”

EXAMPLE: Fed. Project No. is STP-5A03(264)
Enter, **503264**

FHWA 534 Required: Enter the five alpha-numeric character code, found in the Project Pool of iPM.

Controlling Project Checkbox: Should be checked for the project containing the most money. See Chapter 9 of this manual for details.

Primary Project District ID: This field populates automatically.

Urban/Rural Class: Select the appropriate code from the drop-down menu: Rural, Suburban or Urban.

Project Type Required (this is new): Select the appropriate code from the drop-down menu.

PROJECT TYPE CODE

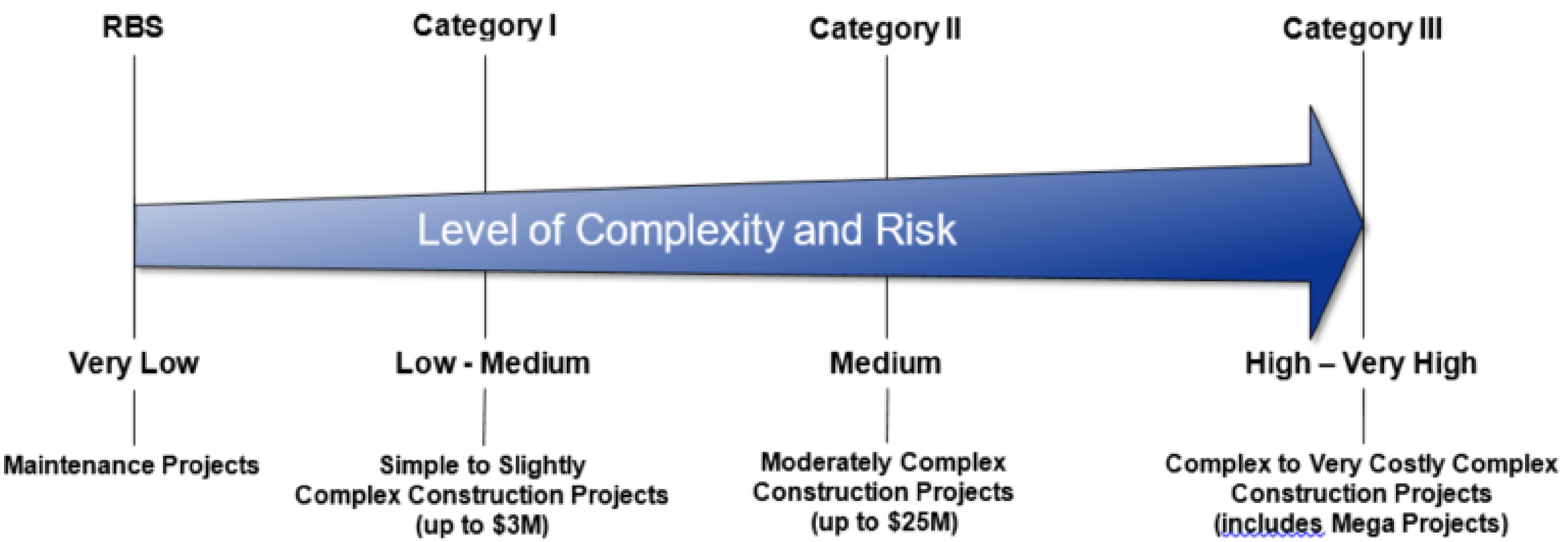
CODE	USE
CM	CONSTRUCTION / MAINTENANCE HYBRID
CMMR	MAINTENANCE RAAP
CMMS	MAINTENANCE SAAP
CMSR	MAINT SCHEDULE RAAP
CR	CONSTRUCTION RAAP
CRL	CRL Project Type (For CRL Use Only)
CS	CONSTRUCTION SAAP

RAAP (Regular Advertisement and Award Process) are advertised on the 2nd Tuesday for a minimum of 21 days. Posted on VDOT’s Contractors Advertisement Bulletin Board (CABB) web system and the eVa website.

SAAP (Special Advertisement and Award Process) are advertised for 10 days minimum. Posted on VDOT’s Contractors Advertisement Bulletin Board (CABB) site and the eVa website.

Progress Schedule Category Required (Updated June 2022): Select the appropriate Progress Schedule from the drop-down menu.

VDOT Project Schedule Category Guidelines



Description	RBS (Former CAT M)	Category I (Former CAT I + II)	Category II (Former CAT III)	Category III (Former CAT IV + V)
Level of Complexity and Risk	Very Low	Low to Medium	Medium	High to Very High
Type of Projects	1. Seasonal Maintenance 2. Maintenance Projects – Road and Bridge Standard Specifications 108.03	1. Small to medium size construction/bridge projects 2. One or two season duration 3. Estimated contract value of up to $3M	1. Moderately complex medium size projects 2. Multi-season duration 3. Estimated value up to $25M	1. Large to very large size complex projects 2. Multi-season duration, multi-major operations

Date of Estimate Required: When you first create (add) the Project, this field will be automatically populated with the **current date**. This field indicates the date the estimate was first started.

Last L&D Estimate: This field populates automatically when a project is moved to the CD control group.

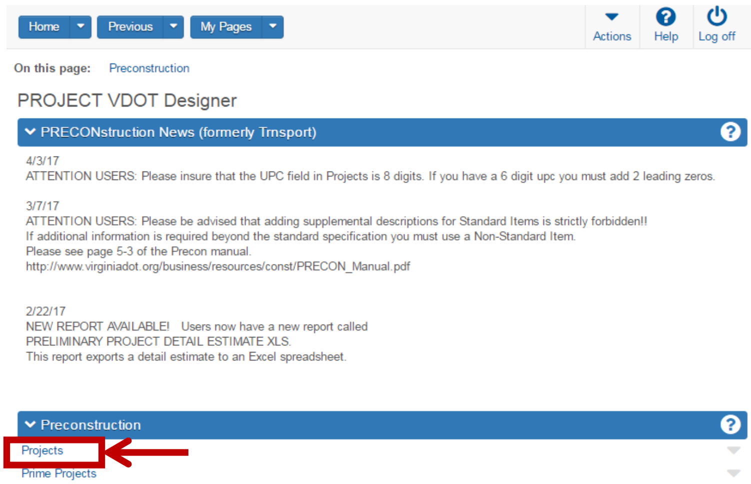
Loaded L&D Estimate: This field populates automatically when a project is moved to the CD control group.

Date of Gen Bid Base Prices: Enter the date when you generated item prices. This date displays on the cover of most Precon reports.

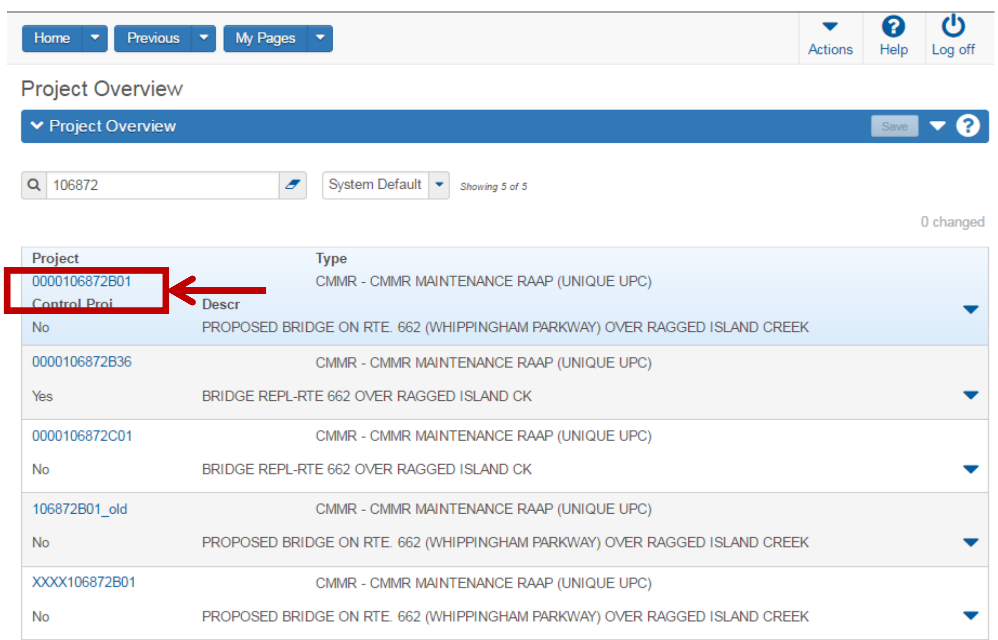
2.6.1 iPM Interface

Preconstruction has an interface that will pull the general project data from iPM and transfer the data into the fields of Preconstruction. The project in iPM is associated by the UPC field so it is crucial that the UPC field be filled out correctly. In order for this interface to work, the user must reside on the VDOT network. Unfortunately, this feature does not work for external users/Consultants.

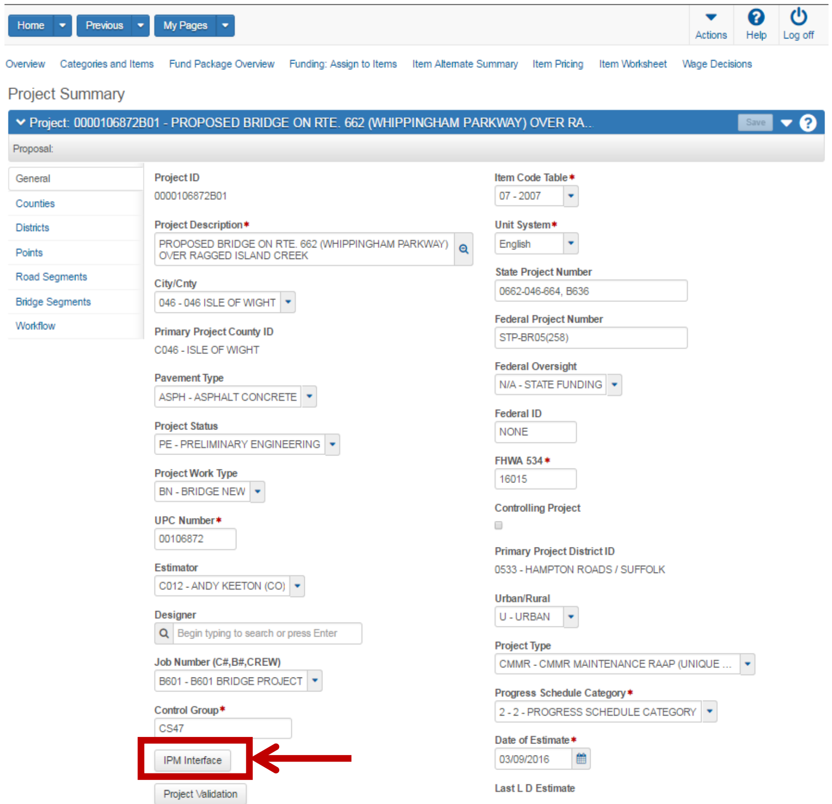
The IPM Interface must be used from within an existing Project. From the Home Screen select **Projects**.



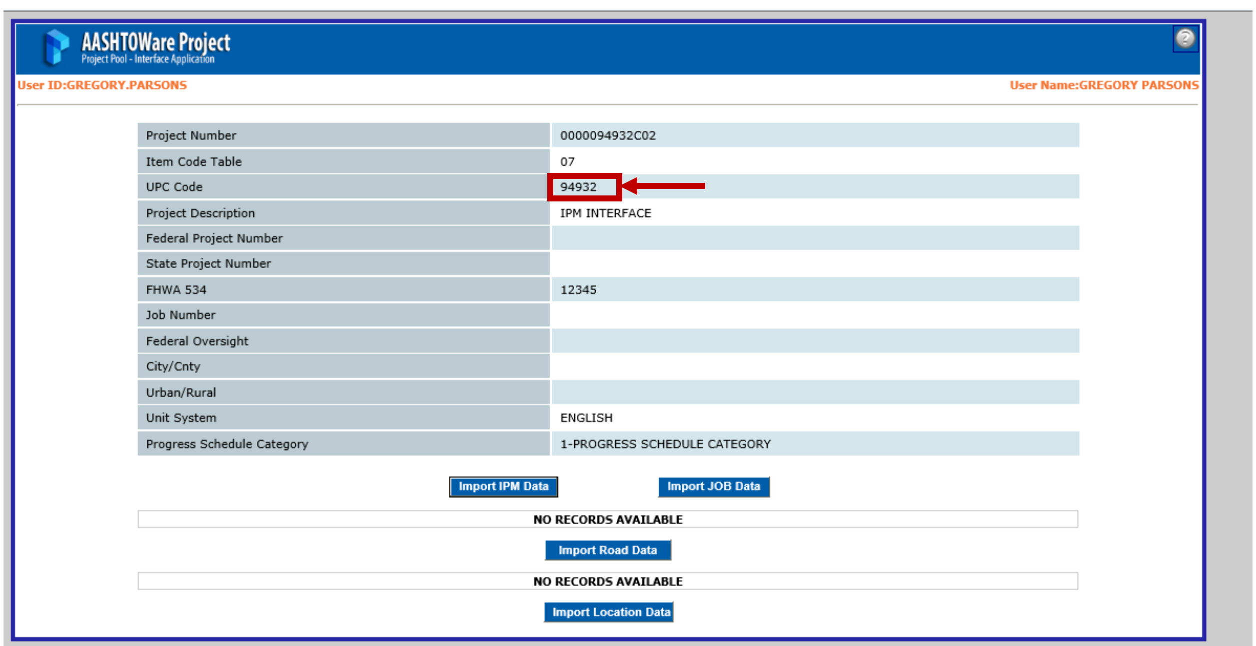
Type your Project ID into the Search box on the Project Overview Screen. Click on the Project ID once you have found your project



You are now in the Project on the General Tab. Scroll to the bottom of the page and select the button **IPM Interface**.

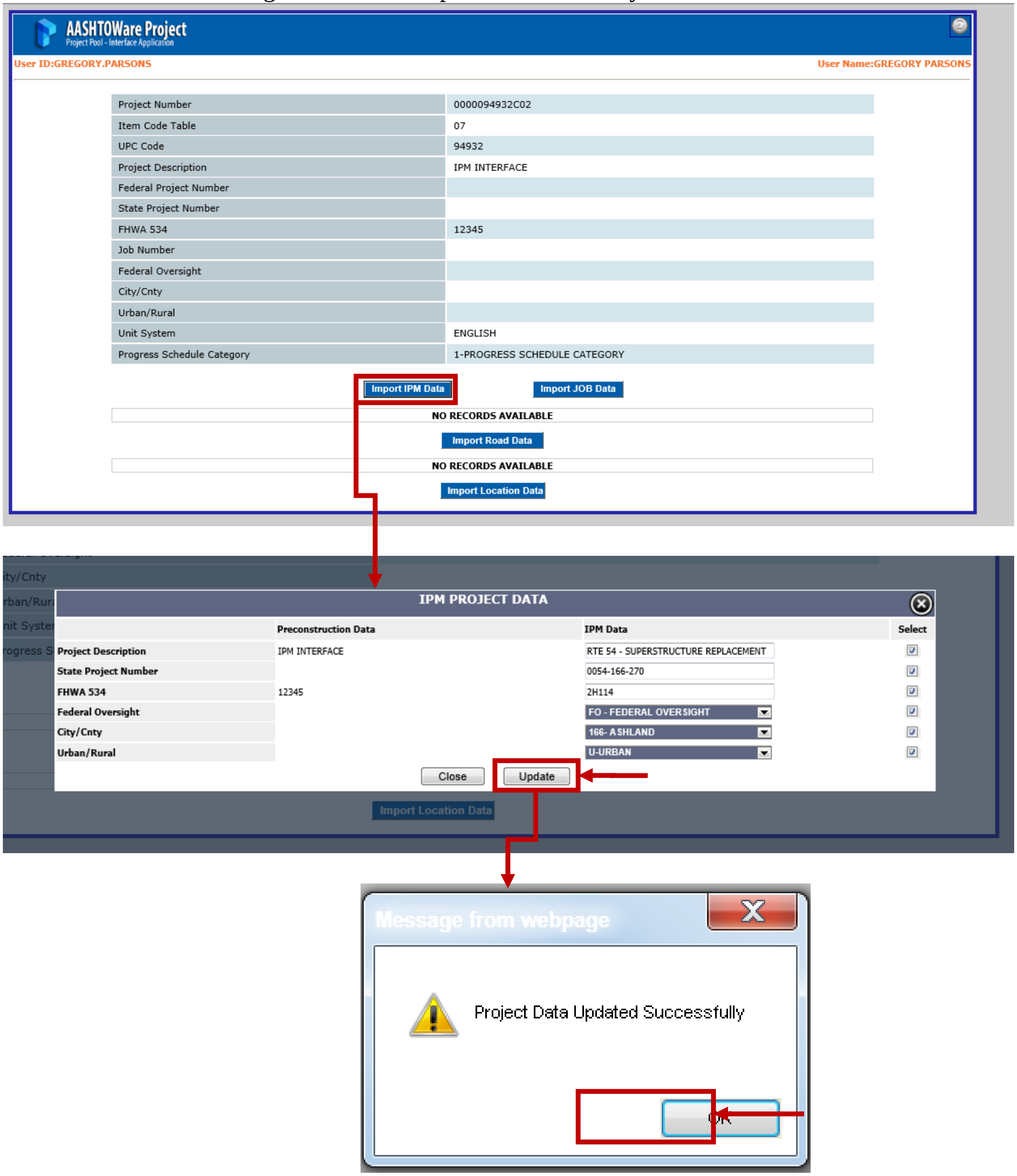


The iPM interface will open a new window on your web browser. This page will show the current data you have on your project in Precon. Verify that the UPC Code is correct before moving forward.

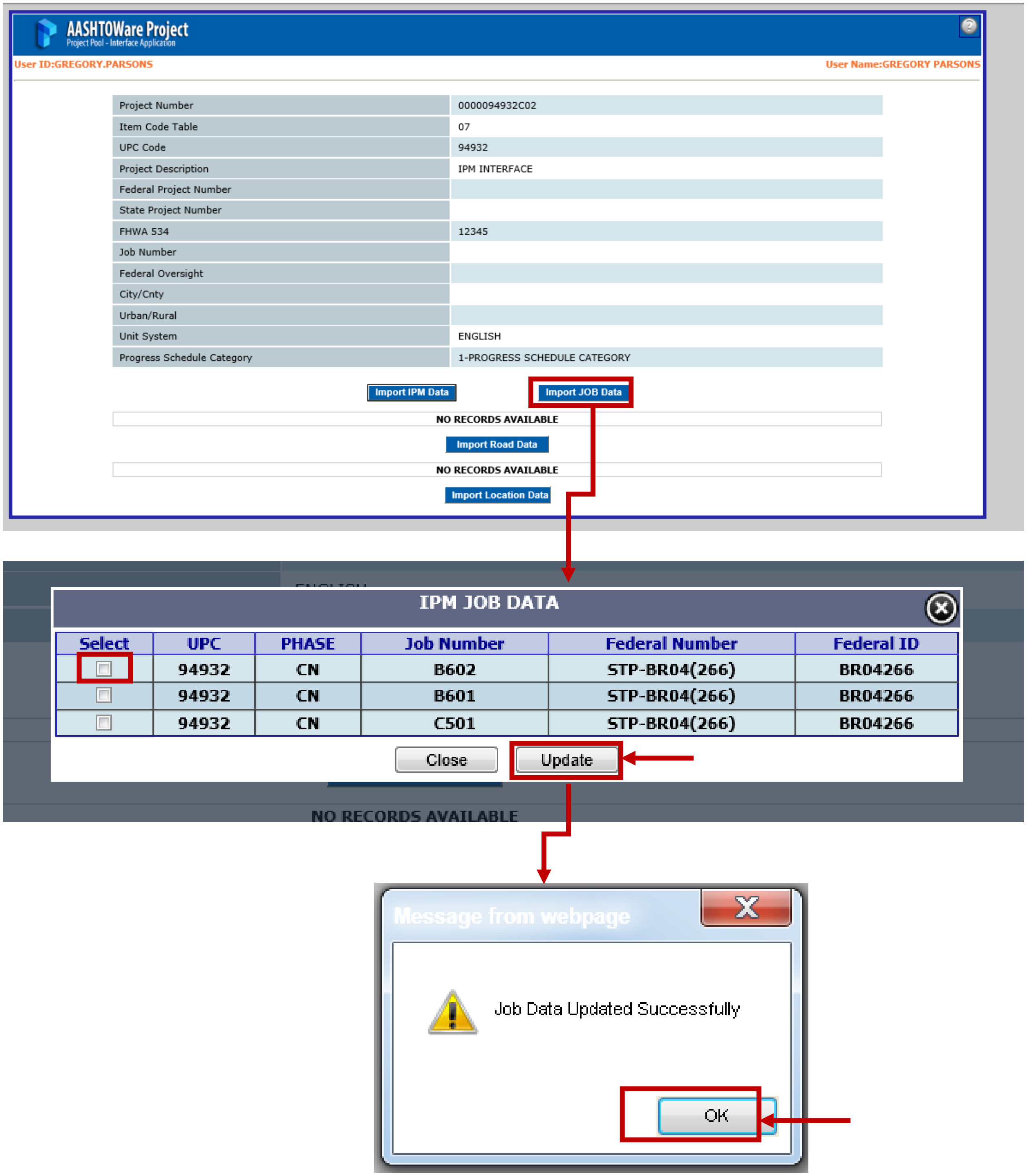


Select the **Import IPM Data** button. A new widow will appear. The column on the left displays the current data you have in Precon and the column on the right displays the data in IPM.

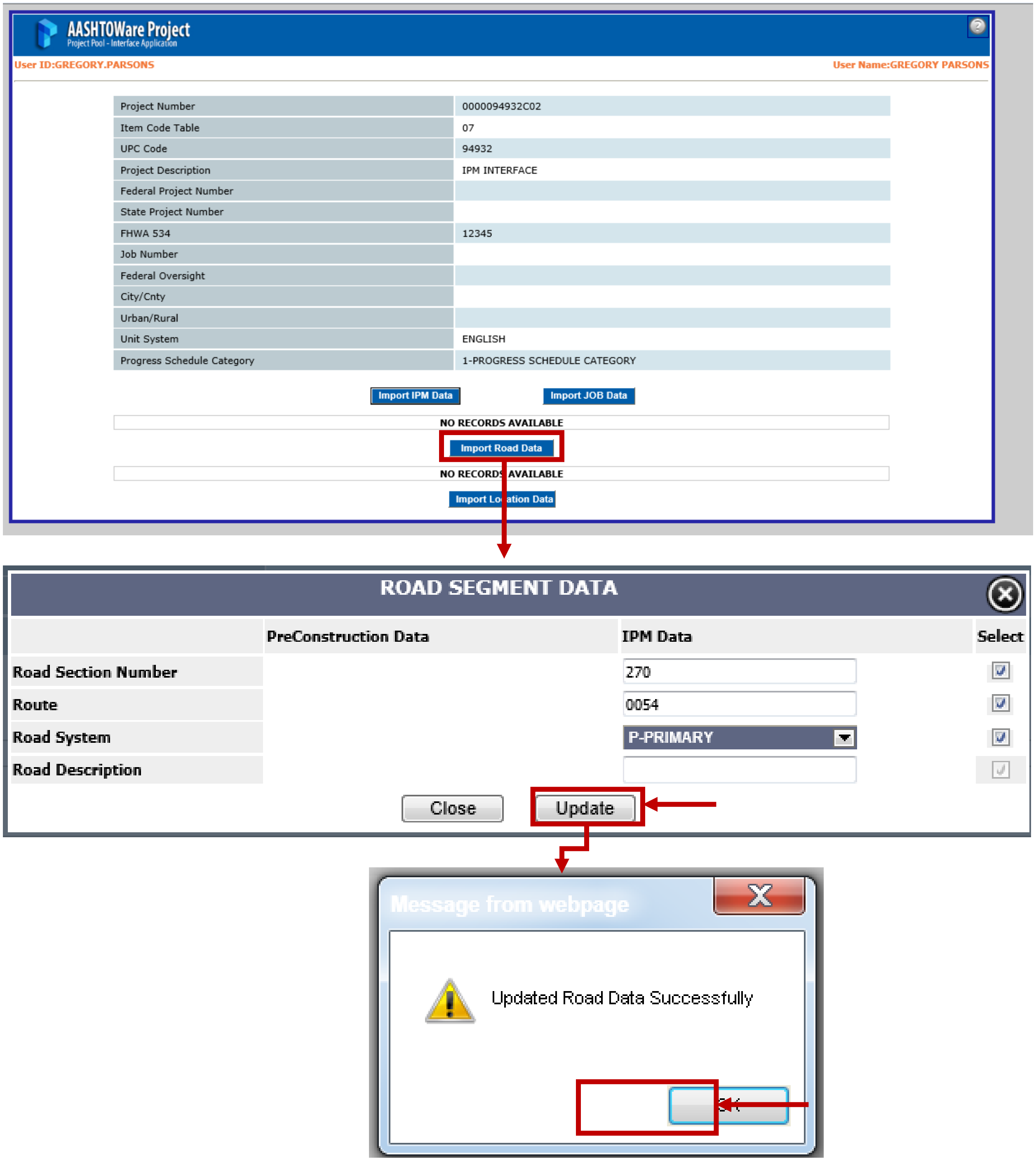
The Select checkbox beside each row allows you to choose which fields you want to overwrite with iPM Data. Click the **Update** button to import the iPM data or the **Close** button to cancel importing those fields to Precon. You will receive a message that the data updated successfully. Click **OK** to return to the IPM main screen.



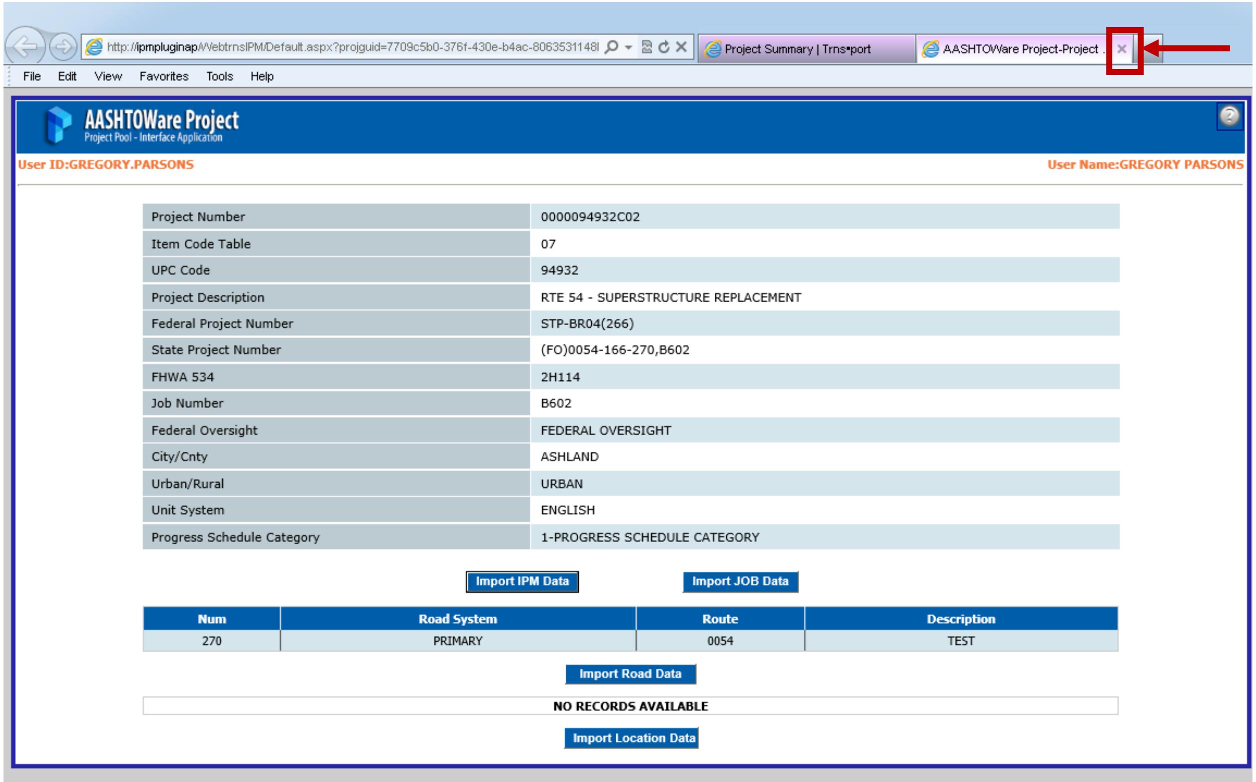
Next, select the **Import Job Data** button. A new window will appear with the IPM Job Data. Depending on the UPC, there may be multiple selections associated to the project. The Select checkbox allows the user to select which job they would like to import. Click the **Update** button to import the iPM data or the **Close** button to cancel importing those fields to Precon. You will receive a message that the data updated successfully. Click **OK** to return to the IPM main screen.



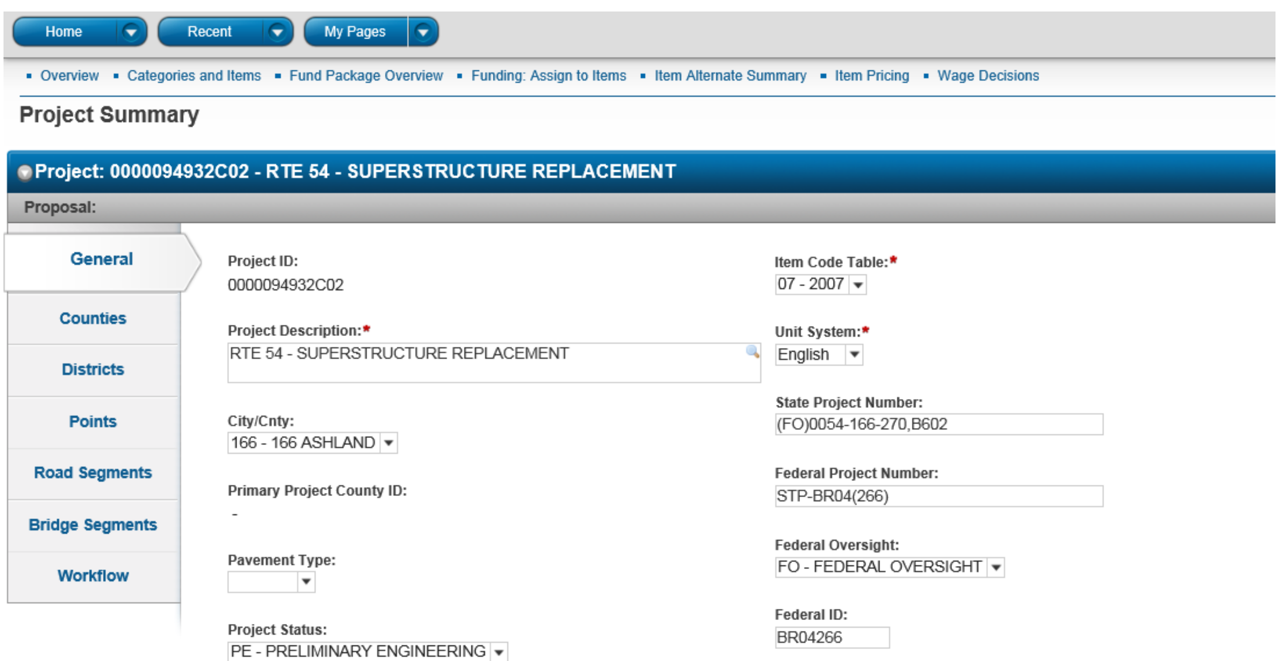
Click the **Import Road Data** button. A new window will appear with the Road Segment Data. The left column displays the data currently in Precon and the right column displays the data currently in iPM. The Select checkbox beside each row allows you to choose which fields you want to overwrite with iPM Data. Add the route in the Road Description field. Click the **Update** button to import the iPM data or the **Close** button to cancel importing those fields to Precon. You will receive a message that the data updated successfully. Click **OK** to return to the IPM main screen.



After updating the Precon information with iPM Data, close the iPM interface web browser window.

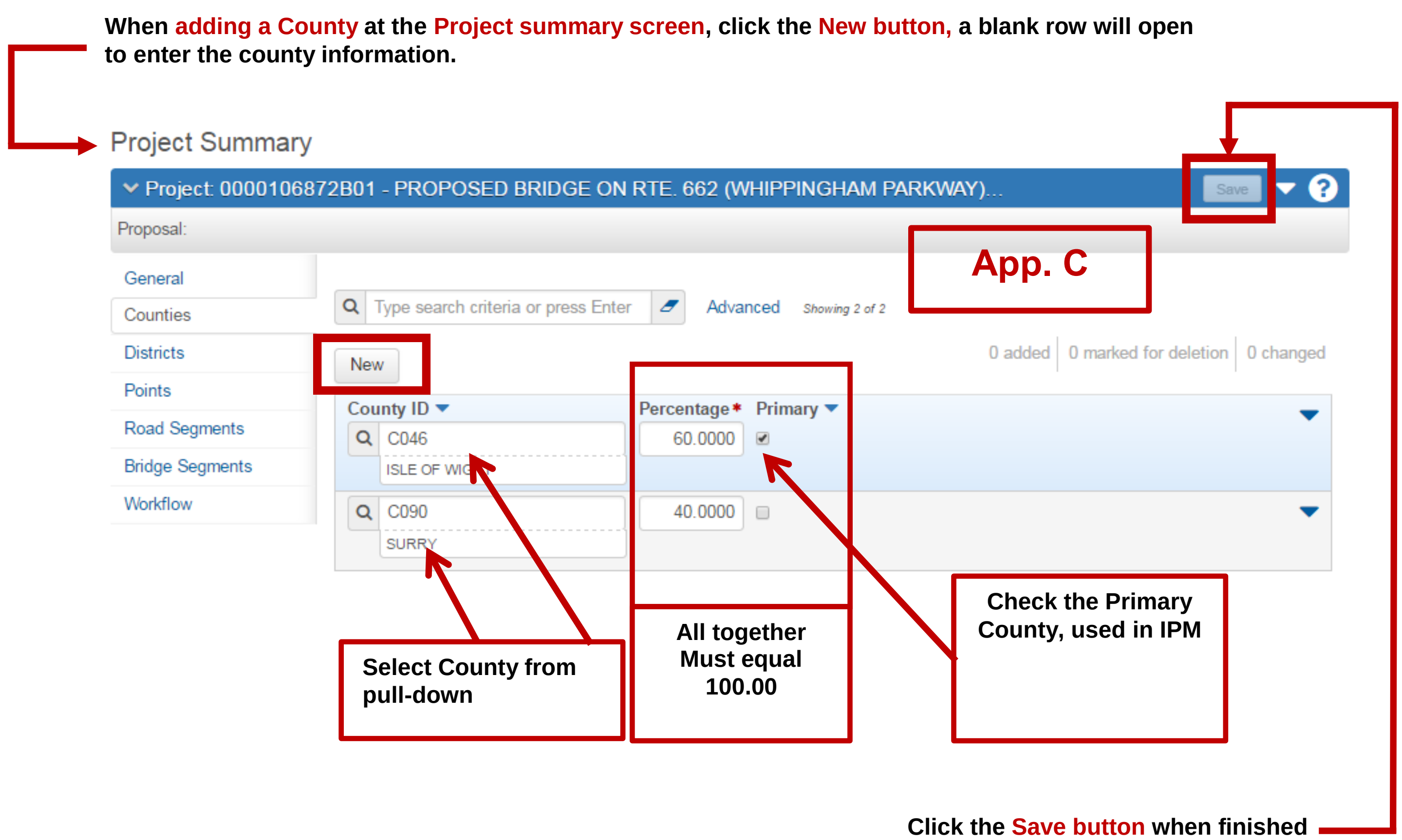


Notice that the Precon data is not showing the new iPM Data. This is because the database has been updated since your last page refresh. Select the **F5** key to refresh your page or you may have to log out of Precon, then log back in for the update to appear.



2.7 Counties Tab

Each project must have at least one county, should include all counties that the project touches and its Percentage must equal 100%. Failure to associate a county will prevent the generation of the preliminary detail estimate report. The Primary County selected should match the county that is used in IPM.



To add a County:

1. When the **Counties tab** is displayed, if it is not showing a blank row, click the **New button** and enter the following information:
2. **County ID:** this is a search field. Enter the **county number or name** and then select the appropriate code from the drop-down menu. See **Appendix C** for a complete listing.
3. **Percentage:** this is a **required field** and will **default to 100.**
    - This is the percentage of the Project that is associated with this County.
4. **Primary: Checkbox –** This should always be checked for the larger percentage county.
    - **One county must be flagged as the Primary County**, which is the **controlling county.** This primary county should match the county shown in iPM.
5. When the county information has been entered, click the **Save button**.

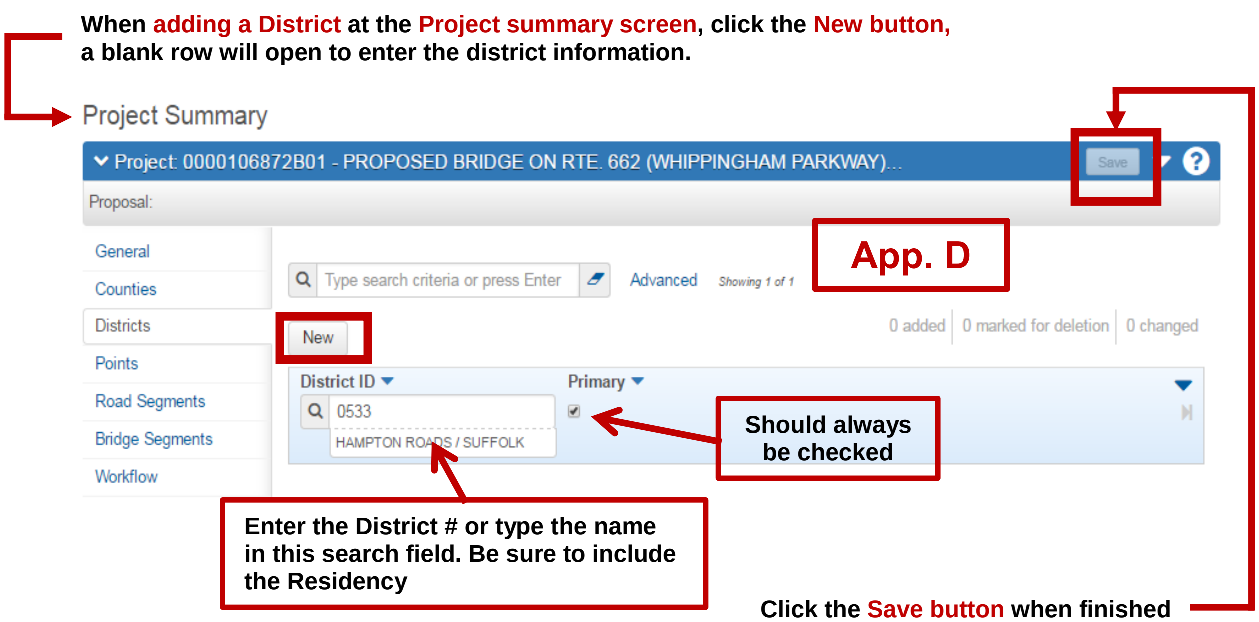
2.7.1 Deleting a County from a Project

To **remove** a **County** from a Project, select the Counties tab and select the County row's Action Menu and select **Delete.** After the row turns grey, click on **Save** to complete the delete.

To **change a County to a different County**, go to the Counties tab and select the County ID field and change to the new **County ID,** and then select **Save**.

2.8 District Tab

Each project must have at least one District and its associated Residency assigned to the project, which can be found in iPM.



To add a District:

1. When the District tab displays, if it is not showing a blank row, click the **New button** and enter the following information:

2. **District ID:** This is a search field**.** Hit the **Enter key** or enter all or part of the District number or name and select the appropriate **District** from the drop-down list. See Appendix D for a complete list.

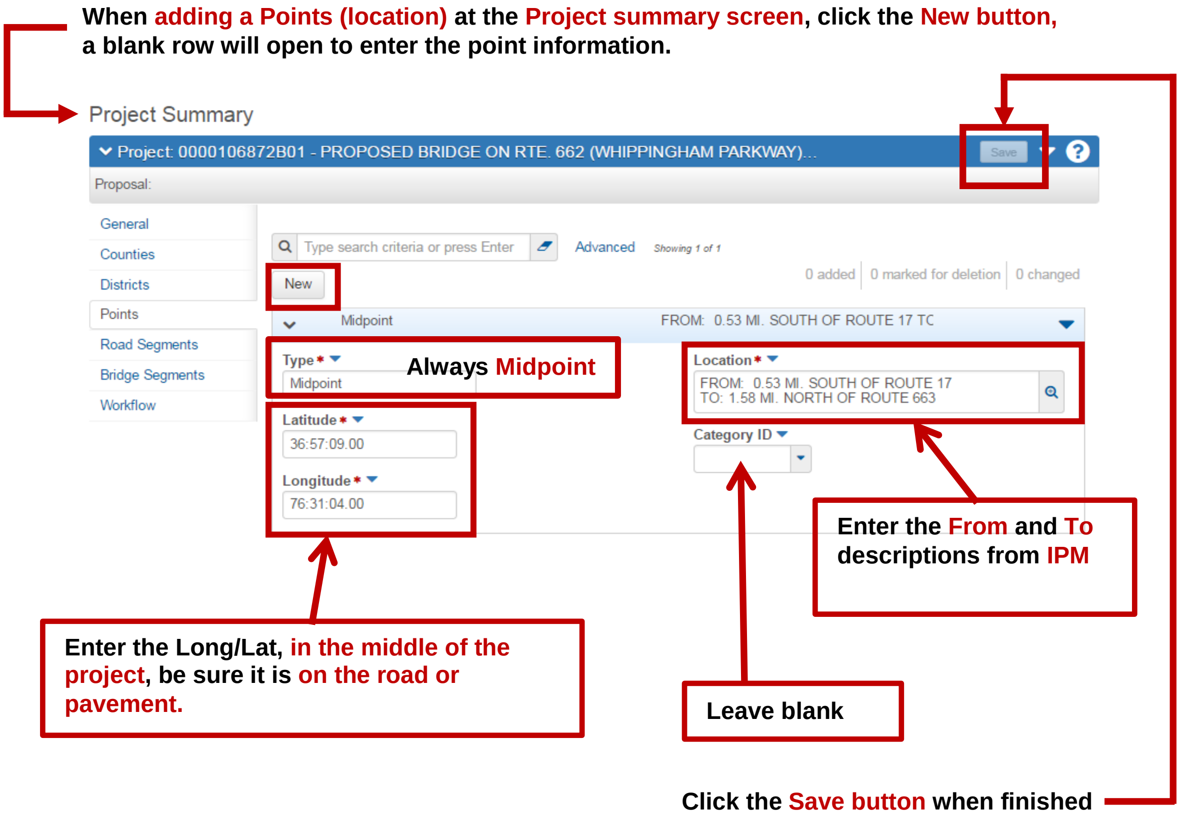
District	District No.
Bristol	1
Salem	2
Lynchburg	3
Richmond	4
Hampton Roads	5
Fredericksburg	6
Culpeper	7
Staunton	8
Northern VA	9

3. **Primary: Checkbox: Should always be checked.** This checkbox indicates that the District is the **first or principal district** in which work will be performed for this project.

- If there are **multiple Districts**, then **one District must be flagged as the Primary District** and contains the majority of the work.

2.9 Points Tab

The Points tab provides vital project data for the From & To description and the Longitude & Longitude of the project.



To add Points (location) information:

1. Click the **New button** and enter the following information:

2. **Type field Required**: This field will default to **Midpoint** and can only be **Midpoint**.

3. **Latitude field Required**: Enter the Latitude using this format **36:36:43.00**.

4. **Longitude field Required**: Enter the Longitude using this format 80:23:27.00. <u>The negative should NOT be entered.</u>

5. **Location field Required**: Enter the **FROM: *description* and To: *description*** from iPM**.**

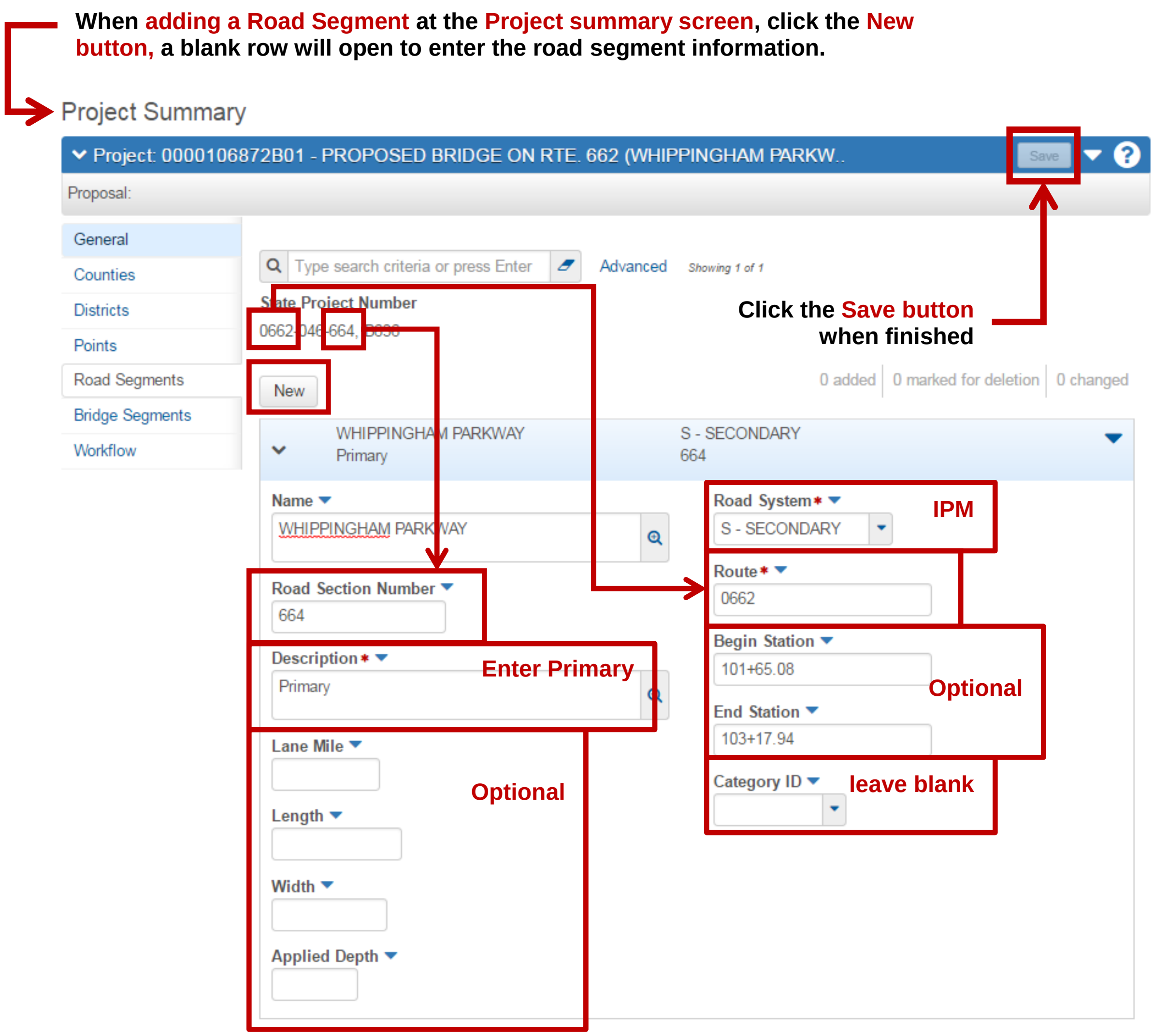
6. **Category ID field:** Not used, leave blank.

7. **Location:** Not used, leave blank.

Note about Long/Lat: If a project spans a large area, provide the Long/Lat at the center of the work area. The Long/Lat fields are used by the Civil Rights Division to determine DBE goals using a 75 mile radius from the point provided.

2.10 Road Segments tab

A road segment is a portion of a road that can be described by a set of starting and ending stationing. A Road Segment should be created for each road on the project. A road segment can be used to locate a specific section of a road as the site for a project's work or a portion of the project's work. **All Precon projects (including Bridge projects) must have at least 1 Road Segment.**



The fields on the Road Segment tab are:

1) **Name**: The name of the Road Segment.

2) **Road Section No.**: Enter the **section number of the Project Number** (the third part of the State Project Number).

   Ex.: Project number is 0615-047-169. Section number is 169.

3) **Description Required**: Enter the word **Primary** in this field.

4) **Lane Mile**: A unit of measure **one standard lane wide and one mile long**. **Note: The Lane miles should not be separated between Road Segments, the project total Lane Miles should be entered in the *first* road segment of a project if there is more than 1 Road Segment.**

5) **Length**: The **length** of the Road Segment in **miles**, to 4 decimal places.

6) **Width**: The **width** of the Road Segment in **feet**, to 4 decimal places.

7) **Applied Depth**: The **depth of the pavement** in the Road Segment in **inches** (or in centimeters for metric projects). This field is optional.

8) **Road System Required**: The **functional class of the road** (obtained from the title sheet of the plan set or iPM). Select the appropriate code from the drop-down menu.

9) **Route Required**: Enter the **Route Number** exactly as it appears in the State Project Number, it **must be 4 digits**:

   Ex. #1: Project number is 0064-122-101, C501. Route number is 0064.

   Ex. #2: Project number is U000-124-110, B610. Route number is U000.

   Ex. #3: Project number is 0615-047-169, C501. Route number is 0615.

10) **Beginning Station**: Enter the **beginning station of the project** (from iPM or the plan set cover sheet) and the "+" and decimals should be included, otherwise this field can be left blank. (**Ex**.: 1290+10.72) This field is optional.

11) **Ending Station**: Enter the **ending station of the project** (from iPM or the plan set cover sheet) and the "+" and decimals should be included, otherwise this field can be left blank. (**Ex**.: 1360+15.95.) This field is optional.

12) **Category ID**: A unique identifier assigned to each Project Category in the system. **This field is not used, leave blank.**

13) **Location:** Not used, leave blank.

2.11 Bridge Segments tab

A bridge segment can be used to locate a specific section of a bridge as the site for a project's work or a portion of the project's work. It can also refer to an entire bridge. Not all Precon projects require a Bridge segment but all Bridge projects must include at least one Road Segment.

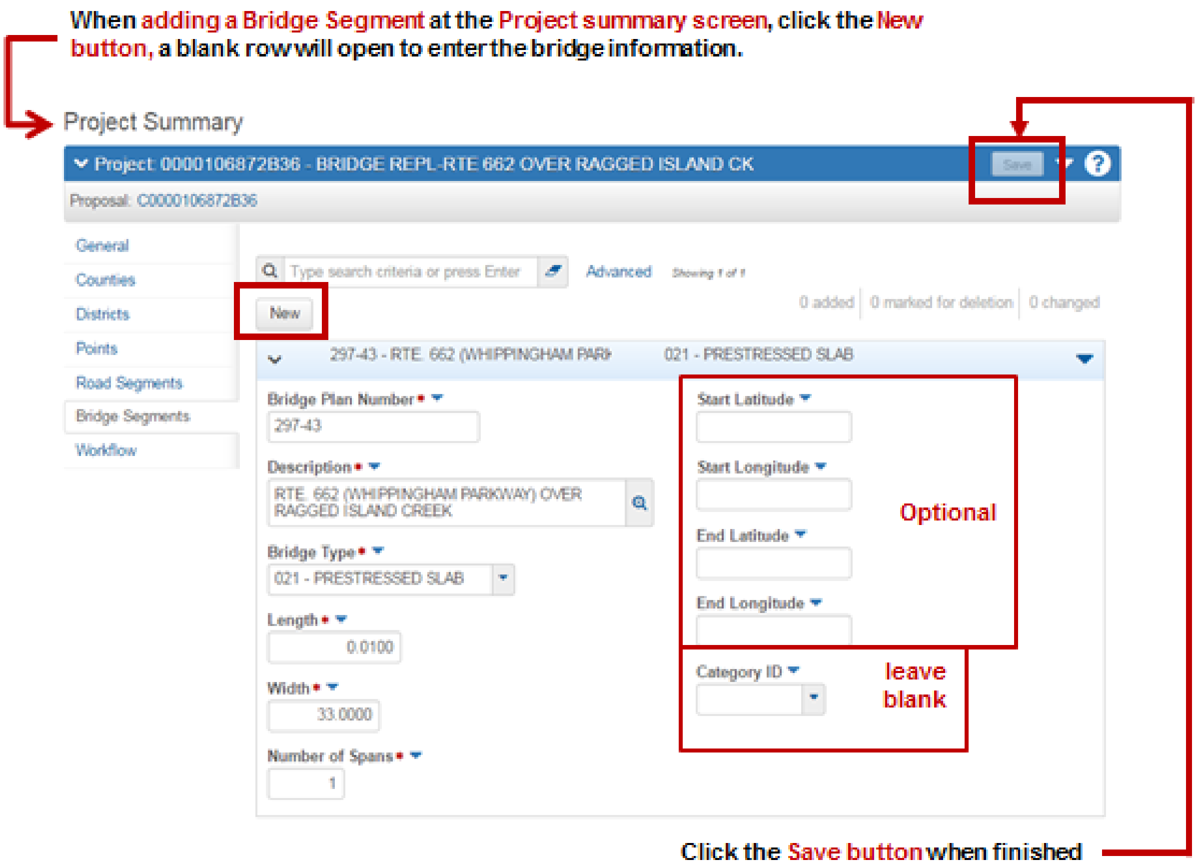


Figure 2 - The Bridge

The fields on the Bridge Segment tab are:

1. **Bridge Plan Number Required**: Enter the number in this field. Ex: 276-73

2. **Description Required**: Enter the **description.**

3. **Bridge Type Required**: Select the appropriate type from the pull-down.

Bridge Type	
Code	**Description**
001	PRESTRESSED CONCRETE BEAM
002	CONCRETE BOX GIRDER
003	RIGID FRAME
004	BOX CULVERT
005	STEEL BOX GIRDER
006	ROLLED BEAM
007	STEEL PLATE GIRDER
008	TRUSS
009	CONCRETE SLAB SPAN
010	CHANNEL BEAM
011	ARCH
012	SWING SPAN
013	BASCULE SPAN
014	COMBINATION PLATE GIRDER & ROLLED BEAM
016	LIFT SPAN
017	RETRACTILE SPAN
018	OTHER
019	PEDESTRIAN OR BIKEWAY BRIDGE
020	PRESTRESSED BOX BEAM
021	PRESTRESSED SLAB
022	PRESTRESSED CONCRETE BEAM, BULB-T

4. **Length Required**: Enter the length in **miles**, to 4 decimal places.

5. **Width Required**: Enter the width in **feet**, to 4 decimal places.

