

# Indirect Costs of Contracts

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## EXECUTIVE SUMMARY

- Construction, by its very nature, is a risky business. Estimating is part of what makes it risky.
- Contractors estimating projects without a complete understanding of the cost components, including indirect costs, are unnecessarily increasing their risk and exposure to losses.

**S**tatement of Position 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*, (SOP 81-1), contains a paragraph that states:

Contract costs generally include all direct costs, such as materials, direct labor, and subcontracts, and indirect costs identifiable with or allocable to the contracts.

The Statement of Position was issued by the Accounting Standards Division of the American Institute of Certified Public Accountants. It gives accounting guidance to construction contractors.

This article discusses the “indirect costs identifiable with or allocable to the contracts” referred to above. Those costs are often referred to as overhead. However, it should be made clear that general and administrative costs are also referred to as overhead, and in fact are part of the contractor’s total overhead.

A contractor needs an understanding of indirect costs for estimating purposes, for tracking the individual jobs or projects, and for financial statement preparation.

Contractors estimating projects without a complete understanding of the cost components, including indirect costs, are

unnecessarily increasing their risk and exposure to losses. One certainly wouldn’t drive across the country without a road map. It would not be an efficient undertaking. By taking the time to analyze the components that should be included to arrive at an accurate bid, or estimate, contractors can develop their own map, or plan, to guide their business decisions.

On any construction project, the potential profit to be earned is limited by certain constraints, but losses are not so constrained. That is why the original estimate is so important! To be able to earn profits, an accurate job estimate is essential. No matter how efficient a contractor is, if a project has unknowingly been bid at a loss, it will be almost impossible to salvage profitability.

Construction, by its very nature, is a risky business. Estimating is part of what makes it risky. After all, the term for the contract proposal is “estimate,” indicating imprecision.

## CONTRACT COSTS

The cost components used to arrive at an estimate can vary tremendously among contractors even within the same line of business. By breaking down the specific items included in gross profit, the differences among contractors may have less to do with the uniqueness of their operations,

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and more to do with the understanding or the misunderstanding of the cost components used to arrive at a project estimate.

When preparing an estimate, key cost components such as labor, material, subcontract, equipment rental, and travel are analyzed as to the amount of resources needed to perform the job. Those costs are relatively straightforward and easily understood. These costs are charged by the specific identification method.

### INDIRECT JOB COSTS (OVERHEAD)

After the direct costs are determined, contractors usually apply an "overhead factor" to labor, total cost, etc. in order to establish a complete job cost estimate. However, overhead is a broad term and is often used differently by different contractors. It is important for a contractor to distinguish between different types of overhead. For a construction contractor, overhead falls into two different cost pools. The first pool consists of indirect job costs, and the second pool consists of general and administrative costs. Both groups of costs must be recovered to be profitable.

Indirect job costs are costs necessary for the performance of the job but are difficult to identify to a specific contract. According to SOP 81-1:

Indirect costs allocable to contracts include the costs of indirect labor, contract supervision, tools and equipment, supplies, quality control and inspection, insurance, repairs and maintenance, depreciation and amortization, and, in some circumstances, support costs, such as central preparation and processing of payrolls.

### GENERAL AND ADMINISTRATIVE COSTS

While indirect job costs are related to contract performance, general and administrative costs are related to the functioning of the company as a whole. These costs are

necessary to run the business, but are not assignable to a specific job or project.

Examples of these types of costs are advertising, dues and subscriptions, office supplies, office salaries, salesman salaries, legal and accounting fees, taxes and licenses, office rent, building maintenance, depreciation on software, office equipment and furniture, owner's salary, and utilities.

General and administrative costs are usually relatively stable and are often predictable as a percentage of volume over time. Per SOP 81-1:

General and administrative costs ordinarily should be charged to expense as incurred . . .

### SEPARATING COSTS

Separating general and administrative costs from indirect job costs often causes the greatest discrepancies among contractors.

