



CITY OF  
**West Linn**  
 PLANNING AND DEVELOPMENT

**STAFF REPORT**

**PLANNING DIRECTOR DECISION**

DATE: July 23, 2013

FILE NO.: MISC-13-05

REQUEST: Request for a Flood Management Area (FMA) permit for additions to an existing house at 19220 Nixon Ave.

PLANNER: Tom Soppe, Associate Planner

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## **SPECIFIC DATA**

**OWNER:** Julie Heath, 19220 Nixon Ave., West Linn, OR 97068

**APPLICANT:** Arciform LLC/Bradley Horne, 2303 N. Randolph Ave., Portland, OR 97227

**CONSULTANT:** Shane Empey, 13995 SE Matilda Dr., Milwaukie, OR 97267

**SITE LOCATION:** 19220 Nixon Ave.

**SITE SIZE:** 12,761 Sq. Ft.

**LEGAL DESCRIPTION:** 2 1E 24 AC Tax Lot 1700

**COMP PLAN DESIGNATION:** Low-Density Residential

**ZONING:** R-10, Single-Family Residential Detached

**APPROVAL CRITERIA:** Community Development Code (CDC) Chapter 27, Flood Management Area (FMA) Sections 27.060, 27.070 and 27.080

**ADDITIONAL APPLICABLE CDC CHAPTER:** Chapter 11, Single-Family Residential Detached, R-10

**120-DAY RULE:** The application was submitted complete on June 18, 2013. The 120-day period ends on October 16, 2013.

**PUBLIC NOTICE:** Notice was mailed to property owners within 100 feet of the subject property, all neighborhood associations, the US Army Corps of Engineers (USACE) and the Department of State Lands (DSL) on July 9, 2013. The notice was also posted on the City's website. Therefore, public notice requirements of CDC Chapter 99 have been met.

## **BACKGROUND**

The subject property is shown on the following map. It is an R-10 (single family residential-10,000 square foot minimum lot size) zoned parcel in the Robinwood neighborhood. The property is occupied by a single family home. All surrounding properties are similarly zoned and occupied.

Figure 1: Vicinity and Zoning Map

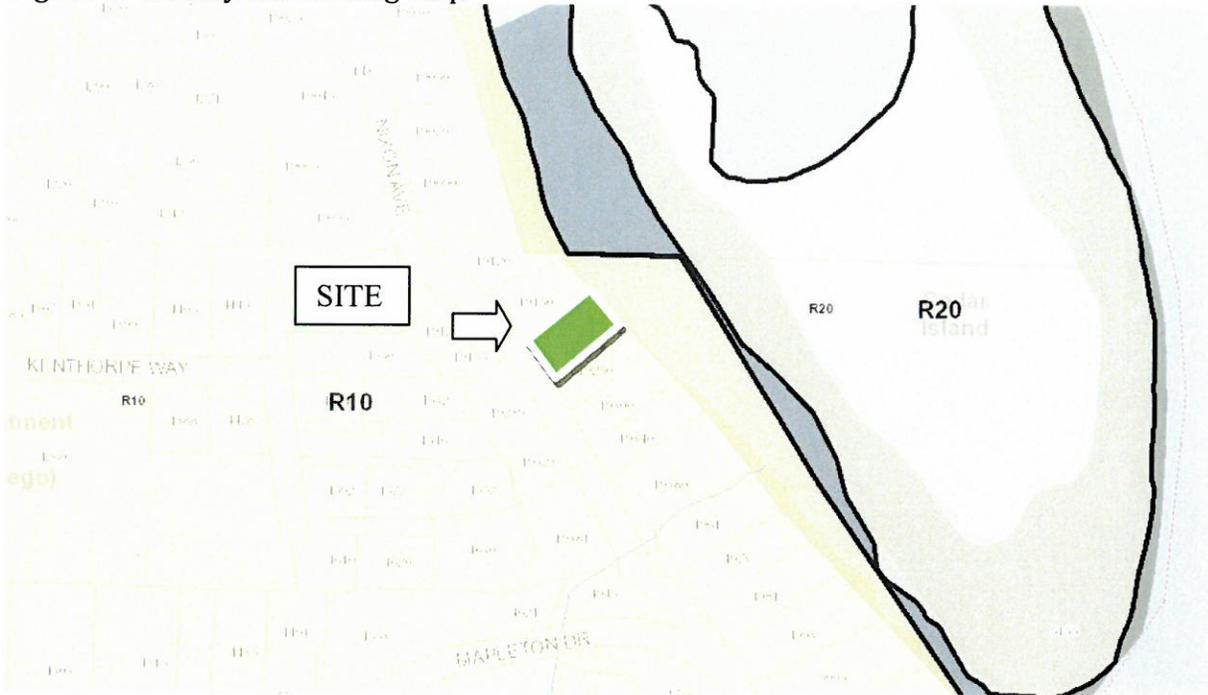
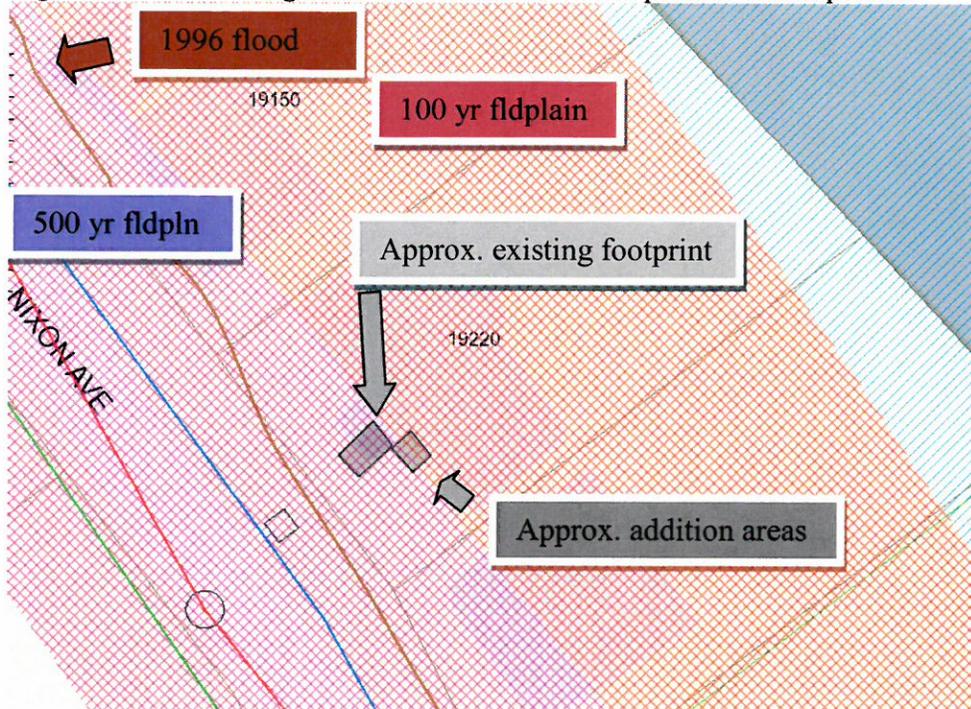


Table 1 Surrounding Land Use and Zoning

DIRECTION FROM SITE	LAND USE	ZONING
North	Single-family detached residential	R-10
East	Park land along river and island	R-10, R-20
South	Single-family detached residential	R-10
West	Single-family detached residential, Lake Oswego water treatment plant just uphill	R-10

The application requests Flood Management Area approval for new outdoor front entrance stairway and for a small front interior addition. Both of these areas are within the 1996 Flood Line, and the area of the addition is partly within the 100-year floodplain. Per Section 27.010 the Flood Management Area consists of areas within the floodway, the 100-year floodplain and/or the 1996 Flood Line. Per Section 27.020 any development in the Flood Management Area (FMA) requires FMA approval. Therefore the applicant has applied for FMA approval.

Figure 2: Flood Designations in Relation to Proposed Development

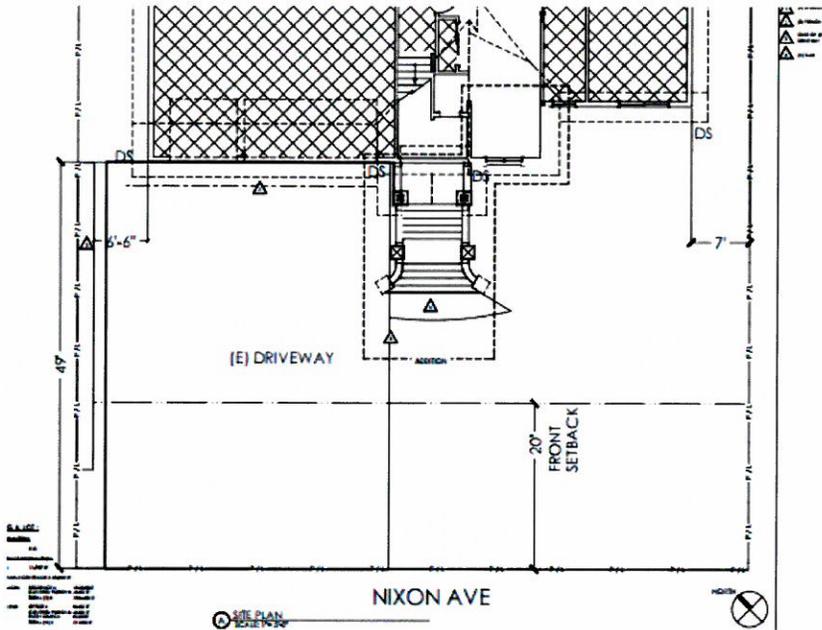


The applicant proposes a small addition to the house totaling approximately 61 square feet and a new outdoor front stairway to the second floor front entrance; the stairway has a footprint of approximately 190 square feet (including areas where the stairway does not touch the grade).

The central requirements of the Flood Management Area permit application are that (1) habitable/living spaces must be one-foot above the base flood elevation, (2) additions to the building footprint cannot adversely divert floodwaters into areas that were not previously subject to flooding and (3) filling and excavation must be balanced

The 100-year or base flood elevation is 46 feet in this area per City GIS. The applicant proposes to build the new habitable interior space at 49.1 feet in elevation which puts this at three feet above the base flood elevation. An Oregon licensed engineer's findings accompany the application (see Page 22 of Exhibit PD-3). These findings have determined that the addition and the enlargement will not have any adverse impacts on floodwaters or modify existing flood patterns.

Figure 3 Applicant's Plan Showing Proposed Stairs and Addition (Interior addition is just above and to the right of the stairs in this view):



Site Conditions. The lot slopes downward somewhat from Nixon Avenue to the existing house. As with many lots in this area, the lots slopes down much more steeply behind the house, terminating at a channel of the Willamette River between the mainland and Cedar Island. The house is further than the required 20-foot setback from the front property line, as will be the proposed staircase and addition.

By using FEMA's 46-foot base flood elevation, in concert with the applicant's elevations on the submitted Site Plan on Page 48 of Exhibit PC-3, an accurate delineation of the expected height of floodwaters was provided for this property.

**PUBLIC COMMENTS**

As of July 23, 2013 there have been no public comments.

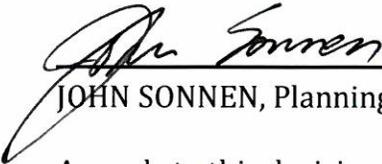
**PLANNING DIRECTOR'S DECISION**

Based on findings contained in the applicant's submittal in the City record and the staff findings, there are sufficient grounds to **approve** this application (MISC-13-05) subject to the following condition of approval:

1. The home additions shall be constructed consistent with the Site Plan Sheet A1.0, dated May 30, 2013, on Page 48 of Exhibit PD-3.

2. The applicant shall make necessary excavation on this property to compensate on an equal cubic yard to cubic yard basis for all water displacing structures (foundation walls, slab on grade, etc.) below 46 foot elevation.

I declare to have no interest in the outcome of this decision due to some past or present involvement with the applicant, the subject property, or surrounding properties, and therefore, can render an impartial decision. The provisions of the Community Development Code Chapter 99 have been met.

  
\_\_\_\_\_  
JOHN SONNEN, Planning Director

  
\_\_\_\_\_  
DATE

Appeals to this decision must be filed with the West Linn Planning Department within 14 days of mailing date. Cost is \$400. The appeal must be filed by an individual who has established standing by submitting comments prior to or on July 23, 2013. Approval will lapse 3 years from effective approval date.

Mailed this 24<sup>th</sup> day of July, 2013.

Therefore, the 14-day appeal period ends at 5 p.m., on

Aug. 7, 2013

# ADDENDUM

## APPROVAL CRITERIA AND FINDINGS

### MISC-13-05

Staff recommends adoption of the findings for approval contained within the applicant's submittal, with the following exceptions and additions:

#### **Chapter 11 SINGLE-FAMILY RESIDENTIAL DETACHED, R-10**

##### **11.030 PERMITTED USES**

*The following are uses permitted outright in this zoning district*

1. *Single-family detached residential unit.*

##### **STAFF RESPONSE NO. 1:**

The site contains one single-family detached residential home in agreement with 11.030. The proposed development consists of additions to this home, not an additional home or use. Staff determines the criterion is met.

##### **11.070 DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS**

*Except as may be otherwise provided by the provisions of this code, the following are the requirements for uses within this zone:*

1. *The minimum lot size shall be 10,000 square feet for a single family detached unit.*
2. *The minimum front lot line length or the minimum lot width at the front lot line shall be 35 feet.*
3. *The average minimum lot width shall be 50 feet.*
4. *The lot depth comprising non-Type I and II lands shall be less than two and one-half times the width, and more than an average depth of 90 feet.*

##### **STAFF RESPONSE NO. 2:**

The lot is 12,761 square feet in size which exceeds the 10,000 square foot minimum lot size. The width of the lot as measured at the front lot line is approximately 77 feet. This width

continues for the entire lot, so the lot frontage and average lot width exceed the required 35 and 50 feet respectively. Staff determines that subsections 1-3 above are met. The lot does not meet the provision of Subsection 4 above, as the lot area excluding the 100-year flood plain (Type I lands) is less than 2.5 times longer than it is wide but does not have a depth of more than 90 feet, since most of the lot is within the 100-year floodplain. However this is an existing non-conformity that does not change due to the proposal, and the proposal meets the CDC upon the granting of FMA approval and fulfillment of the proposed conditions. Therefore a permit to Enlarge/Alter a Non-Conforming Structure is not required.

5. *The minimum yard dimensions or minimum building setback area from the lot line shall be:*

a. *For the front yard, 20 feet; except for steeply sloped lots where the provisions of CDC 41.010 shall apply; and as specified in CDC 26.040(D) for the Willamette Historic District.*

b. *For an interior side yard, seven and one-half feet; except as specified in CDC 26.040(D) for the Willamette Historic District.*

(...)

d. *For a rear yard, 20 feet.*

6. *The maximum building height shall be 35 feet, except for steeply sloped lots in which case the provisions of Chapter 41 CDC shall apply.*

7. *The maximum lot coverage shall be 35 percent.*

(...)

9. *The floor area ratio shall be 0.45. Type I and II lands shall not be counted toward lot area when determining allowable floor area ratio, except that a minimum floor area ratio of 0.30 shall be allowed regardless of the classification of lands within the property. That 30 percent shall be based upon the entire property including Type I and II lands. Existing residences in excess of this standard may be replaced to their prior dimensions when damaged without the requirement that the homeowner obtain a non-conforming structures permit under Chapter 66 CDC.*

10. *The sidewall provisions of Chapter 43 CDC shall apply.*

**STAFF RESPONSE NO. 3:**

Both the existing and proposed house footprints are more than 20 feet from the front and rear property lines. Per City GIS the house may be closer than 7.5 feet to the side property lines but this is an existing non-conformity and the proposed additions do meet the side setback requirements. Therefore no permit to Enlarge/Alter a Non-Conforming Structure is needed. The additions will not cause the house footprint or finished area square footage to exceed the lot coverage or floor area ratio limits, respectively. The additions will not go over the height limit as they extend to the lowest level of the second floor at most, and as front additions they

do not affect the sidewall size. Staff determines that the criteria are met with respect to the proposal.

#### **27.060 APPROVAL CRITERIA**

*The Planning Director shall make written findings with respect to the following criteria when approving, approving with conditions, or denying an application for development in flood management areas.*

- A. *Development, excavation, and fill shall be performed in a manner to maintain or increase flood storage and conveyance capacity and not increase design flood elevations.***

#### **STAFF RESPONSE NO. 4:**

The proposed staircase is an outdoor addition, and the proposed nearby interior addition has a crawlspace below base flood level which will have vents allowing water to pass through. Staff determines the criterion is met. Condition of Approval 2 is recommended as it requires the applicant to make necessary excavation on this property to compensate on an equal cubic-yard-to-cubic-yard basis for the volume of all new water-displacing development (foundation walls, slab on grade, staircase, etc.) below 46 foot elevation.

- B. *No net fill increase in any floodplain is allowed. All fill placed in a floodplain shall be balanced with an equal amount of soil material removal. Excavation areas shall not exceed fill areas by more than 50 percent of the square footage. Any excavation below bankful stage shall not count toward compensating for fill.***
- C. *Excavation to balance a fill shall be located on the same parcel as the fill unless it is not reasonable or practicable to do so. In such cases, the excavation shall be located in the same drainage basin and as close as possible to the fill site, so long as the proposed excavation and fill will not increase flood impacts for surrounding properties as determined through hydrologic and hydraulic analysis.***

(...)

#### **STAFF RESPONSE NO. 5:**

As noted above, Condition of Approval 2 is recommended as it requires the applicant to make necessary excavation on this property to compensate on an equal cubic-yard-to-cubic-yard basis for the volume of all new water-displacing development (foundation walls, slab on grade, staircase, etc.) below 46 foot elevation. Staff determines the criteria are met upon the inclusion of Condition of Approval 2.

- F. *Prohibit encroachments, including fill, new construction, substantial improvements, and other development in floodways unless certification by a professional civil engineer licensed to practice in the State of Oregon is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.***

G. *All proposed improvements to the floodplain or floodway which might impact the flood-carrying capacity of the river shall be designed by a professional civil engineer licensed to practice in the State of Oregon.*

(...)

J. *The applicant shall provide evidence that all necessary permits have been obtained from those federal, State, or local governmental agencies from which prior approval is required.*

(...)

**STAFF RESPONSE NO. 6:**

The applicant proposes development in the 100-year floodplain and the 1996 flood area, but not the floodway. The front interior addition will be built above the base 100-year flood elevation above a crawlspace. The staircase will be footed in the 1996 flood area only. The applicant has submitted a signed/stamped determination by a licensed engineer that the additions will not modify the pattern of the floodwaters because of their small size and because the air vents will allow passage of floodwaters through the crawlspace. As noted above, Condition of Approval 2 is recommended as it requires the applicant to make necessary excavation on this property to compensate on an equal cubic-yard-to-cubic-yard basis for the volume of all new water-displacing development (foundation walls, slab on grade, staircase, etc.) below 46 foot elevation. Staff determines the criteria are met upon the inclusion of Condition of Approval 2.

**27.070 CONSTRUCTION MATERIALS AND METHODS**

A. *All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage using methods and practices that minimize flood damage.*

B. *Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.*

(...)

**STAFF RESPONSE NO. 7:**

Development will be constructed of materials resistant to flood damage. Utilities will be above base flood level. The interior addition's floor will be above base flood level. Under this floor is proposed a concrete crawlspace with water vents. Staff determines the criteria are met.

F. *All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.*

**STAFF RESPONSE NO. 8:**

All proposed development will be attached to the existing house. All proposed development will be anchored per specification of a licensed engineer to prevent the phenomena described in this criterion. Staff determines the criterion is met.

## **27.080 RESIDENTIAL CONSTRUCTION**

*A. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to at least one foot above the base flood elevation.*

### **STAFF RESPONSE NO. 9:**

The 100-year or base flood elevation is 46 feet in this area per City GIS. The applicant proposes to build the proposed new habitable interior space at 49.1 feet in elevation which puts it three feet above the base flood elevation. Staff determines the criterion is met.

*B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must be certified by either a professional civil engineer or an architect licensed to practice in the State of Oregon, and must meet or exceed the following minimum criteria:*

- 1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.*

### **STAFF RESPONSE NO. 10:**

Two vents are proposed for the crawlspace. These will be designed to meet the requirement of one square inch of vent per one square foot of enclosed space. Staff determines the criterion is met.

- 2. The bottom of all openings shall be no higher than one foot above grade.*

### **STAFF RESPONSE NO. 11:**

The vents will not be higher than one foot above grade. Staff determines the criterion is met.

- 3. Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry or exit of floodwaters.*

### **STAFF RESPONSE NO. 12:**

Flood vents are proposed for the crawlspace. Staff determines the criterion is met.

- 4. Fully enclosed areas below the base flood elevation shall only be used for parking, access, and limited storage.  
(...)*

### **STAFF RESPONSE NO. 13:**

The only proposed fully enclosed area below base flood elevation is a crawlspace. Staff determines the criterion is met.

6. *All walls, floors, and ceiling materials located below the base flood elevation must be unfinished and constructed of materials resistant to flood damage.*

**STAFF RESPONSE NO. 14:**

The crawlspace will be concrete. Staff determines the criterion is met.

*C. Crawlspaces. Crawlspaces are a commonly used method of elevating buildings in special flood hazard areas (SFHAs) to or above the base flood elevation (BFE), and are allowed subject to the following requirements:*

1. *The building is subject to the Flood-Resistant Construction provisions of the Oregon Residential Specialty Code.*
  2. *They shall be designed by a professional engineer or architect licensed to practice in the State of Oregon to meet the standards contained in the most current Federal Emergency Management Agency's (FEMA) Technical Bulletin.*
  3. *The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.*
  4. *Flood vent openings shall be provided on at least two sides that equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. The total area of the flood vent openings must be no less than one square inch for each square foot of enclosed area. The bottom of each flood vent opening can be no more than one foot above the lowest adjacent exterior grade. For guidance on flood openings, see FEMA Technical Bulletin 1-93, Openings in Foundation Walls.*
  5. *Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls (studs and sheathing), but also any joists, insulation, or other materials that extend below the BFE. For more detailed guidance on flood-resistant materials see FEMA Technical Bulletin 2-93, Flood-Resistant Materials Requirements.*
- (...)
7. *The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade (LAG).*
  8. *The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall, must not exceed four feet at any point. This limitation will also prevent these crawlspaces from being converted into habitable spaces.*
  9. *There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. Possible options include natural drainage through*

*porous, well-drained soils and drainage systems such as low-point drains, perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity.*

**STAFF RESPONSE NO. 15:**

The applicant proposes a concrete crawlspace with vents, well-drained soil for drainage, and a perforated drainpipe for drainage, all designed to the specifications above with the certification of an engineer. See the applicants' findings in response to these criteria, on Pages 41-42 of Exhibit PD-3. Staff determines the criteria are met.

10. *The velocity of floodwaters at the site should not exceed five feet per second for any crawlspace. For velocities in excess of five feet per second, other foundation types should be used.*

(...)

**STAFF RESPONSE NO. 16:**

The fact that this location represents the upper reaches of a 100 year flood means that floodwater velocity is expected to be well below the five-feet-per-second standard. Staff determines the criterion is met.

**AFFIDAVIT OF NOTICE**

We, the undersigned do hereby certify that, in the interest of the party (parties) initiating a proposed land use, the following took place on the dates indicated below:

**GENERAL**

File No. MISC-13-05 Applicant's Name Charles: Julie Heath  
Development Name \_\_\_\_\_  
Scheduled Meeting/Decision Date 7-23-13

**NOTICE:** Notices were sent at least 20 days prior to the scheduled hearing, meeting, or decision date per Section 99.080 of the Community Development Code. (check below)

**TYPE A**

- A. The applicant (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- B. Affected property owners (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- C. School District/Board (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- D. Other affected gov't. agencies (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- E. Affected neighborhood assns. (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- F. All parties to an appeal or review (date) \_\_\_\_\_ (signed) \_\_\_\_\_

At least 10 days prior to the scheduled hearing or meeting, notice was published/posted:

Tidings (published date) \_\_\_\_\_ (signed) \_\_\_\_\_  
City's website (posted date) \_\_\_\_\_ (signed) \_\_\_\_\_

**SIGN**

At least 10 days prior to the scheduled hearing, meeting or decision date, a sign was posted on the property per Section 99.080 of the Community Development Code.

