

TOWN OF THOMSON CARLTON COUNTY - 25 HARNEY ROAD EAST PO BOX 92
ESKO, MN 55733 - (218)879-9719

FOR ALL INSPECTIONS:

Properties SOUTH of Harney Rd-Call Matt Munter
(218) 391-3745 OR (218) 879-9719 EXT 3505
MMunter@TownOfThomsonMN.gov

Properties NORTH of Harney Rd-Call Adam Schminski
(218) 721-8115 ASchminski@TownOfThomsonMN.GOV

NEW DECK

A building permit is needed for all decks **over 30"** in height
AND all decks attached to the home regardless of height.

The following items MUST BE INDICATED on the plan pages before submitting for review. Verify ALL items that apply are on your plans, then sign, date, and return the checklist.

1. Two Copies of Deck Plan:

Deck Specification Sheet

2. Site Plan

- Show Entire Parcel With North/South Directional, Roadways, Driveway Access, Easements, Etc.
- Show Setbacks from ALL property lines.
- Show Deck Placement on Home.
- Show all Existing Structures in addition to New Structures
- Show all Waterways on the property

3. Additional Items that must be included with the plans

- Carlton County Zoning approval for Waterways or Township Variance Approval
- Building Permit Application
- Application for Zoning Certification

Incomplete applications will not be accepted for plan review. Plan review begins when complete applications and plans are submitted.

Please allow a minimum of two weeks for plan review after submittal.

I have looked through the plan and confirmed that all the above information is indicated on the pages being submitted.

Signature

Print Name

Date: _____

TOWN OF THOMSON

Application for Zoning Certification

1. Applicant: Name: _____
Address: _____
Telephone Number: _____

2. Activity Proposed: _____

3. Location of property which activity is to be conducted on: _____

4. Attach plat plan showing the location, dimensions and nature of any structure involved, including set backs from property lines.

5. The undersigned does hereby make application for a Zoning Certificate for the activity Described herein. The undersigned has received and/or has reviewed in the Town office a copy of the Town of Thomson's Zoning Ordinance. The Town of Thomson relies on the undersigned's representations and does not waive the enforceability of the Zoning Ordinance in the event that errors, omissions or otherwise result in a non-conforming structure, use or activity. The Undersigned shall be liable and responsible for all costs and expenses necessary for the proposed activity in final or completed state to comply with the Zoning Ordinance, including but not limited to costs of dismantling and/or relocating structures in some instances.

The undersigned is aware of the right and opportunity to employ licensed professionals such as registered surveyors, registered architects and/or contractors, to ensure the proposed activity complies with the Zoning Ordinance.

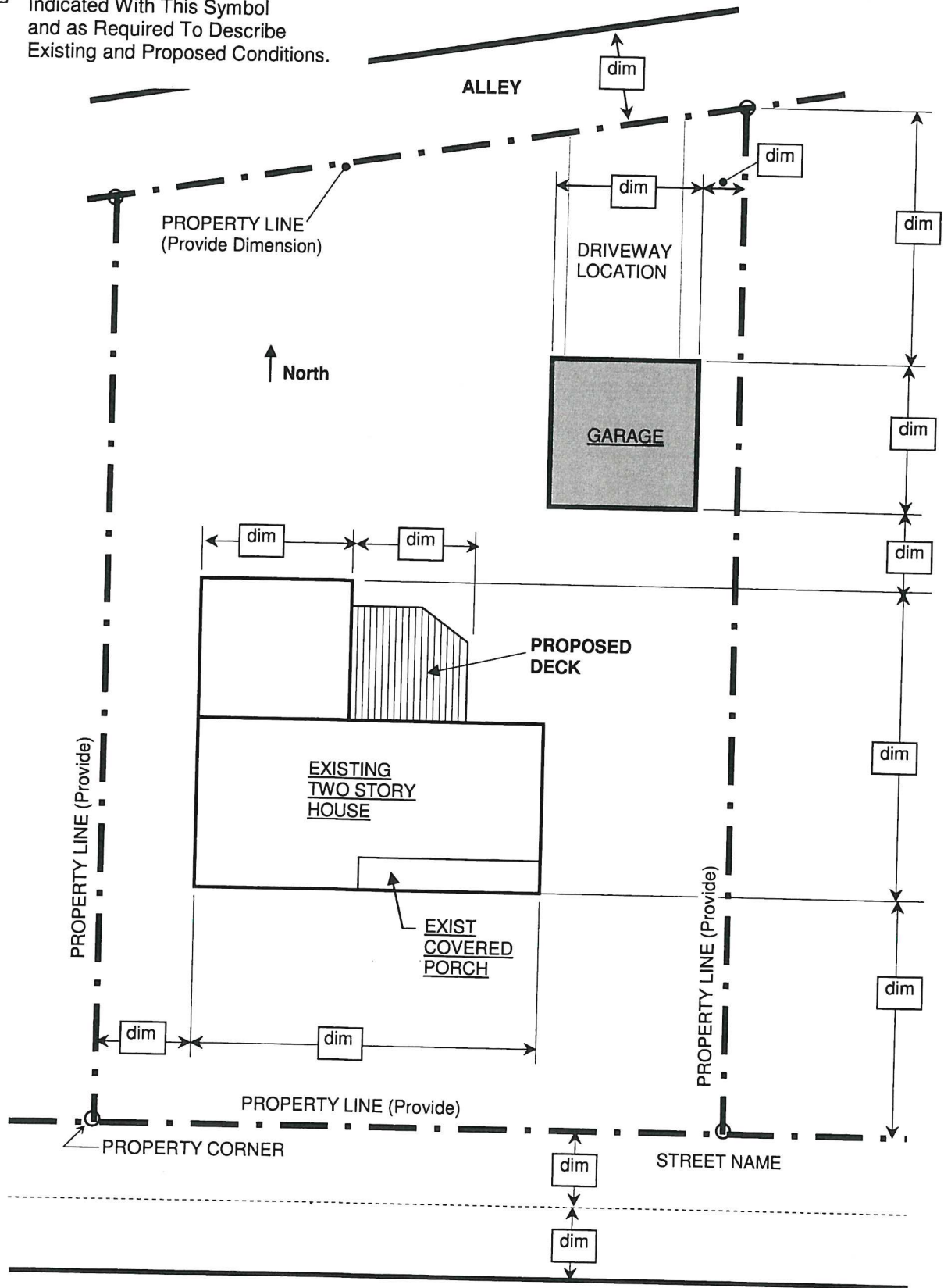
Dated the _____ day of _____, 20 _____

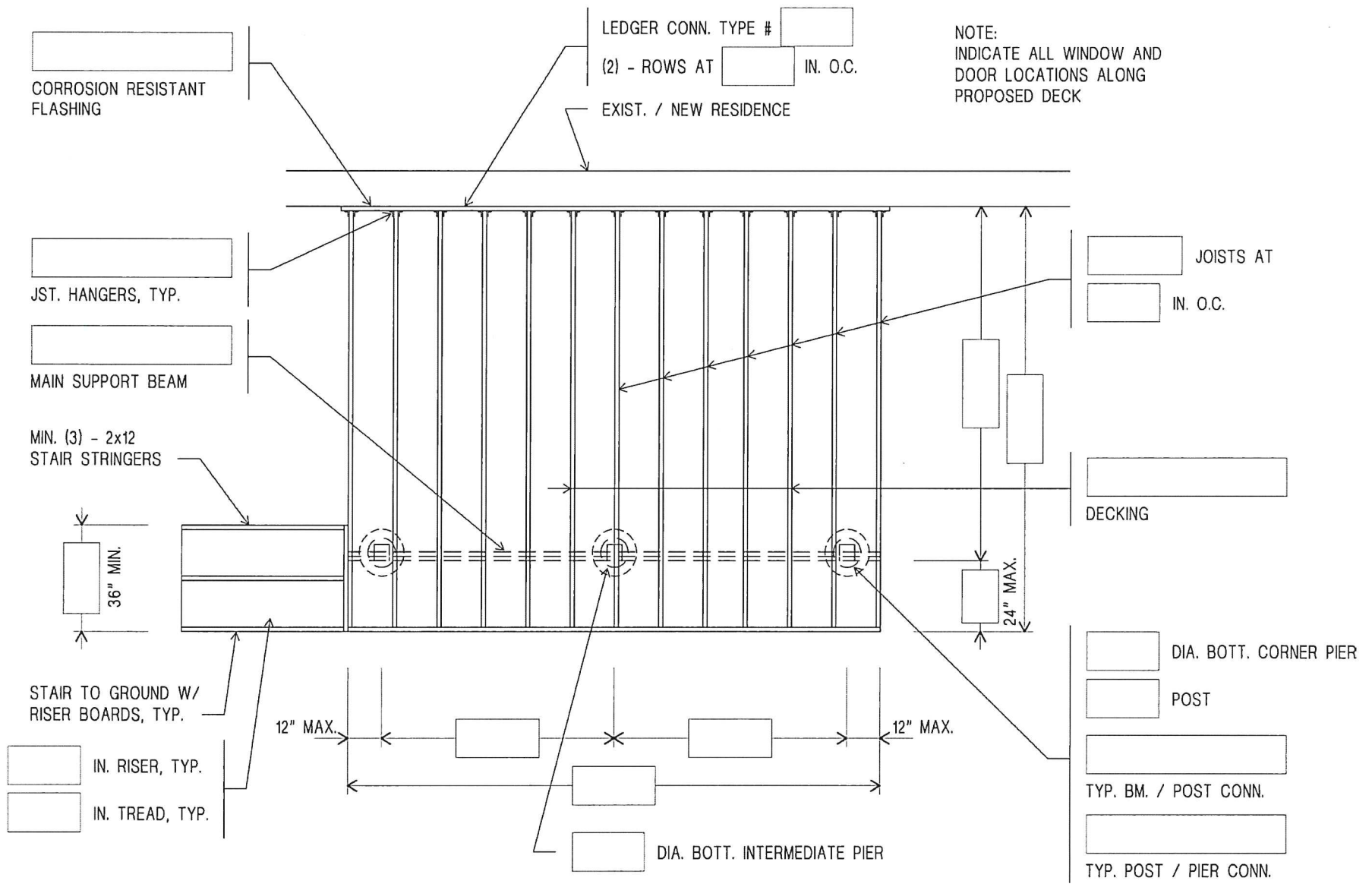
Applicant

Sample Site Plan

Don't use this sheet-create your own drawing.
SCALE: 1" = _____ FEET

dim Provide Dimensions Where Indicated With This Symbol and as Required To Describe Existing and Proposed Conditions.



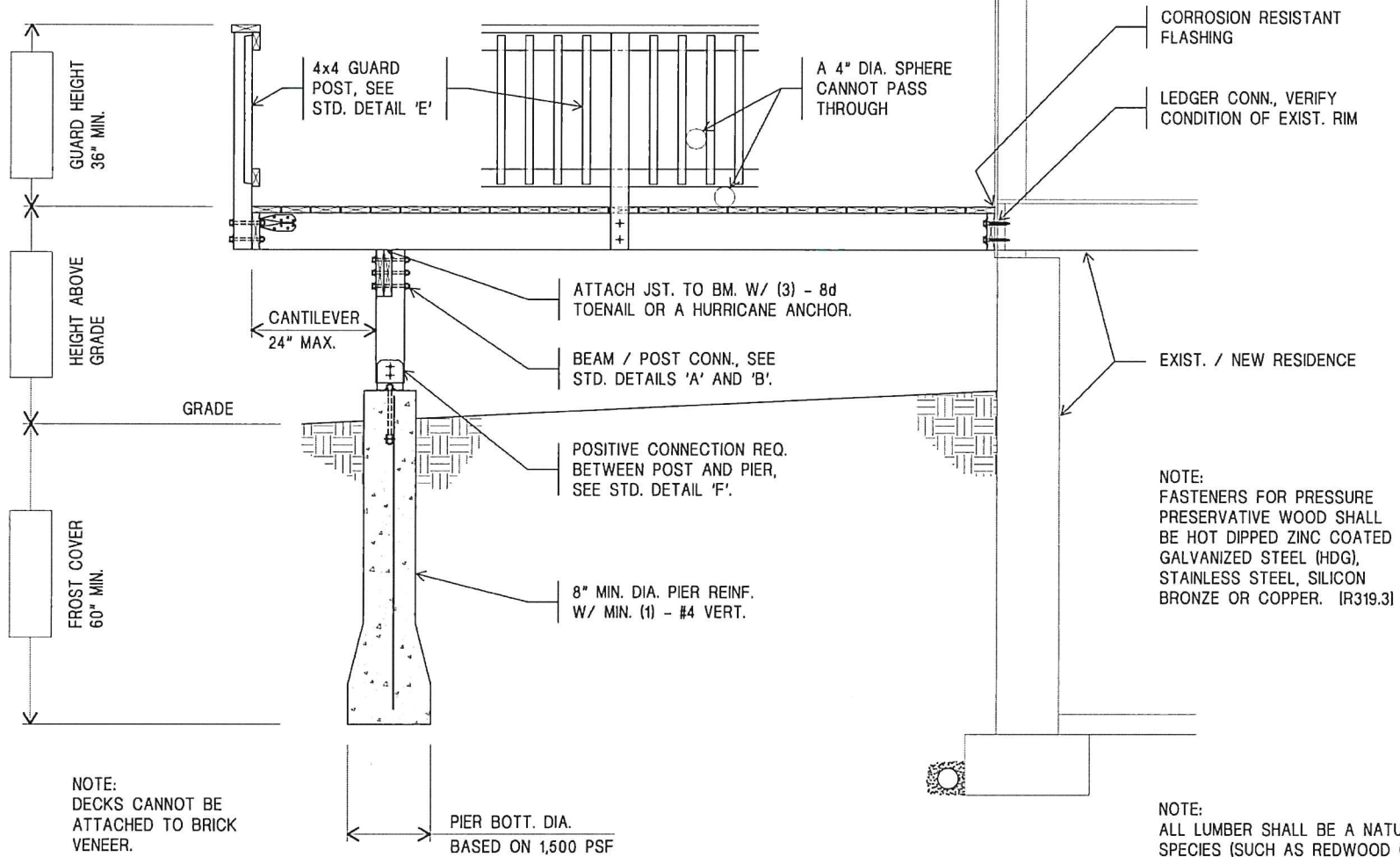


1 DECK PLAN
NOT TO SCALE

NOTE:
FILL IN ALL BOXES

NOTE:
 WHERE SUPPORTED BY ATTACHMENT TO AN EXTERIOR WALL, DECKS SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE AND DESIGNED FOR BOTH VERTICAL AND LATERAL LOADS AS APPLICABLE. SUCH ATTACHMENT SHALL NOT BE ACCOMPLISHED BY THE USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL. WHERE POSITIVE CONNECTION TO THE PRIMARY STRUCTURE CANNOT BE VERIFIED DURING INSPECTION, DECKS SHALL BE SELF-SUPPORTING. (R502.2.2)

