

THE ENGINEERS' CLUB OF PHILADELPHIA

(215) 985-5701

www.engrclub.org

FIRE PROTECTION ENGINEERING COURSES SPRINKLER SYSTEMS BASICS

The cost of this 2 day course is \$650. It will be an in-depth review of water based fire protection systems as required by the NFPA-13 (including Underground, Water Supplies & Storage Standards), 13D, 13R, the BOCA Code; and insurance company criteria. The NFPA Sprinkler Handbook will be supplied. Two Continuing Education Units will be earned for the successful completion of the course.

This course will be taught by Philip L. Gaughan, a NICET Level IV designer and member of All State Design Group of Willow Grove PA. Phil has over 25 years of experience in the sprinkler industry.

This course will be held on **Wednesday**, March 26, 2007 and **Thursday**, March 27, 2007 from 9:00 AM to 4:00 PM at

03/26/08 **INTRODUCTION** - The history and development of water based fire protection systems. What we hope to accomplish by the end of the course will be discussed. Review & study of NFPA-13 (2003 Edition), Chapters 1 through 4. - Phil Gaughan

CLASSIFICATION OF OCCUPANCIES & COMMODITIES & DESIGN APPROACHES - In depth study of how Occupancies & Storage Commodities affect the design and type of sprinkler system to be utilized in a building. Review & study of NFPA-13, Chapters 5 & 11. - Tony Carmona

SPRINKLER SYSTEM COMPONENTS, HARDWARE & REQUIREMENTS - Specific details on types of systems, including wet, anti freeze, dry, deluge and pre-action; and also the acceptable materials required to provide an approved system. Review & study of NFPA-13, Chapters 6, 7 & 9. - Phil Sconyo

OBSTRUCTIONS & SPECIAL CONDITIONS - Designing layouts of sprinklers to avoid obstructions by building components and conditions. A study of where sprinklers can be excluded from a building. Review & study of NFPA-13, Chapter 8.- Phil Gaughan

PACING, LOCATION & POSITION OF SPRINKLERS - Standards for the design layout of sprinklers with respect to structure and room configuration. Review & study of NFPA-13, Chapter 8.- Bob Smith

03/27/08 **PLANS & CALCULATIONS** - Hydraulic calculations of Tree System including friction loss through piping systems and sprinkler discharge characteristics. Review & study of NFPA-13, Chapter 14.- Phil Gaughan

WATER SUPPLIES - Underground piping from public and private water supplies. How to size fire pumps, booster pumps and stored water supplies. Review & study of NFPA-13, Chapters 10 & 15. - Tony Carmona

FINAL DESIGN - A review of design approaches, plans for review, hydraulic calculations, water supplies and system acceptance. Review & study of NFPA-13, Chapters 11, 14, 15 & 16.- Phil Gaughan

STORAGE AND SPECIAL OCCUPANCIES - Special design criteria for different types of storage configurations and criteria for special type commodities. Review & study of NFPA-13, Chapters 12 & 13. - Tony Carmona

RESIDENTIAL SPRINKLER SYSTEMS & GENERAL SUMMARY - Comparison of requirements for Residential Occupancies that relate to the three standards that cover them. Review & study of NFPA-13, Chapters 13R & 13D. - Jim Gourley