SPEIGHT MARSHALL & FRANCIS

A Professional Corporation

Technical Bulletin

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On a regular basis, we plan to distribute these informational leaflets about crucial - but often ambiguous - structural engineering topics. With the knowledge of our featured subjects, our goal is to help our clients improve their profitability while reducing their liability. We suggest distributing a copy of our technical bulletins throughout your office and keeping them on hand for quick reference.

Prefabricated Metal-Plate Connected Wood Trusses

Part II of III - Roof Truss Types

Introduction:

As roof profiles become increasingly complicated to satisfy aesthetical requirements, so do roof structural systems. Many types of truss configurations are available to accommodate different roof profiles. This technical bulletin will briefly discuss some roof truss configurations and end types available, as well as additional information that should be included by the design team on the Contract Documents. Please note that this technical bulletin is Part II of a three-part series on prefabricated metal-plate-connected wood trusses.

Typical Roof Truss Configuration:

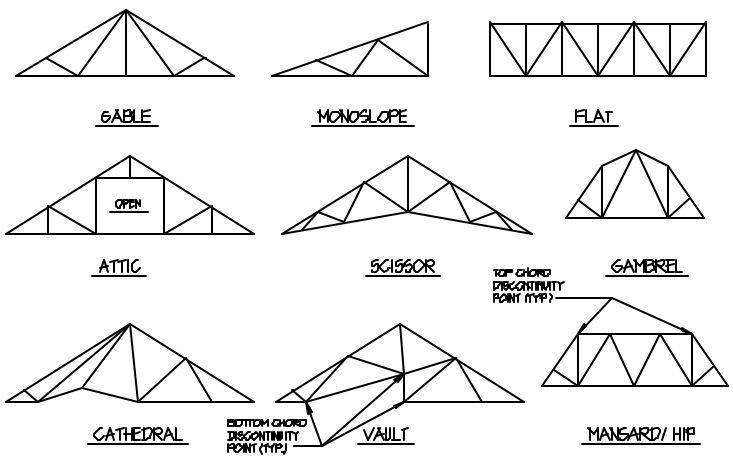
Below are several roof truss configurations currently available. A more complete list of available truss configurations can be obtained by contacting any of the local truss manufacturers or searching the reference websites listed at the end of this technical bulletin.

Typical Truss Definitions:

(see Part I of this three-part technical bulletin for definitions not noted)

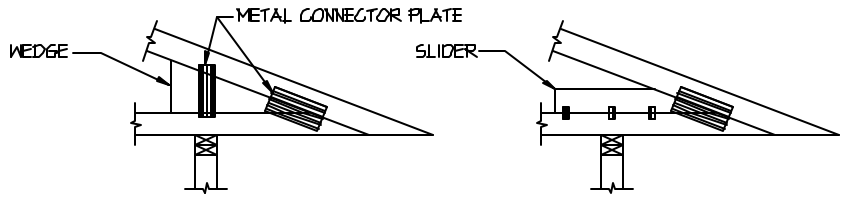
Discontinuity Point: Point at which a chord ceases or a change in pitch occurs

Top/Bottom Chord Segment: Portion of the chord member between discontinuity points



End Types:

Typically, a panel point is set at support locations. In the case where an end support is close to the heel, a web member may not be sufficiently cut to support the truss bottom chord. Roof truss end types are available to satisfy these constraints as follows:



MISC. END BEARING TYPES

Design Team Responsibility: (in addition to responsibilities described in Part I of this three-part technical bulletin)

The Architect is additionally responsible for:

Truss configuration

- Pitch of top and bottom chord segments

Truss dimensions

- Attic trusses
  - < Vertical and horizontal clearance requirements
  - < Centerline of attic area, if offset from truss centerline
  - < Attic access (pulldown stairs, etc) locations and dimensions
- Locations of discontinuity points (if specific points desired)
- Dimensions of top and bottom chord segments (if specific dimensions desired)

The Structural Engineer is primarily responsible for:

Special loading

- Attic or storage loads

Conclusion:

The design team should be aware of the various types of truss configurations currently available. This will help the design team decide which roof system (stick framing, truss system, etc.) is best suited for a particular job. It will also help to ensure a properly specified roof truss system.

References:

General Truss Information: **www.trussnet.com**
Typical Truss Span Tables: **www.woodtruss.com**

Truss Manufacturers:

Nationwide: Wood Truss Council of America Directory:
www.woodtruss.com/membership/memberlist.php
Hampton Roads, Virginia area:
Kempsville Building Materials, Inc.: **www.kempsvillebuilding.com**
Universal Forest Products, Shoffner LLC: **www.ufpi.com**
Trusswood, Inc.: (757) 833-5300

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