

Technical White Paper

Pay Application Print Templates (PAPTs) sfPMS V4.1

Creating PAPTs for use with Spitfire's SOV workbook

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Introduction

This technical white paper describes how to create Pay Application Print Templates (PAPTs) used to present and print the data created in the Pay Application's SOV workbook. You are encouraged to review this entire white paper prior to beginning a practical exercise.

This technical white paper assumes you have a basic understanding of sfPMS in general and the SOV workbook in specific. If not, please read the <u>Overview Guide</u> and the <u>Focus on Schedule of Values (SOV) Billing</u> guide first.

All documentation referred to within this white paper can be found on the Spitfire Help menu.

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Note: This paper also assumes you know to use Microsoft Excel to copy worksheets, create formulas, set up filters and more. Anyone without a good understanding of Microsoft Excel should take the time to learn the ins and outs of that application before attempting to create a PAPT.

Overview

The goal of the Pay Application Print Template (PAPT) is to take data from the SOV workbook and the project in general and format it as you desire for display and print purposes.

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FORTERS		
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By: Andy Carothes		
Anoy Carotne is	Notary Public:	
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	the rights of the Owner or Contractor under this Contract. The AvietRicAll INSTITUTE of ARCHTECTE, ITEM NEW YORK, AVE, NW, WASHINGTON, DC, 20086382	•

Planning

Your first step should be to determine how many output worksheets are required to present your SOV data in a clear and precise manner. For example, you may want to imitate the AIA standard, which includes a cover sheet, a schedule for Original Contract items, a schedule for Change Orders and a schedule of Subtotals by phase or area, as shown in the example below.

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Output Worksheets

Output Worksheet Design

If you already use Microsoft Excel for your Pay Applications, you can modify your existing worksheets to use as your output worksheets.

If you are starting without any Microsoft Excel worksheets, you will need to plan each output worksheet carefully.

Each output worksheet requires thought and elements of design to provide the maximum flexibility while at the same time maintaining a minimum print footprint. The best way to accomplish this is to pull out a sheet of paper equal in size to the desired final product and sketch away.

- 1. Jot down all the information needed.
- Organize it logically and keep global project, contact and factual information separate from SOV line items. A good place to start is to review Spitfire's SOV workbook. The Application worksheet on the SOV workbook covers details related to the line items. (See the *Focus on Schedule of Values (SOV) Billing* guide for more information about the Application worksheet.) You will also be able to get information from the Pay Application and Project Setup documents.
- 3. Take one page at a time and mark it up. Once complete, get others to review the pages and comment on them. You want to ensure that you have all the information in the right places.

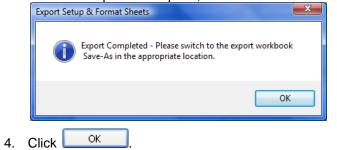
Structured vs. Unstructured

You should also decide if you want your output worksheets to be structured or unstructured. Structured worksheets have a set number of rows. If you think you will need more rows than those that fit on one structured worksheet, you will need to provide multiple structured worksheets for your schedule. For example, you might need three original SOV item sheets. (See also the section on <u>cascading output</u> <u>worksheets</u> on page 33). On the other hand, unstructured worksheets allow for a large number of rows and then use filters to control how many rows are actually printed. (See also the section on <u>unstructured output</u> <u>worksheets</u> on page 32).

SOV Headers and Subtotals	
	Each time a Header or Subtotal row is created in the SOV worksheet, the user will be prompted to answer
	 if the created row should be treated like a original contract item or a Change Order item,
	 if the PAPT has a schedule specifically for subtotals,
	 if the created row should be included in the rows copied to the subtotals schedule. The SOV Billing module follows these directions while copying the data to the output workbook.
	Great care is required for each output worksheet to ensure the SOV Subtotal amounts are not included in any type, page, or project totals. Each row on the SOV worksheet is defined by type expressed as a number in the Row Type column of the App Detail worksheet. Microsoft Excel offers several functions to filter the rows included in the total. (See the section on <u>output page totals rows</u> on page 34 for more information.)
Where Spitfire Data Will Go	
	You should plan where the data that will come from your Spitfire project will go. This includes both data from the specific Pay Application and also more general project data. It is good practice to type in "dummy" data right on your output worksheets as placeholders for the formulas and cell references that will ultimately go there. However, you can enter cell references right at the start if you are comfortable doing so.
Exporting Defined Names	
	Microsoft Excel supports defining ranges by name. A range consists of a group of cells contained within a top left cell reference and a bottom right cell reference. Using named ranges within formulas makes the formulas easier to read. You may prefer to use named cell ranges in your formulas and cell references. You can export all the defined names used by the SOV Billing module onto a separate workbook for easier reference.
	To export defined names:
	1. Open an SOV workbook from a Pay Application document.
	2. Select Export Defined Names from the Spitfire Menu ribbon.
Spitfire Menu Copy In	

Spinite menu Copy in				
Add New Rows 🔤 Insert Header Row	🕫 Get Change Orders	💕 Final Billing	Project Summary 😫 Acquire Invoice Number	Copy/Export Data 💦 Supplemental Workbooks
📑 Delete Rows 📑 Insert Sub Total Row		🛒 Release By Percent	🗰 SOV Print	Export Worksheets
5 Sort By Number ☐ 🚟 Expose Hidden Column				Export Defined Names
Work with Rows	Change Orders	Retention	Presentation and Invoice	Export/Other

3. When the export is complete, a confirmation box will appear:



5. On your computer's desktop, find your copied workbook (with a name such as Book1) and open it.

You can save this workbook on your computer with any name you want.

			ou wa									_
G		<u>n</u>) + (n +) ÷		Book2 - Micr	osoft Excel							
	Н		ormulas	Data Revi	iew View	Develope	r A	dd-Ins	Acrobat	0	- 🗖	x
	ste board	B I U → A Ă Ă · · · · · A Ă · · · · · · · · · · · · ·	≫⁄~~	General ▼ \$ ▼ % > \$.00 >.0 > Number 5	Condition Format a Cell Style	s Table 🔻		Gelete ▼ Delete ▼ Format ▼ Cells	Σ 	Sort & Filter * Editin		
		B1 🔻 💿	f_{x}	Defined Nar	ne							≽
	А	В		С		D	E	F		G	Н	
1	Index	Defined Name	Range									
2	1	Application_Date	=ExportP	rojectDetails	!\$B\$8							
3	2	Application_No	=ExportP	rojectDetails	!\$B\$7							
4	3	Architects No	=ExportP	rojectDetails	!\$B\$3							
5	4	Contact_Block	=ExportP	rojectDetails	!\$C\$2:\$N\$27							
6	5	Contract_Biller	=ExportP	rojectDetails	!\$B\$6							
7	6	Contract_Date	=ExportP	rojectDetails	!\$B\$5							=
8	7	Contract_For	=ExportP	rojectDetails	!\$B\$4							
9	8	Contract_Type	=ExportP	rojectDetails	!\$B\$20							
10	9	Customer_ID	=ExportP	rojectDetails	!\$B\$28							
11	19	ExportProjectDetails!Print_Area	=ExportP	rojectDetails	\$A\$1:\$O\$30							
12	10	From_Date	=ExportP	rojectDetails	!\$B\$9							
13	11	Invoice_Number	=ExportP	rojectDetails	!\$B\$19							
14		Material_Retention	=ExportP	rojectDetails	!\$B\$18							
15	13	Materials_Retention	=ExportP	rojectDetails	\$B\$13							
16	14	Materials_Retention_Percent	=ExportP	rojectDetails	\$B\$13							
17	15	Net_CO_Change	=ExportP	rojectDetails	\$B\$15							
18	16	Original_Contract_Amount	=ExportP	rojectDetails	!\$B\$14							
19	17	Parent_Project_Name	=ExportP	rojectDetails	!\$B\$30							
20	18	Pay_Application_Description	=ExportP	rojectDetails	!\$B\$29							
21	20	Prior_Period_Application	=ExportP	rojectDetails	!\$B\$11							
22	21	Project_Description	=ExportP	rojectDetails	!\$B\$26							
23	22	Project_No	=ExportP	rojectDetails	!\$B\$2							
24	23	Project_Source_Nbr	=ExportP	rojectDetails	!\$B\$27							
25	24	Sales_TaxAmount	=ExportP	rojectDetails	!\$B\$24							
26	25	Sales_TaxID	=ExportP	rojectDetails	!\$B\$22							
27	26	Sales_TaxPrior_Amount	=ExportP	rojectDetails	!\$B\$25							
28	27	Sales_TaxRate	=ExportP	rojectDetails	!\$B\$23							
29	28	ThisApplicationAmount	=ExportP	rojectDetails	!\$B\$21							
30	29	To_Date	=ExportP	rojectDetails	!\$B\$10							
31	30	Total_Completed_and_Stored	=ExportP	rojectDetails	!\$B\$16							
32	31	Work_Retention	=ExportP	rojectDetails	!\$B\$17							
33		Work Retention Percent		rojectDetails								•
			2 / Sheet	3 / 🔁 👘	I ∢				-			
Clic	ck to cha	inge the Print Format for this Project						🛄 100% 🤇	9			

Existing vs. New Output Worksheets

Existing Output + Print Format Worksheets = PAPT

If you already have worksheets in Microsoft Excel that you use for your schedules and now want to incorporate those worksheets in your PAPT, you will need to

• Combine all your output worksheets in one workbook and save the workbook as a template (.xltx) in a folder specific to SOV Billing. Since this will be the basis of your PAPT, you will want to give it a suitable name that will identify it among other PAPTs you may create.

Note: You should save the workbook as a template because a template offers downstream benefits like safeguarding against unintentional changes. Once a workbook is a template file, you can open this file by finding it in your browser, right-mouse-clicking and selecting Open or opening Microsoft Excel and using the Open option. Do *not* double-click on the filename in a browser because double-clicking on the filename will create a new workbook using the template as its base, and this is not what you want to do.

- <u>Export the print format worksheets from your SOV</u> workbook (see page 13) into a temporary workbook. These worksheets sfSOVSetup, Project Details and App Detail—are a necessary component of the PAPT.
- Copy the sfSOVSetup, Project Details and App Detail worksheets to your template workbook. You can rename the Project Detail and App Detail worksheets but do NOT rename sfSOVSetup because the Spitfire SOV Billing module specifically looks for this worksheet.
- Duplicate any output or print format worksheets needed and rename them as desired. For example, if you have structured output worksheets, you may want several sheets to accommodate many rows. Or you may want several App Detail worksheets (each with its own name) to hold SOV items, Change Order items and Headers/Subtotals separately.
- Fill out the sfSOVSetup worksheet (see page 21).
- Save your template as your new Pay Application Print Template (PAPT). Make sure it has an **.xltx** extension.

New Output + Print Format Worksheets = PAPT

If you do not have any Microsoft Excel worksheets to start with, your steps are slightly different.

- Plan your output worksheets.
- <u>Export the print format worksheets from your SOV</u> workbook (see page 13) into a new workbook. These worksheets sfSOVSetup, Project Details and App Detail—are a necessary component of the PAPT.
- Add sheets to this new workbook according to how many output worksheets you need and give each worksheet a unique name.
- Format each worksheet's cells, using dummy data, so that you can see what it will look like.
- Fill out the sfSOVSetup worksheet (see page 21).
- Save your template as your new Pay Application Print Template (PAPT). Make sure it has an **.xltx** extension.

Creating the PAPT

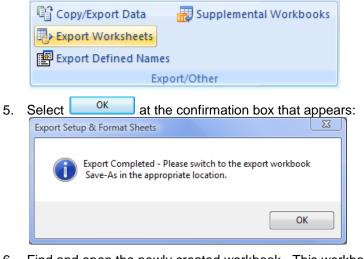
Exporting the Print Format Worksheets

The worksheets (sfSOVSetup, Project Details and App Detail) that you will need in order to create your PAPT come from the SOV workbook. These worksheets, normally hidden in the SOV workbook, are considered the "print format" worksheets.

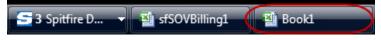
In order to access the SOV workbook, you need a Pay Application document; therefore, you need to start with a project that includes a Pay Application document. You can create a "dummy" project for this purpose, if you do not have or if you do not want to use a real, existing project.

To export the print format worksheets:

- (optional) Create a Project Setup document, change its status to Committed and save. (For more specific instruction, see the <u>Focus on Doc Types and Project Workflow</u> guide.)
- 2. Create or open a Pay Application document.
- 3. Click log to open the SOV workbook. (For more information, see the *Focus on Schedule of Values (SOV) Billing* guide.)
- 4. Select **Export Worksheets** from the Spitfire Menu ribbon.



6. Find and open the newly created workbook. This workbook contains the sfSOVSetup, App Detail and Project Detail worksheets. It will have a name such as **Book1**.



- 7. Save this file with a better name in a suitable location. It should have an **.xltx** extension.
- 8. You can close your SOV workbook.

		19 -	(> ◄ ⇒) =	The second second		Book1 -	Mic	rosoft Excel					x
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2	© Cor			· · · · · · · · · · · · · · · · · · ·	gement, LLC.				DO NOT ALTER	FORMAT				
					ving variables			nodu						
	Descri					Value			Comments					
5	Project	Data S	heet Nam	e					Enter the sheet/ta	ab name where t	he Project header details	will be copi	ed to.	
6	Paste P	roject	Data in ce	ell					Enter the top left o	cell reference wh	here the block Project Dat	ta will be pa:	sted.	
7	Origina	al SOV I	Data Shee	t Name.					Enter the sheet/ta	ab name where t	he Original SOV Data wil	l be copied to	D.	
8	PasteO	riginal	SOV data	on cell					Enter the top left of pasted.	cell reference wh	here the block Original S	OV Data will	be	
9	Separa	ite Cha	nge Orders	s from Original o	lata?	Yes				-	; into a separate workshe on the Original SOV shee	-	inal SO\	<
10	Change	e Order	Data Shee	et Name					Enter the sheet/ta	ab name where t	he Change Order Data wi	II be copied	to.	
11	Paste (Change	Order dat	a in cell					pasted.		here the block Change Or			
12	Unique	e Subto	tals Page?	?		Yes			Useful for high lev	vel view.	and Headers on a separa			
13	Subtot	al Data	Sheet Na	me					to.		he Subtotal and Header			
14	Paste S	Subtota	ils data in	cell					Enter the top left of	cell reference wh	here the block Subtotals	Data will be	pasted.	•
15								_						- []
16		ss the				Yes			Yes: Pass the dat No: SOV will pass	-	g will be controlled by th ol printing.	e user elsew	/nere.	
17	Previe	w and	Print											_
18	Page a	and Pag	ges			Page # of	#s Pages		number of pages.	(Leave Blank to	bering using the # for the exclude page printing)			:
19	Cover S	heet N							page printed then	followed by the	ummary Cover Sheet. This pages of schedules		first	
20				Sheet Page Prin							Page # of #s Pages will b			_
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			eet Name		Device of D. J. J.	18-			Enter the sheet/ta	o name of the s	econd schedule to be pri	nted		
Rea			vSetup	(App Detail)	Project Details) / 🔁 /							(• • ,;;

sfSOVSetup

This worksheet (shown above) is where you indicate all your instructions, the placement of data and the control of print behavior for your PAPT. (See also page 21.) This worksheet serves as the link between the SOV workbook and the PAPT.

App Detail

This worksheet holds your application data, which comes from Spitfire. If you want your original SOV items, your Change Orders and your Headers/Subtotals on different output worksheets, you will need to copy this App Detail worksheet for each type of data.

А	В	С	D	E	F	G	Н		J	K	L	М	N	0	Р	Q
RowNbr	ltem No.	Description	Subtotal Criteria (Max 5)	Туре	First Bill Date	CO No:	Billing Code	Revenue Cost Code	GL Account Number or Account	Scheduled Units	Scheduled Rate	Scheduled Value	Previous Units	Previous Application	Prior % Billed	Work Units
ROWIND									Category							
1																
2																
3																
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R	S	Т	U	V	W	Х	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
Work Completed	Stored Materials	Enter % Billable	Total	Balance to Finish	Work	Materials		Prior Work Retention	Prior Material Retention	Work Retention	Material Retention	Comment s	User Amount	Guid	Row Definitio n	RowType Only
(																
2																
[																
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#### **Project Details**

The Project Details worksheet holds global information about the project that can be used by the PAPT.

	nns A and B hol ct data.	16	Developer General S - %, %, % Number	Partner co	C through N I ontact informa are the Projec and Project M	ation. Also t name,	◎ - ▫ ×
AL		jectData					×
A	В	с	D		E		F 📼
1 ProjectData	Description	Identifier	AddrType Description	D	rime Contact		Company/Descrip
2 Project No:	Description	0	Owner	P I	ine contact		company/Descrip/
3 Architects No:		PC	Project Customer				
4 Contract For		GC	GC				
5 Contract Date		A	Architect				
6 Contract Biller		CM	CM				
7 Application No		1	Lender				
8 Application Date		В	Bonder				
9 From Date		P	Project				
10 To Date		PM	PM				
11 Prior Period Application		ACC	Accountant				
12 Work Retention %		APM	Alternate PM				
13 Materials Retention%		ASC	Associate				
14 Original Contract Amount		DM	Development Manager				
15 Net CO Change		EX	Executive				
16 Total Completed & Stored		OP	Opperations Manager				
17 Work Retention		S	Staff				
18 Material Retention		SU	Superintendent				
19 Invoice Number		PCO	Project Company				
20 Contract Type		IA	Invoice Address				
21 ThisApplicationAmount		FA	From Address				
22 Sales Tax ID		TA	To Address				
23 Sales Tax Rate		SA	Ship To Address				
24 Sales Tax Amount		SC	Source Contact				
25 Sales Tax Prior Amount		RP	Reponsible Party				
26 Project Description		OA	Owner Approver				
27 Project Source #		ACM	Alternate CM				
28 Customer ID							
29 Pay Application Description							
30 Parent Project Name							-
H ◀ ▶ ▶ sfSOVSetup ∠ App Detail	Project Details 🕅		I	4			
Ready 🎦						<b>I</b> I 100% 🕞	+

More information about where the Project Details information comes from and how it can be used in the PAPT is available in a file called *Pa-Papt Worksheet details.xlsx.* 

#### To access PA-PAPT WorkbookDetails.xlsx:

- 1. Open ICTool on your computer. **Note**: if ICTool is not installed on your computer, see your System Administrator.
- 2. Select Install Base Folder from the View menu:

📻 S	pitfire	Config	uration -	SFQA7.armo				
File	View	Tools	Help					
Wel	ICT	ICTool Log L						
	ASPNET Page Trace							
	Application Trace							
Install Base Folder								
	Rel	ease No	otes					
$\sim$	~~~	~~~~	~~~~~	~~~~~				

- 3. Navigate to ImplementationResources | SOVPrinting and find Pa-Papt Worksheets details.xlsx.
- 4. Open the file or copy the file to your computer to save it.

