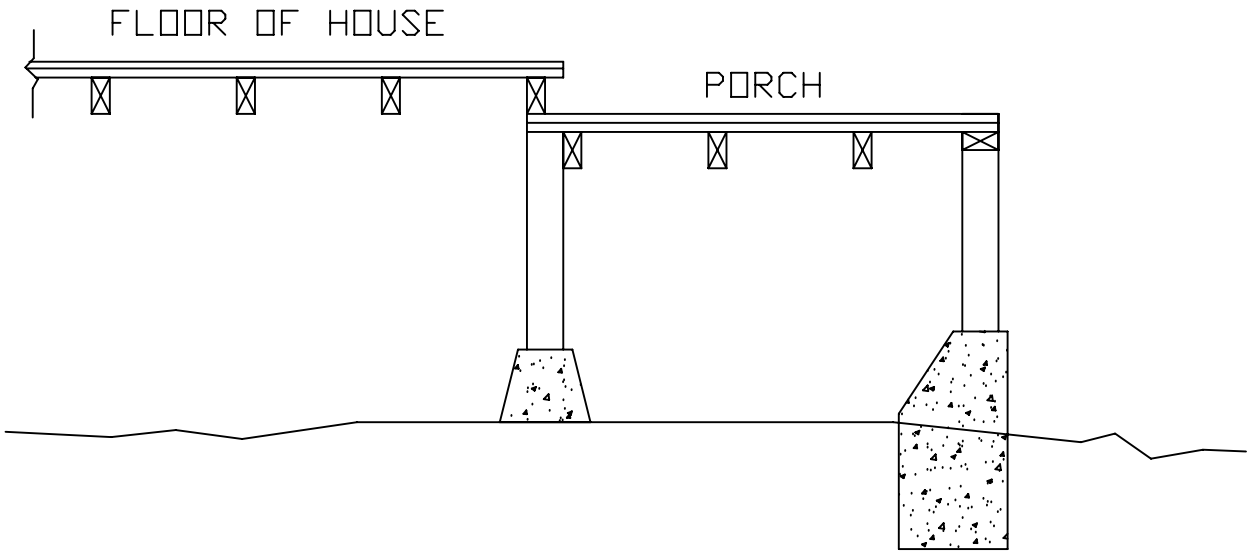
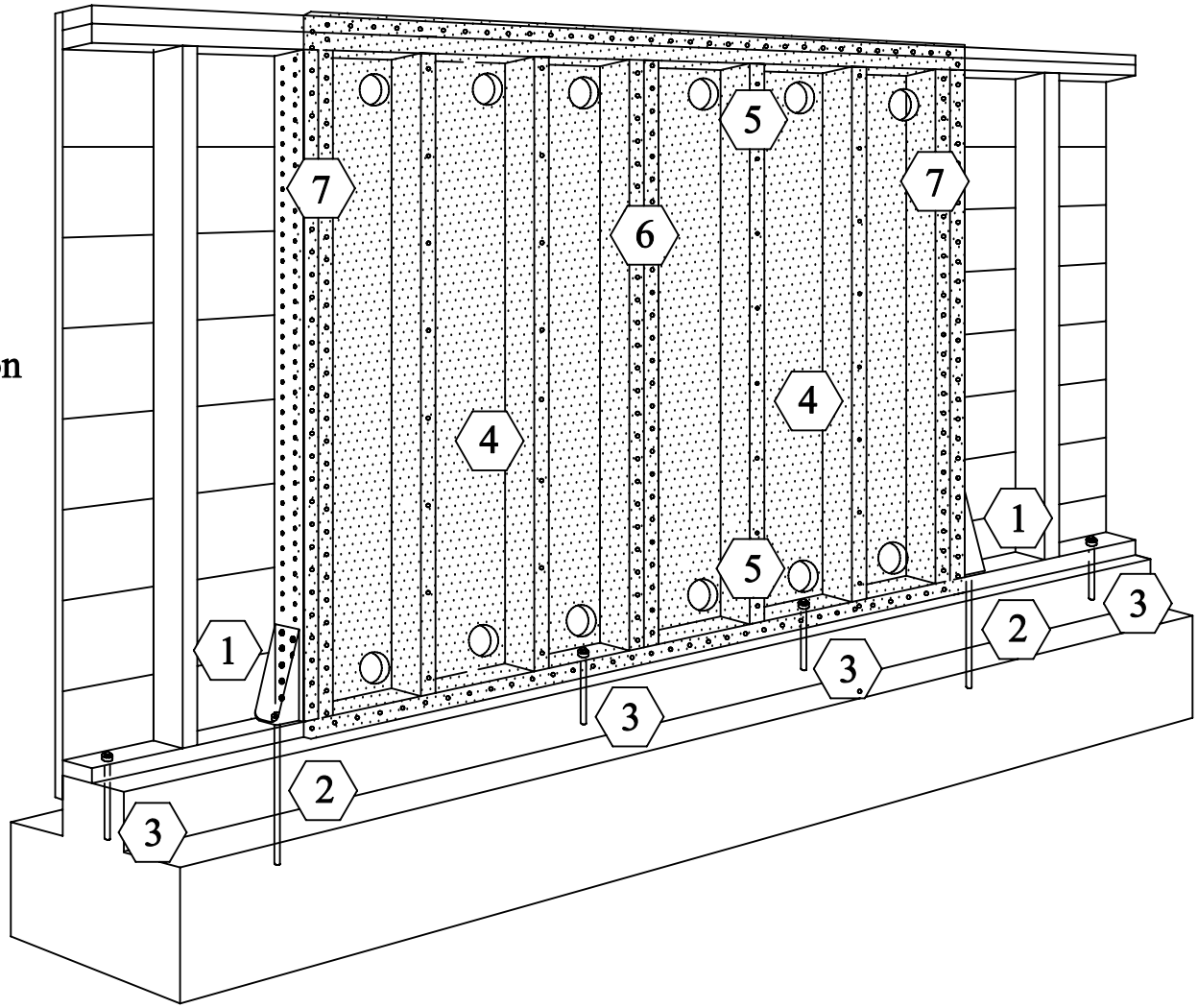