(date) \_\_\_\_\_ (signed) \_\_\_\_\_

**NOTICE:** Notices were sent at least 14 days prior to the scheduled hearing, meeting, or decision date per Section 99.080 of the Community Development Code. (check below)

**TYPE B \*\***

- A. The applicant (date) 7-9-13 (signed) S. Shroyer
- B. Affected property owners (date) 7-9-13 (signed) S. Shroyer
- C. School District/Board (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- D. Other affected gov't. agencies (date) 7-9-13 (signed) S. Shroyer
- E. Affected neighborhood assns. (date) 7-9-13 (signed) S. Shroyer

Notice was posted on the City's website at least 10 days prior to the scheduled hearing or meeting.  
Date: 7-9-13 (signed) S. Shroyer

**STAFF REPORT** mailed to applicant, City Council/Planning Commission and any other applicable parties 10 days prior to the scheduled hearing.

(date) \_\_\_\_\_ (signed) \_\_\_\_\_

**FINAL DECISION** notice mailed to applicant, all other parties with standing, and, if zone change, the County surveyor's office.

(date) \_\_\_\_\_ (signed) \_\_\_\_\_

**CITY OF WEST LINN  
PLANNING DIRECTOR DECISION  
FILE NO. MISC-13-05**

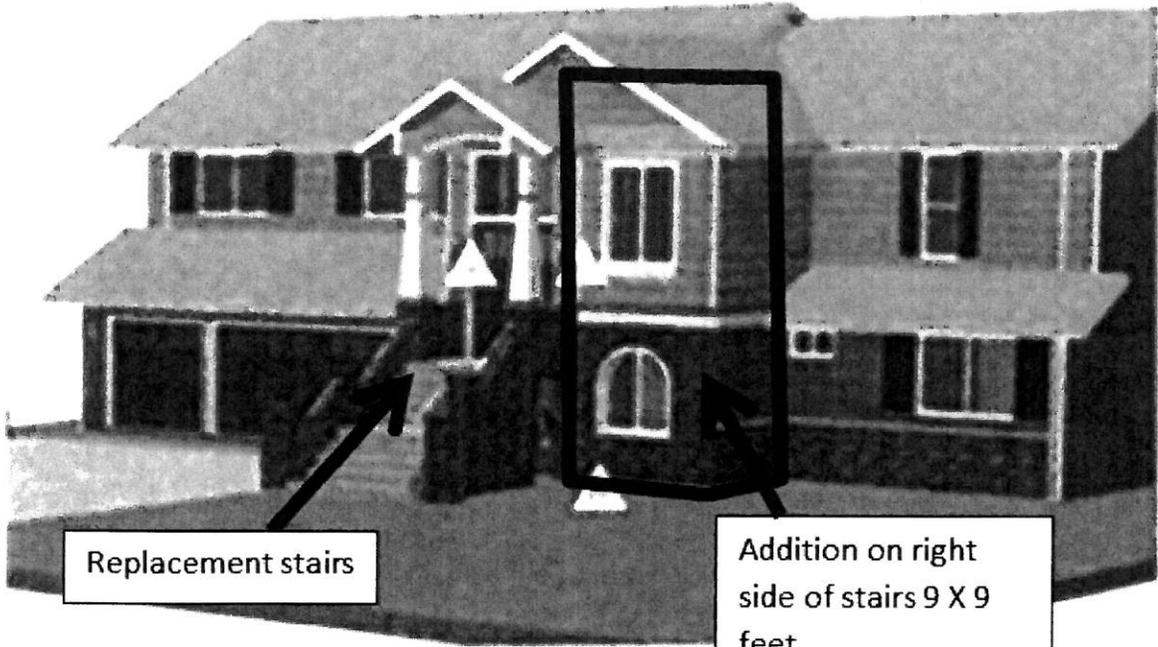
The West Linn Planning Director is considering a request to construct replacement stairs and a small addition in the flood management area at 19220 Nixon Avenue. You received notice because City records indicate that you own property within 100 feet of the subject property. The subject property is also identified as Tax Lot 1700 of Clackamas County Assessor's Map 21E-24AC.

The decision will be based on the approval criteria in Chapter 27 of the Community Development Code (CDC). The approval criteria from the CDC are available for review at City Hall, at the City Library, and at <http://www.westlinnoregon.gov/cdc>.

All relevant materials in the above noted file are available for inspection at no cost at City Hall, and on the city web site at <http://westlinnoregon.gov/planning/19220-nixon-ave-flood-management-area> or copies may be obtained for a minimal charge per page. Although there is no public hearing, your comments and ideas are invited and can definitely influence the final decision of the Planning Director. Planning staff looks forward to discussing the application with you. **The final decision is expected to be made on, and no earlier than, July 23, 2013**, so please contact us prior to that date. For further information, please contact Peter Spir, Associate Planner at 503- 723-2539 or [pspir@westlinnoregon.gov](mailto:pspir@westlinnoregon.gov). The alternate contact is Tom Soppe at 503-742-8660 or [tsoppe@westlinnoregon.gov](mailto:tsoppe@westlinnoregon.gov).

Any appeals to this decision must be filed within 14 days of the final decision date with the Planning Department. Failure to raise an issue in person or by letter, or failure to provide sufficient specificity to afford the decision-maker an opportunity to respond to the issue, precludes the raising of the issue at a subsequent time on appeal or before the Land Use Board of Appeals.

SHAUNA SHROYER  
Planning Administrative Assistant



Replacement stairs

Addition on right  
side of stairs 9 X 9  
feet

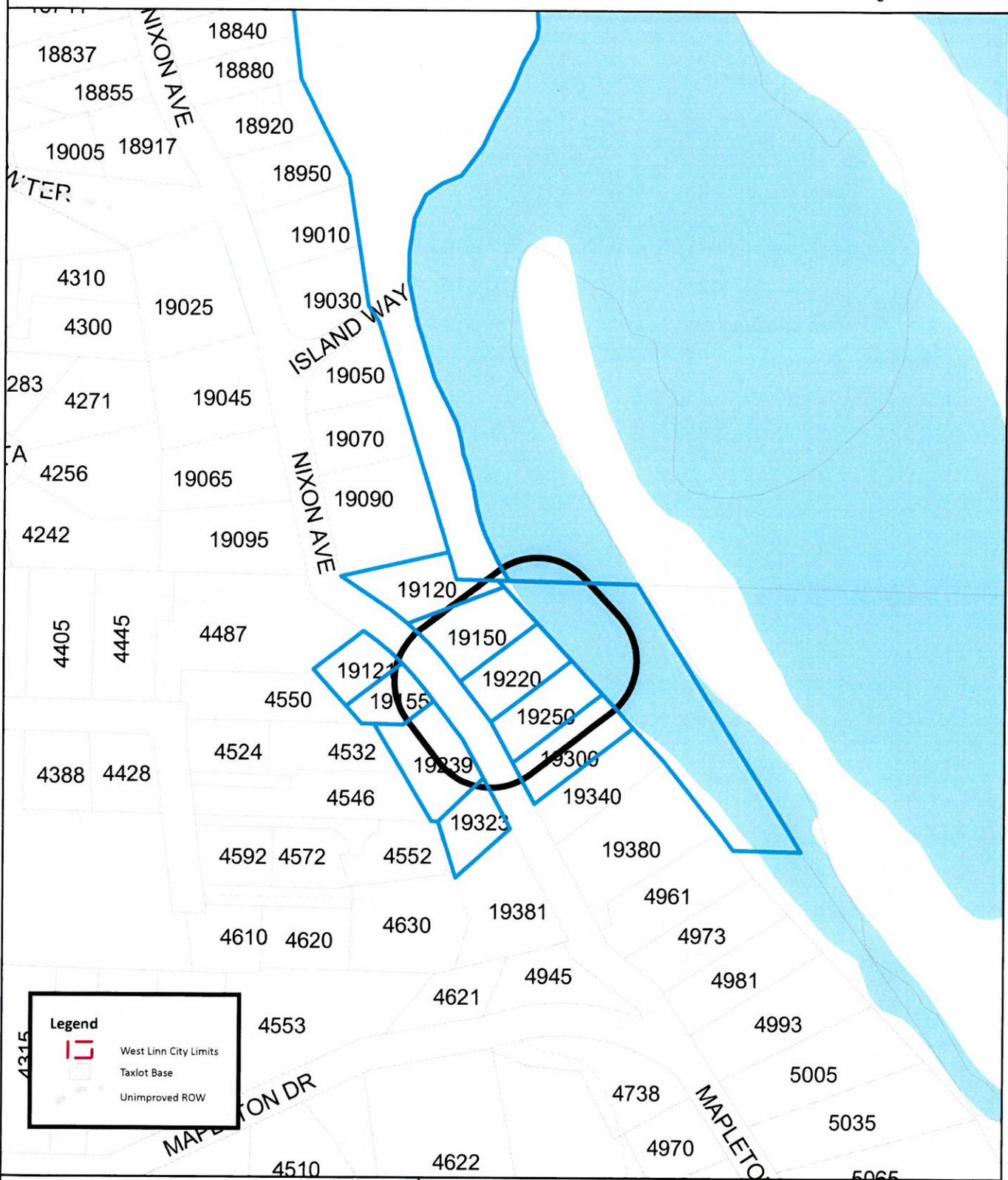


100' RADIUS

MISC - 13 - 05

19220 NIXON

# 19220 Nixon Avenue 100' Buffer



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Taxlot Base Source: Clackamas County GIS

NOT TO SCALE



SNAPNOTIFY.MXD / AHA APP 3-24-2011

User Name:  
Map Creation Date: Jul 09, 2013

ALDER JOHN ALAN & CATHERINE D  
19120 NIXON AVE  
WEST LINN, OR 97068

CENA ROBERT E  
19150 NIXON AVE  
WEST LINN, OR 97068

CITY OF WEST LINN  
22500 SALAMO RD #600  
WEST LINN, OR 97068

FRIEDMAN GLEN H  
19250 NIXON AVE  
WEST LINN, OR 97068

HEATH CHARLES C & JULIA W  
19220 NIXON AVE  
WEST LINN, OR 97068

MACALINO FELICISIMO M & CAROLINA  
M  
12428 57B AVE  
SURREY, BC V3X 3

MAIER PAUL E TRUSTEE  
1655 DEVON LN  
LAKE OSWEGO, OR 97034

MCCRACKEN JON G & PATRICIA J  
19300 NIXON AVE  
WEST LINN, OR 97068

RUSSELL JEFFREY J  
4552 KENTHORPE WAY  
WEST LINN, OR 97068

WOLF MARTIN J  
18930 SW SW HEIGHTSVIEW CT  
BEAVERTON, OR 97007

BRAD HORNE / ARCIFORM  
2303 N RANDOLPH AVE  
PORTLAND, OR 97227

SHANE EMPEY  
13995 SE MATILDA DR  
MILWAUKIE, OR 97267

OREGON DIVISION OF STATE LANDS  
ATTN: TAMI HUBERT  
775 SUMMER ST NE  
SALEM, OR 97301

US ARMY CORPS OF ENGINEERS  
ATTN: BILL DAVIS  
PO BOX 2946  
PORTLAND, OR 97208

WEST LINN CHAMBER OF  
COMMERCE  
1745 WILLAMETTE FALLS DR  
WEST LINN OR 97068

SUSAN VAN DE WATER  
HIDDEN SPRINGS NA DESIGNEE  
6433 PALOMINO WAY  
WEST LINN OR 97068

KEVIN BRYCK  
ROBINWOOD NA DESIGNEE  
18840 NIXON AVE  
WEST LINN OR 97068

DOREEN VOKES  
SUNSET NA SEC/TREAS  
4972 PROSPECT ST  
WEST LINN OR 97068

STEVE GARNER  
BHT NA PRESIDENT  
3525 RIVERKNOLL WAY  
WEST LINN OR 97068

SALLY MCLARTY  
BOLTON NA PRESIDENT  
19575 RIVER RD # 64  
GLADSTONE OR 97027

ALEX KACHIRISKY  
HIDDEN SPRINGS NA PRESIDENT  
6469 PALOMINO WAY  
WEST LINN OR 97068

JEF TREECE  
MARYLHURST NA PRESIDENT  
1880 HILLCREST DR  
WEST LINN OR 97068

BILL RELYEA  
PARKER CREST NA PRESIDENT  
3016 SABO LN  
WEST LINN OR 97068

ANTHONY BRACCO  
ROBINWOOD NA PRESIDENT  
2716 ROBINWOOD WAY  
WEST LINN OR 97068

KEN PRYOR  
SAVANNA OAKS NA VICE PRES  
2119 GREENE ST  
WEST LINN, OR 97068

ED SCHWARZ  
SAVANNA OAKS NA PRESIDENT  
2206 TANNER DR  
WEST LINN OR 97068

TRACY GILDAY  
SKYLINE RIDGE NA PRESIDENT  
1341 STONEHAVEN DR  
WEST LINN OR 97068

TROY BOWERS  
SUNSET NA PRESIDENT  
2790 LANCASTER ST  
WEST LINN OR 97068

JULIA SIMPSON  
WILLAMETTE NA PRESIDENT  
1671 KILLARNEY DR  
WEST LINN OR 97068

ALMA COSTON  
BOLTON NA DESIGNEE  
PO BOX 387  
WEST LINN OR 97068



CITY OF  
**West Linn**

July 2, 2013

Bradley Horne/Arciform LLC  
2303 N. Randolph Ave.  
Portland, OR 97068

SUBJECT: MISC-13-05 application for installation of replacement stairs and small addition on the front of the house at 19220 Nixon Ave.

Dear Brad:

We received the resubmittal on June 18, 2013. The Planning Department finds that this application is now **complete**. The City has 120 days from today's date (until October 16, 2013) to exhaust all local review of your application. You should receive notice later this week which will identify the expected decision date after a 14-day notice period. Tentatively, the decision would be on July 22, 2013.

Please contact me at 503-723-2539, or by email at [pspir@westlinnoregon.gov](mailto:pspir@westlinnoregon.gov) if you have any questions or comments. I will also be out of the office from July 10-August 6 so please direct any inquiries to Tom Soppe, Associate Planner at 503-742-8660 or [tsoppe@westlinnoregon.gov](mailto:tsoppe@westlinnoregon.gov).

Sincerely,

*Peter Spir*

Peter Spir  
Associate Planner

## DEVELOPMENT REVIEW APPLICATION

For Office Use Only		
STAFF CONTACT <i>Peter Spir</i>	PROJECT NO(S): <i>MI - 1305</i>	
NON-REFUNDABLE FEE(S)	REFUNDABLE DEPOSIT(S) <i>\$ 1050</i>	TOTAL <i>1050</i>

**Type of Review** (Please check all that apply):

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Annexation (ANX)                      | <input type="checkbox"/> Historic Review                                  | <input type="checkbox"/> Subdivision (SUB)                               |
| <input type="checkbox"/> Appeal and Review (AP) *              | <input type="checkbox"/> Legislative Plan or Change                       | <input type="checkbox"/> Temporary Uses *                                |
| <input type="checkbox"/> Conditional Use (CUP)                 | <input type="checkbox"/> Lot Line Adjustment (LLA) */**                   | <input type="checkbox"/> Time Extension *                                |
| <input type="checkbox"/> Design Review (DR)                    | <input type="checkbox"/> Minor Partition (MIP) (Preliminary Plat or Plan) | <input type="checkbox"/> Variance (VAR)                                  |
| <input type="checkbox"/> Easement Vacation                     | <input type="checkbox"/> Non-Conforming Lots, Uses & Structures           | <input type="checkbox"/> Water Resource Area Protection/Single Lot (WAP) |
| <input type="checkbox"/> Extraterritorial Ext. of Utilities    | <input type="checkbox"/> Planned Unit Development (PUD)                   | <input type="checkbox"/> Water Resource Area Protection/Wetland (WAP)    |
| <input type="checkbox"/> Final Plat or Plan (FP)               | <input type="checkbox"/> Pre-Application Conference (PA) */**             | <input type="checkbox"/> Willamette & Tualatin River Greenway (WRG)      |
| <input checked="" type="checkbox"/> Flood Management Area      | <input type="checkbox"/> Street Vacation                                  | <input type="checkbox"/> Zone Change                                     |
| <input type="checkbox"/> Hillside Protection & Erosion Control |   |  |

Home Occupation, Pre-Application, Sidewalk Use, Sign Review Permit, and Temporary Sign Permit applications require different or additional application forms, available on the City website or at City Hall.

<b>Site Location/Address:</b> <i>19220 Nixon Ave</i> <i>West Linn, OR 97068</i>	Assessor's Map No.: <i>21E24AC</i>
	Tax Lot(s): <i>1700</i>
	Total Land Area: <i>12,761 sq Ft</i>

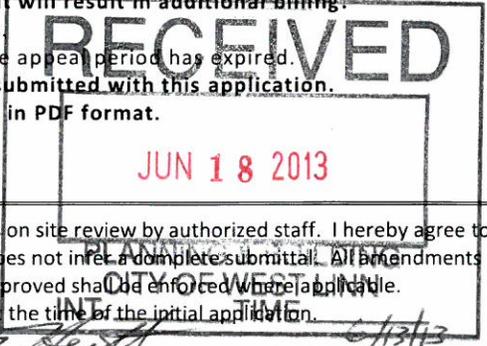
**Brief Description of Proposal:**  
*Small office addition and addition of exterior entry stairs to replace existing dilapidated wood stairs*

<b>Applicant Name:</b> <i>Arciform LLC / Bradley Horne</i> <small>(please print)</small> Address: <i>2303 N. Randolph Ave</i> City State Zip: <i>Portland, OR 97227</i>	Phone: <i>503.493.7344</i> Email: <i>brad@arciform.com</i>
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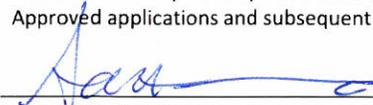
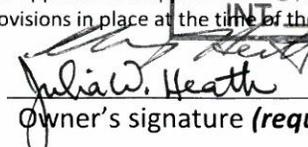
<b>Owner Name</b> (required): <i>Julie Heath</i> <small>(please print)</small> Address: <i>19220 Nixon Ave</i> City State Zip: <i>West Linn, OR 97068</i>	Phone: <i>503.307.1053</i> Email: <i>Jawheath@msn.com</i>
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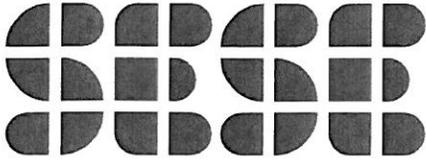
<b>Consultant Name:</b> <i>Shane Empey</i> <small>(please print)</small> Address: <i>13995 SE Matilda Dr.</i> City State Zip: <i>Milwaukie, OR 97267</i>	Phone: <i>503.998.7704</i> Email: <i>Shane.Empey.pe@gmail.com</i>
---	--

1. All application fees are non-refundable (excluding deposit). **Any overruns to deposit will result in additional billing.**
  2. The owner/applicant or their representative should be present at all public hearings.
  3. A denial or approval may be reversed on appeal. No permit will be in effect until the appeal period has expired.
  4. **Three (3) complete hard-copy sets (single sided) of application materials must be submitted with this application.**  
One (1) complete set of digital application materials must also be submitted on CD in PDF format.  
If large sets of plans are required in application please submit only two sets.
- \* No CD required / \*\* Only one hard-copy set needed



The undersigned property owner(s) hereby authorizes the filing of this application, and authorizes on site review by authorized staff. I hereby agree to comply with all code requirements applicable to my application. Acceptance of this application does not infer a complete submittal. All amendments to the Community Development Code and to other regulations adopted after the application is approved shall be enforced where applicable. Approved applications and subsequent development is not vested under the provisions in place at the time of the initial application.

 Applicant's signature	<i>6/18/13</i> Date	 Owner's signature (required)	<i>6/13/13</i> Date
---	------------------------	--	------------------------



Shane  
Empey, P.E.  
Structural  
Engineering

13995 SE MATILDA DR., MILWAUKIE OR, 97267, 503-998-7704. SHANE.EMPEY.PE@GMAIL.COM

Project: Heath Residence: Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: June 2013 By: SAE Sheet No.: 1 / 1

**Field Memo** Subject: City of West Linn chapter 27.060 F&G, & chapter 27.080 B Time: -  
 **Job Observation** To: Bradley Horne, Richard DeWolfe Ref. Sheet: -  
 **Revision Sketch** Distribution: - - -

I HAVE PROVIDED CONSULTATION FOR THE DESIGN OF THE STRUCTURAL SYSTEM FOR THE PROPOSED FRONT ADDITION AND CONCRETE ENTRY STAIRWAY. IT HAS BEEN DISCOVERED THAT ALTHOUGH THE PROPERTY IS ELEVATED ABOVE THE RIVER AND IS ON A RELATIVELY FLAT LOT, IT HAS BEEN D

I HAVE BEEN ASKED TO PROVIDE MY OPINION OF THE LIKELIHOOD THAT THE PROPOSED SCOPE OF CONSTRUCTION WOULD IMPACT FLOOD LEVELS. BY DEFINITION, ANYTHING SUBMERGED IN A FLUID WITH ALL OTHER VARIABLES REMAINING CONSTANT, WILL RAISE THE FLUID LEVEL. I DON'T BELIEVE ANYONE IS ASKING FOR THIS ANSWER. IT IS MY UNDERSTANDING THAT IN THIS CASE, THE INTENT IS FOR A CIVIL ENGINEER, SOMEONE WITH ACADEMIC KNOWLEDGE OF DAMS AND DIKES, TO CATCH THE RARE OCCURRENCE WHEN A CONSTRUCTION PROJECT IS ALTERING THE TYPOGRAPHY OF THE RIVER BANK SUCH THAT IT MAY AFFECT FLOODWATERS ENOUGH TO CAUSE DAMAGE TO NEIGHBORING PROPERTIES.

THE PROJECT IN QUESTION IS LOCATED ON A RELATIVELY FLAT LOT WHICH IS ELEVATED ABOVE THE RIVER. THE ADDITION IS LOCATED IN AN INSIDE CORNER SUCH THAT THE RIVER FLOW EXPOSURE OF THE STRUCTURE HAS NOT BEEN INCREASED. THE CONCRETE ENTRY STAIRS NEXT TO THE DRIVEWAY WOULD INCREASE THE RIVER FLOW EXPOSURE BUT THE 3FT WIDE x 7FT TALL OPENING BETWEEN THE STAIRS AND BUILDING COULD ALLOW FOR A GREAT DEAL OF WATER FLOW. THE STAIRS WOULD NOT PRACTICALLY IMPEDE THE RIVER FLOW ANY MORE THAN A DRIVEWAY FULL OF CARS WOULD.

WITH SPECIFIC REGARDS TO:

27.060 (F) - THE ADDITION WILL REQUIRE EXCAVATION OF SOIL. THE STAIRS HAVE A FOOTPRINT APROX. THAT OF A MINIVAN. I DO NOT BELIEVE THIS WILL CAUSE A SUBSTANTIAL INCREASE IN FLOOD LEVELS DURING THE OCCURRENCE OF THE BASE FLOOD.

27.060 (G) - I DO NOT BELIEVE THIS PROJECT IS LIKELY TO IMPACT THE FLOOD-CARRYING CAPACITY OF THE RIVER. DUAL FUNCTION VENTS HAVE BEEN PROVIDED TO ACCOMMODATE OPTIMAL RIVER FLOW DURING A FLOOD.

27.080 (B) -

1. THE DUAL PURPOSE VENTS BEING USED ARE MARKETED TO ACCOMMODATE 200 SQ FT OF FLOOR AREA. THE ADDITION IS LESS THAN 100 SQ FT.
2. TO MY KNOWLEDGE THE BOTTOM OF THE OPENING WILL BE WITHIN 1 FT OF GRADE.
3. TO MY KNOWLEDGE THE DUAL PURPOSE VENTS ARE MARKETED TO OPEN UPON FLOOD CONTACT.
4. THE AREA BELOW THE FLOOR IS ONLY INTENDED AS CRAWLSPACE.
5. TO MY KNOWLEDGE THERE ARE NO PLANS FOR NON-CRAWLSPACE USE.
6. TO MY KNOWLEDGE THERE ARE NO PLANS FOR ANY FINISHES.

TO CONCLUDE, I DO NOT FEEL THE PROPOSED ADDITION AND STAIRS WILL PRACTICALLY EFFECT THE FLOW OF THE FLOOD RIVER. THIS IS NOT BASED ON CALCULATIONS, ONLY MY INITIAL JUDGEMENT. SHOULD FURTHER EXPLORATION BE REQUIRED I COULD SEE TO IT THAT SUCH ANALYSIS BE PERFORMED.

