



ADMINISTRATIVE BULLETIN

NO. AB-106

DATE : September 19, 2013 (Updated 01/01/2017 for code references)

SUBJECT : Seismic Strengthening of Soft Story Wood Frame Buildings

TITLE : **Procedures for implementation of SFEBC Chapter 4D**

PURPOSE : The purpose of this Bulletin is to establish procedures for implementation of the Mandatory Seismic Retrofit Program for Wood Frame Buildings, Chapter 4D.

REFERENCE : 2016 San Francisco Building Code (SFBC)
2016 San Francisco Existing Building Code (SFEBC)
SFEBC Chapter 4D, Mandatory Seismic Retrofit Program for Wood Frame Buildings
SFBC_Section 104A.2.7.1, Local equivalencies
SFBC Section 104A.2.8, Alternate materials, design, and methods
Administrative Bulletin AB-107, Application of Engineering Criteria to SFEBC 406D

DISCUSSION : The Mandatory Seismic Retrofit Program for Wood-Frame Buildings was established to support the City's post-earthquake resilience goals. Compliance with these code requirements is intended to improve building performance by reducing the risk of collapse and increasing the likelihood that an upgraded building will continue to be habitable or repairable. Compliance does not establish any certainty of performance or specific level of building performance.

This bulletin provides information about procedures for administration of the Mandatory Seismic Retrofit Program for Wood-Frame Buildings. Detailed technical criteria and related information regarding this upgrade program for wood-frame buildings may be found in Administrative Bulletin AB-107, *Application of Engineering Criteria* in SFEBC 406D.

The requirements of SFEBC Chapter 4D and the related design criteria represent a minimum standard to reduce earthquake risk. Property owners may undertake seismic retrofit improvements that exceed the requirements of SFEBC Chapter 4D.

IMPLEMENTATION :

Screening Form

On September 15, 2013, the Department will mail a Notice and Screening Form to all owners of buildings that are within the scope of SFEB Chapter 4D. The Screening Form provides a simplified mechanism to determine if buildings must comply with the seismic upgrade requirements of SFEB Chapter 4D, and to identify the time frame for building retrofit within a four-tier system. All Screening Forms must be returned to the Department no later than September 15, 2014. Information provided on the Screening Form will be spot-checked by DBI staff; if errors are found or if additional information is required, the Department will contact the property owner or the owner's designated representative.

Copies of the Screening Form and detailed instructions for completion and submittal of this form are available from the Department's website at www.sfdbi.org/softstory or at the Department offices at 1660 Mission Street, San Francisco. There is no fee for submittal of the Screening Form.

Optional Evaluation Form

A building that has been previously seismically upgraded or which the owner believes may already meet the requirements of SFEB Chapter 4D may be exempt from this program if an evaluation confirms that the criteria detailed in SFEB Chapter 4D are met. This confirmation may be done using the Optional Evaluation Form process. These forms and detailed instructions for completion and submittal of the form are available on the Department's website at www.sfdbi.org/softstory or at the Department offices at 1660 Mission Street, San Francisco. A fee for a minimum of two hours of plan review time is due upon submittal of the Optional Evaluation Form. Additional fees may apply if more than two hours is required for plan review.

Plan review by Department of Building Inspection

Building permit applications that are submitted to comply with this program will be reviewed for compliance with acceptable methodologies and appropriate design criteria. Insofar as possible, such review will be done over-the-counter. If over-the-counter review is not an available option, permit applications must be submitted. Such applications will be routed and tracked in accordance with standard Department procedures.

Plan review by other agencies

Review by agencies other than the Department of Building Inspection shall be in accordance with the guidelines set forth by the corresponding department. Where such guidelines do not cover specific issues or concerns, such other agencies will apply their standard plan review guidelines.

Fees for plan review and permit issuance by all agencies shall be as detailed in codes and regulations.

Specific conditions of approval may be part of permit approval by any City agency. Project sponsors should carefully review all comments and notes on plans and permits regarding such conditions of approval.

Please visit the following websites for further information for permits from other departments.

<http://www.sf-planning.org/>

<http://www.sfdpw.org/>

<http://www.sf-fire.org/>

Triggered code requirements

In accordance with the specific requirements of the San Francisco Building Code, smoke detectors and carbon monoxide detectors may be required to be installed in a building at the time of this seismic upgrade work. Other work, such as water heater bracing, may also be triggered. Please review the codes and plan review comments for more information about such triggered such work.

In accordance with San Francisco Building Code Chapter 11B, Accessibility to Public Buildings, Public Accommodations, Commercial Buildings and Publically Funded Housing, disability access improvements will be required when seismic upgrade work involves alterations and/or structural repairs. Chapter 11A, Housing Accessibility, may apply in certain unusual cases when a building has undergone a change of use, addition, or provides certain public or common use areas. A design professional or consultant will be able to provide guidance as to the scope of any such required disability access work.

