

August 12, 2025

Submitted to:

John Doe
5431 Nowhere St. .
Oakland, CA

Dear Mr. Doe,

We [created a video](#) that explains how this proposal is best understood. We think it is best to start there.

We have also included this written proposal with graphics, a plan that shows you where the retrofit components may be installed, a cost estimate, along with a link or [urls](#) to specific web pages and videos you can enter into any browser to learn more about the topics. We want you to know exactly what we plan on doing and what you can expect to receive for your money.

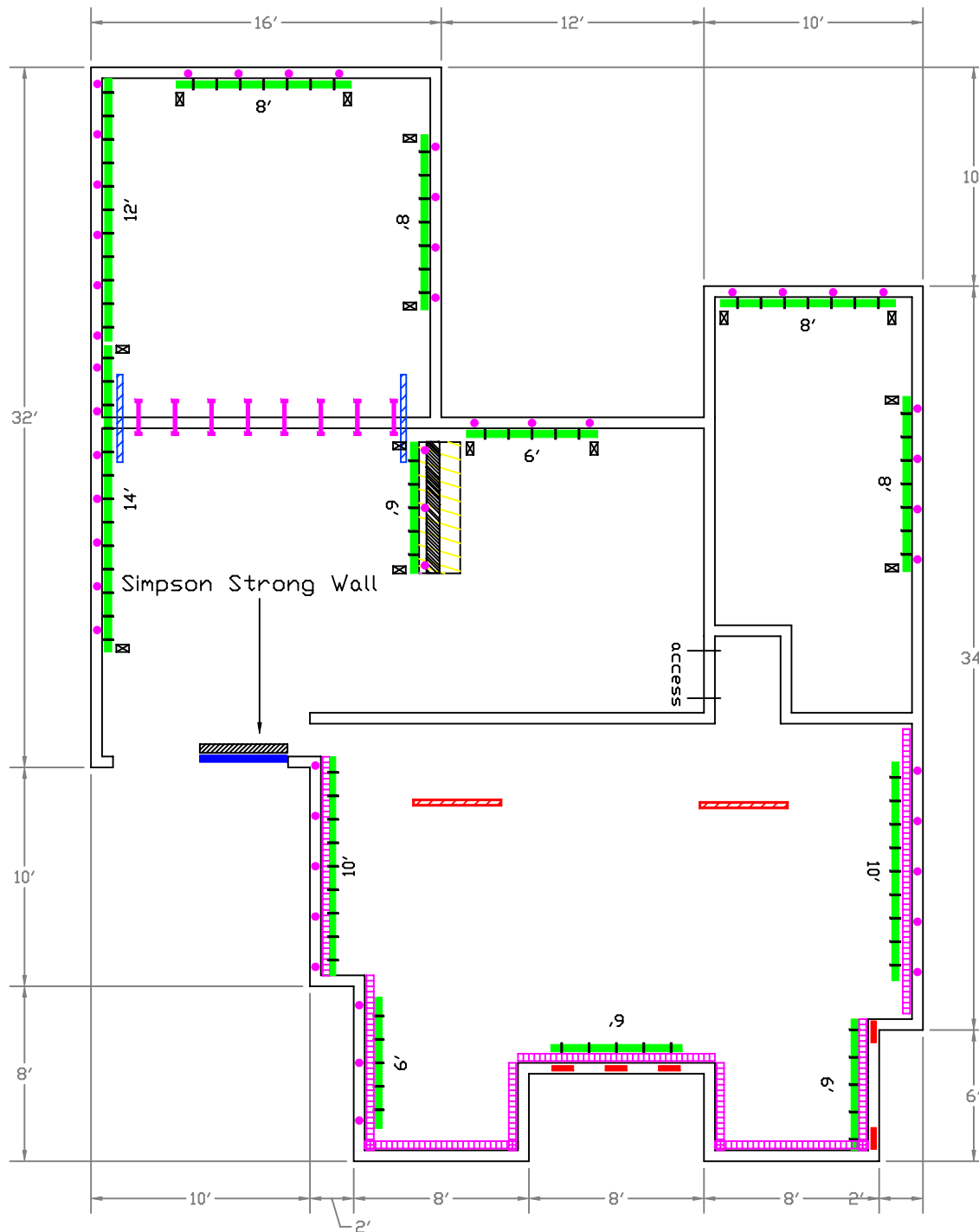
As discussed during my inspection this proposal **IS NOT INTENDED FOR EBB**. If you would like to use EBB you will need to work with an engineer as you have cripple walls over 4 feet in height. The plan attached is for a Voluntary Retrofit not for EBB.

