

Florida Department of Transportation

Trns•Port CES

Release 5.6a

Job Estimator's Guide

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Table of Contents

Introduction.....	4
Managing Jobs in Trns•port CES	5
Checking Jobs In and Out	6
The Jobs List Window.....	6
Checking Jobs Out	7
Projects	7
Proposals.....	8
Checking Jobs in	9
Projects	9
Proposals.....	9
Deleting a Job	10
Estimating the Job	10
Opening the Job.....	10
Working with the Jobs Tabbed Folder	10
The General Tab – Page 1	10
The General Tab – Page 2	11
The Items Tab.....	11
The Grid Format.....	13
The Tree Format.....	13
Importing Default Tasks.....	14
First Run	14
Missing Unit Prices	16
Item Pricing.....	19
Adding and Changing Item Tasks	19
Bid-based Prices	20
Adding a Bid-based Price	20
Regression Analysis.....	22
Averages	23
Reference Prices	24
Recalculating Item Values.....	25
Deleting Item Tasks	25
Active and Inactive Tasks	26
Scatter Diagrams	26
Profile Name	27
Factors	27
Model Options.....	27
Viewing the data.....	27
Enlarging the graph	30
Alternate Items	31
Importing Job Items from a CES Snapshot.....	32
Saving Data	35
Restoring Job Reference Prices.....	35

Managing Snapshots	37
Adding a Snapshot	38
Deleting a Snapshot.....	38
Viewing a Snapshot of a Job still in CES.....	39
Listing Snapshots	41
Comparing Snapshots.....	42
Comparing Global Snapshots.....	42

Introduction

This User Guide describes the procedures involved in establishing and maintaining projects in the Trns•port Cost Estimation System (CES). It is intended for Estimators in the Department who are involved in the development of project and contract Cost Estimates. They may be prepared at various times in the life cycle of a project or contract.

Three elements control the security of Department data in the CES database. These are the granting of access to individuals into CES, the granting of particular authority within the system, and the assignment of each user to an Access Control Group.

The State Estimates Office Security Coordinator or The Trns•port Coordinator will assist with security access issues and questions.

Just as PES created headers in the formulation of projects and proposals, CES will create a Job header. A Job is the entity that holds the list of all proposal or project information. A Trns•port project from PES is a group of pay Items with their associated quantities and other physical and financial information. It is "checked out" from PES to CES as a Job and will show on the list under the Jobs List window. While it is "checked out" from PES, it will be locked in the PES module to avoid the chance of data changes while the Job is under the control of an estimator.

Data fields on Trns•port screens are either required or optional. A required field may be required by either Trns•port system requirements or Department procedure. Throughout this guide, required field names will be in ***bold italics***. Field names of optional fields will be in *italics*.

Because there are hundreds of active projects in the Department at any given time, the use of the Control Group field is very important. Through its use, projects and proposals can, in effect, be sub-sets to individuals or groups of individuals for simplifying screen lists as well as for security protection of data. See Appendix A for a discussion on the structure of Control Group.

For questions relating to logging in the Trns•port modules, filtering data, and printing with Citrix Metaframe, and generating reports, see the applicable sections of the PES Reference Manual for Production Projects and Proposals.

Reference is made to the Trns•port Proposal and Estimating System (PES) and to the Trns•port Letting and Award System (LAS) where the estimator will have a role to perform in concert with the Contracts Administration Offices.

System Security

Trns•port software includes several levels of security. Each Trns•port module has a list of users (identified by user ID) who may access the module.

Each major process or program in Trns•port CES, PES, and LAS is accessible only to users with privileges to access that process or program. Each user has a set of process privileges.

Managing Jobs in Trns•port CES

Trns•port CES has extensive project building capabilities that permit users to create projects and do many functions that are also available to PES users. The Department has restricted the functions of CES to estimating. In general, all functions associated with creating or modifying the scopes of projects or proposals are to be done only in PES. The security tokens for these types of actions have been removed from the appropriate roles in CES.

Projects. Projects may be processed through CES several times over their development life. They may be re-estimated for work program purposes or at any other time if there is a change to the project scope.

Proposals. When a proposal is being made ready for advertisement, and after all related projects have been attached, the final job should be estimated in CES. To move the proposal and projects to the estimator and CES:

- Change the proposal and all related project Control Groups to one that is accessible to the District Estimator. Once the Control Group in PES has been changed, the estimator may take control of the Job and proceed with the estimate.
- From within CES, the estimator will "check out" the appropriate proposal. During the time that the Job is "checked out" the proposal and all associated projects in PES are locked. No one may access them from within PES. This is to ensure that Jobs do not become duplicated in the database.
- The estimator performs all necessary tasks associated with estimating the Job.
- When all work is complete, the estimator will reverse the process and perform a "check in" of the Job to PES. At this point the locks on the proposal and projects are removed.
- The Job will then reside only in PES except for the "Snapshot" of the estimate that will remain in CES. The proposal and projects retain a control group under the control of the District Estimator.

The steps to pricing a Job are:

- "Check Out" a Proposal from PES.
- Click a Job from the Jobs List Window.
- Open the Job in Change mode.
- Review the **General Tab** pages one and two and make necessary changes.
- Open the **Items Tab** and work with Item tasks. This tab has a **Grid View** and a **Tree View**. Both views will be used extensively.
- Add or change Item tasks.
- Close the Job and save the work.
- "Check In" the Job to PES.

Checking Jobs In and Out

CES is a temporary repository for proposal and project records, the normal location is PES. Since it is temporary, they are checked out of PES for the period it is necessary to perform an estimate. During the time they are checked out, the proposals and projects may not be accessed by others who may wish to make scope changes, but they are available in a "view" mode. Snapshots are created frequently as a job is processed through CES and are stored in CES. Any snapshot may be accessed for alter review or comparison. This screen in PES illustrates all locks in effect at the time the screen was opened.

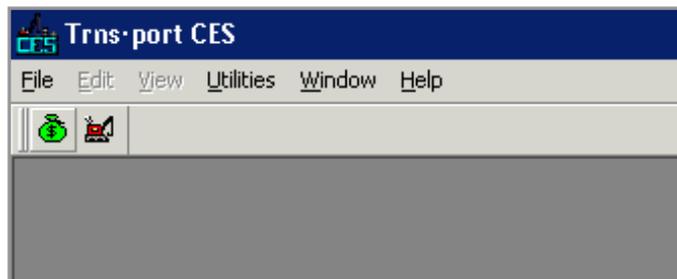
User ID	Entity Type	Entity Key	System Element	Time of Lock
ES968PH	PROJECT	XC#Template2	w_cesjobs_list	05/12/05 16:56
ES968DS	PROJECT	99575415401	w_cesjobs_list	01/05/06 11:26
MT610JV	PROJECT	41882817201	w_proptabfolder_doc	01/23/06 14:28
MT610JV	PROJECT	41882815201	w_proptabfolder_doc	01/23/06 14:28
ES968MW	PROJECT	PAUL258398	w_cesjobs_list	01/23/06 17:11
ES968MW	PROPOSAL	ZPAUL	w_cesjobs_list	01/23/06 17:11
ES968MW	PROJECT	PAUL358399	w_cesjobs_list	01/23/06 17:11
KN652FT	PROJECT	41464815201	designer interface	01/24/06 10:19
RD744JS	PROPOSAL	T7070	w_proptabfolder_doc	01/24/06 10:23
RD744JS	PROJECT	25707015601	w_proptabfolder_doc	01/24/06 10:23
RD744JS	PROJECT	25707015201	w_proptabfolder_doc	01/24/06 10:23
WP364BG	PROJECT	21797625201	w_proptabfolder_doc	01/24/06 10:46
WP364BG	PROPOSAL	T3202	w_proptabfolder_doc	01/24/06 10:46
KN7045B	PROJECT	19576615201	designer interface	01/24/06 10:46
PM404GR	PROJECT	22989715201	w_proptabfolder_doc	01/24/06 10:55
SS939TG	LETPROP	CT050727003	w_letproptabfolder_doc	01/24/06 10:56
KNKCADT	PROJECT	25822815201	designer interface	01/24/06 10:57

The Jobs List Window

Work performed in Trns•port CES will be accomplished through the Jobs List window. This window lists all the Jobs in CES that match your Control Group. You can view and create new Job Snapshots from the Jobs List window. You **cannot** change quantities or make other scope changes to the Job.

To access the Jobs List window:

- Click the **Jobs**  icon,
- Or
- Click **File > Open Job List** from the Menu Bar.



The Jobs List window will open as seen here.

Filter and sort  the window as you would any list window.

- Click the desired proposal.
- Click **OK**.

Job Number	Spec Year	Description	Project	Proposal	Estimator	Primary
19364315201	00	STATEWIDE DESIGN CES	19364315201		OPH	99
20927815201	04	SR 9A	20927815201		2WC	72
21328325201	04	I-295/ACOSTA BRIDGE	21328325201			72
25839815201	04	I-275 (SR 93)	25839815201			10
4060981PAUL	00	SW 8TH ST / TPK	4060981PAUL			87
4119811TEST	00	SR 19	4119811TEST			11
41358315202	04	SR 200	41358315202		5JT	36
415548152LS	00	US 41 (14TH ST W)	415548152LS		1SW	13
9079401PAUL	00	SR 29	9079401PAUL		OPH	03
99575415401	00	US 41 BUS	99575415401			12
9977061PAUL	00	US 27	9977061PAUL		OPH	16
A4481	00	STATEWIDE DESIGN CES	*** TRAINING ***	A4481		87
RITA2583981	04	I-275 (SR 93)	RITA2583981			10

If the project you need is not in the Jobs List Window, you will have to check it out from PES.

Note that in the box containing the check out option, other options are "grayed out."

Checking Jobs Out

Projects

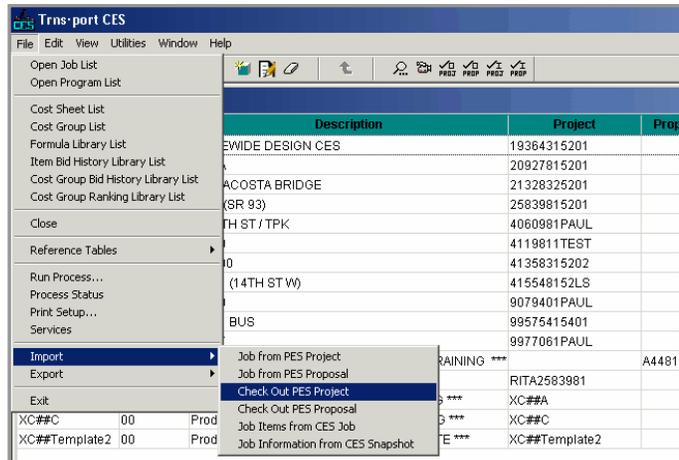
During the time that a project is checked out, that project is locked in PES so that no interactive or batch processes can modify the proposal's data. The corresponding CES Job is also locked with the exception of Item and task level cost estimation activities. While you can modify Item task information in CES, you will not be able to add or delete Items nor will you be able to change Item quantities. This is done to ensure proposal integrity when the estimated Job is returned to PES.

To bring a Project into CES:

- Click **File > Import > Check Out PES Project** from the Menu Bar.

Or

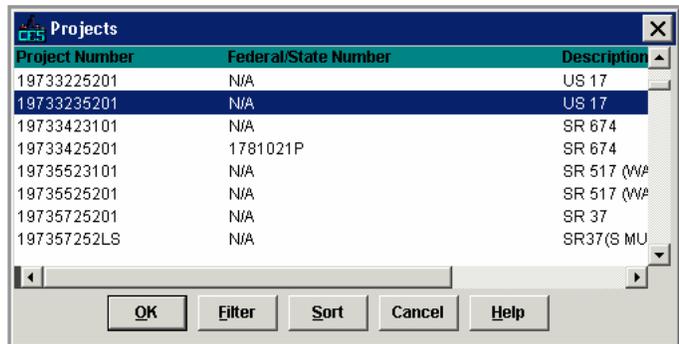
- Click the **Check Out Project** icon. 



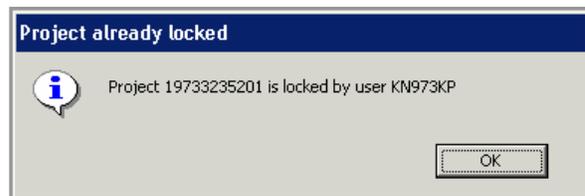
A Projects List window will open.

- Click the project to be checked out.
- Click **OK**.

If you choose a project that has the same number as a Job that already exists in CES, a Project Locked window will display similar to this one. This window indicates who, by USERID, has checked out the project.



- Click **OK** to close the window and select another project.



The PES Project header information will be used to create the CES Job header. Job Item information will be created from the Project Item records. Job category records will be created from the project category records. Once done, CES will list the newly created Job in the Jobs List window. The original PES project number will display in the Project column.

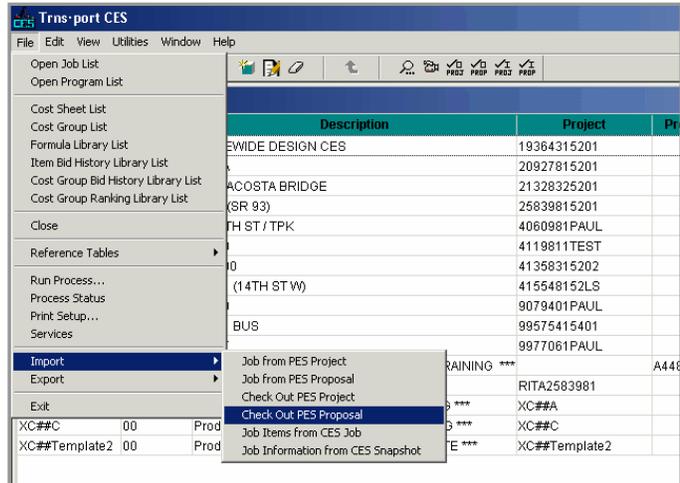
Proposals

CES will also create a Job by importing information from a PES proposal. To do this:

- Click **File > Import > Check out PES Proposal** from the Menu Bar.

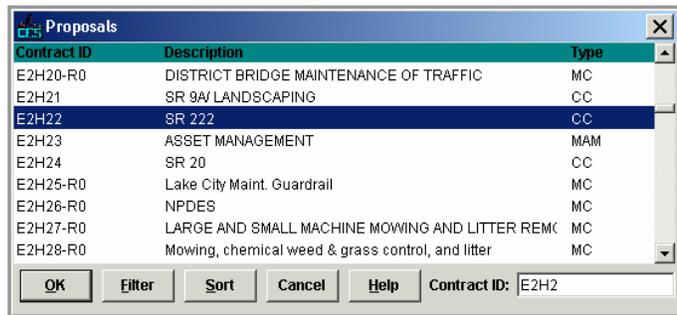
Or

- Click the **Check Out Proposal**



CES displays a Proposals List window.

- Type the **Proposal ID** into the Contract Id field or scroll to the proposal you want.
- Click the proposal to import.
- Click **OK**.



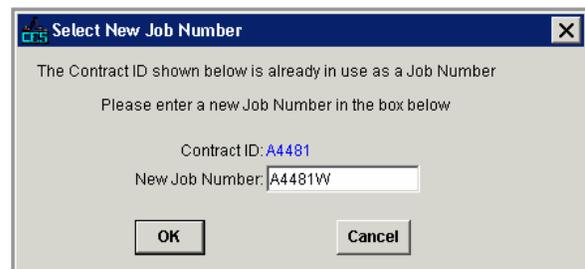
If you choose a proposal that has the same number as a Job that already exists in CES, a **Proposal already locked** window will display.

- Click **OK**.
- Select a different proposal.



You may also choose a job number already in use, but not locked as seen here.

- Click **OK** to close the window and select another Job number.



The PES proposal header information will be used to create the CES Job header. Job Item information will be created from the Proposal Item records. Job category records will be created from the project category records. Once done, CES will list the newly created Job in the Jobs List window. The original PES proposal number will display in the Proposal column. Access the new Job information just as you would any other Job in CES.

Checking Jobs in

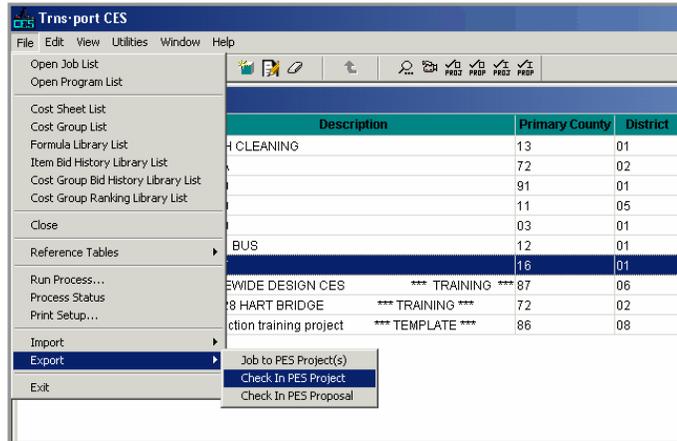
Projects

When the estimate is complete, return it to PES.

- Click the appropriate Job (project).
- Click **File > Export > Check In Project** from the Menu Bar.

Or

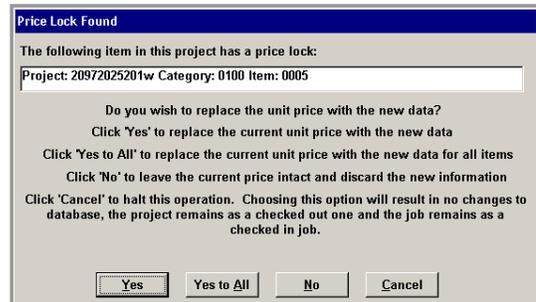
- Click the **Check In Project**



The Items will be returned to PES for assigning to the Project Item Unit Price fields.

Price Locked Flag. For any Project Items that are marked **Yes**, this screen will appear for each item when the project is exported back to PES. It will appear whether or not the Item Price has been changed in CES.

- Click **Yes** to accept each one individually or **Yes to All** to accept all at once.



