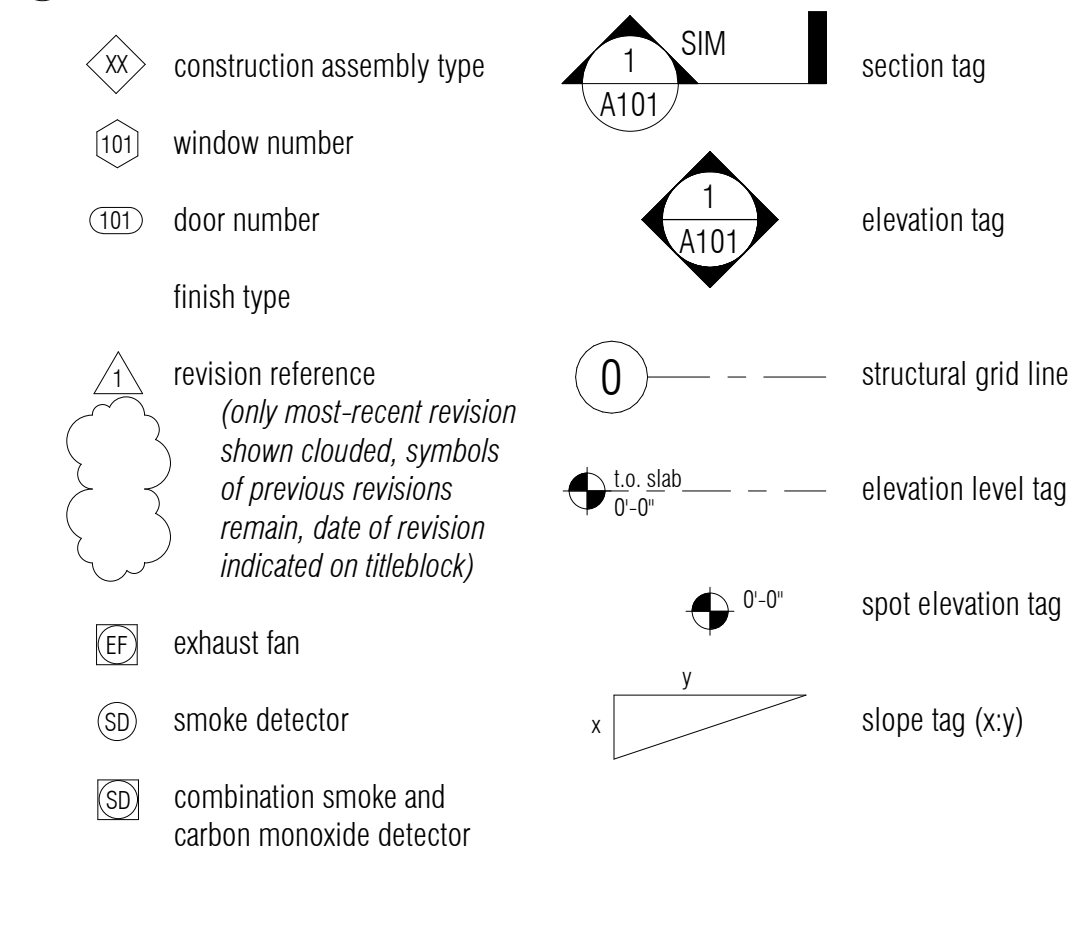


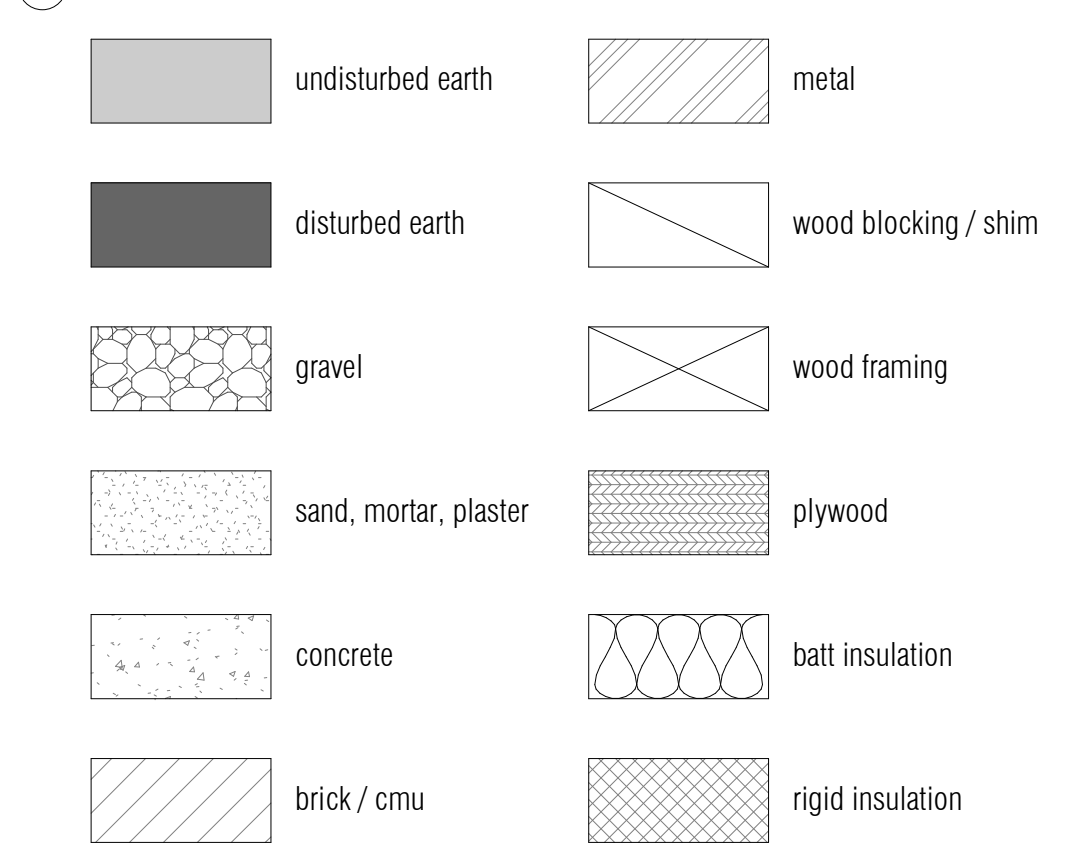
typical abbreviations

@	at	h.b.	hose bib	s.o.g.	slab on grade
dia	diameter	h.c.	hollow core	spec.	specification
#	pound	hdr.	header	s.s.	stainless steel
±	plus or minus	hdwd.	hardwood	std.	standard
abv.	above	h.m.	hollow metal	stl.	steel
acc.	access	horiz.	horizontal	stor.	storage
acous.	acoustic	h.p.	high point	struct.	structure
a.d.	area drain	ht.	height	susp.	suspended
adj.	adjacent	hr.	hour	sym.	symmetrical
a.f.f.	above finish floor	hvac	heating/ventilating/air conditioning	t	tread
alt.	alternate			t.b.	towel bar
alum.	aluminum	i.d.	inside diameter	t.c.	top of curb
approx.	approximately	in.	inch	tel.	telephone
arch.	architectural	insul.	insulation	temp.	tempered
		int.	interior	ter.	terrazzo
bd.	board			t&g	tongue and groove
bdg.	building	j.b.	junction box	t.g.	tempered glass
blkg.	blocking	lam.	laminate / laminated	thk.	thick
bm.	beam	lav.	lavatory	t.o.	top of
b.o.	bottom of	l.f.	linear feet	t.o.w.	top of wall
bot.	bottom	loc.	location	t.p.h.	toilet paper holder
		l.p.	low point	typ.	typical
cab.	cabinet	lt.	light	u.n.o.	unless noted otherwise
c.b.	catch basin				
cem.	cement	m.o.	masonry opening	v.c.t.	vinyl composition
cer.	ceramic	manuf.	manufacturer	tile	tile
c.i.p.	cast in place	max.	maximum	ven.	veneer
c.j.	control joint	m.b.	machine bolt	vert.	vertical
cl.	closet	m.c.	medicine cabinet	v.i.f.	verify in field
clr.	clear	m.d.	medium density overlay	vly.	verify
clg.	ceiling	mech.	mechanical		
cmu	concrete masonry unit	memb.	membrane	w.	west
conc.	concrete	min.	minimum	w.c.	water closet
cont.	continuous	misc.	miscellaneous	wd.	wood
corr.	corridor	mid.	mounted	w.f.	wide flange
cpt.	carpet	mtl.	metal	w.h.	water heater
csmt.	casement window	mul.	mullion	w.l.	water line
c.t.	ceramic tile	n.	north	w.in.	window
ctr.	center	n/a	not applicable	w.s.	weather strip
		n.i.c.	not in contract	w/	with
dbl.	double	no.	number	w/o	without
demo.	demolish	n.s.	not to scale	w/d	washer / dryer
det.	detail	o.a.	overall	w.r.b.	weather-resistive barrier
dia.	diameter	o.c.	on center		
dim.	dimension	o.d.	outside diameter		
dn.	down	off.	office		
d.o.	door opening	o.h.	overhang		
dr.	door	opng.	opening		
d.s.	downspout	op.hd.	opposite hand		
d.w.	dishwasher				
dwg.	drawing				
		perf.	perforated		
e.	east	perp.	perpendicular		
ea.	each	pict.	picture window		
el.	elevation	pl.	plate		
elec.	electrical	p-lam.	plastic laminate		
encl.	enclosure	plas.	plaster		
eq.	equal	pwd.	plywood		
equip.	equipment	pnl.	panel		
est.	estimate	pr.	pair		
(e)	existing	pt.	point		
exist.	existing / expansion	p.t.	pressure treated		
exp.	expand / expansion	ptd.	painted		
expo.	exposed	ptn.	partition		
ext.	exterior				
		r	riser		
f.d.	floor drain	r.a.	return air		
f.e.	fire extinguisher	rad.	radius		
f.f.	finish floor	r.b.	rubber base		
f/f	finish to finish	r.d.	roof drain		
f.g.	fixed glass	ref.	refrigerator		
fin.	finished	rein.	reinforced		
flash.	flashing	rem.	remainder		
flr.	floor	req'd.	required		
fluor.	fluorescent	resil.	resilient		
fund.	foundation	rev.	revision		
f.o.	face of	rgtr.	register		
f.o.c.	face of concrete	r.h.	right hand		
f.o.f.	face of finish	rm.	room		
f.o.i.c.	furnished by owner, installed by contractor	r.o.	rough opening		
		r.v.p.	radon vent pipe		
f.o.m.	face of masonry	r.w.l.	rainwater leader		
f.o.s.	face of stud				
f.p.	fireplace	s.	south		
fr.	frame	s.a.f.	self-adhered flashing		
frpl.	fireproof	s.a.m.	self-adhered membrane		
frzr.	freezer	s.c.	solid core		
ft.	foot / feet	s.d.	smoke detector		
furr.	furring	sched.	schedule		
fut.	future	sect.	section		
f.w.	full width	s.g.	safety glass		
		sh.	shelf		
g	gas	shwr.	shower		
ga.	gauge	sht.	sheet		
galv.	galvanized	sht.mtl.	sheet metal		
g.c.	general contractor	shtg.	sheathing		
gl.	glass	s.i.	square foot / feet		
g-lam.	glue-lam	sq.in.	square inch		
gr.	grade	sim.	similar		
g.w.b.	gypsum wallboard				
gyp.	gypsum				

typical drawing symbols



typical material symbols



applicable codes

2021 international residential code (architectural)	2021 international wildland-urban interface code
2021 international building code (structural)	state environmental policy act (sepa)
2021 international mechanical code	city of mercer island amendments to the codes listed above
2021 fuel gas code	mercier island unified land development code
2021 uniform plumbing code	
2020 national electrical code	
2021 washington state energy code	
2021 international fire code	
2021 seattle stormwater code	

fire protection

all work to conform to the IFC (2021 edition) as amended by the city of mercer island and provided with smoke detectors per IFC 2021.

A NFPA 72- Chapter 29 Monitored Fire Alarm System in compliance with NFPA 72 and CoMI standards shall be installed throughout the residence. A separate fire permit is required.

general notes (RC)

- a. **architectural:**  
all work under this contract shall comply with the current editions of the international residential code, washington state energy code, washington state ventilation and indoor air quality code, uniform plumbing code, national electric code, and washington state department of labor and industries regulations.

all notes and specifications to comply with the 2021 international residential code with any city of mercer island amendments and the washington state energy code with city of mercer island amendments.
  - b. **structural:**  
all materials, workmanship, design and construction shall conform to the drawings, and the 2021 international residential code (IRC) with washington state amendments.
- general contractor shall verify and coordinate all existing and new utilities and site conditions before and during construction.
  - the contractor shall verify all existing conditions and dimensions, and notify architect of any discrepancy or uncertainty.
  - do not scale drawings. written dimensions take precedence over scaled dimensions. details take precedence over general conditions.

residential code (IRC) notes

- bath fans shall be 50 cfm (1.5 sones) and equipped with controls capable of manual and automatic operation such as a clock timer. kitchen exhaust fan shall be 160 cfm min per IRC table M1505.4.3(3).
  - install safety glazing where required per IRC R308.4.
  - openings shall be caulked, sealed or weather-stripped.
  - seal tears or joints in insulation with tape.
  - showerheads shall have a maximum flow rate of 1.8 gpm or less per UPC 408.2. kitchen faucets shall have a maximum flow rate of 1.8 gpm or less per UPC 420.2.1. lavatory faucets shall have a maximum flow rate of 1.2 gpm or less per UPC 407.2.1.1.
  - moisture control to be provided per washington state energy code and international building code.
  - service water pipes in unheated spaces shall be insulated per washington state energy code.
  - minimum 6 mil. black polyethylene or approved equal ground cover required in crawl space per IRC R408.1. the ground cover shall be overlapped 6" minimum at joints and extend to the foundation wall.
  - provide fire blocking, draftstops and firestops per the international residential code.
  - all nailing / fasteners per international residential code, chapters 4-8.
  - provide approved opening control devices at new windows per IRC R312.2.2.
  - verify smoke detectors are installed per IRC R314. all smoke detectors shall be interconnected per IRC R314.
  - vent fans shall terminate at the exterior of the building per IRC M1504.3, insulate all ducts outside of conditioned space per WSEC.
- exhaust openings (IRC M1504.3): air exhaust openings shall terminate as follows:
- not less than 3 ft from property lines;
  - not less than 3 ft from gravity air intake openings, operable windows and doors;
  - not less than 10 ft from mechanical air intake openings except where either of the following apply:
    - the exhaust opening is located not less than 3 ft above the air intake opening.
    - the exhaust opening is part of a factory-built intake/exhaust combination termination fitting installed in accordance with the manufacturer's instructions, and the exhaust air is drawn from a living space.
  - openings shall comply with sections R303.5.2 and R303.6.
- the garage shall be separated as required by IRC table R302.6. the garage shall be separated from the dwelling unit by not less than 1/2" gypsum board or equivalent applied to the garage side. habitable rooms above the garage shall be separated by not less than 5/8" type 'x' gypsum board or equivalent.
  - all stairways shall be provided with artificial light sources. light activation controls shall be accessible at the top and bottom of interior stairways per IRC R303.7.
  - all bathroom fans, kitchen hood, and dryer ducts shall be exhausted through the attic to the roof or through the floor system to an outside wall. all wall ducts shall terminate at least 36" from a window opening.
  - carbon monoxide detectors shall be located per IRC R315.1.
  - thresholds at exterior doors shall not be greater than 1-1/2" per IRC R311.3.1.

19. per IRC G2408.1: direct vent gas fireplaces shall be listed, labeled, and installed as required by the terms of their approval, in accordance with the conditions of their listing, the manufacturer's instructions, and this code

5. **existing dimensions are to face of finish & new dimensions given are to face of foundation walls and face of rough framing unless noted otherwise.**
6. **floor-to-floor dimensions from top of sub-floor to top of sub-floor, unless noted otherwise.**
7. no change in scope or intent of the work shall be made without approval of the architect and owners.
8. alternatives and substitutions to drawings and specifications may be acceptable, but must be approved by the architect and owner. any item substituted without approval may be subject to removal. any alternatives or substitutions must be compliant with applicable building and energy codes.
9. contractor to provide solid blocking behind all wall hung fixtures and accessories. contractor shall verify locations of wall mounted accessories and backing for accessories with owner prior to closing of the walls.
10. contractor responsible for lead and asbestos testing as required.
11. permit documents are for code review only. not for construction.

20. per IRC 303.4, dwelling units shall be equipped with local exhaust fans and whole-house ventilation systems designed and installed as specified in IRC M1505.

the whole-house mechanical ventilation system shall provide outdoor air at a continuous rate as determined in accordance with table M1505.4.3(1) or equation 15-1:

equation 15-1:  $ventilation\ rate\ in\ cubic\ ft\ per\ min. = (0.01 \times total\ sq\ of\ house) + [7.5 \times (number\ of\ bedrooms + 1)]$  but not less than 30 cfm for each dwelling unit

minimum airflow rate requirements per table M1505.4.3(1):

dwelling unit floor area (square feet)	number of bedrooms				
	0 - 1	2	3	4	≥ 5
< 500	30	30	35	45	50
501 - 1,000	30	35	40	50	55
1,001 - 1,500	30	40	45	55	60
1,501 - 2,000	35	45	50	60	65
2,001 - 2,500	40	50	55	65	70
2,501 - 3,000	45	55	60	70	75
3,001 - 3,500	50	60	65	75	80
3,501 - 4,000	55	65	70	80	85
4,001 - 4,500	60	70	75	85	90
4,501 - 5,000	65	75	80	90	95

system coefficient (C<sub>system</sub>) per table M1505.4.3(2):

system type	distributed	not distributed
balanced	1.0	1.25
not balanced	1.25	1.5

intermittent whole house mechanical ventilation rate factors per table M1505.4.3(3):

run-time % in each 4-hour segment	50%	66%	75%	100%
factor	2	1.5	1.3	1.0

the minimum whole-house ventilation rate from section M1505.4.3 shall be adjusted per equation 15-2, by the system coefficient in table M1505.4.3(2) based on the system type not meeting the definition of a balanced whole-house ventilation system and/or not meeting the definition of a distributed whole-house ventilation system:

equation 15-2:  $Q_v = Q_r * C_{system}$   
 $Q_v$  = quality-adjusted ventilation airflow rate in cubic ft per min. (cfm)  
 $Q_r$  = ventilation airflow rate, cubic ft per min. (cfm) from 15-1 or table M1505.4.3(1)  
 $C_{system}$  = system coefficient from table 1505.4.3(2)

whole-house mechanical ventilation systems shall be provided with advanced controls that are configured to operate the system with intermittent off operation and shall operate for at least 2 hours in each 4-hour segment. the whole-house ventilation airflow rate determined in accordance with M1505.4.3 as corrected by M1505.4.3.1 is multiplied by the factor determined in accordance with Table M1505.4.3(3).

21. mechanical makeup air shall be provided for domestic cooking appliance ventilation exceeding 400 cfm per M1503.6

project information

**owners:** jeff and sally garrett

**address:** 9007 se 44th st mercer island wa 98040

**project description:** remodel of existing single family residence to include interior renovations, demolishing existing chimney, replacing existing windows, and reconstruction of existing mudroom. no new square footage or addition to existing footprint proposed.

**parcel number:** 759810-0082

**legal description:** SCHMIDS VITUS E SEATTLE ACRE TRS 9 LESS S 40 FT LESS E 180 FT & LESS W 10 FT & 10 LESS N 100 FT LESS E 180 FT & LESS W 10 FT Plat Block: 1 Plat Lot: 9-10

project team

**owner:** jeff and sally garrett  
9007 se 44th st  
mercier island wa 98040  
phone: (703) 231-5144  
email: jgwagb@aol.com

**structural engineer:** swenson say faget  
2124 3rd ave  
seattle wa 98121  
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phone: (206) 443-6212  
email: bmozden@ssfenegineers.com

architect:

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119 s main street, suite 310  
seattle, wa 98104  
contact: george maroussis  
phone: (206) 395-4392 x 110  
email: george@atelierdrome.com

geotech:

mud bay geotechnical services, llc  
1001 cooper pt rd sw, ste 140 pmb #108  
olympia wa 98502  
contact: chris heathman  
phone: (360) 481-9784  
email: cheathman@mudbaygeotech.com

vicinity map

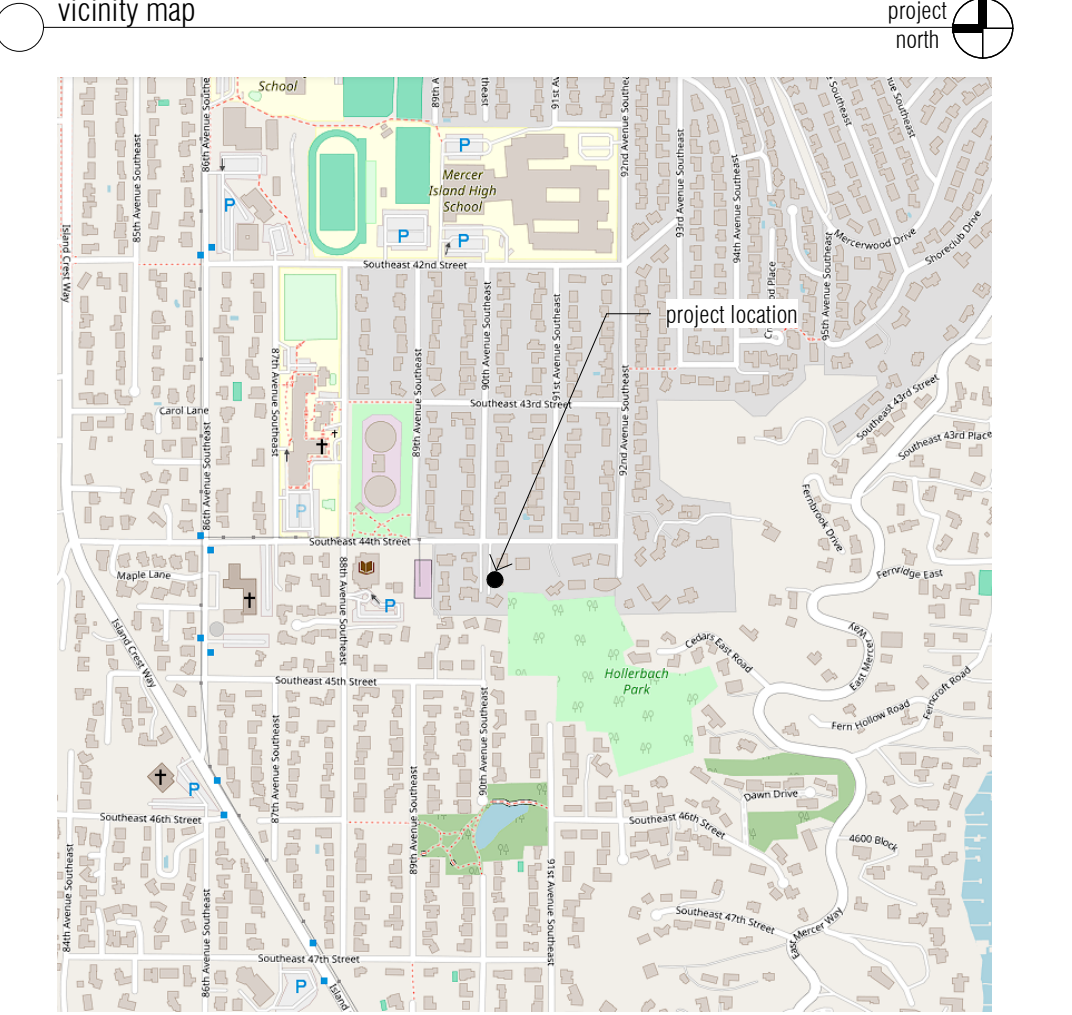
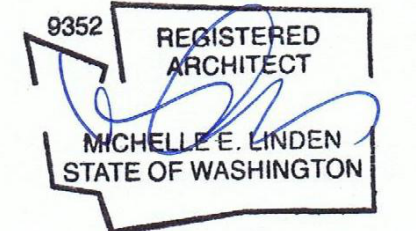


