

# Residential Deck Construction Guide

City of Wadsworth

120 Maple Street, Wadsworth Ohio 44281

This guide provides information on obtaining deck permits in the City of Wadsworth. Information can be obtained at the Building and Planning Department at 330-335-2753, or on the Building Department website at wadsworthcity.com.

**Zoning Permits Are Required** for *all* new deck construction or enlargements. Zoning approval is required prior to the issuance of a building permit.

**Building Permits Are Required** for all decks unless they are not attached to the dwelling, *and* not more than 30” above grade *and* less than 200 square feet *and* don’t serve the main exit door (usually the front door). Building and Zoning permits may be obtained at the same time, from the same office. Work completed prior to plan approval may not meet the requirements of Building or Zoning Codes, and may be required to be removed or re-constructed.

**1) Apply for a Zoning Permit** for all decks by submitting a site plan and a completed building and zoning permit application:

- **Prepare a Site Plan** of your property that includes the lot dimensions, the existing structures, any easements, the location of the proposed construction and setbacks from all property lines, and the dimensions of the proposed deck. The setbacks are the distances from the sides and rear property lines (and front if applicable). This drawing does not have to be to scale. (Site plans of newer homes may be available at the Building Department.)

**Minimum Setback Information:** Complete details can be found in the zoning code, but a brief summary is provided here. Setbacks are measured from the “closest projection” of the structure to the adjacent property line.

Zoning District*	Front Setback	Side Setbacks	Rear Setback
R-1	50'	10'	25'
R-2	50'	10'	25'
R-3	40'	10'	25'
R-4	20'	8'	25'

*\*If your property is located in a Planned Unit Development subdivision, (generally has a Home Owner's Association,) your property's setback requirements may differ from the setbacks shown on this chart.*

**Proposed decks locations involving the following require special consideration:**

- › Decks not meeting the required setbacks for the zoning district require approval from the Board of Zoning Appeals.
  - › Deck additions to condominiums require a letter of approval from the condominium association.
  - › Decks encroaching into a City utility easement require prior approval from the Wadsworth Engineering Department before zoning approval is granted.
- **Complete the Residential Building/Zoning Permit Application.** On the application, complete the top portion, cost of construction, and the setback information. Sign and date the applications. The form may be obtained at the Building Department in City Hall, or online at <http://www.wadsworthcity.com/the-city/departments/building-and-planning/appsforms.html>.

**2) Apply for a Building Permit** prior to construction of regulated decks:

- **Prepare a Building Plan** showing how the proposed deck is to be constructed. Also include a cross section. Test: Could someone else build your deck from your plans?

**Building Plans Should Include:**

- Completed "*Your Deck Design Information*" form. (See Below)
- All deck dimensions, post & beam layout, and house wall cantilevers. (Down-View)
- Height of deck above grade.
- Beam size and spacing.
- Post size and spacing.
- Joist size and spacing.
- Beam connection to posts.
- Joist connections to ledger and beam.
- Ledger attachment to house & flashing.
- Footing size, depth and method.
- Size and type of decking material (e.g., pressure treated wood, vinyl).
- Height, size, type and spacing of guardrail posts and balusters.
- Stair tread and riser details.

**3) Submit the Building and Zoning Application**, site plan and building plans to the Building and Planning Department on the 2<sup>nd</sup> floor of City Hall, 120 Maple Street.

**The Complete Application Should Include the Following:**

- Application for Building/Zoning Permit.
- Site Plan Showing Deck Location (2 copies).
- Construction Plan Drawings (two sets).
- A completed "Your Deck Design" form which is included in this document.
- Letter of Approval from Condominium Association (if applicable).
- Engineering approval for easement encroachment (if applicable).

**4) Pick up Permits.** Normally, plans will be processed and reviewed in 1-3 days. The time frame may be longer during the height of the building season. The applicant will be contacted by phone, and may go to City Hall to pick up the permit and plan copies. At that time a zoning permit fee of \$25, and if applicable, a building permit fee of \$50.00 is required to be paid by cash, check, or credit card.

