

Screened or 3 Seasons Porch

Reference: 2024 International Residential Code
City of Marion Code of Ordinances

Permit requirements: A building permit is required when adding an addition or altering an existing structure. All residential attached additions are to be located per the zoning guidelines listed below.

Zoning guidelines: Planning & Zoning Division 319-743-6320 or planning@cityofmarion.org
(Contact the above department with questions about setbacks and other zoning requirements.)

- Required front, side and rear yard setbacks vary depending on zoning districts. Contact Planning & Zoning to verify what the setbacks are for your project.
- The required rear yard setback is usually 25 feet (not true for all zoning districts) or 20% of the depth of the lot, but no less than 15 feet.
- No portion of the main structure (including overhangs) can encroach into an easement.

Applying for a permit: (Submit digital copies of building plans for review and approval.)

- Complete the Application and a Site Plan showing all required information (see "Sample Site Plan")
- Fill out all of the applicable worksheet on this handout or submit detailed, scaled plans.
- Email the application and all completed plans to buildingpermits@cityofmarion.org or go to the City of Marion website for information about applying through the Online Permit Service portal.
- Upon completion of the review, you will be notified by phone or email to secure your permit.

Cross Section Drawing: (include size, material, and spacing) (See attached forms)

- Footing diameter, size of posts, deck support beams, joists, final grade level.
- Wall framing, ceiling heights, wall sheathing, headers.
- Ceiling joist, rafters, trusses, roof sheathing.
- Eave ice barrier, roof felt underlayment, type of roof covering, soffit fascia, attic vents.
- Siding and exterior finishes.
- Windows and screening material description.
- **Guard detail:** when porch floor is more than 30 inches above grade measuring 3 feet out, guards are required. Screen alone is not a guard.

Stair Cross Section: (When applicable) (See "Residential Stair Brochure")

- Rise, run, headroom, handrail height, guard spacing, and stair width.

Exterior Elevations:

- Show height of structure from final grade. The porch should not alter the drainage of the property or direct additional water onto a neighbor.
- Windows, doors, headers

Additional permits required:

- Separate electrical, mechanical, and plumbing permits are required for any work performed.
 - State licensed contractors are to perform the work and obtain the necessary permits. Single family dwelling homeowners can do the work, but a permit is required.

Inspections required:

- Footings – after all excavation is complete and forms are set and before concrete is poured.
- Rough electrical, mechanical, plumbing, and lastly, rough framing before insulating and covering walls.
- Final grade inspection prior to seed or sod.
- Final inspection – after all work is completed and prior to use the permit holder should contact the Marion Building Department and arrange a final inspection. Once approved, a **Certificate of Occupancy** will be issued by the Building Department.

Design consideration:

- All wooden members of decks shall be pressure treated (approved pressure treated to .40 retention) or rot resistant wood (redwood or cedar).
- Deck/porch footings shall be designed and constructed for a load of 96# per square foot. If there are additional loads (large planters, hot tub, etc.), additional design issues must be addressed.
- Metal flashing (stainless steel, copper, or vinyl) is required behind the ledger board where it attaches to the house. Galvanized metal or aluminum is not to be used.
- Look for hardware with “zmax” or “triple zinc”.
- Joist hangers with proper nails are required whenever joists do not have at least 1½” bearing. (Hangers must be rated for the treated lumber in which it is used with.
- Footings are to be a minimum of 42” deep below grade. Footing diameters will vary with the size of the deck and number of posts. Footing holes shall not contain loose soil and be flared at the bottom. (3-seasons or screened porch footings should be located at the outer extremities of the deck and adjusted in size for the increased loads.)
- Posts to be anchored to footings with approved manufactured post connector to prevent movement.
- Cantilevers (joist overhang past the beam) is not recommended on porches without special design. Also beams should not overhang posts without special design.
- Guardrails at least 36” high are required on screened porches or with “Easy Breeze type windows” when over 30” above the adjacent grade measured out 3 feet from the edge of the porch.
- Porches can be constructed over emergency escape windows with certain conditions.
- Handrails are required for 4 or more stair risers. The height shall be 34 – 38” above the tread nosing.
- Some windows may need to be safety glazed (tempered) depending on location and size.

SCREENED OR 3 SEASONS PORCH

Size of new porch: _____X_____

Roof covering: _____

Roof pitch: _____

(Rise in inches for every 12 inches of run)

Eave ice protection:

Required to a point 24" inside the exterior wall.

Roof underlayment: Minimum 15# asphalt felt underlay.

