

220831 EBIWG Assignment 1 Recommendations
Prepared by Heather Anesta, PE, SE, MS, StS2

Relevant EBIWG Option Section: Section V. Inspection Options

Proposed EBIWG Recommendation: Option 11, to update the proposed 220809 Section V Option 11 (3.0 Consensus)

SB-4D & FBC Relevant Sections, as currently written in Law & Code
(https://www.floridabuilding.org/fbc/links_to_code_resources.html)

SB-4D Section 553.899(12)

FBCB 2020 Supp 2 110.9

Need for Recommendation: (See end of document for Relevant Background Information)

The current SB-4D and FBCEB language does not address the minimum requirements of the milestone inspection program at the practitioner level. This can lead to misinterpretation and/or inconsistent interpretation of SB-4D Section 553.899 and FBCB 2020 Supp 2 Section 110.9 by practitioners, owners, building officials, and other interested parties. A Chapter within FBCEB is the most appropriate place to address the minimum requirements of such inspections by the inspector, and will provide a consistent baseline for inspectors and building officials.

Addressing this recommendation is necessary in order to ensure that the milestone inspections are sufficient to determine the structural integrity of a building.

Recommendation:

Develop a new Chapter (Chapter 18) within the FBCEB 2020 as a Supplement, to include the FBCB 110.9 information as well as universal baseline guidance and minimum requirements for mandatory milestone inspections. The Chapter should define common terminology, condition ratings, and minimum requirements applicable to all building sizes and construction materials relative to mandatory milestone inspections. Within this recommendation, it is proposed to call the new Chapter, "FBCEB Chapter 18 Guideline for Mandatory Milestone Inspections", and to include the below Sections at a minimum:

Section 1801 Purpose & Scope

Section 1802 Definitions, Symbols, and Notations

Section 1803 General Requirements

Section 1804 Structural Integrity

Section 1805 Phase 1 Milestone Inspection Minimum Requirements

Section 1806 Phase 2 Milestone Inspection Minimum Requirements

Section 1807 Referenced Standards

220831 EBIWG Assignment 1 Recommendations
Prepared by Heather Anesta, PE, SE, MS, StS2

Relevant Background Material:

The below information is provided for the convenience of the EBIWG Members.

The IEBC 2018 includes a similar approach to Guidelines for Seismic Retrofit, <https://codes.iccsafe.org/content/IEBC2018P5/appendix-a-guidelines-for-the-seismic-retrofit-of-existing-buildings>

Proposed concepts for inclusion within proposed FBCEB Chapter 18:

“Guideline for Mandatory Milestone Inspections”

Section 1801 Purpose & Scope

Transfer FBC 2020 Supp 2 Sections 110.9.1 here

Section 1802 Definitions, Symbols, and Notations

Transfer FBC 2020 Supp 2 Section 110.9.2 here

Add definitions of FS 627.706 “primary structural members” and “primary structural systems” here

Add definitions for minimum standards for condition ratings here, proposed universal condition ratings as follows. Note that the below Ratings are applicable to all systems and materials, and are based on existing engineering consensus documents.

1. **Good:** (An item/system is Good if all of the below conditions is identified)
 - a. No repair or modifications
 - b. Strength of existing structure by computation analysis without need for load test, exceeds the demand on the structure/elements.
2. **Fair:** (An item/system is Fair either of the below conditions is identified)
 - a. Minor repair or modifications, with both of the below conditions
 - i. Does not interrupt the vertical or lateral load path
 - ii. Does not require shoring in order to complete the repair/modification:
 - b. Strength of existing structure by computation analysis without need for load test, exceeds the demand on the structure/elements.
3. **Poor:** (An item/system is Poor if either of the below conditions is identified)
 - a. Moderate repair or modifications, with all of the below conditions
 - i. Does not interrupt the vertical or lateral load path
 - ii. Will require vertical (non-lateral) shoring of one level of load in order to complete the repair/modification
 - iii. Low/Acceptable risk of collapse/damage during repairs/modifications (TBD by EOR, Owner, Building Official, and AHJ)
 - b. Strength of existing structure by computation analysis AND/OR load test, exceeds the demand on the structure/elements.
4. **Severe:** (An item/system is Severe if either of the below conditions is identified)
 - a. Major repair or modifications, with one or more of the below conditions
 - i. Will interrupt the vertical or lateral load path
 - ii. Will require vertical **and** lateral shoring, or vertical shoring of more than one level, in order to complete the repair/modification:
 - iii. Moderate/Acceptable risk of collapse/damage during repairs/modifications (TBD by EOR, Owner, Building Official, and AHJ)
 - b. Strength of existing structure by load test only, exceeds the demand on the structure/elements.
5. **Critical:** (An item/system is Critical if either of the below conditions is identified)
 - a. Extensive repair or modifications, with one or more of the below conditions
 - i. Will essentially require “rebuild in place”
 - ii. Will interrupt the vertical or lateral load path

220831 EBIWG Assignment 1 Recommendations
Prepared by Heather Anesta, PE, SE, MS, StS2

- iii. Will require vertical **and** lateral shoring in order to complete the repair/modification
- iv. High/Unacceptable risk for collapse during repairs/modifications (TBD by EOR, Owner, Building Official, and AHJ)
- b. Cannot be analyzed using computational analysis or load test, therefore, the strength cannot be verified relative to the demand on the structure/elements.

Section 1803 General Requirements

Transfer FBC 2020 Supp 2 Sections 110.9.3 through 110.9.11 here

Section 1804 Structural Integrity

Provide information such as the following within this section

Similar to FBC Section 1604, updated to apply to assessment of existing buildings
(https://codes.iccsafe.org/content/FLBC2020P1/chapter-16-structural-design#FLBC2020P1_Ch16_Sec1604)

1604.4 Analysis

1607.8 Anchorage

1604.9 Counteracting Structural Actions

Similar to FBC Section 1615, updated to apply to assessment of existing buildings of different construction types (https://codes.iccsafe.org/content/FLBC2020P1/chapter-16-structural-design#FLBC2020P1_Ch16_Sec1615)

Section 1615, Structural Integrity

Section 1805 Phase 1 Milestone Inspection Minimum Requirements

Provide information such as the following within this section

Phase 1: Visual, Qualitative Inspection & Analysis, minimum objectives

Add a Phase 1: Visual, Qualitative Checklist for use as an Appendix to the Phase 1 Report

Section 1806 Phase 2 Milestone Inspection Minimum Requirements

Provide information such as the following within this section

Phase 2: Exploratory Inspection and Quantitative Analysis, minimum objectives

Add a Phase 2: Exploratory and Quantitative Checklist for use as an Appendix to the Phase 2 Report

Section 1807 Referenced Standards

Provide referenced standards that address evaluation of existing buildings, such as ASCE 11