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correction cycle 1 building permit 07.10.2025  
05.16.2025



119 south main street, suite 310  
seattle, wa 98104  
www.atelierdrome.com

**Garrett Residence**  
9007 SE 44th St  
Mercer Island, WA 98040

**a0.1**  
project information

energy code notes

This project to comply with the 2021 Washington State Residential Energy Code (WSEC\_R)

climate zone  
WSEC R301.1 4-C (4-Marine)

compliance  
WSEC R501.1 alterations, additions, or repairs to an existing building, building system, or portion thereof shall comply with sections R502, R503, or R504. unaltered portions of the existing building or building supply system shall not be required to comply with this code.

new and replacement materials  
WSEC R501.5 except as otherwise permitted by the code, materials permitted by the applicable code for new construction shall be used. like materials shall be permitted for repairs provided hazards to life, health or property are not created.

small additions  
WSEC R502.1.1. additions not greater than 150 square feet shall not be required to comply with section R406

alterations, general  
WSEC R503.1 alterations to any building or structure shall comply with the requirements of the code for new construction, without requiring the unaltered portions of the existing building or building system to comply with this code. alterations shall be such that the existing building or structure is no less conforming to the provisions of this code than the existing building or structure was prior to the alteration.

alterations shall be such that the existing building or structure uses no more energy than the existing building or structure prior to the alteration. alterations to existing buildings shall comply with sections R503.1.1 through R503.1.4

building envelope  
WSEC R503.1.1 building envelope assemblies that are part of the alteration shall comply with section R402.1.1 or R402.1.5, sections R402.2.1 through R402.2.10, R402.3.1, R402.3.2, R402.3.5, and R402.4.2

- exceptions:
- existing ceiling, wall or floor cavities exposed during construction, provided that these cavities are filled with insulation. 2 x 4 framed walls shall be insulated to a minimum of R-15 and 2 x 6 framed walls shall be insulated to a minimum of R-21.
  - construction where the existing roof, wall or floor cavity is not exposed
  - roof recover
  - roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.

replacement fenestration  
WSEC R503.1.1.1 where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for U-factor and shgc in table R402.1.3.

heating and cooling systems  
WSEC R503.1.2 new heating, cooling and duct systems that are part of the alteration shall comply with section R403.  
exceptions:

- where ducts from an existing heating and cooling system are extended, duct systems with less than 40 linear feet in unconditioned spaces shall not be required to be tested in accordance with section R403.2.2
- existing duct systems constructed, insulated or sealed with asbestos

service hot water systems  
WSEC R503.1.3 new service hot water systems that are part of the alteration shall comply with section R403.5

lighting  
WSEC R503.1.4 new lighting systems that are part of the alteration shall comply with section R404.1

building thermal and envelope insulation requirements  
WSEC R402.1 the building thermal envelope shall meet the requirements of table R402.1.2

fenestration  
WSEC R402.3.1 an area weighted average of fenestration products shall be permitted to satisfy the u-factor requirements  
WSEC R402.3.2 an area weighted average of fenestration products more than 50 percent glazed shall be permitted to satisfy the shgc requirements

fenestration shall comply with table R402.1.2

air leakage of fenestration  
WSEC R402.4.2 windows, skylights, and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot and swinging doors no more than 0.5 cfm per square foot when tested according to nfrc 400 or AAMA/WDMA/CSA 101/1.S.2/A440 by an accredited independent laboratory and listed and labeled by the manufacturer.

- exceptions :
- field fabricated fenestration products
  - custom exterior fenestration products manufactured by a small business provided they meet the applicable provisions of chapter 24 of the international building code.

combustion air openings  
WSEC R402.3.5 where open combustion air ducts provide combustion air to open combustion, space conditioning fuel burning appliances, the appliances and combustion air openings shall be located outside of the building thermal envelope or enclosed in a room isolated from inside the thermal envelope.

- exceptions:
- direct vent appliances with both intake and exhaust pipes installed continuous to the outside
  - fireplaces and stoves complying with section R402.3.6. and section R1006 of the international residential code.

recessed lighting  
WSEC R402.4.3 recessed luminaires installed in the building thermal envelope shall be type IC rated and certified under astm E283 as having an air leakage rate not more than 2.0 cfm when tested at a 1.57 psf pressure differential and shall have a label attached showing compliance with this test method. all recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

lighting equipment  
WSEC R404.1 all permanently installed lighting fixtures, excluding kitchen appliance lighting fixtures, shall contain only high efficacy lighting sources

ventilation compliance

all work to conform with IRC M1505.

outdoor air will be provided via a supply fan as part of a whole-house ventilation systems designed and installed as specified in IRC M1505.

unvented roof assembly proposed per IRC R806.5

energy code notes (WSEC)

2021 WSEC compliance - zone 1: residential prescriptive compliance per table R402.1.3

ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING R-VALUE	WOOD FRAMED WALL R-VALUE	FLOOR R-VALUE	BELOW GRADE R-VALUE	SLAB R-VALUE & DEPTH
MARINE 4	0.30	0.50	60°	20+5	30	10/15/21 int. + STB	10, 4FT

- e. for single rafter or joist-vaulted ceilings, the insulation may be reduced to R-38 full if the full insulation depth extends over the top plate of the exterior wall

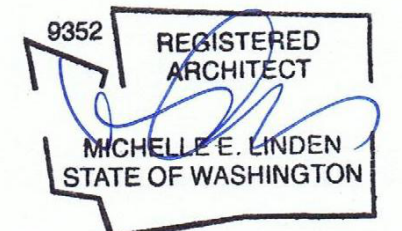
design values for project

ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING R-VALUE	WOOD FRAMED WALL R-VALUE	FLOOR R-VALUE	BELOW GRADE R-VALUE	SLAB R-VALUE & DEPTH
MARINE 4	0.30	N/A	38	20+5	30	N/A	N/A

alterations worksheet provided, per 502.1.1. no credits required for alterations, no new square footage or addition to existing footprint proposed.

2021 energy code requirements for new and replacement heating equipment:

- a residential energy compliance certificate complying with the WSEC 401.3 shall be permanently posted
- dwelling unit is to be furnished with at least one programmable thermostat for the regulation of temperature
- air leakage shall not exceed 5 changes per hour and shall be tested as such. a written report of the test results shall be signed by the testing party and provided to the building inspector prior to call for final inspection.
- ducts shall be leak tested in accordance with WSU RS-33 and insulated to a minimum of R-8. all ducts, air handlers and filter boxes to be sealed.
- continuous whole house fan to be installed in central location.
- per IRC 1004: factory-built fireplaces are to be listed, labeled, and installed in accordance with the conditions of the listing; factory built fireplaces shall be tested in accordance with UL 127.
- window and door headers shall be insulated with a minimum of R-10 insulation



building permit 05.16.2025



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**Garrett Residence**  
9007 SE 44th St  
Mercer Island, WA 98040

**a0.2**  
code information

gross floor area (GFA) calculation

per 19.02.020.D.1.b.: R-9.6: 8,000sf or 40 percent of the lot area, whichever is less  
 11,000 x 0.40 = 4,400sf

basement: 367.19 (remainder of building footprint is crawlspace or slab on grade)  
 first floor: 1125.81  
 second floor: 587.01  
 Total: 2080.01 < 4400 COMPLIES

seasonal development limitation

per 19.07.160.F.2, if excavation/foundation or other similar work will occur between October 1 and April 1, a wet season development waiver is to be applied and reviewed for work during wet season

project description

remodel of existing single family residence to include interior renovations, demolishing existing chimney, replacing existing windows, and reconstruction of existing mudroom. no new square footage or addition to existing footprint proposed.

lot coverage/hardscape calculations

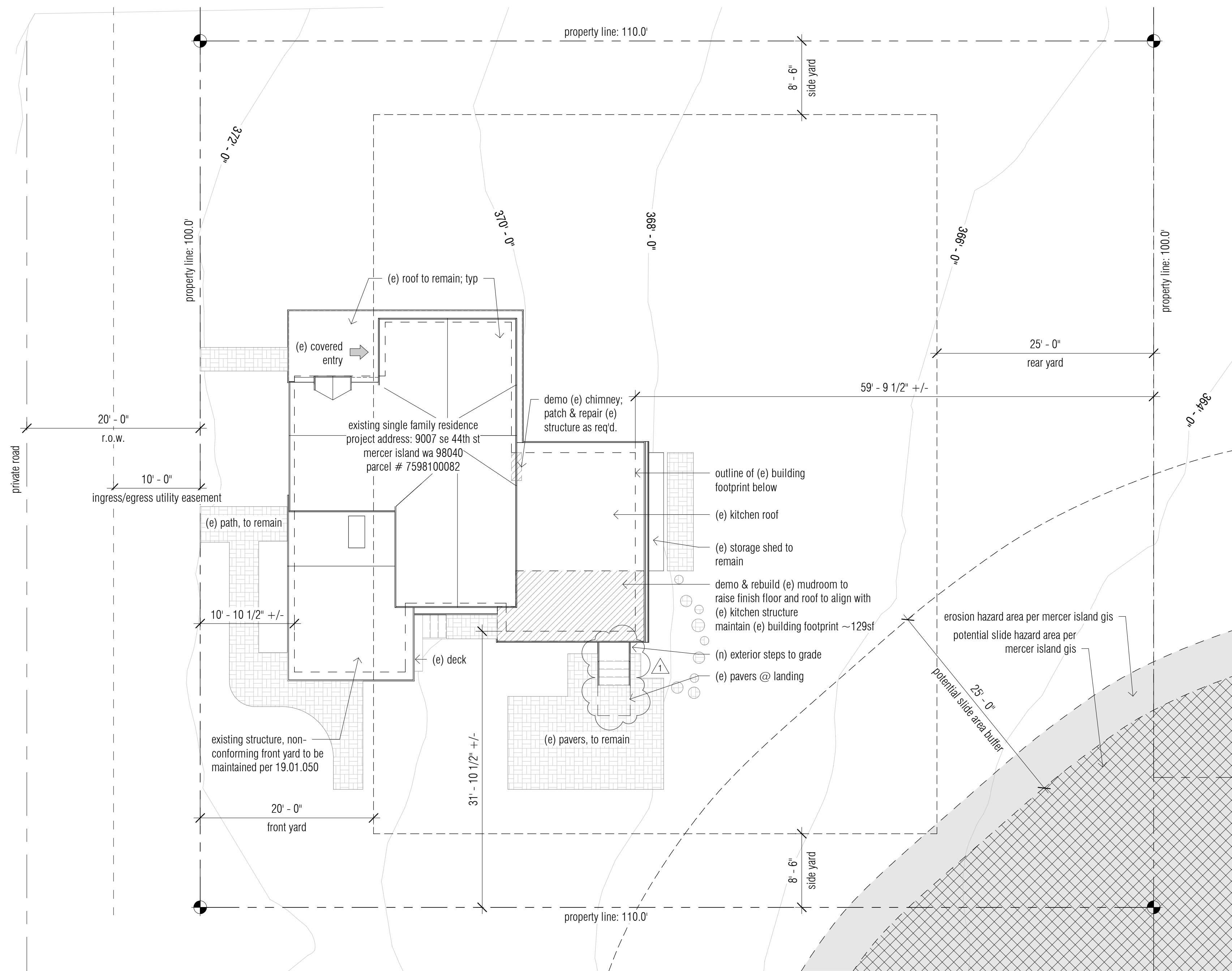
lot area: 11,000 sf  
 40% lot coverage allowed (< 15% slope): 4400 sf

	existing	proposed
primary structure:	1450 sf	1450 sf (129sf replaced over existing footprint)
accessory structures:	0 sf	0 sf
driving surface:	0 sf	0 sf
total / lot area =	1450 sf	1450 sf
	13.2 %	13.2 % = COMPLIES

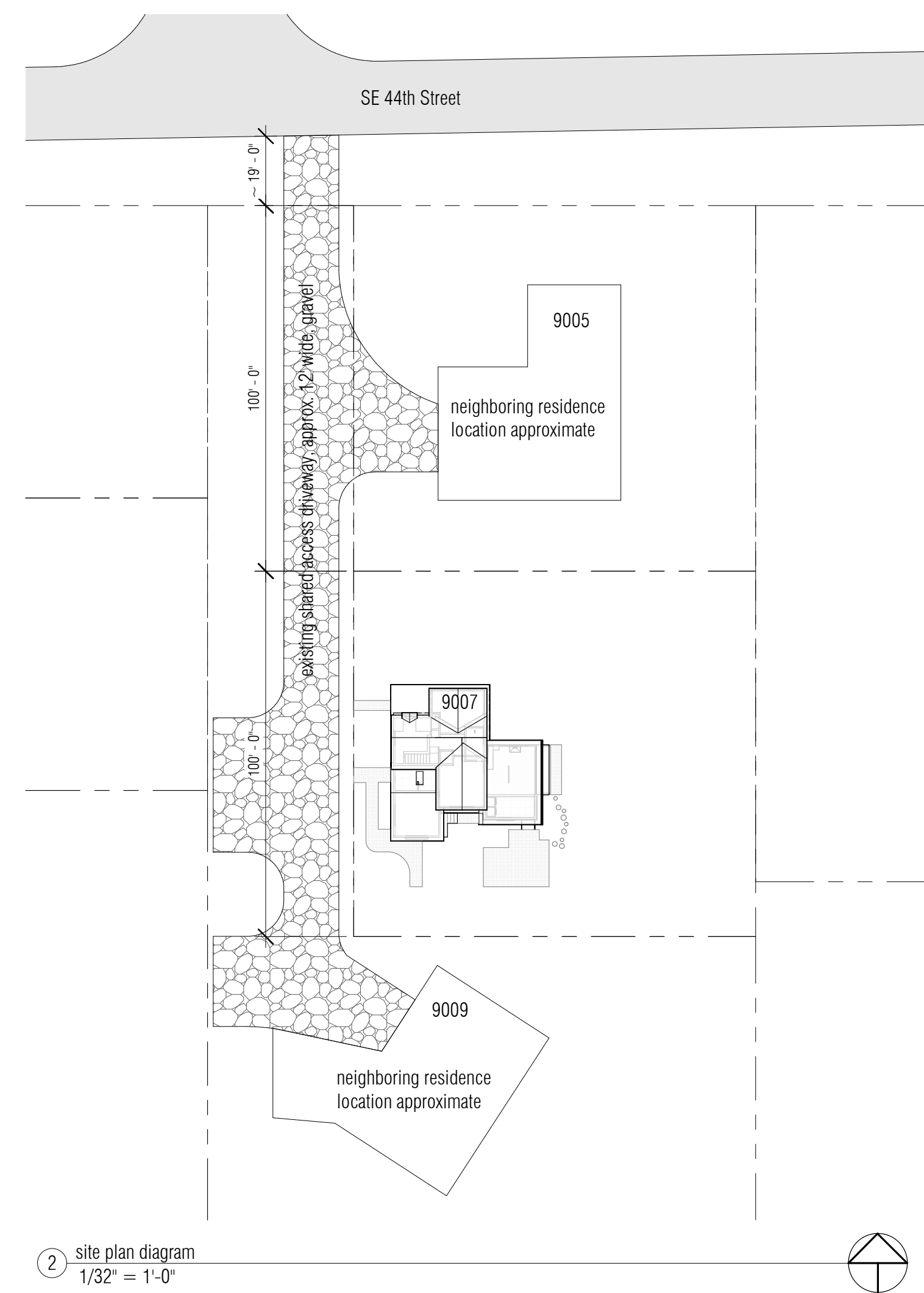
9% hardscape allowed : 990 sf

	existing	proposed
hardscape, max 9% = 990sf	530 sf	530 sf
decks (36" abv. grade):	0 sf	0 sf

total / lot area = 530 sf / 11,000 sf = 4.8 % = COMPLIES



1 Site plan  
 1/8" = 1'-0"



2 site plan diagram  
 1/32" = 1'-0"

site information

<b>owners:</b>	jeff and sally garrett
<b>project address:</b>	9007 SE 44th St mercer island, wa 98040
<b>parcel number:</b>	7598100082
<b>legal description:</b>	SCHMIDS VITUS E SEATTLE ACRE TRS 9 LESS S 40 FT LESS E 180 FT & LESS W 10 FT & 10 LESS N 100 FT LESS E 180 FT & LESS W 10 FT Plat Block: 1 Plat Lot: 9-10
<b>zoning:</b>	R-9.6
<b>property class:</b>	residential
<b>lot area:</b>	11,000 sf (.25 acre)
<b>building footprint:</b>	existing: 1126 sf    proposed: no change
<b>lot coverage:</b>	existing: 1126 sf (10%)    proposed: no change 40% max (allowed: 4400 sf)
<b>building height:</b>	existing: 18 ft    proposed: no change (allowed: 30 ft)
<b>minimum required setbacks:</b>	front: 20 ft    no change rear: 25 ft    no change side: 7.5 ft min, 17 ft total    no change
<b>parking:</b>	no change
<b>hardscape:</b>	no change
<b>landscape:</b>	no change
<b>critical areas:</b>	erosion hazard area potential slide hazard area seismic hazard area



correction cycle 1 07.10.2025  
 building permit 05.16.2025



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**Garrett Residence**  
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**a1.0**  
 site plan

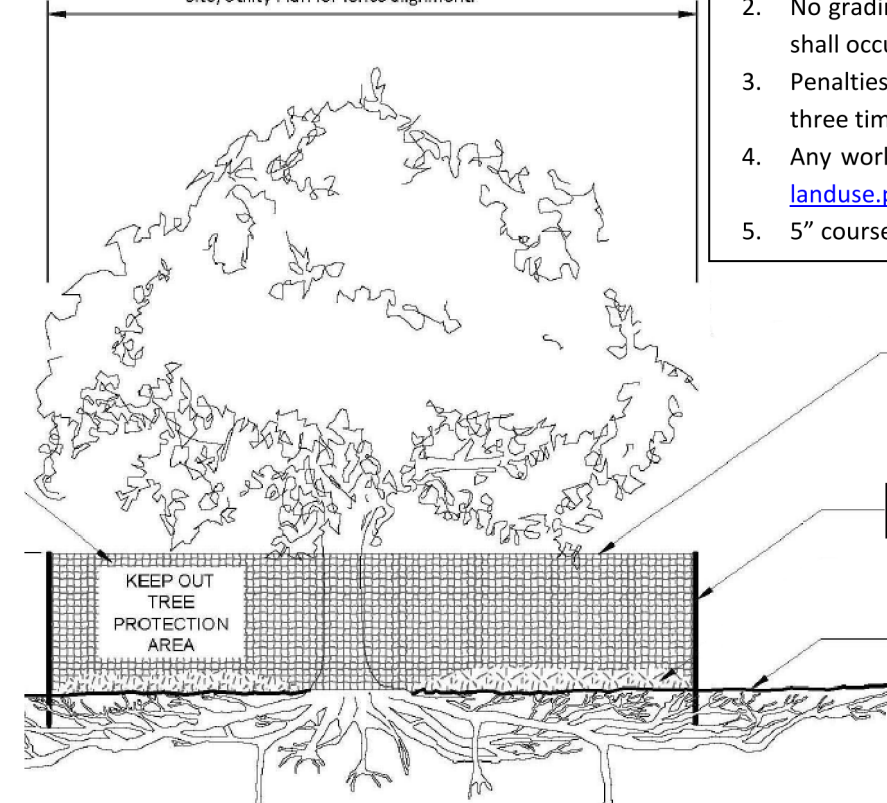
## TREE PROTECTION AREA (TPZ) KEEP OUT!

**DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA**

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation

Crown drip line or other limit of Tree Protection area. See Site/Utility Plan for fence alignment.



