

CHAPTER 4

IDENTIFICATION, REPORTING AND COMPUTATION OF PERSONNEL COSTS

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CHAPTER 4

IDENTIFICATION, REPORTING AND COMPUTATION OF PERSONNEL COSTS

Identification, Reporting, and Computation of Personnel Costs

The accurate estimating, tracking and costing of personnel costs is imperative to ensure accurate reporting and future estimating of these costs. Personnel costs are those costs associated with employing public agency personnel in the performance of a specific job. They include three elements:

- Annual salary or wage paid by the public agency.
- Benefits received by employees such as a public agency's contribution to employee retirement programs, group health plans, and unemployment insurance.
- Benefits paid to employee such as salaries or wages paid to employees who are on holidays, vacation leave, and sick leave.

This section of the manual describes the systems and methods used to track personnel time, determine the costs associated with personnel, and record these costs to a project tracking system.

Tracking Personnel Time

Critical to the public agency's determination of personnel costs is the ability to identify time spent by employees performing work on all public projects.

4.01 Timekeeping System

A public agency shall have a timekeeping system that accumulates hours worked by employees and assigns these hours to all public project codes. Typically, this project code is assigned by the agency's accounting department and conveyed to the person responsible for the public project, generally the foreman. This system shall enable the agency to track hours worked on public projects to allow for the subsequent distribution of the appropriate personnel costs.

4.02 Examples of Timekeeping Systems

The simplest of timekeeping records is a foreman's time book. These books usually have 50 pages and the foreman records on a daily or weekly basis the employee and his daily time spent on a particular project. These books have heavy tagboard covers so they can remain at the job site and be carried in a foreman's pocket. Typically, at the week's end, the foreman's time book is copied onto timesheets or timecards. This may be done at the central office by the foreman, timekeeper, payroll clerk or bookkeeper. This timekeeping system has the advantage of actual timekeeping being performed at the job site; but if the book is lost, the entire project's time record is lost.

Weekly timesheets or timecards and electronic timekeeping systems can also be used to record time. These documents should be completed by employees no later than at the end of the week showing the hours worked on each public project. For the employees to complete the cards or sheets, they must be informed of the appropriate project code to charge. This appears to be an insignificant issue; but without the establishment of a project code and the conveyance of that information to personnel working on the public project, the costs may never get recorded accurately. This decentralization of timekeeping presents the opportunity for possible inaccuracies in the recording of time spent on public projects. Therefore, this system may warrant additional review by management.

Work orders can be used to record time by the appropriate employee. As discussed in the project tracking requirements, work orders are written authorization for the performance of a particular job containing a project code, a description and location of the job, and specifications for the work to be performed. Work orders are the most frequent public project timekeeping systems used by public agencies. These are generally completed by the supervisor of the public project who records the employees' time spent on a public project.

It is important to note that work performed on public projects, unlike timekeeping in the construction industry, requires close supervision by management to ensure that hours worked on end cost objectives as defined by this manual are recorded properly.

4.03 Application of Timekeeping Systems

As discussed earlier, there are two types of organizational units within public agencies that may perform public project work. These are (1) public project units and (2) other organizations that may, in addition to their primary duties, work on public projects.

4.03.1 Public Project Unit

A public project unit is an identifiable organizational unit of any size whose primary goals include the undertaking and completion of public projects. Typically, these units perform construction, reconstruction, erection, alteration, renovation, improvement, demolition, repair work, and painting of any publicly owned, leased, or operated facility. For example, a public works department may have a division/section comprised of employees who as defined by this bill are dedicated to the undertaking and completion of public projects such as road resurfacing, painting, landscaping and building/remodeling. The Commission would, in general, consider a unit to be a public project unit when over 25% of the total unit's annual budget is expended on public projects. It is more common to have these organizational units in the larger public agencies - urban counties, cities and school projects.

a. Timekeeping Requirements

Employees who generally are considered direct labor and are assigned to a public project unit shall record their time on an hourly basis and record all hours of a full work day. This includes time spent on public projects as well as time spent on projects excluded from this program. Unassigned time by these employees will also be recorded and charged to an appropriate code.

