

REAR ELEVATION

SCALE: 1/4"-0"



LEFT SIDE ELEVATION

SCALE: 1/4"-0"

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REAR AND LEFT SIDE ELEVATIONS

PROJECT NO.

DATE:

LEAD:

PRJ. NO.:

REV.:

FILE NO.:

ISSUE NO.:

CONTENTS:

SCALE:

1/4"-0"

DATE:

1/1/04

REAR AND LEFT SIDE ELEVATIONS

PROJECT TITLE:

ROESLER ADDITION

15 SURVEYOR'S SHEET
2004 PAPERWORK SET

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FLOOR JOIST SPAN CHART

INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLINGS 2008
SLEEPING AREAS
30 PSF LIVE, 10 PSF DEAD

HEM FIR #2

SPACING	2'0"	2'6"	2'12"
12' 0"	14'-4"	12'-6"	22'-6"
16' 0"	12'-2"	10'-6"	14'-8"
20' 0"	12'-6"	9'-6"	14'-4"
24' 0"	12'-6"	9'-6"	14'-4"
24' 0"	11'-2"	9'-4"	16'-4"

SFP #2

SPACING	2'0"	2'6"	2'12"
12' 0"	14'-8"	11'-0"	20'-4"
16' 0"	12'-2"	9'-2"	17'-1"
20' 0"	11'-6"	10'-4"	16'-2"
24' 0"	10'-2"	12'-5"	14'-4"

FLOOR JOIST SPAN CHART

INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLINGS 2008
ALL AREAS OTHER THAN SLEEPING AREAS
40 PSF LIVE, 10 PSF DEAD

HEM FIR #2

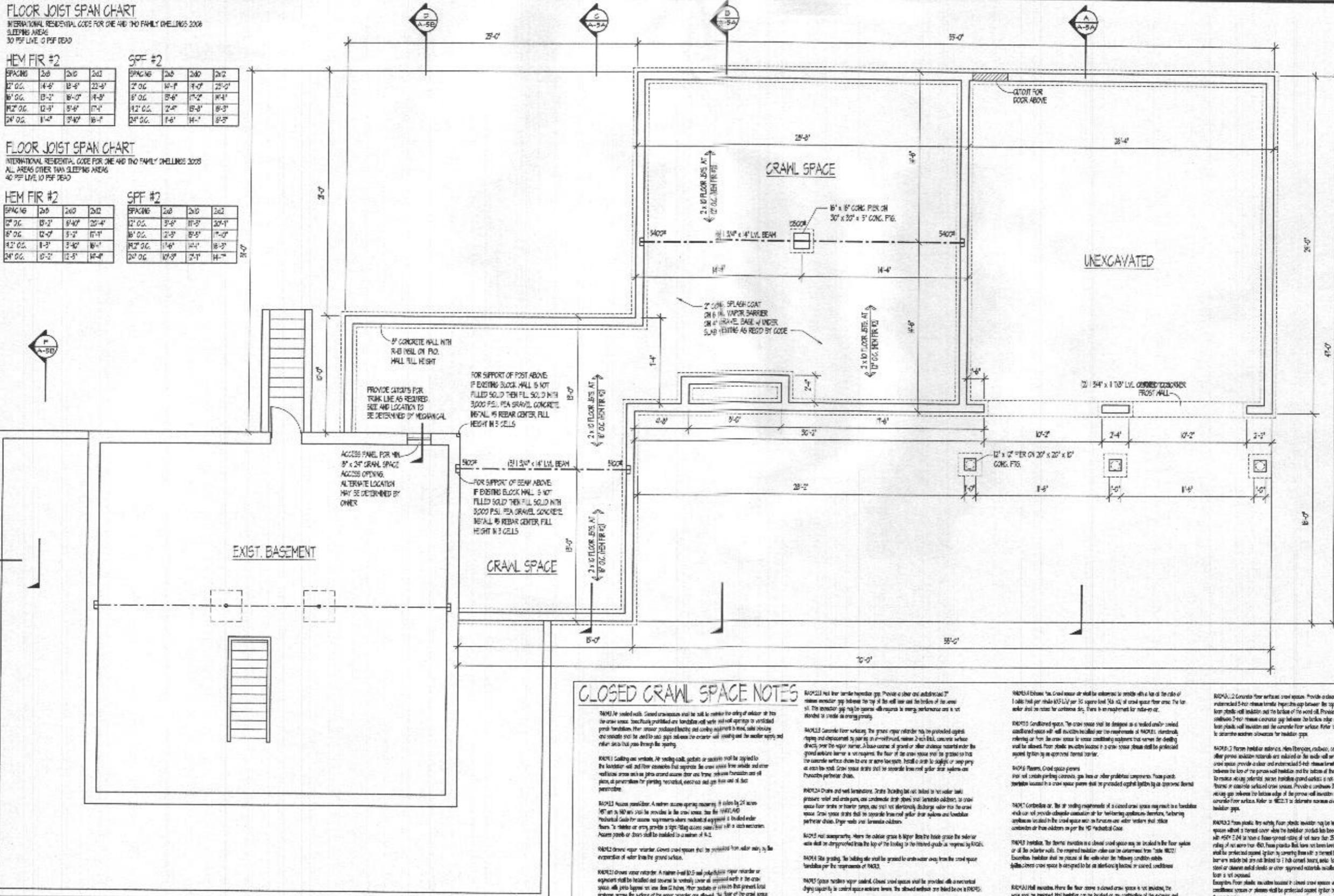
SPACING	2'0"	2'6"	2'12"
12' 0"	13'-2"	9'-0"	20'-4"
16' 0"	12'-2"	9'-2"	17'-1"
20' 0"	11'-6"	10'-4"	16'-2"
24' 0"	10'-2"	12'-5"	14'-4"