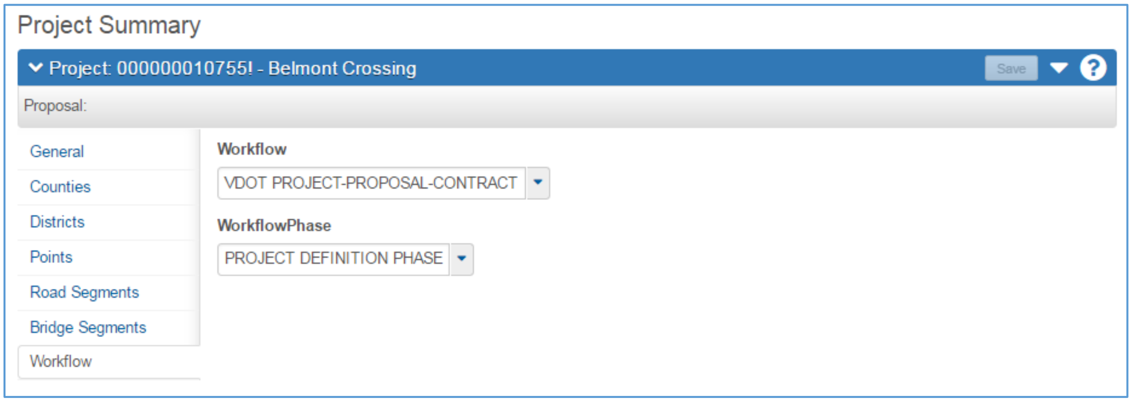
6. **Number of Spans Required**: Enter the number of spans as a whole number.

7. **Category ID:** A unique identifier assigned to each Project Category in the system.

8. **Location:** Not used, leave blank.

2.12 Project Workflow

The Workflow tab is a crucial step in moving an estimate through the phases of the software to produce the Contract document. Users must make the proper selection for all Projects and the Prime according to the table below. Leaving the workflow fields blank results in reporting errors.



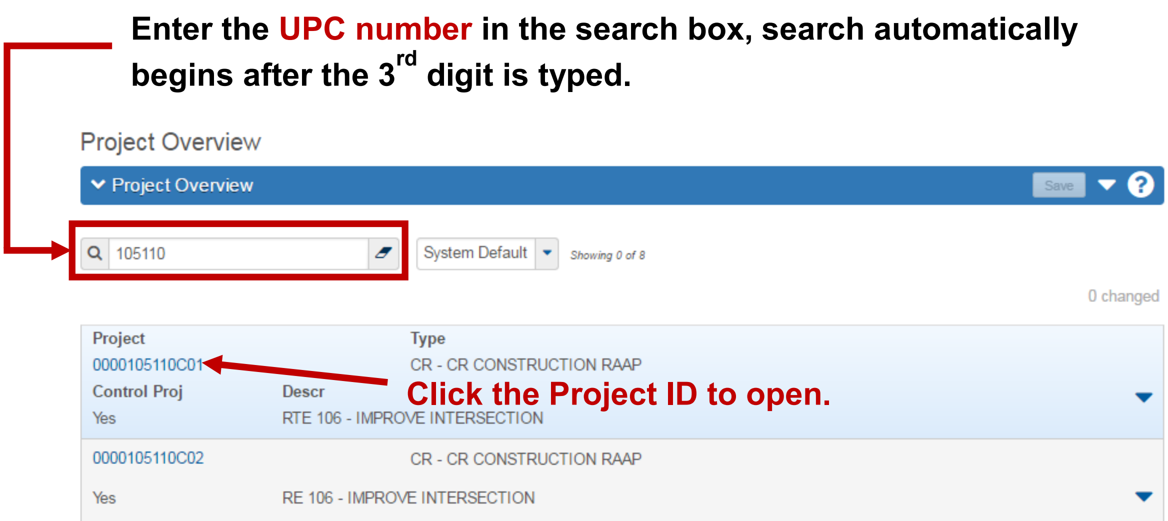
Workflow Phase Definitions

	WORKFLOW NAME	DESCRIPTION	NOTES	
1	Project Definition Phase		Engineers/Designers Use	
2	Proposal Definition Phase		Construction Division/District SAPP Coordinators	
3A	Advertisement Phase	Locks Proposal/No changes from Projects	Any changes once the Proposal is Advertised must be added in the Addenda phase with proper notification to Document assembly group	
3B	Addenda Phase	Changes only reflected when Addenda is open	Changes made during Advertisement.	
4	Bid Letting Phase		Construction Division Use Only	ADMIN Role Only
5	Post Bid Evaluation Phase		Construction Division Use Only	
6	Preconstruction has ended Phase		Construction Division Use Only	
7	Moved to Construction/SiteManager	Passed to CLR/SiteManager	Construction Division Use Only	
8	Historical Phase		Construction Division Use Only	

2.13 Retrieving a Project

To open an existing project:

1. Click on **Projects** from the Preconstruction Dashboard located on the Home page**.**
    - This will take you to the **Project Overview screen.**
2. Clear out the Search by **clicking on the eraser**, then **enter the Project ID** (upc number).
3. The **Project Summary row** will display all projects with that upc that are available in your control group.
4. Click the **Project ID** to open it.

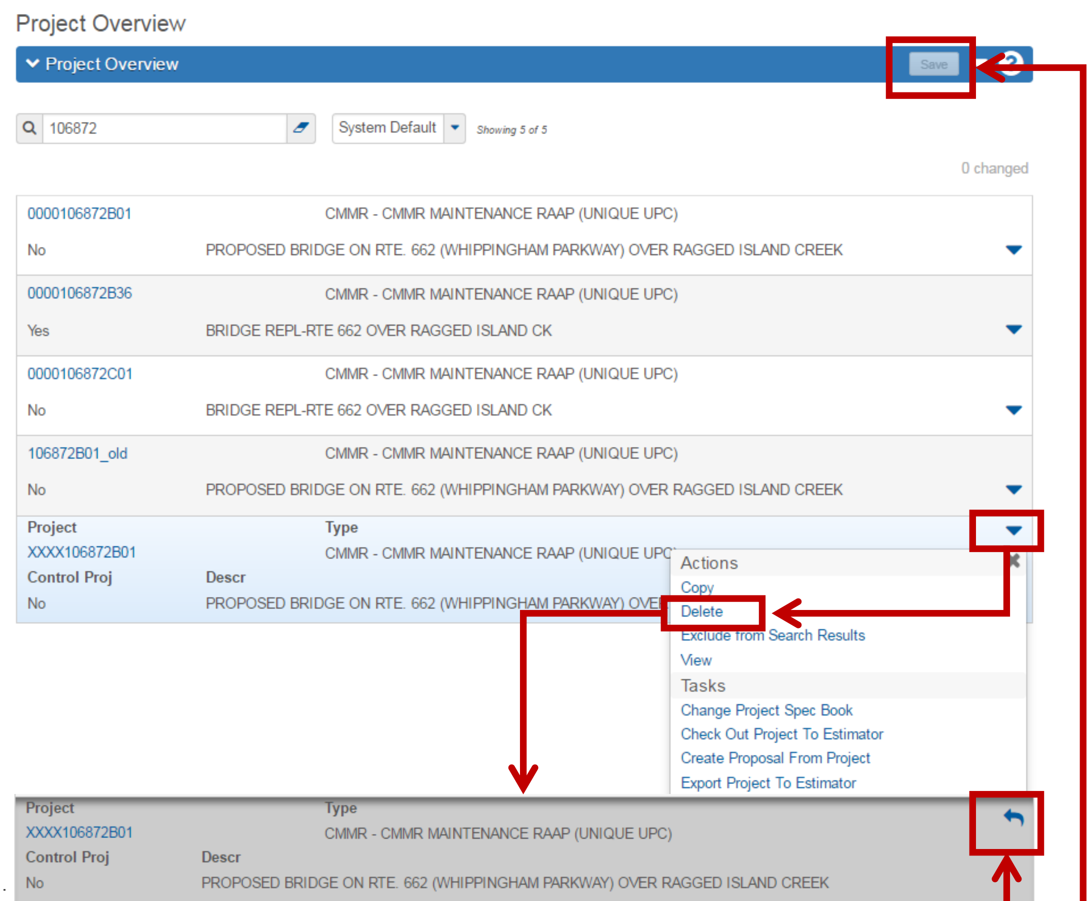


2.14 Delete a Project

Note: Prior to deleting a project, YOU MUST disassociate the project from the Prime and the Proposal if attached. ***See Prime and Proposal chapters for details.***

To delete a project

1. Enter the UPC in the search field.
2. Select the row action button for the project you wish to delete.
3. Select **Delete**.
4. The row will turn **grey** and can be **reversed** by clicking the **Undo** **button**. 
5. Click the **Save button** to delete the Project.



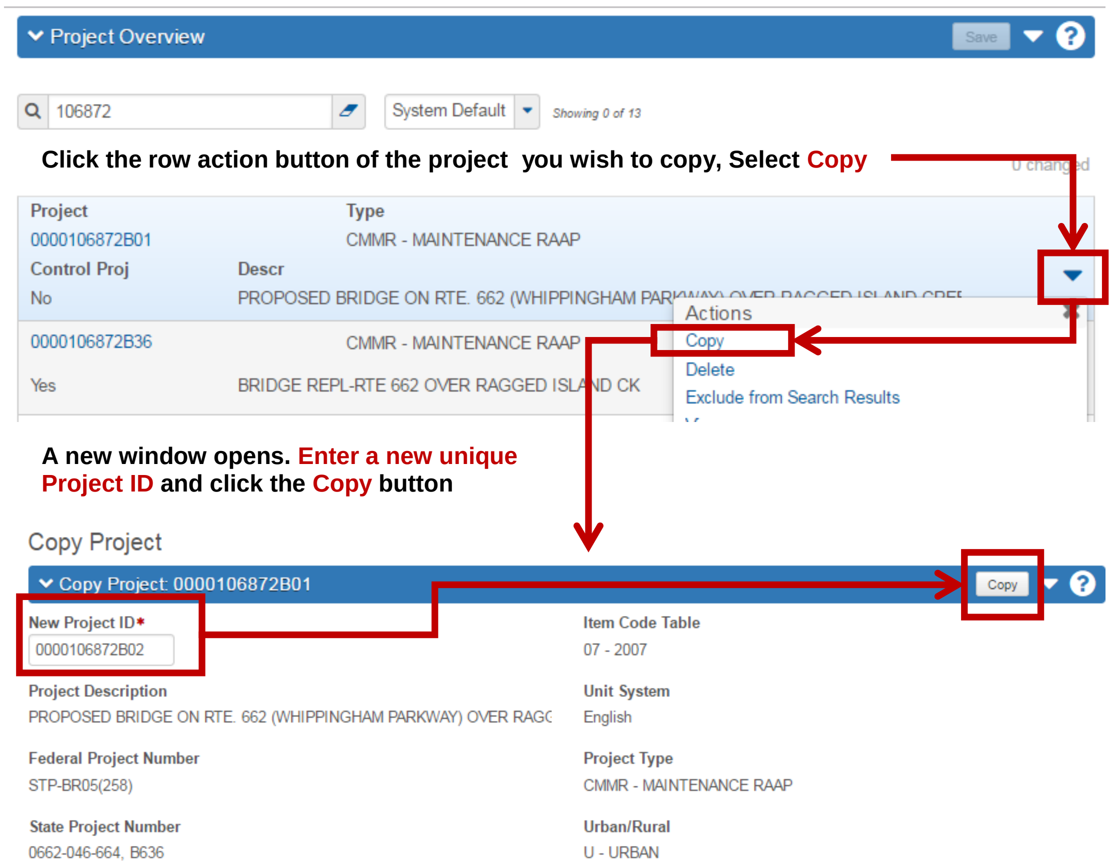
Use this button to reverse the Delete before the Save button is clicked

To confirm the delete click the Save button

2.15 Copying a Project

To copy a project from the Project Overview screen:

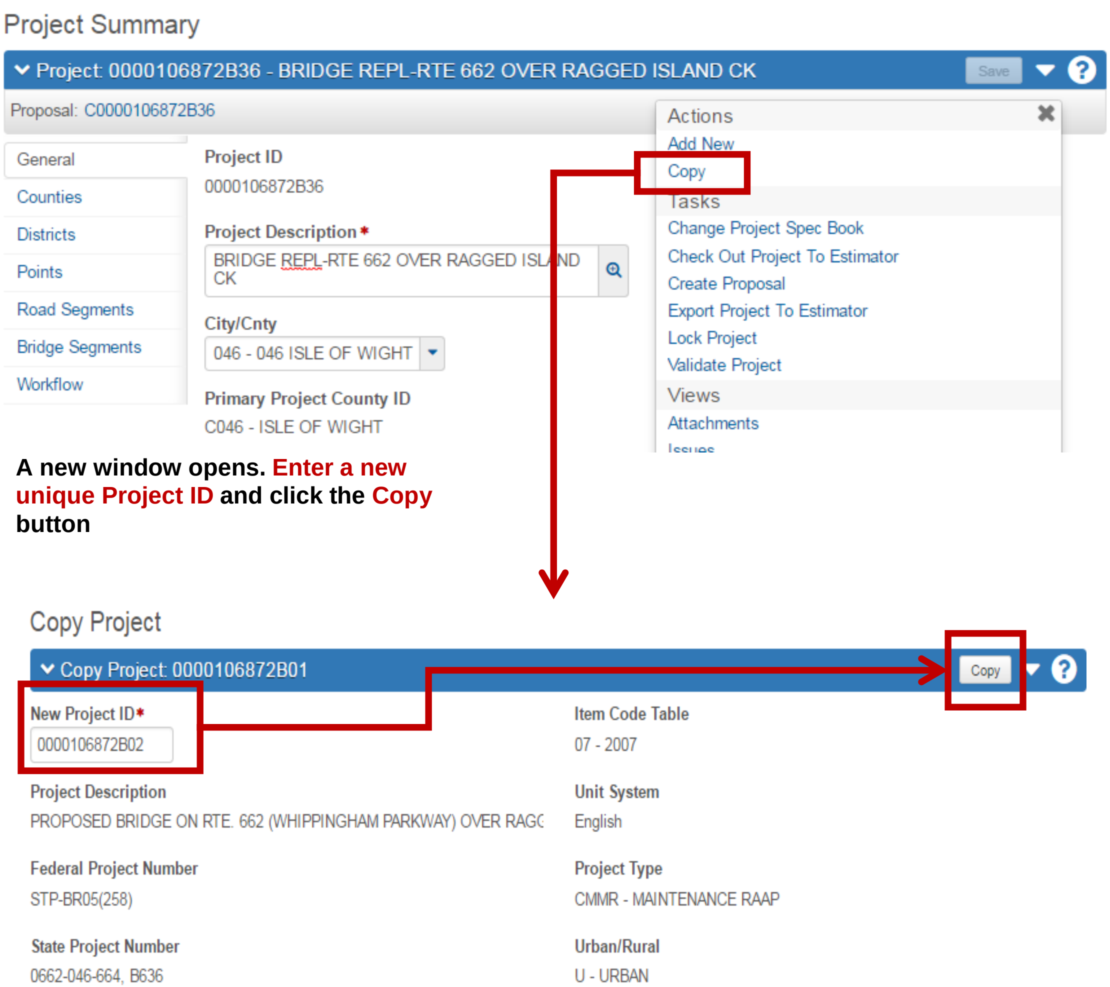
1. Click the row action button of the project you wish to copy, select **Copy**.
2. When you **click on Copy**, it will bring up the **Copy Project screen displaying the old Project to be copied.**
3. Enter a **new and unique Project ID**.
4. Click the **Copy button** on the Copy Project header to complete the copy.
5. The Project will **copy without errors or warnings.** When completed, the Copy will return the user to the copied Project's **Project Summary General** tab which displays the new Project ID.



2.15.1 Copy a Project (Alternate Method)

As an alternative, the copy can be performed from within a **Project** from the General Tab.

- Click the blue component bar action button and select **Copy**.
- Enter a new **Unique Project ID** and the click the **Copy** button.



3. MAINTENANCE-FUNDED PROJECTS

For simplicity in this chapter, this type of project will be referred to as a maintenance-funded project.

This chapter covers adding, changing and deleting maintenance-funded projects. A special chapter is required for this since much information input for maintenance-funded projects differs from construction projects.

There are **two basic types of maintenance-funded projects:**

- **Schedule Work** (at multiple locations with like assets)
- **Maintenance-funded Project at a single location** (i.e., Bridge Repair)

3.1 Schedule Work (at multiple locations with like assets)

An example of schedule work is Plant Mix or Bridge Joint Repairs being done in 8 different counties, and involving all three types of road systems (interstate, primary, secondary).

In Preconstruction, this work needs to be broken down into separate projects BY COUNTY, BY SYSTEM. For the above-mentioned example, 24 projects would need to be created.

TIP: If the projects will be basically the same (same funding, same pay items, etc.), take advantage of the Copying a Project option. Prepare one project in its entirety, composing the category, attaching the funding and the items, and THEN copy the project. Once the project is copied, minor modifications may be made to the copy(ies). See **2.14 Copying a Project** for instructions to copy a project.

3.2 Maintenance-funded Project at a single location (i.e. Bridge Repair)

Entry for Maintenance-funded projects at a single location is entered the same as Construction projects with the exception of the Project ID (see Appendix A). Refer to Section 2 – Projects of this manual.

*All users should use **all UPPER CASE** for **ALL fields** in Preconstruction*

3.3 Creating a New Project

The Add Project function creates a new Project and opens on the **General** tab, which allows you to add basic information for the new project.

- Click on **Projects** from the Preconstruction Dashboard located on the Home page**.**
- **Click the Project Overview Action button** and **click Add.**
- Fill in **only the required fields on the General tab**.
- Please see **Appendix A** for proper naming conventions.

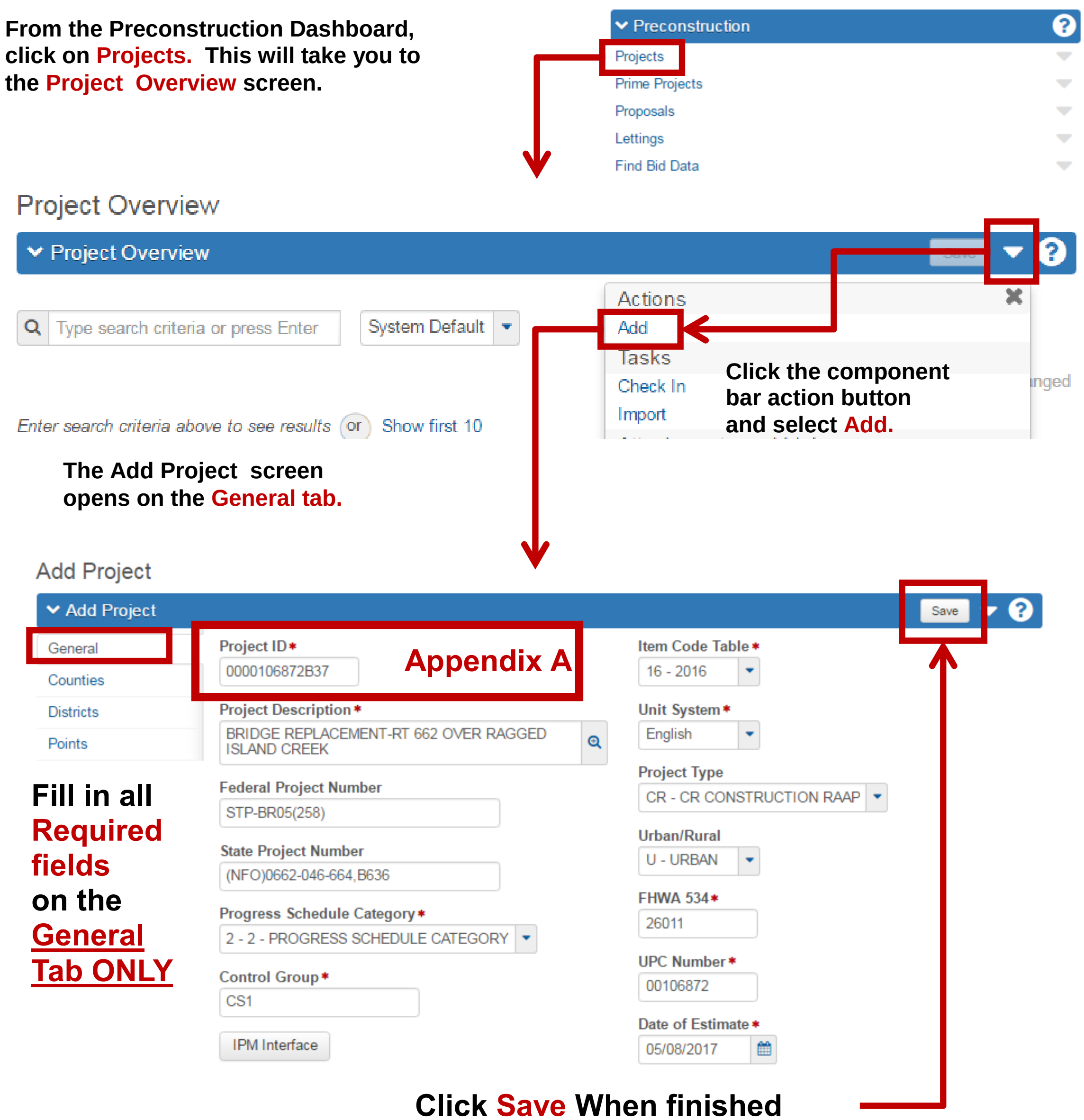


Figure 3 - Adding a Project from the Project Overview screen

The Add project screen requires entry of only the minimum required fields for the database to determine if the Project ID is unique, once the new project is saved then the user will complete the remaining fields.

*<u>Please use **all UPPER CASE for ALL fields** in Precon.</u>*

The following fields are required (indicated by a **red asterisk** *) when adding a new Project:

1. Project ID (See Appendix A for proper naming conventions)
2. Project Description
3. Progress Schedule Category
4. Control Group
5. Item Code Table
6. Unit System
7. Project Type
8. FHWA 534
9. UPC Number **(<u>MUST be 8 digits</u>, add leading zeros to the UPC number**)
10. Date of Estimate (auto fills current date)

The **Add Project screen will display four tabs**: General, Counties, Districts and Points.

- The remaining Project Summary tabs – Road Segment, Bridge Segment and Workflow will not appear until you have saved the Add Project screen and go to the Project Overview screen and retrieve the newly added Project.
- To save the newly added project, click the **Save** Save **button** found on the right side of the Add Project header.

Saving the Project and Correcting Errors

When all tabs of the Add Project screen have been completed or when you are ready to save your data, click the **Save** Save **button** to insure that all information entered has been saved.

- If you have completed all required field criteria satisfactorily and the Project ID (PCN) is a unique number, the project will be added/saved.
- The Project ID field can be changed as long as you are on the Add Project screen, even if the project was previously saved on that screen.
- Once you navigate away from the Add project screen, then you can only return to that project by way of the Project Summary screen. **The Project ID field will convert to display-only and cannot be changed.** This ensures unique Project ID's in the database.
- If a required field was not filled-in or incorrect data entered at a field which is supported with a reference table, an **Error** box will display. For example, if you left a required field blank or entered invalid data, you will see an **Error** box at the top giving information as to what field was left blank or contains an invalid value.
- If you attempted to create a project with a Project ID already in existence in the Precon database, you will see an **Error** box with the message that the Project ID (the primary key) is already being used by another project. A project could already exist in another control group with the Project ID you have just attempted to create. Precon will not allow duplicate Project IDs.

Note: when any errors are presented, they may **only show up one at a time**, so you may have to go through **several corrections** before a save is successful.

Errors must be corrected before the new project record will be saved/created.

3.3.1 Retrieving a Project

Now that you have created & saved your Project and the required fields on the General tab, **click the Overview link**, enter the new project's UPC Number and complete the remaining tabs; **Counties**, **Districts**, **Points**, **Road Segment**, **Bridge Segment** and **Workflow** tabs.

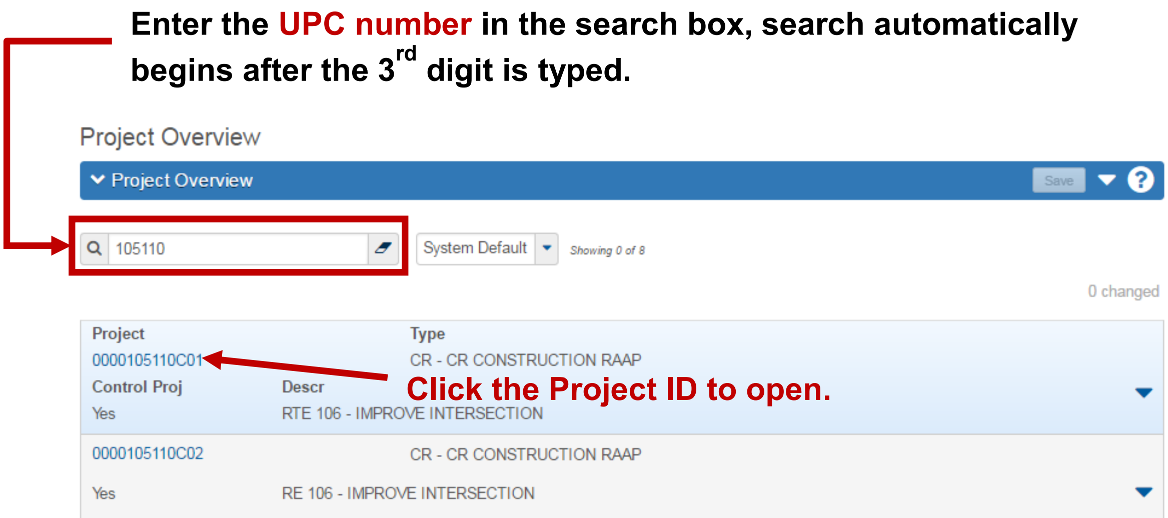


Figure 3 - Retrieving a Project from the Project Overview Screen

To complete the Project:

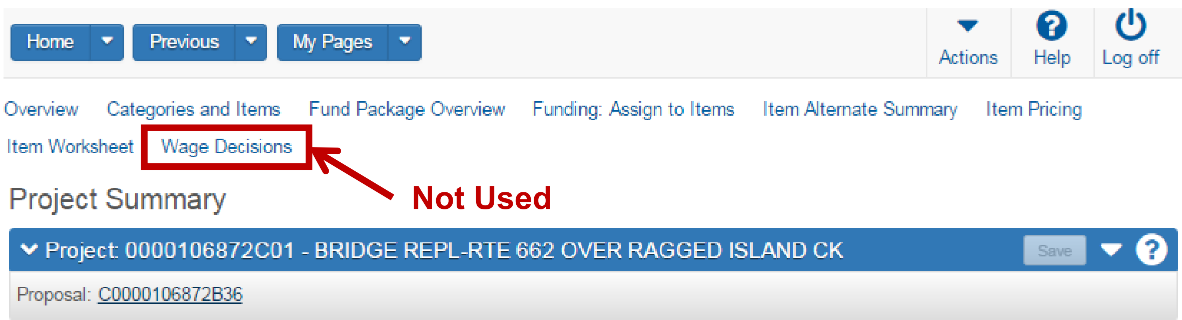
4. Click on the **Overview quick link** at the top left of the Add Project screen or click on the **Home button** and then click on **Projects** from the Preconstruction Dashboard located on the Home page**.**
    - This will take you to the **Project Overview screen.**
5. Clear out the Search by **clicking on the eraser**, and then **enter the UPC Number.**
6. The **Project Summary row** will open. Click on the **Project ID** to open your Project.

3.3.2 Project Quick links

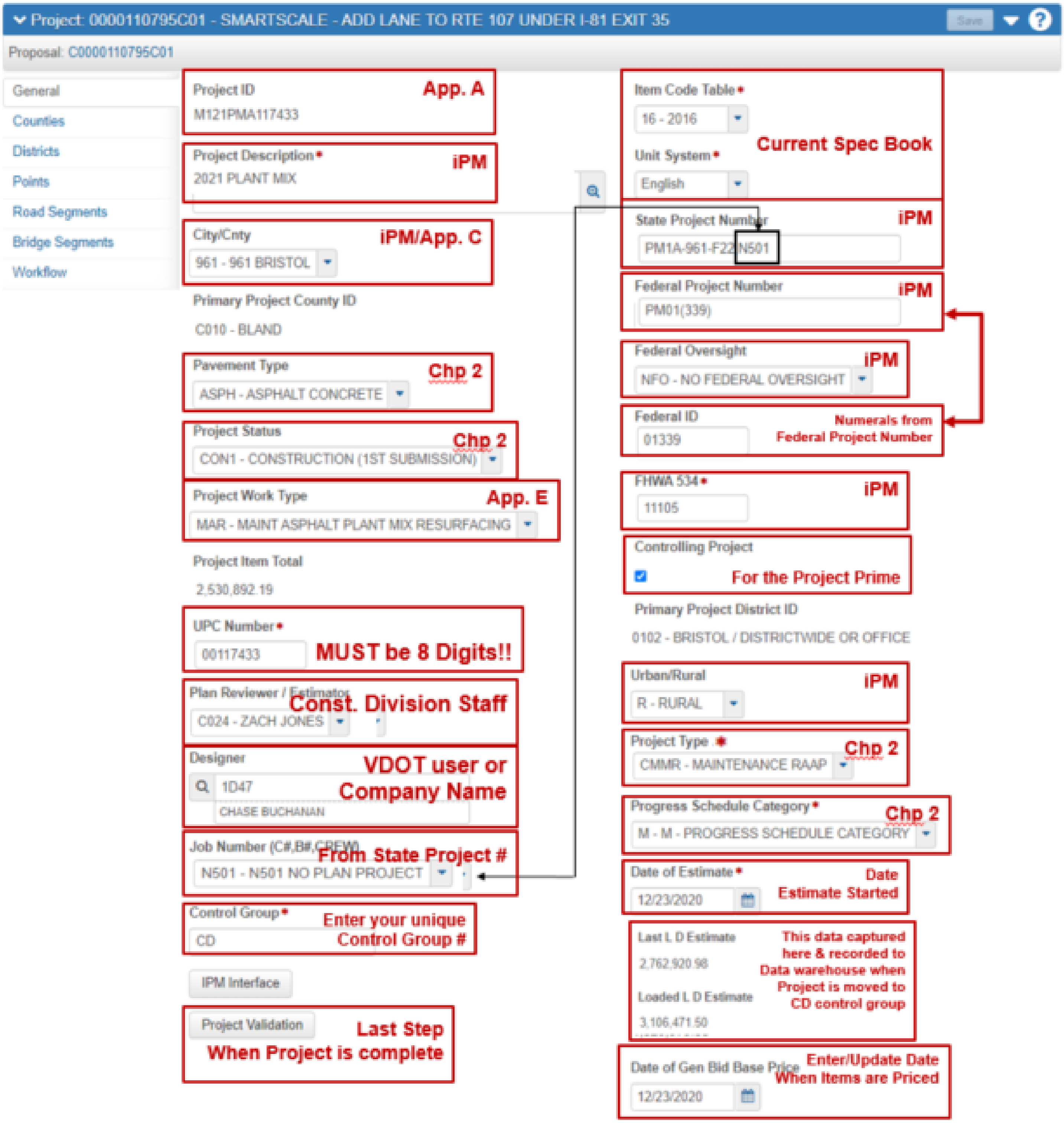
Quick links are displayed in blue text below the Menu Bar and above the blue component bar. These links allow you to quickly jump to application pages for the project.

All but the Wage Decisions quick links are discussed in later chapters.

- Users do not need to enter Wage decisions information at the project level. That information is added in the Proposal. See chapter 9 for details



3.3.2 General tab



Use the **[TAB] key** to move between fields and enter the project information on the General tab.

Some fields have **Reference Tables.** As you [TAB] to such a field, a drop-down arrow will appear. A selection MUST be made from the available choices in the table.

General Tab FIELD DESCRIPTIONS:

Project ID (PCN) Required: required - The Project ID (PCN) consists of 14 characters. Refer to **Appendix A** for Project ID instructions. (Once the project is completed and added to the database, this field becomes display-only and cannot be changed.)
Examples: M514SSB104463, M217PMN110484

Project Description Required: For all projects (other than bridge), enter the description of the type of work being performed on this project. The description from iPM is the best source. For Bridge projects, enter the description from the front sheet title block from the plan set.

City/Cnty: Select County or City in which the project is located from the drop-down menu which should match the State Project Number. Appendix C & D includes County & City codes and appropriate conversions when required.
Ex.: Project number is 0615-047-169. County/City Code is 047.

Pavement Type: Select the appropriate code from the drop-down menu.

Pavement Type Code	
Code	**Description**
ASPH	Asphalt Concrete
BITC	Bituminous Concrete
BITP	Bituminous Penetration
COMB	Combination Asphalt & Concrete
GRDE	Grade & Drained Earth
GRVL	Gravel or Stone
MIXB	Mixed Bituminous
OTHR	All Others
POCC	Portland Cement Concrete
PRIM	Primitive
UNIM	Unimproved

Project Status: Status of the project. Select the appropriate code from the drop-down menu.

Project Status Table	
Code	**Description**
CE	Conceptual Estimate
CON1	Construction (1st Submission)
CON2	Construction (2nd Submission)
FI	Field Inspection
LAS	Passes to LAS
PE	Preliminary Engineering
PFR	Preliminary Field Review
PH	Public Hearing
RWS	Right of Way Stage
SR1	Secondary Roads Project Initiative
SYP	Six Year Plan

Project Work Type: Select the appropriate code from the drop-down menu (Maintenance Surface Treatment, Maintenance Signals, Maintenance Asphalt Resurfacing, etc.). Maintenance work types are MAR, MSS, or MST. See Appendix E

Project Item Totals: This field populates automatically.

UPC Num Required: Enter the UPC number of the project. **This field must have 8 digits, please add leading zeros to the UPC number to attain 8 digits in this field**. Note: this field must match in all Projects under a Prime.

Estimator: This field designates the individual performing the independent Evaluative Estimate. Select the appropriate code from the drop-down menu.

Designer: This field designates the individual entering the estimate in AWP-Precon. Select your name from the drop-down menu. **Note**: All VDOT users should have their name in the list. If your name is not in the list please contact the AWP-Precon Administrator found in the Getting Help section. Consultants shall select their firm/company name in this list which matches their Control Group number.

Job Number: This field is derived from the last numbers of the State Project number and can be found in IPM Pool tab under the Federal Numbers. Select the appropriate code from the drop-down menu. The most typical are P401 or N501
EG: PM88-968-F17,N501
(NFO) PM4A-042-F17, P401

Federal Numbers		
Job #	Federal #	Federal Funding Info
N501	NHPP-PM09(351)	FHWA (NHPP) AC FUNDS AT 100%

Control Group Required: The control group is the security designation that dictates what project(s) users have access to. This field populates automatically with your control group when creating new projects. The data in this field may be changed in order to transfer a project to another person/control group.

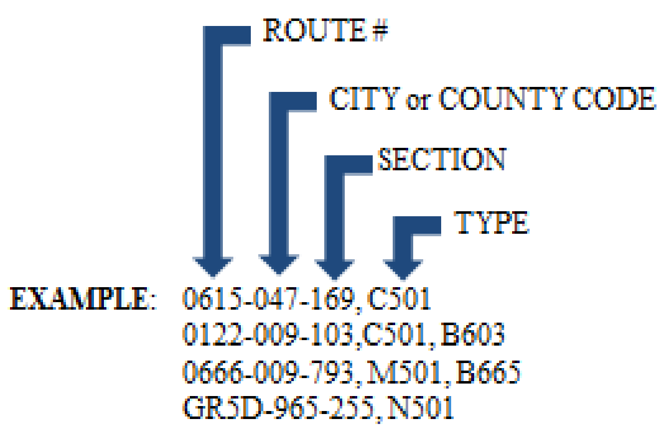
IPM Interface button: Refer to section 2.5.1 for complete details. Please note this feature only functions within VDOT networks.

Project Validation button: This is a VDOT specific project validation that should be run in conjunction with the System Validation. The button is located at the bottom of the General tab within an open Project. This Validation must be run for every Precon Project.

Item Code Table Required: Select from the drop-down menu. This coincides with the current green Road and Bridge Specifications manual.

Unit System Required: Defaults to E (English Project). Note: Metric is no longer used.

State Project No.: Enter the state project number in its entirety, complete with dashes, commas, etc. **with the (FO) or (NFO) or State funded projects get no designation at the beginning.**



Federal Project No.: Enter the Federal Project Number, if applicable, in its entirety, complete with dashes, parentheses, etc. If the project is not federally-funded, enter NONE. **Ex.:** NH-5401(876)

Federal Oversight: Select the appropriate code from the drop-down menu. **Reminder: The (NFO) or (FO) designation should be added at the beginning of the State project # field with parenthesis.** FO = Federal Oversight

NFO = No Federal Oversight
N/A = State Project

Federal ID: Enter only the **numbers** from the Federal Project Number, with no punctuation, no alpha characters, and seven digits maximum.

If the project **does not have a Federal Project Number** enter "NONE"

EXAMPLE: Fed. Project No. is STP-5A03(264)
Enter, **503264**

FHWA 534 Required: Enter the five alpha-numeric character code, found in the Project Pool of iPM.

Controlling Project Checkbox: Should be checked for the project containing the most money. See Chapter 9 of this manual for details.

Primary Project District ID: This field populates automatically.

Urban/Rural Class: Select the appropriate code from the drop-down menu: Rural, Suburban or Urban.

Project Type Required: Select the appropriate code from the drop-down menu.

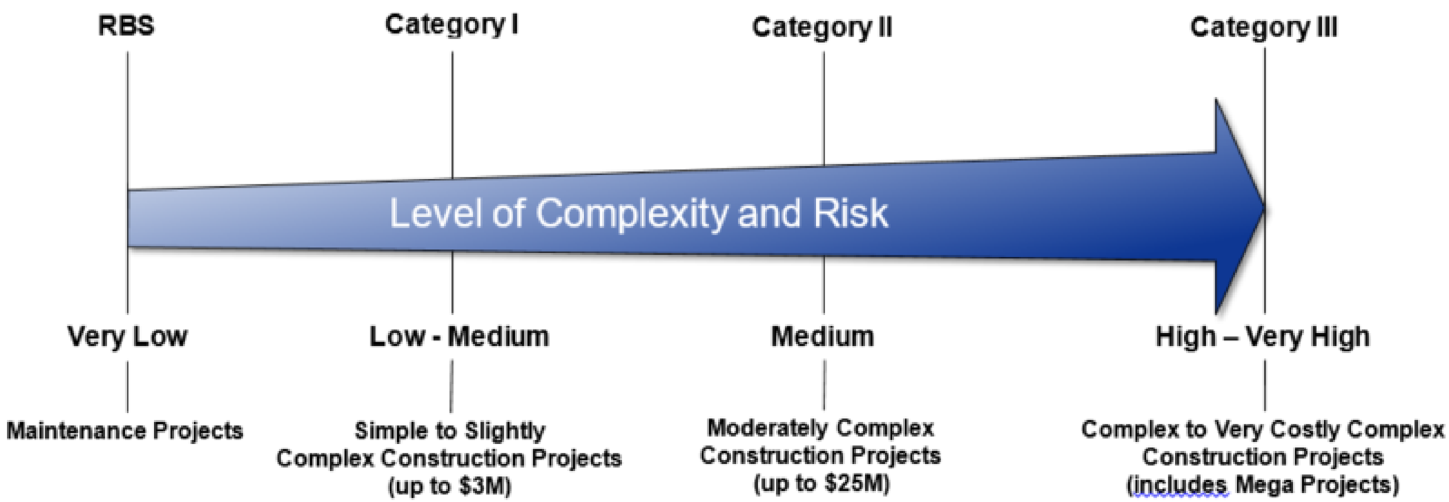
PROJECT TYPE CODE	
CODE	**USE**
CM	CONSTRUCTION / MAINTENANCE HYBRID
CMMR	MAINTENANCE RAAP
CMMS	MAINTENANCE SAAP
CMSR	MAINT SCHEDULE RAAP
CR	CONSTRUCTION RAAP
CRL	CRL Project Type (For CRL Use Only)
CS	CONSTRUCTION SAAP

RAAP (Regular Advertisement and Award Process) are advertised on the 2nd Tuesday for a minimum of 21 days. Posted on VDOT's Contractors Advertisement Bulletin Board (CABB) web system and the eVa website.

SAAP (Special Advertisement and Award Process) are advertised for 10 days minimum. Posted on VDOT's Contractors Advertisement Bulletin Board (CABB) site and the eVa website.

Progress Schedule Category Required: Select the appropriate Progress Schedule from the drop-down menu.

VDOT Project Schedule Category Guidelines



Description	RBS (Former CAT M)	Category I (Former CAT I + II)	Category II (Former CAT III)	Category III (Former CAT IV + V)
Level of Complexity and Risk	Very Low	Low to Medium	Medium	High to Very High
Type of Projects	1. Seasonal Maintenance 2. Maintenance Projects – Road and Bridge Standard Specifications 108.03	1. Small to medium size construction/bridge projects 2. One or two season duration 3. Estimated contract value of up to $3M	1. Moderately complex medium size projects 2. Multi-season duration 3. Estimated value up to $25M	1. Large to very large size complex projects 2. Multi-season duration, multi-major operations

Date of Estimate Required: When you first add the Project, this field will be automatically populated with the **current date**.

Last L&D Estimate: This field populates automatically.

Loaded L&D Estimate: This field populates automatically.

Date of Gen Bid Base Prices: This field **no longer populates automatically**, users should fill in this field every time they price Items and/or Category Items.

iPM Interface Button: Please see 2.5.1 of this manual for complete details.

Project Validation button: This is a VDOT specific project validation that should be run in conjunction with the Project validation from the blue component bar. It checks the following:

a. Checks all Regular/Bid categories do not have items checked Non-Bid.
b. Compares CEI & Contingency lump sums versus percentages at the category level. Projects can have lump sum or percentages but never both.
c. Checks that a project has at least one (1) Road Segment.
d. Checks that all items are assigned to a Fund Package.

3.3.3 Counties Tab

Each project must have at least one county, should include all counties that the project touches and its Percentage must equal 100%. Failure to associate a county will prevent the generation of the preliminary detail estimate report. The Primary County selected should match the county that is used in IPM.

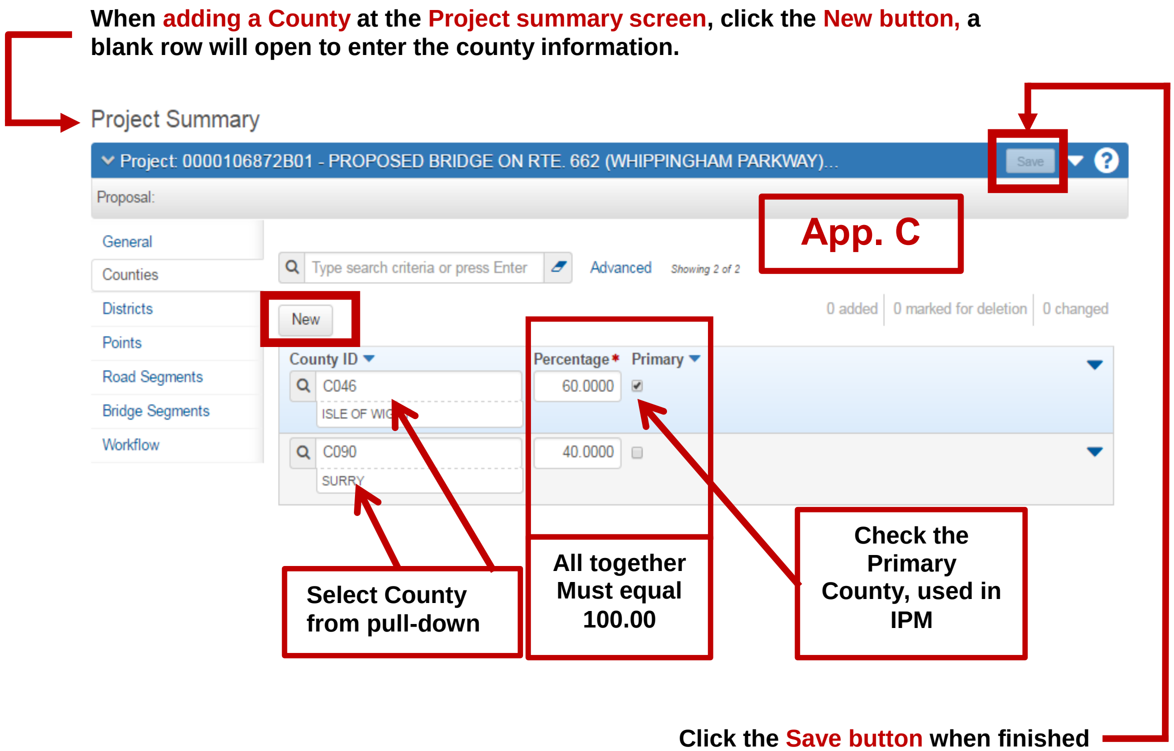


Figure 5 - The Counties tab

To add a County:

6. When the **Counties tab** is displayed, if it is not showing a blank row, click the **New button** and enter the following information:
7. **County ID: t**his is a search field. Enter the **county number or name** and then select the appropriate code from the drop-down menu. See **Appendix D** for a complete listing.
8. **Percentage:** this is a **required field** and will **default to 100.**
   - This is the percentage of the Project that is associated with this County.
9. **Primary: Checkbox –** This should always be checked.
   - **One county must be flagged as the Primary County**, which is the **controlling county.** Since the County Percentage must be 100%, this county must be flagged as Primary.
10. When the county information has been entered, click the **Save button**.

3.3.3.1 Deleting a County from a Project

To **remove** a **County** from a Project, select the Counties tab and select the County row's Action Menu and select **Delete.** After the row turns grey, click on **Save** to complete the delete.

To **change a County to a different County**, go to the Counties tab and select the County ID field and change to the new **County ID,** and then select **Save**.

3.3.4 District Tab

Each project must have at least one District and its associated Residency assigned to the project, which can be found in iPM.

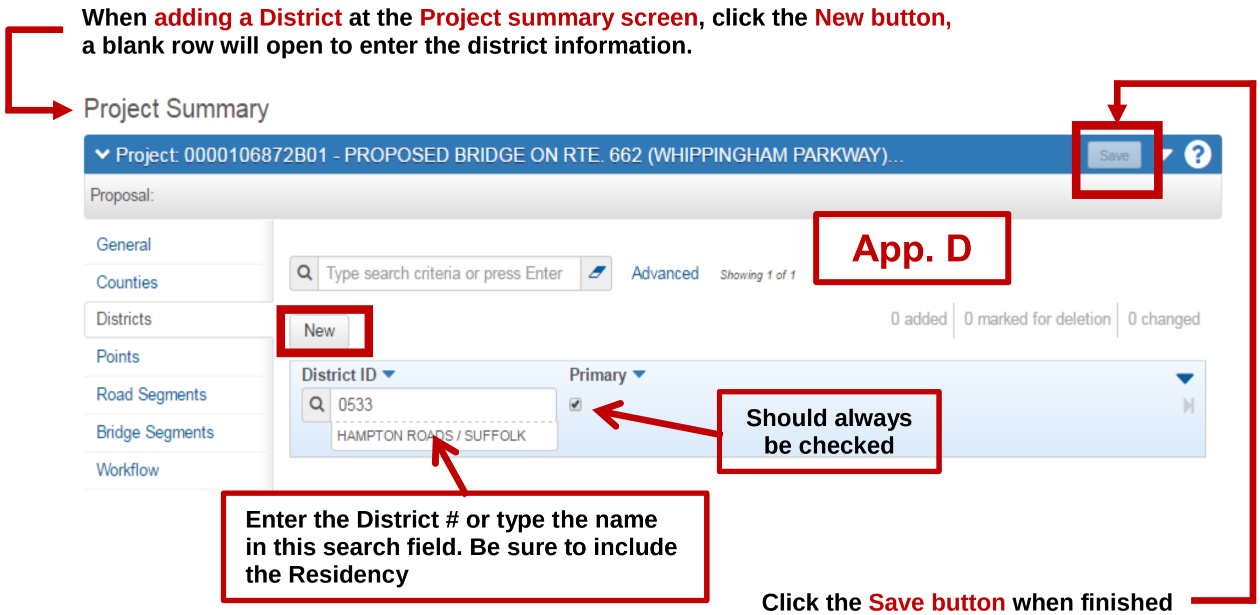


Figure 6 - The Districts tab

To add a District:

4. When the District tab displays, if it is not showing a blank row, click the **New button** and enter the following information:

5. **District ID:** This is a search field**.** Hit the **Enter key** or enter all or part of the District number or name and select the appropriate **District** from the drop-down list.

District	District No.
Bristol	1
Salem	2
Lynchburg	3
Richmond	4
Hampton Roads	5
Fredericksburg	6
Culpeper	7
Staunton	8
Northern VA	9

6. **Primary: Checkbox –** This checkbox indicates that the District is the **first or principal district** in which work will be performed for this project.

- If there are **multiple Districts**, then **one District must be flagged as the Primary District.**

3.3.5 Points Tab

Each project must have at least one Project Point for the "From and To description", and the longitude and latitude for the project

All fields on the Points tab are **required** when you access this tab, enter data and save it.

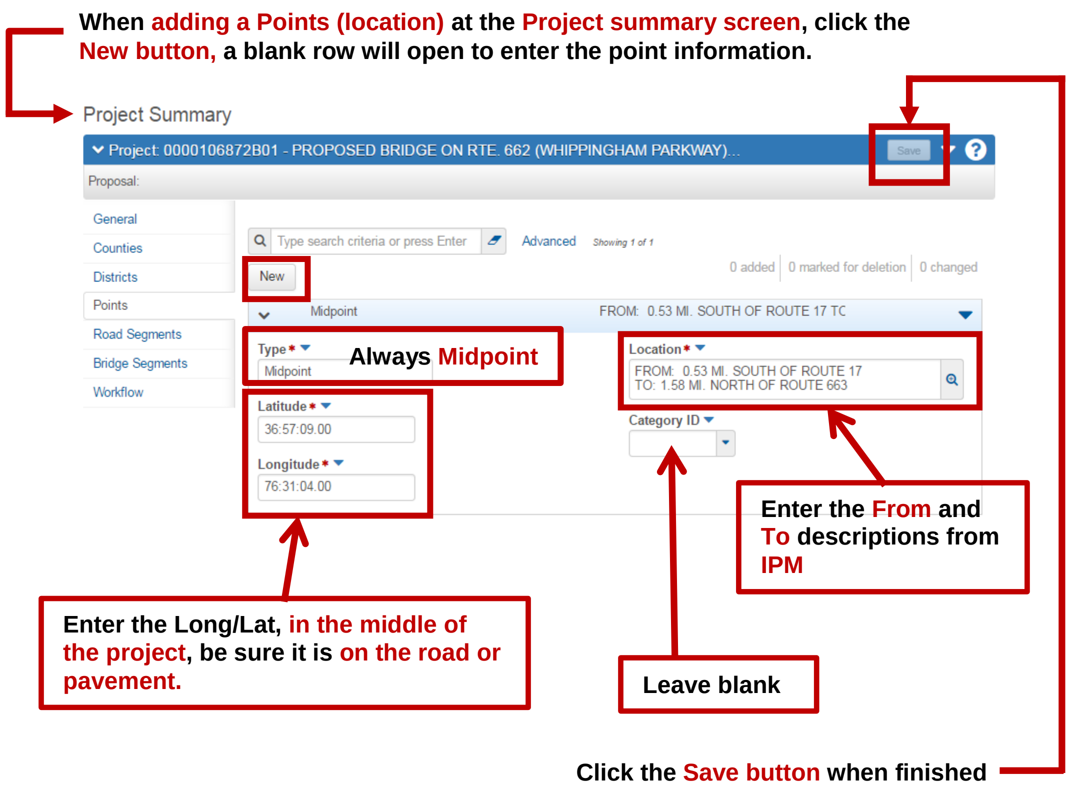


Figure 7 - The Points tab

To add Points (location) information:

8. When clicking the points tab, if it is blank, click the **New button** and enter the following information:
9. **Type field Required**: This field will default to **Midpoint** and can only be **Midpoint**.
10. **Latitude field Required**: Enter the Latitude using this format **36:36:43.00**.
11. **Longitude field Required**: Enter the Longitude using this format 80:23:27.00. The negative should not be entered.
12. **Location field Required**: Enter the **Residency Name or Various** (Ex: Saluda Residency)
13. **Category ID** field: Not used, leave blank.
14. **Location** fields: Not used, leave blank.

Note about Long/Lat: If a project spans a large area, provide the Long/Lat at the center of the work area. The Long/Lat fields are used by the Civil Rights Division to determine DBE goals using a 75 mile radius from the point provided.

3.3.6 Road Segments tab

A road segment is a portion of a road that can be described by a set of starting and ending stationing. A Road Segment should be created for each road on the project. A road segment can be used to locate a specific section of a road as the site for a project's work or a portion of the project's work. **All Precon projects (including Bridge projects) must have at least 1 Road Segment.**

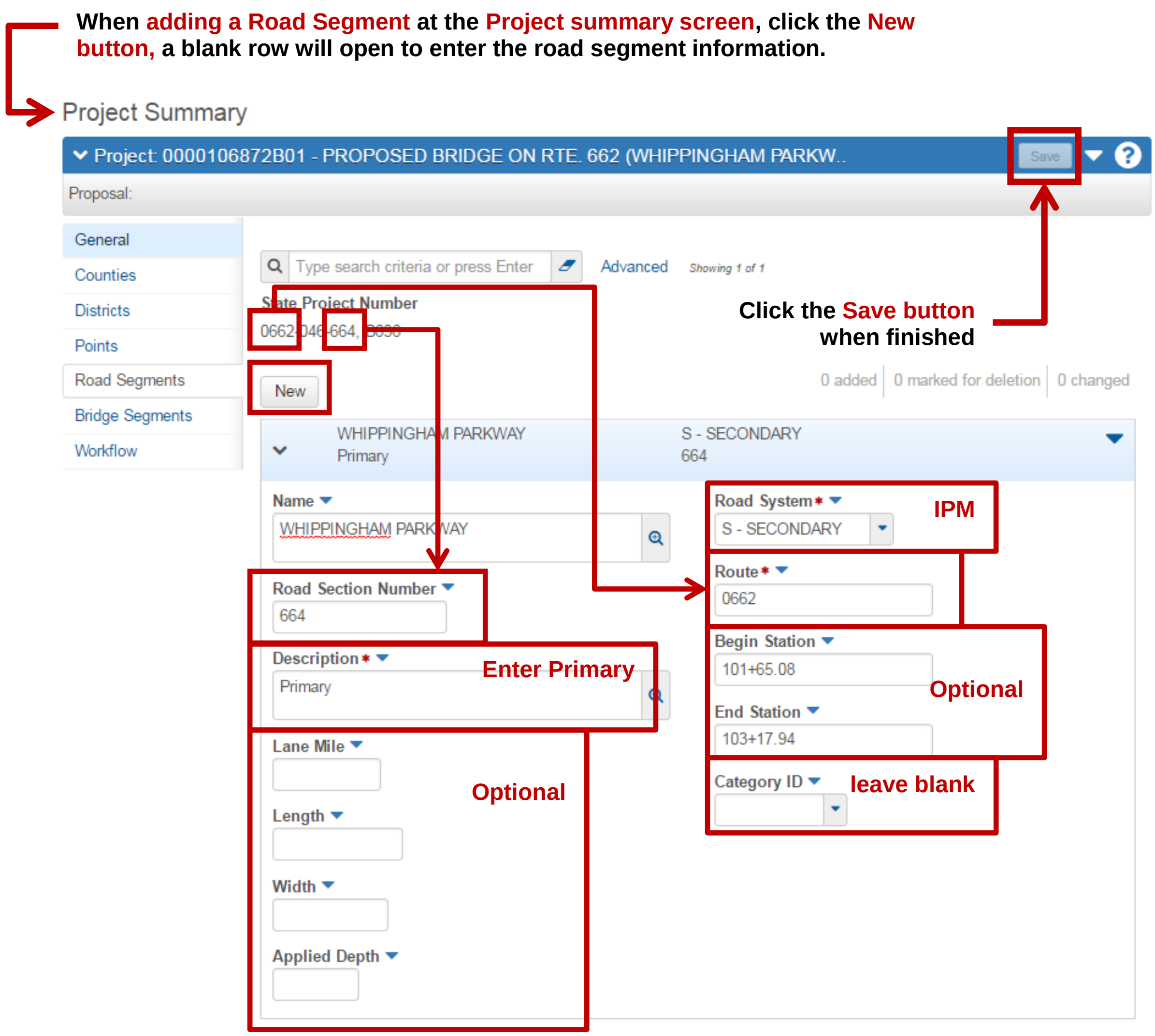


Figure 8 - The Road Segments tab

The fields on the Road Segment tab are:

14) **Name**: Leave blank

15) **Road Section No.**: Enter **F18**. This is the fiscal year that the schedule is Let.