NOTE:
 GUARDS ARE REQ. FOR DECKS W/ SURFACES LOCATED MORE THAN 30" ABOVE THE GRADE BELOW. (R312.1)



NOTE:
 DECKS CANNOT BE ATTACHED TO BRICK VENEER.

NOTE:
 FILL IN ALL BOXES



2 DECK SECTION -
 NOT TO SCALE

NOTE:
 FASTENERS FOR PRESSURE PRESERVATIVE WOOD SHALL BE HOT DIPPED ZINC COATED GALVANIZED STEEL (HDG), STAINLESS STEEL, SILICON BRONZE OR COPPER. (R319.3)

NOTE:
 ALL LUMBER SHALL BE A NATURALLY DURABLE SPECIES (SUCH AS REDWOOD OR WESTERN CEDARS) OR BE PRESSURE TREATED WITH AN APPROVED PROCESS AND PRESERVATIVE IN ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATION STANDARDS (TABLE 1) (R319.1 AND R320.1). ALL LUMBER IN CONTACT WITH THE GROUND SHALL BE APPROVED PRESERVATIVE TREATED WOOD SUITABLE FOR GROUND CONTACT. (R319.1.2)

Residential Decks

One and Two Family Dwellings Including Townhouses

Building Permits: A permit is required if the deck is attached to the dwelling or is 30" (or more) above grade. A building permit application must be completed and submitted to Construction Services. Allow a minimum of 3 business days for review of the plans. You will be contacted when the building permit is ready to be issued. Cost of the permit is based upon the size of the deck. With your permit you will receive a copy of your approved plan. Please be aware that if you later decide to make changes to your plan, these changes must also be approved.

A Permit Application Checklist outlining all application requirements is provided within this handout (2nd page from back) and must be completed and submitted with your application. See pages within for sample Site Plans, Ledger Connection, Framing / Foundation Plan and Standard Details.

Setbacks: Always site specific. Check with Construction Services (730-5240) for your project.

Loads: All decks shall be designed to support a live load (people, furniture, grills, etc.) of 40 lbs per square foot, and a dead load (wood, decking, etc.) of 10 lbs per square foot. R301.4, R301.5

Joists and Beams: See *JOIST SPAN* table for minimum joist size and spacing requirements. See *BEAM AND FOOTING SIZES* table for beam size and footing requirements. Ask your lumber supplier about species and grade.

Cantilevers: Joists shall not overhang beams by more than 2 feet, and beams must not overhang posts by more than 1 foot unless a special design is approved.

Cantilever Attachment: Decks shall not be supported by cantilevers extending from the primary structure or from another deck.

Ledger Attachment: Different loads require different attachment. Please refer to the *LEDGER ATTACHMENT REQUIREMENTS* provided in this hand-out.

Flashing: All connections between deck and dwelling shall be weatherproof. Any cuts in the exterior finish shall be flashed. Flashing of the ledger at the point of connection to the house is especially critical. R703.8

Frost Footings: Footings are required for any deck attached to a dwelling or to any other structure that has frost footings. The minimum depth to the bottom of the footings is 60 inches. The footing bottom diameter shall be based upon the attached table. If the materials used for posts are not rated for ground contact, the concrete piers must protrude above grade a minimum of 6 inches. See attached *BEAM AND FOOTING SIZES* table for footing size and spacing requirements. Minimum thickness of footing pad is 8 inches but a thicker pad is required for larger footings (see chart). Reinforce concrete piers with a minimum of (1) - #4 vertical.

Posts and Beams: Posts must be centered on the concrete pier over the footing and securely fastened to the concrete so as to resist both uplift and lateral displacement. R502.2 Splices in beams must be centered over posts. Beams made of 2x10 (or larger) materials require (3) - ½ inch diameter bolts connecting the beam to the posts. 2x8 (or smaller material) beams require (2) - ½ inch diameter bolts. Beams setting atop posts must be fully anchored with appropriate fasteners (post cap) to resist uplift and lateral displacement. Each joist must be connected to the beam with the proper fastening method using nails, joist hangers or hurricane clips. Beam members shall be nailed or screwed together. Attach with a minimum of (2) - rows 10d common nails or (2) - rows #10 screws at 16 inches on center from each side, stagger. R602.3 Split beam attachment to posts is not allowed.

Stairs: Minimum width is 36 inches. Maximum riser height is 7 ¾ inches. Minimum tread depth is 10 inches. Treads with a depth less than 11 inches must have compliant nosing. Largest tread depth or riser height shall not exceed the smallest by more than 3/8 inch across the run of the stairs. Treads shall be level, (a slope no greater than 2% is permitted). R311.5 Lighting capable of illuminating the treads and landings is required, shall be located in the immediate vicinity of the top landing and may be activated from inside the dwelling. R303.6 There shall be a landing at the top and bottom of stairs. Landings must be as wide as the stairs they serve, have a minimum length of 36 inches in direction of travel and have a slope no steeper than 2% (¼ inch of rise per 1 foot of run). R311.5.4

Handrails: Stairways having 4 or more risers shall have at least 1 handrail. The top of the handrail shall not be less than 34 inches or more than 38 inches above the nosing of the treads. Handrails shall be continuous for the full length of the stairs and shall protrude from the adjoining surface by at least 1 ½ inches, but no more than 4 ½ inches, and the ends shall be returned or terminated into posts. Handrails with a circular cross section shall have an outside diameter of not less than 1 ¼ inches or more than 2 inches. Other handrails may be acceptable. See the specific code language to be sure your handrail does comply. R311.5.6

Guardrails: A guardrail is required on all decks or any portion of a deck more than 30 inches above grade or above a lower deck. Deck guardrails must be a minimum of 36 inches high. Open guardrails on decks must have intermediate rails (balusters) or an ornamental pattern that a 4 inch sphere cannot pass through. Guardrails on stairs cannot have an opening between balusters that a 4-3/8 inch sphere can pass through. R312.1

Structural Details: Header beams and joists that frame into ledgers or beams shall be supported by approved framing anchors such as joist hangers. Posts shall be attached to concrete piers with a post base and anchor bolt (or approved equal). Installation of these framing anchors shall be in accordance with the manufacturer's installation instructions; typically special nails are required. **Note:** Decks must be positively anchored to the primary structure or be self supporting. R502.2 Please see drawings provided.

Nails, Screws and All Connection Hardware: Fasteners for pressure-preservative wood shall be hot dipped zinc coated galvanized steel (HDG), stainless steel, silicon bronze or copper. Ask your materials supplier for an approved fastener. R319.3 Screws cannot be used to attach joist hangers unless specifically approved for such application.

Inspections: You must call for a scheduled appointment time (please try to schedule inspections a minimum of 24 hours in advance). The approved plan must be on site for all inspections. Typically 3 inspections are required:

1. Footings – These will be checked for proper diameter, depth, belled bottom, a flat surface at the base, and no water in the holes. The form (sonotube) and reinforcement must be in place. The post bases and anchor bolts (or approved equal) must be on-site.
2. Framing – If your deck surface is 4 feet or closer to the ground, you must pass a framing inspection before the decking material may be applied to the deck surface. Structural integrity and proper attachment of all connectors will be inspected.
3. Final – For decks that are 4 feet or greater off the ground, framing and final inspections may be completed together. A final inspection must be completed to be sure that the deck complies with the current *Minnesota State Building Code*.

Approved Decking Materials

Wood Decking Materials allowed by the 2007 Minnesota State Building Code (MSBC)

Naturally decay and termite resistant wood species such as:

**Redwood and Cedar
Preservative Treated Wood**

Naturally Decay Resistant Woods allowed as Alternate Materials by the Building Official:

Douglas Fir heartwood
Lodgepole Pine heartwood
Redwood heartwood and sapwood
Western Red Cedar heartwood
White Oak sapwood and heartwood
Western White Pine heartwood
Red Oak sapwood and heartwood
Eucalyptus heartwood
Ponderosa Pine heartwood
Ipe (Brazilian Walnut)

Approved Composite Decking Materials

Composite decking material is not addressed in the Building Code. It is allowed as an alternative material only when the building official finds that the material is, for the purpose intended, at least the equivalent of that (material) prescribed (by the code). (MSBC 1300.0110 Subp. 13) The building official evaluates composite decking products on a product by product basis to determine their equivalence with prescribed materials and other code requirements applicable to decking. ICC Evaluation Services provides reports about products that have been tested and evaluated specifically for compliance with the building code.

The following composite decking products have been approved for use in

Azek Decking System, ESR-1667
Correctdeck, NER-688
CertainTeed Kingston Railing Systems, ESR-1555 and NER 605
CertainTeed PVC Deck Planks, NER-605
Endura Board, ESR-1890
eON Decking, ESR-1300
Fiberon Decking, ICC-ES 22-41
Geodeck Decking and Guardrail Systems, ESR-1369
Life Long Composite, ICC-ES 1278 and 1279
Rhino Deck, ICC-ER-6134
Tamko Evergrain Decking, ESR-1625
Timber Tech Decking, ICC-ES-2325, ESR-1400
Trex Composite Lumber, ESR-3168 and VAR-1011
Ultradeck (Manufactured by MME in Eau Claire WI, *NOT* Ultra-Dek), ESR-1674
VEKAdeck, CCRR-0137
Veranda Deck Board, ESR-1573
Weatherbest Decking and Railing, ESR-1088
Xtendex Decking, NER-695
Genova Deck Board and Guardrail Systems, ESR-1904

The product supplier or manufacturer can tell you whether an ICC Evaluation Report is available for other products. Approval of alternate materials must be by the Building Official.

RESIDENTIAL DECKS AND THE 2020 MINNESOTA RESIDENTIAL CODE

Minnesota Department of Labor and Industry

General requirements and building permits

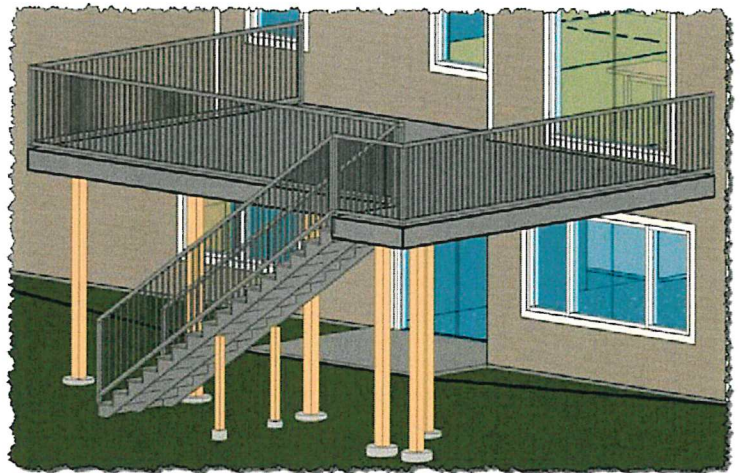
Effective March 31, 2020, residential exterior decks must be designed and constructed using the 2020 Minnesota Residential Code (MRC), related standards, manufacturer installation instructions, best practices and local jurisdiction zoning codes and ordinances.