SFP #2

SPACING	2'0"	2'6"	2'12"
12' 0"	9'-8"	11'-3"	20'-1"
16' 0"	12'-2"	9'-5"	17'-3"
20' 0"	11'-6"	12'-1"	16'-2"
24' 0"	10'-2"	12'-5"	14'-4"

FOUNDATION PLAN

SCALE 1/4"=1'-0"



CLOSED CRAWL SPACE NOTES

R401.1 Debris shall not be allowed in crawl spaces. Provide a clear and unobstructed 8'-0" minimum headroom height above the top of the floor joists and the bottom of the ceiling joists. The exterior joist gap may be greater than required if energy performance is not violated or is used in energy retrofit.

R401.2 Concrete floor slab: The crawl space shall be designed as a sealed under-grade space and separated from the exterior by a 16" thick concrete floor slab or from the exterior by a vapor barrier. A base course of gravel or other drainage material under the crawl space slab shall be one or more feet thick. Install 16 rebar on 16" O.C. (16" on center) and provide a 2" thick concrete floor slab.

R401.3 Drains and venting: Drains shall be installed in the exterior soil pressure relief and vent pipes, one centered drift pipe, one lateral discharge, or two lateral discharge pipes. The exterior soil pressure relief and vent pipes shall be installed in the exterior soil pressure relief and vent pipes.

R401.4 Insulation: A minimum of 10.5 R-value polyisocyanurate insulation or equivalent shall be installed in the exterior walls of the crawl space with polyisocyanate or closed-cell spray foam. Polyisocyanurate insulation shall be applied to the exterior walls of the crawl space. Closed-cell spray foam shall be applied to the exterior walls of the crawl space.

R401.5 Vapor barrier: Closed crawl spaces shall be provided with a moisture vapor barrier across the exterior of the crawl space. The exterior of the crawl space shall be grouted or sealed at the top of the exterior wall.

R401.6 Dry rot protection: Dry rot protection shall be provided in the crawl space. Dry rot protection shall be provided in the exterior walls of the crawl space.

R401.7 Termite protection: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

R401.8 Fire resistance: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

R401.9 Fire resistance: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

R401.10 Fire resistance: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

R401.11 Fire resistance: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

R401.12 Crawl space floor surface shall be covered with a layer of the top of 16" thick soil per 1000 SF over 10' square feet (16" x 16") of crawl space floor area. The top of the soil surface shall be level with the top of the floor joists and the bottom of the ceiling joists. The soil surface shall be covered with a 2" thick concrete cap between the top of the exterior wall and the bottom edge of the new 16" thick wall.

R401.13 Conditioned space: The crawl space shall be designed as a sealed under-grade space and separated from the exterior by a vapor barrier. A base course of gravel or other drainage material under the crawl space slab shall be one or more feet thick. Install 16 rebar on 16" O.C. (16" on center) and provide a 2" thick concrete floor slab.

R401.14 Plastic, crawl space liners: Provide a clear and unobstructed 8'-0" minimum headroom height above the top of the exterior wall and the bottom edge of the new 16" thick wall.

R401.15 Corbeling: The air sealing requirements of a closed crawl space result in a horizontal void or provide exhaust air for the exterior wall. Corbeling shall be located in the crawl space over the exterior wall. To reduce air leakage potential, never install corbeling unless it is covered by a plastic liner or provide a sealed crawl space liner. Provide a continuous 3-foot distance around the exterior wall of the crawl space liner and the exterior wall of the crawl space.

R401.16 Insulation: Insulation in a closed crawl space may be located in the floor system or in the exterior walls. The required insulation value can be determined from Table R401.16.

R401.17 Insulation: Insulation in a closed crawl space may be located in the floor system or in the exterior walls. The required insulation value can be determined from Table R401.17.

R401.18 Wall insulation: Here the crawl space is not insulated, the exterior wall is insulated, or the exterior wall is not insulated or is not continuous with the exterior wall of the crawl space. Wall insulation requires that the bond and joint area of the floor system over the exterior wall be treated with a 2" thick concrete floor slab and that exterior grade 16 rebar be placed 6 inches above the top of the exterior wall. If exterior grade 16 rebar is not available, 24 rebar shall be used. The exterior grade 16 rebar shall be treated with a 2" thick concrete floor slab.

