Staff Report

Infill Housing Design Review Committee

File Number: 9-B-23-IH

Meeting: 9/20/2023
Applicant: Josh Braden Braden Family Properties, LLC
Owner: Braden Family Properties, LLC

Property Information

Location: 318 E. Oldham Ave. **Parcel ID** 81 L A 005
Zoning: RN-2 (Single-Family Residential Neighborhood)
District: Oakwood/Lincoln Park Infill Housing Overlay District

Description of Work

Level III New Primary Structure

New primary residence fronting Oldham Avenue. Two story residence with a front gable roof (10/12 pitch), with a shed-roof massing extending the full length of the façade. Roof, siding, and window materials are unspecified. The house measures 40' long by 16' wide (20' wide with a 4' massing recessed towards the rear). The house is proposed to be set 21' from the front property line. Parking is located at the rear, accessed from the alley, featuring an 18' wide concrete drive.

The façade (north) features a 6' deep projecting porch, supported by three 8x8 square columns, extending the full width of the structure. The porch features a shed roof (4/12 pitch) with an engaged gable located on the right side over the door. On the first story, the first two bays are paired 1/1 double hung windows, followed by a full-light door with a transom. Paired 1/1 double hung windows are centrally located on the second story of the façade. A 1/1 double hung window is also visible on the recessed massing which extends from the right side of the house, approximately 12' behind the façade.

The left elevation features a secondary opening to a small porch. One 1/1 double hung window is located on this elevation. The right elevation features a one-story, massing projecting from the center of the elevation, featuring a transom window. The rear elevation has two 1/1 double hung windows on the first story and one pair of 1/1 double hung windows on the second story.

Applicable Design Guidelines

Heart of Knoxville Infill Housing Design Guidelines

1. Front Yards:
- Consistent front yard space should be created along the street with the setback of a new house matching the older houses on the block.
- A walkway should be provided from the sidewalk or street to the front door. Along grid streets, the walk should be perpendicular to the street.
- Healthy trees that are outside the building footprint should be preserved. The root area should be marked and protected during construction.

2. House Orientation and Side Yards:
- New housing should be proportional to the dimensions of the lot and other houses on the block.
- Side yard setbacks should be similar to older houses on the block, keeping the rhythm of spacing between houses consistent.
- On lots greater than 50’ in width, consider re-creating the original lot size.

3. Alleys, Parking, and Services
- Parking should not be in front yards.
- On streets without alleys, garages or parking pads should be at least 20 feet behind the front façade of the infill house with access limited to one lane between the street and the front facade.

4. Scale, Mass, and Foundation Height
- The front elevation should be designed to be similar in scale to other houses along the street.
- The front façade of new houses should be about the same width as original houses on the block.
- New foundations should be about the same height as the original houses in the neighborhood.
- If greater height is to be created (with new construction or an addition), that portion of the house should be located toward the side or rear of the property.

5. Porches and Stoops
- Porches should be part of the housing design in those neighborhoods where porches were commonplace.
- Porches should be proportional to original porches on the block, extending about 8-12 feet toward the street from the habitable portion of the house
- Porches should extend into the front yard setback, if necessary, to maintain consistency with similarly sited porches along the street.
- Porch posts and railings should be like those used in the historic era of the neighborhood’s development. Wrought iron columns and other materials that were not used in the early 1900’s should not be used.

6. Windows and Doors:
- When constructing new houses, the window and door styles should be similar to the original or historic houses on the block.
- To respect the privacy of adjacent properties, consider the placement of side windows and doors.
- The windows and doors on the front facade of an infill house should be located in similar proportion and position as the original houses on the block.
- Attention should be paid to window placement and the ratio of solid (the wall) to void (the window and door openings).
- Contemporary windows such as picture windows should not be used in pre-World War II neighborhoods.

7. Roof Shapes and Materials
- New roofs should be designed to have a similar pitch to original housing on the block
- Darker shades of shingle were often used and should be chosen in roofing houses in Heart of Knoxville neighborhoods.

8. Siding Material
- Clapboard-like materials (such as cement fiberboard) should be used in constructing new housing where painted wood siding was traditionally used
- Brick, wood shingle, and other less common material may be appropriate in some older neighborhoods, particularly those with a mix of architectural styles.
- Faced stone, vertical siding, and other non-historic materials should not be used in building new houses.

11. Landscape and Other Considerations:
- One native or naturalized shade tree should be planted in the front and rear yards of in fi ll lots with 25 feet or

more in depth to front of house.

Comments

1. The front porch is proposed to be set 21' from the front property line. The average front setback of the block is 18.8'. The adjacent houses are set 21' and 27' from the front property line. The new house will maintain a consistent front yard space with the block.

2. The block to receive new construction is characterized by shotgun houses, Queen Anne cottages, and modified Craftsman bungalows. The house is relatively narrow in proportion to the lot but reflects the width of five shotgun houses on the street. The side yard setbacks are consistent with the block.

3. The proposed parking meets Infill Housing guidelines as it's located to the rear of the house and accessed from the alley. Final site plan revisions may be necessary to meet City Engineering standards.

4. The two-story, two-bay house is narrow but compatible with the multiple shotgun houses on the block, which also have very narrow façade elevations. The additional height from a second story is not disproportionate to the context. As depicted, the foundation height is compatible with the neighborhood context.

5. The house features a 6' deep front porch, which should be increased to at least 8' to meet the design guidelines. The 8 by 8 columns and horizontal header add detail to the porch design. The engaged gable on the front porch should be included in the final construction. If the front porch is constructed on an open foundation, the lattice or another siding method should be included to avoid an open deck look.

6. Guidelines recommend window and door styles be similar, with similar proportions and ratio of solid to void, to historic houses on the block. At least one additional window should be added to the left side elevation to reduce the large swath of siding with no transparency. The frontmost windows on the right side elevation should be double-hung windows instead of transoms.

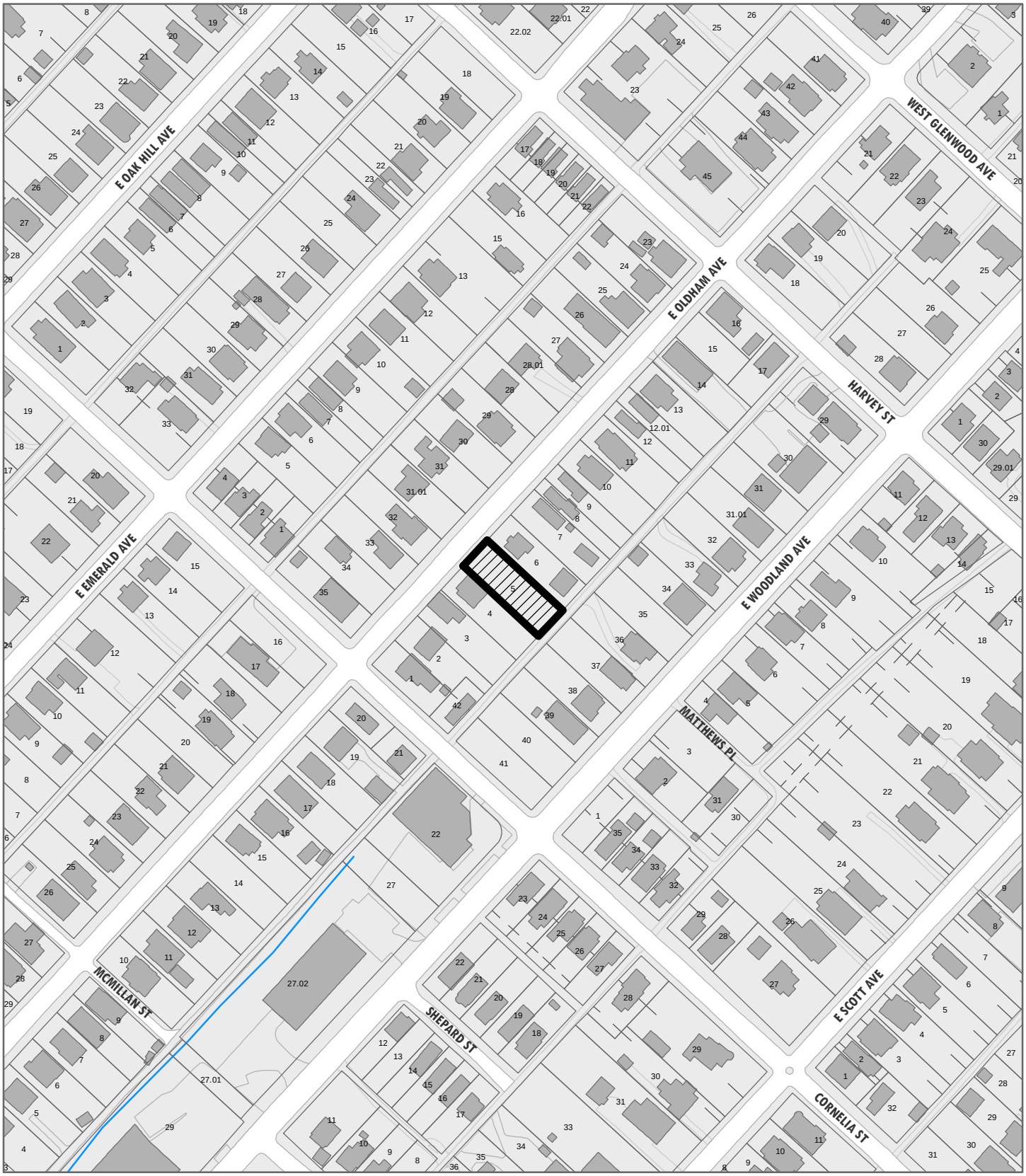
7. The proposed 10/12 pitch roof meets the design guidelines. The final construction should incorporate the rake mold and eave overhangs as drawn.

