

COST ANALYSIS – For an Entire Project


Introduction

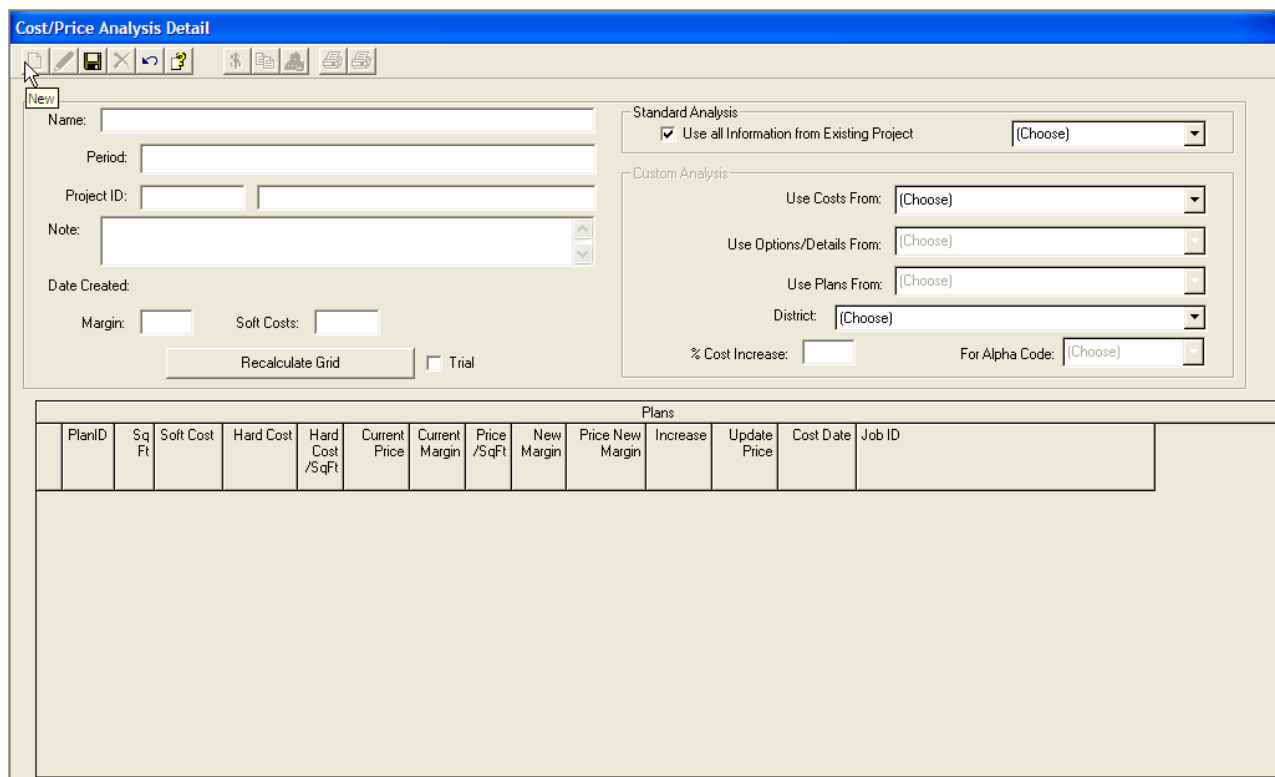
When analyzing costs for an entire neighborhood, you will create one or more Cost Analysis Projects in BOSS. This new project must be based on one or more existing projects and plans. Cost Analysis is an automated program that creates the new project based on the source project and its plans, options, project details and project level prices. The Cost Analysis program creates a job for each plan, imports CAD files and applies cost to each estimate. You will then be able to modify plan prices and margins and to change options to look at determine costs and pricing for a neighborhood.

You will need to select a source project that has similar options and details as your new project.

For example, if you wanted to replicate The Woodlands neighborhood (project) but you want in Okaloosa tax permit district, the cost analysis system allows you to combine these criteria. When Cost Analysis runs it will use the .DAT files from the original project that are in the cost plan folder.

Create Analysis Project

1. From the BOSS top menu options, select Management → Cost/Price Analysis. The Cost/Price Analysis Search screen will display.
2. Click the New Project icon . A blank Cost/Price Analysis Detail screen will display.