**Also See: Residential Prescriptive Deck Guide:** <http://www.awc.org/publications/dca/dca6/dca6-09.pdf>

# DECK BUILDING INSPECTION GUIDELINES

City of Wadsworth

## Where To Call For Building And Utility Inspections:

**Building and Electrical Inspections, ..... 330-335-2753**  
**Wadsworth Communications/Cable Service Installation... 330-335-2888**  
**Wadsworth Electric Service Connections, Toby Blake ..... 330-335-2838**

## Questions Relating To Zoning And Building Procedures Should Be Directed To:

Jeff Kaiser, Planning Director .....330-335-2752  
Kevin Hall, Building Official .....330-335-2780  
Jennifer Stefl, Administrative Assistant.....330-335-2753

## Other Utility Information \*

**OUPS – Call Before You Dig ..... 1-800-362-2764**  
**Dominion Gas ..... 1-800-362-7557**  
**Frontier Communications (Telephone)..... 1-877-844-7196**

*\*Utility locations available at City Engineering Dept..*

The City of Wadsworth Building Department is located on the second floor of City Hall, located at 120 Maple Street, Wadsworth Ohio. Business hours are Monday through Friday from 7:30 a.m. to 4:30 p.m. (Credit cards are only accepted after 8:30 a.m.).

Building inspections should be requested by 9:00 a.m. the day the inspection is needed by scheduling an inspection at (330) 335-2753 or leaving a message on voice mail, which is available 24 hours a day.

## **Following is a Schedule of Building Inspections for Deck Construction:**

- **Footer** - Deck construction holes are inspected for width, depth, and location before concrete is poured. The perimeter of the proposed construction should be clearly marked by stakes, string or paint, and the property lines should be indicated. You may also call for a pre-footer "Stake" inspection before the holes are dug if there is any question whether the proposed deck will encroach into the required setbacks or easement. **REQUIRED FOR ALL DECKS WHEN HOLES ARE DUG.**
- **Rough Frame** - Deck framing is inspected before flooring and railings are installed. A frame inspection *may* not be required for "Weekend Decks" that are over 3' above grade, and in compliance with approved plans and plan review. Please contact inspector. **REQUIRED WHEN DECKS ARE FRAMED, BUT BEFORE DECKING IS INSTALLED.**
- **Final Building Inspection** - **REQUIRED FOR ALL DECKS WHEN COMPLETED.**

## ADDITIONAL BUILDING REQUIREMENTS:

- 1) Accessible permit and visible address numbers must be posted at jobsite to receive inspections.

2) Footer Depth is 38" to bottom of hole. Footer size example: Deck area = how many sq.ft. supported by each post → <u>14' deep x 16' wide (224 sq.ft.) deck attached to house: ½ the deck (7' x16')</u> is bearing on the posts. Total 112 sq.ft. If deck has 3 posts, each post supports 37.3 sq. ft. Footer = 16" diameter. 3) All posts within 48" of the foundation (approximate foundation overdig), must extend to the house footer depth (basement), in houses less than ten years old, to reduce settling. Decks may instead attached to the foundation. Beams may only be attached to ledger if 4' or less from a post. (Decks not attached to houses are taxed the same as attached decks).	Deck Footing Size		
	Deck Area Sq'	Diameter	Thickness
	20	14	6
	30	14	6
	40	14	6
	50	16	6
	60	17	6
	70	18	7
	80	19	7
100	21	8	

- 4) Beams must bear on post tops with mounting brackets; bear on notched posts with thru bolts; or be bolted to post sides with 2 Simpson DJT14 Deck Ties (or equivalent) with 5/8" bolts –(maximum supported deck area per post of 48 ft<sup>2</sup> - 2320 lbs.)

Beams / joists in contact with soil must be rated "**Ground Contact.**" Min. 4A rating. Splices must be over 6" post.

