Welcome!!!

Weyerhaeuser

Agenda

- Green Building definitions and standards
- Wood as a Green Building material
- Commercial Products and applications
- Questions

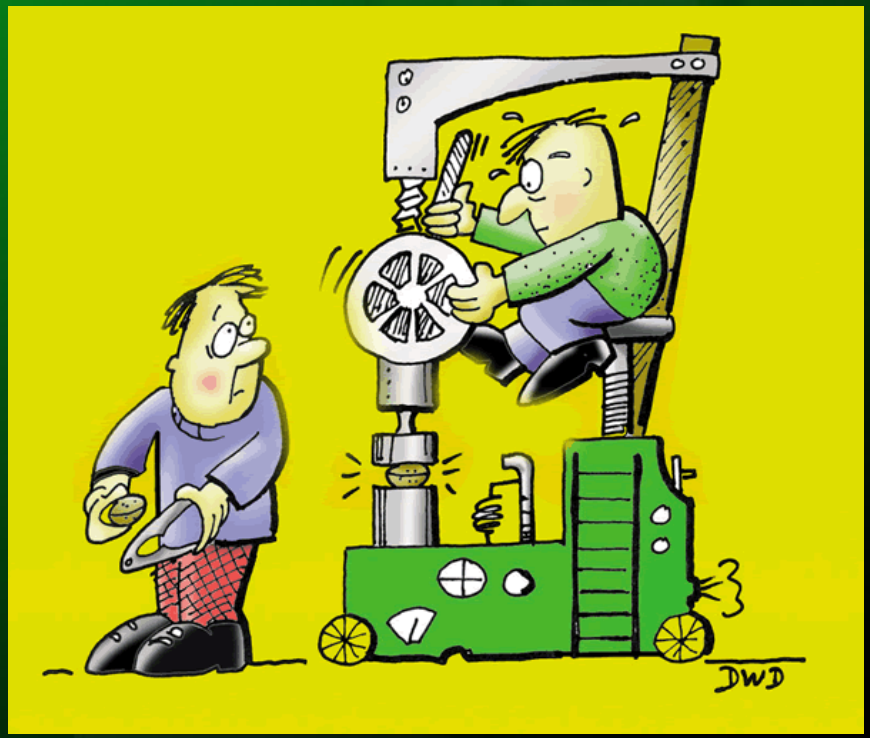
Green Building

- What is Green Construction?
  - Reduce impact on environment

Weyerhaeuser

Define Green

- In order to make this complex concept manageable, we simplify.
  - We need to guard against violating the original intent.



Weyerhaeuser

Why Care

- Buildings represent the following;
  - 39% of energy use
  - 38% of carbon emissions
  - 12% of water
  - 68% of electricity

Weyerhaeuser

USGBC

- USGBC LEED Standard
  - Subjective
  - Favors costly standards

Weyerhaeuser

The Green Building Initiative

- Green Globes
  - Scientific and measurable (LCA)
  - Allows for alternate standards

Life Cycle Assesment

- LCA is a performance based approach
- Weighs relative environmental impact of materials
- Uses software to evaluate the complicated factors in determining environmental impact.

