

State of California
Seismic Safety Commission

Memo

To: Seismic Safety Commission

From: Fred Turner, Staff Structural Engineer
California Seismic Safety Commission
1755 Creekside Oaks Drive, Suite 100
Sacramento, CA 95833
Phone: (916) 263-0582 Fax: (916)263-0594 Email: Turner@StateSeismic.com

Date: March 4, 2014

Subject: **Update on Ad Hoc Committee on Collapse-Prone Buildings**

Based on direction received from the Commission at our January meeting, the staff has been exploring the possibility of hiring a consultant(s) to provide technical editing, to repackage and condense major recommendations of the guidebook for specific audiences such as local government policymakers and regulators as well as building owners and the general public.

So far, the staff has made inquiries to the Institute for Local Government, University of California, the California State University, and the Department of General Services regarding their potential interest in participating in an interagency agreement with the Commission to pursue collaborations. The Institute for Local Government is not able to participate. Staff plans to meet with Department of General Services later this week and will provide an update on the negotiation progress at the Commission hearing on March 13th.

In addition, staff attended San Francisco's Retrofit Fair on January 28th where 3,000 attendees, many of whom are owners of soft story apartment buildings, met with exhibitors who provided advice on retrofit financing options, hiring design professionals and coordinating seismic improvements with other improvements to buildings. Of particular note, San Francisco has expanded its "Property Assessments for Clean Energy" (PACE) program to allow seismic retrofits to be eligible for financing through increases in property taxes. Similar programs exist in several dozen other counties and major cities throughout California. Information from the fair is attached.

This is an informational agenda item and no action from the Commission is expected at the March hearing.

Proposed Outline for a Guidebook to Identify & Manage the Risks of Collapse-Prone Buildings
Alternate Title: Improving Seismic Outcomes for Collapse-Prone Buildings

1. Introduction

- a. Background and Intended Audience for this Guidebook
- b. Types of Collapse-Prone Buildings (implying those types not covered)
- c. Summary of the Guidebook's contents

2. Why Should Commercial, Institutional and Industrial Building Owners Address this Issue Including Limiting Factors

3. Why Should Governments Consider Getting Involved in this Issue Including Limiting Factors

4. Nexus for Public/Private Partnerships to Manage Collapse Risks

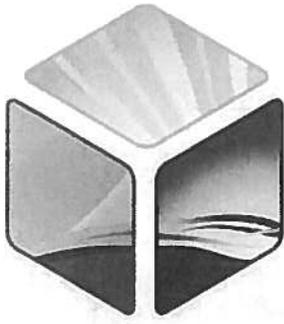
5. Steps to Managing the Seismic Risk of Collapse-Prone Buildings

- a. Step One: Develop a Process that Includes an Effective Public/Private Communication Campaign and Participation
- b. Step Two: Estimate the Size and Nature of Risks Posed by Collapse-Prone Buildings
- c. Step Three: Consider and Develop Options for Mitigating the Risk
 - i. Option One: Rely on Current Triggers for Alterations in Building Code
 - ii. Option Two: Develop an Inventory of Collapse-Prone Buildings and analyze casualty risks to understand the size of the issues
 - iii. Option Three: Develop Seismic Performance Options
 - iv. Option Four: Undertake Rapid Seismic Screenings or Evaluations
 - v. Option Five: Require Detailed Seismic Evaluations and/or Ratings
 - vi. Option Six: Encourage Voluntary Seismic Retrofits or Replacements
 - vii. Option Seven: Require Seismic Retrofits or Replacements
 - viii. Considering Model Ordinances* and Other Approaches Adopted by Local Governments
 - 1. Success Stories
 - 2. Benefits and Pitfalls of Typical Approaches
 - ix. Ranges of Current Costs for Building Owners and Occupants*
 - x. Ranges of Current Costs to Local Governments*
 - xi. Typical Current Benefit-Cost Comparisons*
 - xii. Social Implications of Risk Management Alternatives – Social vulnerability in collapse-prone buildings
 - xiii. Incentives

