AASHTOWare Project

Project Cost Estimate Creation User Guide

This guide provides the steps to properly create a project and cost estimate directly in AASHTOWare project. Additional information regarding the development of a project and cost estimate using the Project Enty Template or Estimator® can be found on our website. Please follow the steps and instructions below:

Steps

Log into AASHTOWare Project

1. Ensure that the proper url is selected: https://ctdot-pr-prod.infotechinc.com/Account/LogOn
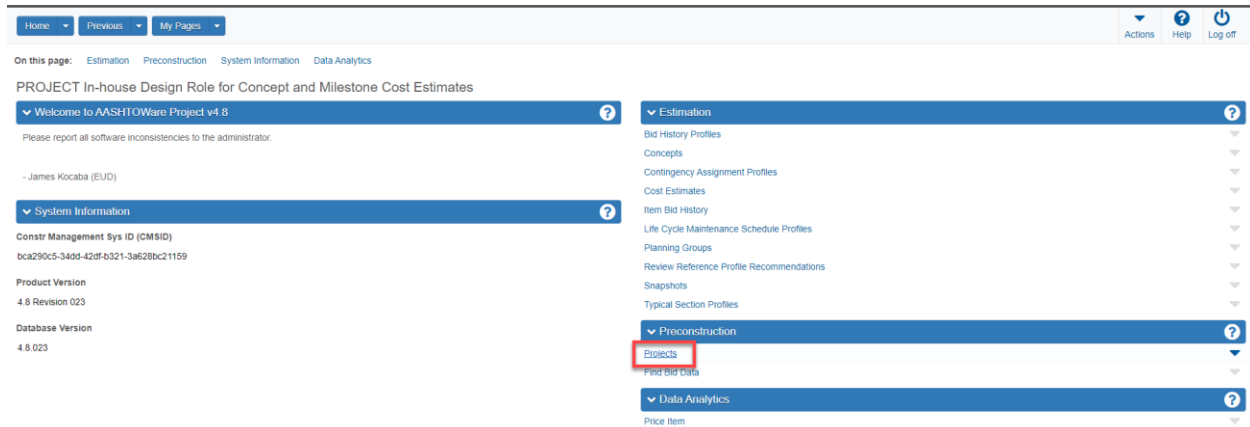2. Enter User name and password

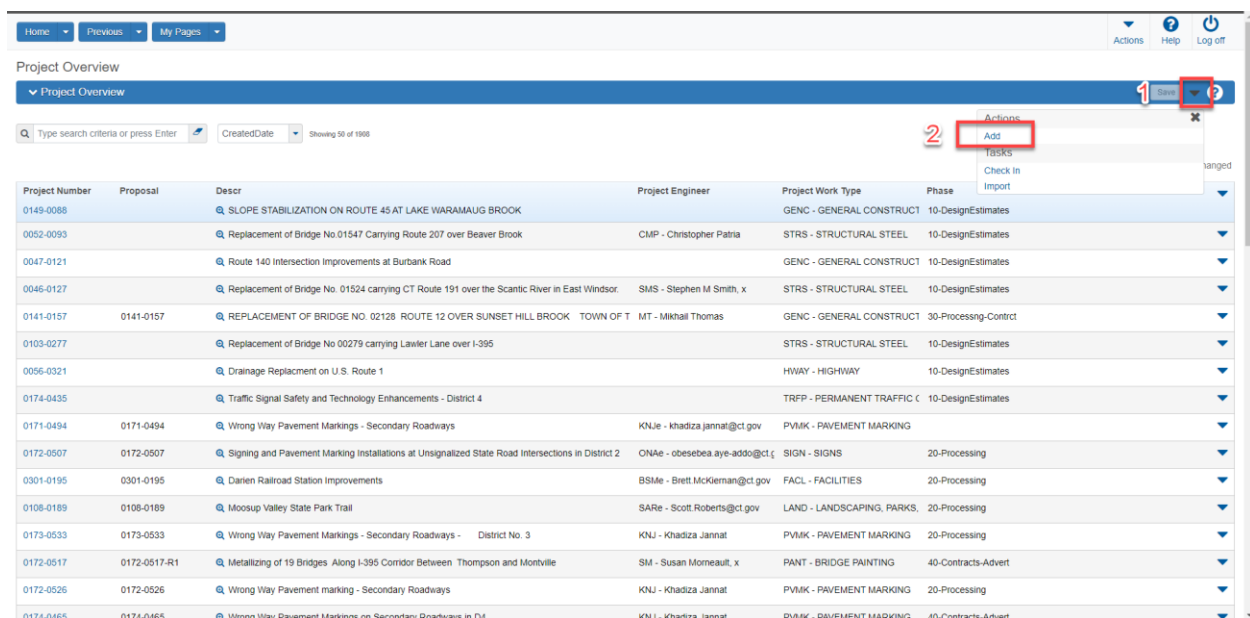
3. Select the role CT_DOT Estimation
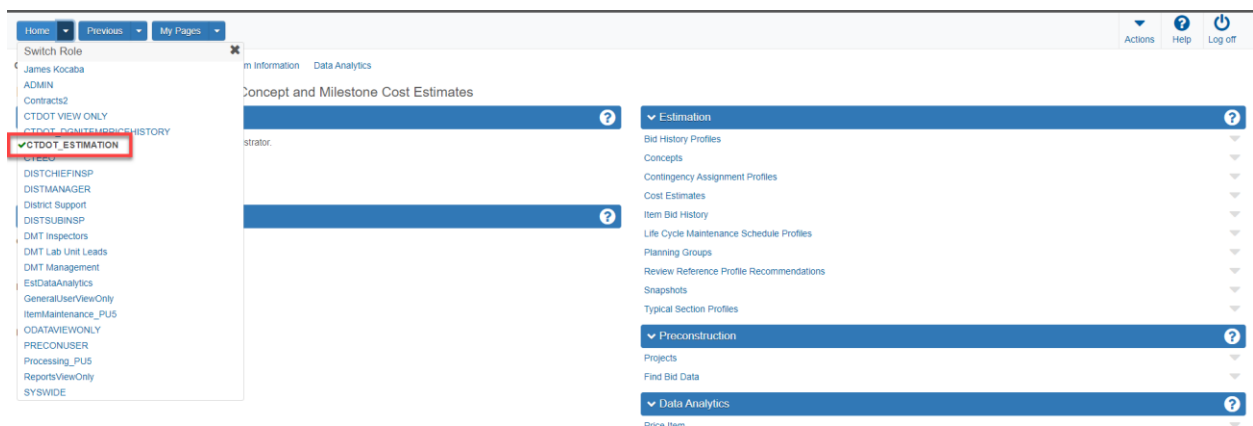
Add New Project

1. Select the Projects under the heading Preconstruction

2. Select the action arrow drop down arrow to the right of the Save button. (1)
3. Select "Add" from the Actions arrow drop down menu

4. Select General from the Add Project Screen (1)
5. Add data to all fields. Ensure that Spec Book 11 and English units are selected (2)
6. If a field is unknown it can be entered at a later date.

Overview

Add Project

▼ Add Project   Save ▼ ?

General   ①

Counties

Districts

Points   ②

Project Number *
TEST9998

Project Description *
TEST9998   🔍

Federal Project Number

State Project Number

Spec Book (Item List 11 = Engl, 10 = Metric) *
11

Unit System *
English   ▼

Project Work Type
                 ▼

Project Engineer
                 ▼

7. Select Counties (1)
8. Enter proper county, percent of work in county and select primary (2)
9. If another county is required select "New" and repeat the process. Ensure the proper county is selected a primary

Overview

Add Project

▼ Add Project   Save ▼ ?

General
                                                              1 added 0 marked for deletion 0 changed
Counties   ①   New

Districts   County ▼   Pct of Work in County * ▼   Primary ▼   ✕
Points   ②   🔍 Begin typing to search or press Enter   ☐

10. Select District (1)
11. Enter proper District ID, description, and select primary (2)
12. If another District is required select "New" and repeat the process. Ensure the proper county is selected a primary

Overview

Add Project

▼ Add Project   Save ▼ ?

General
                                                              1 added 0 marked for deletion 0 changed
Counties   New

Districts   ①   ②   District ID ▼   District Description ▼   Primary ▼   ✕
Points   🔍 Begin typing to search or press Enter   🔍 ☐

Add Midpoint Data

At least one project midpoint must be added to the system. A midpoint can be described as the center of the project polygon or asset feature. Headquarters or District office midpoints can be used for statewide or district wide projects. If more than one feature or asset (Bridge or Intersection) is
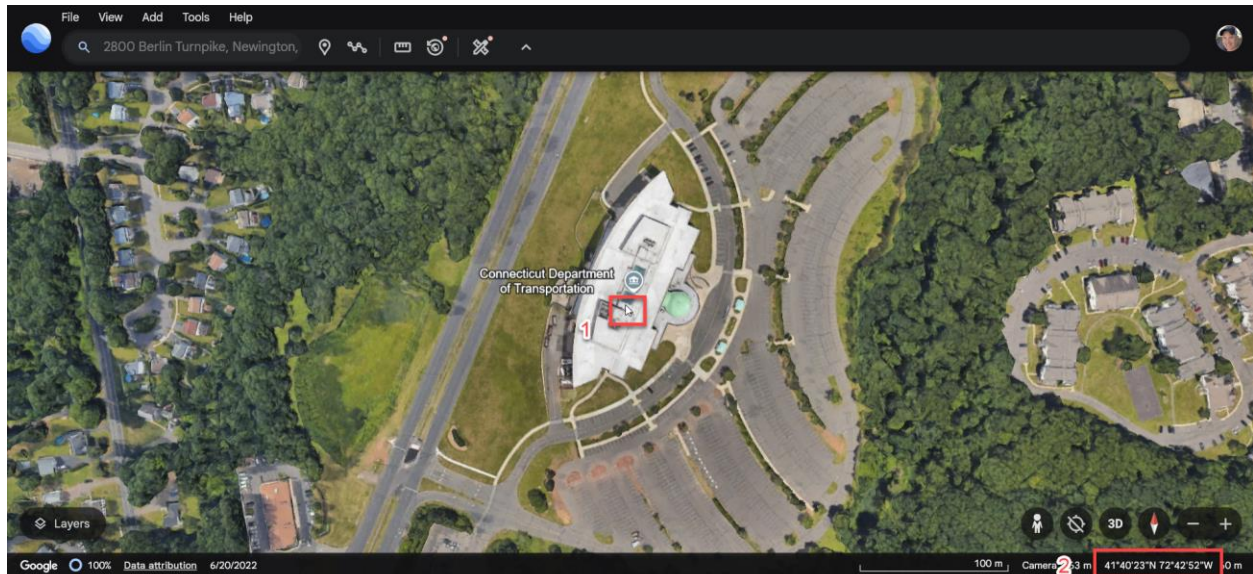
associated to the project, Designers must enter midpoints for each asset. Select "New" to enter an additional midpoint.