Weyerhaeuser

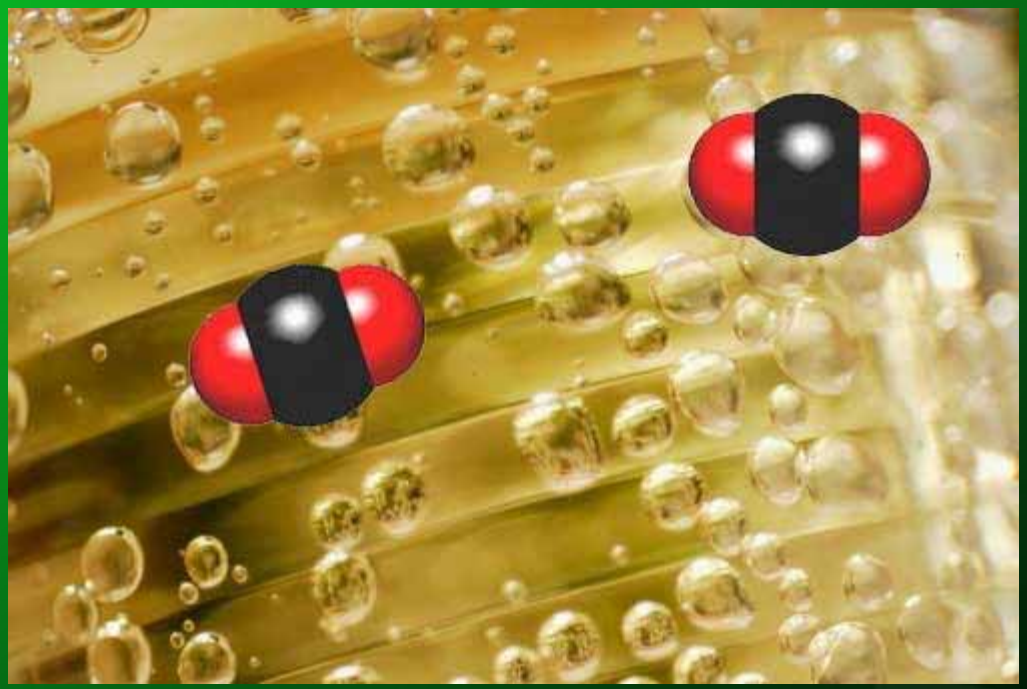
Why Wood?

- Consortium for Research on Renewable Industrial Materials
- Wood framed homes require 16% less energy than steel or concrete, cradle to grave.

Weyerhaeuser

Why Wood?

- Sequester Carbon Dioxide



Why Wood?

- Renewable
- Less Greenhouse Gas Emissions than Steel or Concrete
- Insulation

Weyerhaeuser

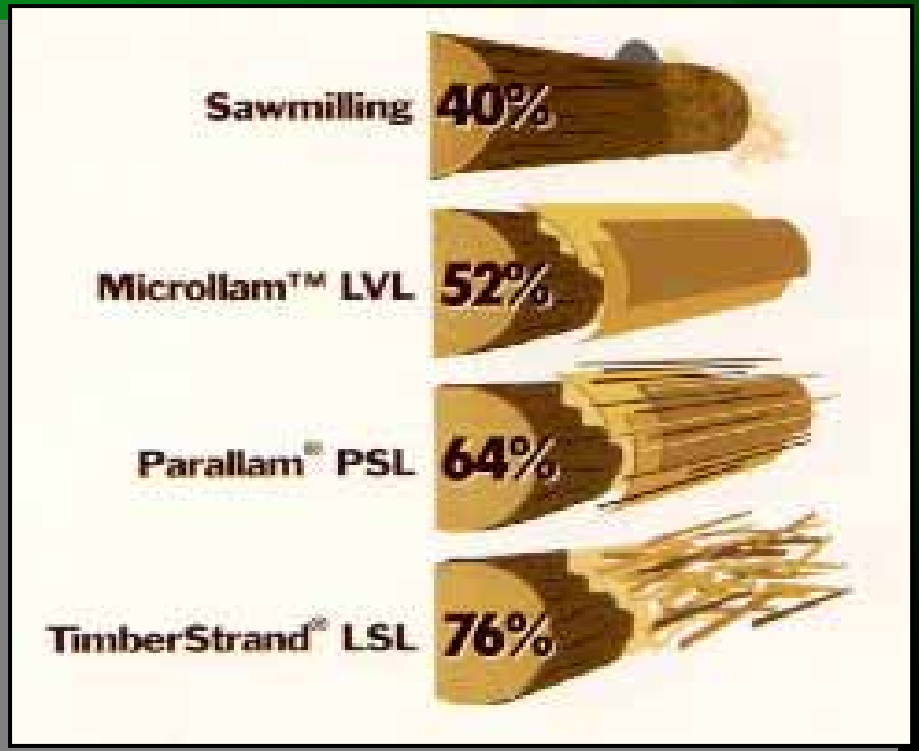
Why EWP?

