

The New Soft-Story Program offers Homeowners even more support.

# ESS Contractor Retrofit Guide

Minimizing earthquake damage one house at a time



**EARTHQUAKE  
SOFT-STORY**  
Funds To Strengthen Your Home <sup>SM</sup>

[www.EarthquakeSoftStory.com](http://www.EarthquakeSoftStory.com)

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## Established by the California Residential Mitigation Program (CRMP)

CRMP is a joint powers authority created by the California Earthquake Authority and the Governor’s Office of Emergency Services. CRMP was established to carry out mitigation programs to assist California homeowners who wish to seismically retrofit their houses. Our goal is to provide grants and other types of assistance and incentives for these mitigation efforts and ESS is one of those programs.



[www.EarthquakeSoftStory.com](http://www.EarthquakeSoftStory.com)

## Re: Benefits of the ESS Contractor Directory

Dear Contractor,

If you are a contractor listed on the ESS Directory, you are eligible to do ESS seismic retrofit work. ESS provides reimbursement grants to qualifying homeowners of up to 75% of the cost of a code-compliant ESS seismic retrofit, up to \$10,000 for a Type 1 or Type 2 qualifying house, or up to \$13,000 for a Type 3 or Type 4 qualifying house. Houses must be built prior to the year 2000. Please see Program Rules for description of house types.

The benefits of a listing on the Contractor Directory include:



- Only contractors listed on the Directory are eligible to complete an ESS retrofit.
- Your listing is searchable by homeowners looking for contractors near them.
- Free marketing materials are available to you and can be ordered at [ESSTools.com](http://ESSTools.com).
- You have access to free program support.
- Your listing on the Directory is free and can include customer testimonials.



*See the Step-by-Step Planner in this guide to help keep your homeowners on track.*

To ensure your retrofit work is approved and prompt payment is received, please familiarize yourself with the materials in this packet, which includes:



- Program Rules Highlights for ESS (complete Program Rules can be found at [www.EarthquakeSoftStory.com](http://www.EarthquakeSoftStory.com));
- Six ESS Construction Mistakes to Avoid;
- Checklist of required photos; and
- Sample Invoice that shows how information must be submitted to receive payment.

Licensed contractors educated in seismic retrofits through the FEMA training will be the backbone of ESS's success. In our similarly structured EBB program, we've provided funding to help retrofit more than 19,000 houses and we have plans to provide grants to thousands more homeowners. Our desire is to do the same with ESS. Your work is helping to create more resilient communities, one job and one house at a time.



For more information about the ESS program, visit our website: [EarthquakeSoftStory.com](http://EarthquakeSoftStory.com). If you have any questions, please contact Customer Service at [info@EarthquakeSoftStory.com](mailto:info@EarthquakeSoftStory.com) or at **(877) 232-4300**.

Thanks for being part of the Earthquake Soft-Story Team!

Sincerely,

Earthquake Soft-Story Team

# Program Rules Highlights

## For CRMP-funded and FEMA-funded ESS Programs

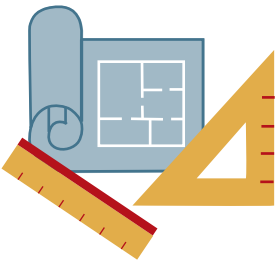
### Contractor and Design Professional Version

*The Earthquake Soft-Story Program (“ESS Program”, “ESS” or “Program”) was developed to help homeowners lessen the potential for damage to their houses during an earthquake. An earthquake or other natural disaster can occur at any time. Grants to assist qualified homeowners in securing structural home improvements are provided in an effort to reduce (but not eliminate) damage or collapse in the event of an earthquake.*

*Homeowners, Contractors and Design Professionals participating in the Earthquake Soft-Story programs are required to agree to and adhere to the full Program Rules and Terms of Use posted on the **EarthquakeSoftStory.com** website.*

#### **These Program Rules include, but are not limited to:**

- Contractor must be a California Licensed General Building Contractor (License Type A or B) and must be listed on the ESS Contractor Directory.
- The house must meet the structural requirements of a FEMA P-1100 retrofit which covers the living space over garage (LSOG) and crawl space seismic vulnerabilities.



