

# 3-Day Plant Expansion and Rearrangement

## Description

This hands-on *working* course will show you step-by-step how to successfully organize and complete major facilities projects. It provides practical, proven methods for planning building expansions and plant floor rearrangements. Through case examples and exercises you will learn how to integrate layout, material handling, and building design into cost-effective facilities. Specific techniques are presented for defining space and capacity required. A valuable course if your plant is expanding or rearranging.

## Objectives

- To increase the value of your company's physical assets.
- To save time on your next facilities project.
- To avoid costly oversights, mistakes, and delays.

## Who Will Benefit

- Plant and Production Managers
- Facilities planners and managers
- Process and plant engineers
- Industrial engineers and layout planners
- Architects and other professionals

## Timing

Duration: 3 days  
Start each day: 8:00  
AM Break: 10:15  
Lunch: 12:00 – 1:00  
PM Breaks: 2:15 & 3:30  
Adjourn Days 1 & 2: 5:00  
Adjourn on Day 3: 3:00

## Course Outline

### Day One

#### A. WELCOME AND INTRODUCTION

- Anatomy of an industrial facility.

#### B. REQUIREMENTS OF EFFECTIVE FACILITIES PLANNING

- Understanding facilities planning and its potential.
- Common shortcomings and preliminary preparations.
- Systematic Planning of Industrial Facilities (SPIF).

#### C. COST-EFFECTIVE PLANNING OF LAYOUTS

- How to plan layouts systematically.
- Phases and procedures.
- Case study and workshop: block and detailed layouts.

#### D. ANALYZING MATERIALS HANDLING

- How to analyze handling needs.
- Phases and patterns of procedures.
- Case study and workshop: general and detailed handling methods.

#### E. INTEGRATING MAJOR COMPONENTS OF FACILITIES

- Communications analysis.
- Utilities analysis.
- Building analysis.
- Layout and material handling needs.

#### F. CASE EXERCISE IN PLANNING

- Guided application in materials handling analysis and layout planning.

### Day Two

#### A. PROBLEM REVIEW AND QUESTIONS

- Review of Day One and case exercise.

#### B. FACILITIES PLANNING CONCEPTS

- Basic axioms of every facilities planning project.
- Guidelines for systematic planning.

## 3-day Plant Expansion and Rearrangement

### Course Outline continued

#### Day Two continued

##### C. THE SYSTEMATIC PLANNING PROCESS

- Four-phase framework.
- Specific five-step pattern.
- How to coordinate multiple components of planning.
- Project planning and scheduling within the framework and pattern.

##### D. MAKING THE PLANNING PROCESS WORK

- Gross and fine planning.
- Long- and short-term planning.
- Lead component concept and its application.
- Integrating short- and long-term planning.
- Practices for more productive planning.

##### E. BASICS OF EXPANSION PLANNING

- Site planning.
- Basic flow patterns.
- How to organize and divide facilities.
- How facilities expand.
- Six ways to determine space requirements.

##### F. GUIDED APPLICATION

- Hands-on planning projects with guidance on theory and practice.

#### Day Three

##### A. COMMON PLANNING CONSIDERATIONS

- Flow patterns.
- Modernizing vs. replacing.
- One story vs. multiple stories.
- Central vs. decentralized storage.
- Overhead vs. under-floor utilities.
- How to select from alternative plans.

##### B. GUIDED APPLICATION

- Hands-on expansion planning project, working in teams.

##### C. MANAGING THE PLANNING PROJECT

- What management needs to know.
- What the planner needs to provide.
- How planners should plan their planning.

##### D. SUMMARY AND CLOSING REMARKS

##### REFERENCE MATERIALS AND TEXT

In addition to more than 100 pages of notebook material, each participant will receive a copy of the text: *Systematic Planning of Industrial Facilities (SPIF), Volume I*, by Richard Muther and Lee Hales. This text provides you with a complete, step-by-step methodology reference, including application examples and wall chart.