The key to remember when categorizing expenses is the phrase "identifiable with or allocable to the contracts." Even though a cost cannot be identified to a specific job, it does not necessarily mean it is not a cost of the job. The contractor must examine all overhead costs thoroughly to determine which costs are identifiable to the jobs individually or the company as a whole. This will vary from contractor to contractor. The success of the contractor is often dependent on a clear understanding of what cost components drive the jobs.

The amount of indirect costs an employee or a piece of equipment can generate is often significant. For example, along with an employee's salary, contractors will generally incur payroll taxes, health insurance, workers' compensation (subject to an annual audit adjustment), vacation, bonuses, vehicle allowances, training, and drug testing expense.

Equipment will generate expenses for fuel, external repairs and maintenance, internal labor for repairs, storage costs, insurance, and personal property taxes. The contractor must examine costs such

**Exhibit 1**  
**Sample Grading Contractor—Statement of Income**

CONTRACT REVENUES		\$2,300,000	100%
CONTRACT COSTS:			
Labor	\$ 340,000		
Materials	400,000		
Subcontract	560,000		
Equipment	506,000		
Other costs	<u>183,000</u>		
		<u>1,989,000</u>	<u>86%</u>
GROSS PROFIT		311,000	14%
GENERAL AND ADMINISTRATIVE EXPENSE		<u>207,000</u>	<u>9%</u>
NET INCOME FROM OPERATIONS		104,000	<u>5%</u>
OTHER INCOME (EXPENSE)		<u>(4,000)</u>	<u>0%</u>
NET INCOME		<u>\$ 100,000</u>	<u>4%</u>

as these to determine how much will be allocable to the contracts.

## ALLOCATING INDIRECT COSTS

Indirect job costs must be separated from general and administrative costs. Once the pool of indirect costs has been identified, the method used to allocate indirect costs among the contracts must be evaluated to determine if it makes sense under the circumstances. The key is to look for causal relationships. Per SOP 81-1:

Methods of allocating indirect costs should be systematic and rational. They include, for example, allocations based on direct labor costs, direct labor hours, or a combination of direct labor and material costs. The appropriateness of allocations of indirect costs and the methods of allocation depend on the circumstances and involve judgment.

When considering overhead, it must be remembered that direct costs affect the two pools of costs in different ways. If direct labor increases, so too will items such as payroll taxes, health insurance, and gas. However, items such as rent, building maintenance, office supplies, and

utilities are relatively stable over time. Therefore, as a general rule, indirect costs are predicted as a percentage of direct labor or another appropriate base, while general and administrative costs, as stated above, are often predictable as a percentage of volume over time.

In allocating indirect costs, most contractors use one of several methods:

- (1) Percentage of total direct costs
- (2) Percentage of direct labor costs
- (3) Percentage of direct labor hours
- (4) Percentage of direct labor costs and equipment charges

The choice of overhead allocation formula depends on many factors. The type of accounting systems and information available may make some allocation formulas almost impossible.

## SAMPLE GRADING CONTRACTOR

Exhibit 1 contains the statement of income of a small grading contractor operating in the southeastern United States.

As additional information, the company has elected to be taxed as a Subchapter S type corporation. There is therefore, no provision for corporate income taxes.

**Exhibit 2**  
**Sample Grading Contractor—Direct and Indirect Costs**

<b>DIRECT COST:</b>	
Labor	\$ 340,000
Materials	400,000
Subcontract	560,000
Equipment (leased for specific projects)	25,000
Other costs	15,000
	<u>1,340,000</u>
<b>EQUIPMENT COST INDIRECT</b>	
Gasoline (can be direct if costed to project)	70,000
Repairs and maintenance	110,000
Mechanics labor and burden	50,000
Depreciation	180,000
Insurance	16,000
Equipment lease (not chargeable to a specific job)	55,000
	<u>481,000</u>
<b>OTHER INDIRECT COSTS</b>	
Health insurance	40,000
Payroll Burden (can be direct if costed to project)	65,000
Workers' Compensation Insurance	15,000
Mobile phone expense	3,000
Project Manager's salary	45,000
	<u>168,000</u>
<b>TOTAL COST OF CONTRACT REVENUE</b>	<u><u>\$1,989,000</u></u>

Sample Grading Contractor has significant indirect equipment and other costs. The success or failure of a project may be determined by accurately estimating the indirect costs. Estimating equipment cost can be involved. Many contractors establish an equipment rate for each piece of equipment based on hours of usage. Each job is then charged costs based on the rates and hours of use for each piece of equipment. The total amounts charged to all the jobs are then compared to the actual costs. The difference between the two is referred to as a variance.

