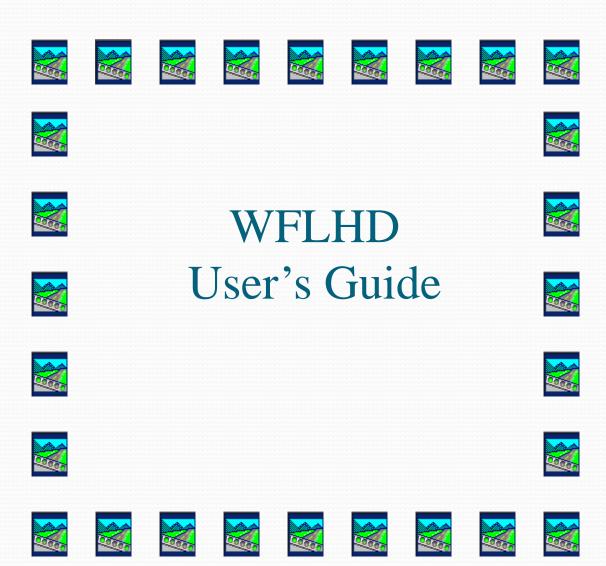
# Engineer's Estimate System (EES)



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#### Some Useful Files

- Engineer's Estimate System USC
   T:\Contract\EE\_FP03\_usc\Lastees\lastees8.exe
- Engineer's Estimate System Metric
   T:\Contract\EE\_FP03\_metric\Lastees\lastees8.exe
- Pay Item Table
   <a href="http://wflnet.wfl.fhwa.dot.gov/departments/acquisition/specifications.htm">http://wflnet.wfl.fhwa.dot.gov/departments/acquisition/specifications.htm</a>
- Files and Information for A/E's ftp://198.145.188.2/bid\_hist\_0302/EES\_AE\_WFLHD/
- Excel Spreadsheets
   I:\Project\_Dev\Design\Forms\Estimate.xlsx
   I:\Project\_Dev\Design\Forms\Summary.xlsx

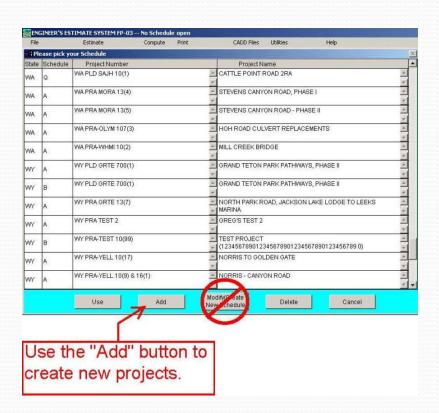
## Excel Spreadsheet – Estimate

- The Estimate.xlsx spreadsheet is used to create the Engineer's Estimate and Summary of Quantities <u>prior</u> to final design and sign-off.
- This spreadsheet was developed by Steve Chapman as an interim product until incorporation of the new EEBACS system.

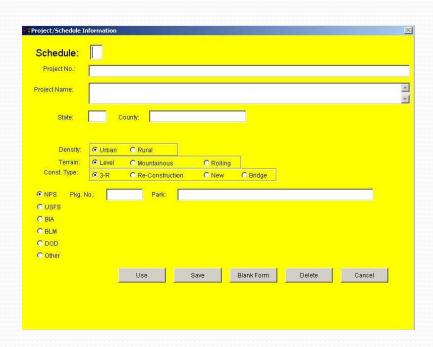
## Excel Spreadsheet – S of Q

- The Summary.xlsx spreadsheet is used to create the <u>Final</u> Summary of Quantities plan sheet.
- This spreadsheet utilizes outputs from the EES program (i.e., TX1, TX2, etc.)
- The EES <u>MUST</u> be used to develop the final Engineer's Estimate and the Summary of Quantities.

- Use the "Add" button.
- Do <u>NOT</u> use the "Modify/Create New Schedule" button.



- A new dialog box will open.
   (Project/Information Screen)
- Enter data.
- Click the "Use" button when done.