Modifications, Equivalencies, or Alternates

Any proposal for seismic retrofit work that does not meet the specific technical requirements or the performance criteria detailed in SFEBBC Chapter 4D, in Administrative Bulletin AB-107, or in this administrative bulletin may be considered for administrative approval by the Department of Building Inspection on a case-by-case basis if the requirements of San Francisco Building Code, Section 104A.2, *Local Equivalencies and Alternate Materials, Design, and Methods*, are met. Such equivalencies or alternatives must be shown to be at least equal to the code requirements and criteria for structural integrity, suitability, strength, effectiveness, durability and safety. Applications for modifications, equivalencies, or alternates should be submitted in accordance with the requirements of Administrative Bulletin AB-005, Procedures for Approval of Local Equivalencies.

Inspection and Special Inspection

Work undertaken to comply with SFEBBC Chapter 4D must meet all requirements of the San Francisco Building Code including inspections and, when necessary, Special Inspections. Please review approved permits and permit documents regarding any such special inspection requirements.

Completion of Work

Completion of this required seismic upgrade work will result in the issuance of a Certificate of Final Completion (CFC). This CFC will be issued only following final inspection, submittal and approval of any Special Inspection documents, and compliance with all conditions of approval. The CFC document will become part of the permanent record of the building.

Extensions of time to complete work may be granted in accordance with SFBC Section 106A4.4, but such extensions may not extend the time beyond the deadline designated in SFEBBC Table 4D-A for completion of required work.

Historic Buildings

Buildings that qualify to use the California Historical Building Code may apply the provisions and analysis techniques referenced in the California Historical Building Code, Chapter 8-7, Structural Regulations, and Chapter 8-8, Archaic Materials and Methods of Construction, and other provisions of that code upon approval of the Department.

To determine if a building can be qualified to use the California Historical Building Code, please contact the Technical Services Division of the Department of Building Inspection at (415) 558-6205.

Optional Earthquake Recording Instrumentation

Building owners are encouraged to provide earthquake recording instrumentation in their buildings. This instrumentation will typically require installation of sensors at the ground level, on the second floor, and at the highest story of a building. Costs of providing instrumentation are modest. The Department may assist in installation and maintenance of earthquake recording instruments in accordance with *San Francisco Building Code*, Section 1604.11.

Earthquake recording instrumentation provides information about actual building movement. Instrumentation may be valuable to a building owner in providing a clearer understanding of actual building performance in an earthquake, possibly reducing the need for more detailed post-earthquake inspection and evaluation. The information from instrumented buildings will also provide scientists and engineers with a better understanding of the earthquake behavior of buildings. For information about participation in the optional earthquake recording instrumentation program, please contact the Technical Services Division at (415) 558-6205.

ENFORCEMENT AND ABATEMENT

Enforcement and abatement action will be promptly taken by the Department if a property owner fails to comply with any of the requirements of this program, including failure to submit a properly completed Screening Form or other document within the allowable one-year time, submittal of Screening Form or other documents that are found to contain errors or misrepresentations, failure to obtain a building permit or failure to complete all work and obtain a final inspection within the time limits indicated in SFEBBC Table 4D-A, or for any other violation of this code. Such enforcement and abatement action will be in accordance with the requirements of San Francisco Building Code, Section 102A, Unsafe Buildings, Structures or Property.

In every case, when any required action has not been properly completed within the time limits of SFEBBC Chapter 4D, the Department will post the building with a notice stating:

Earthquake Warning:
This building is in violation of the requirements of the San Francisco Building Code regarding earthquake safety.

This notice may not be removed until the building is in compliance with the requirements of SFEBBC Chapter 4D. The notice shall also be recorded against the title of the property, with a release of this notice filed upon compliance with the requirements of SFEBBC Chapter 4D.

Violation of any code requirement related to the upgrade of these buildings may subject the property owner to penalties detailed in *San Francisco Building Code*, Section 103A, Violations, including fines of up to \$500 per day per violation and other penalties.

APPEALS

Board of Examiners

In cases where proposed *modifications, equivalencies, or alternates* substantially differ from those prescribed in this bulletin, such proposals may be referred by the Department to the Board of Examiners. Determinations made by the Department regarding technical provisions may be appealed by the permit applicant to the Board of Examiners in accordance with San Francisco Building Code, Section 105A.

Building Inspection Commission

Any person may appeal a determination of the Director related to these requirements to the Building Inspection Commission, pursuant to Chapter 77 of the San Francisco Administrative Code.

RECORDING AND REPORTING

A list of buildings by street address and by block and lot number to which notice has been given regarding this required seismic upgrade program will be maintained and made public on the Department's website.

The Department will track the status of all buildings noticed under this program and will provide an annual update to the Mayor and the Board of Supervisors regarding the status of compliance.

