



3382 Glenwood Blvd. • Reminderville, Ohio 44202 - Municipal Building • Phone 330-562-1234 • Fax 330-562-9548

## **GUIDELINES FOR DECK CONSTRUCTION**

This is a guide to deck construction and is intended as a guide only. Design and code information can be obtained from reference manuals, code books, or design professionals. A sample site plan and construction plan are enclosed for your use.

### **LOCATION AND DESIGN**

Decks are commonly constructed on the rear of the house for privacy. The Zoning Code limits the location with respect to side yards; however, it is uncommon to construct a deck beyond the limits of the house.

The design may affect the location. Some people prefer a one-level deck; others may prefer two or more levels. Decks can be built in most shapes depending upon the carpentry skills of the builder.

**In all cases, the design live load of a deck shall be no less than 40 pounds per square foot.**

### **MATERIALS**

All decking lumber must be treated and rated for use outdoors and in contact with the ground. Ammonical Copper Quat or ACQ is the typical lumber treatment.

All fasteners and hangers, including screws, nails, or bolts must be properly rated for contact with the ACQ lumber.

Nails should be spiral shanked or similar. Both nails and screws should be of a size that will provide proper penetration when fastening deck components together.

**Mechanical fasteners, such as joist hangers, wind uplift tie-downs (hurricane clips) and beam supports are required.**

## **FOUNDATION SYSTEM**

Decks are most frequently constructed of post foundations. 4" x 4" posts are most common. On decks in excess of six (6) foot in height above grade or with large roofed structures located upon them, a 6" x 6" posts should be employed.

In all cases the foundation must be constructed to a depth below the finished grade in excess of thirty-eight inches (<38") or to solid bearing, whichever is deeper.

Traditional methods of post construction provide that the post be placed upon a flagstone within an eight inch (8") diameter post hole. Cement is then placed around the post for stability.

Other methods of foundation construction may include filling the foundation hole entirely with cement and using a galvanized mechanical fitting designed to adapt a 4" x 4" or 6" x 6" post placed into the cement before it hardens.

**If any foundation systems other than the two described are desired, they must be approved by the Building Official.**

## **FLOOR SYSTEM**

The floor system is comprised of three basic components:

*BEAM:* Fastened or borne directly upon foundation posts; they support and run perpendicular to the floor joists.

*FLOOR JOISTS:* Commonly fastened to the house (if desired) and the beam(s) to support the decking.

*DECKING:* Flooring of the deck.

The beam is commonly constructed of two (2) 2" x 6"s, 2" x 8"s, or 2" x 10"s, and are generally spaced at 16" intervals upon the beam(s).

Floor joists should be fastened to the beam with an approved wind uplift tie-down to each. If floor joist spans exceed 10 feet (10'), blocking or bridging must be added between the joists for added stiffness.

The floor joists should be fastened to the house ledger with approved joint hangers. The ledger must be bolted or lagged to the house at 13" to 16" centers or as specified by the manufacturer of the fastener, and the floor joists will then be constructed on to the ledger board with joist hangers.

The decking is frequently 2" x 6" or 5/4" lumber. The 5/4" has a radius (rounded) edge. The decking should be fastened to the floor joist with two (2) fasteners per each floor joist. At butt ends of the decking, three (3) fasteners should be used.

Decking should be constructed with each decking member placed tightly against other decking materials. Shrinkage, which is common with womanized lumber, will occur providing a 1/8" to 3/8" gap between members for rain run-off of snow melt.

## **STAIRS**

Typically a deck will require a stair from the ground to the deck. The stair shall be a minimum of 36" in width. Each step on the stair shall have a minimum tread of nine inches (9") as measured from the nose of the tread above and a maximum rise of eight and one quarter inches (8-1/4"). Steps should not vary in rise and run by more than 3/8".

## **GUARDRAILS AND HANDRAILS**

If the deck is more than 30" above grade, a guardrail a minimum of 36" high.

