

WOOD POLE STRUCTURE DESIGN SEMINAR

November 17-19, 2009
Central Texas EC



2.5 Day Training Seminar

Enroll Today!

[On-Line Registration](#)

**REGISTER BY:
October 22, 2009**

Registration Fees:

Member Registration - \$895
Non-Member Registration - \$1,095

Cancellation Policy: All changes or cancellations must be made in writing. Cancellations must be received 5 working days prior to the date of training to receive a FULL REFUND. It is recommended to send a substitution if less than the 5 working days. No-shows are responsible for paying the full registration fee.

Course Schedule:

9:00 a.m. - 4:00 p.m.	July 7
9:00 a.m. - 4:00 p.m.	July 8
9:00 a.m. - 12:00	July 9

Training Location:

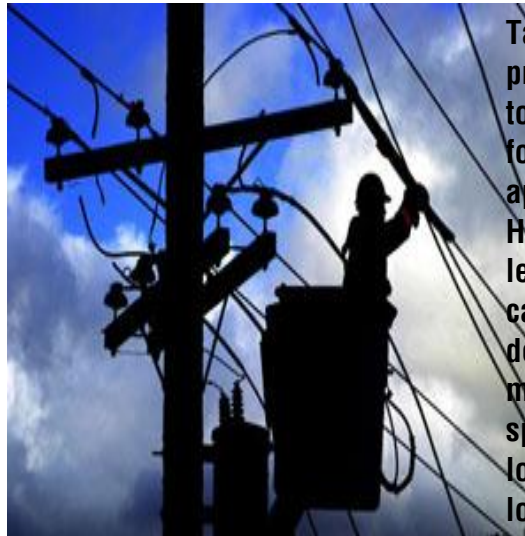
Central Texas EC
386 Friendship Lane
Fredericksburg, TX 78624
(830) 997-2126

Places to Stay: see attached listing

Questions

Contact Esther Miranda Dominguez at (512) 486-6211 or edomingz@texas-ec.org

In this seminar student learns to design overhead electrical distribution structures.



Tables and graphs are provided for the student to lookup design values for immediate application in the field. He or she will also learn to make basic calculations to determine strength and maximum allowable spans for wind and ice loading, plus total guy load due to tension and wind.

WHO SHOULD ATTEND

Design Engineers
System Managers
Foreman
Staking Technicians
Lineman
Purchasing Agents

This seminar will be beneficial to personnel at all levels who deal with design, purchase, installation, and management of the electrical distribution system. Engineers will gain knowledge that will aid them in preparing design guides for their individual utility's standard conductors, poles, and assemblies. Managers and purchasing authorities will gain understanding of the variable that impact performance and reliability. The training will be beneficial to the novice as well as the experienced staking technician. Novices will obtain a working knowledge of correct staking methods and procedures. Experienced personnel will learn the reasoning behind many industry "rules of thumb". Construction personnel such as lineman and supervisors will learn the reasons why lines are built and designed to specifications.

Wood Pole Structure Design (2.5 days)

November 17-19, 2009

WORKSHOP LOCATION

Central Texas EC

386 Friendship Lane

Fredericksburg, TX 78624

(830) 997-2126

REGISTRATION FORM

Please Print Clearly (*One registration form per attendee. Duplicate as necessary*)

NAME: _____ Badge Name: _____

Member Type: CEO/MANAGER DIRECTOR EMPLOYEE SPOUSE/GUEST BAP SUPPLIER/VENDOR ATTORNEY SPEAKER OTHER: _____

TITLE: _____

COOPERATIVE: _____

ADDRESS: _____

CITY: _____ State: _____ Zip: _____

PHONE: _____ Fax: _____

EMAIL: _____

Please select appropriately:

Fees:

<input type="checkbox"/> TEC Member Registration	\$895 per person w/lunch
<input type="checkbox"/> Non-Member Registration	\$1,095 per person w/lunch
<input type="checkbox"/> Continuing Education Credit Certificate (CEU) from ACC	\$12

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REGISTER BY: October 22, 2009

Fax to: (512) 763-3378 or (512) 514-1651

Signature

Cooperative/Company

AUSTIN COMMUNITY COLLEGE
Continuing Education – – 18 Hours CEUs (1.8)
Wood Pole Structure Design
COURSE SYLLABUS

Course Description: The student will learn to design overhead electrical distribution structures. Tables and graphs will be provided for the student to lookup design values for immediate application in the field. He or she will also learn to make basic calculations to determine strength and maximum allowable spans for wind and ice loading, plus total guy load due to tension and wind.