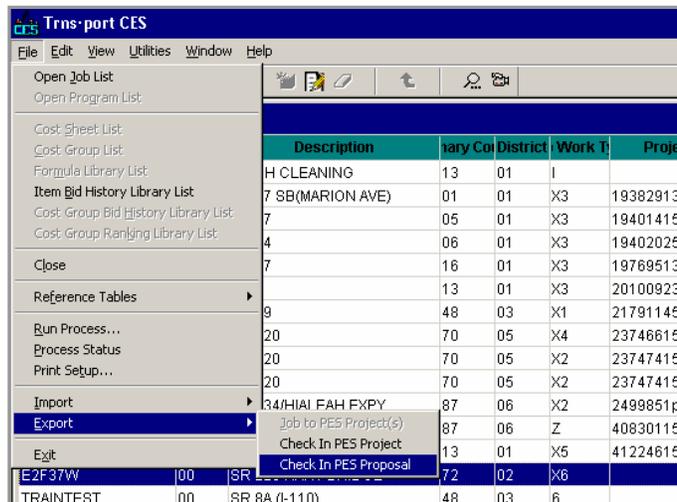
Proposals

When the estimate is complete, return it to PES by:

- Click the appropriate Job (proposal).
- Click **File > Export > Check In Proposal** from the Menu Bar.

Or

- Click the **Check In Proposal**



The unit prices will be passed to PES for assigning to the Proposal Item Unit Price field.

Deleting a Job

CES has the capability to delete Jobs. That authority has been limited to the Trns•port Coordinator in that the need to delete should be rare. Contact the Trns•port Coordinator for assistance.

Estimating the Job

Opening the Job

From the Jobs List window,

- DblClick the row.
- Or
- Rclick the **Job**.
- Click **Change**.

If you want to view this Job

- Rclick the row.
- Click **Job**.

Job Number	Spec Year	Description	Primary County	District
00000	00	DITCH CLEANING	13	01
19363815201	00	STATWIDE - DESIGN-	99	99
19733235201	00	US 17	16	01
21791145210w2	00	SR 79 *** TRAINING ***	48	01
23842315201	00	SR 25 US 27	11	01
2nd conc	00	SR 70	91	01
4119811TEST	00	SR 19	11	01
A4481	00	STATEWIDE DESIGN CES *** TRAIN	87	01
E2F37W	00	SR 228 HART BRIDGE *** TRAINING ***	72	01
E3C89	00	WASHINGTON COUNTY	61	01
T1108	00	I-75	12	01

While in View mode, you may switch to the edit Change mode.

- Click **Edit > Change** from the Menu Bar,
- Or
- Click the **Change**  icon.

You cannot switch back to View mode from Change mode. If you switch to Change mode, you can edit the fields as necessary to create the Job estimate.

Working with the Jobs Tabbed Folder

The General Tab – Page 1

Most fields on this screen are blue. They were populated in PES and may not be changed in CES. Review this page to insure you are in the correct Job and that all information is correct. From this screen you will also load the Library to be used for the cost history for this Job by clicking on the down arrow in the Item History field.

Job Number: T3165w Spec Year: 04 Unit System: E
Description 1: SR 8 (I-10) Training**
Description 2:

Classifications
Work Type: X3
Highway Type:
Job Type: X3

Location
County: 53
Urban/Rural: R
District: 03
Begin Termini: 000000.000
End Termini: 000010.351

Metrics
Depth (in/mm): 0
Length (Mikm): 0.0000
Width (ftm): 0
Lane Mikm: 0.0

Inflation
Inflation %: 0.00
Years Until Work: 0.00
Base Date: 06/01/05

Bid Histories
Cost Grp Hist:
Item History: 6 Months All-DSSA
Bid-based: Use Model
Inflation: Use Job
Season: 3

Cost Sheets
Davis-Bacon?:
Labor Cls.:
Eqmpt Cls.:
Materials Cls.:

Fed/State Project Num.: N/A
C&E %:

Estimated By: JWC
Date Created: 01/09/06
Last Updated: 02/16/06
Conceptual Estimate: 20,167,560.89

Estimate: 18,653,477.46
Contingency Percent: 0.00
Total: 18,653,477.46

- Fill the following fields:

Base Date The field will default to the current date. This date is the point from which inflation will be calculated.

Urban/Rural

Season

Estimated By

Item History

The libraries will appear as seen here. Currently there are libraries for awarded contracts for six months, 18 months, and three years. Additionally there are libraries for six months, 18 months, and three year for all bids received. The libraries are updated about once per month, about 10 to 14 days after each Central Office letting . Choose the Library you wish.

Library	Description
18 MOS ALL	18 Months, English & Metric, all Construction and Traffic Ops
18 MOS AWD	18 Months, Awarded Bids, English & Metric, all Construction
3 YEAR ALL	3 Years, English & Metric, all Construction and Traffic Ops. C
3 YEAR AWD	3 Years, Awarded Bid, English & Metric, all Construction and
SIX MONTHS ALL	6 Months, English & Metric, all Construction and Traffic Ops.
SIX MONTHS AWD	6 Months, Awarded Bid, English & Metric, all Construction an

- Click it.
- Click OK.

The General Tab – Page 2

There are no fields requiring change on this page.

The screenshot shows the 'General' tab for 'Job T3165w'. It contains several input fields organized into sections:

- Scheduling ID:** []
- Planning ID:** []
- FMS Code:** []
- Design ID:** []
- Latitude:** 650000
- Longitude:** 1650000
- Control Group:** CCO3
- Doc. Mgt. ID:** []
- Bridge Mgt. ID:** []
- Pavement Mgt. ID:** []
- GIS ID:** []
- Project:** []
- Proposal:** T3165w
- Funding Category:** []
- String 1-5:** []
- Date 1-5:** 00/00/00
- Number 1-3:** 0.00
- Code 1-3:** []
- Flag 1-5:** []
- Quantity 1-2:** []
- Long String 1:** []

- Click the **Items Tab** to work with the Items on the Job.

The Items Tab

Open the **Items Tab** (the Items are in the **Grid** format) which is very similar to the Worksheet display in PES.

The Grid view will be used for locating and sorting item rows.

Unit Prices may be updated in the grid view.

To switch from the **Grid** format to the **Tree** format,

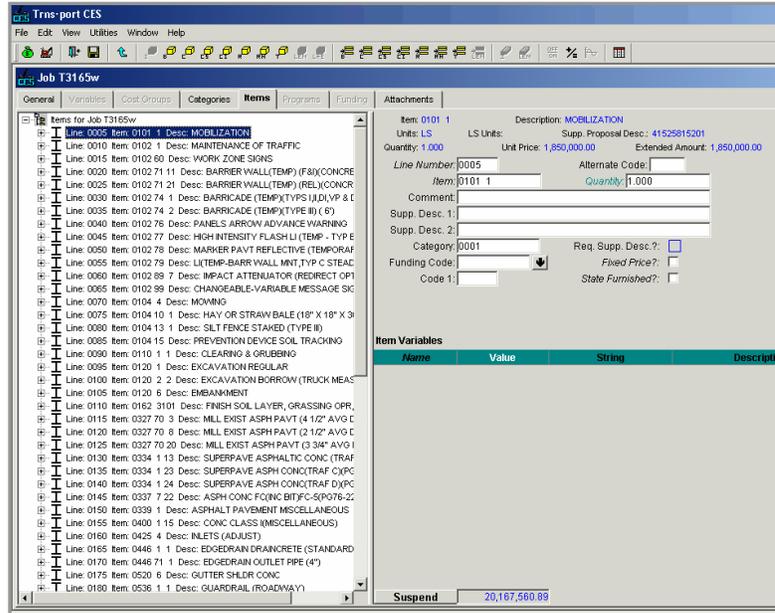
- Click the **Tree**  icon.

Tree Format Icon

The screenshot shows the 'Items' tab for 'Job T3165w' in Grid format. An arrow points to the 'Tree Format Icon' in the toolbar. The grid contains the following data:

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended Amount
0005		0101 1	MOBILIZATION	LS	DA	1.000	1,850,000.00000	1,850,000.00
0010		0102 1	MAINTENANCE OF TRAFFIC	LS		421.000	2,000.00	842,000.00
0015		0102 60	WORK ZONE SIGNS	ED		1,848.000	0.45	831.60
0020		0102 71 11	BARRIER WALL (TEMP) (F&I) (CONCRELF			1,874.000	25.00	46,850.00
0025		0102 71 21	BARRIER WALL (TEMP) (REL) (CONCR LF			2,174.000	8.00	17,392.00
0030		0102 74 1	BARRICADE (TEMP) (TYP S I, II, DI, VP & CED			15,653.000	0.30	4,695.90
0035		0102 74 2	BARRICADE (TEMP) (TYPE II) (0)	ED		35.000	0.71	24.85
0040		0102 76	PANELS ARROW ADVANCE WARNING ED			132.000	15.00	1,980.00
0045		0102 77	HIGH INTENSITY FLASH LI (TEMP - TYIED			792.000	0.71	562.32
0050		0102 78	MARKER PAVT REFLECTIVE (TEMPOREA			2,218.000	6.00	13,308.00
0055		0102 79	LI (TEMP-BARR WALL MNT, TYP C STE) ED			57.000	0.32	18.24
0060		0102 89 7	IMPACT ATTENUATOR (REDIRECT OPLO			2.000	2,500.00	5,000.00
0065		0102 99	CHANGEABLE-VARIABLE MESSAGE S ED			132.000	30.00	3,960.00
0070		0104 4	MOWING	AC		2,824.000	100.00	282,400.00
0075		0104 10 1	HAY OR STRAW BALE (18" X 18" X 36")	EA		720.000	8.00	5,760.00
0080		0104 13 1	SILT FENCE STAKED (TYPE III)	LF		12,989.000	2.00	25,978.00
0085		0104 15	PREVENTION DEVICE SOIL TRACKING EA			2.000	3,000.00	6,000.00
0090		0110 1 1	CLEARING & GRUBBING	LS	AC	35.570	20,000.00	711,400.00
0095		0120 1	EXCAVATION REGULAR	CY		24.000	30.00	720.00

Here is the **Items Tab** in **Tree** format. On the left side of the screen is the list of Items, and on the right is detail at Item level as well as Task Level. The Items list shows plus "+" signs in front of each Item, indicating that they are expandable.

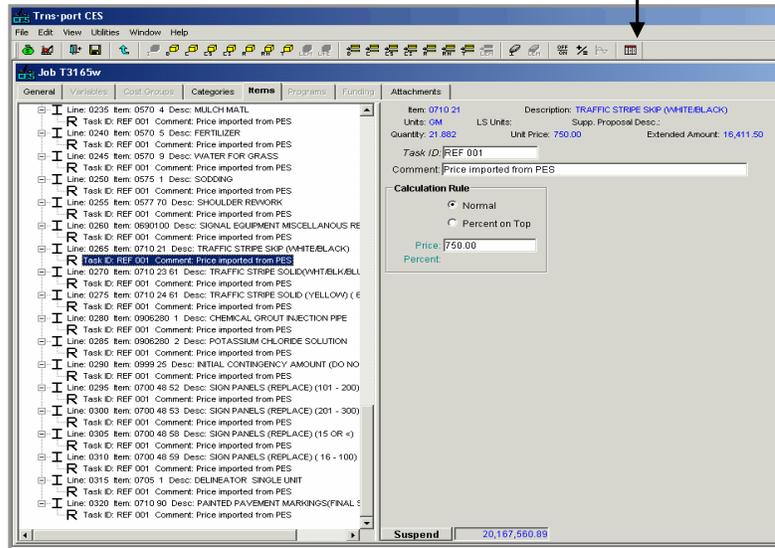


Grid Format Icon

See the **Grid Format**  icon at the right of the screen. You may toggle between the two views as you price the Job.

This shows the same item list in expanded view. On the left, all items have been expanded to show the tasks associated with each Item. On the right the detail information is also altered.

- ❖ **Note. Unit price changes may only be made at the task level.**



To see this view from the Menu Bar:

- Click **View > Expand All**.



The Grid Format

In the **Grid** view the Units column was highlighted by clicking the label **Units** in the green band. Dblclick any column title and the column will sort. In this case, the units are sorted alphabetically. Note that some items appear to be duplicated. This example is a strung job, and some of the Items were set to **not combine**, so that they will be bid, and priced, individually. Check your job to see that all items are marked to **Combine with Like Items** where appropriate. If these flags have to be changed, check the job into PES and make the necessary changes in the projects.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Ext
0225		0660 2106	LOOP ASSEMBLY (F&I) (TYPE F)	AS		79.0000	606.18814	
0220		0635 1 11	PULL & JUNCTION BOXES (F&I) (PULL BOX)	EA		34.0000	233.15730	
0155		0710 6	DIRECTIONAL ARROWS, PAINTED	EA		33.0000	31.24439	
0150		0706 3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA		1,286.0000	4.36923	
0160		0710 7	PAVT MESSAGE, PAINTED	EA		3.0000	35.67254	
0060		0460112	ANCHOR BOLT REPLACEMENT	EA		27.0000	670.73171	
0050		0460 81	RIVETS / HIGH STRENGTH BOLTS (REPLACE)	EA		2,523.0000	100.00681	
0020		0102 60	WORK ZONE SIGNS	ED		54,480.0000	0.46667	
0025		0102 74 1	BARRICADE (TEMP)(TYP5 U/LVP & DRUM)	ED		24,000.0000	0.50000	
0095		0102 74 1	BARRICADE (TEMP)(TYP5 U/LVP & DRUM)	ED		19,800.0000	0.21437	
0045		0102 99	SIGN VARIABLE MESSAGE (TEMPORARY)	ED		720.0000	66.86667	
0030		0102 74 2	BARRICADE (TEMP)(TYPE III) (Ø)	ED		7,680.0000	0.35755	
0090		0102 60	WORK ZONE SIGNS	ED		7,200.0000	0.31148	
0040		0102 77	HIGH INTENSITY FLASH LI (TEMP - TYP B)	ED		5,760.0000	2.86667	
0035		0102 76	PANELS ARROW ADVANCE WARNING	ED		720.0000	8.95000	
0100		0102 76	PANELS ARROW ADVANCE WARNING	ED		450.0000	9.02600	
0105		0102 77	HIGH INTENSITY FLASH LI (TEMP - TYP B)	ED		2,340.0000	0.60355	
0115		0300 1 1	BIT MATL (PRIME COAT)	GA		3,650.0000	0.99902	
0055		0460 95	STRUCTURAL STEEL REPAIR	LB		296.0000	966.66667	
0215		0630 1 14	CONDUIT (FURNISH & INSTALL)(UG - JACKED)	LF		1,653.0000	11.68311	
0210		0630 1 13	CONDUIT (FURNISH & INSTALL)(UNDER PAVT)	LF		3,597.0000	12.51272	
0205		0630 1 12	CONDUIT (FURNISH & INSTALL)(UNDERGROU)	LF		2,833.0000	3.94999	

The Tree Format

The first time an Item is opened after checking out the proposal all of the task types will be "R" for Reference Price. This graphic illustrates the **Add** and **Insert Icons** for Bid-based Prices. In this approach, you will add or insert one Item at a time. To add more task types you can Add or Insert other types from the tool bar Icons. Trns•port provides seven task types that are:

- B Bid-based Price
- C New Cost Sheet
- CI Item Cost Sheet
- CS Standard Cost Sheet
- R Reference Price
- RH Historical Price
- T Task Group

Of this group of seven, The Department is using two at this time. These are **B** and **R**. The Bid-based Price tasks will use data from the cost Library you selected at the **General Tab**. Be sure to select the Library that is best suited to the Job.

Add Icons
Insert Icons

Importing Default Tasks

First Run

As you begin pricing a Job, you may import default tasks that are based on specific Library bid history. This process can replace all of the Reference Prices for the tasks that you select.

Begin in the **General Tab** – **Page 1** of the Job.

- Enter **Season** that corresponds to the **Letting Date**.
- Enter your ID in the **Estimated By** field.
- Enter **Rural/Urban**.
- Enter **Item History**.

Click the **Bid-based Library** for the time period and range by clicking the arrow at the **Item Bid History Library** field.

On completing these fields at the **General Tab**,

- Click the **Items Tab icon**.



Begin with the Item list in **Grid** format.

You may want to import default Items for all **Items** that are NOT lump sum:

- Sort the worksheet on the Unit of Measure. Do this by "DbClicking" the label **Unit** in the green bar.

Line Number	All Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended Amount
0005	0101 1		MOBILIZATION	LS		1,000	1,850,000.00	1,850,000.00
0010	0102 1		MAINTENANCE OF TRAFFIC	LS	DA	421.000	2,000.00	842,000.00
0015	0102 60		WORK ZONE SIGNS	ED		1,848.000	0.45	831.60
0020	0102 71 11		BARRIER WALL(TEMP) (F&I)(CONCRELF			1,874.000	25.00	46,850.00
0025	0102 71 21		BARRIER WALL(TEMP) (REL)(CONCR	LF		2,174.000	8.00	17,392.00
0030	0102 74 1		BARRICADE (TEMP)(TYP I,II,DI,VP & ED			15,653.000	0.30	4,695.90
0035	0102 74 2		BARRICADE (TEMP)(TYPE III) (6)	ED		35.000	0.71	24.85
0040	0102 76		PANELS ARROW ADVANCE WARNING ED			132.000	15.00	1,980.00
0045	0102 77		HIGH INTENSITY FLASH LI (TEMP - TY	ED		792.000	0.71	562.32
0050	0102 78		MARKER PAVT REFLECTIVE (TEMP) OEA			2,218.000	6.00	13,308.00
0055	0102 79		LI(TEMP-BARR WALL MNT,TYP C SITE/EA			57.000	0.32	18.24
0060	0102 89 7		IMPACT ATTENUATOR (REDIRECT OPLO			2.000	2,500.00	5,000.00
0065	0102 99		CHANGEABLE-VARIABLE MESSAGE S ED			132.000	30.00	3,960.00
0070	0104 4		MOWING	AC		2,824.000	100.00	282,400.00
0075	0104 10 1		HAY OR STRAW BALE (18" X 18" X 36")	EA		720.000	8.00	5,760.00
0080	0104 13 1		SILT FENCE STAKED (TYPE III)	LF		12,989.000	2.00	25,978.00
0085	0104 15		PREVENTION DEVICE SOIL TRACKIN	EA		2.000	3,000.00	6,000.00
0090	0110 1 1		CLEARING & GRUBBING	LS	AC	35.570	20,000.00	711,400.00
0095	0120 1		EXCAVATION REGULAR	CY		24.000	30.00	720.00
0100	0120 2 2		EXCAVATION BORROW (TRUCK MEAS	CY		11,554.000	10.00	115,540.00
0105	0120 6		EMBANKMENT	CY		458.000	20.00	9,160.00
0110	0162 3101		FINISH SOIL LAYER, GRASSING OPR,	SY		1,280.000	1.00	1,280.00
0115	0327 70 3		MILL EXIST ASPH PAVT (4 1/2" AVG DE	SY		6,080.000	4.50	27,360.00
0120	0327 70 8		MILL EXIST ASPH PAVT (2 1/2" AVG DE	SY		390,228.000	2.50	975,570.00
Suspend								20,167,560.89

The worksheet will appear similar to this one.