Originally signed by:

Tom C. Hui, S.E., C.B.O., 5/19/2016

Director

Department of Building Inspection

Approved by Building Inspection Commission on 9/18/2013

Attachment A: Wood-Frame Seismic Retrofit Program - Screening Form

Attachment B: Wood-Frame Seismic Retrofit Program - Screening Form Instructions

Attachment C: Wood-Frame Seismic Retrofit Program - Optional Evaluation Form



ATTACHMENT A

Wood-Frame Seismic Retrofit Program

SCREENING FORM – NO FEE

City records indicate that a building located on the block and lot shown below is subject to San Francisco Existing Building Code Chapter 4D: Mandatory Earthquake Retrofit of Wood-Frame Buildings. The building owner or the owner’s authorized agent shall complete and submit this Screening Form (SFEBBC Section 404D.2). Sections 3 through 5.1 of this form, if needed, are to be completed by a California licensed architect or civil or structural engineer. Submittal of this Screening Form is required even if the building has completed voluntary seismic strengthening or if the building in its current condition is believed to satisfy the retrofit requirements of SFEBBC Section 406D (see Section 2).

A separate document, **Screening Form Instructions**, provides explanation and instructions for this Screening Form.

Submit the completed Screening Form either:

- As a pdf attachment to softstory@sfgov.org, with “Screening Form submittal” in the subject line, or
- As a hardcopy by U.S. mail to Wood-Frame Seismic Retrofit Program, Department of Building Inspection, 1660 Mission Street, San Francisco, CA 94103

BLOCK / LOT NUMBER _____

ADDRESS _____

OWNER _____

SECTION 1 – ADMINISTRATIVE INFORMATION

Owner telephone _____ Owner email _____

Owner mailing address _____

Authorized agent (optional) _____ Agent telephone _____ Agent email _____

Agent mailing address _____

CONDOMINIUM OWNERS: Please submit one Screening Form and one set of contact information for each building. Please list all lot numbers comprising the building here:

Does this Screening Form replace or supplement a previously submitted Screening Form for the same building? Yes No

BLOCK / LOT NUMBER _____

SECTION 2 – VOLUNTARY STRUCTURAL WORK EXEMPTION

If the answer to question one (1) is yes, Screening Form Sections 3, 4, and Section 5.1 need not be completed. Section 5.2 must be completed in all cases.

- | | <u>Yes</u> | <u>No</u> |
|--|--------------------------|--------------------------|
| 1. Has voluntary seismic strengthening been completed under Administrative Bulletin AB-094, Definition and Design Criteria for Voluntary Seismic Upgrade of Soft Story, Type-V (wood frame) Buildings? | <input type="checkbox"/> | <input type="checkbox"/> |

If yes, AB-094 Permit Application Number: _____

2. In addition to the exemption for AB-094 retrofits, this program (SFEBEC Section 402D) also exempts certain retrofits completed within the last 15 years. To qualify for that exemption, complete and submit this Screening Form as well as the separate **Optional Evaluation Form**.

SECTION 3 – SCOPE VERIFICATION

- | | <u>Yes</u> | <u>No</u> |
|---|--------------------------|--------------------------|
| 1. Was the building originally constructed before January 1, 1978, or was a permit for construction applied for before January 1, 1978? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Is the building three or more stories, or two stories over a basement or underfloor area that extends above grade? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Does the building contain five or more dwelling units? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Is the building of Type V (wood-frame) construction? <i>(This question applies only to Target Stories. Use the Type V Worksheet in the Screening Form Instructions to answer this question.)</i> | <input type="checkbox"/> | <input type="checkbox"/> |

If No, indicate also which of these conditions is true:

- The building has no Target Stories.
 The building has one or more Target Stories but they are not wood-frame.

CONCLUSION: Is the response to ALL FOUR of the preceding questions Yes?

If Yes: The building is subject to SFEBEC Chapter 4D. Complete and submit this Screening Form.

If No: The building is exempt from SFEBEC Chapter 4D. Complete and submit this Screening Form, but skip Section 4. The Department will confirm the exemption in writing.

Note: Even if the building is subject to SFEBEC Chapter 4D, it might not require retrofit. An owner may show that retrofit is not required by submitting a separate Optional Evaluation Form with supporting documents. The **Optional Evaluation Form** is available at www.sfdbi.org/softstory.

SECTION 4 – ASSIGNMENT OF COMPLIANCE TIER

Indicate the compliance tier. Use the Compliance Tier Worksheet in the Screening Form Instructions to find the compliance tier.

Tier I Tier II Tier III Tier IV

BLOCK / LOT NUMBER _____

SECTION 5 –DESIGN PROFESSIONAL & OWNER AFFIDAVIT

Please see instructions.

5.1 DESIGN PROFESSIONAL

Under penalty of perjury, I certify that the information provided in Sections 3 and 4 of this Screening Form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Date stamped and signed

Firm name

Design Professional telephone

Design Professional email

[Professional Stamp Here]

5.2 OWNER/ AGENT

Under penalty of perjury, I certify that the information provided in Sections 1 and 2 of this Screening Form is correct to the best of my knowledge.

