Abbreviations

ADJ	adjustable
AFF	above finish floor
APPROX	approximate
ASL	above sea level
ASS'Y	assembly
AVG	average
BF	building felt
BIB	blown in blanket
BLDG	building
BMP	best management practice
BTM	bottom
BTWN	between
ccSPF	closed-cell spray polyurethane foam
CFM	cubic feet per minute
CL	centerline
CLG	ceiling
CLR	clear
CLOS	closet
CO	combination smoke/carbon monoxide alarm
CONC	concrete
CONT	continuous
D	dryer
DBL	double
DHW	domestic hot water
DN	down
DS	downspout
DTL	detail
DW	dishwasher
(E)	existing
EA	each
EFG	existing & finished grade
EL	elevation
ELEC	electric, electrical
EPS	expanded polystyrene
E/W	each way
EXP	expansion
EXIST	existing
EXT	exterior
FB	flush beam
FD	floor drain
FDN	foundation
FF	finish floor
FIN	finish/ed
FO	face of...
FOIC	furnished by owner, installed by contractor
FTG	footing
GLB	glue laminated beam
GWB	gypsum wall board
HB	hose bib
HDR	header
HORZ	horizontal
HT	height
HVAC	heating, ventilation, air conditioning
HW	hot water
INSUL	insulation
INT	interior
LOCN	location(s)
LSL	laminated strand lumber
LVL	laminated veneer lumber
MANUF	manufacturer
MAX	maximum
MECH	mechanical
MFR	manufacturer
MIN	minimum
MW	microwave
(N)	new
NCP	no changes proposed
NIC	not in contract
O/	over, on
O/C	on center
OH	overhang
OP	opening
PERF	perforated
PIP	poured in place
PL	property line
PLY	plywood
POLYISO	polyisocyanurate
PSL	parallel strand lumber
PT	pressure treated
PTD	painted
R	riser
REF	refrigerator
REINF	reinforced
REQD	required
RO	rough opening
R-O-W	right of way
SF	square foot
SH	shelf/shelves
SHTG	sheathing
SM	smoke alarm
SOG	slab on grade
SPEC(S)	specifications
SQ	square
STRUCT	structural
SUBFLR	subfloor
TBD	to be determined
TEMP	temporary
ToC	top of concrete
ToP	top of (wall) plate
ToR	top of roof
TPO	thermoplastic polyolefin (membrane)
TR	tread
TYP	typical
UNO	unless noted otherwise
VIF	verify in field
W	washer
W/	with
WD	wood
WH	water heater
WRB	weather-resistive barrier
XPS	extruded polystyrene

WASHINGTON STATE UNIVERSITY
Energy Program

Permit#			
Address or Lot & Block			
5331 Forest Ave SE			
City	Mercer Island	Zip	98040

These requirements apply to all the IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Instructions: This single-family project uses the requirements of the Prescriptive Path below to incorporate the minimum values listed. Based on the conditioned floor area of the structure, the number of required additional credits must be selected by the permit applicant.

Provide all information from the following tables in building permit drawings: Table R402.1.2 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and R406.3 Energy Credits.

Authorized Representative Signature		Date	2/17/2025

	All Climate Zones Table 402.1.3	and Table R402.1.2
	R-Value [a]	U-Factor [a]
Fenestration U-Factor [b, j]	n/a	~~0.30~~ see option 1.2 below
Skylight U-Factor [a]	n/a	0.50
Ceiling [a]	60	0.024
Above-Grade Wall U-Factor [a,j]	20+5 or 13+10	0.056
Floor U-Factor	~~30~~	~~0.029~~ see option 1.2 below
Below Grade Wall U-Factor [c,h]	~~10/15/21 int + 5TB~~	~~0.035~~ see option 1.2 below
Slab [d,i] On Grade F-Factor	10, 4 ft	~~0.54~~ see option 1.2 below

a	R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A101.4 shall not be less than the R-value specified in the table
b	The fenestration *U*-factor column excludes skylights.
c	"10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.
d	R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
e	For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
f	R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
g	For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for climate zone 5 of ICC 400.
h	Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78 percent of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.
i	The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "R13+10" means R-13 cavity insulation plus R-10 continuous insulation
j	A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in windborne debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.

Each dwelling unit ***in a residential building*** shall comply with sufficient options from Table R406.2 (Energy Equalization credits) and Table 406.3 (energy credits) to achieve the minimum number of credits from the list below. To claim credits, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. Small Dwelling Unit: ..... **5.0 credits**
   Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building greater than 500 square feet of heated floor area but less than 1500 square feet.
2. Medium Dwelling Unit: ..... **8.0 credits**
   All dwelling units that are not included in #1, #3 or #4.
3. Large Dwelling Unit: ..... **9.0 credits**
   Dwelling units exceeding 5000 square feet of conditioned floor area.
4. Dwelling units serving Group R-2 occupancies: ..... **6.5 credits**
   Section R401.1 and Residential Building Section R202 for Group R-2.
5. Additions 150 square feet to 500 square feet: ..... **2.0 credits**

The drawings included with the building permit application shall identify which options have been selected and the point value of each option, regardless of whether separate mechanical, plumbing, electrical, or other permits are utilized for the project

Before selecting your credits on this Summary table, review the option descriptions in Table R406.3 (Single Family).

Table R406.2 ENERGY EQUALIZATION CREDITS

System Type	Description of Primary Heating Source	Credits - select ONE system type	
1	For combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C403.3.2(5) or C403.3.2(6)	0	☐
2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) and supplemental heating provided by electric resistance or a combustion furnace meeting minimum standards listed in Table C403.3.2(5)b found in the 2021 WSEC- COMMERCIAL ENERGY CODE	1.5	☐
3	For heating system based on electric resistance only (either forced air or Zonal)	0.5	☐
4[c]	For heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or C403.3.2(9) or Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	3.0	☒
5	For heating system based on electric resistance with: 1. Inverter-driven ductless mini-split heat pump system installed in the largest zone in the dwelling, or 2. With 2kW or less total installed heating capacity per dwelling	2.0	☐

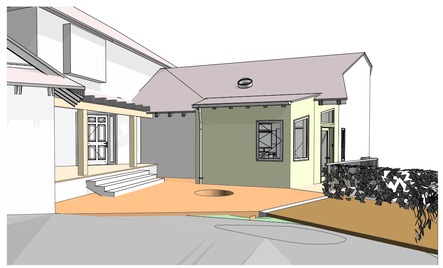
a. See Section R401.1 and residential building in Section R202 for Group R-2 scope.
b. The gas back-up furnace will operate as fan-only when the heat pump is operating. The heat pump shall operate at all temperatures above 38°F (3.3°C) (or lower). Below that "changeover" temperature, the heat pump would not operate to provide space heating. The gas furnace provides heating below 38°F (3.3°C) (or lower).
c. Additional points for the HVAC system are included in Table R406.3.

Summary of Table R406.3

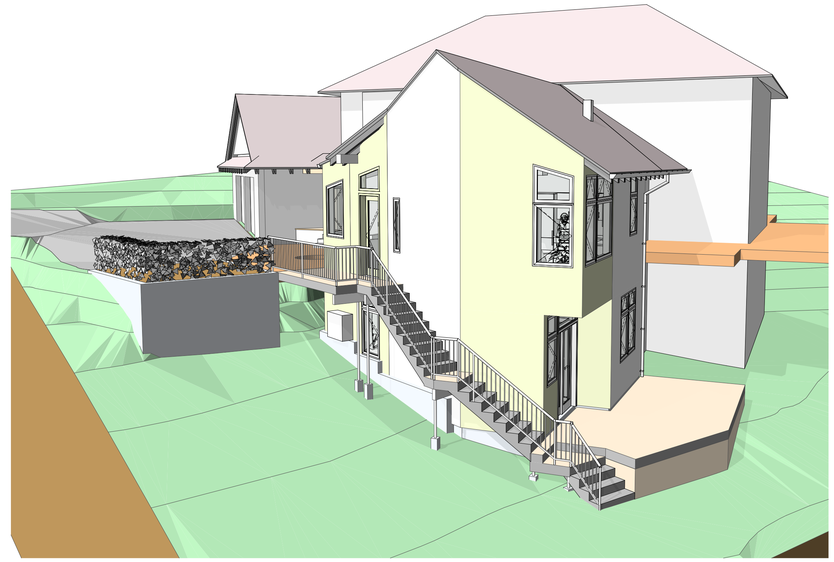
Options	*Energy Credit Option Descriptions*	*Credits – limited to one energy option from each category [f]*		*Comments:*
1.1	Efficient Building Envelope	0.5	☐	
1.2	Efficient Building Envelope	1.0	■	fenestration U-0.25, floor R-38, bsmt wall R-21int + R-5cont, ceiling R-60, slab R-10 perimeter & under entire slab
1.3	Efficient Building Envelope	1.5	☐	
1.4	Efficient Building Envelope	2.5	☐	
2.1	Air Leakage Control and Efficient Ventilation	1.0	☐	
2.2	Air Leakage Control and Efficient Ventilation	1.5	☐	
2.3	Air Leakage Control and Efficient Ventilation	2.0	☐	
3.1[a]	High Efficiency HVAC	1.0	☐	
3.2[a]	High Efficiency HVAC	0.5	☐	
3.3[a,c,d]	High Efficiency HVAC	0.5	☐	
3.4[a,d]	High Efficiency HVAC	1.5	☐	
3.5[d]	High Efficiency HVAC	1.5	☐	
3.6[a]	High Efficiency HVAC	1.0	☐	
3.7[a,c,d,e]	High Efficiency HVAC	2.0	☐	
3.8[a,d]	High Efficiency HVAC	1.0	☐	
3.9	High Efficiency HVAC	1.5	☐	
3.10[f]	High Efficiency HVAC	2.5	☐	
3.11[f]	High Efficiency HVAC	0.5	☐	
4.1	High Efficiency HVAC Distribution System	0.5	☐	
5.1	Efficient Water Heating	0.5	☐	
5.2	Efficient Water Heating	0.5	☐	
5.3	Efficient Water Heating	0.5	☐	
5.4	Efficient Water Heating	1.0	■	Energy Star-rated gas WH, UEF = 0.91 min
5.5	Efficient Water Heating	1.5	☐	
5.6	Efficient Water Heating	2.0	☐	
5.7	Efficient Water Heating	2.5	☐	
5.8	Efficient Water Heating	2.5	☐	
6.1	Renewable Electric Energy (4.5 credits max)	0.5-4.5	0.0	
7.1	Appliance Package	0.5	☐	
	Total Credits	5.0		Calculate Total

a. An alternative heating source sized at a maximum of 0.5 Watts/ft2 (equivalent) of heated floor area or 500 Watts, whichever is bigger, may be installed in the dwelling unit.
b. See Section R401.1 and residential building in Section R202 for Group R-2 scope.
c. Option 3.11 can only be taken with Options 3.1 and 3.3. To qualify to claim Option 3.11 with 3.3, the system shall be a 1-2 speed heat pump system. Variable capacity heat pumps are ineligible from claiming this option.
d. This option may only be claimed if serving System Type 4 from Table R406.2.
e. Primary living areas include living, dining, kitchen, family rooms, and similar areas.
f. Option 3.10 may only be taken with Efficient Water Heating Options 5.1 or 5.2. Equipment sizing for space heating shall be calculated as provided in Section R403.7 with increased capacity to provide a minimum of 75 percent of peak hot water demand or shall be sized in accordance with approved manufacturer's specifications or guidance. Supplementary heat for water heating system shall be in accordance with Section R403.5.7.

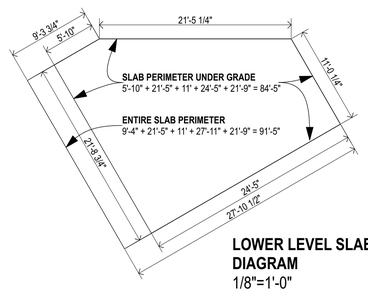
Interior View, Day Room



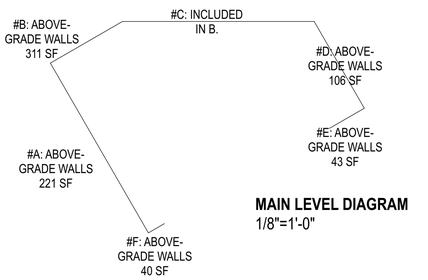
View from Drive



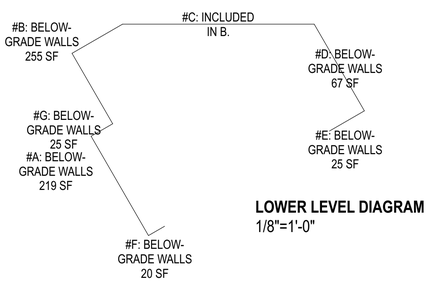
View from Northwest



LOWER LEVEL SLAB DIAGRAM
1/8"=1'-0"



MAIN LEVEL DIAGRAM
1/8"=1'-0"



LOWER LEVEL DIAGRAM
1/8"=1'-0"

WALL SURFACE CALCS

ABOVE	BELOW
#A: 221	219
#B & C: 311	255
#D: 106	67
#E: 43	25
#F: 20	20
#G: 0	25
TOTAL 701 SF	TOTAL 611 SF

Simple Heating System Size: Washington State

This heating system sizing calculation is based on the Prescriptive Requirements of the 2018 and 2021 Washington State Energy Code (WSEC) . This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

This tool is for the permitting purposes only. A Manual J calculation is required to meet the requirement of the Washington State Energy Code.

Project Information: 5331 Forest Ave SE, Mercer Island WA 98040
Contact Information: David DiMarco 206-355-6795, architect@icloud.com

Heating System Type: ○ All Other Systems ● Heat Pump

Design Temperature — Mercer Island — Design Temperature 25; Design Temperature Difference (ΔT) 45 (ΔT = Indoor (70 degrees) - Outdoor Design Temp)

Area of Building — Conditioned Floor Area — Conditioned Floor Area (sq ft) 895

Average Ceiling Height — Average Ceiling Height (ft) 9.2 — Conditioned Volume 8,771

Glazing and Doors — 0.26

Skylights

Insulation — Attic 0.49

U-Factor	X	Area	=	UA
0.024		494		11.86
U-Factor	X	Area	=	UA
—		—		—
U-Factor	X	Area	=	UA
0.045		701		31.55
U-Factor	X	Area	=	UA
0.025		26		0.65
Wall U-Factor	X	Area	=	UA
0.040		611		24.44
Slab F-Factor	X	Length	=	UA
0.560		410		229.60
F-Factor	X	Length	=	UA
0.360		410		147.60

Single Rafter or Joist Vaulted Ceilings — —

Above Grade Walls (see Figure 1) — 0.39 (0.370 +R-5 ci)

Floors — 0.38

Below Grade Walls and Slabs (see Figure 1) — Wall & Slab R21 Batt w/TB; Depth 8.0' depth

Slab on Grade (see Figure 1) — R-10 Fully Insulated

Location of Ducts — No Ducts

Duct Leakage Coefficient 1.000

Sum of UA	514.74	
Envelope Heat Load (Sum of UA x ΔT)	23,163	Btu / Hour
Air Leakage Heat Load (Volume x 0.5 x 0.018)	4,263	Btu / Hour
Building Design Heat Load (Air leakage + envelope heat loss)	27,426	Btu / Hour
Building and Duct Heat Load	27,426	Btu / Hour
Ducts in unconditioned space: sum of building heat loss x 1.10		
Ducts in conditioned space: sum of building heat loss x 1		
Maximum Heat Equipment Output	34,282	Btu / Hour
Building and duct heat loss x 1.40 for forced air furnace		
Building and duct heat loss x 1.25 for heat pump		

Figure 1 — Above Grade; Below Grade

SYMBOLS LEGEND

- centerline
- joist span direction
- #DrgID / #LayID — section marker
- 1 — revision
- D.1 — door marker
- W.1 — window marker
- S.1 — skylight marker
- CO — carbon monoxide alarm
- SM — smoke alarm
- exhaust fan
- elevation dimension point

PROPERTY DATA

Project Description:
Add a two-story accessory dwelling unit to an existing home.
Remodel entry to existing home.

Address:
5331 Forest Ave SE
Mercer Island, WA 98040

Owners:
Kat Lin & Greg Kicska
5257 Forest Ave SE
Mercer Island, WA 98040

Parcel Number:
2948900013

Legal Description:
LOT B OF MERCER ISLAND SHORT PLAT NO. MI-79-03-09, RECORDED UNDER RECORDING NO. 7911260615, BEING A SUBDIVISION OF LOTS 4 THROUGH 8 AND 23 THROUGH 27, BLOCK 2, AND PORTION OF VACATED BORDER STREET AND OF VACATED ANDERSON STREET, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON; SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

Zoning: R-15 Residential

Construction Type: Type V non-rated

Monitored Fire Alarm Systems:
A NFPA 72- Chapter 29 Monitored Fire Alarm System in compliance with NFPA 72 and City of Mercer Island standards shall be installed throughout the residence. A separate Fire permit is required.

PROJECT TEAM

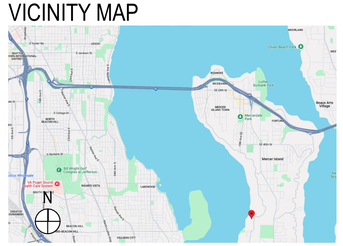
Architect:
David J DiMarco
DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle, WA 98118-4246
206.355.6795
architect@icloud.com

Structural Engineer:
Bryce Dacus, PE
Quantum Consulting Engineers LLC
1511 Third Ave, Suite 323
Seattle, WA 98101
206.957.3911
bdacus@quantumce.com

Civil Engineer:
Audrey Hansen
FACET
9706 – 4th Avenue NE, Suite 300
206.523.0024 ext. 120
ahansen@facetnw.com

Geotechnical Engineer:
Matt McGinnis
Geotech Consultants, Inc.
2401 – 10th Avenue E
Seattle, WA 98102
425-747-5618
mattm@geotechnw.com

VICINITY MAP



SHEET INDEX

Mercer Island Coversheets
SF1 —
SF2 —

Architectural Notes & Site Plan, Survey
A0.0 Coversheet
A0.1 Site Survey
A0.2 Site Plan
A0.3 General Notes

Architectural Plans
A1.0 Main Floor Plan
A1.1 Lower Level Plan
A1.2 Foundation Plan, Roof Plan

Architectural Elevations
A2.0 Exterior Elevations
A2.1 Exterior Elevations

Architectural Sections
A3.0 Building & Wall Sections

Architectural Schedules
A4.0 Window/Door/Skylight Schedules

Architectural 3D Views
A5.0 3D Views

Structural Notes
S1.0 General Structural Notes
S1.1 General Structural Notes

Structural Plans
S2.0 Foundation/Lower Level Framing
S2.1 Main Level Framing
S2.2 Roof Framing

Structural Details
S3.0 Foundation/Slab Details
S3.1 Concrete Details
S4.0 Wood Details
S4.1 Wood Details
S4.2 Floor Details
S4.3 Roof Details

Civil Engineering
C01 Cover Sheet
C02 TESC
C03 Drainage Plan
C04 Details

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

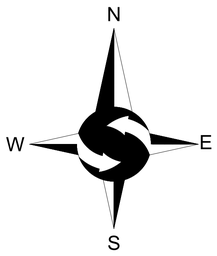
ISSUES:

ADU	11.06.25	REV 2

Coversheet

A0.0

BIMoloud: DiMarco Architecture - BIMoloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



GRAPHIC SCALE

5 0 5 10 20

1 INCH = 10 FT.

LEGEND

- FOUND REBAR AS DESCRIBED
- SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP
- POWER METER
- GAS METER
- HVAC — HVAC UNIT
- UTILITY POLE
- CATCH BASIN
- YARD DRAIN
- WATER METER
- YARD LIGHT
- WROUGHT IRON FENCE
- WOOD FENCE
- CONCRETE WALL
- ROCKERY
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- FLAGSTONE SURFACE
- CE — CEDAR
- DS — DECIDUOUS
- * INDICATES MULTI-TRUNK

LEGAL DESCRIPTION

LOT B OF MERCER ISLAND SHORT PLAT NO. MI-79-03-09, RECORDED UNDER RECORDING NO. 7911260615, BEING A SUBDIVISION OF LOTS 4 THROUGH 8 AND 23 THROUGH 27, BLOCK 2, AND PORTION OF VACATED BORDER STREET AND OF VACATED ANDERSON STREET, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

RECORD OF SURVEY BY TJC LAND SURVEYING, RECORDED UNDER RECORDING NO. 20170830900011, RECORDS OF KING COUNTY, WASHINGTON.

PROJECT INFORMATION

PROPERTY OWNER:	GREGORY KICSKA & KATHLEEN LIN 5257 FOREST AVENUE SE MERCER ISLAND, WA 98040
TAX PARCEL NUMBER:	294890-0013
PROJECT ADDRESS:	5331 FOREST AVENUE SE MERCER ISLAND, WA 98040
ZONING:	R-15
JURISDICTION:	CITY OF MERCER ISLAND
PARCEL ACREAGE:	15,070 S.F. (0.346 ACRES) AS SURVEYED

GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION AND AN EMLID REACH RS2 GPS RECEIVER. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN SEPTEMBER 2024 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

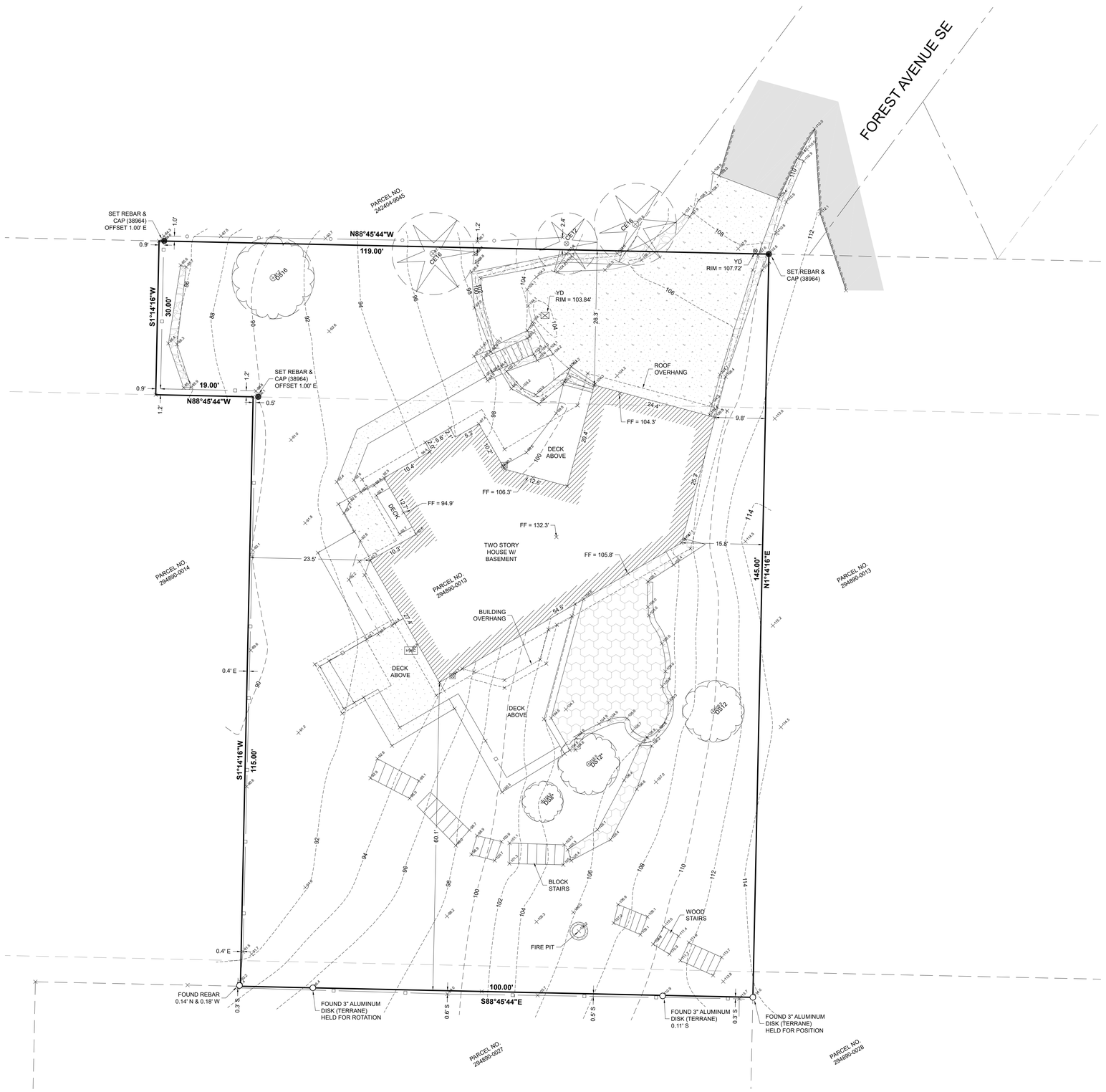
VERTICAL DATUM & CONTOUR INTERVAL

DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM GPS OBSERVATION USING THE WSRN.

DATUM - NAVD 88

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0' FOR THIS PROJECT.



SE 1/4, NE 1/4, SEC 24, TWP 24N, RNG 4E, W.M.

Site Surveying, Inc.
Phone: 425.298.4412
21923 NE 11th Street Sammamish, WA 98074
www.sitesurveymapping.com

WOLDENDORP WASHINGTON THOMAS N. PROFESSIONAL LAND SURVEYOR 38964

DRN

REVISION

DATE

TOPOGRAPHIC SURVEY

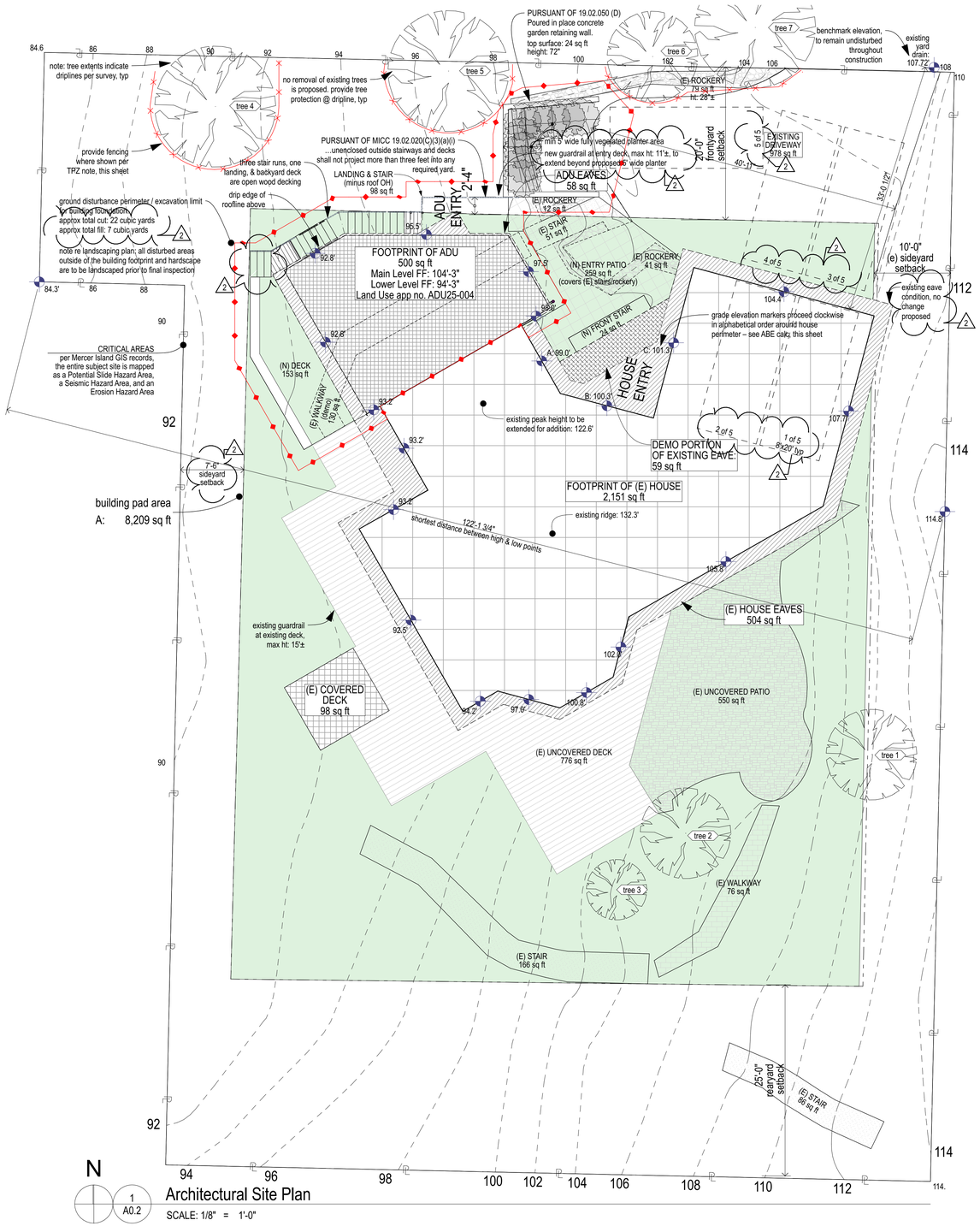
KAT LIN
5331 FOREST AVENUE SE
MERCER ISLAND, WA 98040

© 2024 SITE SURVEYING, INC. ALL RIGHTS RESERVED

PROJECT NO. 24-494

DRAWN BY: MTS
CHECKED BY: TNW
DATE: 9/5/2024

SHEET 1 OF 1



Architectural Site Plan

SCALE: 1/8" = 1'-0"

Property Data

Project Description:
Add a two-story accessory dwelling unit to an existing home. Remodel entry to existing home.