1. Select Points (1)
2. Enter "MidPoint" feature field (2).
3. Enter feature description (BR01234, TS123-4560, etc.) into the Description field (3)
4. Enter feature latitude in Deg Min and Sec (XX:XX:XX.XX) (4)
5. Enter feature longitude in Deg Min and Sec (-XX:XX:XX.XX) (5)
6. Select "Save" (6)
7. Select Overview (7)

Asset feature latitudes and longitudes can be located with the use of Google Earth Web. Navigate to the home screen and select Google Earth Web (1) in the external links header.

1. Navigate to the project or feature midpoint on Google Earth Web
2. Hover pointer over selected midpoint or feature (1)

3. Take note of latitude and longitude in the lower right corner of the screen. (2)
4. Enter this data on the AWP project points screen. Please note that longitudes in Connecticut will always be a negative value.

Update Project Summary Information

1. Select proper Project

2. Select "General" (1)
3. Enter project information. The red boxes indicate the required data to be provided on this screen. It is important to note that when a consultant designer is assigned to a project the project manager must assign the proper firm by selecting the consultant in the vendor access field (2). This is a security measure that allows only the assigned vendor to view the project, but continues to allow internal CTDOT design access. If multiple projects are integrated into one contract, please select which project is the controlling project (3).

4. Counties, Districts and Points have already been entered previously. However, it is good practice to ensure that each tab contains accurate project data

5. Road Segments entries are not required yet

6. Select Bridge Segments (1) This data must be entered for each structure reconstructed or rehabilitated

7. Select New (2)

8. Enter Bridge No. (3)

9. Enter Bridge Description (4)

10. Enter Structure Type (5)

11. Enter Deck Area in SF (6)

12. Click Save (7)

13. If an additional Bridge Segment is necessary, select new to enter another segment.

14. Select Workflow (1)
15. Select Standard ConnDOT Workflow (2)
16. Select 10-Cost Estimate Phase (3)
17. Click "Save" (4)

Create Project Cost Estimate

Users can either create a new blank cost estimate or copy an existing cost estimate template based on the design group. Templates contain multiple standard items related to the project type allowing designers a new cost estimate "jump start". Unique items can be added to the cost estimate and other unused items can be removed. Both methods are explained below. A project can contain two or more cost estimates if designers are comparing the costs between major materials or alternatives. For example, two cost estimates can be created for a bridge project to analyze the costs between steel and

concrete. Additional cost estimates can also be generated to calculate costs for multiple project locations. If multiple cost estimates are generated only one can activated for letting purposes. Multiple location cost estimates must be merged to create a final active cost estimate containing all location pay items. Users must also select "Combine Like Cost Estimate Items" for the cost estimate to roll up pay item quantities. See Sections "Merge and Combine Like Cost Estimate Items" for more information. Design teams can add items to the cost estimate and assign the appropriate group for filtering functionality. See section "Item Grouping by Design Unit Owner" for more information. If a new template is required or additional items are needed on an existing cost estimate template, please contact dot.aashtoware_admins@ct.gov

Blank Cost Estimate

1. Select "Cost Estimate"

2. Enter all necessary cost estimate information
    a. Construction Year (1)
    b. Estimated Date (2)
    c. Letting Date (3)
    d. Highway Type (4)
    e. Season (5)
    f. Terrain (6)
3. Click "Save" (7)

4. Select "Cost Estimates" (1)
5. Select the drop down arow to the right of "Add" (2)

6. Enter new estimate name. Estimate name should match the project name. (1)
7. Enter Cost Estimate Description (2)
8. Enter Cost Estimate Phase (3)
9. Enter Cost Estimate Type (4)
10. Select Estimated By (5)
11. If required, enter the non-agency consultant firm vendor ID. This is a security measure that allows only the assigned vendor to view the cost estimate, but continues to allow internal CTDOT design access (6)
12. Select Save (7)

Copy Cost Estimate Template

1. Follow Create Blank Cost Estimate Steps 1 – 3 above
2. Click on drop down arrow to the right of the add button (1)
3. Click on "Select Cost Estimates" (2)

4. Enter new cost estimate name. Cost estimate name is typically the same as the project or concept name. (1)
5. Select a project type cost estimate template (2)
6. Select "Add to Concept" or "Add to Project" (3). Save complete message is displayed along with a warning message. This warning message is expected due to blank item quantities and can be closed.

7. Click on newly created cost estimate

Overview   Cost Estimate Snapshots

Concept Summary

▾ Concept: _CostEstimateTmpl - Test Proof of Concept...Please do not Delete...JTK Sept 12, 2024 | Save ▾ ❓

General
Locations
Cost Estimates

🔍 Type search criteria or press Enter ✏️   Advanced   Showing 7 of 7

Add ▾   0 marked for deletion 0 changed

_BridgeDeckReplace   ▾
_BridgeReplacement   ▾
_CulvertReplacement   ▾
_Highways   ▾
_TrafficSignalSafety   ▾

Cost Estimate Name	Estimate Type	▾
0888-08888-TEST		

PP08-8888-TEST   ▾

Modify Project Cost Estimate Summary

1. Select newly created Cost Estimate

Overview   Project   Cost Estimate Snapshots

Project Cost Estimate Summary

▾ Project: TEST9998 - TEST9998 | Save ▾ ❓

Proposal:

General
Cost Estimates

🔍 Type search criteria or press Enter ✏️   Advanced   Showing 1 of 1

Show All ☐

Add ▾   0 marked for deletion 0 changed

Cost Estimate Name	Estimate Type	Cost Estimate Total	Active	Price Control ▾	▾
TEST9998		0.00	Yes	☑	

2. Revise cost estimate description (1)
3. Modify cost estimate phase (2)
4. Choose estimated by (3)
5. Select estimate type (4)
6. If required, enter the non-agency consultant firm vendor ID. This is a security measure that allows only the assigned vendor to view the cost estimate, but continues to allow internal CTDOT design access (5)
7. Select save (6)

Add Bid History Profile to Cost Estimate

If the 3YRENG bid history profile has not been automatically assigned to the cost estimate, please follow the steps below. Look for the automatically assigned default bid history profile here:

1. Select General tab (1)
2. Scroll down to additional information and determine if the default bid history profile 3YRENG has been automatically assigned (2)
3. If the bid history profile space is blank, please go to step five