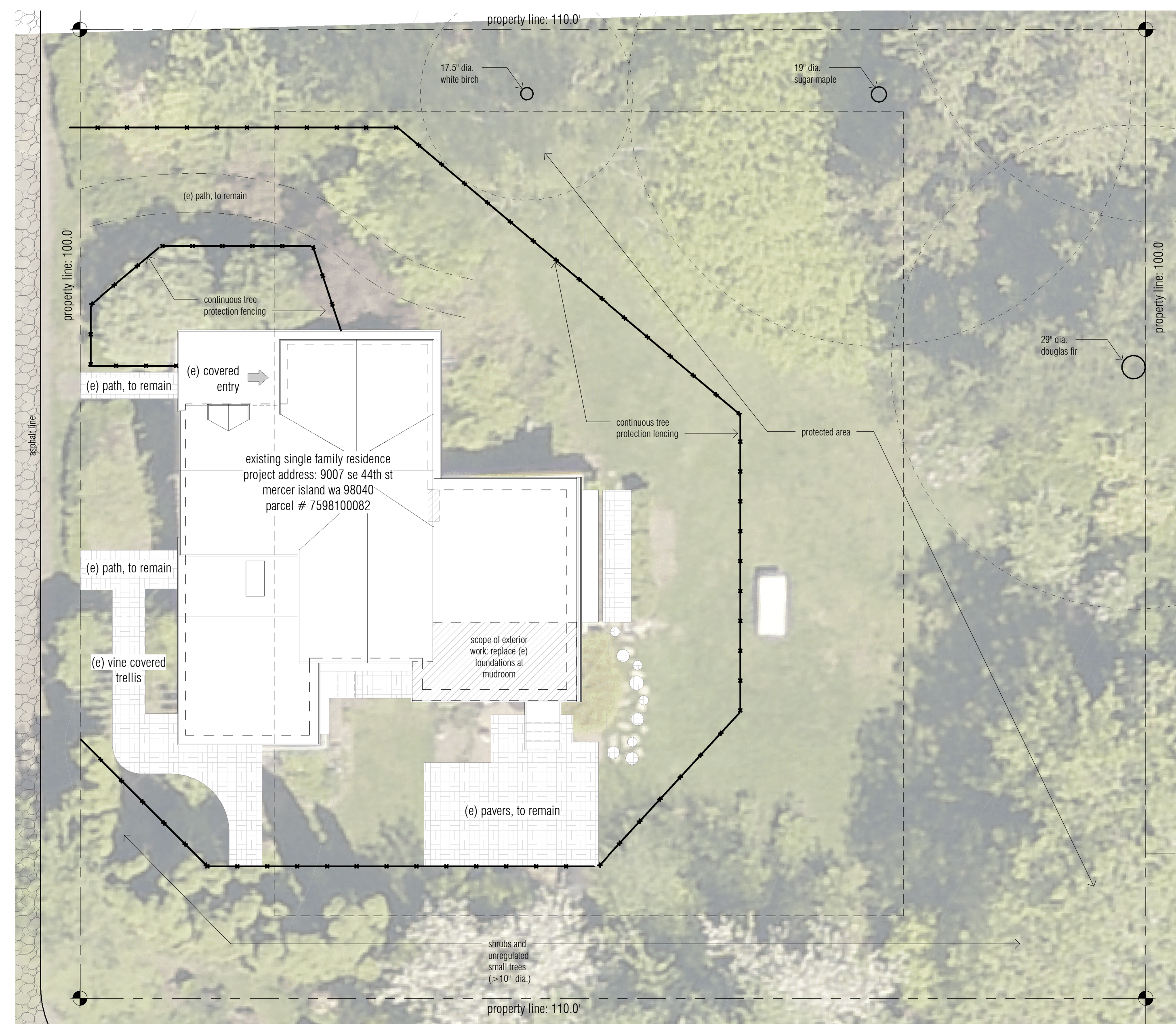
- Notes**
1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
  2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
  3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
  4. Any work in approved TPZ must be with the permission of the Land Use and Planning Division at [landuse.planning@mercergov.org](mailto:landuse.planning@mercergov.org)
  5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

Tree protection fence: 4-6" chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

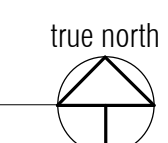
2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the Land Use and Planning Division at [landuse.planning@mercergov.org](mailto:landuse.planning@mercergov.org)



1 tree protection plan  
1/8" = 1'-0"



correction cycle 1 07.10.2025  
building permit 05.16.2025

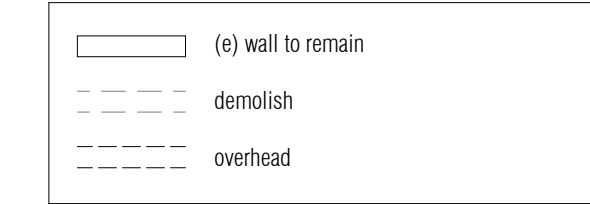


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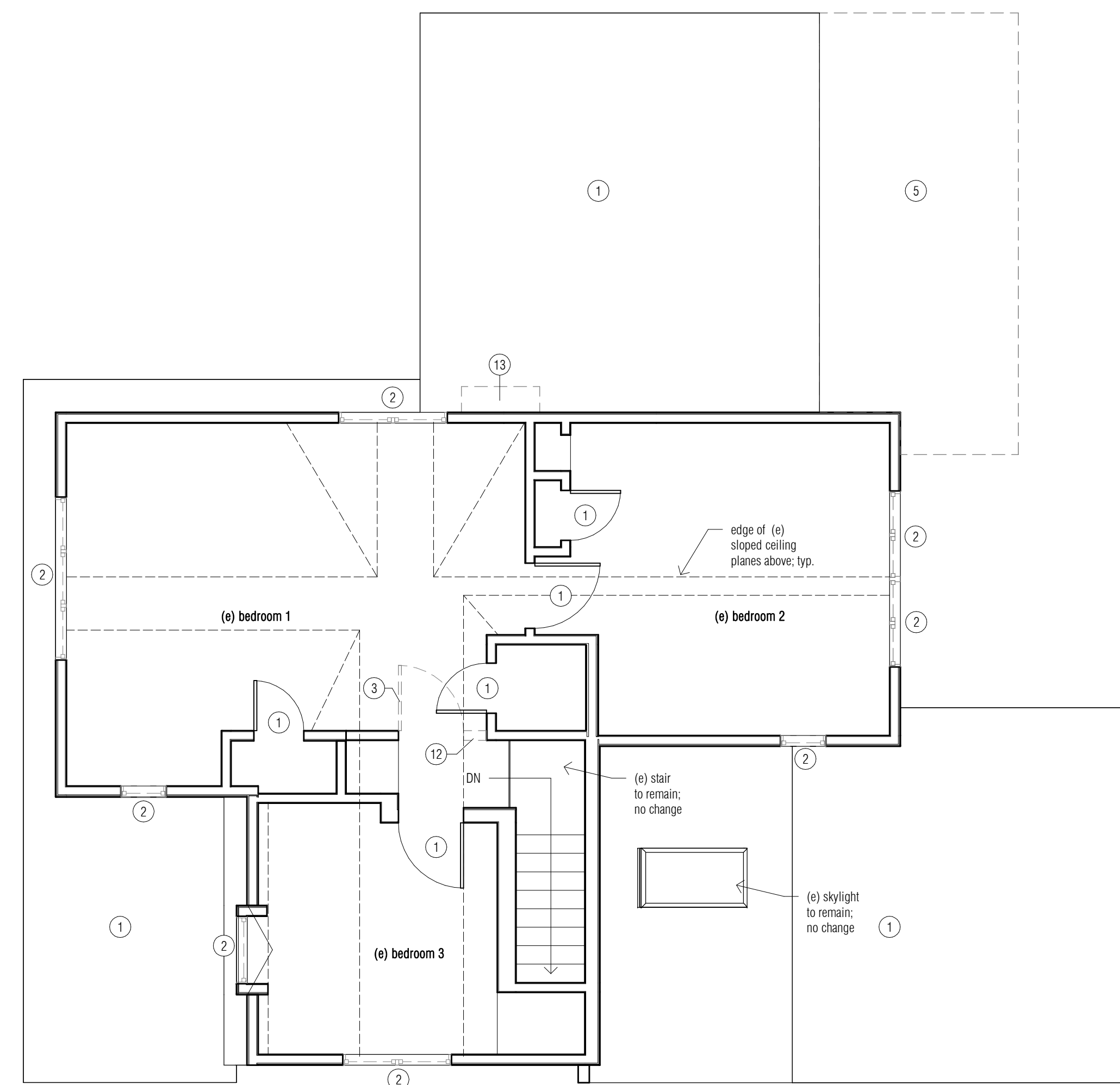
**tp1.0**  
tree protection plan

**demo legend**

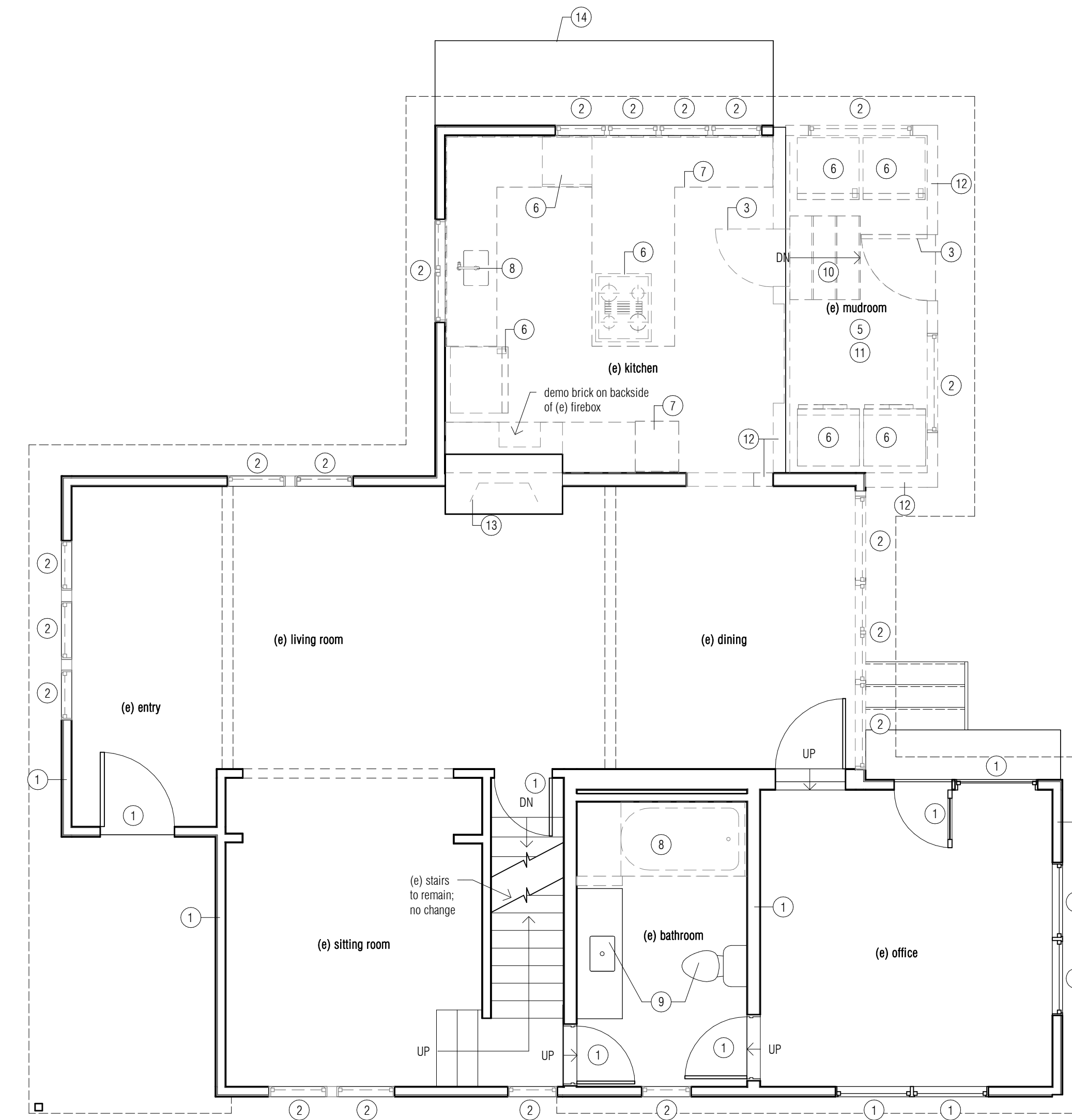


**demo keynote legend**

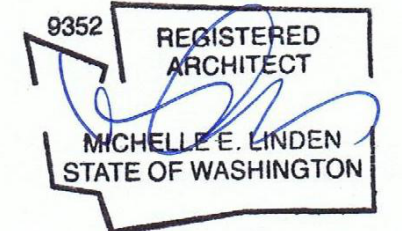
1. (e) door, window, and wall to remain
2. remove (e) window; reinstall/replace trim as needed.
3. remove (e) door
4. remove (e) flooring & baseboards
5. remove (e) roof framing
6. remove (e) appliance
7. remove (e) casework
8. remove (e) plumbing fixture, cap as req'd
9. (e) plumbing fixture to remain
10. demo (e) dropped mudroom and steps, reconstruct addition to raise floor and roof levels to match kitchen heights
11. remove (e) slab on grade foundation
12. remove (e) walls
13. remove (e) chimney to l.o.p. at (e) kitchen. prep for new insert fireplace in (e) firebox w/ direct vent through kitchen roof framing.
14. (e) exterior shed to remain



2 2nd floor plan - demo  
 1/4" = 1'-0"



1 1st floor plan - demo  
 1/4" = 1'-0"



building permit 05.16.2025



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**ad2.0**  
 existing + demo plans

#	location	operation	finish width	finish height	head height	material	u-value	manufacturer	glazing type	comments
101	(e) mudroom	double casement	4'-2"	3'-4"	6'-8"	30	tbd		clr, low-e	tempered
102	(e) mudroom	double casement	4'-0"	3'-4"	6'-8"	30	tbd		clr, low-e	
103	(e) dining	fixed	3'-6"	5'-6"	7'-3"	30	tbd		clr, low-e	mulled with 104, 105, 106; replace windows in (e) rough opening
104	(e) dining	double casement	4'-0"	3'-4"	5'-11"	30	tbd		clr, low-e	mulled with 103, 104, 106; replace windows in (e) rough opening
105	(e) dining	double casement	4'-0"	1'-8"	7'-3"	30	tbd		clr, low-e	mulled with 103, 104, 105; replace windows in (e) rough opening
106	(e) dining	fixed	3'-6"	5'-6"	7'-3"	30	tbd		clr, low-e	
107	(e) bathroom	casement	2'-0"	3'-5"	6'-8"	30	tbd		clr, low-e	replace window in (e) rough opening, tempered
108	(e) sitting room	casement	2'-0"	3'-5"	6'-8"	30	tbd		clr, low-e	replace window in (e) rough opening, tempered
109	(e) sitting room	slider	5'-1"	5'-0"	7'-2 1/2"	30	tbd		clr, low-e	replace window in (e) rough opening
110	(e) entry	slider	7'-2 3/4"	5'-0"	7'-1 1/2"	30	tbd		clr, low-e	replace window in (e) rough opening
111	(e) living room	slider	5'-1"	5'-0"	7'-1 1/2"	30	tbd		clr, low-e	replace window in (e) rough opening
112	(e) kitchen	double casement	4'-2"	3'-5"	7'-1 1/2"	30	tbd		clr, low-e	replace window in (e) rough opening
113	(e) kitchen	casement	2'-1"	3'-0"	6'-4"	30	tbd		clr, low-e	mulled with 118, 119, 120; replace windows in (e) rough opening
114	(e) kitchen	casement	2'-1"	3'-0"	6'-4"	30	tbd		clr, low-e	mulled with 117, 119, 120; replace windows in (e) rough opening
115	(e) kitchen	casement	2'-1"	3'-0"	6'-4"	30	tbd		clr, low-e	mulled with 117, 118, 120; replace windows in (e) rough opening
116	(e) kitchen	casement	2'-1"	3'-0"	6'-4"	30	tbd		clr, low-e	mulled with 117, 118, 119; replace windows in (e) rough opening
201	(e) bedroom 3	double casement	4'-2"	3'-5"	5'-6"	30	tbd		clr, low-e	replace window in (e) rough opening
202	(e) bedroom 3	double hung	4'-2"	2'-8"	4'-3"	30	tbd		clr, low-e	replace window in (e) rough opening
203	(e) bedroom 1	casement	1'-9"	2'-1"	3'-10"	30	tbd		clr, low-e	replace window in (e) rough opening
204	(e) bedroom 1	triple casement	6'-3"	3'-5"	5'-2 1/2"	30	tbd		clr, low-e	replace window in (e) rough opening
205	(n) bathroom	double casement	4'-2"	3'-5"	5'-2 1/2"	30	tbd		clr, low-e	replace window in (e) rough opening
206	(e) bedroom 2	double casement	3'-4 1/2"	3'-5"	5'-2 1/2"	30	tbd		clr, low-e	mulled with 207; replace windows in (e) rough opening
207	(e) bedroom 2	double casement	3'-4 1/2"	3'-5"	5'-2 1/2"	30	tbd		clr, low-e	mulled with 206; replace windows in (e) rough opening
208	(e) bedroom 2	casement	1'-9"	2'-1"	3'-10"	30	tbd		clr, low-e	replace window in (e) rough opening

**Window notes:**

- all dimensions (including frames and rough openings) shall be field verified prior to ordering
- outdoor air intake is provided through operable openings in the windows. locations shall comply with the 2021 international mechanical code section 402
- all operable windows to have screens
- align window heads with exterior doors u.n.o
- provide flashing per mfrct specifications
- egress window requirements per section R310 of the international residential code as follows:  
 minimum opening area = 5.7 sq ft  
 minimum net clear opening height = 24"  
 minimum net clear opening width = 20"  
 maximum window sill height = 44"
- contractor to confirm window and door rough openings requirements with manufacturer(s).
- all exterior window and door openings to be flashed with peel & stick water shield or approved equal, per northwest wall and ceiling bureau standard details.

#	location	operation	width	height	u-value	manufacturer	hardware	comments
101	(e) mudroom	swing	2'-8"	6'-8"	30	tbd	entry set w/deadbolt	provide weatherstripping, reuse (e) dutch door
102	(e) kitchen	double pocket	5'-0"	6'-8"	n/a	tbd	recessed pulls	
201	(e) bedroom 1	swing	2'-6"	6'-8"	n/a	tbd	privacy	
202	(n) bathroom	swing	2'-6"	6'-8"	n/a	tbd	privacy	

**door notes:**

- door returns shall be 4" typical, unless noted otherwise.
- contractor to confirm window and door rough openings requirements with manufacturer(s).
- all exterior window and door openings to be flashed with peel & stick water shield or approved equal, per northwest wall and ceiling bureau standard details.

**stair, handrail, & guardrail notes**

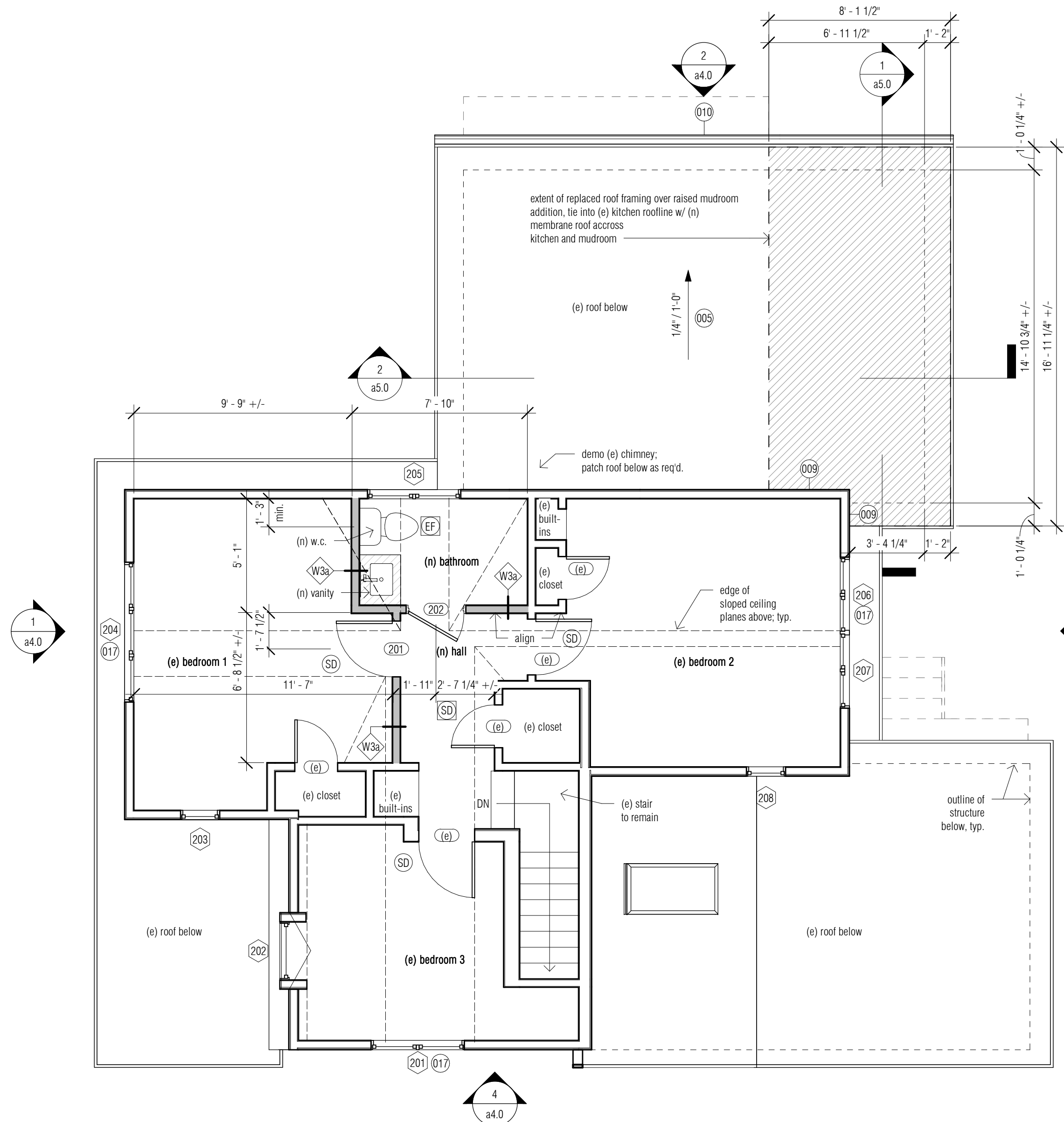
- stairways shall be not less than 36" in clear width at all points above the permitted handrail height and below the required headroom height, the clear width of stairways at and below the handrail height, including treads and landings, shall be not less than 31-1/2" where a handrail is installed on one side, and 27" where handrails are installed on both sides.
- 7/32" max. riser height, 10" min. tread depth
- headroom shall be a min. of 6'-8" measured vertically from a plane parallel and tangent to the stairway tread nosings to the soffit above at all points.
- provide continuous handrail (one side) typ handrail to be located between 34"-38" abv. tread nosing, typ. intermediate rail spacing shall be limited to an opening such that a 4" sphere cannot pass through
- handrail grasping dimension to be 1 1/4" (min.) - 2" (max.), min circular handrails shall have a perimeter of 4" min and not greater than 6.25" and a cross section of not more than 2-1/4" inches, and an edge radius of 0.01 inches min. handrails adjacent to a wall shall have a space of not less than 1-1/2" between wall and handrail.
- guardrails shall have a min. height of 36" from top of adjacent finish floor surface, with a max. spacing of 4" between intermediate rails.
- interior & exterior stairs to be provided with a means of illumination per 303.7.
- guardrails to be designed to resist a 200 lb concentrated load on the top rail and 50 psf on all guardrail infill components per IRC 301.5

**keynote legend**

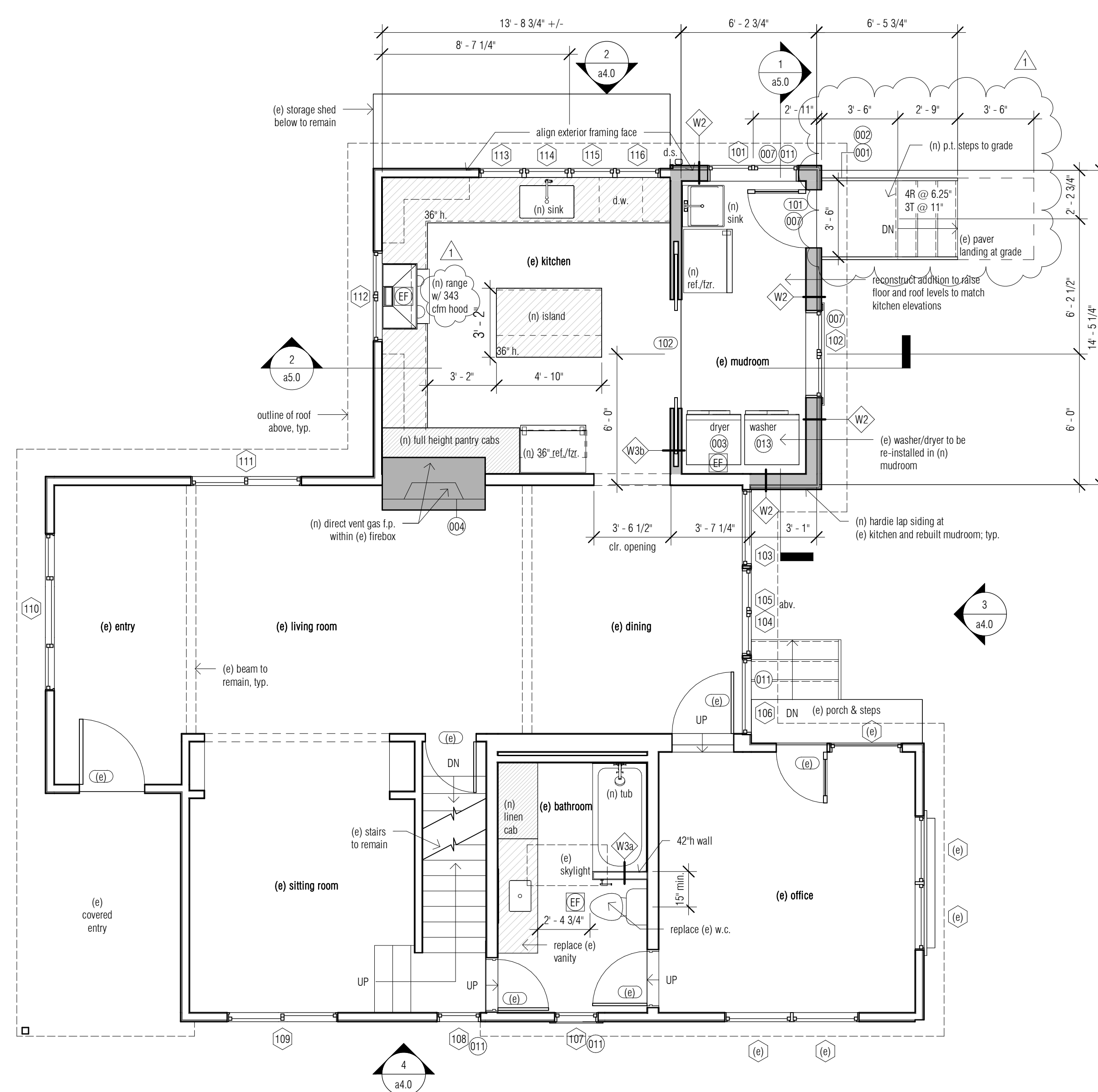
- 001 refer to stair, handrail, and guardrail notes, this sheet.
- 002 provide continuous handrail one side, typ.
- 003 continuously operating whole house fan.
- 004 per IRC G2408.1: direct vent gas fireplaces shall be listed, labeled, and installed as required by the terms of their approval, in accordance with the conditions of their listing, the manufacturer's instructions, and this code.
- 005 slope to drain, 1/4"=1'-0" min.
- 006 18" x 24" min. crawl space access.
- 007 header per structural, per WSEC table R402.1.1, window and door headers shall be insulated with a min. of R-10 insulation, typ.
- 008 new 4" perforated drain w/filter fabric per IRC R405, typ.
- 009 provide roof to wall flashing as required
- 010 4" painted aluminum gutters and downspouts, typ.
- 011 provide safety glazing per IRC R308
- 012 provide window fall protection devices that comply with ASTM F 2090 where the top of the sill of an operable window is less than 24" above floor finish, and the sill is greater than 72" above exterior grade.
- 013 provide drain pan with automatic water sensor under washer, (e) wall, door or window to remain, no work.
- 014 fill all open to view cavities w/ batt insulation to max. depth.
- 015 existing egress window to remain.
- 016 required egress window per IRC 310, egress requirements per window notes on sheet a2.1
- 017