If you wish to proceed with the work, first please fill out the Terms and Signature page, then, write in the dollar amount of the contract, and finally, sign and date it. You can then mail, fax, or scan and email it to us.

Sincerely,

Jason McDonald

Jason McDonald
Field Supervisor
O: 510-548-1111



Design and actual placement of bolts, plywood panels and other hardware may vary depending on existing site conditions.

Legend	
●	bolt
—	foundation anchor
—	new plywood shear panel
- - -	continuity tie
 	hold down
 	shear transfer tie
 	shear transfer diaphragm
 	new foundation
 	existing plywood shear panel
—	tension tie
—	floor connector

Sample Drawing
1234 Mock St
Anywhere, CA 44444
123-456-7890

 Bay Area Retrofit
Howard Cook, Contractor
(510) 548-1111



General principles

[This video and webpage](http://www.bayarearetrofit.com/earthquake-retrofitting); www.bayarearetrofit.com/earthquake-retrofitting discusses everything you will need to know about cripple wall retrofits on a general scale depending on how much information you want. The type of hardware and retrofit techniques we use vary considerably from house to house and what you see in this proposal may not be exactly what we do. We train our technicians' carefully in seismic engineering principles so they know what to do no matter what they find.

Foundation Bolts

[This video and webpage](http://www.bayarearetrofit.com/foundation-bolting); www.bayarearetrofit.com/foundation-bolting discusses foundation bolts.

We must bolt the mudsill (piece of wood sitting directly on top of the foundation) to the foundation. The bolts we use have been tested and approved for retrofit applications in International Code Council Evaluation Report 2302.

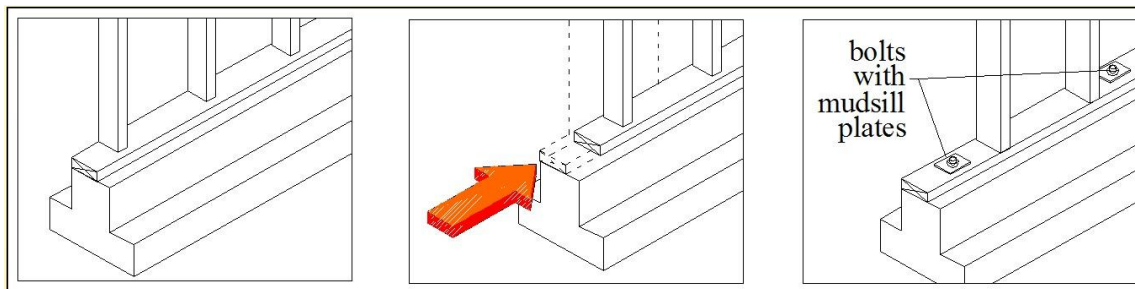


Diagram: Bolts prevent the bottom of the cripple wall from sliding off the mudsill.