- A contractor may use FEMA P-1100 when the house sits directly on the stem wall (i.e. no cripple walls) or has cripple walls 7-feet or less in height.
- The house must not have a completed FEMA P-1100 qualifying soft story, or LSOG retrofit before being accepted into ESS. A house with a qualifying EBB retrofit may be accepted into ESS if the garage area was not retrofitted.

- **The building permit must be received and dated after acceptance into ESS.**
- **The building permit must state the retrofit is in accordance with FEMA P-1100.**

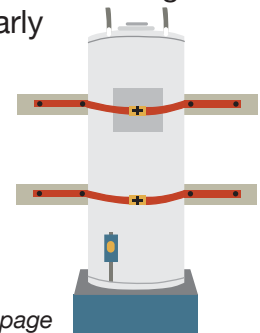


- If the retrofit is an engineered solution, a signed, stamped letter from the engineer must be provided, and state the retrofit meets or exceeds the requirements of FEMA P-1100.

- No partial retrofits allowed. All existing vulnerabilities covered by FEMA P-1100 Vol. 2A and/or 2B, must be addressed.
- Qualifying House must be built before the year 2000 and sit on level ground or a low slope.
- Qualifying House may be constructed in part on concrete slab(s) on grade.
- In addition to the brace and bolt retrofit, the work must include bracing the water heater.\*
- The homeowner must meet all program deadlines and submit the required documentation.
- If a retrofit bid is more than \$10,000 (all permits and fees included), the homeowner must get two bids from contractors on the ESS Directory.
- When submitting documentation for a FEMA-funded program, the following is required:
  - Plans/Drawings using FEMA P-1100;
  - Five (5) photos of the exterior of the house must be submitted with a date stamp before the retrofit begins;



- An additional five (5) date-stamped photos of the exterior of the house must be taken **after** the retrofit work is completed;
- Two (2) photos taken inside of the garage—one taken from the garage door facing the back of the garage showing the entire back wall; one taken from the back of the garage facing the front showing both the right corner of the garage and the left corner of the garage door;
- One (1) photo of the crawl space, if one exists;
- After the retrofit is completed, two (2) photos showing the completed retrofit work taken in the garage space from the same locations as the “before” photos and showing the completed retrofit work. Photos must clearly depict the completed retrofit work;
- If your house requires a crawl space retrofit also, a photo of the completed work is required;
- two (2) photos of the strapped water heater.



\*Information about strapping and bracing your water heater can be found at [EarthquakeCountry.org/step1/waterheater](http://EarthquakeCountry.org/step1/waterheater)

*Continued on next page*



Scan the QR code using your smartphone to access important reference information.

Up to 10  
WEEKS

- In the FEMA-funded program, pre-retrofit documents and photos will be forwarded to FEMA for review. After receiving approval from FEMA (generally, up to ten (10) weeks after submission), ESS will inform the homeowner that their retrofit may begin and that they will have six (6) months from that day to complete the retrofit. **Retrofit construction work must not be started before receiving approval from FEMA and ESS.** Commencement of retrofit work before receiving approval from ESS and FEMA will make the retrofit wholly ineligible for an ESS incentive payment.
- The house must successfully pass a final inspection by a local building inspector, confirming the retrofit was done in accordance with FEMA P-1100.
- Homeowners must use the house as their primary residence and be the owner of record of the house that will be retrofitted.