SHANE EMPEY, P.E.  
SHANE EMPEY STRUCTURAL ENGINEERING

# STRUCTURAL CALCULATIONS

FOR

## Heath Residence Entry Addition/Remodel

19220 Nixon Ave  
West Linn, Oregon 97068



RENEWAL DATE: 12 / 31 / 2013

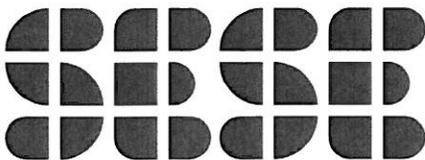
SHANE EMPEY STRUCTURAL ENGINEERING (SESE) was retained in a limited capacity for this project. Design is based upon information provided by the client who is solely responsible for accuracy of it. SESE has prepared these calculations solely for the items listed above. The owner, architect, and/or contractor shall hold SESE harmless for any member or system not part of this analysis.

No litigation may take place against SESE prior to documentation by multiple neutral parties registered as Professional Engineers as to errors found in these documents. The use of these documents represents acceptance of these terms.

### Contents

Narrative	NARR
Design Criteria	DC
Framing Calculations	1 - 6
Lateral Calculations	L1 - L4
Redlined Arch'l Drawings included as 8.5x11 sheets	R1 - R4

Contact Person: SHANE A. EMPEY



Shane  
Empey, P.E.  
Structural  
Engineering

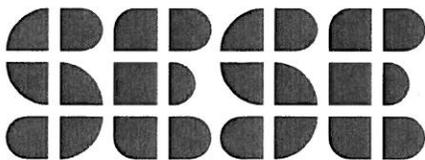
Project: Heath Residence:  
Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: March 2013 By: SAE Sheet No.: COVER

## NARRATIVE

THE EXISTING SINGLE TWO STORY RESIDENCE IS A CONVENTIONALLY WOOD FRAMED STRUCTURE WITH WOOD DIAPHRAGMS. IT IS PROPOSED TO DO THE FOLLOWING:

- REMOVE THE WOOD ENTRY STAIRS AND REPLACE WITH A REINFORCED CONCRETE/MASONRY STRUCTURE.
- EXPAND THE LOWER LEVEL BEDROOM TOWARD THE EXISTING ENTRY LANDING.

LATERAL LOADS HAVE BEEN MITIGATED BY CREATING PERFORATED SHEAR WALLS AROUND NEW AND EXISTING WINDOW OPENINGS.



Shane  
Empey, P.E.  
Structural  
Engineering

13995 SE MATILDA DR., MILWAUKIE OR, 97267, 503-998-7704. SHANE.EMPEY.PE@GMAIL.COM

Project: Heath Residence:  
Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: March 2013 By: SAE Sheet No.: NARR

## DESIGN CRITERIA

### Design per 2009 IBC as modified by the 2010 OSSC

#### Vertical Loads

12 psf.....(DL)	Exterior wall DL.....	10 psf
20 psf.....(SL)	Interior wall DL.....	8 psf
<hr/>		
32 psf.....(TL - ROOF)		
12 psf.....(DL)		
40 psf.....(LL)		
<hr/>		
52 psf.....(TL - FLOOR)		

#### Wind: (See Attached Analysis)

Based on ASCE 7 (method 2)

#### Seismic

Site Classification D (assumed)

$$F_a := 1.11 \quad F_v := 1.724$$

$$S_s := 0.974 \quad S_1 := 0.338$$

$$S_{DS} := 0.721 \quad S_{D1} := 0.388$$

$$R := 6.5 \quad (\text{light framed wood shear walls})$$

$$I := 1.0 \quad (\text{Standard Occupancy Structure})$$

$$V_{\text{strength}} := (S_{DS} * I) / R * W = 0.111 * W \quad (\text{Main Lateral System})$$

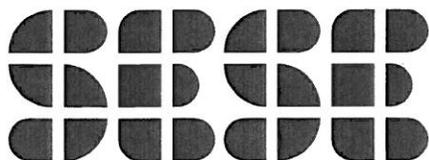
$$V_{\text{stress}} := 0.7 * V_{\text{strength}} = 0.078 * W \quad (\text{Main Lateral System})$$

#### Structural System

Pre-man. Wood Trusses, Wood framed bearing/shear walls, wood framed diaphragms

#### Soil Bearing (ASUMED - TO BE VERIFIED BY BUILDING OFFICIAL)

1500 psf Allowable



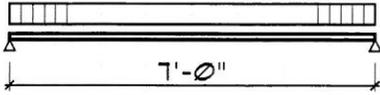
Shane  
Empey, P.E.  
Structural  
Engineering

Project: Heath Residence:  
Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: March 2013 By: SAE Sheet No.: DC

# FRAMING CALCULATIONS

B1 LEDGER BEAM  
L6x4x.375

TRIB = 2.5 FT  
DL = 75 PSF  
LL = 100 PSF



$$f_b = 2,7000 \cdot 12/16 = 2025 \text{ ksi}$$

$$b/t = 10.7$$

$$65/\sqrt{36} = 10.8$$

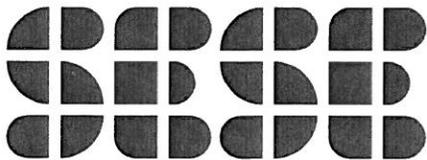
$$F_b = 36(\frac{2}{3}) = 24 \text{ ksi} \quad \text{-OK-}$$

$$\Delta_{DL} = 0.07' = L/1200$$

$$\Delta_{LL} = 0.10' = L/840$$

$$\Delta_{TL} = 0.17' = L/494$$

-OK-



Shane  
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Structural  
Engineering

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Project: Heath Residence:  
Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: March 2013 By: SAE Sheet No.: 1

Title :  
 Dsgnr :  
 Description :

Job #  
 Date: 6:22AM, 12 MAR 13

Scope :

## Timber Beam & Joist

Page 1

13-103 heath addition.ecw:Calculations

### Description

### Timber Member Information

Timber Section	Flr Joists		Basement Beam
		2x8	MicroLam: 5.25x7.2
Beam Width	in	1.500	5.250
Beam Depth	in	7.250	7.250
Le: Unbraced Length	ft	0.00	0.00
Timber Grade		Douglas Fir - Larch, Truss Joist - MacMil	
Fb - Basic Allow	psi	900.0	2,600.0
Fv - Basic Allow	psi	180.0	285.0
Elastic Modulus	ksi	1,600.0	1,900.0
Load Duration Factor		1.000	1.150
Member Type		Sawn	Manuf/Pine
Repetitive Status		Repetitive	No

### Center Span Data

Span	ft	7.00	9.00
Dead Load	#/ft	20.00	380.00
Live Load	#/ft	54.00	525.00

### Results

	Ratio =	0.3333	0.7996
Mmax @ Center	in-k	5.44	109.96
@ X =	ft	3.50	4.50
fb : Actual	psi	413.9	2,390.8
Fb : Allowable	psi	1,242.0	2,990.0
		Bending OK	Bending OK
fv : Actual	psi	29.7	139.9
Fv : Allowable	psi	180.0	327.8
		Shear OK	Shear OK

### Reactions

@ Left End	DL	lbs	70.00	1,710.00
	LL	lbs	189.00	2,362.50
	Max. DL+LL	lbs	259.00	4,072.50
@ Right End	DL	lbs	70.00	1,710.00
	LL	lbs	189.00	2,362.50
	Max. DL+LL	lbs	259.00	4,072.50

### Deflections

	Ratio OK	Deflection OK
Center DL Defl	in	-0.014
L/Defl Ratio		5,925.6
Center LL Defl	in	-0.038
L/Defl Ratio		2,194.7
Center Total Defl	in	-0.052
Location	ft	3.500
L/Defl Ratio		1,601.5

Title :  
 Dsgnr:  
 Description :  
 Scope :

Job #  
 Date: 7:55PM, 12 MAR 13

## Restrained Retaining Wall Design

Page 1

13-103 heath addition.ecw:Calculations

Description Full Height Stair Walls

Criteria	Soil Data	Footing Strengths & Dimensions
Retained Height = 6.00 ft	Allow Soil Bearing = 1,500.0 psf	f <sub>c</sub> = 3,000 psi
Wall height above soil = 2.75 ft	Equivalent Fluid Pressure Method	F <sub>y</sub> = 60,000 psi
Total Wall Height = 8.75 ft	Heel Active Pressure = 45.0	Min. As % = 0.0014
	Toe Active Pressure = 0.0	Toe Width = 0.50 ft
	Passive Pressure = 150.0	Heel Width = 2.00
Top Support Height = 6.00 ft		Total Footing Width = 2.50
Slope Behind Wall = 0.00 : 1	Footing  Soil Friction = 0.300	Footing Thickness = 10.00 in
Height of Soil over Toe = 6.00 in	Soil height to ignore for passive pressure = 0.00 in	Key Width = 0.00 in
Soil Density = 110.00 pcf		Key Depth = 0.00 in
		Key Distance from Toe = 0.00 ft
Wind on Stem = 0.0 psf		Cover @ Top = 3.00 in @ Btm.= 3.00 in

### Design Summary

Total Bearing Load = 1,954 lbs	...resultant ecc. = 3.06 in
Soil Pressure @ Toe = 1,259 psf OK	Soil Pressure @ Heel = 304 psf OK
Allowable = 1,500 psf	Soil Pressure Less Than Allowable
ACI Factored @ Toe = 1,763 psf	ACI Factored @ Heel = 425 psf
Footing Shear @ Toe = 0.0 psi OK	Footing Shear @ Heel = 21.1 psi OK
Allowable = 93.1 psi	
Reaction at Top = 162.0 lbs	Reaction at Bottom = 888.6 lbs

### Concrete Stem Construction

Thickness = 6.00 in	F <sub>y</sub> = 60,000 psi
Wall Weight = 72.5 pcf	f <sub>c</sub> = 2,500 psi
Stem is FIXED to top of footing	

Sliding Calcs Slab Resists All Sliding !  
 Lateral Sliding Force = 888.6 lbs

	@ Top Support	Mmax Between Top & Base	@ Base of Wall
<b>Design height</b>	Stem OK	Stem OK	Stem OK
Rebar Size	# 4	# 4	# 4
Rebar Spacing	12.00 in	12.00 in	12.00 in
Rebar Placed at	Center	Center	Center
Rebar Depth 'd'	3.00 in	3.00 in	3.00 in
<b>Design Data</b>			
fb/FB + fa/Fa	0.000	0.198	0.443
Mu.....Actual	0.0 ft-#	492.6 ft-#	1,101.6 ft-#
Mn * Phi.....Allowable	2,487.6 ft-#	2,487.6 ft-#	2,487.6 ft-#
Shear Force @ this height	0.0 lbs		1,101.6 lbs
Shear.....Actual	0.00 psi		30.60 psi
Shear.....Allowable	85.00 psi		85.00 psi
Rebar Lap Required	18.72 in	18.72 in	
Rebar embedment into footing	=		6.00 in

### Footing Design Results

	Toe	Heel
Factored Pressure =	1,763	425 psf
Mu' : Upward =	209	0 ft-#
Mu' : Downward =	32	0 ft-#
Mu: Design =	178	635 ft-#
Actual 1-Way Shear =	0.00	21.13 psi
Allow 1-Way Shear =	93.11	93.11 psi

### Other Acceptable Sizes & Spacings:

Toe: None Spec'd -or- Not req'd, Mu < S \* Fr  
 Heel: None Spec'd -or- Not req'd, Mu < S \* Fr  
 Key: No key defined -or- No key defined

Title :  
 Dsgnr:  
 Description :  
 Scope :

Job #  
 Date: 7:55PM, 12 MAR 13

**Restrained Retaining Wall Design**

Description Full Height Stair Walls

**Summary of Forces on Footing : Slab RESISTS sliding, stem is FIXED at footing**

Forces acting on footing for soil pressure

>>> Sliding Forces are restrained by the adjacent slab

**Load & Moment Summary For Footing : For Soil Pressure Calcs**

Moment @ Top of Footing Applied from Stem	=		-648.0 ft-#
Surcharge Over Heel	=	lbs ft	ft-#
Axial Dead Load on Stem	=	lbs ft	ft-#
Soil Over Toe	=	27.5 lbs 0.25 ft	6.9 ft-#
Surcharge Over Toe	=	lbs ft	ft-#
Stem Weight	=	634.4 lbs 0.75 ft	475.8 ft-#
Soil Over Heel	=	990.0 lbs 1.75 ft	1,732.5 ft-#
Footing Weight	=	302.1 lbs 1.25 ft	377.6 ft-#
<b>Total Vertical Force</b>	=	1,954.0 lbs	
		Base Moment =	1,944.7 ft-#

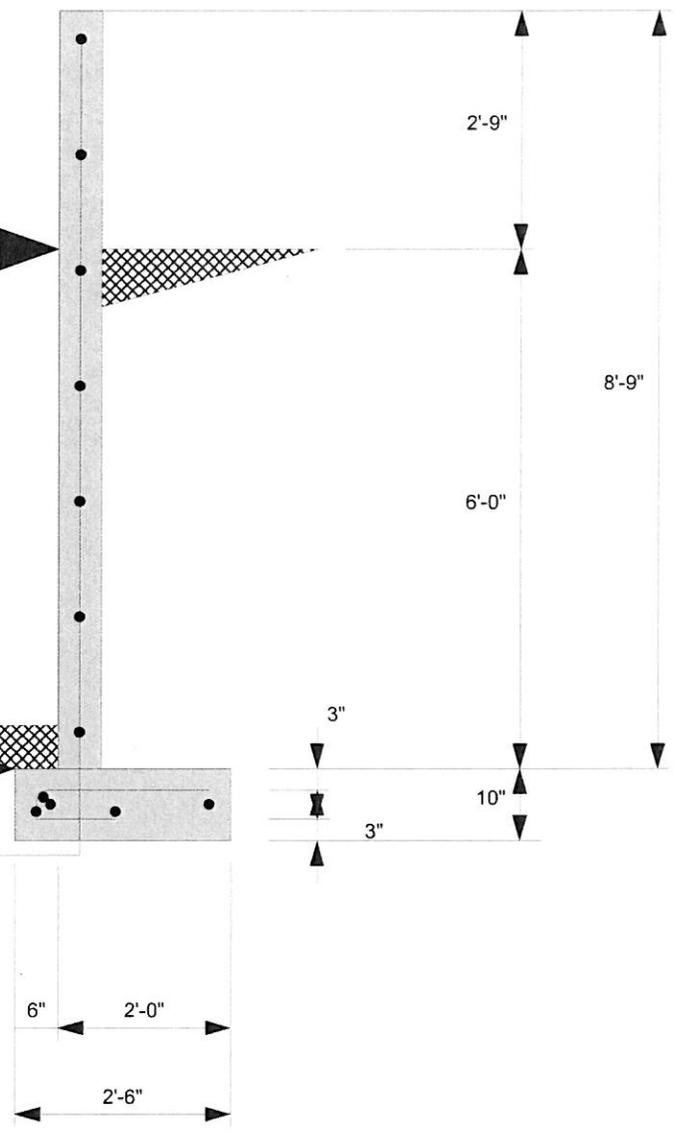
**Soil Pressure Resulting Moment = 497.7ft-#**

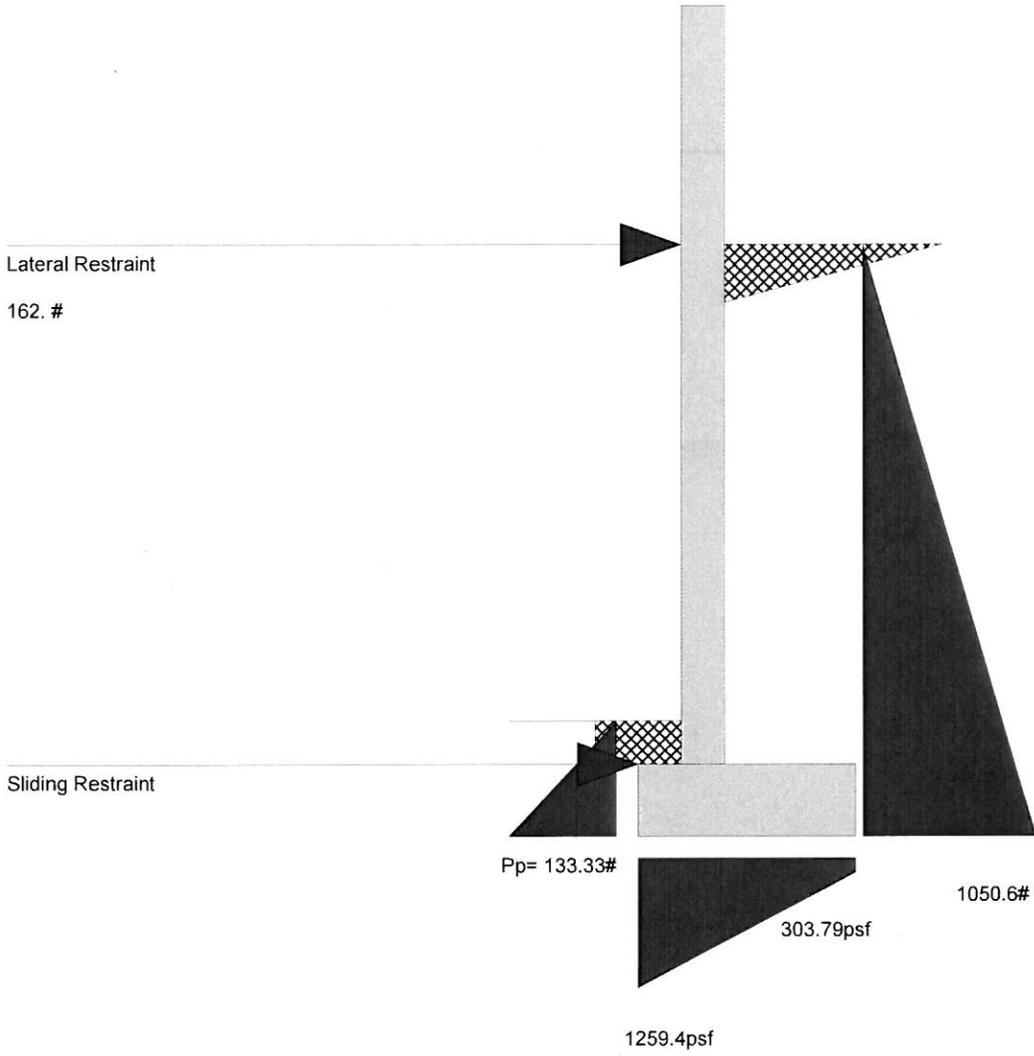
6.00005" Concrete w/ #4 @ 12."

Lateral Restraint ▲  
162. #  
6.00005" Concrete w/ #4 @ 12."  
6'-0"

6.00005" Concrete w/ #4 @ 12."  
Sliding Restraint ▲  
6"

#0@0.in  
@ Toe  
#0@0.in  
@ Heel





Wind Loads for Main Wind Force Resisting System (MWFRS) Using ASCE 7-05 Method 2 for all heights (gable/hipped roofs)											
Building Dimensions		V (mph):	95	Cp		N-S wind		E-W wind			
N - S (ft):	30	Exposure	B	Windward Wall		0.80	1.30	0.80	1.10		
E - W (ft):	60	$I_w$ :	1.00	Leeward Wall		-0.50		-0.30			
$h_m$ (ft):	20	$K_d$ :	0.85	Windward Roof		-0.10	0.48	0.07	0.64		
Roof Pitch:	4 : 12	G:	0.85	Leeward Roof		-0.58		-0.57			
Roof Angle (deg)	18.4	<b>NORTH - SOUTH WIND</b>				<b>EAST - WEST WIND</b>					
$q_h$ (psf)		12.3		WALLS		ROOF		WALLS		ROOF	
Height (ft)		$K_z$		$q_z$ (psf)		LW "-P":		LW "-P":		LW "-P":	
0-15		0.57		11.3		-5.2		-6.0		-3.1	
20		0.62		12.3		LW "+P" (psf)		LW "+P" (psf)		LW "+P" (psf)	
25		0.67		13.1		TOTAL		TOTAL		TOTAL	
30		0.70		13.8		WW		WW		WW	
						TOTAL		TOTAL		TOTAL	
						"+P" (psf)		"+P" (psf)		"+P" (psf)	
						"-P" (psf)		"-P" (psf)		"-P" (psf)	
						7.7		12.9		-0.9	
						-0.9		7.0		7.7	
						8.3		13.5		-1.0	
						-1.0		7.0		8.3	
						8.9		14.1		-1.1	
						-1.1		7.1		8.9	
						9.4		14.6		-1.1	
						-1.1		7.2		9.4	
						9.4		12.5		0.9	
						0.9		6.8		0.9	

$$q_z = 0.0256 \times K_z \times K_{zt} \times K_d \times V^2 \times I_w \quad (\text{ASCE Eq. 6-15})$$

$$K_{zt} = 1.0$$

$$P = q(GC_p) - q_i(GC_{pi}) \quad (\text{ASCE Eq. 6-17})$$

(FOR TYPICAL STRUCTURES, INTERNAL COMPONENTS OF WW AND LW PRESSURES CANCEL. THIS ANALYSIS HAS THEREFORE IGNORED THESE COMPONENTS)

WIND VS SEISMIC CHECK:

$$W_{wind} = 12.5 \text{ psf} \times (8 \text{ ft} / 2 + 8 \text{ ft} + 1 \text{ ft} + 8 \text{ ft} / 2) = 212.5 \text{ PLF}$$

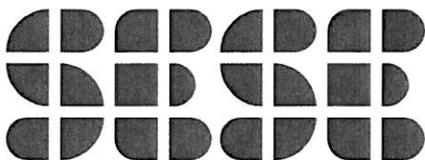
- THEREFORE WIND CONTROLS LATERAL DESIGN -

$$W_{seis} = C_s \times W_p = 0.078 \times 1768 = 138 \text{ PLF}$$

$$C_s = 0.078$$

$$W_p = 12 \text{ psf} \times 62 \text{ ft} \times 2 + 10 \text{ psf} \times 14 \text{ ft} \times 2 = 1768$$

- SEE ATTACHED SHEETS FOR MORE INFORMATION ANALYSIS -



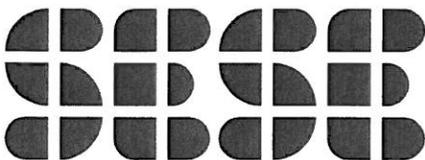
Shane  
Empey, P.E.  
Structural  
Engineering

13995 SE MATILDA DR., MILWAUKIE OR, 97267, 503-998-7704. SHANE.EMPEY.PE@GMAIL.COM

Project: Heath Residence: Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: March 2013 By: SAE Sheet No.: L1

1st Floor Walls			
V (#'s):	3200	Wind	
v (plf):	135	1/2" apa w/ 8d @6/12 ncap= 357 plf (wind)	
H' (ft):	12.5		
<u>L (ft)</u>	<u>wd (plf)</u>	<u>Pd (#)</u>	<u>T (#)</u>
13	200	400	670
2.75	200	400	1285
5.25	200	400	1135
2.67	200	400	1290
23.67			

See Perf. Analysis  
See Perf. Analysis  
See Perf. Analysis  
See Perf. Analysis  
See Perf. Analysis



**Shane  
Empey, P.E.  
Structural  
Engineering**

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Project: Heath Residence:  
Entry Addition/Remodel

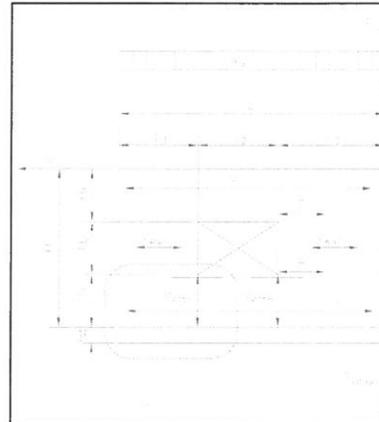
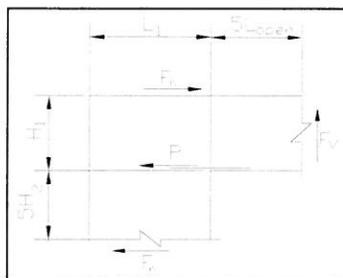
Client: Arciform Proj. No.: 13-103

Date: March 2013 By: SAE Sheet No.: L2

# Shear Line V1

This analysis uses the force transfer method of designing a perforated shear wall. The free body diagrams shown at right are a generic condition and the input values of  $L_1$  and  $H_1$  should be input as the worst case which would be the smallest dimensions.