R401.19 Soil pressure relief: Here the crawl space is not insulated, the exterior wall is insulated, or the exterior wall is not insulated or is not continuous with the exterior wall of the crawl space. Soil pressure relief requires that the bond and joint area of the floor system over the exterior wall be treated with a 2" thick concrete floor slab and that exterior grade 16 rebar be placed 6 inches above the top of the exterior wall. If exterior grade 16 rebar is not available, 24 rebar shall be used. The exterior grade 16 rebar shall be treated with a 2" thick concrete floor slab.

R401.20 Vapor barrier: Here the crawl space floor surface shall be covered with a 2" thick concrete floor slab and that exterior grade 16 rebar be placed 6 inches above the top of the exterior wall. If exterior grade 16 rebar is not available, 24 rebar shall be used. The exterior grade 16 rebar shall be treated with a 2" thick concrete floor slab.

R401.21 Fire resistance: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

R401.22 Fire resistance: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

R401.23 Fire resistance: The exterior walls of the crawl space shall be treated with preservative grade wood preservative.

FOUNDATION PLAN

CONTENTS
STORY E. 1/4"=1'-0"

PR. IN

PR. OUT

PR. TIN

PR. TOUT

PR. TIN

PR. TOUT

PR. TIN

PR. TOUT

ROESELER ADDITION

CONTENTS
STORY E. 1/4"=1'-0"

PR. IN

PR. OUT

PR. TIN

PR. TOUT

PR. TIN

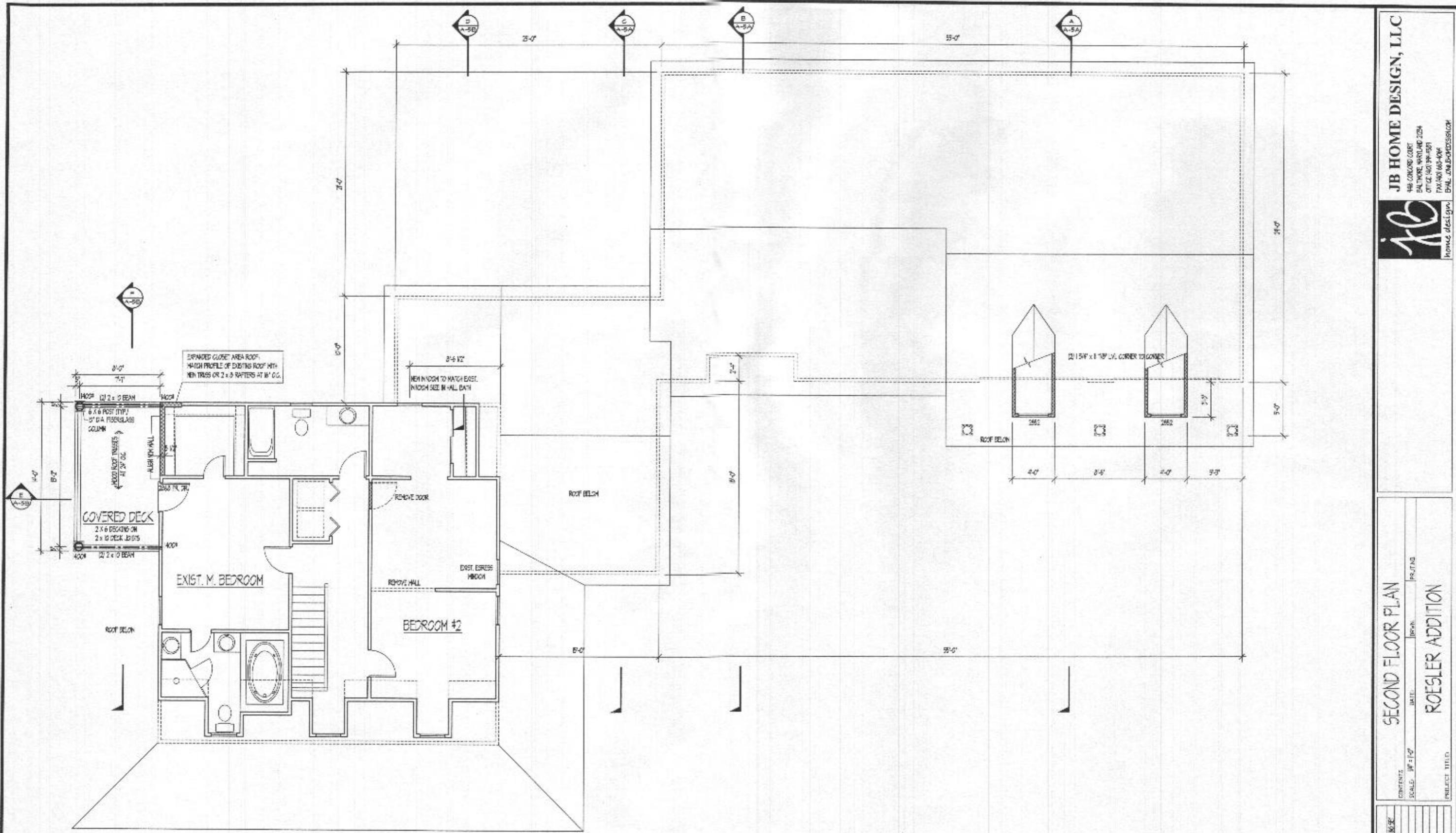
PR. TOUT

PR. TIN

PR. TOUT

PR. TIN

A-2



SECOND FLOOR PLAN

$$A = \angle$$

JB HOME DESIGN, LLC
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HOME STAGING • DESIGN • DECORATING

ESTATE, #2140-2024
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house design

