

**SANTA CRUZ COUNTY PLANNING DEPARTMENT POLICY/ORDINANCE
INTERPRETATION**

Interpretation No.: WALLS-01 (Structural alterations to walls)
Effective Date: 04/09/09
Originally Issued: 04/09/09

Questions

1. *What changes to a building are considered structural alterations for the purposes of determining the extent of alteration regulated by the Ordinance Sections listed below?*
2. *When a supporting member of a wall is structurally altered, how do we determine what portion of the wall has been altered?*
3. *What is the definition of “length of exterior walls”?*

Applicable Ordinance Section(s)

- §13.10.700-S -- definition of “structural alteration”
- §13.10.260, 13,10,261, 13.10.262 -- structural alteration – limitations on non-conforming uses
- §13.10.265 (b), (d), (g), (j) -- length of exterior walls as trigger for allowed alterations;
rebuilding non-conforming structure after natural disaster
- §16.10.040 (s) – alteration of >50% of exterior wall length is considered “development”
as it pertains to geologic hazard regulations
- §12.10.215(c) -- alteration of >50% of the exterior wall length meets definition of
“Structure” as trigger for a soils report
- §17.10.020 “New dwelling unit”-- what is considered a replacement dwelling (also
see Policy Interpretation AH-01)

INTERPRETATION:

1. Structural alteration, as defined in 13.10.700-S, includes any of the following (see graphics for illustrations of terms):

- a) Removal, replacement or addition of studs, headers, king studs, top plates, sill plates and trimmers;
- b) Wall furring (including sistering);
- c) The addition of framing above an existing top plate; or
- d) Elevation of the structure except for temporary elevation necessary to replace the foundation.

The following will not be considered structural alterations:

- a) The partial or complete replacement or reconstruction of foundations or roofs (including roof framing members);
- b) Tie-downs for existing posts for seismic purposes;
- c) Structural sheathing for seismic purposes (other seismic framing/bracing such as the addition of studs counts);
- d) The replacement of window sills and cripple studs under an existing or altered window (so long as the alteration does not make the window larger);
- e) The framing in of existing windows and/or garage doors;
- f) Adding backing for sheetrock and channel framing for interior perpendicular walls; or
- g) The removal of exterior or interior wall finishes.

2. When a vertical supporting member of a wall (such as a stud) is structurally altered, 16” of lineal wall length of a structure with standard framing is considered to have been altered, or half of the tributary load for structures utilizing other framing methods (such as 24” on center). When a horizontal supporting member of a wall (such a top plate) is structurally altered, the actual lineal length of the altered supporting member is considered to have been altered.

3. Definition for “length of exterior walls”: The perimeter of the lineal length of the first story walls plus the perimeter of the lineal length of the second and third stories (if applicable) is added together to be the sum of the total length of exterior walls. For understories with cripple wall studs that are more than 4’ in height, the portion of the studs that are greater than 4’ in height will be included in the linear wall length measurement. The lineal length of attics that meet the definition of “story” in Policy Interpretation ATTIC-02 will also be added to the total length of exterior walls.

Reason

1. There is a need to have more specific criteria applied to the existing definition of “structural alteration” in 13.10.700–S to clarify what is considered a structural alteration for the several areas of the County Code that limit the amount of structural alteration allowed for existing structures. Certain alterations that do not affect the structural integrity of the structure—such as the framing in of existing windows or garage doors—should be allowed and not counted as they do not contribute to the lifespan of the structure. In addition, it is appropriate to exempt certain alterations from the definition, as is already the case for foundations, to foster certain seismic upgrades.

Structural alterations that increase the size or height of a structure—such as raising studs to increase height—always count as structural alterations (see Policy Interpretation NCS-01 regarding when a variance is required for a structural alteration to the roof of a nonconforming structure.)

This definition for structural alteration will apply for both building and zoning purposes to allow for consistency in application.

2. This is a feasible method for determining what portion of a wall has been altered, and relates logically to the portion of wall that is affected structurally by the alteration.