V =	1069	lb	Total shear force.
H =	12	ft	Equiv. Lateral Height
L =	13.75	ft	Total length of wall.
$L_1$ =	5.25	ft	Wall pier length.
$L_2$ =	6	ft	Length of opening.
$L_3$ =	2.5	ft	Wall pier length.
H =	8	ft	Total height of wall.
$H_1$ =	1.25	ft	Critical section depth.
$H_2$ =	4	ft	Height of opening.
$\omega_d$ =	200	plf	Uniform resisting dead load
$P_d$ =	400	lb	Header resisting dead load

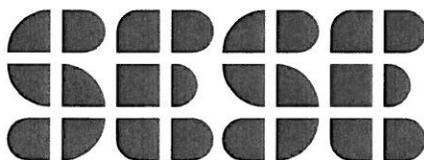


v =	78	plf	$v = \frac{V}{L}$	Shear at top and bottom plates.
$v_{wall}$ =	204	plf	$v_{wall} = \frac{V}{L_{wall}}$	Shear in wall piers.
$F_h$ =	428	lb	$F_h = v(L_1 + 0.5L_{open})$	Horizontal force at critical section.
$F_v$ =	253	lb	$F_v = \frac{F_h(H_1 + .5H_2)}{L_1 + .5L_{open}}$	Vertical force at critical section.
P =	607	lb	$P = \frac{F_v(.5L_{open})}{H_1}$	Critical strap force.
$v_{head}$ =	202	plf	$v_{head} = \frac{F_v}{H_1}$	Shear in panel above opening.

$T_{holdown} = v * H_{hdn} - 6(\omega_d * L/2 + P_d) = -132$  lb Holdown loads at ends

<b>Strap must be designed for 607 lb force.</b>	Simpson CS20	Tcap= 1,030#
<b>Anchor bolts must be designed for 78 plf shear.</b>	1/2" @48" o/c	ncap= 260 plf
<b>Shearwalls must be designed for 204 plf shear.</b>	1/2" apa w/ 8d @6/12	ncap= 357 plf
<b>Panels above and below the opening must be designed for 202 plf shear.</b>	1/2" apa w/ 8d @6/12	ncap= 357 plf

**NO HOLDOWN REQUIRED**



Shane  
Empey, P.E.  
Structural  
Engineering

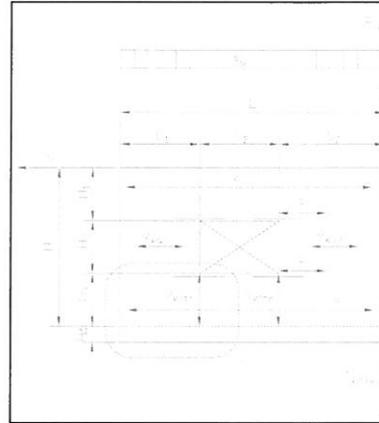
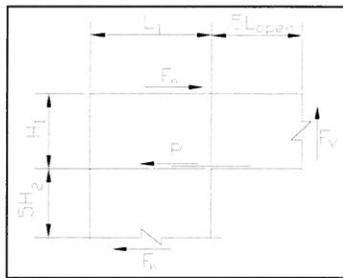
13995 SE MATILDA DR., MILWAUKIE OR, 97267, 503-998-7704. SHANE.EMPEY.PE@GMAIL.COM

Project: Heath Residence: Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: March 2013 By: SAE Sheet No.: L3

# Shear Line V2

This analysis uses the force transfer method of designing a perforated shear wall. The free body diagrams shown at right are a generic condition and the input values of  $L_1$  and  $H_1$  should be input as the worst case which would be the smallest dimensions.

V =	1845	lb	Total shear force.
H' =	12.5	ft	Equiv. Lateral Height
L =	20	ft	Total length of wall.
L <sub>1</sub> =	13	ft	Wall pier length.
L <sub>2</sub> =	4.33	ft	Length of opening.
L <sub>3</sub> =	2.75	ft	Wall pier length.
H =	8	ft	Total height of wall.
H <sub>1</sub> =	1.25	ft	Critical section depth.
H <sub>2</sub> =	5	ft	Height of opening.
ω <sub>d</sub> =	200	plf	Uniform resisting dead load
P <sub>d</sub> =	400	lb	Header resisting dead load

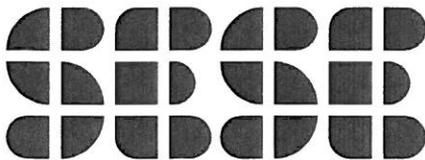


v =	92	plf	$v = \frac{V}{L}$	Shear at top and bottom plates.
v <sub>wall</sub> =	142	plf	$v_{wall} = \frac{V}{L_{wall}}$	Shear in wall piers.
F <sub>h</sub> =	454	lb	$F_h = v(L_1 + 0.5L_{open})$	Horizontal force at critical section.
F <sub>v</sub> =	346	lb	$F_v = \frac{F_h(H_1 + .5H_2)}{L_1 + .5L_{open}}$	Vertical force at critical section.
P =	599	lb	$P = \frac{F_v(.5L_{open})}{H_1}$	Critical strap force.
v <sub>head</sub> =	277	plf	$v_{head} = \frac{F_v}{H_1}$	Shear in panel above opening.

$T_{holdown} = v * H_{hdn} - 6(\omega_d * L/2 + P_d) = -287$  lb Holdown loads at ends

<b>Strap must be designed for 599 lb force.</b>	Simpson CS20	Tcap= 1,030#
<b>Anchor bolts must be designed for 92 plf shear.</b>	1/2" @48" o/c	ncap= 260 plf
<b>Shearwalls must be designed for 142 plf shear.</b>	1/2" apa w/ 8d @6/12	ncap= 357 plf
<b>Panels above and below the opening must be designed for 277 plf shear.</b>	1/2" apa w/ 8d @6/12	ncap= 357 plf

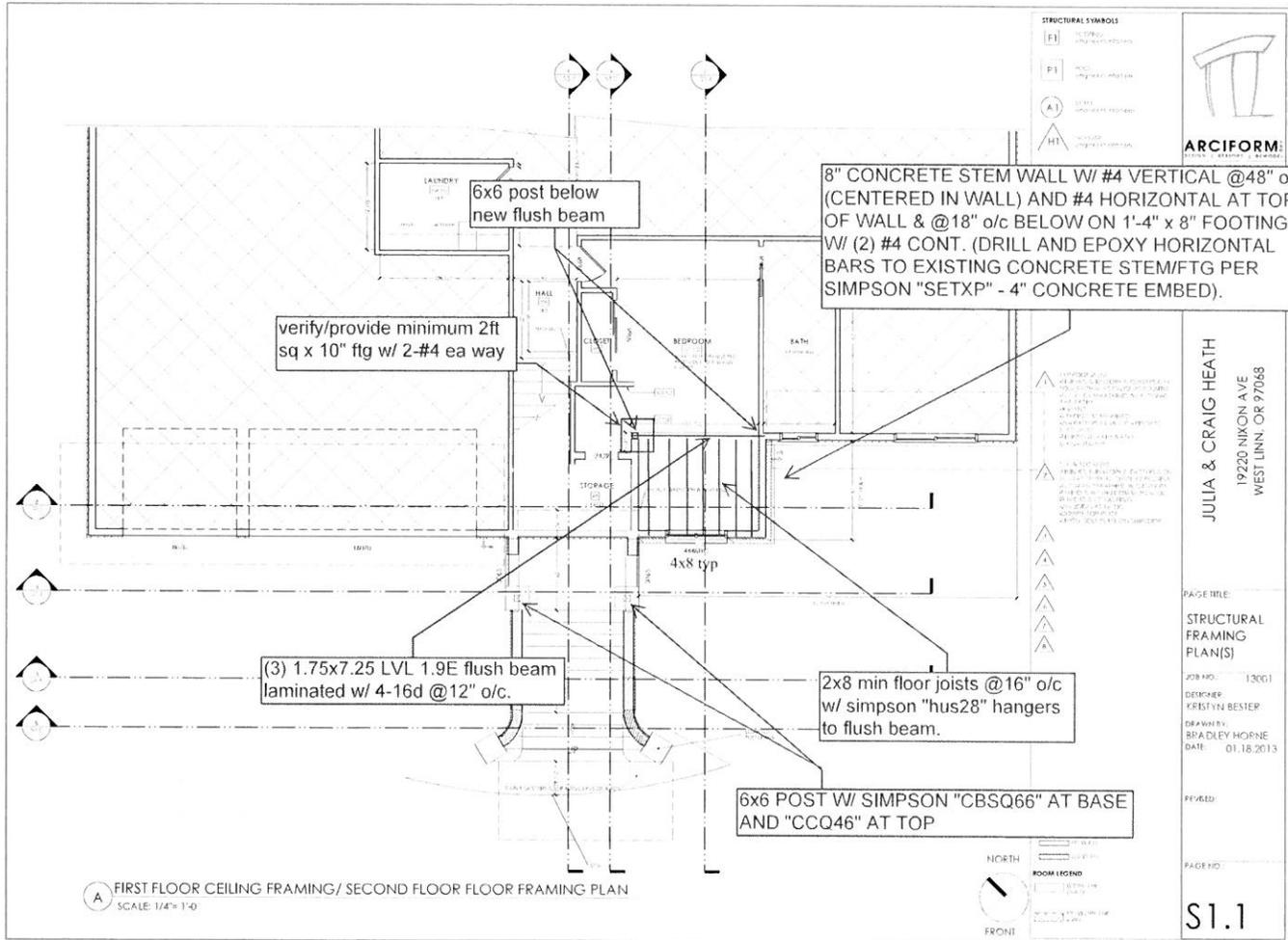
**NO HOLDOWN REQUIRED**



Shane  
Empey, P.E.  
Structural  
Engineering

13995 SE MATILDA DR., MILWAUKIE OR, 97267, 503-998-7704. SHANE.EMPEY.PE@GMAIL.COM

Project: Heath Residence:  
Entry Addition/Remodel  
Client: Arciform Proj. No.: 13-103  
Date: March 2013 By: SAE Sheet No.: L4



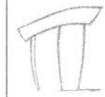
**A** FIRST FLOOR CEILING FRAMING/ SECOND FLOOR FLOOR FRAMING PLAN  
SCALE: 1/4" = 1'-0"

HALF SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

**STRUCTURAL SYMBOLS**

[F]	CONCRETE
[P]	POST
[A]	ANCHOR BOLT
[H]	HANGER



**ARCIFORM**  
CONCRETE FORMWORK

8" CONCRETE STEM WALL W/ #4 VERTICAL @48" o/c (CENTERED IN WALL) AND #4 HORIZONTAL AT TOP OF WALL & @18" o/c BELOW ON 1'-4" x 8" FOOTING W/ (2) #4 CONT. (DRILL AND EPOXY HORIZONTAL BARS TO EXISTING CONCRETE STEM/FTG PER SIMPSON "SETXP" - 4" CONCRETE EMBED).

verify/provide minimum 2ft sq x 10" ftg w/ 2-#4 ea way

6x6 post below new flush beam

(3) 1.75x7.25 LVL 1.9E flush beam laminated w/ 4-16d @12" o/c.

6x6 POST W/ SIMPSON "CBSQ66" AT BASE AND "CCQ46" AT TOP

2x8 min floor joists @16" o/c w/ simpson "hus28" hangers to flush beam.

**JULIA & CRAIG HEATH**  
19220 NIXON AVE  
WEST LINN, OR 97068

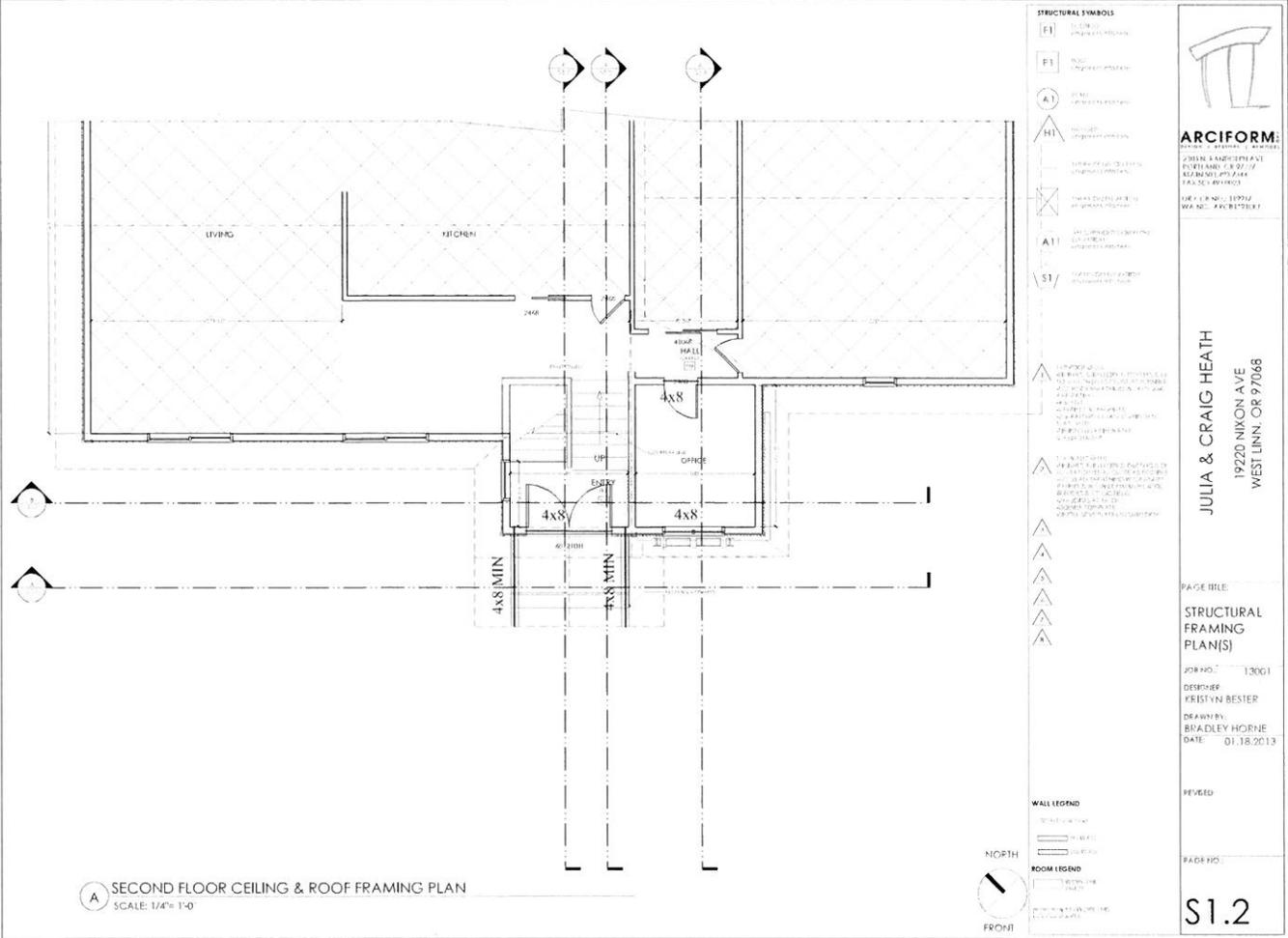
PAGE TITLE:  
**STRUCTURAL FRAMING PLAN(S)**  
JOB NO.: 13061  
DESIGNER: KRISTYN BESTER  
DRAWN BY: BPA/DALEY HORNE  
DATE: 01.18.2013

PAGE NO.:  
**S1.1**



**ROOM LEGEND**

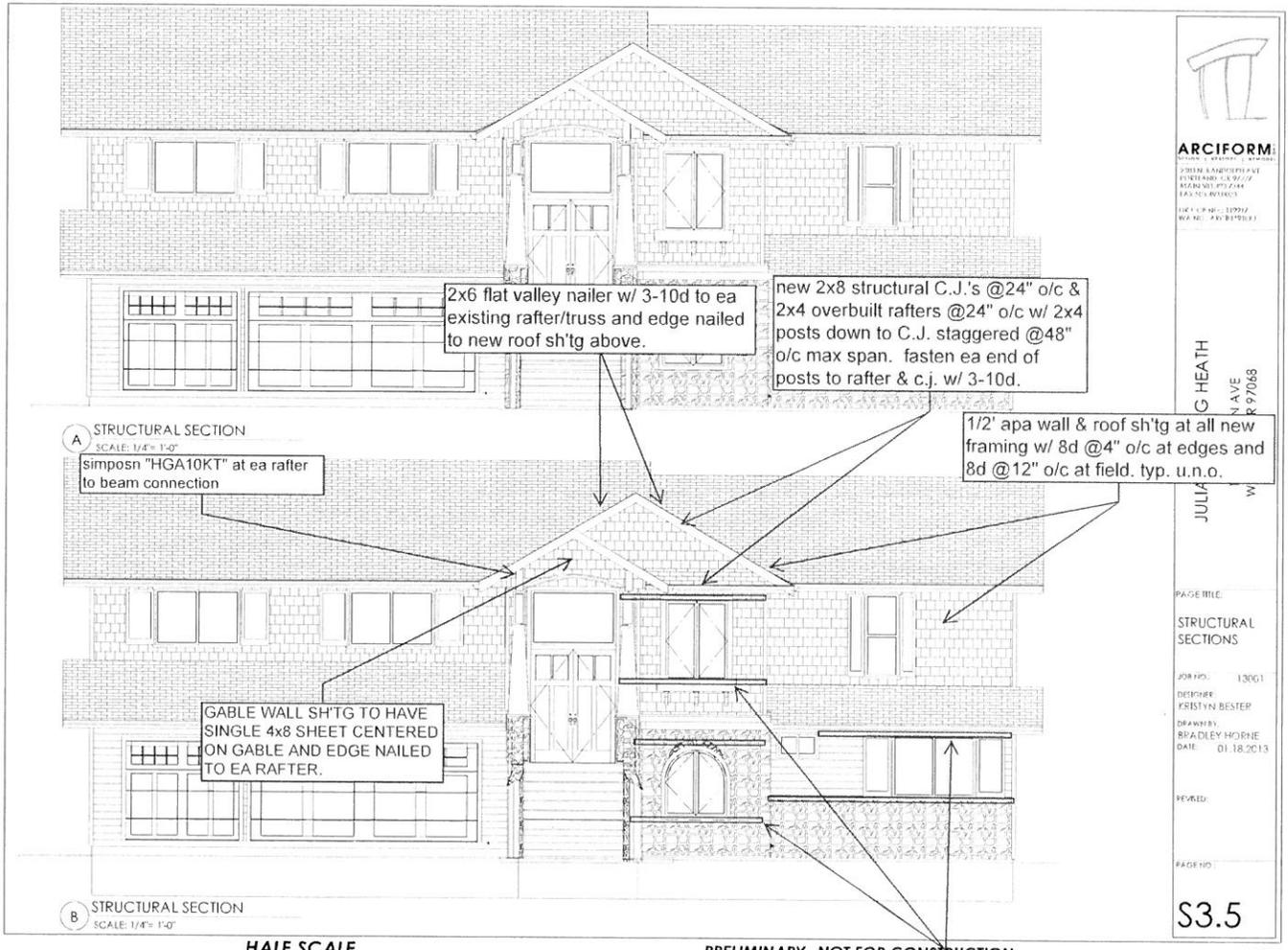
[Symbol]	WALL
[Symbol]	DOOR
[Symbol]	WINDOW
[Symbol]	STAIR



A SECOND FLOOR CEILING & ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"

HALF SCALE

PRELIMINARY - NOT FOR CONSTRUCTION



2x6 flat valley nailer w/ 3-10d to ea existing rafter/truss and edge nailed to new roof sh'tg above.

new 2x8 structural C.J.'s @24" o/c & 2x4 overbuilt rafters @24" o/c w/ 2x4 posts down to C.J. staggered @48" o/c max span. fasten ea end of posts to rafter & c.j. w/ 3-10d.

simposn "HGA10KT" at ea rafter to beam connection

1/2" apa wall & roof sh'tg at all new framing w/ 8d @4" o/c at edges and 8d @12" o/c at field. typ. u.n.o.

GABLE WALL SH'TG TO HAVE SINGLE 4x8 SHEET CENTERED ON GABLE AND EDGE NAILED TO EA RAFTER.

simposn "cs20" aligned above and below window openings. Fasten ea end w/ 7-10d to 2x6 blocking and intermediate w/ 10d @6" o/c to header, sill, and 2x6 blocking w/ 8d@6" o/c intermediate.



**ARCIFORM**  
ARCHITECTURAL ROOFING FORMS  
 2700 N. LAKEVIEW BLVD. SUITE 100  
 AZARON, NEVADA 89444  
 FAX: 702.885.8800  
 TEL: 702.885.1000  
 WWW.ARCIFORM.COM

**G HEATH**  
 NAVE  
 R 97068

JULIA W

PAGE TITLE:  
**STRUCTURAL SECTIONS**

JOB NO: 13061  
 DESIGNER: KRISTYN BESTER  
 DRAWN BY: BRADLEY HORNE  
 DATE: 01.18.2013

REVISED:

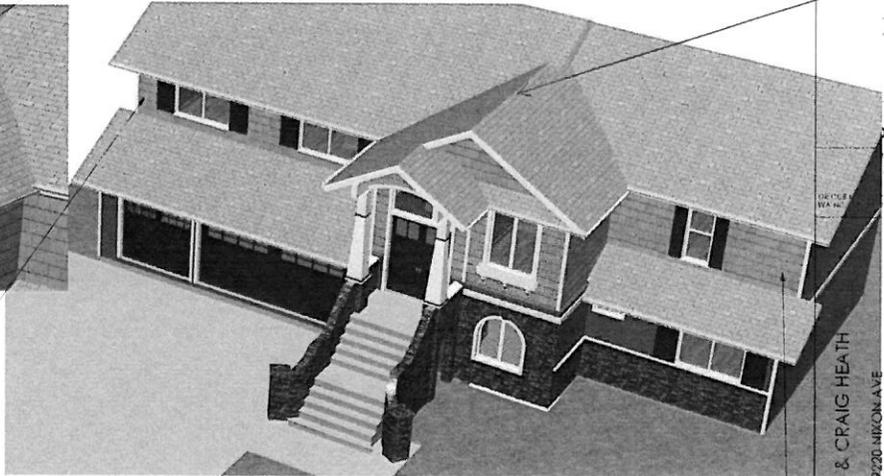
PAGE NO:  
**S3.5**

VERIFY/PROVIDE A STRAIGHT RIDGE  
LINE PER HOME OWNER SITE VISIT  
COMMENTS/CONCERNS.

CUT OUT



THIS WL SET BACK FROM WL  
BELOW



JRM  
19220 MIXON AVE  
WEST LINN, OR 97068  
JULIA & CRAIG HEATH

PAGE TITLE:

JOB NO: 13001  
DESIGNER: KRISTYN BESTER  
DRAWN BY: BRADLEY HORNE  
DATE: 01.18.2013

REVISED:

PAGE NO:



THIS WL SET BACK FROM  
WL BELOW

HALF SCALE

PRELIMINARY- NOT FOR CONSTRUCTION

## **Arciform LLC**

Heath Residence -19220 Nixon Ave - Small office addition and entry staircase

### **27.050**

- A. Pre application conference held on June 6, 2013
- B. An application has been initiated by the property owner's authorized agent and the application fee has been paid.
- C. An application has been submitted as of Tuesday, June 18, 2013
- D. Please see attached plans
- E. Existing and proposed new addition property elevation is as follows;
  - Top of bottom floor (including crawlspace/enclosure floor) is 43.2 feet
  - Top of next highest floor is 49.1 feet
  - Lowest adjacent grade is 43.2 feetPlease see 27.060, section A  
No Water course alteration is proposed
- F. Please refer to attached site plan and maps within this document. The owner proposes to replace a dilapidated entry staircase as well as add an office space. This should not impact the floodplain, please see 27.060 section A.
- G. Refer to above section E
- H. This is a residential project.

