9 BANCROFT RD — SINGLE-FAMILY RESIDENCE

One-story ranch · 3 BR / 2 BA · 1,456 sf main floor + full basement (walkout-grade bulkhead) · 28'-0" × 52'-0"

SHEET INDEX

G-001	Cover, index, design summary
C-101	Site plan, grading, utilities, erosion control
A-101	Main floor plan (dimensioned)
A-102	Basement plan
A-201	Exterior elevations
A-301	Building section
A-501	Wall section & details
A-601	Door & window schedules
S-101	Foundation plan
S-201	Floor framing plan
S-301–S-304	Exterior wall framing elevations (every stud, nail heads)
S-401	Roof framing plan & truss profile
S-601	Fastening schedule (IRC T.R602.3(1)) & connector schedule
M-101	HVAC plan
P-101	Plumbing plan & DWV riser
E-101	Electrical plan — main floor
E-102	Electrical plan — basement & site service
E-601	Panel schedule & load calc

DESIGN SUMMARY

Structure: 2x6 SPF #2 @16" walls, CS-WSP 7/16" OSB bracing; MSR raised-heel Fink trusses @24" (6:12, 16" heel);

2x10 SPF #2 @16" floor lapped on 3-2x12 girder + 6 Sch40 columns; 8" concrete basement walls #5@40" vert.; 20x10 footings.

Envelope (IECC 2018 CZ5A): R-49 ceiling, R-21 walls (U .059), bsmt R-10ci+R-13, U-0.27 windows; target 2.5 ACH50; ERV 60 cfm.

HVAC: 2-ton ducted cold-climate heat pump (≥22 kBtu/h @5°F) + 5 kW strip; design heat 20.5 kBtu/h, cool 11.1 kBtu/h.

Plumbing: drilled well 12 gpm, 62-gal tank 50/70 psi; PEX-A home-run; 50-gal HPWH @140°F + ASSE 1017 mixer; 1,250-gal septic + 825 sf bed.

Electrical: 200 A UG service, meter-main (230.85), 40-space panel, 26 circuits, AFCI/GFCI per NEC 2023 + NH amendments.

Model outputs: 1,156 framing members & 18,300 located fasteners (model/out/*.csv); EnergyPlus 26.2 3-zone model; 40/40 structural checks.

9 BANCROFT RD — SINGLE-FAMILY RESIDENCE

Londonderry, NH 03053 · Map 012 Lot 047-2

Codes: IRC 2024 · NEC 2023 · IECC 2018 (NH amended 2026-07-01) · NHDES Env-Wq 1000

Design loads: pg 65 psf (CRREL) · V 112 mph Exp B · SDC B · frost 48"

DESIGN DOCUMENT — generated from model/ (Python)

Not for construction without review by NH-licensed

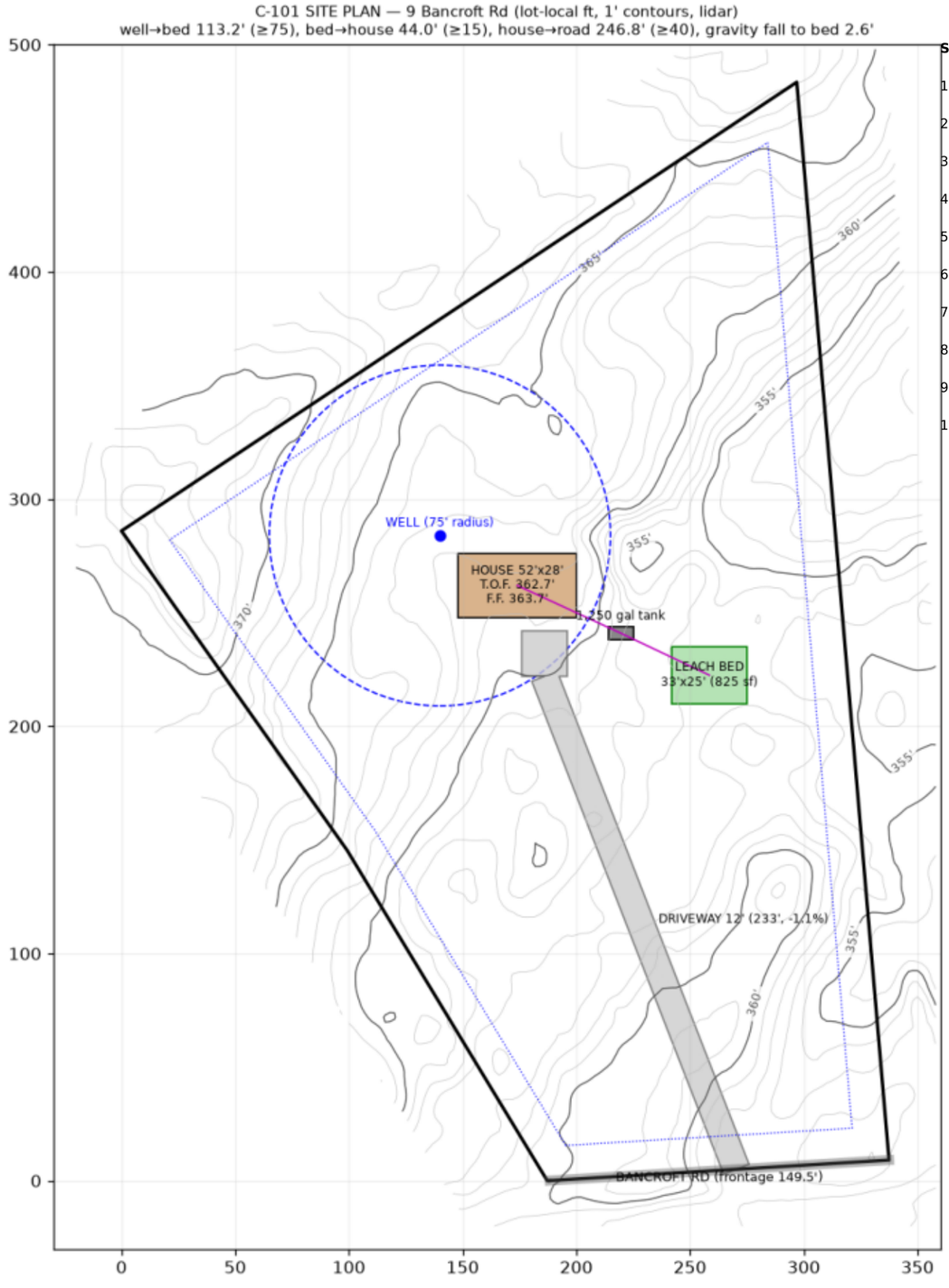
professionals & permitted septic designer.

COVER · SHEET INDEX · DESIGN SUMMARY

Scale: AS NOTED

Date: 2026-10-20 Rev 0

G-001



SITE NOTES

1. Base: Londonderry GIS parcel 012-047-2; USGS 3DEP 1 m lidar 1' contours (approx. ±0.5').
2. Limit of clearing ≈ 0.6 ac; stumps removed under house/drive/septic only.
3. Stabilized construction entrance 50' × 12' × 6" 2-3" stone at Bancroft Rd.
4. Silt fence/filter sock along E & S downhill limit of disturbance; inspect weekly & after 0.5" rain.
5. T.O. foundation 362.71', F.F. 363.67', bsmt slab 355.04'. Grade falls ≥ 6" in first 10 ft away from walls (IRC R401.3).
6. Driveway: 12' gravel → 3" bituminous, 2% crown, 12" crushed gravel base; culvert per Londonderry DPW driveway permit.
7. Water: 1-1/4" HDPE SIDR-7 well→house, 5' cover. Electric: 3" Sch 40 PVC UG from pole along driveway, 24" min cover.
8. Septic: NHDES construction approval required before building permit (Env-Wq 1000); test pit & perc by permitted designer.
9. Sump/foundation-drain outlet to rip-rap splash ≥ 25' from leach bed (Env-Wq Table 1008-2).
10. Loam & seed all disturbed areas; erosion-control blanket on slopes > 3:1.

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Londonderry, NH 03053 · Map 012 Lot 047-2

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Design loads: pg 65 psf (CRREL) · V 112 mph Exp B · SDC B · frost 48"

DESIGN DOCUMENT — generated from model (Python)

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SITE PLAN · GRADING · UTILITIES · EROSION CONTROL

Scale: 1" = 40' (lot-local ft)

Date: 2026-10-20 Rev 0

C-101



PLAN NOTES

1. Ext walls 2x6 @16" (5-1/2" + 7/16" OSB); int 2x4; wet walls 2x6.
2. All interior walls nonbearing (trusses clear-span 28').
3. Ceiling height 8'-0" finished.
4. Egress windows (R319): W01,W02,W03,W04,W11,W12 casement RO 38x62 (net ≥ 5.7 sf, sill ≤ 44").
5. Tempered glazing (R324.4): W05 (tub), W13 (shower).
6. Smoke alarms per E-101.
7. Stair: 36-1/2" clear, handrail N side 35" above nosings (R320).
8. Attic access 22-1/2x30 in hall ceiling (R807.1), R-49 insulated weatherstripped hatch.
9. Exterior landings: precast front 5x4 + 3R, rear 8x4 + 2 steps (R318.3).

