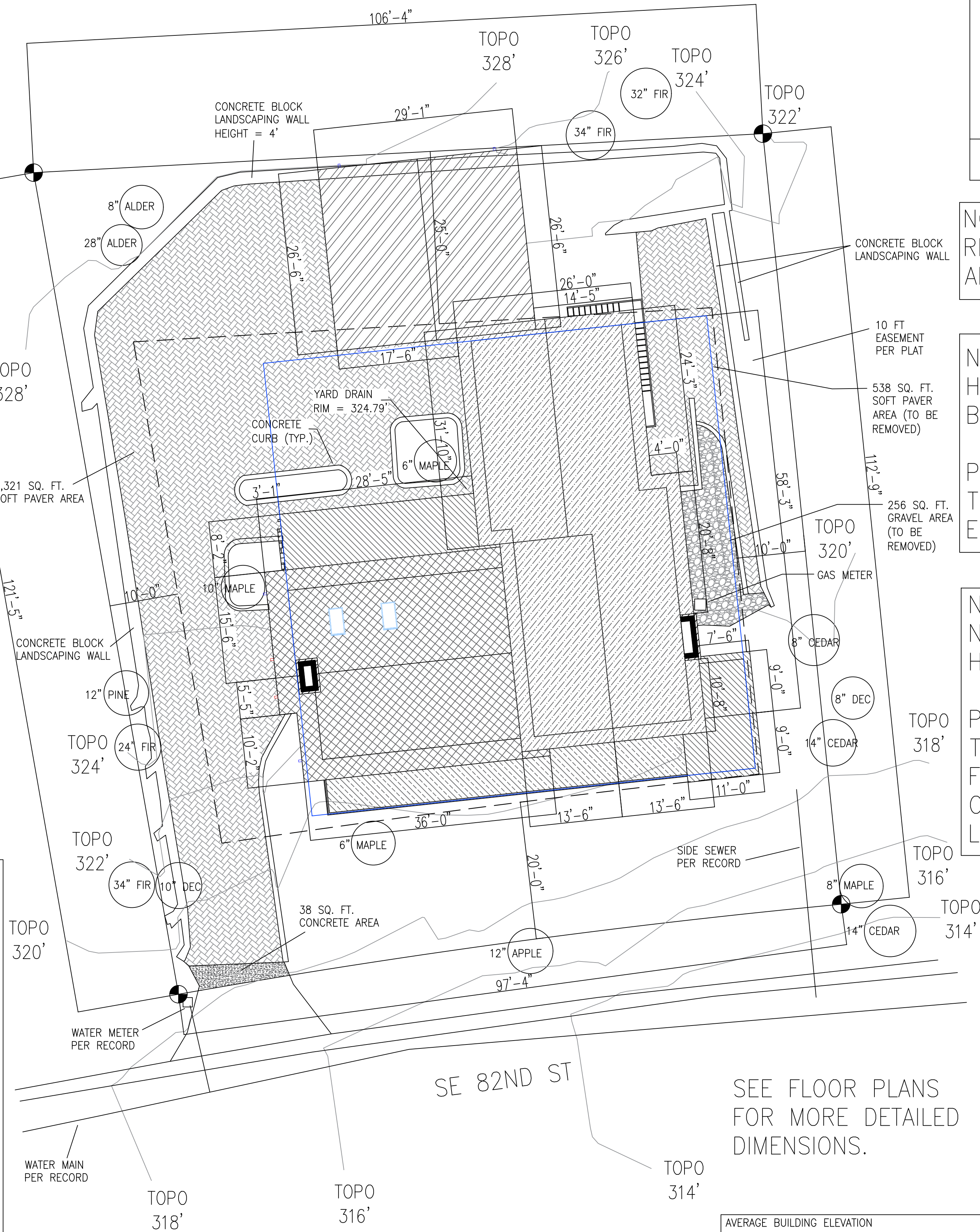


NOTE: A QUALIFIED WASHINGTON STATE LICENSED INDUSTRIAL HYGIENIST MUST INSPECT ANY REMAINING BUILDING MATERIALS TO DETERMINE WHETHER THE MATERIALS CAN SAFELY REMAIN WITH RESPECT TO HEALTH HAZARDS TO BUILDING OCCUPANTS. THEIR INSPECTION SHALL INCLUDE HEALTH SAFETY ITEMS WHICH MAY BE PRESENT BEHIND WALLS, UNDER FLOORS, ETC., INCLUDING BUT NOT LIMITED TO IRRITANTS, POLLUTANTS, CONTAMINANTS, ALLERGENS, TOXIC MATERIALS, OR QUALITY OF AIR IN OR AROUND THE BUILDING (I.E. - SPORES, FUNGUS, MOLD, MILDEW, INFESTATION, ETC.). THE HYGIENIST MUST PROVIDE A WRITTEN REPORT AFTER THEIR INITIAL INVESTIGATION WITH A SUMMARY OF THEIR FINDINGS; A FIELD REPORT PRIOR TO THE FRAMING INSPECTION THAT CLARIFIES ALL THE REMAINING MATERIALS CAN SAFELY REMAIN; AND A SUMMARY REPORT AT THE TIME OF THE FINAL INSPECTION. REPORTS FROM THE HYGIENIST MUST BE SUBMITTED TO THE BUILDING OFFICIAL AND MUST INCLUDE A STATEMENT THAT THEY WERE PROVIDED THE ACCESS NECESSARY TO INSPECT AND DETERMINE THAT THE REMAINING MATERIALS ARE SAFE.

NOTE: THE ELECTRICIAN MUST PROVIDE A WRITTEN REPORT AFTER THEIR INITIAL INVESTIGATION WITH A SUMMARY OF THEIR FINDINGS; A FIELD REPORT PRIOR TO THE FRAMING INSPECTION THAT CLARIFIES ALL THE REMAINING MATERIALS CAN SAFELY REMAIN; AND A SUMMARY REPORT AT THE TIME OF THE FINAL INSPECTION. REPORTS FROM THE ELECTRICIAN MUST BE SUBMITTED TO THE BUILDING OFFICIAL AND MUST INCLUDE A STATEMENT THAT THEY WERE PROVIDED THE ACCESS NECESSARY TO INSPECT AND DETERMINE THAT THE REMAINING MATERIALS ARE SAFE. PRIOR TO COVERING ANY WORK, THE GENERAL CONTRACTOR SHALL OBTAIN AN INSPECTION BY THE CITY OF MERCER ISLAND BUILDING OFFICIAL TO REVIEW THE ELECTRICIAN'S REPORT AGAINST REMAINING MATERIALS. A PEER REVIEW (PAID BY THE BUILDING OWNER) MAY BE REQUIRED IF THE ELECTRICIAN'S APPROVAL OF REMAINING MATERIALS IS FOUND QUESTIONABLE.



NOTE: THE ENGINEER MUST PROVIDE A WRITTEN REPORT AFTER THEIR INITIAL INVESTIGATION WITH A SUMMARY OF THEIR FINDINGS; A FIELD REPORT PRIOR TO THE FRAMING INSPECTION THAT CLARIFIES ALL THE REMAINING MATERIALS CAN SAFELY REMAIN; AND A SUMMARY REPORT AT THE TIME OF THE FINAL INSPECTION. REPORTS FROM THE ENGINEER MUST BE SUBMITTED TO THE BUILDING OFFICIAL AND MUST INCLUDE A STATEMENT THAT THEY WERE PROVIDED THE ACCESS NECESSARY TO INSPECT AND DETERMINE THAT THE REMAINING MATERIALS ARE SAFE.

AVERAGE BUILDING ELEVATION		
LOCATION	SEGMENT LENGTH	HEIGHT AT MIDPOINT
POINT A	10'	322'
POINT B	11'	324'
POINT C	34'	325'
POINT D	23'	325'
POINT E	23'	327'
POINT F	23'	328'
POINT G	23'	327'
POINT H	29'	322'
POINT I	16'	319'
POINT J	12'	319'
POINT K	54'	321'

AVERAGE BUILDING ELEVATION = 324'-10 3/4"
 MAIN FLOOR HEIGHT = 329'-5 3/4"

SEE FLOOR PLANS FOR MORE DETAILED DIMENSIONS.

HOME OWNER: RENE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040
 PROJECT ADDRESS: Same as above
 PROJECT: RESTORE BURNED HOUSE WITH INTERIOR REMODEL AND ADDITION. NEW MAIN FLOOR FOYER AND SUN ROOM, AND NEW UPPER FLOOR WITH MASTER SUITE AND AADU.
 PARCEL NUMBER: 3625500210
 LEGAL DESCRIPTION: ISLAND POINT ADD & UND INT IN COMMUNITY TR A

NOTE: ALL CHARRED WOOD TO BE REPLACED REGARDLESS OF APPARENT INTEGRITY.

NOTE: NEW MAXIMUM BUILDING HEIGHT IS WITHIN MERCER ISLAND BUILDING CODE LIMITS.

PRINT AND PROMINENTLY DISPLAY THIS NOTE ON NORTH WALL OF EXISTING GARAGE.

NOTE: ENSURE THAT NO PLANTS ON NEIGHBORING PROPERTIES ARE HARMED IN ANY WAY.

PRINT AND PROMINENTLY DISPLAY THIS NOTE BY DRIVEWAY ENTRANCE FACING SOUTH AND NEAR THE CENTER OF THE EAST PROPERTY LINE FACING EAST.

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A-5	NEW UPPER FLOOR PLAN
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A-7	NEW THRU-WALL SECTION
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S-6	SECTIONS AND DETAILS
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CODE INFORMATION		
EXISTING HOUSE LOWER FLOOR AREA	1,689 sq. ft.	
EXISTING HOUSE MAIN FLOOR AREA	1,718 sq. ft.	
EXISTING TOTAL LIVING SPACE:	3,407 sq. ft.	
ADDED HOUSE MAIN FLOOR AREA	276 sq. ft.	
ADDED HOUSE UPPER FLOOR AREA	688 sq. ft.	
ADDED HOUSE UPPER FLOOR ADU AREA	553 sq. ft.	
ADDED TOTAL LIVING SPACE:	1,517 sq. ft.	
NEW TOTAL LIVING SPACE:	4,924 sq. ft.	
<u>IMPERVIOUS CALCS</u>		
EXISTING HOUSE ROOF	2,467 sq. ft.	
EXISTING GARAGE ROOF	870 sq. ft.	
EXISTING UNCOVERED DECK	422 sq. ft.	
EXISTING CONCRETE/GRAVEL/PAVERS	4,153 sq. ft.	
EXISTING TOTAL	7,912 sq. ft.	
ADDED HOUSE ROOF	623 sq. ft.	
ADDED TOTAL	623 sq. ft.	
REMOVED GARAGE ROOF	73 sq. ft.	
REMOVED CONCRETE/GRAVEL/PAVERS	794 sq. ft.	
REMOVED TOTAL	867 sq. ft.	
TOTAL LOT IMPERVIOUS SURFACE	64.8%	7,668 sq. ft.
<u>FLOOR AREA RATIO</u>		
EXISTING HOUSE LOWER FLOOR AREA	1,689 sq. ft.	
EXISTING HOUSE MAIN FLOOR AREA	1,718 sq. ft.	
EXISTING ATTACHED GARAGE FLOOR AREA	462 sq. ft.	
EXISTING MAIN FLOOR DECK	422 sq. ft.	
EXISTING TOTAL FLOOR AREA:	4,291 sq. ft.	
ADDED HOUSE MAIN FLOOR AREA:	276 sq. ft.	
ADDED HOUSE UPPER FLOOR AREA:	688 sq. ft.	
ADDED HOUSE UPPER FLOOR ADU AREA:	553 sq. ft.	
ADDED EXTERIOR ADU STAIRS:	90 sq. ft.	
ADDED TOTAL FLOOR AREA:	1,607 sq. ft.	
NEW TOTAL FLOOR AREA:	5,898 sq. ft.	
EXISTING FLOOR AREA RATIO	36.3%	4,291 sq. ft.
NEW FLOOR AREA RATIO	49.9%	5,898 sq. ft.
<u>LOT COVERAGE</u>		
EXISTING HOUSE FOOTPRINT:	1,718 sq. ft.	
EXISTING GARAGE FOOTPRINT:	462 sq. ft.	
EXISTING UNCOVERED DECK:	422 sq. ft.	
EXISTING TOTAL LOT COVERAGE	22.0%	2,602 sq. ft.
ADDED HOUSE FOOTPRINT:	532 sq. ft.	
ADDED EXTERIOR ADU STAIRS:	90 sq. ft.	
ADDED TOTAL LOT COVERAGE:	622 sq. ft.	
NEW TOTAL LOT COVERAGE:	27.3%	3,334 sq. ft.
LOT AREA		11,828 sq. ft.

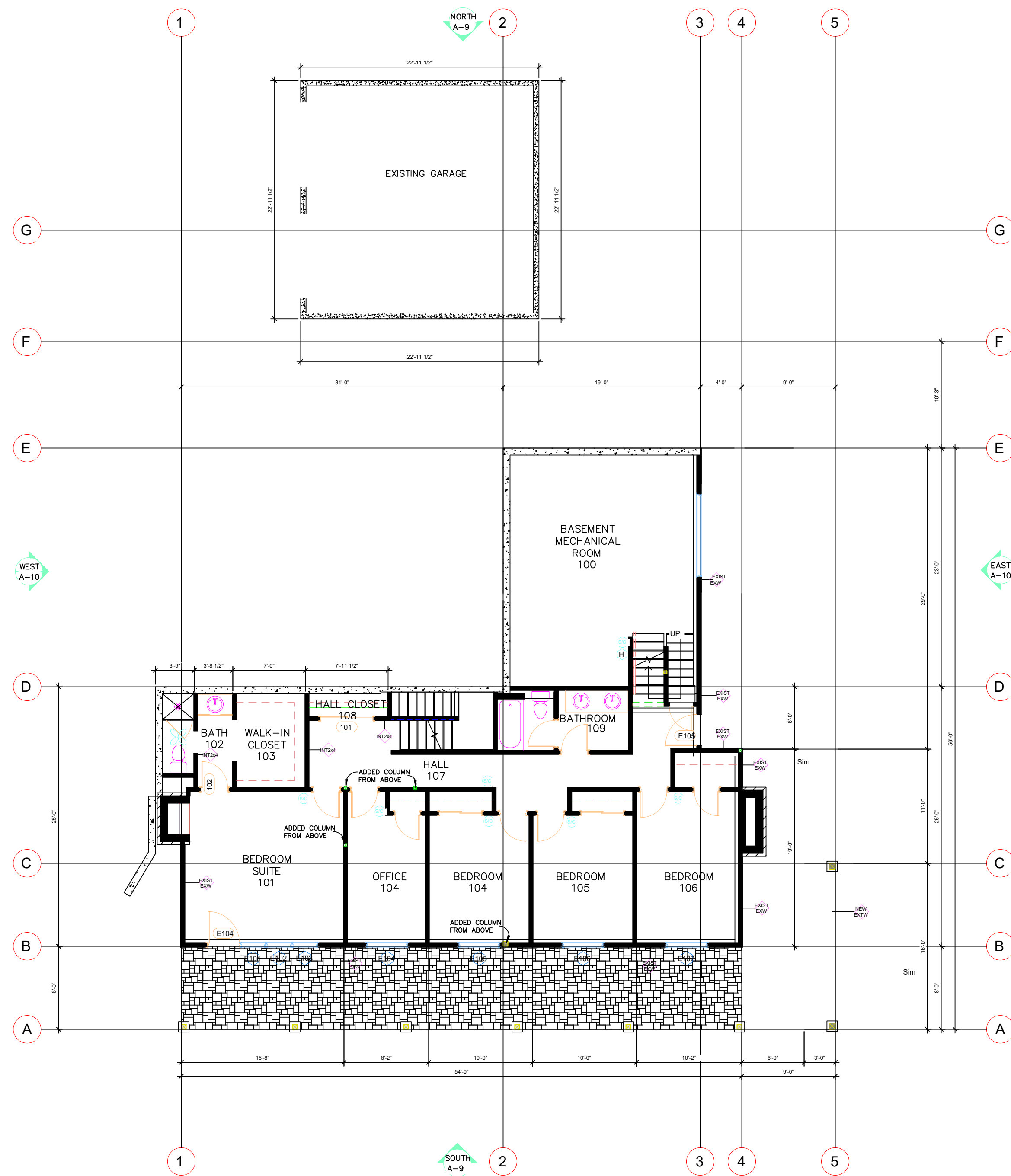
LEGEND		SITE PLAN 1"=10'-0"	
	EXISTING HOUSE		EXISTING TREE/BUSH
	EXISTING GARAGE		PROPERTY CORNERS
	EXISTING MAIN FLOOR DECK		ELEVATION POINTS
	ADDED MAIN FLOOR		N
	NEW UPPER FLOOR		
	EXISTING CONCRETE		
	EXISTING FENCE		
	CONTOUR LINES		
	SETBACK LINES		
	SEWER LINES		
	WATER LINES		
	STORMWATER LINES		

Rich Design Group, LLC
 DESIGNED BY: RICH MELCHIOR
 253-951-8049
 RICHDESIGN@COMCAST.NET

A Home Project for
 RENE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040
 10-11-24

C 1
 RICH DESIGN 1
 PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS

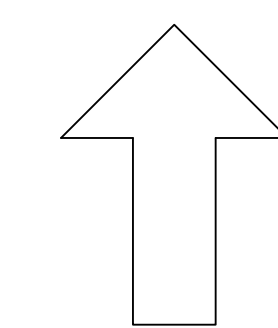


GENERAL NOTES

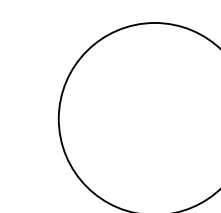
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2. MECHANICAL, ELECTRICAL AND PLUMBING TO BE DESIGNED BY THE CONTRACTORS PER PRESCRIPTIVE REQUIREMENTS.
3. CONTRACTOR RESPONSIBLE FOR VERIFYING UTILITY LINE LOCATIONS PRIOR TO ANY SITE OR DEMO WORK, COORDINATE WITH UTILITY COMPANIES TO DISCONNECT OR RELOCATE ANY UTILITY LINES AS PART OF THE WORK
4. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS, WRITTEN DIMENSIONS TO BE VERIFIED ON SITE
5. ALL WORK SHALL CONFIRM TO THE 2021 IRC/IBC, AND/OR THE LATEST EDITION OF ALL OTHER APPLICABLE CODES
6. ALL INTERIOR WALLS TO BE 2X4" U.N.O.