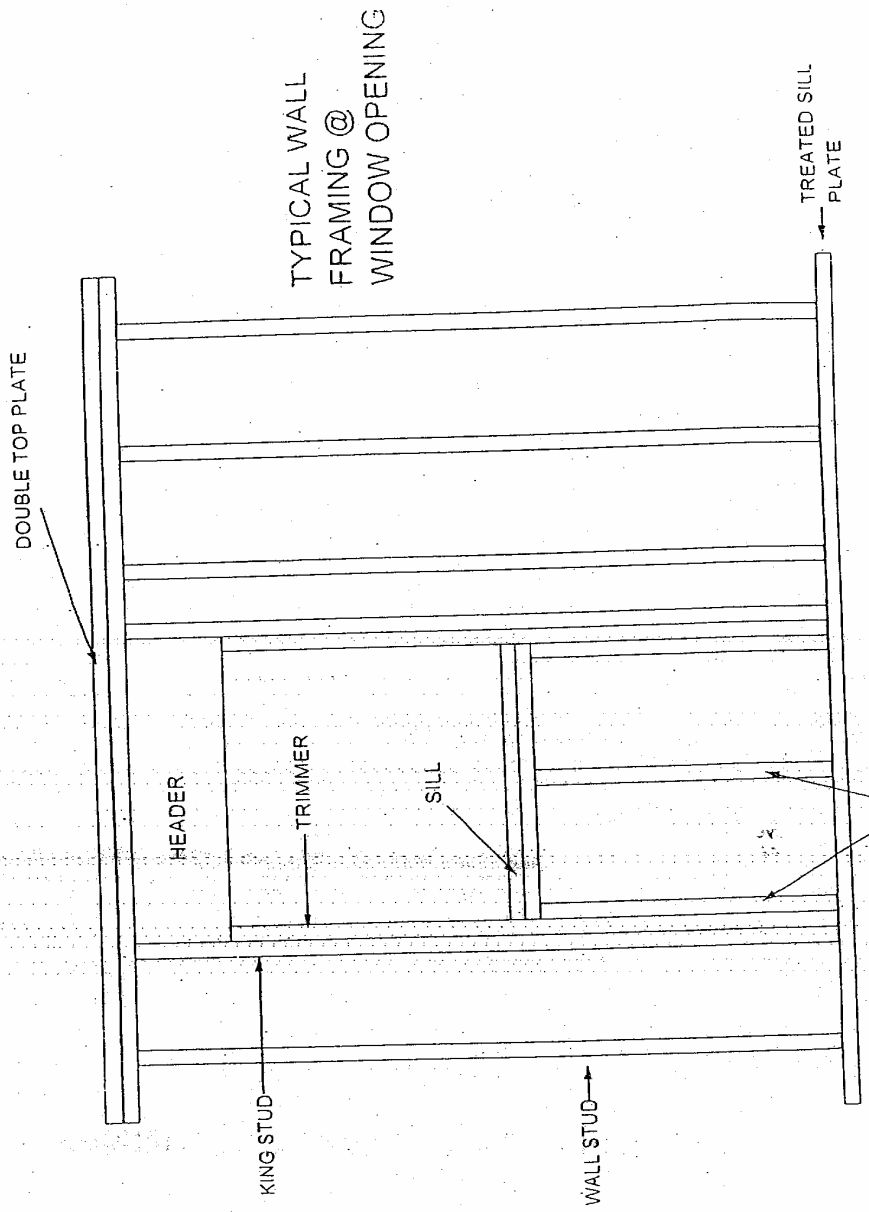
This method will apply for both building and zoning purposes to allow for consistency in application.

3. Several areas of the County Code impose restrictions or trigger requirements based on the length of the exterior walls being altered. This is fairly straightforward to determine for a one-story structure but becomes more complicated for multi-storied or multi-level structures. It could be interpreted that altering a stud on the first story of a three-story structure equates to that lineal footage—on all stories—being altered, but in fact only a small area of the structure is really being altered. Given the regulatory implications of exceeding one of the alteration maximums in the County Code, it is appropriate that this more flexible interpretation be used.