Roof sheathing: _____in. plywood or OSB

Roof framing: (check one below)

- ☐ Trusses _____ft on center
- ☐ Rafters – 2" x _____in. on _____in. center
Joists – _____in. x _____in. on _____in. center

Walls: 2in. x _____in. x _____ft studs on _____in. center

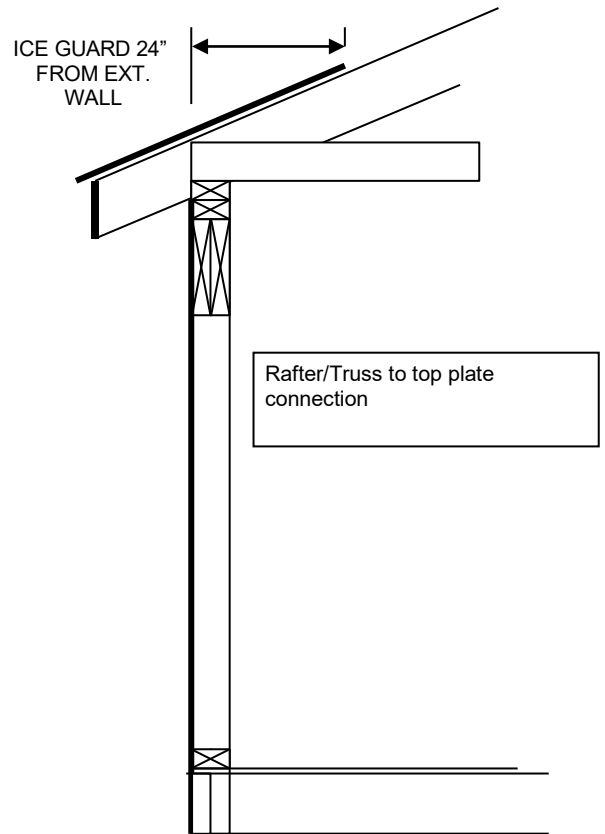
Double 2" x _____in. top plate

Bottom plate 2" x _____in. pressure treated

Wall sheathing: _____" plywood or OSB

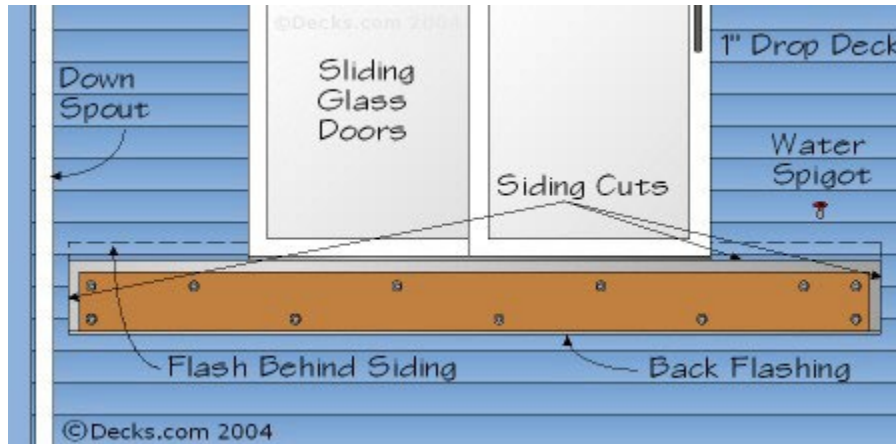
Headers: 2-ply _____in. x _____in. LVL or dimensional lumber

Windows/Screen: _____



- Footing – call for a footing inspection after footing holes are dug and before pouring concrete. Footing holes shall not contain loose soil and should be flared out at the bottom of the holes.

