

PROJECT COST MANAGEMENT



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INTRODUCTION

Course Description

This course covers the concepts and functionality you need to know in order to use the InEight Estimate software successfully. As a result, you will be able to build cost estimates and bid proposals with precision and efficiency.

Course Objectives

As a result of this course, you will be able to use the InEight Estimate software to:

- Construct and modify cost estimates
- Calculate profit and finalize bid proposals

How to Use this Manual

This training manual serves as the working guide during the *E101 Essentials of Project Modeling and Estimating* instructor-led course. The first seven lessons of this document follow a natural progression of putting an estimate together, from set up of a project to finalization of a bid. The remaining lessons cover additional functionality that will help you build and review your project estimate more effectively.

Lessons

The following lessons are covered in this course:

	Course Lessons
Lesson	Торіс
Lesson 1	Estimating Core Concepts
Lesson 2	General Navigation
Lesson 3	Library Setup
Lesson 4	Project Setup
Lesson 5	Estimate Direct Costs
Lesson 6	Estimate Indirect Costs
Lesson 7	Finalize the Estimate

Lesson Format

This manual is designed to be a "hands on" learning guide. As such, each lesson is organized into sections:

Section	Description
Objectives	Specify what you will learn in each lesson.
Topics	Organize the subject matter, with explanations of key concepts and terms.
Step by Steps	Walk you through the "mechanics" of how to perform specific functions in the software. For each step by step, you will use the Training Job that comes pre- loaded in the InEight Estimate Estimating software.
Exercises	Allow you to practice and reinforce what you learn. For each exercise, you will use the Training Job that comes pre-loaded in the InEight Estimate Estimating software.
Review	Asks you questions to check what you have learned within each lesson.

Call-Outs

Throughout the document, you will also find important call-out banners.

TIP	Tips are for important notes and information you want to remember.

NOTE Notes are for critical information you need to know.

Ongoing Use

This manual is also designed to be a comprehensive reference guide you can use outside of the classroom and revisit as needed. Each lesson is compartmentalized so that you can refer back to each lesson as needed.

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LESSON 1 – ESTIMATING CORE CONCEPTS

Lesson Duration: 30 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the estimating process in InEight Estimate
- Explain key terms and concepts

Lesson Topics

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1.1 OVERVIEW OF THE ESTIMATING PROCESS

The estimating process typically progresses through the following five steps. If you are an Owner you may not take part in all five of these steps, but may instead do a few in an iterative process as you progress through stage gate approval phases.

- 1. Enter project details.
- 2. Enter proposal deliverables.
- 3. Calculate Direct & Indirect Project Cost.
- 4. Add Markup, Contingency, & Fees.
- 5. Distribute Cost + Markup to required structure.

The below table displays how these five steps correspond with specific forms in InEight Estimate:



Note the forms used in InEight Estimate to accomplish the steps above:

- Job Properties
- Pay Item & Proposal
- CBS (Cost Breakdown Structure)
- PBS (Price Breakdown Structure)

The rest of this section walks you through an overview of each step in the process and its corresponding form in InEight Estimate.

Step 1 – Enter Project Details

When you decide to estimate a new project, the first step is to create a new estimate and set it up with the general project details. In InEight Estimate, you'll enter basic information and project specific settings in the Job Properties form from the Setup tab.

The Job Properties form is organized into tabs to help you keep track of all the basic information and settings for the project. It begins with the Overview tab. You will move from left to right entering your project specific information and adjusting any settings that differ from the default.

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b Properties	Found Setup [d Resource	Materials	Resource Assemblies	Cost Item Stand Assemblies Tab		Reports					
		Initialize			Resources		Assemblies		Reports					
ost Breakdo	own Stru	ucture (CBS) Reg	jister	Job Properties	0							-		
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Trackin	g Job Folder Tags	Co	ompetitors	Pricing	Schedule	Cash Flow	Equipment	- • •
Identification										_				
Locati	ion: I-1	0 MP 100 to MP 12	:0	Type: Hig	hway and Gen	eral Engineer	ing			Contra	ct Duration:			160
c	City: Pho	penix		Engineer: Exa	ample Engineer	Fred Jones	I			E Tir	ne Measure:	Contract Day	/s *	
Cour	nty: Ma	ricopa		Owner: Exa	ample Owner	Jerry Slate			2	Fo	recast Start:	6/11/2019	•	
Coun	try: Un	ited States	•	Architect: Exa	ample Architect	Robert Fro	st			For	ecast Finish:	11/20/2019	•	
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Longitu Proposal	ıde:	20na • 12/23/2013 •	0.00000				Opening Type:	: Publ	lic		Duration:			162
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Longitu Proposal Bid Bid Estim Bid Loca	nde: Jude: Date: 1 Time: 1 hator: E ation: E	12/23/2013 - 0:00:00 PM	0.00000				Proposal Type: Plan Holders: Liquidated Damages:	Unit	t Price		Duration:			
Longitu Proposal Bid Bid Estim	nde: Jude: Date: 1 Time: 1 hator: E ation: E	12/23/2013 - 0:00:00 PM Example Prime Con	0.00000		\$6,1		Proposal Type: Plan Holders:	Unit	t Price		Duration:			5
Longitu Proposal Bid Bid Estim Bid Loca	nde: Jude: Date: 1 Time: 1 hator: E ation: E	12/23/2013 - 0:00:00 PM Example Prime Con	0.00000			000,000.00	Proposal Type: Plan Holders: Liquidated Damages:	Unit	t Price	55	Duration:		_	5

Step 2 – Enter Proposal Deliverables

For Contractors who are submitting a proposal to a client, this step enables you to enter the client provided deliverables clients are requesting pricing for. Most Owners will skip this step unless there is a need to track various funding sources or prepare for internal or external company billing.

In InEight Estimate this list of items is recorded in the Pay Item & Proposal Register on the Setup tab.

• Notice that your pay items have no pricing when first entered because you have yet to figure out costs. You will come back to this form later in the process to distribute your costs and markup.

Pro	posal Re	cap - Training Jol	b						× 1	Item Recap - 200	SITEWORK & ROAL	DWAY						×
		Current	Target	Forecast	Variance					Description		Unit Price (balanced)	Total Price (balanced)		Fotal Price (current)			
	Price:	\$6,569,735.00	\$6,569,736.28	\$6,577,223.80	\$1.28	DD				Price		(Della ICEO)	\$3,164,056		\$3,402,700.			
м	arkup:	\$984,118.34	\$984,119.62	\$1,041,388.54	\$57,268.92	UT				Distribution			\$549,496.57		\$888,140.0	2		- 1
Mar	gin%:	14.98	14.98	15.83	\$66,039.81	UT				🗸 🙏 Markus			\$478,396,13		\$717,152.3			
										A Pro	fit (Markup records)		\$313,781.00		\$552,537.2	5		
							P	ricina is	now sp	read to								
rag	columns h	ere to group							ay items						Saved vie	tws: Standard V	/ien	-)
	Position i	Pay Item Number	Descript	ion		Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	Unit Price (current)	Total Price (current)	Unit Markup (balanced)	Lock Quantity	Total Markup (balanced)	Lock Price	Unit Distribution	Total Distribution	Unit (curr
÷	- 1	200	SITEWO	RK & ROADWAY					U.S. Dollar		\$3,402,700.00			\$478,396.13			\$649,383.87	
	+ 1.1	641 0 100	Mobile	zation		1.00	1.00	Lump Sum	U.S. Dollar	\$395,600.00	\$395,600.00	\$2,848.15		\$2,848.15		\$6,553.48	\$6,553.48	
	+ 1.2	201 0 102	Cleari	ng & Grubbing		10.00	10.00	Acre	U.S. Dollar	\$5,900.00	\$59,000.00	\$976.24		\$9,762.36		\$1,973.16	\$19,731.56	
	+ 1.3	202.0183	Undas	ssified Excavation		50,000.00	50,000.00	Cubic Yard	U.S. Dollar	\$5.50	\$275,000.00	\$1.11		\$55,694.42		\$1.65	\$82,417.49	
	+ 1.4	303 5912	Aggre	igate Base		40,000.00	45,000.00	Ton	U.S. Dollar	\$26.50	\$1,060,000.00	\$3.02		\$120,771.08		\$4.14	\$165,733.22	
	+ 1.5	303 4263	Aspha	alt Concrete Hot M	x Type A	38,000.00	35,000.00	Ton	U.S. Dollar	\$42.45	\$1,613,100.00	\$7.61		\$289,320.12		\$9.87	\$374,948.12	
	2	400	WATER	& SEWER					U.S. Dollar		\$718,550.00			\$112,985.42			\$154,981.81	
	+ 2.1	413(8) 046	4 36 Inc	th RCP Culvert Cla	is III	1,000.00	1,024.00	Linear Feet	U.S. Dollar	\$97.45	\$97,450.00	\$14.30		\$14,297.53		\$19.96	\$19,959.48	
						12.000.00		Linear Feet	U.S. Dollar	\$29,50	\$354,000,00	\$4.62		\$55,406.82		\$5.25	\$74,950.37	

Step 3 – Calculate Direct & Indirect Project Cost

Once you've set up your estimate, you will perform take-offs and cost analysis to determine the total estimated cost to complete the entire scope of work.

The Cost Breakdown Structure (CBS) Register is the main form where you will do your cost estimating.

- It is the hierarchy of work activities that make up the estimate
- Each row in the CBS represents a work activity and is called a cost item

3	<u> </u>							Training Job -	Estimate						>
File	Setup	Estimate	Quote	Price	Execution	Sys	stem	Integrations	Actions	More Act	ions			盦⊞	
	Print	New	🖶 Сору	🔀 Spl	it	-		B Cost Item		Assembly	2	10	VV	E	
d	Preview	🚫 Delete	Paste	🔁 Tog	ggle Suspended		周	🔚 Subordina	te Cost Item	🚍 Subordina	ate Assembly	- ×		2	
8	Export to Excel	% Cut	+ Fill Down	→ Ind	lent				t Cost Item			Expand / Collapse *	Filter Clear		
	Print	0		Edit						Insert		compac	View		
		c													
OD	Properties	Cost B	reakdown Stri	icture (C	BS) Register (9									
rag	columns here to g	roup							Find:	[Search For]] ··· Saved	views: Previou	us View	•	
	CBS Position Code	⊑. De	escription			Op Cod	tional de		Forecast (T/O) Quant	ty	Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated	d
÷		30	ЭВ							20.00	Mile	\$293,095.93	\$5,861,918.63]
	+	Pi	ime Bond			PRI	IME BON	D		1.00	Lump Sum	\$47,069.88	\$47,069.88		
	+	Pi	rice % Add-On			PRI	ICE % A	DD-ON		1.00	Lump Sum	\$294,928.95	\$294,928.95		
	+	Jo	b Financing			FIN	IANCE E	XPENSE		1.00	Lump Sum	\$0.00	\$0.00		
	+	In	direct Cost Es	calation		INC	DIRECT	COST ESCAL		1.00	Lump Sum	\$0.00	\$0.00		
	+	Di	rect Cost Esca	lation		DIR	RECT CO	ST ESCALAT		1.00	Lump Sum	\$18,837.35	\$18,837.35		
	+	In	direct Cost Ad	ld-On		IND	DIRECT	COST ADD-ON		1.00	Lump Sum	\$0.00	\$0.00		
	+	Jo	ob Managemer	nt & Equij	pment	JOE	B MANA	GEMENT & E		1.00	Lump Sum	\$157,096.28	\$157,096.28		
	+	G	eneral Expense	e		GEI	NERAL E	XPENSE		1.00	Lump Sum	\$4,200.00	\$4,200.00		
	+	Di	rect Cost Add	-On		DIR	RECT CO	ST ADD-ON		1.00	Lump Sum	\$104,301.10	\$104,301.10		
	+ 1	м	obilization			641	1 0 100			1.00	Lump Sum	\$11,909.51	\$11,909.51		
	+ 2	C	earing & Grub	bing		201	1 0 10 2			10.00	Acre	\$3,918.50	\$39,184.97		
	□ 3	U	nclassified Exc	avation		202	2 0 183			50,000.00	Cubic Yard	\$4.68	\$233,915.81		
	+ 3.1		Excavation			3.1				50,000.00	Cubic Yard	\$3.00	\$149,922.88		
	+ 3.2		Embankment			3.2	2			50,000.00	Cubic Yard	\$1.68	\$83,992.94		
	□ 4	A	ggregate Base			303	3 5912			45,000.00	Ton	\$15.40	\$692,928.99		
	+ 4.1		Furnish & Haul B	ase Materi	ial	4.1				45,000.00	Ton	\$11.54	\$519,513.30		
	+ 4.2		Finegrade Subgr	ade		4.2				400,000.00	Square Yard	\$0.19	\$75,848.36		
	H 42		Install Accordant	Page		10				45.000.00	Top	én 17	AUA 252 23		

Step 4 – Add Markup, Contingency, & Fees

Once you have estimated all project costs, you may need to add markup, contingency or other fees and define the job's profit in the Price Breakdown Structure form.

escription	Assigned	Unassigned	Total	% of Target
Price Breakdown Structure				
🗸 🔺 Target Price	\$5,252,19	\$645,755.99	\$5,897,950.68	100.00
🗸 🔺 Markup	\$0.00	\$315,692.95	\$315,692.95	5.35
🗸 🛕 Target Profit		\$0.00	\$0.00	0.00
🛕 Indirect Cost Markup	b	\$0.00	\$0.00	0.00
🛕 Direct Cost Markup		\$0.00	\$0.00	0.00
✓ ▲ Business Overhead	\$0.00	\$315,692.95	\$315,692.95	5.35
Price % Add-On	\$0.00	\$265,407.78	\$265,407.78	4.50
	\$0.00	\$33,105.26	\$33,105.26	0.56
Indirect Cost Escala.	\$0.00	\$2,131.11	\$2,131.11	0.04
Direct Cost Escalatio	n \$0.00	\$15,048.80	\$15,048.80	0.26
Business Overhead .	\$0.00	\$0.00	\$0.00	0.00
🗸 🛕 Total Cost	\$5,252,19	\$330,063.05	\$5,582,257.73	94.65
🗸 📥 Indirect Cost	\$0.00	\$329,063.05	\$329,063.05	5.58
y 📥 Job Overhead	\$0.00	\$329,063.05	\$329,063.05	5.58
Prime Bond	\$0.00	\$43,789.75	\$43,789.75	0.74
Indirect Cost A	\$0.00	\$5,888.67	\$5,888.67	0.10
Direct Cost Add.	\$0.00	\$104,088.34	\$104,088.34	1.76
Job Overhead I	\$0.00	\$175,296.28	\$175,296.28	2.97
🗸 📥 Direct Cost	\$5,252,19	\$1,000.00	\$5,253,194.68	89.07
Direct Cost Items	\$5,252,19	\$1,000.00	\$5,253,194.68	89.07

Step 5 – Distribute Cost + Markup to required Structure

You now have a target price or total estimated value that you can spread to your required project deliverables, back in the Pay Item & Proposal form. InEight Estimate has tools within this form to help automatically distribute your cost, overhead and all markups to the listed items.

	oosal Reca	p - Training Jo	Ь			×	Item Recap	- 641 0100 Me	bilization			×
		Current	Target	Forecast	Variance				Balanced Unit	Current Unit		
	Price: \$6	6,455,450.00	\$6,553,976.75	\$6,462,850.00	\$98,526.75	ADD 🖌	\	Price:	\$18,300.00	\$386,800.00		
1	Profit:	\$544,294.64	\$642,821.40	\$604,568.97	\$38,252.43	ADD		Profit:	\$2,049.63	\$370,501.39		
Mar	gin%:	8.43	9.81	9.35	\$32,502.50	ADD		Total Cost:	\$16,298.61	\$16,298.61		
_							Busine	ss Overhead:	\$840.31			
						1	ر <u>۱</u>	ob Overhead:	\$3,546.52			
							Unassigne	d Direct Cost:	\$2.26			
							Assigne	d Direct Cost:	\$11,909.51			
	olumns here Pay Item Number	Descrip	tion		Pay Quantity	Forecast (T/O) Quantity	Find: Unit of Measure	Search For	Unit Price (current)	Total Price (current)	unit Price (balanced)	Total Price (balanced)
, -	+ 641 0 100) Mobiliza	tion		1.00	1.00	Lump Sum	U.S. Dollar	\$386,800.00	\$386,800.00	\$18,300.00	\$18,30
	+ 201 0 102	2 Clearing	3 & Grubbing		10.00	10.00	Acre	U.S. Dollar	\$6,120.00	\$61,200.00	\$5,867.33	\$58,67
	+ 202 0 183	3 Unclass	ified Excavation		50,000.00	50,000.00	Cubic Yard	U.S. Dollar	\$8.50	\$425,000.00	\$6.31	\$315,50
	+ 303 5912	2 Aggreg	ate Base		40,00				\$22.00	\$880,000.00	\$19.47	\$778,80
	+ 303 4263	B Asphalt	Concrete Hot Mix	Туре А	38,00	Pricing is no		ad to	\$35.00	\$1,330,000.00	\$52.28	\$1,986,64
	+ 413(B) (0464 36 Inc	h RCP Culvert Cl	ass III	1,000	bid i	tems		\$100.00	\$100,000.00	\$87.19	\$87,190
) 10 Inch	PVC Force Main (S	DR21)	12,000.00	12,000.00	Linear Feet	U.S. Dollar	\$28.00	\$336,000.00	\$29.82	\$357,84
	+ 800 0220		PVC Gravity Sewe	r (SDR 35)	3,000.00	3,000.00	Linear Feet	U.S. Dollar	\$64.00	\$192,000.00	\$64.13	\$192,39
) 24 Inch	The oranity serve	(00/(00)				U.S. Dollar	\$4 500.00	\$72,000,00	\$4.579.64	\$73.274

1.2 KEY CONCEPTS AND TERMS

To help you get started in InEight Estimate, you should know a few key terms:

- Job Folder
- Library
- Form
- Cost Item
- Pay Item
- Resource
- Assembly

1.2.1 Job Folder

Job folders hold all the information for an individual project estimate. It is possible to import master data into a job folder, but when you work in a job folder it is independent, meaning any activity performed in that folder will not affect any other jobs and will not affect the library.

TIP When moving back and forth between jobs, make sure to always double-check that you are in the right job.

1.2.2 Library

The Library is a storehouse for master data, such as:

- Labor, equipment, and material unit cost rates
- Standard account codes
- Units of measure

When you create a new job from scratch, default data and settings copy from the Library into your new job folder, except for the resource rates. Multiple list of resource rates can be maintained in the library so you must select which rates to populate a new estimate with. Four tag fields are available to filter the resource rates you bring into an estimate from the master library. For example, you may select a subset of your labor rates based on the geographical location of the project.

1.2.3 Form

Any screen you open in InEight Estimate is considered a Form. There are three types of forms: Standard, Register, and Record forms.

Standard Forms resemble typical data entry forms with fields available to fill in key project information. They also may contain radio buttons or checkboxes to define settings for the job.

Overview Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	Cash Flow	Equipment
Standard Shift Ark ge Work Hours per Shift Pay Hours per Shift: Shifts per Day:	8.00	Standard Warstand Scale 1: Scale 2: Scale 3:	0.00 %		es Lock Cost Items Pay Item Unit Pr Activate PBS Ch Activate Quantit Maintain CBS St	ice Precision: anges Log y Checking	2		Preserv Data Sc	Tabs e Original Cos burce	t item
Days per Week:	5.00	Shift	Checkbox	es	When man-coun) Change UM / M) Change Days	an-Hour		adio butto	ons

TIP

InEight Estimate uses tabs to group and organize entry fields and settings in a logical way, so that the information is easy to access.

Register Forms have a grid format of rows and columns, giving it a spreadsheet look and feel. Register forms allow you to see information for multiple items at once. The Cost Breakdown Structure (CBS) Register is an example of a register form.

	columns here to group				Search For]	Saved	views: Standa	ard View	•	<u> </u>		
rag	columns here to group			Find: LS	search For	Saved	views: Stanua			1		
	CBS Position Code 🚊 Description		Optional Code	Forecast (T/O) Quantity		Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated			
Т	+ 1	Mobilization	641 0 100		1.00	Lump Sum	\$11,909.51	\$11,909.51		1		
	+ 2	Clearing & Grubbing	201 0102	10.00 4		Acre	\$3,918.50	\$39,184.97				
	□ 3	Unclassified Excavation	202 0183		50,000.00	Cubic Yard	\$4.54	\$226,856.16				
	+ 3.1 Excavation + 3.2 Embankment - 4 Aggregate Base		3.1		50,000.00	Cubic Yard	\$2.86	\$142,863.22				
1			3.2	multiple		Cubic Yard	\$1.68	\$83,992.94				
			303 View			Ton	\$15.40	\$692,928.99				
1	+ 4.1	Furnish & Haul Base Material	4.1		.00	Ton	\$11.54	\$519,513.30				
	+ 4.2	Finegrade Subgrade	4.2 Items	items at once		at office		Square Yard	\$0.19	\$75,848.36		
	□ 4.3	Install Aggregate Base	4.3		.00.000	Ton	\$2.17	\$97,567.33				
	+ 4.3.1	Place Aggregate Base	4.3.1		45,000.00	Ton	\$1.63	\$73,460.92				
	+ 4.3.2	Blue Top Aggregate Base	4.3.2		400,000.00	Square Yard	\$0.06	\$24,106.42				
	□ 5	Asphalt Concrete Hot Mix Type A	303 4263		35,000.00	Ton	\$42.62	\$1,491,580.59				
	+ 5.1	Furnish & Haul Hot Mix	5.1		35,000.00	Ton	\$39.27	\$1,374,562.54				
Ł	+ 5.2	Install Hot Mix Type A	5.2		35,000.00	Ton	\$3.34	\$117,018.05				
	6	36 Inch RCP Culvert Class III	413(B) 0464		<u>1,024.00</u>	Linear Feet	\$67.54	\$69,159.49				
	+ 6.1	Furnish RCP Materials	6.1		1,024.00	Linear Feet	\$33.48	\$34,286.70				
	+ 6.2	Excavate RCP Trench	6.2		1,858.56	Cubic Yard	\$4.51	\$8,379.59				
- 1	+ 6.3	Install RCP Pipe	6.3		1.024.00	Linear Feet	\$11.74	\$12,017,60				

In a register form, you can open a **Record** for individual items you want to drill into.

The Tab key is the best way to move among fields in InEight Estimate (instead of the Enter key).

The below figure displays a Cost Item Record accessed by double clicking on that item on the Cost Breakdown Structure (CBS) Register.

TIP

BS Code:	Opt	ional Code:	Desc	ription:				Forec	ast (T/O) Q	ty:	Unit of Me	easure
14	303	5912	Aggr	egateBa	ase				45,00	00.00	Ton	
4.1	4.1		Furni	ish & Ha	ul Base Ma	terial			45,00	00.00	Ton	-
PI Assignment: PI Line Number: 303 5912 40 Cost Item Summary Detail : \$				PI Description: AggregateBase 11.54 V Plug: \$0.00			Record fo on 1 it		S	Cost Segm Direct Cost		
rag columns here	e to gr	oup	Find:	[Search	For]		Saved views:	Previou	s View		-	
Row Number ≞		Code	Resource Assemb		Descriptio	n		Quantity (Less Wa	ste)	Was Add	ite % -on	Qua
+	1	LT1			Teamster							
→ +	2	ETDT			Dump Tru	ck						
	+ 3 MBR			Aggregate Base Rock					45,500.00			

1.2.4 Cost Item

Cost items are the individual cost-related activities that make up the project. Cost items are organized into a hierarchy in the Cost Breakdown Structure (CBS) Register. Each row in the CBS is considered a cost item.

CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost
+ 1	Mobilization	641 0100	1.0	0 Lump Sum	\$11,909.51
+ 2	Clearing & Grubbing	201 0102	10.0	0 Acre	\$3,918.50
□ 3	Unclassified Excavation	202 0183	50,000.0	0 Cubic Yard	\$4.68
+ 3.1	Excavation	3.1	50,000.0	0 Cubic Yard	\$3.00
+ 3.2	Embankment	3.2	50,000.0	0 Cubic Yard	\$1.68
□ 4	Aggregate Base	303 5912	45,000.0	10 Ton	\$15.40
+ 4.1	Furnish & Haul Base Material	4.1	45,000.0	10 Ton	\$11.54
+ 4.2	Finegrade Subgrade	4.2	400,000.0	0 Square Yard	\$0.19
□ 4.3	Install Aggregate Base	4.3	45,000.0	0 Ton	\$2.17
+ 4.3.1	Place Aggregate Base	4.3.1	45,000.0	10 Ton	\$1.63
+ 4.3.2	Blue Top Aggregate Base	4.3.2	400,000.0	0 Square Yard	\$0.06

1.2.5 Pay Item

Pay items typically represent the owner required deliverables a contractor must submit pricing for. Pay items are used to distribute the cost calculated in the Cost Breakdown Structure, with all markup, including any fees or contingencies calculated in the Price Breakdown Structure. This allows the total estimate value to be distributed to a structure that is different than the CBS. Pay Items are

predominantly used by contractors to prepare a bid sheet. Owners may use pay items to identify funding sources or for various reporting needs.

	Position =	Pay Item Number	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	Unit Price (current)	Total Price (current)
÷	□ 1	200	SITEWORK & ROADWAY				U.S. Dollar		\$3,402,700.00
	+ 1.1	641 0 100	Mobilization	1.00	1.00	Lump Sum	U.S. Dollar	\$395,600.00	\$395,600.00
	+ 1.2	201 0 102	Clearing & Grubbing	10.00	10.00	Acre	U.S. Dollar	\$5,900.00	\$59,000.00
	+ 1.3	202 0 183	Unclassified Excavation	50,000.00	50,000.00	Cubic Yard	U.S. Dollar	\$5.50	\$275,000.00
	+ 1.4	303 5912	Aggregate Base	40,000.00	45,000.00	Ton	U.S. Dollar	\$26.50	\$1,060,000.00
	+ 1.5	303 4263	Asphalt Concrete Hot Mix Type A	38,000.00	35,000.00	Ton	U.S. Dollar	\$42.45	\$1,613,100.00
	2	400	WATER & SEWER				U.S. Dollar		\$718,550.0
	+ 2.1	413(B) 0464	36 Inch RCP Culvert Class III	1,000.00	1,024.00	Linear Feet	U.S. Dollar	\$97.45	\$97,450.0
	+ 2.2	800 0220	10 Inch PVC Force Main (SDR21)	12,000.00	12,000.00	Linear Feet	U.S. Dollar	\$29.50	\$354,000.0

1.2.6 Resource

Resources are the building blocks of a detailed cost estimate.

Resources are the people, equipment, material, and supplies needed to complete the project. Resources are employed to cost items to develop an estimate, and are organized into seven categories or types:

- 1. Labor
- 2. Construction Equipment
- 3. Rented Construction Equipment
- 4. Installed Equipment
- 5. Installed Materials
- 6. Supplies
- 7. Unique

1.2.7 Resource Assembly

A **Resource Assembly** is a group of resources that are often used together. For example, for civil work, you may group together an operator foreman, operator, and laborer, along with a loader and excavator. When estimating, you can employ this assembly which includes all of the pre-selected resources.

sou	rce A	ssembl	y Regis	ter O															
g col	lumns	here to g	group																
Code		de 😐					Resource File Description		Quantity	Quantity U			Unit	Cost	Total Cost			nizational gory	Geographi Area
-	CCONC		Concre	ete Crew		Stand	ard Assemb	ly File		1.00	Hour			\$375.03	\$375.03	U.S. Dollar	Cond	rete	
		Row Numbe	r ≞	Resource Code	Description		Quantity	Unit of Measure	Unit Cost	Curr	ency	Cost Driver	r	Resource File Descr	iption	Organizatio Category	nal	Geographic Area	Wage Zone
	\rightarrow		1	LC2	Carpenter Journ	eyman	2.00	Each	\$28.92	U.S.	Dollar	CI Du	ra	Standard	Labor Rate File	Carpenter		Southwest	Wage Zon.
			2	LF2	Finisher		1.00	Each	\$28.07	U.S.	Dollar	CI Du	ra	Standard	Labor Rate File	Finisher - C	onc	Southwest	Wage Zon.
			3	LIW1	Iron Worker		1.00	Each	\$35.55	U.S.	Dollar	CI Du	ra	Standard	Labor Rate File	Iron Worke	r	Southwest	Wage Zon.
			4	LL2	Laborer		1.00	Each	\$26.37	U.S.	Dollar	CI Du	ra	Standard	Labor Rate File	Laborer		Southwest	Wage Zon.
			5	ECRHC	Hydraulic Crane	25 Ton	1.00	Each	\$117.60	U.S.	Dollar	CI Du	ra	Standard	Equipment Rate	Crane			
			6	LC1	Carpenter Appre	ntice	1.00	Each	\$27.48	U.S.	Dollar	CI Du	ra	Standard	Labor Rate File	Carpenter		Southwest	Wage Zon.
			7	LO2	Operator Class 2		1.00	Each	\$28.07	U.S.	Dollar	CI Du	ra	Standard	Labor Rate File	Operator		Southwest	Wage Zon.
			8	ETFT	Flatbed Truck		1.00	Each	\$22.60	U.S.	Dollar	CI Du	ra	Standard I	Equipment Rate	Truck			
			9	LC3	Carpenter Forem	ian	1.00	Each	\$31.47	U.S.	Dollar	CI Du	ra	Standard	Labor Rate File	Carpenter		Southwest	Wage Zon.
+	CGR	ADE	Gradin	g Crew		Stand	ard Assemb	ly File		1.00	Hour			\$234.73	\$234.73	U.S. Dollar	Eart	nwork	
+	CMA	INT	Equipm	nent Mainter	ance	Stand	ard Assemb	ly File		1.00	Each			\$73.60	\$73.60	U.S. Dollar	Mech	nanic	
+	CPA	/E	Paving	Crew		Stand	ard Assemb	ly File		1.00	Hour			\$476.24	\$476.24	U.S. Dollar	Asph	alt	

1.2.8 Cost Item Assembly

A **Cost Item Assembly** is a predefined group of cost items that has cost based on estimator inputs to a set of questions. Cost item assemblies provide parameter-driven estimating and can also refer to reference tables. They allow companies to create intelligent construction systems to automatically estimate various scopes of work, based upon a user providing specification and dimension variables.

05	t Item Assembl	y Register 🛛								
rag	columns here to g	roup								
	Code 🚊	Description	Assembly File Description	Default Quantity	Default Unit of Measure	Default Unit Cost	Default Total Cost	Default Currency	Organizational Category	Geographic Area
	RW01	Standard Retaining Wall Assembly	Standard Cost It	20.00	Cubic Yard	\$424.67	\$8,493.38	U.S. Dollar	Concrete	
	TEST	TEST		1.00	Each	\$0.00	\$0.00	U.S. Dollar		
	TEST - DRS	Test Cost Item Assembly - Ductbank	Standard Cost It	1.00	Each	\$0.00	\$0.00	U.S. Dollar	Concrete	Northeast
	TEST DS	Test Cost Item Assembly - Ductbank	Standard Cost It	1.00	Each	\$0.00	\$0.00	U.S. Dollar	Excavator	Southwest
0		1								

Lesson 1 Review

- 1. Which InEight Estimate form is used to enter basic information about the job as well as define our cost basis?
 - a. Pay Item & Proposal
 - b. Job Properties
 - C. Library
 - d. Job Folder
- 2. All default data and settings copy from the Library into your new job folder *except*:
 - a. Labor rates
 - b. Equipment rates
 - C. Material rates
 - d. All of the above
- 3. These are considered the "building blocks" of the job you employ them to cost items to develop your estimate.
 - a. Assemblies
 - b. Pay Items
 - C. Resources
 - d. Forms

Lesson 1 Summary

As a result of this lesson, you can:

- Explain the estimating process in InEight Estimate
- Explain key terms and concepts



LESSON 2 – GENERAL NAVIGATION

Lesson Duration: 45 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Navigate the InEight Estimate system interface
- Navigate system settings
- Manage columns in InEight Estimate registers

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2.1 GENERAL NAVIGATION

This section explores the layout of InEight Estimate.

NOTE Estimate in the Cloud refers to InEight's hosted estimating solution on the InEight cloud Platform.

Estimate on-premise refers to InEight's estimating solution deployed in a customer's local environment.

2.1.1 InEight on-premise

Step by Step — Launch InEight Estimate via on-premise

1. From the Windows desktop, locate the InEight Estimate shortcut icon.



- 2. Double click on the icon, or right click and select Open.
 - TIP

If you cannot find the InEight Estimate shortcut icon, you can also launch InEight Estimate from the Windows Start menu.

2.1.2 InEight in the Cloud

As a new user to the InEight cloud, the First-time sign in dialog box opens when you first sign in, and presents questions about your working environment in the InEight cloud platform and InEight applications. Preferences are set for language, date, and number formats and the User Agreement, which you must accept before you begin. The First-time sign in dialog boxes only show for the initial sign-in to any of the InEight products.

Step by Step — Estimate in the Cloud preferences setup

1. Select your **preferred language**, and then click **Next**.

	guage	2 User agreement			
		preferred language	Freierences		
0	Dutch (Nederlands))			
	English				
0	Español (América L	atina)			
0	Français (Canada)				
0	Norsk (Bokmål)				
0	Português (Brasil)				
				Cancel	Next

2. Scroll to the bottom of the user agreement, and then select the **check box** for the terms and conditions and privacy policy. **Click Next**.



3. Select a date format and number format, and then click Next.

2.1.3 Estimate in the cloud - first time access

Platform's primary function lets you connect and share data between all Eight applications involved in managing a project. This allows project management workflows to pass between jobsite, field office, and front office seamlessly in a consistent and standardized user interface.

Step by Step — Launch InEight Estimate via Estimate in the Cloud

1. After selecting a project from the home page, you can access Estimate from the Main menu in Platform by selecting **Estimate**, or by clicking **Launch** on the **Estimate** tile.

2023 Clow Creek	Assigned Assigned disciplines commodities 44 42	MODEL Lauch	InEight [®] SCHEDULE
Model Countered Countered Constant Con	intight ESTIMATE	Compliance	COMPLETIONS
Guardhy Quardhy sources 20 taiacht Estmate Control Workspaces Project Mary	InEight [®] REPORT	InEight [®] EXPLORE	

2. When you select Estimate from the home page for the first time, you must click **Download** to access the Estimate Launcher file.

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INEIGHT®	
PT Paul	
< Back	
103961 Ten Mile 🔶 🛧	
Model	×
Document	Launch InEight Estimate
Schedule	The Estimate Launcher must be installed to run InEight Estimate. If it is your first launch, or you need the latest version of the Estimate Launcher select the download button below.
Design ~	This dialog will close in 24 seconds
Estimate	
😧 Control 🗸	Close Download
🛞 Plan 🗸 🗸	

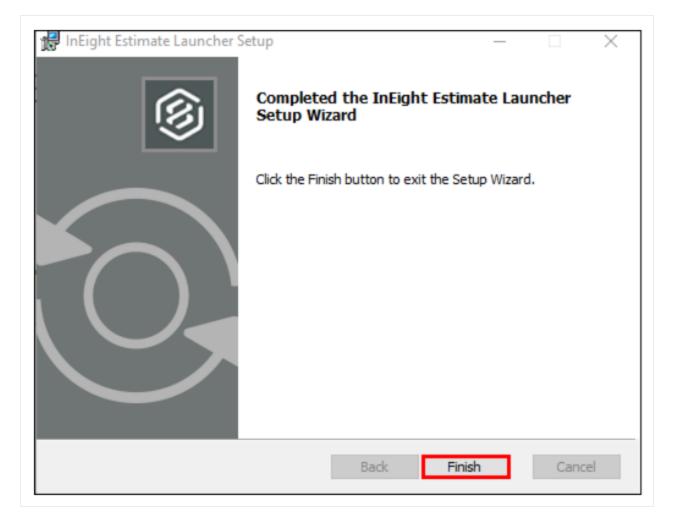
• The EstimateLauncher.msi file shows.

Estimate	
Control	~
Plan	~
PROJECT SETTINGS	
Project home	
Project details	
Settings	
Workflows	
© 2022 InEight Inc. Privacy S	tatement
ររឹ EstimateLauncher.msi	^

- Opening the EstimateLauncher.msi file opens the InEight Estimate Launcher Setup window.
- 3. Select **Open**, and then click **Next** to start the one-time Estimate Launcher download. Afterwards, you will be able to open Estimate from the Main menu or the home page.



4. Click **Finish** to complete the Estimate Launcher Setup installation.



5. Select **Estimate** again to start the Estimate Launcher, which extracts the required files to launch the Estimate application.

🙃 Estimate						INEIGHT 🛞
Control	~	Estimate Launcher	-	• ×		
🛞 Plan	~	Extracting			$+ \times$ InEight	
PROJECT SETTINGS		3 minute(s) remaining				
Project home		22.2.20220301.1		Cancel		
Project details						
Settings					Build 06001	22.2.0
Workflows						

2.1.4 Estimate in the Cloud

After setting up your InEight in the cloud preferences and installing the Estimate launcher, you can begin using Estimate in the cloud.

Step by Step — Estimate in the Cloud - subsequent use

1. Launch Estimate by selecting **Estimate** from the Main menu.

🔃 Estimate						INEIGHT 🛞
Control	~	Estimate Launcher	-	• ×		
🛞 Plan	~	Extracting				
PROJECT SETTINGS		3 minute(s) remaining				1ATE
Project home		22.2.20220301.1		Cancel		
Project details						
Settings				1	Build 06001	22.2.0
Workflows						

• Estimate in the cloud looks and functions much like the Estimate on-premise version. For example, opening a job from the landing page brings you to the Cost Breakdown Structure

register, or the register designated as the start page in the application settings.

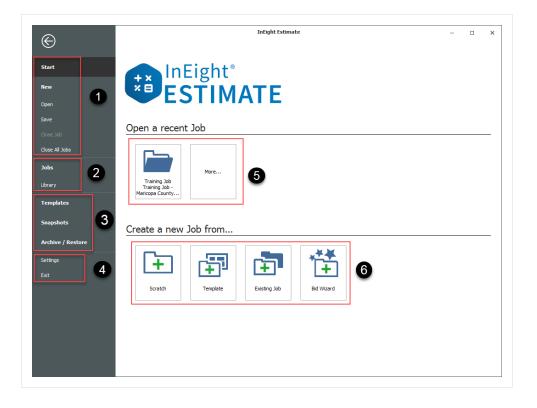
2.1.5 Backstage View

InEight Estimate opens to the Backstage view. You can also get to the Backstage view from other tabs, by selecting the File tab.

Section	Description
1	From the Start page you have the option to create, open or save a project, or close all jobs that are open.
2	You access the Library or open the Jobs page to go to the Job Register, Compare Jobs, delete a job, or do a Primavera Batch Sync.
3	 Templates allows you to create Job templates. You can create job snapshots or access previously created snapshots in the Snapshot Register. You can also archive or back up and restore job folders.

Section	Description
4	Settings allows you to customize options such as General settings, Account Code settings, Timesheet Warehouse settings, Licenses and Currency settings.
5	From the Open a recent Job section of the Start page, you can open the Training job or click More to open your list of jobs.
6	You have the option of creating a new job from scratch, a template, from an existing job, or using the Bid Wizard.

2.1.6 Overview – Backstage View



2.1.6.1 Archive / Restore

From the Backstage View, you can back up and restore your jobs using the Archive/Restore feature.

Step by Step — Archive and Restore a Job

- 1. Click **File** to open the Backstage View.
- 2. Select Archive / Restore.
 - Several options appear for archiving and restoring your jobs and library

€	InEight Estimate	- 🗆 X
Start	Archive / Restore	
liew		
Open	이 글 걸 값 끝 갤 호 끝	22
Save Close Job	Archive Job Restore Job Merge Job with Archive Library Restore Library Merge Library with Archive Template	Restore Template
Close All Jobs		
Jobs		
Library	System Backup System Restore	
Templates		
Snapshots		
Archive / Restore		

- 3. Select Archive Job.
 - The Job Register appears
- 4. Select the **Training Job**, then click **OK**.
- 5. When prompted to include attachments, click Yes.
 - The Save As window appears
- 6. Browse to where you want to save the job, then click **Save**.
- 7. To restore the job, select **Restore Job Archive** from the Archive / Restore page of the Backstage View.
- 8. Browse to the archived job and select it.
- 9. Click Open.
 - If the job already exists, a prompt will appear asking if you want to overwrite it
 - To overwrite it, select Yes
 - If you select No, you will be prompted to save it under a new Job Code

2.1.6.2 Settings

From the **Settings** in the Backstage view, you can adjust some system settings:

- General Settings
- Default Job Start page
- Decimal Precision
- Currency
- Account Code Settings

)	Settings	- 0
Options General Decimal Precision Fax Mail Fax Mail Account Code Settings Network Deployment Mode SQL Security Security Roles Attachment Settings Timesheet Warehouse Settings Licenses Currency Currenc	General Image: Complete the second	Navigation Image: Ribbon Classic Navigation Bar When a record form is closed, return focus to: Image: The last form accessed Image: The form that opened it
Currency	Title Bars Show Job Code Show Job Description Show Job Code and Description 	Job Startup Start Page: Cost Breakdown Stru +
	Language Select a Language: English (United States)	
Restore Defaults		OK Cancel

2.1.6.3 Prompt to Save

An important setting to visit in the Tools menu is **Prompt to Save**. InEight Estimate does not automatically save your work. Instead, it will prompt you to save as often as you specify in the general settings.

2.1.6.4 Decimal Precision

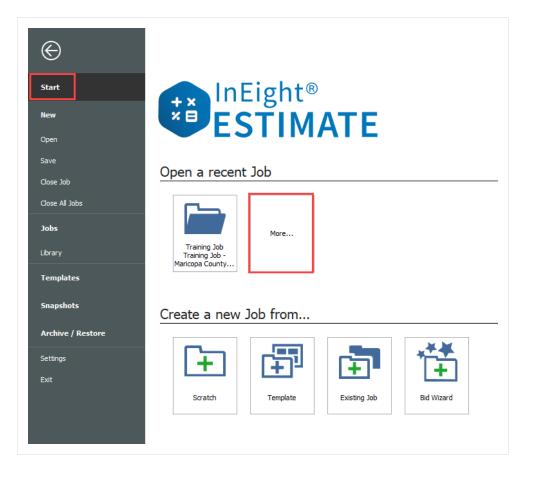
The **Decimal Precision** setting is also helpful. This is where you can specify the way your numbers display in the system. For example, you may want your costs to display to the hundredth decimal place (2), and your quantities to display as whole numbers with nothing to the right of the decimal (0).

TIP

Changing decimal precision does not affect the way your numbers are calculated.

2.1.7 Open a Job Folder

From the Backstage view, you can open a job folder by selecting **Start**. This opens the Start page, where if you see your job, simply click on it to open it. If it's not showing, click on **More**... and select the job from the Job Register. The Job Register is the form that lists all of your existing job folders so you can select the one you need.



Step by Step — Open a Job Folder

- 1. From the Backstage view, under the **Open a recent Job** section, double click on your **job**.
- 2. The job folder opens by default to the Cost Breakdown Structure Register.

9	- -							Training Job -	Estimate							
File	Setup	Estimate	Quote	Price	Execution		System	Actions	More Act	ions						童目
i P	rint	C Ope	n 욹 Cut	+ Fill ()own	+		📕 Cost Item		🔁 Ass	embly	2.	1		The second secon	
Q P	review	🕂 Nev	📲 Сору	🔀 Split		-	愚	🔚 Subordinate	Cost Item	🔁 Sub	oordinate Assembly)n0 20				н
er e	xport to Excel	🚫 Dele	te 🕞 Paste	🎝 Tog	gle Suspended			🕂 Dependent C	ost Item				Expans Collapse		Clear Filter	
	Print			Edit						Insert				View		
Cost	Breakdown S	tructure	(CBS) Registe	er Ø												
Drag	columns here to	group							Fir	d: [Sear	ch For] ···	Save	ed views:	Previous Vie	2W	•
	CBS Position Code		Description				Foreca (T/O) C	st Quantity	Unit of Measu		Unit Cost	Total Co (Foreca		Currency	Optional Code	
			JOB					1.0) Lump S	um	\$5,861,800	\$5,861	,800.79	U.S. Dollar		
	+		Prime Bond					1.0) Lump S	um	\$47,069.28	\$47	,069.28	U.S. Dollar	PRIME BO	ND
	+		Price % Add-	On				1.0) Lump S	um	\$294,923.52	\$294	,923.52	U.S. Dollar	PRICE %	ADD-ON
	+		Job Financing					1.0) Lump S	um	\$0.00		\$0.00	U.S. Dollar	FINANCE	EXPENSE

You can change the default form that opens when you start up a job. From the Backstage view, click on **Settings** to change the Job Startup > Start Page settings.

Ì	Settings	- 0
- Options - General - Decimal Precision - Fax Mai - Account Code Settings - Network - Deployment Mode - SQL Security - Security Roles Attachment Settings Timesheet Warehouse Settings Licenses License License License License License License License	General Image: Complexity of the second se	Navigation Image: Ribbon Classic Navigation Bar When a record form is closed, return focus to: Image: The last form accessed Image: The form that opened it
I Currency	Title Bars Show Job Code Show Job Description Show Job Code and Description Language Select a Language: English (United States)	Job Startup Start Page: Cost Breakdown Stru Cost Breakdown Structure (CBS) Register Pay Item & Proposal Register Quote Register Quote Comparison & Award Price Breakdown Structure None
Restore Defaults		OK Cancel

2.1.8 Common Navigation

Access the common navigation slide-out panel by selecting the main menu located on the top left side of the Estimate page. This feature provides a common navigation user experience that is shared

amongst all InEight products. The primary intent of this navigation menu is to provide a consistent InEight product experience, with similar Project Suite graphical interfaces, while working within multiple InEight products.

Estimate's on-premise software is authenticated by your Windows login credentials, which is shown below the main menu.

							Train	iing Job - I	stimate	
INEIGHT®	xe Execution	System	Actions Mor	e Actions						
INEIGHT	🗿 Split	⇒ Indent	Link Field	Cost Item	⊟ A:	sembly	2 Resource		10	-
pt) paul.trippi	🖉 Split by Cost Type	de Outdent	🖳 Unlink Field	🔚 Subordinate Cost	Item 🗧 Si	ubordinate Assembl	Resource	Assembly	Constant (Filter
Provinippi	Toggle Suspended			Dependent Cost I	tem				Expand / Collapse *	Filter
	Edit		Workbook			Insert				
INEIGHT ONLINE	1									
INEIGHT ONLINE () Explore products	>	Ontional		Forecast	Unit of		Total Cost		51	niect Co
	> >	Optional Code		Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Subject C	ost Su Ra	bject Cos te
Explore products						Unit Cost \$294,138.13		Subject C		
 Explore products InEight learning and support 	>	Code PRIME BOND		(T/O) Quantity 20.00 1.00	Measure Mile Lump Sum	\$294,138.13 \$47,148.68	(Forecast) \$5,882,762.51 \$47,148.68			
 Explore products InEight learning and support 	>	Code		(T/O) Quantity 20.00 1.00	Measure Mile	\$294, 138. 13	(Forecast) \$5,882,762.51			

2.1.9 Help Bubbles

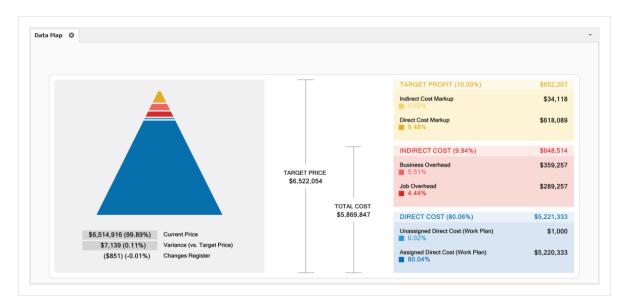
Help bubbles appear at various times in InEight Estimate, including the first time you open InEight Estimate. These messages contain important information to clarify key functions in the system.

You can dismiss the message until the next time by closing it with the X in the corner or dismiss it permanently by clicking the **Never offer this help again** link.

	1
Enter up to 10 factors (multipliers) here to calculate a Factor Composite. The Factor Composite is displayed on the Production data block, and is multiplied by the Duration Driven Man-Hours to calculate the values shown in the Factored Duration Driven Resources column.	
You can globally customize the titles of these factors by choosing View from the main menu, then choosing "Customize."	
Never offer this help again	

2.1.10 Data Map

Found in the Price tab, the Data Map is a great way to view a high level summary of your estimate and can be accessed at any time during the estimating process. You can see totals of direct costs, indirect costs, profit, and overall bid price.



2.1.11 InEight Estimate Layout

The layout of InEight Estimate is workflow based. You will move from left to right on the tabs as you enter your data for the project and work on developing your estimate.

2.1.12 Overview - Setup Tab



	Section	Description
1	Initialize	From the initialize section, you can access the following registers. Job Properties is where you enter the basic project details. Foundation Setup Data is where you populate all account codes and validated fields. The Pay item & Proposal Register provides an alternate structure to distribute estimated values. Bid Wizard helps automate the process of setting up estimates by copying information that already exists in other jobs.
2	Resources	In the Resources section, Resource Rates opens the Resource Rate Register, where detail costs for labor, equipment and material is stored. The Resource Assemblies opens the Resource Assembly Register, where you create a combination of resources as an assembly and reuse it as needed in multiple cost items.
3	Assemblies	You can create a Cost Item Assembly to automatically estimate different scopes of work based on input values. Standard tables - allow you to create tables of reference data that can be accessed in any cost item assembly.
4	Reports	The Reports section is available from any tab. Depending on the tab you access it from will bring you to reports specific to that tabs data. Here you will find reports on resources such as Resources Changes, Resource Utilization, and Resource Cost Details.

2.1.13 Overview – Estimate Tab

I -					Training Job - Estima	te	
File Setup Estimate Quote P	rice Execution Syst	em Actions	More Actions				
Account Code Utilization	🚊 Resource Rates 🕞	Y		Job Finance	Direct Markup	Alternate Scenario:	[i]
Work Breakdown Structures	E Resource Utilization			Price % Add On	Indirect Markup	BASE	-
Cost Breakdown Structure (CBS)	lesource Cost Details	Workbook 3	Schedule Cash Flow	Cost Items Prime Bond	Price Breakdown Structure (PBS)	🙏 Alternates 👩	Reports
Breakdown Structures	Resources	Workbook	Schedule	Indirect Cost	Overhead and Profit	Alternates	Reports

	Section	Description
1	Breakdown Structures	From the Breakdown Structures section in the Estimate tab you can access the Cost Breakdown Structure (CBS) Register, Account Code Utilization Register, and Work Breakdown Structures (WBS) Register.
2	Resources	Resource Rate Register is where you create or modify the rate charged for labor, material and equipment resources. Different views of the

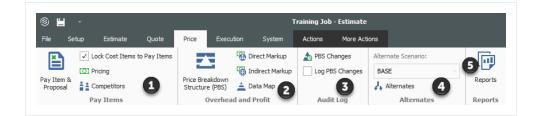
	Section	Description
		Resource Rate register such as Resource Utilization and Resource Cost Details are available from the Resources section.
3	Excel Workbook	InEight Estimate's integration with Microsoft Excel is a two-way integration that allows you to update register fields in Estimate with data contained in an Excel workbook, and update Excel cells with data contained in a register field in Estimate. This is where you open the embed excel workbook which is maintained as part of the estimate job folder and where you preform the sync functions to send values back and forth.
4	Schedule	From the Schedule icon, you can access bi-directional integration with Microsoft Project and Oracle Primavera. The Cash Flow graph displays the projected cash flow of your project, along with the job financing expense, individual cost category costs and resource utilization.
5	Indirect Cost Items	Indirect Cost Items filters the CBS register to display cost items that contain overhead costs that are not directly associated with any particular deliverable items. Clicking on % Price Add on or Prime Bond opens up these individual records.
6	Overhead and Profit	Price Breakdown Structure (PBS) Register is a visual run-down of the costs and profit that make up your Target Price. You can access the Direct and Indirect Markup records or see totals of direct costs, indirect costs, profit and overall bid price summarized in a Data Map.
7	Alternates	Alternates are used to define alternate scenarios in order to assess the impact of those scenarios.
8	Reports	From the Reports section, you can run reports on CBS Summary, CBS Details, CBS Outline, CBS Estimate Summary, CBS Currency Comparison.

2.1.14 Overview – Quote Tab

® 💾 -			
File Estimate	Quote	Execution System	ons Act
Quote Group Tags			P ⁴
Address Book Mttachments	Request For Quotes Quote (RFQ)	Resources Cost Items	Reports
Setup	Quote Management	Quote Comparison & Award	Reports

	Section	Description
1	Setup	Quotes are organized using Address book, Quote Group Tags, Minority Setup and attachments in the Setup section. Address book stores and maintains all information pertaining to subcontractors, vendors, architects/engineers, etc. that you work with regularly. The Minority Setup tab within Job Properties stores information about the agency that authorizes the status of Minority Enterprises along with their different types. You can use Quote Group Tags to group together multiple resources or cost items that will be sent in a single request for quote package to solicited contractors or vendors
2	Quote Management	Quote Management allows you to access the Requests for Quote (RFQs) register and Quotes. Request for Quotes (RFQs) are invitations to sellers, requesting that they submit pricing to provide services, equipment or material based on the line items and resources included in your estimate. The Quote Register stores all of the quote responses you receive for that job.
3	Quote Comparison & Award	The Quote Comparison & Award section allows you to perform comparative analysis across all the quotes you've received. You can view a comparison of submitted pricing by resources or cost items.
4	Reports	From the Reports section in Quotes you can run reports on Quote Summary, Quote Record, Compare & Award, and Minority Participation.

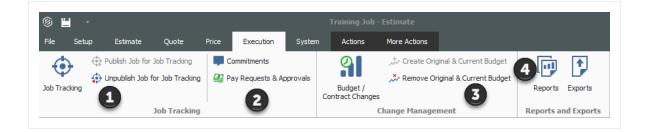
2.1.15 Overview – Price Tab



	Section	Description
1	Pay Items	From the Pay Items section you can lock Cost items to Pay items and access the Pay item & Proposal register. Under Pricing in Job Properties, you can set up how the tool calculates profit and spreads pricing to your pay items. In the Competitors section, you can keep track of companies that have submitted bids as well as record and track competitor bid prices.
2	Overhead and Profit	The Price Breakdown Structure (PBS) Register is a visual run-down of the costs and profit that make up your Target Price. You can access the Direct and Indirect Markup records or see totals of direct costs, indirect costs, profit and overall bid price summarized in a Data Map.
3	Audit Log	You can access the PBS Changes register (which logs any changes that effect the Target Price) and turn on/off logging PBS changes
4	Alternates	Alternates are used to define alternate scenarios in order to assess the impact of those scenarios on the total estimate value.
5	Reports	From the Reports section in the Price tab, you can generate reports for Standard Proposal, DOT Proposal, Pay Item Summary, Pay Item Currency Comparison, Pay Item Price Breakdown.

2.1.16 Overview – Execution Tab

The Execution Tab is for Customers who are utilizing the Job Tracking functionality within InEight Estimate. InEight Control users can disregard this tab.



	Section	Description
1	Job Tracking	The Job Tracking button takes you to the Job Tracking register that shows you the planned cost and production, as-built cost and production, and forecast cost and production of the job as a whole or for any individual cost item or account. The Job Tracking Register is used to document how much work and cost represented by a cost item or account has been finished and how much remains. The Job Tracking Register is also used to Set Forecast Method for all items in the job. You also have the option to enable the creation of the job tracking records for the job by selecting Publish Job for Job Tracking. The Unpublish Job for Job tracking button disables the creation of the job tracking records for the job.
2	Job Tracking	Commitments tracks how much of the current budget has been committed for expenditure. Pay Requests and Approvals automatically calculates earned revenue to provide the data you need to bill your client, as well as approve invoices from your suppliers and subcontractors.
3	Change Management	Budget/Contract Changes is the only way to change current budget or add a pay item after the project has been released for

	Section	Description
		execution and the Original Budget locked. Create Original & Current Budget sets the original and current budget for the project. These should be equal when you initially create it (at the beginning of project execution). Current budget is the only thing that can change after execution. Remove Original & Current Budget removes original and current budget values.
4	Reports and Exports	From the Reports icon, you can run multiple reports on the project. Exports can export budget file, schedule, and timesheet to many different formats.

2.1.17 Overview - System Tab

ô ≝ -							Training J	ob - Estimate
File	Setup	Estimate	Quote	Price	Execution	System	Actions	More Actions
=	•	Saved Views 👻	🜍 Colors +		🔆 External Re	ports +	0	🜐 About Estimate
_	~	Titles 👻	🔅 Output S	ettings +	🔆 External Re	ferences +		🍪 What's New
Customiz	e	•					Estimate Help	InEight.com
		1	Custom			(2	Help

S	Section	Description
1	Custom	You can customize the titles and colors for different fields. You can export and import saved Views, Titles, Colors and Output Settings. You can customize reports generated by Estimate using External reports. External References allows you to open external programs with Estimate.
2	Help	You can access a comprehensive help system from the Help menu. You can get information about the Estimate Version and all new updates about the different versions.

2.1.18 Library

Click on the Library icon and the Library opens in its own window.



Users with sufficient security can access master information available in the Library.

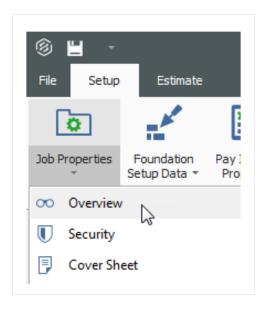
TIP The Library is covered in greater detail in "3.1 Library Overview" on page 75

2.1.19 Open Forms

The following steps assume you already opened the Training Job.

Step by Step — Open Forms

- 1. Click on the **Setup** tab.
- 2. In the Initialize section of the Setup tab, click on the **drop-down menu** for Job Properties.
- 3. Select Overview to open the Job Properties form.



• Notice that each form opens in its own tab within the active job folder



- You can tab between these forms as you are working in InEight Estimate
- Once you are in a register, the Actions and More Actions tabs are available to you. The options available are contextual to that register

- 💾							Training Job - E	stimate							6	
e Setup	Estimate	Quote	Price	Execution		System	Actions	More Actions							盫	Ħ
Print	C Open	⊁ Cut	+ Fill Dov	vn	-	8	E Cost Item	1	+ Assembly		20 /	1	\mathbf{T}		E	
Preview	🕀 New	🖥 Сору	🔀 Split		-	愚	🔚 Subordinate Co	ost Item 🖣	- Subordinate Ass	sembly	M -	×			2	
Export to Excel	😣 Delete	🖹 Paste	🎨 Toggle	Suspended			🕂 Dependent Co	st Item				and / pse *	Filter	Clear Filter		
Print			Edit					Ins	ert				View			
st Breakdown S	tructure (O	BS) Registe	r O													
ig columns here to	group							Find:	[Search For]		Saved viev	s: Pro	evious Vie	w		-
CBS Position Code	≞_ De	scription				Forecas (T/O) Q		Unit of Measure	Unit Cos		otal Cost orecast)	Curr	rency	Pay It Assign		
	30	в					1.00	Lump Sum	\$5,861,8	800 \$	5,861,800.7	9 U.S.	Dollar			

9 💾 🕘			Training Job - E	stimate		
le Setup Esti	mate Quote F	Price Execution	System Actions	More Actions		
Schedule Selection	∢⊳ Swap -	🛗 Bid Wizard	∑ Unit / Total Confirmatio	n 💽		
Unschedule Selection	😑 Remove 👻	Subtotal Calculator	😳 Refresh Benchmarks			
Calculate Plug Days	C Update -	Quantity Checking	产 Add Quote	Import / Update CBS 🔻		
Schedule	Batch Operations		Tools	Data Source		
ost Breakdown Struc	ture (CBS) Register (0				
ag columns here to grou	p			Find: [Searc	:h For] …	Saved
CBS Position Code	Description		Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cos (Forecast
	JOB		1.00	Lump Sum	\$5,861,800	\$5,861,8
+	Prime Bond		1.00	Lump Sum	\$47,069.28	\$47,0
+	Price % Add-On		1.00	Lump Sum	\$294,923.52	\$294,9
+	Job Financing		1.00	Lump Sum	\$0.00	

2.2 SYSTEM SETTINGS

From the Backstage View, you can access system settings. System settings contain options and settings that effect the entire InEight Estimate system. These settings include:

- General settings (options)
- Network settings
- Attachment settings
- Licensing information and settings
- Currency settings

The following step by step walks you through configuring general settings (options).

Step by Step — Decimal Precision

- 1. With InEight Estimate open, click on the **File** tab to go to the Backstage view.
- 2. Select Settings.
- 3. Select General under Options in the node tree on the left.
- 4. To activate Prompt to Save, select the **Prompt to Save** checkbox.
- 5. Select how often you want to be prompted (in minutes).
- 6. Select **Decimal Precision** in the tree on the left.
- 7. Review the default settings.
 - TIP

Units of Measure will default to English, and Currency will default to U.S. Dollar.

		Settings		
⊡ • Options	Decimal Precision			
General Decimal Precision	Cost Summary Precision	Þ		
Fax Mail	Unit Cost Precision	2		
-Network 6	Quantity Precision	2		
SQL Security Security Roles	Short Percent Precision	2		
···· Attachment Settings ···· Timesheet Warehouse Settings	Long Percent Precision	2		
····Licenses ····Currency	Currency Rate Precision	5		
,				
Restore Defaults			0	K Cancel

2.3 COLUMNS

Within each register, you can move, sort, filter and group your columns to view the information the way you need to see it.

2.3.1 Move Columns

You can move columns by selecting a column header and using drag-and-drop. If there are columns on the register that you don't use, you can hide and unhide them from view, as needed.

Step by Step — Move Columns

- 1. In the CBS, click on the **Currency** column header and drag the column to the left, dropping it to the right of the Description column.
- 2. Hide the **Optional Code** column by dragging the Optional Code column header down until a black X appears, then let go.

Currency	Optional Code
U.S. Dollar	
U.S. Dollar	PF IME BOND
U.S. Dollar	PFICE % ADD-ON
U.S. Dollar	FI JANCE EXPENSE
U.S. Dollar	IN TRECT COST ES
U.S. Dollar	DIRECT COST ESC
U.S. Dollar	INDURED SOST A
U.S. Dollar	JOB MANAGEMENT
U.S. Dollar	GENERAL EXPENSE
U.S. Dollar	DIRECT COST ADD
U.S. Dollar	641 0 100
U.S. Dollar	201 0102
U.S. Dollar	202 0183
U.S. Dollar	3.1

- The Optional Code is now hidden from view
- To unhide a column, right click on any column header and select **Column Chooser**; a Customization window appears, which contains all the hidden columns in that register
- 3. Find the **column** you want to unhide and drag-and-drop it to the location where you want it to go.

Unit Cost	Total Cost (Forecast)	Currency	Optiona Code
\$5,861,800	\$5,861,800.79	U.S. Dollar	+
\$47,069.28	\$47,069.28	U.S. Dol	
\$294,923.52	\$294,923.52	U.S. ^p ollar	
\$0.00	\$0.00	U.S. Dollar	
\$0.00	\$0.00	U.S. Dollar	
Customize			×
Drag a column	from by low to p r gister.	lace it into t	he
Custom Captio	n <u>Defaul</u>	t Caption	
Optional Code	Optional Code		*
Owned Equipme Billing	nt Owned E Billing	quipment	
Owned Equipme Total	nt Owned E Total	quipment	
Owned Equipme Total Cost	nt Owned E Total Cos		
Owned Equipme Unit Cost	nt Owned E Unit Cost		
Pay Hours Rules	Pay Hour Rules	S	
Pay Item Assignment	Pay Item Assignme	nt	
Pay Item Description	Pay Item Descriptio	n	
Pay Item Line Number	Pay Item Line Num	her	

- You can also unhide a column using the Go To Column feature
- 4. Right click on a column header and select Go To Column.
- 5. Click on the **drop-down menu** and select the column you want to unhide.

So Go	To Column	—		×
Column:	olumns that are not	currently	in the vie	• La w
		ок	Canc	el

6. Click **OK**.

2.3.2 Sort and Filter Columns

You can sort and filter your columns to drill down to specific information.

Step by Step — Sort Columns

You can sort on any column by clicking once on the column header.

- 1. In the CBS Register, click on the **Total Cost (Forecast)** column to sort the column in ascending order (e.g., 1 to 10, A to Z).
- 2. Click the **Total Cost (Forecast)** column a second time to sort in descending order (e.g.,10 to 1, Z to A).
 - TIP Use Ctrl-click to unsort a column and reset it to its original state.

Step by Step — Filter Columns

- 1. In the CBS, hover over the **Unit of Measure** column header for the filter icon to appear.
- 2. Click on the **filter** icon in the Unit of Measure column to select a filter value.
 - From the filter list, you can select any of the values defined for that column or you can use one of the predefined values (Custom, Blanks, Non blanks).

Unit of Measure	Unit Cost
(Custom) (Blanks) (Non blanks) Acre Cubic Yard Each Linear Feet Lump Sum Month Pound Square Feet Square Yard Ton	
OF	Cancel

- 3. Make your selection, then click **OK**.
- 4. To clear the filter, click on the **red X** at the bottom of the form or click on the filter icon on the header of the column you filtered and select **(All)**, then click **OK**.

2.3.2.1 Filter Editor Overview

The Filter Editor displays conditions and groups as a tree branching system.

The Filter Editor grouping feature allows you to increase the amount of *And/Or* statements that originated from the first selected And statement. When you add a new Group, a new Condition is automatically added to that Group.

With each additional Condition statement, you will need to select an operator and a value in order for your customized filter to take effect on your chosen column. Many new operators have been added to this version as shown in the screenshot below:

Filter Editor		×
And 💿		
WBS: CEAS (Civil Engineering Acco	ount Code System)] Beg	ins with <enter a="" value=""> 🛞</enter>
Or 💿		
[WBS: CEAS (Civil Engineering	Account Code System)]	🛯 🕫 Begins w 👻 <enter a="" th="" valu<=""></enter>
		\geqslant Is greater than or equal to \clubsuit
		< Is less than
		\leqslant Is less than or equal to
		⇔ Is between
		🕰 Is not between
		R Contains
		RCB Does not contain
		∎®⊂ Begins with
4		□ Ends with
		a%⊂ Is like
Load Save	ОК	r%⊂ Is not like
45,000.00	Ton	Is any of
400,000.00	Square Yard	 Is none of
35,000.00	Ton	🔿 Is blank
35,000.00	Ton	 Is not blank

Step by Step — Filter Editor

- 1. In the CBS, hover over the **Unit of Measure** column header for the filter icon to appear.
- 2. Click the **filter** icon in the Unit of Measure column to select a filter value.
- 3. Select the **Filter Editor** button. The Filter Editor data box appears.
 - By default, an **And** statement is created with a **Begins with** operator and a blank value.
- 4. Select your preferred operator and then enter in your preferred value.
- 5. To add additional *And/Or* statements, select the word **And** in the top left corner. A drop down appears.

nd 🖸	ith <enter a="" value=""> 😵</enter>
• Or	ith <enter a="" value=""> 🕲</enter>
🖦 Add Condition	
🚽 Add Group	
≠ Clear All	-
	-

- 6. Choose which And/Or statement to add and then select the preferred operator.
- 7. Enter in your preferred value to complete your additional statement.
- 8. Select the X to delete a single statement.
- 9. Select the And statement in the top left corner to begin clearing all And/Or statements.
- 10. From the drop down, select the option Clear All.
- 11. Once done, select Apply and then click OK.