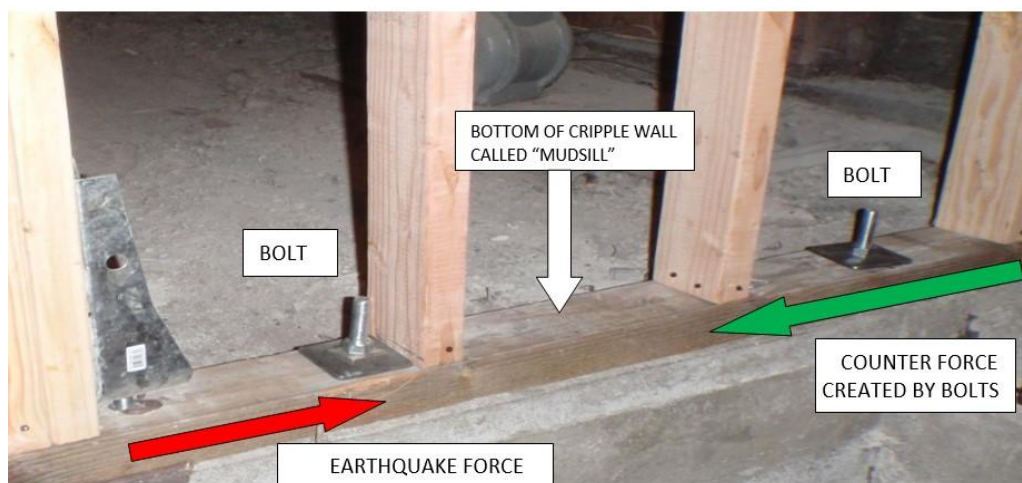


Photo: Cripple wall resists movement because of bolt counterforce.

Mudsill Plates

[The video and webpage](#); www.bayarearetrofit.com/mudsill-plates discusses mudsill plates.

To my knowledge, we are the only company in the country who uses this highly specialized type of hardware. Tests have shown Mudsill Plates can increase the strength of a bolt by 59%. Your retrofit includes installation of mudsill plates on all new bolts.



Photo: Teeth on mudsill plate prevent mudsill from splitting.

Plate Washers

[This video and webpage](#); www.bayarearetrofit.com/plate-washers discusses plate washers.

Plate washers prevent cross-grain bending damage. Your retrofit includes plate washers on all new bolts.

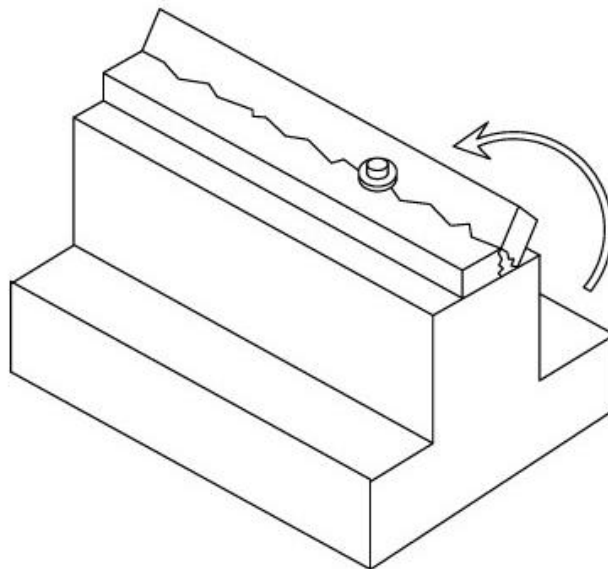


Figure: Cross-grain bending (splitting). Wood has practically no ability to resist cross grain bending.



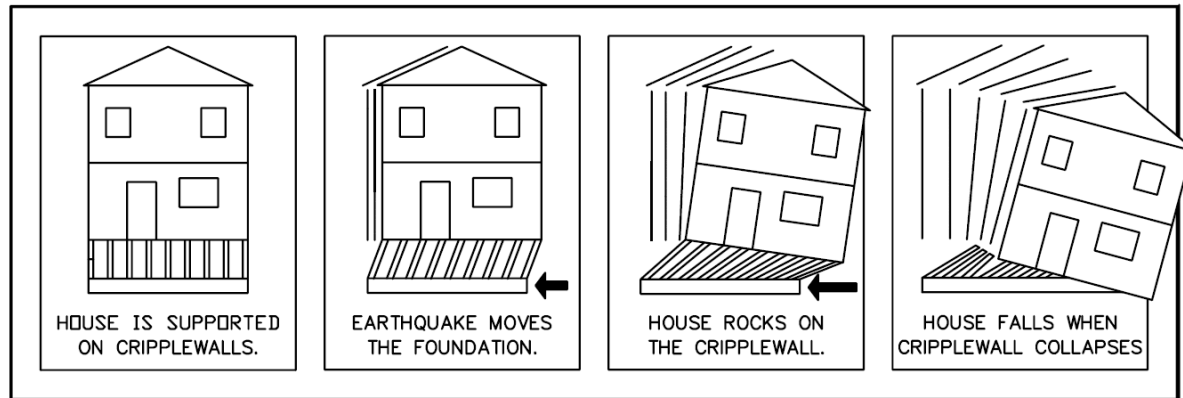
Photo: Cross-grain bending damage to mudsill in a testing laboratory.