1. Federal and State Financial Incentives, including tax incentives
 2. Local Financial and Zoning Incentives, including tax incentives, fee relief, expedited approvals, and removal of disincentives
 3. Adaptability and Sustainability of Incentives
 4. Life cycle Returns on Investments as Incentives
 5. Market-Driven Incentives to Attract Tenants and Obtain Loans
- xiv. Other Management Considerations
1. Including Seismic Objectives in Other Planning, Zoning and Development Initiatives
 2. Investment Losses due to Earthquakes
 3. Earthquake Insurance as a Tool to Transfer Liability
 4. Management by Metrics
 5. Historical Buildings Preservation
 6. Emergency Preparedness
 7. Limitations of Retrofit Reliability, not “Earthquake Proof”
 8. Evaluation, Stabilization, and Repair of Damaged Buildings
 9. Managing Aftershock Risk
- d. Step Four: Implementing Effective Risk Management Programs
- i. Adopting Long-term Perspectives and Commitments
 - ii. Building Department Personnel Qualifications and Training
 - iii. Monitoring Progress, Maintaining Inventories, Sharing Progress with State
 - iv. Reevaluating Progress Periodically, Especially after Future Earthquakes
 - v. Planning for Future Adjustments to Risk Management Programs

6. Reference Material

- a. Applicable State Laws
- b. Liability Considerations for Building Owners, Governments, Contractors and Design Professionals
- c. Incentives
- d. Risk Communication Guidance
- e. Advantages and Secondary Benefits for Building Owners and Governments
- f. Ordinances and progress summaries in agencies with existing programs
- g. Recommended Model Ordinance(s)
- h. Bibliography



GreenFinanceSF



Saving You Money, Energy and Water

USE GREEN FINANCE SF TO FINANCE YOUR RETROFIT!

GreenFinanceSF is a Property Assessed Clean Energy (PACE) financing program that provides 100% financing for seismic strengthening improvements to privately owned buildings. The program allows you to finance through the City and pay back the cost the work through your property taxes.

HERE'S HOW!

Step 1: Review the GreenFinanceSF Program Handbook, which contains everything you need to know about how the financing works at www.greenfinancesf.org.

Step 2: Review the eligibility criteria to make sure your property is eligible. Review the application materials to see what is involved. Feel free to contact us with any questions.

Step 3: Submit the Initial Application that you will find in the application materials. In the Initial Application, you will provide basic information about your property ownership and valuation as well as a broad sketch of your proposed project(s).

Step 4: After reviewing your Initial Application, GreenFinanceSF will provide you a Conditional Reservation that pre-approves your proposed project. With the Conditional Reservation, you can begin assembling the information and authorizations needed for the Final Application.

Step 5: Work with a qualified engineer and/or contractor to finalize your Scope of Work.

Step 6: Contact your mortgage lender to discuss the project. Show them the business case, and ask for their affirmative acknowledgement to fund the project using PACE. The GreenFinanceSF program team may be available to provide educational assistance on an as-needed basis.

Step 7: Reach out to interested PACE lenders to finalize terms that make sense for your project. The program can help you identify potential lenders. Your mortgage lender may well want to do the financing itself. In either case, the GreenFinanceSF team is not directly involved in these negotiations —our role is to secure repayment with the PACE special assessment, ensure basic program requirements are met, and help you through the process.

Step 8: Complete the application materials and submit through this website. You will receive an email confirming that the Final Application is complete, and laying out next steps.

Step 9: Once approved, work with GreenFinanceSF to execute the necessary documents.