Plans													
PlanID	Sq Ft	Soft Cost	Hard Cost	Hard Cost /SqFt	Current Price	Current Margin	Price /SqFt	New Margin	Price New Margin	Increase	Update Price	Cost Date	Job ID

3. Edit fields in top left to describe this project
 - Enter the project name in the Name field (i.e Watercove Test cwd001 – v1)
 - Enter a date in the Period field (mm/yyyy).
 - Enter the new Project ID (wd218)
 - Enter any notes. This field is optional.
 - Enter a percentage for the desired gross profit margin for this project.
 - Enter a value in the soft costs field of at least \$1.00. This field cannot be blank.
4. Edit fields in top right to identify the project to copy from.
 - If this is a standard project you can check Use All Information from Project and choose a project to copy from. It will populate the remaining fields with the project id.
 - For a custom project, you should uncheck Use All Information from Project. Then choose a project for each of the fields in Custom Project section.
 - Use Plans From. Select the project you wish to copy the plans from
 - Use Costs From. Select the project you wish to copy the prices from
 - District – Select the tax permit district for this new project
5. Click the Save Icon. The system will begin creating the new analysis project. This will take at least 20 minutes and will tie up your workstation. Saving does the following things:
 - Creates a project with the options, details and pricing that you selected.
 - Creates a job for each plan that it finds from your source project.
 - Imports one job at a time using existing .DAT files from the source project. If the program runs into a .DAT file that it cannot import because of issues with the CAD .dat file (i.e. activities or resources are missing) the process will stop and the entire Create Analysis Project process will have to be done over again. Import Jobs does not require that you have .DAT files created for the new project as it copies these files from the source project.
 - When the job import is complete, the program will apply costs to all of the jobs in the new project.
6. When the new project has been saved, you will need to close and reopen the Cost/Price Analysis Screen for your new project. Click the X to close the window.
7. When you first import and create your cost analysis project there will be no plan prices calculated. In order to calculate prices, select the new project from the Cost/Price Analysis Search screen by Double clicking on the ► in the row containing your new project.

Cost/Price Analysis Search							
<input checked="" type="radio"/> Exclude Trial Analyses <input type="radio"/> Trial Analyses Only <input type="radio"/> All							
Analyses							
ProjectID	Project Name	Analysis Name	Price Project	Analysis Date	Margin	District	
ml404	Test 4 2964a Tri-Level	Test 4 2964a Tri-Level	ml4t1	6/22/2004	0.5	Escambia County -	
ml4x1	Magnolia Lakes Tri-level Version X	Tri-Level Version x for Magnolia Lakes	ml4t1	7/7/2004	0.5	Escambia County -	
ml4x2	Magnolia Lakes Tri-Level Version	Tri-Level Version x for Magnolia Lakes	ml4t1	7/7/2004	0.5	Escambia County -	
wc211	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 1	wc002	9/21/2005	0.5	Walton County - Nor	
wc212	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 2	wc002	9/21/2005	0.5	Walton County - Nor	
wc213	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 3	wc002	9/21/2005	0.5	Walton County - Nor	
wc214	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 4	wc002	9/21/2005	0.5	Walton County - Nor	
wc215	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 5	wc002	9/21/2005	0.5	Walton County - Nor	
wc216	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 6	wc002	9/21/2005	0.5	Walton County - Nor	
wc217	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 7	wc002	9/22/2005	0.5	Walton County - Nor	
wc218	Waterview Cove Test/cwd01	Waterview Cove Test/cwd01 - 8	wc002	9/23/2005	0.5	Walton County - Nor	
wd101	Woodlands 1	Woodlands 1	wd001	7/14/2004	0.5	Santa Rosa County	
wd102	Woodlands 1	Woodlands 1	wd001	7/16/2004	0.5	Santa Rosa County	
wd103	Woodlands 1	Woodlands 1	wd001	7/16/2004	0.5	Santa Rosa County	
wd106	Woodlands 1	Woodlands 1 Oct 2004	wd001	10/7/2004	0.5	Santa Rosa County	
wd105	Woodlands 1 Sept 04	Woodlands 1 Sept 04	wd001	9/8/2004	0.5	Santa Rosa County	
wd204	Woodlands 2 August 2004	Woodlands 2 August 2004	wd002	8/5/2004	0.5	Santa Rosa County	
wd201	Cost Price Woodlands July 2004	Woodlands 2 Cost Price	wd002	7/7/2004	0.35	Santa Rosa County	
wd202	Woodlands 2 Cost/Price	Woodlands 2 Cost/Price	wd002	7/12/2004	0.5	Santa Rosa County	
wd203	Woodlands 2 Cost/Price	Woodlands 2 Cost/Price	wd002	7/13/2004	0.5	Santa Rosa County	
wd206	Woodlands 2	Woodlands 2 Oct 2004	wd002	10/7/2004	0.5	Santa Rosa County	
wd205	Woodlands 2 Sent 04	Woodlands 2 Sent 04	wd002	9/8/2004	0.5	Santa Rosa County	