Address:
5331 Forest Ave SE
Mercer Island, WA 98040

Owners:
Kat Lin & Greg Kicska
5257 Forest Ave SE
Mercer Island, WA 98040

Parcel Number:
2948900013

Legal Description:
LOT B OF MERCER ISLAND SHORT PLAT NO. MI-79-03-09, RECORDED UNDER RECORDING NO. 7911260615, BEING A SUBDIVISION OF LOTS 4 THROUGH 8 AND 23 THROUGH 27, BLOCK 2, AND PORTION OF VACATED BORDER STREET AND OF VACATED ANDERSON STREET, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON; SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

Occupancy Type: R-3 Residential

Construction Type: V, non-rated

Lot Zoning: R-15

Lot Size: 15,070sf (0.346 acres)

Existing Footprint: 2,151sf

Proposed ADU Addition Footprint: 500sf

Existing Floor Area: 3,689sf (plus 496sf attached garage)

Proposed ADU Addition Floor Area: 874sf

Critical Areas: Per Mercer Island GIS records, the entire subject site is mapped as a Potential Slide Hazard Area, a Seismic Hazard Area, and an Erosion Hazard Area

Related Records: ADU25-004

Lot Slope Calculation

Highest elevation point of lot:		114.8'
Lowest elevation point of lot:		84.3'
Difference:		30.5'
Horizontal distance between high & low points:		122.15'
Lot Slope:	30.5 ÷ 122.15 =	25%

Lot Coverage Calculation

Gross lot area:		15,070sf
Net lot area:		15,070sf
Allowed lot coverage:		35%
Allowed lot coverage area:		5,274.5sf
Existing lot coverage:		
Main structure roof area:		2,655sf (2151+504)
Accessory building roof area:		0sf
Vehicular use:		978sf
Covered patios/decks:		98sf
Total existing lot coverage:		3,731sf
Total lot coverage area removed:		59sf (existing eave)
Proposed adjustment for single story:		0sf
Proposed adjustment for flag lot:		0sf
New lot coverage:		
Main structure roof area:		558sf (500+58)
Accessory structure roof area:		0sf
Vehicular use:		0sf
Covered patios/decks:		0sf
Total new lot coverage:		558sf
Total project lot coverage area:		4,230sf (3731-59+558)
Proposed lot coverage:		28.1%

Hardscape Calculation

"The hardscape includes, but is not limited to, structures, paved areas, stairs, walkways, decks, patios, rockeries and retaining walls, and similar constructed elements that do not have a roof. The hardscape within the landscaping area consists of materials such as wood, stone, concrete, gravel, permeable pavements or pavers, and similar materials. (...) The hardscape does not include driving surfaces or buildings. In addition, unused lot coverage may also be improved with hardscape."

Gross lot area:		15,070sf
Net lot area:		15,070sf
Area borrowed from lot coverage:		948sf
Allowed hardscape area as percentage:		15.3%
Allowed hardscape area:		2,304sf
Existing hardscape:		
Uncovered decks:		776sf
Uncovered patios:		550sf
Walkways:		206sf (130+76)
Stairs:		303sf (51+166+86)
Rockeries/retaining walls:		132sf (79+12+41)
Total existing hardscape:		1967sf
Total hardscape removed:		234sf (130+51+12+41)
New hardscape:		
Uncovered decks:		153sf*
Uncovered patios:		259sf*
Walkways:		0sf
Stairs:		122sf* (24+98)
Rockeries/retaining walls:		24sf*
Total new hardscape:		558sf*
Total project hardscape:		2,291sf (1967-234+558)
Proposed hardscape:		15.2%

** Figures exempt from impervious surface calculation - see "Impervious Surface Calculation" notes, this sheet*

Gross Floor Area Calculation

(note: No existing or proposed accessory buildings, second/third-story covered decks, or ceiling heights >12ft. No basement area is excluded from gross floor area calculation.)

Building Area	Existing Area	Removed Area	Addition Area	Total
Upper Floor	1,330sf	0	0	1,330sf
Main Floor	1,649sf	0	0	1,649sf
Basement (gross)	710sf	0	0	710sf
Garage	496sf	0	0	496sf
Total	4,185sf			4,185sf
ADU	0	0	912sf	912sf
Staircase modifier	0	0	38sf	38sf
Total	4,185sf	0	874sf	5,059sf

Lot area:	15,070sf
Zone:	R-15
Allowed Gross Floor Area:	6,028sf
Allowed Gross Floor Area as %:	40%
Proposed Gross Floor Area:	5,059sf
Proposed Gross Floor Area as %:	33.6%

Tree Inventory

ID	DBH	Status	Type	Exceptional?	Health
tree 1	12"	retained	deciduous	no	good
tree 2	12"	retained	deciduous	no	fair
tree 3	8"	retained	deciduous	no	good
tree 4	16"	retained	deciduous	no	good
tree 5	16"	retained	cedar	no	good
tree 6	12"	retained	cedar	no	good
tree 7	16"	retained	cedar	no	good

Impervious Surface Calculation

from Mercer Island Municipal Code, 'definitions':

Impervious surfaces: Includes without limitation the following:

1. Buildings - the footprint of the building and structures including all eaves;

2. Vehicular use — driveways, streets, parking areas and other areas, whether constructed of gravel, pavers, pavement, concrete or other material, that can reasonably allow vehicular travel;

3. Sidewalks - paved pedestrian walkways, sidewalks and bike paths;

4. Recreation facilities - decks, patios, porches, tennis courts, sport courts, pools, hot tubs, and other similar recreational facilities;

5. Miscellaneous - any other structure or hard surface which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, or causes water to run off the surface in greater quantities or at an increased rate of flow from present flow rate under natural conditions prior to development.

from Mercer Island Municipal Code 19.02.060 C:

Exemptions. The following improvements will be exempt from the calculation of the maximum impervious surface limits set forth in subsection B of this section:

1. Decks/platforms. Decks and platforms constructed with gaps measuring one-eighth inch or greater between the boards which provide free drainage between the boards as determined by the code official shall be exempt from the calculation of maximum impervious surface limits so long as the surface below the deck or platform is not impervious.

2. Pavers. Pavers installed with a slope of five percent or less and covering no more than ten percent of the total lot area will be calculated as only 75 percent impervious. Provided, however, that all pavers placed in driveways, private streets, access easements, parking areas and critical areas shall be considered 100 percent impervious.

3. Pedestrian-oriented walkways. Uncovered pedestrian walkways constructed with gravel or pavers not to exceed 60 inches in width shall be exempt from the maximum impervious surface limits.

4. Public improvements. Open storm water retention/detention facilities, public rights-of-way and public pedestrian trails shall be exempt from the maximum impervious surface limits.

5. Rockeries/retaining walls. Rockeries and retaining walls shall be exempt from the maximum impervious surface limits.

New impervious surfaces	
ADU, including eaves:	558sf
Uncovered deck (gapped flooring, exempt):	153sf
Uncovered patios (gapped flooring, exempt):	259sf
Front/Side Stairs (gapped boards, exempt):	122sf
Rockeries/retaining walls (exempt):	24sf
Total:	554sf
Existing impervious surface area to be removed:	59sf
Net increase in impervious surface area:	**495sf**

Stormwater Report Requirement

Proposed net increase in impervious surface area is 499 square feet, therefore a Small Project Stormwater Report is required.

Fire Alarm System

Fire Valuation Form determined valuation of newly proposed construction is 17.6% of existing construction. There are also site deficiencies. Therefore a monitored Household Fire Alarm System per NFPA 72 Chapter 29 is required.

Average Building Elevation Calculation

MIDPOINT ELEVATION	x	WALL SEGMENT LENGTH	=	PRODUCT
A: 99.0'		a: 10.2'		1009.8
B: 100.3'		b: 12.6'		1263.8
C: 101. 3'		c: 20.4'		2066.5
D: 104.4'		d: 24.4'		2547.4
E: 107.7'		e: 25.3'		2724.8
F: 105.8'		f: 29.5'		3121.1
G: 102.0'		g: 8.4'		856.8
H: 100.8'		h: 8.0'		806.4
I: 97.0'		i: 8.4'		814.8
J: 94.2'		j: 5.3'		499.3
K: 92.5'		k: 27.4'		2534.5
L: 93.2'		l: 10.3'		960.0
M: 93.2'		m: 12.7'		1183.6
N: 93.2'		n: 2.0'		186.4
O: 92.8'		o: 21.7'		2013.8
P: 92.8'		p: 9.0'		835.2
Q: 95.5'		q: 21.3'		2034.2
R: 97.5'		r: 10.9'		1062.8
S: 98.0'		s: 4.3'		421.4
		272.1 SUM		26,942.4 SUM

26,942.4 ÷ 272.1 = **99.02' AVERAGE BUILDING ELEVATION**
Allowable building height: ABE + 30' = 129.02'
Proposed ridge height: 122.6'
Proposed max height of addition: 122.6' – 99.02' = 23.6'
Proposed max wall height on downhill side: 21.6'

Applicable Codes

Construction shall conform to:
2021 International Residential Code (IRC)
2021 International Mechanical Code (IMC)
2021 International Fuel Gas Code (IFGC)
2021 Uniform Plumbing Code (UPC)
2021 International Fire Code (IFC)
Washington State Energy Code (WSEC)

TREE PROTECTION AREA (TPZ)

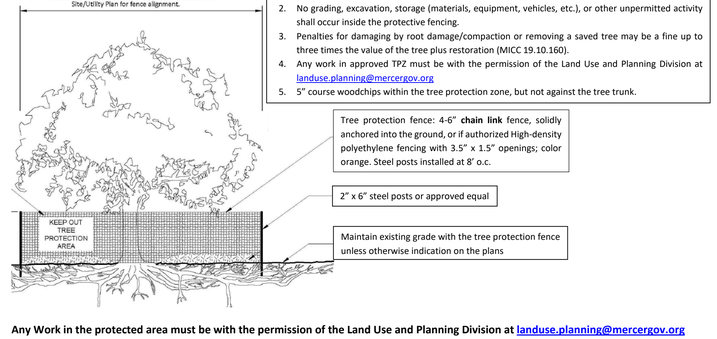
KEEP OUT!

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

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
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.



Any Work in the protected area must be with the permission of the Land Use and Planning Division at landuse.planning@mercergov.org

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

ISSUES:

ADU	11.06.25	REV 2

Site Plan

A0.2

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28\Lin Kicska PERMIT SET 10.28.25

General

- The contractor shall take all necessary precautions to ensure the safety of the occupants and workers at all times during the course of the project.
- All construction shall comply with the 2021 Washington State building codes.
- All construction shall meet the specifications of the structural drawing set.
- It is the responsibility of the contractor to become fully aware of any and all conditions related to the site and existing conditions that may affect the cost or scheduling of construction activities prior to submitting bid.
- All dimensions are to face of framing (not sheathing), centerline of column, or face of concrete unless noted otherwise.
- Contractor shall verify all dimensions and conditions at the job site including, but not limited to, soils and existing utilities, and shall be responsible for same.
- Any discrepancy between the architectural drawings and structural drawings, field conditions, existing dimensions, applicable codes/ordinances/standards, consultant documents and/or other supplementary materials shall be immediately reported to the designer.
- In case of any conflict wherein the methods or standards of installation, or the materials specified, do not equal or exceed the requirements of the codes/ordinances, the codes/ordinances shall govern.
- Do not scale drawings or details. Use given dimensions.
- Check detail drawings for locations of all items not dimensioned on plans.
- Doorways and cased openings without dimensions are to be four inches (finish) from face of adjacent wall or centered between walls unless noted otherwise.
- The 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 designer and structural engineer.
- Building systems and components not specifically detailed shall be installed per manufacturers' recommendations. Notify the designer of any resulting conflicts.
- Contractor shall provide temporary bracing for the structure and structural components until all final connections have been completed in accordance with the plans.
- Contractor shall install dust barriers and other protection as required to protect installed finishes and facilities.
- The contractor and/or the sub-contractors shall apply for, obtain, and pay for all required permits and fees except for the building permit.
- Revised items in the drawing set, when present, are indicated with cloud-shaped outlines. When a portion of a drawing or sheet has been revised, that portion is clouded. When an entire drawing has been revised or added, that drawing's number and title are clouded. When an entire sheet has been revised or added, that sheet's number and title are clouded.

Site

- The contractor shall verify locations of all utilities and services to the site prior to beginning any site improvements.
- No materials are to be stockpiled in the public right-of-way. All rubbish and debris is to be removed from the site.
- Adjacent properties, streets and walks are to be protected from damage at all times.
- All downspouts and roof drains are to be connected to the point of discharge specified on the standard drainage plan and/or site plan by tightline unless site conditions allow for drywells or surface drainage, or unless noted otherwise in construction documents.
- All footings shall be carried to solid, undisturbed original earth. Remove all unsuitable material under footings and slabs and replace with concrete or with compacted fill as directed by a geotechnical engineer.

Utilities

- All existing utility systems for sewer, storm sewer, water, electric, gas, and telephone will remain.

Metal

- Provide galvanic insulation between dissimilar metals.

Wood

- All wood framing details not shown otherwise shall be constructed to the minimum standards of the IRC.
- All wood in direct contact with concrete or exposed weather shall be pressure treated with an approved preservative unless decay-resistant heartwood of cedar or redwood is used. fasteners for pressure treated wood shall be hot dipped galvanized steel, stainless steel, silicon bronze or copper.
- Provide fireblocking vertically at ceiling and floor levels and horizontally at intervals not exceeding 10 feet and as required for concealed spaces under IRC R302.11.

Weather Protection

- All siding methods must have a weather resistive barrier that meets the requirements of IRC R703. General weather protection for the entire project must meet the requirements of IRC R903.

Doors, Windows, Skylights

- Glazing shall conform to federal and local glazing standards.
- All glazing in hazardous locations, defined by IRC R308.4, shall be safety glazing, including but not limited to the safety glazing identified in the construction documents.
- All emergency escape and rescue openings for bedrooms and basements shall meet the requirements of IRC R310. Net clear opening of not less than 5.7 square feet in area, not less than 24 inches in height, and not less than 20 inches in width.
- Security standards shall meet the requirements of IRC R330. Deadbolt (minimum 1/2 inch throw) and viewpoint required at exterior doors. Windows and sliding doors within 10 feet of grade shall be provided with latching devices. All locks shall be able to be opened from the inside without special knowledge or effort.
- All skylights and sloped glazing shall meet the requirements of IRC 308.6.
- Exterior doors shall be 1-3/4 inch solid core with full weatherstrip and threshold. All glazing in exterior doors shall be double glazed with safety glass.

Stairways

- All stairways shall meet the requirements of IRC R311.7. Minimum clear width of the stairway above the handrail shall be 36 inches. Minimum tread depth shall be 10 inches. Maximum riser height shall be 7-3/4 inches. Minimum headroom shall be 80 inches.
- A continuous handrail shall be provided to at least one side of the stairway, mounted 34 to 38 inches above tread nosing.
- Per IRC R302.7: Enclosed accessible space under stairs shall have walls, under-stair surface, and any soffits protected on the underside w/ 1/2" gypsum board.
- Per IRC R311.7.2 exception 1: Where the nosings of treads at the side of a flight of stairs extend under the edge of a floor opening through which the stair passes, the floor opening shall not project horizontally into the required headroom more than 4.75 inches.

Guardrails

- All guardrails for decks, balconies and open railings must meet the requirements of IRC R312. Minimum guardrail height shall be 36 inches. Openings between intermediate members, if any, shall be arranged to prevent passage of a 4 inch sphere.
- All guards are required to meet table R301.5 lateral load values. 2

Electrical

- Electrical drawings are supplementary to the architectural drawings. It shall be the responsibility of each contractor to check with the architectural drawings before installation of their work.
- All electrical work shall be bidder designed, shall comply with all applicable codes and ordinances, and shall adhere to all requirements of the construction documents. Obtain and pay for permits.
- Wiring methods shall be as permitted by code and installation per NECA standards.
- All devices to be specification grade.
- All new electrical panels or load centers to be protected on line side by current limiting fuses.
- All receptacles shall be 15 inches from finished floor to bottom of box unless noted otherwise.
- All switches shall be 42 inches from finished floor to bottom of box unless noted otherwise.
- Verify all receptacles, switch and fixture locations with owner prior to installation.
- All exterior lighting to be shielded and directed away from adjacent properties.

Mechanical

- Mechanical drawings are supplementary to the architectural drawings. It shall be the responsibility of each contractor to check with the architectural drawings before installation of their work.
- All mechanical work shall be bidder designed, shall comply with all applicable codes and ordinances, and shall adhere to all requirements of the construction documents. Obtain and pay for permits.
- All pipes, conduits, ducts, vents, etc. shall be concealed or furred and finished, unless noted as exposed construction on the drawings. Offset studs where required so that finished wall surface will be flush.
- Ventilation of all areas shall conform with WAC 51-11, 51-13 and SRC tables M1507.3.3 and M1507.4.

Plumbing

- Plumbing drawings are supplementary to the architectural drawings. It shall be the responsibility of each contractor to check with the architectural drawings before installation of their work.
- All plumbing work shall be bidder designed, shall comply with all applicable codes and ordinances, and shall adhere to all requirements of the construction documents. Obtain and pay for permits.
- All pipes, conduits, ducts, vents, etc. shall be concealed or furred and finished, unless noted as exposed construction on the drawings. Offset studs where required so that finished wall surface will be flush.
- Provide pressure relief valve for hot water tank. Drain to the outside of the building with drain end not more than two feet nor less than 6 inches above the ground, pointing down.
- Hot water tanks having flexible pipe connections and over four feet tall shall be strapped down to prevent overturn in the event of an earthquake.
- Provide an approved back flow prevention device at all hose bibs.
- Each horizontal drainage pipe shall be provided with a cleanout at its upper terminal.

Energy Efficiency & Indoor Air Quality

- See coversheet for required insulation values.
- Studs in framed insulated walls shall be 16 inches on center, minimum.
- All exterior joints around windows and doors, openings between walls and roofs or foundations, openings at penetrations and all other such openings shall be sealed, caulked, or have a gasket or weatherstripping to limit air leakage per Energy Code.
- Glazing area allowed is unlimited, group R-3 only. All new exterior glazing shall be double glazed (min).
- Provide combustion, ventilation and dilution for any gas appliances per IRC G2407(304).
- Provide venting for all gas heating appliances in accordance with the heating appliance manufacturer's recommendations and the IRC.
- Interior design conditions: (per Energy Code R302) the interior design temperatures used for heating and cooling load calculations shall be a maximum of 72°F (22°C) for heating and minimum of 75°F (24°C) for cooling.
- Source specific ventilation: Ventilation (exhaust) shall be provided in kitchens, bathrooms, and toilet rooms per IRC section M1505.4.4.1:
  - Kitchens: min 250cfm intermittent
  - Bathrooms: 110cfm intermittent
- Makeup air shall be provided per M1503.6 if local mechanical exhaust is ≥401cfm. 2
- Fan controls shall be provided with an on/off manual override switch.
- A residential energy compliance certificate is required to be completed by the builder and permanently posted in a utility room or on the electrical panel per Energy Code R401.3 prior to final inspection.
- The building thermal envelope shall comply with Energy Code sections R402.4.1 through R402.4.4.
- At least one thermostat shall be provided for each separate heating and cooling system per section R403.1.
- A minimum 90% of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps.
- See coversheet for Energy Credit information.
- Air leakage through the building envelope shall not exceed 5.0 air 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.
- Headers at windows and doors shall be insulated to a minimum value of R-10.

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

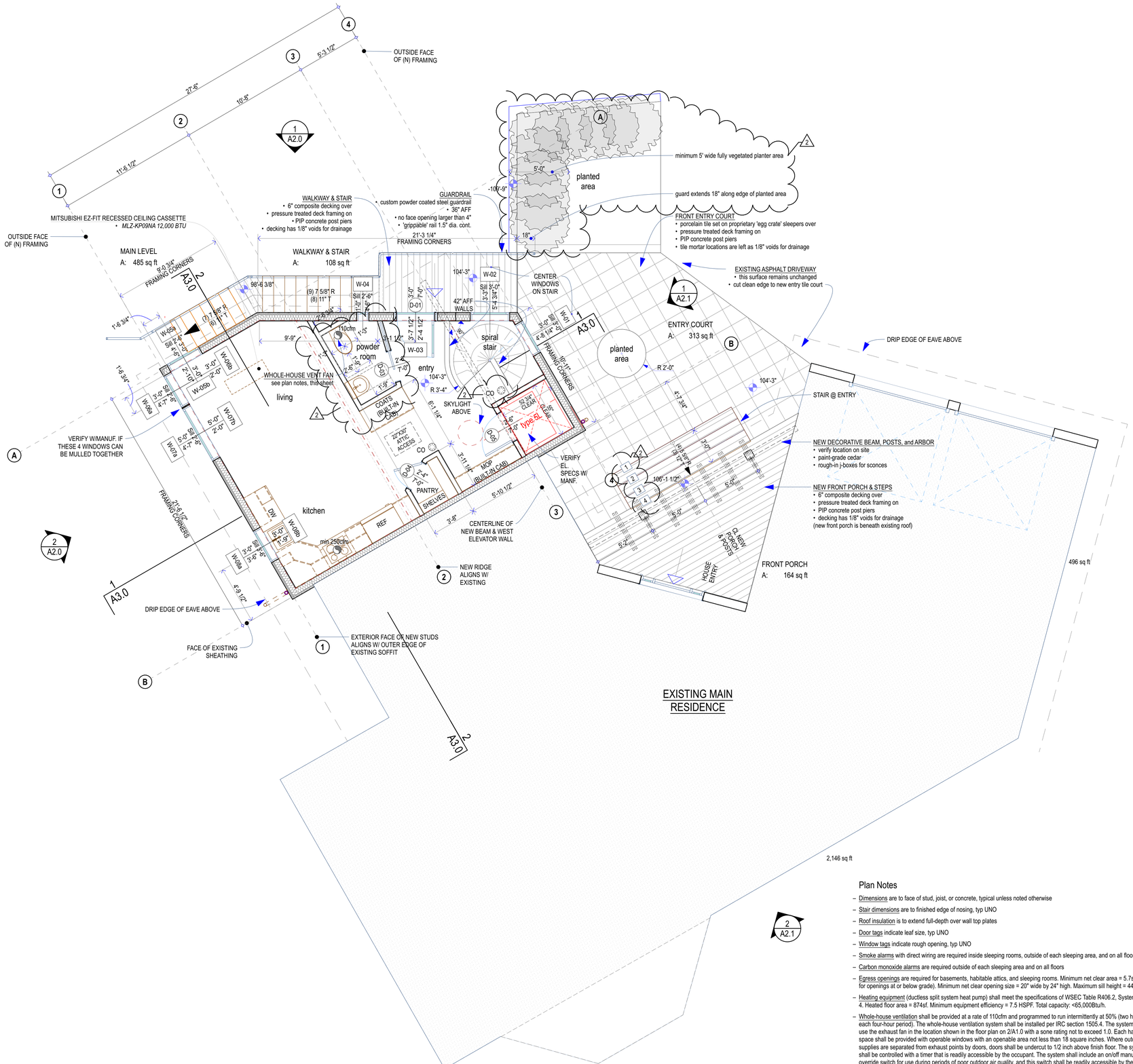
ISSUES:

ADU	11.06.25	REV 2

General Notes

A0.3

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



Plan Notes

- Dimensions are to face of stud, joist, or concrete, typical unless noted otherwise
- Stair dimensions are to finished edge of nosing, typ UNO
- Roof insulation is to extend full-depth over wall top plates
- Door tags indicate leaf size, typ UNO
- Window tags indicate rough opening, typ UNO
- Smoke alarms with direct wiring are required inside sleeping rooms, outside of each sleeping area, and on all floors
- Carbon monoxide alarms are required outside of each sleeping area and on all floors
- Egress openings are required for basements, habitable attics, and sleeping rooms. Minimum net clear area = 5.7sf (5.0sf for openings at or below grade). Minimum net clear opening size = 20" wide by 24" high. Maximum sill height = 44"
- Heating equipment (ductless split system heat pump) shall meet the specifications of WSEC Table R406.2, System Type 4. Heated floor area = 874sf. Minimum equipment efficiency = 7.5 HSPF. Total capacity: <65,000Btu/h.
- Whole-house ventilation shall be provided at a rate of 110cfm and programmed to run intermittently at 50% (two hours of each four-hour period). The whole-house ventilation system shall be installed per IRC section 1505.4. The system shall use the exhaust fan in the location shown in the floor plan on 2/A1.0 with a sone rating not to exceed 1.0. Each habitable space shall be provided with operable windows with an openable area not less than 18 square inches. Where outdoor air supplies are separated from exhaust points by doors, doors shall be undercut to 1/2 inch above finish floor. The system shall be controlled with a timer that is readily accessible by the occupant. The system shall include an on/off manual override switch for use during periods of poor outdoor air quality, and this switch shall be readily accessible by the occupant. *Calculation: per SRC M1505.4, the flow rate for a two-bedroom 874sf dwelling shall be 35cfm x 1.5 (unbalanced/undistributed system) x 2 (multiplier for 50% operation) = 105cfm min.*

N

2 Main Level
SCALE: 1/4" = 1'-0"

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

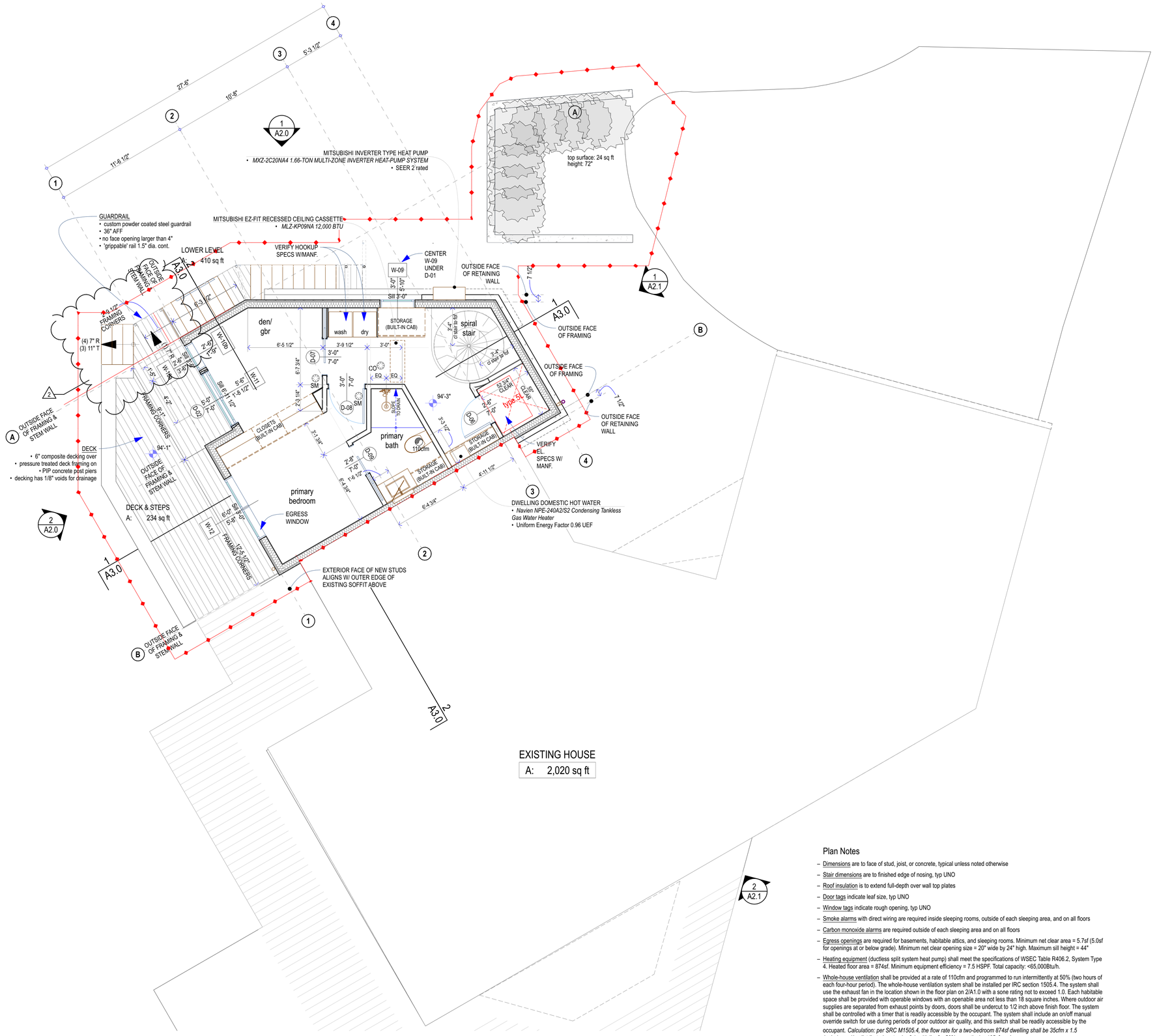
ISSUES:

ADU	11.06.25	REV 2

Main Floor Plan

A1.0

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



Plan Notes

- Dimensions are to face of stud, joist, or concrete, typical unless noted otherwise
- Stair dimensions are to finished edge of nosing, typ UNO
- Roof insulation is to extend full-depth over wall top plates
- Door tags indicate leaf size, typ UNO
- Window tags indicate rough opening, typ UNO
- Smoke alarms with direct wiring are required inside sleeping rooms, outside of each sleeping area, and on all floors
- Carbon monoxide alarms are required outside of each sleeping area and on all floors
- Egress openings are required for basements, habitable attics, and sleeping rooms. Minimum net clear area = 5.7sf (5.0sf for openings at or below grade). Minimum net clear opening size = 20" wide by 24" high. Maximum sill height = 44"
- Heating equipment (ductless split system heat pump) shall meet the specifications of WSEC Table R406.2, System Type 4. Heated floor area = 874sf. Minimum equipment efficiency = 7.5 HSPF. Total capacity: <65,000Btu/h.
- Whole-house ventilation shall be provided at a rate of 110cfm and programmed to run intermittently at 50% (two hours of each four-hour period). The whole-house ventilation system shall be installed per IRC section 1505.4. The system shall use the exhaust fan in the location shown in the floor plan on 2/A1.0 with a sone rating not to exceed 1.0. Each habitable space shall be provided with operable windows with an openable area not less than 18 square inches. Where outdoor air supplies are separated from exhaust points by doors, doors shall be undercut to 1/2 inch above finish floor. The system shall be controlled with a timer that is readily accessible by the occupant. The system shall include an on/off manual override switch for use during periods of poor outdoor air quality, and this switch shall be readily accessible by the occupant. *Calculation: per SRC M1505.4, the flow rate for a two-bedroom 874sf dwelling shall be 35cfm x 1.5 (unbalanced/undistributed system) x 2 (multiplier for 50% operation) = 105cfm min.*

N

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

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

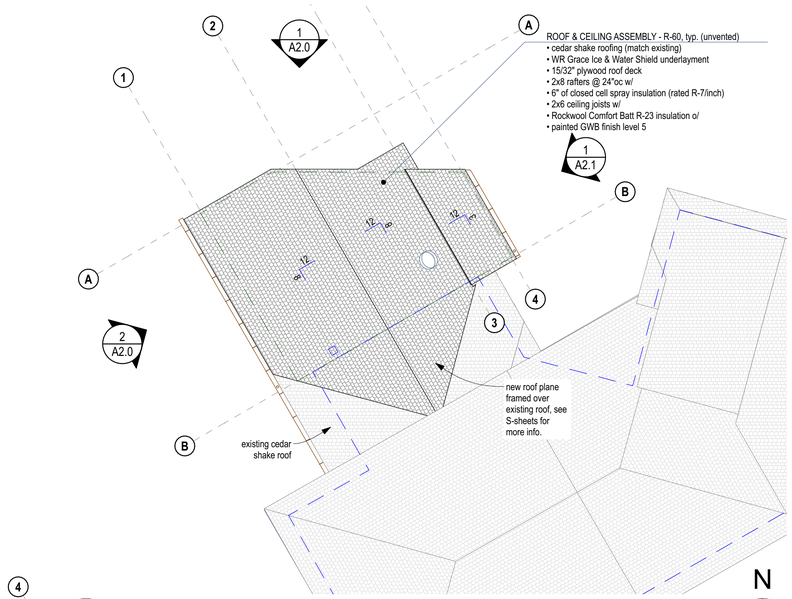
ISSUES:

ADU	11.06.25	REV 2

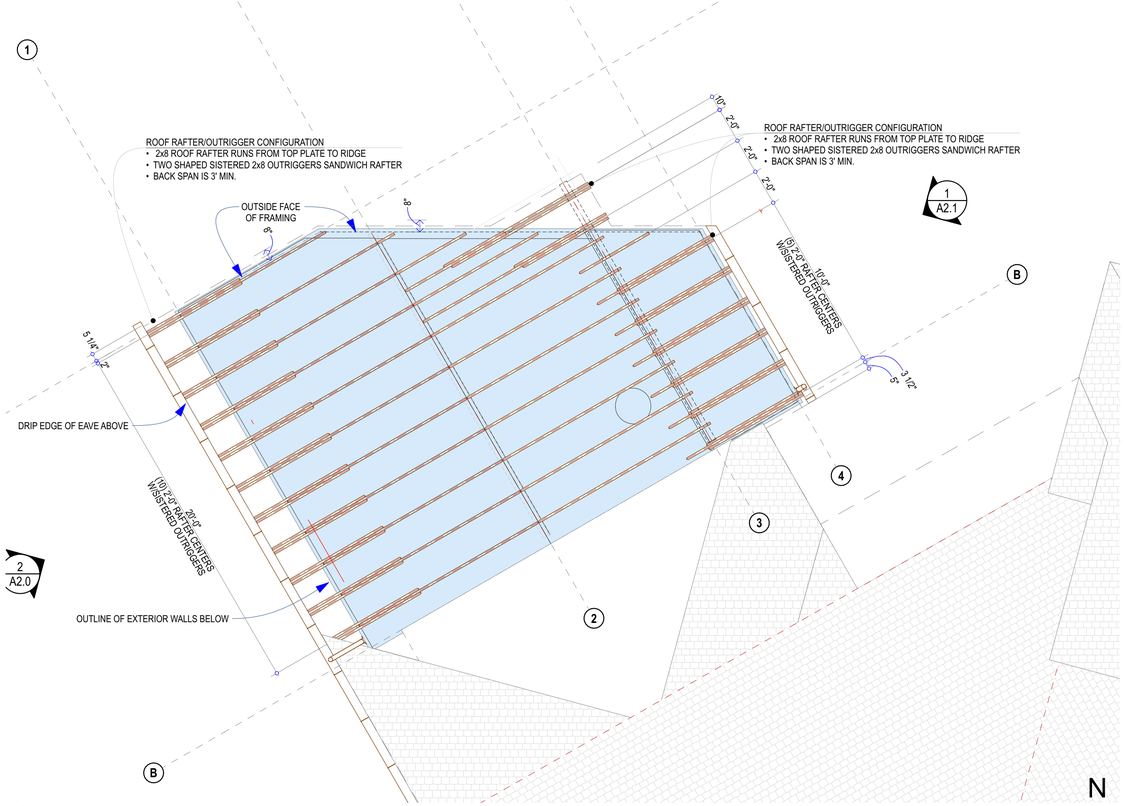
Lower Level Plan

A1.1

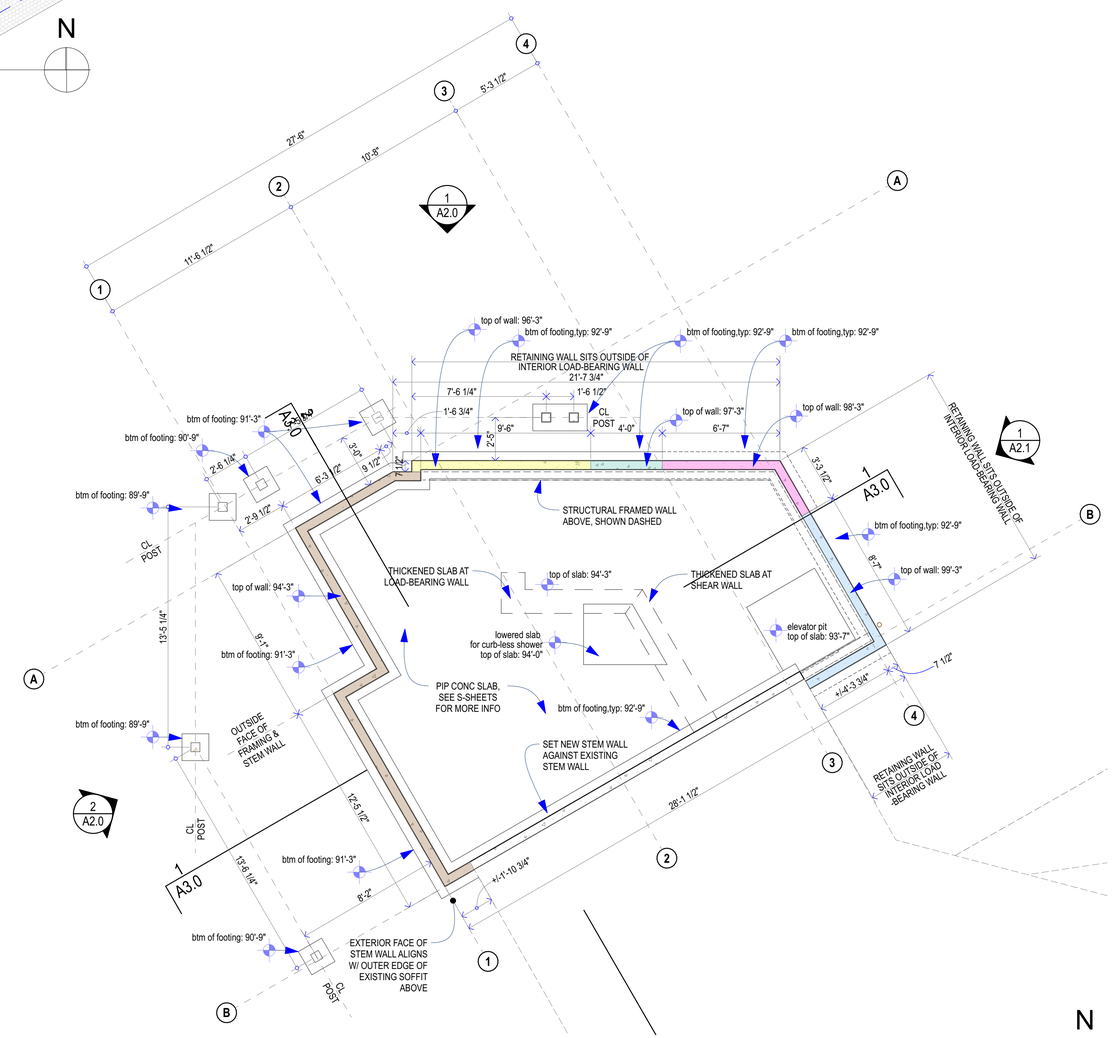
BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



3 Roof
SCALE: 1/8" = 1'-0"



2 Roof Framing Diagram
SCALE: 1/4" = 1'-0"



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

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

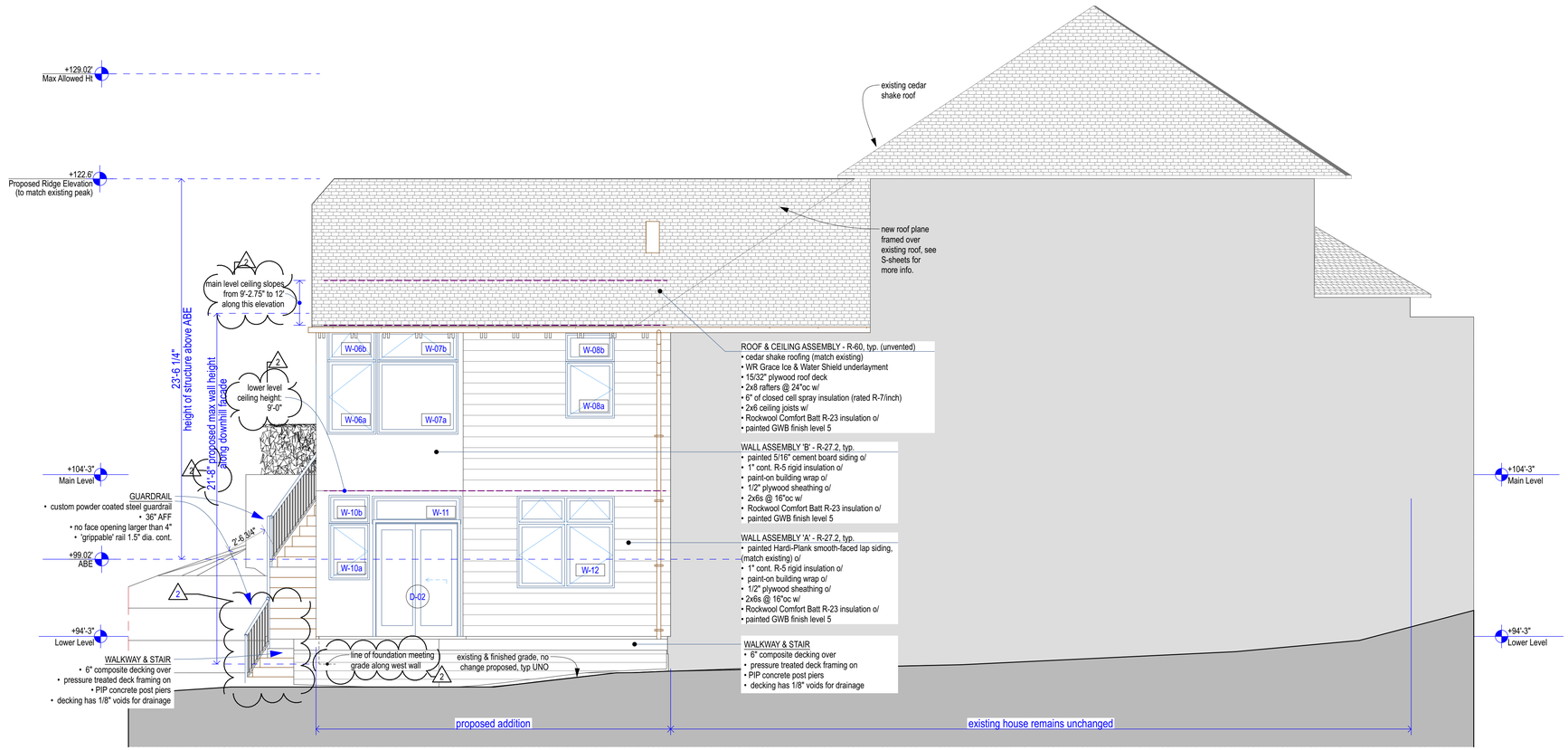
ISSUES:

ADU	11.06.25	REV 2

Foundation Plan, Roof Plan

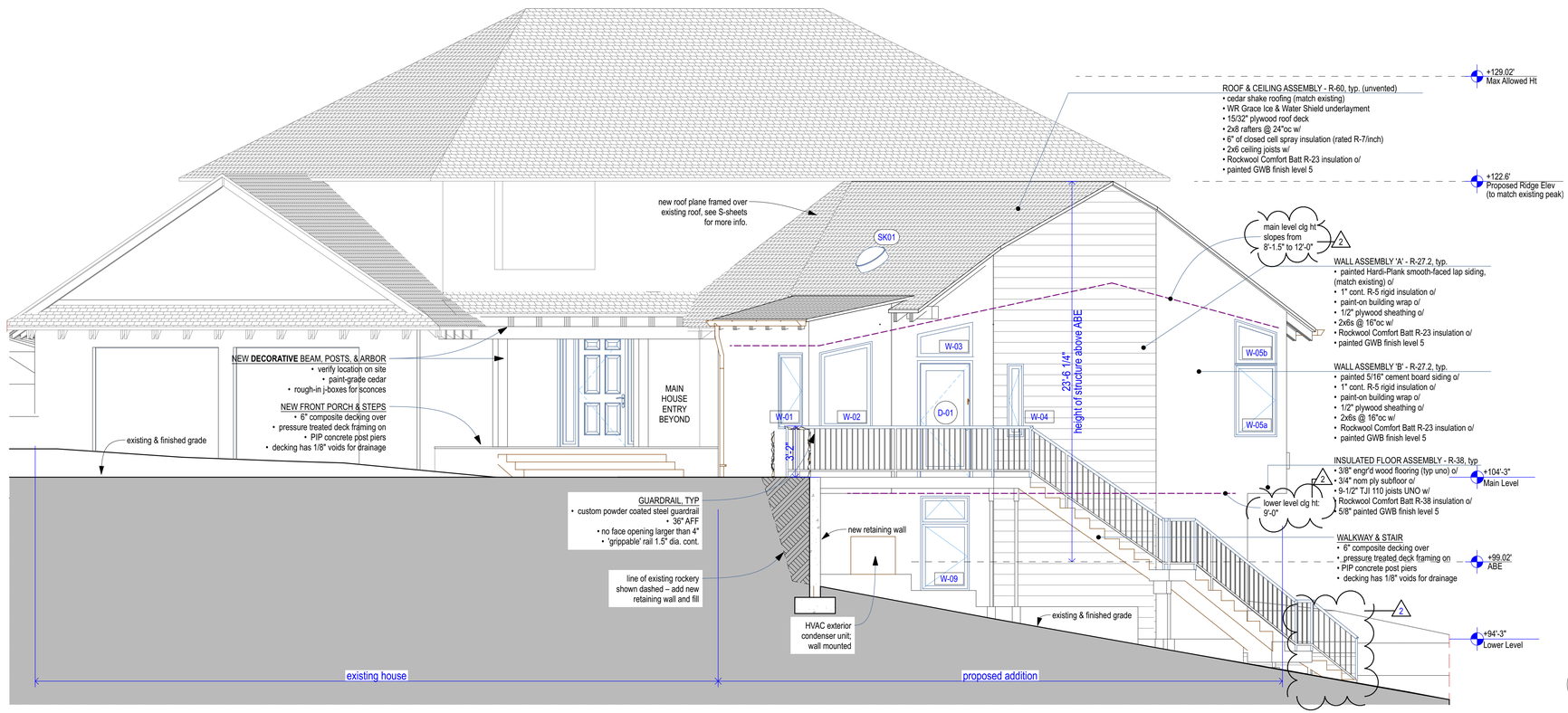
A1.2

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



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

2



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

1

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

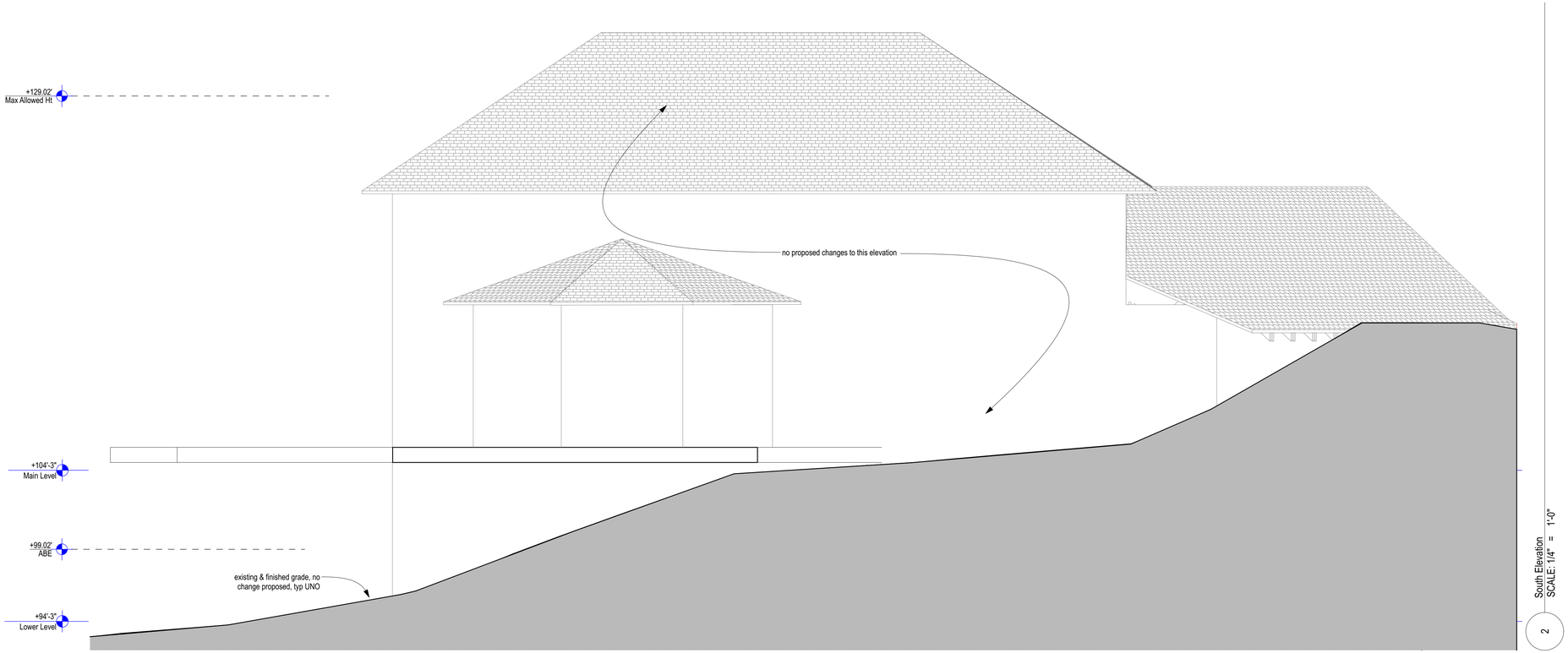
ISSUES:

ADU	11.06.25	REV 2

Exterior Elevations

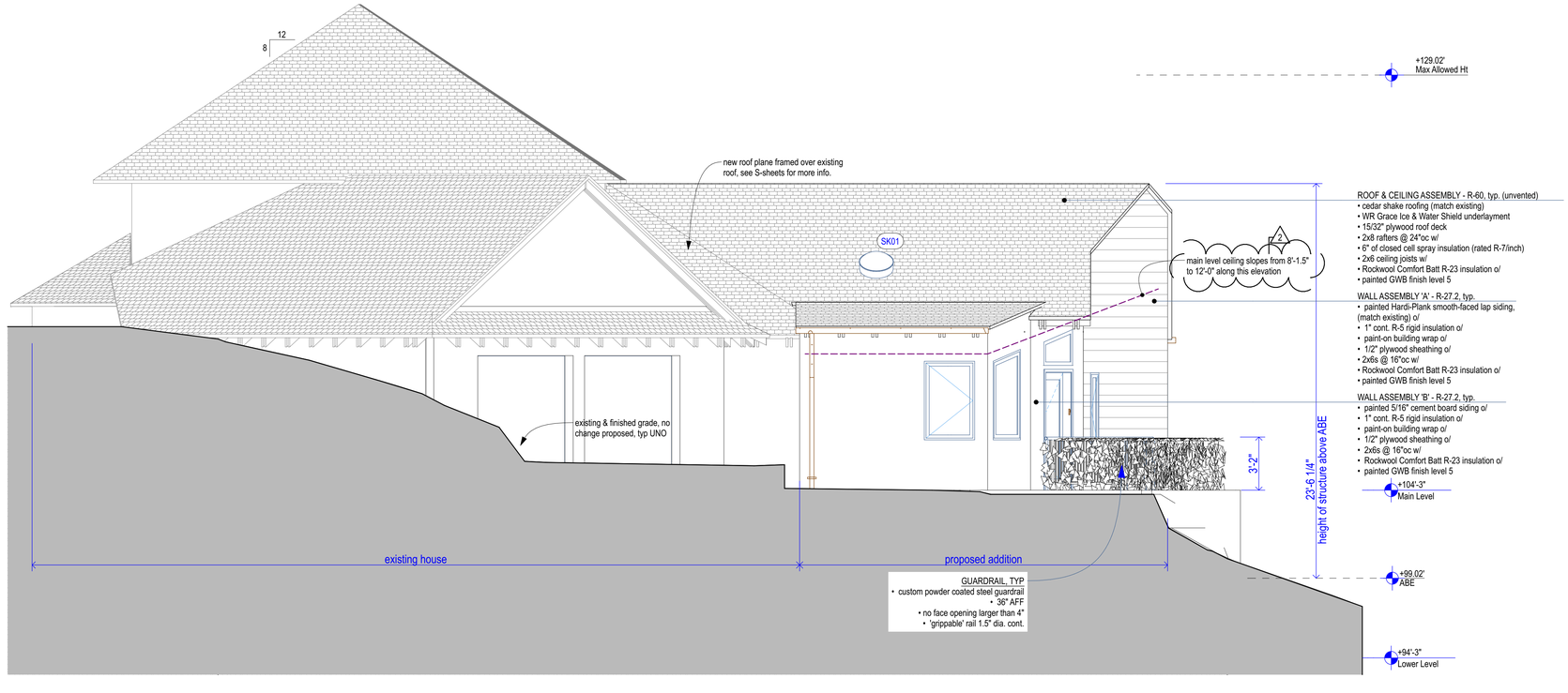
A2.0

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



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

2



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

1

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska
Residence

5331 Forest Ave SE
Mercer Island, WA 98040

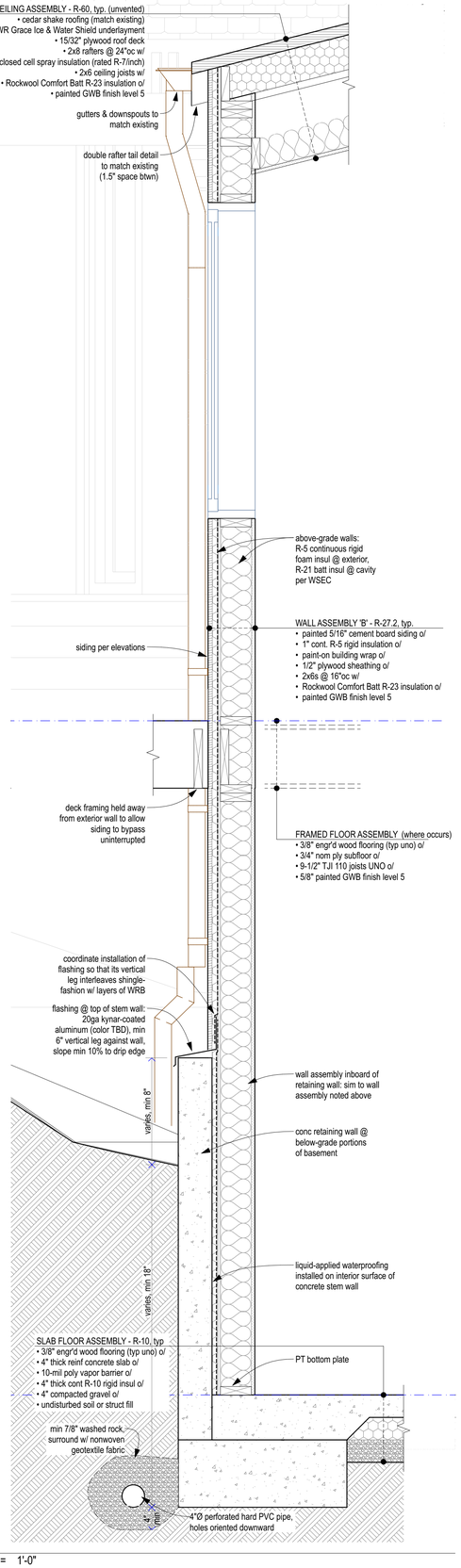
ISSUES:

ADU	11.06.25	REV 2

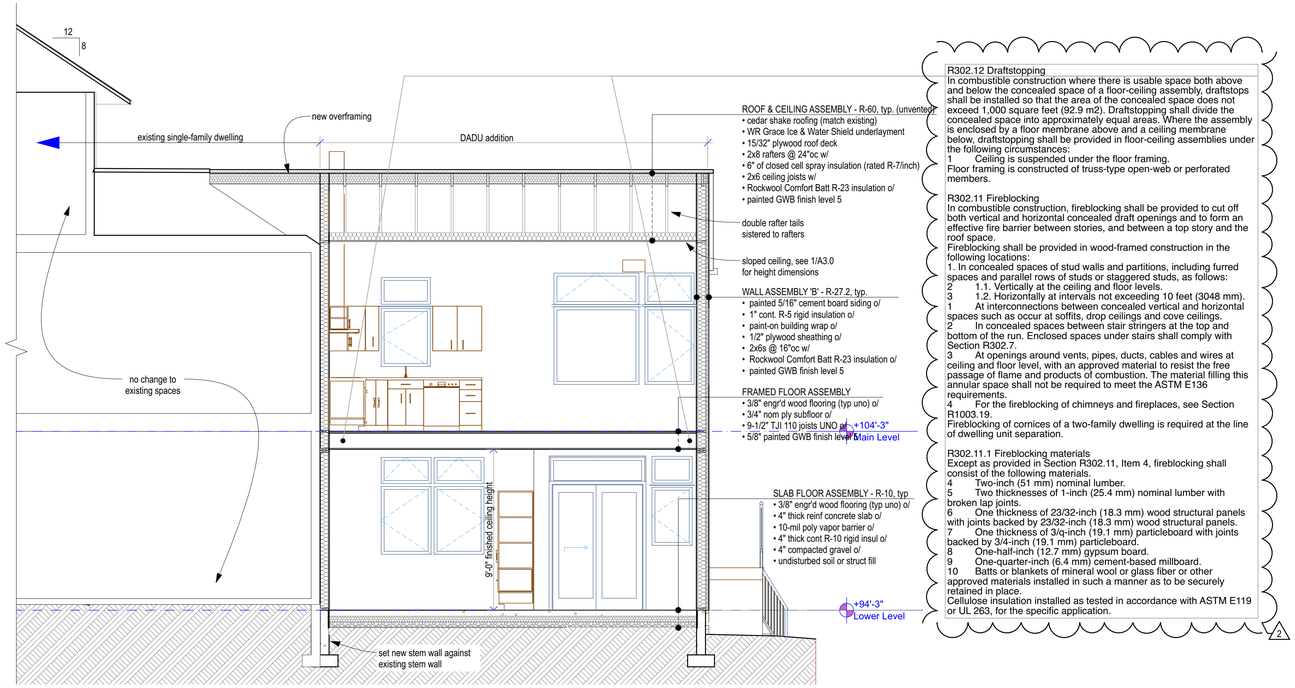
Exterior Elevations

A2.1

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



3 Wall Section
SCALE: 1" = 1'-0"



2 Section Looking West
A3.0
SCALE: 1/4" = 1'-0"

R302.12 Draftstopping
In combustible construction where there is usable space both above and below the concealed space of a floor-ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1,000 square feet (92.9 m2). Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor-ceiling assemblies under the following circumstances:
1 Ceiling is suspended under the floor framing.
Floor framing is constructed of truss-type open-web or perforated members.