Handrails are required for stair when there are more than three (3) steps.

Handrails can vary in height between 34" and 38" to allow a smooth transition with the guardrail.

In all cases, spindles or balusters shall be spaced vertically or horizontally to allow the passage of a sphere with a maximum diameter of four inches (4).

## **VAPOR BARRIER**

To keep grass or other vegetation from growing below the deck, the Building Department has established a standard requiring a vapor barrier below the deck.

The vapor barrier is usually a four (4) to six (6) mil plastic sheet. Gravel is generally used to keep the vapor barrier in place.

## **PLANS AND PERMITS**

Your application for a deck/dock permit needs to include two (2) sets of plans which include the following:

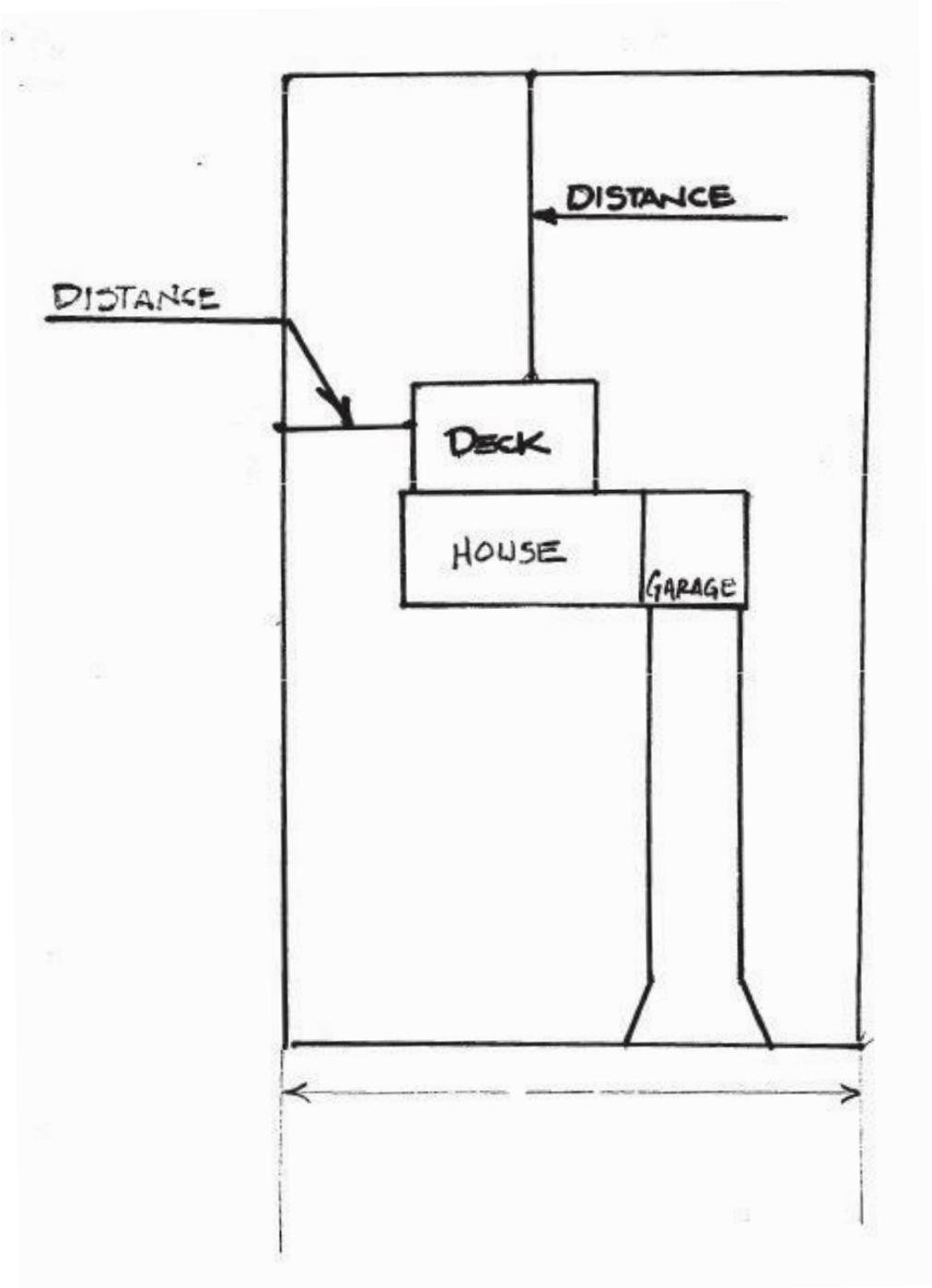
1. Site plan (similar to sample copy)
2. Construction detail with:
  - a. Foundation Systems
  - b. Floor Systems
  - c. Railings and Steps