Exhibit 2 provides example direct and indirect costs of Sample Grading Contractor for the statement of income.

### **ALLOCATIONS OF INDIRECT COSTS**

Assume Sample Grading Contractor is reviewing three methods of allocating

overhead costs to construction projects for the year.

The three methods will be based on:

1. TOTAL DIRECT COSTS
2. DIRECT LABOR COSTS
3. DIRECT LABOR COSTS AND EQUIPMENT HOURS

Using acceptable theoretical methods can produce different results. One must be careful to select the most appropriate method for the circumstances.

Exhibit 3 contains sample schedules for the three methods. The first method is one based on total direct costs only. The second method analyzed will be one of direct labor only. The third method is one based on direct labor costs and equipment hours.

As can be seen by the three examples, one can obtain different results for individual projects based upon the method of overhead cost allocations. Notice that pro-

### Exhibit 3 Sample Grading Contractor—Allocation Based on Three Methods

#### 1. ALLOCATION BASED ON TOTAL DIRECT COSTS

	Direct Costs	%	Indirect Costs	Equip. Costs	Total Costs
A	\$ 375,000	28%	\$ 47,015	\$ 134,608	\$ 556,623
B	150,000	11%	18,806	53,843	222,649
C	225,000	17%	28,209	80,765	333,974
D	425,000	32%	53,284	152,556	630,840
E	<u>165,000</u>	<u>12%</u>	<u>20,687</u>	<u>59,228</u>	<u>244,914</u>
	<u>\$ 1,340,000</u>	<u>100%</u>	<u>\$ 168,000</u>	<u>\$ 481,000</u>	<u>\$ 1,989,000</u>

#### 2. ALLOCATION BASED ON DIRECT LABOR COSTS

	Direct Costs	Direct Labor	%	Indirect Costs	Equip. Costs	Total Costs
A	\$ 375,000	\$ 95,000	28%	\$ 46,941	\$ 134,397	\$ 556,338
B	150,000	15,000	4%	7,412	21,221	178,632
C	225,000	70,000	21%	34,588	99,029	358,618
D	425,000	115,000	34%	56,824	162,691	644,515
E	<u>165,000</u>	<u>45,000</u>	<u>13%</u>	<u>22,235</u>	<u>63,662</u>	<u>250,897</u>
	<u>\$ 1,340,000</u>	<u>\$ 340,000</u>	<u>100%</u>	<u>\$168,000</u>	<u>\$ 481,000</u>	<u>\$ 1,989,000</u>

For Sample Grading Contractor, the indirect other costs are roughly 49% of direct labor. In preparing an estimate, Sample Contractor will add 49% of direct labor to the cost of the job to include an estimate of indirect other costs to be incurred. Equipment costs will add another 140% of labor.

#### 3. ALLOCATION BASED ON DIRECT LABOR COSTS AND EQUIPMENT HOURS

	Direct Costs	Direct Labor	%	Indirect Costs	Equip. Hours	%	Equip. Costs	Total Costs
A	\$ 375,000	\$ 95,000	28%	\$ 46,941	475	30%	\$ 142,797	\$ 564,738
B	150,000	15,000	4%	7,412	90	6%	27,056	184,468
C	225,000	70,000	21%	34,588	275	17%	82,672	342,260
D	425,000	115,000	34%	56,824	650	41%	195,406	677,230
E	<u>165,000</u>	<u>45,000</u>	<u>13%</u>	<u>22,235</u>	<u>110</u>	<u>7%</u>	<u>33,069</u>	<u>220,304</u>
	<u>\$ 1,340,000</u>	<u>\$ 340,000</u>	<u>100%</u>	<u>\$ 168,000</u>	<u>1,600</u>	<u>100%</u>	<u>\$ 481,000</u>	<u>\$1,989,000</u>

ject B varies in cost from a low of \$178,632 to a high of \$222,649, depending upon overhead allocation methodology. That is a significant variance in assumed total costs. It illustrates the fact that indirect allocation methods can influence the decision of what projects to pursue.