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Londonderry, NH 03053 · Map 012 Lot 047-2

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Design loads: pg 65 psf (CRREL) · V 112 mph Exp B · SDC B · frost 48"

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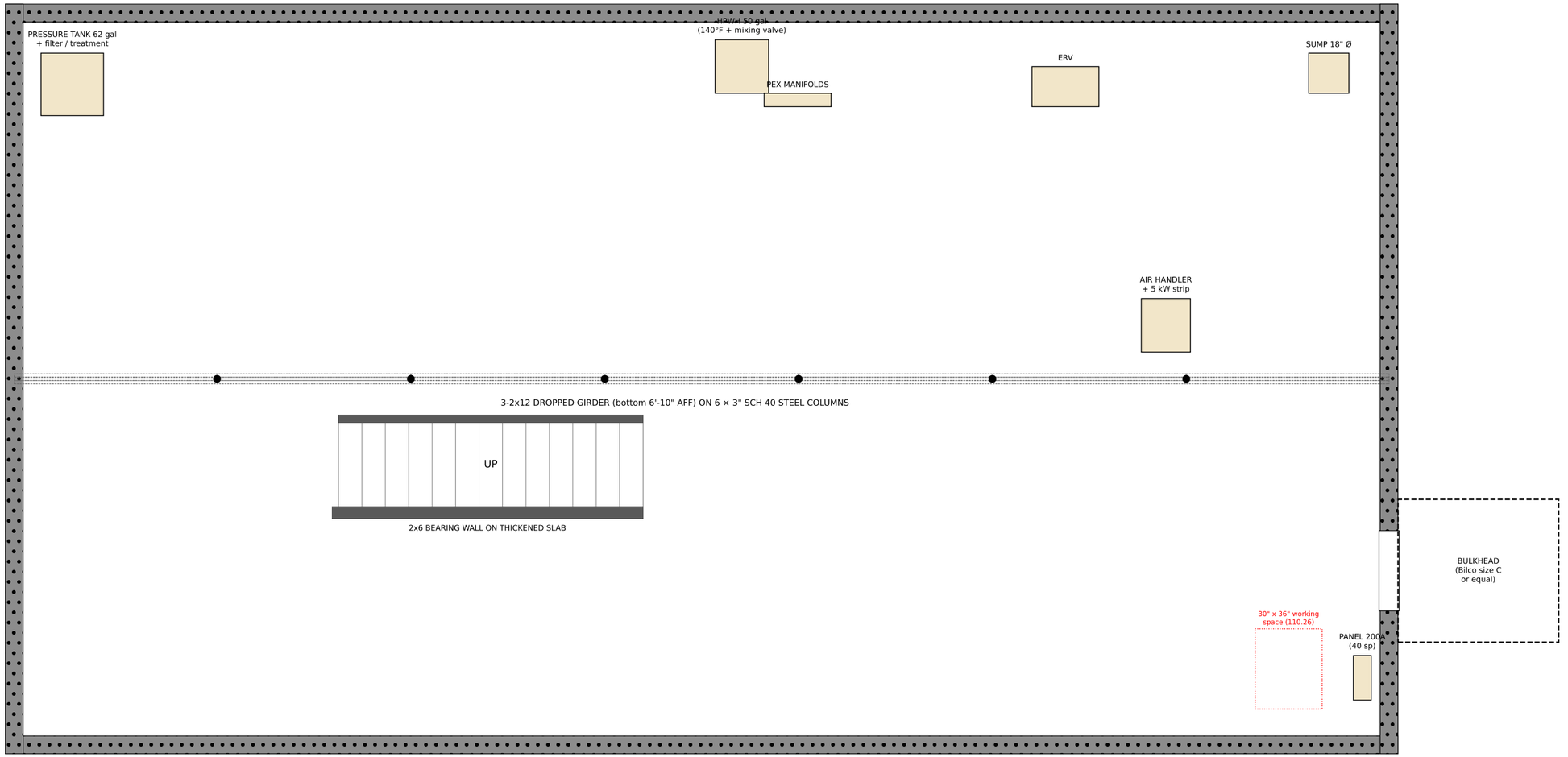
professionals & permitted septic designer.

MAIN FLOOR PLAN

Scale: ≈ 3/16" = 1'-0"

Date: 2026-10-20 Rev 0

A-101



BASEMENT NOTES

1. Unfinished, conditioned (inside thermal envelope). Walls: 2" XPS + 2x4 @24" R-13 + 1/2" gyp (thermal barrier R303.4).
2. Slab 4" 3,000 psi on 10-mil retarder on 4" stone; radon passive riser (App. AF).
3. Emergency escape: bulkhead door 36"x80" (R319.1 NH amend.).
4. Ceiling: no membrane required (2x10 sawn joists, NH R302.13 exc.4).
5. Headroom ≥ 6'-4" under girder & ducts (R313 exc.).

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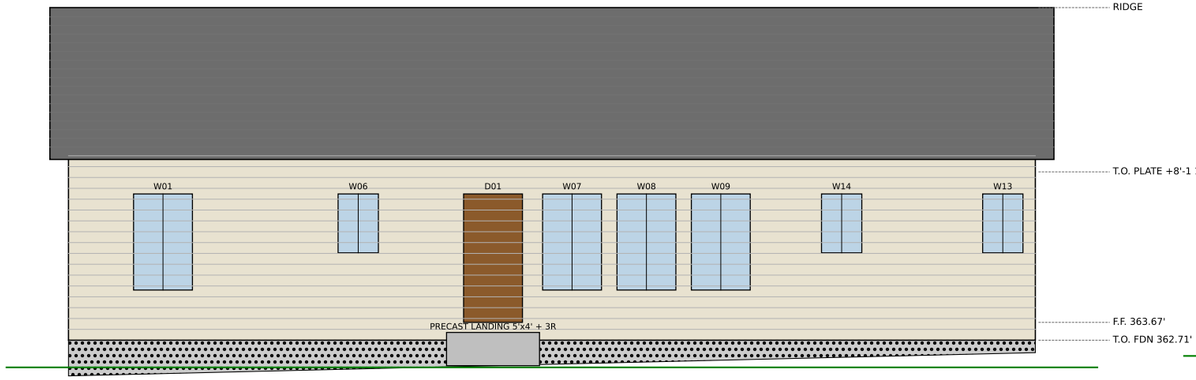
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BASEMENT PLAN

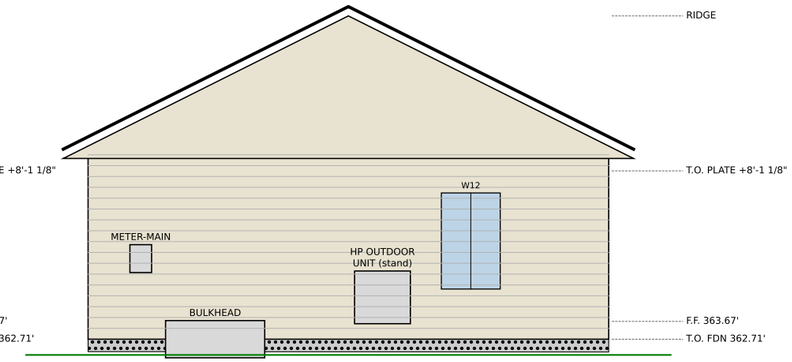
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Date: 2026-10-20 Rev 0

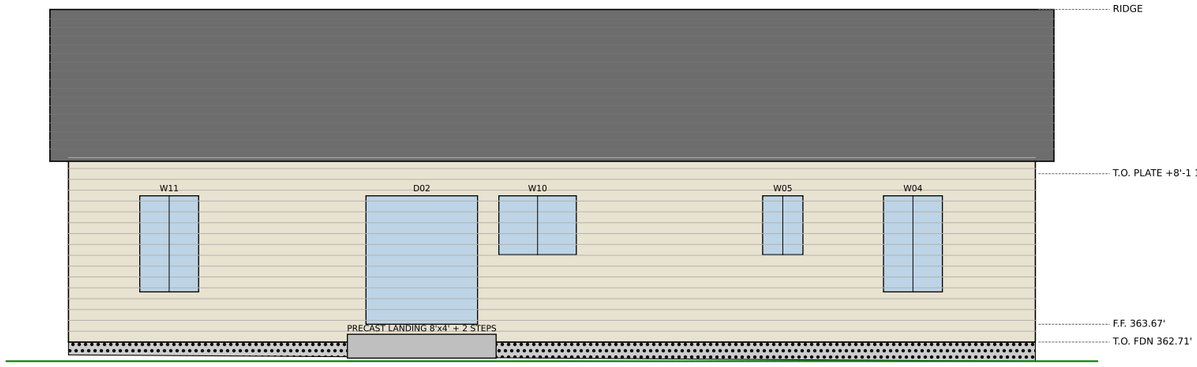
A-102



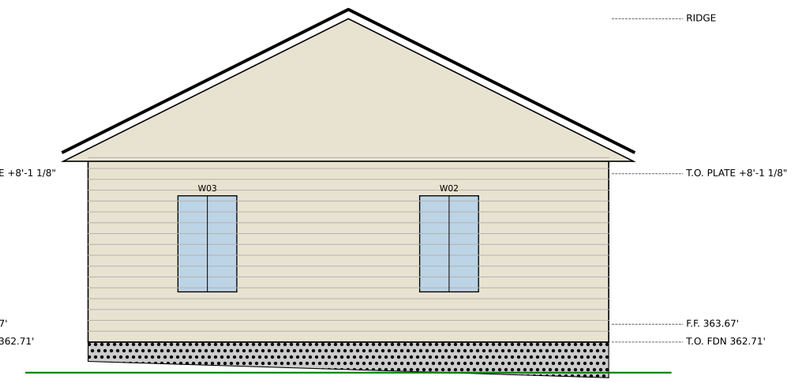
SOUTH (FRONT) ELEVATION



EAST ELEVATION



NORTH (REAR) ELEVATION



WEST ELEVATION

FINISHES: architectural asphalt shingles (Class A, ASTM D7158 Class H), ice barrier from eave to 24" inside ext. wall line (R905.1.2) + valleys; synthetic underlayment; attic ventilation (R806.2): 1,384 sf / 300 = 4.6 sf NFA required (40–50% high); provided ridge vent 48 ft × 18 in²/ft = 6.0 sf + continuous soffit 2 × 52 ft × 9 in²/ft = 6.5 sf → 30% high. 20 vinyl siding ASTM D3679 over WRB; aluminum soffit/fascia; 6" seamless gutters.