**plan legend**

- new wall, typ.
- overhead
- undercounter appliance
- new built-in casework
- combination smoke detector/ carbon monoxide alarm - refer to IRC note #17 on a0.1
- smoke detector refer to IRC note #12 on a0.1
- note: carbon monoxide / smoke detectors shall be hard-wired w/ battery back-up and interconnected
- exhaust fan - refer to IRC note #1 and 13 on a0.1
- whole house fan - refer to IRC note #20 on a0.1



2 2nd floor plan - proposed  
1/4" = 1'-0"



1 1st floor plan - proposed  
1/4" = 1'-0"

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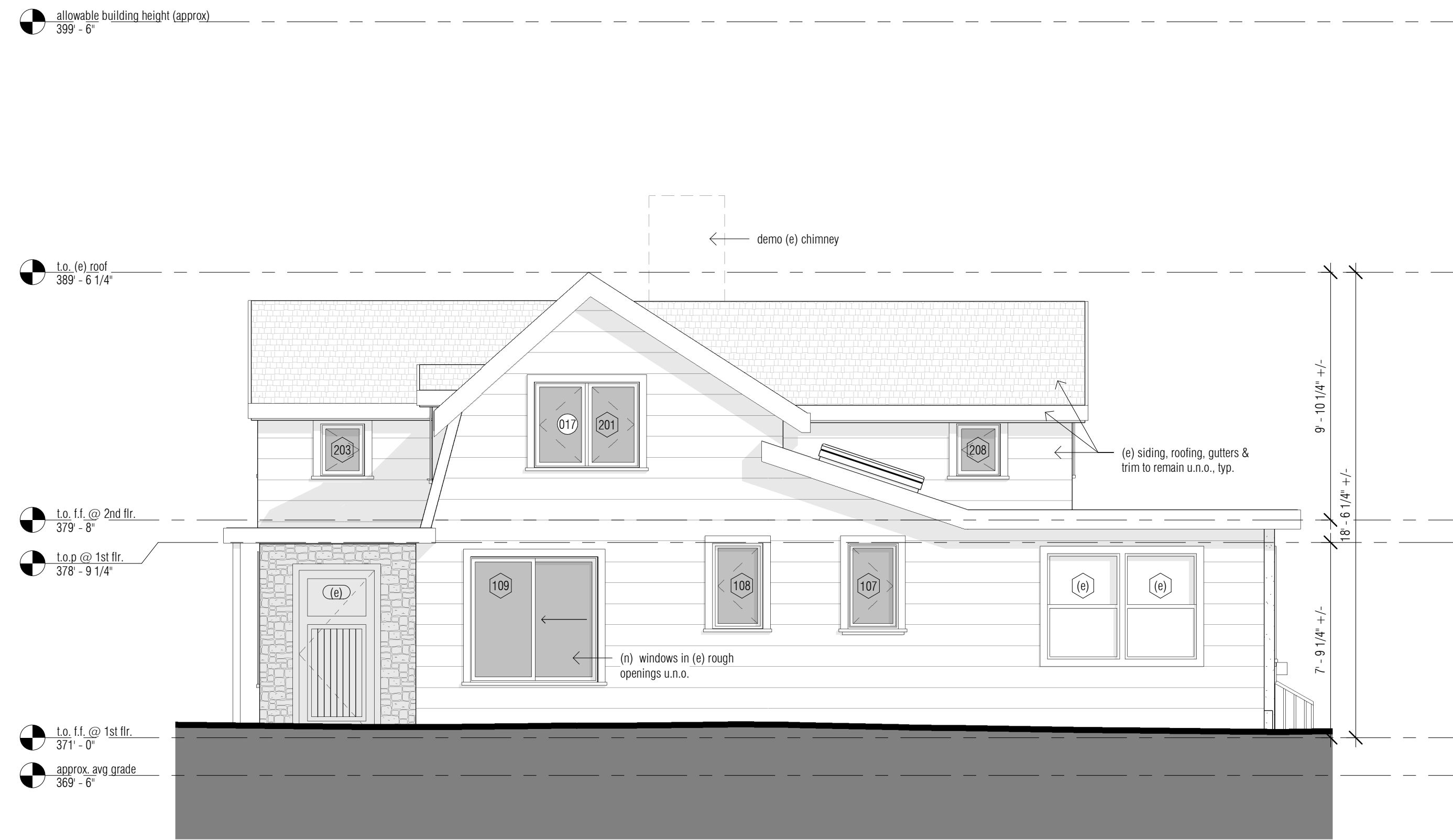
**a2.1**  
floor plans + schedules

stair, handrail, & guardrail notes

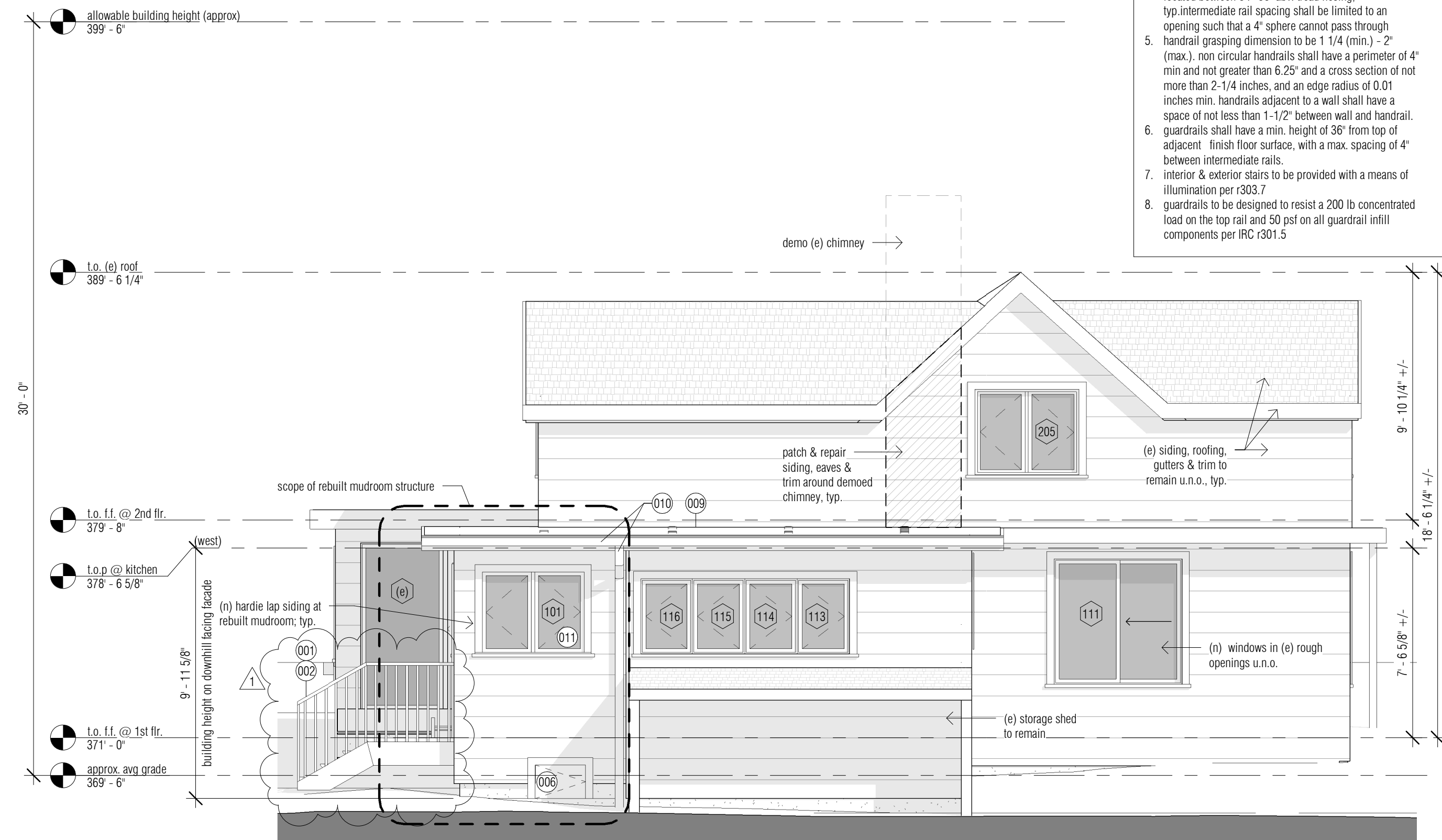
1. stairways shall be not less than 36" in clear width at all points above the permitted handrail height and below the required headroom height. the clear width of stairways at and below the handrail height, including treads and landings, shall be not less than 31-1/2" where a handrail is installed on one side, and 27" where handrails are installed on both sides.
2. 7 3/4" max. riser height, 10" min. tread depth
3. headroom shall be a min. of 6'-8" measured vertically from a plane parallel and tangent to the stairway tread nosings to the soffit above at all points.
4. provide continuous handrail (one side) typ handrail to be located between 34" - 38" above tread nosing. typ intermediate rail spacing shall be limited to an opening such that a 4" sphere cannot pass through
5. handrail grasping dimension to be 1 1/4" (min.) - 2" (max.). non circular handrails shall have a perimeter of 4" min and not greater than 6.25" and a cross section of not more than 2-1/4 inches, and an edge radius of 0.01 inches min. handrails adjacent to a wall shall have a space of not less than 1-1/2" between wall and handrail. guardrails shall have a min. height of 36" from top of adjacent finish floor surface, with a max. spacing of 4" between intermediate rails.
6. interior & exterior stairs to be provided with a means of illumination per 303.7
7. guardrails to be designed to resist a 200 lb concentrated load on the top rail and 50 psf on all guardrail infill components per IRC R301.5

keynote legend

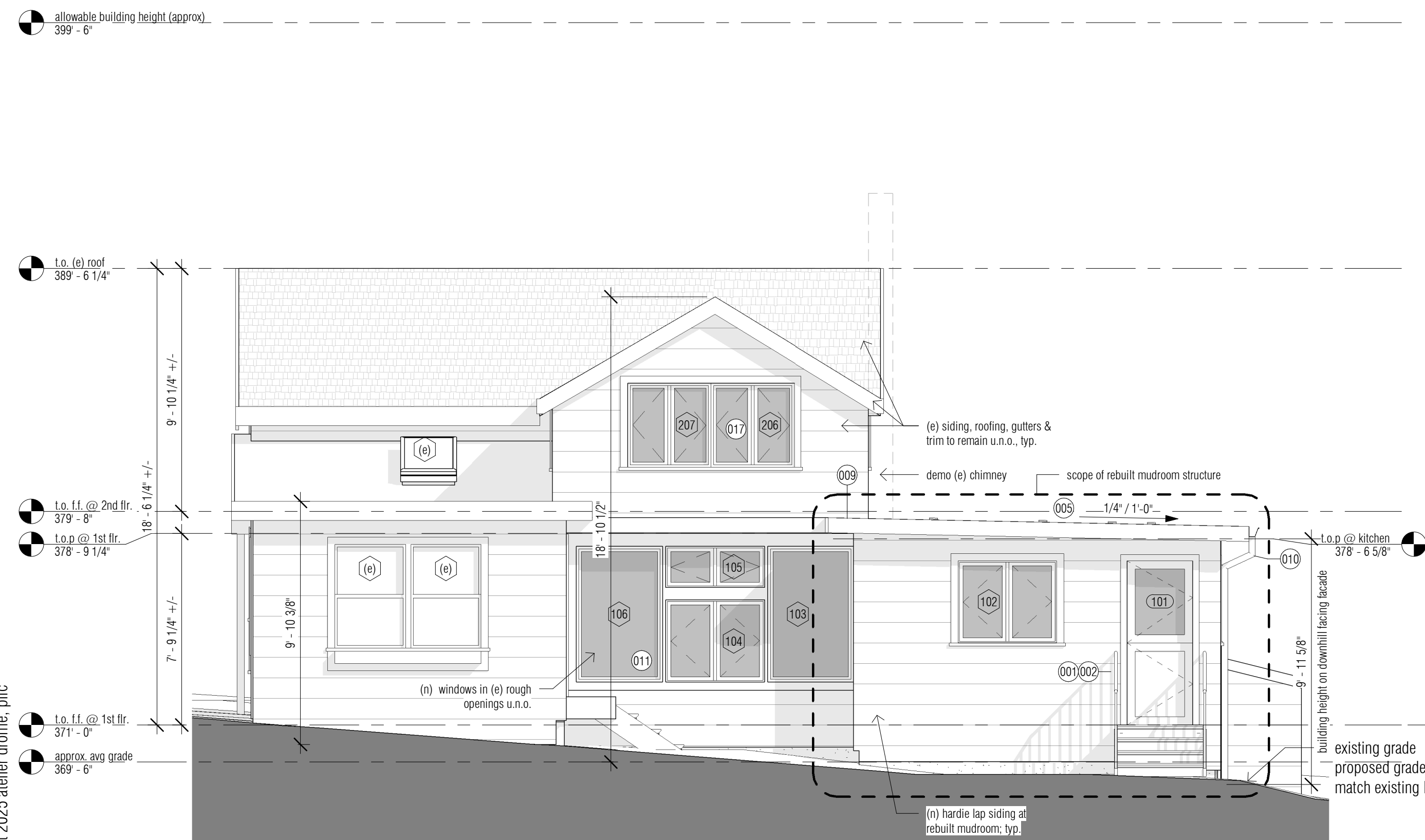
- |     |   |
|-----|---|
| 001 | refer to stair, handrail, and guardrail notes, this sheet.  |
| 002 | provide continuous handrail one side, typ.  |
| 003 | per IRC G2408.1: direct vent gas fireplaces shall be listed, continuously operating whole house fan.  |
| 004 | labeled, and installed as required by the terms of their approval, in accordance with the conditions of their listing, the manufacturer's instructions, and this code.  |
| 005 | slope to drain, 1/4" = 1'-0" min.   |
| 006 | 18" x 24" min. crawl space access.  |
| 007 | header per structural. per WSEC table R402.1.1, window and door headers shall be insulated with a min. of R-10 insulation, typ.   |
| 008 | new 4" perforated drain w/filter fabric per IRC R405, typ.  |
| 009 | provide roof to wall flashing as required   |
| 010 | 4" painted aluminum gutters and downspouts, typ.  |
| 011 | provide safety glazing per IRC R308   |
| 012 | provide window fall protection devices that comply with ASTM F 2090 where the top of the sill of an operable window is less than 24" above floor finish, and the sill is greater than 72" above exterior grade. |
| 013 | provide drain pan with automatic water sensor under washer.   |
| 014 | (e) wall, door or window to remain, no work.  |
| 015 | fill all open to view cavities w/ batt insulation to max. depth.  |
| 016 | existing egress window to remain.   |
| 017 | required egress window per IRC 310, egress requirements per window notes on sheet a2.1  |



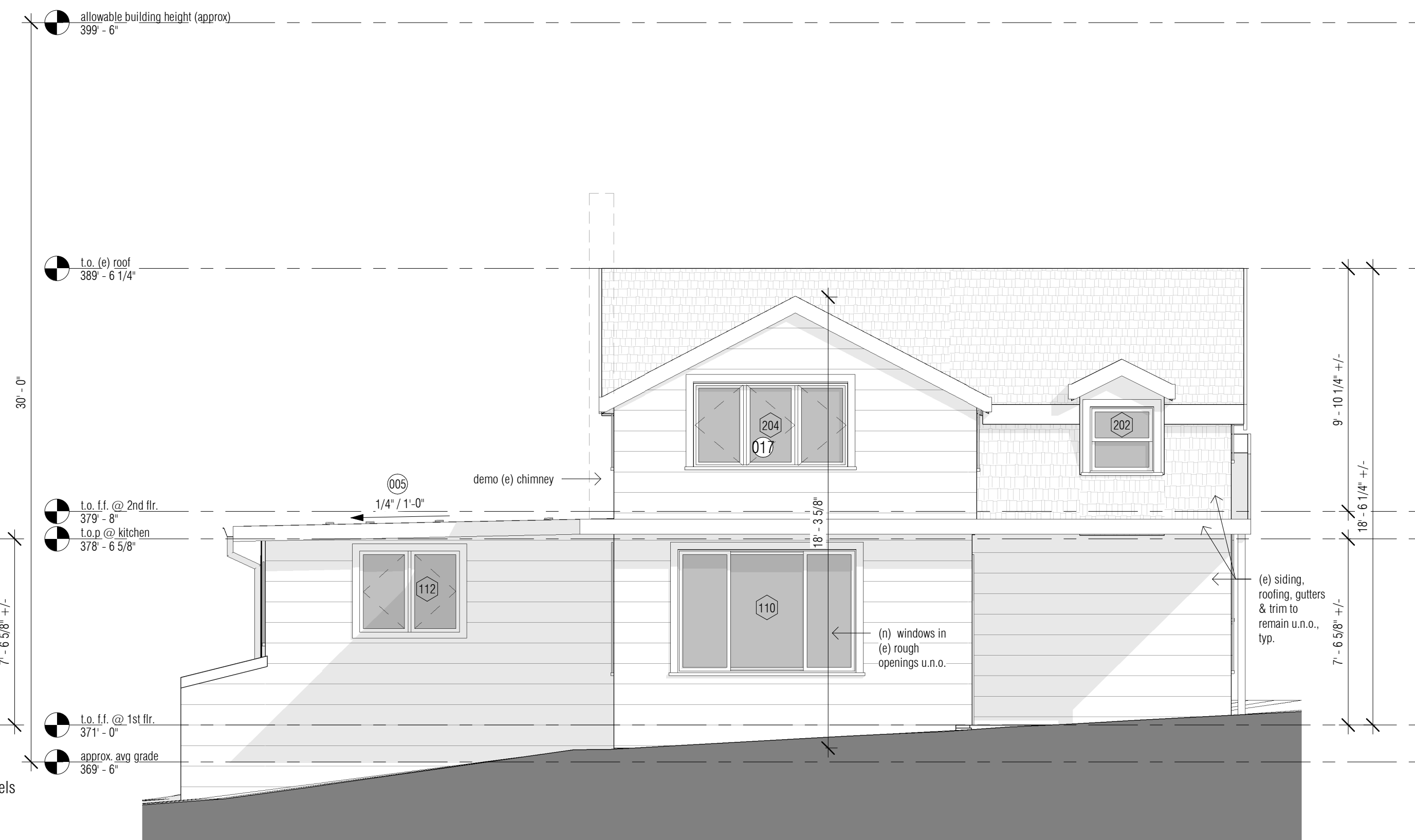
4 west elevation  
1/4" = 1'-0"



2 east elevation  
1/4" = 1'-0"



3 south elevation  
1/4" = 1'-0"



1 north elevation  
1/4" = 1'-0"



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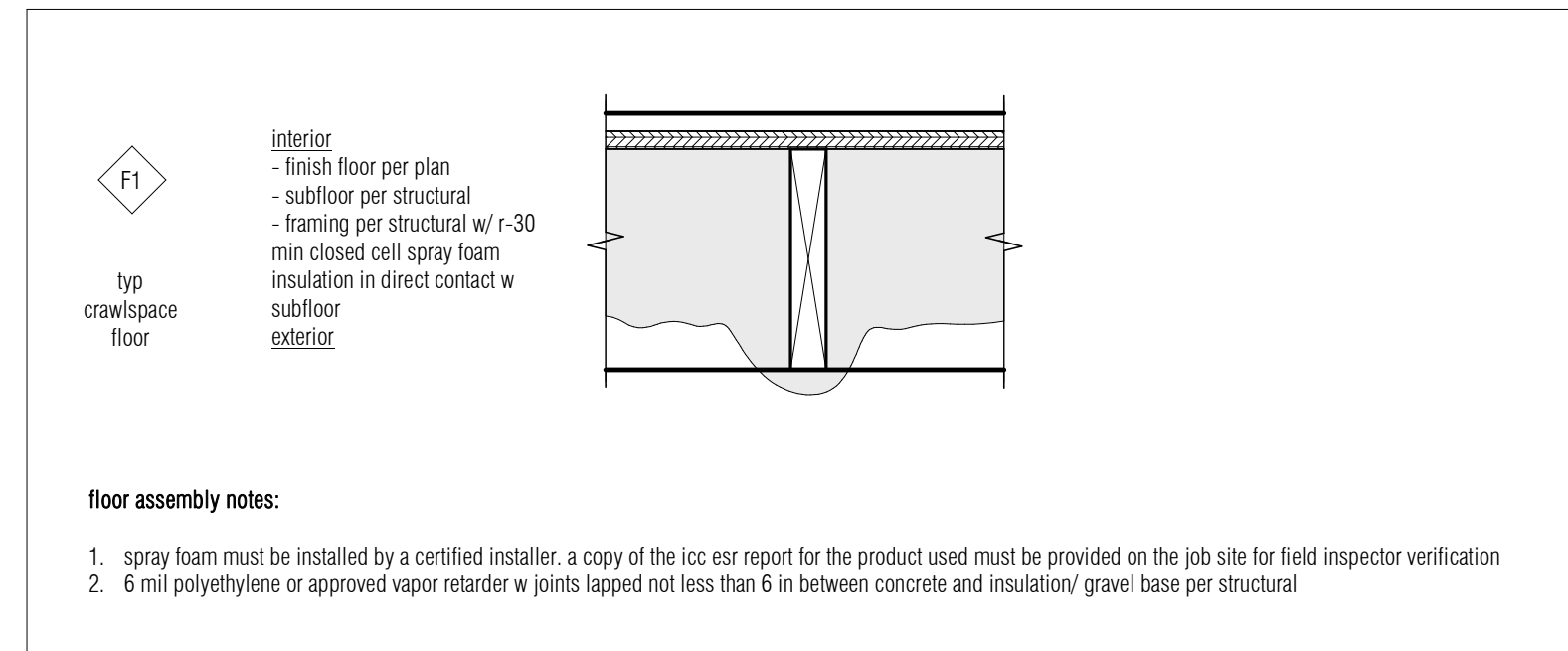