Many contractors use calculated rates for each piece of equipment specifically identified. The charges are then made based

directly on used hours on the job with a separate rate for idle time. This process often results in an over or under utilization of the equipment factor, with an attendant over or under charge to the various projects, a variance. As to this equipment variance, the cause of a large variance may mean obsolete equipment rates, a significant change in volume, or a significant increase in one of the cost components such as insurance or gas. In

#### Exhibit 4 Sample Grading Contractor—Benchmarking

According to the year 2001 CFMA Annual Survey of Highway Contractors, heavy and highway contractors for the Southeast Region of the U.S. had the following:

Gross profit percentage earned on contracts	14.3%
Selling, general and administrative expense	9.2%
Income from operations (before taxes)	5.1%
Net income after income taxes	3.6%

any case, it is vital to the success of the jobs that the rates truly reflect actual costs. Methods may vary, as long as they allow the contractor to estimate equipment costs within a range that is immaterial to the financial statements. Through this process, contractors can then develop their own accurate internal equipment rates to be used when estimating a project.

The key to analyzing profitability for a construction contractor is to examine every contract as a profit/cost center. Only then can one begin to understand the performance of the company. By allocating cost to the original estimate, and to the actual costs as they are incurred, the contractor will receive a more accurate picture of performance of the individual jobs. Furthermore, the adjustment to revenue for costs in excess of billings and billings in excess of costs for the contracts in progress will be more accurate. If this adjustment is incorrect, the contractor's revenue will be incorrect, thus distorting the gross profit for the individual jobs and the company as a whole.

### COST TO COMPLETE

Preparing financial statements requires the contractor to estimate the cost to complete the jobs in progress. The cost to complete the jobs in progress must also include indirect costs. SOP 81-1 states:

In computing estimated gross profit or providing for losses on contracts, estimates of cost to complete should reflect all of the types of costs included in contract costs.

If indirect costs are omitted from the estimated costs to complete, the percentage of completion calculations will be inaccurate. This could result in the contractor reporting net income that is materially misstated. Allocation to costs to complete must be consistent with allocations to actual costs incurred.

By comparing historical costs over time, one can reasonably predict the amount of overhead costs that must be recovered to remain profitable, *before anticipated increases*. A contractor should never use a "rough estimate" of overhead applied to labor or total cost. The actual overhead costs by type, indirect, or general and administrative should be known and adjusted periodically.

If a contractor cannot recover overhead costs and remain competitive, this often signals a problem of excess overhead.

### BENCHMARKING

It is also useful to benchmark a company to determine how it is performing when compared to others in the industry. There is an annual survey of highway contractors' financial data developed by the *Construction Financial Management Association*. Exhibit 4 presents information from the year 2001 edition.

A highway contractor in the Southeast United States can make general comparisons to determine if it is obtaining similar results (caution, the above data is for all highway contractors, both large and small). Sample Grading Contractor appears to have operations consistent with what the survey indicates as normal.

## CONCLUSION

An understanding of the relationship of indirect costs to the individual jobs of a construction contractor is very important. Underestimating the costs when bidding a job usually results in a loss.

Overestimating the same costs means that quite probably the contractor will not be able to obtain new contracts, due to the competitiveness of today's markets. The costs are never static as witness the increasing costs of both the insurance and

surety industries post September 11th, and now post Enron.

As a company changes over time, so will its estimating practices. With the costs of contracting constantly increasing, it doesn't take long for an overhead allocation formula to become outdated. Companies should develop and test their overhead allocations periodically in order to maintain accuracy in their estimating process. ■