8. The application does not include information on siding or roofing materials. If vinyl siding is used, the siding should feature an overlap instead of Dutch lap or flush panel siding. The CMU foundation should be clad in stucco or brick.

9. The final site plan should include one new native or naturalized shade tree to be planted in the front and rear yards.

Recommendation

Staff recommends approval of Certificate 9-B-23-IH, subject to the following conditions: 1) final site plan to meet City Engineering standards; 2) front porch be increased to 8' in depth; 3) additional window to be added to left side elevation and right side window to be revised in side; 4) final construction to retain all details shown on drawings.



INFILL HOUSING REVIEW BOARD

9-B-23-IH

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

318 E. Oldham Ave.

Oakwood/Lincoln Park Infill Housing Overlay District

Original Print Date: 9/8/2023 Revised:

Knoxville/Knox County Planning - Infill Housing Design Review Committee

Applicant: Josh Braden Braden Family Properties, LLC

N

0 250

Feet

Planning
KNOXVILLE | KNOX COUNTY

DESIGN REVIEW REQUEST

- ☐ DOWNTOWN DESIGN (DK)
- ☐ HISTORIC ZONING (H)
- ☒ INFILL HOUSING (IH)

Josh Braden

Applicant

085/28/23	9.20.2023	9-B-23-IH
Date Filed	Meeting Date (if applicable)	File Number(s)

CORRESPONDENCE

All correspondence related to this application should be directed to the approved contact listed below.

☒ Owner ☐ Contractor ☐ Engineer ☐ Architect/Landscape Architect

Josh Braden		Braden Family Properties, LLC.		
Name		Company		
303 Bob Smith Lane		Knoxville	TN	37924
Address		City	State	Zip
865.696.7343	joshuabradens4@gmail.com			
Phone	Email			

CURRENT PROPERTY INFO

Owner Name (if different from applicant)	Owner Address		Owner Phone
318 E. Oldham Avenue		081LA005	
Property Address		Parcel ID	
Mountain View Add			
Neighborhood		Zoning	

AUTHORIZATION

Lindsay Crockett	Lindsay Crockett	8.29.23
Staff Signature	Please Print	Date
	Josh Braden	08/28/23
Applicant Signature	Please Print	Date

REQUEST

DOWNTOWN DESIGN

Level 1:

☐ Signs ☐ Alteration of an existing building/structure

Level 2:

☐ Addition to an existing building/structure

Level 3:

☐ Construction of new building/structure ☐ Site design, parking, plazas, landscape

See required Downtown Design attachment for more details.

☐ Brief description of work: _____

HISTORIC ZONING

Level 1:

☐ Signs ☐ Routine repair of siding, windows, roof, or other features, in-kind; Installation of gutters, storm windows/doors

Level 2:

☐ Major repair, removal, or replacement of architectural elements or materials ☐ Additions and accessory structures

Level 3:

☐ Construction of a new primary building

Level 4:

☐ Relocation of a contributing structure ☐ Demolition of a contributing structure

See required Historic Zoning attachment for more details.

☐ Brief description of work: _____

INFILL HOUSING

Level 1:

☐ Driveways, parking pads, access point, garages or similar facilities ☐ Subdivisions

Level 2:

☐ Additions visible from the primary street ☐ Changes to porches visible from the primary street

Level 3:

☒ New primary structure

☒ Site built ☐ Modular ☐ Multi-Sectional

See required Infill Housing attachment for more details.

☒ Brief description of work: See attached site and building plans.

STAFF USE ONLY

ATTACHMENTS

☐ Downtown Design Checklist

☐ Historic Zoning Design Checklist

☐ Infill Housing Design Checklist

ADDITIONAL REQUIREMENTS

☐ Property Owners / Option Holders

Level 1: $50 • **Level 2:** $100 • **Level 3:** $250 • **Level 4:** $500

FEE 1:	TOTAL:
250.00	250.00
FEE 2:	
FEE 3:	

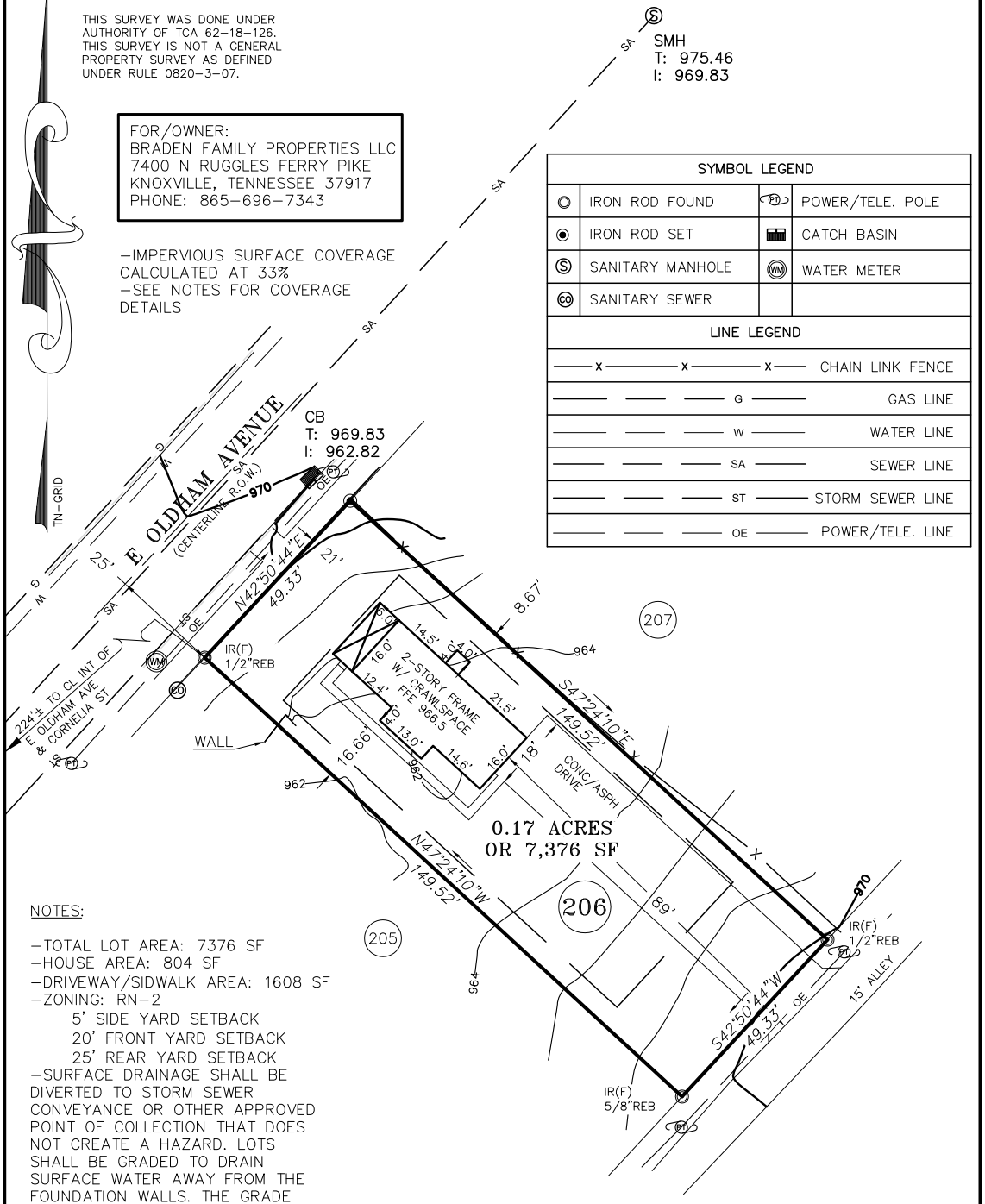
THIS SURVEY WAS DONE UNDER AUTHORITY OF TCA 62-18-126. THIS SURVEY IS NOT A GENERAL PROPERTY SURVEY AS DEFINED UNDER RULE 0820-3-07.

