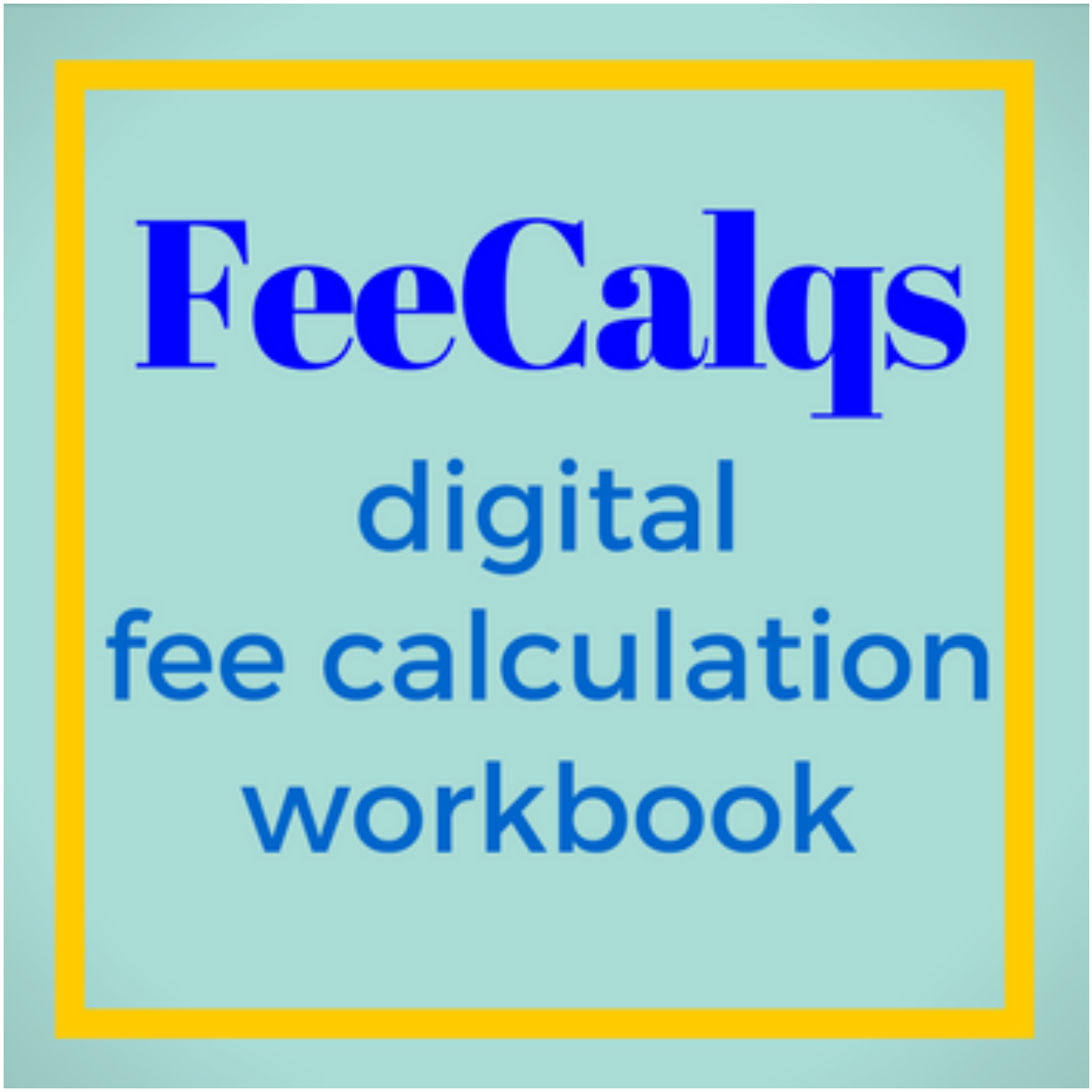


FeeCalqs Guide

Calculate The Fee For Any Size Project

TABLE OF CONTENTS

BACKGROUND

FeeCalqs is a way of determining an appropriate fee using the percentage of construction cost method. Having arrived at an appropriate fee amount, you may present it to your client as any type of fee that you want. (See more about this method.)

This spreadsheet workbook was developed over my career. Nearly every year some major or minor change was made so that it would continue to serve its purpose of calculating and allocating design fees. This workbook takes the process of calculating the design fee based on fee schedules to a new level by providing numerous ways of customizing the results to fit the project in question.

Several fee-related topics can be found in the Appendices.

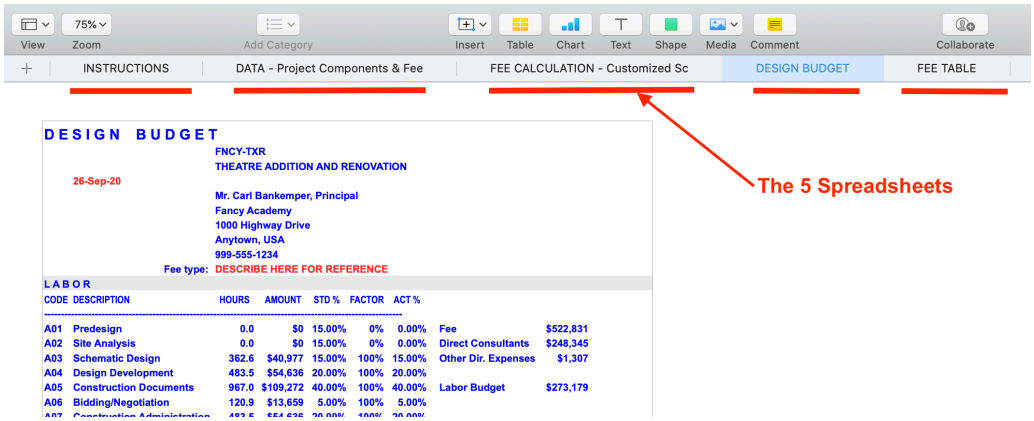
THE TABLE CONVENTION

There is the distinct possibility that you could inadvertently break one of the many cell connections or formulas in the workbook. So you will find that there is a convention to warn you. The **RED** text is the only data that you can safely change.

The primary way to safeguard the workbook is to store the original zip file and a 'Master' copy of the workbook where they will be safe as your backups.

The convention used throughout the workbook is: Cells which show data in red are meant to be customized. Cells which show data in blue are descriptions or the results of calculations - change with care.

OVERVIEW



The **FeeCalqs** workbook contains five sheets. The first, INSTRUCTIONS, contains the same information that you will find here. I find that it is convenient to have the instructions right in the workbook.

After INSTRUCTIONS, the four main sheets of the workbook are DATA, FEE CALCULATION, DESIGN BUDGET, and FEE TABLE. Each sheet will be described in detail next, but here is a brief comment about each.

DATA contains the key parameters of the project. These are things like client data, project square footage, selection of 'Group' type(s) that will be required, and some cost data.

FEE CALCULATION does just that, but allows you to configure the level of service that you will provide.

DESIGN BUDGET allocates the design fee to your specified phases AND to your consultants. By inserting a blended labor rate for your design team you will have a fairly accurate design budget by hours.

FEE TABLE is the final sheet, which you normally won't need to modify once you have made an initial customization.

Now for a more in-depth review of each sheet.

DATA SHEET

Project Components & Fee Customization			
project number	FNCY-TXR		
project name	THEATRE ADDITION AND RENOVATION		
contract date	Dec 25, 2016	(work begins or ??)	
	CLIENT		OWNER (if different)
contact	Mr. Carl Bankemper, Principal		same
organization	Fancy Academy		
address	1000 Highway Drive		
city/st/zip	Anytown, USA		
phone	999-555-1234		
email	put email address here		
1st USE GROUP		**THEATER**	
area	25,000		
cost/sf	$ 200.00		
	$ 200,000	<--sitework allowance	
tot cost	$ 5,200,000		
Change the 0 to 1 in column C to select the appropriate fee group.			
fee group I:	10.5	0	Monumental bldgs, custom homes
fee group II:	9.5	1	Exceptional complexity & high M&E
fee group III:	8.5	0	Moderate complexity, but custom
fee group IV:	7.5	0	Conventional character, not custom
fee group V:	6.5	0	Utilitarian character
fee percent	9.50%		
standard fee	$ 494,000		
2nd USE GROUP		**2nd Use Here**	
area	1		
cost/sf	$ 1.00		
tot cost	$ 1		
Change the 0 to 1 in column C to select the appropriate fee group.			
fee group I:	30.0	0	Monumental bldgs, custom homes
fee group II:	29.0	0	Exceptional complexity & high M&E
fee group III:	28.0	1	Moderate complexity, but custom
fee group IV:	27.0	0	Conventional character, not custom
fee group V:	26.0	0	Utilitarian character
fee percent	28.00%		
standard fee	$ 0		
3rd USE GROUP		**3rd Use Here**	
area	1		
cost/sf	$ 1.00		
tot cost	$ 1		
Change the 0 to 1 in column C to select the appropriate fee group.			
fee group I:	30.0	0	Monumental bldgs, custom homes
fee group II:	29.0	0	Exceptional complexity & high M&E
fee group III:	28.0	0	Moderate complexity, but custom
fee group IV:	27.0	1	Conventional character, not custom
fee group V:	26.0	0	Utilitarian character
fee percent	27.00%		
standard fee	$ 0		

The top section of the DATA Sheet collects general information that is copied to other pages. If you do not intend to share the workbook, you can omit most of this.