48′
6′
24′
PORCH
40′
4′
4′
6′


FLOOR OF HOUSE
PORCH

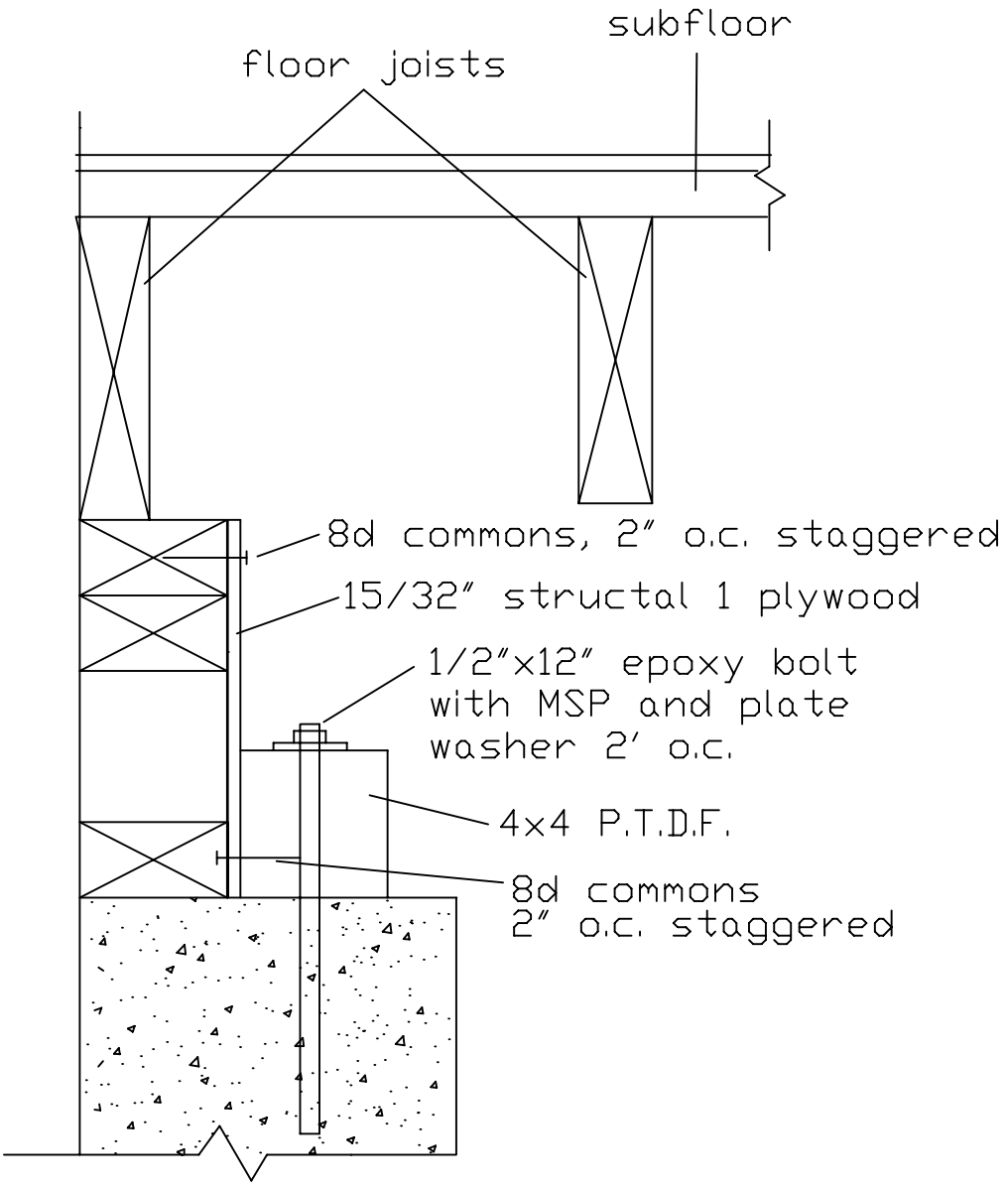
General Principles, Overturning, Splices

1. holddown
2. holddown bolt
3. anchor bolt
4. 15/32 5-ply structural 1 plywood, nailed 2" apart on edges, 12" apart in field.
5. 1-1/8" ventilation holes
6. double studs at plywood joint location, nailed with 12d commons, 3" apart, staggered.
7. double stud at holddown location, nailed with 12d commons, 3" apart, staggered.