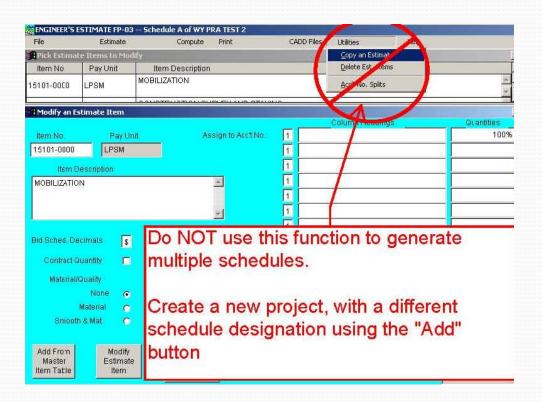
Creating Multiple Schedules

- A design project may have multiple schedules (i.e., Schedule A, Schedule B, etc.), however, within the EES, schedules should be created as if they are separate projects.
- Use the "Add" button to create a new project. The project information can be the same, with only the "schedule" being the differing field.

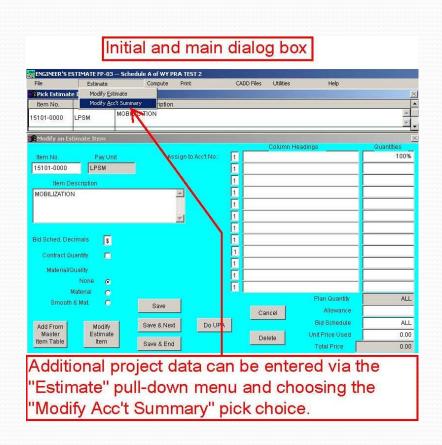
WY PRA TEST							
GREG'S TEST PROJE	ECT						
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	al						L
€ Level € Moui	ntainous	C Rolling		scrie	Jule le	itei	J
€ 3-R	Construction	C New	C Brid	ige			
o.:	Park						
Use		Save	Blank Fo	orm	Delete	Cancel	
	County: Curban C Rura Level C Mou 3-R C Re-C	County: GREG CO  C Urban C Rural C Level C Mountainous C 3-R. C Re-Construction Park:	WY County: GREG CO  © Urban C Rural © Level C Mountainous C Rolling © 3-R C Re-Construction New  .: Park:	County: GREG CO  C Urban C Rural C Level C Mountainous C Rolling C 3-R C Re-Construction C New C Brid	County: GREG CO  All interpretation of Rolling  C Urban C Rural  C Level C Mountainous C Rolling  C 3-R C Re-Construction C New C Bridge  Park:	All informations are EXCE schedule less of the service of the serv	All information the same EXCEPT for schedule letter  C Level C Mountainous C Rolling  Park:  All information the same EXCEPT for schedule letter  Park:

#### Creating Multiple Schedules

 Do NOT use the "Utilities" pull-down and "Copy an Estimate" pick choice.

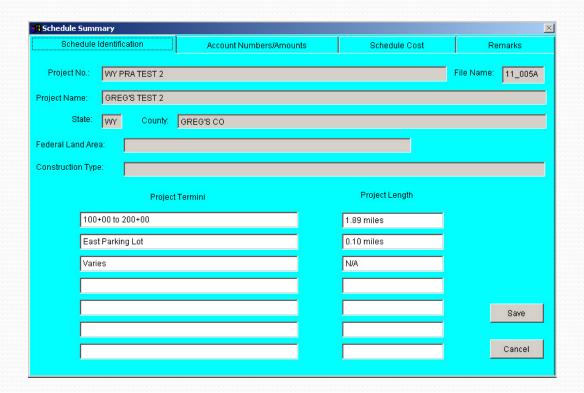


- On start-up of the project, the main dialog box, shown below, will open.
- Use the "Estimate" pull-down menu to enter additional project information.



The "Estimate" Pull-Down Menu – Schedule ID Tab

- Enter relevant information.
- Information entered is at the designer's discretion.



