Pricing Items and PVQ

Additional Estimation Quick Reference Guides, training documents, and the Preconstruction User Guide are available from CDOT.

Background:

- ○ The Item Bid History tool is used for on-the-fly pricing of one reference item at a time, and the results are not permanently saved anywhere in the system. If you want to perform a quick analysis for a reference item, navigate to the Item Bid History component, enter values in the required fields, calculate a price, and then select the **Price vs Quantity Analysis** link from the **Actions** menu on the component header. The system displays the interactive analysis tool in a new browser window. You can also use the Source Data quick link to access the data in a list format.

Key to Actions Buttons:

Global **Actions** menu
(At the top of the screen)

Component **Actions**
menu (On the heading)

Row **Actions** menu
(On the row)

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Price an Item using the Item Bid History:

1. Log on to AASHTOWare Project Estimation.
2. Click the Expand Home button (drop-down arrow next to Home) and select **ESTIMATION-CDOT** to switch to the Estimation role.
3. In the Estimation component, click the **Item Bid History** link.
4. In the **Spec Book** field, select the specification book associated with the item.
5. In the **Item** autocomplete field, search for the Item Id or Description for a reference item and select the one that you want to price. The **Unit of Measure** field is automatically populated with the corresponding unit of measurement for the selected item.
6. In the **Quantity** field, enter the quantity.
7. In the **Bid History Profile** autocomplete field, search for and select the bid history profile that you want to use to price the item.
8. The **Letting Date** field is optional. You can add a letting date or leave it blank to use today's date. The system will attempt to use any date provided to refine the regression calculation.
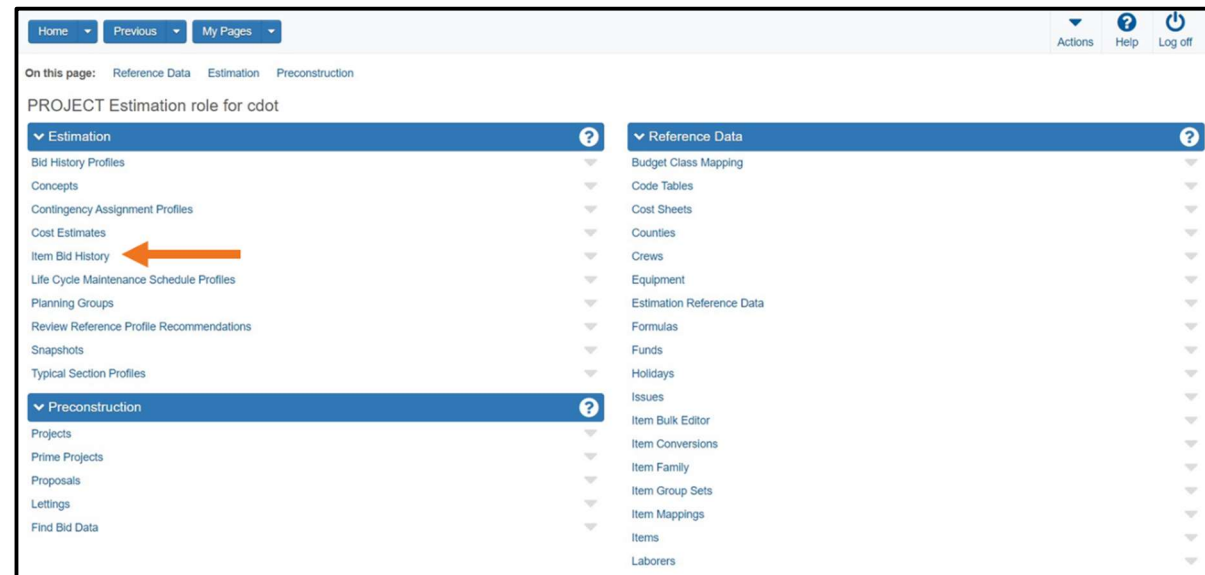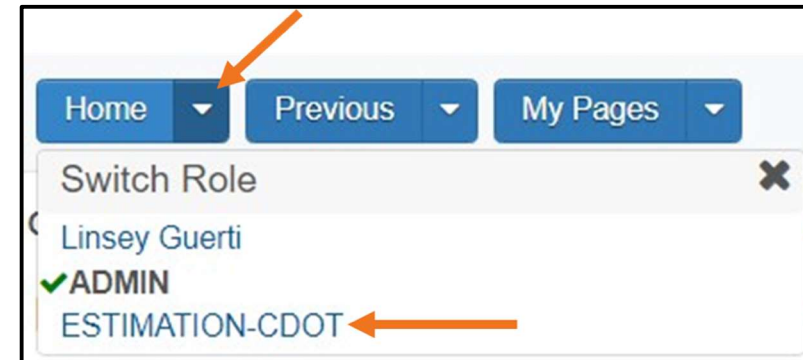
9. The **County** autocomplete field is optional and allows you to search for and select a county to associate with the item. If a county is selected, the system will attempt to use the county or associated market area to refine the regression calculation.
10. The **Highway Type**, **Improvement Type**, **Terrain**, **Urban/Rural**, and **Work Type** fields are optional. If any of these fields are selected, the system will attempt to use the selection to refine the regression calculation.
11. Click the **Calculate Price** button on the component header to calculate the price.
12. View the calculated price in the Results subsection, along with a comment about the criteria used for the calculation.
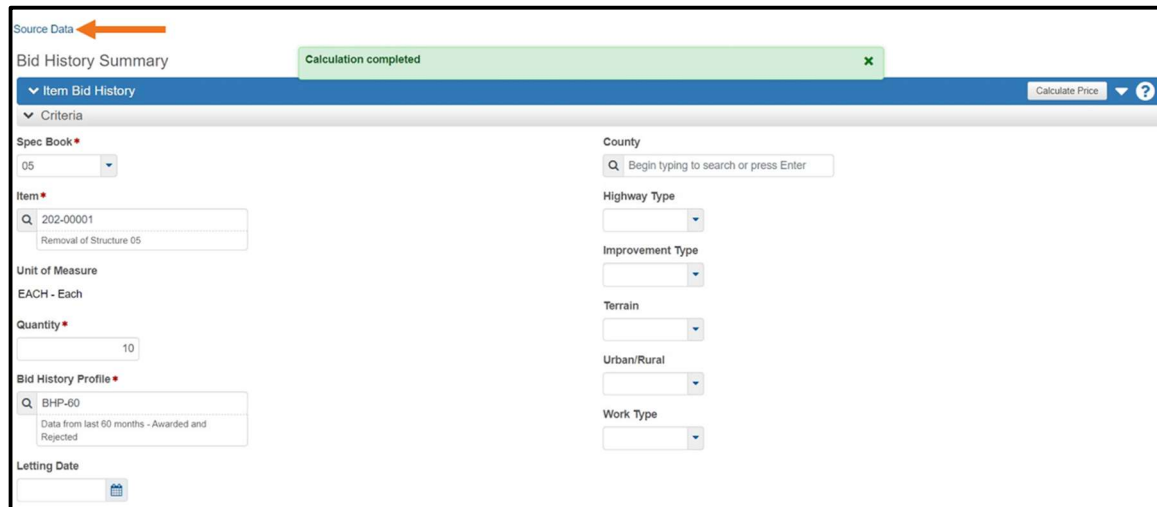
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Reviewing Source Data:

Source data is gathered when the price is calculated and consists of a list of historical bid data for the selected item, including the item bid price and information about the proposal and vendor.

> **Note**: You can analyze the same data in the form of an interactive scatter plot by using the Price Versus Quantity Analysis tool.

1. After calculating a price, click the **Source Data** quick link at the top of the Item Bid History tool.

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2. The **Quick Find** search field can be used to search for a specific item bid.
3. The **Include/Exclude** filter can be used to show only those bids that match the selected criteria.

4. Each Item Bid History row displays the **Proposal**, **Letting Date**, **Quantity**, **Price**, and whether it was **Included** or **Excluded**. The row can be expanded to show the reason for inclusion or exclusion by the model and additional fields related to the proposal and pricing information.

5. To include or exclude an item bid in the price calculation, expand the row for the item bid, and then choose either **Include by Selection** or **Exclude by Selection**.

6. Click the **Reprice** button on the component header.

7. View the updated price.

Reviewing Price Versus Quantity Analysis Tool:

The Price Versus Quantity Analysis tool is displayed as an interactive scatter plot and allows you to compare prices for an item at different quantities based on an item bid history as defined by the selected bid history profile. Data is displayed on an interactive scatter plot. You can modify settings to include or exclude data points, compare calculated prices based on different criteria, and highlight different types of data as needed. You can continue modifying settings and recalculating the price to analyze the data from different perspectives.

