

BOARD OF SUPERVISORS

EAST GOSHEN TOWNSHIP

CHESTER COUNTY
1580 PAOLI PIKE. WEST CHESTER. PA 19380-6199

January 22, 2010

Re: Building Permit Specifications for Decks, Porches, Stoops, Balconies and Steps

To: Resident/Contractor
From: Township Code Enforcement Department

Outlined below is a breakdown of the basic permit requirements and inspections required for decks, porches, stoops, balconies and steps in East Goshen. This is not intended to be comprehensive of all possible requirements, however it should address the majority of issues with regard to permitting and building for decks, porches, stoops, balconies and steps in East Goshen Township.

Building Code: IBC 2009 / IRC 2009

Required Information: Construction Details sealed by a registered design professional. **The design specifications submitted must be for the pool design proposed.**
Site Plan; including property lines and proposed grading, placement of pool, pool mechanical equipment, fence, stormwater management system, decking, walls, etc.
Contractors must register with the Township, as required by §124 of the Township Code; failure to register contractors will result in the issuance of a Stop Work Order

Inspections Required: Minimum of three Inspections

Inspection #1 (Footing)

Inspection #2 (Rough-In)

- Rough Framing
- Rough Electrical (**Conducted by a licensed Electrical Inspector**)

Inspection #3 (Final)

- Final Electric (**Conducted by a licensed Electrical Inspector**)
- Fit and Finish (**Decking, Stairs, Guardrails and Handrails**)

Inspection Scheduling: All Inspections must be scheduled with the Township at least 24 hours in advance.

Upon completion and passing of the final inspection the Township will issue to the resident a Certificate of Occupancy for the decks, porches, stoops, balconies and steps.

The East Goshen Township Code Enforcement Department is committed to providing thorough and timely construction review and inspections for our residents and the contractors doing business in the Township.

Thank you for your cooperation.
Township Code Department Staff

DECK REQUIREMENTS

WOOD DECKS, PORCHES, STOOPS, BALCONIES AND STEPS

Design Criteria: All wood decks, porches balconies and stoops shall be designed for 40 lbs. per square foot live load and 10 lbs. per square foot dead load. Joist and beams shall be pressure treated #2 grade or better Southern Yellow Pine or equivalent. Cantilevers may not extend to 24". All decks supporting hot tubs must be engineered.

- 1. Footings:** Footings shall be a minimum of 36 inches (36") below finished grade. Excavations shall be smooth with straight edges and three times (3x) the diameter of the post used.
- 2. Fasteners:** All screws, bolts and nails used with pressure treated wood shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. The minimum bolt size requirement is 1/2".
- 3. Hardware:** Joist hangers, cast-in-place post etc, shall be galvanized or stainless steel.
- 4. Flashing:** All flashing shall be corrosion-resistant metal of min .019-inch thickness or an approved non-metallic material. Shall be applied at the top of the ledger board an under siding. Flashing is to extend past joist hangers.
- 5. Support Posts:** All deck post sizes shall be 6"x 6" (nominal) or larger and maximum height shall be 14'0 measured to the under side of the beam. Post shall be centered on footing. Cut end of post shall be field treated with an approved preservative. Notching is approved as well as approved post caps. Post bases shall be designed to stop uplift.

Maximum Post/Support Spacing Beam

Joist Span	6'	8'	10'	12'	14'	16'
Beam Size						
Two 2"x 6"	6'-2"	5'-9"	5'-5"	5'-0"	4'-8"	4'-4"
Two 2"x 8"	7'-9"	7'-3"	6'-10"	6'-4"	5'-11"	5'-6"
Two 2"x 10"	9'-6"	8'-11"	8'-5"	7'-10"	7'-3"	6'-9"
Two 2"x 12"	11'-1"	10'-5"	9'-9"	9'-1"	8'-5"	7'-9"
Three 2"x 12"	13'-9"	12'-11"	12'-2"	11'-4"	10'-7"	9'-10"

Maximum Post/Support Spacing Intermediate Beam (Supporting Two Sets of Joists)