The "Estimate" Pull-Down Menu – Account Numbers Tab

- Account information is required if you have more than one account and will be using the Acc't Split function. (More on this later)
- Account information is optional if you ONLY have one account.
- Account information can be the account string #, a description, etc.

chedule Summary			
Schedule Identification	Account Numbers/Amounts	Schedule Cost	Remarks
Account	Number	Amount	
01 Account 01 - FLHP Funds			
02 Account 02 - County Funds			
03			
04			
05			
06			
07			
08			
09			
10			
11			Save
12			
13			Cancel

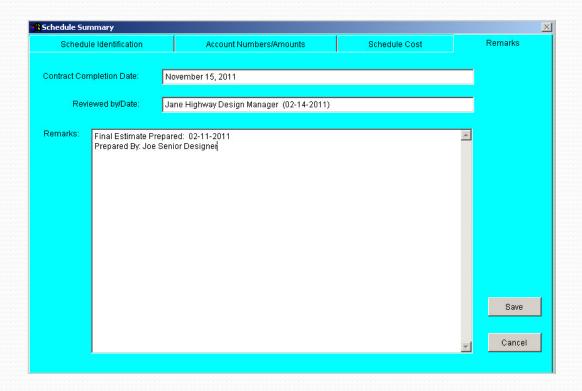
The "Estimate" Pull-Down Menu – Schedule Cost Tab

- This tab contains information beyond the normal construction pay item costs.
- Information includes auto-calculated items. (i.e., Materials and Smoothness incentives)
- Information includes designer entered items. (i.e., Partnering or other items)
- Asphalt binder incentive is a special case and will be discussed later.

edule Summary		NO. 1	and the second	
Schedule Identification	Account Numbers/Amounts	Sche	dule Cost	Remarks
Contingencies/Incentives	Total of Bio	l Items:	0.00	
	Estimate for Quality Material	Incentive	0.00	
	Estimate for Pavement Smoothness	Incentive	0.00	
	Estimate for Asphalt Binder Incer	ntive (1%)		
	Р	artnering	5,000.00	
	Total Construction Ar	nount:	5,000.00	Save
	Construction Engineering Am	ount:	0.00	
	Total Estimate	d Cost:	5,000.00	Cance

The "Estimate" Pull-Down Menu – Remarks Tab

- Enter relevant information.
- Information entered is at the designer's discretion.



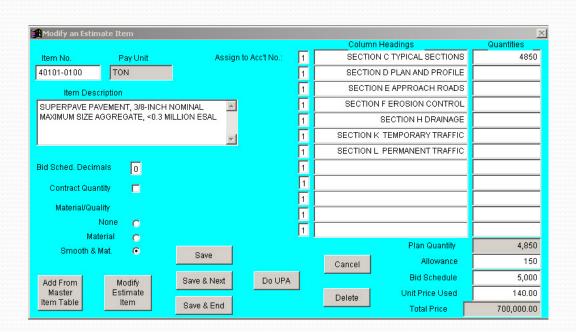
The "Cadd Files" Pull-Down Menu – Column Headings

- Enter the column data prior to entering quantity and cost information.
- Click the "Save CADD headings" button when done.
- The "Path for CADD files" text box and the "Create files" button will be discussed later.
- The "Create and Print files" button is not used.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
SECTION C	SECTION D	SECTION E	SECTION F	SECTION H	SECTION K
TYPICAL	PLAN AND	APPROACH	EROSION	DRAINAGE	TEMPORARY
BECTIONS	PROFILE	ROADS	CONTROL		TRAFFIC
					CONTROL
Column 7  BECTION L  PERMANENT  FRAFFIC	Column 8	Column 9	Column 10	Column 11	Column 12
CONTROL			$\overline{}$		
JOINTROL					<u> </u>
	nge the path for the CA	DD files to a path of yo	•	on will remain .TXn ).	

Entering Pay Items, Quantities, and Cost Data

- Pay items can be added using the "Add From Master Item Table" button.
- Quantities, allowances, and unit prices can be directly entered by the designer.
- In the case of LPSM items, the designer can enter the dollar value directly in the "Unit Price Used" box.