Building permits are required:

- When a deck or platform is more than 30 inches above adjacent grade.
- When a deck or platform is attached to a structure with frost footings.
- When a deck or platform is part of an accessible route (Accessible route refers to the designated main entry of the dwelling as required by code).

Deck materials

All wood used in deck construction must meet requirements of MRC R507.2.1. This includes the grade of the wood (No. 2 or better), preservative treated or naturally durable lumber that has approval by the local jurisdiction. Preservative-treated wood must be appropriate for the installation and meet the American Wood Protection Association's (AWPA) UC3 (above ground) or UC4 (ground contact) use categories. All cuts, notches and holes in preservative-treated wood requires field treatment (MRC R317.1.1). All engineered wood products must meet the requirements in MRC R502.



Exterior deck boards, stair treads, guards or handrails made of plastic composite materials must meet certain performance standards in American Society for Testing and Materials (ASTM) D7302. Labels on materials or packaging will indicate compliance. Follow manufacturer's installation instructions for plastic composite materials.

Fasteners and connectors

Requirements for fasteners are in MRC Table R507.2.3 and R317.3. Fasteners (including nuts and washers) used in preservative-treated wood must be hot-dipped, zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Staples used in preservative-treated wood must be stainless steel. Metal connectors in contact with preservative-treated wood should follow manufacturers recommendations and MRC Table R507.2.3.

Holes for bolts must be drilled between 1/32 and 1/16 of an inch larger than the bolt. Lag screws 1/2 inch or larger should be predrilled to avoid wood splitting.

Footings

Decks are required to be supported on concrete footings or other approved structural systems designed to accommodate all loads in accordance with the MRC. The use of alternative footings must be reviewed for approval by the local building safety department. Footings must be sized to bear loads and suitable for allowable soil-bearing

pressure (MRC Table R401.4.1). The minimum depths of footings must be either 5'-0" (Zone 1) or 3'-6" (Zone 2). Refer to Minnesota Rules 1303.1600 for the counties included in each zone.

Deck posts

Deck post sizing requirements are in MRC Table R507.4 and are limited to single-level wood-framed decks when sizing the decks other structural components with MRC Table R507.5. The height of the post shown in MRC Table R507.4 is measured from the underside of the beam to the top of the footing. Deck posts are based on using a 40 psf live load for structural member size calculations. Metal connectors must be provided at the top and bottom of posts for lateral restraint.

Beams

Allowable deck beam span lengths can be determined in MRC Table R507.5. Examples of the flush beams and dropped beams can be seen in the examples shown. Measurements of deck beam lengths need to be from center of post to center of post. The spans used in the table are based on a live load of 40 psf, a dead load of 10 psf, supporting deck joists from one side only and the beam depth must be greater than or equal to the joist depth when using a flush beam configuration. Beam plies shall be fastened with two rows of 10d (3-inch x 0.128-inch) nails or approved fasteners a minimum of 16 inches on center. Beams are allowed to cantilever up to one-fourth of their allowable span at each end.

Ends of beams used in splices must have a minimum of 1-1/2 inches of bearing on wood and 3 inches on concrete.

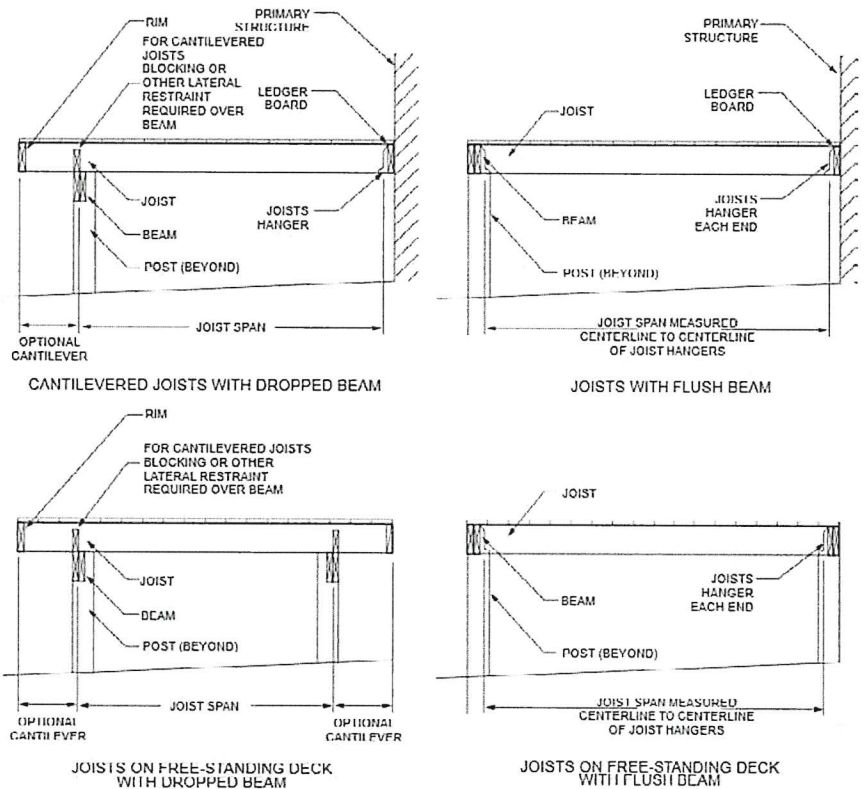
Multiple-span beams must have full bearing on posts (MRC Figures R507.5.1(1) and R507.5.1(2)). Those figures also show beam-to-post connections with metal connector plates and bolts and nuts configurations that are required by MRC R507.5.2.

Joists

Allowable spans for joists are in MRC Table 507.6. The live load used in the table is 40 psf and a dead load of 10 psf. The maximum cantilever length is determined by the lesser of one-fourth of the joist span or the maximum cantilever length shown in MRC Table 507.6. Joist spacing is limited by the span rating of the decking being used, see MRC Table R507.7.

Deck joists require a minimum of 1-1/2 inches of bearing on wood and 3 inches on concrete. Joist bearing on top of a single-ply beam or ledger shall be attached by a mechanical connector. Use the fastener schedule (MRC Table R602.3(1)) for fastening joists to a multiple-ply beam. Use an approved joist hanger for joist framing into the side of a beam or ledger board.

Where joist hangers or blocking are used, 60-percent of the joist depth must be restrained. If a rim joist is being used, not fewer than three 10d (3-inch x 0.128-inch) nails or three No. 10x 3-inch-long wood screws are required.



Decking

Use at least two 8d threaded nails or two No. 8 wood screws to attach wood decking to the joist. Other approved decking or fastener systems shall be installed in accordance with the manufacturer's installation requirements.

Ledger and band joist

A ledger board attached to the exterior wall of the primary structure must be at least 2-inch by 8-inch nominal. Pressure-preservative-treated Southern pine, incised pressure-preservative treated hem-fir, or approved, naturally durable, No. 2 grade or better lumber. Deck ledgers must not support concentrated loads from beams or girders and cannot be supported on stone or masonry veneer.

Band joists supporting a ledger must bear fully on the primary structure and be capable of supporting all required loads. Fasteners used in deck ledger connections in accordance with MRC Tables R507.9.1.3(1) shall be hot-dipped galvanized or stainless steel and shall be installed in accordance with Table R507.9.1.3(2) and figures R507.9.1.3(1) and R507.9.1.3(2). Where connections to the primary structure cannot be verified during inspection, decks must be self-supporting.

Lateral support

Lateral-load connection devices must be installed to transmit the lateral loads imposed on the deck to the ground. The lateral-load connection device shown in MRC Figure R507.9.2(1), with the threaded rod and connection points on the deck joist and the primary structure floor system, must be installed in two locations on the deck a minimum of 24 inches from the ends. Each device must have an allowable stress design capacity of at least 1,500 pounds.

Where the lateral load connections are provided in accordance with Figure R507.9.2(2), the hold-down tension devices must be installed in at least four locations per deck, and each device must have an allowable stress design capacity of at least 750 pounds. Hold-down tension devices are required to be installed per the manufacturer's instructions.

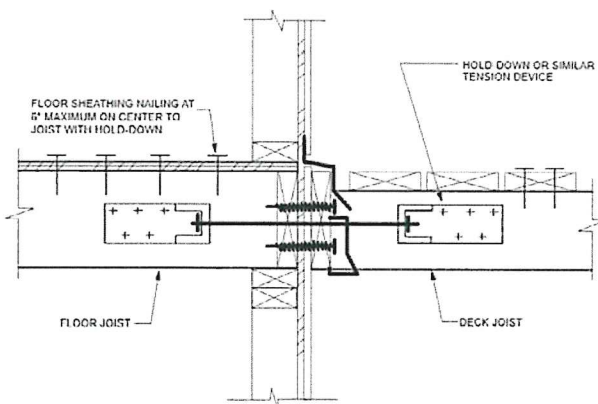


FIGURE R507.9.2(1)
DECK ATTACHMENT FOR LATERAL LOADS

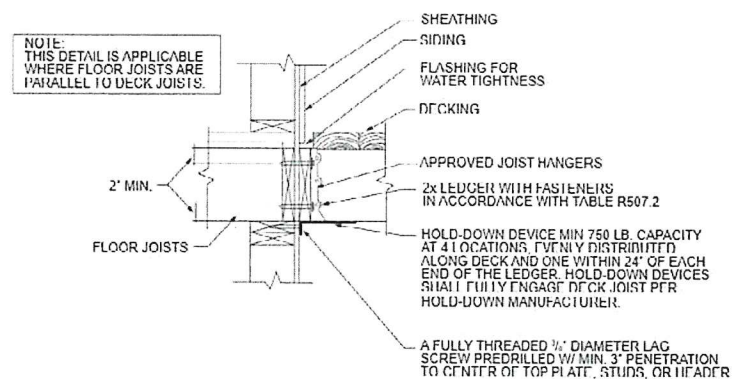
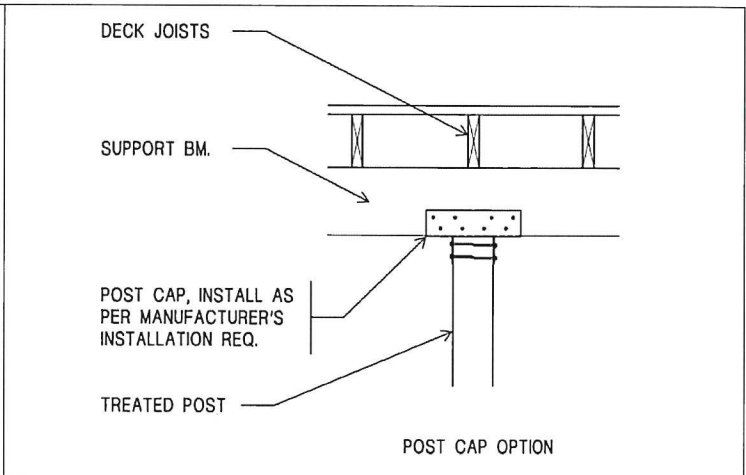
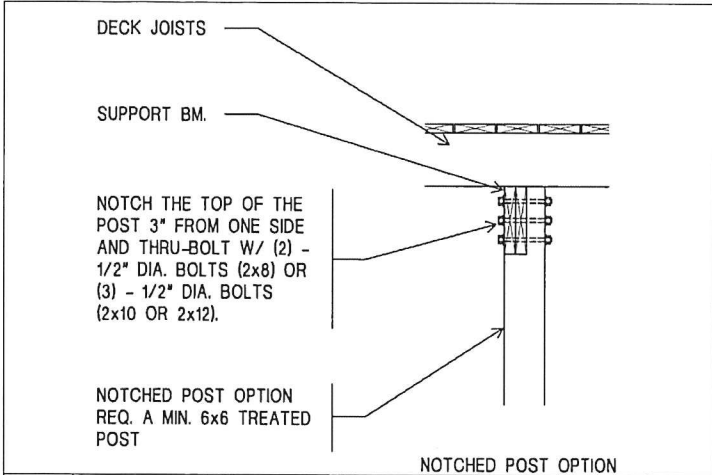
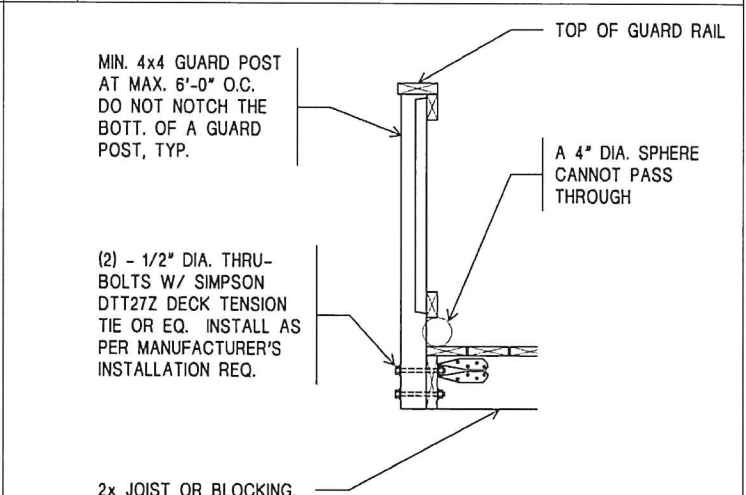
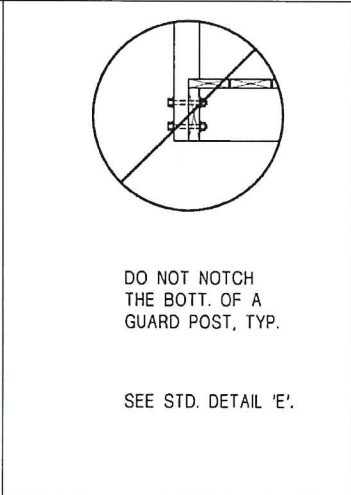
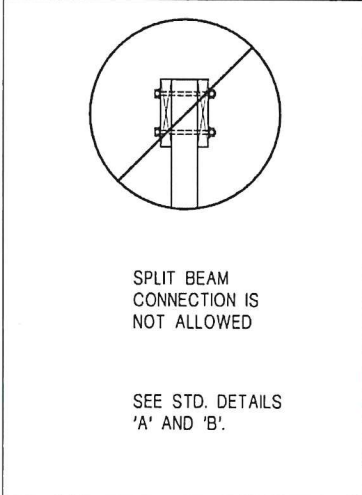