SECOND FLOOR PLAN

ROESELER ADDITION

TABLE R602.10.4
 INTERMITTENT BRACING METHODS

METHOD	MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA	
				Fasteners	Spacing
LB	Lap-bracing	1/4" wood or approved metal straps at 45° to 60° angles for maximum 16' stud spacing		Head 2x4 common rails or 5/8x12 (2" long x 15" dia) rails	Heads per stud and top and bottom pieces
				Wood struts per manufacturer	Metal per manufacturer
DWB	Diagonal wood beams	3/4" (1" spaced) For maximum 24" stud spacing		2x6x12 (2" long x 15" dia) rails 2" 2x15/4" long staples	Per stud
				Exterior sheathing per Table R602.3(3)	6" edges 12' field
WSP	Wood structural panel (See Section R604)	3/8"		Interior sheathing per Table R602.3(1) or R602.3(2)	Variety by fastener
				3/4" or panel edges 12" at intermediate supports 4" at braced wall panel end posts	
BA-MP (a)	Wood structural panels w/16' studs or assembly w/interior See section R602.6(3)	7/8"		3x2 1/2" long x 15" dia, common rails	
				Ed common (2 1/2" long x 15" dia) rails	
SPP	Structural fiberglass sheathing	1/2" or 25/32" for maximum 16' stud spacing		13/8" long x 2" dia. For 1/2" thick sheathing 13/4" long x 2" dia. For 25/32" sheathing galvanized roofing rails or Ed common (2 1/2" long x 15" dia) rails	3" edges 6' field
				Heads or screws per Table R602.3(1) for exterior locations	For all braced wall panel locations 1" edges (including top and bottom pieces) 12' field
SS	Siding board	1/2"		Heads or screws per Table R602.3(1) for interior locations	
PSG	Particleboard sheathing (See Section R605)	3/8" or 1/2" for maximum 16' stud spacing		For 3/8" dia common (2" long x 15" dia) rails For 1/2" dia common (2 1/2" long x 15" dia) rails	3" edges 6' field
PCP	Particle cement panel	See Section R605-6 For maximum 16' stud spacing		1/2" long, 1/8" gauge, 7/8" dia, head rails or 1/8" long, 1/8" gauge staples	6' o.c. or 6' framing members
HPS	Hardboard panel cladding	1/8"		2x2 1/2" dia rails with length to accommodate 1/2" penetration into studs	4" edges 6' field
AWB	Alternate braced wall	See Section R602.10.5.2			See section R602.10.6
PHI	Intermittent portal frame	See Section R602.10.3.3			See section R602.10.6.2
PFI	Intermittent portal frame at garage	See Section R602.10.3.4			See section R602.10.6.3

TABLE R602.10.4
 CONTINUOUS SHEATHING METHODS

METHOD	MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA	
				Fasteners	Spacing
CS-MP	Wood structural panel	3/8"		Exterior sheathing per Table R602.3(1)	6" edges 2' field
				Interior sheathing per Table R602.3(1) or R602.3(2)	Variety by fastener
CS-5-hp (a)	Wood structural panel adjacent to garage openings and supporting wall load only	3/8"	See method CS-MP		
CS-PF	Portal frame	1/8"			See Section R602.10.4
CS-5% (d)	Structural fiberboard	1/2" or 25/32" for maximum 16' stud spacing		13/8" long x 2" dia. For 1/2" thick sheathing 13/4" long x 2" dia. For 25/32" sheathing galvanized roofing rails or Ed common (2 1/2" long x 15" dia) rails	3" edges 6' field

a. Adhesive attachment of wall sheathing, including Method 6B, shall not be permitted in Seismic Design Categories C, D1 and D2.

b. Applies to panels next to garage door opening when supporting garage and wall or roof load only. May only be used on one half of the garage. In Seismic Design Categories D3, D, and D2, roof covering dead load may not exceed 3 psf.

c. Garage openings adjacent to a Method CS-5 panel shall be provided with a header in accordance with Table R602.5(5). A 3/8 height clear opening shall not be permitted adjacent to a Method CS-5 panel.

d. Method CS-5(P) does not apply in Seismic Design Categories D2, D1 and D2 and in areas where the wind speed exceeds 100 mph.

e. Method applies to detached one- and two-family sheathing in Seismic Design Categories D2 through D2 only.