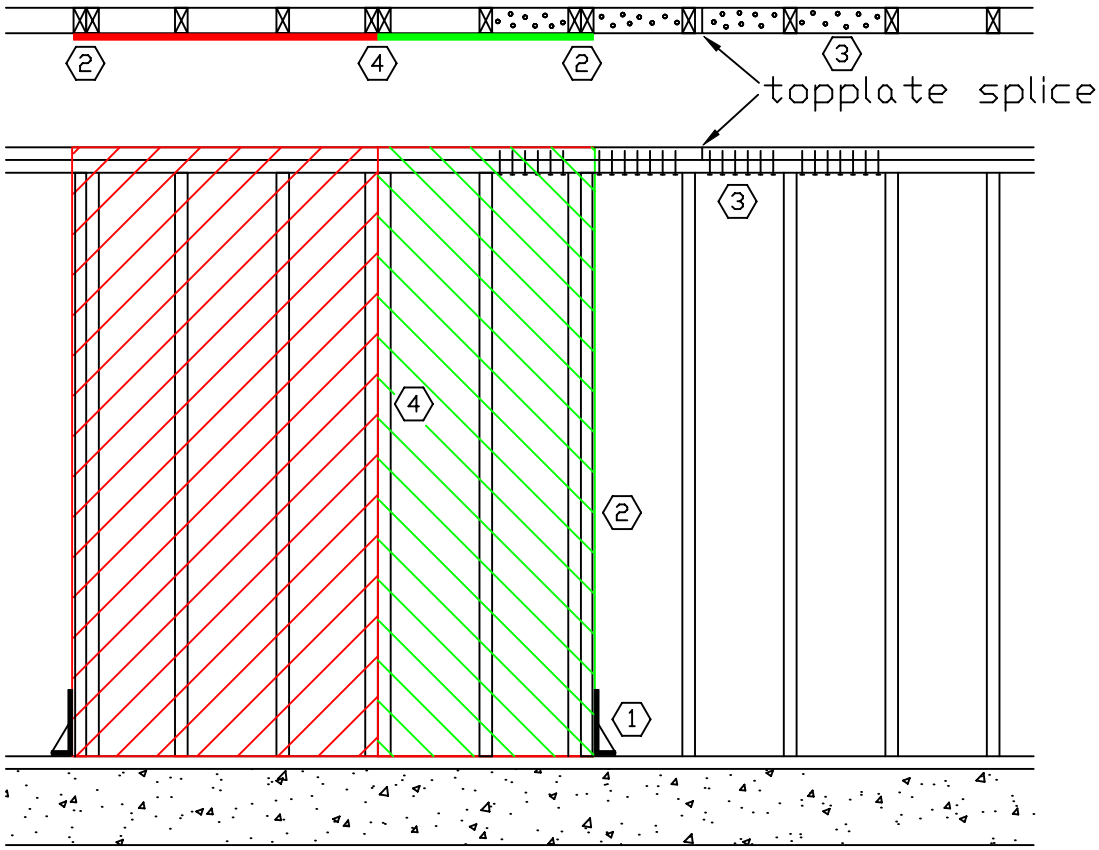


Structural Components of a Shear Wall

Shear Wall - structural components



Detail A



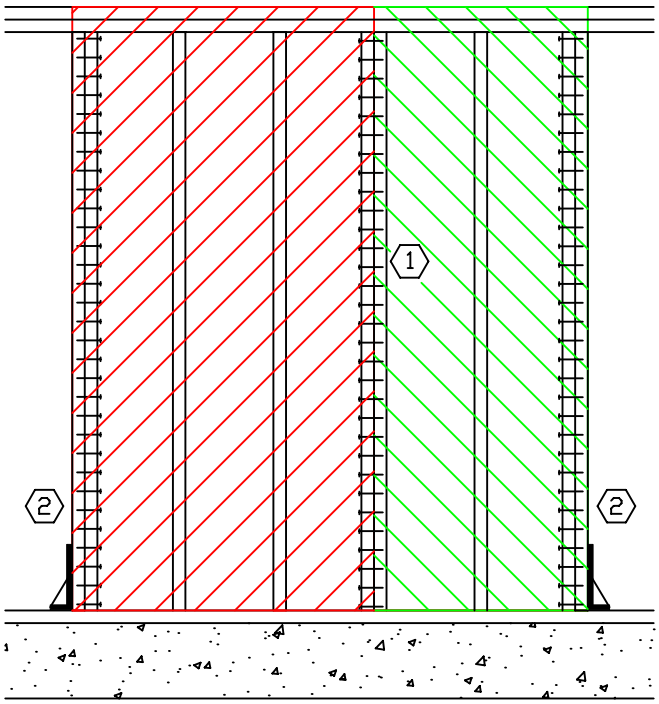
(1) If possible, place holddowns on outside of panel for ease of future inspection.

(2) Nail holddown studs together (new stud into old stud if possible) with 12d commons 3" o.c. staggered

(3) Connect all upper topplate breaks with 12d common nails. 16 nails on each side of break, staggered 2-3 inches o.c.

(4) Nail studs at plywood butt joints (thru new stud into old stud) with 12d commons 3" o.c. staggered

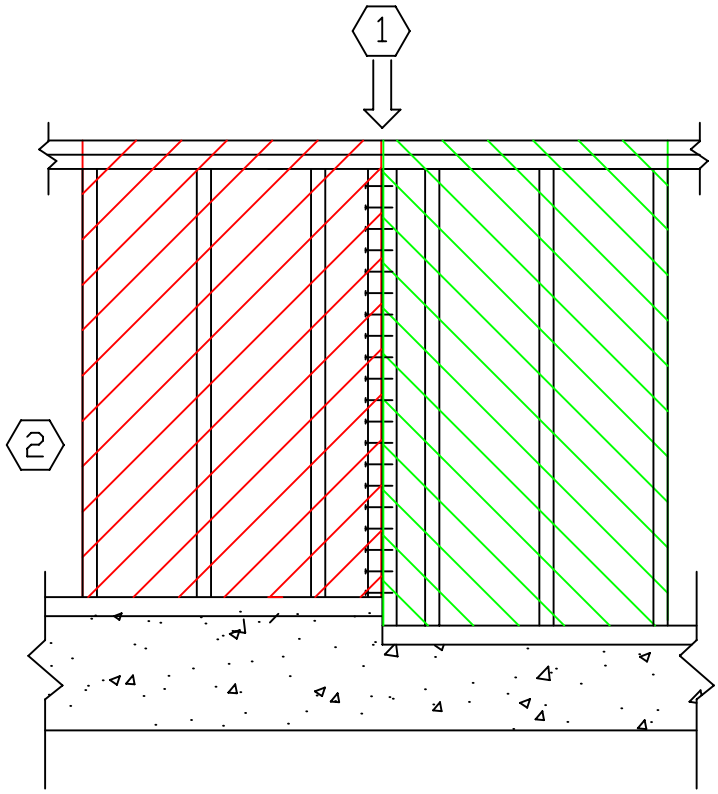
Splicing Topplate



(1) Nail studs together at plywood splice (thru new stud into old stud) with 12d commons placed 3 inches o.c. staggered. Nail new studs to mudsill and topplates with three 8-d common toenails.

(2) Nail holddown studs together (thru new stud into old stud) with 12d commons 3 inches o.c. staggered.

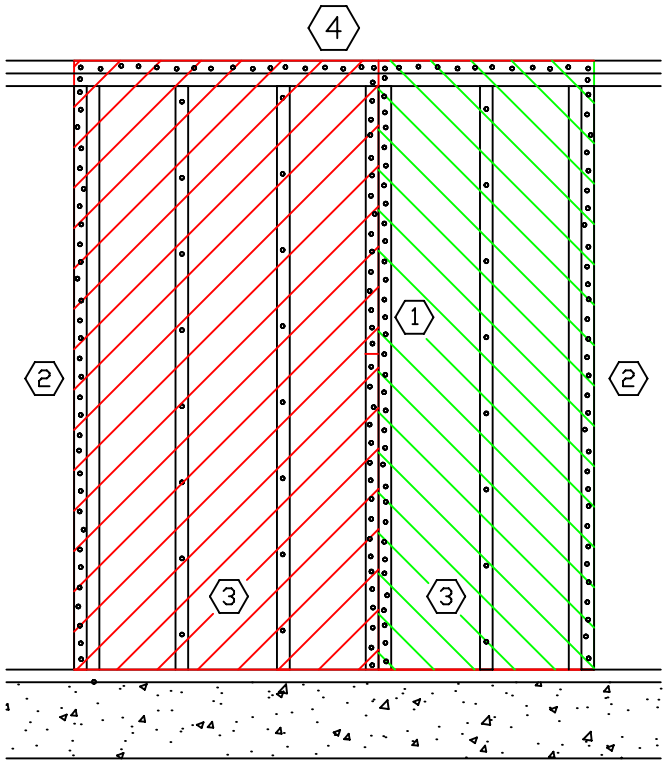
Shearwall Framing Nailing



1. Add a stud at the end of the first level of foundation and add a second stud at the beginning of the next level of foundation. Nail the two studs together as shown with 12d commons 3″ o.c. staggered

2. Cut two pieces of plywood so the combined length equals the length of the required panel and butt the pieces together as shown so each edge is nailed into one of the newly added studs. Nail plywood as normal.

INSTALLING SHEAR PANEL AT STEPPED FOUNDATION



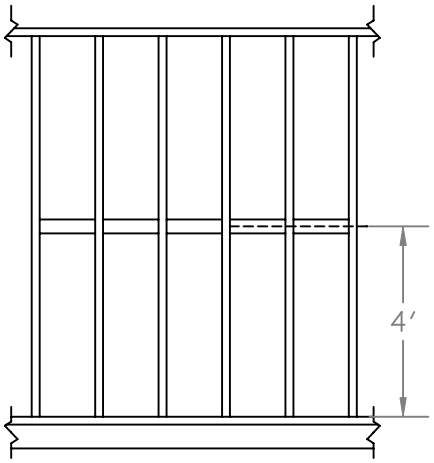
(1) At vertical plywood joints, nail studs together with 12d commons 3″ o.c. staggered, and nail plywood to studs with 8d commons 2″ o.c. staggered.