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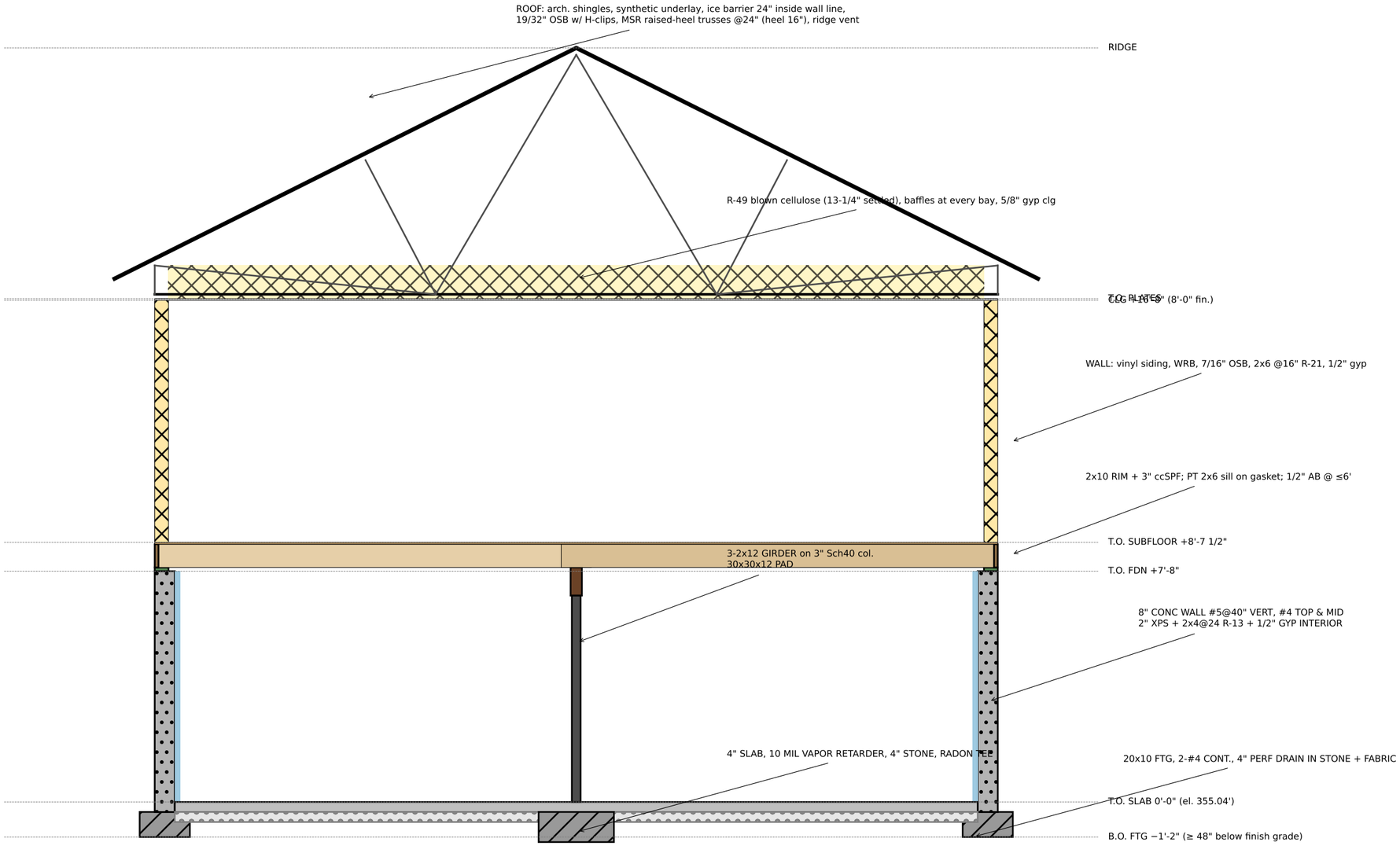
professionals & permitted septic designer.

EXTERIOR ELEVATIONS

Scale: ≈ 1/8" = 1'-0"

Date: 2026-10-20 Rev 0

A-201



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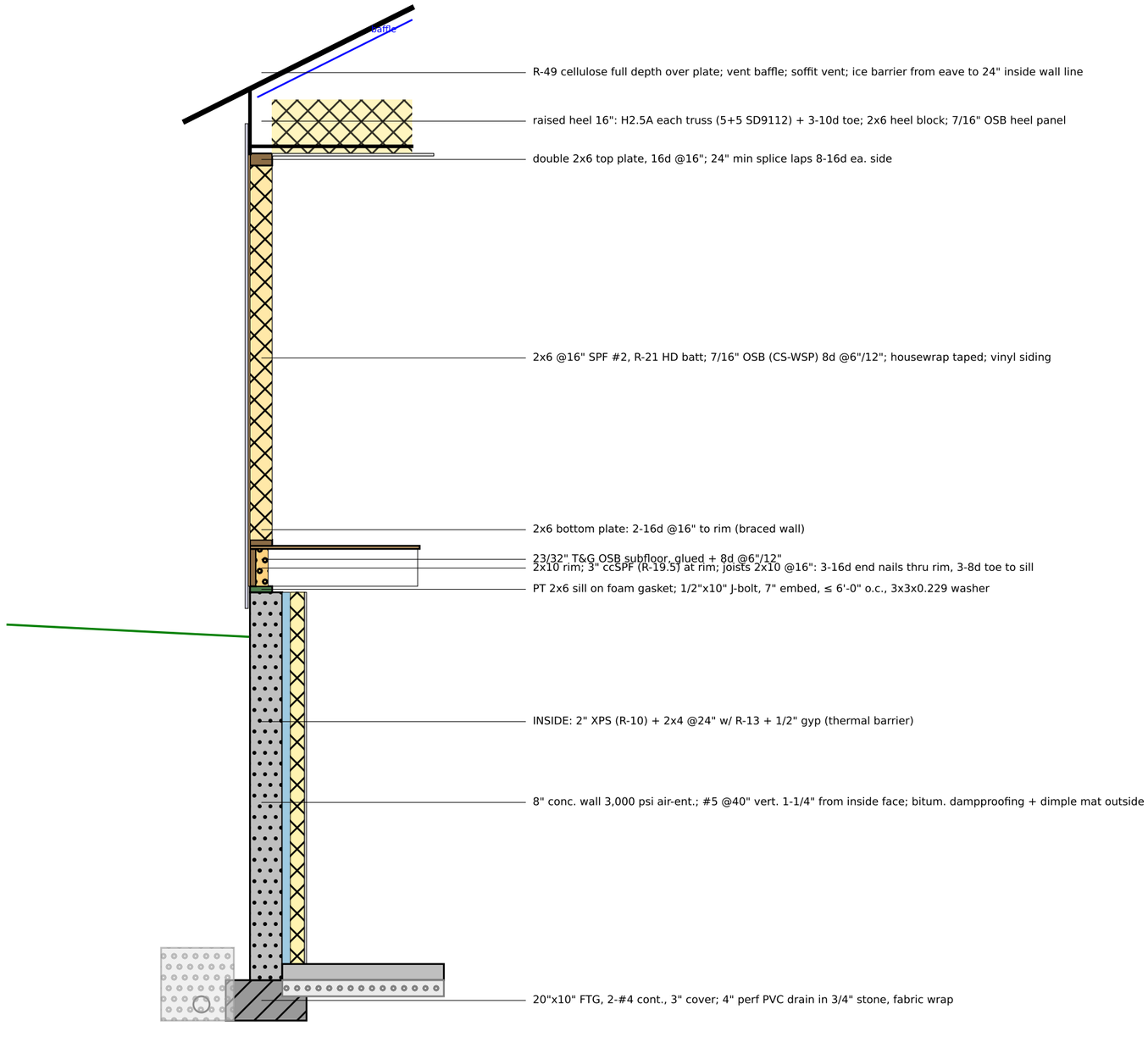
BUILDING SECTION A-A (N–S, LOOKING EAST, THROUGH GREAT ROOM)

Scale: ≈ 1/4" = 1'-0"

Date: 2026-10-20 Rev 0

A-301

DETAIL 1 — TYPICAL BEARING-WALL SECTION (S & N WALLS)



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TYPICAL WALL SECTION & DETAILS

Scale: 1" = 1'-0"

Date: 2026-10-20 Rev 0

A-501

Mark	Wall	Type	RO W x H	Unit (approx)	Sill/RO bottom AFF	Header	Notes
D01	EXT-S	door	38 x 82.875	37.5 x 82.38	—	2-2x12	36x80 fiberglass insulated U-0.17, multipoint lock, ADA threshold
D02	EXT-N	slider	72 x 82.875	71.5 x 82.38	—	3-2x12	6'-0" vinyl slider U-0.27, tempered (R324.4)
D03	W-HALLS	door	34 x 82.875	33.5 x 82.38	—	flat 2x (nonbearing)	32" 2-panel solid-core
D04	W-HALLN	door	34 x 82.875	33.5 x 82.38	—	flat 2x (nonbearing)	32" 2-panel solid-core
D05	W-HALLN	door	32 x 82.875	31.5 x 82.38	—	flat 2x (nonbearing)	30" 2-panel
D06	W-LINEN	door	26 x 82.875	25.5 x 82.38	—	flat 2x (nonbearing)	24" 2-panel
D07	W-LAUNE	door	32 x 82.875	31.5 x 82.38	—	flat 2x (nonbearing)	30" 2-panel
D08	W-COATS	door	26 x 82.875	25.5 x 82.38	—	flat 2x (nonbearing)	24" 2-panel
D09	W-SUITE	door	34 x 82.875	33.5 x 82.38	—	flat 2x (nonbearing)	32" 2-panel solid-core
D10	W-SUITES	door	32 x 82.875	31.5 x 82.38	—	flat 2x (nonbearing)	30" 2-panel
D11	W-SUITES	door	32 x 82.875	31.5 x 82.38	—	flat 2x (nonbearing)	30" 2-panel
D12	W-BR2CLO	bifold	62 x 82.875	61.5 x 82.38	—	flat 2x (nonbearing)	5'-0" bifold pair
D13	W-BR3CLO	bifold	62 x 82.875	61.5 x 82.38	—	flat 2x (nonbearing)	5'-0" bifold pair
W01	EXT-S	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W02	EXT-W	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W03	EXT-W	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W04	EXT-N	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W05	EXT-N	window	26 x 38.000	25.5 x 37.50	44.875"	2-2x12	awning, obscure, tempered if within 60" of tub/shower
W06	EXT-S	window	26 x 38.000	25.5 x 37.50	44.875"	2-2x12	awning, obscure
W07	EXT-S	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W08	EXT-S	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W09	EXT-S	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W10	EXT-N	window	50 x 38.000	49.5 x 37.50	44.875"	2-2x12	casement
W11	EXT-N	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W12	EXT-E	window	38 x 62.000	37.5 x 61.50	20.875"	2-2x12	casement, egress (R319) U-0.27 SHGC 0.40
W13	EXT-S	window	26 x 38.000	25.5 x 37.50	44.875"	2-2x12	awning, obscure, tempered if within 60" of tub/shower
W14	EXT-S	window	26 x 38.000	25.5 x 37.50	44.875"	2-2x12	awning, obscure

9 BANCROFT RD — SINGLE-FAMILY RESIDENCE

Londonderry, NH 03053 · Map 012 Lot 047-2

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DESIGN DOCUMENT — generated from model/ (Python)