PROVIDE **ATTIC ACCESS**, MIN. 22 X 30" W/ MIN. 30" HEADROOM @ UNOBSTRUCTED, READILY ACCESSIBLE OPENING (REF. IRC R807.1)

LEGEND	
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



NORTH



EXISTING BASEMENT

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC

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RICH MELCHIOR
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RICHDESIGN@COMCAST.NET

NO.	DATE	REVISION

NO.	DATE	REVISION

A Home Project for
RENEE LUND
8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24

A 1

RICH DESIGN 1
PROJECT NO.: 21-6

WINDOW SCHEDULE (LOWER FLOOR)

Component Description	Ref	U-factor	Qt	Width Feet	Height Feet	Area	UA
Existing Tempered Fixed Glass	E101	0.25	1	2' 6"	6' 9"	15.0	3.75
Existing Tempered Fixed Glass	E102	0.25	1	2' 6"	6' 0"	15.0	3.75
Existing Tempered Fixed Glass	E103	0.25	1	2' 6"	6' 0"	15.0	3.75
Existing Tempered Single Hung	E104	0.25	1	4' 0"	4' 0"	16.0	4.00
Existing Tempered Single Hung	E105	0.25	1	4' 0"	4' 0"	16.0	4.00
Existing Tempered Single Hung	E106	0.25	1	4' 0"	4' 0"	16.0	4.00
Existing Tempered Single Hung	E107	0.25	1	4' 0"	4' 0"	16.0	4.00
New Fixed Glass	108	0.25	1	2' 0"	2' 6"	5.0	1.25
New Fixed Glass	109	0.25	1	2' 0"	2' 6"	5.0	1.25
New Fixed Glass	110	0.25	1	2' 0"	2' 6"	5.0	1.25
New Fixed Glass	111	0.25	1	2' 0"	2' 6"	5.0	1.25
TOTAL						129.0	32.25

DOOR SCHEDULE (LOWER FLOOR)

Component Description	Ref	U-factor	Qt	Width Feet	Height Feet	Area	UA
Existing Exterior Door	E104	0.25	1	3' 0"	6' 8"	20.0	5.00
Existing Exterior Door	E105	0.25	1	3' 0"	6' 8"	20.0	5.00
TOTAL						40.0	10.00

NEW FIXTURE	QTY
VENT	2
TOILET	2
SINK	3
SHOWER	1
BATH	0
BATH/SHOWER	1

NOTE: FIELD VERIFY ALL MEASUREMENTS

DESIGN PER IRC/IBC 2021

SAFETY GLAZING (REF IRC R308)

- * SAFETY GLAZING MUST BE PERMANENTLY MARKED AS SUCH.
- * WINDOWS ADJACENT TO TUB/SHOWER MUST HAVE BOTTOM SILL AT LEAST 60" ABOVE FLOOR LEVEL.

BATHROOM FIXTURE CLEARANCE (REF IRC R307)

- * 21" IN FRONT OF SINK/TOILET/TUB.
- * 24" IN FRONT OF SHOWER OPENING.
- * 15" BETWEEN WALL/TUB AND TOILET O.C.

BATHROOM HEIGHTS (REF IRC R307)

- * NONABSORBENT SURFACE ON WALL ABOVE TUB/SHOWER MINIMUM 6 FEET HIGH

STAIRWAYS (REF IRC 311.7)

- * MIN WIDTH: 36"
- * MIN HEAD ROOM: 6'-8"
- * MAX RISER HEIGHT: 7-3/4"
- * MAX VARIANCE: 3/8"
- * MIN TREAD DEPTH 10"
- * NOSING BETWEEN 3/4" AND 1-1/4"
- * MAX HANDRAIL PROJECTION: 4-1/2"
- * HANDRAIL REQUIRED FOR ALL FLIGHTS OF AT LEAST 4 STAIRS
- * HANDRAILS SHALL BE CONTINUOUS ALONG FLIGHT OF STAIRS EXCEPT AT CORNER POSTS.
- * LOCATION AT 34-38 INCHES ABOVE THE STAIR NOSING.
- * GRASP DIMENSION BETWEEN 1-1/4 TO 2 INCHES.
- * PROVIDE CONTINUOUS HANDRAIL OR TERMINATE AT NEWEL POSTS OR SAFETY TERMINAL.
- * WHERE USED AS A GUARDRAIL, A MAXIMUM OPENING OF 4 INCHES.
- * USABLE SPACE UNDER STAIRS, WALLS AND CEILINGS TO HAVE 5/8" type x g.w.b. sec. 10003.33.4

LIGHTING (REF IRC R303)

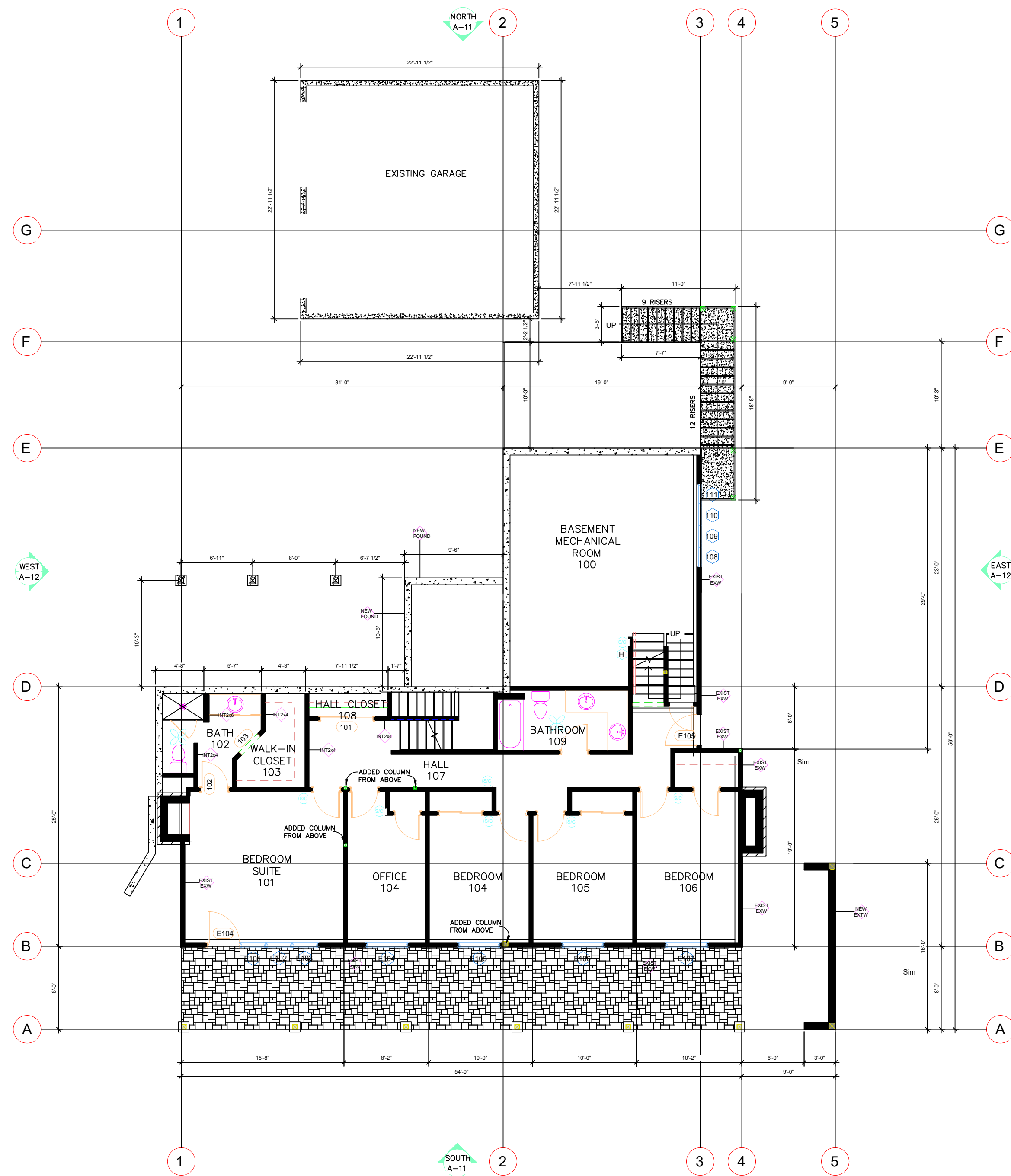
- * INTERIOR AND EXTERIOR STAIRWAYS TO BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE

FIRE ALARMS (REF IFC AND MERCER ISLAND RESIDENTIAL CODE)

- * SMOKE ALARMS COMPLYING WITH NFPA 72 AND KING COUNTY CODE TO BE INSTALLED IN EACH BEDROOM AND NEAR EACH SEPARATE SLEEPING AREA.
- * CARBON MONOXIDE ALARMS TO BE INSTALLED NEAR EACH SEPARATE SLEEPING AREA, MINIMUM 1 ALARM PER FLOOR.
- * ALL NEW ALARMS TO BE HARDWIRED AND INTERCONNECTED.

EGRESS WINDOWS

- * MINIMUM CLEARANCE 20" X 24"
- * MINIMUM OPENING AREA 5.7 SQ FT
- * WINDOW SILL HEIGHT MAX 44" ABOVE FLOOR

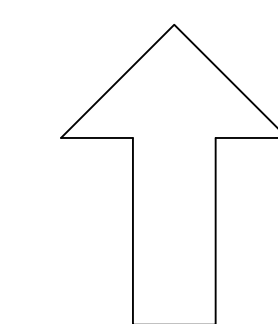


GENERAL NOTES

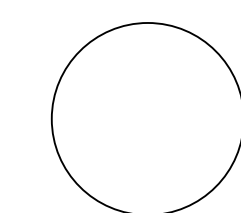
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PROVIDE A TTC ACCESS, MIN. 22 X 30" W/ MIN. 30" HEADROOM @ UNOBSTRUCTED, READILY ACCESSIBLE OPENING (REF. IRC R807.1)

LEGEND	
	NEW WALL TAG
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



NORTH



NEW BASEMENT

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC

DESIGNED BY:
RICH MELCHIOR
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RICHDESIGN@COMCAST.NET

NO.	DATE	REVISION

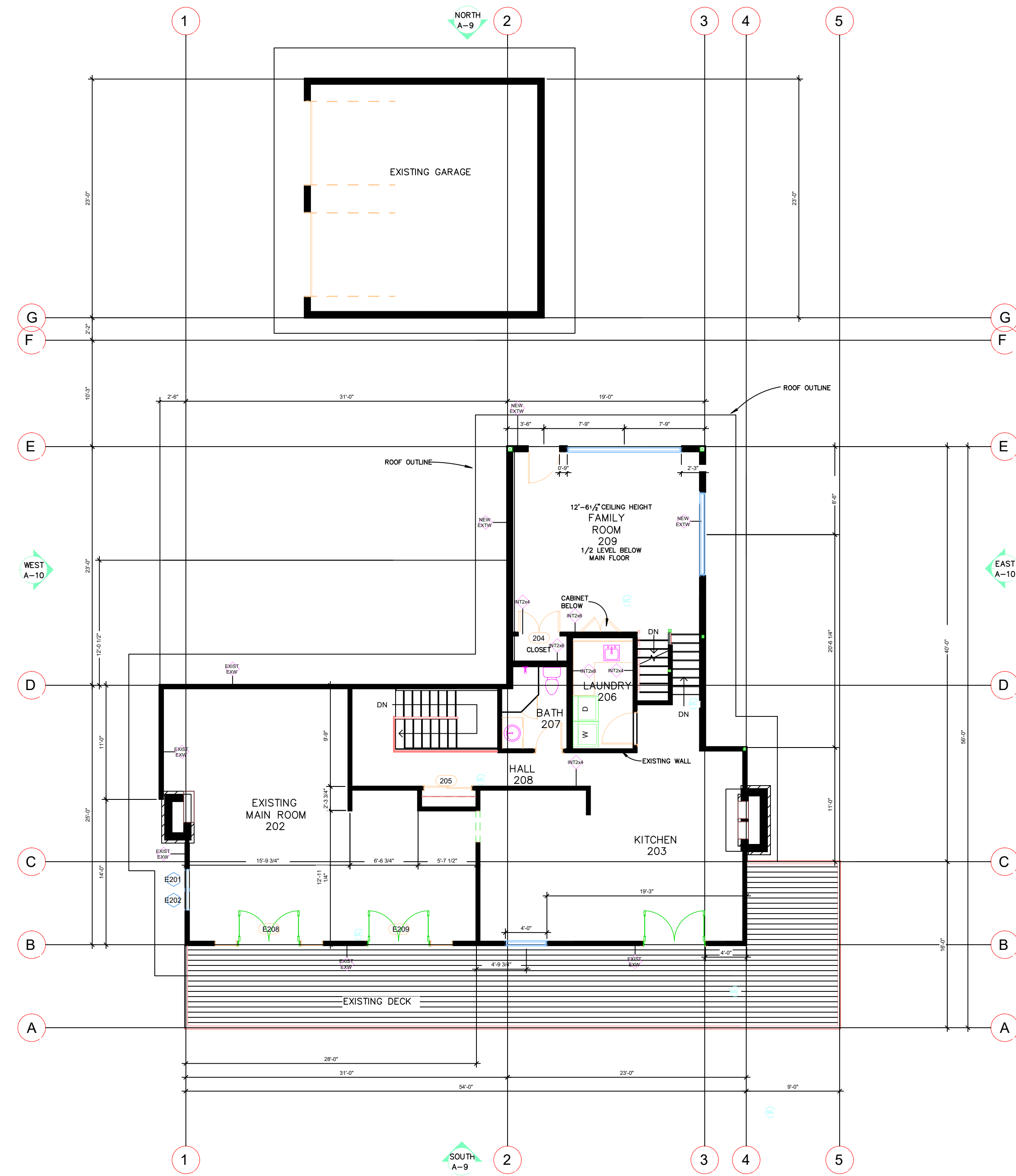
A Home Project for
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8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24

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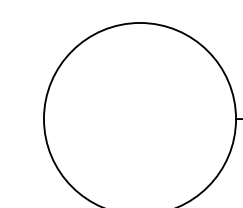
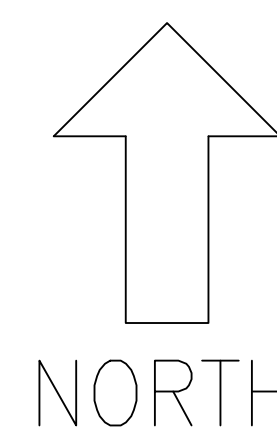
RICH DESIGN 1
PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS



NOTE: ALL ROOMS ON THIS FLOOR AFFECTED BY FIRE DAMAGE. REPLACE DAMAGED FRAMING IN ACCORDANCE WITH NEW MAIN FLOOR PLAN. ENSURE TEMPORARY SUPPORTS REMAIN IN PLACE UNTIL STRUCTURAL INTEGRITY HAS BEEN RESTORED.

LEGEND	
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



EXISTING MAIN FLOOR
SCALE: 1/8"=1'-0"

NOTE: FIELD VERIFY ALL MEASUREMENTS

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NO.	DATE	REVISION

A Home Project for
RENEE LUND
8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24

A 3
RICH DESIGN 1
PROJECT NO.: 21-6

WINDOW SCHEDULE (MAIN FLOOR)

Component Description	Ref.	U-factor	Qt.	Width Feet	Height Feet	Area	UA
Existing Fixed Glass	E201	0.25	1	2' 0"	9' 2"	18.3	4.58
Existing Fixed Glass	E202	0.25	1	2' 0"	8' 6"	17.0	4.25
New Tempered Triple Slider	203	0.25	1	6' 0"	3' 2"	19.0	4.75
New Fixed Glass	204	0.25	1	8' 0"	5' 0"	40.0	10.00
New Fixed Glass	205	0.25	1	4' 0"	5' 0"	20.0	5.00
New Fixed Glass	206	0.25	1	3' 0"	5' 0"	15.0	3.75
New Fixed Glass	207	0.25	1	6' 0"	5' 0"	30.0	7.50
New Fixed Glass	208	0.25	1	3' 0"	5' 0"	15.0	3.75
New Fixed Glass	209	0.25	1	4' 0"	5' 0"	20.0	5.00
New Fixed Glass	210	0.25	1	3' 0"	5' 0"	15.0	3.75
New Tempered Fixed Glass	211	0.25	1	3' 0"	6' 0"	18.0	4.50
New Tempered Fixed Glass	212	0.25	1	6' 0"	6' 0"	36.0	9.00
New Fixed Glass	213	0.25	1	3' 0"	6' 0"	18.0	4.50
New Tempered Fixed Glass	214	0.25	1	5' 0"	6' 0"	30.0	7.50
TOTAL						311.3	77.83

DOOR SCHEDULE (MAIN FLOOR)