(2) At all plywood edges, nail plywood to studs 2″ o.c. staggered with 8d commons.

(3) In field, drop chalk line down center of studs and nail plywood to framing with 8d commons 12″ o.c.

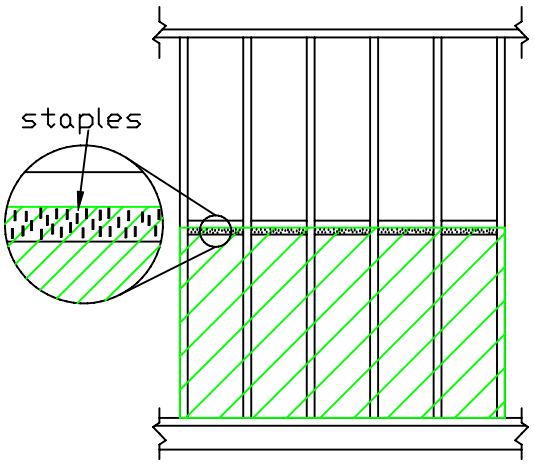
(4) Along upper topplate, nail plywood with 8d commons 2″ o.c. staggered. Nailing no required on lower topplate.

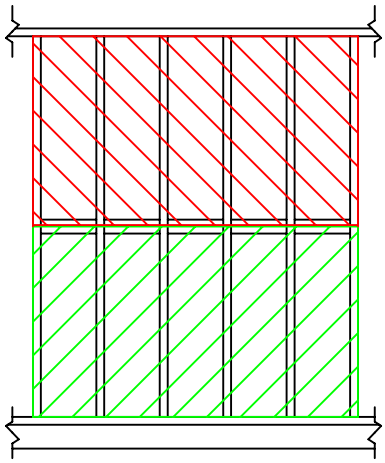
Nailing Plywood



Install flat 2by blocks in stud bays so that the blocks are centerd at the plywood edge joint.

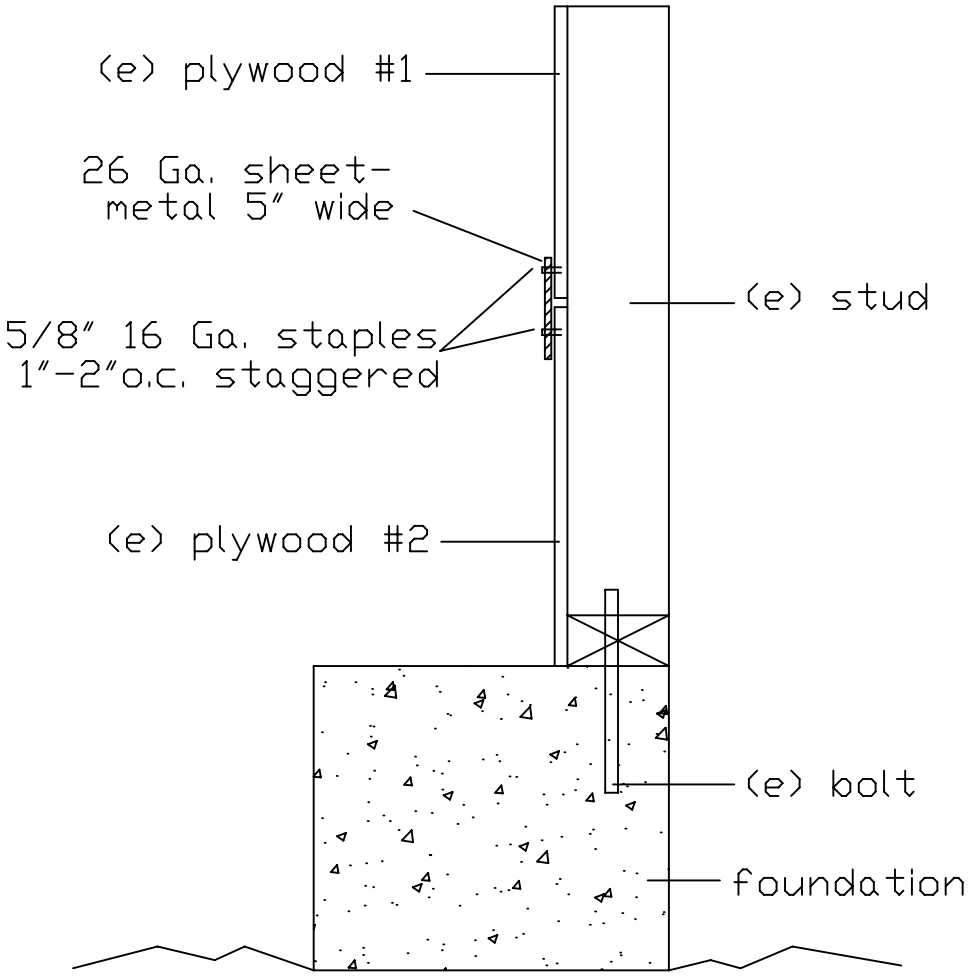
Place the bottom sheet of plywood so it rests on the mudsill. It should extend 1/2 way into the blocks. Staple plywood onto blocks with 1 1/2" 15ga staples 1-2" o.c.





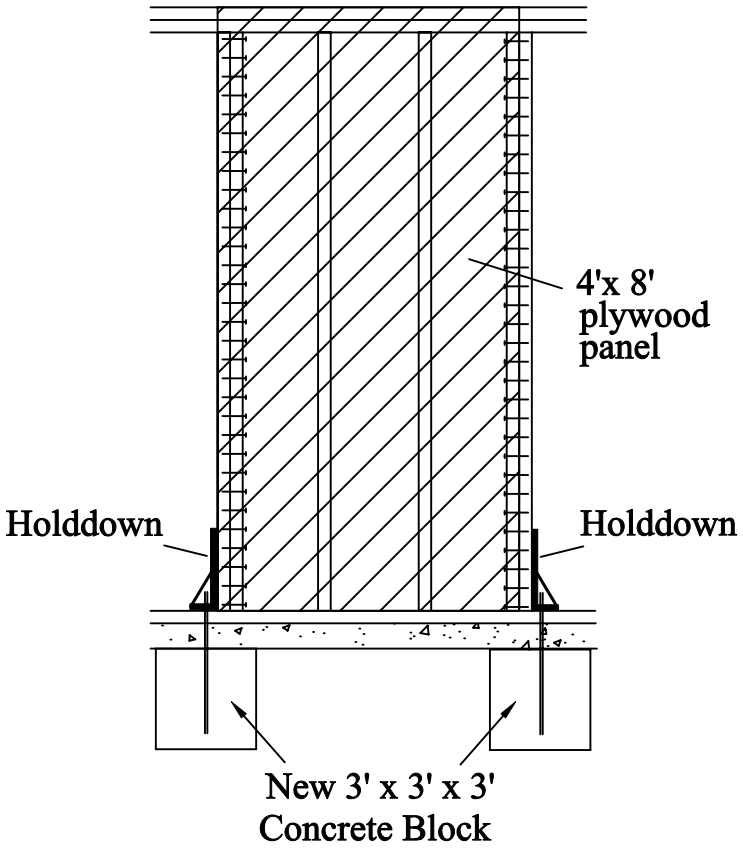
Place the top sheet of plywood on the bottom sheet. Staple it to the blocks. Pop a chalk line if you need to to make sure you hit the blocks.