2.3.3 Group Columns

Sometimes you may want to organize your information into groups. Instead of filtering your information down to one value (e.g., unit of measure = Ton), you can look at your information with a separate group for each value (e.g., a group for Tons, a group for Cubic Feet, etc.).

Step by Step — Group Columns

1. From the CBS register, group the Unit of Measure column by dragging it into the grouping area (where it says "Drag columns here to group").

Co	st Breakdown Struct	ure (CBS) Register 🛛 🕲		
ra	▼ g columns here to group	Init of		
		Measure Description	(T/O) Quantity	Unit of Measure
		JOB	1.00	Lump Sum
	+	Prime Bond	1.00	Lump Sum
	+	Price % Add-On	1.00	Lump Sum
	+	Job Financing	1.00	Lump Sum

• Notice that the cost items in the register are now grouped together by their units of measure, and each group of cost items is subtotalled by costs, hours, quantities, etc.

ost Breakdown Stru	icture (CBS) Register	0				
Jnit of ∕leasure ≞						
Unit of Measure	CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit Cost	Total Cost (Forecast)
🛙 Acre	1			10.00		\$39,184.92
Cubic Yard	19			117,865.76		\$498,571.30
🖾 Each	29			59.00		\$1,684,854.23
E LF	1			2,083.95		\$0.0
🛛 Linear Feet	11			30,248.00		\$459,303.93
Lump Sum	23			22.00		\$667,772.98
🛛 Mile	1			0.00		\$0.0
Month	2			2.00		\$10,000.0
Pound	3			60,000.00		\$44,408.30
Square Feet	9			136,300.00		\$276,594.9
Square Yard	2			800,000.00		\$99,954.7
Ton	8			160,000.00		\$2,034,391.0

- 2. To ungroup, right click in the grouping area and select Clear Grouping
 - The column returns to its original location

TIP You can group by more than one column to have multiple grouping levels.

2.3.4 Saved Views

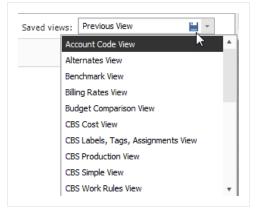
Once you have set up a view the way you like it, you can save the view so you won't have to configure it again later. InEight Estimate also comes with some pre-built views to help you organize the screen the way you want to see it.

Views are accessed from the Saved Views menu in the top right portion of a register.

The following steps assume you have made changes to your register view and want to save it for future use.

Step by Step — Create a Saved View

1. In the CBS register, click on the **Saved Views** drop-down menu and the Save disc icon appears.



- 2. Click on the **Save disc** icon.
 - The Save Current View window appears

9	Save Current View			
Type a name for the current view. All filters, sorts, groups, and column settings will be saved under this name so that you can recall them later while in this register.				
View nar	me:			
Save as Locked Corporate View				
of	clude this view in the Saved Views section the report control			
	OK Cancel			

- 3. Enter the View Name, then select OK.
 - The new view displays in the drop-down menu
- TIP Saved views are user-specific; you will only see your own saved views when you are logged in.

2.4 FIND FEATURE

The Find feature lets you search across all columns in the register with a single operation. The matching results are then highlighted in yellow. A scroll bar annotation is provided to indicate the rows in the grid containing matches. This lets you easily navigate to the search results in the register.

The Find feature also includes the flexibility to perform more precise searches using various syntax in the search bar. The Find search bar shows the currently selected and total number of search results.

NOTE	If you type in two words, such as total cost , the grid considers them as individual
_	conditions and selects records that contain either total or cost .

Search Syntax	Example			
+	To find records that contain both search terms like total cost , type + before the second word. For example: total +cost .			
-	Type - to exclude records that contain a specific word, for example: total-cost. You can combine different operators. Use + and - to select records that contain both pay and item, excluding records that contain assignment. For example: pay +item - assignment.			
"quotes"	To search for a string that contains a space character, you need to enclose this string in quotation marks. For example: "total cost" .			
:	To search against a specific column, type the first letters of the column's display name plus a colon character. For example: optional: unassigned . Now the grid displays records containing unassigned in the optional code column.			

If you add another column-specific condition, the grid joins them using the + logical operator. Then the record shows the result that matches both options. The same happens when you join a column-specific condition with the one applied to all columns. An example of this search criteria looks like this: **optional: unassigned +"pay item"**.

Step by Step — Find Feature

- 1. From the Cost Breakdown Structure (CBS) Register, bring up the Find feature using CTRL+F.
- 2. In the search bar, type in Materials.
- 3. When all the searches are highlighted in yellow, use the **up** or **down** arrows to the right of the search bar to navigate to the next search result in the register.

9	columns here to gro	up			× mate	rial	1/13 🖸 \land 🗸	Q.
	CBS Position Code 📒	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Subje
	+	Indirect Cost Add-On	INDIRECT COST ADD-ON	1.00	Lump Sum	\$0.00	\$0.00	
	+	Job Management & Equipment	JOB MANAGEMENT & EQUIPMENT	1.00	Lump Sum	\$157,096.28	\$157,096.28	
	+	General Expense	GENERAL EXPENSE	1.00	Lump Sum	\$4,200.00	\$4,200.00	
	+	Direct Cost Add-On	DIRECT COST ADD-ON	1.00	Lump Sum	\$98,633.23	\$98,633.23	
•	+ 1	Mobilization	641 0 100	1.00	Lump Sum	\$11,909.51	\$11,909.51	
•	+ 2	Clearing & Grubbing	201 0 102	10.00	Acre	\$3,918.50	\$39, 184.97	
1	3	Unclassified Excavation	202 0 183	50,000.00	Cubic Yard	\$4.68	\$233,915.81	
•	+ 3.1	Excavation	3.1	50,000.00	Cubic Yard	\$3.00	\$149,922.88	
•	+ 3.2	Embankment	3.2	50,000.00	Cubic Yard	\$1.68	\$83,992.94	=
1	4	Aggregate Base	303 5912	45,000.00	Ton	\$15.40	\$692,928.99	-
ľ	+ 4.1	Furnish & Haul Base Material	4.1	45,000.00	Ton	\$11.54	\$519,513.30	
•	+ 4.2	Finegrade Subgrade	4.2	400,000.00	Square Yard	\$0.19	\$75,848.36	
1	4 .3	Install Aggregate Base	4.3	45,000.00	Ton	\$2.17	\$97,567.33	
•	+ 4.3.1	Place Aggregate Base	4.3.1	45,000.00	Ton	\$1.63	\$73,460.92	
•	+ 4.3.2	Blue Top Aggregate Base	4.3.2	400,000.00	Square Yard	\$0.06	\$24,106.42	
1	5	Asphalt Concrete Hot Mix Type A	303 4263	35,000.00	Ton	\$42.62	\$1,491,580.59	

- 4. To add the Find feature to the register functions header, select the **Options** icon to the far right of the search bar. Then select **Always Expanded**.
- 5. To search in a specific column only, select the **Options** icon to the far right of the search bar. Then select **Search in Selected Column Only**. Search a specific term in your selected column.
- 6. To close the Find functionality, click the **Close** icon to the left of the search bar. You can also hold down the **Shift** key and then select the **F3** key to use this feature.

NOTE A drop-down can be used to see a list of previous searches.

Lesson 2 Review

- 1. The ______ is a great way to get a summary view of your bid. You can see totals of direct costs, indirect costs, profit and the overall bid price.
 - a. Job Folder
 - b. Data Map
 - C. System tab
 - d. Resource Rate Register
- 2. You can group by more than one column to have multiple grouping levels.
 - 1. True
 - 2. False
- 3. Display settings for Units of Measure, Currency, and Colors can be adjusted from the ______ tab.
 - a. Setup
 - b. Estimate
 - C. System
 - d. Help

Lesson 2 Summary

As a result of this lesson, you can:

- Navigate the InEight Estimate system interface
- Navigate system settings
- Manage columns in InEight Estimate registers

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LESSON 3 – LIBRARY SETUP

Lesson Duration: 60 minutes

Lesson Objectives

After completing this lesson, you will be able to use the following forms and explain their purpose:

- Library Job Properties
- Library Foundation Setup Data Register
- Library Resource Rate Register
- Library Assembly Register

Lesson Topics

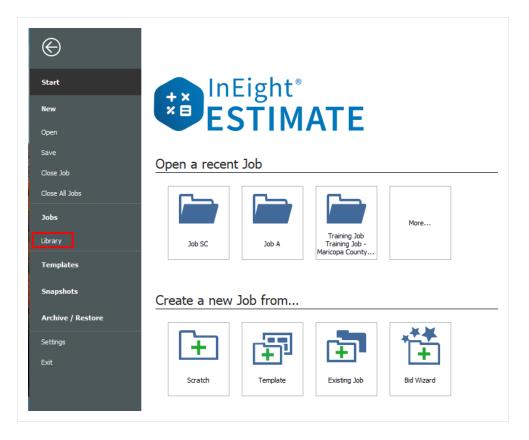
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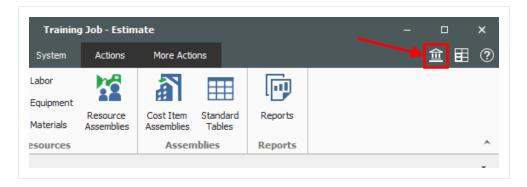
3.1 LIBRARY OVERVIEW

The Library is where you set up and maintain master information that imports into your projects, including resource rates, tags, units of measure, cost item assemblies, and master breakdown structures. It is also where security roles and permissions are configured.

You access the Library from the Backstage view in Estimate. Click on the Library link to open.



You can also access the Library by clicking on the Library icon, when on the InEight Estimate landing page.



When the Library opens, you see ribbons available under the main menu tabs. Each Menu tab has unique sections which hold the necessary forms. In this lesson you will learn about each tab and their components.

3.1.1 Library Tabs

The Library has six tabs which organizes the forms under sections. The tabs are:

- Setup
- Estimate
- Execution
- System

The Actions and More Actions tabs appear when you open a register and contain functions for the register you have active.

© 💾	•						Library - Estimate
File	Setup	Estimate	Execution	System	Actions	More Actions	

3.1.1.1 Setup Tab

Overview - Setup Tab

	Name	Description
1	Job Properties	The job properties maintained in the library will serve as the default settings for any new estimate that is created from scratch. When creating a new job it will inherit all the job properties set in the master library.
2	Foundation Setup Data	A master set of account codes, tags, and units of measure. When a new folder is created, the master set is automatically copied from the Library to the new folder.
3	Address Book	Used to store and maintain all information pertaining to the companies with whom you work and contact regularly (subcontractors, vendors, architects, etc.).
4	Trench	Stores and maintains common trench configurations that are used from

Overview - Setup Tab (continued)

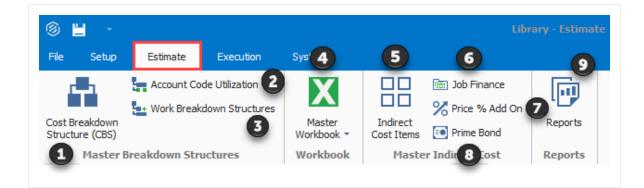
	Name	Description
	Calculator	project to project.
5	Shift Rate Calculator	Allows you to set up shift rate configurations that you can access at the project level.
6	Resource Rates	Opens the Library Resource Rate Register where you can create and edit all resources and resource cost details available for import into your projects.
7	Most Used Resources	For quick access to the Labor, Equipment and Materials tabs of the Master Resource Rate Register.
8	Resource Assemblies	Takes you to the Library Resource Assembly Register where you can set up resource assemblies to import into individual projects.
9	Cost Item Assemblies	Cost Item Assemblies are predictive models to quickly and accurately estimate elements of a job that can be repetitive in nature on the job or from job to job.
10	Standard Tables	The Standard Tables are used to create and/or list job-level table data that is accessible by any of the Cost Item Assemblies that exist in a job. The Standard Table Record allows the user to create and or modify a Table record. The Standard Table Register lists all the job level tables created / available in the project.
11	User Roles	Opens the Register where you assign users to a role which can include the forms, tabs and menu commands to which each role has access. The user names that are used when setting up your User Profiles come from Active Directory, and they are the user names that each user uses when logging onto his/her personal computer.
12	Access Control	Allows you to customize your system permissions by restricting destinations or commands that only designated roles should have access to.
13	Reports	Opens the Reports window, where you can access all system reports and configure the default report settings.



3.1.1.2 Estimate Tab

Overview - Estimate Tab

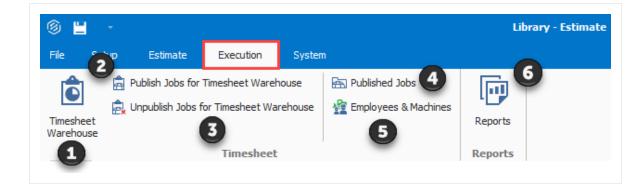
	Name	Description
1	Cost Breakdown Structure (CBS)	Opens the Library Cost Break Structure register, where you can define the CBS that will automatically import when a new project is created.
2	Account Code Utilization	Used to roll estimate line items into an account code hierarchy and benchmark against historical projects in a way that is consistent across projects.
3	Work Breakdown Structures	Opens the Library Work Break Structure register, where you can define additional Work Breakdown Structures that will automatically import when a new project is created.
4	Master Workbook	Opens the master Microsoft Excel template which will be embed into each new estimate job folder. The cells in the embed excel workbook can be linked to send information to or from InEight Estimate Fields.
5	Indirect Cost Items	Takes you to the Library Cost Breakdown Structure Register where you can edit and define indirect cost items.
6	Job Finance	Takes you to the Library Cost Breakdown Structure Register where you can edit the Job Financing cost item.
7	Price % Add On	Takes you to the Price % Add On record, where you can define the price % add to be included in the Library CBS.
8	Prime Bond	Opens to the Library Prime Bond record where you can define the bond tables that will import automatically when a new project is created.
9	Reports	Opens the Reports window, where you can access all system reports and configure their report settings.



3.1.1.3 Execution Tab

Overview - Execution Tab

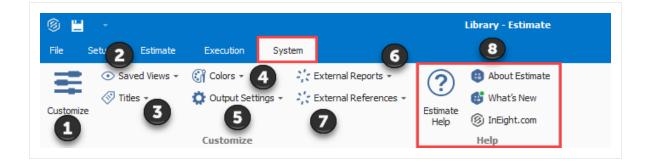
	Name	Description
1	Timesheet Warehouse	Used to document for any period of time (day, week, month, etc.) the employees and machines employed on a cost item (tracked by Account, Phase or CBS Code), how many hours they are employed and optionally, the quantity of work they accomplish.
2	Publish Jobs for Timesheet Warehouse	Links to the Job Register to publish jobs from the Timesheet Warehouse.
3	Unpublished Jobs for Timesheet Warehouse	Opens up a list for to view the unpublished jobs from the Timesheet Warehouse.
4	Published Jobs	Opens to a Register to show the published jobs from the Timesheet Warehouse.
4	Employees & Machines	Opens a register which list all of your company's employees and machines, including their identification number and other associated codes.
5	Reports	Opens the Reports window, where you can access all system reports and configure their report settings.



3.1.1.4 System Tab

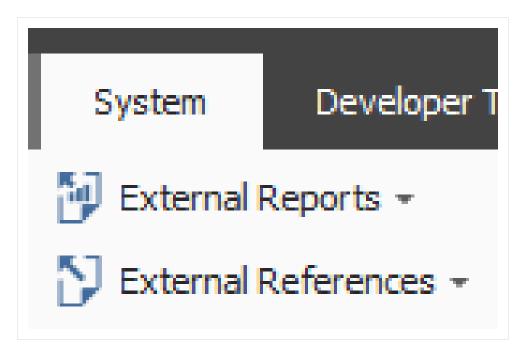
Overview - System Tab

	Name	Description
1	Customize	Window to customize the field titles that are displayed throughout various screens in the system, including all cost category titles, user-defined Tags, and more.
2	Saved Views	Allows you to save your views onto a disk or load from a disk.
3	Titles	Allows you to save titles onto a disk or load from a disk.
4	Colors	Allows you to save your colors onto a disk or load from a disk.
5	Output Settings	Allows you to save your output settings onto a disk or load from a disk.
6	External Reports	Menu to not only generate reports created by Estimate, but also to open programs, folders, documents, reports, or Internet resources with the associated program.
7	External References	Allows you to open programs, folders, documents, reports, or Internet resources with the associated program.
8	Help Section	Offers you links to Estimate's general Help menu, information about Estimate (i.e., version number, system information, tech support, etc.), What's New in the new version, and InEight's external website.



External Reports

The External Reports menu lets you generate reports created by Estimate, and also lets you open program files, folders, documents, or other internet resources.



Each menu item can be added to the External Reports menu. Upon selecting one of the menu items, the associated program, file, folder document or URL will open, as defined by the command entered in the Open column.

External Rep		r Tools Inte					
InEight Fo		pport Tickets					
Integratio	ns		-				
. Customiz	e						
	8		Cu	istomize Menu Iter	ns	- 0	×
	allov			not only generate rep cuments, reports, or i			
	when	n you select one o	f these menu items,	added to the Externa the associated Wind	ows program v	will open the designation	ated
	1			ernet resource define k on the Help button.		land.	st :t) 4,5
		Menu Order 🚊	Menu Text	Open			5,9
	→	1	InEight Folder	www.ineight.com			3,9
	_	2		https://ineight.com/			,04
	_	3	Integrations	https://ineight.com/i	ntegrations/		2,9
	-						3, 1
	_						3,0
							2,2
							9,7
	_	Add Edit	t Delete		OK	Cancel H	ielp ^{9,1}
	_	202 0 103		30,000,00	CUDIC TOTO	30.20	.8

To add a new menu text, first select the **Add** button and enter in a name in the **Menu Text field**, then type in the location of the new Menu text under the Open field.

	Customize Menu Items – D X ernal Reports menu allows you to not only generate reports created by Estimate, but it also you to open programs, folders, documents, reports, or Internet resources with the associated m.
	New Menu Item - × here, ted Menu Text: Type the name of a program, folder, document, report, or Internet resource and Windows will open it for you. If you do not know the command, click the Browse button and select the file that you would like to open. Open: 3 Browse OK Cancel
1	d Edit Delete OK Cancel Help

TIP	File Setup Estimate Quote	Price Execution System	About Estimate	iew of the fields in		
	Customize	tings - 🔆 External References -	What's New InEight.com			
	Customize	н	elp			
	9	Customize				
	- Titles - Cost Categories -	User Tag 1: TEST KL	User Tag 13: Tag 13			
	Job Folder Tags	User Tag 2: Tag 2	User Tag 14: Tag 14			
	- Man Hour Facts	User Tag 3: Tag 3	User Tag 15: Tag 15			
	- Minority Setup	User Tag 4: Tag 4	User Tag 16: Tag 16			
	- Data Entry Indicators - Hierarchy Levels	User Tag 5: Tag 5	User Tag 17: Tag 17	B		
	- Minority Setup	User Tag 6: Tag 6	User Tag 18: Tag 18	✓ Reports ▲ Settings:	Default -	
	- Substitute Quote Ranking	User Tag 7: Tag 7	User Tag 19: Tag 19	Job Properties		
		User Tag 8: Tag 8	User Tag 20: Tag 20	Res Preview		
		User Tag 9: Tag 9	User Tag 21: Tag 21	: File View Background		
		User Tag 10: Tag 10	User Tag 22: Tag 22	1 10 A 🖻 A 🖯 🖯 🖯	🖸 र 🕘 🔍 🔍 100% 🔹 🔍 🖬	I 4 🕨 🖬 🗄 🔹 🚸 🖬 🗎
		User Tag 11: Tag 11	User Tag 23: Tag 23		Other expenses recorded: Subcontract: 0.00	
		User Tag 12: Tag 12	User Tag 24: Tag 24		Ad-Hoc: 0.00	
		Restore Job Folder Tag Titles		Job Folde	r Tage Value	Description
				> Ret TEST N		
	Restore All Customized Values		OK Cance	Cor Teg 2		

3.2 LIBRARY JOB PROPERTIES

The Library Job Properties form serves as a template for new jobs. Some of the tabs on the Library Job Properties form hold basic settings that will require a default selection which will apply to all new jobs

created from scratch. Time can be saved when utilizing Library Job Properties, because the data and settings you fill out will be automatically imported into a new job. Once imported, these settings can be changed at the job level if necessary.

It may be helpful to complete the following tabs / fields at the Library level:

- **Overview Tab Notes Field**: Filling out the Notes section at the Library level would be helpful for any instructions or reminders that you want to display on all projects' Job Properties form. For example, "Always double check currency exchange rates"
- **Cost Basis Tab**: Shift arrangements may or may not be standard across all projects, as well as wage rates and scales. The cost basis default rules should be established within the library.
- **Fuel Cost Tab**: Entering a default fuel cost here will factor with the utilization of your equipment to be included in your equipment rates

	-						Library - Es	timate								>
File Setu	ip Esti	mate Exe	cution Sy	/stem	Integratio	ns									童	
٥	-		山			🐔 Lab	uipment 🦱		â		-	141	0			
ob Properties	Setup Dat	ta * Book	Calculator	Shift Rate Calculator	Resourc Rates *	Mat	100001		Cost Item Assemblies	Standard Tables	User Rol	Control	Repo			
		ter Initializati	ion			Master F	Resources		Master A	ssemblies	Roles and	Permission:	Repo	rts		
Job Propert					_									_		
Overview	Security	Cover Sheet	Cost Basis	Minority S	Setup F	uel Cost	Job Tracking	Job F	Folder Tags	Competitors	Pricing	Schedule	Cash Flow		uipment	
Code: escription:	Library												Status:	Biddin	g	
Notes:																
	Automat	ically save this j	ob													

3.3 LIBRARY ADDRESS BOOK

3.3.1 InEight in the Cloud

Estimate's vendor and contact information in the address book register integrate with InEight Platform's vendor and contact master data libraries.

Vendors and contacts are created and maintained in Platform's master data library as a single source repository of vendor and contact data.

=		ndors						0	¢ " ®			
					VENDORS	VENDOR TY	PES					
Ð	r 8						(C7	7 ()	Q		
	ID	Name 个	Alternate name		Туре			Y				
	T	T		T			т)			T		
ו	0010118762	1123910 B.C. Ltd	Sun Star Shuttle		Z001			.mloops		^		
	0010105600	1127571 B.C. Ltd	Sparrow Excavation an	d Fencing	Z001			.illooet				
	0010069102	112792 Canada Inc	DBA AMJ Campbell Var	n Lines	Z001			elta				
כ	0010106779	1128354 Alberta Ltd	Yvolution Metal Works		Z001		1	У				
כ	0010097951	1135391 Ontario Ltd	DBA Orleans Autopro		Z001		9	ans				
כ	0010114422	1138357 Alberta Ltd.	Young Contracting		Z001			Jnoka				
	0010111084	1142023 B.C LTD	Barcelo Flame Grilled C	hicken	Z001		-(-	Burnaby				
	0010092209	1165292 BC Ltd	DBA Hydro Tech		Z001			rnaby				
	0010006725	1169572 Alberta Ltd.	DBA A-1 Portables		Z001		à	rose				
	0010119746	11754491 Canada Ltd	Synstone		Z001			atford				
	0010102352	1189589 AB Ltd	Fire-Alert SE Edmonton	1	Z001		-/	dmonton				
	0010118867	1190475 BC LTD	Vancouver Island Fores	at & Marine	Z001		-(-	Juncan				
_										-		
		≡ 🛛 -							Library - I	Estimate		
		File Setup Estimate	System Integrations Acti	ions								
		Print	l 🖳 🗏 🔮		e Vendors 🐰 Linki		77	V P	L _			
		Export to Excel Contacts	Vendors and Contacts Default Quotes	opy Il Down	25 UNU	Expand / Collapse *	Filter Clear Filter	View Vendors W	ew Contacts			
		Print	Layouts	Edit	Work		View	InEight Pla	tform			
		Address Book Register 0										
		Drag columns here to group										
		Vendor ID Vendo	Name 🚊	Vendor Type	Tax ID	Tax Jurisdiction	Address 1		Address 2	Country / Region	City	
			ce Geomatics LLC	Z001	461564451		1261A 120th A	ve NE		United States Of America	Belevue	
			Vendor2	1_NP Vendor		abc	90th Street			United States Of America	Scottsdale	
		+ <u>1 NP - Vendor 1</u> 1_Ven + <u>1 NP - Vendor 1</u> 1_Ven		1_NP Vendor 1_NP Vendor								
			gineered Materials LLC	Z001		1516913100	1162 Manchese	ar Ave		United States Of America	Wabash	
			gineered Materials LLC	Z001		1516913100	1162 Manchese			United States Of America	Wabash	
		+ 0010119449 11032	119 Canada Inc	Z001	731900882	7001509700	300 Greenbank	Road Suite 12		Canada	Ottawa	
		+ <u>0010098991</u> 11059	00 Ontario Ltd oa Fire Alert	Z001	898821194	7001520100	1-890 Taylor C	reek Dr		Canada	Orleans	
			75 B.C. LTD	Z001		7000328680	15705 Old Rich			Canada	Osoyoos	
			009 Canada Inc	Z003		7001906500	PRIMARYAddre		PRIMARYAd	India	PRIMARYAddress1	
			3 Canada inc.	Z002		7001565130	6866 McKeown			Canada	Greely	
		+ <u>0010102467</u> 11120	04 Ontario Inc	Z001		7001568530 7000301500	5243 Robert H			Canada	Seeley's Bay	
		+ 0010118762 11239	10 B.C. Ltd	Z001			1016 Quails Ro			Canada	Kamloops	

The vendor and contact data structure shows a new hierarchy where multiple contacts can be assigned to one vendor.

Ad	dre	ss Bo	ok Register	0											
ra	g co	lumns	here to group												
	Ve	ndor I	D	Vendor Name	<u>i.</u>	Vendor Type	Tax	ID	Tax Jur	sdiction	Address 1	1	Country / Region		City
÷	-	0010	106779	1128354 Alberta Ltd		Z001	8638	377379	700014	7200	Box 516		Canada		Vimy
			Vendor ID	First Name	Last Name	Company	<u>i.</u>	Addres	s 1	Address 2	City		Country Region	/ Primary Email	
	↦	→	0010106779	Frank	Matty	Alberta								Frankmatty@gm	ail.com
	_		0010106779	Tom	Cross	Alberta Ltd								Tomcross@gmail	.com

3.3.2 Pre-existing Estimate data

Upon upgrading to version 23.6, address book records show a combined list of both pre-existing Estimate Address Book records and Platform vendors and contacts. Pre-existing Estimate Address Book records are still editable, but Platform records are not. The pre-existing disconnected vendors and contacts show a red glyph to the left of the Vendor ID column which shows that these records are disconnected from Platform.

Address Book Registe	er 🛛
Drag columns here to grou	q
Vendor ID 🚊	Vendor Name
8 +	Alpha
8 +	Al.Ven1
Disconnected from InEight Platform	Ed-Sub2
8 +	Example Vendor 4 DBE

The existing contact records also have a vendor record associated with it. New vendors and contacts must be added via Platform, and changes to any Platform originated records must be modified in Platform. This promotes the use of Platform as the single source of creation and maintenance for vendor master data.

3.3.3 Estimate specific data

Certain vendor affiliated qualification information required for estimating purposes such as licensed, bonded and insured data, or minority participation, is maintained directly in Estimate only rather than in Platform.

There can be other Estimate vendor and contact data that only exist in Estimate and not in Platform, such as License, Bond, Insurance and Minority Certifications, and Default Quotes.

Address Book Registe	r	Vendor Record O					
Vendor Details			Contacts	Notes	License / Bond / Insurance	Minority Certifications	Default Quotes
Vendor ID:	1_NP	Vendor2					
Vendor Name: \star	1_NP	Vendor2	License	d			
Vendor Type:	1_NP	Vendor		Licensor:	Jeff Lewis		
Tax ID:	12345			Class:	A		
Tax Jurisdiction:	abc		Iden	tification:	GDIMNDG83		
Address 1: Address 2:	90th S	treet	Bonded	I			
Country / Region:	United	States Of America	j (Company:	Owens Inc		
City:	Scotts	dale	1	Agent:	Phil Jones		
State:	Arizon	ia ~	il i	Phone:			
Postal / Zip Code:	85258		Cost p	per 1,000:	0.00		
Phone Number:	99999	999	Insured				
Fax Number:	96325	8741	insurce				
Web Site URL:			j (Company:	Evergreen Insurance		
Peference Number:	-		ill ill	Agent:			

3.3.4 Address Book layouts

You can choose between three address book page arrangements, vendors and contacts, vendors and default quotes, and contacts.

File Setup	Estimate	System De	eveloper Took	Integrations	Actions							
Print C Preview P Export to Excel	Vendors and Contacts	Vendors and Default Quotes	Contacts	Copen + Fill D Delete	10.07	c Field .ink Field	Expand / Collapse ~	Filter	Clear Filter	View Vendors	View Contacts	
Print		Layouts		Edit	Work	cbook		View		InEight	Platform	

3.3.4.1 Vendors and Contacts

Vendors and Contacts are arranged where the vendor is the primary record in the register, and the contacts associated with the vendor are shown as secondary detail records.

File		Set	ф	Estima	ite	System	Integrations	Actions
٩		iew ort to	Excel		ors and tacts	Vendors an Default Quot		Copy
	dres		ok Reg	- +	0	Layouts		
	Ven	dor I	D		Vendor	Name		<u>ii</u>
÷	-	0010	106779		112835	4 Alberta Ltd		
			Vendo	r ID	First	Name	Last N	ame
		÷	00101	06779	Fran	ık	Matty	
			00101	06779	Tom		Cross	

3.3.4.2 Vendors and Default Quotes

Vendors and default quotes are arranged where the vendor is the primary record in the register, and the default quote group assignments for the vendor are shown as secondary detail records.

File		Set	φ	Estim	ate	System	In	tegrations	Actions
	Print Prev Expo	view	Excel		lors and	Vendors Default Q		Contacts	Copy
	P	rint				Layout	5		
Ad	dres	s Bo	ok Reg	ister	0		Τ		
Drag	g colı	umns	here to	group					
	Ver	ndor I	D		Vendo	r Name			<u>.</u>
	+	0010	087554		1 Alliar	nce Geomatic	s LLC		
\rightarrow	-	1 NP	- Vend	<u>or 2</u>	1_NP -	- Vendor 2			
			Quote Group			Resource Code		esource escription	
		\rightarrow	Aspha	lt Mate	rials				

3.3.4.3 Contacts

Contacts are arranged where the contacts are shown in a flat list and are not secondary detail records under the Vendor. This layout can be used to search more easily for contacts regardless of their vendor assignment.

File	Setup	Estimate		System Ir	tegrations	Actions
뤔	Print	<u>ا</u>	-	I		🛞 Delete
à	Preview	10	2	* S	i	🖶 Сору
e7	Export to Excel	Vendors Conta		Vendors and Default Quotes	Contacts	+ Fill Down
	Print			Layouts	T	Edit
	columns here to				+	
	First Name		Last	Name	Company	
	Nadeesha		Karu	nanayaka	AXN	
	Joe		Lang	more	You.Inc	

3.3.5 View Vendors and Contacts in InEight Platform

Select View Vendors or View Contacts to open a new InEight Platform master data vendors and contacts browser.

		An President Standard	Adam Conception Tools Decaysions Adam	Link hold hold Link hold hold hold hold hold hold hold hold	Nan Car	iuts -						
=	🛱 Master data libraries / Ve	ndors		0 4 8 9 11	≡	Auster data libraries / C	Contacts			0	ð 🦨 🙁	٢
			VENDORS VENDOR TYPES					CONTACTS	CONTACT TYPES	7 7		
۲			(0 0 t t	¢) 🖻 🛞 🤮 Promote			- (D		D Q
	D	Name 1	Туре			Full name	Primary email	Contact type	Office number	\ ī	Is User	
	Υ	T	T /	T		Υ	T	T		7 7	All	1
	0010087554	1 Alliance Geomatics LLC	Z001	deflevue		Tom Cross	Tomcross@gmail.com	Vendor			false	
0	1_NP - Vendor2	1_NP - Vendor2	1_NP Vendor	rottsdale		Jim Softy	jim.softy@gmail.com	Vendor			false	
	1_NP - Vendor1	1_Vendor1	1_NP Vendor			Tom Cross	Tom.Cross@gmail.com	Vendor) –	false	
0	0010099994	10X Engineered Materials LLC	Z001	oash		Frank Matty	Frankmaltyjögmail.com	Vendor		/	talse	
0	0010119449	11032119 Canada Inc	2001	Atoma		nandytest123 gmail.com	nandytect123@gmail.com	Test contact type A	809899		false	
	0010098991	1105900 Ontario Ltd oa Fire Alert	Z001	vleans		TestUser100nandy@gmail.com	TestUser100nandy@gmail.com	Test contact type A	889		false	
	0010106673	1107075 B.C. LTD	Z001	voos		NP-Contact1 With Vendor	nikitaben parekh@ineight.com	Designer	123456789	\	false	
	0010097822	11088009 Canada Inc	2003	MARYAddress1		Paving Dude II	paying dudell@allstarpaving.com	Vendor		/	false	
	0010033404	111008 Canada inc.	2002	.orely		Nadoesha Karunanayaka	abc@gmail.com	Owner	3145	/	talse	
	0010102467	1112004 Ontano Inc	2001	'celey's Bay		Bhatt Shreya	fitnessmylife2018@gmail.com	Owner			talse	

To view or edit a vendor, click the Vendor ID in Estimate. The Platform Edit vendor > Vendor Details page opens.

	ors		QA-T01-23.6 ⑦ 4 ⁵⁶ ⑧ 🛞 🔛
Vendor > Edit vendor	VENDOR DETAILS	USERS CONTACTS	
			Cancel
	Vendor details		
	* ID	* Name	
	0010010622	Smith and Construction	
	Alternate name	Vendor type	
		Z001	•
	Vendor tax ID	Vendor tax jurisdiction	
	120998877	7001910900	
	Status	Default currency	
	Available	Canadian Dollar	•

3.3.6 Merge and Upload Contacts and Vendors into Platform

You can manage and retain all vendor information in the Estimate Address Book that are not linked (disconnected) with Platform, including contacts and companies that are referenced in multiple estimates, quotes and RFQs.

Disconnected Vendors and Contacts can be merged with existing Platform vendors and contacts, or they can be uploaded to create new Platform vendors and contacts by navigating to the Library > Setup > Address Book. You can also upload new Estimate vendors and contacts into Platform's master data repository.

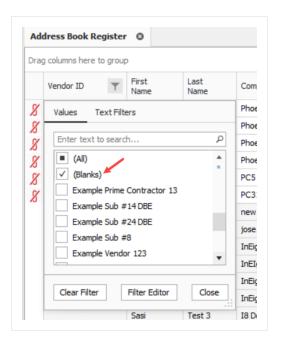
Estimate's process of uploading contacts and vendors into Platform's master data library (as a means for all InEight products to access as a source system of contact and vendor data) not only lets you send this information to Platform, but it provides you with a mechanism to clean up and simplify existing Estimate Address Book data. For example, your current Estimate Address Book might contain many duplicate contacts containing the same first and last name, but with different addresses, emails, or mobile numbers. Merging these records helps administer customer data better so that you can eventually only maintain a single contact or vendor that has the most up to date and most accurate information.

Address Book Re	gister ©		
Orag columns here to) group		
Vendor ID	Company =	Vendor	Address 1
8	Phoenix Contractors	Example Vendor 1888	100 Tenth Street
8	Phoenix Contractors	Example Vendor 1666	100 Tenth Street
8	Phoenix Contractors	Example Vendor 5551	100 Tenth Street
8	Phoenix Contractors	Example Vendor 222	100 Tenth Street

3.3.6.4 Disconnected Contacts and Vendors

Pre-existing Estimate vendors and contacts that are disconnected from Platform show a red glyph to the left of the Vendor ID column, and only exist in Estimate at this time. To only show the disconnected records, click the column filter in the Vendor ID column, and then select (Blanks). You can either delete the disconnected records or choose to merge or upload them into Platform.

Showing only the disconnected vendors or contacts helps you see the vendors and contacts that are not connected with Platform.



NOTE

All new library address book records must be created in Platform.

Vendor and contact ID's that show a blank do not currently have an associated Platform vendor association, as these vendors were originally created in Estimate. These vendors have not been merged into Platform, and therefore have no association with the vendor master data that resides in Platform.

_	Print Prev			Vendors and	Vendors and	Contacts	C Open	+ Fill Do		恩 Lini 恩 Uni	Field	4	Filter	Clear	View Ver
eř	Expo	ort to	Excel	Contacts	Default Quotes	Contacts	🖶 Сору					Expand / Collapse +	Tilter	Filter	view ver
	P	rint			Layouts			Edit		Worl	book		View		
_															
Drag	-		here to	group Vendor Name	2	Vendo	r Type	Tax ID	Tax Jurisd	iction	Address	s 1			Address 2
	-					Vendor	r Type	Tax ID	Tax Jurisd	iction		s 1 st Street Suite	≘ 9000		Address 2
	Ven			Vendor Name Example Sub	#34 DBE	Vendor Last Name	т Туре	Tax ID Company	Tax Jurisd					Dity	Address 2

Inactive Contacts and Vendors

You can mark a vendor as *Do Not Use* in a contact record, which indicates the status of the contacts associated vendor, and can only be set in Estimate when vendors are disconnected from Platform. The record changes to red to signify it is inactive and cannot be used, but is not deleted from the system.

ddress Book Register	Contact Record	Vendor Record	
Vendor Details		Contacts Notes	
Vendor ID: 490	09173019474807	Drag columns here to g	
Vendor Name: * 51s	st State		
Vendor Type: Z0	02 ~	First Name	
Tax ID: 13			
Tax Jurisdiction: 5th	Level		
Address	W, Addie		
Refer L			
Quote	Address	Book Register Contact Record O	
Currency:	S. Dollar	-	
Do Not Use:		First Name: Tony	Address 1: 300 Third Street
		Last Name: LM	Address 2: 300 Third Street
		anv: *	Region: wira
		Title: jr.tL	Office Number: off-1
		inder jinde	
	Languag	ige Preference: English	Mobile Number: mob-1
	Languaç Vendor	-	
		-	Mobile Number: mob-1
		ige Preference: English -	Mobile Number: mob-1 Security

To change the *Do Not Use* status, select the Vendor ID Platform link for the vendor record in Estimate. In Platform, the *Do Not Use* flag can be maintained by selecting the Status field in Master Data Libraries > **Vendors**, and automatically integrates with Estimate.

/endor > Edit vendor	VENDOR DETAILS	USERS	CONTACTS			
	Status Available	•	Default currency Select one			
	Available	٩	Default incoterms			
	Unavailable Default incoterms location	-				
	Addresses	F	PRIMARY REMIT TO	ADDITIONAL		

Step by Step — Merge Estimate Vendors to Platform

1. Choose one connected and one disconnected vendor, then select Merge Vendors with Platform.

	Print Preview Export to Excel	Vendors and Contacts	Vendors and Default Quotes	Contacts		+ Fill Down	Link Fields	Expand / Collapse +	Filter	Clear Filter	View Vendors	View Contac	v∰ Upload	Vendors with Platfo	
	Print		Layouts			Edit	Workbook		View			InEig	ght Platform		
_	columns here to														
	Vendor ID	Vendor Name	e 🚊	Addr	ess 1		City	State	Posta Zip C		Phone Number		Address 2	Vendor Type	Tax I
	+ <u>Ven34</u>	Ven34		700 5	Seventh Street		Hometown		8895	00	111-131-	4321	700 Seventh		

• Note that the connected Estimate vendor previously exists in Platform, prior to the merge of the two vendor records.

≡	命 Master data libraries / \	/endors			
				VENDORS VENDO	IR TYPES
ŧ) 🗹 😣				
	ID	Name 个	City	Address 2	Address 1
		ven34		Ţ	Ţ
	Ven34	Ven34	Hometown	700 Seventh Street	700 Seventh Street

2. Select Merge.

rag colun	nns her	e to group										Sar	ved views: Stand	ard View	-
rimary		Vendor ID	F	Vendor Name	<u>i.</u>	Vendor Type	Address 1	Address 2	City	Postal / Zip Code	Phone Number	Fax Number	Web Site URL	Currency	Do Not Use
		Ven34		Ven34			700 Seventh	700 Seventh	Hometown	889500	111-131-4	222-134-2		CND Dollar	
				Ven36			700 Seventh		Hometown	889500	111-131-4	222-134-2		CND Dollar	

- Notice that the primary vendor is checked, as this record already exists in Platform.
- Other records where the Primary field is not checked are records to be merged into the primary record.
- Fields in yellow for the non-primary records are deltas. These deltas will not be merged, and differences will be lost once they are merged, as the data that exists in Platform takes precedence. If you want any of the disconnected data to exist in Platform, you need to manually change the data in Platform. The advantage for this is to allow for the

disconnected Estimate vendors to become associated with an already existing Platform vendor, which lets the contact to still be keyed in areas it was used in Estimate, such as in Quotes and RFQs.

3. Select **Yes** in the Attention dialogue box to acknowledge that the attributes of the primary contact will exist.

The attributes of the primary vendor will persist and the default
quotes for the other vendors will be removed. This operation will save the Library.
Are you sure you want to continue?
Yes No

• A message shows that the operation was successful, and the entry is created in Platform.

Attention	×								
Successfully me	rged vendors with primary vendor.								
	ОК								
≡	☆ Master data libraries / ∖	 /endors				QA-T01-23.8	?	́ц <mark>14</mark>	Q
				VENDORS	VENDOr.				
Œ) 🖻 😣						5		
	ID	Name 个	City	Address 2		State			
	T	ven34	T						•
	Ven34	Ven34	Hometown	700 Seventh Street					

Step by Step — Upload Estimate Vendors to Platform

 Choose a disconnected vendor with an associated contact, and then select Upload Vendors to Platform.

		int eview		J.						•		\∰° L	Merge Vendors w Jpload Vendors t				
ę	Ex	port to	Exce	Vendor Cont		Vendors a Default Que		Contacts	View	Vendors	View Cont	tacts					
		Print				Layouts					In	Eight Platf	orm				
Ad	dre	ess Bo	ok R	egister	0												
Drag	g co	olumns	here	to group										Si	aved views:	Previous View	•
Vendor Y Ven		Vendor N	ame	<u>i</u>	endor T	ype		Country / Region			City		State	Postal / Zip Code	Phone Number		
8	+			Example	Sub #9	3							Hometown	Hometown A		889050	111-123-12
X	+			Example	mple Sub 77			United States Of America Hometown Aria						Arizona	889030	111-232-34	
X	-			Example	/endor	123			U	United Sta	ates Of Ame	rica	Hometown		Arizona	889060	111-123-21
			Ven	dor ID	First	Name		Last Nan	n	Sta	ate	Postal / Zip Code	Country / Region	Primary E	Email		Contact Type
		8			Pat			Roberts	_	AZ		889060					

- 2. Click the plus symbol to the left of the Vendor ID to expand all the records. Select Upload to sync the vendor shown with the contact in this window to Platform. The preview dialog box opens.
 - The purpose of the preview dialog is to let you see what will be created in Platform, and to correct any issues before completing the operation. In particular, this is an opportunity to provide a Vendor ID which is required by Platform.

)rag co ^l	lumns here to	group							5	Saved views:	Previous View		-
/endor	ID	Vendor Nam	ne 🚊	Vendor	Туре	Tax ID	Tax Jurisdiction			Phone Number	Fax Number	Web Site UR	L
	mple Vendo	Example Ve	ndor 123							111-123-2134	222-123-1		
	First Name	Last Name	Company	<u> </u>	Primary En	nail Address :	1	Ado		Mobile Number	Fax Number	Department	Posit
8	Pat	Roberts	Example V	endo		100 Tent	n Street				222-123-1		
•								• • • • • • • • • • • • • • • • • • •					

• In this scenario, note that the Primary Email field is highlighted in yellow. If any of the fields are highlighted, corrections need to be made to that field entry.

 For more information, select Upload. An Attention window appears. Select >>Show Details to follow the steps needed to proceed.

Primary	Email	Address 1	Address 2	City	State	Postal Zip Co
		100 Tenth Street		Hometown	Arizona	88906
						_
	🙂 Atte	ntion				×
	Platform.			Print	<< Hide Deta	ils
			the second second	er exist in Platfo		

3. Select **Yes** in the Attention dialogue box to confirm that the vendor will be uploaded to Platform and synchronized back to the Estimate Address Book library.

City	State	Postal /	Country /	Contact	- Pi
Attention					
	be uploaded to s operation will			zed back to	-
Are you sure	you want to cor	ntinue?			
			Yes	No	

	Att	ention	×						
	Su	ccessfully uploaded vendors to Pla	tform.						
☆ Mast	ter data libraries / Vendors		ок						
			VENDOR	S VENDOR	YPES				
	⊗ Name ↑	Cr	City		Address 1		Created on		
	example v	endor 12 🍸 🏋		Ţ		T	month/day	/year	
) Example Vendo	or 123 <u>Example Ver</u>	ndor 123	Hometown		100 Tenth Street		09/15/2023	09:46:01 A	M
		libraries / Vendors							
	Vendor > Edit vendo	r		VENDOR DETAILS	USERS	CONT	ACTS		
	+ 🗹 😣								
	Full name	Primary email		0	fice number		City		Created on
		T		_		T		T	month/day/year
	Pat Roberts	pat.roberts@exar	nple.com	1	1-123-2134		Hometown		09/15/2023 09:46:02 AM

• A message shows it was successful and the entry is created in Platform.

Step by Step — Merge Contacts to Platform

1. Choose one connected and one disconnected contact, and then select Merge Contacts with Platform.

Print Preview Preview Print Export to Excel Print	Vendors and Contacts	Vendors and Default Quotes Layouts	Contacts	Copy	Link Fields	Expand / Collapse - View	Clear Filter	View Vendors	View Conta	」 「」 「」	erge Contacts w bload Contacts t prm			
Address Book Reg	ister ©							1						
Drag columns here to	group													Saved views:
8	Larry	Jack E	xample Sub #	44 DBE	900 First Str	343 Plum st		United States Of A	America Al	aska	Hometown	8890	009	pt@sub.com
	Larry	Jack E	Example Sub #	4 DBE	900 First Str	900 First Stree	et Su	United States Of <i>i</i>	America Ar	izona	Hometown	8890	009	tc@yahoo.com

• Prior to the merge, note that the connected Estimate contact previously exists in Platform, prior to the merge of the two contact records.

			CONTACTS	CONTACT TYPES						
			CONTACTS							
ŧ) 🖸 🛞 🛱 р	romote user				[5	3	(i)	Q
	Full name ↑	Primary email	Mobile number	City	Created on	Address 1		Is User		A
	larry jack 🝸 🌾			T	month/day/ 🚞 🍸		T	All	Ļ	

2. Select Merge.

rag columns i	here to group									Saved	views: Prev	vious View	•
rimary	First Name	Last Name	Company	Primary Email	Contact Type	Address 1	Address 2	Country / Region	State	City	Postal / Zip Code	Mobile Number	Office Number
\checkmark	Larry	Jack	Example Sub #4 DBE	tc@yahoo.com	Estimate Cont	900 First Stree	900 First Str	United State	Arizona	Hometown	889009	111-565-8	111-332-4
	Larry	Jack	Example Sub #44 DBE	pt@sub.com		900 First Stree	343 Plum st	United State	Alaska	Hometown	889009		111-332-4

- Notice that the primary contact is checked, as this record already exists in Platform.
- Other records where the Primary field is not checked are records to merge into the primary record.
- Fields in yellow for the non-primary records are deltas. These deltas will not be merged, and differences will be lost after they are merged, as the data that exists in Platform takes precedence. If you want any of the disconnected data to exist in Platform, you need to manually change the data in Platform. The advantage for this is to allow for the disconnected Estimate contact to become associated with an already existing Platform contact, which lets the contact to still be keyed in areas it was used in Estimate, such as in Quotes and RFQs.
- 3. Select **Yes** in the Attention dialogue box to acknowledge that the attributes of the primary contact will exist.

Attention
The attributes of the primary contact will persist. This operation will save the Library.
Are you sure you want to continue?
Yes No

• A message shows it was successful, and the entry is created in Platform.

ention		×								
ccessfully merg	ged contacts with primary contac	t.								
=	OK					QA-T01-23	•	4 ⁴ @	3 6) :::
	f Master data librari	les / Contacts				QA-101-23.	. 8 (0)	4 8	9 E	,
				CONTAC						
				CONTAC	TS CONTACT TYPE.		F tz	(F)	<u></u>	_
Œ) 🖻 🖉 🚭	Promote user		CONTAC	TS CONTACT TYPE.		C7	D	i	Q
Œ	D 🗹 🛞 🚭	Promote user Company	Primary email	CONTAC Address 1	TS CONTACT TYPE.		Created on	-	()	Q
œ			Primary email		<	Ţ	-	1		

Step by Step — Upload Contacts to Platform

1. Choose a disconnected contact, and then select Upload Contacts to Platform.

Print Preview Export to Excel 	Vendors and Contacts	Vendors and Default Quotes	Contacts	5	View Vendors	· · · · · ·	와 Merge Contact 알 Upload Contac				
Print Address Book Reg	istar A	Layouts	(1	InEight P	latform				
Drag columns here to				2					Saved views:	Previous View	•
Vendor ID 🝸	First Name	Last	Name 🚊			Address 1	Address 2	Country / Region	State	City	Posta Zip Co
8	Keesha	Blank	¢ (700 First St	r	United Arab Emira	tes Abu Dhabi	Hometown	8890

- 2. Select **Upload** to send the contact shown in this window to Platform.
 - The purpose of the preview dialog is to let you see what will be created in Platform, and to correct any issues before completing the operation.

Orag columns l	here to group				Saved views:	Previous View	
First Name	Last Name	Company	🚊 Primary Ema	Postal / Zip Code	Contact Type	Language Preference	Mobile Number
Keesha	Blank	SUB5	2@gmail.com	889007			000

3. Select Yes in the Attention dialogue box to upload the contact to Platform, synchronize back to Estimate, and save to the library.

Contacts will be uploaded to Platform and synchronized back Estimate. This operation will save the Library. Are you sure you want to continue?	Attention	
Are you sure you want to continue?		
	Are you sure you want to con	tinue?
Yes No		Yes No

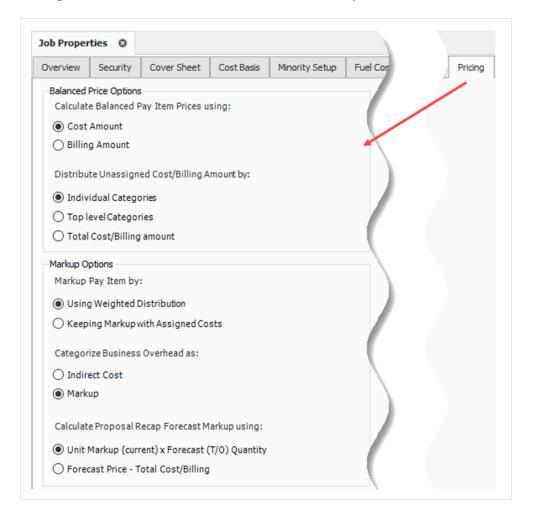
• A message shows it was successful, and the entry is created in Platform.

Γ	Attention		×								
		upload	led contacts to Platform.								
			ОК								
			ᡬ Master data libraries /	Contacts			QA-T01-	23.8 ⑦	₫	8	© III
					CONTACTS	CONTACT TYPES					
		Œ) 🗹 🛞 😋 Promot	te user				C7		()	Q
			Full name 1	Primary email	Office number	Mobile number		Created o	n		4 🗉
			T		T		77	month/	day/year		T
			Keesha Blank	2@gmail.com	111-222-3232	000		09/14/20	23 01:26:	22 PM	*

3.4 LIBRARY JOB PROPERTIES PRICING

3.4.1 Job Properties Overview

In Job Properties Overview > **Pricing**, there are balanced price and markup options in the bid pricing area which lets you categorize costs, markup various costs in an estimate, and distribute that markup throughout the bid which establishes balanced bid prices.



3.4.2 Balanced Price Options

This option determines if a pay item will use the cost or billing amount values of the assigned cost items as the basis for determining a balanced bid price. This also determines if the AutoPrice command will use the cost or billing amount values.

3.4.2.1 Calculate Balanced Pay Item Prices using Cost Amount:

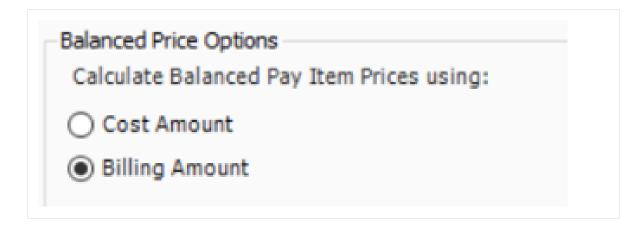
-Balanced	Price	Options	
-----------	-------	---------	--

Calculate Balanced Pay Item Prices using:

- Cost Amount
- Billing Amount

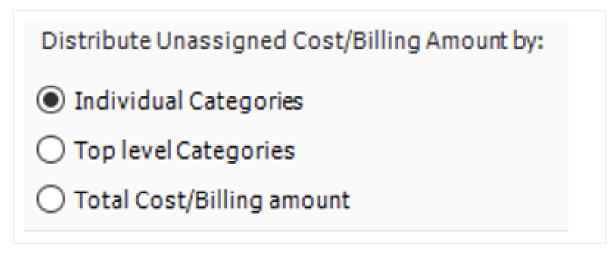
Descriptio	ion	Assigned	Unassigned	Total	% of Target	% of Subject	Assigned Billing	Unassigned Billing	Total Billing	% of Target	% of Subject
~ 🔺 P	Price Breakdown Structure										
~ 🔺	Target Price	\$5,040,796.20	\$1,222,999.47	\$6,263,795.67	100.00		\$5,164,80	\$1,123,41	\$6,288,21	100.00	
~	Markup	\$0.00	\$896,159.52	\$896,159.52	14.31		\$0.00	\$755,068.85	\$755,068.85	12.01	
	✓ 🛕 Target Profit		\$594,133.61	\$594,133.61	9.49	11.13	\$0.00	\$447,511.92	\$447,511.92	7.12	8.0
	Indirect Cost Markup		\$14,730.68	\$14,730.68	0.24	5.00	\$0.00	\$27,331.76	\$27,331.76	0.43	8.0
	🛕 Direct Cost Markup		\$579,402.94	\$579,402.94	9.25	11.49	\$0.00	\$420,180.16	\$420,180.16	6.68	8.0
	🗸 📥 Business Overhead	\$0.00	\$302,025.90	\$302,025.90	4.82		\$0.00	\$307,556.93	\$307,556.93	4.89	
	Price % Add-On	\$0.00	\$281,870.81	\$281,870.81	4.50		\$0.00	\$281,870.81	\$281,870.81	4.48	
	30b Financing	\$0.00	\$5,762.53	\$5,762.53	0.09		\$0.00	\$5,762.53	\$5,762.53	0.09	
	Indirect Cost Escalation	\$0.00	\$2,131.11	\$2,131.11	0.03		\$0.00	\$2,983.55	\$2,983.55	0.05	
	Direct Cost Escalation	\$0.00	\$12,261.46	\$12,261.46	0.20		\$0.00	\$16,940.05	\$16,940.05	0.27	
	Business Overhead Items	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00	0.00	
~	Total Cost	\$5,040,796.20	\$326,839.95	\$5,367,636.15	85.69		\$5,164,80	\$368,342.37	\$5,533,14	87.99	
	🗸 🔺 Indirect Cost	\$0.00	\$325,839.95	\$325,839.95	5.20		\$0.00	\$367,342.37	\$367,342.37	5.84	
	🗸 📥 Job Overhead	\$0.00	\$325,839.95	\$325,839.95	5.20		\$0.00	\$367,342.37	\$367,342.37	5.84	
	Prime Bond	\$0.00	\$45,618.98	\$45,618.98	0.73		\$0.00	\$45,618.98	\$45,618.98	0.73	
	Indirect Cost Add-On	\$0.00	\$5,734.95	\$5,734.95	0.09		\$0.00	\$6,640.46	\$6,640.46	0.11	
	Direct Cost Add-On	\$0.00	\$99,189.74	\$99,189.74	1.58		\$0.00	\$103,316.14	\$103,316.14	1.64	
	Job Overhead Items	\$0.00	\$175,296.28	\$175,296.28	2.80		\$0.00	\$211,766.79	\$211,766.79	3.37	
	🗸 🛓 Direct Cost	\$5,040,796.20	\$1,000.00	\$5,041,796.20	80.49		\$5,164,80	\$1,000.00	\$5,165,80	82.15	
	Direct Cost Items	\$5,040,796.20	\$1,000.00	\$5,041,796.20	80,49		\$5,164,80	\$1,000.00	\$5,165,80	82.15	

3.4.2.2 Calculate Balanced Pay Item Prices using Billing Amount:



Description		Assigned	Unassigned	Total	% of Target	% of Subject	Assigned Billing	Unassigned Billing	Total Biling	% of Target	% of Subject
Price Brea	akdown Structure										
🗸 🔺 Targe	et Price	\$5,040,796.20	\$1,222,999.47	\$6,263,795.67	100.00		\$5,164,80	\$1,123,41	\$6,288,21	100.00	
🗸 🔺 М	larkup	\$0.00	\$896,159.52	\$896,159.52	14.31		\$0.00	\$755,068.85	\$755,068.85	12.01	
v 📩	Target Profit		\$594,133.61	\$594,133.61	9.49	11.13	\$0.00	\$447,511.92	\$447,511.92	7.12	8.0
	Indirect Cost Markup		\$14,730.68	\$14,730.68	0.24	5.00	\$0.00	\$27,331.76	\$27,331.76	0.43	8.0
	Direct Cost Markup		\$579,402.94	\$579,402.94	9.25	11.49	\$0.00	\$420,180.16	\$420,180.16	6.68	8.0
✓ ≜	Business Overhead	\$0.00	\$302,025.90	\$302,025.90	4.82		\$0.00	\$307,556.93	\$307,556.93	4.89	
	Price % Add-On	\$0.00	\$281,870.81	\$281,870.81	4.50		\$0.00	\$281,870.81	\$281,870.81	4.48	
	3 Job Financing	\$0.00	\$5,762.53	\$5,762.53	0.09		\$0.00	\$5,762.53	\$5,762.53	0.09	
	Indirect Cost Escalation	\$0.00	\$2,131.11	\$2,131.11	0.03		\$0.00	\$2,983.55	\$2,983.55	0.05	
	Direct Cost Escalation	\$0.00	\$12,261.46	\$12,261.46	0.20		\$0.00	\$16,940.05	\$16,940.05	0.27	
	Business Overhead Items	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00	0.00	
🗸 📥 Te	otal Cost	\$5,040,796.20	\$326,839.95	\$5,367,636.15	85.69		\$5,164,80	\$368,342.37	\$5,533,14	87.99	
v 📥	Indirect Cost	\$0.00	\$325,839.95	\$325,839.95	5.20		\$0.00	\$367,342.37	\$367,342.37	5.84	
~	📥 Job Overhead	\$0.00	\$325,839.95	\$325,839.95	5.20		\$0.00	\$367,342.37	\$367,342.37	5.84	
	Prime Bond	\$0.00	\$45,618.98	\$45,618.98	0.73		\$0.00	\$45,618.98	\$45,618.98	0.73	
	Indirect Cost Add-On	\$0.00	\$5,734.95	\$5,734.95	0.09		\$0.00	\$6,640.46	\$6,640.46	0.11	
	🔡 Direct Cost Add-On	\$0.00	\$99,189.74	\$99,189.74	1.58		\$0.00	\$103,316.14	\$103,316.14	1.64	
	Job Overhead Items	\$0.00	\$175,296.28	\$175,296.28	2.80		\$0.00	\$211,766.79	\$211,766.79	3.37	
✓ ▲	Direct Cost	\$5,040,796.20	\$1,000.00	\$5,041,796.20	80.49		\$5,164,80	\$1,000.00	\$5,165,80	82.15	
	Direct Cost Items	\$5,040,796.20	\$1,000.00	\$5,041,796.20	80.49		\$5,164,80	\$1,000.00	\$5,165,80	82.15	

3.4.2.3 Distribution of Unassigned Costs/Billing Amount by Individual Categories



Any costs in the estimate not assigned to a pay item needs to be proportionally spread back to all pay items to determine a balanced bid price. This option lets the user choose the basis for calculating the weighted distribution of any unassigned costs plus markup.

• Individual Categories - this option uses each individual cost categories as the basis for establishing the weighted distribution amounts.

			Labor										
			Gross Wages			Taxes				Fringes		Balanced	
Pay Item	Description	Total Cost	Cost	Weight	Distribution	Cost	Weight	Distribution	Cost	Weight	Distribution		Price
641 0100	Mobilization	\$13,106	\$1,763	0.9%	\$949	\$588	0.9%	\$290	\$294	0.9%	\$145		
201 0102	Clearing & Grubbing	\$41,346	\$9,994	5.0%	\$5,379	\$3,331	5.0%	\$1,643	\$1,666	5.0%	\$822		
202 0183	Unclassified Excavation	\$90,455	\$20,923	10.4%	\$11,260	\$6,974	10.4%	\$3,441	\$3,487	10.4%	\$1,720		
303 5912	Aggregate Base	\$646,910	\$68,717	34.2%	\$36,981	\$22,906	34.2%	\$11,300	\$11,453	34.2%	\$5,650		
303 4263	Asphalt Concrete Hot Mix Type A	\$1,756,802	\$85,169	42.4%	\$45,835	\$28,390	42.4%	\$14,005	\$14,195	42.4%	\$7,003		
413(B) 0464	36 Inch RCP Culvert Class III	\$73,220	\$14,114	7.0%	\$7,596	\$4,705	7.0%	\$2,321	\$2,352	7.0%	\$1,160		
	Total Direct Costs	\$2,621,839	\$200,681		\$108,000	\$66,894		\$33,000	\$33,447		\$16,500		\$2,966,839
	Unassigned Cost	\$300,000	\$90,000		1	\$30,000		1	\$15,000		t		
	Markup	\$45,000	\$18,000			\$3,000			\$1,500				
	Total Distribution	\$345,000	\$108,000 -			\$33,000			\$16,500				
	Target Price	\$2,966,839											

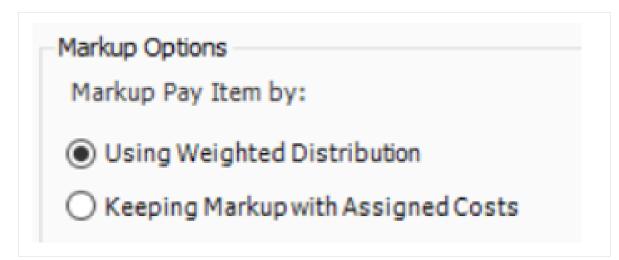
• Top Level Cost Categories - This option uses the ten top level cost categories (labor, owned equipment, rented equipment, supplies, materials, etc.) as the basis for establishing the weighted distribution amounts.

Pay Item				Labor		Owned Equipment			N	laterials		Balanced
	Description	Total Cost	Cost	Weight	Distribution	Cost	Weight	Distribution	Cost	Weight	Distribution	Price
641 0100	Mobilization	\$13,106	\$2,939	0.9%	\$1,582	\$9,642	2.1%	\$2,332	\$0	0.0%	\$0	\$17,020
201 0102	Clearing & Grubbing	\$41,346	\$16,657	5.0%	\$8,964	\$23,587	5.2%	\$5,705	\$0	0.0%	\$0	\$56,015
202 0183	Unclassified Excavation	\$90,455	\$34,872	10.4%	\$18,767	\$55,583	12.2%	\$13,443	\$0	0.0%	\$0	\$122,665
303 5912	Aggregate Base	\$646,910	\$114,528	34.2%	\$61,635	\$118,815	26.1%	\$28,736	\$394,728	22.6%	\$12,431	\$749,712
303 4263	Asphalt Concrete Hot Mix Type A	\$1,756,802	\$141,949	42.4%	\$76,392	\$235,310	51.7%	\$56,911	\$1,316,700	75.4%	\$41,465	\$1,931,570
413(B) 0464	36 Inch RCP Culvert Class III	\$73,220	\$23,524	7.0%	\$12,660	\$11,877	2.6%	\$2,873	\$35,078	2.0%	\$1,105	\$89,857
	Total Direct Costs	\$2,621,839	\$334,469		\$180,000	\$454,814		\$110,000	\$1,746,506		\$55,000	\$2,966,839
					+			+			•	
	Unassigned Cost	\$300,000	\$150,000			\$100,000			\$50,000			
	Markup	\$45,000	\$30,000			\$10,000			\$5,000			
	Total Distribution	\$345,000	\$180,000			\$110,000			\$55,000			
	Target Price	\$2,966,839										

• Total Cost[/Billing Amount] - This option uses Total Cost as the basis for establishing the weighted distribution amounts.

					Balanced	
Pay Item	Description	Total Cost	Weight	Distribution	Price	
641 0100	Mobilization	\$13,106	0.5%	\$1,725	\$14,831	
201 0102	Clearing & Grubbing	\$41,346	1.6%	\$5,441	\$46,787	
202 0183	Unclassified Excavation	\$90,455	3.5%	\$11,903	\$102,358	
303 5912	Aggregate Base	\$646,910	24.7%	\$85,125	\$732,035	
303 4263	Asphalt Concrete Hot Mix Type A	\$1,756,802	67.0%	\$231,172	\$1,987,974	
413(B) 0464	36 Inch RCP Culvert Class III	\$73,220	2.8%	\$9,635	\$82,855	
	Total Direct Costs	\$2,621,839		\$345,000	\$2,966,839	
				•		
	Unassigned Cost	\$300,000				
	Markup	\$45,000				
	Total Distribution	\$345,000 -				
	Target Price	\$2,966,839				

3.4.2.4 Markup Options



This option determines how markup is applied to pay items when establishing a balanced bid price.

