



ORDINANCE NO. 28410

1 AN ORDINANCE relating to the Building Code; amending Chapter 2.02 of the
2 Tacoma Municipal Code by amending Sections 2.02.185 and 2.02.590
3 thereof, to incorporate references to FEMA Region X's updated Flood
4 Insurance Rate Map which identifies Special Flood Hazard Areas within
5 the City, to become effective March 7, 2017.

6 WHEREAS, on December 1, 1983, the Department of Homeland Security,
7 Federal Emergency Management Agency ("FEMA"), issued a Flood Insurance
8 Rate Map ("FIRM") that identified Special Flood Hazard Areas, which are areas
9 subject to inundation by base floods (1 percent annual chance) within the City of
10 Tacoma and surrounding communities, and

11 WHEREAS the City has been enforcing the 1983 FIRM map since
12 March 25, 1987, and

13 WHEREAS FEMA recently completed a reevaluation of flood hazards for
14 these areas, and on December 19, 2014, issued preliminary copies of the FIRM
15 and Flood Insurance Study ("FIS") which identify existing flood hazards and Base
16 Flood Elevations ("BFEs"), and

17 WHEREAS the proposed flood hazard determinations were published in the
18 News Tribune and Federal Register, and the statutory 90-day appeal period has
19 ended with no appeals; therefore, the final rule for these flood hazard
20 determinations will become effective on March 7, 2017, and

21 WHEREAS, in order to comply with requirements under the National Flood
22 Insurance Act of 1967 and to continue eligibility in the National Flood Insurance
23 Program, the City is required to adopt the current floodplain management
24 regulations, which regulations are contained in TMC Chapter 2.02, Building Code,
25 and
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WHEREAS the 2017 FIRM maps include higher BFEs in coastal areas, which will require that buildings and structures be built at higher elevations, and

WHEREAS some coastline flood zones are changing from V zone to Coastal A zone, which will provide relief from additional flood zone construction standards for these zones, and

WHEREAS the 2017 FIRM maps do not include the Puyallup Levee Overtopping Layer, because this part of the flood study is in litigation and may be adjusted based on additional studies that FEMA is completing in this area, and

WHEREAS, as the flood study will likely be completed within a few years and will likely incorporate most of the area of the Puyallup Levee Overtopping Layer in its current boundaries, PDS staff is recommending inclusion of the Puyallup Levee Overtopping Layer as a Special Flood Hazard Area that the City will enforce with its flood zone regulations, and

WHEREAS the proposed amendments were presented to the Building Board of Appeals on February 2, 2017, and the Infrastructure, Planning, and Sustainability Committee on February 8, 2017, and were recommended for consideration by the City Council; Now, Therefore,



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BE IT ORDAINED BY THE CITY OF TACOMA:

Section 1. That Chapter 2.02 of the Tacoma Municipal Code, Building Code, is hereby amended at Sections 2.02.185 and 2.02.590, as set forth in the attached Exhibit "A."

Section 2. That Section 1 shall become effective on March 7, 2017.

Passed _____

Mayor

Attest:

City Clerk

Approved as to form:

Deputy City Attorney

EXHIBIT “A”

Chapter 2.02 BUILDING CODE

2.02.185 Amendment to IBC Section 1612.3 – Establishment of Flood Hazard Areas.

1612.3 Establishment of Flood Hazard Areas. The City of Tacoma hereby adopts the most recent flood study and accompanying flood insurance rate map(s) (FIRM) with any revisions thereto for Pierce County, Washington and Incorporated Areas published by Federal Emergency Management Agency Region X that delineate areas of special flood hazards maps and include the risk premium zones applicable to the City of Tacoma. The City of Tacoma also additionally adopts the Puyallup Levee Overtopping layer established by the supporting data from the 1983 and 2007 FEMA Region X Flood Insurance Study and accompanying Flood Insurance rate maps for Pierce County, Washington and Incorporated Areas, as amended or revised with accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data area hereby adopted by reference and declared to be part of this section.

Where the flood insurance map and studies do not provide adequate information-, the City, through Planning and Development Services, shall consider and interpret information produced by the Army Corps of Engineers, Natural Resource Conservation Service, Department of Housing and Urban Development, or any other qualified person or agency to determine the location of the Flood Hazard areas and Coastal High Hazard Areas. Designation as Coastal A Zone(s) shall be determined by the maps on file with City of Tacoma Planning and Development Services Permit Services.

* * *

2.02.590 Amendment to IRC Table R301.2 (1) – Climatic and geographic design criteria.

TABLE R301.2 (1)

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

ROOF SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^c	ICE BARRIER UNDER-LAYMENT REQUIRED ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed ^d (mph)	Topographic effects ^k	Special wind region ^l	Wind-borne debris zone ^m		Weathering ^a	Frost line depth ^b	Termite ^c					
25	110	K _z =2	No	No	D ₁	Moderate	12 in	Moderate to Heavy	20° F	No	Adoption: 3/25/1986; Flood Insurance Studies: 1983 & 2007 2017 FIRM and Puyallup Levee Overtopping layer from 2007 FIRM map	350	50° F

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index “negligible,” “moderate” or “severe” for concrete as determined from Figure R301.2 (3). The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- b. The frost line depth may require deeper footings than indicated in Figure R403.1 (1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2 (4)A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. The outdoor design dry-bulb temperature shall be in accordance with the Washington State Energy Code, as adopted and amended by the City of Tacoma in TMC Chapter 2.10.

- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study, and (c) the panel numbers and date(s) of all currently effective FIRMs and FBFMs, or other flood hazard map adopted by the community, as amended.
- h. In accordance with Sections R905.1.2, R905.5.3.1, R905.7.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index- USA Method (Base 32°Fahrenheit)".
- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°Fahrenheit)".
- k. Topographical effects shall be considered by performing a topographical analysis or using the topographical effects as published on the City of Tacoma Web Site. The appropriate KZT factor shall be applied and the analysis shall be in accordance with the provisions of the International Building Code and/or ASCE 7-05.