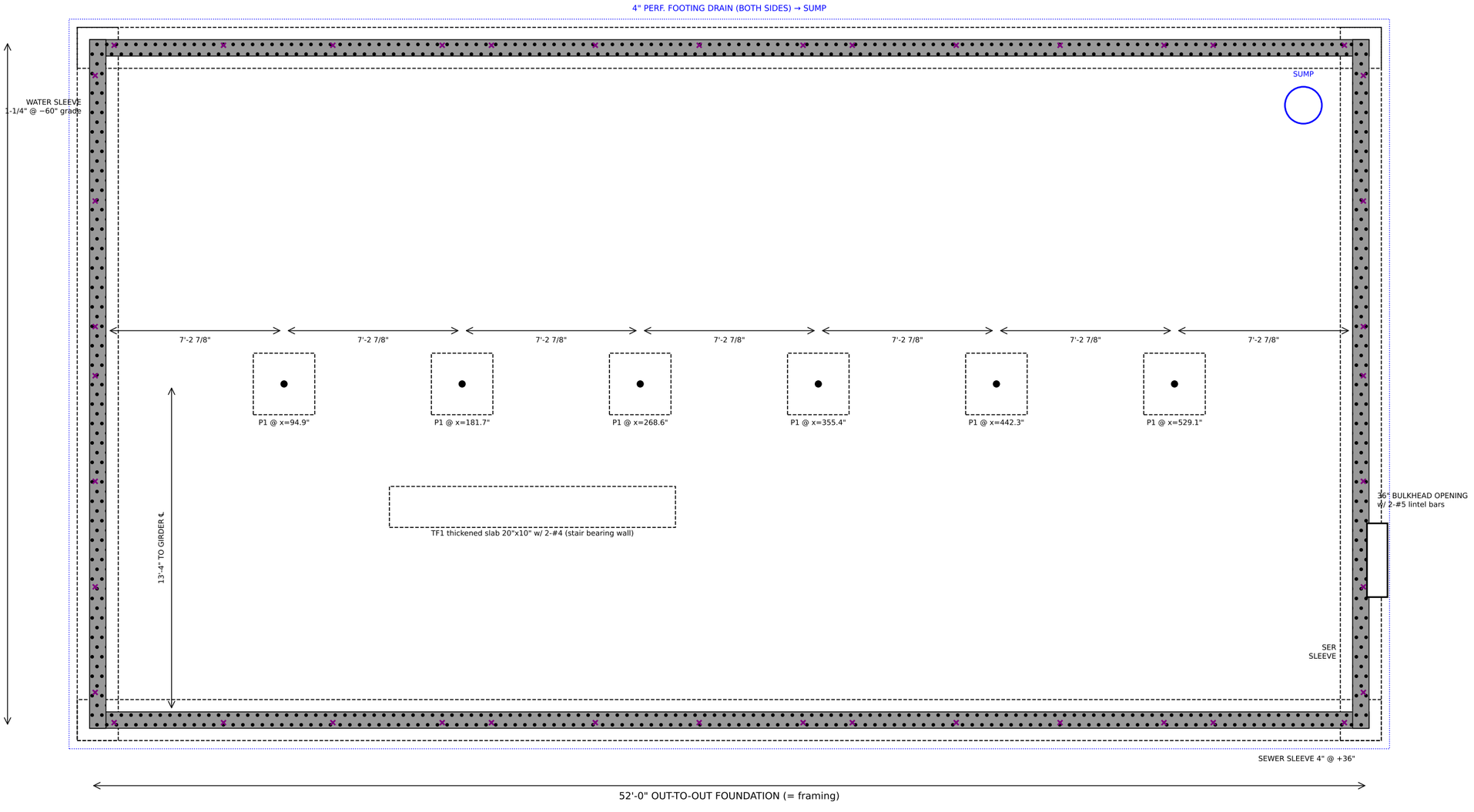
Not for construction without review by NH-licensed professionals & permitted septic designer.

DOOR & WINDOW SCHEDULES

Scale: AS NOTED

Date: 2026-10-20 Rev 0

A-601



FOUNDATION NOTES (IRC R401–R406, NH)
1. Presumptive bearing 2,000 psf (SM, T.R401.4.1(1)); max computed 1,505 psf.
2. Concrete f'c 3,000 psi; walls air-entrained 5–7% (severe weathering, T.R402.2).
3. F1: 20"x10" cont., 2-#4; W1: 8" wall 8'-0", #5 @40" vert (T.R404.1.3.2(8)), #4 ≤12" from top + mid-height (T.R404.1.3.2(1)); laps per T.R608.5.4(1).
4. P1: 30x30x12 pad, 3-#4 e.w. bot. Steel cols 3" Sch40 w/ cap & base plates (R407.3).
5. Anchor bolts × = 1/2" J-bolts 7" embed ≤ 6' o.c., ≤ 12" from plate ends (R403.1.6) — 42 total.
6. Girder pockets E & W walls: 5" W × 12-1/2" H × 4" bearing, steel shim, 1/2" air gap.
7. Brace walls before backfill (R404.1.7); backfill free of stone > 6", compacted in lifts.
8. Footing bottoms ≥ 48" below finished grade; at bulkhead areaway, areaway walls/footings to ≥ 48" below grade & areaway slab insulated 2" XPS.
9. Dampproof (R406.1) grade to footing; dimple mat; 2" XPS interior full height.

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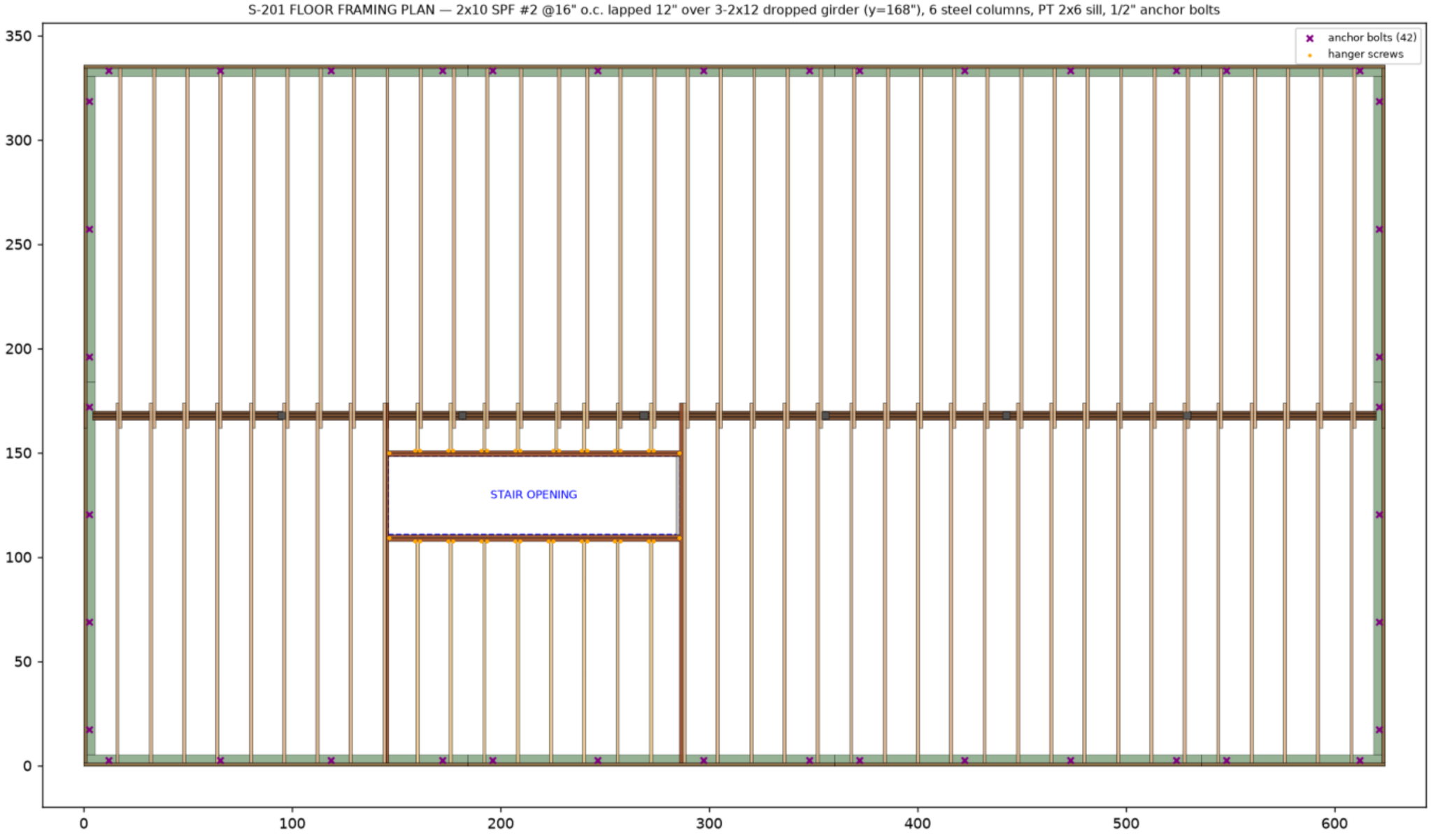
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FOUNDATION PLAN

Scale: ≈ 3/16" = 1'-0"

Date: 2026-10-20 Rev 0

S-101



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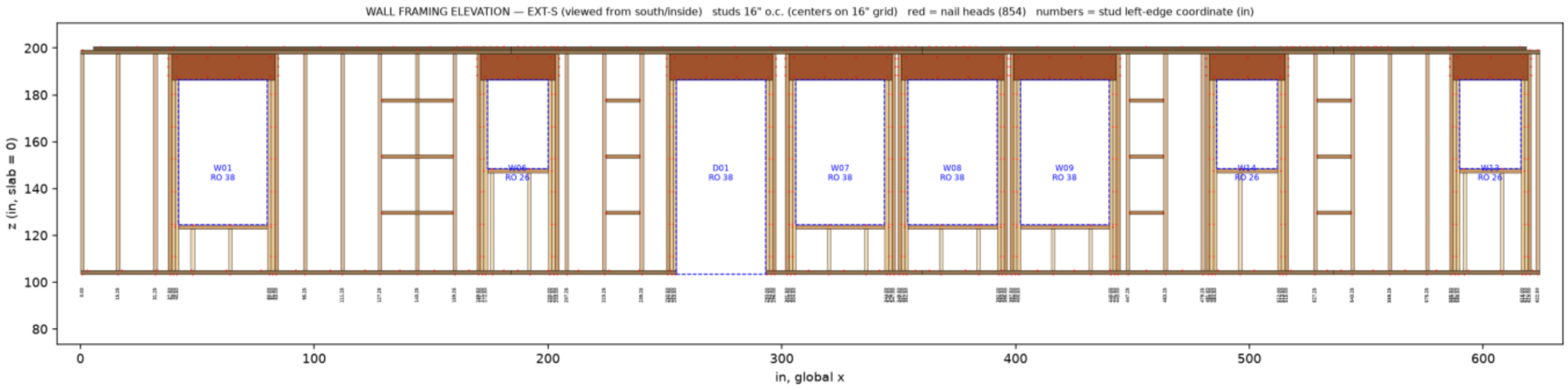
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FLOOR FRAMING PLAN