- Owner
- Agent

Signature

Date

FOR DBI USE ONLY

Form appears incomplete / more information needed regarding:

- | | | |
|--|--------------------------|--|
| SECTION 2: AB-094 Retrofit | <input type="checkbox"/> | |
| SECTION 3: Scope Verification | | Building is subject to the ordinance. <input type="checkbox"/> |
| Wood-Frame | <input type="checkbox"/> | |
| Pre- 1978 | <input type="checkbox"/> | The form appears complete and is assumed correct based on design professional and owner / agent statements. <input type="checkbox"/> |
| Stories | <input type="checkbox"/> | |
| Units | <input type="checkbox"/> | |
| SECTION 4: Compliance Tier | <input type="checkbox"/> | DBI Reviewer: _____ |
| SECTION 5: Professional and Owner / Agent Statements | <input type="checkbox"/> | Date: _____ |



Wood-Frame Seismic Retrofit Program

SCREENING FORM INSTRUCTIONS

About the Screening Form

The purpose of the Screening Form is to confirm which buildings are subject to San Francisco's new Wood-Frame Seismic Retrofit Program and which buildings are exempt. If your building is exempt, the form will help you secure your exemption.

If you received a Screening Form with a letter from the Department of Building Inspection, you are required to complete and submit the form even if you believe your building is exempt from the program.

There is no fee to submit your Screening Form. However, in most cases, the form must be completed by a licensed design professional, who is allowed to negotiate a fee with you.

Deadline for submittal of completed Screening Form

Completed Screening Forms must be submitted by September 15, 2014.

The Department will NOT send you a reminder as the deadline approaches. Because you might need to research your property records or hire a licensed design professional, you should not wait until the deadline is near to begin working on the form.

How to submit the completed Screening Form

You may submit your completed form as a PDF file by email attachment or as a hard copy by U.S. mail. The Department does not allow submittal by fax.

Be sure to:

Have your design professional (if required; see Section 2) stamp and sign the form in Section 5. Sign and date the form in Section 5.

Submit all three pages of the form, even if some sections are not required.

Keep a copy for your records.

By email attachment:

Email your form to: softstory@sfgov.org

In the subject line, please write "Screening Form submittal."

By U.S. mail:

Mail your form to: Wood-Frame Seismic Retrofit Program
Department of Building Inspection
1660 Mission Street
San Francisco, CA 94103

SECTION 1 – ADMINISTRATIVE INFORMATION

Provide your contact information so that the Department can reach you with questions about your submittal.

You may have someone act on your behalf as your authorized agent. The authorized agent must be an individual empowered to make decisions on behalf of the owner. The Department will contact this individual with questions and approvals.

Condominium owners: Condominium units within a single building are sometimes assigned separate lot numbers. In these cases, separate owners might each receive a notice and form from DBI. However, only one Screening Form for the entire building should be submitted.

Replacement or supplemental form. If this is the first time a Screening Form is being submitted for your building, answer no. If you have already submitted a Screening Form but are now submitting a new or revised form to correct an error or provide additional information, answer yes.

SECTION 2 – VOLUNTARY STRUCTURAL WORK EXEMPTION

1. **AB-094**, which set criteria for voluntary retrofits, went into effect on May 26, 2009. If you completed a retrofit in compliance with AB-094 prior to June 18, 2013, answer yes and provide your AB-094 Permit Application Number.

By answering yes, you are claiming exemption from the program, so you need not complete Section 3, 4, or Section 5.1 of the Screening Form. Please complete Section 5.2 and submit the Screening Form.

2. **Other Retrofits:** SFEBC Section 402D Exception 1 exempts retrofits completed within the last 15 years if they satisfied the requirements now found in SFEBC Section 301.2. However, because this exemption will likely require more careful review of various documents (plans, calculations, etc.), owners seeking this exemption must submit documentation together with the separate **Optional Evaluation Form**, available at www.sfdbi.org/softstory. Please fill out all sections of the Screening Form and submit.

SECTION 3 – SCOPE VERIFICATION

Section 3 requires application of the San Francisco Building and Housing Codes and therefore is to be completed by a California licensed architect or civil or structural engineer (unless you answered yes to the question in Section 2). Section 3 determines if your building is exempt from the program; if the building is exempt, you may skip Section 4.

Constructed before January 1, 1978

If the building was constructed after January 1, 1978, but under a permit applied for before that date, the response should still be yes. This question is about the date of original permitting and construction only. The date of any building addition, alteration, or retrofit is not of concern here. The adequacy of a past retrofit, whether done before or after January 1, 1978, is assessed separately, either in Section 2 or through the separate Optional Evaluation Form.

Stories

For this question, the number of stories may generally be understood as the number of stories above grade plane, and basement may generally be understood as any story that is not a story above grade plane, consistent with definitions in the San Francisco Building Code (which are identical to those in the 2016 California Building Code). In addition, per SFEBC Section 403D, "the first story of any building shall be considered a story, whether or not previously exempted from story count under an earlier edition of the San Francisco Building Code."

For this question, the number of stories is counted independent of whether a story is a Target Story or is of wood-frame construction. Other conditions may generally be handled as follows:

Mezzanines (as defined in the 2016 California Building Code) generally do not count as stories.

