



Community Development Department Building & Safety Division

Policy No.: BDP 29

Original Effective Date: January 1, 2008

Revised Date: January 1, 2020

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Subject: Interlocking Door Hardware for R- Occupancies

A. Code References

2019 California Residential Code (CRC), Section R311.2
2019 California Building Code (CBC), Section 1010.1.9.4 (4)
Dublin Municipal Code (DMC), Chapter 7.90 - Universal Design Ordinance

CRC Section R311.2 - Egress door

Egress doors shall be readily openable from inside the dwelling without the use of a key or special knowledge or effort.

R-occupancies (single detached or attached duplexes) designed under the CRC are permitted to have security hardware. The square footage area of the dwelling unit (DU) is not a concern. Interlocking hardware is not required.

CBC Section 1010.1.9.4 – Locks and latches

Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

4. Doors from individual dwelling or sleeping units of group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt, or security chain, provided such devices are openable from the inside without the use of key or tool.

Per CBC Table 1004.5, residential spaces are assigned an occupant load factor of 200 gross square feet per occupant. R-occupancies 2,000 square feet and under yield an occupant load of 10 or less; these units are permitted to have security devices that are simple to operate on the door leading from individual dwelling or sleeping units in a building.

R-occupancies over 2,000 square feet with an occupant load greater than 10 however are not permitted to have security devices. Thus shall be provided with interlocking door hardware at all required exit doors.

DMC Section 7.90.130 Universal Design Ordinance (UDO), Standards – General Components

All new residential construction (single-family, duplex and triplex dwellings) in excess of twenty residential dwelling units shall be designed per the UDO regulations. Section 7.90.130.A.1 requires all visitable residential dwellings be installed with hand-activated door hardware not requiring tight grasping,

pinching or twisting of the wrist and consistent with the requirements of CBC Chapter 11A. These dwellings therefore shall be provided with accessible door hardware (lever) for all primary entry door(s), which includes interlocking mechanisms as defined by the UDO.

CBC Section 1126A.6 – Hand activated doors or gate hardware

Where R-occupancies are constructed under Chapter 11A of the CBC, doors providing access to covered multi-family dwellings shall be provided with latching and locking doors that are hand-activated and on an accessible route, and shall be operable with a single effort by lever type hardware or other hardware designed to provide passage without requiring the ability to grasp the opening hardware. R-occupancies therefore shall be provided with interlocking door hardware at all required exit doors. The exception is for R-occupancies with an occupant load of 10 or less.

B. Design Considerations

Below is the requirement for interlocking door mechanism based on the project scope and applicable design code and local amendments.

Design Code: CRC			
R-3 Occupancies <i>New one- and two- family dwellings & townhouse</i>	Universal Design Ordinance (UDO)	Chapter 11A (CBC)	Interlocking Door Hardware on Egress Door
1. New residential projects with 20 dwelling units (DU) or less. Square footage area of DU is not a factor.	No		Not required. Ok to have security mechanism (night latch, deadbolt, security chain).
2. New residential projects with more than 20 DUs. Square footage area is not a factor.	Yes	Yes (per UDO reference)	Required. Refer to DMC Section 7.90.130.A.1 and CBC 1126A.6.
Design Code: CBC			
R- Occupancies (R-2, R-3) <i>New “covered” multifamily dwellings: apartments with 3 or more DUs; Condos with 4 or more DUs; Hotels; Motels</i>	Universal Design Ordinance (UDO)	Chapter 11A (CBC)	Interlocking Door Hardware on Egress Door
3. Project with dwelling unit less than 2,000 sq ft in area		Yes	Not required per CBC 1010.1.9.4. However, the exception under CBC 1126A.6.1 exempts lever hardware for occupancies of 10 or less.
4. New project with dwelling unit more than 2,000 sq ft in area		Yes	Required per CBC Table 1004.5, CBC Sections 1010.1.9.4 and 1126A.6.

C. Policy

The code section regulating interlocking door mechanism is unclear in situations where projects are either below or greater than 2,000 square feet in area when designed under the CBC. The intent of this policy is to clarify when interlocking door hardware is permitted for R-occupancies under scenarios #3 and #4 regardless of the dwelling unit's square footage area.

With new emerging technology the different varieties of interlocking hardware may not completely meet the literal text of the code regulations for egress. To simplify the code interpretation, all dwelling units will be required to have interlocking door hardware for egress doors (from an individual dwelling unit and from the shared area for dwelling units) regardless of its square footage.