Commitment to Sustainable Forestry

More from less

-Smaller trees

-Use of under-valued species (Aspen & Poplar)



Weyerhaeuser

Why Wood?

- 1.7 Billion seedlings planted in US annually
- Forest area about the same as in 1920
- Wood volume up 44% between 1963 and 1997 (US Forest Service)
- 100% of Weyerhauser forests are certified to the SFI standard.
- 1-3% of timberland managed by Weyerhaeuser is harvested each year.

Weyerhaeuser

Open Web Trusses

- Developed in 1960
- Flexibility of wood with strength of steel
- Longer spans (30’ - 120’ spans)
- Designed specifically for each job
  - Applications: Offices, hotels, shopping centers, schools, institutional health care buildings, restaurants
- Numerous profiles and configurations

Weyerhaeuser

Open Web Trusses

Open-Web Truss Descriptions

TJL™, TJLX™, TJW™ Truss

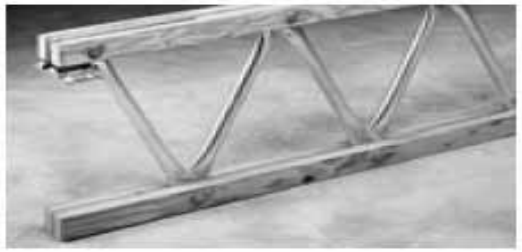
Top and Bottom Chords:
- TJL™, TJLX™ Truss: 1.5" x 3.5" machine stress rated (MSR) lumber.
- TJW™ Truss: 1.5" x 4.75" MSR lumber.

Webs:
1" and 1⅛" diameter tubular steel members varying in gauge and diameter according to requirements. Minimum yield of 45,000 psi.

Weight:
- TJL™, TJLX™ Truss: 3.75 to 4.25 lbs/ft
- TJW™ Truss: 4.5 to 5.25 lbs/ft

Depths:
Min. depth at wall . . . . . 14"
Max. depth at wall . . . . . 50"
Max. pitched ridge depth . . . . . 50"

Any depth between minimum and maximum is available.



TJS™ Truss

Top and Bottom Chords:
Double 1.5" x 2.3" Microllam® LVL.

Webs:
1", 1¼", and 1½" diameter tubular steel members varying in gauge and diameter according to requirements. Minimum yield of 45,000 psi.

Weight:
4.75 to 5.75 lbs/ft

Depths:
Min. depth at wall . . . . . 16"
Max. depth at wall . . . . . 64"
Max. pitched ridge depth . . . . . 84"

Any depth between minimum and maximum is available.

Preservative-treated open-web trusses are not available

TJM™, TJH™ Truss

Top and Bottom Chords:
- TJM™ Truss: Double 1.5" x 3.5" MSR lumber.
- TJH™ Truss: Double 1.5" x 5.5" MSR lumber.

Webs:
Up to 2" diameter tubular steel members varying in gauge and diameter according to requirements. Minimum yield of 45,000 psi.