R602.10.1 Braced wall lines. For the purpose of determining the shortest and location of bracing required in each story level of a building, braces will lines shall be designated as straight lines in the building plan placed in accordance with this section.

R602.10.1 Length of a braced wall line. The length of a braced wall line shall be the distance between its ends. The end of a braced wall line shall be the intersection with a perpendicular braced wall line, or angled braced wall line as permitted in Section R602.10.4 or an exterior wall, as shown in Figure R602.10.1.

R602.10.1.2 Offset along a braced wall line. All exterior walls parallel to a braced wall line shall be offset no more than 4 feet (122 mm) from the designated braced wall line location as shown in Figure R602.10.1.1. Interior wall lines less than 10 feet (305 mm) from a braced wall line through the interior of the building as shown in Figure R602.10.1.1.

R602.10.1.5 Spacing of braced wall lines. The spacing between parallel braced wall lines shall be in accordance with Table R602.10.3. Intermediate braced wall lines through the interior of the building shall be permitted.

R602.10.1.6 Angled walls. Any portion of a wall along a braced wall line shall be permitted to angle out of plane for a maximum sloped length of 6 feet (1829 mm). Where an angled wall occurs at a corner, the length of the braced wall line shall be measured from the projected corner as shown in Figure R602.10.14. Where the sloped length is greater than 6 feet (1829 mm), it shall be considered a separate braced wall line and shall be braced in accordance with Section R602.10.1.

R602.10.1.9 Braced wall panels. Braced wall panels shall be 1/4-height sections of wall that shall have no vertical or horizontal offsets. Braced wall panels shall be constructed along a braced wall line in accordance with the section and the bracing methods specified in Section R602.10.4.

R602.10.2 Braced wall panel. The bracing length in Table R602.10.3 shall apply only when uplift loads are resisted in accordance with Section R602.3(5).

R602.10.2.2 Locations of braced wall panels. A braced wall panel shall begin within 10 feet (305 mm) from each end of a braced wall line as determined in Section R602.10.1. The distance between adjacent edges of braced wall panels along a braced wall line shall be no greater than 20 feet (6096 mm) as shown in Figure R602.10.2.

R602.10.2.3 Minimum width of braced wall panels. Braced wall panels shall have a length of 18 feet (5489 mm) or less shall have a minimum of two braced wall panels of any length or one braced wall panel up to 48 inches (1219 mm) or more. Braced wall lines greater than 18 feet (5489 mm) shall have a minimum of two braced wall panels.

R602.10.2 Required length of bracing. The required length of bracing along each braced wall line shall be determined as follows:

1. All buildings in Seismic Design Categories A and B shall use Table R602.10.3(1) and the applicable adjustment factors in Table R602.10.3(2).

2. Detached buildings in Seismic Design Category C shall use Table R602.10.3(1) and the applicable adjustment factors in Table R602.10.3(3).

3. Townhouses in Seismic Design Categories C and D shall use the greater value determined from Table R602.10.3(1) or R602.10.3(2) and the applicable adjustment factors in Table R602.10.3(3) or R602.10.3(4) respectively.

4. All buildings in Seismic Design Categories D1, D2 and D3 shall use the greater value determined from Table R602.10.3(1) or R602.10.3(2) and the applicable adjustment factors in Table R602.10.3(3) or R602.10.3(4) respectively. Only braced wall panels parallel to the braced wall line shall contribute toward the required length of bracing of that braced wall line. Braced wall panels along an angled wall meeting the minimum length requirements of Tables R602.10.3 and R602.10.3 shall be permitted to contribute to projective length toward the minimum required length of bracing for the braced wall line as shown in Figure R602.10.14. An braced wall panel or angles shall be part of a end of a braced wall line that contributes to projective length for only one of the braced wall lines at the projected corner. Exceptions: The length of a braced wall line for shear hinge or shear hinge in Seismic Design Categories D2, D1 and D2 shall be determined per Section R602.10.1 and exceeding the first-story height shall be in accordance with Section R602.10.6.

R602.10.4 Construction methods for braced wall panels. Intermittent and continuously sheathed braced wall panels shall be constructed in accordance with this section and the methods listed in Table R602.10.4.

R602.10.4.1 Mixing methods. Mixing of bracing methods shall be permitted as follows:

1. Mixing intermittent bracing methods from braced wall line to braced wall line within a story shall be permitted. Within Seismic Design Categories A, B and C or regions where the basic wind speed is less than or equal to 100 mph (16 m/s), mixing of intermittent bracing and continuous sheathing methods from braced wall line to braced wall line within a story shall be permitted.

3. Mixing intermittent bracing methods along a braced wall line shall be permitted in Seismic Design Categories A and B, and detailed sheathing in Seismic Design Category C; provided the length of required bracing is in accordance with Table R602.10.3(1) or R602.10.3(2) is the highest value of all intermittent bracing methods used.

