

Creating Resilient Communities

# Earthquake Brace + Bolt

Minimizing Earthquake Damage  
One House at a Time



# CEA

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CEA is a  
not-for-profit residential  
earthquake insurer.

# CEA: Publicly Managed • Privately Financed

A not-for-profit provider of residential earthquake insurance

## GOVERNING BOARD:

Governor  
Insurance Commissioner  
State Treasurer

Non-Voting:

Assembly Speaker and Senate Rules Chair

## PRIVATELY FINANCED:

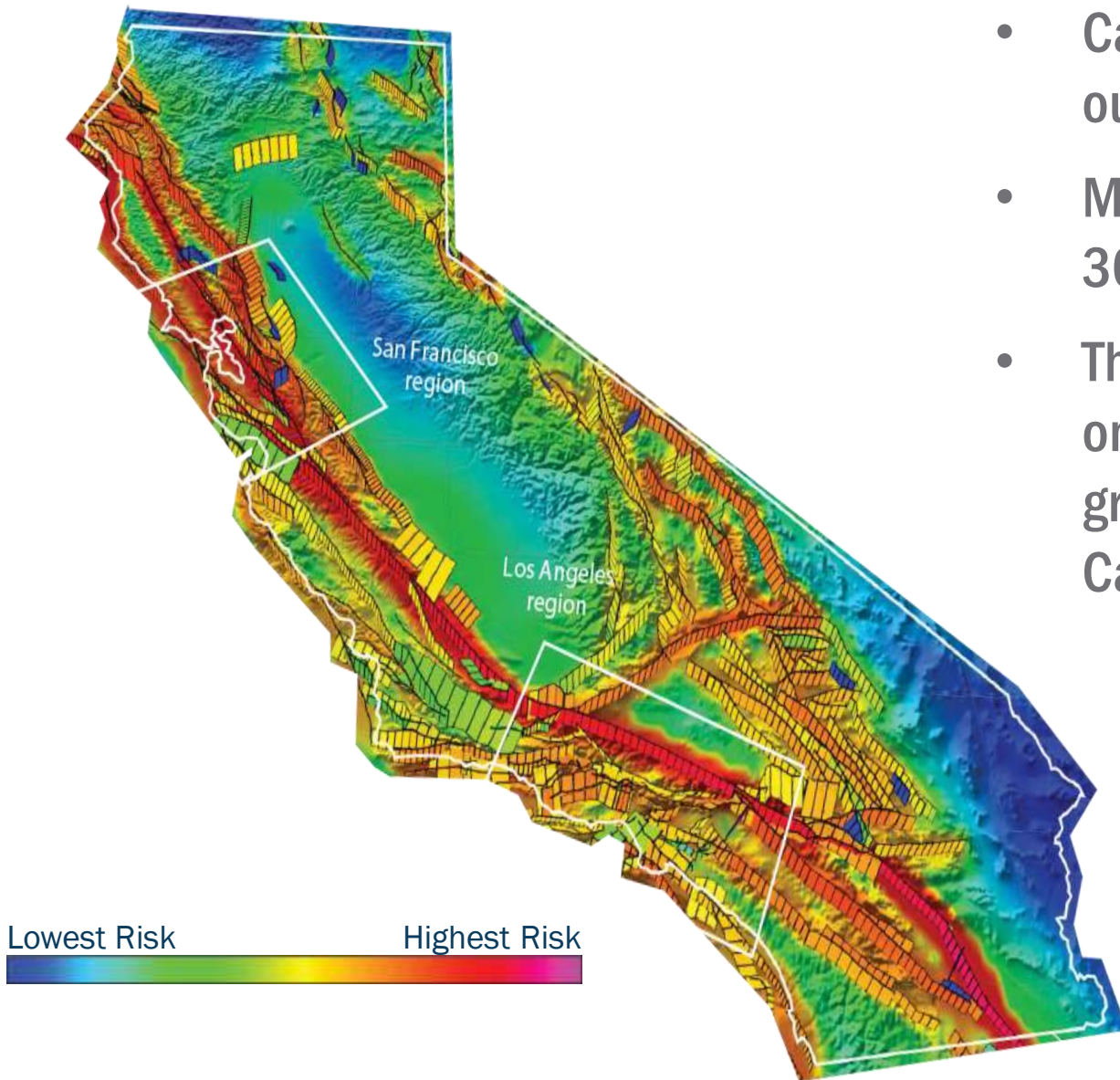
1,106,000 Policyholders

## MISSION:

Educate  
Mitigate  
Insure

# CRMP

- EBB Program benefits are made possible by funding from the California Residential Mitigation Program (CRMP).
- CRMP is a joint powers authority established under California Government Code Section 6500, et seq., whose members are the California Earthquake Authority (CEA), a public instrumentality of the State of California, and the California Governor's Office of Emergency Services, an agency of the State of California.