Joist Span	6'	8'	10'	12'	14'	16'
Beam Size						
Two 2"x 6"	5'-3"	4'-10"	4'-6"	4'-2"	3'-11"	3'-7"
Two 2"x 8"	6'-6"	6'-1"	5'-9"	5'-5"	5'-0"	4'-7"
Two 2"x 10"	7'-11"	7'-5"	7'-0"	6'-6"	6'-1"	5'-8"
Two 2"x 12"	9'-2"	8'-7"	8'-1"	7'-6"	7'-0"	6'-6"
Three 2"x 12"	11'-4"	10'-9"	10'-2"	9'-5"	8'-10"	8'-3"

Floor Joist Spans

Joist Spacing	12"	16"	24"
Joist Size			
2"x8"	13'-8"	12'-5"	10'-2"
2"x10"	17'-5"	15'-10"	13'-1"
2"x12"	18'-0"	18'-0"	15'-5"

Bridging: Where floor joists are longer than 11' solid blocking is required to be placed at intervals not exceeding 8'.

6. Ledger/Ban/Ribbon Board Attachment to Structure: Ledger/ban/ribbon board shall be to the same size or greater than the floor joist. Ledger/ban/ribbon board shall be firmly attached to house using through bolts and placed staggered 16" on center with bolts doubled on each end. Minimum size bolts shall be 1/2" x 4 1/2" or 1/2" x 4 1/2" lag bolts when approved prior to installation or other approved anchors are permitted with approval from the Code Officer prior to installation. Flashing is required behind ledger extending above and wrapped over top of ledger. ***The lateral load connection required by Section R502.2.2 shall be permitted to be in accordance with Figure R502.2.2.3. Hold-down tension devices shall be installed in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 pounds.***

7. Guard Rails: Where the deck, porch or balcony surface is more than 30" above the finished grade any open side shall have guards not less than 36" in height. Open sides of stairs with a height of 30" or more above grade shall have guards not less than 34" in height measured vertically from the nosing of the treads. They all shall also have intermediate rails or ornamental closures that do not allow passage of a sphere 4" in diameter. Required guards shall not be constructed with horizontal rails or other ornamental patten that results in a ladder effect. For stairs, the triangular openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway are permitted to be of such size that a sphere 6" cannot pass through. (If a railing is install on decks below 30" they must comply with all guard rails specifications)

8. Stairs: Stairs shall not be less than 36" in width. The maximum riser height shall be 8 1/4" and the minimum tread depth shall be min 9". Open risers are permitted, provided that the opening between treads do not permit the passage of a 4" diameter sphere. Stair runs greater than 5'6" must have mid-span post supports.

9. Handrails: Hand rails shall be between 34" to 38" in height, respectively, measured vertically from the nosing of the treads shall be provided on at least one side of stairways. All required handrails shall be continuous the full length of the stairs with two or more risers from a point directly above the top riser of a flight to a point directly above the lowest riser of the flight. The handgrip portion of handrails shall have a circular cross section of between 1 1/4" to 2 5/8". Handrails adjacent to a wall shall have a space of not less than 1 1/2" between the wall and the handrail.

10. Landings: The width of each landing shall not be less than the stairway or door served, with a minimum of 36". Every landing shall have a minimum dimension of 36" measured in the direction of travel. The landing at an exterior doorway shall not be more than 8" below the top of the threshold, provided that the door, other than an exterior storm or screen door, does not swing over the landing.