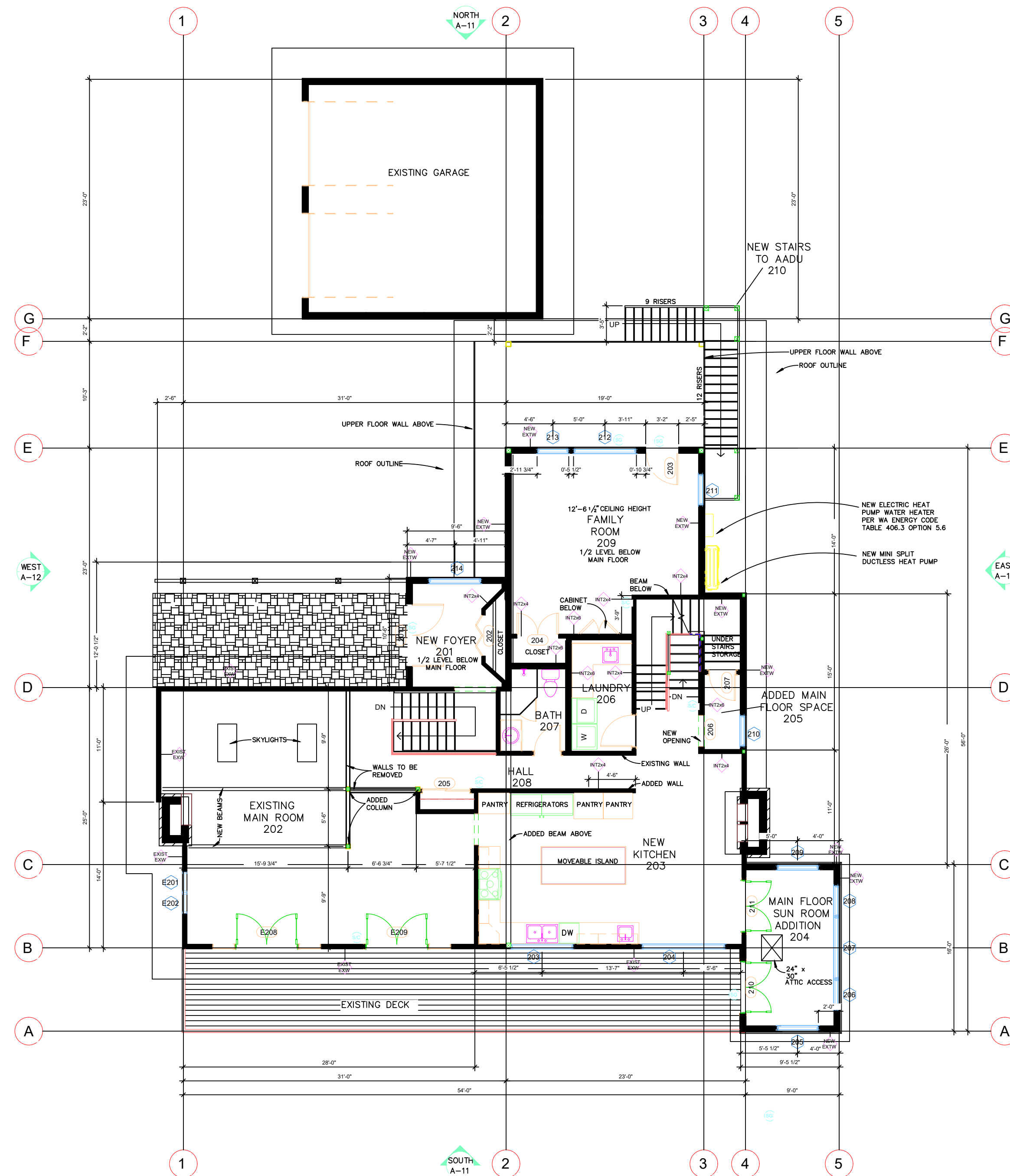
Component Description	Ref.	U-factor	Qt.	Width Feet	Height Feet	Area	UA
New Exterior French Doors	201	0.25	1	6' 0"	8' 0"	48.0	12.00
New Exterior Door	203	0.25	1	3' 0"	8' 0"	24.0	6.00
Existing Exterior French Doors	E208	0.25	1	6' 0"	6' 6"	40.0	10.00
Existing Exterior French Doors	E209	0.25	1	6' 0"	6' 6"	40.0	10.00
New Exterior French Doors	210	0.25	1	5' 0"	6' 6"	33.3	8.33
New Exterior French Doors	211	0.25	1	5' 0"	6' 6"	33.3	8.33
TOTAL						218.6	54.65

NEW FIXTURE	QTY
VENT	0
TOILET	0
SINK	2
SHOWER	0
BATH	0
BATH/SHOWER	0

NOTE: FIELD VERIFY ALL MEASUREMENTS

NEW IN-WALL
TANKLESS WATER
HEATER

NEW IN-WALL
DUCTLESS HEAT
PUMP



DESIGN PER IRC/IBC 2021

SAFETY GLAZING (REF IRC R308)
* SAFETY GLAZING MUST BE PERMANENTLY MARKED AS SUCH.
* WINDOWS ADJACENT TO TUB/SHOWER MUST HAVE BOTTOM SILL AT LEAST 60" ABOVE FLOOR LEVEL.

BATHROOM FIXTURE CLEARANCE (REF IRC R307)
* 21" IN FRONT OF SINK/TOILET/TUB.
* 24" IN FRONT OF SHOWER OPENING.
* 15" BETWEEN WALL/TUB AND TOILET O.C.

BATHROOM HEIGHTS (REF IRC R307)
* NONABSORBENT SURFACE ON WALL ABOVE TUB/SHOWER MINIMUM 6 FEET HIGH

STAIRWAYS (REF IRC 311.7)
* MIN WIDTH: 36"
* MIN HEAD ROOM: 6'-8"
* MAX RISER HEIGHT: 7-3/4"
* MAX VARIANCE: 3/8"
* MIN TREAD DEPTH 10"
* NOSING BETWEEN 3/4" AND 1-1/4"
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LIGHTING (REF IRC R303)
* INTERIOR AND EXTERIOR STAIRWAYS TO BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE

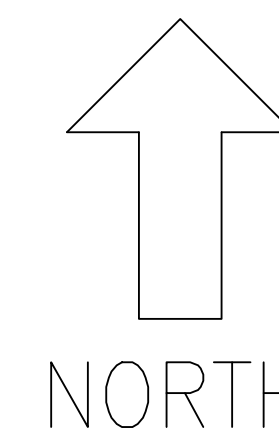
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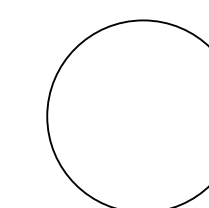
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 - CONTRACTOR RESPONSIBLE FOR VERIFYING UTILITY LINE LOCATIONS PRIOR TO ANY SITE OR DEMO WORK. COORDINATE WITH UTILITY COMPANIES TO DISCONNECT OR RELOCATE ANY UTILITY LINES AS PART OF THE WORK.
 - DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS, WRITTEN DIMENSIONS TO BE VERIFIED ON SITE
 - ALL WORK SHALL CONFIRM TO THE 2021 IRC/IBC, AND/OR THE LATEST EDITION OF ALL OTHER APPLICABLE CODES
 - ALL INTERIOR WALLS TO BE 2X4" U.N.O.

PROVIDE A **TTIC ACCESS**, MIN. 22 X 30" W/ MIN. 30" HEADROOM @ UNOBSTRUCTED, READILY ACCESSIBLE OPENING (REF. IRC R807.1)

LEGEND	
	NEW WALL TAG
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



NORTH



NEW MAIN FLOOR

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC
DESIGNED BY:
RICH MELCHIOR
253-951-8049
RICHDESIGN@COMCAST.NET

NO.	DATE	REVISION

NO.	DATE	REVISION

A Home Project for
RENEE LUND
8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24
A 4
RICH DESIGN 1 PROJECT NO.: 21-6

WINDOW SCHEDULE (UPPER FLOOR)

Component Description	Ref.	U-factor	Qt	Width Feet	Height Feet	Area	UA
New Fixed Glass	301	0.25	1	4	6	24.0	6.00
New Fixed Glass	302	0.25	1	8	6	48.0	12.00
New Fixed Glass	303	0.25	1	4	6	24.0	6.00
New Tempered Slider	304	0.25	1	5	6	30.0	7.50
New Fixed Glass	305	0.25	1	3	6	18.0	4.50
New Fixed Glass	306	0.25	1	3	6	18.0	4.50
New Fixed Glass	307	0.25	1	8	6	48.0	12.00
New Fixed Glass	308	0.25	1	3	6	18.0	4.50
New Tempered Slider	309	0.25	1	4	4	16.0	4.00
New Tempered Slider	310	0.25	1	5	5	25.0	6.25
TOTAL						271.0	67.75

HEAT PUMP
 MODEL: BLUERIDGE BMY48U18FCC
 HEATING POWER: 50,000 BTU
 COOLING POWER: 48,000 BTU
 SEER RATING: 18
 HSPF: 11
 NUMBER OF UNITS: 2

ELECTRIC TANKLESS WATER HEATER
 MODEL: RHEEM RTEX-13
 POWER: 13 kW
 CONNECTION VOLTAGE: 240 V
 GPM: 4.8
 UEF: 0.92
 NUMBER OF UNITS: 2

DOOR SCHEDULE (UPPER FLOOR)

Component Description	Ref.	U-factor	Qt	Width Feet	Height Feet	Area	UA
New Exterior Door	304	0.25	1	3	6	20.0	5.00
TOTAL						20.0	5.00

NEW FIXTURE	QTY
VENT	5
TOILET	2
SINK	5
SHOWER	2
BATH	1
BATH/SHOWER	0

MECHANICAL FLOW RATE CALCULATIONS
 NEW TOTAL LIVING SPACE: 4,924 SQ. FT.
 NUMBER OF BEDROOMS: 6
 REQUIRED AIR FLOW PER WSRC 2021 M1505.4.3: 95 CFM

NOTE: FIELD VERIFY ALL MEASUREMENTS

4'	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 AHR1 550/590	3.0	⊕
2.1	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum at 50 Pascals, or For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/ft2 maximum at 50 Pascals and All whole house ventilation requirements as determined by Section M1505.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.65. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.	1.0	
3.7.2.6	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. Exception: In homes with total heating loads of 24,000 BTUs or less using multi-zone mini-split systems with nominal ratings of 24,000 or less, the minimum HSPF to claim this credit shall be 9 HSPF. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0	
5.6	Water heating system shall include the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard Advanced Water Heating Specification with the UEF noted above To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.	2.0	
7.1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: 1. Dishwasher, standard – Energy Star rated, Most Efficient 2021 or Dishwasher, compact – Energy Star rated (Version 6.0) 2. Refrigerator (if provided) – Energy Star rated (Version 5.1) 3. Washing machine (Residential) – Energy Star rated (Version 8.1) 4. Dryer – Energy Star rated, Most Efficient 2022 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.	0.5	

TOTAL ENERGY CREDITS: 8.5

SUM OF UA (VERTICAL FENESTRATION)	247.50
SUM OF UA (WALLS, FLOORS, CEILING)	477.50
Sum of UA	725.00
Envelope Heat Load	32,625 Btu / Hour
<i>Sum of UA x ΔT</i>	
Air Leakage Heat Load	19,145 Btu / Hour
<i>Volume x 0.6 x ΔT x 0.018</i>	
Building Design Heat Load	51,769 Btu / Hour
<i>Air leakage + envelope heat loss</i>	
Building and Duct Heat Load	51,769 Btu / Hour
<i>Ducts in unconditioned space: sum of building heat loss x 1.10</i>	
<i>Ducts in conditioned space: sum of building heat loss x 1</i>	
Maximum Heat Equipment Output	64,712 Btu / Hour
<i>Building and duct heat loss x 1.40 for forced air furnace</i>	
<i>Building and duct heat loss x 1.25 for heat pump</i>	

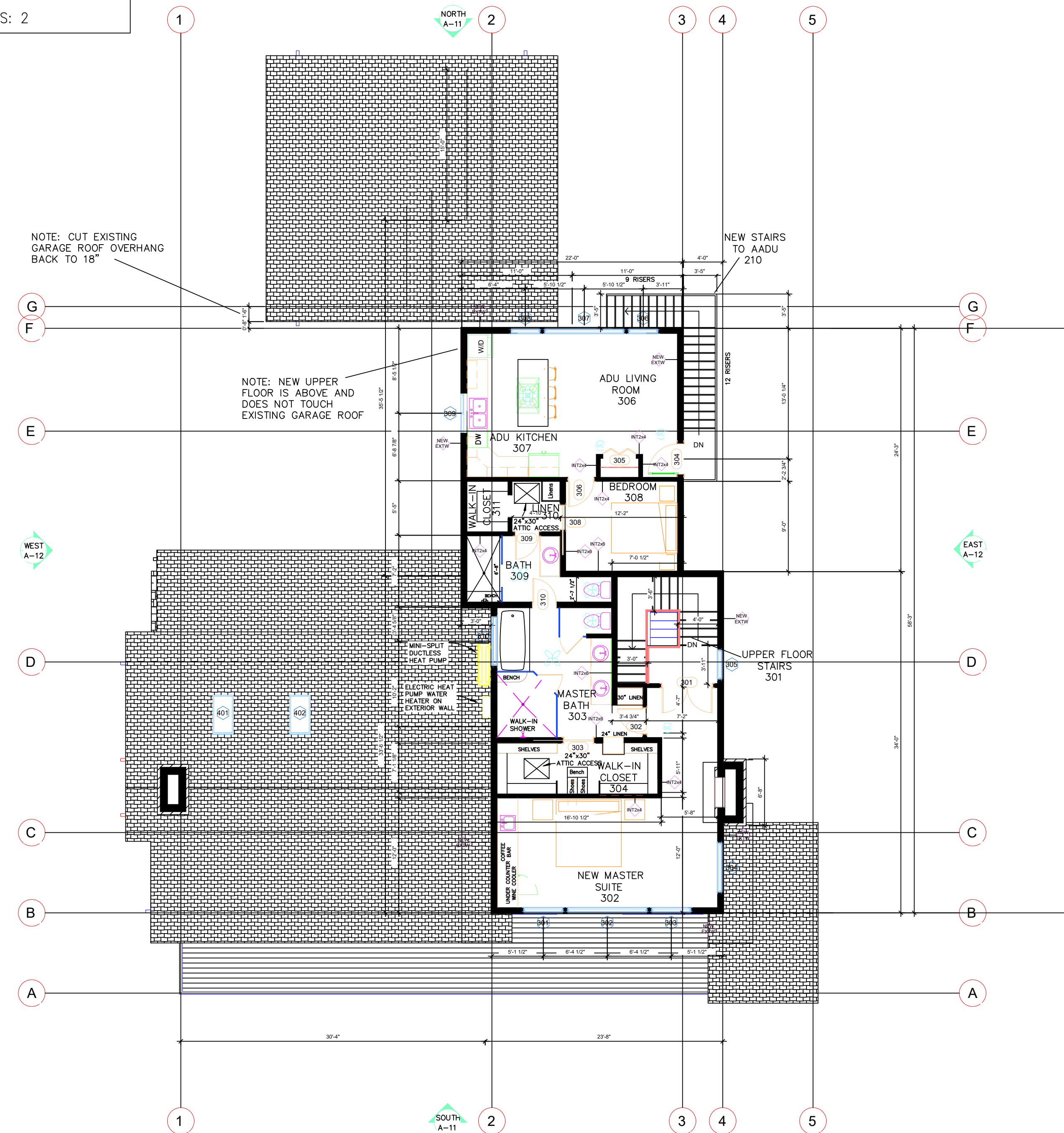
NOTE: SEE HEATING SYSTEM SIZING WORKSHEET FOR HEATING REQUIREMENT CALCULATIONS.

GENERAL NOTES

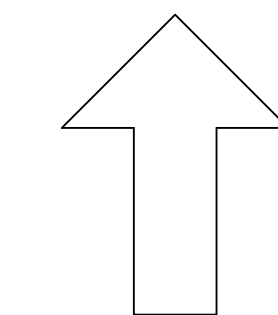
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PROVIDE ATTIC ACCESS, MIN. 22 X 30" W/ MIN. 30" HEADROOM @ UNOBSTRUCTED, READILY ACCESSIBLE OPENING (REF. IRC R807.1)

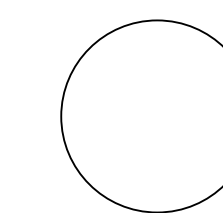
- DESIGN PER IRC/IBC 2021
- SAFETY GLAZING (REF IRC R308)
- * SAFETY GLAZING MUST BE PERMANENTLY MARKED AS SUCH.
 - * WINDOWS ADJACENT TO TUB/SHOWER MUST HAVE BOTTOM SILL AT LEAST 60" ABOVE FLOOR LEVEL.
- BATHROOM FIXTURE CLEARANCE (REF IRC R307)
- * 21" IN FRONT OF SINK/TOILET/TUB.
 - * 24" IN FRONT OF SHOWER OPENING.
 - * 15" BETWEEN WALL/TUB AND TOILET O.C.
- BATHROOM HEIGHTS (REF IRC R307)
- * NONABSORBENT SURFACE ON WALL ABOVE TUB/SHOWER MINIMUM 6 FEET HIGH
- STAIRWAYS (REF IRC 311.7)
- * MIN WIDTH: 36"
 - * MIN HEAD ROOM: 6'-8"
 - * MAX RISER HEIGHT: 7-3/4"
 - * MAX VARIANCE: 3/8"
 - * MIN TREAD DEPTH 10"
 - * NOSING BETWEEN 3/4" AND 1-1/4"
 - * MAX HANDRAIL PROJECTION: 4-1/2"
 - * HANDRAIL REQUIRED FOR ALL FLIGHTS OF AT LEAST 4 STAIRS
 - * HANDRAILS SHALL BE CONTINUOUS ALONG FLIGHT OF STAIRS EXCEPT AT CORNER POSTS.
 - * LOCATION AT 34-38 INCHES ABOVE THE STAIR NOSING.
 - * GRASP DIMENSION BETWEEN 1-1/4 TO 2 INCHES.
 - * PROVIDE CONTINUOUS HANDRAIL OR TERMINATE AT NEWEL POSTS OR SAFETY TERMINAL.
 - * WHERE USED AS A GUARDRAIL, A MAXIMUM OPENING OF 4 INCHES.
 - * USABLE SPACE UNDER STAIRS, WALLS AND CEILINGS TO HAVE 5/8" type x g.w.b. sec. 10003.33.4
- LIGHTING (REF IRC R303)
- * INTERIOR AND EXTERIOR STAIRWAYS TO BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE
- FIRE ALARMS (REF IFC AND MERCER ISLAND RESIDENTIAL CODE)
- * SMOKE ALARMS COMPLYING WITH NFPA 72 AND KING COUNTY CODE TO BE INSTALLED IN EACH BEDROOM AND NEAR EACH SEPARATE SLEEPING AREA.
 - * CARBON MONOXIDE ALARMS TO BE INSTALLED NEAR EACH SEPARATE SLEEPING AREA, MINIMUM 1 ALARM PER FLOOR.
 - * ALL NEW ALARMS TO BE HARDWIRED AND INTERCONNECTED.
- EGRESS WINDOWS
- * MINIMUM CLEARANCE 20" X 24"
 - * MINIMUM OPENING AREA 5.7 SQ FT
 - * WINDOW SILL HEIGHT MAX 44" ABOVE FLOOR



LEGEND	
	NEW WALL TAG
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



NORTH



NEW UPPER FLOOR

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

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NO.	REVISION	DATE

A Home Project for
 RENEE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040
 10-11-24

