

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.
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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

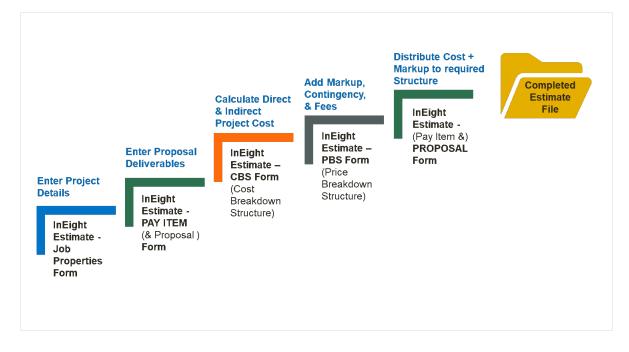
Lesson Topics

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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ost Breakdown Si	tructure (CBS) Reg	jister	Job Properties	O		Assemblies	Reports					
Overview Securit	ty Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Trackir	Job Folder Tags	Competitors	Pricing	Schedule	Cash Flow	Equipment	- •
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County: 1	Maricopa		Owner: Exa	ample Owner	Jerry Slate			E Fore	cast Start:	6/11/2019	*	
Country:	United States -	·	Architect: Exa	ample Architect	Robert Fro	ost		E Forec	ast Finish:	11/20/2019	•	
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Proposal												
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Bid Time:	10:00:00 PM					Proposal Type:	Unit Price					
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Bid Location:	Engineer's Office					Liquidated Damages:					1	\$1,000.00
Owners Estimate:				\$6,	000,000.00	Liq. Damages Per:	Day				•	
					RFQ Contact	Example Prime Cont	ractor 1 Tom Cro	ss				1
										ОК	С	ancel

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.

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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	-							Training Job - I	estamate								
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																	-
rag	columns here to g	group							Find:	[Search For]	1	Saved	views:	Previou	is View	-	·
	CBS Position Code	<u> </u>	Description			Opt Cod	ional le		Forecast (T/O) Quant	ty	Unit of Measure		Unit Cos	t	Total Cost (Forecast)	Allocate	:d
÷			JOB							20.00	Mile		\$293,0	95.93	\$5,861,918.63		1
	+		Prime Bond			PRI		D		1.00	Lump Sum		\$47,0	69.88	\$47,069.88		1
	+		Price % Add-O	n		PRI	CE % A	DD-ON		1.00	Lump Sum		\$294,9	28.95	\$294,928.95		1
	+		Job Financing			FIN	ANCE E	XPENSE		1.00	Lump Sum			\$0.00	\$0.00]
	+		Indirect Cost E	scalation		IND	IRECT	COST ESCAL		1.00	Lump Sum			\$0.00	\$0.00]
	+		Direct Cost Esc	alation		DIR	ECT CC	ST ESCALAT		1.00	Lump Sum		\$18,8	37.35	\$18,837.35		
	+		Indirect Cost A	dd-On		IND	IRECT	COST ADD-ON		1.00	Lump Sum			\$0.00	\$0.00		
	+		Job Manageme	ent & Equipme	ent	JOE	MANA	GEMENT & E		1.00	Lump Sum		\$157,0	96.28	\$157,096.28		
	+		General Expense	se		GEN	IERAL E	XPENSE		1.00	Lump Sum		\$4,2	00.00	\$4,200.00		
	+		Direct Cost Add	l-On		DIR	ECT CC	ST ADD-ON		1.00	Lump Sum		\$104,3	01.10	\$104,301.10		
	+ 1		Mobilization			641	0100			1.00	Lump Sum		\$11,9	09.51	\$11,909.51		
	+ 2		Clearing & Grub	bbing		201	0102			10.00	Acre		\$3,9	18.50	\$39,184.97		
	□ 3		Unclassified Ex	cavation		202	0183			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		
	□ 4		Aggregate Bas	e		303	5912			45,000.00	Ton		\$	15.40	\$692,928.99		
	+ 4.1		Furnish & Haul I	Base Material		4.1				45,000.00	Ton		\$	11.54	\$519,513.30		
	+ 4.2		Finegrade Subg			4.2				400,000.00	Square Yard			\$0.19	\$75,848.36		
	E 42		Testall Accross	to Pace		1 2				45 000 00	Top			ên 17	AUD 222 00		1

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.

Description	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 Mark	up	\$0.00	\$0.00	0.00
🛕 Direct Cost Markup	0	\$0.00	\$0.00	0.00
🗸 📥 Business Overhead	\$0.00	\$315,692.95	\$315,692.95	5.3
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 Escal	la \$0.00	\$2,131.11	\$2,131.11	0.04
Direct Cost Escalat	tion \$0.00	\$15,048.80	\$15,048.80	0.26
Business Overhead	d \$0.00	\$0.00	\$0.00	0.00
🗸 🛕 Total Cost	\$5,252,19	\$330,063.05	\$5,582,257.73	94.6
🗸 📥 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 Ad	d \$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.

Propo	osal Recap - Ti	aining Jo	Ь			×	1	tem Recap -	641 0100 Mo	bilization			×
		Current	Target	Forecas	t Variance					Balanced Unit	Current Unit		
P	Price: \$6,455	,450.00	\$6,553,976.75	\$6,462,850.0	\$98,526.75	ADD			Price:	\$18,300.00	\$386,800.00		
Pr	rofit: \$54	4,294.64	\$642,821.40	\$604,568.9	7 \$38,252.43	ADD			Profit:	\$2,049.63	\$370,501.39		
Margi	in%:	8.43	9.81	9.3	5 \$32,502.50	ADD			Total Cost:	\$16,298.61	\$16,298.61		
								Busines	s Overhead:	\$840.31			
								Jol	b Overhead:	\$3,546.52			
								Unassigned	Direct Cost:	\$2.26			
ag col	olumns here to gr	oup						-	Direct Cost:	\$11,909.51 Sav	ed views: Standa	ard View	•
-					Pav	Eorecast (T/O)		Find:	[Search For]	Sav			
Pa	olumns here to gr ay Item umber	oup Descrip	ion		Pay Quantity	Forecast (T/O) Quantity		-			ed views: Standa Total Price (current)	ard View Unit Price (balanced)	▼ Total Price (balanced)
Pa	ay Item							Find:	[Search For]	Sav	Total Price (current)	Unit Price	Total Price (balanced)
Pa Nu +	ay Item umber	Descript Mobiliza			Quantity	Quantity))	Find:	[Search For] Currency	Unit Price (current)	Total Price (current) \$386,800.00	Unit Price (balanced)	Total Price (balanced) \$18,30
Pa Nu + +	ay Item umber 641 0100	Descript Mobiliza	tion		Quantity 1.00	Quantity)) 1.00 10.00	Find: Unit of Measure Lump Sum	[Search For] Currency U.S. Dollar	Sav Unit Price (current) \$386,800.00	Total Price (current) \$386,800.00 \$61,200.00	Unit Price (balanced) \$18,300.00	Total Price (balanced) \$18,30 \$58,67
Pa Nu + +	ay Item umber 641 0100 201 0102	Descript Mobiliza Clearing Unclass	tion & Grubbing		Quantity 1.00 10.00 50,000.00 40,00	Quantity 50,00) 1.00 10.00 000.00	Find: Unit of Measure Lump Sum Acre Cubic Yard	Search For) Currency U.S. Dollar U.S. Dollar U.S. Dollar		Total Price (current) \$386,800.00 \$61,200.00 \$425,000.00	Unit Price (balanced) \$18,300.00 \$5,867.33 \$6.31	Total Price (balanced) \$18,30 \$58,67 \$315,50
Pa Nu + + +	ay Item umber 641 0100 201 0102 202 0183	Descript Mobiliza Clearing Unclass Aggrega	tion & Grubbing fied Excavation	Type A	Quantity 1.00 10.00 50,000.00 40,00	Quantity 50,00 Pricing is) 1.00 10.00 000.00 S NO	Find: Unit of Measure Lump Sum Acre Cubic Yard	Search For) Currency U.S. Dollar U.S. Dollar U.S. Dollar	Unit Price (current) \$386,800.00 \$6,120.00 \$8.50	Total Price (current) \$386,800.00 \$61,200.00 \$425,000.00 \$880,000.00	Unit Price (balanced) \$18,300.00 \$5,867.33 \$6.31	Total Price
Pa Nu + + +	ay Item umber 641 0100 201 0102 202 0183 303 5912	Descript Mobiliza Clearing Unclass Aggrega Asphalt	tion & Grubbing fied Excavation ate Base		Quantity 1.00 10.00 50,000.00 40,00	Quantity 50,00 Pricing is) 1.00 10.00 000.00 S NO	Find: Unit of Measure Lump Sum Acre Cubic Yard	Search For) Currency U.S. Dollar U.S. Dollar U.S. Dollar	Unit Price (current) \$386,800.00 \$6,120.00 \$8.50 \$22.00	Total Price (current) \$386,800.00 \$61,200.00 \$425,000.00 \$880,000.00 \$1,330,000.00	Unit Price (balanced) \$18,300.00 \$5,867.33 \$6.31 \$19.47 \$52.28	Total Price (balanced) \$18,30 \$58,67 \$315,50 \$778,80 \$1,986,64
Pa Nu + + + +	ay Item umber 641 0100 201 0102 202 0183 303 5912 303 4263	Descript Mobiliza Clearing Unclass Aggrega Asphalt 36 Inc	tion & Grubbing fied Excavation ate Base Concrete Hot Mix	ass III	Quantity 1.00 10.00 50,000.00 40,00 38,000	Quantity 50,00 Pricing is)) 10.00 000.00 s no bid it	Find: Unit of Measure Lump Sum Acre Cubic Yard	Search For) Currency U.S. Dollar U.S. Dollar U.S. Dollar		Total Price (current) \$386,800.00 \$61,200.00 \$425,000.00 \$1,330,000.00 \$1,330,000.00 \$100,000.00	Unit Price (balanced) \$18,300.00 \$5,867.33 \$6.31 \$19.47 \$52.28 \$87.19	Total Price (balanced) \$18,30 \$58,67 \$315,50 \$778,80
Pa Nu + + + + + + +	ay Item umber 641 0100 201 0102 202 0183 303 5912 303 4263 413(B) 0464	Descript Mobiliza Clearing Unclass Aggrega Asphalt 36 Inc 10 Inch	tion & Grubbing fied Excavation ate Base Concrete Hot Mix h RCP Culvert Cla	ass III DR21)	Quantity 1.00 10.00 50,000.00 40,00 38,00 1,000	Quantity 50,00 Pricing is b 12,00)) 10.00)00.00 s no bid it	Find: Unit of Measure Lump Sum Acre Cubic Yard W Spreatems	[Search For] Currency U.S. Dollar U.S. Dollar U.S. Dollar	Sav. Unit Price (current) \$386,800.00 \$6,120.00 \$8.50 \$22.00 \$35.00 \$35.00 \$100.00	Total Price (current) \$386,800.00 \$61,200.00 \$425,000.00 \$1,330,000.00 \$1,330,000.00 \$336,000.00	Unit Price (balanced) \$18,300.00 \$5,867.33 \$6.31 \$19.47 \$52.28 \$87.19	Total Price (balanced) \$18,30 \$58,67 \$315,50 \$778,80 \$1,986,64 \$87,19

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
Work Hou Pay Hou Shit	shift Ari sge urs per Shift ırs per Shift: fts per Day:	8.00 8.00 1.00	Standard Wa Scale 1: Scale 2: Scale 3:	0.00 %		es Lock Cost Items Pay Item Unit Pr Activate PBS Cha Activate Quantit Maintain CBS Str	ice Precision: anges Log y Checking	2		Preserv Data So	Tabs e Original Cos ource	t Item
Currency	s per Week: Entry Currency:	5.00 Fields	Shift	Checkbox		When man-coun ndard Rates Sales Tax Rate:	t changes: 🔘	Change UM / M Change Days	an-Hour	R	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.

rag	g columns here to group			Find: [Search F	or]	··· Save	d views: Standa	ard View	•	
	CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity		Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated	
I	+ 1	Mobilization	641 0100		1.00	Lump Sum	\$11,909.51	\$11,909.51		
	+ 2	Clearing & Grubbing	201 0102	1	0.00	Acre	\$3,918.50	\$39,184.97		
	□ 3	Unclassified Excavation	202 0 183	50,000.00		Cubic Yard	\$4.54	\$226,856.16		
	+ 3.1	Excavation	3.1	50,00	0.00	Cubic Yard	\$2.86	\$142,863.22		
	+ 3.2	Embankment	3.2	50.00	0.00	Cubic Yard	\$1.68	\$83,992.94		
	⊒ 4	Aggregate Base	303 View	multiple		Ton	\$15.40	\$692,928.99		
	+ 4.1	Furnish & Haul Base Material	7.1		.00	Ton	\$11.54	\$519,513.30		
	+ 4.2	Finegrade Subgrade	4.2 Items	at once	.00	Square Yard	\$0.19	\$75,848.36		
	■ 4.3	Install Aggregate Base	4.3	10/00	0.00	Ton	\$2.17	\$97,567.33		
	+ 4.3.1	Place Aggregate Base	4.3.1	45,00	0.00	Ton	\$1.63	\$73,460.92		
	+ 4.3.2	Blue Top Aggregate Base	4.3.2	400,00	0.00	Square Yard	\$0.06	\$24,106.42		
	■ 5	Asphalt Concrete Hot Mix Type A	303 4263	35,00	0.00	Ton	\$42.62	\$1,491,580.59		
	+ 5.1	Furnish & Haul Hot Mix	5.1	35,00	0.00	Ton	\$39.27	\$1,374,562.54		
	+ 5.2	Install Hot Mix Type A	5.2	35,00	0.00	Ton	\$3.34	\$117,018.05		
	■ 6	36 Inch RCP Culvert Class III	413(B) 0464	<u>1,02</u>	4.00	Linear Feet	\$67.54	\$69,159.49		
	+ 6.1	Furnish RCP Materials	6.1	1,02	4.00	Linear Feet	\$33.48	\$34,286.70		
	+ 6.2	Excavate RCP Trench	6.2	1,85	8.56	Cubic Yard	\$4.51	\$8,379.59		
	+ 6.3	Install RCP Pipe	6.3	1.02	4.00	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

CRS	Code:	Oni	tional Code:	Desc	ription:					Forecast (T/O) Obv	Unit of Me	acura
000	coue.		coue.		inpuon.					Torecast (1/0) Quy.		asure
r 1	4	303	3 5912	Agg	regateBa	ise				45	,000.00	Ton	
	4.1	4.1		Furn	Furnish & Haul Base Material 45,000.00 Ton							Ton	
PI A	ssignment:	PIL	ine Number	PI De	escriptio	n:						Cost Segn	nent:
303	3 5912 -		Agg	AggregateBase Record for					uses		Direct Cos	st	
Co	st Item Summar	у	<mark>⊉</mark> <u>D</u> etail :	\$11.54	₽ Pl	u <u>g</u> :\$0.00		on 1 i	ter	n			
Drag	g columns here	to gr	oup	Find:	[Search	For]		Saved views	: F	Previous View		-	
	Row Number 🗎		Code	Resource Assemb		Descriptio	n			uantity ess Waste)		aste % d-on	Qua
	+	1	LT1			Teamster							
÷	+	2	ETDT			Dump Tru	ıck						
	+	3	MBR			Aggregat	e Base R	.ock		45,500.0	00	5.00	•
*													

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 0 100	1.0	0 Lump Sum	\$11,909.51
+ 2	Clearing & Grubbing	201 0 102	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	0 Ton	\$15.40
+ 4.1	Furnish & Haul Base Material	4.1	45,000.0	0 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	0 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 Code	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	\$59,000.0
	+ 1.3	202 0 183	Unclassified Excavation	50,000.00	50,000.00	Cubic Yard	U.S. Dollar	\$5.50	\$275,000.0
	+ 1.4	303 5912	Aggregate Base	40,000.00	45,000.00	Ton	U.S. Dollar	\$26.50	\$1,060,000.0
	+ 1.5	303 4263	Asphalt Concrete Hot Mix Type A	38,000.00	35,000.00	Ton	U.S. Dollar	\$42.45	\$1,613,100.0
	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 Ø															
g col	lumns	here to g	group																
Co	ode	<u> </u>	Descrip	otion		Resou File D	rce escription		Quantity		Unit of Measur	e	Unit C	Cost	Total Cost	Currency		anizational gory	Geograph Area
-	cco	NC	Concre	ete Crew		Stand	ard Assemb	ly File		1.00	Hour			\$375.03	\$375.03	U.S. Dollar	Cond	crete	
		Row Numbe	r ≞	Resource Code	Description		Quantity	Unit of Measure	Unit Cost	Curre	ency	Cost Driver		Resource File Descr		Organizatio Category	inal	Geographic Area	Wage Zone
	\rightarrow		1	LC2	Carpenter Journe	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	Equipment Rate	. Truck			
			9	LC3	Carpenter Forem	an	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	hwork	
+	CMA	INT	Equipm	ent Mainten	ance	Stand	ard Assemb	ly File		1.00	Each			\$73.60	\$73.60	U.S. Dollar	Mech	hanic	
+	CPA	/E	Paving	Crew		Stand	ard Assemb	ly File		1.00	Hour			\$476.24	\$476.24	U.S. Dollar	Asph	nalt	

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.

ost Item Assembly	Register 🛛								
ag columns here to gr	oup								
Code 🗎		Assembly Default File Description Quantity		Default Default Unit of Measure 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

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

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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

Lesson Topics

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.

1 Language	2 User agreement		
Please choose	your preferred language		
O Dutch (Neder	ands)		
English			
🔿 Español (Amé	rica Latina)		
🔿 Français (Can	ada)		
🔿 Norsk (Bokma	I)		
O Português (Br	asil)		

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**.

TIP Make sure you have scrolled to the end of the user agreement

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

2.1.3 Estimate in the cloud - first time access

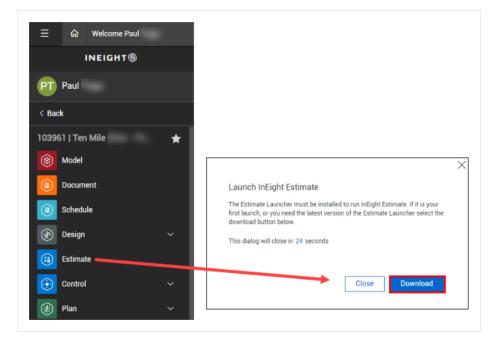
Platform's primary function lets you connect and share data between all Eight applications involved in managing a project. This allows project management workflows to pass between jobsite, field office, and front office seamlessly in a consistent and standardized user interface.

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.

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



• The EstimateLauncher.msi file shows.

Estimate	
Control	~
🛞 Plan	~
PROJECT SETTINGS	
Project home	
Project details	
Settings	
Workflows	
© 2022 InEight Inc. Privacy St	tatement
រ🗗 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.



ៅ InEight Estimate Launcher S	etup — 🗆 🗙
1	Completed the InEight Estimate Launcher Setup Wizard
	Click the Finish button to exit the Setup Wizard.
	Back Finish Cancel

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.