Employees not performing labor on public projects, but who provide administrative support services to the employees of the public project unit, shall also record their time on an hourly basis and record all hours of a full work day. This time will be charged to an appropriate overhead account and will be used in the development of the organizational unit's overhead rate as discussed in Chapter 7.

All employees, whether performing direct labor or providing support services, shall have their time posted to the project tracking system on a periodic basis as discussed in Chapter 4. An audit trail of all labor hours shall be maintained.

b. Discussion of Example

An employee has recorded on an hourly basis a full 40 hour work week. He has identified 32 hours spent performing work on specific public projects: 22 hours on remodeling the Main Street School, Work Order #3359, and 10 hours on weatherizing the district's administration building. Four hours were spent on miscellaneous maintenance work and 4 hours were spent waiting for assignment to a job.

4.03.2 Other Organizational Units Performing Work on Public Projects

There are other organizational units that have employees who perform work on public projects but whose primary goal is the performance of routine maintenance work and/or other general government services. Typically, these organizational units include: parks and recreation departments; divisions of public works agencies that have not been identified specifically as public project units, such as engineering; water and sewer; street maintenance; and routine maintenance.

a. Timekeeping Requirements

Employees of these organizational units shall report time worked on public projects. Although the Commission strongly believes that it is advisable for employees to record an eight-hour day to various end cost objectives, work performed outside of public projects is excluded from the scope of the program and is not required to be reported. All time worked on public projects by a public agency employee shall be posted to a project tracking system on a timely basis with an adequate audit trail maintained.

b. Discussion of Example

An example of how an employee of an organizational unit who performs work on a public project, but whose organization is not identified as a public project unit, must report his time. As noted, the employee has recorded only the time worked on a public project. Unit management, employees performing maintenance work, and unassigned employees need not record their time as do similar employees in a public project unit.

4.04 Recording Time to Public Projects

A public project's direct labor time shall be recorded to a project code under the following circumstances:

- The employee worked on a public project.
- The employees were in transit to or from a project site.
- The employee performed clean-up work on a public project, e.g., the employee returned to central headquarters to complete paperwork attributable to a public project.
- The employee was assigned to work on a public project but was unable to work due to unforeseen circumstances, e.g., equipment breakdown or inclement weather, and was therefore idle.

Computing Personnel Costs

In determining personnel costs, three different rates must be determined and applied: the employee's productive hourly rate, the department's overhead rate, and the general government overhead rate.

4.05 Productive Hourly Rate

Personnel costs in many public projects represent the single largest cost of a public project. In calculating these costs it is important to include the three components of personnel costs:

- Annual Salary/Wages
- Benefits Received
- Benefits Paid

The calculation of an hourly rate integrating these three costs components is commonly called a "productive hourly rate."

A productive hourly rate shall be used to cost time reported to public projects. A productive hourly rate determines the full costs per hour of employing public agency personnel on a public project. A productive hourly rate is calculated by dividing annual personnel costs by an employee's available hours for work assignment.

4.05.1 Annual Personnel Cost

The annual personnel costs of an employee or class of employees shall be determined by the public agency. These costs shall include annual salary/wages and fringe benefits paid by the public agency.

Fringe benefits are generally calculated as a percentage of annual salary/wages or as an annual cost per employee.

If the productive hourly rate is calculated by employee class, members of each class should have reasonably comparable fringe benefits. Otherwise, further division of the employee class should be performed.

Fringe benefit calculations shall take into consideration, but not be limited to, the employer contribution portion of the following costs:

- Disability insurance
- Life insurance
- Retirement plan
- Unemployment insurance
- Worker's compensation insurance
- Personal liability insurance

The fringe benefits calculation is not required to include accrued benefits, such as sick leave or vacation earned but not taken, as a component of personnel costs. It is recognized that these accrued benefits represent a significant future cost to the public agency. Yet, many public agencies do not account for these costs and would have difficulty in developing accurate figures. If further pronouncements concerning accrued benefits of public agencies are issued, the Commission will determine whether inclusions of these costs are appropriate.

