

# What Does the UDC Say?

# True or False?

There must be 2 exit doors on the first floor of a dwelling.

What does the UDC say?

- SPS 321.03 (1) (a) & (b)
- (a) Except as allowed under par. (h), [Small dwellings under 400 sq. ft.] every dwelling unit shall be provided with at least 2 exit doors **accessible** from the first floor.
- (b) At least one of the exits shall discharge to grade and may not go through a garage. This exit may include interior or exterior stairs.



- Are any exit doors specifically required from first floor?

- Policy issue:
- How to apply separation distance when doors are not on the same floor?
- Measure separation distance from center of “front” doorway to center of stairway down (or up).

# How does one insulate an attic access panel?

What does the UDC say?

- SPS 322.37 (3) requires the attic access hatch to be sealed with caulk, or gasketed, or taped.
- Nothing specific on R-value.
- Future code change?



**Does the 7' ceiling height  
apply to bathrooms?**

What does the UDC say?

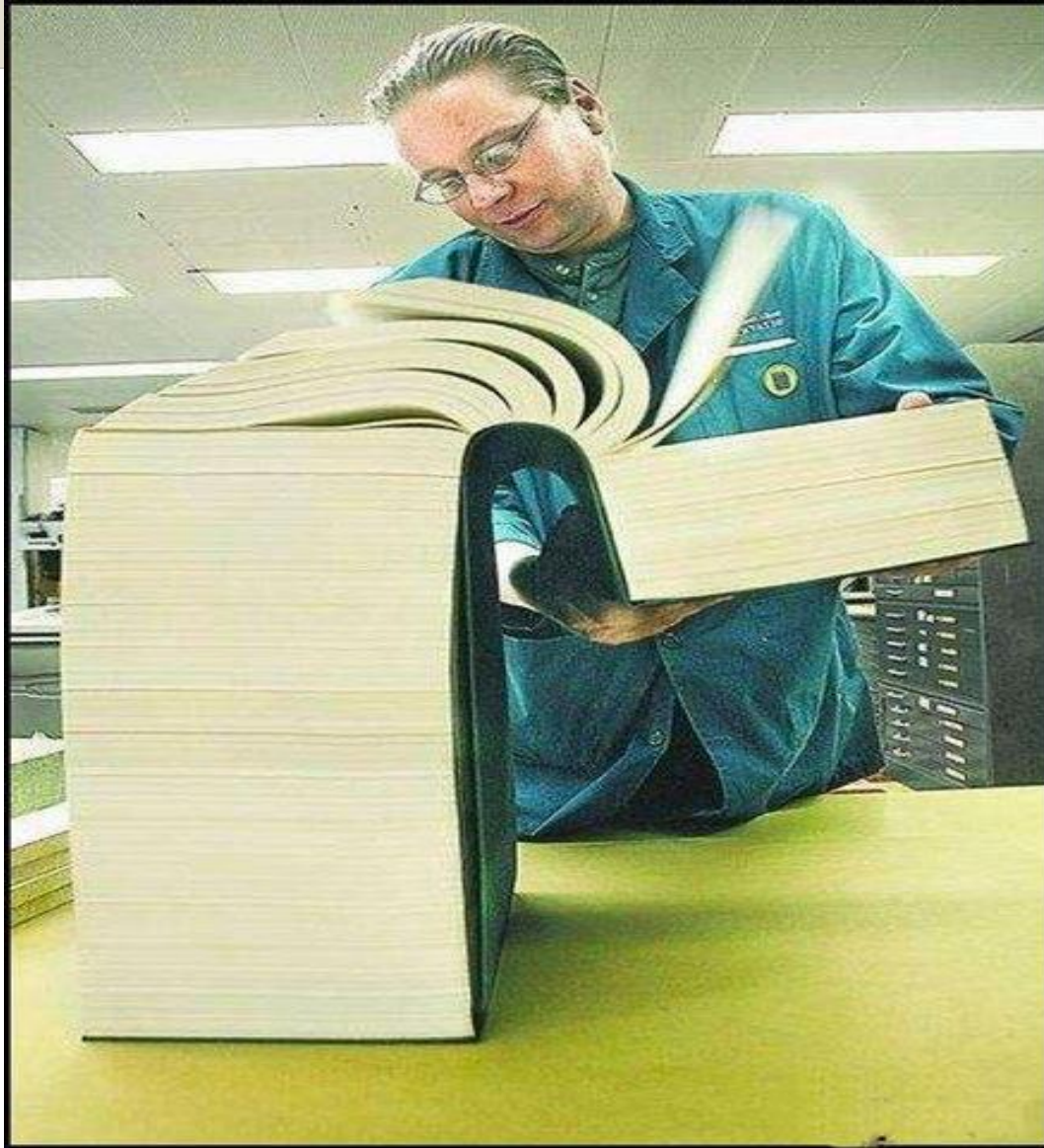
- SPS 321.06 All habitable rooms, kitchens, hallways, bathrooms & corridors shall have a ceiling height of at least 7 feet.
- Upcoming changes planned for bathroom
- fixtures.

