

Engineered Laminated Wood

# Joint-Use Structures

Combining Electric Utility, Wired and  
Wireless Telecommunication Applications

- **Complete Structure Design Includes Foundation**
- **Easily Modified in the Field**
- **Natural Beauty plus FREE Photo Simulations Equal Easier Permitting**
- **Quick Delivery\***
- **Longer Life than Any Other Engineered Structure**

\* Typical delivery 4 - 6 weeks after approval of design.

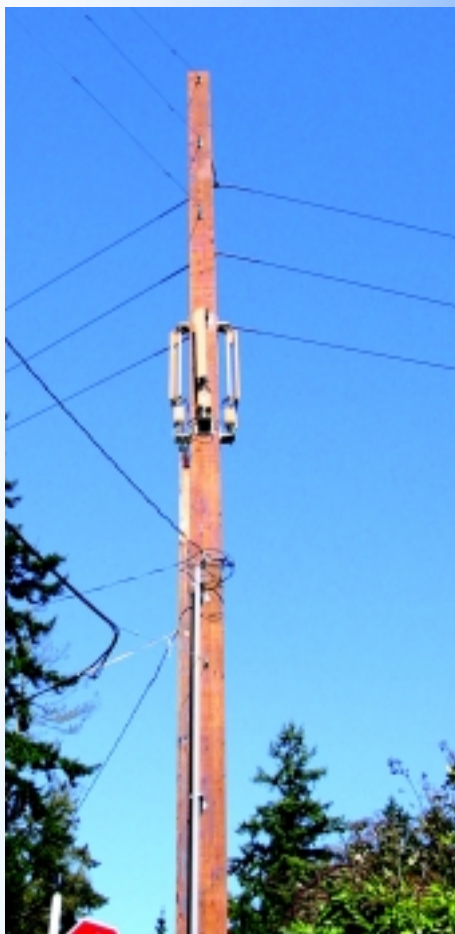
**Preferred by the Public  
over Steel as the Best  
Looking Construction  
Above Grade!**



# E-LAM<sup>®</sup>

Engineered Laminated Wood Products

# E-LAM<sup>®</sup> Brings the *Best of* Provide the Perfect



71' Distribution Structure with  
Flush-mounted Antennas



95' 138kV H-frame Transmission  
Structure with Two Antenna Arrays



45' Distribution Structure with  
Concealed Antennas

*Laminated Wood Structures  
Blend in Naturally with Any  
Surrounding...*

**E-LAM<sup>®</sup>**

# of Both Worlds Together to Joint-Use Solution



81' Distribution Structure with Street Light and Flush-mounted Antennas



69' 115kV Transmission Structure with Distribution Underbuild, Cable TV Attachment and Concealed Antennas



Field Lighting Structure with Single Antenna Array

- **Complete Structure Design Includes Foundation**
- **Easily Modified in the Field**
- **Natural Beauty plus FREE Photo Simulations equal Easier Permitting**
- **Quick Delivery**
- **Longer Life than Any Other Engineered Structure**

*Laminated Wood Systems can streamline your next joint-use project with a superior product, expert engineering, free photo simulations and quick delivery (usually 4 to 6 weeks).*

*Just call today or fill out the design sheets on the back of this brochure and receive a quote within 3 working days!*

**800-949-3526**

**[www.lwsinc.com](http://www.lwsinc.com)**



## Proven History in “Both Worlds”

Laminated wood poles have been used in the electric utility industry for more than 40 years (3 years before the first tubular steel poles). Laminated Wood Systems’ extensive experience in designing electric utility structures, coupled with our knowledge of the telecommunications industry, is the perfect fit for designing and providing joint-use solutions.

## Complete Structure Design

Joint-use structures from LWS are complete kits that include all framing, hardware and foundation design. **If you would like LWS to provide a quote on a joint-use structure, just complete the following steps:**

1. **Wireless Carrier** fills out the joint-use structure design worksheet on **page 6**.
2. **Electric Utility** fills out the joint-use structure design worksheet on **page 5**.
3. **Electric Utility** submits a complete load tree.

Typically LWS will have the preliminary design and quotation returned to the customer within 3 working days. The quote will include the pole, framing, hardware and recommended foundation system.

## Quick Delivery

Typical lead-time is 4 to 6 weeks after approval of drawings. Structure kits include the pole, T&D framing (crossarms, davit arms etc.), attachment hardware, antenna brackets and foundation system.

## FREE Photo Simulations

LWS will provide free imaging when E-LAM® joint use structures are specified. After providing the necessary design information requested above, simply send a good quality photo (print or electronic) to the address below and we will produce a realistic simulation of the structure.

**Send electronic photos to:** [sales@lwsinc.com](mailto:sales@lwsinc.com) (please note “photo simulation” in subject line).

