



## Application for Urban Design Committee Review

Department of Planning and Development Review

900 E. Broad Street, Room 510

Richmond, Virginia 23219 | (804) 646-6335

<https://www.rva.gov/planning-development-review/urban-design-committee>



### Application Type (select one)

Location, Character, & Extent

Section 17.05

Other:

Encroachment

Design Overlay District

### Review Type (select one)

Conceptual

Final

### Project Information

Submission Date: *2/8/20*  
*29*

Project Name: *Pine Camp Outdoor Classroom*

Project Address: *4901 Old Brook Road Richmond, VA 23222*

Brief Project Description (this is not a replacement for the required detailed narrative):

*We are erecting a 16'x24' outdoor Classroom behind the main Pine Camp Arts building.*

### Applicant Information (a City representative must be the applicant, with an exception for encroachments)

Name: *Diane Hayes, Manager Cultural Arts* Email: *diane.hayes@RVA.gov*

City Agency: *Parks & Recreation Dep. Cultural Arts*

Phone: *804 646-3677*

Main Contact (if different from Applicant):

Company: *N/A*

Phone: *N/A*

Email: *N/A*

### Submittal Deadlines

All applications and support materials must be filed no later than 21 days prior to the scheduled meeting of the Urban Design Committee (UDC). Please see the schedule on page 3 as actual deadlines are adjusted due to City holidays. **Late or incomplete submissions will be deferred to the next meeting.**

### Application

It is important that the applicant discuss the proposal with appropriate City agencies, Zoning Administration staff, and area civic associations and residents prior to filing the application with the UDC. Applications should be emailed to the Urban Design Committee Secretary, Ray Roakes, at [Raymond.roakes@rva.gov](mailto:Raymond.roakes@rva.gov).

### Background

The UDC is an 11 member committee created by City Council in 1968 whose purpose is to advise the City Planning Commission (CPC) on the design of projects on City property or right-of-way. The UDC provides advice of an aesthetic nature in connection with the performance of the duties of the Commission under Sections 17.05, 17.06, and 17.07 of the City Charter. The UDC also advises the Department of Public Works in regards to private encroachments in the public right-of-way.

last revised 01/04/2024



Pine Camp  
Outdoor Classroom

# 16'x24' Rectangle Wood Pavilion

## GENERAL NOTES

All notes do not necessarily apply due to different requirements on each project. This plan is intended to reflect only the structural design of the building. The contractor shall review all applicable local, state, and federal building codes prior to the start of construction to ensure building performance. Timber Tech Engineering, Inc. is not responsible for information pertaining to this project if not shown on drawings or listed below. Revisions to the plans shall be approved by engineer of record.

## GENERAL REQUIREMENTS

1. Governing Code including, not limited to: IBC 2009
2. Dead Loads:

- A. Roof 5 psf
- B. Floor n/a psf
- C. Other n/a psf

## 3. Live Loads

- A. Roof (See also note #4) 37.5 psf
- B. Floor n/a psf
- C. Other n/a psf

## 4. Snow Loads

- A. Ground Snow (Pg) 4.5 psf
- B. Flat Roof Snow (Rf) 37.5 psf
- C. Snow Exposure Factor (Ce) 1.0
- D. Snow Load Importance Factor (I) 1.0
- E. Unbalanced Snow

- 1. Windward Roof 0 psf
- 2. Leeward Roof 4.5 psf

- 3. Wind Load 140 mph
- A. Basic Wind Speed (V)
- B. Wind Load Importance Factor (I) 1.0
- C. Wind Exposure Category C
- D. Enduse Category Open
- E. Components and Cladding +72 psf/-63 psf

- 4. Earthquake Design Data: +72 psf/-63 psf
- A. Spectral Response Acceleration at 1 sec, S 0.18
- B. Spectral Response Acceleration at short periods, S 0.25
- C. Seismic Use Group 1
- D. Occupancy Importance Factor, I 1.0
- E. Site Class D
- F. Basic Structural System Cantilevered Column Timber Frame
- G. Response Modification Factor (R) 15
- H. Deflection Amplification Factor (Cd) 15

## ASSEMBLATIONS

at	mtl.	mtl.	mtl.
beam	on column	on column	on column
conc.	continuous	continuous	continuous
coll.	diaphragm	diaphragm	diaphragm
ext.	existing	existing	existing
fr.	floor	floor	floor
ft.	foot/hoist	foot/hoist	foot/hoist
ga.	gauge	gauge	gauge
hbk.	hardware	hardware	hardware
hdr.	header	header	header
jo.	joist	joist	joist
lul	lipse per square inch	lipse per square inch	lipse per square inch
pa.	pounds	pounds	pounds
max.	maximum	maximum	maximum

## WOOD

1. General Requirements
  - A. Structural wood members and connections shall be of sufficient size or capacity to carry all design loads without exceeding the allowable design values specified in "The National Design Specification for Wood Construction" (NDS), 2005 edition, and its "Supplement" by the American Forest and Paper Association (AF&PA).
  - B. Wood members used for load supporting purposes shall have the grade mark of a lumber grading agency certified by the American Lumber Standards Committee.
2. Dimension Lumber
  - A. All lumber species, graded visually or mechanically, shall comply with the NDS by AF&PA, and the "American Softwood Lumber Standard" (PS 20-94) by the U.S. Department of Commerce.
  - B. The minimum grade and species for posts, beams, headers, and other primary structural members shall be Dense Select Structural Southern Pine, unless specified otherwise.
  - C. Lumber used for secondary framing shall be #1 Southern Yellow Pine (SYP) or better.
  - D. Post frame headers shall be two-span continuous beams with all multiple ply headers overlapping so that the butt joints for each ply do not occur at the same post.
  - E. Mechanically laminated columns shall conform with ANSI/SAE EP 559.
3. Pressure Preservative Treatment (PPT)
  - A. Pressure treatment to be performed according to the American Wood Preservers' Association (AWPA) standards.
  - B. Pressure treated members shall have the inspection mark of an agency accredited by the American Lumber Standards Committee.
  - C. Preservative: Ammonia Copper Quaternary ammonia (ACQ) or Copper Boron Azole (CBA)
  - D. Minimum waterborne treatment retention shall be 0.4 pcf for members above ground, and 0.6 pcf for members in contact with earth.
  - E. Treat indicated lams and the following:
    1. Wood members exposed to weather or insect infestation.
    2. Wood members in direct contact with earth or concrete.
    3. Wood members exposed to high moisture content (MS) for dimension lumber, 10% for girded laminated timber).
    4. Wood members less than 12 inches above grade.
    5. Field treat newly exposed wood where cutting, girding or notching pressure treated lumber.
  - F. Metal connectors used in treated wood shall be hot-dip galvanized as per ASTM A307-01A.
4. Connections shall be designed and constructed according to the NDS by AF&PA and shall conform to the following:
  - A. The minimum connection shall be two 12 penny nails, or as detailed on the drawings.
  - B. Other connections as per standard construction practices.

## Design Reaction Chart

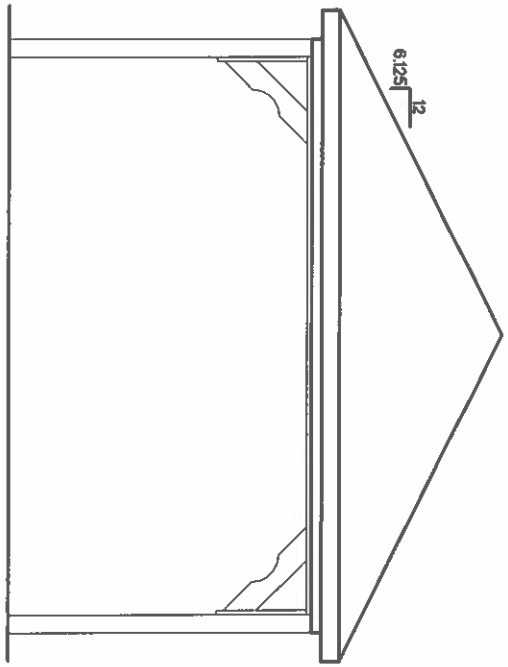
Design Reaction Chart	
Max. Moment in column	5,125 lb-ft.
Max. uplift at column base	3,400 lb
Max. downward force at column base	7,000 lb
Max. shear at column base	800 lb

This drawing is the property of Country Lane Woodworking, LLC, provided by Timber Tech Engineering so of this drawing without the written consent of Country Lane Woodworking, LLC is prohibited. Drawings shall not be scaled to obtain dimensions. The contractor and builders involved on this project shall verify all dimensions and conditions before starting work and any discrepancy shall be reported to the engineer in writing before starting work.

## Drawing Index

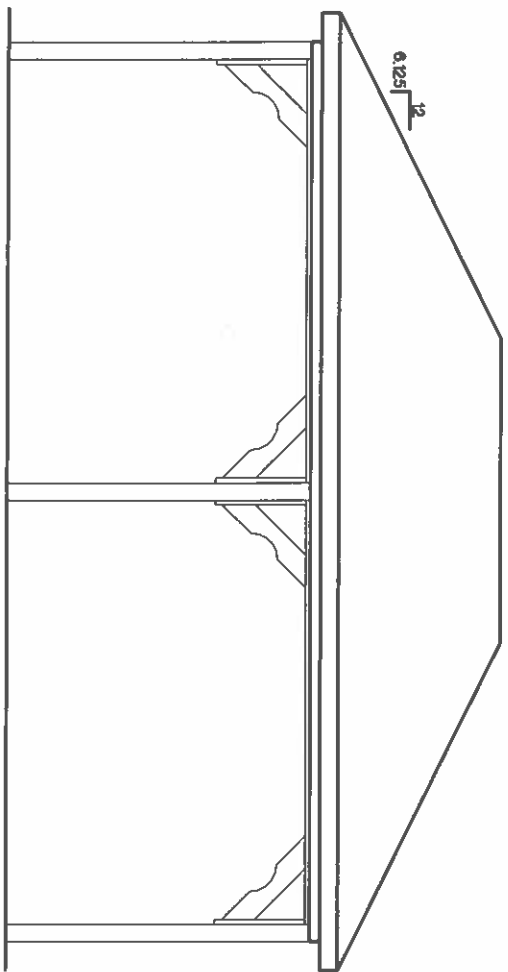
- Page 1 - Elevations
- Page 2 - Post Layout Plan
- Page 3 - Roof Framing
- Page 4 - Cross Section, Details
- Page 5 - Page 9 - Details

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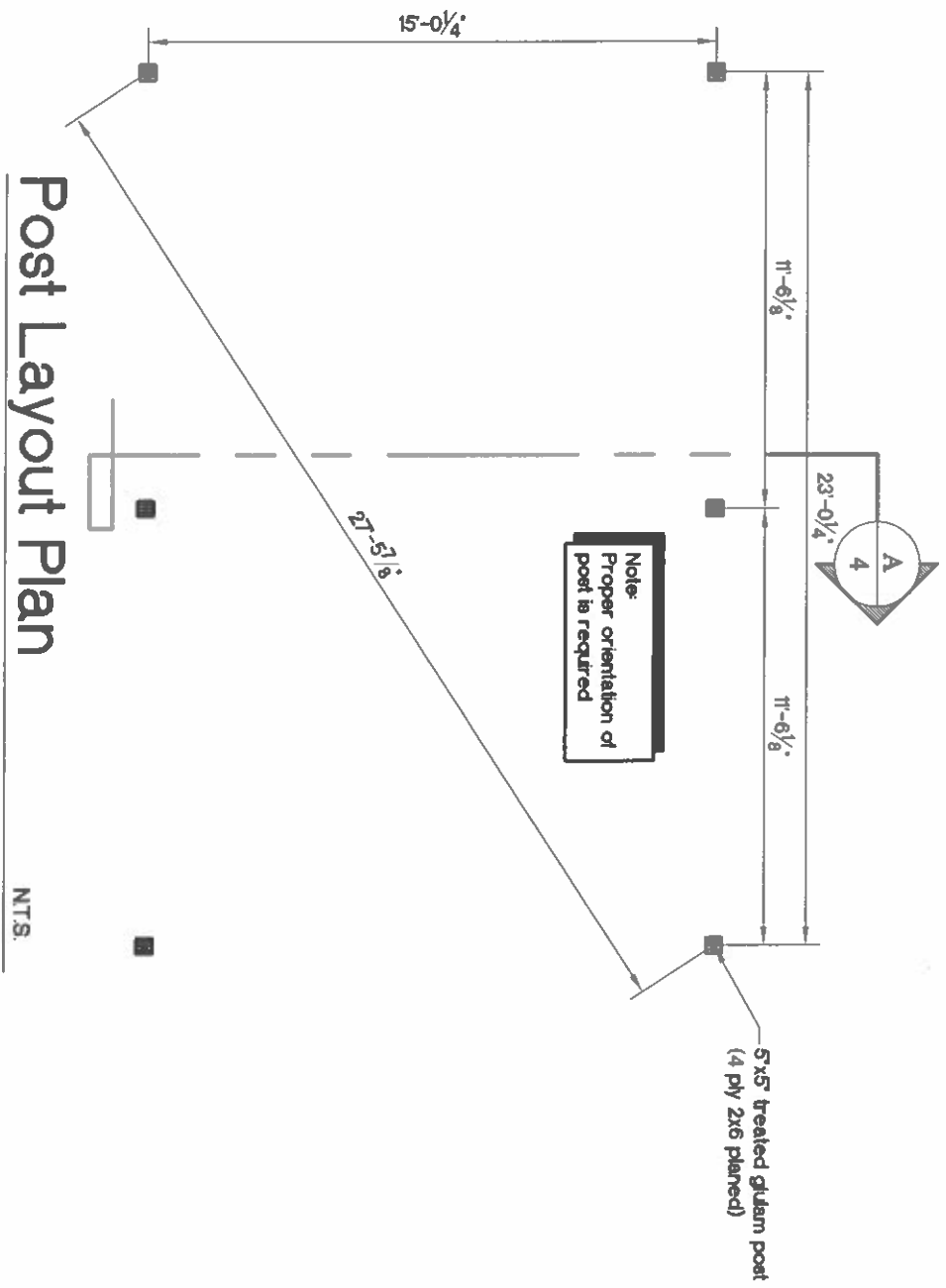
**End Elevation**

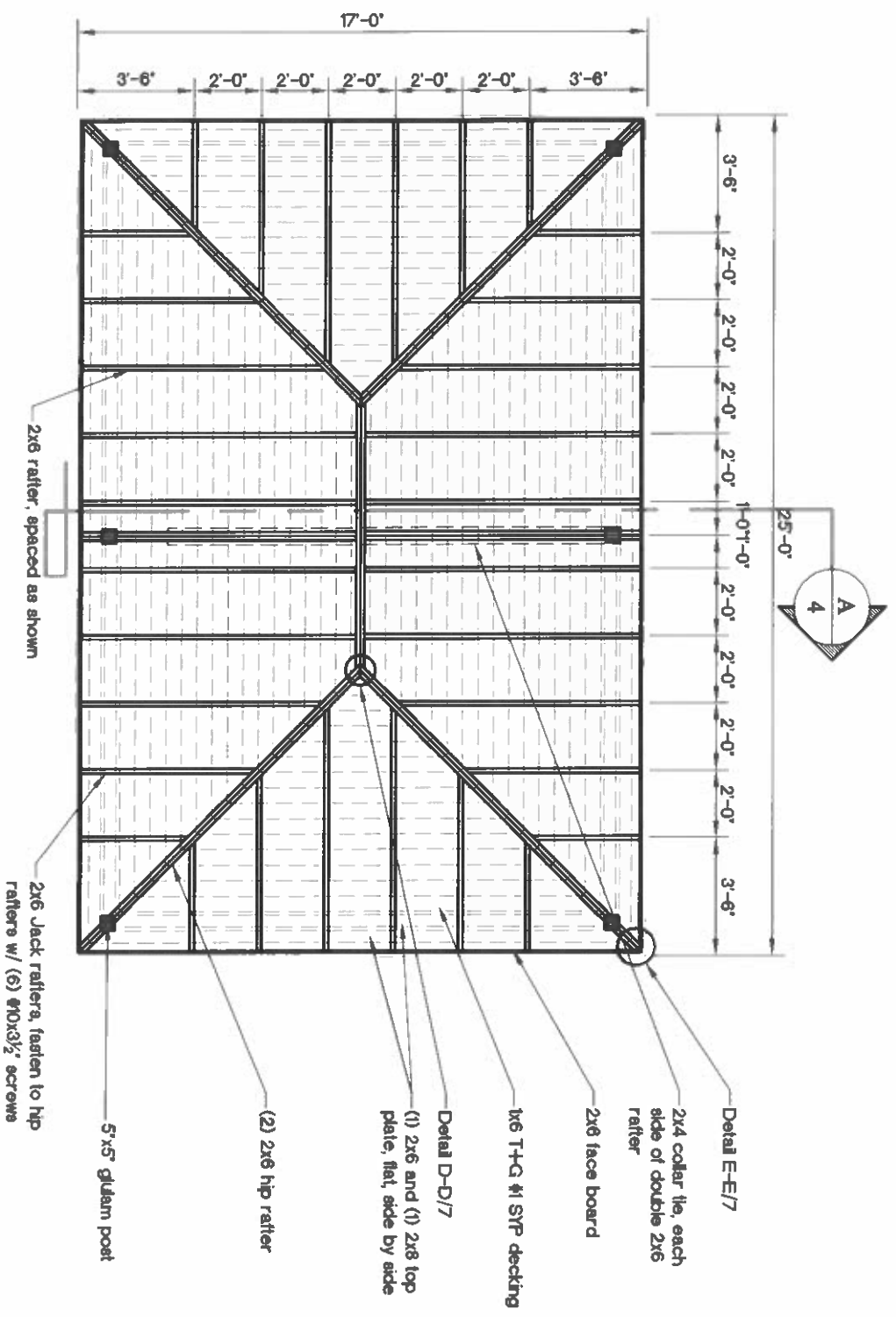
NTS.



**Side Elevation**

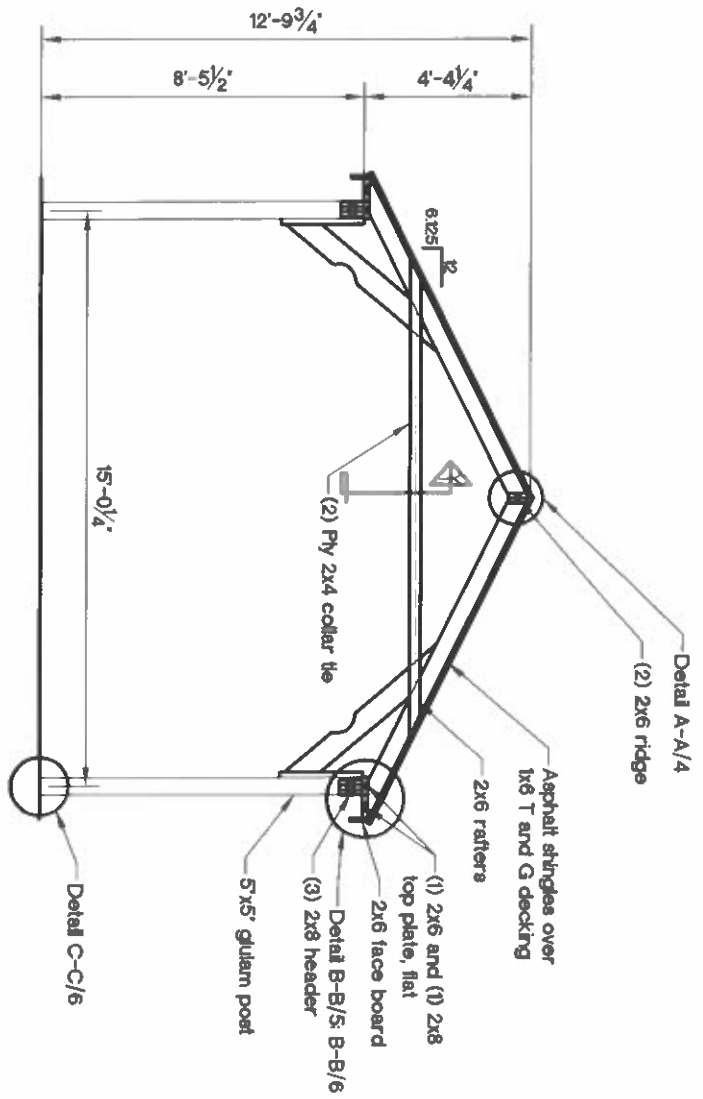
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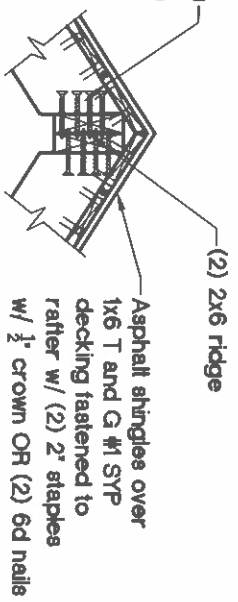
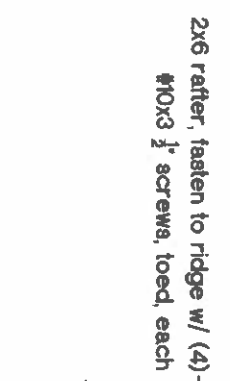
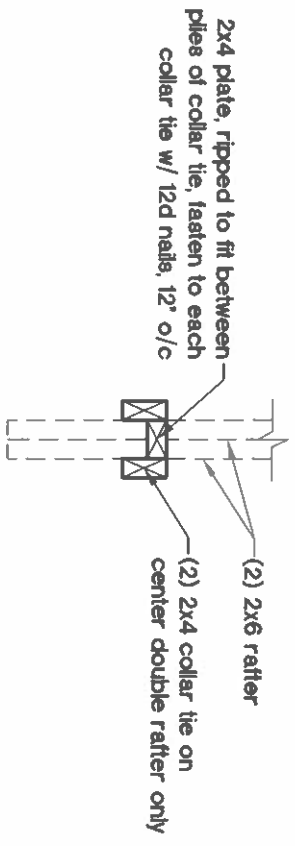
# Roof Framing Plan

NTS.



**Cross Section A/4**

N.T.S.

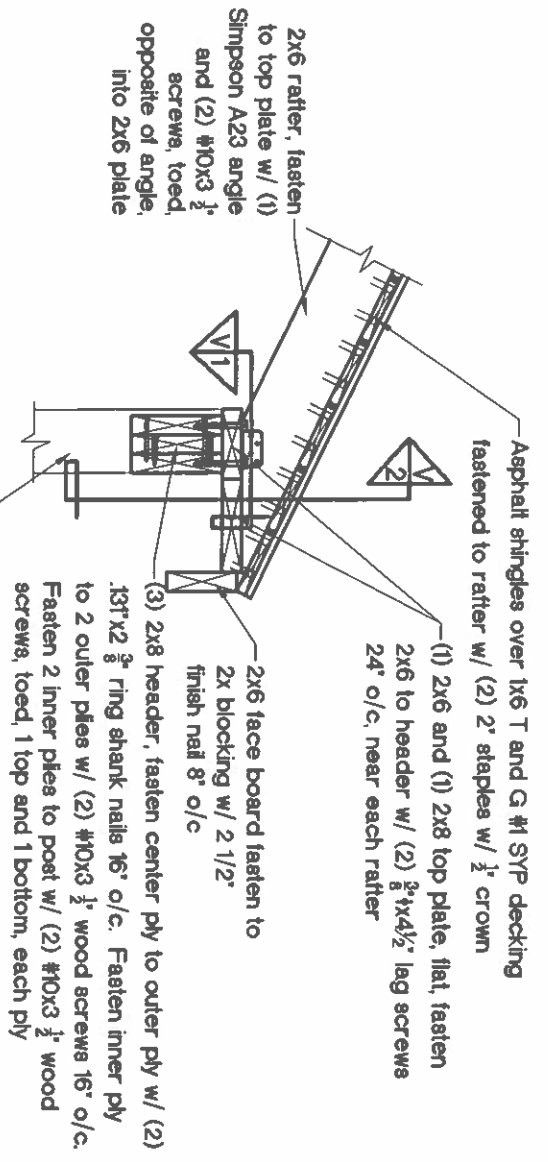


**View 1 Cross Section A/4**

N.T.S.

**Detail A-A/4  
Typical Single Rafter**

N.T.S.



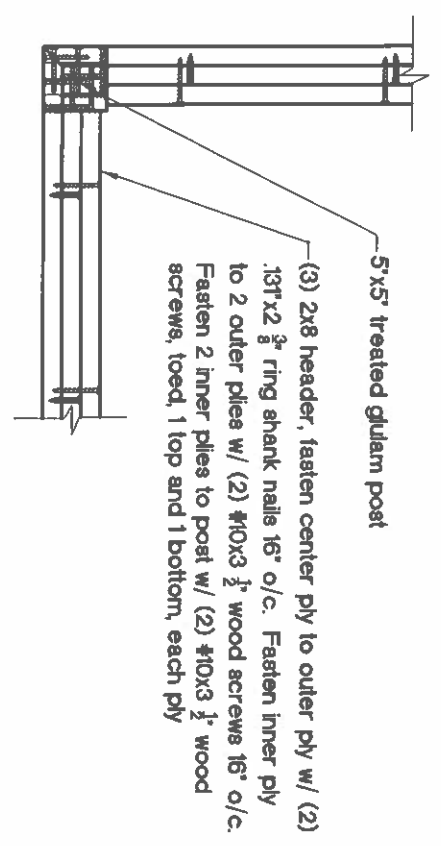
**Detail B-B/5**  
 Typical Single Rafter

Fasten outside ply of 2x8 header to post w/ (10) #10x3 1/2" wood screws, typical

2x6 face board fasten to top plate w/ 2 1/2" finish nail 8" o/c

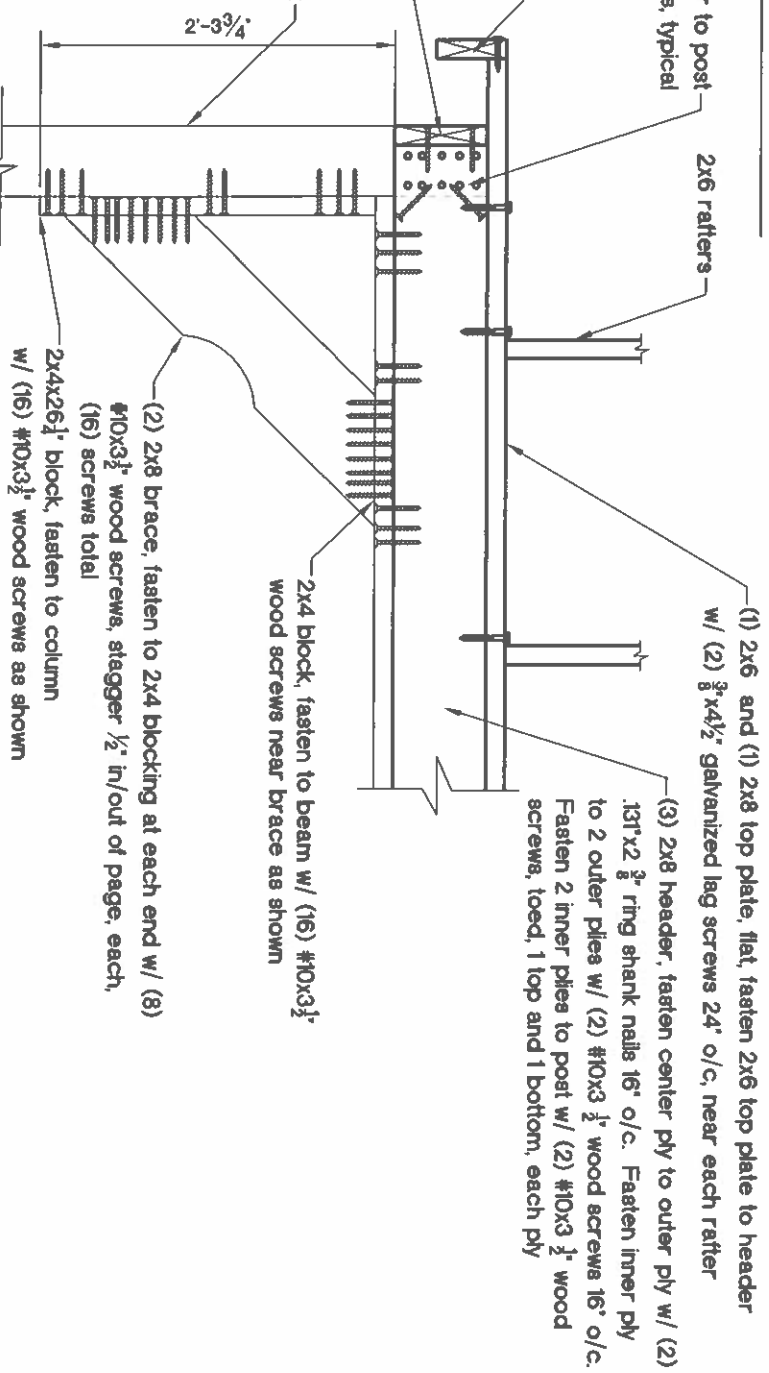
Post notched at top to accept outside ply of header from each direction

5'x5" treated glulam post



**View 1 Detail B-B/3=5**

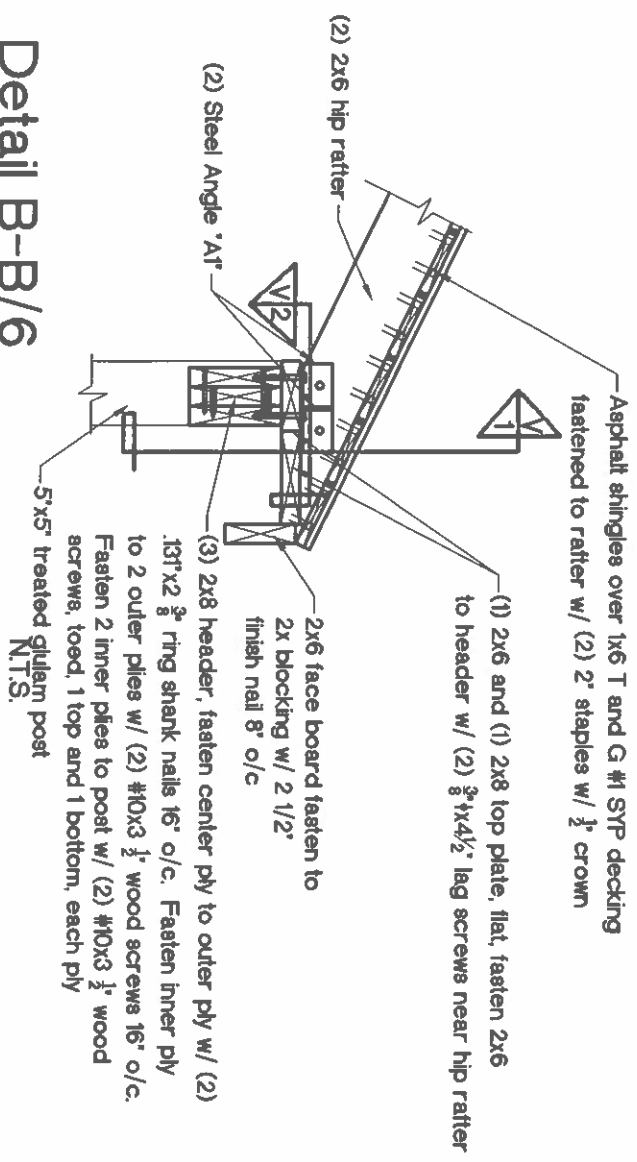
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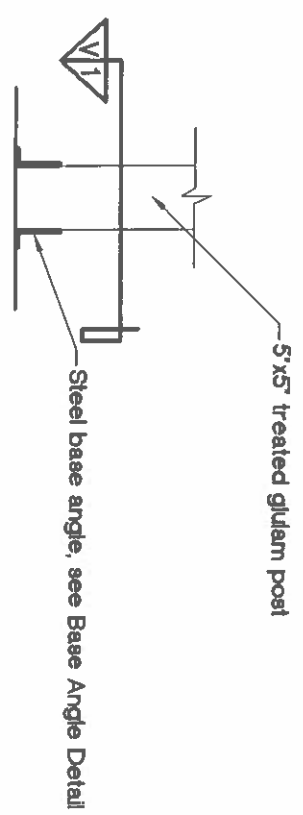
**View 2 Detail B-B/5**

NTS.

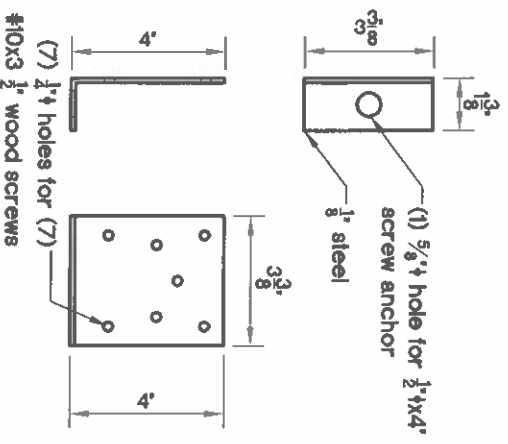




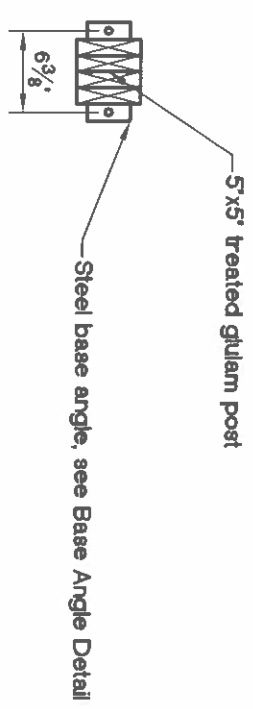
**Detail B-B/6**  
 Hip Rafter Connection



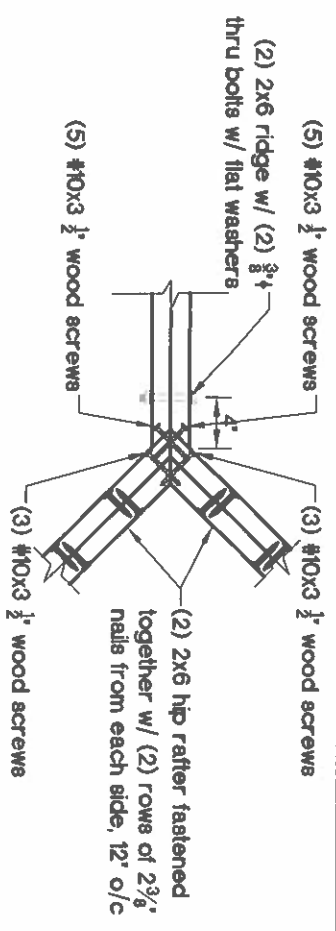
**Detail C-C/6**  
 N.T.S.



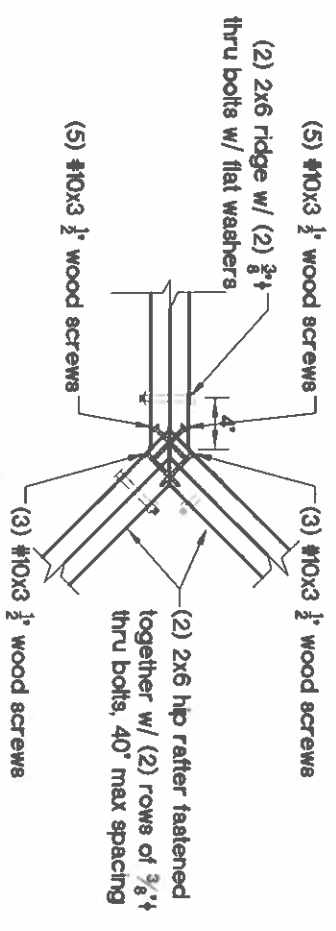
**Base Angle Detail**  
 N.T.S.



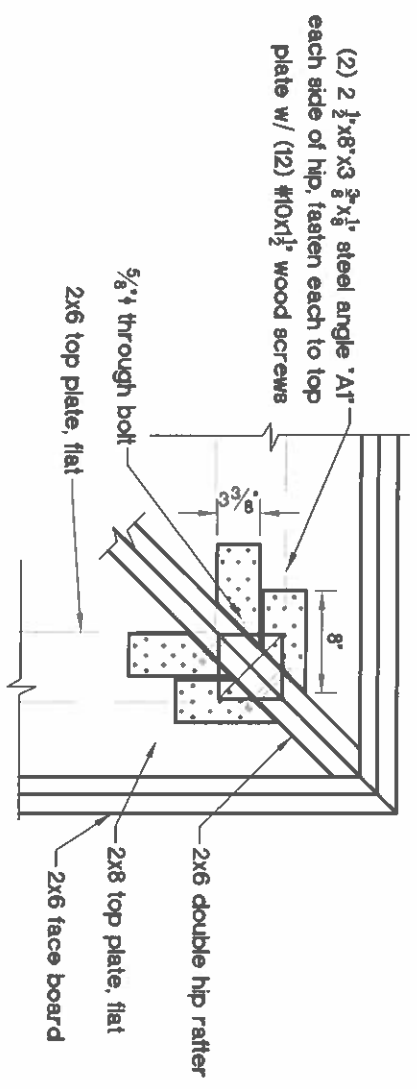
**View 1 Detail C-C/6**  
 N.T.S.



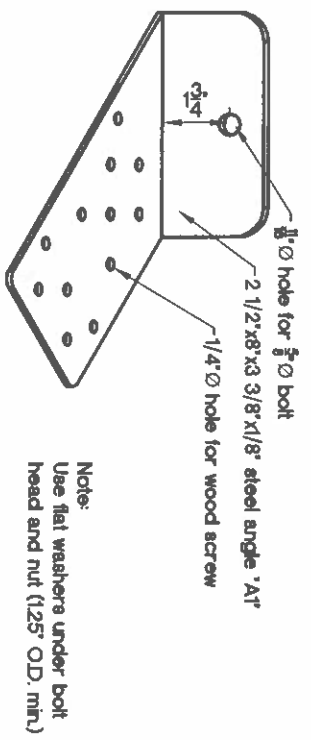
**Detail D-D/7**  
 Option 1  
 N.T.S.



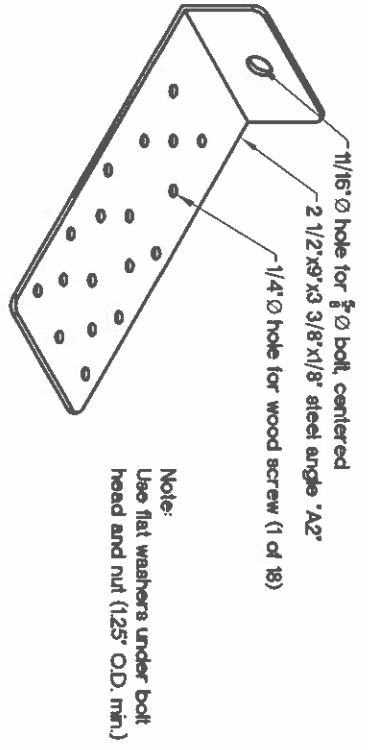
**Detail D-D/7**  
 Option 2  
 N.T.S.



**Detail E-E/7**  
 N.T.S.

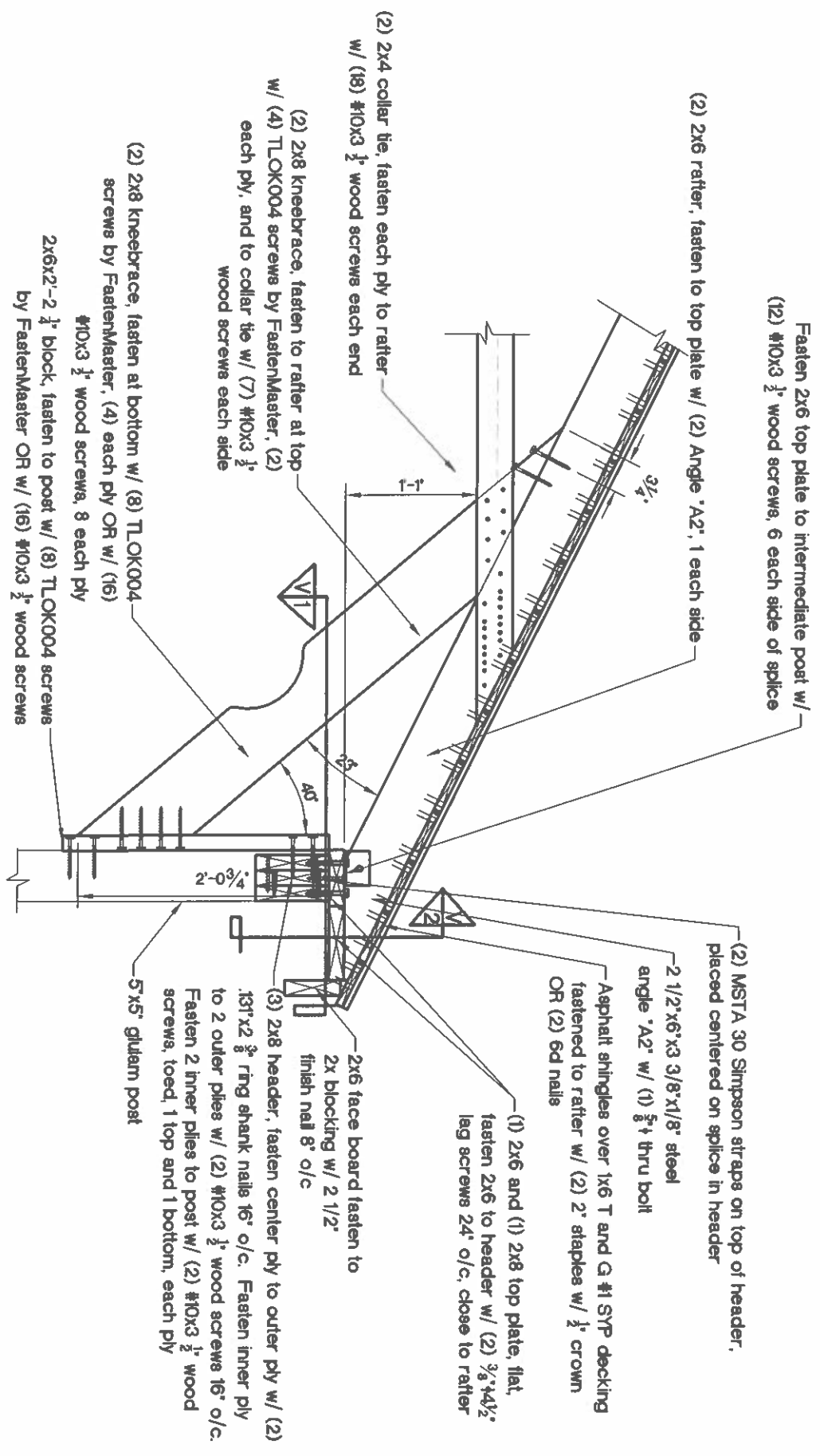


**Angle "A1"**  
 N.T.S.



**Angle "A2"**  
 N.T.S.

Note:  
 Use flat washers under bolt head and nut (125" O.D. min.)



Fasten 2x6 top plate to intermediate post w/  
 (12) #10x3 1/2" wood screws, 6 each side of splice

(2) 2x6 rafter, fasten to top plate w/ (2) Angle "A2", 1 each side

(2) 2x4 collar tie, fasten each ply to rafter  
 w/ (18) #10x3 1/2" wood screws each end

(2) 2x8 kneebrace, fasten to rafter at top  
 w/ (4) TLOK004 screws by FastenMaster, (2)  
 each ply, and to collar tie w/ (7) #10x3 1/2"  
 wood screws each side

(2) 2x8 kneebrace, fasten at bottom w/ (8) TLOK004  
 screws by FastenMaster, (4) each ply OR w/ (16)  
 #10x3 1/2" wood screws, 8 each ply  
 2x6x2-2 1/2" block, fasten to post w/ (8) TLOK004 screws  
 by FastenMaster OR w/ (16) #10x3 1/2" wood screws

(2) MSTA 30 Simpson straps on top of header,  
 placed centered on splice in header.

2 1/2"x6"x3 3/8"x1/8" steel  
 angle "A2" w/ (1) 5/8" thru bolt

Asphalt shingles over 1x6 T and G #1 SYP decking  
 fastened to rafter w/ (2) 2" staples w/ 1/2" crown  
 OR (2) 6d nails

(1) 2x6 and (1) 2x8 top plate, flat,  
 fasten 2x6 to header w/ (2) 3/8"x4 1/2"  
 lag screws 24" o/c, close to rafter

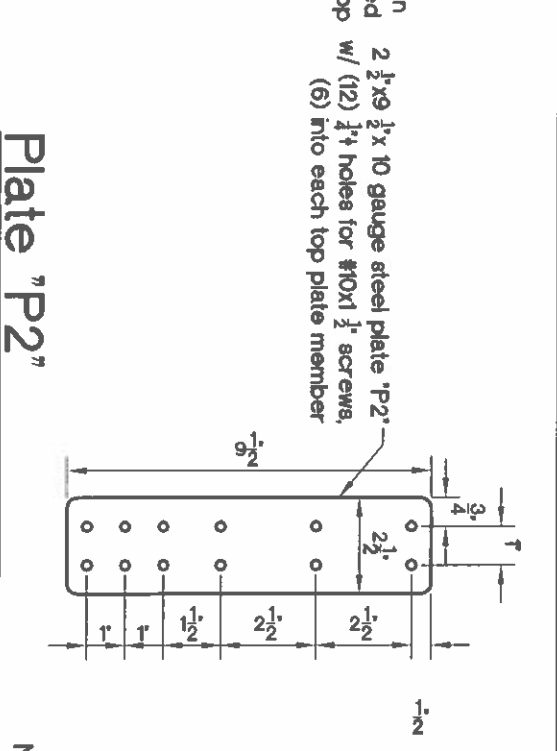
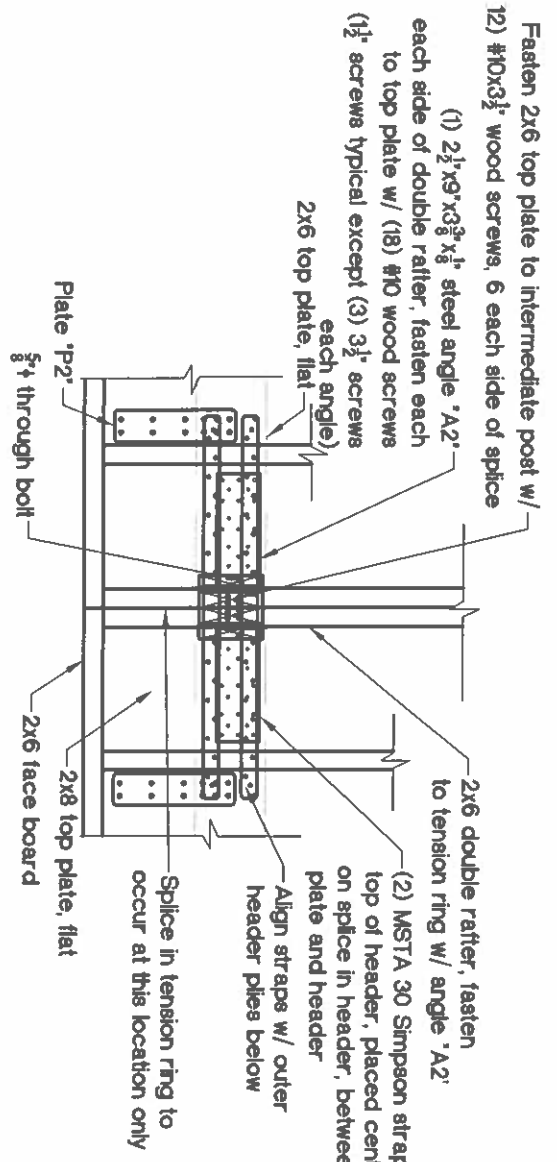
2x6 face board fasten to  
 2x blocking w/ 2 1/2"  
 finish nail 8" o/c

(3) 2x8 header, fasten center ply to outer ply w/ (2)  
 .131"x2 3/8" ring shank nails 16" o/c. Fasten inner ply  
 to 2 outer plies w/ (2) #10x3 1/2" wood screws 16" o/c.  
 Fasten 2 inner plies to post w/ (2) #10x3 1/2" wood  
 screws, toed, 1 top and 1 bottom, each ply

5"x5" glulam post

**Detail E-F/8**  
 Center Double Rafter

N.T.S.

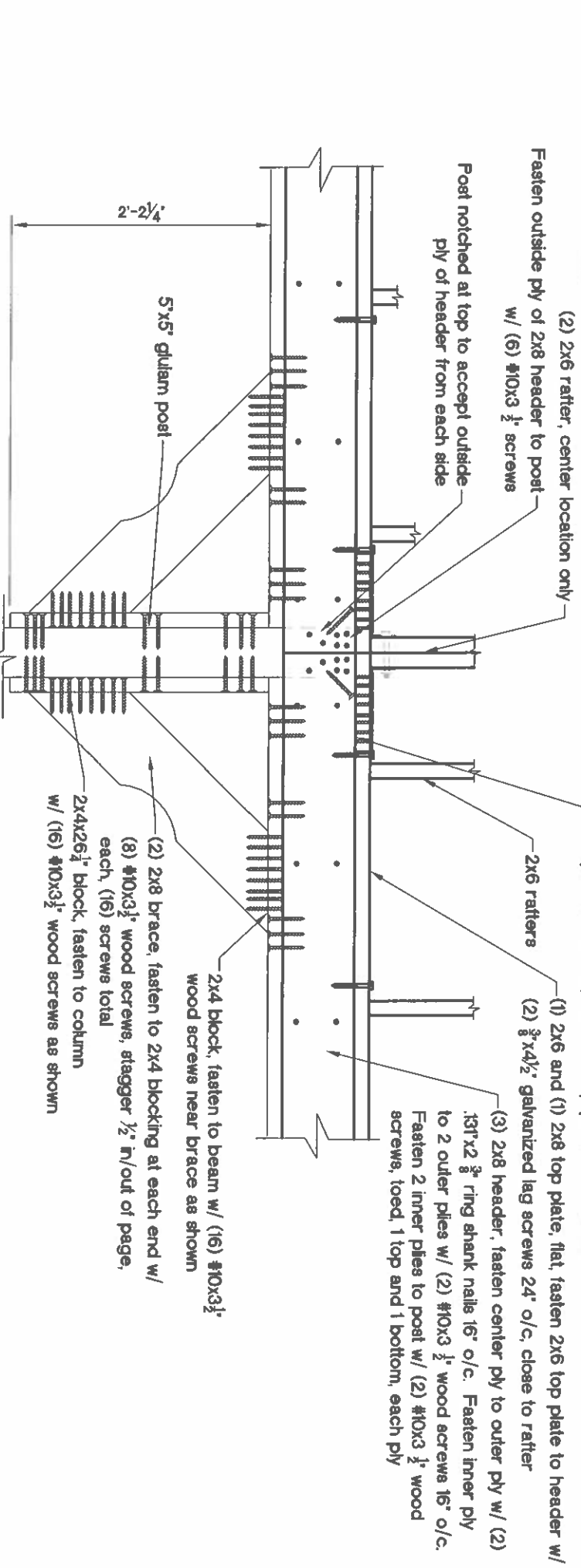


**View 1 Detail F-F/8**

N.T.S.

(2) MSTA 30 Simpson straps on top of header, placed centered on splice in header, between top plate and header

N.T.S.



**View 2 Detail F-F/8**

N.T.S.

(2) 2x6 rafter, center location only  
 Fasten outside ply of 2x8 header to post w/ (6) #10x3 1/2 screws  
 Post notched at top to accept outside ply of header from each side

(1) 2x6 and (1) 2x8 top plate, flat, fasten 2x6 top plate to header w/ (2) 3/4"x4 1/2" galvanized lag screws 24" o/c, close to rafter  
 (3) 2x8 header, fasten center ply to outer ply w/ (2) 13T x 2 3/8" ring shark nails 16" o/c. Fasten inner ply to 2 outer plies w/ (2) #10x3 1/2 wood screws 16" o/c. Fasten 2 inner plies to post w/ (2) #10x3 1/2 wood screws, toed, 1 top and 1 bottom, each ply

(2) 2x8 brace, fasten to 2x4 blocking at each end w/ (8) #10x3 1/2 wood screws, stagger 1/2" in/out of page, each, (16) screws total  
 2x4x26 1/4" block, fasten to column w/ (16) #10x3 1/2 wood screws as shown  
 2x4 block, fasten to beam w/ (16) #10x3 1/2 wood screws near brace as shown

2'-2 1/4"

5'x5' glulam post

2x4 block, fasten to beam w/ (16) #10x3 1/2 wood screws near brace as shown