Photo: A square washer absorbs movement (converting it into an upward pull on the plate) and acts to prevent splitting of the mudsill.

Install Plywood on Cripple Walls

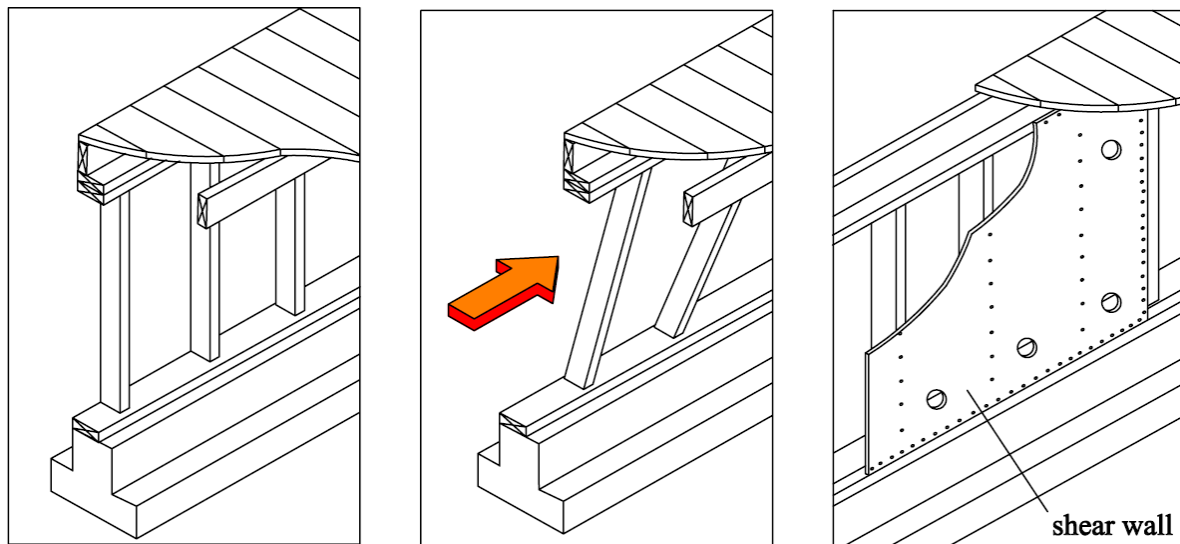
The diagrams below show what happens when a cripple wall collapses:



UNBRACED CRIPPLEWALL FAILURE

Diagram: Cripple wall collapse.

The diagram below illustrates how plywood prevents this from happening. The plywood we use has been tested by American Plywood Association Laboratories and is the best grade available for high performance shear walls.



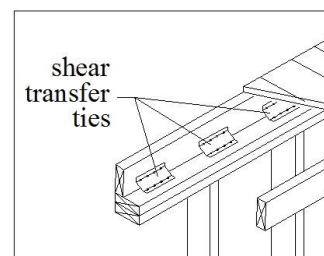
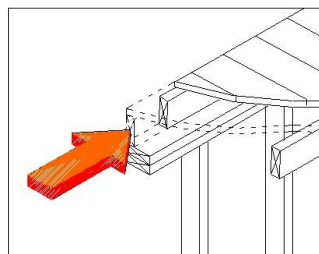
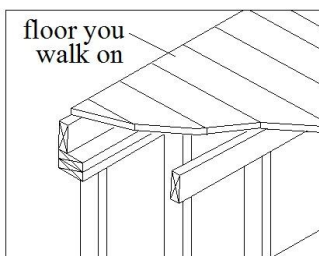
Movement prevented by plywood shear panels.



Everything you could possibly want to know about plywood is on [this webpage](http://www.bayarearetrofit.com/plywood-shear-walls); www.bayarearetrofit.com/plywood-shear-walls

Shear Transfer Ties

In order to complete the cripple-wall-to-shear-wall conversion process, we will connect the bolted and plywood braced cripple walls to the floor with steel known as shear transfer ties. We only install laboratory tested shear transfer ties.



Movement prevented by shear transfer ties.

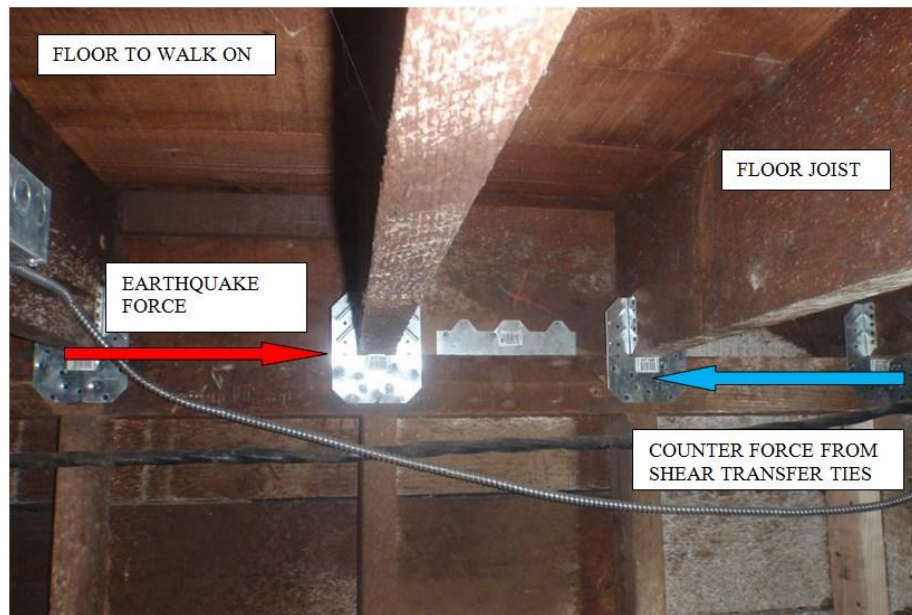


Photo: Two of the many shear transfer ties we use.

Hold Downs

[This video and webpage](http://www.bayarearetrofit.com/shear-wall-overtuning); www.bayarearetrofit.com/shear-wall-overtuning discusses hold downs.

Sometimes shear walls need hold downs to resist overturning (tipping over). We will install hold-downs on all shear walls that need to resist overturning.

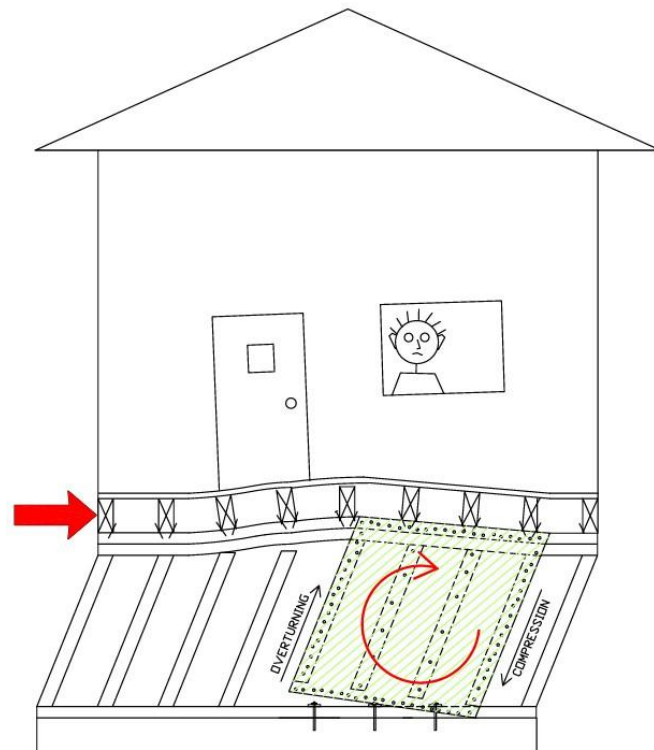


Diagram: Earthquake force is overturning the shear wall tearing the plywood at base.