• Using Weighted Distribution. Marking up Pay Items using weighted distribution takes the total markup and proportionally spreads the amount using the chosen weighted distribution method.

			Total				Balanced		
Pay Item	Description	Labor	Equipment	Material	Total	Weight	Distribution	Price	
201 0102	Clearing & Grubbing	\$14,000	\$24,000	\$0	\$38,000	4.0%	\$4,556	\$42,556	
202 0183	Unclassified Excavation	\$62,000	\$172,000	\$0	\$234,000	24.8%	\$28,055	\$262,055	
303 5912	Aggregate Base	\$112,000	\$157,000	\$404,000	\$673,000	71.2%	\$80,689	\$753,689	
	Total Direct Costs	\$188,000	\$353,000	\$404,000	\$945,000		\$113,300	\$1,058,300	
							+		
	Markup								
	Markup Percent	20%	10%	10%					
	Markup Amount	\$37,600	\$35,300	\$40,400	\$113,300				
	Target Price				\$1,058,300				

Keeping Markup rates to Assigned Costs. This option uses the cost category amounts of all
assigned cost items and calculates the markup by applying markup percentages as defined in the
direct and indirect cost markup records. Excluding cost items from the dependency tab of the
markup record precludes the application of that markup percentage to the assigned costs on
that pay item.

		Labor			1	Equipment		Material		Total			
Pay Item	Description	Cost	Markup	Price	Cost	Markup	Price	Cost	Markup	Price	Cost	Markup	Price
201 0102	Clearing & Grubbing	\$14,000	\$2,800	\$16,800	\$24,000	\$2,400	\$26,400	\$0	\$0	\$0	\$38,000	\$5,200	\$43,200
202 0183	Unclassified Excavation	\$62,000	\$12,400	\$74,400	\$172,000	\$17,200	\$189,200	\$0	\$0	\$0	\$234,000	\$29,600	\$263,600
303 5912	Aggregate Base	\$112,000	\$22,400	\$134,400	\$157,000	\$15,700	\$172,700	\$404,000	\$40,400	\$444,400	\$673,000	\$78,500	\$751,500
	Total Direct Costs	\$188,000	\$37,600	\$225,600	\$353,000	\$35,300	\$388,300	\$404,000	\$40,400	\$444,400	\$945,000	\$113,300	\$1,058,300
	Markup Percentages												
	Labor	20%											
	Equipment	10%											
	Material	10%											

3.4.2.5 Categorize Business Overhead as Indirect Cost



This option controls where cost Items with a cost segment of business overhead appear in the PBS.

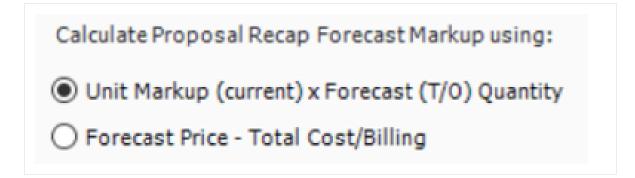
• Indirect Cost - Business Overhead is included as a subcategory of indirect costs in the PBS.

Job Prop	erti	es	Pay Item & Pro	posal Register		Price Brea	akdown Structu	re Ø	Cos	Cost Breakdown Structure (
Descriptio	n			Assigned Una		assigned	Total	% of Target		% of Subject		
🗸 🔺 Pri	ice Br	eakd	own Structure									
👗	Target Price			\$5,263,291.67 \$,259,783.56	\$6,523,075.24	10	00.00			
~		Mark	up	\$0.00	4	\$638,732.42	\$638,732.42		9.79			
	>	🔨 т	arget Profit		\$	\$638,732.42	\$638,732.42		9.79	11.52		
~		Total Cost		\$5,263,291.67	\$621,051.14		\$5,884,342.81	90.21				
	¥ .	À Ir	ndirect Cost	\$0.00	4	\$620,051.14	\$620,051.14		9.51			
		> 📩	Business Overhead	\$0.00	\$	\$340,453.76	\$340,453.76		5.22			
		≻ _≜	Job Overhead	\$0.00	\$	\$279,597.38	\$279,597.38		4.29			
	¥ .	🔺 D	irect Cost	\$5,263,291.67		\$1,000.00	\$5,264,291.67	80.70				
			Direct Cost Items	\$5,263,291.67		\$1,000.00	\$5,264,291.67	8	30.70			

Job Pro	pertie	5	Pay Item & Pro	posal Register		Price Breakdown Structure O					Cost Breakdown Structure (
Description			Assigned Una		assigned	Total		% of Target		% of Subject				
~ 🔺 P	rice Bro	akdowr	n Structure											
~ 🔺	Targ	et Price		\$5,263,291.67	\$1,	,259,783.56	\$6,523,075.	24	10	0.00				
×	<u> </u>	📩 Markup		\$0.00	\$	979, 186. 18	\$979,186.18		15.01					
	\rightarrow	Targ	et Profit		\$	638,732.42	\$638,732.4	42		9.79	11.52			
	> _	Busir	ness Overhead	\$0.00	\$	340,453.76	\$340,453.	76		5.22				
¥	A	otal Co	st	\$5,263,291.67	\$	280,597.38	\$5,543,889.	05	8	4.99				
	× /	Indir	ect Cost	\$0.00	\$	279,597.38	\$279,597.	38		4.29				
)	د 🚖 ا	lob Overhead	\$0.00	\$	279,597.38	\$279,597.	38		4.29				
	~ <u>/</u>	Direc	t Cost	\$5,263,291.67		\$1,000.00	\$5,264,291.	57	8	0.70				
			Direct Cost Items	\$5,263,291.67		\$1,000.00	\$5,264,291.0	57	8	0.70				

• Markup - Business Overhead is included as a subcategory of Markup in the PBS.

3.4.2.6 Calculate Proposal Recap Forecast Markup



This option determines how the Markup is determined in the Forecast column of the Proposal Recap data block on the Pay Item & Proposal form.

 Unit Markup (current) × Forecast (T/O) Quantity - The Forecast Markup amount is determined as the sum of each Pay Items Unit Markup (current) multiplied by the Pay Items Forecast (T/O) Quantity.

Pr	oposal R	ecap - Trainin	g Job						×					
		Curr	ent Targ	get	Fo	recast	Vari	ance						
	Price:	\$6,455,450	00 \$6,523,075	\$6,523,075.24		\$6,462,850.00		25.24 A	DD					
1	Markup:	\$571,107	.19 \$638,732	.42	\$631,5	560.32	\$7,17	72.10 A	DD					
Margin%:		8	.85 9	9.79		9.77	\$1,41	13.30 A	DD					
	Properties	Pay Item & Proposal Register O Price Breakdown		itructure Cost Breakdown Structure (CBS)										
_			roposal Register 🛛 🖉	Price	Breakdown	structure	Cos	t breakdow	n Stru	cture (CBS) I	-			
ag	columns here t	to group									Saved view	s: Previous View	•	1
	Position : Code	Pay Item Number	Description			Forecast (Quantity	T/O)	Unit of Measure		Price rent)	Total Price (current)	Unit Markup (current)	Total Markup (current)	
	+ 1	641 0100	Mobilization				1.00	Lump Sum		\$386,800.00	\$386,800.00	\$370,596.05	\$370,596.05	ł
	+ 2	201 0102	Clearing & Grubbing				10.00	Acre		\$6,120.00	\$61,200.00	\$1,007.30	\$10,072.97	1
Į	+ 3	202 0183	Unclassified Excavation			5	60,000.00	Cubic Yard		\$8.50	\$425,000.00	\$3.04	\$151,909.18	Į.
Į	+ 4	303 5912 Aggregate Base		4	15,000.00	Ton		\$22.00	\$880,000.00	\$4.64	\$185,711.50	ł		
	+ 5	303 4263	Asphalt Concrete Hot M	ix Type	A	3	35,000.00	Ton		\$35.00	\$1,330,000.00	(\$12.23)	(\$464,653.94)	
	+ 6	413(B) 0464	36 Inch RCP Culvert Cla	ss III			1,024.00	Linear Feet		\$100.00	\$100,000.00	\$23.17	\$23,166.27	l
	+ 7	800 0220	10 Inch PVC Force Main	(SDR.2	1)	1	12,000.00	Linear Feet		\$28.00	\$336,000.00	\$1.46	\$17,550.62	1
	+ 8	800 0330	24 Inch PVC Gravity Set		R.35)		-,	Linear Feet		\$64.00	\$192,000.00	\$7.46	\$22,394.31	
1	+ 9	800 0400	4 Foot Diameter Manho	-				Each		\$4,500.00	\$72,000.00	\$448.18	\$7,170.88	
	+ 10	501(A) 1306	Structural Excavation &	Backfill				Cubic Yard		\$30.00	\$24,000.00	\$5.25	\$4,201.04	
	+ 11	506(A) 1322	Steel Reinforcement			3	0,000.00			\$1.60	\$48,000.00	(\$0.01)	(\$363.37)	
	+ 12	503(A) 1313	Retaining Wall					Cubic Yard		\$535.00	\$454,750.00	\$60.79	\$51,669.32	
	+ 13	600 0300	Paint Existing Steel Brid	ge Stru	cture			Lump Sum		\$100,000.00	\$100,000.00		\$10,918.94	
	+ 14	700	Process Equipment					Each	\$	1,920,500.00	\$1,920,500.00	\$170,356.68	\$170,356.68	
	+ 15	1000	Removal of Undergroun		ge Tanks			Each		\$12,500.00	\$25,000.00	\$1,571.46	\$3,142.91	
	+ 16	1010	Disposal of Contaminate	ed Soil				Cubic Yard		\$25.00	\$20,000.00	\$2.25	\$1,802.45	
	+ 17	1200 0100	Toll Booth					Each		\$30,000.00	\$30,000.00	\$2,169.15	\$2,169.15	
	. 10	1500 0100	Guardrail Type 2					Linear Feet		\$24.00	\$24,000.00	(\$2.06)	(\$2,059.88)	
		1500 0200	Guardrail Type 3A					Linear Feet		\$31.00	\$6,200.00	(\$2.66)	(\$532.14)	
	+ 20 + 21	1600 0230 CO1	Type 4 Signs Realignment of Water L				1,000.00 Square Fe 1.00 Each		Feet \$13.00 \$7,000.00		\$13,000.00	(\$1.12) \$7,000.00	(\$1,115.77) \$7,000.00	
. 1	. 1	COI	Realignment of water c	ne	-		1.00	CaCi		\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	ł
L] 21	1								\$6,455,450.00		\$571,107.19	,
											+ + + + + + + + + + + + + + + + + + + +	-	401 4/20/12	1

 Forecast Price Total Price - Total Cost/Billing. The markup amount is determined by subtracting the sum of the total jobs cost based on forecast (T/O) quantities from the forecast bid price, which is the sum of all pay item current unit prices multiplied by the pay items forecast (T/O quantity).

Proposal Recap - Training Job							
	Current	Target	Forecast	Variance	1		
Price:	\$6,455,450.00	\$6,523,075.24	\$6,462,850.00	\$67,625.24	ADD		
Markup:	\$571,107.19	\$638,732.42	\$627,743.91	\$10,988.51	ADD		
Margin%:	8.85	9.79	9.71	\$5,643.97	ADD		

ag o	olumns here to	group					Saved views	Previous View	-	Ç
	osition 🚋	Pay Item Number	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Price (current)	Total Price (current)	Unit Markup (current)	Total Markup (current)	U (1
+	1	641 0100	Mobilization	1.00	Lump Sum	\$386,800.00	\$386,800.00	\$370,596.05	\$370,596.05	
+	2	201 0102	Clearing & Grubbing	10.00	Acre	\$6,120.00	\$61,200.00	\$1,007.30	\$10,072.97	
+	3	202 0183	Unclassified Excavation	50,000.00	Cubic Yard	\$8.50	\$425,000.00	\$3.04	\$151,909.18	
+	+ 4 303 5912 Aggregate Base		45,000.00	Ton	\$22.00	\$880,000.00	\$4.64	\$185,711.50		
+	5	303 4263	Asphalt Concrete Hot Mix Type A	35,000.00	Ton	\$35.00	\$1,330,000.00	(\$12.23)	(\$464,653.94)	
+	+ 6 413(B) 0464 36 Inch RCP Culvert Class III			1,024.00	Linear Feet	\$100.00	\$100,000.00	\$23.17	\$23,166.27	
+	+ 7 800 0220 10 Inch PVC Force Main (SDR21)		12,000.00	Linear Feet	\$28.00	\$336,000.00	\$1.46	\$17,550.62		
+	+ 8 800 0330 24 Inch PVC Gravity Sewer (SDR35)		3,000.00	Linear Feet	\$64.00	\$192,000.00	\$7.46	\$22,394.31		
+	+ 9 800 0400 4 Foot Diameter Manhole		16.00	Each	\$4,500.00	\$72,000.00	\$448.18	\$7,170.88		
+	10	501(A) 1306	Structural Excavation & Backfill	800.00	Cubic Yard	\$30.00	\$24,000.00	\$5.25	\$4,201.04	
+	11	506(A) 1322	Steel Reinforcement	30,000.00	Pound	\$1.60	\$48,000.00	(\$0.01)	(\$363.37)	
+	12	503(A) 1313	Retaining Wall	850.00	Cubic Yard	\$535.00	\$454,750.00	\$60.79	\$51,669.32	
+	13	600 0300	Paint Existing Steel Bridge Structure	1.00	Lump Sum	\$100,000.00	\$100,000.00	\$10,918.94	\$10,918.94	
+	14	700	Process Equipment	1.00	Each	\$1,920,500.00	\$1,920,500.00	\$170,356.68	\$170,356.68	
+	15	1000	Removal of Underground Storage Tanks	2.00	Each	\$12,500.00	\$25,000.00	\$1,571.46	\$3,142.91	
+	16	1010	Disposal of Contaminated Soil	800.00	Cubic Yard	\$25.00	\$20,000.00	\$2.25	\$1,802.45	
+	17	1200 0100	Toll Booth	1.00	Each	\$30,000.00	\$30,000.00	\$2,169.15	\$2,169.15	
+	18	1500 0100	Guardrail Type 2	1,000.00	Linear Feet	\$24.00	\$24,000.00	(\$2.06)	(\$2,059.88)	
+	19	1500 0200	Guardrail Type 3A	200.00	Linear Feet	\$31.00	\$6,200.00	(\$2.66)	(\$532.14)	
+	20	1600 0230	Type 4 Signs	1,000.00	Square Feet	\$13.00	\$13,000.00	(\$1.12)	(\$1,115.77)	
+	21	C01	Realignment of Water Line	1.00	Each	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	
L				1						
	2	1		\$6.4	62,85	0.00	\$6,455,450.00		\$571,107.19	•

Jol	b Properties	Pay Item & Proposal Register	Price Break	down Structure	Cost Breakdown	Structure (CBS)	Register ©	
ra	g columns here to	group						
	CBS Position Code	Description			Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
÷	8	JOB			20.00	Mile	\$291,755.30	\$5,835,106.0
	+	Prime Bond	PF	RIME BOND	30ND 1.00		\$46,915.38	\$46,915.3
	+	Price % Add-On	PR	PRICE % ADD	1.00	Lump Sum	\$293,538.39	\$293,538.3
	+	Job Financing	FI	NANCE EXPE	1.00	Lump Sum	\$0.00	\$0.0
	+	Indirect Cost Escalation	IN	DIRECT COS	1.00	Lump Sum	\$0.00	\$0.0
	+	Direct Cost Escalation	DI	RECT COST	1.00	Lump Sum	\$0.00	\$0.0
	+	Indirect Cost Add-On		DIRECT COS	1.00	Lump Sum	\$0.00	\$0.0
	+	Job Management & Equipme	nt JC	B MANAGEM	1.00	Lump Sum	\$157,096.28	\$157,096.2
	+	General Expense	GE	ENERAL EXPE	1.00	Lump Sum	\$4,200.00	\$4,200.0
	+	Direct Cost Add-On	DI	RECT COST	1.00	Lump Sum	\$104,301.10	\$104,301.1
	+ 1	Mobilization	64	10100	1.00	Lump Sum	\$11,909.51	\$11,909.5
	+ 2	Clearing & Grubbing	20	01 0 1 0 2	10.00	Acre	\$3,918.50	\$39,184.9
	□ 3	Unclassified Excavation	20	02 0 183	50,000.00	Cubic Yard	\$4.68	\$233,915.8
	+ 3.1	Excavation	3.	1	50,000.00	Cubic Yard	\$3.00	\$149,922.8
	+ 3.2	Embankment	3.	2	50,000.00	Cubic Yard	\$1.68	\$83,992.9
	□ 4	Aggregate Base	30	3 5912	45,000.00	Ton	\$15.40	\$692,928.9
	+ 4.1	Furnish & Haul Base Material	4.	1	45,000.00	Ton	\$11.54	\$519,513.3
	+ 4.2	Finegrade Subgrade	4.	2	400,000.00	Square Yard	\$0.19	\$75,848.3
	■ 4.3	Install Aggregate Base	4.	3	45,000.00	Ton	\$2.17	\$97,567.3
	+ 4.3.1	Place Aggregate Base	4.	3.1	45,000.00	Ton	\$1.63	\$73,460.9
	+ 4.3.2	Blue Top Aggregate Base	4.	3.2	400,000.00	Square Yard	\$0.06	\$24,106.4
	□ 5	Asphalt Concrete Hot Mix Ty	pe A 30	3 4263	35,000.00	Ton	\$42.62	\$1,491,580.5
	+ 5.1	Furnish & Haul Hot Mix	5.	1	35,000.00	Ton	\$39.27	\$1,374,562,5
		102						\$5,835,106.0

3.5 LIBRARY FOUNDATION SETUP DATA

Foundation Setup Data is where all drop-down options within Estimate fields are stored. These can serve as category labels, alternate structures or validated tag fields. The different validated fields are organized into tabs on this form.

3	💾 👘 🕋						Lib	orary - Estimate						•	
File	Setup	Est	imate Ex	ecution	System	Integrations	Actions							童 📰	?
	¢.	-			翻	-	🕵 Labor					t+t	P		
ob	Properties	Founda Setup Da			Shift Rate Calculator	Resource Rates *	Haterials	nt Resource	Cost Item Assemblies	Standard Tables	User Ro	es Access Control	Reports		
		Ma	ster Initializ	ation		P	laster Reso	irces	Master As	semblies	Roles and	Permissions	Reports		^
															-
Jop	Properties	s	Foundation	setup Data K	egister 😡										
	count Codes	_		kdown Structur	-	Group Tags	Units of Me	asure Currend	ies Resour	ce / Assemb	y Files Ger	ographic Areas	Wage Zones	Orga 🚽	•
Aco	-	Tags	Work Brea	-	-		Units of Me			ce / Assemb			Wage Zones	Orga 🤘	•
Aco	count Codes	Tags	Work Brea	-	-		S			th For]	Sav -Quantity		-	•	► ry
Acc	count Codes	Tags re to grou Accou	Work Brea	kdown Structur	es Quote	Group Tags Unit of	S	econdary	Find: Searc	h For] Auto (Prim	Sav -Quantity	ed views: Star	ndard View Auto-Quantity	* Secondar	► Y
Acc	count Codes	Tags re to grou Accou Code	Work Brea	kdown Structur Description	on	Group Tags Unit of Measure	s U	econdary	Find: Searc	h For] Auto (Prim	Sav -Quantity	ed views: Star Quantity	ndard View Auto-Quantity	* Secondar	► ry
Aco	count Codes	Tags ret to grou Accou Code 1001	Work Brea	kdown Structur Description Remove insulati	on Vork	Group Tags Unit of Measure Each	s U	econdary	Find: Searce Currency U.S. Dolla	Auto (Prim r	Sav -Quantity	ed views: Star Quantity 0.00	ndard View Auto-Quantity	* Secondar	► Y

You should be aware of these category labels:

	Category Labels
Name	Definition
Account Codes	These codes will be set up on the back end and will help you compare your cost and production rates to similar cost items in past projects.
Tags	Some tags are already set up for you. Additional tags can be created and used to group and filter your items.
Work Breakdown Structures	Use this format when you need to have multiple variations and summary reports of an estimate. WBS retains the same relationships between items as in the original estimate and only changes the view and how items are arranged in hierarchy.
Units of Measure	These are standardized to relate to one another by a conversion factor. If you need to create a new unit of measure, you will need to reference it to a base unit of measure and can include a conversion factor to allow you to convert back and forth between English and Metric.
Currencies	The default currency is set to U.S. Dollar, but you can also enter the exchange rate for other currencies (such as Canadian) so you can estimate with

Category Labels

whatever currency you need. Multiple currencies can be used in the same project. The system base currency can be changed from USD in the backstage view settings, but is a global change for the entire estimate environment.

Currency 🛓	Exchange Rate	Currency Symbol	Positive Currency Format	Negative Currency Format	Decimal Symbol
CND Dollar	1.00000	\$	\$1.1	(\$1.1)	Period (.)
U.S. Dollar	1.00000	\$	\$1.1	(\$1.1)	Period (.)

When you create a new job folder, all category labels defined in the Library Foundation Setup Data Register will be copied to the new job folder automatically.

3.6 RESOURCES

VIDEO | Create a Unique Resource

InEight Estimate refers to labor, equipment and material items as Resources. You will use these resources as the basic building blocks used to detail the costs in your estimates.

InEight Estimate organizes resources into seven types:

	Resources
Name	Description
Labor	The human resources that perform direct or indirect work. Direct labor is typically classified by trade (e.g., pipefitters, electricians, iron workers) and title (e.g., foreman, journeyman, laborer).
Construction Equipment	Owned construction equipment.

	Resources
Rented Construction Equipment	Construction equipment rented from a third party.
Installed Materials	Materials that will remain installed on site after the project is completed, (e.g., concrete, piping, aggregate).
Installed Equipment	Equipment that will remain installed on site after the project is completed, (e.g., boilers, heat exchangers, vessels, cooling towers).
Supplies	Expendable items that will not be permanently installed (e.g., small tools, consumables).
Unique	Resources that are of a "unique" nature and do not fit well into the other types (e.g., dump fees, hauling charges and equipment rented by the month).

After creating a new job folder, you can import a filtered set of resources from the Library into the new project. This is done on the Cost Basis tab of the Job Properties form.

In the following section, you will learn more about the resources stored in your Library in the Library Resource Rate Register.

3.6.1 Library Resource Rate Register

To open the Library Resource Rate Register, select Labor from the Master Resources ribbon.

6 1							Libra	ry - Estimate	:
File	Setup	Estimate	Exec	ution	System	Integrations	Actions		
R	2	-	2	鱼			🐔 Labor		
	perties *	Foundation Setup Data 👻	Address Book	Trench Calculator	Shift Rate Calculator	Resource Rates *	Materials	Resource Assemblies	Cost Item Assemblies
		Master I	nitializati	on		P. P	laster Resourc	es	Master Ass

Overview – Library Resource Rate Register

	Name	Description
1	Tabs	There are tabs along the top of the form for each of the seven resource

	Name	Description
		types, in addition to an <i>All</i> tab that holds the resources of all types.Notice that you are on the Labor Tab
2	Resource Code	Each record (or row in the register) represents a single resource.
3	Description	The Description provides more detail about the resource.
4	Resource Rate per Unit	This is the resource cost per unit.
5	Utilization Count	Tells you how many units of that resource are being used in the job.
6	Unit of Measure	Each resource is defined with a Unit of Measure.
7	Register	This register includes columns for the resource attribute categories so you can filter and group your resources.

_							-			
All	Labor Co	nstruction Equipment Re	ented Construction	n Equipment	Installed Material	Installed Equ	ipment Su	pplies Unique		
rag	column 2: to	group 3		4		5 Find	: [6] Fo	r] ··· Saved v	iews: 7 jous View	· •
	Resource 😑	Description	Unit Cost (Scale 1)	Unit Cost (Scale 2)	Unit Cost (Scale 3)	Utilization Count	Unit of Measure	Resource File Description	Wage Zone	Organizational Category
>	+ LC1	Carpenter Apprentice	\$27.48	\$41.22	\$54.96	594.37	Hour	Standard Labor Rate	Wage Zone A	Carpenter
	+ LC2	Carpenter Journey	\$28.92	\$43.38	\$57.84	1,188.73	Hour	Standard Labor Rate	Wage Zone A	Carpenter
	+ LC3	Carpenter Foreman	\$31.47	\$47.20	\$62.94	594.37	Hour	Standard Labor Rate	Wage Zone A	Carpenter
	+ LF1	Finisher Apprentice	\$26.80	\$40.20	\$53.60	0.00	Hour	Standard Labor Rate	Wage Zone A	Finisher - Concrete
	+ LF2	Finisher	\$28.07	\$42.10	\$56.13	594.37	Hour	Standard Labor Rate	Wage Zone A	Finisher - Concrete
	+ LF3	Finisher Foreman	\$32.32	\$48.48	\$64.64	0.00	Hour	Standard Labor Rate	Wage Zone A	Finisher - Concrete

Source Job and Source System name fields

The Source Job field provides visibility into the jobs from which the data may have originated from.

The Source System Name helps to see the source of the data when integrating with other systems.

Resource Type	Resource Code	Source Job	Source System Name
+ Construction Equipment Rate	EMTB	Library	System
+ Installed Material Rate	MDIRTB	Library	System
+ Construction Equipment Rate	ETDT	Library	System
+ Supply Rate	SFM	Library	System
+ Supply Rate	SFH	Library	System
+ Installed Material Rate	MPD 16	Library	System



Resource rate add and search tips:

- You cannot add new resources on the All tab.
- You can search for resources in the Resource Rate Register using the 'Find' field.

Next you will take a look at the different types of resources and how they differ when we drill into resource rate records from each category.

3.6.2 Labor Resources

Looking at your Labor resources more closely, you will see all the Resource Codes for the Labor resources begin with an L. This is a best practice for naming and organizing your resources, but you can also use another organizational method of your choice.

3.6.3 Resource Rate Record

If you need to add cost to a resource, adjust a rate, or just view a more detailed breakdown, you can open the resource's rate record. From the Library Resource Rate Register, double click on the row header for the resource you need to view in greater detail.

	click on the der to open				
	e rate record		Resource File Description	Unit of Measure	Productivity Factor
+ LC1	LC1 Carpenter App		Standard Labor Rate	Hour	1.0
+ LC1	Carpenter App	rentice	Standard Labor Rate	Hour	1.
+ LC2	Carpenter Jou	rney	Standard Labor Rate	Hour	1.
+ LC2	Carpenter Jou	rney	Standard Labor Rate	Hour	1.
+ LC3	Carpenter For	eman	Standard Labor Rate	Hour	1.0

Overview – Resource Rate Record

	Name	Description
1	Record	The record references the resource you are editing.
2	Charge Rate	The Charge Rate tab is the tab the record defaults to and is where you define the cost of the resource.
3	Scale Buttons	The Scale buttons only show up on labor resources. They are used for defining regular time, overtime and double time rates for the resource.
4	Cost Category Breakdown	The Cost Category Breakdown is where you enter the costs for the resource. The categories will depend on what type of resource it is (e.g., equipment resources will have equipment cost categories and materials will have material cost categories).
5	Special Instructions / Base Wage Factors	The right side of the record will have additional options to help you define the rate. These options change depending on what type of resource it is.

ode: ' Setup		C1 Descript		Apprentice				•
Scale	-		I Scales					Special Instructions
Cost C	ateg	ory Breakdown	Amount	()	Percent	Is Taxed	Is Insured	Use the Materials cost category to add additional labor cos formaterials and supplies.
			Varies Varies					Worker's Comp values for this resource can be adjusted automatically when this resource is employed in a job, based on the geographic location of the work, and the
		Labor Base Labor Burden	Varies Varies					Worker's Comp Override listed on the Cost Item on which the resource is employed.
		 Labor Fringes 	Varies					Standard Worker's Comp Overrides can be defined in the
		Labor Insurance Labor Taxes	Varies 4					Library's Foundation Setup Data Register. Base Wage Factors for Overtime
	Б	Undefined Labor B	\$0.00 \$0.00	÷ +	0.00			Use Base Wage Factors for Scales 2 and 3
>	Mat	erials	\$0.00		0.00			Scale 2 Factor: 1.50 x Base Wage
	Und	efined	\$0.00					Scale 3 Factor: 2.00 x Base Wage
								This option multiplies the Scale 1 base wage by the factor entered here to automatically calculate the base wage for Scales 2 and 3.

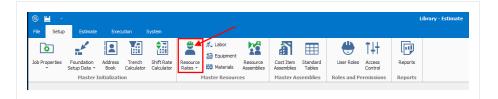
	Name	Description
6	Setup	There is also a Setup tab where you can define the resource's attributes, plus other settings. These attributes are used for filtering which resource rates to load into a new estimate.
7	Cost Driver	Labor resources default Cost Driver is CI Duration which means their costs are driven by time.
8	Default Quantity	The Default Quantity is typically set to 1 for most cases if you are bringing in the resource you are using at least one.

	Billing Rate	e Rate	Setup 6 Charg
•	rd Labor Rate File	Standar	Resource File:
•	est	Southw	Geographic Area:
•	one A	Wage Z	Wage Zone:
•	ter	Carpen	Org. Category:
đ			Account Code:
•	tion	CI Dura	Cost Driver:
•	ed Cost Item	Employe	Cost Curve:
•	ion	Non Uni	Tag 1:
•		Hourly	Tag 2:
-			Tag 3:
	1.00		roductivity Factor:
	1.00 1.00 8		roductivity Factor: Default Quantity:

The following steps walk you through how to create a new labor resource.

Step by Step — Create a Labor Resource

1. From the Library landing page, on the Setup tab, click on **Resource Rates** from the Master Resources section.



- The Library Resource Rate Register opens
- 2. Select the Labor tab.
- 3. Right click on any row header and select **New**.
 - A new Labor Rate Record displays
- 4. In the Code field, type L + [your initials].
- 5. Press the **Tab** key.
- 6. Fill in the Description field.
- 7. Click on the resource's **Setup** tab and select **Standard Labor Rate File** from the Resource File drop-down list.
- 8. Select a **location** for the Geographic Area.
- 9. Select **Wage Zone** A for Wage Zone.
- 10. Select a **labor type** for the Organizational Category.
- 11. For Tag 2, select a **code**.

Code: * LMECHPB	Description: Mechanic - Hea	avey Duty
Setup 🐥 Charg	e Rate Billing Rate	
Resource File:	Standard Labor Rate File 🔹	Userl
Geographic Area:	Southwest -	Userl
Wage Zone:	Wage Zone A 🔹	Userl
Org. Category:	Mechanic -	User I
Account Code:	e e e e e e e e e e e e e e e e e e e	Userl
Cost Driver:	CI Duration -	Userl
Cost Curve:	Employed Cost Item 👻	Userl
Tag 1:	Hourly -	User I
Tag 2:	Non Union 👻	User I
Tag 3:	•	User D

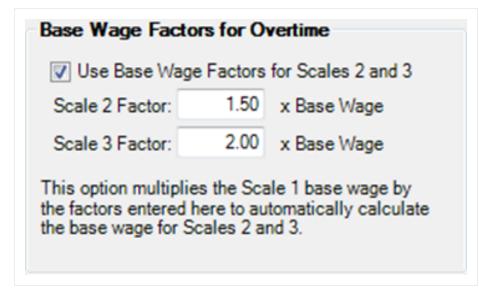
Code: * [LMECHPB		Description:	1echanic - Hea	avey Duty
Setup	🐈 Charge	e Rate	Billing Rate		
Reso	urce File:	Standard Labor Rate File			User I
Geograp	hic Area:	Southwest			User I
Wa	ge Zone:	Wage Zone A			User I
Org. C	ategory:	Mechanic			User I
Accou	int Code:			d.	User I
Cos	st Driver:	CI Duration			User I
Co	st Curve:	Employed Cost Item			User I
	Tag 1:	Hourly		•	User I
	Tag 2:	Non Uni	ion	•	User I
	Tag 3:			•	User D

- 12. For Tag 1, select a code.
- 13. On the Charge Rate tab, enter a **dollar value** for your Labor Base.
- 14. Expand Labor Burden and under Labor Fringes, type in a **dollar value** for Pension and

Subsistence.

Resour	rce	Ra	te R	egister La	bor Rate Recor	∙d ©	
Code: *	K [.ME	СНІ	NEIGHT Descript	ion: Mechanic -	Heavy Duty	
Setup		4 ,	Cha	rge Rate Billing I	Rate		
Scale	1	S	cale	2 Scale 3 Al	Scales		
Cost C	ateg	jor	y Bre	akdown	Amount	↔	Percent
✓ Tot	tal				\$57.00		
~	Lab	oor			\$57.00		
		La	bor E	Base	\$52.00		
		La	bor Burden		\$5.00		
			¥	Lab	or Fringes	\$5.00	
				Travel	\$0.00	÷	0.00
				Premium	\$0.00	÷	0.00
				Holiday	\$0.00	÷	0.00
				Savings	\$0.00	÷	0.00
			- [Pension	\$3.00	÷	5.77
			- [Vacation	\$0.00	÷	0.00
				Subsistence	\$2.00	÷	3.85
			- [Health & Welfare	\$0.00	(0.00

- 15. Define an overtime and double-time rate for the resource. Select the **checkbox** for Use Base Wage Factors for Scales 2 and 3.
- 16. Set the Scale 2 Factor to **1.50** x Base Wage and Scale 3 Factor to **2.00** x Base Wage.



17. Click **OK**, to close the record.

3.6.4 Construction Equipment Resources

- Similar to Labor Resources, Construction Equipment Resources are also duration driven resources by default
- They contain cost categories for ownership and operation costs

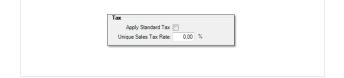
All	Labor Cons	truction Equipment Rent	ted Construction Equipment	Installed Materi	al Installed Equi	pment Supp	lies Unique					
Irag	columns here to g	roup					Find: Se	arch For]	Saved v	iews: Previous	View	•
	Resource 📄	Description	Resource File Description	Unit of Measure	Productivity Factor	Default Quantity	Waste % Add-on	Unit Cost (Scale 1)	Currency	Utilization Count	Organizational Category	Geograp Area
<i>></i>	+ EAPAV Asphalt Paver		Standard Equipment Rate	Hour	1.00	1.00		\$53.40	U.S. Dollar	0.00	Asphalt	
	+ EARL	Asphalt Roller	Standard Equipment Rate	Hour	1.00	1.00		\$21.00	U.S. Dollar	0.00	Asphalt	
	+ ECOMP1 Compactor Smooth D.		Standard Equipment Rate	Hour	1.00	1.00		\$7.00	U.S. Dollar	0.00	Compactor	
	+ ECOMP2	Compactor Sheeps F	Standard Equipment Rate	Hour	1.00	1.00		\$28.00	U.S. Dollar	0.00	Compactor	
	+ ECR110	Crane 110 Ton	Standard Equipment Rate	Hour	1.00	1.00		\$196.00	U.S. Dollar	0.00	Crane	
	+ ECRBT	Boom Truck 15 Ton	Standard Equipment Rate	Hour	1.00	1.00		\$28.00	U.S. Dollar	0.00	Crane	
	+ ECRHC	Hydraulic Crane 25 Ton	Standard Equipment Rate	Hour	1.00	1.00		\$84.00	U.S. Dollar	0.00	Crane	
	+ ED6	Dozer D6	Standard Equipment Rate	Hour	1.00	1.00		\$84.00	U.S. Dollar	0.00	Dozer	
	+ ED8	Dozer D8	Standard Equipment Rate	Hour	1.00	1.00		\$140.00	U.S. Dollar	0.00	Dozer	
	+ EG14G	Grader 14G	Standard Equipment Rate	Hour	1.00	1.00		\$35.00	U.S. Dollar	0.00	Grader	
	+ EG160H	Grader 160H	Standard Equipment Rate	Hour	1.00	1.00		\$91.00	U.S. Dollar	0.00	Grader	

These resources are the fleet of construction equipment that you own.

3.6.5 Rented Equipment Resources

These resources represent the construction equipment that you rent.

- Rented Equipment Resources are also duration driven resources by default
- Contain cost categories for rental and operation cost as well as additional fees
- On the Rental Construction Equipment Record, you will notice a new tab named Quote
 - Quotes will be discussed in detail in Lesson 8 Quote Management
- You will also note the Tax section. You can check the box to Apply Standard Tax, which pulls the Sales Tax percentage defined on the Cost Basis tab in Job Properties, or you can manually specify a unique sales tax rate



Step by Step — Create a Rental Equipment Resource

- 1. Open the Library Resource Rates Register.
- 2. Select the **Rented Construction Equipment** tab.
- 3. Right click on any row header and choose **New**; a new Installed Rented Equipment Rate Record displays.
- 4. In the Code field, type **RECR + [your initials]**, then press **Tab**.
- 5. In the Description field, type **Crane 110 Ton**.
- 6. Click on the resource's **Setup** tab and select **Standard Rental Rate File** from the Resource File drop-down list.
- 7. Select a **resource** from the Organizational Category drop-down list.

Code: *	RECR110		Description:	Crane 110 Tor	n	
Setup	🐥 Charg	e Rate	🖵 Quote	Billing Rate		
Res	ource File:	Standar	rd Rental Rate	File +	User Defined 1:	
Geogra	phic Area:			•	User Defined 2:	
w	age Zone:			•	User Defined 3:	
Org.	Category:	Crane		•	User Defined 4:	
Acco	ount Code:			đ	User Defined 5:	
0	oot Drivory	CLDura	tion	-	Lass Defined &	_

8. Move back to the Charge Rate tab to follow the step by step on the next page.

3.6.6 Equipment Consumption Rates

The Construction Equipment and Rented Construction Equipment Resource Rate Records include consumption rates that will factor with the fuel cost you define on the **Library Job Properties** > **Fuel Cost** tab to give a fuel cost for your equipment rate.

ode:	*	EAPAV		Descrip	tion: Aspha	lt Paver
Setup		🔱 Charge	Rate	Billing	Rate	
Cost (Cate	gory Breakd	wn		Amount	Fuel
v To	otal				\$199.00	Fuel Type Consumption Rate
¥	0	wned Equipm	ent		\$199.00	Gasoline 👻 12.00 Gallon/Hour
	>	OE Owners	hip		\$0.00	
	¥	OE Operati	on		\$199.00	Consumption Rate factored
		OE Rep	air Par	ts	\$0.00	with cost per liter gives you a
		OE Rep	air Lab	or	\$0.00	fuel cost.
		OE Fue			\$144.00	Automatically calculate Maintenance Labor
		OE Lub	2		\$0.00	Man-Hours for this resource

The below figure shows where consumption rates are defined on the Construction Equipment Resource Rate Record.

3.6.7 Non-Hourly Rate Calculator

For owned and rented construction equipment, the rate entered must be hourly. If your rate is weekly or monthly, you can use the Non-Hourly Rate Calculator on the Construction Equipment Resource Record to come up with the hourly rate.

Step by Step — Non-Hourly Rate Calculator

- 1. Refer back to your last entry's rate amount. Under Non-Hourly Period Charge Rates on the right, check the **Calculate Non-Hourly Period Charge Rates** checkbox.
- 2. On the resulting prompt, click **OK**.
- 3. In the Period field, select **Weekly**.
- 4. In the Amount Per Period field, type in a **number value**.
- 5. Type in a **number of hours** in the Hours Per Period field.

ates Charge Rates for
y 💌
\$4,000.00
20.00

Cod	e: '	RECR110	Descript	ion:	Crane	110 Ton
Se	tup	🔱 Charge Rate	Charge Rate 📮 Quot			
Co	st C	ategory Breakdown		Amou	unt	
¥	То	tal		\$20	00.00	
	>	Rented Equipment		\$20	00.00	
	>	Fees		\$	0.00	
		Undefined		\$	0.00	

6. Click **OK** to close the record.

3.6.8 Installed Materials, Installed Equipment & Supplies Resources

- Comparing the Installed Material & Equipment resources to those covered so far, you will note that the unit of measure is not Hour for materials, but it is specific to the kind of material. It is a quantity-driven resource, as opposed to duration-driven like your labor and equipment resources
- You will also note the tax field can pull your standard tax settings from the Cost Basis tab in Job Properties, or a unique sales tax rate can be manually entered in each record
- On record for these resource types, you will notice a new tab named Quote. This tab shows up here because you may have to shop around and get quotes for these resources
 - Quotes will be discussed in detail in Lesson 8 Quote Management

 In the Setup tab you will see a field named Waste % Add-on. Here you can account for approximate waste percentages

٠	Cost categories will	l differ on each typ	be of resource record
---	----------------------	----------------------	-----------------------

Jop	Propertie	5	Resource Rate	Register 🕻						
All	Labor	Const	truction Equipment	Rented Con	struction Equipm	ent Installed	Material	Installed Equipment	Supplie	
Drag	columns he	ere to g	roup							
	Resource Code	<u> </u>	Description		Unit Cost (Scale 1)	Utilization Count	Unit of Measure	Resource File Description		
÷	+ MAAM		Asphalt Mix (Finish	1)	\$32.50	0.00	Ton	Standard Materia	al Rate	
	+ MAC		Asphalt Cement		\$195.00	0.00	Ton	Standard Materia	al Rate	
	+ MACA1-1/2		Coarse Aggregate	e 1-1/2 In	\$9.10	0.00 Ton		Standard Material Rate		
	+ MAFA		Fine Aggregate		\$7.80	0.00	Ton	Standard Material Rate		
	+ MAHAU	JL	Aggregate Haul Q	uarry to P	\$2.60	\$2.60 0.00 Ton			al Rate	
	+ MAIA3	/4	Intermediate Agg	regate 3/4	\$10.40	\$10.40 0.00 Ton			al Rate	
	+ MASAN	1D	Sand		\$7.80	0.00	Ton	Standard Materia	al Rate	
	+ MATK		Tack		\$1.30	0.00	Gallon	Standard Materia	al Rate	
	+ MBR		Aggregate Base R	ock	\$8.45	0.00	Ton	Standard Materia	al Rate	
	+ MC200	0	Concrete 4000 PS	I	\$110.50	0.00	Cubic Yar	d Standard Materia	al Rate	
	+ MC350	0	Concrete 3500 PS	I	\$104.00	0.00	Cubic Yar	d Standard Materia	al Rate	
	+ MDIRT	A	Dirt Class A		\$1.30	0.00	Cubic Yar	d Standard Materia	al Rate	
	+ MDIRT	в	Dirt Class B		\$6.50	0.00	Ton	Standard Materia	al Rate	

Above is an example of the Installed Material tab in the Library Resource Rate Register.

The following steps walk you through how to create a new material resource in InEight Estimate.

Step by Step — Create an Installed Material Resource

- 1. Select **Resource Rates** from the Library landing page.
 - The Resource Rate Register displays
- 2. Select the Installed Material tab.
- 3. Right click on any row header and select **New** from the drop-down menu.
 - A new Installed Material Rate Record displays
- 4. In the Code field, type **MGBP + [your initials]**, then press **Tab.**
- 5. In the Description field, type **Brick Pavers**.
- 6. Select a unit of measure from the Unit of Measure drop-down list.

- 7. On the resource's Setup tab, under Resource File select Standard Material Rate File.
- 8. On the Charge Rate tab, expand Materials and enter a **number value** in the Installed Materials Amount field.

Code: *	MGBPPB	Descripti	on: E	Brick F	avers
Setup	🔱 Charge Rate	🖵 Que	ote	Billing	g Rate
Cost Cat	egory Breakdown		Amou	nt	
🗸 Tota	l		\$	5.00	
~ I	1aterials			5	
	Installed Materials		\$	5.00	
	Undefined Materia	ls	\$	0.00	
> F	ees		\$	0.00	
	Indefined		÷	0 00	

9. Click **OK** to finish adding this resource.

3.6.9 Unique Resources

The Unique resource type is a catch-all and can be used for anything from dump fees and security to creating subcontractors as a resource.

- The Unique resources are the only resources that have all cost categories available, as well as all units of measure
- You will also note the tax field which can pull your standard tax settings from the Cost Basis tab in Job Properties, or a unique sales tax rate can be manually entered in each record
- Quotes will be discussed in detail in Lesson 8 Quote Management

Al	Labor Con	struction Equipment	Rented Constru	uction Equipment	installed	Material	Installed Equipment	Supplies U	Inique				
Drag	g columns here to	group						Find: Sear	ch For]	··· Saved vie	ws: Previous	View	*
	Resource E.	Description		Resource File Description		Unit of Measure	Productivity Factor	Default Quantity	Waste % Add-on	Unit Cost (Scale 1)	Currency	Utilization Count	Organizatio Category
÷	+ UCRANE	Crane by the Mon	th	Standard Unique R	ate	Month		1.00	0.00	\$16,500.00	U.S. Dollar	0.00	
	+ UDFL	Disposal Fee for L	iquids	Standard Unique R	ate	Gallon		1.00	0.00	\$6.00	U.S. Dollar	0.00	Earthwork
	+ UDUMP	Dump Fees		Standard Unique R	ate	Load		1.00	0.00	\$100.00	U.S. Dollar	0.00	Earthwork
	+ UHAUL	Haul to Job Site 1	5-20 Miles	Standard Unique R	ate	Ton		1.00	0.00	\$3.00	U.S. Dollar	0.00	Earthwork
	+ UPD	Per Diem		Standard Unique R	ate	Day		1.00	0.00	\$150.00	U.S. Dollar	0.00	
	+ USS	Security Service		Standard Unique R	ate	Week		1.00	0.00	\$500.00	U.S. Dollar	0.00	

3.7 RESOURCE ASSEMBLIES

A Resource Assembly is a group of resources. You can create an assembly once and then reuse it as needed in multiple cost items whenever the same combination of resources is needed.



The most common use for an assembly is to group labor resources into crews (e.g., Pipe Crew, Concrete Crew); however, any resource (equipment, materials, etc.) may be grouped into an assembly. Utilizing assemblies allows you to estimate faster, since you can add and manage an entire group of resources at once.

You can create assemblies in the Library and import them into job folders the same way you import resources.

3.7.1 Library Resource Assembly Register

To open the Library Resource Assembly Register, select the **Library** icon, then select **Resource Assemblies** from the Master Resources section of the Setup tab.

Overview – Library Resource Assembly Register

Section	Description
1	Each row in the register represents a single resource assembly and is defined with an Assembly Code and Assembly Description.
2	Each assembly can be expanded by clicking the plus \boxdot icon next to its Assembly Code.
3	 Expanding an assembly reveals the list of resources that make up that assembly. Best practice for creating Assembly codes is to use C for Crew Assemblies, M for Material Assemblies, etc., however you can have labor, equipment, and materials in the same assembly

ag colu	umns	here to gr	oup										Find: [Se	arch For	··· Saved	d views:	Standard View		-
2	de	<u>1</u>	Descri	otion		Resou File D	urce escription		Quantity		Unit of Measure	Unit Cost	Total Cost	Currency	Organization Category		Geographic Area	Wage Zone	Man Cou
E	cco	NC	Concre	ete Crew		Stand	lard Assemb	ly	1	.00	Hour	\$330.3	\$330.38	U.S. Doll	ar Concrete				
		Row Number	1	Resource Code	Description		Quantity	Unit o Measu		Cost	Currency	Cost Driver	Resource File Description		Organizational Category	Geograpi Area	hic Wage Zone		
	→		1	LC2	Carpenter Journe	eyman	2.00	Each	\$2	8.92	U.S. Dollar	CI Dura	Standard Labor Ra	ate File	Carpenter	Southwe	st Wage Zon		
			2	LF2	Finisher		1.00	Each	\$2	8.07	U.S. Dollar	CI Dura	Standard Labor Ra	ate File	Finisher - Conc	Southwe	st Wage Zon		
			3	LIW1	Iron Worker		1.00	Each	\$3	5.55	U.S. Dollar	CI Dura	Standard Labor Ra	ate File	Iron Worker	Southwe	st Wage Zon		
3			4	LL2	Laborer		1.00	Each	\$2	6.37	U.S. Dollar	CI Dura	Standard Labor Ra	ate File	Laborer	Southwe	st Wage Zon		
-			5	ECRHC	Hydraulic Crane	25 Ton	1.00	Each	\$8	4.00	U.S. Dollar	CI Dura	Standard Equipment	nt Rate	Crane				
			6	LC1	Carpenter Appre	ntice	1.00	Each	\$2	7.48	U.S. Dollar	CI Dura	Standard Labor Ra	ate File	Carpenter	Southwe	st Wage Zon		
			7	LO2	Operator Class 2		1.00	Each	\$3	0.21	U.S. Dollar	CI Dura	Standard Labor Ra	ate File	Operator	Southwe	st Wage Zon		
			8	ETFT	Flatbed Truck		1.00	Each	\$	7.00	U.S. Dollar	CI Dura	Standard Equipme	nt Rate	Truck				
1			9	LC3	Carpenter Forem	ian	1.00	Each	\$3	3.87	U.S. Dollar	CI Dura	Standard Labor Ra	ate File	Carpenter	Southwe	st Wage Zon		
4	CGR	ADE	Gradin	g Crew		Stand	lard Assemb	ly	1	.00	Hour	\$175.0	\$175.06	U.S. Doll	ar Earthwork				

3.7.2 Resource Assembly Record

To open an existing Resource Assembly Record, right click on the row header of an assembly (row) on the Resource Assembly Register and select Open.

Overview – Resource Assembly Record

	Name	Description
1	Assembly Code and Description	Each assembly is defined with an assembly Code and an assembly Description.
2	Quantity and Unit of Measure	Each assembly has a quantity and unit of measure. The default is 1 EA. For crew assemblies with all hourly duration driven resources, it is a best practice to change the Qty to Hour, so that when used on a cost item, it will show you the assembly's unit cost per hour.
3	Assembly Details	The rows in the Assembly Details register represent the resources that make up the resource assembly.
4	Notes	An area where the estimators make notes for records related to the resource assemblies for work orders which is commonly performed by a type of crew.

Cod	e: * CCONC	Descri	otion: Concrete Crew	U						8	Qty:	
F	Resource File:	Standard Assem	oly File 🔹 Tag		-						UM: Hour	
eo	graphic Area:		→ Tag	2:	-					Unit	Cost:	\$330
	Wage Zone:		→ Tag		-					Curi	rency: U.S. Do	llar
0	rg. Category:	Concrete	 Man Count 	: 8.00					•	Last Change	ed By:	
			Equip Coun	t: 2.00					4	Last Change	ed On:	
	Notes:											
		ssembly Details	3					Find:	Search For] ···· Sav	ed views: Previous	View	
	t Summary A		Description	Quantity	Unit of Measure	Unit Cost	Currency	Find: [Search For] ··· Sav Resource File Description	ed views: Previous V Organizational Category	View Geographic Area	• Wage Zone
rag	t Summary A g columns here to	group Resource					Currency U.S. Dollar	Cost	Resource	Organizational	Geographic	Wage Zone
Drag	t Summary A g columns here to	group Resource Code	Description	2.00	Measure	\$28.92		Cost Driver	Resource File Description	Organizational Category	Geographic Area	Wage
	t Summary A g columns here to	group Resource Code 1 LC2	Description Carpenter Journey	2.00	Measure Each	\$28.92 \$28.07	U.S. Dollar	Cost Driver CI Duration	Resource File Description Standard Labor Rate File	Organizational Category Carpenter	Geographic Area Southwest	Wage Zone Wage Z

3.7.2.1 Productivity Rate Indicator in the CBS Register

The Productivity Indicator shows the field that contains the as-entered value and is driving the estimate for that cost item. This appears as an arrow aligned to the left of the cell as shown below.

Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	(Forecast)	Currency	(Duration driven)	(Non-Duration driven)	
306	20.00	Mie	\$228,294.37	\$4,565,887.34	U.S. Dollar	5,191.90		15.3
Prime Bond	1.00	Lump Sum	\$39,357.30	\$39,357.30	U.S. Dollar			
Price % Add-On	1.00	Lump Sum	\$225,515.71	\$225,515.71	U.S. Dollar			
Job Financing	1.00	Lump Sum	\$0.00	\$0.00	U.S. Dollar			
Indirect Cost Escalation	1.00	Lump Sum	\$0.00	\$0.00	U.S. Dollar			
Direct Cost Escalation	1.00	Lump Sum	\$0.00	\$0.00	U.S. Dollar			
Indirect Cost Add-On	1.00	Lump Sum	\$0.00	\$0.00	U.S. Dollar			
Job Management & Equipment	1.00	Lump Sum	\$157,096.28	\$157,096.28	U.S. Dollar	800.00		0.0
General Expense	1.00	Lump Sum	\$4,200.00	\$4,200.00	U.S. Dollar	0.00		0.0
Direct Cost Add-On	1.00	Lump Sum	\$80,770.35	\$80,770.35	U.S. Dollar			
Mobilization	1.00	Lump Sum	\$13,335.70	\$13,335.70	U.S. Dollar	▶ 90.00		0.0
Clearing & Grubbing	10.00	Acre	\$3,918.50	\$39,184.97	U.S. Dollar	80.00		0.0
Unclassified Excavation	50,000.00	Cubic Yard	\$2.21	\$110,560.40	U.S. Dollar	294.67		0.0
Excavation	50,000.00	Cubic Yard	\$0.66	\$33, 100.80	U.S. Dollar	128.00		0.0
Embarkment	50,000.00	Cubic Yard	\$1.55	\$77,459.60	U.S. Dollar	166.67		0.0

Being able to see productivity drivers on the CBS register makes it easier to review and modify the estimate as a whole while reducing the potential to accidentally overwrite a manually entered data.

Follow the step by step below to create a Resource Assembly.

Step by Step — Create a Resource Assembly

1. From the Library landing page, under the Master Resources section of the Setup tab, select **Resource Assemblies**.

- The Resource Assembly Register is shown.
- 2. Right click on any **row header** and select **New** from the drop-down menu.
 - A new Resource Assembly Record is shown.
- 3. In the Code field, type **CEXC + [your initials]** as the unique code for the assembly.
- 4. Add a **description** in the Description field.
- 5. In the Assembly Details register at the bottom of the screen, click in the **Resource Code** column in the first blank row, and then select the **Resource** icon that appears in the cell.
- 6. On the Labor tab of the resulting register, select the resource with the Description: **LL2Laborer** and click **OK** to add this resource to the assembly.
- 7. Add two additional resources.

You can use the Ctrl and Shift keys to select multiple resources at once.

8. Click **OK** to save and close the new assembly.

Re	source Assemb	ly Register 🛛			
Dra	g columns here to	group			
	Code 📃	Description	Resource File Description	Quantity	Unit of Measure
	+ CCONC	Concrete Crew	Standard Assembly	1.00	Hour
÷	+ CEXCPB	Excavation Assembly		1.00	Each
	+ CGRADE	Grading Crew	Standard Assembly	1.00	Hour
	+ CMAINT	Equipment Maintenance	Standard Assembly	1.00	Each

TIP

Exercise 3.1 — Create Resources & Resource Assemblies

In this exercise, you will practice creating resources and assemblies in the InEight Estimate Library. In the Library Resource Rate Register, create resources with the following variables:

Labor Resource

Resource Code	LSFA	Wage Zone	Wage Zone A
Resource Description	Field Administrator	Organizational Category	Supervision
Geographic Area	Southwest	Scale 1 Labor Base	\$33.45
Scale 1 Premium	2 percent	Scale 1 Subsistence	\$0.47
Resource File		Standard Labor Rate File)

Select the checkbox for Use Base Wage Factors for Scales 2 and 3. Scale 2 Factor: 1.50 x Base Wage. Scale 3 Factor: 2.00 x Base Wage.

Rented Construction Equipment Resource

Rented Construction	on Equipment Resource			
Resource Code	RPW3000	RE Rental Amount	\$3.40	
Resource Description	Pressure Washer 3000 PSI	Organizational Category	Clean & Insp	pect
Resource File		Standard Rental Rate	e File	
Installed Material	Resource			
Resource Code	МССВ	Installed Materials A	Mount	\$300.00
Resource Description	Pre-Cast Concrete Catch Basin	Organizational Cate	gory	Concrete
Resource File		Standard Material Ra	ate File	
Unit of Measure		Each		
l loob ook the box f	or Apply Stondard Tox on		Tax Data C)/

Uncheck the box for Apply Standard Tax and enter a Unique Sales Tax Rate: 6%

In the Library Resource Assembly Rate Register, create resource assemblies with the following codes, descriptions, and resources

	Assembly #1	
Assembly Code	CBRIDGE	
Assembly Description	Bridge Crew	
Resource File	Standard Assembly File	
Unit of Measure	Hour	
Select Wage Zone A Labor Reso	urces for this Assembly.	
Resources on Assembly	Resource Description	Resource Quantity
LC3	Carpenter Foreman	1
LL2	Laborer	2
LF2	Finisher	1
LC2	Carpenter Journeyman	2

Assembly #2

Assembly Code	CRIPRAP
Assembly Description	Rip Rap Replacement Crew
Resource File	Standard Assembly File
Unite of Measure	Hour

Select Wage Zone A Labor Resources for this Assembly.

Resources on Assembly	Resource Description	Resource Quantity
LT2	Teamster Foreman	.5
LO3	Operator Class 3	1
LL2	Laborer	2
EX510	Backhoe JD 510	1
ETPU	Pickup	1
EL950	Loader 950	1

You should end up with the following results

Resource Ele Description					Organizationa Category		eograp ea	hic	Wage Zone	Description	Unit of Measure
-	LSFA		Standard La	bor Rate File	Supervision	So	outhwe	st		Field Administrator	Hour
		Scale 🛓	Total	Labor	Labor Base	Labor Bur	rden	Labor Fri	nges		
	\rightarrow	1	\$33.92	\$33.92	\$33.45	\$0	0.47	1	\$0.47		
		2	\$50.18	\$50.18	\$50.18	\$0	0.00	:	\$0.00		
		3	\$66.90	\$66.90	\$66.90	\$0	0.00		\$0.00		

Res Cod		rce / 👻	Descri	ption			urce File	Unit of Measure	Unit Cost (Scale 1)	Curr	ency 👻		anizational egory	Ŧ
EF	RPV	V3000	Pressu	ire Washer 3000 PSI		Stand	dard Rental Rate Fi	e Hour	\$3.40	U.S.	Dollar	Clea	n & Inspect	_
		Total		Rented Equipment	RE Rer	ntal	RE Rent Expense	RE Overhead	RE Finance Expe	ense	RE Insura	ance	RE License	F
	۲		\$3.40	\$3.40	\$3	3.40	\$0.00	\$0.00	Ş	0.00	\$	0.00	\$0.00	Ī

Res Cod		ce 🗸 👻	Descriptio	n 💌	Resource File Description	-		Unit Cost (Scale 1)	Curr	rency 👻	Organizationa Category	• 👻
	мсс	В	Pre-Cast	Concrete Catch Basin	Standard Material R	ate File	Each	\$318.00	u.s.	Dollar	Concrete	
		Total	Materials	Installed Materials	Undefined Materials	Fees	Sales Taxes	Undefined Fee	es	Undefined	Billing Rate	Billing Markı
	F	\$318.00	\$300.00	\$0.00	\$300.00	\$18.00	\$18.00	\$0	.00	\$0.00	\$318.00	

Ass Cod			Asse Desc	mbly cription		Resource File Descript	ion 💌	Quantity -	Unit of Measure	Y	Unit Cost	t 🖵	Total Cost 👻	Currenc		organization ategory		eographic 🚽
-	B	RIDGE	Bridg	e Crew		Standard As	sembly File	1.0	00 Hour		\$17	70.11	\$170.11	U.S. Dol	lar			
		Row Number	/	Resource Code	Description	Quantity	Unit of Measure	Unit Cost	Currency	Cos		Reso File D	urce Description		Organiza Categor		Geograp Area	hic Wage Zone
	۲		1	LC2	Carpenter Journeyma	n 2.0	0 Each	\$28.92	U.S. Dollar	CI	Duration	Stand	dard Labor Rate	File	Carpente	er	Southwe	est Wage Zor
			2	LC3	Carpenter Foreman	1.0	0 Each	\$31.47	U.S. Dollar	CI	Duration	Stand	dard Labor Rate	File	Carpente	er	Southwe	est Wage Zor
			3	LF2	Finisher	1.0	0 Each	\$28.07	U.S. Dollar	CI	Duration	Stand	dard Labor Rate	File	Finisher	- Concrete	Southwe	est Wage Zon
			4	LL2	Laborer	2.0	0 Each	\$26.37	U.S. Dollar	CI	Duration	Stand	dard Labor Rate	File	Laborer		Southwe	st Wage Zon

Code	2	≞.▼	Descri	otion		Resou File D	irce escription		Quar		Unit of Measure	Unit Cost	Total Cost	Currency	Organizational Category	Geographic Area	Wage Zone
- 0	RIP	RAP	Rip Ra	p Replaceme	ent Crew	Stand	lard Assemb	ly		1.00	Hour	\$152.89	\$152.89	U.S. Dollar			
		Row Number	1	Resource Code	Description		Quantity	Unit o Meas		Unit Cost	Currency	Cost Driver	Resource File Description		Organizational Category	Geographic Area	Wage Zone
	→		1	LL2	Laborer		2.00	Each		\$26.37	U.S. Dollar	CI Duration	Standard Labor	Rate File	Laborer	Southwest	Wage Zon
			2	LO3	Operator Class 3		1.00	Each		\$30.62	U.S. Dollar	CI Duration	Standard Labor	Rate File	Operator	Southwest	Wage Zon
			3	LT2	Teamster Forema	in	0.50	Each		\$32.32	U.S. Dollar	CI Duration	Standard Labor	Rate File	Truck Driver - Teamster	Southwest	Wage Zon
			4	EL950	Loader 950		1.00	Each		\$14.18	U.S. Dollar	CI Duration	Standard Equip	ment Rate	Loader		
			5	ETPU	Pickup		1.00	Each		\$4.20	U.S. Dollar	CI Duration	Standard Equip	ment Rate	Truck		
			6	EX510	Backhoe JD 510		1.00	Each		\$35.00	U.S. Dollar	CI Duration	Standard Equip	ment Rate	Excavator		

Congratulations, you have completed this exercise!

3.8 IMPORTING RESOURCES

The following procedures inform you how to setup resources in InEight Estimate from an excel sheet.

NOTE Use of this lesson will draw from other sections of InEight Estimating Manual. Basic understanding of the Sort, Group, Filter, Excel integration functionality in InEight Estimate is required.

3.8.1 Open Resource Rate Register

You can create resources within the Resource Rate Register. This is the location to build out the structure of those resources.

Step by Step — Opening the Labor tab

- 1. Open the Job Folder or Library that you're going to be working in.
- 2. From the Ribbon, select the **Setup** tab.
- 3. Under the Resources section, select **Resource Rates**. The Resource Rate Register opens.
- 4. Select the tab you want to add resources to.

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Labor Cons	struction Equip	ment Rent	ted Constr	uction Equ	ipment	Installed Mat	erial	Installed Equ	uipment	Supplies	Uniqu
umns here to g	group										
source	Description		Unit of Measure	Prod	uctivity	Default Quantity		Waste % Add-on	Unit Cost (Scale 1)		Unit Cost (Scale 2)

The layout of this register and excel file is up to the organization and the decisions that are made during the detail design phase. A basic excel file will be provided to your organization as a starting point to work from. If that can't be located, you can easily build one utilizing the views within InEight Estimate.

3.8.1.1 Creating A Labor Saved View - Resource Rate Register

You can create a view to mirror both the register and excel sheets to easily bring information back and forth from the two applications.

Example of columns:

- User Defined 1
- Resource Code
- Description
- Resource File Description Validated field
- Geographic Area Validated field
- Wage Zone Validated field
- Organizational Category Validated field
- Tag 1 Validated field
- Tag 2 Validated field
- Currency Validated field
- Default Quantity
- Use Base Wage Factors Scale Factors
- Scale Factor 2 Scale Factors
- Scale Factor 3 Scale Factors

NOTE For more information on Validated Tags field, see Validated Tags topic. Scale Factors aren't required if you are manually applying rates to each cost category scale.

The view should appear as shown below with **User Defined 1** in the first column. This field is used for sorting and arranging data accurately moving between Estimate and Excel. You are not limited to UDF 1 and can choose to utilize a field of their choice for sorting.

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Drag columns here	e to group															ind: [Search	For]	- Saved views	RB_Resource Labor	Upload VI +
User Defined 1	Resource	ce De	scription		ource File cription		Organizational Category	0	eogra rea	Wage Zone	Tag 1	Tag 2	Currency	Default Quan	Use Base Wage Factors	Scale 2 Factor	Scale 3 Factor			
→		_																		

3.8.2 Setting up the excel file

Go to the Excel sheet and make sure the information in the columns shown in the screenshot are filled out. Basic concepts to keep in mind regarding the excel file:

Sort Code - This column needs to have a high sequential number such as **10000**. This is very important to assign as it will help us authenticate all the labor rates.

Resource Code - A unique Naming convention to be assigned to every labor resource. In this example we have all labor resource starting with a **L** followed by the letters that represent the resource description.

Labor Base - The base wage of the labor resource is entered here. Estimate does not allow \$ sign to be pasted, which is why the cells for the Base column are formatted to **Number**.

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UDF1					Organizational Category		Wage Zone 🛛				Default Quantity	Use Base Wage Factors	*Scale Factor 2 -			Labor Base
	10000	LC2	Carpenter Journeyman	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	I TRUE	1.50	2.00		22
		LSUPF	Foreman Pipe	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50		\$29.92	23
	10002	LSUIW	Foreman Iron	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$30.92	24
	10003	LSUC	Foreman Civil	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$31.92	25
	10004	LSUBM	Foreman Boilermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	3	TRUE	1.50	2.00	\$32.92	26
	10005	LPF1	Lead Pipe Fabricator	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$33.92	27
	10006	LPF2	Journeyman Pipefitter	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$34.92	28
	10007	LPF3	Pipefitter A	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$35.92	29
	10008	LPF4	Pipefitter 8	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$36.92	30
	10009	LBM1	Lead Boilermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$37.92	31
	10010	LBM2	Journeyman Boilermake	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	\$38.92	32

3.8.2.2 Creating the resource

Follow this procedure once you have information filled out in excel.

Step by Step — Creating the Resource

- 1. Open the excel file.
- 2. Sort the sheet by sequential number in the **Sort Code** field.
- 3. Highlight the cells you want to bring into the estimate.
- 4. Copy the cells using right click and selecting **Copy** from the context menu.