B.O.S.S. **LIVE DATA** Version: 1.2.333 - [Cost/Price Analysis Detail]													
Estimator Maintenance Administration Purchase Orders Customers Management eBOSS Reports Windows Help													
<div> <div> Name: Waterview Cove Test/cwd01 - 8 Period: 9/2005 Project ID: wc218 Waterview Cove Test/cwd01 Note: Date Created: 9/23/2005 9:21:29 AM User: dph Margin: 0.5 Soft Costs: 0 Recalculate Grid Trial </div> <div> Standard Analysis <input checked="" type="checkbox"/> Use all Information from Existing Project wc002 Custom Analysis Use Costs From: wc002 Use Options/Details From: wc002 Use Plans From: wc002 District: Walton County - North % Cost Increase: 0 For Alpha Code: (Choose) </div> </div>													
Plans													
PlanID	Sq Ft	Soft Cost	Hard Cost	Hard Cost /SqFt	Current Price	Current Margin	Price /SqFt	New Margin	Price New Margin	Increase	Update Price	Cost Date	Job ID
1980a	1980	0	101765	51.39	117400	13.31	84.54	0.5	203900	86500	203900	9/23/2005	wc218001000
1980b	1980	0	99598	50.3	117400	15.16	84.54	0.5	199400	82000	199400	9/23/2005	wc218002000
1980d	1980	0	96240	48.6	113400	15.13	82.52	0.5	192400	79000	192400	9/23/2005	wc218003000
2095a	2095	0	100558	47.99	118400	15.06	80.38	0.5	201400	83000	201400	9/23/2005	wc218004000
2095b	2095	0	99904	47.68	116400	14.17	79.42	0.5	199900	83500	199900	9/23/2005	wc218005000
2095d	2095	0	98584	47.05	113400	13.06	77.99	0.5	197400	84000	197400	9/23/2005	wc218006000
2104a	2104	0	101409	48.19	118400	14.35	80.03	0.5	202900	84500	202900	9/23/2005	wc218007000
2104b	2104	0	101678	48.32	118400	14.12	80.03	0.5	203400	85000	203400	9/23/2005	wc218008000
2104d	2104	0	98987	47.04	114400	13.47	78.13	0.5	198400	84000	198400	9/23/2005	wc218009000
2162a	2162	0	102453	47.38	108900	5.92	73.49	0.5	204900	96000	204900	9/23/2005	wc218010000
2162b	2162	0	102741	47.52	107900	4.78	73.03	0.5	205400	97500	205400	9/23/2005	wc218011000
2162d	2162	0	101097	46.76	105900	4.53	72.1	0.5	202400	96500	202400	9/23/2005	wc218012000
2296a	2296	0	109074	47.5	112900	3.38	70.94	0.5	218400	105500	218400	9/23/2005	wc218013000

8. Click the Edit Icon.
9. Enter a margin percentage
10. Click the *Recalculate* Grid button to update prices.
11. Click *Save* Icon to save your changes.

Pricing Notes:

- Once the plan prices have been populated in the grid, you can manually edit the prices directly in the grid.
- The plan prices are calculated so that they either come out ending in \$400 or \$900 depending on which value is closest when the price is rounded up.
- Lot prices are not included in the plan price.
- You can Right-click in the grid to change how records are sorted.

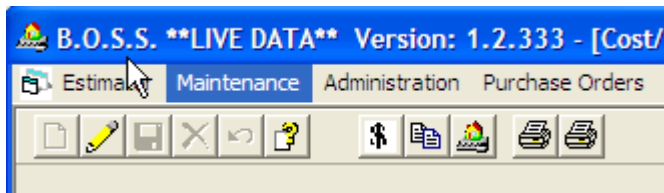
Notes:

- When the project is created it is automatically marked as a cost analysis project. Therefore its jobs will not appear on any of the exception lists.
- If one of the .DAT files requires changes and you want to re-import that job, use the menu options *Administration* → *Import Standard Plan*. Select the appropriate .DAT file for the job and import that one job. You will then need to go back in and reapply cost in the View Estimate screen.
- The jobs will automatically be attached to the customer *Cost Analysis*, so if you want to find the jobs by customer you can go to the Customer Screen and put in *Standard Plan Customer* and all the jobs for cost analysis will be listed.
- A Trial Analysis is a project that will be deleted at a later date by the System Administrator.
- If the cost analysis process is stopped by a bad .dat file and most of your plans have been imported, you can manually create the missing jobs. You can then import the .DAT files using the Administration → Import Standard Plans function. Or you can Create a new cost analysis project once the .DAT files have been corrected. It is recommended that you use the manual job import method until you are sure that CAD has corrected any issues since it takes between 10 and 30 minutes to create a complete cost analysis project. It's a lot quicker during the test process to do one job at a time.
- If you want to exclude a plan from your analysis, put yesterdays date instead of today's date in the xxx date field. because of the way dates compare that plan will be available until midnight that night so your better to put yesterdays date and then you can continue.

Running Analysis Reports

Once you have created the Cost Analysis Project and updated prices and options, you are ready to run the available reports.

1. Use Maintenance → Cost/Price Analysis to find and display the Cost/Price Analysis Detail screen for your project.
2. In the tool bar at the top left of the screen are two printer icons. Sample reports are shown on the next page.
3. The first one will generate a Summary Budget Report for Select Plan.
4. The second icon will display Print Analysis Report.



Summary Budget Report

Project: wc218 - Waterview Cove Test/cwd01

Builder:

District: Walton County - North

Job: wc218001000 - wc218 #001 Plan: 1980a						Plan: 1980a	
Activity	PO#	Type	Released	Approved	Paid	Budget	Actual
30300 - Engineering Services						\$75.00	\$0.00
30450 - Fire District Impact Fee						\$0.00	\$0.00
30500 - Notice of Commencemen						\$12.50	\$0.00
30800 - Building Permit						\$987.00	\$0.00
30950 - Water Meter/Fees						\$1,912.50	\$0.00
30975 - Site Evaluation						\$197.40	\$0.00
31000 - Septic Permit						\$305.00	\$0.00
40000 - Clear Lot						\$1,400.00	\$0.00
40010 - Supply Driveway Culvert						\$550.93	\$0.00
40015 - Install Driveway Culvert						\$75.00	\$0.00

Profit Margin Analysis Report

Analysis Name : Waterview Cove Test/cwd01 - 8
 Period: 9/2005
 Lot Cost: \$ 50,000
 Soft Costs: \$ 0
 Project: wc218 - Waterview Cove Phase 2

New Margin : 50.00%
 Copy Project : wc002
 Option Project : wc002
 Plan Project : wc002
 Cost Project: wc002
 User: dph

Analysis Date : 09/23/2005
 Tax Permit District : Walton County - North
 Tax Rate : 7.00%
 Costed Date : 9/23/2005

PlanID	Act. Cost	Hard Cost	Plan SqrFt	cost /sf	Sales Prc	Price - Lot	Gross Margin	price /sf	Changes For	50.00% GM	New Sls Price
1980a	101765	101765	1980	51.4	\$167,400.00	117400	13.3%	84.5	203900	253900	86500
1980b	99598	99598	1980	50.3	\$167,400.00	117400	15.2%	84.5	199400	249400	82000
1980d	96240	96240	1980	48.6	\$163,400.00	113400	15.1%	82.5	192400	242400	79000
2095a	100558	100558	2095	48.0	\$168,400.00	118400	15.1%	80.4	201400	251400	83000
2095b	99904	99904	2095	47.7	\$166,400.00	116400	14.2%	79.4	199900	249900	83500
2095d	98584	98584	2095	47.1	\$163,400.00	113400	13.1%	78.0	197400	247400	84000
2104a	101409	101409	2104	48.2	\$168,400.00	118400	14.4%	80.0	202900	252900	84500
2104b	101678	101678	2104	48.3	\$168,400.00	118400	14.1%	80.0	203400	253400	85000
2104d	98987	98987	2104	47.0	\$164,400.00	114400	13.5%	78.1	198400	247900	83500
2162a	102453	102453	2162	47.4	\$158,900.00	108900	5.9%	73.5	204900	254900	96000
2162b	102741	102741	2162	47.5	\$157,900.00	107900	4.8%	73.0	205400	255400	97500
2162d	101097	101097	2162	46.8	\$155,900.00	105900	4.5%	72.1	202400	252400	96500
2296a	109074	109074	2296	47.5	\$162,900.00	112900	3.4%	70.9	218400	268400	105500
2296b	107664	107664	2296	46.9	\$161,900.00	111900	3.8%	70.5	215400	265400	103500
2296d	102687	102687	2296	44.7	\$159,900.00	109900	6.6%	69.6	205400	255400	95500
2375a	110519	110519	2375	46.5	\$165,900.00	115900	4.6%	69.9	221400	270900	105000
2375b	109608	109608	2375	46.2	\$164,900.00	114900	4.6%	69.4	219400	269400	104500
2375d	106913	106913	2375	45.0	\$162,900.00	112900	5.3%	68.6	213900	263900	101000
2396a	112041	112041	2396	46.8	\$168,900.00	118900	5.8%	70.5	224400	274400	105500