In a building with a flat roof, the unfinished space between ceiling framing and roof framing need not be counted as a story.

In a building with a pitched roof, if the attic space is enclosed by any vertical bearing walls of any height, so that a story sidesway mechanism is possible, the attic is to be counted as a story. Otherwise, for an attic with a pitched roof and no potential story sidesway mechanism, the attic shall be counted as a story if it contains one or more residential units distinct from units on floors below. The intent of this rule is to account for the additional risk posed by units in occupied attics. (Note: This rule has no bearing on the count of dwelling units required by the next question. If the building has fewer than five dwelling units, it is exempt from the program whether or not any unit is contained in an occupied attic.)

For hillside buildings, the response should be Yes if at any point in plan, a vertical line would pass through three stories or through two stories and a basement or underfloor area that extends above grade.

Dwelling units

For this question, "dwelling units" shall be based on the definition in SFEBC Section 403D:

A dwelling unit shall include any individual residential unit within either an R-1 or an R-2 occupancy building. It shall also include a guestroom, with or without kitchen, within either a tourist or residential hotel or motel but shall not include a "housekeeping room." A dwelling unit shall include an area that is occupied as a dwelling unit, whether such is approved or unapproved for residential use.

Type V (wood-frame) construction.

For this retrofit program, the structural elements of interest are the seismic force-resisting walls or frames in certain targeted stories –what SFEB Chapter 4D calls “critically vulnerable” stories. This requires a more specific understanding of “Type V” construction than is usually meant by the building code. Therefore, the design professional should answer this Screening Form question by using the Type V Worksheet provided here.

The correct answer to the Screening Form question is Yes if two conditions are true: 1. The building has a so-called Target Story, and 2. The Target Story has wood-frame walls.

A Target Story is a story that SFEB Chapter 4D intends to identify and retrofit, one that represents a potentially critical seismic vulnerability. Generally, a basement story, an underfloor area, or any story whose walls are substantially different from those of the next story up will be a Target Story.

The concept of a Target Story is needed to screen out those buildings that are technically made of wood but do not have the “critically vulnerable lower stories” or the “most critical vulnerabilities” contemplated by SFEB Section 401D. As Section 401D notes, the intent of this retrofit program is to “limit the structural retrofit work to the ground story or to a basement or underfloor area.” Thus, the uniform upper stories of a typical building were never intended to be subject to SFEB Chapter 4D. Similarly, buildings with uniform wall layouts in all stories, from foundation to roof, should be exempted. To be clear, these buildings might have seismic deficiencies and might benefit from retrofit, but they do not have the “critical” vulnerabilities targeted by SFEB Chapter 4D. The identification of Target Stories allows these buildings to be properly exempted from the program during the initial screening phase.

In more technical terms, Target Story may be defined as follows:

TARGET STORY: For purposes of SFEB Chapter 4D, a Target Story is any of:

- 1) A basement story or underfloor area that extends above grade at any point.
- 2) Any story above grade plane whose wall configuration is substantially different from the wall configuration of the story above, except that a story is not a Target Story if it is the topmost story or if the difference in configuration is primarily due to the story above being a penthouse, an attic with a pitched roof, or a setback story.

Notes on the definition:

- An “underfloor area” can be a crawl space or cripple story, finished or not. A partially below-grade story is generally any story that is not a “story above grade plane” as defined in 2016 CBC Chapter 2.
- “Any story above grade plane” can be the first story or any upper story. The first story above grade plane generally means the first story entirely at or above grade, but for sloped sites, see the definition in 2016 CBC Chapter 2. Also see Figure 1.
- In general, “wall configuration” may be measured by length, location, orientation, and openings. Wall construction and strength is also important, so “substantially different from” generally means “substantially weaker than.” However, the Screening Form is not meant to require any structural evaluation, so the judgment of the design professional and the Department will be applied to determine whether a story is “substantially different” from the story above. In practice, if substantial lengths of exterior walls or interior partitions do not line up from story to story, or door and window openings change substantially from story to story, the lower story might be deemed “substantially different.” Wall configuration can be related to occupancy as well: The wall layout or openings of a non-residential first story is usually (but not always) different from the wall layout or openings of the residential stories above.

The following Type V Worksheet will guide you to the appropriate answer to the “Type V” question on the Screening Form. As noted above, the correct answer to the Screening Form question is yes if the building has a Target Story and if the Target Story walls are wood-frame. Thus, the worksheet has two steps: one to identify Target Stories, and one to check for wood-frame walls.

The worksheet questions are intended to capture most of the conditions found in San Francisco. However, since they might not cover every possible combination of grade slopes and structural systems, the answers to these questions and to the Screening Form questions are subject to review by the Department.

Type V Worksheet

Step 1. Answer the following questions to identify the building's Target Story or Stories. (Note: It is possible for a building to have more than one Target Story.) See the text above and Figure 1 for additional guidance.

Yes No

Does the building have a basement, underfloor area, or other partially below-grade story that extends at any point above the adjacent grade?

If Yes, the basement, underfloor area, or partially below-grade story is a Target Story.