A B	C	D	E	F	G	н	1	J	K	L	M	N	0	P
Required														
alidated Field														
Not Required														
		Co	lumn Headers may differ b	ased on Design Der	ision Item #67									
		Resource R	ate Register										Resource	e Cost Details Re
Iser Defined 1 Resource Code	- Description -	Resource File Description	Organizational Category	Geographic Area	Wage Zone	Tag 1 -	Tag 2 -	Outrepcy -	Default Quantity	Use Base Waze Factors	- Scale Factor 2 -	*Scale Eactor 3 -	Total -	Labor Base
10000 LC2	Carpenter Journeyman	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$28.92	22
10001 LSUPF	Foreman Pipe	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$29.92	
10002 LSUIW	Foreman Iron	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$30.92	
10003 LSUC	Foreman Civil	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$31.92	
10004 LSUBM	Foreman Boilermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$32.92	
10005 LP#1	Lead Pipe Fabricator	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$33.92	
10006 LPF2	Journeyman Pipefitter	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$34.92	
10007 LPF3	Pipefitter A	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$35.92	
10008 LPF4	Pipefitter 8	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50		\$36.92	
10009 LBM1	Lead Boilermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$37.92	
10010 LBM2	Journeyman Boilermak	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar		1 TRUE	1.50	2.00	\$38.92	32

- 5. Open Estimate to the **Resource Rate Register**.
- 6. Select the **User Defined 1** column in the Labor tab of the Resource Rate Register.

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- 7. Right click the empty cell and select **Paste** from the context menu. A pop up will appear asking **Are you sure you want to insert the selected values?**
- 8. Select **Yes** to confirm inserting the selected values.
- 9. The cells you copied from the excel sheet are now copied into the Resource Rate Register. The Sort code data is pasted in the User defined 1 column. Resource Code & Resource description data is pasted as well.

	1 67									Resource -	Import Den	10 - Estima	ite					
le	Setup	Estim	ate Quot		ecution System	Actions												盒 匪
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ig c	columns he	ere to group													F	ind: [Search F	or]	Saved views: RB_Resource Labor Upload Vi
	User Defined 1		esource ode	Description	Resource File Description		Organizationa Category		ieogra rea	Wage Zone	Tag 1	Tag 2	Currency	Deraus	Use Base Wage Factors	Scale 2 Factor	Scale 3 Factor	
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							Carpenter	9	outhwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1.00	1	0.00	0.00	
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	+ 10002 + 10003 + 10004 + 10005		SUEW SUC SUBM PF1	Foreman Iron Foreman Civil Foreman Boilermaker Lead Pipe Fabricator	Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra	te File te File te File te File te File	Carpenter Carpenter Carpenter Carpenter Carpenter		outhwest outhwest outhwest outhwest outhwest	Wage Zone A Wage Zone A Wage Zone A Wage Zone A Wage Zone A	Non Union Non Union Non Union Non Union	Hourly Hourly Hourly Hourly Hourly	U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar	1.00 1.00 1.00 1.00 1.00	* * * * * * * *	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	
	+ 10002 + 10003 + 10004 + 10005 + 10005		SUEW SUC SUBM PF1 PF2	Foreman Iron Foreman Civil Foreman Boilermaker Lead Pipe Fabricator Journeyman Pipefitte	Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra r Standard Labor Ra	te File te File te File te File te File te File te File	Carpenter Carpenter Carpenter Carpenter Carpenter Carpenter		outhwest outhwest outhwest outhwest outhwest outhwest	Wage Zone A Wage Zone A Wage Zone A Wage Zone A Wage Zone A Wage Zone A	Non Union Non Union Non Union Non Union Non Union	Hourly Hourly Hourly Hourly Hourly Hourly	U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar	1.00 1.00 1.00 1.00 1.00 1.00	* * * * * *	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	
	+ 10002 + 10003 + 10004 + 10005 + 10005 + 10007		SUTW SUC SUBM PF1 PF2 PF3	Foreman Iron Foreman Ovil Foreman Bolermaker Lead Pipe Fabricator Journeyman Pipefitte Pipefitter A	Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra Standard Labor Ra	te File te File te File te File te File te File te File te File	Carpenter Carpenter Carpenter Carpenter Carpenter Carpenter Carpenter		outhwest outhwest outhwest outhwest outhwest outhwest outhwest	Wage Zone A Wage Zone A Wage Zone A Wage Zone A Wage Zone A Wage Zone A	Non Union Non Union Non Union Non Union Non Union Non Union	Hourly Hourly Hourly Hourly Hourly Hourly Hourly	U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar	1.00 1.00 1.00 1.00 1.00 1.00 1.00	<pre></pre>	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	

10.

NOTE For Make sure the sorting is on User Defined 1 column. This allows us to see the information being sorted similar to our data in excel file. Base Wage Factors need to be flagged to turn on with the check box. Your first copy and paste should have activated them. You need to copy and paste again in order to apply the factors.

											Resource Cos	t C			
							tors -	*Scale Factor 2	- *Scale F	actor 3	- Total - Lab	or			
								1.	50	2.	\$28.92				
								1.	50		\$29.92				
									50		\$30.92				
									50		\$31.92				
								1.			\$32.92				
								1.	50 50		00 \$33.92 00 \$34.92				
								-	50		0 \$35.92				
									50		\$36.92				
									50		\$37.92				
								1.5	50	2.	\$38.92				
											(()				
1	Labo	or Constr	ucture (CBS) Reg			rce Cost Details Regis		Unique						a l fant	
a 00	Labo column	oor Constr ns here to gro	ruction Equipment	Rented Construction		-		Unique				Default	Use Base	Find: (Search I	For] Scale 3
u ag	Labo column	or Constr	ruction Equipment		Equipment Installed Material	Installed Equipment	Supplies		Tag 1	Tag 2	Currency	Default Quan	Wage Factors	Scale 2 Factor	
ag	Labo column User Defined	oor Constr ns here to gro	ruction Equipment	Rented Construction	Equipment Installed Material	Installed Equipment	Supplies Geogra	Wage Zone	Tag 1 Non Union	_	Currency U.S. Dollar		Wage Factors	Scale 2	Scale 3
a 00	Labo column User Defined + 100	oor Constr ns here to gro ed 1 h	ruction Equipment oup Resource Code	Rented Construction	Equipment Installed Material Resource File Description	Installed Equipment Organizational Category	Supplies Geogra Area	Wage Zone st Wage Zone A		Hourly		Quan	Wage Factors	Scale 2 Factor	Scale 3 Factor
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a 30	Labo column User Defined + 100 + 100	or Constr ns here to gro ed 1 =- 2000	Resource Code	Rented Construction Description Carpenter Journey Foreman Pipe	Equipment Installed Material Resource File Description Standard Labor Rate File Standard Labor Rate File	Installed Equipment Organizational Category Carpenter Carpenter	Supplies Geogra Area Southwes Southwes	Wage Zone st Wage Zone A st Wage Zone A st Wage Zone A	Non Union Non Union	Hourly Hourly Hourly	U.S. Dolar U.S. Dolar	Quan 1.00 1.00	Wage Factors	Scale 2 Factor 1.50 1.90	Scale 3 Factor 2.00 2.00
ag eg	Labo column User Defined + 100 + 100	or Constr ns here to gro ed 1 0000 0001 0001 0002 0003 003	Resource Code LC2 LSUPF LSUTW	Rented Construction Description Carpenter Journey Foreman Pipe Foreman Iron	Equipment Installed Material Resource File Description Standard Labor Rate File Standard Labor Rate File Standard Labor Rate File	Installed Equipment Organizational Category Carpenter Carpenter Carpenter Carpenter	Supplies Geogra Area Southwes Southwes Southwes	Wage Zone tt Wage Zone A tt Wage Zone A tt Wage Zone A tt Wage Zone A	Non Union Non Union Non Union	Hourly Hourly Hourly Hourly	U.S. Dolar U.S. Dolar U.S. Dolar	Quan 1.00 1.00 1.00	Wage Factors	Scale 2 Factor 1.50 1.50	Scale 3 Factor 2.00 2.00 2.00
a 30 1	Labo column Definer + 100 + 100 + 100 + 100	or Constr ns here to gro ed 1 0000 0001 0001 0002 0003 003	Resource Code LC2 LSUPF LSUTW LSUC	Rented Construction Description Carpenter Journey Foreman Pipe Foreman Iron Foreman Civil	Equipment Installed Material Resource File Description Standard Labor Rate File Standard Labor Rate File Standard Labor Rate File	Installed Equipment Organizational Category Carpenter Carpenter Carpenter Carpenter Carpenter	Supplies Geogra Area Southwes Southwes Southwes Southwes Southwes Southwes	Wage Zone tt Wage Zone A tt Wage Zone A tt Wage Zone A tt Wage Zone A tt Wage Zone A	Non Union Non Union Non Union	Hourly Hourly Hourly Hourly	U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar	Quan 1.00 1.00 1.00 1.00	Wage Factors	Scale 2 Factor 1.50 1.50 1.50 1.50	Scale 3 Factor 2.00 2.00 2.00 2.00
- II	Labo column Defined + 100 + 100 + 100 + 100 + 100	cor Constr ns here to gro ed 1 0000 0001 0002 0003 0004 004	Resource Code LC2 LSUPF LSUV LSUC LSUBM	Rented Construction Description Carpenter Journey Foreman Pipe Foreman Iron Foreman Civil Foreman Bolemaker	Equipment Installed Material Resource File Description Standard Labor Rate File Standard Labor Rate File Standard Labor Rate File Standard Labor Rate File Standard Labor Rate File	Installed Equipment Organizational Category Carpenter Carpenter Carpenter Carpenter Carpenter Carpenter Carpenter	Supples Geogra Area Southwes Southwes Southwes Southwes Southwes	Wage Zone tt Wage Zone A tt Wage Zone A tt Wage Zone A tt Wage Zone A tt Wage Zone A	Non Union Non Union Non Union Non Union	Hourly Hourly Hourly Hourly Hourly	U.S. Dollar U.S. Dollar U.S. Dollar U.S. Dollar U.S. Dollar	Quan 1.00 1.00 1.00 1.00 1.00	Wage Factors	Scale 2 Factor 1.50 1.50 1.50 1.50 1.50	Scale 3 Factor 2.00 2.00 2.00 2.00 2.00
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- II 	Labo column User Defined + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100	oor Constr ins here to gro ins 0000 ins 0001 ins 0002 ins 0003 ins 0005 ins 0005 ins 0007 ins	Resource Code LSUPF LSUFF LSUE LSUE LSUE LSUE LSUE LSUE LSUE LSUE	Rented Construction Description Carpenter Journey. Poreman Pipe Foreman Ion Foreman Bolermaker Lead Ope Fabricator Journeyman Pipefiter Pipefiter A	Equipment Installed Material Resource File Description Standard Labor Rate File Standard Labor Rate File	Installed Equipment Organizational Category Carpenter Ca	Supples Geogra Area Southwes Southwe	Wage Zone tt Wage Zone A tt Wage Zone A	Non Union Non Union Non Union Non Union Non Union Non Union Non Union	Hourly Hourly Hourly Hourly Hourly Hourly Hourly	U.S. Dollar U.S. Dollar U.S. Dollar U.S. Dollar U.S. Dollar U.S. Dollar U.S. Dollar U.S. Dollar	Quan L00 1.00 1.00 1.00 1.00 1.00 1.00 1.	Wege Factors	Scale 2 Factor 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50	Scale 3 Factor 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.0
Al rag	Labo column User Defines + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100	oor Constr ins here to gro ins 0000 ins 0001 ins 0002 ins 0003 ins 0005 ins 0006 ins 0007 ins	Resource Code LSUPF LSUFF LSUFW LSUC LSUEM LPF1 LPF2 LPF3 LPF4	Rented Construction Description Carporter Journey Foreman Pon Foreman Don Foreman Dol Foreman Dol Foreman Dol Foreman Pope Lead Pope Fabricator Journeyman Pipefitter Pipefitter 8	Equipment Installed Material Resource File Description Standard Labor Rate File Standard Labor Rate File	Installed Equipment Cargonizational Cargoniter Cargenter	Supples Geogra Area Southwes Southwe	Wage Zone Xit Wage Zone A tt Wage Zone A	Non Union Non Union Non Union Non Union Non Union Non Union Non Union	Hourly Hourly Hourly Hourly Hourly Hourly Hourly Hourly Hourly	U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar U.S. Dolar	Quan	Wage Factors	Scale 2 Factor 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50	Scale 3 Factor 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.0

3.8.2.3 Resource Cost Details

Labor resources are now in the system a user can apply rates to those resources.

Step by Step — Resource Cost Detail

- 1. From the Ribbon, select the Actions tab.
- 2. Under the View section, select the Resource **Cost Details** option. The **Resource Cost Details Register** opens.
- 3. NOTE Create a view to mirror the accompanying excel sheet or create one to bring in the associated resource cost in the details register.
- 4. From the Saved views drop down, select the Labor view to filter down to only labor resources.
- 5. Right click a column header and select **Column Chooser**.
- 6. Drag and drop the columns into the view identified below.

								_						End D	Search For] ····	Saved views: Labor	tau.	•
raç	p columns here to g	roup												Find: D	search Por] ····	Saved views: Labor	new	•
	Resource E	Scale 📐 🕇	Total	Labor	Labor Base	Labor Burden	Labor Fringes	Travel	Premium	Holiday	Savings	Pension	Vacation	Sort Ascending	Apprenticeship	Undefined Fringe1	Indefined Fringe2	Undefi
•	LBM1	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	21 Sort Descending	\$0.00	\$0.00	\$0.00	
	LBM2	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Clear All Sorting	\$0.00	Customize	n below to place it into	×
	LC2	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0	\$0.00	\$0.00	\$0.00	Group By This Column	\$0.00		egister.	
	UPF1	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00		\$0.00	Custom Caption	Default Caption	
	LPF2	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Hide This Column	\$0.00	Adjustment Allowance	Adjustment Allowance	-
	LP#3	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	Remove All Columns	\$0.00	PROTICING	HENTERING	
	UPF4	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	67.00	Go To Column (Ctrl+G)	\$0.00	Allowance	Allowance	
	LSUBM	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	30100	E Column Chooser	\$0.00	Apply	Apply	- 1
	LSUC	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	*A* Best Fit	\$0.00	Standard Tax	Standard Tax	
	LSUIW	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	Business Taxes	Business Taxes	
	LSUPP	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Best Fit (all columns)	Ser			- 1
														✓ Fixed None		Consumption	Consumption Rate	
														Fixed Left				
														Fixed Right		Contingency Allowance	Contingency Allowance	
														Change Caption		Custom Category1	Custom Category1	
														Reset Caption			_	
														Reset All Captions		Fees	Fees	
															-	Fees Undefined 1	Fees Undefined 1	

Example of columns – The level of detail and utilization of specific cost categories is a decision for each organization:

- User Defined 1 Non editable fields from resource rates register
- Resource Code Non editable fields from resource rates register
- · Description Non editable fields from resource rates register
- Resource File Description Non editable fields from resource rates register
- · Geographic Area Non editable fields from resource rates register
- · Wage Zone Non editable fields from resource rates register
- Organizational Category Non editable fields from resource rates register
- · Scale Non editable fields from resource rates register

- Labor Base
- Travel
- Premium
- Holiday
- Savings
- Pension
- Vacation
- Subsistence
- Health & Welfare
- Apprenticeship
- Undefined Fringe 1
- Undefined Fringe 2
- Undefined Labor Fringes
- Bodily Injury & Property Damage
- Workers Compensation
- Undefined Insurance1
- Undefined Insurance2
- Undefined Labor Insurance
- FICA
- FUTA
- SUTA
- Undefined Tax1
- Undefined Labor Taxes
- Undefined Labor Burden
- Undefined Labor
- Construction Supplies
- Undefined Materials
- Undefined
- Billing Rate
- Billing Rate Markup
- Billing Rate Markup %

3.8.3 Filter/Sort/Paste - Resource Cost Details Register

The Labor upload view brings in the columns required to enter Labor base, burdens etc. Every Labor resource has three rows created with Scales 1,2,3. The Scale Column is used to setup Straight time, Over time, Double time.

Co	st Breakdown St	ructure (CBS) R	egister	Resource	ce Rate Register	r	Resource	Cost Details Regis	ter 🕴
Dra	g columns here to g	roup							
	Resource E	Scale 🖮	Total	Labor	Labor Base	Labor	Burden	Labor Fringes	Travel
	LBM1	1	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$
	LBM1	2	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$
	LBM1	3	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$
	LBM2	1	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$

Step by Step — Filter Resource Cost Detail Register

- 1. From the Scale column header, click the filter icon..
- 2. Set the From and To values to 1.

rag	g columns here to	o group									_			
	User Defined 1	Resource 🛌	Description		Resource Fi Description	le	Organizational Category	Geographic Area	Wage Zone	Scale 🖭 🍸	Total	Labor Base	Travel	Pr
•	10009	LBM1	Lead Boilermak	er	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A	Values	Numeric Filt	ers	\$0.00	
	10010	LBM2	Journeyman Bo	ilermaker	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	
	10000	LC2	Carpenter Jour	neyman	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A	From 1		To 1	\$0.00	
	10005	LPF1	Lead Pipe Fabri	cator	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	
	10006	LPF2	Journeyman Pip	pefitter	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A	••			\$0.00	
	10007	LPF3	Pipefitter A		Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	
	10008	LPF4	Pipefitter B		Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	
	10004	LSUBM	Foreman Boilerr	maker	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	
	10003	LSUC	Foreman Civil		Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	
	10002	LSUIW	Foreman Iron		Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	
	10001	LSUPF	Foreman Pipe		Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A				\$0.00	

- 3. Back on the excel spreadsheet, highlight the base rates to bring in.
- 4. Right click and select **Copy** in the context menu.

A	6	c	м	N	0	P	0	R	s	T	U	V	w	х	Y	z
Required																
Validated Fiel	d															
Not Required																
	Resource Rate	Register			Resource	Cost Details Regi	ster									
User Defined 1	Resource Code	 Description 	*Scale Factor 2 ¥	*Scale Factor 3 ¥	Total 👻	Labor Base	 Travel 	* Premium *	Holiday *	Savings *	Pension *	Vacation 👻	Subsistence *	Health & Welfare *	Apprenticeship 👻	Undefined Fringe 1 👻
1000	0 LC2	Carpenter Journeyman	1.50	2.00	\$28.92	22.1	0 0.	00.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.0
1000	L LSUPF	Foreman Pipe	1.50	2.00	\$29.92	23.1	.0 0.	00.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.0
1000	LSUIW	Foreman Iron	1.50	2.00	\$30.92	24.1	0 0.	00.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.00
1000	B LSUC	Foreman Civil	1.50	2.00	\$31.92	25.1	0 0.	00.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.00
1000	LSUBM	Foreman Boilermaker	1.50	2.00	\$32.92	26.1	0 0.	00 0.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.00
1000	5 LPF1	Lead Pipe Fabricator	1.50	2.00	\$33.92	27.1	0 0.	00 0.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.0
1000	5 LPF2	Journeyman Pipefitter	1.50	2.00	\$34.92	28.1	0 0.	00 0.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.0
1000	7 LPF3	Pipefitter A	1.50	2.00	\$35.92	29.1	0 0.	00 0.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.0
1000	B LPF4	Pipefitter B	1.50	2.00	\$36.92	30.1	0 0.	00 0.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.00
1000	BM1	Lead Boilermaker	1.50	2.00	\$37.92	31.1	0 0.	00 0.00	0.22	0.00	0.66	0.44	0.00	0.66	0.00	0.0
1001	LBM2	Journeyman Boilermaker	1.50	2.00	\$38.92	32.1	0 0.	00 0.00	0.22	0.00	0.66	0.44	0.00	0.65	0.00	0.00

5. Go to Estimate. Right click and select **Paste** from the context menu.

Breakdown 5	structure (CBS) R	egister Resource Rate	Register Resource	e Cost Details Register 🛛 🔘	Labor Rate Record												
columns here to	group										_	Find:	Search For]	S	aved views:	Labor View	
User Defined 1 ៉	Resource Code	Description	Resource File Description	Organizational Category	Geographic Area	Wage Zone	Scale	٣	Total	Labor Base	Travel	Premium	Holiday	Savings	Pension	Vacation	Subsistence
10000	LC2	Carpenter Journeyman	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00		60.00	20.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10001	LSUPF	Foreman Pipe	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10002	LSUIW	Foreman Iron	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10003	LSUC	Foreman Civil	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10004	LSUBM	Foreman Bollermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10005	LP#1	Lead Pipe Fabricator	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10006	LPF2	Journeyman Pipefitter	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00	1+ Eur	Down		\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10007	UPF3	Pipefitter A	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00	di Link	k this field to l	Excel	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10008	LPF4	Pipefitter B	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00	뤈 UnL	Link from Exce	el	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10009	LBM1	Lead Bollermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
10010	LBM2	Journeyman Bollermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A		1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0

6. You will be prompted with a **Are you sure you want to insert these values?** message as before. Select **Yes** to continue.

3.8.4 Manual Set-Up of Scales 2 & 3 – Optional

If the organization wants to have more in-depth cost details for each scale rather than using scale factors the same procedure will be utilized to copy Labor burden, fringes, and other add-ons to setup Scale 2 & Scale 3.

NOTE For Base Wage Factor Columns will not be active if your organization is using method 2.

3.8.4.4 Resource Rate Register

it Bri	eakdown Sti	ructure (CBS) Regi	ister Resourc	e Rate Regi	ister O Resou	rce Cost Details Regi	ster	Labor Rate	Record								
L	abor Cons	struction Equipment	Rented Construction	Equipment	Installed Material	Installed Equipment	Supplies	Unique									
) colu	umns here to g	roup												Fin	d: [Search For]	Saved views:
Res Cod	iource 🛌	Resource Type		Description		Resource File Description		Unit of Measure		Productivity Factor	Default Quantity	Waste % Add-on	Unit Cost (Scale 1)	Unit Cost (Scale 2)	Unit Cost (Scale 3)	Currency	Use Base Wage Factors
+ 1	LBM1	Labor Rate		Lead Boler	maker	Standard Labor Rate Fi	le	Hour		1.00	1.00		\$37.90	\$46.65	\$62.20	U.S. Dollar	
+	LBM2	Labor Rate		Journeyma	n Bollermaker	Standard Labor Rate F	le	Hour		1.00	1.00		\$38.90	\$48.15	\$64.20	U.S. Dollar	
+	LC2	Labor Rate		Carpenter	Journeyman	Standard Labor Rate Fi	le	Hour		1.00	1.00		\$28.90	\$33.15	\$44.20	U.S. Dollar	
+ 1	LPF1	Labor Rate		Lead Pipe F	abricator	Standard Labor Rate Fi	le	Hour		1.00	1.00		\$33.90	\$40.65	\$54.20	U.S. Dollar	
+	LPF2	Labor Rate		Journeyma	n Pipefitter	Standard Labor Rate Fi	le	Hour		1.00	1.00		\$34.90	\$42.15	\$56.20	U.S. Dollar	
+	LPF3	Labor Rate		Pipefitter A		Standard Labor Rate Fi	le	Hour		1.00	1.00		\$35.90	\$43.65	\$58.20	U.S. Dollar	
+	LPF4	Labor Rate		Pipefitter B		Standard Labor Rate Fi	le	Hour		1.00	1.00		\$36.90	\$45.15	\$60.20	U.S. Dollar	
+	LSUBM	Labor Rate		Foreman B	olermaker	Standard Labor Rate F	le	Hour		1.00	1.00		\$32.90	\$39.15	\$52.20	U.S. Dollar	
+	LSUC	Labor Rate		Foreman C	M	Standard Labor Rate Fi	le	Hour		1.00	1.00		\$31.90	\$37.65	\$50.20	U.S. Dollar	
+ 1	LSUTW	Labor Rate		Foreman Ir	on	Standard Labor Rate Fi	le 🛛	Hour		1.00	1.00		\$30.90	\$36.15	\$48.20	U.S. Dollar	
+	LSUPF	Labor Rate		Foreman P	ine.	Standard Labor Rate Fi	la	Hour		1.00	1.00		\$29.90	\$34.65	\$46.20	U.S. Dollar	I

3.8.4.5 Resource Cost Details Register

Cost Breakdown Structure (CBS) Register Resource Rate Register					Resource Cos	t Details Register 🛛 🛛	Labor Rate Record					
Dra	g columns here to g	roup										
	User Defined 1	Resource Code Descript		n	Resource Fil Description	le	Organizational Category	Geographic Area	Wage Zone	Scale	٣	Total
÷	10000 LC2 Carper		Carpente	er Journeyman Standard		ard Labor Rate File	Carpenter	Southwest	Wage Zone A		2	\$33.1
	10001	LSUPF	Foreman	Foreman Pipe		bor Rate File	Carpenter	Southwest	Wage Zone A		2	\$34.
	10002	LSUIW	Foreman	Iron	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A		2	\$36.

Step by Step — Manual Setup of Scales

- 1. From the Scale column header, click the filter icon..
- 2. Set the From and To values to 2.

-	C Dreakuowii S	tructure (CBS) R	legister	Resource Rate	: Keyister	Resource co	ost Details Register 🛛 🔘	Labor Rate Record							
ag	columns here to	group													
	User Defined 1	Resource Code	Descriptio	n	Resource Fil Description	e	Organizational Category	Geographic Area	Wage Zone	Scale	٣	Total	Labor Base	Tra	vel
•	10000	LC2	Carpente	er Journeyman	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A	Values	Nu	meric Filte	rs		\$0
	10001	LSUPF	Foreman	Pipe	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A		_				\$0
	10002	LSUIW	Foreman	Iron	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A	From	2		To 2		\$0
	10003	LSUC	Foreman	Civil	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A						\$0
	10004	LSUBM	Foreman	Boilermaker	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A	<u> </u>		•	•	-	\$0
	10005	LPF1	Lead Pipe	E Fabricator	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A						\$0
	10006	LPF2	Journeym	nan Pipefitter	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A						\$0
	10007	LPF3	Pipefitter	A	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A						\$0
	10008	LPF4	Pipefitter	в	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A						\$0
	10009	LBM1	Lead Boile	ermaker	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A						\$0
	10010	LBM2	Journeym	nan Boilermaker	Standard La	bor Rate File	Carpenter	Southwest	Wage Zone A						\$0

- 3. Back on the excel spreadsheet, highlight the base rates to bring in.
- 4. Right click and select **Copy** in the context menu.

U V W		
sion Y Vacation Y Subsistence Y	Health & Welfare Y Apprenticeship Y	Undefined Fringe 1 👻
0.66 0.44 0.00	0.66 0.00	0.00
0.66 0.44 0.00	0.65 0.00	0.00
0.66 0.44 0.00	0.66 0.00	0.00
0.66 0.44 0.00	0.66 0.00	0.00
0.66 0.44 0.00	0.66 0.00	0.00
0.66 0.44 0.00	0.66 0.00	0.00
		0.00
0.66 0.44 0.00	0.65 0.00	0.00
0.66 0.44 0.00	0.66 0.00	0.00
0.66 0.44 0.00	0.66 0.00	0.00
0.66 0.44 0.00	0.66 0.00	0.00
	0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00 0.86 0.44 0.00	0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00 0.66 0.44 0.00 0.66 0.00

5. Go to Estimate. Right click and select **Paste** from the context menu.

t Breakdown S	tructure (CBS) R	egister Re	esource Rate I	Register	Resource Co	st Details Register 0	Labor Rate Record									
columns here to	group						-		_						Find:	[Search For.
User Defined 1	Resource Code	Description		Resource File Description		Organizational Category	Geographic Area	Wage Zone	Scale	т	Total	Labor Bas		Travel	Premium	Holiday
10000	LC2	Carpenter Jour	rneyman	Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$33.15		33.15	\$0.00	\$0.00	\$0.
10001	LSUPF	Foreman Pipe		Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$34.65	0				\$0.
10002	LSUTW	Foreman Iron		Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$36.15	0	Dele	ete		\$0.
10003	LSUC	Foreman Civil		Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$37.65	8<				\$0.
10004	LSUBM	Foreman Boller	rmaker	Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$39.15		Сор			\$0.
10005	UPF1	Lead Pipe Fabr	ricator	Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$40.65	B	Past			\$0.
10006	LPF2	Journeyman Pi	pefitter	Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$42.15	1+	EUL	Down		\$0.
10007	LPF3	Pipefitter A		Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$43.65	8	Link	this field to	Excel	\$0.
10008	LPF4	Pipefitter B		Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$45.15	문	Unl	ink from Exc	el	\$0.
10009	LBM1	Lead Bollermak	ker	Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$46.65	5	46.65	\$0.00	\$0.00	\$0.
10010	LBM2	Journeyman Br	ollermaker	Standard Lab	or Rate File	Carpenter	Southwest	Wage Zone A		2	\$48.15	5	48.15	\$0.00	\$0.00	\$0.

- 6. You will be prompted with a **Are you sure you want to insert these values?** message as before. Select **Yes** to continue.
- 7. Follow the same procedure for scale 3.

3.8.4.6 Non Labor Resource Setup

The same principles can be applied for the other resource types within InEight Estimate. This procedure covers installed material, but can also be used for the other six resource types.

3.8.5 Creating A Materials Saved View - Resource Rate Register

Create a view to mirror both the register and excel sheets to easily bring information back and forth from the two applications.

Example of columns

- User Defined 1
- Resource Code
- Description
- · Resource File Description Validated Tag field
- Geographic Area Validated Tag field
- Wage Zone Validated Tag field
- Organizational Category Validated Tag field
- Tag 1 Validated Tag field
- Tag 2 Validated Tag field
- Currency Validated Tag field
- Apply Standard Tax Validated Tag field
- Unique Sales Tax
- Unit of Measure Validated Tag field

3.8.6 Creating A Material Resource

Follow the step by step once you have information filled out in excel.

Step by Step — Creating the Resource

- 1. Open the excel file.
- 2. Sort the sheet by sequential number in the **Sort Code** field.
- 3. Highlight the cells you want to bring into the estimate.
- 4. Copy the cells using right click and selecting **Copy** from the context menu.

) ଜি •-⊲					mport Worksheet.xlsx - S					Ray
	le Home	Insert Pag	e Layout Formulas Data	Review View Add-ir	vs Help	BLUEBEAM VEO	Power Pivot Te	am 🖓 Tell me	what you want to do			
245	te Clipboard	Calibri B I	• 11 • A* A = <u>U</u> • ⊞ • <u>Δ</u> • <u>A</u> • Font rs	= = ≫ • the Wrap T = = • • • • the Marge Alignment	Bi Center + Se	msitivity S = %		nal Format as Cel ng * Table * Style Styles			Z T P Sort & Find & Filter * Select *	Create PDF Change Setti Batch PDF Bluebeam
47	· · ·	i X 🗸	<i>f</i> _* 10000									
l	A	8	c	D	E	F	G	н	I J	к	L	м
í		Required										
		Validated Field										
		Not Required										
l							Column Headers may diff	er based on Design I	Decision Item #67			
1						Resource Rate						
		Resource Code *		Resource File Description	Geographic Are	a 👻 Wage Zone 👻		- Tag 1 -	Tag 2 V Currency V			
4	10000	MAAM	Asphalt Mix (Finish)	Standard Material Rate File			Asphalt	Pave	U.S. Dollar	TRUE	5 Tor	
	10001	MAC	Asphalt Cement	Standard Material Rate File			Asphalt	Plant Asphalt	U.S. Dollar	TRUE	5 Tor	
	10002	MACA1-1/2	Coarse Aggregate 1-1/2 In	Standard Material Rate File			Asphalt	Plant Asphalt	U.S. Dollar	TRUE	5 Tor	
	10003	MAFA	Fine Aggregate	Standard Material Rate File			Asphalt	Plant Asphalt	U.S. Dollar	TRUE	5 Tor	
	10004	MAHAUL	Aggregate Haul Quarry to Plant	Standard Material Rate File			Asphalt	Plant Asphalt	U.S. Dollar	TRUE	5 Tor	
I	10005	MAJA3/4	Intermediate Aggregate 3/4 In	Standard Material Rate File			Asphalt	Plant Asphalt	U.S. Dollar	TRUE	5 Tor	
	10006	MASAND	Sand	Standard Material Rate File			Asphalt	Plant Asphalt	U.S. Dollar	TRUE	5 Tor	
	10007	MATK	Tack	Standard Material Rate File			Asphalt	Pave	U.S. Dollar	TRUE	5 Gal	lon
	10008	MBR	Aggregate Base Rock	Standard Material Rate File			Base Stone	Aggregate Base	U.S. Dollar	TRUE	5 Tor	
	10009	MC2000	Concrete 4000 PSI	Standard Material Rate File			Concrete	Concrete	U.S. Dollar	TRUE	5 Cub	ic Yard
	10010	MC3500	Concrete 3500 PSI	Standard Material Rate File			Concrete	Concrete	U.S. Dollar	TRUE	5 Cub	ic Yard
	10011	MDIRTA	Dirt Class A	Standard Material Rate File			Earthwork	Water/Sewer	U.S. Dollar	TRUE	5 Cub	ic Yard
	10012	MDIRTB	Dirt Class B	Standard Material Rate File			Earthwork	Water/Sewer	U.S. Dollar	TRUE	5 Tor	
I	10013	MMH	Manhole Precast 4 Ft	Standard Material Rate File			Manholes	Manhole	U.S. Dollar	TRUE	5 Eac	h
1	()	Labor Owned	Eqp Rental Eqp Perm	anent Equipment Materi	als Supplies	. +						
			and a second and a second	and a darbance a	out the second							

- 5. Open Estimate to the **Resource Rate Register**.
- 6. Select the User Defined 1 column in the Installed Material tab of the Resource Rate Register.

AI	Labor	Const	ruction Equipment	Rer	nted Construction Equipr	nent	Installed Materia
Drag	columns he	re to gr	oup				
	User Defined 1		Resource Code		Description		esource File escription
→ [•	New				
		ø	<u>D</u> elete				
		3<	Cut				
			Сору				
		B	<u>P</u> aste				
		+	Eill Down				
		品	Link this field to I	Excel			
		愚	UnLink from Exc	el			
		臣	Copy to Besource	e File.			

- 7. Right click the empty cell and select **Paste** from the context menu. A pop up will appear asking **Are you sure you want to insert the selected values?**
- 8. You will be prompted with a **Are you sure you want to insert these values?** message. Click **Yes** to continue.

3.8.7 Create A Material Saved View - Resource Cost Details Register

Installed Material Resources are now in the system. You can apply rates to those resources. Create a view to mirror the accompanying excel sheet or create one to bring in the associated resource cost in the details register.

Step by Step — Material Saved View

- 1. From the Ribbon, select the Actions tab.
- 2. Under the View section, select the Resource **Cost Details** option. The **Resource Cost Details Register** opens.

- 3. **NOTE** Create a view to mirror the accompanying excel sheet or create one to bring in the associated resource cost in the details register.
- 4. From the Saved views drop down, select the **Installed material** view to filter down to only material resources.
- 5. Right click a column header and select **Column Chooser**.
- 6. Drag and drop the columns into the view identified below.

	Coreakaonin su	ucture (CBS) F	tegister	Resource	e Rate Register	Resource	Cost Details Regis	ter O										
rag	columns here to g	roup				-								Find:	[Search For] ····	Saved views: Labo	r View	-
	Resource 🛌	Scale 🖭 🕇	Total	Labor	Labor Base	Labor Burden	Labor Fringes	Travel	Premium	Holiday	Savings	Pension	Vacation	Sort Ascending	Apprenticeship	Undefined Fringe1	Undefined Fringe2	Undefi
-	LEM1	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	21 Sort Descending	\$0.00	\$0.00	\$0.00	
1	LEM2	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Clear All Sorting	\$0.00	Customize	om below to place it into	×
	LC2	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.~	\$0.00	\$0.00	\$0.00		\$0.00	Drag a column fr	register.	othe
	UPF1	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00	Group By This Column	\$0.00	Custom Caption	Default Caption	L
	LPF2	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Hide This Column	\$0.00	Adjustment Allowance	Adjustment Allowance	-
	LPF3	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	24	\$0.00	Remove All Columns	\$0.00	Allowance	Allowance	
	UPF4	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	67.00	Go To Column (Ctrl+G)	\$0.00	Allowance	Allowance	
	LSUBM	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	30.00	E Column Chooser	\$0.00	Apply	Apply	
	LSUC	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	Standard Tax	Standard Tax	
	LSUIW	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<a+ best="" fit<="" td=""><td>\$0.00</td><td>Business Taxes</td><td>Business Taxes</td><td></td></a+>	\$0.00	Business Taxes	Business Taxes	
	LSUPF	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Best Fit (all columns)	\$0.	DUSERESS Taxes	Duarress Taxes	
														✓ Fixed None		Consumption Rate	Consumption Rate	
														Fixed Left		Contingency	Contingency	
														Fixed Right		Allowance	Allowance	
														Change Caption		Custom Category 1	Custom Category1	
														Reset Caption		Fees	Fees	
														Reset All Captions		rees	rees	
															_	Fees Undefined 1	Fees Undefined 1	

Example of columns – The level of detail and utilization of specific cost categories is a decision for each organization:

- User Defined 1 Non editable fields from resource rates register
- Resource Code Non editable fields from resource rates register
- · Description Non editable fields from resource rates register
- Resource File Description Non editable fields from resource rates register
- Geographic Area Non editable fields from resource rates register
- · Wage Zone Non editable fields from resource rates register
- · Organizational Category Non editable fields from resource rates register
- · Unit of Measure Non editable fields from resource rates register
- Currency Non editable fields from resource rates register
- Total Non editable fields from resource rates register
- Installed Materials
- Undefined Materials
- Sales Taxes

- Undefined Fees
- Undefined
- Billing Rate
- Billing Rate Markup
- Billing Rate Markup %

3.9 QUANTITY CHECKING

The Quantity Checking feature allows you to compare the quantity of a superior cost item to the sum of its relevant subordinate cost item quantities. This setting enables the use of the **Quantity Check** and **Quantity Warning** columns in the Cost Breakdown Structure. The use of these columns can assist in confirming whether or not your quantities are correct.

NOTE The subordinate cost item quantities need to have the same unit of measure as the superior cost item before you are able to choose the Quantity Check column.

In the example below, break a concrete pour cost item into four subordinate parts. The Forecast (T/O) Quantity of the superior item will be 156875.00 tons of concrete. Start by dividing each of the four parts into 35000.00 tons each. Once you have broken out this concrete pour, determine if you need a fifth pour or if you should distribute the remaining quantity to the four pours. The factors you keep in mind are the trips and time involved in the extra pour vs capacity of equipment.

Step by Step — Quantity Checking

- 1. From the Ribbon, select the **Setup** tab.
- 2. Under the section Initialize, select Job Properties. Then select the Cost Basis tab.
 - NOTE Quantity checking starts by turning the feature on in the Job Properties. If you want to have quantity checking turned on for all jobs in Estimate, then this setting needs to be turned on in the **Master Job Properties**. The Master Job Properties is located in the **Library**.
- 3. From the Rules data box, select the Activate Quantity Checking check box.

ile Set	up Est	imate Q	uote	Price	Execution	:	System	Integration	ns			
٥	. *	Ě		**		🔊 La	ibor quipment		â		P	
ob Propertie	s Founda Setup Da			Wizard	Resource Rates *	M	aterials	Resource Assemblies	Cost Item Assemblies	Standaro Tables	d Reports	
	Ir	nitialize				Res	ources		Assen	nblies	Reports	
Cost Break	down Struc	ture (CBS) F	legister	Jo	b Properties	0						
Overview	Security	Cover Shee	t Cost E	Basis	Minority Setup	Fu	el Cost	Job Tracking	Job Folde	r Tags	Competitors	Pricing
-Standard S	hift Arranger	ments	Stand	ard Wag	e Rate Compos	site —	Rule	s Lock Cost Iter	ns to Pay Iter	ns		
Work Hou	ırs per Shift	8.00	S	cale 1:	100.00 9	6		Pay Item Unit	Price Precisio	n:	2	
Pay Hou	rs per Shift:	8.00	s	cale 2:	0.00 9	6	_	Activate PBS C Activate Quant				
Shif	fts per Day:	1.00	S	cale 3:	0.00 9	6		Maintain CBS S	Structure at L	evel:	0	
Days	s per Week:	5.00		Shift / R	ate Calculato	r		When man-cou	unt changes:	<u> </u>	Change UM / Ma Change Days	n-Hour

- 4. Next bring a couple of columns into your view on the Cost Breakdown Structure (CBS) Register. Right click on the column header and choose **Go To Column**.
- 5. The Go To Column dialog box appears. Have the **Include columns that are not currently in the view** check box selected.

8	10 Inch PVC Force Main (SDR21)	Linear Feet	Pay Item	Detail	Direct Cost	Quote Group			Quote Group	0	No	
7.4	Concrete Batch Four	Ton	Fixed	Detail	Piret Cut	Quantity War	ning		Quantity Wa	arning	No	5.
7.3	Concrete Batch Three	Ton	Fixed	Detail	Direct Cost	Quantity Driv	er		Quantity Dri	ver	Yes	2
7.2	Concrete Batch Two	Ton	Fixed	Detail	Decuri	Quantity Che	dk		Quantity Ch	eck	No	
7.1	Concrete Batch One	Ton	Fixed	Detail	Discussion	Plug Days			Plug Days		No)
7	Concrete Pour	Ton	Superior CI	Detail	Di	Phase Code			Phase Code		No	
⊦ 6.4	Backfill RCP Pipe	Cubic Yard	Superior CI	Detail	Di 🗹 Include co	lu Period Count	Mismatch		Period Coun		No	
F 6.3	Install RCP Pipe	Linear Feet	Superior CI	Detail	Di	A Custom C	aption		Default Cap	tion	Visi	
⊦ 6.2	Excavate RCP Trench	Cubic Yard	Superior CI	Detail	Di Column:			¥	37.17	4.65	\$	4,963
⊦ 6.1	Furnish RCP Materials	Linear Feet	Superior CI	Detail	D 🛞 Go	To Column		×	0.00	0.00		\$0
6	36 Inch RCP Culvert Class III	Linear Feet	Pay Item	Detail	Direct Cost	\$67.54	\$69,159.49		149.30	18.66	\$20	0,073
⊦ 5.2	Install Hot Mix Type A	Ton	Superior CI	Detail	Direct Cost	\$3.34	\$117,018.05		233.33	23.33	\$58	8,941
⊦ 5.1	Furnish & Haul Hot Mix	Ton	Superior CI	Detail	Direct Cost	\$39.27	\$1,374,562.54		233.33	29.17	\$50	0,010
5	Asphalt Concrete Hot Mix Type A	Ton	Pay Item	Detail	Direct Cost	\$42.62	\$1,491,580.59		466.67	52.50	\$108	8,952
+ 4.3.2	Blue Top Aggregate Base	Square Yard	Superior CI	Detail	Direct Cost	\$0.06	\$24,106.42		320.00	40.00	\$10	6,874
+ 4.3.1	Place Aggregate Base	Ton	Superior CI	Detail	Direct Cost	\$1.63	\$73,460.92		240.00	30.00	\$33	3,884.
4.3	Install Aggregate Base	Ton	Superior CI	Detail	Direct Cost	\$2.17	\$97,567.33		560.00	70.00	\$50	0,759
+ 4.2	Finegrade Subgrade	Square Yard	Superior CI	Detail	Direct Cost	\$0.19	\$75,848.36		320.00	40.00	\$39	9,464
CBS Position 🖭 Code	Description	Unit of Measure	Quantity Driver	Cost Source	Cost Segment	Unit Cost	Total Cost (Forecast)	Hours (Duration driv		Days (Duration driven)	Labor Total C	Cost

6. Click **OK** when you have selected your preferred columns.

Next, toggle the check box for the **Quantity Check** column.

7	Concrete Pour	156,875.00	Ton		Superior CI
- 7.1	Concrete Batch One	35,000.00	Ton 🥖	./	Fived
7.2	Concrete Batch Two	35,000.00	Ton	Remaining Quant	tity: 16,875.00 Ton
- 7.3	Concrete Batch Three	35,000.00	Ton	\checkmark	Fixed
7.4	Concrete Batch Four	35,000.00	Ton	\checkmark	Fixed

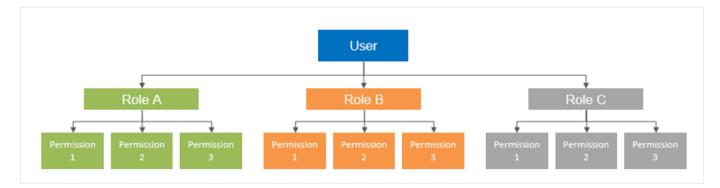
- 7. NOTE As you check Quantity Check for the four batches of Concrete, the superior cost item Quantity Warning turns yellow. This is indicating a quantity warning. Hover your mouse over the superior cost item Quantity Warning column. Then, an overlay message appears showing the quantity discrepancy. Apply this discrepancy to the Subordinate cost items. That way, the superior cost item with be the sum of the parts.
- 8. The remaining quantity is 16875.00 tons which does not warrant a fifth pour.

3.10 SECURITY IN ESTIMATE

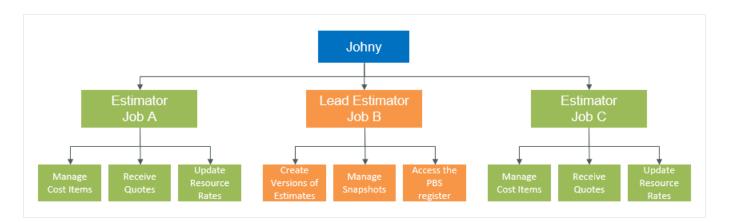
3.10.1 Role based permissions

Estimate uses a role-based security model, where users can be assigned to a role on a project. A role identifies if a user has been granted access for various permissions to perform defined functions in Estimate.

A role is a collection of permissions that defines a user's responsibilities on a project or in an organization.



For example, Johny can be an Estimator on Job A and a Lead Estimator on Job B, giving him elevated permissions to perform actions that a less responsible estimator may not permitted to perform.



Roles are created and managed in the Roles and Permissions page in the Suite Administration section of InEight Platform (Suite Administration > **Roles and permissions**).

Œ) 🖻 🛞 🖬 🎗				C7	D	()	Q
	Name 🕇 🛛 📃	Description	Administ	trator level				
	Account Administrator	Account Administrator	Level 3 -	Account Admin				
	Account Administrator- All Roles	Account Administrator	Level 3 -	Account Admin				
	Account Administrator- Copy	Account Administrator	Level 3 -	Account Admin				
	AJL New Role LIV	testing synch of roles to estimate	Level 3 -	Account Admin				
	AJL Role Z	test role to do something somewhere	Level 1 -	Project Admin				
	AJL Role ZZ	maybe this is the last roled	Level 2 -	Organization Admir	1			
	AL - NoEditRole	Role cannot edit library	Level 3 -	Account Admin				
	AL - YesEditRole	Role can edit library	Level 3 -	Account Admin				
	AL Role A	Role A for use in test cases	Level 3 -	Account Admin				
	AL Role B	can delete snapshots	Level 3 -	Account Admin				
	AL Role C	Role to test more stuff	Level 3 -	Account Admin				
	AL-no Templates, No Library	user cannot access Library or Templates	Level 3 -	Account Admin				
	Default Role	Default Role	Level 0 -	Base				
	Dev/Ops Administrator	Dev/Ops Administrator	Level 3 -	Account Admin				
	Estimate-AddJob-noViewSnapshot	Testing Estimate permissions scenario	Level 3 -	Account Admin				
	Estimate-AddJob-ViewSnapshot	Testing Estimate permissions scenario	Level 3 -	Account Admin				
	Estimate-AddSnapshot	Testing Estimate permissions scenario	Level 3 -	Account Admin				
	Estimate-noAddJob-ViewSnapshot	Testing Estimate permissions scenario	Level 3 -	Account Admin				
	Estimate-ViewSnapshot	Testing Estimate permissions scenario	Level 3 -	Account Admin				
	Estimator	Estimator	Level 1 -	Project Admin				
	Foreman	Foreman	Level 1 -	Project Admin				
7	Integration Settings	Integration Settings	Level 3 -	Account Admin				

The following image shows how the Estimator role has been defined with permissions to launch Estimate, add and edit jobs, and view snapshots, but it does not have permissions to delete jobs or add and edit snapshots.

Suite administration / Role	s and permissions			OneDrive-QA-23.2 ⑦	4 ⁹ ®
Roles and permissions > Edit role				Can	cel
ole details					
Name	Description		* Administrator level		
Estimator	Estimator		Level 1 - Project Admin	· ()	
Permissions					
Suite administration					
Organization and project					
Master data libraries					
Model					
Document					
Estimate					
Select all				Search	
Jobs	Select all	Snapshots	Select all		
Launch Estimate		🛃 🕲 View snapshots 📐			
🗹 🕀 Add jobs		Add snapshots			
🗹 💽 Edit jobs		🗌 💽 Edit snapshots 🕕			
🗌 🛞 Delete jobs		 Delete snapshots 			
Cohodula 2023 InEight Inc. Privacy Statement	Terms & Conditions v 2				IN

For more information on setting up roles in InEight Platform, see <u>Roles & Permissions</u> in the Knowledge Library.

3.10.2 Security in Estimate

The capacity to grant permissions in a job and what can be performed is accomplished with a combination of permissions that exist in both Platform and Estimate.

Generally, permissions managed in Platform determine which users can launch Estimate and who can manage jobs, snapshots, templates and access the Estimate library. Permissions managed in the

Estimate determine which users are granted permissions to specific commands and destinations solely in Estimate.

For any user to use Estimate, they need to have a role that has been granted the Launch Estimate permission, which is found in the Estimate blade of the Roles and permissions page when editing the details of a role.

				Cancel	Sav
ole details					
Name	Description	* Administrator level			
Estimator	Estimator	Level 1 - Project Admin	· (1)		
Permissions					
Suite administration					~
Organization and project					~
Master data libraries					~
Model					~
Document					~
Estimate					~
Select all				rch	
Jobs	Select al				
Launch Estimate		🗹 🎯 View snapshots 📐	1		
🗹 🕀 Add jobs		□ ④ Add snapshots			
🗹 💽 Edit jobs		🗌 🖻 Edit snapshots 🕕			
🗌 💌 Delete jobs		🔲 😠 Delete snapshots			

3.10.3 Granting permissions to access Jobs and Snapshots

When creating jobs in Estimate, it is required to associate new estimates with existing Platform projects and all the related OBS contents.

NOTE Multiple estimates can be assigned to a single Platform project. In this case, permissions granted to users on a project will be the same permissions for all the estimates belonging to that project.

🕅 Titles 👻 🧔 🖸	olors • 🚱 External Reports • Dutput Settings • 🔀 External References •	Estir	nate	Notes InEight com University		
8	New Job			Platform	projec	ts
Core Project: *	Project A4998		👫 Project ID	Project Name	Status	Created Date
core project:	Project A 4990		Project A4997	Project A4997	New	4/1/2020 3:56:1
Code: *	A4998		Project A4998	Project A4998	New	4/1/2020 3:56:1
		- 1	Project A4999	Project A4999	New	4/1/2020 3:56:1
Description:	Clemson Creek Restoration project	^	Project A5	Project A5	New	4/1/2020 3:52:3
			Project A50	Project A50	New	4/1/2020 3:52:3
			Project A500	Project A500	New	4/1/2020 3:52:4
	Auto-Update Job in Connected Analytics		Project A5000	Project A5000	New	4/1/2020 3:56:1
			×			

This Platform project is used to assign roles for the purposes of granting various permissions.

To grant permissions to a particular user on a Job, go to the User Management page in InEight Platform, edit the user, and then assign the user a role on a project on the Roles tab of the Add or Edit User slide-out panel.

+ Add	i users 🗹 🛞					1 DETAILS	ROLE	S
	First name 1	Le	Status	Roles (10)			(Add
	T			* Role		* Organization/Project	-	
	Partneriy		Active	Estimator	*	organization/rioject	• 0) (
	Partner2		Active	Estimator				
	Partner20		Active			۹. ۹.		
	Partner21	A.	Active	Dev/Ops Administrator			. 0) (
	Partner22	Pá	Active			2023 Clow Creek Shoreline Restoratio		
	Partner23	Pé	Active			2020 Concrete Repairs Program 499	_	
	Partner24	F	Active	Superintendant	•	Bridge Deck Repairs and Shoulder Re-	Θ) (
	Partner25		Active			Springbrook Golf Course Dynamic Sig		
	Partner26		Active			Retaining and Noise Wall Rehabilitation		
	Partner27		Active	Superintendant	•	2020 Clow Creek Shoreline Bestoratio	• 😑) (
	Partner28		Active			<	_	
	Partner29	P	Active	Superintendant	*	Steel Structure Training Job 105091 ×	• 0) (
	Partner3	Pa	Active					
	Partner30	Pé	Active					
	Partner4		Active	Superintendant	*	Steel Structure Partner Job 105094 $\qquad \times$	• Θ) (
	Partner5		Active					
	Partner6		Active			(
	Partner7		Active	Foreman	*	Steel Structure Training Job 3 105093 X	• Θ) (
	Partner8		Active					
	Partner9	P\	Active	Foreman	*	Steel Structure Training Job 2 105092 ×	• 0) (
	Patrick	Sa	Active					
	Paul	br	Active					
	Paul		Active					
	Pavan		Not reg					
	Pavithra		Active			Back Cancel		ave

For more information on managing users, see the User Management section in <u>Roles & Permissions</u> in the Knowledge Library.

NOTE In Estimate on-premise, roles are created and managed in the User Roles register. After the role is created, users can be assigned to the role from the list in the Windows Active Directory Users and Groups in Estimate. The Users assigned role as determined by the currently logged in user is used to grant permissions at the application level. Because Estimate on-premise uses the computer's logged in user in determining the user's role, roles cannot be segregated by job. To enforce job-level security in Estimate on-premise, populate the list of users allowed in the job on the Security tab of the Job Properties form.

3.10.3.1 Organizational Breakdown Structure

Projects in Platform are required to have an Organizational Breakdown Structure (OBS) assignment. The OBS assignments can be utilized for assigning roles and granting permissions to all jobs belonging to a node in the OBS.

In the following example, Johny has been assigned as the Lead Estimator for the Site Work node of the OBS, which grants him the permissions assigned to the Lead Estimator role for every estimate created that belongs to the Site Work node in the OBS.

Roles (1)			(+) Add r
* Role		* Organization/Project	
Lead Estimator	*	Site Work	× • 🖂 (
		▼ Site Work 2023 Clow Creek Shoreling	e Restoration 49
		2020 Concrete Repairs Pr Bridge Deck Repairs and S Springbrook Golf Course D	Shoulder Reconst
		Retaining and Noise Wall	Rehabilitation and 🖕

NOTE Permissions are cumulative, so if a user is assigned multiple roles on a single project, the role with the most permissions is applied when attempting to access various functions.

3.10.4 Granting permissions to destinations and commands

Estimate can grant permissions at a deep-rooted level by assigning which roles can access specific forms. You can also assign certain roles that can perform specific commands or actions that can be performed within those forms.

File Setup	up Estimate	System	Tools Integra	rations	Actions													
Print Preview Export to E Print			UnLink Field	Expand / Collapse	 Acces View 	-	ojects	Accessible Obje Tools	bjects									
	Register O	_			•	Acce	ss con	ntrol Register	0		_				_			
g columns h	here to group	Saved views	ws: Standard View	/	-	Тур	pe in.	- Category is	-						Saved views:	Standard View	/	_
Role Name	ne 🚊	Description					Type	h	Category	n .	<u>1.</u>	Subcategory	in.	Ribbon Nam	me			
Estimator	1	Estimator			*		Com											
Foreman		Foreman						stination										
	ion Settings	Integration Se	ettings			1 1		Access Control	Registr									
IS Role		IS Role						Account Code U										
KN ROLE1		KN ROLE1						Account Record		a Register								
Lead Estin	mator	Lead Estimator	or division					Address Book R										
MLQ-0		test-level 0						Address Book R										
MLQ-1		test-level 1																
MLQ-2		test-level 2						Attachments R										
MLQ-3		test-level 3						Bond Cost Item	A Record									
	Copy w/Add Project							Cash Flow										
NP 1		Estimate Full A	Access					Competitor Rec	cord									
NP-2		NP-2						Competitors										
Role 01-E	-	Role 01-Engin						Connected Ana										
Role 1 - Er	-	Role 1-Engine				→		Cost Breakdown										
Role 2 - Es		Role 2- Estima				4 -				akdown Structur	re (CBS) Register	Form		Cost Breakr	kdown Structure (CE	.85) Register		
	Lead Estimator	Role 3-Lead E				4		Cost Curve Rec										
	Regional Admin	Role 4- Region						Cost Item Asse										
Role 5 - A		Role 5- Admin						Cost Item Asse	embly Re	ecord								
	Settings Admin	Role 6- Setting	-					Cost Item Asse	embly Re	egister								
	Engineer @ Root	Role 7-Engine						Cost Item Reco	ord									
Role 8- Ad		Role 8- Admin	12					Custom Auto Pr	Price Rec	ord								
	3-Snapshots-Add,vi							Customize										
		55						Default Quote R	Record		6							
4					•	4					45							

Permissions are managed in the Access Control Register in the Setup tab of the Library.

This register is a list of accessible objects, which can be used to grant or restrict permissions to various roles. By default, the register is organized by type, then by category. Removing the grouping lets you search for key words using the search capabilities of the register.

Access Control Register	0				-
Orag columns here to group		×	•	PBS 1/18 ©	^ v
Туре	Category	Ribbon Name			
+ Destination	Fuel Cost Record	Fuel Cost Record			
+ Destination	Geographic Area Record	Geographic Area Record			
+ Destination	Haul Calculator Record	Haul Calculator Record			
+ Destination	Job Properties	Job Properties			
+ Destination	Job Register	Job Register			
+ Destination	Job Snapshots	Job Snapshots			-
+ Destination	Job Status Register	Job Status Register			
+ Destination	Main Form	Main Form			-
+ Destination	Microsoft Excel	Microsoft Excel			
+ Destination	Organizational Category Record	Organizational Category Record			
+ Destination	Pay Item & Proposal Register	Pay Item & Proposal Register			
+ Destination	Pay Item Record	Pay Item Record			
+ Destination	PBS Change Record	PBS Change Record			
+ Destination	PBS Changes Register	PBS Changes Register			
+ Destination	Period Resource Quantities	Period Resource Quantities			
+ Destination	Price % Add-On Record	Price % Add-On Record			
+ Destination	Price Breakdown Structure	Price Breakdown Structure			-
+ Destination	Price Category Record	Price Category Record			
+ Destination	Quantity Roll-Up Record	Quantity Roll-Up Record			
+ Destination	Quote Comparison & Award - Cost items	Quote Comparison & Award - Cost items			
+ Destination	Ouote Comparison & Award - Resources	Ouote Comparison & Award - Resources			

The Type of the accessible object is one of the following:

• **Command:** Actions that are in the main ribbon navigation.

• **Destination:** A form or location within the application. Restricting this type of permission means that all the actions that are available in the form are unavailable.

• **Register Command:** These are the commands that appear for the specified register and are commonly accessed either by using the actions menu in the navigation ribbon when the register is active or using the right-click context menu commands on the records in a register.

Categories and subcategories can be used to further group and identify various accessible objects.

The Ribbon Name column provides the navigation path and name of the object as it appears in the ribbon navigation. The Show Classic Navigation Accessible Objects button on the Actions tab of the Access Control register can be used to identify accessible objects as they might have existed in the legacy version of Estimate, and are still available to assist users who may have set up Access Control prior to the newer ribbon navigation.

Follow these steps to set up Access Control on an Accessible object:

1. Identify the role or roles in the User Roles register, then right-click to copy.

Iser Roles Register O			ho	cess Control Regis	ter U	
ag columns here to group	Saved views: Standard View	•	Ту	pe 🗽		× Enter text to search
Role Name 🚊	Description			Type in	Category	Ribbon Name
Estimator	Estimator	*	_	+ Destination	Job Status Register	Job Status Register
Foreman	Foreman			+ Destination	Main Form	Main Form
Integration Settings	Integration Settings	L.	}	+ Destination	Microsoft Excel	Microsoft Excel
IS Role	10 TOP -	fields to Excel		+ Destination	Organizational Category Record	Organizational Category Record
KN ROLE1	KN ROLE1	om Excel	_	+ Destination	Pay Item & Proposal Register	Pay Item & Proposal Register
Lead Estimator	Lead Estimator division			+ Destination	Pay Item Record	Pay Item Record
MLQ-0	test-level 0			+ Destination	PBS Change Record	PBS Change Record
MLQ-1	test-level 1		.	+ Destination	PBS Changes Register	PBS Change Register
MLQ-2	test-level 2		17	+ Destination	Period Resource Quantities	Period Resource Quantities
MLQ-3	test-level 3			+ Destination	Price % Add-On Record	Price % Add-On Record
MLQ-3- Copy w/Add Projects	test-level 3			+ Destination	Price Breakdown Structure	Price Breakdown Structure
NP 1	Estimate Full Access			+ Destination	Price Category Record	Price Category Record
NP-2	NP-2			+ Destination	Quantity Roll-Up Record	Quantity Roll-Up Record
Role 01-Engineer	Role 01- Engineer			+ Destination	Quartery Roirop Record	Quote Comparison & Award - Cost items
Role 1 - Engineerr	Role 1-Engineer			+ Destination	Quote Comparison & Award - Cost items	Quote Comparison & Award - Resources
Role 2 - Estimatorr	Role 2-Estimator			+ Destination	Quote Comparison & Award - Resources Quote Cost Item Record	Quote Companison & Award - Resources Ouote Cost Item Record
Role 3 - Lead Estimator	Role 3-Lead Estimator			+ Destination	Quote Cost Item Record	Quote Cost Item Record Quote Group Tag Record
Role 4 - Regional Admin	Role 4- Regional Admin			+ Destination	Quote Group Tags Register	Quote Group Tag Register
Role 5 - Adminn	Role 5- Admin			+ Destination	Quote Group Tags Register	Quote Group Tags Register
Role 6 - Settings Admin	Role 6- Settings Admin				•	•
Role 7 - Engineer @ Root	Role 7-Engineer @ Root			+ Destination	Quote Register	Quote Register
Role 8- Admin 2	Role 8- Admin 2			+ Destination	Quote Resource Item Record	Quote Resource Item Record
SJ- Role3-Snapshots-Add,vi	SJ-Role3			+ Destination	Reports	Reports
	as a liter to still hereitige r	¥		+ Destination	Request for Quote (RFQ) Record	Request for Quote (RFQ) Record
55				+ Destination	Request for Quote (RFQ) Register	Request for Quote (RFQ) Register

2. Select one or more accessible objects in the Access Control register and right-click to paste.

	r Roles Register 0		•	-	ess Control Register	•			
9	columns here to group	Saved views: Standard View -		Тур	e iii.			× Enter text to se	
	Role Name 🚊	Description			Type in.	Category	Ribbon Name		
	Estimator	Estimator	•		+ Destination	Job Status Register	Job Status Register		
	Foreman	Foreman			+ Destination	Main Form	Main Form		
	Integration Settings	Integration Settings			+ Destination	Microsoft Excel	Microsoft Excel		
	IS Role	IS Role			+ Destination	Organizational Category Record	Organizational Category Record	d	
	KN ROLE1	KN ROLE1			+ Destination	Pay Item & Proposal Register	Pay Item & Proposal Register	-	
	Lead Estimator	Lead Estimator division			+ Destination	Pay Item Record	Pay Item Record		
	MLQ-0	test-level 0		+ I	+ Destination	PBS Change Record			
	MLQ-1	test-level 1		1	+ Destination	PBS Changes Register	TOT Charges Desirity	New	
	MLQ-2	test-level 2		1.1	+ Destination	Period Resource Quantities	Period Resource Quantitie	Delete	
	MLQ-3	test-level 3			+ Destination	Price % Add-On Record	Price % Add-On Record	Cut	
	MLQ-3- Copy w/Add Projects	test-level 3			+ Destination	Price Breakdown Structure	Price Breakdown Structure	Сору	
	NP 1	Estimate Full Access			+ Destination	Price Category Record	Price Category Record	Paste	
	NP-2	NP-2			+ Destination	Quantity Roll-Up Record	Quantity Roll-Up Record +	Eill Down	
	Role 01-Engineer	Role 01- Engineer			+ Destination	Quantity Koli-Op Record Quote Comparison & Award - Cost items	Quote Comparison & Awa	Link these fields to Excel	
	Role 1 - Engineerr	Role 1-Engineer						Quote Comparison & Awa	UnLink from Excel
	Role 2 - Estimatorr	Role 2- Estimator			+ Destination	Quote Comparison & Award - Resources			
	Role 3 - Lead Estimator	Role 3-Lead Estimator			+ Destination	Quote Cost Item Record	Quote Cost Item Record		
	Role 4 - Regional Admin	Role 4- Regional Admin			+ Destination	Quote Group Tag Record	Quote Group Tag Record		
	Role 5 - Adminn	Role 5- Admin			Destination	Quote Group Tags Register	Quote Group Tags Register		
	Role 6 - Settings Admin	Role 6- Settings Admin			+ Destination	Quote Record	Quote Record		
	Role 7 - Engineer @ Root	Role 7- Engineer @ Root			+ Destination	Quote Register	Quote Register		
	Role 8- Admin 2	Role 8- Admin 2			+ Destination	Quote Resource Item Record	Quote Resource Item Record		
	SJ- Role3-Snapshots-Add,vi	SJ-Role3			+ Destination	Reports	Reports		
		and the the the transfer of the	Ŧ		+ Destination	Request for Quote (RFQ) Record	Request for Quote (RFQ) Reco		
	55				+ Destination	Request for Quote (RFQ) Register	Request for Quote (RFQ) Regis	ster	

3. Expand the detail records of the accessible objects to verify the role assignments have been correctly made.

har	columns here to group	Saved views: Standard View							It Cohe built and
				Type	2 10.				× Enter text to search
	Role Name 🚊	Description		7	Type		in.	Category	Ribbon Name
	Estimator	Estimator	-	4	+ D	lestin	nation	Job Status Register	Job Status Register
	Foreman	Foreman	-	4	+ D	lestin	nation	Main Form	Main Form
	Integration Settings	Integration Settings	-	4	+ D	estir	nation	Microsoft Excel	Microsoft Excel
	IS Role	IS Role	-	4	+ 0	lestir	nation	Organizational Category Record	Organizational Category Record
	KN ROLE1	KN ROLE1		4	+ 0	estir	nation	Pay Item & Proposal Register	Pay Item & Proposal Register
	Lead Estimator	Lead Estimator division		4	+ D	estir	nation	Pay Item Record	Pay Item Record
	MLQ-0	test-level 0		× F	- D	lestir	nation	PBS Change Record	PBS Change Record
	MLQ-1	test-level 1	-		T		Role		
	MLQ-2	test-level 2	-		1		Lead Estimat	tor	
	MLQ-3	test-level 3	-				Estimator		
	MLQ-3- Copy w/Add Projects		-	١r.		estir	nation	PBS Changes Register	PBS Changes Register
	NP 1	Estimate Full Access	4		T	_	Role		
	NP-2	NP-2	-		1		Estimator		
	Role 01-Engineer	Role 01- Engineer	-				Lead Estimat	har	
	Role 1 - Engineerr	Role 1-Engineer	-		-	_	nation		Daried Description Octobilities
	Role 2 - Estimatorr	Role 2-Estimator		-	-			Period Resource Quantities	Period Resource Quantities Price % Add-On Record
	Role 3 - Lead Estimator	Role 3- Lead Estimator					nation	Price % Add-On Record Price Breakdown Structure	Price % Add-On Record Price Breakdown Structure
	Role 4 - Regional Admin	Role 4- Regional Admin		-			nation		
	Role 5 - Adminn	Role 5- Admin		1			nation	Price Category Record	Price Category Record
	Role 6 - Settings Admin	Role 6- Settings Admin		1			nation	Quantity Roll-Up Record	Quantity Roll-Up Record
	Role 7 - Engineer @ Root	Role 7- Engineer @ Root	_	-	-		nation	Quote Comparison & Award - Cost	
	Role 8- Admin 2	Role 8- Admin 2		1			nation	Quote Comparison & Award - Reso	
	SJ-Role3-Snapshots-Add,vi	SJ-Role3		1			nation	Quote Cost Item Record	Quote Cost Item Record
		as a list in all handware a li					nation	Quote Group Tag Record	Quote Group Tag Record

NOTE You can drag and drop the Roles onto the accessible objects in these two registers.

