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# Professional Practice 544

## Office Management and Fee Calculation

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# FINANCIAL MANAGEMENT

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## Small Office Production Cost (payroll):

<b>1 Principal @ \$100,000</b>	<b>\$ 100,000</b>
<b>2 Associates @ \$75,000</b>	<b>150,000</b>
<b>1 Senior Architect @ 65,000</b>	<b>65,000</b>
<b>2 Junior Architects @ \$55,000</b>	<b>110,000</b>
<b>2 Beginners @ \$35,000</b>	<b><u>70,000</u></b>
	<b>\$ 445,000</b>
<b>Plus FICA</b>	<b>55,000</b>
<b>Plus Insurance</b>	<b><u>100,000</u></b>
	<b>\$ 650,000</b>

**8 persons @ 2,080 hours/year 16,640 hours**

**$\$650,000 \div 16,640 \text{ hours} = 39.06/\text{hour}$**

## Small Office Misc. Expenses (overhead):

<b>Secretary</b>	<b>\$ 60,000</b>
<b>Receptionist</b>	<b>45,000</b>
<b>Rent</b>	<b>65,000</b>
<b>Professional Liability Insurance</b>	<b>65,000</b>
<b>Other insurance</b>	<b>15,000</b>
<b>3 cars (5 years)</b>	<b>20,000</b>
<b>Printing</b>	<b>15,000</b>
<b>Phone, Fax</b>	<b>10,000</b>
<b>Utilities, supplies</b>	<b>10,000</b>
<b>Legal</b>	<b>20,000</b>
<b>Accountant</b>	<b>10,000</b>
<b>Miscellaneous</b>	<b><u>30,000</u></b>
	<b>\$ 370,000</b>

**$\$370,000 \div 16,640 \text{ hours} = \$22.24/\text{hour}$**

**Total w/o profit  $\$39.06 + \$22.24 =$   
 $\$61.30/\text{hour}$**

# FINANCIAL MANAGEMENT

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## To Make A Profit

- Total w/o profit  $\$39.06 + \$22.24 = \$61.30/\text{hour}$
  - Goal of 20% of total:  $\$61.30 \times .20 = \$12.26$
  - Rate \$ 61.30/hour
  - add: \$ 12.25/hour
  - Average hourly billing with profit \$ 73.50/hour
- Round up to \$ 75.00/hour

# SUSTAINING OPERATION

# FEES TO SUSTAIN OPERATION

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## Need to Stay in Business (without profit):

Production cost	\$ 650.00
Overhead	<u>370.00</u>
	<u>\$1,020,000</u> ÷ 12 Months = \$85,000/month

## Need to Stay in Business (with profit):

If 20% profit is added –  $\$1,020,000 \times 1.20 = \$1,224,000$

Total: \$1,224,000 ÷ 12 Months = \$102,000/month

In order to generate \$1,224,000 architectural fees, one has to add consultants (equal about 35% of total fee):

Architect (65%):	\$1,224,000
Consultants (35%):	<u>659,000</u>
Total:	<u>\$1,883,000</u> fees per year**

If average fee an architect charges is 4% of construction cost, then \$1,883,000 in fees represents \$47,075,000 of construction volume per year in order to sustain an office of this size. Almost \$50,000,000 in construction projects per year – every year!

\*\* To look at it another way, you need to collect:

$\$1,883,000 \div 12 = \$156,916/\text{month}$
$\$1,883,000 \div 52 = \$36,212/\text{week}$
$\$1,883,000 \div 260 = \$7,242/\text{work day}$

# PAYMENT SCHEDULE

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Assume a job with  
Less consultants

**\$600,000 fee**  
200,000 (about 1/3)  
**\$400,000**

Phase	Duration	Fee	Payment
SD (15%)	2 months	60,000	2 @ 30,000
DD (20%)	2 months	80,000	2 @ 40,000
CD (40%)	4 months	160,000	4 @ 40,000
BN (5%)	1 month	20,000	1 @ 20,000
CON (20%)	12 months	80,000	12 @ 6,666

Make a time chart showing phase durations, and intervals between phases (approximate). Then, insert realistic payments. (You must also always consider the time that will elapse between billing and receipt of payment).

# FEE AND COST PRODUCTION COST

# FEE AND PRODUCTION COSTS

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Assume a project that has approximately \$12,000,000 in construction costs (small apartment building) and a 4% fee. How do you budget the amount of hours that may be spent to design and still remain profitable?

