TYPES OF CONTRACT
Types of Contract

- Single fixed cost or Lump-sum
- Negotiated Cost-plus-a-fee contract
- Guaranteed maximum price
Single Fixed Cost or Lump-sum

- Contractor agrees to perform the work for a predetermined price that includes profit.
- Same as unit price contract
Advantages of Fixed Cost Contract

- Historically supported with well-established legal and contractual procedures.
- Overall cost is predetermined.
- Minimal involvement by the owner.
- Owner may benefit from price competition.
- Incentive for contractors to reduce costs.
Disadvantages of Fixed Cost Contract

- Long procedure
- The owner and designer is in adversarial position with the general contractor
- Does not benefit from highly qualified contractor on technological advancements
- Pass much of the risk to the contractor
Negotiated Cost-Plus-A-Fee Contract

- Contractor agrees to perform the work for a fixed or variable fee to cover overhead cost and profit.
- Fee can be flat dollar sum or % of cost estimate.
- Incentive fees are now increasingly popular.
Advantages of Negotiated Cost-Plus-A-Fee Contract

1. Minimal adversarial position
2. Preferred for unknown technology
3. No official change order procedure
Disadvantages of Negotiated Cost-Plus-A-Fee Contract

1. May not be the most economical price
2. System can be abused
3. Owner or designer involvement are increased
4. Additional administrative cost
5. No incentive for contractors to reduce cost
6. Pass the risk to the owner
Guaranteed Maximum Price

- The contractor agrees for a fixed fee and profit at a cost not to exceed pre-established max. price.
- Costs above the guarantee are absorbed by the contractor.
- Savings may be reverted to the owner or in most cases shared by the owner and the contractor.
Advantages of Guaranteed Maximum Price

1. Guarantee maximum price.
2. Owner may pass some of the risk to the contractor.
3. Sharing the savings can reduce the cost.
4. Minimum owner involvement
Disadvantages of Guaranteed Maximum Price

1. Generate disputes in case of poor initial scope.
2. Change orders negate the advantage of guarantee.
Lump-sum Contract

(Price is fixed at $10,300)

Final Price

$10,300

Final Cost

$9,500

$10,000

$10,500

a = If final cost is $9,500, contractor profit is $800 (8.42%)
b = If final cost is $10,000 (as expected), contractor profit is $300 (3%)c = If final cost is $10,500, contractor loss is $200 (-1.9%)

DR. Nabil Dmaidi
Time-and-Materials Contract

(Price = cost plus 5%)

a = If final cost is $9,500, contractor profit is $475 (5%)
b = If final cost is $10,000, contractor profit is $500 (5%)
c = If final cost is $10,500, contractor loss is $525 (5%)
Time-and-Materials Contract

(Price = cost of work plus fixed fee of $500 with a maximum price of $10,500)

a = If final cost is $9,500, contractor profit is $500 (5.26%)

b = If final cost is $10,000, contractor profit is $500 (5%)

c = If final cost is $10,500, contractor loss is $0 (0%)

DR. Nabil Dmaidhi
# Degree of Risk for Owner and Contractor

<table>
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<tr>
<th>Contract</th>
<th>Owner</th>
<th>Contractor</th>
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<tr>
<td>(No Change in Contract)</td>
<td>Risk</td>
<td>Risk</td>
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<tr>
<td>(Some Changes in Contract)</td>
<td>Risk</td>
<td>Risk</td>
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<tr>
<td>Lump-sum Contract (many changes)</td>
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<tr>
<td>Unit Price Agreement</td>
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<td>Guaranteed Max Cost Contract with Sharing Clause (50/50)</td>
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<tr>
<td>Guaranteed Max Cost Contract with Sharing Clause (25/75)</td>
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<td>Cost-Plus-Fixed-Fee Contract</td>
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<tr>
<td>Cost-Plus-Percent-Fee Contract</td>
<td>Risk</td>
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Hammurabi

The building code of Hammurabi, founder of the Babylonian empire, is the earliest known code of law. Translated:

228: If a builder build a house for a man and complete it, that man shall pay him two shekels of silver per sar (approximately 12 square feet) of house as his wage.

229: If a builder has built a house for a man and if the house he has built falls in and kills the householder, that builder shall be slain.

230: If the child of the householder be killed, the child of that builder shall be slain.

231: If the slave of the householder be killed, he shall give slave for slave to the householder.

232: If goods have been destroyed; and because the house was not made strong, and it has fallen in, he shall restore the fallen house out of his own material.

233: If a builder has built a house for a man, and his work is not done properly and a wall shifts, then that builder shall make that good with his own silver.