FIGURE R507.9.2(2)
DECK ATTACHMENT FOR LATERAL LOADS



A BEAM / POST CONNECTION

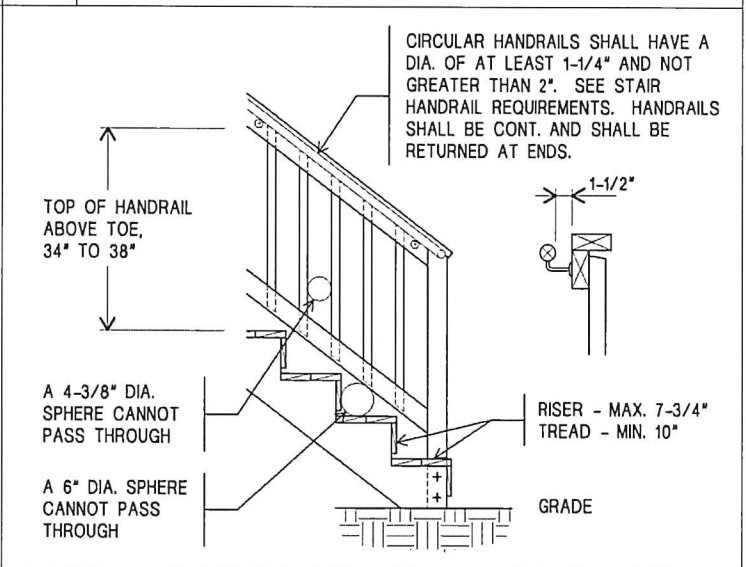
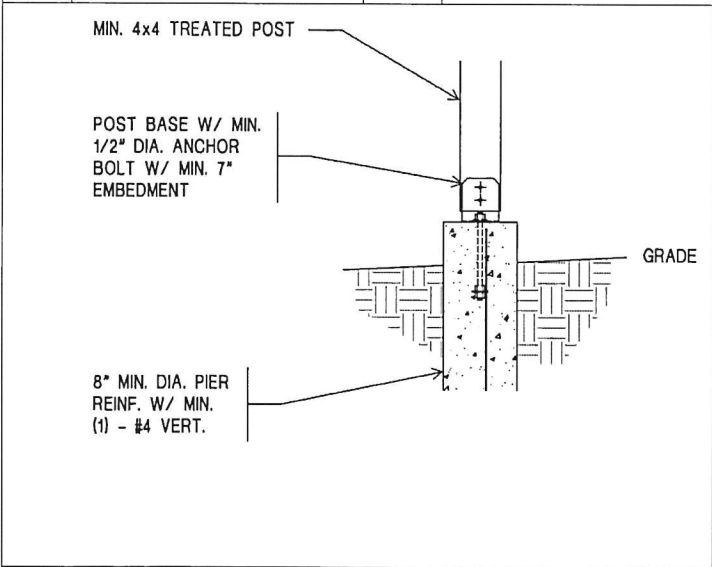
B BEAM / POST CONNECTION



C BEAM CONN.

D GUARD CONN.

E GUARD POST CONNECTION



F POST / PIER CONNECTION

G STAIR / HANDRAIL

Table 3: Ledger Connection Requirements

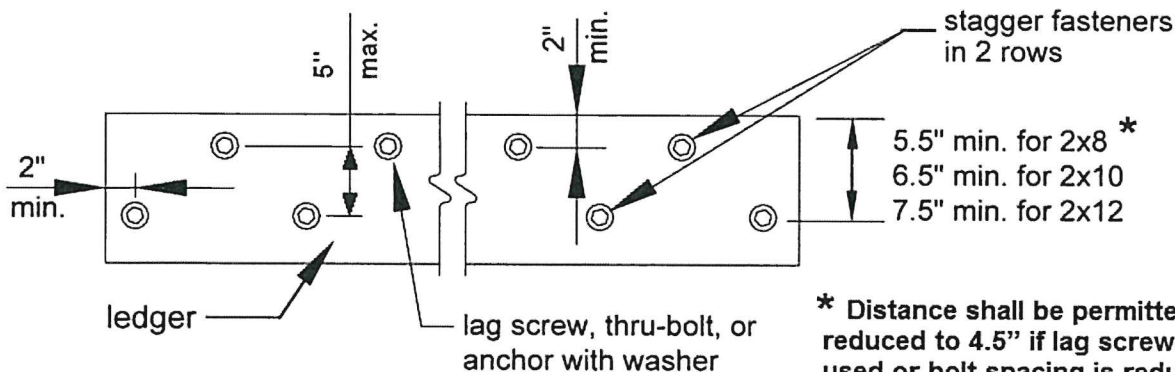
Fastener Spacing For a Southern Pine or Hem-Fir Deck Ledger and a 2 inch Nominal Solid Sawn Spruce Pine Fir Band Joist^{c,f}

(Deck Live Load = 40 psf, Deck Dead Load = 10 psf)

Joist Span	6' and less	6'-1" to 8'	8'-1" to 10'	10'-1" to 12'	12'-1" to 14'	14'-1" to 16'
Connection Details	(2) - Rows of On-Center Spacing of Fasteners ^{d,e}					
1/2 inch diameter lag screw with 15/32 inch maximum sheathing ^a	30	23	18	15	13	11
1/2 inch diameter bolt with 15/32 inch maximum sheathing	36	36	34	29	24	21
1/2 inch diameter bolt with 15/32 inch maximum sheathing and 1/2 inch stacked washers ^{b,g}	36	36	29	24	21	18

- The tip of the lag screw shall fully extend beyond the inside face of the band/rim joist.
- The maximum gap between the face of the ledger board and face of the wall sheathing shall be 1/2 inch.
- Ledgers shall be flashed to prevent water from contacting the house band/rim joist.
- Lag screws and bolts shall be staggered.
- Deck ledger shall be minimum 2x8 pressure preservative treated No. 2 grade lumber, or other approved materials as established by standard engineering practice.
- When solid sawn pressure preservative treated deck ledgers are attached to a minimum 1 inch thick engineered wood product (structural composite lumber, laminated veneer lumber or wood structural panel band/rim joist), the ledger attachment shall be designed in accordance with accepted engineering practice.

Wood structural panel sheathing, gypsum board sheathing or foam sheathing not exceeding 1 inch nominal in thickness shall be permitted. The maximum distance between the face of the ledger board and the face of the band/rim joist shall be



*** Distance shall be permitted to be reduced to 4.5" if lag screws are used or bolt spacing is reduced to that of lag screws to attach 2x8 ledgers to 2x8 band / rim joists.**

Lag Screws:

Lag screws shall have a minimum diameter of 1/2 inch. Lag screws may be used only when the field conditions conform to those shown above. All lag screws shall be with washers.

Thru-Bolts:

Thru-bolts shall have a diameter of 1/2 inch. Pilot holes for thru-bolts shall be 17/32 inch to 9/16 inch in diameter. Thru-bolts require washers at the bolt head and nut.

MATERIALS

Fasteners

Nails and other hardware must be hot-dipped zinc-coated (galvanized), stainless steel or equal. Screws should be either hot-dipped galvanized or electroplated with a polymer coating.

12d nails are recommended on nominal 2-inch decking. 10d nails are recommended for 5/4" decking.

With lag screws, use a flat washer under the head. Use washers under the nut and head of machine bolts and just under the nut of carriage bolts.

Lumber

All wood used in deck construction must be pressure treated lumber or wood that is naturally resistant to decay such as redwood or cedar.

★ Wood used above ground, in contact with the ground, or below ground requires different degrees of treatment. Check the labels of the material you are buying to determine where it can be used. **Because some preservative treatments are very corrosive, make sure that any metal connectors used in the construction of your deck are approved by the manufacturer for use with treated wood.**

Decking

Materials commonly used for decking include standard dimension lumber (either 2X4 or 2X6), radius-edged decking, or a manufactured decking product.

Radius-edged Patio Decking (5/4 decking) has been specifically developed for outdoor decks. Redwood and cedar patio decking is intended to be used flat-wise in load-bearing applications where spans do not exceed 16" o.c. (12" o.c. when installed diagonally to joists). Southern pine decking may span 24" o.c. or 16" o.c. when installed diagonally to joists.

MAXIMUM DECK BOARD SPANS	
2x6 OR 5/4 SOUTHERN PINE PERPENDICULAR TO JOIST	24" O.C.
5/4 CEDAR OR REDWOOD AND 2X4 PERPENDICULAR TO JOIST OR 5/4 SOUTHERN PINE OR 2X6 AT 45 DEGREES TO JOIST	16" O.C.
5/4 AND 2X4 AT 45 DEGRESS TO JOIST	12" O.C.

FOOTINGS

Call Gopher State One Call for utility locations at least two working days before you dig –
1-800-252-1166 or 651-454-0002.

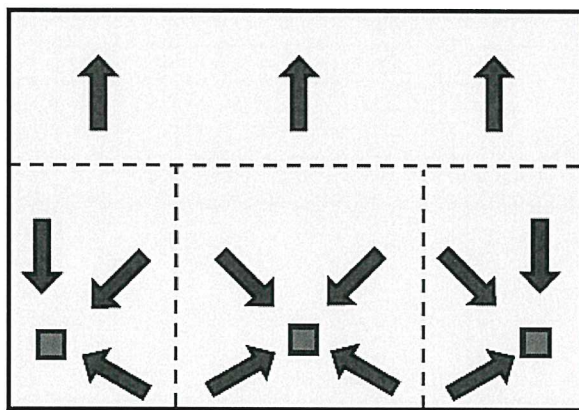


Deck footings should be sized according to the following table. Footings must extend at least 60 inches below grade (frost line) except for decks that are not connected to a dwelling.

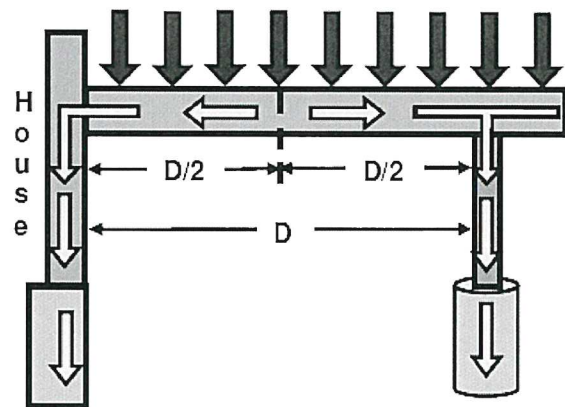
DECK FOOTING SIZES (1500 psf soils)							
Max. Area of Deck Supported in Sq Ft	Footing Diameter Required in Inches	Max. Area of Deck Supported in Sq Ft	Footing Diameter Required in Inches	Max. Area of Deck Supported in Sq Ft	Footing Diameter Required in Inches	Max. Area of Deck Supported in Sq Ft	Footing Diameter Required in Inches
10	8	23	12	41	16	65	20
13	9	27	13	47	17	72	21
16	10	32	14	53	18	79	22
19	11	36	15	59	19	86	23

Required footing sizes are determined by calculating the area of the deck supported by each footing. Loads shall be assumed to be equally shared between the supporting elements. Don't overlook cantilevers.