#### **DISCLAIMER:**

Neither CRMP nor ESS is liable or in any way responsible for the use of this information, nor do they endorse, warrant, guarantee, attest to or insure, any of the following:

- acts, errors or omissions of homeowners, public officials, contractors or design professionals;
- the content of any communications between homeowners, public officials, contractors and design professionals;
- the ability or experience of contractors or design professionals to provide services;
- the results of work performed, or not performed, by homeowners, public officials, contractors or design professionals;
- that a homeowner, public official, contractor or design professional will complete services, conduct any transaction, or perform with any specific standard of care; and
- any public official's involvement approving plans, close out of permits, completing inspections or other actions.

All parties are advised to educate oneself on the background, experience and reputation of contractors or design professionals before starting any project.

Read the full **FEMA-funded ESS Program Rules** at  
[EarthquakeSoftStory.com](http://EarthquakeSoftStory.com).

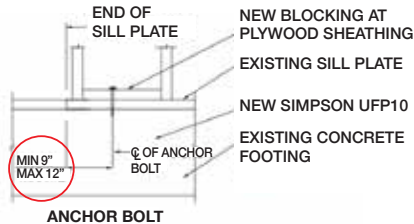


Scan the QR codes above using your smartphone to access important reference information.

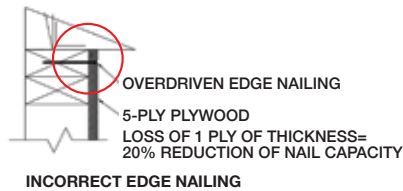
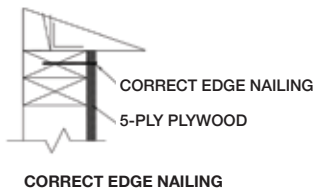
# Six ESS Construction Mistakes to Avoid

(First and foremost: Do not start construction before approval by ESS)

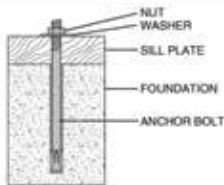
## #1 Incorrect Anchor Bolt End Distance in Mud sill



## #2 Nails Overdriven or Misplaced

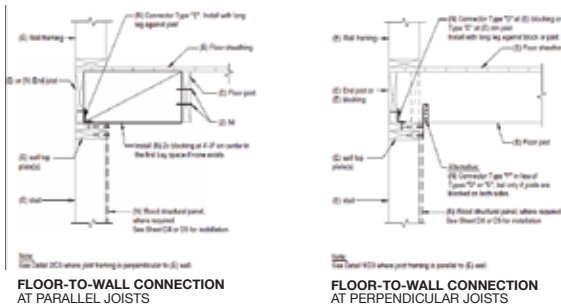


## #3 Bolts and Nuts Improperly Installed



- Install bolts with proper diameter, embedment, edge distance, and with approved washer. Confirm acceptability with building department.
- Bolts should be flush with the top of the nut.

## #4 Use of Non-Approved Angles, Hold-downs, Clips and Foundation Plates



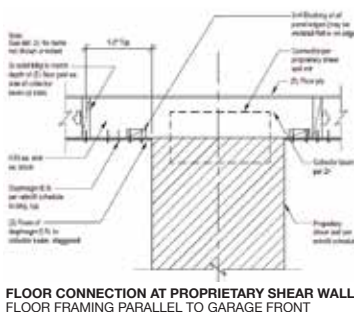
- FEMA P-1100 requires installation of pre-approved hardware with minimum capacity values.
- Do not substitute non-approved hardware.

## #5 Installation of Anchor Bolts into Brick or Unreinforced Masonry Foundations



- FEMA P-1100 requires that the house have a continuous concrete perimeter footing and concrete slab on grade in the garage area.
- Brick and unreinforced masonry foundations are not allowed.

## #6 Only Use Manufacturer Specified Anchors in Proprietary Hardware and Elements



- Proprietary hardware must be installed per the manufacturer's requirements.
- Check the manufacturer's requirements for approved concrete/masonry/steel anchors.