- Click the rows for which you wish to import default values to highlight them.

In this example

- DoubleClick the **Units** label.

The Units column will be sorted.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended Amount
0070	0104	4	MOWING	AC		2,824.000	100.00	282,400.00
0155	0400	1 15	CONC CLASS (MISCELLANEOUS)	CY		5.000	1,200.00	6,000.00
0095	0120	1	EXCAVATION REGULAR	CY		24.000	30.00	720.00
0100	0120	2 2	EXCAVATION BORROW (TRUCK MEAS)	CY		11,554.000	10.00	115,540.00
0105	0120	6	EMBANKMENT	CY		458.000	20.00	9,160.00
0305	0700	48 58	SIGN PANELS (REPLACE) (15 OR <)	EA		69.000	250.00	17,250.00
0310	0700	48 59	SIGN PANELS (REPLACE) (16 - 100)	EA		45.000	1,500.00	67,500.00
0210	0536	85 25	GUARDRAIL END ANCHORAGE ASSE	EA		14.000	1,000.00	14,000.00
0205	0536	85 22	GUARDRAIL END ANCHORAGE ASSE	EA		10.000	2,300.00	23,000.00
0050	0102	78	MARKER PAVT REFLECTIVE (TEMPOR	EA		2,218.000	6.00	13,308.00
0300	0700	48 53	SIGN PANELS (REPLACE) (201 - 300)	EA		6.000	7,000.00	42,000.00
0295	0700	48 52	SIGN PANELS (REPLACE) (101 - 200)	EA		7.000	4,500.00	31,500.00
0215	0544	75 14	IMPACT ATTR VEHICULAR (QUADRU	EA		1.000	22,500.00	22,500.00
0085	0104	15	PREVENTION DEVICE SOIL TRACKING	EA		2.000	3,000.00	6,000.00
0195	0536	8 5	GRDRL BRIDGE ANCHORAGE ASSEM	EA		10.000	2,400.00	24,000.00
0075	0104	10 1	HAY OR STRAW BALE (18" X 18" X 36")	EA		720.000	8.00	5,760.00
0315	0705	1	DELINEATOR SINGLE UNIT	EA		357.000	50.00	17,850.00
0190	0536	8	GUARDRAIL BRIDGE ANCHORAGE AS	EA		4.000	2,000.00	8,000.00
0160	0425	4	INLETS (ADJUST)	EA		24.000	2,000.00	48,000.00
0035	0102	74 2	BARRICADE (TEMP)(TYPE III) (6)	ED		35.000	0.71	24.85
0015	0102	60	WORK ZONE SIGNS	ED		1,848.000	0.45	831.60

- Click **Edit > Select All** from the Menu bar.

All the rows will be highlighted

- Scroll down to the rows where **LS** units appear.
- With the **CTRL** key depressed, click each **LS** row.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended Amount
0225	0550	10150	FENCING, TYPE A(8-1-10.0)	LF		115,700.000	18.00	2,082,600.00
0025	0102	71 21	BARRIER WALL(TEMP) (REL)(CONCR	LF		2,174.000	8.00	17,392.00
0200	0536	73	GUARDRAIL REMOVAL	LF		7,030.000	5.00	35,150.00
0185	0536	1 3	GUARDRAIL (ROADWAY, DOUBLE FAC	LF		40,795.000	35.00	1,427,825.00
0180	0536	1 1	GUARDRAIL (ROADWAY)	LF		7,211.000	25.00	180,275.00
0175	0520	6	GUTTER SHLDR CONC	LF		6,800.000	20.00	132,000.00
0170	0446	71 1	EDGEDRAIN OUTLET PIPE (4")	LF		1,162.000	24.00	27,888.00
0165	0446	1 1	EDGEDRAIN DRAINCRETE (STANDAR	LF		24,979.000	30.00	749,370.00
0080	0104	13 1	SILT FENCE STAKED (TYPE III)	LF		12,989.000	2.00	25,978.00
0020	0102	71 11	BARRIER WALL(TEMP) (F&)(CONCRE	LF		1,874.000	25.00	46,850.00
0060	0102	89 7	IMPACT ATTENUATOR (REDIRECT OP	LO		2.000	2,500.00	5,000.00
0290	0999	25	INITIAL CONTINGENCY AMOUNT (DO	LS		1.000	150,000.00	150,000.00
0010	0102	1	MAINTENANCE OF TRAFFIC	LS	DA	421.000	2,000.00	842,000.00
0005	0101	1	MOBILIZATION	LS		1.000	1,850,000.00	1,850,000.00
0090	0110	1 1	CLEARING & GRUBBING	LS	AC	35.570	20,000.00	711,400.00
0320	0710	90	PAINTED PAVEMENT MARKINGS(FINA	LS		1.000	179,999.00	179,999.00
0245	0570	9	WATER FOR GRASS	MG		840.000	30.00	25,200.00
0270	0710	23 61	TRAFFIC STRIPE SOLID (WHITE)BLK	NM		22.996	800.00	18,396.80
0275	0710	24 61	TRAFFIC STRIPE SOLID (YELLOW) (B	NM		23.246	880.00	20,456.48
0260	0690100		SIGNAL EQUIPMENT MISCELLANOUS	PI		2.000	250.00	500.00
0220	0546	72 61	RUMBLE STRIP (GROUND-IN) (18" MI	PFM		38.200	1,250.00	47,750.00
0255	0577	70	SHOULDER REWORK	SY		49,765.000	1.00	49,765.00
0250	0575	1	SODDING	SY		138,702.000	2.50	346,755.00
0125	0327	70 20	MILL EXIST ASPH PAVT (3 3/4" AVG	DE	SY	9,104.000	4.25	38,692.00

Each of the **LS** rows will be deselected as seen here. Scroll up and down to verify the list of selected Items. By holding down the **CTRL** key and clicking, any row can be individually selected or de-selected.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended Amount
0225	0550	10150	FENCING, TYPE A(8-1-10.0)	LF		115,700.000	18.00	2,082,600.00
0025	0102	71 21	BARRIER WALL(TEMP) (REL)(CONCR	LF		2,174.000	8.00	17,392.00
0200	0536	73	GUARDRAIL REMOVAL	LF		7,030.000	5.00	35,150.00
0185	0536	1 3	GUARDRAIL (ROADWAY, DOUBLE FAC	LF		40,795.000	35.00	1,427,825.00
0180	0536	1 1	GUARDRAIL (ROADWAY)	LF		7,211.000	25.00	180,275.00
0175	0520	6	GUTTER SHLDR CONC	LF		6,800.000	20.00	132,000.00
0170	0446	71 1	EDGEDRAIN OUTLET PIPE (4")	LF		1,162.000	24.00	27,888.00
0165	0446	1 1	EDGEDRAIN DRAINCRETE (STANDAR	LF		24,979.000	30.00	749,370.00
0080	0104	13 1	SILT FENCE STAKED (TYPE III)	LF		12,989.000	2.00	25,978.00
0020	0102	71 11	BARRIER WALL(TEMP) (F&)(CONCRE	LF		1,874.000	25.00	46,850.00
0060	0102	89 7	IMPACT ATTENUATOR (REDIRECT OP	LO		2.000	2,500.00	5,000.00
0290	0999	25	INITIAL CONTINGENCY AMOUNT (DO	LS		1.000	150,000.00	150,000.00
0010	0102	1	MAINTENANCE OF TRAFFIC	LS	DA	421.000	2,000.00	842,000.00
0005	0101	1	MOBILIZATION	LS		1.000	1,850,000.00	1,850,000.00
0090	0110	1 1	CLEARING & GRUBBING	LS	AC	35.570	20,000.00	711,400.00
0320	0710	90	PAINTED PAVEMENT MARKINGS(FINA	LS		1.000	179,999.00	179,999.00
0245	0570	9	WATER FOR GRASS	MG		840.000	30.00	25,200.00

When the selected list is correct, from the Menu Bar:

- Click **Edit > Bring in Default Tasks**.

The warning window will appear.

- Click **Yes**.

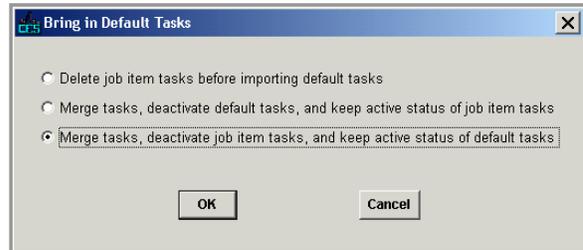
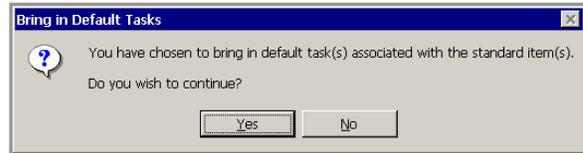
A second window will appear to give you choices on how to show the default items.

- Click a Radio Button.

In this example the third radio button is selected so that the default prices being imported will be the primary price and the reference prices will be available for comparison.

- Click **OK**.

As the import proceeds, you will see activity on the screen.



Missing Unit Prices

You may find that the library used for the first run of importing default prices includes some Items that did not have prices. To find these:

- DblClick the label **Unit Price** in the green bar.

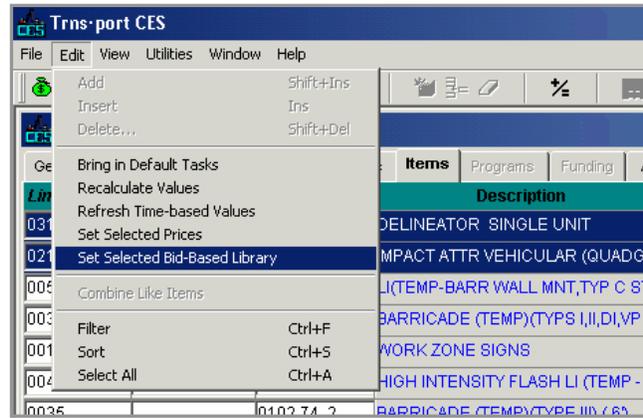
Items having no unit prices will sort to the top of the list. In this example, the library contained values for all but 18 items.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended
0215	0544 75 14	IMPACT ATTR VEHICULAR (QUADGURD)		EA	1,000			
0185	0536 1 3	GUARDRAIL (ROADWAY, DOUBLE FACE)		LF	40,795.000			
0230	0570 3 1	SEED GRASS (PERM TYPE,ARGEN BAHIA)		LB	26.000			
0115	0327 70 3	MILL EXIST ASPH PAVT (4 1/2" AVG DEPTH)		SY	6,080.000			
0140	0334 1 24	SUPERPAVE ASPH CONC(TRAFF D)(POT6-22)		TN	78,302.800			
0300	0700 48 53	SIGN PANELS (REPLACE) (201 - 300)		EA	6.000			
0280	0906280 1	CHEMICAL GROUT INJECTION PIPE		LF	9,750.000			
0225	0550 10150	FENCING, TYPE A(8-1-10-0)		LF	115,700.000			
0285	0906280 2	POTASSIUM CHLORIDE SOLUTION		GA	20,000.000			
0310	0700 48 59	SIGN PANELS (REPLACE) (16 - 100)		EA	45.000			
0195	0536 8 5	ORDRL BRIDGE ANCHORAGE ASSEMBLY (REP)		EA	10.000			
0165	0446 1 1	EDGE DRAIN DRAINCRETE (STANDARD)		LF	24,979.000			
0170	0446 71 1	EDGE DRAIN OUTLET PIPE (4")		LF	1,162.000			
0125	0327 70 20	MILL EXIST ASPH PAVT (3 3/4" AVG DEPTH)		SY	9,104.000			
0315	0705 1	DELINEATOR SINGLE UNIT		EA	357.000			
0160	0425 4	INLETS (ADJUST)		EA	24.000			
0295	0700 48 52	SIGN PANELS (REPLACE) (101 - 200)		EA	7.000			
0220	0546 72 51	RUMBLE STRIP (GROUND-IN) (16" MIN. W)		PM	38.200			
0055	0102 79	L/TEMP-BARR WALL MNT,TYP C STEADY BURN)		ED	57.000		0.18	
0030	0102 74 1	BARRICADE (TEMP)(TYP I,L/D,V/P & DRUM)		ED	15,653.000		0.23	

- Highlight all unpriced rows by holding down the **<CTRL>** key and **Clicking** the rows.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended
0215	0544 75 14	IMPACT ATTR VEHICULAR (QUADGURD)		EA	1,000			
0185	0536 1 3	GUARDRAIL (ROADWAY, DOUBLE FACE)		LF	40,795.000			
0230	0570 3 1	SEED GRASS (PERM TYPE,ARGEN BAHIA)		LB	26.000			
0115	0327 70 3	MILL EXIST ASPH PAVT (4 1/2" AVG DEPTH)		SY	6,080.000			
0140	0334 1 24	SUPERPAVE ASPH CONC(TRAFF D)(POT6-22)		TN	78,302.800			
0300	0700 48 53	SIGN PANELS (REPLACE) (201 - 300)		EA	6.000			
0280	0906280 1	CHEMICAL GROUT INJECTION PIPE		LF	9,750.000			
0225	0550 10150	FENCING, TYPE A(8-1-10-0)		LF	115,700.000			
0285	0906280 2	POTASSIUM CHLORIDE SOLUTION		GA	20,000.000			
0310	0700 48 59	SIGN PANELS (REPLACE) (16 - 100)		EA	45.000			
0195	0536 8 5	ORDRL BRIDGE ANCHORAGE ASSEMBLY (REP)		EA	10.000			
0165	0446 1 1	EDGE DRAIN DRAINCRETE (STANDARD)		LF	24,979.000			
0170	0446 71 1	EDGE DRAIN OUTLET PIPE (4")		LF	1,162.000			
0125	0327 70 20	MILL EXIST ASPH PAVT (3 3/4" AVG DEPTH)		SY	9,104.000			
0315	0705 1	DELINEATOR SINGLE UNIT		EA	357.000			
0160	0425 4	INLETS (ADJUST)		EA	24.000			
0295	0700 48 52	SIGN PANELS (REPLACE) (101 - 200)		EA	7.000			
0220	0546 72 51	RUMBLE STRIP (GROUND-IN) (16" MIN. W)		PM	38.200			
0055	0102 79	L/TEMP-BARR WALL MNT,TYP C STEADY BURN)		ED	57.000		0.18	
0030	0102 74 1	BARRICADE (TEMP)(TYP I,L/D,V/P & DRUM)		ED	15,653.000		0.23	

- From the menu bar Click **Edit . Set Selected Bid-Bases Library**



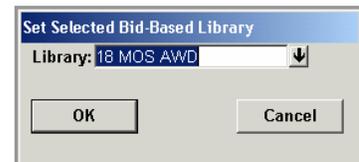
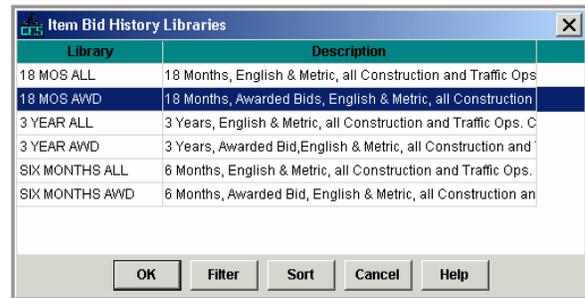
This selection window will open.

- Click the **Down Arrow**



The Bid Histories Library window will open

- Highlight a different library, in this example the **18 MOS AWD** library will be chosen.
- Click **OK**.
- Click **OK**.



In this run eight prices were found

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extended A
0215	0544 75 14	IMPACT ATTR VEHICULAR (QUADOURD)		EA	1,000		22850.42000	22
0185	0536 1 3	GUARDRAIL (ROADWAY, DOUBLE FACE)		LF	40,795.000	30.32		1,236
0230	0570 3 1	SEED GRASS (PERM TYPE ARGEN BAHIA)		LB	26.000			
0115	0327 70 3	MILL EXIST ASPH PAVT (4 1/2" AVO DEPTH)		SY	6,080.000			
0140	0334 1 24	SUPERPAVE ASPH CONC (TRAF DXP076-22)		TN	78,302.800	74.47		5,831
0300	0700 48 53	SIGN PANELS (REPLACE) (201 - 300)		EA	6,000			
0280	0906280 1	CHEMICAL GROUT INJECTION PIPE		LF	9,750.000			
0225	0550 10150	FENCING, TYPE A8.1-10.0)		LF	115,700.000			
0285	0906280 2	POTASSIUM CHLORIDE SOLUTION		GA	20,000.000			
0310	0700 48 59	SIGN PANELS (REPLACE) (116 - 100)		EA	45,000	1,517.46		68
0195	0536 8 5	GRORL BRIDGE ANCHORAGE ASSEMBLY (REP)		EA	10.000			
0165	0446 1 1	EDGE DRAIN DRAINCRETE (STANDARD)		LF	24,979.000			
0170	0446 71 1	EDGE DRAIN OUTLET PIPE (4")		LF	1,162.000			
0125	0327 70 20	MILL EXIST ASPH PAVT (3 3/4" AVO DEPTH)		SY	9,104.000			
0315	0705 1	DELINEATOR SINGLE UNIT		EA	357.000	46.51		16
0160	0425 4	INLETS (ADJUST)		EA	24.000	1,498.56		36
0285	0700 48 52	SIGN PANELS (REPLACE) (101 - 200)		EA	7,000	3,583.27		25
0220	0546 72 51	RUMBLE STRIP (GROUND IN) (18" MIN. W)		PM	38.200	1,421.25		54
0255	0102 79	LI (TEMP-BARR WALL MNT, TYP C STEADY BURIN)		ED	57.000	0.18		
0030	0102 74 1	BARRICADE (TEMP) (TYP S IJL/D/VP & DRUM)		ED	15,653.000	0.23		3

- Highlight all remaining unpriced rows by holding down the <CTRL> key and **Clicking** the rows.