Fill in project name, ID number and the contract date - the date on which your work began (or some other meaningful date).

Fill in information on the Client. If your client is not the Owner, fill in data on the Owner, too.

The balance of the Data sheet gives you the opportunity to describe the project in terms of size, cost and difficulty to design. If the project is simple, just use the "1st Use Group". (The numbers that are already in the 2nd and 3rd Use Groups are designed to prevent division by zero, but not to change the results.) If you are not familiar with Building Groups, see Appendix B - Building Groups.

Projects which include more than one Building Group or which have remodeling or an addition lend themselves to the use of the 2nd and 3rd Use Groups. See Appendix E - Hybrid Projects.

All site work should be included in the 1st Use Group table and this Group should represent the major part of the project.

The selection of an appropriate fee group is done by inserting a number "1" (one) on its line and "0" (zero) on the other four fee group lines.

This allows you to arrive at an appropriate blended percent of construction cost fee.

FEE CALCULATION SHEET

Customized Scope of Work			
project code.....	FNCY-TXR		
phone.....	999-555-1234		
date.....	26-Sep-20		
name.....	Mr. Carl Bankemper, Principal		
company.....	Fancy Academy		
street.....	1000 Highway Drive		
city, st zip.....	Anytown, USA		
project name.....	THEATRE ADDITION AND RENOVATION		
area	calc	25,002	
cost/sf w/o sitework	calc	$199.98	
tot cost w/ sitework	calc	$5,200,002	
fee %	calc	9.50%	
std a/e fee	calc	$494,001	
predesign phase %	value	0	
site anal phase %	value	0	
schematic phase %	value	100	
design dev phase %	value	100	
constr doc phase %	value	100	
bid/negot phase %	value	100	
const adm phase %	value	100	
postconst phase %	value	0	
spec serv phase %	value	0	
structural construction %	value	60	
struct design included	y/n=1/0	1	
struct coord included	y/n=1/0	1	
struct eng fee %	value	1.35	
struct design %	value	100	
m/e constr %	value	40	
m/e design incl	y/n=1/0	1	
m/e coord incld	y/n=1/0	1	
m/e eng fee %	calc	9.50%	
m/e design %	value	100	
std struct fee	calc	$40,500	
req'd struct fee	calc	$40,500	
struct design fee	calc	$30,375	
struct coord fee	calc	$10,125	
std m/e fee	calc	$190,000	
req'd m/e fee	calc	$190,000	
m/e design fee	calc	$142,500	
m/e coord fee	calc	$47,500	
std arch fee for reference	calc	$263,500	
req'd arch fee	calc	$263,500	
special adjustment (+ or -)	value	$28,830	CONTINGENCY OR SPECIAL
tot a/e fee quoted	calc	$522,831	
% fee quoted	calc	10.05%	
% of std fee	calc	106%	

This worksheet is designed to determine the appropriate fee for the scope of work that is to be performed. (Note that the Project DATA appears for reference.)

All nine standard AIA phases are included for projects that include more than Basic Services. Each of the nine phases should be assigned a number from 0 to 100, which represents the percent of that phase's services that are to be included in this fee. For example, if the client has drawings of a schematic design nature, you might use "25" to represent only the time it will take to review and adjust this work. If field measurements are required, some value should be assigned to Site Analysis. If the client is a contractor, you may have "0" work for Bidding and Construction Admin. See Appendix F - Custom Scope of Services.

The five lines for structural design define the scope of structural engineering services as follows:

- structural construction % = This is the percent of the construction cost NOT assigned to M/E. Usually 60% - 70%.

- struct design included = This is a 1 for "yes" or a 0 for "no" to indicate if you are providing the structural engineering consultant.

- struct coord included = This is a 1 for "yes" or a 0 for "no". You may not have the structural engineer working for you but you may have to coordinate his work with your own.

- struct eng fee % = 1.35 usually gives an appropriate budget for structural engineering. Modify if you have a reason to do so.

- struct design % = This represents the scope of structural engineering required and is usually similar to our percentage of Basic

Services. If the building is a Pre-Engineered Metal Building, then only foundation design may be needed, so adjust as needed.

The five lines for m/e are similar to the structural group except that the M/E eng fee is calculated for you. Change this if your m/e fee is calculated differently. Answer the rest as you did for the structural engineer.

The last number required is the "special adjustment" which gives you a place to add or subtract an amount to get a round number, or to accommodate some other requirement that has not been addressed, like 3D work, or some other Additional Service that is being treated as a Basic Service. This is a good place to insert a contingency allowance as well.

At this point you should have an appropriate fee for the scope of services.

The way that structural and M/E fees are treated may be very different from what you are used to. Of course, adjust the spreadsheet to suit your methods. Or you can always adjust the fees that are being calculated for you by using the “special adjustment”.

See Appendix D - What a Fee Includes

DESIGN BUDGET SHEET

DESIGN BUDGET

FNCY-TXR
THEATRE ADDITION AND RENOVATION

26-Sep-20

Mr. Carl Bankemper, Principal
Fancy Academy
1000 Highway Drive
Anytown, USA
999-555-1234

Fee type: DESCRIBE HERE FOR REFERENCE

LABOR

CODE	DESCRIPTION	HOURS	AMOUNT	STD %	FACTOR	ACT %
A01	Predesign	0.0	$0	15.00%	0%	0.00%
A02	Site Analysis	0.0	$0	15.00%	0%	0.00%
A03	Schematic Design	362.6	$40,977	15.00%	100%	15.00%
A04	Design Development	483.5	$54,636	20.00%	100%	20.00%
A05	Construction Documents	967.0	$109,272	40.00%	100%	40.00%
A06	Bidding/Negotiation	120.9	$13,659	5.00%	100%	5.00%
A07	Construction Administration	483.5	$54,636	20.00%	100%	20.00%
A08	Post Construction Services	0.0	$0	15.00%	0%	0.00%
A09	Other Services	0.0	$0	15.00%	0%	0.00%
		2417.5	$273,179	160.00%		100.00%

Fee	$522,831
Direct Consultants	$248,345
Other Dir. Expenses	$1,307
Labor Budget	$273,179
Reimb Consult	
Other Reimb.	
Total Hours	2,418

EXPENSES

ACCT	DESCRIPTION	REIMB	AMOUNT	STD %	FACTOR	ACT %
611	Structural Consultant	NO	$65,354	12.50%	100%	12.50%
612	M/E Consultant	NO	$130,708	25.00%	100%	25.00%
614	Landscape Consultant	YES	$13,071	2.50%	100%	2.50%
616	Interior Consultant	NO	$0	7.50%	0%	0.00%
617	Misc. Consultants	NO	$39,212	7.50%	100%	7.50%
	Acoustics Consultant	NO	$0	1.00%	0%	0.00%
	Kitchen Consultant	NO	$0	7.50%	0%	0.00%
	Hardware Consultant	NO	$0	0.20%	0%	0.00%
621	Travel/Meals/Lodging	NO	$0	0.25%	0%	0.00%
622	Reproductions	NO	$0	0.50%	0%	0.00%
623	Models/Rendering/Photos	NO	$0	1.50%	0%	0.00%
624	Long Distanct Telephone	NO	$0	0.05%	0%	0.00%
629	Misc. Dir. Expenses	NO	$1,307	0.25%	100%	0.25%
			$249,652	66.25%		47.75%

LABOR USEAGE PLAN

	RATE	%	
EMP 1	$155.00	35%	$54.25
EMP 2	$125.00	15%	$18.75
EMP 3	$80.00	50%	$40.00
EMP 4			$0.00
EMP 5			$0.00
EMP 6			$0.00
EMP 7			$0.00
EMP 8			$0.00
EMP 9			$0.00
EMP 10			$0.00
EMP 11			$0.00
EMP 12			$0.00
EMP 13			$0.00
EMP 14			$0.00
EMP 15			$0.00
AVG HOURLY RATE	$120.00	100%	$113.00
HOURLY RATE USED	$113.00		

Having arrived at a fee, this worksheet assigns the fee to the various design phases for you.

I like to note the Fee Type for future reference by describing the fee type you plan to use. Although the amount of the fee has been determined by using a percentage of construction cost (modified), the way that you 'present' the fee may be completely different. Fee Types.

The LABOR portion of the design budget is calculated for you. The STD% column contains the traditional Basic Services assignment of fee to each phase. These services are only referenced if a FACTOR was entered on the FEE CALCULATION Sheet. Change the STD% to suit your practice.