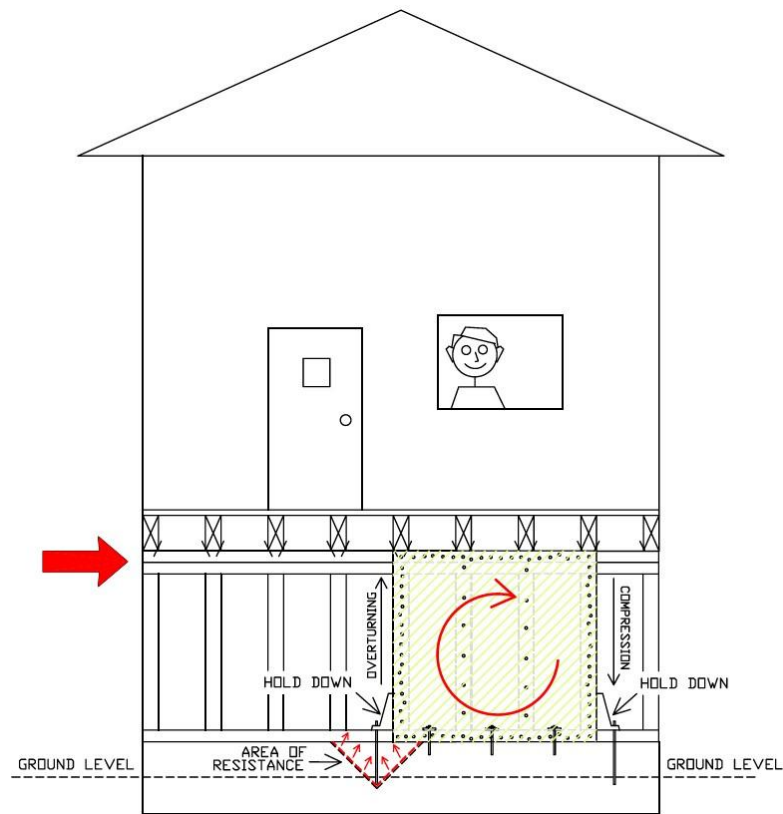


Diagram: Hold-downs resist overturning on each side of the wall.