R302.11 Fireblocking
In combustible construction, fireblocking shall be provided to cut off both vertical and horizontal concealed draft openings and to form an effective fire barrier between stories, and between a top story and the roof space.
Fireblocking shall be provided in wood-framed construction in the following locations:
1. In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs, as follows:
2 1.1. Vertically at the ceiling and floor levels.
3 1.2. Horizontally at intervals not exceeding 10 feet (3048 mm).
1 At interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
2 In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with Section R302.7.
3 At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E136 requirements.
4 For the fireblocking of chimneys and fireplaces, see Section R1003.19.
Fireblocking of cornices of a two-family dwelling is required at the line of dwelling unit separation.

R302.11.1 Fireblocking materials
Except as provided in Section R302.11, Item 4, fireblocking shall consist of the following materials.
4 Two-inch (51 mm) nominal lumber.
5 Two thicknesses of 1-inch (25.4 mm) nominal lumber with broken lap joints.
6 One thickness of 23/32-inch (18.3 mm) wood structural panels with joints backed by 23/32-inch (18.3 mm) wood structural panels.
7 One thickness of 3/q-inch (19.1 mm) particleboard with joints backed by 3/4-inch (19.1 mm) particleboard.
8 One-half-inch (12.7 mm) gypsum board.
9 One-quarter-inch (6.4 mm) cement-based millboard.
10 Batts or blankets of mineral wool or glass fiber or other approved materials installed in such a manner as to be securely retained in place.
Cellulose insulation installed as tested in accordance with ASTM E119 or UL 263, for the specific application.

1 Section Looking South
A3.0
SCALE: 1/4" = 1'-0"

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska Residence

5331 Forest Ave SE
Mercer Island, WA 98040

ISSUES:

ADU	11.06.25	REV 2

Building & Wall Sections

A3.0

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25

Windows

ID	Qty	Type	Rough Opening W	Rough Opening H	U-Val	Area	Material	Manufacturer	Model	Hardware	SG	Priv	Egress	Notes
W-01	1	casement	3'-0"	4'-8 1/4"	0.25	14.06		---	---	Undefined	☐	☐	☐	
W-02	1	fixed	3'-3"	5'-4 3/4"	0.25	17.54		---	---	Undefined	☐	☐	☐	trapezoid, match ceiling slope
W-03	1	fixed	3'-7 1/2"	2'-4 1/2"	0.25	8.61		---	---	Undefined	☐	☐	☐	trapezoid, match ceiling slope
W-04	1	casement	1'-0"	4'-6"	0.25	4.50		---	---	Undefined	☐	☒	☐	
W-05a	1	casement	3'-0"	4'-6"	0.25	13.50		---	---	Undefined	☐	☐	☐	
W-05b	1	transom	3'-0"	2'-10"	0.25	8.50		---	---	Undefined	☐	☐	☐	trapezoid, match ceiling slope
W-06a	1	casement	3'-0"	4'-7"	0.25	13.75		---	---	Undefined	☐	☐	☐	
W-06b	1	transom	3'-0"	2'-0"	0.25	6.00		---	---	Undefined	☐	☐	☐	
W-07a	1	fixed	5'-0"	4'-7"	0.25	22.92		---	---	Undefined	☐	☐	☐	
W-07b	1	transom	5'-0"	2'-0"	0.25	10.00		---	---	Undefined	☐	☐	☐	
W-08a	1	casement	3'-0"	3'-6"	0.25	10.50		---	---	Undefined	☐	☐	☐	
W-08b	1	transom	3'-0"	1'-9"	0.25	5.25		---	---	Undefined	☐	☐	☐	
W-09	1	casement	3'-0"	5'-10"	0.25	17.50		---	---	Undefined	☐	☐	☐	
W-10a	1	casement	2'-6"	3'-6"	0.25	8.75		---	---	Undefined	☐	☐	☐	
W-10b	1	transom	2'-6"	1'-9"	0.25	4.38		---	---	Undefined	☐	☐	☐	
W-11	1	transom	5'-6"	1'-8 1/2"	0.25	9.40		---	---	Undefined	☐	☐	☐	
W-12	1		6'-0"	5'-8"	0.25	34.00		---	---	Undefined	☐	☐	☒	
						209.16 ft²								

Exterior Doors

ID	Qty	Type	Leaf Dimensions W	Leaf Dimensions H	Leaf Dimensions Thk	U-Val	Area	Material	Manufacturer	Model	Hardware	Jamb	Notes
D-01	1	swing	3'-0"	7'-0"		0.25	22.43		---	---	Undefined		
D-02	1	slider	5'-0"	7'-0"		0.25	36.60		---	---	Undefined		
							59.03 ft²						

Interior Doors

ID	Qty	Type	Leaf Dimensions W	Leaf Dimensions H	Leaf Dimensions Thk	Material	Manuf	Model	Hardware	Jamb	Notes
D-03	1	swing	2'-6"	7'-0"	1 3/8"		---	---	Undefined		
D-04	1	swing	2'-4"	7'-0"	1 3/4"		---	---	Undefined		
D-05	1	swing	2'-6"	7'-0"	1 3/4"		---	---	Undefined		
D-06	1	swing	2'-6"	7'-0"	1 3/4"		---	---	Undefined		
D-07	1	pocket	3'-0"	7'-0"	1 3/8"		---	---	Undefined		
D-08	1	swing	3'-0"	7'-0"	1 3/8"		---	---	Undefined		
D-09	1	pocket	2'-8"	7'-0"	1 3/8"		---	---	Undefined		

Skylights

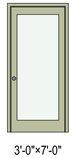
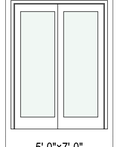
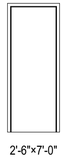
ID	Qty	Type	Rough Opening (L x W)	U-Val	Area	Material	Manuf	Model	Hardware	SG	Priv	Egress	Notes
SK01	2		2'-0"×2'-0"		8.00		---	---	---	☐	☐	---	circular
					8.00 ft²								

All glazing shall be NFRC-certified.

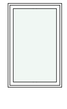
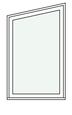
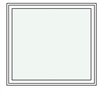
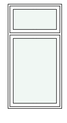
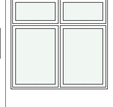
Glazing in the following hazardous locations shall be safety glazing (see IRC R308.4 for details and exceptions):

- In doors (operable or fixed, except decorative glazing)
- Adjacent to doors (in an operable or fixed panel), where the bottom exposed edge of glazing is less than 60" above the floor or walking surface and it meets either of the following conditions:
  - Glazing is within 24" of either side of the door in the plane of the door in the closed position
  - Glazing is on a wall less than 180° from the plane of the door and within 24" of the hinge side of an in-swinging door
- In a window (operable or fixed) that meets all of the following conditions:
  - The exposed area of an individual pane is larger than 9 square feet
  - The bottom exposed edge of glazing is less than 18" above the floor
  - The top edge of the glazing is more than 36" above the floor
  - One or more walking surfaces are within 36" of the glazing (measured horizontally and in a straight line)
- In guards and railings
- Adjacent to wet surfaces (hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, and indoor or outdoor swimming pools) where the bottom exposed edge of glazing is less than 60" above any standing or walking surface
- Adjacent to stairs and ramps, where the bottom exposed edge of glazing is less than 36" above the plane of the adjacent walking surface of stairways, stair landings, and ramps
- Adjacent to the landing at the bottom of a stairway where the glazing is less than 36" above the landing and within a 60" horizontal arc less than 180° from the bottom tread nosing

Door Legend

ID	D-01	D-02	D-03	D-04	D-05	D-06	D-07	D-08	D-09
TYPE	swing	slider	swing	swing	swing	swing	pocket	swing	pocket
VIEW									
SIZE	3'-0"×7'-0"	5'-0"×7'-0"	2'-6"×7'-0"	2'-4"×7'-0"	2'-6"×7'-0"	2'-6"×7'-0"	3'-0"×7'-0"	3'-0"×7'-0"	2'-8"×7'-0"

Window Legend

ID	W-01	W-02	W-03	W-04	W-05a	W-05b	W-06a	W-06b	W-07a	W-07b	W-08a	W-08b	W-09	W-10a	W-10b	W-11	W-12
TYPE	casement	fixed	fixed	casement	casement	transom	casement	transom	fixed	transom	casement	transom	casement	casement	transom	transom	
VIEW																	
SIZE	3'-0"×4'-8 1/4"	3'-3"×5'-4 3/4"	3'-7 1/2"×2'-4 1/2"	1'-0"×4'-6"	3'-0"×4'-6"	3'-0"×2'-10"	3'-0"×4'-7"	3'-0"×2'-0"	5'-0"×4'-7"	5'-0"×2'-0"	3'-0"×3'-6"	3'-0"×1'-9"	3'-0"×5'-10"	2'-6"×3'-6"	2'-6"×1'-9"	5'-6"×1'-8 1/2"	6'-0"×5'-8"

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska
Residence

5331 Forest Ave SE
Mercer Island, WA 98040

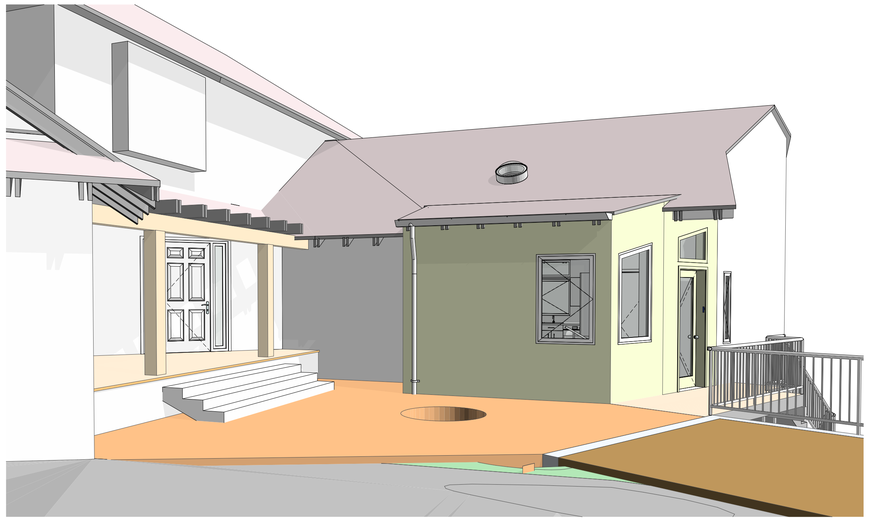
ISSUES:

ADU	11.06.25	REV 2

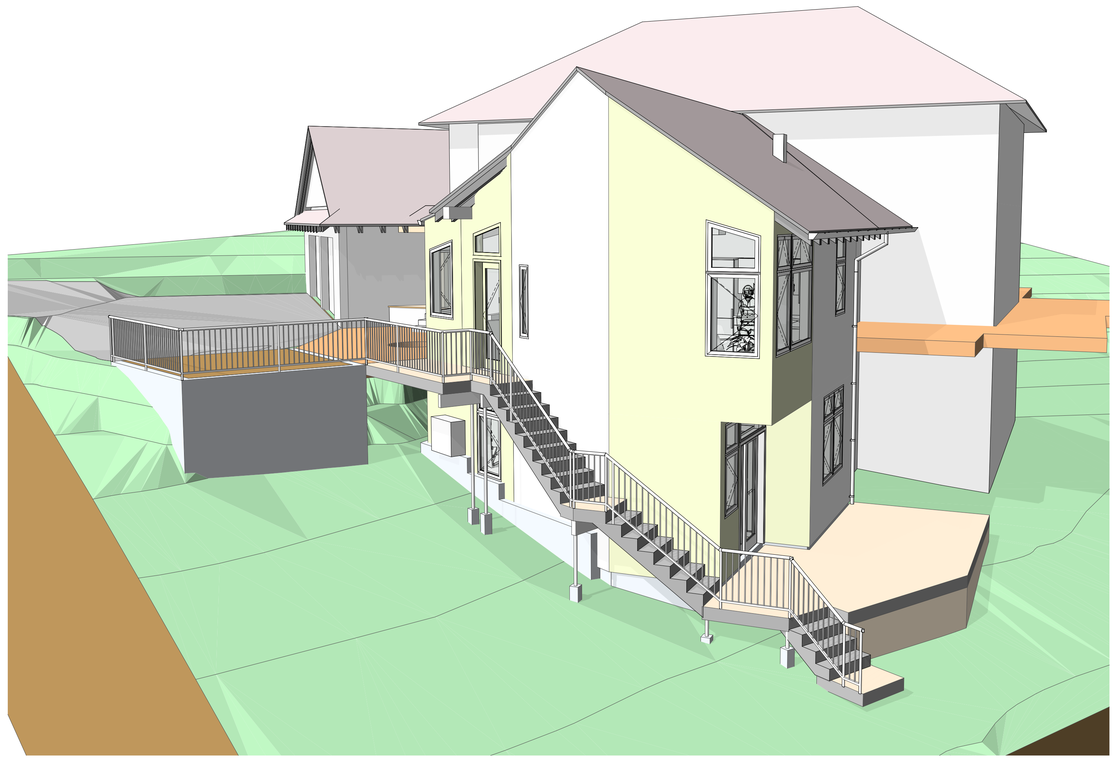
Window/Door/Skylight Schedules

A4.0

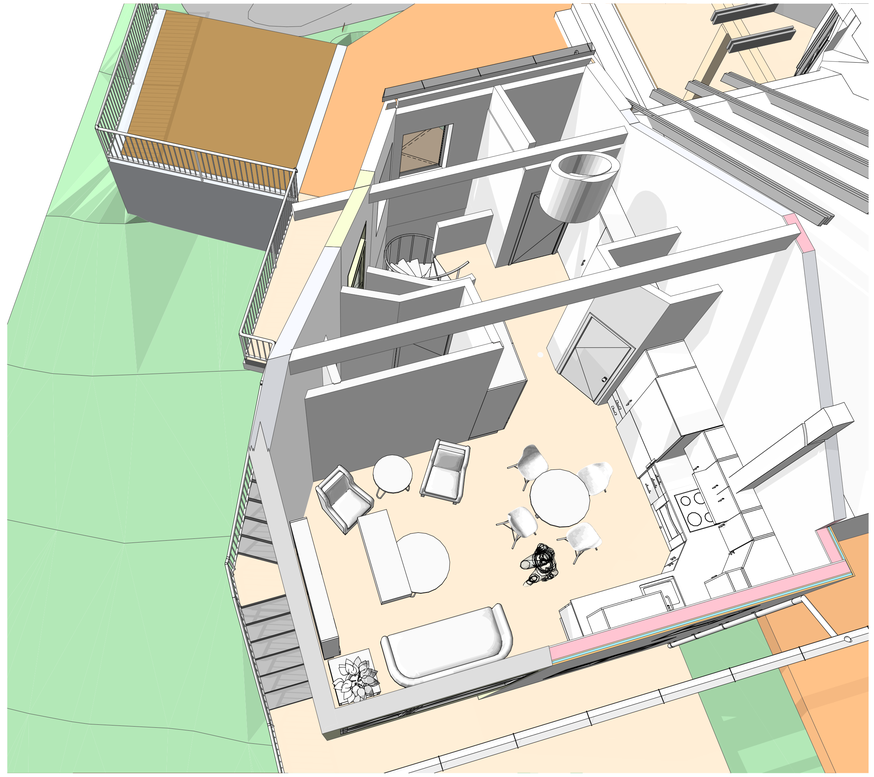
BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25



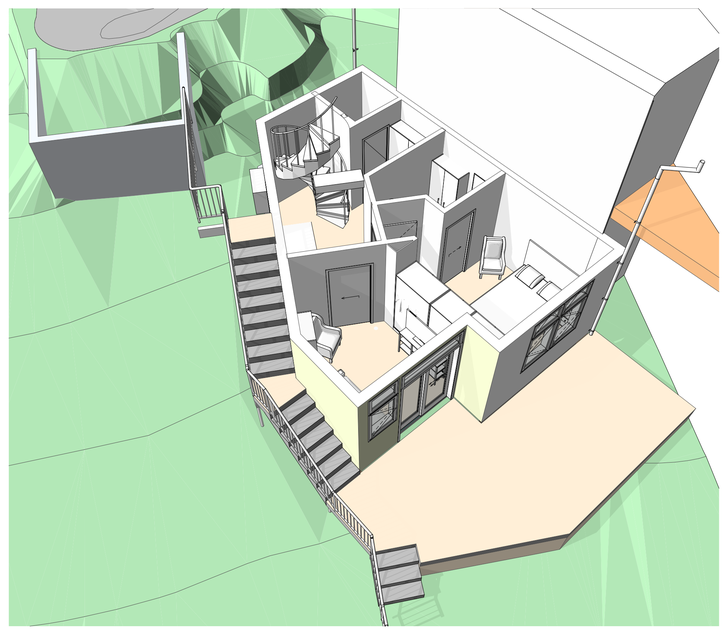
View from Drive



View from Northwest



Main Level (shown without roof)



Lower Level (shown without level above)

DiMarco Architecture + Design
7541 Seward Park Ave S
Seattle WA 98118-4246 USA

Lin Kicska
Residence

5331 Forest Ave SE
Mercer Island, WA 98040

ISSUES:

ADU	11.06.25	REV 2

3D Views

A5.0

BIMcloud: DiMarco Architecture - BIMcloud Basic for Archicad 28/Lin Kicska PERMIT SET 10.28.25

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC).

2. DESIGN LOADING CRITERIA

ROOF SNOW LOAD	25 PSF
FLOOR LIVE LOAD (RESIDENTIAL)	40 PSF
FLOOR LIVE LOAD (RESIDENTIAL EXTERIOR DECKS AND BALCONIES)	60 PSF
GUARDRAILS/BALCONY RAILS (ONE OR TWO UNIT DWELLING)	200 LBS

WIND : ANALYSIS PROCEDURE: ASCE 7-16 CHAPTER 27 "PART 1 - BUILDINGS OF ALL HEIGHTS"
RISK CATEGORY II
98 MPH
EXPOSURE "B"
TOPOGRAPHIC FACTOR Kzt = 1.0
WIND BASE SHEAR, NORTH/SOUTH Vw = 10.2 K
WIND BASE SHEAR, EAST/WEST Vw = 8.5 K

EARTHQUAKE : ANALYSIS PROCEDURE: IBC "EQUIVALENT LATERAL FORCE PROCEDURE"
SEISMIC DESIGN CATEGORY (SDC) = D
RISK CATEGORY = II
SEISMIC SITE CLASS = D
IMPORTANCE FACTOR Ie = 1.0
MAPPED MCE Ss = 1.46; S_1 = 0.51
DESIGN ACCELERATION Sds = 0.97; Sd$_1$ = 0.60
SEISMIC RESISTING SYSTEM: WOOD PANEL BEARING SHEAR WALL, R = 6.5
SEISMIC RESPONSE COEFFICIENT: Cs = 0.15
SEISMIC BASE SHEAR Vs = 5.6 K

3. LATERAL LOADS ARE TRANSFERRED BY THE ROOF AND FLOOR DIAPHRAGMS TO THE SHEAR WALLS. FORCES ARE BASED ON THE TRIBUTARY AREA FOR EACH SHEAR WALL AND ARE CARRIED BY THE SHEAR WALLS TO THE FOUNDATION.

4. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

5. 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.

6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THEIR 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 OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

8. 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.

9. 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. WHERE INFORMATION ON THE DRAWINGS IS IN CONFLICT WITH THE SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. DO NOT SCALE THE DRAWINGS.

10. ALL STRUCTURAL SYSTEMS WHICH ARE COMPOSED OF FIELD ERECTED COMPONENTS SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

11. SHOP DRAWINGS FOR CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

12. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.

13. SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

14. SPECIAL INSPECTION: EXPANSION BOLTS, SCREW ANCHORS, EPOXY GROUTED, AND DRIVEN PILE INSTALLATIONS SHALL BE SUPERVISED IN ACCORDANCE WITH IBC SECTIONS 1704 & 1705 AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE OWNER. THE TESTING AGENCY AND INSPECTOR SHALL BE REGISTERED WITH WABO AND SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET PROJECT SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

GEOTECHNICAL

15. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) 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 GEOTECHNICAL ENGINEER. UNLESS OTHERWISE NOTED, FOOTINGS SHALL BE CENTERED UNDER COLUMNS OR WALLS ABOVE.

BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE GEOTECHNICAL REPORT.

THE STRUCTURAL DESIGN IS BASED ON THE FOLLOWING VALUES FROM THE REFERENCED GEOTECHNICAL REPORT:

LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	40 PCF
SEISMIC SURCHARGE PRESSURE (RESTRAINED/UNRESTRAINED)	9H PSF
PASSIVE SOIL PRESSURE	250 PCF
SOIL COEFFICIENT OF FRICTION	0.35
PILE CAPACITY (3" DIA.)	12 KIPS

GEOTECHNICAL REPORT REFERENCE: #24314 BY GEOTECH CONSULTANTS ENGINEERS, INC. DATED OCTOBER 8, 2024.

16. PIPE PILES SHALL BE SCHEDULE-40 (STD) ASTM A53 (TYPE E OR S, GRADE A OR B) 3 INCH NOMINAL PIPE DRIVEN TO REFUSAL PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER. THE ALLOWABLE AXIAL COMPRESSION CAPACITY SHALL BE 12 KIPS. SECTIONS OF PIPE SHALL BE CONNECTED TOGETHER WITH COMPRESSION FITTED SLEEVE COUPLERS.

17. PIPE PILING INSPECTION SHALL BE CONTINUOUSLY PERFORMED BY THE GEOTECHNICAL ENGINEER DURING PLACEMENT TO CONFIRM THAT THE PILES ARE INSTALLED IN ACCORDANCE WITH THE PLANS AND GEOTECHNICAL REPORT. AT LEAST 3% OF THE PILES SHALL BE LOAD TESTED IN ACCORDANCE WITH ASTM D1143. THE MAXIMUM TEST LOADS SHALL BE 200 PERCENT OF THE ALLOWABLE COMPRESSIVE CAPACITY. MAXIMUM PILE MIS-LOCATION SHALL BE 2" LATERALLY. PILE LENGTH INDICATED ON DRAWINGS IS ESTIMATED. ACTUAL LENGTH SHALL BE DETERMINED IN THE FIELD BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRIVING PILES.

CONCRETE

18. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301. CONSTRUCTION TOLERANCES SHALL NOT EXCEED THOSE LISTED IN ACI 117. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 2,500 PSI. ALL CONCRETE EXPOSED TO THE WEATHER SHALL ATTAIN A 28-DAY STRENGTH f'c OF 3,000 PSI IN ACCORDANCE WITH IBC SECTION 1904 AND ACI 318 TABLE 19.3.2.1 THIS INCREASE IN REQUIRED STRENGTH IS FOR DURABILITY ONLY (SPECIAL INSPECTION IS NOT REQUIRED). 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 (BEFORE THE ADDITION OF ADMIXTURES). THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.55 FOR FOOTINGS AND 0.45 FOR ALL SLABS AND EXPOSED CONCRETE UNLESS OTHERWISE NOTED. EXCEPT FOR FOOTINGS AND SLAB ON GRADE, AGGREGATE SIZE SHALL NOT EXCEED 3/4".

THE MINIMUM AMOUNT OF CEMENT AND THE MAXIMUM SLUMP MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. (THE W/C RATIO LIMITS STILL APPLY). THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, CEMENTITIOUS MATERIAL, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 301. CHEMICAL ADMIXTURES AND FLY ASH SHALL CONFORM TO ASTM C494 AND C618 RESPECTIVELY. FLY ASH PERCENTAGE OF TOTAL CEMENTITIOUS MATERIAL SHALL NOT EXCEED 20%. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY TO CONTRACT DOCUMENTS. CONTRACTOR MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-19 TABLE 19.3.3.1. ALL CONCRETE TO RECEIVE A STEEL TROWELED FINISH SHALL NOT BE AIR-ENTRAINED.

19. REINFORCING STEEL SHALL CONSIST OF #4 BARS CONFORMING TO ASTM A615, GRADE 40, fy = 40,000 PSI AND SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315 AND 318. LAP ALL CONTINUOUS REINFORCEMENT 48 BAR DIAMETERS, 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS, LAP 2'-0" MINIMUM. PROVIDE (2) #4 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLABS EXTENDING 2'-0" PAST CORNERS, TYPICAL.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO REINFORCING BARS SHALL BE "WET-SET" INTO THE CONCRETE. PROVIDE A 20' LONG REBAR GROUND (UFER GROUND) PER ELECTRICIAN.

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

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST EARTH	3"
FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER	2"
SLABS AND WALLS (INTERIOR FACE)	1"

21. NON-SHRINK GROUT SHALL BE NON-METALLIC CONFORMING TO ASTM C1107 AND BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (5000 PSI MINIMUM).

ANCHORAGE

22. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2 WEDGE ANCHOR", AS MANUFACTURED BY SIMPSON STRONG-TIE ANCHOR SYSTEMS. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-3037 INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.

23. SCREW ANCHORS INTO CONCRETE SHALL BE "TITEN HD", AS MANUFACTURED BY SIMPSON STRONG-TIE ANCHOR SYSTEMS. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-2713 INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL SCREW ANCHOR INSTALLATION.

24. DRIVE PINS, SHOT PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE FASTENERS AS MANUFACTURED BY HILTI CORPORATION. WHEN CALLED FOR IN THE DRAWINGS, PROVIDE THE APPROPRIATE FASTENER AS NOTED IN THE TABLE BELOW FOR EACH GIVEN APPLICATION. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORTS NO. ESR-2269 FOR THE X-U FASTENERS AND ESR-2379 FOR THE X-GP FASTENERS. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE AND 4" CENTER TO CENTER SPACING. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. MAXIMUM EMBEDMENT IN POST TENSIONED SLABS IS 3/4A.

ALLOWABLE APPLICATION	ALLOWABLE FASTENER TYPE	SHEAR CAPACITY (LBS)	TENSION CAPACITY (LBS)
2X TREATED LUMBER TO CONCRETE (2000 PSI MIN.)	X-GP T2 P8 S23 w/ 1.33" EMBED	250	175

25. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) INTO CONCRETE SHALL BE INSTALLED USING "SET-3G" ADHESIVE ANCHOR AS MANUFACTURED BY SIMPSON STRONG-TIE ANCHOR SYSTEMS. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-4057, INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

STEEL

26. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE LATEST EDITIONS OF THE A.I.S.C. SPECIFICATIONS AND CODES:

A. AISC - STEEL CONSTRUCTION MANUAL, 15TH EDITION
B. AISC 303-16 - CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
C. 2014 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS.

27. STRUCTURAL STEEL, WIDE FLANGE (W AND WT) SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI; ALL OTHER ROLLED SHAPES SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STEEL PLATE SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, Fy = 35 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE C, Fy = 50 KSI. CONNECTION BOLTS SHALL CONFORM TO ASTM A307. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36, Fy = 36 KSI.

SUBSTITUTION OF MEMBER SIZES OR STEEL GRADE SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL OF THE ENGINEER. ALL OTHER STEEL SHALL HAVE ONE COAT OF APPROVED SHOP PAINT.

STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER OR EARTH SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123. GALVANIZE BOLTS AND SIMILAR THREADED FASTENERS EXPOSED TO WEATHER OR EARTH IN ACCORDANCE WITH ASTM A153. ALL FIELD WELDS EXPOSED TO WEATHER OR EARTH SHALL BE COATED WITH BRUSH APPLIED ZINC RICH PAINT COMPLYING WITH ASTM A780 (Z.R.C. OR EQUIVALENT).

A MINIMUM OF TWO BOLTS ARE REQUIRED FOR ALL CONNECTIONS. ALTERNATE CONNECTIONS TO THOSE SHOWN ON THESE DRAWINGS WILL REQUIRE PRIOR APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES, AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES AND UNEQUAL PARTS.

28. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. ALL WELDING SHALL BE PERFORMED BY WELDERS WITH AWS / W.A.B.O. CERTIFICATION WITH THE MATERIAL AND METHOD REQUIRED.

SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. WELDS SHOWN ON DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. MINIMUM WELDING SHALL BE 3/16-INCH. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD ARROWS ARE SHOWN WHERE A FIELD WELD IS REQUIRED BY THE STRUCTURAL DESIGN; THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL DELIVERY AND ERECTION.

File: 439-s100.dwg Plotted: Fri, 09/26/2025 7:37 am

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER
STATE OF WASHINGTON
36098
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE
5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ◯ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

SHEET TITLE:

GENERAL STRUCTURAL NOTES

SHEET NO.

