Structural-Use Panels

- Plywood
- Oriented Strand Board (OSB)
- COM-PLY

1. Logs are placed in lathe and peeled to obtain veneer sheet.
2. Veneer sheets are dried, graded, and then sheets are glued together, pressed, and sanded.

Grain direction alternates in different layers.
Oriented Strand Board (OSB)

1. Logs are cut into short bolts; bolts are fed into rotary slicer to produce rectangular strands.

2. Strands are dried and oriented so they are parallel to each other, sprayed with adhesive and formed into a mat of minimum 3 cross-aligned layers.

3. Mat is pressed and dried then sawn into 4 ft x 8 ft sheets.

COM-PLY

- Composite panels of wood veneer and wood fiber
- Outer layers and center layer are solid wood veneer
- Core layers are wood fiber sandwiched between veneers
Structural-Use Panels

- Design based on Plywood Design Specification by APA
- Used for roof sheathing, wall sheathing, subflooring, single-layer flooring
- Classified by Span Ratings (maximum recommended support spacings)
- Designer specifies:
  - span rating
  - nominal thickness
  - grade and construction
  - exposure durability classification

Structural-Use Panel Grades

- Sheathing
  - rated for subfloor, roof, and wall use
  - usually unsanded
- Single Floor
  - rated for use as combination subfloor-underlayment
  - usually have tongue and groove edges
  - usually sanded or touch sanded
- Structural I Sheathing
  - meet requirements of Sheathing plus additional requirements for diaphragms, shear walls, and panelized roof systems
**Structural-Use Panel Span Ratings**

- Span ratings are the maximum recommended support spacing (inches) for specific applications.

- Span ratings apply when panel is used with reference axis (strong or primary axis) across 2 or more supports.

**Sheathing**
- Use dual span system.
- For roof / subfloor support spacing (e.g. 32/16).
- For wall use only, Wall-24 or Wall-16.

**Single Floor**
- Single number gives recommended floor support spacing.
- E.g. 20 OC, 24 OC.
Exposure Durability

- **Exterior**
  - can be used where permanently exposed to weather or moisture
- **Exposure 1**
  - should be used where not permanently exposed to weather or moisture, but OK for high moisture due to high humidity, water leaks, construction delays, etc.
- **Exposure 2**
  - may be used for interior applications requiring resistance to high humidity and water leakage

Certifying Agency: American Plywood Association

Grade (Sheathing)

Span Rating
(48 in. OC roof supports)
(24 in. OC floor supports)

Exposure Rating

Panel Thickness

Panel Thickness