Are the wall layout and major wall openings of any story above grade plane (not counting a top story or penthouse) substantially different from the wall layout and major wall openings of the next story above?

If Yes, the lower of the two stories being compared is a Target Story.

Exception: If the difference between two stories is primarily due to a setback of the upper story, or if the upper story is an attic with a pitched roof (whether occupied or not), then the lower story need not be considered a Target Story.

If you answered No to BOTH of the Step 1 questions:

- Enter **No** as the answer to the Screening Form question about Type V construction.
- Check the box for "The building has no Target Stories."
- Skip Step 2.

If you answered Yes to EITHER of the Step 1 questions:

- Proceed to Step 2.

Step 2. Considering all of the Target Stories identified in Step 1, answer the following question.

Yes No

Does the seismic force-resisting system in any Target Story include any wood-frame wall elements of any height, length, or sheathing type, whether or not they conform to requirements for new construction?

The intent is to target wood-frame walls and cripple walls. If there are no wood-frame walls, and the non-wood wall or frame elements extend to the underside of wood floor framing with a rim joist or solid blocking, the Target Story is not considered to have wood-frame wall elements.

If you answered No to the Step 2 question:

- Enter **No** as the answer to the Screening Form question about Type V construction.
- Check the box for "The building has one or more Target Stories, but they are not wood-frame."

If you answered Yes to the Step 2 question:

- Enter **Yes** as the answer to the Screening Form question about Type V construction.

– End of Type V Worksheet –

SECTION 4 – ASSIGNMENT OF COMPLIANCE TIER

Section 4 requires application of the San Francisco Building and Housing Codes and therefore is to be completed by a California licensed architect or civil engineer (unless you answered yes to the question in Section 2, or the building is determined to be exempt in Section 3).

Section 4 assigns each building in the program to a compliance tier. The compliance tier determines the schedule for retrofit design and construction, but it has no impact on exemption from the program or on the deadline for submitting the Screening Form.

For reference, the compliance tier definitions from SFEB Section 404D.3 and the related compliance deadlines from SFEB Section 405D.2 and Table 4D-A are reproduced here:

Department of Building Inspection
1660 Mission Street – San Francisco CA 94103
Office (415) 558-6699 – www.sfdbi.org

404D.3. Compliance tiers.

Each building not exempt from this Chapter shall be assigned to one of the following Compliance Tiers:

1. **Tier I:** Buildings that contain a Group A, E, R-2.1, R-3.1 or R-4 occupancy on any story.
2. **Tier II:** Buildings containing 15 or more dwelling units, except for buildings assigned to Tier I or Tier IV.
3. **Tier III:** Buildings not falling within the definition of another tier.
4. **Tier IV:** Buildings that contain a Group B or M occupancy on the first story or in a basement or underfloor area that has any portion extending above grade, and buildings that are in mapped liquefaction zones, except for buildings assigned to Tier I.

405D.2 Compliance deadlines.

Compliance Tier	Submission of Screening Form and Optional Evaluation Form	Submittal of Permit Application with Plans for Seismic Retrofit Work	Completion of Work And Issuance of CFC ²
I	September 15, 2014	September 15, 2015	September 15, 2017
II	September 15, 2014	September 15, 2016	September 15, 2018
III	September 15, 2014	September 15, 2017	September 15, 2019
IV	September 15, 2014	September 15, 2018	September 15, 2020

2 All time limits and extensions of Chapter 1A of this Code are applicable, except that all work is to be completed by December 31, 2020, as recommended in California Health & Safety Code Section 19160(1).

Compliance Tier Worksheet

The following questions are related to each other like the steps in a flowchart. Therefore, answer the questions in sequence, following the instructions after each one. Guidance on key terms follows the worksheet.

	<u>Yes</u>	<u>No</u>
Does the building contain a Group A, E, R-2.1, R-3.1, or R-4 occupancy on any story? If Yes, the building is assigned to Tier I. Skip the remaining questions and indicate Tier I on the Screening Form. If No, continue to the next question.	<input type="checkbox"/>	<input type="checkbox"/>
Does the building contain a Group B or M occupancy on the first story or on a partial basement story? If Yes, the building is assigned to Tier IV. Skip the remaining questions and indicate Tier IV on the Screening Form. If No, continue to the next question.	<input type="checkbox"/>	<input type="checkbox"/>
Is the building located in a mapped liquefaction zone? If Yes, the building is assigned to Tier IV. Skip the remaining question and indicate Tier IV on the Screening Form. If No, continue to the next question.	<input type="checkbox"/>	<input type="checkbox"/>
Does the building contain 15 or more dwelling units? If Yes, the building is assigned to Tier II. Indicate Tier II on the Screening Form. If No, the building is assigned to Tier III. Indicate Tier III on the Screening Form.	<input type="checkbox"/>	<input type="checkbox"/>

– End of Compliance Tier Worksheet –

Occupancy A, E, R-2.1, R3.1, or R-4: Occupancies are defined in San Francisco Building Code Chapter 3. The response should be Yes even if the listed occupancy is contained in only part of the building or story, is part of a mixed occupancy, or is part of a temporary occupancy. The listed occupancies represent higher risks in the event of an earthquake in a deficient building. The intent of SFEBC Chapter 4D is to include in Tier I any building with any portion of these occupancies.