S1.0

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

WOOD

29. FRAMING LUMBER: SHALL BE KILN DRIED OR MC-19 (MOISTURE CONTENT LESS THAN 19%), AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.I.B. STANDARD NO. 17 GRADING RULES FOR WEST COAST LUMBER. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS (2X, 3X, AND 4X MEMBERS)	DOUGLAS FIR OR HEM-FIR NO. 2
BEAMS AND STRINGERS (INCLUDING 6 X AND LARGER MEMBERS)	DOUGLAS FIR NO. 1
POSTS AND TIMBERS	DOUGLAS FIR NO. 1
STUDS, PLATES & MISCELLANEOUS LIGHT FRAMING (AS NOTED ON PLANS / DETAILS)	DOUGLAS FIR OR HEM-FIR NO. 2

30. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM D3737 AND ANSI A190.1 STANDARDS. EACH MEMBER SHALL BEAR AN A.I.T.C. IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. CERTIFICATE OF CONFORMANCE. CERTIFICATES OF CONFORMANCE MUST BE MADE AVAILABLE TO BUILDING INSPECTORS. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv = 240 PSI, E = 1,800 KSI. ALL CANTILEVERED OR CONTINUOUS BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2,400 PSI, Fv = 265 PSI, E = 1,800 KSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS TO 5,000' RADIUS UNLESS SHOWN OTHERWISE ON THE PLANS. CONTRACTOR SHALL VERIFY AVAILABILITY OF THE GL MEMBER SIZES SHOWN ON THE DRAWINGS AND ADJUST THE CONNECTOR SIZES IF NEEDED FOR LARGER MEMBER SIZES.

31. LAMINATED STRAND LUMBER (LSL) SHALL BE DESIGNED AND MANUFACTURED PER ASTM D5456. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, AND THE INDEPENDENT INSPECTION AGENCY'S LOGO. ALL LAMINATED STRAND LUMBER SHALL BE MANUFACTURED USING A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559. MINIMUM STRUCTURAL PROPERTIES ARE AS FOLLOWS:

RIM JOISTS AND BLOCKING (1-1/4" MINIMUM THICKNESS AT NON-SHEAR WALLS; SEE SCHEDULE FOR MINIMUM THICKNESS AT SHEAR WALLS):

$Fb = 1700$ PSI, $E = 1.3 \times 10^6$ PSI, $Fv = 400$ PSI

BEAMS AND HEADERS:

$Fb = 2325$ PSI, $E = 1.55 \times 10^6$ PSI, $Fv = 310$ PSI

DESIGN SHOWN ON PLANS IS BASED ON MATERIALS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

32. WOOD I-JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE I-JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE I.C.C. OR IAPMO UES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH WOOD JOIST PROVIDED. GLUE FLOOR JOISTS TO SHEATHING AS REQUIRED BY THE JOIST MANUFACTURER.

33. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH IBC SECTION 2303.4 AND ANSI/TPI 1-2014 "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION" FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. TRUSSES SHALL BE HANDLED, INSTALLED, AND BRACED PER "HIB 91" PER THE TRUSS PLATE INSTITUTE. LOADING SHALL BE AS FOLLOWS:

TOP CHORD SNOW LOAD	25 PSF
TOP CHORD DL ALLOWANCE FOR PV PANELS	5 PSF
TOP CHORD DEAD LOAD	5 PSF
BOTTOM CHORD LIVE LOAD	10 PSF (NOT INCLUDED IN TOTAL)
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	40 PSF
NET WIND UPLIFT (TOP CHORD)	10 PSF

THE LOADS ABOVE SHALL BE INCREASED TO THE FOLLOWING IF THE TRUSSES MEET THE DESCRIPTION OF AN "UNINHABITABLE ATTIC WITH STORAGE" AS DEFINED IN IBC 1607.22:

BOTTOM CHORD LIVE LOAD	20 PSF - INCLUDE IN TOTAL
BOTTOM CHORD DEAD LOAD	10 PSF

TOP CHORDS SHALL BE DF LUMBER. UTILIZE A MINIMUM CREEP FACTOR OF 2.0 FOR DEAD AND SUSTAINED LIVE LOADS IN DETERMINING THE TRUSS DEFLECTIONS. MAXIMUM TOTAL DEFLECTION SHALL BE LESS THAN OR EQUAL TO L/240 OF THE TOTAL SPAN AND MAXIMUM LIVE LOAD DEFLECTION SHALL BE LESS THAN OR EQUAL TO L/360 OF THE TOTAL SPAN. PROVIDE ADEQUATE PLIES AND/OR METAL BRACKETS TO ADEQUATELY DISTRIBUTE THE BEARING PRESSURE AT THE ENDS OF THE GIRDER TRUSSES TO THE TOP PLATES OF THE BEARING WALLS SUCH THAT THE BEARING PRESSURE DOES NOT EXCEED 405 PSI. PROVIDE ADDITIONAL TRUSSES (AS REQUIRED) TO CARRY ALL CONCENTRATED LOADS AND MECHANICAL UNITS.

WOOD TRUSSES SHALL UTILIZE I.C.C. OR IAPMO UES APPROVED CONNECTOR PLATES. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BEAR THE STAMP AND SIGNATURE OF A STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC., SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

34. WOOD SHEATHING SHALL BE APA RATED, EXTERIOR GLUE; EXPOSURE 1, IN CONFORMANCE WITH THE REQUIREMENTS FOR THEIR TYPE IN DOC PS-1 OR PS-2. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS.

UNLESS OTHERWISE NOTED ON THE PLANS, ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE 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 (2) 10d-F NAILS AT EACH END, UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS PROVIDE FLAT 2X BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPACED PER PLANS. WHERE NOT NOTED OTHERWISE, NAIL PANEL EDGES WITH 8d NAILS @ 6" O.C. EDGES, 12" O.C. IN THE FIELD.

35. ALL WOOD EXPOSED TO WEATHER, OR BEARING ON UNPROTECTED CONCRETE BELOW GRADE, OR BEARING ON UNPROTECTED CONCRETE LESS THAN 8" FROM EXPOSED EARTH SHALL BE PRESSURE-TREATED, U.O.N. PRESSURE TREATMENT SHALL BE WITH AN APPROVED PRESERVATIVE CONFORMING TO AMERICAN WOOD PRESERVERS ASSOCIATION U1 AND M4 AND SHALL BE BRANDED WITH A QUALITY CONTROL AGENCY MARK BY THE AWPA OR EQUAL. ALL METAL HARDWARE IN CONTACT WITH TREATED WOOD SHALL BE PROTECTED WITH A G185 GALVANIZED COATING (ZMAX) OR BETTER. ALL NAILS IN TREATED WOOD SHALL BE HOT-DIP GALVANIZED OR BETTER. PROVIDE 2 LAYERS OF 30# ASPHALT IMPREGNATED BUILDING PAPER BETWEEN NON-PRESSURE-TREATED LEDGERS, BLOCKING, ETC., AND CONCRETE.

36. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO. C-C-2024. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE I.C.C. OR IAPMO UES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. CONNECTORS SHALL BE SIZED TO MATCH THE SIZE OF THE FRAMING MEMBERS BEING CONNECTED. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED. ALL BOLTS TIGHTENED TO SNUG TIGHT.

37. WOOD FASTENERS:

A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

DRAWING ID	NAIL NAME	NAIL DIAMETER	NAIL LENGTH
"6d"	6d Common	0.113"	2"
"8d Box"	8d Box	0.113"	2-1/2"
"8d"	8d Common	0.131"	2-1/2"
"10d-F"	10d Framer	0.131"	3"
"10d"	10d Shear	0.148"	2-1/4"
"16d"	16d Sinker	0.148"	3-1/4"

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

B. NAILS - SHEATHING FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

C. SCREWS SHALL BE WOOD SCREWS OF THE DIAMETER AND LENGTH NOTED ON THE DRAWINGS. SDS FASTENERS ARE SIMPSON STRONG DRIVE SCREWS.

D. HOT DIPPED GALVANIZED NAILS, BOLTS AND METAL PLATES - ALL NAILS, BOLTS AND METAL PLATES IN CONTACT WITH PRESSURE TREATED (INCLUDING FIRE-RETARDANT TREATED) LUMBER SHALL BE HOT DIPPED GALVANIZED.

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

A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. 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. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. TIGHTEN BOLTS AND LAG SCREWS SNUGLY AGAINST WOOD FRAMING AFTER WOOD HAS REACHED SPECIFIED MOISTURE CONTENT.

B. WALL FRAMING: ALL BEARING AND SHEAR WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2 x 4 STUDS @ 16" O.C. AT INTERIOR WALLS AND 2 x 6 @ 16" O.C. AT EXTERIOR WALLS. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL BEARING AND SHEAR WALLS AND AT EACH SIDE OF ALL OPENINGS. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW.

ALL BEARING STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 8" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS WITH 3"x3"x1/4" PLATE WASHERS @ 4'-0" O.C., UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH 10d-F NAILS @ 8" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES ATTACHED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH SCREWS AT 8" O.C. USE 1-1/4 " W #6 SCREWS FOR 1/2" GWB AND 5/8" GWB WHERE OCCURS. VERIFY THE FIRE ASSEMBLY REQUIREMENTS WHERE APPLICABLE WITH THE ARCHITECT.

C. FLOOR AND ROOF FRAMING: PROVIDE BLOCKING BETWEEN ADJACENT JOISTS @ 48^ O.C. MAX. UNDER ALL PARALLEL PARTITIONS. PROVIDE DOUBLE JOISTS AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 10d-F NAILS @ 8" O.C. STAGGERED UNLESS OTHERWISE NOTED.

D. POSITIVE CONNECTIONS: PROVIDE THE FOLLOWING SIMPSON CONNECTORS AT TYPICAL FRAMING UNLESS OTHERWISE NOTED ON PLAN OR DETAIL. PROVIDE CCQ/ECCQ CAPS AND PBS BASES AT POSTS. PROVIDE BC BASE WHERE POST BEARS ON WOOD FRAMING BELOW. PROVIDE LUS SERIES HANGERS FOR 2X FLOOR AND ROOF JOISTS. CONNECTORS SHALL BE SIZED TO MATCH THE SIZE OF THE FRAMING MEMBERS BEING CONNECTED.

ABBREVIATIONS

@	At
d	Penny (Nails)
Φ	Diameter
°	Degrees
...#	Pounds
#...	Number
(A)	Above
A.B.	Anchor Bolt
ADD'L	Additional
ALT.	Alternate
APPROX.	Approximate
ARCH.	Architect
(B)	Below
B/	Bottom of
BF	Braced Frame
BLKG.	Blocking
BLDG.	Building
BM.	Beam
BOT.	Bottom
BRG.	Bearing
BTWN.	Between
℄	Centerline
C	Camber
CIP	Cast In Place
C.J.	Construction Joint or Control Joint
CJP	Complete Joint Penetration
CLG.	Ceiling
CLR.	Clear
CMU	Concrete Masonry Unit
COL.	Column
CONC.	Concrete
CONN.	Connections
CONST.	Construction
CONT.	Continuous
CSK.	Countersink
DBA	Deformed Bar Anchor
DBL.	Double
DEG.	Degree
DF	Doug Fir-Larch
DIA.	Diameter
DIAG.	Diagonal
DIAPH.	Diaphragm
DIM.	Dimension
DN.	Down
DO	Ditto
DTL.	Detail
DWG.	Draning
(E)	Existing
E.	East
EA.	Each
E.F.	Each Face
EL.	Elevation
ELEV.	Elevator
EMBED.	Embedment Length
ENGR.	Engineer
EQ.	Equal
E.W.	Each Way
EXP.	Expansion
EXT.	Exterior
FDN.	Foundation
FIN.	Finish
FLR.	Floor
FRP	Fiber Reinforced Polymer
F.S.	Far Side
FT.	Foot or Feet
FTG.	Footing
GA.	Gauge
GALV.	Galvanized
GL	Glue Laminated
GWB	Gypsum Wall Board
HDG	Hot Dipped Galvanized
HF	Hem Fir
HGR.	Hanger
HORIZ.	Horizontal
HSS	Hollow Structural Section
HT.	Height
I.D.	Inside Diameter
I.F.	Inside Face
IN.	Inch
INFO.	Information
INT.	Interior
JT.	Joint
K	Kips
KSF	Kips per Square Foot
KSI	Kips per Square Inch
L	Angle
LB.	Pound
LL	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LONGIT.	Longitudinal
LT. WT.	Lightweight
MAX.	Maximum
MECH.	Mechanical
MEZZ.	Mezzanine
MF	Moment Frame
MFR.	Manufacturer
MIN.	Minimum
MISC.	Miscellaneous
MK.	Mark
(N)	New
N.	North
N.S.	Near Side
NOM.	Nominal
NTS	Not to Scale
O.C.	On Center
O.D.	Outside Diameter
O.F.	Outside Face
O.H.	Overhang
OPNG.	Opening
OPP.	Opposite
PAF	Ponder Actuated Fastener
PC	Precast
PERM.	Permanent
PERP.	Perpendicular
PJP	Partial Joint Penetration
PL or ℙ	Plate
PLF	Pounds per linear Foot
PLYND	Plywood
PREFAB.	Prefabricated
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
P.T. or PT	Post-Tensioning
P/T	Pressure-Treated
RAD.	Radius
REF.	Reference
REINF.	Reinforce or Reinforcement
REQD.	Required
REV.	Revise
R.O.	Rough Opening
S.	South
SCH. or SCHED.	Schedule
SECT.	Section
SHT.	Sheet
SIM.	Similar
SOG	Slab On Grade
SPEC.	Specification
SQ.	Square
SQ. FT.	Square Feet
SQ. IN.	Square Inch(es)
SPF	Spruce-Pine-Fir
S.S.	Stainless Steel
STD.	Standard
STIFF.	Stiffener
STL.	Steel
STR.	Structural
SUB.	Substitute
SYM.	Symmetrical
T/	Top of
T&B	Top and Bottom
T&G	Tongue & Groove
TEMP.	Temporary
THRU	Through
T.O.C.	Top of Concrete
T.O.S.	Top of Steel
T.O.W.	Top of Wall
TRANS.	Transverse
TS	Tube Steel
TYP.	Typical
U.O.N.	Unless Otherwise Noted
VERT.	Vertical
V.I.F.	Verify in Field
W.	West
W/ or w/	With
W.H.S.	Welded Headed Stud
W/O	Without
WP	Work Point
W.T.S.	Welded Threaded Stud
WWF	Welded Wire Fabric
X SECT.	Cross Section
X-STR	Extra Strong
XX-STR	Double Extra Strong

QUANTUM
CONSULTING ENGINEERS

1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER
STATE OF WASHINGTON
36098
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ◯ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

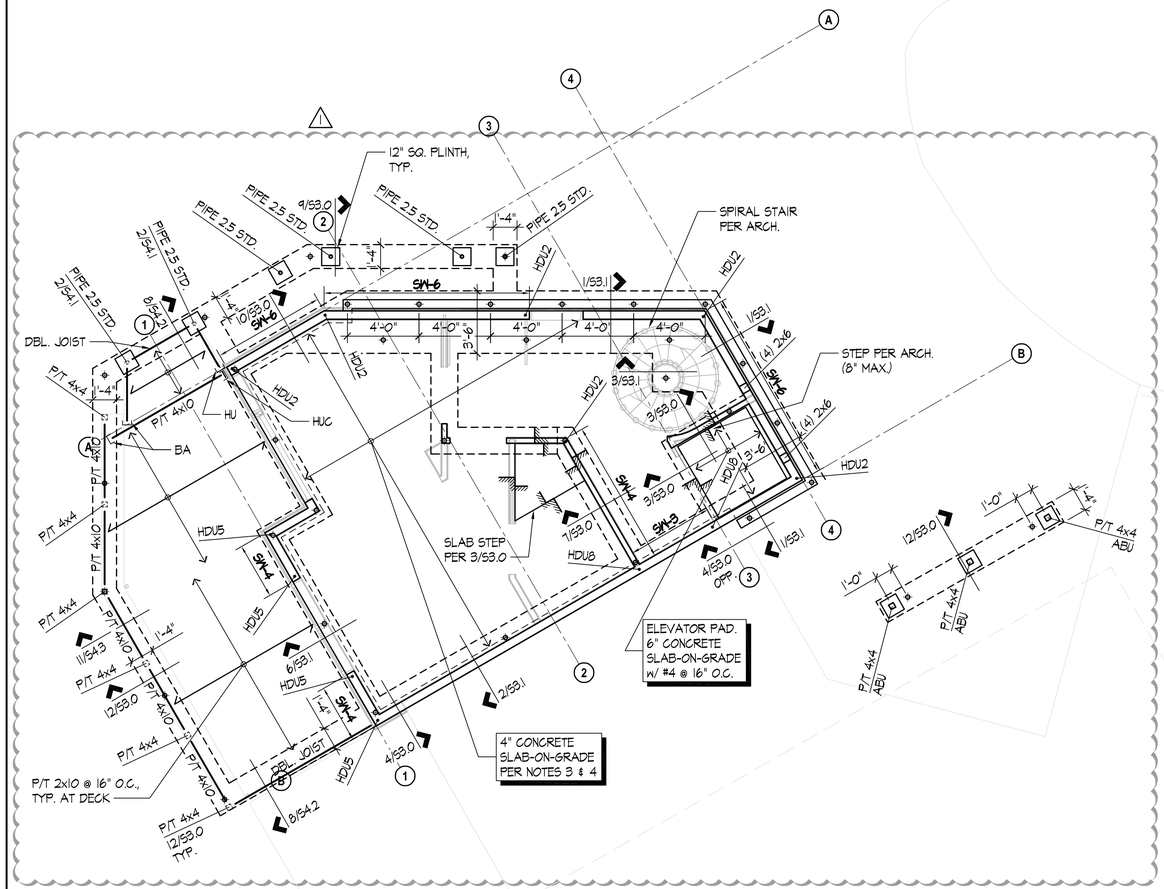
SHEET TITLE:

GENERAL STRUCTURAL NOTES

SHEET NO.

S1.1

File: 429-s101.dwg Plotted: Fri, 09/26/2025 7:27 am



EXISTING HOUSE

FOUNDATION / LOWER LEVEL FRAMING PLAN

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

FOUNDATION / LOWER LEVEL FRAMING PLAN NOTES:

1. ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL PLANS ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR WITH THE ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
2. SEE SHEETS S1.0 AND S1.1 FOR GENERAL STRUCTURAL NOTES AND ABBREVIATIONS. SEE SHEET S3.0 FOR TYPICAL CONCRETE AND FOUNDATION DETAILS. SEE SHEET S4.0 FOR TYPICAL WOOD DETAILS.
3. SLAB-ON-GRADE SHALL BE 4" THICK CONCRETE REINFORCED WITH #4 @ 16" O.C. EACH WAY AT MID-DEPTH, U.O.N. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING SUB-GRADE MOISTURE BARRIER AND ELEVATIONS, ETC.
4. FOR SLAB-ON-GRADE JOINTS, SEE DETAIL 2/S3.0.
5. WHERE NEW CONCRETE IS CAST AGAINST EXISTING CONCRETE FOUNDATIONS, DRILL AND EPOXY #4 DOWELS x 3'-0" LONG TO LAP WITH THE NEW FOOTING LONGITUDINAL REINFORCING (4" MINIMUM EMBEDMENT).
6. ALL WOOD BEARING ON UNPROTECTED CONCRETE, EXPOSED TO WEATHER, OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE-TREATED, U.O.N.
7. FOR SILL PLATE ANCHOR BOLT LAYOUT TO CONCRETE FOUNDATION WALLS AND SLABS, SEE DETAIL 1/S4.0.
8. ALL BEARING AND SHEAR WALLS SHALL BE 2x4 @ 16" O.C. INTERIOR AND 2x6 @ 16" O.C. EXTERIOR, U.O.N.
9. POSTS INDICATED ARE AT THIS LEVEL. ALL POSTS NOT SPECIFIED SHALL BE (2) 2x U.O.N. SOLID SAWN MEMBERS OF EQUIVALENT SIZE MAY BE SUBSTITUTED FOR BUILT-UP MEMBERS (SUCH AS A 4x6 FOR (3) 2x4).
10. SW-x — INDICATES SHEAR WALL AT THIS LEVEL. SEE SHEAR WALL SCHEDULE 8/S4.0 FOR SHEATHING, BLOCKING, NAILING, AND ANCHOR BOLT REQUIREMENTS. ALL EXTERIOR WALLS SHALL BE SHEATHED PER SW-6 CRITERIA U.O.N.
11. HDUx — INDICATES HOLDOWN TO CONCRETE FOUNDATION WALLS OR FOOTINGS. SEE 12/S4.0 FOR HOLDOWN DETAIL. USE MIN. (2) 2x POST U.O.N.

LEGEND:

- INDICATES GRADE BEAM
- INDICATES FOUNDATION WALL, WOOD BEARING WALL OR SHEAR WALL
- INDICATES NON-BEARING/ NON-SHEAR WALL AT THIS LEVEL. SEE 1 & 2/S4.1 FOR CONNECTION DETAILS
- SW-x — INDICATES SHEAR WALL TYPE AT THIS LEVEL. SEE PLAN NOTE 10
- 4/12x — INDICATES MULTIPLE STUD POST AT THIS LEVEL. SEE PLAN NOTE 9
- HX — INDICATES HOLDOWN TYPE AT THIS LEVEL. SEE PLAN NOTE 11
- INDICATES 3" DIA. PIPE PILE

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER — STATE OF WASHINGTON — 36098 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE
5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ○ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

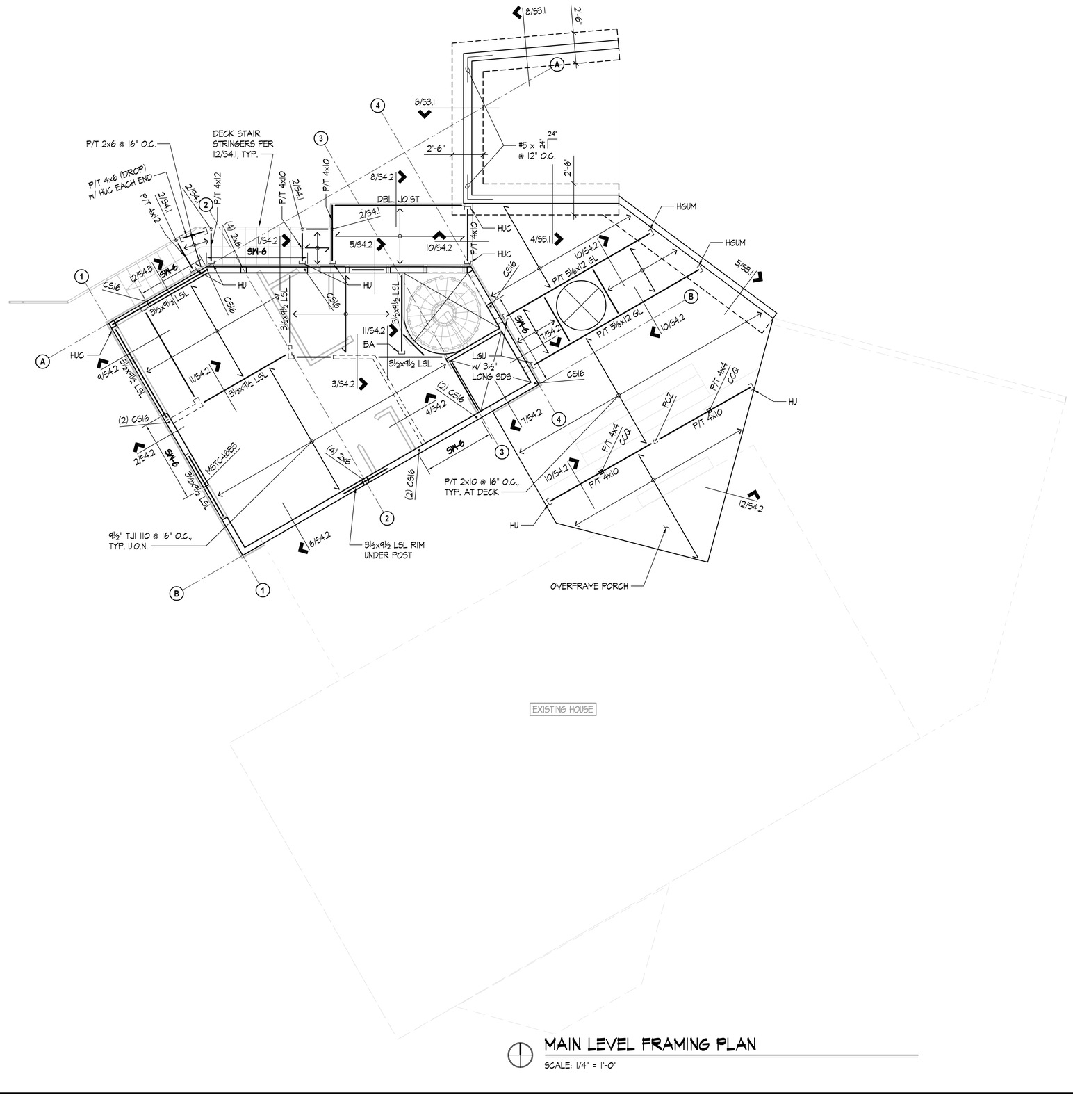
SHEET TITLE:

FOUNDATION/ LOWER LEVEL FRAMIING PLAN

SHEET NO.

S2.0

File: 4329-s200.dwg Plotted: Fri, 09/26/2025 7:28 am



MAIN LEVEL FRAMING PLAN

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

MAIN LEVEL FRAMING PLAN NOTES:

1. ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL PLANS ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR WITH THE ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
2. SEE SHEETS S1.0 AND S1.1 FOR GENERAL STRUCTURAL NOTES AND ABBREVIATIONS. SEE SHEETS S4.0 THRU S4.2 FOR TYPICAL WOOD DETAILS.
3. TYPICAL FLOOR FRAMING CONSISTS OF 23/32" APA RATED T&G SHEATHING (INDEX 48/24), LAID FACE GRAIN PERPENDICULAR OVER 9-1/2" TJI 110 JOISTS AT 16" O.C. HANG TJI JOISTS WITH ITS TOP FLANGE HANGERS TYPICAL AT FLUSH BEAMS, U.O.N.
4. TYPICAL DECK FRAMING CONSISTS OF PRESSURE TREATED DECKING/SLEEPERS OVER 2x10 HF#2 JOISTS AT 16" O.C. HANG JOISTS WITH LUS FACE MOUNT HANGERS TYPICAL AT FLUSH BEAMS, U.O.N.
5. NAIL FLOOR SHEATHING TO FRAMING WITH 8d NAILS (0.131"Φ x 2.5" LONG) AT 6" O.C. AT ALL PANELS EDGES AND 8d NAILS AT 12" O.C. AT INTERMEDIATE FRAMING MEMBERS (UNBLOCKED). SEE DETAIL 6/S4.0.
6. ALL BEARING AND SHEAR WALLS SHALL BE 2x4 @ 16" O.C. INTERIOR AND 2x6 @ 16" O.C. EXTERIOR, U.O.N.
7. POSTS INDICATED ARE AT THIS LEVEL. ALL POSTS NOT SPECIFIED SHALL BE (2) 2x U.O.N. SOLID SAWN MEMBERS OF EQUIVALENT SIZE MAY BE SUBSTITUTED FOR BUILT-UP MEMBERS (SUCH AS A 4x6 FOR (3) 2x4).
8. PROVIDE SOLID OR BUILT-UP WOOD POSTS BENEATH THE ENDS OF ALL FLOOR BEAMS AND ALL POSTS ABOVE FOR FULL BEARING. PROVIDE BLKG. AT JOISTS PER DETAIL 7/S4.1.
9. ALL HEADERS NOT SHOWN ON PLAN SHALL BE (2) 2x10 FOR EXTERIOR BEARING WALLS AND (2) 2x10 FOR INTERIOR BEARING WALLS. SEE 10/S4.1 FOR HEADER DETAIL.
10. FOR TOP PLATE SPLICE SEE DETAIL 6/S4.1.
11. ALIGN A JOIST OR JOIST BLOCKING OVER THE FULL LENGTH OF ALL BEARING/SHEAR WALLS. SEE 8/S4.0 FOR SPECIAL SHEAR WALL BLOCKING REQUIREMENTS.
12. SW-x — INDICATES SHEAR WALL AT THIS LEVEL. SEE SHEAR WALL SCHEDULE 8/S4.0 FOR SHEATHING, BLOCKING, NAILING, AND ATTACHMENT REQUIREMENTS. ALL EXTERIOR WALLS SHALL BE SHEATHED PER SW-6 CRITERIA, U.O.N.
13. CSxx — INDICATES HOLDOWN STRAP TO FRAMING BELOW WALL. SEE 10/S4.0 FOR STRAP HOLDOWN DETAIL AT FLOOR-TO-FLOOR AND BEAM SUPPORTING SHEAR WALL END. USE MIN. (2) 2x POST U.O.N.