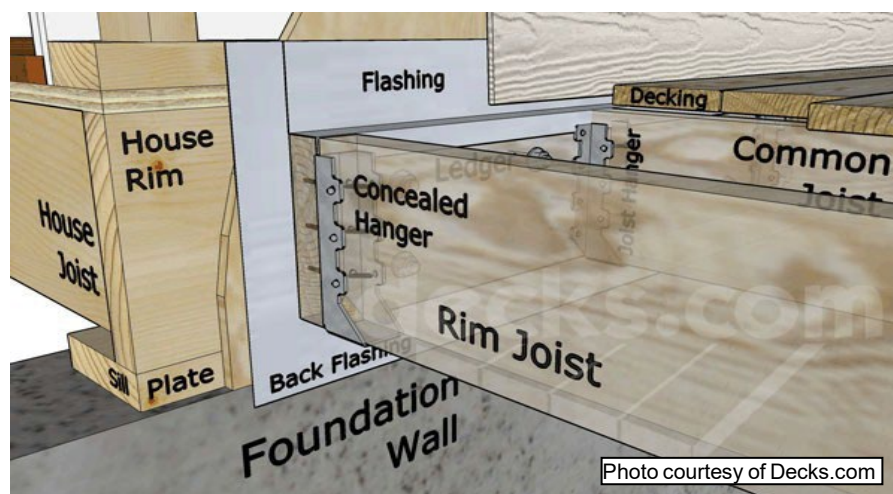
Ledger Board Installation



LEDGER

- Minimum of ½" lag screws or bolts are required and are to be staggered with spacing as shown in the table below.
- All screws or bolts are to be placed 2 inches in from the bottom and top edge of the ledger and between 2 and 5 inches in from the ends.
- Tips of the lag screws are to extend past the inside face of the band joist.
- Lag screws, bolts, and washers are to be hot-dipped galvanized or stainless steel when using.
- Ledger boards shall not be attached to open web trusses, brick veneers, or hollow concrete block.

JOIST SPAN	6' OR 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	Inches on center spacing of fasteners						
½" diameter lag screw	30	23	18	15	13	11	10
½" diameter bolt	36	36	34	29	24	21	19



FLASHING

- House siding must be removed prior to the installation of the ledger board.
- Flashing is required where a ledger is fastened to wood construction.
- Flashing material shall be copper with copper nails, stainless steel, UV resistant plastic, or galvanized steel coated with G-185 coating.

Beam, Footing, & Span Table

(Maximum allowable spans are based on #2 Southern Pine CCA .40 pressure treated lumber. Other lumber species will have shorter spans than indicated.)

- **Note: Covered decks and screened porches will require larger footings and additional requirements.**
- **Charts and tables are for reference. All plans are verified by the building department.**

Joist Size	Joist Spacing	Joist Max. Span	Beam Size	Beam Max Span (Post Spacing)	Posts: Size & Max. Height Above Grade			Footing Diameter Inches	Corner Footing Diameter Inches	Deck Boards Min. Size
					4 x 4 In Feet	4 x 6 In Feet	6 x 6 In Feet			
2 X 6	12" o.c.	9'-11"	2—2 x 6	5'-11"	12	16		14	12	5/4 x 6
2 x 6	16" o.c.	9'-0"	2—2 x 6	5'-11"	12	16		12	12	5/4 x 6
2 x 6	24" o.c.	7'-7"	2—2 x 6	5'-11"	12	16		12	12	2x4 or 2x6
2 x 8	12" o.c.	13'-1"	2—2 x 8	6'-2"	10	12	20	16	14	5/4 x 6
2 x 8	16" o.c.	11'-10"	2—2 x 8	6'-2"	10	12	20	16	12	5/4 x 6
2 x 8	16" o.c.	11'-10"	2—2 x 10	6'-2"	9	12	20	18	14	5/4 x 6
2 x 8	24" o.c.	9'-8"	2—2 x 8	6'-9"	10	12	20	16	12	2x4 or 2x6
2 x 8	24" o.c.	9'-8"	2—2 x 10	6'-9"	10	12	20	18	14	2x4 or 2x6
2 x 10	12" o.c.	16'-2"	2—2 x 10	6'-4"	8	10	16	20	16	5/4 x 6
2 x 10	16" o.c.	14'-0"	2—2 x 10	6'-9"	8	10	16	18	16	5/4 x 6
2 x 10	16" o.c.	14'-0"	2—2 x 12	6'-9"	6	10	16	20	16	5/4 x 6
2 x 10	24" o.c.	11'-5"	2—2 x 10	8'-0"	9	10	20	18	14	2x4 or 2x6
2 x 10	24" o.c.	11'-5"	2—2 x 12	8'-0"	8	10	16	20	16	2x4 or 2x6
2 x 12	12" o.c.	18'-0"	2—2 x 12	7'-0"	6	8	16	22	16	5/4 x 6
2 x 12	16" o.c.	16'-6"	2—2 x 10	6'-4"	8	8	16	20	16	5/4 x 6
2 x 12	16" o.c.	16'-6"	2—2 x 12	7'-5"	6	8	16	20	16	5/4 x 6
2 x 12	24" o.c.	13'-6"	2—2x10	6'-9"	8	8	16	18	14	2x4 or 2x6
2 x 12	24" o.c.	13'-6"	2—2 x 12	8'-7"	6	8	16	20	16	2x4 or 2x6

- Post and footing sizes are approximate based on 2000 psf soil bearing and other assumptions for a standard deck.
- Sway bracing may be required on taller posts.

PORCH CONSTRUCTION

(Not to scale)

Size of desired porch:

Porch width _____ ft. _____ in.

Joist length _____ ft. _____ in.