**Does the UDC (or  
Plumbing Code) specify  
where a T.P. dispenser  
can be located?**







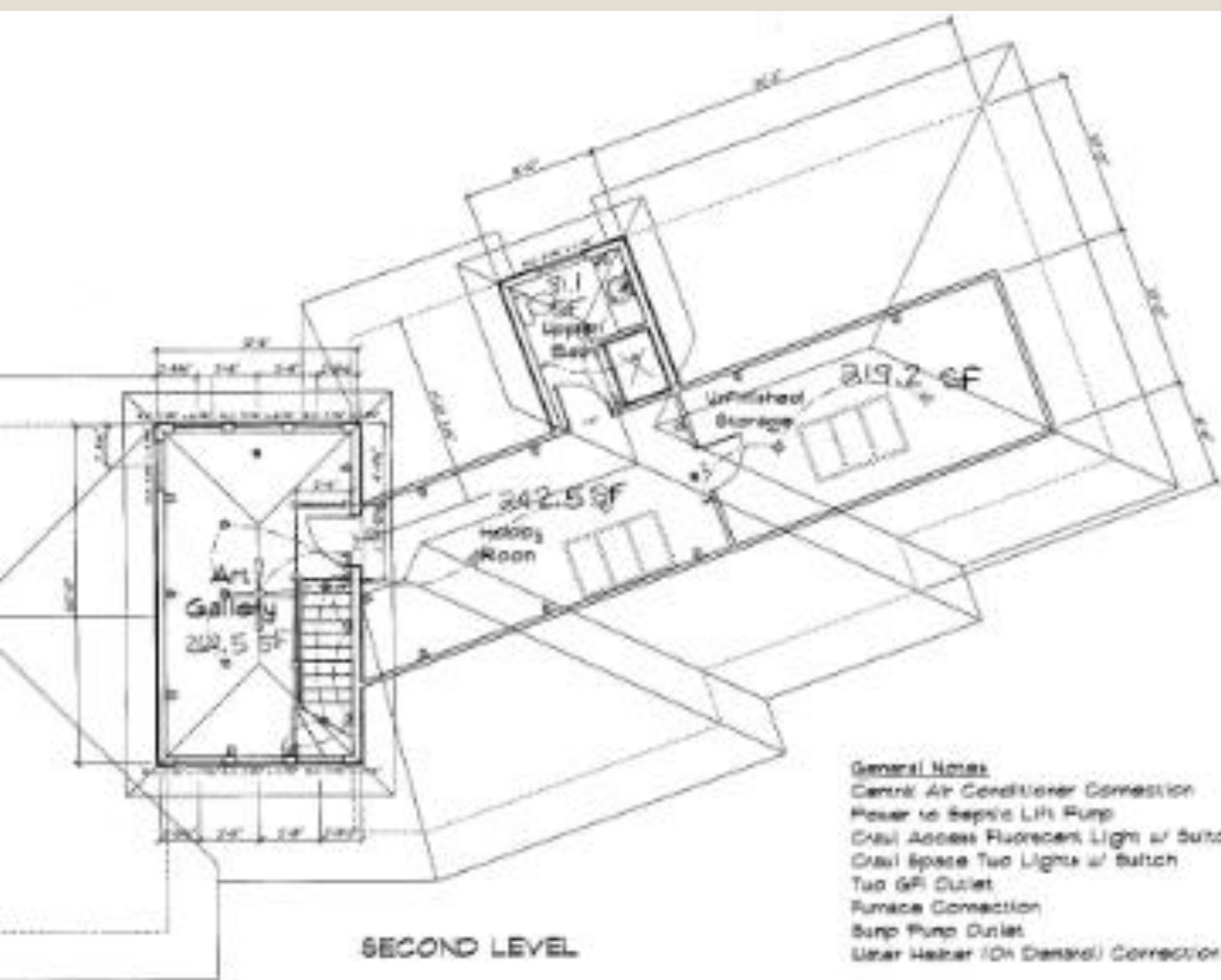


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**Can you have an egress window from 2<sup>nd</sup> floor if there are no bedrooms on 2<sup>nd</sup> floor?**

What does the UDC say?





- SPS 321.03 (2) (a) At least 2 exits shall be provided from the second floor. One of the exits shall be a stairway or ramp and lead to the first floor or discharge to grade. The second exit may be via a stairway or ramp which discharges to grade or may discharge to a balcony...
- (b) ...windows which comply with sub. (6) may be provided in each second floor bedroom in lieu of the second exit from the floor.

# What are the thresholds for requiring a rail on a stairway?

What does the UDC say?

- SPS 321.04 (3) (a) 1. Stair flights with more than 3 risers shall be provided with at least one handrail for the full length of the stair.
- 2. ~~Handrails or~~ guardrails shall be provided on all open sides of stair flights consisting of more than 3 risers and on all open sides of areas that are elevated more than 24" above the floor or exterior grade.





**Legal Rail and Stair?**



**For slabs less than 12"  
below grade, If I meet  
the insulation  
requirements in Table  
322.31-1, do I need  
anything else to protect  
the foundation?**

What does the UDC say?