FOR/OWNER:
BRADEN FAMILY PROPERTIES LLC
7400 N RUGGLES FERRY PIKE
KNOXVILLE, TENNESSEE 37917
PHONE: 865-696-7343

-IMPERVIOUS SURFACE COVERAGE CALCULATED AT 33%
-SEE NOTES FOR COVERAGE DETAILS

SYMBOL LEGEND			
○	IRON ROD FOUND	PT	POWER/TELE. POLE
◉	IRON ROD SET		CATCH BASIN
Ⓢ	SANITARY MANHOLE	WM	WATER METER
CO	SANITARY SEWER		

LINE LEGEND	
x x x	CHAIN LINK FENCE
G	GAS LINE
W	WATER LINE
SA	SEWER LINE
ST	STORM SEWER LINE
OE	POWER/TELE. LINE



NOTES:

-TOTAL LOT AREA: 7376 SF
-HOUSE AREA: 804 SF
-DRIVEWAY/SIDWALK AREA: 1608 SF
-ZONING: RN-2
5' SIDE YARD SETBACK
20' FRONT YARD SETBACK
25' REAR YARD SETBACK
-SURFACE DRAINAGE SHALL BE DIVERTED TO STORM SEWER CONVEYANCE OR OTHER APPROVED POINT OF COLLECTION THAT DOES NOT CREATE A HAZARD. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM THE FOUNDATION WALLS. THE GRADE SHALL FALL NOT FEWER THAN 6" WITHIN THE FIRST 10'.

PLOT PLAN OF:

Mountain View Addition

LOT 206

318 E Oldham Avenue
Knoxville, Tennessee 37917

NOTE:
NO TITLE REPORT WAS FURNISHED TO THIS SURVEYOR AND OTHER EASEMENTS AND/OR EXCEPTIONS NOT APPARENT IN THE FIELD MAY OR MAY NOT EXIST AND MAY BE REVEALED BY A TITLE SEARCH BY A TITLE ATTORNEY.

Ward	17	City	KNOXVILLE
District	2	County	KNOX
Plat Cab:	A	Slide	177C
Deed Book	202308220009846	Page	-
CLT #	081 L "A"	Parcel	005
Scale	1"=30'	Date	08/29/2023
Drawn By	C. VITKUS	City Block	17663
Project #	4833		

RYAN S. LYNCH
REGISTERED LAND SURVEYOR
XVI AGRICULTURE COMMERCE
TENNESSEE No. 2447

LYNCH SURVEYS LLC
SUBDIVISIONS | AS-BUILTS | SITE DESIGN
4405 COSTER RD. KNOXVILLE, TENN. 37912
865-584-2630 FAX 865-584-2801 WWW.LYNCHSURVEY.COM

2980-1M.dwg 9-24-02 2:10:04 pm EST

#2 southern yellow pine (#1 syp)				
floor joist		12" o.c.	16" o.c.	24" o.c.
40 psf live load 10 psf dead load (all rooms except sleeping)	2x10	16'-2" #2 (18'-0" #1)	14'-0" #2 (16'-1" #1)	11'-5" #2 (13'-3" #1)
	2x12	19'-1" #2 (21'-11" #1)	16'-6" #2 (19'-1" #1)	13'-6" #2 (15'-7" #1)
50 psf live load 10 psf dead load (sleeping rooms @ L/360)	2x10	16'-1" #2 (19'-10" #1)	15'-8" #2 (18'-0" #1)	12'-10" #2 (14'-8" #1)
	2x12	21'-4" #2 (24'-2" #1)	18'-6" #2 (21'-4" #1)	15'-1" #2 (17'-5" #1)
ceiling joist				
(GWB ceiling @ 10 psf dead load L/240)	2x6	13'-11" #2 (15'-8" #1)	12'-0" #2 (14'-0" #1)	9'-10" #2 (11'-5" #1)
	2x8	17'-7" #2 (20'-9" #1)	15'-3" #2 (17'-9" #1)	12'-6" #2 (14'-6" #1)
rafters				
20 psf live load 10 psf dead load	2x6	15'-7"	13'-6"	12'-3"
	2x8	19'-8"	17'-1"	15'-7"
30 psf live load 10 psf dead load	2x6	12'-11"	11'-2"	9'-2"
	2x8	16'-4"	14'-2"	11'-7"
50 psf live load 10 psf dead load (rakes over 3/12 no finished ceiling L/240)	2x6	10'-6"	9'-2"	7'-5"
	2x8	13'-4"	11'-7"	9'-5"

#2 S-P-F (spruce-pine-fir)				
floor joist		12" o.c.	16" o.c.	24" o.c.
40 psf live load 10 psf dead load (all rooms except sleeping)	2x10	17'-3"	15'-5"	12'-7"
	2x12	20'-7"	17'-10"	14'-7"
30 psf live load 10 psf dead load (sleeping rooms @ L/360)	2x10	19'-0"	17'-2"	14'-1"
	2x12	23'-0"	19'-11"	16'-3"
ceiling joist				
(GWB ceiling @ 10 psf dead load L/240)	2x6	14'-9"	12'-10"	10'-6"
	2x8	18'-9"	16'-3"	13'-3"
	2x10	22'-11"	19'-10"	16'-3"
rafters				
20 psf live load 10 psf dead load	2x6	16'-3"	14'-4"	11'-9"
	2x8	21'-0"	18'-2"	14'-10"
30 psf live load 10 psf dead load	2x6	13'-9"	11'-11"	14'-9"
	2x8	17'-5"	15'-1"	12'-4"
50 psf live load 10 psf dead load (rakes over 3/12 no finished ceiling L/240)	2x6	11'-3"	9'-9"	7'-11"
	2x8	14'-3"	12'-4"	10'-1"

2015 IRC and the 2018 NCRC

abbreviations

cj	ceiling joist
clg.	ceiling
CMU	concrete masonry unit
C.O.	cased opening
conc.	concrete
CT.	ceramic tile
dbl.	double
dj	double joist
ew.	each way
fj	floor joist
ftg.	footing
HVAC	heating/ventilating/air conditioning
jst.	joist
LVL.	laminated veneer lumber - ie. Parallam
mech.	mechanical
mil	.001 inch
min.	minimum
N.T.S.	not to scale
oc	on center
pc	pull cord
pt.	pressure treated
psf	pounds per square foot
R/A	return air
reqd.	required
reinf.	reinforcing
Rm.	room
ro.	rough opening
sf	square feet
syp	southern yellow pine
Shw.	shower
T&G	tongue and groove
vif	verify in field
W.H.	water heater
WWM	welded wire mesh
yp	yellow pine

Thank you for your purchase of these house plans.

These plans are designed to conform to the 2018 IRC, 2021 IRC and the 2018 NCRC including local state amendments. National and local building codes vary with location and change from time to time. Therefore it is impossible to warrant compliance to your specific location. It is the responsibility of the purchaser and/or the builder to adapt these plans to the requirements of the individual locale.

Structural Notes

These plans are designed for roof loads of 20 psf live load and 10 psi dead load. The chart to the left can be used to adjust for different requirements. All beams are labeled "LVL" and should be sized locally. Roof loads can vary and have a big impact on the beams carrying accumulated loads. Most Lumber suppliers can have this engineered for their product.

Wall Header Notes

Headers 3' or less to be 2-2x6 with 1 jack each side
Headers 4' - 6' to be 2-2x8 with 2 jacks on each side
Beams 4' to 6' to be 2-2x12 with 2 jacks on each side
or 3" min bearing and footing under point loads.