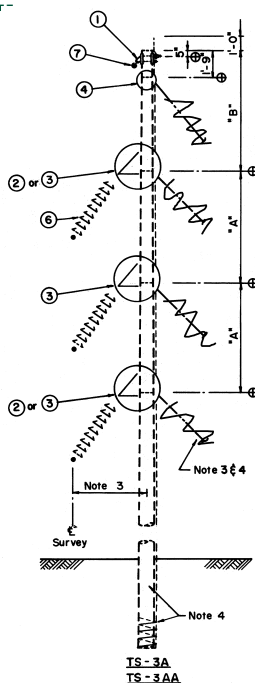
**Send prints to:** Photo Simulations  
Laminated Wood Systems, Inc.  
1327 285th Road  
Seward, NE 68434

# Joint-Use Structure Design Criteria

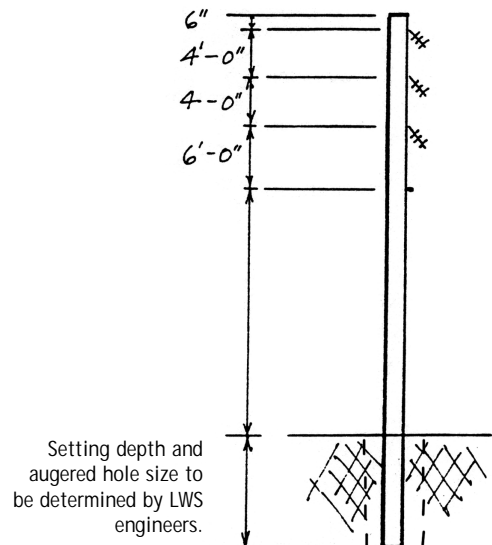
## Utility Specifications (To be filled out by electric utility)

By providing our engineering department with pertinent design details and criteria, we can specify the raked poles suited to meet your pole and loading requirements.

**Please Attach Your Drawing(s)**  
**Such as...**



**And/Or a Sketch Such as...**



Customer Name \_\_\_\_\_

Site Name/Address \_\_\_\_\_

Contact Name \_\_\_\_\_ Phone \_\_\_\_\_

Construction Type \_\_\_\_\_

Line Voltage(s) \_\_\_\_\_

Number of Conductors \_\_\_\_\_ Conductor Size \_\_\_\_\_

Number of Neutral/Shield Wires \_\_\_\_\_

Neutral/Shield Wire Size \_\_\_\_\_

Maximum Span (feet) \_\_\_\_\_

Line Angle Range (degrees) \_\_\_\_\_ to \_\_\_\_\_

Maximum Design Tension (lbs.) \_\_\_\_\_

60 Degree Fahrenheit Tension (lbs.) \_\_\_\_\_

Loading Conditions \_\_\_\_\_

(Example - NESC Heavy Loading, Grade B Construction)

Pole Height (above ground), Range \_\_\_\_\_ to \_\_\_\_\_

Typical Soil Type \_\_\_\_\_

Additional Comments:

(Example - cable TV, telephone, etc.)

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**Please Fax Completed form to LWS at:**  
**402-643-4374**

# Joint-Use Structure Design Criteria Telecomm Specifications (To be filled out by wireless carrier)

Customer Name: \_\_\_\_\_ Site Name: \_\_\_\_\_

Site Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

• Pole Height (above ground): \_\_\_\_\_ feet • Design Wind Speed: \_\_\_\_\_ M. P. H. • Radial Ice: \_\_\_\_\_ inches

• Soils Report Available: \_\_\_ Yes \_\_\_ No

If "no" please describe soil type: \_\_\_\_\_

• Picture of Proposed Site Available: \_\_\_ Yes \_\_\_ No

If "no" please describe surrounding area: \_\_\_\_\_

## ANTENNAS

Mfg./Model No.	Quantity	RAD Center	Azimuth
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

• Sectorized antenna arms? \_\_\_ Yes \_\_\_ No Centerline elevation: \_\_\_\_\_ feet

• Horizontal separation per antenna: - \_\_\_\_\_ feet

• Non-sectorized antenna arms? \_\_\_ Yes \_\_\_ No. Centerline elevation: \_\_\_\_\_ feet

• Horizontal separation per antenna: \_\_\_\_\_ feet • "Close mount" brackets? \_\_\_ Yes \_\_\_ No

• Twist/sway deflection requirements: \_\_\_\_\_ degrees (at 50 M.P.H. operational wind speed.)

## MICROWAVE ANTENNAS

Mfg./Model No.	Quantity	RAD Center	Azimuth
_____	_____	_____	_____

• Twist/sway deflection requirements: \_\_\_\_\_ degrees (at 50 M.P.H., operational wind speed.)

## OPTIONS

• Cable Covers - Metal 8" x 9" \_\_\_\_\_, Metal 3" x 9" \_\_\_\_\_ or Laminated Wood \_\_\_\_\_

• Bracket Paint Color: \_\_\_ Brown or \_\_\_ Green • Pole Steps: \_\_\_ removable or \_\_\_ non-removable

• Internal Raceway (5" x 7-1/4") \_\_\_\_\_ • Chamfered Pole Corners (4" bevel) \_\_\_\_\_ • Safety Cable Assembly \_\_\_\_\_

• Pole Drawings \_\_\_\_\_/Calculations \_\_\_\_\_

• Other Requests: \_\_\_\_\_

**Please Fax Completed form to LWS at: 402-643-4374**