# Combining the Print Format Worksheets with Output Worksheets

Whether you start with your existing output worksheets combined into a template workbook or with the print format worksheets, you need to end up with one file—your PAPT—that includes the sfSOVSetup, App Detail and Project Detail worksheets as well as all your output worksheets. Because the print format worksheets receive data from Spitfire, they are considered "receiving" worksheets.

- If you have existing output worksheets, copy the three print format worksheets onto your template workbook then save your resulting PAPT. Make sure it has the **.xltx** extension.
- If you do not have existing output worksheets, add as many output worksheets as needed to the workbook that contains the print format worksheets, then save your resulting PAPT. Make sure it has the **.xltx** extension. The output worksheets can look any way you want them to. Use your knowledge of Microsoft Excel plus your planning sheets to design your output worksheets.
- You may need to copy the App Detail (receiving) worksheet more than once if you want to hold your original SOV items, Change Order items and Headers/Subtotals on separate worksheets.
- Each worksheet on your PAPT should have its own distinct name.

#### **Examples**

The following pages show a few examples of PAPTs in terms of worksheets included.

DADT 21 Sample SOV Brint Te	emplate.xlt [Compatibility Mode] - Microsoft Excel
Home Insert Page Layout Formulas Data Review View	Developer Add-Ins Acrobat (0 – 🔿 X
Arial 12 A A T	General • • • • • • • • • • • • • • • • • • •
Paste → B Z U · ⊞ · ③ · ▲ · ■ ■ # # B Array & Centr	
Clipboard 10 Font 10 Alignment	Image: Structure
	x rumoci 2 Junio J
Security Warning Macros have been disabled. Options	
A14 $\checkmark$ Contractors's Application F	or Payment
SOFTWERE® Sample Applicati	on for Payment
1 2	
3 Submitted To: Project	Period To 0-Jan-00
5	, Project Number: Arch Proj Number:
7 From: Archited	Contract Date: 0-Jan-00 Application Date: 0-Jan-00
9 10	, Invoce No: 0
11 Contract For: 0	
14 Contractors's Application For Payment	
16 Application is made for payment, as shown below, in connection with the Contract. 17 Continuation Sheets are attached to substantiate this application.	The undersigned Contractor certifies tha the the best of the Contractor's knowledge, information and belief the Vork covered by this Applicati Payment has bee completed in accordance with the Cntract Documents, that all amounts have been paid by the Contractor fo Vork for which
18 19 1 Original Contract Sum \$ -	previous Certificates for Payment where payments have been received from Owner, and current payment shown herein is now due.
20 21 2 Net Change By Change Orders \$ -	Contractor: 0
22	Ву:
23 3 Contract Sum To Date S -	State of:
25 4 Total Completed And Stored To Date \$-	Subscribed and sworn before me this day of,,
27         5 Retainage:           28         a.         0% of Completed Work	Contractor personally appeared before me, the undersigned notary public, and provided satisfactory evidence of identification
29 30 b. 0% of Stored Material \$ -	to be the person who signed this document in my presnece and swore or affirmed to me that the contents of this document are truthful and accurate to the best of Innowledge and belief.
31 32 Total Retainage: \$ -	Notary Public: Expires:
33 34 6 Total Earned Less Retainage \$ -	Owner Approval of Payment In alfordance with the Contract Documente, based on on-site observations and the data comprising this application, the Owner
35	believes that the best of their howledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Constr Documents, and the Constractor is entilled to the payment of the Amount Approved.
37	Amount Approved No Dollars and No Cents
38 8 Current Payment Due \$ -	(Attached explanation if amout approved differs from the amount applied for, Initial all figures on the application and on the Continuation Sheets that changed to c to the amount approved.)
40     9 Balance to Finish Including Retainage       41	Owner: 0
42 43	BY: Date:
44 IA + > P Cover Sheet SOV Sched sfSOVSetup Project Details SOVs	
Ready 🔚	
<b>Cover Sheet</b> A formatted Pay	Application cover cheet [output]
	Application cover sheet [output] ' items schedule [output]
sfSOVSetup The Setup instruct	
Project Details General project of SOVs All SOV data, inc	lata [receiving] Iuding Change Orders and Headers/Subtotals (a renamed App
Details workshee	et) [receiving]

PAPT 3.2	Spitfire Sample COs Box- Single Details- with Lien	Release Letter.xlt [Compatibility Mo	ode] - Microsoft Excel	
Home Insert Page Layout Formula				x = _ @
	Wrap Text Num		Format Cell Insert Delete Format	Sort & Find &
Paste V V V V V V V V V V V V V V V V V V V	喜 클 譚 譚 國 Merge & Center S	Formatting * a	as Table - Styles	Z * Filter * Select * Editing
	Options		, ),	X
A6 •	<pre>fx =IF(LEN('Project Details'!\$F2)=0,"",'P</pre>	Project Details ¹¹ \$E2)		
A B C	D E F	Н	I J K L M	N
2 APPLICATION AND CERTIFICATION	R E [®]	AIA DOCUMENT G702	Page 1 of 2 Pages	
4 OWNER:	PROJECT:	APPLICATION NUMBER:	0	
8	]	INVOICE NUMBER: APPLICATION DATE:	0 0-Jan-00	
10 11 12 2 CONTRACTOR:	ARCHITECT:	PERIOD FROM: PERIOD TO:	0-Jan-00 0-Jan-00	
16 17 19		PROJECT NO: CONTRACT NUMBER: CONTRACT DATE:	0 0-Jan-00	
21 CONTRACTOR'S APPLICATION FOI 22 Application is made for payment, as shown below, in com 23 Continuation Sheet, AIA Document G703, is attached. 24 25 26		information and belief the Work cove completed in accordance with the Co the Contractor for Work for which pr	that to the best of the Contractor's knowledge, red by this Application for Payment has been ntract Documents, that all amounts have been pai evious Certificates for Payment were issued and and that current payment shown herein is now du	
27 1. ORIGINAL CONTRACT SUM     28 2. Net change by Change Orders     23 3. CONTRACT SUM TO DATE (Line 1 ± 2)     30 4. TOTAL COMPLETED & STORED TO	\$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00	CONTRACTOR:		
31         DATE         (Column G on G703)           32         5.         RETAINAGE:           33         a.         0 % of Completed Work		By: State of:	Date:	
34         (Column D + E on G703)           35         b.         0 % of Stored Material	\$ <u>0.00</u> \$ <u>0.00</u>	State of: Subscribed and sworn to before me Notary Public:	County of: this day of	2009
36 (Column F on G703) 37 Total Retainage (Lines 5a + 5b or		My Commission expires:		
38         Total in Column I of G703)           39         6. TOTAL EARNED LESS RETAINAGE	\$ <u>0.00</u> \$ <u>0.00</u>	In accordance with the Contract Doc	AYMENT uments, based on on-site observations and the da	ta
40 (Line 4 Less Line 5 Total) 41 7. LESS PREVIOUS CERTIFICATES FOR		Architect's knowledge, information a	tect certifies to the Owner that to the best of the and belief the Work has progressed as indicated,	
42 PAYMENT (Line 6 from prior Certificate) 43 8. CURRENT PAYMENT DUE (Line 6 less Line 7)	\$ <u>0.00</u> \$ <u>0.00</u>	the quality of the Work is in accordant is entitled to payment of the AMOUNT	nce with the Contract Documents, and the Contract CERTIFIED.	tor
44 9. BALANCE TO FINISH, INCLUDING RETAINAGE 45 (Line 3 less Line 6) 46	\$0.00	AMOUNT CERTIFIED	No Dollars and No Cents	
47         CHANGE ORDER SUMMARY           48         Total changes approved           49         in previous months by Owner	ADDITIONS         DEDUCTIONS           0.00         0.00		ed differs from the amount applied. Initial all figure Sheet that are changed to conform with the amoun	
50 G702 G703 Lien Retention sfSO	VSetup / Project Details / App Detail			
Ready 🔛			90% 🕞 —	., 🕀 🕂
G702	A formatted sheet called	G702 [output]		

G702	A formatted sheet called G702 [output]
G703	A formatted sheet G703 [output]
Lien Retention	A formatted "Continual Release of Lien and General Release" page [output]
sfSOVSetup	The Setup instruction sheet
Project Details	General project data [receiving]
App Details	All SOV data, including Change Orders and Headers/Subtotals [receiving]

**Note**: the examples above and on the previous page use an unstructured worksheet (SOV Sched and G703 respectively) to hold SOV items, whereas the example on the next page uses eight structured worksheets to hold and display the SOV items by type as well as a summary page with Header and Subtotal data.