Errors

When I select Project Information, the project ID selection box doesn't always say Choose. It seems to be cacheing my current project and listing the project information from my test project even though I didn't select it.

Job - New, projected field doesn't let me type-ahead more than one letter in the projected

There is no cancel button on the Import Cad dialog box - if I get errors and have to go back and fix how do I gracefully exit. X doesn't work. I have to close BOSS and reenter.


COST ANALYSIS – Single Plan

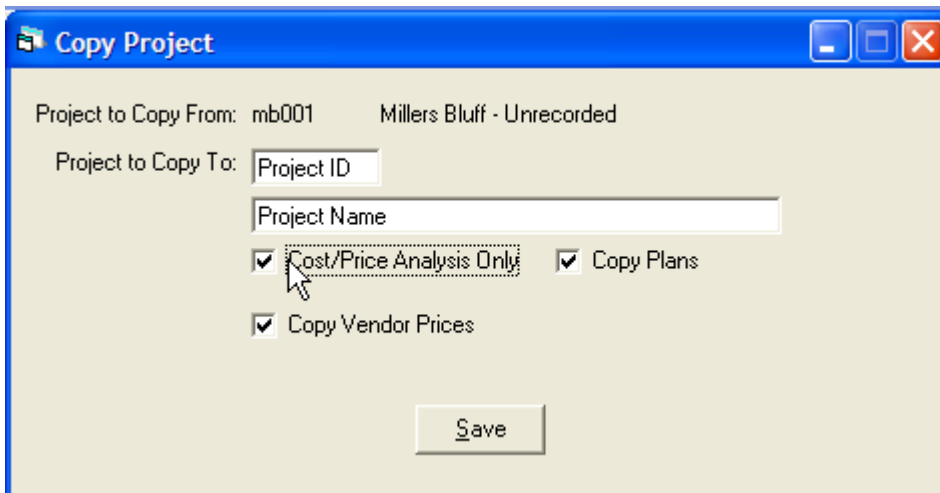
These instructions explain how to use the estimating programs within BOSS to do a cost analysis on a project for a single plan.


Notes:

The import CAD program requires that the truss resource be named as follows:
S + the numerical part of the plan ID + R + the letter part of the plan ID (the elevation). An example of a plan ID is 1980a or 1980d. A resource ID would be S1980ra or S1908rd.

CREATE ANALYSIS PROJECT

1. Create New Project - Create a project for cost analysis by finding similar existing project that has the options and project details that you want to use.
2. Maintenance → Projects → Project Information
3. Choose the project id that you want to copy.
4. Click the *Copy* icon on the tool bar. 



5. The Copy Project form will display as shown above. Enter a unique ProjectID and a Project Name that includes the words "cost analysis"
6. Be sure that the **Cost/Price/Analysis Only** and **Copy Vendor Prices** boxes are checked. If you do not want to copy all of the plans from the source project, uncheck the Copy Plan checkbox.
7. Click *Save* button to continue. A message box will display on the screen when the new project has been created. Because it was marked as a cost analysis project, it will not display on the *Daily Discipline Reports*.
8. Decide which plan(s) you want to associate with this Cost Analysis Project. Check the Plan List in the *Administration Menu* to see if the plan you will be using exist in the Plan List. If not, add it.
9. Display the Project Information page. (Maintenance → Projects → Project Information) to edit the project and add the plan
10. Click the Edit icon 
11. Right click in the Plans grid area. Then select Change Plans menu option.