## **PLAN REVIEW**

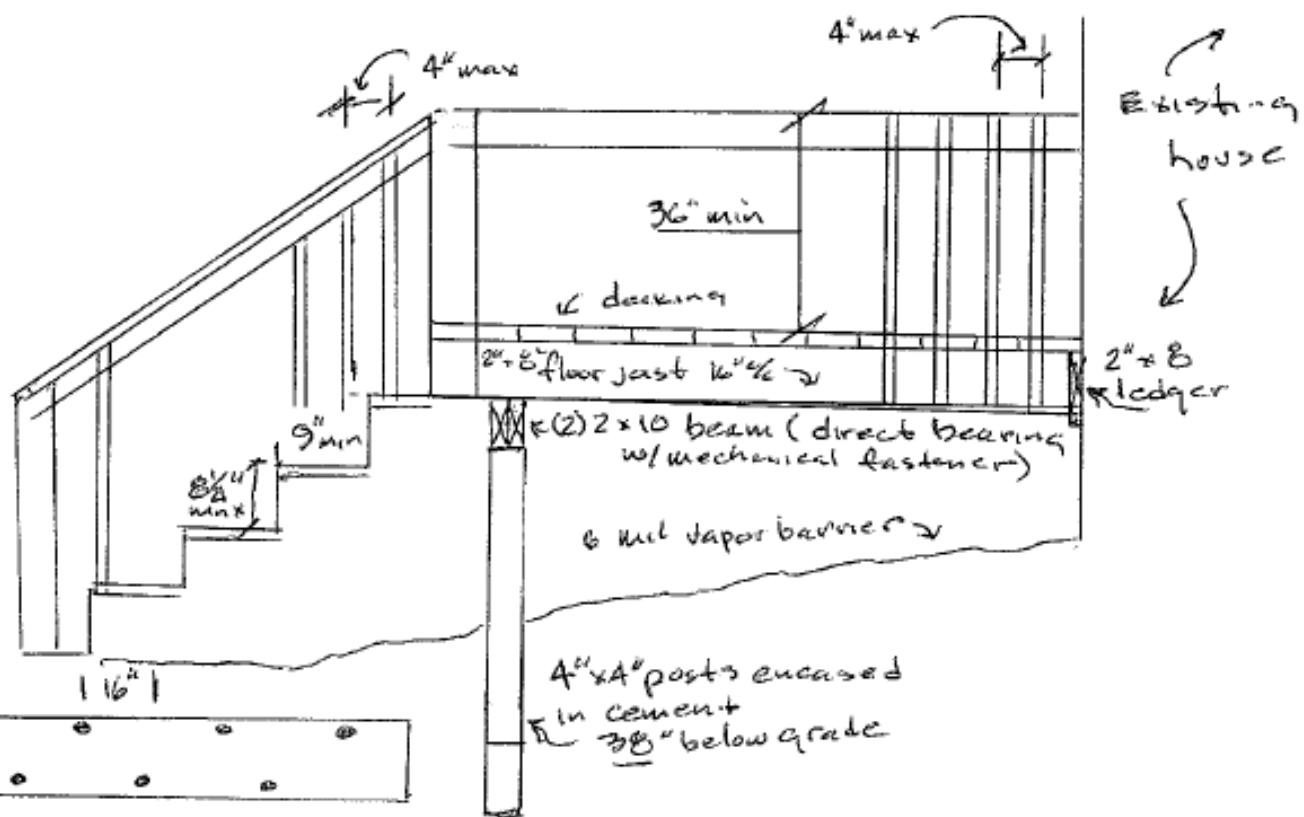
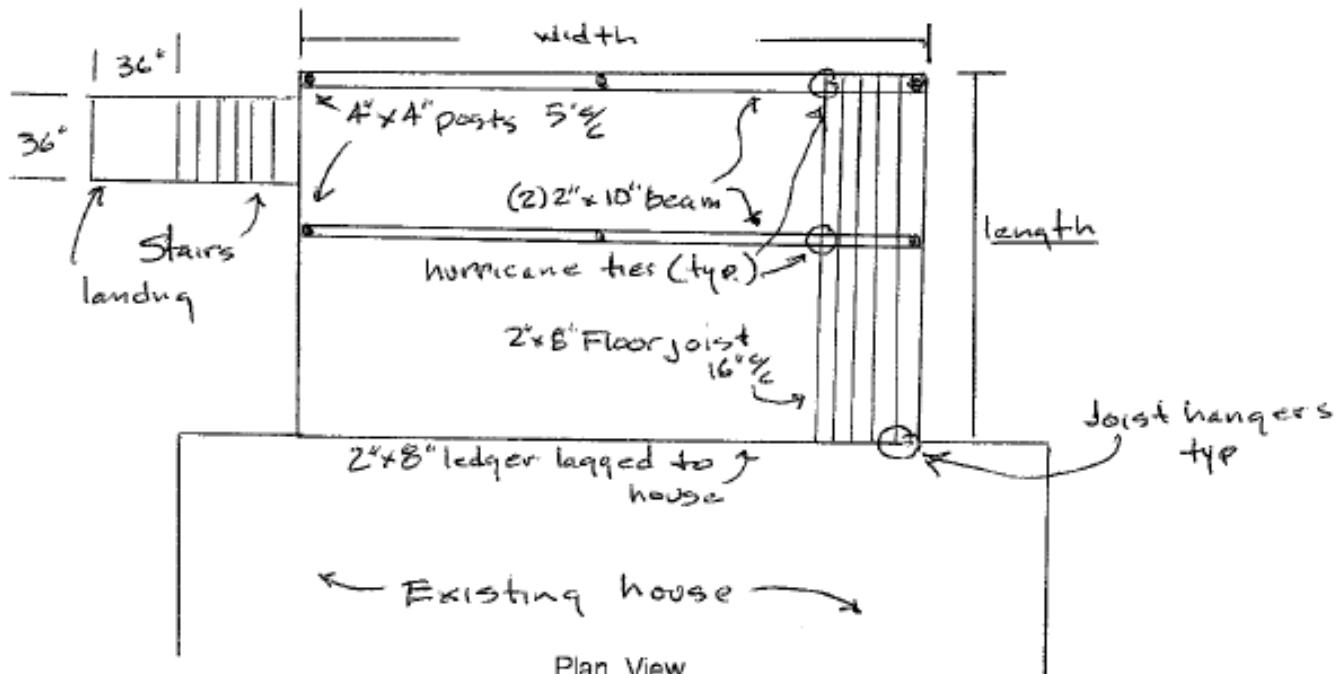
Your plans will be subject to a code review by the Building Official and an architectural review by the Village Architectural Board of Review (ABR).

The ABR has established a standard requiring a screen or a skirt around the base of the deck when the floor level of the deck is greater than eighteen inches (18") above grade and less than fifty-four inches (72") above grade.

## Sample Site Plan



Sample Deck Plans



Sectional View