Objectives

- Perform basic calculations to determine pole strengths, maximum line angles, and wind and ice loading.
- Calculate the total guy load and the guy strength necessary to hold the load.
- Specify primary assemblies based on the design parameters.
- Calculate ruling spans and the importance of properly sagging wire.
- Calculate maximum spans based on the design parameters.

Prerequisites: None

Required Material: Course Study Guide

Type Of Course: Two and one-half days of classroom instruction.

Evaluation: Students will be evaluated on their mastery of the course objectives through classroom exercises, their participation during group discussions, and their individual responses to the instructor's questions. A minimum of 80% attendance in class is required to receive credit for this course.

COURSE OUTLINE (18 Hours)

Schedule Time: 9:00 a.m. – 4:00 p.m. -- (5 minute break every hour)

DAY ONE

9:00 a.m. Welcome / Course Overview

CONDUCTORS

Ruling span theory and calculation
Sag and tension calculations and tables

12:00

Lunch

12:30

CONDUCTORS continued

Galloping and Aeolian vibration
Maximum span based on vertical and horizontal conductor separation
Conductor stringing and sag measurement

4:00 p.m.

Adjourn

DAY TWO

9:00 a.m.

POLES

Ultimate resisting and bending moments of wood poles
Transverse conductor wind load and calculations
Calculation of maximum wind span for tangent poles
Designing un-guyed small line angle poles and embedment
Selection of pole class based on transformer weight and vertical loading

12:00

Lunch

12:30

POLE-TOP ASSEMBLIES

Types of horizontal and vertical pole-top assemblies
Crossarm loading and maximum weight spans
Characteristics and selection of pin and post type insulator assemblies
Pole-top assembly strength calculations

4:00 p.m.

Adjourn

DAY THREE

9:00 a.m.

GUYS AND ANCHORS

Determination of horizontal pull based on transverse and longitudinal loads
Calculation of total guy load as a resultant of guy lead to height ratio
Soil classification and anchor selection
Designing a deadend anchor/guy assembly
Designing a line angle anchor/guy assembly

12:00

Adjourn



Instructor BIO/Resume

W. Richard Lovelace, RF, CA

Richard Lovelace has a BS in Forestry from Auburn University, and a BS in Electrical Engineering from Kennedy Western University. Mr. Lovelace has over thirty years of experience in the operation and engineering of electric distribution systems. He worked sixteen years for Tallapoosa River Electric Cooperative in LaFayette, Alabama, twelve years for Southern Engineering Company in Atlanta, Georgia. He is presently the general manager of the Auburn, Alabama, office and Director of Field Services for Hi-Line Engineering.

Mr. Lovelace has experience in the hands on operation and maintenance of a utility distribution system, having worked in both the construction and engineering fields. He performs overhead distribution design, underground distribution design, work order inspections, construction observation, contract management, highway line relocations, right-of-way easement acquisition, right-of-way vegetation management planning, federal/state regulatory permitting, PCB disposition planning, and operations/maintenance surveys.

Places to Stay in Fredericksburg:

Attendees are responsible for making their own hotel room reservations!

[Best Western](#)

314 Highway Street
Fredericksburg, TX
(830) 992-2929

[Fredericksburg Inn & Suites](#)

201 South Washington
Fredericksburg, TX 78624
(830) 997-0202

[Comfort Inn & Suites](#)

723 S. Washington Street
Fredericksburg, TX 78624
(830) 990-2552