4.05.2 Productive Hours

The public agency shall start with the assumption of 2,080 productive hours in a year if a 40-hour work week is the standard for the public agency. If a 40-hour work week is not the standard, the appropriate number of annual productive hours must be determined by the agency. The public agency shall then determine average annual nonproductive time either by employee, class of employee, or agency-wide. Nonproductive time is time when the employee is not available to work or assignment to work and includes but is not limited to:

- Vacation
- Sick Leave
- Holidays
- Military Leave
- Jury Duty
- Training

4.06 Unit Overhead Rate

4.06.1 Public Project Unit

A unit overhead rate shall be developed for each public project unit. This unit overhead rate shall include all public project costs that are not direct costs. The overhead rate shall be developed and added to the productive hourly rate. Organizational Unit Performing Public Project Work

A unit overhead rate shall be developed for each organizational unit performing work on public projects in addition to its primary duties. This unit overhead rate shall include all of the

organizational unit's costs that are not direct costs. The overhead rate should be developed and applied to the employee's productive hourly rate.

4.07 Government-Wide Overhead Rate

A government-wide overhead rate shall be developed to include all costs of a public agency not associated with organizational units performing services that support all end cost objectives of the government entity. The government-wide rate shall be developed and applied to the productive hourly rate after unit overhead has been applied.

See Chapter 7 for the Commission's simplified overhead calculation and allocation method.

See Appendix B for further discussion on government-wide overhead rate development.