- Section SPS 321.16 (1) Except as allowed under sub. (2), footings & foundations, ~~including those for ramps & stoops~~, shall be placed below the frost penetration level or at least 48" below adjacent grade, whichever is deeper.
- (2) Frost protected shallow foundation shall be designed in accordance with ASCE 32...

- ASCE 32, section 4.1, In regions of seasonal ground freezing, shallow foundations not extending below the frost depth shall be protected against frost heave by one or more of the following methods:
  - 1. Use of non-frost-susceptible layers of undisturbed ground or fill materials.

## Frost Susceptible Soils

Table 321.18-A

Only the least dense sands & gravels are non-frost susceptible.

[GW, GP, SW, SP classifications]

Description of Backfill Material	Unified Soil Classification	Design Lateral Soil Load <sup>a</sup> PSF per Foot of Depth
Well graded, clean gravels; gravel-sand mixes	GW	30c
Poorly graded clean gravels; gravel-sand mixes	GP	30c
Silty gravels, poorly graded gravel-sand mixes	GM	40e
Clayey gravels, poorly graded gravel and clay mixes	GC	45e
Well-graded, clean sands; gravelly sand mixes	SW	30c
Poorly graded clean sands; sand-gravel mixes	SP	30c
Silty sands, poorly graded sand-silt mixes	SM	45e
Sand-silt clay mix with plastic fines	SM-SC	45d
Clayey sands, poorly graded sand-clay mixes	SC	60d
Inorganic silts and clayey silts	ML	45d
Mixture of inorganic silt and clay	ML-CL	60d
Inorganic clays of low to medium plasticity	CL	60d
Organic silts and silt clays, low plasticity	OL	b
Inorganic clayey silts, elastic silts	MH	60d
Inorganic clays of high plasticity	CH	b
Organic clays and silty clays	OH	b

<sup>a</sup>Design lateral soil loads are given for moist conditions for the specified soils at their optimum densities. Actual field conditions shall govern. Submerged or saturated soil pressures shall include the weight of the buoyant soil plus the hydro-static loads.

<sup>b</sup>Unsuitable as backfill material.

<sup>c</sup>For relatively rigid walls, as when braced by floors, the design lateral soil load shall be

- ASCE s. 4.1.1
- The foundation depth, as measured from finished grade to bottom of footing, shall not be less than 12".
- ASCE s. 4.1.2
- The site shall be graded to drain surface water away from the walls... In soils other than GW, GP, SW, SP, GM or SM, [i.e. no silt or clay fractions] a layer of washed, crushed stone or gravel shall be placed beneath the horizontal insulation and drained to daylight.

- ASCE 4.1.4
- Horizontal insulation less than 12" below the ground surface, or any portion extending outward more than 24" from the foundation edge shall be protected against damage by pavement, by cement board or by plywood rated for below-ground use.

**Table 2. MINIMUM INSULATION REQUIREMENTS  
FOR FROST PROTECTED FOOTINGS  
IN HEATED BUILDINGS<sup>1</sup>**

Freezing index (days) <sup>2</sup>	Vertical Insulation R-Value <sup>3,4</sup>	Horizontal Insulation R-Value <sup>3,5</sup>		Horizontal Insulation Dimensions per Figure No. 16 (inches)		
		along walls	at corners	A	B	C
0 or less	4.5	NR	NR	NR	NR	NR
2,000	5.6	NR	NR	NR	NR	NR
2,500	6.7	1.7	4.9	12	24	48
3,000	7.8	6.5	8.6	12	24	48
3,500	9.0	8.0	11.2	24	30	60
4,000	10.1	10.5	13.1	24	36	60

Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement or Crawl Space Wall R-Value <sup>b</sup>	Heated Slab R-Value <sup>c</sup>	Unheated Slab R-Value <sup>d</sup>
1	0.35	0.60	49	19 <sup>e</sup> or 13+5 <sup>f</sup>	15	30 <sup>g</sup>	10/13	10/15	10
2	0.35	0.60	49	21 <sup>e</sup>	19	30	10/13	10/15	10

c. The first R-value applies under the entire slab, regardless of depth below grade. The second R-value applies to the slab edge where the bottom of the slab is less than 12 inches below adjacent grade. (Requires the 48" down & outward total)

d. The R-value applies to any slab, the bottom of which is less than 4 feet below adjacent grade.



# What about slab foundations for detached garages?

What does the UDC Say

- SPS 320.05 (4) ACCESSORY BUILDINGS.
- Except for s. SPS 321.08, the provisions of this code do not apply to detached garages or to any accessory buildings detached from the dwelling.

- SPS 320.02 (2) (c) MUNICIPAL ORDINANCES.
- Any municipality may, by ordinance, require permits and fees for any construction, additions, alterations or repairs not within the scope of this code.

- 2009 IBC 1809.5
- Freestanding buildings meeting all of the following do not need to be protected:
  - 1. They are “minor” storage facilities that represent a low hazard to human life in the event of failure.

- 2. Area of 600 sq. ft. or less if light frame (400 sq. ft. if other than light frame);
- 3. Eave height of 10 ft. or less; and
- 4. The slab doesn't bear directly on frozen soil.



# Can you have a required exit under a deck

What does the UDC say?