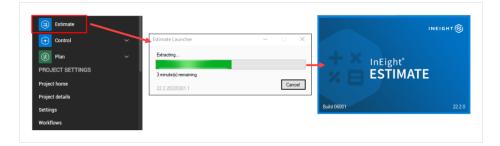
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Project details					
Settings				Build 06001	22.2.0
Workflows					

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 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

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

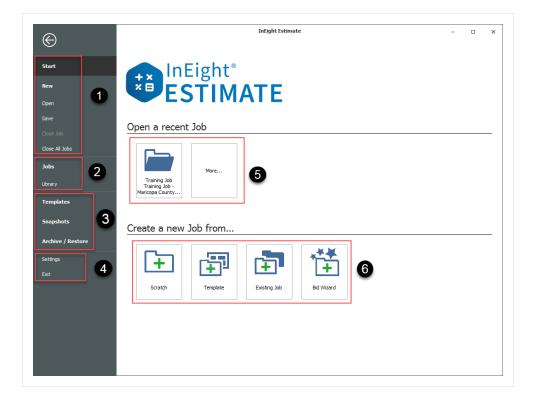
2.1.5 Backstage View

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

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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

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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

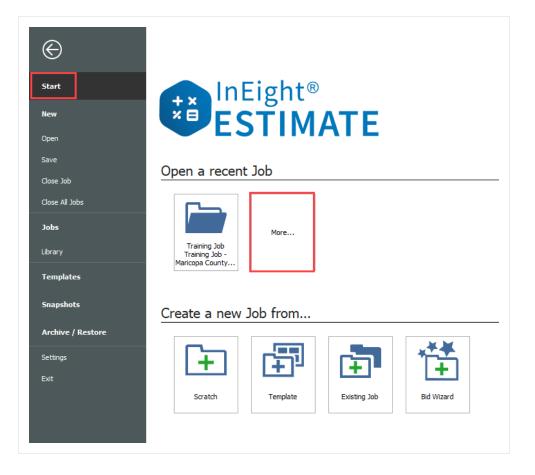
The **Decimal Precision** setting is also helpful. This is where you can specify the way your numbers display in the system. For example, you may want your costs to display to the hundredth decimal place (2), and your quantities to display as whole numbers with nothing to the right of the decimal (0).

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.

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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.

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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.

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2.1.9 Help Bubbles

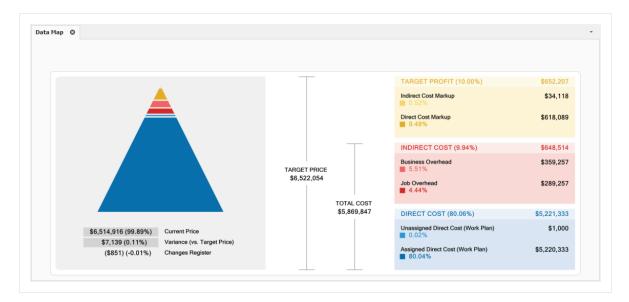
Help bubbles appear at various times in InEight Estimate, including the first time you open InEight Estimate. These messages contain important information to clarify key functions in the system.

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.

	R
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

3 💾 -								Training Job - Estima	te	
File Setup	Estimate Quote Pr	ice Execution Syst	em Actions	More Actions						
	Account Code Utilization	🚊 Resource Rates 🕞	Y	- 4		🛅 Job Finance		🚯 Direct Markup	Alternate Scenario:	
		E Resource Utilization				% Price % Add On		🚯 Indirect Markup	BASE	
Cost Breakdown Structure (CBS)	0	🐉 Resource Cost Details	Workbook 3	Schedule Cash Flow	Indirect Cost Items	💽 Prime Bond	Price Breakdown Structure (PBS)	🛓 Data Map 👩	🙏 Alternates	7 Reports
Break	kdown Structures	Resources 2	Workbook	Schedule	In	idirect Cost 🛛 🙂	Overhea	d 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

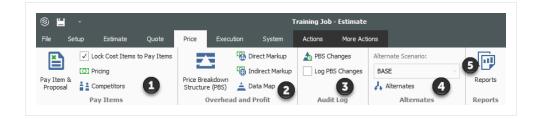
	Section	Description
		for labor, material and equipment resources. Different views of the Resource Rate register such as Resource Utilization and Resource Cost Details are available from the Resources section.
3	Excel Workbook	InEight Estimate's integration with Microsoft Excel is a two-way integration 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 Stimate	Quote	Execution System	ons Act
Quote Group Tags			
Minority Setup			· 🕞
Address Book 🕢 Attachments	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

	Section	Description
		after the project has been released for 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

9 💾	-						Training J	ob - Estimate
File	Setup	Estimate	Quote	Price	Execution	System	Actions	More Actions
=	• s	Gaved Views 👻	🜍 Colors -		🔆 External Re	ports +	0	🜐 About Estimate
_	🐼 т	ītles +	🔅 Output S	ettings +	🔆 External Re		\odot	🍪 What's New
Customiz	ze	•					Estimate Help	InEight.com
			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.

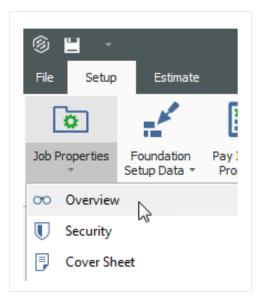
TIP The Library is covered in greater detail in 3.1 Library Overview on page 68

2.1.19 Open Forms

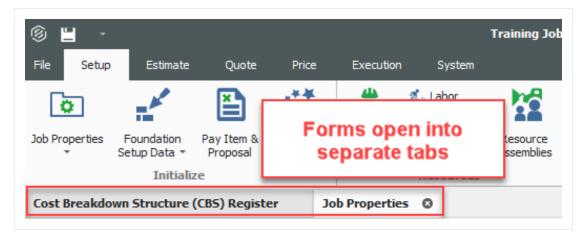
The following steps assume you already opened the Training Job.

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							đ	
e Setup	Estimate	Quote	Price	Execution		System	Actions	More Action	ns						盫	Ē
Print	C Open	⊁ Cut	+ Fill Dov	vn	+	8	Cost Item		🔁 Asser	mbly	2.	1			E	
Preview	🕀 New	🖥 Сору	🔀 Split		-	愚	🔚 Subordinate Co	ost Item	🔁 Subor	rdinate Assembly	12				2	
Export to Excel	😣 Delete	🖹 Paste	🎨 Toggle	Suspended			🕂 Dependent Co	st Item				Expand Collapse		Clear Filter		
Print			Edit					I	nsert				View			
ost Breakdown S	itructure (C	BS) Registe	r O													
ag columns here to	group							Find	[Search	For]	Save	d views:	Previous Vie	w		-
CBS Position Code	≞_ De	scription				Forecas (T/O) Q		Unit of Measure		Unit Cost	Total Co (Foreca		Currency	Pay It Assign		
	30	в					1.00	Lump Sun	n	\$5,861,800	\$5,861	,800.79	U.S. Dollar			

I - 🗒 I			Training Job - E	stimate		
File Setup Est	imate Quote i	Price Execution	System Actions	More Actions		
E Schedule Selection	∢► Swap -	"🎽 Bid Wizard	∑ Unit / Total Confirmatio	n 💽		
E Unschedule Selection	😑 Remove 👻	Subtotal Calculator	😳 Refresh Benchmarks			
Calculate Plug Days	C Update -	Quantity Checking	🗩 Add Quote	Import / Update CBS 🔻		
Schedule	Batch Operations		Tools	Data Source		
Cost Breakdown Struc	ture (CBS) Register	0				
)rag columns here to grou	ıp			Find: [Seard	n For] …	Saved
CBS Position Code	Description		Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Co (Forecas
	JOB		1.00	Lump Sum	\$5,861,800	\$5,861,8
+	Prime Bond		1.00	Lump Sum	\$47,069.28	\$47,
+	Price % Add-On		1.00	Lump Sum	\$294,923.52	\$294,
	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	– o ×
- Options	Decimal Precision	
General Decimal Precision	Cost Summary Precision	
Fax Mail		
Account Code Settings	Unit Cost Precision 2	
⊡Network bode body body body body body body body body	Quantity Precision 2	
SQL Security	Charl Development Provide and	
Security Roles Attachment Settings	Short Percent Precision 2	
Timesheet Warehouse Settings	Long Percent Precision 2	
Licenses	Currency Rate Precision 5	
Currency		

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.

Jnit Cost	Total Cost (Forecast)	Currency	Option Code
\$5,861,800	\$5,861,800.79	U.S. Dollar	
\$47,069.28	\$47,069.28	U.S. Dol	1
\$294,923.52	\$294,923.52	U.S. Follar	
\$0.00	\$0.00	U.S. Dollar	
\$0.00	\$0.00	U.S. Dollar	
Customize			×
Drag a column Custom Captio	from by low to p r gister.	place it into t	the
Optional Code	Optional Code		*
Owned Equipme Silling	nt Owned E Billing	quipment	
Owned Equipme Total	nt Owned E Total	quipment	
owned Equipme otal Cost	nt Owned E Total Cos	quipment st	
Owned Equipme Jnit Cost	nt Owned E Unit Cost	quipment t	
ay Hours tules	Pay Hour Rules	s	
Pay Item Assignment	Pay Item Assignme		
ay Item escription	Pay Item Description		
ay Item ine Number	Pay Item		

- 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.

③ Go To Co	lumn –		×
Column:	that are not curren	tly in the vi	•
M Include columns		Can	

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	K 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		×	H
And 🕤			
[WBS: CEAS (Civil Engineering Acco	unt Code System)] Begi	ins with <enter a="" value=""> 🛞</enter>	
Or 💿			
[WBS: CEAS (Civil Engineering)	Account Code System)]	🖪 🗈 Begins w 🔻 <enter a="" th="" val<=""><th>u</th></enter>	u
		\geqslant Is greater than or equal to	*
		< Is less than	
		Is less than or equal to	
		⇔ Is between	
		🕰 Is not between	
		R Contains	
		Be Does not contain	
		Bec Begins with	
•		RBC Ends with	
Load Save	ОК	n%c Is like	
Load Save	OK	R%C 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	Ŧ

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.

Filter Editor	×
CO And	ith <enter a="" value=""> 🐼 ith <enter a="" value=""> 🐼</enter></enter>
• Or	
Add Condition Add Group	
≠ Clear All	-
Load Save	OK Cancel Apply

- 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").

Cost Br	Cost Breakdown Structure (CBS) Register 🛛 🕲									
Drag colu	mns here to grou	D Unit of								
CBS		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.

st Breakdown Stru	cture (CBS) Register	0				
nit of leasure 🗎						
Unit of E	CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit Cost	Total Cost (Forecast)
🖾 Acre	1			10.00		\$39,184.97
Cubic Yard	19			117,865.76		\$498,571.36
🖾 Each	29			59.00		\$1,684,854.23
D LF	1			2,083.95		\$0.00
Linear Feet	11			30,248.00		\$459,303.91
🛛 Lump Sum	23			22.00		\$667,772.98
🛛 Mile	1			0.00		\$0.00
Month	2			2.00		\$10,000.00
Pound	3			60,000.00		\$44,408.30
Square Feet	9			136,300.00		\$276,594.95
Square Yard	2			800,000.00		\$99,954.78
Ton	8			160,000.00		\$2,034,391.05

- 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

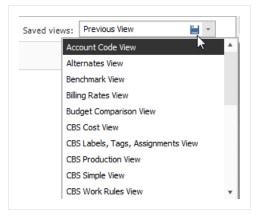
Once you have set up a view the way you like it, you can save the view so you won't have to configure it again later. InEight Estimate also comes with some pre-built views to help you organize the screen the way you want to see it.

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

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 name:
Save as Locked Corporate View
$\hfill \square$ Include this view in the Saved Views section of 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.

g	columns here to grou	ιp			× mate	rial	1/13 🖸 \land 🗸	Ŷ
	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	
8	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	Ξ
3	4	Aggregate Base	303 5912	45,000.00	Ton	\$15.40	\$692,928.99	_
ŀ	+ 4.1	Furnish & Haul Base Material	4.1	45,000.00	Ton	\$11.54	\$519,513.30	
1	+ 4.2	Finegrade Subgrade	4.2	400,000.00	Square Yard	\$0.19	\$75,848.36	
8	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
- 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



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:

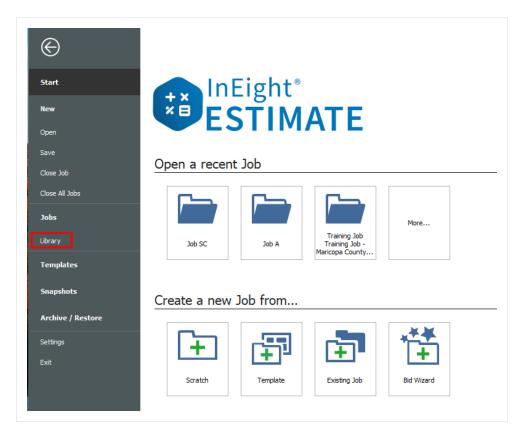
- Library Job Properties
- Library Foundation Setup Data Register
- Library Resource Rate Register
- Library Assembly Register

Lesson Topics

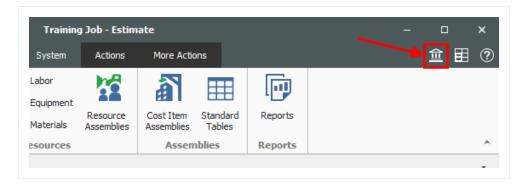
3.1 LIBRARY OVERVIEW

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
- System
- Integrations

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

8		Library - Estimate					
File	Setup	Estimate	Execution	System	Actions	More Actions	

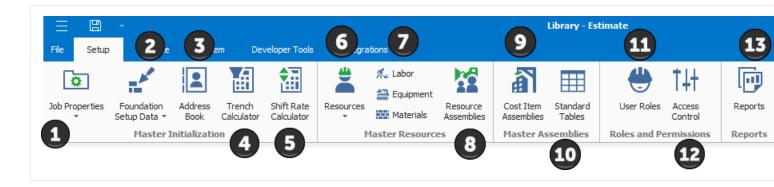
3.1.1.1 Setup Tab

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 Calculator	Stores and maintains common trench configurations that are used from project to project.

Overview - Setup Tab (continued)

	Name	Description
5	Shift Rate Calculator	Allows you to set up shift rate configurations that you can access at the project level.
6	Resources	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.



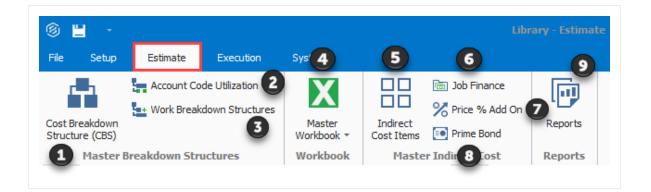
3.1.1.2 Estimate Tab

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.

Overview - Estimate Tab (continued)

	Name	Description
9	Reports	Opens the Reports window, where you can access all system reports and configure their report settings.



3.1.1.3 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.

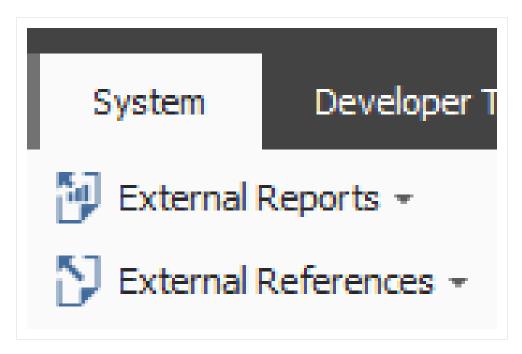
Overview - System Tab (continued)

	Name	Description
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.

System	older	0						
Estimate Integratio	ons	oport Tickets	-					
	Each prog	vs you to open pro gram. menu item that yo you select one of gram, folder, docu	nenu allows you to ograms, folders, do ou add here will be f these menu items, ment, report, or Int	istomize Menu Iter not only generate rep cuments, reports, or i added to the Externa the associated Wind ernet resource define k on the Help button.	orts created b Internet resour I Reports meni ows program v d by the comm	ces with the as u in Estimate. vill open the d	ssociated From there,	st t)
	→	Menu Order 🚊	Menu Text InEight Folder	Open www.ineight.com	_			5, 3,
		2		https://ineight.com/ https://ineight.com/				,0 2,9 3,9
								3, 3, 2, 3,
		Add Edit	Delete		OK	Cancel	Help),),

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.

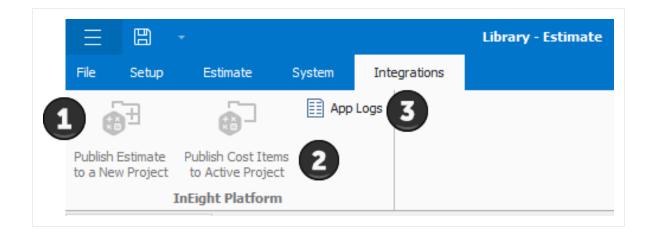
8	Customize Menu Items – 🗆 🗙
	ernal Reports menu allows you to not only generate reports created by Estimate, but it also you to open programs, folders, documents, reports, or Internet resources with the associated m.
	Menu Text:
For ad	Type the name of a program, folder, document, report, or Internet 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.
n	Browse OK Cancel
Ad	d Edit Delete OK Cancel Help

TIP	Customized Job Folder Tags match the view of the fields in the Job Properties form.
	Vic Statustic Quick Price Statustic Price Construct Price Display Display <thdisplay< th=""> <thdisplay< th=""> <thdisplay< th=""></thdisplay<></thdisplay<></thdisplay<>
	Code di goli data User Trig 3: Trig 3:<
	User Tag 12 User Tag 22 Tag 24 User Tag 12 User Tag 24 Tag 24 User Tag 12 User Tag 24 Tag 24 Restore All Customized Values OK Cancel

3.1.1.4 Integrations

Overview - Integrations Tab

	Name	Description
1	Publish Estimate to a New Project	Lets you publish an estimate job to a new project. This requires the installation of the data provider plug-in.
2	Publish Cost Items to Active Project	Lets you publish cost items to an active project. This requires the installation of the data provider plug-in.
3	App Logs	Lets you open the Estimate application logs in Project Suite, view log details, and export to Excel.



App Logs

The InEight Project Suite App Log lets you drill down to the Detail level which helps you find, analyze and solve application errors.