CHAPTER 5

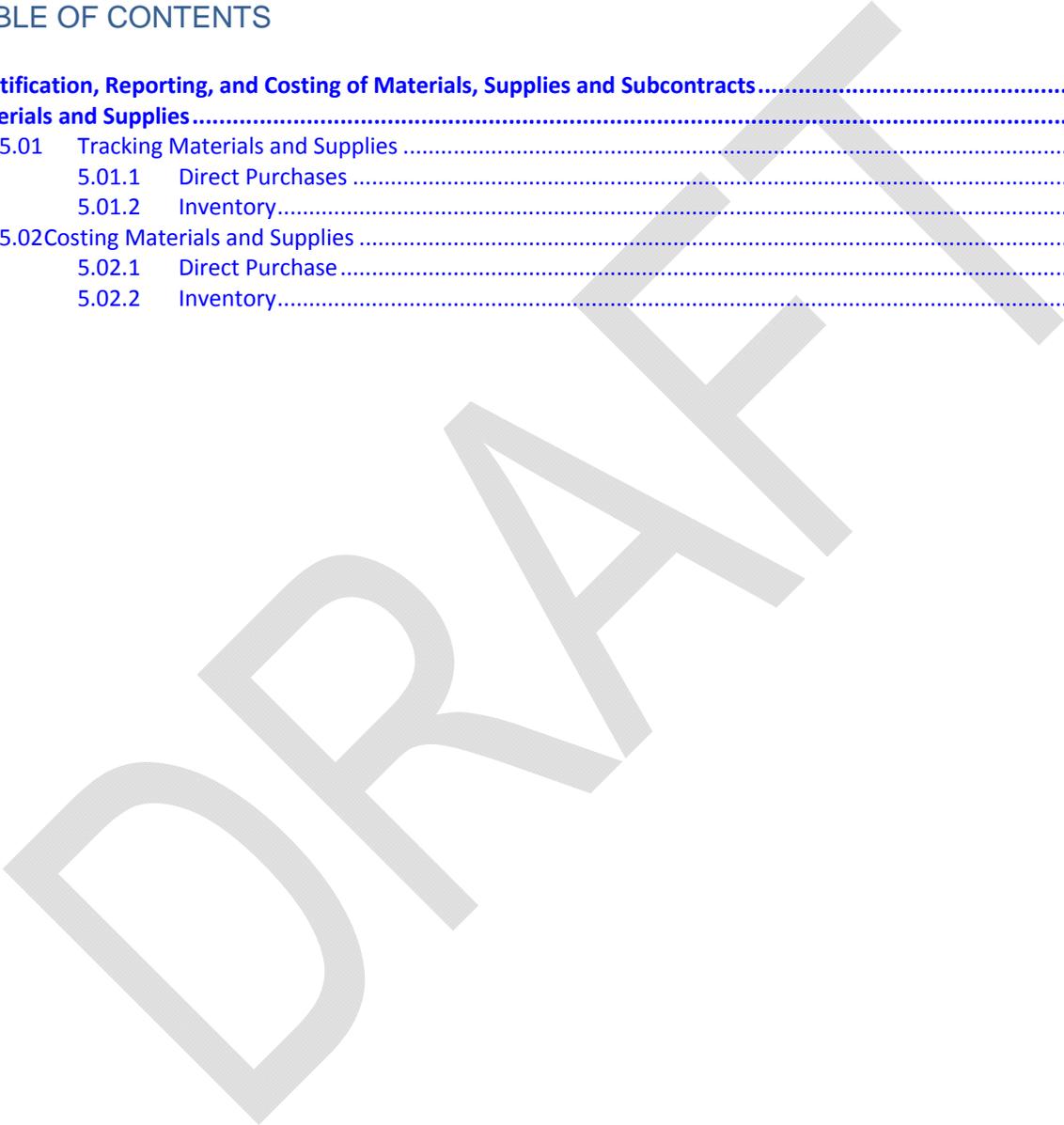
IDENTIFICATION, REPORTING AND COSTING OF MATERIALS, SUPPLIES AND SUBCONTRACTS

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CHAPTER 5

IDENTIFICATION, REPORTING AND COSTING MATERIALS, SUPPLIES AND SUBCONTRACTS

Identification, Reporting, and Costing of Materials, Supplies and Subcontracts

Materials, supplies, and subcontracts used on public projects are considered a cost element by the Commission and include such items as lumber, bricks, cement, doors, paint, asphalt, wire, sand, gravel, pipe, and work performed under a subcontract. Materials and supplies used on public projects shall be tracked and charged to project codes as discussed in Section II and can be accounted for either as direct purchase or inventory.

This section of the manual describes the systems and methods used to track materials, supplies, and subcontracts; determine their value, as well as the other costs associated with providing materials and supplies; and record these costs to a project tracking system.

Materials and Supplies

Critical to the public agency's determination of personnel costs is the ability to identify time spent by employees performing work on all public projects.

5.01 Tracking Materials and Supplies

The Commission wishes to provide policies and procedures so that public agencies account for public projects in a manner similar to the construction industry. The nature of governmental procurement and inventory practices presents challenges to the public agency's ability to meet the Commission's objective of effectively measuring material and supply costs for public projects.

5.01.1 Direct Purchases

Materials and supplies are often purchased directly for use on a public project. The public agency can thus identify the associated dollar value of items purchased to the public project code, which should be identified on the purchase order when the procurement is initiated.

5.01.2 Inventory

It is more difficult to identify the associated costs of items obtained from the public agency's inventory of materials and supplies, generally maintained at a warehouse or stockroom. The major challenge is identifying and recording the costs of material and supplies utilized for the public project which are obtained from the public agency's inventory. It is the Commission's position that, if the value of these goods obtained from inventory is material, the cost must be recorded to the public project code as a direct cost item. Materiality is defined for purposes of this manual to be any item that has a unit or aggregate value of twenty-five dollars (\$25) or more.

5.02 Items purchased and placed into inventory that would subsequently be used on public projects and which may exceed the \$25 limit shall be issued to projects in a manner consistent with good accounting controls. Costing Materials and Supplies

5.02.1 Direct Purchase

The total material and supplies costs are the invoiced amount. This amount should be posted to the project tracking system for direct purchases on a timely basis. This recorded amount should include the cost of the materials and supplies, freight, sales tax, use tax and any other appropriate costs.

5.02.2 Inventory

The public agency shall have a method to provide for the valuation of the inventory it releases to public projects. Acceptable methods include:

First-In, First-Out (FIFO) – The earliest acquired stock is assumed to be used first, the latest acquired stock is assumed to be still on hand. Therefore, when inventory is issued, it is valued at the cost of the earliest acquired stock.

Last-In, First-Out (LIFO) – The earliest acquired stock is assumed to be still on hand, the latest acquired stock is assumed to have been used immediately. Therefore, when inventory is issued, it is valued at the cost of the most recently (latest) acquired stock.

Weighted Average – In this type of inventory valuation system, each purchase of stock is aggregated with the former inventory balances so that a new average unit price is used to price the subsequent issues of inventory.

Recent Costs – The most recent unit costs is applied to units consumed to yield total cost.