Scale: ≈ 3/16" = 1'-0"

Date: 2026-10-20 Rev 0

S-201



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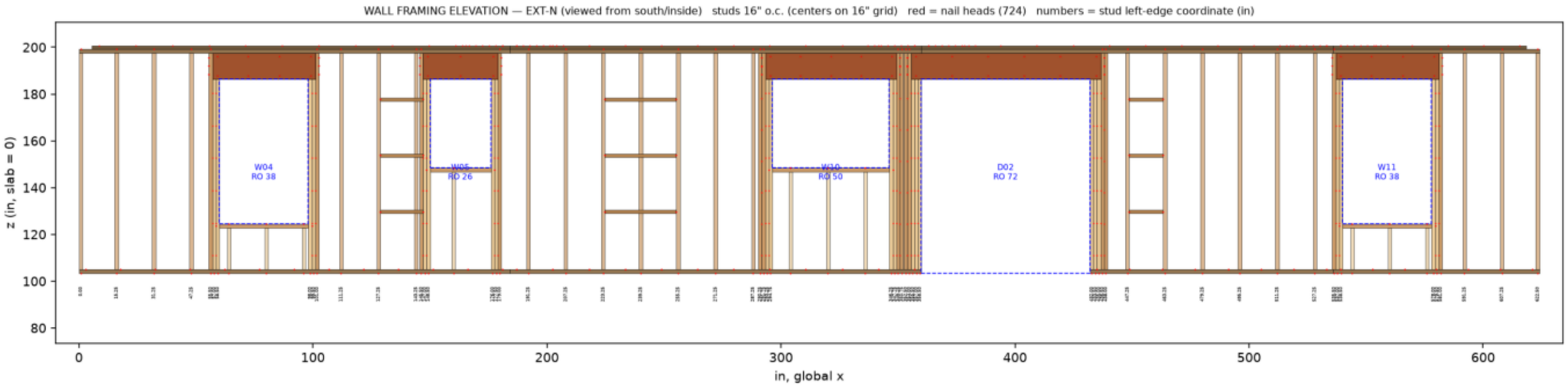
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WALL FRAMING ELEVATION — EXT-S

Scale: ≈ 1/4" = 1'-0"

Date: 2026-10-20 Rev 0

S-301



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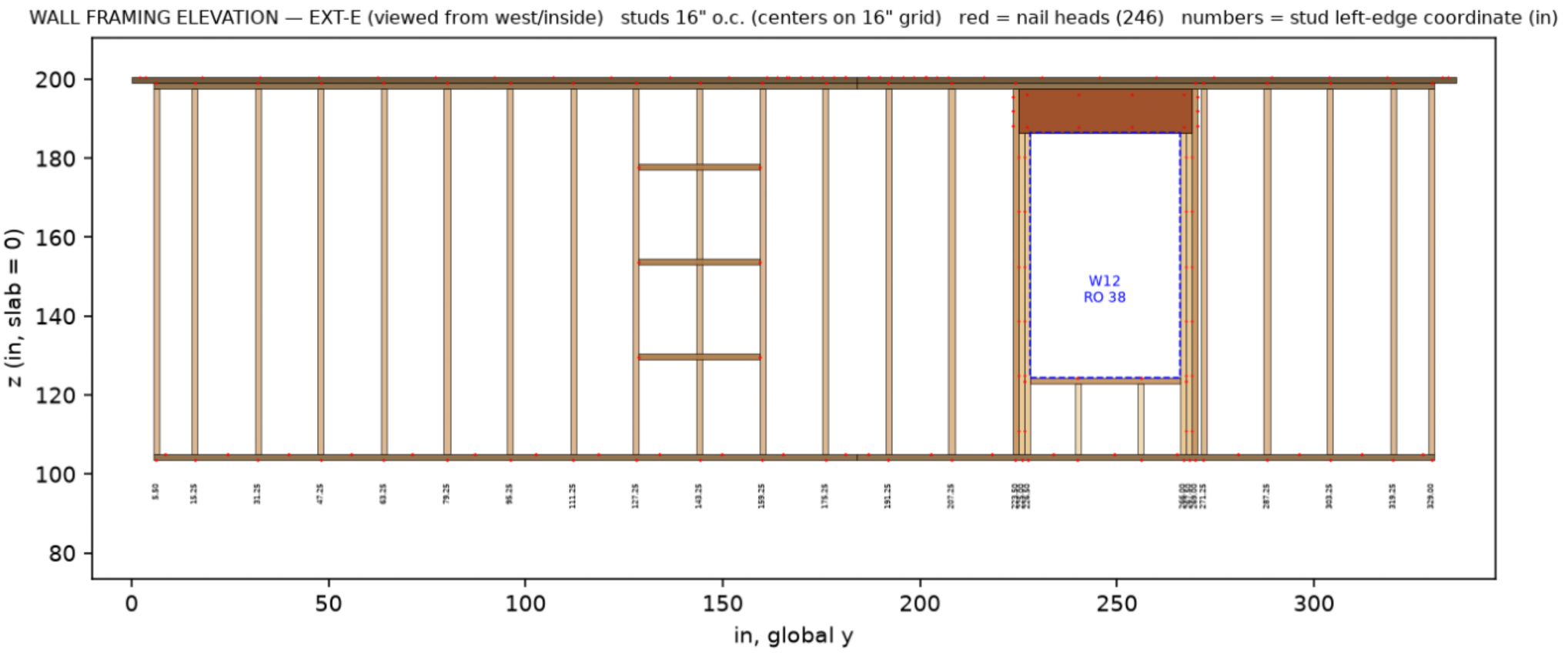
professionals & permitted septic designer.

WALL FRAMING ELEVATION — EXT-N

Scale: ≈ 1/4" = 1'-0"

Date: 2026-10-20 Rev 0

S-302



9 BANCROFT RD — SINGLE-FAMILY RESIDENCE

Londonderry, NH 03053 · Map 012 Lot 047-2

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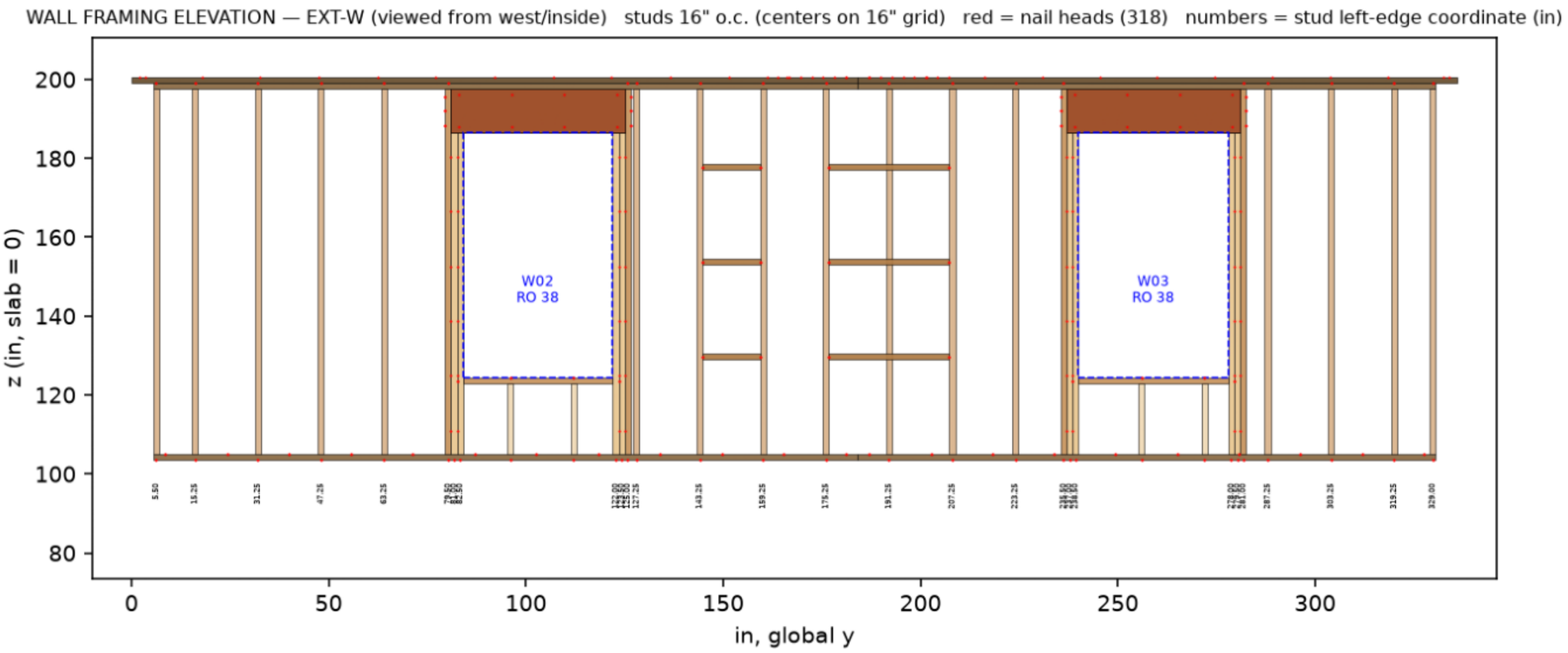
professionals & permitted septic designer.