Horizontal stapled splice



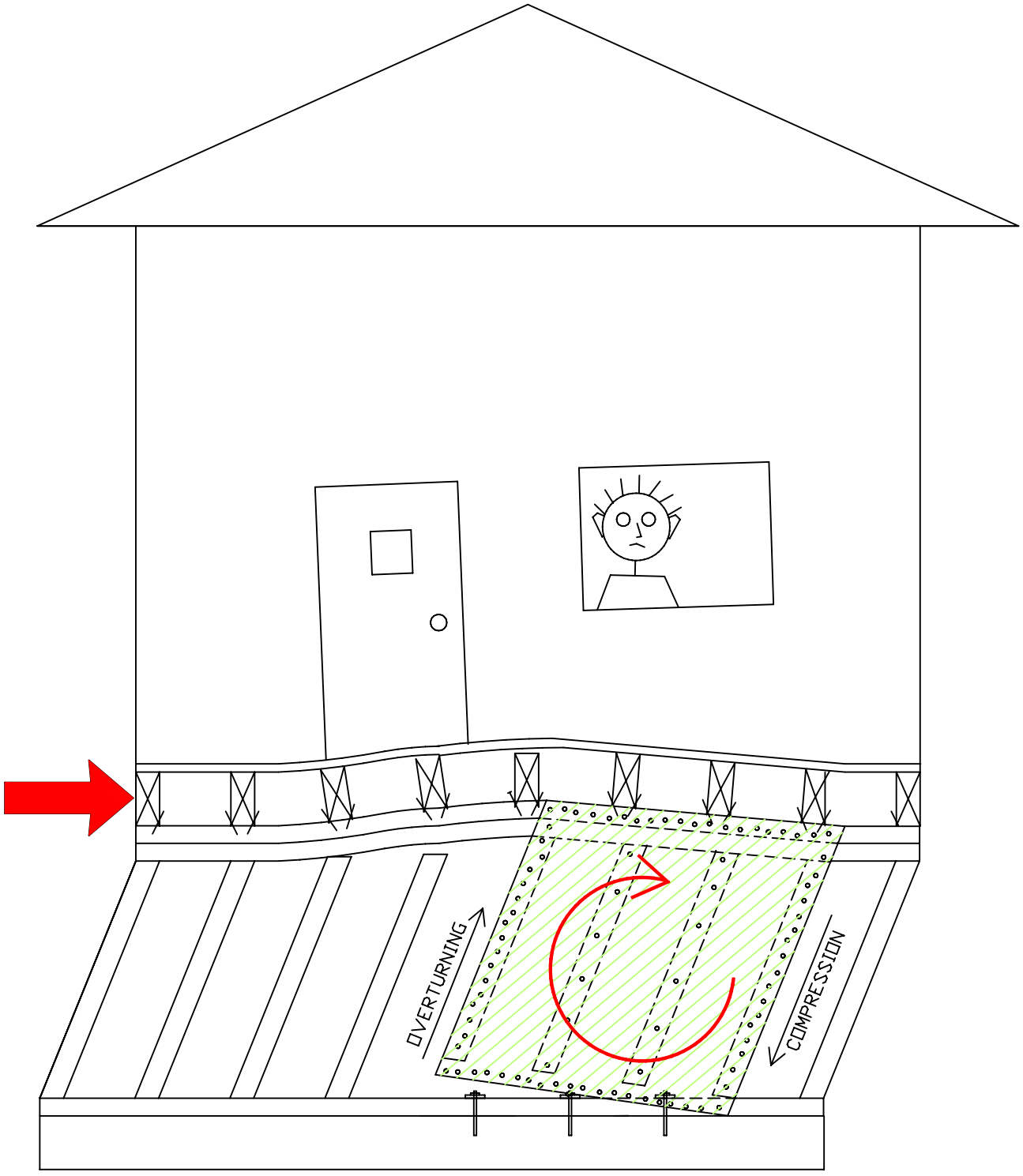
For new walls or when the contractor neglected to install horizonal 2x4 blocks between plywood panels. See APA Techincal Note #N370C, May 1997.