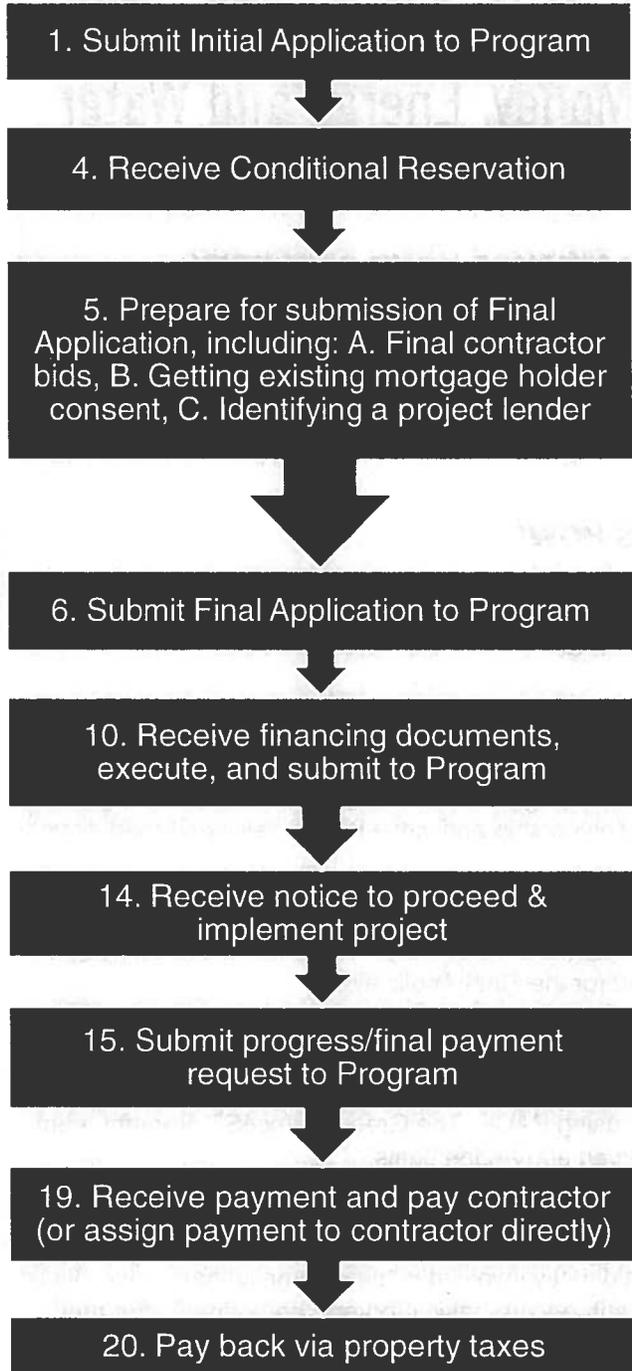
Step 10: Close financing and implement your upgrade!



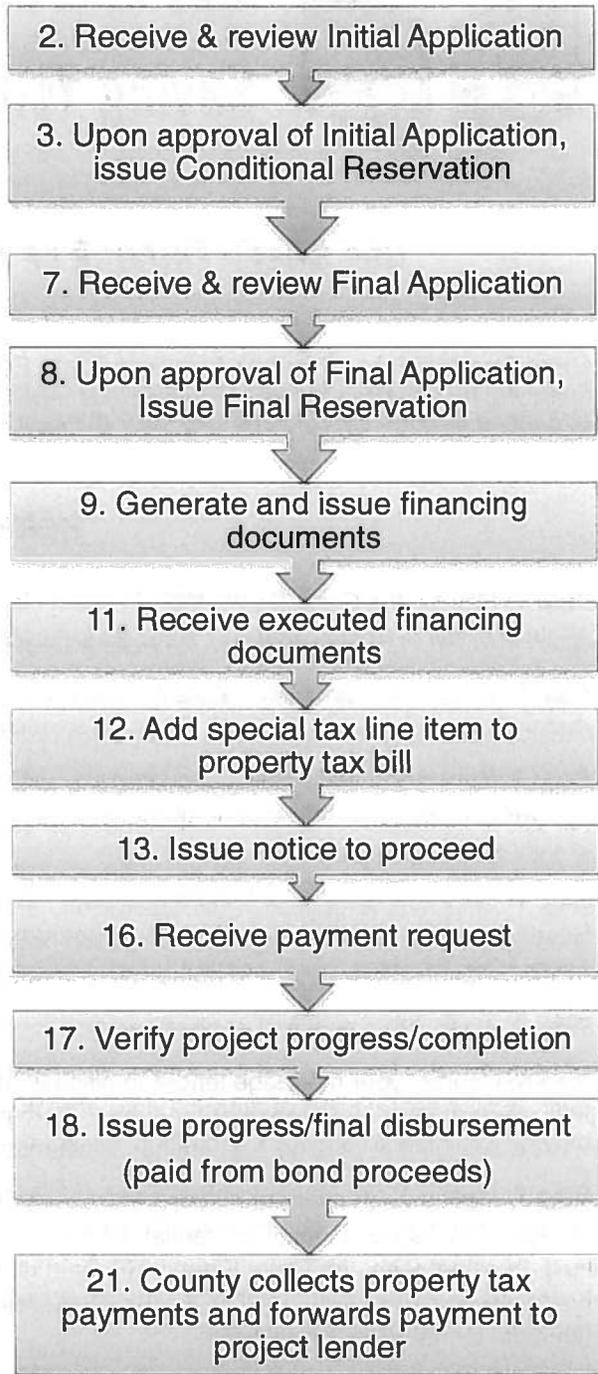
SF Environment
Our home. Our city. Our planet.
A Department of the City and County of San Francisco