16) **Description Required**: Enter the description of the type of work performed on this project. EG: Plant Mix Overlay or Primary Plant Mix Resurfacing or Various

17) **Lane Mile**: A unit of measure **one standard lane wide and one mile long**. **Note: The Lane miles should not be separated between Road Segments, the project total Lane Miles should be entered in the *first* road segment of a project if there is more than 1 Road Segment.**

18) **Length**: Leave blank

19) **Width**: Leave blank

20) **Applied Depth**: Leave blank

21) **Road System Required**: The functional class of the road (obtained from the title sheet of the road plans). Select the appropriate code from the drop-down menu.

22) **Route Required**: Enter **Various**.

23) **Beginning Station**: Leave blank

24) **Ending Station**: Leave blank

25) **Lane Mile**: Leave blank

26) **Category ID**: Leave blank

27) **Location fields:** Not used, leave blank.

3.3.7 Bridge Segments Tab

The Bridge Segment tab is not used for Schedule/Maintenance work. Skip this Tab.

3.4 Project Workflow

The Workflow tab is a crucial step in moving an estimate through the phases of the software to produce the Contract document. Users should make the proper selection for all Projects and the Prime according to the table below.

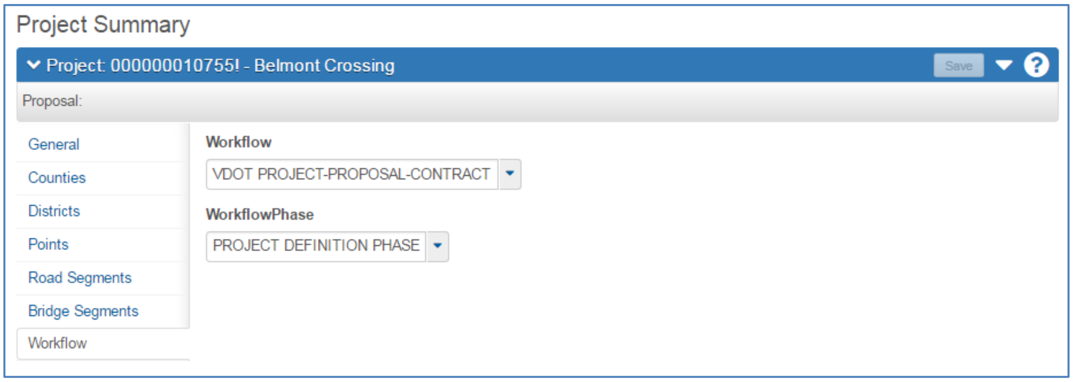


Figure 9a - The Workflow Tab – Project

Figure 9b - The Workflow Tab – Prime

	Workflow Phase Definitions			
	WORKFLOW NAME	**DESCRIPTION**	**NOTES**	
1	Project Definition Phase		Engineers/Designers Use	
2	Proposal Definition Phase		Construction Division/District SAPP Coordinators	
3A	Advertisement Phase	Locks Proposal/No changes from Projects	Any changes once the Proposal is Advertised must be added in the Addenda phase with proper notification to Document assembly group	
3B	Addenda Phase	Changes only reflected when Addenda is open	Changes made during Advertisement.	
4	Bid Letting Phase		Construction Division Use Only	ADMIN Role Only
5	Post Bid Evaluation Phase		Construction Division Use Only	
6	Preconstruction has ended Phase		Construction Division Use Only	
7	Moved to Construction/SiteManager	Passed to CLR/SiteManager	Construction Division Use Only	
8	Historical Phase		Construction Division Use Only	

3.5 Retrieving a Project

To open an existing project:

1. Click on **Projects** from the Preconstruction Dashboard located on the Home page.
   - This will take you to the **Project Overview screen.**
2. Clear out the Search by **clicking on the broom**, then **enter the Project ID** and hit **Enter.**
3. The **Project Summary row** will come up. Make sure that the Project ID is correct and **click on the Project ID.**
4. The **Project Summary screen opens** with the **correct Project ID** being displayed.

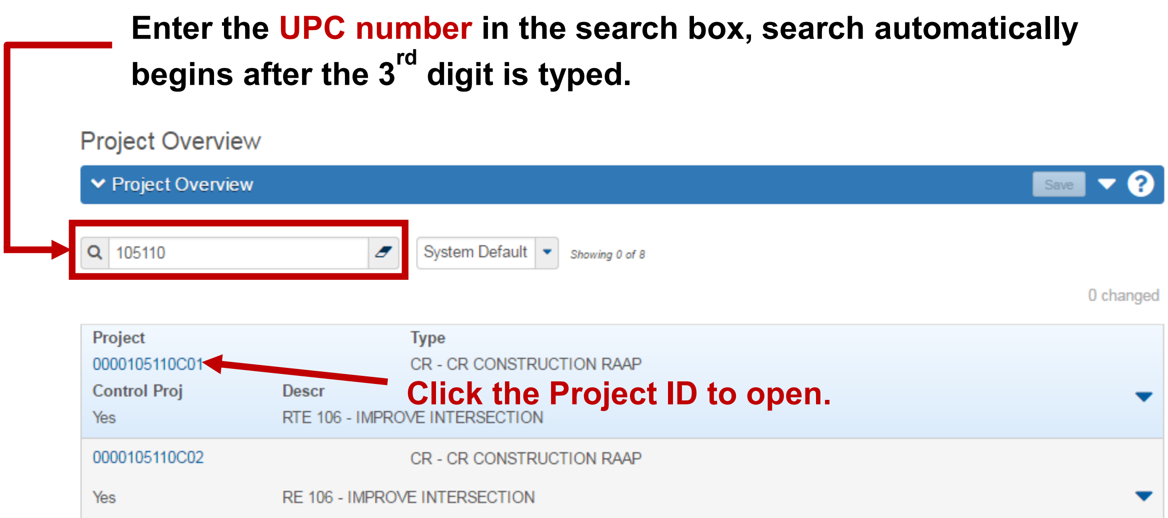


Figure 10 – Selecting and Opening a Project

3.6 Deleting a Project

Note: Prior to deleting a project, YOU MUST disassociate the project from the Prime and the Proposal if attached. ***See Prime and Proposal Sections for details.***

To delete a project

6. Enter the UPC in the search field.
7. Select the row action button for the project you wish to delete.
8. Select **Delete**.
9. The row will turn **grey** and can be **reversed** by clicking the **Undo** **button**. 
10. Click the **Save button** to delete the Project.

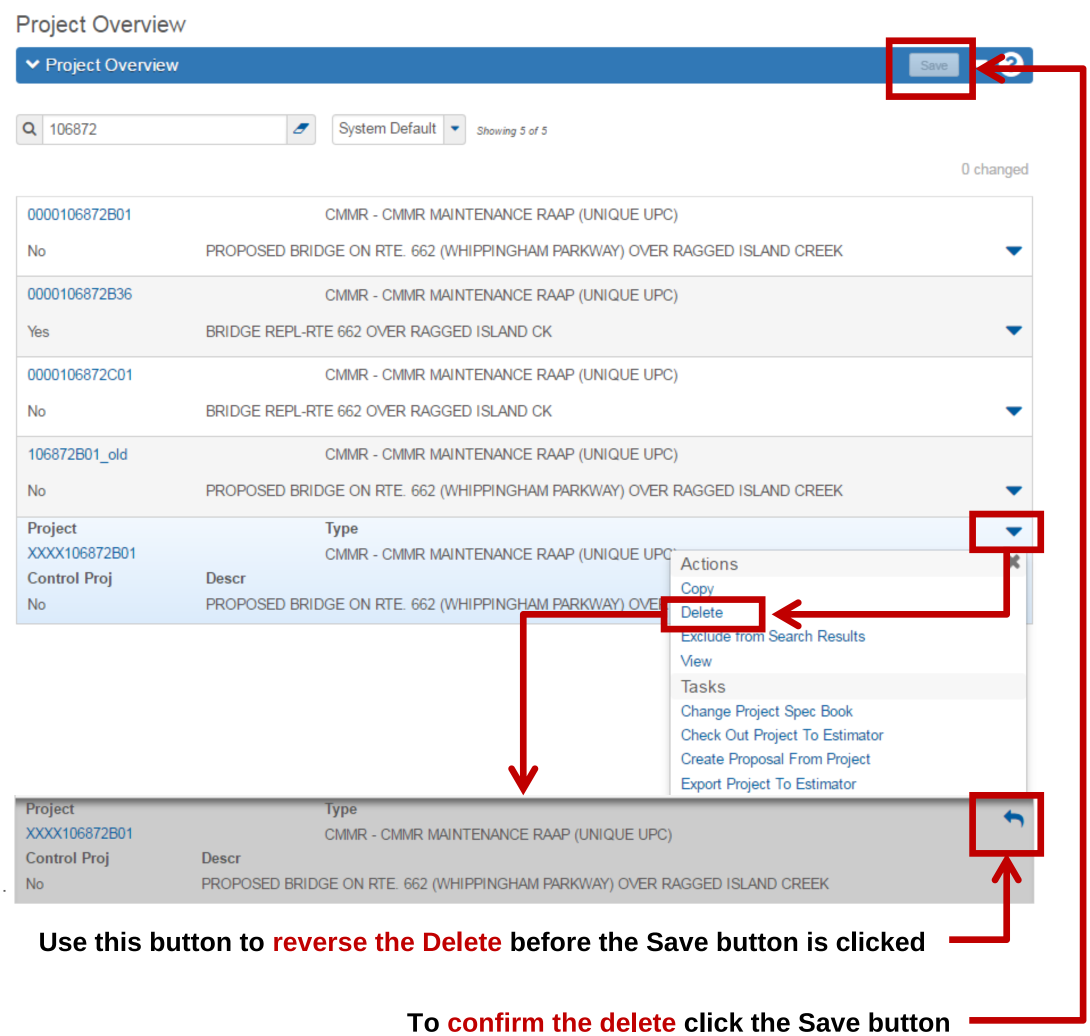


Figure 13 - Deleting a project

3.7 Copying a Project

To copy a project from the Project Overview screen:

6. **Click on the Project's row Action Menu button** to open up the **Action Menu** and **click on Copy.**
7. When you **click on Copy**, it will bring up the **Copy Project screen displaying the old Project to be copied.**
8. Enter a **new and unique Project ID**..
9. Click the **Copy button** on the Copy Project header to complete the copy.
10. The Project will **copy without errors or warnings.** When completed, the Copy will return the user to the copied Project's **Project Summary General tab** displaying the new Project ID.

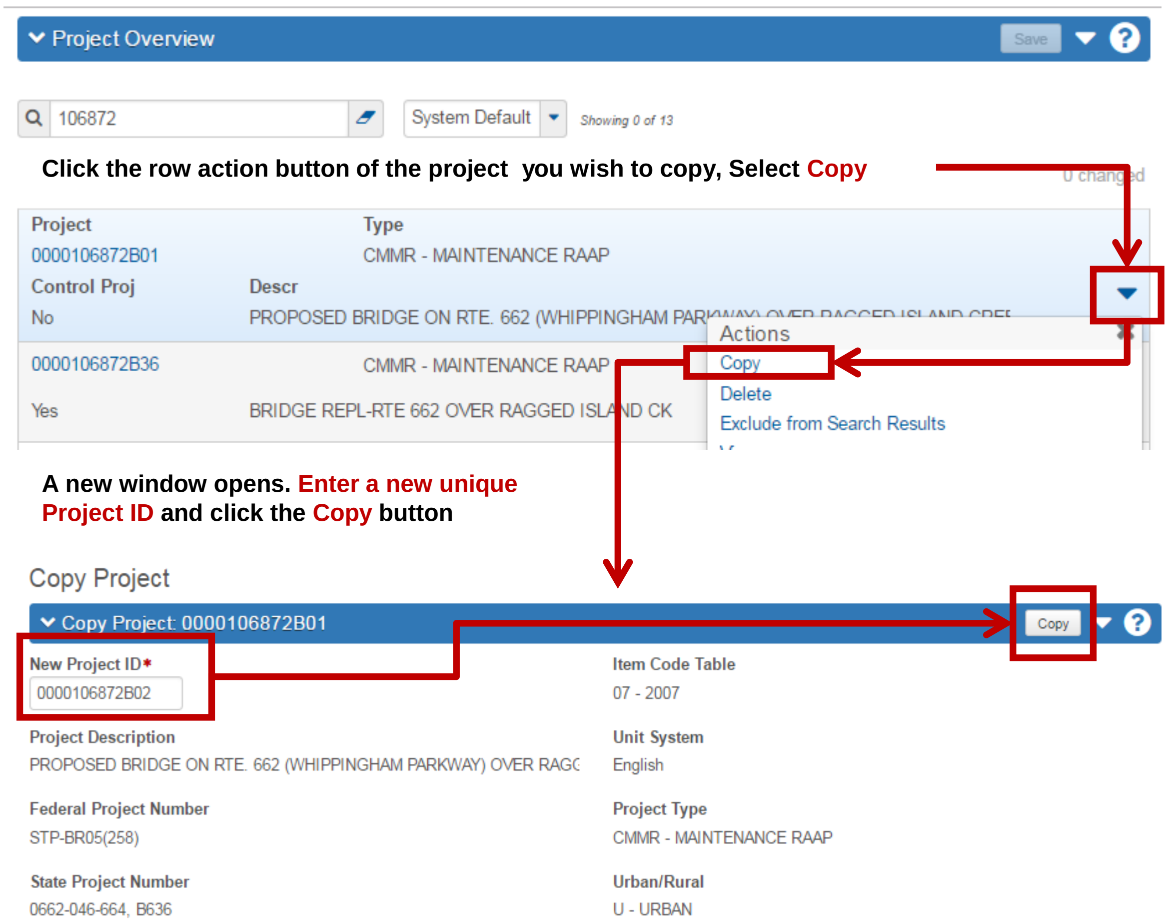


Figure 14 - Copying a Project from the Project Overview Screen

3.7.1 Copy a Project (Alternate Method)

As an alternative, the copy can be performed from within a **Project** from the General Tab.

- Click the blue component bar action button and select **Copy**.
- Enter a new **Unique Project ID** and the click the **Copy** button.

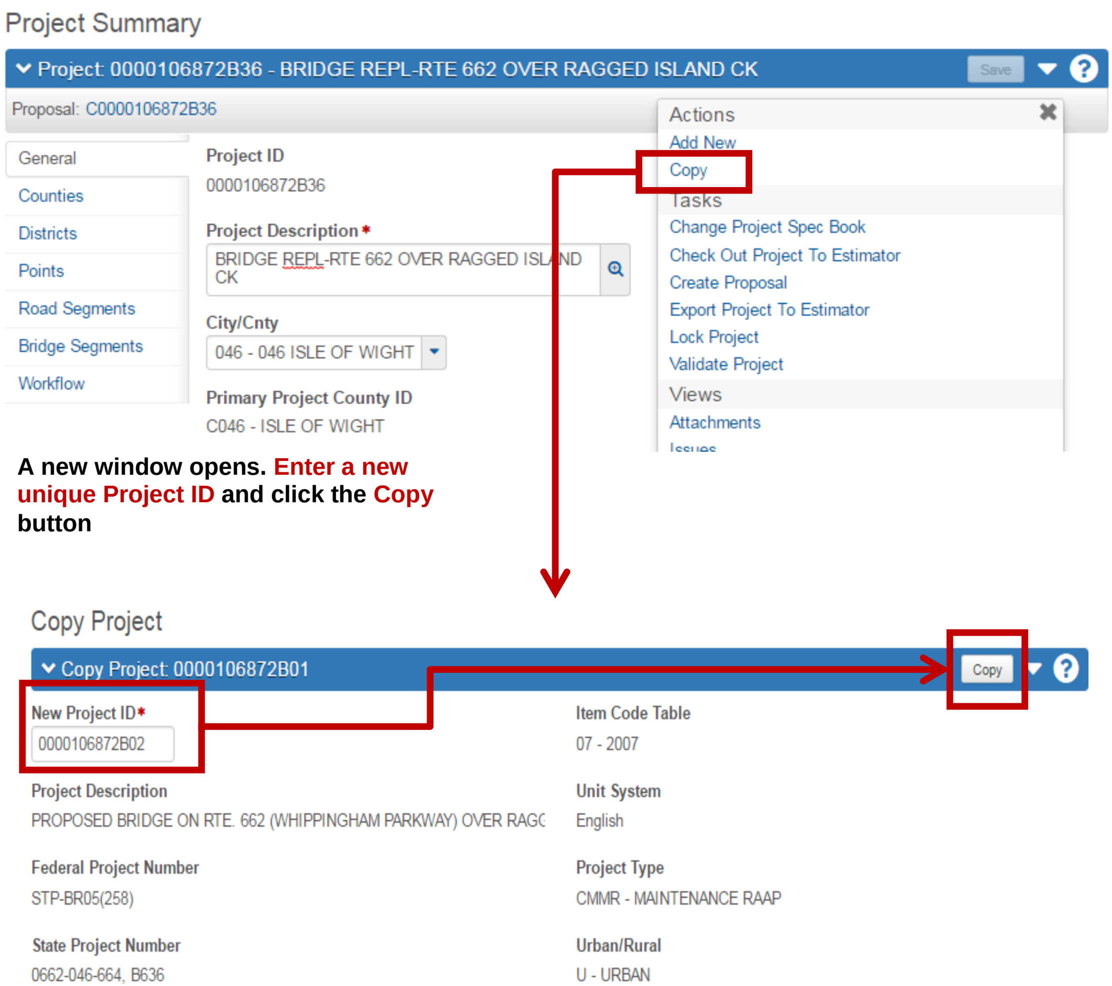


Figure 15 - Copying a Project from within a Project

3.8 Validating a Project

Please see Chapter 8 of this manual for complete Project Validation information.

4. CATEGORIES

Precon Categories are systematically programmed to distinguish between Bid & Non-Bid and separate types of items into specific groups. Categories act as the parent of the (child) Items. Categories must exist before Items can be added in Precon. The Category number must be 4 digits and a separate category must be created for these different areas**:**

- **Regular Bid Items**
- **(Bid) Demolition of Buildings** (Clearing of Parcels, Closing Wells, Removal of Underground Storage Tanks, Removal of Asbestos)
- **(Bid) Betterment / Utility Relocation**
- **(Non-Bid) State Forces** (Police Patrol, ROW monuments, Railroad, Work performed by state resources, Utility Inspector, etc.)
- **(Non-Bid) Contract Requirements** (Incentives/Dis-Incentives) Refer to Chapter 5 for more details
- **(Non-Bid) Construction Engineering and Inspection (CEI)** Refer to Chapter 5 for more details
- **(Non-Bid) Contingency** – Refer to Chapter 5 for more details

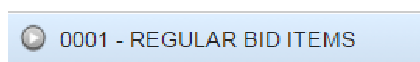
<u>Categories are identified with a four-digit number (this is required) and fall in two distinct types:</u>

1. **Bid** Category (items the contractor will bid/build) or
2. **Non-Bid** Category (overhead costs VDOT incurs that the contractor does not bid/use).

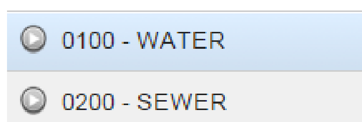
<u>The following Category numbering scheme IS REQUIRED for Categories:</u>

● **<u>REGULAR BID Category numbers 0001 - 1999</u>** Ex: 0100, 0150, 0200, 0300, 0400, etc.

Examples:
Road Design, Traffic or Bridge Project



Utility Project Example:

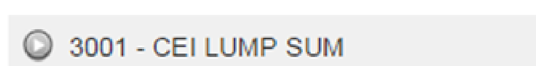


● **<u>NON-BID Category number 2000 - 2999</u> Work performed by State Forces**

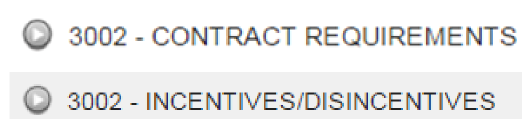
Examples: Police Patrol, State Force work, Utility Inspector, Railway

● **<u>NON-BID Category numbers 3001 – 3003</u>**

Construction Eng (CEI) Lump Sum: **3001**



Contract Requirements: **3002**
(Use Incentives/Disincentives here)



Contingency Lump Sum: **3003**

The Categories tab contains a **list of all existing Categories** associated with the project. Each Category row contains **detail information for that Category**.

- To **expand a Category row**, select the Category in the list and click on the **Expand button** for that row.
- Each row contains an **Action Menu** that lists actions that can be performed for the Category.

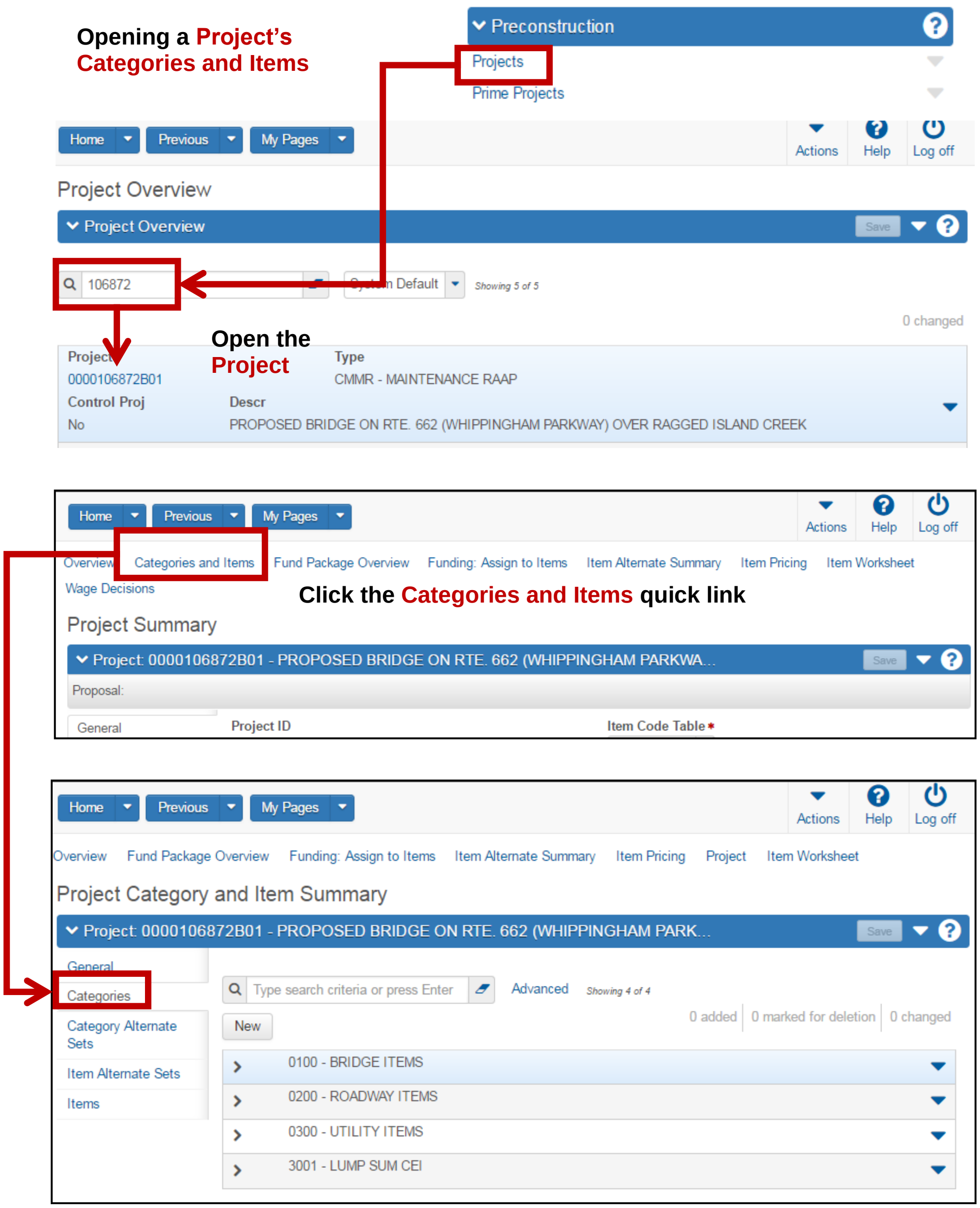


Figure 4 - Project's Category and Items Summary Screen

4.1 Adding a Category

To add a new Category in a Project perform the following steps:

1. Select the Categories Tab.
2. Click the **New button**
3. If the new Category is not expanded to show the fields, click the **Expand** **button.**
4. Enter information in the fields listed.
5. Click **Save** when you are finished to save the new Category.
6. The system displays a message to confirm that the new information was successfully saved.

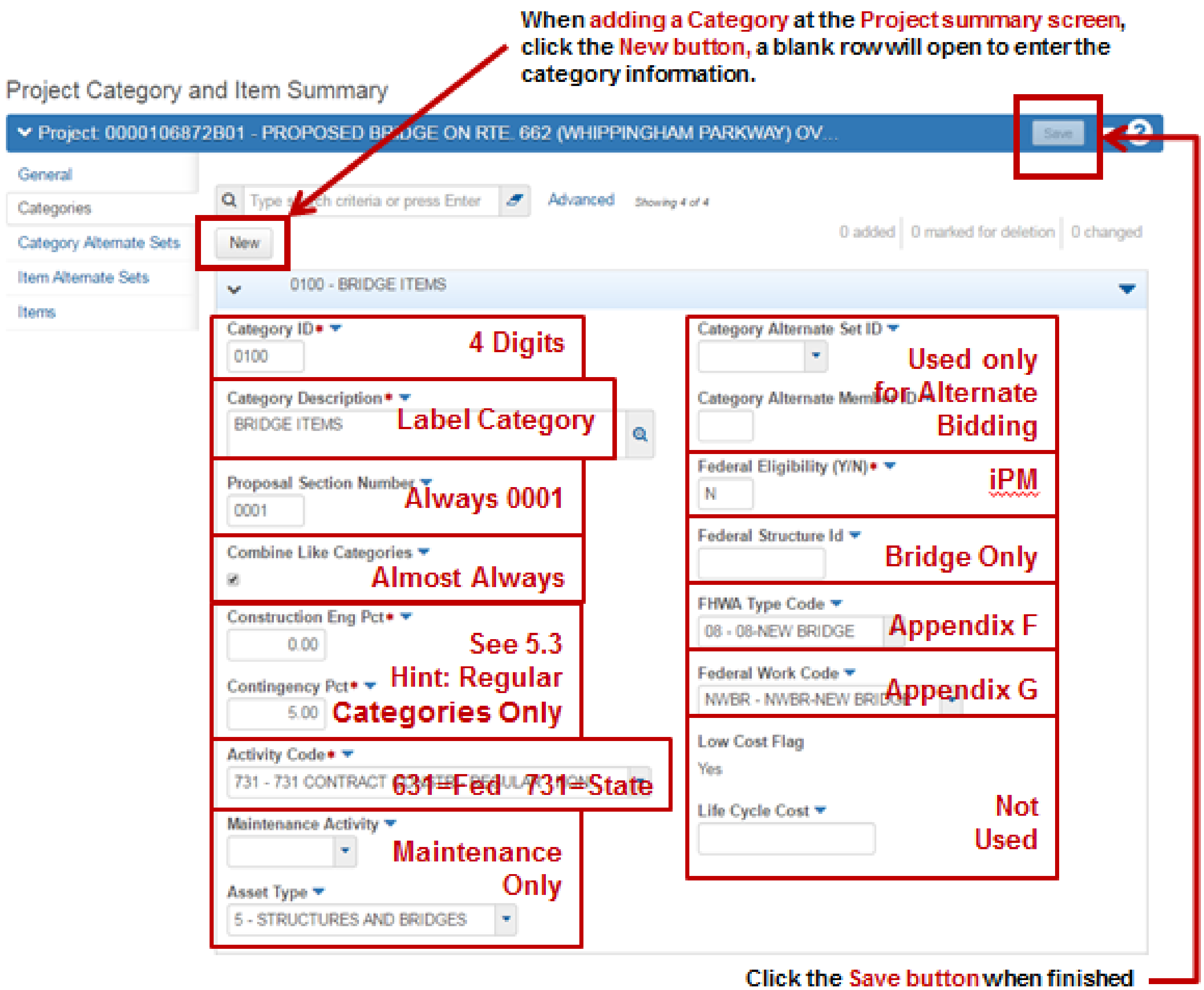


Figure 2 - Adding a New Category

CATEGORY FIELD DESCRIPTIONS:

Category ID (Number) Required: Enter the unique 4-digit category number. Use the following format to number the categories:

Regular bid items (including field office): 0100, 0200, 0300, 0400, etc.

Non-bid items

State Forces, Police Patrol, RW Monuments, Utility Inspector, Railway, etc: (2000-2999)

Lump Sum CEI (3001)

Contract Requirements (Incentives/Disincentives) (3002)

Lump Sum Contingency (3003)

Note that when the estimate is printed, the categories will be arranged numerically; therefore, some thought should be given to the category number assignments.

For Bid Options or Alternates: The Construction Division plan reviewer section is responsible for building bid options/alternates when necessary.

Category description Required: Enter a description. Ex: REGULAR BID ITEMS

Proposal Section Number: Defaults to "0001" and should always be 0001.

Combine Like Categories: The checkbox will default to checked ☑ and should not be changed. This field combines several different categories (as long as the funding source and funding percentages are the same) into a single proposal section.

Construction Eng. Pct (aka CEI): A percentage entered in this field will calculate the CEI costs for all the items under that Category. NOTE: CEI percentages should only be used on Regular Bid Item Categories (Categories 0001 through 1999). **For Non-Bid Categories 2000-3003, the value should always equal zero.**

Contingency Pct Required: When a number is entered in this field, it will calculate that percentage for all the items in that Category. NOTE: Contingency percentages should only be used on Regular Bid Item Categories (Categories 0001 through 1999). **For Non-Bid Categories 2000-3003, the value should always equal zero.**

Contingency costs are based on L&D's IIM-LD-249 - 2-Tiered Approach to Project Oversight:
http://www.virginiadot.org/business/resources/LocDes/IIM/IIM249.pdf

1. Tier I (< or = 10 Million) = **5.0** percent

OR

2. Tier II (> 10 Million) = **10.0** percent

Note: If you use the Lump Sum method for entering the Contingency, you must enter 0.00 in this field, please see 5.3 of this manual for complete details.

Activity Code Required: Choose appropriate value from the drop-down menu. This field classifies and distinguishes between the federal and state funding pool for the Cardinal financial system. This is not to be confused with the Funding packages within a Preconstruction estimate.

Select from the following based on the funding of your project:

a.) 631 = CONS-Regular Fed-Funded (Federal funded)

b.) 731 = CONS-Regular-NonFed Funded (State funded)

Do NOT use 632 or 732 in PreCon Projects, these are dedicated to the AWP-Construction module only.

Maintenance Activity: This field is for maintenance-funded projects only, Maintenance project should enter 72000, otherwise leave this field blank.

Asset Type: Select an appropriate choice from the pull-down for maintenance-funded projects only. **Leave this field blank**

Category Alternate Set ID: A unique identifier assigned to each Category Alternate Set in the Category Alternate Set List. Category alternate sets contain one or more alternate members, and can be used to determine Section alternatives. A Project may contain multiple category alternate sets. Alternates are the Construction Division Plan reviewer's responsibility. **Leave this field blank**.

Category Alternate Member ID: A unique identifier assigned to each category alternate member of a Category Alternate Set. A Category cannot be assigned to a Category Alternate Set without identifying a Category Alternate member. Alternates are the Construction Division Plan reviewer's responsibility. **Leave this field blank**.

Federal Eligibility Required: Enter **Y** or **N**. This designation can be found in iPM.

Federal Structure ID: Enter the 5-digit HTRIS Structure ID. This is a unique 5-digit number assigned to the structure and may be found on the first screen of the structure inventory in the HTRIS system. (This is not to be confused with the 4-digit Structure Number assigned by the State of Virginia.) Enter the Structure ID in the first 5 spaces of this field, leaving the remainder of the field blank. (Enter leading zeroes if necessary to fill 5 spaces.) If it is not a bridge project, leave this field blank.

The District Safety Inspection personnel in the Districts shall be contacted for the Structure ID.

FHWA Type Code: Choose appropriate value from the drop-down menu. This table consists of specific Federal Work Type codes. See Appendix F.

Federal Work Code: Choose appropriate value from the drop-down menu. See Appendix G.

Low Cost Flag: **Display only** – cannot be changed on this screen. A system generated indicator for a Category Section, or bid item that contributes to the low cost total in an estimate.

Life Cycle Cost: The expected maintenance cost over the life of the work being performed. The value is added to the bid amount for the alternate category in low cost calculations and decisions, but it is not part of the actual award amount. **Leave this field blank**.

4.2 Copying a Category

If you are adding a new category to a project that is similar to another category, you can **create a copy of the existing category** and **assign it a new Category ID.** This saves the time it would take to enter all the category detail information again. You can then make any minor changes required for the new category. **Note: All items that are within the Category are also copied.**

- You can copy a category to the current project or another project, and choose whether to include associated data such as locations, funds, and alternate sets.
- The Category may be copied into any existing Project in your Control Group.

Follow these steps to **copy a Category:**

1. On the **Project Summary screen**, click the **Categories and Items Quick link**.
2. On the **Project Category and Item Summary screen,** click the **Categories tab.**
3. Locate the Category you want to copy, and select **Copy** from the Actions Menu on the Category row.
    - The system takes you to the **Copy Category screen.**
4. If you are **copying the Category to another Project,** enter the **destination Project's ID** in the Project ID field.
5. Click in the **Category ID** field, and replace the value with a **unique ID** for the new Category.
    - Be sure to follow the **format for numbering Categories.**
6. If you want to **copy associated information to the new Category**, select the appropriate check boxes for the type of data you want to copy: **Copy Fund Packages, Copy Alternate Sets,** and **Copy Locations.**
7. Click the **Copy Category to Project button** on the screen header.
8. The system **validates the new Category ID, adds the new Category to the destination Project,** and takes you back to the Categories tab.
9. When you **copy a Category to the same Project,** all the information in the source Category is copied to the new Category with the following exceptions and differences:
    - The **Low Cost Flag** field values are determined automatically by the system after the copy is made.
    - **Project Item Line Number** field values in the copied Category will not necessarily match the source values, but will be determined by the order of insertion into the Project.
10. When you **copy a Category to another Project**, all the information in the source Category is copied to the new Category with the following exceptions and differences:
    - The **Low Cost Flag** field values are determined automatically by the system after the copy is made.
    - **Project Item Line Number** and **Project Item ID** field values in the copied Category will not necessarily match the source Project's values, but will be determined by the order of insertion into the destination Project.
11. If you **do not include the Category's associated information** in the copy, the system clears the **Section ID, Fund Package ID, Alternate Set ID,** and **Alternate Member ID** fields.

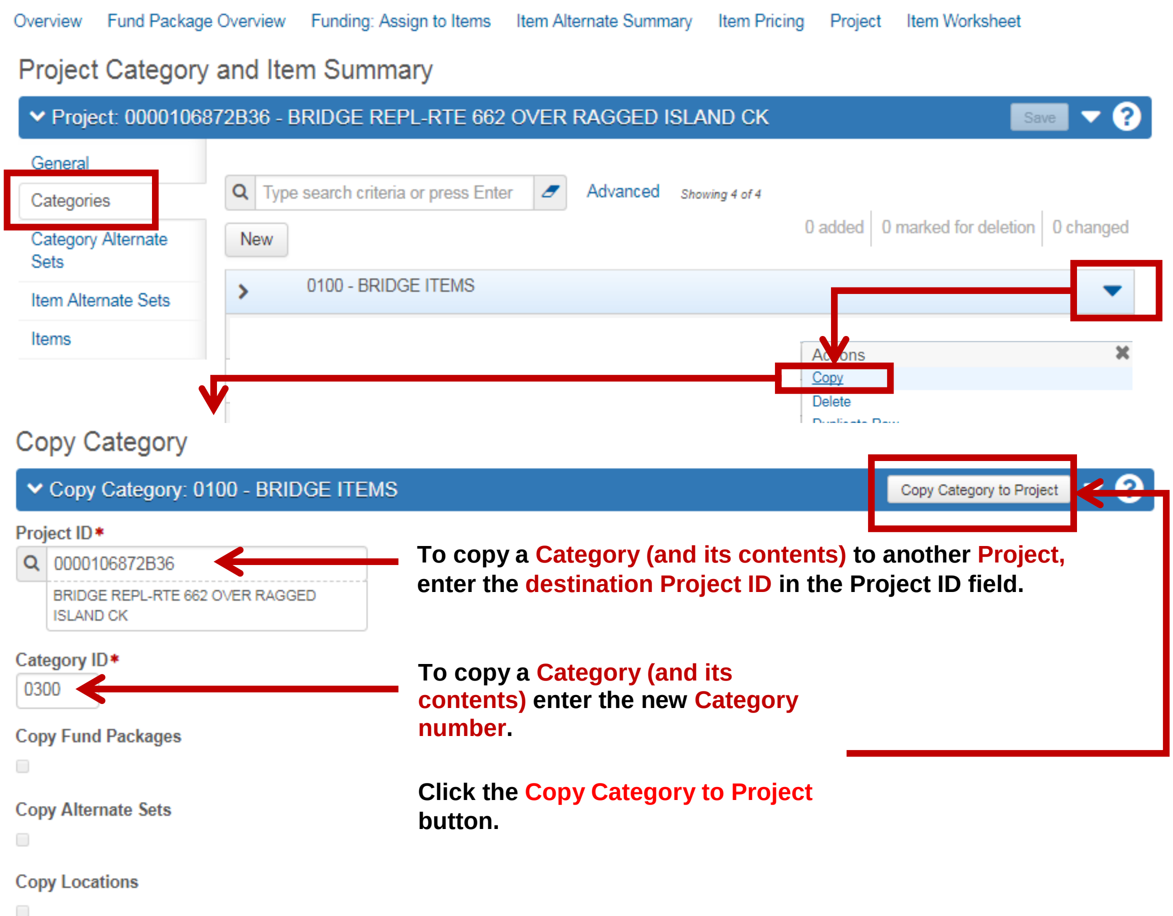


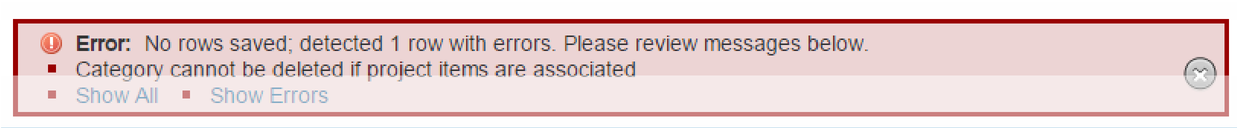
Figure 3 - Copying a Project's Category

4.3 Deleting a Category

There are 2 methods to delete a Category and this is dependent upon whether the Category includes items.

To Delete a category perform the following steps:

1. Select the action button on the Category row you wish to delete
2. Select Delete.
3. If the Category has items within it, the following error displays.



4. If you are certain you want to delete the Category AND all the items within it, select the action button on the Category row you wish to delete.

5. Select Delete Category and Associated Data.

   This means all the items under that Category will be deleted!!
   USE EXTREME CAUTION: Once this is selected it deletes automatically. There is no opportunity to Undo!

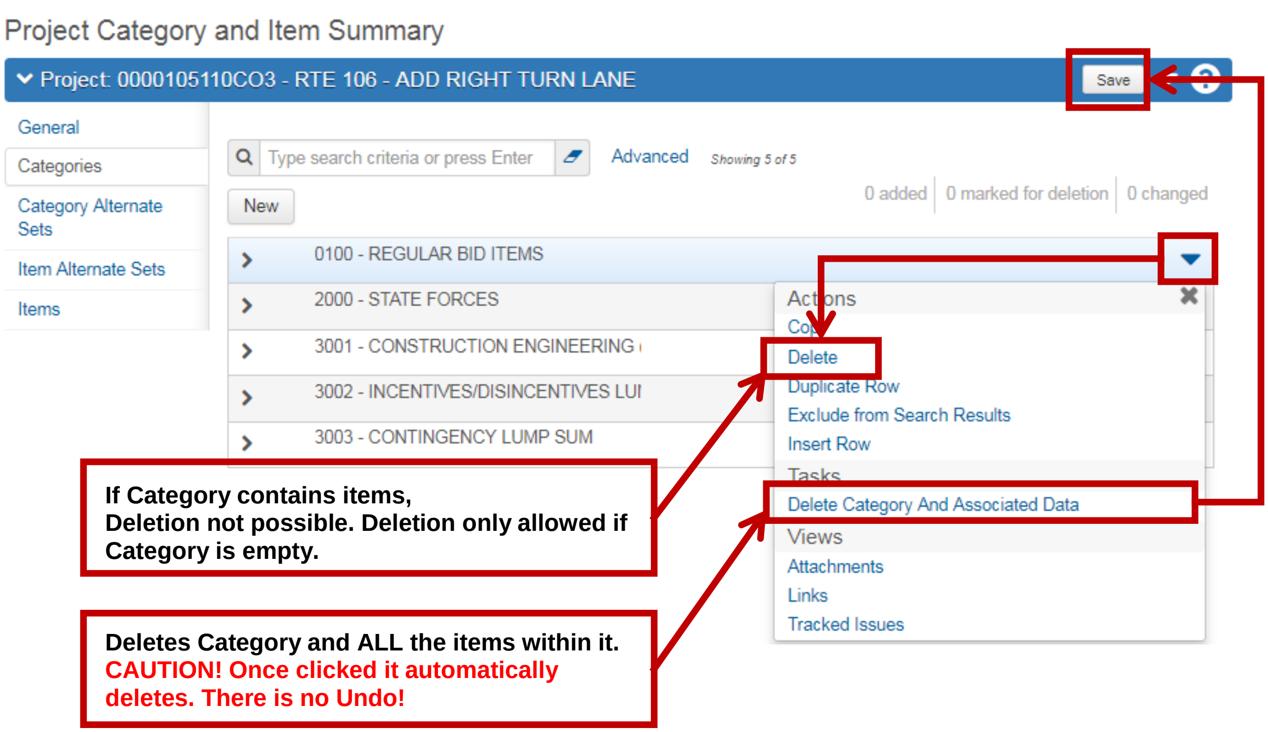


Figure 4 – Deleting a Category

5. ITEMS

Precon Items have a relationship with Categories. Categories act as the parent of the (child) Items. Categories must exist before Items can be added in a Precon Project. The Items come from an Item Code Table from the current Specification book. There are 2 types of items: **Standard Items** and **Non-Standard items**. A complete list can be found here: http://www.virginiadot.org/business/const/resource.asp

The **Items** tab on the Project Category and Item Summary component contains an accordion list of all the items in the project. Each row represents one item. Each row displays an Actions button and values for the **Project Item Line Number, Item ID and Description, Quantity,** and **Unit of Measure** fields.
If you are working only with the items in a single project category, you can use the **Category ID** filter at the top of the page to filter out of the list all items except those you are working with. Click the **Category ID** down arrow, and select the category you want. You can choose **No Filter** to display all items in the list.

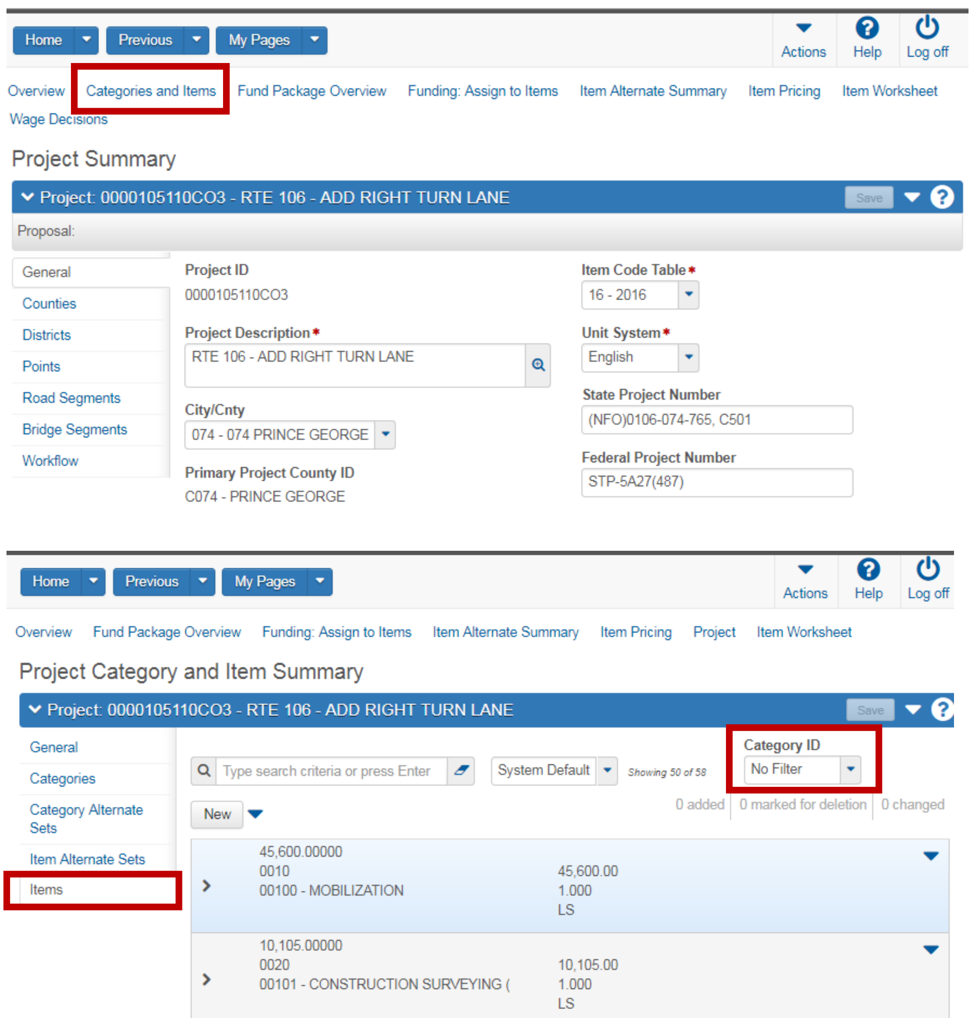


Figure 5 – Project Category and Item Summary Screen

5.1 Item Overview

5.1.1 Item Field Descriptions

Item Number Required: Enter the 5-digit number for the item. The item number or description will search the item code table. Once the Item Code Table displays your item, click the item to fill in the field.

Project Item Supp Description: This field becomes required for Non-Standard items only. Enter the additional wording that will be added to the text of the item to complete the non-standard item description.

IMPORTANT:
Standard Items: this table is designed per the current specification book. If you find that a standard item does not suit your situation or you have a slight deviation of the standard specification, you must use a Non-Standard item and provide additional information. Users are not permitted to add supplemental description to standard item codes.

Non-standard items: Before using a non-standard item, be certain that there is not a standard item that is applicable. Once you determine that there is not an applicable standard item, you will need to select one of the items in the table that is prefixed with NS. These items are interspersed throughout the table in places where deemed appropriate. Additionally, there are very general NS items at the end of many of the groupings; select from these very general NS items only as a last resort. See Appendix B for the Item Code Index.

Note: The same NS item number may be used more than once in an estimate as long as the description you give at the **Project Item Supp Description** field is unique.

There will be occasions when you will be entering NS items for multiple projects that will be advertised on the same contract. Consideration must be given to the non-standard descriptions as to whether or not you wish the items to be combined.

- If you do not wish items to combine, be sure to give unique descriptions in this field.
- If you wish items to combine, the descriptions given in this field must be exactly the same. In addition, any other information you enter on the item screen must be exactly the same (spec book#, source of price, etc.).

Note: The "NS" will print at the Project and Prime level reports, but will not print on the proposal.

Spec Book# Non-Std: This is a required field for all Non-Standard items entered in an estimate. Up to three Specification Numbers, or 11 characters, shall be entered. Enter the Specification Number here, if known. If the Specification Number does not reference a location providing measurement and payment details for the Non-Std Item you MUST provide measurement and payment information for the Non-Std Item, to do so you shall enter "**ATTD**" to indicate Special Provisions are attached in the contract to indicate pertinent information is on the plans. **The Special Provisions and pertinent information associated with "ATTD" must be submitted to the Construction Division for review and acceptance.**

Unit of Measure: This field will display the units of the item that you selected.

Quantity: Enter the quantity of the item. **Please Note: Enter the quantity of the item to the nearest 10th of the quantity on the plan, for example 2.5 - Quantities entered in Precon need to match what's shown on the summary that the estimate is built from.**

Estimate Unit Price: Leave this field blank for standard items. When you have finished your estimate, the prices will be generated when you generate bid based prices. The designer has the option to overwrite the generated price.

A Price must be filled in for non-standard items. Be sure to lock the price so the generate price process will not overwrite your work/price.

Extended Amount: When the quantity and estimated price are filled in, the extension of those two numbers is shown in this field.

Price Lock Flag: Select the checkbox if you would like to lock the unit price for the selected item including all Lump Sum items where the users enter a price. This prevents the system from overwriting prices that the user enters.

Category ID Required: Select the Category that you wish to assign the item to from the drop down list. All items in the estimate must be assigned to a category.

Project Item Previous Price: This field is reserved for Construction Division. Changes from the estimated price can be tracked by utilizing this field.

Non-Bid Item: Default is unchecked. Any Item within Categories 2000 through 3003 must have this box checked to prevent items from appearing on the contractor's bid sheets.

Combine w/Like Items: Defaults to checked to combine like items on the proposal; uncheck box if you do not want to combine items on the proposal.

Item Alternate Set ID: This field is only used by the Construction division, leave field blank.

Alternate Member ID This field is only used by the Construction division, leave field blank.

Source of Price: This value will be set once the item is priced and determined by the method the price was created.

Proposal Line Number: This field is filled in by Preconstruction after generating line numbers in the proposal.

5.1.2 Lump Sum Items

Lump sum items are items for which a typical unit of measure does not exist (for example, mobilization).

A lump sum item can be defined by three methods:

True lump sum

A *true* lump sum item is bid in a lump sum amount (that is, with a quantity of 1). The quantity, at the proposal item level, is grouped together as a single unit and the item is priced and bid as a whole. For true lump sum items, the Lump Sum and the Bid as Lump Sum check boxes are selected on the Item Summary component.

Fractional lump sum

A *fractional* lump sum item has a fractional quantity (greater than 0 but less than 1.0) but, at the proposal level, the quantity must equal a summed quantity of 1.0, and it is bid with a single value. Like true lump sum items, fractional lump sum items have both the **Lump Sum** and the **Bid as Lump Sum** check boxes selected on the Item Summary component.

If a project item has a fractional lump sum quantity, there must be at least one other project item which, when combined at the proposal level, sums the quantity to 1.0. In order to combine, the fractional lump sum items must have the same unit price. Errors are indicated at the proposal item level and on the proposal validation if these conditions are not met.

The same item can be true or fractional depending on how your agency wishes to price that particular item.

Hybrid lump sum

A *hybrid* lump sum item has a typical unit of measure and quantity (which may be greater than 1), but is bid in a lump sum amount (that is, with a quantity of 1.0). The **Bid as Lump Sum** check box will be selected, but not the **Lump Sum** check box. For example, a "Clearing and Grubbing" item can be a hybrid lump sum item if its quantity is measured in terms of acres, but it is bid in a lump sum amount.

Characteristics of Lump Sum Items

Type	Lump Sum Flag	Bid as LS Flag Checked	Has Unit of Measure	Estimate Quantity	Estimate Price for Multiple Occurances	Proposal Total Quantity	Bid Quantity
True	Yes	Yes	No	1	Same or Different	1	1
Fractional	Yes	Yes	No	0 < Qty > 1	Same	1	1
Hybrid	Yes	Yes	Yes	0 < Qty	Same or Different	1	1

Note: For hybrid items at the proposal item level and bid item level pages, the quantity is displayed as the estimated quantity, but is calculated based on a quantity of 1.0 for the extended item amount.

5.2 Adding an Item

There are 4 ways to add an item to a Precon project, from either the Categories and Items tab or the Item Worksheet quick link.

