

# Basic Structural Principles

## for GENERAL CONTRACTORS AND SUB-CONTRACTORS

### COURSE TOPICS:

➤ **Code Requirements**

- Life Load
- Wind Load
- Deed Load
- Seismic (Earthquake) Load
- Snow Load

➤ **Review of Structural Design Principles and Terminology**

- Moment
- Shear
- Tension
- Pending Stress
- Deflection
- Compression
- Section Modules
- Moment of Inertia

➤ **Structural Design Examples**

- Load Determination
- Moment Diagrams
- Design of Joists, Rafters and Beams
  - ✓ Steel (Bar Joists, Joist Girders and Wide Flanges)
  - ✓ Manufactured Lumber (Wood "T" Beams, IML's, PSL's)
- Shear Diagrams
  - ✓ Steel (Wide Flanges, Pipes, Columns)
  - ✓ Concrete
- Building Stability
  - ✓ Moment Frames
- Concrete Walls
  - ✓ Cantilever Retaining Walls
- Connections
  - ✓ Rods
- Tributary Area
- Concrete Footing Design
- Availability of Materials
- ✓ Sawn Lumber
- ✓ Concrete
- ✓ Shear Wall
- ✓ Braced Frame
- ✓ Foundation Wall
- ✓ Welds
- ✓ Nails

Tuesdays, October 14 - December 9, 2008

3:00 - 5:30 PM

ABC Chapter Training Center, Concord NH

\$400 per person / ABC Member

\$600 per person / Non-ABC Member

*This course qualifies as 20 Credit Hours toward the **Certificate of Achievement in Construction Supervision** (See reverse for further details)*

**WHO SHOULD ATTEND** - Individuals from **Sub-Contractors, General Contractors, Construction Managers, Owners** and others who are developing or enhancing their ability to control projects and lead people.

**PREREQUISITE** - A high school diploma or the equivalent is required. Also, a basic knowledge of the construction industry is recommended.

**GRADES** - Grades are awarded on a Pass / Fail basis. Letter grades are available upon request.

**COURSE WITHDRAWAL** - 100% refunds are given for withdrawals prior to three days before the first class. No refunds are given after the first class.

**QUESTIONS** - Contact the Chapter Office for further information.

NOTE: This course includes three (3) Field Trips:

1. Wood Truss Shop
2. Steel Fabrication Shop
3. Concrete Testing Facility

### REGISTRATION - Basic Structural Principles

Registration for full 8-week course

Tuesdays, Oct 14 - Dec 9, 2008 ABC Chapter Training Center, Concord NH

\$400 per person / ABC Member \$600 per person / Non-ABC Member - Payable to Associated Builders & Contractors NH/VT

COMPANY \_\_\_\_\_

CONTACT \_\_\_\_\_

PHONE \_\_\_\_\_

EMAIL \_\_\_\_\_

NAME (S) \_\_\_\_\_



**New Hampshire/  
Vermont Chapter**

CERTIFICATE OF PROFESSIONAL ACHIEVEMENT  
in  
CONSTRUCTION SUPERVISION

Our certificate program courses were developed by construction industry professionals to prepare and provide construction supervisory level people with the knowledge required to perform their duties. Each 20-hour course is valuable for the knowledge and information gained.

Individuals who complete all the course requirements (*160 credit hours*) will be awarded a Certificate of Achievement in Construction Supervision.

CERTIFICATE REQUIREMENTS

Required Courses: (*approx. 20 class hours each*)

- Project Planning and Scheduling
- Safety
- Understanding Construction Documents
- Leadership and Communications
- Project Cost Controls

Choose Three Elective Courses: (*approx. 20 class hours each*)

- Contractor Relations
- Introduction to Estimating
- Basic Construction Law
- Basic Structural Principles

Course Semesters

- **WINTER** – February - March
- **SPRING** – April - June
- **FALL** – October - December

**ABC NH/VT TRAINING CENTER**

**58 CHENELL DRIVE, CONCORD NH  
603/226-4789**

**FROM I-93 IN CONCORD TAKE EXIT 15 E TO I-393 EAST**

**TAKE EXIT 3 TO ROUTE 106 AND HEAD RIGHT ONTO 106 SOUTH; PROCEED PAST STEEPLEGATE MALL**

**THE NEW ABC NH/VT CHAPTER OFFICE & TRAINING CENTER IS ON THE RIGHT AT THE CORNER OF ROUTE 106 AND CHENELL DRIVE.**

**TRAINING CENTER PARKING & ENTRANCE AT REAR OF BUILDING**