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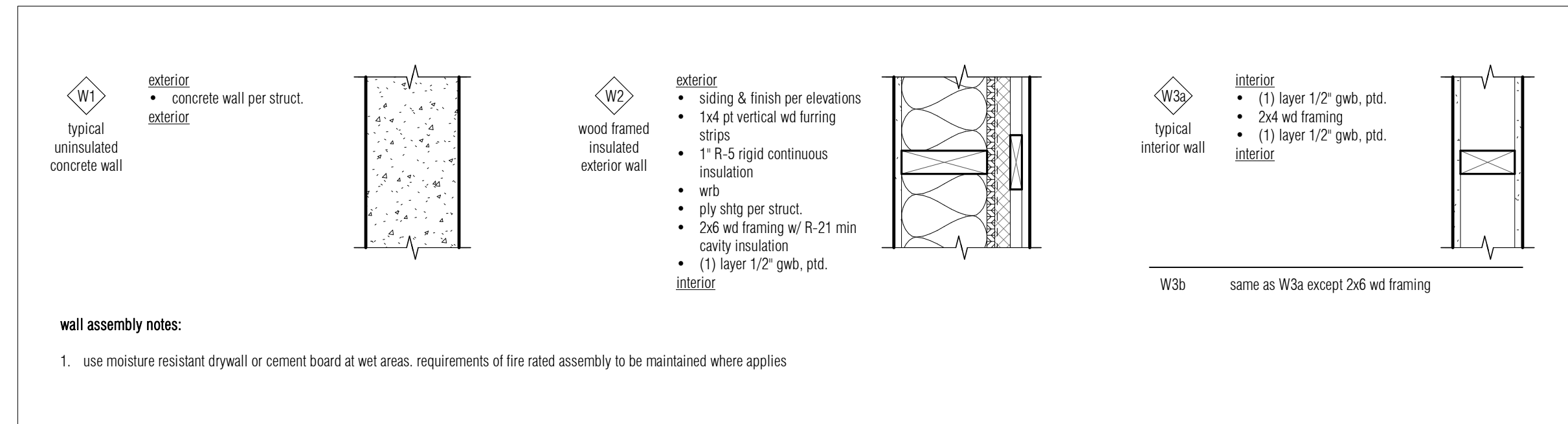
**Garrett Residence**  
9007 SE 44th St  
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**a4.0**  
exterior elevations

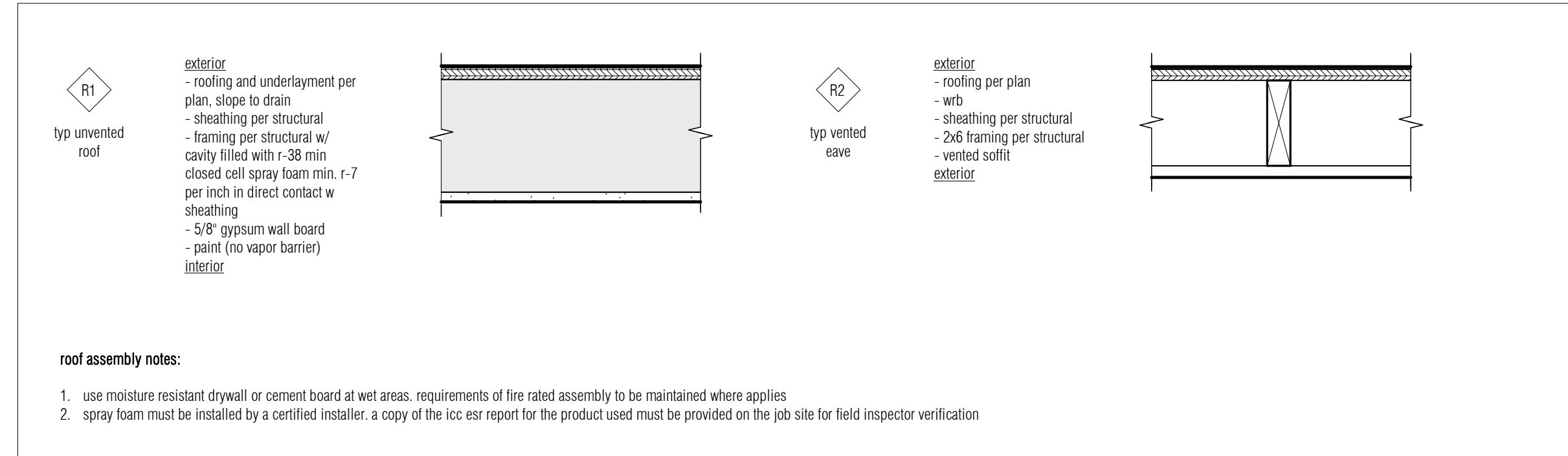
**floor assemblies:**



**wall assemblies:**



**roof assemblies:**



**stair, handrail, & guardrail notes**

1. stairways shall be not less than 36" in clear width at all points above the permitted handrail height and below the required headroom height. the clear width of stairways at and below the handrail height, including treads and landings, shall be not less than 31-1/2" where a handrail is installed on one side, and 27" where handrails are installed on both sides.
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4. provide continuous handrail (one side) typ handrail to be located between 34"-38" abov. tread nosing, typ intermediate rail spacing shall be limited to an opening such that a 4" sphere cannot pass through
5. handrail grasping dimension to be 1-1/4" (min.) - 2" (max.). min circular handrails shall have a perimeter of 4" min and not greater than 6.25" and a cross section of not more than 2-1/4 inches, and an edge radius of 0.01 inches min. handrails adjacent to a wall shall have a space of not less than 1-1/2" between wall and handrail.
6. guardrails shall have a min. height of 36" from top of adjacent finish floor surface, with a max. spacing of 4" between intermediate rails.
7. interior & exterior stairs to be provided with a means of illumination per 3303.7
8. guardrails to be designed to resist a 200 lb concentrated load on the top rail and 50 psf on all guardrail infill components per IRC r301.5

**keynote legend**

- |     |   |
|-----|---|
| 001 | refer to stair, handrail, and guardrail notes, this sheet.  |
| 002 | provide continuous handrail one side, typ.  |
| 003 | continuously operating whole house fan.   |
| 004 | per IRC G2408.1: direct vent gas fireplaces shall be listed, labeled, and installed as required by the terms of their approval, in accordance with the conditions of their listing, the manufacturer's instructions, and this code. |
| 005 | slope to drain, 1/4"=1'-0" min.   |
| 006 | 18" x 24" min. crawl space access.  |
| 007 | header per structural, per WSEC table R402.1.1, window and door headers shall be insulated with a min. of R-10 insulation, typ.   |
| 008 | new 4" perforated drain w/filter fabric per IRC R405, typ.  |
| 009 | provide roof to wall flashing as required   |
| 010 | 4" painted aluminum gutters and downspouts, typ.  |
| 011 | provide safety glazing per IRC R308   |
| 012 | provide window fall protection devices that comply with ASTM F 2090 where the top of the sill of an operable window is less than 24" above floor finish, and the sill is greater than 72" above exterior grade.                     |
| 013 | provide drain pan with automatic water sensor under washer.   |
| 014 | (e) wall, door or window to remain, no work   |
| 015 | fill all open to view cavities w/ batt insulation to max. depth.  |
| 016 | existing egress window to remain.   |
| 017 | required egress window per IRC 310. egress requirements per window notes on sheet a2.1  |



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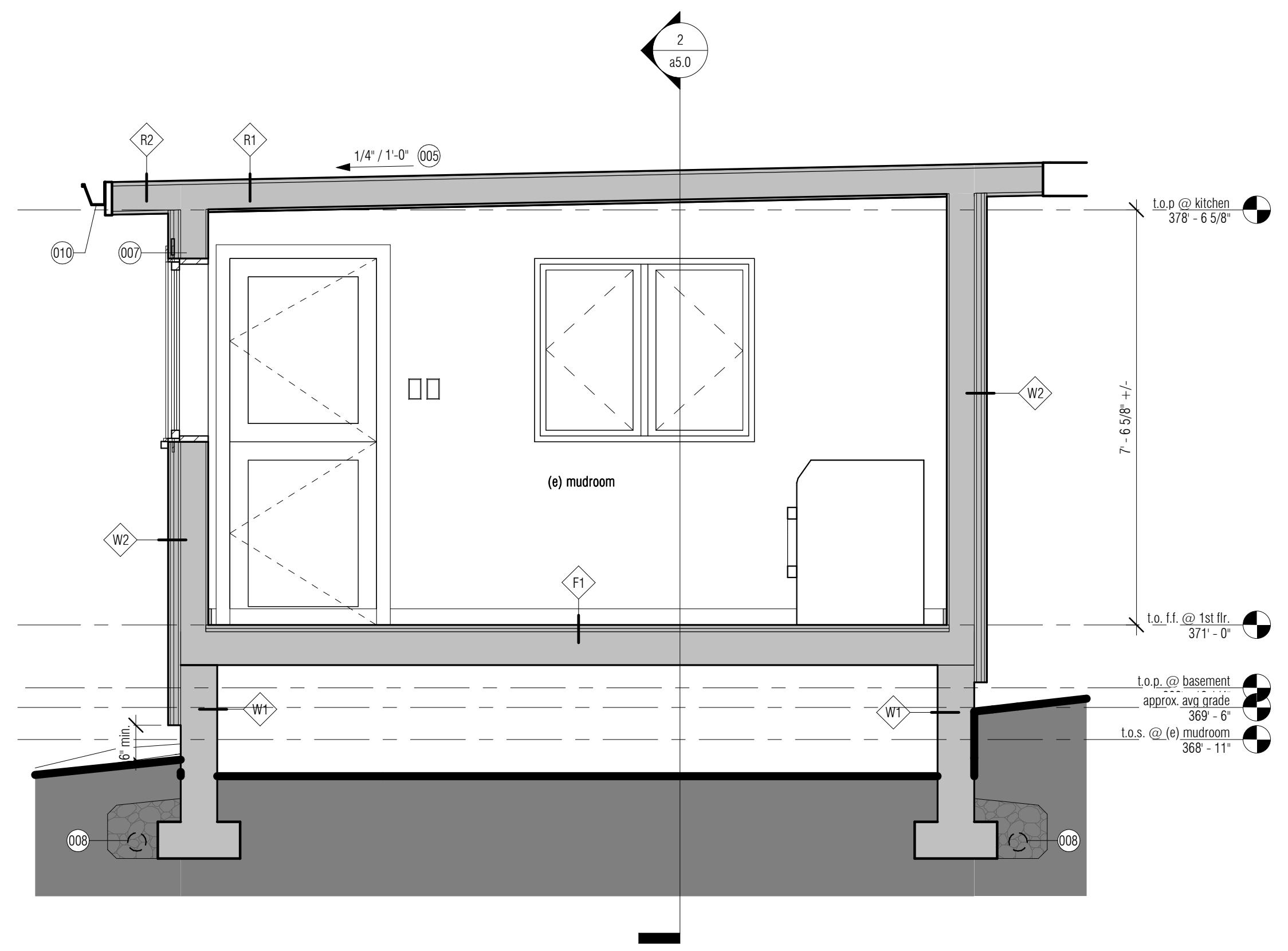


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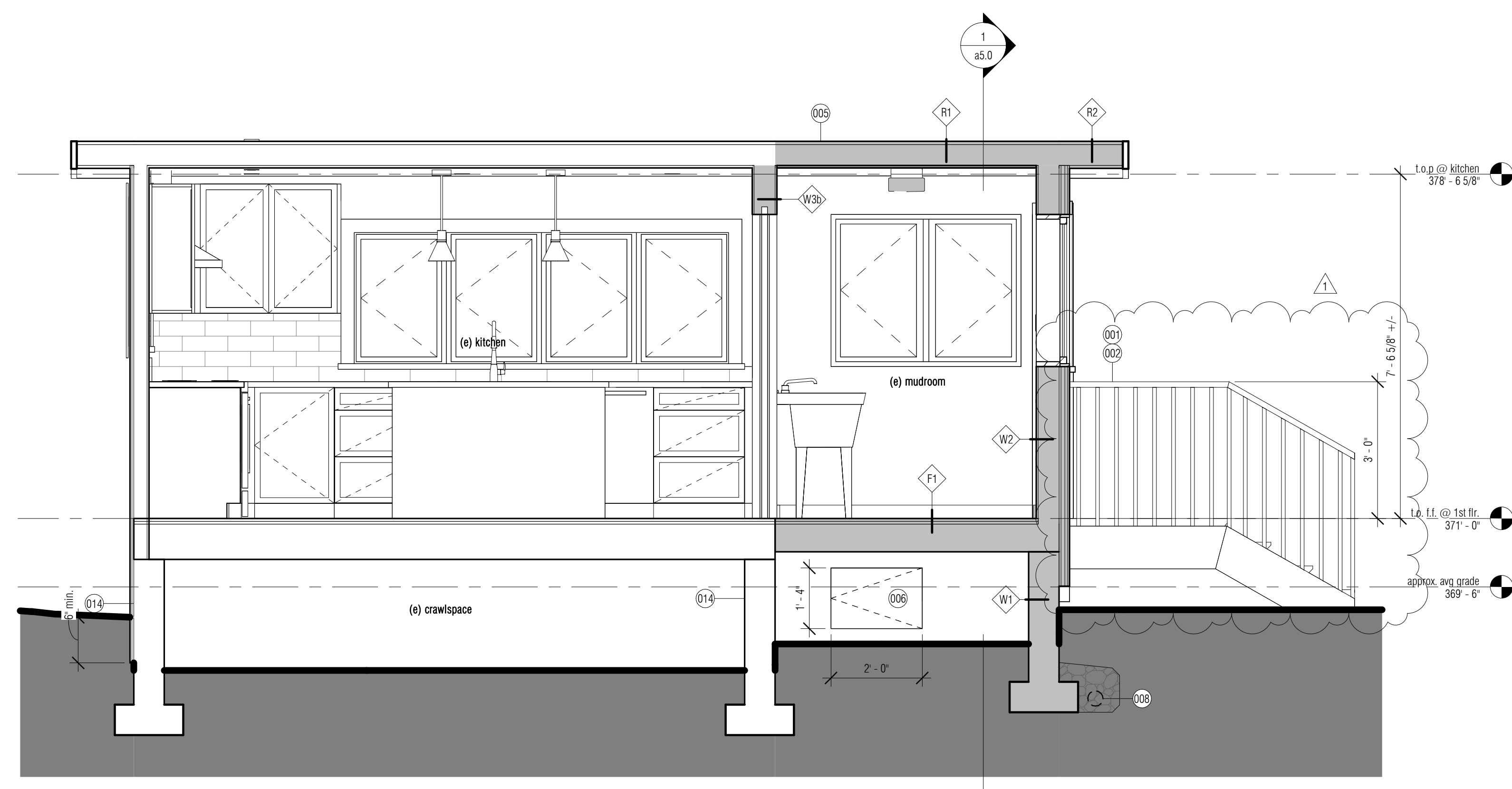
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**a5.0**  
sections & assemblies

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1 mudroom section - e/w  
1/2" = 1'-0"



2 mudroom section - n/s  
1/2" = 1'-0"

## General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

### CRITERIA

- ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2021 EDITION).
- DESIGN LOADING CRITERIA:  
 FLOOR LIVE LOAD . . . . . 40 PSF  
 ROOF LIVE LOAD . . . . . 25 PSF  
 SNOW . . Ce=1.0, Is=1.0, Ct=1.1, Cs=1.0, Pg=25 PSF, Pf=25 PSF, Ps=25 PSF  
 WIND . . . . . GCpi=0.18, 100 MPH, EXPOSURE "B"  
 EARTHQUAKE:  
 ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE  
 LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS  
 Vs = 3.9 KIPS, SITE CLASS=D (DEFAULT), Ss=1.42,  
 Sds=1.00, S1=0.49,  
 Sd1=0.89, Cs=0.154, SDC D, Ie=1.0, R=6.5
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.
- PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".
- CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

### QUALITY ASSURANCE

- SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1705 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED UNLESS NOTED OTHERWISE.

EXPANSION BOLTS AND THREADED EXPANSION INSERTS	PER MANUFACTURER
EPOXY GROUTED INSTALLATIONS	PER MANUFACTURER

PERIODIC INSPECTION: INSPECTION SHALL BE PERFORMED AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS.

CONTINUOUS INSPECTION: INSPECTOR SHALL BE ONSITE AND OBSERVE THE WORK REQUIRING INSPECTION AT ALL TIMES THAT WORK IS PERFORMED.

### GEOTECHNICAL

- FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH OR COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

ALLOWABLE SOIL PRESSURE . . . . . 1500 PSF

SOILS REPORT REFERENCE:  
 9007 SE 44TH ST.  
 MERCER ISLAND, WA 98040  
 PARCEL #759810-0082  
 GEOTECHNICAL RECOMMENDATIONS

PREPARED BY MUD BAY GEOTECHNICAL SERVICES, LLC PROJECT NO. 1376-K1N

### RENOVATION

- DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF.
- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IF EXISTING CONDITIONS DETERMINED DURING WORK VARY FROM THE EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS.
- CONTRACTOR SHALL CHECK FOR DRY ROT AT ALL AREAS OF NEW WORK. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.

### CONCRETE

- CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF  $f'c = 3,000$  PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS  $f'c = 2,500$  PSI.
- ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-19, TABLE 19.3.2.1 MODERATE EXPOSURE, F1.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, FY = 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, FY = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, FY = 60,000 PSI.
- DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 318R-18 AND 318-19. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 40 BAR DIAMETERS OR 2"-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 40 BAR DIAMETERS OR 2"-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-19, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

- CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . .	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER) . . . . .	2"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER) . . . . .	1-1/2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS . . . . .	1-1/2"
SLABS AND WALLS (INT. FACE) . . . . .	GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

- CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
8" WALLS	#4 @ 12 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
10" WALLS	#4 @ 18 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS
12" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS

- CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

### ANCHORAGE

- EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037 FOR CONCRETE AND IAPMO ER-240 FO MASONRY, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.
- EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) INTO CONCRETE SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-30" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-4057. MINIMUM BASE MATERIAL TEMPERATURE IS 40 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.
- CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

### WOOD

- FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH NCLIB STANDARD No. 17, GRADING RULES FOR WEST COAST LUMBER, 2018, OR WMPA STANDARD, WESTERN LUMBER GRADING RULES 2021. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS	(2X & 3X MEMBERS)	HEM-FIR NO. 2 MINIMUM BASE VALUE, Fb = 850 PSI
	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI
BEAMS	(INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1350 PSI
POSTS	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc = 1350 PSI
	(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fc = 1000 PSI
STUDS, PLATES & MISC. FRAMING:	DOUGLAS FIR-LARCH NO. 2 OR HEM-FIR NO. 2	

- PLYWOOD SHEATHING SHALL BE EXPOSURE 1, PANEL GRADE C-D, AND EITHER SHEATHING, SINGLE-FLOOR, OR STRUCTURAL I GRADE IN CONFORMANCE WITH DOC PS 1 AND PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.

FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

- ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.

- PRESERVATIVE TREATED WOOD SHALL BE TREATED PER WMPA STANDARD U1-20 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO WMPA UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO WMPA UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO WMPA UC4B.

- FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

WOOD TREATMENT	CONDITION	PROTECTION
HAS NO AMMONIA CARRIER	INTERIOR DRY	G90 GALVANIZED
CONTAINS AMMONIA CARRIER	INTERIOR DRY	G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653
	INTERIOR WET	TYPE 304 OR 316 STAINLESS
CONTAINS AMMONIA CARRIER	EXTERIOR	TYPE 304 OR 316 STAINLESS
AZCA	ANY	TYPE 304 OR 316 STAINLESS

INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURER'S RECOMMENDATIONS FOR PROTECTION OF METAL.

- TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

- WOOD FASTENERS

- NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
6d	2"	0.113"
8d	2-1/2"	0.131"
10d	3"	0.148"
12d	3-1/4"	0.148"
16d BOX	3-1/2"	0.135"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.

- ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

- NOTCHES AND HOLES IN WOOD FRAMING:

- NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.

- IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.

- NOTCHES AND HOLES IN MANUFACTURED LUMBER AND PREFABRICATED PLYWOOD WEB JOISTS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE NOTED.

- WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

- ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AWC "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.2. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

- WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

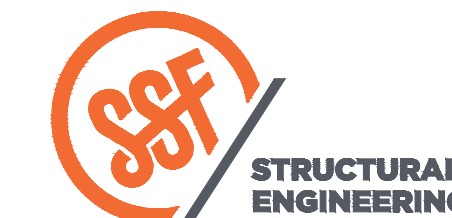
ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C.. LAP TOP PLATES AT JOINTS A MINIMUM 4'-0" AND NAIL WITH TWELVE 16d NAILS @ 4" O.C. EACH SIDE JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @ 12" ON-CENTER, UNLESS OTHERWISE NOTED. GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER, UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

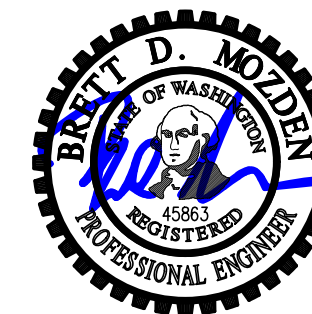
- FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING BETWEEN RAFTERS AND JOISTS AT ALL BEARING POINTS WITH A MINIMUM OF (3) 16d TOE NAILS EACH END. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER, MINIMUM TWO NAILS PER BLOCK, UNLESS OTHERWISE NOTED.

- WOOD SHRINKAGE: MECHANICAL, ELECTRICAL, PLUMBING FIRE PROTECTION, CLADDING, AND OTHER SYSTEMS INSTALLED WITHIN THE BUILDING SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE 3/8" OF VERTICAL MOVEMENT PER FLOOR LEVEL.