4. Mixing of continuous sheathing methods CS-MP, CS-5 and CS-PF along a braced wall line shall be permitted.

5. In Seismic Design Categories A and B, and for detached one- and two-family one-half in Seismic Design Category C, mixing of intermittent bracing methods along the interior portion of a braced wall line with continuous sheathing methods CS-MP, CS-5 and CS-PF along the exterior portion of the same braced wall line shall be permitted. The length of required bracing shall be the highest value of all intermittent bracing methods used in accordance with Table R602.10.3(1) or R602.10.3(2) as adjusted by Tables R602.10.3(2) and R602.10.3(4), respectively. The requirement of Section R602.10.1 that apply to each end of the continuous sheathing portion of the braced wall line.

R602.10.4.2 Continuous sheathing methods. Continuous sheathing methods require structural panel sheathing to be used on all sheathable surfaces on one side of a braced wall line, including areas above and below openings and gables and walls and shall meet the requirements of Section R602.10.1.

R602.10.4.3 Method CS-PF. Continuously sheathed portal frame. Continuously sheathed portal frame braced wall panels shall be constructed in accordance with Figure R602.10.6-4 and Table R602.10.6-4. The number of continuously sheathed portal frame panels in a single braced wall line shall not exceed four.

R602.10.4.7 Ends of braced wall lines with continuous sheathing. Each end of a braced wall line with continuous sheathing shall have one of the conditions shown in Figure R602.10.1.

R602.10.4.8 Braced wall panel connections. Braced wall panels shall be connected to floor framing or foundation as follows:

1. Where joists are perpendicular to a braced wall panel above or below, a tie, sole joist or blocking shall be provided along the entire length of the braced wall panel in accordance with Figure R602.10.8(1). Furring of top and bottom wall plates to framing in joist, sole joist and/or blocking shall be in accordance with Table R602.10.8(1) and Figure R6

TABLE R602103
LENGTH REQUIREMENTS FOR BRACED WALL PANELS WITH CONTINUOUS SHEATHING

METHOD	ADJACENT CLEAR OPENING HEIGHT	WALL HEIGHT				
		8'	9'	10'	11'	12'
CS-NSP CS-STB	6'	24'	27'	30'	33'	36'
	63'	26'	27'	30'	33'	36'
	72'	28'	27'	30'	33'	36'
	76'	24'	30'	30'	33'	36'
	80'	31'	35'	30'	33'	36'
	84'	25'	26'	33'	33'	36'
	88'	24'	27'	36'	33'	36'
	92'	24'	27'	34'	33'	36'
	96'	28'	45'	42'	36'	36'
	100'	46'	45'	38'	33'	36'
	104'	51'	48'	40'	33'	36'
	108'	54'	57'	42'	41'	41'
	112'	54'	57'	45'		
	116'	51'	48'	45'		
	120'	60'	52'	42'		
	124'		56'	51'		
	128'		61'	54'		
	132'		66'	58'		
	136'			62'		
	140'			66'		
	144'			72'		
CS-S	120'	24'	31'	30'	33'	36'
CS-PP	120'	8'	18'	20'	22'	24'

TABLE R602103 II
BRACING REQUIREMENTS BASED ON WIND SPEED

BASIC WIND SPEED (mph)	STORY LOCATION	BRACED WALL LINE SPACING (feet)	MINIMUM TOTAL LENGTH (feet) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINES			
			METHOD LIB	METHOD 55 (double sided)	METHODS DAB, NSP, STB, PCHPS, DAB, BSCS-5B	CONTINUOUS SHEATHING
190 MPH	10' EAVE TO RIDGE HEIGHT 10' FT WALL HEIGHT 2 BRACED WALL LINES	10	35	35	20	20
		20	10	10	40	33
		30	45	45	55	50
		40	125	125	15	60
		50	155	155	40	15
	10' EAVE TO RIDGE HEIGHT 10' FT WALL HEIGHT 1 BRACED WALL LINE	60	185	185	105	90
		10	10	10	40	33
		20	80	80	15	65
		30	185	185	65	80
		40	240	240	140	20
		50	245	245	110	145
		60	350	350	205	110
		10	NP	105	60	50
		20	NP	100	10	15
		30	NP	215	65	65
		40	NP	355	225	175
		50	NP	410	250	25
		60	NP	520	305	255

RESIDENTIAL ENERGY EFFICIENCY 2012 IECC SECTION 402 BUILDING THERMAL ENVELOPE

R4021 General (Prescriptive). The building thermal envelope shall meet the requirements of Sections R4021 through R4024.

R4022 Specific insulation requirements (Prescriptive). In addition to the requirements of Section R4021, insulation shall meet the specific requirements of Sections R4022 through R4022.12.

R4023 Ventilation (Prescriptive). In addition to the requirements of Section R4021, ventilation shall comply with Sections R4023.1 through R4023.6.

R4024 Air leakage (Mandatory). The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R4024.1 through R4024.4.

R4024.1 Building thermal envelope. The building thermal envelope shall comply with Sections R4024.1 and R4024.2. The sealing methods between exterior walls and sheathing shall allow for differential expansion and contraction.