A 5
 RICH DESIGN 1
 PROJECT NO.: 21-6

NOTE: REFER TO ENGINEERING SHEETS FOR WALL SECTION & DETAILS

NOTE: FIELD VERIFY ALL MEASUREMENTS

VENTILATION CALCULATIONS

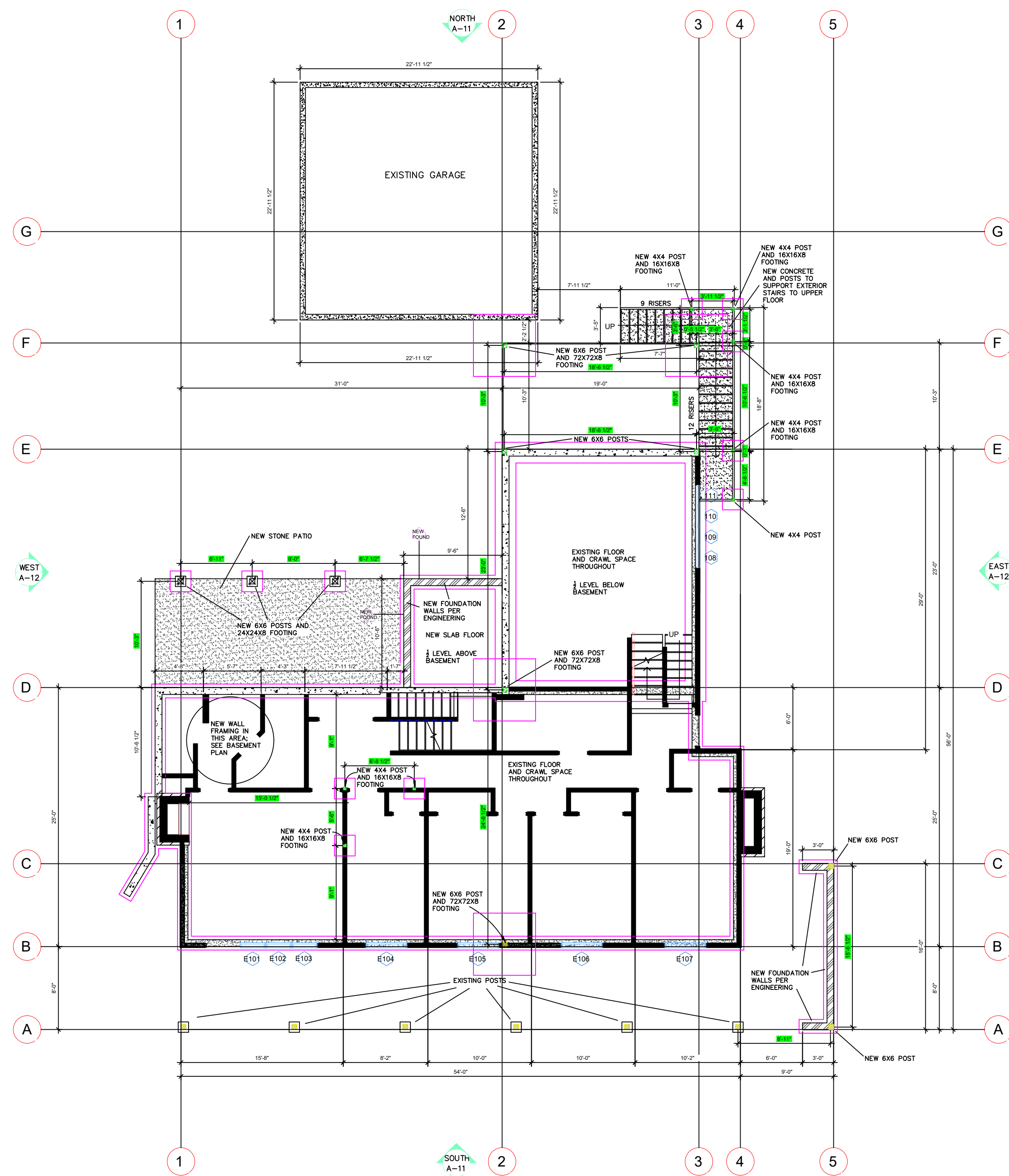
NOT REQUIRED; ONLY NEW AREA IS SLAB FLOOR

FIELD VERIFY ALL MEASUREMENTS

ALL TRUSSES:
SHALL CARRY MANUFACTURER STAMP
SHALL BE INSTALLED AND BRACED TO
MANUFACTURER SPECIFICATIONS
SHALL NOT BE ALTERED WITHOUT
PRIOR BUILDING DEPT. APPROVAL
OF ENGINEERING CALCULATIONS
SHALL HAVE DRAWINGS ON SITE
FOR FRAMING INSPECTION
VENT BLOCKS (APPROX. EVERY OTHER BAY).
PROVIDE FIRE BLOCKING BETWEEN STUDS
ALL NEW INSULATION INSTALLED UP TO CODE

NOTES:

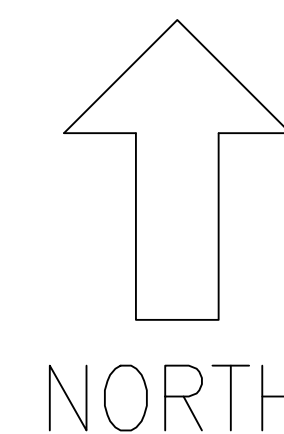
1. DISHWASHER TO HAVE AIR GAP
2. SHOWER HEADS SHALL BE EQUIPPED WITH FLOW CONTROL DEVICES TO LIMIT FLOW TO A MAX OF 3 GPM PER SHOWER HEAD.
3. SAFETY GLASS IS REQUIRED ON SHOWER DOORS.
4. HOT WATER TANK PROVIDE PRESSURE RELIEF VALVE PIPE DRAIN TO OUTSIDE DRAIN PIPE TO EXTEND WITHIN 2' ABOVE GROUND POINTING DOWN TO TRAPPING UPC 6083.
5. STOVE TO BE SEPARATELY VENTED TO OUTSIDE
6. ATTIC ACCESS (SEE SHEETS A2 AND A6) TO BE READILY ACCESSIBLE MINIMUM SIZE 22"x30" WITH 30" UNOBSTRUCTED HEADROOM R8071.
7. HANDRAILS SHALL BE PROVIDED OF TWO SIDE OPEN AND CONTINUOUS ON ONE SIDE ONLY. HANDRAIL SHALL BE 34"-38" ABOVE NOSING OF TREAD AND SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS AND THE ENDS SHALL RETURN TO THE WALL OF SHALL TERMINATE IN A NEWELL POST. THERE SHALL BE NOT LESS THAN 1-1/4" NOR MORE THAN 2" IN CROSS SECTIONAL DIMENSION AND SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS.
8. APPLIANCES INSTALLED IN GARAGE SHALL BE LOCATED OUT OF THE NORMAL PATH OF VEHICLES OR A MEANS OF PROTECTION SHALL BE PROVIDED. UNITS GENERATING A SPARK OR FLAME SHALL HAVE PILOTS AND BURNERS 18" ABOVE THE FLOOR.
9. ALL ELECTRIC WATER HEATERS IN UNHEATED SPACES SHALL BE PLACED ON AN INCOMPRESSIBLE INSULATED SURFACE OF R-10. WSEC 2021.
10. HOSE BIBS REQUIRED TO HAVE AN APPROVED BACKFLOW PREVENTION.
11. USABLE SPACE UNDER STAIRS, WALLS AND CEILINGS TO HAVE 5/8" type x g.w.b. . sec. 10003.33.4
12. FIREBLOCK STAIRWAYS BETWEEN STRINGERS AND RUN BETWEEN STUDS.
13. MAXIMUM RISE 7-3/4" MINIMUM RUN 10" MINIMUM WIDTH 36" MINIMUM HEADROOM 6'-8".
14. HANDRAIL TO BE MINIMUM 34"-38" WITH BALUSTERS NOT TO ALLOW A 4" SPHERE TO PASS THROUGH.
15. ALL SMOKE ALARMS MUST BE INTERCONNECTED
16. FACTORY BUILT FIREPLACE(S) SHALL BE LABELED, LISTED, TESTED IN ACCORDANCE WITH UL 127, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS



LEGEND	
	EXISTING 8" STEM WALL
	16X8 CONCRETE FOOTING
	NEW FOUNDATION WALL
	4X4 POST (EXISTING EXCEPT WHERE NOTED)
	24X24X8 CONCRETE FOOTING (EXISTING EXCEPT WHERE NOTED)

NOTE: DIMENSIONS RELATED TO NEW POSTS ARE HIGHLIGHTED IN GREEN

NOTE: REFER TO ENGINEERING SHEETS FOR WALL SECTION & DETAILS



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

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A Home Project for
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8520 SE 82ND ST
MERCER ISLAND, WA 98040
10-11-24

A 6
RICH DESIGN 1
PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS

VENTILATION CALCULATIONS
ATTIC FLOOR AREA: 1,498 SQ. FT. VENT RATIO: 1/300
REQUIRED VENT AREA: $1,498/300 = 4.99$ SQ. FT.

NEW GLAZING TO BE NFRC CERTIFIED.

EXISTING AREAS, WHERE FLOOR, WALL AND CEILING FINISH HAS BEEN REMOVED AND CAVITY IS EXPOSED DURING CONSTRUCTION, THEY ARE TO BE FILLED TO THE FULL DEPTH WITH BATT INSULATION OR EQUIVALENT R-VALUE INSULATION

- MIN. R-25 FOR 2X6 FRAMED WALLS

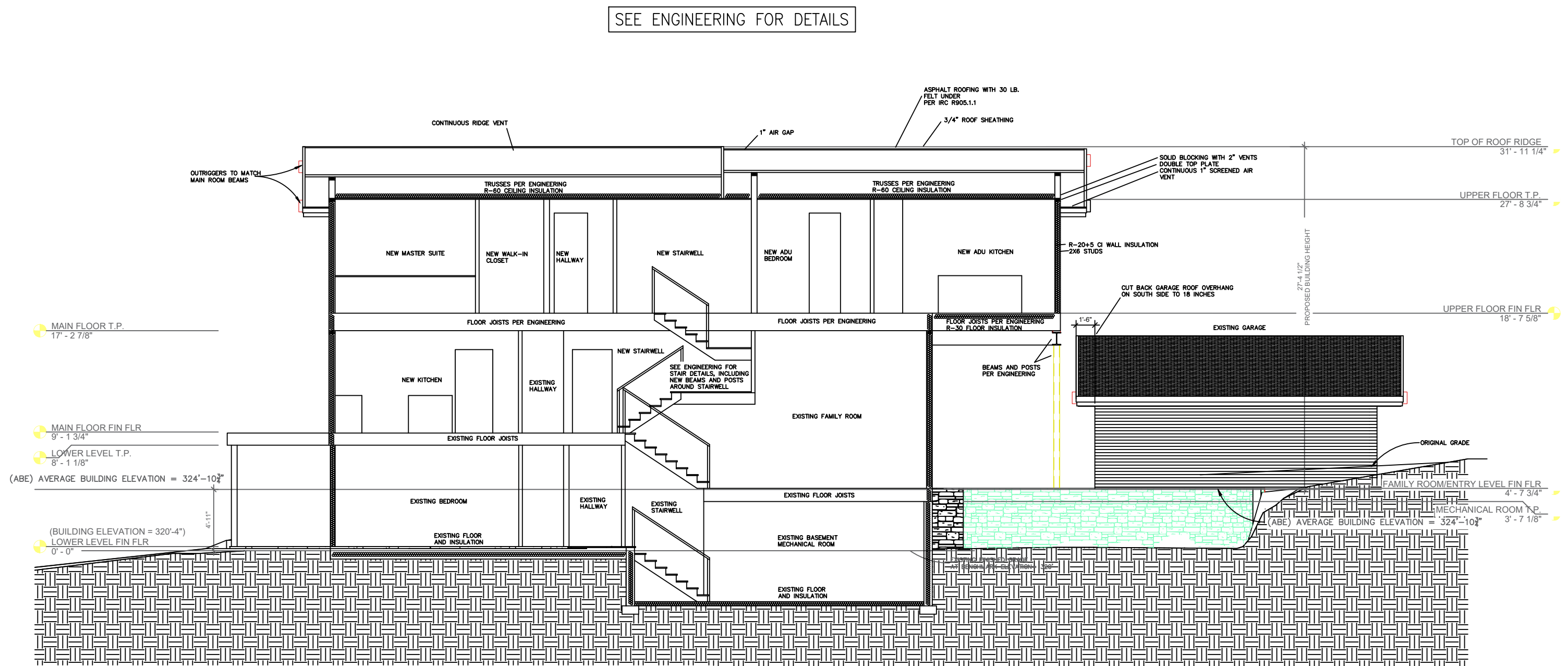
CHANGE OF USE NEEDS TO BE BROUGHT TO FULL COMPLIANCE OF WSEC 2021 (REF. IRC R101.4.4)

VENTILATION:
PROVIDE LOCAL EXHAUST VENTILATION WITH A VENTILATION RATE OF **105 CFM** (PER TABLE M403.4.1 @ A FLOW RATE OF 0.25" W.G. STATIC PRESSURE AND A SOUND RATE @ 1.0 SONE MAX. OPERATED.

- CONTROLS SHALL BE READILY ACCESSIBLE
- A MANUAL SHALL BE PROVIDED BY THE INSTALLER
- LOCAL EXHAUST VENTILATION SYSTEM SHALL BE CONTROLLED BY MANUAL SWITCHES, DEHUMIDISTATS, TIMERS, OR OTHER APPROVED MEANS.
- SHALL OPERATE CONTINUOUSLY AND BE EQUIPPED WITH AN OVERRIDE CONTROL.

INSULATION
IN COMPLIANCE WITH THE **2021 WASHINGTON STATE ENERGY CODE**, THE FOLLOWING MIN. INSULATIVE VALUES ARE TO BE PROVIDED FOR ALL NEW AREAS:

- TRUSS CEILING (ROOF): R-60
- STICK FRAMING (ROOF) R-60
NOTE: MAINTAIN 1" AIR SPACE BELOW ROOF SHEATHING
- WALL (ABOVE GRADE): R-20 + ci 5
w/ min. R-10 for Headers
- WALL (BELOW GRADE):
 - Cont. R-10 on Exterior or
 - Cont. R-15 on Interior or
 - Cavity R-21 + Thermal Break btwn slab and interior basement wall or
 - Cavity R-13 on Interior + Cont. R-5 interior or exterior
- FLOOR (CRAWL SPACE): R-30
SLAB ON GRADE (UNHEATED)
Min. R-10 under entire slab
- HEATED SLAB ON GRADE: Cont. R-10
- ELECTRIC WATER HEATERS IN UNHEATED SPACES OR ON CONCRETE FLOOR TO BE PLACED ON INCOMPRESSIBLE, INSULATED SURFACE MIN. R-10
- DUCTS: R-8
- WINDOW GLAZING 0.25 U-VALUE
- SKYLIGHT GLAZING 0.50 U-VALUE
- DOORS 0.25 U-VALUE



SEE ENGINEERING SHEETS FOR DETAILS

NEW THRU WALL SECTION

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

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A 7

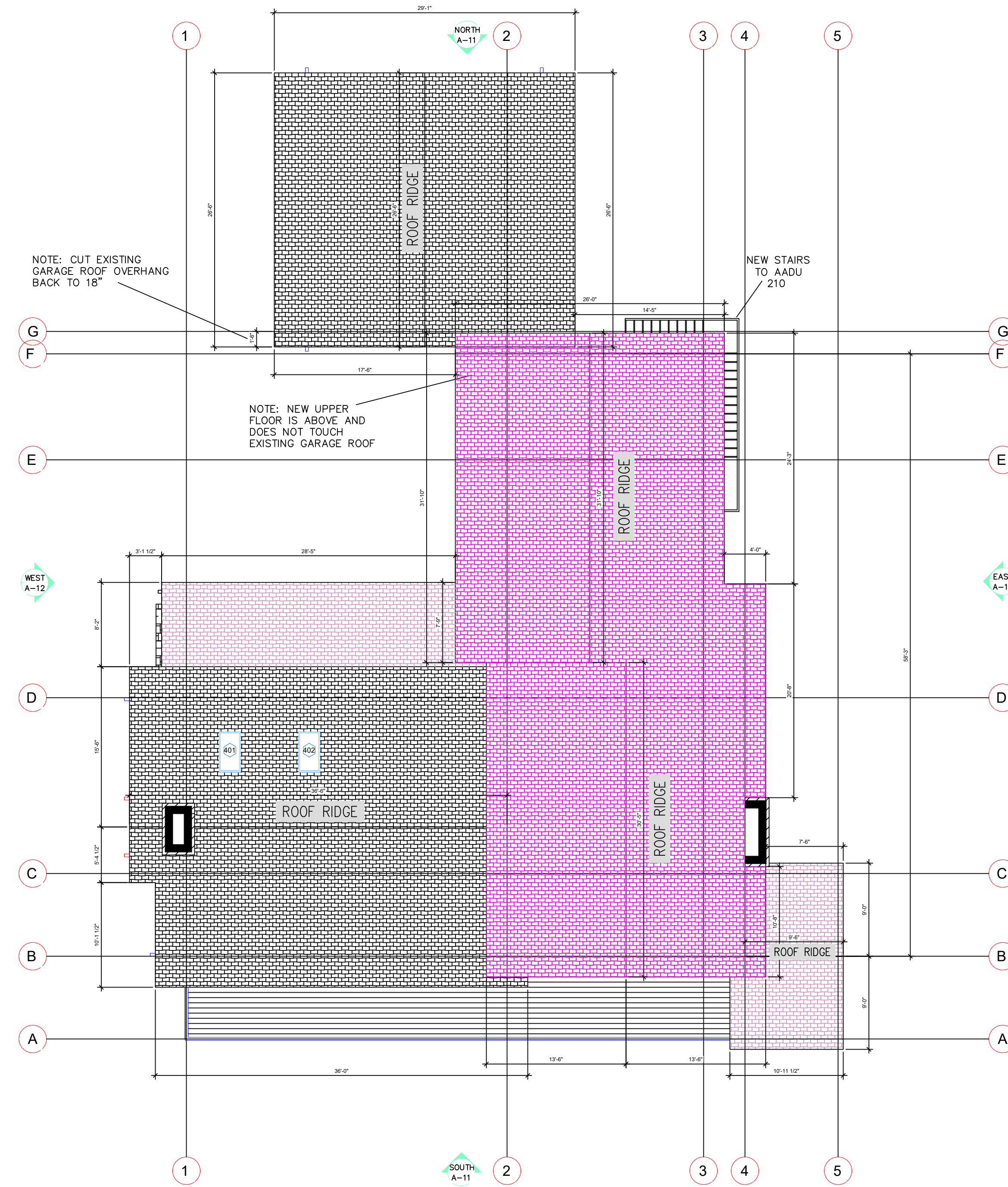
RICH DESIGN 1
PROJECT NO.: 21-6

WINDOW SCHEDULE (ROOF)

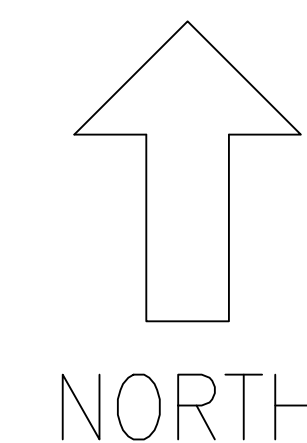
Component Description	Ref.	U-factor	Width		Height		Area	UA
			Qt	Feet	Inch	Feet		
New Skylight	401	0.50	1	2	0	4	8.0	4.00
New Skylight	402	0.50	1	2	0	4	8.0	4.00
TOTAL							16.0	8.00

NOTE: FIELD VERIFY ALL MEASUREMENTS

VENTILATION CALCULATIONS
ATTIC FLOOR AREA: 1,498 SQ. FT. VENT RATIO: 1/300
REQUIRED VENT AREA: $1,498/300 = 4.99$ SQ. FT.