PAPT	PT 3.2 Spitfire Sample SOV Print Template.XLT [Compatibility Mode] - Microsoft Excel	<u> </u>
Home Insert Page Layout Formulas Di	Data Review View Developer Add-Ins Acrobat	🛛 – 🗖 🗙
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		Sort & Find & Filter * Select *
Clipboard 🗟 Font 🕼	Alignment Number Styles Cells	Editing
Security Warning Macros have been disabled. Options	h	x
A14 • 5x Co	Contractors' Application For Payment	*
A B C D E F G	HIJK LM NO PQRSTUVVX	Y
SOFTWERE Sample	e Construction Application for Payment	
2 3 Submitted To: 4	Project: Application No: 0 Period To 0-Jan-00	
5 6	. Project Number: 0 Arch Proj Number: 0	
7 From: 8	Architeot: Contract Date: 0-Jan-00 Application Date: 0-Jan-00	
9	. Invoice No: 0	
11 Contract For: 0		
Contractors' Application For Payment     Application is made for payment, as shown below, in connection with the Contra	ract. Continuation The undersigned Contractor certifies that the best of the Contractor's knowledge, information and belief the Work covered by this	
Application is made to payment, as shown below, in connection with the Contra-     Sheets are attached to substantiate this application.	Application For Payment has bee completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment where payments have been received from Owner, and current payment shown herein is	
19 1 Original Contract Sum \$	- now due. Contractor: 0	
21 2 Net Change By Change Orders \$	. Bu:	
23 3 Contract Sum To Date \$	· 0 State of:	_
25 4 Total Completed And Stored To Date \$	Subscribed and sworn before me this day of, , 2009	=
27 5 Retainage:     28 a. 0% of Completed Work \$0.00	Contractor personally appeared before me, the underrigned notary public, and provided artisfactory evidence of identification	
29 30 b. 0% of Stored Material \$0.00	ta bo the person wharianed this dacument in my presence and suare ar affirmed ta me that the cantents of this dacument are truthful and accurate to the best afhis ther knowledge and belief.	
31 32 Total Retainage:	Notary Public: Expires:	
33 34 6 Total Earned Less Retainage	Owner Approval of Payment . In affardance with the Cantrest Dacumente, based an anxite a baservetiane and the date camperines this application, the Owner	
35 36 7 Less Previous Certificates for Payment \$	believer that to the best of their leaule day, information and belief the Work har propored or indicated, the quality of the Work ir in occardence with the Construction Documents, and the Constructor is onlited to the prymert of the Amount Approved.	
37 38 8 Current Payment Due	Amount Approved No Dollars and No Cents	
33 40 9 Balance to Finish Including Retainage	(Attached septenation) i amount approved differe fram the amount applied for. Initial all figures on the application and on the Continuation Sheete that changed to conform to the amount approved.)	
41 42 43	Owner: 0 BY: Date:	
<ul> <li>43</li> <li>44</li> <li>45 (See attached pages for Original Contract and Change Order Breakdown.)</li> </ul>	BY: Date:	
46 47	uithant projectes to the rights of the Ouner or Constructor under this Construct.	
48 49		
50 51		
52 • • • • Cover Sheet OC_PG1 OC_PG2 OC_PG3	/ CO_PG1 / CO_PG2 / CO_PG3 / HS_MASTER1 / HS_MASTER2 / sfSOVSetup / Project Details / SOVs / COs	HSMaster
Ready		
Cover Sheet	A formatted Pay Application cover sheet [output]	
OC_PG1	A formatted first page of the Original Contract schedule [output]	
OC_PG2	A formatted second page of the Original Contract schedule [output]	
OC_PG3 CO_PG1	A formatted third page of the Original Contract schedule [output] A formatted first page of the Change Order schedule [output]	
CO_PG2	A formatted second page of the Change Order schedule [output]	
CO_PG3	A formatted third page of the Change Order schedule [output]	
HS_MASTER1 HS_MASTER2		
sfSOVSetup	The Setup instruction sheet	
Project Details		
SOVs COs	Data for Original SOV items (a renamed App Details worksheet) [receiving] Data for Change Order items (a renamed App Details worksheet) [receiving]	
HSMaster	Data for Headers and Subtotals (a renamed App Details worksheet) [receiving]	

# **PAPT Setup**

# The setup instructions for your PAPT are entered in the sfSOVSetup worksheet. This worksheet must be included in your PAPT.

	Book1 - Microsoft Excel						
ſŪ	Home Insert Page Layout Formulas	Data Review	View Developer Add-Ins Acrobat 🔞 🗕 🗖	x			
	· · /	<mark>≡ ≫</mark> ·· ≡ ∉ ≇ ⊡ · Alignment □	General       ▼         S ~ % ,       Image: Conditional Formatting ~         Format as Table ~       Image: Conditional Formatting ~         S ~ % ,       Image: Conditional Formatting ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format as Table ~       Image: Conditional Format as Table ~         Image: Conditional Format ~       Image: Conditional Format ~         Image: Conditional Format ~<				
_	A1 • fx	Spitfire Setup She	et	¥			
	A	В	C	=			
1	Spitfire Setup Sheet	Version	3.2				
2	© Copyright 2005 Spitfire Management, LLC. All Riv		J.Z DO NOT ALTER FORMAT				
3	Use this sheet to provide the following variables						
4	Description	Value	Comments				
5	Project Data Sheet Name		Enter the sheet/tab name where the Project header details will be copied to.				
6	Paste Project Data in cell		Enter the top left cell reference where the block Project Data will be pasted.				
7	Original SOV Data Sheet Name.		Enter the sheet/tab name where the Original SOV Data will be copied to.				
8	PasteOriginal SOV data on cell		Enter the top left cell reference where the block Original SOV Data will be pasted.				
9	Separate Change Orders from Original data?	Yes	Yes: SOV will paste Change Orders into a separate worksheet than Original SOV data. No : SOV will paste all data on the Original SOV sheet.	ŀ			
10	Change Order Data Sheet Name		Enter the sheet/tab name where the Change Order Data will be copied to.				
11	Paste Change Order data in cell		Enter the top left cell reference where the block Change Order Data will be pasted.	F			
12	Unique Subtotals Page?	Yes	Yes: Will place the Subtotal rows and Headers on a separate worksheet - Useful for high level view.	L			
13	Subtotal Data Sheet Name		Enter the sheet/tab name where the Subtotal and Header Data will be copied to.				
14	Paste Subtotals data in cell		Enter the top left cell reference where the block Subtotals Data will be pasted.				
15			Very Design the data OW V. Deletion will be experied by the wave already and				
16	Just Pass the Data	Yes	Yes: Pass the data ONLY. Printing will be controlled by the user elsewhere. No: SOV will pass data and control printing.	r			
17	Preview and Print		Enter the profile for the page supported uping the # for the page and #e for the				
18	Page and Pages	Page # of #s Pages	Enter the profile for the page numbering using the # for the page and #s for the number of pages. (Leave Blank to exclude page printing)				
19	Cover Sheet Name		Enter the sheet/tab name of the Summary Cover Sheet. This will be the first page printed then followed by the pages of schedules				
20	Cover Sheet Page Print Cell Reference		Enter the cell reference where the Page # of #s Pages will be pasted				
21	Cover Sheet Distribution Designation sheet name		Enter the sheet/tab name where the distribution "who to" value is copied to				
22	Cover Sheet Distribution Cell Reference		Enter the cell reference where the distribution "who to" value is copied to.				
23	Cover Sheet Land on Cell Reference		Optional: Enter the cell to set as active during Print Preview.				
24	Schedule 1 Sheet Name		Enter the sheet/tab name of the first schedule to be printed.				
25	Page Print Cell Reference		Enter the cell reference where the Page # of #s Pages will be pasted				
26	Page Sum Cell Reference		Enter the cell reference where the Sum of this page exist. If the value in this reference eguals zero it will not be counted nor will it print.				
27	Single Page Output - Set autofilter		Enter "Yes" to filter out blank rows when all the printable rows are on ONE worksheet. The sum of each column can be at the top or at the bottom.	-			
	Cover Sheet / SOV Sched sfSOVSetup	🛾 App Detail 📈 Proje	t Details / 💱 / 🖬 4 🔤 👘 👘				
Rea	dy 🔚		■ □ □ 100%	.::			

• Fill out this setup worksheet as follows.