Weight:
- TJM™ Truss: 8 to 9 lbs/ft
- TJH™ Truss: 10 to 12 lbs/ft

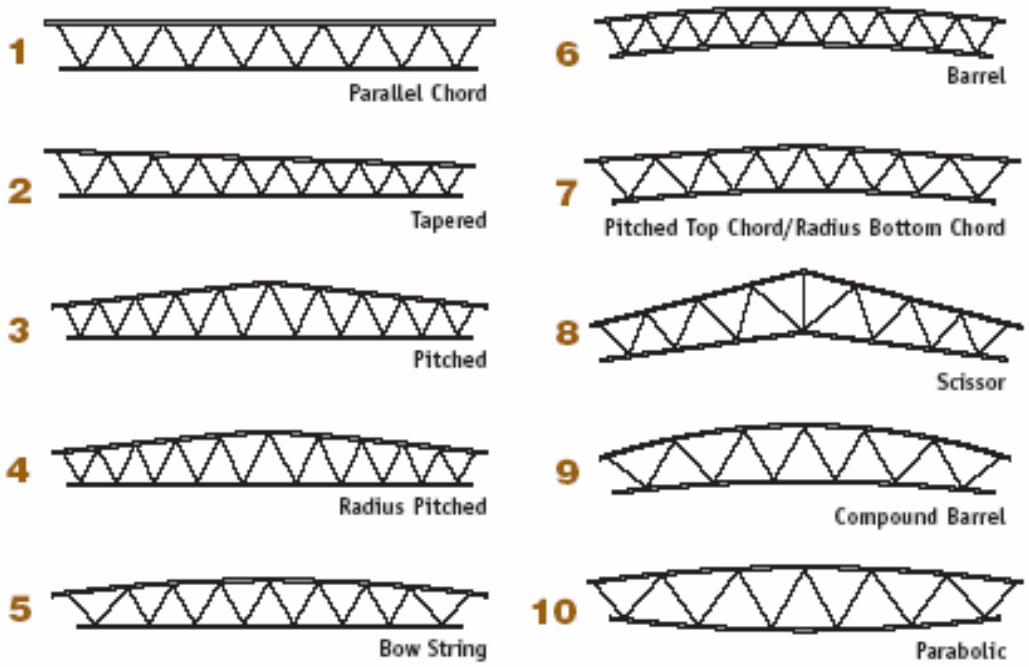
Depths:	TJM™	TJH™
Min. depth at wall	20"	24"
Max. depth at wall	60"	72"
Max. pitched ridge depth	72"	114"

Any depth between minimum and maximum is available.

Weyerhaeuser

iLevel Open Web Trusses

Profiles



Code Evaluation: ICC ES Legacy Report PFC-4354, L.A. City RR #22614

Tightest Curvature Available:

TJL™, TJLX™, TJW™ Truss . . . . . 50' Radius
TJS™ Truss . . . . . 200' Radius
TJM™ Truss . . . . . Camber Only
TJH™ Truss . . . . . Camber Only

Truss Series	Profiles Available									
	1	2	3	4	5	6	7	8	9	10
TJL™ TJLX™ TJW™	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TJS™	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TJM™	✓	✓	✓					✓		
TJH™	✓	✓	✓					✓		

- In radius truss applications (Profiles 5, 6, 7, 9, and 10), allowable loads are reduced due to radial stresses. Contact your Trus Joist representative for job-specific possibilities.
- Maximum top chord slope for Profile 4 (Radius Pitched) is ½" per foot for TJL™ and TJW™ series, and ⅜" per foot for TJS™ series.

Weyerhaeuser

Open Web Trusses

Weyerhaeuser

Open Web Trusses

Design Flexibility – Church – Flint, MI

Weyerhaeuser

Heavy Timber Trusses

Weyerhaeuser

Open Web Trusses

Millersburg, OH Medical Center

Weyerhaeuser

Open Web Trusses

Exposed Trusses – Pella Plaza – Pittsburgh, PA

Open Web Trusses

Weyerhaeuser

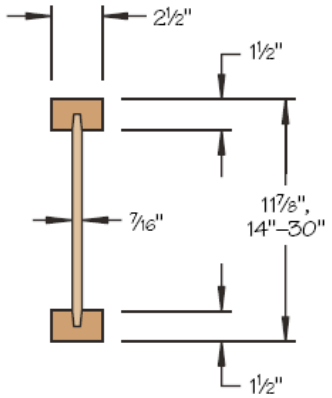
Commercial TJI Joists

- Since 1970
- High Strength-to-weight ratio
- Economical sizes from 11-7/8” to 30”
- Light weight, long lengths, straight and true
- Predictable performance
- Examples:
  - Offices, Hotels, Shopping Centers, Schools, Institutional Health Care Bldgs., Restaurants