The DESIGN BUDGET Sheet is the final quick check on the appropriateness of the fee. If the quantity of hours allocated to phases look wrong, that is the signal to investigate the reason. See Appendix C - Deliverables.

Changes in this area should be accomplished by going back to the preceding worksheets and modifying the decisions that were made there that gave the unsatisfactory results (like not enough hours). In the lower right portion of this worksheet is an area labeled "LABOR USEAGE PLAN". The labor budget was calculated using the amount shown as "HOURLY RATE USED". You can adjust the percent involvement of each person to find a more realistic average hourly rate and insert that number here. Of course you will need to add your people and rates here to get started.

Under EXPENSES the assumption is that only MES consultants and a small allowance for Misc Direct Expenses are included in the fee. You will have to add other consultants' fees by using the "special adjustment" on the FEE CALCULATION sheet.

The column headed "REIMB" should have other consultants which are to be paid out of your fee changed from "YES" to "NO". The percent in the FACTOR column should be changed as well to get the amount that you think should be set aside for these special consultants. Usually some arrangement in the preceding worksheets (use of the “special adjustment”) should have been made to avoid the fee for special consultants coming out of your labor budget.

FEE TABLE SHEET

FEE TABLES

GLOBAL ADJUSTMENTS:

Increase every fee by ...	0.00
Set Group ‘step’ to ...	1.00
Baseline starts at ...	30.00

USE AT YOUR OWN RISK

GROUP I		GROUP II		GROUP III		GROUP IV		GROUP V		baseline percentages	historical reference
Construction Cost	Fee Percent	Construction Cost	Fee Percent	Construction Cost	Fee Percent	Construction Cost	Fee Percent	Construction Cost	Fee Percent		
over:		over:		over:		over:		over:			
1.00	30.00	1.00	29.00	1.00	28.00	1.00	27.00	1.00	26.00	30.00	
10,000	24.00	10,000	23.00	10,000	22.00	10,000	21.00	10,000	20.00	24.00	
25,000	20.00	25,000	19.00	25,000	18.00	25,000	17.00	25,000	16.00	20.00	15.50
50,000	18.00	50,000	17.00	50,000	16.00	50,000	15.00	50,000	14.00	18.00	13.40
75,000	17.00	75,000	16.00	75,000	15.00	75,000	14.00	75,000	13.00	17.00	12.30
100,000	16.00	100,000	15.00	100,000	14.00	100,000	13.00	100,000	12.00	16.00	11.30
200,000	14.00	200,000	13.00	200,000	12.00	200,000	11.00	200,000	10.00	14.00	9.80
300,000	13.60	300,000	12.60	300,000	11.60	300,000	10.60	300,000	9.60	13.60	8.70
400,000	13.20	400,000	12.20	400,000	11.20	400,000	10.20	400,000	9.20	13.20	8.40
500,000	12.90	500,000	11.90	500,000	10.90	500,000	9.90	500,000	8.90	12.90	8.00
600,000	12.60	600,000	11.60	600,000	10.60	600,000	9.60	600,000	8.60	12.60	7.70
700,000	12.30	700,000	11.30	700,000	10.30	700,000	9.30	700,000	8.30	12.30	7.50
800,000	12.10	800,000	11.10	800,000	10.10	800,000	9.10	800,000	8.10	12.10	7.40
900,000	12.00	900,000	11.00	900,000	10.00	900,000	9.00	900,000	8.00	12.00	7.30
1,000,000	11.90	1,000,000	10.90	1,000,000	9.90	1,000,000	8.90	1,000,000	7.90	11.90	7.00
1,250,000	11.80	1,250,000	10.80	1,250,000	9.80	1,250,000	8.80	1,250,000	7.80	11.80	6.90
1,500,000	11.70	1,500,000	10.70	1,500,000	9.70	1,500,000	8.70	1,500,000	7.70	11.70	6.80
1,750,000	11.60	1,750,000	10.60	1,750,000	9.60	1,750,000	8.60	1,750,000	7.60	11.60	6.70
2,000,000	11.50	2,000,000	10.50	2,000,000	9.50	2,000,000	8.50	2,000,000	7.50	11.50	6.60
2,250,000	11.40	2,250,000	10.40	2,250,000	9.40	2,250,000	8.40	2,250,000	7.40	11.40	6.50
2,500,000	11.30	2,500,000	10.30	2,500,000	9.30	2,500,000	8.30	2,500,000	7.30	11.30	6.30
2,750,000	11.20	2,750,000	10.20	2,750,000	9.20	2,750,000	8.20	2,750,000	7.20	11.20	6.10
3,000,000	11.10	3,000,000	10.10	3,000,000	9.10	3,000,000	8.10	3,000,000	7.10	11.10	6.00
4,000,000	10.80	4,000,000	9.80	4,000,000	8.80	4,000,000	7.80	4,000,000	6.80	10.80	5.80
5,000,000	10.50	5,000,000	9.50	5,000,000	8.50	5,000,000	7.50	5,000,000	6.50	10.50	5.70
7,000,000	10.20	7,000,000	9.20	7,000,000	8.20	7,000,000	7.20	7,000,000	6.20	10.20	5.60
9,000,000	10.00	9,000,000	9.00	9,000,000	8.00	9,000,000	7.00	9,000,000	6.00	10.00	5.60
11,000,000	9.80	11,000,000	8.80	11,000,000	7.80	11,000,000	6.80	11,000,000	5.80	9.80	5.60
14,000,000	9.50	14,000,000	8.50	14,000,000	7.50	14,000,000	6.50	14,000,000	5.50	9.50	
17,000,000	9.20	17,000,000	8.20	17,000,000	7.20	17,000,000	6.20	17,000,000	5.20	9.20	
20,000,000	8.90	20,000,000	7.90	20,000,000	6.90	20,000,000	5.90	20,000,000	4.90	8.90	
24,000,000	8.60	24,000,000	7.60	24,000,000	6.60	24,000,000	5.60	24,000,000	4.60	8.60	
28,000,000	8.30	28,000,000	7.30	28,000,000	6.30	28,000,000	5.30	28,000,000	4.30	8.30	
32,000,000	8.00	32,000,000	7.00	32,000,000	6.00	32,000,000	5.00	32,000,000	4.00	8.00	

The Fee Table was modified over time to suit my firm's needs, and to adapt to the more complicated building environment that has evolved. It is unlikely that this fee schedule will fit your needs.

The DATA worksheet uses this table to insert your customized standard Basic Services fees. This table may be modified globally by using the three 'Global Adjustments' at the top of the sheet.

The 1st way to customize the fee schedule is by increasing every fee by the same amount. To do this, you replace the "**0.00**" by entering a decimal number, which has the effect of changing all the fee values by that amount. For example, if you enter 0.5, then every fee is increased by 0.5% (one half percent).

The 2nd way to customize the fee schedule is by changing the "Set Group 'step' to …". Each fee group is different by a constant amount, the Group 'step'. The Group I fee group is the most complex and custom fee group. The fees are the largest, and it is the starting point for the other fee groups. The other fee groups step lower by a set amount as you proceed from Group I to Group II, and so on. You can change the size of the 'step' from "**1.00**" to another amount to suit your needs. Changing the Group 'step' has no effect on the Group I fees. Increasing the 'step' has the effect of making the fees of the other groups smaller. Decreasing the 'step' has the effect of making the fees of the other groups larger.

The 3rd way to customize the fee schedule is by changing the "Baseline starts at …" value. The Baseline percentages at the right side of the table controls the Group I fees. The percentage that the Baseline starts with sets the 'tone' for all the fees. To change the Baseline starting point, enter a new value in the "Baseline starts at …" to replace the "**30.00**" value there now. Increasing the Baseline starting point raises all the fees in every fee group, but not by a fixed amount as with the 1st way

to customize. Conversely decreasing the Baseline starting point decreases all the fees in every fee group.

The 4th way...? The BASELINE column on the right could be modifi ed to match your preferences on fee percentages for the various construction cost levels. Make sure you have saved the workbook so you can easily recover from changes that you don't like. Each Baseline percentage is a formula referencing the preceding cell (top to bottom) and subtracting an amount to set the next fee. It is a tedious undertaking that you might be able to avoid by using the three global adjustments.

Many users will find these fees too high or too low.

YOU MUST CUSTOMIZE!

4 TACTICS FOR CUSTOMIZING THE FEE TABLES

Past Reference Project

- Compare an actual fee to one you have calculated using FeeCalqs.
- Use the actual fee as the basis for how much to adjust the fee tables.
- Select a project for comparison that had a simple scope of service, that had a simple scope of work, and that was profitable.

Fee Table You Use Now

- Determine which Fee Group your current fee table represents.
- Modify your table so that it represents a Fee Group I table. The Fee Groups step by an adjustable amount from Group to Group in FeeCalqs.
- Overwrite the 'baseline percentages' with the Group I fees that you determined.
- You may also have to interpolate the percentages to match the 'steps' in construction cost. Or change the steps to suit your fee table.

