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**College of Environmental Design**  
**Construction Engineering & Management Department**  
**CEM 511**  
**Construction Estimating**  
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# Cost control system

The management of the project moved from planning stage to the construction stage.

The objectives of cost control system are:

- To keep the construction costs of the project within the established budget.
- To develop labor and equipment production information in a form suitable for estimating the cost of future projects.



# Cost control system

## Components of cost control system:

- Cost accounting is applied to determine the actual costs.
- Actual costs are continuously compared with the budget.
- Identifying work items that show cost overruns.
- The situations of these work items are analyzed to find out the causes of overruns.
- Suitable actions are taken to eliminate the causes of deviation.
- Periodic reports are prepared to forecast final project costs and compare that with the budgeted costs.



# Cost control system

## Components of cost control system:

### Notes:

Monitoring involves collecting actual cost (cost accounting) and comparing it with the budgeted cost.

The whole process is repeated at regular time intervals.

This process is designed to serve as management-by-exception devices.

Timely information is required if effective action against cost overruns is to be taken.



# Cost control system

## Project cost accounting

- It provides the basic data required for both cost control and cost estimating.
- Cost accounting differs substantially from financial accounting in that the information is not entirely in the terms of dollars and cents.
- Cost accounting involves:  
The continuous determination of man-hours, equipment-hours, and work accomplished as well as cost data,  
The analysis of this information, and,  
The presentation of the results in summary form.



# Cost control system

## Materials, subcontractor's, and overhead costs:

- Costs associated with these items are of a reasonably fixed nature and seldom tend to vary appreciably.
- Cost control of these items is affected mainly by the disbursement controls applied to purchase orders and subcontracts.

## Labor, and equipment costs:

- Characterized by considerable uncertainty and can fluctuate substantially during the construction period.
- They merit and need constant management attention.



# Cost control system

## Labor, and equipment cost reports:

- Reports must be compiled often enough so that excessive project costs can be detected.
- The frequency of reports could be daily, weekly, and monthly depending on the nature of the project
- Weekly labor and equipment cost summaries are about optimum for most construction operations.



# Cost control system

## Labor time reporting:

Labor time cards are used to report the hours of labor time for every cost item to which the labor applied.

Daily or weekly time cards could be used.

In daily cards, several slots are provided for the distribution of each person's hours to specific cost codes.

In weekly cards, a separate card for each worker is prepared to record the hours and cost codes for that week.





# Cost control system

Daily time cards:



# Cost control system

Weekly time card:



# Cost control system

## Measurement of work quantities:

To determine productivity rates and unit costs, it is necessary to obtain not only the hours and costs expended, but also the amounts of work put into place.

It is more common practice that project work measurements be made at longer intervals, such as weeks.

Weekly reports of work done are submitted on standard forms such as that in the following figure.



# Cost control system

## Measurement of work quantities:



# Cost control system

## Weekly labor cost report:

Once a week, labor costs obtained from time cards are matched to the work quantities produced.

The labor costs here are direct labor costs only and don't include indirect labor costs.

These reports indicate how actual labor costs compare with those estimated.

These reports identify work items having excessive labor costs and give indication of how serious the overruns are.



# Cost control system

## Weekly labor cost report:

