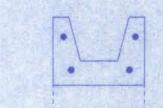


RE

PROJECT NO.

Lintel Concrete Strength = 4000 psi Fill Concrete Strength = 3000 psi Steel Strength = Grade 60 (#6), Grade 40 (#2 - #5)

TOP BARS NONE	BOTTOM BARS 2-#3
2-#2	2-#4
2-#3	2-#4
2-#3	2-#5
2-#4	2-#6
	2-#2 2-#3 2-#3



MASONRY

MASONRY CONSTRUCTION SHALL CONFORM TO ACI STANDARD BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES (ACI 530-88/ASCE 5-88) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-88/ASCE 6-88)

CONCRETE BLOCKS SHALL CONFORM TO ASTM C-90 (fm = 1500 PSI)

BLOCK SHALL NOT BE MOISTENED BEFORE GROUTING.

KNOCK OUT AT BASE OF LIFT WILL NOT BE REQUIRED).

MORTAR SHALL COMPLY WITH ASTM C270 TYPE M OR S (COMPRESSIVE

STRENGTH = 2500 PSI AND 1800 PSI) RESPECTIVELY. SITE TESTED MORTAR

ALL MASONRY CROSS WEBS SHALL BE FULLY BEDDED IN MORTAR AROUND CELLS

REINFORCE WALLS WITH LADDER TYPE (ASTM A-82, #9 GAGE WIRE) REINFORCEMENT EQUAL TO DURO-WALL IN BED JOINTS @ 16" O.C. MEASURED VERTICALLY, PLACE

CORES OR BLOCK MASONRY SHALL BE FILLED WITH GROUT AT CORNERS, EACH SIDE

OF OPENINGS, AND @ 48" O.C. WITH MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI

GROUT FOR FILLED CELLS SHALL BE POURED OR PUMPED IN LIFTS NOT TO EXCEED

EIGHT (8) FEET IN HEIGHT, AND SHALL BE CONSOLIDATED AT TIME OF POURING BY

VERIFICATION OF COMPLETE GROUT PENETRATION (FOR LIFTS OF 5'-0" OR LESS, A

VERTICAL REINFORCING MUST HAVE A MIMUM CLEARANCE OF 1/2 " TO INSIDE FACE.

GROUT PLACEMENT STOPPED FOR (1) HOUR OR MORE SHALL BE STOPPED (1 1/2 ")

SEE FOUNDATION PLANS FOR ALL VERT. REINFORCING. TYP. VERTICAL REINFORCING

BELOW THE TOP OF THE MASONRY UNIT TO PROVIDE A KEY FOR SUBSEQUENT

TEMPORARY BRACING AND SHORING OF WALLS TO PROVIDE STABILITY DURING

PROVIDE FILLED PRECAST U-LINTELS W/ (1) #5 CONT. AT ALL OPENINGS WHERE CONCRETE BEAMS ARE NOT SHOWN OR NOTED. MINIMUM UNFILLED LINTEL

PLACED IN (2) HORIZ. JTS. APPROXIMATELY 8" APART, IMMEDIATELY ABOVE THE

DO NOT APPLY UNIFORM LOADS TO MASONRY WALLS FOR (3) DAYS

DO NOT APPLY CONCENTRATED LOADS TO MASONRY WALLS FOR (7) DAYS.

MASONRY CONSTRUCTION MATERIALS AND INSPECTIONS SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI-ASCE 530.1)"

CAPACITY = 400 Ib/LF FOR SPAN INIDICATED. SEE PLANS FOR LINTEL REQUIREMENTS

AT 28 DAYS. GROUT SLUMP SHALL BE 8" TO 11" FOR MASONRY FILLED CELLS.

PROVIDE KNOCK-OUT CMU AT BASE OF EACH FILLED CELL TO ALLOW VISUAL

VERTICAL REINFORCEMENT IN WALLS SHALL BE SECURED AND LATERALLY

SUPPORTED AGAINST DISPLACEMENT AT INTERVALS NOT EXCEEDING 6 FT

SIZE & SPACING SHALL BE ABOVE AND BELOW ALL WALL OPENINGS.

EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE DOCUMENTS.

CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.

THE MINIMUM CONTINUOUS UNOBSTRUCTED CELL AREA IN CELL TO RECEIVE

GROUT MUST BE NOT LESS THAN 2" x 3". MORTAR FINS MUST BE REMOVED AS

BLOCK PLACEMENT PROCEEDS. MORTAR DROPPINGS MUST BE KEPT OUT OF

PER MFR. INSTR. LAP ALL HORIZONTAL JOINT REINFORCING 8" MIN.

CUBES SHALL ACHIEVE A MINIMUM OF 80% OF THE DESIGN COMPRESSIVE

(1900 PSI ON THE NET AREA)

CELLS WHICH ARE TO BE GROUTED.

RODDING OR VIBRATING.

GROUTING.

AT DOOR OPENINGS.

FRESH MASONRY

OTHERWISE NOTED.

ADDITIONAL REQUIREMENTS.

STRENGTH.

TO BE GROUTED.

Lintel Concrete Strength = 4000 psi Fill Concrete Strength = 3000 psi Steel Strength = Grade 60 (#6), Grade 40 (#2 - #5)

otoor ottorigui	Ciddo ou (mo)	, Grado to (HZ HO
TYPE	TOP BARS	BOTTOM BARS
Α	NONE	2-#3
В	NONE	2-#4
C	2-#2	2-#4

# PRECAST LINTEL OVER OPENINGS

LENGTH	CLEAR SPAN	TYPE	FILLED + BEAM
4'-6"	3'-2"	Α	6000+ PLF
7'-6"	6'-2"	В	5663 PLF
12'-0"	10'-8"	D	2181 PLF
17'-4"	16'-0"	Е	1366 PLF
FILLED + BE	AM = Acting as compos	ite beam wit	h an 8" perimeter beam

1-#5 rebar in lintel, 1-#5 rebar in perimeter beam

SEE ELEV.

DOOR SIZE	TYPE	FILLED + BEAM
3'-0"	Α	6000+ PLF
5'-0"	В	5689 PLF
6'-0"	С	4262 PLF

1-#5 rebar in lintel, 1-#5 rebar in perimeter beam

### INTERIOR BRG. WALL DETAIL SCALE: 3/4" = 1'-0"

DOUBLE

TOP PLATE-

2x4 STUDS @

16" O.C. MAX.

5/8" x 10" A307 ANCHOR BOLTS WITH 3"x3"x 1/8"-

WASHER @ 48" O.C.

AND 6" FROM ENDS

FOUNDATION-

	12
	SEE ELEV.
1	
	CONC. FILLED "U' BLOCK W/ 1-#5 BAR CONT.
	PRECAST "U" LINIEL FILLED W/ 1-#5 CONT.

---ENGINEERED WOOD TRUSSES, DESIGNED

-SIMPSON SPH4

@ 48" O.C.

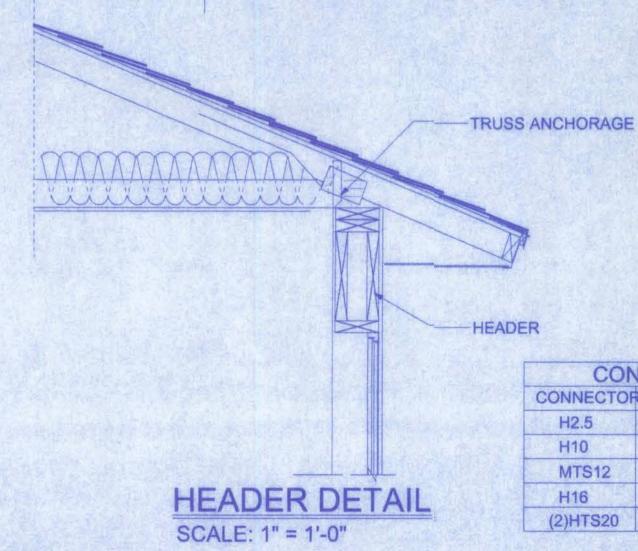
P.T. 2x4 PLATE

FOR INTERIOR BEARING

TIE BEAM DETAIL SCALE: 1" = 1'-0"

	CON	INECTOR S	CHEDULE	FOR TE	RUSS AN	CHORAGE
CONNECTOR	1 PLY-TRUSS	2 PLY-TRUSS	EMBEDMENT	UPLIFT F	PROVIDED	MANUFACTURER
HETA20	10-10d NAILS		5"	1,28	O LES	SIMPSON
HETA20		11-16d NAILS	5"	1,89	O LES	SIMPSON
	GIRDER	TRUSSES	TIE BEA	M		
MGT	22-10d	NAILS	1-5/8"x10" ANCHO	RBOLT	3,965 LBS	SIMPSON
LGT2	16-16d SINKER		7-1/4 x 2 1/4	TITEN	2,'50 LBS	SIMPSON

OPENING CONNECTION RIEQUIREMENTS					
CLEAR OPENING WIDTH	HEADER SIZE #2 GRADE OR BETTER	END BEARING	CONNECTOR AT EACH END OF OPENING	ANCHORAGE TO FOUNDATION @ EACH END OF OPENING	
0' - 3'	(2) 2x8	1.,5"	SIMPSON H2.5	SIMPSON SPH4	
>3' - 6'	(2) 2x10	3"	(1) SIMPSON LSTA30	(2) SIMPSON SPH4	
>6' - 9'	(2) 2x12	3"	(1) SIMPSON LSTA30	(2) SIMPSON SPH4	
>9' - 12'	(2) 1 3/4" x 11 1/4" LVL - 2.0E	33"	(1) SIMPSON LSTA30	(2) SIMPSON SPH4	
>12' - 15'	(2) 1 3/4" x 11 1/4" LVL - 2.0E	3"	(2) SIMPSON LSTA30	SIMPSON HD5A	
>15' - 18'	(2) 1 3/4" x 11 1/4" LVL - 2.0E	44.5"	(2) SIMPSON LSTA30	SIMPSON HD5A	



CONNECTOR	TRUSS	TOP PLATE	UPLIFT PROVIDED	MANUFACTUR
H2.5	5-8d NAILS	5-8d NAILS	365 LBS	SIMPSON
H10	8-8d NAILS	8-8d NAILS	850 LBS	SIMPSON
MTS12	7-10d NAILS	7-10d NAILS	1,000 LBS	SIMPSON
H16	2-10d NAILS	10-10d NAILS	1,300 LBS	SIMPSON
(2)HTS20	10-10d NAILS	10-10d NAILS	2 x 1,450 = 2,900 LBS	SIMPSON

DO	OR	WAY	HEA	DER

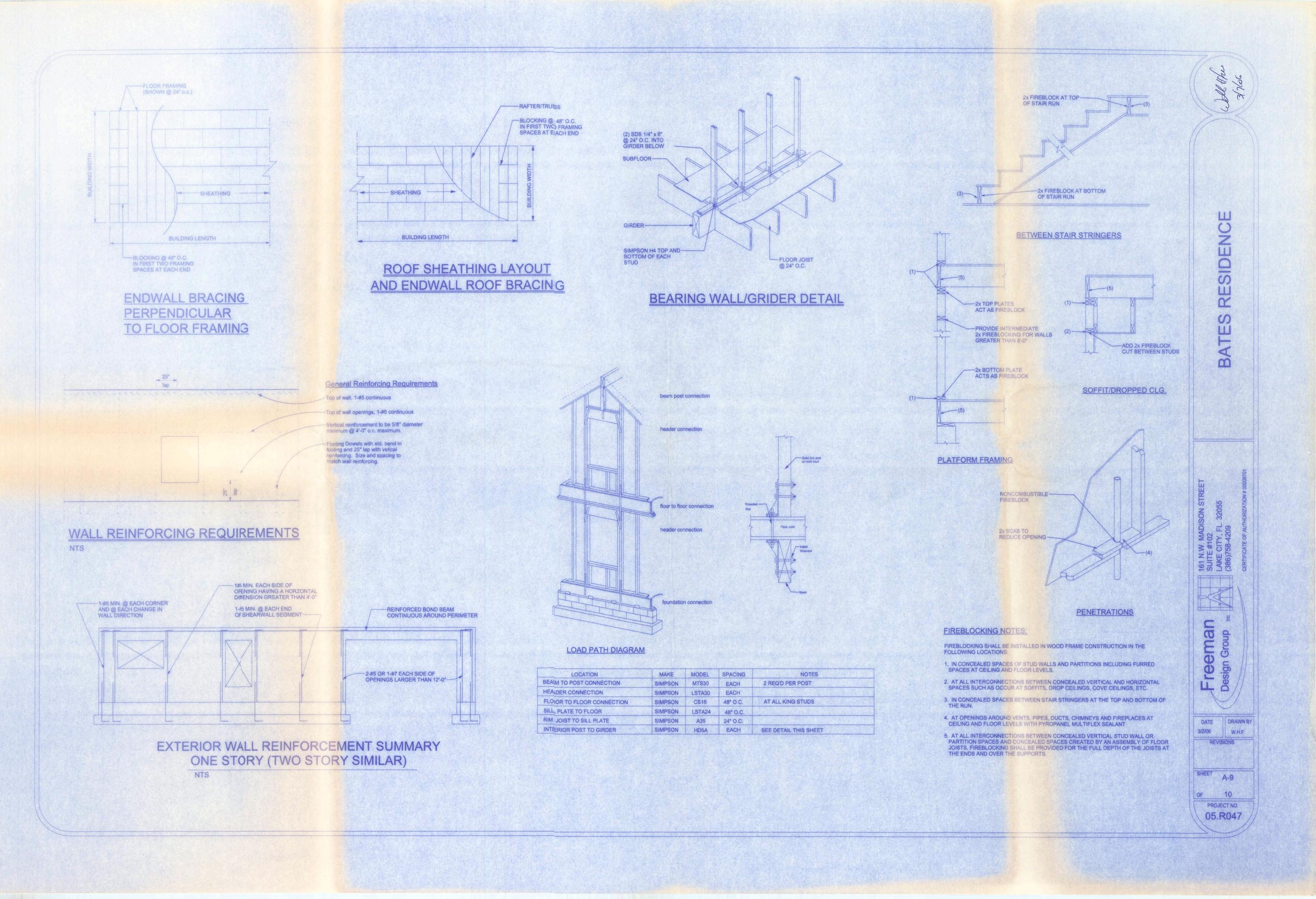
DOOR SIZE	TYPE	FILLED + BEAM
3'-0"	Α	6000+ PLF
5'-0"	В	5689 PLF
6'-0"	С	4262 PLF

FILLEED + BEAM = Acting as composite beam with an 8" perimeter beam

STOPPING AND RESUMING WORK: RACK BACK 1/2- UNIT LENGTH IN EACH COURSE. DO NOT TOOTH. CLEAN EXPOSED SURFACES OF SET MASONRY WET UNITS LIGHTLY (IF REQ'D.) AND REMOVE LOOSE MASONRY UNITS AND MORTAR PRIOR TO LAYING REINFORCE MASONRY OPENINGS GREATER THAN 1'-0" WIDE WITH HORIZ. JT. REINF. LINTEL AND IMMEDIATELY BELOW THE SILL. EXTEND REINFORCING A MINIMUM OF

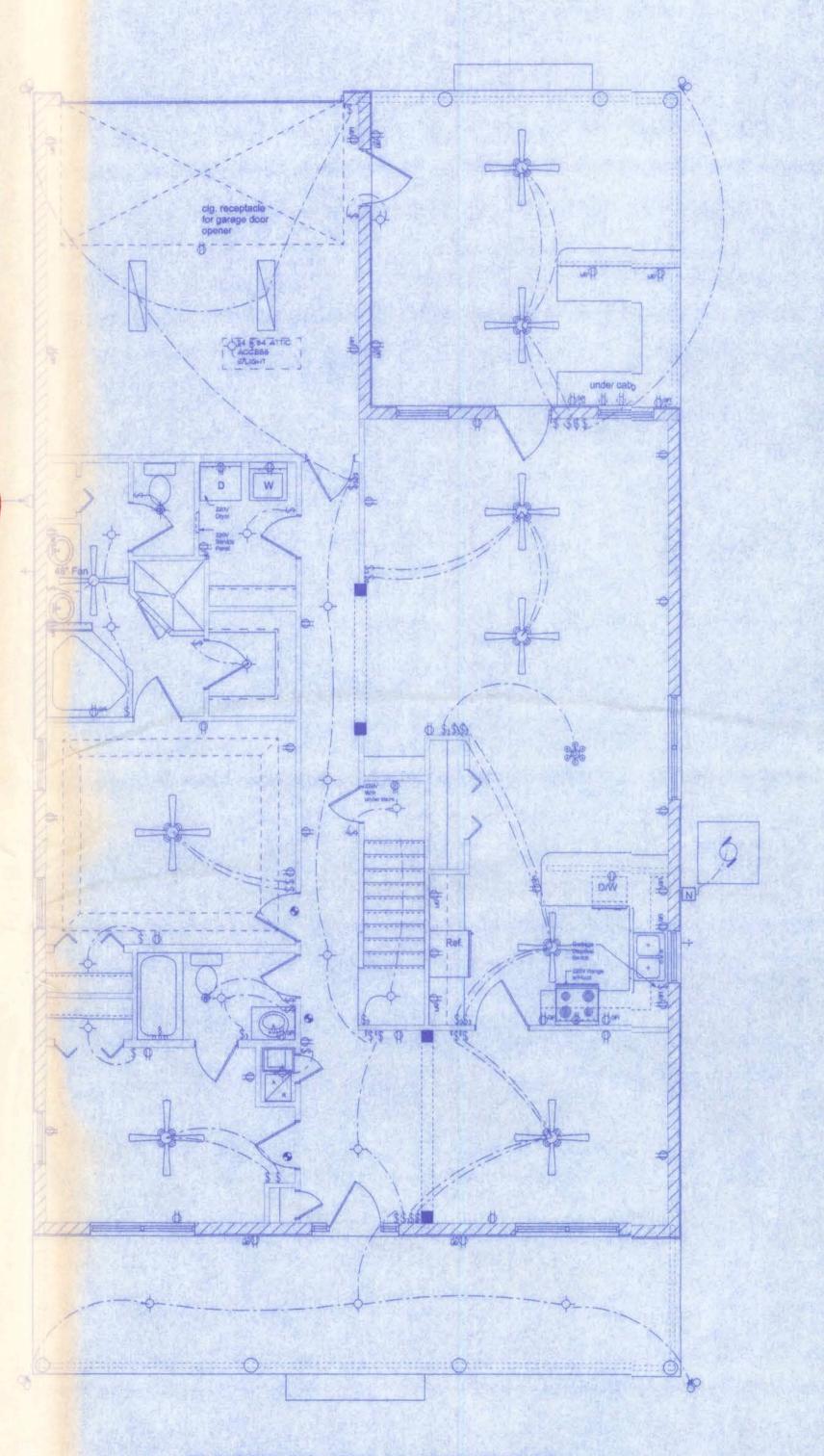
2'-0" BEYOND JAMBS OF THE OPENING EXCEPT AT CONTROL JOINTS. SEE PLAN FOR

EXTEND ALL VERTICAL REINFORCEMENT TO WITHIN 2" OF TOP OF TIE BEAMS UNLESS

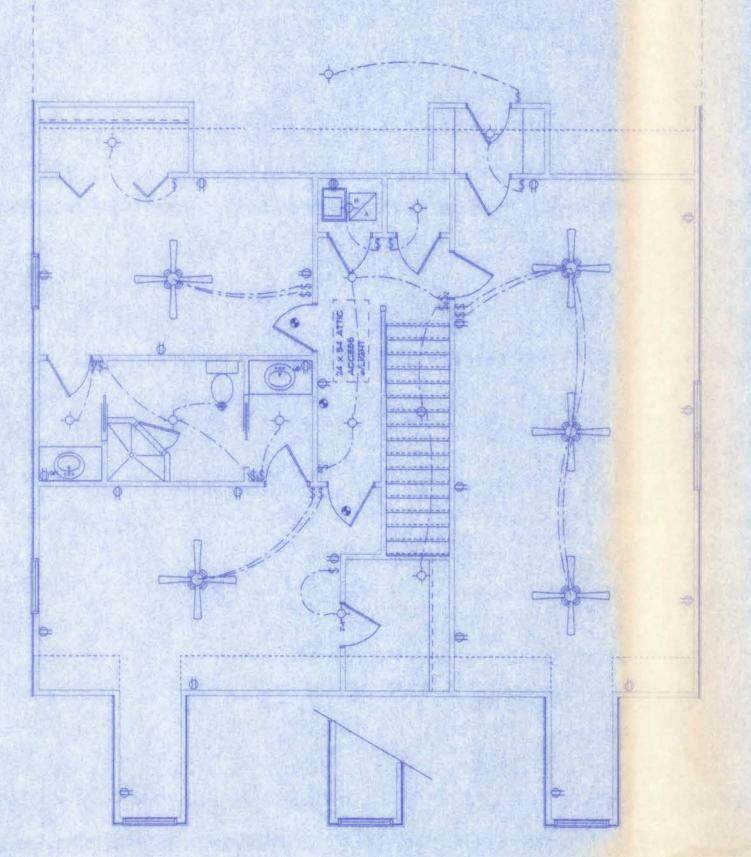


ELECTRICAL CONT'R SHALL PREPARE "AS-BUILT" SHOP DWGS INDICATING ALL ELECTRICAL WORK, INCLUDING ANY CHANGES TO THE ELEC. PLAN, ADD'NS TO THE ELEC. PLAN, TYPE W/ RATINGS & LOADS.

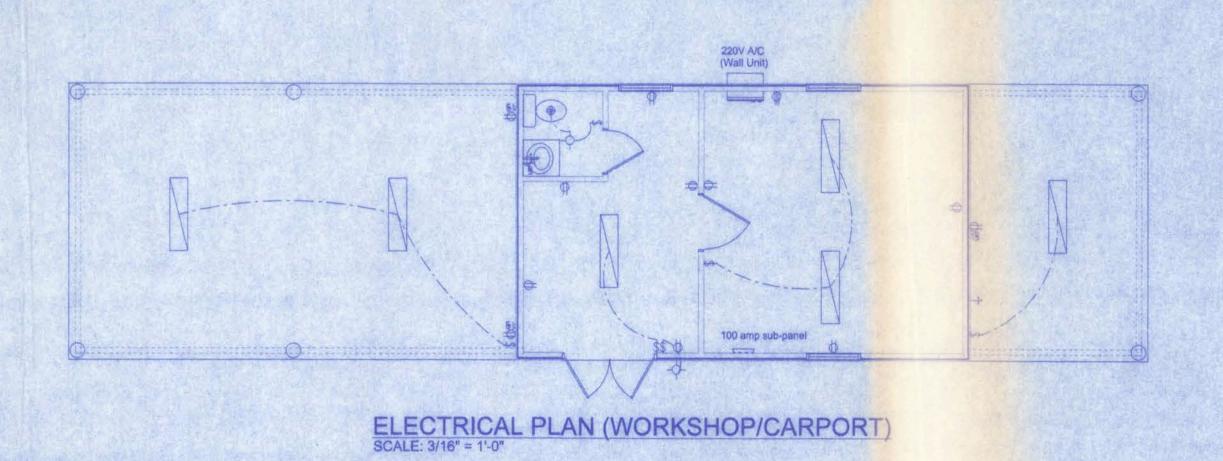
ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE PHASE.
15 AND 20 AMP OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS
SHALL BE PROTECTED BY AN ARC FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.



ELECTRICAL PLAN (MAIN FLOOR)
SCALE: 3/16" = 1'-0"



ELECTRICAL PLAN (UPPER FLOOR)
SCALE: 3/16 = 1'-0"





RESIDENCE BATES

Freeman
Design Group

DATE DRAWN BY 3/2/06 W.H.F. REVISIONS

SHEET A-10

PROJECT NO. 05.R047

TELEPHONE LINES TO BE INSTALLED

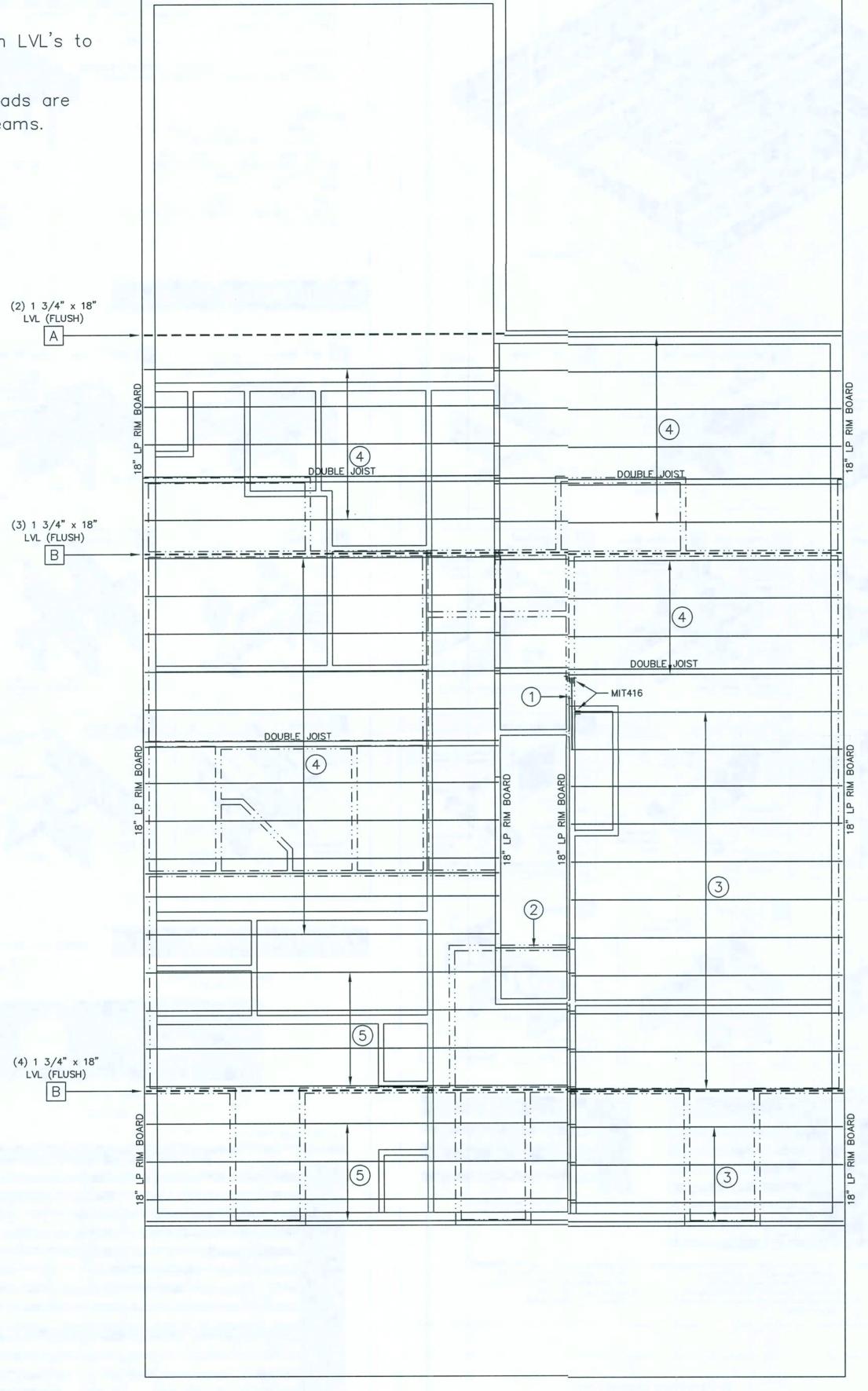
INSTALLATION SHALL BE PER NAT'L ELECTRIC CODE. ALL SMOKE DETECTORS SHALL BE 120V W/ BATTERY BACKUP OF THE PHOTOELECTRIC TYPE, AND SHALL BE INTERLOCKED TOGETHER. INSTALL INSIDE AND NEAR ALL BEDROOMS.

TELEPHONE, TELEVISION AND OTHER LOW VOLTAGE DEVICES OR OUTLETS SHALL BE AS PER THE OWNER'S DIRECTIONS, & IN ACCORDANCE W/ APPLICABLE SECTIONS OF NEC-LATEST EDITION.

RISER DIAGRAM, AS-BUILT PANEL SCHEDULE W/ ALL CKTS IDENTIFIED W/ CKT Nr., DESCRIPTION & BRKR, SERVICE ENT. & ALL UNDERGROUND WIRE LOCATIONS/ROUTING/DEPTH. RISER DIA. SHALL INCLUDE WIRE SIZES/TYPE & EQUIPMENT CONTRACTOR SHALL PROVIDE 1 COPY OF AS-BUILT DWGS TO OWNER & 1 COPY TO THE PERMIT ISSUING AUTHORITY.

# Important Notes

- 1. Upon final approval of this plan, the supplier must notify Woodford Plywood, Inc. so seals can begin being processesd.
- 2. 18" material has been used in lieu of 16" to allow the flush LVL's to be concealed within the floor system.
- 3. Trim Joists not designed to support roof loads. All roof loads are assumed to be transferred to the exterior walls and LVL beams.



# 2ND FLOOR JOIST PLACEMENT

BEFORE INSTALLATION REVIEW REVERSE SIDE & ATTACHED PAMPHLET FOR INSTALLATION DETAILS.

Mark	QTY.	Material List	O.C.
		Trim Joists	
1	1	TJ 18 04	
3 4	1	TJ 18 06	
3	15	TJ 18 16	24"
	31	TJ 18 20	24"
5	8	TJ 18 24	24"
		LVL'S(2650F <sub>b</sub> −1.9e)	
Α	2	1 3/4" x 18" x 20'-0"	10
В	7	1 3/4" x 18" x 20'-0" 1 3/4" x 18" x 37'-0"	
		Hangers	
	2	MIT416	
		LP Rim Board	
	11	1 1/8" x 18" x 12'-0"	
		<u> </u>	
		`	
4			
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		angelia Mana F	
		The state of the s	
	1 11111	1520	

### WOODFORD PLYWOOD, INC

"Structural Wood Products"

1504 S. MOCK RD. : P.O. BOX 50007 ALBANY, GA 31705

## TRIMJOIST

### NOTICE:

THIS PLACEMENT PLAN IS OFFERED AS A SALES PRESENTATION AND HAS NOT BEEN REVIEWED OR APPROVED BY AN ENGINEER

NO STRUCTURAL ANALYSIS HAS BEEN MADE OF SEISMIC, LATERAL, SHEAR, STACKING, OR OTHER FORCES WHICH MAY ACT ON THESE COMPONENTS, THEREFORE THE USE OF THESE PRODUCTS SHALL BE SPECIFIED BY " THE DESIGNER OF THE COMPLETE STRUCTURE ".

. DEALER SALES REPRESENTATIVE SHALL CHECK AND CONFRM ALL LENGTHS, TALLIES, SERIES, AND DEPTH INFORMATION WITH CONTRACTOR PRIOR TO PLACING ORDER FOR MATERIALS. THIS PLACEMENT PLAN IS PRELIMINARY AND NOT A CONSTRUCTION DOCUMENT.

- THE LOAD BEARING WALLS, POSTS, AND/OR PIERS ON THIS PLACEMENT PLAN ARE NECESSARY FOR THE PROPER INSTALLATION OF YOUR STRUCTURAL WOOD PRODUCTS. PLEASE NOTIFY WOODFOR) TECHNICAL DEPT. IN WRITING OF ANY CHANGES IN BEARING LOCATIONS. THE DESIGN OF BEARING LOCATIONS IS THE SOLE RESPONSIBILITY OF THE DESIGNER OF THE COMPLETE STRUCTURE.
- 3. ALL METAL CONNECTORS SPECIFIED ARE TO BE SIMPSON STRONG-TIE CO., INC. OR EQUAL. ALL HANGERS AND CONNECTORS IN CONTACT WITH WITH PRESSURE TREATED WOOD MUST BE REVIEWED BY THE CONTRACTOR, PRESSURE TREATED WOOD AND HANGER MANUFACTURER TO INSURE PROPER COATINGS ON HANGERS, CONNECTORS AND ATTACHMENT
- . ⊗ INDICATES UNIFORM OR CONCENTRATED ROOF BRACIN; LOCATIONS OTHERWISE, ALL ROOF BRACE LOADS SHALL BE TRANSFERRED TO FIRST FLOOR WALLS AND NOT TO FLOOR JOISTS. 5. I-JOIST SPACED 24"o.c. SHALL HAVE ADEQUATE SUBFLOOR TO INSURE
- STIFFNESS BETWEEN JOIST. 6. LATERAL BRACING IS REQUIRED ALONG BOTTOM FLANGES OF I-JOIST AT 8'-0"o.c. IF RIGID SHEATHING IS NOT APPLIED.

### LEGEND

=ROOF LOAD =:==WALL ABOVE ---- =BEAM -----=I-JOIST

= JOIST MARKER

Tr =HANGER △ =DETAL\_MARK

CUSTOMER: Mayo Truss Company

PROJECT: Bates Job REV.2 \_ \_ \_ | DATE: 3/28/06 | DESCRIPTION: 2nd Floor Plan REV.3 \_ \_ \_ | DRAWN BY: JCW | W/F# 6048 \_ \_ \_



### Handling & Installation Recommendations Gang Limi TVI Beams Note: 1500 (300 the strength and span information). please consult specific product brochures. For

application with I-joist depths over 16", pica e-

consult the LPI 36/56 Product Guide

### **Important Notes**

WARNING: Failure to follow good procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.

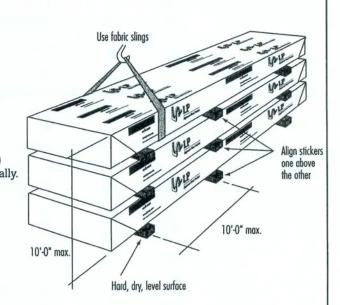
These instructions are offered as a guide to good practice in the handling, storage and installation of LPI Joists and Gang-Lam LVL beams. They are, however, solely general recommendations and, in some instances, other or additional precautions may be desirable. In all cases, the procedures used should be as specified by the architect/engineer responsible 
• LPI Joists and Gang-Lam LVL beams must for the entire building.

- This is not intended as a manual for selecting products and assumes that components and details have been specified correctly.
- Consult the LPI Joist and Gang-Lam LVL brochures or contact your LP Engineered Wood Products distributor for assistance.
- · All rim joists, blocking, connections and temporary bracing must be installed before erectors are allowed on the structure.
- No loads other than the weight of the erectors are to be imposed on the structure before it is permanently sheathed.
- · After sheathing, do not overload joists with
- construction materials exceeding design loads.
- be used under dry, well-ventilated conditions.



### **Handling & Storage**

- Keep LPI Joists and LVL beams dry.
- Unload I-joists and LVL beams carefully, by lifting. Support the bundles to reduce excessive bowing. Individual I-joists should be handled in a manner which prevents physical damage to the I-joist during measuring, cutting, erection, etc. I-joists should be handled vertically and not flatwise.
- Keep stored in wrapped and strapped bundles, stacked no more than 10' high. Support and separate bundles with 2" x 4" (or larger) stickers spaced no more than 10' apart. Keep stickers in line vertically.
- Product must not be stored in contact with the ground, or have prolonged exposure to the weather.
- Use forklifts and cranes carefully to avoid damaging product. Do not use visually damaged product. Call your local Engineered Wood Products distributor for assistance when damaged products
- are encountered. For satisfactory performance, LP Engineered Wood Products must be used under dry, well-ventilated conditions.



### Gang-Lam LVL Details

Connections and fastenings shown below are typical for top loaded beams (where framing is applied on top of beam so that each ply carries an equal load). Additional nails and/or bolts may be required for other load conditions.

CONNECTION ASSEMBLIES

**DETAIL A\*** 

1 piece 5-1/4

2 pieces 3-1/2"

\* 3 rows of nails are required for depths greater than 12",

up to 18". Four rows of nails are required for depths

For Details A and B, when attaching any two plies of

For Detail A, when nails shorter than 3-1/2" are used,

When driving nails from each face, alternate every othe

For Details C and E, the larger side load should be

For Detail F, it is permissible to nail plies together

additional ply to each side. Finally, bolt as shown.

unless approved by a licensed professional.

Other nail and bolt configurations are possible.

7" beams should not be loaded from one side only

Contact your LP Engineered Wood Products distributor.

before bolting. Nail two plies together, then attach one

1-3/4" LVL together, half the nails may be driven from

DETAIL G

3-1/2" WIDE BEAMS

5-1/4" WIDE BEAMS

3 pieces 1-3/4"

**DETAIL B\*** 

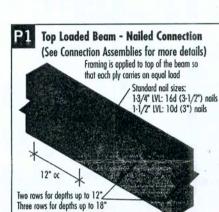
" WIDE BEAMS

DETAIL F

greater than 18", up to 24".

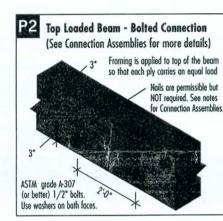
drive half the nails from each face.

applied to larger ply when possible.

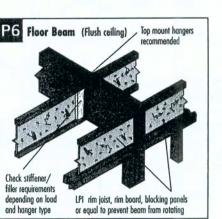


Four rows for depths up to 24

P3 Beam Connection





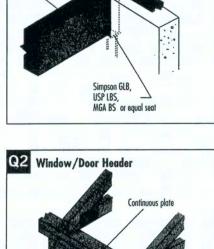


langer must apply load equally to each



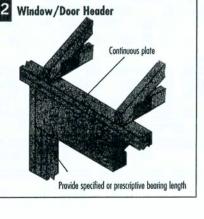


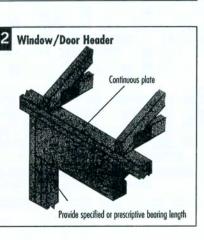


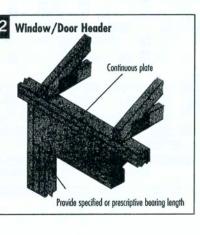


NOTE: Protect wood from contact with concrete as









# Minimum 2 x diameter of larger hole

# LVL HOLE DETAILS

1. These guidelines apply to uniformly loaded beams selected from the Quick Reference Tables or 4. DO NOT drill holes in cantilevers without prior approval from the project engineer/architect the Uniform Load Tables or designed with LP's design/specification software only. For all other applications, such as beams with concentrated loads, please contact your LP Engineered Wood Products distributor for assistance

5. Other hole sizes and configurations MAY be possible with further engineering analysis. For more information, contact your LP Engineered Wood Products distributor. Up to three 3/4" holes may be drilled in "Area B" to accommodate wiring and/or water lines Round holes can be drilled anywhere in "Area A" provided that; no more than four holes are cut, These holes must be at least 12" apart. The holes should be located in the middle third of the with the minimum spacing described in the diagram. The maximum hole size is 1-1/2" for depth, or a minimum of 3" from the bottom of the beam. For beams shallower than 9-1/4", depths up to 9-1/4", and 2" for depths greater than 9-1/4". locate holes at mid-depth. 7. Protect plumbing holes from moisture. Rectangular holes are NOT allowed.

### TEMPORARY BRACING

Floor Layout (Typical)

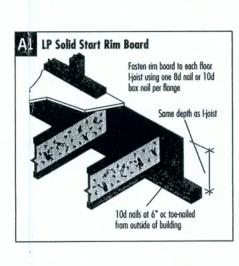
- Use at least 1"x 4" temporary bracing members nailed to each I-joist with two 8d nails. • Keep them parallel and no more than 6'-0" apart for LPI 26^ series and LPI (CTR) 150
- series, 8'-0" apart for other LPI Joist series. · Use long pieces, not short blocks; lap the ends to keep a continuous line of bracing. • To prevent endwise movement of the continuous 1"x 4" lines of bracing, anchor them at the ends and at 25'-0" intervals into a stable end wall or an area braced by sheathing
- Remember, the continuous 1"x 4" bracing is not effective unless attached to the braced area.
- · Use particular care removing temporary bracing when applying sheathing. Remove the bracing as the sheathing is attached.

- · I-joists must be supported laterally at end bearing and cantilever.
- Unless specified, bridging or mid-span blocking is not required; however, it may enhance floor
- performance if used properly. Verify capacity and fastening of hangers
- Some wind or seismic loads may require different or additional details and connections.

# WARNING: Temporary construction bracing is required for lateral support before decking is completed. Failure to use bracing could result in serious Cantilever details

### Floor Details

and connectors.



BI Web Stiffeners at Interior Support

Check stiffener requirements

Cantilever Detail

th reinforcement to too and bottom flanges wit

Hanger Detail

8d wils at 6" oc both sides with nails staggered to avoid splitting

Solid Start rim board forcement one side,

Web filler is required if hanger

Web Filler: For hanger, install fillers tight to bottom flange. Filler behind hanger to be installed tight to top

flinge for top-mount hangers (as shown) or tight to bottom flange for face-mount hangers. Provide web fillers

Filer Block: install with 1/8" minimum gap at top. Required full length of double 1-joist; may be in

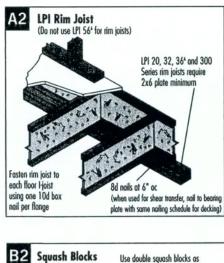
sations, minimum length 4'-0". Refer to E5 for detailed information.

Varify capacity and fastener requirements of hangers and connectors.

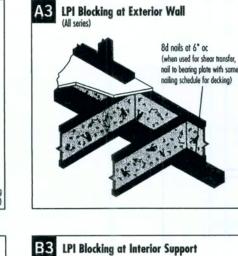
Ua 10d for LPI 564 I-joists. Clinch when possible.

See I-Joist Filler Schedule for filler sizes.

Atach filler blocks and web fillers with 2 rows of 8d nails at 6" oc from each side.



C4 Cantilever Detail May be substituted for detail (2



Blocking is required when I-joists end

C6 Step-Down Cantilever

2x8 (min.) design

lange and filler with

from edge at 6" oc 7

Stair Stringer

rows of 8d nails

10d nails for LPI 564

See I-Joist Filler Schedule for

filler block and web filler sizes

Connect double I-joists using 4' long filler blocks at each support and at

Fasten fillers through I-joist webs using two rows of 8d nails at 6" oc

Use 10d nails for LPI 564 series. Stagger rows and clinch when possible.

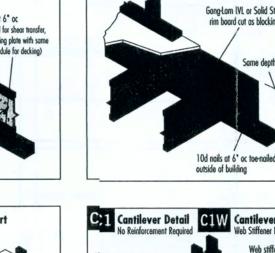
Floor sheathing to be glued and nailed to flanges of both plies to provide

Provide 4' filler block at all concentrated loads. Center filler blocks on load.

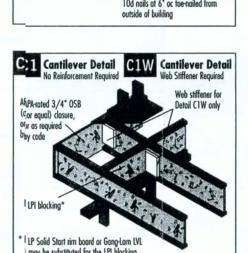
8' on-center, maximum.

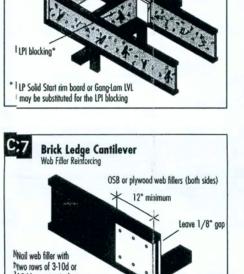
continuous lateral restraint for each ply.

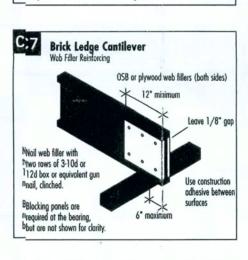
Schedule for filler block



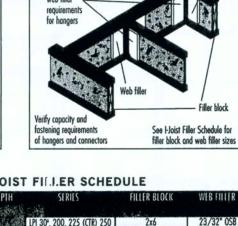
A.4 Solid Blocking at Exterior Wall











It is recommended to use construction adhesive between surfaces.

Blocking panels are required at the bearing, but are not shown for clarity

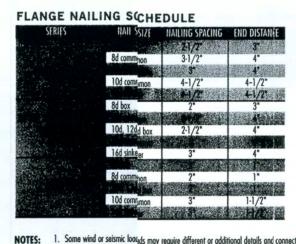
Attach reinforcement to top and bottom flanges with 8d nails at 6" oc

with 3-6d or 8d box no or #6x1-1/2" wood

A5 Joist End Nailing

Use two 8d nails or

(one on each side)

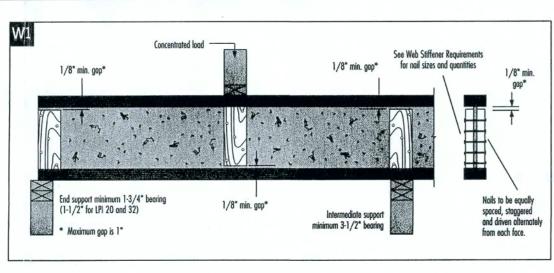


NOTES: 1. Some wind or seismic loagds may require different or additional details and connections. Verify building code requirements for suitability of details shown. Refer to LPI Product Guide's for bearing length requirements. 4. Refer to Flange Nailing Schedule for rim joists and blocking panel nailing 5. Lateral support should be considered for bottom flange when there is no sheathing on underside.

# I-JOIST FILLER SCHEDULE LPI 36<sup>4</sup>, 300 2x8 + 3/8" OSB 7/8" OSB NOTE: Web fillers to be same height as web stiffeners See Web Stiffener Requirements table below.

. Blocking is recommended, but not required, at interior bearing supports if there is no load-bearing wall above the bearing wall below. Verify capacity and fastening requirements of hangers and connectors. Squash block capacity designed by others. LPI 56<sup>4</sup> series rim joist requires special design

### Web Stiffener Details



. Web stiffeners, when required, must be installed in pairs - cone to each side of the web. Web stiffeners are always required four the "Bird's Mouth" roof bearing detail. . Web stiffeners should be cut to fit between the flanges of thhe Hoist, leaving a minimum 1/8" gap (1" maximum). At bearing logications, the stiffeners should be installed tight to the bottom flange withh the gap to the top flange. At locations of concentrated loads, the stiffeeners should be installed tight to the top flange with the gap to the bottoom flange.

. Web stiffeners should be cut from APA-rated (or equal) OSB3 or plywood. Do NOT use 1x lumber as it tends to split. . Web stiffeners should be the same width as the bearing surfrace. with a minimum of 3-1/2". 5. See table to right for minimum stiffener thickness, maximun<sub>m</sub> stiffener height and required nailing.

WEB STIFFENER REQUIREMENTS

## Roof Layout (Typical)

### TEMPORARY BRACING

- Use at least 1"x 4" temporary bracing members nailed to each I-joist with two 8d nails. Keep them parallel and no more than 6'-0" apart for LPI 26<sup>A</sup> series and LPI (CTR) 150 series, 8'-0" apart for other LPI Joist series.
- Use long pieces, not short blocks, lap the ends to keep a continuous line of bracing. • To prevent endwise movement of the continuous 1"x 4" lines of bracing, anchor them at the ends and at 25'-0" intervals into a stable end wall or an area braced by
- sheathing or diagonal bracing.
- Remember, the continuous 1"x 4" bracing is not effective unless attached to the braced area.
- Use particular care removing temporary bracing when applying sheathing. Remove the bracing as the sheathing is attached.

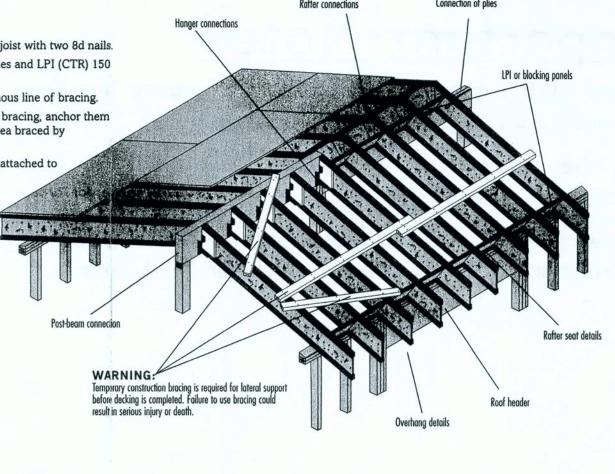
### NOTES:

- · I-joists used as rafters must be laterally supported at end bearing and at cantilever support.
- · Any fastening of member not detailed, such as uplift or seismic anchor, is subject to local

approval and may require additional details

and connections. Maximum slope: 12:12. Uplift anchors may be required. Verify capacity and fastening of hangers

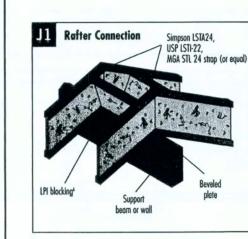
# and connections.

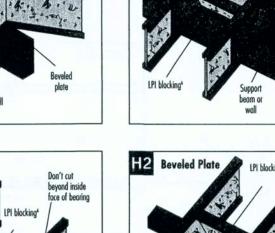


Simpson LSTA24, USP LSTI-22,

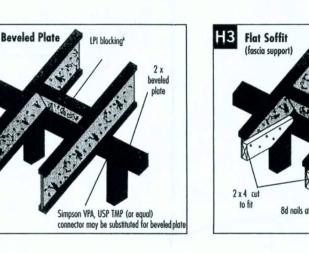
Ridge Rafter Connection

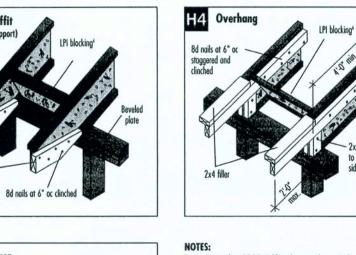
### **Roof Details**

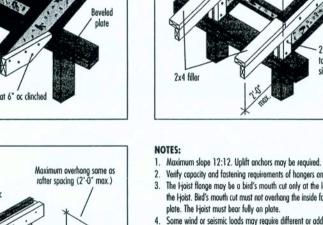




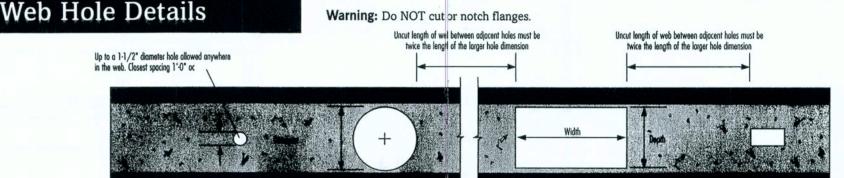
12 Rafter Connection with Fitted OSB Gusset



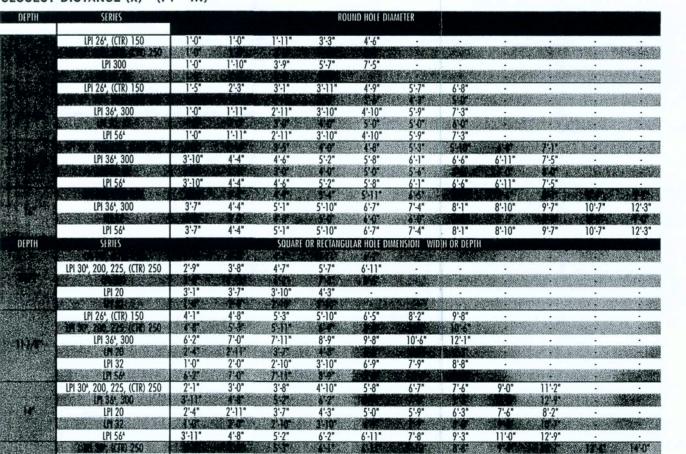




### 1. Maximum slope 12:12. Uplift anchors may be required. . Verify capacity and fastening requirements of hangers and connectors. The I-joist flange may be a bird's mouth cut only at the low end of the Hoist. Bird's mouth cut must not overhang the inside face of bearing and connections. . 4" diameter hole(s) may be cut in blocking for ventilation. Lateral resistance must be provided. Other methods of restraint, such as full depth Solid Start OSB rim board and Gang-Lam LVL, or metal X-bracing may be substituted for the LPI blocking shown.



Closest distance (x) to centerline of round hole FROM EITHER BEARING CLOSEST DISTANCE (X) - (FT - IN)



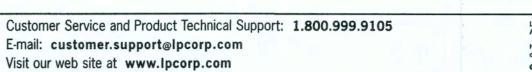
Closest distance (x) to edge

of square or rectangular hole

FROM EITHER BEARING

- 1. CUT HOLES CAREFULLY! DO NOT OVERCUT HOLES! DO NOT CUT JOIST FLANGES! 2. Square and rectangular holes must be centered at mid-height of the web.
- Round the corners where possible. 3. Round holes need not be placed at mid-height, A minimum 1/2" clear distance
- is required between the hole and the flange. 4. Round holes up to 1-1/2" diameter, including the perforated "knockouts",
- may be cut anywhere in the web. . Holes larger than 1-1/2" are not permitted in cantilevers. 6. Multiple holes must have a clear separation along the length of the joist of at
- least twice the largest dimension of the adjacent hole(s), or a minimum of 12" center-to-center whichever is greater. Multiple holes may be spaced closer provided they fit within the boundary of an acceptable larger hole. Example: two 3" round holes may be spaced 2" apart
- diameter round hole are acceptable for the joist depth at that location. . These web hole tables are valid for simple and continuous span joists with uniform loads only, as sized from the tables contained in LP's current I-joist product guides. Larger holes, non-uniform loading conditions and/or closer proximity to supports may be possible, but require further analysis using LP's design software. Please contact your local LP Engineered Wood Products

(clear distance) provided that a 3" high by 8" long rectangular hole, or an 8"



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The following conditions

are NOT permitted!

Do notuse visually damaged products

withou first checking with your local

LP Engineered Wood Products

distributor or sales office.

Warnings















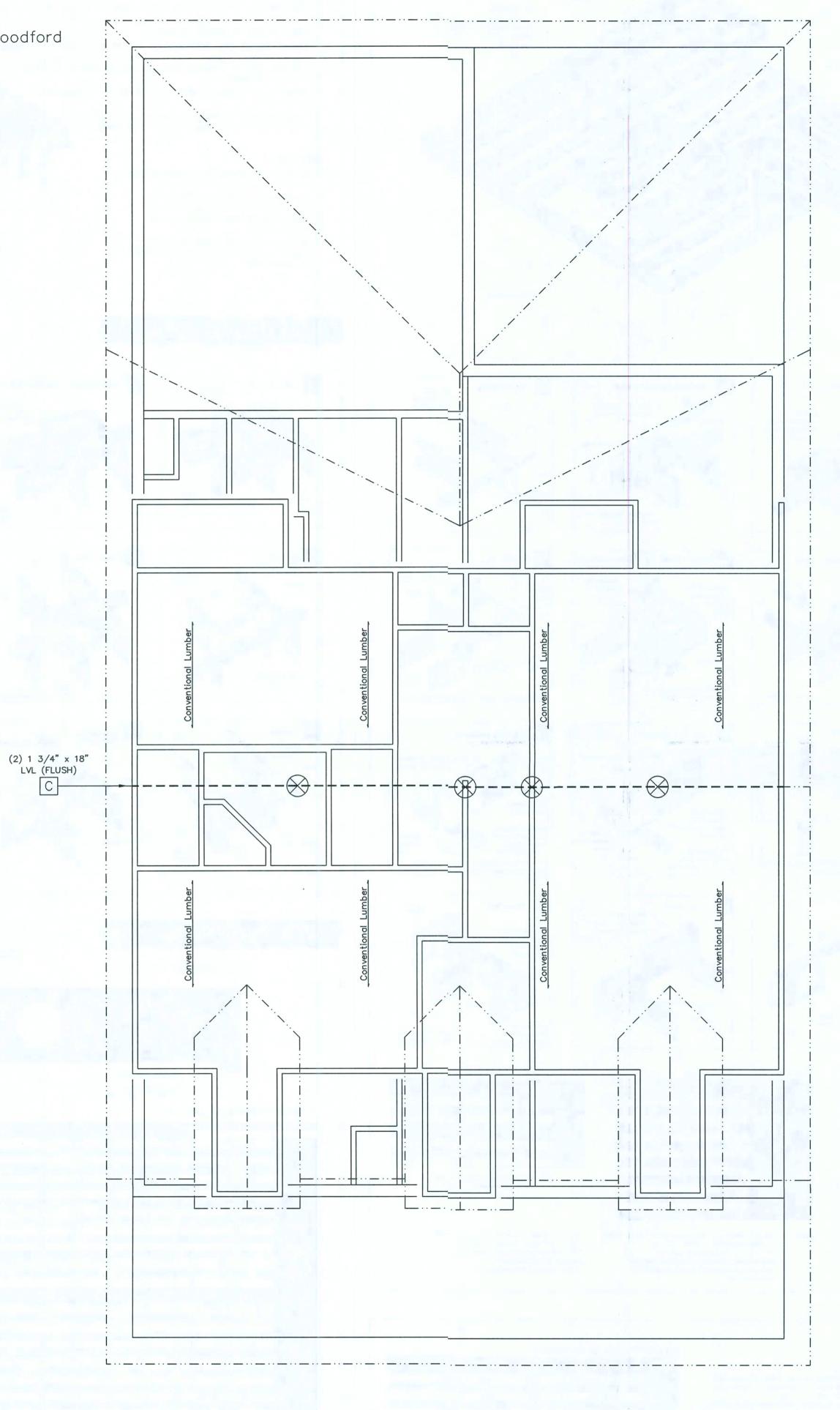






# Important Notes

1. Upon final approval of this plan, the supplier must notify Woodford Plywood, Inc. so seals can begin being processesd.

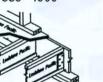


Mark	QTY.	Material List	0.0
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### WULLIFURD PLYWLLLD, INC.

"Structural Wood Products"

1504 S. MOCK RD. : P.O. BOX 50007



COMPLETE STRUCTURE ".





### NOTICE:

THIS PLACEMENT PLAN IS OFFERED AS A SALES PRESENTATION AND HAS NOT BEEN REVIEWED OR APPROVED BY AN ENGINEER. NO STRUCTURAL ANALYSIS HAS BEEN MADE OF SEISMIC, LATERAL, SHEAR, STACKING, OR OTHER FORCES WHICH MAY ACT ON THESE COMPONENTS, THEREFORE THE USE OF THESE PRODUCTS SHALL BE SPECIFIED BY " THE DESIGNER OF THE

DEALER SALES REPRESENTATIVE SHALL CHECK AND CONFIRM ALL LENGTHS, TALLIES, SERIES, AND DEPTH NFORMATION WITH CONTRACTOR PRIOR TO PLACING ORDER FOR MATERIALS. THIS PLACEMENT PLAN IS PRELIMINARY AND NOT A CONSTRUCTION DOCUMENT. THE LOAD BEARING WALLS, POSTS, AND/OR PIERS ON THIS PLACEMENT PLAN ARE NECESSARY FOR THE PROPER INSTALLATION OF YOUR STRUCTURAL WOOD PRODUCTS. PLEASE NOTIFY WOODFORD TECHNICAL DEPT. IN WRITING OF ANY CHANGES IN BEARING LOCATIONS. THE DESIGN OF BEARING LOCATIONS IS THE SOLE RESPONSIBILITY OF THE DESIGNER OF THE COMPLETE STRUCTURE.

ALL METAL CONNECTORS SPECIFIED ARE TO BE SIMPSON STRONG-TIE CO., INC. OR EQUAL. ALL HANGERS AND CONNECTORS IN CONTACT WITH WITH PRESSURE TREATED WOOD MUST BE REVIEWED BY THE CONTRACTOR, PRESSURE TREATED WOOD AND HANGER MANUFACTURER TO INSURE PROPER COATINGS ON HANGERS, CONNECTORS AND ATTACHMENT MATERIALS.

I. 

✓ INDICATES UNIFORM OR CONCENTRATED ROOF BRACING LOCATIONS OTHERWISE, ALL ROOF BRACE LOADS SHALL BE TRANSFERRED TO FIRST FLOOR WALLS AND NOT TO FLOOR JOISTS. 5. I-JOIST SPACED 24"o.c. SHALL HAVE ADEQUATE SUBFLOOR TO INSURE

STIFFNESS BETWEEN JOIST. 6. LATERAL BRACING IS REQUIRED ALONG BOTTOM FLANGES OF I-JOIST AT 8'-0"o.c. IF RIGID SHEATHING IS NOT APPLIED.

LEGEND

=:==WALL ABOVE 

---- =BEAM

= JOIST MARKER

1 = HANGER △ =DETAIL MARK

——— =I-JOIST

customer: Mayo Truss Company

PROJECT:Bates\_bb\_\_\_\_\_ REV.2 \_ \_ \_ | DATE: 3/28/06 | DESCRIPTION: Ceiling Plan \_  $||REV.3 - - - ||DRAWN BY: JCW|| W/F# 6048_____$ 



### Handling & Installation Recommendations Gang I mi 1VI Beams Note: For positic strength and span information please consult specific product brochures. I application, with I-joist depths over 16", pica-

consult the LPI 36/56 Product Guide.

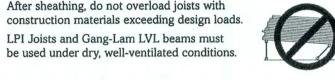
### **Important Notes**

WARNING: Failure to follow good procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.

- These instructions are offered as a guide to good practice in the handling, storage and installation of LPI Joists and Gang-Lam LVL beams. They are, however, solely general recommendations and, in some instances, other or additional precautions may be desirable. In all cases, the procedures used should be as specified by the architect/engineer responsible · LPI Joists and Gang-Lam LVL beams must
- for the entire building.

- This is not intended as a manual for selecting products and assumes that components and details have been specified correcty. Consult the LPI Joist and Gang-Lam LVL brochures or contact your LP Engineered Wood Products distributor for assistance.
- - · All rim joists, blocking, connections and temporary bracing must le installed before erectors are allowed on the structure. · No loads other than the weight of the erectors are to be imposed
  - on the structure before it is permanently sheathed. After sheathing, do not overload joists with

  - construction materials exceeding design loads.



### Handling & Storage

- Keep LPI Joists and LVL beams dry.
- · Unload I-joists and LVL beams carefully, by lifting. Support the bundles to reduce excessive bowing. Individual I-joists should be handled in a manner which prevents physical damage to the I-joist during measuring, cutting, erection, etc. I-joists should be handled vertically and not flatwise.
- Keep stored in wrapped and strapped bundles, stacked no more than 10' high. Support and separate bundles with 2" x 4" (or larger) stickers spaced no more than 10' apart. Keep stickers in line vertically. Product must not be stored in contact with the ground, or have
- prolonged exposure to the weather. Use forklifts and cranes carefully to avoid damaging product. Do not use visually damaged product. Call your local Engineered
- Wood Products distributor for assistance when damaged products
- For satisfactory performance, LP Engineered Wood Products must be used under dry, well-ventilated conditions.

# Hard, dry, level surface

### Gang-Lam LVL Details

Connections and fastenings shown below are typical for top loaled beams (where framing is applied on top of beam so that each py carries an equal load). Additional nails and/or bolts may be required for other load conditions.

3-1/2" WIDE BEAMS

5-1/4" WIDE BEAMS

up to 18". Four rows of nails are required for depths

For Details A and B, when attaching any two plies

1-3/4" LYL together, half the nails may be driven from

For Detail A, when nails shorter than 3-1/2" are usl,

When driving nails from each face, alternate every over

For Details C and E, the larger side load should be

For Detail F, it is permissible to nail plies together

additional ply to each side. Finally, bolt as shown.

7" beams should not be loaded from one side only

Contact your LP Engineered Wood Products distributo

unless approved by a licensed professional.

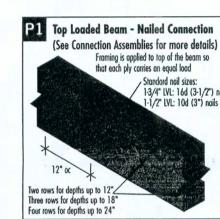
Other nail and bolt configurations are possible.

before bolting. Nail two plies together, then attach as

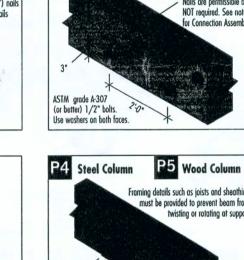
greater than 18", up to 24".

drive half the nails from each face.

applied to larger ply when possible.



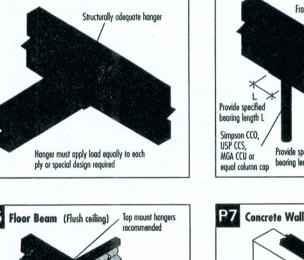
P3 Beam Connection

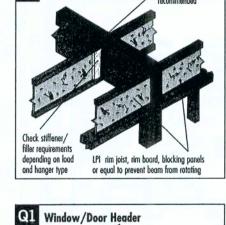


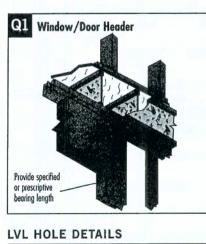
P2 Top Loaded Beam - Bolted Connection

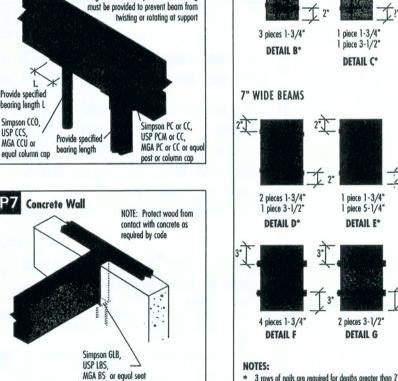
(See Connection Assemblies for more details)

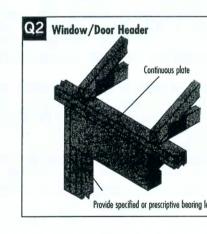
Framing is applied to top of the beam so that each ply carries an equal load













# Minimum 2 x diameter of larger hole

1. These guidelines apply to uniformly loaded beams selected from the Quick Reference Tables or

4. DO NOT drill holes in cantilevers without prior approval from the project engineer/architect. the Uniform Load Tables or designed with LP's design/specification software only. For all other applications, such as beams with concentrated loads, please contact your LP Engineered Wood

Products distributor for assistance. 2. Round holes can be drilled anywhere in "Area A" provided that: no more than four holes are cut, with the minimum spacing described in the diagram. The maximum hole size is 1-1/2" for depth, or a minimum of 3" from the bottom of the beam. For beams shallower than 9-1/4", depths up to 9-1/4", and 2" for depths greater than 9-1/4". Rectangular holes are NOT allowed.

### 5. Other hole sizes and configurations MAY be possible with further engineering analysis. For more information, contact your LP Engineered Wood Products distributor. Up to three 3/4" holes may be drilled in "Area B" to accommodate wiring and/or water lines. These holes must be at least 12" apart. The holes should be located in the middle third of the

### locate holes at mid-death. Protect plumbing holes from moisture.

### TEMPORARY BRACING

Floor Layout (Typical)

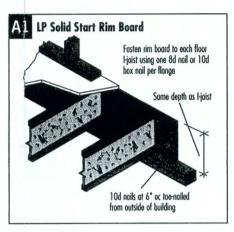
- Use at least 1"x 4" temporary bracing members nailed to each I-joist with two 8d nails.
- Keep them parallel and no more than 6'-0" apart for LPI 26' series and LPI (CTR) 150 series, 8'-0" apart for other LPI Joist series.
- · Use long pieces, not short blocks; lap the ends to keep a continuous line of bracing. • To prevent endwise movement of the continuous 1"x 4" lines of bracing, anchor them at the ends and at 25'-0" intervals into a stable end wall or an area braced by sheathing
- Remember, the continuous 1"x 4" bracing is not effective unless attached to the braced area. Use particular care removing temporary bracing when applying sheathing. Remove the bracing as the sheathing is attached.

### NOTES:

- · I-joists must be supported laterally at end bearing and cantilever.
- Unless specified, bridging or mid-span blocking is not required; however, it may enhance floor
- performance if used properly. Verify capacity and fastening of hangers
- and connectors. Some wind or seismic loads may require different or additional details and connections.

A4 Solid Blocking at Exterior Wall

### Floor Details



Bi Web Stiffeners at Interior Support

Cantilever Detail

8d rails at 6" oc both sides with nails staggered to avoid splitting

Interior Non-Stacking Load Reinforcing

Attach reinforcement to top and bottom flanges with 8d nails at 6" oc

Hanger Detail

rforcement one side,

does not support top flange

Web Filler: For hanger, install fillers tight to bottom flange. Filler behind hanger to be installed tight to top

flage for top-mount hangers (as shown) or tight to bottom flage for face-mount hangers. Provide web fillers

Filer Block: install with 1/8" minimum gap at top. Required full length of double I-joist; may be in

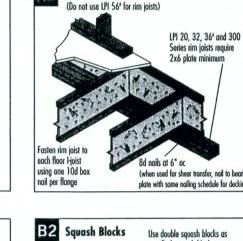
sections, minimum length 4'-0". Refer to E5 for detailed information.

Veily capacity and fastener requirements of hangers and connectors.

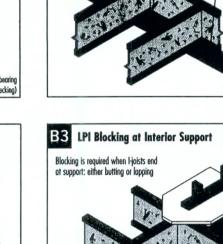
Use 10d for LPI 56<sup>a</sup> Hoists. Clinch when possible.

See I-Joist Filler Schedule for filler sizes.

Attach filler blocks and web fillers with 2 rows of 8d nails at 6" oc from each side.



C4 Cantilever Detail May be substituted for detail C2



rows of 8d nails

10d nails for LPI 56\*

See I-Joist Filler Schedule for

filler block and web filler sizes

• Connect double Hoists using 4' long filler blocks at each support and at

Provide 4' filler block at all concentrated loads. Center filler blocks on load.

• Fasten fillers through Hoist webs using two rows of 8d nails at 6" oc

Use 10d nails for LPI 564 series. Stagger rows and clinch when possible

Floor sheathing to be glued and nailed to flanges of both plies to provide

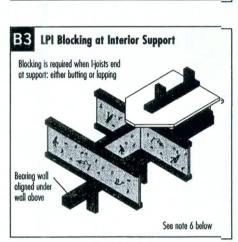
8' on-center, maximum.

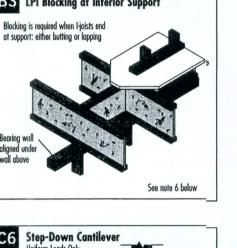
continuous lateral restraint for each ply.

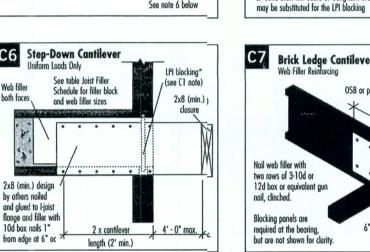
A3 LPI Blocking at Exterior Wall

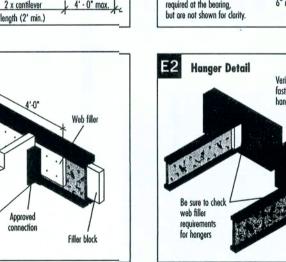
(when used for shear transfer

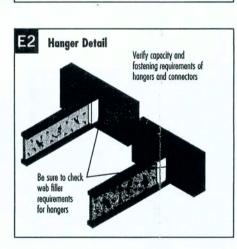
nail to bearing plate with sam

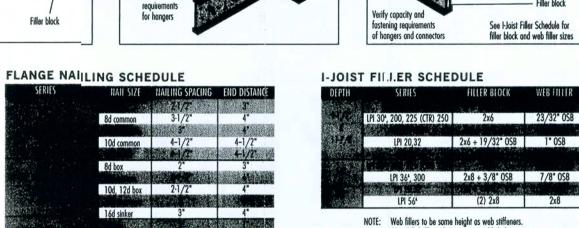












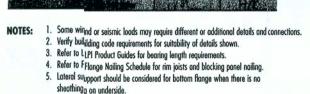
or #6x1-1/2" wood

screws into both flanges

Hanger Detail

It is recommended to use construction adhesive between surfaces.

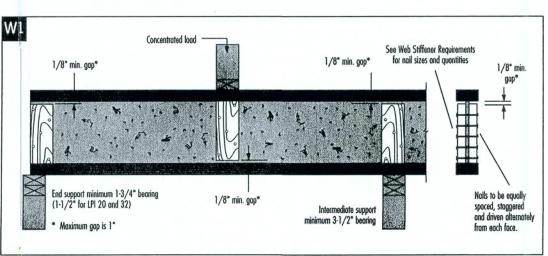
Blocking panels are required at the bearing, but are not shown for clarity.



### 5. Blocking is recommended, but not required, at interior bearing supports if there is no load-bearing wall above the bearing wall below. Verify capacity and fastening requirements of hangers and connectors. Squash block capacity designed by others. LPI 56<sup>4</sup> series rim joist requires special design.

WEB STIFFENER REQUIREMENTS

### eb Stiffener Details



### Web stiffeners, when required, must be inst;talled in pairs — one to each side of the web. Web stiffeners are allways required for the "Bird's Mouth" roof bearing detail. Web stiffeners should be cut to fit between the flanges of the ligist, leaving a minimum 1/8" gap (1" maximur<sub>u</sub>m). At bearing locations, the stiffeners should be installed tight to the boottom flange with the gap to

be installed tight to the top flange with the 3 gap to the bottom flange. Web stiffeners should be cut from APA-ratedd (or equal) OSB or plywood Do NOT use 1x lumber as it tends to split. 4. Web stiffeners should be the same width ass the bearing surface, with a minimum of 3-1/2". 5. See table to right for minimum stiffener thisickness, maximum stiffener height and required nailing.

the top flange. At locations of concentrated loads, the stiffeners should

# 23/32" 10-7/8" 8d, (2-1-2")

### Roof Layout (Typical)

### TEMPORARY BRACING

- Use at least 1"x 4" temporary bracing members nailed to each I-joist with two 8d nails.
- Keep them parallel and no more than 6'-0" apart for LPI 26' series and LPI (CTR) 150 series, 8'-0" apart for other LPI Joist series.
- Use long pieces, not short blocks, lap the ends to keep a continuous line of bracing. · To prevent endwise movement of the continuous 1"x 4" lines of bracing, anchor them
- at the ends and at 25'-0" intervals into a stable end wall or an area braced by sheathing or diagonal bracing. Remember, the continuous 1"x 4" bracing is not effective unless attached to
- the braced area.
- Use particular care removing temporary bracing when applying sheathing. Remove the bracing as the sheathing is attached.

### NOTES:

Temporary construction bracing is required

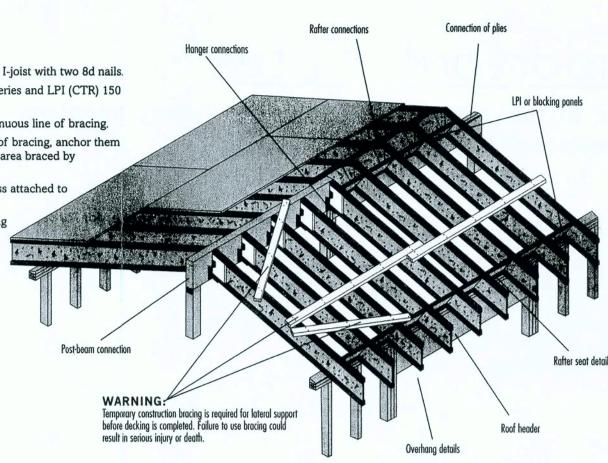
for lateral support before decking is completed.

Failure to use bracing could result in serious

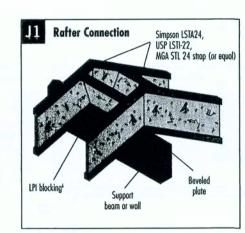
A5 Joist End Nailing

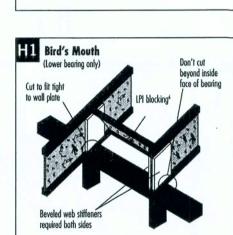
Use two 8d nails or

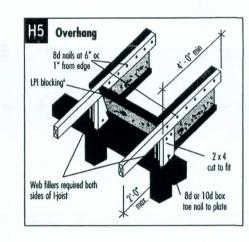
- · I-joists used as rafters must be laterally supported at end bearing and at cantilever support.
- Any fastening of member not detailed, such
- as uplift or seismic anchor, is subject to local approval and may require additional details
- and connections. Maximum slope: 12:12. Uplift anchors may be
- required. Verify capacity and fastening of hangers and connections.



### **Roof Details**







Web Hole Details

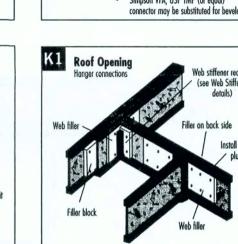
CLOSEST DISTANCE (X) - (FT - IN)

Up to a 1-1/2" diameter hole allowed anywhere in the web. Closest spacing 1'-0" oc

Closest distance (x) to centerline of round hole

FROM EITHER BEARING

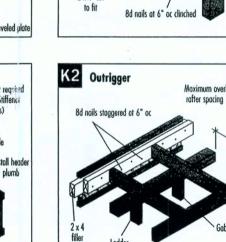
LPI 30', 200, 225, (CTR) 250 2'-9" 3'-8" 4'-7" 5'-7" 6'-11"



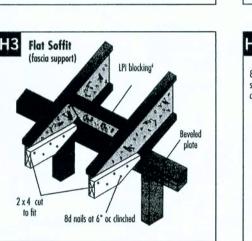
Warning: Do NOT cut or notch flanges.

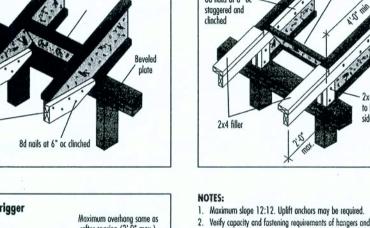
Uncut length of web between adjacent holes must be

J2 Rafter Connection with Fitted OSB Gusset



3 Ridge Rafter Connection





Uncut length of web between adjacent holes must be

of square or rectangular hole

FROM EITHER BEARING

1. CUT HOLES CAREFULLY! DO NOT OVERCUT HOLES!

2. Square and rectangular holes must be centered at mid-height of the web.

4. Round holes up to 1-1/2" diameter, including the perforated "knockouts"

Holes larger than 1-1/2" are not permitted in cantilevers.

3. Round holes need not be placed at mid-height. A minimum 1/2" clear distance

6. Multiple holes must have a clear separation along the length of the joist of at

least twice the largest dimension of the adjacent hole(s), or a minimum of 12"

Multiple holes may be spaced closer provided they fit within the boundary of an

acceptable larger hole. Example: two 3" round holes may be spaced 2" apart (clear distance) provided that a 3" high by 8" long rectangular hole, or an 8" diameter round hole are acceptable for the joist depth at that location.

. These web hole tables are valid for simple and continuous span joists with uniform loads only, as sized from the tables contained in LP's current l-joist

product guides. Larger holes, non-uniform loading conditions and/or closer

proximity to supports may be possible, but require further analysis using LP's design software. Please contact your local LP Engineered Wood Products

DO NOT CUT JOIST FLANGES!

Round the corners where possible.

may be cut anywhere in the web.

center-to-center whichever is greater.

distributor for more details.

is required between the hole and the flange.

### . Maximum slope 12:12. Uplift anchors may be required. Verify capacity and fastening requirements of hangers and connectors The I-joist flange may be a bird's mouth cut only at the low end of

- the Hoist. Bird's mouth cut must not overhang the inside face of bearing plate. The I-joist must bear fully on plate. Some wind or seismic loads may require different or additional details 4" diameter hole(s) may be cut in blocking for ventilation.
- Lateral resistance must be provided. Other methods of restraint, such as full depth Solid Start OSB rim board and Gang-Lam LVL, or metal X-bracing may be substituted for the LPI blocking shown.

# R6 DON'T





P is a registered trademark of Louisiana-Pacific Corporation. APA is a registered trademark of The APA – The Engineered Wood Customer Service and Product Technical Support: 1.800.999.9105 E-mail: customer.support@lpcorp.com NOTE: Louisiana-Pacific Corporation periodically updates and revises its product information. To verify that this version is current, contact the sales offices. Visit our web site at www.lpcorp.com Louisiana-Pacific Corporation 2003. All rights reserved. Printed in USA. W 50M

Warnings

The following conditions

are NOT permitted!

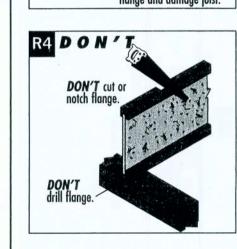
Do not use visually damaged products without first checking with your local

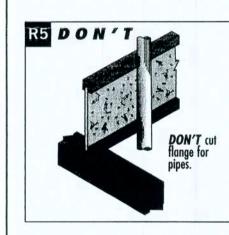
LP Engineered Wood Products

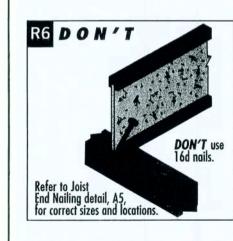
distributor or sales office.

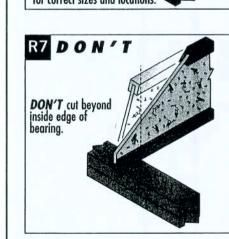


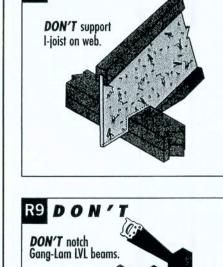










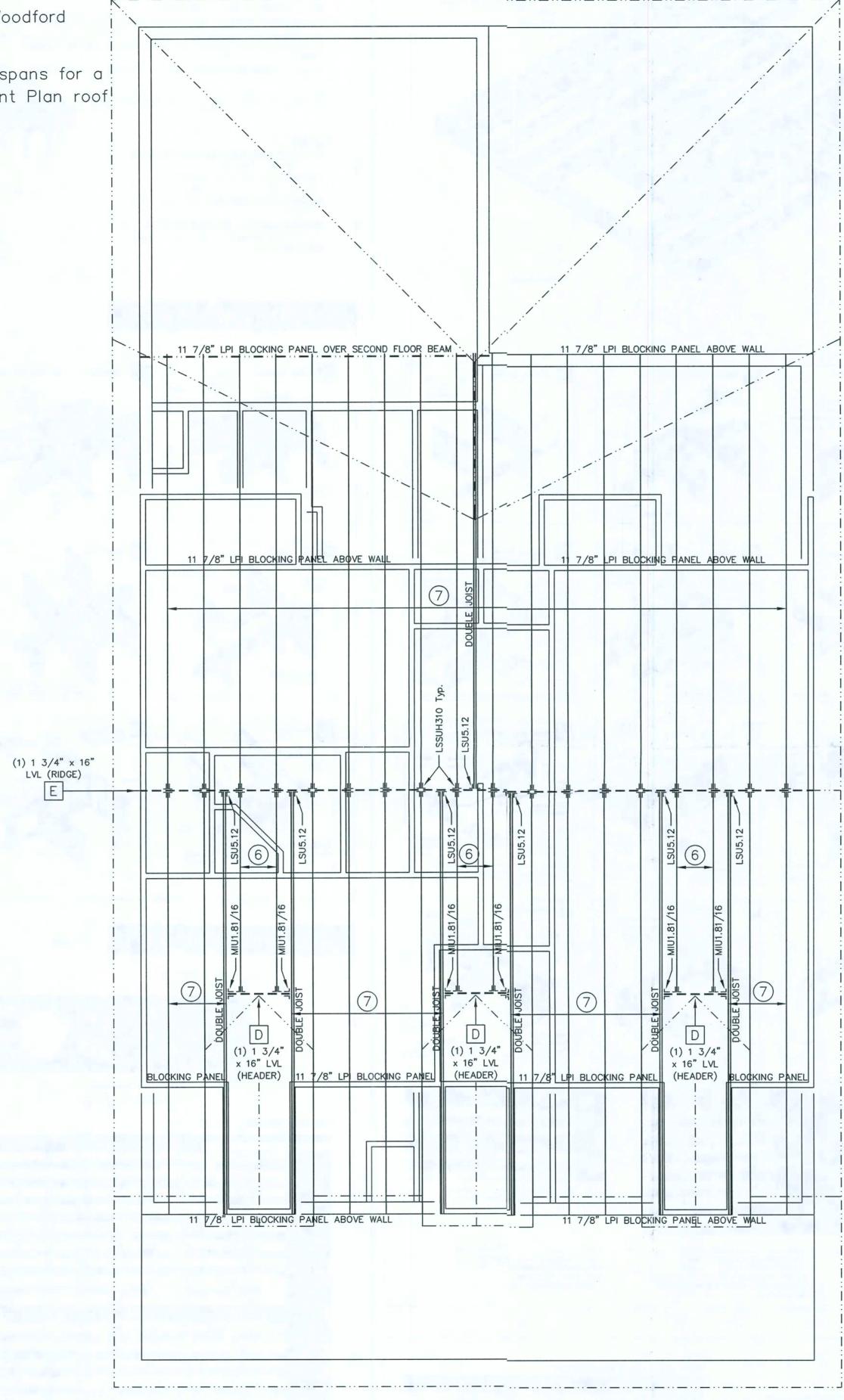






1. Upon final approval of this plan, the supplier must notify Woodford Plywood, Inc. so seals can begin being processesd.

2. Beam E requires additional bearing at mid-span of longer spans for a single LVL to support the load. See Ceiling Beam Placement Plan roof! load markers for popper placement of posts or supports.



ROOF JOIST PLACEMENT PLAN

Mark	QTY.	Material List	0.C.
		I Joists	
6	6	LPI-20 Plus x 11-7/8" x 16'-0"	24"
7	44	LPI-20 Plus x 11-7/8" x 32'-0"	24" 24"
		LVL'S(2650F <sub>b</sub> -1.9 <sub>e</sub> )  1 3/4" x 16" x 4'-0"  1 3/4" x 16" x 37'-0"	
D	3	1 3/4" x 16" x 4'-0"	
Е	1	1 3/4" x 16" x 37'-0"	
		Hangers	
17	42	LSSUH310	
	7	LSU5.12	
	6	MIU1.81/16	
	Calendary 1		
		Blocking Panel	
	142 LF	11-7/8" (Random Lengths)	
1		tel conservation of	
			and at
		-	- 111
			111111111111111111111111111111111111111
			314.0
	3111		
		well many	
		Shire and the Full Inches	

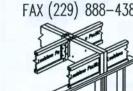
## WOODFORD PLYWOOD, INC

"Structural Wood Products"

1504 S. MOCK RD. : P.O. BOX 50007







### NOTICE:

THIS PLACEMENT PLAN IS OFFERED AS A SALES PRESENTATION AND HAS NOT BEEN REVIEWED OR APPROVED BY AN ENGINEER. NO STRUCTURAL ANALYSIS HAS BEEN MADE OF SEISMIC. LATERAL, SHEAR, STACKING, OR OTHER FORCES WHICH MAY ACT ON THESE COMPONENTS, THEREFORE THE USE OF THESE

### PRODUCTS SHALL BE SPECIFIED BY " THE DESIGNER OF THE COMPLETE STRUCTURE ".

DEALER SALES REPRESENTATIVE SHALL CHECK AND CONFIRM ALL LENGTHS, TALLIES, SERIES, AND DEPTH INFORMATION WITH CONTRACTOR PRIOR TO PLACING ORDER FOR MATERIALS. THIS PLACEMENT PLAN IS

PRELIMINARY AND NOT A CONSTRUCTION DOCUMENT. . THE LOAD BEARING WALLS, POSTS, AND/OR PIERS ON THIS PLACEMENT PLAN ARE NECESSARY FOR THE PROPER INSTALLATION OF YOUR STRUCTURAL WOOD PRODUCTS. PLEASE NOTIFY VOODFORD TECHNICAL DEPT. IN WRITING OF ANY CHANGES IN BEARING LOCATIONS. THE DESIGN OF BEARING LOCATIONS IS THE SOLE RESPONSIBILITY OF THE DESIGNER OF THE COMPLETE STRUCTURE.

3. ALL METAL CONNECTORS SPECIFIED ARE TO BE SIMPSON STRONG-TIE CO., INC. OR EQUAL. ALL HANGERS AND CONNECTORS IN CONTACT WITH WITH PRESSURE TREATED WOOD MUST BE REVIEWED BY THE CONTRACTOR, PRESSURE TREATED WOOD AND HANGER MANUFACTURER TO INSURE PROPER COATINGS ON HANGERS, CONNECTORS AND ATTACHMENT

4. SINDICATES UNIFORM OR CONCENTRATED ROOF BRACING LOCATIONS OTHERWISE, ALL ROOF BRACE LOADS SHALL BE TRANSFERRED TO FIRST FLOOR WALLS AND NOT TO FLOOR JOISTS.

5. I-JOIST SPACED 24"o.c. SHALL HAVE ADEQUATE SUBFLOOR TO INSURE STIFFNESS BETWEEN JOIST. 6. LATERAL BRACING IS REQUIRED ALONG BOTTOM FLANGES OF I-JOIST AT 8'-0"o.c. IF RIGID SHEATHING IS NOT APPLIED.

### LEGEND

ROOF LOAD =::==WALL ABOVE = WALL BELOW ——— =I−JOIST = JOIST MARKER ٦Γ =HANGER =BEAM MARKER A =DETAIL MARK

cusтомек: <u>Mayo\_Truss\_Company</u>\_\_\_

| | REV.2 \_ \_ \_ | DATE: <u>3/28/06</u> | DESCRIPTION: <u>Roof\_Plan\_\_\_\_</u>  $||REV.3 - - - ||DRAWN BY: JCW|| W/F# 6048 _ _ _ _$ 



### Handling & Installation Recommendations Gang Limi TVI Beams Note: For position trength and spain information

ilease consult specific product brochures. Lo

application with I-joist deptis over 16", pica-

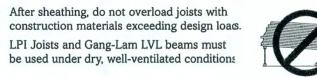
consult the LPI 36/56 Product Guide.

### **Important Notes**

WARNING: Failure to follow good procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.

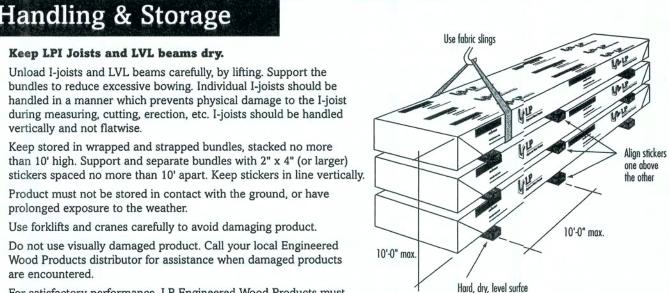
These instructions are offered as a guide to good practice in the handling, storage and installation of LPI Joists and Gang-Lam LVL beams. They are, however, solely general recommendations and, in some instances, other or additional precautions may be desirable. In all cases, the procedures used should be as specified by the architect/engineer responsible • LPI Joists and Gang-Lam LVL beams must for the entire building.

- This is not intended as a manual for selecting products and assumes that components and details have ben specified correctly. Consult the LPI Joist and Gang-Lam LVL brichures or contact your
- LP Engineered Wood Products distributor for assistance. All rim joists, blocking, connections and temorary bracing must be installed before erectors are allowed on the sructure.
- · No loads other than the weight of the erectos are to be imposed on the structure before it is permanently shethed. After sheathing, do not overload joists with construction materials exceeding design loas.



### **Handling & Storage**

- Keep LPI Joists and LVL beams dry.
- · Unload I-joists and LVL beams carefully, by lifting. Support the bundles to reduce excessive bowing. Individual I-joists should be handled in a manner which prevents physical damage to the I-joist during measuring, cutting, erection, etc. I-joists should be handled vertically and not flatwise.
- Keep stored in wrapped and strapped bundles, stacked no more than 10' high. Support and separate bundles with 2" x 4" (or larger) stickers spaced no more than 10' apart. Keep stickers in line vertically.
- Product must not be stored in contact with the ground, or have prolonged exposure to the weather.
- Use forklifts and cranes carefully to avoid damaging product. Do not use visually damaged product. Call your local Engineered
- are encountered. · For satisfactory performance, LP Engineered Wood Products must
- be used under dry, well-ventilated conditions.



### Gang-Lam LVL Details

Connections and fastenings shown below re typical for top loaded beams (where framing is applied on top ofbeam so that each ply carries an equal load). Additional nails and or bolts may be required for other load conditions.

CONNECTION ASSEMBLIES

3-1/2" WID BEAMS

5-1/4" WIDI BEAMS

DETAILS\*

7" WIDE BEMS

DETAIL

1 piece 3-1/2"

DETAIL E\*

DETAIL G

\* 3 rows of not are required for depths greater than 12

up to 18". Fcr rows of nails are required for depths For Details Aind B, when attaching any two plies of

1-3/4" LVL tzether, half the nails may be driven from

For Detail A, then nails shorter than 3-1/2" are used,

When driving ails from each face, alternate every other

For Details C nd E, the larger side load should be

For Detail F, is permissible to nail plies together

additional plya each side. Finally, bolt as shown.

7" bearns sheld not be loaded from one side only

Contact your ? Engineered Wood Products distributor.

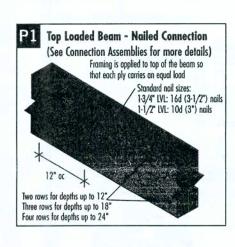
unless approve by a licensed professional.

Other nail and olt configurations are possible.

before bolting Nail two plies together, then attach one

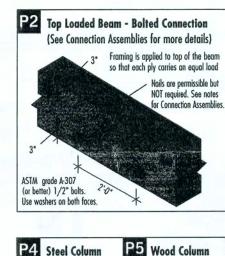
drive half therails from each face.

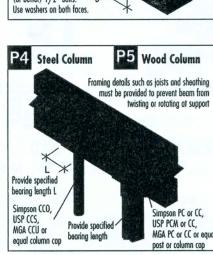
applied to larer ply when possible.

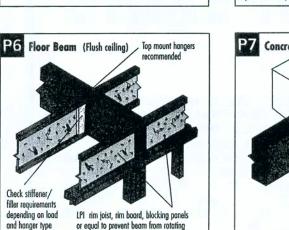


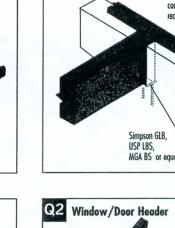
**PS** Beam Connection

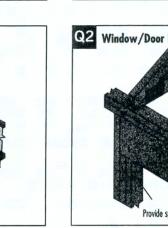
CI Window/Door Header

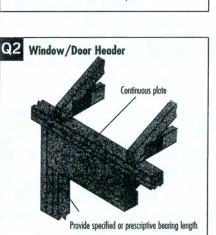


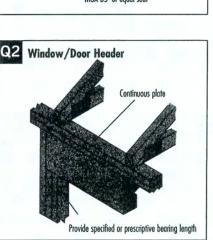


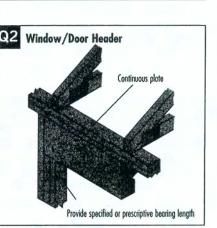


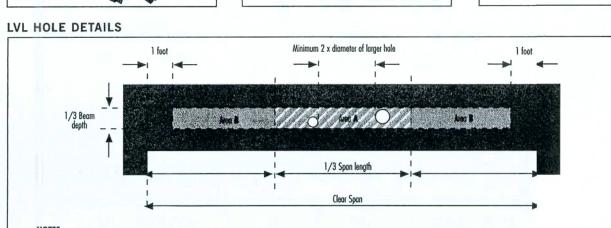












1. These guidelines apply to uniformly loaded beams selected from the Quick Reference Tables or 4. DO NOT drill holes in cantilevers without prior approval from th project engineer/architect. the Uniform Load Tables or designed with LP's design/specification software only. For all other 5. Other hole sizes and configurations MAY be possible with furth engineering analysis. For more applications, such as beams with concentrated loads, please contact your LP Engineered Wood

information, contact your LP Engineered Wood Products distribut. 6. Up to three 3/4" holes may be drilled in "Area B" to accommidate wiring and/or water lines. 2. Round holes can be drilled anywhere in "Area A" provided that: no more than four holes are cut, These holes must be at least 12" apart. The holes should be leated in the middle third of the with the minimum spacing described in the diagram. The maximum hole size is 1-1/2" for depth, or a minimum of 3" from the bottom of the beam. For earns shallower than 9-1/4", depths up to 9-1/4", and 2" for depths greater than 9-1/4". locate holes at mid-depth. Rectangular holes are NOT allowed. 7. Protect plumbing holes from moisture.

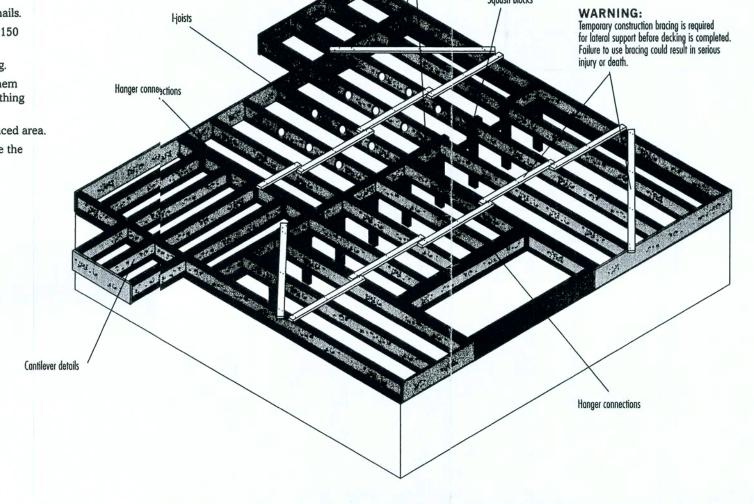
### TEMPORARY BRACING

Floor Layout (Typical)

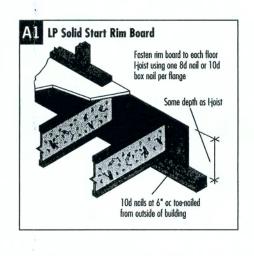
- Use at least 1"x 4" temporary bracing members nailed to each I-joist with two 8d nails. Keep them parallel and no more than 6'-0" apart for LPI 26<sup>h</sup> series and LPI (CTR) 150 series, 8'-0" apart for other LPI Joist series.
- · Use long pieces, not short blocks; lap the ends to keep a continuous line of bracing. • To prevent endwise movement of the continuous 1"x 4" lines of bracing, anchor them at the ends and at 25'-0" intervals into a stable end wall or an area braced by sheathing
- Remember, the continuous 1"x 4" bracing is not effective unless attached to the braced area. Use particular care removing temporary bracing when applying sheathing. Remove the bracing as the sheathing is attached.

### NOTES:

- I-joists must be supported laterally at end
- bearing and cantilever. Unless specified, bridging or mid-span blocking is not required; however, it may enhance floor
- performance if used properly. Verify capacity and fastening of hangers
- Some wind or seismic loads may require different or additional details and connections.



### Floor Details



BI Web Stiffeners at Interior Support

Check stiffener requirements (see Web Stiffener detail)

Attach reinforcement to top and bottom flanges wi

Attach reinforcement to top and bottom flanges with 8d nails at 6" oc

Hanger Detail

both sides of a single 1-joist header.

See I-Joist Filler Schedule for filler sizes.



to top and bottom flanges with 8d nails at 6" oc

Use double squash blocks as



2x8 (min.) design /

lange and filler with

from edge at 6" oc 7

Stair Stringer

rows of 8d nails

from each side. Use 10d nails for LPI 56\*

See I-Joist Filler Schedule for

filler block and web filler sizes

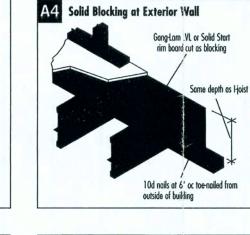
Provide 4' filler block at all concentrated loads. Center filler blocks on load.

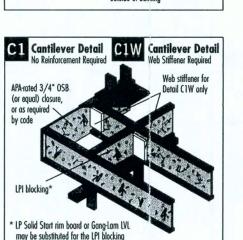
Fasten fillers through Hoist webs using two rows of 8d nails at 6" oc

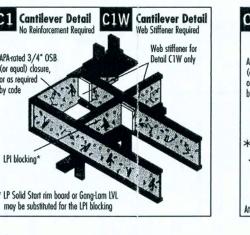
Use 10d nails for LPI 564 series. Stagger rows and clinch when possible.

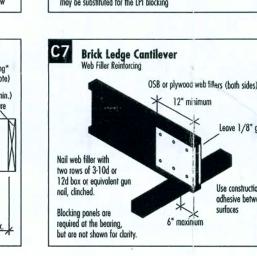
Floor sheathing to be glued and nailed to flanges of both plies to provide

continuous lateral restraint for each ply.

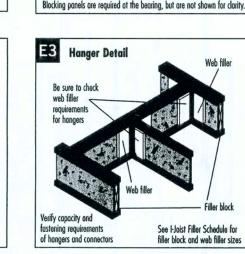












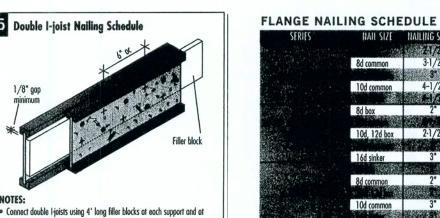
It is recommended to use construction adhesive between surfaces.

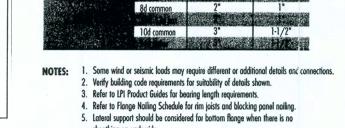
or #6x1-1/2" wood

screws into both flanges

A5 Joist End Nailing

Use two 8d nails or





### I-JOIST FILLER SCHEDULE LPI 30°, 200, 225 (CTR) 250 2x6 23/32" OSB LPI 20,32 2x6 + 19/32" OSB 1" OSB LPI 36\*, 300 2x8 + 3/8" OSB 7/8" OSB NOTE: Web fillers to be some height as web stiffeners. See Web Stiffener Requirements table below.

Blocking is recommended, but not required, at interior bearing supports if there is no load-bearing wall above the bearing wall below. Verify capacity and fastening requirements of hangers and connectors. 8. Squash block capacity designed by others. 9. LPI 564 series rim joist requires special design.

# Web Stiffener Details

sections, minimum length 4'-0". Refer to E5 for detailed information

Verify capacity and fastener requirements of hangers and connectors.

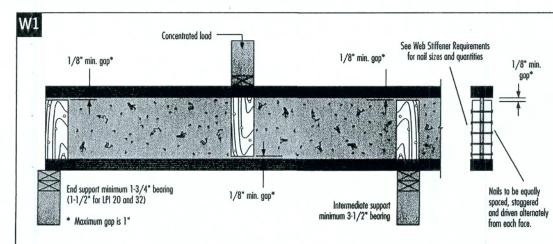
Attach filler blocks and web fillers with 2 rows of 8d nails at 6" oc from each side.

Web filler is required if hange does not support top flange

Web Filler: For hanger, install fillers tight to bottom flange. Filler behind hanger to be installed tight to top

Filler Block: install with 1/8" minimum gap at top. Required full length of double 1-joist; may be in

flunge for top-mount hangers (as shown) or tight to bottom flunge for face-mount hangers. Provide web fillers

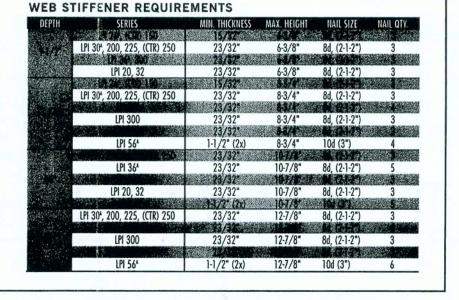


1. Web stiffeners, when required, must be installed in pairs - one to each! side of the web. Web stiffeners are always required for the "Bird'I's Mouth" roof bearing detail. 2. Web stiffeners should be cut to fit between the flanges of the Lijoist, leaving a minimum 1/8" gap (1" maximum). At bearing locations, the stittenners should be installed tight to the bottom flange with the gap to the toop flange. At locations of concentrated loads, the stiffeners should be installed tight to the top flange with the gap to the bottom flange. . Web s stiffeners should be cut from APA-rated (or equal) OSB or plywood. Do NCOT use 1x lumber as it tends to split. Web s stiffeners should be the same width as the bearing surface,

5. See taable to right for minimum stiffener thickness, maximum stiffener

with an minimum of 3-1/2".

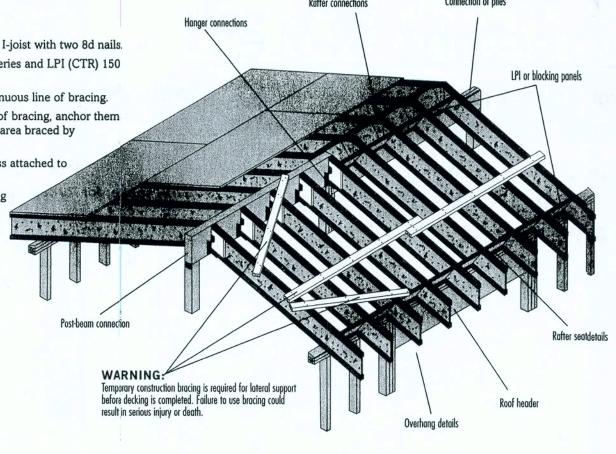
height and required nailing.



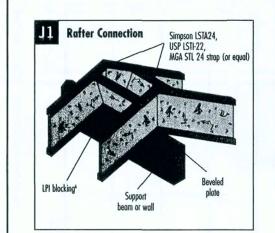
## Roof Layout (Typical)

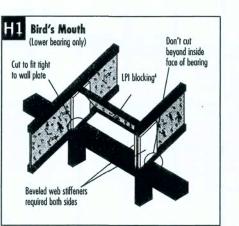
- **TEMPORARY BRACING** • Use at least 1"x 4" temporary bracing members nailed to each I-joist with two 8d nails. Keep them parallel and no more than 6'-0" apart for LPI 26<sup>A</sup> series and LPI (CTR) 150
- series, 8'-0" apart for other LPI Joist series. Use long pieces, not short blocks, lap the ends to keep a continuous line of bracing. • To prevent endwise movement of the continuous 1"x 4" lines of bracing, anchor them
- at the ends and at 25'-0" intervals into a stable end wall or an area braced by sheathing or diagonal bracing. Remember, the continuous 1"x 4" bracing is not effective unless attached to
- the braced area.
- Use particular care removing temporary bracing when applying sheathing. Remove the bracing as the sheathing is attached.

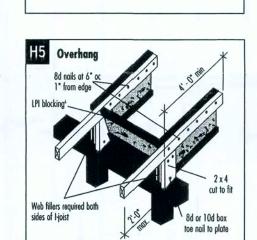
- · I-joists used as rafters must be laterally supported
- at end bearing and at cantilever support. Any fastening of member not detailed, such
- as uplift or seismic anchor, is subject to local approval and may require additional details and connections.
- Maximum slope: 12:12. Uplift anchors may be required. Verify capacity and fastening of hangers
- and connections.



### **Roof Details**







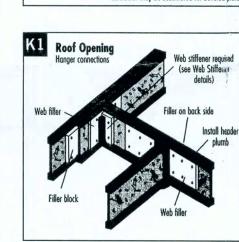
Web Hole Details

CLOSEST DISTANCE (X) - (FT - IN)

in the web. Closest spacing 1'-0" oc

Closest distance (x) to centerline of round hole

FROM EITHER BEARING

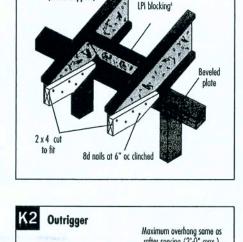


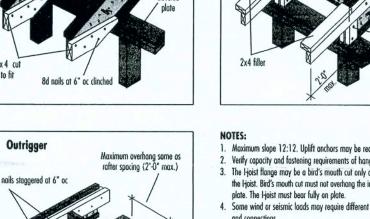
Warning: Do NOT cut or notch flanges.

Uncut length of well between adjacent holes must be

twice the length of the larger hole dimension

Rafter Connection with Fitted OSB Gusset





Uncut length of web between adjacent holes must be

twice the length of the larger hole dimension

Closest distance (x) to edge

of square or rectangular hole

FROM EITHER BEARING

1. CUT HOLES CAREFULLY! DO NOT OVERCUT HOLES!

2. Square and rectangular holes must be centered at mid-height of the we.

4. Round holes up to 1-1/2" diameter, including the perforated "knockous",

3. Round holes need not be placed at mid-height. A minimum 1/2" clear listance

Multiple holes must have a clear separation along the length of the jois of at

least twice the largest dimension of the adjacent hole(s), or a minimum of 12"

7. Multiple holes may be spaced closer provided they fit within the boundry of an acceptable larger hole. Example: two 3" round holes may be spaced 2'apart (clear distance) provided that a 3" high by 8" long rectangular hole, oran 8"

diameter round hole are acceptable for the joist depth at that location.

8. These web hole tables are valid for simple and continuous span joists wth

uniform loads only, as sized from the tables contained in LP's current l-jist

product guides. Larger holes, non-uniform loading conditions and/or claer

proximity to supports may be possible, but require further analysis using LP's design software. Please contact your local LP Engineered Wood Product

DO NOT CUT JOIST FLANGES!

Round the corners where possible.

may be cut anywhere in the web.

center-to-center whichever is greater.

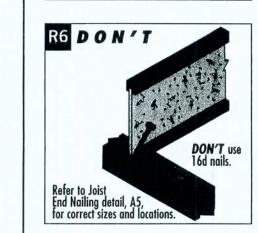
distributor for more details.

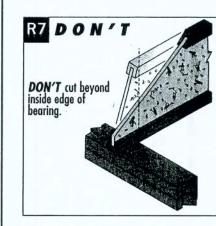
is required between the hole and the flange.

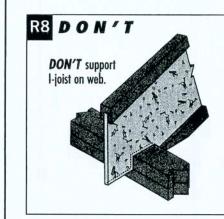
Holes larger than 1-1/2" are not permitted in cantilevers.

. Maximum slope 12:12. Uplift anchors may be required. Verify capacity and fastening requirements of hangers and conectors. . The I-joist flange may be a bird's mouth cut only at the low erd of the Hoist. Bird's mouth cut must not overhang the inside face of rearing Some wind or seismic loads may require different or additiona detail and connections. 4" diameter hole(s) may be cut in blacking for ventilation. Lateral resistance must be provided. Other methods of restrain, such as full depth Solid Start OSB rim board and Gang-Lam LVL, or meal

# X-bracing may be substituted for the LPI blocking shown.









Customer Service and Product Technical Support: 1.800.999.9105 E-mail: customer.support@lpcorp.com

Visit our web site at www.lpcorp.com

LPI 30<sup>4</sup>, 200, 225, (CTR) 250 | 2<sup>1</sup>-9" 3<sup>1</sup>-8" 4<sup>1</sup>-7" 5<sup>1</sup>-7" 6<sup>1</sup>

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Warnings

The following conditions are NOT permitted!

Do not use visually damaged products without first checking with your local LP Engineered Wood Products distributor or sales office.