Wall bracing notes

Continuous 7/16" osb sheathing - typical - CS-WSP.
Wall bracing shall be in accordance to IRC/NCRC Section R602.10.5. The required length of bracing for each side of a rectangle circumscribed around the plan or a portion of the plan at each story level shall be determined using Table R602.10.3 and Figure R602.10.3(1). The cumulative contributing length of braced wall panels assigned to a rectangle side shall be greater than or equal to the required length of bracing specified in Table R602.10.3. The following additional requirements shall apply.

Limitations - The continuous sheathing requirements of Section R602.10.3 shall be limited to bracing method CS-WSP in accordance with Table R602.10.1 with the following conditions of use:
1. Basic design wind speed shall not exceed 115 mph.
2. Wall height at each story level shall not exceed 12 feet.
3. Eave to ridge height shall not exceed 20 feet.
4. Exterior walls shall be sheathed on all sheathable surfaces including infill areas between braced wall panels, above and below wall openings, and on gable end walls.
5. Except when used for bracing method GB, the interior side of exterior walls and both sides of interior walls shall be sheathed continuously with minimum 1/2-inch-thick gypsum wall board interior finish fastened in accordance with Table R702.3.5, or approved interior finish of equivalent or greater shear resistance. Unless required for fire separation by Section R302.6, gypsum board shall be permitted to be omitted where the required length of bracing, as determined in Table R602.10.3, is multiplied by 1.40.
6. Floors shall not cantilever more than 24 inches (607 mm) beyond the foundation or bearing wall below.

Requirements - The required length of bracing for each side of a rectangle circumscribed around the plan or a portion of the plan at each story level shall be determined using Table R602.10.3 and Figure R602.10.3(1). The cumulative contributing length of braced wall panels assigned to a rectangle side shall be greater than or equal to the required length of bracing specified in Table R602.10.3. The following additional requirements shall apply.
1. Braced wall panels on exterior or interior walls shall be assigned to the nearest rectangle side as shown in Figure R602.10.3(2) for each story level floor plan.
2. Braced wall panels shall be distributed and installed in accordance with Figure R602.10.3(3).
3. A minimum of one-half the required bracing amount for each rectangle side should be located on exterior walls within 8 feet of the location of the rectangle side.
4. Interior braced wall panels using Method GB shall be assigned to the closest parallel rectangle side and shall contribute 0.5 times their actual length. The narrowest width of braced wall panels allowed for GB is 48", and the 0.5 accounts for GB being half the strength of other methods except LIB.
5. The bracing amount provided on an upper story building side shall be deemed-to-comply where it equals or exceeds the amount of bracing required for the story immediately below.
6. Where the bracing amount provided on an upper story equals or exceeds the amount of bracing required for the story below, an analysis of bracing shall not be required for the upper story.
7. CS-WSP Continuous sheathed WSP method to have - minimum braced material thickness or size 7/16". Minimum brace panel length or brace angle 24" adjacent to window not more than 67% of wall height, 30" adjacent to door or window greater than 67% and less than 85% of wall height, 48" for taller openings. Fasteners 8d common nail or 8d (2 1/2" long x 0.113" diameter) nails. See table R602.3(5). Space 6" edges and 12" field.

General Notes

- Square footages are for heated floor areas. This does not include fireplace projection or vaulted space. Stairs are counted on the main floor only.
- Dimensions are from the face of the stud wall. Contractor to verify all dimensions and please contact us if an error is present.
- All footings shall be on firm undisturbed soil of no less than 2000 psf and be below frost depth. The exact size and reinforcement of concrete footings must be determined by local soil conditions.
- HVAC design to be sized according to the local climate conditions including compass direction.

Energy Notes

- Caulk all exterior toe plates with latex caulk.
- Caulk all wire and pipe holes where they penetrate all upper and lower exterior plates.
- Use blown-in wall insulation if at all possible. If batt insulation is used pack behind all electrical boxes.
- Seal all joints in HVAC ducts, with leakage no more than 5%. Three inch fiber mesh tape should be used on all collar to plenum connections and all gaps that are 1/4" or wider. Insulate ducts with R-6.5 or greater.
- Foam insulate between all exterior window and door edges and rough opening frame. Use non-expanding foam.
- Provide back draft damper on kitchen hood vent, dryer vent, and bathroom vents.
- Insulate all hot water pipes.
- Install wrap kit on water heater.

This plan is licensed to Josh Braden

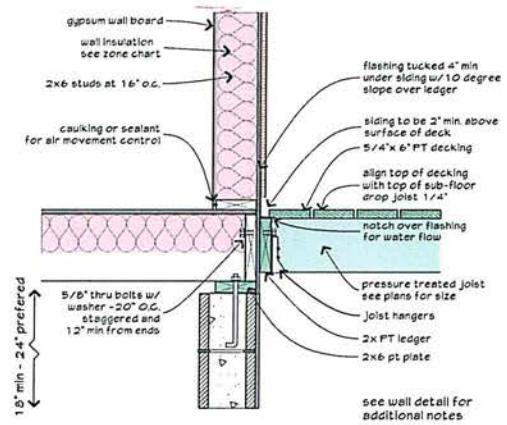
Plan 1202Am

Index to Drawings

www.thompsonplans.com

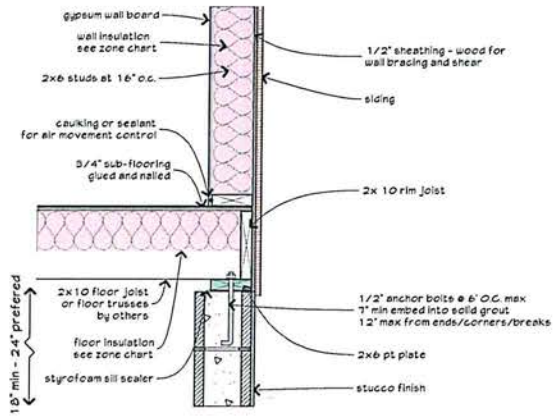
info@thompsonplans.com
Asheville, NC
828-734-2553

original print date
6/29/23



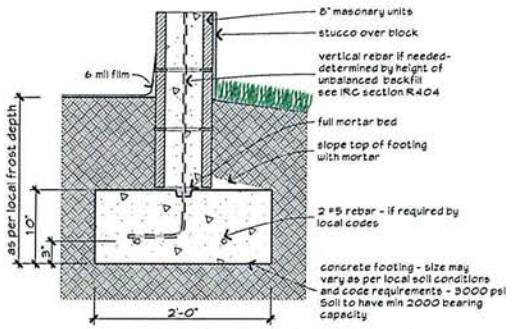
W5 Wall detail Fl 1

scale 1"= 1'-0"



W1 Wall detail Fl 1

scale 1"= 1'-0"



F4 Foundation - block wall

scale 1"= 1'-0"

General crawl notes

Provide 16"x24" min. access door. Location as per field conditions - side prefered.

Provide foundation vents not less than 1 sqft per 150 sqft under floor space. One vent within 3 feet of each corner. IRC - R408.1
or
Unvented where exposed earth is covered and and air supplied as per IRC - R408

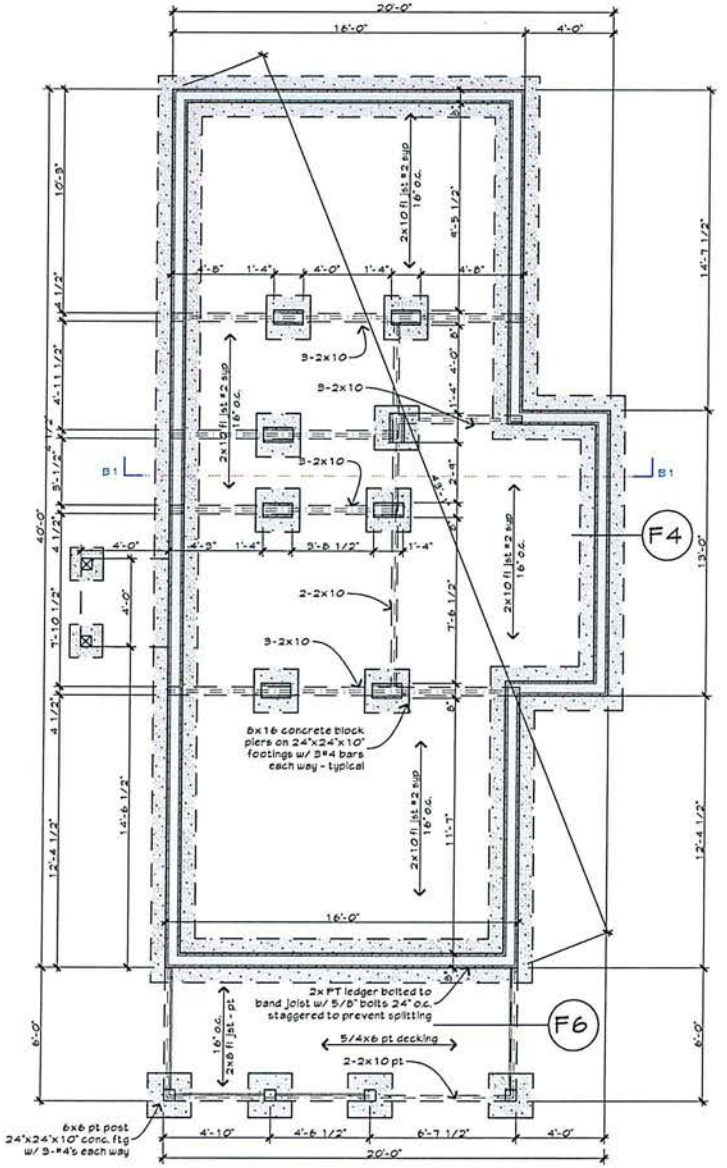
Fill piers solid with grout. Pier block size shown is minimum. May vary as per foundation height.