5.03 Handling/Carrying Costs

Personnel, equipment and facilities costs are incurred by the public agency to store and transport inventoried items. This is separate and distinct from the cost of procurement that is considered to be recaptured through general government overhead, as discussed in Section VI. (If warehousing and transportation costs are not provided by a central organization, it is assumed that these costs are recovered through the government-wide overhead rate).

5.04 Subcontracts

A public agency may wish to complete work on a public project by subcontracting, i.e., hiring an outside contractor to perform a portion of the work.

Subcontractors shall be accounted for in a manner similar to a direct purchase of materials and supplies. Contracts or purchase orders should be coded with the appropriate project code and the subcontract costs recorded onto the project tracking system in a timely manner.

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CHAPTER 6

IDENTIFICATION, REPORTING AND COSTING EQUIPMENT

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CHAPTER 6

IDENTIFICATION, REPORTING AND COSTING EQUIPMENT

Identification, Reporting, and Costing Equipment

Usage of equipment on public projects is a cost element of performing those public projects. Equipment usage, excluding passenger riding sedans, must be tracked when a piece of equipment is assigned to a public project. Equipment used on public projects shall be charged to a project cost code. This section describes the systems and methods used to track equipment usage, determine equipment costs, and record the costs to a projects tracking system.

6.01 Equipment Tracking Systems

The public agency shall have a manual or automated system that tracks the appropriate equipment by time, mileage or other usage factor to a public project. The system shall have the capability to track equipment usage to a public project:

- When it is in motion to/from a project site;
- When at a public project site (whether in use or not), if time is the means of equipment tracking; and
- When at a public project site and in use, if mileage or some other mechanism is the means of equipment tracking.

6.01.1 Examples of Tracking Systems

One of the simplest forms for tracking equipment is a weekly timesheet for each piece of equipment that has been assigned to the public project and the time or mileage incurred by the public project. These sheets should be submitted weekly with labor timesheets or cards; they should then be sent to the accounting area and charged to a project tracking system.

6.02 Equipment Tracking of Agency Owned/Operated Equipment

As will be seen in section *Equipment Usage Rates*, the public agency can cost out equipment it owns and operates in one of two ways. The public agency can either utilize internally developed equipment rates or rates from industry equipment rate books.

6.02.1 Internal Rates

When an agency develops internal equipment rates for certain or all types of equipment, that agency must track the time that equipment was used on end cost objectives such as public projects, maintenance work, and unassigned time. This enables the public agency to determine what the equipment's history of productive hours has been. This enables a better forecast of projected productive hours to be made for rate development purposes.

6.02.2 Equipment Rate Book Rates

When an agency utilizes the calculated equipment rate from rate books, it must record the time or mileage the equipment is used on public projects. Since these equipment rates generally factor in idle time, a full tracking of the equipment as performed for "internal rate" equipment is not mandated.

Work orders can also be used to record equipment usage. Personnel issuing equipment would generally record the time/mileage when the equipment was issued and returned. Upon return of the equipment, the accounting area would receive the work order and would value and post the equipment usage costs.

Equipment Usage Rates

There are three (3) acceptable means of determining equipment rates. They include rates developed internally for public agency owned and operated equipment, equipment rate books used by the construction industry and rental or lease rates charged by commercial vendors. Each of these methods attempts to recapture the costs associated with the equipment's purchase and operations, such as depreciation, fuel, maintenance, repair and insurance.

6.03 Internal Rates (Equipment Owned by Public Agency)

Public agencies shall utilize internally developed equipment usage rates that reflect the full cost of owning, operating and maintaining types of equipment. Rates should be developed for classes of equipment and should comply with the following guidelines:

- The internal equipment rate methodology shall be documented and an adequate audit trail provided.
- The costs of depreciation, fuel and oil, equipment storage, and income are to be included in the internally developed rates.

6.03.1 Depreciation

Depreciation is the method used to spread the cost of equipment, capital lease, or replacement value less residual value, over a piece of equipment's useful life. The public agency's capitalization policy should be used to determine whether a piece of equipment should be depreciated. Generally, equipment that costs more than \$1,000 and has a useful life of more than one (1) year should be depreciated.

Depreciation should be calculated as follows:

(1) Useful Life

Depreciation should be based on the average useful life for the piece of equipment in a particular operation. Determination of useful life should be based on actual or planned retirement and replacement practices.