As discussed above bring in another library of longer duration.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extent
0280	0906280 1	CHEMICAL GROUT INJECTION PIPE	LF			9,750.000		
0170	0446 71 1	EDGEDRAIN OUTLET PIPE (4")	LF			1,162.000		
0300	0700 48 53	SIGN PANELS (REPLACE) (201 - 300)	EA			6.000		
0125	0327 70 20	MILL EXIST ASPH PAVT (3 3/4" AVG DEPTH)	SY			9,104.000		
0225	0550 10150	FENCING, TYPE A(8 1-10.0)	LF			115,700.000		
0230	0570 3 1	SEED GRASS (PERM TYPE,ARGEN BAHIA)	LB			26.000		
0195	0536 8 5	ORDRL BRIDGE ANCHORAGE ASSEMBLY (REP)	EA			10.000		
0165	0446 1 1	EDGEDRAIN DRAINCRETE (STANDARD)	LF			24,979.000		
0115	0327 70 3	MILL EXIST ASPH PAVT (4 1/2" AVG DEPTH)	SY			6,080.000		
0285	0906280 2	POTASSIUM CHLORIDE SOLUTION	GA			20,000.000		
0055	0102 79	LICTEMP-BARR WALL MNT,TYP C STEADY BURN	ED			57.000	0.18	
0030	0102 74 1	BARRICADE (TEMP)(TYP S LII D/VP & DRUM)	ED			15,653.000	0.23	

In this case the 3 YEAR AWD library was chosen

Two more items are priced, leaving eight to be priced by other means.

One means to pricing the remaining items is to use the reference price initially imported from PES. Do this by toggling the active and inactive tasks. Another technique is to find the price on a similar item.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity	Unit Price	Extent
0280	0906280 1	CHEMICAL GROUT INJECTION PIPE	LF			9,750.000		
0170	0446 71 1	EDGEDRAIN OUTLET PIPE (4")	LF			1,162.000		
0300	0700 48 53	SIGN PANELS (REPLACE) (201 - 300)	EA			6.000	4,849.05	
0125	0327 70 20	MILL EXIST ASPH PAVT (3 3/4" AVG DEPTH)	SY			9,104.000		
0225	0550 10150	FENCING, TYPE A(8 1-10.0)	LF			115,700.000		
0230	0570 3 1	SEED GRASS (PERM TYPE,ARGEN BAHIA)	LB			26.000		
0195	0536 8 5	ORDRL BRIDGE ANCHORAGE ASSEMBLY (REP)	EA			10.000	1,943.74	
0165	0446 1 1	EDGEDRAIN DRAINCRETE (STANDARD)	LF			24,979.000		
0115	0327 70 3	MILL EXIST ASPH PAVT (4 1/2" AVG DEPTH)	SY			6,080.000		
0285	0906280 2	POTASSIUM CHLORIDE SOLUTION	GA			20,000.000		
0055	0102 79	LICTEMP-BARR WALL MNT,TYP C STEADY BURN	ED			57.000	0.18	
0030	0102 74 1	BARRICADE (TEMP)(TYP S LII D/VP & DRUM)	ED			15,653.000	0.23	

When the import finishes:

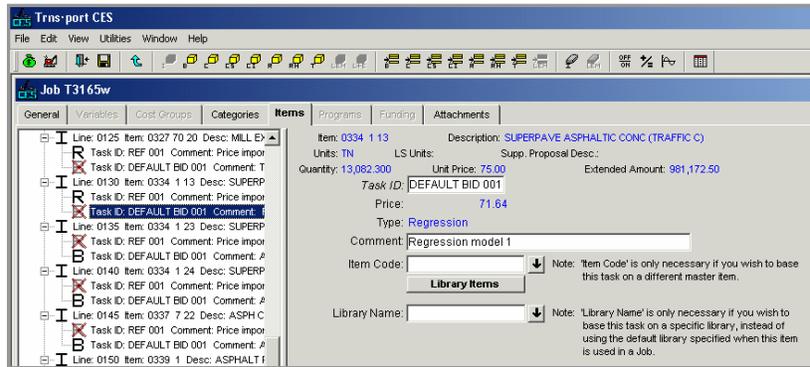
- Click the **Tree** icon.
- Click **View > Expand All** from the Menu Bar.

In this example you see an item where the Bid based price is the active task and the information is displayed in blue in the upper part of the screen.

Compare it to the Reference Price information below it.

If you toggle the two tasks to reverse which is active, the screen will look like this.

The Reference Price task data is now in the upper portion of the screen and the Bid data below it.



Item Pricing

Trns•port CES has numerous features to provide estimates for Items. These range from equipment and crew labor costs to formulae, cost sheets, and task groups. At present the Department practice is limited to two types of tasks at the Item level. These are Bid-based Prices, which come from Bid History Libraries, and Reference Prices, which come from the individual pricing actions of Department estimators.

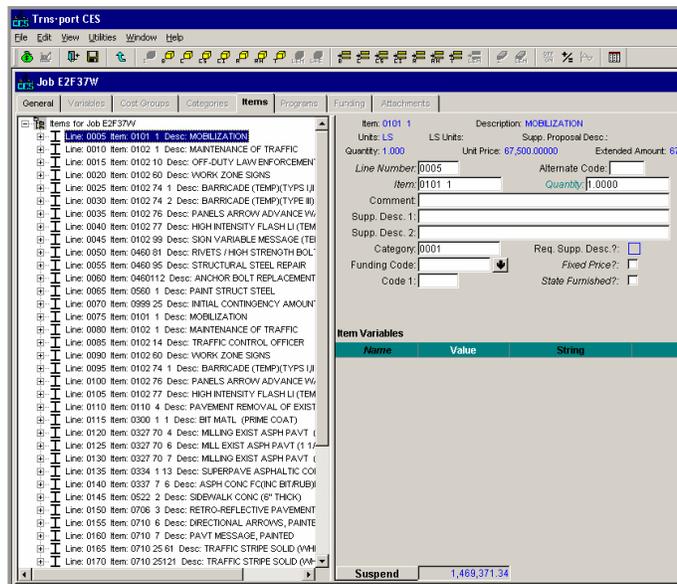
The purpose of Tasks as elements of Items is to draw into the worksheet prices with varying criteria to allow the estimator to choose the most appropriate unit price for the Item. The remainder of this section will show how to add or delete tasks at the Item.

Adding and Changing Item Tasks

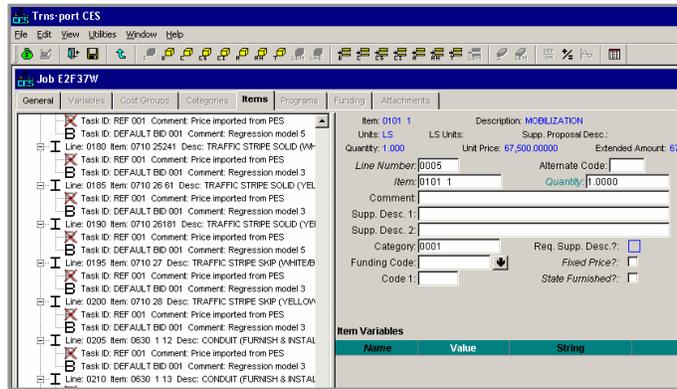
Click the Job you want to work with in the Jobs List window.

- Open the Job in **Change** mode.
- Click the **Items** Tab.
- Click the **Tree** icon.

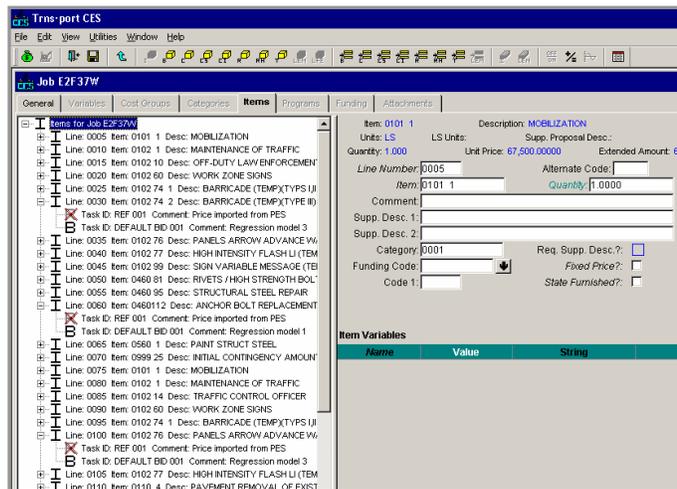
This screen will appear. From this point, the view can be changed to Expand all Items to view the full set of tasks, or individual Items can be expanded as desired.



This shows the **Tree View** fully expanded, with the Bid-Based Prices active, and the Reference Prices inactive.



This shows a Job with only three tasks expanded. Individual tasks may be expanded by clicking the "+" sign in the box at the left of the Item row or collapsed expanded by clicking the "-" sign in the box at the left of the Item row.



Bid-based Prices

CES draws information from the libraries listed in the Item Bid History Library field when calculating Bid-based Prices.

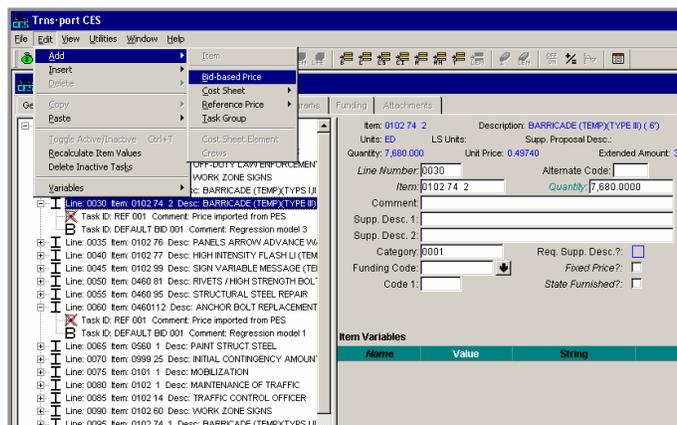
Adding a Bid-based Price

To add a Bid-based Price for an Item, from **Tree View**

- Click the Item to edit.
- Click **Edit > Add > Bid-based Price** from the Menu Bar.

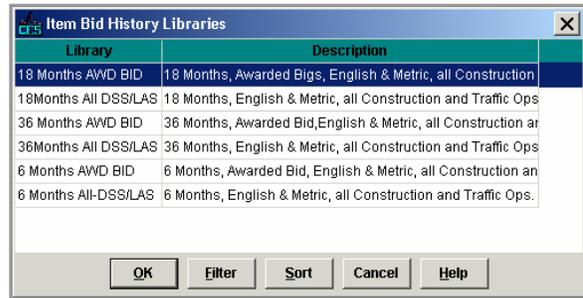
A new task row appears for this item.

- Click the Down Arrow at the **Library Name** field



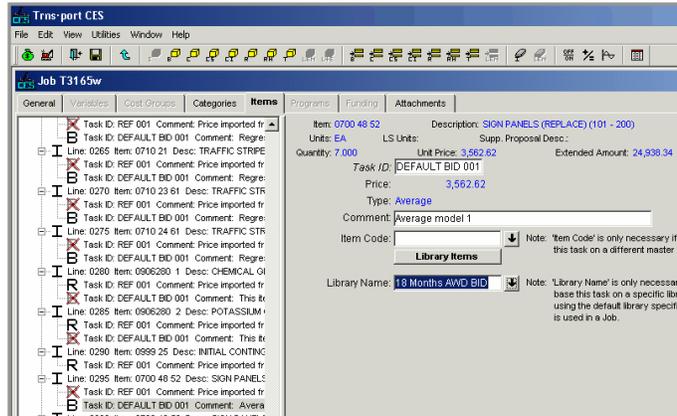
The Item Bid History Libraries will appear as seen here.

- Click the Library to use for this new task.
- Click **OK**.



The Bid-based Price history will be imported.

The left pane of the **Items Tab** will alter to display the new Bid-based Price at the end of the list of tasks for the selected Item. (To place the Bid-based Price elsewhere in the list, highlight the task above which to place the Bid-based Price, and select Insert instead of Add.) The right pane will display a data entry and display area for the Bid-based Price.



The following fields can be edited in the data entry area:

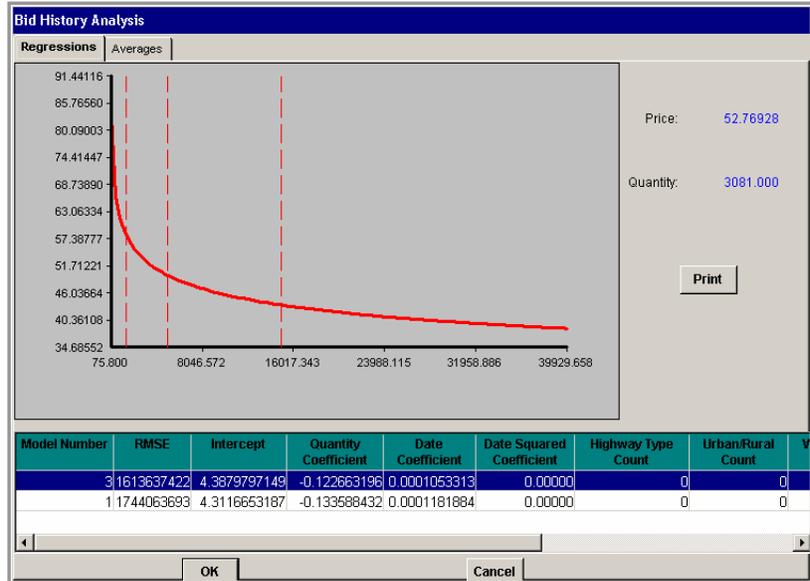
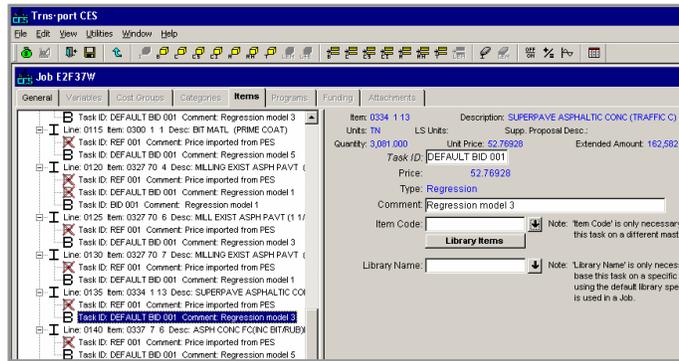
- ❖ **Task ID** This identifier must differ from any other task IDs for the selected Item.
- ❖ **Comment** A user-entered brief comment about the Bid-based Price.
- ❖ **Item Code** The Item on which the Bid-based Price is founded. When the Item Code field is blank, the price is based on the Item selected in the left pane of the **Items Tab**. If there is another Item on which the Bid-based Price should be based, enter that Item number in this field. To select an alternative item from the Library associated to the Job click the **Library Name** button. If a particular Library is named for this task it will show in the **Library Name** field and appear on the heading of the pop up menu. If no Library is named for the task, then the Library associated with the Job on the **General tab** will be used. To pick from the Master Item List, outside of Library results, click the down arrow.
- ❖ **Library Name** The Item bid history Library that CES uses to arrive at the Bid-based Price. When this field is blank, CES uses the Library specified in the Library Name field on the **General Tab**. If there is another Library on which the Bid-based Price should be made, enter that Library name in this field by clicking on a selection from the down arrow menu.

Regression Analysis

To open a regression analysis, click the **View Bid-based Graphs and Information** icon. It looks like a sine wave, and is to the right of the "+/-" icon.

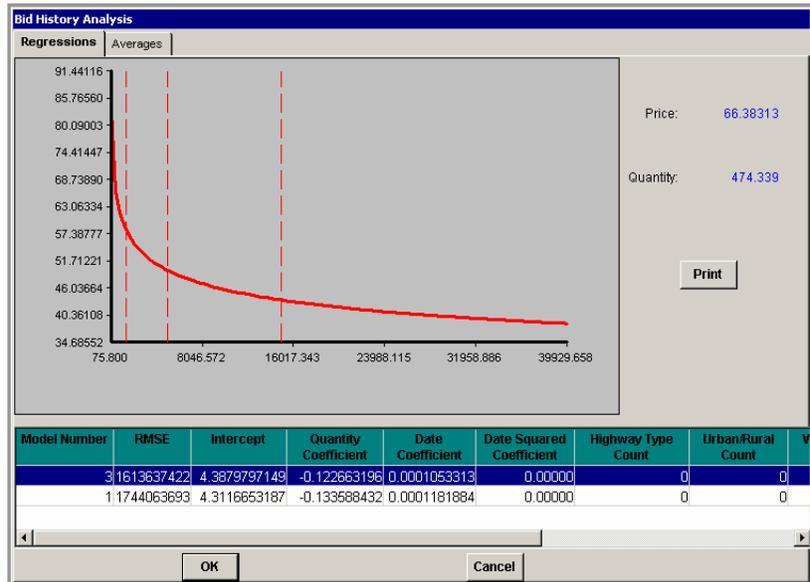
This shows a regression analysis on which a Bid-based Price is made. In this example two models appear in the lower part of the screen. Click between them to see price/quantity sensitivity for each available model.

Note that, in this example, CES chose Model 3 and selected a price of \$52.76928 per unit for the 3081.0000 units of the item.



When CES uses regression analysis to price an Item, you can access a graphical view of the regression information by choosing **Bid-based Information** from the **View** menu. CES displays a Bid History Analysis window that interactively displays prices and quantities along the curve.

To do this, place the cursor on the red curve and click the left mouse button. The price and quantity values at the point chosen will display at the right

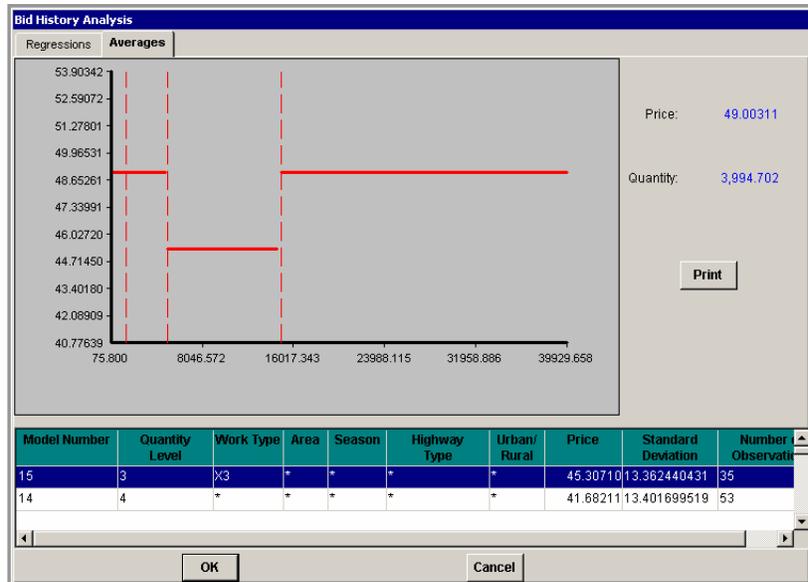


Hold the left mouse button down while tracing the curve and the price and quantity values will display at the right in blue as the cursor moves.