DECK SAMPLE

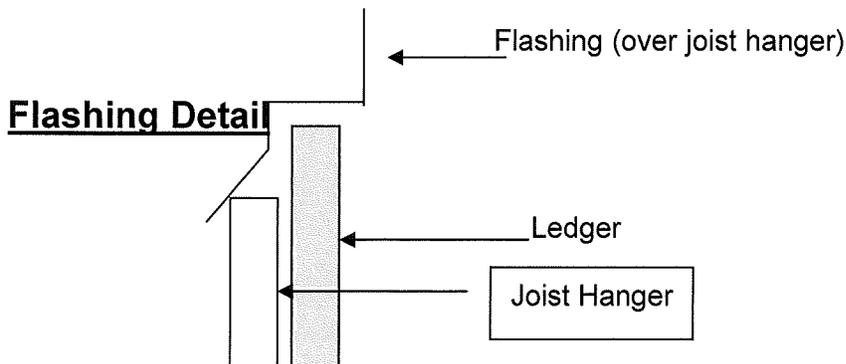
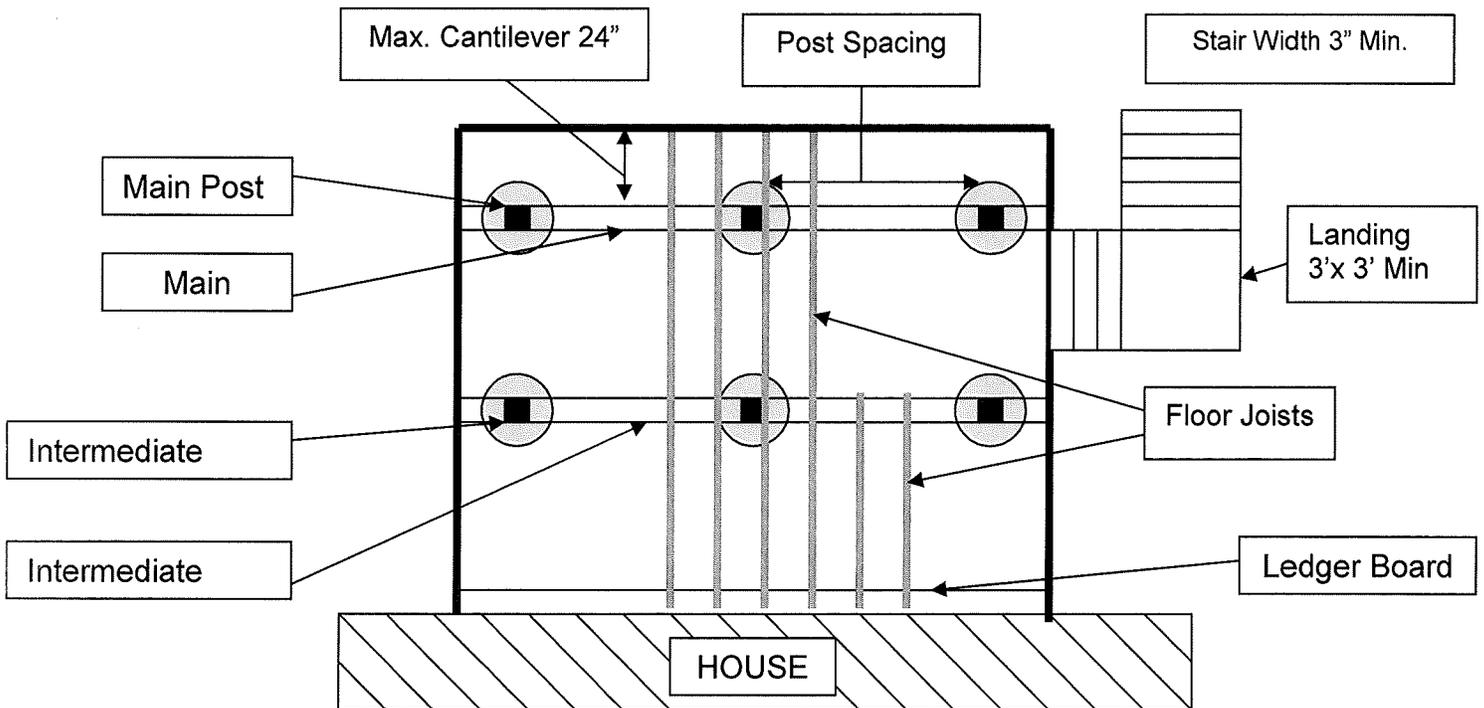
The following information will be needed on the plans turned in to the Township.