**STRUCTURAL ENGINEERING**  
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 Seattle, WA 98121  
**TACOMA**  
 1818 Tacoma Ave S, Suite 200  
 Tacoma, WA 98402  
**CENTRAL WASHINGTON**  
 414 N Pearl Street, Suite 8  
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DESIGN:	BDM
DRAWN:	NHD
CHECKED:	BDM
APPROVED:	BDM

REVISIONS:	
1	Permit Corrections July 10, 2025

PROJECT TITLE:  
**Garrett Residence**  
 9007 SE 44th St  
 Mercer Island, WA 98040



119 south main street, suite 310  
 seattle, wa 98104  
 www.atelierdrome.com

ISSUE:  
**PERMIT**

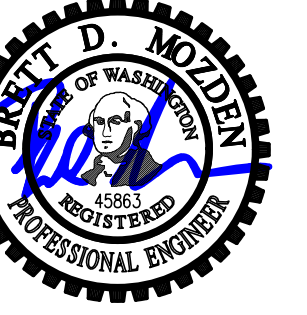
SHEET TITLE:  
**General Structural Notes**

SCALE:  
 -

DATE:  
 April 21, 2025

PROJECT NO:  
 02233-2024-38

SHEET NO:  
**S1.1**



DESIGN: BDM  
 DRAWN: NHD  
 CHECKED: BDM  
 APPROVED: BDM

REVISIONS:  
 1 Permit Corrections July 10, 2025

DPD:

PROJECT TITLE:  
**Garrett Residence**  
 9007 SE 44th St  
 Mercer Island, WA 98040

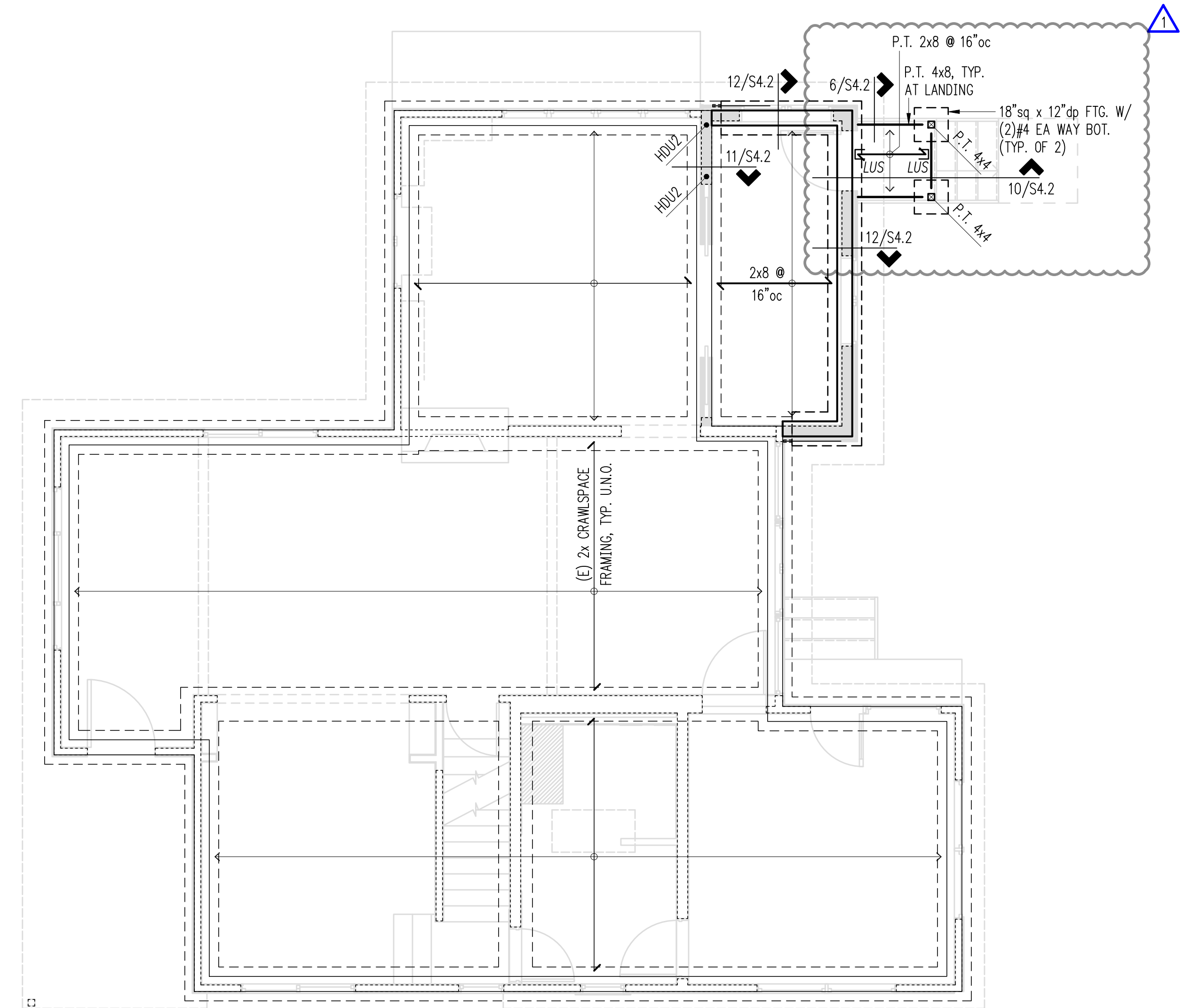
ARCHITECT:  
  
**ATELIER DROME**  
 119 south main street, suite 310  
 seattle, wa 98104  
 www.atelierdrome.com

ISSUE:  
**PERMIT**

SHEET TITLE:  
**First Floor Framing/  
 Foundation Plan**

SCALE: 1/4" = 1'-0" U.N.O.  
 DATE: April 21, 2025  
 PROJECT NO: 02233-2024-38  
 SHEET NO:

**S2.1**



**First Floor Framing/Foundation Plan**

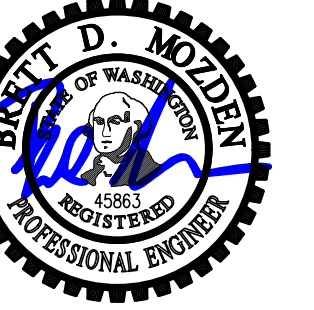
Scale: 1/4" = 1'-0"

**Plan Notes**

- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
- THE BOTTOM OF ALL NEW EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW EXTERIOR GRADE.
- ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE FULL CONTINUOUS BEARING THROUGH FLOORS TO FOUNDATION.
- EXISTING FRAMING ON PLANS IS ASSUMED. CONTRACTOR TO VERIFY DIRECTIONS AND EXTENTS. NOTIFY ARCHITECT AND ENGINEER IF DIFFERENT.

**Legend**

- NEW STRUCTURAL WALL OR POST BELOW
- EXISTING WALL OR POST BELOW
- NON-STRUCTURAL WALL BELOW
- NEW STRUCTURAL WALL OR POST ABOVE
- EXISTING STRUCTURAL WALL OR POST ABOVE
- NEW STEM WALL & FOOTING
- EXISTING STEM WALL & FOOTING
- SPAN DIRECTION
- EXTENT OF JOISTS
- EXISTING HEADER/BEAM
- HOLDOWN PER 10/S4.1



DESIGN: BDM  
 DRAWN: NHD  
 CHECKED: BDM  
 APPROVED: BDM

REVISIONS:  
 1 Permit Corrections July 10, 2025

DPD:

PROJECT TITLE:  
**Garrett Residence**  
 9007 SE 44th St  
 Mercer Island, WA 98040

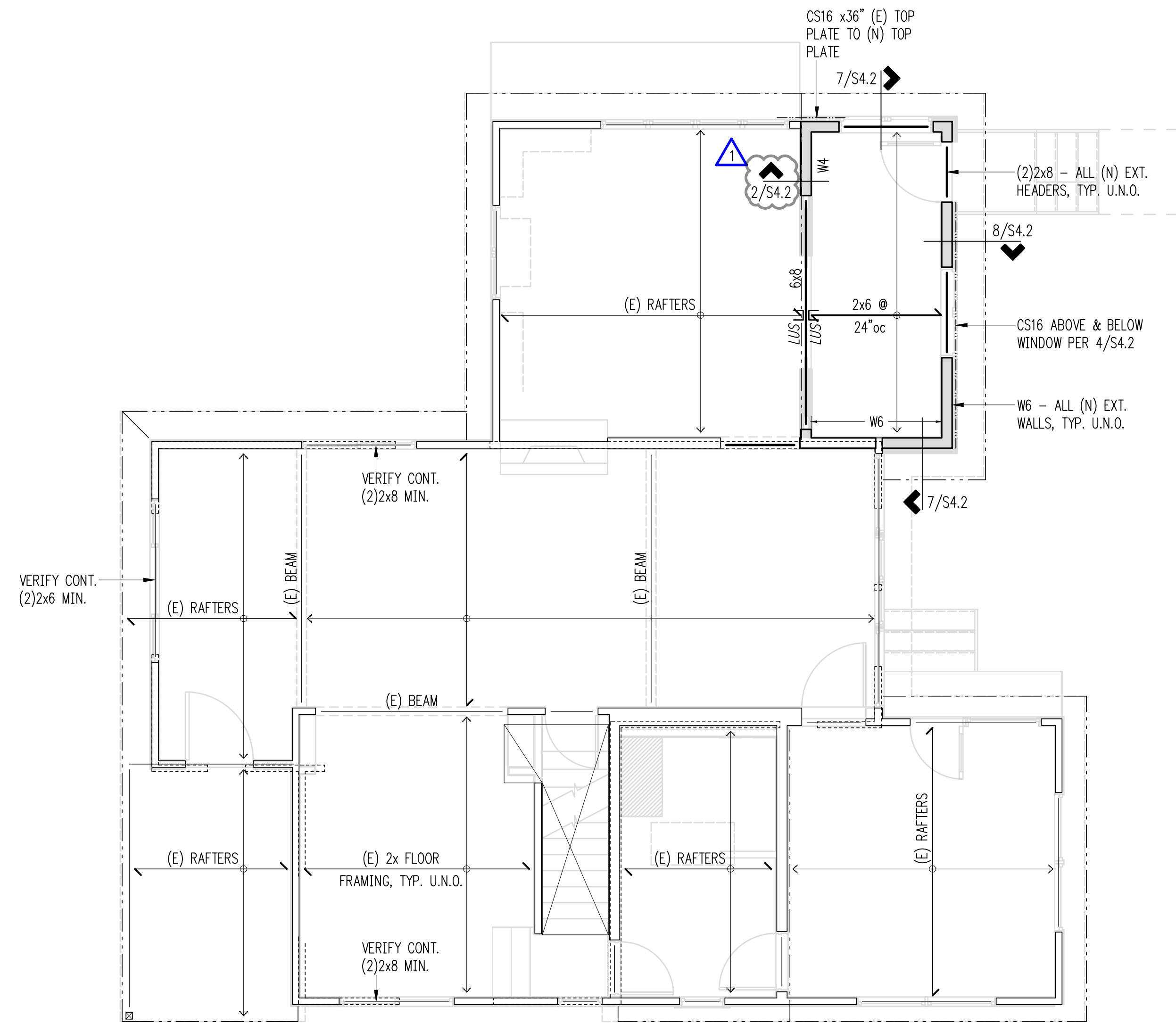
ARCHITECT:  
  
**ATELIER DROME**  
 119 south main street, suite 310  
 seattle, wa 98104  
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ISSUE:  
**PERMIT**

SHEET TITLE:  
**Second Floor and Roof Framing Plans**

SCALE: 1/4" = 1'-0" U.N.O.  
 DATE: April 21, 2025  
 PROJECT NO: 02233-2024-38  
 SHEET NO:

**S2.2**



**Second Floor Framing Plan**

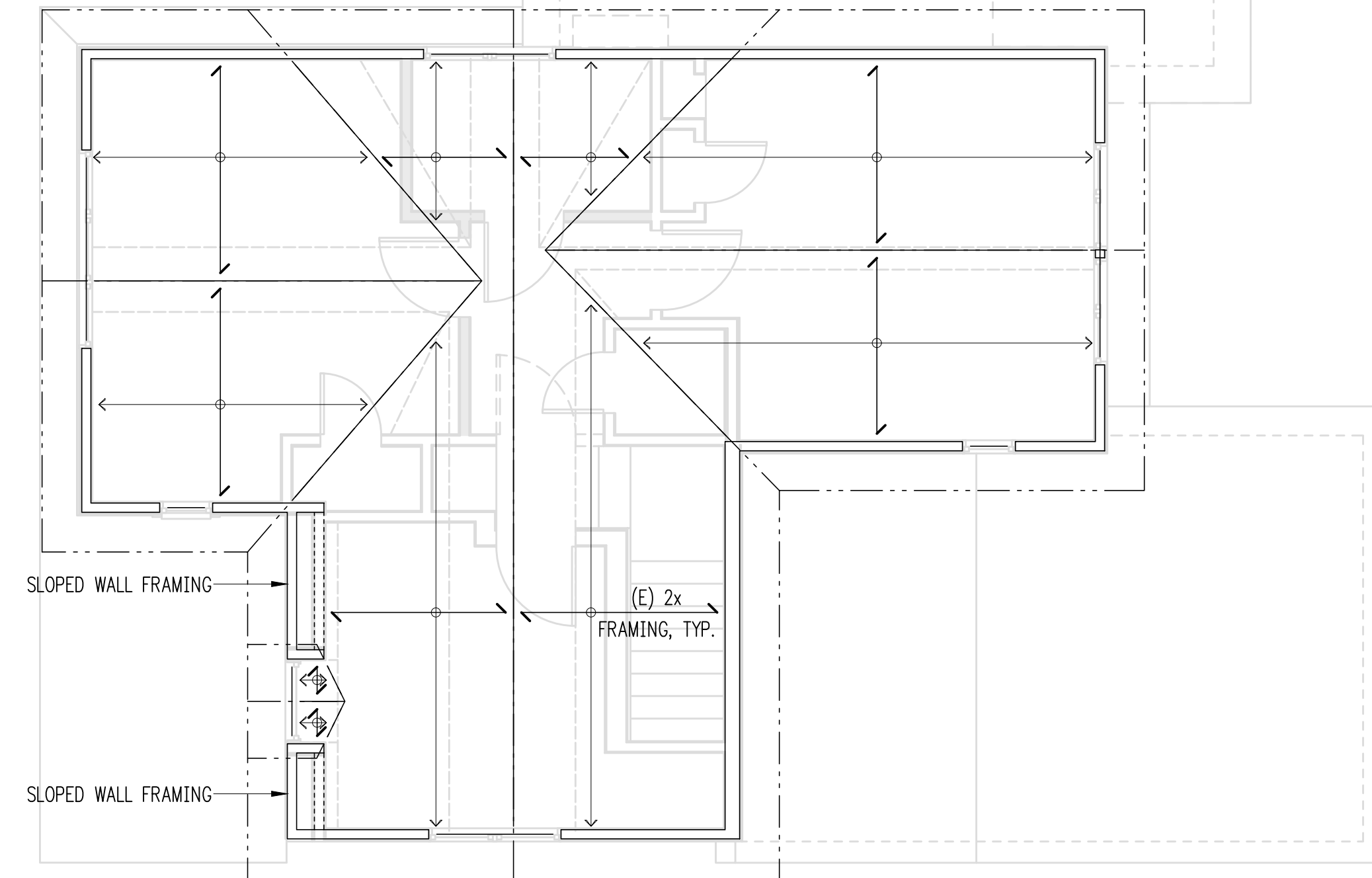
Scale: 1/4" = 1'-0"

**Plan Notes**

- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
- ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE FULL CONTINUOUS BEARING THROUGH FLOORS TO FOUNDATION.
- PROVIDE AC, ACE, PC, EPC, LPC, OR LCE COLUMN CAP AND BASE AT ALL NEW BEAM TO COLUMN CONNECTIONS U.O.N.
- "W." INDICATES PLYWOOD SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE FOR WALL ATTACHMENTS. ALL EXTERIOR WOOD FRAMED WALLS ARE W6, U.O.N.
- PROVIDE (2) BEARING STUDS AT EACH END OF ALL HEADERS AND BEAMS OVER 3'-0" IN LENGTH, U.O.N.
- TYPICAL ROOF FRAMING CONSISTS OF ROOFING PER ARCHITECTURAL DRAWINGS OVER 1/2" CDX APA RATED SHEATHING (EXPOSURE 1), FACE GRAIN PERPENDICULAR TO FRAMING PER PLAN, U.O.N.
- NAIL ROOF SHEATHING WITH 8D AT 6" O.C. AT ALL FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12" O.C. FIELD.
- PROVIDE H1 AT ENDS OF ALL NEW TRUSSES/RAFTERS, U.O.N.
- EXISTING FRAMING ON PLANS IS ASSUMED. CONTRACTOR TO VERIFY DIRECTIONS AND EXTENTS. NOTIFY ARCHITECT AND ENGINEER IF DIFFERENT.

**Legend**

- NEW STRUCTURAL WALL OR POST BELOW
- EXISTING WALL OR POST BELOW
- NON-STRUCTURAL WALL BELOW
- NEW STRUCTURAL WALL OR POST ABOVE
- EXISTING STRUCTURAL WALL OR POST ABOVE
- SHEARWALL PER 4/S4.1
- SPAN DIRECTION
- EXTENT OF JOISTS
- NEW HEADER/BEAM PER PLAN
- EXISTING HEADER/BEAM
- HANGER



**Roof Framing Plan**

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

**Plan Notes**

- NO WORK THIS LEVEL.

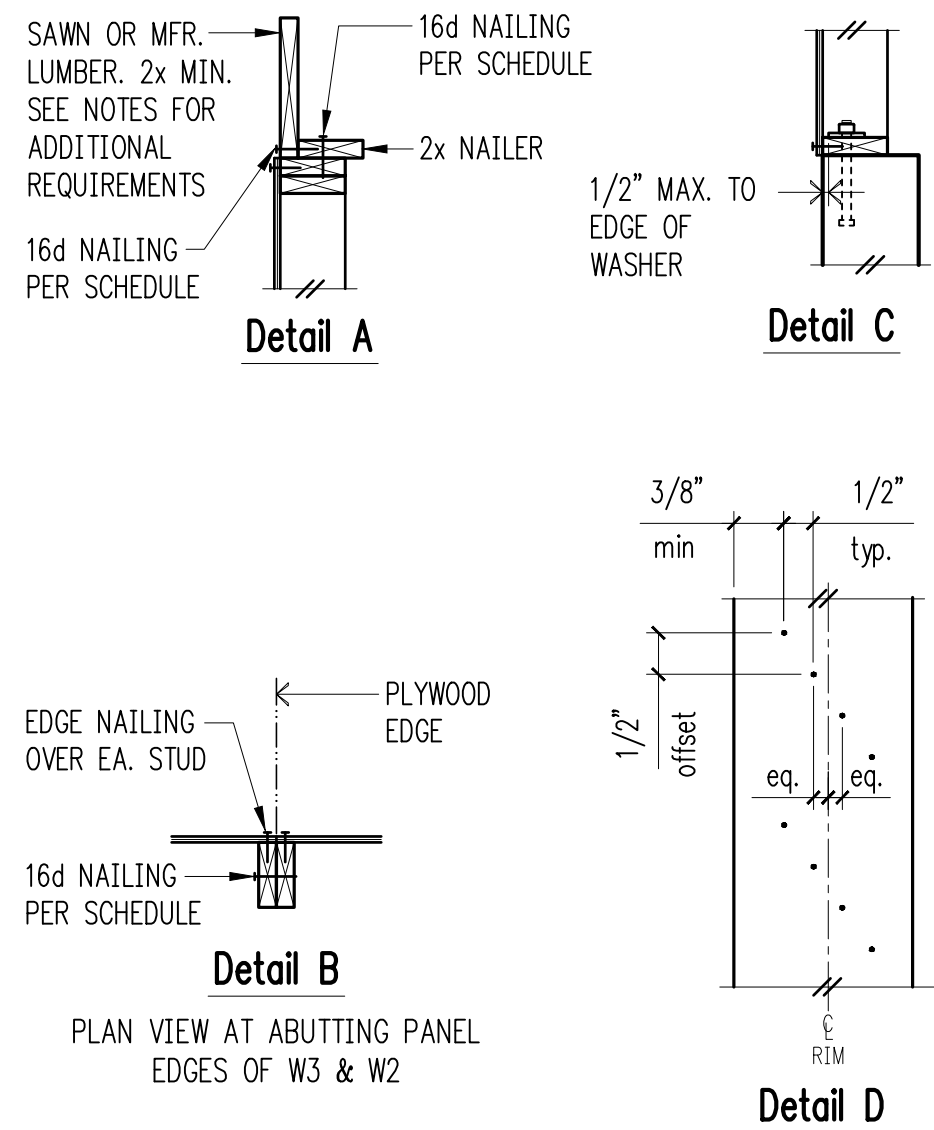
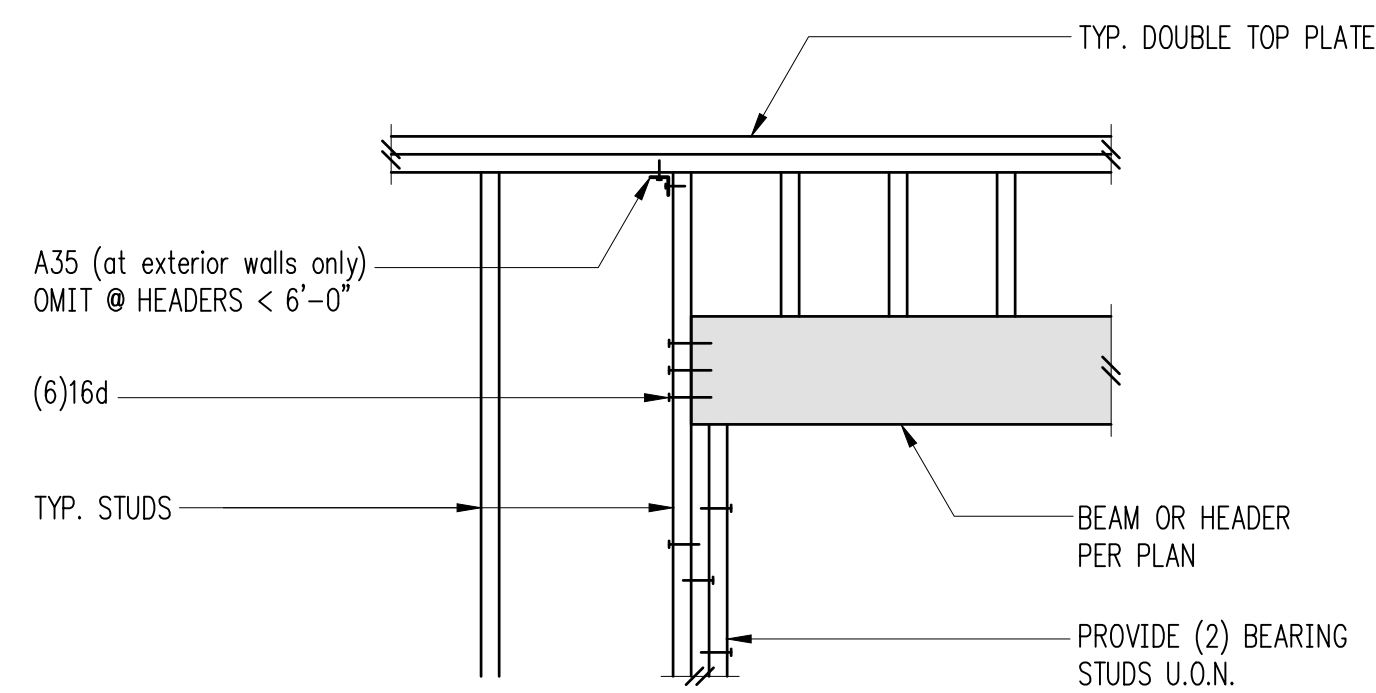
**Legend**

- EXISTING WALL OR POST BELOW
- NON-STRUCTURAL WALL BELOW
- SPAN DIRECTION
- EXTENT OF JOISTS
- EXISTING HEADER/BEAM

1

Typical Header Support w/2 Bearing Studs

2



Shearwall Schedule ①②③④⑤⑥⑦⑧

Mark	Sheathing	Panel Edge Nailing	Top Plate Connection		Base Plate Connection	
			if TJI	if Wood ④	at Wood ⑩⑪	at Concrete
W6	15/32" CDX PLYWOOD	8d @ 6"oc	16d @ 6"oc	A35 @ 24"oc ⑩	16d @ 6"oc	5/8" A.B. @ 48"oc
W4	15/32" CDX PLYWOOD	8d @ 4"oc	16d @ 4"oc	A35 @ 16"oc ⑩	(2)rows 16d @ 6"oc	5/8" A.B. @ 32"oc
W3 ①	15/32" CDX PLYWOOD	8d @ 3"oc	(2)rows 16d @ 4"oc	A35 @ 12"oc ⑩	(2)rows 16d @ 6"oc	5/8" A.B. @ 24"oc
W2 ②	15/32" CDX PLYWOOD	8d @ 2"oc	(2)rows 16d @ 4"oc	A35 @ 9"oc ⑩	(2)rows 16d @ 4"oc ⑬	5/8" A.B. @ 16"oc
2W3 ⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 3"oc EA. SIDE	n/a	A35 @ 6"oc	(3)rows 16d @ 4"oc ⑭	5/8" A.B. @ 16"oc
2W2 ⑥	15/32" CDX PLYWD. EA. SIDE	8d @ 2"oc EA. SIDE	n/a	HGA10KT @ 8"oc	(3)rows 16d @ 4"oc ⑭	5/8" A.B. @ 12"oc
2W2-10 ⑤	15/32" CDX PLYWD. EA. SIDE	10d @ 2"oc EA. SIDE	n/a	HGA10KT @ 6"oc	(4)rows 16d @ 4"oc ⑭	5/8" A.B. @ 12"oc

- ① BLOCK PANEL EDGES WITH 2x MIN. LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12"o.c.
- ② 8d NAILS SHALL BE 0.131"ø x 2 1/2" (common) - 16d NAILS SHALL BE 0.135"ø x 3 1/2" (box) - 10d NAILS SHALL BE 0.148"ø x 3" (common).
- ③ EMBED ANCHOR BOLTS AT LEAST 7". DRILLED AND EPOXIED THREADED ROD MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 6" EMBEDMENT. TITEN HD SCREW ANCHORS MAY BE SUBSTITUTED FOR ANCHOR BOLTS W/ 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x 1/4" MIN. PLATE WASHERS. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING. SEE DETAIL C.
- ④ 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF W3 AND W2. SEE DETAIL B. WHERE 3x STUDS ARE USED FOR W2, STAGGER NAILS AT ADJOINING PANEL EDGES.
- ⑤ 3x FOUNDATION SILL PLATES ARE REQUIRED FOR 2W3 AND 2W2. 3x STUDS ARE REQUIRED AT ABUTTING PANEL EDGES AND PANEL JOINTS SHALL BE OFFSET EACH SIDE OF WALL. STAGGER NAILS AT ADJOINING PANEL EDGES. 3x STUD, MIN., REQUIRED AT END OF SHEARWALL.
- ⑥ TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SINGLE-SIDED SHEARWALLS. ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING. SEE PLANS AND HOLDOWN SCHEDULE FOR ALTERNATE REQUIREMENTS.
- ⑦ ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE.
- ⑧ 7/16" O.S.B. MAY BE SUBSTITUTED FOR 15/32" CDX, EXCEPT AT 10d PANEL EDGE NAILING.
- ⑨ LTP4's (HORIZONTAL ORIENTATION) W/ 8d COMMON MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
- ⑩ A 2x NAILER ATTACHED W/ BASE PLATE NAILING PER DETAIL A MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
- ⑪ AT MULTI-ROW NAILING, MINIMUM OFFSET BETWEEN ROWS AND ROW SPACING 1/2". SEE DETAIL D.
- ⑫ LVL RIMS PERMITTED AT SINGLE SIDED SHEAR WALLS ONLY.
- ⑬ PROVIDE (3) ROWS 16d @ 6"oc AT LVL RIMS.
- ⑭ MINIMUM RIM OR JOIST 3/2" WIDE BELOW SHEARWALL.