- California is home to two-thirds of our nation's earthquake risk.
- Most Californians live within 30 miles of an active fault.
- There's more than a 99% chance of one or more magnitude 6.7 or greater earthquakes striking California.

# RETROFIT

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Without retrofitting, cost to repair damage could double for older houses.

# Earthquake Brace + Bolt (EBB) and Chapter A3

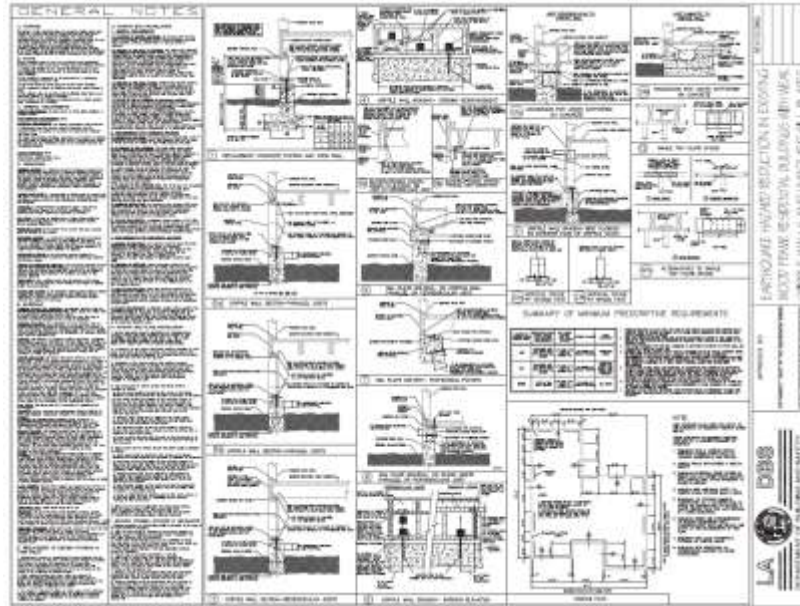
## Chapter A3:

- The State of California has adopted, effective January 1, 2011, California Existing Building Code (CEBC) Appendix Chapter A3: Prescriptive Provisions for Seismic Strengthening of Cripple Walls and Sill Plate Anchorage of Light, Wood-Frame Residential Buildings.
- In 2013 CRMP began the pilot program for EBB in 4 ZIP codes, utilizing Chapter A3 as its standard for retrofitting.