1455 Market Street, Suite 1200, San Francisco, CA 94102
SFEnvironment.org • (415) 355-3700

Property Owner



GreenFinanceSF



Contact Us!

Phone: 415-355-3761

e-mail: contact@greenfinancesf.org



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What is PACE?

Property Assessed Clean Energy (PACE) is an innovative way to finance energy efficiency and renewable energy upgrades to buildings. Interested property owners evaluate measures that achieve energy savings and receive 100% financing, repaid as a property tax assessment for up to 20 years. The assessment mechanism has been used nationwide for decades to access low-cost long-term capital to finance improvements to private property that meet a public purpose.

By eliminating upfront costs, providing low-cost long-term financing and making it easy for building owners to transfer repayment obligations to a new owner upon sale, PACE overcomes challenges that have hindered adoption of energy efficiency and related projects in our nation's buildings.

PACE is a local government/community initiative that creates permanent private sector jobs, strengthening our national and local economies. Buildings use nearly half of the energy we consume in the United States. PACE programs help make our nation more energy independent and secure while safeguarding our environment by reducing demand for fossil fuels.

The PACE financing mechanism provides a strong credit that is attractive to private sector investors and without government subsidies. PACE is voluntary. Property owners, acting in their own self interest, implement building upgrades that can save them money, increase the value of their property. PACE programs add value, and have gained bi-partisan support nationwide at federal, state and local levels.

Introduced in pilot programs in 2008, PACE made immediate sense to energy efficiency advocates across the country, and today, 31 states and the District of Columbia have adopted (or already had) legislation that enables local governments to offer PACE benefits to building owners. See a list of all PACE enabling legislation.

PACE is available for residential and commercial buildings. Commercial PACE programs are being developed across the nation. There are a number of residential PACE programs as well. Click here to see a full list of PACE programs.

Benefits of PACE

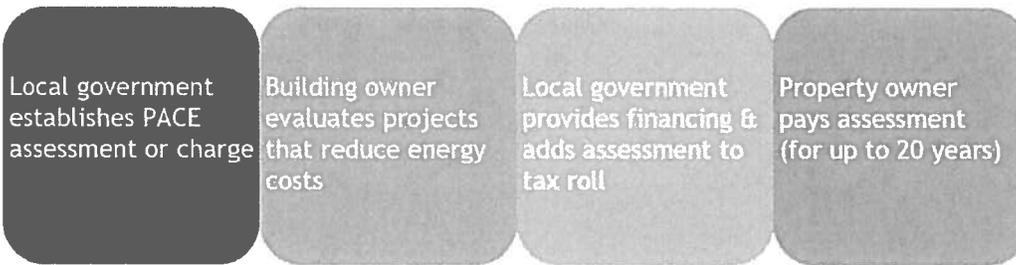
PACE drives spending in the local communities through the installation of energy efficient equipment and the implementation of renewable energy measures. Major benefits of PACE are:



Both commercial and residential PACE improve consumer's cash flow by decreasing energy needs and hence decreasing utility bills. PACE, compared to other retrofit mechanisms, is tax neutral and results in no exposure to county's general fund. An economic study performed by ECONorthwest in 2011 predicts that every \$1 million of EE/RE project spending results in \$2.5 million in total economic output, roughly \$250 thousand in state and local taxes, and approximately 15 new jobs nationwide. Another study conducted in 2011 by the United States Department of Energy on the economic impacts of the Boulder County (CO) Climate Smart (PACE) Loan Program found that \$9 million spent on EE/RE projects on 598 homes contributed, statewide, to more than \$7 million in personal income gains, just under \$30 million of total economic activity, and the creation of roughly 125 short-term jobs.

How PACE Works?

There are 4 simple steps to every PACE programs:



PACE uses the same kind of land-secured financing districts that American cities and towns have used for over 100 years to pay for improvements in the public interest. Over 37,000 land secured districts already exist and are a safe and familiar tool of municipal finance for street paving, parks, open space, water and sewer systems, street lighting, and seismic strengthening, among others.

PACE Programs

PACE programs work at the local municipal level and program elements vary to meet the needs of individual communities and reflect differences in state laws. Most PACE programs will share basic features:

- State and local governments establish, in law or public policy, a specific goal or objective: promoting energy efficiency as a means to promote jobs or better air quality, for example.
- A municipal government may establish a type of land or real property secured benefit district.
- Property owners within the district (or the municipality if a district is not required) can voluntarily choose to participate; those who choose not to see no change to their taxes and assessments.
- An experienced contractor will assess the scope of desired improvements. This may involve a thorough energy audit for efficiency measures and their projected savings and costs, or cost estimates for renewable projects weighed similarly against projected energy savings.
- The municipality will provide financing for the project, typically by selling bonds secured solely by payments made from participating property owners.
- Homeowners who receive a financing benefit from the municipality will agree to accept a property tax assessment or charge for up to 20 years, though shorter periods may be chosen or required by the municipality.

Please, check out our **interactive map** to learn more about each PACE program or go straight to the **list of PACE programs**.

Is PACE near you?

Our **interactive map** will allow you to find out if there is an operational PACE program near you. If PACE is not available in your state, take action to **make PACE possible**.

PACE Resources

Our **resources page** contains PACE webinars, newsletters, latest reports on energy efficiency, PACE marketing materials, videos on PACE, and other relevant information.

What is PACE? 1-page succinct explanation of PACE financing.

On-bill Repayment Resources

Another energy efficiency program, spearheaded by our friends at the Environmental Defense Fund, is called **on-bill repayment or OBR**. The program is similar to PACE. Program customers take advantage of 100% financing for qualified clean energy upgrades and pay overtime on their utility bill.

OBR offers an opportunity for customers to choose clean energy and save money at the same time. Rather than continuing to pay for dirty energy from polluting power plants, consumers can obtain cost-effective energy saving measures for their own buildings and homes at no upfront cost.

So how does OBR work? **Once qualifying energy-saving projects have been identified, customers can have them installed at no upfront cost. Instead, customers pay for clean energy upgrades over time on their utility bill.** All OBR projects are designed to have cost savings that exceed the monthly OBR payment, so consumers save energy and money at the same time, starting on day one. For more information, please visit Environment Defense Fund's page on OBR.

Download National OBR Factsheet.



About Us

We are a foundation funded, impartial and consensus driven non-profit service provider to our customers: the government and non-governmental organizations, energy and administrative service companies, real estate owners and managers, law and financial firms, and others who share our goals and commitment to PACE.

Our Mission

Our mission is to promote and assist the development of PACE programs by state and local governments and provide leadership and support for a growing universe of energy efficiency and PACE stakeholders.