### **27.060**

- A. All new construction will maintain conveyance capacity and not increase design flood elevations. The area being affected is less than 80 sq ft and does not impact any grade changes that would affect flood elevations. In addition to this the new floor level will plane out level with the existing floor level which will be elevated 3'-0" and are above the 500 year flood line. In addition to this we are planning on adding flood vents that will be an improvement to the existing residence and allow potential flood water to better recede without cause flood damage. The habitable space above the new crawlspace does not contain plumbing fixtures and is heated from a portion of the existing crawlspace. Therefore no plumbing lines or ducting is required in the new proposed crawlspace. Refer to engineer's letter.
- B. No fill is required. Please refer to line item A.
- C. No excavation to balance a fill is required. Please refer to line item A.
- D. The new finish floor will meet flush with the existing finish floor. Therefore it will be elevated 3'-0" and are above the 500 year flood line, refer to line item A

E. No temporary fill is required for this small addition, refer to line item A

F. Please refer to letter from licensed engineer, refer to line item A

G. Please refer to letter from licensed engineer, refer to line item A

H. This project does not contain any culverts, bridges, stream crossings, or transportation projects. This is only a small residential office addition that includes entry steps. Refer to line item A

I. This is only a small residential office addition that includes entry steps. Therefore there will be no creation of vacant buildable land. Refer to line item A

J. We are in the process of obtaining the appropriate permits through the city of West Linn.

#### **27.070**

A. Yes the structure will be constructed of materials resistant to flood damage. This will be a concrete crawlspace that will meet FEMA requirements. The utility equipment will not be below the BFE. Refer to line item A, CH.060 and letter from the engineer

B. All equipment will be above the BFE and will not intrude into the crawlspace. . Refer to line item A, CH.060 and letter from the engineer

C. There will be no plumbing in the new addition. . Refer to line item A, CH.060 and letter from the engineer

D. There will be no changes to the existing sanitary sewage system since the proposed rooms are only habitable space not containing plumbing or waste lines. . Refer to line item A, CH.060 and letter from the engineer

E. No waste disposal systems will be affected by this addition. . Refer to line item A, CH.060 and letter from the engineer

F. All new construction will be anchored per specification of a licensed engineer to prevent floatation, collapse or lateral movement of the structure. . Refer to line item A, CH.060 and letter from the engineer

#### **27.080**

A. Yes the lowest floor will be elevated to at least one foot above the base flood elevation. . Refer to line item A, CH.060 and letter from the engineer

B. Yes the enclosed crawlspace will have the appropriate number of flood venting that meets or exceeds the requirement of 1 square inch of vent per 1 square foot of enclosed space. Our crawlspace will require a minimum of 2 FEMA certified flood vents. . Refer to line item A, CH.060 and letter from the engineer

1. Refer to section B, a min of 2 flood vents will be installed and will meet FEMA requirements. . Refer to line item A, CH.060 and letter from the engineer

2. Yes, all flood openings shall be no higher than one foot above grade. . Refer to line item A, CH.060 and letter from the engineer

3. Yes, we will use FEMA certified flood vents which allow the entry/exit of flood waters. . Refer to line item A, CH.060 and letter from the engineer

4. Yes, only fully enclosed areas below flood elevations shall only be used for parking, access and limited storage. We will only have a crawlspace foundation. . Refer to line item A, CH.060 and letter from the engineer

5. Yes, service equipment is not allowed below the base flood elevation. However we will not be installing any service equipment since it's existing and doesn't impact the addition. . Refer to line item A, CH.060 and letter from the engineer

6. Yes, all walls, floors and ceiling materials below the base flood elevation will be unfinished and constructed of materials resistant to flood damage. We will only have a vented crawlspace that will be concrete. . Refer to line item A, CH.060 and letter from the engineer

C. We will be using a crawlspace foundation which will meet the following requirements. . Refer to line item A, CH.060 and letter from the engineer

1. The building is subject to the flood-resistant construction provisions of the Oregon residential specialty code. The addition will meet these requirements. . Refer to line item A, CH.060 and letter from the engineer

2. The addition is designed by a licensed contractor and by a licensed engineer. . Refer to line item A, CH.060 and letter from the engineer

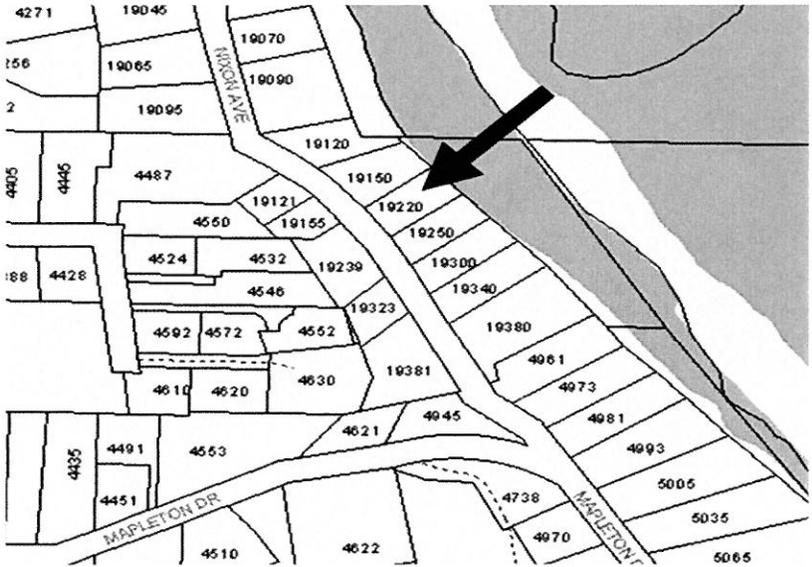
3. The addition will be properly designed and anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. The will be done by a licensed engineer and installed to his specifications. . Refer to line item A, CH.060 and letter from the engineer

4. We will install a minimum of 2 FEMA approved flood vent openings on at least two sides that will equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. The total area of the flood vent openings will be no less than one square inch for each square foot of enclosed area. The bottom of each flood vent opening can be no more than one foot above the lowest adjacent exterior grade. . Refer to line item A, CH.060 and letter from the engineer

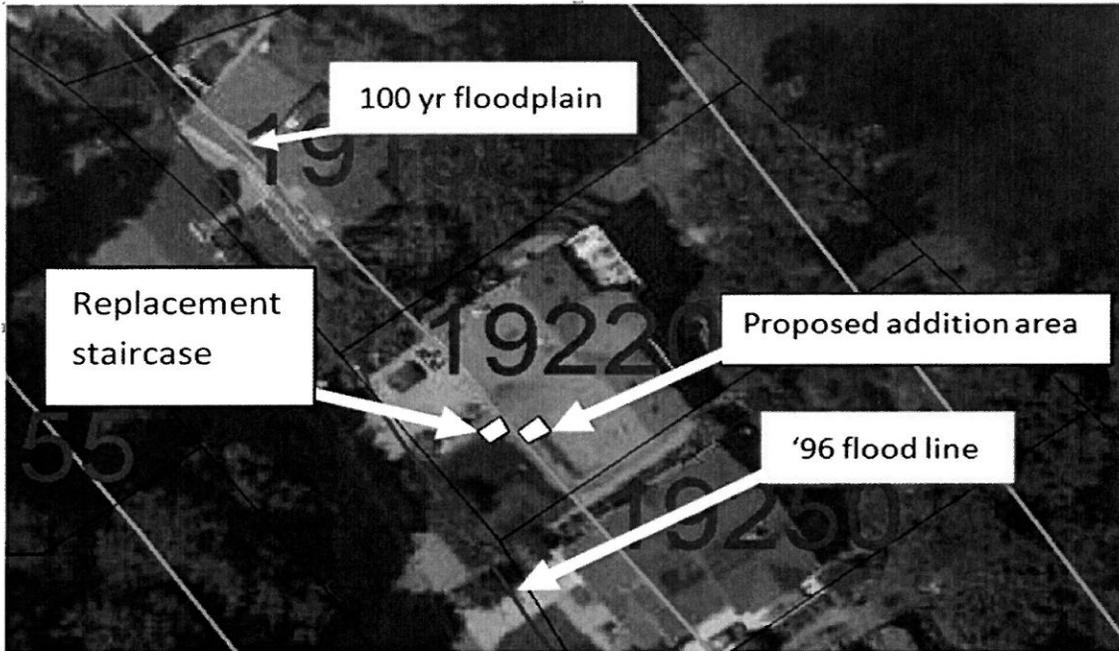
5. Any and all portions of the building below the BFE will be constructed with material resistant to flood damage. This will be a concrete foundation for the crawlspace. . Refer to line item A, CH.060 and letter from the engineer

- 6. We will not have utility systems below the BFE. . Refer to line item A, CH.060 and letter from the engineer
  - 7. The interior grade of the crawlspace below the BFE will be no more than 2'-0" below the lowest adjacent exterior grade. We will have the interior grade be level with the exterior grade. . Refer to line item A, CH.060 and letter from the engineer
  - 8. The height of the crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall, will not exceed 4'-0" at any point. These spaces will not be habitable space. . Refer to line item A, CH.060 and letter from the engineer
  - 9. There will be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. We will use well drained soil and perforated drain pipe. . Refer to line item A, CH.060 and letter from the engineer
  - 10. The velocity of floodwaters at the site does not exceed five feet per second for any crawlspace. The property is in zone AE. . Refer to line item A, CH.060 and letter from the engineer
  - 11. We will reference FEMA bulletin 11-01. . Refer to line item A, CH.060 and letter from the engineer
  - 12. We understand the city is not liable for any potential increases of insurance premiums.
- D. We will be using a crawlspace foundation for the office addition. . Refer to line item A, CH.060 and letter from the engineer
- E. The addition will be designed to resist hydrostatic and hydrodynamic forces. Please refer to the notice from the engineer.

**27.090** - This is a residential construction project; refer to line item A, CH.060.



Site location in the Robinwood neighborhood



High HCA (Green) extends over the exempted stairway



SMART VENT® - Model: 1540-510



## Dual Function SMART VENT® Superior Flood Protection and Natural Air Ventilation

### ICC-ES Evaluated and FEMA Accepted Foundation Flood Vents

- Potential savings on homeowner's NFIP premiums
- Preserves aesthetic beauty of a home by requiring 2/3 less vents
- Each vent certified to protect 200 sq. ft. of your home
- Code Compliant, FEMA accepted, ICC-ES Evaluated
- All Stainless Steel construction meets or exceeds flood and corrosion resistance code requirements
- Patented automatic floats release bi-directional flood door
- Temperature controlled louvers automatically open in warm weather and close in cold weather

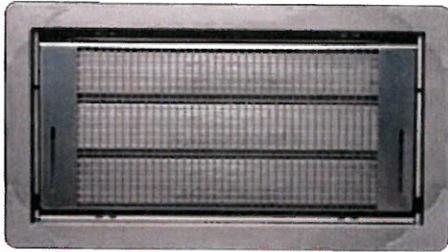
One 16" x 8" vent is certified to cover 200 square feet of enclosed area for flood protection and 51 square inches for ventilation

SMART VENT® models are certified to provide flood protection and ventilation. This model is used for a home with a crawl space or any enclosed area that desires natural air ventilation and flood protection. All stainless steel construction resists weather and pest.



# SMART VENT

www.smartvent.com • 877-441-8368



**Model #:** 1540-510

**Installation Type:** Masonry Wall

**Style:** louvered

**Dimensions:** 16" x 8"

**Rough Opening:** 16¼" x 8¼" (one block, or CMU)

**Finish:** Stainless Steel (Standard)

**Available Powder Coat Colors For Special Order:**



White



Wheat



Gray



Black



Stainless (standard)

**Optional Accessories:**

Fire Damper, Interior Trim Flange & Inner Sleeve, Rain Shield

**Other Models Available:** Insulated FLOOD VENT, Overhead Garage Door Model, Stacked and Quad Configurations, Models for Wood Studded Wall Applications and Pour in Place Buck Systems.

**There's more online at [www.smartvent.com](http://www.smartvent.com)**

Dealer Locator, Installer Locator, Cad Drawings, Installation Instructions, Technical Specifications, Frequently Asked Questions, Videos, Testimonials, Resource Library Database, Insurance Forms.



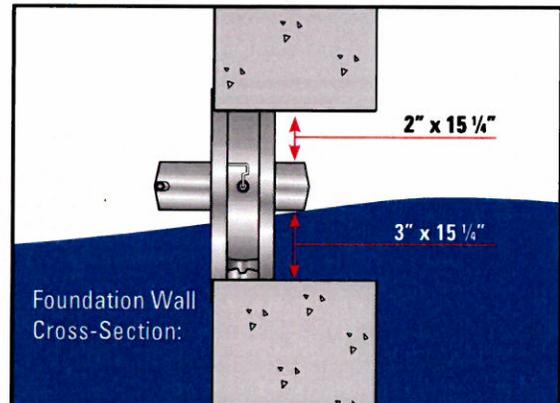
Rapidly rising floodwater can put extreme pressure on the foundation walls causing improperly vented structures to buckle and collapse. SMART VENTS® quickly and efficiently equalize the pressure and minimize damage.

**How it works:**

**Flood Protection:** The SMART VENT® door is latched closed until flood water enters. Entering flood water lifts the patented internal floats which unlatches and rotates the door open. This allows the flood water to automatically enter and exit through the frame opening, relieving the pressure from your foundation walls.

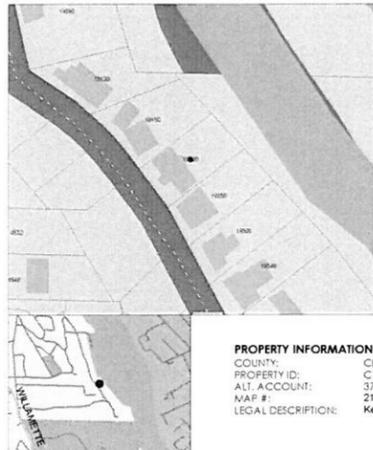
**Ventilation:** A bimetal coil (like a thermostat, no electricity is needed) automatically opens and closes the ventilation louvers as temperature changes. They will be closed when it is freezing outside and open when it is warm outside to provide natural ventilation.

**Important note:** SMART VENT® does not rely on the louvers to let floodwater in and out. Regardless of the louvers' position, opened or closed, when floodwater flows into the door, the internal floats release the door to rotate open to relieve the hydrostatic pressure. The louvers and pest screen are rotated out of the path of the floodwater. The temperature-controlled louvers are for ventilation purposes only.



**How does one SMART VENT® provide so much coverage?**

You may have heard that FEMA requires that flood openings provide one square inch of opening per one square foot of enclosed area, referring to dimensions of the opening in proportion to the space to be vented. This is only partially correct. FEMA's regulations and guidelines do state that a non-engineered flood vent solution must (among other requirements) provide one square inch of opening per square foot of enclosed area to be vented. However; all SMART VENT® products are ICC-ES certified engineered openings. They have been designed, engineered, tested, rated, and certified to provide flood relief so efficiently that only one unit is needed for 200 square feet of enclosed area. It would be our pleasure to contact your code official, surveyor, or insurance agent if they require more information.



**PROPERTY INFORMATION**  
 COUNTY: CLACKAMAS  
 PROPERTY ID: C165430  
 ALT. ACCOUNT: 371353  
 MAP #: 21E24AC tax lot 1700  
 LEGAL DESCRIPTION: Kernhorpe Tracts (unrecorded) 1940

**SITE & VICINITY MAP**  
 NO SCALE



**PERSPECTIVE**  
 NO SCALE - CONCEPTUAL ONLY

## HEATH RESIDENCE

**SCOPE**  
 OFFICE ADDITION & ENTRY REMODEL

### DRAWING INDEX

- CS COVER SHEET
- A1.0 SITE PLAN
- A1.1 (E) FIRST FLOOR PLAN
- A1.2 (E) SECOND FLOOR PLAN
- A2.1 (N) FIRST FLOOR PLAN & MEP PLAN
- A2.2 (N) SECOND FLOOR PLAN & MEP PLAN
- A3.1 EXTERIOR ELEVATION & PERSPECTIVES
- A3.2 EXTERIOR ELEVATIONS
- A4.1 DETAILS - see 5-0000s for struc info
- S1.0 FOUNDATION & FIRST FLOOR FRAMING PLAN
- S1.1 FIRST FLOOR CEILING FRAMING/SECOND FLOOR FLOOR FRAMING PLAN
- S1.2 SECOND FLOOR CEILING & ROOF FRAMING PLAN
- S3.1 STRUCTURAL SECTION, PERSPECTIVE & DETAIL
- S3.2 STRUCTURAL SECTION
- S3.3 STRUCTURAL SECTION & DETAILS



### CONDITIONS

CONTRACTOR MUST SEE THAT ALL WORKS OF SAID BUILDING ARE PERFORMED IN A THOROUGH AND SUBSTANTIAL MANNER BY COMPETENT TRADESMEN, AND MUST FURNISH ALL MATERIALS TO THE BEST OF THEIR RESPECTIVE KINDS, LABOR, INSTRUMENTS ETC., IF NOT OTHERWISE SPECIFIED.

### INTERPRETATION OF DRAWINGS

FOR THE ARRANGEMENT OF FLOORS, GENERAL FINISH AND MEASUREMENTS, REFERENCE MUST BE MADE TO THE DRAWINGS. VERIFY DIMENSIONS AND EXISTING CONDITIONS, AND NOTIFY THE DESIGNER OR ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING. THE CONTRACTOR IS RESPONSIBLE FOR SAFE CONDITIONS AT THE JOB SITE, AND THE TEMPORARY SUPPORT OF THE BUILDING PRIOR TO THE COMPLETION OF THE VERTICAL AND LATERAL LOAD SYSTEMS. ALL WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE OREGON RESIDENTIAL SPECIALTY CODE.

IN PLANS AND PROPOSED ELEVATIONS, DIMENSIONS ARE FROM FINISH TO FINISH.

### MEP

LICENSED TRADE PROFESSIONALS TO PROVIDE & INSTALL MEP TO MEET CODE REQUIREMENTS.

VERIFY & PROVIDE MEP REQUIREMENTS FOR ALL FIXTURES AS SPECIFIED BY MANUFACTURER.

LOCATION OF (E) FRAMING MEMBERS MAY REQUIRE ALTERING EXACT LOCATIONS OF FIXTURES. VERIFY W/ DESIGNER AS NEC.

SEE INTERIOR ELEVATIONS FOR LOCATIONS OF VENTS, FIXTURES, RECEPTACLES & SWITCHES.

SEE SPECS FOR COLORS & FINISHES OF VENTS, FIXTURES, RECEPTACLES, SWITCHES & COVER PLATES.

### WINDOWS & DOORS

STANDARD WINDOW & DOOR MANUFACTURERS SHOWN ON PLANS ARE READ AS FOLLOWS:  
 3068 = 3'-0" WIDE X 5'-8" HIGH  
 4024 = 4'-0" WIDE X 7'-4" HIGH  
 DOOR SIZE INDICATES DOOR PANEL DIMENSIONS.

WINDOW SIZE INDICATES CASING OPENING AT EXISTING - SEE WINDOW MANUFACTURERS SPECIFICATIONS AT NEW

EXTERIOR WALL INSULATION FOR (N) WALL	R 21
BASEMENT WALL INSULATION	R 15
FLAT CEILING INSULATION	R 38
VAULTED CEILING INSULATION	R 38
FLOOR INSULATION	R 30
FORCED AIR DUCT INSULATION	R 8

UND. CENTER BETWEEN ADJACENT WALLS.

### WOODWORK

WHEN NOT SPECIFIED ELSEWHERE, ALL WOODWORK SHALL BE IN ACCORDANCE WITH OR BETTER THAN THE AIA (ARCHITECTURAL WOODWORK INSTITUTE) CUSTOM QUALITY STANDARD.

CABINET AND CARPENTRY DIMENSIONS ARE APPROXIMATE ONLY.

### TILE

WHEN NOT SPECIFIED ELSEWHERE, ALL TILE WORK SHALL CONFORM TO OR EXCEED THE TILE COUNCIL OF AMERICA STANDARDS.

TILE LAYOUT AND DETAILS ARE TO BE USED AS A GUIDE ONLY.

### WOOD

LUMBER GRADES SHALL BE AS FOLLOWS, EXCEPT AS NOTED ON DRAWINGS:

JOIST, RAFTERS & 4 INCH NOMINAL BEAMS #2 GRADE DOUGLAS FIR

POSTS & 6 INCH NOMINAL BEAMS #1 GRADE DOUGLAS FIR

2x4 FRAMING & STUDS #2 GRADE DOUGLAS FIR

2x6 FRAMING & LARGER STUDS #2 GRADE DOUGLAS FIR

BUCKS, BLOCKING & BRIDGING #3 GRADE DOUGLAS FIR

PLATES & SILL ON CONCRETE #1 GROUND CONTACT DOUGLAS FIR

2x4 DECKING/COMM. GRADE DOUGLAS FIR OR NEW FIR

PROVIDE SOLID BLOCKING FOR JOISTS AND RAFTERS AT ALL BEARING WALLS AND BEAMS.

PROVIDE BRIDGING AND FIRE STOPPING AS REQUIRED BY CODE.

ROOF, WALL AND FLOOR SHEATHING SHALL BE APA RATED SHEATHING FOR EXPOSURE OR CDX OR EQUIVALENT ORIENTED STRAND BOARD WITH EXTERIOR GLUE. SHEAR WALL SHEATHING SHALL BE INSTALLED WITH JOINTS BLOCKED UNLESS NOTED OTHERWISE.

USE EXTERIOR TYPE PLYWOOD FOR EXPOSED LOCATIONS SUCH AS SOFFITS.

NAIL ALL MEMBERS WITH MINIMUM NAILING TO CONFORM TO TABLE R602.3(1) OF THE OREGON RESIDENTIAL CODE AND INCREASE WHERE INDICATED. FASTENERS AND HANGERS NOTED ON THE DRAWINGS ARE MODEL NUMBERS OF SIMPSON STRONG-TIE COMPANY, INC., AND MAY BE REPLACED WITH EQUIVALENT MODELS.

INSTALL ALL CONNECTORS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS WITH NAILING IN ALL AVAILABLE HOLES.

CUTTING OR NOTCHING OF BEAMS, JOISTS, RAFTERS, AND COLUMNS NOT ALLOWED WITHOUT PRIOR APPROVAL. JOISTS AND RAFTERS MAY HAVE A CIRCULAR HOLE NOT EXCEEDING 1/8" OF DEPTH DRILLED AT CENTER OF MEMBER. STUDS IN BEARING WALLS MAY BE NOTCHED NOT EXCEEDING 25% OF DEPTH AT TOP AND 30% AT 1/3 OF HEIGHT OR MAY HAVE A CIRCULAR HOLE NOT EXCEEDING 1/3 OF MEMBER DEPTH DRILLED AT CENTER AT ANY HEIGHT.

CONTRACTOR TO PROVIDE SIGNED LETTER STATING COMPLIANCE WITH DRG SECTION R318.2 (FRAMING LUMBER MOISTURE CONTENT - NOT MORE THAN 19% DRY WEIGHT)

THE ACI STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS ACI-301 SHALL BE FOLLOWED FOR ALL ITEMS NOT SPECIFICALLY COVERED ON THE DRAWINGS AND SPECIFICATIONS.

MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:

3500 PSI FOR CONCRETE SLABS ON GRADE

3000 PSI FOR WALLS, FOOTINGS AND OTHER CONCRETE

MAXIMUM SLUMP SHALL BE 3 1/2" INCHES FOR SLABS ON GRADE AND 4 INCHES FOR OTHER CONCRETE. PROVIDE 5% AIR ENTRAINMENT FOR CONCRETE EXPOSED TO EXTERIOR CONDITIONS.

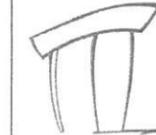
PROVIDE CONTROL JOINTS FOR CONCRETE SLABS ON GRADE IN ACCORD WITH DETAILS AND SPACING SHOWN ON DRAWINGS. WHERE SPACING INFORMATION IS LACKING, SPACE JOINTS AT A MAXIMUM OF 20 FEET IN EACH DIRECTION.

CONCRETE HANDLING, PLACEMENT AND CURING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI-301 IF NOT OTHERWISE NOTED.

CONCRETE HANDLING, PLACEMENT AND CURING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI-301 IF NOT OTHERWISE NOTED.