Work Backwards From Hours

- Select a project that ran smoothly.
- You need to know the hours that were spent on the project.
- Complete FeeCalqs for that project.
- Compare the hours that FeeCalqs determined to your actual hours.
- Use this check as the basis for adjusting the fee tables.

Calibrate Based On Your Current Fee Calculation Method

- Use both methods to calculate a fee - your current method and FeeCalqs.
- Determine the amount that the fee percent from the FeeCalqs tables would have to change to match your fee.
- Repeat for a couple more projects.
- Ideally you would make a 'Global Adjustment' that would make the FeeCalqs tables match your method. If not, then see 'Fee Table You Use Now' above.

For Any Method

In all of these methods, do several comparisons using different sizes and different types of projects. The goal is to get to the point of trusting what the FeeCalqs method generates as soon as possible. One of the ideal ways to build your confi dence in FeeCalqs is by really studying the labor results shown in the Design Budget sheet. See Appendix

Although I have been using versions of FeeCalqs for over 25 years, I always check the labor budget against how much time I think will be required. The bigger the project the more difficult this becomes.

My tactic in those "bigger" cases was to develop a list of deliverables for Construction Documents using as much detail as I could. See Appendix C - Deliverables. Then I estimated what each sheet or other deliverable (spec, estimate, meetings) would require in hours. The key to estimating ANYTHING is to use a long list of items. If you have 50 items and each one is wrong by 1% to 30%, the final answer will rarely be off by more than 15%, and usually 5%. That is because your errors will cancel out for the most part, and those that remain will be averaged out over all the line items.

The Fee Table was modified over time to suit my firm's needs, and to adapt to the more complicated environment that has evolved. It is unlikely that this fee schedule will fit your needs, So you really need to consider customizing it.

Alternative To Customization

I think customization is worth the effort, but there is an alternative.

- Use the fee tables 'as is'.
- Use the Design Budget labor breakdown of hours to challenge every fee as described above.
- Use the 'special adjustment' in the Fee Calculation sheet to 'provide' the hours that you need for the project

The downside to the Alternative is that you are signing up for extra work indefinitely.

One final word...

Now is a good time to remind you of the Architekwiki **Terms of Use** because, since I am sharing my fee calculation method with you, I don't want you to hurt yourself.

I hope this workbook serves you as well as it has me. Good luck!

Appendix A - Fee Types

By my count there are four basic types of architectural fees. Variations on two of these basic types adds another four fee types.

1 - Hourly Personnel Rates

Hourly by Type of Work

Hourly by Role

Hourly with a Maximum

2 - Percent of Construction Cost

3 - Lump Sum (aka Fixed Fee)

Lump Sum with Phases

4 - Unit Costs

Of course you can use more than one type on a project, and I will explain later why you might want to do that.

Hourly Rates Fee Type

An Hourly Rate Fee is simply getting paid a specific amount for every hour that you spend on the work.

This is the safest fee type because you will be compensated for all the effort that you expend. However the open-ended nature of this fee type does not appeal to clients.

Nevertheless, when a project is very small, has a poorly defined scope of work, or has a variable nature, this is the most appropriate fee type.

Normally the hourly rate is based on the person doing the work and a multiple of their labor rate. (Labor Rate is the amount per hour that the individual receives as their wages.) Two of the variations that are used with this fee type are to charge based on the individual's role or based on the type of work being performed. Both of these variations are rare and create an additional layer of complexity. Charging by role or work allows lesser or greater paid individuals to be charged out based on something else besides their labor rate. I recommend that you avoid these variations.

The third variation to the Hourly Rate Fee Type is to add a maximum (or limit) to the total fee that may be charged. This reduces the client's risk while increasing the Architect's risk. The reason for using this variation is to mollify your client's concern about the prospect of an excessive fee. Like the other variations to the Hourly Rate Fee Type, a maximum creates additional complexity that has to be addressed.

Percent of Construction Cost Fee Type

A fee based on a percentage of the Cost of Construction is the most traditional fee type. You simply take a percentage of the Cost of Construction and that is the fee.

After first arriving at the fee quite simply, things get more complicated. The overall fee is divided into a percentage of the overall fee per phase, and inevitably the Cost of Construction changes.

The advantage of this fee type is that the project can get started based on this arrangement before an exact scope and fee are known. Some clients are put off by this lack of certainty about the fee. Clients also are concerned that the architect has a disincentive to control construction costs.

Architects find that changes in scope aren't automatically covered by using this fee type. Changes may be covered, but vigilance is required to avoid providing more work than expected for the fee that you ultimately receive.

Lump Sum Fee Type

A fee that is a simple lump sum is an attractive concept. Both client and architect know exactly what to expect. The smaller and simpler the project, the better the fit for this fee type.

For a standard "Basic Services" project, a variation on the Lump Sum fee is often used - Lump Sum with Phases. In the case of Lump Sum with Phases fees, everything is very similar to a Percent of Construction

Cost fee, except that the fee is independent of the construction cost and is fixed, at least initially. Changes are not covered, so vigilance is still required to avoid providing more work than expected for the fee.

The Lump Sum with Phases fee type also lends itself to projects that are non-standard. For instance, a project that is intended to determine the suitability of a building for adaptive reuse would need non-standard phases to reach a determination.

The Lump Sum fee type with or without Phases is used more and more.

Unit Costs Fee Type

The Unit Cost fee type is similar to an Hourly Rates fee type except that something else is counted instead of hours. A Unit Cost fee type is useful where you have a niche project type where the amount of work required is related to the number of square feet, sheets of drawings, details provided, etc.

An example is a firm that produces house plans for builders based on a cost per square foot.

Multiple Fee Types

The project that fits the standard “Basic Services” model is becoming the minority condition. Projects often have an additional

service or a phase whose scope is indeterminate. These are the cases where a different fee type usually makes sense.

The Construction Administration phase is a perfect example. You may want to closely define what services are included in a Lump Sum fee for the CA Phase, and include another phase called “Additional Construction Administration” that uses an Hourly Rate for the Construction Administration services that you have no control over. A similar case can be made for Schematic Design to accommodate an indecisive client.

Appendix B - Building Groups

One of the fundamental parts of calculating a design fee as a percentage of construction cost is characterizing the complexity of the project. There is a different fee table for each level of difficulty. The terminology may vary, but the solution is to place each type of building into the Group representing its level of complexity / difficulty. Traditionally there were five Building Groups. Here is what those Groups look like.

Building Groups

Building Groups decrease in complexity as you step through the levels, usually. Sometimes the complexity increases. Let's start with the highest complexity in Building Group I. The following are common groupings of building types.

GROUP I

- Custom Residences
- Special Decorative Buildings
- Custom Designed Furnishings
- Mausoleums And Memorials
- Special Lighting
- Complex Laboratories
- Medical Hospitals
- Custom Swimming Pool
- Official Government Residence
- Decorative Work
- Exhibition Display
- Public Garden
- Air Traffic Control Tower
- Flight Service Station
- Legislative Building
- Mint

GROUP II

- Laboratory Classrooms
- Libraries
- Auditoriums
- Museums
- Air Terminals
- Food Service Facilities
- Specialized Detention Areas
- Detention-Treatment Areas
- Average Laboratories
- Mental Hospitals
- Simple Medical Hospitals
- Clinics
- Court Houses
- Theaters
- Complex University Buildings
- Special Purpose Classrooms
- Aquariums
- Art Galleries
- Aquariums
- Communications Buildings
- Airport Terminals
- Computer Centers
- Convention Centers

GROUP III

- Schools (Elementary And Secondary)
- General Office Space
- General Teaching Space
- General Detention Facilities
- Specialized Factory Buildings
- Maintenance Hangars
- Banks And Financial Institutions
- Luxury Apartments
- Amphitheaters
- Medical/Dental Office Buildings
- Major Post Office Buildings
- Convalescent Hospitals
- Public Health And Service Centers
- College Classroom Facilities
- Convention Facilities
- Correctional And Detention Facilities
- Extended Care Facilities
- Institutional Dining Halls
- Medical Schools
- Medical Office Facilities And Clinics
- Mental Institutions
- Office Buildings With Tenant Improvements
- Parks, Playground And Recreational Facilities
- Police Stations
- Public Health Centers
- Research Facilities
- Vocational Schools
- Country Clubs And Marinas
- Restroom And Shower Buildings
- Firing Range Buildings
- Specialty Shops
- Field-Houses And Natatoriums
- Stadiums And Sports Facilities
- Emergency Response Stations
- Theaters, Auditoriums & Casinos
- Fraternal Buildings
- Veterinary Hospitals
- Hotels, City
- Clubs/Resort Lodges

GROUP IV

- Armories
- Exhibition Halls
- Hangers
- Manufacturing Plants
- Office Buildings Without Tenant Improvements
- Printing Plants
- Regional Shopping Centers
- Fraternity And Sorority Houses
- Group Care Homes
- Health Clubs And Fitness Centers
- Branch Post Offices
- Bus Stations
- Apartment Buildings
- Dormitory Buildings
- Service Garages
- Day Care Centers
- Specialized Parking Structures
- Visitor Centers
- Hotels, Motels
- Gymnasiums
- Laundries And Cleaners
- Cold Storage Buildings
- Department Stores
- Public Recreation Facilities
- Racquetball And Tennis Clubs

GROUP V

- Storage Warehouses
- Storage Facilities
- Recycling And Waste Transfer Structures
- Utilitarian Type Buildings
- Parking Structures
- Industrial Buildings Without Special Facilities
- Simple Loft Type Structures
- Warehouses Exclusive Of Automated Equipment
- Greenhouse Structures
- Storage Garages
- Prefab. Booths And Shelters

Of course, lists like this can't list every building type, so you will often need to categorize your project based on "a similarity to" rather than "a match to" what you see listed here.