Weyerhaeuser

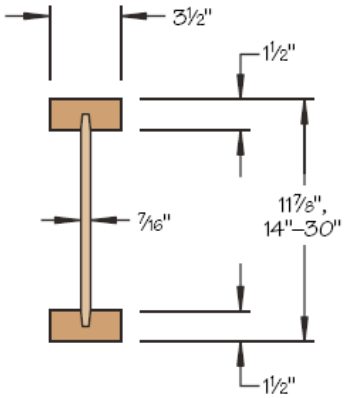
Commercial TJI Joists

- **Commercial TJI joist** (Refer to #1062 TJI Joist Design Guide)
  - ❑ L-65 – 1-1/2” x 2-9/16” Flanges – 11-7/8” – 30” (in 2” increments)
  - ❑ L-90 – 1-1/2” x 3-1/2” Flanges – 11-7/8” – 30” (in 2” increments)
  - ❑ H-90 – 1-3/4” x 3-1/2” Flanges – 11-7/8” – 30” (in 2” increments)



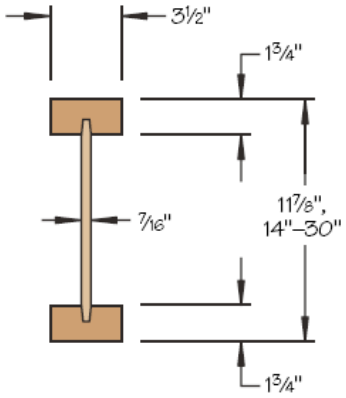
TJI® L65

Top and bottom flanges of 1½" x 2½" Microllam® LVL with 7/16" Performance Plus® web.



TJI® L90

Top and bottom flanges of 1½" x 3½" Microllam® LVL with 7/16" Performance Plus® web.



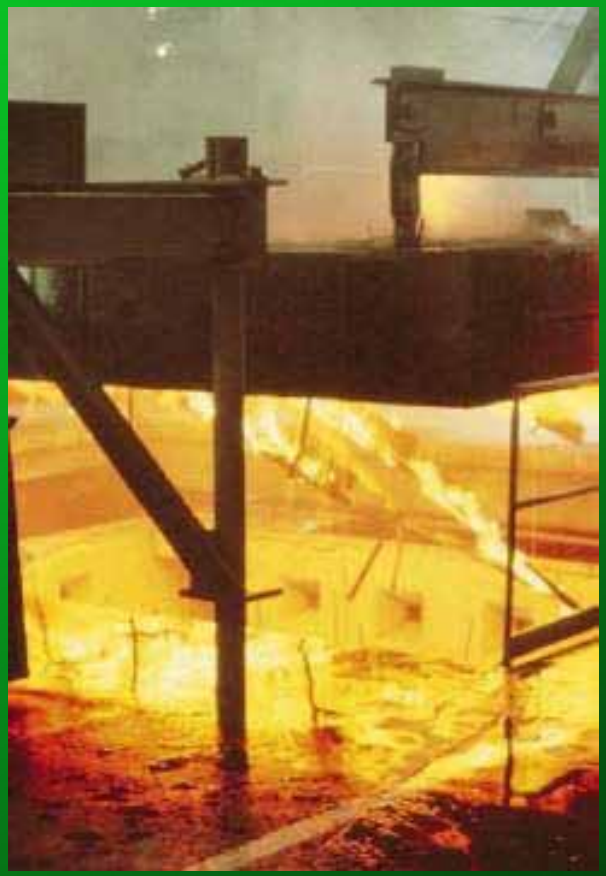
TJI® H90

Top and bottom flanges of 1¾" x 3½" Microllam® LVL with 7/16" Performance Plus® web.

Joist depths from 14" to 30" are available in 2" increments.