WALL FRAMING ELEVATION — EXT-E

Scale: ≈ 1/4" = 1'-0"

Date: 2026-10-20 Rev 0

S-303



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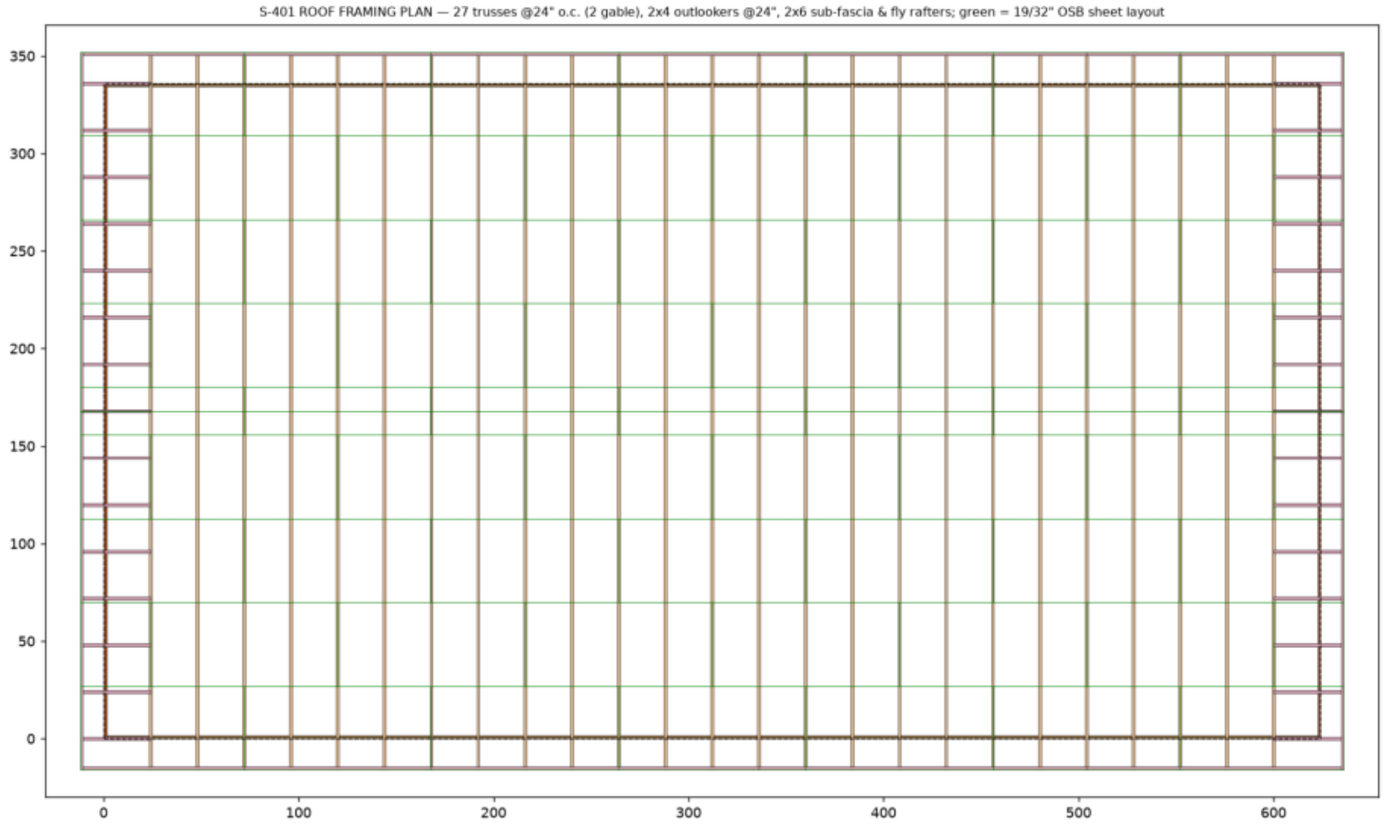
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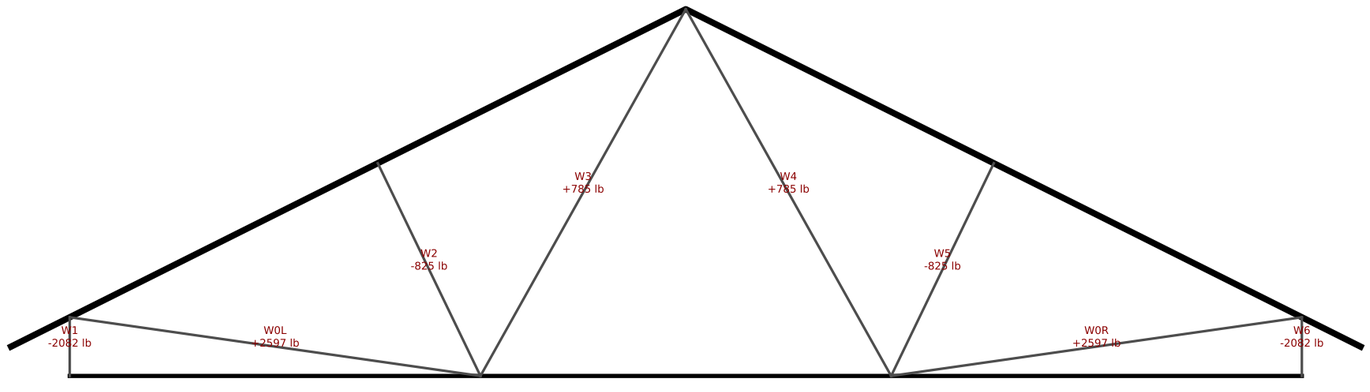
WALL FRAMING ELEVATION — EXT-W

Scale: ≈ 1/4" = 1'-0"

Date: 2026-10-20 Rev 0

S-304





28'-0" raised-heel Fink, 6:12, 24" o.c., heel 16", overhang 16" · TC 2x6 & BC 2x4 MSR 2100f-1.8E, webs 2x4 SPF #2 · reactions (D+S) 2158 lb · uplift 153 lb → H2.5A

Design: TCLL 50 psf snow + unbalanced 65 psf leeward; TCDL 10; BCLL 10; BCDL 10 · forces shown = D+S (+tension) · manufacturer's sealed truss drawings govern (R802.10.1)

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Design loads: pg 65 psf (CRREL) · V 112 mph Exp B · SDC B · frost 48"

DESIGN DOCUMENT — generated from model/ (Python)

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professionals & permitted septic designer.

ROOF FRAMING PLAN & TRUSS PROFILE

Scale: AS NOTED

Date: 2026-10-20 Rev 0

S-401

Connection / governing rule	Fastener	Count
IRC R602.3(1) #32 subfloor 23/32", 8d common @6" edges / 12" field + APA AFG-01 adhesive	8d common 2-1/2" x 0.131"	3,367
IRC Table R602.3(3) 7/16" 24/16, 8d common @6" edges / 12" field (≤170 mph Exp B)	8d common 2-1/2" x 0.131"	3,210
IRC R602.3(1) #32 roof 19/32": 8d common @6" edges & intermediate (wind 112 Exp B → 6")	8d common 2-1/2" x 0.131"	2,836
IRC Table R602.3(3) panel edge / plate nailing 8d common @6"	8d common 2-1/2" x 0.131"	1,865
IRC R602.3(1) #17 bottom plate to stud, 2-16d common end nail	16d common 3-1/2" x 0.162"	710
IRC R602.3(1) #17 top plate to stud, 2-16d common end nail	16d common 3-1/2" x 0.162"	574
IRC R602.3(1) #9 stud to stud at braced wall panel, 16d common @16"	16d common 3-1/2" x 0.162"	424
IRC R602.3(1) #30-analog: blocking to stud, 2-16d common end nail	16d common 3-1/2" x 0.162"	288
IRC R602.3(1) #13 top plate to top plate, 16d common @16" o.c.	16d common 3-1/2" x 0.162"	286
heel panel to truss heel vertical, 8d common @6"	8d common 2-1/2" x 0.131"	264
IRC R602.3(1) #16 bottom plate to rim/joist at braced wall panel, 2-16d common @16"	16d common 3-1/2" x 0.162"	254
Simpson H2.5A → truss: 5-SD9112 (SPF uplift 540 lb)	Simpson SD9112 #9 x 1-1/2" connector scr	250
Simpson H2.5A → double top plate: 5-SD9112	Simpson SD9112 #9 x 1-1/2" connector scr	250
IRC R602.3(1) #27 rim to joist, 3-16d common end nail	16d common 3-1/2" x 0.162"	228
IRC R602.3(1) #22 joist to sill, 3-8d common toe nail	8d common 2-1/2" x 0.131"	228
IRC R602.3(1) #22 joist to girder, 3-8d common toe nail	8d common 2-1/2" x 0.131"	228
IRC R602.3(1) #12 full-height stud to end of header, 3-16d common end nail	16d common 3-1/2" x 0.162"	220
IRC R602.3(1) #1 blocking to truss, 2-16d common end nail	16d common 3-1/2" x 0.162"	216
IRC R602.3(1) #23 rim to sill, 8d common @6" toe nail	8d common 2-1/2" x 0.131"	212
IRC R602.3(1) #14 double top plate splice, 8-16d common each side, 24" lap	16d common 3-1/2" x 0.162"	176
IRC R602.3(1) #6 truss to plate, 3-10d common (2 toe one side, 1 opposite)	10d common 3" x 0.148"	162
IRC R602.3(1) #1 blocking to top plate, 3-8d common toe nail	8d common 2-1/2" x 0.131"	156
IRC R602.3(1) #15 bottom plate to joist/blocking, 16d common @16"	16d common 3-1/2" x 0.162"	148
Simpson LUS210 header-face: 8-SD9112 (SPF floor 1,235 lb)	Simpson SD9112 #9 x 1-1/2" connector scr	128
IRC R602.3(1) #10 built-up header, 16d common @16" each edge	16d common 3-1/2" x 0.162"	126
IRC R602.3(1) #23 end joist to sill, 8d common @6" toe nail	8d common 2-1/2" x 0.131"	120
IRC R502.6.1 lapped joists, 3-10d common face nails	10d common 3" x 0.148"	114
sub-fascia to truss tail, 2-16d common end nail	16d common 3-1/2" x 0.162"	112
gable truss BC to top plate, 8d common @6" toe nail (R602.3(1) #23 analog)	8d common 2-1/2" x 0.131"	110
IRC R602.3(1) #8 stud to stud, 16d common @24"	16d common 3-1/2" x 0.162"	88
IRC R602.3(1) #28 built-up girder, 20d common @32" top & bottom staggered	20d common 4" x 0.192"	78
tread to stringer: construction adhesive + 2-8d finish/trim screws per stringer	8d common 2-1/2" x 0.131"	78
Simpson LUS210 joist: 4-SD9212	Simpson SD9212 #9 x 2-1/2" connector scr	64
outlooker to first common truss, 2-16d common end nail (R602.3(1) #7 analog)	16d common 3-1/2" x 0.162"	64
outlooker to gable truss TC, 2-16d common face nail	16d common 3-1/2" x 0.162"	64
fly rafter to outlooker, 2-16d common end nail	16d common 3-1/2" x 0.162"	64
IRC R602.3(1) #17 sill to cripple, 2-16d common end nail	16d common 3-1/2" x 0.162"	58
IRC R602.3(1) #17 bottom plate to cripple, 2-16d common end nail	16d common 3-1/2" x 0.162"	58
IRC R602.3(1) #17 end nail: jack to rough sill, 2-16d common	16d common 3-1/2" x 0.162"	56
IRC R602.3(1) #17 top plate to cripple, 2-16d common end nail	16d common 3-1/2" x 0.162"	48
IRC R602.3(1) #17 flat header to cripple, 2-16d common end nail	16d common 3-1/2" x 0.162"	48
IRC R602.3(1) #28 2-20d common at ends and each splice	20d common 4" x 0.192"	48
IRC R403.1.6 1/2" anchor bolt, 7" embed, ≤6' o.c., ≤12" from ends	1/2" x 10" J anchor bolt + nut + 3x3x0.2	42
Simpson LUS210-2 header-face: 8-SD9112 (SPF floor 1,365 lb)	Simpson SD9112 #9 x 1-1/2" connector scr	32
IRC R602.3(1) #28 doubled trimmer, 20d common @32" staggered	20d common 4" x 0.192"	28
cap plate to girder, 4 x 1/4" x 3" lag screws	1/4" x 3" lag screw	24
IRC R602.3(1) #28 doubled header, 20d common @32" staggered	20d common 4" x 0.192"	24
Simpson LUS210-2 joist: 6-SD9212	Simpson SD9212 #9 x 2-1/2" connector scr	24
IRC R602.3(1) #17 PT plate to stud, 4-8d common toe nail (2 shown per side)	8d common 2-1/2" x 0.131"	20
IRC R602.3(1) #17 PT plate to stud, toe nail 8d common	8d common 2-1/2" x 0.131"	20
base plate to pad, 2 x 1/2" wedge anchors (R407.3 restraint)	1/2" x 4-1/4" wedge anchor (3" embed)	12
ENG (calcs/structural.md §6): 10-10d common staggered, ledger to trimmer	10d common 3" x 0.148"	10
IRC R602.3(1) #13 top plate to top plate, 16d common @16"	16d common 3-1/2" x 0.162"	10
IRC R602.3(1) #18 top plates lap at corner, 2-16d common face nail	16d common 3-1/2" x 0.162"	8
1/4" x 2-1/4" concrete screw @32" (nonbearing) — listed as wedge anchor family	1/2" x 4-1/4" wedge anchor (3" embed)	5
1/2" wedge anchor @48" o.c., ≤12" from ends	1/2" x 4-1/4" wedge anchor (3" embed)	4
ENG: 2 x SDWS 1/4" x 6" through ledger + trimmer plies	Simpson SDWS22600 0.22" x 6" structural	2