Contact Us

Address: 141 Tompkins Ave, 3rd Floor Pleasantville, NY 10570
E-mail: info@pacenow.org

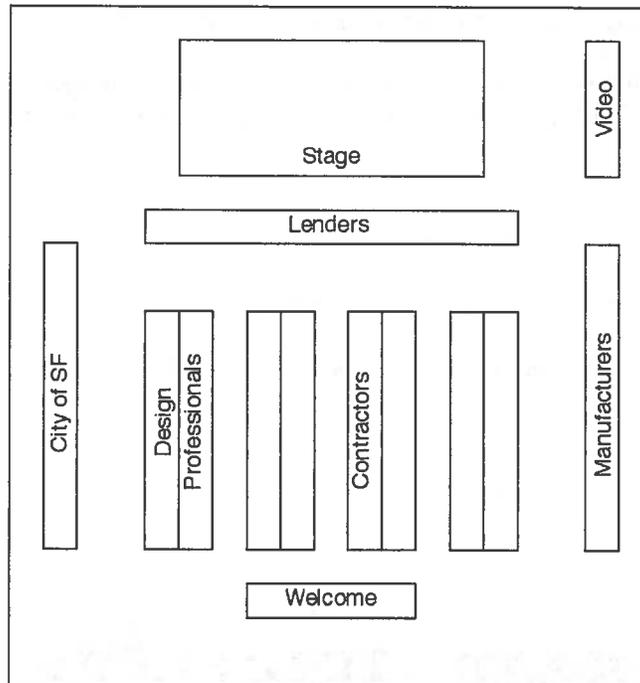
PACENow Market Updates

[Click here to subscribe to PACENow's Market Update.](#)



Earthquake Retrofit Fair

January 28, 2014
Bill Graham Civic Auditorium



Please use this guide to help you get the most out of the Retrofit Fair. This event is meant to help property owners navigate the process of complying with the City's new retrofit law successfully.

Mandatory Soft Story Retrofit Program

The mandatory soft story retrofit program is a program with the Department of Building Inspection requiring all soft story multifamily residential buildings to be retrofitted by 2020. This ordinance protects not only the property owner's valuable asset and the residents that live in these buildings but also enhances the resiliency of the City itself after a large earthquake.

This ordinance covers all wood frame buildings built before January 1978 with five or more units containing two or more stories over a soft (target) story.

Department of Building Inspection
1600 Mission Street
San Francisco, CA 94103
415-558-6699
softstory@sfgov.org
www.sfcapss.org/softstory
www.sfdbi.org/softstory



The ordinance will require property owners to do the following:

1. **Work with a design professional to complete the screening form by September 15, 2014.** This will determine if you are required to do work or not.
2. **Using the screening form the design professional will determine your building's compliance tier.** This is based on the requirements of the ordinance and will let you know the timeline for the rest of your required retrofit.
3. **If you need to secure financing there are a number of options from private lenders and public financing available at the fair.** Please note that if you would like to be considered for the City's public financing option you must submit your application by April 18, 2014
4. **Permits for your retrofit are required to be issued through the Department of Building Inspection within the time required by your compliance tier.** You will need a design professional and contractor for this.
5. **Your contractor will complete the construction work.** There are companies available that offer products and services that may help this process, such as manufacturers and seismic retrofitting services offering a one-stop-shop approach.
6. **Your work is complete when it has passed the final inspection from the Department of Building Inspection.** The inspector will issue a Certificate of Final Completion (CFC) and you will have met the requirements of this law.

Important Dates:

September 15, 2014: All screening forms must be completed by a design professional and submitted to the Department of Building Inspection.

April 18, 2014: All application for GreenFinanceSF, the City's public finance option, must be submitted to the Earthquake Safety Implementation Program.

There is a video playing in the back of our Informational Workshops.





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 Building Code Chapter 34B: Mandatory Earthquake Retrofit of Wood-Frame Buildings. The building owner or the owner's authorized agent shall complete and submit this Screening Form (Section 3404B.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 SFBC Section 3406B (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

WOOD-FRAME SEISMIC RETROFIT PROGRAM SCREENING FORM
Page 2

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 (SFBC Section 3402B) 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 SFBC Chapter 34B. Complete and submit this Screening Form.