Occupancy B or M on first story or partial basement: Occupancies are defined in San Francisco Building Code Chapter 3. The response should be Yes even if the Group B or Group M occupancy is not the only occupancy in the story. (If the story also contains one of the occupancies listed in the previous question, however, this question will be moot.) The intent of SFEBC Chapter 4D is to allow more time for retrofit design and construction in Group B and Group M occupancies by assigning them to Tier IV, as long as no other critical condition exists that would assign them to Tier I or II.

For this question, “first story” and “partial basement story” should be understood to mean “any wood-frame Target Story” as described above in the instructions for Section 2. The intent of SFEBC Chapter 4D is to allow additional compliance time only where the Group B or Group M occupancy might require complex solutions.

Liquefaction zone: Mapped liquefaction zones are shown as Zones of Required Investigation on the map titled “Seismic Hazard Zones, City and County of San Francisco (California Department of Conservation, Division of Mines and Geology, 2000). The map of liquefaction areas and a searchable database may be viewed at the Department of Building Inspection or online at www.sfcaps.org/softstory.

SFEBC Chapter 4D does not require mitigation of the liquefaction hazard, but it is the intent of the chapter to allow more time for retrofit compliance where owners might choose to address liquefaction potential voluntarily.

Dwelling units: See the instructions for **Dwelling units** in Section 3. The same rules apply here.

SECTION 5 –DESIGN PROFESSIONAL & OWNER AFFIDAVIT

Section 5.1 is required whenever Section 3 or Section 4 is required. If you answered yes to the question 1 in Section 2 and therefore skipped Sections 3 and 4, you need not complete Section 5.1. If you will be using the **Optional Evaluation Form** (based on Section 2, statement 2) please complete Section 5.1.

Section 5.2 must be completed in all cases.

Figure 1. Examples of story counts, Target Stories, and Type V construction

4 stories w/ first floor parking

Basement: None.

First story above grade plane: Wall layout in parking area differs from story above → Target Story. Wood frame walls → Check Type V: Yes on Screening Form.

1st story above grade plane →



3 stories above grade plane, plus basement

Basement: Extends above grade → Target Story.

First story above grade plane: If wall layout substantially matches story above, not a Target Story.

1st story above grade plane →

Basement →



3 stories, plus underfloor area

Underfloor area (unfinished crawl space): Target Story. If walls include wood-frame, check Type V: Yes on Screening Form. If walls are concrete stem walls, check No.

First story above grade plane: Wall layout matches story above, so not a Target Story.

1st story above grade plane →

Crawl space →



Figure 1, continued. Examples of story counts, Target Stories, and Type V construction

Sloped site w/ 5 floor levels


Basement or underfloor area (indicated by windows / vents at grade): Target Story, even though underfloor area exists under only part of building.

First story above grade plane: Not a Target Story if wall layout substantially matches story above.

2nd story above grade plane →

1st story above grade plane →

Partial basement or underfloor area →



Sloped site w/ 5 floor levels

Story 1: Partial below-grade story → Target Story.

Story 2: Story above grade plane, configuration / wall layout does not match story above (see right side of photo) → Target Story.

Story 3: Story above grade plane, configuration / wall layout matches story above, so not a Target Story.


Story 4: Story above grade plane, configuration / wall layout differs from story above (see right side of photo), but not a Target Story because change in layout is due to setback.

4 →

3 →

2 →

1 →




4 stories, including concrete podium

Basement: None.

First story above grade plane: Wall layout (parking level) differs from story above → Target Story. But Target Story is concrete podium structure, with no wood frame walls → Check Type V: No on Screening Form.

Concrete podium structure (3 wood-frame stories above) →





ATTACHMENT C

Wood-Frame Seismic Retrofit Program

OPTIONAL EVALUATION FORM - \$374.00 FEE

This form has been developed in compliance with San Francisco Existing Building Code Section 404D.2.2 for use by owners of buildings within the scope of SFBC Chapter 4D. The purpose of the form is to summarize an owner's optional evaluation demonstrating that the building either 1) has been strengthened to meet or exceed the standards of SFBC Section 301.2 or its predecessor provisions since June 17, 1998, or 2) already meets the criteria of SFBC Section 406D.2 without additional retrofit. Where used, Sections 3 through 5.1 of this form are to be completed by a California licensed architect, civil or structural engineer.

Submit the completed Optional Evaluation Form together with a completed Screening Form and with the supporting documents identified in Sections 3 and/or 4 to Department of Building Inspection, 1660 Mission Street, San Francisco, CA 94103.