LEGEND:

- INDICATES GRADE BEAM
- INDICATES FOUNDATION WALL, WOOD BEARING WALL OR SHEAR WALL
- INDICATES FRAMING DIRECTION
- INDICATES EXTENT OF FRAMING
- SW-x — INDICATES SHEAR WALL TYPE AT THIS LEVEL. SEE PLAN NOTE 12
- INDICATES WOOD BEARING OR SHEAR WALL AT THIS LEVEL. SEE PLAN NOTES 6 & 12
- INDICATES WOOD BEARING WALL OR SHEAR WALL BELOW. SEE PLAN NOTE 11
- INDICATES HEADER MEMBER. SEE PLAN NOTE 9
- (#)2x — INDICATES MULTIPLE STUD POST AT THIS LEVEL. SEE PLAN NOTE 7
- CSxx — INDICATES HOLDOWN TYPE AT THIS LEVEL. SEE PLAN NOTE 13

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

PROJECT:

LIN KICSKA RESIDENCE

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ○ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

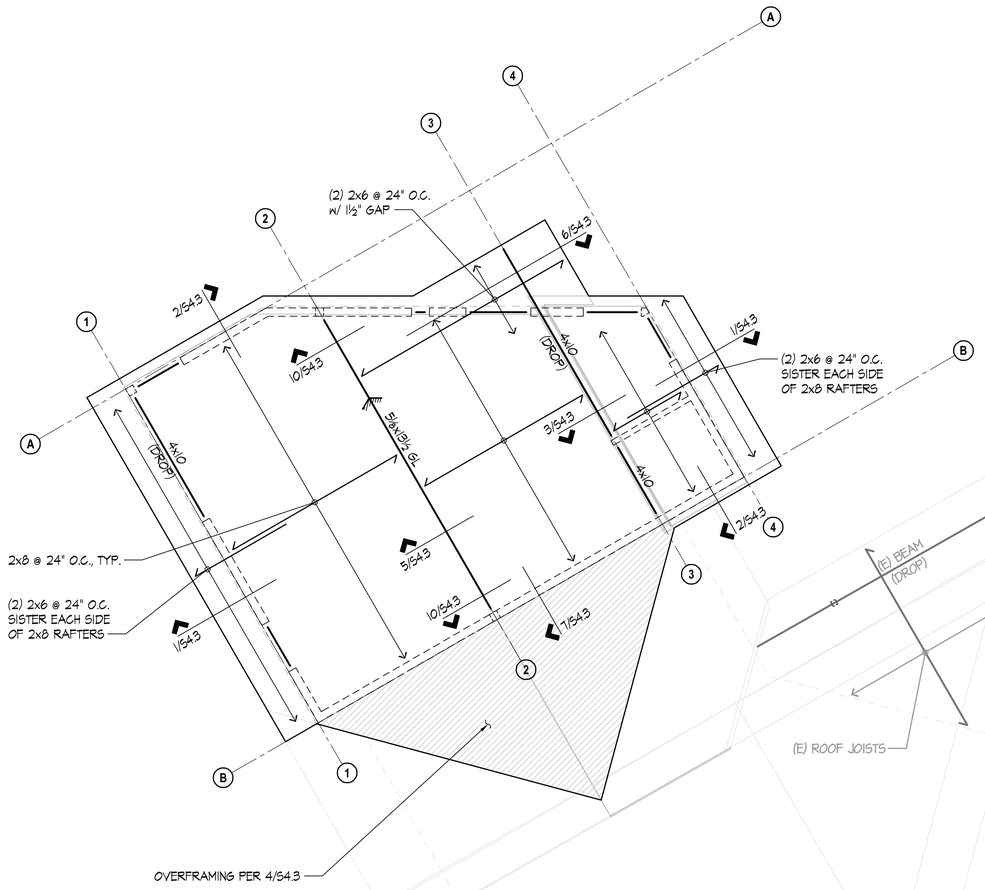
SHEET TITLE:

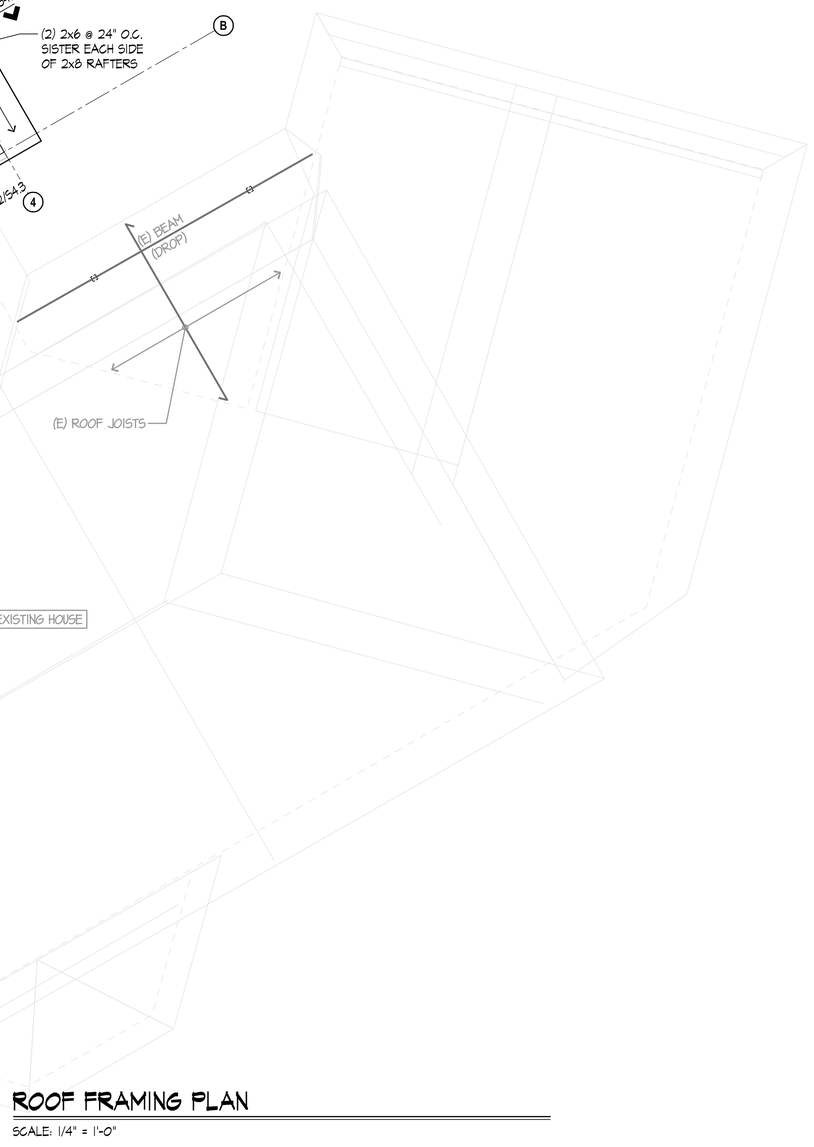
MAIN LEVEL FRAMING PLAN

SHEET NO.

S2.1

File: 429-s201.dwg Plotted: Fri, 09/26/2025 7:28 am





ROOF FRAMING PLAN

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

ROOF FRAMING PLAN NOTES:

1. ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL PLANS ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR WITH THE ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
2. SEE SHEETS S1.0 AND S1.1 FOR GENERAL STRUCTURAL NOTES AND ABBREVIATIONS. SEE SHEETS S4.0 THRU S4.3 FOR TYPICAL WOOD DETAILS.
3. TYPICAL ROOF FRAMING CONSISTS OF 15/32" APA RATED SHEATHING (INDEX 32/16), LAID FACE GRAIN PERPENDICULAR OVER 2x FRAMING @ 24" O.C., U.O.N.
4. TYPICAL ROOF JOIST SHALL BE 2x8 HF#2 @ 24" O.C., U.O.N. HANG JOISTS WITH LRUZ FACE MOUNT HANGERS TYPICAL AT FLUSH BEAMS, U.O.N.
5. NAIL ROOF SHEATHING TO FRAMING WITH 8d NAILS (0.131"Ø x 2.5" LONG) AT 6" O.C. AT ALL PANELS EDGES AND 8d NAILS AT 12" O.C. AT INTERMEDIATE FRAMING MEMBERS (UNBLOCKED). SEE DETAIL 6/S4.0.
6. PROVIDE SOLID BLOCKING BETWEEN EACH ROOF JOIST AT SUPPORTS. PROVIDE AN HIA CLIP AT EVERY MEMBER TO TOP PLATE.
7. ALL HEADERS NOT SHOWN ON PLAN SHALL BE (2) 2x10 FOR EXTERIOR BEARING WALLS AND (2) 2x10 FOR INTERIOR BEARING WALLS. SEE 10/S4.1 FOR HEADER DETAIL.
8. PROVIDE SOLID OR BUILT-UP WOOD POSTS BENEATH THE ENDS OF ALL ROOF BEAMS FOR FULL BEARING.
9. FOR TOP PLATE SPLICE SEE DETAIL 6/S4.1.

LEGEND:

- INDICATES FRAMING DIRECTION
- INDICATES EXTENT OF FRAMING
- INDICATES WOOD BEARING WALL OR SHEAR WALL BELOW. SEE PLAN NOTE 6
- INDICATES HEADER MEMBER. SEE PLAN NOTE 7

QUANTUM
CONSULTING ENGINEERS

1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER
STATE OF WASHINGTON
36098
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ◯ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

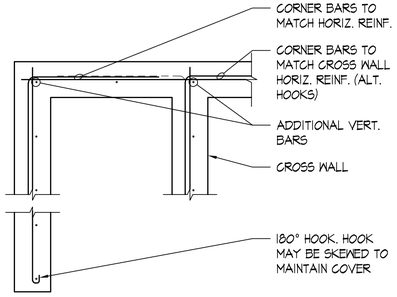
SHEET TITLE:

ROOF FRAMING PLAN

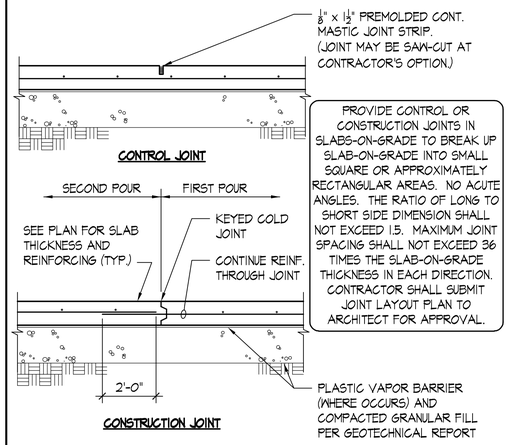
SHEET NO.

S2.2

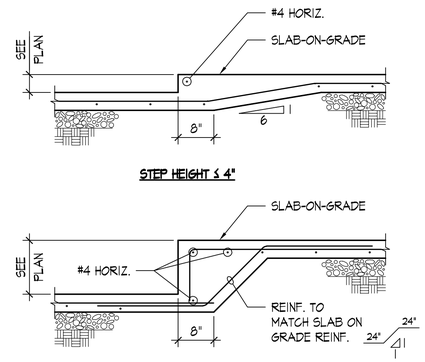
File: 429-s202.dwg Plotted: Fri, 09/26/2025 7:18 am



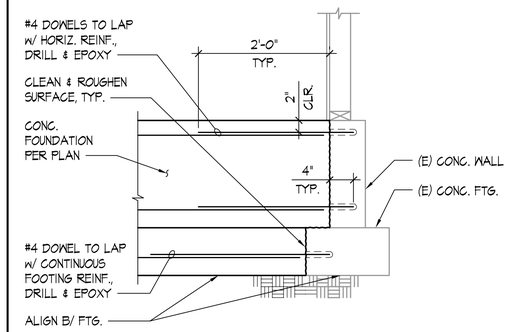
TYPICAL CORNER BAR AND WALL END BAR ARRANGEMENT AT CONCRETE WALLS OR FOOTINGS — SCALE: NONE — 1



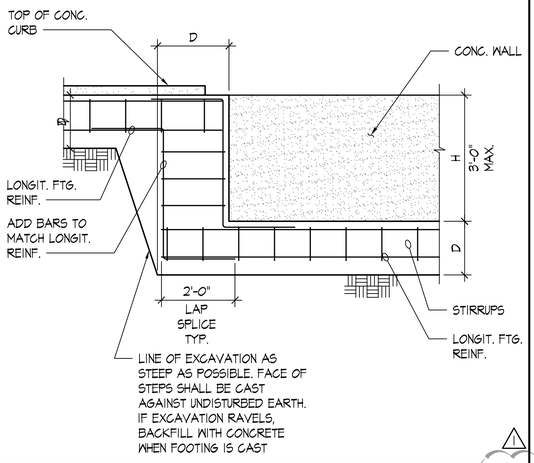
TYPICAL SLAB-ON-GRADE JOINTS — SCALE: NONE — 2



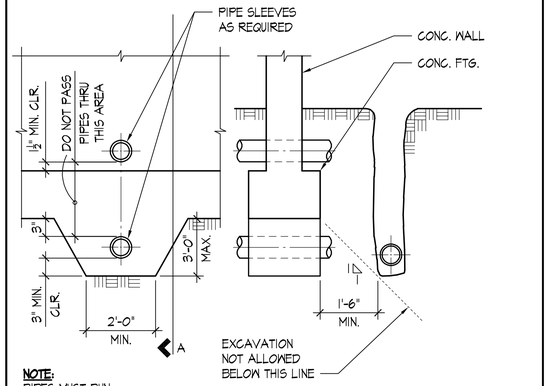
TYPICAL SLAB-ON-GRADE STEP DETAIL — SCALE: NONE — 3



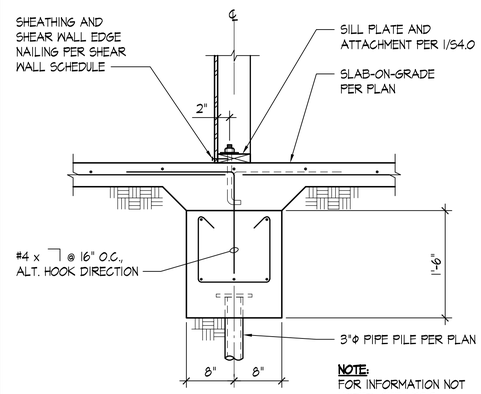
TYPICAL NEW FOUNDATION TO EXISTING FOUNDATION — SCALE: NONE — 4



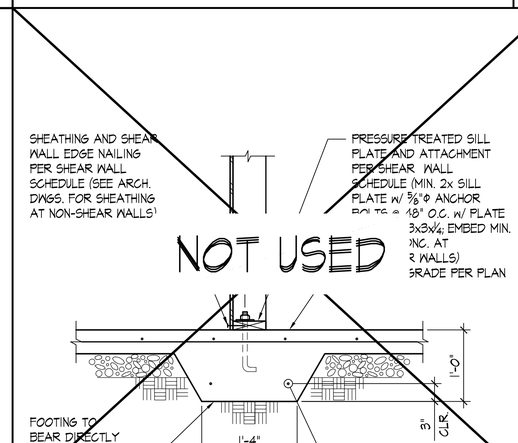
TYPICAL STEPPED GRADE BEAM — SCALE: NONE — 5



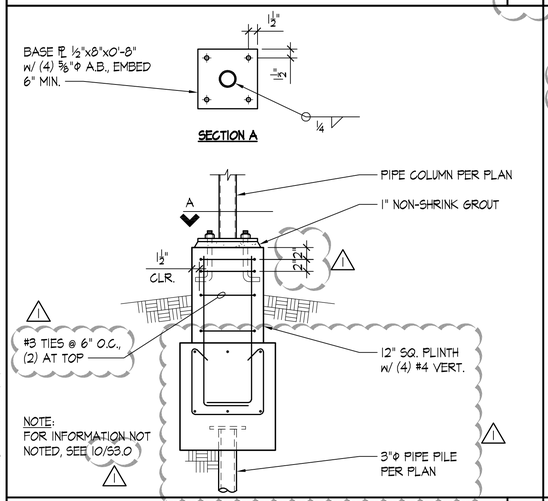
TYPICAL PIPE AND TRENCH LOCATIONS PERPENDICULAR TO FOOTING — SCALE: NONE — 6



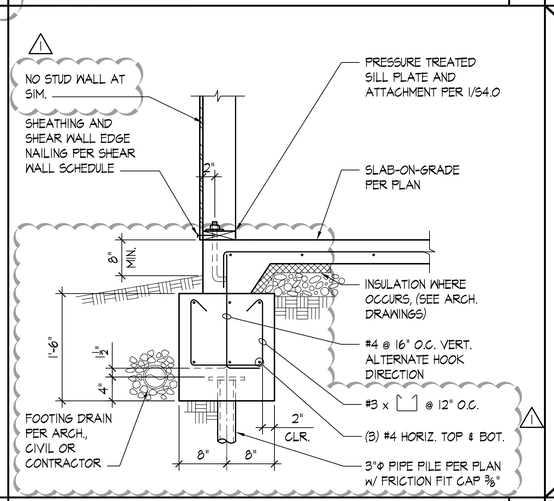
TYPICAL PIPE PILE FOUNDATION - INTERIOR — SCALE: 1"=1'-0" — 7



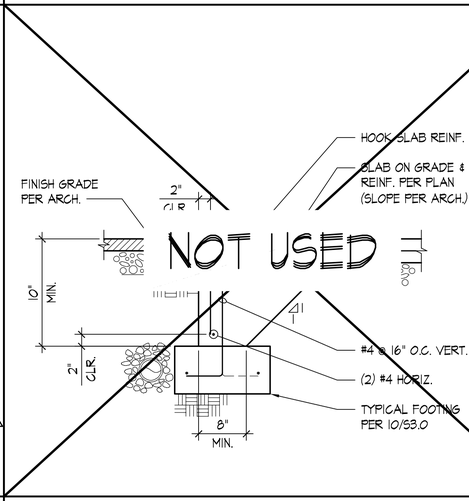
TYPICAL INTERIOR WALL FOUNDATION (THICKENED SLAB) — SCALE: NONE — 8



PIPE COLUMN AT POST FOOTING — SCALE: NONE — 9

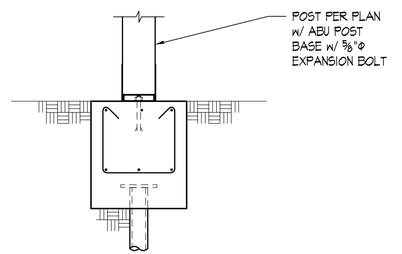


TYPICAL PERIMETER GRADE BEAM FOUNDATION AT SLAB-ON-GRADE — SCALE: NONE — 10



TYPICAL THICKENED SLAB AT DOOR — SCALE: NONE — 11

NOTE:
FOR INFORMATION NOT NOTED, SEE 10/S3.0



TYPICAL EXTERIOR POST AT GRADE BEAM — SCALE: NONE — 12

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

PROJECT:

LIN KICSKA RESIDENCE

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ○	REVISIONS: △
P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

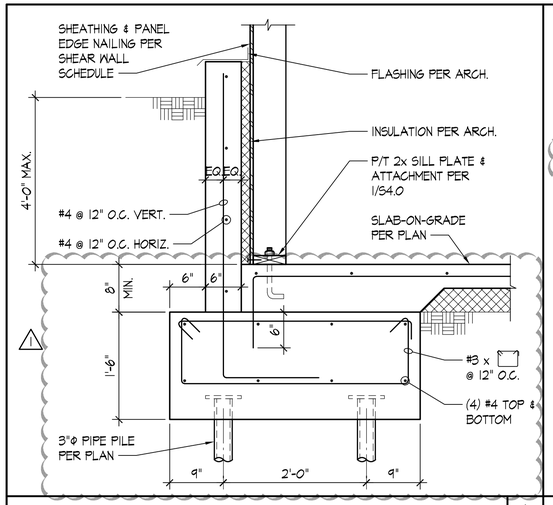
SHEET TITLE:

FOUNDATION/SLAB DETAILS

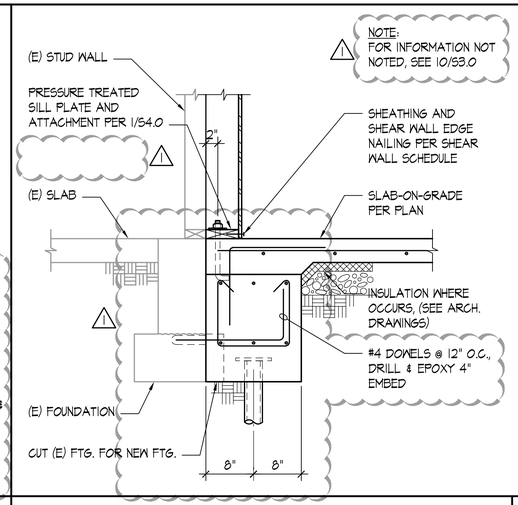
SHEET NO.

S3.0

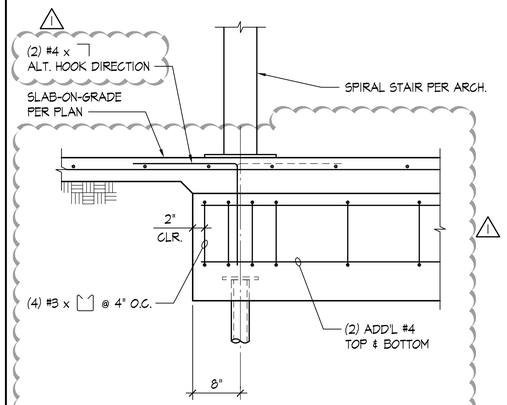
File: 429-s300.dwg Plotted: Fri, 09/26/2025 7:56 am



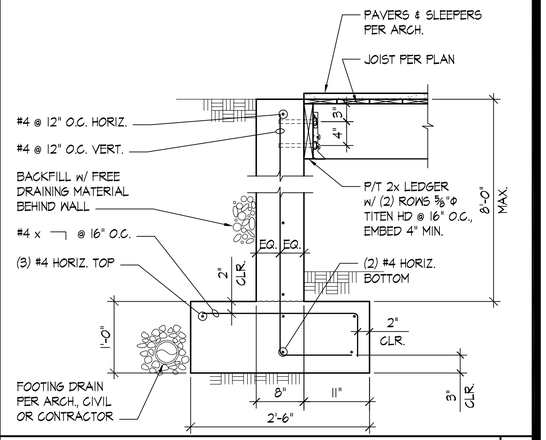
CANTILEVERED BASEMENT WALL — SCALE: 1"=1'-0" — 1



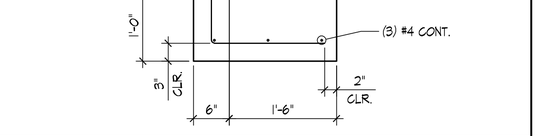
PERIMETER WALL FOUNDATION AT EXISTING FOUNDATION — SCALE: NONE — 2



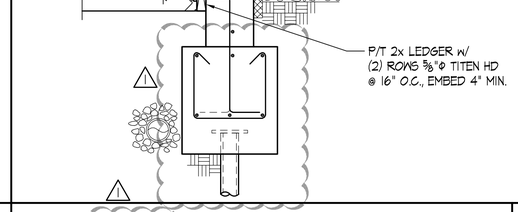
SPIRAL STAIR FOUNDATION — SCALE: NONE — 3



PLANTED AREA RETAINING WALL w/ DECK — SCALE: NONE — 4

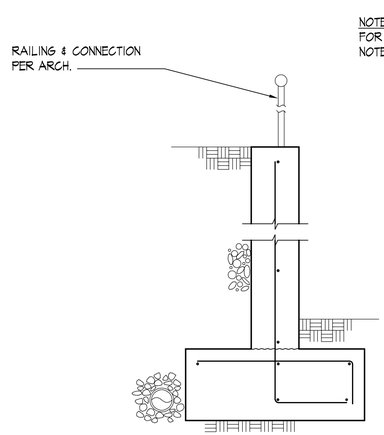


RETAINING WALL AT DECK — SCALE: 1"=1'-0" — 5

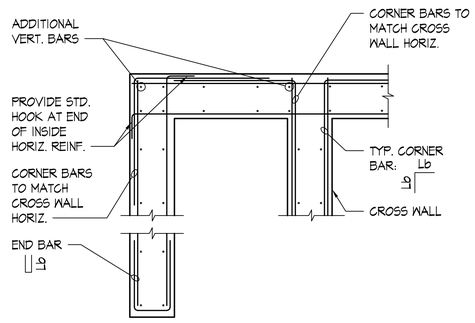


PERIMETER GRADE BEAM FOUNDATION AT DECK — SCALE: NONE — 6

DETAIL — SCALE: 1"=1'-0" — 7



PLANTED AREA RETAINING WALL — SCALE: NONE — 8



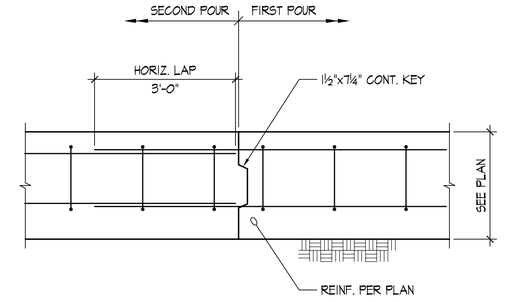
NOTE:
SEE SCHEDULE FOR SPLICES & DEVELOPMENT LENGTHS

DOUBLE CURTAIN

TYPICAL CORNER AND WALL END BAR ARRANGEMENT AT GRADE BEAMS — SCALE: NONE — 9

DETAIL — SCALE: 1"=1'-0" — 10

DETAIL — SCALE: 1"=1'-0" — 11



NOTE:
ALIGN GRADE BEAM JOINT w/ WALL JOINT

TYPICAL GRADE BEAM JOINT — SCALE: NONE — 12

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER — STATE OF WASHINGTON — 36098 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ◯ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

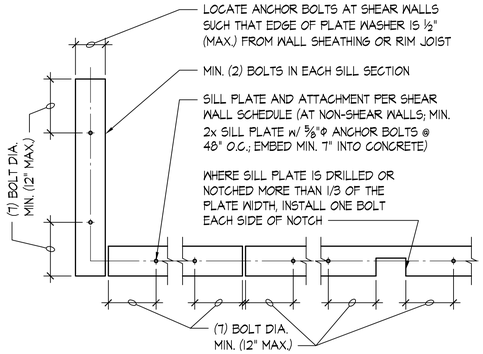
SHEET TITLE:

CONCRETE DETAILS

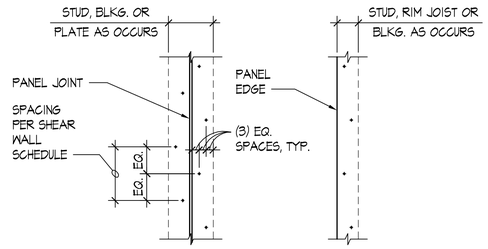
SHEET NO.

S3.1

File: 429-s301.dwg Plotted: Fri, 09/26/2025 3:28 pm



TYPICAL SILL PLATE BOLTING - PLAN VIEW SCALE: NONE | 1



NOTE:
STAGGER EACH LINE OF NAILING (AT ALL PANEL EDGES) AS INDICATED

TYPICAL STAGGERED NAILING SCALE: NONE | 2

SHEAR WALL SCHEDULE							
				BOTTOM PLATE ATTACHMENT			TOP PLATE ATTACHMENT
SHEAR WALL TYPE	SHEAR WALL SHEATHING (1)	PANEL EDGE FRAMING (2)(7)	PANEL EDGE NAILING (3)	2x BOTTOM PLATE CONNECTION TO RIM JOIST OR BLOCKING BELOW	ANCHOR BOLTING OF SILL PLATE TO CONCRETE BELOW (4)(5)		RIM JOIST OR BLOCKING CONNECTION TO TOP PLATE (6)
					3x PLATE	2x PLATE	INTERIOR WALL / EXTERIOR WALL
SW-6	7/16" APA ONE-SIDE SHTG.	2x	0.131"Φx2½" @ 6" O.C.	0.148"Φx3¼" @ 6" O.C. (9)	⅝"Φ @ 48" O.C.	⅝"Φ @ 48" O.C.	A35 @ 16" O.C. / LTP4 @ 16" O.C.
SW-4	7/16" APA ONE-SIDE SHTG.	3x OR (2) 2x	0.131"Φx2½" @ 4" O.C. (8)	0.148"Φx3¼" @ 4" O.C. (9)	⅝"Φ @ 48" O.C.	⅝"Φ @ 32" O.C.	A35 @ 16" O.C. / LTP4 @ 16" O.C.
SW-3	7/16" APA ONE-SIDE SHTG.	3x OR (2) 2x	0.131"Φx2½" @ 3" O.C. (8)	0.148"Φx3¼" @ 3" O.C. (9)	⅝"Φ @ 32" O.C.	⅝"Φ @ 24" O.C.	A35 @ 12" O.C. / LTP4 @ 12" O.C.

NOTES:

(1) INSTALL PANEL SHEATHING EITHER HORIZONTALLY OR VERTICALLY FOR THE ENTIRE LENGTH OF THE WALL PER PLAN. WALL STUD SPACING SHALL BE 16" O.C. MAXIMUM.

(2) ALL INTERMEDIATE WALL STUDS SHALL BE PER PLAN. PROVIDE BACKING FRAMING AT ALL PANEL EDGES INCLUDING HORIZONTAL BLOCKING PER THE SCHEDULE.

(3) PROVIDE NAILING TO ALL PANEL EDGES, TOP & BOTTOM PLATES AND HORIZONTAL BLOCKING. PROVIDE THE SAME NAILING PATTERN TO EACH MULTIPLE STUD OF THE BUILT-UP HOLD DOWN POST. NAIL PANEL TO INTERMEDIATE FRAMING MEMBERS w/ 0.131"Φ x 2-1/2" @ 12" O.C.

(4) EMBED CAST-IN-PLACE 5/8"Φ ANCHOR BOLTS 7" MIN. (OR EMBED ADHESIVE ANCHOR BOLTS 5 1/2" IN (E) CONCRETE; SEE STRUCTURAL NOTES). PROVIDE PLATE WASHER 3" x 3" x 1/4" AT EACH ANCHOR BOLT. SILL PLATES SHALL BE TREATED PER GENERAL NOTES, AND SHALL BE 2x OR 3x PER THE SCHEDULE. SEE DETAIL 11/S4.0 FOR OTHER REQUIREMENTS.