Appendix C - Deliverables

The Phase Deliverables Checklist is a tool that I use to estimate fees, plan the work and manage the design process. The master deliverables checklist is a list of all the drawing sheets that you routinely have on a largish project arranged by design phases. The **downloadable checklist**, partially visible below, uses a loose adherence to the National CAD Standards. You may use a different sheet naming convention but the idea is the same.

The first steps during either estimating a fee or planning the design work is to copy the checklist, rename it, and edit the list for the anticipated scope of work. This is mostly striking off unneeded sheets, but also adding sheets that are needed for this project. Next is to check off which sheets will be needed for each phase; see the columns headed with the phase initials. Use the COMMENTS column to make any observations about the sheet content or research that will be needed.

PROJECT PHASE DELIVERABLES

		PD	SA	SD	DD	CD	COMMENTS
PROJECT BUDGET							x = may be used for some projects (small x)
SPACE/COST ANALYSIS							
ASSEMBLY METHOD							
TOC METHOD							
PROJECT SCHEDULE/PLAN							
D-B-B BREAKDOWN							
D PHASE BREAKDOWN (PKS)							
DETAILED BREAKDOWN (MSPROJECT)							
SPECS (SPECLINK)							
TOC METHOD							
"PRODUCTS"							
SPECLINK							
DRA INGS							
Space Schematics/Flow Diagrams							
Site Master Plan							
Master List of Drawing Sheets							
GI-001	Title Sheet			x	x	X	Dwg List, Legends, Vicinity, Consultants, Zoning and Plumbing Calcs
GI-002	Building Code			x	X	X	May take more than one sheet if Special Inspections
GI-003	Overall Plan					X	For code information
GC-001	General Requirements				x	X	
AS-101-SA	Site Analysis		X	X			
AS-101	Site Plan			X	X	X	If there is a Civil, give him the info and omit AS series
AS-102	Grading Plan			x	X	X	
AS-103	Site Demolition					X	
AS-501	Site Details				x	X	
AD-101	Demolition Plan				x	X	
AD-102	2nd Flr Demo Plan				x	X	
AD-103	3rd Flr Demo Plan				x	X	
AE-001	Specs				x	X	Each discpl does own, Gen Reqmts on GC-001
AE-101	1ST Floor Plan			X	X	X	
AE-102	2ND FLR PLAN			X	X	X	
AE-103	3RD FLR PLAN			X	X	X	
AE-104	Basement Plan			X	X	X	

Use to estimate and verify fees

If your projects are similar and you collect time-spent data on each type of sheet, you would soon be able to estimate a fee using this form as a checklist with historical average cost per sheet embedded for calculations. If your work is more varied, reviewing the list will help you estimate the hours you will need to produce the deliverables. The master list often spurs questions regarding scope of work. Get questions resolved early before you find yourself expected to provide services that you haven't budgeted for.

By adding columns to the spreadsheet you can document the estimated hours to be spent by each individual for each deliverable that you anticipate. Then compare these hours to the allocation that you are

finding in the FeeCalqs DESIGN BUDGET. When using the Deliverables spreadsheet in this way, there is a tendency to be optimistic about the hours per sheet. I compensate by adding a contingency. Often the contingency is as high as 20%. Consider how familiar you are with the building type and the construction details that you anticipate.

Having started using the Deliverables spreadsheet while considering fees, you are all set to get even more value from it as the project launches.

Use to plan work and set priorities

When getting started on a project you can use the checklist to assign staff. Two ways of doing this are to replace the 'Xs' with the individual's initials to make the assignment. Or add columns to hold the initials. Color coding the assignment cells helps to focus attention on responsibilities and to make workloads obvious. To set priorities you can make the entire row **bold** to stress what is most important.

Use to manage work

As the project progresses, you can update the assignments and plan subsequent phases. With the addition of another column you can track an estimated percent completion for each sheet. Add a formula to calculate the average completion. This isn't terribly accurate but it is at least a somewhat objective evaluation of where your progress stands.

Use the model to create your own version based on your project types and typical scope of work. Add other tasks such as Code Review, Cost Estimates, Scheduling, and Specifi cations to suit your standards. Add engineering disciplines if you normally manage their work too.

BOTTOM LINE: You have probably used something similar to this to manage projects. What I am suggesting is that a spreadsheet offers several advantages.

- It becomes a 'master' so that you embed what you learn from each project.
- It can hold historical data, offering easy access and a place to store it.
- It can be tweaked into providing other information through its calculations.
- It can be shared if you want others to help update it; or distributed by PDF.
- It can be printed on your plotter at a large scale to display or meet around.

The larger the project, the more valuable this tool is for estimating time and managing the work.

Appendix D - What A Fee Includes

Well, what your fee includes is mostly up to you. But I will share my experience with fees.

The only benchmark I know of is 'Basic Services'. This is the architect's level of involvement in the project that the standard national agreements assume, especially those developed by the American Institute of Architects [AIA]. Basic Services usually include five phases of work - Schematic Design [SD], Design Development [DD], Construction Documents [CD], Bidding [B], and Construction Administration [CA]. The only one of these five that I feel is fully detailed is Construction Administration. No doubt the design phases are too variable to describe in detail. To oversimplify, the result of each phase is:

- SD - resolve the Owner's program into a design concept
- DD - resolve the approved concept into plans and elevations
- CD - develop detailed drawings of the approved design to describe the building in enough detail that it can be built
- B - obtain a firm cost from a contractor to build the building
- CA - oversee the construction of the building in enough detail to determine that it substantially complies with the construction documents

Architectural Fee Breakdown				
PHASE	%		DISCIPLINE	%
Schematic Design	15%		Structural Engineer	11%
Design Development	20%		M/E Engineers	22%
Construction Documents	40%		Architect	67%
Bidding	5%			
Construction Administration	20%			
TOTAL FEE	100%			100%

This table shows the traditional breakdown of an architect's fee. Users of BIM-type software often shift more of the fee into the first two phases to address the BIM need for increased detail in those phases.

Public projects usually include Basic Services at a minimum. Private projects do as well, but the Owner and Architect aren't prevented from modifying the scope of services in any way they like. Adding and deleting services to suit their objectives. For example, the standard AIA agreements describe numerous Additional Services that might be added to Basic Services initially or as circumstance dictate.

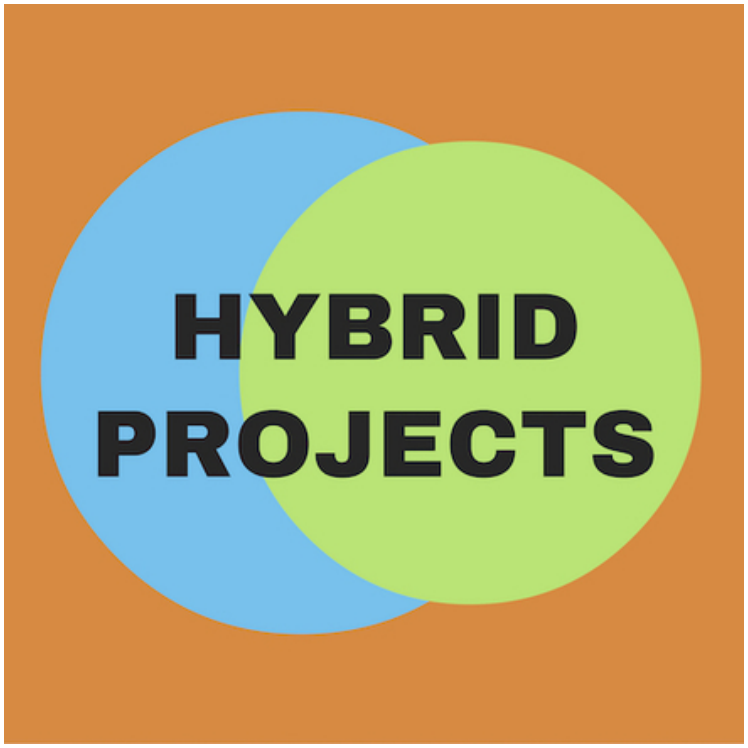
Another assumption that is part of Basic Services is that the Architect will provide basic engineering services. By basic engineering is meant structural design, mechanical engineering (HVAC, plumbing, fi re protection) and electrical engineering. The inclusion of civil engineering, telecommunications, and networking usually need to be addressed. Are they in or out?