	Level	Time	Domain 📃	Area		Message		ExceptionMessage	ExceptionType	Route -	CorrelationId
<u>etails</u>	Error	2023/11/28 11:21:18 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		0b1c7752-578f-4e12-b02b-ccd8fa4d14
<u>tails</u>	Error	2023/11/28 11:10:53 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		94fdc0a9-36b9-4696-a07c-08bf45f262
tails	Error	2023/11/28 9:46:24 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		12cac03b-76ea-4808-9330-3d57b4b31
ails	Error	2023/11/28 9:45:44 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		205bcf4b-fa41-428b-b9cd-9270e460be
ails	Error	2023/11/28 8:26:02 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		2c9a0ea7-e898-4512-97b8-57a194732
ails	Error	2023/11/28 8:16:04 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		244b84e1-f82b-4c17-894d-dd5851b31
tails	Error	2023/11/28 8:06:00 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		30d6c546-2581-42fd-aa16-2341bbcf9e
tails	Error	2023/11/28 7:56:01 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		5d9f3e27-f3d8-417e-ab07-a4bf512f0e3
<u>tails</u>	Error	2023/11/28 7:49:44 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		432e359a-4e04-4040-b5df-f6470a650ff
tails 🚬	Error	2023/11/28 7:43:58 AM	HDDesign	Design		EntityChange -> Publish NoMessageTargetsException:		No ESB subscriptions exist that match top	ng.NoMessageTargetsException		cf6f4150-6eec-4f82-b2c7-14d2df91770
	Area: Correlat	Design ionId: 0b1c7752-578f-4	4e12-b02b-ccc	l8fa4d148	Bro Bro	wse Chain)				
		ionId: 0b1c7752-578f-4 2023-12-13 11:2	1:18 -0700	l8fa4d148	3d Bro	wse Chain)				
	Correlat Expires: Machine	ionId: 0b1c7752-578f-4 2023-12-13 11:2	1:18 -0700	l8fa4d148	3d Bro	vise Chain)				
	Correlat Expires: Machine Mes	ionId: 0b1c7752-578f-4 2023-12-13 11:2 pd1sdwk000INM	1:18 -0700		3d Bro	wse Chain)				
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	Correlat Expires: Machine Mes EntityCh InEig	ionid: 0b1c7752-578f-4 2023-12-13 11:2 pd1sdwk000INM ssage ange -> Publish NoMess pht.Platform.M	1:18 -0700 ageTargetsExc lessagin	eption:	Mes)				

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 - I	stimate								œ	-		×
File Setup	Estimate	e Syste	m Integra	tions																<u>î</u> 8	?
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Job Properties	Foundation Setup Data *	Address Book	Trench Shi Calculator Ca	ft Rate R culator	Resources *	Materials	Resource Assemblie	s Cost Item s Assemblies	Standard Tables	User Roles	Access Control	Report	s								
	Master	Initializatio	n		Ma	aster Resourc	ces	Master A	ssemblies	Roles and P	ermissions	Report	ts								^
Job Propertie	s ©																				•
Overview C	Cover Sheet	Cost Basis	Minority Setu	Fuel Co	Cost Job I	Folder Tags	Pricing S	chedule Cast	h Flow E	quipment Maintena	nce Bench	marking	Alternates								
Code:	Library										Status:	Bidding] -	Organizat	tion:					
Description	:																				
Notes:																					^
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Last Saved:	: 11/28/2023	9:32:00 AM																			
Job created by:	: Sarita																				
Source Job:	:																				
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3.3 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							Li	brary - Estimate						· • ×	<
File	Setup	Est	imate Exe	cution S	System	Integrations	Actions							童 🖽 🤇	?
	•	-		山		-	🕵 Labor		a l		+	†‡†	P		
Job	Properties	Founda Setup Da		Trench Calculator	Shift Rate Calculator	Resource Rates *	Haterial	Resource	Cost Item Assemblies	Standard Tables	User Role	es Access Control	Reports		
		Ma	ster Initializa	ion		P	laster Reso	urces	Master As	semblies	Roles and	Permissions	Reports		^
Joł	b Propertie	s	Foundation S	etup Data R	egister Ø										÷
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Ac	count Codes	Tags	Work Break	down Structur	es Quote	Group Tags	Units of Me	asure Currenci	es Resour	ce / Assembly	y Files Geo	graphic Areas	Wage Zones	Orga 🔹 🕨	Þ
	count Codes g columns he			down Structur	es Quote		Units of Me			ce / Assembly			Wage Zones	Orga	Þ
		re to grou	ıp ınt	down Structur escription	es Quote		5			h For]	Save Quantity		-	- -	•
Dra	g columns he	re to grou	int <u>=</u> Di			Group Tags Unit of	5	Secondary	Find: Searc	h For] Auto-i (Prima	Save Quantity	d views: Star	ndard View Auto-Quantity	Secondary Quantity	
	g columns he	Accou Code	ınt <u>=</u> D 	escription	on	Group Tags Unit of Measure		Secondary	Find: Searc	h For] Auto-i (Prima	Save Quantity	d views: Star Quantity	ndard View Auto-Quantity	Secondary Quantity	
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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 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.

3.4 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.
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.

3.4.1 Library Resources Register

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

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lob Propertie	Foundation Setup Data ▼	Address Book	Trench Calculator	Shift Rate Calculator	Resources *	Materials	Resource	Cost Item Assemblies	Standard Tables	User Roles	Access Control	Repo
	Master 1	Initializatio	n		P	laster Resou	rces	Master As	semblies	Roles and Pe	ermissions	Repo

Overview – Library Resource Rate Register

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

ose or caldown St	ructure (CBS) Register	505110	perties	Resource Rate	e Register 🛛				
All Labor Con	struction Equipment Re	ented Construction	n Equipment	Installed Material	Installed Equ	uipment Sup	oplies Unique		
rag column 2 to	group 3		4		5 Find	: [6 For	r] … Saved vi	ews: 7 ious Vie	w •
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

TIP

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.

3.4.2 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.

3.4.3 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				
resource	e rate record		Resource File Description	Unit of Measure	Productivity Factor
+ LC1	Carpenter App	rentice	Standard Labor Rate	Hour	1.0
+ LC1	Carpenter App	rentice	Standard Labor Rate	Hour	1.0
+ LC2	Carpenter Jour	rney	Standard Labor Rate	Hour	1.0
+ LC2	Carpenter Jour	rney	Standard Labor Rate	Hour	1.0
+ LC3	Carpenter Fore	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.

Setup	1	Charge Rate 2 ng	Rate					6
Scale	1	Scale 2 Scale 3 A	Il Scales					Special Instructions
Cost C	ateo	ory Breakdown	Amount	()	Percent	Is Taxed	Is Insured	Use the Materials cost category to add additional labor cos formaterials and supplies.
То			Varies					Worker's Comp values for this resource can be adjusted
~	Lab	or	Varies					automatically when this resource is employed in a job,
		Labor Base	Varies					based on the geographic location of the work, and the Worker's Comp Override listed on the Cost Item on which
	•	Labor Burden	Varies					the resource is employed.
		 Labor Fringes 	Varies					Standard Worker's Comp Overrides can be defined in the
		> Labor Insurance	Varies 4					Library's Foundation Setup Data Register.
		 Labor Taxes 	Varies					Base Wage Factors for Overtime
		Undefined Labor B	\$0.00	÷	0.00			Use Base Wage Factors for Scales 2 and 3
		Undefined Labor	\$0.00	÷	0.00			
>		erials	\$0.00					Scale 2 Factor: 1.50 x Base Wage
	Und	lefined	\$0.00					Scale 3 Factor: 2.00 x Base Wage
								This option multiplies the Scale 1 base wage by the facto entered here to automatically calculate the base wage fo 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	6 Charge	Setup
•	d Labor Rate File	Standar	source File:	R
•	est	Southw	raphic Area:	Geog
•	one A	Wage Z	Wage Zone:	
•	ter	Carpent	g. Category:	Or
đ			count Code:	Ac
•	tion	CI Dura	Cost Driver:	Ø
•	ed Cost Item	Employe	Cost Curve:	
•	on	Non Uni	Tag 1:	
•		Hourly	Tag 2:	
-			Tag 3:	
	1.00		ivity Factor:	rodud
	1.00		ult Quantity:	Defa

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.

o 💾 🕞													ibrary - Estimate
File Setup	Estimate	Exec	ution	System									
•	-	2	围			🐔 Labor 🔐 Equipment		a		٢	†4†	D	
Job Properties	Foundation Setup Data 🔻	Address Book	Trench Calculator	Shift Rate Calculator	Resource Rates *	Materials	Resource Assemblies	Cost Item Assemblies	Standard Tables	User Roles	Access Control	Reports	
	Master I	nitializati	on		1	Master Resourc	es	Master As	semblies	Roles and Pe	rmissions	Reports	

- 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: * LME	СНРВ		Description: [Mechanic - Hea	avey Duty
Setup 👯	Charge F	Rate	Billing Rate		
Resource	File: S	Standar	d Labor Rate F	ile +	User I
Geographic A	rea: S	Southw	est	•	Userl
Wage Z	one: V	Nage Z	one A	•	Userl
Org. Categ	ory: N	Mechan	ic	•	Userl
Account C	ode:			d.	User I
Cost Dr	iver: C	CI Dura	tion	•	Userl
Cost Cu	irve: E	Employe	ed Cost Item	•	Userl
Ta	ig 1: H	Hourly		•	User I
Ta	ag 2: 🛛	Non Uni	ion	•	User I
Ta	ig 3:			•	User D

Code: * LMECH	IPB	Description:	Mechanic - Hea	avey Duty
Setup 👯 Cł	arge Rate	Billing Rate		
Resource Fi	e: Stand	lard Labor Rate	File +	Userl
Geographic Are	a: South	nwest	•	Userl
Wage Zor	e: Wage	zone A	•	Userl
Org. Catego	y: Mech	anic	•	Userl
Account Coo	le:		d.	Userl
Cost Driv	er: CI Du	iration	•	Userl
Cost Cur	e: Emplo	oyed Cost Item	•	Userl
Tag	1: Hourl	у	•	Userl
Tag	2: Non l	Jnion	•	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.

lesou	rce	Rat	te Register	La	bor Rate Recor	d 😳				
ode: '	•	LME	CHINEIGHT Des	cript	tion: Mechanic -	Heavy Duty				
Setup		4 /	Charge Rate Bil	ling I	Rate					
Scale	1	S	cale 2 Scale 3	Al	Scales					
Cost C	ate	gory	Breakdown		Amount	↔	Percent			
✓ Tot	tal				\$57.00					
~	La	oor			\$57.00					
	•	~	Lat	oor Base		\$52.00				
			¥	¥	¥	Lab	abor Burden \$5.00			
		×	Labor Fringes		\$5.00					
			Travel		\$0.00	(0.00			
			Premium		\$0.00	(0.00			
			Holiday		\$0.00	,	0.0			
			Savings		\$0.00	(0.00			
			Pension		\$3.00	(5.7			
			Vacation		\$0.00	(0.00			
			Subsistence		\$2.00	(3.85			
			Health & Welfa	re	\$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.

Base Wage Fac	tors for O	vertime							
📝 Use Base Wa	age Factors	for Scales 2 and 3							
Scale 2 Factor:	1.50	x Base Wage							
Scale 3 Factor: 2.00 x Base Wage									
	d here to au	ale 1 base wage by tomatically calculate nd 3.							

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

3.4.4 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 Ren	ted Construction Equipment	Installed Materia	al Installed Equi	pment Supp	lies Unique					
rag	columns here to g	roup					Find: [earch For]	··· Saved	views: 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	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.

3.4.5 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

Apply Standard Tax Unique Sales Tax Rate: 0.00 %
Unique Sales Tax Rate: 0.00 %

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 Ton	
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:			್	User Defined 5:
0	oot Driver	CUDura	tion	_	Lloor Defined &

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

3.4.6 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.

Job P	rope	erties	Constructi	on Equipment Ra	tate Record 🛛									
Code:	*	EAPAV Description: Asphalt Paver												
Setu	p	🖶 Charge I	Rate Billing	Rate										
Cost	Cate	gory Breakdo	own	Amount	Fuel									
v T	otal			\$199.00	Fuel Type Consumption Rate									
	0	vned 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 Parts	\$0.00	with cost per liter gives you a									
		OE Rep	air Labor	\$0.00	fuel cost.									
		OE Fue		\$144.00	Automatically calculate Maintenance Labor									
		OE Lube	-	\$0.00	Man-Hours for this resource									

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

3.4.7 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.

Non-Hourly Period Charge R Calculate Non-Hourly Period RE Rental	
Period: Week	ly 💌
Amount Per Period:	\$4,000.00
Hours Per Period:	20.00

Cod	e: '	RECR110	RECR110 Description					
Set	tup	🔱 Charge Rate	🖵 Quote		Billing Rate			
Cos	st C	ategory Breakdown		Amount				
¥	То	tal		\$200.00				
Ŧ	≻	Rented Equipment		\$20	00.00			
	>	Fees		\$				
		Undefined		5				

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

3.4.8 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

Job	Properties	5	Resource Rate	Register 🕻								
All	Labor	Const	ruction Equipment	Rented Con	struction Equipm	ent Insta	lled M	laterial	Installed Equipment	Supplie		
Drag	columns her	re to gr	oup									
	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 Materia	al Rate		
	+ MAFA		Fine Aggregate		\$7.80	0	.00	Ton	Standard Materia	al Rate		
	+ MAHAU	L	Aggregate Haul Q	uarry to P	\$2.60	0	.00	Ton	Standard Materia	al Rate		
	+ MAIA3/	4	Intermediate Agg	regate 3/4	\$10.40	0	.00	Ton	Standard Materia	al Rate		
	+ MASAN	D	Sand		\$7.80 0.0			Ton	Standard Materia	Standard Material Rate		
	+ MATK		Tack		\$1.30	0	0.00 Gallon		Standard Materia	al Rate		
	+ MBR		Aggregate Base R	ock	\$8.45	0	0.00 Ton		Standard Materia	al Rate		
	+ MC2000)	Concrete 4000 PS	I	\$110.50	0	.00	Cubic Yard	Standard Materia	al Rate		
	+ MC3500)	Concrete 3500 PS	I	\$104.00	0	.00	Cubic Yard	Standard Materia	al Rate		
	+ MDIRTA	1	Dirt Class A		\$1.30	0	.00	Cubic Yard	Standard Materia	al Rate		
	+ MDIRTE		Dirt Class B		\$6.50	\$6.50 0.0			Standard Materia	Standard Material Rate		

• Cost categories will differ on each type of resource record

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	Description: Brick Pavers						
Setup	🔱 Charge Rate	Quo	te Billin	g Rate				
Cost C	ategory Breakdown	ļ	Amount					
✓ To	tal		\$5.00	\$5.00				
¥	Materials		5					
	Installed Materials		\$5.00	5.00				
	Undefined Materia	ls	\$0.00					
>	Fees		\$0.00					
	Undefined		ê0, 00					

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

3.4.9 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

escription rane by the Month isocial File for Liquids	ction Equipment Installe Resource File Description Standard Unique Rate	Unit of Measure Month	Installed Equipment Productivity Factor	Find: Sear Default Quantity	Waste % Add-on	" Saved vie Unit Cost (Scale 1)	ws: Previous Currency	Wew Utilization Count	* Organization Category
escription rane by the Month	Description	Measure		Default Quantity	Waste % Add-on	Unit Cost		Utilization	Organizatio
rane by the Month	Description	Measure		Quantity	Add-on		Currency		
	Standard Unique Rate	Month						Count	
and the first factor				1.00	0.00	\$16,500.00	U.S. Dollar	0.00	
sposal ree for Liquids	Standard Unique Rate	Gallon		1.00	0.00	\$6.00	U.S. Dollar	0.00	Earthwork
ump Fees	Standard Unique Rate	Load		1.00 0.00		\$100.00	U.S. Dollar	0.00	Earthwork
aul to Job Site 15-20 Miles	Standard Unique Rate	Ton		1.00	0.00	\$3.00	U.S. Dollar	0.00	Earthwork
er Diem	Standard Unique Rate	Day		1.00	0.00	\$150.00	U.S. Dollar	0.00	
ecurity Service	Standard Unique Rate	Week		1.00	0.00	\$500.00	U.S. Dollar	0.00	
er	Diem	Diem Standard Unique Rate	Diem Standard Unique Rate Day	Diem Standard Unique Rate Day	Diem Standard Unique Rate Day 1.00	Diem Standard Unique Rate Day 1.00 0.00	Diem Standard Unique Rate Day 1.00 0.00 \$150.00	Diem Standard Unique Rate Day 1.00 0.00 \$150.00 U.S. Dollar	Diem Standard Unique Rate Day 1.00 0.00 \$150.00 U.S. Dallar 0.00

3.5 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.

3.5.1 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 $$ 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

2500	rce A	ssembly	Regis	ter o															•
ag co	lumns	here to gr	oup										Find: [Sea	arch For]	Save	d views:	Standard View		•
0	de	£.	Descrip	otion		Resou File D	urce escription		Quantity		Jnit of Measure	Unit Cost	Total Cost	Currency	Organizatio Category		Geographic Area	Wage Zone	Man Cou
-	ссо	NC	Concre	te Crew		Stand	dard Assembly		1.00		Hour	\$330.3	38 \$330.38 U.S. Dolla		r Concrete				
		Row Number	-	Resource Code	Description		Quantity	Unit o Measu		Cost	Currency		Resource File Description		Organizational Category	Geogra Area	phic Wage Zone		
	\rightarrow		1	LC2	Carpenter Journe	eyman	2.00	Each	\$2	8.92	U.S. Dollar	CI Dura	Standard Labor Ra	te File	Carpenter	Southw	est Wage Zor		
			2	LF2	Finisher		1.00	Each	\$2	8.07	U.S. Dollar	CI Dura	Standard Labor Ra	te File	Finisher - Conc	Southw	est Wage Zor	n	
-			3	LIW1	Iron Worker		1.00	Each	\$3	5.55	U.S. Dollar	CI Dura	Standard Labor Ra	te File	Iron Worker	Southw	est Wage Zor	n	
3			4 LL2 Laborer		Laborer		1.00 Each	Each	sh \$26.3	6.37	U.S. Dollar	CI Dura	Standard Labor Rate File La	Laborer Southw		st Wage Zon	n		
-			5	ECRHC	Hydraulic Crane	25 Ton	1.00	Each	\$8	4.00	U.S. Dollar	CI Dura	Standard Equipmer	nt Rate	Crane				
			6	LC1	Carpenter Appre	ntice	1.00	Each	\$2	7.48	U.S. Dollar	CI Dura	Standard Labor Ra	te File	Carpenter	Southw	est Wage Zor	n	
			7	LO2	Operator Class 2		1.00	Each	\$3	0.21	U.S. Dollar	CI Dura	Standard Labor Ra	te File	Operator	Southw	est Wage Zor	n	
			8	ETFT	Flatbed Truck		1.00	Each	s	7.00	U.S. Dollar	CI Dura	Standard Equipmer	nt Rate	Truck				
A.			9	LC3	Carpenter Forem	ian	1.00	Each	\$3	3.87	U.S. Dollar	CI Dura	Standard Labor Ra	te File	Carpenter	Southw	est Wage Zor	n	
4	CGR	ADE	Gradin	g Crew		Stand	lard Assemb	ly	1	.00	Hour	\$175.0	6 \$175.06	U.S. Dolla	r Earthwork				
+	CMA	INT	Equipm	nent Mainter	ance	Stand	lard Assemb	ly	1	.00 1	Each	\$58.0	0 \$58.00	U.S. Dolla	r Mechanic			2	

3.5.2 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.

	urce Assemb												
Cod	e: * CCONC		Description	: Concrete Crew	U						2	Qty:	
R	esource File:	Standa	ard Assembly Fi	e 🔹 Tag 1:		•						UM: Hour	
ieo	graphic Area:			• Tag 2:		•					Unit	Cost:	\$330
	Wage Zone:			• Tag 3:		•					Curr	rency: U.S. Do	ollar
0	rg. Category:	Concre	te	 Man Count: 	8.00					•	Last Change	ed By:	
				Equip Count:	2.00					4	Last Change	ed On:	
	Notes:												
Cost		Assembly	y Details										
			- 2						Find:	Search For] ···· Sa	ved views: Previous V	/iew	•
rag	Summary	to group R	- 2	Description	Quantity	Unit of Measure	Unit Cost	Currency	Find: E Cost Driver	Search For] ··· San Resource File Description	ved views: Previous V Organizational Category	/iew Geographic Area	- Wage Zone
)rag	: Summary columns here t	to group R	esource ode	Description Carpenter Journey	Quantity 2.00			Currency U.S. Dollar	Cost	Resource	Organizational	Geographic	Wage Zone
)rag	: Summary columns here t	to group Ri C	esource ode C2	•		Measure	\$28.92		Cost Driver	Resource File Description	Organizational Category	Geographic Area Southwest	Wage Zone Wage 2
Drag	: Summary columns here t	to group R C 1 L	esource ode C2 =2	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

3.5.2.1 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	Total Cost (Forecast)	Currency	(Duration driven)	Hours (Non-Duration driven)	
306	20.00	Mie	\$228,294.37	\$4,565,887.34	U.S. Dollar	5,191.90		15.36
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
Embankment	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 🛛				
Drag	; columns here to	group				
	Code 📃	Description	Resource File Description	Quantity	Unit of Measure	
	+ CCONC	Concrete Crew	Standard Assembly	1.00	Hour	
\rightarrow	+ CEXCPB	Excavation Assembly		1.00	Each	
	+ CGRADE	Grading Crew	Standard Assembly	1.00	Hour	
	+ CMAINT	Equipment Maintenance	Standard Assembly	1.00	Each	