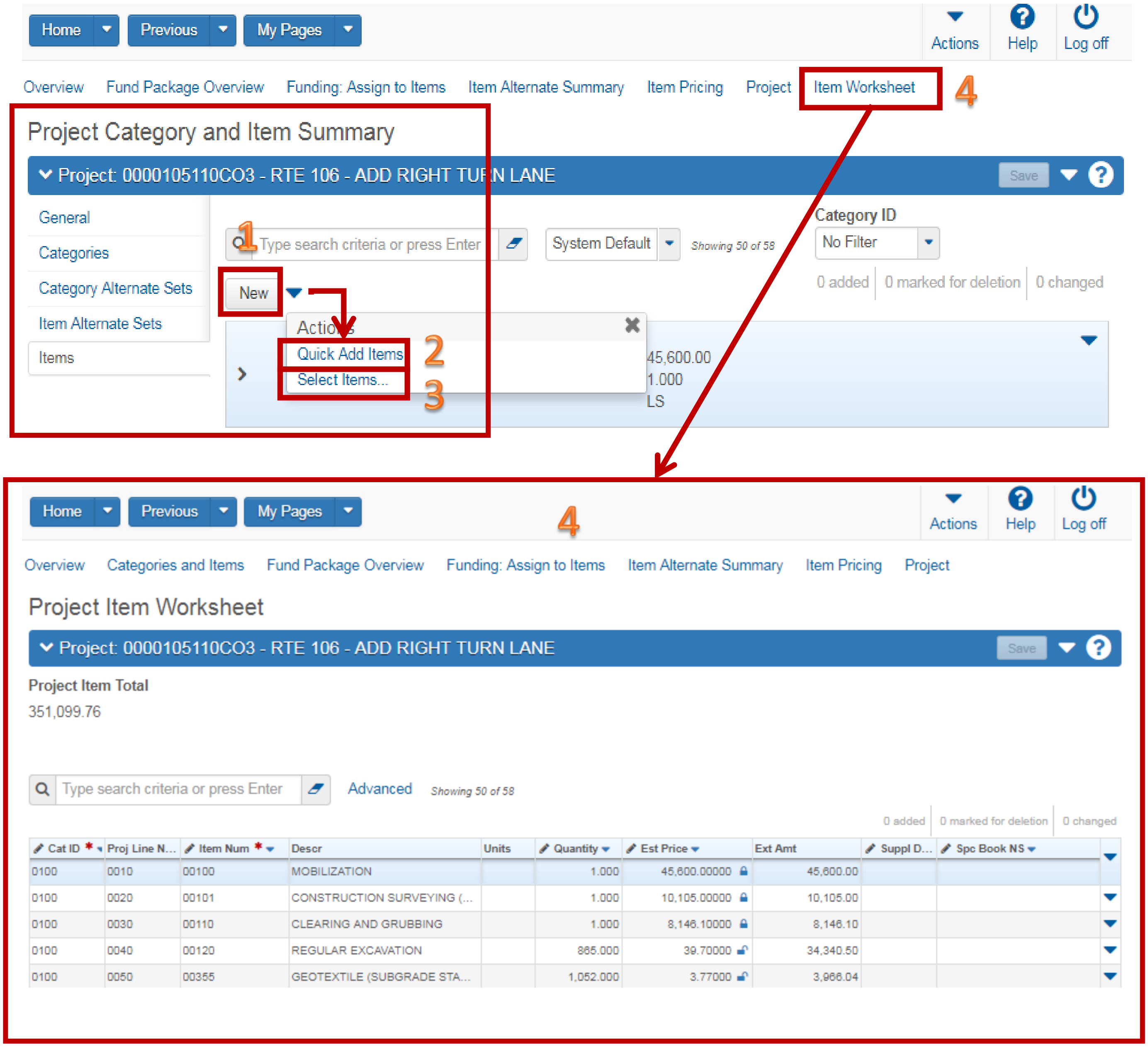


Figure 2 – 4 Ways to Add Items

5.3 Deleting an Item

From the Project Category and Item Summary, find the item you want to delete. Select the row actions button for that item and then select **Delete** from the list of actions.

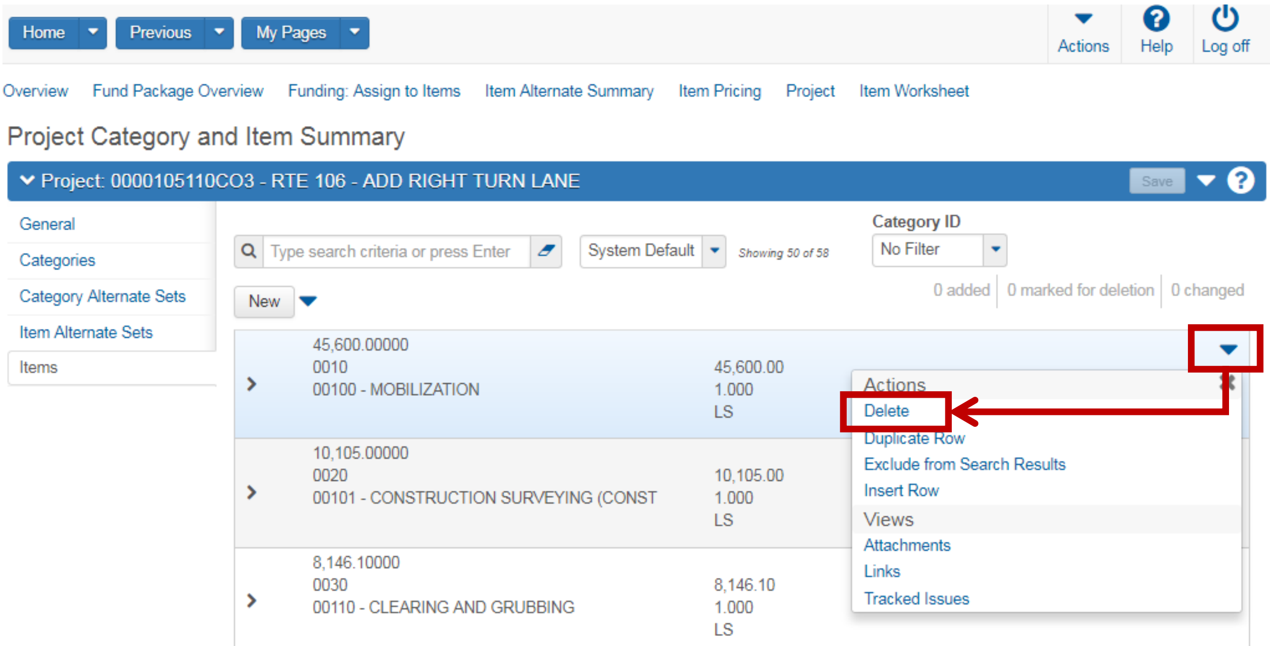


Figure 3 – Delete Item Screen

5.4 Determining Construction Surveying, Mobilization, Construction Engineering (CEI), Contingency and Contract Requirement costs

Two items shall be entered on **every** Road design (Project ID's ending in CXX) and Structure & Bridge (Project ID's ending in BXX) Precon estimate.

1. Construction Surveying (Calculate first) – Item Code **00101**
2. Mobilization (calculation includes Construction Surveying cost) – Item Code **00100**

It is recommended that these two items be entered, with a quantity of 1 and a value of zero, **at the time the rest of the items are entered**. Then calculate and fill in the cost **after** all other items in the estimate are complete. Recalculation of the Construction Surveying and Mobilization may be required if **project totals change.**

5.4.1 Calculating Construction Surveying

All Location & Design and Structure & Bridge projects will contain the pay item Construction Surveying *(Item Code 00101) and should be entered under a Regular Bid Item Category*. The cost is determined by the following:

- Structure and Bridge – **$1,500 per span**
- Location and Design – **1% of the total project cost,** If there is a Traffic component on the project, calculate 1% of the sum of the "C" (road design) and the "T"(traffic) projects
  – **Add $1,000 for each "D" number.**
- Traffic Engineering – Construction Surveying costs for Traffic engineering projects are calculated and included in the L&D road design estimate.

5.4.2 Calculating Mobilization

All Location & Design projects and all Structure & Bridge projects shall contain the pay item Mobilization *(Item Code 00100) and should be entered under a Regular Bid Item category as a Lump Sum.* The formula for Mobilization can be found in the Spec book in Section 513.

The mobilization calculation includes the cost of Construction Surveying. Traffic engineering projects which are a part of an L&D project will not include Mobilization. The road designers will calculate their Mobilization based upon the sum of the "C" (road design) and "T" (traffic) projects.

FORMULA FOR MOBILIZATION (Spec Book Section 513)

Contract Amount		Total Mobilization Payout Limit
More Than	**To and Including**	
$0	$200,000	10% of total contract amount
200,000	1,000,000	$20,000 plus 7.5% (of total contract amount minus $200,000)
1,000,000	More	$80,000 plus 5% (of total contract amount minus $1,000,000)

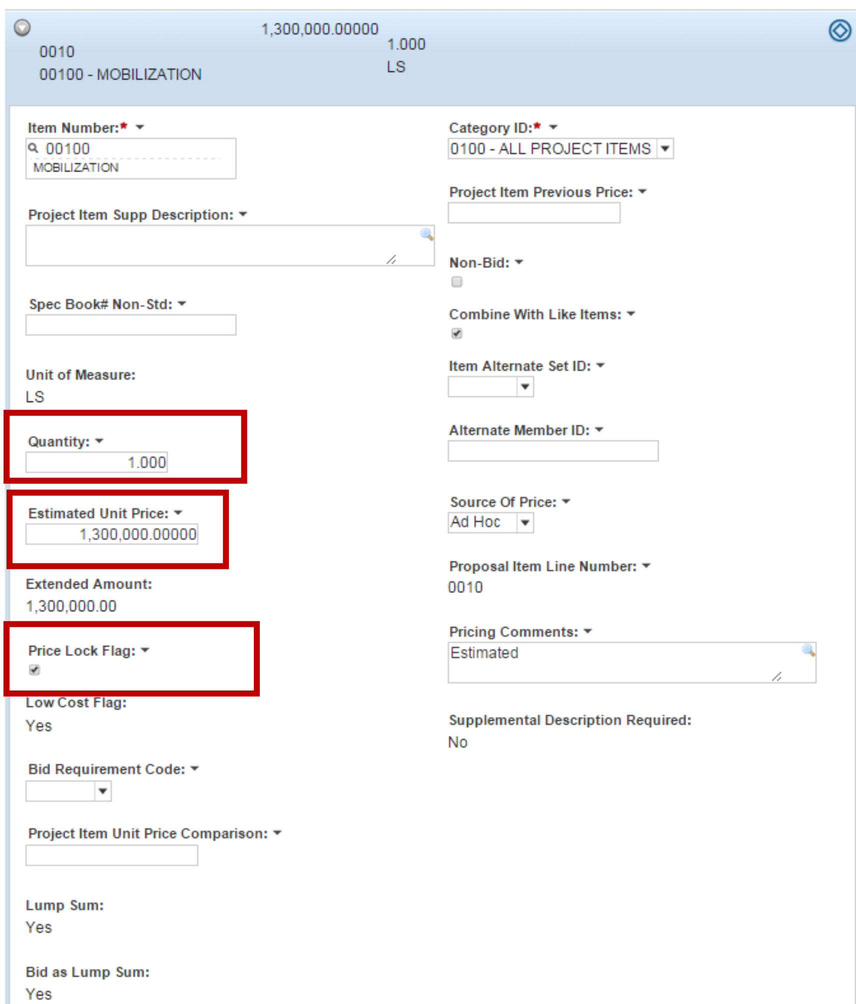


Figure 4 – Mobilization

5.4.3 Calculating Construction Engineering and Inspection (CEI) (Non-Bid Cost)

The Non-Bid Construction Engineering and Inspection (CEI) covers a range of costs and the Project Manager is ultimately responsible for developing and managing the construction engineering and inspection budget. This budget typically is developed after the project plans are complete so it is recommend to use the following formula based on the estimated Construction cost (totals in Precon projects).

Estimated Construction Cost (in Millions)	Construction Engineering %
< 1 M	18.0%
1 - 3 M	17.0%
3 - 6 M	16.0%
6 - 10 M	14.5%
10 - 15 M	13.0%
> 15 M	12.5%
Schedule Work	10.0%

Construction Engineering (CEI) should be entered as a lump sum using **Item Code 25580** and must be entered under **category 3001**, see Chapter 4 for complete details. Item 25580 has a TEC (Total Engineering Cost) unit of measure and the quantity should always be 1.

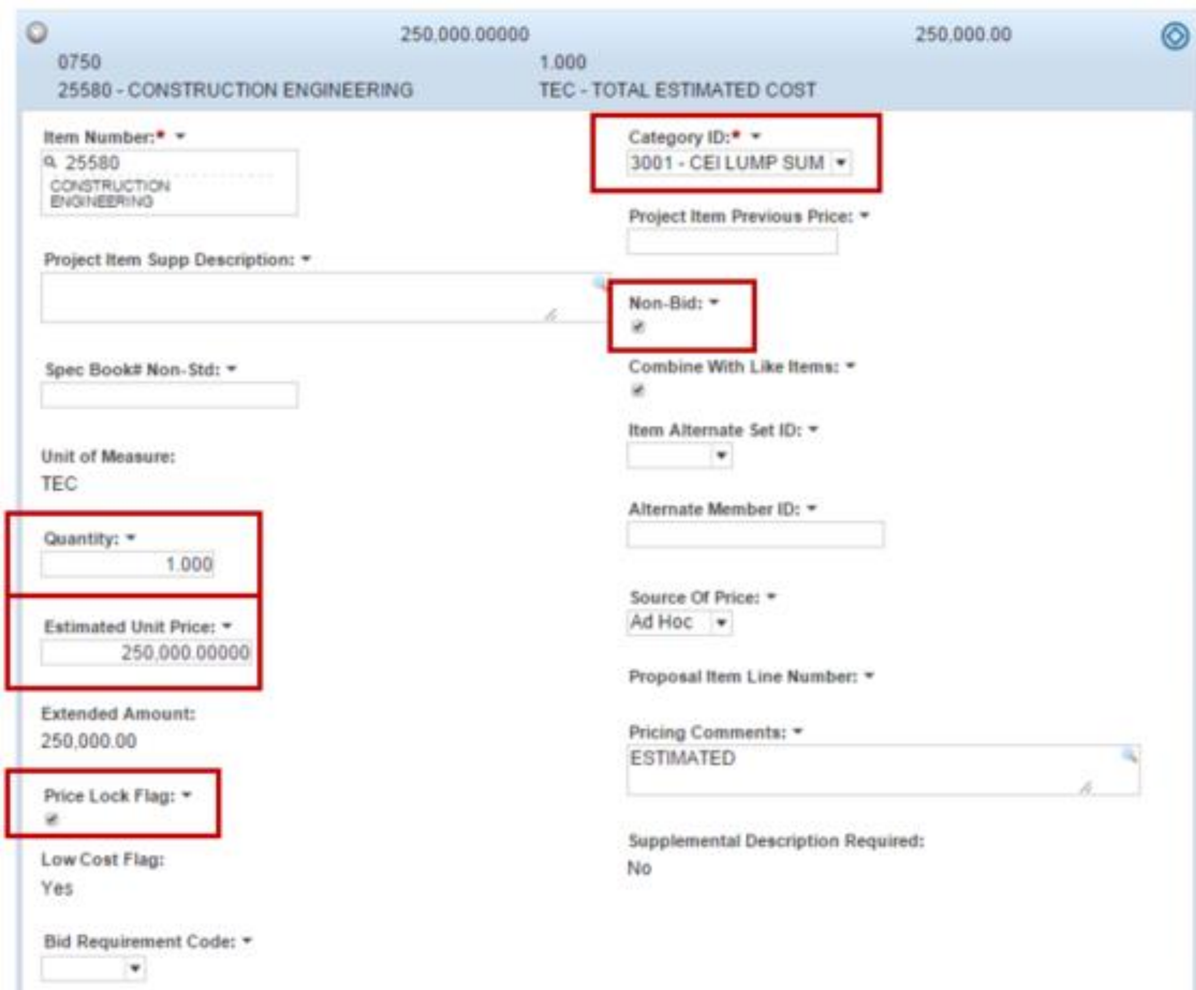


Figure 5 – CEI Lump Sum

5.5 Contingency (Non-Bid Cost)

The Contingency cost on construction and maintenance contracts is used to capture the potential cost of additional work, unforeseen conditions such as differing site conditions, plan changes etc. **Contingency is a Non-Bid cost and is only calculated for Regular Bid Items (Categories 0001 through 1999)**. The following items need to be accounted for in your contingency budget for both construction and maintenance contracts including schedule work:

- Fuel Adjustment
- Asphalt Price Adjustment
- Steel Adjustment
- Ride ability

Contingency costs are based on L&D's IIM-LD-249 - 2-Tiered Approach to Project Oversight:

3. Tier I = **5.0** percent

OR

4. Tier II = **10.0** percent

If there is more than one federal project number, the contingency cost should be allocated to each federal project. The cost may be divided among other Project ID's, if the Project Manager desires but **if using contingency percentages they must match in all Precon Projects.**

The Contingency cost can be entered in Preconstruction in one of two ways: It must be one or the other, BUT NOT BOTH.

1. As a percentage in the Contingency PCT field on the Category screen (preferred method) (Entered **Only on Categories 0001 through 1999)**

OR

2. As a Lump Sum (less common method)

5.5.1 Entering Contingency as a Percentage (Recommended method)

Enter **5.0** or **10.0** in the **Contingency Pct** field under the Regular Category only.
Important note: Contingency percentages should only be entered on Categories 0001 through 1999.

Note to Project Managers: The Contingency percentage must match across all projects in the Prime and/or Proposal.

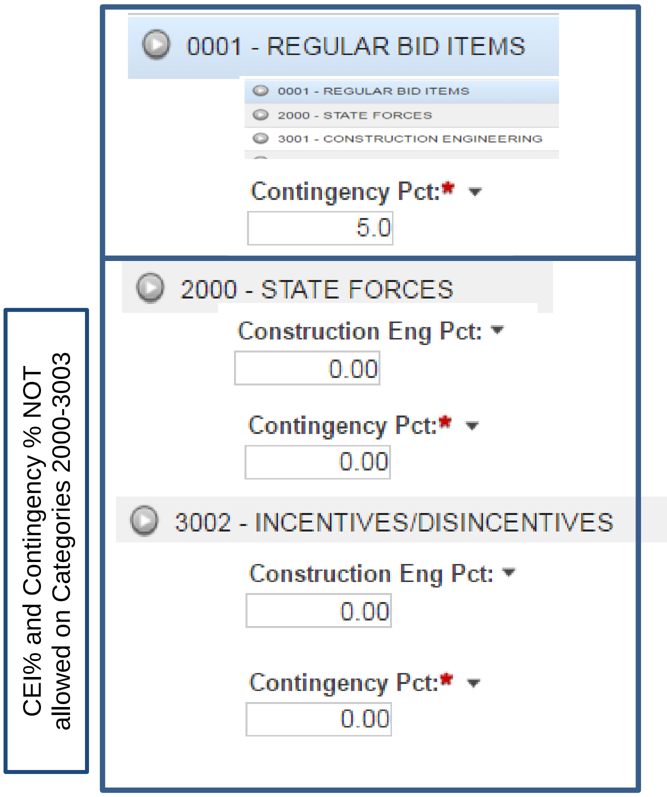


Figure 6 – Contingency Percentage

5.5.2 Entering Contingency as a Lump Sum (less common method)

Lump Sum Contingency uses **Item Code 25590** and must be entered under **category 3003**.
The Contingency Item 25590 has a TEC (Total Engineering Cost) unit of measure and the quantity should always be 1.

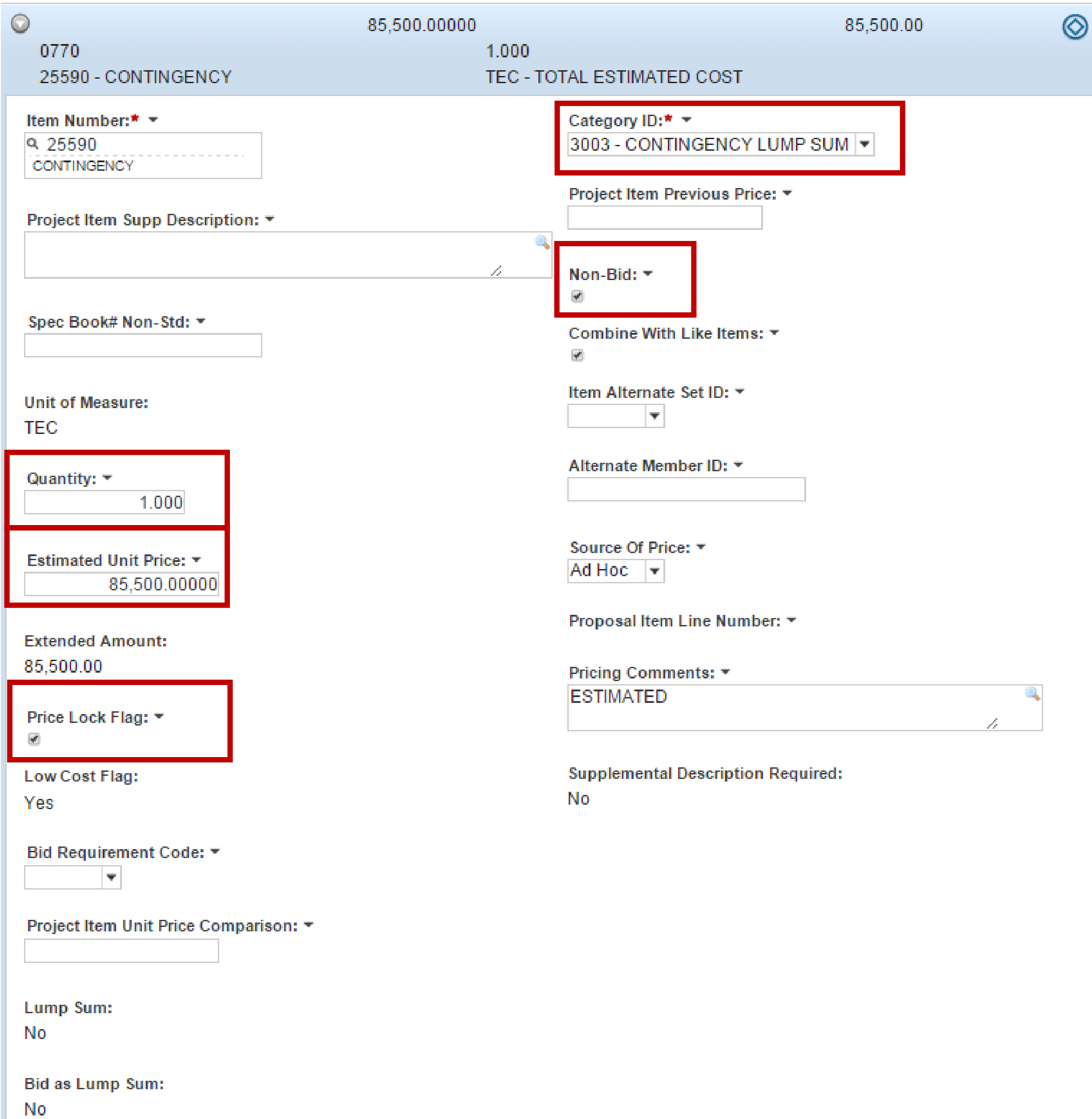


Figure 7 – Lump Sum Contingency

<u>Note: If using the Lump Sum method for Contingency, be sure that all the Contingency % field is 0.0 at the Category level!</u>

5.5 Contract Requirements (Non-Bid Costs)

The Contract Requirements item was established to capture potential project Incentives/Disincentives (I/D) payments. Users may utilize HUB-CAP or other methods to determine the Maximum cost.

Contract Requirements uses **Item Code 25585** and must be entered under **category 3002**.
Item 25585 has a TEC (Total Engineering Cost) unit of measure and the quantity should always be 1.

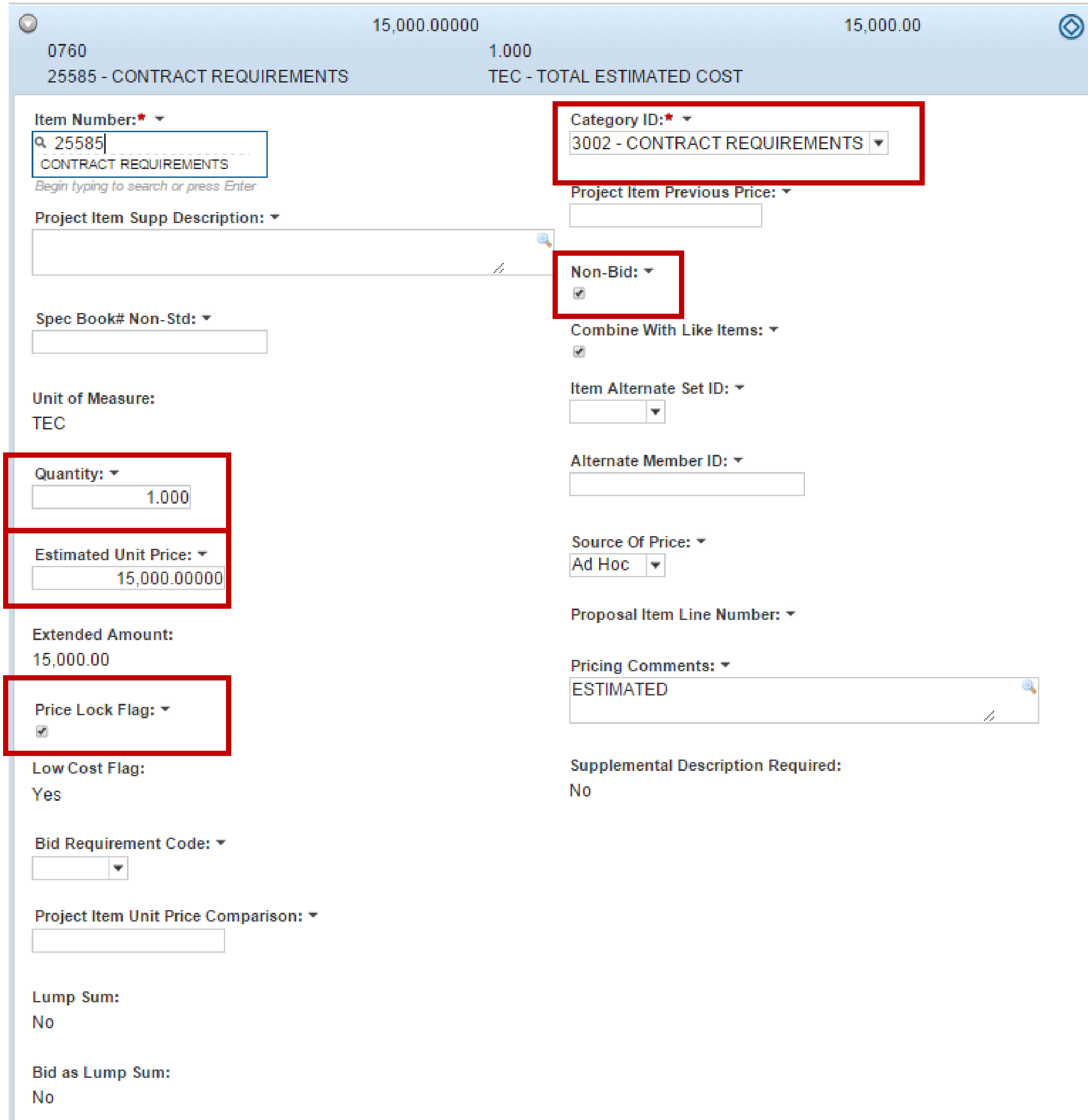


Figure 8 – Requirements / Incentives & Disincentives

6. FUND PACKAGE Overview & FUNDING: Assign to Items

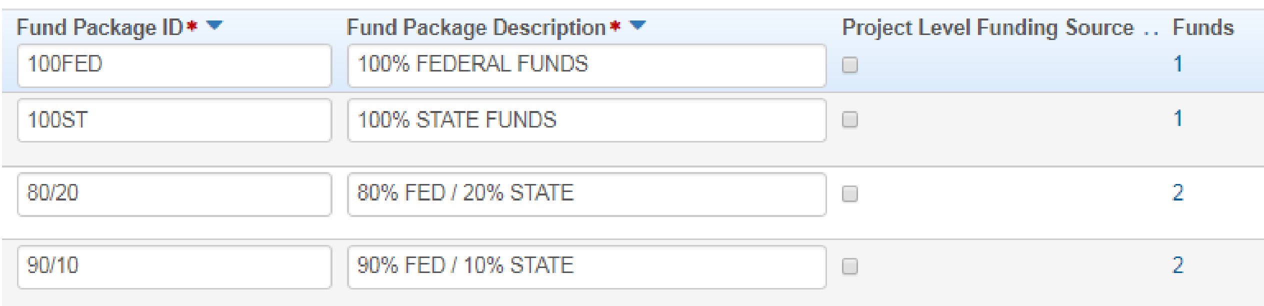
A *fund package* is used to assign funding to the project items and to define that grouping with a Fund package name. **For the majority of VDOT Projects, only One Fund Package is necessary,** as funding is typically the same for the entirety of a project. An exception to this rule is a project that contains betterment. **Fund Packages must equal 100% and all items must be assigned to a Fund Package.**

The procedures are as follows:

1. Assign Pre-Defined Fund Package or Create a new Custom Fund Package.
2. If a New Custom Fund Package was created – add the funding specifics to the Custom Fund Package.
3. Assign Funding to Items.

6.1 Pre-Defined Fund Packages

VDOT has 4 Standard Pre-Defined Funding Packages at your disposal, they are:



Fund Package ID*	Fund Package Description*	Project Level Funding Source ..	Funds
100FED	100% FEDERAL FUNDS		1
100ST	100% STATE FUNDS		1
80/20	80% FED / 20% STATE		2
90/10	90% FED / 10% STATE		2

Figure 6 – VDOT's Pre-Defined Fund Packages

6.1.1 Funding Specifics for Pre-Defined Fund Packages

All Federal funds (AF01, AF02 & AF03) must include the Cust ID = 00055002. This is a Cardinal requirement for the AWP-Construction module validation.

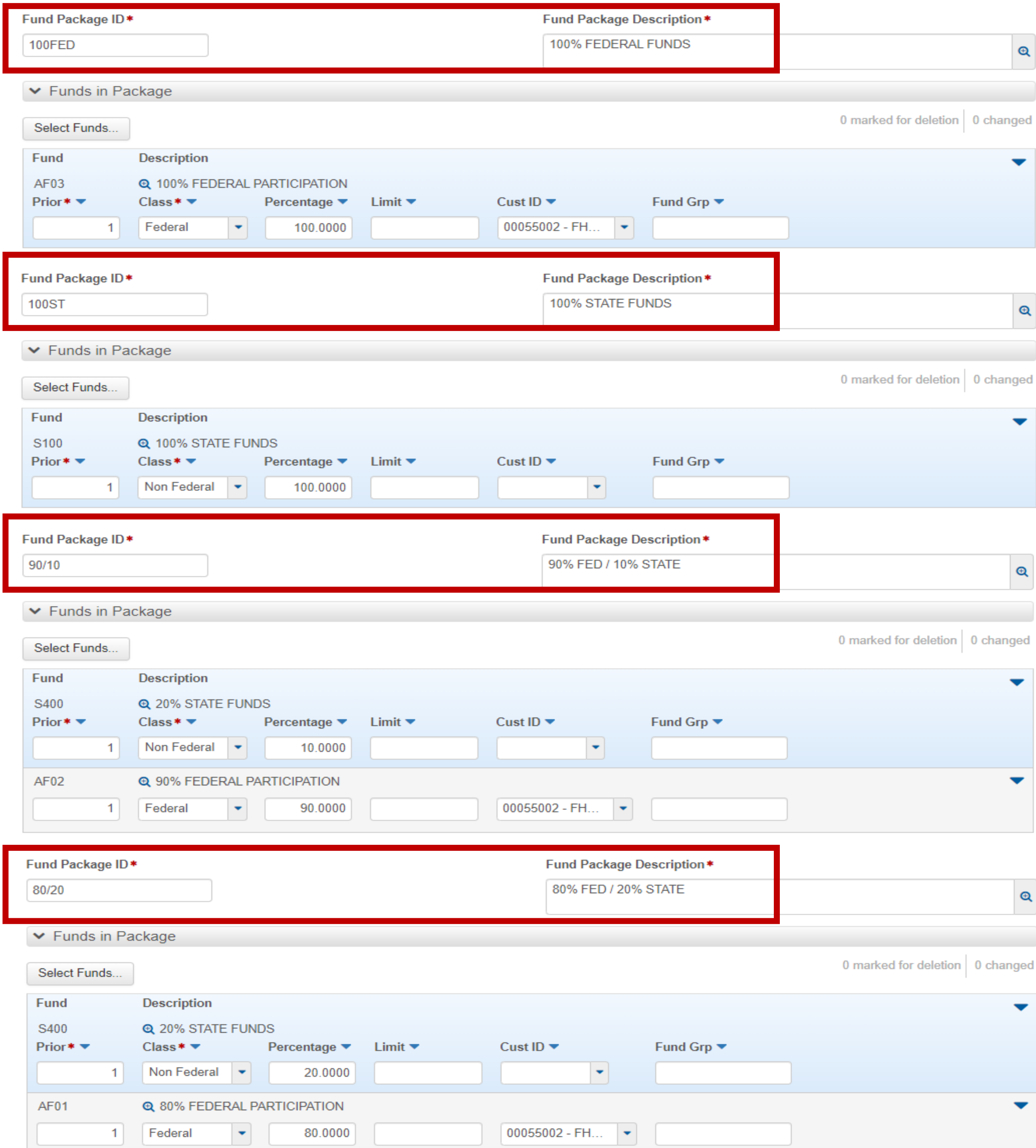


Figure 2 – Funding Specifics for VDOT's Pre-Defined Fund Packages

6.1.2 Example of a Betterment Custom Fund Package

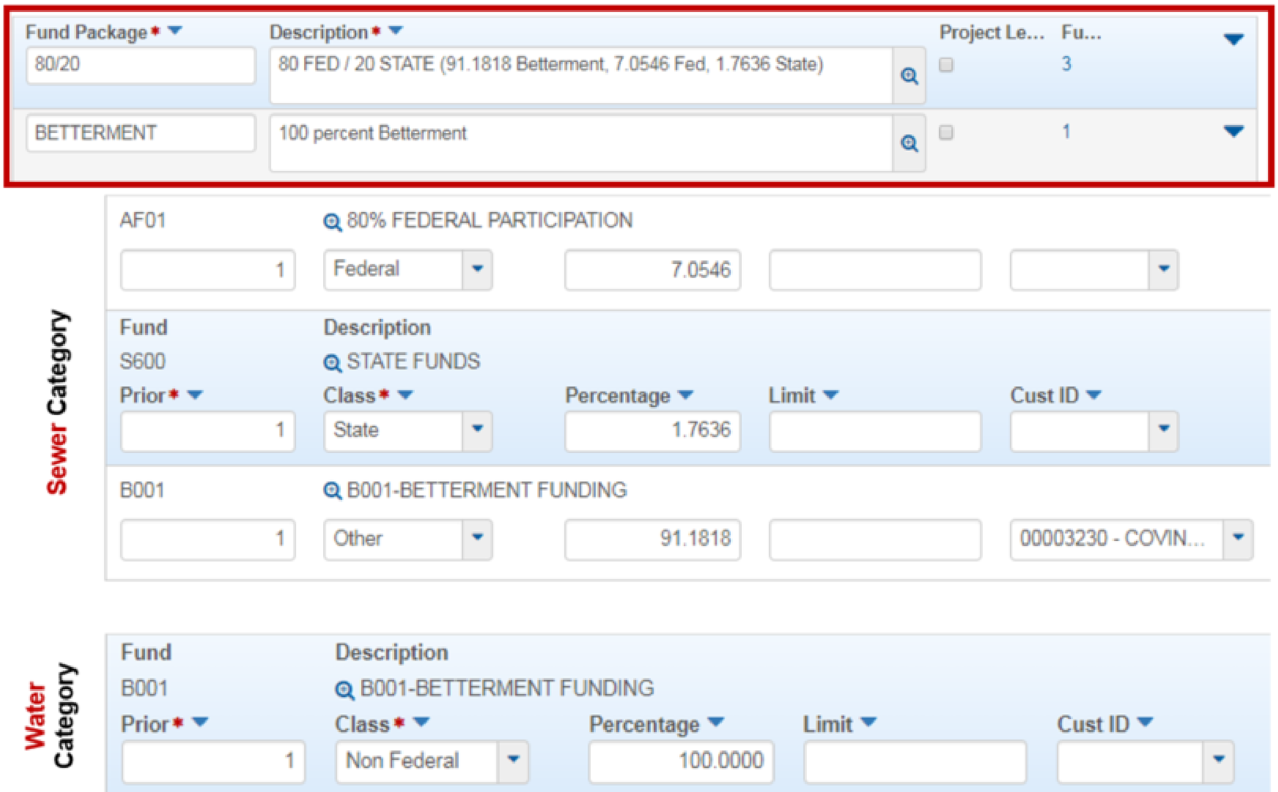


Figure 3 – Betterment Custom Fund Package Example

6.2 Methods to Add Fund Packages

There are 2 methods to Add a Funding Package to a Project:

1. Select a Fund Package from a Pre-Defined List (Most common method)
2. Create a New Custom Fund Package from scratch (that is not in the Pre-Defined List)

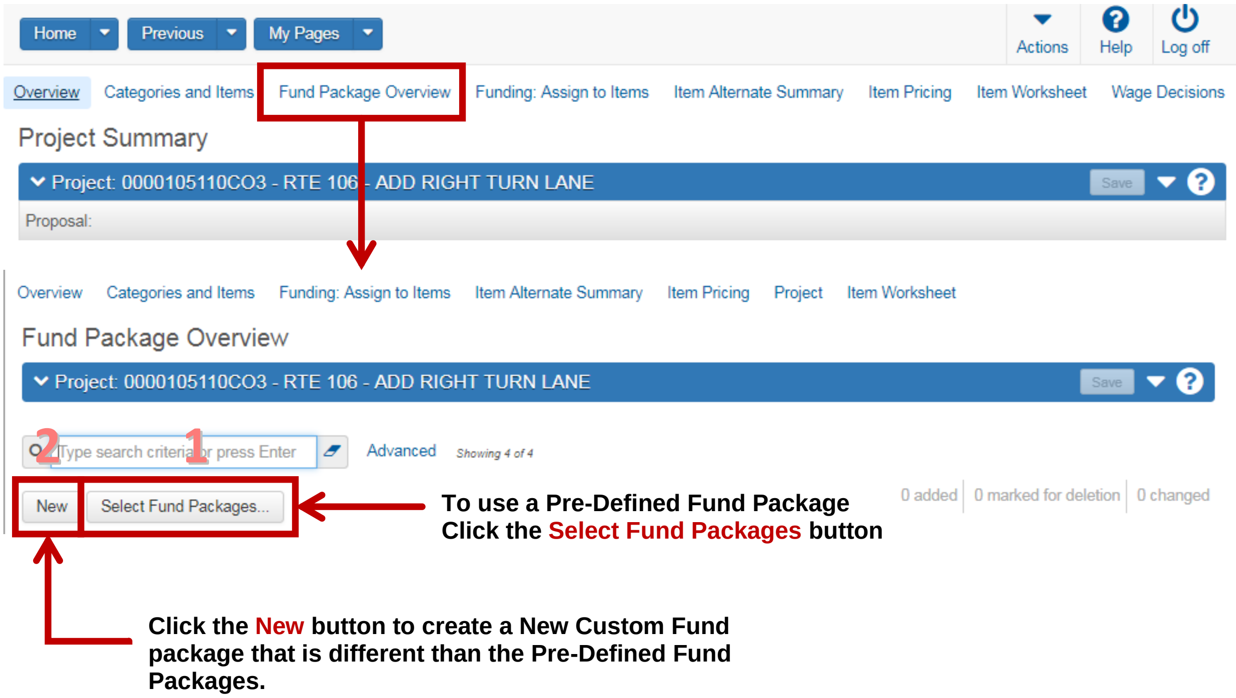


Figure 4 – Two Methods to Add a Fund Package

6.2.1 Adding a Pre-Defined Fund Package

Perform the following steps to add a Pre-Defined Fund Package to a Project.

1. From an open project, click the Fund Package Overview quick link.
2. Click the **Select Fund Packages** button, a new window will open.
3. Click **Show first 10** in the middle of the screen.
4. Select the desired Fund Package from the list, a green check mark displays to the right of the chosen package in the list.
5. Click the **Add Fund Package** button.
6. **Go to 6.3** for the next step.

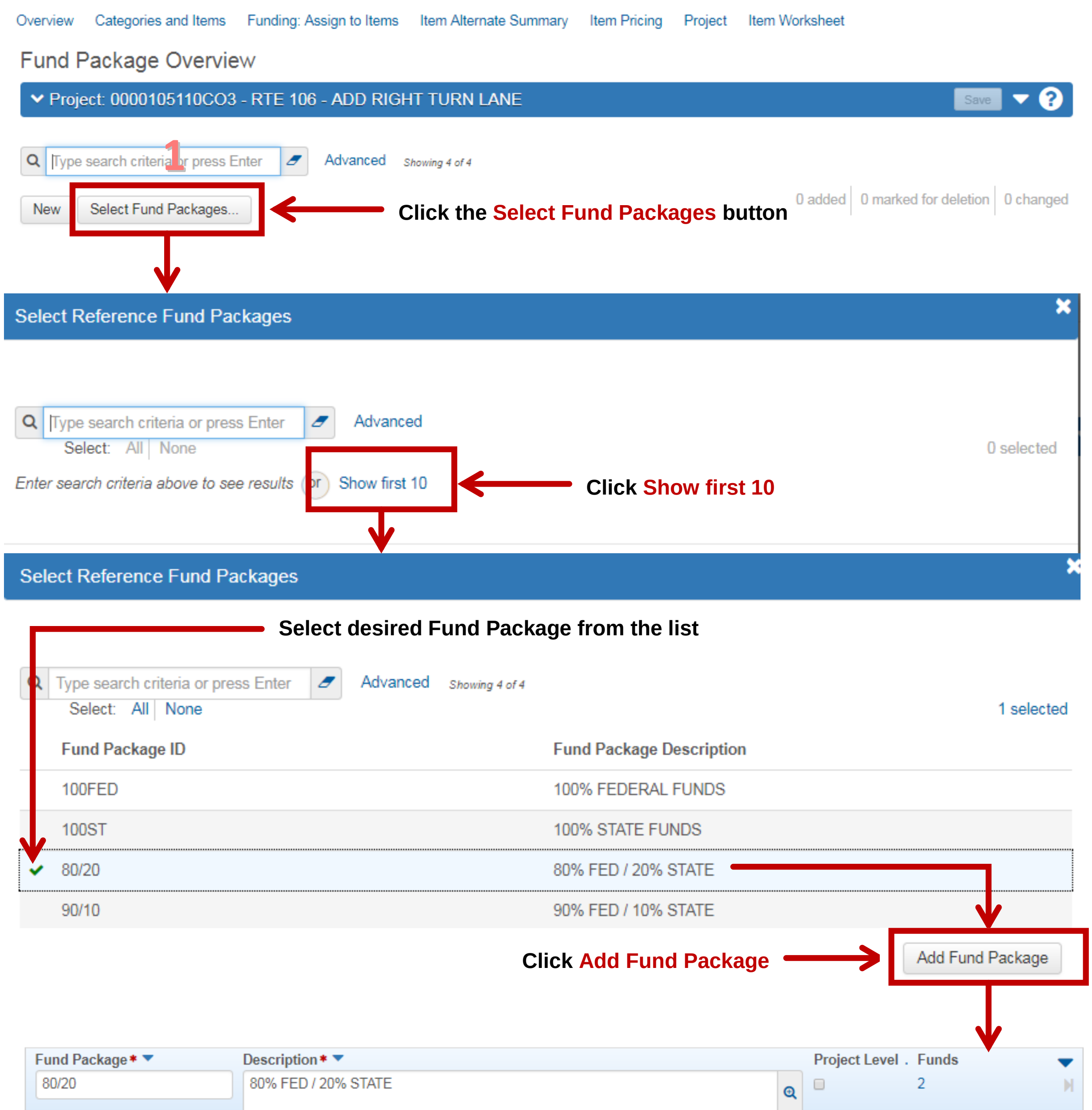


Figure 5 – Adding a Pre-Defined Fund Package

6.2.2 Creating a New Custom Fund Package

Perform the following steps to Create a new Custom Fund Package for a Project.

1. From an open project, click the Fund Package Overview quick link.
2. Click the **New** button, a new window will open.
3. Add a **New Fund Package** name in the Fund Package field. *Keep the name as short as possible.*
4. Enter a **Description** in the description field.
5. Click the **SAVE** button on the blue component bar.
6. **Go to 6.2.2.1 to complete this task.**

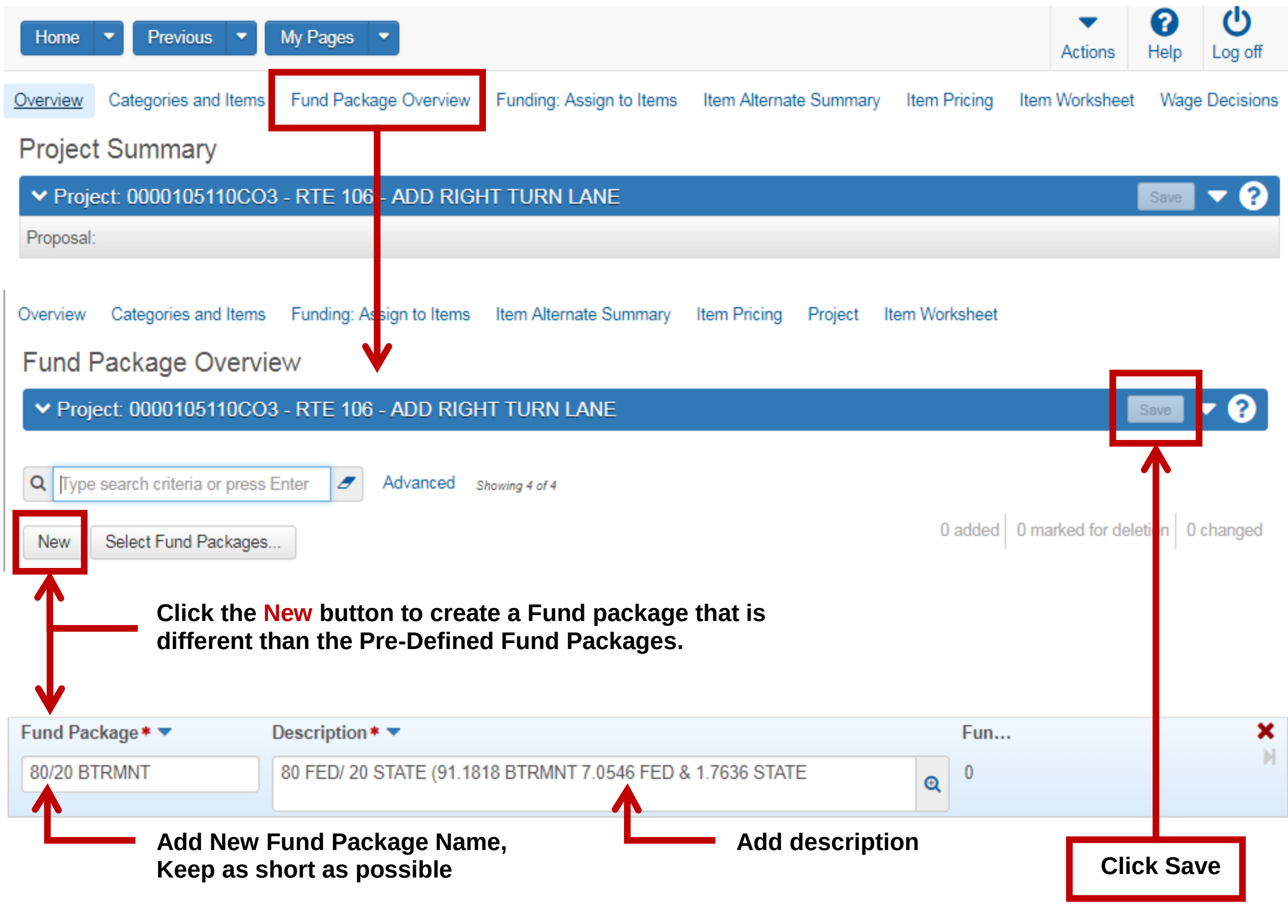


Figure 6 – Creating a New Custom Fund Package

6.2.2.1 Adding Custom Funding Specifics

Perform the following steps to Add Funding Specifics to the new Custom Fund Package.

1. Click the **0** on the right of the screen of the new fund package or click the row action down arrow and Select **Open**.

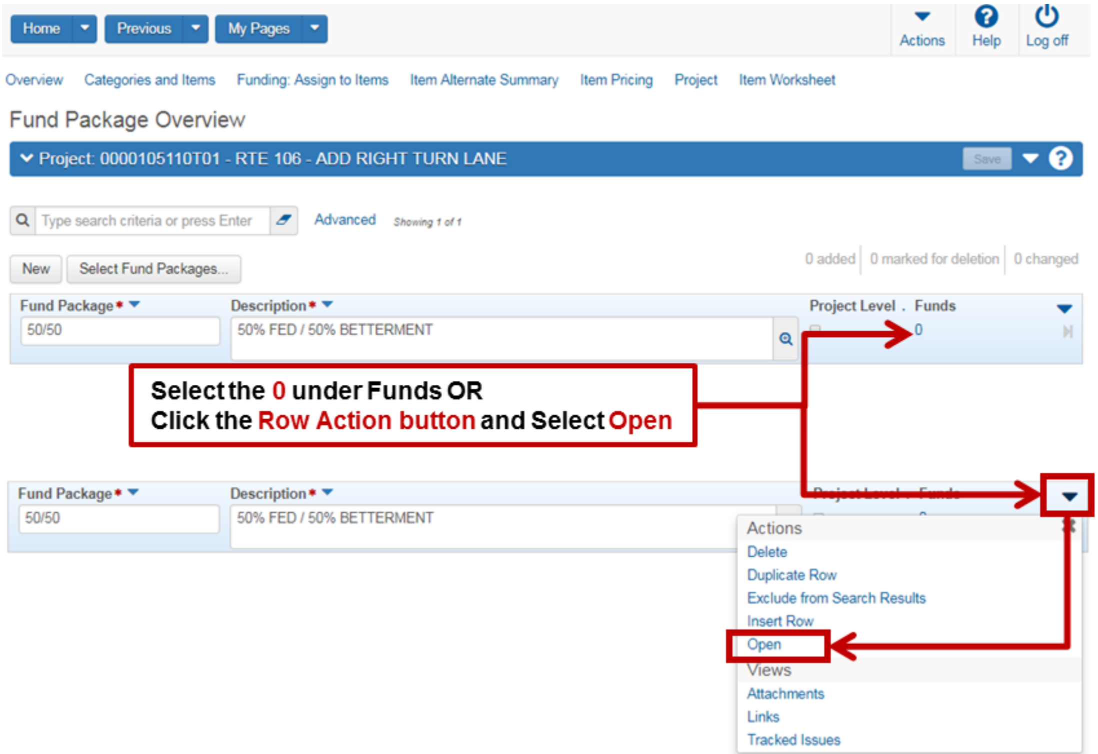


Figure 7 – Two ways to open Fund specifics

Adding Custom Funding Specifics Continued

2. Click the **Select Funds** button.
3. Perform a search in the search box or Click **Show first 10** and select from the list.
4. Click the **Add to Fund Package** button.
5. Fill in **1** in all the **Priority** fields
6. Change the percentage field as required.
7. Ensure the Total of all equal 100%
8. Click the **Save** button on the blue component bar.

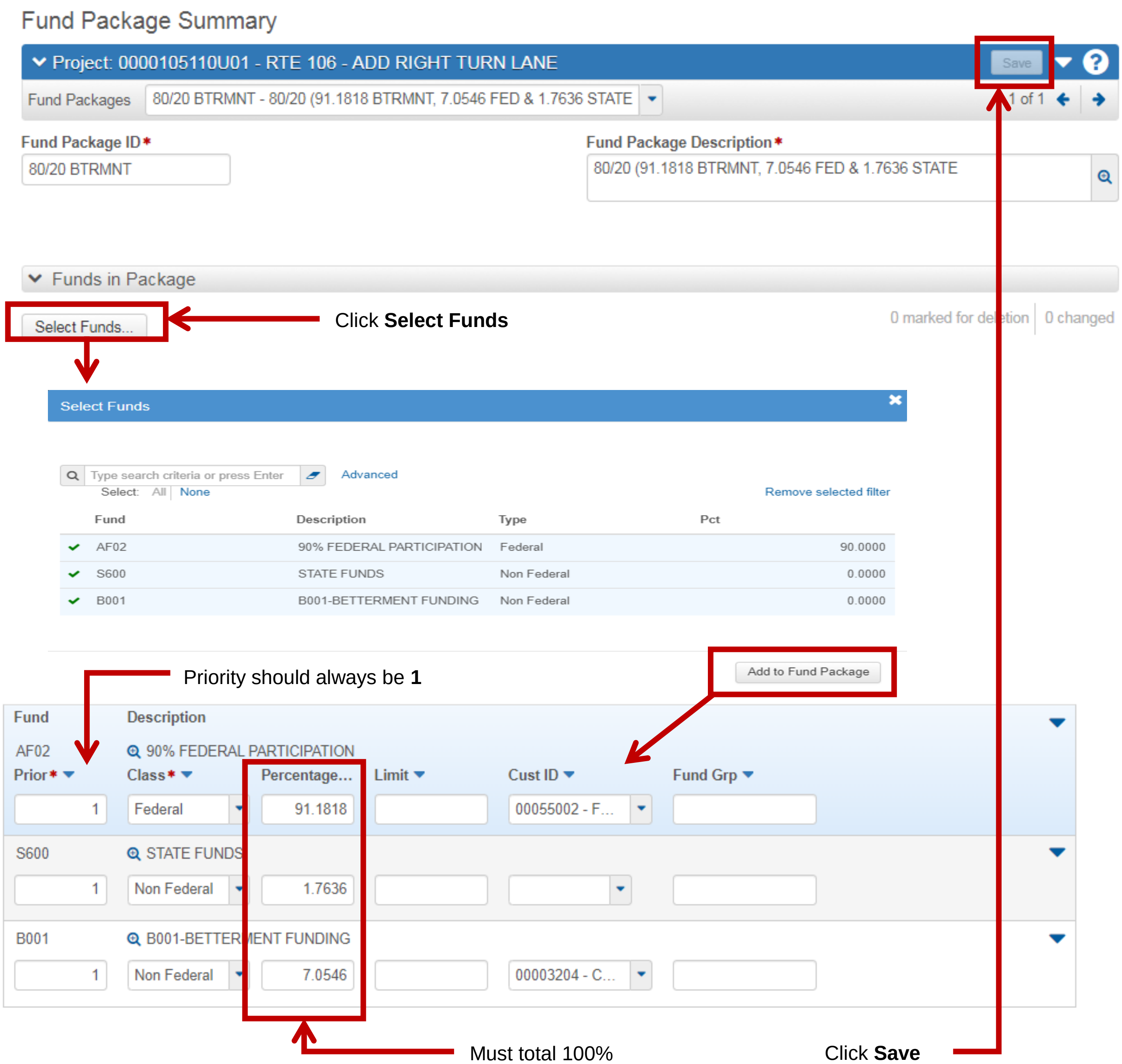


Figure 8 – Adding funding specifics

6.3 Funding:Assign to Items to a Project (for Pre-Defined Fund Packages)

Assigning funds will be dependent on the type and/or the number of Fund package(s) a project contains.