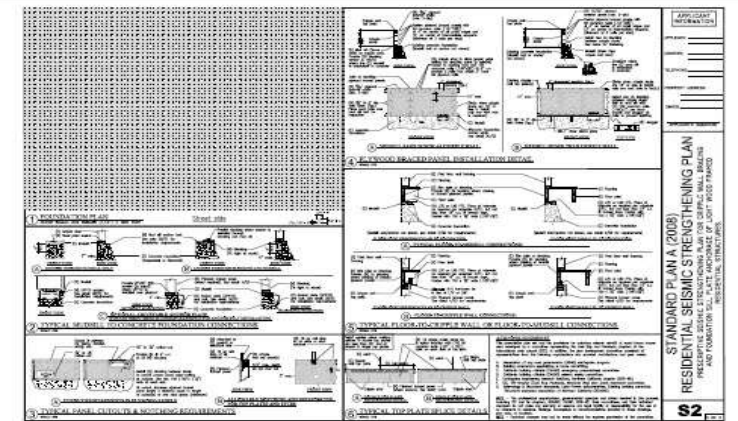
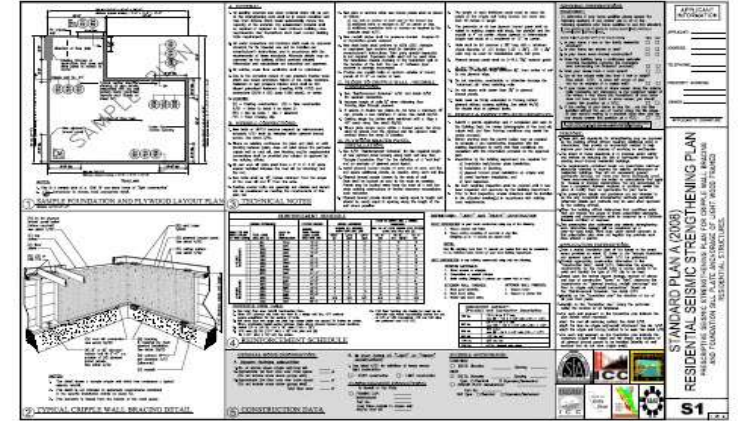


# Accepted Plan Sets for EBB

## LA STANDARD PLAN SET



## STANDARD PLAN SET A



And now...



# FEMA P-1100



## Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings

Volume 2A - Plan Set for Crawlspace Dwellings

FEMA P-1100-2A / October 2019

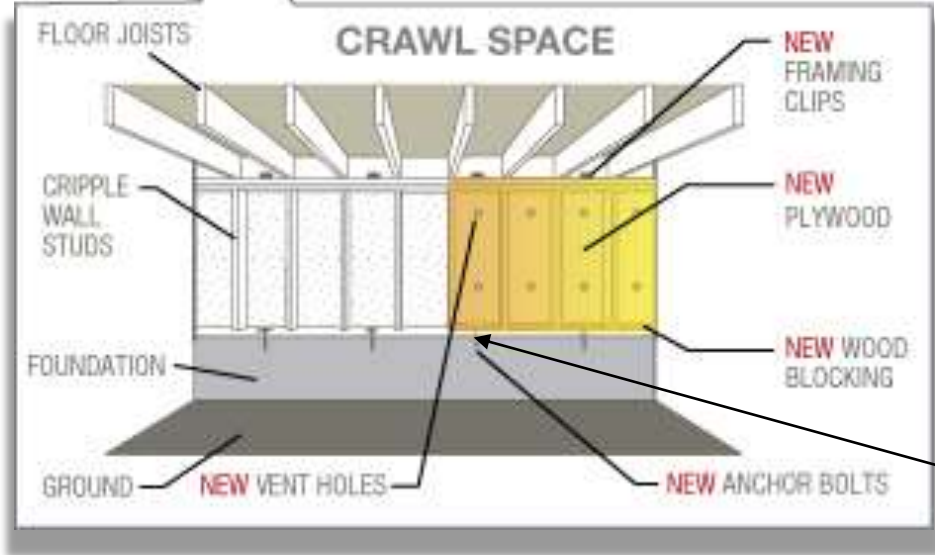


- If your building department will accept its use, homeowners with cripple walls up to 7ft. in height will be allowed to use the FEMA P-1100 plan set for their retrofit and qualify for the EBB grant.
- FEMA P-1100 is pre-engineered and does not require the use of an engineer for the retrofit of cripple walls between 4ft. and 7ft. in height.

## Typical House for an EBB Retrofit - Crawl Space



In a brace and bolt retrofit, the house is bolted to its foundation, and if there is a cripple wall, it is braced.



Approved foundation plates may also be used.

