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## Frequently Asked Questions (FAQs) on usage of ACI 332-14 to the Uniform Dwelling Code

### 1. Is the 2014 version of the *American Concrete Institute (ACI) 332 Residential Code Requirements for Structural Concrete* adopted by the Uniform Dwelling Code (UDC)?

Yes. ACI 332-14 is an adopted standard under Wis. Admin. § SPS 320.24 (Table 320.24-1) and Wis. Admin. § SPS 321.02(3)(d). ACI 332-14 became effective January 1, 2016. (See [CR 15-041](#) for more information)

### 2. Is the 2014 version of the *American Concrete Institute (ACI) 318 Building Code Requirements for Structural Concrete* adopted by the UDC?

Yes. ACI 318-14 is an adopted standard under Wis. Admin. § SPS 320.24 (Table 320.24-1) and Wis. Admin. § SPS 321.02(3)(d).

### 3. Shall a contractor or home owner use ACI 332-14 or ACI 318-14 for the design of a residential concrete foundation?

Per the note in Wis. Admin. § SPS 321.02(3) concrete construction in one- and two-family dwellings should meet the standards established in ACI 332. Construction means, materials, or methods not addressed in ACI 332 should meet the standards established in ACI 318.

### 4. Are the following ACI standards adopted by the UDC?:

- ACI 305 Specification for Hot Weather Concreting;
- ACI 306 Guide to Cold Weather Concreting;
- ACI 117 Specification for Tolerances for Concrete Construction and Materials; or,
- ACI 347 Guide to Formwork for Concrete.

No. Some of these ACI standards are referenced within the commentary sections within ACI 318; however, the UDC does not adopt the ACI commentary for either ACI 332 or ACI 318.

### 5. Shall a contractor or home owner refer to both the ACI and UDC for designing a concrete foundation?

Yes. The UDC does have criteria that differs slightly from ACI 332-14; however, provisions within the UDC have minimum requirements that are greater than ACI 332-14.

All concrete foundation standards and design shall follow the standards within ACI 332-14 or ACI 318-14 unless specific foundation standards are addressed within the UDC that override ACI 332-14 or ACI 318-14 criteria.

### 6. What information associated with the concrete foundation shall be provided to an inspector at the time a dwelling permit is requested?

Wis. Admin. § SPS 320.09(6)(a) states the following:

*All plans submitted for approval shall be accompanied by sufficient data, calculations and information to determine if the dwelling will meet the requirements of this code.*

The contractor shall provide to the local municipal inspector the following, but not limited to:

- Design criteria of foundation (ACI 332-14 or combination of ACI 332-14 and ACI 318-14);
- Soil bearing and soils classification of the site location;
- Steel rebar grade and size(s),
- PSI of concrete strength;

- Vertical rebar spacing (walls and footings); and,
- No. of horizontal rebars in foundation walls.

**7. How does a contractor determine the soil bearing capacity and soils classification of a site location?**

See Wis. Admin. § [SPS 321.15\(3\)](#).

Soil bearing capacities and soils classifications may be available at the municipality prior to any bidding or permit application. The local municipality or county may have on file this information for any building site. Also, some municipalities have ordinances that may require soil testing at the time of permit issuance. Please check with local ordinances.

In addition, the U.S. Department of Agriculture (USDA) does have a free web portal available for public use in determining soils classification for a particular building site or address. Visit:

<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

There is information on this web site on how to use the Web Soil Survey portal as well as materials necessary to understand how to determine soils classification.

Once the soil classifications are known then the contractor or home owner can develop the design of the residential foundation by referring to both the UDC and ACI 332-14.