

# ARC 226 Construction Scheduling

Creating Teamwork and Getting Subcontractors to  
Conform to the Schedule

# Introduction

- The schedule should be created with input from all members of the project team
  - This includes site management and subs
- The schedule should not be created and used only by the person in the office with the best computer skills

# Formal Training

- In order for the managers to provide input concerning the schedule the managers must be familiar with CPM
  - Logic diagrams, durations, float
    - How does one activity affect others?
  - It may be beneficial to provide training to subs also
- Training must motivate those involved to use CPM techniques
  - Seminars from software providers
  - Cover the basics of developing a schedule

# Preliminary Schedule Meetings

- Preconstruction conference should be held with all the major players for the project
  - Discuss project details and constraints
  - Brainstorm the schedule
    - Where should the project start and how should it progress
  - Use non-conventional ideas

# Create and Share the Logic Diagram

- If the project members have a basic idea of CPM they can assist in the creation of the logic diagram
  - Be open to input from any source
    - Do not assume, but communicate and clarify
- Subs should check the logic
  - Subs need sufficient material and manpower to complete within the given schedule
    - Include procurement and suppliers

## Create and Share the Logic Diagram, cont.

- The logic diagram does not need to be computerized at this point
- You may not need to draw out the entire project at this time (pre-construction)
  - General plan first
- The time spent early in the planning phase will be more than made up later during the construction phase

# The Gilbane Method

- Preconstruction meeting is held with all the basic players
  - A general plan for construction is agreed upon
- Schedule development meeting is held
  - Each team member lists their own activities
    - Name of the activity, duration, crew size
  - The team members then post their activities to the logic diagram
    - Predecessor and successor lines are drawn
  - Extra activities can be added as needed

## The Gilbane Method, cont.

- Once the schedule is complete review it for appropriate logic and completion date
  - If the schedule is not acceptable the entire project team can work to revise it
- Try to ensure that all team members are present
  - Members absent from the schedule development meeting tend to be the source of problems during the project
- The schedule is then computerized, distributed, and reviewed
  - A follow up meeting can be useful



# Manage Durations

- Do not rely solely on the durations supplied by the subs
  - Subs may supply inflated durations
  - Have a general agreement between project members about the appropriate level of risk on the project
    - Add extra days to the schedule to address the added risk
    - It must be realized that the entire team shares the extra days and they should be used only as a last resort

# Plan for Undependable Subs

- What is the previous history of the subs?
  - If the sub has a history of not finishing on time you may want to add “hidden” days for insurance
- Subs that do not show up on time or finish on time affect the entire project
  - Include a finish to start lag
- A dependable sub may be worth the extra cost

# Reward Subs for Compliance

- Acknowledge subs for conforming to the schedule
  - Sub of the Month, etc.
- Successful companies commonly reward their employees and associates
  - Gift certificates, vacations, or just acknowledgement of a job well done

## Other Methods for Conformance

- Treat subs like you would want to be treated
- Don't schedule the same crew to be in two places at once
  - Or two subs
- Use the web to send updated schedules
- Fax reminders about the schedule to subs
- Give sufficient notice to subs about starting dates
- Make the schedule a part of every progress review meeting

# Scheduling Consultants

- May be necessary if the company is just getting started with CPM
  - Don't try to reinvent the wheel, rely on other's expertise
- Training is better received if it comes from a consultant vs. upper management
- The consultant should not be used to develop every job schedule
- The PM must be in control of the schedule
  - Timely updates, evaluations, creation, revision

# Conclusion

- The more the project players function as a team, the more likely the project will be successful
- Everyone in key positions should have the opportunity to contribute to the schedule development