Perform the following steps to Assign Funding to all the items:

1. Click the **Funding: Assign to Items** quick link.
2. Click the **Radial button** on the All Project Items row.

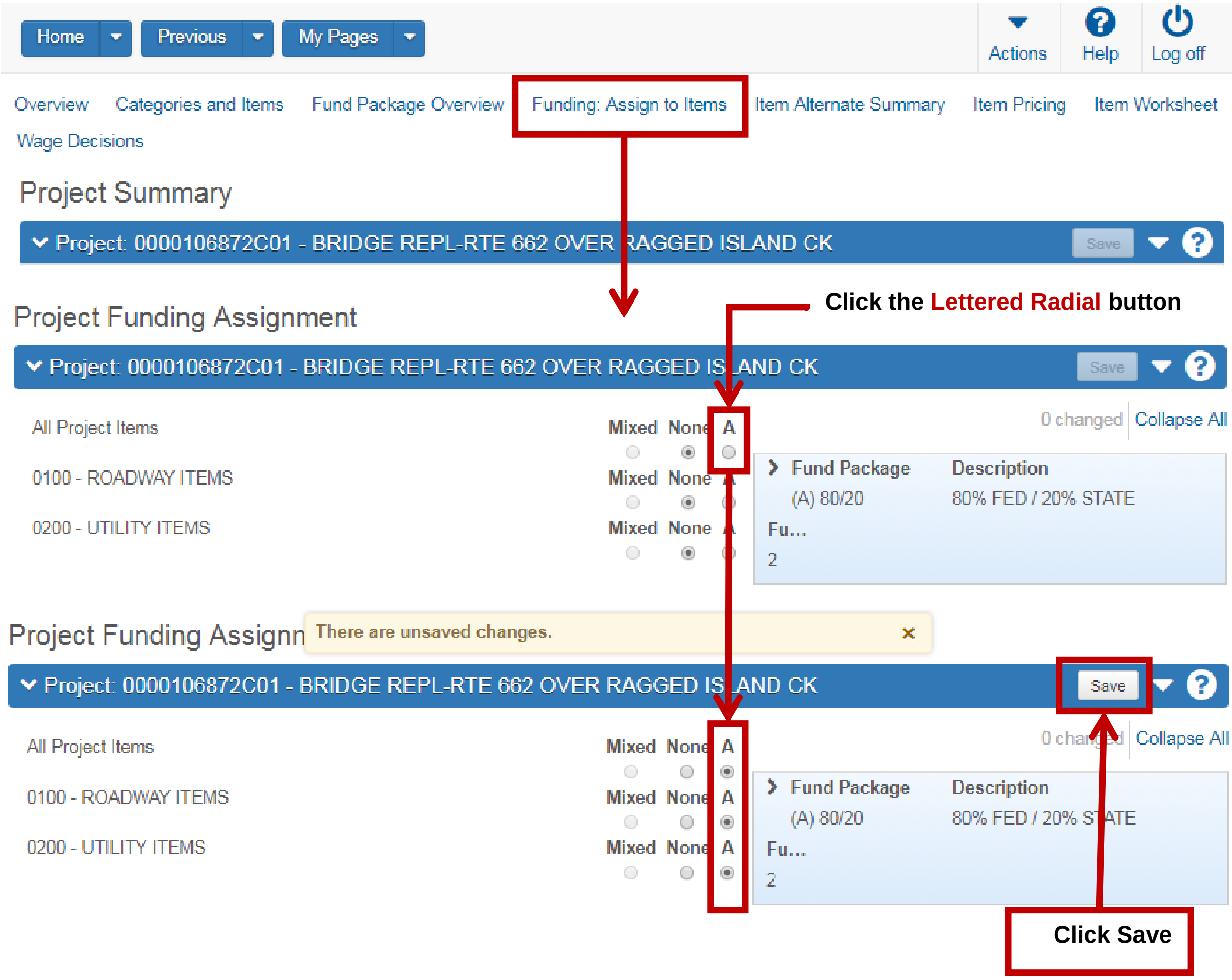


Figure 9 –Funding: Assign to Items

6.3.1 Funding:Assign Funding to a Project (for a Custom Fund Package)

Assigning funds will be dependent on the type and/or the number of Fund package(s) a project contains. Perform the following steps to Assign Funding to all the items:

1. Click the **Funding: Assign to Items** quick link.
2. Click the **Radial buttons** for each Category to correspond to the correct fund package.

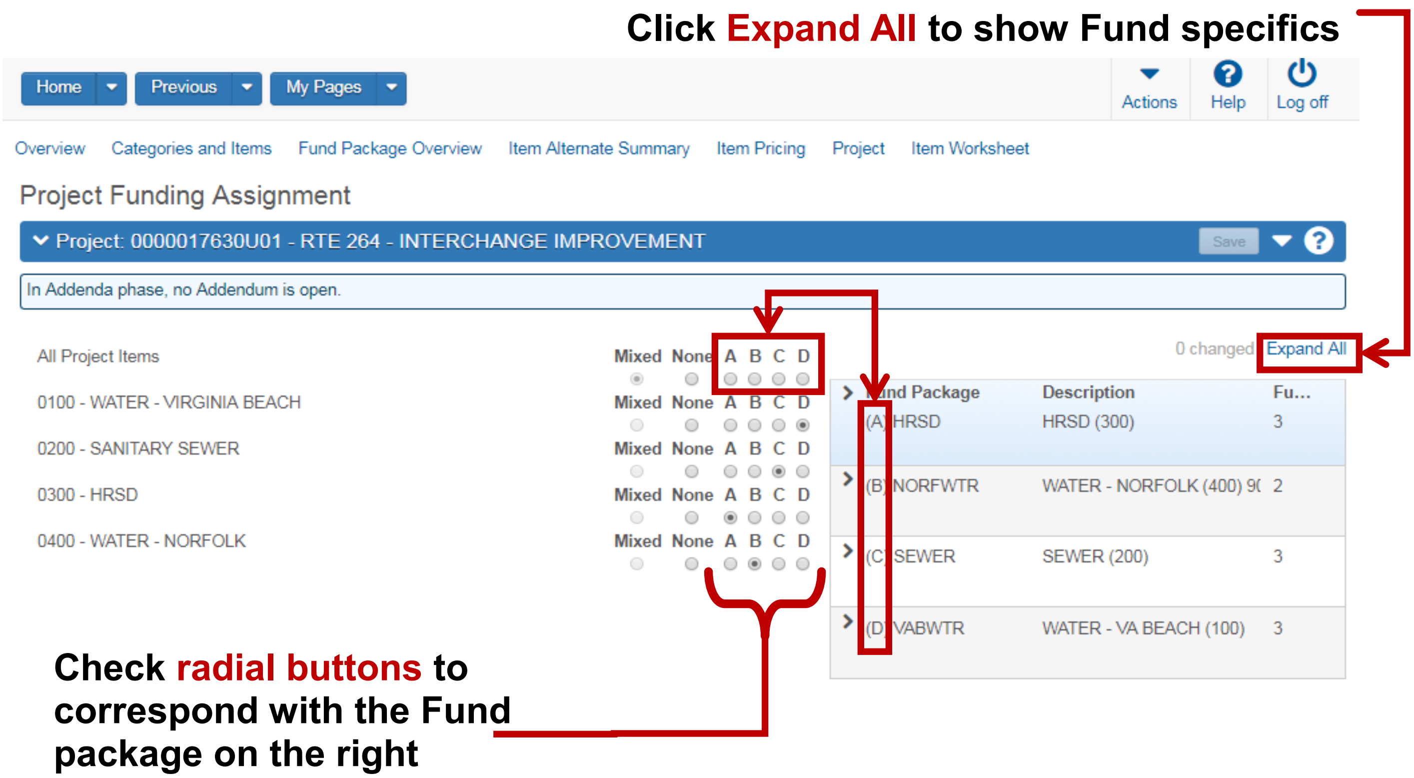


Figure 10 –Funding: Assign to Items

6.4 Deleting a Fund Package

Perform the following steps to delete a Fund Package. You must have a project open to do this.

1. Click the **Fund Package Overview** quick link.
2. Select the row action button for the Fund Package row.
3. Select **Delete.**
4. Click the **Save** button on the blue component bar.

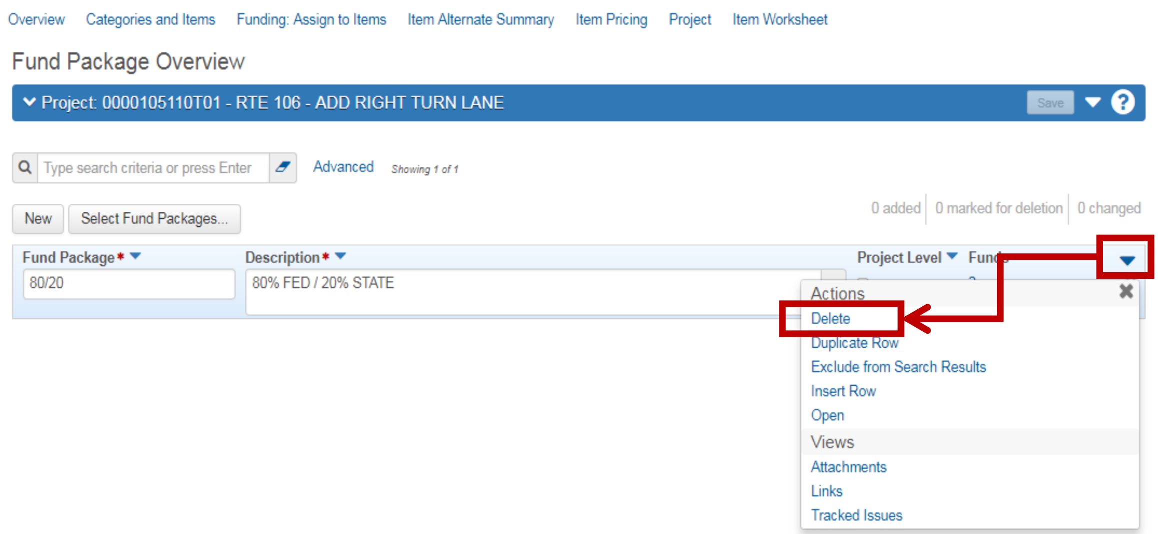


Figure 11 – Deleting a Fund Package

7. ITEM PRICING

The Item Pricing quick link allows you to generate or change units prices for project items.

Preconstruction uses a regression model for item prices as a function of specific price qualifiers. The system uses Market Area (currently set to "District") as a variable in the regression analysis. The regression model is based on the top three (3) bidder's history, for a 25 month window and is updated monthly. See the Bid-Based Regression Model methodology, later in this chapter.
District and Statewide Average price reports published on the VDOT website is based on an average price model that uses the Market Area (District) and Quantity as variables to generate the average prices. Both reports are run monthly and are based on the same 25 month window as the regression model.

The system will allow the user to enter their own price manually or have the system generate a bid-based price from the historical bid data**. It is recommended to generate the bid-based prices for all the items in the project(s).** If the quantity of an item is outside the quantity range of the bid history (24 months), the system will generate a price that may not be suitable. The system will notify the user that the quantity is out of range in the item pricing comments field. **It is advised that the user refer to other resources to evaluate and determine an appropriate price when the quantity is out of range of the historical data.**

Preconstruction will not generate prices for Non-Standard items. Therefore, the engineer and or designer will need to determine a logical price and enter it manually.

VDOT's Construction Division maintains Historical Pricing here:

http://www.virginiadot.org/business/const/resource.asp

Included are: Two-year historical bid pricing listing
Statewide averages listing
Districtwide averages listing
3–month District Average listings

VDOT employees may utilize the Staunton database to determine prices, found here:

http:// stauntonapps/main/bridge/inside_vdot/items.asp

Note: The bid data in this location is updated quarterly..

All of VDOT's Historical bid history can be found on the Bid Express website, please note this is not a free service and users outside of VDOT will need to pay a subscription fee. https://www.bidx.com

VDOT employees may request access to Bid Express for free by contacting Mary "Kiwi" Roane kiwi@roane@vdot.virginia.gov with your Name, phone number and email and she will request an account for you. Accounts created on the Bid Express site must be logged in monthly to keep the account active.

7.1 Generate Bid-Based Prices for an Entire Estimate

The system updates the value in the Price field and changes the Est Type to either Regression or Average, depending on which estimation model is chosen. The Ext Amount and Project Item Total fields are also automatically updated. If no historical information is available for an item, the system updates the Price field with the reference price and changes the Est Type to Reference. If reference price information is not available, the system leaves the price as it was or blank.

To generate Prices for an Entire estimate perform the following steps:

1. Click the **Item Pricing** quick link. A new screen opens and the categories in your estimate are listed.
2. Select the **Component Action Button.**
3. Select **Price All Items.**
4. A message will display once the process is complete.
5. Return the General tab and change the **Date of Gen Bid Base Prices** field to the date the prices were generated.

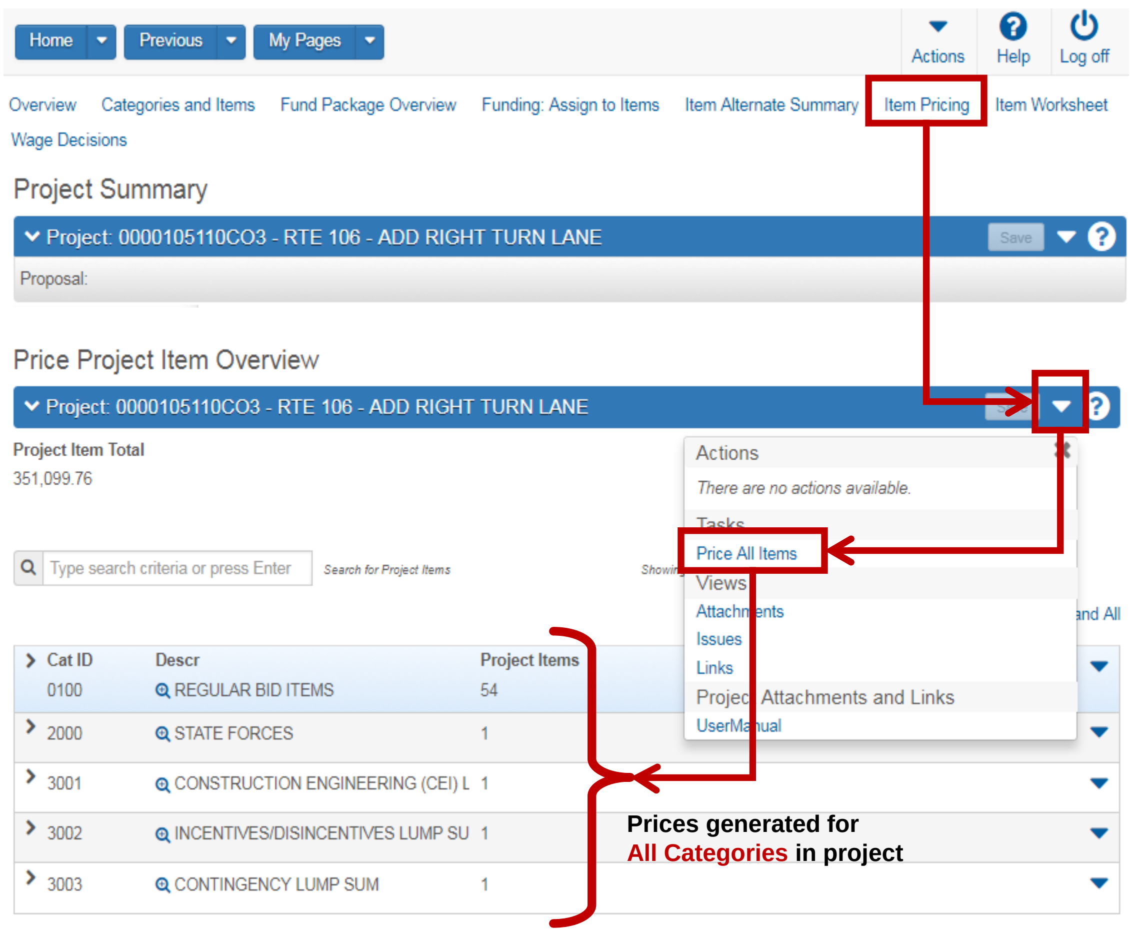


Figure 7 – Generate Bid-Based Prices for entire estimate

7.1.1 Generate Prices for a Category

To generate historical prices for a specific Category perform the following steps:

1. Click the **Item Pricing** quick link.
2. Click the row Action Button of the **Category** you wish to price.
3. Select **Price Category.**

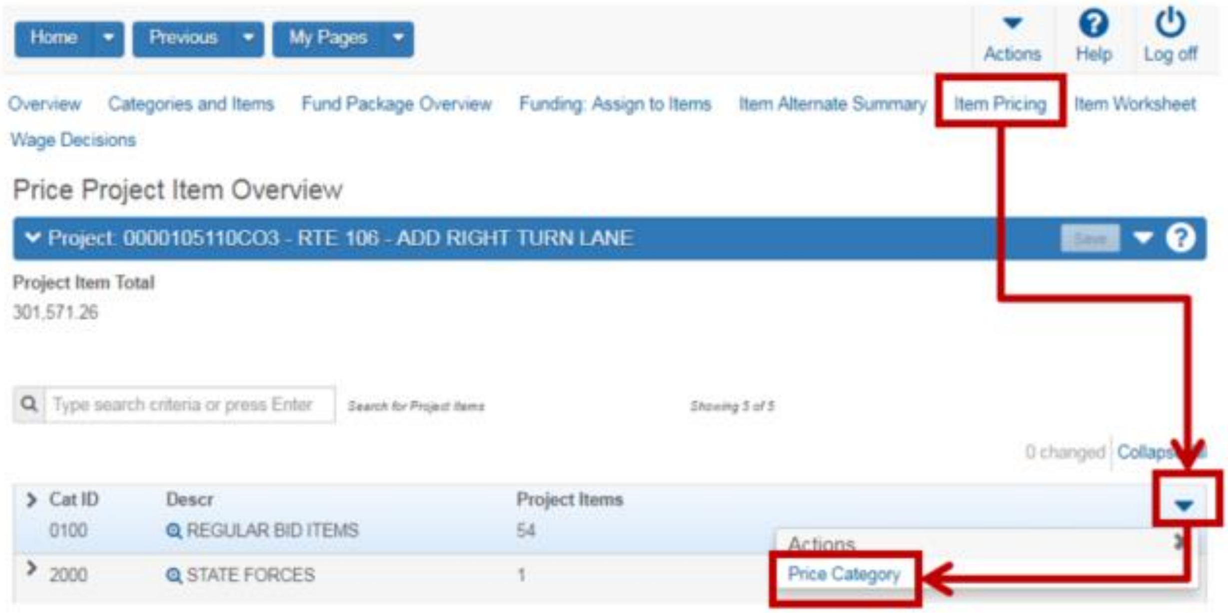


Figure 2 – Generate Bid-Based Prices for Category

7.1.2 Generate a Bid-Based Price for an Individual Item

To generate a historical price for an individual item perform the following steps.

1. Click the **Item Pricing** quick link.
2. Expand the **Category** of the item you wish to price.
3. Click the row action button of the item you wish to price.
4. Click **Price Item**.

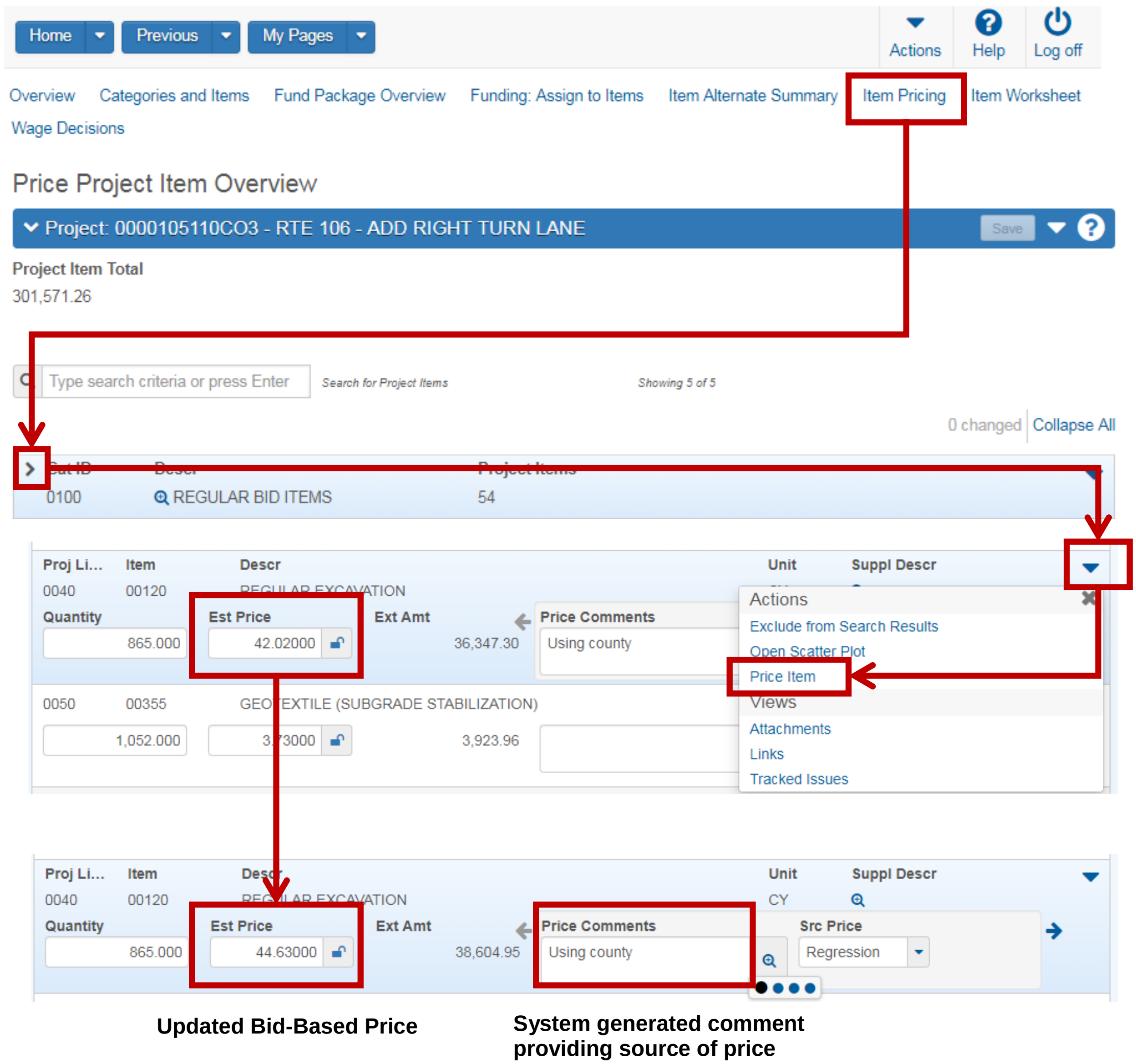


Figure 3 – Generate Price for Individual Item

7.1.2.1 Bid-Based Regression Model methodology

The bid history model calculates the regression coefficients for an individual item by **quantity** and **District**. The model performs the following steps when generating the regression price for an item.

1. Perform an initial regression model using only quantity and date (25 month date range).
2. Remove (10%) outliers based upon the parameter settings.
3. Exclude the date variable from the models if it is not within the minimum of 25 month history and a minimum number of thirty (30) observations.
4. Include only the top three (3) bidders.
5. Determine which models can be calculated for an item based upon the minimum number of twenty (20) observations needed.
6. For each item to be modeled, calculate the level of improvement (0.2) for each potential variable to be included in the estimation regression models.
7. Select variables to be included in the models for which the level of improvement (0.2) is significant. *
8. Run the estimation regression models including all variables which pass the selection requirements for number of observations, level of improvement, and parameter settings.
9. Calculate statistics on these models.
10. Exclude regressions that have a positive quantity relationship (price increases as the quantity increases)** or are out of range when compared to the average.

*The Level of Improvement to Add for Regressions option sets the level of improvement a regression model must have over the base model before keeping it. For example, when considering a regression with just area as a parameter, a value of .20 (the default) indicates that the regression model must have a .20 level of improvement over the base regression model that does not include area. Otherwise the model with area is excluded from further analysis.

** If a regression is found to have a positive quantity coefficient (price increases as the quantity increases), selecting the Exclude Regressions with Positive Quantity Coefficients for Regressions option will exclude the regression calculation for the item. While this may be valid for the item, it usually indicates further analysis should be done before using the model’s regression analysis for the item.

7.1.2.2 Pricing comments field

The system fills in the Price comments field when the prices are generated from the bid-based history, a glossary of possible comments are as follows:

1. **Using minimum* quantity of *n***
   **Minimum range of quantities found in the 24 month regression model.*

2. **Using maximum** quantity of *n***
   ***Maximum range of quantities found in the 24 month regression model.*

3. **Using average quantity of *n***

If **Area** (District/City/County) is used in addition to quantity to determine price, "*and county*" is appended to the above values, e.g. "Using maximum quantity of *n* and county."

If **Area** (District/City/County) is used but not quantity, Price Comments is set to "Using county."

Note: **Area** = consists of VDOT District and the cities and/or counties that are within that District.

7.1.3 Enter a Price Manually

If you know the price of a particular item or the database does not generate one for you, to enter a price manually perform the following steps.

1. Click the **Item Pricing** quick link.
2. Expand the **Category** of the item you wish to price.
3. Enter your price in the **Est Price** field
4. Click the **padlock icon** to lock the price.

Note: Locking the price is important so that when the Generate price process is run, it does not overwrite the price that you entered.

5. The Src Price field automatically populates Ad Hoc.

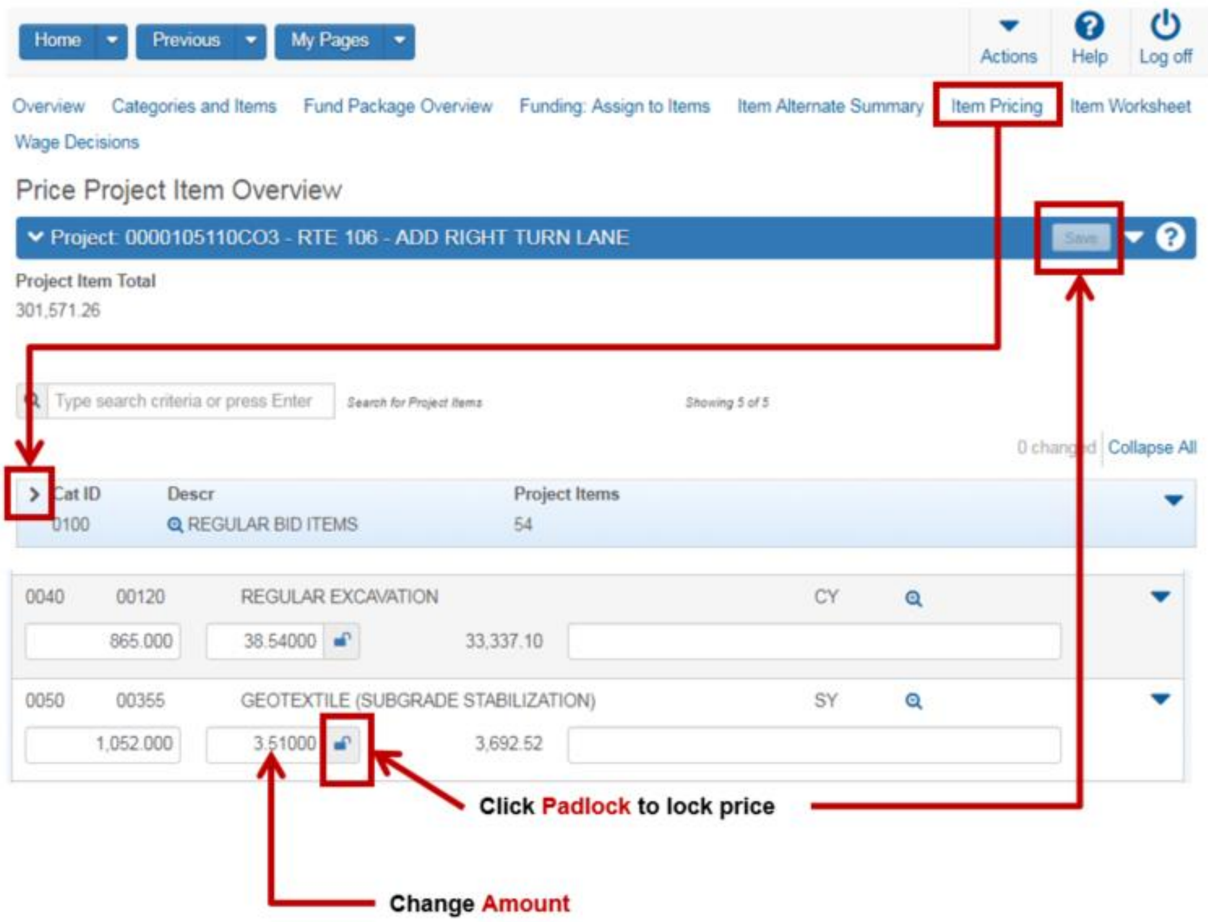


Figure 4 – Enter a Price Manually

7.2 Price Scatter Plot

VDOT uses the BAMS/DSS HREG profile which allows users to View a Scatter Plot of prices from the 2-year Bid History.

If the item record includes a quantity, that information is used as an additional parameter in the profile. The system displays the scatter plot in a new browser window.

To View a Scatter Plot, perform the following steps:

1. Open the project of your choice.
2. Select the **Item Pricing** quick link.
3. Expand the **Category** you wish to view.
4. Select the **Row Action button** for the row you wish to see the scatter plot.
5. Select **Open Scatter Plot**

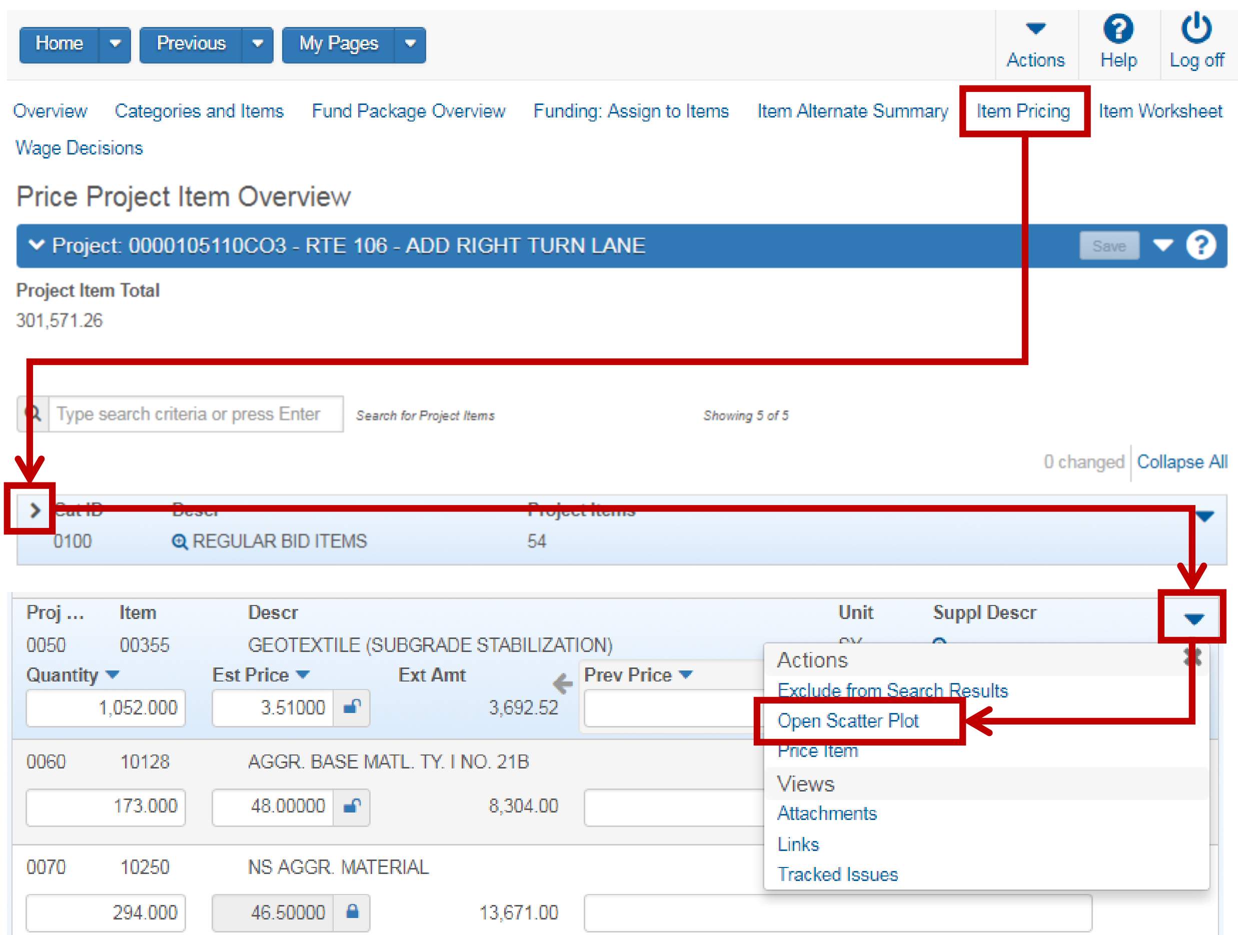


Figure 5 – How to View a Scatter Plot

The Scatter Plot is an interactive window where you can move your cursor over the dots in the graph to show additional information in the upper right corner of the graph. This data is based on the past 2 years.

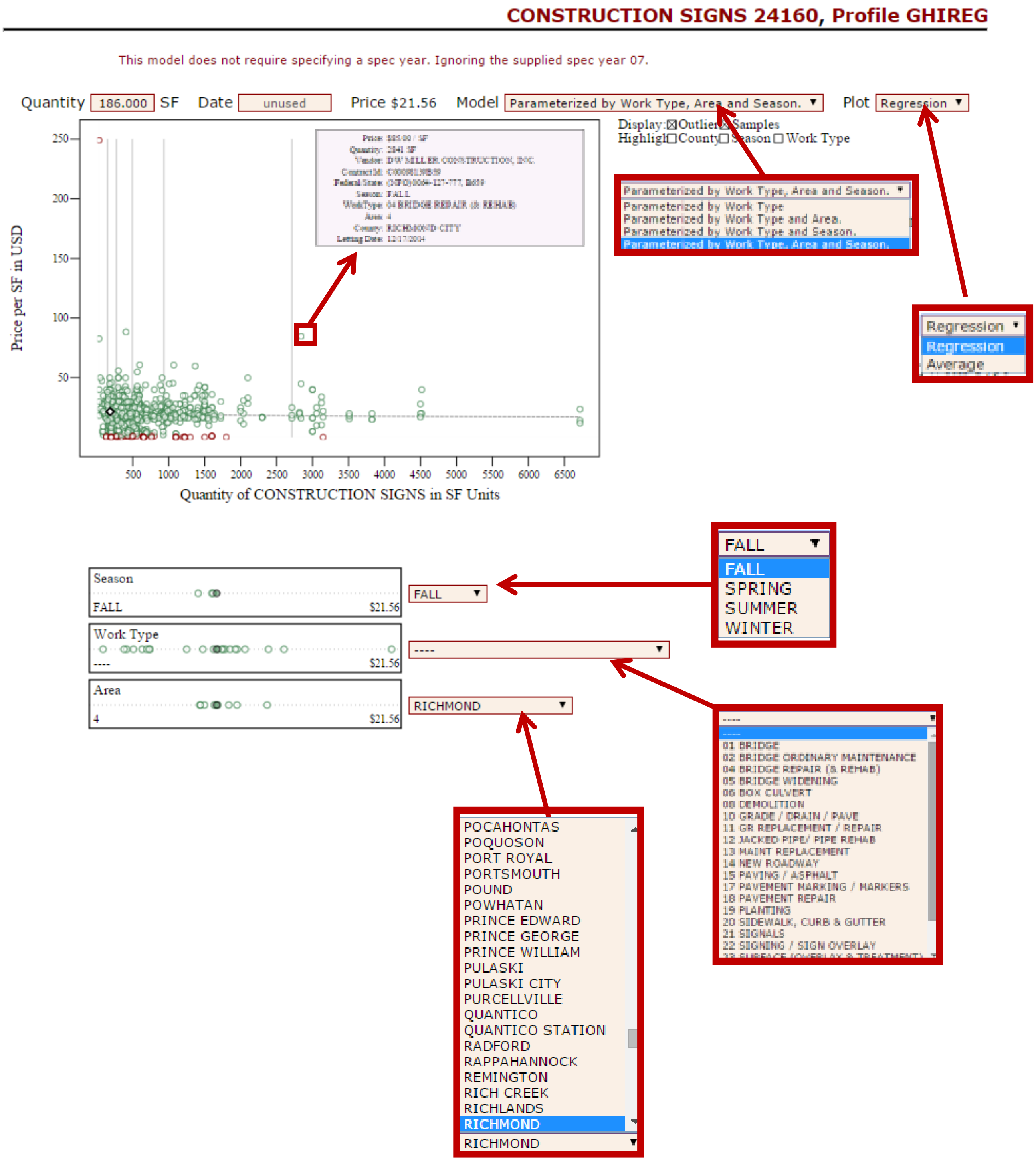


Figure 6 – Scatter Plot Overview

8. VALIDATIONS & REPORTS

The final step in completing a Precon Project is to validate that errors do not exist and run reports.

8.1 Validating a Project

All Precon Projects MUST be validated to check for errors. The validation process generates a list of warnings about the state of the project and does not stop further processing. Validation can be performed at any time in the estimate life-cycle but should be run before the user runs reports.

There are 2 Validations that MUST be run for each project.

1st Validation = System Validation (2 methods)

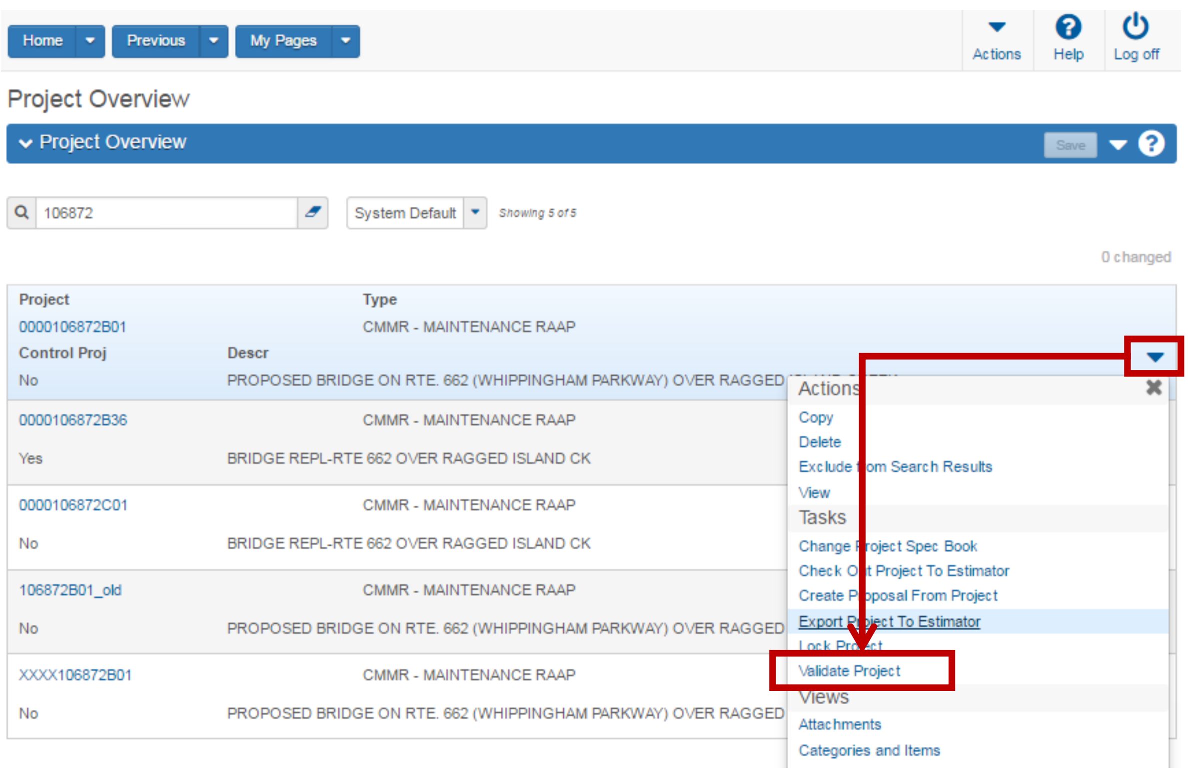
2nd Validation = VDOT specific –Project Validation Button

(only works via VDOT GP or VPN)

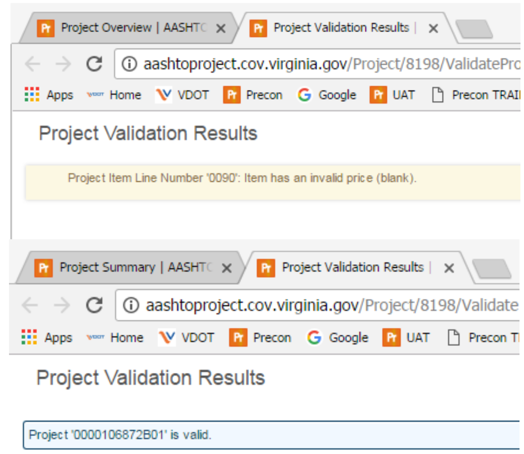
8.1.1 System Validation - from the Project Overview

To run the System validation of a project without opening it, perform the following steps:

1. Navigate to Project Overview screen
2. Enter the UPC in the search box.
3. Select the Row action button for that project
4. Select **Validate Project.**



5. A new browser window/tab opens and provides results of validation, error messages will appear here using the color coding described in Chapter 1.
6. If errors occur, close the validation browser tab, make the necessary corrections and then re-run the Validation so that your project is free of errors.

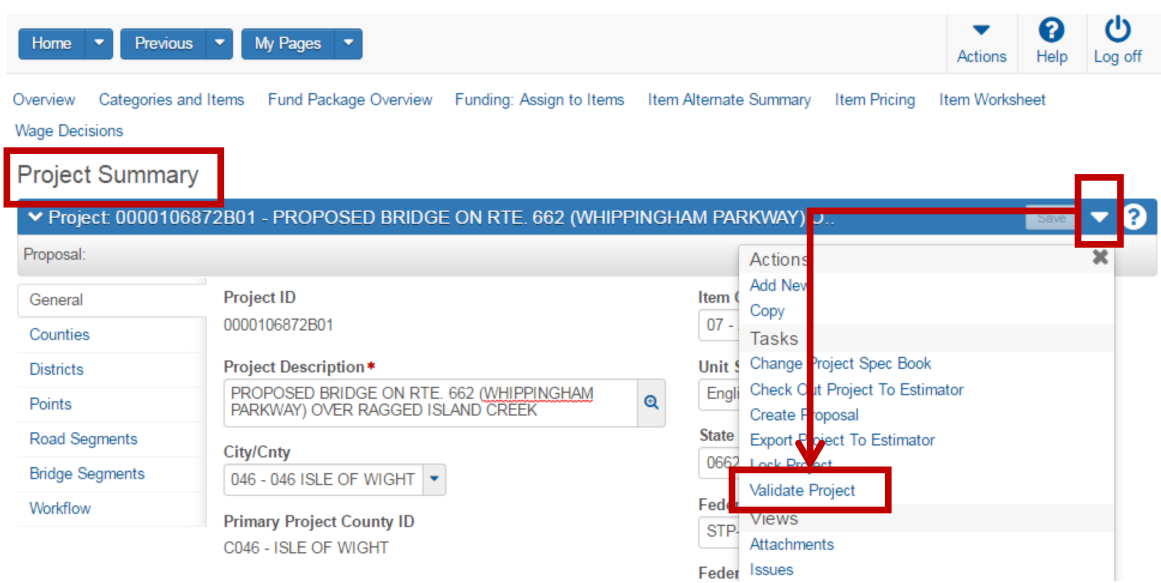


8.1.2 System Validation - from an Open Project

Validation within an open project is available in two locations: Project Summary or Project Category and Item Summary screens.

To validate from an open project, perform the following steps:

1. Navigate to the Project Overview screen.
2. Enter the UPC in the search box.
3. Open the desired project.
4. Select the Row action button from either the Project Summary or Project Category and Item Summary screens.
5. Select **Validate.**
6. A new browser window/tab opens and provides results of validation, error messages will appear here using the color coding described in Chapter 1.
7. If errors occur, close the validation browser tab, make the necessary corrections and then re-run the Validation so that your project is free of errors.



8.2 System Validation Overview

This validation is the standard "out of the box" error checking from the software company and is not customizable by an agency.

8.2.1 PROJECT Validation checks the following:

- The project contains at least one project item.
- The project contains at least one county.
- The sum of the project county percentages equals 100%.
- The project contains at least one district.
- The project contains at least one category.
- VDOT's agency setting for *Require Project Item Assigned to Category* option is set to *True*, then all project items must be assigned to a category.
- All project items must be assigned to a category.
- All project items must have a quantity.
  - blank, null are not valid, 0 is a warning
- All project items must have a price.
  - blank, null are not valid, 0 is a warning
  - If the **Bid Requirement Code** field is set to *Minimum* for an item, the project item price must be greater than or equal to the value in the **Unit Price Comparison** field.
  - If the **Bid Requirement Code** field is set to *Maximum* for an item, the project item price must be less than or equal to the value in the **Unit Price Comparison** field.
- The project contains a point location record with the word "midpoint" recorded in the **Description** field and recorded values for **longitude** and **latitude**.
- All project items have been funded.
- All fund packages associated with an item must pass funding validations.
- All alternate sets attached to a project item must have an alternate member defined at the item level.
  - For each alternate set, there should be at least one item with an assigned set and member.
- All alternate sets attached to a project category must have an alternate member defined at the category level.
  - For each category alternate set, there should be at least one category with an assigned set and member.

8.2.2 PROPOSAL Validation checks the following:

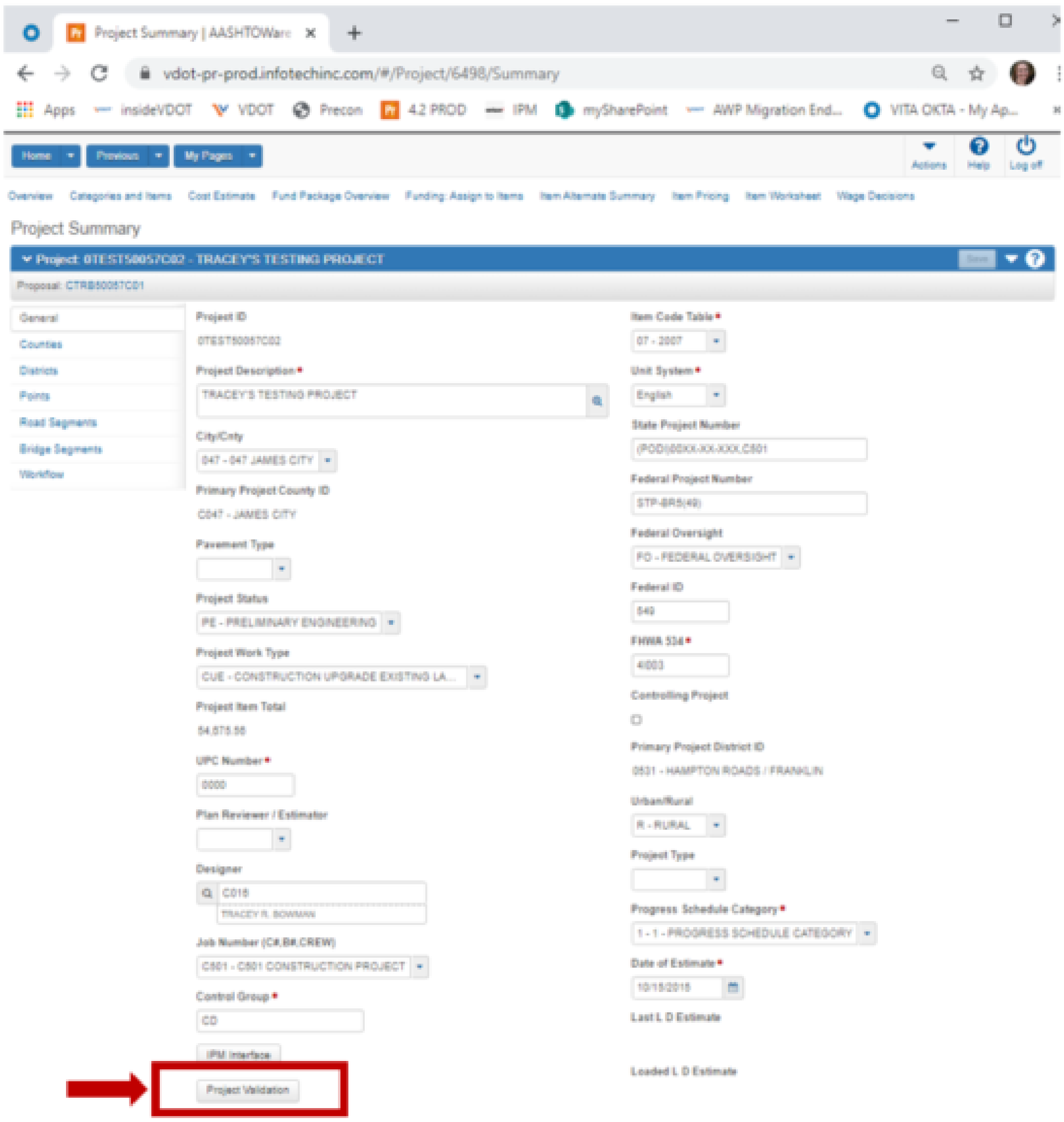
This validation is the standard "out of the box" error checking from the software company and is not customizable by an agency.

- The proposal has a primary county.
- The proposal has at least one associated project.
- A proposal time record is identified as Main Time.
- Proposal items exist for the proposal.
- All proposal items have a quantity.
  - blank, null are not valid; 0 is a warning.
- All proposal items have a price.
  - blank, null are not valid; 0 is a warning.
  - Unit prices do not fall outside the boundaries of the minimum or maximum value held in the **Unit Price Comparison** field whenever multiple projects containing items with minimum or maximum bid requirements but with different Unit Price Comparison values are added to the same proposal.
- Proposal items identified as fractional lump sums have the same estimated price and quantities that sum to 1.0. For more information about lump sums, please see Chapter 5 for more details.
- All proposal items are assigned to a section (needed for Bid Express).

8.3 VDOT Specific Project Validation button

This is a VDOT specific project validation that should be run in conjunction with the System Validation in the previous section. The button is located at the bottom of the General tab within an open Project.

<u>This Validation must be run for every Precon Project.</u>

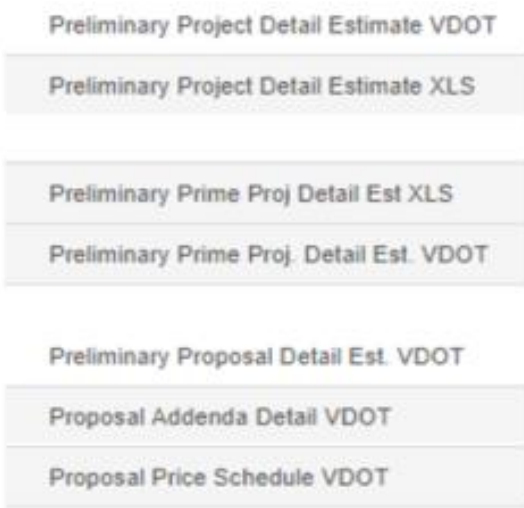


8.3.1 VDOT Specific validation checks the following:

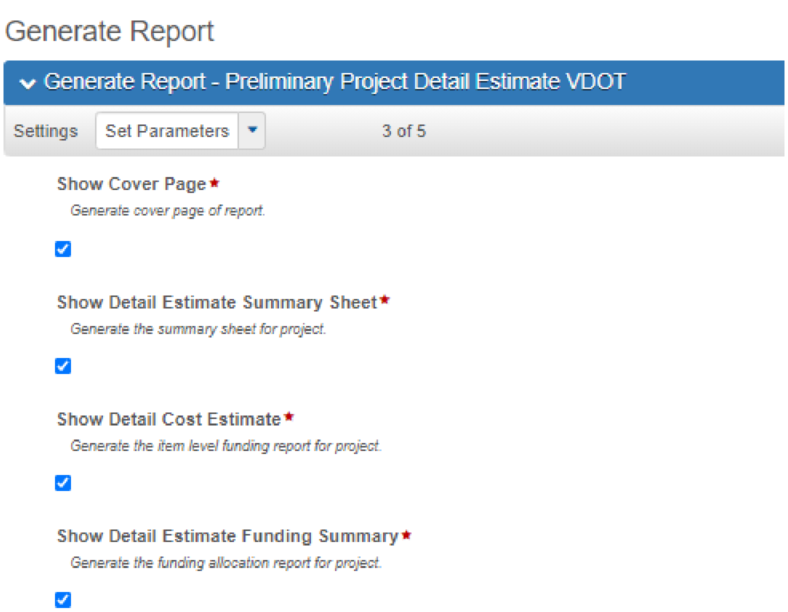
a. Checks all Regular/Bid categories do not have items checked Non-Bid.
b. Compares CEI & Contingency lump sums versus percentages at the category level. Projects can have lump sum or percentages but never both.
c. Checks that a project has at least one (1) Road Segment.
d. Checks that all items are assigned to a Fund Package.

8.4 Reports

VDOT has a series of customized reports for Precon Projects, Primes and Proposals. Users should only use reports that contain “VDOT” in the name. Reports that contain “VDOT” are PDF and the XLS is a duplicate of the VDOT version in an Excel format.



Most reports are comprised with different pages that vary per report but this gives the user the ability to turn certain pages on or off by clicking the desired checkbox. For Example:



8.4.1 Built-in Error checking features (some reports)

Some VDOT reports have built-in error checking features (that the Validation process does not provide) in this report. ***Users should ensure that all red errors are corrected before submission to the Construction Division for Advertisement.***

Users should ensure that the report contains no red errors and that there are no "N" flags for Categories 0001 through 1999. The "N" indicates non-bid, Non-bid Items should only reside in Categories 2000 and higher.