Plans for this Project			
Plan ID	Price	Start Date	End Date

Change Plans

Change Start Date

Change End Date

Update Prices

Show Current Plans

Show Future Plans

Show Past Plans

12. Select the plan(s) you want to add to this project from the list of Available Plans.

Click the < button to add it to the list of Selected Plans.
Press OK to continue. (got an error in QA and boss closed)

Select Plans For Project: mb01t

_
□
✕

Selected Plans

<

>

Available Plans

0672a - 24x28 Basic Detached Garage w/
0672b - 24x28 Basic Detached Garage w/
0720a - 24x30 Detached Garage w/ Gable
0720b - 24x30 Detached Garage w/ Hip R
0750a - 25x30 Detached Garage w/ Gable
0750b - 25x30 Detached Garage w/ Hip R
0896a - 28x32 Deluxe Detached Garage w.
0896b - 28x32 Deluxe Detached Garage w.
1073a - Monaco
1075b - Madrid
1089a - Coral Rose
1104b - Tuscany
1111b - Barcelona
1166a - American Rose
1166b - American Rose
1200b - Need Name
1210b - Tangier

OK

Cancel

13. From the Project Information page, verify that this project is in the appropriate tax permit district and that at least one builder has been added.



Creating a Job and Importing CAD Data

The CAD department will create a data file that contains the "sticks and bricks" list to be used to do the cost estimate. The .DAT file will be stored on the HCHMAIN file server in the H:\bcadho\jobs folder with a filename of job.dat (i.e. aw00101300d.dat).

Once CAD has created your .DAT file, you must create a new job for your cost analysis project, attach that job to a plan and then import the CAD (activities and resources) data into the project. This works best if you have already associated at least one plan with the project prior to creating a new job.

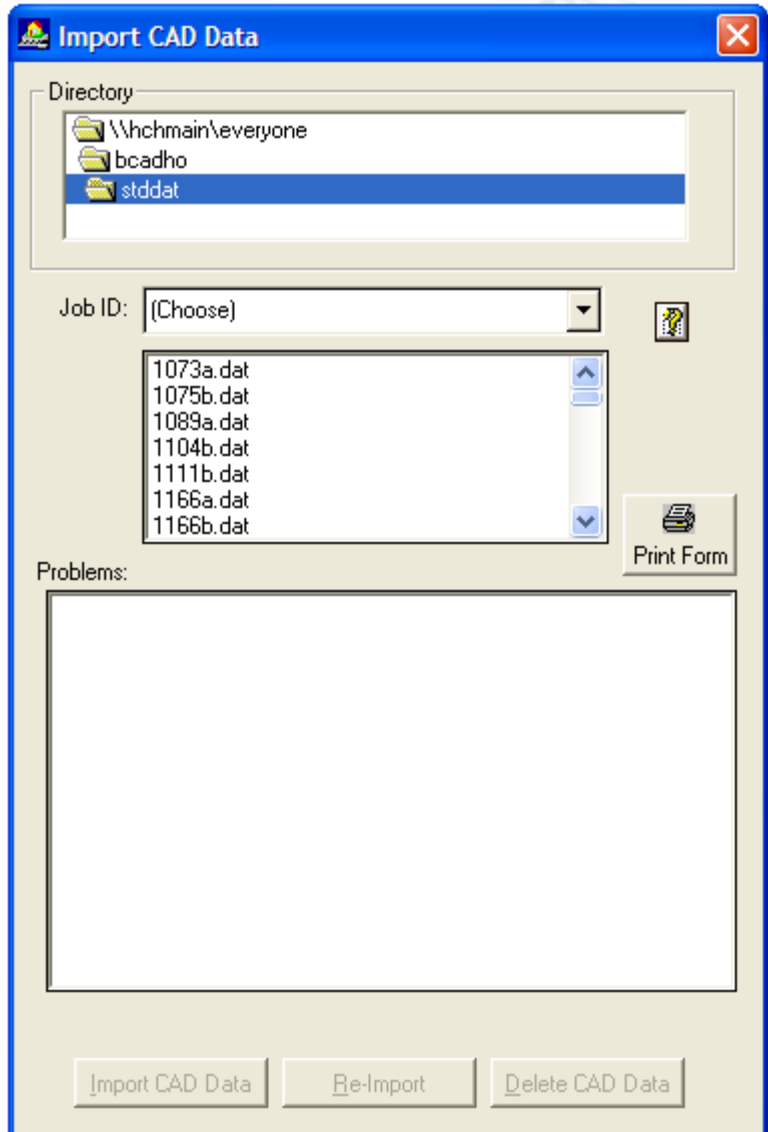
A job can only have one plan associated with it. However as you do your cost analysis you can reuse the same job through several different analyses by editing the plan and re-importing the cad data into the job. Or you can create multiple jobs for an analysis project.