# EarthquakeBraceBolt.com

Currently addressing one, particular seismic vulnerability



Crawlspace wall before



Plywood bracing



Anchor bolt

# EarthquakeBraceBolt.com

Targets Cripple Wall Failure



2014 M6.0 Napa Earthquake



Earthquake damage



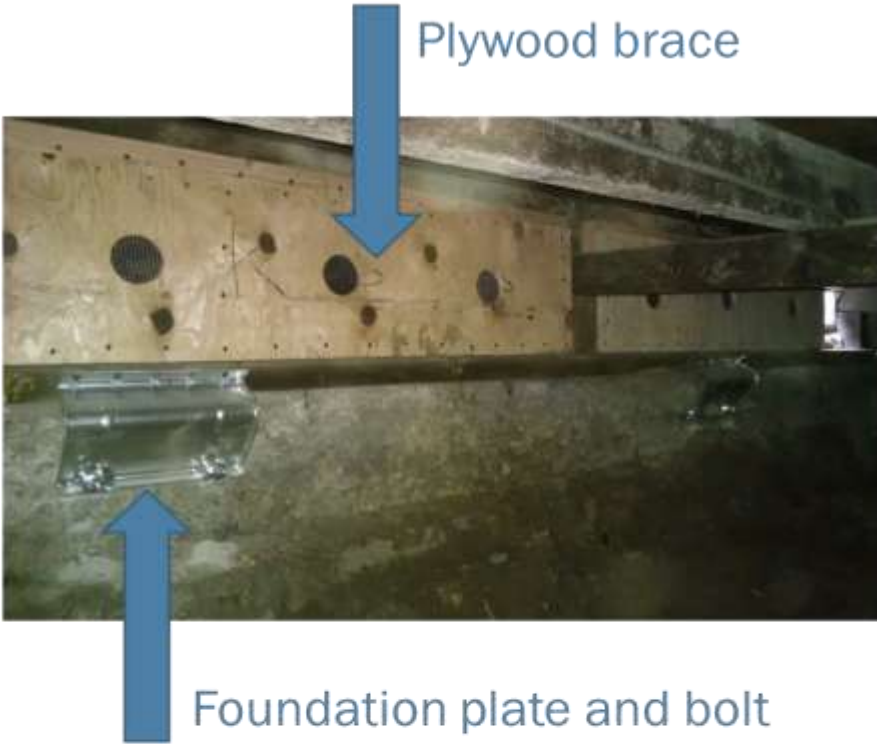
Cripple wall collapsed



Crawlspace before retrofit



Crawlspace after retrofit







# **EARTHQUAKE BRACE+BOLT**

**Funds To Strengthen Your Foundation®**

# Mitigation

## Overall Retrofit Cost

### Total Count, Average and Median Cost For EBB Programs (Statewide and by Region as of 12/19/2023)

Statewide CA			
Program Cycle	Count	Average	Median
<b>Total</b>	<b>22977</b>	<b>\$6,174</b>	<b>\$5,150</b>

Northern CA			
Program Cycle	Count	Average	Median
<b>Total</b>	<b>10112</b>	<b>\$7,719</b>	<b>\$6,163</b>

Southern CA			
Program Cycle	Count	Average	Median
<b>Total</b>	<b>12865</b>	<b>\$4,959</b>	<b>\$4,365</b>

# Earthquake Brace + Bolt provides grants of up to \$3,000 to homeowners to strengthen pre-1980 houses against earthquake damage

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## Qualifying Homeowner:

- Lives in the qualifying house

## Qualifying House:

- Located in one of 815 California ZIP Codes in 2024
- Constructed pre-1980
- Has a raised foundation; other foundation types may be eligible
- Sits on level ground or a low-slope site
- May have wood-framed walls (cripple walls) in the crawl space

The retrofit work requires a permit and must meet or exceed the requirements of the California Existing Building Code Chapter A3 retrofit code or FEMA P-1100.



# CEBC Chapter A3

## Prescriptive Provisions For Seismic Strengthening of Cripple Walls and Sill Plate Anchorage of Light, Wood-Frame Residential Buildings

- The retrofit for the entire continuous perimeter foundation must address all vulnerabilities covered by Chapter A3 of the CEBC, i.e., no partial retrofits.
- Details from Chapter A3 may be used by a contractor for the retrofit of the continuous perimeter foundation.
- LADBS Standard Plan #1, Standard Plan Set A may be used as construction documents which meet Chapter A3 requirements.
- Engineered plans are allowed as long as they meet or exceed the requirements of Chapter A3.