4. Select cost estimate general tab (1)
5. Select action arrow to the right of Save (2)
6. Select "Select Item Bid History Profile" (3)
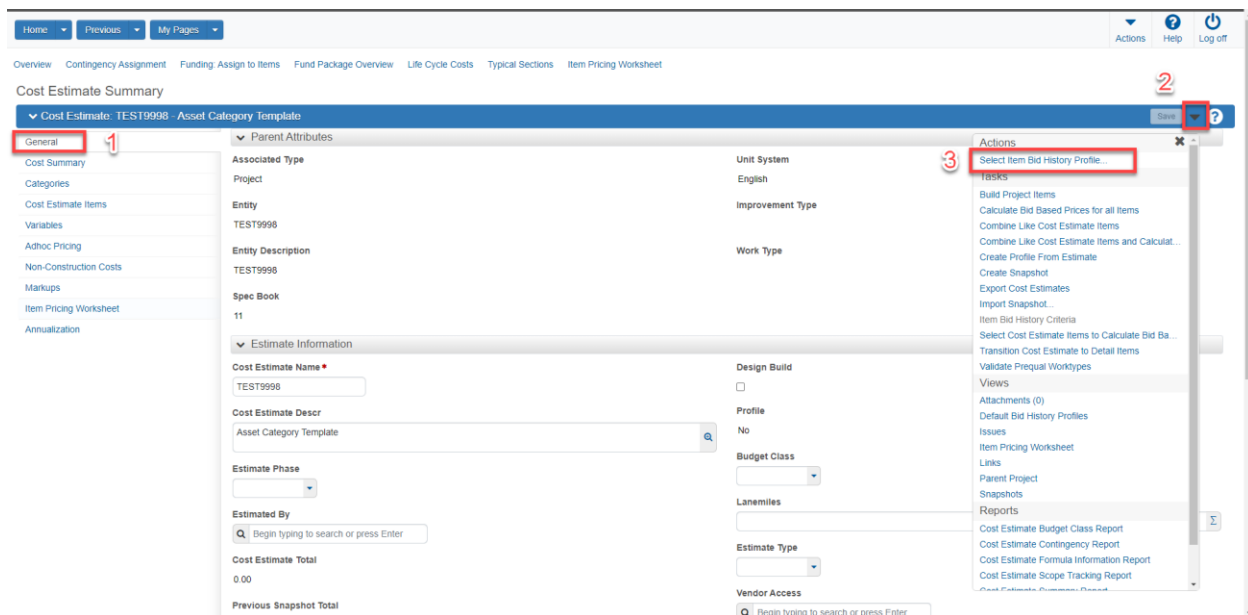
7. Select 3YRENG Bid History Profile (1)
8. Select "Copy Profile to Cost Estimate" (2)
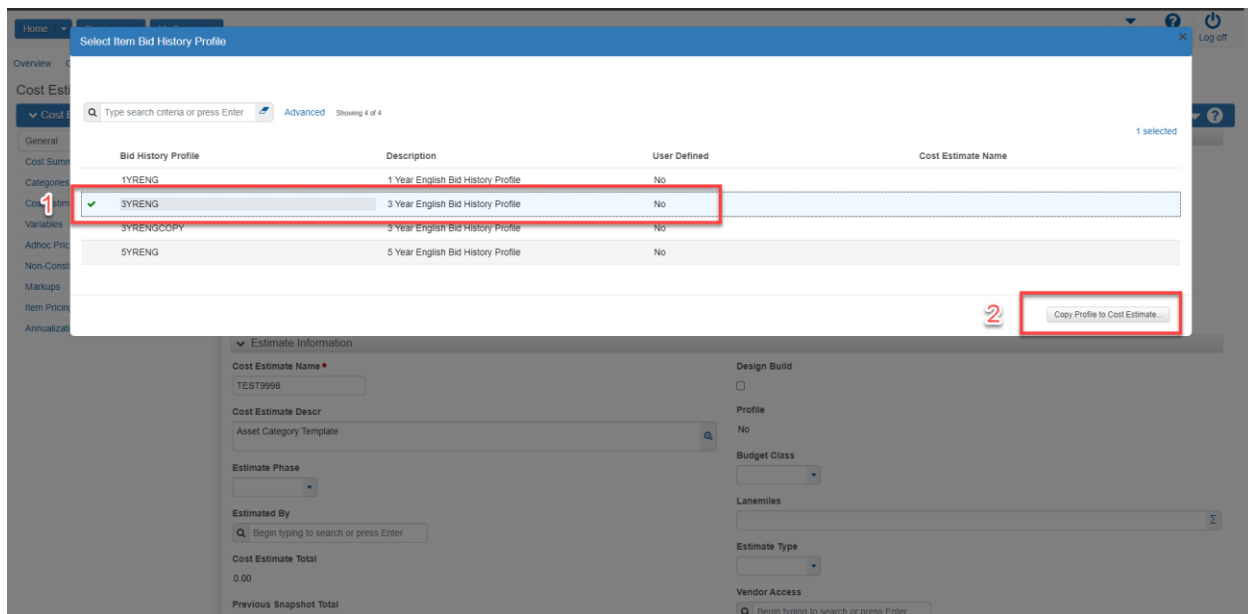
9. Proper bid history profile has been added to the cost estimate

Enter Project Cost Estimate Category Details

This step is very important and ensures that all items and associated costs are tracked according to their funding categories. **Each individual item must be assigned an asset category.** Designers must create new categories based upon project funding requirements.

1. Select Cost Estimates. (1)

2. Navigate to Categories

3. Select New

4. Add category (1) and description (2) based upon proposed concept funding. Additional funding categories can be added by selecting the "new" button. See examples below:
   a. 0001: 80 Fed – 20 State
   b. 0002: 100 State
   c. 0003: 50 State - 50 Muni
   d. 8888 – Non-contract
5. Select Save (3)

Add Individual Cost Estimate Items

After the cost estimate has been generated and proper asset categories added the user can begin to add cost estimate items.

1. Select and navigate to Item Pricing Worksheet

2. Select "New"

3. Select Category/Funding Source

4. Enter proper Item number or search for item description

5. Enter quantity

6. Double click on "Supp Descr" if required
7. Enter "** See Special Provisions **" (1)
8. Select Apply (2)
9. Please note that the text must match (two asterisks, space, See Special Provisions, space, two asterisks) exactly. Any other data in this field will generate an error. (3)
10. Select Save

Overview   Cost Estimate   Cost Estimate Items

Item Pricing Worksheet

Save Complete ✕

▼ Cost Estimate: 0001-1111-01 - NONAGE TEST   Save ▼ ?

Project: 0001-1111

🔍 Type search criteria or press Enter   System Default ▼   Showing 7 of 7

Total Cost Estimate Items

1,314,287.09

Cat ID ▼	Line	Item ▼	Descr	Unit	Quantity ▼	Unit Price ▼	Ext Amt	Price Source ▼	Supp Descr ▼	Active
0001 - 80FED20STE	1	0520035	ASPHALTIC PLUG EXPANSION JOINT SYSTEM	c.f.	2,500.000	467.31000	1,168,275.00	Regression		
0001 - 80FED20STE	2	0707001	MEMBRANE WATERPROOFING (WOVEN GLASS FABRIC)	s.y.	102.000	139.19000	14,197.38	Regression	** See Special Provisions **	Ye
0001 - 80FED20STE	3	0406172	HMA S0.375	ton	90.000	324.35000	29,191.50	Regression		Ye
0001 - 80FED20STE	4	0406312	GUTTER LINE SEALING FOR BRIDGES	l.f.	1,000.000	14.58000	14,580.00	Regression		Yes
0001 - 80FED20STE	5	0406236	MATERIAL FOR TACK COAT	gal	16.500	35.53000	586.24	Regression		Yes
0001 - 80FED20STE	6	0406005	REMOVAL OF EXISTING WEARING SURFACE	s.y.	333.500	71.82000	23,951.97	Regression		Yes
0001 - 80FED20STE	7	0520041	PREFORMED JOINT SEAL	l.f.	500.000	127.01000	63,505.00	Regression		Yes

0 added   0 marked for deletion   1 changed

New   Select Items...

Showing 7 of 7

▼ Cost Estimate: 0001-1111-01 - NONAGE TEST   Save ▼ ?

General
Cost Summary
Cost Estimate Items
Incidentals and Contingencies
Categories
Markups

Total Cost Estimate Items

1,314,287.09

🔍 Type search criteria or press Enter   ItemNoSortLH ▼   Showing 7 of 7

New ▼

Collapse All   0 added   0 marked for deletion   1 changed

1 error. Hide details...
• Supplemental Description: Text value must match ** See Special Provisons **

Line	Item		Type	
3	0406172 HMA S0.375		Detail	

▼ Quantity | Unit | Price | Ext Amt | Active
90.000 | ton | 324.35000 | 29,191.50 | Yes

Item * ▼   Unit of Measure
🔍 0406172   ton
   HMA S0.375

Supplemental Description ▼

** See Special Provisions**   🔍

Regular expression not found

Price Source   Active ▼
Regression   ☑

Price Summary ▼

| Quantity ▼ | | Price ▼ | | Ext Amt |
| 90.000 Σ | × | 324.35000 Σ Details | = | 29,191.50 |

Contribute to Total Construction Cost ▼   Preliminary Engineering ▼
☑   ☐

Exclude from Reference Price Calculation ▼   Design Unit Owner ▼
☐   [▼]

Nonbid ▼   Prequalification Work Type ▼

Overview   Cost Estimate   Cost Estimate Items

Item Pricing Worksheet

There are unsaved changes. ✕

▼ Item Pricing Worksheet   Save ▼ ?

🔍 Type search criteria or press Enter   System Default ▼   Showing 2 of 2

Total Cost Estimate Items

1 added   0 marked for deletion   0 changed

Cat ID ▼	Line	Item ▼	Descr	Unit	Quantity ▼	Unit Price ▼	Ext Amt	Supp Descr ▼	Active ▼	
8888	10	3100012	C.L + POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DISTRIBUTION	LS	1.000				Yes	
0097	20	0201001	CLEARING AND GRUBBING	LS	1.000				Yes	
0097		0980020	CONSTRUCTION SURVEYING	LS	1.000				Yes	✕

New   Select Items...

Showing 2 of 2

Add Multiple Cost Estimate Items

1. Scroll to the bottom of the estimate and Click "Select Items"

2. Search for item description (1) , item number (2) or portion of an item number (3)

Screenshot 1

Home ▾ | Overview

Select Items ✕ Log off

Item Price
🔍 0971001   Advanced   Showing 1 of 1
Select: All None   0 selected

Item	Descr	Unit
0971001	MAINTENANCE AND PROTECTION OF TRAFFIC	LS - LUMP SUM

Total Cost E
0.00

Add to Cost Estimate Item   0 changed

Cat ID ▾								
8888	10	3100012	C.L.+ POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DISTRIBUTION	LS	1.000	☰	Yes	▾
0097	20	0201001	CLEARING AND GRUBBING	LS	1.000	☰	Yes	▾
0097	30	0980020	CONSTRUCTION SURVEYING	LS	1.000	☰	Yes	▾

New | Select items...