Creating a Job


- From BOSS menus, select Maintenance → Jobs → Job Information (or select Estimator → Job Information)
 - Select New Job icon 
 - From the Job Information screen, select your Cost Analysis project number for the Project ID field.
 - Select the plan ID for this job. You will only be able to select from a list of plans that have previously been associated with this project.
 - Complete the rest of the fields and click the Save Icon. . The system will create a unique JobID which includes the project ID, block and lot number. After saving the job, you will be asked "Do you want to create options now?" You can come back later and add Options to this Job.
 - When the Job is saved, the early permit options are automatically added to the estimate. (In a normal job you would have to release to CAD to post the permit options).

Importing CAD Data

- CAD will notify you when the .DAT file for this job (project) is ready for import. To start the import, select menu options: **Administration → Import Standard Plans**
- The Import CAD Dialog box will display listing all the .DAT files from the BCADHO (Builder's CAD HandOff) folder.
- Select the appropriate folder where the data files are stored (i.e. costplans). Then select your job from the Job ID drop-down box. (Only jobs attached to analysis plans will display in this list. If you select Import CAD from the Estimator menu, only non-analysis jobs will be listed.)
- Select a .DAT file that matches the plan you want to import. Then click the *Import CAD Data* button to begin the import. If there are any problems with the data (i.e. missing activities or resources, incorrect truss id) a message will display and the Import process will be cancelled.
- If the import is successful, you are ready to apply costs.
- If there is a problem with the Import, notify CAD to resolve and recreate the data file. A list of problems will be displayed in the problem box and an email will be generated to CAD. You can click the Print Form button to print the list of problems.



Apply Cost to Job

- From the Boss menus select Estimator → View Estimate
- Select the Job that you just created to display a list of activities and resources that were imported from the CAD .DAT file.
- Click the Apply Cost Icon . If the process is successful, a message will display. Press OK to continue. If there are problems with Apply Cost, review the troubleshooting steps below until the process can be run successfully.

Troubleshooting Apply Cost

- If there are any invalid resources, activities, or combinations of the two, an error message will display and the Apply Cost process will continue. Any problems need to be researched to determine whether the problem is with the CAD or BOSS data. If the problem is with CAD, they will need to provide a new .dat file for import. If the problem is in BOSS, you will need to correct the problem.
- If there are any uncosted resources, a message will display that tells you which resources are uncosted.
- Resources will show as uncosted if there is not a project, district or global price for that resource within the current date range. Administrator will add a price for this project and resource.
- An error will occur if the Vendor for a resource is not in use or the vendor's insurance is expired.

Fixing Uncosted Items

1. To resolve, go to Administration → Vendor → Price Maintenance.
2. The Vendor Contract and Cost Maintenance screen will display.
3. Use filters to select the resource. Use Search Icon on the tool bar.
4. Select a Vendor in the top grid.
5. Right-click anywhere in the lower grid and select a menu option.
6. Add all missing resources for this vendor
7. Add a single missing resource (manually) for this vendor (Click Add to save). You will need to select tax permit district and enter a cost for this resource within each selected district. No charge items – NC. Pending if price is not effective yet.
8. Use the Print button to compare vendor prices against hard copy of the bid.
9. Update Cost allows you to change costs of existing resources (edit grid)
10. Click (X) to close this this screen when vendor prices have been updated.
11. Go back to View Estimate and re-apply cost until there are no more problems.

Notes

- You should now have one plan imported as a Cost Analysis Plan. It will not show up on a Cost Analysis Report but you will be able to print any of the normal reports so that you can calculate what that plan will cost.
- If you want your plan to show up on a Cost Analysis Report, add the job to an existing Cost Analysis Project.

- If you want to determine the effect on price of adding additional BOSS options you can create a second job on the same project add the job options your interested in testing, import CAD on that house and apply cost. You can then compare the first job to the second job and the cost price difference between the two would be the cost of the options.
- If you want to compare CAD options, (structural type options), then you will need CAD to create you an additional .dat file based on the same plan so that you could compare prices that way.