Total located fasteners: 18,343. Every fastener's coordinates, direction and joined members: model/out/fasteners.csv. Nails: bright common unless noted; PT lumber contact: hot-dip galvanized (R317.3). Connectors G90 (ZMAX at PT).

9 BANCROFT RD — SINGLE-FAMILY RESIDENCE

Londonderry, NH 03053 · Map 012 Lot 047-2

Codes: IRC 2024 · NEC 2023 · IECC 2018 (NH amended 2026-07-01) · NHDES Env-Wq 1000

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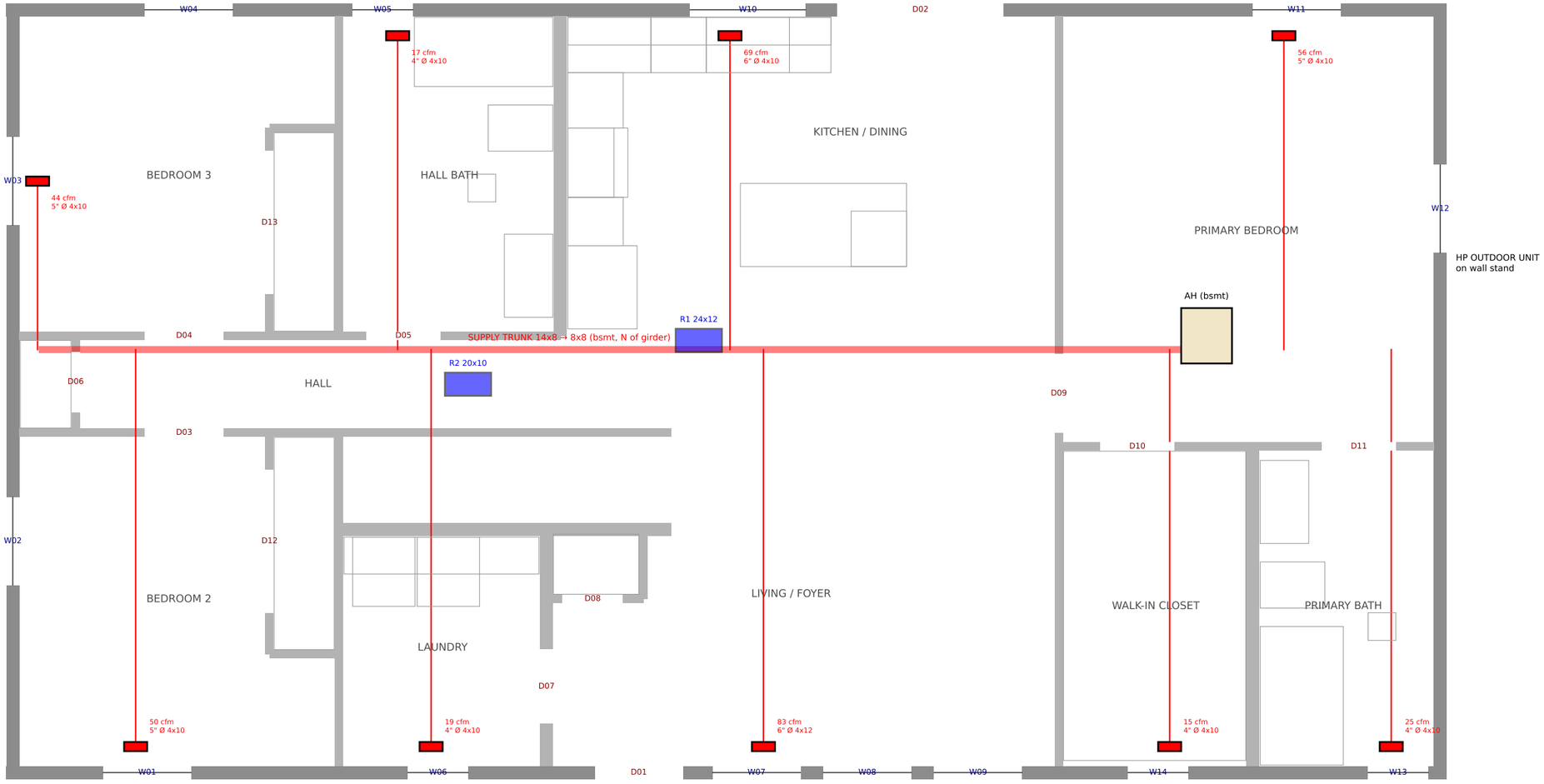
professionals & permitted septic designer.

FASTENING & CONNECTOR SCHEDULE (counts from model)

Scale: AS NOTED

Date: 2026-10-20 Rev 0

S-601



Airflow 642 cfm total (main 384, bsmt 264); FR 0.08"/100'; seal with UL 181 mastic; all ducts inside envelope. ERV 60 cfm integrated to AH return. Bath fans 80 cfm & range hood 250 cfm ducted to roof caps; dryer to S rim (≤35 ft equiv).

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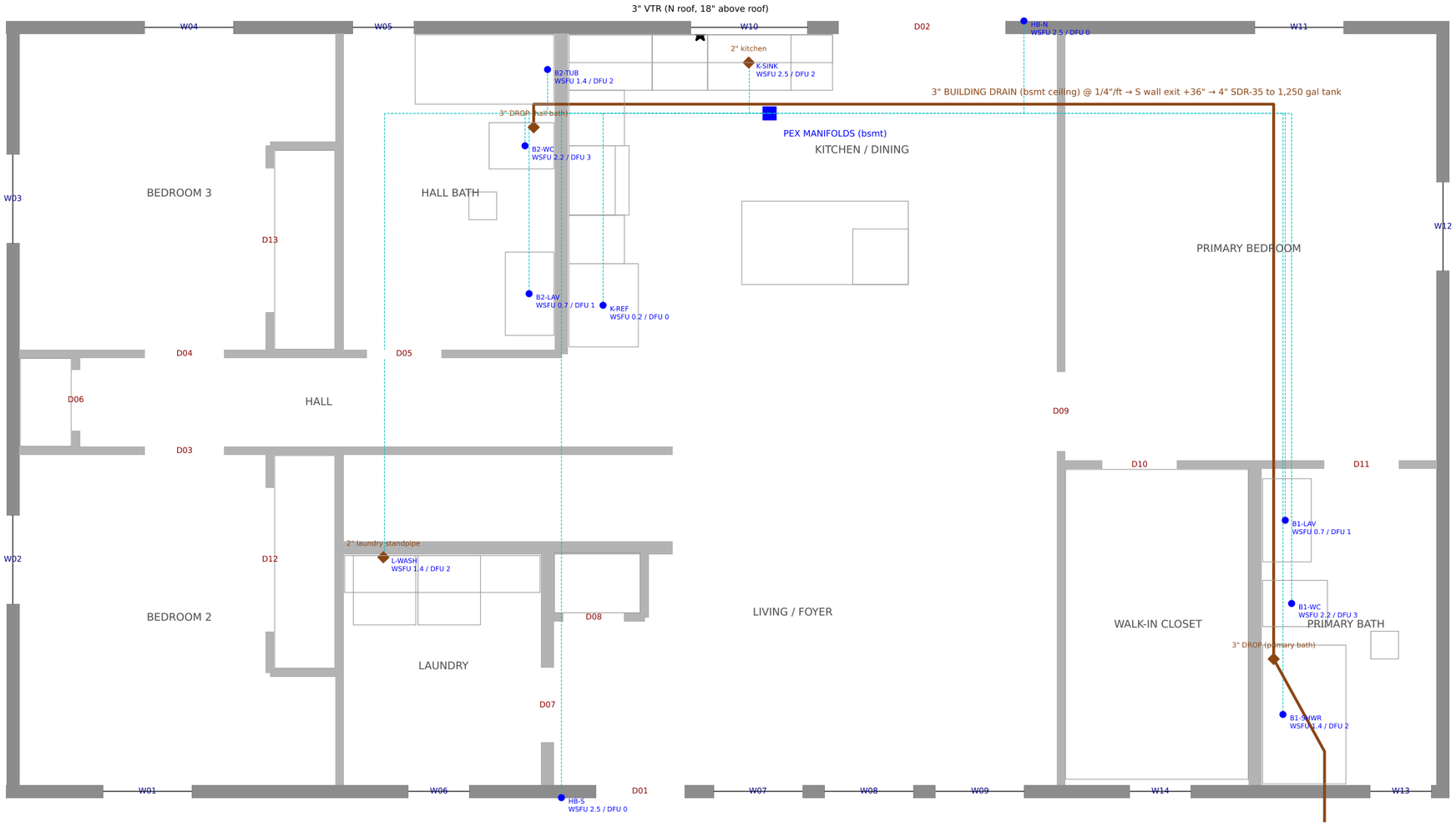
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HVAC PLAN (supply red, returns blue)