Showing 3 of 3

Screenshot 2

Home ▾ | Overview

Select Items ✕ Log off

Item Price
🔍 0601   Advanced   Showing 50 of 376
Select: All None   0 selected

Item	Descr	Unit
0100601	WORK TRESTLE MODIFICATIONS	LS - LUMP SUM
0506010	TEMPORARY RETAINING WALL	LS - LUMP SUM
0506014	RAILROAD TIE RETAINING WALL	s.f. - Square Foot
0506015	RESETTING STONE MASONRY	LS - LUMP SUM
0506016	RESET STONE MASONRY	s.y. - Square Yard
0506017	RETAINING WALL	LS - LUMP SUM
0506018	TIE-BACK WALL, TYPE I	s.f. - Square Foot
0506019	TIE-BACK WALL, TYPE II	s.f. - Square Foot
0601000	CLASS "A" CONCRETE	c.y. - Cubic Yard
0601007	CLASS "A" CONCRETE (MODIFIED)	c.y. - Cubic Yard
0601008	REINFORCED CONCRETE FACE FOR PERMANENT SOLDIER PILE WALL WITH	s.f. - Square Foot
0601011	FRP COMPOSITE STAY-IN-PLACE FORM	ea. - Each
0601014	COMPOSITE ARCH BRIDGE SYSTEM	LS - LUMP SUM
0601016	PRECAST APPROACH SLAB	s.y. - Square Yard
0601017	PRECAST CONCRETE RAMP	LS - LUMP SUM

Total Cost E
0.00

Cat ID ▾
8888
0097
0097

New

0 changed

Showing 4 of 4

Add to Cost Estimate Item

3. Users can also search for groups of items using filter functions
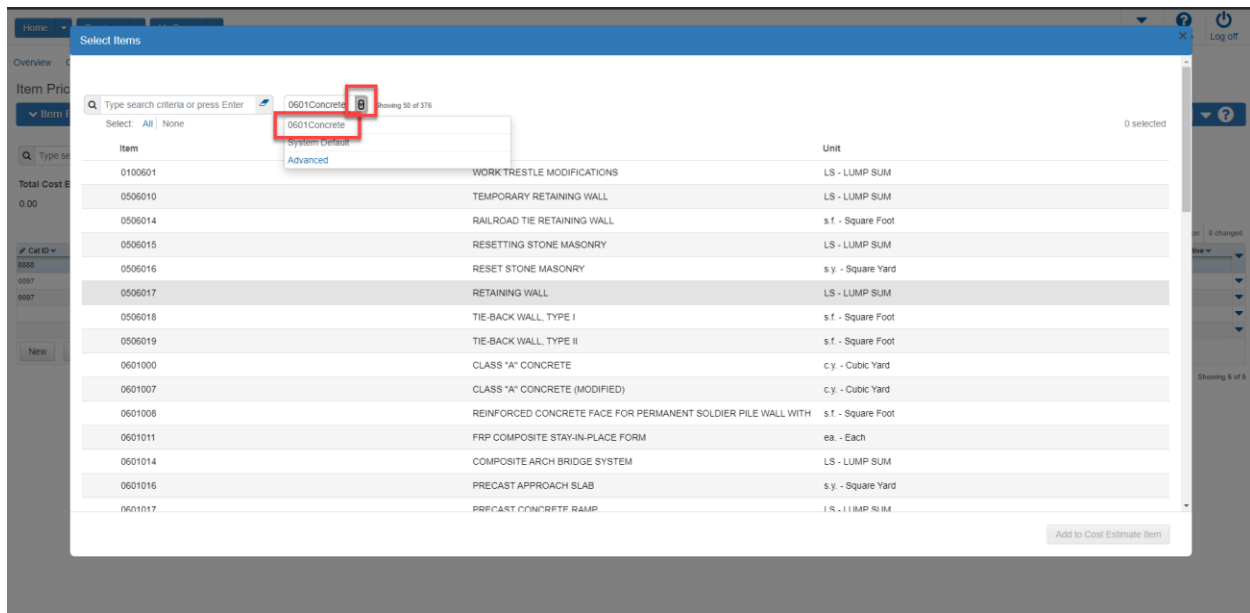
4. Select multiple items as needed
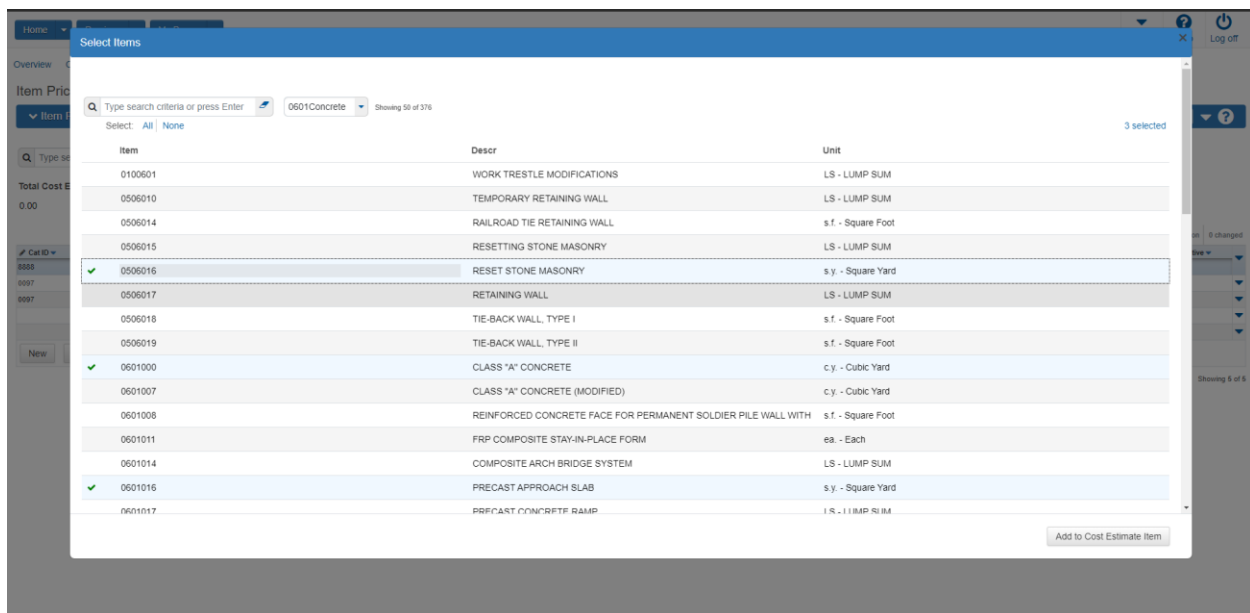
Excel .CSV Cost Estimate Item Import Process

This process can be substituted for the manual entry of contract pay items using the user interface. Users must have either a concept or project created in the system with a cost estimate in place. The cost estimate also must have a least one funding category (Ex: 0001 – FED80STE20) assigned. The cost estimate pay item csv import file can be downloaded from our Cost Estimating webpage. Do not modify the main or column headers. Header modifications may impact the import process and possibly generate errors. Item unit price is not required and can be generated once data is imported. For best

results, please follow the csv import instructions below. We recommend complete cost estimates are imported only once and any future item modifications completed in the user interface.

1. Ensure that a concept or project has been created in the AWP system
2. Ensure that cost estimate contains at least one category
3. Open the CostEstimate_Import_Template
4. Rename the file
5. Ensure that "remove leading zeros and convert to a number" is disabled in excel. Select File > Options > Data > uncheck "remove leading zeros and convert to a number"
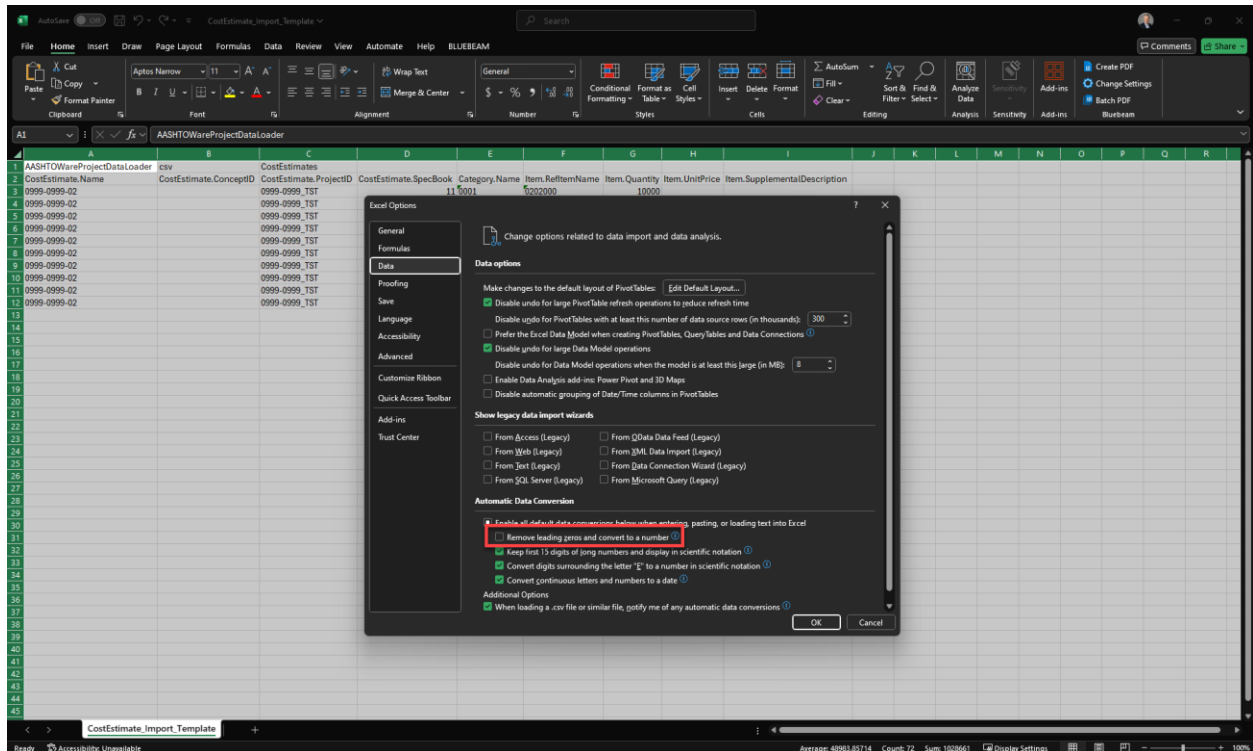
6. Ensure all column header data is visible by selecting format > autofit column width
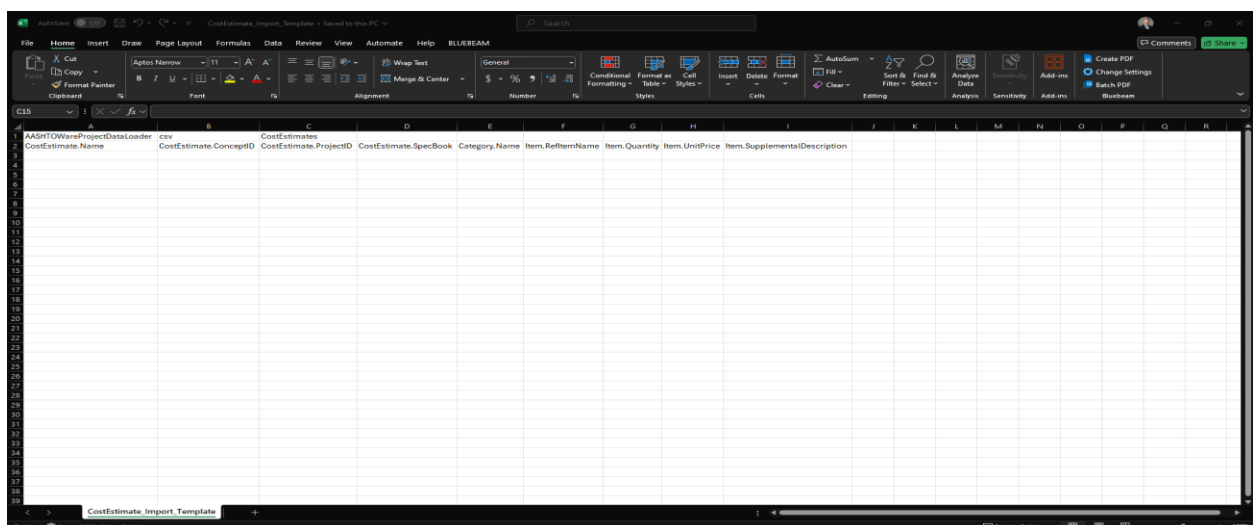
6. Enter Cost Estimate Name. This value must match AWP cost estimate name and must be entered for each pay item row. (1)
7. Enter Concept or Project ID. This data must be entered for each pay item row. (2)
8. Enter Cost Estimate Spec Book. This data must be entered for each pay item row. (3)
9. Enter Category Name. This value must match value in the UI and entered for each pay item row. (4)
10. Enter Ref Item number for each row. (5)
11. Enter Item Quantity for each row. (6)