1. After calculating a price, click the component **Actions** button.
2. Click the **Price vs Quantity Analysis** section. The Price Versus Analysis tool scatter plot opens in a new window.
3. The header for the scatter plot includes:
   - Item number and description: This link allows you to search for and select an alternative item to use in the analysis.
   - **Reprice** button ($): This button is only selectable after changes are made and allows you to recalculate the price with the changes applied.
   - **Reload** button (circling arrows): This button is only selectable after changes are made and serves as an undo, reloading the price without applying the changes.
   - Price: This link opens the variable selection tab, allowing you to select alternative values for either regression or average calculations. You can also select new variables to include in your analysis that were not originally included, or you can deselect variables to remove them. After modifying variables, the item can be repriced with your selections.
   - Unit of measurement: This field is read only and populated based on the selected reference item.
   - Bid history profile: This link allows you to search for and select an alternative bid history profile to use in the analysis.
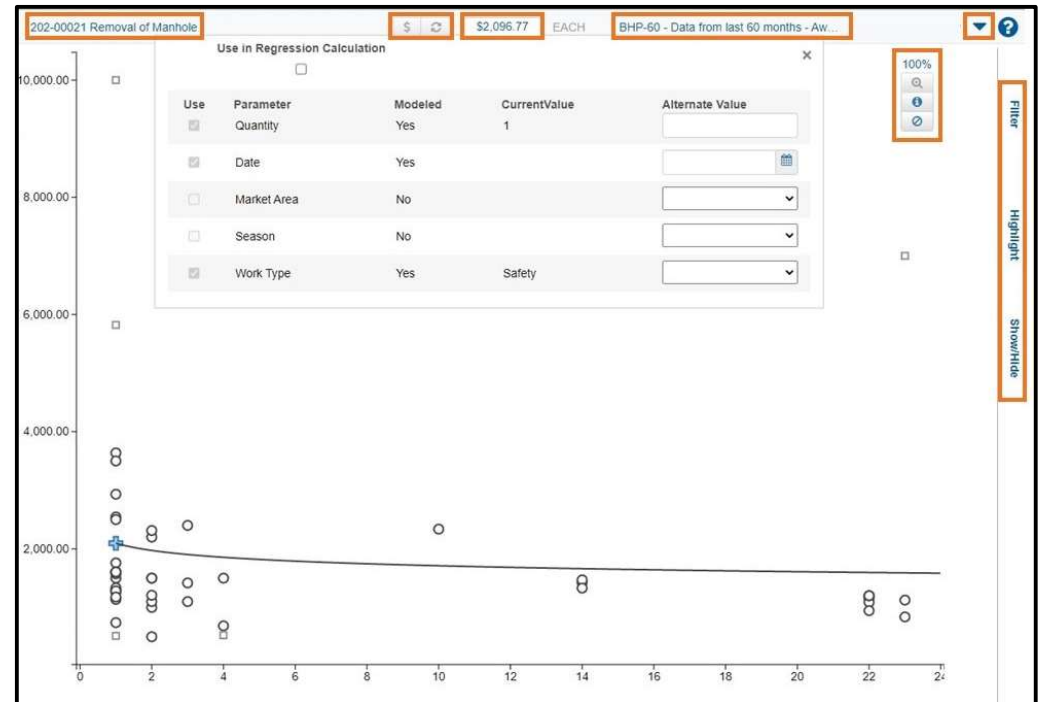
- o **Actions** button: Allows you to reload the analysis with the original data or to switch between average and regression calculations.
- o **Help** button: Access the online help for the Price Versus Quantity tool.
4. When data is first loaded, the **Zoom** tool is selected by default, and the current level of the zoom is displayed as a link above the tool. You can zoom in by either clicking anywhere on the scatter plot or by clicking and dragging over a specific area. To zoom out, select the link displaying the level of zoom above the tool.
5. To display the pricing and proposal information for a specific data point, select the **Identify** tool, and then choose any point on the scatter plot. Pricing information is displayed by default, with a link to the proposal and vendor information displayed underneath. You can also include or exclude the selected data point using the link displayed.
6. To include or exclude data points on the scatter plot, select the **Include/Exclude** tool and then either select specific data points individually or click and drag over a group of data points.
7. Links for **Filter**, **Highlight**, and **Show/Hide are on the right side of the scatter plot window**.
   - o The **Filter** menu allows you to filter out data based on quantities and variables.
   - o The **Highlight** menu allows you to highlight data points based on chosen variables.
   - o The **Show/Hide** menu allows you to decide which data points and lines to display.

Key for Price Versus Quantity Analysis Tool Data Points:

○	□	⊘	◪	△	◉
Included by Model	Excluded by Model	Included by Selection	Excluded by Selection	Excluded by Filter	Any shape with gray interior: Highlighted

Next Steps:

○ If you want to perform an analysis for a cost estimate item and have the option to save your changes to the associated bid-based task, navigate to the Cost Estimate Item Bid Based Task Summary, and select **Price vs Quantity Analysis** from the **Actions** menu on the component header. The system displays the interactive analysis tool. After you modify the settings and reprice, the **Apply** button becomes available, enabling you to save the changes to the bid-based task associated with the cost estimate item. The interactive analysis tool can also be accessed from the item detail record on the **Cost Estimate Items** tab of the Cost Estimate Summary, or from the item row on the Item Pricing Worksheet from the Cost Estimate, by selecting **Price vs Quantity Analysis** from the **Actions** menu on the price details overlay for the item.