### STANDARD ABBREVIATIONS LIST

- 1ST FIRST
- 2ND SECOND
- 3RD THIRD
- 4TH FOURTH
- ADJ ADJUSTABLE
- ADJ.C ADJACENT
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- APPROX APPROXIMATELY
- AS ADJUSTABLE SHELVES
- ASB ASBESTOS
- BD BOARD
- BM BEAM
- BTM BOTTOM
- BWN BETWEEN
- CAB CABINET
- CL CENTER LINE
- CLG CEILING
- CLR CLEAR
- CLST CLOSET
- CMU CONCRETE MASONRY UNIT
- COL COLUMN
- CONC CONCRETE
- CONST CONSTRUCTION
- CRP CARPET
- CT CERAMIC TILE
- D DEEP / DEPTH
- DBL DOUBLE
- DIA DIAMETER
- DIM DIMENSION
- DR DOOR
- DRW DRAWER
- DS DOWN SPOUT
- EX EXISTING
- EACH EACH
- EJ EXPANSION JOINT
- ELEC ELECTRICAL
- ELEV ELEVATION
- EQ EQUAL
- EQUIP EQUIPMENT
- EXT EXTERIOR
- F FIXTURE
- FD FLOOR DRAIN
- FDN FOUNDATION
- FF FACE FRAME
- FIN FINISH
- FLR FLOOR
- FLOR FLOORESCENT
- FRM FRAME
- FS FIXED SHELVES
- FT FOOT / FEET
- FTG FOOTING
- GEN GENERAL
- GL GLASS
- GLB GLULAM BEAM
- GRT GROUT
- GYP BD GYPSUM BOARD
- H HIGH
- HWWD HARDWOOD
- HR HANDRAIL
- HT HEIGHT
- HW HARDWARE
- INSUL INSULATION
- INT INTERIOR
- JB JUNCTION BOX
- JST JOIST
- LAM LAMINATE
- LAV LAVATORY
- LN LINOLEUM
- LOC LOCATION/LOCATE
- LVL LAM VENEER LUMBER (BAM)
- MANUF MANUFACTURER
- MAX MAXIMUM
- MEP MECH. ELEC. PLG
- MOLD MOLDING
- MW MILLWORK
- NEW NEW
- NEC NECESSARY
- NTS NOT TO SCALE
- OC ON CENTER
- OH OVERHEAD
- OPG OPENING
- PL PLASTER
- PLAS PLASTER
- PLBG PLUMBING
- PLWD PLYWOOD
- PO PULL OUT
- PORC PORCELAIN
- PS PARALLEL STRAND LUMBER (BAM)
- PT PRESSURE TREATED
- R RISER
- REC RECESSED
- RET RETAINING
- RM ROOM
- RO ROUGH OPENING
- ROD REQUIRED
- SCHED SCHEDULE
- SF SQUARE FOOTAGE
- SHT SHEET
- ST STONE
- STD STANDARD
- STRUCT STRUCTURAL
- SUSP SUSPENDED
- T&G TONGUE & GROOVE
- T&G TO BE DETERMINED
- TP TOILET PAPER
- TYP TYPICAL
- UNO UNLESS NOTED OTHERWISE
- VCT VINYL COMPOSITION TILE
- VIF VERIFY IN FIELD
- W WIDE / WIDTH
- WC WATER CLOSET
- WD WOOD
- WIN WINDOW
- WL WALL
- WPF WATERPROOF



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**JULIE & CRAIG HEATH**  
 19220 NIXON AVE  
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PAGE TITLE:  
**COVER SHEET**

JOB NO.: 13001

DESIGNER:  
 KRISTYN BESTER

DRAWN BY:  
 BRADLEY HORNE

DATE:  
 04.29.2013

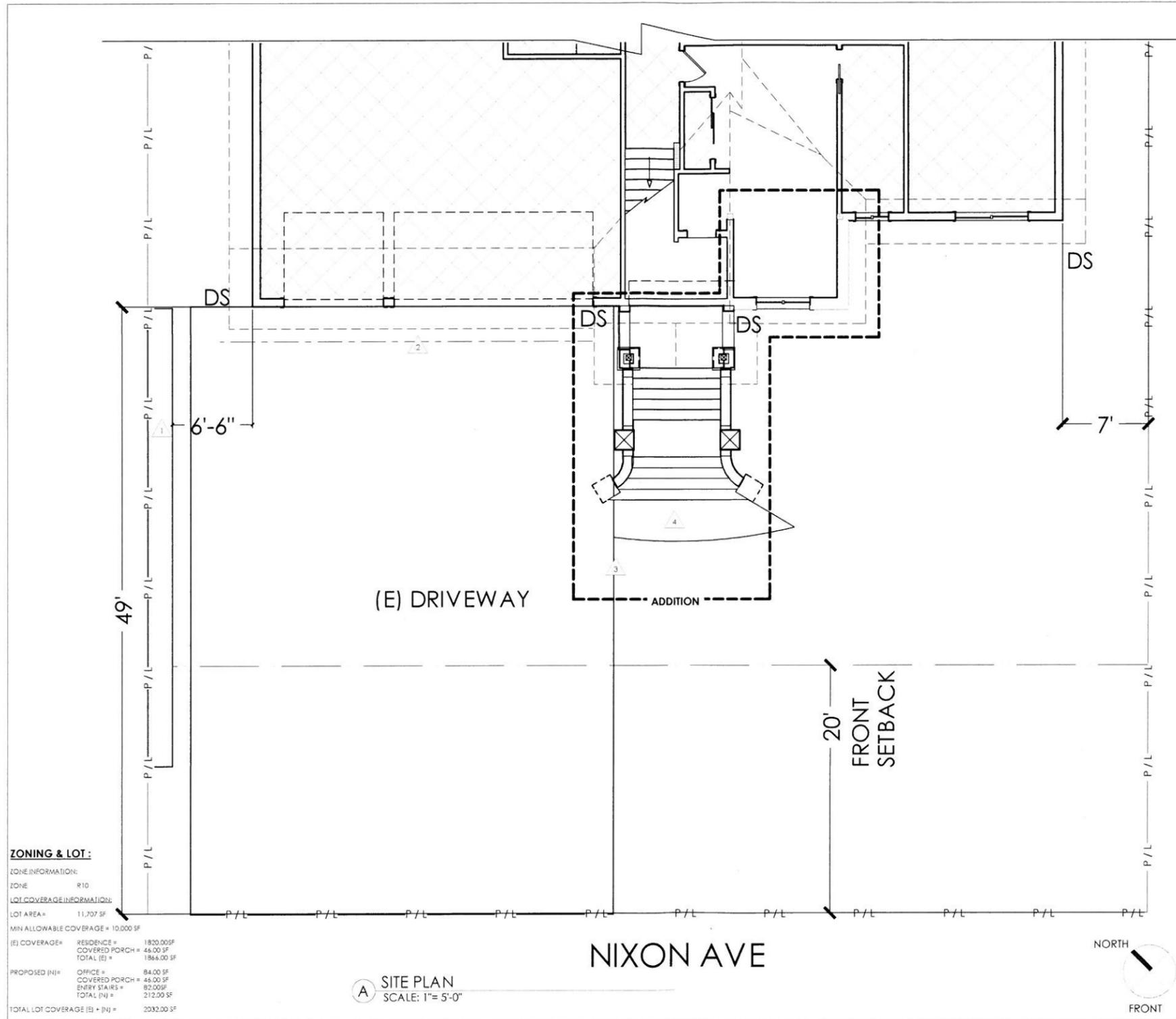
CONSTRUCTION  
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 05.30.2013

PAGE NO.:

**CS**

**HALF SCALE**



- NOTES**  
ALL DIMENSIONS ARE FROM FINISH TO FINISH UNLESS NOTED OTHERWISE.
- 1 (E) RETAINING WALL
  - 2 (E) FRENCH DRAIN
  - 3 EDGE OF (E) DRIVEWAY
  - 4 (N) SLAB

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PAGE TITLE:  
**SITE PLAN**

JOB NO.: 13001  
DESIGNER:  
KRISTYN BESTER  
DRAWN BY:  
BRADLEY HORNE  
DATE:  
04.29.2013  
CONSTRUCTION SET  
REVISED:  
05.30.2013

PAGE NO.:  
**A1.0**

**ZONING & LOT:**

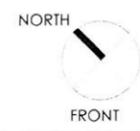
ZONE INFORMATION:  
ZONE R10

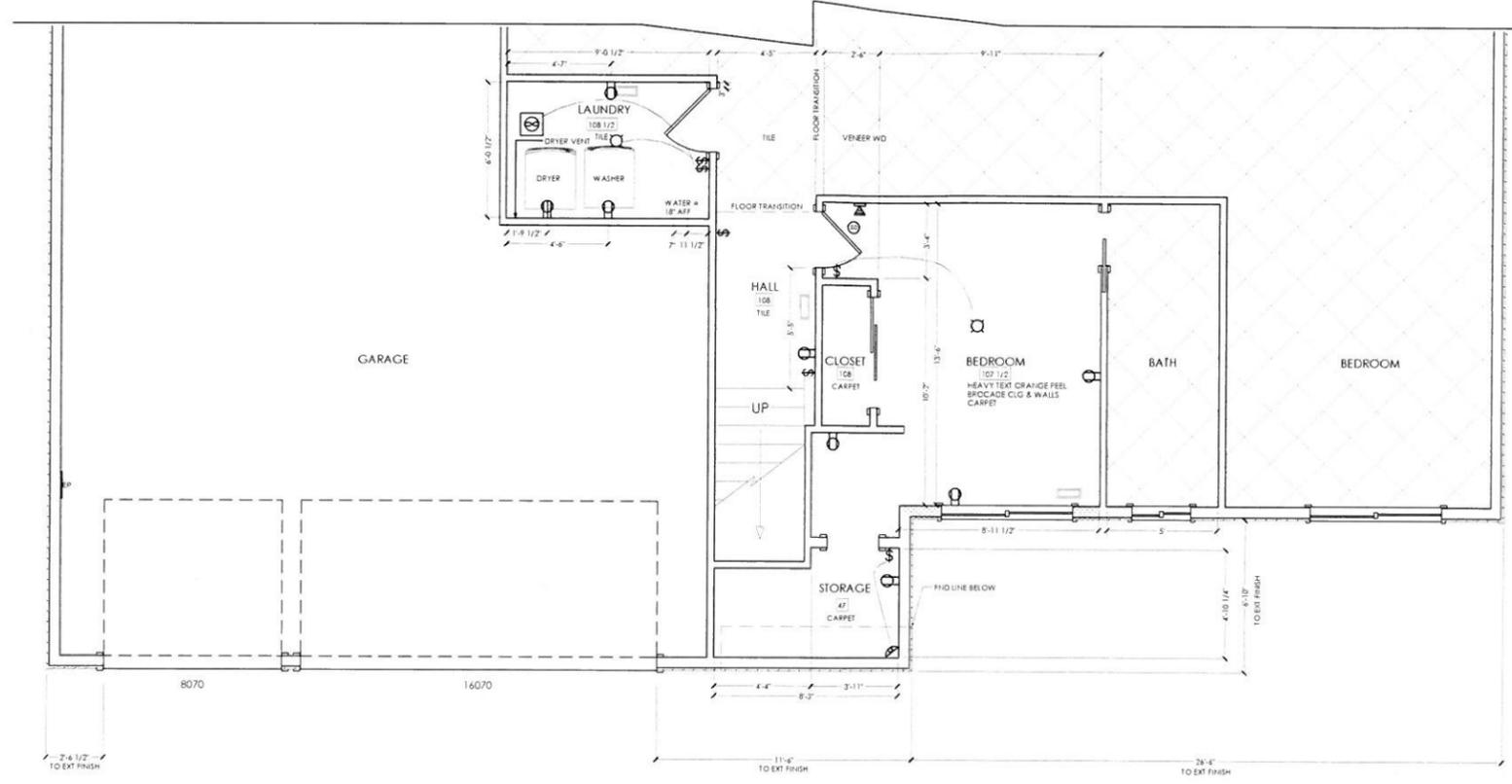
LOT COVERAGE INFORMATION:  
LOT AREA = 11,707 SF  
MIN ALLOWABLE COVERAGE = 10,000 SF

(E) COVERAGE =	RESIDENCE = 1820.00SF	COVERED PORCH = 46.00 SF	TOTAL (E) = 1866.00 SF
PROPOSED (N) =	OFFICE = 84.00 SF	COVERED PORCH = 45.00 SF	ENTRY STAIRS = 82.00SF
	TOTAL (N) = 212.00 SF		
TOTAL LOT COVERAGE (E) + (N) =	2032.00 SF		

**A** SITE PLAN  
SCALE: 1" = 5'-0"

**HALF SCALE**





**NOTES**  
ALL DIMENSIONS ARE FROM FINISH TO FINISH UNO.



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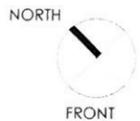
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JOB NO.: 13001  
DESIGNER: KRISTYN BESTER  
DRAWN BY: BRADLEY HORNE  
DATE: 04.29.2013  
CONSTRUCTION SET  
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PAGE NO.:  
**A1.1**

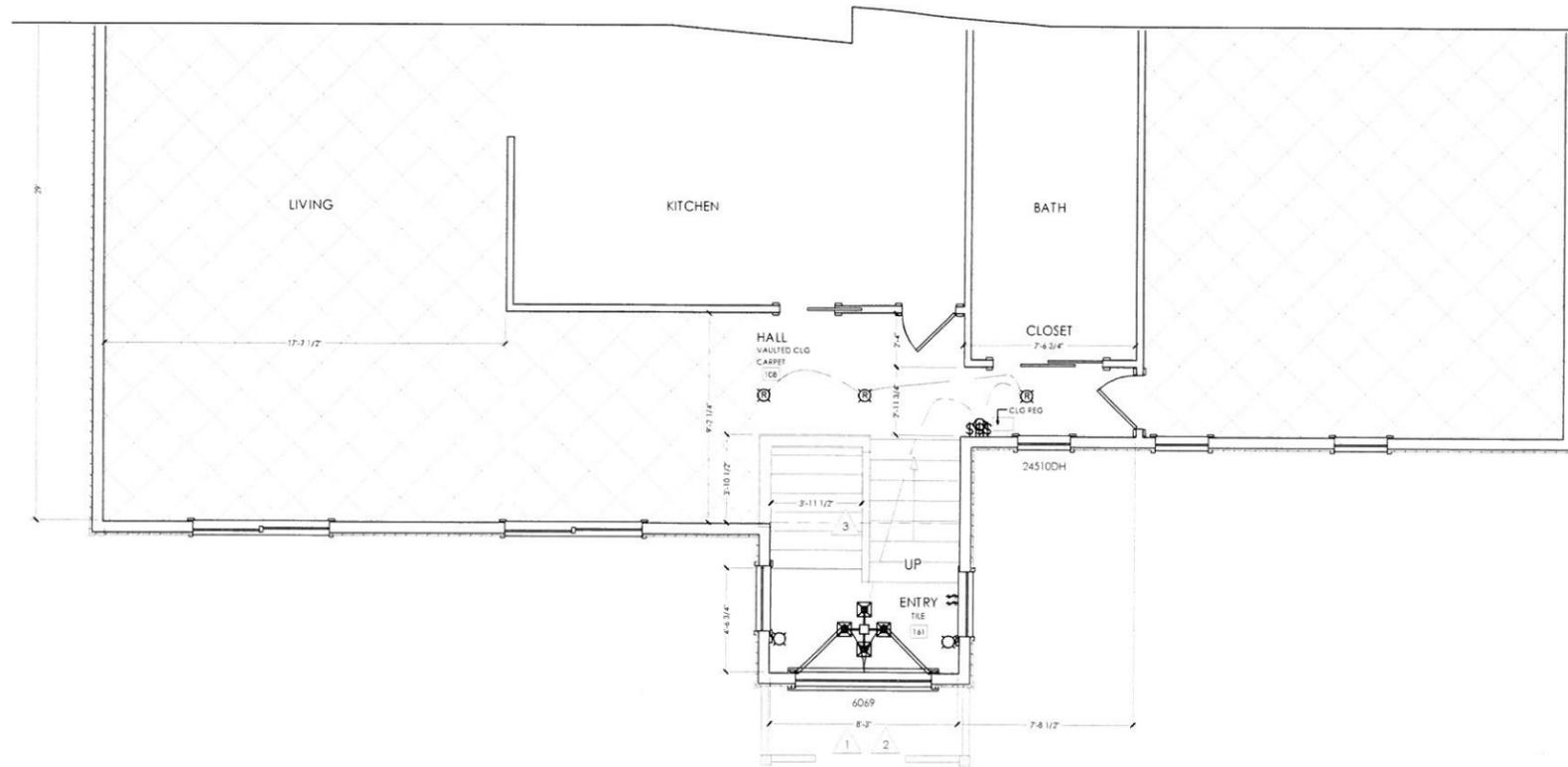
**WALL LEGEND**  
SCALE: 1/4"=1'-0"  
[Symbol] (E) WALL  
[Symbol] DEM O WALL

**ROOM LEGEND**  
[Symbol] WORK THIS PHASE  
[Symbol] NO WORK THIS AREA



**A (E) FIRST FLOOR PLAN**  
SCALE: 1/4"= 1'-0"

**HALF SCALE**



- NOTES**  
ALL DIMENSIONS ARE FROM FINISH TO FINISH UNO.
- 1 ARCIFORM TO DEMO (E) DECK, CLIENT WILL DEMO (E) STAIRS; NOT AS DRAWN
  - 2 EXT DECK - 8\"/>

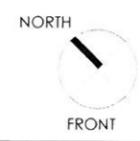
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**(E) SECOND FLOOR PLAN**

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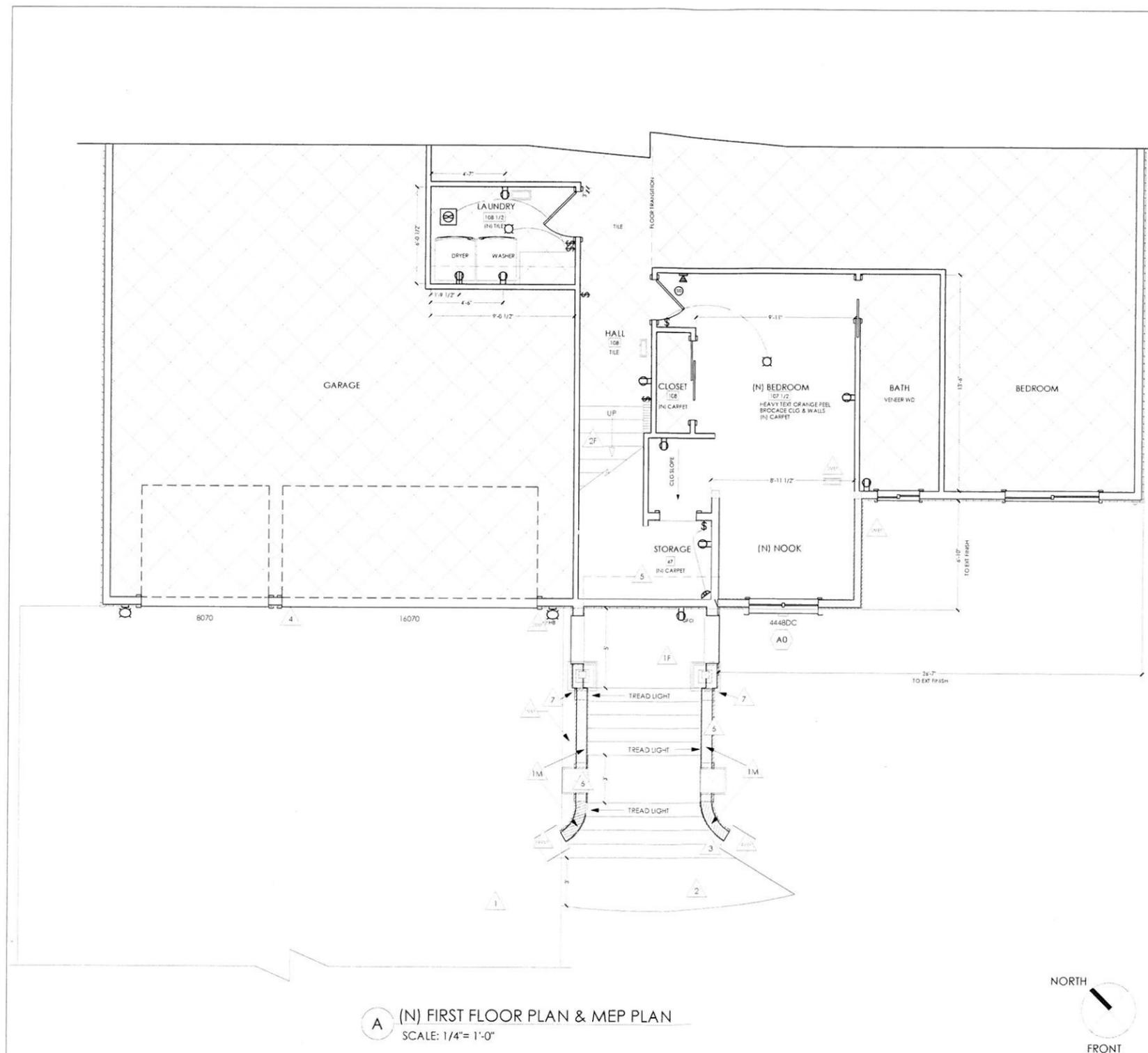
- DOORS & WINDOWS**
- 100 DOOR
  - A1 WINDOW
- WALL LEGEND**  
SCALE: 1/4"=1'-0"
- (E) WALL
  - DEM O WALL
- ROOM LEGEND**
- WORK THIS PHASE
  - NO WORK THIS AREA



**A (E) SECOND FLOOR PLAN**  
SCALE: 1/4"= 1'-0"

**HALF SCALE**

PAGE NO.:  
**A1.2**



**A (N) FIRST FLOOR PLAN & MEP PLAN**  
SCALE: 1/4" = 1'-0"

**HALF SCALE**

- GENERAL NOTES**
- ALL DIMENSIONS ARE FROM FINISH TO FINISH, UNO
  - SEE ENLARGED PLANS & INT ELEV FOR MORE INFO
  - INSULATE EXT WALLS WHERE ACCESSIBLE
  - 1 (E) DRIVEWAY
  - 2 CONFIRM FINAL SHAPE/ SIZE OF (N) SLAB W/ CLIENT ON SITE
  - 3 (N) STAIRS TO TERMINATE INTO CURVED WALL & (N) NEWEL POSTS
  - 4 (N) GARAGE DOOR SUPPLIED & INSTALLED BY CLIENT
  - 5 FLOOR CANTILEVERS OVER (E) FOUNDATION
  - 6 SEE ELEVATIONS & S-PAGES FOR WALL CONSTRUCTION & COLUMN DETAILS
  - 7 5" REVEAL

- MILLWORK**
- MATCH ADJ. PROFILES AS CLOSELY AS POSSIBLE # (N)
  - 1M INSIDE EDGE OF (N) HANDRAIL TO ALIGN W/ FACE OF STAIR WALLS. SEE ELEVATIONS FOR DETAILS

- FINISHES**
- MATCH ADJ. WALL & CEILING SURFACES # (N) & PATCHED AREAS
  - SEE EXT ELEVATIONS FOR (N) STONE VENEER APPLICATIONS
  - (N) CARPET & INSTALL IS BY CLIENT
  - 1F CONCRETE AT UNDERSIDE OF STAIRS. NO ADD'L CLG FINISH
  - 2F (N) BAMBOO WOOD TREADS & RISERS

- MEP**
- ADDRESS HVAC AS NEC FOR REMODEL ONLY
  - UPDATE ELEC AND PLBG AS NEC FOR REMODEL ONLY
  - COORDINATE W/ CLIENT, WHO WILL RUN (E) SPRINKLER SYSTEM TO THIS LOC
  - (N) HOSE BIB LOC, IF POSS
  - (N) FLOOR REGISTER LOC TO BE CONFIRMED W/ CLIENT ON SITE
  - (N) POST LIGHT; NOT AS DRAWN

- MEP LEGEND**
- R RECESSED LIGHT
  - CEILING LIGHT
  - SCONCE
  - SWITCH
  - OUTLET
  - WL & FL REG
  - EXHAUST FAN
  - SMOKE DETECTOR
  - INTERCOM
  - HOSE BIB