If no roles are assigned to an accessible object, no restrictions are applied to the accessible object, and anyone with access to the application will be able to access that destination or command. When setting up Access Control, be sure to identify the commands and destinations in Estimate that you want to restrict permissions to, and then assign the roles to explicitly grant permissions to those accessible objects

In the following example, both Estimators and Lead Estimators are permitted to invoke any of the actions on the records in the PBS Changes Register, but only the Lead Estimator is permitted to activate or deactivate the PBS Changes Log. Because no roles have been assigned to the *Activate 'View Change Record'* prompt, anyone with access to the application will be able to perform that action.

ser	Roles Register O		•	Acc	ess (Control Register	0				
ag	columns here to group	Saved views: Standard View -		Typ	pe 🖮				×	PBS	17/1
	Role Name 🚊	Description		-	Туре	e <u>i</u>	Category	Ribbon Name			
	Estimator	Estimator				c = Register Command	PBS Changes Register	Actions > Edit > Copy			
	Foreman	Foreman				Register Command	PBS Changes Register PBS Changes Register	Actions > Edit > Copy Actions > Edit > Cut			
	Integration Settings	Integration Settings						Actions > Edit > Cut Actions > Edit > Delete			
1	IS Role	IS Role				Register Command	PBS Changes Register				
1	KN ROLE1	KN ROLE1				Register Command	PBS Changes Register	Actions > Edit > Fill Down			
	Lead Estimator	Lead Estimator division			- R	Register Command	PBS Changes Register	Actions > Edit > New			
1	MLQ-0	test-level 0				Role					
1	MLQ-1	test-level 1	_			→ Lead Estimator					
1	MLQ-2	test-level 2				Estimator					
	MLQ-3	test-level 3			- R	Register Command	PBS Changes Register	Actions > Edit > Open			
Ĩ	MLQ-3- Copy w/Add Projects	test-level 3				Role					
1	NP 1	Estimate Full Access				→ Lead Estimator					
1	NP-2	NP-2				Estimator					
1	Role 01-Engineer	Role 01- Engineer			- P	Register Command	PBS Changes Register	Actions > Edit > Paste			
	Role 1 - Engineerr	Role 1- Engineer				Role					
ī	Role 2 - Estimatorr	Role 2- Estimator				→ Lead Estimator					
1	Role 3 - Lead Estimator	Role 3- Lead Estimator				Estimator					
1	Role 4 - Regional Admin	Role 4- Regional Admin			- F	Register Command	PBS Changes Register	Actions > Tools > Activate Changes Log			
1	Role 5 - Adminn	Role 5- Admin				Role					
1	Role 6 - Settings Admin	Role 6- Settings Admin				→ Lead Estimator					
1	Role 7 - Engineer @ Root	Role 7- Engineer @ Root		->	+ p	Register Command	PBS Changes Register	Actions > Tools > Activate 'View Change Re	cord" Pro	mpt	
1	Role 8- Admin 2	Role 8- Admin 2			— p	Register Command	PBS Changes Register	Actions > Tools > Deactivate Changes Log			
1	SJ- Role3-Snapshots-Add,vi	SJ-Role3				Role					
		AS A 1 477 1 4 11 11 11 AVAILANDA A 1 4	Ŧ			→ Lead Estimator					
	55				+ 5	Peninter Command	Drojacte	(Context Manu) > Conv			

3.10.5 Granting permissions to the Estimate Library

In Platform, permissions relating to the Estimate library are found in the Master data libraries permission section.

Suite administration / Roles and permiss Roles and permissions > Cdit role							Cancel	
Role details								
Name Account Administrator- All Roles	Description Account Administrator	* Administrator level Level 3 - Account Admin	· ①					
Permissions								
Suite administration								
Organization and project								
Master data libraries								
Select all						Search	h	
Account code structure	✓ Select all	Contacts		✓ Select all	Cost categories		2	Select a
	Î	 ☑ (●) View contacts ☑ (●) Add contacts ☑ (►) Edit contacts ☑ Promote contact to user ▲ ☑ Promote contact to user ▲ 			 ☑ Wiew cost categories ☑ Edit cost categories 			
Cost centers	✓ Select all	Currency		✓ Select all	Disciplines and commodities			Select al
		 Were currency Add currency Edit currency Edit currency Delete custom currency 			 Wiew disciplines and commodities Add disciplines and commodities Edit disciplines and commodities Delete disciplines and commodities 			
Estimate	🗹 Select all	Field attributes		🛃 Select all	General ledger accounts		2	Select all
 Z ≤ Édit estimate library A Add template A Z ≤ Édit template A Delete template 		 Wiew field attributes Add field attributes Edit field attributes Edit field attributes Delete field attributes 			 Wiew general ledger accounts Add general ledger accounts Edit general ledger accounts Orlete general ledger accounts 			
2023 InEight Inc. Privacy Statement Terms & Co	onditions v 23.2							INE

To grant Estimate library permissions to a role, the role must be an Administrator Level 3 - Account Admin. If not, the permissions are not selectable on the Add/Edit Role setup page.

Roles and permissions > Add role			
Role details			
Name	Description	* Administrator level	
Estimate Administrator		Level 3 - Account Admin	• ()
		Level 0 - Base	
Dermissione		Level 1 - Project Admin	
Permissions		Level 2 - Organization Admin	
		Level 3 - Account Admin	6
Suite administration			10
Organization and project			

The Master data libraries permission section is also where the permissions controlling which roles can manage templates are found.

3.10.6 Common roles used when securing an Estimate

The process of creating an estimate for a bidding opportunity commonly requires unrestricted access to the capabilities of Estimate so that estimators can work efficiently. However, depending on the level of data governance within an organization, you might want to preclude certain users from accessing some of the more sensitive parts of Estimate. If changes were made, either accidentally or otherwise, it could impose detrimental impacts on the organization.

Estimate's security model is very detailed and robust. When designing a security model that restricts certain features and functionality of Estimate, each company must weigh the benefit of the protection of such restrictions which could bring unwanted or uncontrolled changes and negatively impact the productivity of the estimating process. While it is possible to create a very detailed and robust security model with many different roles for individuals within an organization, it is not necessary to set up and maintain roles for all of Estimates accessible objects. It is likely a company can effectively secure their sensitive data with no more than a couple roles granting permissions to a few commands and destinations.

A common way to implement security on the Estimate application is to restrict access to certain system level settings, such as who can modify data in the library, or who can change any company specified custom column captions. The following are some of the more common Roles a company may set up, describing the purpose of the role and typical permissions:

- Lead Estimator: Lead Estimators are commonly assigned to estimates based on their knowledge and experience. They may be precluded from creating or deleting estimates themselves or changing any system level settings, but commonly have full access to all the capabilities needed to create and maintain the estimates they are assigned to.
- Estimate Manager: Estimate Managers are commonly responsible for identifying bidding opportunities and determining which opportunities to pursue. Once it has been determined that the company will pursue an opportunity, the Estimate Manager creates the estimate and assign it to a Lead Estimator based on resource availability relative to all the bidding opportunities the company will be pursuing. These roles manage the creation of estimates and assist in ensuring all the necessary supporting data is available, such as assigning appropriate project attributes or including needed resource libraries.
- Administrator: Administrators ensure accessibility and availability of the solutions utilized by estimators. Typically, they control system level settings and activities that would affect company standards, such as changing column captions, ability to define corporate views, list of job statuses and ribbon settings. Other typical permissions restricted to only the Administrator level roles are the ability to access the User Roles register and the Access Control register.

Lesson 3 Review

- 1. When you create a new job folder, all category labels defined in the Library Foundation Setup Data Register will be copied to the new job folder automatically.
 - a. True
 - b. False
- 2. This resource type is a catch-all and can be used for anything from dump fees and security to creating subcontractors as a resource.
 - a. Installed Materials
 - b. Unique
 - C. Labor
 - d. Construction Equipment
- 3. The Construction Equipment and Rented Construction Equipment Resource Rate Records include consumption rates that will factor with the fuel cost you define where?
 - a. Library Foundation Setup Data
 - b. Library Resource Rates
 - C. Job Properties
 - d. Cost Breakdown Structure

Lesson 3 Summary

As a result of this lesson, you can define, adjust and explain:

- Library Job Properties
- Library Foundation Setup Data Register
- Library Resource Rate Register
- Library Assembly Register



LESSON 4 – PROJECT SETUP

Lesson Duration: 45 minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Create a new project
- Enter Job Properties
- Create pay items in the Pay Item & Proposal Register

Lesson Topics

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Lesson 4 Review	
Lesson 4 Summary	

4.1 JOB CREATION

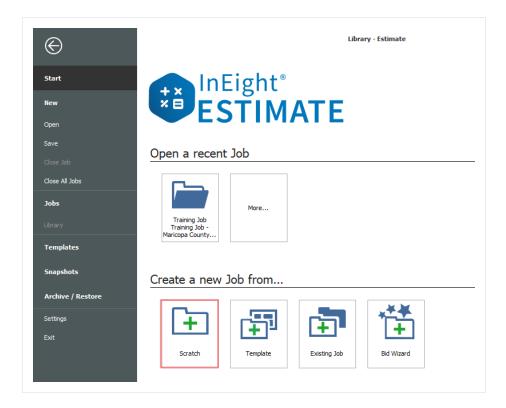
4.1.1 InEight on-premise

As discussed in Lesson 1, a job folder contains all pertinent information for a single project, and it is independent from any other job. When you create a new job folder, all your estimating and managing of the project will be stored in that folder.

First, you will create a new job from scratch.

Step by Step — Create a New Job

 From the InEight Estimate Backstage view, under the Create a new Job from... section, select Scratch, or select New > Scratch from the left sidebar menu.



- 2. On the New Job dialog, name the **Code** field.
 - The Job Code must be unique to differentiate between projects

- 3. Type in a **description** in the Description field.
- 4. When you create a new job, you can choose to auto-update the job in Connected Analytics. You do not need to manually select the Connected Analytics option to auto-update it.

8	New Job
Code: *	E101 - Training job PT
Description:	Sample Training Job
	~
	Auto-Update Job in Data Warehouse
	OK Cancel

5. Click **OK** to create the new project.

4.1.2 InEight in the Cloud

4.1.2.1 Platform project association

You can associate your estimates with additional master data, such as project data from the Project details page in Platform. Associating Platform projects lets you organize estimates directly from Platform's Organizational Breakdown Structure (OBS). Your location assignment in the OBS determines the access you inherit and the visibility you have to other areas of the OBS.

Extracting Platform project master data directly into Estimate promotes data consistency and helps ensure that the data is being pulled from a single source of truth.

● Save ③ Save ③ Titles	s- ÖC	iolors • 🚱 External Reports • Autput Settings • 🕥 External References • stomize	Estir	About E About E Bala About E Bala Bal	Notes InEight com University		
6	ì	New Job			Platform	orojec	ts
	Core Project: *	Project A4998		A Project ID	Project Name	Status	Created Date
	Core Project:	Project A4990	-	Project A4997	Project A4997	New	4/1/2020 3:56:1
	Code: *	A4998		Project A4998	Project A4998	New	4/1/2020 3:56:1
			<u> </u>	Project A4999	Project A4999	New	4/1/2020 3:56:14
	Description:	Clemson Creek Restoration project	۰	Project A5	Project A5	New	4/1/2020 3:52:36
				Project A50	Project A50	New	4/1/2020 3:52:33
			- 1	Project A500	Project A500	New	4/1/2020 3:52:4
		Auto-Update Job in Connected Analytics	- 1	Project A5000	Project A5000	New	4/1/2020 3:56:14

Platform project specific master data can be maintained in one place, then it can flow directly into Estimate in the Cloud. Certain project data such as location and forecast start and finish dates are now maintained in Platform which helps to enforce data consistency and reduce duplicate entries.

The fields that are located in Setup > Job Properties > **Overview** that are maintained in Platform and integrate into Estimate consist of: Project ID, Organization, and Notes. The fields on the Estimate Cover Sheet tab include Location, State, City, Country, and Latitude and Longitude, Forecast Start and Finish, and Duration.

Overview	Cover Shee	t Cost Basis	Minority Setup	Fuel Cost					
Cod	498536	version 1							
Project I	D: <u>498536</u>								
Descriptio	on: 2020 Cl	ow Creek Shorelir	ne Restoration Project						
			Overview	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Folder Tags	Pric
			Identificati	ion					
			Loc	ation: Scottsd	ale, AZ				
Note	es: Shorelin	e Restoration pro	pject						
				City: Scottsd	ale				
			Co	ounty:					
			Co	untry: United	States O 👻]			
				unary. Onited.	States U]			
				State: Arizona	Ŧ				
			Lat	itude:				41.	77287

The Project ID field in Estimate is a hyperlink field that takes you directly to the project Details page in Platform.

Overview	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Folder Tags			
			Haroncy Setup	ruercost	Joorroider rags			
		1				_		
	Properties 0 rview Cover Sheet Code: 4985362 Project ID: 585562 escription: 2020 to Notes: The project							
			-	-				
	The projec	E û				as 162 / Project details		ଡ ଦ୍ ⁶ ଛ ତ
		All projects	s & organizations	Edit	project <	DETAILS		
						(Project settings Cancel Sav
		Projec	t details			/	_	
					1º	* Project ID		Notes
					and the	4985362		The project includes shoreline stabilization and revegetation of native turf grasses in designated areas to restore impaired ecological function to the impacted area
		-	and a		and the second second	* Name		
						2020 Clow Creek Shoreline F		
		The way	2 Julyon		allen M	* Phase 💡		

When modifications are made to any of the integrated fields in Platform, then saved, the changes automatically show in Estimate. For example, if you need to change the name of the project in Platform to show the year 2023 instead of 2020, this change is reflected in the in the Job Properties > **Project Name** field form in Estimate.

Project details	
(* Project ID
	4985362
	* Name 2023 Clow Creek Shoreline Restoration
	* Phase Job Properties O
	Overview Cover Sheet Cost Basis Minorit e Cash Flow Equipment Maintenance Benchmarking Code: 4985362-v1
	Project ID: 4985362 Project Name: 2023 Clow Creek Shoreline Restoration
	Description: 2020 Clow Creek Shoreline Re

4.1.2.2 Job Register Management

An advantage to associating Estimate with Platform project data is the capacity to manage multiple versions of Estimates from one source project.

For example, if you have multiple addendums issued for the same project, you can maintain a version of the estimate for each addendum you've received.

Jo	b Register 🛛 🔘							
Dra	g columns here to	o group						
	Project ID	Description	<u> </u>	Country	State	City	Latitude	Longitude
	4985362	2020 Clow Creek Shoreline Restoration - Per Addendum 1		United Stat	Illinois	Naperville	41.77287	-88.14793
	4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 2		United Stat	Illinois	Naperville	41.77287	-88.14793
	<u>4985362</u>	2023 Clow Creek Shoreline Restoration - Per Addendum 3		United Stat	Illinois	Naperville	41.77287	-88.14793
	<u>4985362</u>	2023 Clow Creek Shoreline Restoration - Per Addendum 4		United Stat	Illinois	Naperville	41.77287	-88.14793
	4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 5		United Stat	Illinois	Naperville	41.77287	-88.14793

Grouping estimates together using a common project means there is no need to structure and enforce a job coding schema in Estimate on the Job Code, or use tag fields or user defined fields to identify and manage different versions of a project in the Job register.

Pro	oject ID 🛓							
_								
	Proj =	Description	<u> </u>	Country	State	City	Latitude	Longitude
	🛙 Unassigne							
÷	■ 4985362							
	<u>4985362</u>	2020 Clow Creek Shoreline Restoration - Per Addendum	L	United Stat	Illinois	Naperville	41.77287	-88.1479
	<u>4985362</u>	2020 Clow Creek Shoreline Restoration Project - Original	Estimate	United Stat	Illinois	Naperville	41.77287	-88.1479
	4985362	2020 Clow Creek Shoreline Restoration Project - Per Adde	ndum 1	United Stat	Illinois	Naperville	41.77287	-88.1479
	4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 2	2	United Stat	Illinois	Naperville	41.77287	-88.1479
	4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 3	3	United Stat	Illinois	Naperville	41.77287	-88, 1479
	4985362	2023 Clow Creek Shoreline Restoration - Per Addendum	÷	United Stat	Illinois	Naperville	41.77287	-88.1479
	4985362	2023 Clow Creek Shoreline Restoration - Per Addendum	5	United Stat	Illinois	Naperville	41.77287	-88.1479
	4985922							
	4992404							
	4996059							

Job register grouped by Platform project

Grouping by organization lets you see projects batched in an organizational breakdown level, and lets you see a listing of projects in an organizational breakdown format and projects derived in Platform.

Or	ganization 🚋			/	ric.	vious View	کر -
	Organization	Source Job	Project Name	Description	de	Status	Schedule
÷	Unassigned						
	Estimate Infrastructure						
	Estimate Mining						
•	Estimate Power						
	Estimate Power	נד	SR-2023FEB	restored tj	.00000	Bidding	Microsoft Proj
	Estimate Power	SaaS-FullImport232	SR-DBt		2.07414	Bidding	Primavera
	Estimate Power	DWH-2	SR-2023FEB	SR-2023FEB	00000	Bidding	Microsoft Proj
	Estimate Power	SR-Job2	SR-2023FEB	from existing	0000	Bidding	Microsoft Proj
	Estimate_Infrastructure_South Central	I.)			
•	5100000 - PKS Inc						
	S100000 - PKS Inc		Rail	Rail	00000	Bidding	Microsoft Proj
	S100000 - PKS Inc		S1201name	S1201	0.00000	Bidding	Microsoft Proj
	S100000 - PKS Inc	SR-Job3	03102022	03102022	.00000	Bidding	Microsoft Proj
	S100000 - PKS Inc	KwtSaaS2212-Sel	226-SR		0000/	Bidding	Primavera
	S100000 - PKS Inc	DB-0209	New project name: 2:38	SR-TEST API-123	000	Bidding	Manual
	S100000 - PKS Inc		new proj	API Job from Import	000	Bidding	Microsoft Proj
				/			

4.2 JOB PROPERTIES

When you create a new project, the **Job Properties** form automatically displays. This is where you can enter basic information about the project. To open the Job Properties form at any other time, on the InEight Estimate landing page, select the **Setup** tab and click **Job Properties**.

4.2.1 Overview Tab

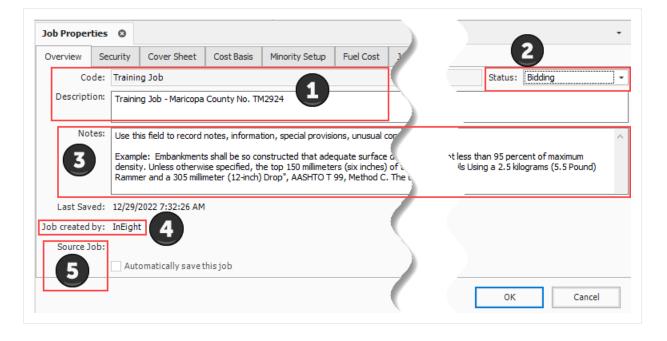
The Job Properties form opens to the Overview tab.

Overview – Overview Tab

	Name	Description
1	Job Code and Description	 Contain the information you entered on the New Job dialog. The Description can be changed at any time if necessary The Code cannot be changed
2	Status	Indicates where in the process this project is (e.g., Bidding, Awarded, etc.)When searching for jobs in the Job Folders list, you can filter and sort jobs by their status

Overview – Overview Tab (continued)

	Name	Description
		 These job statuses can be adjusted to fit your company requirements in the Jobs Register, Tools Menu, Job Statuses.
3	Notes	 Used to document project specifics. Information in this field is created in InEight Estimate and it is not integrated with other programs
4	Job created by	Indicates the user or entity that initially created the job.
5	Source Job	The name of the original job that the job was copied from.



NOTE When you copy a job, the new job shows the name of the person who created the copied job, and the name of the source job the job was copied from.

4.2.2 Security Tab

When you set up the job, you can secure it so only those working on the estimate will have access. You can adjust security at the field level or at the job level.

The following steps walk you through how to set up security. For now, you will leave the Security tab as is without making any specific selections; however, the following steps guide you through making any security changes when needed in the future.

Step by Step — Set Up Job Level Security

- 1. On the Job Properties > Security tab, select the **Restrict access to this Job...** check box.
 - Notice the checkbox to "Allow ALL users with Bid Wizard access to use this job as a source" is checked by default. Make sure to keep this checked as well
- 2. Click the Add Users / Groups button to add users.
- 3. In the Select Users or Groups dialog, type the **email addresses** for those that need access and then click **OK**.
 - If you don't know the email address, you can type the name of the user, and click the Check Names box to find the appropriate user

Resource /	Assembly R	legister	Job Properti	es Ø								
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	C 4	
Estimate P	rotection											
Enable	e field level e	estimate protect	ion	Passwo	rd:							
User Acces	ss											
🗹 Restri	ict access to	this job to the fo	ollowing users		Allow .	ALL users with B	id Wizard access to	use this job as	a source			
Users allo	owed in this	iob:						(2			
		ni@INEIGHT.CON	4									_
user • Sus	ian, cappellor	INGINEIGHT.COM	4	_					Ad	ld Users / Gr	oups	
				-					Romouro	Salacted Up		
				-					Remove	e Selected Us	ers / Gro	up
									Remove	Selected Us	ers / Gra	up
									Remove	e Selected Us	ers / Gro	up
				_					Remove	e Selected Us	ers / Gro	up
									Remove	Selected Us	ers / Gro	up
									Remove	e Selected Us	ers / Gro	up

• The job can now only be opened by those listed under Users allowed in this job

4.2.3 Cover Sheet Tab

The Cover Sheet tab is where you can define much of the general information about the project. It includes fields to identify the job's location, contacts, and bid details.

The following fields are available:

- Job Location
- City, County, Country, Province/State
- Job Type
- Engineer
- Owner
- Architect
- Forecast Start and Forecast Finish
- Bid Date and Bid Time
- Bid Location
- Estimator
- Opening Type and Proposal Type
- Liquidated Damages (if applicable)

					_									
Overview	Security	Cover Sheet	Cost Basis	Minority Set	up F	uel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	Cash Flow	Equipment	4
Identificati	on													
Loci	ation: I-1	0 MP 100 to MP 1	20	Type:	Highwa	y and Gen	eral Engineering			Contra	act Duration:			1
City: Phoenix			Engineer:	Engineer: Example Engineer Fred Jones						Time Measure: Contract Days 👻				
Co	ounty: Ma	ricopa		Owner:	Example	e Owner	Jerry Slate			E Fo	recast Start:	1/6/2014	•	
Cor	untry: Ur	ited States	•	Architect:	Example	e Architect	Robert Frost			I For	ecast Finish:	6/5/2014	•	
5	State: Ar	izona	•								Duration:			3
Lati	itude:		0.00000											
Long	itude:		0.00000											
Proposal														
Bi	d Date:	12/23/2013	•					Opening Type:	Public					
Bi	d Time: 1	: 10:00:00 PM						Proposal Type:	Unit Price					_
Est	imator:	Example Prime Cor	ntractor 1 To	m Cross				Plan Holders:						

The fields on this tab can be helpful for historical reference and job classification. It is good practice to complete as many of these fields as possible, so you can reference and find the project later. These fields can be updated as needed at any time.

4.2.4 Cost Basis Tab

The Cost Basis tab has some important settings that will affect how costs are calculated in your estimate. The settings reviewed below are the ones you need to consider.

	Name	Description
1	Standard Shift Arrangements	The default standard shift arrangements are set up as 8 hours per shift, 1 shift per day, and 5 days per week; this can be changed if a project requires a different standard shift arrangement.
2	Standard Wage Rate Composite:	Allows you to indicate what percentage of your labor hours will be regular time (Scale 1), overtime (Scale 2) or double time (Scale 3). You can enter these percentages manually, or you can use the Shift Rate Calculator to obtain a more accurate figure.
3	Lock Cost Items to Pay Items:	For this sample job, you will check this box. When Cost Items are locked to Pay Items, your level 1 estimate structure is controlled by your list of pay items.
4	Default Currency:	The default will be set to U.S. Dollar, but this can be changed if needed.
5	Sales Tax Rate:	This field is not required but may be used to automatically apply a sales tax to all your material and rental items. The default is set to zero.

Cost Basis Tab Overview

verview Secure Cover Sheet	Cost Basis	Min 2 etup	Fuel Cost	Job Tracking	Job Folder Tag	3 Competitors	Pricing	Schedule	Cash Flow	Equipment	
Standard Shift Arrangements Work Hours per Shift 8.00 Pay Hours per Shift: 8.00	Standard Wage Rate Composite Scale 1: 100.00 % Scale 2: 0.00 % Scale 3: 0.00 % Shift / Rate Calculator			Rules ✓ Lock Cost Items to Pay Items Pay Item Unit Price Precision: Pay Item Unit Price Precision: Activate PBS Changes Log Activate PBS Changes Log Activate Quantity Checking Maintain CBS Structure at Level: Men man-count changes: O change UM / Man-Hour O change Days							
Shifts per Day: 1.00 Days per Week: 5.00											
Currency Default Currency: U.S. Dollar Resource / Assembly Filter 4				ndard Rates Sales Tax Rate:		5.00 %]				
Labor Rate	source / Assen [All] [None]		Geographic A		Wage Zone				egory ^	Import Filte Resource	

4.2.5 Shift Rate Calculator

Take a closer look at calculating your shift rates using the Shift Rate Calculator. For this example, you will walk through setting up 2 shifts for your project.

Step by Step — Shift Rate Calculator

1. On the Job Properties > Cost Basis tab, select the **Shift Rate Calculator** button.

Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	Cash Flow	Equipment	4
Work Ho Pay Hou Shi	Shift Arrange urs per Shift Irs per Shift: fts per Day: s per Week:	8.00 8.00 1.00	Scale 1 Scale 2 Scale 3	: 0.00 %		es Lock Cost Items Pay Item Unit Pr Activate PBS Cha Activate Quantity Maintain CBS Str When man-count	ice Precision:	2 0 Change UM / M) Change Days	an-Hour	Preserv Data So	e Original Cos urce	t Item	
Currency Default	Currency:	U.S. Dollar			-Sta	ndard Rates Sales Tax Rate:		0.00 %					

- 2. For Shift 1, type a number value of hours in the Monday through Friday Work Hours fields.
 - · You can enter up to three shifts for the project
- 3. For Shift 1, type a **number value** of hours in the **Scale 1** fields.
 - Scale 1 will be your regular time and Scale 2 will be any overtime

گ Acti	ions		Shift / Rate	Calculator Re	cord - Training	j Job		E –	
<u>ب</u>	Copy Calculator from Library								
îг с	Copy Calculator to Library								
•	Clear All								
-	Tools								
	Shift Rate Calculator Name:	[Enter Name]							
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Totals
	Shift 1								101010
,	Shift 1 Work Hours	10.00	10.00	10.00	10.00	10.00	0	0.00	
,		10.00	10.00	10.00	10.00 0.00	10.00 0.00	0.00	0.00	50.00
,	Work Hours								50.00

- 4. Enter a number value for hours in the Scale 2 fields (just Monday through Friday).
- 5. For Shift 2, type a **number value** for hours as you did above in Step 3.
- 6. Click OK.

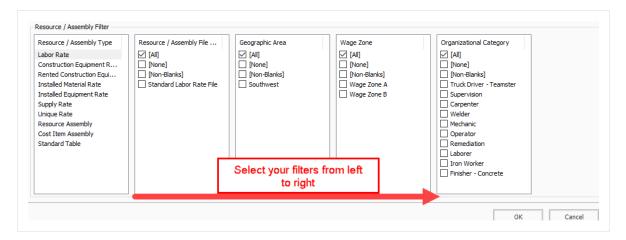
Shift 2								
Work Hours	12.00	12.00	12.00	12.00	12.00	0.00	0.00	60.00
Scale 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scale 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scale 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

• Now you have a blended shift arrangement, and your labor rates are a blend of 64.18% straight-time and 35.82% overtime

Job Proper	ties 🛛				
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fue
-Standard S	hift Arrange	ments	-Standard Wa	ge Rate Composite	-
Work Hou	ırs per Shift	11.17	Scale 1:	64.18 %	
Pay Hou	rs per Shift:	11.17	Scale 2:	35.82 %	
Shit	fts per Day:	1.71	Scale 3:	0.00 %	
Days	s per Week:	7.00	Shift /	Rate Calculator	

4.2.6 Import Filtered Resources

You may have noticed the bottom portion of your Cost Basis tab called the Resource Filter.



The Resource Filter portion of the Cost Basis tab is the most important part of Job Properties. You use it to import your labor, equipment, and materials from the Library. Until you import filtered resources, you have no resources (labor, equipment, materials) in your project.

Updated resource rates can be imported into the Library on a regular basis. It is important to update and have the "Latest & Greatest" rates available to import into your estimates.

You will import the rates you need using a set of four filters called Resource Attributes. Especially for labor rates, filtering by these attributes allows you to pare down the master list to just the resources you need.

Each of the resource filter categories are open for use as determined best by your business. The following are examples of common uses:

	Resource Attribute Filters
Name	Description
Resource File Description	This attribute can be used to designate the rate type or the year to which the rates pertain.
Geographic Area	This attribute is used to designate regions, cities, or provinces based on geographical location of a project.
Wage Zone	This attribute is typically used specifically for labor resources. For example, it may designate the trade and union agreements your labor resources belong to.
Organizational Category	This attribute can be used to designate what trade or work type your resources pertain to.

Resource filters become more specific from left to right, so it makes sense to start with Resource File Description and end with Organizational Category. The geographic area, wage zone and organizational category attribute titles can be changed to meet your business needs for filtering resources.

TIP You can sort the filter lists by clicking on the filter category titles.

The following steps walk through using the Resource Filter to import resources.

Step by Step — Import Filtered Resources

- 1. In your job, go to the **Job Properties > Cost Basis** tab, select the **Labor Rate** resource type.
- 2. Under Resource File Description, select Standard Labor Rate File.
- 3. For Geographic Area, select **Southwest**.
- 4. For Wage Zone (Work Center), select Wage Zone A.
- 5. For Organizational Category, select All.



- 6. Select the **Construction Equipment** resource type.
- 7. Select the Import Filtered Resources button to bring your selected resources into the job.

NOTE You must select "Import Filtered Resources" to import your resources. Clicking OK on the Job Properties form will not import your resources.

4.2.7 Fuel Cost Tab

On this tab you can enter the cost for fuel (or other energy sources). These unit cost will be multiplied by the consumption rates entered on each equipment record to define the fuel operating cost of each piece of equipment. The Cost per UM fields default to \$0.00.

Step by Step — Enter Fuel Costs

- 1. In your job, open the **Job Properties** > **Fuel Cost** tab.
- 2. In Cost Per UM column, enter a dollar amount into the following:

- Diesel
- Gas & Gasoline
- Off Road Diesel

Ov	erview	Security	Cover S	Sheet	Cos	st Basis	Mino	ority Setup	p Fuel	Cost
Drag	g columns	here to grou	qu							
	Fuel Type			Cost Per UM		Curre			Account Code	
	Diesel			\$	4.20	U.S. Do	lar	Gallon		
	Gas			\$	3.90	U.S. Do	lar	Gallon		
	Gasolin	e		\$	3.90	U.S. Do	lar	Gallon		
	Off Roa	ad Diesel		\$	3.20	U.S. Do	lar	Gallon		

3. Currency should read U.S. Dollar and UM should read Gallon.

4.2.8 Job Folder Tags Tab

On this tab, you can enter tag fields to label your project, so you can reference it later.

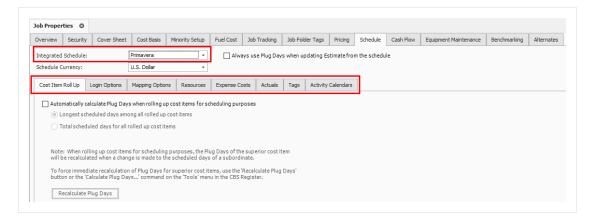
ob Proper	rties ©												
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Pricing	Schedule	Cash Flow	Equipment Maintenance	Benchmarking	Alternates
Job Folder	r Tag Assignm	ients											
	Tag	1:		-		Tag 13:			-				
	Tag	2:				Tag 14:			*				
	Tag	3:				Tag 15:			*				
	Tag	4:		•		Tag 16:			•				
	Tag	5:				Tag 17:			Ŧ				
	Tag	6:				Tag 18:			*				
	Tag	7:				Tag 19:			*				
	Tag	8:		•		Tag 20:			*				
	Tag	9:		-		Tag 21:			0.00				
	Tag 1	0:		-		Tag 22:			*				
	Tag 1	1:		-		Tag 23:			-				
	Tag 1	2:		•		Tag 24:							

Many of these fields are validated fields, meaning you can choose from options in a drop-down list. The names of these tags and the drop-down values are defined at a master level within the Library Foundation Setup Data. Some job folder tags are setup to be date fields or numerical fields. These tags are used to sort and filter the job register as well as for selecting which past estimates to utilize for benchmarking.

4.2.9 Schedule Tab

The Schedule tab is used to define the scheduling options for the integration between InEight Estimate Primavera or Microsoft Project. The settings you define here determine what information is sent to your scheduling tool, and how it will be structured.

- At the top of the Schedule tab, the Integrated Schedule can be set to Primavera or Microsoft Project or Manual
- You will need to confirm the proper settings are defined on each of the Schedule sub-tabs. These settings are defined in detail in *Lesson 12 Schedule Integration*



4.2.10 Other Job Properties Tabs

There are several additional tabs on the Job Properties form. The other tabs will not be discussed here because they are either used for project controls, or they will be covered at another time.

	Other Job Properties Tabs
Name	Function
Minority Setup	Used to set up minority participation goals (for example, DBE or MBE) and you want to track minority participation goal attainment status during the bid

	Other Job Properties Tabs
	process,
Job Tracking	Used to select the code that will be used when tracking job progress, define the planned production calculation, define the percent complete calculation, define the forecast methods, and define markup rates for calculating earned revenue on Time and Expense pay items.
Pricing	Used to define how you want the Balanced Unit Price for each of the job's pay items to be calculated when using the AutoPrice feature. You can also choose form several options in determining how markup is defined.
Cash Flow	Defines the cash flow rules (payment terms) that are used in the calculation of Job Financing and cost/revenue realization to generate the curves that display on the Cash Flow form.
Equipment Maintenance	Used to define the calculation of maintenance labor man-hours based on equipment utilization, to capture the impact on total man-hours when changes are made that affect the job's total value.
Benchmarking	Used to establish the historical data to be used for benchmarking the current job, and to define the default benchmark graph display and calculations.
Alternates	Used to define Alternate Scenarios, to assess the impact of those scenarios.

Exercise 4.1 – Define Job Properties

In this exercise, you will continue to define your Job Properties from in the E101 training job you have created. Complete the following steps:

1. On the Cover Sheet tab, fill out the following fields:

CityScottsdaleCountyMaricopaCountyUnited StatesStateArizonaTypeInfrastructureEngineerFred JonesOwnerSotter FrostaArchitectRobert FrostaTime MeasureOlaronationsForecast StartOlaronationsBid Date and Bid TimeJonesBid LocationJonesBid LocationSottaPonen's EstimatorStationsProposal TypeNainesPine MedesStationsBid LocationStationsContract StationStationsContract StationStationsBid LocationStationsContract StationStationsContract StationStationsBid LocationStationsContract StationStationsContract StationStationsContract StationStationsSt	Job Location	90 th Street & Shea
CountryUnited StatesStateArizonaTypeInfrastructureEngineerFred JonesOwnerJerry SlateArchitectRobert FrostContract Duration80Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid TimeJim SlyBid LocationJim SlyBid LocationStoo,000.00Opening TypeUnit PricePlan Holders10Jung Count PlanterStoo,000.00Stoo,000 Planter	City	Scottsdale
StateArizonaTypeInfrastructureEngineerFred JonesOwnerJerry SlateOwnerRobert FrostArchitectRobert FrostContract Duration80Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid TimeJin SlyBid Location123 Main StreetOwner's EstimateStoo,000.00Proposal TypeUnit PricePlan Holders10Jung Unit PriceStoo,000.00Han Holders10Ston On Conter StoreStoo,000.00Ston On Conter StoreSton On Conter StoreStore </td <td>County</td> <td>Maricopa</td>	County	Maricopa
TypeInfrastructureEngineerFred JonesOwnerJerry SlateOwnerRobert FrostArchitectRobert FrostContract Duration80Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid TimeJin SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Days	Country	United States
Find ContractFred JonesOwnerJerry SlateArchitectRobert FrostContract Duration80Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid TimeJin SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Days	State	Arizona
OwnerJerry SlateArchitectRobert FrostContract Duration80Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid Time10/1/2019 2:00 PMBid Location123 Main StreetBid Location\$500,000.00Opening TypePublicPlan Holders10Liquidated Damages\$100.00 Per Days	Туре	Infrastructure
ArchitectRobert FrostContract Duration80Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid Time10/1/2019 2:00 PMBid LocationJim SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Proposal TypeUnit PricePlan Holders10Liquidated Damages\$100.00 Per Days	Engineer	Fred Jones
Contract Duration80Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid Time10/1/2019 2:00 PMBid LocationJim SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypePublicPlan Holders10Liquidated Damages\$1000.00 Per Day	Owner	Jerry Slate
Time MeasureCalendar DaysForecast StartOctober 15, 2019Duration (days)70Bid Date and Bid Time10/1/2019 2:00 PMEstimatorJim SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypePublicProposal Type10Han Holders10Liquidated Damages\$100.00 Per Days	Architect	Robert Frost
Forecast StartOctober 15, 2019Duration (days)70Bid Date and Bid Time10/1/2019 2:00 PMEstimatorJim SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypePublicProposal Type10Ian Holders10Jun Street10Duration (days)10Bid Location10Bid Location10 <td>Contract Duration</td> <td>80</td>	Contract Duration	80
Duration (days)70Bid Date and Bid Time10/1/2019 2:00 PMEstimatorJim SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypePublicProposal TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Days	Time Measure	Calendar Days
Bid Date and Bid Time10/1/2019 2:00 PMEstimatorJim SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypePublicProposal TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Day	Forecast Start	October 15, 2019
EstimatorJim SlyBid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypePublicProposal TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Day	Duration (days)	70
Bid Location123 Main StreetOwner's Estimate\$500,000.00Opening TypePublicProposal TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Day	Bid Date and Bid Time	10/1/2019 2:00 PM
Owner's Estimate\$500,000.00Opening TypePublicProposal TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Day	Estimator	Jim Sly
Opening TypePublicProposal TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Day	Bid Location	123 Main Street
Proposal TypeUnit PricePlan Holders10Liquidated Damages\$1000.00 Per Day	Owner's Estimate	\$500,000.00
Plan Holders 10 Liquidated Damages \$1000.00 Per Day	Opening Type	Public
Liquidated Damages \$1000.00 Per Day	Proposal Type	Unit Price
	Plan Holders	10
RFQ Contact Jim Sly	Liquidated Damages	\$1000.00 Per Day
	RFQ Contact	Jim Sly

2. On the Cost Basis tab:

- Ensure the Shift Arrangement is 8 hours a day, 5 days a week
- Ensure the Wage Composite is set to 100% Scale 1
- Ensure the Sales Tax is set to 8%

You should end up with the following results

The following Cover Sheet properties are defined:

Overview	Securit	ty Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	Cash Flow	Equipment I	1
Identificati	on												
Loc	ation:	90th Street & Shea		Type: In	frastructure				Contr	act Duration:			80
	City:	Scottsdale		Engineer: E	ample Engineer	Fred Jones			I T	ime Measure:	Calendar Day	∕s +	
Co	ounty:	Maricopa		Owner: E	ample Owner	Jerry Slate			I F	orecast Start:	10/15/2019	•	
Co	untry:	United States -	•	Architect: E	ample Architect	Robert Fros	st		E Fo	recast Finish:	12/24/2019	•	
5	State:	Arizona -								Duration:			70
Lati	itude:		0.00000]									
Long	itude:		0.00000]									
Proposal													
Bi	d Date:	10/1/2019 -]				Opening Type:	Public					
Bi	d Time:	2:00:00 PM					Proposal Type:	Unit Price					
Est	timator:	Hard Dollar Corpora	tion - Chief Es	timator Jim Sly		1	Plan Holders:						10
Bid Lo	ocation:	123 Main Street					Liquidated Damages:					:	\$1,000.00
Owners Es	timate:				\$	500,000.00	Liq. Damages Per:	Day				•	
						050 61	Hard Dallas Comment	chief Setting					1
						Krų Contact:	Hard Dollar Corporati	on - Chier Estimat	tor Jim S	му			(1)
												_	

The following Cost Basis settings are defined:

verview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	Cash Flow	Equipment	4
Standard S	Shift Arranger	ments	Standard Wa	age Rate Composit	e Rule	25	-						
Pay Hou Shif Day:	urs per Shift irs per Shift: fts per Day: s per Week:		Scale 1: Scale 2: Scale 3: Shift	: 0.00 %		Lock Cost Items Pay Item Unit Pr Activate PBS Cha Activate Quantity Maintain CBS Str When man-count ndard Rates	ice Precision:	0 Change UM / M Change Days	an-Hour	Preserv Data Sc	e Original Cos ource	t Item	
Currency – Default (Currency:	U.S. Dollar			- Star	Sales Tax Rate:		8.00 %					
Resource Labor Rat Construct Rented Co Installed I Installed B Supply Ra Unique Ra Resource	tion Equipmen onstruction E Material Rate Equipment Ra ate Assembly Assembly	ype Re lt R	esource / Assen] [Alī]] [None]] [Non-Blanks]] Standard Labo		Geographic / [AII] [None] [Non-Blar Southwest	nks]	Wage Zone [All] [None] [Blanka] [Non-Blan W Wage Zon Wage Zon	ne A		anizational Ca [AI] [None] [Non-Blanks] Truck Driver - Supervision Carpenter Welder Welder Mechanic Operator Remediation			Filtered urces

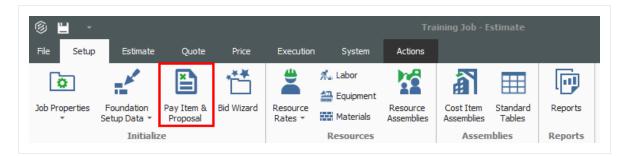
Congratulations, you have completed this exercise!

4.3 PAY ITEM CREATION

Pay items typically represent the owner required deliverables a contractor must submit pricing for. Within InEight Estimate, pay items are used to distribute the cost calculated in the Cost Breakdown Structure and all markup, fees or contingency calculated in the Price Breakdown Structure to a list of defined items. This allows the total estimate value to be distributed to a structure that is different then the CBS. Pay Items are predominantly used by Contractors to prepare a bid sheet. Owners may use pay items to identify funding sources or for various reporting needs.

Many Bid Forms are organized by grouping bid items for related scopes of work. Pay items within the Pay Item and Proposal screen can be grouped in a hierarchy by utilizing the Position Code column.

You can create pay items in the Pay Item & Proposal Register. Access this form by selecting the **Setup** tab > **Pay Item & Proposal**.



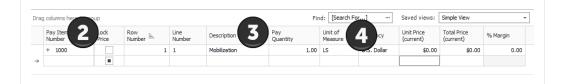
	Name	Description
1	Proposal and Item Recaps	Related to pricing during bid close-out. You can disregard them at this time.
2	Pay Item Number	Represents the bid item number from the client (if they give you one) or can be a number you specify. This field is alpha-numeric
3	Position Code	Controls the way pay items can be grouped, and provide you with an efficient way to sort.
4	Description	You can enter a pay item description.
5	Pay Quantity and Forecast (T/O) Quantity	The Pay Quantity is the quantity provided by the client. The Forecast (T/O) Quantity is your measured quantity for the item.

4.3.1 Overview – Pay Item & Proposal Register

Proposal R	ecap - Training Jo	b					×	Item Reca	p - 200 SITEW	ORK & ROADW	AY						×
	Current	Target	Forecast	Variance				Description			Unit Price (balanced)	Total Price					
Price:	\$6,569,735.00	\$5,897,950.68	\$6,577,223.80	\$671,784.32	CUT			V A Price			(baianced)	\$2,834,3		(current) \$3,402,700			
Markup:	\$987,477.27	\$315,692.95	\$1,044,716.27	\$729,023.32	CUT			_	Nstribution			\$2,004,0		\$3,402,700			
Margin%:	15.03	5.35	15.88	\$731,836.84	сит				Markup			\$150,14		\$718,760,46			
					_				A Profit (Mar	rkup records)		\$	0.00	\$568,618.53			
									A Business C	Overhead		\$150,14	1.93	\$150,141.93			*
rag columns	2 9040	0				6)							Saved vie	ws: Standard	View	-)
Pay Item Number	Position Code	Lock Quantit	y Price	Description	•	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	Unit Price (current)	Total Pric (current)		nit Markup alanced)		Unit Distribution	Total Distribution	Unit (cun
200	1			SITEWORK &	ROADWAY				U.S. Dollar		\$3,402	,700.00		\$150,141.93		\$319,521.54	
+ 6410	1.1			Mobilization		1.00	1.00	Lump Sum	U.S. Dollar	\$395,600	.00 \$395	,600.00	\$737.74	\$737.74	\$4,435.45	\$4,435.45	
+ 2010	0102 1.2			Clearing & C	Grubbing	10.00	10.00	Acre	U.S. Dollar	\$5,900	.00 \$59	,000.00	\$257.19	\$2,571.93	\$1,251.61	\$12,516.08	
+ 202.0	1.3			Unclassified	Excavation	50,000.00	50,000.00	Cubic Yard	U.S. Dollar	\$5	50 \$275	,000.00	\$0.30	\$14,840.72	\$0.83	\$41,414.20	
+ 303 5	5912 1.4			Aggregate	Base	40,000.00	45,000.00	Ton	U.S. Dollar	\$26	50 \$1,060	,000.00	\$0.94	\$37,486.40	\$2.05	\$82,054.63	1
+ 303 4	4263 1.5			Asphalt Cor	ncrete Hot Mix Type A	38,000.00	35,000.00	Ton	U.S. Dollar	\$42	.45 \$1,613	,100.00	\$2.49	\$94,505.14	\$4.71	\$179,101.18	
= 400	2			WATER & SEV	VER				U.S. Dollar		\$718	,550.00		\$34,584.99		\$76,228.25	
+ 413(8	B) 0464 2.1			36 Inch RCF	P Culvert Class III	1,000.00	1,024.00	Linear Feet	U.S. Dollar	\$97	.45 \$97	,450.00	\$4.33	\$4,325.59	\$9.94	\$9,944.34	1
+ 800 0	2.2			10 Inch PVC	Force Main (SDR21)	12,000.00	12,000.00	Linear Feet	U.S. Dollar	\$29	.50 \$354	,000.00	\$1.43	\$17,165.84	\$3.04	\$36,531.54	
+ 800 0	2.3			24 Inch PVC	Gravity Sewer (SDR35)	3,000.00	3,000.00	Linear Feet	U.S. Dollar	\$64	50 \$193	,500.00	\$3.16	\$9,484.48	\$7.32	\$21,965.47	'
+ 800 0	2.4			4 Foot Diam	eter Manhole	16.00	16.00	Each	U.S. Dollar	\$4,600	.00 \$73	,600.00	\$225.57	\$3,609.08	\$486.68	\$7,786.90	
500	3			STRUCTURAL	CONCRETE & BRIDGES				U.S. Dollar		\$631	,895.00		\$32,304.21		\$78,703.66	
+ 501(4	A) 1306 3.1			Structural E	xcavation & Backfill	800.00	800.00	Cubic Yard	U.S. Dollar	\$28	.00 \$22	,400.00	\$1.39	\$1,111.52	\$3.16	\$2,525.23	
+ 5060	A) 1322 3.2			Steel Reinfo	proement	30,000.00	30,000.00	Pound	U.S. Dollar	\$1	70 \$51	,000.000	\$0.08	\$2,536.15	\$0.13	\$4,011.30	
				Retaining W		850.00	850.00	Cubic Yard	U.S. Dollar	\$545		.250.00	\$27.45	\$23,336,43	\$67.68	\$57,526,49	

Step by Step — Create a Pay Item

- 1. Open your job and select **Setup** tab **>Pay Item & Proposal** from the InEight Estimate landing page.
 - The Pay Item & Proposal Register displays
- 2. In the Pay Item Number column, in the first blank row, type a **number value**.
- 3. Use the Tab key to move to the Description column and type a **description**.
- 4. Leave the Pay Quantity at 1.00 and change the Unit of Measure to LS (Lump Sum).
 - The Forecast (T/O) Quantity will auto populate to match your pay quantity, but can be changed later
 - You can tab to the next row to create additional pay items if needed



4.3.2 Pay Item Prices by Category

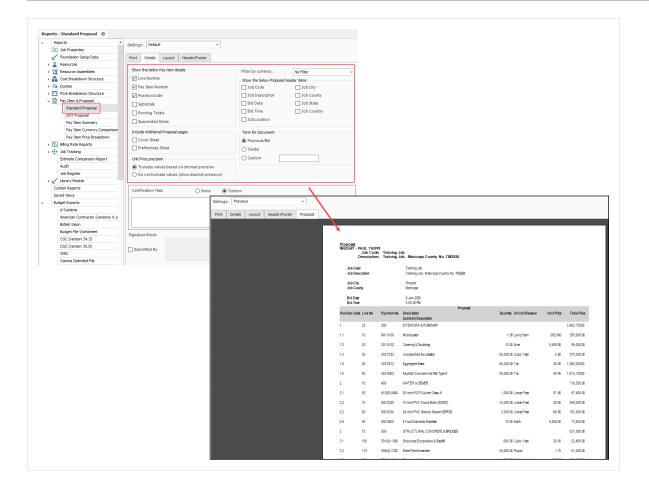
Owners are increasingly requiring more information from contractors as part of their bid submissions. Many times, this is a further breakdown of a bid price such as separating the price of an item based on its labor cost, material cost or man-hours. Select columns in the Pay Item & Proposal register enable users to summarize their pay item prices by up to 10 price categories.

In addition to seeing the price by category, these additional columns also give users better visibility into how the price is established, including columns for the total cost, total distribution, total markup and markup percent. These new columns make it easier to verify that the distribution of unassigned cost and markup are calculated as intended by the estimator.

Pay Item Number	Position 🚋	Lock Quantity	Lock Price	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	LABOR Cost	LABOR Cost Distribution	LABOR Markup	LABOR Price (balanced)	LABOR Price (current)	LABOR Markup %	Unit Price (current)
200	1			SITEWORK & ROADWAY				U.S. Dollar	\$291,828.52	\$51,472.21	\$7,224.74	\$350,525.47	\$394,902.06	2.48	
+ 641 0 100	1.1			Mobilization	1.00	1.00	Lump Sum	U.S. Dollar	\$2,449.51	\$386.80	\$60.85	\$2,897.16	\$81,365.80	2,48	\$395,600.00
+ 201 0102	1.2			Clearing & Grubbing	10.00	10.00	Acre	U.S. Dollar	\$14,880.57	\$7,301.27	\$344.82	\$22,526.66	\$22,405.37	2.32	\$5,900.00
+ 202 0183	1.3			Unclassified Excavation	50,000.00	50,000.00	Cubic Yard	U.S. Dollar	\$62,230.08	\$9,800.01	\$1,545.91	\$73,576.00	\$73,159.96	2.48	\$5.50
+ 303 5912	1.4			Aggregate Base	40,000.00	45,000.00	Ton	U.S. Dollar	\$99,794.93	\$15,809.26	\$2,479.10	\$118,083.29	\$171,742.65	2.48	\$26.50
+ 303 4263	1.5			Asphalt Concrete Hot Mix Type A	38,000.00	35,000.00	Ton	U.S. Dollar	\$112,473.43	\$18,174.87	\$2,794.06	\$133,442.35	\$112,437.69	2.48	\$42.45
400	2			WATER & SEWER				U.S. Dollar	\$128,895.90	\$20,324.84	\$3,202.02	\$152,422.76	\$167,735.34	2.48	
+ 413(B) 0464	2.1			36 Inch RCP Culvert Class III	1,000.00	1,024.00	Linear Feet	U.S. Dollar	\$19,602.99	\$3,084.69	\$486.98	\$23,174.66	\$28,284.74	2.48	\$97.4

4.3.3 Standard Proposal report

The Pay Item Standard Proposal report is located in Execution > Reports > Pay Item & Proposal > **Standard Proposal**, and is intended to be used as a bid form, and distributed to other clients, partners, and contractors. In the Details box below, you can determine which key fields you want included and shown on your standard proposal report.



Exercise 4.2 — Create Pay Items

In this exercise, you will practice creating pay items in the Pay Item & Proposal Register by adding subordinates to the Sitework & Roadway pay item. Complete the following steps, using a job of your own.

Position Code	Pay Item Number	Description	Pay Quantity	Unit of Measure
1	2000	SITEWORK & ROADWAY		
1.1	641 0100	Mobilization	1	LS
1.2	201 0102	Clearing & Grubbing	10	Acre
1.3	202 0183	Unclassified Excavation	50,000	CY

You should end up with the following results

Position =	Pay Item Number	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure
1	200	SITEWORK & ROADWAY			
+ 1.1	641 0 100	Mobilization	1.00	1.00	Lump Sum
+ 1.2	201 0 102	Clearing & Grubbing	10.00	10.00	Acre
+ 1.3	202 0 183	Unclassified Excavation	50,000.00	50,000.00	Cubic Yard

Congratulations, you have completed this exercise!

Lesson 4 Review

- 1. This is where you enter basic information about the job as well as define your cost basis.
 - a. Pay Item & Proposal
 - b. Job Properties
 - C. Library
 - d. Job Folder
- 2. On the Job Properties form, this tab is where you enter information such as the start date, bid date, job type and location.
 - a. Overview
 - b. Cover Sheet
 - C. Cost Basis
 - d. Foundation Setup Data
- 3. These are the project deliverables; anything the owner agrees to measure and pay for.
 - a. Cost Items
 - b. Resources
 - C. Target Price
 - d. Pay Items

Lesson 4 Summary

As a result of this lesson, you can:

- Create a new job
- Enter Job Properties
- Create pay items in the Pay Item & Proposal Register

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LESSON 5 – DIRECT COSTS

Lesson Duration: 30 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the estimating process in InEight Estimate
- Explain key terms and concepts

Lesson Topics

5.1 Cost Breakdown Structures	
5.1.1 Cost Item Terminology	
5.1.2 Work Breakdown Structures	
5.1.3 Locked vs. Unlocked Approach	
5.1.4 Take-Off Quantities	
5.2 Cost Item Creation	
5.2.1 Insert Subordinate Cost Item	
5.2.2 Insert Cost Item	
5.2.3 Move Cost Items	211
Exercise 5.1 – Create Cost Items	
5.3 Costs and Production	
5.3.1 Cost Item Record	
5.3.2 Cost Segments	
5.3.3 Cost Sources	
5.3.4 Plug Costs	
5.3.5 Detail Costs	
Exercise 5.2 – Define Cost Detail	

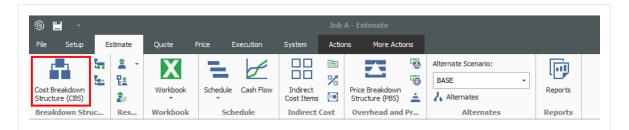
5.4 Cost Item Details	
5.4.1 Cost Item Setup	
5.4.2 Notes	
5.4.3 Man-Hour Factors	
5.4.4 Unique Identifier	
5.4.5 Cost Drivers	
5.4.6 Suspend Cost Items	
5.4.7 Adding Cost Adjustments	
Exercise 5.3 – Manage Cost Item Details	
Lesson 5 Review	
Lesson 5 Summary	

5.1 COST BREAKDOWN STRUCTURES

The Cost Breakdown Structure (CBS) is the main form where you will do your cost estimating.

- It is the hierarchy of work activities that make up the estimate
- Each row in the CBS represents a work activity or organizing category and is called a cost item

To access the Cost Breakdown Structure, from the InEight Estimate landing page select the **Estimate** tab, then under the Breakdown Structure section select **Cost Breakdown Structure (CBS)**.



Overview – Cost Breakdown Structure (CBS) Register

	Name	Description
1	Actions Menu	Shortcut icons allow you to edit cost items and import items from other sources such as Excel.
2A	CBS Tree Filter Mode (drop- down)	The CBS Tree filter shows the CBS hierarchy and is used to quickly help filter cost items, instead of scrolling the CBS to locate certain cost items. The CBS Tree Filter lets you choose between a filter mode or a new navigation mode.
2B	CBS Tree Filter or Navigation Mode	Both Filter and Navigation modes on the left side of the page provides you with the visibility of your entire CBS structure, as well as giving you the option to navigate and filter throughout the CBS estimate. The Cost Item record can also be tiled next to the tree to make navigating and filtering possible, while viewing all the cost item record details at the same time.
3	Left CBS register	This side of the register contains all of the estimate activities (cost items) that you create or import, organized into a parent-child hierarchy.
4	Right CBS register	This side of the register contains numerous columns for cost detail, production values, and user-defined tags and fields.

									Training Job	- Estimal	te						
File Setup		-	ote Price		ution	System	Integrations	Actions	More Actions							1	≙ ⊞
📇 Print	🕀 New	٦	Сору 🔀	Split		⇒ Indent	🐰 Link Field	Cos	t Item	🔁 Ass	embly	2. Resource			ZE.	CBS Tree Filter Mo	de:
neview	🛞 Delete	ß	Paste 🙎	Split by Co	st Type	de Outdent	Unlink Field	🔚 Sub	ordinate Cost Item	🔁 Sub	ordinate Assembly	Resource A				Filter	Ψ.
Export to E	xcel 😪 Cut	+	Fill Down 🛛 🎝	Toggle Su	pended			-+ Dep	endent Cost Item				Expa Collap		Clear CBS Tree Filter Filter	Filter	_
Print			Б	dit			Workbook				Insert				View	Navigation	
Cost Breakdo	own Structure (CB	5) R	gister ©				0							-0		C	9 0
CBS Tree (Fi	lter Mode) 🛛 🗙	bra	ıg columns here	to group			-0					-0-			Saved views: Sta	andard View	-
B	-		COC					Opti			Forecast	11-11-14		Tabl Cash		Cubicut Cost	
Code	Description JOB		CBS Position Code	<u> </u>	Descriptio	n		Code			(T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Subject Cost	Subject Cost Rate	Allocate
	Prime Bond		•		ЈОВ						20.00	Mile	\$294, 138. 13	\$5,882,762.51			
	Price % Add-On		+		Prime B	ond		PRIM	IE BOND		1.00	Lump Sum	\$47,148.68	\$47,148.68			
	Job Financing		+		Price %	Add-On		PRIC	E % ADD-ON		1.00	Lump Sum	\$295,638.13	\$295,638.13			
88	Indirect Cost Esca		+		Job Fina	incing		FINA	NCE EXPENSE		1.00	Lump Sum	\$33,105.26	\$33,105.26			
88	Direct Cost Escala		+		Indirect	Cost Escalat	ion	INDI	RECT COST ESCALA	TION	1.00	Lump Sum	\$2,131.11	\$2,131.11			
	Indirect Cost Add		+		Direct C	ost Escalatio	n	DIRE	CT COST ESCALATI	ION	1.00	Lump Sum	\$15,048.80	\$15,048.80			
88	Direct Cost Add-C		+		Indirect	Cost Add-Or	1				1.00	Lump Sum	\$5,888.67	\$5,888.67	\$294,433.42	2.00	
	SITEWORK & RO		+		Direct C	ost Add-On		DIRE	CT COST ADD-ON		1.00	Lump Sum	\$104,088.34	\$104,088.34	\$5,204,417.24	2.00	
> 📫 2 > 📫 3	WATER & SEWER STRUCTURAL CO		1		SITEWO	RK & ROADW	AY	200			1.00	Each	\$2,464,161.56	\$2,464,161.56			
> = 3 > = 4	INDUSTRIAL & RE		+ 1.1		Mobiliza	ation		641	0100		1.00	Lump Sum	\$11,909.51	\$11,909.51			
> 📥 5	COMMERCIAL		+ 1.2		Clearin	g & Grubbing		201	0102		10.00	Acre	\$3,918.50	\$39,184.97			
> 🗖 6	GUARDRAIL & SIG		■ 1.3		Undas	sified Excavatio	m	202	0183		50,000.00	Cubic Yard	\$4.68	\$233,915.81			
> 📥 7	Indirect Costs		+ 1.3.1		Exca	vation		1.3.	1		50,000.00	Cubic Yard	\$3.00	\$149,922.88			
8	Special Risk Allow		+ 1.3.2		Emb	ankment		1.3.	2		50,000.00	Cubic Yard	\$1.68	\$83,992.94			
			■ 1.4		Aggreg	ate Base		303	5912		45,000.00	Ton	\$15.40	\$692,928.99			
			+ 1.4.1		Furn	ish & Haul Base	e Material	1.4.	1		45,000.00	Ton	\$11.54	\$519,513.30			
			+ 1.4.2		Fine	grade Subgrad	e	1.4.	2		400,000.00	Square Yard	\$0.19	\$75,848.36			
			■ 1.4.3		Inst	all Aggregate B	ase	1.4.	3		45,000.00	Ton	\$2.17	\$97,567.33			
			+ 1.4.3.1		PI	ace Aggregate	Base	1.4.	3.1		45.000.00	Ton	\$1.63	\$73.460.92			
				107										\$5,882,762.51			

5.1.1 Cost Item Terminology

The CBS contains both direct and indirect costs.

- **Direct Cost Items** contain costs that pertain directly to the deliverables of the project. Therefore, direct cost items are typically assigned to pay items
- Indirect Cost Items contain overhead costs that are not directly associated with particular deliverable items but contribute to the total cost of the project (e.g., supervision, site office, safety supplies, bid securities). Occasionally an indirect cost item may be assigned to a pay item (e.g., Mobilization costs that are indirect but assigned to a Mobilization pay item).

InEight Estimate uses various terms to describe the parent-child relationships of the multiple levels in the CBS:

Terms	Description
Superior	A Superior cost item has subordinate (child) items below it that determine hours and costs.
Subordinate	A Subordinate cost item is a child to a Superior cost item.
Terminal	A Terminal cost item has no subordinate items. Resources, costs, and production can only be added at the terminal cost item level.

NOTE A Terminal cost item may or may not be a subordinate.

The levels of the CBS are referred to as Level 1, Level 2, etc., as you drill down in the structure. As costs are defined on the terminal items, the sum of the terminal cost items roll up to the superior cost items.

TIP A superior cost item can have no costs of its own; its costs are strictly the rolled-up total from the subordinate cost items below it.

You can use superior cost items as buckets for organizing your work.

As hours and costs are defined on the terminal items, the sum of the terminal cost items roll up to the superior cost items.

5.1.2 Work Breakdown Structures

The Work Breakdown Structure (WBS) allows you to reorganize the estimate using different formats such as Construction Specifications Institute (CSI) MasterFormat or UniFormat. WBS formats are used when you need multiple variations and summary reports of an estimate. The WBS retains the same relationships between items as in the original estimate while only changing the view and items arrangement in the WBS hierarchy.

To view the Work Breakdown Structure View Register, in the Ribbon select the tab **Estimate > Work Breakdown Structures**.

ľ	lame	Description
1	WBS Tree	Use the WBS Tree to filter to a particular WBS item.
2	WBS Grid	When a specific WBS item is selected in the WBS Tree, all subordinate WBS items display in the WBS grid.
3	Cost Items	The Cost Items associated with the WBS subordinate in the WBS Grid displays in this data block.

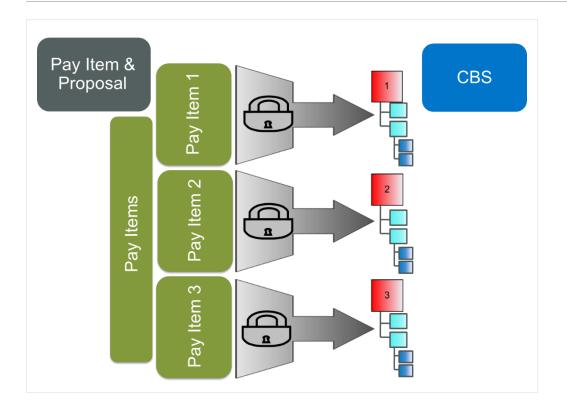
Overview – Work Breakdown Structure (WBS) View Register

	ructure (CBS) Register	Quote Register	r	Quote Comparison	& Award - Resources	Work Breakde	own Structure Vie	w Register 🛛					
WBS Tree	1	×	Dra	g columns here to group	2			FI	nd: [Search	•or] …	Saved views:	Standard View	•
WBS: CEAS	9		•	Code 📃	Description	Currency	Unit Cost	Total Cost (Forecast)					
Code	Description			CEAS	Civil Engineering Account	t Code System			1.00	Each	U.S. Dollar	\$2,494,088	\$2,494,088.0
✓ CEAS	Civil Engineering Accou	nt Code System		10	GENERAL PROVISIONS				1.00	Lump Sum	U.S. Dollar	\$35,054.5	\$35,054.5
> 10	GENERAL PROVISIONS			□ 10.10	PROJECT SETUP				1.00	Each	U.S. Dollar	\$14,000.0	0 \$14,000.0
> 11	EARTH WORK		\rightarrow	10.10.100	YARD				1.00	Each	U.S. Dollar	\$4,000.0	6 \$4,000.00
> 12	PAVEMENT WORK			10.10.200	OFFICE FACILITIES				1.00	Each	U.S. Dollar	\$2,000.0	0 \$2,000.0
> 13	BRIDGE WORK			10.10.500	UTILITIES				1.00	Each	U.S. Dollar	\$8,000.0	\$8,000.0
> 14	CONCRETE STRUCTUR	ES		■ 10.20	EQUIPMENT SETUP				1.00	Each	U.S. Dollar	\$14,624.3	\$14,624.3
> 17	PIPE WORK			0 10.20.100	MOBILIZATION				1.00	Load	U.S. Dollar	\$11,909.5	\$11,909.5
Cost Items	3												>
Drag columns here to	Jup							Fi	nd: [Search F	or] …	Saved views:	Standard View	•
CBS Position Code	E Description		Op Co	tional de	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated	Allocation Source	Currency		Resource Assemb Quantity
→ + 23.1	Setup Yard		UN	ASSIGNED	1.00	Lump Sum	\$4,000.00	\$4,000.00			U.S. Dollar		
CBS Position Code	E Description		Co	de	(T/O) Quantity	Measure		Total Cost (Forecast)	Allocated	Allocation	Currency	Cost	

5.1.3 Locked vs. Unlocked Approach

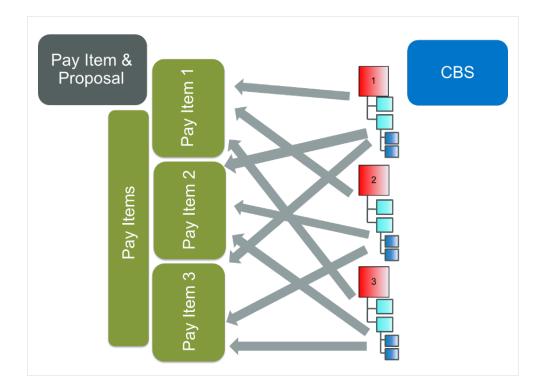
There are two basic approaches to structuring your cost items and pay items. You can choose to work in a "locked approach" or an "unlocked approach."