LEGEND	
	NEW WALL
	NEW UPPER FLOOR ROOF
	EXISTING UPPER FLOOR ROOF
	EXISTING MAIN FLOOR ROOF
	NEW GUTTER DOWN SPOUT



SEE ENGINEERING SHEETS FOR DETAILS

NEW ROOF PLAN

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

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A 8
 RICH DESIGN 1
 PROJECT NO.: 21-6

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NOTES:

1. CAULK OR WEATHERSTRIP ALL JOINTS AND PENETRATION TO HEATING SPACES.
2. ALL GLAZING TO COMPLY WITH WSEC 2021.
3. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA OR 1/300 PROVIDED 40-50 PERCENT IS LOCATED WITHIN 3 FEET OF ROOF RIDGE. THE OPENING SHALL BE COVERED WITH 1/4" MESH CORROSION RESISTANT WIRE.
4. PROVIDE ADDRESS ON EVERY DWELLING. ADDRESS SHALL BE LEGIBLE AND VISIBLE FROM THE STREET. NUMBERS SHALL CONTRAST FROM THEIR BACKGROUND.

2.0" Trim around all windows & doors

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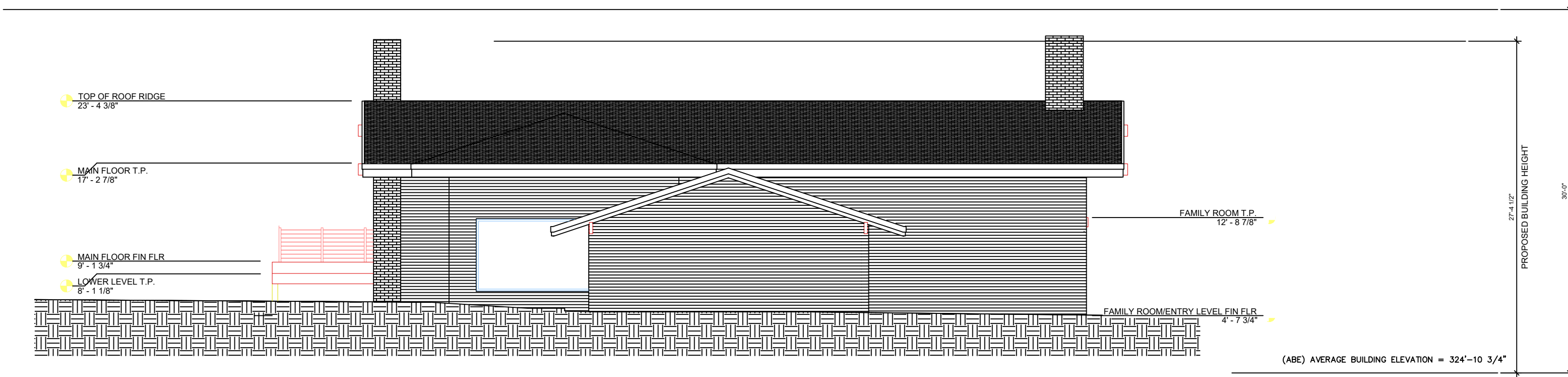
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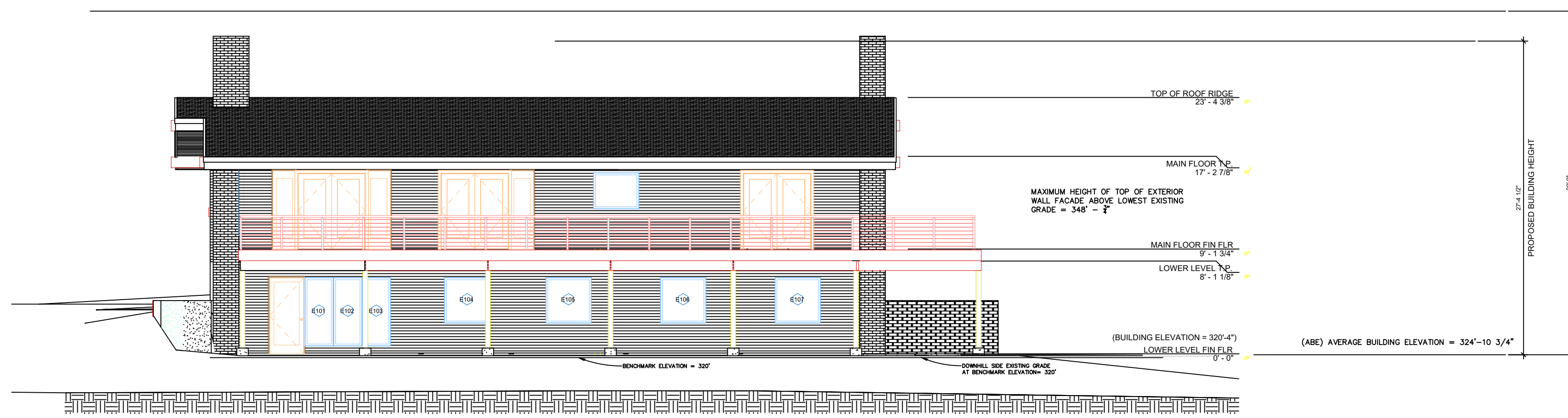
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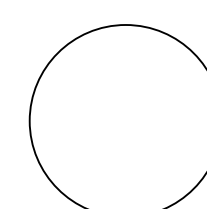
RICH DESIGN 1
PROJECT NO.: 21-6



NORTH



SOUTH



EXISTING NORTH & SOUTH ELEVATION

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

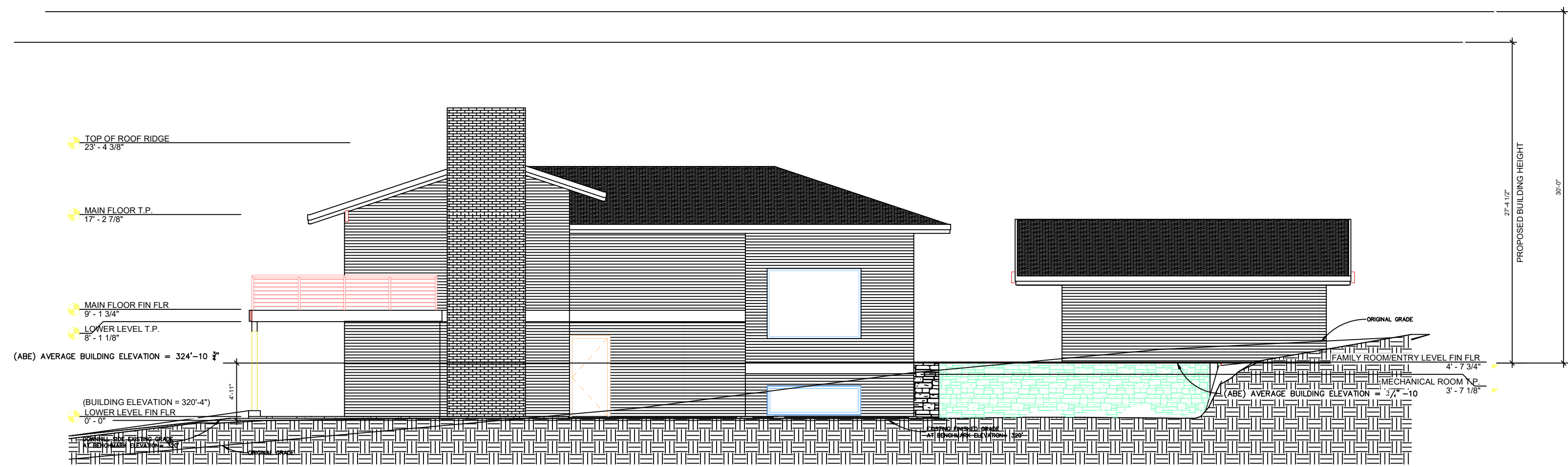
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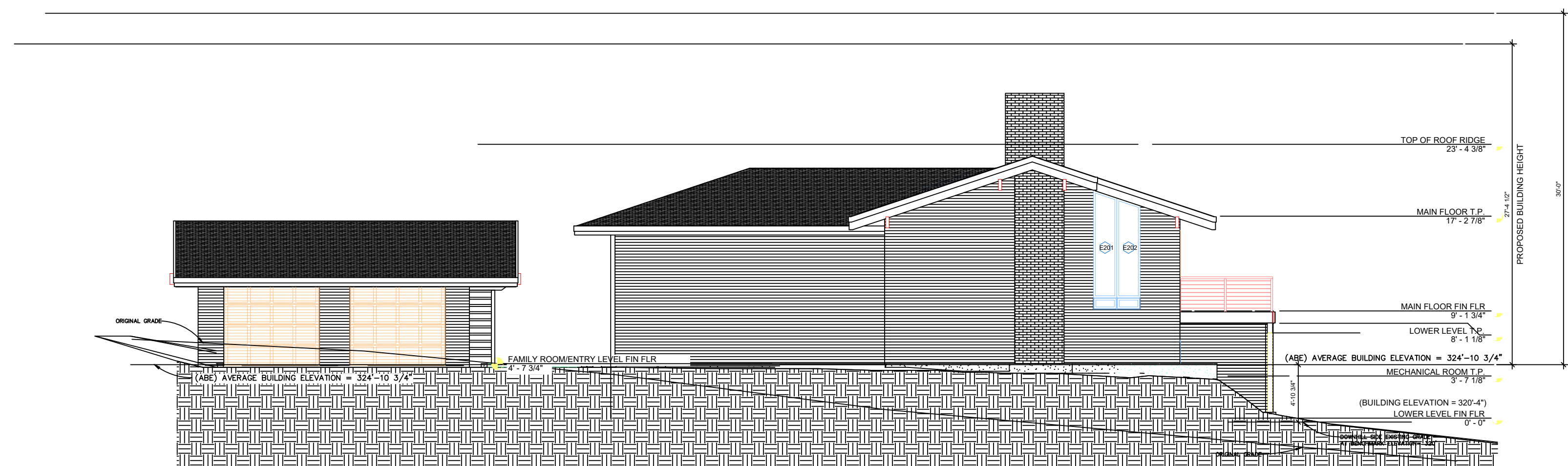
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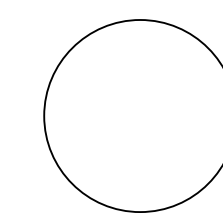
2.0" Trim around all windows & doors



EAST



WEST



EXISTING EAST & WEST ELEVATION

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

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A 10
RICH DESIGN 1
PROJECT NO.: 21-6

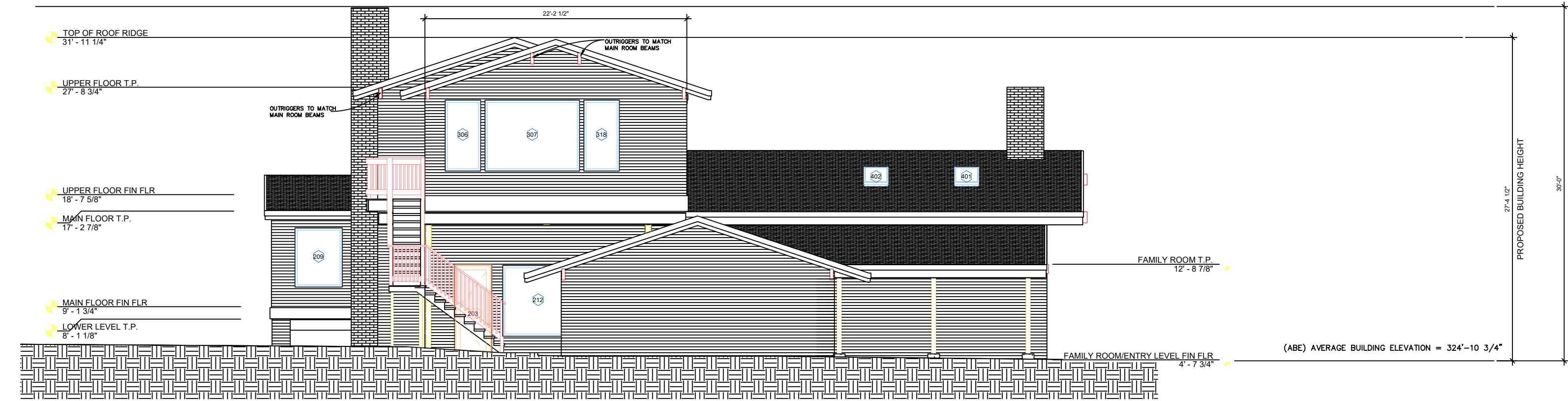
NOTE: FIELD VERIFY ALL MEASUREMENTS

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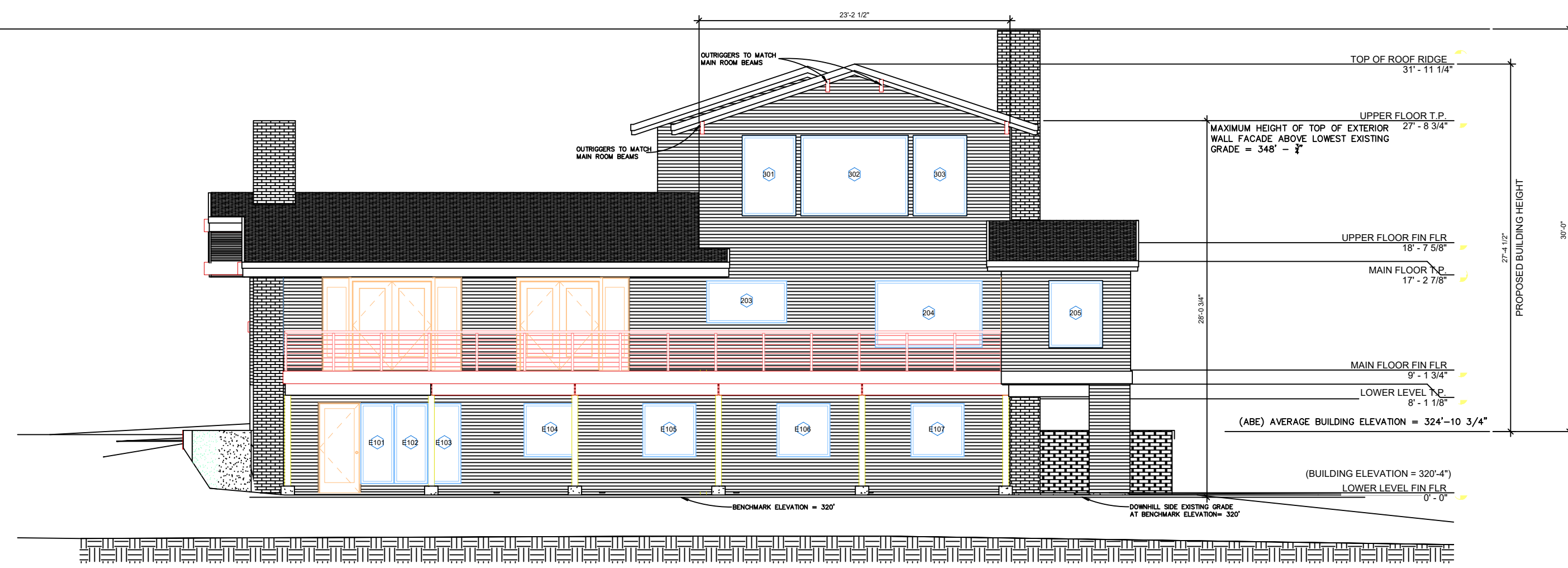
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2. ALL GLAZING TO COMPLY WITH WSEC 2021.
3. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA OR 1/300 PROVIDED 40-50 PERCENT IS LOCATED WITHIN 3 FEET OF ROOF RIDGE. THE OPENING SHALL BE COVERED WITH 1/4" MESH CORROSION RESISTANT WIRE.
4. PROVIDE ADDRESS ON EVERY DWELLING. ADDRESS SHALL BE LEGIBLE AND VISIBLE FROM THE STREET. NUMBERS SHALL CONTRAST FROM THEIR BACKGROUND.

2.0" Trim around all windows & doors

VENTILATION CALCULATIONS	
ATTIC FLOOR AREA:	1,498 SQ. FT.
VENT RATIO:	1/300
REQUIRED VENT AREA:	$1,498/300 = 4.99$ SQ. FT.