Scale: ≈ 3/16" = 1'-0"

Date: 2026-10-20 Rev 0

M-101



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PLUMBING PLAN (supply home-runs dashed, drain solid)

Scale: ≈ 3/16" = 1'-0"

Date: 2026-10-20 · Rev 0

P-101

Supply: well 12 gpm 1-1/2 hp, 62 gal tank 50/70 psi, 1" sediment filter, softener/UV provisions; home-run PEX-A (3/8" lav/ice, 1/2" others, 3/4" hose bibbs). Demand 18.7 gpm (17.7 WSFU). DWV 12 DFU: 3" bldg drain, 2" wet vents, 1-1/2" dry vents, single 3" VTR. HPWH 50 gal @140 °F + ASSE 1017 mixing valve. 2 zone expansion tank.



o duplex TR receptacle (GFCI where noted in schedule) · S switch · X light · H smoke alarm (interconnected) · P exhaust fan · ■ j-box · D disconnect · blue = circuit #

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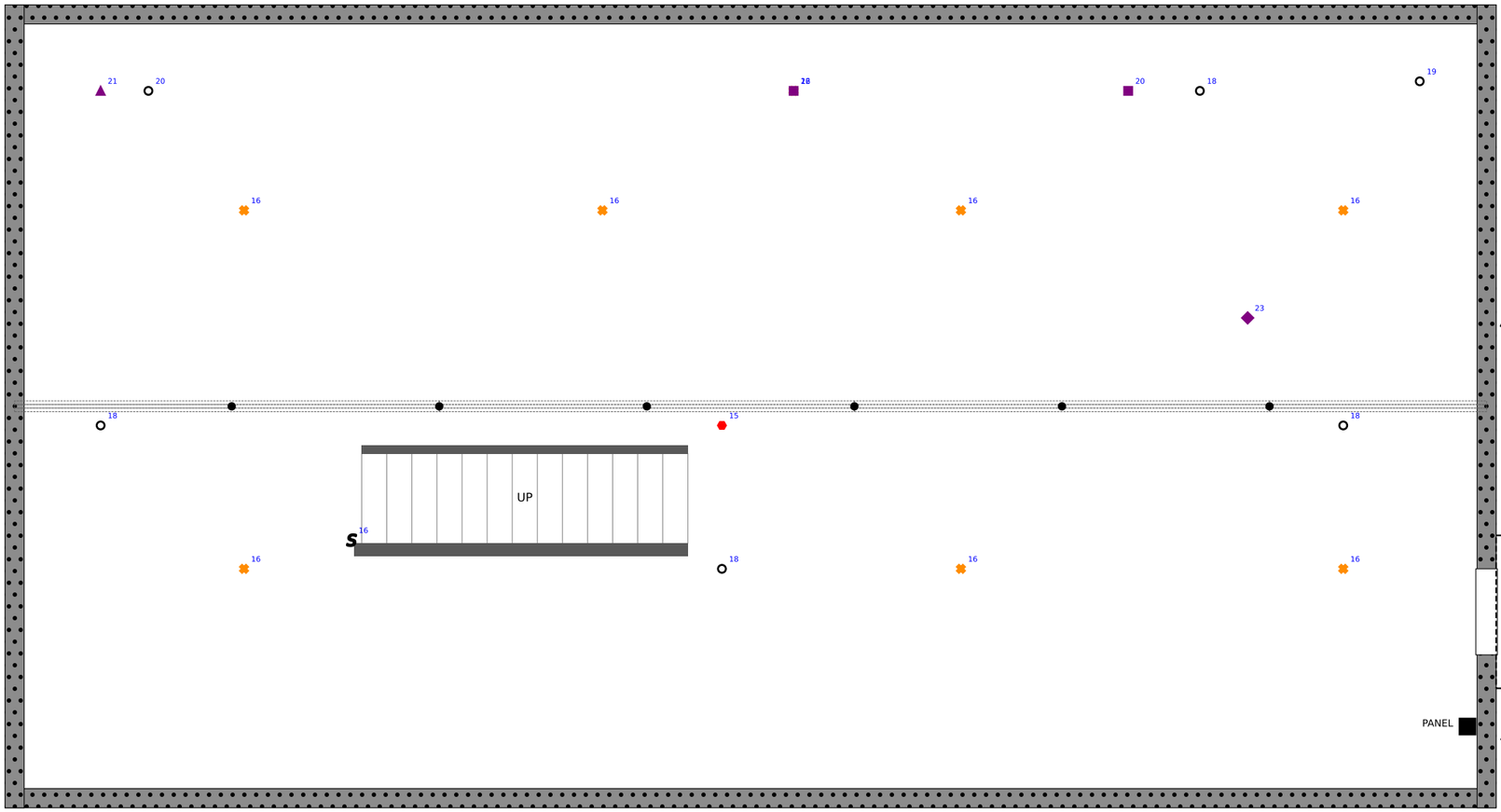
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ELECTRICAL PLAN — MAIN FLOOR

Scale: ≈ 3/16" = 1'-0"

Date: 2026-10-20 Rev 0

E-101



o duplex TR receptacle (GFCI where noted in schedule) · S switch · X light · H smoke alarm (interconnected) · P exhaust fan · ■ j-box · D disconnect · blue = circuit #

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ELECTRICAL PLAN — BASEMENT & SERVICE

Scale: ≈ 3/16" = 1'-0"

Date: 2026-10-20 Rev 0

E-102

Spaces	Ckt	Breaker	Wire	Load
1-2	6	50 A 2P GFCI	6/3 NM-B (Cu)	Range 12 kW
3-4	9	30 A 2P GFCI	10/3 NM-B	Dryer 5 kW
5-6	21	20 A 2P standard	12/2 NM-B	Well pump 1-1/2 hp 230 V (via control box + pressure switch)
7-8	22	30 A 2P standard	10/2 NM-B	Heat-pump water heater (4.5 kW)
9-10	23	30 A 2P standard	10/2 NM-B	Air handler + 5 kW strip
11-12	24	25 A 2P standard	10/2 UF-B / THWN in conduit	Heat pump outdoor unit (2 ton)
13-14	25	space	—	Spare — future EV / generator inlet (2-pole space reserved)
15	1	20 A 1P DF (AFCI+GFCI)	12/2 NM-B	Kitchen small-appliance #1 (N counter + island)
16	2	20 A 1P DF (AFCI+GFCI)	12/2 NM-B	Kitchen small-appliance #2 (W counter + dining wall)
17	3	20 A 1P DF (AFCI+GFCI)	12/2 NM-B	Refrigerator
18	4	20 A 1P AFCI	12/2 NM-B	Dishwasher (hardwired j-box)
19	5	20 A 1P DF (AFCI+GFCI)	12/2 NM-B	Microwave drawer (island)
20	7	15 A 1P AFCI	14/2 NM-B	Kitchen lighting + range hood
21	8	20 A 1P DF (AFCI+GFCI)	12/2 NM-B	Laundry receptacle (washer)
22	10	20 A 1P GFCI	12/2 NM-B	Bathroom receptacles (both baths)
23	11	20 A 1P AFCI	12/2 NM-B	Living / foyer / hall receptacles
24	12	15 A 1P AFCI	14/2 NM-B	Living / dining / foyer / hall lighting + exterior front & rear door l
25	13	15 A 1P AFCI	14/2 NM-B	Primary bedroom + WIC receptacles & lighting
26	14	20 A 1P AFCI	12/2 NM-B	Bedroom 2 receptacles
27	15	15 A 1P AFCI	14/3 NM-B (interconnect)	Bedrooms 2/3, linen, hall-bath, laundry lights & fans + smoke alarms (
28	16	15 A 1P AFCI	14/2 NM-B	Primary bath light/fan + stair & basement lighting
29	17	20 A 1P GFCI	12/2 NM-B	Outdoor receptacles (front, rear, east @ HP)
30	18	20 A 1P GFCI	12/2 NM-B	Basement receptacles (general)
31	19	20 A 1P GFCI	12/2 NM-B	Sump pump
32	20	15 A 1P GFCI	14/2 NM-B	ERV + water treatment (UV)
33	26	20 A 1P AFCI	12/2 NM-B	Bedroom 3 receptacles

LOAD (NEC 220.82 optional): 28,625 VA = 119.3 A; standard method 36,919 VA = 153.8 A → 200 A service.

SERVICE: Eversource UG, 3" Sch40 PVC, RGS sweeps; 200 A meter-main (NEC 230.85 outdoor emergency disconnect) → 4/0-4/0-2/0-4 Al SER feeder → 200 A main-lug 40-space panel (neutral & ground separated).

GROUNDING: concrete-encased electrode (20 ft #4 footing rebar, #4 Cu GEC) + 2 ground rods 5/8"x8' ≥ 6' apart (#6 Cu); bond water piping (#4 Cu); IBTB at meter. NH deleted 230.67 → SPD optional (provided).

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PANEL SCHEDULE · LOAD CALCULATION · SERVICE & GROUNDING

Scale: AS NOTED

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E-601