Use the horizontal scroll bar at the bottom of the window to view specific information about the regression. In the **Grid** below, the model number is an identifier given to the groupings of components used to determine the Bid-based Price. These groupings can range from different seasons combined with terrain, or terrain combined with the work type, or simply the location of the work. Some of the determinants of the price are listed in the **Grid**. CES assigns the highest model number to what it deems the most compatible grouping.

Averages

To see price averages information for the analysis, click the **Averages Tab**. The averages information for an Item displays, even if CES does not have the information necessary to perform a regression analysis for an Item, it will still attempt to produce a price for that Item based on averages. Click the red line and the values will appear on the right. In this example the average price is \$49.00311 for all quantities in the low and high ranges, and \$45.30710 for quantities in the middle range.



Use the horizontal scroll bar at the bottom of the window to view specific information. Similar to the **Regressions Tab**, the grid at the bottom of the regression display shows the different factors that influence the price and lists them by different model numbers. When you decide on the model number of the regression or the average you wish to use:

- Click the model you wish to use.
- Click **OK** to exit the graphic window.
- Click **SAVE**, or Click **File > Save** from the Menu Bar to save the work.

Reference Prices

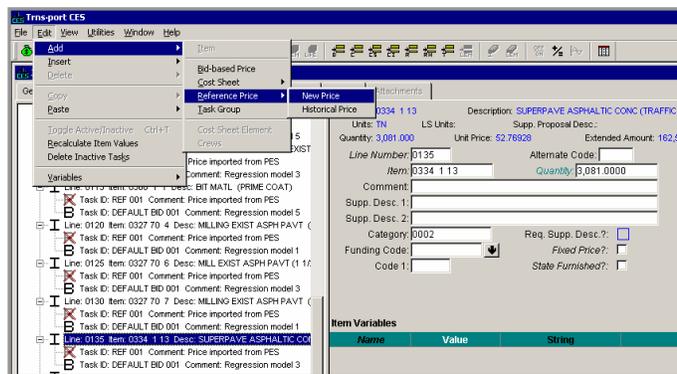
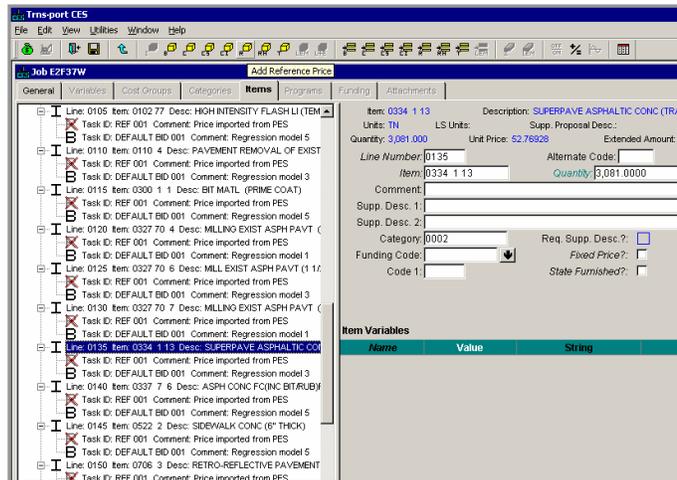
A Reference Price is a price used as the basis for estimating the cost of an Item. Reference Prices can be entered directly, or they can be imported from a Snapshot. They are the prices used when a Job is first "checked out" or they can be derived from formulas or other sources. At present, Department practice will include those prices brought in from PES, and prices directly entered by estimators.

To add a Reference Price for an Item, you must be in the **Tree** view. In the left pane of the **Tree** view,

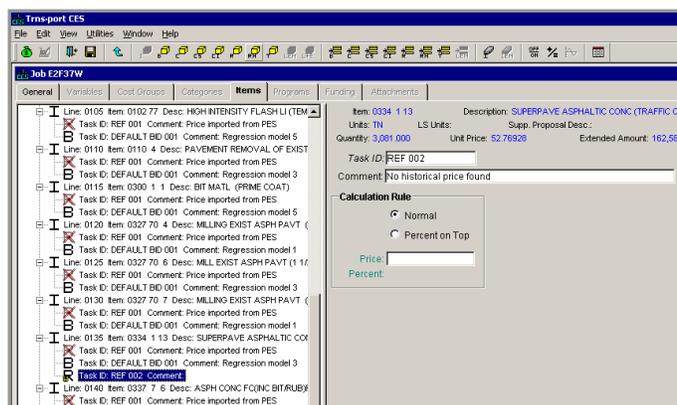
- Click the Item to edit. You can add a Reference Price by clicking on the **Add Reference Price icon**. It is the yellow cube with the label "R."

Or

- Click **Edit > Add > Reference Price > New Price** from the Menu Bar.



If you choose **Historical Price** in the last menu choice you will insert a new task the states that a historical Price could not be found. This feature is not presently available in Florida DOT. Once the new task is entered, go to the entry area in the right panel and manually enter a **Price** and a **Comment** as appropriate.



Recalculating Item Values

CES does not automatically recalculate all the costs for a Job each time a change is made to the Job. Instead, it recalculates only the Job element that changed and its associated higher-level entities.

CES offers a menu option that recalculates all the costs related to an Item. This menu item is available from either the **Grid** view or the **Tree** view of the **Items Tab**.

When in the **Grid View**, begin by selecting the row or rows of Item information to include. To choose more than one row at a time, hold down the **CTRL** key, while selecting rows. To include several rows that are adjacent to each other, select the first Item and then hold down the **SHIFT** key as you select the last Item row to be included. All the Items to be included will be highlighted. Go the Menu Bar:

- Click Edit > Recalculate Item Values.

In the **Tree** view you can only recalculate the values one Item at a time. The recalculate feature is also available from the right mouse button menu.

Item	Description	Units	LS Units	Unit Price	Extended
000	ANCHOR BOLT REPLACEMENT	EA		37.94733	
000	STRUCTURAL STEEL REPAIR	LB		52.74339	
000	FOR BOLT REPLACEMENT	EA		813.32650	
000	STRUCTURAL STEEL	LS	TN	15,000.00000	
000	INITIAL CONTINGENCY AMOUNT (DO NOT BID)	LS		75,000.00000	
0075	MOBILIZATION	LS		135,000.00000	
0080	MAINTENANCE OF TRAFFIC	LS	DA	650.00000	
0085	TRAFFIC CONTROL OFFICER	MH		89.68514	
0090	WORK ZONE SIGNS	ED		0.27149	
0095	BARRICADE (TEMP)(TYP S U, V P & DRUM)	ED		0.19277	
0100	PANELS ARROW ADVANCE WARNING	ED		10.49716	
0105	HIGH INTENSITY FLASH LI (TEMP - TYP B)	ED		0.60478	
0110	PAVEMENT REMOVAL OF EXISTING CONCRETE	SY		20.31794	
0115	BIT MATL (PRIME COAT)	SA		1.71938	
0120	MILLING EXIST ASPH PAVT (3" AVG DEPTH)	SY		1.86786	
0125	MILL EXIST ASPH PAVT (1 1/2" AVG DEPTH)	SY		2.70661	
0130	MILLING EXIST ASPH PAVT (4" AVG DEPTH)	SY		1.86290	
0135	SUPERPAVE ASPHALTIC CONC (TRAFFIC C)	TN		52.76928	
0140	ASPH CONC FC(INC BITRUBFC12.5FC-C)	TN		85.98044	
0145	SIDEWALK CONC (6" THICK)	SY		19.73223	
0150	RETRO-REFLECTIVE PAVEMENT MARKERS	EA		3.30376	

Deleting Item Tasks

You must be in the **Tree** view of the **Items Tab** to delete Item tasks.

To delete a Bid-based Price:

- Click the Bid-based Price in the left pane of the **Items Tab**.
- From the Mouse button menu, Click **Delete Bid-based**.

A Delete window will open.

- Click **YES** to confirm the deletion or **NO** to cancel the action. If you click **YES** CES will delete the selected task.

Active and Inactive Tasks

As Bid-based or Reference tasks are added to a Job, they are initially made Active. In this condition, they will contribute to the total cost of an Item and the Job.

For the final pricing of a Job, only one task per Item should be Active.

When it is determined that an Item task is not desired for the Job being estimated, it can easily be eliminated from the task calculations by marking it Inactive. In the **Tree view**:

- Click the task to be made Inactive.
- Click the right mouse button and Click **Toggle Active/Inactive**.

Or

- Click the **Off/On**  icon.

A red X will display over the selected Item task indicating that it is now inactive and the costs for the task will not be included in calculations for the Item or the Job.

To make an inactive task active again:

- Click the task.
- Click **Toggle Active/Inactive** from the right mouse button menu. The selected element will no longer display an X and will once again be included in Job estimate.

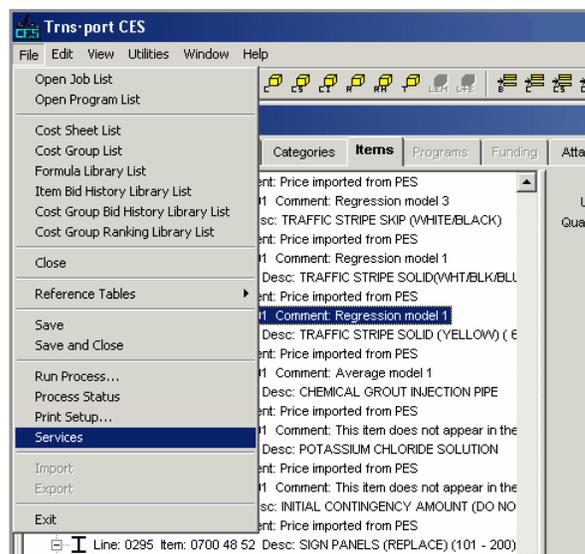
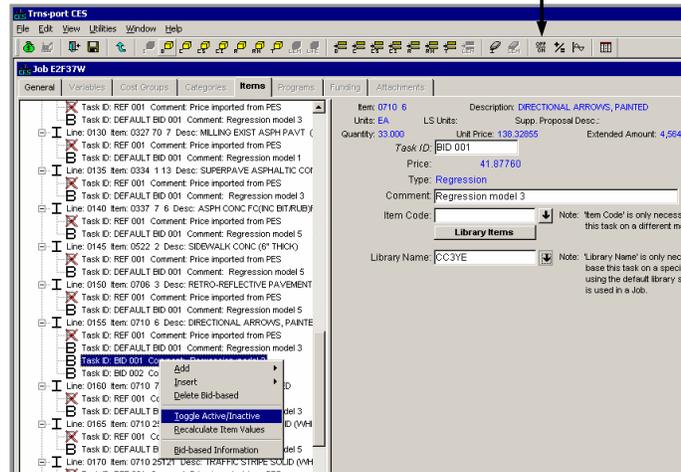
Scatter Diagrams

A new CES feature is the ability to examine a regression curve in greater detail. The estimator may vary several factors to achieve a better unit price for a particular item in a circumstance.

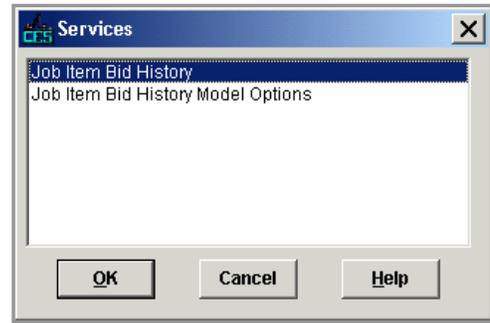
To open a scatter diagram, highlight a bid based price on the tree diagram for the Item you want to examine.

- Click **File > Services** from the Menu bar.

Off/On icon



- Click **Job Item Bid History**
- Click **OK**.



A diagram of points with a curve fit through them will open.

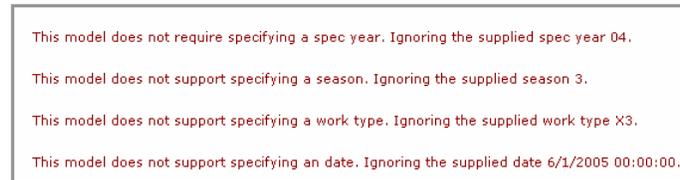
Profile Name

The header on the page provides the Pay Item Number and Description as well as the Library from which the data points came. In this illustration the profile name is **ALL6MON**. Recall that the name of the CES library for this item was **6 Months All DSS/LAS**. While the names are different they are sufficiently similar to know the data content and they are the identical data set. The **ALL6MON** is the name used in the DSS which is the primary source for CES profiles.



Factors

The next block indicates specific factors that are not influencing the data.



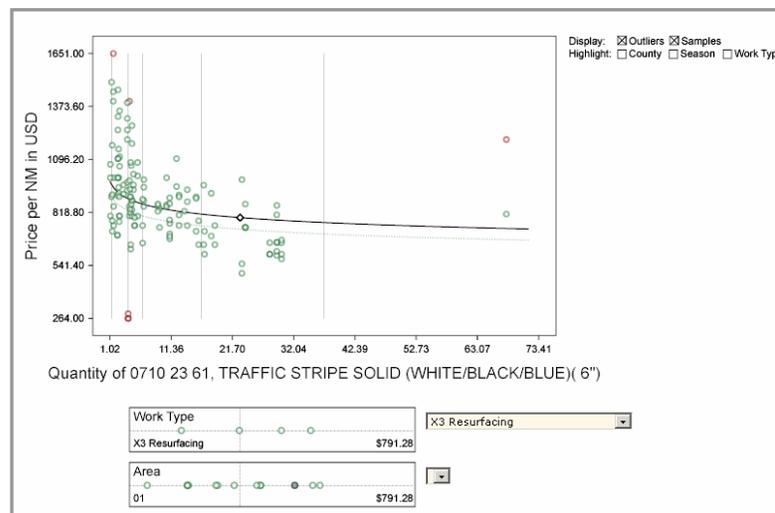
Model Options

The next block indicates item quantity, price, date, model, and plot type.

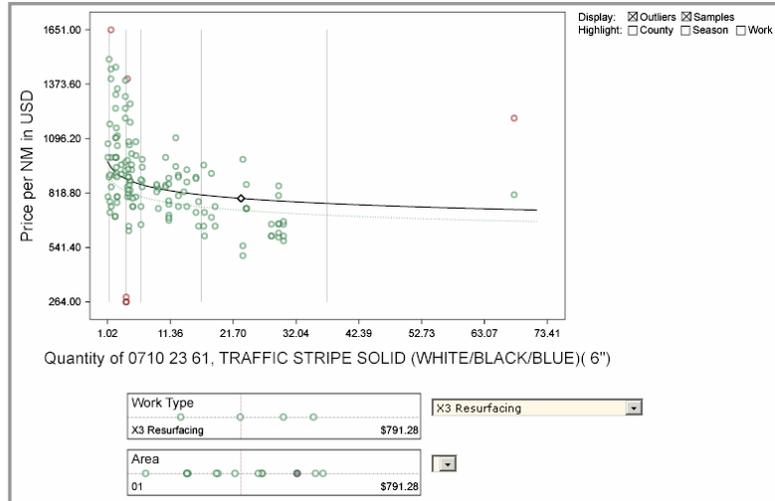


Viewing the data

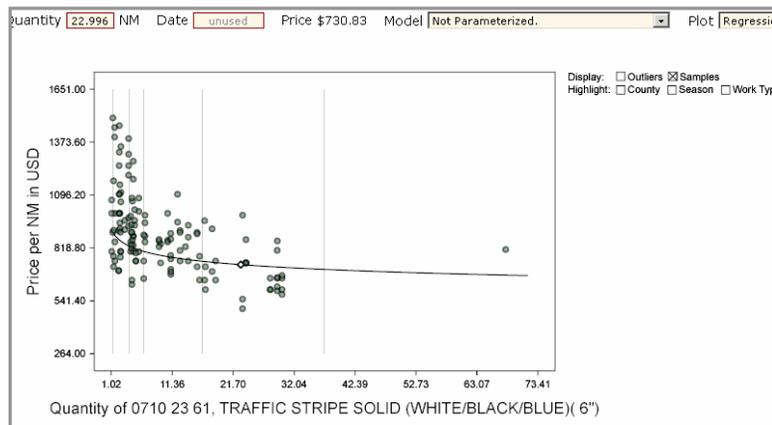
The scatter diagram contains a wealth of information. It will open defaulting to an Area and a Work Type. In this example the Area is 01 and the Work Type is 03, with a wide choice of variables to change. The \diamond indicates the point on the curve representing the selected cost of \$791.28 for the contract quantity of 22.996 units of the Pay Item.



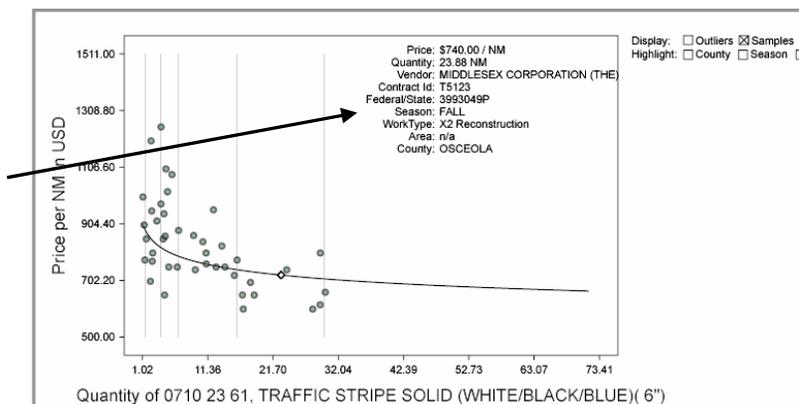
Note that the circles are all open, red or green, and either bold or not bold. The bold circles are those points from the active **Work Type (X3)** and the active **Area (01)**. The red circles are those that fall out of “range” and may be removed from the graph by removing the **X** in the Outliers box as seen here. While all of the points on the graph are shown, only Area 01 and Work Type X3 are contributing to the curve seen here. Note in this enlargement that a shadow regression curve is present. This shadow curve represents the effect of all points (less outliers) and may be activated by clicking the window **Model** and selecting *Not Parameterized*.