- DOORS & WINDOWS**
- 100 DOOR
  - A1 WINDOW

- WALL LEGEND**  
SCALE: 1/4" = 1'-0"
- (E) WALL
  - (N) WALL
  - (E) HALF WL

- ROOM LEGEND**
- WORK THIS PHASE
  - NO WORK THIS AREA



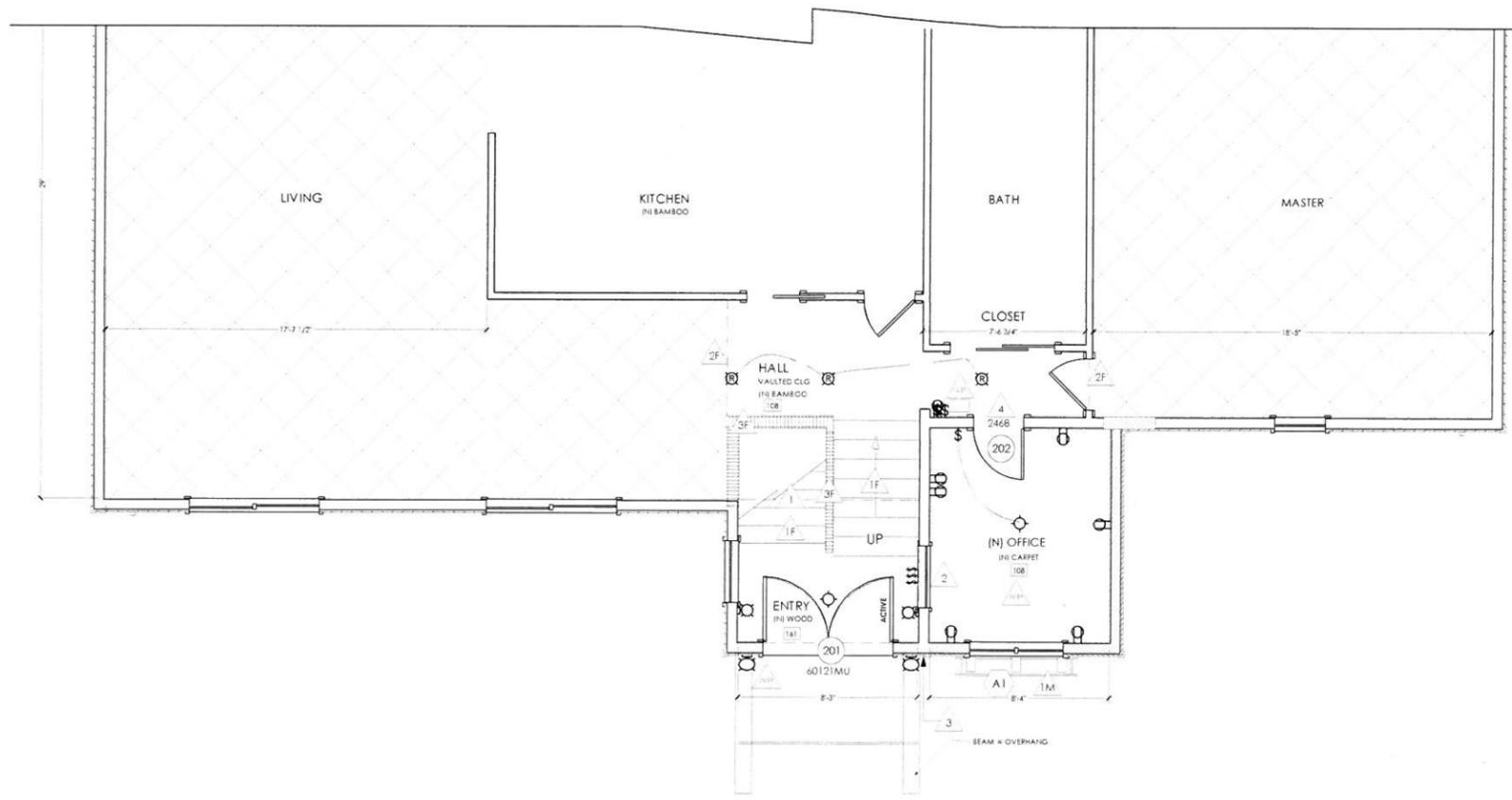
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**A2.1**



**A** (N) SECOND FLOOR PLAN & MEP PLAN  
SCALE: 1/4" = 1'-0"

**HALF SCALE**

**GENERAL NOTES**

- ALL DIMENSIONS ARE FROM FINISH TO FINISH, UNO
- SEE ENLARGED PLANS & INT ELEV FOR MORE INFO
- INSULATE EXT WALLS WHERE ACCESSIBLE
- 1 CEILING BREAK LINE
- 2 (E) WINDOW TO REMAIN
- 3 EXT WL SURFACE TO ALIGN
- 4 (N) DOOR \* (E) WIN OPENING

**MILLWORK**

- MATCH ADJIC PROFILES AS CLOSELY AS POSSIBLE \* (N)
- (N) FLOWER BOX, SEE ELEVATIONS FOR MORE INFO

**FINISHES**

- MATCH ADJIC WALL & CEILING SURFACES \* (N) & PATCHED AREAS
- (N) BAMBOO FLOOR IN KITCHEN, DINING, PANTRY, HALL & POWDER ROOM (NOT AS DRAWN)
- (N) CARPET & INSTALL IS BY CLIENT
- 1F (N) BAMBOO TREADS & RISERS
- 2F (N) FLOORING TRANSITION, AS FLUSH AS POSSIBLE
- 3F PAINT WOOD CAP \* (E) HALF WALL

**MEP**

- ADDRESS HVAC AS NEC FOR REMODEL ONLY
- UPDATE ELEC A1ID PLBG AS NEC FOR REMODEL ONLY
- (E) CLG REG
- CENTER ENTRY DOOR WALL LIGHTS AT 80" ABOVE PORCH FLOOR & 10" FROM DOOR OPENING
- (N) OUTLETS THIS ROOM, AS DESIGNED

**MEP LEGEND**

- RECESSED LIGHT
- CEILING LIGHT
- SCONCE
- SWITCH
- OUTLET

**DOORS & WINDOWS**

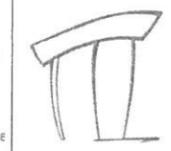
- 100 DOOR
- A1 WINDOW

**WALL LEGEND**

- SCALE: 1/4" = 1'-0"
- (E) WALL
- (N) WALL
- (E) HALF WL

**ROOM LEGEND**

- WORK THIS PHASE
- NO WORK THIS AREA



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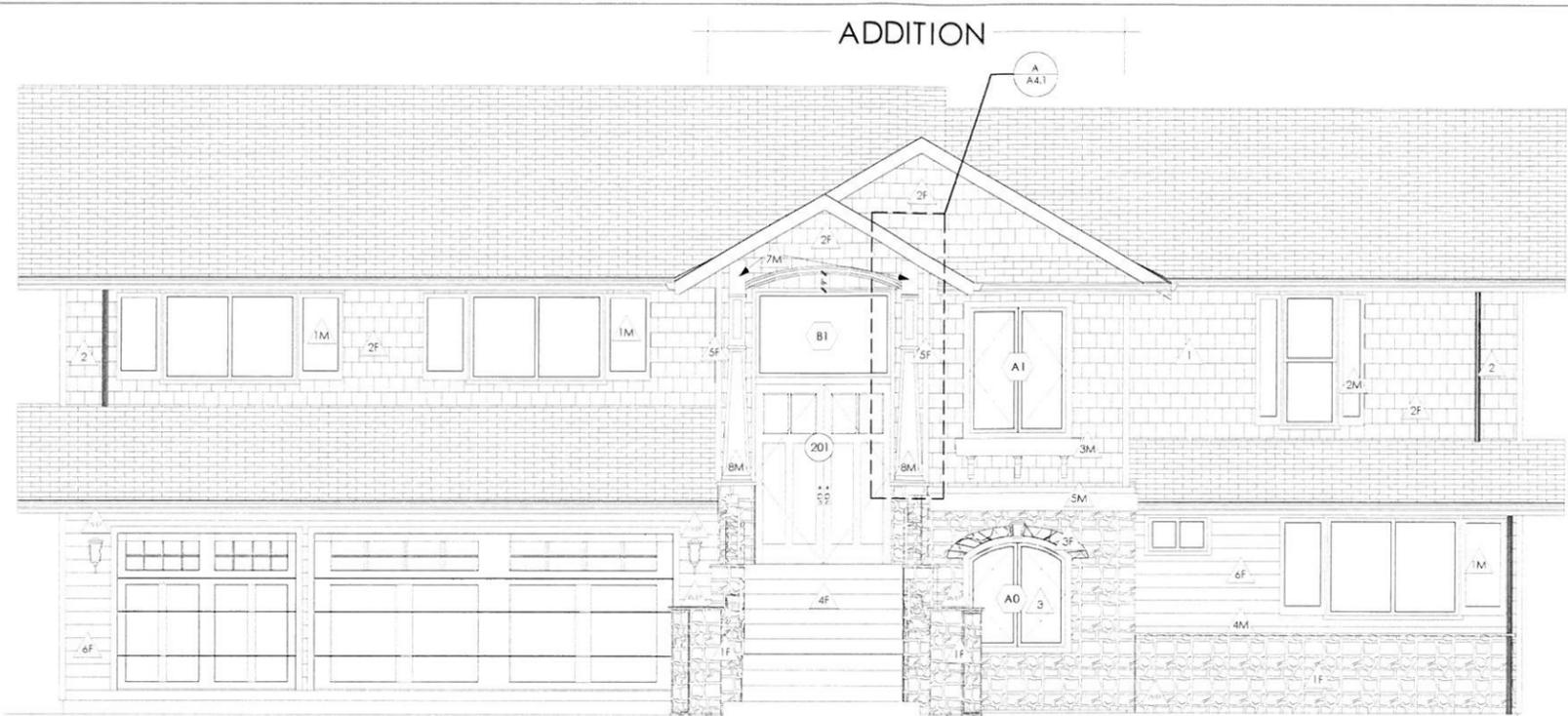
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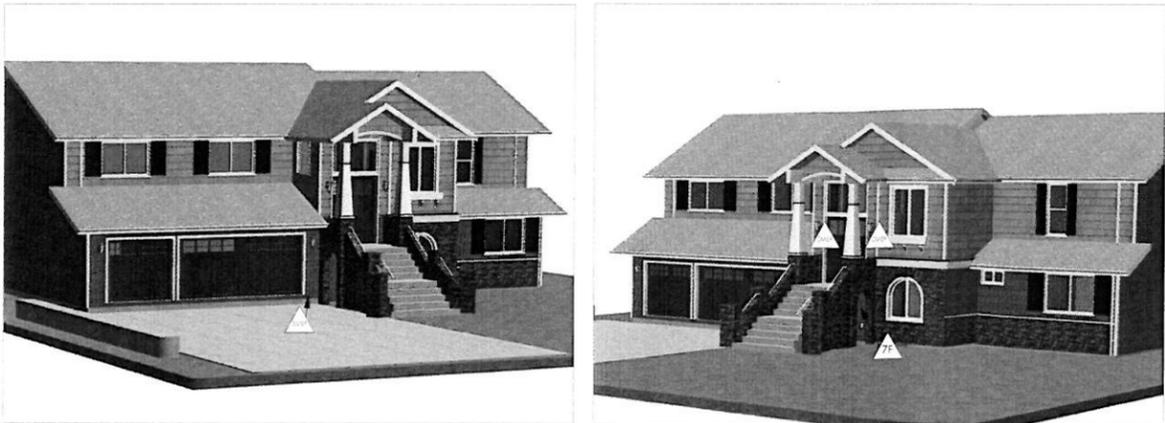
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**A2.2**



**A** EXTERIOR ELEVATION - FRONT & SOUTHWEST  
SCALE: 1/4" = 1'-0"



**B** EXTERIOR PERSPECTIVES  
NO SCALE - CONCEPTUAL ONLY

**HALF SCALE**

**GENERAL NOTES**  
DETAILS & FINISHES TO MATCH (E) AS CLOSE AS POSSIBLE

- 1 PATCH SIDING AS NEC AFTER WINDOW REMOVAL
- 2 ASSESS (E) DOWNSPOUT FOR POSS RELOCATION TO ADJ EXT WALL
- 3 RADIUS OF ARCH WINDOW NOT AS DRAWN - SEE DETAIL C-A3.1

**MILLWORK**

- MILLWORK IS PAINTED, UNO
- (N) CORNER BOARDS & ALL EXTERIOR CORNERS
- MATCH ADJ PROFILES AS CLOSELY AS POSSIBLE & (N)
- 1M (N) SHUTTERS ARE 24" WIDE
- 2M (N) SHUTTERS ARE SET BY WINDOW WIDTH
- 3M (N) PLANTER BOX W/ DECORATIVE CORBELS
- 4M STONE CAP @ TOP OF STONE; HEIGHT TO TERMINATE TWO FULL SIDING BOARDS BELOW WINDOW
- 5M 2X10 BELLY BAND TO SEPARATE SHAKE SIDING & STONE VENEER AT ADDITION
- 6M NOT USED
- 7M MIN. 4X8 BEAM; WRAPPED
- 8M 18X18 COLUMN @ BASE & TAPERS TO 10X10 @ TOP - SEE A4.1 FOR MORE INFO

**FINISHES**

- 1F STONE VENEER
- 2F (N) SHINGLE SIDING
- 3F DECORATIVE CAPITAL W/ STONE VENEER; FINAL DESIGN DETAILS TBD BY CLIENT & STONE INSTALLER
- 4F CONCRETE STAIRS & LANDINGS
- 5F PAINT COLUMN CAPITAL & COLUMN BASE W/ ACCENT COLOR
- 6F (E) HARDI SIDING
- 7F HORIZONTAL LAP SIDING AT EXTERIOR WALL UNDER STAIRS

**MEP**

- (N) WALL LIGHT IN (E) LOC
- CENTER ENTRY DOOR WALL LIGHTS AT 90" ABOVE PORCH FLOOR & 10" FROM DOOR OPENING
- (N) WATER SPIGOT
- (N) LIGHTS AT POSTS; NOT AS DRAWN

**DOORS & WINDOWS**

- SEE SPEC FOR DOOR STYLES; NOT AS DRAWN
- 100 DOOR
- A1 WINDOW



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PAGE TITLE:

**EXTERIOR ELEVATION & PERSPECTIVES**

JOB NO.: 13001

DESIGNER: KRISTYN BESTER

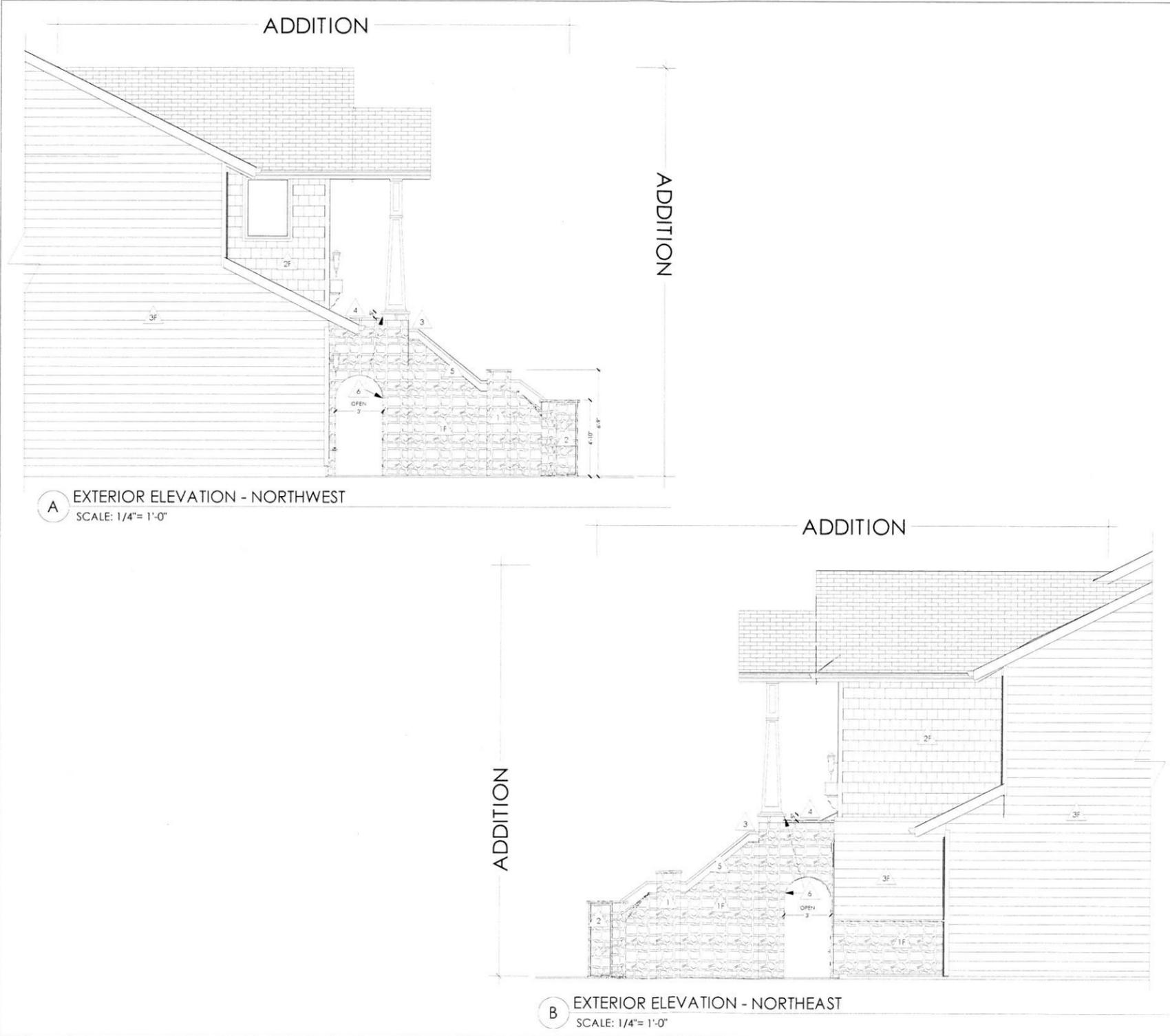
DRAWN BY: BRADLEY HORNE

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PAGE NO.:

**A3.1**



HALF SCALE

**GENERAL NOTES**

DETAILS & FINISHES TO MATCH (E) AS CLOSE AS POSSIBLE

**MILLWORK**  
MILLWORK IS PAINTED, TYP.

CORNER BOARDS & EXTERIOR CORNERS TO MATCH (E) AS CLOSELY AS POSS.

1 18 X 18 COLUMN W/ STONE CAP PER INSTALLER

2 20 X 20 COLUMN W/ STONE CAP PER INSTALLER

3 TOP OF CUSTOM RAILING @ 3' ABOVE FINISHED TREAD

4 TOP OF STONE CAP AT +/- 3" ABOVE LANDING

5 TOP OF STONE CAP ALONG SLOPE OF STAIRS +/- 25" ABOVE EACH STEP

6 FRAME (I) DOORWAY AS TALL AS POSS. ALIGN EDGE OF OPENING W/ EDGE OF COLUMN ABOVE

**FINISHES**

1F (I) STONE VENEER

2F (I) SHINGLE SIDING

3F (E) HARDI SIDING



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19220 NIXON AVE  
WEST LINN, OR 97068

PAGE TITLE:

EXTERIOR ELEVATIONS

JOB NO.: 13001

DESIGNER: KRISTYN BESTER

DRAWN BY: BRADLEY HORNE

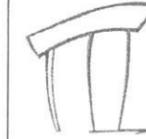
DATE: 04.29.2013  
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A3.2

GENERAL NOTES  
ALL DIMENSIONS ARE  
FINISH TO FINISH UNLESS  
NOTED OTHERWISE



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PAGE TITLE:  
**DETAILS**

Structural info on 5 pages

JOB NO.: 13001

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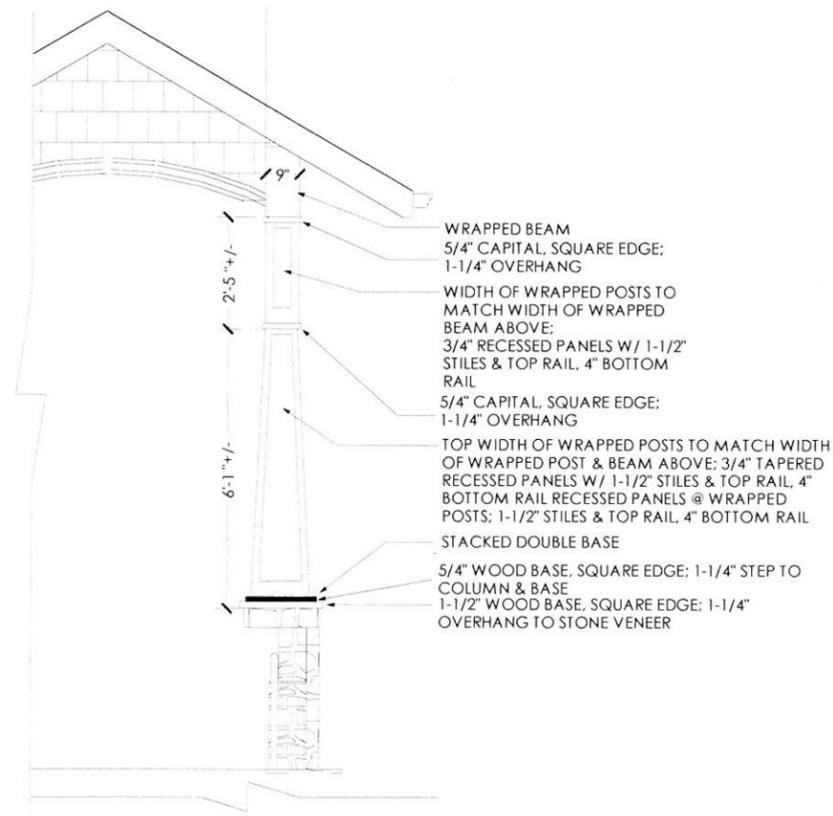
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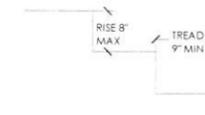
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PAGE NO.:

**A4.1**



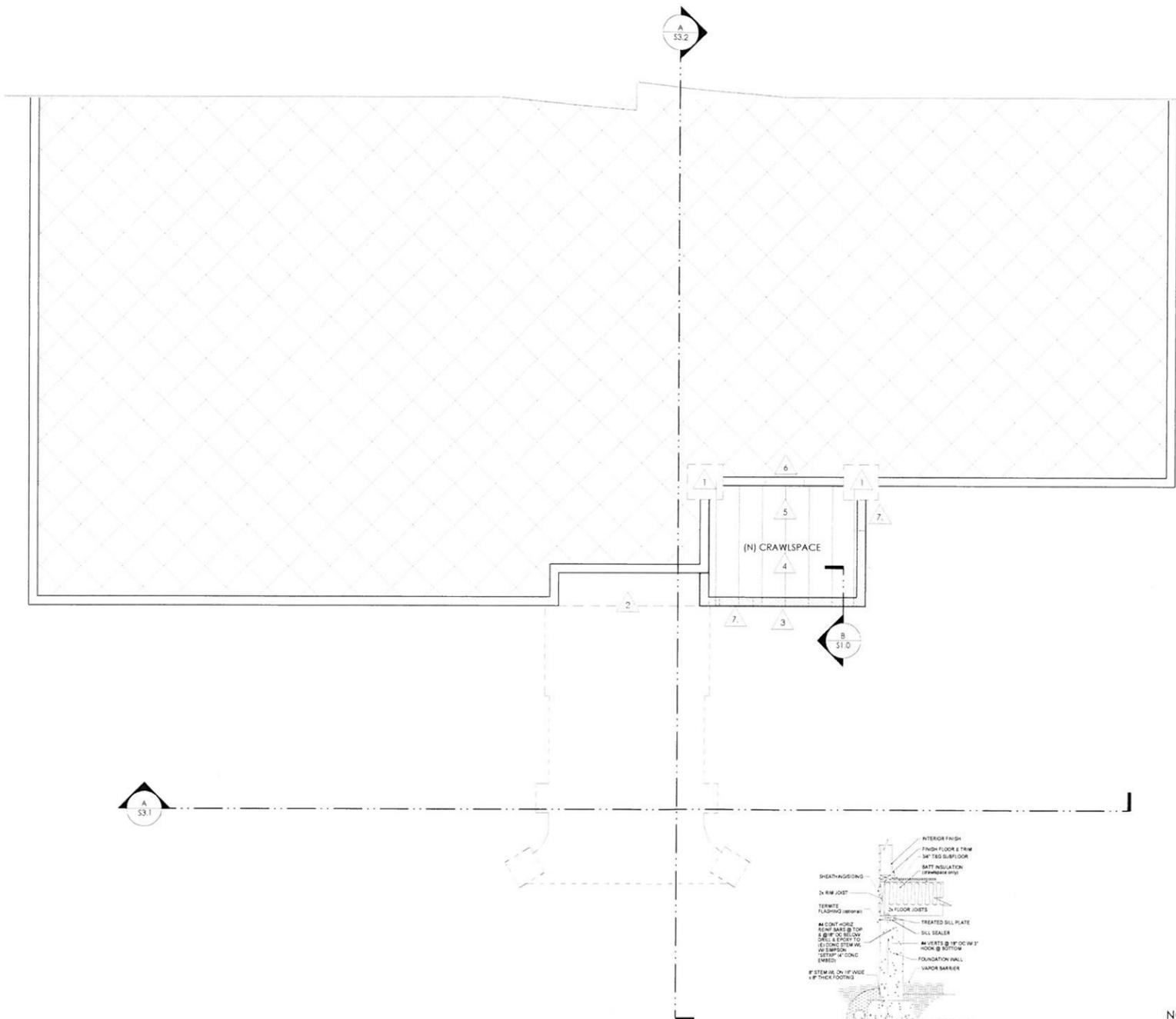
**A** PORCH COLUMN FINISH DETAIL  
SCALE: 1/2" = 1'-0"



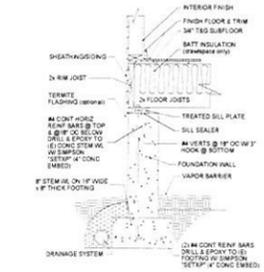
RISERS AND TREADS  
\* 36" FROM SIDE TO SIDE MINIMUM ABOVE THE HAND RAIL  
\* 3/8" MAXIMUM DIFFERENCE BETWEEN THE LARGEST AND THE SMALLEST RISE  
\* 3/8" MAXIMUM DIFFERENCE BETWEEN THE LARGEST AND SMALLEST TREAD MEASURED FROM FRONT TO BACK

**B** STANDARD TREAD & RISER DETAIL  
SCALE: NOT TO SCALE

**HALF SCALE**



**A** FOUNDATION & FIRST FLOOR FRAMING PLAN  
SCALE: 1/4" = 1'-0"

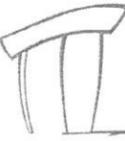


**B** FOOTING DETAIL  
SCALE: NOT TO SCALE

**GENERAL NOTES**

- STRUCTURAL PER SEEL. SEE CALC PACKET FOR FURTHER INFO.
- SEE SHEET S3.3 FOR ENTRY STAIRS FOUNDATION.
- VERIFY / PROVIDE 2" X 2" X 10' FOOTING W/ (2) #4 EA WAY BELOW (E) FOUNDATION WL.
- (E) CANTILEVER.
- 8" CONC. STEM W/ W/ #4 VERTICAL @ 48" OC (CENTERED IN WL) & #4 HORIZONTAL @ TOP OF WL & 18" OC BELOW ON 1'-4" X 8" FOOTING W/ (2) #4 CONT. (DRILL & EPOXY HORIZONTAL BARS TO (E) CONC. STEM / FTG PER SIMPSON "SETXP" - 4" CONC. EMBED).
- 18" MIN CRAWLSPACE HT W/ TOP OF (N) & (E) FND TO ALLOW (N) FINISH FLR TO PLANE OUT LEVEL W/ (E) FINISH FLR. ADJUST CRAWLSPACE HEIGHT AS NEC. WITH FEMA COMPLIANT FLOOD VENTS FOR (N) CRAWLSPACE. PER WEST LINN DEVELOPMENT CODE CH 27.080 (N) CRAWLSPACE REQUIRES (2) FLOOD VENTS MIN OR EQUAL TO 1 SQ INCH PER 1 SQ FT OF ENCLOSED SPACE.
- 2X8 MIN FLR JOISTS @ 16" OC.
- ACCESS HOLE IN (E) STEM WALL.
- (X2) FEMA APPROVED FLOOD VENTS.