Traditionally the engineering work has been assumed to be one third (1/3) of the total fee. In the last two decades this has been increasing as it becomes more typical to include civil engineering, telecommunications, networking and other disciplines as well. We have experienced as many as nine members of the design team -

- Architect
- Landscape Architect
- Civil Engineer
- Structural Engineer
- Mechanical Engineer
- Electrical Engineer
- Interior Designer
- Graphic Designer
- Sculptor

The breakdown of the fee was 50/50 on that project.

Appendix E - Hybrid Projects



My experience is probably a lot like yours - things are never as simple as they seem.

Projects, for instance. It probably took me 15 years to realize that a project wasn't a project most of the time. It was actually two or three projects masquerading as one project. A Hybrid. The difference isn't great, but it is enough that it should be recognized and dealt with.

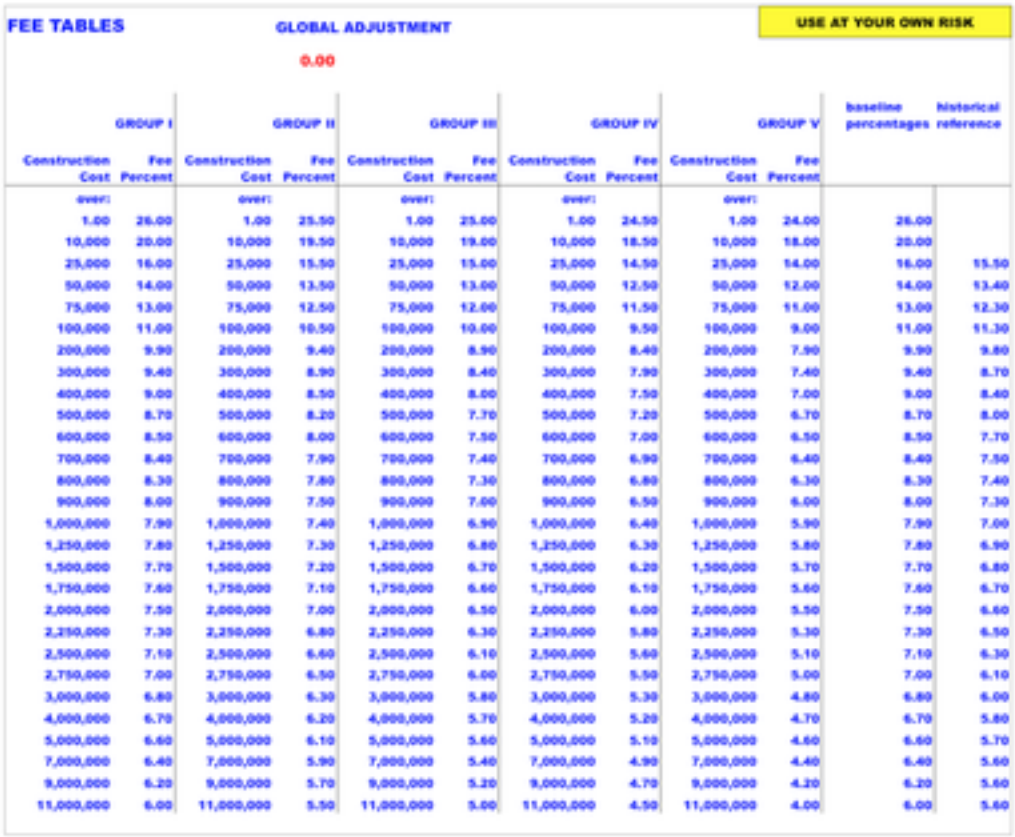
The Hybrid Project usually complicates code compliance when you are dealing with two Building Groups - or Use Groups in code-speak. Fire separations and mixed use requirements suddenly appear. Another type of Hybrid Project is one that is an addition. That is because you have a part that is 'new' and a part that is remodeling. Specifications and

detailing usually get a bit more complicated to address the different parts of a Hybrid Project.

Two or three Building Groups is the typical way that we encountered a Hybrid Project. Some examples:

- an office/warehouse building
- retail space with residential above
- an owner-occupied office building with undeveloped floors for rental or expansion

In my experience Hybrid Projects were much more numerous than straight-up new buildings. But it was ages before we recognized the impact on our architectural fees.



FEE TABLES

GLOBAL ADJUSTMENT

0.00

USE AT YOUR OWN RISK

GROUP I		GROUP II		GROUP III		GROUP IV		GROUP V		baseline percentages	historical reference
Construction Cost over:	Fee Percent	Construction Cost over:	Fee Percent	Construction Cost over:	Fee Percent	Construction Cost over:	Fee Percent	Construction Cost over:	Fee Percent		
1.00	26.00	1.00	25.50	1.00	25.00	1.00	24.50	1.00	24.00	26.00	
10,000	20.00	10,000	19.50	10,000	19.00	10,000	18.50	10,000	18.00	20.00	
25,000	16.00	25,000	15.50	25,000	15.00	25,000	14.50	25,000	14.00	16.00	15.50
50,000	14.00	50,000	13.50	50,000	13.00	50,000	12.50	50,000	12.00	14.00	13.40
75,000	13.00	75,000	12.50	75,000	12.00	75,000	11.50	75,000	11.00	13.00	12.30
100,000	11.00	100,000	10.50	100,000	10.00	100,000	9.50	100,000	9.00	11.00	11.30
200,000	9.90	200,000	9.40	200,000	8.90	200,000	8.40	200,000	7.90	9.90	9.80
300,000	9.40	300,000	8.90	300,000	8.40	300,000	7.90	300,000	7.40	9.40	8.70
400,000	9.00	400,000	8.50	400,000	8.00	400,000	7.50	400,000	7.00	9.00	8.40
500,000	8.70	500,000	8.20	500,000	7.70	500,000	7.20	500,000	6.70	8.70	8.00
600,000	8.50	600,000	8.00	600,000	7.50	600,000	7.00	600,000	6.50	8.50	7.70
700,000	8.40	700,000	7.90	700,000	7.40	700,000	6.90	700,000	6.40	8.40	7.50
800,000	8.30	800,000	7.80	800,000	7.30	800,000	6.80	800,000	6.30	8.30	7.40
900,000	8.00	900,000	7.50	900,000	7.00	900,000	6.50	900,000	6.00	8.00	7.30
1,000,000	7.90	1,000,000	7.40	1,000,000	6.90	1,000,000	6.40	1,000,000	5.90	7.90	7.00
1,250,000	7.80	1,250,000	7.30	1,250,000	6.80	1,250,000	6.30	1,250,000	5.80	7.80	6.90
1,500,000	7.70	1,500,000	7.20	1,500,000	6.70	1,500,000	6.20	1,500,000	5.70	7.70	6.80
1,750,000	7.60	1,750,000	7.10	1,750,000	6.60	1,750,000	6.10	1,750,000	5.60	7.60	6.70
2,000,000	7.50	2,000,000	7.00	2,000,000	6.50	2,000,000	6.00	2,000,000	5.50	7.50	6.60
2,250,000	7.30	2,250,000	6.80	2,250,000	6.30	2,250,000	5.80	2,250,000	5.30	7.30	6.50
2,500,000	7.10	2,500,000	6.60	2,500,000	6.10	2,500,000	5.60	2,500,000	5.10	7.10	6.30
2,750,000	7.00	2,750,000	6.50	2,750,000	6.00	2,750,000	5.50	2,750,000	5.00	7.00	6.10
3,000,000	6.80	3,000,000	6.30	3,000,000	5.80	3,000,000	5.30	3,000,000	4.80	6.80	6.00
4,000,000	6.70	4,000,000	6.20	4,000,000	5.70	4,000,000	5.20	4,000,000	4.70	6.70	5.80
5,000,000	6.60	5,000,000	6.10	5,000,000	5.60	5,000,000	5.10	5,000,000	4.60	6.60	5.70
7,000,000	6.40	7,000,000	5.90	7,000,000	5.40	7,000,000	4.90	7,000,000	4.40	6.40	5.60
9,000,000	6.20	9,000,000	5.70	9,000,000	5.20	9,000,000	4.70	9,000,000	4.20	6.20	5.60
11,000,000	6.00	11,000,000	5.50	11,000,000	5.00	11,000,000	4.50	11,000,000	4.00	6.00	5.60

Architectural fee tables don't address Hybrid Projects. The obvious solution is to pick the most complicated Building Group and use that fee for the entire project. The least complicated Building Group would clearly make the architectural fee too low. But the most complicated Building Group makes the architectural fee ... also TOO LOW! How can that be?

Let's look at an example.

The project has two Building Groups.

The first part is Building Group II, having 20,000 SF at a cost of $200/SF, or $4,000,000.

The second part is Building Group IV, having 10,000 SF at a cost of $100/SF, or $1,000,000.

So the total project cost is $5,000,000.