VDOT

Virginia Department of Transportation **Date Printed:** **04/19/2016**

Detail Cost Estimate Page 2 of 6

Project ID: 0000099420TRB **UPC:** 00099420 **FHWA 534:** 16014
Project Description: DO NOT USE/DO NOT DELETE
Category: 0001 REGULAR BID ITEMS
Federal Structure ID: 13312 **Road Segment Length:** **Road Segment Width:**
Bridge Plan No.: 296-71 **Num of Spans:** 1 **Bridge Length:** 22.6667 MI **Bridge Width:** 24.6667 FT
FHWA Type Code: 14 14-BRIDGE-REHAB-NO ADDED CAPACITY
Activity Code: 631 631 CONTRACT CONSTR - REGULAR - FED
Fed Construction Class:

Line No.	Item Code	Spec Number	Item Description	Alt Set ID	Alt Mem ID	Units	Estimated Qty	Unit Price	Amount	Fund Package ID	Flags*
0170	10635	315	ASPHALT CONCRETE TY. SM-9.5A			TON	100.000	203.71000	20,371.00	80/20	L
0180	11070	315 315	NS SAW-CUT ASPH CONC (FULL DEPTH)			LF	33.000	5.00000	165.00	80/20	L
0190	24152	512	TYPE III BARRICADE 8'			EA	6.000	337.98000	2,027.88	80/20	L
0200	24160	512	CONSTRUCTION SIGNS			SF	371.000	15.63000	5,798.73	80/20	L
0210	24282	512	FLAGGER SERVICE			HR	40.000	22.61000	904.40	80/20	L
0220	24283	STA.FR.	ERROR ** Non-Bid item in a regular Bid category ** ERROR			TEC	1.000	52,000.00000	52,000.00		N L
0230	24288	512	WARNING LIGHT TY. B			DAY	1,680.000	2.00000	3,360.00	80/20	L
0240	24290	512	TRAFFIC BARRIER SERVICE CONCRETE			LF	37.000	41.20000	1,524.40	80/20	L
0250	24430	508	DEMOLITION OF PAVEMENT			SY	351.000	5.22000	1,832.22	80/20	L

8.4.2 Methods of Running Reports

Precon Reports can be run from the Dashboard or from an open Project, Prime or Proposal.

8.4.2.1 Running Project report from the Dashboard

1. Click the Dashboard Global Action button.
2. Select Generate Report.
3. Choose **Preliminary Project Detail Estimate VDOT** from the list, a green check box appears to the left. It automatically moves to page 2.
4. In the search box, **enter the desired UPC number**.
5. **Click the desired Project ID** from the list, a green check box appears to the left.
6. Click the blue **Next arrow** button on the upper right of your screen.
7. Check or uncheck the boxes from the list of 4 report pages that you desire, all 4 default as checked.
8. Click the **Execute** button on the blue component bar.
9. The report opens in a new Browser tab.

Note: Please remember to save or print the PDF, this is the only time you will have the opportunity to do so. Otherwise, you will have to re-run the report.

8.4.2.2 Running Project report from an open Project

This report can be run in almost every quick link page within a project.

1. Open the desired project.
2. Click the blue component Action Button.
3. Select Preliminary Project Detail Estimate VDOT
4. Check or uncheck the boxes from the list of 4 report pages that you desire, all 4 default as checked.
5. Click the **Execute** button on the blue component bar.
6. The report opens in a new Browser tab.

Note: Please remember to save or print the PDF, this is the only time you will have the opportunity to do so. Otherwise, you will have to re-run the report.

9. PRIME PROJECTS

A Prime Project must be created for every State or Federal project that will be advertised. The Prime acts as a link to all the Projects and thus any changes in the Projects are reflected in Prime reports. The prime combines all the projects from the different disciplines and does two important things. **A Prime is required even if there is only one Project.**

The Prime has 2 functions:

1. Provides the Construction Division Project Coordinator (person that prepares Proposals for Advertisement) the list of correct Preconstruction projects that are to be included in the advertisement. For example: Some advertisements consist of more than 1 UPC or more than 1 bridge.

2. Uploads cost estimate information to the PCES module of IPM, every night at 7pm.

Prime Project ID: Is 14 digits and **always begins with a C and ends with the Project ID number of the largest project (most money) and would be the controlling project and the Prime is named per the controlling project name.**

For example, if the projects to be combined are: 9845C02, 9845B21, 9845B22, 9845T01 and 9845L02 and the largest (monetarily) is the C02 project then the Prime would be named: Prime Project ID = **C0000009845C02**

Whether you, as a user, create a Prime Project or not can be determined by the three cases described below:

Case 1: It is the responsibility of the Project Manager to create the original project and make the appropriate copies for the other disciplines/users on the project team (i.e. Bridge, Traffic Engineering, Environmental, Consultants)
The Project Manager will create the Prime Project and associate all projects to it then move the projects to the team members respective control groups.

Case 2: The designer who is not the Project Manager receives a project from the Project Manager. The project has been linked to the Prime Project by the Project Manager. Therefore, this designer will not create a Prime Project unless directed by the Project Manager to do so.

Case 3: The designer of a “stand-alone” project (a project in which no other division will be involved) shall create a Prime Project and associate the project(s) to it.

9.1 Prime Controlling Project

A **checkbox** is used to designate a Project as a **Controlling Project**, which is the Controlling Project in a Prime containing multiple projects. **The Project with the majority of the Construction funds/money should be the Controlling project. The name of the Prime will correspond to the name of the controlling project.**

- There can be only **one Controlling Project** designated **per Prime.**
- The Project used for the Prime Project will also be the Controlling Project.
- The cover of the Prime report will be blank if a controlling project is NOT checked.

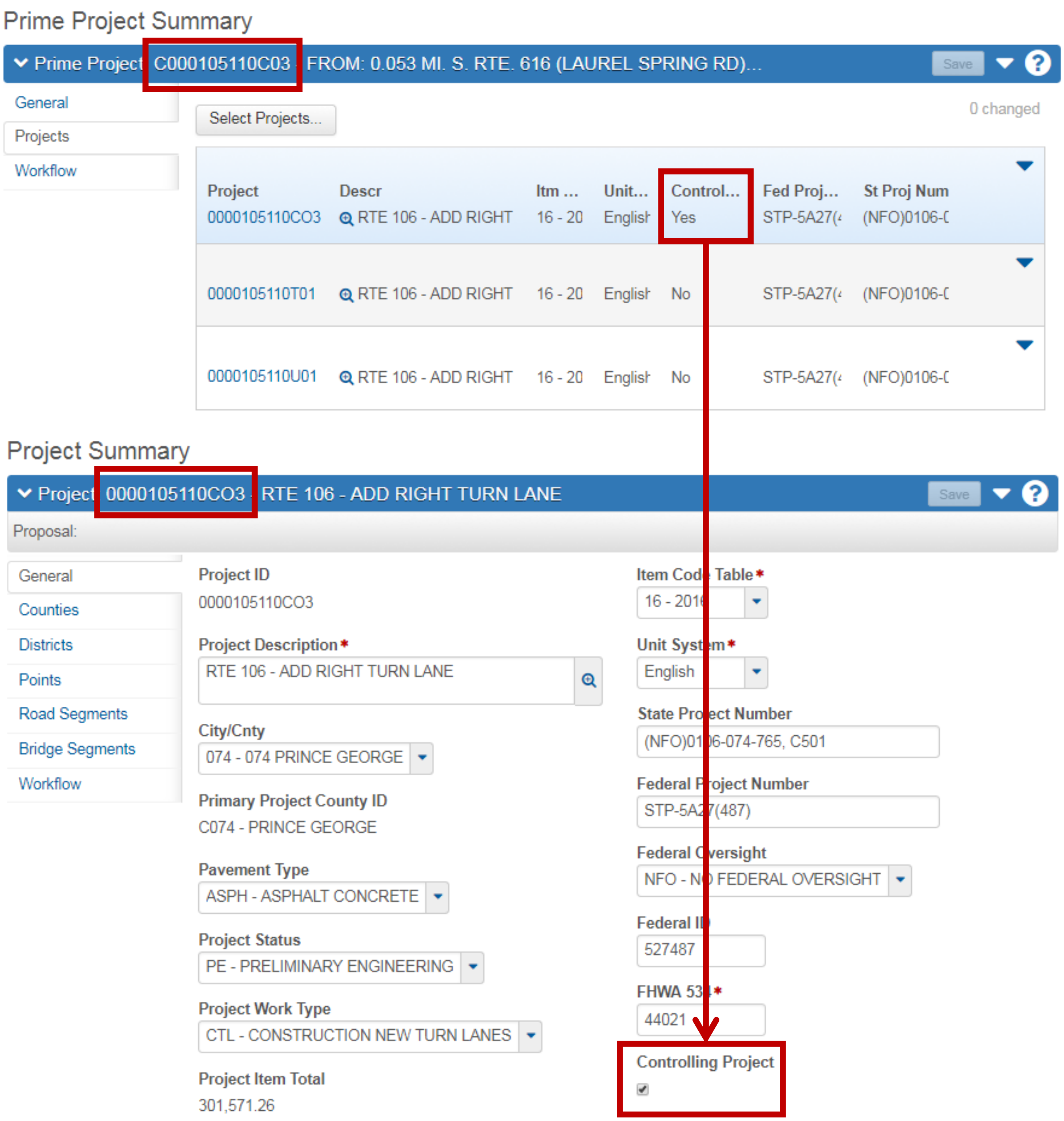


Figure 1- Prime Controlling Project

9.2 Adding a Prime Project

To **add a Prime Project** from the **Prime Project Overview screen** follow these steps:

1. Click on the **Prime Project link** from the Preconstruction Dashboard found on the Home page.
2. Open the Prime Project Overview header's **Action Menu** and click **Add**.
3. The Add Prime Project screen opens.
4. Enter the **Prime Project data** and click the **Save** button when finished.

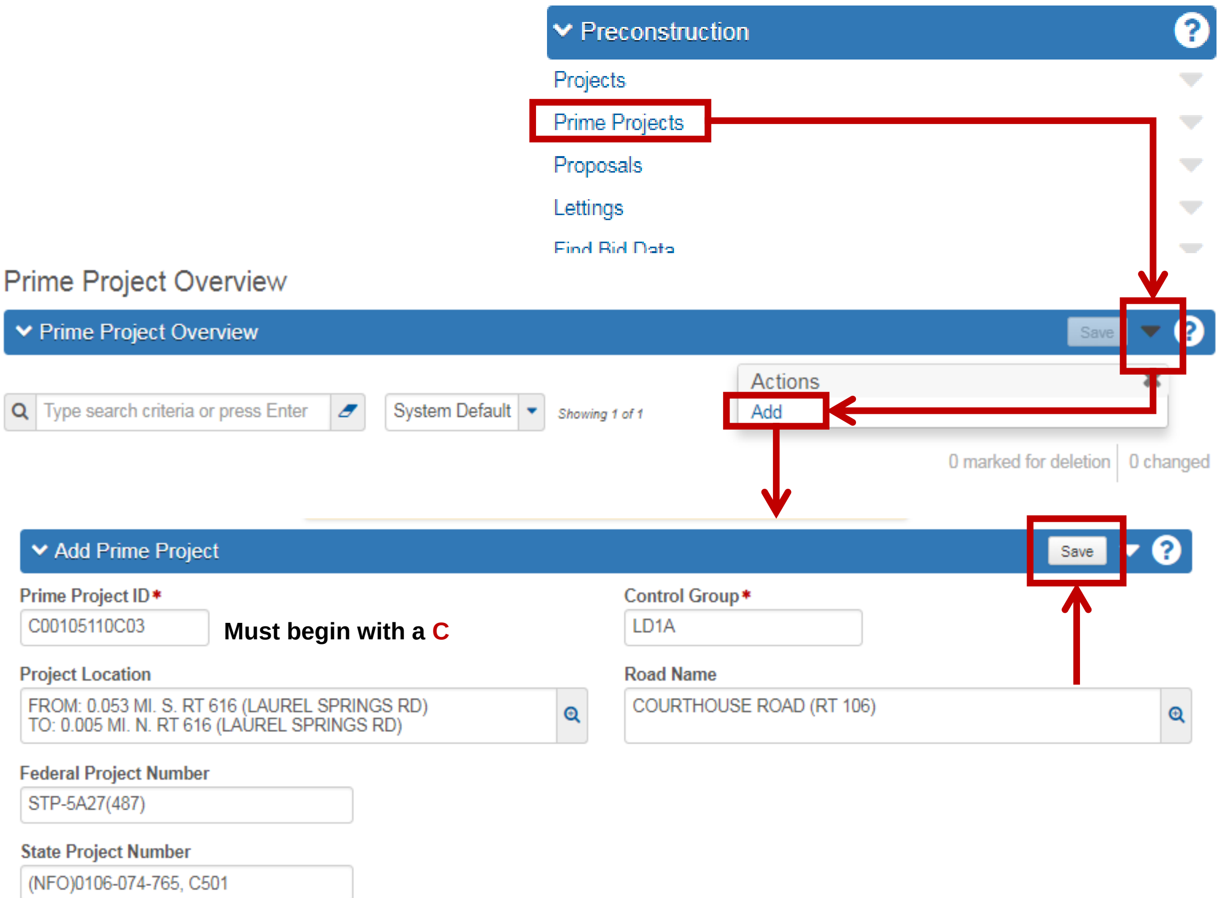


Figure 2 - Adding a New Prime Project

PRIME FIELD DESCRIPTIONS:

Prime Project ID: 14 Digits and **must start with a C** and ends with the Project ID number. Ex: **C0000104340C01** or **C0000009845C02**

Control Group: The control group is the security designation which decides which user has access to which prime project(s). This field will already be filled out with your control group. The data in this field may be changed in order to transfer the prime project to another control group.

Project Location: Use the first line for the **From:** information and the second line for the **To:** information. Bridge projects will use the location from the title sheet.
Ex: FROM: 0.09 MI. W. WEST HIGHLANDS BLVD.
TO: 0.01 MI. W. WEST HIGHLANDS BLVD.

Federal Project Number: Enter the Federal Project Number, if applicable, in its entirety, complete with dashes, parentheses, etc. If the project is not federally-funded, enter **NONE**. Ex: STP-5A03(264)

State Project Number: Enter the state project number in its entirety, complete with dashes, commas, etc. Ex: 0615-047-169, C501

Federal Appropriation Codes: Not currently used.

Road Name: Enter the name of the road or leave blank.
Ex: HOLLAND ROAD or RTE 628, MCCLELLAN ROAD

9.2.1 Adding/Associating Project(s) to a Prime

To add (link) projects to a Prime perform the following steps:

1. Open the Prime of your choice.
2. Select the **Projects** tab on the left side of the screen.
3. Click the **Select Projects** button.
4. Enter the **UPC number** in the search box.
5. Click all the Projects from the list that belong in the Prime.
6. Click the **Add to Prime Project** button.
7. Click the **Save** button.

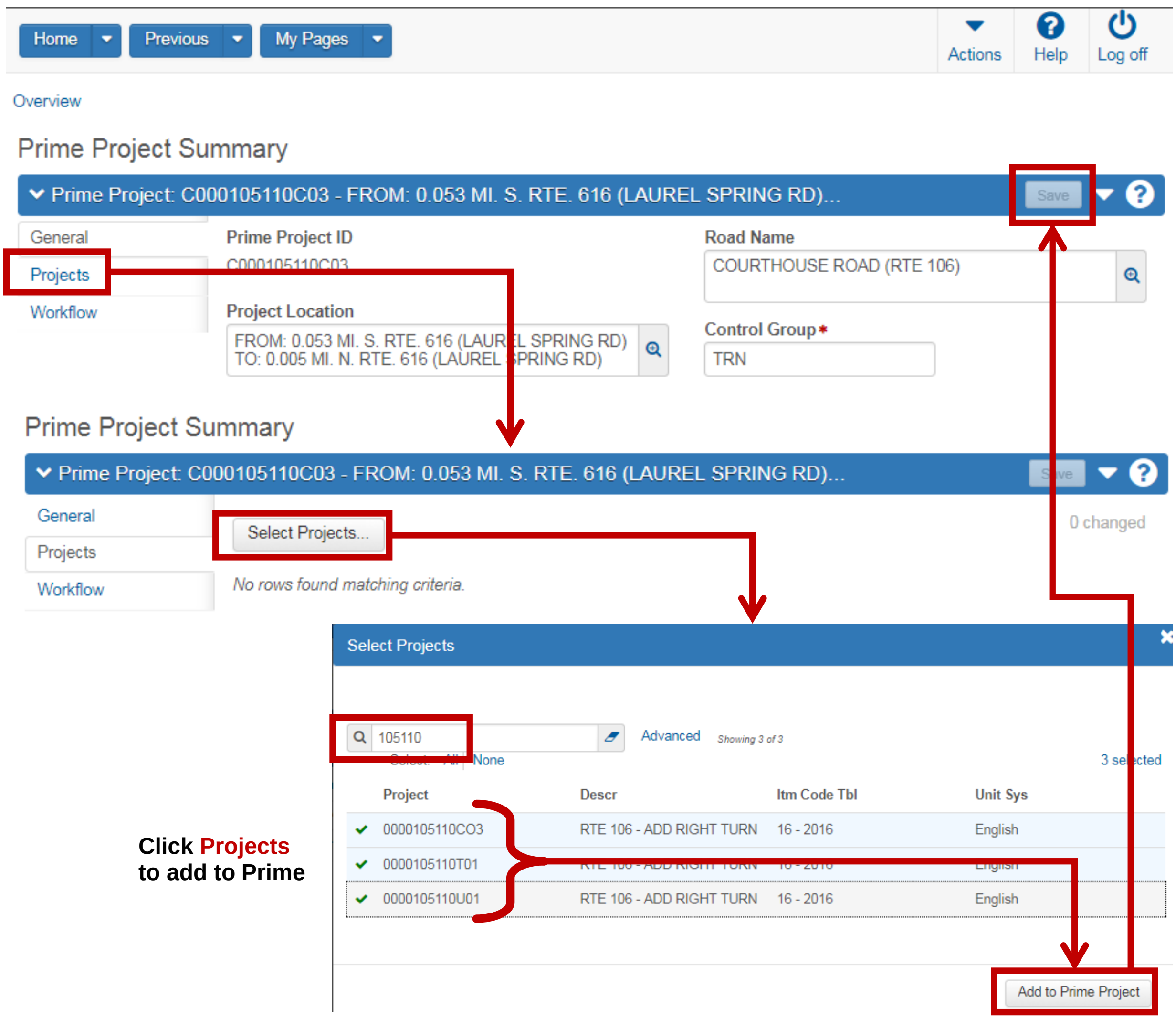


Figure 3 - Adding Projects to a Prime

9.2.2 Prime Workflow

The Workflow tab is a crucial step in moving an estimate through the phases of the software to produce the Contract document. Users must make the proper selection for all Projects and the Prime according to the table below. Leaving the workflow fields blank, results in reporting errors.

Workflow field: set to **VDOT Workflow Project-Proposal-Contract**

Workflow Phase: set to **Project Definition Phase**

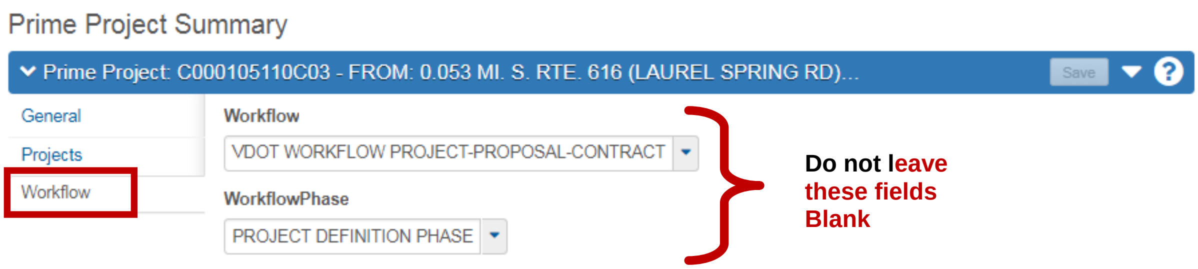


Figure 4 - The Workflow Tab – PRIME

9.3 Disassociating (Removing) Projects from a Prime Project

Warning: When **Remove is selected**, the Project Row is **automatically removed**. There is no opportunity to reverse the selection, as the **row is immediately removed without clicking the Save button**. To restore the row, you must associate the Project back to the Prime Project.

1. Open **Prime**.
2. Click the **row action button** of the appropriate Project.
3. Click **Remove**.

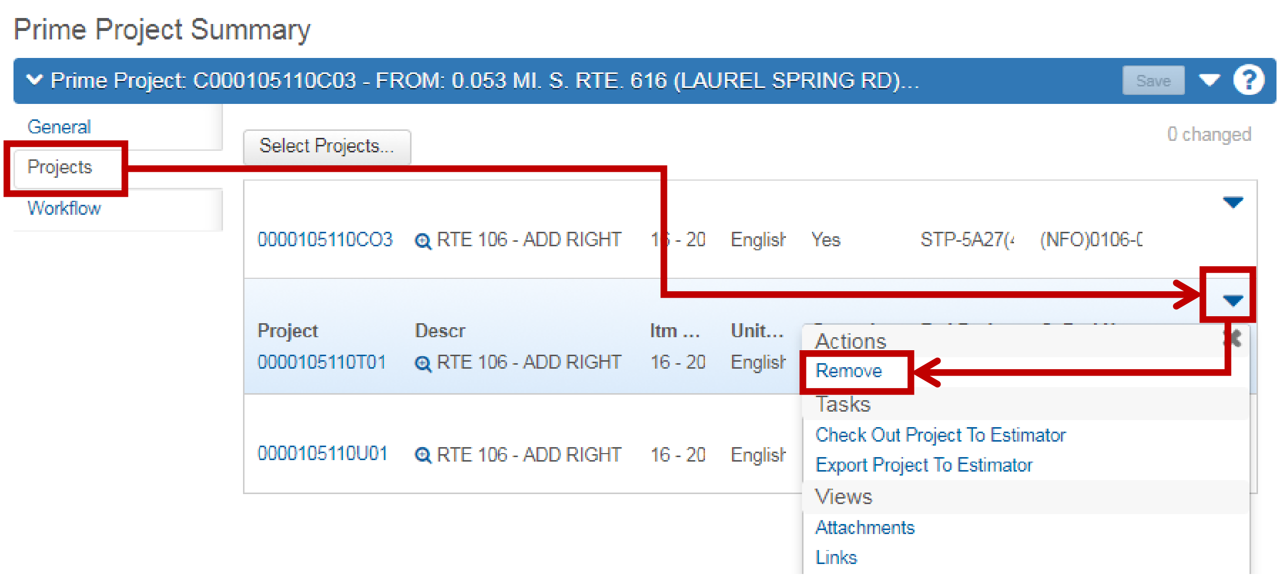


Figure 5 - Disassociating (Removing) a Project from a Prime Project

9.4 Deleting a Prime Project

A Prime can be deleted only after all the projects have been disassociated (removed) and some users do not have permission to delete a Prime. If you need a Prime deleted, please contact the Precon Administrator listed in the Support/Help at the beginning of this manual.

To delete a Prime perform the following steps.

1. Open the Prime.
2. Click the **Projects** tab.
3. Remove all **Projects** (see 8.3 for complete instructions).
4. Click the **Overview** quick link**.**
5. Click the row action button of **Prime** you wish to delete.
6. Click **Delete**.

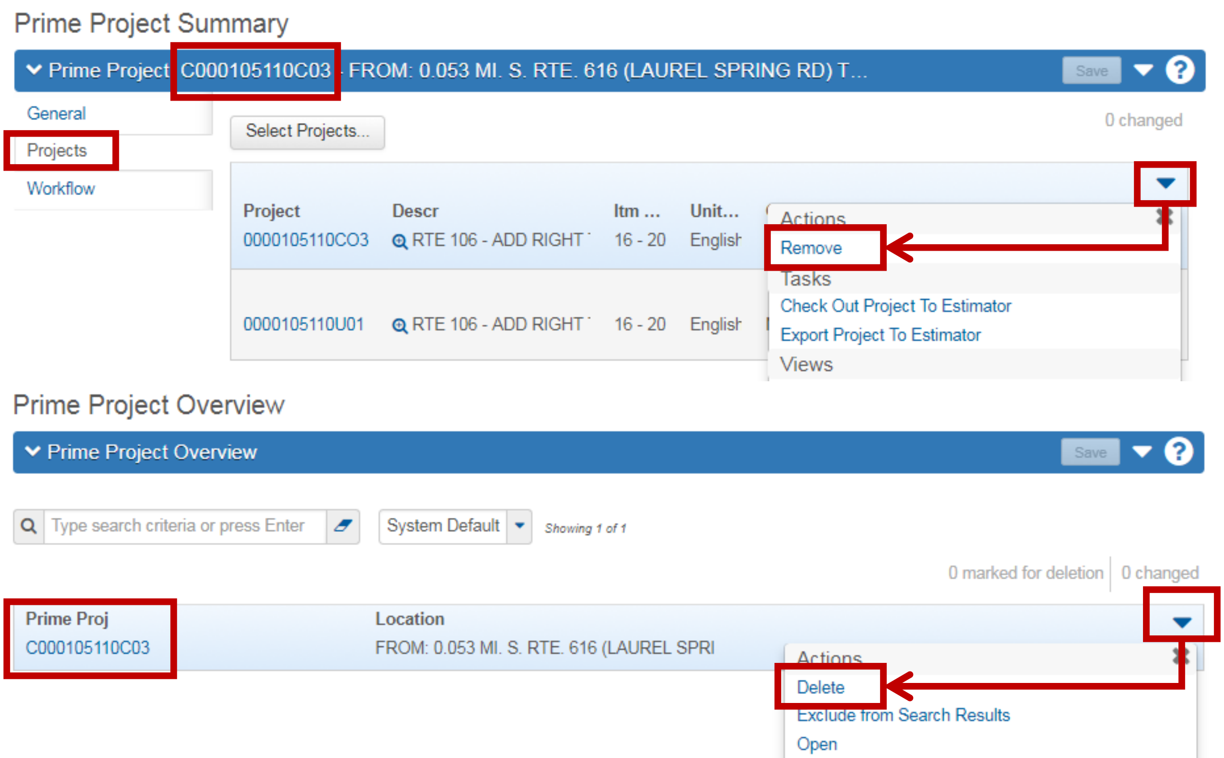


Figure 6 - Deleting a Prime

9.5 Running the Prime Project Detail Estimate VDOT Report

The Prime Project Detail Estimate VDOT report is a combined report that calculates the totals for all the projects associated to the Prime.

The report is comprised of four individual reports:

- Cover Page
- Summary Sheet
- Cost Estimate
- Funding Summary

When you generate this report, you can choose to include one, several, or all of these reports.

9.5.1 Running the Detail report from the Dashboard

10. Click the Dashboard **Global Action** button.
11. Select **Generate Report**.
12. Choose **Preliminary Prime Detail Estimate VDOT** from the list, a green check box appears to the left. It automatically moves to page 2.
13. In the search box, **enter the desired UPC number**.
14. **Click the desired Project ID** from the list, a green check box appears to the left.
15. Click the blue **Next arrow** button on the upper right of your screen.
16. Check or uncheck the boxes from the list of 4 report pages that you desire, all 4 default as checked.
17. Click the **Execute** button on the blue component bar.
18. The report opens in a new Browser tab.

Note: Please remember to save or print the PDF, this is the only time you will have the opportunity to do so. Otherwise, you will have to re-run the report.

9.5.2 Running the Detail report from an open Project

This report can be run in almost every quick link page within a project.

7. Open the desired project.
8. Click the **Action Button** on the blue component bar.
9. Select **Preliminary Prime Detail Estimate VDOT**.
10. Check or uncheck the boxes from the list of 4 report pages that you desire, all 4 default as checked.
11. Click the **Execute** button on the blue component bar.
12. The report opens in a new Browser tab.

Note: Please remember to save or print the PDF, this is the only time you will have the opportunity to do so. Otherwise, you will have to re-run the report.

10. PROPOSALS

A Precon Proposal is one or more projects grouped together for advertisement, bid-letting, award and the creation of the Construction Contract.

A proposal is similar to a project in that it contains items or work, but it also contains advertisement info, DBE goals, wage decisions, expected construction completion date and the Contractor's bids. The Proposal combines 'like items' from 1 or more Precon Projects into a single biddable list so that bidders only view and bid on the same item(s) once. The Proposal generates 4 digit proposal line numbers, in increments of 10. Eg: 0010, 0020, 0030.

Proposals can be created in two (2) ways:

1. Creating a proposal **from the controlling project**. (Recommended Method). This pulls general data from the project and automatically assigns the project to the proposal. Then other Projects can be added to the Proposal.

2. Create a proposal **from scratch** – the user will need to add the general information and assign the projects to the proposal.

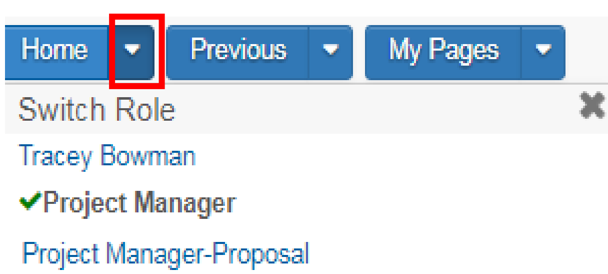
Understanding Your Role

All Precon users are assigned at least one security role. Many users have multiple roles, but you <u>can only use one role at a time</u>. Therefore, you are always limited to the security access rights of your <u>*Active Role*</u>. Roles combine the permissions needed for several related tasks and allow you more efficient access to the parts of the system you need. Roles are assigned to you based on your location (control group) and the components you need.

You can change your active role at any time by clicking on another role on the **Home** menu. By selecting a different role, your permissions and security access are changed to reflect the areas you need to access to perform your duties in the new role.

****In order to create a Proposal (either from scratch or from an existing project) you must use the Project Manager-Proposal role for all work performed in a proposal.***

*****Important Note: Once a project is attached to a Proposal, the project is not viewable from the Project Manager role.***



10.1 Creating a Proposal from a Project (Recommended Method)

To create a Proposal from the controlling project, perform the following steps:

1. From the Preconstruction component select **Projects**. In the search box, query for the project you wish to create a proposal. The Proposal should be created from the controlling project.
2. Select the project row Actions menu and select **Create Proposal from Project**. Be sure to add a C to the beginning of the Proposal ID.
3. Fill in all the required fields and click **Save**
4. Add other Projects if required.

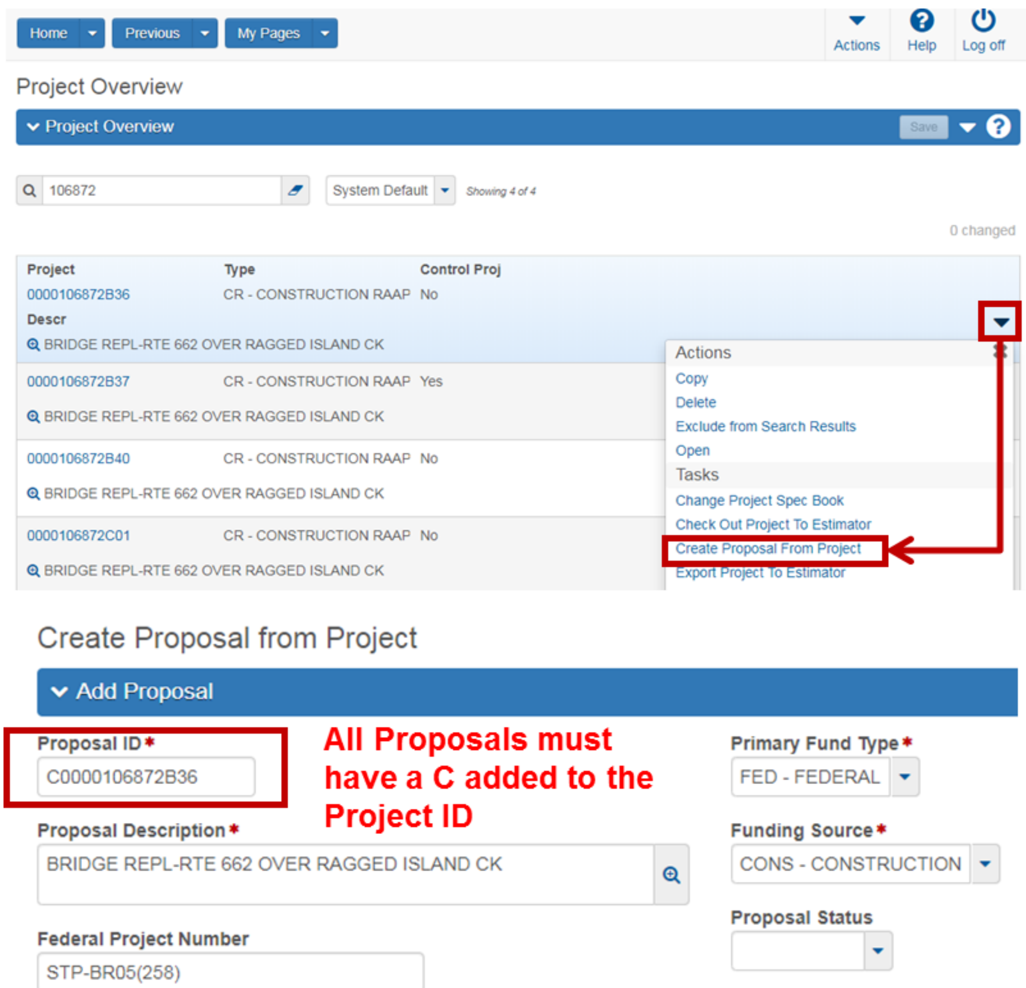


Figure 8 – Project Overview Screen

10.1.2 Creating a Proposal from scratch (less common method)

To create a Proposal from scratch, perform the following steps:

1. From the **Home** screen, click the **Proposals** quick link.
2. Click the **row action button** on the blue component bar, select **Add**.
3. Fill in all the required fields and click **Save**.
4. Add other Projects if required.

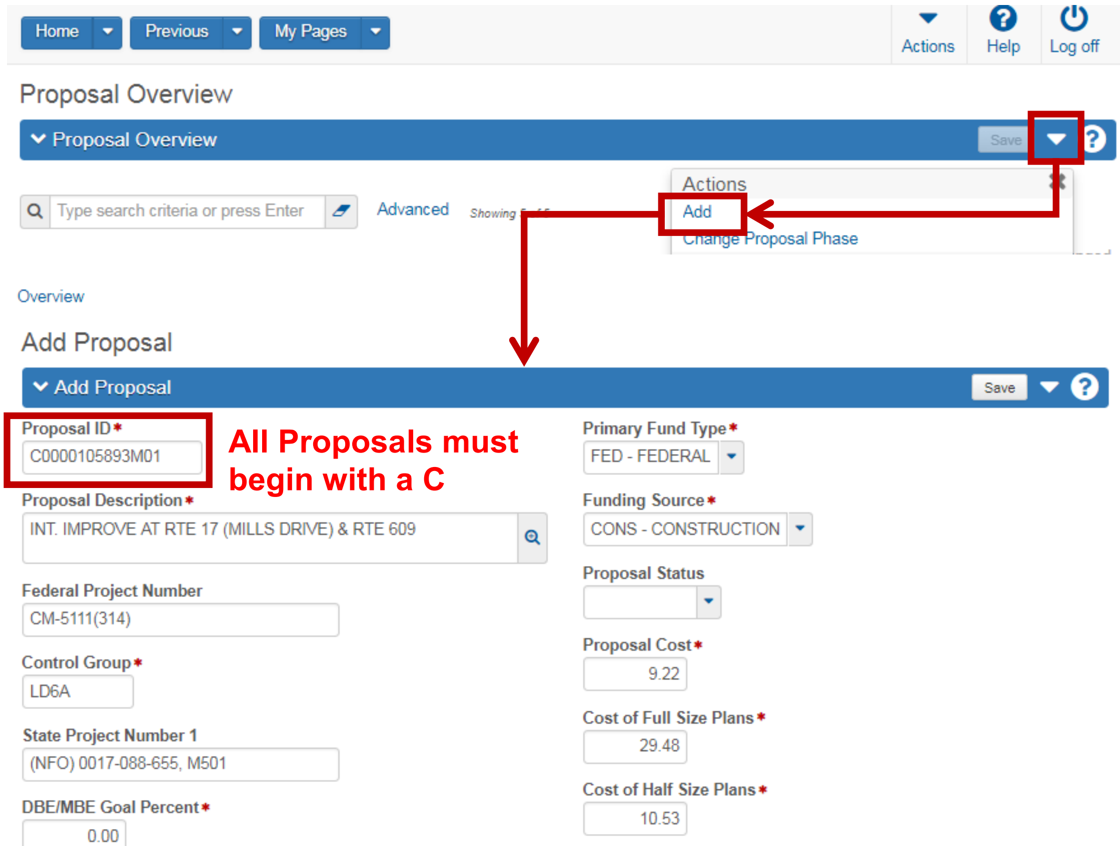


Figure 2 – Creating a Proposal from scratch

Some fields are required; the proposal will not be saved to the database unless the required fields are filled-in. The required fields are listed with a red asterisk behind the field name. Non required fields should also be filled in, if applicable.

Once you have filled in the correct fields, click the **Save** button. If the Proposal ID you created is already in the system, you will receive an error message. You will also receive an error message if you have left any required fields blank.

Once the proposal is saved, you will be directed to the Proposal General Tab. Notice that other fields are now displayed on the Proposal General Tab. These fields include:

Proposal Field Descriptions:

Proposal ID: All Proposal ID's *must begin with a C* (excerpt from Appendix A, of this manual) and should match the corresponding Prime ID (which is also the name of the controlling project for the Proposal)

A.4 Prime Project ID and Proposal & Contract ID

Both the Prime Project ID and the Proposal/Contract ID begin with a C and end with the Project ID of the largest project. The Proposal ID and Contract ID should always be the same. The Prime and the Proposal/Contract ID are typically 14 digits.

Example 1: **Projects ID**'s are: 0000003942C01
0000003942B01
0000003942B02

Prime Project = C00000003942C01
Proposal/**Contract** ID = C00000003942C01

Note: all letters must be CAPITALIZED !

Example 2: **Project ID** is: M615LMA107318

Prime Project = CM615LMA0107318
Proposal/**Contract** ID = CM615LMA0107318

Note: The C is added to the Project ID, it does not replace the first digit.

Note: all letters must be CAPITALIZED !

Order Number (aka Call): Contact the Construction Division's Federal Submissions Coordinator for Call number assignment.

Proposal Description: Required. Enter a short description of the work to be performed. This should match the project description from IPM and the Prime.

Location: Type the location with format**: FROM: (location) TO: (location)**.
For Projects with Plans, enter the location from the front sheet title block.

Federal Project No.: Enter the federal project number, if applicable, in its entirety, complete with dashes, parentheses, etc. If the project is not federally-funded, enter NONE.
EXAMPLE: NH-5401(876)

State Project Number 1: Enter the state project number in its entirety, including commas, etc. **EXAMPLE**: 7029-021-103, C502

State Project Number 2: Use only when more space is needed for the State Project Number 1 row, otherwise leave blank.

State Project Number 3: Use only when more space is needed for the State Project Number 2 row, otherwise leave blank.

DBE Goal: Select the appropriate code from the drop-down menu. Do not leave this field blank.

DBE GOAL	
BOTH	MBE and WBE Goals or Requirements
DBE	DBE Goals or Requirements
ND	Not Yet Determined
NONE	NO DBE Goals or Requirements
VSBE	VDOT Small Business Enterprise Program

DBE/MBE Goal Percent: Required. Percentage will be determined by the Civil Rights Division & entered by the Construction division staff.

WBE Goal Percent: Percentage will be determined by the Civil Rights Division & entered by the Construction division staff.

SWaM Goal Percent: Percentage will be determined by the Civil Rights Division & entered by the Construction division staff.

Advertisement Date: Required. Enter the Advertisement Date in MM/DD/YYYY format or select the date from the calendar icon.

Rejected checkbox: Used by Construction division, leave unchecked.

Reason for Non-Processing: Used by the Construction Division, leave this field blank.

Prev Let As ContID: This field is not used.

Contract Type: Required. Select the appropriate code from the drop-down menu.

CONTRACT TYPE	
CM	Construction / Maintenance Hybrid
CMMR	Maintenance RAAP
CMMS	Maintenance SAAP
CMSR	Maint. Schedule RAAP
CR	CR Construction RAAP
CS	CS Construction SAAP
DB	DB Construction Design/Build
EM	EM Emergency
LAP	Local Assistance Project
PP	Public/Private Transportation Act

Proposal Type: Select the appropriate code from the drop-down menu.

PROPOSAL TYPE	
01 - GRADING	18 - SEAL COAT
02 - STABILIZATION	19 - REJUVENATING
03 - STRUCTURES	20 - CLEARING AND GRUBBING
04 - BRIDGES	21 - LANDSCAPING
05 - CONCRETE BOX CULVERT	22 - SPRINKLER SYSTEM
06 - RETAINING WALL	23 - PLANTING
07 - HOT BITUMINOUS PAVEMENT	24 - SODDING
08 - CONCRETE PAVEMENT	25 - CURB AND GUTTER
09 - SIGNING	26 - SIDEWALK
10 - STRIPING	27 - BIKEWAY
11 - LIGHTING	28 - GUARD RAIL
12 - SIGNALIZATION	29 - IMPACT ATTENUATER
13 - TOPSOIL	30 - CHANNEL RELOCATION
14 - SEEDING	31 - GRADING AND SURFACING OF CAMPGROUNDS
15 - MULCHING	32 - SAFETY REST AREA WITH COMFORT AND FACILITIES
16 - HOT BITUMINOUS PAVEMENT OVERLAY	33 - PORT OF ENTRY BUILDING AND SCALES
17 - PLANT MIX SEAL COAT	34 - TRAFFIC AND SURVEILLANCE

Contract Work Type: Required. Select the appropriate code from the drop-down menu.

CONTRACT WORK TYPE	
01 - BRIDGE	16 - PAVING / CONCRETE
02 - BRIDGE ORDINDARY MAINTENANCE	17 - PAVEMENT MARKING/MARKERS
03 - BRIDGE PAINTING	18 - PAVEMENT REPAIR
04 - BRIDGE REPOAIR (& REHAB)	19 - PLANTING
05 - BRIDGE WIDENING	20 - SIDEWALK, CURB & GUTTER
06 - BOX CULVERT	21 - SIGNALS
07 - CURB CUT RAMP	22 - SIGNING / SIGN OVERLAY
08 - DEMOLITION	23 - SURFACE (OVERLAY & TREATMENT)
09 - FENCE REPAIR/REPLACE	24 - UTILITY
10 - GRADE / DRAIN / PAVE	25 - WIDEN ROADWAY
11 - GR REPLACEMENT/REPAIR	26 - WILDFLOWERS
12 - JACKED PIPE/PIPE REHAB	27 - PEDESTRIAN / BIKES
13 - MAINT REPLACEMENT	28- PAVEMENT MAINT. SCHEDULES (Selected for Limited Scope Maintenance Schedules Classified with Numeric Order Numbers)
14 - NEW ROADWAY	29- PAVEMENT MAINT. STAND ALONE (Selected for Larger Scope Maintenance Schedules Classified with Alpha-Numeric Order Numbers)
15 - PAVING / ASPHALT	

On Call Proposal: Field Removed

Proposal Item Total: Price generated from proposal total, no action required by user.

Control Group: The control group is the security designation which decides which user has access to which proposals(s). The data in this field may be changed in order to transfer the project to another control group.

Contract ID: A Contract's unique ID- should be identical to the Proposal ID.

Show Location button: No longer used.

Primary Fund Type: Required. Select the appropriate code from the drop-down menu.

PRIMARY FUND TYPE
BOND
FED – FEDERAL
OTH – OTHER
STA – STATE
TOLL

Proposal Status: Used by the Construction Division after Bid Letting only, leave blank.

Status Date (Award Date): Used by the Construction Division after Bid Letting only, leave blank.

Funding Source: Required Select the appropriate code from the drop-down menu.

FUNDING SOURCE
CM – CONSTRUCTION/MAINTENANCE
CONS-CONSTRUCTION
MANT-MAINTENANCE

Bridges: Required. Enter the number of bridges on the proposal. Enter 0 for no bridges.

OJT Goal: Used by the Construction Division, leave blank.

OJT Goal Units: Used by the Construction Division, leave blank.

OJT Goal Comments: Used by the Construction Division, leave blank.

Primary County: Required. This field will populate if Proposal was created from a project, otherwise select the appropriate code from the drop-down menu and should match iPM.

Primary District: Required. This field will populate if Proposal was created from a project, otherwise select the appropriate code from the drop-down menu and should match iPM. **Ensure the District selected includes the corresponding Residency.**

Document Specialist: As determined by Construction Division. Select from the pulldown menu.

Proposal Funding Total: A field used to enter amount to limit funding on a proposal. Used by the Construction Division, leave blank.

Mandatory Showing: Select the appropriate value. Y (YES) or N (NO)

NOTE: Select Y ONLY if the showing is mandatory. If not, then select N. You can still enter the showing location for non-mandatory showings.

Showing Location Code: No longer used.

Showing Date: As determined by Construction Division, leave blank.

Showing Time: As determined by Construction Division, leave blank.

Showing Location 1: Enter extra showing information in this field as needed.

Showing Location 2: Enter extra showing information in this field as needed.

Progress Schedule Category: Select the appropriate code from the drop-down menu.

Proposal to Doc Assembly: Used by the Construction Division, leave blank.

CTB Meeting Date: The actual date that the Transportation Board holds their meeting for award recommendation, used by Construction Division after Bid Letting only. Leave blank.

10.2 Changing a Proposal

From the Preconstruction Home screen select **Proposals**. This opens the Proposal Overview Screen. Enter a UPC number in the search box and click the Proposal ID to open the Proposal.

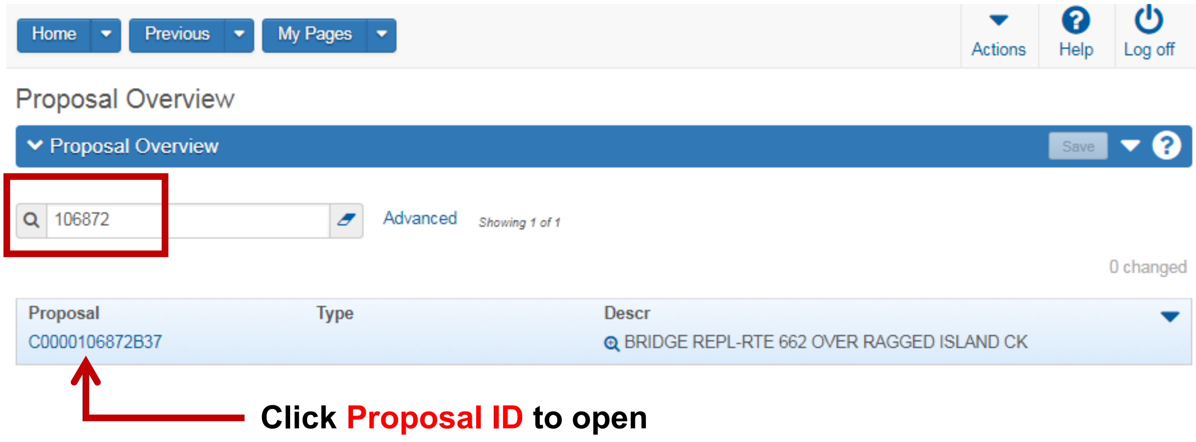


Figure 3 – Proposal Overview Screen

This opens the Proposal on the General Tab where you can make edits to the fields. Note that changes cannot be made to the **Proposal ID** field as it is display-only. Once you have made edits, click the **Save** button to save changes. A Save complete message will display.

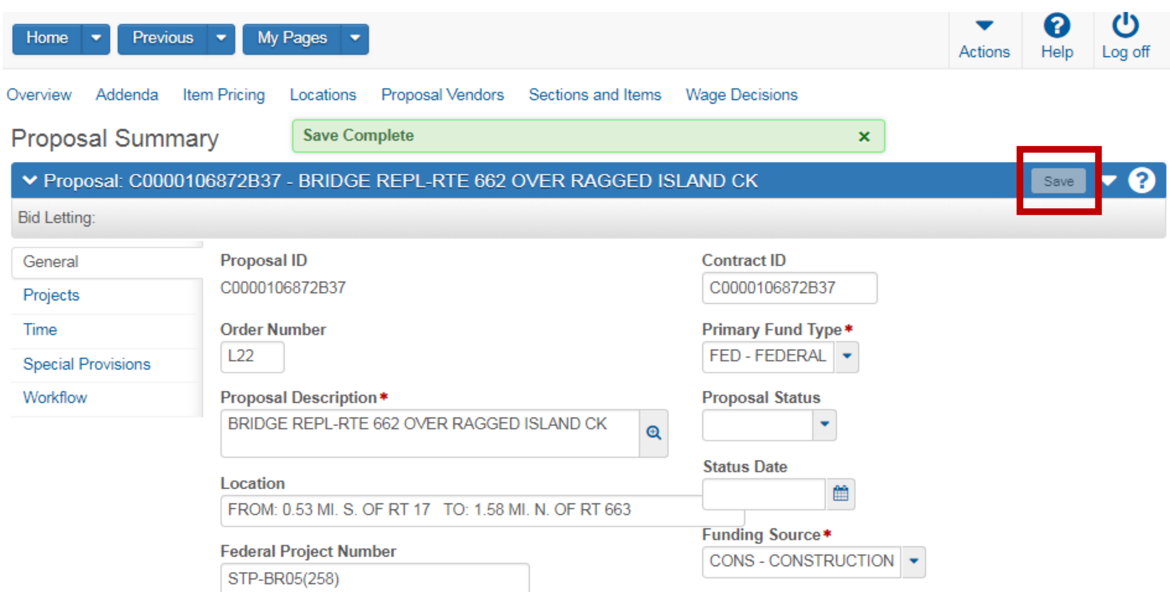


Figure 4 – Changing a Proposal

10.2.1 Adding Projects to a Proposal

When projects are added to a Proposal they act as a link to all the items in each project. The particular Projects, that are within a Proposal will become a construction contract, shall match the Projects that are attached to the Prime that the District submits to the Central Office Construction Division for advertisement and let.

To add projects to a Proposal perform the following steps.

1. Open the Proposal.
2. Click the **Projects** tab.
3. Click the **Select Projects** button. Opens a new window.
4. In the search box, enter the **UPC**.
5. **Click the projects** in the list, a green check box appears next to each selection.
6. Click the **Add to Proposal** button. This closes the Select Projects window.
7. Click the **Save** button on the blue component bar.

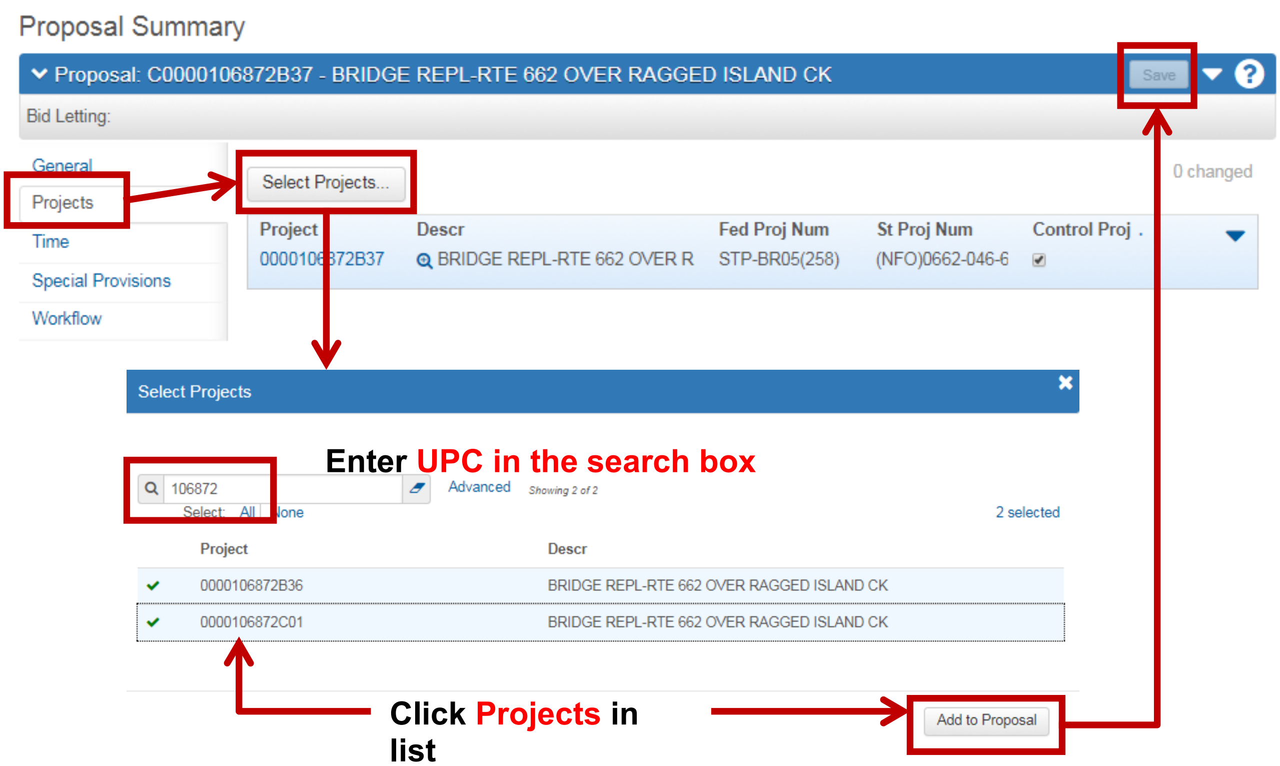


Figure 5 – Adding Projects to a Proposal

10.2.2 Removing Projects from a Proposal

To remove a project from the proposal, select the row actions button for the project in the list on the Projects Tab. Select **Remove** from the actions list. The project is removed and a message of Save Complete will be displayed.

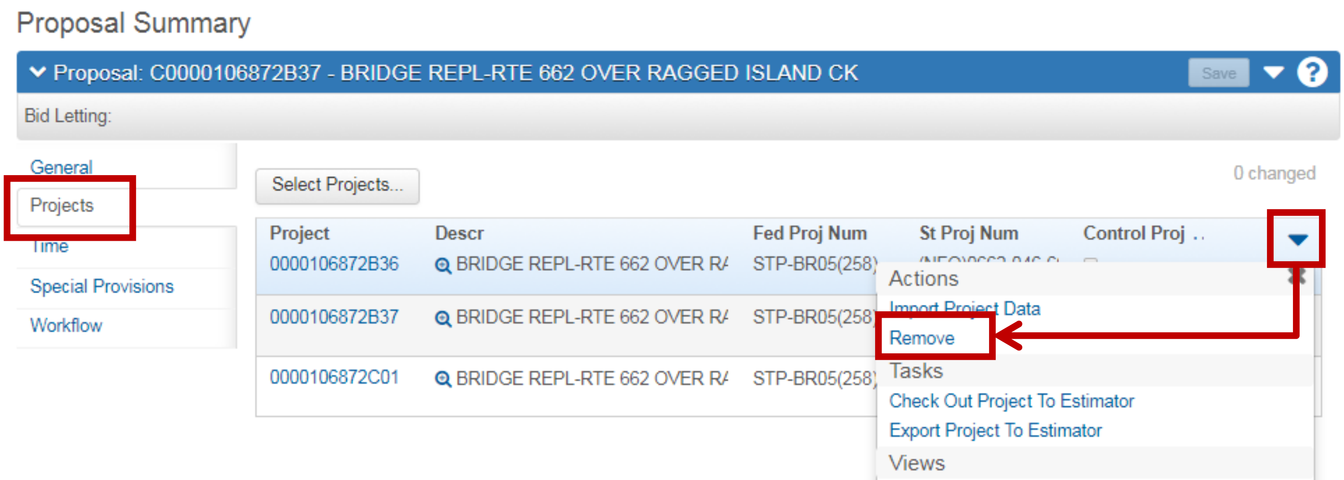


Figure 6 – Removing Projects from Proposal

10.3 Assigning Time Locations

Each proposal must have at least one time, numbered **00**, in order to specify time limits and liquidated damages in Site Manager.