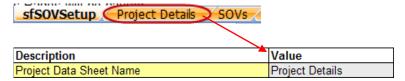
### **Your Input**

#### TIP

The examples shown here correspond to the <u>PAPT shown</u> on page 20.

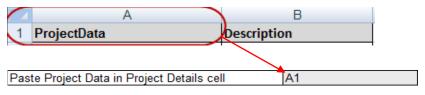
#### 5. Project Data Sheet Name

Indicate the receiving worksheet that will hold your global project information (i.e., data that is not line item specific.) Normally this is the Project Details worksheet. Enter **Project Details** or the name of your renamed worksheet in the Value column. For example,



#### 6. Paste Project Data in Project Details cell

Notice that the name of your Project Data worksheet entered in row five is now used in the description. In the Value column enter the cell reference that represents the top-left corner where the block of data copied from the Project Details worksheet should be copied. For example,



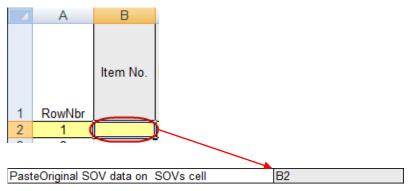
#### 7. Original SOV Data Sheet Name

What did you name the worksheet (originally App Details) that will hold original contract/SOV items? In the Value column enter the name of this worksheet. For example,



### 8. Paste Original SOV data in SOVs cell

Notice that the name of your Original SOV Data worksheet entered in row seven is now used in the description. In the Value column, enter the cell reference that represents the top-left corner where the SOV data should be copied to on the SOV Data worksheet. For example,



#### 9. Separate Change Orders from Original Data?

This is a simple Yes or No answer. Does your PAPT include different App Detail worksheets for original SOV items and for Change Order items? If so, the answer is Yes. A Yes answer will cause the SOV Billing module to write the Change Orders to a different worksheet. For example,

Separate Change Orders from Original data?	Yes
--------------------------------------------	-----

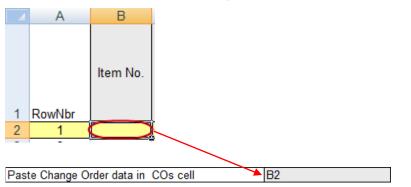
#### 10. Change Order Data Sheet Name

If your answer to the previous question is No then leave this Value column blank. If your answer to the previous question is Yes, then enter the worksheet name (originally App Details) that will hold Change Order items. For example,



#### 11. Paste Change Order data in COs cell

Notice that if you entered a Change Order Data Sheet name in row ten, it is now used in the description. In the Value column enter the cell reference that represents the top-left corner where the Change Order data should be copied to on the Change Order Data Sheet. For example,



#### 12. Unique Subtotal Page?

If you do not use Headers and/or Subtotals in your Spitfire SOV workbook, just leave the Value blank and skip to "16. Just Pass the Data". If you do use Headers and/or Subtotals AND your PAPT has a separate worksheet for the SOV Headers and Subtotals, enter Yes in the Value column. Otherwise, enter No. For example,

Unique Subtotals	Page?	Yes

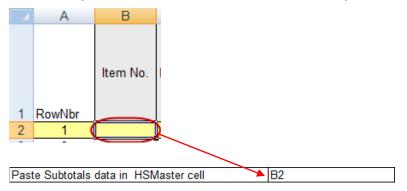
#### 13. Subtotal Data Sheet Name

If your answer to the previous question is No then leave this Value blank. If your answer to the previous question is Yes, then enter the worksheet name (originally App Details) to hold the SOV Header and Subtotal data. For example,



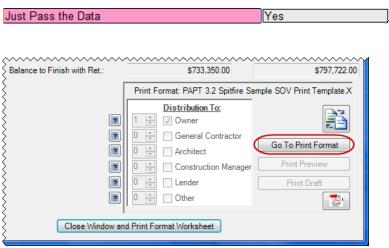
#### 14. Paste Subtotals data in HSMaster cell

Notice that if you entered a Subtotal sheet name in row 13, it is now used in the description. In the Value column, enter the cell reference that represents the top-left corner where the Header and Subtotal data should be copied to on the Subtotal worksheet. For example,



#### 16. Just Pass the Data

If you enter No in the Value column, the rows after "Just Pass the Data" will tell the PAPT how to print the output worksheets that you have included. If, however, you do not want any pages to print automatically, but would rather give print control to the user, enter Yes in the Value column. If "Just Pass the Data" = Yes, a button will appear on the Project Summary/SOV Print form in the SOV workbook, allowing the user to open the Microsoft Excel printout and select which pages to print. For example,



If you enter Yes, you are finished with the sfSOVSetup worksheet. Save your PAPT. If you enter No, you need to fill out the remaining rows.

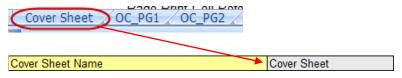
#### 18. Page and Pages

Microsoft Excel controls the page count by worksheet. Therefore, if the PAPT has multiple output worksheets, the first printed page from each worksheet would start with page 1. Additionally, if multiple project partners are selected in the SOV Print Form, the cover sheet page numbering would reflect the distribution count and not the page count. To overcome this issue, the SOV Billing Module generates the page count on the fly. This is a "what you see is what you get" entry. It is defaulted to "Page # of #s Pages" where "#" is the page number and "#s" is the total page count. This follows the similar structure and outcome to the Headers and Footers entry in Microsoft Excel. Delete the default entry and leave it blank if you do not want page numbers on your printouts.

Pa	ge and Pages	Page # of #s Pages

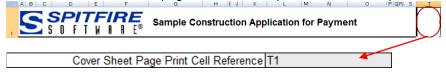
#### 19. Cover Sheet Name

If you created an output worksheet for your cover sheet, enter this sheet/tab name in the Value column. If "Just Pass the Data" = No, this will be the first page printed. For example,



#### 20. Cover Sheet Page Print Cell Reference

If the "Page and Pages" value is not blank, enter the cell reference on the cover sheet where the page format will be printed. For example,



#### 21. Cover Sheet Distribution Destination Sheet Name

Most often this is the same worksheet name as the cover sheet name. It identifies which output worksheet will be updated with the SOV Billing distribution name, such as owner, contractor, architect, etc. For example,

#### Owner Approval of Payment

In affordance with the Contract Documents haved or

Cover Sheet Distribution Designation sheet name Cover Sheet

#### 22. Cover Sheet Distribution Cell Reference

Enter the cell that will be updated with the SOV Billing distribution name code. For example,

W3 • 🕥	f _x O					
	G H I J K Sample Construction Applic	cation for Payment	PIQRIS TUV V V			
2 3 Submitted To:	Project:	Application No: 0				
Cover Sheet Distribution Cell Reference W3						

#### TIP

You can place information on your output worksheets that will not get printed. One way to do this is to make the text the same color as the background (white).

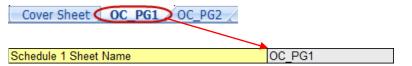
#### 23. Cover Sheet Land on Cell Reference

Enter the cell reference that best positions your cover sheet for viewing whenever the print preview is selected from the SOV Print form in the SOV workbook. This cell will be guaranteed to be visible in print preview. For example,

	ABCDEF		G
	SPITFIR	E,	ample Co
1	🚬 SOFTWAR	E®	
2			
3	Submitted To:		
4			
5			
7	From:		
8			
9 10			
11	Contract For:	0	
14			
14	Contractors' Applicat	ion For Pa	iyment
15 16	Application is made for payment, as shown below, in a	connection w	ith the Contract, Cont
17	Sheets are attached to substantiate this application.		
18		_	
19 20	1 Original Contract Sum	\$	-
20	2 Net Change By Change Orders	\$	
22			
23	3 Contract Sum To Date	\$	-
24 25	4 Total Completed And Stored To Date	\$	
26	4 Total Completed And Stoled To Date	*	
27	5 Retainage:		
28	a. 0% of Completed Work	\$0.00	
29 30	b. 0% of Stored Material	\$0.00	
31	b. 0% or stoled Material	\$0.00	
32	Total Retainage:	\$	-
33			
34	6 Total Earned Less Retainage	\$	-
35	7 Less Previous Certificates for Payment		
07	r Less Frevious Certificates for Payment	<u> </u>	
	Cover Sheet L	and or	Cell Refer
	00101 011001 2	and or	000011100101

#### 24. Schedule 1 Sheet Name

What output worksheet should be displayed/printed after the cover? Enter this output worksheet name in the Value column. For example,



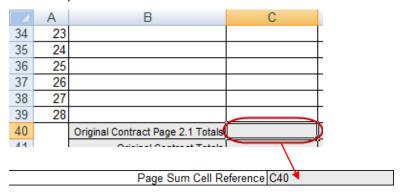
#### 25. Page Print Cell Reference

If the "Page and Pages" value is not empty, enter the cell reference on the first schedule output worksheet where the page format will be printed.