# FEMA P-1100



## Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings

Volume 2A - Plan Set for Crawlspace Dwellings

FEMA P-1100-2A / October 2019



- If your building department will accept its use, homeowners with cripple walls up to 7ft. in height will be allowed to use the FEMA P-1100 plan set for their retrofit and qualify for the EBB grant.
- FEMA P-1100 is pre-engineered and does not require the use of an engineer for the retrofit of cripple walls between 4ft. and 7ft. in height.



# Supplemental Grants for Income-eligible Households is Currently Available



These much-needed supplementary grants, will in most cases, be able to provide **100% of the funds** needed to help strengthen houses in disadvantaged communities, and help neighborhoods be more resilient after an earthquake.



# Supplemental Grant Eligibility

- Your house qualifies for an EBB retrofit
- You are a homeowner
- Your household income is \$87,360 or less\*
- Your home is built before 1980
- Live in program ZIP Codes
- Verified by IRS through CoreLogic Platform

**\*The annual household income amount is updated annually by the California Department of Housing and Community Development. EBB Grants awarded in previous years are subject to the annual household income eligibility amount for that fiscal year.**

# How We Try to Ensure Retrofit Quality and How You Can Help

- Permits must state the retrofit is in accordance with:
  - CEBC Chapter A3, or
  - FEMA P-1100, or
  - an accepted Standard Plan Set (i.e., Standard Plan Set A, LA City Standard Plan Set #1 or if the building department will accept it, FEMA P-1100) or
  - engineered plans
- FYI, if the retrofit is an engineered solution, we require the homeowner to provide us with a signed and stamped letter from the engineer stating the retrofit meets or exceeds the requirements of CEBC Chapter A3.

# How We Try to Ensure Retrofit Quality and How You Can Help

- The retrofit for the entire continuous perimeter foundation must address all vulnerabilities covered by Chapter A3 of the CEBC, i.e., no partial retrofits.
- Contractors must be licensed and in good standing.
- Contractors must also take training provided by CRMP and pass all quizzes to be included on the CRMP Contractor Directory.

# How We Try to Ensure Retrofit Quality and How You Can Help

- Retrofit work must be finalized by the local building department before reimbursement of the funds may occur.
- EBB has a third-party inspection company to perform random inspections.

# EBB Website

The screenshot shows the homepage of the Earthquake Brace + Bolt (EBB) website. At the top, the logo "EARTHQUAKE BRACE+BOLT" is on the left, and navigation links "What is EBB?", "How Our Program Works", and "Homeowner Resources" are in the center. A red "Register" button is on the right. Below the navigation is a teal banner with the text: "Earthquake Brace + Bolt Program registration is opening **January 10th!** Please [Sign Up](#) to receive updates from EBB." The main content area features a large image of a smiling man and a young girl on a swing set in front of a house. Overlaid on the left side of this image is the text: "Earthquake Brace + Bolt" in large white font, followed by "Helping California Homeowners Protect Their Home From Earthquake Damage" in smaller white font. Below this, there are two dark grey boxes. The left box is titled "See if Your Home Qualifies for an EBB Retrofit" and contains a form with the label "Enter ZIP Code", a white input field with "ZIP Code" inside, and a yellow "Go" button. The right box is titled "Sign Up to Receive EBB Program Updates." and contains a form with the label "Enter Email Address", a white input field with "Email Address" inside, and a yellow "Sign Up" button.

Includes detailed program information, a way to search to see if your ZIP Code is included in EBB (plus a complete list of cities and ZIP Codes) and a place to sign up for updates.

# EarthquakeBraceBolt.com

## Contractors Directory

### Example

ZIP Code: 90026

Within: 10 Miles

Full/Partial Company

Name:

Contractor's Licensed #:

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If they wish to hire a contractor, homeowners may use our Contractor Directory as a resource.

**SEARCH FOR FEMA-TRAINED CONTRACTORS**

The Contractor Directory is a list of contractors who have successfully completed the FEMA training for seismic retrofit of single family wood-frame houses. The Directory is provided as a service and is not an endorsement or approval of any contractor.