Tom Burns, Planning Director

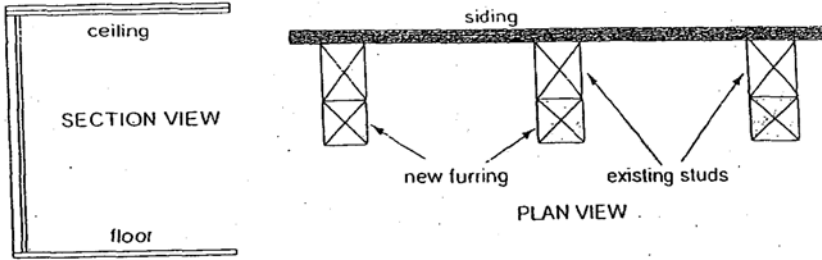
Date

Interpretation No.:

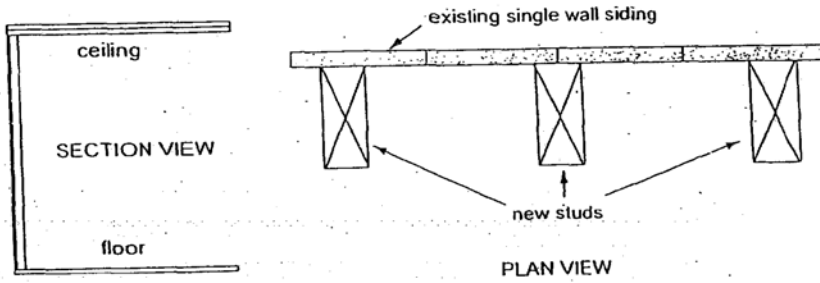


Interpretation No.:

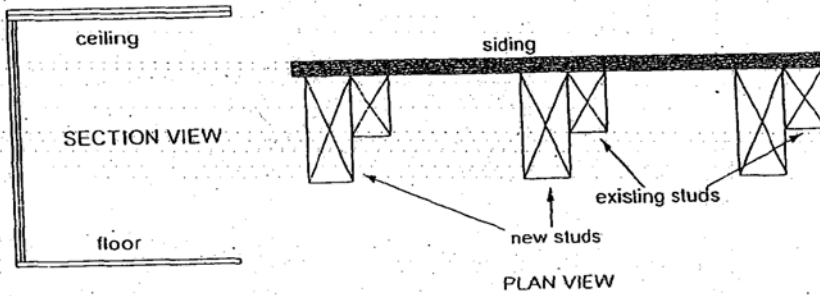
condition one: adding additional material to an existing wall stud on the inside of the building



condition two: adding 2X wall studs to existing single wall construction



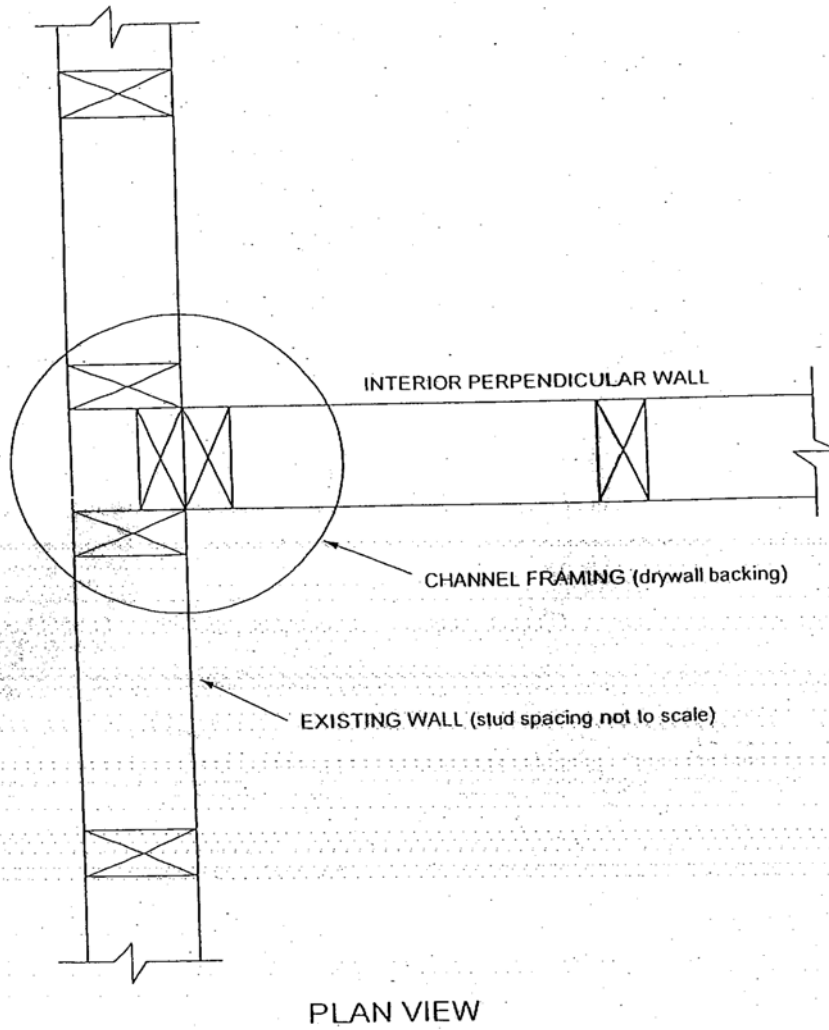
condition three: sistering new 2X studs beside existing smaller studs





