PART 1 - GENERAL

1.1 SUMMARY

A. Products Supplied But Not Installed Under This Section:
   1. Wood roof trusses
   2. Trussed blocking for roof trusses

B. Related Sections
   1. Section 06 1100:
      a. Storage and handling of trusses on Project site
      b. Installing, securing, bracing, etc
      c. Required blocking other than trussed blocking

1.2 REFERENCES

A. American National Standards Institute / Truss Plate Institute:
   1. ANSI / TPI 1-2002, 'National Design Standard For Metal Plate Connected Wood Truss Construction.'

B. Truss Plate Institute:
   1. TPI Pamphlet HIB-91, 'Handling, Installing, Erecting, & Bracing Wood Trusses.'

1.3 SUBMITTALS

A. Shop Drawings:
   1. Base shop drawings on truss configurations and on truss loads shown on Drawings and on requirements of Contract Documents. Joint configurations may be modified to allow double cut webs. Determine member forces from exact analysis method as defined by TPI.
   2. Include following information on submitted shop drawings:
      a. Allowable loads in lbs per effective nail or lbs per sq inch for lumber and plates used as allowed by ICBO and current ICBO report number.
      b. Stress reduction factors used for plates and lumber.
      c. Top and bottom chord design loads in psf.
      d. Size, thickness, and exact location by dimension of plates.
      e. Lumber species and grades used.
      f. Combine stress ratio for each member.
      g. Stamp and signature of Engineer responsible for preparation of shop drawings.
      h. Name and trademark of Plate Manufacturer if metal plates are used.
      i. Name and address of Truss Fabricator and Project name and address.

B. Quality Assurance / Control: Copies of previous four quarterly inspection reports verifying compliance with TPI regulations.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: Truss Fabricator shall have in place a program requiring fabrication plant to be inspected four times each year by an independent testing laboratory in accordance with TPI regulations.
1.5 DELIVERY, HANDLING, AND STORAGE

A. Notify Architect two days minimum before arrival of trusses to allow for scheduling of truss inspection on site before unloading and for monitoring of unloading procedure.

B. Unload trusses by one of following methods.
   1. As outlined in TPI Pamphlet HIB.
   2. Trusses may be unloaded by dumping if trusses are shipped horizontally, are rolled off low profile roller bed trailer, and if no part of any truss is required to drop more than 18 inches 450 mm.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Top And Bottom Chords And Web Members:
   1. Douglas Fir or Southern Pine No. 2 or better.
   2. 2 inch by 4 inch nominal minimum size.
   3. Sizes, species, and grades of members shall be as required to provide combined stress ratios of less than one.
   4. Designed in accordance with ANSI / TPI-1 and IBC for given design loads.

B. Metal Gusset Plates
   1. Plate design and manufacture shall be as approved by 'The Research Committee for the ICBO.' Plates shall be galvanized or otherwise protected from corrosion.
   2. Manufacturer's name or trademark shall be visible on plates.
   3. Category Four Approved Manufacturers. See Section 01 6000 for definitions of Categories.
      a. Alpine Engineered Products Inc, Pompano Beach, FL.
      b. CompuTrus Inc, Riverside, CA.
      c. Jager Industries Incorporated, Calgary, AB.
      d. MiTek Industries, Chesterfield, MO.
      e. Robbins Manufacturing Co, Tampa, FL.
      f. Tee-Lok Corp, Edenton, NC.
      g. Truswal Systems Corp, Arlington, TX.

2.2 FABRICATION

A. General:
   1. Fabrication of trusses shall be as approved by ICBO except that this Specification shall govern when it exceeds ICBO requirements.
   2. Fabricate trusses from approved shop drawings.
   3. Fabricate trusses in jigs with members accurately cut to provide good bearing at joints. Joints shall be acceptable if the average opening between ends of members immediately after fabrication is less than 1/16 inch 1.6 mm.
   4. Each chord section shall be involved in two panel points before being spliced.
   5. Type One Acceptable Fabricators:
      a. <Insert Approved Fabricator>.
      b. <Insert Approved Fabricator>.
      c. Equal as approved by Architect before bidding. See Section 01 6000.

B. Metal Gusset Plates:
   1. No panel point shall have more than one plate per truss side
   2. Plates shall have minimum bite of 2-1/2 inches 63 mm on members. Measure bite along center line of webs and perpendicular to chord axes. Orient plate axis parallel with truss chord axis except where chords change pitch or terminate. Plates may be placed parallel with webs at single web joints.
   3. Plate Sizes:
a. Minimum width of plates shall be 3 inches 75 mm.
b. Trusses Other Than Scissor Trusses: Size plates, nail and steel section, for 135 percent of member forces.
c. Scissor Trusses: Size plates, nail and steel section, for 160 percent of member forces.
d. No increase in plate values will be allowed for duration of loading or other factor.

4. Press plates into members to obtain full penetration without crushing outer surface of wood. Plate embedment is acceptable if opening between plate and wood surface is less than 1/32 inch 1 mm.

5. Lumber defects and plate misplacement, in combination, shall not reduce plate area or number of effective teeth, prongs, or nails by more than ten percent.

6. Do not apply metal gusset plates after shop fabrication.

2.3 SOURCE QUALITY CONTROL

A. Inspections: Notify Architect 7 days before beginning truss fabrication to allow scheduling of Architect's inspection visit during truss fabrication.

PART 3 - EXECUTION: Not Used

END OF SECTION