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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