



DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND
1322 PATTERSON AVENUE, SE, SUITE 1000
WASHINGTON NAVY YARD, DC 20374-5065

4700
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From: Commander, Naval Facilities Engineering Command

Subj: INTERIM TECHNICAL GUIDANCE (ITG 2017-03), 2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC) – ROOF DIAPHRAGMS RESISTING WIND LOADS IN HIGH WIND REGION

Ref: (a) 2015 International Existing Building Code, Sections 403.8 and 707.3.2

1. Purpose. Develop interim guidance for application of the 2015 International Existing Building Code (IEBC) requirement for structural analysis and possible strengthening of existing roof structures and connections when re-roofing buildings in high wind regions as required by reference (a).

2. Policy. Installations conducting re-roofing projects that exceed 50% of a building's roof area must conduct a structural evaluation and analysis of the roof diaphragm and related connections. If the diaphragm elements are found to be incapable of resisting at least 75 percent of current IBC wind loads, they shall be replaced or strengthened in accordance with the loads specified in the IBC. See Background and Technical Guidance below for clarification.

3. Background. UFC 1-200-01 adopted the 2015 International Building Code (IBC) on June 20, 2016 for use on all DoD projects. The 2015 IBC references the 2015 International Existing Building Code (IEBC) for all existing building requirements. The 2015 IEBC states for roof diaphragms resisting wind loads in high-wind regions¹, "Where the intended alteration requires a permit for re-roofing and involves removal of roofing materials from more than 50 percent of the roof diaphragm of a building, or section of a building, located where the ultimate design wind speed is greater than 115 mph (51m/s) in accordance with Figure 1609.3(1) of the International Building Code or in a special wind region as defined by Section 1609 of the International Building Code, roof diaphragms, connection of the roof diaphragms to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in Section 1609 of the International Building Code, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting at least 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in Section 1609 of the International Building Code"². Re-roofing is defined as the process of re-covering or replacing an existing roof covering. Removal of the roofing materials from the roof diaphragm provides an opportunity to inspect a portion of the structure that would otherwise be concealed.

¹ Design wind speed greater than 115mph

² 2015 IEBC Section 403.8 and Section 707.3.2

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4. Technical Guidance.

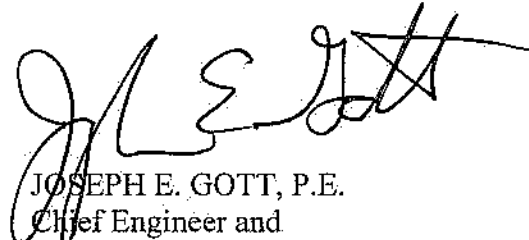
(a) FY17: All re-roofing projects will be exempted from this IEBC requirement during fiscal year 2017.

(b) FY18: The IEBC requirement must be applied to all re-roofing projects for Risk Category III and IV buildings, as well as to billeting facilities (except detached one and two family dwellings) during fiscal year 2018.

(c) FY19: A comprehensive risk based policy will be developed respecting this IEBC requirement for Tri-Service criteria. Requirements will be incorporated into the appropriate UFC's for fiscal year 2019 implementation.

(d) This ITG automatically terminates once UFC requirements are in place.

5. Point of Contact. For clarification or additional information related to this subject, please contact NAVFAC Structural Criteria Manager, Curtis Craven P.E., curtis.l.craven@navy.mil, (757) 322- 8143.



JOSEPH E. GOTT, P.E.
Chief Engineer and
Director, Capital Improvements

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