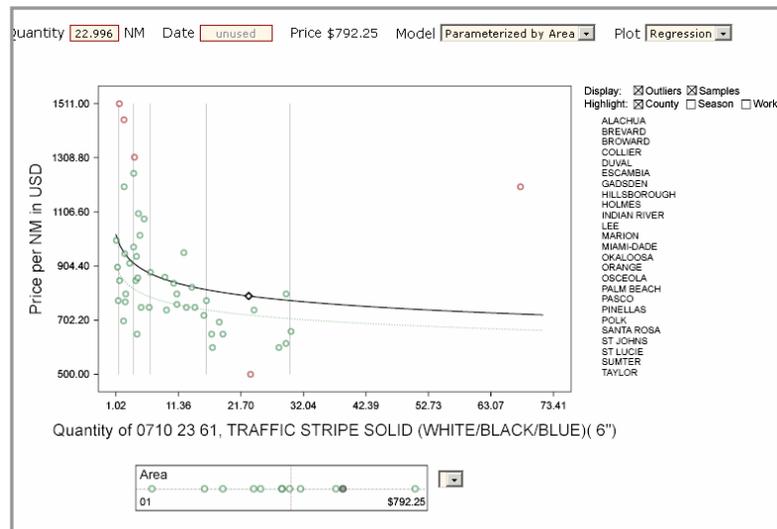
This view is *Not Parameterized*. Note that the unit price is now \$730.83, represented by the \diamond . Also note that all data circles are filled circles.



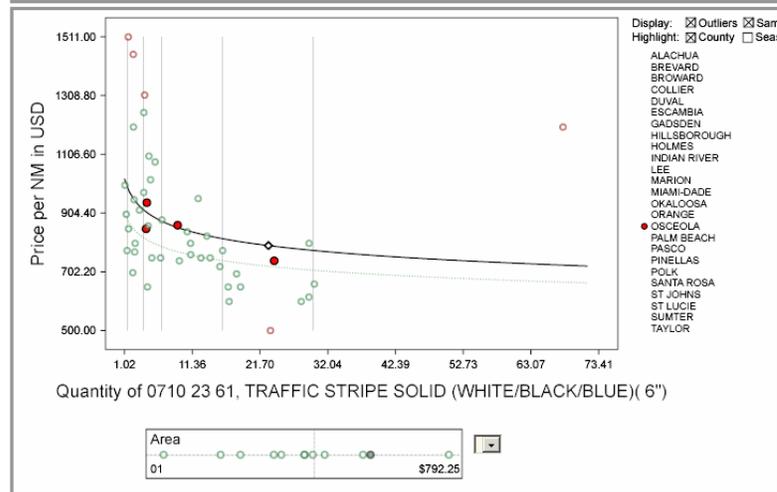
Additional detail is available for each data point. In this view, the cursor is placed over the data point just above and to the right of the \diamond . Note that when the cursor hovers over a point a window opens that provides details about the particular point.



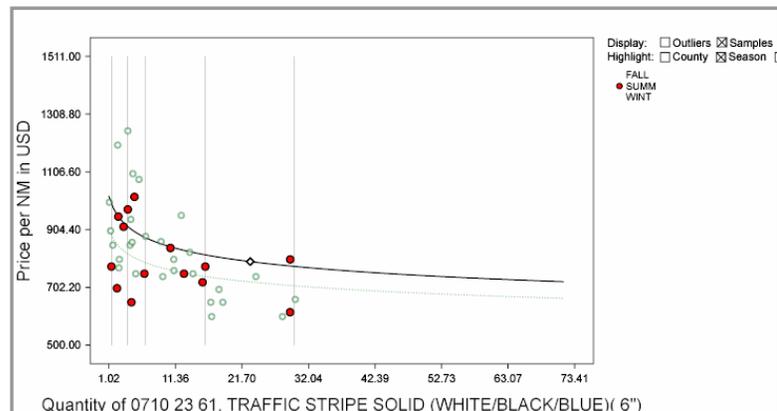
Another navigational feature is to click the box Highlight County. A county list opens representing the data points on the screen



Place your cursor over a county and a red dot appears at the county name and the data points from that county are turned red in the plot. In this example Osceola County has four points in the plot.



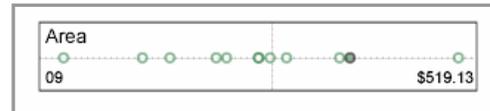
In a similar manner place an X in the Highlight Season box and see which data points are included by season of letting. In this example the summer data points are shown.



Observe the rectangle labeled “Area”. It presently shows Area 01 and a unit price of \$792.25.



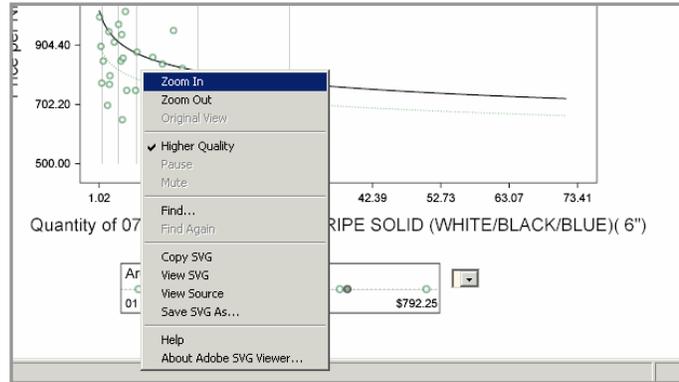
Move your cursor over the other points and notice their values. The left most point is lowest price. In this example it is Area 09 at a unit price of \$519.13.



Enlarging the graph

Place your cursor at a spot where you want to see more detail and

- Click **Zoom In** from the right mouse button menu.



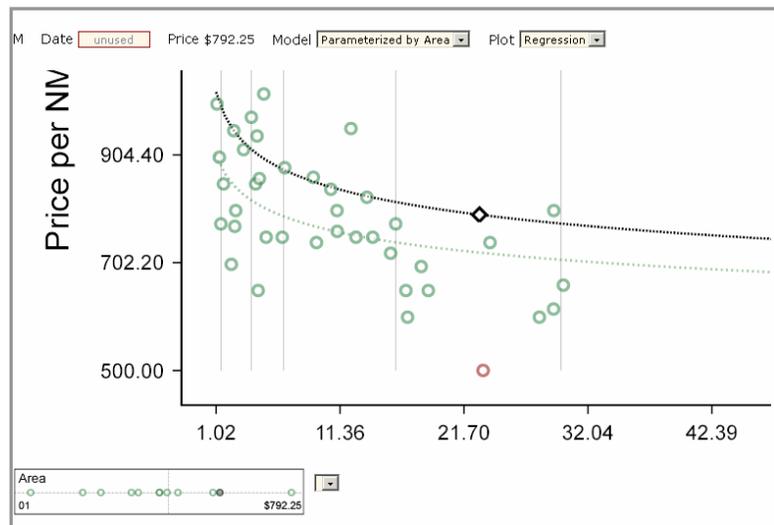
The enlargement will appear like this one.

To return to the original view,

- Click **Original View** from the right mouse button menu.

After your review of the bid history, you opt to use \$740.00 as the unit price for this item.

- Close the Scatter Diagram



Return to the Item List window.

- Insert a new reference price task.
- Enter a unit price of \$740.00
- Toggle the Bid Based price task to **off**.

Proceed to price other items.

Alternate Items

In another Job, which is a project estimate as opposed to a proposal estimate, after trials with Libraries, three Items remain without prices. The first Item to try will be the Inlet. Look for a similar Item, under a different Item Number.

- Click the **Inlet Item** in the Grid View.
- Click the **Tree View** icon.

Line Number	Item	Description	Units	Quantity	Unit Price	Extended Amount
0280	0425 1712	INLETS (GUTTER) (TYPE V) (P10)	EA	1.0000		
0345	0430610 29	U-ENDWALL WITH GRATE (24")	EA	1.0000		
0350	0430610 33	U-ENDWALL WITH GRATE (30")	EA	1.0000		
0555	0999 25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)	LS	1.0000	0.01000	0.01
0440	0570 2	SEED & MULCH	SY	1.0000	0.56630	0.57
0485	0710 5 1	GUIDE LINES (PAINT) (WHITE)	LF	1.0000	0.64207	0.64
0255	0415 1 5	REINF STEEL (SUBSTRUCTURE)	LB	1.0000	0.75075	0.75
0045	0415 1 5	REINF STEEL (SUBSTRUCTURE)	LB	1.0000	0.75075	0.75
0085	0102 74 1	BARRICADE (TEMP)(TYP5 I,II,VP & DRUM)	ED	1.0000	0.83167	0.83
0100	0102 77	HIGH INTENSITY FLASH LI (TEMP - TYP B)	ED	1.0000	1.12220	1.12
0540	0710 28	TRAFFIC STRIPE SKIP (YELLOW)	LF	1.0000	1.14347	1.14
0090	0102 74 2	BARRICADE (TEMP)(TYPE III) (6)	ED	1.0000	1.29377	1.29
0080	0102 60	WORK ZONE SIGNS	ED	1.0000	1.39571	1.40
0260	0415 1 9	REINF STEEL (APPROACH SLABS)	LB	1.0000	1.91650	1.92
0250	0415 1 1	REINF STEEL (ROADWAY)	LB	1.0000	2.03719	2.04
0040	0415 1 4	REINF STEEL (SUPERSTRUCTURE)	LB	1.0000	2.10285	2.10
0470	0575 1 2	SODDING (CENTPEDE)	SY	1.0000	2.42786	2.43
0525	0710 25181	TRAFFIC STRIPE SOLID (WHITE/BLACK) (18")	LF	1.0000	2.94633	2.95
0200	0300 1 3	BIT MATL (TACK COAT)	GA	1.0000	3.51553	3.52
0535	0710 26181	TRAFFIC STRIPE SOLID (YELLOW) (18")	LF	1.0000	3.60856	3.61
0155	0120 3	EXCAVATION LATERAL DITCH	CY	1.0000	3.61468	3.61
0140	0105 70	TRAINEE MAN-HOURS	MH	1.0000	3.63448	3.63
						6,416.11

In the Job task detail for the Inlet Item select a value in the **Item Code** field. Click the down arrow which will take you to the Master Item List.

Using the Filter

From this Item List,

- Click **Filter**.

See Appendix B for searches like this one, using an advanced filter that is named and saved will save a great deal of time.

The Filter will appear. In this example:

- For **Column**, Click Description.
- For **Operator**, Click Contains.
- For **Value**, enter INLET in capital letters.

Item	Spec Year	Description	Units
0102 1	00	MAINTENANCE OF TRAFFIC	LS
0102 3	00	COMMERCIAL MATL FOR DRIVEWAY MAINT	CY
0102 10	00	OFF-DUTY LAW ENFORCEMENT OFFICER	MH
0102 14	00	TRAFFIC CONTROL OFFICER	MH
0102 60	00	WORK ZONE SIGNS	ED
0102 61	00	BUSINESS SIGNS	EA
0102 69	00	TEMPORARY CURB	LF
0102 70 11	00	BARRIER WALL(TEMP) (F&I)(STD)(CONCRETE)	LF

For now:

- Click the **0425 1714** inlet.
- Click **OK**.

Item	Spec Year	Description	Units
0425 1703	00	INLETS (GUTTER) (TYPE S) (J BOT, <10')	EA
0425 1704	00	INLETS (GUTTER) (TYPE S) (J BOT, >10')	EA
0425 1705	00	INLETS (GUTTER) (TYPE S) (PARTIAL)	EA
0425 1711	00	INLETS (GUTTER) (TYPE V) (<10')	EA
0425 1713	00	INLETS (GUTTER) (TYPE V) (J BOT, <10')	EA
0425 1714	00	INLETS (GUTTER) (TYPE V) (J BOT, >10')	EA
0425 1715	00	INLETS (GUTTER) (TYPE V) (PARTIAL)	EA
0425 1717	00	INLET (GUTTER)(TYP V)(J BOT, <10', SPE)	EA

The information on the selected Item will be entered and can be seen here. For other Items in your Job that still lack a unit price, continue in this manner until all Items have a Bid-based Price.

Item	Description	Units	Price
0425 1712	INLETS (GUTTER) (TYPE V) (>10')	EA	4,003.71702

Continue until all items are satisfactorily priced and the symbol is removed from the General Tab page 1.

Importing Job Items from a CES Snapshot

You can import Job Items into a CES Job from earlier Snapshots taken of that Job. You may do this for any Snapshot in your Control Group.

- Click the Job into which the Snapshot will be placed.
- Click **File > Import > Job Information from CES Snapshot** from the Menu Bar.

CES displays a Snapshots List window.

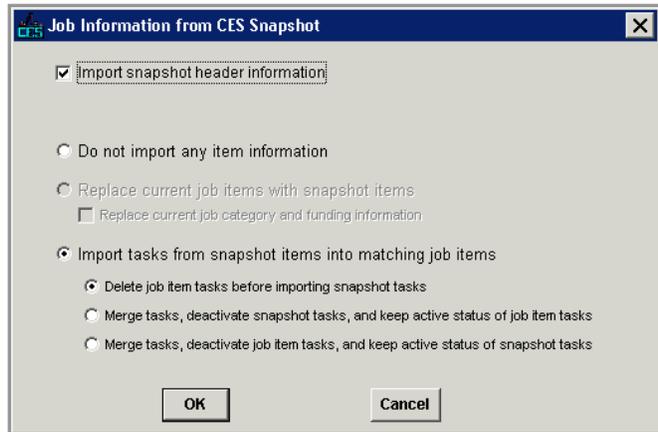
- Click the particular **Snapshot**.
- Click **OK**.

Job Number	Snapshot ID	User	Date Created	Reason Created
21791145210w2		3KN971WC	3/8/2004 08:02:45	CPES
21791145210w2		2ES968KR	5/9/2002 15:24:18	CPES
21791145210w2		1AAEXP	5/7/2002 07:13:01	USER
21794825201wc		9KN971WC	6/4/2002 07:03:09	CPES
21794825201wc		8AAEXP	5/28/2002 10:05:00	CPES
21794825201wc		7AAEXP	5/7/2002 15:57:48	CPES

Take great care if the Snapshot detail selected is for a different Job Number than the one Highlighted on the Jobs List window.

You will have the choice of importing the Job header information, replacing the current Job Items with the Items in the Snapshot, or importing the tasks of the Snapshot Items into the matching Job Items. These are the default settings.

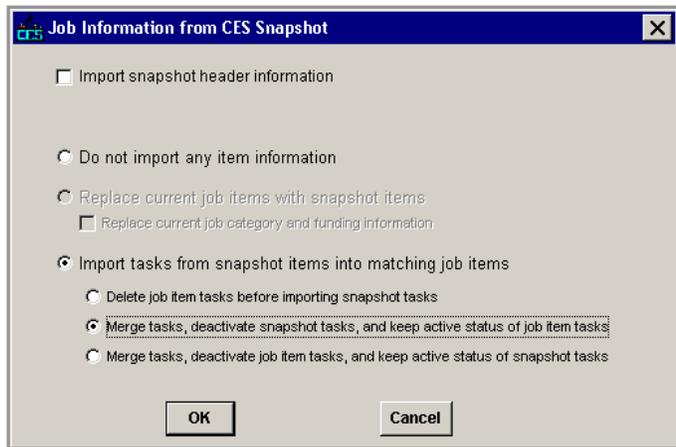
If the check mark option is selected, CES imports header information along with the Snapshot Item task information. **For most situations this should not be done, as it will lead to changing of critical fields in the Job Header.**



- Click the **check mark** to turn off this choice.

The three radio buttons provide options on how the Job information should be imported.

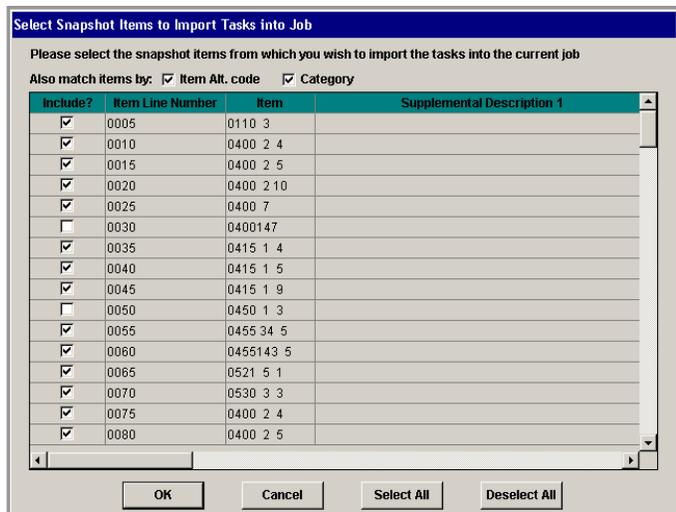
- If the first radio button is selected, CES does not bring in any Item information.
- The second radio button is grayed out and not available.
- When the third option is selected, the three buttons below it will be activated.



CES matches up the Items in the Snapshot to those in the Job, but instead of replacing all Items, it only replaces the tasks of the Items that are also in the Snapshot. This is done if you want to use earlier tasks, but want to keep the same Items, for example, to use a previous version of a Job. Once you've chosen an option.

- Click **OK**.

CES displays the Snapshot Items to Import Tasks Window.



In this example some Items are selected and some are not. The **SELECT ALL** button was selected first and then some Items were deselected. Decide which Items to include in the import by selecting them in the Include checkbox.

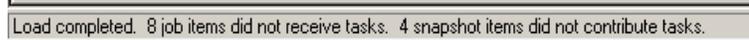
If you want to select all the Items,

- Click **SELECT ALL**.

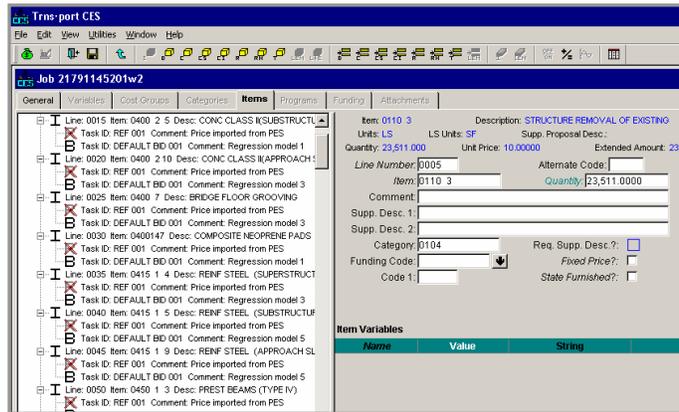
You may also choose the Category and Item Alt Code boxes for matching purposes. Once you have decided which Items to include,

- Click **OK**.
- From the Grid View of the Job, click the **Tree** icon.

When the load is completed, the results display on the status bar. In this example, eight job items received tasks.