Ledger board: (Flashing required)

Size: _____ in. x _____ in. x _____ ft

Lag or bolt size: _____

Joists:

Size: _____ in. x _____ in. x _____ ft

Spacing: _____ in. on center

Length of cantilever: _____

Beams: (Any splices to be over a post)

Beam size: _____ in. x _____ in. x _____ ply

Length of beam: _____ ft

Number of beams needed: _____

Flashing material: _____

Posts:

Height of porch off ground: _____

Posts spacing: _____

Number of posts needed: _____

Decking:

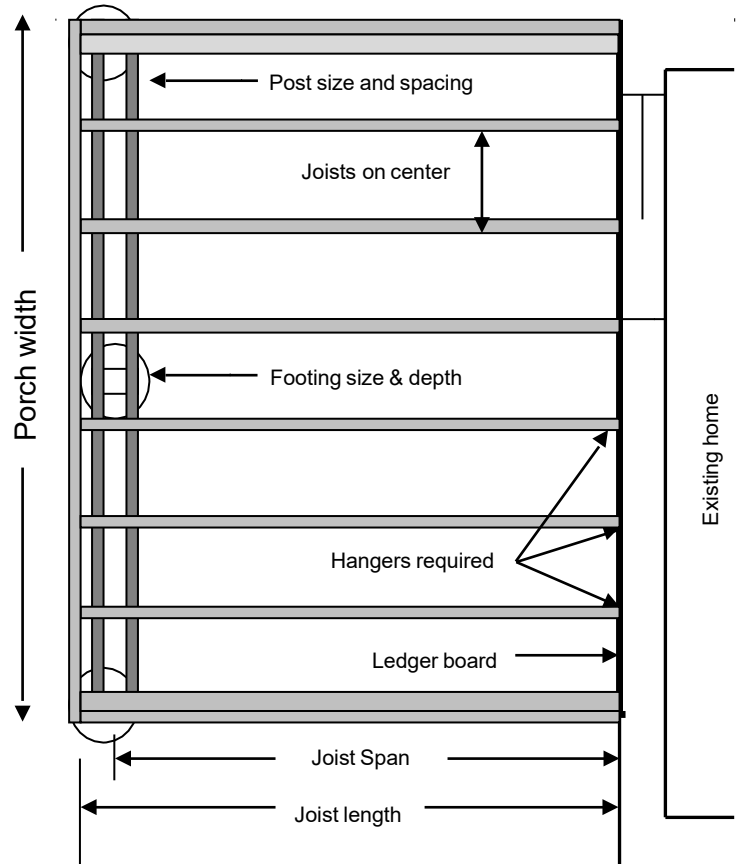
Material: _____

Size desired: _____ in. x _____ in.

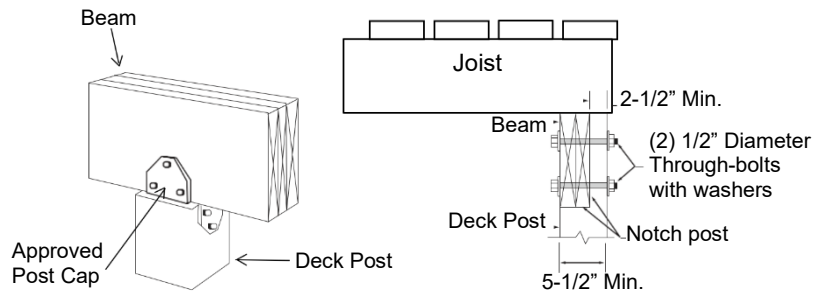
Footings: (42" min. depth)

Diameter of footing: _____

OPTION (see below): _____

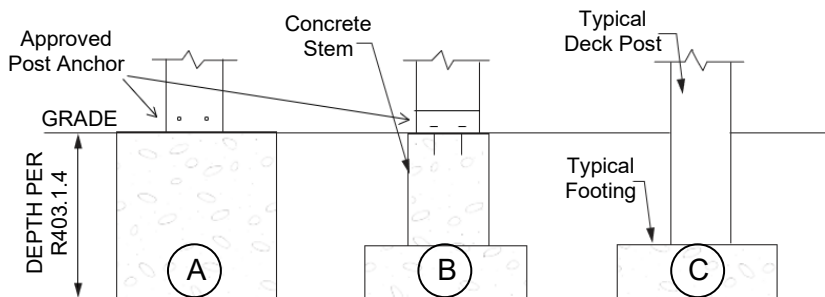


OPTIONS FOR BEAM CONNECTION TO POSTS



Over the top post/beam

Notched post/beam



TYPICAL DECK POSTS TO DECK FOOTINGS