Architect's fee at 4% ( $\$12,000,000 \times .04$ )	\$480,000
Structural Engineer ( $\pm 12.5\%$ )	- 60,000
Mechanical/Electrical Engineer ( $\pm 22\%$ )	-105,500
Specification Writer	- 4,000
<u>Coordinating the Engineers (10% of engineers)</u>	<u>- 16,500</u>
<u>Profit (20%)</u>	<u>- 96,000</u>
Left to produce job:	\$198,000

$$\$198,000 \div 61.30/\text{hour} = 3,230 \text{ hours}$$

# FEE AND PRODUCTION COSTS

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SD	1 person	8 weeks	=	320 hours
DD	2 persons	8 weeks	=	640 hours
CD	3 persons	16 weeks	=	1,920 hours (120 hours/avg. sheet for 16 weeks. Is this enough?)
BN	1 person	4 weeks	=	160 hours
CON	¾ person,	52 weeks	=	<u>1,560 hours</u>
				4,600 hours required
				<u>-3,230 hours budgeted</u>
				1,370 hours (over budget!)
		Translation	=	1,256 x \$61.30 = \$83,981 loss to the business

# FEE AND PRODUCTION COSTS

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Try increasing the architectural fee to 6%

Architect's fee at 6% (\$12,000,000 x .06)	\$ 720,000
Structural Engineer (± 12.5%)	- 90,000
Mechanical/Electrical Engineer (± 22%)	- 158,400
Specification Writer	- 5,000
<u>Coordinating the Engineers (15% of engineers)</u>	<u>- 37,200</u>
<u>Profit</u>	<u>- 144,000</u>
Left to produce job:	\$ 285,400

$\$285,400 \div \$61.30 = 4,656$  hours budgeted (should be enough)

- Enough with a cushion of 56 hours? But now the client may want to bargain.
- Try 5.5% or 5.75%.
- But will that cover you? Can you scale back on hours in your initial budget?

# MARKETING AND FEES

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## Why would client select you as architect?

- Knows you
- Knows your work
- You were recommended

### “Knows you . . .”

- Widen your circle of acquaintances.
- Belong to and become active in organizations.
- Be written up in articles, journals, trade magazines, etc.

### “Knows your work . . .”

- In the beginning you take any promising job.
- Enter competitions for recognition.
- Increase professional activities (A.I.A., teaching, lectures, articles, etc.)
- Publicize whatever little you have (good presentation, relation with press, exhibits, agent? etc.)

# MARKETING AND FEES

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## Difference between marketing and selling

1. Marketing: Cold calls, networking, conventions, professional press, RFQ-RFP, etc.
2. Selling: Presentation (visual material, verbalization), politics

The miracle happens – You have a client!!

- What fee to charge?
- How to get client to sign an agreement?

# WHAT OTHER ISSUES?

# OTHER ISSUES TO SETTLE

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## The Terms of the Deal:

- What is included and what is not included in fee?
- When is fee being paid?
- What to charge for Reimbursable Expenses?
- How do you define the Scope of Work?
- Special cases: Limiting field visits, re-use of drawings rights, etc.
- What is the form of the agreement (handshake, letter, formal contract)?

# OTHER ISSUES TO SETTLE

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## Issue of Consultants:

- What do they charge? (The advantages of long term relationships)
- What do they include in service (how many visits)?
- What is their rate of pay? Must be same as yours.
- Same contract conditions as yours.
- Insurance
- Settle the terms in writing

# WHAT TO CHARGE AND HOW TO STRUCTURE?

# DETERMINING FEES

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## 1. On the basis of % of the construction cost

- Are there any generally accepted percentages?
- The issue of the \$ “curve.” More cash up front as opposed to a smooth line of payment.
- Is the client secure with it?
- The ethical issues of overruns (or under).
- What is the “construction cost” and when is it determined?
  - At the time of bid?
  - Is a change order needed if the all-in cost is greater than the bid?
  - How do you bill for the increased fee when the construction cost goes up?

# DETERMINING FEES

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## 2. On the basis of lump sum

- Must know your costs very well!
  - Look to the previous analysis.
  - Assess your overhead and profit margins.
- What if scope changes?
- How to handle additive change orders?
- What about inflation?

## 3. On the basis of hourly compensation

- No limits?
- This method could reward inefficiency!
- Fixed rates vs. current rates?

# DETERMINING FEES

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Multiplier:                      2.5% times “payroll”  
    40% labor  
    40% overhead  
    20% profit

Payroll should include benefits.

Small vs. large office overhead (multiplier of 2.75 or 3?).

Fixed rates of hourly compensation with overhead and profit.

Principal	\$120
Project Manager	\$ 90
Job Captain	\$ 75
Architect	\$ 60
Drafter	\$ 35

Problems of averaging (at \$65?).

In all cases you must know production cost and overhead not to go bankrupt.

# QUESTIONS