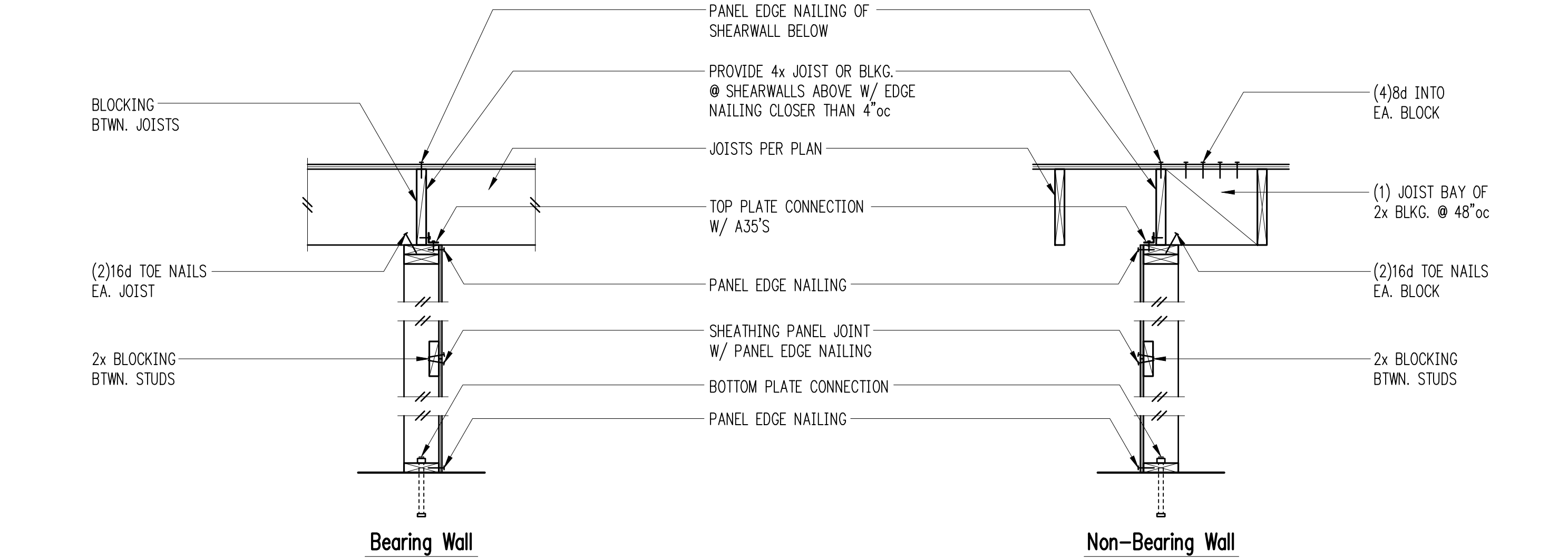
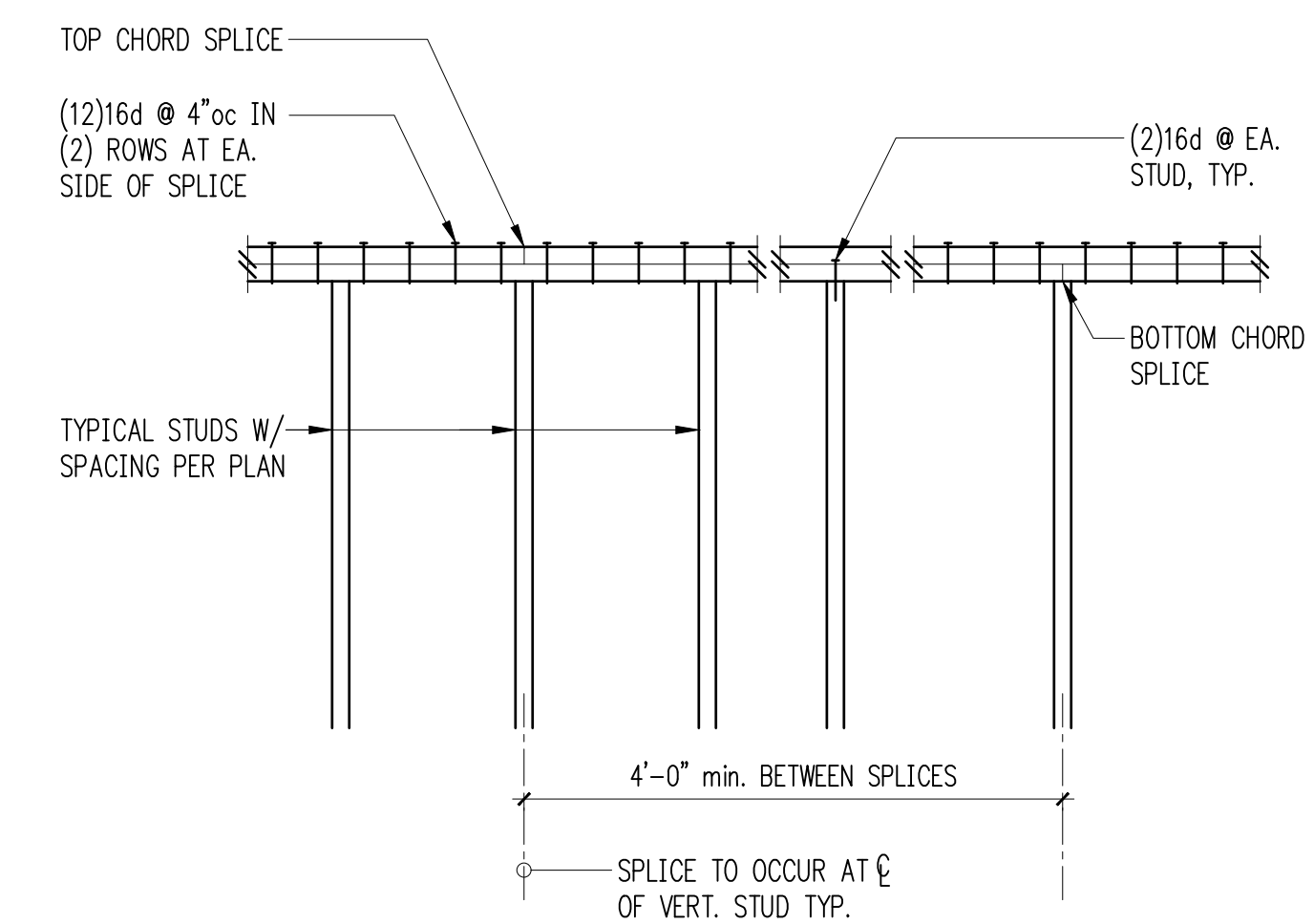
Shearwall Schedule

4

5

Typical Top Plate Splice

6



NOTE: SEE SHEARWALL SCHEDULE FOR ALL NAILING AND CONNECTIONS, NOT OTHERWISE NOTED

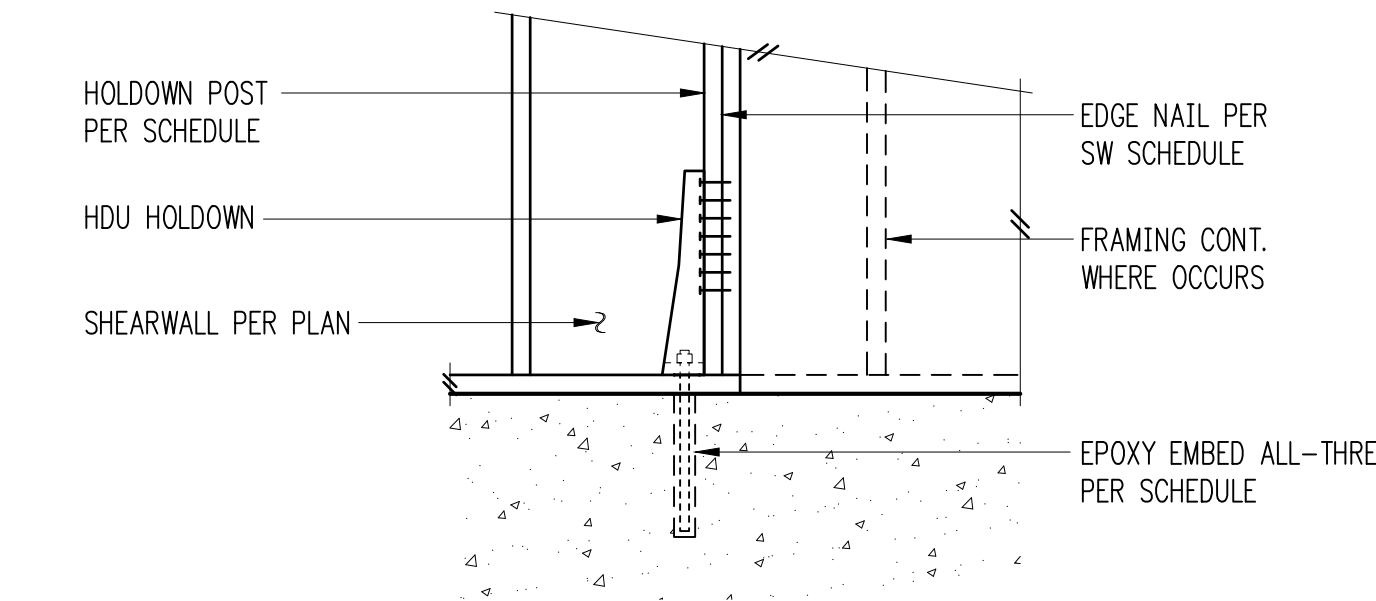
Typical Shearwall Construction

8

9

Typical HDU Holdown

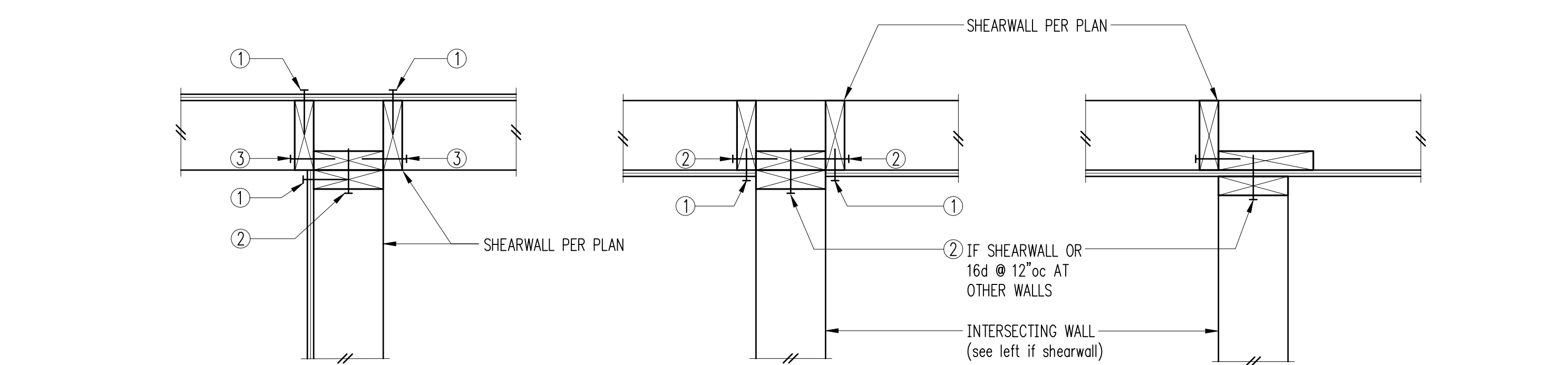
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**Holddown Schedule**

Plan Mark	Screws	Anchor Bolt	A.B. Embed	Holddown Post ①	
				if 2x4	if 2x6
HDU2-SDS2.5	(6)SDS 1/4"x2 1/2"	5/8"ø	12"	(2) 2x4	(2) 2x6
HDU4-SDS2.5	(10)SDS 1/4"x2 1/2"	5/8"ø	16"	4x4	4x6

① MINIMUM SIZE OF POST AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.



- ① PLYWOOD PANEL EDGE NAILING PER SHEARWALL SCHEDULE
- ② BASE PLATE NAILING PER SHEARWALL SCHEDULE
- ③ 16d @ 8"oc

Typical Shearwall Intersections

12

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 206.443.6212  
 ssfengineers.com  
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**BRETT D. MOZEN**  
 PROFESSIONAL ENGINEER  
 DESIGN: BDM  
 DRAWN: NHD  
 CHECKED: BDM  
 APPROVED: BDM

REVISIONS:  
 1 Permit Corrections July 10, 2025

PROJECT TITLE:  
**Garrett Residence**  
 9007 SE 44th St  
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ARCHITECT:  
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 119 south main street, suite 310  
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 www.atelierdrome.com

ISSUE:  
**PERMIT**

SHEET TITLE:  
**Typical Wood Framing Details**

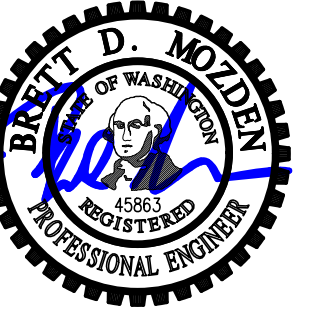
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 3/4" = 1'-0" U.N.O.

DATE:  
 April 21, 2025

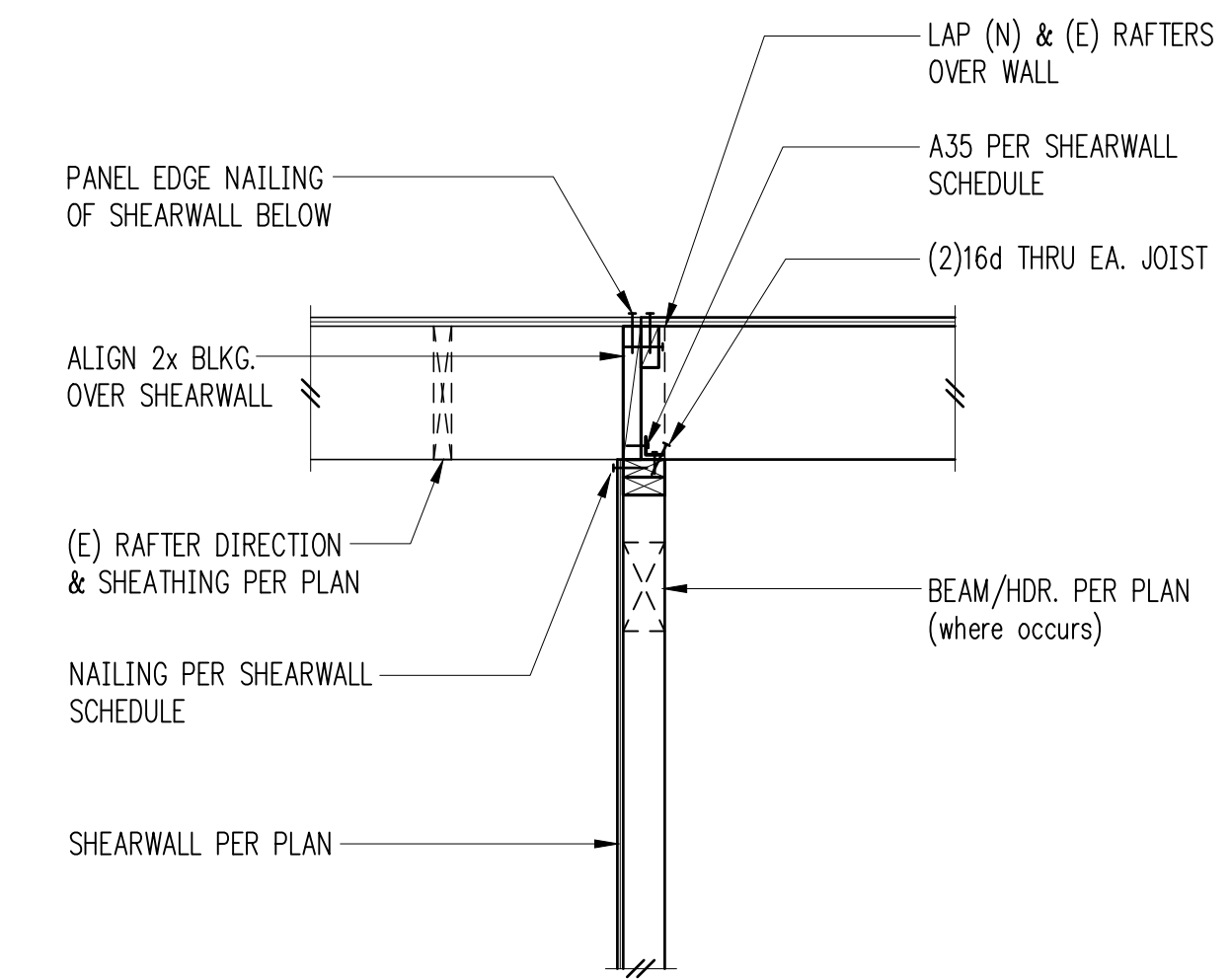
PROJECT NO:  
 02233-2024-38

SHEET NO:

**S4.1**

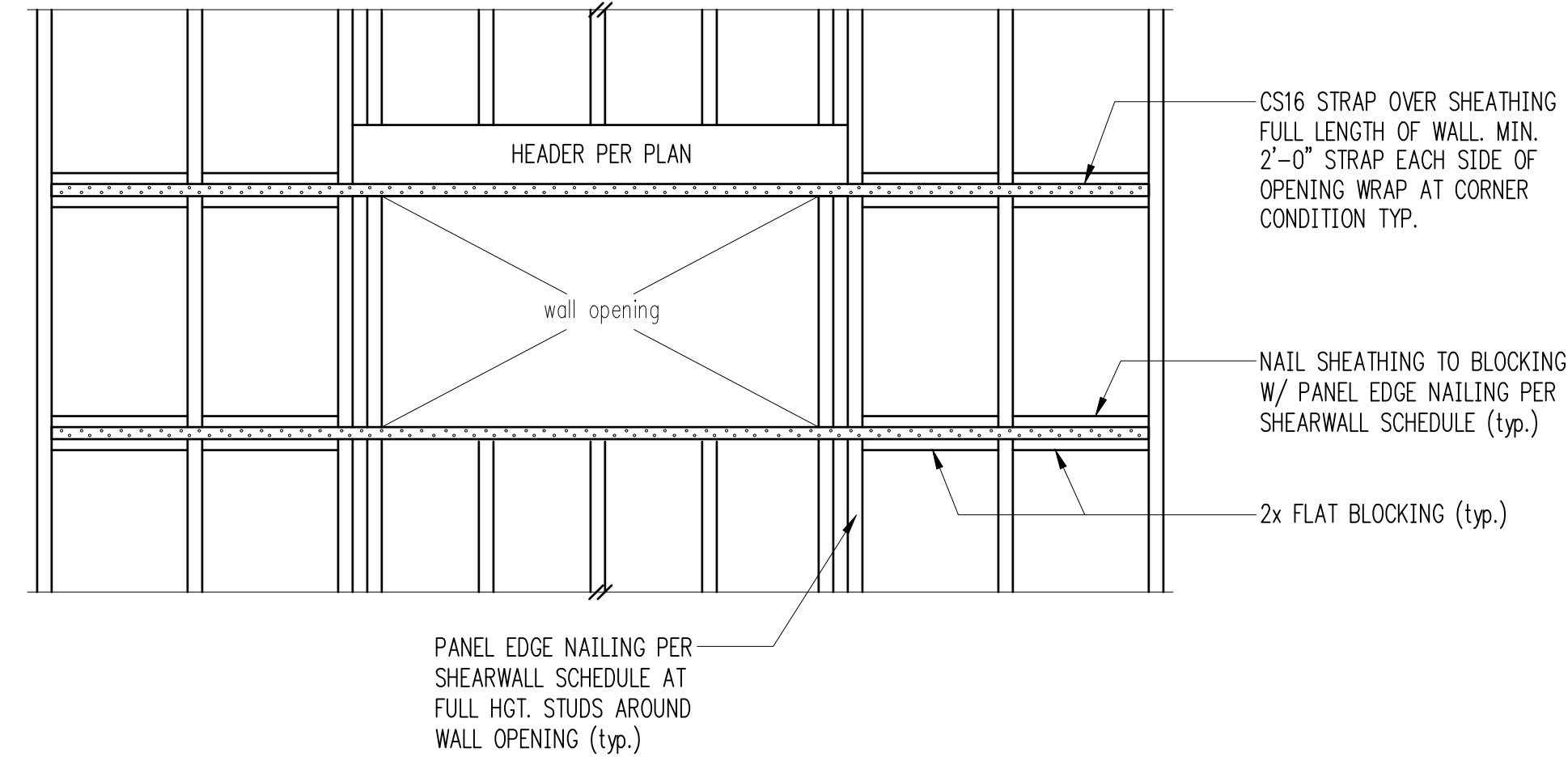


DESIGN: BDM  
 DRAWN: NHD  
 CHECKED: BDM  
 APPROVED: BDM

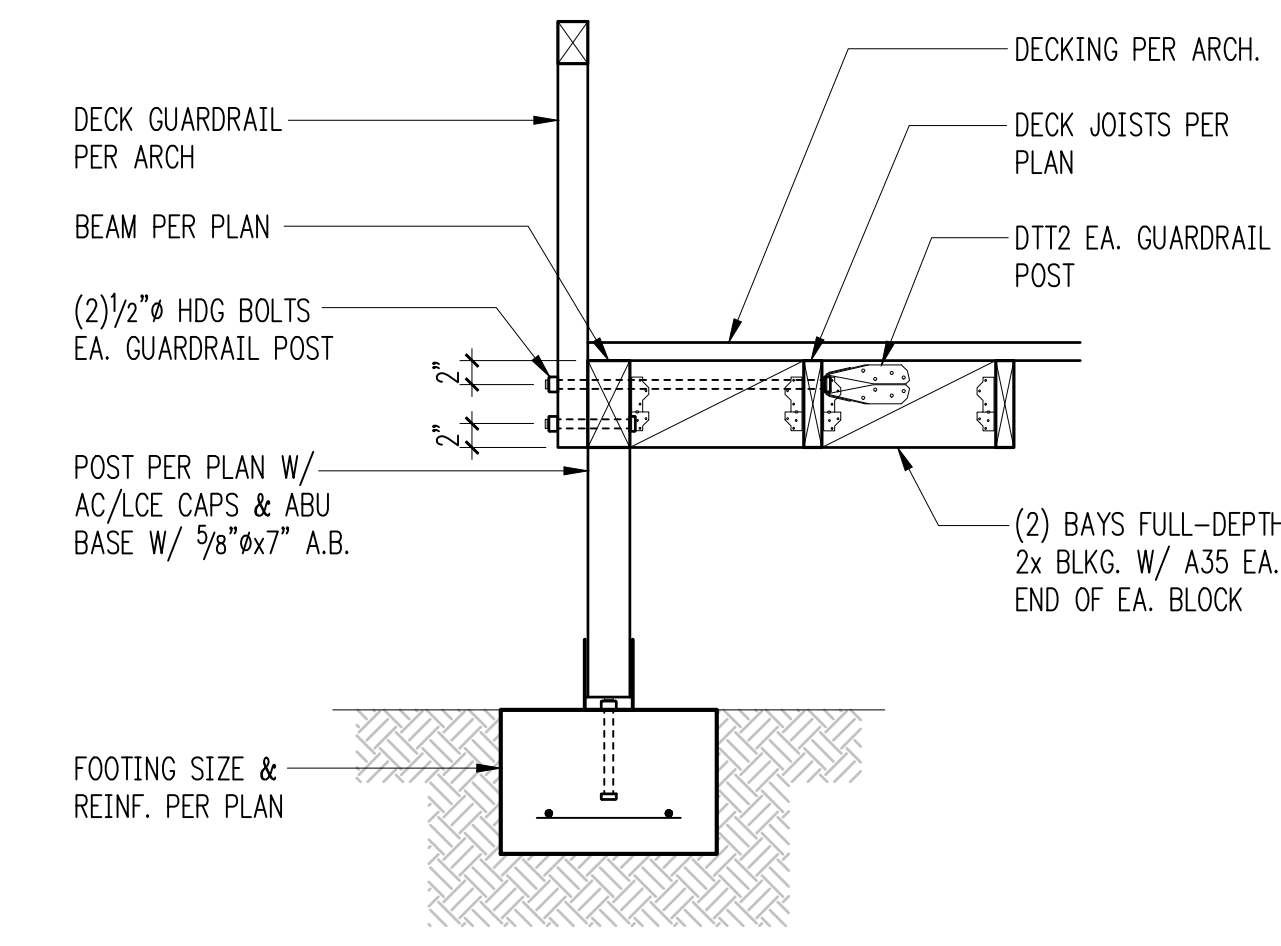


1

2

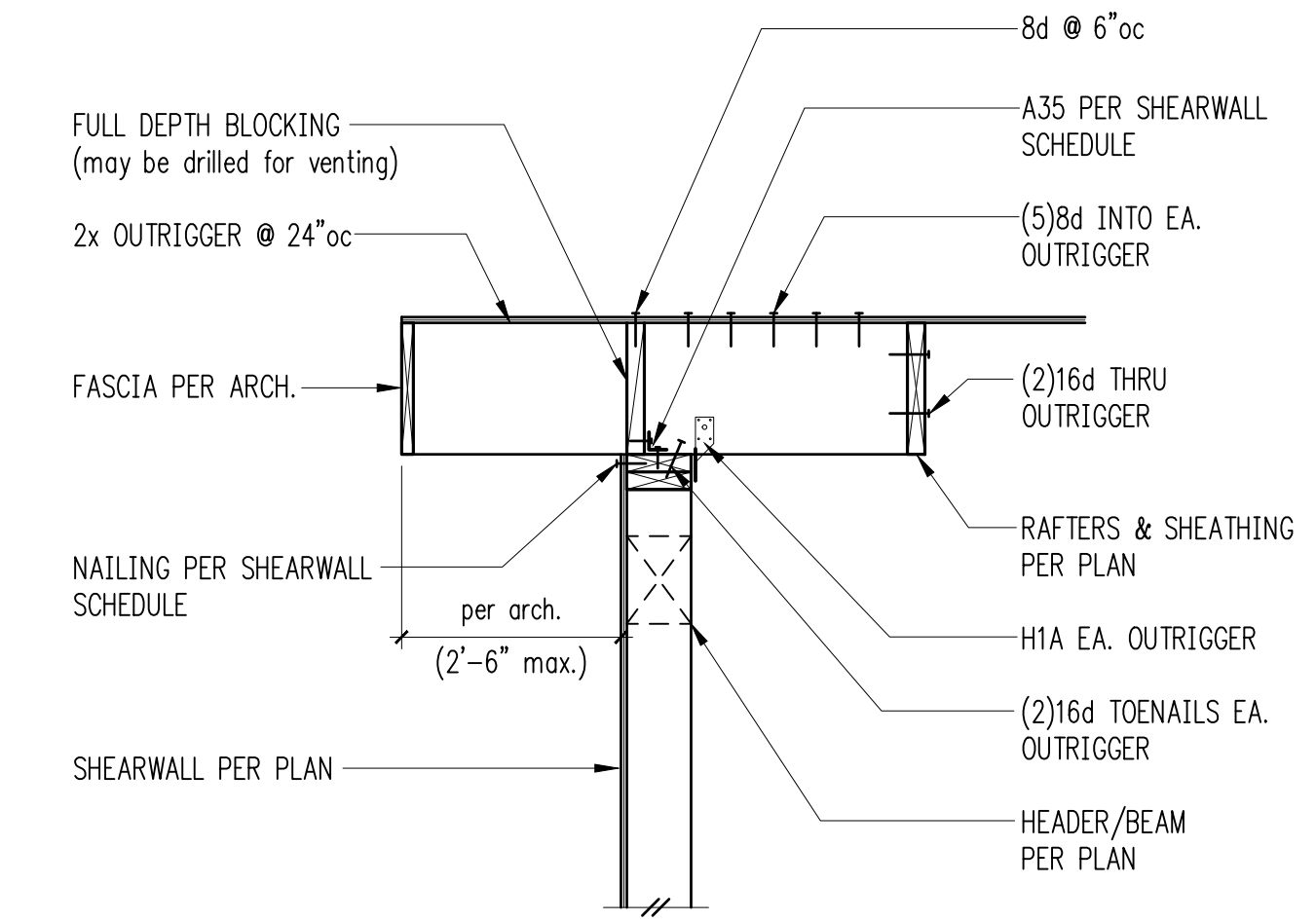


Continuous Straps at Wall Opening (above and below) 4

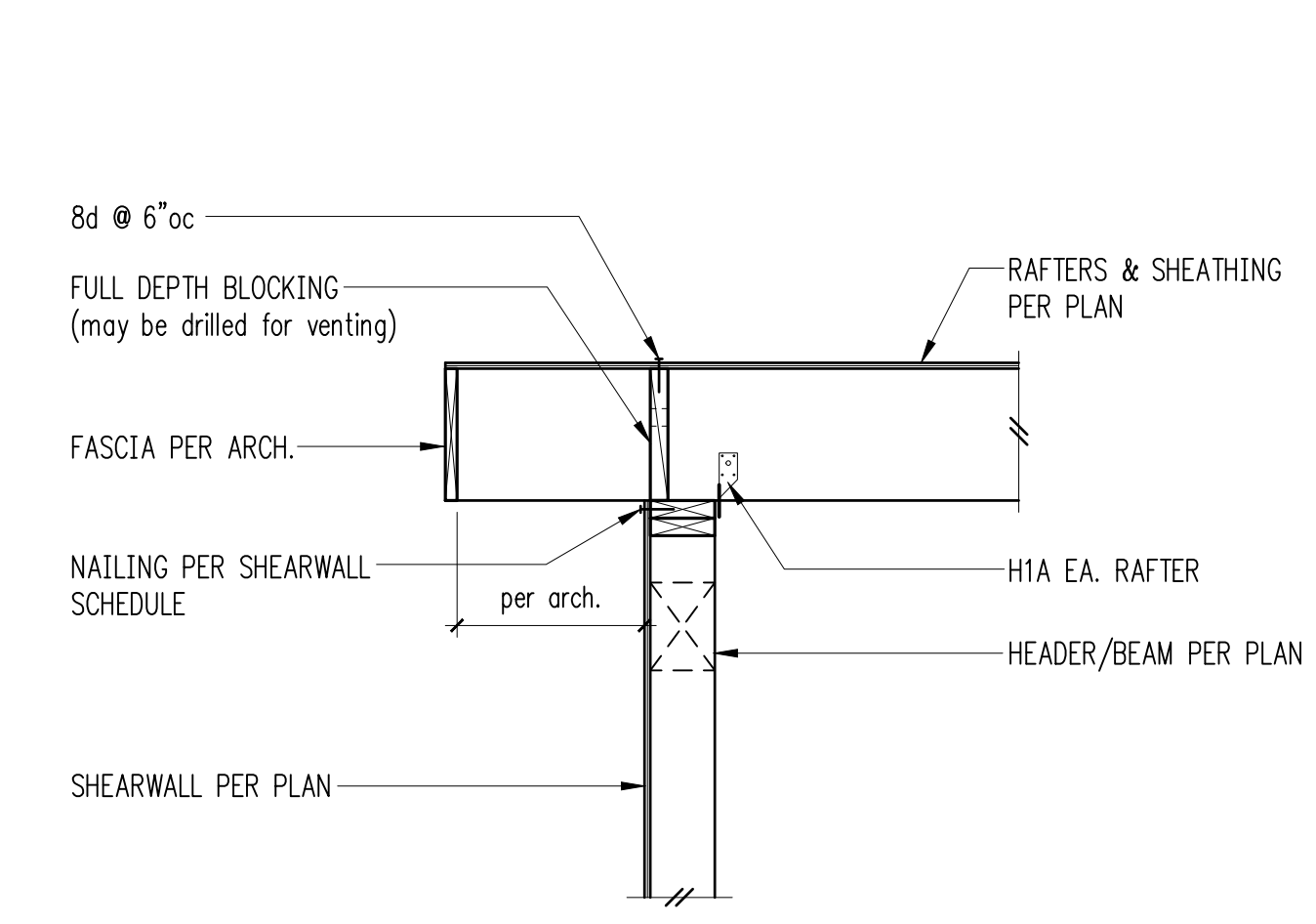


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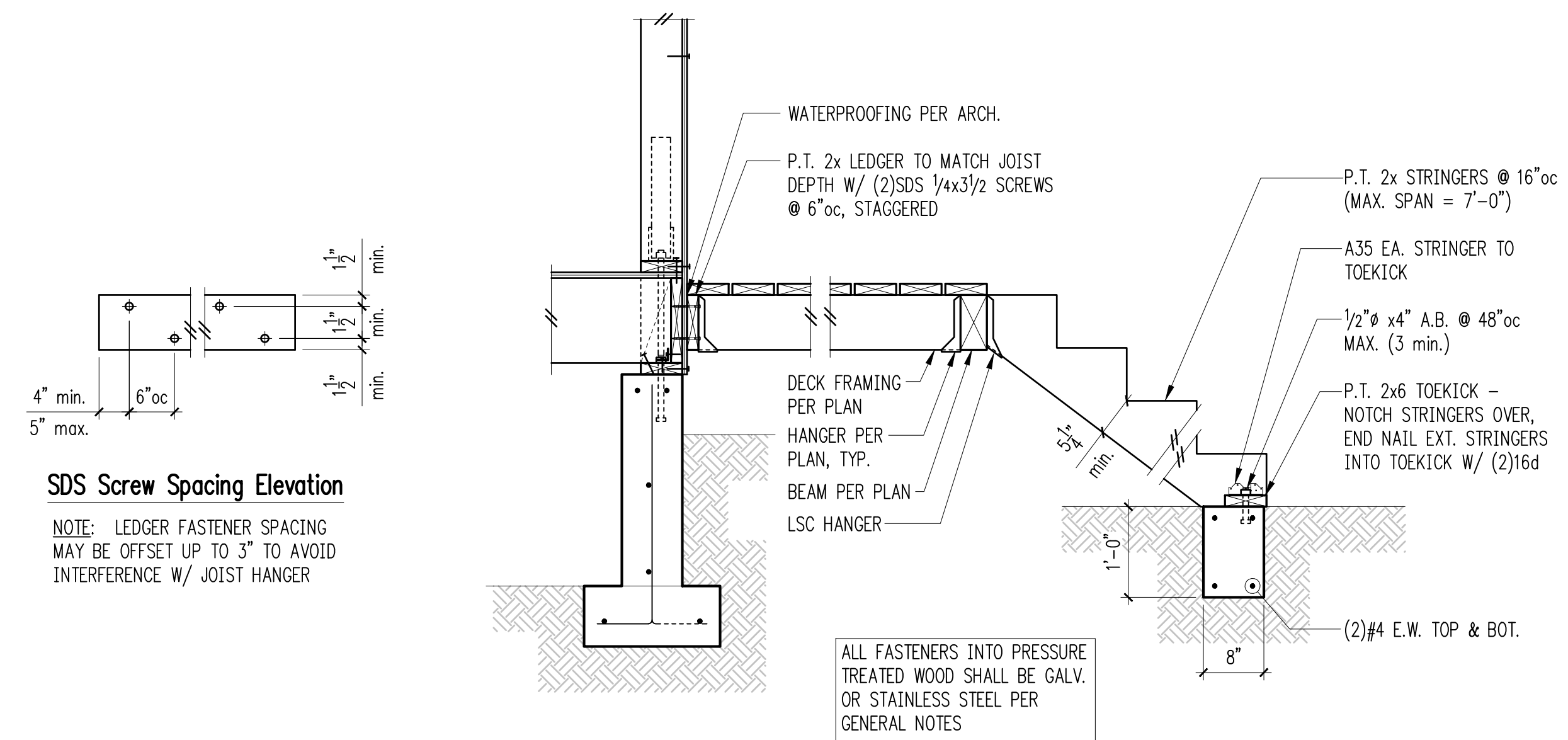
Typical Deck w/ Guardrail Detail 5



Exterior Non-Bearing Wall - Full Depth Outrigger 7



Exterior Bearing Wall 8



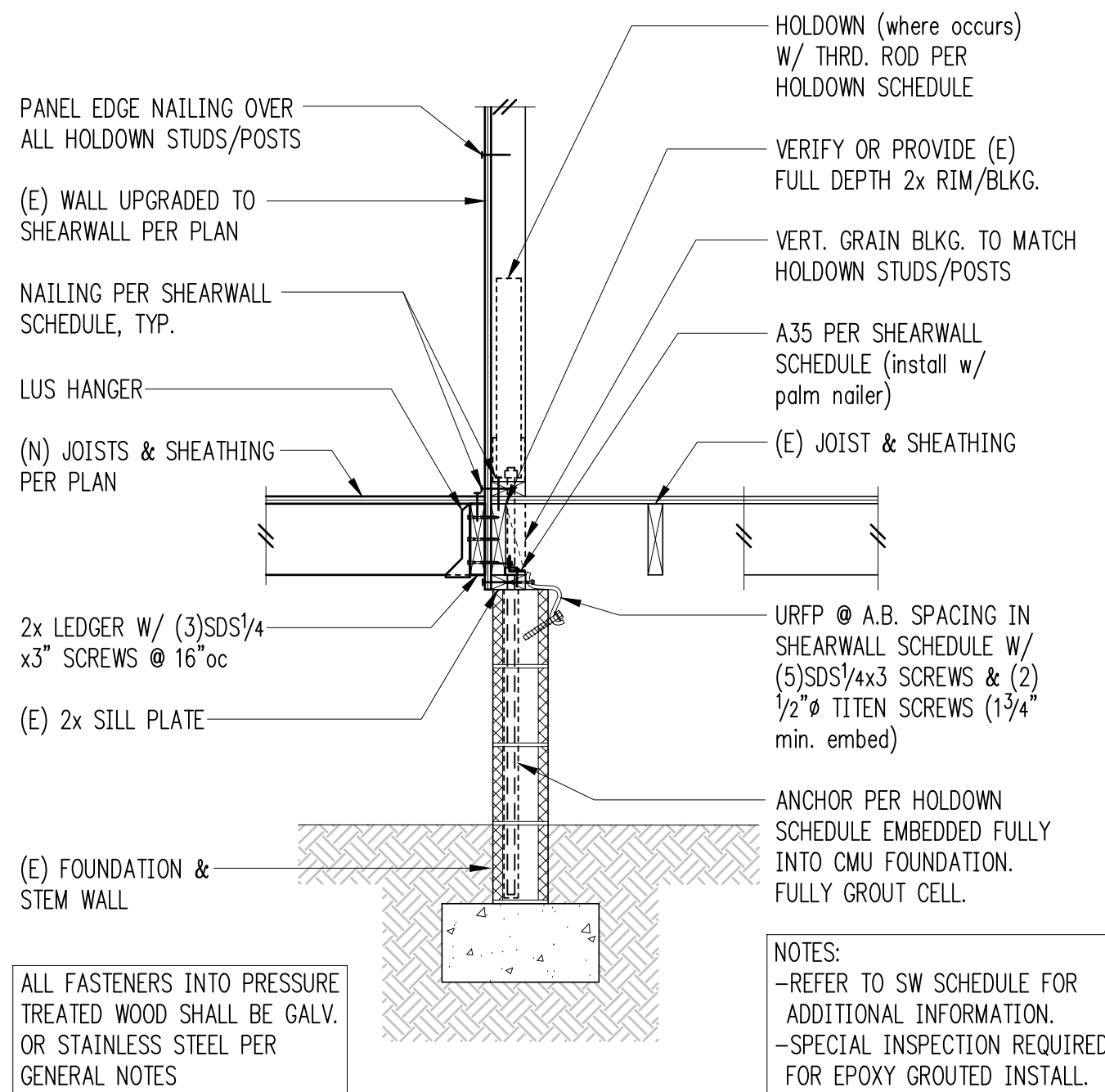
SDS Screw Spacing Elevation

NOTE: LEDGER FASTENER SPACING MAY BE OFFSET UP TO 3" TO AVOID INTERFERENCE W/ JOIST HANGER

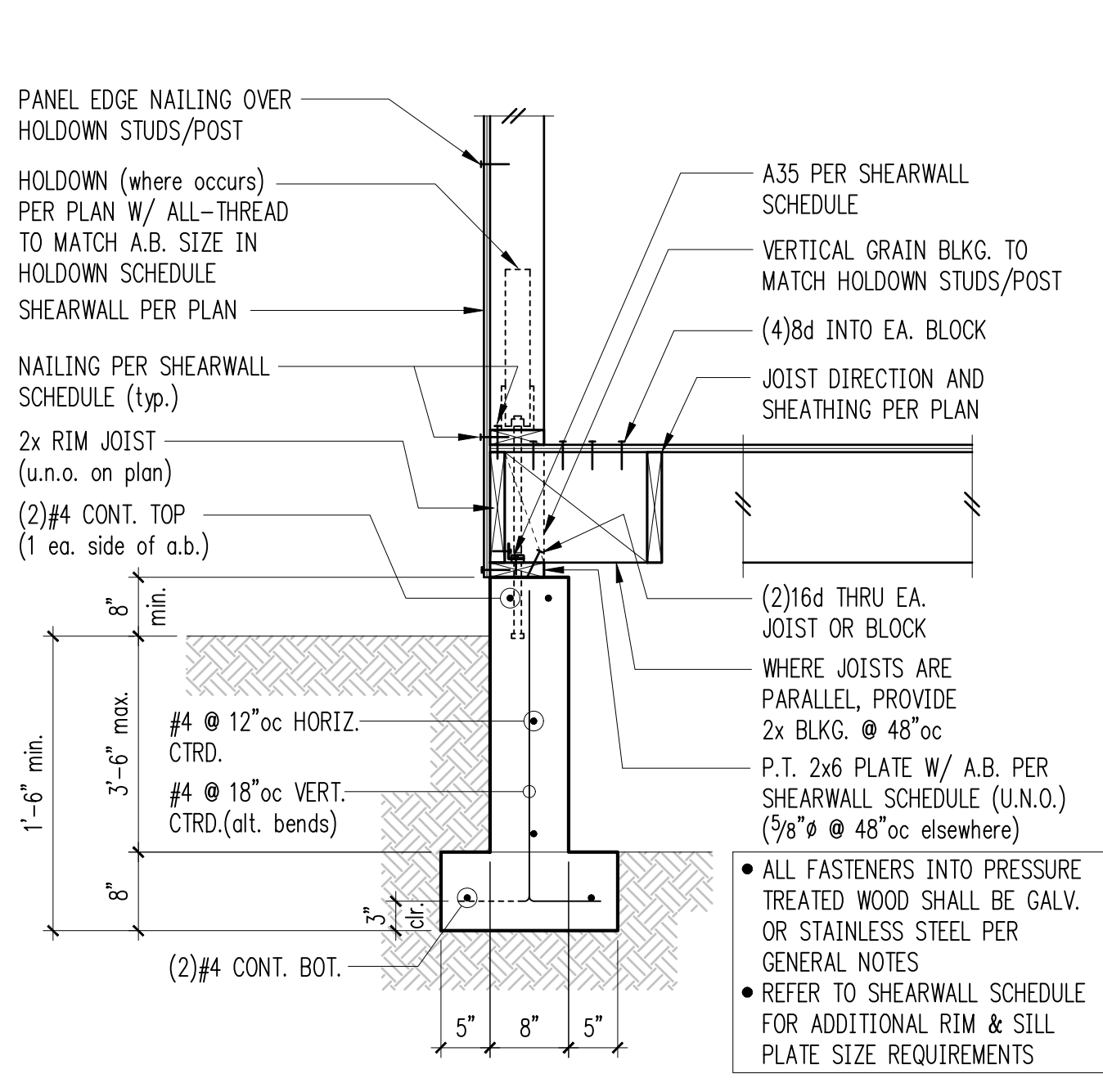
ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES

FOR CALLOUTS IN COMMON SEE 12/S4.2

10



Existing Framing at Crawl Space 11



Exterior Framing at Crawl Space 12

REVISIONS:  
 1 Permit Corrections July 10, 2025

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 9007 SE 44th St  
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ISSUE:  
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**Wood Framing Details**  
 SCALE: 3/4" = 1'-0" U.N.O.  
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 SHEET NO:

S4.2