Pier spacing may vary dependent on local snow loads, soil bearing capacity and the use of roof trusses.

Footing sizes and reinforcement are assumed. Soil conditions vary and must be taken into account. Inspectors can allow builders to adjust the use of rebar and footing sizes as per local conditions.

Girders may be sized with LVL's to reduce piers. Up size footing accordingly (30"x30"x10" min w/ 4-#4's each way) and 16"x16" filled piers. See separate drawing for LVL's

Separate double joist under plumbing walls 3 1/2"



Crawl Foundation Plan

scale 1/4"= 1'-0"

Asheville, North Carolina
info@thompsonplans.com
ThompsonPlans.com
828-734-2553

original print date
6/29/23

2

plan # 1202Am

Minimum Insulation Chart

Table N1102.1 - IRC 2018 & (2021 NCRC - in parentheses)
Insulation and fenestration requirements by components [a]

Check appropriate climate zone as determined by local building dept.

	Climate Zone	Glazing U-factor	Glazes fenestration SHGC[b,e]	Ceilings R-value	Wood frame wall R-value	Floors R-value	Basement[c] walls R-value	Slab[d] perimeter R value and depth	Crawl space[c] wall R-value
☐	1	NR	.25	30	13	13	0	0	0
☐	2	.40	.25	38	13	13	0	0	0
☐	3	.35	.25	38 (or 30[h])	20 or (15 or 13+5[h] 13+2.5[h])	19	5/13[f]	0	5/13
☐	4 [illegible]	.35	.40	49 (38 or 30[h])	20 or (15 or 13+5[h] 13+2.5[h])	19	10/13 (10/15)	10, 2 (10, 2)	10/13 (10/15)
☐	5 [illegible]	.32 (.35)	NR	49 (38 or 30[h])	20 or (19[h] or 13+5[h] 13+5[h])	30[g]	10/13 (10/15)	10, 2' (10, 2)	10/13 (10/15)
☐	6	.32	NR	49	20 or 13+5[h]	30[g]	15/19	10, 2'	15/19 (10/19)
☐	7	.32	NR	49	20 or 13+5[h]	38[g]	15/19	10, 4'	15/19
☐	8	.32	NR	49	20 or 13+5[h]	38[g]	15/19	10, 4'	15/19

a - R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.

b - The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c - "15/19" means R-15 continuous insulated sheathing on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulated sheathing on the interior or exterior of the home. "10/13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall. ("10/15" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-15 cavity insulation at the interior of the basement wall or crawl space wall.)

d - R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Zones 1 through 3 for heated slabs. For monolithic slabs, insulation shall be applied from the inspection gap downward to the bottom of the footing or a maximum of 24 inches below grade whichever is less. For floating slabs, insulation shall extend to the bottom of the foundation wall or 24 inches, whichever is less.

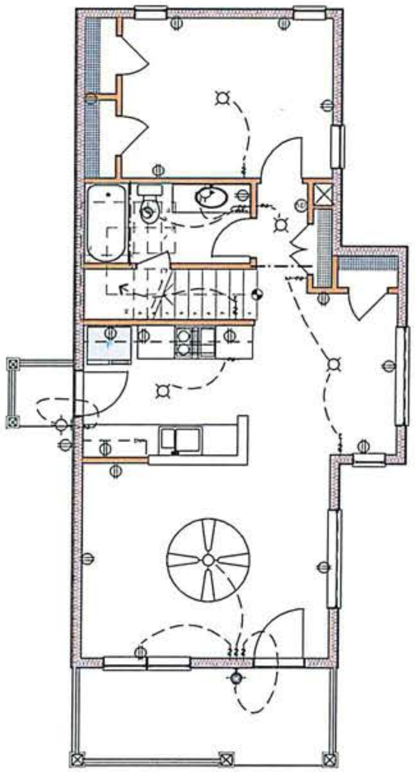
e - There are no solar heat gain coefficient (SHGC) requirements in the Marine Zone.

f - Basement wall insulation is not required in warm-humid locations as defined by Figure 301.1 and Table 301.1

g - Or insulation sufficient to fill the framing cavity, R-19.

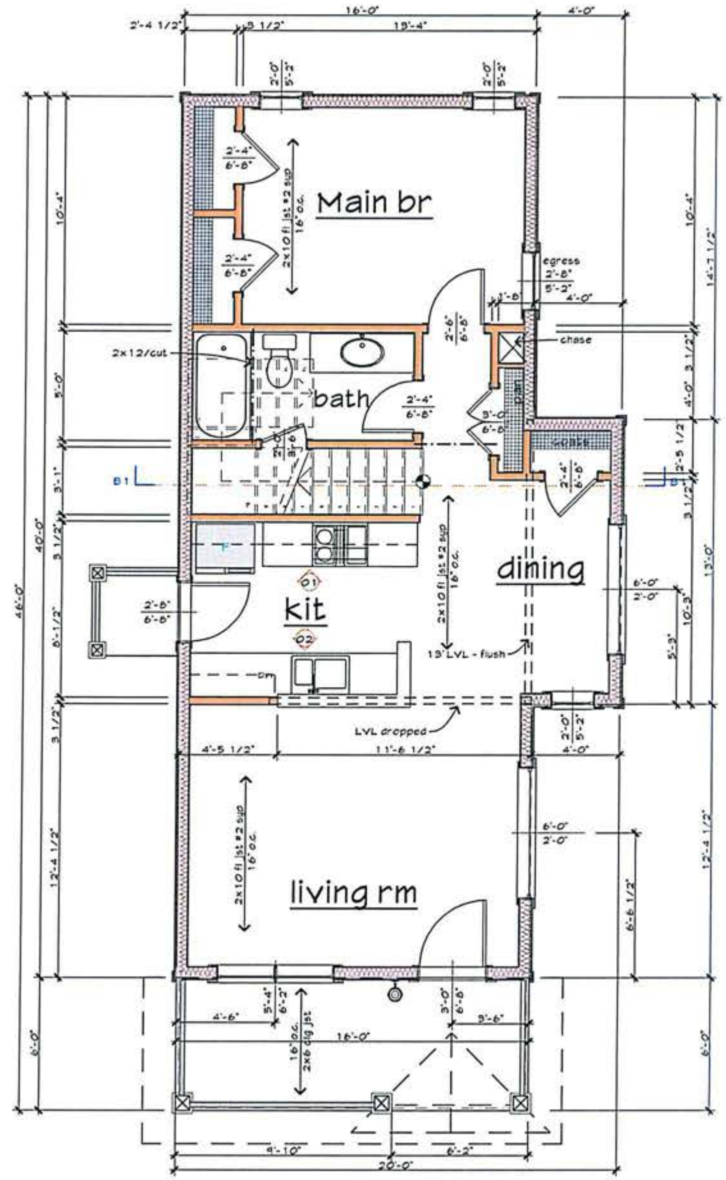
h - "13+5" means R-13 cavity insulation plus R-5 insulated sheathing if structural sheathing covers 25 % or less of the exterior. Insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.

i - The second R-value applies when more than half the insulation is on the interior of the mass wall.