Prepare for CSV file upload.

1. Navigate to any AWP screen
2. Select the action item arrow drop down (1)
3. Select Import file (2)

4. Select "Select File" (1)
5. Navigate to cost estimate import file (2)
6. Select "Open"
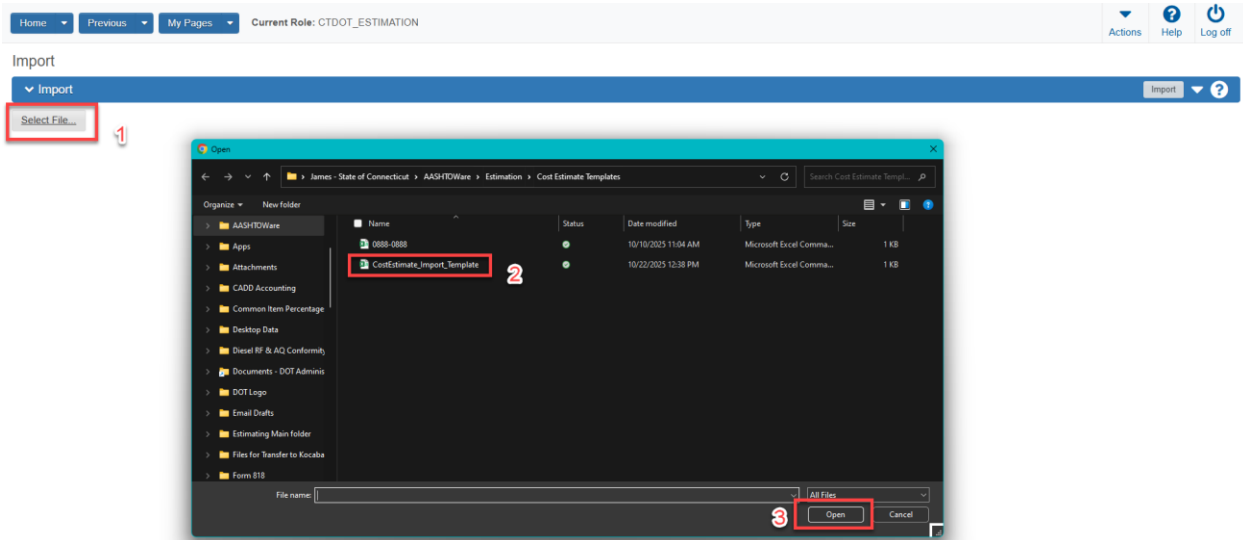
7. Select "Add or update existing records and ignore blanks" (1)
8. Select Import (2)
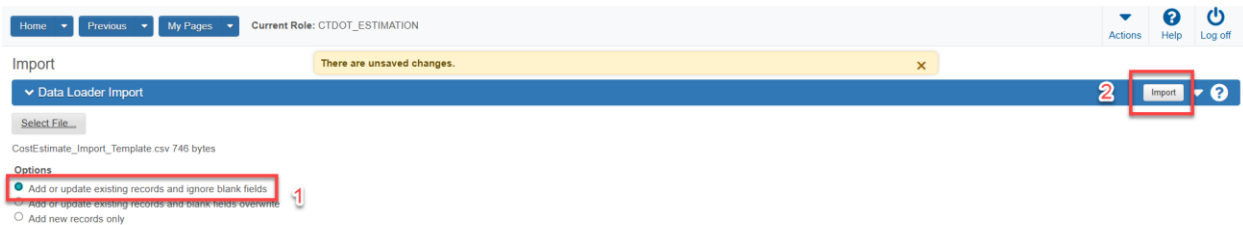
9. Check for successful import
10. Navigate to the global action arrow dropdown (1)
11. Select Open Process History (2)
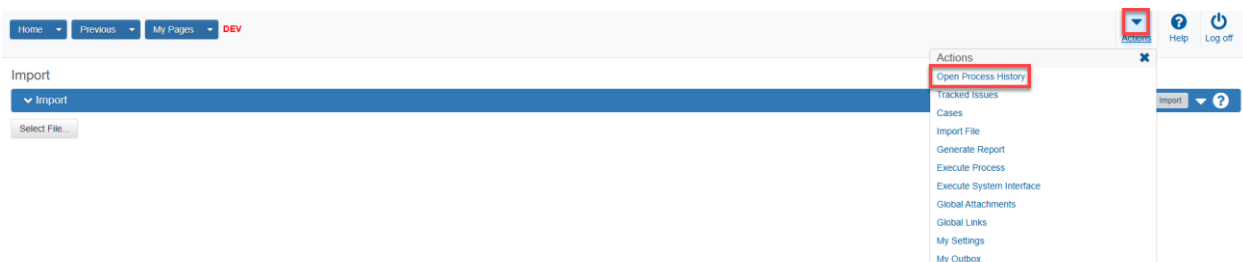
12. Select DataLoadSummary.log (1)
13. Name the file and save location (2)
14. Select Save (3)
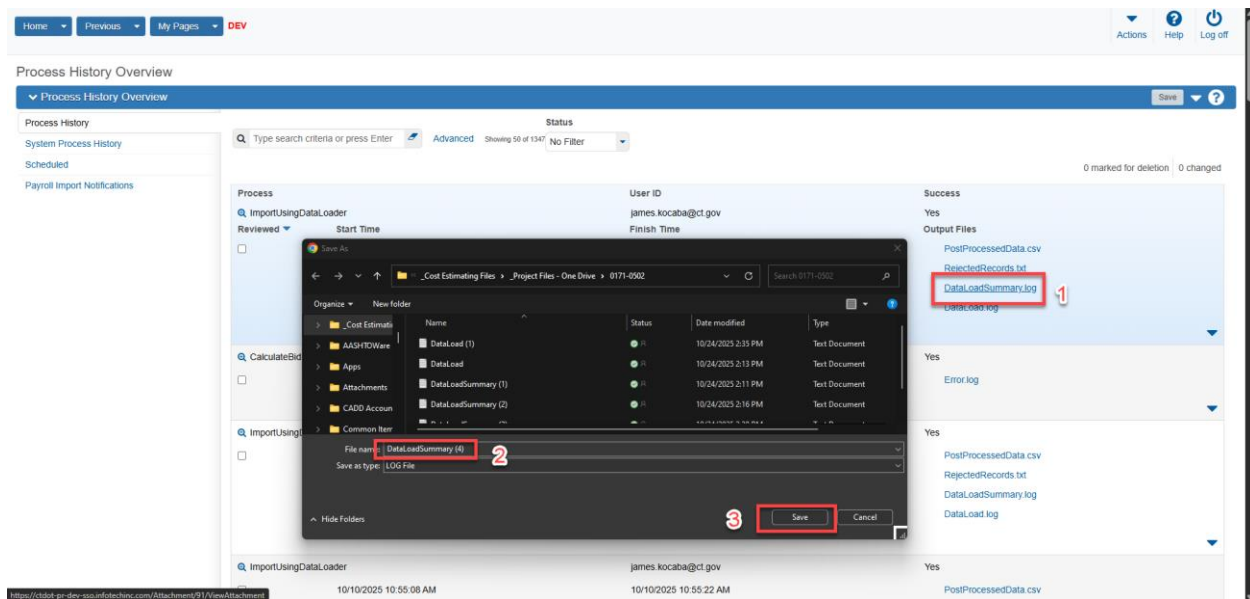
15. Locate downloaded file (1)
16. Select file (2)
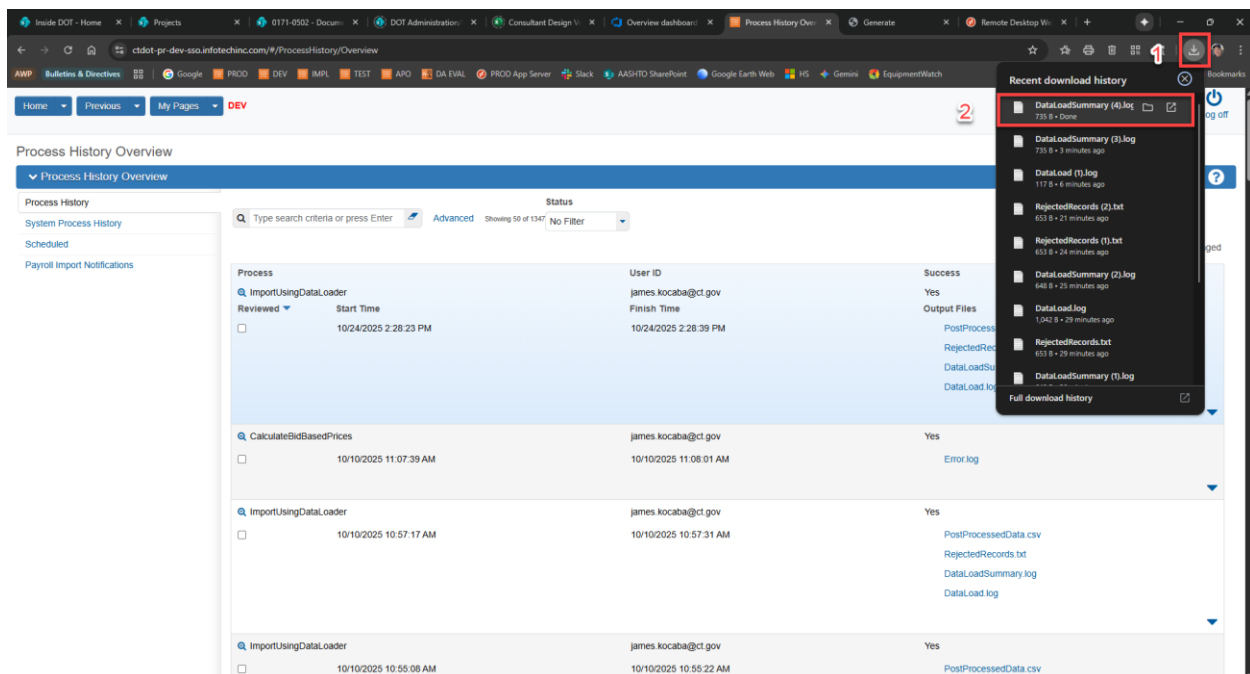
17. View data summary results. Any unsuccessful record imports will be itemized in the rejected records column.
18. Navigate to the cost estimate to view imported pay items