If No: The building is exempt from SFBC Chapter 34B. 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 SFBC Chapter 34B, 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

SECTION 3: Scope Verification

Wood-Frame

Pre- 1978

Stories

Units

SECTION 4: Compliance Tier

SECTION 5: Professional and Owner / Agent
Statement s

Building is subject to the ordinance.

The form appears complete and is assumed correct based
on design professional and owner / agent statements.

DBI Reviewer: _____

Date: _____



Wood-Frame Seismic Retrofit Program

OPTIONAL EVALUATION FORM - \$374.00 FEE

This form has been developed in compliance with San Francisco Building Code Section 3404B.2.2 for use by owners of buildings within the scope of SFBC Chapter 34B. 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 1604.11 or its predecessor provisions since June 17, 1998, or 2) already meets the criteria of SFBC Section 3406B.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 SFBC CHAPTER 34B

(SFBC Section 3402B Exception 1 and Section 3402B.2.2)

Was the building seismically strengthened to meet or exceed the standards of SFBC Section 1604.11 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 (SFBC Section 3402B 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 SFBC Section 3402B Exception 1), answer the next question and complete Section 4 as appropriate.

Are you declaring that the building already meets the criteria of SFBC Section 3406B.2?

If yes, skip Section 3 and complete Section 4.

SECTION 3 – DOCUMENTATION OF PREVIOUS RETROFIT

(SFBC Section 3402B 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 SFBC Section 1604.11 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

(SFBC Section 3402B Exception 1)

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

With reference to SFBC Section 3406B.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 SFBC Chapter 34B. They may be submitted as reference, but evaluation with one of the listed criteria is still required.

WOOD-FRAME SEISMIC RETROFIT PROGRAM SCREENING FORM
Page 3

BLOCK / LOT NUMBER _____

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.

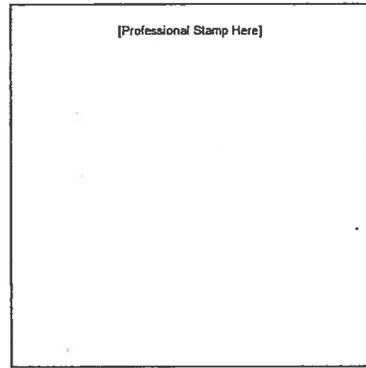
5.1. Design Professional:

Date stamped and signed

Firm name

Design Professional telephone

Design Professional email



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 SFBC Section 1604.11 or its predecessor provisions since June 17, 1998. DBI to send a letter confirming compliance with SFBC Chapter 34B.

DBI has approved the evaluation showing that the existing building meets the criteria of SFBC Section 3406B.2 without additional retrofit. DBI to send a letter confirming compliance with SFBC Chapter 34B.

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



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:** SFBC Section 3402B Exception 1 exempts retrofits completed within the last 15 years if they satisfied the requirements now found in SFBC Section 1604.11. 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 2010 California Building Code). In addition, per SFBC Section 3403B, "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 2010 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 SFBC Section 3403B:

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 SFBC Chapter 34B 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 Chapter 34B 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 SFBC Section 3401B. As Section 3401B 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 SFBC Chapter 34B. 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 SFBC Chapter 34B. 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 SFBC Chapter 34B, 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 2010 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 2010 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.

	<u>Yes</u>	<u>No</u>
Does the building have a basement, underfloor area, or other partially below-grade story that extends at any point above the adjacent grade?	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>
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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.

	<u>Yes</u>	<u>No</u>
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?	<input type="checkbox"/>	<input type="checkbox"/>

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 SFBC Section 3404B.3 and the related compliance deadlines from SFBC Section 3405B.2 and Table 34B-A are reproduced here:

3404B.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.