In a locked approach, level one cost items are automatically created and assigned to pay items. This locked approach works well when pay items adequately represent the work plan. Subordinate cost items inherit the pay item assignment of superior cost items.



NOTE If the Lock Cost Items to Pay Item rule is checked in Job Properties, InEight Estimate will automatically create level 1 cost items in the CBS Register for each of your pay items.

The unlocked approach may work better when the pay items do not adequately represent the work plan. You can then assign your cost items to your pay items in any arrangement. Companies looking to standardize the way they estimate and use templates will want to use this approach as it allows you to dictate the cost breakdown structure. Owners will also typically use the unlocked approach since pay items are not necessary to their estimating process.



The option of working in a locked approach vs. an unlocked approach is available in the Job Properties Form, on the Cost Basis tab under the Rules section. By selecting the checkbox for Lock Cost items to Pay Item, you are choosing to work in a locked approach.

Overview	Security	Cover Sheet	Cost Rasis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tag	s Competitors	Pricing	
Overview	Security	Cover Sheet	COSCIDASIS	Minority Setup	Tuercost	JOD TRacking	Job Folder Tag	Competitors	Friding	
-Standard S	hift Arrange	ments	Standard Wa	age Rate Composite	Rule	s				
						Lock Cost Items	to Pay Items			[
Work Hou	ırs per Shift	8.00	Scale 1:	100.00 %		Pay Item Unit Pr	ice Precision:	2		
Pay Hou	rs per Shift:	8.00	Scale 2:	0.00 %		Activate PBS Cha	inges Log			
-1.						Activate Quantity	/ Checking			
Shi	fts per Day:	1.00	Scale 3:	0.00 %		Maintain CBS Str	ucture at Level:	0		
Day	s per Week:	Standard Wage Rate Com Shift 8.00 Scale 1: 100.00 Shift: 8.00 Scale 2: 0.00 Clay: 1.00 Scale 3: 0.00	/ Rate Calculator		When man-count	changes:	Change UM / M	an-Hour		
					_			Change Days		

5.1.4 Take-Off Quantities

In the Cost Breakdown Structure, estimated quantities are entered into the Forecast (T/O) Quantity field with a corresponding unit of measure. The quantity will default to 1 each when you create a new cost item and should be updated to reflect the work being estimated.

CBS Position ៉ Code		Description	Forecast (T/O) Quantity		
+	1	Mobilization	1.00		
+	2	Clearing & Grubbing	10.00		
=	3	Unclassified Excavation	50,000.00		
+	3.1	Excavation	50,000.00		
+	3.2	Embankment	50,000.00		
	4	Aggregate Base	45,000.00		
+	4.1	Furnish & Haul Base Material	45,000.00		
+	4.2	Finegrade Subgrade	400,000.00		
	4.3	Install Aggregate Base	45,000.00		
+	4.3.1	Place Aggregate Base	45,000.00		
+	4.3.2	Blue Top Aggregate Base	400.000.00		

NOTE

Forecast (T/O) Quantities are only used for your cost items in the CBS Register. Pay Quantities are used for final pricing in the PBS and Pay Item & Proposal forms.

Because the training project is a "locked" job, you already have level 1 cost items, and their default take-off quantities are populated from their corresponding pay item quantities.

The following step by step walks you through adjusting the default take-off quantities on a couple of your cost items.

Step by Step — Adjust Take-Off Quantities

- 1. In your job, from the InEight Estimate landing page, on the Estimate tab, select **Cost Breakdown Structure (CBS)**.
 - For each cost item, you can enter the T/O quantity, followed by the unit of measure in the next column
- 2. For this example, add a **number value** per acre and a **number value** to Excavation with the UoM to CY.

1	Mobilization	1.00	LS
2	Clearing & Grubbing	15.00	Acre
3	Excavation	40,000.00	CY
4	10 " PVC Pipe	1,000.00	LF

5.2 COST ITEM CREATION

During estimate development, you will create new cost items to break down your work into specific activities. You can create superior and subordinate cost items as needed to organize your work.

5.2.1 Insert Subordinate Cost Item

You can add subordinate cost items in two different ways:

Option 1

Right-click on the row header of the superior cost item and select Insert Subordinate.

Drag columns here to g	roup		Сору				
CBS Position Code	ition Code Description JOB Prime Bond Price % Add-On Job Financing Job Management & E General Expense 1 Mobilization 2 Clearing & Grubbing 3 Excavation		<u>P</u> aste <u>F</u> ill Down				
	JOB		Link this field to Excel				
+	Prime Bond		-				
+	Price % Add-On	1	UnLink from Excel				
+	Job Financing	⇒	Indent				
+	Job Management & Equ		Outdent				
+	General Expense						
+ 1	Mobilization		Insert				
+ 2	Clearing & Grubbing		Insert Su <u>b</u> ordinate				
+ 3	Excavation		Insert Dependent <u>C</u> ost Item				
→ - 4	10" PVC Pipe	-					
*		1					
		l.					

The row header is considered the far left edge of the CBS row where the small arrow appear appears above. It is used to open records and perform actions on items instead of clicking on cells within the row which will allow you to directly type into the selected cell.

Option 2

Click on the Subordinate Cost Item icon on the Cost Breakdown Structure (CBS) Register toolbar.

Quo	te Price	E	xecution	System	Actions	More Actions
Fill D	lown	-	,	Cost Item		Assembly
Split		-		Subordinate (🔁 Subordinate Asser
Тода	gle Suspended		5	 Dependent C 	o i Item	
					1	Insert
Reg	gister 🛛					
Drag	g columns here	to grou	ip			Find: [Search For]
	CBS Position 🗎		Description			ecast D) Quantity
			Mobilization			
	+ 1		Mobilizati	ion		1.00
→	+ 1 + 2			ion & Grubbing		1.00 10.00
÷	+ 1		Clearing 8		n International In International International Internation	

5.2.2 Insert Cost Item

You can add cost items at the same level in two different ways.

Option 1

Right click on the row header of the superior cost item and select Insert.

	CBS Position Code	Description	Ē	Copy Paste
	+ 1	Mobilization	+	<u>F</u> ill Down
	+ 2	Clearing & Grubbing	ß	Link this field to Excel
	□ 3	Unclassified Excavation	ß	UnLink from Excel
	+ 3.1	Excavation	-	Indent
	+ 3.2	Embankment	+	Outdent
	□ 4	Aggregate Base		
	+ 4.1	Furnish & Haul Base Material		Insert
-	i 4.2	Finegrade Subgrade		Insert Subordinate
	□ 4.3	Install Aggregate Base		Insert Dependent Cost Item
	+ 4.3.1	Place Aggregate Base	Ξ	Insert Cost Item Assembly
	+ 4.3.2	Blue Top Aggregate Base	1	Insert Cost Item Assembly as Subordinate
	□ 5	Asphalt Concrete Hot Mix Ty	ß	Split
	+ 5.1	Furnish & Haul Hot Mix	2.	Insert <u>R</u> esource
	+ 50	Install Hot Mix Type A	100	

Option 2

Click on the Cost Item icon on the Cost Breakdown Structure (CBS) Register toolbar.

Quo	te Prie	ce E	Execution	ı Sys	stem A	tions	More Actions	
Fill D	own	\Rightarrow	8	• Cost	Item		- Assembly	2
Split		-	愚	F Sibo	rdinate Cost I	Item	🔁 Subordinate Assem	bly 🎦
Togg	jle Suspende	ed		🕂 Depe	ndent Cost It	em		
t				- 1		In	isert	
) Reg	gister 🛛							
Drag	; columns he	re to grou	ıp			F	Find: [Search For]	
	CBS Position Code	<u>-</u>	Descript	ion		Fored (T/O)	cast) Quantity	Unit of Measure
	+ 1 Mobilization					1.00	Lump Su	
	+ 2 Clearing & Gru			g & Grub	bi g		10.00	Acre
	■ 3		Unclass	sified Exc	avition		50,000.00	Cubic Ya
\rightarrow	+ 3.1		Excav	ation			50,000.00	Cubic Ya

Because the project you are working in is a "locked" job (where cost items are locked to pay items), your CBS Register will already have level 1 cost items representing each of your pay items, and each cost item will be assigned to its corresponding pay item.

The following step by step walks you through creating a subordinate (child) cost item for one of your level-one cost items.

Step by Step — Create a Subordinate Cost Item

- 1. In your job, from the InEight Estimate landing page, on the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Right click on a cost item and select Insert Subordinate.
 - This creates a new, subordinate cost item below your selected cost item
- 3. For the subordinate cost item, enter a Description.
- 4. Add a quantity and select your Unit of Measure.

CBS Posit	ion Code 🗎	Description	Forecast (T/O) Quantity	Unit of Measure
		JOB	1.0) Lump Sum
+		Prime Bond	1.0) Lump Sum
+		Price % Add-On	1.0) Lump Sum
+		Job Financing	1.0) Lump Sum
+		Job Management & Equipment	1.0) Lump Sum
+		General Expense	1.0) Lump Sum
+ 1	L	Mobilization	1.0) LS
₽ 2	2	Clearing & Grubbing	15.0) Acre
+ 2	.1	Clearing	15.0	Acre ,
+ 3	3	Excavation	50,000.0) CY
+ 4	L Contraction	10" PVC Pipe	1,000.0) LF

TIP You can create a subordinate at the same level, by right clicking on an equal-level cost item and selecting **Insert**.

5.2.3 Move Cost Items

As you develop your estimate, you may need to move cost items around in the Cost Breakdown Structure. To move a cost item:

- 1. Select the row header of the cost item you wish to move. If you select a superior cost item, it will bring the subordinates along with it.
- 2. Drag and drop the cost item to the right place in your structure. Notice one of two cursor symbols appears:

The symbol with three equal bars will drop the cost item at the same level as the cost item you drop it on.

The symbol with a subordinate bar will make the cost item become a subordinate to the one you drop it on.



Exercise 5.1 — Create Cost Items

In this exercise, you will practice creating additional cost items. Create the following cost items, using your E101 – Training Job:

Code	Description	Forecast (T/O) Quantity	Unit of Measure
2.2	Grading	10	Acre
3.1	Excavate	40,000	CY
3.2	Haul	40,000	CY
4.1	Furnish Pipe Materials	1,000	LF
4.2	Excavate-Install-Backfill Pipe	1,000	LF

You should end up with the following results

CBS Position Code 🗎	Description	Forecast (T/O) Quantity	Unit of Measure
+ 1	Mobilization	1.00	LS
2	Clearing & Grubbing	15.00	Acre
+ 2.1	Clearing	15.00	Acre
+ 2.2	Grading	10.00	Acre
□ 3	Excavation	40,000.00	CY
+ 3.1	Excavate	40,000.00	CY
+ 3.2	Haul	40,000.00	CY
□ 4	10" PVC Pipe	1,000.00	LF
+ 4.1	Furnish Pipe Materials	1,000.00	LF
+ 4.2	Excavate-Install-Backfill Pipe	1,000.00	LF

Congratulations, you have completed this exercise!

5.3 COSTS AND PRODUCTION

For the cost items you've created, you can now add their costs and production. All information for a cost item is contained in a Cost Item Record.

5.3.1 Cost Item Record

You can open the Cost Item Record by either double clicking on a cost item row header, or right clicking and selecting **Open**.

Cost Item Record Overview

	Name	Description
1	Cost Item Header Information	Provides general information about the cost item. It displays the cost item's take-off quantity, Unit of Measure, and Cost. It also indicates what Cost Source is being used. The Cost Segment drop-down is used to differentiate estimated costs in the Direct Costs, Job Overhead or Business overhead categories.
2	Costing Area	Section where costs are defined. There are three ways to enter costs: Detail, Plug, and Quote. The Cost Summary tab summarizes whatever costs are defined. Under the Cost Segment drop down, you can choose
3	Data Blocks	Contains a set of tabs for entering additional information including production, shift arrangements, man-hour factors, notes, and scheduling information.

	Optional Code:	Description:					Fore	cast (T/O) Qty:	Unit of Measur	e:	Unit Cost:	Total Cost:	Currency:	
- 3	202 0183	Unclassified E	xcavation					50,000.00	Cubic Yard		\$4.68	\$233,915.81	U.S. Dollar	
3.1	3.1	Excavation						50,000.00	Cubic Yard		\$3.00	\$149,922.88	U.S. Dollar	
PI Assianme	ent: PI Line Number:	PIDescription					[Cost Seament:		Pay Quantity:	Cost Source:	Alternate:	
		· · · ·												_
202 0 183	~ 30	Unclassified E	xcavation						Direct Cost		50,000.00	Detail 👻	BASE	_
Cost Item S	ummary 🍃 Detail : \$	3.00 🖊 Plug	: \$0.00 💭	Quote : \$0.00	Allocation					E	mployment Setup			>
Cost Catego	гу	Unit Cost	Total Cost	Unadjusted Total Cost	Cost Adjustment Percent	←→	Cost Adjustment Amount		Total Billing Amount			Type: Construction Ec	uipment Rate	
✓ Total		\$3.00	\$149,922.88	\$149,922.88	0.00		\$0.00	\$3.28	\$163,881.06	:	Description: Water Tr	uck		
> Labo	r	\$0.66	\$33,170.48	\$33,170.48	0.00		\$0.00	\$0.93	\$46,438.66	4	Quantity (Less Waste):	Wast	e % d-on:	
> Owne	ed Equipment	\$2.34	\$116,752.40	\$116,752.40	0.00		\$0.00	\$2.35	\$117,442.40		waste).			
	ed Equipment	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Quantity:	1.00 Producti Fa	vity otor:	
Supp		\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Cost Driver: Sd			
> Mate		\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Cost Driver: So	nedule *		
	ontract	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Employment Cost			
		\$0.00	\$0.00	\$0.00	0.00		\$0.00		\$0.00		Unit Cost: \$29	.60 Total Cost:	\$1.302.40	
> Fees	ance	\$0.00 \$0.00	\$0.00 \$0.00	\$0.00 \$0.00	0.00	→	\$0.00	\$0.00 \$0.00	\$0.00 \$0.00					
 Fees Allow 	om Catagoriul	\$0.00			0.00		\$0.00 \$0.00		\$0.00 \$0.00		Maintenance Labor Cost			
 Fees Allow Custr 	om Category1 fined	\$0.00	\$0.00	\$0.00										

5.3.2 Cost Segments

The Direct Costs, Job Overhead, and Business Overhead cost segments helps to classify the scope of work so you can report on direct vs indirect costs, and accurately control how markup is spread throughout your bid. This differentiation is necessary to effectively price work based on the risk profile of each segment of cost.

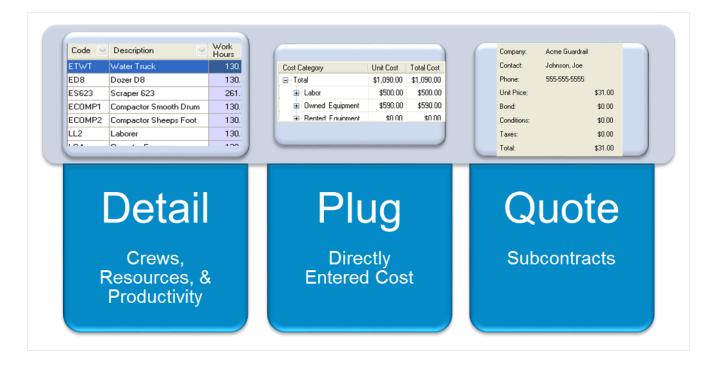
			ption:			Forecast (T/O) Qty:	Unit of Measure:	Unit Cost:	То
								~	
2	400	00 WATER & SEWER					Each	\$496,284.	13
2.1	413(B) 0464	13(B) 0464 36 Inch RCP Culvert Class III					Linear Feet	▼ \$67.	4
I Assignment: PI Line Number: PI Description:						Cost Segment:	Pay Quantity:	Co	
13(B) 0464 🗎 60 36 Inch RCP Culvert Class III							Direct Cost	- 1,000.	00 De
Cost Item Summary Detail : \$67.54 UPlug : \$0.00 Quote : \$0.00 Allocation					1	A Description			
Cost Item Summary Detail : \$67.54 UP Plug : \$0.00 Quote : \$0.00 Allocation					Business Overhead	ł			
This cost item has			ate cost item and e	atao Dataila			Direct Cost		
Click the Next Dutt	ton to move to a	suborain	ate cost item and e	enter Details.			Job Overhead		

5.3.3 Cost Sources

You can define costs on a cost item in one of three ways, called Cost Sources:

Tab	Description					
Detail	This is the recommended costing method, where labor, equipment, and material resources are defined, along with productivity, to determine costs.					
Plug	This method allows you to enter a unit or total cost directly, without needing to enter resources or production. This should rarely be used , but does have a couple of use cases:					
	 Place holder value until you get more information (from subcontractors or designers) For preliminary estimates when limited information is available 					
Quote	The Quote cost source is for contractors, subcontractors or vendor quotes.					

• Creating and managing quotes is covered in Lesson - Quote Management



On each Cost Item Record, InEight Estimate gives you the option to define both Plug and Detail values on each respective tab.

5.3.3.1 Plug Tab

The Plug tab allows user to input unit or total cost to any of the listed cost categories which can be customized based on company requirements.

ost Breakd	lown Strue	cture (CBS)	Register		Cost Item Rec	ord 🖸									
BS Code:	Optio	onal Code:	Descripti	on:			For	recast (T/O) Qi	ty:	Unit of Measure	:	Unit Cost:	Total Cost:	Currency:	
1 17	1200	0100	Toll Boot	:h					1.00	Each	~	\$25,264.55	\$25,264.55	U.S. Dollar	
17.1	0220)	Site Prep	aratio	n				1.00	Lump Sum	-	\$3,664.55	\$3,664.55	U.S. Dollar	
Assignmen	nt: PI Lir	ne Number:	PI Descrip	otion:						Cost Segment:		Pay Quantity:	Cost Source:	Alternate:	
200 0 100	- 170		Toll Boot	:h						Direct Cost	~	1.00	Detail 👻	BASE	_
Cost Item Su	immary	🍰 <u>D</u> etail : \$3	3,664.55	ų,	Plug : \$2,500.00	Quote : \$	0.00	Allocation			Cos	st Item Setup			:
ost Category	y		Unit Cos	t	Total Cost						De	efault Pay Rules			
Total			\$2,50	0.00	\$2,500.00								Scale 1: Scale	2: Scale 3:	
> Labor			\$	0.00	\$0.00							Composite Wage Sc	ale: 100.00 0.0	0.00	
> Owned	d Equipmen	t	\$	0.00	\$0.00						F	or every 8.00 ho	urs worked, pay 8.0	0 hours	
> Rente	d Equipmen	t	\$	0.00	\$0.00										
> Supplie	es		\$	0.00	\$0.00							efault Shift Arrangeme			
> Materi	ials		\$	0.00	\$0.00						W	ork Hours per Shift:		ays per Week:	
Subcor	ntract		\$2,50	0.00	\$2,500.00							8.00	1.00	5.00	
> Fees			\$	0.00	\$0.00						De	efault Properties			
> Allowa	ance		\$	0.00	\$0.00							Account Co	de: 8000	d.	
Custor	m Category	1	\$	0.00	\$0.00										
Undefi	ined		\$	0.00	\$0.00							Cost Cu	ve: Linear	•	
Billing Rate	e		\$	0.00	\$0.00						4				,
Billing Rate	e Markup			0.00	\$0.00							🚖 P 🕵	📚 📜 S	•	\approx

5.3.3.2 Detail Tab

ode:	Optional (Code: [Description:			Foreca	st (T/O) Qty:	Unit of Measure	20	Unit Cost:	Total Cost:	Currency:
									~			
7	1200 010)	Toll Booth				1.00	Each		\$25,264.55	\$25,264.55	U.S. Dollar
7.1	0220		Site Preparatio	n			1.00	Lump Sum	•	\$3,664.55	\$3,664.55	U.S. Dollar
signment:	PI Line Nu	mber: F	PI Description:					Cost Segment:		Pay Quantity:	Cost Source:	Alternate:
0100 -	170		Toll Booth					Direct Cost	~	1.00	Detail 👻	BASE
	_						-	-		•	Scala 1, Scala	2: Scale 3:
Row Nu ≒	c			Description	Quantity (Less Waste)		Waste % Add-on	Qua L	,		ale: 100.00 0.	00 0.00
+	1 LL2			Laborer				3.00 E		- foult Chift Arrangemen		
+	2 LO1			Operator Class 1				1.00 E		-		ays per Week:
+	3 EG14G			Grader 14G				1.00 E		8.00	1.00	5.00
+	4 ETWT			Water Truck				1.00 E		<u> </u>		
+	5 LT1			Teamster				1.00 E			de: 8000	1
												•
										Cost Cur	ve: Linear	
	7.1 ignment: 0100 - Item Summa olumns here Sow - - -	7.1 0220 ignment: PI Line Nu 0100 ° 170 Item Summary 200 kow 200 000mms here to group C Row 2 1 LL2 2 LO1 3 EG14G 4 ETWT	7.1 0220 ignment: PI Line Number: 0100 170 Item Summary	7.1 0220 Site Preparatic ignment: PI Line Number: PI Description: 0100 170 Toll Booth Item Summary	7.1 0220 Site Preparation ignment: PI Line Number: PI Description: 0100 170 Toll Booth ttem Summary Description: 0 Description: 0 0 olumns here to group Find: [Search For] Sa Resource Assembly Description 0 1 L12 Laborer 0 2 L01 Operator Class 1 0 3 EG14G Grader 14G Grader 14G 4 ETWT Water Truck Vater Truck	D220 Site Preparation ignment: PI Line Number: PI Description: 0100 170 Toll Booth Item Summary	7.1 0220 Site Preparation ignment: PI Line Number: PI Description: 0100 170 Toll Booth Item Summary	7.1 0220 Site Preparation 1.00 ignment: PI Line Number: PI Description: 1.00 0100 170 Toll Booth 1.00 Item Summary	7.1 0220 Site Preparation 1.00 Lump Sum ignment: PI Line Number: PI Description: Cost Segment: 0100 170 Toll Booth Direct Cost ttem Summary	7.1 0220 Site Preparation 1.00 Lump Sum ▼ ignment: PI Line Number: PI Description: Cost Segment: 0100 170 Toll Booth Direct Cost Item Summary	7.1 0220 Site Preparation 1.00 Lump Sum • \$3,664.55 ignment: PI Line Number: PI Description: Cost Segment: Pay Quantity: 0100 170 Toll Booth Direct Cost 1.00 Item Summary	7.1 0220 Site Preparation 1.00 Lump Sum + \$3,664.55 \$3,664.55 ignment: PI Line Number: PI Description: Cost Segment: Pay Quantity: Cost Source: 0100 170 Toll Booth Direct Cost 1.00 Detail + 0100 170 Toll Booth Direct Cost 1.00 Detail + 0100 170 Toll Booth Quote: \$0.00 Allocation Direct Cost 1.00 Detail + 0100 170 Find: [Search For] ···· Saved views: Previous View - Ocost Item Setup 0100 Escource Quantity Waste Quant N 0101 Utr2 Laborer 3.00 E Composite Wage Scale: 100.0 0.0 1 LL2 Laborer 3.00 E 0.00 1.00 E 0.00 0.0 1 LL2 Laborer 3.00 E 0.00 E 0.00 0.00 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Entering both a detailed and plug cost allows you to define costs at a higher summary level initially (Plug tab), and then define more detail as the estimating process progresses (Detail tab). You can

review and compare your plug and detail values by toggling between tabs, but your cost item will only contribute the total cost from one of the tabs based on which cost source is selected.

You control which cost is used by selecting **Detail** or **Plug** in the Cost Source field on the Cost Item Record.

	Forecast (T/O) Qty:	Unit of Measure:	Unit Cost:	Total Cost:	Currency:
	1.00	Each	\$24,100.00	\$24,100.00	U.S. Dollar
	1.00	Lump Sum		\$2,500.00	U.S. Dollar
		Cost Segment:	Pay Quantity:	Cost Source:	Alternate:
		Direct Cost	- 1.00	Plug	BASE
		Γ	c	M Description	
Quote : \$0	.00 <u>A</u> llocation		Cost Item Setup	Detail	
ved views:	Previous View	-	Default Pay Rules	Plug	
Quantity (Less Waste)	Waste % Add-on	Qua L 3.00 E 1.00 E 1.00 E 1.00 E 1.00 E	Composite Wage Sc For every 8.00 ho Default Shift Arrangeme Work Hours per Shift: 8.00 Default Properties Account Co	u m [×

TIP The Quote Cost Source can only be selected from the Quote Comparison & Award form. See Lesson 8 – Quote Comparison.

5.3.4 Plug Costs

The following steps walk you through defining a plug cost on a cost item.

Step by Step — Define a Plugged Cost

- 1. In your job, from the InEight Estimate landing page, on the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Right click on the **row header** for a cost itemand select **Open**.

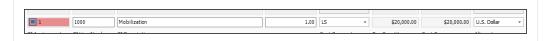
3. In the **Cost Source** drop-down field select **Plug**.

Pay Quantity:	Cost Source:	Alternate:
1.00	Detail -	BASE -
	M Description	h
t Item Setup	Detail	
fault Pay Rules	Plug	
Composite Wage Sc	Quote	
or every 8.00 ho	-	
alt Shift Arrangeme	r	
ork Hours per Shift:		
8.00	···.	×

- 4. In the left section of the Cost Item, select the **Plug** tab.
 - This gives you the list of all cost categories, where you can enter either a Unit or Total Cost
- 5. Click in the Labor Unit Cost field and enter a numeric value. Click in the Owned Equipment Unit Cost field and enter a numeric value.

C	ost i	Item Summary	🚊 <u>D</u> etail : \$0	0.00	🐈 Plug	: \$20,000.00	5
Co	st C	Category		Uni	it Cost	Total Cost	
¥	То	tal		\$	20,000.00	\$20,000.00	
	>	Labor		\$	10,000.00	\$10,000.00	
	>	Owned Equipme	ent	\$	10,000.00	\$10,000.00	
	>	Rented Equipm	ent		\$0.00	\$0.00	
	>	Supplies			\$0.00	\$0.00	
	>	Materials			\$0.00	\$0.00	
	>	Subcontract			\$0.00	\$0.00	
	>	Fees			\$0.00	\$0.00	
	>	Allowance			\$0.00	\$0.00	
		Custom Catego	ory1		\$0.00	\$0.00	
		Undefined			\$0.00	\$0.00	
	Bil	ling Rate		\$	20,000.00	\$20,000.00	
	Bil	ling Rate Markup			\$0.00	\$0.00	
	Bil	ling Rate Markup	%		0.00	0.00	

• The Total Cost for the cost item should now auto-calculate to be \$20,000.00



5.3.5 Detail Costs

The **Detail** cost method is also defined on the Cost Item Record. On the Detail tab, you can add resources (labor, equipment, and material) and define production.

On the Production tab (right side of screen), define production by entering one of the following:

- A duration, or
- A unit per duration, or
- A duration per unit

When you enter a production value, all the other production fields will auto-fill based on what you entered.

g	columns here t	o group				Find:	Search For]	··· Sa	ved views: Previ	ous View		•		PIOU	uction	Qty Driven Hourly
	Row =	c	Resource	Description	Quantity (Less	Waste %	Quantity	Unit of	Product	w	Pay	Unit		Duration D	iven Resources	Resources
	Nu =	C	Assembly	Description	Waste)	Add-on	Quantity	Mea	Factor	н	н	Cost		Cus	comize Display	
	+ 1	LT1		Teamster			1.00	Each	1.00	80.00	80.00	\$30		Days:	10.00 ৰ	0.00
	+ 2	ETLT		Lowboy Trailer			1.00	Each	1.00	80.00	80.00	\$33		Shifts:	10.00	0.00
	+ 3	ETTT		Tractor Truck			1.00	Each	1.00	80.00	80.00	\$78		Hours:	80.00	0.00
														Man-Hours:	80.00	0.00
						Resou	rces							Equip-Hours:	160.00	0.00
													4	-	,	

The hours defined on the Production tab drive the labor and equipment resources you employ on the left, multiplying their unit costs by the production hours.

When you employ material resources, their costs are driven by the quantity you enter into the quantity field.

The Total Cost of each resource is added together to give you the Total Cost for the cost item.

Cos	t Breakdow	n Structure	CBS) Register	Cost Ite	m Record 🛛							_	
CBS	Code:	Optional Co	de: Descriptio	in:		Forecast (T/C) Qty:	Unit of Measure:	Uni	t Cost:	Total Cost:	Currency:	
	1	641 0100	Mobilizat	on			1.00	Lump Sum	•	\$11,909.51	\$11,909.51	U.S. Dollar	r
PI A	ssignment:	PI Line Nun	ber: PI Descrip	tion:				Cost Segment:	Pay	Quantity:	Cost Source:	Alternate:	
641	l 0100 -	10	Mobilizat	on				Direct Cost	-	1.00	Detail 👻	BASE	
Cos	st Item Summa	ary 🏂 De	ail : \$11,909.51	₽ Plug : \$20	,500.00 💭 Quote : \$	\$500.00 <u>A</u> lloc	ation			Productio	n		×
Drag	g columns here	e to group		Find: [Se	arch For] ···	Saved views:	Previora	view	-				Duratio
	≞	Waste % Add-on	Cost Driver	Quantity (Less Waste)	Productivity Factor	Total Cost (Forec	Curre	Cost Curve	Wo Ho Ru	urs	Duration Driven I	Resources	R (x
÷	+ 1		CI Duration		1.00	-	U.S. Do	llar Employed C			Days:	10.00 ┥	
	+ 2		CI Duration		1.00	\$2,688.00	U.S. Do	llar Employed C			Shifts:	10.00	
	+ 3		CI Duration		1.00	\$6,272.00	U.S. Do	llar Employed C			Hours:	80.00	
*											Man-Hours:	80.00	
											Equip-Hours:	160.00	

5.3.5.3 Add Cost Detail

The following steps walk you through adding resources and production on a cost item.

Step by Step — Add Cost Detail

- 1. Using your job, from the InEight Estimate landing page, on the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Right click on the **row header** for a cost item and select **Open**.
- 3. Select the **Detail** tab.
 - Notice there is no cost on the Detail tab since no cost detail is defined

rag	g columns here to group Find: [Search For] Saved views: Previous View -													
	Row 🛌	Code	Resource Assembly	Description	Quantity (Less Waste)	Waste % Add-on	Quantity	Unit of Mea	Product Factor	W H	Pay Hours	Unit Cost	Total Cost (Forec	
>														

4. A blank row is available to define your costs. With your cursor in the code field, click the **Resource Selection**^A icon to open the Resource Selection Register.

Row Number Code 🖭 Reso Asse	

- 5. On the Labor tab, select a labor resource.
- 6. Select OK.

ad	columns here to	group		Find:	[Search For]	··· Saved vi	ews: Previous View	•	ī
	Resource 🚊	Description	Resource File Description		Unit of Measure	Productivity Factor	Default Quantity	Resource Type	
	+ LIW1	Iron Worker	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	+ LIW2	Iron Worker Foren	nan Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	+ LL1	Labor Apprentice	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
J	+ LL2	Laborer	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
4	ε λ LL3	Labor Foreman	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	+ LMECH	Mechanic	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	+ LO1	Operator Class 1	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	+ LO2	Operator Class 2	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	+ LO3	Operator Class 3	Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	+ LO4	Operator Foreman	n Standard Labor Rat	te File	Hour	1.00	1.00	Labor Rate	
	1	24							

- The labor resource you selected is now employed on the cost item
- 7. In the new blank row, click in the **Code** field and click on the **Resource Selection** icon to open the Resource Selection Register.
- 8. Select the Labor tab, then select a labor resource.
- 9. Click **OK**.
- 10. In the new blank row, click in the **Code** field and click on the **Construction Equipment** tab, then select an **equipment resource**.
- 11. Click **OK**.

Drag	g columns here	to group				
	Row 🛓	Code	Resource Assembly	Description	Quantity	Unit of Mea
÷	+ 1	LL2		Laborer	1.00	Each
		LO1		Operator Class 1	1.00	Each
	+ 3	EL988		Loader 988	1.00	Each
*						

12. Because these are duration-based resources, you need to enter a Production value. From the lower-right section of the form, select the **Production** tab.

	Man	Count:	2.00			
	Equip	Count:	1.00			
Cos	🚉 Pro	🔮 Ма	😫 Res	Sch	🛓 Use	≈в

- 13. Enter a **numeric value** in the Days field, then press **Tab**.
 - Notice the red arrow indicating where production was defined
 - Notice that the Total Cost of the cost item is defined, based on the resources and productivity you defined

	2.1		Clearin	Ig		15.00	Acre +	\$553.10		\$8,296.52	U.S
ΙA	ssignment:	PI Line Nu	mber: PI Des	cription:			Cost Segment:	Pay Quantity:	Cost Sour	ce:	Alte
200	0 ~	2	Clearin	ıg & Grubbing			Direct Cost	10.00	Detail	•	BA
Co	st Item Summa	ry 🍃 De	etail : \$553.10	₽ Plu <u>g</u> : \$0.00	□	Production					
[Se	arch For]		Saved views:	Previous View	•					Qty Drive Hour	
	Row =	Code		Resource	Description			Duration Driven Res		Resourc	es
	Row Nu ⊨	Code		Resource Assembly	Description			Customize D)isplay	Resourc	tes
	Nu =	Code			Description Laborer					Resourc	
	Nu = +							Customize D)isplay		00
<i>→</i>	Nu == + +	1 LL2	1		Laborer			Customize D Days:)isplay	0.0	00
→ *	Nu == + +	1 LL2 2 LO1	ž		Laborer Operator Class			Customize D Days: Shifts: Hours:	bisplay 8.00 ◀ ₿	0.0	00 00 00

14. Next, adjust the production by entering a **numeric value** in the Acre/Day field.

41	2		2000	Clearin	g & Grubbing			15.00	Acre	~	\$1,037.06	\$15,555.9	7 U.S. Do
	2.1			Clearin	g			15.00	Acre	•	\$1,037.06	\$15,555.	7 U.S. Do
PI As	ssignmen	t: F	PI Line Number	: PI Desc	ription:				Cost Segment:		Pay Quantity:	Cost Source:	Alternat
200	0	~	2	Clearin	g & Grubbing				Direct Cost	~	10.00	Detail	* BASE
Cos	st Item Sur	nmary	<mark>⊉</mark>	\$1,037.06	₩ Plu <u>g</u> : \$0.00	Quote : \$0.00	Allocation			Prod	uction		
Drag) columns l	nere to	group	Find: S	earch For] ···	Saved views:	Previous View		•				Qty D H
	Row Nu ≞		Code		Resource Assembly	Description		(Quantity Less Vaste)			n Driven Resources <u>Customize Display</u>	Reso
	+	1	LL2			Laborer					Day	rs: 15.00	
	+	2	L01			Operator Class	1				Shift	ts: 15.00	
÷	+	3	EL988	2		Loader 988					Hour	rs: 120.00	
*											Man-Hour	rs: 240.00	
											Equip-Hou	rs: 120.00	
											Acre/Da	y: 1.00	•
											A (OL 1)	GL. 8	

15. Click **OK** to close the record.

5.3.5.4 Add Assembly

Step by Step — Define Cost Detail by Adding an Assembly

- 1. Using your job, from the InEight Estimate landing page, on the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Right click on the row header for a cost item and select **Open**.
- 3. Select the **Detail** tab.
 - A blank row is available to define your costs
- 4. With your cursor in the Resource Assembly field, click the **Resource Assembly Selection** icon to open the Resource Assembly Selection Register.

Drag columns here	to group		
Dow			
Nu =	Code	Resource Assembly	Descripti
1			12

5. Select a labor assembly, then select OK.

• The assembly you selected is now employed on the cost item

1	2			2000		Clearin	ig & Grubbir	ıg								
	2.2					Gradin	g									
I A:	ssig	nment	: 1	PI Line	Number:	PI Desc	Description:									
200	0		~	2		Clearin	Clearing & Grubbing									
Cos	st Item Summary 🕏 Detail : \$0.00 🔱 Plug : \$0.00								Quote : \$0.00	Allocation						
rag	; colu	ımns h	iere to	o group	1											
	Row E. Code					Resource Assembly			Description			Quantity (Less Waste)	Waste % Add-or	Qua.		
÷	-		1				CGRADE		Grading Crew							
			Row Num.	_ <u>=</u>	Code	Resour Assemb		Description	ı	Quantity (Less Waste)	Waste % Add-on	Quan	Unit of Measure	Productivity Factor		
		\rightarrow		1	ETWT	CGRAD	Ε	Water True	ck			0.50	Each	1.0		
				2	LL2	CGRAD	E	Laborer				1.00	Each	1.0		
				3	LO3	CGRAD	E	Operator C	Class 3			2.00	Each	1.0		
				4	EG14G	CGRAD	E	Grader 140	3			1.00	Each	1.0		
				5	ECOMP1	CGRAD	E	Compactor	Smooth Drum			1.00	Each	1.0		
				6	LO4	CGRAD	E	Operator F	oreman			1.00	Each	1.0		
	_	4														

- 6. Because this crew includes duration-based resources, you need to enter a Production value. Select the **Production** tab.
- 7. Enter a numeric value in the Acre/Day field, then press Tab.

		×
	Qty Driven Hourly	1
Resources	Resources	
ze Display		
10.00	0.00	
10.00	0.00	
80.00	0.00	
320.00	0.00	
200.00	0.00	
1.00 ┥	0.00	
1	0.00	
0.13	0.00	
0.03	0.00	
0.05	0.00	
1.00	0.00	
1.00	0.00	
	ze Display 10.00 10.00 80.00 320.00 200.00 1.00 6 0.13 0.03 0.05 1.00	Hourly Resources Hourly 10.00 0.00 10.00 0.00 10.00 0.00 200.00 0.00 200.00 0.00 1.00 0.00 0.00 0.00 1.00 0.00 0.13 0.00 0.05 0.00 1.00 0.00

Ŧ.	2		2	2000		Clearin	ng & Grubbin	ng			15.00	Acre		~	\$2,301.20	\$34,518.06	U.S.					
	2.2					Gradin	Ig				10.00	Acre		•	\$1,896.21	\$18,962.09	U.S.					
PI As	ssigr	nmen	t: P	'I Line	Number:	PI Des	cription:					Cost Segr	ment:	Pa	y Quantity:	Cost Source:	Alter					
200	0		~ 2	2		Clearin	ng & Grubbin	ng				Direct Co	st	~	6.67	Detail +	BAS					
Cos	st Iter	m Su	mmary	3	<u>D</u> etail : \$	1,896.21	🖊 Plug	: \$0.00	Quote : \$0.00	<u>A</u> llocation				Product	ion							
Drag	, colu	imns	here to	group		Find:	Search For]	Saved views:	Previous View		•					Qt					
				Resource Assembly		Description (Le			Quantity (Less Waste)				n Driven Resources Customize Display	R								
<i>→</i>	-		1				CGRADE		Grading Crew			wastej			Day	rs: 10.00						
			Row Num.	1	Code	Resour		Description	ı	Quantity (Less Waste)	Waste % Add-on	Quan.			Shift							
	-	<i>→</i>		1	ETWT	CGRAD		Water Tru	dk	(,					Hou							
				2	LL2	CGRAD	Œ	Laborer							Man-Hour							
				3	LO3	CGRAD	E	Operator (Class 3						Equip-Hou	rs: 200.00						
			4	4	4	4	1	1		4	EG14G	CGRAD	ЭE	Grader 14	G				.		Acre/Da	
		-												4	A and I miles	a. k						

• Notice the Total Cost of the cost item is defined, based on the resources included in the assembly and the productivity you defined

Exercise 5.2 — Define Cost Detail

For cost items you create in InEight Estimate, you need to add resources, assemblies and production to define their costs. In this exercise, you will practice defining cost details. Complete the following steps, using your E101 – Training Job:

Add the following resources to 3.1 Excavate cost item

Code	Description	Quantity
LO1	Operator Class 1	1
LL2	Laborer	2
LL3	Labor Foreman	1
EX225	Excavator 225	1
CY/Hour	400	

Add the following resources to 3.2 Haul cost item

Code	Description	Quantity
LO1	Operator Class 1	1
LL2	Laborer	2
LL3	Labor Foreman	1
LT1	Teamster	1
EL950	Loader 950	1
ETDT	Dump Truck	1
EX225	Excavator 225	1

Add the following production value to cost item

CY/Hour	400
---------	-----

Add the following resources to 4.1 Furnish Pipe Materials cost item

Code	Description	Quantity
MPP10	Pipe 10" PVC SDR21	1,000 with 5% Waste % Add-on = 1,050 LF

Add the following assembly to 4.2 Excavate-Install-Backfill Pipe cost item

Resource Assembly	Description	Quantity
CPIPE	Pipe Crew	1

Add the following production value to cost item

3

Days

You should end up with the following results

CBS Position Code 🗎	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
+ 1	Mobilization	1.00	Lump Sum	\$20,000.00	\$20,000.00
□ 2	Clearing & Grubbing	15.00	Acre	\$2,301.20	\$34,518.06
+ 2.1	Clearing	15.00	Acre	\$1,037.06	\$15,555.97
+ 2.2	Grading	10.00	Acre	\$1,896.21	\$18,962.09
□ 3	Excavation	40,000.00	CY	\$1.52	\$60,723.96
+ 3.1	Excavate	40,000.00	CY	\$0.51	\$20,587.04
+ 3.2	Haul	40,000.00	CY	\$1.00	\$40,136.93
□ 4	10" PVC Pipe	1,000.00	LF	\$11.89	\$11,893.33
+ 4.1	Furnish Pipe Materials	1,000.00	LF	\$3.54	\$3,538.08
+ 4.2	Excavate-Install-Backfill Pipe	1,000.00	LF	\$8.36	\$8,355.25

Congratulations, you have completed this exercise!

5.4 COST ITEM DETAILS

The Cost Item Record contains other tabs (called Data Blocks) in addition to the Production tab, for storing and calculating information specific to that cost item.

Default Pay Rules			
	Scale 1: S	cale 2: Scale 3:	
Composite Wage Scale:	100.00	0.00 0.00	
For every 8.00 hours v	vorked, pay	8.00 hours	
Default Shift Arrangements -			
Work Hours per Shift: Shif	fts per Day:	Days per Week:	
8.00	1.00	5.00	
Default Properties			
Account Code:	1110	2	
Cost Curve:	Linear	-	
Worker's Comp Override:		•	
Tag 1:	Estimator 1	•	
Tag 2:	Roadway	•	
Tag 3:		-	
Tag 4:		•	
Tag 5:		-	
	·		

You can add to or adjust the information on these tabs as needed, based on the cost item's circumstances. In this section, you will review three of the tabs (in addition to the Production tab) you will likely use most often: Cost Item Setup, Notes, and Man-Hour Factors.

5.4.1 Cost Item Setup

On the data block where the Production tab was found, there is also a Cost Item Setup tab where you can adjust wage scale and shift arrangements for a specific cost item.

Default Pay Rules	Scale 1: Scale 2: Scale 3:
Composite Wage Scale:	100.00 0.00 0.00
For every 8.00 hours w	vorked, pay 8.00 hours
Default Shift Arrangements -	
Work Hours per Shift: Shif	ts per Day: Days per Week:
8.00	1.00 5.00
Default Properties	
Account Code:	1110 💉
Cost Curve:	Linear -
Worker's Comp Override:	-
Tag 1:	Estimator 1 🔹
Tag 2:	Roadway 👻
Tag 3:	•
Tag 4:	•
Tag 5:	•
Quantity Driver:	Pay Item 🚽
Quote Group Tag:	•
Minority Goal Allowance:	100.00
Phase Code:	
When man-count changes:	Change UM / Man-Hour
Suspend:	Change Days

The composite wage scale and work and pay hours are used in the calculation of the cost of employed labor resources. The data reported on the Default Pay Rules tab is, by default, the composite wage scale and work and pay hours defined on the Job Properties - Cost Basis tab for the current job.

These settings can be modified from the default on a cost item-by-cost item basis.

The Pay Rules for cost items can also be defined or modified on the Cost Breakdown Structure (CBS) Register in the Scale 1, Scale 2, Scale 3, Work Hours Rules, and/or Pay Hours Rules columns in the row of the subject cost item.

Step by Step — Adjust Shift Arrangements

- 1. Using your job, from the InEight Estimate landing page, on the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Right click on the row header for a cost item and select **Open**.

- 3. Select the **Cost Item Setup** tab in the lower-right portion of the form (the tab name may be abbreviated).
- 4. In the Default Pay Rules data block, adjust your wage scale to a **numeric value** for Scales 1 and 2.

15.00 Acre	▼ \$1,079.93 \$16,198.97 U.S. Dollar	•
Cost Segment:	Pay Quantity: Cost Source: Alternate:	
Direct Cost	→ 10.00 Detail → BASE	•
	Cost Item Setup	×
Quantity (Less Waste)	Default Pay Rules Scale 1: Scale 2: Scale 3: Composite Wage Scale: 80.00 20 0.00 For every 8.00 hours worked, pay 8.00 hours	P 4
	Default Shift Arrangements Work Hours per Shift: Shifts per Day: Days per Week: 8.00 1.00 5.00	
	Default Properties	
Drag columns here to group	Find: [Search For] ···· Saved views: Previous View ·	Ĩ
Row Number Unit Cost		uan

Laborer

5. Under the Composite Wage Scale, adjust the hours so that for every **10** hours worked, pay **10** hours.

1.00

Default Pav Rules	
	Scale 1: Scale 2: Scale 3:
Composite Wage Scale:	80.00 20.00 0.00
For every 10.00 hours	worked, pay 10.00 hours
Default Shift Arrangements -	
Nork Hours per Shift: Shi	ifts per Day: Days per Week
8.00	1.00 5.00

\$31.22 LL2

6. In the Default Shift Arrangements data block, change the Work Hours per Shift to 10. Leave Shifts per Day at 1 and Days per Week at 5.

•		
Default Pay Rules		
	Scale 1:	Scale 2: Scale 3:
Composite Wage Sca	le: 80.00	20.00 0.00
For every 10.00 hou	rs worked, pay	10.00 hours
Default Shift Arrangemen	ts	
Work Hours per Shift:	Shifts per Day:	Days per Week:

- Notice that your hours did not change on the cost item (they will remain constant)
- However, if you go back to the Production tab, you will also see that it automatically adjusted your other production values based on the new settings

Production		:	×
		Qty Driven Hourly	*
Duration Driv	en Resources		
Custo	mize Display		
Days:	12.00	0.00	
Shifts:	12.00	0.00	
Hours:	120.00	0.00	
Man-Hours:	240.00	0.00	
Equip-Hours:	120.00	0.00	
Acre/Day:	1.25	• 0.00	
Acre/Shift:	1.25	0.00	
Acre/Hour:	0.13	0.00	
Acre/Man-Hr:	0.06	0.00	
Acre/Equip-Hr:	0.13	0.00	
Days/Acre:	0.80	0.00	
Shifts/Acre:	0.80	0.00	*
•		•	

5.4.2 Notes

On the Cost Item Record, you can enter any cost item-specific instructions, parameters, or general information on the Notes tab. Below are a few examples of the kinds of notes you might enter:

- For a Hauling cost item: There should be very little waste. If so, we can spread it out in the right of way at MP 111
- For a Structural Excavation and Backfill item: The backfill cannot be the native material. Have to use clean base rock
- For an Underground Pipe cost item: The average depth is close to 10 ft.

TIP You can use the Notes tab to reference cost item changes (e.g., changing shift arrangements, changing a resource rate).

5.4.3 Man-Hour Factors

For items that have known risks or potential resource concerns, you can apply a Man-Hour Factor to take those risks into consideration.

Man-Hour factors are applied on the Man-Hour Factors tab on the Cost Item Record. Factors are applied in relation to 1, where slower production is greater than 1 and faster production is less than 1.

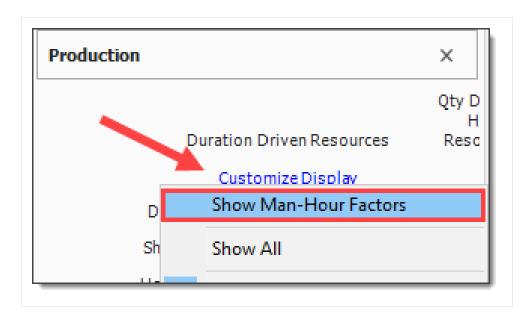
TIP Man-Hour Factors affect both Labor and Equipment Hours.

For example, if you predict production to be 20% slower due to weather concerns, you would type 1.2 in the weather factor field.

Man-Hour Factors	
Factor Name:	Factor:
Factor 1:	1.20
Factor 2:	1
Factor 3:	1.00
Factor 4:	1.00
Factor 5:	1.00
Factor 6:	1.00
Factor 7:	1.00
Factor 8:	1.00
Factor 9:	1.00
Factor 10:	1.00
FactorComposite:	1.2000

Even after defining a Man-Hour Factor, the Production tab will still display the original Production values.

- To see the factored Production values, click the **Customize Display** link on the **Production** tab and select **Show Man-Hour Factors**
- Both original and factored production are then displayed on the Production tab



You can apply Man-Hour Factors to multiple cost items at once by Multi-Editing selected cost items on the CBS Register.

5.4.4 Unique Identifier

TIP

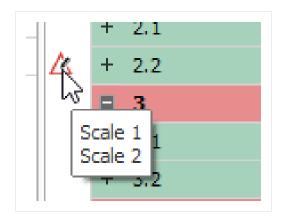
You may have noticed when you made changes on the Cost Item Setup tab, that the fields you changed and the Cost Item Setup tab became highlighted, indicating they were altered from their original state.

efault Pay Rules		
	Scale 1: Scale 2: Scale 3	-
Composite Wage Scale:	80.00 20.00 0.00	
For every 8.00 hours v	worked, pay 8.00 hours	
efault Shift Arrangements -		
Vork Hours per Shift: Shif	fts per Day: Days per Wee	c
8.00	1.00 5.0	J
efault Properties		
Account Code:		
Cost Curve:	Linear +	
Worker's Comp Override:	-	
Tag 1:	-	
Tag 2:	-	
Tag 3:	-	
Tag 4:	-	
Tag 5:	-	
Quantity Driver:	Superior CI -	
Quote Group Tag:	-	
Minority Goal Allowance:	100.00	
Phase Code:		
Vhen man-count changes:	Change UM / Man-Hour	
	O Change Days	
Suspend:		

On the CBS Register, the cost item you edited now has a Unique Identifier in the row header indicating the cost item was altered from the default values set in the project job properties or in the project library of resources rates.

		אחר	
nd	+	Prime Bond	PRIM
dd-On	+	Price % Add-On	PRIC
icing	+	Job Financing	FINA
gemen ⁺	+	Job Management & Equipment	JOB N
xpense	+	General Expense	GENE
on	+ 1	Mobilization	1000
& Grubb	2	Clearing & Grubbing	2000
n	+ 2.1	Clearing	
Pipe 🛛 🖄	+ 2.2	Grading	
	a 3	Excavation	3000
	+ 3.1	Excavate	
	+ 3.2	Haul	
		toll pure pr	4000

If you hover over the identifier, a pop-up menu appears indicating what data points were changed.



This same identifier will show up for resources as well, if you make changes to the employed resource's cost to be different than the original resource rate imported from the Resource Rate Register.

) i Fili	ndtol [Search F	or] ··· Saved	views: Previous View	•	Co	st C	Category	Scale 1	Scale 2
					~	To	tal	\$28.00	\$40.8
	Row	Code	Resource Assembly	Description	1	>	Labor	\$28.00	\$40.8
	NU		Assembly			>	Owned Equipment	\$8.66	\$0.0
	+ :	1 LL2		Laborer		>	Rented Equipment	\$0.00	\$0.0
Ą	+	2 LO1		Operator Class 1		>	Supplies	\$0.00	\$0.0
		3 EL988		Loader 988		>	Materials	\$0.00	\$0.0
*	$\mathbf{\mathbf{N}}$					>	Subcontract	\$0.00	\$0.0
						>	Fees	\$0.00	\$0.0
		•				>	Allowance	\$0.00	\$0.0
							Custom Category 1	\$0.00	\$0.0
							Undefined	\$0.00	\$0.0
						Billi	ling Rate	\$28.00	\$40.8
							ling Rate Markup	\$0.00	\$0.0
					4	Rilli	inn Rate Markun %	0.00	0 C

5.4.4.1 Highlight Unique (Delta) Toggle

You can turn the highlighting of unique resource and cost item fields off and on from the Actions menu of the Cost Item Record, under the View section.

۵ 🗉	-						Training J	ob - Estimate
File	Setup	Estimate	Quote f	Price	Execution	System	Actions	
M	[FFFF	📃 Display I	Parent Informa	tion	뷣 Highlight Unique	(Delta) Re	source Fields	🛓 Edit Resource P
	9111	莖 Display I	Billing Rate		Highlight Unique	(Delta) Co	st Item Fields	🔚 Insert Subordin
Split	Default Data Blocks							🔏 Break Cost Allo
Edit				Vie	w			
Cost Br	rea <mark>kdown S</mark> t	tructure (CBS) Register		Cost Item Record	0		
CBS Cod	de: O	ptional Code:	Description	1:			Foreca	st (T/O) Qty: Unit
din e	2	02 4262	Acobalt Co	nerat	Hot Mix Tupo A			25 000 00 Top

5.4.5 Cost Drivers

Each type of resource has a default cost driver. For example, Labor resources are duration driven so the cost driver is CI Duration, meaning their costs are driven by the duration of the cost item. If you want an Operator to only be assigned to a specific cost item or work activity for half the time, you can change its quantity to .5 and it will be driven by half of the cost item's hours.

Jug	g columns he	re to group						Find: [Sea	rch For]	
	Row Number	1	Code	Resource Assembly	Description	Quantity	Unit of Mea	Unit Cost	Waste % Add-on	Qua (Les Was
	+	1	LL2		Laborer	0.50	Each	\$29.00		
	+	2	L01		Operator Clas	1.00	Each	\$29.94		
	+	3	EL988		Loader 988	1.00	Each	\$73.75		
ø				43						

To enter work hours manually for the employed resource, you can change the Cost Driver option to CI Quantity or Fixed.

Row Number	<u>=</u>	Code	Resource Assembly	Description	Quantity	Unit of Mea	Unit Cost	Cost Driver	Waste % Add-on	Quantity (Less Waste)
+	1	LL2		Laborer	0.50	Each	\$29.00	CI Duration 👻		
+	2	L01		Operator Clas	1.00	Each	\$29.94	A Description		
+	3	EL988		Loader 988	1.00	Each	\$73.75	CI Duration		
								CI Quantity		
								Fixed 6		
								Scheduled Perio	ods	
								×		

With CI Quantity as your cost driver for the Operator, you can adjust the Work Hours manually, where previously that column was read-only.

Let's say you want your Operator to work specifically 80 hours.

rag	columns he	re to group				[Search For] ···· Saved views: Pr						
	Row Number	<u>11</u>	Code	Resource Assembly	Description	Quantity	Unit of Mea	Unit Cost	Work Hours	Pay Hours	Waste % Add-on	Cost Driver
R	+	1	LL2		Laborer	0.50	Each	\$29.00	80	60.00		CI Quantity
	+	2	LO1		Operator Clas	1.00	Each	\$29.94	120.00	120.00		CI Duration
	+	3	EL988		Loader 988	1.00	Each	\$73.75	120.00	120.00		CI Duration
*												

However, since the resource is now quantity driven, if you change the Forecast (T/O) Quantity to 50 you will see that the work hours will still adjust from 12 to 40.

cus	t Breakdown	Scruc	cure (CDS)	Register	Cost Item Recon	G Cost Ite	m Record										*
CBS	Code:	Optic	inal Code:	Description:						Forecast (T/O) Qty:		feasure: Unit Cost:	Total G	lost:	Currency:	
	2.2			Clearing							50.00	Cubic Ya	ard + \$1,15	5.70	\$57,835.17	U.S. Dollar	
PI A:	ssignment:	PI Lin	e Number:	PI Description								Cost Seg	gment: Pay Quantity:	Cost S	ource:	Alternate:	
201	0102 -	20		Clearing & Gr	ubbing							Direct C	ost -	0.00 Detail	•	BASE	•
Cos	t Item Summar	y		,156.70 	Plug : \$0.00	Quote : \$0.00 A	location						Production				×
Drag	columns here	to grou	ıp.			Find: [Sear	th For]	··· Saved	views: Previo	us View	_	•			Fa Duration		ty Driv Hou
	Row		Code	Resource Assembly	Description	Quantity	Unit of Mea		Work Hours	Pay Hours	Waste %	O D		iven Resourc		ources F	Resour
											Add-on		Davs:		0 4	48.00	48.
'g	+		LL 2		Laborer	0.50	Each	\$29.00	240.00	240.00		C			-		
	+	2	LO1		Operator Clas	1.00	Each	\$29.94	480.00	480.00		C	Shifts:	40.0	0	48.00	48.
	+	3	EL988		Loader 988	1.00	Each	\$73.75	480.00	480.00		C	Hours:	400.0	0	480.00	480.
*													Man-Hours:	400.0	0	480.00	240.
													Equip-Hours:	400.0		480.00	0.

If you want it set at 80 hours no matter what changes you make to your quantity, you can change the cost driver to Fixed. Then when you change the Forecast Quantity to 500, the work hours for the Operator will not change and will remain at 80 hours as shown below.

		Clearing										
		locaring								500.00	Cubic Yard	
nment:	PI Line Numb	er: PI Descrip	ption:						_		Cost Segm	ent:
02 -	20	Clearing	& Grubbing								Direct Cost	t
em Summa	ry 🍃 Detai	il : \$106.39	₽ Plug : \$0.00 (💭 Quote : \$0.00	Allocation							
umns here	to group					Find:	Search For]	··· Save	d views: Pre	evious View	-	
-	Code	Resource Assembly	Description	Quantity	Unit of Mea	Unit Cost	Work Hours	Pay Hours	Waste % Add-on	Cost Driver	Quantity (Less Waste)	P
1	LL2		Laborer	0.50	Each	\$29.00	80.00	80.00		Fixed		
2	LO1		Operator Clas	1.00	Each	\$29.94	480.00	480.00		CI Duration		
3	EL988		Loader 988	1.00	Each	\$73.75	480.00	480.00		CI Duration		
er	n Summa mns here 1 2	n Summary Deta nns here to group Code 1 LL2 LO1	n Summary 2 Qetal : \$106.39 mns here to group Code Assembly 1 LL2 2 LO1	n Summary	n Summary Detal : \$106.39	n Summary Detail : \$106.39 ♥ Plug : \$0.00 Quote : \$0.00 Allocation mins here to group E Code Resource 1 LL2 Laborer 0.50 Each 2 L01 Operator Clas 1.00 Each	Summary Detail : \$106.39 ♥ Plug : \$0.00 Quote : \$0.00 Allocation min here to group Find: E Code Resource Verticity Vint of Cost Unit of Cost 1 LL2 Laborer 0.50 Each \$29.90 2 LO1 Operator Clas 1.00 Each \$29.94	Summary Detail : \$106.39 ♥ Plug : \$0.00 Quote : \$0.00 Allocation min here to group Find: [Search For] Image: Solution of the second of th	Summary Detail : \$106.39 Plug : \$0.00 Quote : \$0.00 Allocation mns here to group Find: [Search For] Save E Code Resource Assembly Description Quantity Unit. Unit. Work Hours Pay Hours 1 LL2 Laborer 0.50 Each \$29.00 80.00 480.00 2 L01 Operator Clas 1.00 Each \$29.94 480.00 480.00	Summary Detail : \$106.39 ♥ Plug : \$0.00 Quote : \$0.00 Allocation minishere to group Find: [Search For] ···· Saved views: Prind: init of monitoria Unit of Monitoria Unit of Monitoria Unit Monitoria Waste Mours Made Mours	Summary Detail: \$10:00 Quote: \$0.00 Δlocation minishere to group Find: [Search For] ··· Saved views: Previous View image: A constraint of the same bit is a constraint of the sa	Summary Detail : \$106.39 ♥ Plug : \$0.00 Quote : \$0.00 Allocation minishere to group Find: [Search For] Saved views: Previous View

If you followed along and made any adjustments to cost item 2.1 Clearing, change the Cost Driver for the Operator resource back to **CI Duration** and the Work Hours back to **100**.

5.4.5.2 Split by Cost Type

It is common for an estimate to progress through multiple levels of detail. Often a high-level estimate for a particular scope of work consists of a single cost item inclusive of the entire cost of that work in a single line item. As the estimate is further refined, more detail is added and at times it can become necessary to split a cost item by the four main types of costs that make it up, such as separating the material cost from the installation cost.

The Split by Cost Type feature gives you the ability to select a cost item or a collection of cost items, and then separate any of the labor, equipment, material, or subcontract costs into separate cost items.

+ 1 2 3	Mobilization Clearing & G	Link this field to Excel
+ 4 → + 5	10" PVC Pipe	Indent Outdent
*		Insert Insert Su <u>b</u> ordinate Insert Dependent <u>C</u> ost Item Insert Cost Item <u>A</u> ssembly Insert Cost Item Assembly as <u>S</u> ubordinate
	M *	Split Split by Cost Typ <u>e</u>

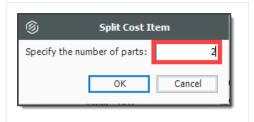
• Right click on a new Cost Item under Guardrail Type 2, and select **Split by Cost Item**. You can use this option if there at least two types. If not, you will get this pop-up:

(i) Attention		×
or The Cost Item '5' cannot two cost types.	be 'Split by Cost Type' because it does	not contain at least
o Add-Op	PRICE % ADD-ON	0

Alternatively, click on Split.

6	Split Cost It	em	
Specify the nur	nber of parts:		0
	ОК	Cancel	
			_

• Enter the number of parts to split and click OK



• You will be asked if you want to proceed. If so, click Yes

Attention	
Are you sure you want to split	the selected cost item into 2 parts?
Never ask me this question	again
	Yes No

The end-result will automatically add subordinate rows which you can now edit.

■ 5	Guardrail Type 2
+ 5.1	Guardrail Type 2
+ 5.2	Guardrail Type 2

5.4.6 Suspend Cost Items

The Suspend feature allows you to turn cost items on and off in order to perform "what-if?" analysis or evaluate alternative approaches to the work.

A cost item can be suspended in InEight Estimate for various reasons including the following:

- Manually suspended cost items
- Suspended parent
- Parent with cost source that is not Detail (plugged or quoted)
- Parent cost item with a zero quantity
- Pay item is suspended
- Allocated cost items
- Alternate scenarios:

- Overridden by another alternate
- Alternative is not active

Suspended cost items do not contribute any cost to the job's total value. Suspended items can be unsuspended at anytime in order to be included in the total project value.

Step by Step — Suspend a Cost Item

- 1. On the Cost Breakdown Structure (CBS) Register, select a cost item.
- 2. Right click on the selection and select **Toggle Suspended** from the menu.
 - You can also select Toggle Suspended under the Edit section of the Actions tab up above
 - You can also suspend cost items by checking the Suspend checkbox on the Cost Item Setup tab of a cost item record



• If a superior cost item is suspended, its subordinate cost items are automatically suspended as well

+ 3.1	Excavate	40,000.00 CY
+ 3.2	Haul	40,000.00 CY
□ 4	10" PVC Pipe	1,000.00 LF
+ 4.1	Furnish Pipe Materials	1,000.00 LF
+ 4.2	Excavate-Install-Backfill	1,000.00 LF

• The costs associated with these cost items will no longer contribute to the estimate

5.4.6.3 Editable Man-Hour Factors in Suspended Cost Items

You can edit Man-Hour Factors for a suspended cost item by creating and maintaining cost items, including Man-Hour Factors. This can be accomplished in a suspended state while having the scope of

work included in your estimate. The cost to contribute is excluded from the scope of work until you are ready to make it part of your estimate.

Car	t Breakdown	1 569	wchare (CBS	Register	Quote Company	toon & Award - Cost	Rema	Cast Item Reco	ord O									
085	Code	0p	tional Code:	Description						Panecest (7)(0) Qty:	Unit of	Measure		Unit Costs	Total (Ceets	Currency	
E	1	11	£ 0 100	Heblarte	yei					1.0	(Leng)	tum .		\$20,319.82		\$23,319.02	U.S. Deb	
P[A	coignnerb:	P] i	Line Number:	PI Descript	Sem:						Cost 5	epnert:		Pay Quantity:	Cost 5	Rounder	Alternate	
64	6100 -	н)	Hobilante	yi i						Death	Cent		1.00	Detail		8452	
CĮ	rt Tiem Summa	ry	2- Detail 1	\$23,318.42	🏺 75.g : \$500.00	Quete : \$500.00	Bocation						Ha	n-Hour Factors				×
-	columns here	to p	mp						Saved views:	Previous View		• •				Factor Name		Fadari
	Row Number		Code	Resource	Description	Quartity (Less Waste)	Viarie % All-on	Qe-h.	Unit of Measure		Uph The	Pay				Factor 1		E
	+	3	errr		Tractor Truck			1.00	Each	1.00	190.00	155				Fedor 3	_	1.00
	+	2	ELT		Loobey Trailer			L.00	Each	1.00	145.00	10				Fador 3	_	1.00
	+	1	171		Teanster			L.00	Each	1.00	380.00	26				Feder		1.00
																Fedor 3		1.00
																Fedori	-	1.00
				-									Ŀ	- B - D - 1	2	2. 2.	5. 2	- 25
1														05 0	morel	< Prev		< bai

5.4.6.4 Unsuspend a Cost Item

Follow the step by step below to unsuspend a cost item.