EXAMPLES OF WALL FURRING

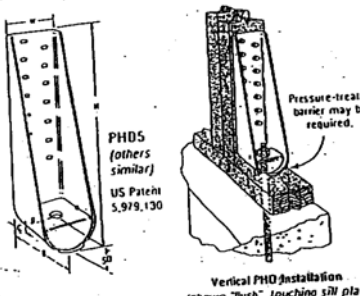
Interpretation No.:

CHANNEL FRAMING EXAMPLE



TIE-DOWN EXAMPLES

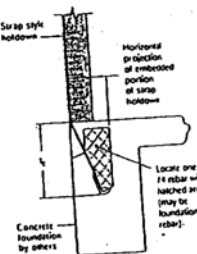





PHD5
(others similar)
U.S. Patent 5,919,130

Pressure-treated barrier may be required.

Vertical PHD Installation
(Shown "flush", touching sill plate)



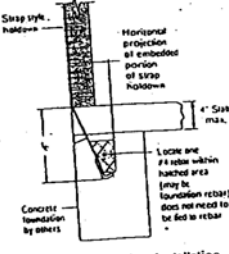
Strap style hold-down

Horizontal projection of embedded portion of strap hold-down

Concrete foundation by others

Locate one #4 rebar within hatched area (may be foundation rebar).

Single Pour Rebar Installation
*Maintain minimum rebar cover, per ACI-318 concrete code requirements.



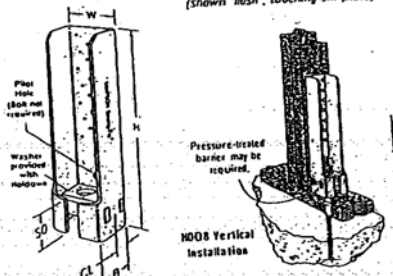
Strap style hold-down

Horizontal projection of embedded portion of strap hold-down

4" Slab max.

Locate one #4 rebar within hatched area (may be foundation rebar) does not need to be tied to rebar.

Two Pour Rebar Installation
*Maintain minimum rebar cover, per ACI-318 concrete code requirements.



PHD Hole (Bolt nut required)

Washer provided with hold-down

HDOB Vertical Installation

HDOB
U.S. Patents 6,006,487 and 6,327,831

Pressure-treated barrier may be required.

SPALL REDUCTION SYSTEM FOR STHD STRAP TIE HOLDDOWN

FEATURES

- Built-in tab.
- StrapMate® locator line.
- Additional diamond hole in RJ versions.

BENEFITS

Built-in Tab:

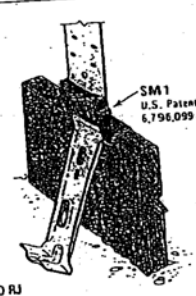
- Reduces spalling and costly retrofits.
- No additional labor to install.
- Holds STHD away from form board.

StrapMate Locator Line:

- Easy inspection to ensure proper location.
- Allows adjustment without removing STHD.

Additional Diamond Hole:

- One more fastener to help prevent the STHD RJ models from bowing out at the rim joist section.



SM1
U.S. Patent 6,798,099

For holdowns, per ASTM test standards, anchor bolt nut should be finger-tight plus 1/5 to 1/6 turn with a hand wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut. Impact wrenches should not be used.