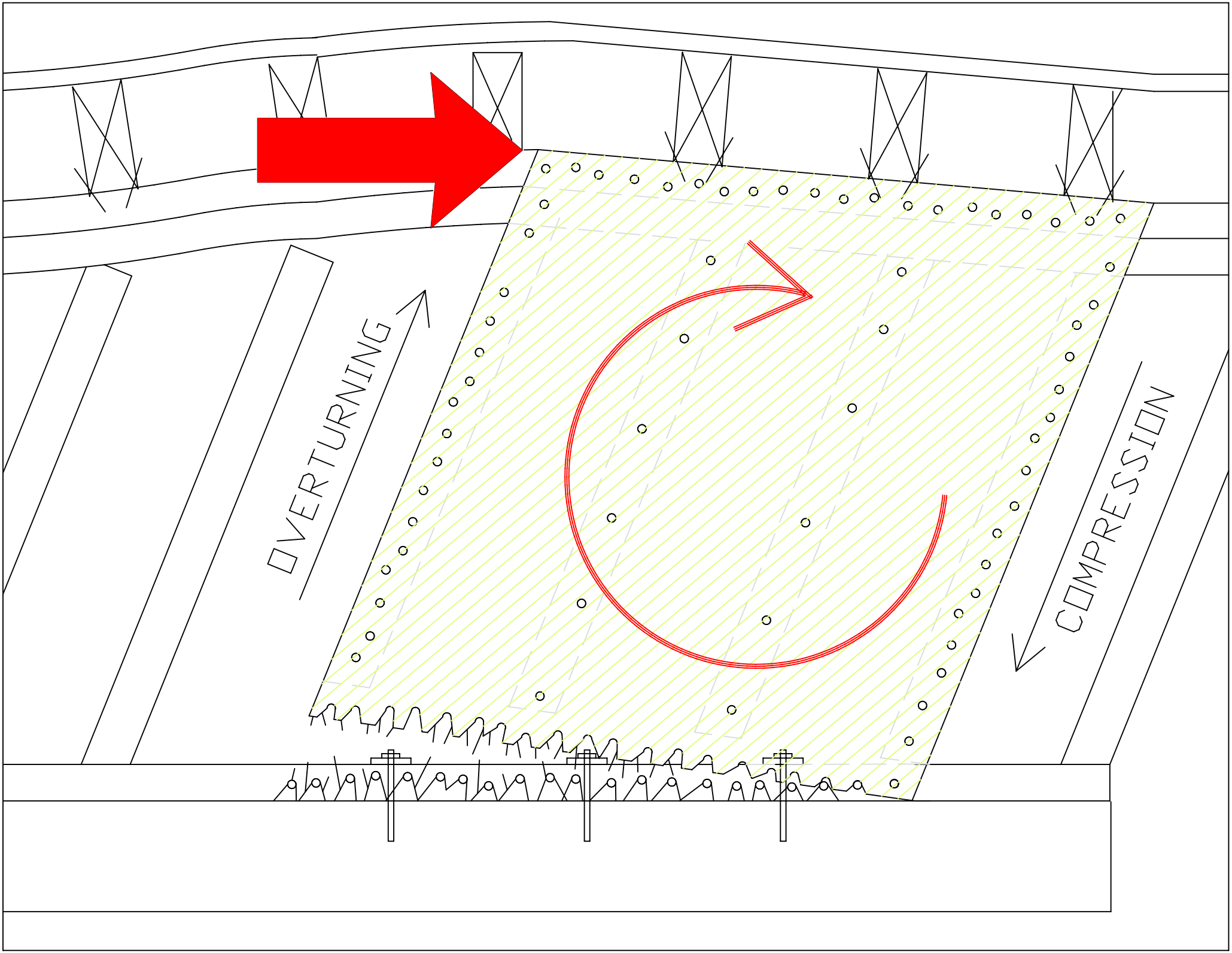
Sheetmetal Blocking

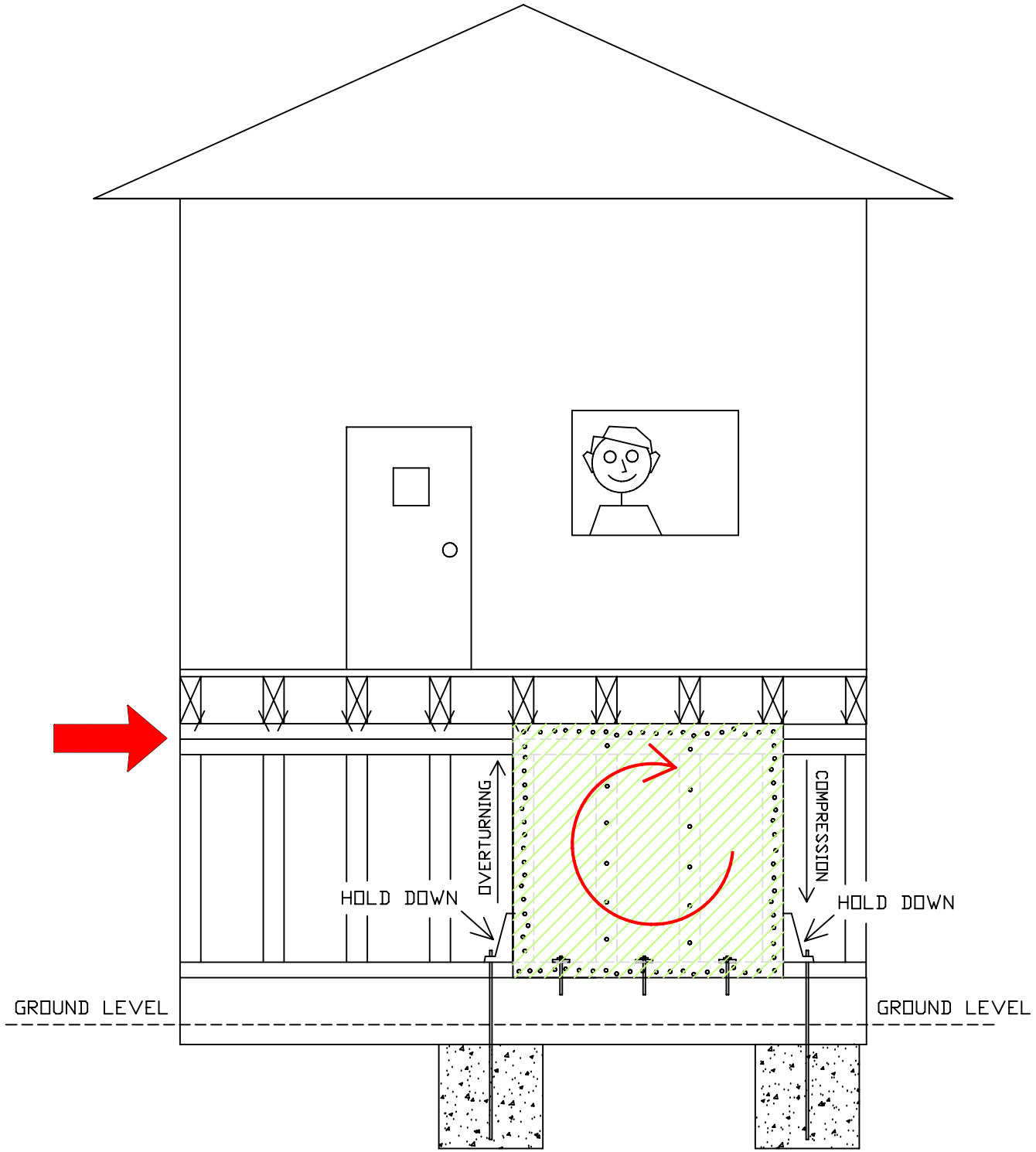


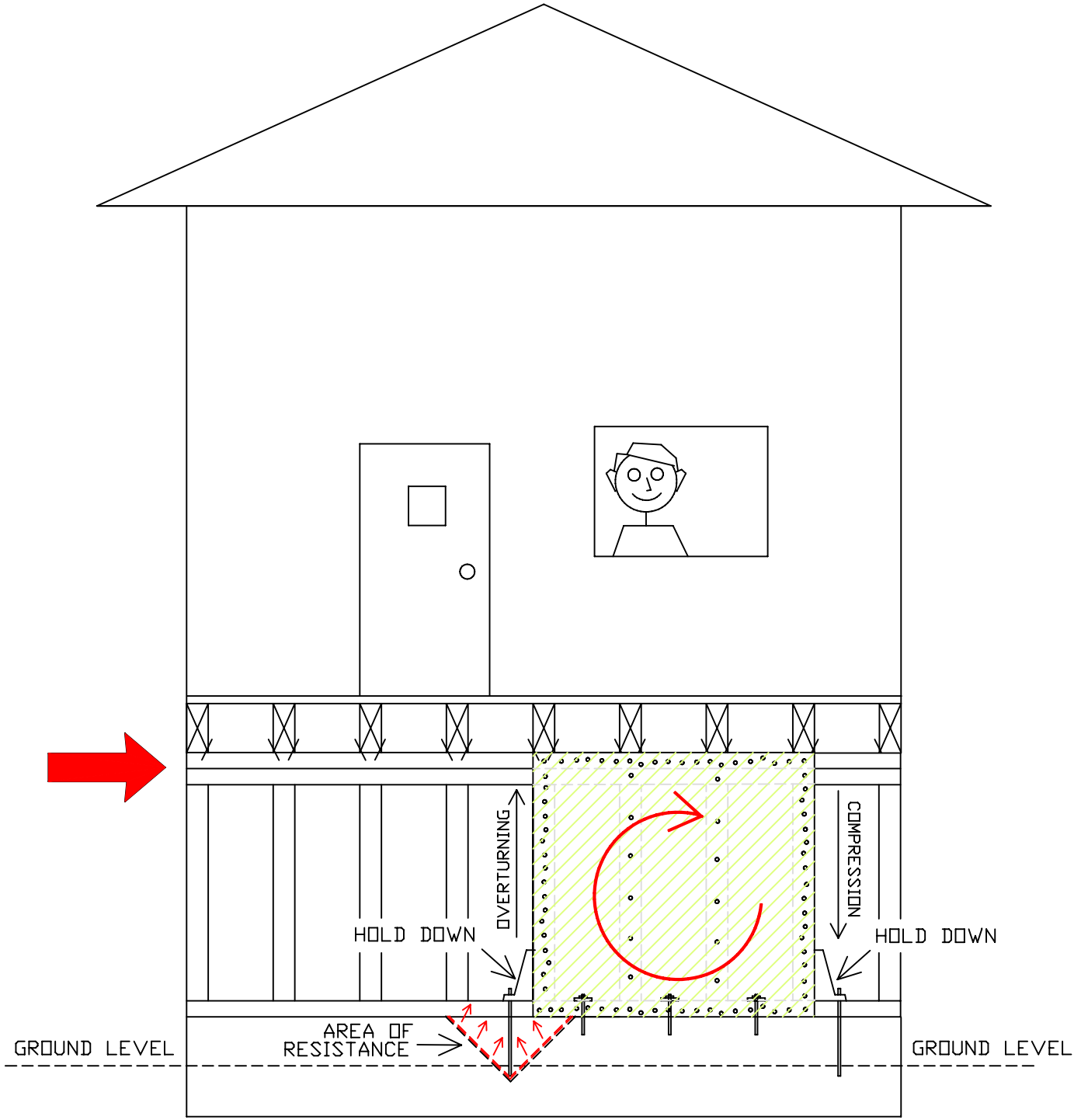