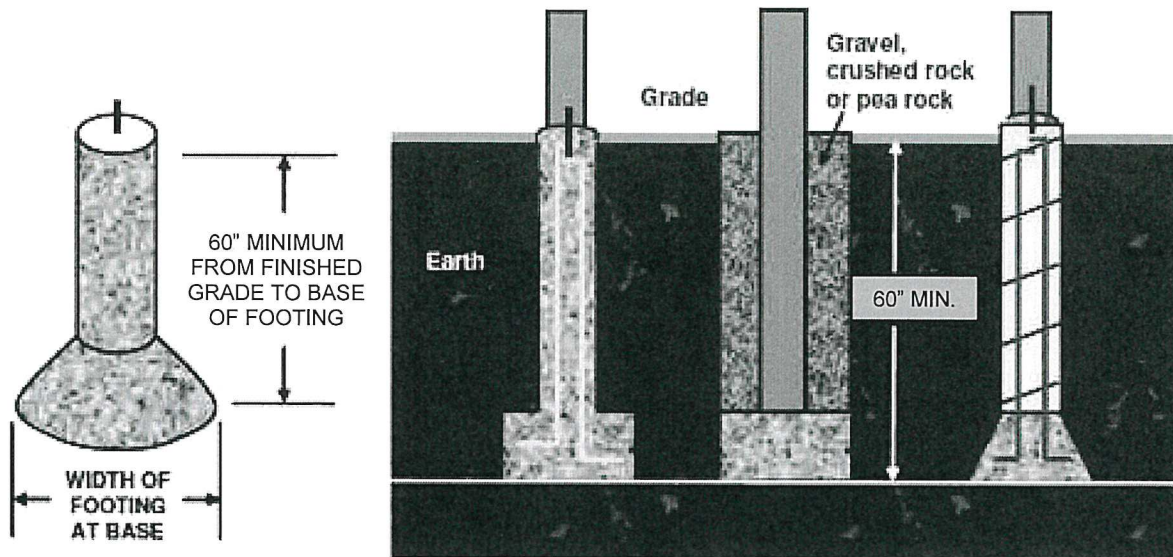
UNDERSTANDING LOAD PATHS



Loads are assumed to be uniform across the floor



Footings supporting a 4x4 column must be not less than 6-inch diameter. Post footings supporting columns larger than 4x4 must be 8-inch diameter or larger. The bottom of post footings may be "belled" to achieve the desired minimum bearing area. The base of the footing must be at least 60 inches below finished grade. Rebar is recommended. Center the column on the footing secured by a pin or connector. Posts imbedded in the ground must be 60% C.C.A. or equal. Using a fiberboard tube will allow elevation of the top of the footing above finished grade to provide protection of the wood post from lawn mowers and trimmers.



DECK FRAMING

Ledger Board

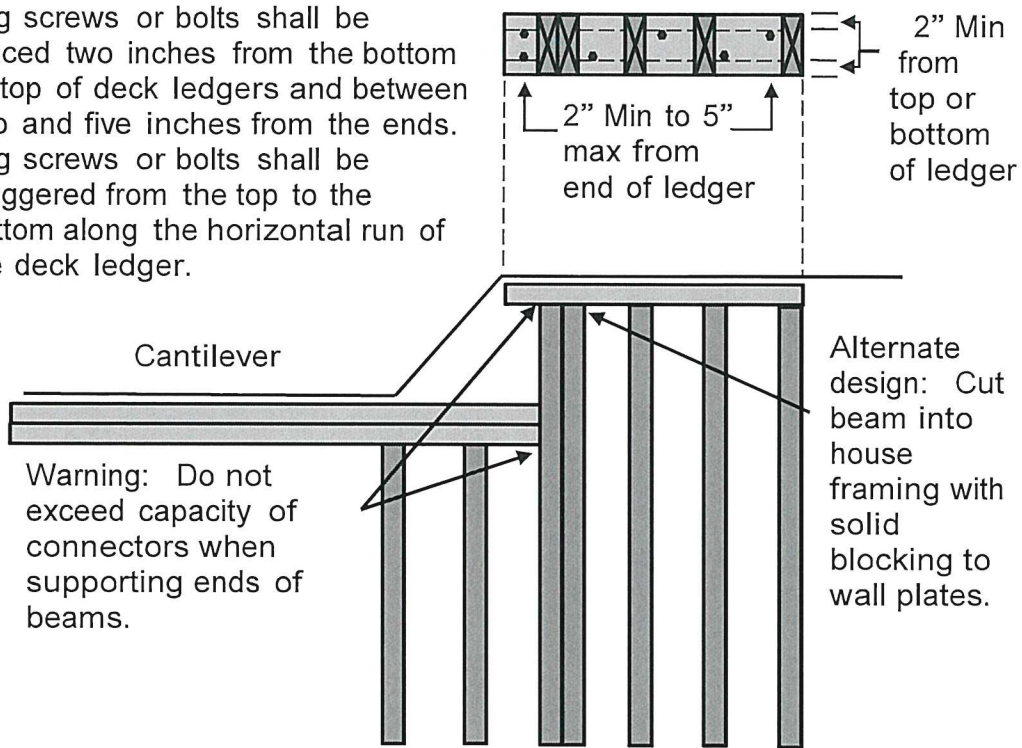
★ The ledger board attaches to the house frame. **Make sure the ledger is securely attached to the dwelling. Install metal flashing at top and caulk sides.**

FASTENER SPACING FOR SOUTHERN PINE OR HEM-FIR DECK LEDGER AND 2-INCH NOMINAL SOLID-SAWN SPRUCE-PINE-FIR BAND JOIST <small>Deck Live Load = 40 psf, Deck Dead Load = 10 psf^{3,6,7}</small>							
JOIST SPAN (ft)	6' & less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
CONNECTION DETAILS	ON-CENTER SPACING OF FASTENERS ^{4,5}						
½" DIAM. LAG SCREW WITH 15/32" SHEATHING ¹	3 0	23	18	15	13	11	10
½" DIAM. BOLT WITH 15/32" MAX. SHEATHING	3 6	36	34	29	24	21	19
½" DIAM. BOLT / 15/32" MAX. SHEATHING & ½" STACKED WASHERS ^{2,8}	3 6	36	29	24	21	18	16

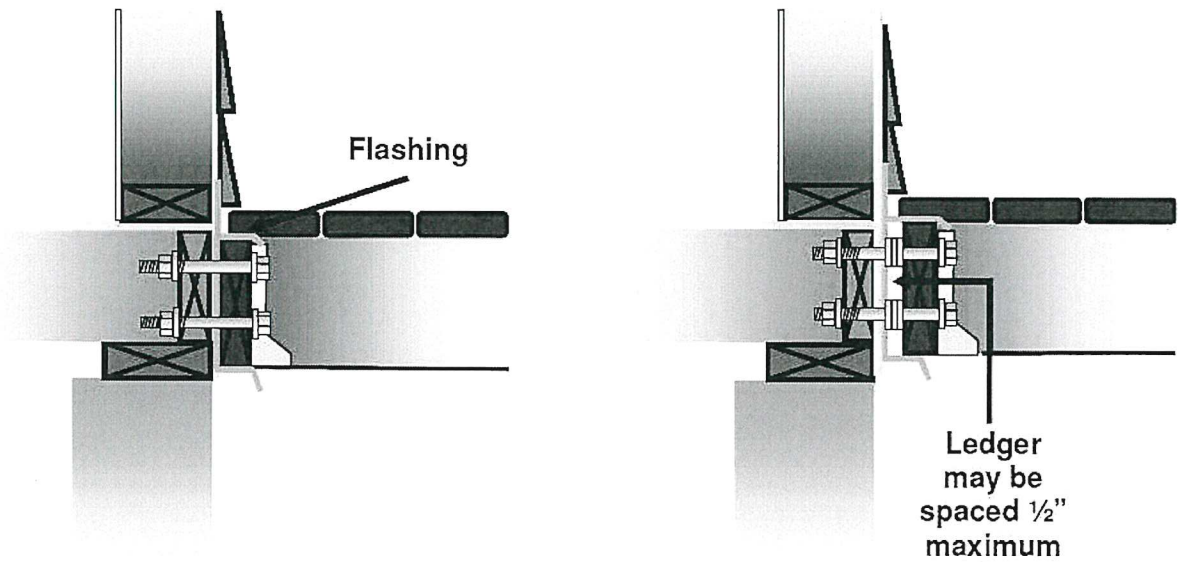
- ¹ The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- ² The maximum gap between the face of the ledger board and the face of the wall sheathing shall be ½".
- ³ Ledgers shall be flashed to prevent water from contacting the house band joist.
- ⁴ Lag screws and bolts shall be placed two inches from the bottom or top of deck ledgers and between two and five inches from the ends. Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger.
- ⁵ Deck ledgers shall be minimum 2X8 pressure-preservative treated No. 2 grade lumber or other approved materials as established by standard engineering practices.
- ⁶ When solid-sawn pressure-preservative-treated deck ledgers are attached to engineered wood products (structural composite rim board or laminated veneer lumber), the ledger attachment shall be designed in accordance with accepted engineering practices.
- ⁷ A minimum 1 X 9½ Douglas Fir laminated veneer rim board shall be permitted in lieu of the 2-inch nominal band joist.
- ⁸ Wood structural panel sheathing, gypsum board sheathing, or foam sheathing not exceeding one inch in thickness shall be permitted. The maximum distance between the face of the ledger board and the band joist shall be one inch.

⚠ Capacity of lag or carriage bolts shall not exceed 400 lb's per bolt unless design provided.

Lag screws or bolts shall be placed two inches from the bottom or top of deck ledgers and between two and five inches from the ends. Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger.



WARNING: CAPACITY OF LAG OR CARRIAGE BOLTS SHALL NOT EXCEED 400 LB'S PER BOLT UNLESS DESIGN PROVIDED.



BEAMS

Construct beams using two or more 2 inch nominal pieces of lumber. Nail beams together using 16d nails at 16 inches o.c. along each edge of the beam. A spacer may be used to fir the beam to a 3½ -inch width. Beams should be installed with any arch or crown facing up. Attachments to columns should be with post caps designed for such use.

BEAM SPANS (Wet Service)

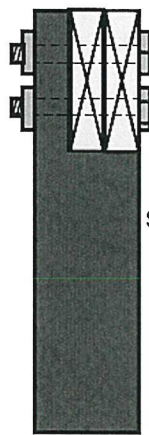
(Center of one column to center of next) (Source AF&PA; rev. 8-17-10)

Species	Beam Size	Joist Spans						
		6'	8'	10'	12'	14'	16'	18'
Southern Pine	2-2X6	7'1"	6'2"	5'6"	5'0"	4'8"	4'4"	4'1"
	2-2X8	9'2"	7'11"	7'1"	6'6"	6'0"	5'7"	5'3"
	2-2X10	11'10"	10'3"	9'2"	8'5"	7'9"	7'3"	6'10"
	2-2X12	13'11"	12'0"	10'9"	9'10"	9'1"	8'6"	8'0"
	3-2X6	8'7"	7'8"	6'11"	6'3"	5'10"	5'5"	5'2"
	3-2X8	11'4"	9'11"	8'11"	8'1"	7'6"	7'0"	6'7"
	3-2X10	14'5"	12'10"	11'6"	10'6"	9'9"	9'1"	8'7"
	3-2X12	17'5"	15'1"	13'6"	12'4"	11'5"	10'8"	10'1"
Cedar, Redwood, Ponderosa Pine	2-2X6	5'5"	4'8"	4'2"	3'10"	3'6"	3'1"	2'9"
	2-2X8	6'10"	5'11"	5'4"	4'10"	4'6"	4'1"	3'8"
	2-2X10	8'4"	7'3"	6'6"	5'11"	5'6"	5'1"	4'8"
	2-2X12	9'8"	8'5"	7'6"	6'10"	6'4"	5'11"	5'7"
	3-2X6	7'4"	6'8"	6'0"	5'6"	5'1"	4'9"	4'6"
	3-2X8	9'8"	8'6"	7'7"	6'11"	6'5"	6'0"	5'8"
	3-2X10	12'0"	10'5"	9'4"	8'6"	7'10"	7'4"	6'11"
	3-2X12	13'11"	12'1"	10'9"	9'10"	9'1"	8'6"	8'1"