If we base the architectural fee on Building Group II, the fee percentage is 6.1%. The fee is $305,000. Looks pretty good.

What happens if you treat each part as a project and add the two results together?

Well, surprisingly, you get a fee of **$312,000**.

Here's the math:

The first part is 6.2% of $4,000,000 = $248,000.

The second part is 6.4% of $1,000,000 = $64,000.

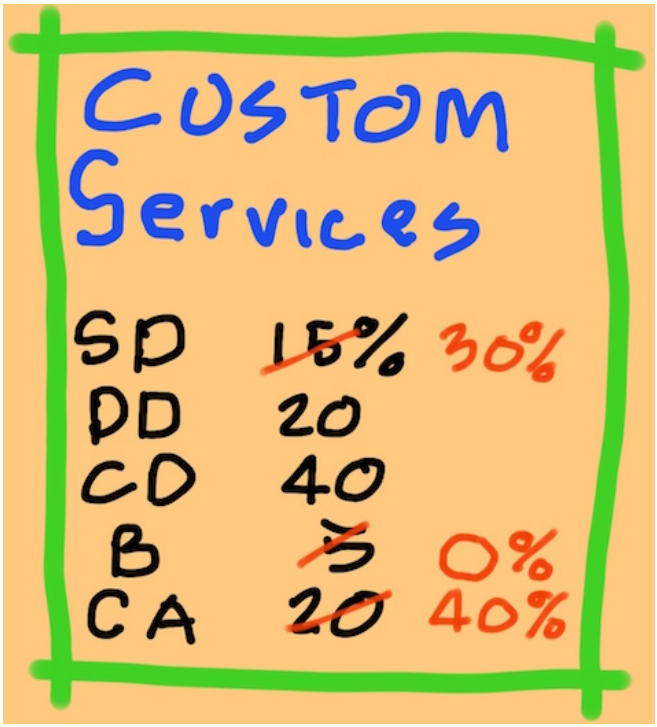
Total $312,000.

A Hybrid Project is actually two smaller projects. Smaller projects have higher fee percentages as you can see in the image above. So, Hybrid Projects present a complication in determining architectural fees. When you simplify, you may hurt your bottom line.

There are situations where you are better off using the more complicated Building Group - usually when it represents the smaller part of the project or when the project is quite large. However, that higher fee may make you non-competitive. In any event, being able to see your options is always a good thing.

I think that this clarity is a really good feature of using fee tables to calculate architectural fees.

Appendix F - Custom Scope of Services



One of the key factors in determining the appropriate fee for a project is the required **Scope of Services**.

What are you required to do to complete the project?

If the answer is standard Basic Services, then the issue of Scope of Services is settled. Basic Services is the answer for a lot of smaller public projects.

Something different than Basic Services is more likely the case in private work. Private clients don't fit the cookie cutter of public projects.

They need more here and less there. That makes determining the appropriate fee more complicated.

Here's the solution.

If your client is not experienced at developing projects, there are plenty of things lying outside the scope of Basic Services that they may need.

Things like:

- Site Analysis
- Pre-Design
- More Schematic Design
- Extra assistance during Construction Administration
- Post Construction help moving or setting up management systems

If your client is an experienced project developer, on the other hand, their needs may vary quite a lot from standard Basic Services.

- Will Bidding Services be required?
- Do they have staff that will address Construction Administration issues?
- Is the structure going to be a PEMB? Or precast concrete?

- Are additional consultants required?
- Will M/E be Design/Build?
- Is the client hiring the consultants directly?

In either case, these departures from Basic Services can get complicated. You can keep track of what is 'IN' and what is 'OUT' in FeeCalqs on the FEE sheet.

area	calc	39,000
cost/sf w/o sitework	calc	$156.15
tot cost w/ sitework	calc	$6,290,000
fee %	calc	6.33%
std a/e fee	calc	$398,380
predesign phase %	value	0
site anal phase %	value	0
schematic phase %	value	100
design dev phase %	value	100
constr doc phase %	value	100
bid/negot phase %	value	100
const adm phase %	value	100
postconst phase %	value	0
spec serv phase %	value	0

In the first part of the spreadsheet, the extent that Basic Services is required is quantified by percentages. 100% is standard Basic Services. The percentage can be made more or less. The less common, but standard phases are represented, too. 0% means 'not required'. A positive percentage indicates your expectation for including some or all of these phases.

structural construction %	value	60	
struct design included	y/n=1/0	1	
struct coord included	y/n=1/0	1	
struct eng fee %	value	1.35	
struct design %	value	100	
m/e constr %	value	40	
m/e design incl	y/n=1/0	1	
m/e coord incld	y/n=1/0	1	
m/e eng fee %	calc	6.33%	
m/e design %	value	100	

The next section of the spreadsheet looks at the level of involvement of consultants for structural engineering and mechanical / electrical design. You have a chance to define what part of the project is devoted to those disciplines and what percentage of normal services is required. Or will you just coordinate with someone else's consultant?

std struct fee	calc	$49,329	
req'd struct fee	calc	$49,329	
struct design fee	calc	$36,997	
struct coord fee	calc	$12,332	
std m/e fee	calc	$154,285	
req'd m/e fee	calc	$154,285	
m/e design fee	calc	$115,714	
m/e coord fee	calc	$38,571	
std arch fee	calc	$194,766	
req'd arch fee	calc	$194,766	
special adjustment	value	28830	CONTINGENCY OR SPECIAL
tot a/e fee quotd	calc	$427,210	

In the final section, you can see a comparison of a standard fee and the fee that is required for this project. Here's where a 'gut check' on what you are seeing is appropriate.

Lastly you have an opportunity to consider including a contingency for any other services that you will be required to provide - walk-through video, zoning representation, Additional Services that have been requested.

This is also where you would include extra consultants' fees.

By just 'filling in the blanks', you have taken a fee for Basic Services and customized it to reflect the project at hand.

Appendix G - Fee Schedule Concept

If you specialize in one project type, your past experiences give you a solid basis for determining fees. But what do you do until you have past experiences to draw on? When you don't have a comparable project to use for gauging the right fee, a fee schedule gives you a way to arrive at an appropriate fee for your project.

Even where you have a similar project, the size or some other aspect of the new project might be significantly different.

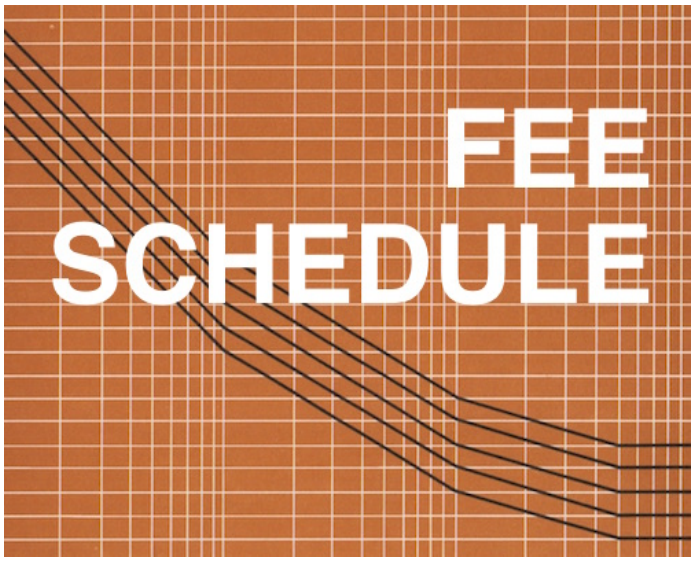
The standard fee

The world likes 'simple'. I think that is where the myth of the standard fee comes from. I know I have heard "6%" suggested as the standard architectural fee on several occasions. History sheds some light on where the 6% fee arose.

In the early 1860s Richard Morris Hunt established a standard fee by accident when he sued a client for non-payment of his 5% fee. In short order, this fee became well known; and most architects adopted the 'new standard'.

In the late 1800s as buildings became bigger and taller, the legal precedent was set for holding architects responsible for major structural defects. The standard fee crept up to 6% over the next decade or so. By the early 1900s, 6% was well established.

Leading up to the 1950s architects were noticing that the same fee for every job wasn't working. The AIA began addressing the fee situation by establishing the concept of a fee schedule.



You won't find any broadly accepted fee schedules in the US since the Department of Justice brought price-fixing charges against the AIA in 1972.

So you are on your own nowadays.

Scope of Services

When you adopt the concept of a fee schedule, you need to standardize the Scope of Services that the fee schedule is based upon. The owner/architect agreements nail this down by establishing 'Basic Services' and what tasks are to be 'Additional Services'.