(2) Residual Value

Residual value is the value at disposition (less costs of disposal) estimated at the time of acquisition. In many cases, the estimated residual value is so small and occurs so far in the future that it has no significant impact. As well, residual value may be almost or completely offset by removal and dismantling costs. Normally, public agency equipment will be used through the end of its estimated useful life and the residual value may be carried at zero. In the event that it is known at the time of acquisition that the capital equipment will not be used for at least 75% of its scheduled useful life, residual value should be estimated.

(3) Capital Improvements

Capital improvements are the costs of major overhauls and modifications that add value and prolong the life of a piece of equipment. These costs should be treated as capital expenditures and depreciated over the extended or remaining useful life of either the asset or improvement, whichever is less.

(4) Straight Line Depreciation Method

The straight-line depreciation method charges an equal amount for each period of useful life (generally a year). This method is considered the most practical and reasonable method for determining equipment usage costs.

(5) Calculation of Depreciation Examples

Annual depreciation for capitalized equipment will be estimated as follows:

- A. Start with the acquisition cost (purchase price) plus capital improvements, plus all other costs incurred to place the equipment in usage, e.g., transportation, installation. The public agency may choose to utilize replacement value for this calculation.
- B. Determine the useful life of the equipment, utilizing applicable guides such as the IRS guide.
- C. Compute annual depreciation by dividing the depreciable basis (acquisition cost plus capital improvements less residual value) by the useful life.

a. Maintenance and Repairs

These are costs (labor and parts) that are incurred for maintenance repairs to keep the equipment in normal operating condition. These costs do not include capital improvements that add value to equipment and are accounted for under depreciation. Tires and grease are included in this classification of cost. Typically, a ledger card for each piece of equipment will be necessary to record these costs.

b. Fuel and Oil

These costs include the labor and fuel costs of supplying the equipment with fuel of any type and oil.

c. Equipment Storage Costs

Equipment storage costs include the cost of facilities associated with the use of equipment. These costs include equipment yards, warehouse facilities, and the cost of guards and other security measures.

d. Insurance

These costs include the premiums paid by the public agency (whether self-insured or paid to an outside agency) for equipment insurance.

A good discussion of the calculation of internal equipment rates can be found in California State Controller's Office, *Accounting Standards and Procedures for Counties* in the Road Fund Accounting section.

6.04 Equipment Rate Books (Equipment Owned by Public Agency)

Public agencies that own equipment used on public projects but do not calculate internal equipment rates shall utilize appropriate private industry equipment rate books. It is understood that industrial rates may include certain costs that are not incurred by public agencies, such as personal property taxes paid on the assessed value of the equipment and interest charges. However, these equipment usage rates in some cases do not include: the cost of fuel or other energy costs to operate a particular piece of equipment; the cost of preparatory work performed before a piece of equipment can be made operative; the costs of dies, blades or welding rods that are normally consumed in the operation of a piece of equipment; or the costs of extraordinary wear and tear. Therefore, the use of industrial rates is assumed to provide a reasonable approximation of internal rates.

Equipment rate books that are acceptable to the commission for use in lieu of internal rates include:

- *Caltrans Labor Surcharge and Equipment Rental Rates*
<http://www.dot.ca.gov/hq/construc/equipmnt.html>
- *Mechanical Contractors Association Tool and Equipment Rental Guide*
- *National Electrical Contractors Association Tool and Equipment Rental Schedule*

Use of other guides must first be reviewed and approved by the Commission.

These guides are maintained and updated on a periodic basis by the appropriate agency or association to accurately reflect current costs associated with equipment usage. If a piece of equipment or comparable piece of equipment is not included in an established guide, an internal rate shall be developed or a documented quote from an equipment leasing or rental agency may be utilized.

6.05 Rental or Lease Rates

Rented or leased equipment to be used partially or completely on public projects shall be tracked and have the appropriate amount charged to the public project. Additional costs associated with the leasing or renting of equipment used partially on a public project shall be charged on a pro rata basis, if appropriate to that project. Costs related to renting or leasing equipment generally include, but are not limited to:

- Rates
- Moving, loading, and assembly costs
- Maintenance and repairs
- Insurance
- Fuel (under some rate schedules)

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