METHODS OF ATTACHING BEAM TO COLUMN

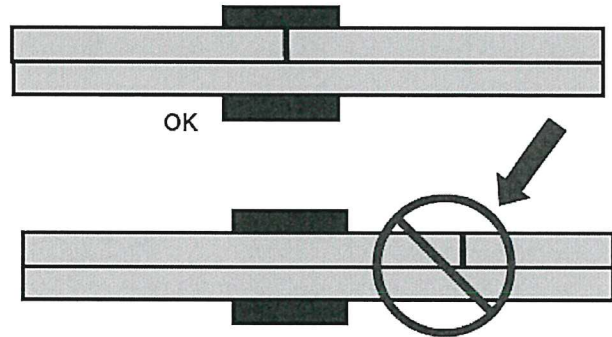


BEAM SECURED WITH POST CAP



BEAM SECURED WITH BOLTS TO NOTCHED COLUMN

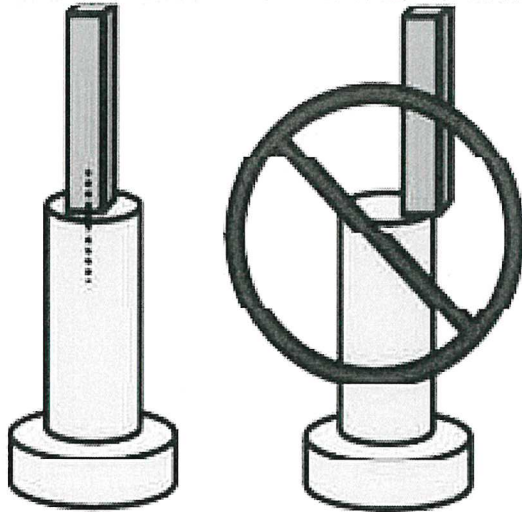
BEAM SPLICES



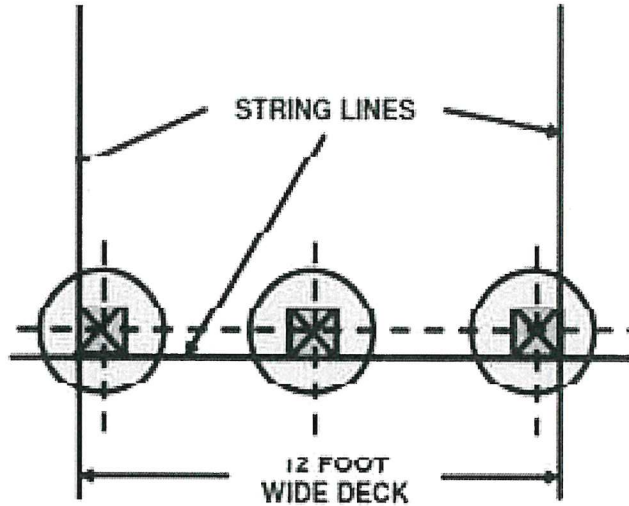
COLUMNS

MAXIMUM POST HEIGHT IN FEET		SQUARE FEET OF DECK SUPPORTED													
SPECIES	SIZE	36	48	60	72	84	96	108	120	132	144	156	165	180	192
		SOUTHERN PINE	4X4	10	10	10	9	9	8	8	7	7	6	6	6
4X6	14		14	13	12	11	10	10	9	9	8	8	8	7	7
6X6	17		17	17	17	17	17	17	17	16	16	15	14	13	13
REDWOOD CEDAR	4X4	10	10	9	8	7	7	6	6	5	4				
	4X6	14	13	12	11	10	9	8	8	7	7	7	6	6	5
	6X6	17	17	17	17	17	16	13	7						

THE REQUIRED AREA OF THE COLUMN SHOULD FULLY BEAR ON THE FOOTING



PLACING A SLIGHT CROWN ON THE TOP OF THE FOOTING PREVENTS WATER ACCUMULATIONS AND PREMATURE COLUMN FAILURE



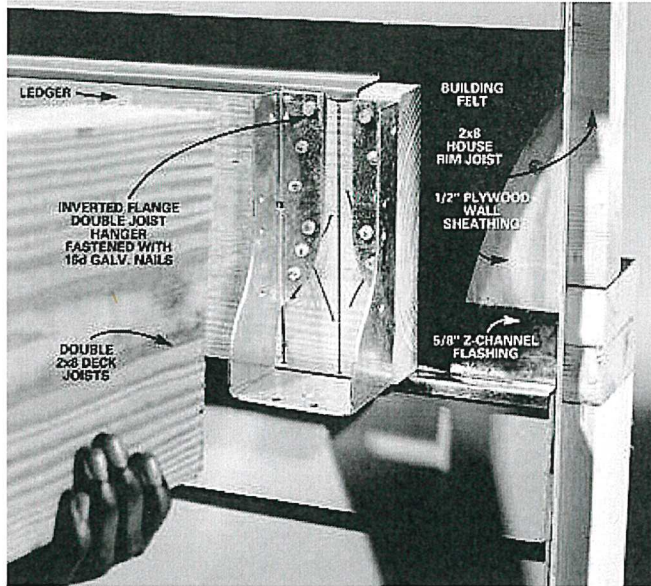
THE INTERSECTION OF YOUR STRING LINES IS NOT THE CENTER OF THE FOOTING. ADJUST ACCORDING TO THE LOCATION AND SIZE OF YOUR COLUMN.

JOISTS

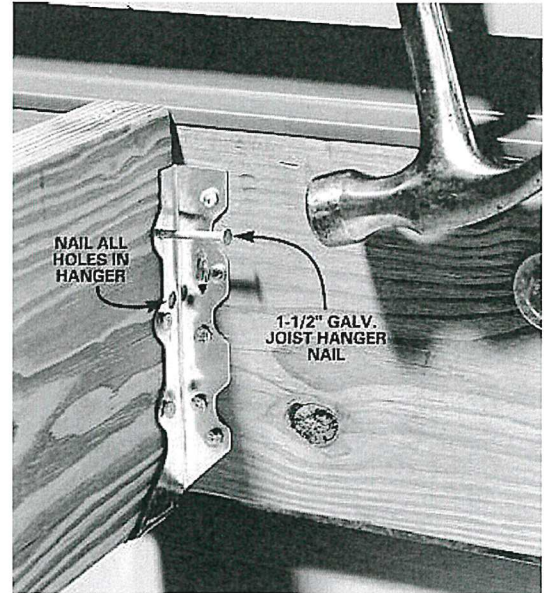
JOIST SPANS (Wet Service)						
(Source AF&PA; rev. 8-17-10)						
JOIST SIZE	SOUTHERN PINE			WESTERN CEDAR/PONDEROSA PINE		
	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
2X6	10'4"	9'5"	7'10"	8'10"	8'0"	7'0"
2X8	13'8"	12'5"	10'2"	11'8"	10'7"	8'8"
2X10	17'5"	15'10"	13'5"	14'11"	13'0"	10'7"
2X12	21'2"	18'10"	15'5"	17'5"	15'1"	12'4"

MAXIMUM CANTILEVER SPANS FOR JOISTS WITH BACKSPAN AT LEAST 2:1		
JOIST SIZE	SPACING O.C.	MAX. CANTILEVER
2X8	12"	39
2X8	16"	34
2X10	12"	57
2X10	16"	49
2X10	24"	40
2X12	16"	67
2X12	24"	54

★ Joists must bear on a beam, ledger strip, or joist hangers. Joist hangers must be installed in accordance with the manufacturer's recommendations. **Fill all nail holes in joist hangers.**



CONCEALED FLANGE HANGER



CONVENTIONAL HANGER

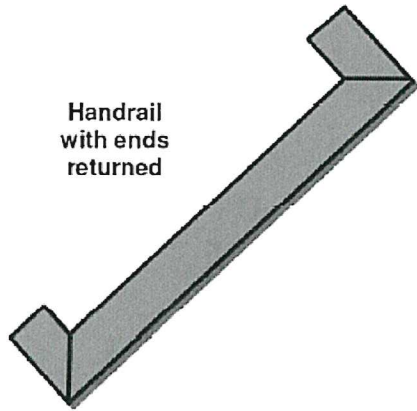
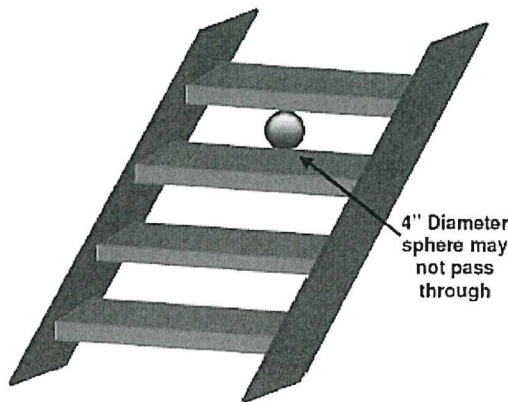
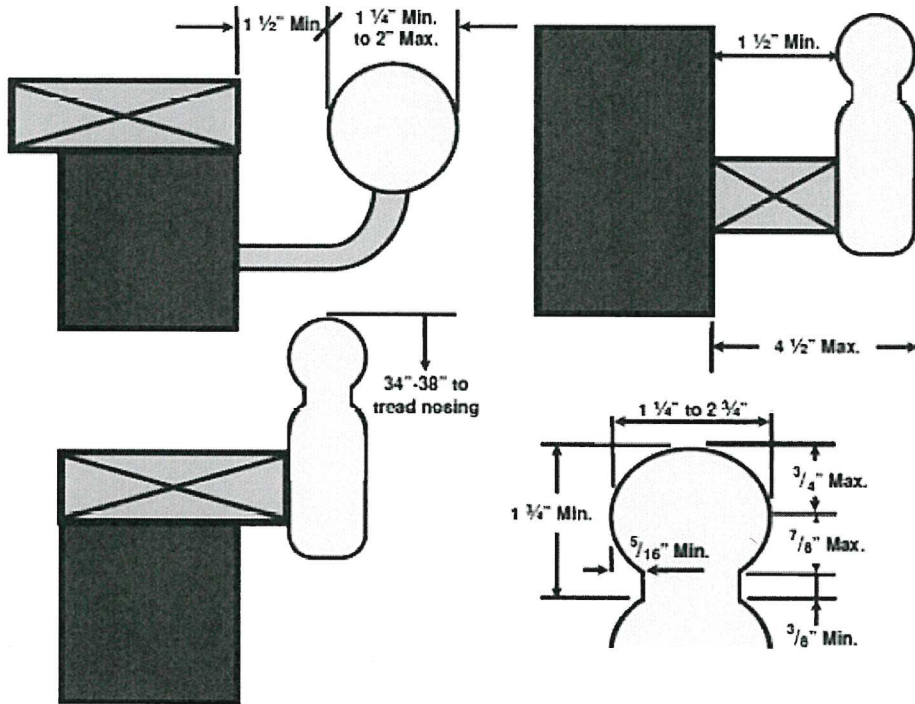
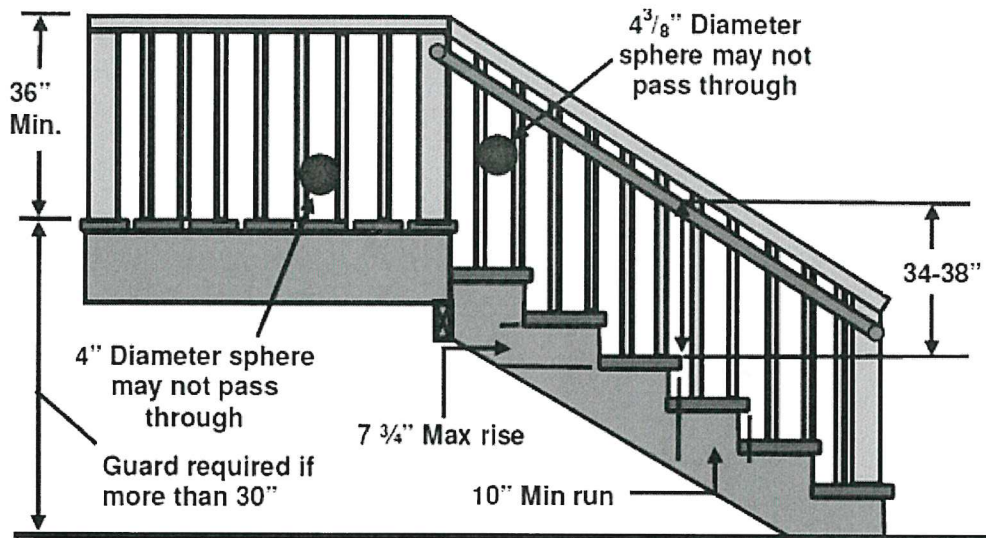
STAIRS, GUARDS AND HANDRAILS

Guards and handrails must be provided as shown on the following illustration. Guards must continue down stairs where the stair is more than 30 inches above grade. The height of guards on stairs must be 34 inches minimum.

Stairs must have a maximum rise of 7-3/4 inches and a minimum run of 10 inches measured as shown. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch. **Open risers are permitted provided that a 4" diameter sphere will not pass between the treads.**

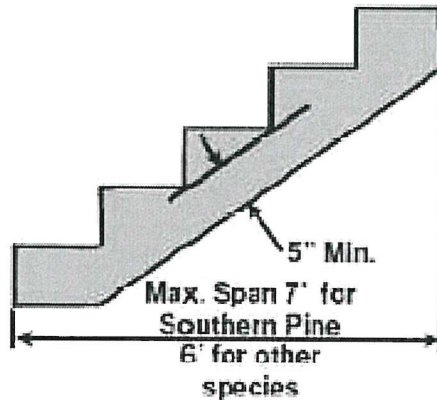
- ★ Stairs must be a minimum of 36 inches wide above the handrail and 31½ inches below the handrail. **Handrails must be provided on at least one side when there are four or more risers. Handrails must have returns on each end or terminate in a newel post.** Other handrail shapes having an equivalent gripping shape may be used with prior approval of the Building Department. **Handrails must be continuous for the entire length of the stairs and may not be interrupted by newel posts except at landings.**

Hand rails and guards must be designed to support a 200 lb load applied in any direction at any point along the top of the guard or rail. The bottoms of the stringers should rest on a sound foundation such as a gravel bed, a concrete pad, pavers, or similar.