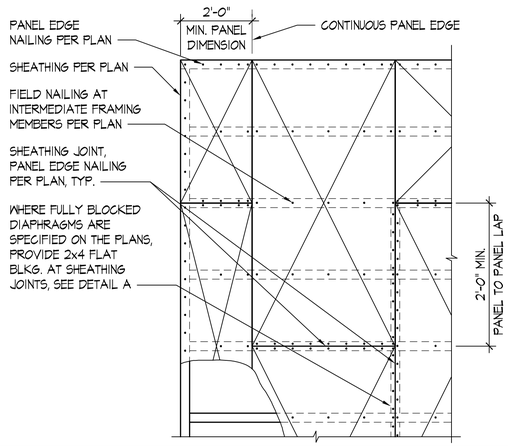
(5) PROVIDE HOT DIPPED GALVANIZED NAILS, BOLTS, OR METAL PLATES FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED MEMBERS.

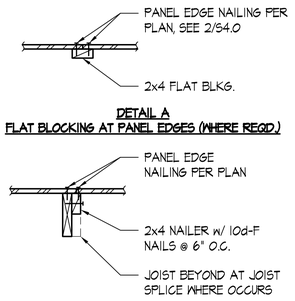
(6) PROVIDE 0.131"Φ x 1-1/2" LONG NAILS FOR CLIPS DIRECTLY ATTACHED TO FRAMING MEMBERS; PROVIDE 0.131"Φ x 2-1/2" LONG NAILS FOR CLIPS INSTALLED OVER FLOOR OR WALL SHEATHING ON FRAMING MEMBERS. SEE 6/S4.1 FOR TOP PLATE SPLICE.

(7) ALTERNATIVE TO 3x STUDS AND 3x HORIZ. BLOCKING IS (2) 2x STUDS/BLKG. NAILED TOGETHER WITH 0.148"Φ x 3" LONG NAILS WITH THE SAME SPACING AS THE PANEL EDGE NAILING PER THE SCHEDULE (STAGGER).

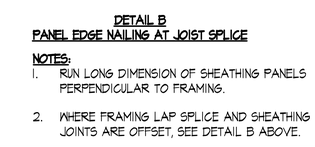
(8) STAGGER NAILS PER 2/S4.0.

(9) RIM JOIST/BLOCKING MINIMUM WIDTH OF 1¾". STAGGER NAILS PER 2/S4.0 WHERE SPACING IS LESS THAN 6" O.C.





DETAIL A
FLAT BLOCKING AT PANEL EDGES (WHERE REQD.)

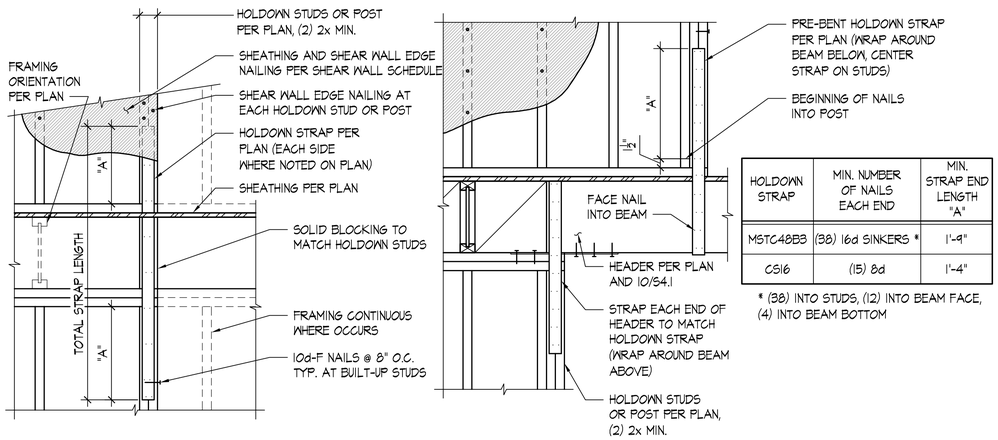


DETAIL B
PANEL EDGE NAILING AT JOIST SPLICE

NOTES:
1. RUN LONG DIMENSION OF SHEATHING PANELS PERPENDICULAR TO FRAMING.
2. WHERE FRAMING LAP SPLICE AND SHEATHING JOINTS ARE OFFSET, SEE DETAIL B ABOVE.

TYPICAL ROOF AND FLOOR DIAPHRAGM SHEATHING SCALE: NONE | 6

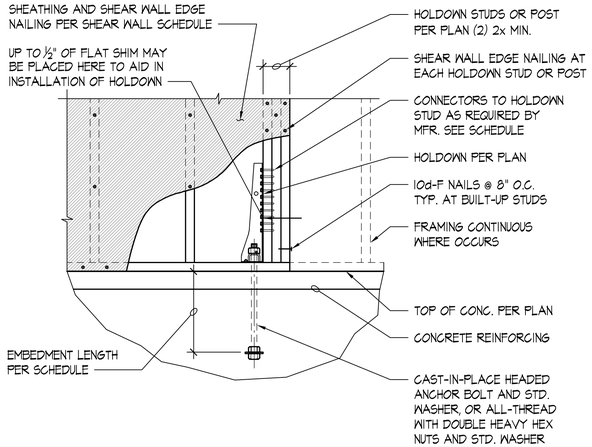
SHEAR WALL SCHEDULE - 8d NAILS SCALE: NONE | 8



HOLDOWN STRAP	MIN. NUMBER OF NAILS EACH END	MIN. STRAP END LENGTH "A"
MSTC48B3	(38) 16d SINKERS *	1'-9"
CS16	(15) 8d	1'-4"

* (38) INTO STUDS, (12) INTO BEAM FACE, (4) INTO BEAM BOTTOM

TYPICAL FLOOR TO FLOOR HOLDOWN STRAP & FLOOR TO HEADER HOLDOWN STRAP SCALE: NONE | 10



HOLDOWN	ANCHOR BOLT Φ	ANCHOR BOLT IN CONCRETE EMBED LENGTH	CONNECTORS TO HOLDOWN STUDS
HDU2	⅝"Φ	13"	(6) ¼"x2½" SDS
HDU5	⅝"Φ	13"	(14) ¼"x2½" SDS
HDU8	⅞"Φ	18"	(20) ¼"x2½" SDS

NOTE:
PROVIDE HOT DIPPED GALVANIZED NAILS, BOLTS, OR METAL PLATES FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED MEMBERS.

TYPICAL HOLDOWN TO CONCRETE SCALE: NONE | 12

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER — STATE OF WASHINGTON — 36098 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE
5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ○	REVISIONS: △
P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

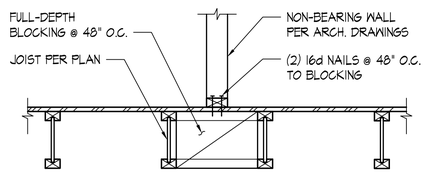
SHEET TITLE:

WOOD DETAILS

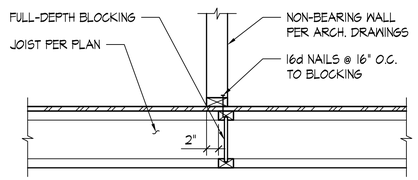
SHEET NO.

S4.0

File: A3P-s400.dwg Plotted: Fri, 09/26/2025 7:28 am

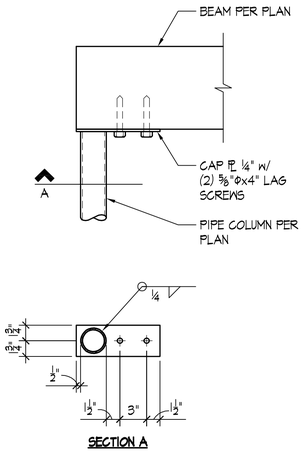


WALL PARALLEL TO FLOOR FRAMING



WALL PERPENDICULAR TO FLOOR FRAMING

TYPICAL NON-BEARING WALL SUPPORT (BOTTOM) - I-JOIST — SCALE: NONE — 1



SECTION A

WOOD BEAM TO PIPE COLUMN CONNECTION — SCALE: NONE — 2

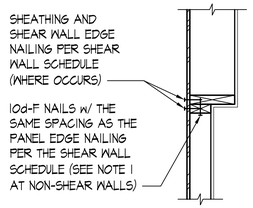
CEILING JOIST SCHEDULE	
SIZE	MAX. SPAN
2x4 @ 24" O.C. 2x4 @ 16" O.C.	8'-0" 9'-2"
2x6 @ 24" O.C. 2x6 @ 16" O.C.	12'-6" 14'-4"
2x8 @ 24" O.C. 2x8 @ 16" O.C.	16'-6" 19'-0"
2x10 @ 24" O.C. 2x10 @ 16" O.C.	21'-2" 24'-3"

NOTES:
CEILING JOIST TABLE BASED ON HF #2, Fb=850 PSI (REPETITIVE MEMBER USE), Fv = 150 PSI
$E=1.3X10^6$ PSI, DEFL. < L/240

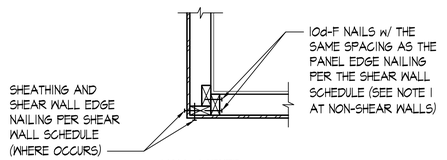
ATTIC LIVE LOAD = 10.0 PSF
CEILING DEAD LOAD = 5.0 PSF

CEILING JOIST SCHEDULE — SCALE: NONE — 3

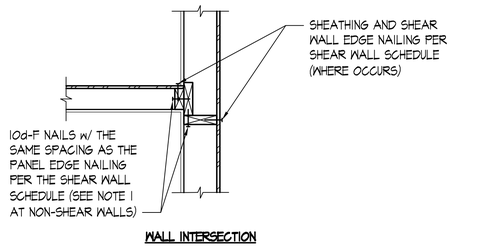
NOTES:
1. AT NON-SHEAR WALLS, NAIL STUDS TOGETHER w/ 10d-F NAILS @ 8" O.C.
2. ADDITIONAL STUDS REQUIRED AS NAILERS, ETC. ARE NOT SHOWN.



VARYING WALL SIZE

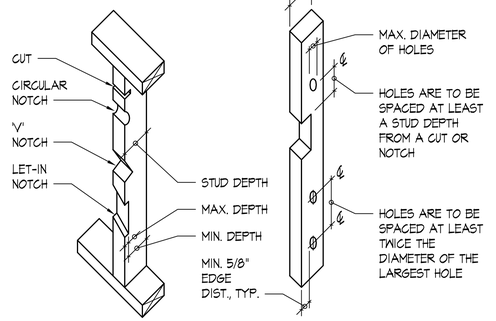


WALL CORNER



WALL INTERSECTION

TYPICAL WALL INTERSECTIONS - RESIDENTIAL — SCALE: NONE — 8



A. CUTTING AND NOTCHING WOOD STUDS
(DO NOT NOTCH MORE THAN 3 ADJACENT STUDS w/o REVIEW BY ENGINEER)

BEARING WALL STUDS:

STUD SIZE	MAX. DEPTH OF SAW CUT OR NOTCH	MIN. DEPTH REMAINING AFTER CUT OR NOTCH
2x4	1"	2-3/8"
2x6	1-3/8"	4-1/8"
2x8	1-7/8"	5-3/8"

NON-BEARING WALL STUDS:

STUD SIZE	MAX. DEPTH OF SAW CUT OR NOTCH	MIN. DEPTH REMAINING AFTER CUT OR NOTCH
2x4	1-1/2"	2"
2x6	2-3/8"	3-1/8"
2x8	3"	4-1/4"

B. HOLES IN WOOD STUDS

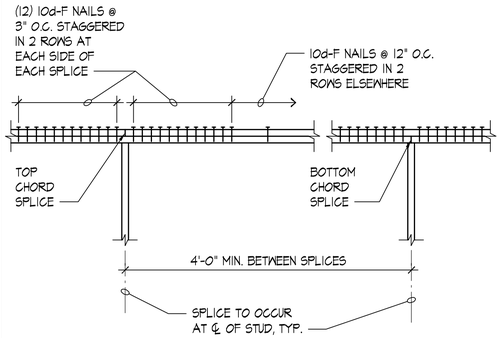
BEARING WALL:

STUD SIZE	MAX. DIAMETER OF HOLE
2x4	1-1/2"
2x6	2-3/8"
2x8	3"

NON-BEARING WALL:

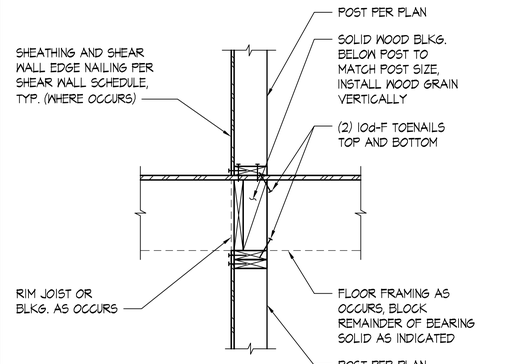
STUD SIZE	MAX. DIAMETER OF HOLE
2x4	2-1/4"
2x6	3-3/8"
2x8	4-1/2"

TYPICAL ALLOWABLE HOLES AND NOTCHES IN STUDS — SCALE: NONE — 9



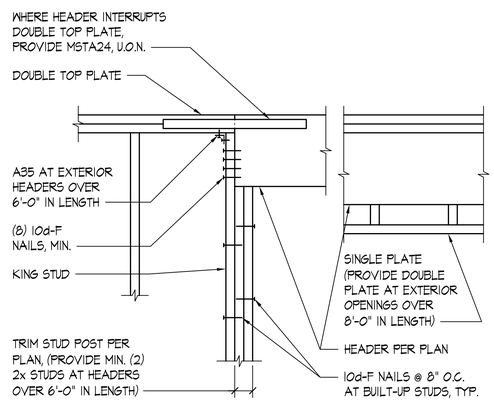
DF CAPACITY:
97(1.6)(25)=3.88^k
HF CAPACITY:
84(1.6)(25)=3.36^k

TYPICAL TOP PLATE SPLICE — SCALE: NONE — 6

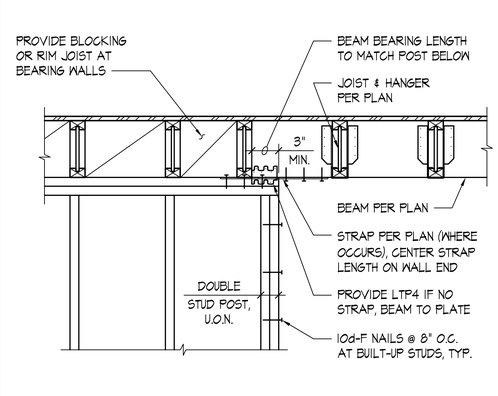


NOTE:
FRAMING CONDITIONS VARY, FOR INFORMATION NOT NOTED SEE PLAN & APPROPRIATE DETAILS

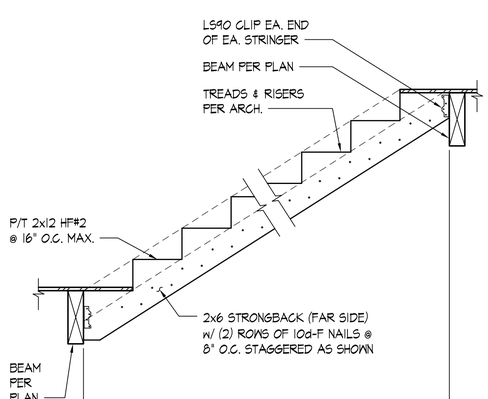
TYPICAL POST AT FLOOR — SCALE: NONE — 7



TYPICAL HEADER — SCALE: NONE — 10



TYPICAL FLUSH BEAM — SCALE: NONE — 11



TYPICAL DECK STAIR STRINGER — SCALE: NONE — 12

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER — STATE OF WASHINGTON — 36098 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE
5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ○ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

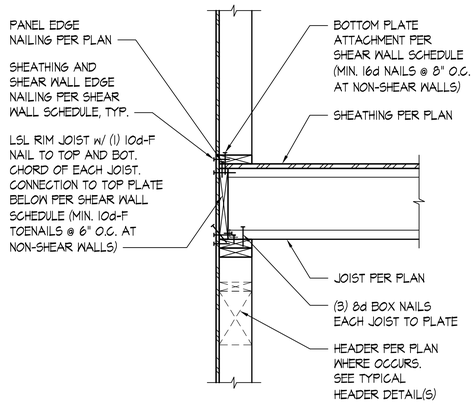
SHEET TITLE:

WOOD DETAILS

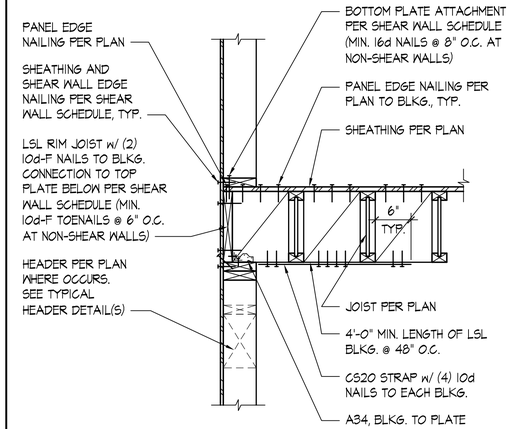
SHEET NO.

S4.1

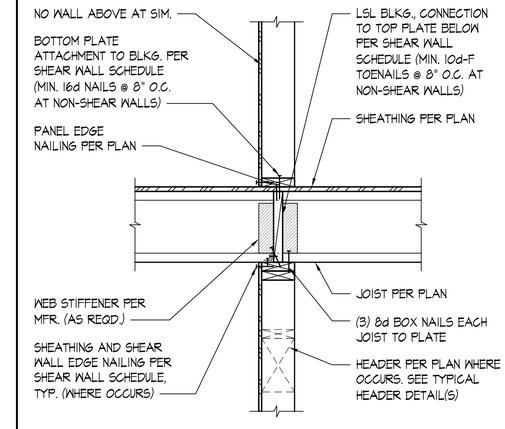
File: 429-s401.dwg Plotted: Fri, 09/26/2025 7:28 am



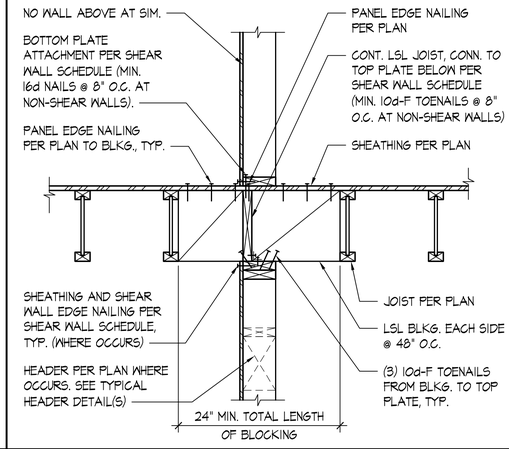
TYPICAL EXTERIOR WALL - I-JOIST PERPENDICULAR — SCALE: NONE — 1



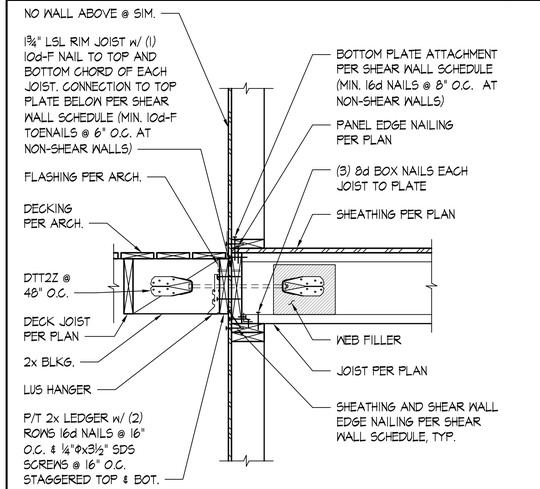
TYPICAL EXTERIOR WALL - I-JOIST PARALLEL — SCALE: NONE — 2



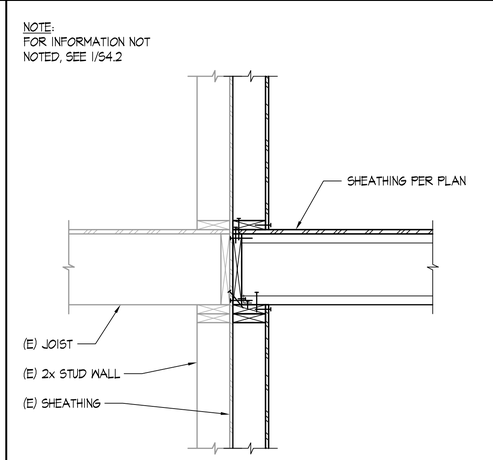
TYPICAL INTERIOR WALL - I-JOIST PERPENDICULAR — SCALE: NONE — 3



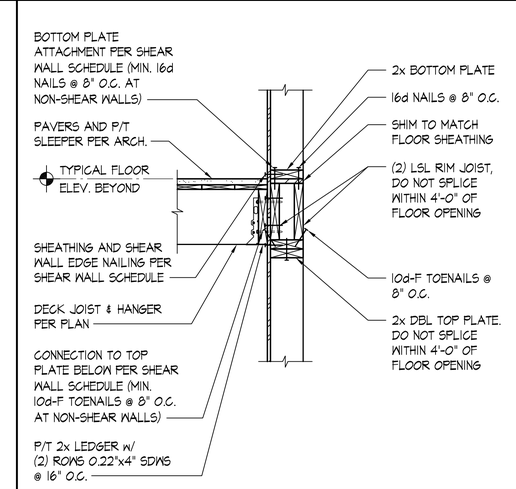
TYPICAL INTERIOR WALL - I-JOIST PARALLEL — SCALE: NONE — 4



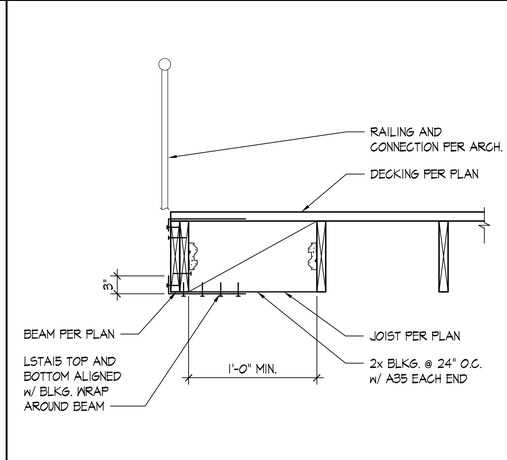
TYPICAL EXTERIOR WALL WITH DECK ATTACHED - I-JOIST FLOOR — SCALE: NONE — 5



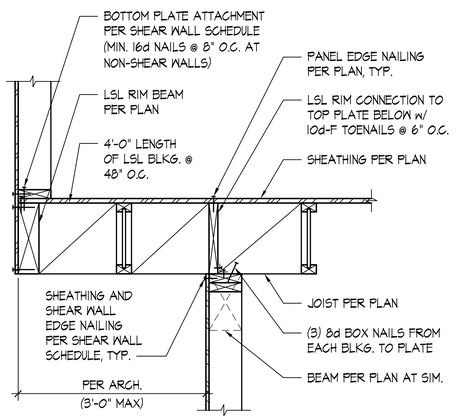
NEW EXTERIOR WALL AT EXISTING EXTERIOR WALL — SCALE: NONE — 6



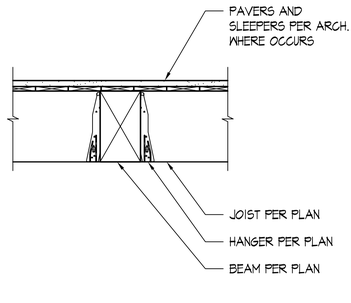
EXTERIOR WALL AT FLOOR OPENING DECK JOIST — SCALE: NONE — 7



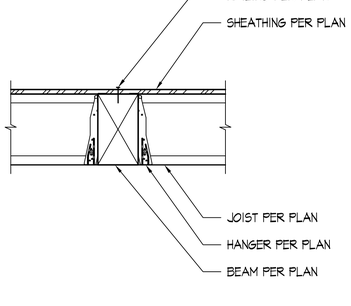
TYPICAL FLOOR EDGE - I-JOIST PARALLEL — SCALE: NONE — 8



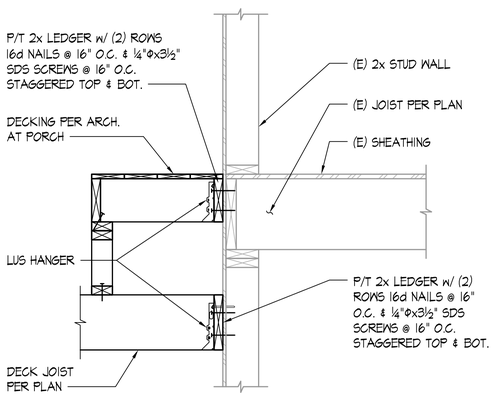
FLOOR CANTILEVER AT EXTERIOR WALL - I-JOIST — SCALE: NONE — 9



DECK JOIST TO FLUSH BEAM CONNECTION — SCALE: NONE — 10



TYPICAL I-JOIST TO FLUSH BEAM CONNECTION — SCALE: NONE — 11



EXISTING WALL WITH DECK ATTACHED AT PORCH — SCALE: NONE — 12

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER — STATE OF WASHINGTON — 36098 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ○ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

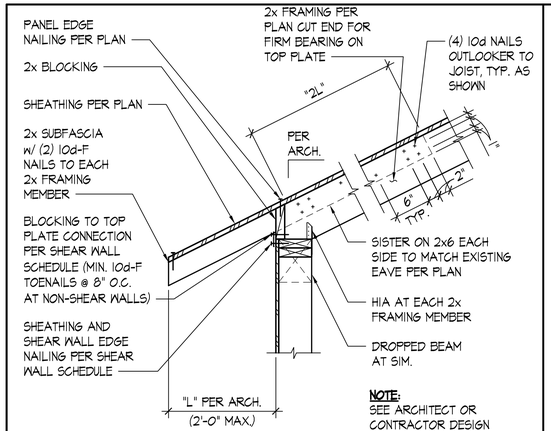
SHEET TITLE:

FLOOR DETAILS

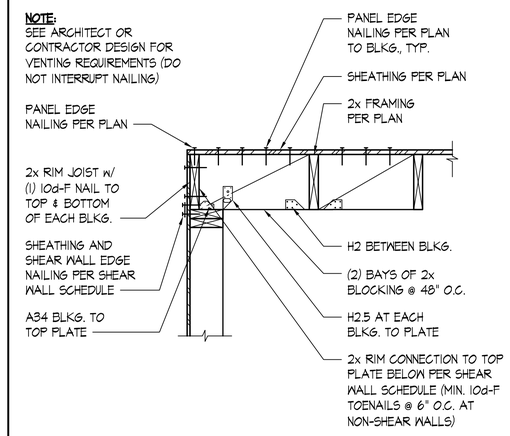
SHEET NO.