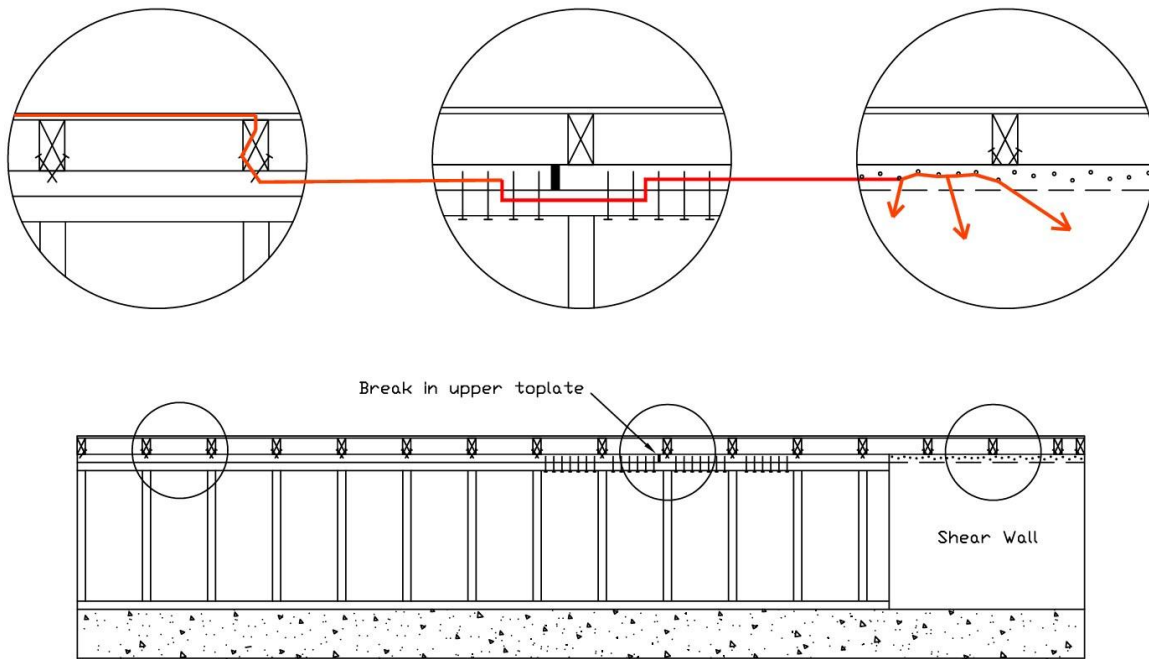


Photo: Overturning force pulling on hold down which is firmly attached to the foundation.

Top Plates and Cripple Wall Retrofits

This [video and webpage](http://www.bayarearetrofit.com/top-plates-cripple-wall-retrofits); www.bayarearetrofit.com/top-plates-cripple-wall-retrofits discusses top plates.

The horizontal two by fours at the top of the cripple walls (known as top plates) are not connected. They tend to separate where not connected together. We will connect the top plates with either nails or steel to create a continuity tie.



Lag Bolts Shear Transfer Ties

This [video and webpage](http://www.bayarearetrofit.com/cripple-wall-floor-connectors); www.bayarearetrofit.com/cripple-wall-floor-connectors discusses lag bolt shear transfer ties.

Attach the shear walls to the floor with non-invasive lag bolt shear transfer ties.

Terms and Signature Page

* If you would like to proceed, please fill out this Terms and Signature Page and input the dollar amount of the contract and return it to office@bayarearetrofit.com , or via fax 510.704.4408, or USPS to 427 San Pablo Ave., Albany, CA 94706

This proposal is not intended to follow or meet requirements for any state or City programs.

Initial

* To complete the permit process, I may need to meet the inspector for the final inspection so he/she can look at the required smoke detectors. I understand I will need to be home available for an hour before and after slated inspection time (if known), or possibly for entire work day (8a-5p) if unknown. **Initial**

*I understand Smoke Detectors and Carbon Monoxide Detectors MUST be in place prior to the final inspection. Bay Area Retrofit does not install Smoke or CO Detectors **Initial**

If I get a permit, I will need to have these detectors to meet City building department requirements. **Initial**

* If necessary to access work areas, I will give contractor access to inside of house to install these detectors during work hours

Initial

* If unexpected problems arise such as dry rot, termite damage, etc are exposed during the course of the work I understand such repair work will need to be done before we can complete our job. This work can be done by us or others under a separate contract. Our rate is \$90 an hour. **Initial**

* Contractor warrants that the services will at a minimum be performed in a timely, competent and professional manner by qualified personnel possessing all relevant certifications. Project will be done with permits if requested and urges you to procure a permit. Contractor will at all times keep his license in effect, and will maintain both workers' compensation and liability insurance. The work shall be done using generally accepted industry standards and give preference to materials that have been tested by independent testing laboratories. Design shall conform or exceed standards generally accepted in the industry.

* Contractor not responsible for incidental damage that may occur which is caused by existing conditions such as previous poor workmanship or deterioration of other components of the house such as cracking of plaster, popping out of drywall nails on walls adjacent to work areas, pipes that are severely rusted and break while being moved out of the way, etc. It is extremely uncommon for this sort of thing to happen but we want it clear that we cannot be responsible for the structural integrity of the rest of the house. When alarm wires are strewn on the ground under the house, or even attached to floor joists/beams, contractor and his employees shall be careful when working around them but shall not be held responsible if wires are pulled from their triggers or otherwise damaged in the normal course of this work.

* I will remove personal property from work areas.