Basic Services

The five usual phases of Basic Services are:

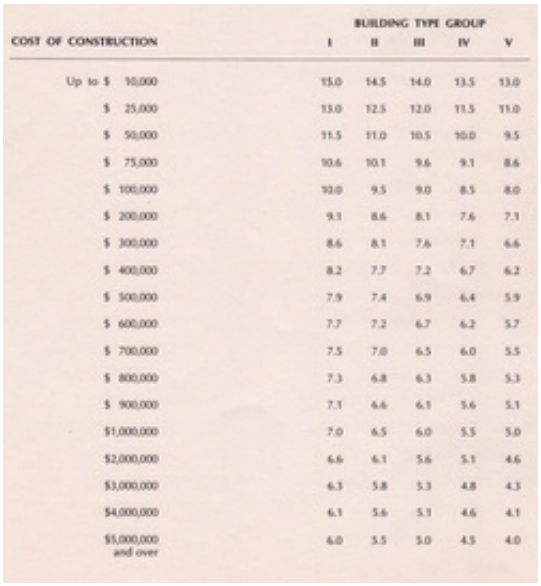
- Schematic Design develops a design concept
- Design Development creates a design from the concept
- Construction Documents produces detailed documents for construction
- Bidding procures construction services
- Construction Administration manages the construction contract

For a more detailed description of Basic Services see the American Institute of Architects website or a standard AIA agreement.

A standard scope of services is key to establishing a fee. It forms a benchmark for measuring how the project type and project scale impacts the fee.

Here's How Fee Schedules Work

First determine complexity by choosing the Building Group which represents the current project. This is unavoidably subjective. But Appendix B has alist.



COST OF CONSTRUCTION	BUILDING TYPE GROUP I	II	III	IV	V
Up to $ 10,000	15.0	14.5	14.0	13.5	13.0
$ 25,000	13.0	12.5	12.0	11.5	11.0
$ 50,000	11.5	11.0	10.5	10.0	9.5
$ 75,000	10.6	10.1	9.6	9.1	8.6
$ 100,000	10.0	9.5	9.0	8.5	8.0
$ 200,000	9.1	8.6	8.1	7.6	7.1
$ 300,000	8.6	8.1	7.6	7.1	6.6
$ 400,000	8.2	7.7	7.2	6.7	6.2
$ 500,000	7.9	7.4	6.9	6.4	5.9
$ 600,000	7.7	7.2	6.7	6.2	5.7
$ 700,000	7.5	7.0	6.5	6.0	5.5
$ 800,000	7.3	6.8	6.3	5.8	5.3
$ 900,000	7.1	6.6	6.1	5.6	5.1
$1,000,000	7.0	6.5	6.0	5.5	5.0
$2,000,000	6.6	6.1	5.6	5.1	4.6
$3,000,000	6.3	5.8	5.3	4.8	4.3
$4,000,000	6.1	5.6	5.1	4.6	4.1
$5,000,000 and over	6.0	5.5	5.0	4.5	4.0

Second estimate construction cost. Since the design hasn't begun yet, this is usually based on the client's budget.

Third determine the appropriate fee percentage from the fee schedule.

Fourth determine the amount of the fee.

The formula is: FEE = FEE PERCENT X CONSTRUCTION COST

The final consideration is to watch for changes in scope that would significantly change your fee. A big change might involve a new percentage for the fee.

That's the concept. Not terribly difficult.

Next is a closer look at the five tables used to generate the fee percentage.

During my career we saw a wide range of projects. They ranged from really small and simple to really big (for us) and complicated. On the small end of the spectrum was a two-car garage addition to the side of a house. On the opposite end of the spectrum was a new high school. I will show you how the five fee tables of a fee schedule can span that kind of range. Let's take a closer look at the five tables that make up the fee schedule.

A fee table represents the standard fee for a standard scope of work for similar projects of varying size. In order to address projects of differing complexity, additional fee tables are introduced for the different building types. That's what a fee schedule needs to address: Scope of Work. Size of Project. Complexity of Project.

The Scope Of Work

The Scope Of Work is assumed to be Basic Services. 'Basic Services' is defined by standard contracts.

The Size Of The Project

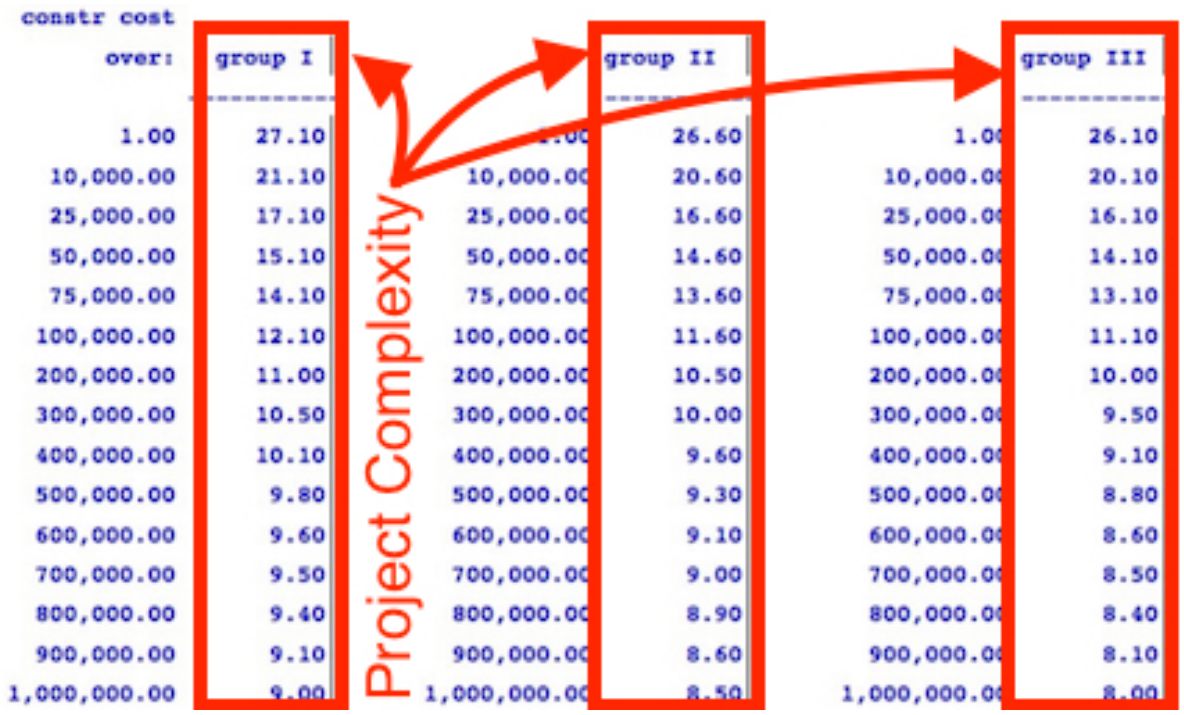
The Size Of The Project correlates to its cost, and cost represents the number of building components you will design and coordinate. Take doors for example. The two-car garage had just one overhead door. We selected a size, material, and and electric operator. Then put a couple of notes on the drawings. Compare that with the high school that had 110

constr cost over:	group I		group II		group III
1.00	27.10	1.00	26.60	1.00	26.10
10,000.00	21.10	10,000.00	20.60	10,000.00	20.10
25,000.00	17.10	25,000.00	16.60	25,000.00	16.10
50,000.00	15.10	50,000.00	14.60	50,000.00	14.10
75,000.00	14.10	75,000.00	13.60	75,000.00	13.10
100,000.00	12.10	100,000.00	11.60	100,000.00	11.10
200,000.00	11.00	200,000.00	10.50	200,000.00	10.00
300,000.00	10.50	300,000.00	10.00	300,000.00	9.50
400,000.00	10.10	400,000.00	9.60	400,000.00	9.10
500,000.00	9.80	500,000.00	9.30	500,000.00	8.80
600,000.00	9.60	600,000.00	9.10	600,000.00	8.60
700,000.00	9.50	700,000.00	9.00	700,000.00	8.50
800,000.00	9.40	800,000.00	8.90	800,000.00	8.40
900,000.00	9.10	900,000.00	8.60	900,000.00	8.10
1,000,000.00	9.00	1,000,000.00	8.50	1,000,000.00	8.00

doors of three different materials, interior and exterior exposures, a variety of hardware and fire ratings, several door frame configurations, and a half dozen wall types to match up with. Bigger buildings simply have more doors, and it takes longer to decide their features and document them.

The Complexity Of The Project

The Complexity Of The Project is represented by its Building Group. (See the link above.) Using a different fee table for each Building Group addresses the complexity issue. That's where the five tables come from, one for each level of complexity, which is represented by a Building Group. Complexity translates into different levels of design and detail that will be needed, and also the amount of custom stuff to design and detail.



The simplicity of the fee schedule using five tables has allowed it to remain relevant for 50 years - with one exception. Practices and expectations have changed. Tables from the 1970s need adjustments to accommodate things that weren't being done back then. Things like:

- BIM
- Energy Codes
- ADA
- Storm Water Management
- Expanded Design Services - the HGTV effect
- Security
- Communications

You can make accommodations for these new practices and expectations, but there is still some things that I have found that fee tables cannot address. Fee tables cannot address a change in Scope of Work, or a hybrid Building Type, or whether the fee that has been calculated is adequate.

That is where FeeCalqs comes in.