Concrete Under Hold Down

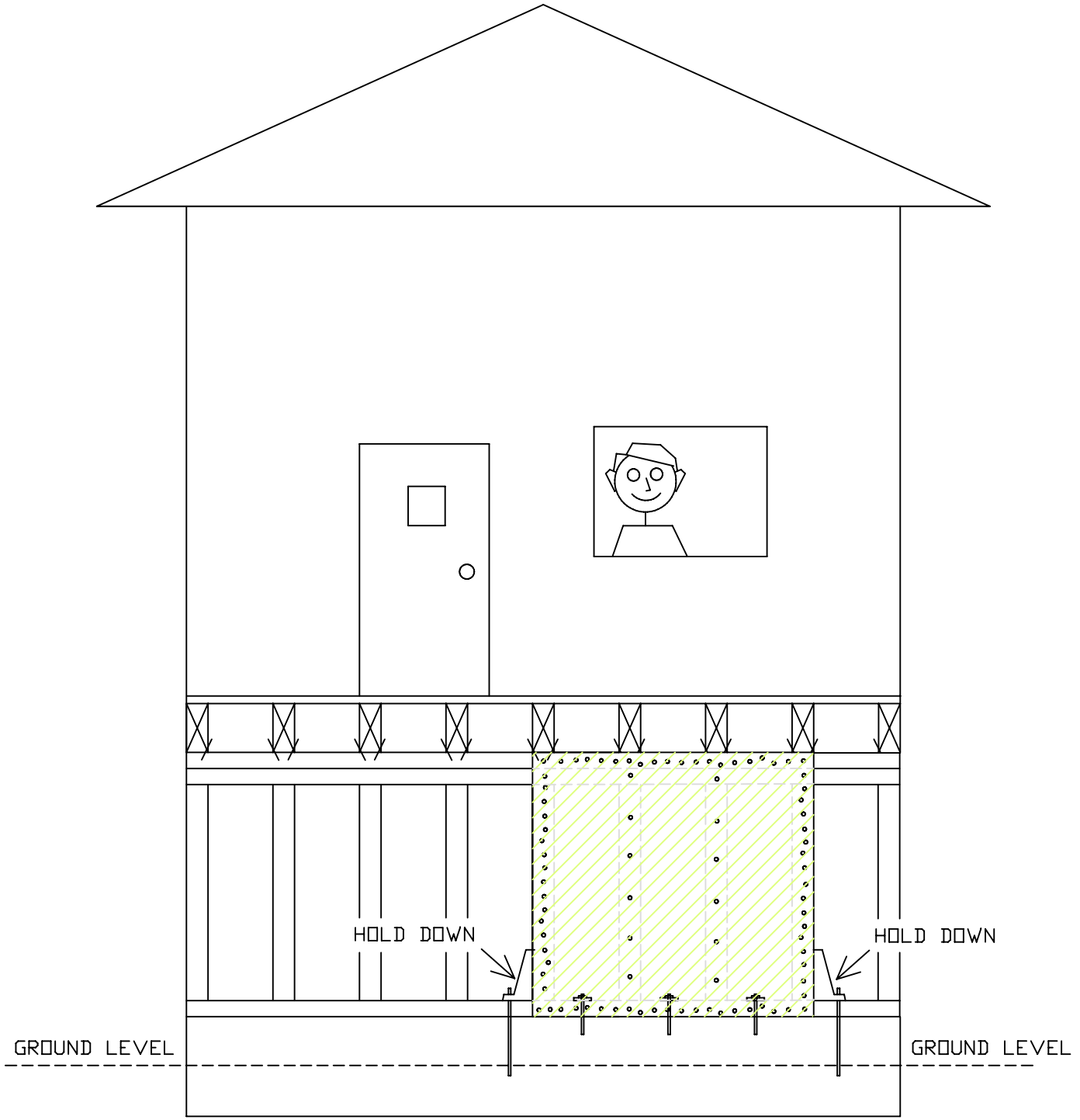
GROUND LEVEL
OVERTURNING
COMPRESSION
GROUND LEVEL

