

Oregon
Interpretive Ruling No. 92-6 B
FOOTING AND CRAWL SPACE DRAINS
(revised 7-1-99, editorial only)

Requested By: Pat Bridges, Oregon State Home Builders Association
December 19, 1991

REQUEST FOR RULING

Are both footing drains and low point crawl space drains around a foundation, without habitable space, required by the One and Two Family Dwelling Code?

CODE SECTIONS

Dwelling Code

405.1 Concrete or masonry foundations. Drains shall be provided around all concrete or masonry foundations enclosing habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend a minimum of 1 foot (305 mm) beyond the outside edge of the footing and a minimum of 6 inches (153 mm) above the top of the footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper, and the drainage tiles or perforated pipe shall be placed on a minimum of 2 inches (51 mm) of washed gravel or crushed rock at least one sieve size larger than the tile joint opening or perforation and covered with a minimum of 6 inches (153 mm) of the same material.

Exception: A drainage system shall not be required where the foundation is installed on well-drained ground or sand-gravel mixture soils according to the Unified Soil Classification System, Group I Soils, as listed in Table 405.1.

405.2 Wood foundations. *(contains similar provisions to those above, but for wood foundations.)*

and;

409.4 Finished grade. The finished grade of under-floor surface shall be permitted to be located at the bottom of the footings; however, where there is evidence that the groundwater table is capable of rising to within 6 inches (153 mm) of the finished floor at the building perimeter or where there is evidence that the surface water does not readily drain from the building site, the grade in the under-floor space shall be as high as the outside finished grade, unless an approved drainage system is provided.

BACKGROUND

Pat Bridges, Oregon State Home Builders Association, writes that some local building departments are requiring that both footing drains and crawl space drains be installed in a crawl space house. Mr. Bridges asks that the Board take steps to make it clear that the building official can require either requirement, but should not be requiring both (unless the house has both a crawl space and habitable or usable space below grade).

BOARD FINDINGS

- Footing drains are only required by Section 405.1 when there is habitable or usable space below grade,
- A crawl space drainage system may be required when there is evidence that the groundwater table may rise to within 6 inches of the surface **and** the builder elects not to have his crawl space at the same elevation as the outside grade. Much of western Oregon (and irrigated areas all over the state), qualify with the groundwater specification.
- As a matter of style, builders keep the profile of dwellings low by digging out the crawl space to provide space for ducts and other equipment.

DISCUSSION AND CONCLUSION:

When the crawl space is lower than the surrounding yard, there is a potential that the crawl space may collect water, either from drainage into the space or from groundwater rising into the space. Section 409.4 requires a drain when the crawl space is below the outside grade.

Section 405.1 provides footing drains are only required where there are habitable or usable spaces located below grade.

(signed June 25, 1992)
John Talbott, Chairman
Structural Code Advisory Board

Date

The recommendations and findings of the Structural Code Advisory Board are accepted and adopted.

(signed June 29, 1992)
Gary J. Wicks, Administrator
Building Codes Agency

Date