CEA Brace + Bolt program is not responsible for confirming the contractor is licensed in the State of California. To verify the contractor is licensed and in good standing, visit the Contractor State License Board website. If you have not done it already, please review the following information before deciding on a contractor. "What You Should Know Before Hiring a Contractor".

To search for a contractor, enter your Zip Code and choose between a 5 and 100 mile radius. You can also search by Company Name or Contractor License Number.

ZIP Code


Within

Full / Partial Company Name


Contractor's License #

**SEARCH RESULTS**


Sort Results

 **GENIE CONSTRUCTION (CSLB # 852551)**  
3950 Montclair St  
Los Angeles, CA 90018  
jpet16025@gmail.com  
W: geniehomemodel.com  
P: (323) 732-5225

**About Us:** Completed FEMA training for Seismic Retrofits of One- and Two-Family Wood-Frame Dwellings

 **Villa Construction (CSLB # 888175)**  
741 Hay Ave  
Los Angeles, CA 90022  
villafra1@yahoo.com  
P: (323) 236-5712

**About Us:** Completed FEMA training for Seismic Retrofits of One- and Two-Family Wood-Frame Dwellings

 **The Mop Crew Inc (CSLB # 1013556)**  
11277 Sardis Ave  
Los Angeles, CA 90064  
www.themopcrew.com

[Homeowner Reviews](#)



# Marketing Materials

**Earthquake Brace and Bolt adds Nearly 300 ZIP Codes; Largest Program Expansion**



**See if you qualify for an EBB \$3,000 seismic retrofit grant**

Earthquake Brace + Bolt (EBB) helps homeowners lessen the potential for damage during an earthquake. EBB offers up to \$3,000 toward a code-compliant seismic retrofit for houses that qualify.

**Supplemental Grants Available**

EBB is offering Supplemental Grants to help income-eligible households pay up to 100 percent of the cost to seismically retrofit their homes. Income-eligible is defined as a household with an annual income at or below \$87,360.

**Register for EBB:**

Go to [EarthquakeBraceBolt.com](http://EarthquakeBraceBolt.com) between January 10, and February 21, 2024. Create an online account and answer questions for an opportunity to participate. Once registration closes, EBB will select homeowners through an electronic random drawing. All homeowners who successfully registered will be notified by email whether they have been selected to participate or whether they have been placed on the wait list.

**Important!** To remain eligible to receive the \$3,000 grant and the EBB Supplemental Grant, you must not obtain a permit or begin retrofit construction work before being notified by EBB.



**“I thought it would be harder and take longer but the contractor I chose took care of everything and did it fast.”**

Mark Whitney  
Seismic retrofit completed,  
Los Angeles



SCAN



[EarthquakeBraceBolt.com](http://EarthquakeBraceBolt.com)



**See if your house qualifies for up to a \$3,000 seismic retrofit grant.**



For More Information



For More Information



For More Information



[EarthquakeBraceBolt.com](http://EarthquakeBraceBolt.com)

**REGISTRATION IS OPEN**

EBB was created to help homeowners lessen the damage caused by earthquakes. Your house may qualify for an EBB grant if it is:

- In an EBB ZIP Code
- Built before 1990
- Owner-occupied
- On a raised foundation



EBB is also offering a Supplemental Grant to help income-eligible households pay up to 100% of the cost to seismically retrofit their homes. An "income-eligible household" is defined as a household with income at or below \$72,080. These grants are based on available funds.

Visit [www.EarthquakeBraceBolt.com](http://www.EarthquakeBraceBolt.com) to see if your house qualifies.

Homeowners will be randomly selected and notified. To qualify for the retrofit grant, homeowners must not apply for a permit until they have been accepted into the program. Retrofit work must not start until the homeowner has been approved by EBB.

For complete program rules, visit [EarthquakeBraceBolt.com/What-is-EBB/Program-Rules](http://EarthquakeBraceBolt.com/What-is-EBB/Program-Rules).



2021-22





801 K Street, Suite 1000  
Sacramento, CA 95814

Go to [EBBTOOLS.COM](http://EBBTOOLS.COM) for these and more!

