



Building Services
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SFR-26
Smoke Alarms:
Installation in one- and
two-family dwellings

The Spokane Regional Code Group has determined the need to clarify application of requirements as it applies to smoke alarms within one- and two-family dwellings undergoing repairs, alterations, or additions.

IRC Section R313.1.1 Alterations, Repairs, and Additions.

When interior alterations, repairs or additions requiring permits occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be provided with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hardwired.

Alterations: New smoke alarms are NOT required to be added if, for example: altering a plumbing system, converting drains to ABS, altering an electrical system by replacing the fuse panel with a circuit breaker panel, altering a circuit by extending it or converting it from one voltage to another, changing windows from wood frame to vinyl, etc. Major alterations like removing or adding structural members, remodeling a bathroom, or remodeling a kitchen (finished materials removed, and framing is exposed) are examples which WOULD trigger the requirements for smoke alarms according to Section R313.1.1.

Discussion: If a kitchen were being remodeled on a rancher style house, and the attic were open such that all other rooms were accessible via the attic, then hardwired, interconnected smoke alarms would be required throughout the house in required locations, powered from an existing circuit. Additionally, if the same home could be routed through an open kitchen wall, then the basement smoke alarm would also be required to be interconnected with the upstairs alarms.

Repairs: New smoke alarms are NOT required to be added when certain repairs are performed (such as replacing water heaters, boilers, gas inserts, electrical service equipment, sprinkler systems or their interior components, or miscellaneous plumbing repairs) or minor structural repairs (such as replacing a deteriorated structural support). Major structural repairs occurring from fire damage, tree falling through roof, lightning strikes, etc., WOULD require the smoke alarms to be upgraded according to Section R313.1.1.

Additions: This section seems to be fairly self-explanatory in that additions which affect the actual structure of the building would require smoke alarms according to Sections R313.1.1. It may be possible that an attached garage addition with no disturbance to the existing structure would NOT trigger the smoke alarm requirement. Repairs to exterior surfaces of dwelling are exempt from the requirements of this section.

Consensus Opinion: Hardwired interconnection of smoke detectors would not be required between floors or areas which would require the boring of structural members within enclosed wall or floor assemblies. If, however, an open chase exists for ductwork or plumbing and provides a readily accessible means for fishing wiring (alongside ductwork or plumbing) from floor to floor or other areas, the smoke alarms could practicably be installed, hardwired, or interconnected. The removal or rearrangement of insulation is NOT considered removal of finished material.

NOTE: Areas not accessible for hardwiring would still require battery-operated smoke alarms.