Item Grouping by Design Unit Owner

Cost estimates may contain items from separate design units. Estimation allows designers to classify estimate item ownership using the "Design Unit Owner" field in the Cost Estimate Items tab. After assignment, items can be filtered and identified by design unit ownership.

1. Navigate to Cost Estimate Summary screen
2. Select Cost Estimate Items (1)
3. Select Item (2)

4. Select Design Unit Owner field dropdown arrow (1)
5. Select proper design unit owner (2)
6. Select Save (3)

Users can activate cost estimate "Design Unit Owner" item filters by following these simple procedures:

1. Select dropdown adjacent to search field (1)
2. Select proper "Design Unit Owner" (2)
3. System will display only items assigned to the filter selected.

Users can also apply the "Design Unit Owner" item assignment to multiple items at time by following the steps below:

1. Select item accordion arrow to active dropdown (1)
2. Select action item arrow adjacent to "Design Unit Owner" field (2)

3. Select the number of rows (down or up), all displayed rows, or all rows (1)
4. Click Save (2)

Non-Bid Items – Utilities, State Police and Work by State Forces

All non-bid items that are added to the estimate must not contribute to the total construction costs. Prior to building project items, the "Contribute to Total Construction Costs" checkbox must be unselected and the "Exclude from Reference Price Calculation" activated for all non-bid items.

1. Navigate to "Cost Estimate Items"

2. Filter Non-Bid Items by selecting dropdown arrow (1)
3. Select 8888Items (2)

4. Remove "Contribute to Total Construction Cost" checkmark. (1)
5. Activate "Exclude from Reference Price Calculation" (2)
6. Ensure "Nonbid" checkbox is activated (3)
7. Click Save (4)

Common Lump Sum Items

All common lump sum items must have the "Contribute to Total Construction Costs" and "Exclude from Reference Price Calculation" checkboxes must be activated.

1. Navigate to "Cost Estimate Items"

2. Locate Common Lump Sum Items
3. Ensure "Contribute to Total Construction Cost" is activated (1)
4. Activate "Exclude from Reference Price Calculation" (2)
5. Select "Save" (3)

Overview   Contingency Assignment   Funding: Assign to Items   Fund Package Overview   Life Cycle Costs   Typical Sections   Item Pricing Worksheet

Cost Estimate Summary

▼ Cost Estimate: PP08-8888-TEST - Test Proof of Concept - Cost Estimate...Please do not delete....JTK Sept 12, 2024   ③ Save ▼ ❓

Concept: PP08-8888-TEST

General	**Total Cost Estimate Items**
Cost Summary	1,110,470.30
Cost Estimate Items	
Item Pricing Worksheet	
Incidentals and Contingencies	
Markups	
Categories	

🔍 Type search criteria or press Enter   🖋   System Default ▼   Showing 7 of 7

New ▼   0 added   0 marked for deletion   0 changed

1	0603061 STRUCTURAL STEEL (SITE NO. 1)			Detail		▼
1.000		LS	250,000.00000	250,000.00	Yes	
2	0503001 REMOVAL OF SUPERSTRUCTURE			Detail		▼
1.000		LS	150,000.00000	150,000.00	Yes	
3	0020801 ASBESTOS ABATEMENT			Detail		▼
1.000		LS	50,000.00000	50,000.00	Yes	
4	0602030 DEFORMED STEEL BARS - GALVANIZED			Detail		▼
2,000.000		lb.	2.45000	4,900.00	Yes	
5	0601318 PARTIAL DEPTH PATCH			Detail		▼
330.000		c.f.	319.91000	105,570.30	Yes	

Line	Item			Type		▼
6	0975004 MOBILIZATION AND PROJECT CLOSEOUT			Detail		
Quantity	Unit		Price	Ext Amt	Active	
1.000	LS		500,000.00000	500,000.00	Yes	

Item * ▼   **Unit of Measure**

🔍 0975004   LS
MOBILIZATION AND PROJECT CLOSEOUT

Supplemental Description ▼

[   ] 🔍

Price Source   **Active** ▼

Ad Hoc   ☑

Price Summary ▼

Quantity ▼		Price ▼			Ext Amt
1.000 Σ	×	500,000.00000 Σ	Details	=	500,000.00

Contribute to Total Construction Cost ▼   **Preliminary Engineering** ▼

① ☑   ☐

Exclude from Reference Price Calculation ▼   **Design Unit Owner** ▼

② ☑   [▼]

Nonbid ▼   **Prequalification Work Type** ▼

☐   [▼]

Design Build   **Parent Parametric Item** ▼

No   🔍 Begin typing to search or press Enter

Lump Sum   **Parent Typical Section**

Yes

Bid as Lump Sum   **Item Alternate Set** ▼

Yes   [   ]

Cost Estimate Category ID ▼   **Item Alternate Member** ▼

🔍 Begin typing to search or press Enter   [   ]

                                                               Low Cost

                                                               Yes

▼ Remarks

Type *   **Remark** *

[▼]   [   ] 🔍

7	3100012 C.L. + POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DI			Detail		▼
1.000		LS	50,000.00000	50,000.00	Yes	

Add Common Lump Sum Item Reference Price

1. Navigate to the Item Pricing Worksheet

2. Select the three blue bar icon in the unit price field of the common lump sum item (1)
3. Select the "Reference Hyperlink" (2)

4. Select New (1)
5. Enter reference description. For example 8% of total estimate (2)
6. Enter percentage in the "Percent on top" field. Use of this field will exclude all other percentage based items from the calculation, such as M&PT, Mobilization and Construction Surveying (3)
7. Select the "Active" checkbox (4)

8. Click Save (5)

9. Price is calculated.

Calculate Bid Based Unit Prices for All Items

There are several methods to price items in Estimation. Items can be priced individually, or the entire estimate can be priced all at once. It is recommended that all item prices be updated every six months or at every milestone cost estimate. After an entire cost estimate price refresh, it is also recommended that a snapshot be created and saved for historical purposes. The snapshot description should contain both a reason and date. See Snapshots and Cost Estimate Phase Transition topic for more details. AASHTOWare Project Estimation calculates all item pricing based upon current bid history values. When a letting is more than a year from when the estimate is prepared, an inflation adjustment should be included. Please see the Inflation topic for more details.

1. Navigate to the item pricing worksheet from the Cost Estimate summary page

2. Pricing all estimate items can be accomplished selecting the action arrow to the right of the save button (1)
3. Select "Calculate Bid Based Prices for all items" (2)

https://ctdot-pr-prod.infotechinc.com/CostEstimate/232/EntityIssueOverview

4. Calculate Bid-Based Prices operation will begin. Please be patient with this step in the process. Large estimates may require 10 to 15 minutes to complete item pricing calculations.