Additional Information - Other

- The number of bid decimals is shown for each pay item.
- Items can be designated as CQ.
- They type of incentive, if any, is shown here. Note ~ The only time this setting needs to change is if Type 5 Pavement Smoothness is specified. In this case, switch the setting from "Smooth & Mat" to "Materials".

 Do NOT change the account # in this dialog box.

SECTION C TYPICAL SECTIONS 4850 40101-0100 SECTION D PLAN AND PROFILE SECTION E APPROACH ROADS Item Description SUPERPAVE PAVEMENT, 3/8-INCH NOMINAL MAXIMUM SIZE AGGREGATE, <0.3 MILLION SECTION F EROSION CONTROL SECTION H DRAINAGE SECTION K TEMPORARY TRAFFIC SECTION L PERMANENT TRAFFIC Bid Sched, Decimals Contract Quantity CQ check box Material/Quality Material Smooth & Mat Allowance 150 Bid Schedule 5,000 Do UPA Add From Save & Next nit Price Used 140.00 Delete Item Table Save & End 700,000.00 Do NOT change the Incentive type values in these boxes

Additional Information – Mobilization

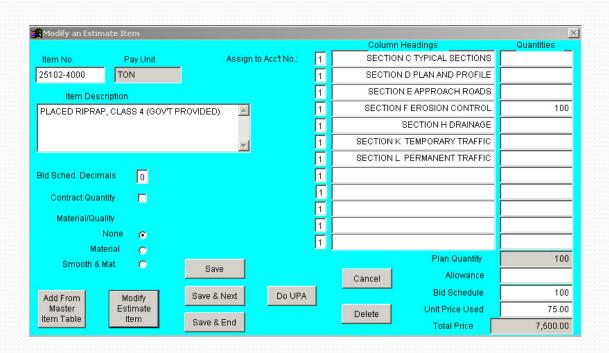
- The Mobilization item is traditionally a Lump Sum (LPSM) item.
- Mobilization is generally a percentage of the final construction cost and can usually be left to self-calculate.
- The designer has the option to override the auto-calculation and enter a set value.

#### Additional Information – Flagger Rate

- The unit of measure used in WFL for Flaggers is Fixed Hr Rate. (Item # 63509-1000)
- This is a Davis-Bacon rate that is site specific, often a function of the distance from the project site to a major city or post office.
- Flagger rates are subject to change on a weekly basis. (FLH has no control over changes.)
- Designers are welcome to ask for Flagger rates and updates at any stage of their project, but <u>MUST</u> acquire an update for the Final Engineer's Estimate and just prior to Contracts Hand-Off.
- To request flagger rates contact:
   Greg Kwock (360.619.7987 / greg.kwock@dot.gov)
   LeeAnn Bush (360.619.7746 / leeann.bush@dot.gov)

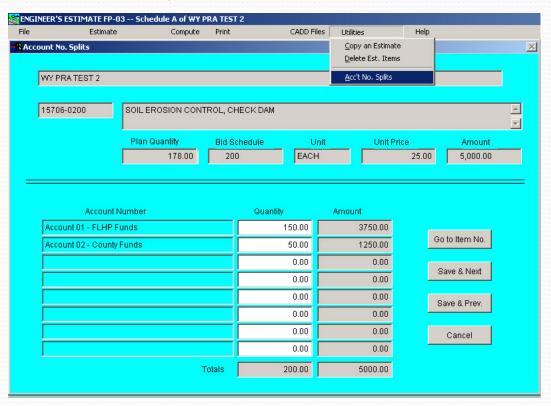
Additional Information – Existing and New Pay Items

- Existing pay item descriptions can be supplemented. Use parenthesis to enclose additional description.
- Existing pay item descriptions cannot be deleted or modified.
- Contact Greg Kwock to request new pay items. (360.619.7987 / greg.kwock@dot.gov)



## EES – Acc't Splits

- Acc't Splits should be done after all pay items and quantities have been entered.
- Splitting accounts are done via the Utilities pull-down menu and "Acc't No. Splits" pick choice.
- Each item's quantity is individually split
- Note ~ this is the ONLY area you will be able to see how the item was split (until you print the EE details)