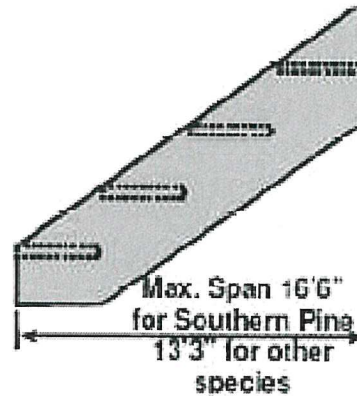


STAIR STRINGER SPANS

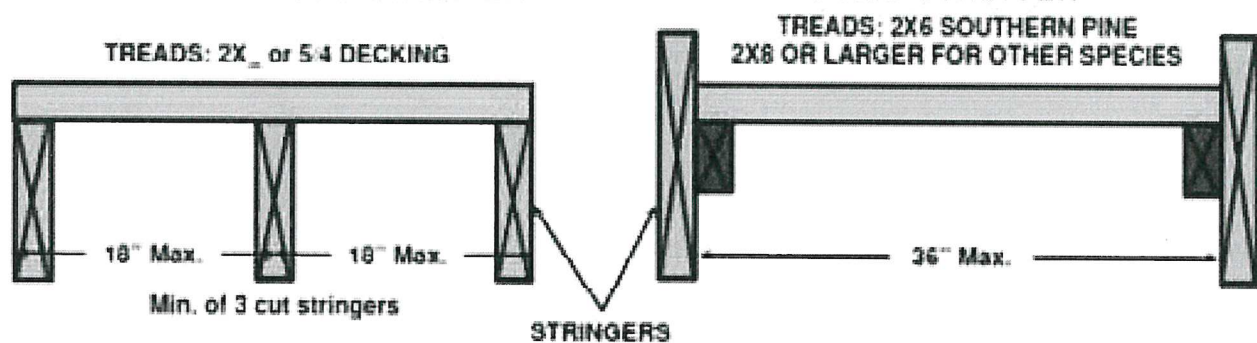
LANDINGS OR COLUMNS AND BEAMS MAY BE USED TO SHORTEN
STRINGER SPANS



CUT STRINGER



SOLID STRINGER



INSPECTIONS

- Call 1-2 days in advance
- Have address, permit number, and type of inspection (ex. footing) ready
- Let scheduler know if you wish an exact time
- Footing Inspection - Holes dug, loose material removed.
- Framing Inspection
- Final Inspection
- - All work complete and all stairs, handrails, and guards in place. •

Table 1

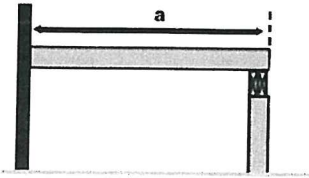
Joist span

(Design Load = 40#LL + 10#DL, Deflection = L/360)

	Ponderosa Pine or Red Pine #2			Southern Yellow Pine #2			Western Cedar #2		
	12" o.c.	16" o.c.	24" o.c.	12" o.c.	16" o.c.	24" o.c.	12" o.c.	16" o.c.	24" o.c.
2x6	8' - 9"	8' - 0"	7' - 0"	10' - 4"	9' - 4"	7' - 9"	8' - 9"	8' - 0"	7' - 0"
2x8	11' - 6"	10' - 6"	8' - 9"	13' - 6"	12' - 4"	10' - 0"	11' - 5"	10' - 6"	9' - 2"
2x10	14' - 9"	13' - 3"	10' - 10"	17' - 4"	15' - 9"	13' - 0"	14' - 9"	13' - 5"	11' - 3"
2x12	17' - 9"	15' - 4"	12' - 6"	21' - 0"	18' - 8"	15' - 3"	18' - 0"	16' - 0"	13' - 0"

Sample calculations for using joist span, beam size and footing size tables

Case I solution:

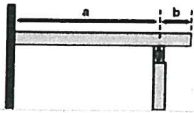


Refer to tables for joist, beam and footing size requirements.

Example: a = 12 feet; Post spacing = 8 feet

Use the **joist span** table to find the acceptable joist sizes for a 12 foot span, 2x8s at 12 inches O.C., 2x10s at 16 inches O.C. or 2x12s at 24 inches O.C. Use the **Beam and footing sizes** table and find the 8 foot post spacing column. With a 12 foot deck span, the beam may be either two 2x8s or two 2x10s, depending on wood used. Depending on the type of soil, the footing diameter at the base must be a minimum of 12 inches, 10 inches or 9 inches for the corner post and 17 inches, 14 inches or 12 inches for all intermediate posts.

Case II solution:

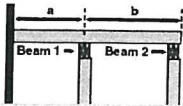


Use "a" to determine joist size and "a" + "2b" to determine beam and footing sizes. The length of "b" is restricted by both the length of "a" and the size of the joists.

Example: a = 8 feet, b = 2 feet, Post spacing = 10 feet

Refer to the **joist span** table. For an 8 foot joist span, either 2x8s at 24 inches O.C. or 2x6s at 16 inches O.C. are acceptable. For sizing the beam, use a joist length of 12 feet (8 feet + 4 feet) and a post spacing of 10 feet. The **beam and footing sizes** table indicates that the beam may be either two 2x10s or two 2x12s, depending on wood used. Depending on the type of soil, the footing diameter at the base must be a minimum of 15 inches, 12 inches or 11 inches for the corner post and 20 inches, 17 inches or 15 inches for all intermediate posts. Note that because of the 2 foot cantilever all footing sizes were increased by 1 inches as required by footnote 2 at the end of the table.

Case III solution:



Example: a = 6 feet, b = 7 feet, Post spacing = 9 feet

Joist size is determined by using the longest span joist (7 feet). The **joist span** table indicates that 2x6s at 24" O.C. would be adequate for this span. For Beam 1 and footings, use a joist length of 13 feet (6 feet + 7 feet) and a post spacing of 9 feet. The **beam and footing sizes** table indicates that the beam may be two 2x10s or two 2x12s, depending on the wood used. Depending on the type of soil, the footing diameters for Beam 1 posts shall be 13 inches, 11 inches or 9 inches for the corner (outside) post and 19 inches, 15 inches or 13 inches for all intermediate posts. For Beam 2 and footings use a joist length of 7 feet and post spacing of 9 feet. The beam may be two 2x8s or two 2x10s, depending on wood used. Depending on the type of soil, the footing diameters for Beam 2 shall be 10 inches, 8 inches or 7 inches for the corner posts, and 14 inches, 11 inches or 10 inches for all intermediate posts.

Note: Prior to using this table, determine joist span from Table 1 on Joist Span sheet. Circle joist span and post spacing of proposed deck, then find beam size and concrete pier footing (bottom diameter) requirements at their intersection (see notes below).

Beam and Footing Size Table 2

Treated Ponderosa Pine No. 2 or Better

Size Requirements	Post Spacing (ft.)											Joist Span (ft.)	
	4	5	6	7	8	9	10	11	12	13	14		
Beam	1- 2x6	1- 2x6	1- 2x8	2- 2x8	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	2- 2x12	2- 2x12	2- 2x12	6
Corner Footing	6	8	8	8	8	9	10	10	10	11	11	11	
Intermediate Footing		9	10	10	11	12	13	14	14	15	15	16	7
Beam	1- 2x6	1- 2x6	1- 2x8	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x10	2- 2x12	3- 2x10	3- 2x10	3- 2x10	
Corner Footing	7	8	8	8	9	9	10	10	11	11	12	12	7
Intermediate Footing		9	10	11	12	13	14	15	15	16	17	17	8
Beam	1- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x10	3- 2x10	3- 2x10	3- 2x10	3- 2x12	
Corner Footing	8	8	8	9	9	10	10	11	11	12	13	13	8
Intermediate Footing		10	11	12	13	14	15	16	16	17	18	18	9
Beam	1- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x10	3- 2x10	3- 2x10	3- 2x12	3- 2x12	3- 2x12	
Corner Footing	9	8	8	9	10	10	11	12	12	13	13	14	9
Intermediate Footing		10	12	13	14	15	16	17	17	18	19	20	10
Beam	1- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	3- 2x10	3- 2x12	3- 2x12	3- 2x12		
Corner Footing	10	8	9	10	10	11	12	12	13	14	14	N.A.	10
Intermediate Footing		11	12	14	15	16	17	17	18	19	20		
Beam	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x12	2- 2x12	3- 2x10	3- 2x12	3- 2x12	3- 2x12		
Corner Footing	11	8	9	10	11	12	12	13	14	14	15	N.A.	11
Intermediate Footing		12	13	14	15	16	17	17	18	19	20		
Beam	1- 2x6	2- 2x6	2- 2x8	2- 2x10	2- 2x10	2- 2x12	2- 2x12	3- 2x12	3- 2x12	3- 2x12			
Corner Footing	12	9	10	10	11	12	13	14	14	15	N.A.	N.A.	12
Intermediate Footing		12	14	15	16	17	18	19	20	21			
Beam	2- 2x6	2- 2x6	2- 2x8	2- 2x10	2- 2x12	2- 2x12	2- 2x12	3- 2x12	3- 2x12	3- 2x12			
Corner Footing	13	9	10	11	12	13	13	14	15	15	N.A.	N.A.	13
Intermediate Footing		13	14	15	17	18	19	20	21	22			
Beam	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x12	3- 2x10	3- 2x12	3- 2x12	3- 2x12				
Corner Footing	14	9	10	11	12	13	14	15	15	N.A.	N.A.	N.A.	14
Intermediate Footing		13	15	16	17	18	20	21	22				
Beam	2- 2x6	2- 2x8	2- 2x8	2- 2x10	3- 2x10	3- 2x10	3- 2x12	3- 2x12	3- 2x12				
Corner Footing	15	10	11	12	13	14	14	15	16	N.A.	N.A.	N.A.	15
Intermediate Footing		14	15	17	18	19	20	21	22				
Beam	2- 2x6	2- 2x8	2- 2x10	2- 2x10	3- 2x10	3- 2x10	3- 2x12	3- 2x12					
Corner Footing	16	10	11	12	13	14	15	16	16	N.A.	N.A.	N.A.	16
Intermediate Footing		14	16	17	18	20	21	22	23				

Notes:

1. An 8-inch minimum concrete pier is required with a 6 x 6 post centered and securely attached.
2. When joist extends (cantilevers) beyond support beam by 18 inches or more, add 1 inch to footing dimensions.
3. All footing sizes are base (bottom) diameters (inch).
4. Maximum beam cantilever is 1-foot.

Note: Prior to using this table, determine joist span from Table 1 on Joist Span sheet.
 Circle joist span and post spacing of proposed deck, then find beam size and concrete pier footing (bottom diameter) requirements at their intersection (see notes below).

Beam and Footing Size Table

Treated Southern Pine No. 2 or Better

Size Requirements		Post Spacing (ft.)											
		4	5	6	7	8	9	10	11	12	13	14	
Beam		1- 2x6	1- 2x6	1- 2x6	2- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x10	
Corner Footing	6	8	8	8	8	8	9	10	10	10	11	11	6
Intermediate Footing		9	10	10	11	12	13	14	14	15	15	16	
Beam		1- 2x6	1- 2x6	1- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x10	2- 2x12	
Corner Footing	7	8	8	8	9	9	10	10	11	11	12	12	7
Intermediate Footing		9	10	11	12	13	14	15	15	16	17	17	
Beam		1- 2x6	1- 2x6	2- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	2- 2x12	
Corner Footing	8	8	8	9	9	10	10	11	11	12	13	13	8
Intermediate Footing		10	11	12	13	14	15	16	16	17	18	18	
Beam		1- 2x6	1- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	2- 2x12	3- 2x10	
Corner Footing	9	8	8	9	10	10	11	12	12	13	13	14	9
Intermediate Footing		10	12	13	14	15	16	17	17	18	19	20	
Beam		1- 2x6	1- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	2- 2x12	3- 2x10	
Corner Footing	10	8	9	10	10	11	12	12	13	14	14	15	10
Intermediate Footing		11	12	14	15	16	17	17	18	19	20	21	
Beam		1- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	2- 2x12	3- 2x10	3- 2x10	
Corner Footing	11	8	9	10	11	12	12	13	14	14	15	15	11
Intermediate Footing		12	13	14	15	16	17	17	18	19	20	21	
Beam		1- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	3- 2x10	3- 2x10	3- 2x12	
Corner Footing	12	9	10	10	11	12	13	14	14	15	15	16	12
Intermediate Footing		12	14	15	16	17	18	19	20	21	22	23	
Beam		1- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x10	2- 2x12	3- 2x10	3- 2x10	3- 2x12	
Corner Footing	13	9	10	11	12	13	13	14	15	15	16	17	13
Intermediate Footing		13	14	15	17	18	19	20	21	22	23	24	
Beam		1- 2x6	2- 2x6	2- 2x6	2- 2x8	2- 2x10	2- 2x10	2- 2x12	3- 2x10	3- 2x10	3- 2x12	3- 2x12	
Corner Footing	14	9	10	11	12	13	14	15	15	16	17	17	14
Intermediate Footing		13	15	16	17	18	20	21	22	23	24	24	
Beam		2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x12	2- 2x12	3- 2x10	3- 2x12	3- 2x12		
Corner Footing	15	10	11	12	13	14	14	15	16	17	17		15
Intermediate Footing		14	15	17	18	19	20	21	22	23	24		N.A.
Beam		2- 2x6	2- 2x6	2- 2x8	2- 2x8	2- 2x10	2- 2x12	2- 2x12	3- 2x10	3- 2x12	3- 2x12		
Corner Footing	16	10	11	12	13	14	15	16	16	17	18		16
Intermediate Footing		14	16	17	18	20	21	22	23	24	25		N.A.
		4	5	6	7	8	9	10	11	12	13	14	