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 Clean & Ins Category		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 Rate File				
Unit of Measure		Each				
l loob ook the box f	or Apply Stondard Tax and	l antor a l Inique Color	Tay Data 60)/		

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

Assem	b	lv	#1
/		• 」	

Assembly Code	CBRIDGE
Assembly Description	Bridge Crew
Resource File	Standard Assembly File
Unit of Measure	Hour

Select Wage Zone A Labor Resources 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 Resou	urces for this Assembly.					
Resources on Assembly	Resource Description	Resource Quantity				
Resources on Assembly	Resource Description Teamster Foreman	Resource Quantity .5				
-	•	-				
LT2	Teamster Foreman	-				

Assembly #2 (continued)

ETPU	Pickup	1
EL950	Loader 950	1

You should end up with the following results

$\frac{\text{Resource}}{\text{Code}} \cong \mathbf{T}$		urce 🛓 🕇 Resource File Description		Organizational Category				Wage Zone	Des	Description	Unit of Measure	
-	LSFA		Standard Labor Rate File		Supervision	So	outhwe	st		Field	Administrator	Hour
		Scale 🖮	Total	Labor	Labor Base	Labor Bu	urden	Labor Fri	nges			
	\rightarrow	1	\$33.92	\$33.92	\$33.45	\$	\$0.47	1	\$0.47			
		2	\$50.18	\$50.18	\$50.18	\$	\$0.00	:	\$0.00			
		3	\$66.90	\$66.90	\$66.90	\$	\$0.00		\$0.00			

	Resource / 🚽 Code		Descri	ption	-				Unit of Measure	Unit Cost (Scale 1)	Cur	rency 👻		anizational egory	4
R	- RPW3000			ire Washer 3000 PSI		Stan	dard Rental Rate Fi	le H	Hour	\$3.4	ю <mark>U.S</mark>	Dollar	Clea	n & Inspect	
		Total		Rented Equipment	RE Re	ntal	RE Rent Expense	RE	Overhead	RE Finance Ex	pense	RE Insura	ance	RE License	
	F		\$3.40	\$3.40	\$	3.40	\$0.00		\$0.00		\$0.00	\$	0.00	\$0.00	ו

Re: Co		rce 🗸 👻	Descriptio	n –	Resource File Description	-		Unit Cost (Scale 1)	Currency 👻	Organizationa Category	al 👻
Ξ	MC	CB	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	s Undefined	Billing Rate	Billing Markı
	۲	\$318.00	\$300.00	\$0.00	\$300.00	\$18.00	\$18.00	\$0.	00 \$0.0	\$318.00	

			_																	
Ass Cod				mbly ription	Ŧ	Resource File Descript	ion 💌	Quantity -	Unit of Measure	Unit	t Cost 👻	Total Cost 👻	Currency	 Organization Category 	al 🚽 Geog Area	raphic 🖵				
- (CBRIDGE		CBRIDGE		CBRIDGE		Bridg	e Crew		Standard As	sembly File	1.00	0 Hour		\$170.11	\$170.11	U.S. Dollar	r		
		Row Number	1	Resource Code	Description	Quantity	Unit of Measure	Unit Cost	Currency	Cost Driver		ource Description		Organizational Category	Geographic Area	Wage Zone				
	۲		1	LC2	Carpenter Journeyma	an 2.0	0 Each	\$28.92	U.S. Dollar	CI Dura	ation Star	ndard Labor Rate	File C	arpenter	Southwest	Wage Zon				
	-		2	LC3	Carpenter Foreman	1.0	0 Each	\$31.47	U.S. Dollar	CI Dura	ation Star	ndard Labor Rate	File C	arpenter	Southwest	Wage Zon				
			3	LF2	Finisher	1.0	0 Each	\$28.07	U.S. Dollar	CI Dura	ation Star	ndard Labor Rate	File Fi	inisher - Concrete	Southwest	Wage Zon				
			4	LL2	Laborer	2.0	0 Each	\$26.37	U.S. Dollar	CI Dura	ation Star	ndard Labor Rate	File Li	aborer	Southwest	Wage Zon				

od	de 🖹 🕇		🖹 🝸 Description				Resource File Description				Unit of Measure	Unit Cost	Total Cost	Currency	Organizational Category	Geographic Area	Wage Zone
• •	RIP	RAP	Rip Ra	p Replaceme	nt Crew	Stand	lard Assemb	ly		1.00	Hour	\$152.89	\$152.89	U.S. Dollar			
		Row Number	<u>1.</u>	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!

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

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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

4.1 JOB CREATION

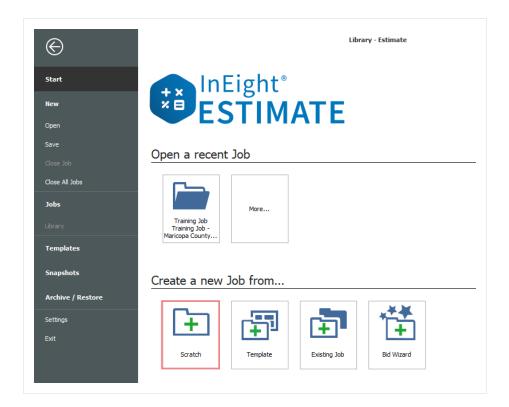
4.1.1 InEight on-premise

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.

Core Project * Project A4998 Code: * A4998 Project A4998 New 4/1, Project A4998 New 4/1,			()	About Estimat Release Note: InEight.com Help	C Estimate Help	 External Reports * External References * 	Colors + Output Settings + ustomize	🖉 Titles - 🄅	
Core Project A 4998 Project A 4997 New 4/1, Code: * A 4998 Project A 4998 New 4/1,		project	latform	Р		ob	New Jo	6	
	Created Date 1/1/2020 3:56:1 1/1/2020 3:56:1 1/1/2020 3:56:1	New New	oject A4997 oject A4998	ect A4997 Pro	 Proj	*			
Description: Clemson Creek Restoration project Project A5 Project A5 New 4/1, Project A50 Project A50 New 4/1,	/1/2020 3:52:3 /1/2020 3:52:3 /1/2020 3:52:4	New	oject A5 oject A50	ect A5 Pro	Proj Proj	Restoration project	Clemson Creek F	Description:	

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 0	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost											
			Parloticy Secup	Tuci cost											
Code	4985362 ve	ersion 1													
Project ID	: <u>4985362</u>														
Description	n: 2020 Clow	2020 Clow Creek Shoreline Restoration Project													
			Overview	Cover S	Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Folder Tags	Pri					
			Identific	ation											
Notes				ocation: S	cottsdal	e, AZ									
Notes	Shoreline F	Restoration pro	ject	City: S	cotto dal	•									
				city. 3	consua	c									
				County:											
				Country: L	United St	ates O 👻									
				State: /	Arizona	Ŧ									
			L	atitude:					41.7	7728					
			Lo	ngitude:					-88.1	14793					

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

lob Proper	ties O						
verview	Cover Sheel	Cost Basis	Minority Setup	Fuel Cost	Job Folder Tags		
Co	de: 4985362	-v1					
Project	ID: 4985362						
			ne Restoration Proj				
Not	The pro	∃ 6		eek Shoreline	on of native turf gra Restoration 853 project <	2 / Project details DETAILS	0 ¢ ⁶ 8 ®
							Project settings Cancel Save
		Projec	ct details				
					Ľ	Project ID	Notes
			<u>.</u>		1949 B	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 the second second	Name	
						2020 Clow Creek Shoreline F	
		CALL THE			10/235		
		The second	2. 19/202	N/ AL	9	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
23 m	* Phase Job Properties O Pre-E Overview Cover Sheet Cost Basis Minori e Cash Flow Equipment Maintenance Benchmarking
	Code: 4985362-v1
	Project ID: <u>4985362</u> Description: 2020 Clow Creek Shoreline Restoration

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	group						
	Project ID	Description	<u> </u>	Country	State	City	Latitude	Longitude
	<u>4985362</u>	2020 Clow Creek Shoreline Restoration - Per Addendum 1		United Stat	Illinois	Naperville	41.77287	-88.14793
	<u>4985362</u>	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	e e e e e e e e e e e e e e e e e e e						
÷	4985362							
	4985362	2020 Clow Creek Shoreline Restoration - Per Addendum 1	L	United Stat	Illinois	Naperville	41.77287	-88.1479
	4985362	2020 Clow Creek Shoreline Restoration Project - Original B	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)	United Stat	Illinois	Naperville	41.77287	-88.1479
	4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 4	ł	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 🖮				/	Pre	vious View	•	}
	Organization	<u>in.</u>	Source Job	Project Name	Description	de	Status	Schedule	
÷	Unassigned								
	Estimate Infrastructure								
	Estimate Mining								
٠	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_Sout	h Central							
٠	S100000 - 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 These job statuses can be adjusted to fit your company requirements

	Name	Description
		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.

Overview – Overview Tab (continued)

Overview !	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	1	2
Code	: Trainir	ıg Job					Status: Bidding
Descriptior	^{1:} Trainir	ng Job - Maricopa	County No. TN	12924			
Notes	: Use th	is field to record	notes, informa	tion, special provisi	ons, unusual co	or	
3	densit	y. Unless otherwi	se specified, th	nstructed that ade ne top 150 millimete Drop", AASHTO T	rs (six inches)	ofl	t less than 95 percent of maximum ils Using a 2.5 kilograms (5.5 Pound)
		2022 7-22-26 AM					
Last Saved	: 12/29/	2022 7:52:20 AM					
Last Saved						(
	: InEigh						
ob created by	: InEigh					S	

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 A	Assembly R	legister	Job Propertie	es Ø								
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	C 4	
Estimate Pi	rotection											
Enable	e field level e	estimate protect	ion	Passwo	rd:							
User Acces	s											
🗹 Restri	ct access to	this job to the fo	ollowing users	1	Allow	ALL users with B	id Wizard access to	use this job as a	a source			
Linora alle												
	wad in this	ioh:										
	owed in this								5			
		job: ni@INEIGHT.CON	1	3					S Ac	dd Users / Gi	oups	
			1	3								
			1	3						dd Users / Gi e Selected Us		ps
			1	3								ps
			1	3								ps
			1	3								ps
			1	3								ps
			1	3								ps

• 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)

.ost Break	down Stru	cture (CBS) Reg	jister	Job Propert	ties (8									
Overview	Security	Cover Sheet	Cost Basis	Minority Set	tup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	Schedule	Cash Flow	Equipment	4	
Identificati	ion	-													
Loc	ation: I-10	MP 100 to MP 12	20	Type:	Highv	vay and Gen	eral Engineering			Contra	ect Duration:				1
	City: Pho	enix		Engineer:	Exam	ple Engineer	Fred Jones			1 Tir	ne Measure:	Contract Day	/s *		
Co	ounty: Mar	icopa		Owner:	Exam	ple Owner	Jerry Slate			E Fo	recast Start:	1/6/2014	-		
Co	untry: Uni	ted States	•	Architect:	Exam	ple Architect	Robert Frost			E For	ecast Finish:	6/5/2014	*		
	State: Ari:	iona y	•								Duration:				1
Lat	itude:		0.00000												
Long	jitude:		0.00000												
Proposal															
Bi	id Date: 1	2/23/2013 -						Opening Type:	Public						
Bi	id Time: 1	0:00:00 PM						Proposal Type:	Unit Price					_	
01							1	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 Shifts per Day: 1.00 Days per Week: 5.00	Scale 1: Scale 2: Scale 3:	ge Rate Composit 100.00 % 0.00 % 0.00 % Rate Calculator		es Lock Cost Items Pay Item Unit Pr Activate PBS Cha Activate Quantity Maintain CBS Str When man-count	ice Precision: inges Log y Checking ucture at Level: t changes:	2 O Change UM / I O Change Days	Man-Hour	Preserv Data So	e Original Cos urce	t Item	
Currency U.S. Dollar Default Currency: U.S. Dollar Resource / Assembly Filter 4				ndard Rates Sales Tax Rate:	U	5.00 %					
Labor Rate	source / Assemb [All] [None]	ly File ^	Geographic A [All] [None] (None]		Wage Zone				egory ^	Import Reso	

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	
Work Hou Pay Hou	shift Arrange urs per Shift rs per Shift: fts per Day:	8.00	Standard Wa Scale 1 Scale 2 Scale 3	: 0.00 %		es Lock Cost Items Pay Item Unit Pr Activate PBS Cha Activate Quantit Maintain CBS Str	ice Precision:	2		Preserv Data So	e Original Cos urce	t Item	
Day	s per Week:	5.00	Shift	/ Rate Calculator		When man-coun	· · · · · · ·	Change UM / M Change Days	an-Hour			G₂	
Currency					Star	ndard Rates							
Default	Currency:	U.S. Dollar			•	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

3			Shift / Rate	Calculator Re	cord - Training	Job		⊞ –	
Acti	ons								
È c	Copy Calculator from Library								
î с	Copy Calculator to Library								
) c	lear All								
	Tools								
	Shift Rate Calculator Name:	[Enter Name]							
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Totals
	Shift 1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Totals
,	Shift 1 Work Hours	Monday 10.00	Tuesday 10.00	Wednesday 10.00	Thursday 10.00	Friday 10.00	Saturday	Sunday 0.00	Totals 50.00
,					,				50.00
,	Work Hours	10.00	10.00	10.00	10.00	10.00	0	0.00	

- 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	F
-Standard S	hift Arrange	ments	-Standard Wa	age Rate Composite	
Work Hou	ırs per Shift	11.17	Scale 1:	64.18 %	
Pay Hou	rs per Shift:	11.17	Scale 2:	35.82 %	
Shif	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.

		Select your filter to right		Iron Worker Finisher - Concrete
Lesource / Assembly Type abor Rate Construction Equipment R Jented Construction Equi Installed Material Rate Installed Equipment Rate Jupply Rate Lesource Assembly Cost Item Assembly Landard Table	Resource / Assembly File [V] [All] [None] [Non-Blanks] Standard Labor Rate File	Geographic Area [[All] [[None] [[Non-Blanks]] Southwest	Wage Zone [[All] [[None] [[Non-Blanks] [Wage Zone A] Wage Zone B	Organizational Category [[All] [[None] [[Non-Blanks]] Truck Driver - Teamster] Supervision [Carpenter] Welder [Welder] Mechanic] Operator] Remediation [Laborer]

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 Cos	t
Drag	g columns	here to gro	up							
	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.

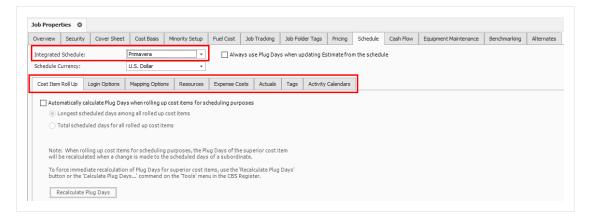
ob Proper	ties ©												
Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Pricing	Schedule	Cash Flow	Equipment Maintenance	Benchmarking	Alternates
Job Folder	Tag Assignm	ents											
	Tag	1:		•		Tag 13:			-				
	Tag	2:				Tag 14:			•				
	Tag	3:				Tag 15:			*				
	Tag	4:		•		Tag 16:			•				
	Tag	5:				Tag 17:			*				
	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 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,

	Other Job Properties Tabs
	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:

Job Location	90 th Street & Shea
City	Scottsdale
County	Maricopa
Country	United States
State	Arizona
Туре	Infrastructure
Engineer	Fred Jones
Owner	Jerry Slate
Architect	Robert Frost
Contract Duration	80
Time Measure	Calendar Days
Forecast Start	October 15, 2019
Duration (days)	70
Bid Date and Bid Time	10/1/2019 2:00 PM
Estimator	Jim Sly
Bid Location	123 Main Street
Owner's Estimate	\$500,000.00
Opening Type	Public
Proposal Type	Unit Price
Plan Holders	10
Liquidated Damages	\$1000.00 Per Day
RFQ Contact	Jim Sly

2. On the Cost Basis tab:

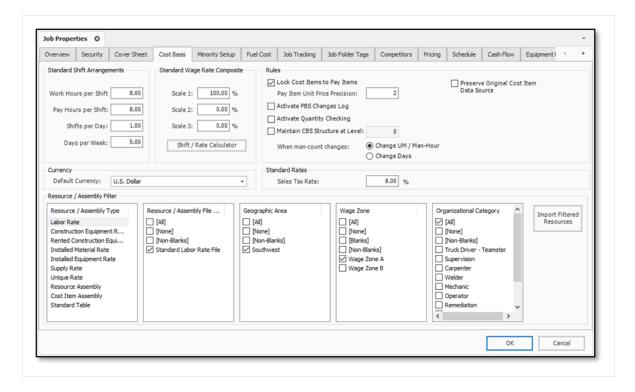
- Ensure the **Shift Arrangement** is 8 hours a day, 5 days a week
- Ensure the Wage Composite is set to 100% Scale 1
- Ensure the Sales Tax is set to 8%

You should end up with the following results

The following Cover Sheet properties are defined:

80
80
70
10
1,000.00
1
(A)

The following Cost Basis settings are defined:



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

ay Item &	Proposal Re	gister	0					6										
Proposal R	ecap - Train	ing Job						×	Item Reca	p - 200 SITEW(DRK & ROADW	AY						×
		rrent	Target	Forecast	Variance				Description				Total Price (balanced)	Unit Price (current)				
Price:	\$6,569,73	5.00	\$5,897,950.68	\$6,577,223.80	\$671,784.32	сот			V A Price				\$2.834.341	(carent)	\$3,402,700.			
Markup:	\$987,4	77.27	\$315,692.95	\$1,044,716.27	\$729,023.32	сот			_	istribution			\$319,781.07		\$888,140.0	7		
Margin%:		15.03	5.35	15.88	\$731,836.84	сот			v 🔺	Markup			\$150,141.93		\$718,760.4	5		
										A Profit (Mar	kup records)		\$0.00		\$568,618.5	3		
										📥 Business O	Iverhead		\$150,141.93		\$150,141.9	3		
			-				-								Saved vie	ws: Standard		
rag columns	0.00		B 1			<u> </u>	6											
Pay Item Number	р — Р	ode	Lock Quantity	Lock Price	Description	•	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	Unit Price (current)	Total Price (current)	Unit M (balan		Total Markup (balanced)	Unit Distribution	Total Distribution	Ur (o
200	1				SITEWORK & P	ROADWAY				U.S. Dollar		\$3,402,7	00.00		\$150,141.93		\$319,521.54	ł.
+ 6410	0100 1.	1			Mobilization		1.00	1.00	Lump Sum	U.S. Dollar	\$395,600	.00 \$395,6	00.00	\$737.74	\$737.74	\$4,435.45	\$4,435.45)
+ 2010	0102 1.	2			Clearing & G	irubbing	10.00	10.00	Acre	U.S. Dollar	\$5,900	.00 \$59,0	00.00	\$257.19	\$2,571.93	\$1,251.61	\$12,516.08	1
+ 202 0	0183 1.	3			Undassified	Excavation	50,000.00	50,000.00	Cubic Yard	U.S. Dollar	\$	i.50 \$275,0	00.00	\$0.30	\$14,840.72	\$0.83	\$41,414.20	1
+ 303 5	5912 1.	4			Aggregate B	Base	40,000.00	45,000.00	Ton	U.S. Dollar	\$20	i.50 \$1,060,00	00.00	\$0.94	\$37,486.40	\$2.05	\$82,054.63	
+ 303 4	4263 1.	5			Asphalt Con	crete Hot Mix Type A	38,000.00	35,000.00	Ton	U.S. Dollar	\$43	\$1,613,1	00.00	\$2.49	\$94,505.14	\$4.71	\$179,101.18	
400	2				WATER & SEW	ER				U.S. Dollar		\$718,5	50.00		\$34,584.99		\$76,228.25	i
+ 413(8	B) 0464 2.	1			36 Inch RCP	Culvert Class III	1,000.00	1,024.00	Linear Feet	U.S. Dollar	\$93	.45 \$97,4	50.00	\$4.33	\$4,325.59	\$9.94	\$9,944.34	
+ 800 0	1220 2.	2			10 Inch PVC	Force Main (SDR21)	12,000.00	12,000.00	Linear Feet	U.S. Dollar	\$25	\$354,0	00.00	\$1.43	\$17,165.84	\$3.04	\$36,531.54	ŧ.
+ 800 0	0330 2.	3			24 Inch PVC	Gravity Sewer (SDR35)	3,000.00	3,000.00	Linear Feet	U.S. Dollar	\$64	\$193,5	00.00	\$3.16	\$9,484.48	\$7.32	\$21,965.47	
+ 800 0	0400 2.	4			4 Foot Diam	eter Manhole	16.00	16.00	Each	U.S. Dollar	\$4,600	.00 \$73,6	00.00	\$225.57	\$3,609.08	\$486.68	\$7,786.90	1
500	3		•		STRUCTURAL	CONCRETE & BRIDGES				U.S. Dollar		\$631,8	95.00		\$32,304.21		\$78,703.66	i
+ 501(4	· .	1			Structural E	xcavation & Backfill	800.00	800.00	Cubic Yard	U.S. Dollar	\$20	\$22,4	00.00	\$1.39	\$1,111.52	\$3.16	\$2,525.23	1
+ 506(/	A) 1322 3.	2			Steel Reinfo	rcement	30,000.00	30,000.00	Pound	U.S. Dollar	\$.70 \$51,0	00.00	\$0.08	\$2,536.15	\$0.13	\$4,011.30	-
+ 5030	A) 1313 3.	3			Retaining W	al	850.00	850.00	Cubic Yard	U.S. Dollar	\$54			\$27.45	\$23.336.43	\$67.68	\$57.526.49	
			26									\$6,569,73	35.00		\$315,692.95		\$645,755.99	•

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 0 102	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 0 183	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	\$5.5
+ 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	\$42.4
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	\$485.98	\$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.