_	A	В	С	D	E	F	G	Н	1	J
1				ORIGI	NAL CON	FRACT PA	GE 2.1	_		$\frown$
2	2 Submitted From: Project:									Page of
			Pag	e Print C	ell Refere	ence J2				

#### 26. Page Sum Cell Reference

Pick a cell on the first output worksheet that would indicate if there is data on this schedule. This is usually a cell in a total row. How it works: If there is no SOV data, the total would be zero or blank. As such, the SOV Billing module would check the specified cell and, not finding data, would not print the schedule.



#### 27. Single Page Output – Set AutoFilter

AutoFilter is an advanced Microsoft Excel function that allows you to choose specific rows for review from a group of rows on the worksheet. Spitfire uses this feature specifically with PAPTs that contain unstructured worksheets. Unstructured worksheets should be configured to handle more than the maximum number of SOV items ever to appear on a project. By deploying Microsoft Excel's AutoFilter based on the existence of amounts on each row, the output will automatically set the dimension of the worksheet to match the number of SOV items and remove all blank rows. (See page 32.) Enter **Yes** on the Value column if you want to filter out blank rows from the one printable worksheet. Enter **No** if you have several structured worksheets to accommodate more rows than fit on one printout page. For example,

Single Page Output - Set autofilter Yes

#### 28. Single Page Output – Blank Rows Cell Reference

Used with the prompt above this is the cell reference which identifies the column that is evaluated by the AutoFilter criteria. Spitfire defaults the AutoFilter criteria to only those rows containing actual values. Doing so eliminates all blank rows. For example,

	J	K	L	
1	f 2 Pages			
2		•		
3				
4				
5				
6				
7	1	J	Visible	
8 9 10 11 12	RETAINAGE (IF VARIABLE	Comment	$\frown$	
ĨŪ.	RATE)	Comment	i 1	
11			1	
	0.00		1	
13 14	0.00		1	
14	0.00		1	
16	0.00		1	
17	0.00		1	
18	0.00		1	
19	0.00		1	
20	0.00		1	
21	0.00		1	
22	0.00		1	
23	0.00		1	
				$\mathbf{A}$
Si	ngle Page Ou	tput - Blank R	ows Ce	Il Reference 18

Note: only Schedule 1 and Schedule 2 are AutoFilter capable.

#### 29. Schedule 2 Sheet Name etc.

What output worksheet should be displayed/printed after the first schedule? Enter this output worksheet name in the Value column then fill out the "Page Print Cell Reference," "Page Sum Cell Reference," "Single Page Output – Set autofilter," and "Single Page Output – Blank Rows Cell Reference" rows as described above for your second schedule. For example,

#### / OC_PG1 OC_PG2 OC_PG3 /

Schedule 2 Sheet Name	OC_PG2
Page Print Cell Reference	J2
Page Sum Cell Reference	C40
Single Page Output - Set autofilter	No
Single Page Output - Blank Rows Cell Reference	

Complete the sfSOVSetup worksheet using the references from the PAPT to identify additional schedules.

Remember to save often while entering your information and when you are finished.

#### TIP

You can hide the column that will be evaluated by the AutoFilter so that users do not see it. In addition, the AutoFilter criteria can be an actual number or a formula that returns either a number or a blank based on the existence of an amount in another cell on that row.

# **Testing and Mapping**

Once you have entered all your information in the sfSOVSetup worksheet and have included all corresponding worksheets in your PAPT, you are ready to test the PAPT.

Unless you already have mapped cell references in your output worksheets, your PAPT will likely include static data. After verifying that your output looks the way you want it to, you will map the correct cell references so that your PAPT can correctly access the data from your Spitfire Pay Application and corresponding SOV workbook.

#### To test your PAPT:

- 1. Open a Pay Application document.
- 2. Open the SOV workbook for that document.
- 3. Select **SOV Print** from the Spitfire Menu ribbon. The **Browse for PAPT** dialog box will open.

S Browse for PAPT					
The Pay Application Print Template (PAPT) for this Project is not identified.					
Please browse for the location of the Pay Applicatio Template (PAPT).					
Location / Path					
	•••				
Print Template Name					
	OK				

**Note**: if the **Browse for PAPT** dialog box does not appear and instead the SOV Print Form opens, click the "Change Print Format" button on the SOV Print form to open the **Browse for PAPT** dialog box.

2		
	n Sales Tax View ~	
Contract Sum:	\$750,000.00	
CO Change:	\$.00	Amounts with Tax
Project Total:	\$750,000.00	\$813,750.00
ed and Stored:	\$7,000.00	
tion on Work	\$630.00	
n on Material:	\$.00	
tal Retention:	\$630.00	
ss Retention:	\$6,370.00	
Applications:	\$.00	\$.00
Payment Due:	\$6,370.00	\$6,965.00
hish with Ret.:	\$743,630.00	\$806,785.00
}	Print Format: PAPT 3.2 Spitfire S	ample SOV Print Template.X
Ś	Distribution To:	
?	1 🚔 💟 Owner	195 I
2	0 🚔 🔲 General Contractor	
?	0 🚔 🔲 Architect	
> ?	0 🚔 🔲 Construction Manager	Print Preview
2	0 🚔 🔲 Lender	Print Draft
2	0 🚔 🔲 Other	
	/	
Close Window ar	nd Print Format Worksheet	
$\geq$		

On the Browse for PAPT dialog box, browse for your newly created PAPT file, then click OK.

**Note**: If the SOV Billing Module experiences errors opening the PAPT, it may identify the errors in a message box. If the error is not disabling, it may be able to complete the opening but not complete the data transfer. If the error is disabling, it will abort the opening and the print distribution area of the SOV Print form will be disabled. If you experience an error, review your work and correct the cause of the error.

5. If there are no errors, your output workbook will open. This workbook contains your formatted output worksheets along with data. You may need to find it on your task bar. Look for your PAPT filename then click to bring the workbook to the foreground.

<b>G</b>	<b>ਰਿ</b> • 6 • ) ●				nt Template1 [Compatil		icrosoft Excel					
		age Layout Formulas	Data Review		eveloper Add-Ins	Acrobat			+		Σ· Α _	
Past				ge & Center *	\$ • % •	Conditiona Formatting	I Format ▼ as Table ▼ S		nsert Delete	Format	Sort & Find	
ipbo	oard 🖻 🛛 Font	5	Alignment	5		6	Styles		Cells		Editing	
٥	A14	▼ (	Contractors' Applic		ayment	0	PQRS	т	II V	V	¥ ¥	7
5		E			ation for Payn			Page 1 c	of 2 Pages	w		-
	Submitted To:	Adventure Works 450 Shattuck Ave South Poritand, OR 98777	Project:	18777	Project Numl	To 27-Feb-09 per: AD0002	-			_		
	From:	Spitfire Construction 80 Busines Park Drive STE 104 Armonk, NY 10504-2222	Architect:		Arch Proj Numi Contract Dat Application D Invoice I	e: 0-Jan-00 ate: 27-Apr-09	-					
	Contract For:	0								_		
	Contractor	s' Application For Payment										
1 2 3 4 5	neets are attached to substantiate thi I Driginal Contract Sum I Net Change By Change Orders I Contract Sum To Date I Total Completed And Stored To Da I Retainage:	\$ \$ 	for 50,000.00 . Col . By: 50,000.00 Sta 7,000.00 Sub	Work for which previ dwc. ntractor: Adv Chris Demo te of: oscribed and sworr		e payments have been rec	ceived from Owner, : day of,	and current paym	d by the Contracto tent shown herein is	1		
	a. 9% of Completed Work b. 9% of Stored Material	\$630.00	tab. afki	tractur porrunally appo the porrun unuriqued rfher knuuledge and be tary Public:	sarad baføre me, the underzigned nøtar this døcument in my prerence and sum sliaf.	y public, and provide dratis o or affirmed to me that the Expires:	factary ovidon co afid o cantontr af thir da cu	dontification Imont are truthful c	and accurate to the b.	est		
	Total Retainage:	\$	630.00	vner Approva	l of Paymont					_		
	Total Earned Less Retainage	\$	6,370.00 In aft bolio	fardanco with the Cant war that to the bart of t	ract Dacumontr, barodan an vite abre thoir knaulodgo, infarmatian and bolie ind the Cantractar ir ontitled to the pay	f the Work har progressed as	r indicated, the quality		ccordance uith the			
	Current Payment Due	\$	6,370.00	iount Approved		ee Hundred Seventy I				_		
	Balance to Finish Including Retaina	ge \$ 1	(Att. 43,630.00	iqod ta canfarm ta the c	naunt appravod difforz fram tho amaus amaunt appravod.)		res an the application :	and an the Cantinu	iation Sheets that			
10	Applicable Sales Tax	\$	595.00 BY:			0	Date:			_		
	(See attached pages for Original Co	ntract and Change Order Breakdown.	This with	Application ir not no qu out projudico tu tho riqi	tiable. The AMOUNT APPROVED is pay hts of the Ouner or Contractor under ti	able an ta the Cantractarne sir Cantract.	umed herein. kruance,	, paymont and acco	optanco of paymont a	re		
	N N Course Charts	PC1 / 00 PC2 / 00 PC3	/ CO. DC1 / CO. D	ca / ca ac			-50010	7.	is at Data?	CON		
	to change the Print Format for	<u>PG1 / OC_PG2 / OC_PG3</u> or this Project	<u>/ CO_PG1 / CO_P</u>	G2 / CO_PG	3 / HS_MASTER1 /	HS_MASTER2	sfSOVSet	up Proj	ject Details	SOVs		-(
	» 🔎 2 Google T 🔻	闷 Inbox - Micr 🛛 💋 Sr	itfire Cons 🗃 s	pitfire_sov	S 2 Spitfire D	🔹 📓 sfSOVBill	lia al	) PAPT 3.2	Santa 1	Project S		31

Look at the output workbook name. Notice that it is similar to your PAPT filename but ends with a number, like 1. Also notice that it is NOT a template but an ordinary worksheet with the extension of **.xlsx**.