1. Main Beam: _____ Post Size: _____ Distance Between Post: _____

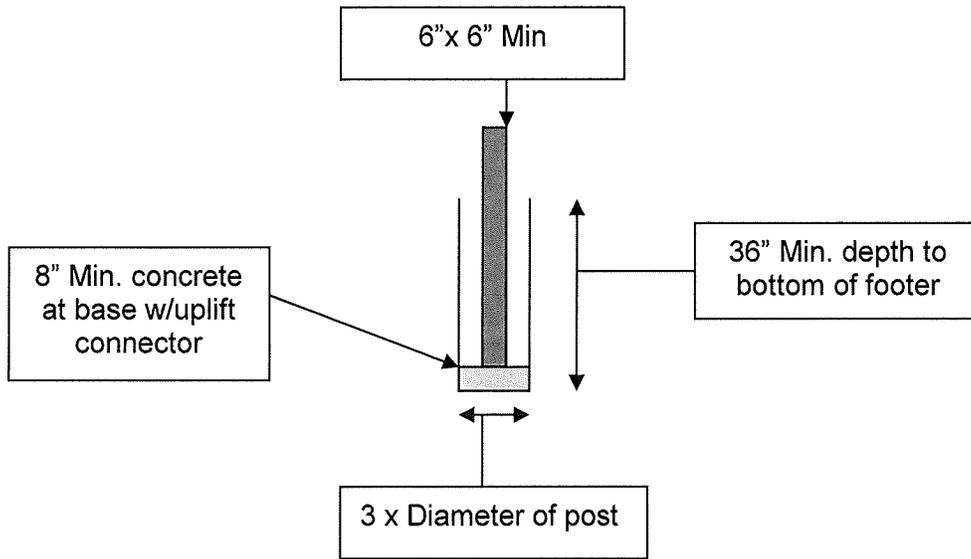
2. Intermediate Beam: _____ Post Size: _____ Intermediate Post Spacing: _____