NORTH



SOUTH

SEE ENGINEERING SHEETS FOR DETAILS

NEW NORTH & SOUTH ELEVATION

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC

DESIGNED BY:
RICH MELCHIOR
253-951-8049
RICHDESIGN@COMCAST.NET

NO.	DATE	REVISION

A Home Project for
RENEE LUND
8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24

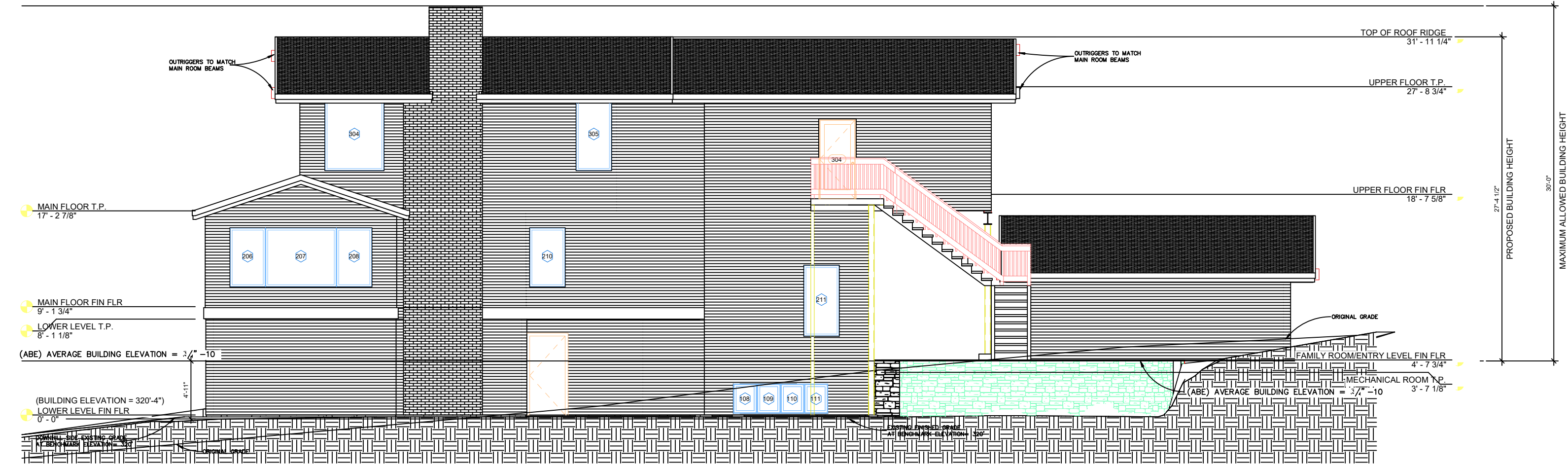
A 11
RICH DESIGN 1
PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS

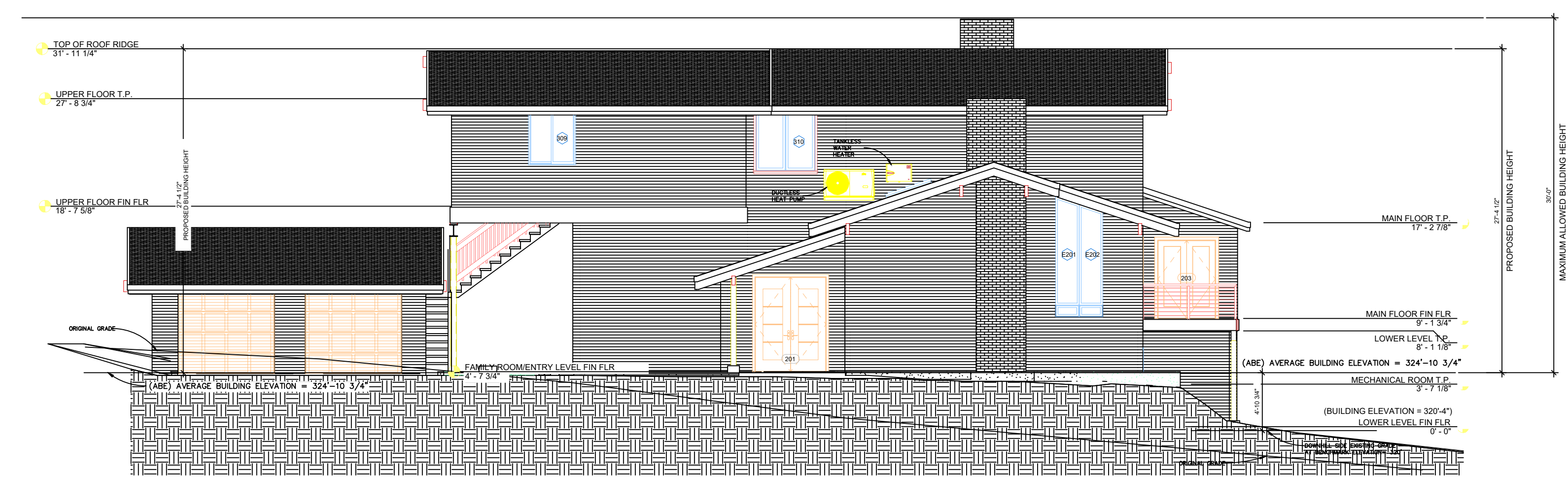
- NOTES:
1. CAULK OR WEATHERSTRIP ALL JOINTS AND PENETRATION TO HEATING SPACES.
 2. ALL GLAZING TO COMPLY WITH WSEC 2021.
 3. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA OR 1/300 PROVIDED 40-50 PERCENT IS LOCATED WITHIN 3 FEET OF ROOF RIDGE. THE OPENING SHALL BE COVERED WITH 1/4" MESH CORROSION RESISTANT WIRE.
 4. PROVIDE ADDRESS ON EVERY DWELLING. ADDRESS SHALL BE LEGIBLE AND VISIBLE FROM THE STREET. NUMBERS SHALL CONTRAST FROM THEIR BACKGROUND.

2.0" Trim around all windows & doors

VENTILATION CALCULATIONS	
ATTIC FLOOR AREA:	1,498 SQ. FT.
VENT RATIO:	1/300
REQUIRED VENT AREA:	$1,498/300 = 4.99$ SQ. FT.



EAST



WEST

SEE ENGINEERING SHEETS FOR DETAILS

NEW EAST & WEST ELEVATION

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC
 DESIGNED BY:
 RICH MELCHIOR
 253-951-8049
 RICHDESIGN@COMCAST.NET

NO.	DATE	REVISION

A Home Project for
RENEE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040

10-11-24

A 12
 RICH DESIGN 1
 PROJECT NO.: 21-6

GENERAL STRUCTURAL NOTES

- ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE INTERNATIONAL BUILDING CODE (IBC, 2021 EDITION) AND MODIFICATIONS TO THE INTERNATIONAL BUILDING CODE BY THE LOCAL JURISDICTION.
- DESIGN LOAD CRITERIA

DEAD LOADS	
ROOF	15 PSF
FLOORS	15 PSF
DECKS	8 PSF
EXTERIOR WALLS	10 PSF
INTERIOR WALLS	8 PSF
LIVE LOADS	
ROOF	25 PSF
FLOOR / LIVING SPACE	40 PSF
DECKS / BALCONIES	60 PSF
SNOWLOADS	
GROUND LOAD	51 PSF
ROOF SNOW LOAD	51 PSF
WIND	
ULTIMATE DEIGN WIND SPEED	110 MPH
WIND EXPOSURE	C
IMPORTANCE FACTOR	$I_w = 1.0$
ADJUSTMENT FACTOR	$\lambda = 1.0$
WIND SPEED UP FACTOR	1.0
SEISMIC	
SEISMIC USE GROUP	II
IMPORTANCE FACTOR I_e	1.0
SITE CLASS	D
SEISMIC DESIGN CATEGORY	D
RESPONSE FACTOR	$R = 6.5$
MAPPED ACCELERATION	$S_s = 1.64$
(PER USGS)	$S_1 = 0.62$
BASE SHEAR	$V = 19,900$
SEISMIC RESPONSE COEFFICIENT	$C_s = 0.18$
SOIL PRESSURE:	
ALL SOIL PRESSURE	1,500 PSF

- 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 AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
- 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 BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER SITE ENTITIES OR PERSONS AT THE PROJECT SITE.
- CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
- ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

FOUNDATIONS

- ALL FOOTINGS AND FOUNDATIONS SHALL BE SUPPORTED BY COMPETENT NATIVE SOIL 18" BELOW FINISHED GRADE FOR EXTERIOR SIDE AND 12" FOR INTERIOR FOOTINGS, FREE OF ORGANIC MATERIALS. OVEREXCAVATION MIGHT BE NEEDED TO REACH THE COMPETENT SOIL.
- FOOTINGS AND FOUNDATION EXCAVATION SHALL BE FREE OF LOOSE SOILS, SLOUGHS, DEBRIS, AND FREE OF WATER AT ALL TIMES.
- FOUNDATION WALL BACKFILL SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF WALL PROVIDING 4" PERFORATED PIPE (AS REQUIRED) FOR SUBSURFACE DRAINAGE.

- U.N.O. IN AN APPROVED GEOTECHNICAL REPORT, THE FOLLOWING METHOD FOR BACKFILL PLACEMENT AND COMPACTION IS TO BE USED:

EXCEPT FOR BACKFILL AGAINST BELOW-GRADE WALLS OR RETAINING WALLS, ALL OTHER STRUCTURAL FILL AND STRUCTURAL BACKFILL MATERIALS SHALL BE PLACED IN RELATIVELY HORIZONTAL LOOSE LIFTS NOT EXCEEDING 10 INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR (ASTM D1557) MAXIMUM DENSITY AT MOISTURE CONTENTS WITHIN TWO (2) PERCENT OF OPTIMUM. THE SPECIFIED COMPACTION DENSITY AND MOISTURE CONTENT OF EACH LIFT MUST BE VERIFIED BY INSPECTION, PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS. BACKFILL AGAINST BELOW-GRADE WALLS AND RETAINING WALLS SHOULD BE COMPACTED AS DESCRIBED ABOVE TO ONLY 90 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.

- FOOTING SIZE SHALL BE AS INDICATED ON DRAWINGS OR MIN. AS PER IBC SECTION 1806.
- WHERE THE SURFACE IS SLOPED MORE THAN ONE (1) FOOT IN TEN (10) FEET THE FOUNDATION SHALL BE LEVEL OR STEPPED SO THAT BOTH, TOP AND BOTTOM, OF SUCH FOUNDATION ARE LEVEL PER IBC.
- WHERE STRUCTURAL COLUMNS AND POSTS ARE EXPOSED TO WATER SPLASH ABOVE, A CONCRETE SURFACE OR TO THE WEATHER, PROVIDE A MIN. OF 1" ABOVE CONCRETE SURFACE, OR 8" ABOVE THE EXPOSED EARTH PER IBC.

CONCRETE

- CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905, 1906, AND ACI 301. STRENGTH AT AGE 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS, U.N.O.:

MEMBER TYPE (IN)	PSI	MAX AGGR	MAX W/C RATIO
SLABS ON GRADE	2,500	1	0.45
FOUNDATIONS	2,500	1	0.45
WALLS	2,500	1	0.50
COLUMNS, ELEVATED SLABS & BEAMS	4,500	¾	0.40

- CONCRETE MIX FOR FOUNDATION AND SLAB:
CEMENT: 5.5 SACK TYPE I NORMAL PORTLAND CEMENT
1,210 LBS OF WET SAND
1,925 LBS GRAVEL
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, FY = 60,000 PSI, UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM-185.
- DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 318-14. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE". PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
- NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED AND APPROVED BY THE STRUCTURAL ENGINEER.
- CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
FOOTINGS AND OTHER UNFORMED SURFACES
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER
(NO. 6 BARS OR LARGER) 2"
(NO 5 BARS OR SMALLER) 1-1/2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS 1-1/2"
SLABS AND WALLS: GREATER OF BAR DIAMETER + 1/8 OR 3/4"
- CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS .
- NON-SHRINK GROUT SHALL 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 (2,500 PSI MIN).

FLOOR SLABS

- INTERIOR CONCRETE SLAB-ON-GRADE FLOORS SHOULD BE UNDERLAIN BY CAPILARY BREAK CONSISTING OF AT LEAST 4 INCHES PEA GRAVEL OR COMPACTED ¾- INCH CLEAN CRUSHED ROCK (LESS THAN 3 PERCENT FINES).

ANCHORAGE

- EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BARS) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED WITH SIMPSON EPOXY "SET-XP" OR EQUAL. SPECIAL INSPECTION IS REQUIRED. RODS SHALL BE ASTM A-36 UNLESS NOTED OTHERWISE.
- DRIVEN PINS AND OTHER POWDER ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE.
- PERIODIC SPECIAL INSPECTION FOR EPOXIED ANCHORS AND BOLTS IS REQUIRED.

STEEL

- STRUCTURAL STEEL FABRICATION, ERECTION AND WELDING INSPECTION SHALL COMPLY WITH THE SPECIAL INSPECTION SCHEDULE.
- STRUCTURAL STEEL SHALL BE GRADE A-36 UNLESS NOTED OTHERWISE.
- ARCHITECTURALLY EXPOSED STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
- THE FOLLOWING ADHESIVE-TYPE ANCHORING SYSTEMS SHALL BE USED FOR CONCRETE AND MASONRY, AS APPLICABLE AND IN ACCORDANCE WITH CORRESPONDING CURRENT ICC ESR REPORT.

- SIMPSON "SET-XP" – ICC ESR 2508
FOR ANCHORING TO CONCRETE

- ALL WELDING SHALL BE IN CONFORMANCE WITH AISC 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 COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT LBS AT -20 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION
- WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1.

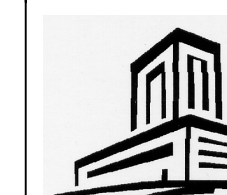
WOOD

- ALL SOLID LUMBER TO BE GRADED BY WCLIB OR WWSA. ALL LUMBER SHALL BE HEM-FIR #2 (HF #2) OR BETTER. ALL SOLID LUMBER 5" X 4" OR LARGER SHALL BE DOUGLAS FIR #2 (DF #2) U.N.O. ALL GLUE-LAMINATED LUMBER SHALL BE GLULAM 24F-1.8E WS.
DESIGN VALUES FOR GLULAM BEAMS
FLEXURAL STRESS TENSION ZONE 2,400 PSI
FLEXURAL STRESS COMPRESSION ZONE 1,850 PSI
COMPRESSION PERPENDICULAR TO GRAIN 650 PSI
SHEAR 266 PSI
APPARENT E 1.8x10⁶ lb-in²
TRUE E 1.9x10⁶ lb-in²
- LUMBER IN CONTACT WITH CONCRETE AND ALL EXTERIOR WOOD SHALL BE PRESSURE TREATED, ALL CONNECTORS GALVANIZED.
- INSTALL SOLID BLOCKING BTWN JOISTS AT ALL BEARING POINTS. THROUGH BOLTS AND LAG BOLTS SHALL BE ASTM A307. PROVIDE MALLEABLE IRON WASHER AT ALL BOLT AND LAG BOLT LOATIONS. PROVIDE CUT WASHER FOR ALL BOLTS PROTRUDING BEARING WOOD.
- ALL METAL (CONNECTORS, NAILS, BOLTS, ETC.) IN CONTACT WITH P.T. WOOD SHALL BE HOT DIPPED GALVANIZED.
- U.N.O. CONNECTORS AND FASTENERS SHALL COMPLY WITH IBC TABLE 2304.10.1

OPEN WEB TRUSSES

- THE INSTALLATION OF OPEN WEB TRUSSES SHALL COMPLY WITH THE REQUIREMENTS OF IBC 2018 TABLE 1705.2.3.
- OPEN WEB TRUSS SHOP DRAWINGS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF WASHINGTON.

COMPARISON OF COMMON, BOX AND SINKER NAIL DIMENSIONS (inches) OF THE SAME PENNYWEIGHT.						
TYPE	FEATURE	PENNYWEIGHT				
		6d	8d	10d	12d	16d
COMMON	Length	2	2-1/2	3	3-1/4	3-1/2
	Diameter	0.113	0.131	0.148	0.148	0.162
	Head	0.226	0.281	0.312	0.312	0.344
BOX	Length	2	2-1/2	3	3-1/4	3-1/2
	Diameter	0.099	0.113	0.128	0.128	0.135
	Head	0.266	0.297	0.312	0.312	0.344
SINKER	Length	1-7/8	2-3/8	2-7/8	3-1/8	3-1/4
	Diameter	0.092	0.113	0.120	0.135	0.148
	Head	0.231	0.266	0.281	0.312	0.344