Preconstruction allows three types of days (VDOT only uses one of these):

1. **Fixed Completion date (DT) - <u>VDOT only uses Fixed Completion date (DT)</u>**
2. Available days (AD) – Do not use
3. Calendar days (CD) – Cost Plus Time bidding information is also entered at the proposal time level but is only used for the calendar days. Do not use.

To add Time to a Proposal perform the following steps:

1. Open the Proposal
2. Click the **Time** tab.
3. Click the **New** button.
4. Fill in fields as described in the next section.
5. Click **Save**.

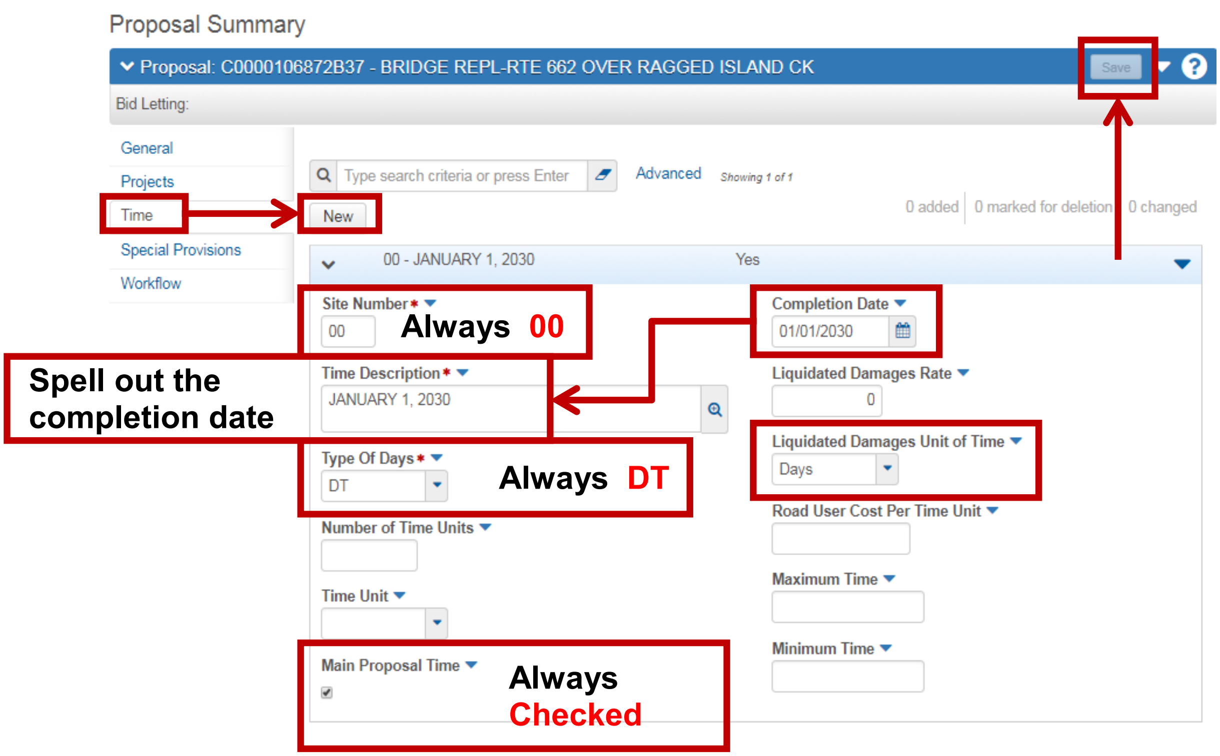


Figure 7 – Adding Time to the Proposal (Fixed Completion Date)

<u>Time Field Descriptions</u>

Site Number: Required. This value will always equal **00**.

Time Description: Required. Write/Spell out the completion date to match the Completion Date Field. Example: January 1, 2030

Type of Days: Required. From the drop-down menu, select either **DT** (Fixed Completion Date DT)

Number of Time Units: Not used. If CD was chosen for the Type of Days, this field becomes required.

Time Units: Not used. If CD was chosen for the Type of Days, this field becomes required. Hours or Days.

Main Proposal Time: Should always be checked

Completion Date: Enter the Completion Date in MM/DD/YYYY format or select the date from the calendar icon.

Liquidated Damages Rate: The amount to be charged, in whole dollars, for each time unit (hours or days) that a contractor exceeds the allowed time for a contract. If you enter a value in this field, you must also enter a value in the Liquidated Damages Unit of Time field. Default is 0.

Liquidated Damages Unit of Time: The time used for liquidated damages on a contract. Valid values are Hours or Days. Default is Days

Road User Cost Per Day: The field is used by Construction Division only. A value entered in this field indicates the Site is a Cost Plus Time Site. Enter the cost per day value (whole number; no dollar sign) to determine the low bidder in a Cost Plus Time bid. A value can only be entered in this field if the selection in the **Type of Days** field is CD. The value is the cost per day (dollar amount) of the inconvenience of the construction. Leave blank.

Maximum Time: A maximum amount of time a vendor may bid on this proposal. Leave blank. Leave blank.

Minimum Time: A minimum amount of time a vendor may bid on this proposal. Leave blank.

<u>Special Provisions Tab:</u> Not in use by VDOT.

10.4 Setting Proposal Workflow

A proposal’s workflow is an important setting to move the proposal through the phases of the letting. *Workflow fields should never be left blank.* It’s important to remember that you should never move the workflow backwards, they should only move forward in the list on the next page.

Click in the workflow field and select **VDOT WORKFLOW PROJECT-PROPOSAL-CONTRACT** and click in the WorkflowPhase field and select **PROPOSAL DEFINITION PHASE**. Once these are selected click the **Save** button.

NOTE: *Once a project(s) is associated to a Proposal, the workflow setting in the Proposal controls the workflow of the projects.*

Figure 8 – Proposal Workflow

Workflow Phase Definitions

	WORKFLOW NAME	DESCRIPTION	NOTES	
1	Project Definition Phase		Engineers/Designers Use	
2	Proposal Definition Phase		Construction Division/District SAPP Coordinators	
3A	Advertisement Phase	Locks Proposal/No changes from Projects	Any changes once the Proposal is Advertised must be added in the Addenda phase with proper notification to Document assembly group	
3B	Addenda Phase	Changes only reflected when Addenda is open	Changes made during Advertisement.	
4	Bid Letting Phase		Construction Division Use Only	ADMIN Role Only
5	Post Bid Evaluation Phase		Construction Division Use Only	
6	Preconstruction has ended Phase		Construction Division Use Only	
7	Moved to Construction/SiteManager	Passed to CLR/SiteManager	Construction Division Use Only	
8	Historical Phase		Construction Division Use Only	

10.5 Specifying Section and Line Numbers

When you create a proposal that consists of one or more project(s), sections need to be generated which assigns proposal line numbers, Preconstruction then combines the projects and project items in the following way:

- If you have selected the Combine With Like Items checkbox in the Project item, each item will appear once because Preconstruction combines them into single proposal line items, even if they are in different categories or projects. Bidders can then bid on a single item. In order for non-standard items to combine, the Description (Non-std) and Spec Book (Non-std) information must be exactly the same.
- If you have not selected the Combine With Like Items checkbox, that item will not be combined.
- Because bidders will not bid on non-bid items (you select the Non-Bid checkbox on the project item), non-bid items will be omitted from the proposal report.
- After Preconstruction combines like items, it assigns unique proposal line numbers, then updates every database item record to reflect the proposal line item number to which the record now belongs.

10.5.1 Add a Proposal Section

The Proposal Sections and Items component allows you to organize the items in the proposal into sections and to generate proposal line numbers. Each proposal must have at least one (1) section and they can be created manually or automatically. The Section number should always be 4 digits.

9.5.1.1 Generating Sections Automatically (Recommended Method)

When you generate proposal sections automatically, all of the proposal items are assigned to sections. You do not need to use the **Assign Items to Sections** command unless you want to review or make changes to the assignments. *If you add new items to one of the projects in the proposal after you automatically generate sections, you can use the* ***Auto Generate Sections*** *command again to assign the new items to a section.*

To Generate Sections Automatically perform the following steps:

1. Click the **Sections and Items** quick link.
2. Click the **Component Actions button** on the blue component bar.
3. Select **Auto Generate Sections**.
4. Section ID should be 0001 (4 digits).

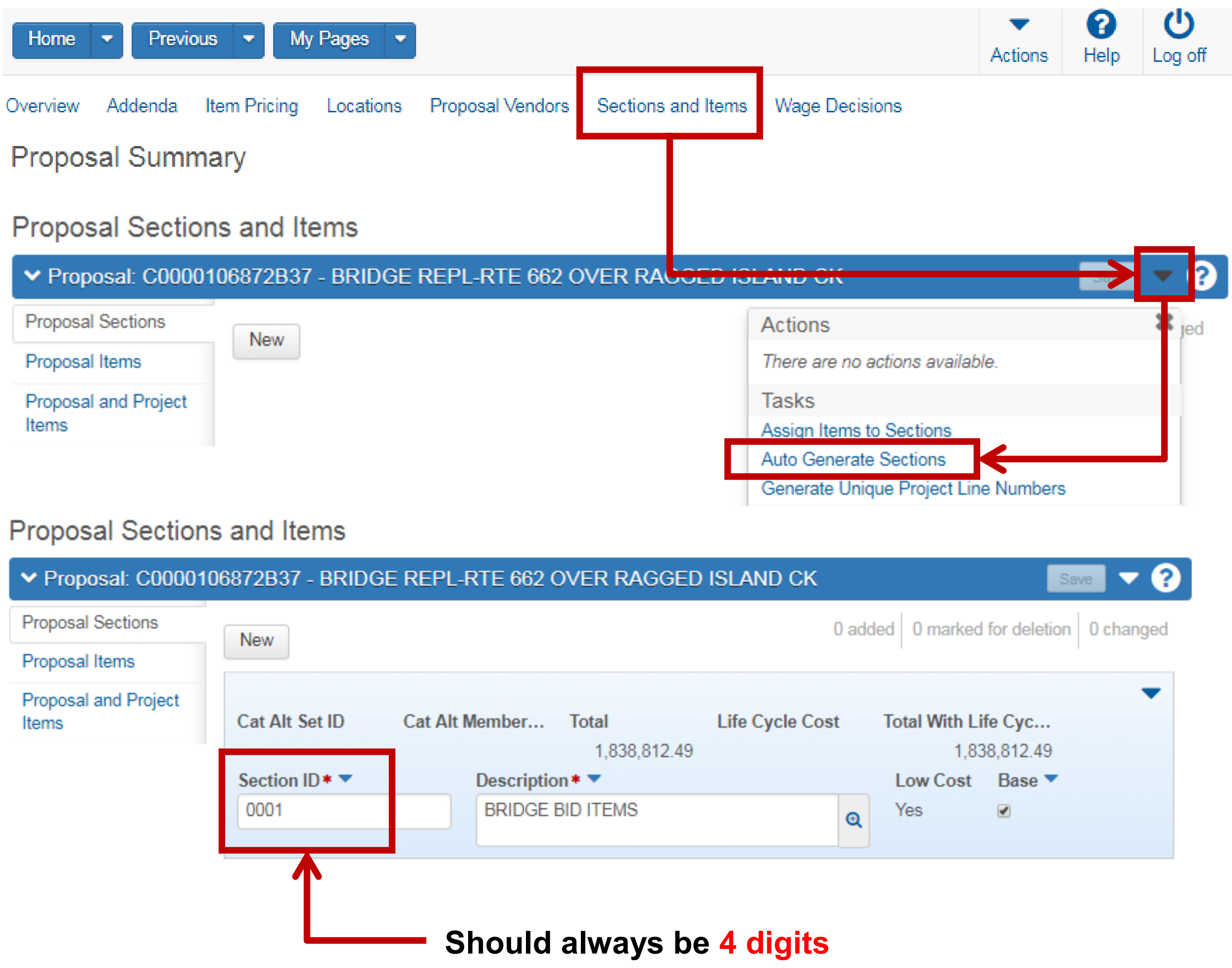


Figure 9 – Auto Generate Sections

10.5.1.2 Adding a Section Manually (Less Common Method)

Click the New button and fill in the fields Section ID with **0001** and a Description of **ALL BID ITEMS,** check the Base check box. Click the Save button. A Save Complete message will appear.

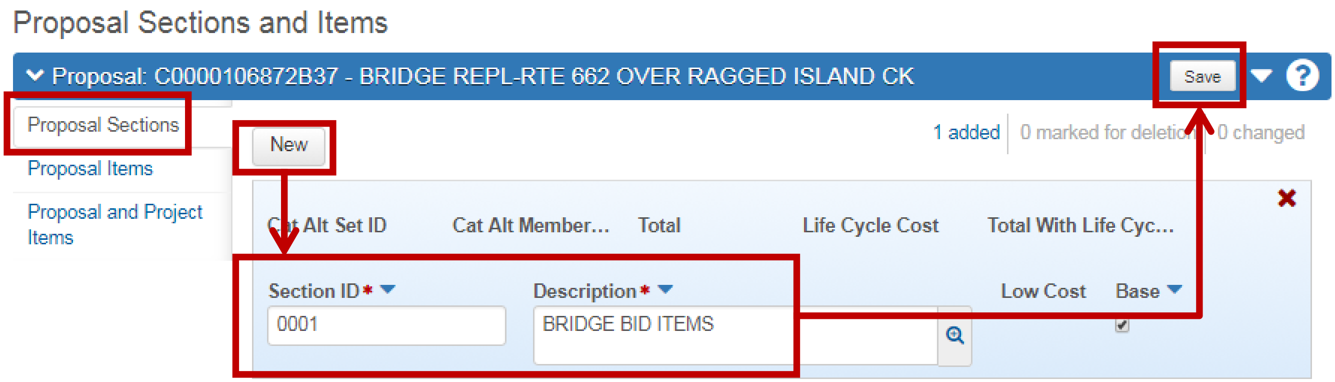


Figure 10 – Adding a Section Manually

10.5.2 Assigning Items to the Section

The next step is to Assign Items to the Section you just created. Click the Proposal Actions Button and select **Assign Items to Sections** from the list.

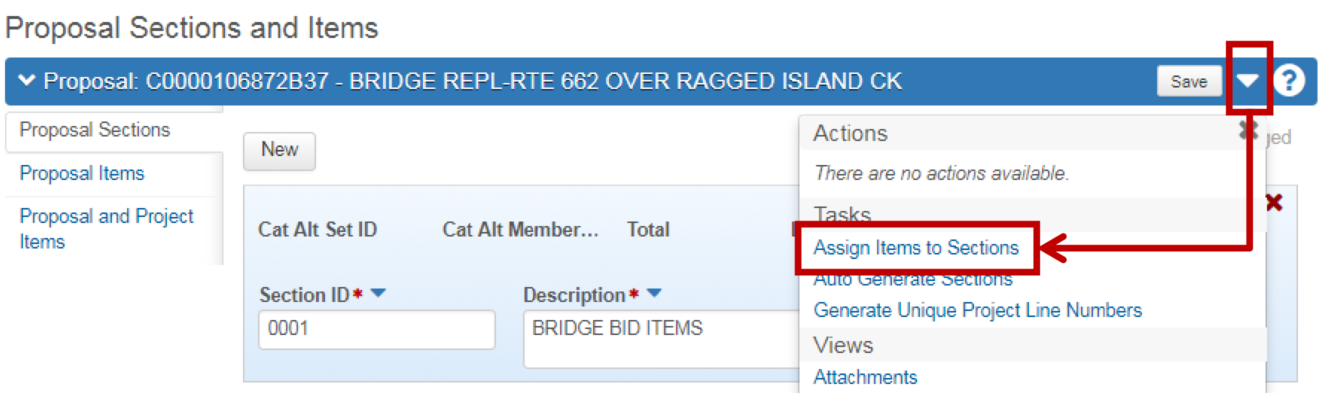


Figure 11 – Assign Items to Sections

This will open the Assign Items to Sections page. You will have this screen for each project associated to the proposal. Be sure to assign all items and all categories for each project by selecting the drop down or the blue arrow buttons to page through the projects. To assign all project items to the section, select the **A** button beside All Project Items and click the **Save** button.

Note: the Assignment of items should always include all the categories (Bid and Non-bid). This allows the non-bid categories and items to appear on the Final Proposal detail estimate after bid letting.

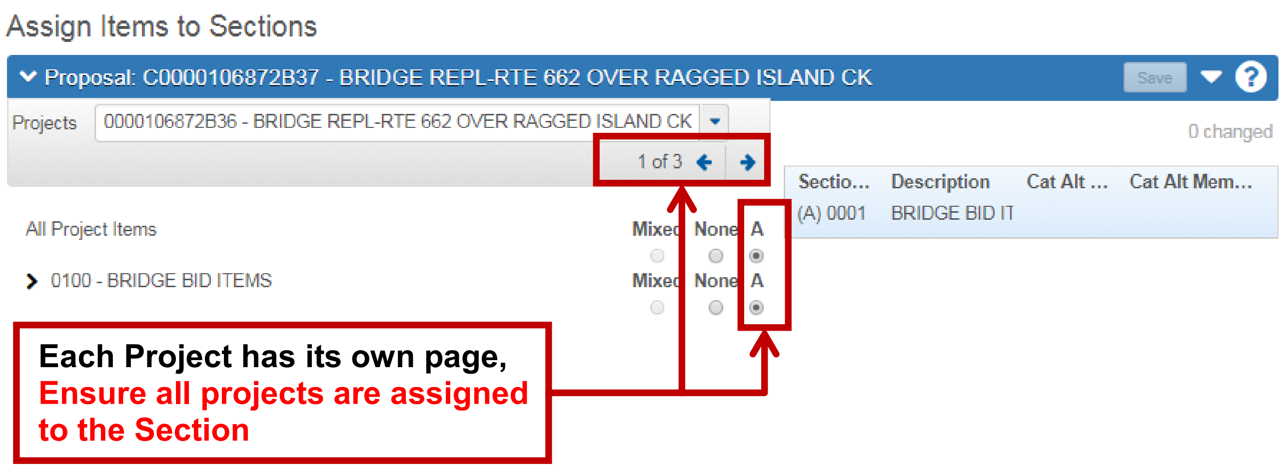


Figure 12 – Assign all Project Items to Section

10.6 Copying a Proposal

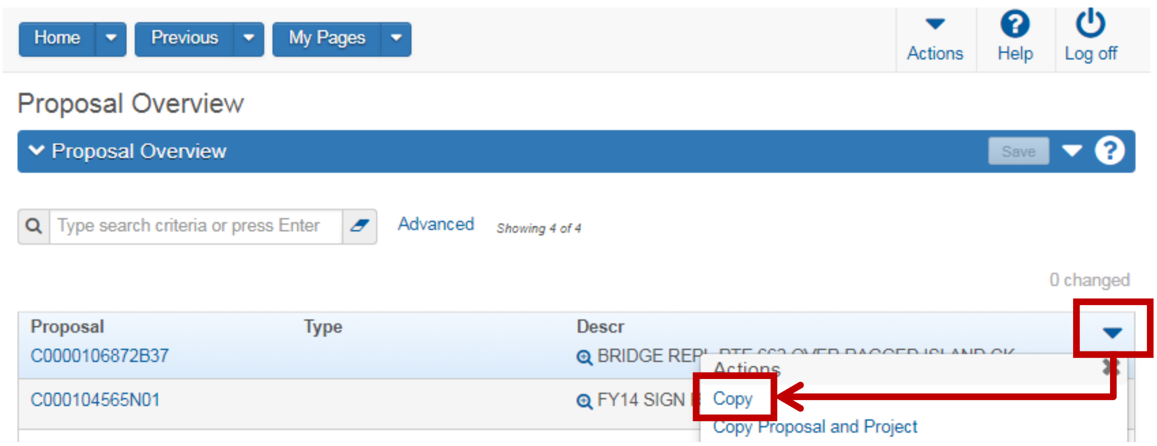
If you are setting up a new proposal that is similar to another proposal already saved in the database, you can copy the existing proposal and assign it a new proposal ID. You can then make any minor changes required for the new proposal. Preconstruction has two methods:

- Copy (no associated projects)
- Copy Proposal and Project

Note: Proposals/Projects that are Rejected and then re-advertisement shall be copied and a version letter is added to the end of the Project name, Proposal name and Contract ID. EG: C0000101289M01**B**

10.6.1 Copy a Proposal (no associated Projects)

To copy a proposal, find the proposal you wish to copy on the Proposal Overview Screen. Select the proposal row Actions menu and click **Copy** from the list.



Preconstruction displays the Copy Proposal window. Enter a new Proposal ID in the field. The Proposal ID cannot be the same as a Proposal that is already in the database.

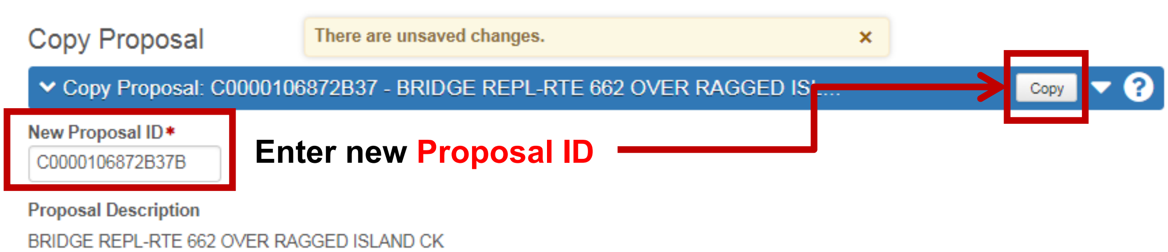


Figure 13 – Copy a Proposal

Click the **Copy** button once you have entered a new proposal ID. A Saved Complete message will display and you will be taken to the new proposal General Tab. Note that no projects are associated to the new proposal.

10.6.2 Copy Proposal and Project(s)

To copy a Proposal and Projects perform the following steps.

1. From the Proposal overview screen, enter the UPC in the search box.
2. Select the **row action button** of the Proposal you wish to copy.
3. Select **Copy Proposal and Project**.
4. Enter the new Proposal name in the **New Proposal ID** field.
5. Click the **Right arrow** to go to the next page.
6. Click all the **projects in the list** that you wish to include in the Proposal.
7. Click the **Right arrow** to go to the next page.
8. Enter the **New Project ID's** (same order from the previous screen)
9. Click the **Copy Proposal** button.

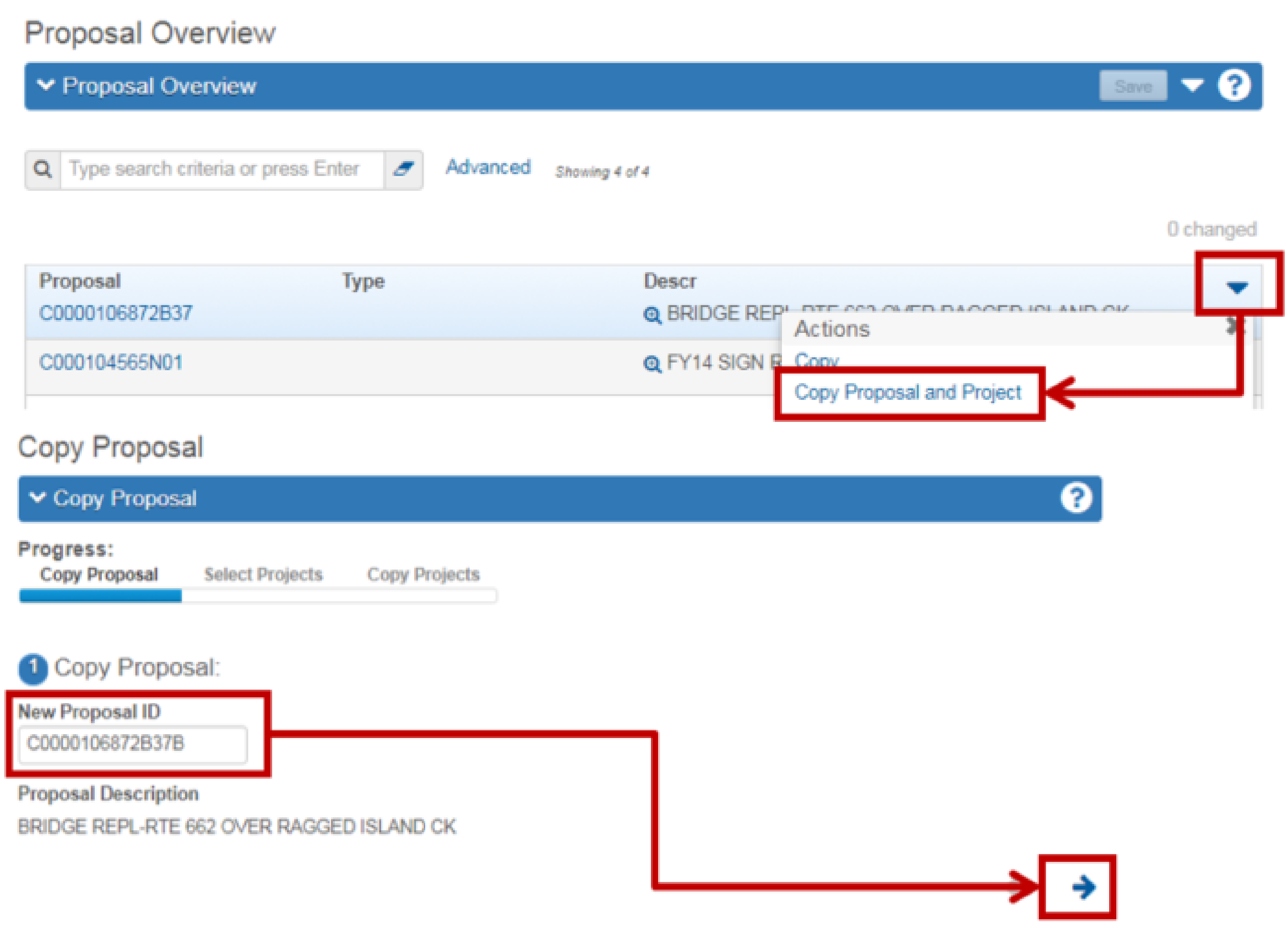


Figure 14 – Copy a Proposal and Project

Copy Proposal and Project(s) Continued

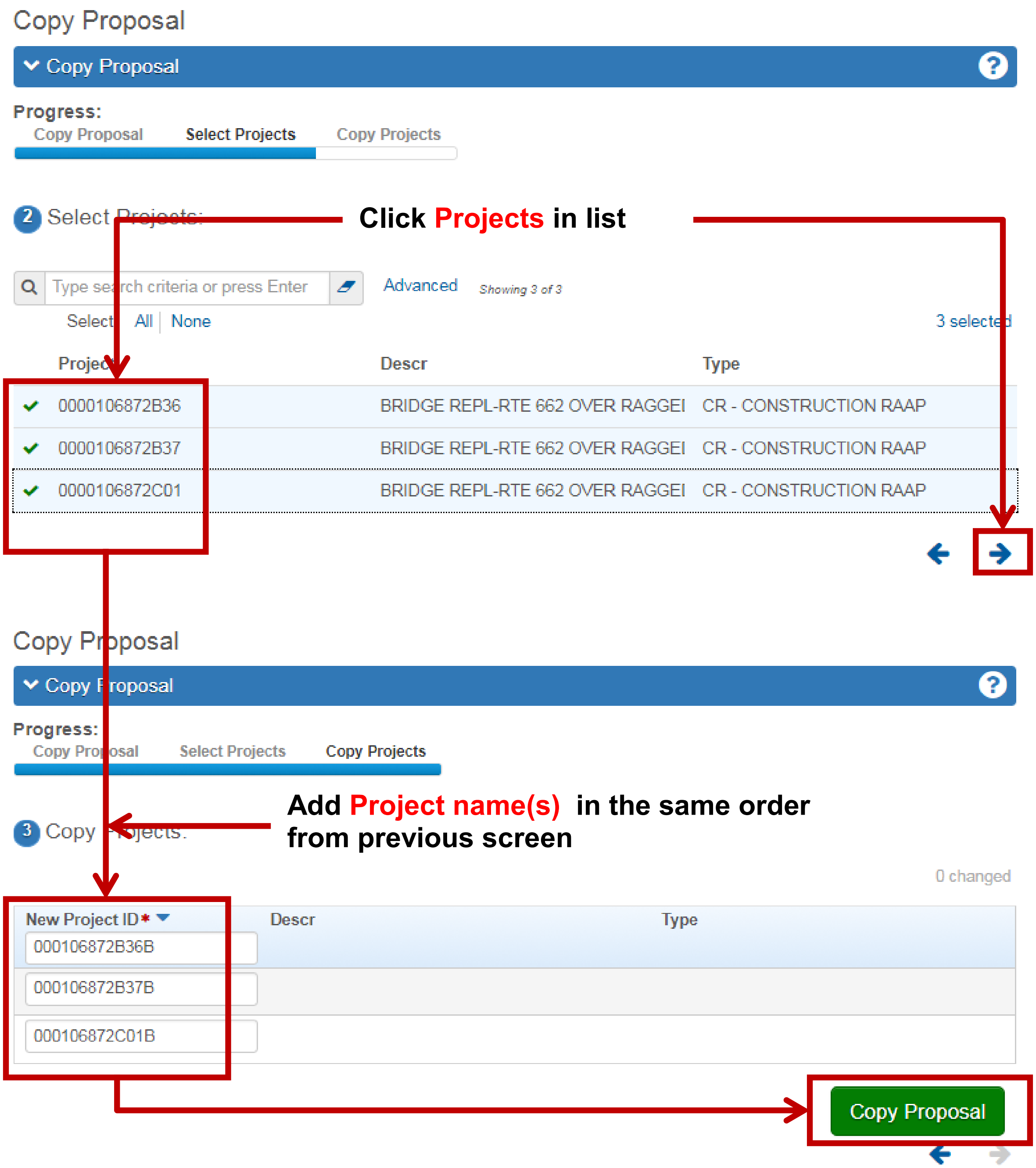


Figure 15 – Copy a Proposal and Project

10.7 Deleting a Proposal

When the occasion to delete a proposal occurs, it is important to remember a proposal record contains several levels of associated information, deleting a proposal can have serious consequences. Projects are associated (linked) to a proposal and **Projects MUST BE REMOVED FROM THE PROPOSAL BEFORE DELETING THE PROPOSAL.** Please use Extreme Caution when deleting a Proposal!

There are two options to delete a Proposal

1. Delete Proposal
2. Delete Including Project

10.7.1 Delete a Proposal (with no Project(s) associated)

To delete a proposal, find the proposal you wish to delete on the Proposal Overview Screen. Select the proposal row Actions menu and click **DELETE** from the list. An additional screen appears, select **Delete only the Proposal.** Note: this process does not have an UNDO option so please **use caution when deleting!**

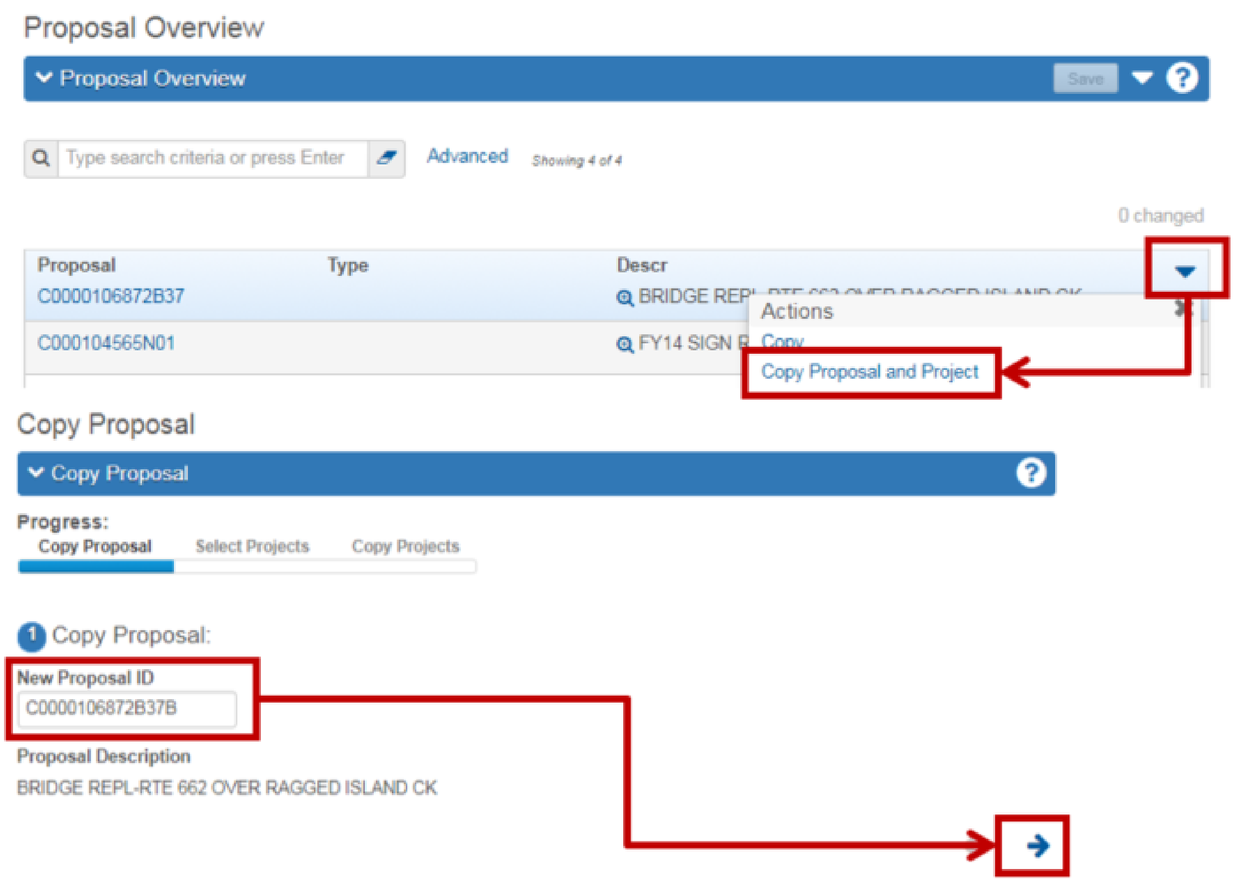


Figure 16 – Delete a Proposal

10.7.2 Delete a Proposal Including Project(s)

To delete a proposal, find the proposal you wish to delete on the Proposal Overview Screen. Select the proposal row Actions menu and click **Delete Including Projects** from the list. An additional screen appears, select **Delete only the Proposal.** Note: this process <u>does not have an UNDO option</u> so please **use caution when deleting!**

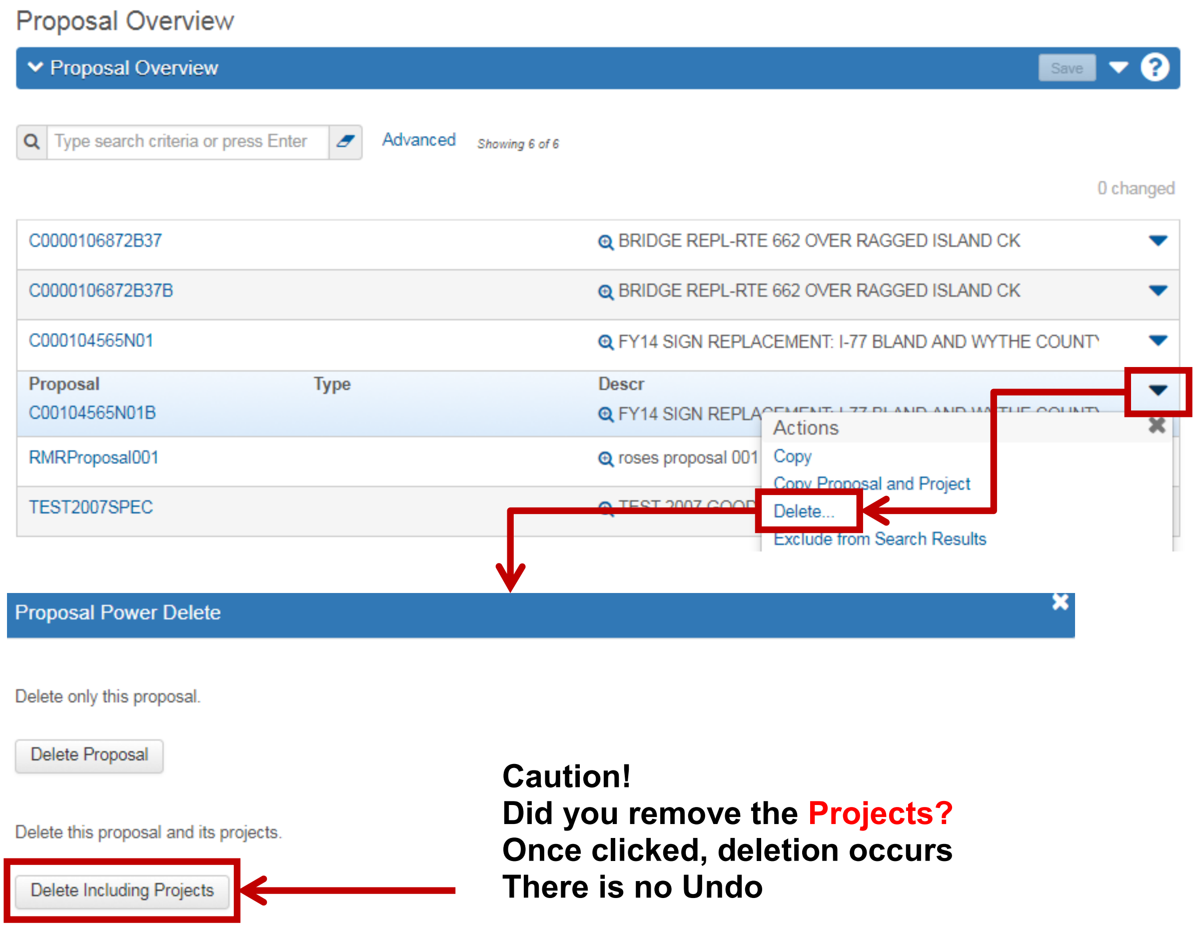


Figure 17 – Delete Proposal and its associated Projects

10.8 Generating Bid-Based Prices for Proposal

The Price Proposal Items component allows you to change the estimated unit price for any proposal item.

If you are on the Proposal General Tab, click the **Item Pricing** quick link at the top of the page. This opens the Price Proposal Items screen where you can see all items that are associated to the proposal. You can click any Actions button to generate a price based on historical bids or you can manually change the price of a single item. You can also generate bid-based prices for all items in the proposal or all items in a section at once.

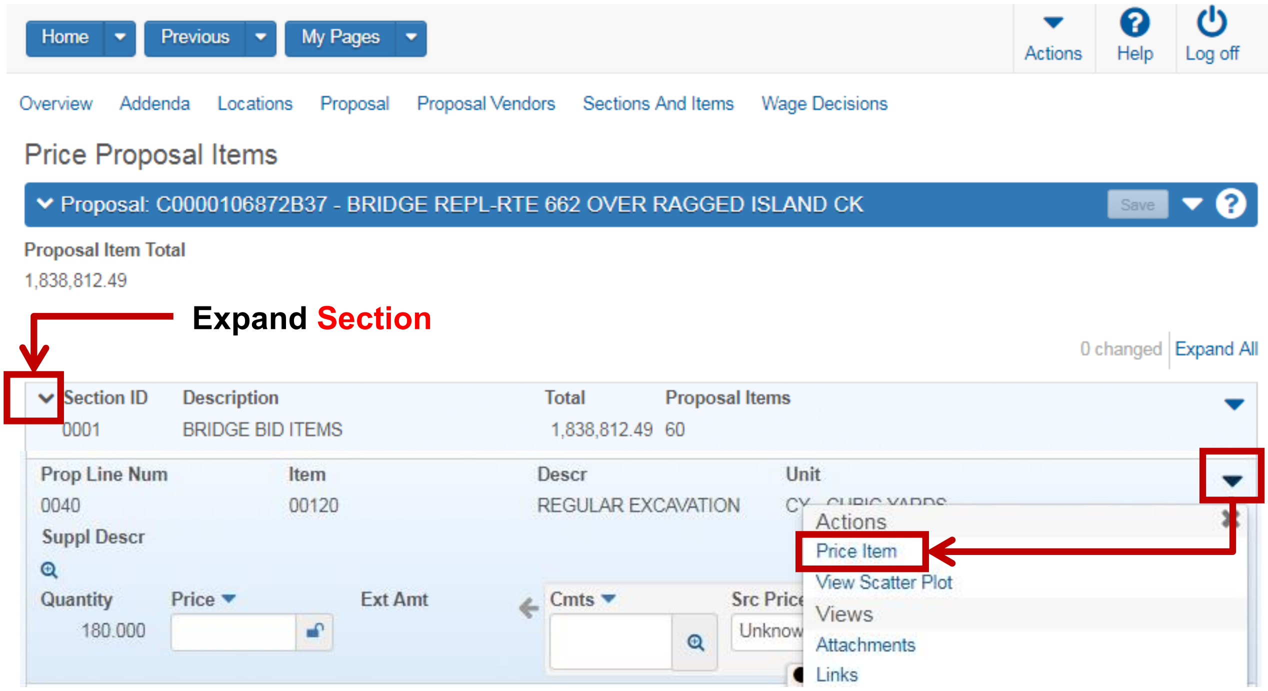


Figure 18 – Price Proposal Items Screen

To manually change the price of a proposal item, click in the Price field, and type the new price. Notice that a lock is displayed in the Price field. **If the lock is closed you cannot change the price until you unlock the item and save the estimate.** When you modify a proposal item price and save your change, several updates take place:

- The system sets the Est Type field for that item to Ad Hoc.
- The new price, estimation type, and pricing comments are automatically updated in the associated project items.
- The extended amount is recalculated for the proposal item and the associated project items.
- The total price for the proposal is updated and for the associated projects.

Note: Once the Proposal has been advertised (and Proposal set to Advertisement phase) prices may only be changed with an Open addendum.

10.9 Generating the Proposal Price Schedule (aka Schedule of Items or SOI) Report

The Proposal Price Schedule report has the options to display the Proposal Cover Page, Schedule of Items, Proposal Estimate, DBE Interest Report, Fuel Sheet, Steel Sheet, Major Items, and Merge Data Sheet.

From the Proposal Overview Screen, search for your proposal. Click the row Actions button for the proposal and select **Proposal Price Schedule VDOT.**.

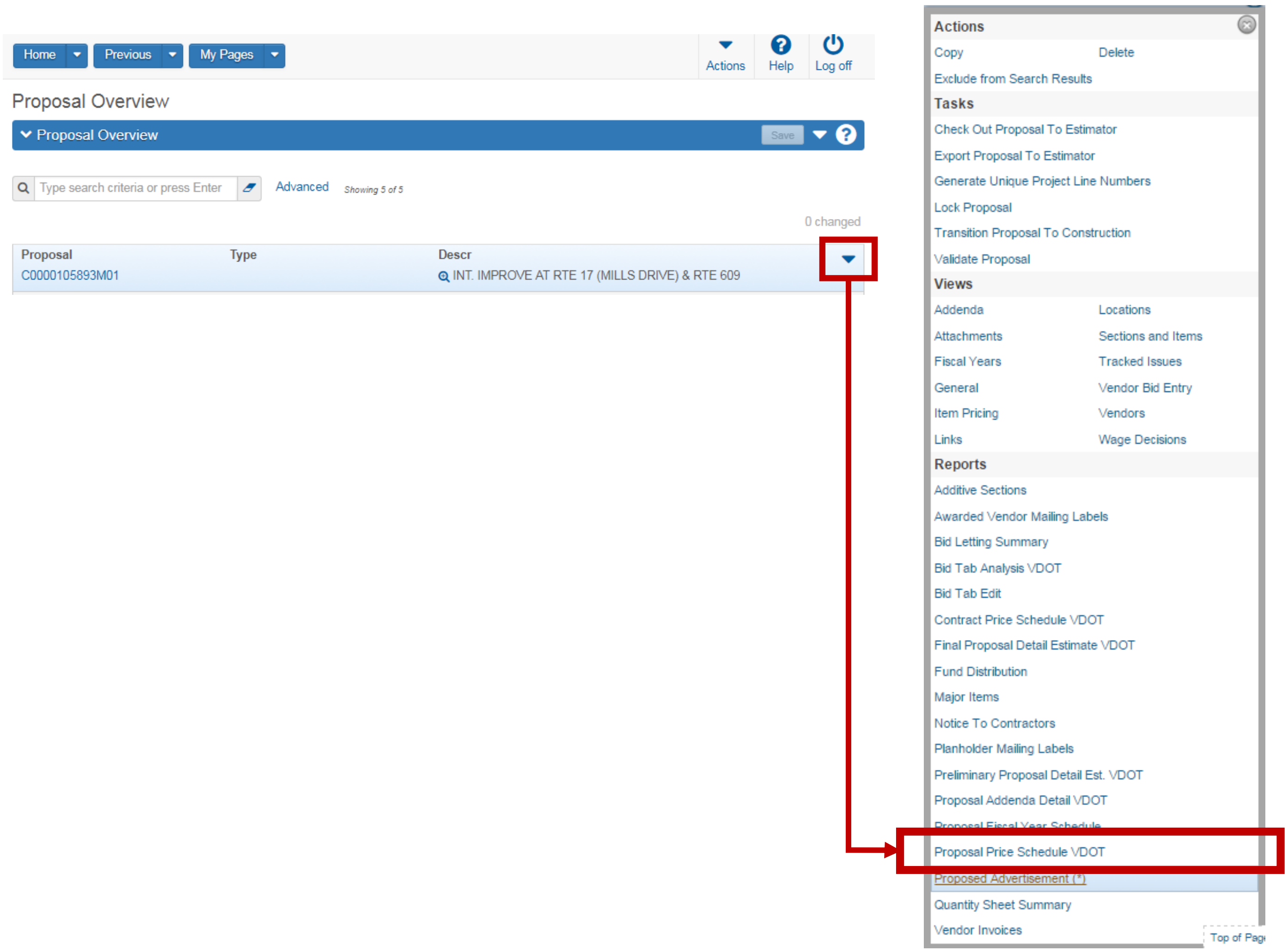


Figure 19 – Proposal Overview Screen

From the Generate Report menu, click the appropriate check boxes then click the **Execute** button.

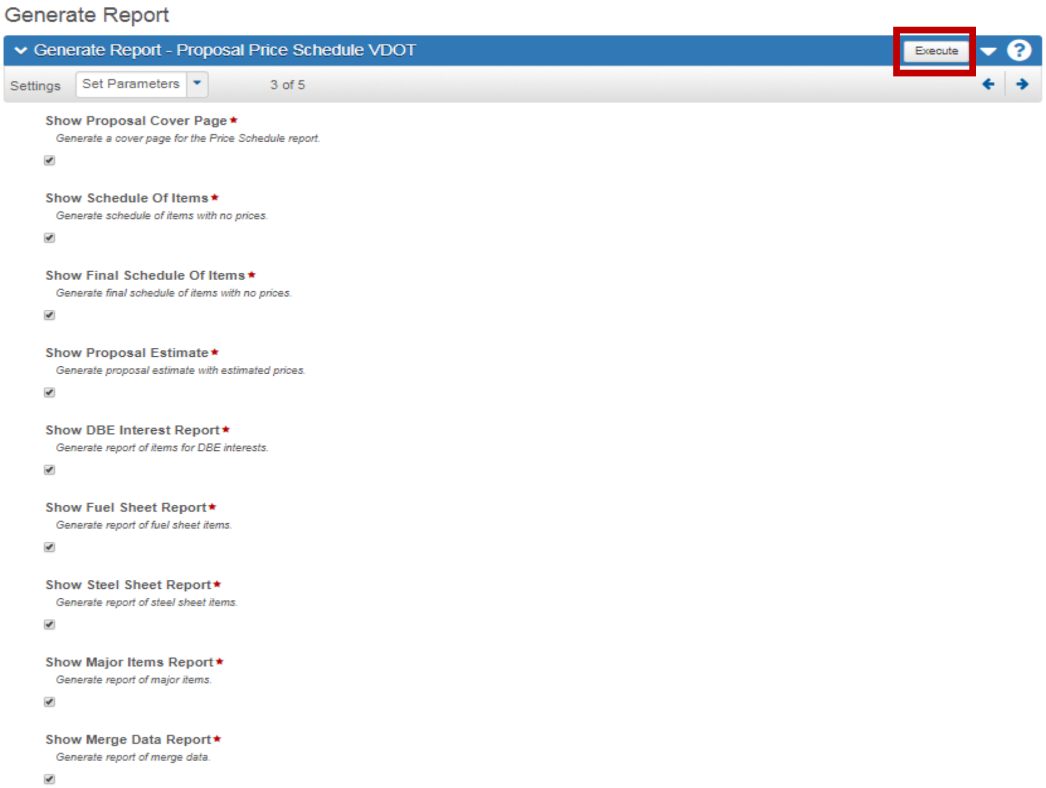
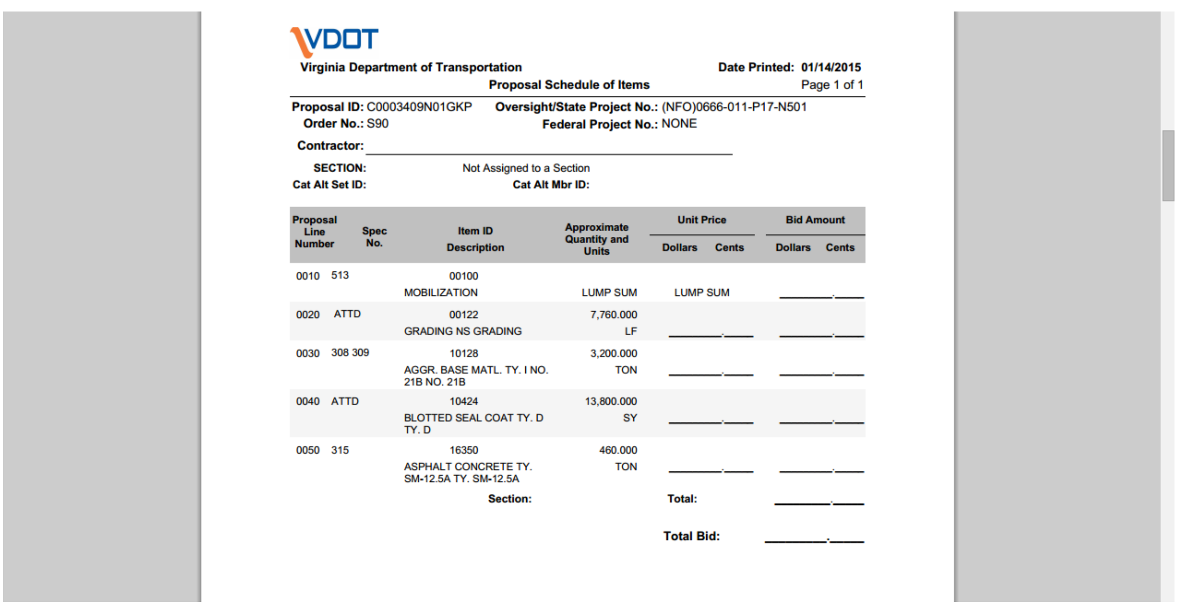


Figure 20 – Generate Proposal Price Schedule Screen

A new browser tab will open with the report and you can save the report as a pdf. Note that the report is not stored in the system. If you do not save the report before you close the browser, you will not be able to view it again unless you regenerate the report.



VDOT

Virginia Department of Transportation — Date Printed: 01/14/2015

Proposal Schedule of Items — Page 1 of 1

Proposal ID: C0003409N01GKP **Oversight/State Project No.:** (NFO)0666-011-P17-N501

Order No.: S90 **Federal Project No.:** NONE

Contractor: ____________________

SECTION: Not Assigned to a Section

Cat Alt Set ID: **Cat Alt Mbr ID:**

Proposal Line Number	Spec No.	Item ID Description	Approximate Quantity and Units	Unit Price Dollars Cents	Bid Amount Dollars Cents
0010	513	00100 MOBILIZATION	LUMP SUM	LUMP SUM	______.____
0020	ATTD	00122 GRADING NS GRADING	7,760.000 LF	______.____	______.____
0030	308 309	10128 AGGR. BASE MATL. TY. I NO. 21B NO. 21B	3,200.000 TON	______.____	______.____
0040	ATTD	10424 BLOTTED SEAL COAT TY. D TY. D	13,800.000 SY	______.____	______.____
0050	315	16350 ASPHALT CONCRETE TY. SM-12.5A TY. SM-12.5A	460.000 TON	______.____	______.____
		Section:		Total:	______.____
				Total Bid:	______.____

Figure 21 – Price Proposal Schedule Screen

10.10 Assigning Wage Decisions

The Proposal Wage Decision Overview component provides access to all the wage decisions that are currently associated with the proposal. Wage decisions are not associated directly with the proposal, but rather with the projects in the proposal. To access the Proposal Wage Decision Overview component, click the Wage Decisions Quick link on the Proposal Summary component. Click the button Select Wage Decisions to assign wage decisions to the project. Search for the wage decision you will add to the project and then select it from the list. A green check will display beside the decision. Select Add to Project and then Save.