## EES – Computing Total Project Cost Adding Incentives

- From the "Estimate" pull-down menu, "Schedule Cost" tab, you will see costs for incentives, partnering, CE, and any other costs you add beyond normal pay items.
- If you have a 40101 pay item in your EE, then you will need to add an additional cost for Asphalt Binder Incentive. This cost should be 1% of the cost of your 40101 pay item.

edule Summary				
Schedule Identification	Account Numbers/Amounts	S	chedule Cost	Remarks
Contingencies/Incentives	Total of Bi	d Items:	1,036,000.00	
	Estimate for Quality Materia	l Incentive	41,000.00	
	Estimate for Pavement Smoothness	s Incentive	35,000.00	
	Estimate for Asphalt Binder Ince	ntive (1%)	7,000.00	
	I	Partnering	5,000.00	
	Total Construction A	mount:	1,124,000.00	Save
	Construction Engineering Am	ount:	104,000.00	
	Total Estimate	ed Cost:	1,228,000.00	Cancel

## EES – Computing Total Project Cost

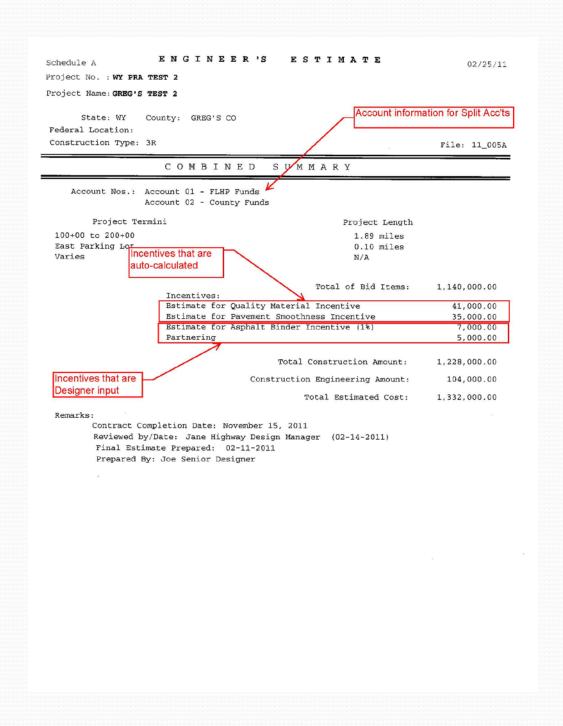
Updating Total Costs - Mobilization, Incentives, and CE

- Mobilization and CE costs ~ Reenter the % required whenever the EE is updated.
- Materials and Smoothness incentives are autocalculated at 5% of the total cost of the pay items in question.
- The "Save" button MUST be clicked or the values shown here will not be transferred to your finalized EE.

RProject Cost Projection		×
The Total Cost of Items (excluding Mobilization)in the Estimate is 1,036,000.00		
Item 15101, Mobilization Calculated: 10 % 104,000.00	Used:	104,000.00
The Estimated Construction Cost is Calculated: 1,140,000.00	Used:	1,140,000.00
Incentives:		
Quality Material Incentive is estimated as 5% of the cost of those Items indicated.		
Calculated: 41,000.00	Used:	41,000.00
Pavement Smoothness Incentive is estimated as 5% of the cost of those Items indicated.		
Calculated: 35,000.00	Used:	35,000.00
Construction Engineering Calculated: 10.0 % 104,000.00	Used:	104,000.00
The Total Estimated Construction Cost is: Calculated: 1,320,000.00	Used:	1,320,000.00
Save		Cancel

## EES – Computing Total Project Cost

#### EES Print-Out: Summary Page



## EES – Final Summary of Quantities

Creating txt Files To Use In the Summary.xlsx Spreadsheet

- To produce the txt file that is used to generate the Summary of Quantities sheet, go to the Column Headings dialog box.
- In the text box titled "Path for CADD files:", type in the path you want to save the txt files to. (Note ~ copy and paste will not work here.)
- Do NOT change the filename.
- Click the "Create files" button.

• Follow the instructions in the Summary.xlsx spreadsheet to generate the Summary of

Quantities.