- 6. Examine each of your worksheets by clicking on tabs on the bottom of the workbook.
- 7. Keep the output workbook open while you map cells or make other changes to your PAPT as described in the next section.

# Connecting the Dots

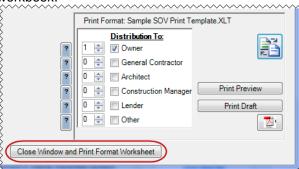
While you have your output workbook open, you will make changes to your PAPT. This process is easier if you have two monitors.

#### To modify your PAPT and map data:

- 1. Open Microsoft Excel outside of Spitfire.
- 2. Use the Open command to open your PAPT file.

	• •
New	Recent Doc
Open	2 PAPT 3.2 3 PAPT 3.2

- 3. Wherever you have static data in your output worksheets, delete the data, position the cursor on the corresponding variable data cell and then enter the address for the corresponding data. This is usually a "point and shoot" exercise. Select the variable cell, enter "=" (the equal key), then use the mouse to change to the output worksheet (in Spitfire), navigate to and highlight the target cell, then press the Enter key.
  - Most of the output Cover page data will be found on the Project Detail worksheet.
- 4. When you are satisfied with your changes, save your PAPT file (the file that you opened outside of Spitfire). Remember that you can go back to it and make further changes as needed.
- In Spitfire, click the Close Window and Print Format Workbook button on the SOV Print form to close your output workbook.



6. You can also close the SOV workbook and Pay Application document.

Repeat the process of using your PAPT from an SOV workbook, checking the resulting output workbook, and making necessary changes to the PAPT.

#### TIP

A way to verify that you have opened the template file is to check the name in the title bar. It should have the **.xltx** extension. If it has the PAPT name with a 1 suffix, then you have opened a new workbook from the template instead. Close it and open the template as described.

# **Fine-tuning**

# Unstructured Output Worksheets

Many output workbooks consist simply of a cover page and one schedule. Construction of that schedule requires additional configuration within the PAPT.

#### Steps to consider:

- 1. Create the output worksheet with the desired columns and titles starting with the first row and working down. As you transition from column labels and titles to item rows, remove any blank rows. Microsoft Excel prefers no blank rows when using the AutoFilter option.
- Create more than ample line item rows. If a typical SOV workbook has 50 items, then double the number of probable rows. If you are consistently up in the hundreds of items, add 100 rows to the average SOV item count. More is better, and more will not dramatically impact the operation or performance, although reasonableness should prevail.
- 3. Add the page total rows at the end of the item rows. Enter the appropriate sum formula.
- 4. Map each cell in the first item row on the output worksheet to the first row and appropriate column on the receiving worksheet (for example, the App Detail worksheet). Review each cell reference. Since the next step copies the reference down to the next row, make sure the reference is structured to change when copied. For example, a reference of =\$A\$2 will always point to column A on row 2 regardless of where you copy it. Remove the \$ from either the column or row and a copy will maintain the "Relative Position". Therefore, if the cell holding the reference formula =A2 is 5 columns to the right and 3 rows below, and you copy and paste the reference formula to another location, the cell you paste the formula in will reference a cell 5 columns to the left and 3 rows above. Since we are copying down, remove any \$ in front of the numbers. "=\$A2" is the objective.
- 5. Depending on the output worksheet format, highlight the entire first item row starting where the mapping begins and copy it down to the last row before the page total rows. Repeat as necessary copying the mapped references for each column to cover all the item rows.

- 6. Configure the Page Setup.
  - Using the Microsoft Excel Page Layout options, set the orientation, margins, and scaling to get all printable columns on one page width. Using the "Scale to Fit" options, set the Width to 1 and set the Height to a number equal to or greater than the number of pages needed to accommodate the desired print area. If you leave the Height as Automatic, Microsoft Excel will adjust the output.

Ca	🚽 🤊 🔹	(ч • ⇒)	÷					Во	ok1 - Mici	rosoft
9	Home	Insert	Page Layout	Formulas	Data	Review	View	Develo	per A	dd-In:
Aa Themes	Colors A Fonts	- Margi	ns Orientation	Size Print Area	Breaks	Background	Print Titles	Width: Height:		
1	Themes			Page Setu	р		G	Scale	to Fit	J.
$\circ$ On the sheet tables set the print area to include all										

- On the sheet tab, set the print area to include all printable columns and rows 1 through to the last output page total row.
- Select the rows to repeat at top to include the label and title rows.
- Page order should be down, then over.
- 7. Set up the AutoFilter column. The objective here is to select a column where the cell content is dependent on the existence of an SOV item. One example would be the "Schedule of Values" column. If the SOV item exists then one can assume the "Schedule of Values" column would have an entry. Whereas, the column containing "This Application Work Completed" amount may or may not have an amount. In some cases, you may elect to reference a no-print column. This column could force a minimum number of blank rows to be printed on the first page, then use a formula to check the existence of cell content to see if it should add additional rows creating additional pages.
- 8. As a final step be sure to include the page subtotal rows as "always print" rows.

# Cascading Output Worksheets

Print formats can use multiple, very similar worksheets that cascade item rows from one worksheet to the next at the time of creation.

How it works is not all that complicated and could be the best solution for your print format requirements.

#### Steps to consider:

- 1. Create the schedule for original items with the required column labels and titles. Include <u>page total rows</u> (see page 34) and enough item rows so that the worksheet prints as one page on the desired paper size.
- 2. Copy this worksheet within the PAPT as needed to cover possible items. Give each worksheet a distinct name.

- 3. In a similar manner, create the output schedule worksheet for Change Order items and copy that worksheet as needed within the PAPT. Remember to give each worksheet a distinct name.
- 4. If desired, create the output worksheets for Headers and Subtotals also.
- 5. Map each output worksheet to the source (receiving) print format worksheet. The item rows mapping for the original SOV items goes from the first output worksheet to the second output worksheet to the third, etc. For example, if items 1 to 25 are on schedule 1, items 26 to 50 are on schedule 2, and so on. Use the same process for cascading Change Order and other schedules if applicable.
- 6. The order in which the output worksheets are printed is defined on the sfSVOSetup worksheet.
- 7. An important component of this setup is the use of the "Page Sum Cell Reference" where only those output worksheets meeting the criteria will be printed. For example, if you have three original SOV item schedules (listed as Schedule 1, 2 and 3 on the sfSOVSetup worksheet) in the PAPT, and the SOV application has only enough items to fill one output page, then the original SOV item schedules 2 and 3 would not print. Yet, if the Change Order schedules (listed as Schedule 4 and Schedule 5 on the sfSOVSetup worksheet) were to follow and Change Orders did exist on this SOV application, then the appropriate number of Change Order schedules would print.

## Output Page Total Rows

Often referred to as "footers," these rows usually display the sum of the amounts in the rows above. These total rows may separate original items from Change Order items as subtotals while other rows may include all items. The difficulty is determining which item row to include where. What tools are available to help in identifying which rows should be in which totals? Microsoft Excel offers a "sumif" function that evaluates each row for a user-defined condition and, if the condition is satisfied, the target amount is included in the sum. You can use this function to evaluate and distinguish the item row as an original item, Change Order, Header or Subtotal row.