# Required Photos Before and After Retrofit



## All exterior house photos must:

- be date stamped
- be digital and clearly show front, back and sides
- show corners connecting side and back or side and front
- show from roof to ground and adjust, if possible, around bushes, trees etc. to show as much of house as possible

## BEFORE AND AFTER CHECKLIST

Image	Description	Before ✓	After ✓
View 1	Front of house	<input type="checkbox"/>	<input type="checkbox"/>
View 2	Front of house and left side	<input type="checkbox"/>	<input type="checkbox"/>
View 3	Back of house and right side	<input type="checkbox"/>	<input type="checkbox"/>
View 4	Back of house and left side	<input type="checkbox"/>	<input type="checkbox"/>
View 5	Front of house and right side	<input type="checkbox"/>	<input type="checkbox"/>
<b>Pre-Retrofit</b> Garage LSOG 1	Photo taken inside garage, facing front showing both corners	<input type="checkbox"/>	<input type="checkbox"/>
<b>Pre-Retrofit</b> Garage LSOG 2	Photo taken inside garage, facing back wall, showing both corners	<input type="checkbox"/>	
<b>*Pre-Retrofit</b> Crawl Space (if applicable)	Photo of crawl space, foundation and cripple walls, if present	<input type="checkbox"/>	
<b>Post-Retrofit</b> Garage LSOG 1	Photo taken from the same location as “Pre-Retrofit” photo 1		<input type="checkbox"/>
<b>Post-Retrofit</b> Garage LSOG 2	Photo taken from the same location as “Pre-Retrofit” photo 2		<input type="checkbox"/>
<b>Post-Retrofit</b> Crawl Space (if applicable)	Photo taken from the same location as “Pre-Retrofit” photo 3		<input type="checkbox"/>
Water Heater 1*	Front of strapped water heater		<input type="checkbox"/>
Water Heater 2*	One side of strapped water heater		<input type="checkbox"/>

\*Sample photos of water heater not provided. See EBB website



**Check to make sure you’ve taken each photo.**

### APP Resources for Photos\*

#### IPHONE

- PhotoMarks
- DateStamper
- Timestamp Camera

#### ANDROID

- Vignette—Photo Effects
- Auto Stamper

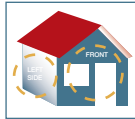
\*ESS does not recommend, endorse or approve of any of these Apps. ESS provides this list as a convenience only. There are other Apps available.



# Examples of Required Photos



**VIEW #1**  
Front of house



**VIEW #2**  
Front of house  
and left side



**VIEW #3**  
Back of house  
and right side



**VIEW #4**  
Back of house  
and left side



**VIEW #5**  
Front of house  
and right side



**ACCESS CRAWL SPACE**  
(show scale with something  
such as a ruler)



**GARAGE\*\***  
**PRE-RETROFIT #1**



**GARAGE\*\***  
**PRE-RETROFIT #2**



**CRAWL SPACE**  
**\*If applicable**

\*Note: **House View** examples are to demonstrate the angles at which the photos should be taken. All ESS houses must have a living space above the garage.

\*\*Note: **Garage Pre-Retrofit** photos show garage walls with gypsum wallboard. For an ESS retrofit the gypsum wallboard must be removed to allow for the installation of plywood shear walls.

Note: **Garage Post-Retrofit** photos should be taken from the same place as the Pre-Retrofit photos, and must show ESS retrofit work, e.g. steel wide-flanged column, proprietary shear wall, etc. If gypsum wall board is to go back up, photos should be taken before that is done, to show the plywood shear walls.



## We're Here to Answer Any Questions

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### Homeowner Resources

[www.CaliforniaResidentialMitigationProgram.com/Resources](http://www.CaliforniaResidentialMitigationProgram.com/Resources)

### Email

[info@EarthquakeSoftStory.com](mailto:info@EarthquakeSoftStory.com)



### Customer Service

(877) 232-4300



### Connect with us!



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**Contractors  
needed for  
seismic retrofit  
work!**