Step by Step — Unsuspend a Cost Item

- 1. On the Cost Breakdown Structure (CBS) Register, select a cost item.
- 2. Right click on the selection and choose **Toggle Suspended**.
 - You can also select Toggle Suspended from the Edit section of the Actions tab
 - You can also unsuspend cost items by unchecking the Suspend checkbox on the Cost Item Setup tab of a cost item record

5.4.6.5 Suspend Column

Within the CBS Register, the Suspend column indicates which cost items are suspended.

CBS Position Code	Description		ecast D) Qu
+ 1	Mobilization		
2	Clearing & Grubbing		
+ 2.1	Clearing		
+ 2.2	Grading		
3	Excavation		
+ 3.1	Excavate		
+ 3.2	Haul		
□ 4	10" PVC Pipe	✓	
+ 4.1	Furnish Pipe Materials	✓	
+ 4.2	Excavate-Install-Backfill	✓	

• Hover over the checkmarks to see why the cost item is suspended

+ 3.2	Haul	
□ 4	10" PVC Pipe	✓
+ 4.1	Furnish Pipe Materials	×
+ 4.2	Excavate-Install-Backfill	13
		Parent is Suspended

• You can suspend and unsuspend cost items by checking and unchecking the checkboxes in the Suspend column as well

5.4.7 Adding Cost Adjustments

Total Cost and Billing Adjustments can now be made in the CBS register which can be viewed either from the Standard view of the CBS register, or a saved view affiliated with change.

ost	Breakdown Struc	ture (CBS) Register 🛛									
ag o	olumns here to grou	up						Find:	[Search For] ····	Saved views: Cost Iter	n Adjustment View 👻
	BS Tosition Code ៉	Description	Forecast (T/O) Quantity	Unit of Measure	Total Cost (Forecast)	Cost Adjustment	Total Cost Adjustment Amount	Total Cost Adjustment Percent	Labor Cost Adjustment Amount	Labor Cost Adjustment Percent	Owned Equipment Cost Adjustment Amount
	3.5	REBAR	1.00	Lump Sum	\$2,618,414.00						
+	3.5.1	Rebar	1.00	Lump Sum	\$2,512,724.00		\$0.00	0.00	\$0.00	0.00	\$0.0
+	3.5.2	Post Tension Tendons	1.00	Lump Sum	\$0.00		\$0.00	0.00	\$0.00	0.00	\$0.0
+	3.5.3	Crane	1.00	Lump Sum	\$105,690.00		\$0.00	0.00	\$0.00	0.00	\$0.0
	3.6	034100 - Precast Structural Concrete	2,800.00	SQFT	\$128,640.00						
+	3.6.1	Precast Panels	27.00	EA	\$64,320.00		\$0.00	0.00	\$0.00	0.00	\$0.0
+	3.6.2	Crane	1.00	Lump Sum	\$64,320.00		\$0.00	0.00	\$0.00	0.00	\$0.0
=	4	DIV 04 - MASONRY	1.00	Lump Sum	\$2,326,834.67						
	4.1	042000 - Unit Masonry	1.00	Lump Sum	\$2,326,834.67						
+	4.1.1	CMU Walls	1.00	Lump Sum	\$1,879,709.33		\$1,708,826.67	1000.00	\$0.00	0.00	\$0.0
+	4.1.2	Precast Concrete Caps	1.00	Lump Sum	\$170,882.67		\$0.00	0.00	\$0.00	0.00	\$0.0
	4.1.3	Steel Embeds	1.00	Lump Sum	\$170,882.67		\$0.00	Þ	\$0.00	0.00	\$0.0
	4.1.4	Scaffolding	1.00	Lump Sum	\$105,360.00						
+	4.1.4.1	Setup & Maintain Scaffolding	2.00	Month	\$105,360.00		\$0.00	0.00	\$0.00	0.00	\$0.0
+	4.1.4.2	Additional Month	0.00	Month	\$0.00		\$0.00	0.00	\$0.00	0.00	\$0.0
+	4.1.4.3	Netting on Exterior	0.00	Lump Sum	\$0.00		\$0.00	0.00	\$0.00	0.00	\$0.0
=	5	DIV 05 - METALS	1.00	Lump Sum	\$854,880.00						
	26				\$20,381,473.74		\$1,733,328.68		\$17,567.79		\$176.7

Adjustment fields have been added to the CBS to view and modify the adjustment amount and adjustment percent without going into each individual cost item.

Any adjustment made to the Adjustment Amount fields on the CBS register will then have the Adjustment Percent field automatically calculated. Changes made to those fields will be highlighted in yellow signifying an adjustment has been made.

	261			\$20,381,473.74		\$1,733,328.68		\$17,567.79	
□ 5 ·	DIV 05 - METALS	1.00	Lump Sum	\$854,880.00					
+ 4.1.4.3	Netting on Exterior		Lump Sum	\$0.00		\$0.00	0.00	\$0.00	0.0
+ 4.1.4.2	Additional Month		Month	\$0.00		\$0.00	0.00	\$0.00	0.0
+ 4.1.4.1	Setup & Maintain Scaffolding	2.00	Month	\$105,360.00		\$0.00	0.00	\$0.00	0.0
■ 4.1.4	Scaffolding	1.00	Lump Sum	\$105,360.00					
+ 4.1.3	Steel Embeds	1.00	Lump Sum	\$170,882.67		\$0.00	þ	\$0.00	0.0
+ 4.1.2	Precast Concrete Caps	1.00	Lump Sum	\$170,882.67		\$0.00	0.00	\$0.00	0.0
+ 4.1.1	CMU Walls	1.00	Lump Sum	\$1,879,709.33	~	\$1,708,826.67	1000.00	\$0.00	0.0
₫ 4.1	042000 - Unit Masonry	1.00	Lump Sum	\$2,326,834.67					
□ 4	DIV 04 - MASONRY	1.00	Lump Sum	\$2,326,834.67					
+ 3.6.2	Crane	1.00	Lump Sum	\$64,320.00		\$0.00	0.00	\$0.00	0.0
+ 3.6.1	Precast Panels	27.00	EA	\$64,320.00		\$0.00	0.00	\$0.00	0.0

Other adjustments fields in the CBS register include the many adjustments fields that have been added to the **Billing Rates View**.

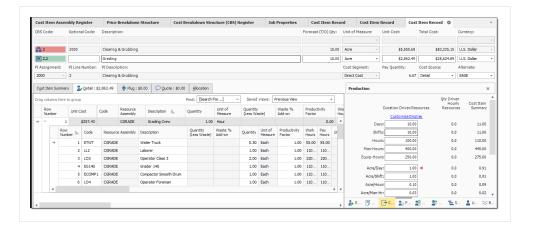
A new Saved view called **Cost Item Adjustment View** has been added to the Cost Breakdown Structure.

Exercise 5.3 — Manage Cost Item Details

In this exercise, you will practice making adjustments to your cost item details. Complete the following steps, using your E101 – Training Job:

- 1. Open the Cost Item Record for cost item 2.2 Grading.
- 2. From the **Cost Item Setup tab**, change the Composite Wage Scale to **80%** Scale 1, **20%** Scale 2.
- 3. Change the Default Shift Arrangements to **10** Work Hours per Shift, **1** Shift per Day, **5** Days per Week. Also adjust for every **10** hours worked, pay **10** hours.
- 4. From the **Man-Hour Factors** tab, apply a Man-Hour Factor of **1.1** to the same cost item.
- 5. On the Notes tab, type Added man-hour factor due to hard soil conditions.

You should end up with the following results for 2.2 Grading



Congratulations, you have completed this exercise!

Lesson 5 Review

- 1. Resources, costs, and production can only be added to what type of cost item?
 - a. Superior
 - b. Terminal
 - C. Parent
- 2. What Cost Source is used for defining resources and production?
 - a. Plug
 - b. Detail
 - c. Quote
- 3. On the Cost Item Record, what tab is used for changing the cost item's Default Shift Arrangements?
 - a. Cost Item Setup
 - b. Production
 - C. Man-Hour Factors
 - d. Notes

Lesson 5 Summary

As a result of this lesson, you can:

- Explain the Cost Breakdown Structure and its purpose
- Create cost items
- Add costs and production
- Manage cost item details

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LESSON 6 – INDIRECT COSTS

Lesson Duration: 45 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Explain how indirect costs are defined in InEight Estimate
- Estimate default indirect cost items
- Estimate user-defined indirect cost items

Lesson Topics

6.1 Indirect Costs Overview	
6.1.1 Navigation to Indirect Costs	
6.2 Default Indirect Cost Items	
6.2.1 Independent Indirect Cost Items	
6.2.2 Dependent Indirect Cost Items	
6.3 User-Defined Indirect Cost Items	
6.4 Cost Allocation	
6.4.1 Cost Allocation	
6.4.2 View Filter Excludes Cost Item Allocation Details	
6.4.3 Cost Allocation to By Unit Cost	
6.5 Dependent Cost Item Allocation	
6.5.1 Turning Off Cost Allocation	
6.5.2 Breaking a Cost Allocation Link	293
6.5.3 Pay Item Assignment for Allocation Distribution in an Unlocked Job	
Exercise 6.1 – Define Indirect Costs	
Lesson 6 Review	

Lesson 6 Summar	y	9 9
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6.1 INDIRECT COSTS OVERVIEW

Indirect costs such as the cost of prime bond, mobilization, or site supplies are typically overhead costs that are not directly associated with a particular project deliverable but contribute to the total cost of the project. However, indirect costs can be assigned to a pay items. This gives you the flexibility to more accurately control the cost basis of bid items and strategically price the work to maximize cost recovery and profit.

Once your direct costs are defined, you can add indirect project costs. Estimate provides two ways you can create indirect costs:

1. **Default Indirect Cost Items**: These are pre-built cost items created by InEight Estimate, located at the top of the CBS Register.

CBS Position ៉	Description
	JOB
+	Prime Bond
+	Price % Add-On
+	Job Financing
+	Indirect Cost Escalation
+	Direct Cost Escalation
+	Indirect Cost Add-On
+	Job Management & Equip
+	General Expense
+	Direct Cost Add-On

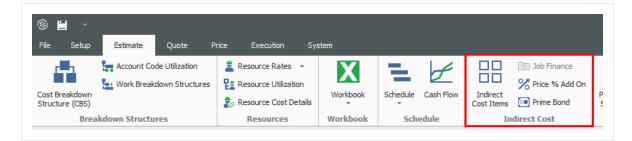
2. User-Defined Indirect Cost Items: Any cost item you create in the CBS Register that is not assigned to a pay item is considered indirect cost.

23	Job Overhead - Indirect
+ 23.1	Setup Yard
+ 23.2	Trailer Rent
+ 23.3	Utilities

TIP The Cost Breakdown Structure (CBS) located in the Library under the Estimate tab, Master Breakdown Structures section, controls which of the default indirect cost items to copy into new job folders.

6.1.1 Navigation to Indirect Costs

From the Estimate tab of the InEight Estimate landing page, you can quickly access indirect costs from the Indirect Cost section.



- Select Indirect Cost Items to open the Cost Breakdown Structure Register filtered to only your indirect costs
- You can select Prime Bond, Price % Add On, and Job Financing to access those indirects

The following section takes a closer look at the default indirect cost items.

6.2 DEFAULT INDIRECT COST ITEMS

InEight Estimate contains various default cost items to help you calculate your indirect costs.

6.2.1 Independent Indirect Cost Items

Independent indirect cost items function very much like the direct cost items you defined previously:

- Job Management & Equipment
- General Expense

6.2.1.1 Job Management & Equipment

The sample Job Management & Equipment Record below shows that you can add resources and production just like in your direct cost items. Supervisory staff resources were added, and the

production duration is set to 100 days.

CBS	S Code:	Optior	al Code:	Description:						Forecast (T/	0) Qty:	Unit of N	leasure:	Unit Cost		Total Cost:	Currency:	
														*				
														Ŧ				
		JOB M	ANAGEM	E Job Management	& Equipment						1.00	Lump Su	m	- \$1	57,096.28	\$157,096	.28 U.S. Dollar	
PI A	ssignment:	PI Line	Number:	PI Description:								Cost Seg	ment:	Pay Quant	ity:	Cost Source:	Alternate:	
	÷											Job Ove	rhead	-	1.00	Detail	* BASE	
		_																
Cg	st Item Summa	у 🚊	<u>D</u> etail :	\$157,096.28 🗳 P	ug:\$0.00 🖇	Ouote : \$0.0	0 <u>A</u> llocation							Production				×
Dia	g columns here	to group)			Find:	[Search For]	S	aved views:	Previous View		-					Factored Duration Driven	¢
	Daw	to group Co		Description	Quantity	Find: Unit of Measure	[Search For] Unit Cost	S Work Hours	Pay	Previous View Waste % Add-on	Quantity (Less Wa	,	Produ			Driven Resources	Duration Driven Resources	C
	-	Co	de			Unit of Measure	Unit Cost	Work Hours	Pay Hours	Waste %		,	Produ		Custo	omize Display	Duration Driven Resources (x 1.0000)	C
	Daw	Co 1 LS	de S 💄	Project Superintend	1.00	Unit of Measure Each	Unit Cost \$42.53	Work Hours 800.00	Pay Hours 800.00	Waste %		,	Produ	Days	Custo		Duration Driven Resources	C
	Row Number = +	Co 1 LS 2 LS	de S 🙎 SEC	Project Superintend Secretary	1.00	Unit of Measure Each Each	Unit Cost \$42.53 \$20.41	Work Hours 800.00 800.00	Pay Hours 800.00 800.00	Waste %		,	Produ		Custo	omize Display	Duration Driven Resources (x 1.0000)	C
	Daw	Co 1 LS	de S 🙎 SEC	Project Superintend	1.00	Unit of Measure Each	Unit Cost \$42.53	Work Hours 800.00	Pay Hours 800.00	Waste %		,	Produ	Days	Custo	100.00	Duration Driven Resources (x 1.0000) 100.0	C
	Row Number = +	Co 1 LS 2 LS	de S 🙎 SEC PE	Project Superintend Secretary	1.00	Unit of Measure Each Each	Unit Cost \$42.53 \$20.41	Work Hours 800.00 800.00	Pay Hours 800.00 800.00	Waste %		,	Produ	Day: Shift: Hours	<u>Cust</u>	100.00 100.00 800.00	Duration Driven Resources (x 1.0000) 100.0 100.0 800.0	C
	Row Number = +	Co 1 LS 2 LS 3 LS	de S 1	Project Superintend Secretary Project Engineer	1.00 1.00 1.00	Unit of Measure Each Each Each	Unit Cost \$42.53 \$20.41 \$51.03	Work Hours 800.00 800.00 800.00	Pay Hours 800.00 800.00 800.00	Waste %		,	Produ	Days	<u>Cust</u>	100.00	Duration Driven Resources (x 1.0000) 100.0 100.0	c

The following Step by Step walks you through defining resources and costs for your Job Management & Equipment indirect cost item.

Step by Step — Add Job Management & Equipment Costs

- 1. In your job, from the InEight Estimate landing page, select the **Estimate** tab.
- 2. Select Cost Breakdown Structure (CBS).
- 3. Double click on the Job Management & Equipment row header.
 - You can see that this record looks like the direct cost item records that you have been working with thus far in the CBS

ost Breakdown	Structure (CBS) F	Register	Cost Item Recor	d Cos	st Item Record 🛛 🖗							•
BS Code:	Optional Code:	Description:			Forecast (T/O) Qty:	Ur	nit of Meas	ure:	Unit Cost:	Total Cost:	Currency:	Ÿ
	JOB MANAGEME	Job Manager	ment & Equipment		1.0	0	ump Sum		- - - \$0.00	\$0.00	U.S. Dollar	-
I Assignment:	PI Line Number:	PI Descriptio	n:				ost Segmer		Pay Quantity:	Cost Source:	Alternate:	
Cost Item Summar rag columns here Coc	to group Fin	d: [Search F			Allocation Previous View Unit of Measure	Unit C		Wo	Identification Code: Type: Description:			×
•									Quantity (Less Waste): Quantity:	Ac	ite % Id-on: tivity actor:	

4. Here you will add a labor resource by clicking in the Code column and selecting the icon.

			Allocation	Quote : \$0.00	🛱 Plug : \$0.00 🖓	etail : \$ 0.00	<u> 🕹 D</u> e	mmary	m Su	st Iter	Co
]	•	W	Previous V	Saved views:	Search For] ···	Find: [roup	here to g	mns	g colu	Dra
Pr Fa	Work Hours	Jnit Cost	Jnit of Jeas	Oua	Description	Reso Asse		Code		 	
0	0.00	\$21.97	Each	1.00	Secretary			LSSEC	1	+	
b	0.00	\$45.78	Each	1.00	Project Superintend		2	LSSUPT	2	+	<u>/4</u>
											*
											*

- 5. Select the **Production** tab.
- 6. Enter a **numeric value** in the Days field.
 - This represents the length of the job

Production						
	0	Juration Driven Res Customize Disp				
	Days:	70.00	•			
	Shifts:	70.00				
	i					

7. Click **OK** to close the record.

Step by Step — Add General Expense Costs

- 1. In your job, from the InEight Estimate landing page, select the **Estimate** tab.
- 2. Select Cost Breakdown Structure (CBS).
- 3. Right click on the **General Expense** row header and select **Open**.
 - The General Expense cost item record also looks identical to a direct cost item record
 - You could add existing resources here, but in this case, you will create an ad hoc resource
- 4. Type in a **description** the Description column.

	GI	ENERAL EXPE	Gen	eral Exp	pense					
PI A	ssignment: PI	Line Number	r: PIDe	escript	ion:					
	Ψ									
Co	st Item Summary	🥏 <u>D</u> etail :	\$0.00	₩ P	ʻlu <u>q</u> : \$ 0.00	<u> </u>	0.00	<u>A</u> llocation		
Drag	g columns here to g	roup								
	Row Number 들	Code	Resourc Assembl		Description		Quan (Less	tity Waste)	Waste % Add-on	
\rightarrow	+ 1				General Off	ice Supplies		0.00	0).00
*										

- 5. Enter a **number** in the Quantity field.
- 6. For the Unit of Measure field, select a **Unit of Measure** from the drop down.
- 7. Click on (highlight) that row, and then click the Resource Employment Breakdown tab.
- 8. Enter a **number** in the Undefined Supplies cost category.
 - The amount entered automatically fills into the unit and total cost columns

Cos	t Item Summary	💁 Deta	l:\$1,000.00	붲 Plug : \$0.00	Quote : \$0.00	Alocatio	n								Res	ource Employment Breakdown		×
rag	columns here to g	group						F	ind: [Search I	ior]	Saved views:	Previous V	ew	-	Cost	Category	Scale 1	
	Row .		Resource		Quantity		Waste %		Unit of	Productivity	Work	Pay		Total Cost	¥ T	otal	\$1,000.00	1
	Number 🗎	Code	Assembly	Description	(Less Was	te)	Add-on	Quantity	Measure	Factor	Hours	Hours	Unit Cost	(Forecast)		Labor	\$0.00	
•	+ 1	1		General Office Sup	ples	1.00	0.00	1.00	Lump Sum	1.00			\$1,000.00	\$1,000.		Owned Equipment	\$0.00	
÷ [Rented Equipment	\$0.00	
															v	Supplies	\$1,000.00	L
																Undefined Supplies	\$1,000.00	
																Materials	\$0.00	
														\$1,000.00	<u> </u>	Cubranteast	#0.00	
														+	20	- 🖗 e 🕑 e 🎰 e 😫 e 😤 e	se 🎍 e 🦻	×

TIP You are only allowed to enter information in the Resource Cost Breakdown if the resource row is selected, otherwise fields will not display.

9. Click **OK** to close the record.

6.2.2 Dependent Indirect Cost Items

The other default indirect cost items are **dependent indirect cost items**, meaning their costs depend on other costs, prices or hours. They include:

- Direct and Indirect Cost Add-On
- Direct and Indirect Cost Escalation
- Prime Bond
- Price % Add-On

- Job Financing
- Man-Hour Add-On

Actio	ns More Actio	ons	
uspended	📙 Link Field	E Cost Item	1
	📇 Unlink Field	Subordinate Cost Item	5
		📑 Dependent Cost Item	
	Workbook		

It's possible to assign any assigned or dependent cost Item to any of the 3 cost segments and provides greater control over where costs exist in the Price Breakdown Structure (PBS).

Cost	Breakdown Struc	ture (CBS) Register O Pay Item	& Proposal Register		
Drag c	columns here to grou	p			
	CBS Position Code 🖮	Description	Cost Segment	Pay Item Assignment	Pay Item Position Code
5	1	JOB			
·	÷	Prime Bond	Business Over		
+	F	Price % Add-On	A Description		
+	F	Job Financing	Business Overhead	ł	
-+	F	Indirect Cost Escalation	Direct Cost		
-	-	Direct Cost Escalation	Job Overhead		
+	F	Indirect Cost Add-On			
-	-	Mobilization			
-	1	SITEWORK & ROADWAY			
-+	- 1.1	Mobilization	×		
+	1.2	Clearing & Grubbing	Direct Cost	201 0102	1.2
-	1.3	Unclassified Excavation	Direct Cost	202 0183	1.3
-+	1.3.1	Excavation	Direct Cost	202 0 183	1.3

6.2.2.2 Default Dependent Cost Item Deletion

NOTE If you need to use additional dependent cost items, you can create your own, but you must delete all the existing default dependent cost items first.

The following steps walk you through deleting your existing default indirect costs so you can create your own.

Step by Step — Delete Existing Default Dependent Cost Items

- 1. In your job, from the InEight Estimate landing page, select the **Estimate** tab.
- 2. Select Cost Breakdown Structure (CBS).
- 3. Select an indirect cost item by clicking on its **row header**.
- 4. Press and hold the **Shift** key while selecting **another indirect cost item**.
 - All your dependent indirect cost items are now selected

	CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure
		ЈОВ	20.00	Mile
	+	Prime Bond	1.00	Lump Sum
	+	Price % Add-On	1.00	Lump Sum
\rightarrow	+	Job Financing	1.00	Lump Sum
	+	Job Management & Equipment	1.00	Lump Sum
	+	General Expense	1.00	Lump Sum

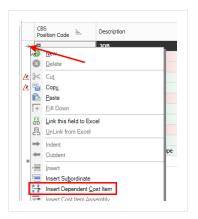
- 5. Right click on the selection and select **Delete**.
- 6. Select **Yes** to confirm you want to delete the selected cost items.
 - Your indirect cost items are now deleted

6.2.2.3 Prime Bond

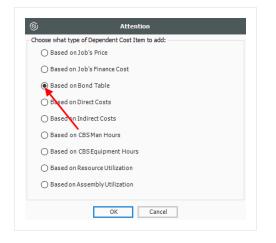
The following steps walk you through adding and defining your prime bond for the job.

Step by Step — Define Prime Bond

- 1. In your job, from the InEight Estimate landing page, select the **Estimate** tab.
- 2. Select Cost Breakdown Structure (CBS).
- 3. Right click on the row header for any cost item and select Insert Dependent Cost Item.



4. On the resulting Attention prompt, select **Based on Bond Table**.



- 5. Click **OK**.
 - The Prime Bond indirect cost item now displays at the top of your CBS
- 6. Right click on the Prime Bond row header and select **Open**.
 - Prime Bond represents the insurance for the job
 - This is an irregular form and uses bond rate tables
 - The form's Bond Table Name defaults to No Bond Required until a saved Bond Table

Name is chosen

Cost Breakdown	Structure (CBS) F	legister	Bond Cost Item Record	0		
CBS Code:	Description: Prime Bond					Total Cost: \$0.00
Dependenc <u>v</u>		Bond Table	2			×
Cost is calculated based on Target Price.		Last Main				• Edit Name New
		Bond Rat	-	<u> </u>	īo	Cost per \$1,000

7. Use the Table Name drop-down to choose **EXAMPLE: GENERAL CONSTRUCTION**

ost Breakdown St	ructure (CBS) I	Registe	r Bond Co	st Item Record 🛛		
CBS Code:	Description: Prime Bond					Total Cos \$48,681.9
Dependency		Bon	l Table			>
Cost is calculated		Ide	ntification			
oased on Target			Table Name:	EXAMPLE: GENERAL CONSTRUCTION	ON	Edit Name New
Price.		lac	t Maintenance:	M Table Name		hg
		Las	c Hamtenance.	EXAMPLE: BRIDGE		
		Bo	nd Rate Layers	EXAMPLE: EARTHWORK		
			From	EXAMPLE: GENERAL CONSTRUCTION	ON	.
		\rightarrow		EXAMPLE: PAVING		10.80000
				EXAMPLE: PIPE		8.20000
				EXAMPLE: UNDERGROUND UTILITI	ES	7.00000
				No Bond Required		5.00000
				×		.:: 4.80000
				\$20,000,000.01	\$40,000,000.00	3.50000

- 8. Click **OK** to close the record.
 - The Prime Bond indirect cost item is now added to your CBS

CBS Position Code	Description	Optional Code	Forecast (T/O) Qua
	JOB		
+	Job Management & Equipment	JOB MANAGEMENT & E	
+	General Expense	GENERAL EXPENSE	
+	Prime Bond	PRIME BOND	
+ 1	Mobilization	1000	
— •	Cleaning & Crubbing	2000	

Multiple bond rate dependent items

For certain projects, it may be desirable to calculate costs for bond or insurance premiums based upon multiple different rate tables. It is now possible to add multiple bond/rate table based dependent items in the CBS.

For example, in addition to having a prime bond, the job may also require insurance coverage where the premium is calculated using a rate table-based approach. This can now be accomplished by adding another Bond/Rate-table based dependent cost item to the job.

g columns here to grou	P								
CBS Position Code in-	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated	Currency	Hours (Duration driven)
	308		20.00	Mie	\$277,616.11	\$5,552,322.14		U.S. Dolar	5,492.2
+	Prime Bond	PRIME BOND	1.00	Lump Sum	\$42,305.50	\$42,305.50		U.S. Dollar	
+	Insurance	INSURANCE	1.00	Lump Sum	\$140,027.49	\$140,027.49		U.S. Dollar	
+	Job Financing	FINANCE EXPENSE	1.00	Lump Sum	\$29,842.32	\$29,842.32		U.S. Dollar	
+	Indirect Cost Escalation	INDIRECT COST ESCALATION	1.00	Lump Sum	\$2,131.11	\$2,131.11		U.S. Dollar	
+	Direct Cost Escalation	DIRECT COST ESCALATION	1.00	Lump Sum	\$15,048.80	\$15,048.80		U.S. Dollar	
+	Indirect Cost Add-On		1.00	Lump Sum	\$5,823.31	\$5,823.31		U.S. Dollar	
+	Direct Cost Add-On	DIRECT COST ADD-ON	1.00	Lump Sum	\$100,820.54	\$100,820.54		U.S. Dollar	
□ <u>1</u>	SITEWORK & ROADWAY	200	1.00	Each	\$2,464,161.56	\$2,464,161.56		U.S. Dollar	2,158.3
+ 1.1	Mobilization	6410100	1.00	Lump Sum	\$11,909.51	\$11,909.51		U.S. Dollar	80.0
+ 1.2	Clearing & Grubbing	2010102	20.00	Acre	\$3,918.50	\$39,184.97		U.S. Dollar	80./
II 1.3	Unclassified Excavation	202 0 183	50,000.00	Cubic Yard	\$4.68	\$233,915.81		U.S. Dollar	291.4

Deleting Bond Tables

Delete bond tables that are not applicable to your estimate by selecting them and then clicking the **Delete** button. You can customize the Bond Table window to only view the tables that are relevant to your estimate from the Table Name drop-down list.

IUC	ntification					_
	Table Name:	EXAMPLE: GENERAL CONSTRUCT	TION O	* Edit Name	Delete	
las	t Maintenance:	A Table Name				
Las	erromeenonee.	EXAMPLE: EARTHWORK				
Bor	d Rate Layers	EXAMPLE: GENERAL CONSTRUCT	TION			
	From	EXAMPLE: PAVING		\$1,000		
÷		EXAMPLE: PIPE			10.80000	-
		EXAMPLE: UNDERGROUND UTILI	TIES		8.20000	
		No Bond Required			7.00000	
		×			5.00000	
		\$10,000,000.01	\$20,000,000.00		4.80000	
		\$20,000,000.01	\$40,000,000.00		3.50000	
		\$40,000,000.01	\$80,000,000.00		3.00000	,

6.2.2.4 Price % Add-On

The following steps walk you through defining the Price % Add-On.

Step by Step — Define a Price % Add-On

- 1. From the Cost Breakdown Structure (CBS) Register, right click on the **row header** for any cost item and select **Insert Dependent Cost Item**.
- 2. On the resulting Attention prompt, select **Based on Job's Price**.

Attention Attention	
Choose what type of Dependent Cost Item to add:	
Based on Job's Price	
○ Based on Job's Finance Cost	
○ Based on Bond Table	
○ Based on Direct Costs	
○ Based on Indirect Costs	
○ Based on CBSMan Hours	
O Based on CBS Equipment Hours	
O Based on Resource Utilization	
O Based on Assembly Utilization	
OK Cancel	

- 3. Click **OK**.
- 4. Double click on the **Price % Add On** row header to open the record.

CBS Position Code 🗎	Description	Optional Code
	JOB	
+	Job Management & Equipment	JOB MANAGEMENT & E
+	General Expense	GENERAL EXPENSE
+	Prime Bond	PRIME BOND
+	Price % Add-On	PRICE % ADD-ON
+ 1	Mobilization	1000

5. The Price % Add-on Record opens to the **Description** tab. Type a **description** in the Description field and enter a **numeric value** for rate.

Cost Breakd	own Structure	er P	Price % Add-On Record					
CBS Code:	Descrip Price %	otion: Add-On						
Description	Dependency							
Drag columns l	here to group							
Descriptio	on		Rate	Account Code				
Office Ov	/erhead		4.00	£				
*				T I				

6. Click **OK** to close the record.

6.2.2.5 Direct Cost Add-On

The following steps walk you through creating a Direct Cost Add-On dependent cost item.

Step by Step — Define a Direct Cost Add-On

- 1. From the Cost Breakdown Structure (CBS) Register, right click on the **row heade**r for any cost item and select **Insert Dependent Cost Item**.
- 2. On the resulting Attention prompt, select **Based on Direct Costs**.
- 3. Click **OK**.
- 4. Double click on the **Direct Cost Add-On** row header.
- 5. On the Description tab, type a **description** in the Description column.

CBS Position (Code:	· · ·	tion: ost Add-On			
Description Dependency		endenc <u>v</u>	Cost Categorization	Allocation		
Drag columns l	nere to	group				
Descripti	on	_	-	Curre	Total Cost (Forecast)	

- 6. Press the **Tab** key (you can define additional rows for other add-on costs as needed).
 - The Dependency Cost Breakdown appears on the right
 - The **Subject Cost** is the cost that the cost item depends on, based on what is defined on the cost item's Dependency tab

			٦	Fotal C	ost:	Al	teri
				\$0	.00	BASE	
Cost	Breakdown						
Cost	Category	Subject Cost	Rate		Cost	t	
✓ Te	otal	\$130,759.83	0.00			\$0.00	
>	Labor	\$58,969.83	0.00			\$0.00	
>	Owned Equipment	\$68,251.92	0.00			\$0.00	
>	Rented Equipment	\$0.00	0.00			\$0.00	
>	Supplies	\$0.00	0.00			\$0.00	
>	Materials	\$3,276.00	0.00			\$0.00	
>	Subcontract	\$0.00	0.00			\$0.00	
>	Fees	\$262.08	0.00			\$0.00	
>	Allowance	\$0.00	0.00			\$0.00	
	Custom Category1	\$0.00	0.00	→		\$0.00	
	Undefined	\$0.00	0.00	->		\$0.00	

7. Click on the **Dependency** tab to see what contributes to your subject cost.

• These are the cost items on which this Direct Cost Add-On depends

		Direct	Cost Add-On				
<u>D</u> es	scription	Dependency	Cost Categorization	<u>A</u> llocatio	n		
Drag	; columns l	here to group					
	CBS Position (Code ៉	Description	1	Include	Currency	Op Cod
	1		Mobilization		\checkmark	U.S. Dollar	100
<u>/</u>	2.1		Clearing		\checkmark	U.S. Dollar	
<u>&</u>	2.2		Grading		\checkmark	U.S. Dollar	
	3.1		Excavate		\checkmark	U.S. Dollar	
	3.2		Haul		\checkmark	U.S. Dollar	
	4.1		Furnish Pipe Materials		\checkmark	U.S. Dollar	
	4.2		Excavate-Install-Backfill Pip		\checkmark	U.S. Dollar	

- There are a couple of options at the bottom to control how dependency items are selected. By default, the bottom radio button is selected
 - The bottom radio button allows you to use column filtering to control what items are included
 - The top button allows you to manually select the cost items you would like to include
- 8. For this activity, leave the default (lower) button selected.



- 9. Click on the **Description** tab, where you can define an add-on Rate (percentage) or Cost at any of the cost category levels in the Dependency Cost Breakdown on the right side of the record.
 - You can also add a rate at the Total level to have it apply to all your cost categories
- 10. Enter a **numeric value** in the Rate field at the Labor cost category level, then press **Tab**.

Co	ost Breakdown			
Cos	st Category	Subject Cost	Rate	Cost
~	Total	\$130,759.83	0.00	\$0.00
	> Labor	\$58,969.83	10	\$0.00
	 Owned Equipment 	\$68,251.92	0.00	\$0.00
	Rented Equipment	\$0.00	0.00	\$0.00
	> Supplies	\$0.00	0.00	\$0.00
	> Materials	\$3,276.00	0.00	\$0.00
	> Subcontract	\$0.00	0.00	\$0.00
	L Econ	£252.09	0.00	é0.00

11. Click **OK** to close the record.

6.2.2.6 Repositioning Dependent Cost Items

Repositioning dependent cost items creates a simpler way to manage the hierarchy of your project by placing items of more importance ahead of other line items.

Since dependent cost items can now be repositioned, a Position Code field has been added with the functionality similar to column remaining the same. The below listed dependent cost item fields are now exposed in the CBS register so you can more easily see the various percentages used in dependent items.

- Subject Cost
- Subject Cost Rate
- Subject Billing Amount
- Subject Billing Rate

These columns can also be found in the new saved view **Bid Review**.

CBS Position Code 📒	Description	Optional Code
3	ЈОВ	
+	Prime Bond	PRIME BOND
F	Price % Add-On	PRICE % ADD-ON
F	Job Financing	FINANCE EXPENSE
F	Indirect Cost Escalation	INDIRECT COST ESCALATION
-	Direct Cost Escalation	DIRECT COST ESCALATION
-	Indirect Cost Add-On	INDIRECT COST ADD-ON
÷	Job Management & Equipment	JOB MANAGEMENT & EQUIPMENT
F	General Expense	GENERAL EXPENSE
F	Direct Control I Con	DIDECT COST ADD ON
F	Direct Cost Add-On	DIRECT COST ADD-ON
-	Mobilization	641 0100
•		
• 1 • 24.1.2	Mobilization	
• 24.1.2 • 25	Mobilization Day Two	641 0 100
+ 1 + 24.1.2 + 25 + 26	Mobilization Day Two Prime Bond	641 0100 PRIME BOND
+ 1 + 24.1.2 + 25 + 26 + 27	Mobilization Day Two Prime Bond Price % Add-On	641 0100 PRIME BOND PRICE % ADD-ON
+ 1 + 24.1.2	Day Two Prime Bond Price % Add-On Job Financing	641 0100 PRIME BOND PRICE % ADD-ON FINANCE EXPENSE
+ 1 + 24.1.2 + 25 + 26 + 27 + 28 + 29	Day Two Prime Bond Price % Add-On Job Financing Indirect Cost Escalation	641 0100 PRIME BOND PRICE % ADD-ON FINANCE EXPENSE INDIRECT COST ESCALATION
+ 1 + 24.1.2 + 25 + 26 + 27 + 28	Mobilization Day Two Prime Bond Price % Add-On Job Financing Indirect Cost Escalation Direct Cost Escalation	641 0100 PRIME BOND PRICE % ADD-ON FINANCE EXPENSE INDIRECT COST ESCALATION DIRECT COST ESCALATION
+ 1 + 24.1.2 + 25 + 26 + 27 + 28 + 29 + 30	Mobilization Day Two Prime Bond Price % Add-On Job Financing Indirect Cost Escalation Direct Cost Escalation Indirect Cost Add-On	641 0100 PRIME BOND PRICE % ADD-ON FINANCE EXPENSE INDIRECT COST ESCALATION DIRECT COST ESCALATION INDIRECT COST ADD-ON

6.3 USER-DEFINED INDIRECT COST ITEMS

You may prefer to create your own indirect cost items. You create user-defined indirect cost items the same way you create direct cost items. The only difference is that your indirect cost items will not be assigned to pay items. One advantage of creating your own indirect cost items is the ability to create a parent-child structure for your indirect costs.

Here is an example of user-defined indirect cost items, expanded to show their employed resources:

CB: Pos	S sition (Code	1		Description			recast ⁄O) Quantit	y	Unit of Measur		Un	it Cost	Total Cost (Forecast)
	5				Indirect Cost				1.00	Each			\$10,584.36	\$10,584.36
-	5.1				Head Office				1.00	Each			\$370.32	\$370.32
			1	Desc	ription	Quant	ity	Unit of Measure	Work Hours	Pay Hours	Unit Co	st	Total Cost (Forecast)	
	\rightarrow	+	1	Head	Office Project	1.	00	Each	8.00	8.00	\$46.	29	\$370.32	
-	5.2				Field Office				1.00	Each			\$1,775.04	\$1,775.04
			-	Desc	ription	Quant	ity	Unit of Measure	Work Hours	Pay Hours	Unit Co	st	Total Cost (Forecast)	
	∕	+	1	Field	Office Clerk	1.	00	Each	4.00	4.00	\$38.	00	\$152.00	
	Δ	+	2	Field	Office Safety M	1.	00	Each	8.00	8.00	\$62.	38	\$499.04	
		+	3	Field	Office Site Supe	1.	00	Each	16.00	16.00	\$70.	25	\$1,124.00	
-	5.3				Site Facilities				1.00	Each			\$905.00	\$905.00
			1	Desc	ription	Quant	ity	Unit of Measure	Work Hours	Pay Hours	Unit Co	st	Total Cost (Forecast)	
	\rightarrow	+	1	Field	Office Telephone	0.	50	Month			\$250.	00	\$125.00	
		+	2	Field	Office Trailer	1.	00	Each	0.00	0.00	\$5.	94	\$0.00	
		+	3	Pick	Up Truck	1.	00	Each	80.00	80.00	\$9.	75	\$780.00	
+	5.4				Misc. Expenses				1.00	Each			\$2,765.00	\$2,765.00
+	5.5				Supervision				1.00	Each			\$4,769.00	\$4,769.00

Step by Step — Add User-Defined Indirect Cost Items

- 1. At the bottom of your CBS, create an indirect cost item with a Forecast (T/O) Quantity of **1** and a Unit of Measure of **Each**.
- 2. Add two subordinates under the new cost item and name both. For the first subordinate cost item, set it to **1 Each**. Set the second to **1 Lump Sum**.

5	Job Overhead	1.00 Each
+ 5.1	Job Trailer	1.00 Each
+ 5.2	Utilities	1.00 Lump Sum

- 3. Open the first subordinate cost item by double clicking on the **row header**.
 - Assuming there is nothing for this subordinate indirect cost item in your Resource Rate Register, you will create this resource "on the fly"

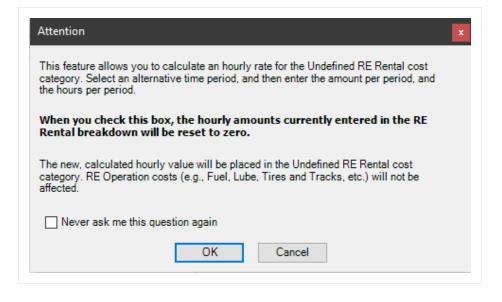
- 4. In the Detail grid, click on the **Resource Register** icon in the Code field as if you were going to select from the Resource Rate Register.
- 5. On the Resource Rate Register, click the **Rented Construction Equipment** tab.
- 6. Right click on one of the line items and select **New** to add a new resource.

						TC-50	urce Rate Registe			ob ne
A	ctions									
All	Labo	r	Constr	uction Equipmer	nt	Rented Con	struction Equipment	Ins	talled Material	Installe
Dra	g column	s he	re to gro	pup		Fine	d: [Search For]		 Saved vie 	ews: Prev
	Resour Code	ce :	<u> </u>	Description			Resource File Description		Unit of Measure	Productiv Factor
\rightarrow	+ RO	OMP		Rental Co			R	ate	Hour	Í
	+ RLT			Light Tow	_	lew		ate	Hour	
	+ RP	2		Plate Com	C	ору		ate	Hour	
	+ RPI	J		Rental Pickup			Standard Rental R	ate	Hour	

- 7. Enter a Resource Code of **RJT** for the Rented Construction Equipment Resource.
- 8. In the Description field, type in a **description**.

2	*				-		Rate Record	- Training Job —	o x
Code:	<u>^</u>	RJT	Descript	ion:	Job Traile	er			
Setu	р	🔱 Charge Rate	Qu	uote	Billing F	Rate			
Cost	Cate	egory Breakdown		Amo	unt	Fuel			
✓ T	otal				\$0.00	Fuel Type		Consumption Rate	
>	R	ented Equipment			\$0.00	<fuel plu<="" td=""><td>gged> -</td><td>0.00 Unit/Hour</td><td></td></fuel>	gged> -	0.00 Unit/Hour	
>	Fe	ees			\$0.00	Fuel Acc			
	U	ndefined			\$0.00	D	K - C - L	and consumption is	
						Tax Apply Unique S Mainter Mainter Man-I	of measure for the Job Propicost defined i form is ignore	r offer this help again	
							ob default:	Maintenance Labor resources	
							ob derault:	CMAINT	2.4 1.0
						O Use:			100 100
							ice Man-Hours ent utilization h		0.00
							rly Period Cha ate Non-Hourly	arge Rates Period Charge Rates for RE R	ental

- You do not need to enter Fuel, but the Job Trailer's cost is given to you at a charge per week, so you will use the Non-Hourly Period Charge Rates to figure out the hourly cost
- 9. Select the **Calculate Non-Hourly Period Charge Rates for RE Rental** checkbox; this will allow you to edit the fields below the checkbox. A pop-up box will appear.
- 10. Click **OK** on the resulting prompt.



- TIP
- You may need to expand the resource record to see all of the fields to fill out.
- 11. Select **Weekly** as the Period, and type **1,000** as the Amount Per Period.
- 12. Since the Period is Weekly, type **40** in the Hours Per Period field.

es for RE Rental	ourly Period C	Calculate Non-Ho
-	Weekly	Period:
\$1,000.00		Amount Per Period:
40.00		Hours Per Period:

- 13. Press the **Tab** key so the change takes effect on your Cost Category Breakdown (on the left).
 - Now you can see that Estimate auto-filled the Rented Equipment category, as well as your Standard Sales Tax under Fees in the Cost Category Breakdown, to equal a total amount per hour

Setup	🔱 Charge Rate	Qu	iote	Billing) Ra
Cost C	Category Breakdown		Amou	unt	_
✓ To	tal		\$2	27.00	
>	Rented Equipment		\$2	25.00	
>	Fees		\$	2.00	
	Undefined		\$	0.00	

14. Click **OK** to close the Resource Rate Record.

- 15. Select the **new resource** you created, then click **OK** to return to the Cost Item Record.
- 16. On the Cost Item Record, adjust the quantity of **first subordinate cost item** you created, assuming you will have multiples of this item on site.
- 17. Finally, adjust your production by entering the **duration** of the job.

🔓 Detail	\$30,240.0	10 🛱 Plug : \$0	.00 📮 💭 Quote	: \$0.00 <u>A</u> lloca	tion					Production		×
group			Fi	nd: [Search For.]	Saved views: Pr	evious View	-			Factored Duration Driven	
Code		Description	Quantity	Unit of 🛓	Unit Cost	Productivity Factor	Work Hours	Pay Hours	Wast % Add⊰		Resources (x 1.0000)	
ਪਾ		Job Trailer	2.00	Each	\$27.00	1.00	1,120.00	1,120.00		Days: 70.00	70.00	
										Shifts: 70	70.00	

- 18. Click **OK** to close the record.
- 19. On the CBS register, select the **Utilities** cost item by double clicking on the **row header**.
- 20. Create another ad hoc resource on this cost item which will be **1Lump Sum**.

Drag) columns here	to group	Fin	d: [Search For	.] Sa	ved views:	Prev	ious View	•	
	Row Num	Code		Description	Quantity	Unit of Mea ≞		Unit Cost	Productivity Factor	N H
ı	+ 1			Electricity	1.00	Lump Sum	-	\$0.00	1.00	
*										

21. Finally, go to the **Resource Employment Breakdown** tab and enter your **forecasted cost** for the duration of the jobin the Custom Category1 row.

Cos	st Item Sum	mary	<u>D</u> eta	l:\$1,500.0	0 🖊 Plug : \$0).00 🖵 Quote	: \$0.00	<u>A</u> llocation			Re	sou	rce Employment Breakdown	>
Drag	columns h	ere t	o group Find:	[Search Fo	or] …	Saved views: P	revious View	1	-]	Cos	st Ca	ategory	Scale 1
											¥	Tota	al	\$1,500.00
	Row		Code		Description	Ouantity	Unit of	Ur		Proc Fac		>	Labor	\$0.00
	Num						Mea =	- Co	IST	Fac		>	Owned Equipment	\$0.00
÷	+	1			Electricity	1.00) Lump Sum	n	\$1,500.00			>	Rented Equipment	\$0.00
*												>	Supplies	\$0.00
		_								-		>	Materials	\$0.00
												>	Subcontract	\$0.00
												>	Fees	\$0.00
												>	Allowance	\$0.00
												- Г	Custom Category1	\$1,500.00

22. Click **OK** to close the record.

• Your user-defined indirect cost items now contain production and costs

5	Job Overhead	1.00	Each	\$31,740.00	\$31,740.00
+ 5.1	Job Trailer	1.00	Each	\$30,240.00	\$30,240.00
+ 5.2	Utilities	1.00	Lump Sum	\$1,500.00	\$1,500.00

6.4 COST ALLOCATION

The **Cost Item Record - Allocation** tab lets you to spread costs from a single Cost Item Record to one or more other cost items in the Cost Breakdown Structure (CBS) Register.

- Allocation Item The cost item to be allocated, where you define the quantities, resource employments and the logic that determines how to allocate the item throughout the bid.
- Allocation Target A cost item to be the recipient of allocated cost, as defined within the Allocation Item. There may be one or many Allocation Targets for one Allocation Item.
- **Distribution** A read-only cost item in the CBS representing an Allocation Target's proportional share of the Allocation Item.

You can choose from several methods to determine specifically where and how much cost to spread:

- Quantity Specify the amount of the Allocation Item to be spread to each Allocation Target.
- **Proportionately based on another field** Allocate proportionately by one of many available cost item values, usually based on time or cost.
- **Percentage** Specify the percentage of the Allocation Item to spread to each Allocation Target.
- Unit Cost Use the unit cost from the Allocation Item and the quantity of each Allocation Target to drive the Forecast (T/O) Quantity of the Allocation Item.

Cost Item Allocation is a good means of spreading costs throughout a bid for the purpose of determining appropriate bid prices. You can then compare unit price in **Quote Comparison & Award**.

NOTE Only Level 1 cost items can be allocated, including Add-On and Escalation dependent cost items. A subordinate cost item cannot be allocated, and a cost item that is assigned to a pay item cannot be allocated.

6.4.1 Cost Allocation

With Cost Item Allocation, you can track the cost of one broad cost item by distributing the cost of that item to other cost items, so that the cost can be tracked on a more detailed level. This gives better visibility into the cost that makes up an item. For example, you can spread ST&S from one cost item to multiple cost items that will use ST&S.

Imagine that a large portion of your scope of work for the job you are bidding has concrete. You face the options of batching your own raw materials or purchasing the materials from a supplier. You can use cost allocation to create the cost of a batch plant and allocate it to different items, and then compare this unit cost to the unit cost of purchasing the materials from a supplier.

The Allocation tab allows you to spread costs from an Allocation Item to one or more Allocation Target (s).

NOTE In the Allocation Target list, the **[Unit of Measure] Quantity** column caption displays the Unit of Measure of the Allocation Item. For instance, if the Allocation Item's Unit of Measure is **Cubic Yards (CY)**, then the caption displayed for this column is **CY** Quantity.

A Distribution cost item is created as a read-only subordinate cost item under each Allocation Target. It is copied proportionally with the quantity/cost defined to each different item in CBS.

6.4.2 View Filter Excludes Cost Item Allocation Details

A View Filter option is added to show only the level 1 cost item distribution in the allocation destinations to provide you with a clear and comprehensive view of the CBS register, especially when there are many allocations. When you are allocating cost items, the allocations are created in the destination cost item by creating a copy of the entire allocated cost items structure. This filter allows you to simplify the view by displaying only the parent level allocation cost item.

	Cut 🕂 Fill Down	Toggle Suspende	ed 🔒 Link Fie		ist Item bordinate Cost Iter	Assembly	te Assembly	Resource	embly 🖌	CBS Tree Filter Mode:		
		stType = Outdent	CD OTHER	-	pendent Cost Item		ic rescinoly	IA (10000100 / 1000	Expand Collapse			
Print	Edit		Workbo	ok		Inser	E I			Filter to CBS Level	1	
ob Properties	Cost Breakdown Structure (CBS)	Register Ø								Filter to Terminal Cost Items		
												_
rag columns here to gr	oup									Filter to Direct Cost Items		
CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated		Hours (Duration driven)	Filter to Indirect Cost Items Filter by Cost Source Plug	Subject Cost Rate	WBS: CE (Civil En System)
	ЈОВ		20.00	Mie	\$3,996,575.15	\$79,931,503.08		U.S. Dollar	527,45			
+	Prime Bond	PRIME BOND	1.00	Lump Sum	\$312,587.53	\$312,587.53		U.S. Dollar				BOND
+	Price % Add-On	PRICE % ADD-ON	1.00	Lump Sum	\$3,785,175.55	\$3,785,175.55		U.S. Dollar		Filter by Cost Source Detail		TAXES
+	Job Financing	FINANCE EXPENSE	1.00	Lump Sum	\$974,798.06	\$974,798.06		U.S. Dollar		Filter to Schedule Relations		FEES
+	Indirect Cost Escalation	INDIRECT COST ESCALAT	1.00	Lump Sum	\$2,131.11	\$2,131.11		U.S. Dollar		Filter by Resource		LABOR
+	Direct Cost Escalation	DIRECT COST ESCALATION	1.00	Lump Sum	\$687,306.87	\$687,306.87		U.S. Dollar		Filter by Resource Assembly		LABOR
+	Indirect Cost Add-On		1.00	Lump Sum	\$46,251.26	\$46,251.26		U.S. Dollar		Filter by Resource Account	2.00	LABOR
+	Direct Cost Add-On	DIRECT COST ADD-ON	1.00	Lump Sum	\$1,449,959.93	\$1,449,959.93		U.S. Dollar			2.00	LABOR
= 1	SITEWORK & ROADWAY	200	1.00	Each	\$68,690,789	\$68,690,789.87		U.S. Dollar	520,48			PAVEME
+ 1.1	Mobilization	641 0 100	1.00	Lump Sum	\$11,909.51	\$11,909.51		U.S. Dollar	8	0.0 🍸 Filter by Unique (Delta) Resources		MOBILI
+ 1.2	Clearing & Grubbing	201 0102	10.00	Acre	\$3,918.50	\$39,184.97		U.S. Dollar	8	0.0 🍸 Filter by Unique (Delta) Cost Items		CLEARI
■ 1.3	Unclassified Excavation	202 0 183	50,000.00	Cubic Yard	\$4.68	\$233,915.81		U.S. Dollar	29	1.6 Tilter Cost Items with Excel Links		COMMO
+ 1.3.1	Excavation	1.3.1	50,000.00	Cubic Yard	\$3.00	\$149,922.88		U.S. Dollar	12	5.0 Filter Allocation Distributions Subordinates		COMMO
+ 1.3.2	Embankment	1.3.2	50,000.00	Cubic Yard	\$1.68	\$83,992.94		U.S. Dollar		6.6		EMBANK
□ 1.4	Aggregate Base	303 5912	45,000.00	Ton	\$1,487.10	\$66,919,557.30		U.S. Dollar	519,56	4.0 Filter Resources with Waste Percentage		UNTREA
+ 1.4.1	Furnish & Haul Base Material	1.4.1	45,000.00	Ton	\$11.54	\$519,513.30		U.S. Dollar	36	0.00 12.20.090		BUY MA
	Finegrade Subgrade	1.4.2	400,000.00	Square Yard	\$100.00	\$40,000,000.00		U.S. Dollar	168,75	7.77 11.70.300		FINEGR

Step by Step — Cost Allocation

- 1. From the Ribbon, select the Estimate tab.
- 2. Under the Breakdown Structures section, select **Cost Breakdown Structure (CBS)**. The Cost Breakdown Structure Register opens.
- 3. Select the **Concrete Batch Plant** cost item.

	8	Project Indirect Costs	1.00	Lump Sum
+	8.1	Crane Service	30.00	Day
	9	Concrete Batch Plant	1,000.00	СҮ
+	9.1	Buy Raw Materials	1,000.00	CY
+	9.2	Batch/Mix/Haul Concrete	18.00	Day
	10	Equipment Related Indirects	1.00	Each
+	10.1	Maintenence	1.00	Each

- 4. From the Ribbon, select the Actions tab. Under the Edit section, select **Open**. The Cost Item Record opens.
- 5. Select the Allocation tab.
- 6. Check the box for Allocate this Item's Cost. Keep the By Quantity option selected.

I	Allocate this Item's Cost
	Allocation distributions inherit target Pay Item Assignment
	How do you want to determine allocation percentages?
	by Quantity
	O proportionately based on
	O by Percentage
	○ by Unit Cost (drives the Allocation Item's Forecast (T/O) Quantity)

7. Check the Include box for the cost item Box Culvert Footing to allocate cost to it.

CBS Position Code	Description	Include	Unit of Measure	Forecast (T/O) Quantity
1	Roadway Excavation		CY	344,820.24
1.1	Short Haul Excavation		CY	74,883.28
1.2	Medium Haul Excavation		CY	109,740.72
1.3	Long Haul Excavation		CY	160, 196. 24
2	Structural Concrete (Class S) (FC=3,		CY	229.87
2.1	Box Culvert Footing	\checkmark	CY	52.84
2.1.1	Erect & Strip Footer		SFCA	597.00

NOTE Take note of the Allocation Percentage and Total Cost to be Allocated columns. This shows the percent of the total allocation qty allocated to that cost item and the total cost to be allocated to that item (notice that is the total cost of the Concrete Batch Plant).

CBS Position Code	Description	Include	Unit of Measure	Forecast (T/O) Quantity	CY Quantity	Allocation Percentage	Percent of Total Cost	Total Cost to be Allocated
1	Roadway Excavation		CY	344,820.24	0.00	0.00	0.00	\$0.00
1.1	Short Haul Excavation		CY	74,883.28	0.00	0.00	0.00	\$0.00
1.2	Medium Haul Excavation		CY	109,740.72	0.00	0.00	0.00	\$0.00
1.3	Long Haul Excavation		CY	160, 196. 24	0.00	0.00	0.00	\$0.00
2	Structural Concrete (Class 5) (FC=3,		CY	229.87	0.00	0.00	0.00	\$0.00
2.1	Box Culvert Footing	✓	СҮ	52.84	52.84	5.28	100.00	\$81,895.53
2.1.1	Erect & Strip Footer		SFCA	597.00	0.00	0.00	0.00	\$0.00

8. The **Box Culvert Footing** item just gained all of the **Concrete Batch Plant's** distribution cost items (highlighted in purple). Navigate back to the **CBS Register**.

	CBS Position Code ៉	Description	Include	Unit of Measure	Forecast (T/O) Quantity	CY Quantity	Allocation Percentag
	1.3	Long Haul Excavation		CY	160, 196.24	0.00	
	2	Structural Concrete (Class S) (FC=3,		CY	229.87	0.00	
•	2.1	Box Culvert Footing	\checkmark	CY	52.84	52.84	
	2.1.1	Erect & Strip Footer		SECA	597.00	0.00	
	2.1.2	Place Footer Concrete		CY	52.84	0.00	
	2.1.3	Concrete Batch Plant		CY	52.84	0.00	
	2.1.3.1	Buy Raw Materials		CY	52.84	0.00	
	2.1.3.2	Batch/Mix/Haul Concrete		Day	0.95	0.00	
	2.2	Box Culvert Walls		CY	87.86	0.00	
	2.2.1	Erect & Strip Wall		SECA	5,757.00	0.00	
	2.2.2	Erect & Strip Bulkheads		SECA	131.79	0.00	
		al miles i		-	22.05	0.00	

9. Find the **Box Culvert** Footing cost item. The distribution cost items are added as its subordinates.

	CBS Position Code	Description	Forecast (T/O) Quantity
\rightarrow	•	JOB	1.00
	□ 1	Roadway Excavation	344,820.24
	+ 1.1	Short Haul Excavation	74,883.28
	+ 1.2	Medium Haul Excavation	109,740.72
	+ 1.3	Long Haul Excavation	160, 196.24
	□ 2	Structural Concrete (Class S) (FC=3,00	229.87
	■ 2.1	Box Culvert Footing	52.84
	+ 2.1.1	Erect & Strip Footer	597.00
	+ 2.1.2	Place Footer Concrete	52.84
	2.1.3	Concrete Batch Plant	52.84
	+ 2.1.3.1	Buy Raw Materials	52.84
	+ 2.1.3.2	Batch/Mix/Haul Concrete	0.95

- 10. In the Cost Item Record, check the **Include** box for the cost items, **Box Culvert Walls** and **Box Culvert Deck**.
- 11. In the Account Code column, click on the **Filter** icon. Filter to account code **13** for all of the concrete items. Once done, click OK.

Account Code	Alternate	Alterna Descrip					
(Custom)							
(Blanks)							
(Non blank	ය)						
11.22.100)						
11.22.200)						
11.22.300)						
√ 13							
13.2.1							
13.3.2							
13.3.3							
13.3.4							
13.8.1							
13.8.2							
	ОК	Cancel					

- 12. Select the **Erect and Strip Deck** code, hold **<Shift>**, and select the Footer code to muliselect all of the codes in between. Then, tight click and select **Toggle Included**.
- Check the Include box in the Include column for the cost item Column, round. The CY Quantity is now highlighted yellow. This is because this cost item's UoM is Each and not CY.

CBS Position Code	Description	Include	Unit of Measure	Forecast (T/O) Quantity	CY Quantity
4.2.4	East Wing Wall	\checkmark	CY	4.22	4.22
4.2.5	West Wing Wall	\checkmark	CY	4.93	4.93
4.3.1	Footer	\checkmark	CY	41.67	41.67
4.3.2	Column, round	√	Each	3.00	0.00
4.3.3	Pier cap		CY	18.67	0.00
4.4.1	Footer		CY	41.67	0.00
4.4.2	Column, round		Each	3.00	0.00

- 14. Right click on the Account Code column, and select **Clear Filter** from the context menu.
- 15. Under the cost item **Column, round**, the subordinate cost item **Place Column Concrete** has a UoM of **CY**. Manually enter that cost item's Forecast (T/O) Quantity into the Column, round's **CY Quantity** field.

	CBS Position Code	Description	Include	Unit of Measure	Forecast (T/O) Quantity	CY Quantity
1	4.3.2	Column, round	✓	Each	3.00	60.51
	4.3.2.1	Erect & Strip column forms		SFCA	508.94	1 0.00
	4.3.2.2	Install embeds		EA	9.00	0.00
	4.3.2.3	Place Column Concrete		CY	60.51	0.00
	4.3.2.4	Rub & Patch		SF	508.94	0.00
	4.3.3	Pier cap		CY	18.67	0.00

- 16. Select the Account Code filter and reselect the option 13.
- 17. In the Include column, check the **Include** box for all of the remaining cost items with this filter. Then, remove the Account Code filter.

CBS Position Code	Description	Include	Unit of Measure
4.2.5	West Wing Wall	\checkmark	CY
4.3.1	Footer	\checkmark	CY
4.3.2	Column, round	\checkmark	Each
4.3.3	Pier cap	\checkmark	CY
4.4.1	Footer	\checkmark	CY
4.4.2	Column, round	\checkmark	Each
4.4.3	Pier cap	\checkmark	CY
6	Drilled Shaft Foundation (60") (Structure # 2929 - Drilled Shaft Foundation)	\checkmark	LF
7	Drilled Shaft Foundation (72") (Structure # 2929 - Drilled Shaft Foundation)		LF

18. Fix the CY quantity for the other **Column, round** cost item.

CBS Position Code	Description	Include	Unit of Measure	Forecast (T/O) Quantity	CY Quantity
4.4.1.3.1	Buy Raw Materials		CY	41.67	0.0
4.4.1.3.2	Batch/Mix/Haul Concrete		Day	0.75	0.0
4.4.2	Column, round		Each	3.00	60.5
4.4.2.1	Erect & Strip column forms		SFCA	508.94	1 0.00
4.4.2.2	Install embeds		EA	9.00	0.0
4.4.2.3	Place Column Concrete		CY	60.51	0.0
4.4.2.4	Rub & Patch		SF	508.94	0.0
4.4.3	Pier cap	\checkmark	CY	18.67	18.6
4.4.3.1	Erect & Strip Pier		SFCA	382.50	0.0
4.4.3.2	Erect & Strip Bulkheads		SFCA	28.00	0.0
4.4.3.3	Install embeds		EA	6.00	0.0

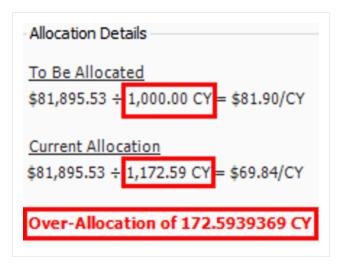
19. Fix the CY quantity for the Drilled Shaft Foundation (60") cost item.

CBS Position Code	Description	Include	Unit of Measure	Forecast (T/O) Quantity	CY Quantity
5	Reinforcing Steel (Structure #2929)		b	175,235.00	0.0
5.1	Reinforcing Steel		b	175,235.00	0.0
6	Drilled Shaft Foundation (60") (Structure # 2929 - Drilled Shaft Foundation)	\checkmark	LF	306.00	222.5
6.1	Buy Reinforcing Steel		b	47,482.52	1 0.0
6.2	Drill Abutment Shafts		LF	306.00	0.0
6.3	Erect Rebar Cage		EA	4.00	0.0
6.4	Place Rebar Cage		EA	4.90	0.0
6.5	Pour Concrete		СҮ	222.53	0.0
7	Drilled Shaft Foundation (72") (Structure # 2929 - Drilled Shaft Foundation)	~	LF	300.00	0.0
7.1	Buy Reinforcing Steel		b	58,189.36	0.0

20. 20. Fix the CY quantity for the **Drilled Shaft Foundation (72")** cost item.

CBS Position Code	Description	Include	Unit of Measure	Forecast (T/O) Quantity	CY Quantity
6.5	Pour Concrete		CY	222.53	0.00
7	Drilled Shaft Foundation (72") (Structure # 2929 - Drilled Shaft Foundation)	\checkmark	LF	300.00	314.16
7.1	Buy Reinforcing Steel		b	58,189.36	0.00
7.2	Drill Abutment Shafts		LF	300.00	0.00
7.3	Erect Rebar Cage		EA	4,90	0.00
7.4	Place Rebar Cage		EA	4.00	0.00
7.5	Pour Concrete		CY	314.16	0.00
8	Project Indirect Costs		Lump Sum	1.00	0.00

21. Notice in the Allocation Details section, that we have over-allocated this cost item. The Concrete Batch Plant quantity is 1,000 CY, whereas we have allocated 1,172.59 CY.



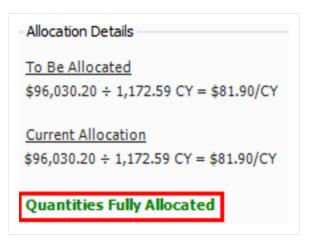
6.4.3 Cost Allocation to By Unit Cost

Having an under allocation or over allocation is ok, but it can be fixed by updating the Forecast (T/O) Quantity of the **Concrete Batch Plant**. To do this, change the cost allocation to **by Unit Cost**.

How do you want to determine allocation percentages?					
O by Quantity					
O proportionately based on					
🔿 by Percentage					
by Unit Cost (drives the Allocation Item's Forecast (T/O) Quantity)					

Step by Step — Cost Allocation by Unit Cost

- 1. Change the cost allocation to **by Unit Cost**. When the Attention dialog box appears, click **Yes** to continue.
- 2. Now the Allocation Details warning states the quantities are fully allocated.



3. Notice also that the Forecast (T/O) Quantity of the **Concrete Batch Plant** has updated to 1,172.59 CY to match the allocated quantity, and the Total Cost has updated to \$96,030.20 to keep the unit cost at the original \$81.90/CY.

Forecast (T/O) Qty:	Unit of Measure:		Unit Cost:	Total Cost:
		Υ.		
		w.		
1,172.59	CY	•	\$81.90	\$96,030.20
	Cost Segment:		Pay Quantity:	Cost Source:
	Job Overhead	•	1,172.59	Detail 👻

4. Return to the CBS Register. The distributed cost items all have a unit cost of \$81.90.

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
8	ЗОВ	1.00	Lump Sum	\$1,121,620	\$1,121,620.97
1	Roadway Excavation	344,820.24	CY	\$1.55	\$535,419.74
+ 1.1	Short Haul Excavation	74,883.28	CY	\$0.58	\$43,695.89
+ 1.2	Medium Haul Excavation	109,740.72	CY	\$0.81	\$88,620.58
+ 1.3	Long Haul Excavation	160, 196.24	CY	\$2.52	\$403,103.26
□ 2	Structural Concrete (Class S) (FC=3,00	229.87	CY	\$377.25	\$86,719.63
□ 2.1	Box Culvert Footing	52.84	CY	\$209.15	\$11,051.67
+ 2.1.1	Erect & Strip Footer	597.00	SFCA	\$10.26	\$6,123.68
+ 2.1.2	Place Footer Concrete	52.84	CY	\$11.37	\$600.65
2.1.3	Concrete Batch Plant	52.84	CY	\$81.90	\$4,327.33
+ 2.1.3.1	Buy Raw Materials	52.84	CY	\$35.62	\$1,882.06

5. The original "Concrete Batch Plant" cost item has a total cost of \$96,030.20.

+ 8.1	Crane Service	30.00	Day	\$1,871.89	\$56,156.73	U.S. Dollar
9	Concrete Batch Plant	1,172.59	CY	\$81.90	\$96,030.20	U.S. Dollar
+ 9.1	Buy Raw Materials	1,172.59	CY	\$35.62	\$41,765.74	U.S. Dollar
+ 9.2	Batch/Mix/Haul Concrete	21.11	Day	\$2,570.96	\$54,264.46	U.S. Dollar

- 6. Navigate to the CBS Register. Double click the Project Indirect Costs cost item to open it.
- 7. Select the Allocation tab. Check the box for Allocate this Item's Cost.