R4024.2 Insulation. The components of the building thermal envelope as listed in Table R4024.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R4024.1 as applicable to the method of construction, where required by the code official, or approved third party, shall inspect all components and verify compliance.

R4024.2.1 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour in Climate Zones 1, 2, and 3 air changes per hour in Climate Zones 4 through 9. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.c. (50 Pa) and where required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

DR-10 testing.

1. Exterior windows and doors, trap doors and stove doors shall be closed, but not sealed beyond the interior weatherstripping or other infiltration control measures;

2. Dampers, heating exhaust, intake, makeup air, backdraft and fire dampers shall be closed, but not sealed beyond intended infiltration control measures;

3. Exterior doors, if located at the time of the test, shall be open;

4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;

5. Heating and cooling systems, if located at the time of the test, shall be turned off; and

6. Supply and return registers, if installed at the time of the test, shall be fully open.

R4024.2.2 Fireplaces. New wood-burning fireplaces shall have tight-fitting dampers and outdoor combustion air.

R4024.3 Penetration air leakage. Hatches, skylights and sliding glass doors shall have an air infiltration rate of no more than 23 cfm per square foot (13 L/s/m²) and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m²) when tested according to NFRC 400 or ANSI/ASHRAE/IESNA Standard 90.1-2010 at a 157 psf (15 Pa) pressure differential. All recessed fixtures shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed fixtures shall be G-rated and labeled as having an air leakage rate not more than 20 cfm (1.6 L/s) when tested according to ASTM E 289 at a 157 psf (15 Pa) pressure differential. All recessed fixtures shall be sealed with a gasket or cap between the housing and the interior wall or ceiling cavity.

R4025 Maximum penetration U-factor and SHGC (Mandatory). The area-weighted average maximum penetration U-factor permitted using trapezoids from Section R4024.4 or R4025 shall be 0.48 in Climate Zones 1 through 5 and 0.40 in Climate Zones 6 through 9 for vertical penetration, and 0.13 in Climate Zones 4 through 9 for skylights. The area-weighted average maximum penetration SHGC permitted using trapezoids from Section R405 in Climate Zones 1 through 3 shall be 0.30.

RESIDENTIAL ENERGY EFFICIENCY 2012 IECC SECTION 403

SEE SECTION 405 FOR SYSTEM REQUIREMENTS INCLUDING:

1. Programmable thermostats;

2. Duct insulation and sealing;

3. Verification of duct tightness;

4. Air handler sealing;

5. Mechanical system piping insulation and protection;

6. Hot water systems;

7. Hot water pipe insulation;

8. Mechanical ventilation;

9. Equipment sealing;

10. Steam well system controls;

11. In-ground pools and spas.

RESIDENTIAL ENERGY EFFICIENCY 2012 IECC SECTION 404

SEE SECTION 404 FOR ELECTRICAL POWER AND LIGHTING REQUIREMENTS

RESIDENTIAL ENERGY EFFICIENCY 2012 IECC SECTION 405

SEE SECTION 405 FOR SIMULATED PERFORMANCE ALTERNATIVE PERFORMANCE INCLUDING:

1. Manditory requirements;

2. Performance-based compliance;

3. Discretionary;

4. Calibration procedures;

5. Calibration software, approved software and input values.

TABLE R402.11 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT

CLIMATE ZONE	FENESTRATION U-FACTOR (B)	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC (B,D)	CEILING U-FACTOR	WOOD FRAME WALL U-FACTOR	MASONRY WALL U-FACTOR (I)	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR (G)	SLAB SPACE WALL U-FACTOR (G)
1	NP	0.75	0.25	30	B	34	3	0	0
2	0.40	0.65	0.25	35	B	46	3	0	0
3	0.35	0.55	0.25	35	20 OR 35 (V)	51B	7	51.7	51.5
4 EXCEPT MARINE	0.35	0.55	0.40	45	20 OR 35 (V)	61B	8	10.5	10.5
5 AND MARINE 4	0.32	0.55	NP	45	20 OR 35 (V)	51T	30 (g)	21.7	31.9
6	0.32	0.55	NP	45	20 OR 35 (B) (H)	52B	30 (g)	21.7	31.9
14.5	0.32	0.55	NP	45	20 OR 35 (B) (H)	52T	30 (g)	10.4	31.9

For 1 ft = 304.8 mm.

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

b. The fenestration U-factor column applies to glazed fenestration. The SHGC column applies to glazed fenestration. Skylights may be excluded from glazed fenestration. SHGC requirements apply to Climate Zones 1 through 3 where the SHGC for non-skylights does not exceed 0.30.

c. 0.35" means R-5 continuous insulation on the interior or exterior of the home or R-11 cavity insulation at the interior of the basement wall. 0.51" shall be permitted to be installed on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home.

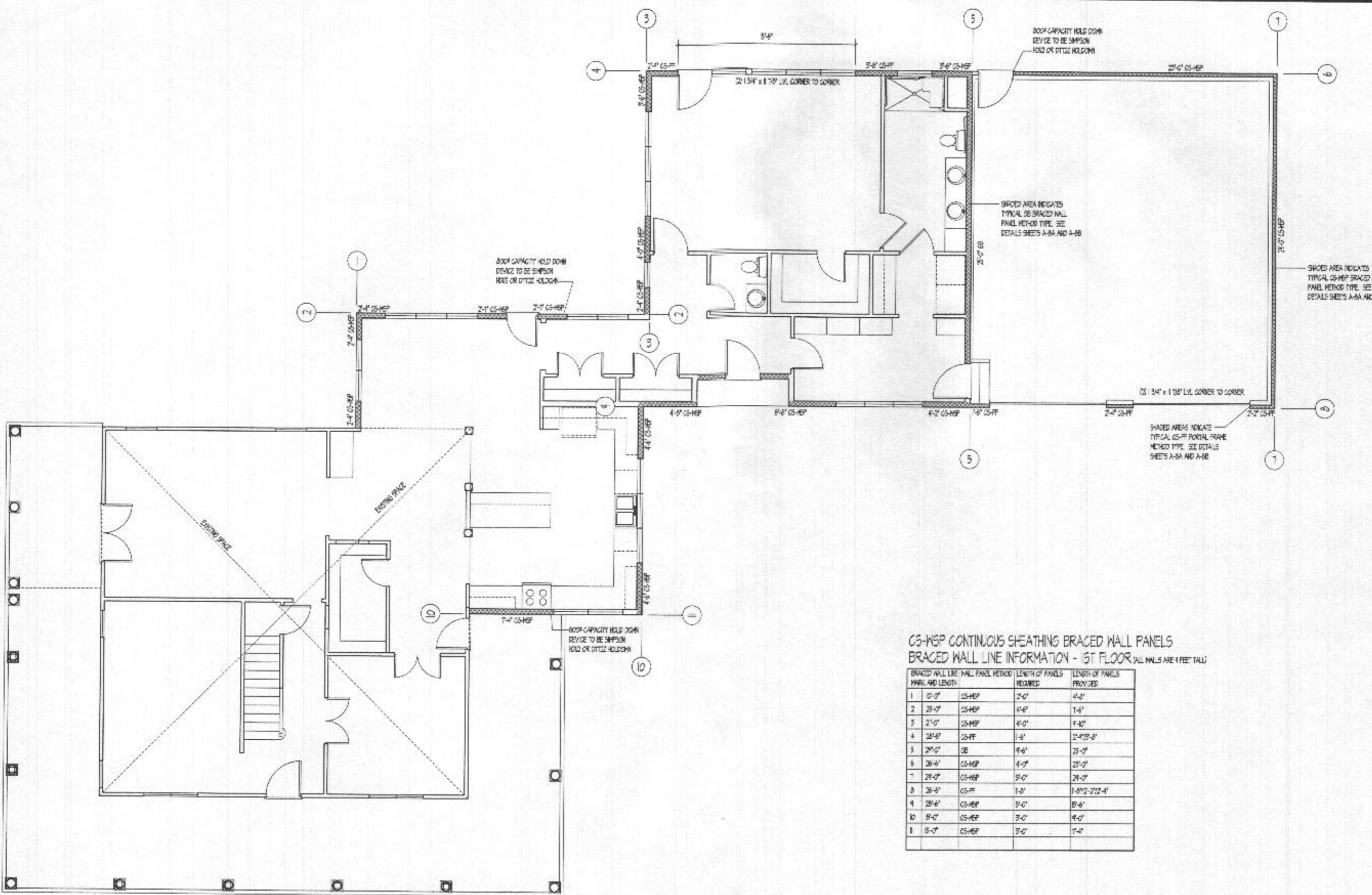
d. 0.35" means R-5 continuous insulation on the interior or exterior of the home or R-11 cavity insulation at the interior of the basement wall.

e. I-factors are to SHGC requirements in the Marine Zone.

f. Basement wall insulation is not required in non-habitable locations as defined by Figure R301 and Table R301.

g. Dr. resistor sufficient to fill the framing cavity R-11 minimum.

h. First floor is cavity insulation; second floor is continuous insulation or insulation siding. If 0.5" means R-5 cavity insulation plus R-5 continuous insulation siding, 40 percent or less of the exterior, continuous insulation R



FIRST FLOOR WALL BRACING PLAN

525

NOTE

I PROVIDE MA. 1/8" OSB SHEATHING AT ALL
POSTAL FRAME WALLS.

2. LOAD CAPACITY HELD 20 MIN DEVICE TO BE
SIMPLIFIED HD12 OR ST12 HOLDING. INSTALL TO
MANUFACTURER'S SPECIFICATIONS USING ANCHOR
BOLT CONNECTIONS AT CONCRETE AND ALL-THREAD
ROD CONNECTIONS AT WOOD FL 2005.

1
2
3
4
5

FIRST FLOOR WALL BRACING PLAN

ROFES| FR ADDITION