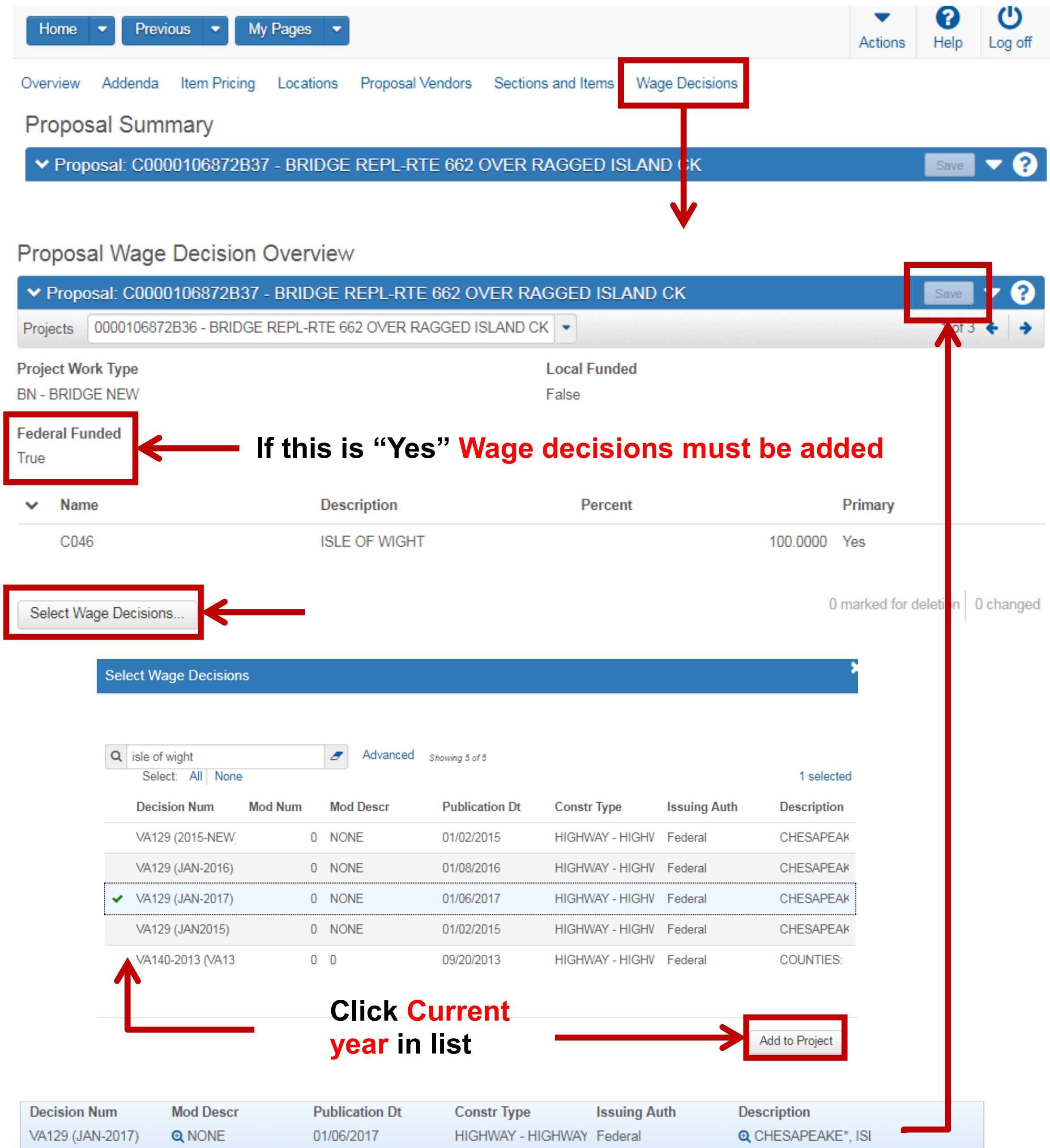


Figure 22– Proposal Wage Decision Overview

10.11 Proposal Addendums

After a proposal has been advertised, subsequent changes to proposal information that affect contractor bidding (such as proposal times, items, or special provisions) must be tracked and distributed (revisions are posted to CADD/Bid-X) to the proposal vendors (Contractors) to make them aware of the changes from the original advertisement. Once a proposal Workflow has been set to Advertisement phase, the system locks the proposal from updating from the project(s) level.

This is accomplished by adding addenda to the proposal. Before you can add an addendum to a proposal, the proposal must be changed to the Addenda Workflow phase.

WORD OF CAUTION: **Do not Auto Generate Sections** while in an Open Addendum!!

From the Proposal **General Tab**, select the **Addenda** quick link. This opens the Addendum Summary page. Select the New button and complete the **Description** and **Comments** fields. Click the **Save** button. This automatically opens the newly created addendum.

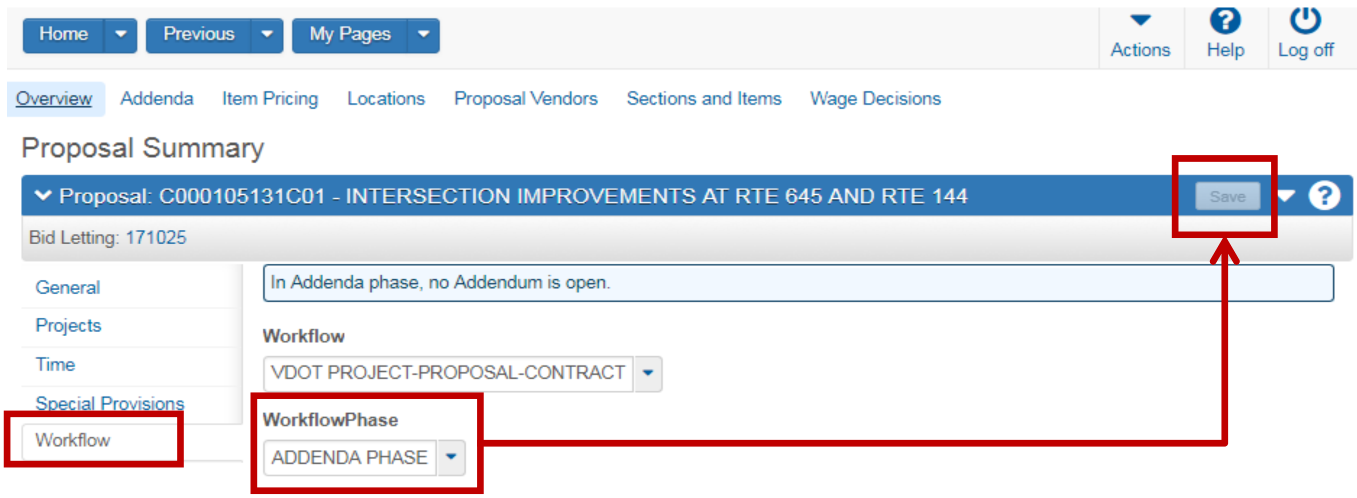


Figure 23 – Addendum Summary Screen

10.11.1 Adding Items in Addendum Phase

If you wish to add an item, you must determine the appropriate **Proposal Item Line Number** so that the new item is inserted (numerically by the item code number) in the correct line on the Proposal Price Schedule (aka Schedule of Items or SOI).

This is accomplished by using the Proposal Price Schedule report to find the correct Proposal line number. Here is an example:

Virginia Department of Transportation — **Date Printed:** 11/12/2015

Schedule of Items — **Page:** 4

Proposal ID: C00052050C01B — **Oversight/State Project No.:** (NFO)U000-306-102, C501, B601

Order No.: H62 — **Federal Project No.:** STP-5306(005)

Contractor: ______________________

SECTION: 001 — ALL PROJECT ITEMS

Cat Alt Set ID: — **Cat Alt Mbr ID:**

Proposal Line Number	Spec No.	Item ID / Description	Approximate Quantity and Units	Unit Price Dollars	Unit Price Cents	Bid Amount Dollars	Bid Amount Cents
0270	ATTD	14300 CEMENT CONCRETE SIDEWALK 4"	148.000 SY				
INSERT 0280	ATTD	14440 SAW CUT SIDEWALK	14.000 LF				
HERE → 0285		16330 ASPHALT CONC SM9.0A	4 TONS				
0290	507	23560 TEMP. SAFETY FENCE 4'	200.000 LF				
0300	511	24100 ALLAYING DUST	400.000 HR				
0310	512	24152 TYPE III BARRICADE 8'	9.000 EA				
0320	512	24160 CONSTRUCTION SIGNS	385.000 SF				
0330	512	24278 GROUP 2 CHANNELIZING DEVICES	2,079.000 DAY				

Figure 24 – Adding Items after Advertisement

Step 1: To add a new item, open the appropriate project within the Proposal, click the Project Categories and Items tab, click the Items tab then click the **New** button. Enter all the required fields, including the Proposal Item Line Number field. Click Save. Please don't forget to assign the new item to a funding package by selecting the Funding: Assign to items quick link.

Step 2: The new item(s) must be added to an existing fund package within the project. See Chapter 6 (section 6.2.2) for details.

Step 3: Assign the new item(s) to the Proposal section. Otherwise they will not appear on the Proposal detail estimate report. See Section 9.6.1.3

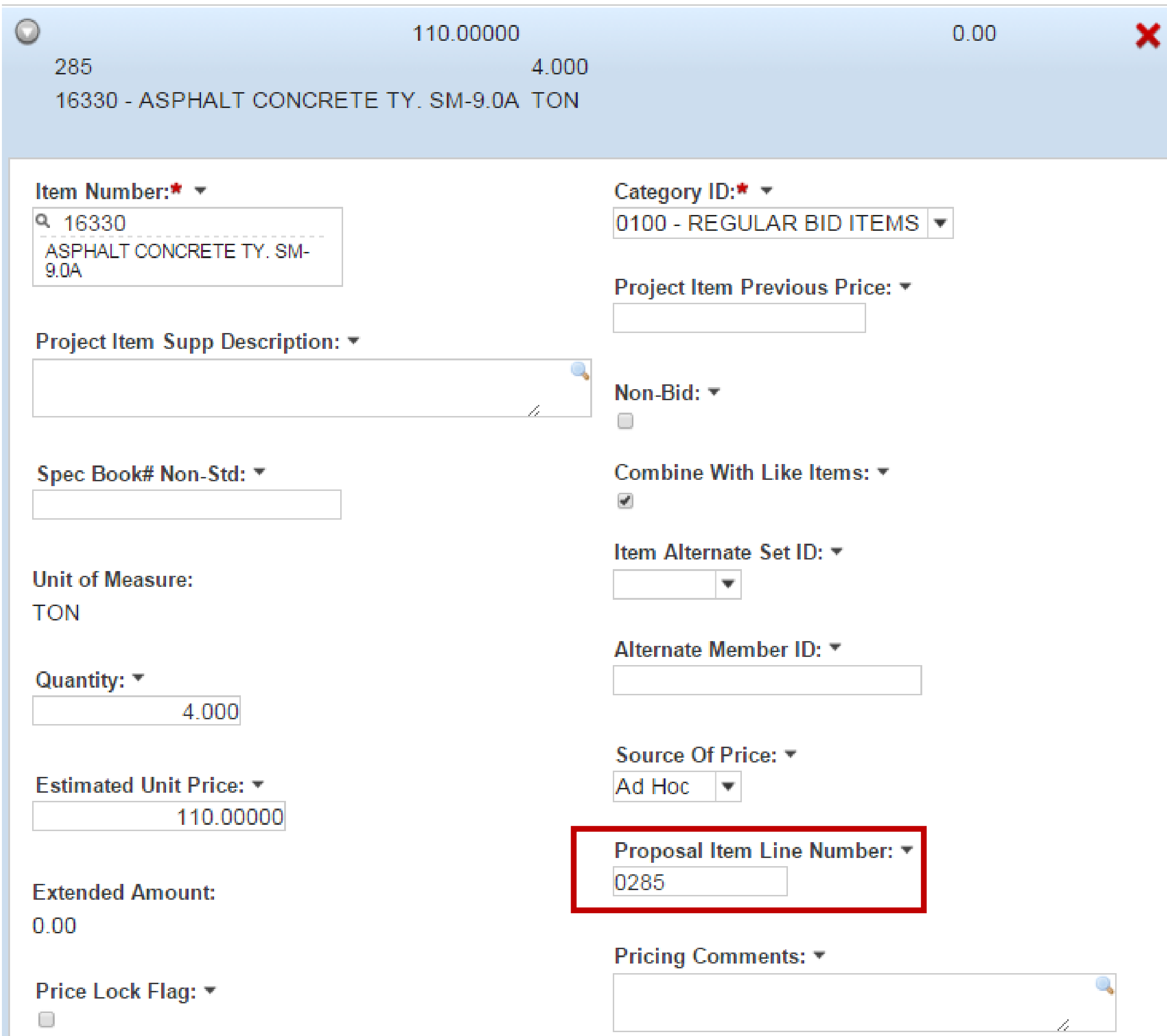
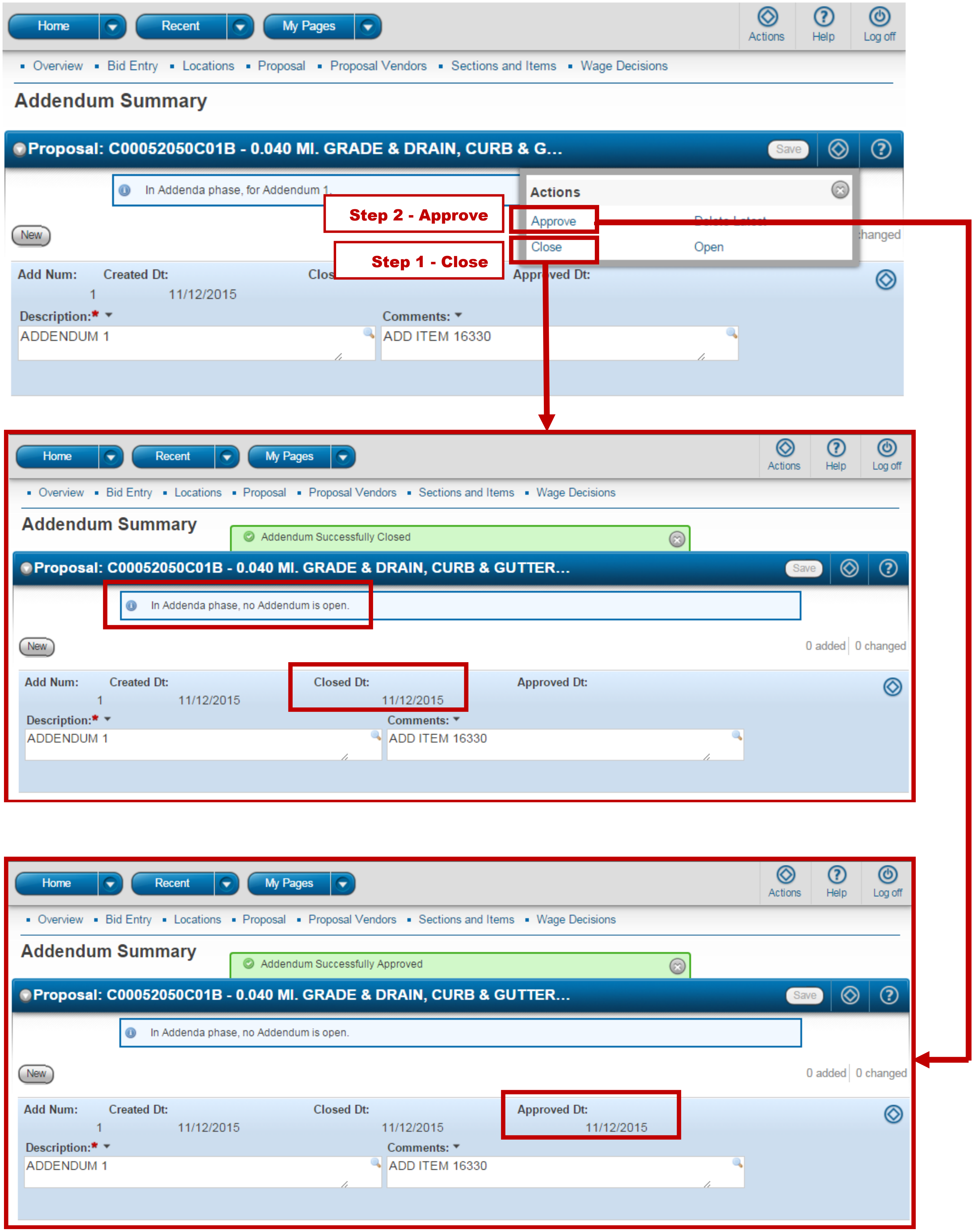


Figure 25 – Adding Project Items Screen

Step 4: Close and Approve the Addendum

Once you have completed all the necessary corrections, the next step is to Close and then Approve the Addendum.



10.12 Lessons Learned – Common Proposal Errors

10.12.1 Ensure these items are in the correct Category, marked as non-bid and have a quantity of 1.

Category **3001- CEI Lump Sum** → Use item code **25580 Construction Engineering**
Category **3002- Contract Requirements** → Use item code **25585 Contract Requirements**
Category **3003- Contingency Lump Sum** → Use item code **25590 Contingency**

Excerpt from Chapter 4 of this manual

Categories are identified with a **four-digit number (this is required)** and fall in **two distinct types**:

1. **Bid** Category (items the contractor will bid/build) or
2. **Non-Bid** Category (overhead costs VDOT incurs that the contractor does not bid/use).

The following Category numbering scheme IS REQUIRED for Categories:

- **REGULAR BID Category numbers 0001 - 1999** Ex: 0100, 0150, 0200, 0300, 0400, etc.

  Examples:
  Road Design, Traffic or Bridge Project — 0001 - REGULAR BID ITEMS

  Utility Project Example: — 0100 - WATER, 0200 - SEWER

- **NON-BID Category number 2000 - 2999 Work performed by State Forces**

  Examples: Police Patrol, State Force work, Utility Inspector, Railway — 2000 - STATE FORCES

- **NON-BID Category numbers 3001 – 3003**

  Construction Eng (CEI) Lump Sum: **3001** — 3001 - CEI LUMP SUM

  Contract Requirements: **3002** — 3002 - CONTRACT REQUIREMENTS
  (Use Incentives/Disincentives here) — 3002 - INCENTIVES/DISINCENTIVES

  Contingency Lump Sum: **3003** — 3003 - CONTINGENCY LUMP SUM

10.12.1 Check to make sure there are no non-bid items in the regular bid items category. Preliminary Project Detail Estimate Report will generate an error if a TEC item is in a regular bid item category

Project ID: 00097160C01 UPC: 97160 FHWA 534: 4H011
Project Description: REPLACE BRIDGE OVER SWIFT CREEK

Category: 0100 REGULAR BID ITEMS
Federal Structure ID: Road Segment Length: 12.1234 MI Road Segment Width: 22.0000 FT
Bridge Plan No.: BR001 Num of Spans: 2 Bridge Length: 2.5200 MI Bridge Width: 27.5000 FT
FHWA Type Code: 04 04-4R - RECONSTRUCTION-NO ADDED CAP
Activity Code: 631 631 CONTRACT CONSTR - REGULAR - FED
Fed Construction Class:

Line No.	Item Code	Spec Number	Item Description	Alt Set ID	Alt Mem ID	Units	Estimated Qty	Unit Price	Amount	Fund Package ID	Flags*
0010	00100	513	ERROR ** Non-Bid item in a regular Bid category ** ERROR			TEC	1.000	66,373.72500	66,373.73	100	L B
0020	00101	517	CONSTRUCTION SURVEYING (CONSTRUCTION)			LS	1.000	11,025.56488	11,025.56	100	L B
0030	00110	301	CLEARING AND GRUBBING			ACRE	1.000	62,328.54271	62,328.54	100	L B
0040	00155	303	GEOTEXTILE (EMBANKMENT STABILIZATION)			SY	1,185.000	1.57000	1,860.45	100	L
0050	00700	302	POST INSTALLATION INSPECTION			LF	20.000	10.00000	200.00	100	L
0060	01156	302	STORM SEWER PIPE 15"			LF	20.000	62.71000	1,254.20	100	L
0070	01180	302	18" PIPE			LF	72.000	41.77000	3,007.44	100	L
0080	06150	302	15" END SECTION ES-1 OR 2			EA	4.000	448.78000	1,795.12	100	L
0090	06745	302	DROP INLET DI-2A			EA	4.000	2,605.99000	10,423.96	100	L
0100	09150	414	EROSION CONTROL STONE CLASS I, EC-1			TON	10.000	79.94170	799.42	100	L
0110	10128	308 309	AGGR. BASE MATL. TY. I NO. 21B			TON	1,198.000	22.35971	26,786.93	100	L
0120	10250	ATTD 1234	NS AGGR. MATERIAL AGGR. MATERIAL NO. 10 STONE 308			TON	288.000	35.00000	10,080.00	100	L
0130	10250	ATTD	NS AGGR. MATERIAL AGGR. MATERIAL NO. 3 STONE 308			TON	768.000	30.00149	23,041.14	100	L

10.12.2 Check is to ensure there are no "N" flags column in the Preliminary Project Detail Estimate Report.

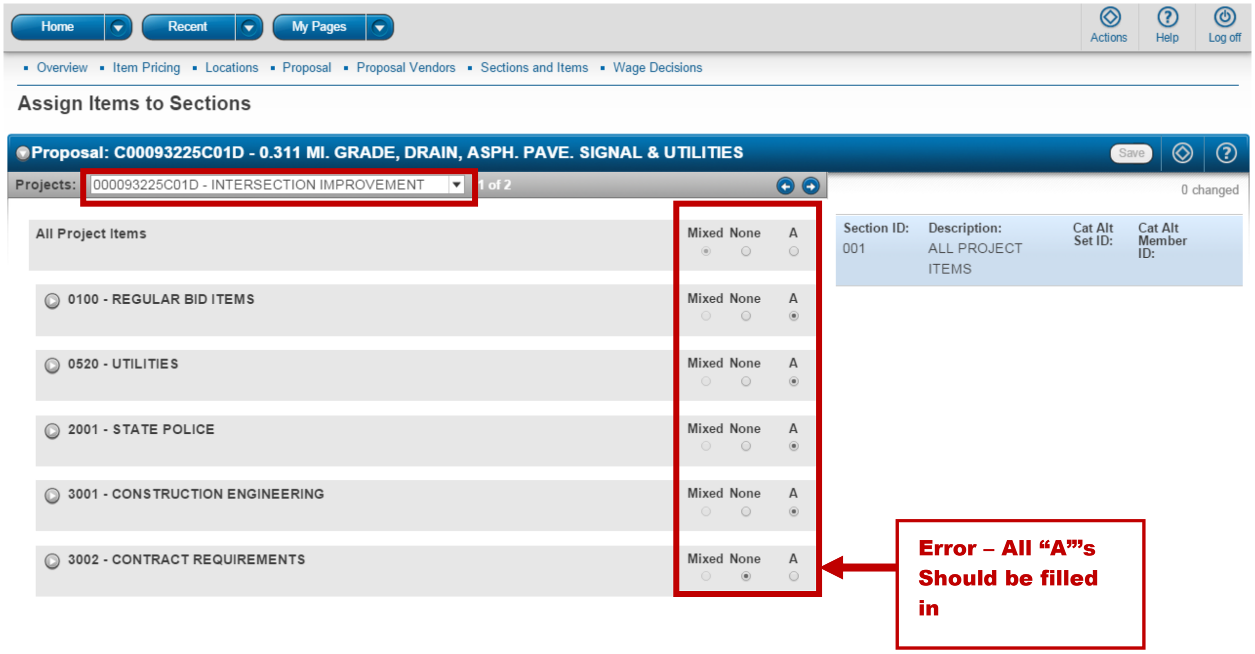
Line No.	Item Code	Spec Number	Item Description	Alt Set ID	Alt Mem ID	Units	Estimated Qty	Unit Price	Amount	Fund Package ID	Flags*
0010	00100	513	MOBILIZATION			LS	1.000	15,000.00000	15,000.00		L B
0020	00101	517	CONSTRUCTION SURVEYING (CONSTRUCTION)			LS	1.000	12,000.00000	12,000.00		L B
0030	00110	301	CLEARING AND GRUBBING			LS	1.000	10,000.00000	10,000.00		L B
0040	00211	303	MINOR STRUCTURE EXCAV. PIPE CULVERT			CY	1,500.000	21.00000	31,500.00		N L
0050	10123	308 309	AGGR. BASE MATL. TY. I NO. 21A			TON	1,000.000	100.00000	100,000.00		L
0060	14502	ATTD	REINFORCING STEEL			LB	12,000.000	2.12000	25,440.00		L
0070	16350	315	ASPHALT CONCRETE TY. SM-12.5A			TON	244.000	123.03000	30,019.32		L

Category Total: $223,959.32

Project Total: **$223,959.32**

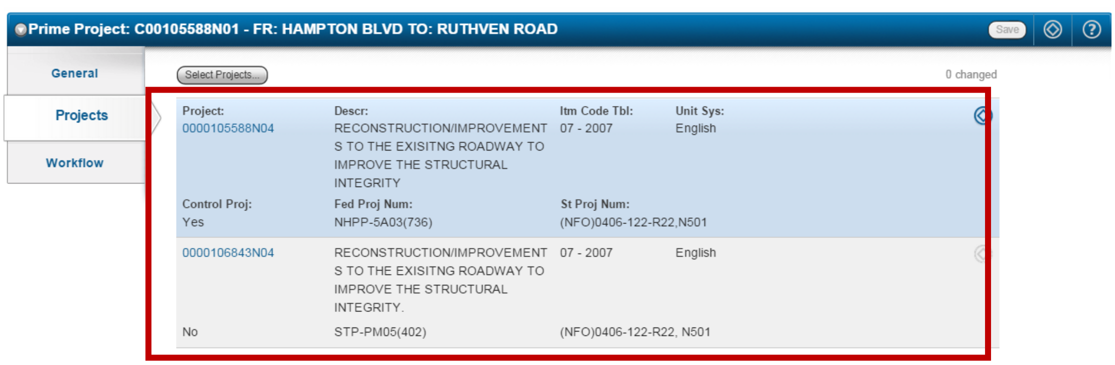
** Flags: (F)ixed Price, (N)on Bid, (L)ow Cost Contributor, (B)id as Lump Sum*

10.12.4 Ensure all items are assigned to the Proposal Section



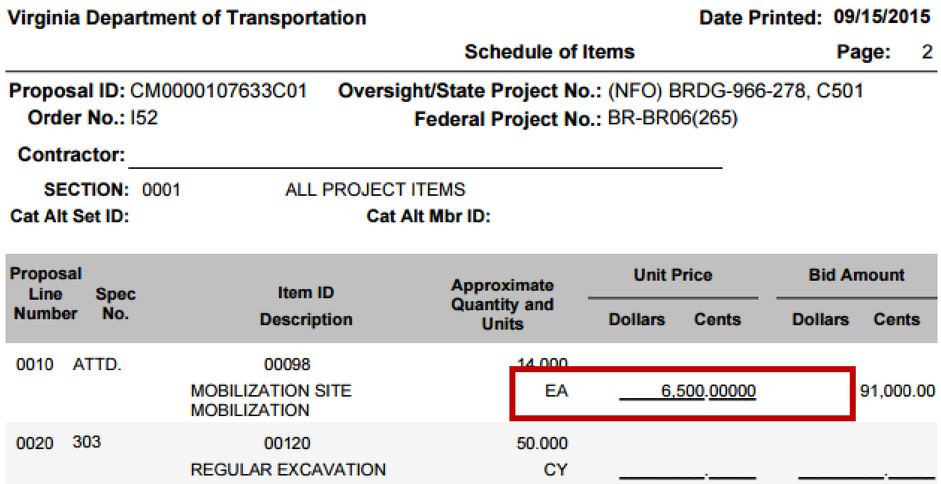
The Auto Generate Sections button will automatically create a section for each category on the projects. *Multiple sections should only be used when creating a proposal with Additives and/or Alternates.*

10.12.5 Ensure all projects associated to the prime are associated to the proposal and name the Proposal after the controlling project.



10.12.6 To fix unit prices displaying on the Schedule of Items (SOI)

You will have to select the Project item from the Categories and Items link and remove the Bid requirement code and replace it with a null value.



Virginia Department of Transportation **Date Printed: 09/15/2015**

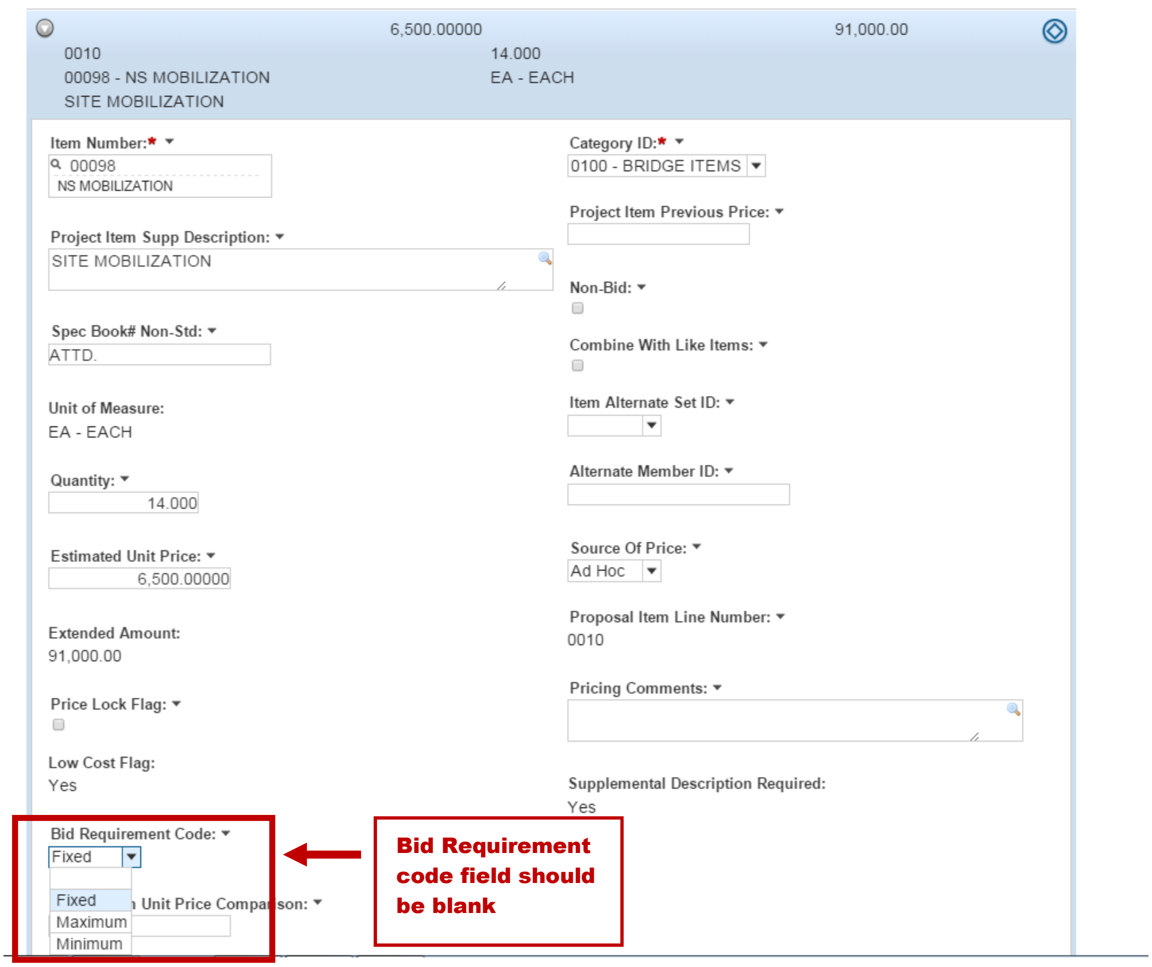
Schedule of Items **Page:** 2

Proposal ID: CM0000107633C01 **Oversight/State Project No.:** (NFO) BRDG-966-278, C501
Order No.: I52 **Federal Project No.:** BR-BR06(265)

Contractor: ______________________________

SECTION: 0001 ALL PROJECT ITEMS
Cat Alt Set ID: **Cat Alt Mbr ID:**

Proposal Line Number	Spec No.	Item ID / Description	Approximate Quantity and Units	Unit Price Dollars	Unit Price Cents	Bid Amount Dollars	Bid Amount Cents
0010	ATTD.	00098 MOBILIZATION SITE MOBILIZATION	14.000 EA	6,500.00000		91,000.00	
0020	303	00120 REGULAR EXCAVATION	50.000 CY	________	____	________	____

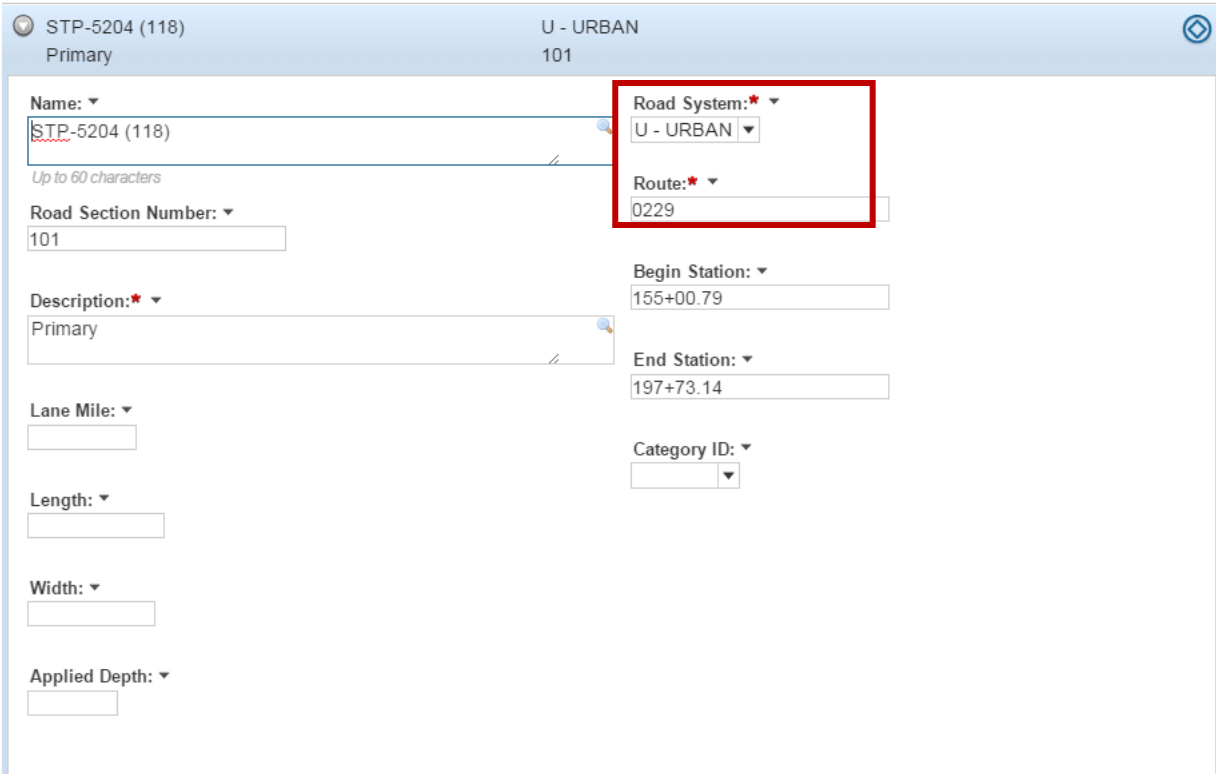


6,500.00000 91,000.00
0010 14.000
00098 - NS MOBILIZATION EA - EACH
SITE MOBILIZATION

Item Number:* 00098 NS MOBILIZATION
Category ID:* 0100 - BRIDGE ITEMS
Project Item Previous Price:
Project Item Supp Description: SITE MOBILIZATION
Non-Bid:
Spec Book# Non-Std: ATTD.
Combine With Like Items:
Item Alternate Set ID:
Unit of Measure: EA - EACH
Alternate Member ID:
Quantity: 14.000
Source Of Price: Ad Hoc
Estimated Unit Price: 6,500.00000
Proposal Item Line Number: 0010
Extended Amount: 91,000.00
Pricing Comments:
Price Lock Flag:
Low Cost Flag: Yes
Supplemental Description Required: Yes
Bid Requirement Code: Fixed
Fixed
Maximum
Minimum
Unit Price Comparison:

10.12.7 Make sure the Project has a Road Segment with a Route and Road System.

No road segment creates issues with the Ballot report.



APPENDIX A – PROJECT ID (PCN) NUMBER

The format of the Project ID for various types of projects is as follows:

A.1 Projects with UPC Numbers

The **13**-character **Project ID (PCN)** is composed of the following:

Position		Explanation
1-10	=	UPC (iPM) Number, with leading zeroes
11	=	Type of Project: (LETTER MUST BE CAPITALIZED) B – Bridge C – L&D (Construction or Road designs) D – Drainage Structures over 20' in length H – Hydraulics L – Environmental R – Right of Way S – SAAP (Special Advertisement and Award Process) T – Traffic Engineering U – Utilities X – Maintenance (Regular Project using Maintenance Funds) N – No Plan M – Minimum Plan
12-13	=	For Constr., Bridge, etc. The last two digits of the fourth part of the state project number, following the C, B, R, etc. (Ex: for C503 project, enter 03 in positions 12 & 13 for B622 project, enter 22 in positions 12 & 13)

EXAMPLES of Project ID (PCN):

0000008216C01 (C501 project for UPC# 8216)
0000015492B01 (B601 project for UPC# 15492)
0000010679N01 (N501 project for UPC # 10679)
0000106515R01 (R201 project for UPC# 106515)
0000100625M01 (M501 project for UPC# 100625)
0000108104D44 (D644 project for UPC# 108104)
0000108897S01 (N501 project for UPC# 108897)

Note: all Letters in these ID's are CAPITALIZED !

A.2 Maintenance Projects

The **13**-character Project ID is composed of the following:

Position		Explanation
1	=	M (for Maintenance-funded)
2	=	1 – Bristol 2 – Salem 3 – Lynchburg 4 – Richmond 5 – Hampton Roads 6 – Fredericksburg 7 – Culpeper 8 – Staunton 9 – Northern Virginia
3-4	=	Year EX. 21 or 22
5-6	=	Project Type = (LETTER MUST BE CAPITALIZED) ST – Surface Treatment SS – Slurry Seal LM – Latex Modified PM – Plant Mix
7	=	Schedule Letter – A, B, C, etc. (LETTER MUST BE CAPITALIZED)
8-13	=	6 Digit Unique UPC

A unique UPC is set up for each county, for each system. The District Maintenance Engineer will assist in determining the Project ID for your project.

Examples of Project ID for Maintenance Projects:

PM122LMC119679
SS8A800111612
M0M117SS110871
LM8C800110684
M615LMA107318
M115PMD106385
M415SSA107434
M215STA107156

Note: all letters must be CAPITALIZED !

A.3 District Originated or Urban Projects (Non-IPM Projects)

The **13**-character Project ID is composed of the following:

Position		Explanation
1-2	=	BR – Bristol SA – Salem LY – Lynchburg RC – Richmond SU – Hampton Roads FR – Fredericksburg CU – Culpeper ST – Staunton NV – Northern Virginia UR – Urban
3-13	=	Assigned by Districts or Local Assistance Division

A.4 Prime Project ID and Proposal & Contract ID

Both the Prime Project ID and the Proposal/Contract ID begin with a C and end with the Project ID of the largest project. The Proposal ID and Contract ID should always be the same. The Prime and the Proposal/Contract ID are typically 14 digits.

Example 1: **Projects ID**'s are: 0000003942C01
0000003942B01
0000003942B02

Prime Project = **C**00000003942C01
Proposal/**Contract** ID = **C**00000003942C01

Note: all letters must be CAPITALIZED !

Example 2: **Project ID** is: M615LMA107318

Prime Project = **C**M615LMA0107318
Proposal/**Contract** ID = **C**M615LMA0107318

Note: The C is added to the Project ID, it does not replace the first digit.

Note: all letters must be CAPITALIZED !

APPENDIX B – ITEM CODE INDEX

Common Item Codes:

LUMP SUM CONSTRUCTION ENGINEERING………………………………….25580
Must be used in Category 3001 only

LUMP SUM CONTRACT REQUIREMENTS…………………..…………………25585
Must be used in Category 3002 only

LUMP SUM CONTRACT CONTINGENCY…………………...…………………25590
Must be used in Category 3003

APPENDIX C –COUNTY - DISTRICT - RESIDENCY CONVERSION CHART

See Chapter-1C of the Road Design Manual

http://www.virginiadot.org/business/locdes/rdmanual-index.asp

APPENDIX D – CONVERSION CHART (CITY)

See Chapter-1C of the Road Design Manual

http://www.virginiadot.org/business/locdes/rdmanual-index.asp

APPENDIX E – PROJECT WORK TYPES

CODE **DESCRIPTION**

BDO	BRIDGE DECK OVERLAY
BDR	BRIDGE DECK REPLACEMENT
BN	BRIDGE NEW
BWR	BRIDGE WIDENING & REPAIR
CBC	CONSTRUCTION NEW BOX CULVERT
CDA	CONSTRUCTION DEMOLITION/ABATEMENT
CITS	CONSTRUCTION DEMOLITION/ABATEMENT
CNA	CONSTRUCTION NEW ALIGNMENT
CTL	CONSTRUCTION NEW TURN LANES
CUE	CONSTRUCTION UPGRADE EXISTING LANES
CW	CONSTRUCTION WIDENING (ADDING LANES)
CWM	CONSTRUCTION WETLAND MITIGATION/LANDSCAP
MAR	MAINT ASPHALT PLANT MIX RESURFACING
MBD	MAINTENANCE BR SUPERST REPAIR/ REHAB
MBSB	MAINTENANCE BR SUBSTRUCTURE REPAIR/REHAB
MG	MAINTENANCE GUARDRAIL
MPAR	MAINTENANCE PAVEMENT REPAIRS
MPIR	MAINTENANCE PIPE REHABILITATION
MPM	MAINTENANCE PAVEMENT MARKING
MRWF	MAINTENANCE RIGHT OF WAY FENCING
MSCG	MAINTENANCE SIDEWALK/CURB & GUTTER
MSIG	MAINENANCE SIGNAGE
MSIN	MAINTENANCE SIGNALS
MSR	MAINTENANCE SLOPE REPAIR
MSS	MAINTENANCE SLURRY SEAL
MST	MAINTENANCE SURFACE TREATMENT

APPENDIX F – FHWA Type Codes

CODE	NAME
01	NEW CONSTRUCTION ROADWAY
03	4R - RECONSTRUCTION- ADDED CAPACITY
04	4R - RECONSTRUCTION-NO ADDED CAPACITY
05	4R - SYSTEM PRESERVATION - RESURFAC
06	4R - RESTORATION & REHABILITATION
07	4R - RELOCATION
08	BRIDGE - NEW CONSTRUCTION
10	BRIDGE - REPLACEMENT-ADDED CAPACITY
11	BRIDGE - REPLACE-NO ADDED CAPACITY
13	BRIDGE - REHAB-ADDED CAPACITY
14	BRIDGE-REHAB-NO ADDED CAPACITY
15	PRELIMINARY ENGINEERING
16	RIGHT OF WAY
17	CONSTRUCTION ENGINEERING
18	PLANNING
19	RESEARCH
20	ENVIRONMENTAL ONLY
21	SAFETY
22	SAFETY - RAIL/HWY CROSSING
23	TRANSIT
24	TRAFFIC MANAGEMENT/ENGINEERING-HOV
25	VEHICLE WEIGHT ENFORCEMENT PROGRAM
26	FERRY BOATS
27	ADMINISTRATION
28	OTHER-FACILITIES FOR PEDS/BIKES
29	OTHER-ACQUISITION OF SCENIC/HISTORY
30	OTHER-SCENIC OR HISTORIC HWY PROGRAM
31	OTHER-LANDSCAPE/SCENIC BEAUTIFY
32	OTHER-HISTORIC PRESERVATION
33	OTHER-REHAB/OPER OF HISTORIC BLDG
34	OTHER-PRESERVATION OF ABANDONED RWY
35	OTHER-CTRL/REMOVAL OUTDOOR ADVERTISE
36	OTHER-ARCHAEOLOGICAL PLAN/RESEARCH
37	OTHER-MITIGATION OF WATER POLLUTION
38	OTHER-SAFETY AND ED FOR PED/BIKE
39	OTHER-ESTABLISHMENT TRANS MUSEUMS
40	OTHER-SPECIAL BRIDGE
41	OTHER-YOUTH CONSERVATION/SERVICE
42	OTHER-TRAINING
43	OTHER-UTILITIES
44	OTHER-OTHER
45	DEBT SERVICE
47	BRIDGE PRESERVATION
48	BRIDGE PROTECTION
49	BRIDGE INSPECTION AND RELATED TRAINING
50	NEW TUNNEL
51	TUNNEL REPLACEMENT
52	TUNNEL REHABILITATION
53	TUNNEL PRESERVATION
54	TUNNEL PROTECTION
55	TUNNEL INSPECTION AND RELATED TRAINING
56	OTHER ASSET INSPECTIONS

FHWA Type Code Descriptions

CODE	NAME	DESCRIPTION
01	New Construction	Construction of a new roadway that will not replace an existing roadway. A new roadway will provide: (1) a roadway where none existing, or (2) an additional and alternate roadway to an existing roadway will remain open and continue to serve through traffic.
03-4R	Reconstruction, Added Capacity	Construction on approximate alignment of an existing route where the old pavement structure is substantially removed and replaced. Such reconstruction includes widening to provide continuous additional through lane(s), or adding, or revising interchanges, replacing other highway elements such as a grade separation to replace an existing grade intersection. Also included, where necessary, are other incidental improvements such as drainage and shoulder improvements.
04-4R	Reconstruction, No added Capacity	Widening the lanes and/or shoulders of an existing roadway without adding through lanes. This may include reconstructing the existing pavement and other incidental improvements such as shoulder and drainage improvements.
05-4R	Resurfacing	Placement of additional surface material over the existing roadway to improve serviceability or to provide additional strength. There may be some upgrading of unsafe features and other incidental work in conjunction with resurfacing. Where surfacing is constructed by a separate project as a final stage of construction, the type of improvement should be the same as that of the preceding stage B new route, relocation, reconstruction, minor widening, etc.
06-4R	Restoration and Rehabilitation	Work required to return existing pavement (including shoulders) to a condition of adequate structural support or to a condition adequate for placement of an additional stage of construction. There may be some upgrading of unsafe features or other incidental work in conjunction with the restoration and rehabilitation. Typical improvements would include replacing spalled or malfunctioning joints; substantial pavement stabilization prior to resurfacing; grinding/grooving of rigid pavements; replacing deteriorated materials; reworking or strengthening bases or sub-bases, and adding under-drains.
07-4R	Relocation	Construction of a roadway at a new location that replaces an existing roadway. The new roadway carries all the through traffic with the previous facility closed or retained as a land–service road only.
08	New Bridge	Construction of a new bridge that does not replace or relocate an existing bridge.

*Projects using these Improvement Codes must report a National Bridge Inventory (NBI) Structure Number.

CODE	NAME	DESCRIPTION
*10	Bridge Replacement	Total replacement of a bridge with a new structure. The use of this code requires the reporting of the National Bridge Inventory (NBI) structure number in the "Bridge Number" data field.
*13	Bridge Rehabilitation	Major work required to restore the structural integrity of bridge as well as work necessary to correct major safety defects. If HBRRP funds are involved, the use of this code requires the reporting of the National Bridge Inventory (NBI) structure number in the "Bridge Number" data field.
**15	Preliminary Engineering	For the preparation of plans, specifications, and estimates (PS&E), traffic, and related studies including field inspections, surveys material testing and borings.
16	Right of Way	For purchase of land, improvements and easements, in addition to the cost of moving and relocating buildings, businesses, and persons.
**17	Construction Engineering	Oversight of construction of roadways, structures, and traffic service facilities including additional design work after construction project is let.

*Projects using these Improvement Codes must report a National Bridge Inventory (NBI) Structure Number.
**Transportation Enhancement Projects (Program Codes with fund source 33B0, Q220) must use these Improvement Codes.

CODE	NAME	DESCRIPTION
18	Planning	For Planning related purposes.
19	Research	For Research related purposes.
20	Environmental Only	For improvements that do not provide any increase in the level of service, in the condition of the facility or in safety features. Typical improvements, which would fall in this category, would be noise barriers, beautification and other environmentally related features not built as a part of any other improvement type. If environmental mitigation is needed as the result of a bridge project, and it is confined to the reasonable touchdown and the bridge itself, then it is allowable with HBRRP funds. Outside the reasonable touchdown would not be considered eligible.
21	Safety	For projects or a significant portion of a project that provides features or devices to enhance safety. For example, expenditures on projects designed to improve the safety of at-grade railroad crossings or for the construction of facilities dedicated to the enforcement of vehicle weight regulations.
22	Rail/Highway Crossing	Improvements to crossing warning Protective Devices such as signs, markings, and cross bucks; flashing light additions/improvements; and improvements to track circuitry.
23	Transit	For transit and transit-related purposes.
24	Traffic Management/Engineering – HOV	Traffic operation improvements that are designed to reduce traffic congestion and to facilitate the flow of traffic, both people and vehicles, on existing systems, or to conserve motor fuels. Include automated toll collection equipment, road and bridge surveillance and control systems, etc.
25	Vehicle Weight Enforcement Program	Vehicle Weight Enforcement Program
26	Ferry Boats	Ferry Boats
27	Administration	Administration for National Recreational Trails Projects, Commercial Vehicles, and other similar projects.
**28	Facilities for Pedestrians and Bicycles	For independent projects (not part of any other Federal-aid Highway project) to construct a facility to accommodate bicycle transportation and pedestrians.
**29	Acquisition of Scenic Easements and Scenic or Historic Sites	For projects consisting of easement and fee-simple purchase of sites of historic significance and/or considered worthy of preserving due their scenic qualities within the view shed of a transportation facility.
**30	Scenic or Historic Highway Programs	For projects consisting of scenic highway program and implementation activities not included in safety and other related improvements.

**Transportation Enhancement Projects (Program Codes with fund source 33B0, Q220) must use these Improvement Codes.

CODE	NAME	DESCRIPTION
**31	Landscaping and Other Scenic Beautification	For projects involving landscaping and other scenic beautification through planting and related work. This includes vegetation management to assure the sustainability of landscape areas.
**32	Historic Preservation	For projects consisting of purchasing and restoring/rehabilitating a building, structure, or facility (other than transportation buildings, structures and facilities) that is directly related to the transportation system.
**33	Rehabilitation and Operation of Historic Transportation Buildings, Structures, or Facilities	For projects consisting of purchasing and restoring/rehabilitating, and/or operating transportation buildings, structures, or facilities considered to be of historic significance.
**34	Preservation of Abandoned Railway Corridors	For projects to preserve an abandoned railway corridor. It is expected that most of these projects will accommodate bicycle and pedestrian use. This code may be used for any railway corridor conversion project including those used by equestrians, skaters, and skiers. Not to be used for National Recreational Trails projects.
**35	Control and Removal of Outdoor Advertising	For projects to purchase outdoor advertising for permanent removal, to remove illegal outdoor advertising, or to develop an outdoor advertising control plan.
**36	Archeological Planning and Research	For projects involving the identification, evaluation, planning, and/or research of historic or archeological planning and research under Transportation Enhancements.
**37	Mitigation of Water Pollution due to Highway Runoff	
**38	Safety and Education for Pedestrians/Bicyclists	
**39	Establishment of Transportation Museums	
**40	Special Bridge	This category includes bridge inventory, inspection and classification and other special bridge projects, such as load posting, not covered by another type of improvement code
**41	Youth Conservation Service	
42	Training	Training, Supportive Services; TRAC; On the Job Training
43	Utilities	Utilities
44	Other	Miscellaneous work such as National Recreational Trails construction, noise barriers, etc.
45	Debt Service	Interest payments and retirement of principal under an eligible bond issue (including capitalized interest) and any other cost incidental to the sale of an eligible bond issue (including issuance costs, insurance or other credit enhancement fees, and other bond-related costs as determined).

*Projects using these Improvement Codes must report a National Bridge Inventory (NBI) Structure Number.

**Transportation Enhancement Projects (Program Codes with fund source 33B0, Q220) must use these Improvement Codes.

BRIDGE IMPROVEMENT TYPES				
Code	Name	Structure Number Required?	Definition	
			Highway Bridge Program Funds	MAP-21 Funds
40	Special Bridge	No	Includes bridge inventory, inspection and classification and other special bridge projects, such as load posting, not covered by another type of improvement code. Also includes application of calcium magnesium acetate, sodium acetate/formate, or other environmentally acceptable, minimally corrosive ant-icing and deicing compositions.	Includes low water crossing replacement, application of calcium magnesium acetate, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and deicing compositions, and other eligible bridge projects not covered by another type of improvement code.
47	Bridge Preservation	Yes	Preventative Maintenance activities that are a cost effective means of extending the service life of a bridge.	Activities that prevent, delay, or reduce deterioration of bridges or bridge elements, restore the function of existing bridges, keep bridges in good condition and extend their life.
48	Bridge Protection	Yes	Not Applicable	Includes scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events.
49	Bridge Inspection and Related Training	No	Not Applicable	Bridge inspection and evaluation activities, including in-depth and special inspections. Bridge inspection related training.

TUNNEL IMPROVEMENT TYPES			
Code	Name	Structure Number Required?	MAP-21 Funds
50	New Tunnel	No	Construction of a new tunnel that does not replace or relocate an existing tunnel.
51	Tunnel Replacement	Yes	Total replacement of a tunnel with a new structure constructed with additional lanes in the same general traffic corridor.
52	Tunnel Rehabilitation	Yes	For the work required to restore structural integrity of a tunnel, as well as, work necessary to correct major safety defects.
53	Tunnel Preservation	Yes	Activities that prevent, delay, or reduce deterioration of tunnels or tunnel elements, restore the function of existing tunnels, keep tunnels in good condition and extend their life.
54	Tunnel Protection	Yes	Includes impact protection measures, security countermeasures, and protection against extreme events.
55	Tunnel Inspection and Related Training	No	Tunnel inspection and evaluation, including in-depth and other special inspections. Tunnel inspection training.

OTHER ASSETS IMPROVEMENT TYPES (Including Signs, Earth Walls, & Drainage)			
Code	Name	Structure Number Required?	MAP-21 Funds
56	Other Asset Inspections	No	Inspection and evaluation of infrastructure assets other than bridge or tunnels, including signs and sign-structures, earth retaining walls and drainage structures. Inspection related training for signs and sign-structure, earth retaining walls and drainage structures.

APPENDIX G – FEDERAL WORK CODES

CODE	DESCRIPTION
ALT	Alternates
BRAL	Bridge Alterations
BRRP	Bridge Replacement
DEMO	Demolition
DSSR	Deck Superstructure Replacement
ENVR	Environmental
GENL	General
MABR	Major Bridge Rehabilitation
MAWD	Major Widening
MCON	Minor Construction - City
MIBR	Minor Bridge Rehabilitation
MIWD	Minor Widening
NCON	New Construction
NCST	New Construction-Surface Treatment
NONE	No Supplemental Code
NWBR	New Bridge
PREL	Preliminary Studies Only
R&B	Roadway & Bridge
RCST	Reconstruction/Resurfacing
RDWY	Roadway
RECS	Reconstruction
RELC	Relocation
RPRS	Deck Super/Substructure Repairs
RSRF	Resurfacing
RSRH	Restoration & Rehabilitation
SAFT	Safety/Traffic/TMS