3405B.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?	<input type="checkbox"/>	<input type="checkbox"/>
<p style="margin-left: 20px;">If Yes, the building is assigned to Tier I. Skip the remaining questions and indicate Tier I on the Screening Form.</p> <p style="margin-left: 20px;">If No, continue to the next question.</p>		
Does the building contain a Group B or M occupancy on the first story or on a partial basement story?	<input type="checkbox"/>	<input type="checkbox"/>
<p style="margin-left: 20px;">If Yes, the building is assigned to Tier IV. Skip the remaining questions and indicate Tier IV on the Screening Form.</p> <p style="margin-left: 20px;">If No, continue to the next question.</p>		
Is the building located in a mapped liquefaction zone?	<input type="checkbox"/>	<input type="checkbox"/>
<p style="margin-left: 20px;">If Yes, the building is assigned to Tier IV. Skip the remaining question and indicate Tier IV on the Screening Form.</p> <p style="margin-left: 20px;">If No, continue to the next question.</p>		
Does the building contain 15 or more dwelling units?	<input type="checkbox"/>	<input type="checkbox"/>
<p style="margin-left: 20px;">If Yes, the building is assigned to Tier II. Indicate Tier II on the Screening Form.</p> <p style="margin-left: 20px;">If No, the building is assigned to Tier III. Indicate Tier III on the Screening Form</p>		

- 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 Chapter 34B 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 Chapter 34B 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 Chapter 34B 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.sfcapss.org/softstory.

Chapter 34B 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

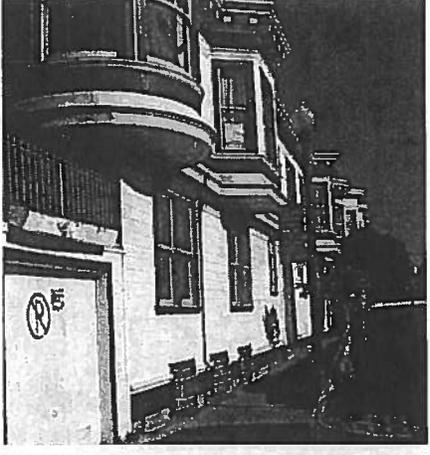
Section 5.1 is required whenever Section 3 or Section 4 is required. If you answered yes to the question 1 in Section 2 and therefore skipped Sections 3 and 4, you need not complete Section 5.1. If you will be using the **Optional Evaluation Form** (based on Section 2, statement 2) please complete Section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

Section 5.2 must be completed in all cases.

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

<p><u>4 stories w/ first floor parking</u></p> <p>Basement: None.</p> <p>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.</p>	 <p>1st story above grade plane →</p>
<p><u>3 stories above grade plane, plus basement</u></p> <p>Basement: Extends above grade → Target Story.</p> <p>First story above grade plane: If wall layout substantially matches story above, not a Target Story.</p>	 <p>1st story above grade plane →</p> <p>Basement →</p>
<p><u>3 stories, plus underfloor area</u></p> <p>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.</p> <p>First story above grade plane: Wall layout matches story above, so not a Target Story.</p>	 <p>1st story above grade plane →</p> <p>Crawl space →</p>

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

<p><u>Sloped site w/ 5 floor levels</u></p> <p>Basement or underfloor area (indicated by windows / vents at grade): Target Story, even though underfloor area exists under only part of building.</p> <p>First story above grade plane: Not a Target Story if wall layout substantially matches story above.</p>	<p>2nd story above grade plane →</p> <p>1st story above grade plane →</p> <p>Partial basement or underfloor area →</p>	
<p><u>Sloped site w/ 5 floor levels</u></p> <p>Story 1: Partial below-grade story → Target Story.</p> <p>Story 2: Story above grade plane, configuration / wall layout does not match story above (see right side of photo) → Target Story.</p> <p>Story 3: Story above grade plane, configuration / wall layout matches story above, so not a Target Story.</p> <p>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.</p>	<p>4 →</p> <p>3 →</p> <p>2 →</p> <p>1 →</p>	
<p><u>4 stories, including concrete podium</u></p> <p>Basement: None.</p> <p>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.</p>	<p>Concrete podium structure (3 wood-frame stories above) →</p>	