Allocate this Item's Cost
How do you want to determine allocation percentages?
by Quantity
O proportionately based on
O by Percentage
O by Unit Cost (drives the Allocation Item's Forecast (T/O) Quantity)

8. Select the **proportionately based on** radio button. From the drop down, select **Shifts** (Total).

How do you want to deterr	nine allo	location percentages?	
O by Quantity			
proportionately based	on		*
 ○ by Percentage ○ by Unit Cost (drives the Allo 		Shifts (Duration driven)	1
		Shifts (Non-Duration driven)	
		Shifts (Total)	
	S	Subcontract Total Billing Amount	
ag columns here to group		Subcontract Total Cost	
		Supplies Total Billing Amount	
CBS	criptic S	Supplies Total Cost	•
Position Code			.::

9. Filter the Account Code column to 13. Once done, click OK.

Account Code	Alternate	Alternate Descriptic
(Custom) (Blanks)		
(Non blank	-	
11.22.100		
11.22.300)	
✓ 13 13.2.1		
13.3.2		
13.3.3		
13.3.4		
13.8.2		
	ОК	Cancel:

10. Select all of the cost items. Then, right click on the selected cost items and select **Toggle included**. Ensure that all of the **Included** boxes are checked.

7	Drilled Shaft Foundation (72") (Structure # 2929 - Drilled Shaft Foundation)		LF
6	Drilled Shaft Foundation (60") (Structure # 2929 - Drilled Shaft Foundation)	\checkmark	LF
4.4.3	Pier cap	\checkmark	CY
4.4.2	Column, round	\checkmark	Each
4.4.1	Footer	\checkmark	CY
4.3.3	Pier cap	\checkmark	CY
4.3.2	Column, round	\checkmark	Each
4.3.1	Footer	\checkmark	CY
4.2.5	West Wing Wall	 Image: A set of the set of the	CY
CBS Position Code	Description	Include	Unit of Measure

11. On the CBS Register, verify that all of the items have cost items distributed proportionately by shifts.

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure
+ 2.2.3	Place Wall Concrete	87.86	CY
+ 2.2.4	Rub & Patch	922.51	SF
2.2.5	Project Indirect Costs	0.29	Lump Sum
+ 2.2.5.1	Crane Service	8.67	Day
2.3	Box Culvert Deck	48.53	CY
+ 2.3.1	Erect & Strip Deck	1,310.21	SFCA
+ 2.3.2	Place Deck Concrete	48.53	CY
2.3.3	Project Indirect Costs	0.06	Lump Sum
+ 2.3.3.1	Crane Service	1.87	Day
□ 2.4	Box Culvert Wing Walls	40.65	CY
+ 2.4.1	Erect & Strip Footings	563.67	SFCA
+ 2.4.2	Erect & Strip Wingwalls	1,067.56	SFCA
+ 2.4.3	Place Wing Wall Concrete	40.65	CY
2.4.4	Project Indirect Costs	0.16	Lump Sum
+ 2.4.4.1	Crane Service	4.82	Day
□ 3	Reinforcing Steel (CBC Extn at STA 395	35,372.00	lb
+ 3.1	Reinforcing Steel	35,372.00	lb
□ 4	Structural Concrete (Class S) (FC=3,50	306.00	CY
■ 4.1	Abutment 1 (south)	84.00	CY
■ 4.1.1	Footer	44.44	CY
+ 4.1.1.1	Erect & Strip Footer	300.00	SFCA
+ 4.1.1.2	Place Footer Concrete	48.88	CY
4.1.1.3	Project Indirect Costs	0.03	Lump Sum
+ 4.1.1.3.1	Crane Service	0.91	Day

6.5 DEPENDENT COST ITEM ALLOCATION

Step by Step — Dependent Cost Item Allocation

- 1. From the CBS Register, right click on the first cost item and select **Insert Dependent Cost Item** from the context menu.
- 2. When the Attention dialog box shows, select **Based on Direct Costs**. Once done, click **OK**.

Attention Attention
Choose what type of Dependent Cost Item to add:
○ Based on Job's Price
O Based on Job's Finance Cost
O Based on Bond Table
Based on Direct Costs
O Based on Indirect Costs
O Based on CBSMan Hours
O Based on CBSEquipment Hours
O Based on Resource Utilization
O Based on Assembly Utilization
OK Cancel

3. Find your new cost item. Then double click to open the cost item record.

8	Project Indirect Costs	1.00	Lump Sum	\$56,156.73	\$
+ 8.1	Crane Service	30.00	Day	\$1,871.89	\$
9	Concrete Batch Plant	1,172.59	CY	\$81.90	\$
+ 9.1	Buy Raw Materials	1,172.59	CY	\$35.62	\$
+ 9.2	Batch/Mix/Haul Concrete	21.11	Day	\$2,570.96	\$
10	Equipment Related Indirects	1.00	Each	\$76,467.24	\$
+ 10.1	Maintenence	1.00	Each	\$76,467.24	\$
+	Direct Cost Add-On	1.00	Lump Sum	\$0.00	

- 4. In the CBS Position Code Description, enter the description Small Tools & Supplies.
- 5. Enter in the cost item, "ST&S".

) columns here to group		
	Description	Currency	Total Cost (Forecast)
,	ST&S	U.S. Dollar	\$0.0
e l			

6. In the Cost Breakdown default data block, set the labor rate as 5%.

Cos	t Breakdown			
Cost	Category	Subject Cost	Rate	Cost
r 1	Total	\$1,003,3	0.00	\$0.00
>	Labor	\$217,258	5	\$0.00
)	Owned Equipment	\$545,478	0.00	\$0.00
)	Rented Equipment	\$0.00	0.00	\$0.00

- 7. In the Cost Item Record, select the Cost Categorization tab.
- 8. Under the Cost Categorization Method, select the **Use Custom Categorization** radio button.

Cost Segment:	Job Overhead	•
Cost Categorization Method:	OUse Default Categorization	
	Use Custom Categorization	

- 9. Find the **Supplies** Cost Category and check the box next to **Supplies**.
- 10. Select the Allocation tab. Then, check the box for Allocate this Item's Cost.
- 11. Select the **proportionately based on** radio button. From the drop down, select **Labor Total Cost**.

Description	Dependency	Co	st Categorization	 ✓ <u>A</u>llocation 	
Allocate	this Item's Cost				
✓ Allocatio	on distributions i	nher	it target Pay Item A	ssignment	
How do yo	u want to determ	nine a	llocation percentag	es?	
🔿 by Qua	ntity				
propor	tionately based (on			*
O by Perc	entage		Forecast (T/O) Qu	antity	1
🔘 by Unit	Cost (drives the	e Allo	Hours (Duration dr		
			Hours (Non-Duration Hours (Total)	on driven)	
-			Labor Total Billing	Amount	
Drag columns l	nere to group		Labor Total Cost		
CBS Position (Desc	riptio	Man Count		
Position	Loue	-			:i

12. In the Cost Item Record, filter the **Account Code** column to **13**. Once you are done selecting the filter, click **OK**.

Account Code	Alternate	Alternat Descript
(Custom)		
(Blanks)		
(Non blan	ദ)	
11.22.100)	
11.22.200)	
11.22.300)	
✓ 13		
13.2.1		
13.3.2		
13.3.3		
13.3.4		
13.8.1		
13.8.2		
	ок	Cancel

- 13. In the Cost Item Record, check the **Include** box in the Include column for every cost item.
- 14. Return to the CBS Register. The ST&S is distributed to all of the selected cost items.

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Currency
	ЗОВ	1.00	Lump Sum	\$1,132,483	\$1,132,483.91	U.S. Dolla
+	Small Tools & Supplies	1.00	Lump Sum	\$10,862.95	\$10,862.95	U.S. Dolla
= 1	Roadway Excavation	344,820.24	CY	\$1.55	\$535,419.74	U.S. Dolla
+ 1.1	Short Haul Excavation	74,883.28	CY	\$0.58	\$43,695.89	U.S. Dolla
+ 1.2	Medium Haul Excavation	109,740.72	CY	\$0.81	\$88,620.58	U.S. Dolla
+ 1.3	Long Haul Excavation	160,196.24	CY	\$2.52	\$403,103.26	U.S. Dolla
2	Structural Concrete (Class S) (FC=3,00	229.87	CY	\$429.05	\$98,628.03	U.S. Dolla
□ 2.1	Box Culvert Footing	52.84	CY	\$136.60	\$7,218.11	U.S. Dolla
+ 2.1.1	Erect & Strip Footer	597.00	SFCA	\$10.26	\$6,123.68	U.S. Dolla
+ 2.1.2	Place Footer Concrete	52.84	CY	\$11.37	\$600.65	U.S. Dolla
+ 2.1.3	Small Tools & Supplies	0.05	Lump Sum	\$10,862.95	\$493.77	U.S. Dolla
■ 2.2	Box Culvert Walls	87.86	CY	\$572.99	\$50,341.83	U.S. Dolla
+ 2.2.1	Erect & Strip Wall	5,757.00	SFCA	\$5.13	\$29,525.99	U.S. Dolla
+ 2.2.2	Erect & Strip Bulkheads	131.79	SFCA	\$15.39	\$2,027.69	U.S. Dolla
+ 2.2.3	Place Wall Concrete	87.86	CY	\$17.05	\$1,498.08	U.S. Dolla
+ 2.2.4	Rub & Patch	922.51	SF	\$0.61	\$561.08	U.S. Dolla
2.2.5	Project Indirect Costs	0.29	Lump Sum	\$56,156.73	\$16,235.20	U.S. Dolla
+ 2.2.5.1	Crane Service	8.67	Day	\$1,871.89	\$16,235.20	U.S. Dolla
+ 2.2.6	Small Tools & Supplies	0.05	Lump Sum	\$10,862.95	\$493.77	U.S. Dolla
2.3	Box Culvert Deck	48.53	CY	\$237.72	\$11,535.59	U.S. Dolla
+ 2.3.1	Erect & Strip Deck	1,310.21	SFCA	\$5.13	\$6,719.68	U.S. Dolla
+ 2.3.2	Place Deck Concrete	48.53	CY	\$17.05	\$827.43	U.S. Dolla
2.3.3	Project Indirect Costs	0.06	Lump Sum	\$56,156.73	\$3,494.71	U.S. Dolla
+ 2.3.3.1	Crane Service	1.87	Day	\$1,871.89	\$3,494.71	U.S. Dolla
+ 2.3.4	Small Tools & Supplies	0.05	Lump Sum	\$10,862.95	\$493.77	U.S. Dolla
■ 2.4	Box Culvert Wing Walls	40.65	CY	\$726.51	\$29,532.50	U.S. Dolla
+ 2.4.1	Erect & Strip Footings	563.67	SFCA	\$5.13	\$2,890.88	U.S. Dolla
+ 2.4.2	Erect & Strip Wingwalls	1,067.56	SFCA	\$15.39	\$16,425.66	U.S. Dolla
+ 2.4.3	Place Wing Wall Concrete	40.65	CY	\$17.05	\$693.13	U.S. Dolla
2.4.4	Project Indirect Costs	0.16	Lump Sum	\$56,156.73	\$9,029.05	U.S. Dolla
+ 2.4.4.1	Crane Service	4.82	Day	\$1,871.89	\$9,029.05	U.S. Dolla
+ 2.4.5	Small Tools & Supplies	0.05	Lump Sum	\$10,862.95	\$493.77	U.S. Dolla
□ 3	Reinforcing Steel (CBC Extn at STA 395	35,372.00	b	\$0.73	\$25,750.82	U.S. Dolla

6.5.1 Turning Off Cost Allocation

If you determine that you no longer want to spread the cost of an Allocation Item, you can turn off cost allocation for that cost item. The logic that you created to spread the costs are retained, so you can easily turn it back on later.

NOTE

Distributions cannot exist in the CBS when a job is published for Job Tracking. To remove Distributions, either break the Cost Allocation link or uncheck the **Allocate this Item's Cost** check box on the **Cost Item Record - Allocation** tab.

Step by Step — Turning Off Cost Allocation

- 1. From the CBS Register, select the Concrete Batch Plant Cost Item Record.
- 2. From the Ribbon, select the **Actions** tab. Under the Edit section, select **Open**. The Cost Item Record opens.

3. Select the Allocation tab. Uncheck the box for Allocate this Item's Cost.

Allocation distributions inhe	rit target Pay Item Assignment
How do you want to determine	allocation percentages?
) by Quantity	
 proportionately based on 	v
🔿 by Percentage	
by Unit Cost (drives the All	ocation Item's Forecast (T/O) Quantity)

4. Once done, click **OK** to return to the CBS Register.

ок	Cancel	< Prev	Next >

5. All of the distribution cost items are gone, but the quantity and the total cost of the **Concrete Batch Plant** has not changed.

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Currency
8	Project Indirect Costs	1.00	Lump Sum	\$56,156.73	\$56,156.73	U.S. Dollar
+ 8.1	Crane Service	30.00	Day	\$1,871.89	\$56,156.73	U.S. Dollar
9	Concrete Batch Plant	1,172.59	СҮ	\$81.90	\$96,030.20	U.S. Dollar
+ 9.1	Buy Raw Materials	1,172.59	CY	\$35.62	\$41,765.74	U.S. Dollar
+ 9.2	Batch/Mix/Haul Concrete	21.11	Day	\$2,570.96	\$54,264.46	U.S. Dollar
10	Equipment Related Indirects	1.00	Each	\$76,467.24	\$76,467.24	U.S. Dollar
+ 10.1	Maintenence	1.00	Each	\$76,467.24	\$76,467.24	U.S. Dollar

6.5.2 Breaking a Cost Allocation Link

To make a Distribution a permanent part of the CBS, and permit its costs and quantities to be directly editable under the cost item(s) to which it has been distributed, break the Cost Allocation link.

Step by Step — Breaking a Cost Allocation Link

- 1. From the CBS Register, select the Project Indirect Costs Cost Item Record.
- 2. From the Ribbon, select the **Actions** tab. Under the Edit section, select **Open**. The Cost Item Record opens.
- 3. Select the Allocation tab. Then go to the CBS Register in the record.
- 4. Select the cost item with a Cost Allocation Link. Then from the Ribbon, select the **Actions** tab.
- 5. Under Tools, select Break Cost Allocation Link.

۵ 🗎	-							
File	Setup	Estimate	Quote	Price	Execution	System	Actions	
\mathbb{N}		📃 Display	y Parent Infor	mation	🏂 Highlight Uniqu	e (Delta) Res	ource Fields	🛓 Edit Resource Periods
		过 Display	y Billing Rate		Highlight Uniqu	e (Delta) Cos	t Item Fields	🔚 Insert Subordinate
Split	Default Data Blocks							发 Break Cost Allocation Link
Edit				Vie	w			Tools

6. When the Attention dialog box shows, click **Yes** to continue.

Attention
You have chosen to break the Cost Allocation link from the Cost Allocation Item to the Distribution Items. This will make the Distribution Items permanent Cost Items in their current locations.
If this Allocation Item or any of its Distributions are included as a dependency on a dependent cost item, then breaking this link could result in a change to this job's target price.
This action cannot be undone. Do you want to continue?
Yes No

7. The original cost item still exists and is now becomes editable. All the distribution cost items are now editable as well. They are now permanent items and are no longer highlighted in purple either.

6	Drilled Shaft Foundation (60") (Struct	306.00	LF
+ 6.1	Buy Reinforcing Steel	47,482.52	b
6.2	Drill Abutment Shafts	306.00	LF
6.3	Erect Rebar Cage	4.00	EA
6.4	Place Rebar Cage	4.00	EA
+ 6.5	Pour Concrete	222.53	CY
6.6	Project Indirect Costs	0.03	Lump Sum
+ 6.6.1	Crane Service	0.82	Day
7	Drilled Shaft Foundation (72") (Struct	300.00	LF
+ 7.1	Buy Reinforcing Steel	58,189.36	b
7.2	Drill Abutment Shafts	300.00	LF
7.3	Erect Rebar Cage	4.00	EA
7.4	Place Rebar Cage	4.00	EA
+ 7.5	Pour Concrete	314.16	CY
7.6	Project Indirect Costs	0.04	Lump Sum
+ 7.6.1	Crane Service	1.15	Day
8	Project Indirect Costs	1.00	Lump Sum
+ 8.1	Crane Service	30	Day
9	Concrete Batch Plant	1,172.59	СҮ
+ 9.1	Buy Raw Materials	1,172.59	CY

6.5.3 Pay Item Assignment for Allocation Distribution in an Unlocked Job

In the **Cost Item Record - Allocation** tab, the check box **Allocation distributions inherit target Pay Item Assignment** was added. When the check box is selected in an unlocked job, the system uses the same allocation distribution for the cost item's costs anytime the cost item is copied and added to a job. For a locked job, this is the normal system behavior. This option is always selected and cannot be edited.

Cost Breakdown	Structure (CBS)	Register	Cost Item R	ecord ©		
CBS Code:	Optional Code:	Description:				
9		Concrete Bato	h Plant			
PI Assignment:	PI Line Number:	PIDescription	:			
-						
Cost Item Summa	ry 🍃 <u>D</u> etail : \$	81.90 🗳 Plu	ig:\$0.00 🕻	Quote : \$	0.00	Allocation
Allocate this	Item's Cost					
Allocation d	istributions inherit t	arget Pay Item A	Assignment			
How do you wa	ant to determine allo	cation percentag	jes?			
O by Quantity	/					
	ately based on			~		
O by Percenta	age					
by Unit Cost	st (drives the Alloca	ation Item's Fore	ecast (T/O) Quar	tity)		

Exercise 6.1 — Define Indirect Costs

In this exercise, you will practice entering Indirect Costs. Complete the following steps, using the E101 – Training Job:

- 1. Double click on the **Price % Add On** row header.
- 2. You already have Office Overhead as your first line item. In the next blank row type **Corporate Insurance** in the Description field and enter a rate of **.10**.
- 3. Click **OK** to close the record.
- 4. Double click on the **Direct Cost Add-On** row header.
- 5. You already have Small Tools as your first line item. On the Description tab, type **Safety & Training** in the next blank row's Description field, then press **Tab**.
- 6. The Dependency Cost Breakdown appears on the right. Enter a rate of **5** for Labor Costs only.
- 7. Click **OK** to close the record.

You should end up with the following results

Cos	st Breakdown Structure (CBS) Regis	ter Pi	rice % Add-O	n Record 🛛 🕲				
CB:	S Code: Description: Price % Add-On							Total Cost: \$9,082.87
<u>D</u> e:	scription Dependency					Cost Item Setup		×
Drag	g columns here t Eigd au [Search For]	··· Sav	ved views: Pr	evious View	-	Properties		
			Account			Currency:	U.S. Dollar	-
	Description	Rate	Code			Account Code:		1
\rightarrow	Office Overhead	4.00				Cost Curve:	linear	
	Corporate Insurance	0.10					Lincol	
*						Tag 1:		•
						Tag 2		

CBS P	osition	Code: Descript	ion:										٦	Total Cos	t:
		Direct Co	ost Add-	On]		\$8,845.4	7 BASE
<u>D</u> esci	ription	Dependency	Cost C	ategorization	Allocation			c	ost	Breakdown					
Drag d	Filadan	[Search For]		Saved views	Previous V	ew	-	Co	ost C	ategory	Subject	Cost	Rate	C	ost
						Total Cost		, ×	То	tal	\$130,	759.83	2.25		\$2,948.49
[Descript	ion		F	Curre	(Forecast)		3	>	Labor	\$58,	969.83	5.00		\$2,948.49
5	Small To	ols			U.S. Dollar		\$5,896.98		>	Owned Equipment	\$68,	251.92	0.00		\$0.00
→ []	Safety 8	& Training			U.S. Dollar		\$2,948.49		>	Rented Equipment		\$0.00	0.00		\$0.00
*									>	Supplies		\$0.00	0.00		\$0.00
~ _									>	Materials	\$3,	276.00	0.00		\$0.00
									>	Subcontract		\$0.00	0.00		\$0.00
									>	Fees	\$	262.08	0.00		\$0.00
									>	Allowance		\$0.00	0.00		\$0.00
										Custom Category 1		\$0.00	0.00	→	\$0.00
										Undefined		\$0.00	0.00	→	\$0.00

Congratulations, you have completed this exercise!

Lesson 6 Review

- 1. Default indirect costs are pre-built _____ created by InEight Estimate, located within the CBS Register.
 - a. billing rates
 - b. cost items
 - C. pay items
- 2. By default, any cost item you create in the CBS Register that is not assigned to a pay item is considered indirect cost.
 - a. True
 - b. False
- 3. The cost segment field in the CBS is used to indicate:
 - a. Whether your costs will be considered job overhead, business overhead, or direct cost.
 - b. The source of your costs (Detail, Plug or Quote).
 - c. What pay item your cost item is assigned to.

Lesson 6 Summary

As a result of this lesson, you can:

- Explain how indirect costs are defined in InEight Estimate
- Estimate default indirect cost items
- Estimate user-defined indirect cost items

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LESSON 7 – FINALIZE THE ESTIMATE

This lesson is primarily suited towards contractors who must add profit or markup to their total estimated cost, which will be submitted in the form of a bid or proposal. Most owners can divert from this lesson as it's more geared towards adding profit and markup. There are a few use cases in which an owner may wish to use the price breakdown structure. For example: to add risk, contingency, or reserves if it is preferred, these are not shown directly in the budget line items. The price breakdown structure also provides a summary level review of the total estimate and is a great reference during estimate reviews.

Lesson Duration: 45 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Add job markup (profit)
- Use tools on the PBS form to review your estimate
- Spread Target Price over pay items
- Make bid adjustments

Lesson Topics

7.1 Job Markup (Profit)	
7.1.1 Target Price	
7.1.2 Price Breakdown Structure	
7.1.3 Markup vs. Margin	
7.1.4 Define Profit	
7.2 Cost Estimate Audit/Review	
7.2.1 Price Breakdown Structure Tabs	
7.3 Spread Target Price Over Pay Items	

7.3.1 Current Price vs. Target Price	
7.3.2 Proposal Recap	
7.3.3 Spread the Target Price	
7.3.4 Define Pricing for Pay Items Manually	
7.3.5 Use AutoPrice to Balance and Hit the Target Total	
7.3.6 Use AutoPrice to Unbalance and Hit the Target Total	
7.4 Selective Pay Item Markup	
Exercise 7.1 – Manually Price Pay Items	
7.5 Bid Adjustments	
7.5.1 Lock Price	
7.5.2 Suspend Pay Items	
Lesson 7 Review	
Lesson 7 Summary	

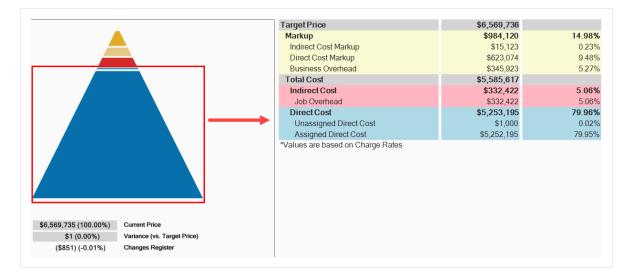
7.1 JOB MARKUP (PROFIT)

On the Data Map ^{A Data Map} notice how the different segments within the pyramid coincide with the percentage amounts that make up Direct Costs, Indirect Costs and Target Profit. Illustrations below show how the Data Map values correspond to the values that make up the cost and profit.

To open the Data Map, select the Price tab, then Data Map from the Overhead and Profit section.

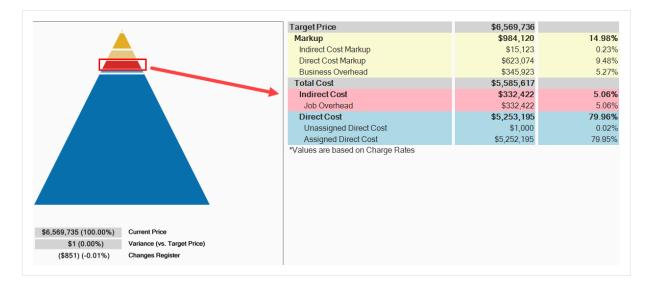
7.1.1 Target Price

For contractors building the price of your project is like building a pyramid. The foundation of your price consists of the direct costs of the job.



The images below represent a default examples.

On top of your direct costs, you can decide if costs with a cost segment of business overhead should be indirect costs or markup. You estimate your direct and indirect costs in the CBS Register.



At the top of the pyramid you add an amount for profit. You add profit in the Price Breakdown Structure (PBS) form. There is a very small block at the top of the Data Map, which comprises 0.22% of Indirect Cost Markup.



The total of the direct cost, indirect cost, and profit in the project is referred to in InEight Estimate as the Target Price. This is the final price that you want to submit as your proposal.

📥	Target Price	\$6,569,736	
	Markup	\$984,120	14.989
	Indirect Cost Markup	\$15,123	0.239
	Direct Cost Markup	\$623,074	9.489
	Business Overhead	\$345,923	5.279
	Total Cost	\$5,585,617	
	Indirect Cost	\$332,422	5.069
	Job Overhead	\$332,422	5.06
	Direct Cost	\$5,253,195	79.96
	Unassigned Direct Cost	\$1,000	0.02
	Assigned Direct Cost	\$5,252,195	79.959
	*Values are based on Charge Rates		
6 569 735 (100 00%) Current Price			
	arrat Price)		
66,569,735 (100.00%) Current Price \$1 (0.00%) Variance (vs. T (\$851) (-0.01%) Changes Regis			

7.1.2 Price Breakdown Structure

As you already practiced, your direct and indirect costs are estimated in the CBS. Your project's profit needs to be defined in the Price Breakdown Structure (PBS) form.

The main purpose of the Price Breakdown Structure (PBS) is to add markup (profit) to the estimate. The Price Breakdown Structure is a visual run-down of the costs and profit that make up your Target Price. It helps you analyze how your costs contribute to the price you are targeting, including the amount of profit you would like to include.

You can open the PBS from the InEight Estimate landing page by selecting the **Price** tab, then **Price Breakdown Structure (PBS)** from the Overhead and Profit section.

	Name	Definition
1	PBS Description	 The left side of the screen displays several cost classifications: Target Profit Business Overhead Job Overhead Direct Cost
2	Various Columns	The Assigned and Unassigned columns show which costs are either assigned or not assigned to pay items. Unassigned costs are spread back to pay items based on the distribution logic set in Job Properties > Pricing. The Total columns represents a summation of both columns. Each layer displays with an amount, and the percentage of the Target Price that this amount represents.

Overview – Price Breakdown Structure

Overview – Price Breakdown Structure (continued)

	Name	Definition
3	PBS Menu	The right side of the screen holds several tabbed pages of information. This information is useful in analyzing the job at a summary level.
4	Refresh Data	To ensure that you are always reviewing the most up-to-date factors and ratios, click the Refresh Summary Data button whenever you are reviewing the data.

lescription	Assigned	Unassigned	Total	% of Target	Markup Analysis	Price Status Co	ost Source	Resource Utilization	Minority Goals	Subcontract Status	Vendor Status	-		
Price Breakdown Structure												-		
✓ ▲ Target Price	\$5,252,19	\$1,317,54	\$6,569,73	100.00	Markup Analysi	s (based on Bid Qi	uantities an	d Charge Rate Marl	kup)					
🗸 🛕 Markup	\$0.00	\$984,119.62	\$984,119.62	14.98										
🗸 📩 Target Profit		\$638,196.32	\$638,196.32	9.71	Markup as % of	All Costs (Target	Price - Marku	n)		17.62				
🛕 Indirect Cost Markup		\$15,122.66	\$15,122.66	0.23				*7						
Direct Cost Markup		\$623,073.66	\$623,073.66	9.48	Markup as % of	All LaborCosts				122.70				
✓ ≜ Business Overhead	\$0.00	\$345,923.30	\$345,923.30	5.27	Markup as % of	All Direct Labor C	osts			142.11				
Price % Add-On	\$0.00	\$295,638.13	\$295,638.13	4.50										
Job Financing	\$0.00	\$33,105.26	\$33,105.26	0.50	Markup as % of	All Indirect Labor	Costs			898.32				
Indirect Cost Escala	\$0.00	\$2,131.11	\$2,131.11	0.03	Markup as % of	All Owned Equips	nent and Ren	ed Equipment Costs		101.26				
Direct Cost Escalation	\$0.00	\$15,048.80	\$15,048.80	0.23	Madeur an N. of	All OE Ownership		d Canta		239.23				
Business Overhead	\$0.00	\$0.00	\$0.00	0.00	Markup as % of	All OE Ownership	and KE Kent	al Costs		239.23				
V 📥 Total Cost	\$5,252,19	\$333,421.97	\$5,585,61	85.02	Markup as % of	All OE Operation a	and RE Opera	tion Costs		177.02				
🗸 📥 Indirect Cost	\$0.00	\$332,421.97	\$332,421.97	5.06	Markup as % of	All Materials Cost	9			28.61				
y 📥 Job Overhead	\$0.00	\$332,421.97	\$332,421.97	5.06										
Prime Bond	\$0.00	\$47,148.68	\$47,148.68	0.72	Markup as % of	All Supplies Costs				3571.02				
Indirect Cost A	\$0.00	\$5,888.67	\$5,888.67	0.09	Markup as % of	All Subcontract Co	osts			900.51				
Direct Cost Add	\$0.00	\$104,088.34	\$104,088.34	1.58										
Job Overhead I	\$0.00	\$175,296.28	\$175,296.28	2.67	Markup per Manh	our				\$36.80				
✓ ▲ Direct Cost	\$5,252,19	\$1,000.00	\$5,253,19	79.96	Markup per Equip	ment hour				\$61.84				
Direct Cost Items	\$5,252,19	\$1,000.00	\$5,253,19	79.96										

TIP

All costs in the Price Breakdown Structure are based on pay quantities (not forecast takeoff quantities).

7.1.3 Markup vs. Margin

Let's look at the difference between Markup and Margin.

- Markup is a function of cost, while margin is a function of price
- Markup indicates how much you are marking up the cost
- Margin indicates what percentage of your price the markup represents

The percentages on the main PBS screen are margin, so you can see what percentage each category in the PBS represents compared to the total price. If you enter 10% in the Target Profit field, your profit will be 10% margin of your total price.

Description	Assigned	Unassigned	Total	% of Target
✓ ▲ Price Breakdown Structure				
🗸 🔺 Target Price	\$5,252,19	\$1,317,54	\$6,569,73	100.00
🗸 🔺 Markup	\$0.00	\$984,119.62	\$984,119.62	14.98
> 🛕 Target Profit		\$638,196.32	\$638,196.32	9.71
> 📥 Business Overhead	\$0.00	\$345,923.30	\$345,923.30	5.27
V 🛕 Total Cost	\$5,252,19	\$333,421.97	\$5,585,61	85.02

When you open the Direct or Indirect Markup Records, the Rate percentage there indicates markup of the cost. If you enter 10% markup on \$100, the markup will be \$10.

Within Job Properties, you can choose if costs with a cost segment of business overhead should be indirect costs or markup. If selecting markup, then Business Overhead will be spread within the Markup category of the Price Breakdown Structure. The Total Markup will be the sum of Target Profit and all Items categorized as Business Overhead.

Data Map	Job	Properties 🛛						
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Pricing
Calculate Cost / Billing Distribut Indivi Top le	Amount g Amount	Pay Item Prices us ed Cost/Billing A pries ries	-					a
Using Keepi Categori	Pay Item by Weighted I ing Markup v ize Business ect Cost		sts					

This lets you see the true total cost of the job, including the total markup inclusive of the business overhead. You can also create cost items and categorize them as business overhead, then possibly include overhead costs such as estimating or home office expenses. This provides you with added flexibility in marking up your job.

7.1.4 Define Profit

Before you define profit, review the PBS. You estimated your direct cost items, and you also estimated some indirect cost items in the CBS. You can view your direct and indirect cost totals on the Price Breakdown Structure. Notice you have not defined profit yet.

Description	ı		Assigned	Unassigned	Total	% of Target
🗸 🔺 Pri	ce Brea	akdown Structure				
~ 🔺	Targe	t Price	\$5,252,19	\$645,755.99	\$5,897,950.68	100.00
~	Ам	arkup	\$0.00	\$315,692.95	\$315,692.95	5.35
	~ 🔺	Target Profit		\$0.00	\$0.00	0.00
		🔺 Indirect Cost Markup		\$0.00	\$0.00	0.00
		📩 Direct Cost Markup		\$0.00	\$0.00	0.00
	¥ 🏛	Business Overhead	\$0.00	\$315,692.95	\$315,692.95	5.35
		Price % Add-On	\$0.00	\$265,407.78	\$265,407.78	4.50
		Job Financing	\$0.00	\$33,105.26	\$33,105.26	0.56
		Indirect Cost Escala	\$0.00	\$2,131.11	\$2,131.11	0.04
		Direct Cost Escalation	\$0.00	\$15,048.80	\$15,048.80	0.26
		Business Overhead	\$0.00	\$0.00	\$0.00	0.00
~	📥 To	otal Cost	\$5,252,19	\$330,063.05	\$5,582,257.73	94.65
	¥ 📥	Indirect Cost	\$0.00	\$329,063.05	\$329,063.05	5.58
	~	📥 Job Overhead	\$0.00	\$329,063.05	\$329,063.05	5.58
		Prime Bond	\$0.00	\$43,789.75	\$43,789.75	0.74
		Indirect Cost A	\$0.00	\$5,888.67	\$5,888.67	0.10
		Direct Cost Add	\$0.00	\$104,088.34	\$104,088.34	1.76
		Job Overhead I	\$0.00	\$175,296.28	\$175,296.28	2.97
	× 🔺	Direct Cost	\$5,252,19	\$1,000.00	\$5,253,194.68	89.07
		🖶 Direct Cost Items	\$5,252,19	\$1,000.00	\$5,253,194.68	89.07

You can define profit by entering a profit percentage directly on the PBS, or by modifying the Direct or Indirect Cost Markup Records.

The following steps walk you through plugging a Target Profit percentage directly on the PBS form.

7.1.4.1 Profit as a Percentage of Target Price

Step by Step — Add Profit as a Percentage of Target Price

- 1. Open your job in InEight Estimate.
- 2. From the InEight Estimate landing page, select the **Price** tab.
- 3. Select **Price Breakdown Structure (PBS)** from the Overhead and Profit section.
- 4. On the Target Profit row, enter a **numeric value** in the % of Target Price column, then press **Tab**. Notice that entering that Target Profit has the following effects, once you tab off the field:
 - Your Target Price increases
 - Indirect and Direct Cost Markup values automatically have amounts pushed down to them
 - The amounts for both Prime Bond and Price % Add-On increase, as they are based on a percentage of the Target Price
 - Direct Cost and Job Overhead amounts don't change, but their % of Target Price changes

7.1.4.2 Profit Through Direct Cost Markup Record

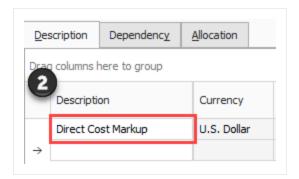
The following steps walk you through how to add profit as markup on the Direct Cost Markup record.

Step by Step — Modify the Direct Cost Markup Record

1. On the Price Breakdown Structure (PBS) form, double click on the Direct Cost Markup row.

Description		Cost	% of Target
🗸 🔺 Price Breakdown	Structure		
🗸 🔺 Target Price		\$6,568,772.37	100.00
Target Pr	ofit	\$656,877.24	10.00
🚺 🛓 Direc	t Cost Markup	\$623,140.54	9.49
	ect Cost Markup	\$33,736.70	0.51
🗸 🔺 Total Cos	st .	\$5,911,895.14	90.00

2. In the Markup Cost Item Record, override the Default entry with **Direct Cost Markup** in the Description field.



- 3. In the Rate column on the Dependency Cost Breakdown, a numeric value for your rates in the Labor Cost , Owned Equipment, Materials, and Fees categories. Reset the other categories back to **0**.
 - Notice the average rate rolls up at the Total cost category level

Co	st C	Category	Subject Cost	Rate		Cost
/		tal	\$133,226.64	12.15		\$16,191.02
	>	Labor	\$59,096.84	15.00		\$8,864.53
	>	Owned Equipment	\$70,591.72	10.00		\$7,059.17
	>	Rented Equipment	\$0.00	0.00		\$0.00
	>	Supplies	\$0.00	0.00		\$0.00
	>	Materials	\$3,276.00	8.00		\$262.08
	>	Subcontract	\$0.00	0.00		\$0.00
	>	Fees	\$262.08	2.00		\$5.24
	>	Allowance	\$0.00	0.00		\$0.00
		Custom Category1	\$0.00	0.00	÷	\$0.00
		Undefined	\$0.00	0.00	÷	\$0.00

- 4. Click **OK** to save your changes and return to the PBS.
 - The Direct Cost Markup now is a different percentage of the Target Price, and the Target Profit and Target Price have changed

Descri	ption		Cost	% of Target
~ 🔺	Price Brea	kdown Structure		
🗸 🔺 Targe		t Price	\$248,161.82	100.00
	🗸 🛕 Та	rget Profit	\$25,249.17	10.17
		Indirect Cost Markup	\$9,058.15	3.65
	A	Direct Cost Markup	\$16,191.02	6.52
	🗸 🔺 To	tal Cost	\$222,912.65	89.83

5. Click the **Refresh Summary Data** button on the PBS to see the changes reflected.

7.2 COST ESTIMATE AUDIT/REVIEW

InEight Estimate offers built-in reports to double check your estimate and review different aspects of your project, including material costs, quotes, man-hours and production.

7.2.1 Price Breakdown Structure Tabs

The purpose of the tabs on the Price Breakdown Structure is to assist with estimate reviews.

Markup Analysis	Price Status	Cost Source	Resource Utilization	Minority Goals	Subcontract Status	Vendor Status
-----------------	--------------	-------------	----------------------	----------------	--------------------	---------------

7.2.1.1 Markup Analysis

On this tab, you can compare your profit to your costs for labor, subcontract and other cost groupings. By seeing the ratios of your markup compared to your different cost categories, you can gauge if you have the right balance of costs in your estimate.

Markup Analysis	s (based on Bid quantities)	
Markup as % of	All Costs (Target Price - Target Profit)	11.11
Markup as % of	All LaborCosts	79.42
Markup as % of	All Direct Labor Costs	94.07
Markup as % of	All Indirect Labor Costs	510.05

For example, if your markup is more than 100% of your Labor cost, it may indicate that you don't have enough labor cost in your estimate to cover the work, which could indicate labor cost overruns during execution that would eat into your profit margin.

7.2.1.2 Cost Source

The Cost Source tab shows the breakdown of Detail, Plug and Quote cost sources, as well as the amounts and percentages of each that are attributable to Direct and Indirect cost. Your Plug cost source should be the lowest percentage.

Markup A	Analysis	Price Sta	atus Cost Source	Resou	rce Utilization	Mino	rity Goals	s Subcontract Stat	tus N	/endor Status		
Cost	Cost Source Analysis (based on Bid quantities)											
			Detail		Plu	g *		Quote		Т	otal	
			Amount	%	An	nount	%	Amount	%	An	ount	%
(Dire	ect Cost	\$5,156,491.67	97.95	\$64,6	00.00	1.23	\$43,200.00	0.82	\$5,264,2	291.67	100.00
[Indire	ect Cost	\$638,694.52	98.62	\$5,3	38.76	0.82	\$3,570.19	0.55	\$647,	603.46	100.00
		Total	\$5,795,186.19	98.03	\$69,9	938.76	1.18	\$46,770.19	0.79	\$5,911,	895.14	100.00

* Includes values entered as flat amounts (not percentages) on dependent cost items.

7.2.1.3 Resource Utilization

The Resource Utilization tab shows a breakdown of the man-hours and equipment hours utilized on the job, based on take-off quantities.



7.2.1.4 Subcontract Status

The Subcontract Status tab displays a breakdown of subcontractor amounts, costs, and percentages for quoted cost items. This is a good place to review how much of your estimate is subcontracted.

7.2.1.5 Vendor Status

The Vendor Status tab displays a breakdown of vendor information, including amounts and percentages of the Target Price represented by vendors. This is a good place to review how much of your estimate costs come from vendor quotes.

1arkup Analysis	Price Status	Cost Source	Resource Utilization	Minority Goals	Subcontract Sta	atus Vendor Status		
Vendor Analy	ysis (based on	Bid quantities)					
Number of Ven	dors	2						
Total Vendor A	mount	\$1,442,571.90						
% of Target Pri	ce	21.96						
Company Name		Contact	Phon	2	Amount	Currency	Percent	Street Address
Example Vendor	4 DBE	Slim, Leste	r 111-1	22-1321	\$271,471.20	U.S. Dollar	4.13	400 Fourth Street
Example Vendor	1	Roberts, P	at 111-1	23-2134	\$1,171,100.70	U.S. Dollar	17.83	100 Tenth Street

7.3 SPREAD TARGET PRICE OVER PAY ITEMS

In the Cost Breakdown Structure you generated your direct and indirect costs, and in the Price Breakdown Structure you added profit to come up with a Target Price for the bid, but you still haven't decided how to spread the Target Price over your pay items.

In Lesson 4 you created pay items for the project in the Pay Item & Proposal Register. You can now go back to the Pay Item & Proposal Register to distribute your Target Price over those pay items.

7.3.1 Current Price vs. Target Price

In InEight Estimate, Current Price means the total price that is currently assigned on your pay items. Open the Pay Item & Proposal Register to see what the Current Price is for your pay items (Price > Pay Item & Proposal).

At this point there is no pricing on your pay items, so your Current Price is \$0.00. This is because you have not yet spread your Target Price (the total of your cost and profit) over your pay items.

Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Meas	Unit Price == (cu	Total Price (current)
+ Mobiliation	1.00	1.00	Each	\$0.00	\$0.00
+ Clearing and Grubbing	10.00	15.00	Acre	\$0.00	\$0.00
+ Excavation	50,000.00	40,000.00	CY	\$0.00	\$0.00
+ 10 " PVC Pipe	1,000.00	1,000.00	LF	\$0.00	\$0.00

7.3.2 Proposal Recap

On the Pay Item & Proposal Register, there is a Proposal Recap table where you can compare your Current Price to your Target Price to see if there is any variance.

Proposal K	ecap - Training Jo	0			
	Current	Target	Forecast	Variance	1
Price:	\$6,455,450.00	\$6,506,904.35	\$6,462,850.00	\$51,454.35	ADD
Profit:	\$599,221.88	\$650,676.22	\$655,858.61	\$5,182.39	СЛ
Margin%:	9.28	10.00	10.15	\$10,653.01	СЛ

Ideally, you want to add pricing to your pay items until your Current Price equals your Target Price, so that your Variance equals zero. That way you know you are covering all your costs and getting the profit you want.

Notice the Variance column will indicate if you need to ADD or CUT pricing on your pay items to hit your Target Price.

7.3.3 Spread the Target Price

For lump sum contracts, spreading the Target Price may be as simple as spreading it to a single pay item that represents the entire project. However, most jobs will have at least a few pay items defined by the owner, and Unit Price contracts will have many pay items.

There are two main ways to distribute pricing onto your pay items:

- 1. Define pay item prices manually, by entering a unit or total price, or a margin percentage.
- 2. Use InEight Estimate's AutoPrice feature to distribute pricing automatically.

7.3.4 Define Pricing for Pay Items Manually

First, you will walk through the process of defining pricing manually. This method requires filling in each item's price based solely on your own judgment.

Step by Step — Define Pricing Manually

- 1. From the InEight Estimate landing page, select the **Price** tab.
- 2. Select Pay Item & Proposal from the Pay Items section.
 - Review the Proposal Recap and determine where adds or cuts are needed. If your Current Price is \$0.00, you need to add the entire Target Price to your pay items

	Current	Target	Forecast	Variance	
Price:	\$0.00	\$248,161.82	\$0.00	\$248,161.82	ADD
Profit:	(\$222,912.65)	\$25,249.17	(\$219,532.90)	\$244,782.07	ADD
Margin%:	0.00	10.17	0.00	\$244,399.25	ADD

- 3. Select a pay item.
 - Notice at the top-right of your register you have an Item Recap to tell you what the direct cost, overhead and profit would be for the Civil Work pay item if it was balanced

	em Recap - 1000 Mobiliz		
		Balanced Unit	Current Unit
	Price:	\$31,225.08	\$0.00
Δ	Profit:	\$3,216.65	(\$28,008.43)
	Total Cost:	\$28,008.43	\$28,008.43
Å	Business Overhead:	\$1,929.76	
Å	Job Overhead:	\$6,078.66	
A	Unassigned Direct Cost:	\$0.00	
4	Assigned Direct Cost:	\$20,000.00	1

4. First, define pricing manually. In the **Total Price (current) field** for your selected pay item, enter a **dollar amount**.

Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Meas	Unit Price (current)	Total Price (current)
Mobilization	1.00	1.00	Lump Sum	\$20,000.00	\$20,000.00

5. Use Go to Column (<Ctrl> - G) to find the **% Margin** column, bring it in next to the Total Price (current) column, and adjust your % Margin amount as needed.

	Pay Item Number	Description	Pay Qua	Forecast (T/O) Quantity	Unit of Meas	Curre	Unit Price (current)	Total Price (current)	% Margin
•	+ 1000	Mobilization	1.00	1.00	Lump Sum	U.S. Dollar	\$20,000.00	\$20,000.00	-40.04
	+ 2000	Clearing & Grubbing		15.00		U.S. Dollar	\$4,705.04	\$47,050.40	5.00
•	+ 3000	Excavation	50,000.00	40,000.00	CY	U.S. Dollar	\$0.00	\$0.00	0.00
Ŀ	+ 4000	10" PVC Pipe	1,000.00	1,000.00	LF	U.S. Dollar	\$0.00	\$0.00	0.00

7.3.5 Use AutoPrice to Balance and Hit the Target Total

Perhaps you want to get a head start and have InEight Estimate spread your Target Price proportionately over your pay items for you. This can be done using the InEight Estimate AutoPrice

feature.

TIP

Once distributed, you will still have the ability to adjust your pricing on pay items manually as needed.

Look at how you can use the AutoPrice feature.

Step by Step — Use AutoPrice to Balance and Hit the Target Total

- 1. Open the your job in InEight Estimate.
- 2. From the InEight Estimate landing page, select the **Price** tab.
- 3. Click on **Pay Item & Proposal** to open the Pay Item & Proposal Register.
- 4. On the Pay Item & Proposal Register menu, choose Actions > Balanced Bid > Hit Target Total.
- 5. Review the Proposal Recap and see that the Variance is now \$0.00. Now that the job is balanced, you can see that the Current Price and the Target Price are the same, indicating that the costs and profit are spread proportionately over your pay items.

7.3.6 Use AutoPrice to Unbalance and Hit the Target Total

The Autoprice to Unbalance feature in InEight Estimate can automatically distribute profit to account for your over- and underrun items.

InEight Estimate will take profit from your underrun and put it on your overrun by using the Actions > Unbalanced > Hit Target Total feature. The purpose is to maximize your profit by spreading it strategically between these items.

Step by Step — Unbalance Hit Target Total

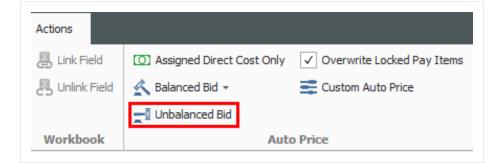
1. You may encounter overrun and/or underrun items in the Pay Item & Proposal Register of your job.

Description 📻 🝸	Pay Quantity	Forecast (T/O) Quantity	Unit of Meas	Curre
Excavation	10.00	15.00	Cubic Yard	U.S. Dollar
Clearing & Grubbing	50,000.00	40,000.00	Acre	U.S. Dollar

2. If you do, highlight the row for each item to view it's current balanced item recap.

10	em Recap - 2000 Clearin	ig && Grubbing		10	Item Recap - 3000 Excavation						
		Balanced Unit	Current Unit			Balanced Unit	Current Unit				
	Price:	\$4,985.70	\$4,994.91		Price:	\$2.86	\$2.86				
A	Profit:	\$515.91	\$525.12		Profit:	\$0.29	\$0.29				
	Total Cost:	\$4,469.79	\$4,469.79		Total Cost:	\$2.57	\$2.57				
Å	Business Overhead:	\$245.35		1	Business Overhead:	\$0.15					
٨	Job Overhead:	\$1,681.60		1	Job Overhead:	\$0.91					
Å	Unassigned Direct Cost:	\$0.00			Unassigned Direct Cost:	\$0.00					
4	Assigned Direct Cost:	\$2,542.84	-	A	Assigned Direct Cost:	\$1.52					

3. On the Pay Item & Proposal Register menu, choose **Actions > Unbalanced Bid**.



• You will see the changes reflected and how the profit was spread to your overrun and underrun items

Unit I (curr		Total Price (current)	% Margin
	\$3,000.00	\$150,000,000.00	-9.26
	\$4,871.84	\$48,718.40	97.68
	\$91,100.00	\$91,100.00	10.05

• In the example shown, highlighting each item will show that all your overhead and profit from Excavation was put onto Clearing & Grubbing.

10	em Recap - 2000 Clearin	ig aa Grubbilig			em Recap - 3000 Excava		
		Balanced Unit	Current Unit			Balanced Unit	Current Unit
Δ	Price:	\$4,985.70	\$11,706.11		Price:	\$2.86	\$1.52
٨	Profit:	\$515.91	\$7,236.32		Profit:	\$0.29	(\$1.05)
	Total Cost:	\$4,469.79	\$4,469.79		Total Cost:	\$2.57	\$2.57
A	Business Overhead:	\$245.35		<u></u>	Business Overhead:	\$0.15	
Å	Job Overhead:	\$1,681.60		<u></u>	Job Overhead:	\$0.91	
A	Unassigned Direct Cost:	\$0.00		<u> </u>	Unassigned Direct Cost:	\$0.00	
A,	Assigned Direct Cost:	\$2,542,84			Assigned Direct Cost:	\$1.52	1

7.4 SELECTIVE PAY ITEM MARKUP

Estimate has a streamlined process to estimate the cost of a project and price the work to ensure all unassigned costs and markup are included in the final price of the project. For markup to be spread to pay items, a weighted distribution method is used as determined in the Job Properties, Pricing tab. It might be desirable for markup percentages to not be distributed, but rather directly applied to the costs assigned to any particular pay item.

This option can be set to keep markup with assigned costs for establishing a pay item price.

ob Proper	ties O					
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Pricing
Calculate Cost Billing Distribut Indivi Top le	Amount g Amount	'ay Item Prices u ed Cost/Billing A rries ies	-			
Markup Op Markup O Using	ptions Pay Item by Weighted D	:	sts			
	ect Cost	Overhead as:				
Unit	Markup (curr	ecap Forecast M ent) x Forecast (otal Cost/Billing	T/O) Quantity			

Additionally, this option can be used to isolate the markup and apply it only to specific pay items. The following is an example of a dependent cost item being used to mark up the labor of select site work pay items by 25%.

8	Print	🔁 New 🛛	Сору	Carl Toggle Suspended	🐰 Link Field	- 🗐 in	sert	C Assigned C	ost Only 📃 0	verwrite Locked I	Pay Items	🏒 🖷 Def	ault Data Blocks	1117*	🛗 Bid Wizard		
Q	Preview	🛞 Delete 🛛	Paste	Lock Quantities	🕂 Unlink Field	1 in	sert Subordinate	🔨 Balanced Bi	d - 🚍 o	ustom Auto Price			pare Alternate Scenario		🌙 Reset Round	ing Precision	
ಶ	Export to Excel	}< Cut	+ Fill Down	✓ Lock Prices				Unbalanced	Bid			xpand / ollapse *		Configure Pri Categories	te 🚯 Import DOT F	ay Item File	
	Print		Edit		Workbook		Insert		Auto Pr	ice		1	Tiew		Tools		
Pay	Item & Propo	sal Register	0														
Drar	columns here to	aroup															
	Pay Item	Lock	Lock	Description	Pay		Forecast (T/O)	Unit of	Currency	LABOR	LABOR Cost	LABOR		LABOR Price	LABOR	Unit Price	Total Price
	Number	Quantity	Price	Description	Quant	ity	Quantity	Measure	currency	Cost	Distribution	Markup	Markup %	(balanced)	Price (current)	(current)	(current)
÷	+ 1			EARTHWORK AND UTIL	ITIES	1.00	1.00	Lump Sum	U.S. Dollar	\$62,401.68	\$0	.00 \$15,600.42	25.00	\$78,002.09	\$72,664.97	\$170,700.00	\$170,700.0
	+ 2			AC PAVING		1.00	1.00	Lump Sum	U.S. Dollar	\$29,711.17	\$0	.00 \$7,427.79	25.00	\$37,138.96	\$34,430.26	\$97,253.00	\$97,253.0
	+ 3			PAVMENT MARKINGS		1.00	1.00	Lump Sum	U.S. Dollar	\$14,545.57	\$0	.00 \$3,636.39	25.00	\$18,181.96	\$16,940.94	\$44,200.00	\$44,200.0
	+ 4			SITE CONCRETE		1.00	1.00	Lump Sum	U.S. Dollar	\$0.00	\$0	.00 \$0.00	0.00	\$0.00	\$0.00	\$216,300.00	\$216,300.0
	+ 5			FENCING		1.00	1.00	Lump Sum	U.S. Dollar	\$7,163.88	\$0	.00 \$1,790.97	25.00	\$8,954.84	\$8,099.23	\$42,300.00	\$42,300.0
	+ 6			LANDSCAPING		1.00	1.00	Lump Sum	U.S. Dollar	\$0.00	\$0	.00 \$0.00	0.00	\$0.00	\$0.00	\$39,900.00	\$39,900.
	+ 7			PILES AND PIERS		1.00	1.00	Lump Sum	U.S. Dollar	\$0.00	\$0	.00 \$0.00	0.00	\$0.00	\$0.00	\$1,625,000.00	\$1,625,000.0
	+ 8			CONCRETE		1.00		Lump Sum	U.S. Dollar	\$0.00		.00 \$0.00	0.00	\$0.00	\$0.00	\$5.370,940.00	\$5,370,940.0

Exercise 7.1 — Manually Price Pay Items

To finalize your bid proposal, you will apply final pricing (costs and profit) to your pay items either manually or using the AutoPrice tool. In this exercise, you will practice entering prices manually for your pay items. Complete the following steps, using your E101 – Training Job.

- 1. Continue manually pricing items in the Pay Item & Proposal Register.
- 2. Type **2.75** in the Unit Price (current) column for pay item Unclassified Excavation.
- 3. Type **2** in the % Margin field for pay item $4000 10^{"}$ PVC Pipe.
- 4. Check your variance to see if you need to add or cut your current pricing to hit your Target Price.

You should end up with the following results

Pay Item Number	Row Nu ≞_	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Meas	Unit Price (current)	Total Price (current)	% Margin
+ 1000	1	Mobilization	1.00	1.00	Lump Sum	\$20,000.00	\$20,000.00	-40.04
+ 2000	2	Clearing & Grubbing	10.00	15.00	Acre	\$4,705.04	\$47,050.40	5.00
+ 3000	3	Excavation	50,000.00	40,000.00	CY	\$2.75	\$137,500.00	6.44
+ 4000	4	10" PVC Pipe	1,000.00	1,000.00	LF	\$22.00	\$22,000.00	1.99

According to the Proposal Recap, you need to add \$21,611.42 to reach your Target Price.

Proposal R	ecap - E101 - Tra	aining Job PB2			
	Current	Target	Forecast	Variance]
Price:	\$226,550.40	\$248,161.82	\$222,575.60	\$21,611.42	ADD
Profit:	\$3,637.75	\$25,249.17	\$3,042.70	\$22,206.47	ADD
Margin%:	1.61	10.17	1.37	\$21,823.65	ADD

Congratulations, you have completed this exercise!

7.5 BID ADJUSTMENTS

Often you will want to continue adjusting certain pay items and then rebalance to hit the target total.

7.5.1 Lock Price

You can lock down a pay item price and it will not factor in future rebalancing.

Step by Step — Lock Price

1. Select the Lock Price checkbox on an item's row.

Pay Item Number	Description 📻 Y	Lock Price	Pay Quantity	Forecast (T/O) Quantity
+ 202 0183	Unclassified Excavation		50,000.00	50,000.00
+ 641 0 100	Mobilization	\checkmark	1.00	1.00
+ 201 0102	Clearing & Grubbing		10.00	10.00

- 2. After making further adjustments in the next step by step, you will return to the Pay Item & Proposal to rebalance.
 - You can continue to adjust at previous levels aside from solely in the Pay Item & Proposal Register
 - For example, you could make a last-minute adjustment in the PBS or CBS. You can make adjustments anywhere, but for this example an adjustment will be made in the Direct Cost Add-On record at the CBS level

Step by Step — Make Last Minute Bid Adjustments

- 1. With your job open, select the **Estimate** tab.
- 2. Click on **Cost Breakdown Structure** to open the CBS.
- 3. Double click on the row header to open the **Direct Cost Add-On** dependent cost item record.

- 4. Under the Description tab on the left, click in the blank row under the **Description column**.
- 5. Type in a **description**.
- 6. Make the adjustment by typing a **numeric value** in the **Cost column** of the Materials Cost category under the Cost Breakdown section on the right.

	-SL	Breakdown				
Cos	st C	ategory	Subject Cost	Rate		Cost
-	То	tal	\$130,759.83	-0.76		(\$1,000.00)
	>	Labor	\$58,969.83	0.00		\$0.00
	>	Owned Equipment	\$68,251.92	0.00		\$0.00
	>	Rented Equipment	\$0.00	0.00		\$0.00
	>	Supplies	\$0.00	0.00		\$0.00
	>	Materials	\$3,276.00	-30		(\$1,000.00)
	>	Subcontract	\$0.00	0.00		\$0.00
	>	Fees	\$262.08	0.00		\$0.00
	>	Allowance	\$0.00	0.00		\$0.00
		Custom Category1	\$0.00	0.00	→	\$0.00
		Undefined	\$0.00	0.00	->	\$0.00

- To make a cut, enter a negative value, i.e. -1000
- 7. Press the **Tab** key, and your adjustment will be reflected on the left-hand side.

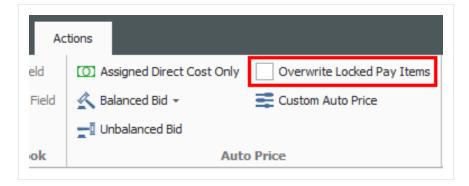
<u>D</u> es	scription	Dependenc <u>v</u>	Cost Categorization	Allocation		
Drag	g columns ł	nere to group				
	Description		=	Curre	Total Cost (Forecast)	Aci Co
	Small Too	ols		U.S. Dollar	\$5,896.98	
	Safety &	Training		U.S. Dollar	\$2,948.49	
\rightarrow	Cut			U.S. Dollar	(\$1,000.00)	
*						

- 8. Finally, return to the Pay Item & Proposal.
- 9. On the Actions menu, select Balanced Bid > Hit Target Total.
- 10. An Auto Price Warning may display, informing you of rounding variances. After reading the details, click the **Close** button.

-Variance due to rounding Estimate attempted to hi	r your Target Price by spreading the to	otal variance amount
across the unlocked pay	items in accordance with your selected is' rounding precision, a variance still (d pricing method.
	Initial rounding variance:	(\$84.43)
attempting to spr	till remaining as a variance after read the initial rounding variance onately into each unlocked item:	(\$0.03)
Turn off this warning	about rounding variances for ALL JOB	is.
	ariances due to rounding by specifying ed items, and by unlocking items with	

- Note on the proposal recap that a variance may still exists because there are limited number of pay items to spread the rounding error over
- Note that the locked item did not adjust, but the other pay items were updated
- Note that you can overwrite locked items for spreading your price by checking the

Overwrite Locked Pay Items option on the Actions menu



7.5.2 Suspend Pay Items

Like suspending cost items in the CBS Register, you can suspend pay items in the Pay Item & Proposal Register. Suspending a pay item causes it to no longer contribute quantities and pricing to the estimate.

This can be helpful when considering alternate items on a bid submission. Should the client decide to not require a pay item, you can suspend it, causing the pay item and any of its assigned cost items to no longer contribute any cost or price. It will no longer show up on your bid and no longer contribute to the overall total price.

You can suspend/unsuspend pay items in one of three ways:

• Right click on the pay item and select Toggle Suspended

	Ľ.	000 0000		υ	00	27 THULLEVE GLAVILY SEWEL (SURG	J)	3,000.00	3,000.00	LINCOL
\rightarrow	+	800 0400		9	90	4 Foot Diameter Manhole	<u>г</u> а	Open	16.00	Each
	+	501(A) 1306		10	100	Structural Excavation & Backfill	6	New	00.00	Cubic
	+	506(A) 1322		11	110	Steel Reinforcement		Delete	00.00	Pounc
	+	503(A) 1313		12	120	Retaining Wall			50.00	Cubic
	+	600 0300		13	130	Paint Existing Steel Bridge St		Cu <u>t</u>	1.00	Lumj
	+	700		14	140	Process Equipment		Cop <u>v</u>	1.00	Each
	+	1000		15	150	Removal of Underground Storage	T, E	<u>P</u> aste	2.02	Each
	+	1010		16	160	Disposal of Contaminated Soi	+	<u>Fill Down</u>	00.00	Cubic
	+	1200 0100		17	170	Toll Booth	8	Link this field to Excel	1.00	Each
	+	1500 0 100		18	180	Guardrail Type 2	<pre>M</pre>	UnLink from Excel	00.00	Linear
	+	1500 0200		19	190	Guardrail Type 3A	2	Toggle Suspended	:00.00	Linear
	+	1600 0230		20	200	Type 4 Signs		1,000.00	1,000.00	Squa
	+	CO 1		21	21	Realignment of Water Line		1.00	1.00	Fach

• Select the pay item and click Toggle Suspended under the Edit section of the Actions Tab

File Setu	ip Es	timate	Qı	uote	Price Exe	cution	Syster	m	Actions					
🗐 Print		Open	*	Cut	+ Fill Down		Lock Pr	rices	🗸 Link Field	O Assign	ed Direct Cost (Only Overwrite	e Locker	
o Preview		New	Ę	Сору	🚡 Toggle Suspe	ended	1		🖲 Unlink Field	\land Balanc	🖄 Balanced Bid 👻 📑 Custom Ar			
Export to	Excel	Delete	B	Paste	– Lock Quantiti	es			0.0		anced Bid	_		
Print					Edit				Workbook		Auto Price			
Pay Item &	Proposal	Register	0											
Proposal R	ecap - Tra	aining Job												
		Current		Target	Foreca	ast	Variance]						
Price:	\$6,455,	450.00	\$6,	514,915.53	\$6,462,850.	.00 :	\$59,465.53	ADD)					
Profit:	\$592	2,026.02	\$	651,491.55	\$658,609.	.04	\$7,117.49	СЛ						
								-						
Margin%:		9.17		10.00	10.	.19 :	\$13,693.38	СОТ						
_	-			10.00 L P	Row =	Line Nu	Des	CUT			Pay Qua	Forecast (T/O) Quantity	Unit of Meas	
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Pay Iten Number))100	up		L	Row =	Line Nu	Des Mob	cription	1		Qua	(T/O) Quantity	Meas	
Pay Iten Number + 641 (0100 0102	up		L	Row =1	Line Nu 10	Des Mob	criptior vilization aring &	n		Qua 1.00	(T/O) Quantity 1.00	Meas	
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rag columns Pay Iten Number + 641 (+ 201 (+ 202 (+ 303 s + 303 s	0100 0102 0183 5912 4263	up		L	Row = 1 Nu = 1 2 3	Line Nu 10 20 30	Mob Clea Und Agg	criptior vilization aring & lassifie regate	n Grubbing d Excavation	re A	Qua 1.00 10.00 50,000.00	(T/O) Quantity 1.00 10.00 50,000.00	Meas Lump Acre Ton	
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Number + 641 (+ 2010 + 2020 + 303 + 303 + 413 + 800 (+ 800 (0100 0102 0183 5912 4263 (B) 0464 0220	up		L	Row = 1 Nu = 1 2 3 4 5 6	Line Nu 10 20 30 40 50 60 70	Des Mob Clea Unc Agg 36: 10 I 10 I 24 I	criptior vilization aring & lassifie regate halt Co Inch F Vinch PV	n Grubbing d Excavation Base Increte Hot Mix Typ SCP Culvert Class	5 III 21) IDR35)	Qua 1.00 10.00 50,000.00 40,000.00 38,000.00 1,000.00	(T/O) Quantity 1.00 10.00 50,000.00 45,000.00 35,000.00 1,024.00	Meas Lump Acre Ton Ton Line Linea	

• Open the pay item record and checking/unchecking the Suspend box

2011 20	Line Number:						* 800 0400	Pay Item Number: 🏾
ate: BASE	Alternate:					Manhole	4 Foot Diameter	Description:
end:	Suspend:							
K								Quantity
		Qty Variance Group:	Qty Variance %:	Qty Variance:	Unit of Measure:	Forecast (T/O) Qty:	Pay Quantity:	Lock Quantity: F
		Even Run	0.00	0.00	Each -	0 16.00	16.0	

Lesson 7 Review

- 1. Markup is a function of cost, while margin is a function of ______.
 - a. billing
 - b. price
 - C. job overhead
 - d. indirect costs
- 2. When adding profit, it must be the same amount for direct and indirect costs.
 - a. True
 - b. False
- 3. What options do you have to enter profit on the PBS?
 - a. % Mark-Up, % Margin, and Fixed Dollar Amount
 - b. % Mark-Up or % Margin
 - C. Fixed Dollar Amount Only
- 4. Once distributed, you still can adjust your pricing on pay items manually as needed.
 - a. True
 - b. False

Lesson 7 Summary

As a result of this lesson, you can:

- Add job markup (profit)
- Use tools on the PBS form to review your estimate
- Spread Target Price over pay items
- Make bid adjustments