5. Non-lump sum items will be priced automatically. Users may refresh the browser to view item pricing progress.

Item Pricing Worksheet

| ∨ Item Pricing Worksheet | | | | | | | | Save ▼ ❓ |

Q Type search criteria or press Enter ✎   ItemNumLH ▼   Showing 8 of 8

Total Cost Estimate Items

1,139,339.64

0 added   0 marked for deletion   0 changed

✎ Cat ID ▼	Line	✎ Item * ▼	Descr	Unit	✎ Quantity ▼	✎ Unit Price ▼	Ext Amt	✎ Supp Descr ▼	✎ Pri... ▼
0001	3	0020801	ASBESTOS ABATEMENT	LS	1.000	50,000.00000	50,000.00		Ad Hoc
0001	2	0503001	REMOVAL OF SUPERSTRUCTURE	LS	1.000	351,000.00000	351,000.00		Ad Hoc ▼
0001	6	0503151	REMOVAL OF SUPERSTRUCTURE (SITE NO. 1)	LS	1.000	5,000.00000	5,000.00		Ad Hoc ▼
0001	7	0601318	PARTIAL DEPTH PATCH	c.f.	330.000	325.25000	107,332.50		Regre... ▼
0001	8	0602030	DEFORMED STEEL BARS - GALVANIZED	lb.	2,000.000	5.27000	10,540.00		Regre... ▼
0001	1	0603061	STRUCTURAL STEEL (SITE NO. 1)	LS	1.000	250,000.00000	250,000.00		Ad Hoc ▼
0001	4	0975004	MOBILIZATION AND PROJECT CLOSEOUT	LS	1.000	315,467.14000	315,467.14		Refere... ▼
8888	5	3100012	C.L.+ POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DISTRIBUTION	LS	1.000	50,000.00000	50,000.00		Ad Hoc ▼

| New | Select Items... |

Showing 8 of 8

Calculate Bid Based Unit Prices for Individual Items

Single items added in between bi-annual or milestone estimate updates can be priced individually. Please follow the steps below for item pricing procedures.

1. Navigate to the item pricing worksheet from the Cost Estimate summary page

Overview   Contingency Assignment   Funding: Assign to Items   Fund Package Overview   Life Cycle Costs   Typical Sections   Item Pricing Worksheet

Cost Estimate Summary

| ∨ Cost Estimate: 0999-0999-TST - Cost Estimate for Training. Created 8/3/23 by James Kocaba. Please do not delete. | | Save ▼ ❓ |

Project: 0999-0999-TST

General	**∨ Parent Attributes**
Categories	**Associated Type**
Cost Summary	Project
Cost Estimate Items	**Entity**
Non-Construction Costs	0999-0999-TST
Markups	**Entity Description**

Associated Type   Project

Unit System   English

Improvement Type

Entity Description

Test project created by James Kocaba for Estimation training

Work Type

Spec Book

11

∨ Estimate Information

Cost Estimate Name *

0999-0999-TST

Design Build

☐

Cost Estimate Descr

Cost Estimate for Training. Created 8/3/23 by James Kocaba. Please do not delete.   🔍

Profile

No

Estimate Phase

01 - Programming ▼

Budget Class

▼

Estimated By

Q CONNDOT\kocabajt

Kocaba James

Lanemiles

Σ

Estimate Type

▼

Cost Estimate Total

Vendor Access

2. Pricing individual estimate items can be accomplished selecting the three staked blue bars in the item unit price field (1)
3. Ensure the active checkmark box is active (2)
4. Select calculate price (3)

5. Select "Save"

6. Save is complete and item price is established

Add Contingency Percentage

Contingency is an element of estimated cost included to account for uncertainty and risk. The designer is responsible for ensuring that the proper percentage is entered based upon cost estimate phase.

1. Select Non-Construction Costs (1)
2. Select New (2)
3. Enter "Contingency" for name (3)
4. Enter "Contingency" for description (4)
5. Enter Percentage (5)
6. Select "Active" (6)
7. Select "Save" (7)

Add Incidental Percentage

The Non-Construction Cost tab can be used to enter incidental cost values. The cost of Construction Engineering (CENG), which consists of the various activities required to administer the construction contract, including inspection, materials testing, construction phase design support and other functions. It includes state and consultant forces, when applicable. For state-awarded construction contracts, this "Incidental Cost" is estimated using a sliding scale percentage of the contract cost as shown in the Incidental Cost Percentage Chart. Please refer to the cost estimating guide for contract price ranges and the associated values.

1. Select Non-Construction Costs from the Cost Estimate Summary (1)
2. Select "New" (2)
3. Enter Non-Construction Cost Name (3)
4. Enter Non-Construction Cost Description (4)
5. Enter proper percentage (5)
6. Select the "Active" checkbox (6)
7. Click "Save" (7)

Add Inflation

A cost estimate with a letting date more than one year from when the estimate is prepared should include an inflation adjustment. Inflation values progressively decrease as contracts move from programming to semi-final design and are removed entirely at the final design phase. The Inflation Parametric Item (005PARA) can be used to enter direct future inflation values. The steps for calculating and entering inflation values ad-hoc (manually) or as a reference percentage are shown below. This item must always have "Contribute to Total Construction Cost" and "Exclude from Reference Price Calculation" flags activated on the cost estimate item screen

Except for contracts with durations of three years or more, the inflation adjustment factor is computed by determining the number of years between the estimate date (when estimate is prepared) and scheduled bid opening and multiplying this number by the annual inflation factor. For contracts with durations of three years or longer, compute the number of years from the estimate date to the mid-point of construction. An annual inflation rate of 6.5 percent per year (simple, not compound) should be used for 2023 and subsequent years. Inflation costs decrease as the cost estimate phases advance toward semi-final design and eventually are eliminated at final design. Example computations and process for AWP cost estimate incorporation to follow:

Inflation Example 1 (construction duration less than 3 years)
Estimate date: January 15, 2023
Scheduled bid opening (letting) date: November 15, 2024
Duration of construction contract: 2 years (midpoint: April 2026)
Estimated cost: $1,500,000
Inflation: 6.5 percent
Estimated future/inflated cost = $1,500,000 x (1.83x0.065) = $178,425

Inflation Example 2 (construction duration more than 3 years)
Estimate date: January 15, 2023
Scheduled bid opening (letting) date: December 13, 2024
Duration of construction contract: 4 years (midpoint: April 2027)

Estimated cost: $15,000,000
Inflation: 6.5 percent
Estimated future/inflated cost = $15,000,000 x (4.25x0.065) = $4,143,750

Ad Hoc (Manual):

1. Navigate to the Cost Estimate Summary screen
2. Select Item Pricing work sheet

3. Select New

4. Click in the Cat ID field (1)
5. Select the appropriate funding category

6. Double click the item field
7. Enter "PARA"
8. Select item 0005PARA

9. Enter a lump Sum quanity of 1.0

10. Enter the manually calculated lump sum unit price (1)
11. Click Save (2)

12. Ensure "Contribute to Total Construction Cost" and "Exclude from Reference Price Calculation" flags are activated on the cost estimate item screen
13. Navigate to the cost estimate item screen

Item Pricing Worksheet

∨ Cost Estimate: 0999-0999-01 - TEST Cost Estimate for Consultant Design Demo　　Save ∨ ❓

Project: 0999-0999

🔍 Type search criteria or press Enter　✏️　ItemNumLH ∨　Showing 8 of 8

Total Cost Estimate Items

593,460.10

0 added　0 marked for deletion　0 changed

✏️ Cat ID ∨	Line	✏️ Item ● ∨	Descr	Unit	✏️ Quantity ∨	✏️ Unit Price ∨	Ext Amt	✏️ Price ! ✏️ Supp Descr ∨	✏️ Active ∨
0001	8	0005PARA	INFLATION PARAMETRIC ITEM	LS	1.000	70,886.10000	70,886.10 Refere...		Yes
0001	6	0202000	EARTH EXCAVATION	c.y.	1,600.000	62.29000	99,664.00 Regre...		Yes ▼
0001	7	0212000	SUBBASE	c.y.	2,000.000	60.00000	120,000.00 Ad Hoc		Yes ▼
0001	3	0406170	HMA S1	ton	1,000.000	191.84000	191,840.00 Regre...	** See Special Provi...	Yes ▼
0001	5	0975004	MOBILIZATION AND PROJECT CLOSEOUT	LS	1.000	37,805.92000	37,805.92 Refere...		No ▼
0001	2	1001001	TRENCHING AND BACKFILLING	l.f.	1,000.000	53.12000	53,120.00 Regre...		Yes ▼
0001	1	1114102	SPAN WIRE	l.f.	1,000.000	7.95000	7,950.00 Regre...	** See Special Provi...	Yes ▼
8888	4	3100012	C.L.+ POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DISTRIBUTION	LS	1.000	50,000.00000	50,000.00 Ad Hoc		Yes ▼

New　Select Items...

Showing 8 of 8

14. Locate the inflation parametric item
15. Select the drop down arrown (1)
16. Activate Contribute to Total Item Construction Cost checkbox (2)
17. Activate Exclude from Refernece Proce Calculation chekcbox (3)

Cost Estimate Summary

∨ Cost Estimate: 0999-0999-01 - TEST Cost Estimate for Consultant Design Demo　　Save ∨ ❓

Project: 0999-0999

General
Cost Summary
Cost Estimate Items
Incidentals and Contingencies
Categories
Markups

Total Cost Estimate Items

593,460.10

🔍 Type search criteria or press Enter　✏️　ItemNoSortLH ∨　Showing 8 of 8

New ▼

0 added　0 marked for deletion　0 changed

Line	Item	Type
1	0005PARA INFLATION PARAMETRIC ITEM	Detail

Quantity	Unit	Price	Ext Amt	Active
1.000	LS	70,886.10000	70,886.10	Yes

Item ● ▼　　　　　　　　　　**Unit of Measure**

🔍 0005PARA　　　　　　　　　　LS
　INFLATION PARAMETRIC ITEM

Supplemental Description ▼

　　　　　　　　　　　　　　　　　　　　　　🔍

Price Source　　　　　　　　　　**Active** ▼

Reference　　　　　　　　　　☑

Price Summary ▼

Quantity ▼	Price ▼	Ext Amt
1.000 Σ ×	70,886.10000 Σ　Details =	70,886.10

Contribute to Total Construction Cost ▼　　　**Preliminary Engineering** ▼

☑　　　　　　　　　　　　　　☐

Exclude from Reference Price Calculation ▼　　**Design Unit Owner** ▼

☑　　　　　　　　　　　　　　[　　　▾]

Nonbid ▼　　　　　　　　　**Prequalification Work Type** ▼

☐　　　　　　　　　　　　　　[　　　▾]

Design Build　　　　　　　　**Parent Parametric Item** ▼

No　　　　　　　　　　　　　　🔍 Begin typing to search or press Enter

Lump Sum　　　　　　　　　**Parent Typical Section**

No

Reference Price Percetage

Adding a reference based percentage will automatically adjust inflation values based upon the total of all the bid items. Properly identified non-bid item values will not be included in this calculation.