Initial

* I understand the type of hardware, quantities, linear footage of plywood etc may vary slightly depending on existing site conditions

Initial

* Contractor hereby disclaims any express or implied warranties that the seismically strengthened building will be able to withstand an earthquake without damage to its structure or contents. **Initial**

* If "Tear out of existing wall/ceiling material" is listed on estimate, I understand that this proposal EXCLUDES installation of sheetrock over new plywood unless otherwise specified on estimate **Initial**

*Please remove any shelving or personal property from the walls where we will be working before, we arrive. If we must remove shelving or personal property you will be responsible for putting it back. We try to be careful when removing shelving or personal property but cannot guarantee it will not be broken or even destroyed upon removal. By initialing here, I am releasing Bay Area Retrofit from any liability concerning removal of shelving or personal property or what is done with it after it is removed. **Initial**

Payment:

Full payment is due upon completion of work, regardless of rebate funds status or receipt of photos (this can take a few weeks). Payable by: cash, check, or credit card plus 3% service charge. Unless arrangements are made, invoices not paid within 7 days of receipt of invoice are deemed past due and will accrue fees at rate of 2% per month.

Acceptance:

I have read and understand the information above, initialed where listed, and hereby accept this proposal for the amount of \$_____. The specifications, prices, and conditions outlined in this proposal are satisfactory. I authorize Bay Area Retrofit to complete this contract.

I desire a permit and will pay a \$350.00 handling fee plus any City permit costs/fees.

Initial

I do not need/already have, a permit

Initial

This proposal is not intended to follow or meet requirements for any State or City retrofit program, unless otherwise specifically noted.

Initial

Signature_____Date_____

Print Name_____E-mail_____

JOB SITE_____

Address_____

Phone_____

Professional Highlights

[Vice Chair](#) of a seismic retrofit building code committee.

Co-author of [Standard Plan A](#) used by the California Earthquake Authority as well as building departments all over the Bay Area.

Course Instructor: "[Principles and Practice of Earthquake Retrofitting](#)" 2014 presented by the Association of Bay Area Governments.

Author of article "[Seismic Retrofit for Cripple Walls](#)", The Journal of Light Construction. April 2006.

Featured expert "[The Hayward Fault. Predictable Peril.](#)" KQED, Channel 9.

Contributing Contractor "[California Works to Prepare for the Big One](#)", PBS News Hour. This is a compilation of both the "The Hayward Fault. Predictable Peril" and the NewsHour documentaries.

Featured Expert in the "[S.F. Homeowners Need To Be Ready](#)" in the S.F. Chronicle

Source for this article in the [New York Times](#)

Guest Lecturer "[Retrofit Principles and Practice for the Home Inspection Industry](#)" Sponsored by the Golden Gate Chapter of the American Society of Home Inspectors.

Keynote speaker "[The Preservation of Historical Wood-Framed Buildings](#)" Sponsored by The City of Victoria Heritage Foundation in British Columbia.

Mayoral Appointee to the Berkeley Disaster Commission as a [seismic retrofit expert](#).

Guest Lecturer: "[Retrofit Principles and Practice for the Canadian Home Inspection Industry](#)," sponsored by the Canadian Association of Home and Property Inspectors.

Primary source for an article in the [The Mercury News](#) on Soft Story Retrofitting.

Featured contractor in "[The Danger Beneath](#)" in the East Bay Express

Residential Damage Inspector, FEMA. 1989-1994.

Professional Affiliations

Member Associations

- [Earthquake Engineering Research Institute](#)
- [Structural Engineers Association of Northern California](#)

Publications

- Author, “[Seismic Retrofit for Cripple Walls](#).” *The Journal of Light Construction*. April, 2006 (you will receive a virus warning; there are no viruses).
- Contributor, [Wood-Framed Shear Wall Construction: An Illustrated Guide](#). Authored by Thor Matteson, structural engineer. The International Code Council, 2010.
- Co-Author, “[Retrofit Mudsill Anchorage Systems](#).” Co-author with Allen Wendy, Engineer for Simpson Strong Tie, 2007.
- Co-Author, “[Standard Plan A, Residential Seismic Strengthening Plan](#).” Part of a team that created the Bay Area’s retrofit guidelines. The International Code Council, 2005.