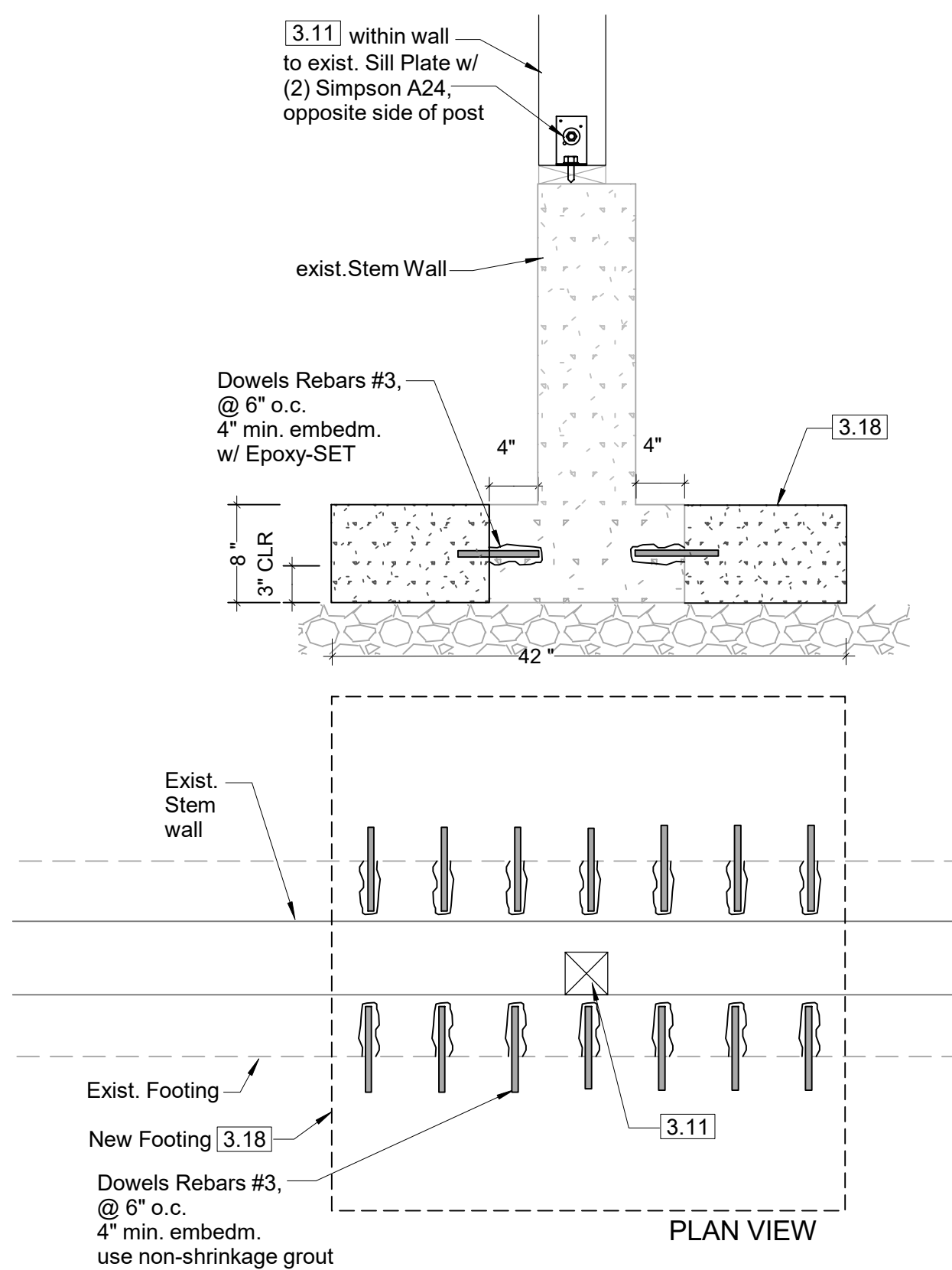
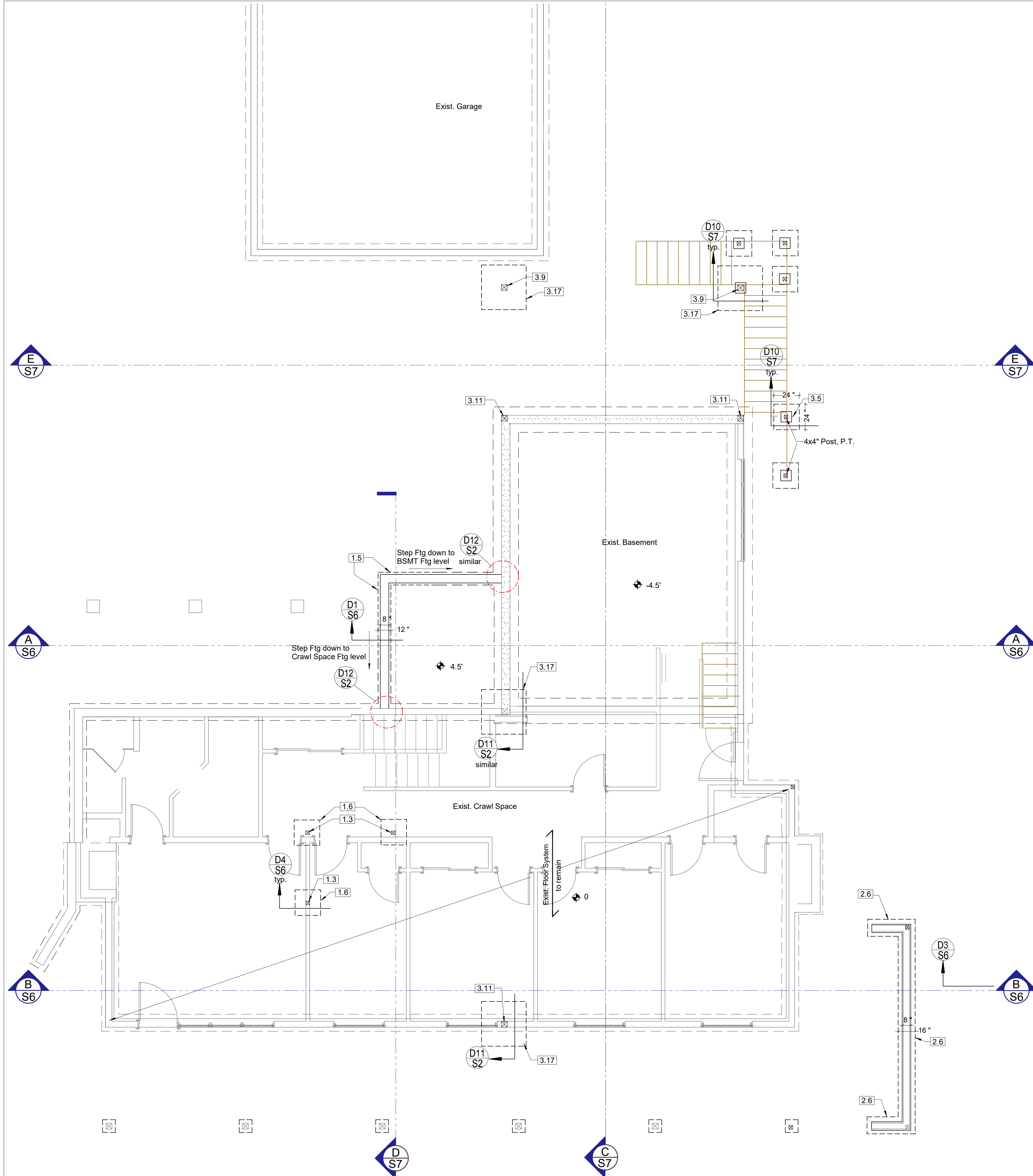


tec instruct LLC

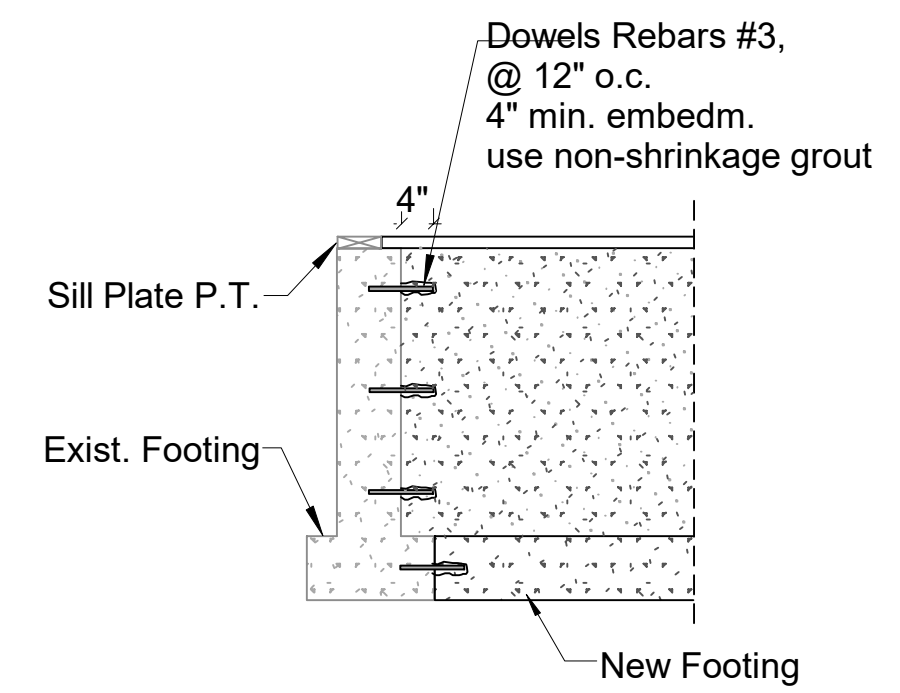
4111 164th St. SW #51, Lynnwood, WA 98087
Telephone (206) 553 9076 - email: www.heimisch@yahoo.com

ENGINEERING

CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S1
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	



DETAIL 11 SCALE: 1" = 1'-0" (1:12)



DETAIL 12 DOWEL DETAIL (TYP.) SCALE: 1/2" = 1'-0" (1:24)

KEY NO.	MAIN FLOOR ALTERATIONS
1.1	Rafters, HF No.2, 2x12" @ 24" o.c.
1.2	Glulam WS, 24F-1.8E, 3-1/8x12"
1.3	Post, PSL, 1.8E, 3-1/2x3-1/2"
1.4	Header, DF No.2, 4x8"
1.5	Cont. Footing, fc = 2,500 psi, 12x8"
1.6	Spread Footing, fc = 2,500 psi, 24x24x8"

KEY NO.	NEW SUN ROOM
2.1	Manufactured Trusses @ 24" o.c.
2.2	Header, DF No.2, 4x8"
2.3	TJI 110, 1-3/4x11-7/8" @ 16" o.c.
2.4	Beam, DF No.2, 4x8"
2.5	Dbl. Joists, HF No.2, (2) 2x8", P.T.
2.6	Cont. Footing, fc = 2,500 psi, 16x8"

KEY NO.	SECOND STORY ADDITION
3.1	Manufactured Trusses @ 24" o.c.
3.2	Header, DF No.2, 4x10"
3.3	Header, DF No.2, 4x6"
3.4	Beam, PSL, 2.2E, 2900Fb, 3-1/2x11-7/8"
3.5	Post, HF No.2, 6x6", P.T.
3.6	TJI 210, 2-1/16x16" @ 16" o.c.
3.7	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.8	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.9	Post, HF No.2, 6x6", P.T.
3.10	Glulam WS, 24F-1.8E, 5-1/2x21"
3.11	Post within Wall, DF No.2, 6x6"
3.12	TJI 230, 2-5/16x11-7/8" @ 16" o.c.
3.13	Header, DF No.2, 4x12"
3.14	Stair Stringers, HF No.2, 2x12" @ 12" o.c., P.T.
3.15	Landing Joists, HF No.2, 2x6" @ 16" o.c., P.T.
3.16	Beam, flush, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.17	Spread Footing, fc = 2,500 psi, 72x72x16"

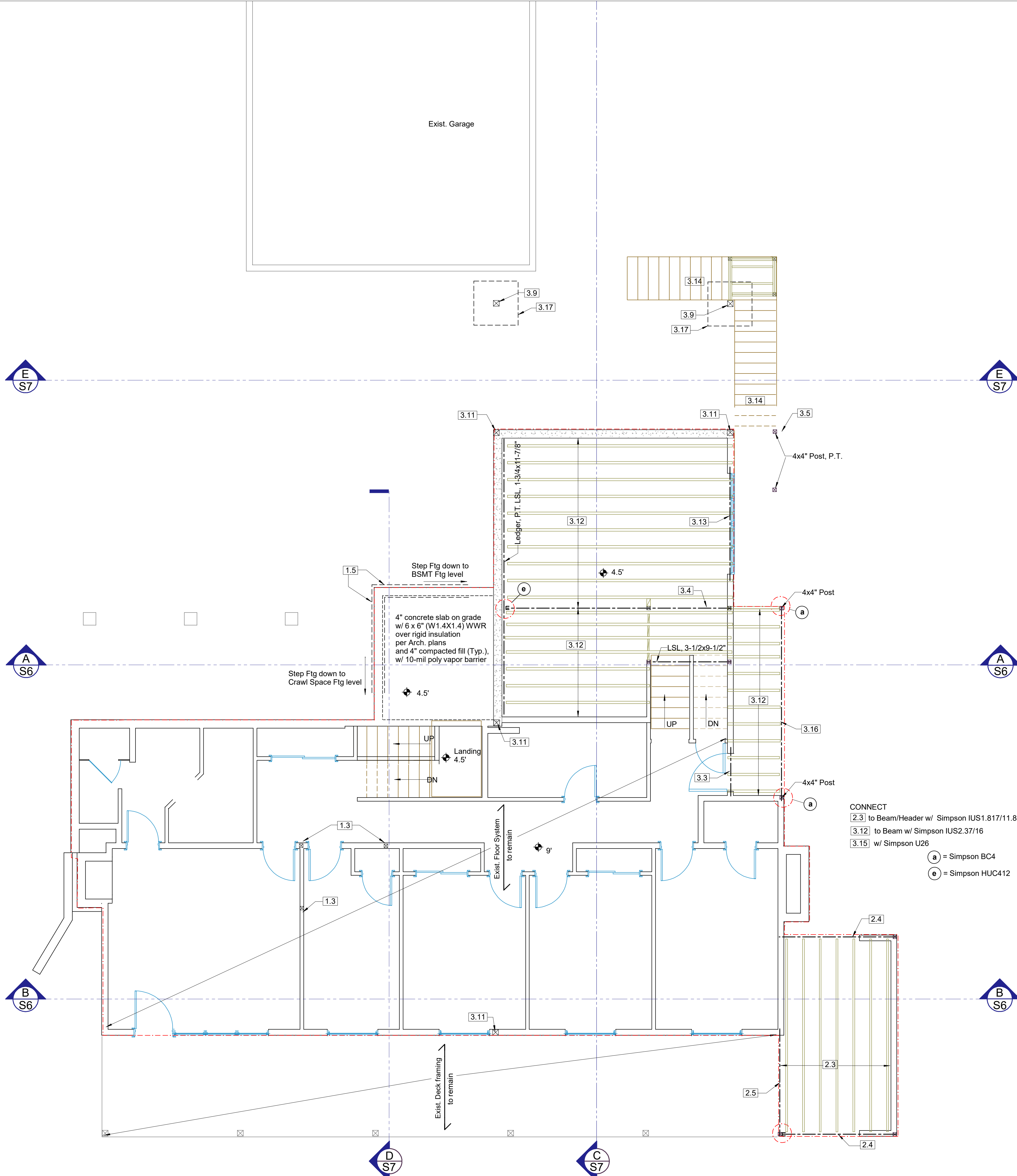


BASEMENT / FOUNDATION PLAN

SCALE: 1/4" = 1'-0" (1:48)

tec instruct LLC
4111 164th St. SW #51, Lynnwood, WA 98087
Telephone (206) 553-9076 - email: www.rolandheimisch@yahoo.com
ENGINEERING

CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S2
PROPERTY #:		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	

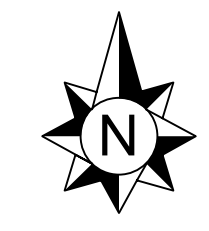


KEY NO.	MAIN FLOOR ALTERATIONS
1.1	Rafters, HF No.2, 2x12" @ 24" o.c.
1.2	Glulam WS, 24F-1.8E, 3-1/8x12"
1.3	Post, PSL, 1.8E, 3-1/2x3-1/2"
1.4	Header, DF No.2, 4x8"
1.5	Cont. Footing, fc = 2,500 psi, 12x8"
1.6	Spread Footing, fc = 2,500 psi, 24x24x8"

KEY NO.	NEW SUN ROOM
2.1	Manufactured Trusses @ 24" o.c.
2.2	Header, DF No.2, 4x8"
2.3	TJI 110, 1-3/4x11-7/8" @ 16" o.c.
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3.10	Glulam WS, 24F-1.8E, 5-1/2x21"
3.11	Post within Wall, DF No.2, 6x6"
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CONNECT
 2.3 to Beam/Header w/ Simpson IUS1.817/11.88
 3.12 to Beam w/ Simpson IUS2.37/16
 3.15 w/ Simpson U26
 a = Simpson BC4
 e = Simpson HUC412