BLOCK / LOT NUMBER _____

OWNER NAME _____

OWNER ADDRESS _____

SECTION 1 – ADMINISTRATIVE INFORMATION

Owner telephone _____ Owner email _____

Owner mailing address (if different from above) _____

Authorized agent (optional) _____ Agent telephone _____ Agent email _____

Agent mailing address _____

CONDOMINIUM OWNERS: Please submit one Screening Form and one set of contact information for each building. Please list all lot numbers comprising the building here:

Does this Optional Evaluation Form replace or supplement a previously submitted Optional Evaluation Form for the same building? Yes No

BLOCK / LOT NUMBER _____

SECTION 2 – BASIS FOR COMPLIANCE WITH SFEBc CHAPTER 4D

(SFBC Section 402D Exception 1 and Section 402D.2.2)

Was the building seismically strengthened to meet or exceed the standards of SFEBc Section 301.2 or its predecessor provisions since June 17, 1998? Yes No

If yes, complete EITHER Section 3 if you are submitting documentation of the past retrofit OR Section 4 if you are submitting new evaluation documentation.

Notes:

1. Exemption for voluntary seismic retrofit completed under AB-094 (SFEBc Section 402D Exception 1) is covered in Screening Form Section 2. If an AB-094 retrofit has been completed, do not submit this Optional Evaluation Form.
2. For buildings retrofitted prior to June 17, 1998 (and therefore not eligible for exemption under SFEBc Section 402D Exception 1), answer the next question and complete Section 4 as appropriate.

Are you declaring that the building already meets the criteria of SFEBc Section 406D.2?

If yes, skip Section 3 and complete Section 4.

SECTION 3 – DOCUMENTATION OF PREVIOUS RETROFIT

(SFBC Section 402D Exception 1)

Indicate which of the following items you are submitting to document that the previous retrofit satisfies all of the following:

- The retrofit meets or exceeds the standards of SFEBc Section 301.2 or its predecessor provisions.
- The retrofit was permitted after June 17, 1998.
- The retrofit was properly permitted, completed, and maintained.

Approved Permit Application	<input type="checkbox"/>	Original structural calculations / design criteria	<input type="checkbox"/>
Approved Structural Plans	<input type="checkbox"/>	Original construction documents	<input type="checkbox"/>
Certificate of Final Completion	<input type="checkbox"/>	Original soil or geotechnical report	<input type="checkbox"/>
		Original product literature	<input type="checkbox"/>

SECTION 4 – EVALUATION DOCUMENTS

(SFEBc Section 402D Exception 1)

If you completed Section 3, you may skip Section 4.

With reference to SFEBc Section 406D.2, which criteria are you using to demonstrate compliance of the existing building?

FEMA P-807
ASCE 41-13
ASCE 41-06
ASCE 31-03
Other

If Other, describe briefly:

Notes:

1. Your submittal will be reviewed using the criteria noted above and Administrative Bulletin 107. Design professionals are advised to review AB-107 requirements for each set of criteria before submitting evaluation documents.
2. Structural calculations for retrofits performed before June 17, 1998 are not necessarily sufficient to comply with SFEBc Chapter 4D. They may be submitted as reference, but evaluation with one of the listed criteria is still required.

BLOCK / LOT NUMBER _____

Department of Building Inspection
1660 Mission Street – San Francisco CA 94103
Office (415) 558-6699 – www.sfdbi.org

Indicate which of the following items you are submitting as evidence that the building meets the criteria noted above:

- | | | | |
|---|--------------------------|--|--------------------------|
| Building condition assessment report(s) | <input type="checkbox"/> | Structural plans for previous retrofit (see Note 2 above) | <input type="checkbox"/> |
| Structural investigation report(s) | <input type="checkbox"/> | Structural calculations for previous retrofit (see Note 2 above) | <input type="checkbox"/> |
| Soil / geotechnical report | <input type="checkbox"/> | | |
| Structural calculations | <input type="checkbox"/> | | |
| Structural software verification | <input type="checkbox"/> | | |

SECTION 5 –DESIGN PROFESSIONAL & OWNER AFFIDAVIT

Under penalty of perjury, the Design Professional certifies that the information provided in Sections 2, 3 and 4 and the Owner/Agent certifies that the information provided in Section 1 of this Optional Evaluation Form are correct to the best of their knowledge.

5.1. Design Professional:

Date stamped and signed

Firm name

Design Professional telephone

Design Professional email

[Professional Stamp Here]

5.2. Owner / Agent:

- Owner
 Agent

Signature

Date

FOR DBI USE ONLY

DBI has approved the evaluation showing that the existing building has been strengthened to meet or exceed the standards of SFEBEC Section 301.2 or its predecessor provisions since June 17, 1998. DBI to send a letter confirming compliance with SFEBEC Chapter 4D.

DBI has approved the evaluation showing that the existing building meets the criteria of SFEBEC Section 406D.2 without additional retrofit. DBI to send a letter confirming compliance with SFEBEC Chapter 4D.

DBI has reviewed the materials submitted but cannot approve the evaluation as submitted. DBI to send a letter giving the reason(s) for non-approval.

DBI Reviewer

Date reviewed