Reports A	Settings: Default +									
Job Properties	Settings: Delaut									
Foundation Setup Data	Print Details Layout Header/Footer									
Resources										
Resource Assemblies	Show the below Pay item details	Filter by currency:	No Filter							
Cost Breakdown Structure	Line Number	Show the below Proposal h	eader items							
Quotes	Pay Item Number	Job Code] Job City							
Price Breakdown Structure	✓ Position Code	Job Description	Job County							
Pay Item & Proposal	Subtotals	Bid Date	Job State							
Standard Proposal	-	Bid Time	Job Country							
DOT Proposal	Running Totals	JobLocation								
Pay Item Summary	Suspended Items									
Pay Item Currency Comparison	Include Additional Proposal pages	Term for Document								
Pay Item Price Breakdown	Cover Sheet	Proposal/Bid								
Biling Rate Reports	Preferences Sheet	O Tender								
Job Tracking										
Estimate Comparison Report	Unit Price precision	O Custom								
Audit	Truncate values based on decimal precision									
Job Register	 Do not truncate values (show decimal precisio 	n)								
Custom Reports					1					
aved Views	Certification Text: O None	Custom								
ludget Exports	Sett	tings: Previous	-							
A Systems		-								
American Contractor (versions 4.1)	Pri	nt Details Layout Header/Foo	oter Proposal							
Bidtek Vision										
Budget File Worksheet				¥						
CGC (version 34.3)	Signature Block:									
CGC (version 35.0)				Propose	- PAUL TRIP					
СМІС	Submitted By			INCIGHI	Job Cod	e: Training .	Job Job - Maricopa County No. TM2924			
Comma Delimited File					Descriptio	n: Training .	Job - Mancopa County No. TM2924			
				Job			Training Job			
				Job I	leacription		Training Job - Maricopa County No. TM2924			
				Job			Phoenix			
					ounty		Maricopa			
				Bid I Bid I			5-Jan-2020 9:00:00 PM			
							Proposal			
					ode Line No.		Description Subtotal Description	Quantity Unit of Measure	Unit Price	Total Price
				1	22	200	SITEWORK & ROADWAY			3,402,700.00
				1.1	10	641 0100	Mobilization	1.00 Lump Sum	395,600	395,600.00
				1.2	20	201 0102	Clearing & Grubbing	10.00 Acre	5,900.00	59,000.00
				1.3	30	202 0183	Unclassified Excavation	50,000.00 Cubic Yard	5.50	275,000.00
				1.4	40	303 5912	Aggregate Base	40,000.00 Tan		1,060,000.00
				1.5	50	303 4263	Asphalt Concrete Hot Mix Type A	38,000.00 Ton	42.45	1,613,100.00
				2	18	400	WATER & SEWER			718,550.00
						413(2) 0464	36 Inch RCP Culvert Case III	1,000.00 Linear Feet	97.45	97,450.00
				2.1	50					
							10 June 2010 Same Mails (2020)	40.000 m 11-1-1 T-1		
				22	70	800 0220	10 Inch PVC Force Main (SDR21)	12,000.00 Linear Feet	29.50	354,000.00
							10 Inch PVC Force Main (SDR21) 24 Inch PVC Gravity Sewer (SDR35)	12,000.00 Linear Feet 3,000.00 Linear Feet		
				22	70	800 0220			29.50	354,000.00
				22 23	70 80 90	800 0220 800 0330	24 Inch PVC Gravity Sewer (SDR35)	3,000.00 Linear Feet	29.50 64.50	354,000.00 193,500.00
				22 23 24 3	70 80 90 15	800 0220 800 0330 800 0400 500	24 Inch PVC Gravity Sewer (SDR35) 4 Foot Diameter Marhole STRUCTURAL CONCRETE & BRIDGES	3,000.00 Linear Feet 16.00 Each	29.50 64.50 4,600.00	354,000.00 193,500.00 73,600.00 631,695.00
				22 23 24	70 80 90	800 0220 800 0330 800 0400 500 501(A) 1306	24 Inch PVC Gravity Sewer (SDR35) 4 Foot Diameter Manhde	3,000.00 Linear Feet	29.50 64.50	354,000.00 193,500.00 73,600.00

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

Positior Code	_	Pay Item Number	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure
1		200	SITEWORK & ROADWAY			
+ 1.1		641 0 1 0 0	Mobilization	1.00	1.00	Lump Sum
+ 1.2		201 0 1 0 2	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



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

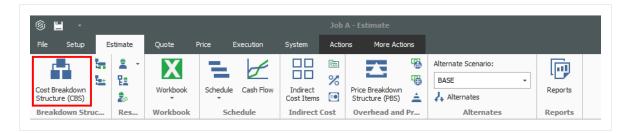
Lesson Topics

5.1 COST BREAKDOWN STRUCTURES

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	- Estimate						
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📇 Print	🕀 New	9	Сору	🛒 Spl	t	⇒ Indent	🐰 Link Field) 🗏 Cost	Item	Assembly	2. Resource			T F	CBS Tree Filter Mod	le:
Review	🛞 Delete	B	Paste	🚉 Spl	t by Cost Type	- Outdent	Junlink Field	🔚 Subo	rdinate Cost Item	🔁 Subordinate Assembly	Resource /				Filter	*
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× 📫	JOB	Ш		on Code -				Code		(T/O) Quantity	Measure		(Forecast)		Rate	
88	Prime Bond	÷	=		JOB					20.00	Mile	\$294, 138. 13	\$5,882,762.51			
88	Price % Add-On	ш	+		Prime	Bond		PRIME	BOND	1.00	Lump Sum	\$47,148.68	\$47,148.68			
	Job Financing	11	+		Price	% Add-On		PRICE	% ADD-ON	1.00	Lump Sum	\$295,638.13	\$295,638.13			
	Indirect Cost Esc		+		Job Fir	ancing		FINAM	ICE EXPENSE	1.00	Lump Sum	\$33,105.26	\$33,105.26			
88	Direct Cost Escal		+		Indire	ct Cost Escalat	tion	INDIR	ECT COST ESCALA	TION 1.00	Lump Sum	\$2,131.11	\$2,131.11			
	Indirect Cost Ad		+		Direct	Cost Escalatio	n	DIREC	T COST ESCALATI	ON 1.00	Lump Sum	\$15,048.80	\$15,048.80			
> 🗖 1	Direct Cost Add- SITEWORK & RC	11	+		Indire	ct Cost Add-Or	1			1.00	Lump Sum	\$5,888.67	\$5,888.67	\$294,433.42	2.00	
> = 1 > = 2	WATER & SEWER		+		Direct	Cost Add-On		DIREC	T COST ADD-ON	1.00	Lump Sum	\$104,088.34	\$104,088.34	\$5,204,417.24	2.00	
> 📩 3	STRUCTURAL CO		= 1		SITEW	ORK & ROADW	AY	200		1.00	Each	\$2,464,161.56	\$2,464,161.56			
→ == 4	INDUSTRIAL & R		+ 1.	1	Mobil	ization		6410	100	1.00	Lump Sum	\$11,909.51	\$11,909.51			
> 📥 5	COMMERCIAL	Ш	+ 1.	2	Clear	ing & Grubbing		2010	102	10.00	Acre	\$3,918.50	\$39,184.97			
> 📥 6	GUARDRAIL & SI		□ 1.	3	Unda	ssified Excavatio	on	202 0	183	50,000.00	Cubic Yard	\$4.68	\$233,915.81			
> 🚔 7	Indirect Costs	11	+ 1.	3.1	Ex	cavation		1.3.1		50,000.00	Cubic Yard	\$3.00	\$149,922.88			
8	Special Risk Allov	v	+ 1.	3.2	Em	bankment		1.3.2		50,000.00	Cubic Yard	\$1.68	\$83,992.94			
			■ 1.	4	Aggr	egate Base		303 5	912	45,000.00	Ton	\$15.40	\$692,928.99			
			+ 1.	4.1	Fu	rnish & Haul Base	e Material	1.4.1		45,000.00	Ton	\$11.54	\$519,513.30			
			+ 1.	4.2	Fir	egrade Subgrad	e	1.4.2		400,000.00	Square Yard	\$0.19	\$75,848.36			
			■ 1.	4.3	In	stall Aggregate B	ase	1.4.3		45,000.00	Ton	\$2.17	\$97,567.33			
			+ 1.	4.3.1		Place Addredate	Base	1.4.3	1	45.000.00	Ton	\$1.63	\$73.460.92			
1		11			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**.

	Name	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.

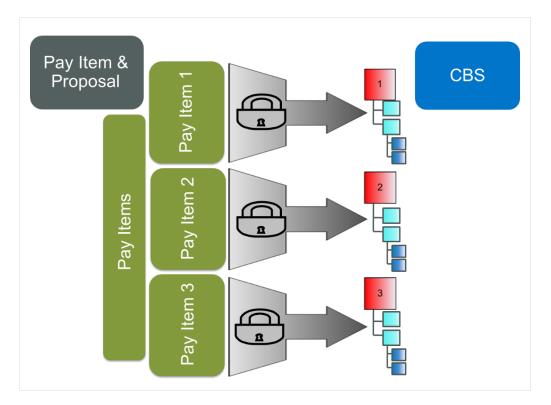
Overview – Work Breakdown Structure (WBS) View Register

WBS: EAS Description Quantity Whit of bit of	WBS Tree	1	×	Dra	g columns here to gro	up 2			F	nd: [Search	For] …	Saved views:	Standard View	-	
Code Description Generating Records of the provide of	WBS: CEA			•	Code 🛓					Quantity		Currency	Unit Cost	Total Cost (Forecast)	
CMLS Out Brynneening Account Code System P 10	Code	Description			CEAS	Civil Engineering Account	t Code System			1.00	Each	U.S. Dollar	r \$2,494,088.	\$2,494,088.07	
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IZ PPE WORK Local Cold Local Cold <thlocal cold<="" th=""> Local Cold Local ColdLocal Cold<td>> 13</td><td>BRIDGE WORK</td><td></td><td></td><td>10.10.500</td><td>UTILITIES</td><td></td><td></td><td></td><td>1.00</td><td>Each</td><td>U.S. Dollar</td><td>r \$8,000.01</td><td>\$8,000.00</td></thlocal>	> 13	BRIDGE WORK			10.10.500	UTILITIES				1.00	Each	U.S. Dollar	r \$8,000.01	\$8,000.00	
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Deg camera bere Care Care Care Care Care Care Care C				4	3	,								\$2,494,088.	
Position Code E Description Code (T/O) Quantity Measure Unit Cost (Forecast) Allocated Source United Adjustment Quantity	Cost Items	s A		1	3	,								\$2,494,088 >	
→ + 23.1 Setup Yard UVASSIGNED 1.00 Lump Sum \$4,000.00 \$4,000.00 U.S. Dollar				1	5				Fi	nd: [Search F	ior]	Saved views:	Standard View		
	Drag columns	s here to youp			otional	Forecast		Unit Cost	Total Cost		Allocation		Cost	× Resource Assembl	
				1	5	-			FI	nd: [Search F	for]	Saved views:	Standard View	Ş2,49	

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."

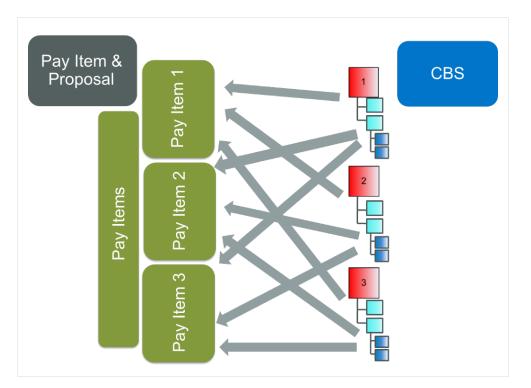
In a locked approach, level one cost items are automatically created and assigned to pay items. This locked approach works well when pay items adequately represent the work plan. Subordinate cost items inherit the pay item assignment of superior cost items.



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 Basis	Minority Setup	Fuel Cost	Job Tracking	Job Folder Tags	Competitors	Pricing	1
Standard S	Shift Arrange	ments	-Standard Wa	age Rate Composite	Rule	s				
Pay Hou Shi	urs per Shift rs per Shift: fts per Day: s per Week:	8.00	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	ice Precision: anges Log y Checking ructure at Level:	2 0 Change UM / Ma Change Days	an-Hour	

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.

CBS Position Code	Description	+	– Fill Down
	JOB	-11	-
+	Prime Bond	8	Link this field to Excel
+	Price % Add-On	CD .	<u>U</u> nLink from Excel
+	Job Financing	→	Indent
+	Job Management & E	qu 📥	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	-	

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	Ex	ecution	System	Actions	More Actions
Fill D	own	-	🗸 🖂 🖉	ost Item		Assembly
Split		-		ubordinate (🔁 Subordinate Asser
Тодд	le Suspended		D	ependent Co	t Item	
					1	insert
) Reg	jister O			/		
Drag	; columns here	to group				Find: [Search For]
	CBS Position 🗎 Code	. D	escription			ecast)) Quantity
	+ 1	P	1obilization			1.00
\rightarrow	+ 2	•	learing & G	rubbing		10.00
	□ 3	ι	Inclassified	Excavation	1	50,000.00

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	A	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		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 f	Executio	n S	ystem	Actions	More Actions	
Fill D	own	\Rightarrow	×	• 🔤 Cos	t Item		Assembly	2
Split		-	8	- 🗐 s 🕫	ordinate C	ost Item	🔁 Subordinate Assen	nbly 🎦
Togg	jle Suspende	ed		🕂 Dep	endent Co	st Item		
t						1	Insert	
) Reg	gister 🛛							
Drag	; columns he	re to grou	up				Find: [Search For]	
	CBS Position Code	<u>.</u>	Descrip	tion			ecast D) Quantity	Unit of Measure
	+ 1		Mobili	zation			1.00	Lump Su
	+ 2		Cleari	ng & Gru	bbi <mark>l</mark> g		10.00	Acre
	■ 3		Unclas	ssified Ex	cav tion		50,000.00	Cubic Ya
→	+ 3.1		Exca	vation			50,000.00	Cubic Ya
	+ 3.2		Emba	ankment			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 Positio	n Code 🗎	Description	Forecast (T/O) Quantity	Unit of Measure
		ЈОВ	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		Mobilization	1.0) LS
2		Clearing & Grubbing	15.0) Acre
+ 2.3	1	Clearing	15.0	Acre -
+ 3		Excavation	50,000.0) CY
+ 4		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.

	e: Optional Code	e: Description:					Fore	cast (T/O) Qty:	Unit of Measu	re:	Unit Cost:	Total Cost:	Currency:	
- 3	202 0183	Unclassified E	cavation					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 Assig	nment: PI Line Numbe	er: PI Description:					[Cost Segment		Pay Quantity:	Cost Source:	Alternate:	
202.018		Unclassified Ex												
202 0 18	3 - 30	Unclassified Ex	cavation						Direct Cost	_	50,000.00	Detail 🔹	BASE	
Cost Ite	m Summary 🍃 Detail	: \$3.00 🛱 Plug	: \$0.00 💭	Quote : \$0.00	Allocation					E	mployment Setup			>
Cost Cat	egory	Unit Cost	Total Cost	Unadjusted Total Cost	Cost Adjustment Percent	ډ∢	Cost Adjustment Amount	Billing Unit Rate	Total Billing Amount	id il in		Type: Construction Ec	uipment Rate	
✓ Total		\$3.00	\$149,922.88	\$149,922.88	0.00		\$0.00	\$3.28	\$163,881.06	1	Description: Water Tr			
> L	abor	\$0.66	\$33,170.48	\$33,170.48	0.00		\$0.00	\$0.93	\$46,438.66	\$	Quantity (Less Waste):	Wast	e % d-on:	
> C	Owned Equipment	\$2.34	\$116,752.40	\$116,752.40	0.00		\$0.00	\$2.35	\$117,442.40	1	waste).			
	ented Equipment	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Quantity:	1.00 Producti Fa	vity ctor:	1
	upplies	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Cost Driver: Sd	ha di da		
	laterials	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Cost Driver: 50	hedule *		
	ubcontract	\$0.00	\$0.00	\$0.00	0.00		\$0.00	\$0.00	\$0.00		Employment Cost			
	ees Ilowance	\$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		Unit Cost: \$29	.60 Total Cost:	\$1,302.40	
	lowance Custom Category 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	\$0.00	\$0.00	ΗE	Maintenance Labor Cost			
C	Indefined										Unit Cost: \$0	.00 Total Cost:	\$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.