S4.2

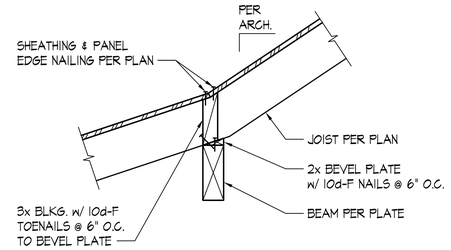
File: 439-4402.dwg Plotted: Fri, 09/26/2025 7:28 am



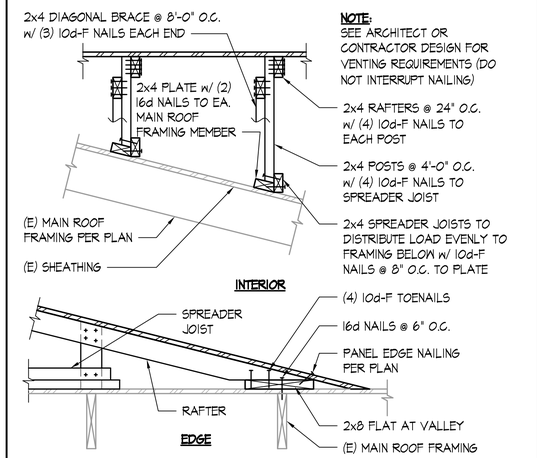
TYPICAL SLOPED ROOF FRAMING TO EXTERIOR WALL - 2x FRAMING PERPENDICULAR — SCALE: NONE — 1



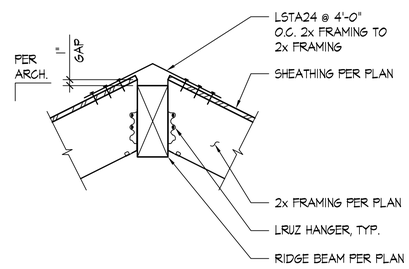
TYPICAL EXTERIOR WALL AT ROOF - 2x FRAMING PARALLEL — SCALE: NONE — 2



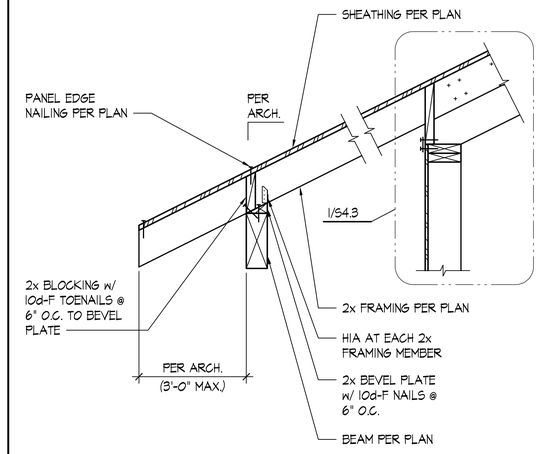
BEAM AT CHANGE IN ROOF SLOPE — SCALE: NONE — 3



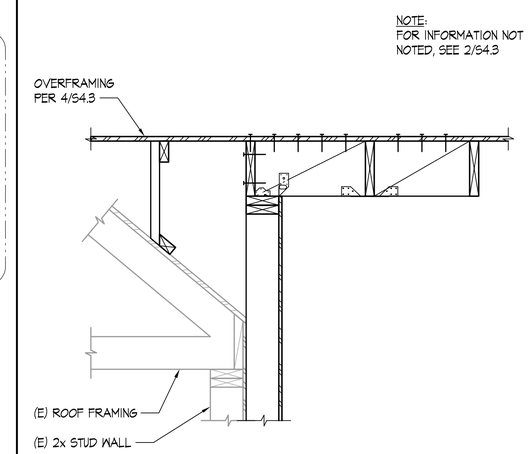
TYPICAL ROOF OVERFRAMING — SCALE: NONE — 4



TYPICAL FLUSH RIDGE BEAM - 2x FRAMING PERPENDICULAR — SCALE: NONE — 5

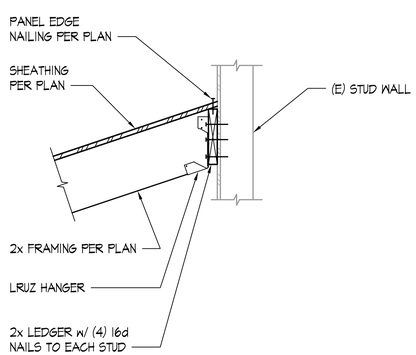


ENTRY ROOF FRAMING OVER DROPPED BEAM — SCALE: NONE — 6

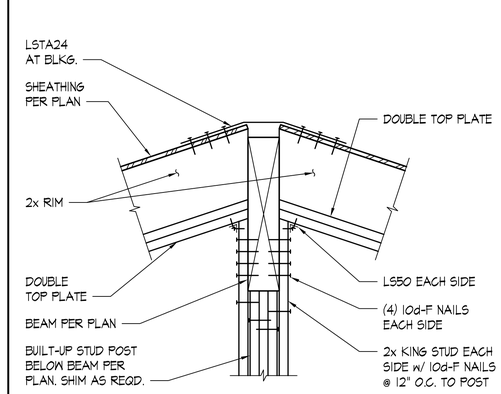


NEW ROOF AT EXISTING ROOF — SCALE: NONE — 7

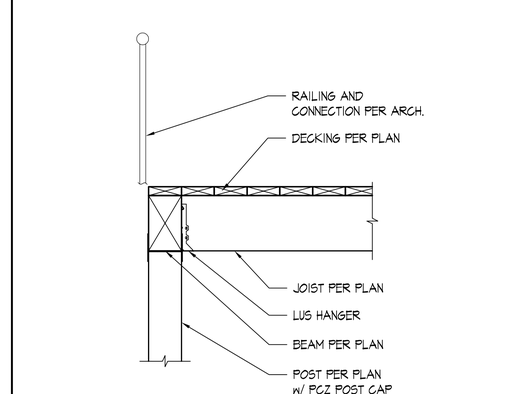
DETAIL — SCALE: NONE — 8



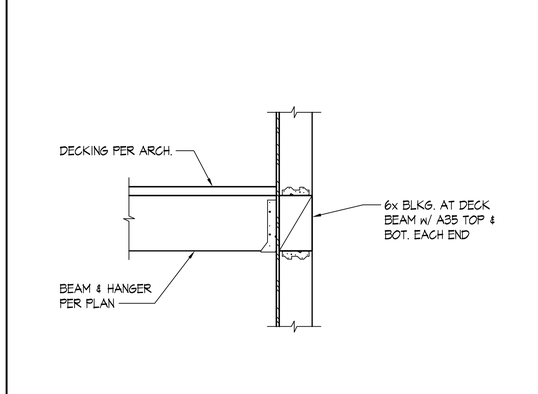
2x FRAMED LOW ROOF — SCALE: NONE — 9



RIDGE BEAM AT EXTERIOR WALL — SCALE: NONE — 10



TYPICAL DECK EDGE - JOIST PERPENDICULAR TO BEAM SUPPORT — SCALE: NONE — 11



DECK BEAM TO STUD WALL BLOCKING — SCALE: 1"=1'-0" — 12

QUANTUM
CONSULTING ENGINEERS
1511 THIRD AVENUE
SUITE 323
SEATTLE, WA 98101
TEL 206.957.3900
www.quantumce.com

SEAL:

SCOTT H. TINKER — STATE OF WASHINGTON — 36098 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

PROJECT:

LIN KICSKA RESIDENCE

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

APPROVAL:

NO.	DESCRIPTION	DATE	BY
	PERMIT SET	5/5/25	
1	PERMIT CORRECTIONS	9/26/25	

ISSUES: ◯ REVISIONS: △

P.M.	SHT
P.E.	BSD
DRAWN BY:	SSN
SCALE:	AS SHOWN
DATE:	5/5/25
JOB NO.	24429.01

SHEET TITLE:

ROOF DETAILS

SHEET NO.

S4.3

File: 429-s403.dwg Plotted: Fri, 09/26/2025 7:39 am

5331 FOREST AVE SE
MERCER ISLAND, WA 98040

DATUM & BENCHMARK:

BASIS OF BEARINGS
RECORD OF SURVEY BY TJC LAND SURVEYING, RECORDED UNDER RECORDING NO. 20170830900011, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM & CONTOUR INTERVAL

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM GPS OBSERVATION USING THE WSRN.

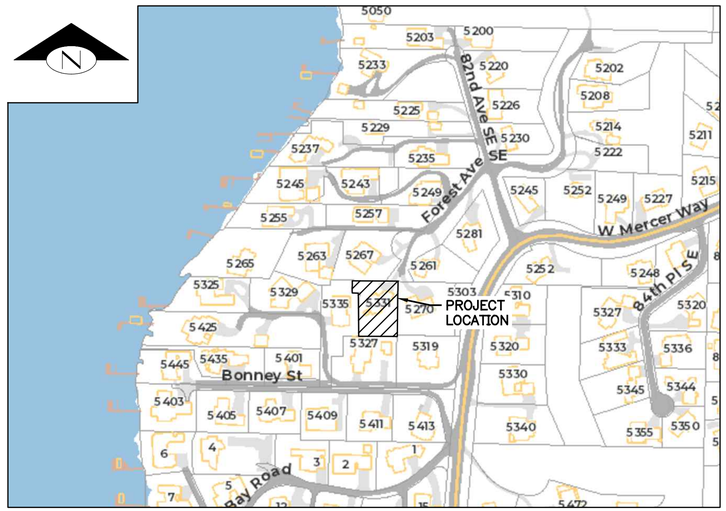
DATUM - NAVD 88

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0' FOR THIS PROJECT.

LEGAL DESCRIPTION:

LOT B OF MERCER ISLAND SHORT PLAT NO. MI-79-03-09, RECORDED UNDER RECORDING NO. 7911260615, BEING A SUBDIVISION OF LOTS 4 THROUGH 8 AND 23 THROUGH 27, BLOCK 2, AND PORTION OF VACATED BORDER STREET AND OF VACATED ANDERSON STREET, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.



VICINITY MAP
SCALE: NTS

CONTACTS:

APPLICANT:
KATHLEEN LIN & GREG KICSKA
5531 FOREST AVE SE
MERCER ISLAND, WA 98040

CIVIL ENGINEER:
FACET
9706 4TH AVE NE, SUITE 300
SEATTLE, WA 98115
PHONE: (206) 523.0024
CONTACT: TIM GABELEIN, P.E.

SURVEYOR:
SITE SURVEYING, INC.
21923 NE 11TH ST
SAMMAMISH, WA 98074

ARCHITECT:
DIMARCO ARCHITECTURE & DESIGN
7541 SEWARD PARK AVE S
SEATTLE, WA 98118
PHONE: (206) 355.6795
CONTACT: DAVID DIMARCO

ABBREVIATIONS:

BM	= BENCHMARK
CB	= CATCH BASIN
CONC	= CONCRETE
DEMO	= DEMOLITION
EG	= EXISTING GRADE
EOP	= EDGE OF PAVEMENT
EX	= EXISTING
FF	= FINISHED FLOOR
FG	= FINISHED GRADE
FH	= FIRE HYDRANT
IE	= INVERT ELEVATION
LF	= LINEAL FEET
SD	= STORM DRAIN
SDFM	= STORM DRAIN FORCE MAIN
SDMH	= STORM DRAIN MANHOLE
SS	= SANITARY SEWER
SSSCO	= SANITARY SIDE SEWER CLEANOUT
SSS	= SANITARY SIDE SEWER
TOC	= TOP OF CURB
TOP	= TOP OF PAVEMENT
TYP	= TYPICAL
UGP	= UNDERGROUND POWER
W	= WATER
WM	= WATERMAIN

SHEET LIST TABLE

SHEET NO.	DESCRIPTION
C01	COVER SHEET
C02	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN
C03	DRAINAGE PLAN
C04	DETAILS

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

NO.	DATE	BY	REVISION

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

FACET
P: 206.523.0024
www.facetnw.com
9706 4th Ave NE
Suite 300
Seattle, WA 98115
FEDERAL WAY | KIRKLAND | MOUNT VERNON | SEATTLE | SPOKANE | WHIDBEY ISLAND

TIMOTHY W. GABELEIN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Tim Gabelein
Date: 2025.03.28 12:46:17 -07'00'

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

5331 FOREST AVE SE
MERCER ISLAND, WA 98040
2501.0498.00

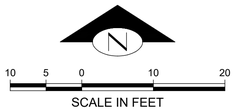
PERMIT PLAN

COVER SHEET

DATE: 3/28/2025

PLAN NUMBER:
C01
SHEET 1 OF 4

FILE LOCATION: Z:\SHARED\PROJECTS\ACTIVE\2025\01\2501.0498_KAT LIN_5331 FOREST AVE SE MERCER ISLAND\DRAWINGS\CAD-REVIT\ACTIVEFILES\01 FOREST AVE SE MERCER ISLAND_CIVIL PLANS.DWG - ORIGINAL SHEET SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES) - LAST MODIFIED BY: AUDREY HANSEN
PRINCIPAL: TG PROJECT MANAGER: CW DESIGNED BY: AH DRAWN BY: LA CHECKED BY: CW



LEGEND:

- STABILIZED CONSTRUCTION ENTRANCE
- PERIMETER PROTECTION*
- CLEARING LIMITS
- STOCKPILE LOCATION

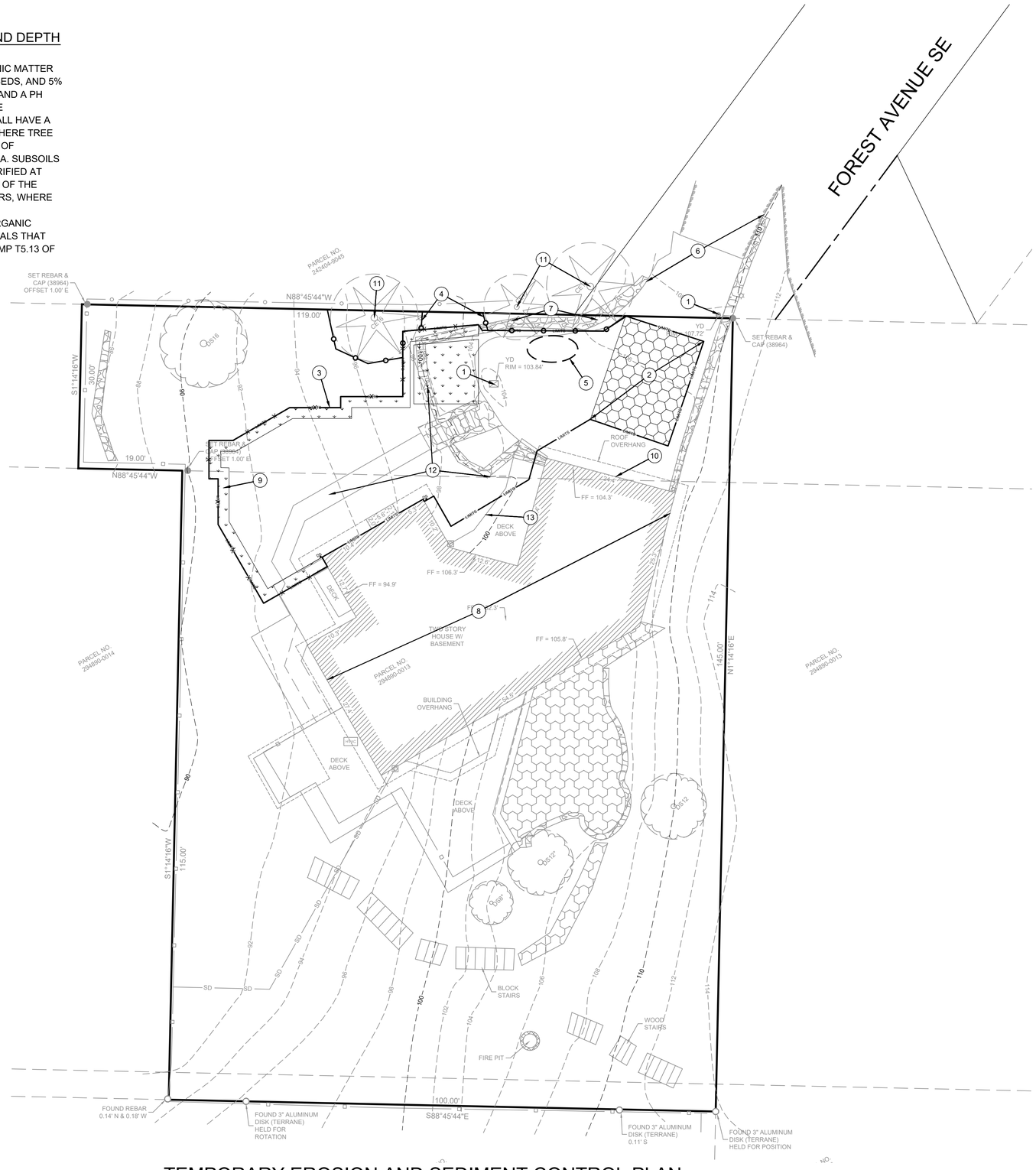
*INSTALL PERIMETER PROTECTION AS SILT FENCING IN ACCORDANCE WITH VOLUME 2 OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY'S 2016 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON

POST CONSTRUCTION SOIL QUALITY AND DEPTH NOTES:

1. A LAYER OF TOPSOIL WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL . THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL USE COMPOST AND OTHER MATERIALS THAT MEET THE ORGANIC CONTENT OUTLINED IN BMP T5.13 OF THE DOE MANUAL.

KEY NOTES:

KEY	NOTE:	DETAIL/ SHEET
1	INSTALL TEMPORARY INLET PROTECTION ON EX SD INLET OR CLOSEST SD INLET DOWNSTREAM OF SITE	-
2	EX DRIVEWAY TO SERVE AS TEMPORARY CONSTRUCTION ENTRANCE	A/C04
3	INSTALL APPROX 165 LF PERIMETER PROTECTION*	B/C04
4	TREE PROTECTION FENCING (TYP)	-
5	PROPOSED STOCKPILE LOCATION. CONTRACTOR TO DETERMINE FINAL LOCATION IN FIELD	-
6	CONTRACTOR TO SWEEP STREET DAILY OR MORE OFTEN IF NECESSARY TO REMOVE TRACKED SEDIMENT	-
7	EX ROCKERY TO REMAIN AND BE PROTECTED	-
8	EX SINGLE FAMILY RESIDENCE TO REMAIN AND BE PROTECTED	-
9	SOIL AMENDMENT (TYP). SEE "POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES" ON THIS SHEET	-
10	ENSURE ACCESS TO SFR REMAINS AVAILABLE	-
11	ALL EXISTING TREES TO REMAIN AND BE PROTECTED	-
12	REMOVE EXISTING WALKWAY AND ROCKERY	-
13	A PORTION OF EXISTING ROOF EAVE TO BE REMOVED. SEE ARCHITECTURAL PLANS FOR DETAILS	-



TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 10'

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

NO.	DATE	BY	REVISION

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

FACET
P: 206.523.0024
www.facetnw.com
9706 4th Ave NE
Suite 300
Seattle, WA 98115
FEDERAL WAY | KIRKLAND | MOUNT VERNON | SEATTLE | SPOKANE | WHIDBEY ISLAND

TIMOTHY W. GABELEIN STATE OF WASHINGTON 21746 REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Tim Gabelein
Date: 2025.03.28 12:46:58

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

5331 FOREST AVE SE

MERCER ISLAND, WA 98040

2501.0498.00

PERMIT PLAN

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

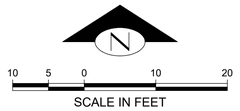
DATE: 3/28/2025

PLAN NUMBER:

C02

SHEET 2 OF 4

FILE LOCATION: Z:\SHARED\PROJECTS\ACTIVE\2025\01\2501.0498_KAT LN_5331 FOREST AVE SE MERCER ISLAND\DRAWINGS\CAD-REVIT\ACTIVEFILES\31 FOREST AVE SE MERCER ISLAND_CIVIL PLANS.DWG - ORIGINAL SHEET SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES) | LAST MODIFIED BY: AUDREY HANSEN
PRINCIPAL: TG PROJECT MANAGER: CW DESIGNED BY: AH DRAWN BY: LA CHECKED BY: CW



KEY NOTES:

KEY	NOTE:	DETAIL /SHEET
1	AT-GRADE HARD SURFACE TO BE DRIP-THROUGH DECKING THAT DRAINS OVER LANDSCAPE AMENDED SOIL (TYP)	-
2	ADU DS TO TIE INTO EXISTING GUTTER SYSTEM OF SFR (TYP)	-
3	EXISTING SFR DOWNSPOUTS COMBINE AND FLOW THROUGH EXISTING STORM LATERAL AND DISCHARGE TO THE WEST THROUGH ADJACENT PARCEL	-
4	EXISTING SFR STORM PIPING NOT SURVEYED, LOCATION ASSUMED PER SCOPING REPORT. LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION	-
5	STORMWATER TO DISCHARGE FROM SITE THROUGH EXISTING LATERAL, RUNNING THROUGH 5335 FOREST AVE SE. STORMWATER DISCHARGES THROUGH EXISTING PRIVATE STORM INFRASTRUCTURE TO LAKE WASHINGTON. EXISTENCE OF SIDE SEWER EASEMENT ON 5335 FOREST AVE SEE TBD	-
6	4" DOWNSPOUT (TYP)	-
7	GARDEN RETAINING WALL. SEE ARCHITECTURAL AND STRUCTURAL PLANS	-
8	ROOF OVERHANG (TYP)	-
9	EXISTING DRIVEWAY YARD DRAINS FOUND TO TIE INTO OTHER EXISTING STORMWATER INFRASTRUCTURE AND DRAIN TO STORMWATER POINT OF DISCHARGE	-
10	TIE FOOTING DRAINS INTO EXISTING SFR FOOTING SYSTEM. IF NO FOOTING SYSTEM ENCOUNTERED IN THE FIELD, CONTACT ENGINEER AND TIGHTLINE FOOTING DRAINS TO STORM VAULT ON WEST SIDE OF SFR	-
11	ADU SEWER TO TIE INTERNALLY INTO EXISTING SFR SEWER INFRASTRUCTURE	-
12	ADU WATER SERVICE TO TIE INTERNALLY INTO EXISTING SFR WATER SERVICE	-

FOOTING DRAINS:

1. FOOTING DRAINS SHALL BE INSTALLED AROUND ALL FOUNDATIONS WHICH ENCLOSE A CRAWL SPACE, CELLAR, BASEMENT, GARAGE, OR OTHER BUILDING SPCAE.
2. DRAINS SHALL BE CONSTRUCTED OF PERFORATED PIPE INSTALLED AT THE BASE OF THE FOOTING.
3. DRAIN PIPE SHALL MEET MATERIAL STANDARDS FOR D2729 FOR PVC PIPE, WITH PERFORATIONS DIRECTED DOWNWARD.
4. GRANULAR BACKFILL SHALL BE PLACED AROUND AND ABOVE THE FOOTING DRAIN TO A DEPTH OF 2/3 THE HEIGHT OF THE WALL.

LEGEND:

DRIP-THROUGH DECKING OVER LANDSCAPE

LANDSCAPE

AREA SUMMARY:

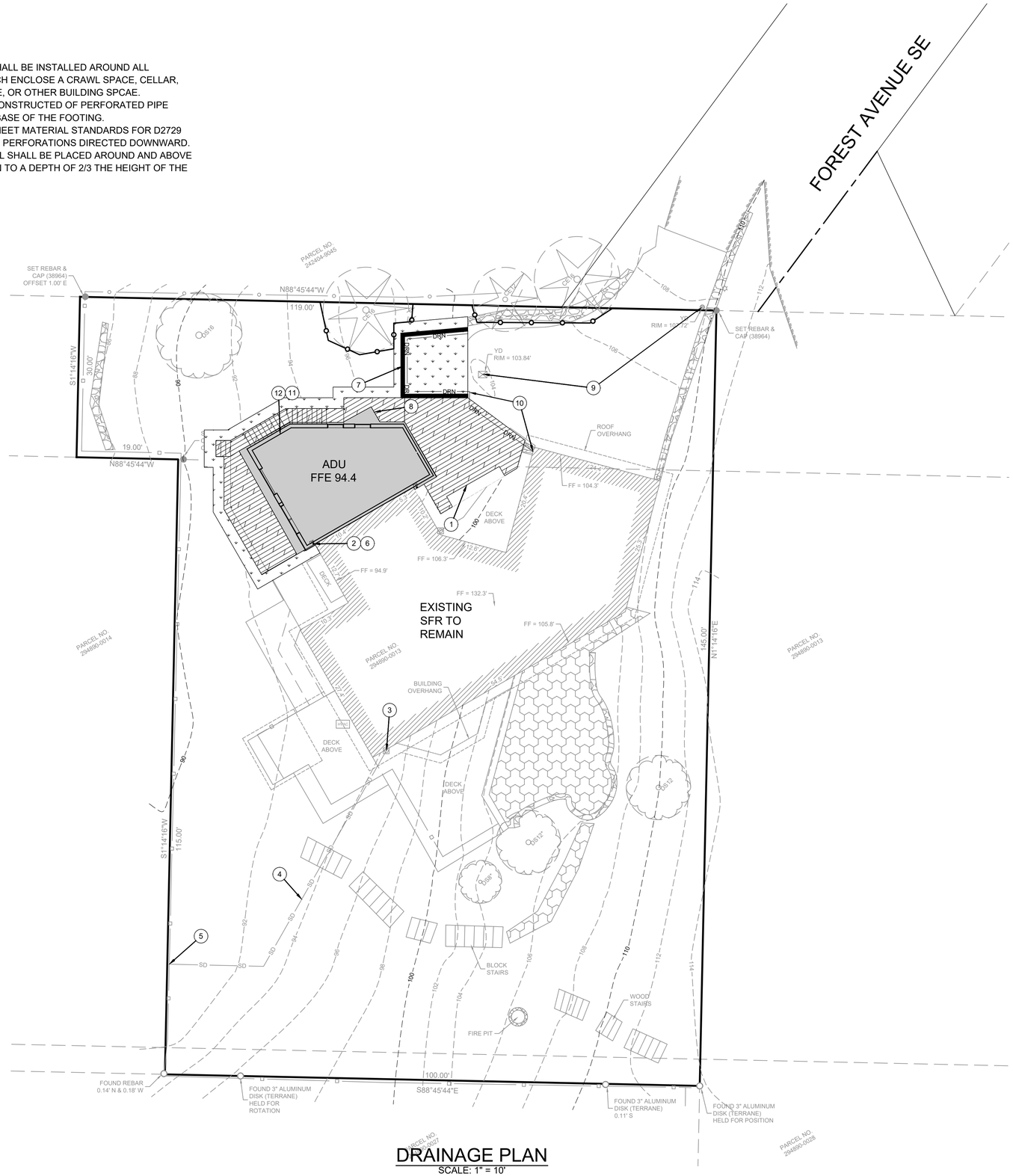
NEW IMPERVIOUS SURFACE (ADU ROOF) = 558 SF

EX IMPERVIOUS SURFACE TO BE REMOVED = 59 SF

NET INCREASE IN IMPERVIOUS SURFACE = 499 SF

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)



DRAINAGE PLAN
SCALE: 1" = 10'

FACET
P: 206.523.0024
www.facetnw.com
9706 4th Ave NE
Suite 300
Seattle, WA 98115
FEDERAL WAY | KIRKLAND | MOUNT VERNON | SEATTLE | SPOKANE | WHIDBEY ISLAND

NO.	DATE	BY	REVISION

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

TIMOTHY W. GABELEIN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Timothy Gabelein
Date: 2025.03.28 12:47:32 -07'00'

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

5331 FOREST AVE SE
MERCER ISLAND, WA 98040
2501.0498.00

PERMIT PLAN

DRAINAGE PLAN

DATE: 3/28/2025

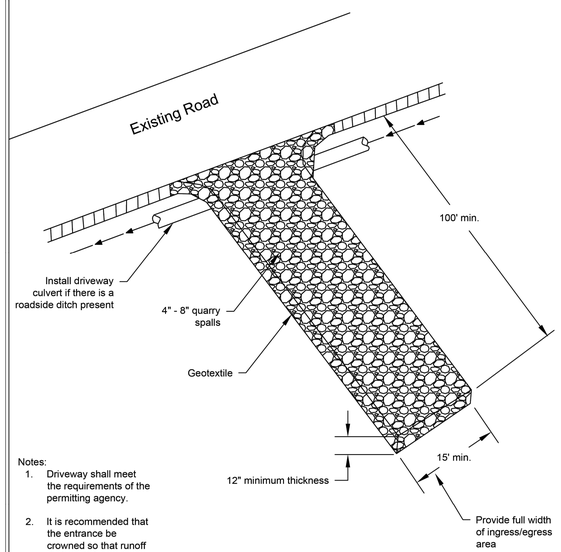
PLAN NUMBER:

C03

SHEET 3 OF 4

FILE LOCATION: Z:\SHARED\PROJECTS\ACTIVE\2025\01\2501.0498_KAT LIN_5331 FOREST AVE SE MERCER ISLAND\DRAWINGS\CAD-REVIT\ACTIVE\5331 FOREST AVE SE MERCER ISLAND_CIVIL PLANS.DWG - ORIGINAL SHEET SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES) | LAST MODIFIED BY: AUDREY HANSEN
PRINCIPAL: TG PROJECT MANAGER: CW DESIGNED BY: AH DRAWN BY: LA CHECKED BY: CW

NOT TO SCALE



Notes:
1. Driveway shall meet the requirements of the permitting agency.
2. It is recommended that the entrance be crowned so that runoff drains off the pad.

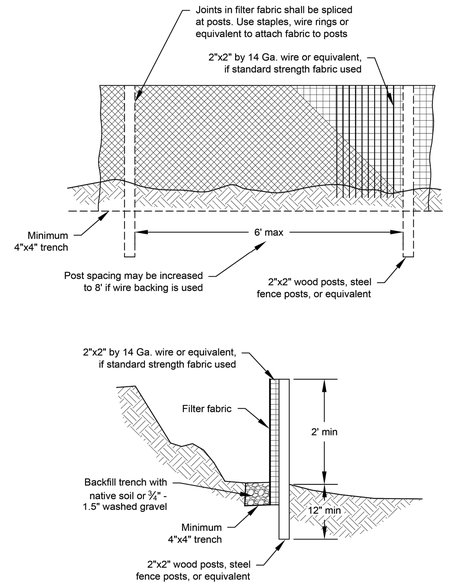
DEPARTMENT OF ECOLOGY
State of Washington

Figure II-4.1.1
Stabilized Construction Entrance

Revised June 2015

Please see *http://www.ecy.wa.gov/copyright.html* for copyright notice including permissions, limitation of liability, and disclaimer.

STABILIZED CONSTRUCTION ENTRANCE (A / C04)
NTS



NOT TO SCALE

DEPARTMENT OF ECOLOGY
State of Washington

Figure II-4.2.12
Silt Fence

Revised October 2014

Please see *http://www.ecy.wa.gov/copyright.html* for copyright notice including permissions, limitation of liability, and disclaimer.

SILT FENCE (B / C04)
NTS

NO.	DATE	BY	REVISION

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

FACET
P: 206.523.0024
www.facetnw.com
9706 4th Ave NE
Suite 300
Seattle, WA 98115
FEDERAL WAY | KIRKLAND | MOUNT VERNON | SEATTLE | SPOKANE | WHIDBEY ISLAND

TIMOTHY W. GABELEIN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Tim Gabelein
Date: 2025.03.28 12:42:27 -07'00'

CALL 811
2 BUSINESS DAYS BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

5331 FOREST AVE SE
MERCER ISLAND, WA 98040
2501.0498.00

PERMIT PLAN

DETAILS

DATE: 3/28/2025

PLAN NUMBER:
C04

SHEET 4 OF 4

FILE LOCATION: Z:\SHARED\PROJECTS\ACTIVE\2025\2501\2501.0498_KAT LIN_5331 FOREST AVE SE MERCER ISLAND\DRAWINGS\CAD-REVIT\ACTIVE\E5331 FOREST AVE SE MERCER ISLAND_CIVIL PLANS.DWG - ORIGINAL SHEET SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES) | LAST MODIFIED BY: AUDREY HANSEN
PRINCIPAL: TG PROJECT MANAGER: CW DESIGNED BY: AH DRAWN BY: LA CHECKED BY: CW