- WALL LEGEND**  
SCALE: 1/4" = 1'-0"
- [Symbol] FND WL
  - [Symbol] (N) FND WL
- ROOM LEGEND**
- [Symbol] WORK THIS PHASE
  - [Symbol] NO WORK THIS AREA



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---

PAGE TITLE:  
**FOUNDATION & FIRST FLOOR FRAMING PLAN**

JOB NO.: 13001

DESIGNER:  
KRISTYN BESTER

DRAWN BY:  
BRADLEY HORNE

DATE:  
04.29.2013

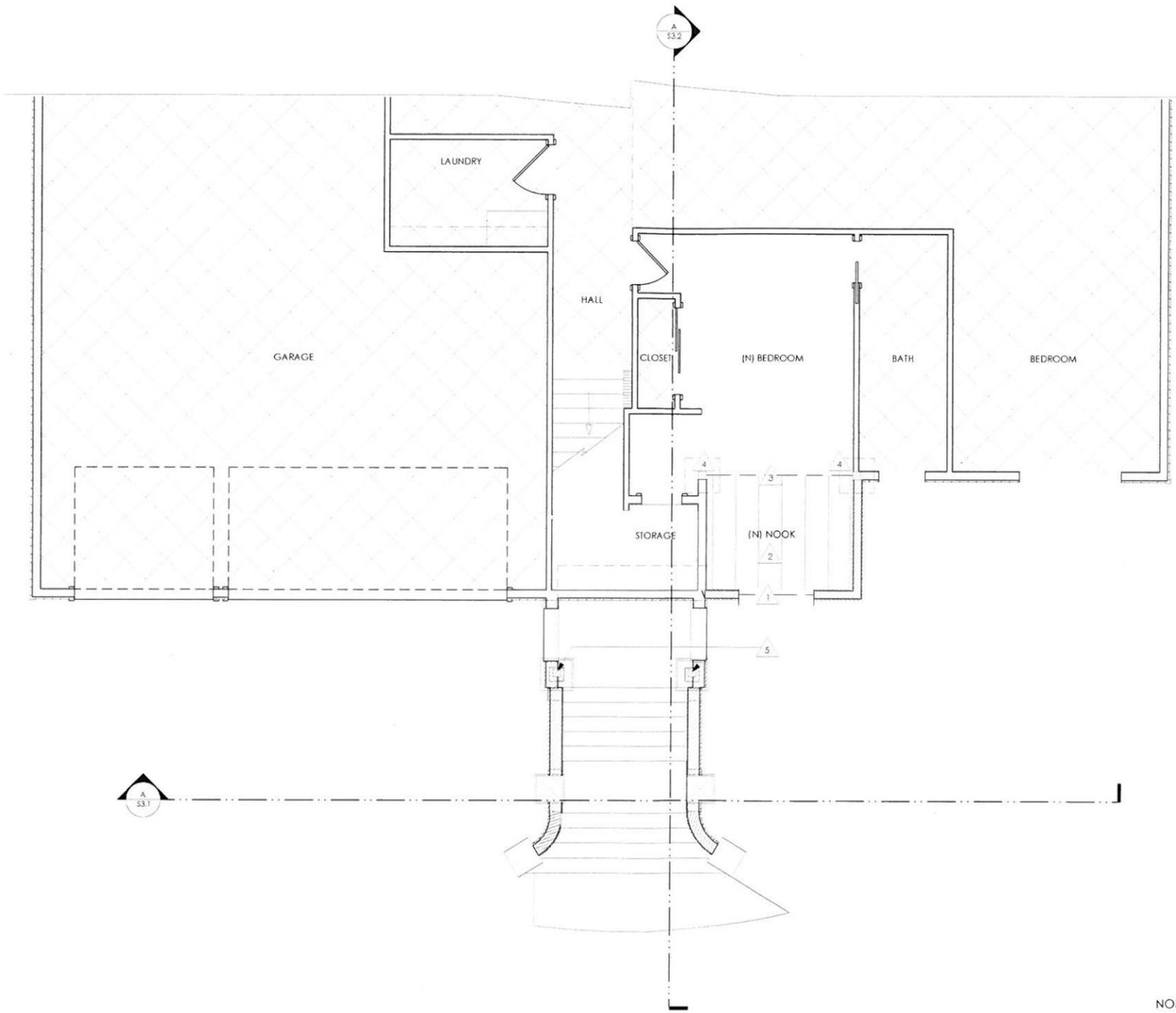
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PAGE NO.:  
**S1.0**

**HALF SCALE**



**GENERAL NOTES**

STRUCTURAL PER SESE, SEE CALC PACKET FOR FURTHER INFO

- 1 4x8 MIN HEADER
- 2 2x8 MIN FLR JOISTS @ 16" OC W/ SIMPSON "HUS28" HANGERS TO FLUSH BEAM
- 3 (3) 1.75 X 7.25 LVL 1.9E FLUSH BEAM LAMINATED W/ (4) 16d @ 12" OC
- 4 6x6 POST BELOW (N) BEAM ABOVE CLG PLANE
- 5 6x6 POST W/ SIMPSON "CS5066" COLUMN BASE @ BASE & "CCG46" COLUMN CAP @ TOP



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PAGE TITLE:  
FIRST FLOOR CEILING FRAMING/ SECOND FLOOR FRAMING PLAN

JOB NO.: 13001  
DESIGNER: KRISTYN BESTER  
DRAWN BY: BRADLEY HORNE  
DATE: 04.29.2013  
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PAGE NO.:

**S1.1**

**A** FIRST FLOOR CEILING FRAMING/ SECOND FLOOR FRAMING PLAN  
SCALE: 1/4"= 1'-0"

**WALL LEGEND**

SCALE: 1/4"=1'-0"

(E) WALL

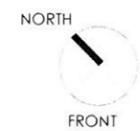
(N) WALL

(E) HALF WL

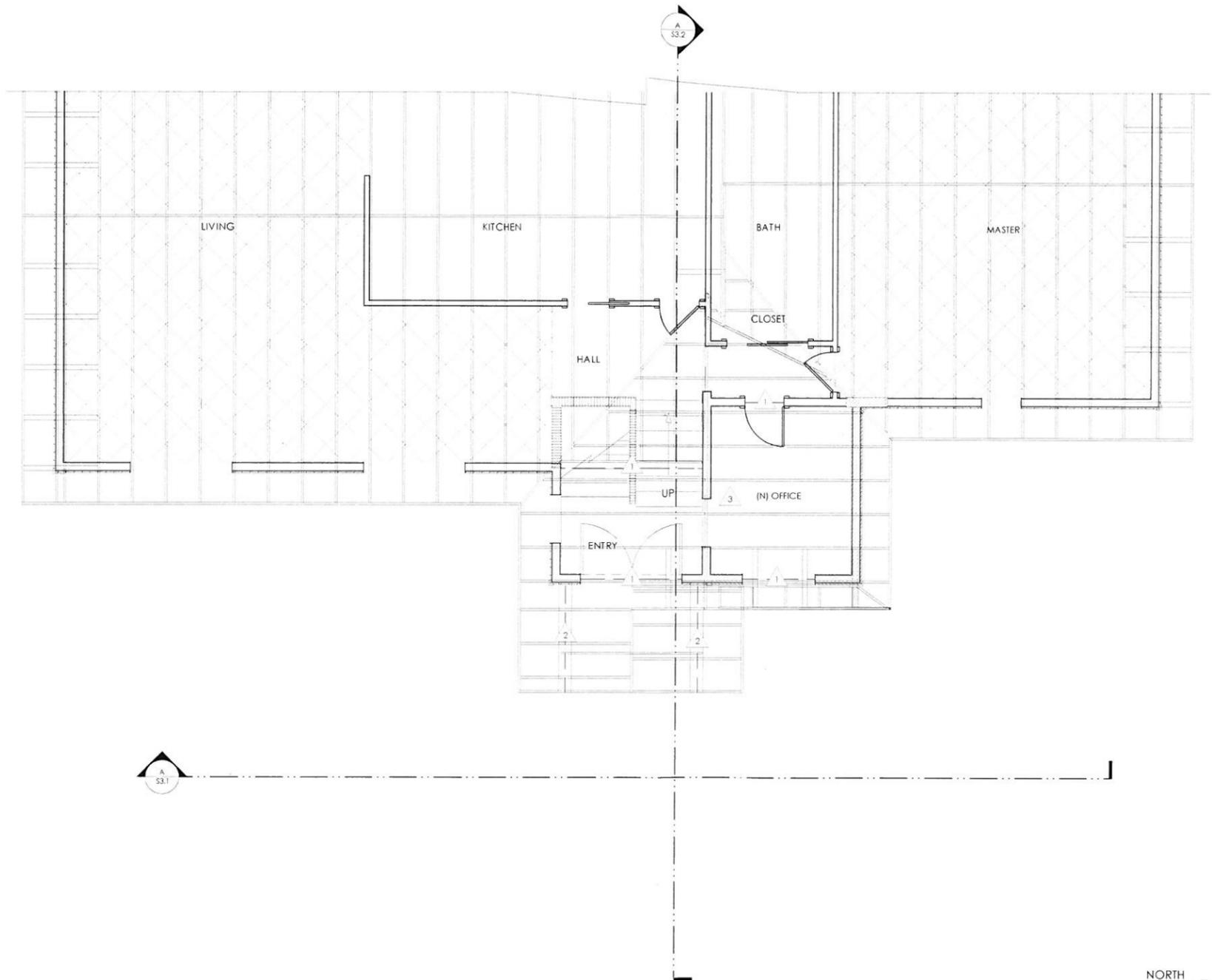
**ROOM LEGEND**

WORK THIS PHASE

NO WORK THIS AREA



**HALF SCALE**



**GENERAL NOTES**

- STRUCTURAL PER SESE.  
SEE CALC PACKET FOR  
FURTHER INFO
- 1 4X8 MIN HEADER  
VERIFY / PROVIDE
  - 2 4X8 BEAM
  - 3 2X4 OVERBUILT  
RAFTERS @ 24" OC  
W/ 2X8 CLG  
JOISTS @ 24" OC



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PAGE TITLE:  
**SECOND FLOOR CEILING & ROOF FRAMING PLAN**  
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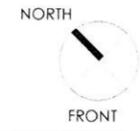
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**S1.2**

**WALL LEGEND**  
SCALE: 1/4"=1'-0"

- (E) WALL
- (N) WALL

**ROOM LEGEND**

- WORK THIS PHASE
- NO WORK THIS AREA



**A** SECOND FLOOR CEILING & ROOF FRAMING PLAN  
SCALE: 1/4"=1'-0"

**HALF SCALE**



**A** STRUCTURAL SECTION  
SCALE: 1/4"= 1'-0"



**B** PERSPECTIVE  
SCALE: NOT TO SCALE

**HALF SCALE**

**GENERAL NOTES**

STRUCTURAL PER SESE.  
SEE CALC PACKET FOR FURTHER INFO

- 1 TYP ROOF # (N)  
-FINISHES, MILLWORK & GUTTERS & DS TO MATCH (E) AS CLOSE AS POSSIBLE  
-1/2" ROOF SHEATHING W/ ACX 2440  
-APA RATING W/ 80 # 4" OC AT EDGES & 80 # 12" OC AT FIELD TYP. UNO  
-#30 FELT  
-VENTING AS REQUIRED  
-2X4 OVERBUILT RAFTERS AT 24" OC - PITCH TO MATCH (E)  
-TIE INTO (E) RAIN WATER MANAGEMENT
- 2 GABLE WALL SHIT G TO HAVE SINGLE 4X8 SHEET CENTERED ON GABLE & EDGE NAILED TO EA RAFTER
- 3 TYP WALLS # (N)  
-FINISHES, MILLWORK & GUTTERS & DS TO MATCH (E) AS CLOSE AS POSSIBLE  
-1/2" WALL SHEATHING W/ 80 # 4" OC AT EDGES & 80 # 12" OC AT FIELD TYP. UNO  
-2X6 STUDS AT 16" OC  
-DOUBLE TOP PLATE  
-SINGLE SOLE PLATE ON SUBFLOOR  
-R-21 INSUL MIN TYP
- 4 VERIFY / PROVIDE A STRAIGHT RIDGE LINE PER HOME OWNER SITE VISIT COMMENTS / CONCERNS
- 5 SIMPSON "HGA10KT" # EA RAFTER TO BM CONNECTION
- 6 2X6 FLAT VALLEY NAILER W/ (3) 10G TO EA (E) RAFTER/TRUSS & EDGE NAILED TO (N) ROOF SHIT G ABOVE
- 7 (N) 2X8 STRUCTURAL CLG .51 # 24" OC & 2X4 OVERBUILT RAFTERS # 24" OC W/ 2X4 POSTS DOWN TO CLG .51 STAGGERED # 48" OC MAX SPAN. FASTEN EA END OF POSTS TO RAFTER & CLG .51 W/ (3) 10G, R-38 MIN INSUL TYP
- 8 SIMPSON "CS20" ALIGNED ABOVE & BELOW WINDOW OPENINGS. FASTEN EA END W/ (7) 10G TO 2X6 BLOCKING & INTERMEDIATE W/ 10G # 6" OC TO HEADER, SILL & 2X6 BLOCKING W/ 80 # 6" OC INTERMEDIATE



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PAGE TITLE:  
**STRUCTURAL SECTION, PERSPECTIVE & DETAIL**

JOB NO.: 13001

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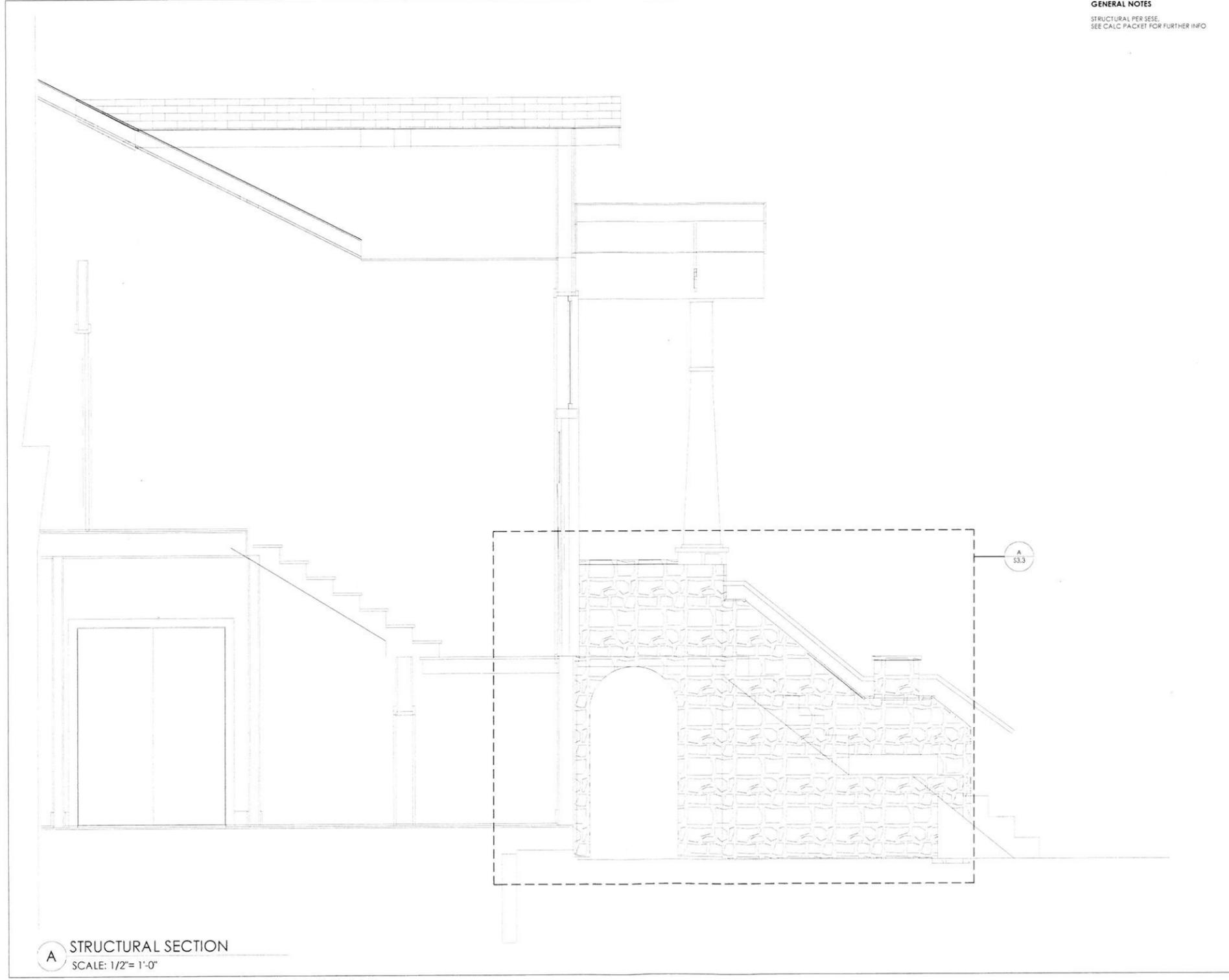
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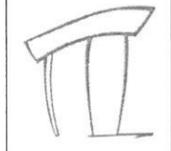
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**S3.1**



**GENERAL NOTES**  
 STRUCTURAL PER SESE,  
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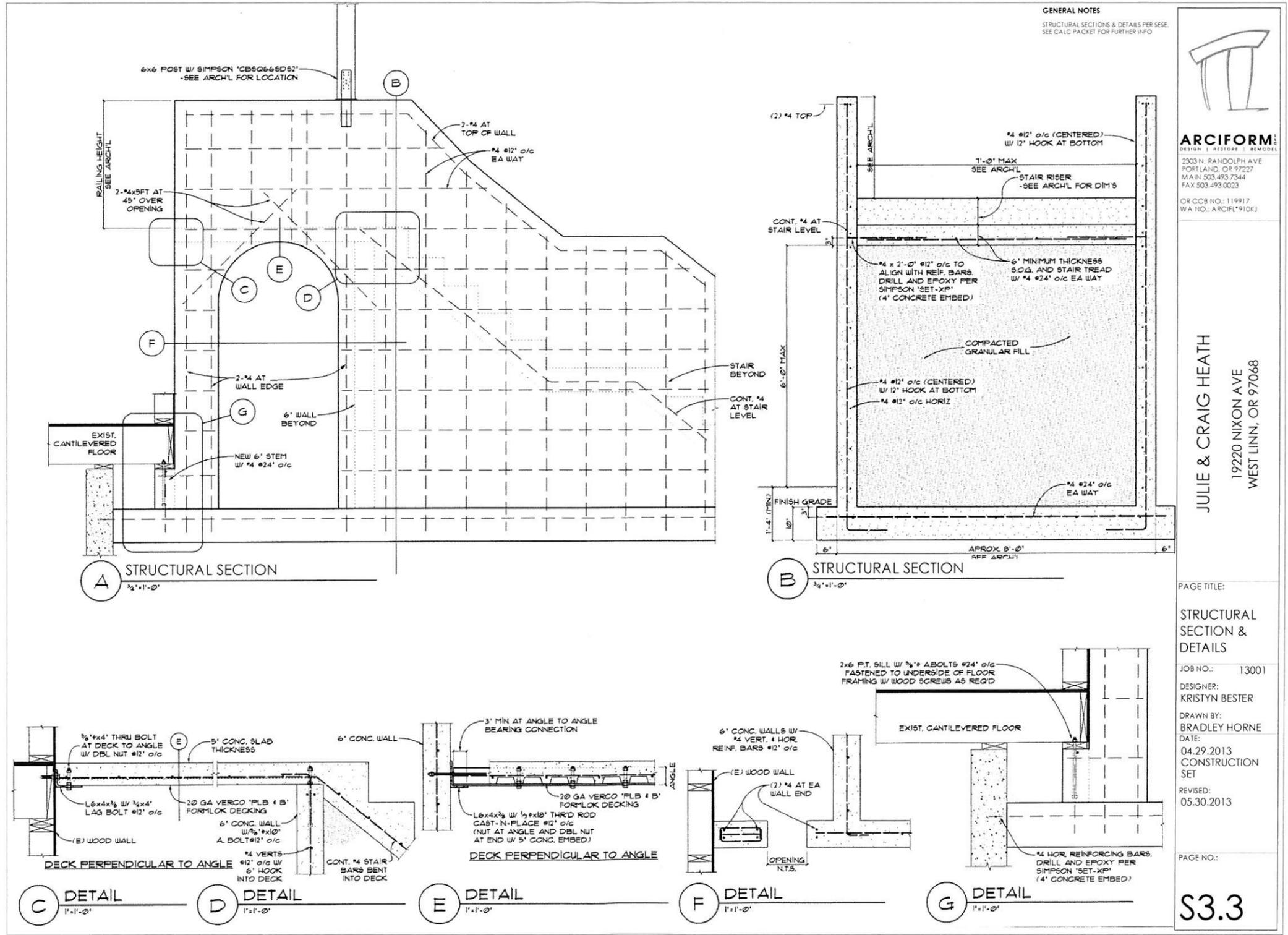
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**S3.2**

**A** STRUCTURAL SECTION  
 SCALE: 1/2" = 1'-0"

**HALF SCALE**



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**S3.3**