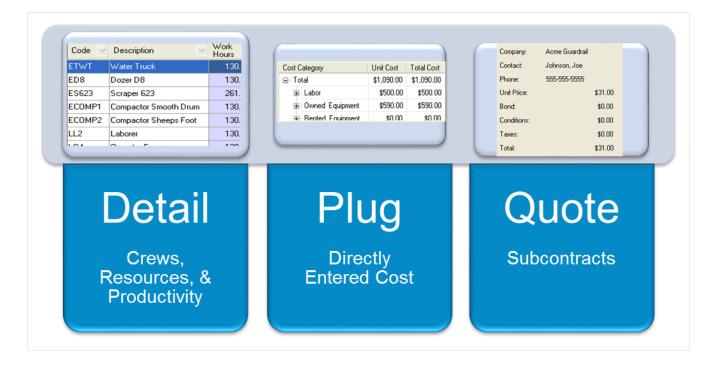
CBS Code:	Optiona	l Code:	Descr	ption:			Forecast (T/O) Qty:	Unit of Measure:	Unit Cost:	То
2	400		WATE	R & SEWER			1.00	Each	 \$496,284.83 	
2.1	413(B)	0464		h RCP Culvert Class	s III		1,024.00		\$67.54	
I Assignment:	PI Line I	Number:	PI Des	cription:				Cost Segment:	Pay Quantity:	Co
413(B) 0464 🗎	60		36 Inc	h RCP Culvert Class	s III			Direct Cost	- 1,000.00	D
Cost Item Summary	/	<u>D</u> etail : \$6	7.54	₩ Plu <u>g</u> : \$0.00	♀ <u>Q</u> uote : \$0.00	Allocation		Business Overhead	I	
This cost item has Click the Next but				nate cost item and e	enter Details.			Direct Cost 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 Breakdow	n Structure (CBS)	Register	Cost Item R	ecord 🕲							
IS Code:	Optional Code:	Description	1:		Forecast (T/O) (Qty:	Unit of Measure:	Unit Cost:	Total Cost:	Currency:	
17	1200 0100	Toll Booth				1.00	Each	\$25,264.55	\$25,264.55	U.S. Dollar	
17.1	0220	Site Prepa	ation			1.00	Lump Sum	▼ \$3,664.55	\$3,664.55	U.S. Dollar	
Assignment:	PI Line Number:	PI Descript	ion:				Cost Segment:	Pay Quantity:	Cost Source:	Alternate:	
200 0 100	170	Toll Booth					Direct Cost	- 1.00	Detail -	BASE	_
ost Item Summa	ry 🕏 Detail : \$	3,664.55	🛱 Plug : \$2,500.0) 💭 Quote : \$	0.00 <u>A</u> llocation			Cost Item Setup			:
ost Category		Unit Cost	Total Cost					Default Pay Rules			
Total		\$2,500	.00 \$2,500.00						Scale 1: Scale	2: Scale 3:	
> Labor		\$0	.00 \$0.00					Composite Wage Sc	ale: 100.00 0.	00 0.00	
 Owned Eq 	uipment	\$0	.00 \$0.00					For every 8.00 ho	urs worked, pay 8.0	0 hours	
 Rented Ec 	uipment	\$0	.00 \$0.00								
 Supplies 		\$0	.00 \$0.00					-Default Shift Arrangeme			
 Materials 		\$0	.00 \$0.00					Work Hours per Shift:		ays per Week:	
 Subcontra 	ct	\$2,500						8.00	1.00	5.00	
> Fees		\$0	.00 \$0.00					Default Properties			
 Allowance 		\$0	.00 \$0.00					Account Co	de: 8000	1	
Custom Ca		\$0	.00 \$0.00						rve: Linear	•	
Undefined		\$0	.00 \$0.00					COSt Cu	Lincui	•	
Billing Rate		\$0	.00 \$0.00				-				
Billing Rate Ma	rkun	\$0	.00 \$0.00					💽 🔝 P 🕵	📚 📜 S		\approx

5.3.3.2 Detail Tab

	Code:	Optional C	ode: Description:		F	Forecast (T/O) Oty:	Unit of Measure:	Unit Cost:	Total Cost:	Currency:
								~		
÷	17	1200 0100	Toll Booth			1.00	Each	\$25,264.55	\$25,264.55	U.S. Dollar
	17.1	0220	Site Preparati	on		1.00	Lump Sum		\$3,664.55	U.S. Dollar
PI A	ssignment:	PI Line Nu	mber: PI Description	:			Cost Segment:	Pay Quantity:	Cost Source:	Alternate:
120	0 0 1 0 0 -	170	Toll Booth				Direct Cost	~ 1.00	Detail 👻	BASE
_	st Item Summa		Find: Search] <u>Q</u> uote : \$0.00 ed views: Pr	evious View	-	Cost Item Setup Default Pay Rules	Scale 1: Scale	e 2: Scale 3:
Dra	2	to group	Find: [Search	For] ···· Sav	ed views: Pr	evious View Waste		Default Pay Rules		e 2: Scale 3:
	Nu =	C	Assembly	Description	(Less Waste)	% Add-on	Qua	For every 8.00 ho	urs worked, pay 8.0	0 hours
÷	+ :	1 LL2		Laborer			3.00 E	Default Shift Arrangeme		
	+	2 LO1		Operator Class 1			1.00 E	Work Hours per Shift:		ays per Week:
	+	3 EG14G		Grader 14G			1.00 E	8.00	1.00	5.00
	+ •	4 ETWT		Water Truck			1.00 E			
	+	5 LT1		Teamster			1.00 E	Default Properties		
								Account Co		<i></i>
*								Cost Cur	ve: Linear	-
*										

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**.

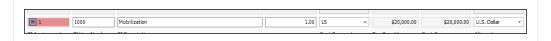
3. In the **Cost Source** drop-down field select **Plug**.

Pay Quantity:	Cost Source:	Alternate:
1.00	Detail -	BASE -
	M Description	h
t Item Setup	Detail	
fault Pay Rules	Plug	
Composite Wage Sci	Quote	
or every 8.00 ho	-	I
fault 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 1	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	ry1	\$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		-		Prod	uction	Qty Driven Hourly
	Row =	c	Resource	Description	Quantity (Less	Waste %	Quantity	Unit of	Product	w	Pay	Unit			iven Resources	Resources
	Nu =	C	Assembly	Description	Waste)	Add-on	Quartery	Mea	Factor	н	н	Cost		Cust	omize 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 Break	down 9	Structure (O	BS) Register	Cost It	em Record	0											
BS	Code:		Optional Cod	le: Descriptio	n:			Forecas	t (T/0)	Qty:	Unit o	of Measure:	Unit Co	st:	Total Cos	t:	Currency	:
	1		641 0100	Mobilizati	on					1.00	Lump	Sum +		\$11,909.51		\$11,909.51	U.S. Dol	ar
PI As	ssignme	nt:	PI Line Numb	er: PI Descrip	tion:						Cost	Segment:	Pay Qua	ntitv	Cost Sou	rce:	Alternate	:
641	0100	Ψ.	10	Mobilizati	on						Direc	t Cost 🚽		1.00	Detail	-	BASE	
Cos	t Item Su	immary	Deta	il : \$11,909.51	🛱 Plug : \$2	0,500.00	Quote : \$	500.00	<u>A</u> llocat	tion				Productio	n			×
Drag	columns	here to	group		Find: [S	earch For]	:	Saved view	vs: Pr	revio: v	liew		•					F Duratio
	≞		Waste % Add-on	Cost Driver	Quantity (Less Waste)	Productiv Factor	ity	Total Cost (Forec		Curre		Cost Curve	Work Hours Rules		Durat	ion Driven R <u>Customize</u>		Ri <u>(x</u>
÷	+	1		CI Duration	Wastej		1.00			U.S. Doll	lar	Employed C	rearca		D	ays:	10.00	•
	+	2		CI Duration			1.00	\$2,68	8.00	U.S. Doll	lar	Employed C			Sh	ifts:	10.00	
	+	3		CI Duration			1.00	\$6,27	2.00	U.S. Doll	lar	Employed C			Ho	ours:	80.00	
*															Man-Ho	ours:	80.00	
															Equip-Ho	ours:	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	columns here to	group					Fin	id: [Search F	or] …	Saved vie	ews: 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.

30.0	olumns here to gr	000		Find	: [Search For]	··· Saved vi	ews: Previous View	Ŧ
F	Resource 🛓	Description	Resource File Description		Unit of Measure	Productivity Factor	Default Quantity	Resource Type 🗎
-	⊢ LIW1	Iron Worker	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
-	⊦ LIW2	Iron Worker Foren	nan Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
-	F ∐1	Labor Apprentice	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
]-	⊦ LL2	Laborer	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
13	⊦ LL3	Labor Foreman	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
-	+ LMECH	Mechanic	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
-	+ LO1	Operator Class 1	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
-	⊦ LO2	Operator Class 2	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
-	⊦ LO3	Operator Class 3	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
-	⊦ LO4	Operator Foreman	Standard Labo	or Rate File	Hour	1.00	1.00	Labor Rate
	124							

- 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 Nu ⊨	Code	Resource Assembly	Description	Quantity	Unit of Mea
÷	+ 1	LL2		Laborer	1.00	Each
	+ 2	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	iearch 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.

-	is here to gro	oup		
Row Nu	≞Co	de	Resource Assembly	Descripti
0				12

5. Select a labor assembly, then select OK.

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

2			2000		Clearin	g & Grubbir	g							
2.2					Gradin	g								
I Assig	nmen	t: I	PI Line	Number:	PI Desc	ription:								
2000		~	2		Clearin	g & Grubbir	g							
C <u>o</u> st Ite	t Item Summary 🍃 Detail : \$0.00 🕴 Plug : \$0.00 💭 Quote : \$0.00 Allocation													
rag colu	umns l	nere to	group	1										
Roi Nu.			Code			Resource Assembly		Description			Quantity (Less Waste)	Waste % Add-or	Qua.	
→ -		1				CGRADE		Grading Crew						
		Row Num.	=	Code	Resour Assemb		Description	I	Quantity (Less Waste)	Waste % Add-on	Quan	Unit of Measure	Productivity Factor	
	\rightarrow		1	ETWT	CGRAD	E	Water True	:k			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	L04	CGRADE	F	Operator F	oreman			1.00	Each	1.0	

- 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.



H.	2		2	2000		Clearin	ng & Grubbir	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 Seg	ment		Pay Quantity:	Cost Source:	Alte
200	0		- 2	2		Clearin	ng & Grubbir	ng				Direct C	ost	~	6.67	Detail -	BAS
Cos	st Iter	m Su	mmary	2	<u>D</u> etail : \$:	1,896.21	🛱 Plug	; \$0.00	Quote : \$0.00	<u>A</u> llocation				Prod	uction		
Drag	, colu	imns	here to	group		Find:	Search For]	Saved views:	Previous View		•					Qt
	Rov Nu.			Code			Resource Assembly		Description			Quantity (Less				n Driven Resources Customize Display	R
÷	-		1	1			CGRADE	Grading Cr		Grading Crew		Waste)			Day		
			Row Num	1	Code	Resour		Description	1	Quantity (Less Waste)	Waste % Add-on	Quar			Shif		
	-	→	Num	1	ETWT	CGRAE	·	Water Tru		(LESS WOSTE)	Aug-on		- 1		Hou	rs: 80.00	
		7		2		CGRAL	-	Laborer	CK						Man-Hou	rs: 320.00	
							-						11		Equip-Hou	rs: 200.00	
				3	LO3	CGRAE	-	Operator (,				
		4		4	EG14G	CGRAE)E	Grader 14	G			•			Acre/Da		
		-											_	4	A (ML)	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

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!

3

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:		-	
	1		

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.

Cost Item Setup		
Default Pay Rules		
	Scale 1: S	Scale 2: Scale 3:
Composite Wage Sc	ale: 80.00	20.00 0.00
For every 10.00 ho	urs worked, pay	10.00 hours
Default Shift Arrangeme	nts	
Work Hours per Shift:	Shifts per Day:	Days per Week:
month found per chiner		

- 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.

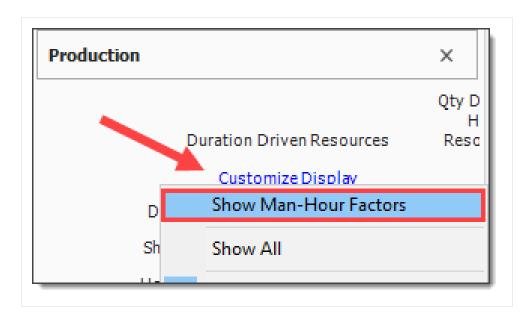
TIP Man-Hour Factors affect both Labor and Equipment Hours.

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

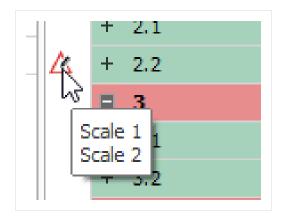
You may have noticed when you made changes on the Cost Item Setup tab, that the fields you changed and the Cost Item Setup tab became highlighted, indicating they were altered from their original state.

Default 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 Week:
8.00	1.00 5.00
Default 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
Suspend:	Change Days

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.

) FBi	getol [Search i	For] ··· Sav	ed views: Previous View	w -	Cost	t Category	Scale 1 S	cale 2
					¥ 1	Total	\$28.00	\$40.8
	Row	Code	Resource Assembly	Description		> Labor	\$28.00	\$40.8
	NU		Assembly			 Owned Equipment 	\$8.88	\$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.
*	\mathbf{i}					> Subcontract	\$0.00	\$0.0
						> Fees	\$0.00	\$0.0
		•				> Allowance	\$0.00	\$0.0
						Custom Category1	\$0.00	\$0.
						Undefined	\$0.00	\$0.0
						Billing Rate	\$28.00	\$40.8
						Billing Rate Markup	\$0.00	\$0.0
					•	Billinn Rate Markun %	0.00	0 r

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 Jo	ob - Estimate	
File	Setup	Estimate	Quote F	Price	Execution S	System	Actions		
\mathbf{K}		📃 Display F	Parent Informa	tion	🏂 Highlight Unique (D	Delta) Reso	ource Fields	🛓 Edit Resou	rce P
	1111	🧰 Display B	Billing Rate		Highlight Unique (D	Delta) Cost	t Item Fields	🔚 Insert Sub	ordin
Split	Default Data Blocks							🔏 Break Cost	t 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	Apphalt Co	nerat	a Hat Mix Tupa 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.

orag	g columns here	to group						Find: [Sea	rch For]	
	Row Number	-	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	N	Loader 988	1.00	Each	\$73.75		
0				63						

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	LO1		Operator Clas	1.00	Each	\$29.94	A Description		1
	+	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	g columns he	re to group							Find:	[Search For]		Saved views: P
	Row Number	<u>-</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.

cos	t Breakdown	Struc	cure (cus)	Register	cost ne	m Record	O COSCIO	em Record											Ť
CBS	Code:	Optio	inal Code:	Description							Forecast (T/O) Qty:	Unit of N	leasure: Unit Cost:	1	Fotal Cost:	C	urrency:	
	2.2			Clearing								50.00	Cubic Ya	rd - \$1,	156.70	\$57,	835.17 L	J.S. Dollar	-
PIA	signment:	PI Lin	e Number:	PI Descripti	ion:								Cost Seg	ment: Pay Quantity		Cost Source:	A	Iternate:	
201	0102 -	20		Clearing &	Grubbing								Direct O	ost -	50.00	Detail	* E	BASE	•
Cos	t Item Summar	y	<u>D</u> etail : \$1	,156.70	₩ Plu <u>g</u> : \$0.0		uote : \$0.00	Allocation						Production					×
Drag	columns here	to grou	ıp.				Find: Sea	rch For]	Saved	views: Previo	us View		•				Facto ration Dri	ven H	lou
	Row		Code	Resourc		otion	Quantity	Unit of Mea	Unit Cost	Work Hours	Pay Hours	Waste %	0 D	Duration	Driven Re		Resou (x 1.20		our
												Add-on		Days		40.00			48.
g.	+		LL2		Labor		0.50		\$29.00		240.00		C	Shifts	<u> </u>	40.00			48.
	+		LO1			tor Clas	1.00		\$29.94		480.00		C						
	+	3	EL988		Loade	988	1.00	Each	\$73.75	480.00	480.00		C	Hours	-	400.00	480	.00 4	80.
*														Man-Hours		400.00	480	.00 2	40.
														Equip-Hours		400.00	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.

CBS	Code:		Optional Code:	Descriptio	on:						F	precast (T/O) Qty:	Unit of Mea	asur
	2.2			Clearing								500.0	0 Cubic Yard	
PI A	ssignmer	nt:	PI Line Number	PI Descrip	otion:								Cost Segm	ent:
201	0102		20	Clearing	& Grubbing								Direct Cost	t
Cos	t Item Su	ımmar	y 🍃 Detail :	\$106.39	₩ Plug : \$0.00 (Quote : \$0.00	Allocation]						
Drag	columns	here	to group					Find:	Search For]	Save	d views: Pro	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
<u>/</u>	+	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		

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>

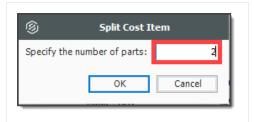
• Right click on a new Cost Item under Guardrail Type 2, and select **Split by Cost Item**. You can use this option if there at least two types. If not, you will get this pop-up:

(B) Attention		×
or The Cost Item '5' cannot two cost types.	be 'Split by Cost Type' because it does	not contain at least
		.0
o Add-On	PRICE % ADD-ON	1.0

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 Compar	toon & Award - Cost	Rema	Cost Item Reco										
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. Del	
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		8432	
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				Factor		1.00
٠																Fedor 3	k i	1.00
																Fector I	k .	1.00
				-									Ŀ	- B - D - 1	2	2.2	5. 2	- 25
1														05 0	an cal	< 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	Suspend	Forecast (T/O) 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 Strue	ture (CBS) Register 🛛									
ag o	olumns here to grou	ip.						Find:	[Search For] ····	Saved views: Cost Iter	n Adjustment View 👻
P	BS osition 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	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						
1	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**.

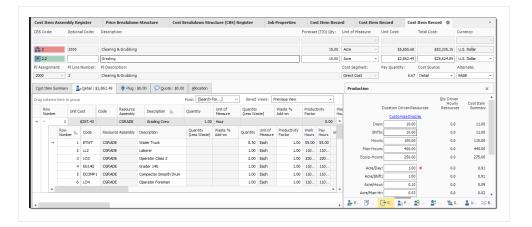
A new Saved view called **Cost Item Adjustment View** has been added to the Cost Breakdown Structure.

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

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 🗎 Code	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

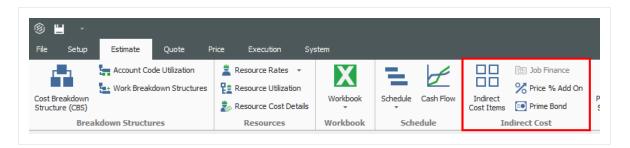
2. User-Defined Indirect Cost Items: Any cost item you create in the CBS Register that is not assigned to a pay item is considered indirect cost.

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.