Electrical - Floor 1 Plan

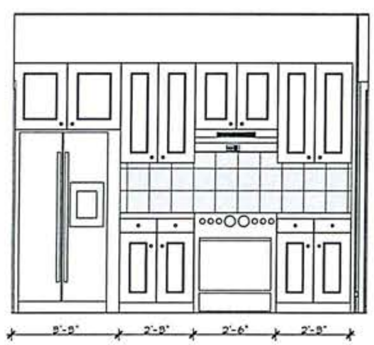
scale 3/16" = 1'-0"



Floor 1 plan

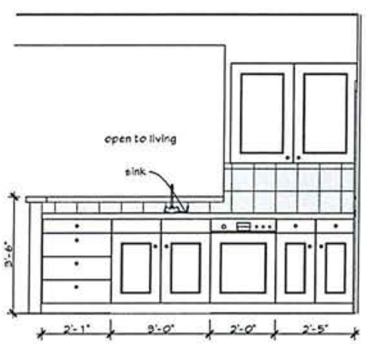
scale 1/4"=1'-0"

Floor 1 plan	692 sq.ft.
Floor 2 plan	595 sq.ft.
total	1287 sq.ft.



01 Kitchen

Scale 3/8" = 1'-0"



02 Kitchen

Scale 3/8" = 1'-0"

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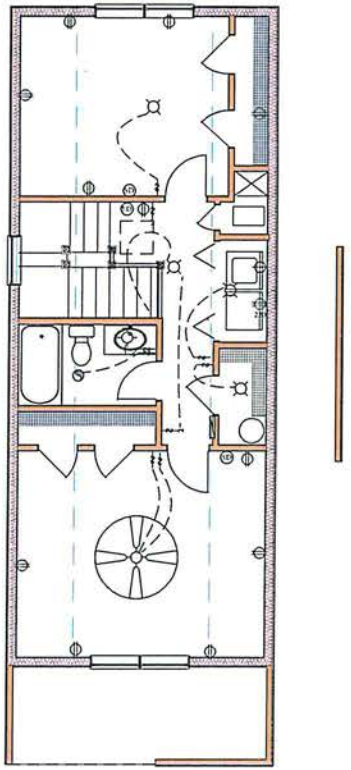
All Federal, State and local codes shall be considered as a part of these documents, and shall take preference over anything shown or implied if differences arise.

plan # 1202Am

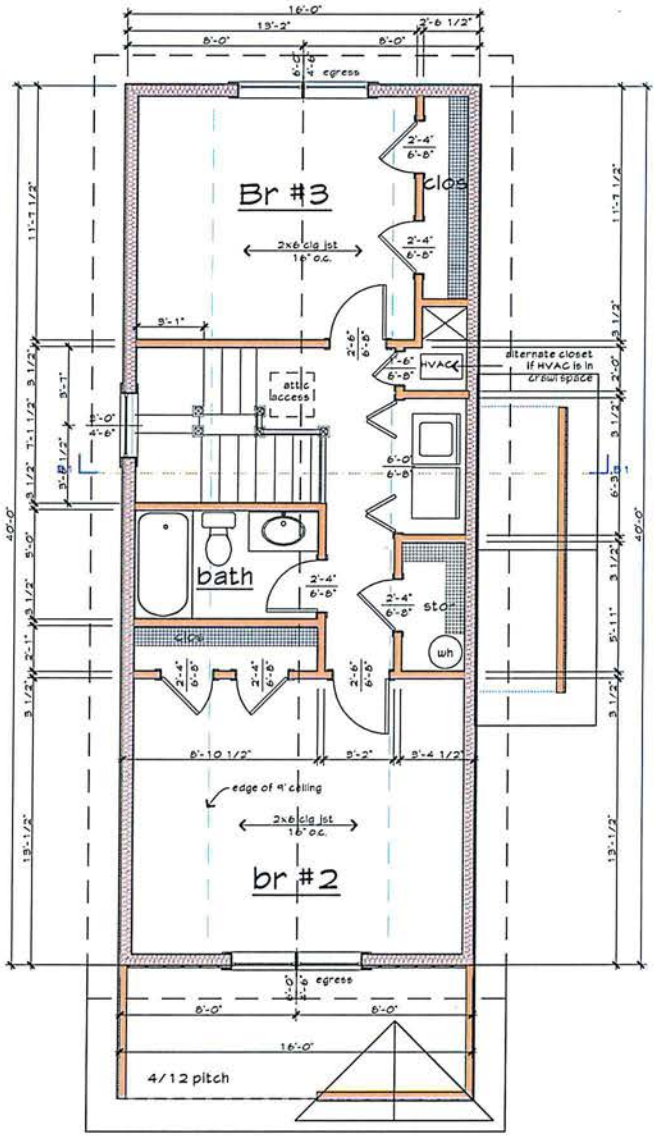


Electrical - Floor 2 Plan

scale 3/16" = 1'-0"

Door List				
Width	Height	Name	Type	Quantity
1'-6"	6'-8"	RD02 Swing	Interior	1
2'-0"	3'-6"	RD02 Swing	Access	1
2'-4"	6'-8"	RD02 Swing	Interior	10
2'-6"	6'-8"	RD02 Swing	Interior	3
2'-8"	6'-8"	RD01 Door ST	Exterior	1
3'-0"	6'-8"	RD01 Door ST	Exterior	1
3'-0"	6'-8"	RD02 Swing	Access	1
6'-0"	6'-8"	RD05 Bifold	Interior	1
				19

Window List			
W x H Size	Units	Window Type	Quantity
2'-0"x5'-2"	Single	RM 1-4 Doublehung	3
2'-8"x5'-2"	Single	RM 1-4 Doublehung	1
3'-0"x4'-6"	Single	RM 1-4 Doublehung	1
5'-4"x6'-2"	Twin	RM 1-4 Doublehung	1
6'-0"x2'-0"	Single	RM 1-1 Stationary	2
6'-0"x4'-6"	Twin	RM 1-4 Doublehung	2
			10



Floor 2 plan

scale 1/4" = 1'-0"