- Max Post Height = 4x4 - 6'9" for 3 ply Beams; 8' for 1-2 Ply Beams, 4x6 - 8', 6x6 - 14'.
  - Post-Frame designs supporting room above require 6x6 posts and full bearing on post.
- 5) 2x8 Minimum SYP Ledgers attached to house min.2x8 rim. Siding must be removed and a flashing material, non-reactive with treated lumber, installed under upper siding & over the ledger or to a point below the sill plate. NO BARE ALUMINUM FLASHING. Ledger boards cannot be supported by face-brick. Beams (supporting more than 550 lbs. total load) cannot be supported by ledger. See on center ledger fastener spacing requirements below:
- 6) All anchors must be corrosion resistant with washers. Fill cells of concrete block with concrete/mortar prior to installing ½" dia. approved epoxy anchors, or use other approved anchors per manufacture's instructions.
- 7) Decks must be adequately braced to resist horizontal forces. Additional devices may be required for decks higher than 4' above grade. Examples include 5-1/2" lag screws into house joist ends, diagonal bracing, or fasteners similar to Simpson DTT2Z tension devices installed on deck ends. Decks > 6' above grade need diagonal bracing from post to beam, or brackets designed to resist lateral forces.
- 8) Decks supported by 24" 2x10 cantilevers from bay windows and fireplaces, must have a support beam no farther than 29" from cantilever. Otherwise use double header with double joists; or install support beam.
- 9) Joist spans 16" o.c.: Treated #2 Southern Pine (2x6 - 9'-0"). (2x8 -11'-10). (2x10 - 14'-0"). (2x12 -16'- 6").
- 10) Joists shall be attached on top of beams with 3-8-d nails, or other approved mechanical fastener. Joists attached flush with ledgers or beams shall have full height (60%) u-shaped, galvanized hangers, fully nailed.
- 11) Stairs stringers must be fully bearing on deck at top and attached to deck rim with sloped hangers or other positive attachment. **Stairs must be supported at ground by posts or concrete/masonry pad.** Notched stringers can span a maximum 7', without additional support..
- 12) Stair width minimum is 36". Stair run minimum is 9" from nosing to nosing + ¾" - 1 ¼" nosing = 9-3/4" tread depth. Riser max 8 ¼". Run/Rise not to vary more than 3/8". **A handrail with a perimeter of not more than 6-1/4" or diameter between 1-1/4 and 2" (i.e. a 2x2), is required on 1 side where 4 or more risers exist.** 36" guardrails, with balusters spaced 4-1/2" between, and solid risers are required on stairs and landings that are 30" above grade. Maximum rise of a flight of stairs is 12'.
- 13) All nails, bolts, screws, & hangers must be hot dipped galvanized, stainless steel, or have a zinc 185 coating. Aluminum flashing must be separated from copper based treated wood.
- 14) Furnace or hot water heater vents must be 12" above deck surface or grade, and 12" below deck framing if under deck and deck is open on two sides, and if permitted by appliance manufacturer. Maintain 12" to windows/doors.
- 15) Deck floor surface, stairways or ramps must be 10 feet below overhead service. Meters must be accessible and have 3" clearance to railings and deck framing. AC units must maintain clearance by manufacturer.
- 16) A 3'x3' landing is required at all exterior doors 30" above grade.
- 17) Prefabricated floor panels must be designed by an approved design professional.
- Decks not exceeding 200 square feet that are not more than 30 inches above grade at any point, are not attached to a dwelling, and do not serve the main exit door (front) do not require building permits
  - Free-standing decks consisting of joists directly supported on grade do not require footers.
  - Pier block may be used for free standing decks not exceeding 200 square feet, that are no more than 20 inches above grade, where the joists bear directly on pier blocks at grade (no beams).
  - Freestanding decks must have footers that are a minimum of 12 inches below the undisturbed ground surface.