CO	st Breakdown	Str	ucture (CE	35) Register	Cost Item Reco	rd ©												-
CBS	Code:	Op	tional Code	: Description:						Forecast (T/	0) Qty:	Unit of M	easure:	Unit Cost:		Total Cost:	Currency:	
														- v				Ŧ
														Ψ.				
		30	B MANAGE	ME Job Managemen	t & Equipment						1.00	Lump Sur	n	÷ \$157	,096.28	\$157,096.28	U.S. Dollar	
PI A	ssignment:	PIL	.ine Numbe	r: PI Description:								Cost Seg	ment:	Pay Quantit	y:	Cost Source:	Alternate:	
	~											Job Over	head	~	1.00	Detail +	BASE	
Co	st Item Summar	у	🤷 Detail	: \$157,096.28	Plug : \$0.00 \$	⊃Quote : \$0.0	0 <u>A</u> llocation	<u> </u>					_	Production				×
Dra	g columns here	to gr	oup			Find:	[Search For]	9	Saved views:	Previous View		-				D	Factored uration Driven	C
	Row Number 🗎		Code	Description	Quantity	Unit of Measure	Unit Cost	Work Hours		Waste % Add-on	Quantity (Less Wa		Produ Facto	D		Driven Resources	Resources	
÷	+	1	LSS 💄	Project Superintend.	1.00	Each	\$42.53	800.00	800.00					Davs:	Custo	100.00	(x 1.0000) 100.0	
	+	2	LSSEC	Secretary	1.00	Each	\$20.41	800.00	800.00					Shifts:		100.00	100.0	
	+	3	LSPE	Project Engineer	1.00	Each	\$51.03	800.00	800.00					Hours:		800.00	800.0	
	+	4	ETST	Service Truck	1.00	Each	\$50.60	800.00	800.00					Man-Hours:		2,400.00	2,400.0	
				Pickup	2.00	Each	\$15.90	1,600.00	1,600.00								1 - C	
	+	5	EIPU	(lettep										Equip-Hours:		2,400.00	2,400.0	

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

Cos	t Break	down Stru	ucture (CBS)	Register	Cost Item Re	ecord (lost I	tem Record 🛛 🕲									•
CBS	Code:	Opt	ional Code:	Description	:		Fo	recast (T/O) Qty:		Unit of Mea	sure:		Unit Cost:	Total Cost	:	Currency:	
												Ŧ					
		105	MANAGEME	Job Manag	ement & Equipment			1.00	1	Lump Sum			\$0.00		\$0.00	U.S. Dollar	
_	signme		ine Number:	PI Descripti				1.00		Cost Segme	nt:		Pay Quantity:	Cost Sourc		Alternate:	
		Ŧ								Job Overhe	ad	Ŧ	1.00	Detail	•	BASE	•
Cos	t Item S	ummary	<mark>⊉</mark>	.00 4 P	lug:\$0.00	Quote : \$0.00	Allo	ocation			[Em	ployment Setup				×
Drag	columns	shere to gr	oup Fi	nd: [Search	For]	Saved views:	Pre	vious View		-	٦	Id	dentification				
		Code	Resource A	ssembly	Description	Quantity	/	Unit of Measure	Jnit		Wo Hou	D	Code: Type:				
→													Quantity (Less Waste):		Wast Ad	e % d-on:	
													Quantity:		Product	ivity actor:	
													Cost Driver:				
											1	-		0			*

4. Here you will add a **labor resource** by clicking in the Code column and selecting the **icon**.

-	Item Su	· · · ·	-	tail : \$0.00	♥ Plug : \$0.00 🔎	0 <u>0</u> uote : \$0.00	-			
Drag o	columns	here to g	roup	Find:	[Search For] ····	Saved views	: Previous \	/iew	•	
		Code		Reso Asse	Description	Qua	Unit of Meas	Unit Cost	Work Hours	Pro Fa
+	+ 1	LSSEC			Secretary	1.00	Each	\$21.97	0.00	
<u>4</u> +	+ 2	LSSUPT	2		Project Superintend	1.00	Each	\$45.78	0.00	
*										

- 5. Select the **Production** tab.
- 6. Enter a **numeric value** in the Days field.
 - This represents the length of the job

Produ	iction		
	C)uration Driven Res	ources
		Customize Disp	lay
	Days:	70.00	•
	Shifts:	70.00	

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.

	GE	ENERAL EXPE	Gen	eral Exp	pense				
PI A	ssignment: PI	Line Numbe	r: PIDe	escripti	ion:				
	Ŧ								
Co	st Item Summary	🍃 <u>D</u> etail	: \$0.00	₩ P	ʻlu <u>q</u> : \$ 0.00	<u> </u>	0.00	Allocation	
Dra	g columns here to g	roup							
	Row Number 들	Code	Resourc Assembl		Description		Quar (Less	itity Waste)	Waste % Add-on
	+ 1				General Off	ice Supplies		0.00	0.00
\rightarrow									

- 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	st Item Summary	💁 Detai	: \$1,000.00	🟺 Plug : \$0.00 🖓 Quo	te : \$0.00 <u>A</u> llocati	on								Reso	ource Employment Breakdown		×
rag	columns here to g	group					F	ind: [Search	For]	Saved views:	Previous V	iew	-	Cost 0	Category	Scale 1	
	Row .		Resource		Quantity	Waste %		Unit of	Productivity	Work	Pay		Total Cost	✓ To	otal	\$1,000.00	4
	Number	Code	Assembly	Description	(Less Waste)	Add-on	Quantity	Measure	Factor	Hours	Hours		(Forecast)	>	Labor	\$0.00	
•	+ 1	1		General Office Supplies	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	
															Undefined Supplies	\$1,000.00	
														>	Materials	\$0.00	
													\$1,000.00	L.	C.brootract	40.00	
														20 .	. 🗒 a 🔄 a 🎰 a 🏦 a 🏥 a	≞u ≗u >	а.

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

Action	ns More Actio	ons	
	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).

Cos	st Breakdown Stru	octure (CBS) Register O Pay Item	& Proposal Register		
Drag	g columns here to gro	зир			
	CBS Position Code	Description	Cost Segment	Pay Item Assignment	Pay Item Position Code
		J0B			
1	+	Prime Bond	Business Over	•	
	+	Price % Add-On	A Description		
	+	Job Financing	Business Overhea	d	
	+	Indirect Cost Escalation	Direct Cost		
	+	Direct Cost Escalation	Job Overhead		
	+	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 0 183	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
		JOB	20.00	Mile
	+	Prime Bond	1.00	Lump Sum
	+	Price % Add-On	1.00	Lump Sum
÷	+	Job Financing	1.00	Lump Sum
	+	Job Management & Equipment	1.00	Lump Sum
	+	General Expense	1.00	Lump Sum

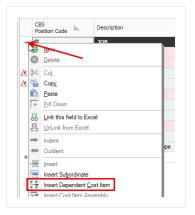
- 5. Right click on the selection and select **Delete**.
- 6. Select **Yes** to confirm you want to delete the selected cost items.
 - Your indirect cost items are now deleted

6.2.2.3 Prime Bond

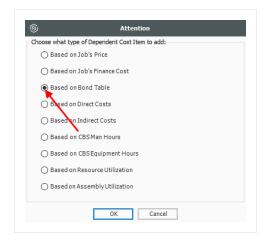
The following steps walk you through adding and defining your prime bond for the job.

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 or cardow	n Structure (CBS) I	regiated	Bond Cost Item Record			
CBS Code:	Description: Prime Bond				Т	otal Cost: \$0.00
Dependency		Bond Table	e			×
Cost is calculate based on Target Price.			ole Name: No Bond Required		- Edit Name	New
		From	<u>=</u>	То	Cost per \$1,000	
						*

7. Use the Table Name drop-down to choose **EXAMPLE: GENERAL CONSTRUCTION**

Cost Breakdown	Structure (CBS) F	Registe	r Bond Co	st Item Record				
CBS Code:	Description: Prime Bond							al Cost 3,681.94
Dependenc <u>v</u>		Bond	l Table					×
		Ide	ntification					
Cost is calculated based on Target	1		Table Name:	EXAMPLE: GENERAL CONSTRUCT	ON	€ _K	Edit Name	New
Price.		Las	t Maintenance:	# Table Name		45		
			c riuncendireer	EXAMPLE: BRIDGE				
		Bo	nd Rate Layers	EXAMPLE: EARTHWORK				
			From	EXAMPLE: GENERAL CONSTRUCTI	ON	þ		
		\rightarrow		EXAMPLE: PAVING			10.80	0000
				EXAMPLE: PIPE			8.20	0000
				EXAMPLE: UNDERGROUND UTILIT	IES		7.00	0000
				No Bond Required			5.00	0000
				×		.::	4.80	0000
				\$20,000,000.01	\$40,000,000.00		3.50	0000

- 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	
= 1	Classing & 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.

st Breakdown Struc	ture (CBS) Register O								
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. Dollar	5,492.2
+	Prime Bond	PRIME BOND	1.00	Lump Sum	\$42,305.50	\$42,305.50		U.S. Dolar	
+	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	30.00	Age	\$3,918.50	\$39,184.97		U.S. Dollar	80.0
II 1.3	Unclassified Excavation	202 0 183	50,000.00	Cubic Yard	\$4.68	\$233,915.81		U.S. Dollar	291.6

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.

106	ntification				_
	Table Name:	EXAMPLE: GENERAL CONSTRUCT	CTION O	* Edit Name De	lete
last	t Maintenance:	A Table Name			_
	ernomeen.	EXAMPLE: EARTHWORK			
Bon	d Rate Layers	EXAMPLE: GENERAL CONSTRUC	CTION		
	From	EXAMPLE: PAVING		\$1,000	
÷		EXAMPLE: PIPE		10.80	0000
		EXAMPLE: UNDERGROUND UTIL	LITIES	8.20	0000
		No Bond Required		7.00	0000
		×		5.00	0000
		\$10,000,000.01	\$20,000,000.00	.:: 4.80	0000
		\$20,000,000.01	\$40,000,000.00	3.50	0000
		\$40,000,000.01	\$80,000,000.00	3.00	, 0000

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
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
O Based on Direct Costs
◯ 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. 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 Pi	Price % Add-On Record			
CBS Code:	Descrip Price %	otion: Add-On				
Description	Dependenc <u>y</u>					
Drag columns l	nere to group					
Descriptio	on		Rate	Account Code		
Office Ov	/erhead		4.00	£		
*						

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 0	Code:	Descript	ion:			
			Direct C	ost Add-On			
Des	scription	Depe	endenc <u>v</u>	Cost Categorization	Allocation		
Drag	g columns h	nere to	group		-		
	Descriptio	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	lost:	A
				\$1	0.00	BASE
Cost	Breakdown					
Cost C	Category	Subject Cost	Rate		Cost	t
✓ To	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

		Direc	t Cost Add-On				
<u>D</u> es	scription	Dependency	Cost Categorization	Alloca	tion		
Drag	g columns l	here to group					
	CBS Position	Code ៉	Description		Include	Currency	Op Co
	1		Mobilization		~	U.S. Dollar	10
/♣	2.1		Clearing		\checkmark	U.S. Dollar	
<u>A</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		~	U.S. Dollar	
	4.2		Excavate-Install-Backfil	Pipe	\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.

(Affacts displayed items only) Define the Subject Cost using column filtering (all current and future items that match the filter will be included automatically)	Toggle Include All	O Define the Subject Cost by viewing all available items and clicking the Include boxfor the desired items	1
(Affects displayed tens only)	(Affects displayed items only)	Define the Subject Cost using column filtering (all current and future items that match the filter will be included automatically)	

- 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.

Cos	t Breakdown			
Cost	Category	Subject Cost	Rate	Cost
¥ 1	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
	East	£262.09	0.00	¢0.00

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
+	Price % Add-On	PRICE % ADD-ON
+	Job Financing	FINANCE EXPENSE
+	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
+	General Expense	GENERAL EXPENSE
+	Direct Cost Add-On	DIRECT COST ADD-ON
+ 1	Mobilization	641 0 100
+ 1 + 24.1.2		
+ 24.1.2 🗸	Mobilization	
+ 24.1.2 V + 25	Mobilization Day Two	641 0100
+ 24.1.2 ▼ + 25 + 26	Mobilization Day Two Prime Bond	641 0 100 PRIME BOND
+ 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 + 25 + 26 + 27 + 28 + 29 	Mobilization Day Two Prime Bond Price % Add-On Job Financing	641 0100 PRIME BOND PRICE % ADD-ON FINANCE EXPENSE
+ 24.1.2 ▼ + 25 + 26 + 27 + 28	Mobilization Day Two Prime Bond Price % Add-On Job Financing Indirect Cost Escalation	641 0100 PRIME BOND PRICE % ADD-ON FINANCE EXPENSE INDIRECT COST ESCALATION
+ 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	641 0100 PRIME BOND PRICE % ADD-ON FINANCE EXPENSE INDIRECT COST ESCALATION DIRECT COST ESCALATION
+ 24.1.2 + 25 + 26 + 27 + 28 + 29	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	iit 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	ost	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
			1	Desc	ription	Quant	ity	Unit of Measure	Work Hours	Pay Hours	Unit Co	ost	Total Cost (Forecast)	
	ل	+	1	Field	Office Clerk	1.	.00	Each	4.00	4.00	\$38.	00	\$152.00	
	∆	+	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	\$905.0
				Desc	ription	Quant	ity	Unit of Measure	Work Hours	Pay Hours	Unit Co	ost	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	Jp Truck	1.	.00	Each	80.00	80.00	\$9.	75	\$780.00	
+	5.4				Misc. Expenses				1.00	Each			\$2,765.00	\$2,765.0
+	5.5				Supervision				1.00	Each			\$4,769.00	\$4,769.0

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.

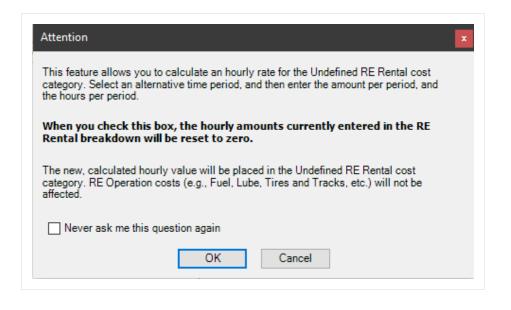
- 5. On the Resource Rate Register, click the **Rented Construction Equipment** tab.
- 6. Right click on one of the line items and select **New** to add a new resource.

	_				irce Rate Register			
A	ctions		• •	<u> </u>				
All	Labor	Const	ruction Equipment	Rented Cons	struction Equipment	Ins	talled Material	Installe
Dra	g columns ł	nere to gro	pup	Find	: [Search For]		Saved vie	ws: Pre
	Resource Code	1	Description		Resource File Description		Unit of Measure	Producti Factor
\rightarrow	+ RCON	1P	Rental Co	New	Rat	e	Hour	
	+ RLT		Light Tow	<u>N</u> ew	Rat	e	Hour	
	+ RPC		Plate Com 📮	Сору	Rat	e	Hour	
	+ RPU		Rental Pickup		Standard Rental Rat	e	Hour	

- 7. Enter a Resource Code of **RJT** for the Rented Construction Equipment Resource.
- 8. In the Description field, type in a **description**.

2	1		Rented	Cons	truction	quipment Rate Record	- Training Job —		×
Co	de: '	* RJT	Descript	ion:	Job Traile				
S	etup	🔱 Charge Rate	Qu	iote	Billing R	te			
С	ost C	Category Breakdown		Amo	unt	Fuel			
~	То	tal			\$0.00	Fuel Type	Consumption Rate		
	>	Rented Equipment			\$0.00	<fuel plugged=""> +</fuel>	0.00 Unit/Hour		
	>	Fees			\$0.00	Fuel Acc		5	1
		Undefined			\$0.00		and consumption is		
						Apply of measure for the Job Prope cost defined i Unique S Mainter Autor Man-	offer this help again		
							Maintenance Labor resource	s:	E-4
						Ose job default:	CMAINT		1,40 1,00 1,00
						O Use:			100
						Maintenance Man-Hours p equipment utilization h			0.00
						Non-Hourly Period Cha	rge Rates Period Charge Rates for RE	Rental	

- 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.

Non-Hourly Period	charge naces
Calculate Non-Ho	urly Period Charge Rates for RE Rental
Period:	Weekly -
Amount Per Period:	\$1,000.00
Hours Per Period:	40.00

- 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	ote	Billing I			
Cost Ca	ategory Breakdown		Amount				
✓ Tot	al		\$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.

🧟 <u>D</u> etail	: \$30,240.0	00 🛱 Plug : \$0	.00 💭 Quote	: \$0.00 <u>A</u> lloca	ation					Production		×
group			Fi	nd: [Search For.]	Saved views: Pr	evious View	-]		Factored Duration Driven	
Code		Description	Quantity	Unit of 🛓	Unit Cost	Productivity	Work	Pay Hours	Wast %	Duration Driven Resources	Resources	
ਪਾ		Job Trailer	2.00	Each	\$27.00	1.00	1,120.00	1,120.00	Add-	Customize Display Days: 70.00	<u>(x 1.0000)</u> 70.00	
		Job Haller	2.00	LUCI	ý27100	2100	1,120100	1/120100		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	Fir	nd: [Search For	.] Sav	ved views:	Prev	ious View	•
	Row Num	Code	 	Description	Quantity	Unit of Mea		Unit Cost	Productivity Factor
1	+ 1			Electricity	1.00	Lump Sum	Ŧ	\$ 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	t Item Sun	nmary	Detail	: \$1,500.0	0 🖊 Plug : \$0.	00 📮 Quote :	: \$0.00 <u>A</u> lloca	tion		Res	ource Employment Breakdown	>
Drag	columns h	ere t	group Find:	[Search Fo	r]	Saved views: Pr	evious View	•]	Cost	Category	Scale 1
									_	▼ T	otal	\$1,500.00
	Row		Code		Description	Quantity	Unit of	Unit	Proc	>	Labor	\$0.00
	Num					,	Mea =	Cost	Fac	>	Owned Equipment	\$0.00
÷	+	1			Electricity	1.00	Lump Sum	\$1,500.00		>	Rented Equipment	\$0.00
*										>	Supplies	\$0.00
									<u> </u>	>	Materials	\$0.00
										>	Subcontract	\$0.00
										>	Fees	\$0.00
										>	Allowance	\$0.00
											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

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:										т	otal Co	st:	A
		Direct Co	ost Add-	On]	:	\$8,845.	47 BASE	
<u>D</u> esci	ription	Dependency	Cost C	ategorization	Allocation			c	ost	Breakdown						
Drag d	Findm	[Search For]		Saved views:	Previous V	iew	•	C	ost C	ategory	Subject	Cost	Rate		Cost	
						Total Cost			То	tal	\$130,	759.83	2.25		\$2,948.4	49
[Descript	ion		=	Curre	(Forecast)		9	>	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		\$0.0	00
→ []	Safety 8	Training			U.S. Dollar		\$2,948.49		>	Rented Equipment		\$0.00	0.00		\$0.0	00
*									>	Supplies		\$0.00	0.00		\$0.0	00
- L									>	Materials	\$3,	276.00	0.00		\$0.0	00
									>	Subcontract		\$0.00	0.00		\$0.0	00
									>	Fees	\$	262.08	0.00		\$0.0	00
									>	Allowance		\$0.00	0.00		\$0.0	00
										Custom Category1		\$0.00	0.00	->	\$0.0	00
										Undefined		\$0.00	0.00	->	\$0.0	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

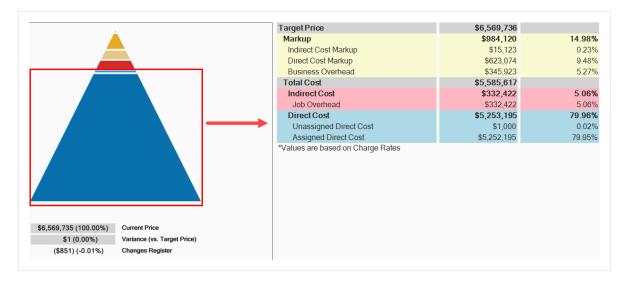
7.1 JOB MARKUP (PROFIT)

On the Data Map ^{ADDATA 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.

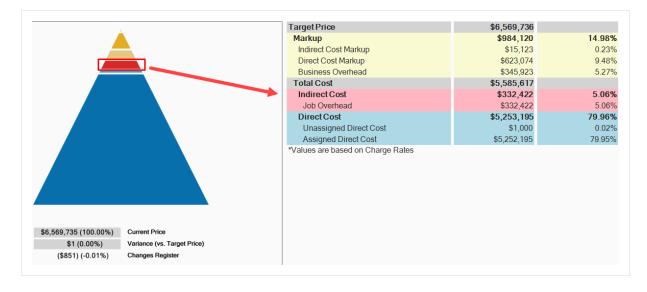
7.1.1 Target Price

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.