#### Steps to consider:

- Take a moment and review the columns in the App Detail worksheet. Column AH is defined as **Row Type**. When populated by the SOV Billing module, the values in this column will range from 0 to 6 for each item row.
  - 0 = regular item row
  - 1 = change order row
  - **2** = header row
  - 3 = subtotal row
  - 4 = reserved
  - **5** = distributed change order row
  - 6 = special sales tax row

- On the output worksheet, create a non-print column titled RowType and map the output worksheet item row cell for this column to the corresponding Row Type column on the receiving worksheet.
- 3. Copy the mapping through to the last item row before the totals rows.
- 4. In your subtotal of items row (on your output worksheet) change each cell formula to read =sumif(Range, Criteria, SumRange) where Range is the RowType column inclusive of item row 1 through item row xx (xx being 1 less than the totals row); Criteria is input as "0" including the ""; and SumRange is the current column inclusive of item row 1 through item row xx. For example,

		C40	✓						
	Α	В	С	1	D	E	R		
38	27			/			>		
39	28								
40		Original Contract Page 2.1 Totals	\$750,000.00	2	\$1,250.00	\$14,250.00	$ \geq $		
41	~~~	Original Contract Totals	\$750,000,00	h	\$1,250.00	\$14,250,00			

 In your subtotal of Change Order items row (on your Change Order output worksheet), change each formula to read =sumif(*Range,Criteria,SumRange*). Use the same Range and SumRange as in the Original Items for this column. Change the Criteria to 1. For example,

	C38	fx =SUMIF(\$M\$12:\$M\$39,"1",C12:C37)				
25					}	
26					2	
	Change Orders Totals Page 3.1		)		2	
h	Change Order Grand Totals	hanna	L	hanna	hanna	

6. If you create Subtotal rows, then you need to exclude amounts in these rows from the grand total. In your Grand Total row change the formula to read =sumif(Range,Criteria,SumRange). Use the same Range and SumRange as in the original items for this column, but change the criteria to read "<2". This eliminates all other types of row (Subtotal, Distributed Change Orders, Sales tax, etc.) from the sum.</p>

### **Data Flow**

You will want to ensure that your output worksheets contain the correct data from your Pay Application and project. In order to test this, you will need a project with Pay Application data. If necessary, create a "dummy" project and enter data in the SOV workbook before testing your PAPT.

#### To test data flow in the PAPT:

- 1. Open an SOV workbook. This workbook should have enough data to test all the output worksheets.
- Select SOV Print from the Spitfire Menu. The output workbook created from your PAPT should open.
   Note: if you get the Browse for PAPT dialog box instead, browse for your PAPT file and click OK.

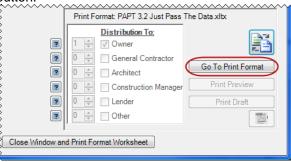
S Browse for PAPT	
The Pay Application Print Template (PAPT) for t is not identified.	his Project
Please browse for the location of the Pay Applic Template (PAPT).	ation Print
Location / Path	
Print Template Name	
	ОК

 Check all data in the output worksheets. If you find incorrect data, you should <u>open the PAPT file</u> in a separate Microsoft Excel session (as described on page 31) and make your changes directly on the PAPT.

### Printing

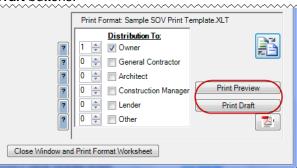
#### To print or preview your printouts:

 If your PAPT includes the instruction to "Just Pass the Data" (see page 24), your SOV Print form shows the Go to Print Format button.



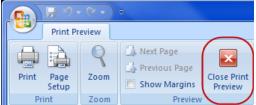
Click the button to go to the output workbook and print / preview whatever sheets you want using regular Microsoft Excel options.

2. If your PAPT does *not* include the instructions to "Just Pass the Data", your SOV Print form shows the **Print Preview** and **Print Draft** buttons.



Click the **Print Preview** button to see what your output sheets will look like when printed or the **Print Draft** button to print your application.

**Note**: if you look at the Print Preview, the first page (normally your Cover sheet) will be the only one visible. To see the next page, close the current page:



### Things to Consider

- Each schedule identified in the sfSOVSetup worksheet is evaluated for preview/print in sequential order, for example, Cover, Schedule 1, Schedule 2, Schedule 3, Schedule 4, etc.
- Only those worksheets which meet the sfSOVSetup criteria are printed. A non-print schedule will not prevent subsequent schedules from printing.
- If a schedule is designed to have multiple pages it must support the AutoFilter feature. (See page 32.)
- Page and Page counts are not required on each schedule. Leaving the Page Print Cell Reference blank will prevent page printing on that schedule; however, the SOV Billing module will count each schedule being printed.

# **Uploading Your PAPT Into Spitfire**

When the PAPT is ready for use, you can upload it into your system so that it is available to all who wish to print from the SOV workbook.

#### To upload your PAPT into Spitfire:

1. In sfPMS, go to the Templates tool on either the Manage or System Admin Dashboard.

Home Catalog Contacts	Executiv	ve Manage System Ad	Imin		
~					TEMPLATES
Routes     Allocations	NAMES	LIKE:	TYPE:	Supplemental	Wol - DOC TYP
Alert Subscriptions	đ	Doc Туре	Name	Туре	Description
CSI Maintenance     Date Types     Reference	× /		Competitive Bid Response Analysis	Bid Analysis	Template for simultaneously rev on a project
Region Maintenance     Templates			Transmittal	Transmittal	General Transmittal Cover

2. Check the Type box and select **PAPT**. If there are any PAPTs already in Spitfire, they will be listed. You can have multiple PAPTs in your system; users will be able to select the one they want to use at any particular time.

		TEMPLATES
NAMES LIKE:	TYPE: 🔽 PAPT	•

- 3. Click  $\square$  to add a new row.
- 4. Select **Pay Application** from the Doc Type drop-down.
- 5. In the Name field, enter a name for your PAPT.
- 6. Keep **PAPT** as the Type.
- 7. Enter a **Description** for this PAPT. The description will help users identify it as the one they want later.

₽	Doc Туре	Name	Туре	Description
×	Pay Application 💌	AIA	PAPT 💌	AIA-like Print Template

- 8. Click v to accept your information.
- 9. Click 🔚 to save the row. A 🚟 will appear on your row.
- 10. Click **to open the Template Maintenance dialog box**.
- 11. Click to browse for your **PAPT** file on your computer. (It should have an .xltm extension).
- 12. Click Open to select your file.
- 13. Back on the Template Maintenance dialog box, click
- 14. When the Template Maintenance dialog box says "Upload successful," click to close it.
- 15. Back on the Templates tool, click 🔚 to save it again.

# Saving the Print Output

When you create print output of your SOV workbook, should you save that output? There is no definitive answer to this question. Since all project data is copied to the output workbook, the output workbook could be saved as a stand-alone workbook, separate from Spitfire.

## Some Considerations

- The output can always be recreated from the original Pay Application document using the data stored in the SQL database. Saving the output may be redundant.
- Saving the output saves both the data and the workbook increasing the file size and storage requirements. For example, a typical output workbook without data is 110K in size and with data, 128K in size (roughly 18K of data for 55 line items). While 128k is miniscule, the storage requirements to save the workbook with the data are seven times greater.
- If the SOV Billing module controls the print flow, attempting to recreate such from a saved output may be troublesome. Page counts, AutoFilter for blank rows, printing of empty schedules are just a few considerations.
- Another option is to print the output to a PDF file using the PDF button on the SOV Print form and save the file on your computer:

			NOF	RTH	ERN LIGHTS	
Project:	Project: Northern Lights Office Bldg		Original Contract Sum:		\$750,000.00	
Project No:	GC003				Net CO Change:	\$.00
	1000 Electric Lane			]	Project Total:	\$750,000.00
	Portland	OR	10504		Total Completed and Stored:	\$1,250.00
Doc. Desc:	Application 0001			Retention on Work		\$125.0
Application No:	1	Invoice No:		]	Retention on Material:	\$.00
App. Date:	3/10/2010	From:	11/6/2006	-	Total Retention:	\$125.00
Contract Date:	11/5/2004	To:	11/30/2006	-	Total Earned Less Retention:	\$1,125.00
Contract For:	General Construction			Less Previous Applications:	\$.0	
Biller:	Elizabeth Keyser-Rubble				Current Payment Due:	\$1,125.0
Submitted To:	Northern Lights				Balance to Finish with Ret.:	\$748,875.00
Submitted 10.	1234 River Gorge			Print Format: SpitfireSample AIA Print single schedule1		
	Roseburg	OR	97470		Distribution To:	
From	Spitfire Construction			?	1 🚔 🔽 Owner	2 B
11011.	80 Busines Park DriveSTE 104			?	0 🚔 🔲 General Contractor	
	Armonk	NY	10504-2222	?	0 🚔 🔲 Architect	Print Preview
Architect	York Architects, Inc.		?	0 🚔 🔲 Construction Manager		
Architects No:				?		Print Draft
	555 Madison Ave.			?	0 🚔 🔲 Other	( 🔤
	New York	NY	10012	1		Print Format Worksheet

You could then attach the PDF file to the Pay Application document and add it to the Spitfire Catalog. The PDF file could then be printed on demand without launching the SOV workbook.

**Note**: if you click the PDF button when the Pay Application is Invoiced, the PDF file will be automatically attached to the Pay Application document as well as saved on your computer.