## 2019 Structural Deck Component Tables

Ledger to House Rim Fastening						
Joist Span/ Fastener Spacing	6' & Less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'
½" x 3 ½" Lags	30" (o.c.)	23	18	15	13	11
5/16" x 3 ½" Ledgerloks	24	18	14	12	10	9
½" Carriage Bolts	36	36	34	29	24	21
1" EWP w/Ledgerloks	25	19	15	12	10	6
Solid Concrete Fasteners	24	18	14	12	10	9
¼" Tapcon Hollow Block	15	12	8	8	6	6

DECK BEAM SPAN LENGTHS								
	Size	Deck Joist Spans (feet - inches)						
		6' 18"	8'	10'	12'	14'	16'	
Beam Spans for Southern Pine #2 Wet Service Factor	1-2x6	4-11	4-0	3-7	3-3	3-0	2-10	2-8
	1-2x8	5-11	5-1	4-7	4-2	3-10	3-7	3-5
	1-2x10	7-0	6-0	5-5	4-11	4-7	4-3	4-0
	1-2x12	8-3	7-1	6-4	5-10	5-5	5-0	4-9
	2-2x6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2-2x8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2-2x10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2-2x12	12-2	10-7	9-5	8-7	8-0	7-6	7-0

	Size	Allowable Joist Span			Maximum Cantilever		
		Deck Joist Spacing			Deck Joist Spacing with Cantilevers		
		12"	16"	24"	12"	16"	24"
Southern Pine #2 Wet Service Factor	2x6	9-11	9-0	7-7	1-3	1-4	1-6
	2x8	13-11	11-10	9-8	2-1	2-3	2-5
	2x10	16-2	14-0	11-5	3-4	3-6	2-0
	2x12	10-0	16-6	13-6	4-6	4-2	3-4

See Framing Details in the 2019 Ohio Residential Deck Code at [www.wadsworthcity.com](http://www.wadsworthcity.com).

## YOUR DECK DESIGN INFORMATION

**NAME** \_\_\_\_\_ **DATE** \_\_\_\_\_

**JOB ADDRESS** \_\_\_\_\_

- Footer Size (Diameter) 12" (Min.) 14" 16" 18" Other \_\_\_\_\_
- Depth 38" Other \_\_\_\_\_
- Post Size &Height \_\_\_\_\_" x \_\_\_\_\_" (Dia.)
- Height of Deck Above Grade \_\_\_\_\_' \_\_\_\_\_"
- Beam Size 2- Pieces 2" x \_\_\_\_\_" / 1-Piece 2" x \_\_\_\_\_"
- Joist Size 2" x \_\_\_\_\_" at \_\_\_\_\_" on center.
- Joist Span Between Beams \_\_\_\_\_ ft. - \_\_\_\_\_ inches
- Joist Distance Past Beam (Cantilever) \_\_\_\_\_ ft. - \_\_\_\_\_ inches
- Distance Between Posts \_\_\_\_\_ ft. - \_\_\_\_\_ inches
- Are Beams in Contact With Ground?  Yes  No
- Do House Walls Extend Past Foundation (Cantilever)?  Yes  No
- Does a Chimney or Bay Window Extend Past Foundation?  Yes  No
- Is Deck Attached to House?  Yes  No
- Is Deck Attached to  House Framing  Concrete  Block
- Are House Joists 2 x Lumber (Not Manufactured-Joists)?  Yes  No
- Is Siding to be Removed?  Yes  No
- Are Any Posts Within 4ft. of Foundation?  Yes  No
- Are Balusters Planned for Deck and Stairs?  Yes  No
- Are All Fasteners Compatible with Lumber?  Yes  No
- Will Power Lines Be Above Deck?  Yes  No
- Will Deck Cover Furnace/HW Vents?  Yes  No
- Is Hot Tub Planned for Deck?  Yes  No

**SHOW DECK DIMENSIONS & LOCATION OF POSTS & BEAMS BELOW –**  
**OR ATTACH DRAWING** (Scale Dimensions: 1 SQUARE = 1 FOOT)

-----HOUSE-----