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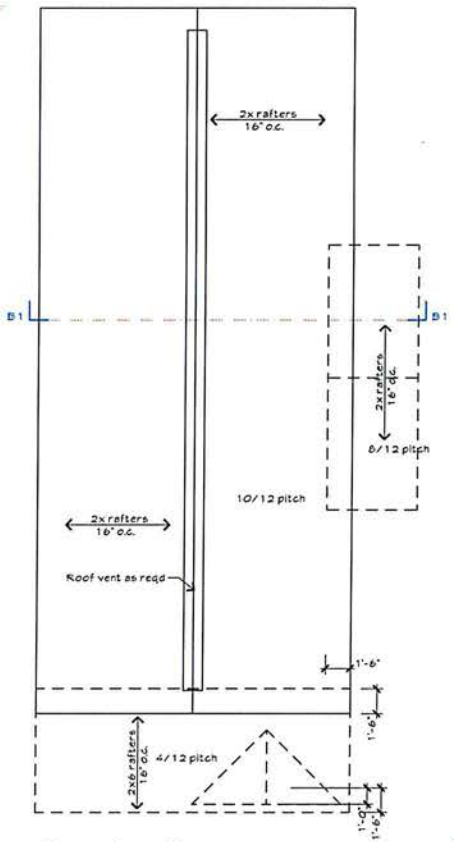
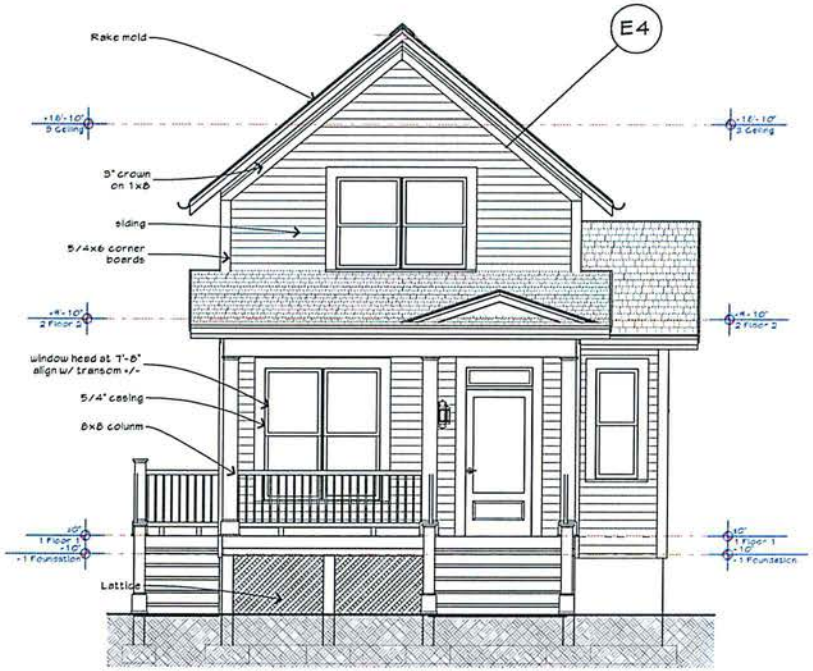
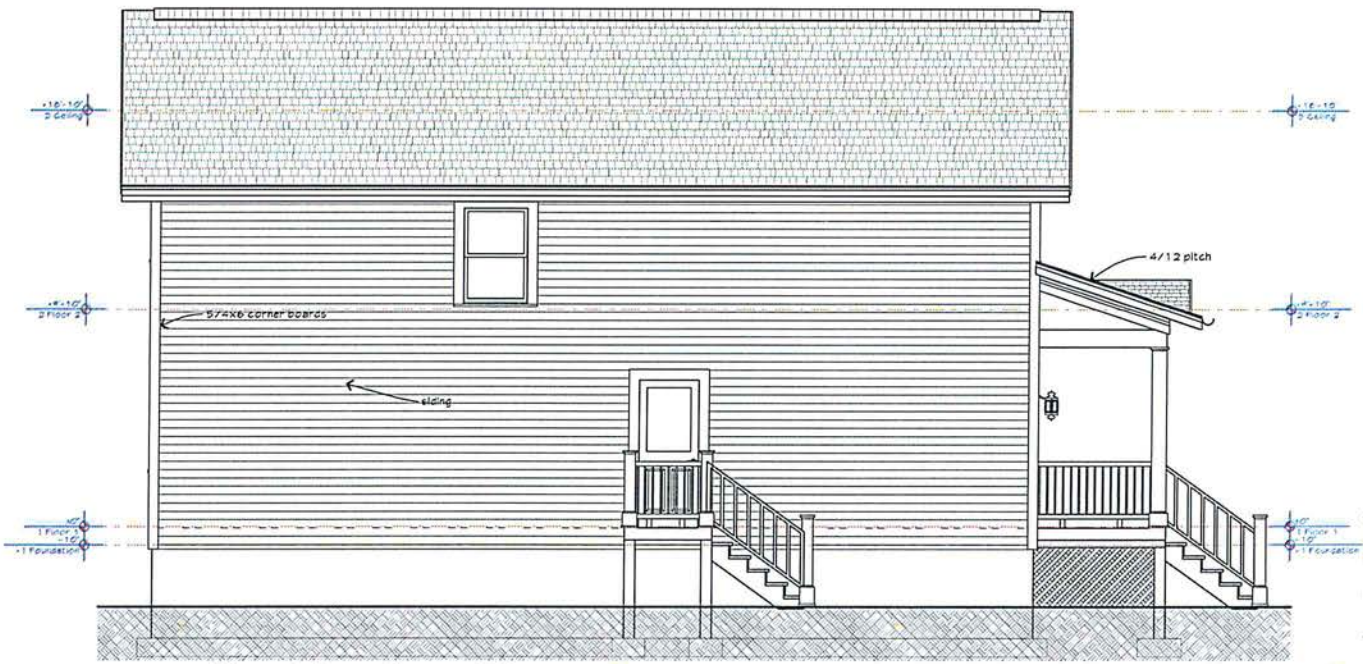


Roof plan
scale 3/16"=1'-0"



Front Elevation
scale 1/4" = 1'-0"



Left Side Elevation
scale 1/4" = 1'-0"

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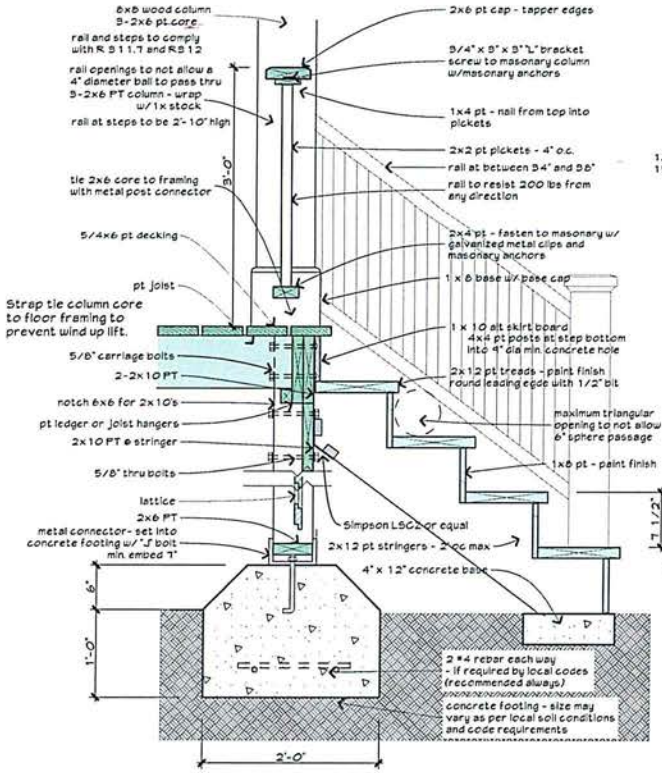
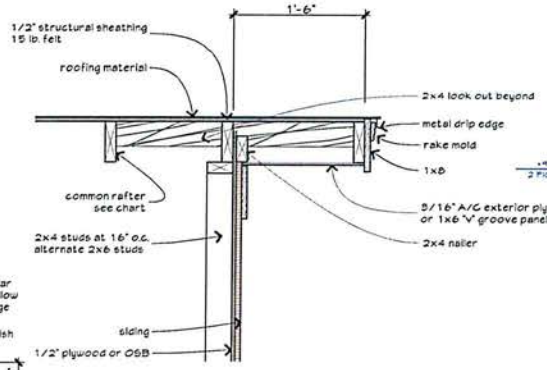
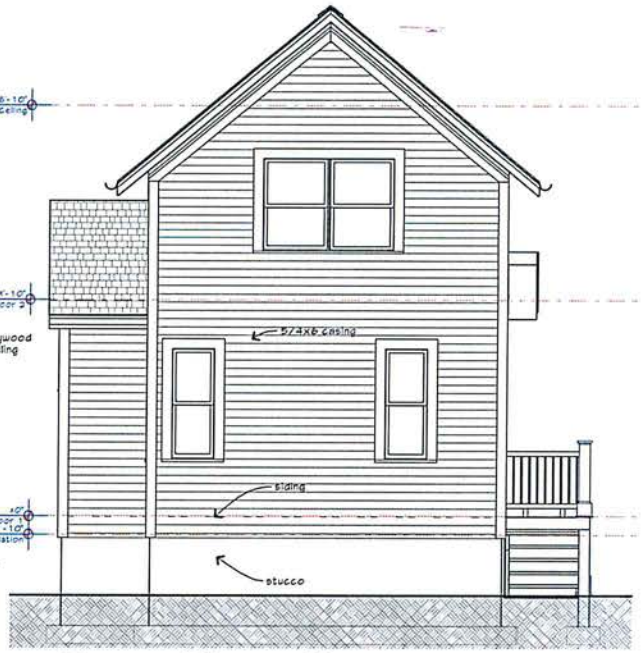


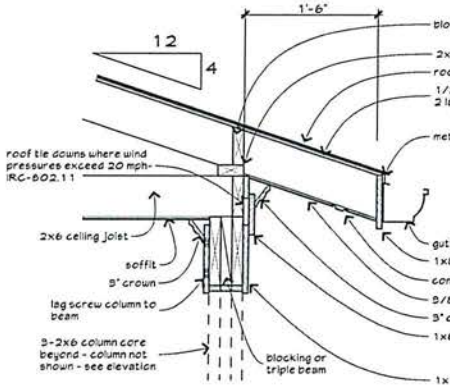
F6 Porch Detail
scale 1"=1'-0"



