

# GG123-14

## 404.1.2

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### Revise as follows:

**404.1.2 Irrigation system design and installation.** Where in-ground irrigation systems are provided, the systems shall comply with all of the following:

1. The design and installation of outdoor irrigation systems shall be under the supervision of an irrigation professional accredited or certified by an appropriate local or national body.
2. Landscape irrigation systems shall not direct water onto building exterior surfaces, foundations or exterior paved surfaces. Systems shall not generate runoff.
3. Where an irrigation control system is used, the system shall be one that regulates irrigation based on weather, climatological or soil moisture status data. The controller shall have integrated or separate sensors to suspend irrigation events during rainfall.
4. Irrigation zones shall be based on plant water needs with plants of similar need grouped together. Turfgrass shall not be grouped with other plantings on the same zone.
5. Microirrigation zones shall be equipped with pressure regulators that ensure zone pressure is not greater than 40 psi (275.8 kPa) appropriate for the emission devices, filters, and flush end assemblies.
6. Sprinklers shall:
  - 6.1 Comply with ASABE/ICC 802. Have nozzles with matched precipitation rates.
  - 6.2 Be prohibited on landscape areas less than 4 feet (1230 mm) in any dimension.
  - 6.3 Be prohibited on slopes greater than 1 unit vertical to 4 units horizontal (25- percent slope).

**Exception:** Where the application rate of the sprinklers is less than or equal to 0.50.65 inches (12.719.1 mm) per hour.

  - 6.4 Be permitted for use on turfgrass, ground cover areas less than 12 inches (300 mm) tall at mature height and crop areas only excepting microsprays of a flow less than 4530 gallons (170113.3 liters) per hour.
  - 6.5 If of the pop-up configuration, shall have a pop-up to a height of not less than 4 inches (101 mm).
  - 6.6 Only be installed in zones composed exclusively of sprinklers and shall be designed to achieve a lower quarter distribution uniformity of not less than 0.65. shall have matched precipitation rates within each zone.
7. Microirrigation emission devices shall:
  - 7.1 Comply with ASABE/ICC 802
  - 7.2 Be pressure compensating where they are drip emitters.

### Add new standard(s) as follows:

#### ASABE

ASABE/ICC 802-201X Landscape Irrigation Sprinkler and Emitter Standard.

**Reason:** Draft 2 of the Landscape Sprinkler and Emitter standard is due for public release soon and hopefully the committee will have a final version by the time of the hearing meetings in late April.

Proposed changes to this section is to reflect provisions and consistency with the proposed Landscape Sprinkler and Emitter standard.

Item 5 is to remove the maximum pressure requirement so that design professionals will not be artificially constrained on the correct pressure needed for proper operation of a drip system. The inclusion in 6.7 that emitters be pressure compensating will help ensure proper delivery of water. This is especially important on very large systems where 40 psi would be limiting to proper hydraulics for efficient operation.

Item 6.1 is changed to reference that sprinklers and emitters comply with proposed standard. The current provision of 6.1 was added to 6.6.

Item 6.3 by increasing the application rate to 0.65 inches per hour allows the designer a wider product selection so that the irrigation can be designed more efficiently and take advantage of many new innovative nozzles and sprinklers. Current provision favors a limited product choice. Additionally, since the irrigation control system has to be one that uses advance technology and inputs to create proper schedules including cycle and soak which helps mitigate runoff as well as the lower precipitation rate.

Item 6.4 is modified so that extensive low-growing ground cover areas could be irrigated with sprinklers instead of drip emitters at the discretion of the irrigation designer. The goal is to deliver water the most efficiently and also to minimize the amount of piping etc. required to irrigate a space which is a more sustainable approach. The sprinkler pop-up height would need to be sufficient to clear the vegetation for proper delivery and since the maximum popup height of sprinklers is twelve inches, that is why the maximum mature height of the plantings is twelve inches in the provision.

**Cost Impact:** Will not increase the cost of construction.

**Analysis:** A review of the standard proposed for inclusion in the code, ASABE/ICC 802-201X with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28), will be posted on the ICC website on or before April 1, 2014.

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