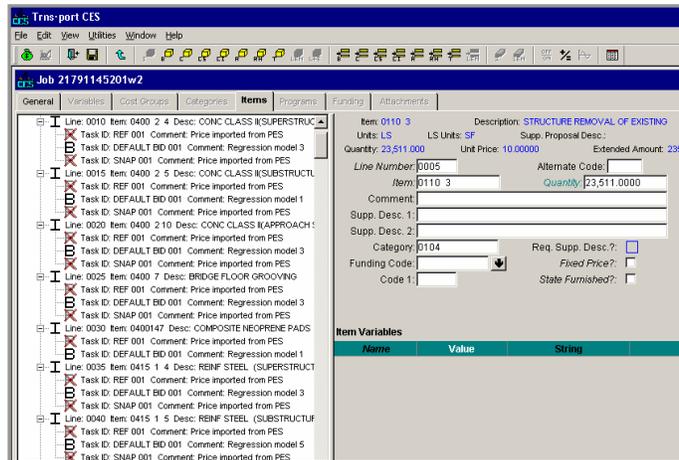


The tree view will appear as seen here. See the Tasks associated with the Items of a particular Job. In this example, most Items have either one or two tasks per Item.



This shows the Job after a Snapshot was merged into it. The three choices in the radio buttons give the estimator the ability to approach the estimate with varied sources of information.

It is recommended that as soon as a Job is "checked out" from PES that an immediate Snapshot be made to record the original conditions. This gives the estimator a way to restore the proposal (or project) to its condition when it was received from project staff or a District Estimator should problems occur in the preparation of the estimate.



Saving Data

Review the **General Tab** once more. Verify that the **Estimated Cost** is reasonable. Review the base library on which the estimate was based and other information on the tab.

When it is complete save the record. There are three ways to save the data.

From the Menu Bar,

- Click **File > Save**.

Or

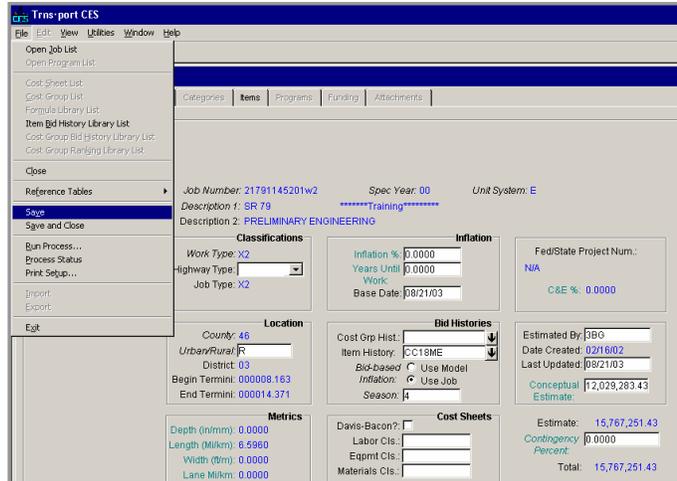
- Click the **Save**  icon on the toolbar.

Or

- Click the **X** to close the window.

After you Click **SAVE**, you will receive a query message.

- Click **Yes**.



Restoring Job Reference Prices

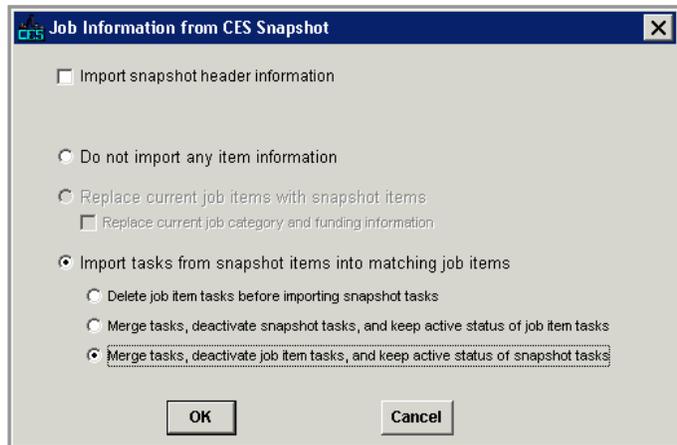
If you decide you want to update an estimate by restoring prices contained in an earlier snapshot,

- Click the Job to be updated.
- From the Menu Bar, Click **File > Import > Job Information from CES Snapshot**.
- Click a snapshot source.

At the screen as seen here,

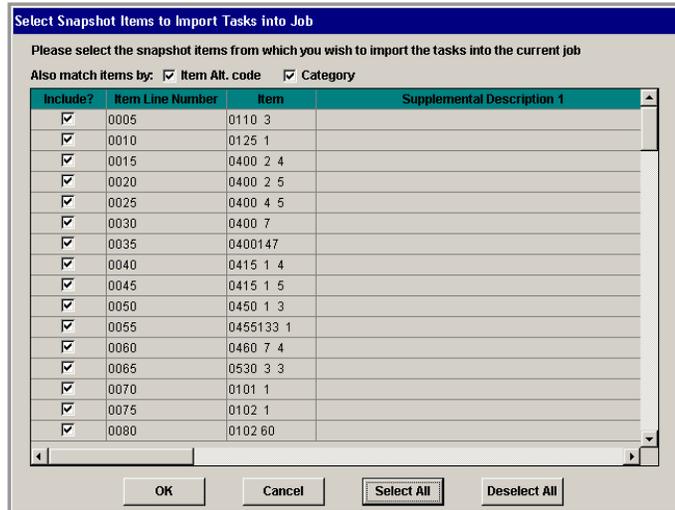
- Click the check mark to turn off the Header choice
- Click the Import Task Radio Button to activate the buttons below it.
- Click the bottom Radio Button.

With this selection, the Header will be unaltered and all Reference Prices from PES will be imported as the active Tasks. Other tasks on the job will be inactive.



The screen appears as seen here

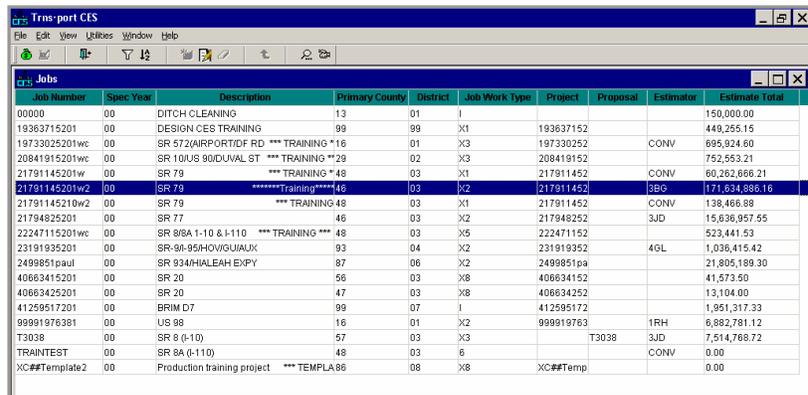
- Click **SELECT ALL**.
- Click **OK**.



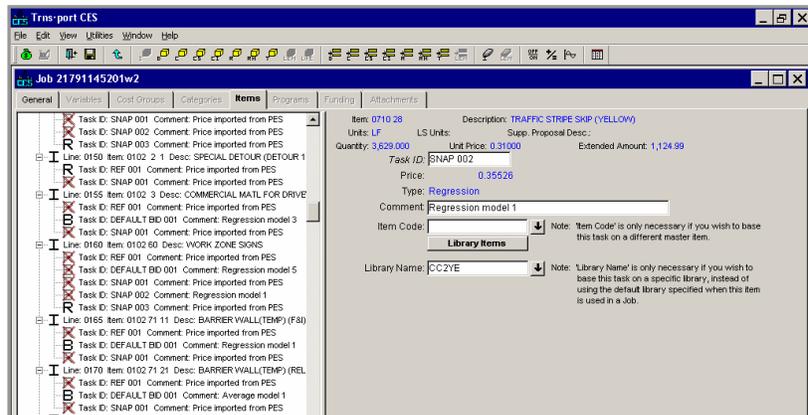
The Jobs List window will reappear.

Note the status bar comment of Load Completed and the number of tasks altered.

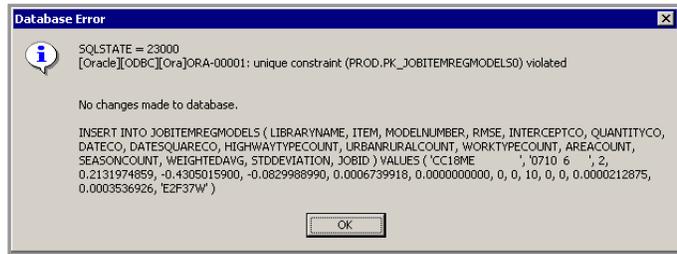
- Open the Job in **Change Mode**.
- Click the **Items Tab**.
- Click the **Tree** icon.
- Click **View > Expand All** from the Menu Bar.



In this example, we saw in the load complete statement that there were many tasks that were unaltered. We also saw that at the end of the merge process, the estimate for the Job was 171 million dollars. The mismatching that occurred allowed for two active tasks on numerous items. See the result after making inactive all but one task per Item. While it seems easy to recall a snapshot and activate those prices, time may have caused the Job to be altered, and the snapshot may no longer be a satisfactory representative of the job as it has changed.



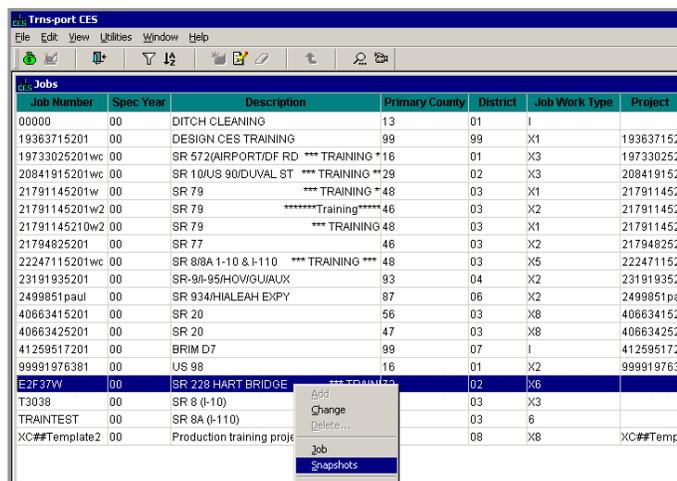
Before saving the Job at the end of pricing, remember that only one task for each Item may be active. If more than one is active, their cumulative value will be the value placed in the final estimate. You will also occasionally encounter difficulties with you data that will cause you to not be able to save your work.



This shows an error message indicating that no changes were saved to the database. From the message you see that the problem appears to be with Item 0710__6. You may have to close the Job and reopen it to clear the error causing task if it cannot be found.

Managing Snapshots

A Snapshot is a complete picture of a Job at a given time. It is like freezing the information in a Job and keeping it available for use, even if the information in that Job later changes. Looking at a Job Snapshot is similar to being in View mode but without the option of switching to Change mode. You can choose to create a Snapshot, and Snapshots may also occur automatically at prescribed times (for instance, when a Job is being "checked in" to PES).

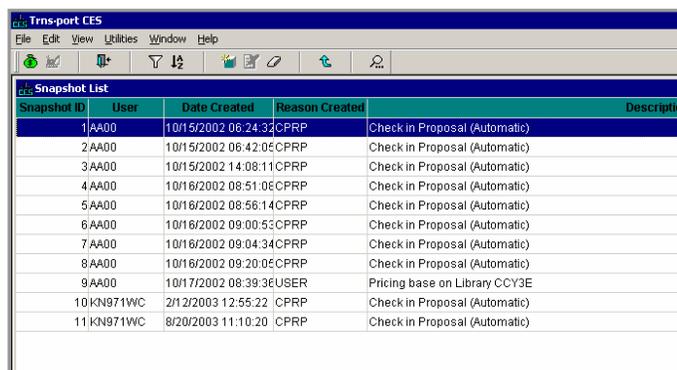


To work with Snapshots:

- Click the Job from the Jobs List window.
- Click **View > Snapshots** from the Menu Bar.

Snapshots are also available from the right mouse button menu.

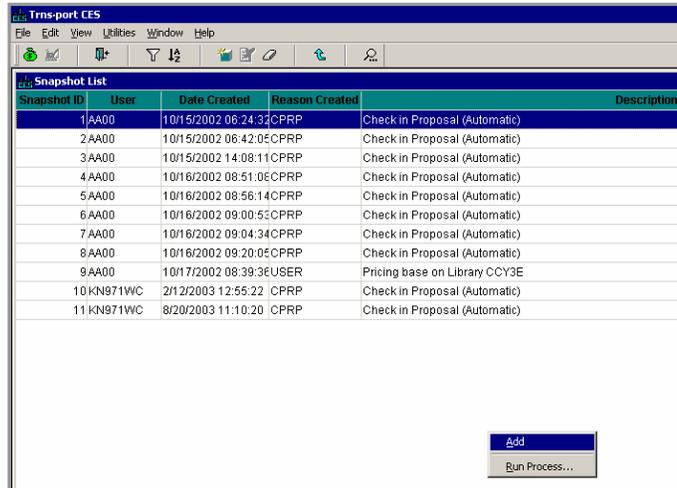
CES displays the Snapshot List Window seen here. This window lists all the Snapshots that currently exist for the selected Job along with information about each Snapshot such as creator of the Snapshot, the Snapshot ID number, and the description of the Snapshot.



Adding a Snapshot

To add a Snapshot, while in the Snapshot List Window:

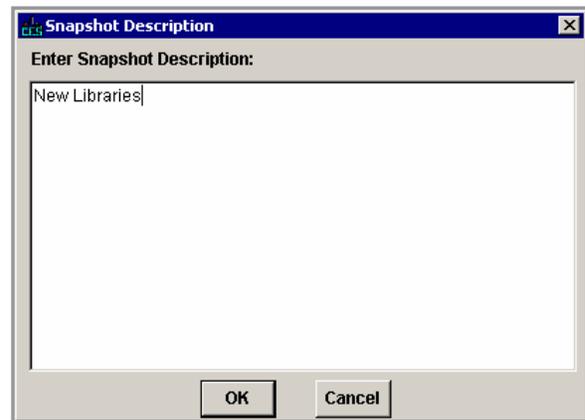
- Click **Add** from the right mouse button menu.



The Snapshot Description window will appear.

- Enter a description of the snapshot.
- Click **OK** or click **CANCEL** to cancel the action.

If you click **OK** CES once again displays the Snapshot List window, which now includes the newly added Snapshot.



Deleting a Snapshot

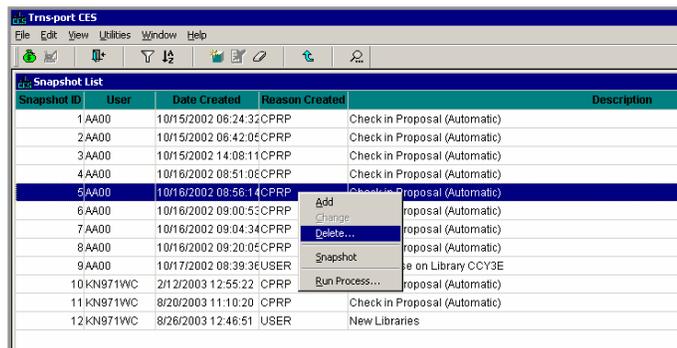
To delete a Snapshot, begin by selecting the Snapshot from the Snapshot List window. To select more than one Snapshot at a time, hold down the **CTRL** key as you select the Snapshots. To select multiple Snapshots that are adjacent to each other, select the first Snapshot, and then hold down the **SHIFT** key as you select the last Snapshot.

To select all the Snapshots in the list window at once,

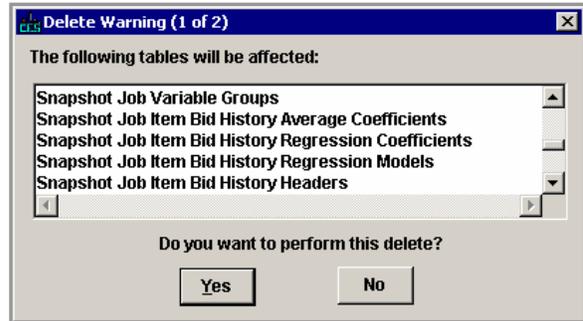
- Click **Select All** from the **Edit** menu.

Once the Snapshot(s) is selected:

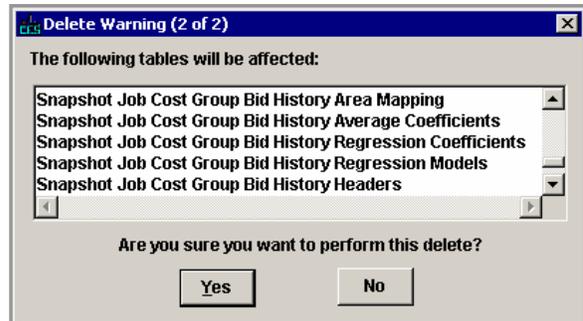
- Click **Delete** from the right mouse button menu.



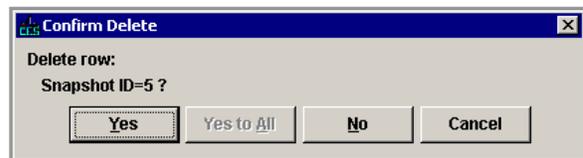
Two Delete Warning windows will display listing the tables that will be affected by the deletion. You will need to confirm the deletion several times before CES will delete the data from the database. The window title bar lists the number of deletes required. The first Delete Warning window is shown here.



The second Delete Warning Window will appear.



If you click YES in each of the Delete Warning windows, CES will then display a final window to confirm the deletion. To delete the Snapshot currently listed,

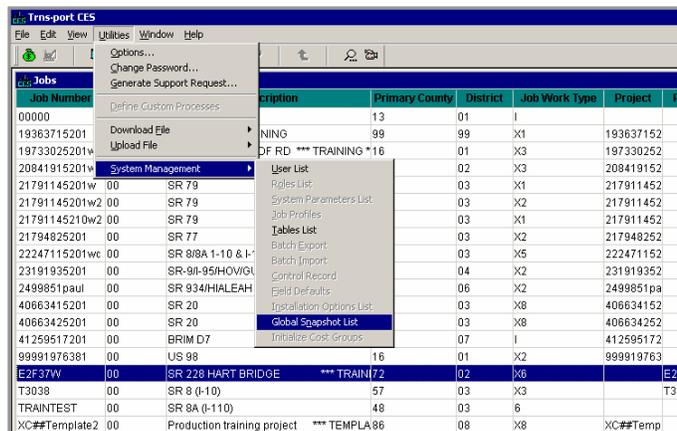


- Click YES. If you chose multiple Snapshots to delete at once.
- Click YES TO ALL to delete them simultaneously,
- Click NO to cancel the deletion of the Snapshot currently listed and move on to the Confirm Delete window for the next Snapshot.
- Click CANCEL to cancel the deletion of the remaining selected Snapshots.