3. Joist Size: _____ Joist Length: _____

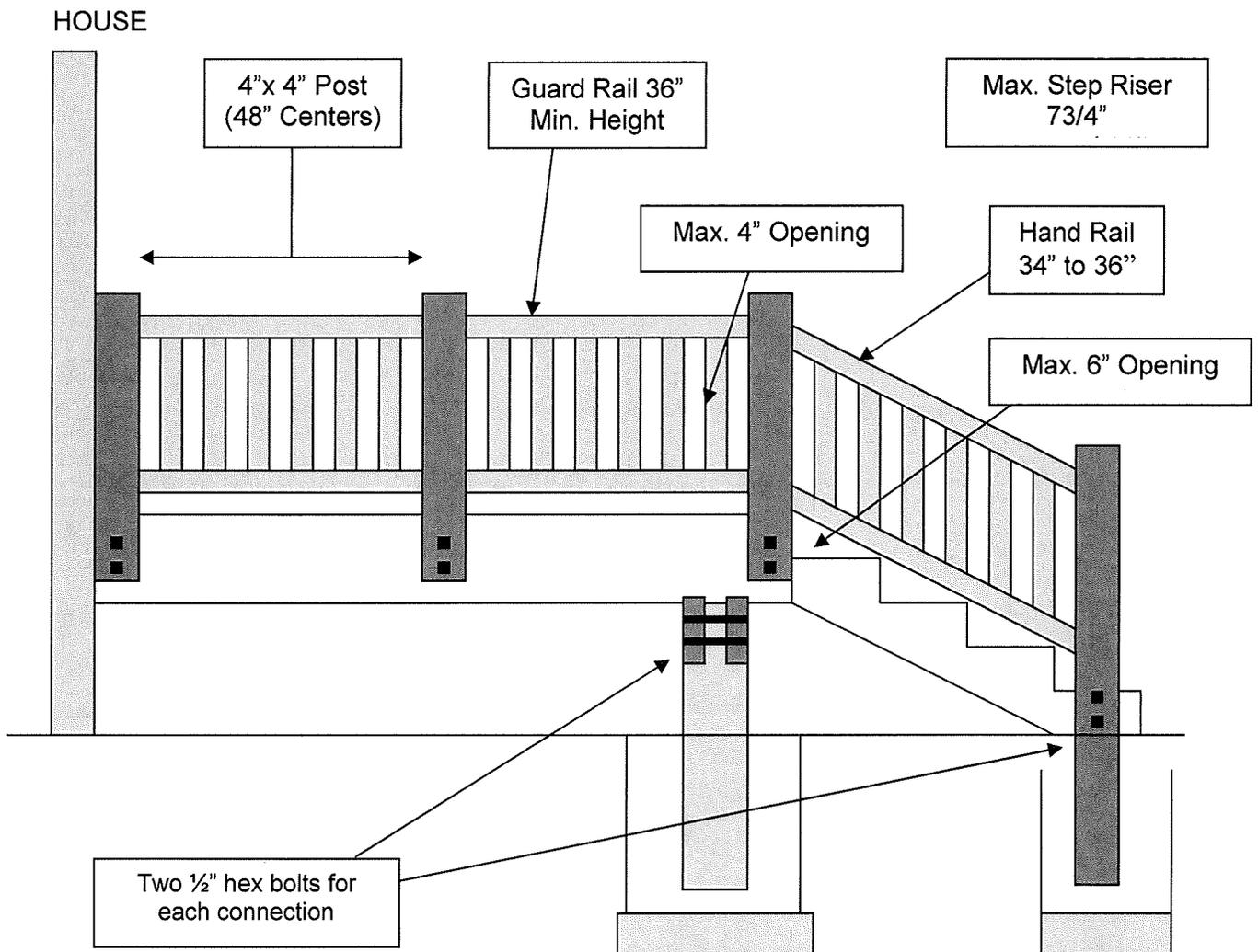
Deck Framing Detail



Footing Detail



Guard & Hand Rail Detail

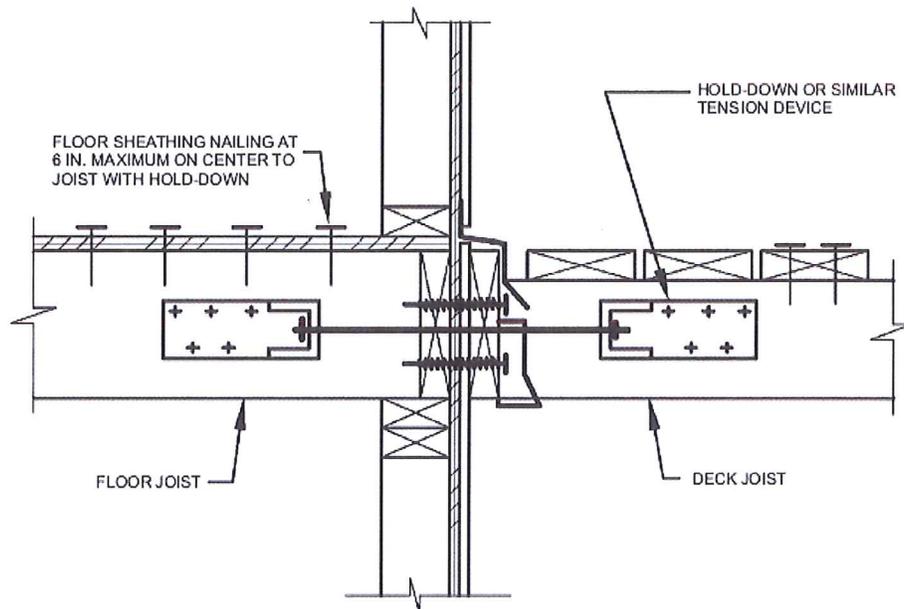


R502.2.2.2 Alternate deck ledger connections.

Deck ledger connections not conforming to Table [R502.2.2.1](#) shall be designed in accordance with accepted engineering practice. Girders supporting deck joists shall not be supported on deck ledgers or band joists. Deck ledgers shall not be supported on stone or masonry veneer.

R502.2.2.3 Deck lateral load connection.

The lateral load connection required by Section [R502.2.2](#) shall be permitted to be in accordance with Figure R502.2.2.3. Hold-down tension devices shall be installed in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 pounds (6672 N).



For SI: 1 inch = 25.4 mm.

**FIGURE 502.2.2.3
DECK ATTACHMENT FOR LATERAL LOADS**