# Digital Assets for Website and Social

Link images and more for registration (available for download at [EBBTools.com](http://EBBTools.com))

## Press Release



### HOMEOWNERS CAN APPLY FOR UP TO \$3,000 IN SEISMIC RETROFIT GRANTS

Registration Opens October 18 and continues through November 29 Income-Eligible Homeowners May Qualify for Supplemental Grants Program Expands to 521 ZIP Codes

**Sacramento, Calif.**—More California homeowners will be eligible for up to \$3,000 in seismic retrofit grants through Earthquake Brace + Bolt (EBB), a program jointly administered by the California Earthquake Authority (CEA) and the California Governor's Office of Emergency Services. The grants help offset the cost of seismic retrofits that brace the cripple walls of older homes, when present, and bolt houses to their foundations, making them less vulnerable to earthquake damage.

Eligible homeowners can [apply online for grants](#) during the registration period, **October 18 through November 29, 2022**. Thanks to additional FEMA funding that is administered by Cal OES, EBB grants will be available to homeowners in 521 ZIP Codes in more than 270 cities and communities. The EBB program added ZIP Codes in new areas including, but not limited to, San Diego, Concord, Santa Cruz, Northridge and Ontario.

Income-eligible homeowners may also qualify for available supplemental grants. The amounts vary depending on the region and type of retrofit completed. These supplemental grants, which are available for households with an income at or below \$72,080, may be able to provide up to 100% of the funds needed to cover a seismic retrofit. Grants are contingent upon meeting eligibility requirements and available funds.

"EBB's growth is helping more California homeowners prepare for the next big earthquake by offsetting the cost of completing a seismic retrofit," said Janiele Maffei, chief mitigation officer of CEA and executive director of EBB. "The EBB program can help Californians protect their families, their homes and their investments, and we encourage homeowners in EBB ZIP Codes to apply for funding during the registration period this fall."

According to CEA, more than 1.2 million houses in high-hazard areas are particularly vulnerable to earthquakes because of the way they were constructed. These homes are typically built before 1980, are wood framed with a raised foundation and may have a cripple wall in the crawl space under the house. Since 2014 when the first EBB retrofit was completed, EBB grants have helped more than 17,000 homeowners retrofit their houses.

"Older homes are particularly vulnerable to earthquake damage, so it's important that homeowners in high-seismic-hazard areas take proactive steps to reduce the risk of their

## Sample Social Media Posts

### Social Media posts to use now through January 9, 2024.

- Don't let your life get shaken up by an earthquake. Strengthen your home with the help of up to a \$3,000 EBB seismic retrofit grant. Additional funds are also available for income-eligible homeowners through our Supplemental Grants. Registration opens January 10, 2024. See if your house qualifies at [EarthquakeBraceBolt.com](http://EarthquakeBraceBolt.com).
- YOU could get \$3,000 for an EBB seismic retrofit to strengthen your home and protect your family! Additional funds are also available for income-eligible through our Supplemental Grants. Registration opens January 10. See if your house qualifies at [EarthquakeBraceBolt.com](http://EarthquakeBraceBolt.com).

### Social Media posts for use between January 10, 2024 – February 21, 2024.

- Shake, Rattle, ENROLL! Homeowners can apply NOW for up to a \$3,000 EBB seismic retrofit grants. Additional funds are available for income-eligible homeowners through our Supplemental Grants Register at [EarthquakeBraceBolt.com](http://EarthquakeBraceBolt.com).
- Do you own your home? Was it built before 1980? Does it have a raised foundation? If it's located in one of 815 eligible ZIP Codes, you could get up to \$3,000 for a seismic retrofit to strengthen your home and protect your family. Additional funds are available for income-eligible homeowners through our Supplemental Grants. Find out if you're eligible and apply today! [EarthquakeBraceBolt.com](http://EarthquakeBraceBolt.com).

## Sample Digital Assets





**Registration is Open From:**  
**January 10, 2024 through February 21, 2024**

Register at [EarthquakeBraceBolt.com](https://EarthquakeBraceBolt.com)





For more on our program visit: [EarthquakeBraceBolt.com](https://EarthquakeBraceBolt.com) and [EBBTools.com](https://EBBTools.com)