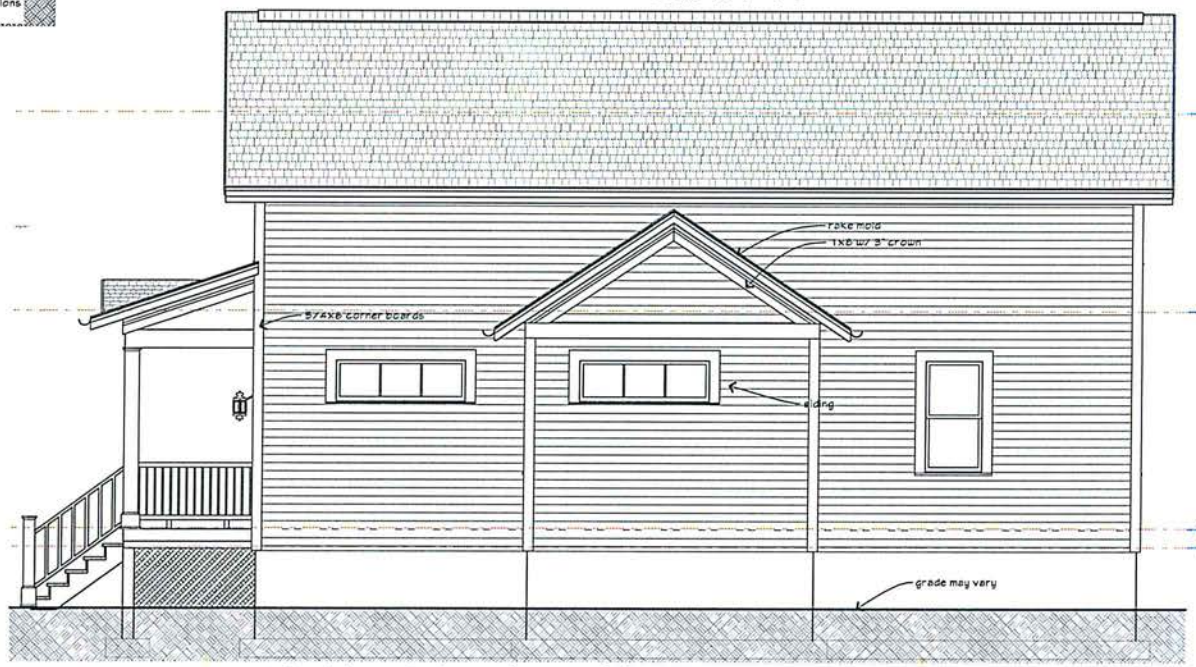
E4 Typical Rake
scale 1"=1'-0"



Rear Elevation
scale 1/4"=1'-0"



PE1 Typical Porch Boxed Eave
scale 1"=1'-0"



Right Side Elevation
scale 1/4"=1'-0"

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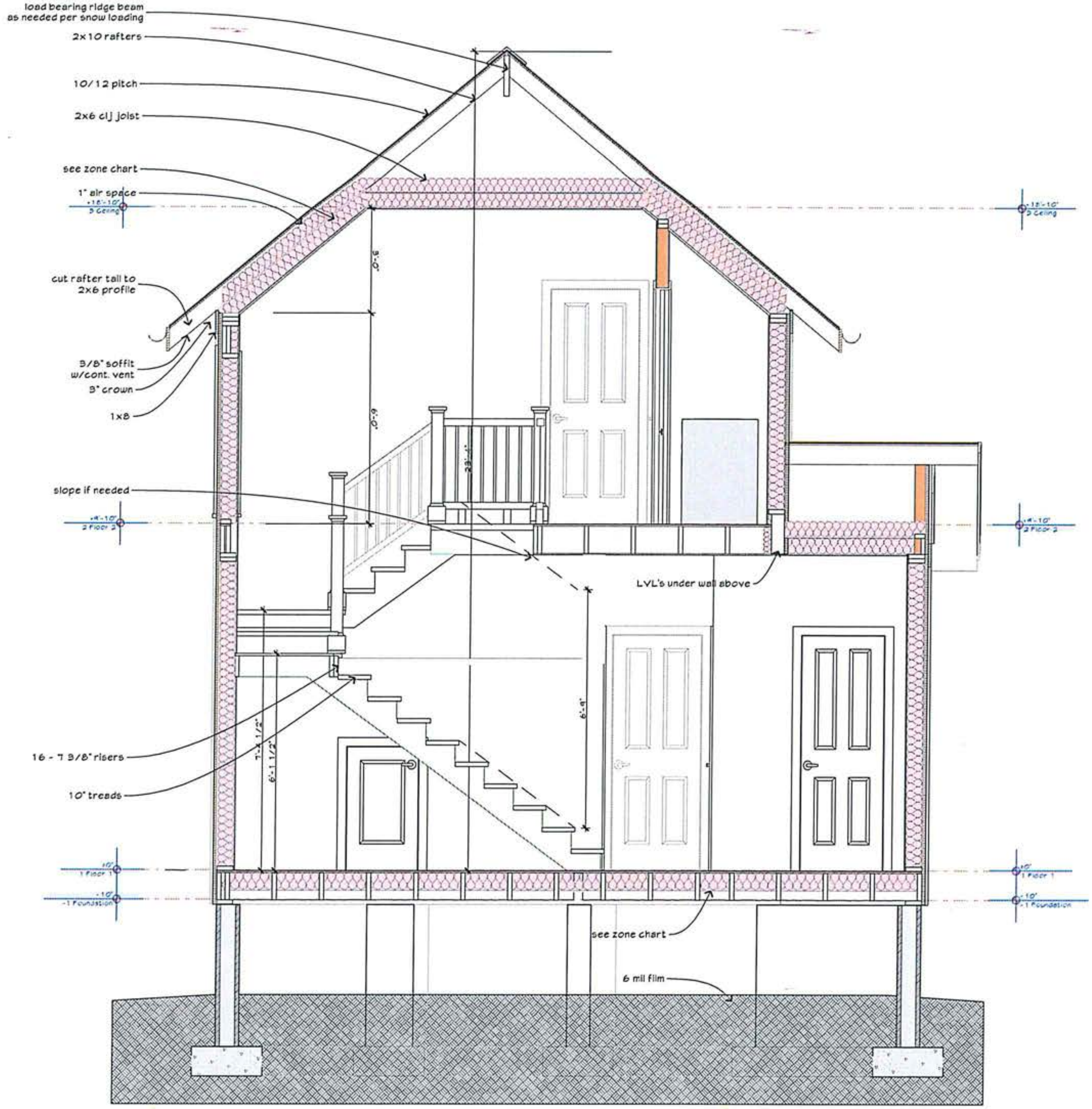

Building Section B 1

Scale 1/2" = 1'-0"

Minimum Insulation Chart

Table N1102.1 - IRC 2018 & (2021 NCRC - in parentheses)
Insulation and fenestration requirements by components [a]

Check appropriate climate zone as determined by local building dept.

	Climate Zone	Glazing U-factor	Glazes fenestration SHGC[b,e]	Ceilings R-value	Wood frame wall R-value	Floors R-value	Basement[c] walls R-value	Slab[d] perimeter R value and depth	Crawl space[c] wall R-value
☐	1	NR	.25	30	13	13	0	0	0
☐	2	.40	.25	38	13	13	0	0	0
☐	3	.35	.25	38 (or 30[h])	20 or (15 or 13+5[h] 13+2.5[h])	19	5/13[f]	0	5/13
☐	4 except marine	.35	.40	49 (38 or 30[h])	20 or (15 or 13+5[h] 13+2.5[h])	19	10/13 (10/15)	10, 2' (10, 2')	10/13 (10/15)
☐	5 and marine 4	.32 (.35)	NR	49 (38 or 30[h])	20 or (19 or 13+5[h] 13+5[h])	30[g]	10/13 (10/15)	10, 2' (10, 2')	10/13 (10/15)
☐	6	.32	NR	49	20 or 13+5[h]	30[g]	15/19	10, 2'	15/19 (10/19)
☐	7	.32	NR	49	20 or 13+5[h]	38[g]	15/19	10, 4'	15/19
☐	8	.32	NR	49	20 or 13+5[h]	38[g]	15/19	10, 4'	15/19

a - R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
b - The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
c - "15/19" means R-15 continuous insulated sheathing on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulated sheathing on the interior or exterior of the home. "10/13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
("10/15" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-15 cavity insulation at the interior of the basement wall or crawl space wall.)
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f - Basement wall insulation is not required in warm-humid locations as defined by Figure 301.1 and Table 301.1.
g - Or insulation sufficient to fill the framing cavity, R-19.
h - "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25 % or less of the exterior, insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.
i - The second R-value applies when more than half the insulation is on the interior of the mass wall.

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