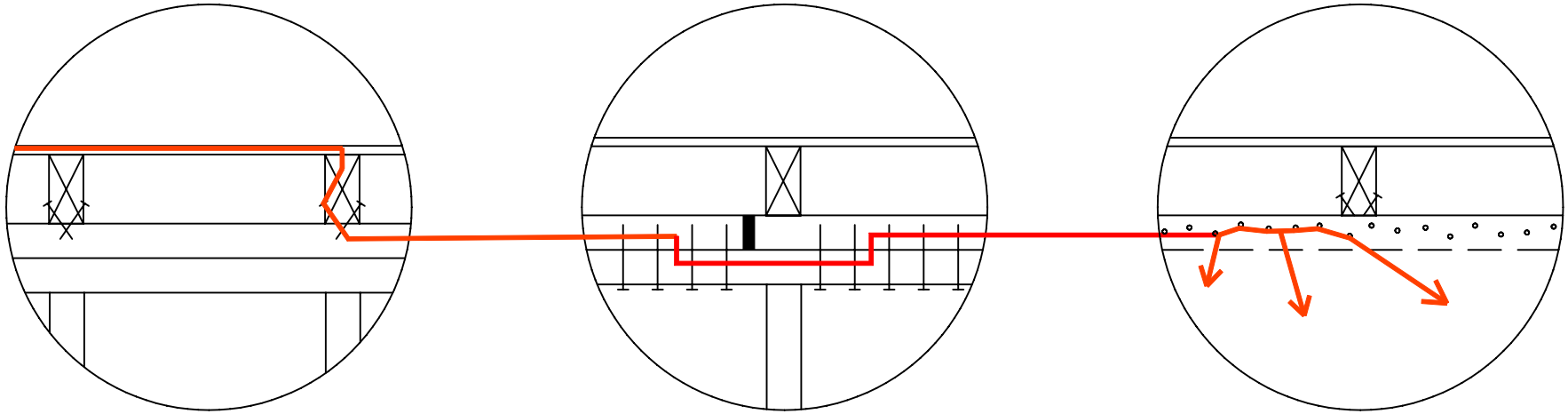


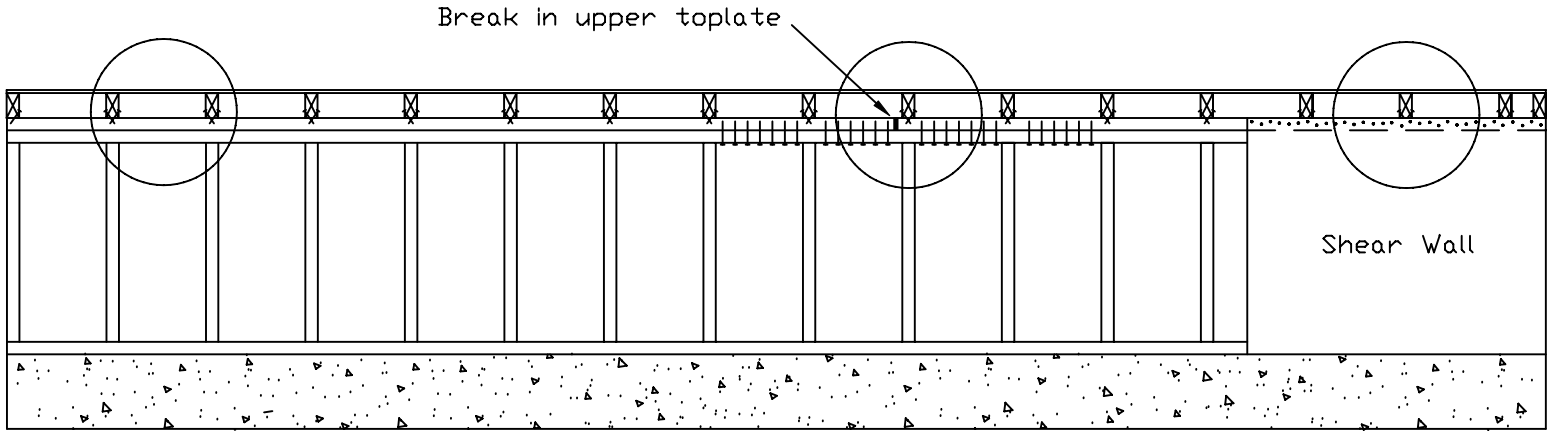




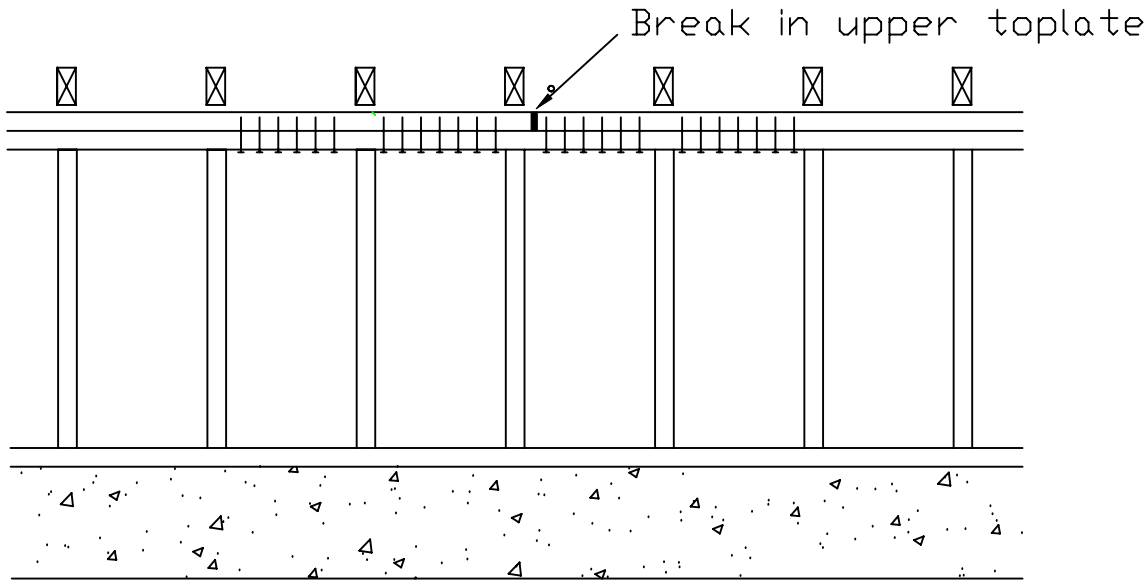








Upper topplate slice stitch nailed with ten 12d commons each side of break.



Topplate splice Nailed