Notes:

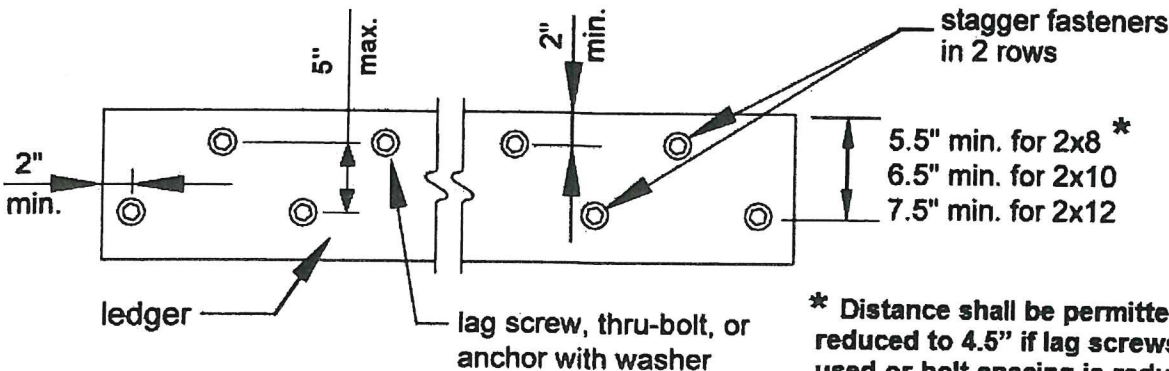
1. An 8-inch minimum concrete pier is required with a 6 x 6 post centered and securely attached.
2. When joist extends (cantilevers) beyond support beam by 18 inches or more, add 1 inch to footing dimensions.
3. All footing sizes are base (bottom) diameters (in.).
4. Maximum beam cantilever is 1-foot.

Table 3: Ledger Connection Requirements

Fastener Spacing For a Southern Pine or Hem-Fir Deck Ledger and a 2 inch Nominal Solid Sawn Spruce Pine Fir Band Joist^{c,f}
 (Deck Live Load = 40 psf, Deck Dead Load = 10 psf)

Joist Span	6' and less	6'-1" to 8'	8'-1" to 10'	10'-1" to 12'	12'-1" to 14'	14'-1" to 16'
Connection Details	(2) - Rows of On-Center Spacing of Fasteners^{d,e}					
1/2 inch diameter lag screw with 15/32 inch maximum sheathing ^a	30	23	18	15	13	11
1/2 inch diameter bolt with 15/32 inch maximum sheathing	36	36	34	29	24	21
1/2 inch diameter bolt with 15/32 inch maximum sheathing and 1/2 inch stacked washers ^{b,g}	36	36	29	24	21	18

- a. The tip of the lag screw shall fully extend beyond the inside face of the band/rim joist.
- b. The maximum gap between the face of the ledger board and face of the wall sheathing shall be 1/2 inch.
- c. Ledgers shall be flashed to prevent water from contacting the house band/rim joist.
- d. Lag screws and bolts shall be staggered.
- e. Deck ledger shall be minimum 2x8 pressure preservative treated No. 2 grade lumber, or other approved materials as established by standard engineering practice.
- f. When solid sawn pressure preservative treated deck ledgers are attached to a minimum 1 inch thick engineered wood product (structural composite lumber, laminated veneer lumber or wood structural panel band/rim joist), the ledger attachment shall be designed in accordance with accepted engineering practice.
- g. Wood structural panel sheathing, gypsum board sheathing or foam sheathing not exceeding 1 inch nominal in thickness shall be permitted. The maximum distance between the face of the ledger board and the face of the band/rim joist shall be 1 inch.



*** Distance shall be permitted to be reduced to 4.5" if lag screws are used or bolt spacing is reduced to that of lag screws to attach 2x8 ledgers to 2x8 band / rim joists.**

Lag Screws:

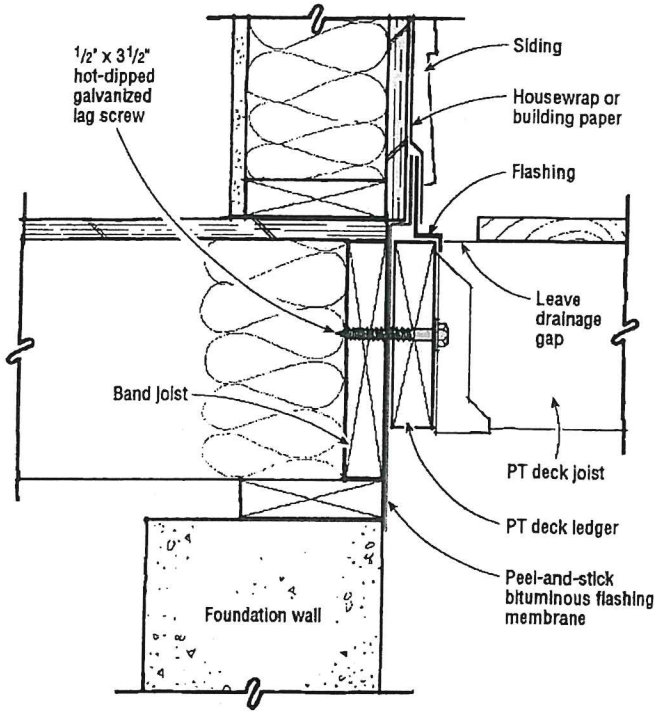
Lag screws shall have a minimum diameter of 1/2 inch. Lag screws may be used only when the field conditions conform to those shown above. All lag screws shall be with washers.

Thru-Bolts:

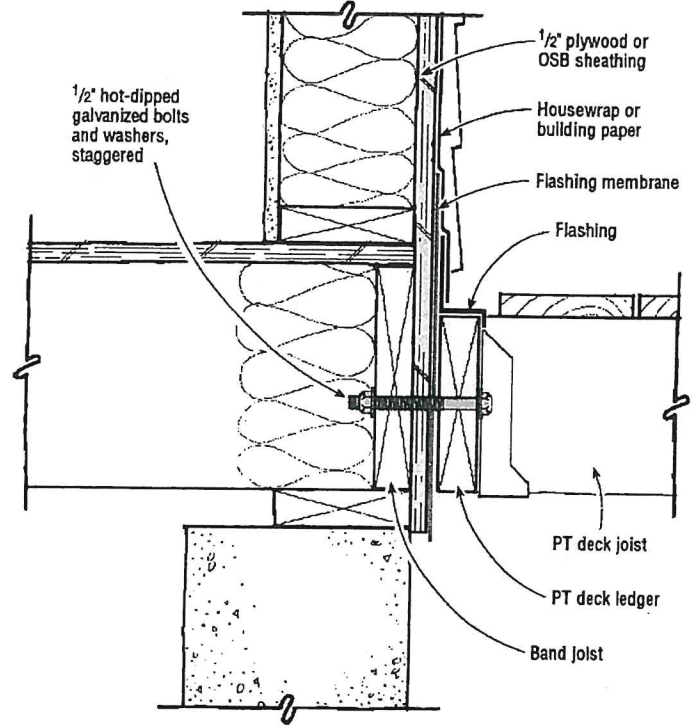
Thru-bolts shall have a diameter of 1/2 inch. Pilot holes for thru-bolts shall be 17/32 inch to 9/16 inch in diameter. Thru-bolts require washers at the bolt head and nut.

Ledger Attachment Requirements

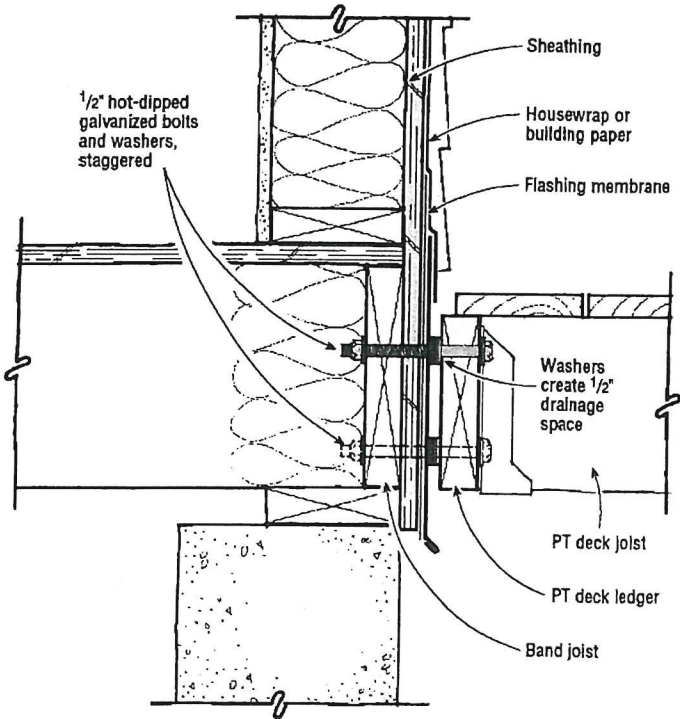
Detail 1: Attaching Ledger Directly to Band Joist



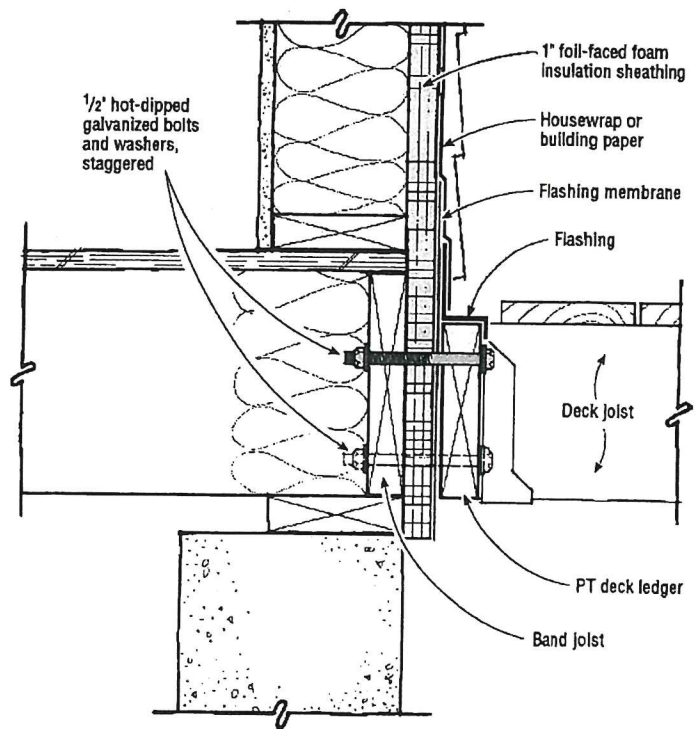
Detail 2: Attaching Ledger to Band Joist Over Structural Sheathing



Detail 3a: Attaching Ledger With Drainage Spacers



Detail 3b: Attaching Ledger Over Foam Sheathing



**OFFICIAL NOTICE OF BUILDING DEPARTMENT
INSPECTION SERVICE PROCEDURES**

BUILDING INSPECTIONS:

Building Inspections will be done by appointment only. A 48 hour notice is requested for all inspections. Both inspectors work outside of the Town Office during regular business hours. There will be no in-office hours at this time.

Work requiring inspections must be complete at the time of the inspection. Your cooperation in observing these procedures will eliminate the necessity of recalls and enable us to provide better service.

If you have any questions, you may call the Town Office 218-879-9717 or contact the listed official for your address.

For All Inspections:

Properties south of Harney Road – Call Matt Munter (218)391-3745 or (218)879-9719
MMunter@TownofThomsonMN.gov

Properties north of Harney Road – Call Adam Schminski (218)721-8115
ASchminski@TownofThomsonMN.gov

Plumbing Inspections:

Plumbing inspections are handled in the same manner. Please provide at least 48 hours notice.

For a list of required inspections, please refer to the information given at the time of application.

IT IS YOUR RESPONSIBILITY TO CALL FOR THE INSPECTIONS

Thank You.

Matt Munter
Building Official/Inspector

Adam Schminski
Inspector

REQUIRED INSPECTIONS:

- Footings or Slab Forms - BEFORE concrete is poured.
(Rebar must be in place at time of inspection)
- Foundation before backfilling
- Framing
- Plumbing (*Both before concrete is poured & as a rough-in before drywall is applied*)
- Insulation
- Vapor Barrier
- FINAL

Revised 3-24-2011