	Target Price	\$6,569,736	
	Markup	\$984,120	14.98%
	Indirect Cost Markup	\$15,123	0.23%
	Direct Cost Markup	\$623,074	9.48%
	Business Overhead	\$345,923	5.27%
	Total Cost	\$5,585,617	
	Indirect Cost	\$332,422	5.06%
	Job Overhead	\$332,422	5.06%
	DirectCost	\$5,253,195	79.96%
	Unassigned Direct Cost	\$1,000	0.02%
	Assigned Direct Cost *Values are based on Charge Rates	\$5,252,195	79.95%
0%) Current Price			
urrent Price ariance (vs. Target Price)			

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	14.98%
		Indirect Cost Markup	\$15,123	0.23%
		Direct Cost Markup	\$623,074	9.48%
		Business Overhead	\$345,923	5.27%
		Total Cost	\$5,585,617	
		Indirect Cost	\$332,422	5.06%
		Job Overhead	\$332,422	5.06%
		DirectCost	\$5,253,195	79.969
		Unassigned Direct Cost	\$1,000	0.02%
		Assigned Direct Cost	\$5,252,195	79.95%
		*Values are based on Charge Rates		
6,569,735 (100.00%)	Current Price			
6,569,735 (100.00%) \$1 (0.00%)	Current Price Variance (vs. Target Price)			
\$6,569,735 (100.00%) \$1 (0.00%) (\$851) (-0.01%)				

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

Overview – Price Breakdown Structure

Overview – Price Breakdown Structure (continued)

	Name	Definition
		Price that this amount represents.
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.

escription	Assigned	Unassigned	Total	% of Target	Markup Analysis	Price Status	Cost Source	Resource Utilization	Minority Goals	Subcontract Status	Vendor Status	0		
Price Breakdown Structure														
✓ ▲ Target Price	\$5,252,19	\$1,317,54	\$6,569,73	100.00	Markup Analysi	s (based on B	id Quantities a	nd Charge Rate Mari	cup)					
🗸 🛕 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 (Ta	roet Price - Mari	(un)		17.62				
A Indirect Cost Markup		\$15,122.66	\$15,122.66	0.23				(ap)						
📥 Direct Cost Markup		\$623,073.66	\$623,073.66	9.48	Markup as % of	All LaborCos	ts			122.70				
✓ ≜ Business Overhead	\$0.00	\$345,923.30	\$345,923.30	5.27	Markup as % of	All Direct Lab	or Costs			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 Li	abor Costs			898.32				
Indirect Cost Escala	\$0.00	\$2,131.11	\$2,131.11	0.03	Markup as % of	All Owned Ec	uipment and Re	nted Equipment Costs		101.26				
B Direct Cost Escalation	\$0.00	\$15,048.80	\$15,048.80	0.23	Markup as % of	All OF Owner	which and DE Day	tal Costs		239.23				
Business Overhead	\$0.00	\$0.00	\$0.00	0.00						237.23				
V 🛕 Total Cost	\$5,252,19	\$333,421.97	\$5,585,61	85.02	Markup as % of	All OE Opera	tion and REOpe	ration Costs		177.02				
🗸 📥 Indirect Cost	\$0.00	\$332,421.97	\$332,421.97	5.06	Markup as % of	All Materials	Costs			28.61				
🗸 📥 Job Overhead	\$0.00	\$332,421.97		5.06										
Prime Bond	\$0.00	\$47,148.68	\$47,148.68	0.72	Markup as % of	All Supplies (Costs		3	3571.02				
Indirect Cost A	\$0.00	\$5,888.67	\$5,888.67	0.09	Markup as % of	All Subcontra	ict Costs			900.51				
Direct Cost Add	\$0.00	\$104,088.34	\$104,088.34	1.58	Markup per Mani					\$36.80				
Job Overhead I		\$175,296.28		2.67	Markup per Man	lour				\$30.80				
V 📥 Direct Cost	\$5,252,19		\$5,253,19	79.96	Markup per Equi	oment hour				\$61.84				
Direct Cost Items	\$5,252,19	\$1,000.00	\$5,253,19	79.96										
													Paf	(4) resh Summary Data

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
🗸 🛕 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 Indiv Top la	Amount g Amount	Pay Item Prices us ed Cost/Billing An pries ries	-					
Using Keep Categor	Pay Item by g 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.

Descriptio	n			Assigned	Unassigned	Total	% of Target
🗸 🔺 Pri	ice Br	eakdo	wn Structure				
- 🗸 👗	Tar	get Pri	ce	\$5,252,19	\$645,755.99	\$5,897,950.68	100.00
~	\mathbf{A}	Marku	р	\$0.00	\$315,692.95	\$315,692.95	5.35
	v]	💧 Ta	rget 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
	Y]	🗎 Bu	siness 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
~		Total (Cost	\$5,252,19	\$330,063.05	\$5,582,257.73	94.65
	¥ .	📥 In	direct 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
	× ,	Dir	ect Cost	\$5,252,19	\$1,000.00	\$5,253,194.68	89.07
		- 1	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

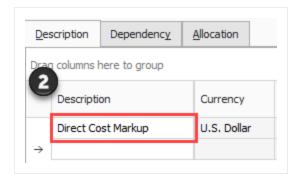
The following steps walk you through how to add profit as markup on the Direct Cost Markup record.

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 E	Breakdown Structure		
🗸 🔺 Ta	rget Price	\$6,568,772.37	100.00
	Target Profit	\$656,877.24	10.00
1	🛕 Direct Cost Markup	\$623,140.54	9.49
-	🛕 Indirect Cost Markup	\$33,736.70	0.51
× 🔺	Total Cost	\$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

C	ost	Breakdown					
Co	st C	Category	Subject Cost	Rate		Cost	
¥	То	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	\$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

Description		Cost	% of Target	
🗸 🔺 Price Brea	akdown Structure			
🗸 🔺 Targe	t Price	\$248,161.82	100.00	
🗸 🔺 Ti	arget Profit	\$25,249.17	10.17	
	Indirect Cost Markup	\$9,058.15	3.65	
	Direct Cost Markup	\$16,191.02	6.52	
V 🔺 T	otal 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.

rice Status	Cost Source	Resource Utilization	Minority Goals	Subcontract Status	Vendor Status
'n	rice Status	rice Status Cost Source	ice Status Cost Source Resource Utilization	ice Status Cost Source Resource Utilization Minority Goals	rice Status Cost Source Resource Utilization Minority Goals Subcontract 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 /	kup Analysis Price Status Cost Source		rice Status Cost Source Resource Utilization Minority Goals Subcontract Sta		tus Vendor Status						
Cost	Source Analysis	tities)									
		Detail		Plug	*	Τ	Quote		т	otal	
		Amount	%	Amo	unt %	Τ	Amount	%	Ar	mount	%
- 1	Direct Cost	\$5,156,491.67	97.95	\$64,60).00 1.2	3	\$43,200.00	0.82	\$5,264	,291.67	100.00
	Indirect Cost	t \$638,694.52	98.62	\$5,33	8.76 0.8	2	\$3,570.19	0.55	\$647	,603.46	100.00
	Tota	\$5,795,186.19	98.03	\$69,93	3.76 1.1	8	\$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	ice	21.96						
Company Name		Contact	Phon	e	Amount	Currency	Percent	Street Address
Example Vendor	4 DBE	Slim, Leste	r 111-	122-1321	\$271,471.20	U.S. Dollar	4.13	400 Fourth Street
Example Vendor	1	Roberts, P	at 111-	123-2134	\$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 R	ecap - Training Jo	Ь			
	Current	Target	Forecast	Variance	1
Price:	\$6,455,450.00	\$6,506,904.35	\$6,462,850.00	\$51,454.35	ADE
Profit:	\$599,221.88	\$650,676.22	\$655,858.61	\$5,182.39	СЛ
Margin%:	9.28	10.00	10.15	\$10,653.01	СUT

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	ation	
		Balanced Unit	Current Unit
l	Price:	\$31,225.08	\$0.00
N	Profit:	\$3,216.65	(\$28,008.43)
	Total Cost:	\$28,008.43	\$28,008.43
N,	Business Overhead:	\$1,929.76	
N	Job Overhead:	\$6,078.66	
N	Unassigned Direct Cost:	\$0.00	
N.	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
+ 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 📻 T	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.

Itt	em Recap - 2000 Clearin	ig && Grubbing		п	em Recap - 3000 Excava	tion	
		Balanced Unit	Current Unit			Balanced Unit	Current Unit
Ι	Price:	\$4,985.70	\$4,994.91		Price:	\$2.86	\$2.86
٨	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	
Å	Job Overhead:	\$1,681.60			Job Overhead:	\$0.91	
A	Unassigned Direct Cost:	\$0.00		A	Unassigned Direct Cost:	\$0.00	
4	Assigned Direct Cost:	\$2,542.84			Assigned Direct Cost:	\$1.52	

3. On the Pay Item & Proposal Register menu, choose Actions > Unbalanced Bid.

Actions		
Link Field	O Assigned Direct Cost Only	✓ Overwrite Locked Pay Items
📇 Unlink Field	🔦 Balanced Bid 👻	Custom Auto Price
	Unbalanced Bid	
Workbook	Auto	o Price

• You will see the changes reflected and how the profit was spread to your overrun and underrun items

Unit Price 😑		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.

It	em Recap - 2000 Clearin	ig && Grubbing		10	em Recap - 3000 Excava		
		Balanced Unit	Current Unit			Balanced Unit	Current Unit
	Price:	\$4,985.70	\$11,706.11		Price:	\$2.86	\$1.52
A	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
٨	Business Overhead:	\$245.35			Business Overhead:	\$0.15	
٨	Job Overhead:	\$1,681.60	1		Job Overhead:	\$0.91	
4	Unassigned Direct Cost:	\$0.00			Unassigned Direct Cost:	\$0.00	
A	Assigned Direct Cost:	\$2,542.84	1		Assigned Direct Cost:	\$1.52	

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.

Overview	Security	Cover Sheet	Cost Basis	Minority Setup	Fuel Cost	Pricing
Relanced	Price Options					
	-	, ay Item Prices u	sing:			
Cost	Amount					
-	g Amount					
Distribu	te Unassign	ed Cost/Billing A	mount by:			
	idual Catego					
	evel Categor					
O Total	Cost/Billing	amount				
-Markup O	ptions					
Markup	Pay Item by:	:				
Using	g Weighted D	Distribution				
🔿 Кеер	ing Markup v	vith Assigned Co	sts			
Categor	ize Business	Overhead as:				
	ect Cost					
Mark						
Calculat	e Proposal R	ecap Forecast M	arkup using:			
Unit I	Markup (curr	ent) x Forecast (T/O) Quantity			
O Forer	ast Price - T	otal Cost/Billing				

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	🔁 Toggle Suspended	🐰 Link Field	Insert (O Assigned Co	st Only 📃 Or	erwrite Locked	Pay Items	🍢 🖷 Defa	ult Data Blocks		🛗 Bid Wizard		
đ	Preview	🕑 Delete 👔	Paste	Lock Quantities	📇 Unlink Field 🗧	Insert Subordinate	🔨 Balanced Bid	- ≣ o.	stom Auto Price			pare Alternate Scenario		Reset Round	ing Precision	
e	Export to Excel	}< Cut ∏	Fil Down	✓ Lock Prices			Unbalanced	Bid			apse *		Configure Pric Categories	te 👔 Import DOT F	ay Item File	
	Print		Edit		Workbook	Insert		Auto Pri	æ		v	iew		Tools		
Pa	v Item & Propo	sal Register (2													
Drag columns here to group																
	Pay Item Number	Lock Quantity	Lock Price	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	LABOR Cost	LABOR Cost Distribution	LABOR Markup	LABOR Markup %	LABOR Price (balanced)	LABOR Price (current)	Unit Price (current)	Total Price (current)
\rightarrow	+ 1			EARTHWORK AND UTIL	ITIES 1.	00 1.00	Lump Sum	U.S. Dollar	\$62,401.68	\$0.0	\$15,600.42	25.00	\$78,002.09	\$72,664.97	\$170,700.00	\$170,700.00
	+ 2			AC PAVING	1.	00 1.00	Lump Sum	U.S. Dollar	\$29,711.17	\$0.0	\$7,427.79	25.00	\$37,138.96	\$34,430.26	\$97,253.00	\$97,253.00
				PAVMENT MARKINGS	1.	00 1.00	Lump Sum	U.S. Dollar	\$14,545.57	\$0.0	\$3,636.39	25.00	\$18,181.96	\$16,940.94	\$44,200.00	\$44,200.00
	+ 3			1 Athenti Piercando									\$0.00	\$0.00	\$216,300.00	\$216,300.00
				SITE CONCRETE	1.	00 1.00	Lump Sum	U.S. Dollar	\$0.00	\$0.0	\$0.00	0.00	\$0.00			
	+ 3							U.S. Dollar U.S. Dollar	\$0.00 \$7,163.88	\$0.0		25.00	\$8,954.84	\$8,099.23	\$42,300.00	\$42,300.00
	+ 3 + 4			SITE CONCRETE	1.	00 1.00	Lump Sum				\$1,790.97					\$42,300.00 \$39,900.00
	+ 3 + 4 + 5			SITE CONCRETE FENCING	1.	00 1.00	Lump Sum Lump Sum	U.S. Dollar	\$7,163.88	\$0.0	0 \$1,790.97 0 \$0.00	25.00	\$8,954.84	\$8,099.23	\$42,300.00	

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 =	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 Recap - E101 - Training 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 = T	Lock Price	Pay Quantity	Forecast (T/O) Quantity
+ 202 0183	Unclassified Excavation		50,000.00	50,000.00
+ 641 0100	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.

C	st	Breakdown				
Co	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 -30		\$0.00
	>	Materials	\$3,276.00			(\$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.

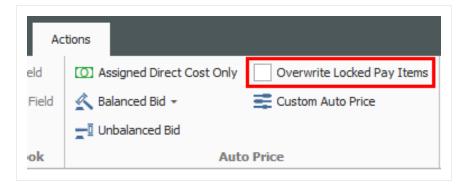
<u>D</u> es	scription	Dependenc <u>v</u>	Cost Categorization	Allocation		
Drag	g columns ł	nere to group				
	Description		-	Curre	Total Cost (Forecast)	Ac Co
	Small Too	ols		U.S. Dollar	\$5,896.98	
	Safety & Training			U.S. Dollar	\$2,948.49	
\rightarrow	Cut			U.S. Dollar	(\$1,000.00)	
*						

- 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.

6	Auto Price Warning	- ×
Variance due to rounding	precision	
across the unlocked pay	it your Target Price by spreading the tota items in accordance with your selected p ns' rounding precision, a variance still exi	pricing method.
	Initial rounding variance:	(\$84.43)
attempting to spi	till remaining as a variance after read the initial rounding variance ionately into each unlocked item:	(\$0.03)
Turn off this warning	about rounding variances for ALL JOBS.	
	ariances due to rounding by specifying g ed items, and by unlocking items with a c	
	Undo AutoPricing	Close

- 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:

1.1	000 0000		U	00	27 IIIII FVC GIAVILY SEWEL (SURGE	IJ.	5,000.00	3,000.00	LINE
+	800 0400		9	90	4 Foot Diameter Manhole	F 2	Open	16.00	Eac
+	501(A) 1306		10	100	Structural Excavation & Backfill		New	:00.00	Cub
+	506(A) 1322		11	110	Steel Reinforcement		Delete	00.00	Pou
+	503(A) 1313		12	120	Retaining Wall			:50.00	Cub
+	600 0300		13	130	Paint Existing Steel Bridge Str		Cu <u>t</u>	1.00	Lur
+	700		14	140	Process Equipment		Cop <u>v</u>	1.00	Ead
+	1000		15	150	Removal of Underground Storage		<u>P</u> aste	2.0	Ead
+	1010		16	160	Disposal of Contaminated Soi	+	<u>Fill Down</u>	00.00	Cul
+	1200 0100		17	170	Toll Booth	8	Link this field to Excel	1.00	Eac
+	1500 0100		18	180	Guardrail Type 2	<pre>M</pre>	UnLink from Excel	00.00	Line
+	1500 0200		19	190	Guardrail Type 3A	Ð	Toggle Suspended	:00.00	Line
+	1600 0230		20	200	Type 4 Signs	_	1,000.00	1,000.00	Sq
+	CO 1		21	21	Realignment of Water Line		1.00	1.00	Fac

• Right click on the pay item and select Toggle Suspended

• 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	n Syste	m	Actions				
Print		Open	*	Cut	+ Fill Down		Lock F	rices	🛃 Link Field	O Assign	ed Direct Cost (Only Overwrite	e Locked
🗟 Preview		• New	٩	Сору	Toggle Suspe	ended			📇 Unlink Field	🔦 Balanc	ed Bid 👻	Custom A	uto Pric
Export to	Excel	Delete	B	Paste	Lock Quantiti	es	×			Unbala	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		450.00	\$6,5	514,915.53	53 \$6,462,850.0		\$59,465.53	ADD)				
Profit: \$592,026.02		2,026.02	\$6	651,491.55	1,491.55 \$658,609.0		\$7,117.49						
Margin%: 9.17			10.00			10.19 \$		3.38 CUT					
Margin%:		9.17		10.00	10.	.19	\$13,693.38	СОТ					
	-			10.00 L P	Row =	Line Nu	De				Pay Qua	Forecast (T/O) Quantity	
Drag columns	1	Lock		L	Row _	Line	. De		n			(T/O)	Meas
Pay Iten Number))100	Lock		L	Row =	Line Nu	. Dei	scription	n		Qua	(T/O) Quantity	Meas
Pay Iten Number + 641 (0100 0102	Lock		L	Row =1	Line Nu 10	. De: Mo Cle	scription bilizatio aring &	n		Qua 1.00	(T/O) Quantity 1.00	Meas.
Pay Iten Number + 641 (+ 201 (+ 202 (+ 303)	0100 0102 0183 5912	Lock		L	Row 1 Nu 1 2 3 4	Line Nu 10 20 30 40	. De: Mo Cle Un Ag	scription bilizatio aring & classifie gregate	n Grubbing ed Excavation : Base		Qua 1.00 10.00 50,000.00 40,000.00	(T/O) Quantity 1.00 10.00 50,000.00 45,000.00	Meas Lump Acre
Pray Item Number + 641 (+ 201 (+ 202 (+ 303 3 + 303 -	0100 0102 0183 5912 4263	Lock		L	Row 1 Nu 1 2 3 4 5	Line Nu 10 20 30 40 50	De: Mo Cle Un Ag	scription bilizatio aring & classifie gregate ohalt Co	n Grubbing ed Excavation e Base oncrete Hot Mix Tyj		Qua 1.00 10.00 50,000.00 40,000.00 38,000.00	(T/O) Quantity 1.00 10.00 50,000.00 45,000.00 35,000.00	Meas Lump Acre Ton Ton Ton
Pay Iten Number + 641 (+ 201 (+ 202 (+ 303) + 303 - + 413(0100 0102 0183 5912 4263 (B) 0464	Lock		L	Row 1 Nu 1 2 3 4 5 6	Line Nu 10 20 30 40 50 60	. De Mo Cle Un Ag Asj 36	scription bilizatio aring & classifie gregate bhalt Co Inch I	n Grubbing ed Excavation e Base oncrete Hot Mix Tyy RCP Culvert Class	5 III	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 Ton Linea
Pray Item Number + 641 (+ 201 (+ 202 (+ 303 3 + 303 -	0100 0102 0183 5912 4263 (B) 0464 0220	Lock		L	Row 1 Nu 1 2 3 4 5	Line Nu 10 20 30 40 50	. Dee Mo Cle Un Ag 36 36	scription bilizatio aring & classifie gregate bhalt Co Inch P	n Grubbing ed Excavation e Base oncrete Hot Mix Tyj	5 III 21)	Qua 1.00 10.00 50,000.00 40,000.00 38,000.00	(T/O) Quantity 1.00 10.00 50,000.00 45,000.00 35,000.00	Ton Ton Ton Linear

• Open the pay item record and checking/unchecking the Suspend box

ay Item & Proposa	integrater i	ay Item Record 🛛 🕲					
Pay Item Number: *	800 0400						Line Number: 90
Description:	4 Foot Diameter Ma	anhole					Alternate: BASE
							Suspend:
Quantity							\
Lock Quantity: Pa	ay Quantity:	Forecast (T/O) Qty:	Unit of Measure:	Qty Variance:	Qty Variance %:	Qty Variance Group:	
	16.00	16.00	Each •	- 0.00	0.00	Even Run	
Price							

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