1. Add new 0005PARA INFLATION PARAMETRIC ITEM and a lump sum quanity of 1.0 as shown in the steps above.
2. Navigate to the blue hamburger button (1)
3. Click the "Reference" hyperlink

4. Click the "New" button (1)
5. Enter Description that details the pereentage calculation (2)
6. Enter calculated percentage in the "Perect on top" field (3)
7. Click the "Active" checkbox (4)
8. Click "Save" (5)

Snapshots and Cost Estimate Phase Transition

After a cost estimate has been completed and is ready to transition to the next project development milestone several actions must be completed. First, users must generate a cost estimate phase snapshot. A snapshot is required for PowerBi reporting and audit purposes as well as tracking scope creep. After a snapshot is created the cost estimate phase can be transitioned and saved.

1. Navigate to the Cost Estimate Summary
2. Select the action arrow adjacent to the save button (1)
3. Select "Create Snapshot" (2)

4. Enter a detailed description of the cost estimate phase (1)
5. Select the proper snapshot reason (2)
6. Select "Save" (3)

7. Snapshot has been successfully saved
8. Users can navigate back to snapshot overview

9. Navigate back to the current cost estimate

10. Modify Cost Estimate phase
    a. Select Cost Estimate Phase drop down arrow (1)
    b. Select next cost estimate phase (2)
    c. Click Save (3)

11. Quick link to cost estimate snapshots is located here:
    a. Select action item arrow adjacent to the save button (1)
    b. Select the "Snapshots" hyperlink (2)

Merge Multiple Cost Estimates

If multiple cost estimates are used to separate project locations, a cost estimate merge function must be completed before Final Design Plans phase. This task will combine all items into one active cost estimate. Users must re-add categories to the new merged cost estimate. Follow the step below to merge cost estimates.

1. Navigate to Concept or Project Cost estimates

2. Select primary cost estimate
3. Select primary cost estimate the action arrow drop down (1)
4. Select Merge Cost Estimate (2)

5. Rename merged cost estimate (1)
6. Locate and select all cost estimates to merge (2)
7. Select Merge Cost Estimate (3)

8. The system will trigger the Merge Cost Estimates Process

9. Refresh the browser
10. Locate and select new merged controlling cost estimate

11. Navigate to Cost Estimate Categories – categories must readded after merging cost estimates

12. Select New (1)
13. Enter Category (2)
14. Enter Category Description (3)
15. Select Save (4)

Check for Duplicate Items

Prior to FDP it is recommended that the designer check the cost estimate for duplicate items. Duplicate items appear when separate design groups add an identical items to the cost estimate or after merging several cost estimates. Designers can check, combine and reprice duplicate items by using the method below from the cost estimate summary or the Item Pricing Worksheet screen.

1. Navigate to the action item arrow drop down (adjacent to the save button)
2. Select either combine like items or combine like items and reprice

Change Project Workflow from 10 to 20

The final step in the cost estimate is process is to change the project workflow from 10 – Concept and Milestone Estimate to 20 – Processing for Final Estimate and Proposal. This task is initiated at Final Design Plans (FDP) cost estimate phase. Once complete Contract Development will be automatically notified by email that the cost estimate is ready for final processing. After the workflow is set to 20 the cost estimate becomes confidential and can only be modified by Contract Development and Cost Estimating.

1. Navigate to the Project Summary screen and select workflow

2. Ensure that the Standard ConnDOT Workflow is selected (1)
3. Select the WorkflowPhase drop down arrow (2)

4. Select 20 – Processing for Final Estimate and Proposal. ***Important*** Please select only phase 20. If different phase is selected and saved, you cannot go back and Contract Development will not be notified.

5. Select Save

Build Project Items (Completed by Contract Development)

Contract Development staff can initiate the "Build Project Items" process at FDP after cost estimate has been finalized and the workflow phase has been changed to 20 – Processing for Final Estimate and Proposal. This process can be completed by following the steps below:

1. Select the proper project number from the Project Overview screen.

2. Navigate to Cost Estimate

3. Select the "Cost Estimates" tab

4. Select the Cost Estimate that has control. It is very important that the proper (controlling) cost estimate is selected in this step. If the non-controlling estimate is selected, the non-preferred cost estimate alternative and it's items will be added to the project.

5. Navigate to the Cost Estimate General tab

6. Select the action dropdown arrow to the right of the save button (1)
7. Select Build Project Items (2)

8. Wait for green "Built Project Items Successfully" banner.

9. Verify that items have been built and added to the project. Navigate back to the project

10. Select Item Pricing Worksheet to view items

Update Project Fund Packages (Completed by Contract Development)

1. Navigate to the General Tab on the Project Summary Screen (1)
2. Select "Fund Package Overview" along the main navigation header (2)

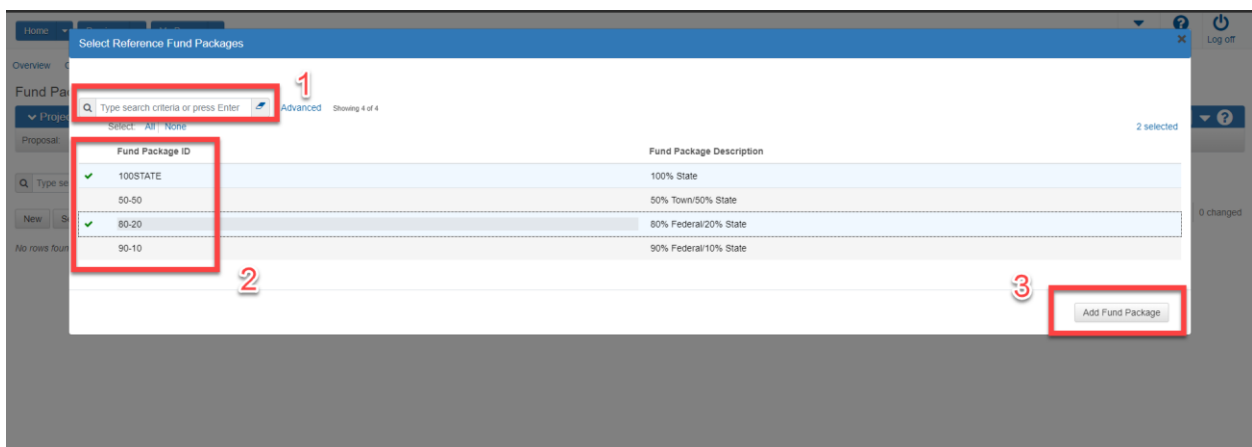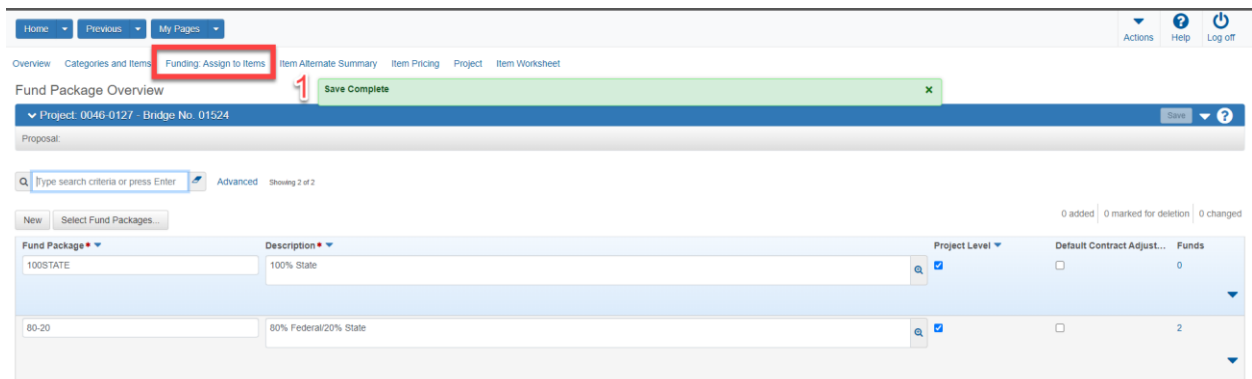3. Click on "Select Fund Packages" button (1)

4. Type Fund Package ID into search bar or press enter for all fund packages (1)
5. Select individual fund packages for assignment to the project (2)
6. Select "Add Fund Package" (3)

7. Select "Funding Assign to Items" (1)

8. Assign funds be selecting all project items, asset categories or individual items (1).
9. Click "Save" (2)

Overview   Categories and Items   Fund Package Overview   Item Alternate Summary   Item Pricing   Project   Item Worksheet

Project Funding Assignment

▾ Project: 0046-0127 - Bridge No. 01524   2️⃣ [Save] ▾ ❓

Proposal:

1️⃣

All Project Items					0 changed Expand All

All Project Items	Mixed ⦿	None ○	A ○	B ○	
01-01524 - Route 191 over the Scantic River in East Windsor	Mixed ○	None ○	A ⦿	B ○	
0010 0020903 LS LEAD COMPLIANCE FOR MISCELLANEOUS EXTERIOR TASKS		○	○	⦿	
99-General - General	Mixed ○	None ○	A ○	B ⦿	
0020 0201001 LS CLEARING AND GRUBBING		○	○	⦿	
0030 0202000 c.y. EARTH EXCAVATION		○	○	⦿	
0040 0202452 ea. TEST PIT		○	○	⦿	

	Fund Package	Description	Funds
>	(A) 100STATE	100% State	0
>	(B) 80-20	80% Federal/20% State	2