Viewing a Snapshot of a Job still in CES

To view a Snapshot for a job that remains in the Job List Window.

- Click the job
- Click **Snapshot** from the right mouse button menu.



Jobs Returned to PES

To view a snapshot from a job that has been returned to PES.

- From the Menu Bar, Click **Utilities > System Management > Global Snapshot List**.

The Global Snapshot List window will appear. Use the scroll bar, sorting or filtering features if necessary to find a Job:

- Click the job you want to see.
- Double-click it, or Click **View > Snapshot** from the Menu Bar, or Click **Snapshot** from the right mouse button menu.

#ID	User	Date Created	Reason Created	Description	Job Number
1	ES968PH	6/11/2003 16:20:58	CPES		DADELANDSC
1	AA00	10/16/2002 10:17:35	CPRP	Check in Proposal (Automatic)	E2F37
12	KN971WC	8/26/2003 12:46:51	USER	New Libraries	E2F37W
11	KN971WC	8/20/2003 11:10:20	CPRP	Check in Proposal (Automatic)	E2F37W
10	KN971WC	2/12/2002 12:55:22	CPRP	Check in Proposal (Automatic)	E2F37W
9	AA00	10/17/2002 08:39:36	USER	Pricing base on Library CCY3E	E2F37W
8	AA00	10/16/2002 09:20:05	CPRP	Check in Proposal (Automatic)	E2F37W
7	AA00	10/16/2002 09:04:34	CPRP	Check in Proposal (Automatic)	E2F37W
6	AA00	10/16/2002 09:00:55	CPRP	Check in Proposal (Automatic)	E2F37W
5	AA00	10/16/2002 08:56:14	CPRP	Check in Proposal (Automatic)	E2F37W
4	AA00	10/16/2002 08:51:06	CPRP	Check in Proposal (Automatic)	E2F37W
3	AA00	10/15/2002 14:08:11	CPRP	Check in Proposal (Automatic)	E2F37W
2	AA00	10/15/2002 06:42:05	CPRP	Check in Proposal (Automatic)	E2F37W
1	AA00	10/15/2002 06:24:32	CPRP	Check in Proposal (Automatic)	E2F37W
5	KN971WC	6/4/2002 07:03:59	CPRP	Check in Proposal (Automatic)	E3A47wc
4	KN971WC	5/31/2002 09:44:30	CPRP	Check in Proposal (Automatic)	E3A47wc
3	KN971WC	5/31/2002 09:32:41	USER	new initial	E3A47wc
2	KN971WC	5/31/2002 09:04:29	CPRP	Check in Proposal (Automatic)	E3A47wc
1	KN971WC	5/3/2002 12:54:01	USER	initial	E3A47wc
2	KN971WC	6/4/2002 07:04:07	CPRP	Check in Proposal (Automatic)	E3B00wc
1	KN971WC	5/3/2002 13:02:25	USER	initial	E3B00wc
1	SS973WS	8/20/2003 16:23:44	CPRP	Check in Proposal (Automatic)	E3B56
2	RD352B6	3/20/2003 09:34:13	CPRP	Check in Proposal (Automatic)	E3C34
1	RD352B6	3/20/2003 09:28:13	CPRP	Check in Proposal (Automatic)	E3C34
1	RD352B6	3/5/2003 13:46:49	CPRP	Check in Proposal (Automatic)	E3C45
2	RD352B6	3/25/2003 07:47:18	CPRP	Check in Proposal (Automatic)	E3C49
1	RD352B6	3/24/2003 16:17:29	CPRP	Check in Proposal (Automatic)	E3C49

CES displays a tabbed folder window in which you can view but not modify the Snapshot information.

The Snapshot will open. The **General Tab** of the Job Snapshot window displays the same information about the Snapshot as the Snapshot List window.

General	Job	Variables	Cost Groups	Categories	Items	Funding
Job Number: E2F37W						
Snapshot ID: 5						
User ID: AA00						
Date Created: 10/16/2002 08:56:14						
Reason Created: CRRP						
Description: Check in Proposal (Automatic)						

The **Job Tab** opens on Page 1 of the Job **General Tab**. See Page 2 by clicking on the appropriate Radio Button.

General	Job	Variables	Cost Groups	Categories	Items	Funding
page 1 — page 2						
Job Number: E2F37W Spec Year: 00 Unit System: E						
Description 1: SR 228 HART BRIDGE						
Description 2:						
Classifications Work Type: X6 Highway Type: Job Type: X6		Inflation Inflation %: 0.00 Years Until Work: Base Date: 10/16/02		Fed/State Project Num.: N/A C&E %:		
Location County: 72 Urban/Rural: District: 02 Begin Termini: 000007 545 End Termini: 000008 273		Bid Histories Cost Grp Hist: Item History: Bid-based: <input type="radio"/> Use Model Inflation: <input checked="" type="radio"/> Use Job Season:		Estimated By: Date Created: 00/00/00 Last Updated: 10/16/02 Conceptual 1381267.67 Estimate:		
Metrics Depth (inmm): 0 Length (milk): 0.0000 Width (ftm): 0 Lane Milk: 0		Cost Sheets Davis-Bacon?: <input type="checkbox"/> Labor Cts.: Eqprint Cts.: Materials Cts.:		Estimate: 1,296,267.66 Contingency Percent: 0.00 Total: 1,296,267.66		

The **Grid** View of the Snapshot is seen here.

Line Number	Alt. Code	Item	Description	Units	LS Units	Quantity
0005		0101 1	MOBILIZATION	LS		
0010		0102 1	MAINTENANCE OF TRAFFIC	LS	DA	24
0015		0102 10	OFF-DUTY LAW ENFORCEMENT OFFICER	MH		7.20
0020		0102 60	WORK ZONE SIGNS	ED		54.48
0025		0102 74 1	BARRICADE (TEMP)(TYP'S ULVP & DRUM)	ED		24.00
0030		0102 74 2	BARRICADE (TEMP)(TYPE III) (6')	ED		7.68
0035		0102 76	PANELS ARROW ADVANCE WARNING	ED		72
0040		0102 77	HIGH INTENSITY FLASH LI (TEMP - TYP B)	ED		5.76
0045		0102 99	SIGN VARIABLE MESSAGE (TEMPORARY)	ED		72
0050		0460 81	RIVETS / HIGH STRENGTH BOLTS (REPLA)	EA		2.52
0055		0460 95	STRUCTURAL STEEL REPAIR	LB		29
0060		0460112	ANCHOR BOLT REPLACEMENT	EA		2
0065		0560 1	PAINT STRUCT STEEL	LS	TN	
0070		0999 25	INITIAL CONTINGENCY AMOUNT (DO NOT	LS		
0075		0101 1	MOBILIZATION	LS		
0080		0102 1	MAINTENANCE OF TRAFFIC	LS	DA	
0085		0102 14	TRAFFIC CONTROL OFFICER	MH		72
0090		0102 60	WORK ZONE SIGNS	ED		7.20

The Expanded **Tree** view can be seen.

Listing Snapshots

To produce a listing of Snapshot information,

- Begin by selecting the Snapshot or Snapshots for which to produce a listing in the Snapshot List window.
- Click **Run Process** from the **File** or right mouse button menu.

Snapshot ID	User	Date Created	Reason Created	Description
2AAEXP		4/30/2002 09:40:04	USER	Snapshot 4/30/2002/0939
3AAEXP		4/30/2002 09:45:03	USER	Snapshot 4/30/2002/0945
4AAEXP		4/30/2002 09:53:49	USER	Snapshot 4/30/2002/0950
6AAEXP		5/7/2002 15:53:48	CPES	
7AAEXP		5/7/2002 15:57:48	CPES	

Snapshot ID	User	Date Created	Reason Created	Description
1AA00		10/15/2002 08:24:32	CPRP	Check in Proposal (Automatic)
2AA00		10/15/2002 08:42:06	CPRP	Check in Proposal (Automatic)
3AA00		10/15/2002 14:08:11	CPRP	Check in Proposal (Automatic)
4AA00		10/16/2002 08:51:06	CPRP	Check in Proposal (Automatic)
5AA00		10/16/2002 08:56:14	CPRP	Check in Proposal (Automatic)
6AA00		10/16/2002 09:00:53	CPRP	Check in Proposal (Automatic)
7AA00		10/16/2002 09:04:34	CPRP	Check in Proposal (Automatic)
8AA00		10/16/2002 09:20:06	CPRP	Check in Proposal (Automatic)
9AA00		10/17/2002 08:38:38	USER	Pricing base on Library

CES displays a Processes window.

- Click **List Job Snapshots**.
- Click **OK** to submit the process

When it appears,

- Click **Submit** on the Confirm process Window.

Shortly after that,

- Click **OK** on Confirmation window.

See "Running a Process" below for more information about Processes.

Comparing Snapshots

You may compare two snapshots to see changes in quantity and price over time.

- From the Job List window, **Click** a Job.
- From the Right Mouse Button Menu Click **Snapshots**.
- **Click** the two snapshots to be compared.
- Click **Run Process** from the right mouse button menu.

CES displays a Processes window.

- Click Snapshot to Snapshot Comparison.
- Click **OK** to submit the process to print the report.

When it appears,

- Click **Submit** on the Confirm process Submission Window.

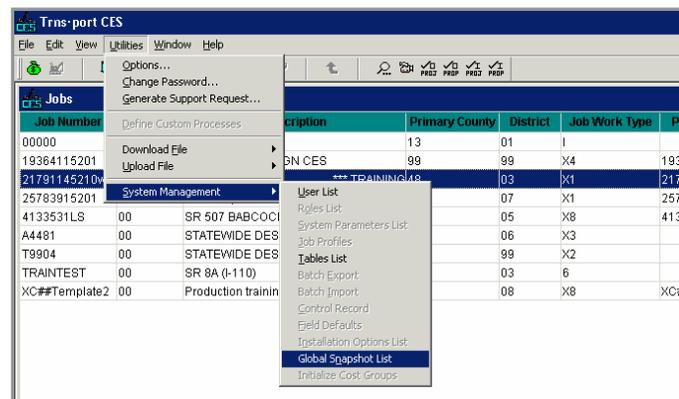
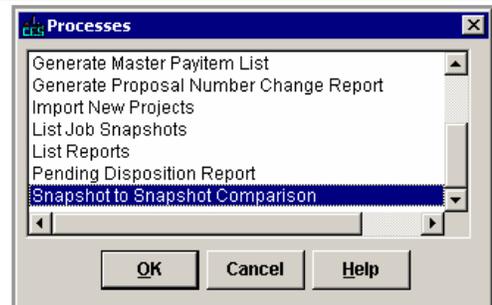
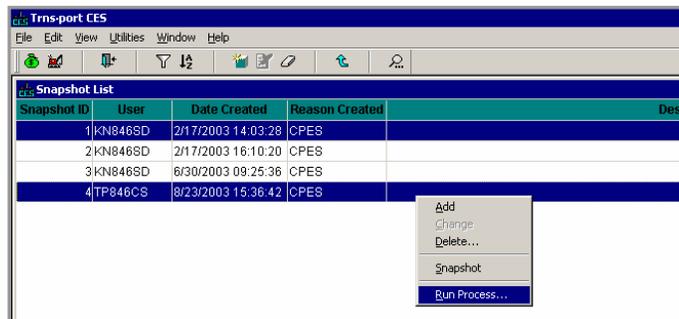
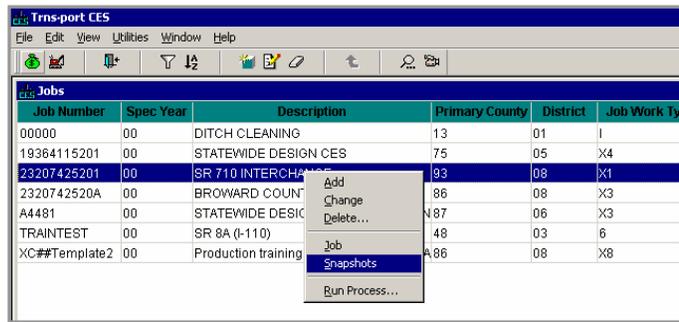
Shortly after that,

- Click **OK** on the Confirmation window when it appears.

Comparing Global Snapshots

After projects and proposals are checked in to PES, there is one more source of seeing snapshot information.

- From the Menu Bar, Click Utilities > System Management > Global Snapshots.



The Global Snapshot List window will open.

Job Number	Snapshot ID	User	Date Created	Reason Created	Description
00A01w	1	KN971WC	3/5/2004 13:48:29	CPRP	Check in Proposal (Automatic)
1555555555	1	RD544TB	4/1/2003 13:29:20	CPES	
1555555555	2	RD544TB	4/1/2003 13:34:16	CPES	
1555555555	3	RD544TB	6/1/2003 14:05:43	CPES	
1555555555	4	RD554CT	9/23/2003 11:18:44	CPES	
1555555555	5	RD554CT	10/16/2003 09:21:54	CPES	Check in Project (Automatic)
19077725201	1	KN846SD	3/19/2003 14:20:49	CPES	
19077725201	2	KN846SD	5/28/2003 09:13:16	CPES	
19363715201	1	ES968PH	4/1/2002 16:46:55	USER	INITIAL
19363715201	2	ES968PH	4/16/2002 08:15:21	USER	1st ESTIMATE
19363715201	3	ES968PH	4/16/2002 08:49:03	USER	2nd ESTIMATE
19363715201	4	ES968PH	5/13/2002 16:31:41	CPES	
19363715201	5	ES968PH	5/20/2002 08:32:55	CPES	
19363715201	6	ES968JH	5/28/2002 16:23:01	CPES	
19363715201	7	ES968MW	5/29/2002 08:56:03	CPES	

Scroll to the desired project or proposal. In this case T3001.

- Click **one** snapshot.
- Press the <CTRL> key and Click the **second** snapshot of interest.
- Rclick the **blue band**.
- Click **Run Process**.
- Click **Global Snapshots to Snapshot Comparison**.
- Click **OK**.
- Click **Submit**.
- Acknowledge the remaining process messages.

Job Number	Snapshot ID	User	Date Created	Reason Created	Description
T2078	2	ES968AI	7/17/2003 11:09:27	CPRP	Check in Proposal (Automatic)
T2080	1	RD252MG	7/14/2003 15:03:46	CPRP	Check in Proposal (Automatic)
T2088	1	KN973KP	2/26/2004 11:12:12	CPRP	Check in Proposal (Automatic)
T2116	1	ES968KR	1/21/2004 15:42:59	CPRP	Check in Proposal (Automatic)
T3001	1	RD352JD	1/22/2003 09:19:13	CPRP	Check in Proposal (Automatic)
T3001	2	RD352JD	1/22/2003 09:24:49	CPRP	Check in Proposal (Automatic)
T3001	3	RD352JD	1/22/2003 09:30:40	CPRP	Check in Proposal (Automatic)
T3001	4	RD352JD	1/22/2003 09:59:12	CPRP	Check in Proposal (Automatic)
T3001	5	RD352JD	1/22/2003 10:34:56	CPRP	Check in Proposal (Automatic)
T3001	6	RD352JD	5/5/2003 09:12:16	CPRP	Check in Proposal (Automatic)
T3001	7	RD352JD	5/5/2003 09:28:33	CPRP	Check in Proposal (Automatic)
T3001	8	RD352JD	5/14/2003 09:13:02	CPRP	Check in Proposal (Automatic)
T3001	9	RD352JD	5/15/2003 13:29:53	CPRP	Check in Proposal (Automatic)
T3001	10	RD352JD	5/22/2003 13:20:55	CPRP	Check in Proposal (Automatic)
T3002	1	ES968TW	7/25/2002 15:53:19	USER	INITIAL
T3002	2	ES968TW	7/25/2002 15:57:38	CPRP	Check in Proposal (Automatic)

Processes

- Generate Contract Project Directory
- Generate Master Payitem List
- Global Snapshot to Snapshot Comparison**
- List Job Snapshots

OK Cancel Help

Open the report and it will be similar to the one seen here. The items in each snapshot will be listed and a comparison column at the right will show the item by item variances. A job total variance will also appear at the bottom of the report.

UNIT TEST-NT** FLORIDA DEPARTMENT OF TRANSPORTATION ** UNIT TEST-NT **
Snapshot To Snapshot Comparison

CCSNMCMB PAGE: 1
DATE: 03/06/2000

NEWEST PROPOSAL NUMBER: T3001 OLDEST PROPOSAL NUMBER: T3001
SNAPSHOT ID: 10 SNAPSHOT ID: 1

ITEM	ALT CODE	ITEM PRICE	ITEM QTY	ITEM	ALT CODE	ITEM PRICE	ITEM QTY	PRICE DIFFERENCE	QUANTITY DIFFERENCE
2101	1	252975.00000	1.000	2101	1	100000.00000	1.000	152975.00000	0.00
2102	1	425.00000	305.000	2102	1	356.49000	1.000	68.51000	304.00
2102	3	22.00000	3020.000	2102	3	10.09239	3020.400	11.90761	-0.40
2102	60	0.27910	18574.000	2102	60	0.23208	63989.000	0.04702	-45316.00
2102	74	0.30000	37123.000	2102	74	0.18753	245270.000	0.11247	-208147.00
2102	77	0.65000	14043.000	2102	77	0.49916	47466.000	0.15084	-33423.00
2102	78	3.75000	4390.000	2102	78	4.03924	4390.000	-0.28924	0.00
2102	99	35.29617	277.000	2102	99	23.23504	418.000	12.06113	-141.00
2104	4	125.00000	0.000	2104	4	195.63448	15.900	-70.63448	-7.90
2104	10	4.75000	2280.000	2104	10	5.89560	2280.000	-1.14560	0.00
2104	11	24.20765	160.000	2104	11	36.39994	160.000	-12.19229	0.00
2104	12	16.17436	270.000	2104	12	14.18531	270.000	1.98905	0.00
2104	13	4.25000	2196.000	2104	13	6.72922	2196.000	-2.47922	0.00
2104	16	7.03128	1425.000						
2110	1	15900.00000	3.260	2110	1	11800.00000	1.000	3200.00000	2.26
2110	3	200.00000	62.000						
2110	4	7.86526	6531.000						
2110	7	100.00000	20.000						
2120	2	11.50893	3093.000	2120	2	4.00595	2573.000	7.50298	520.00
2120	71	14992.00000	1.000	2120	71	7550.00000	1.000	7442.00000	0.00
2160	4	2.72333	2406.000						
2160	9	0.75000	1896.000	2160	9	1.07606	31875.000	-1.32606	-14966.00

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