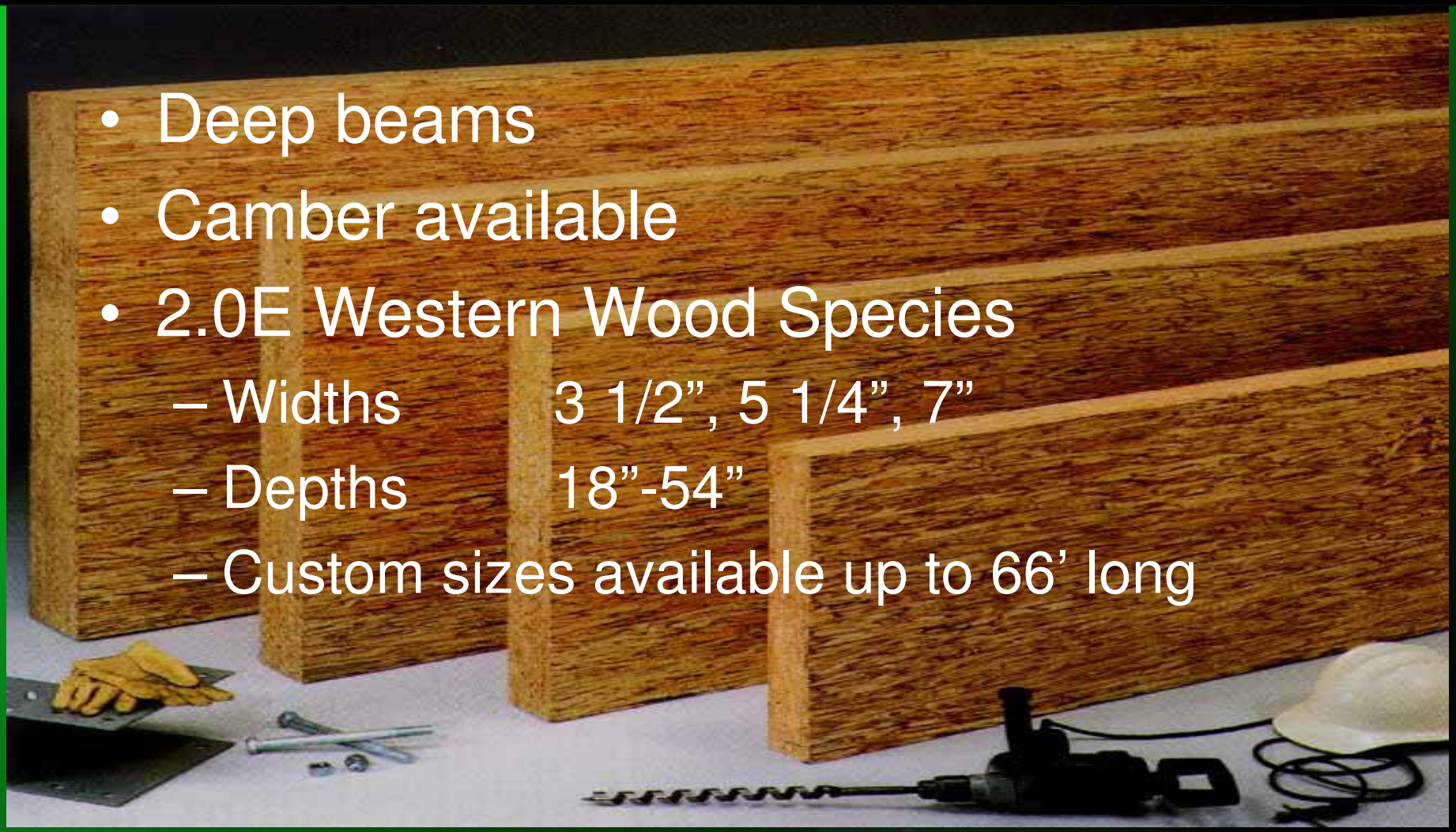
Weyerhaeuser

Fire Facts



- One-hour and two-hour system for both I-joist and Open web truss
- 1-1/4” thick LSL is equivalent to 2x for one-hour fire stopping

Commercial Parallam



- Deep beams
- Camber available
- 2.0E Western Wood Species
  - Widths 3 1/2”, 5 1/4”, 7”
  - Depths 18”-54”
  - Custom sizes available up to 66’ long

Weyerhaeuser

iLevel Engineering

We will provide engineering services as your need warrants.

3 Current Job Types

1. **Engineered Sealed Shop Drawings**
   - **Sealed Layout Drawings**
   - **Calc's**
   - **Letter**

2. **Shop Drawings**
   - **Placement Plans**
   - **Sealed letter**
   - **Calc's**

3. **Material Only**
   - **Calc's only**

Weyerhaeuser

Questions?

Weyerhaeuser