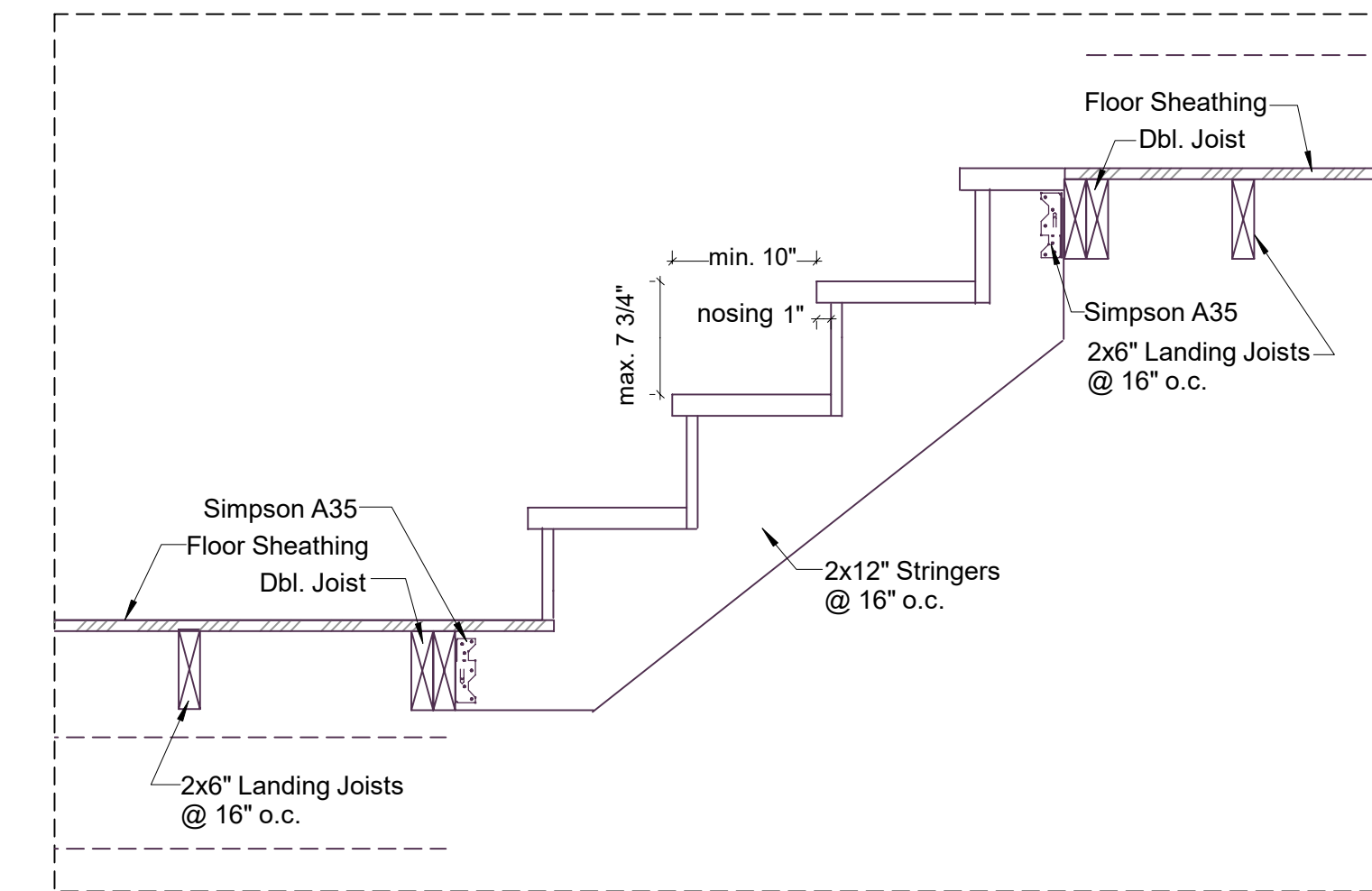
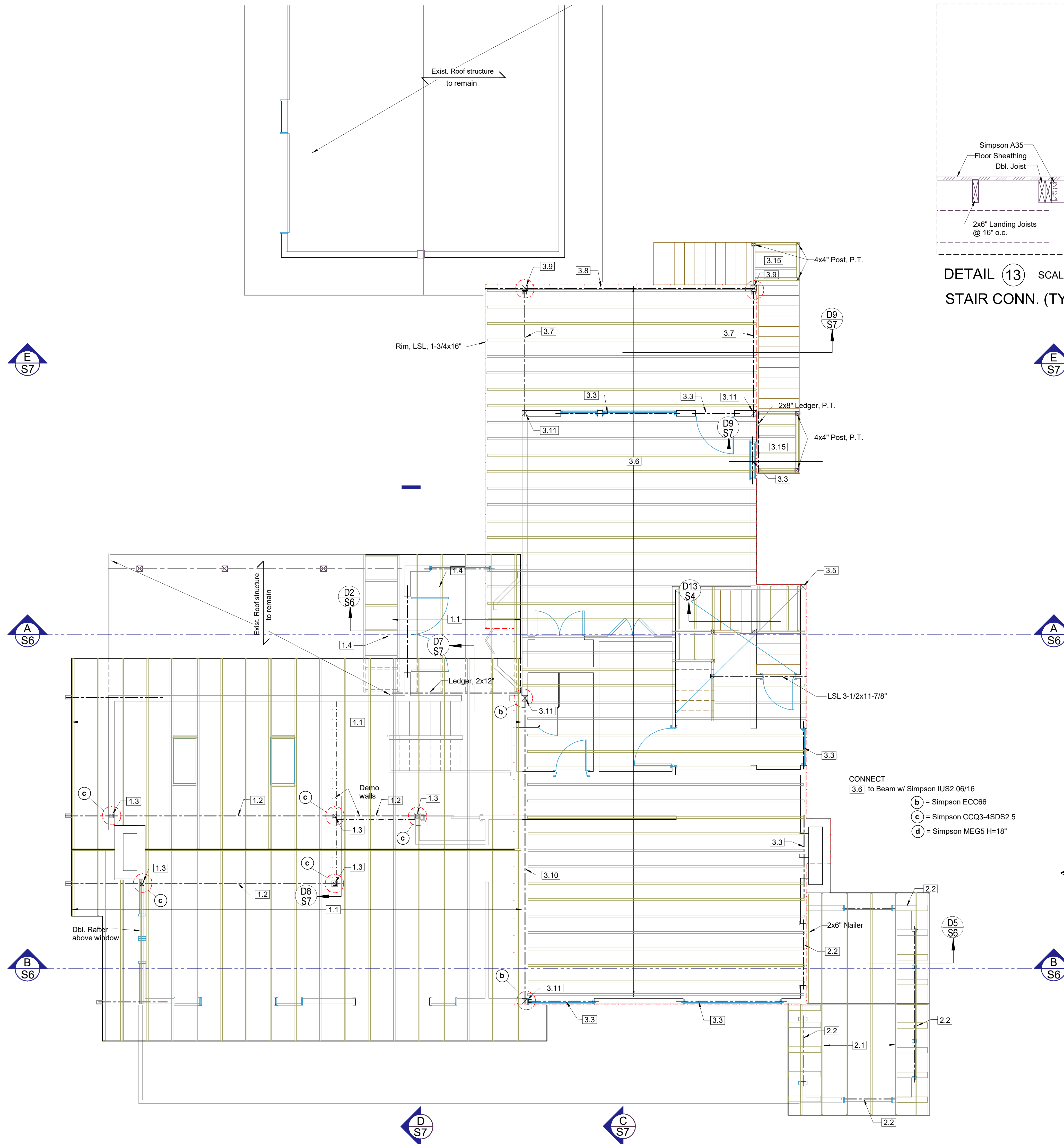
FRAMING ABOVE LOWER FLOOR

SCALE: 1/4" = 1'-0" (1:48)



tec instruct LLC
 4111 164th St SW #51, Lynnwood, WA 98087
 Telephone (206) 553 9076 - email: www.heimisch@yahoo.com
 ENGINEERING

CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S3
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024	
ENGINEER:	Roland Heimisch, P. E.	SCALE: as noted

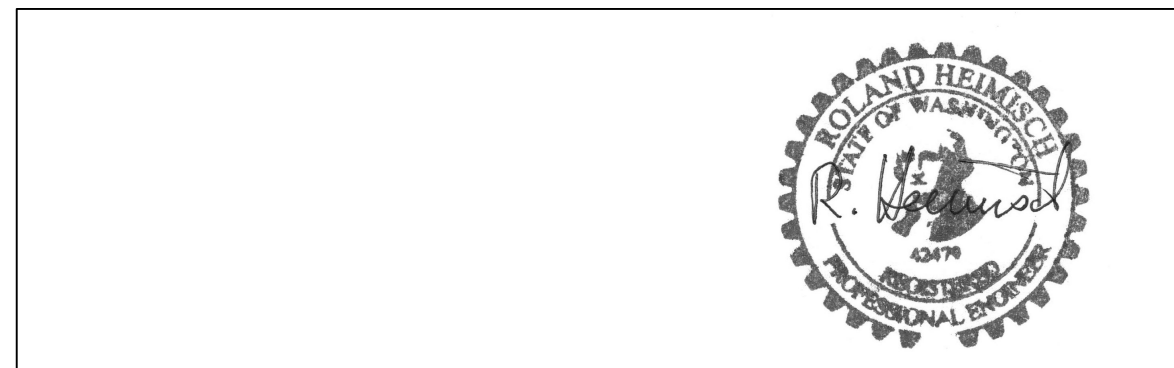


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KEY NO.	NEW SUN ROOM
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2.3	TJI 110, 1-3/4x11-7/8" @ 16" o.c.
2.4	Beam, DF No.2, 4x8"
2.5	Dbl. Joists, HF No.2, (2) 2x8", P.T.
2.6	Cont. Footing, fc = 2,500 psi, 16x8"

KEY NO.	SECOND STORY ADDITION
3.1	Manufactured Trusses @ 24" o.c.
3.2	Header, DF No.2, 4x10"
3.3	Header, DF No.2, 4x6"
3.4	Beam, PSL, 2.2E, 2900Fb, 3-1/2x11-7/8"
3.5	Post, HF No.2, 6x6", P.T.
3.6	TJI 210, 2-1/16x16" @ 16" o.c.
3.7	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.8	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.9	Post, HF No.2, 6x6", P.T.
3.10	Glulam WS, 24F-1.8E, 5-1/2x21"
3.11	Post within Wall, DF No.2, 6x6"
3.12	TJI 230, 2-5/16x11-7/8" @ 16" o.c.
3.13	Header, DF No.2, 4x12"
3.14	Stair Stringers, HF No.2, 2x12" @ 12" o.c., P.T.
3.15	Landing Joists, HF No.2, 2x6" @ 16" o.c., P.T.
3.16	Beam, flush, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.17	Spread Footing, fc = 2,500 psi, 72x72x16

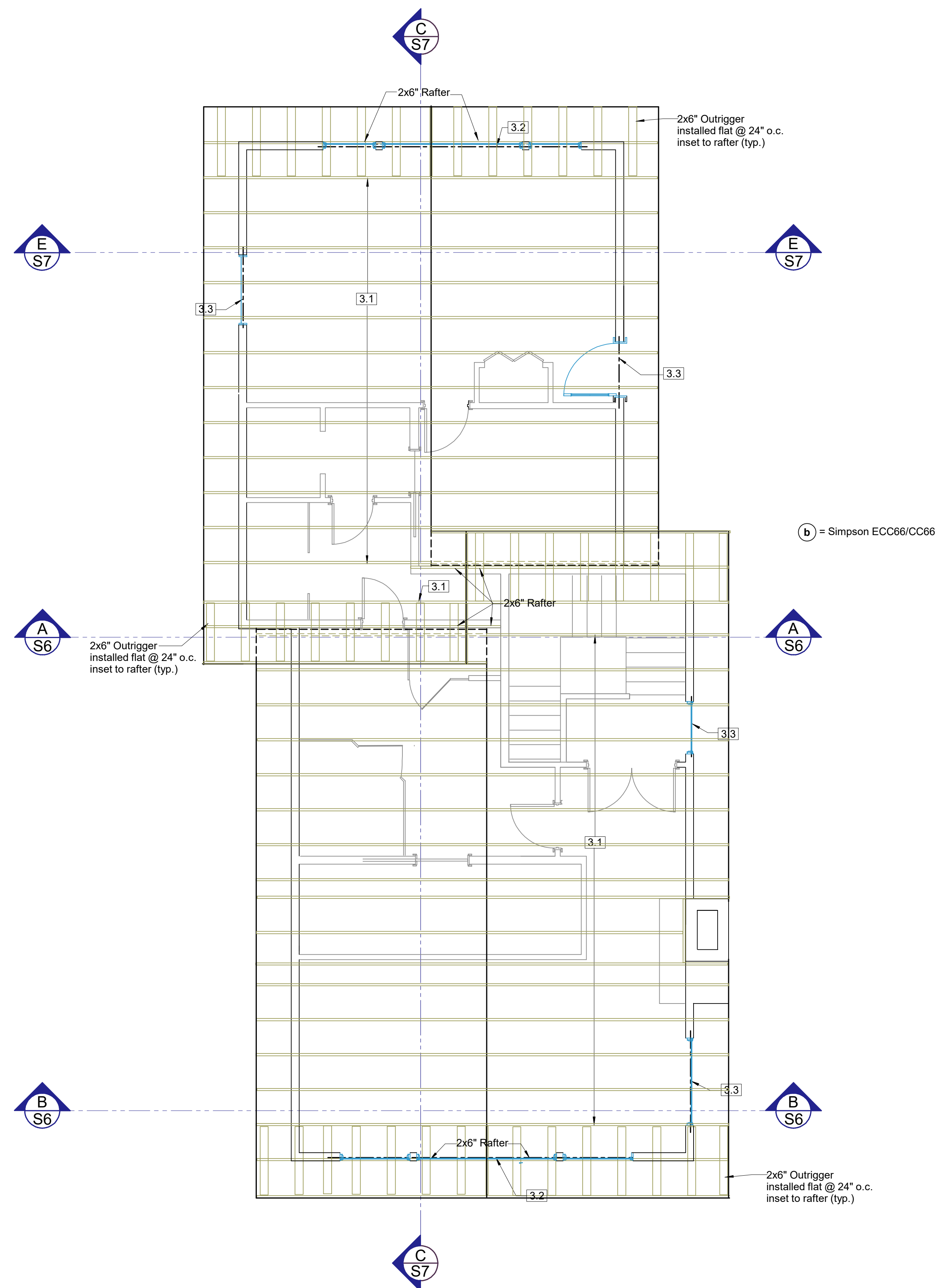
FRAMING ABOVE MAIN FLOOR
LOWER ROOF FRAMING
SCALE: 1/4" = 1'-0" (1:48)



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CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S4
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	

KEY NO.	SECOND STORY ADDITION
3.1	Manufactured Trusses @ 24" o.c.
3.2	Header, DF No.2, 4x10"
3.3	Header, DF No.2, 4x6"
3.4	Beam, PSL, 2.2E, 2900Fb, 3-1/2x11-7/8"
3.5	Post, HF No.2, 6x6", P.T.
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3.13	Header, DF No.2, 4x12"
3.14	Stair Stringers, HF No.2, 2x12" @ 12" o.c., P.T.
3.15	Landing Joists, HF No.2, 2x6" @ 16" o.c., P.T.
3.16	Beam, flush, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.17	Spread Footing, fc = 2,500 psi, 72x72x16

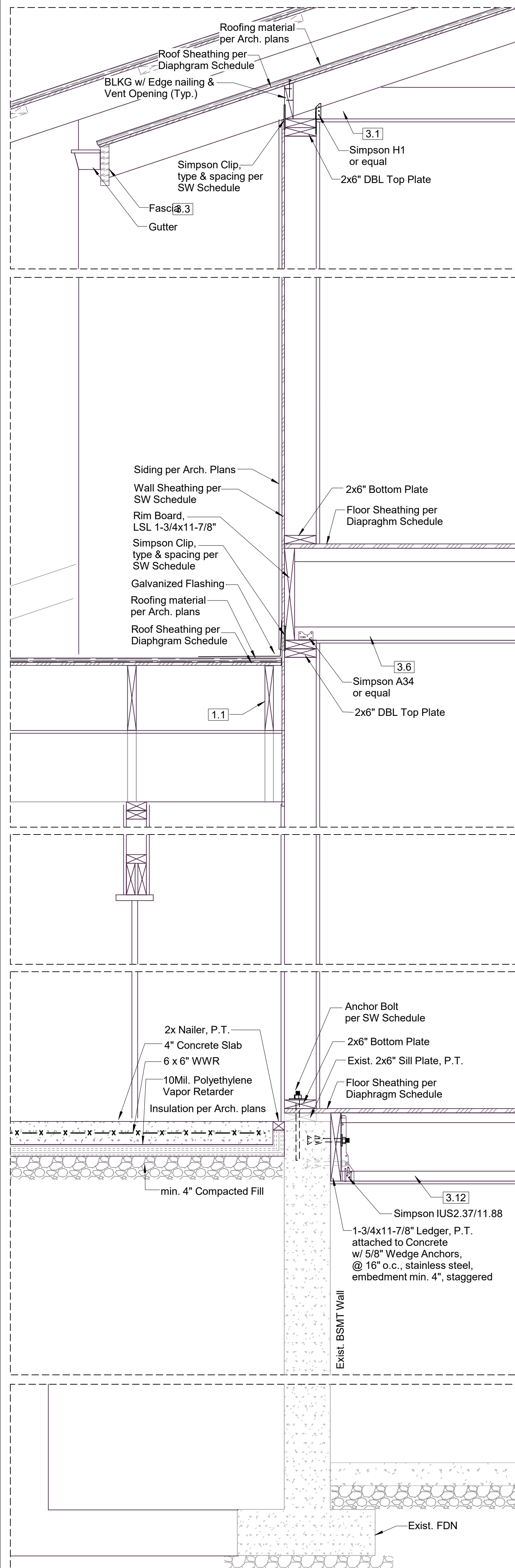


**ROOF FRAMING FOR
2ND STORY ADDITION**
SCALE: 1/4" = 1'-0" (1:48)

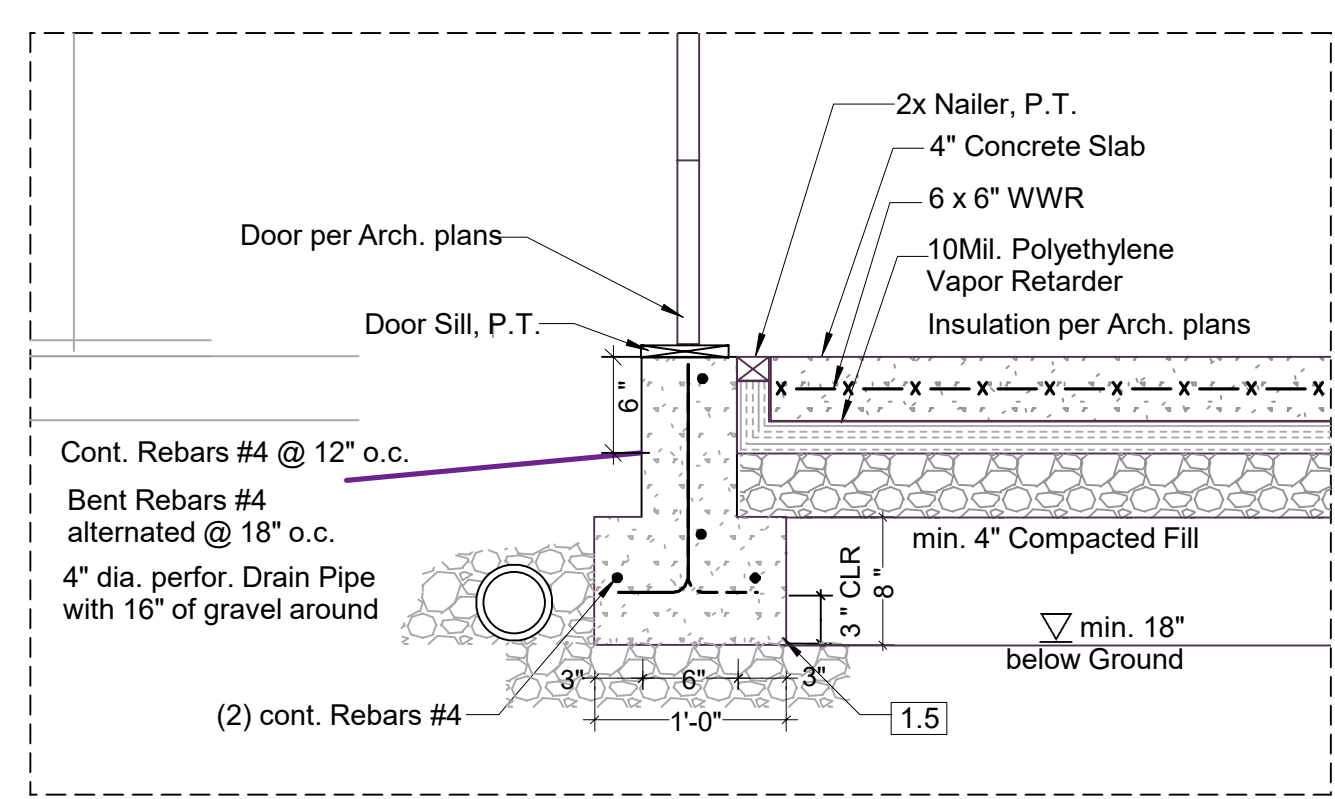


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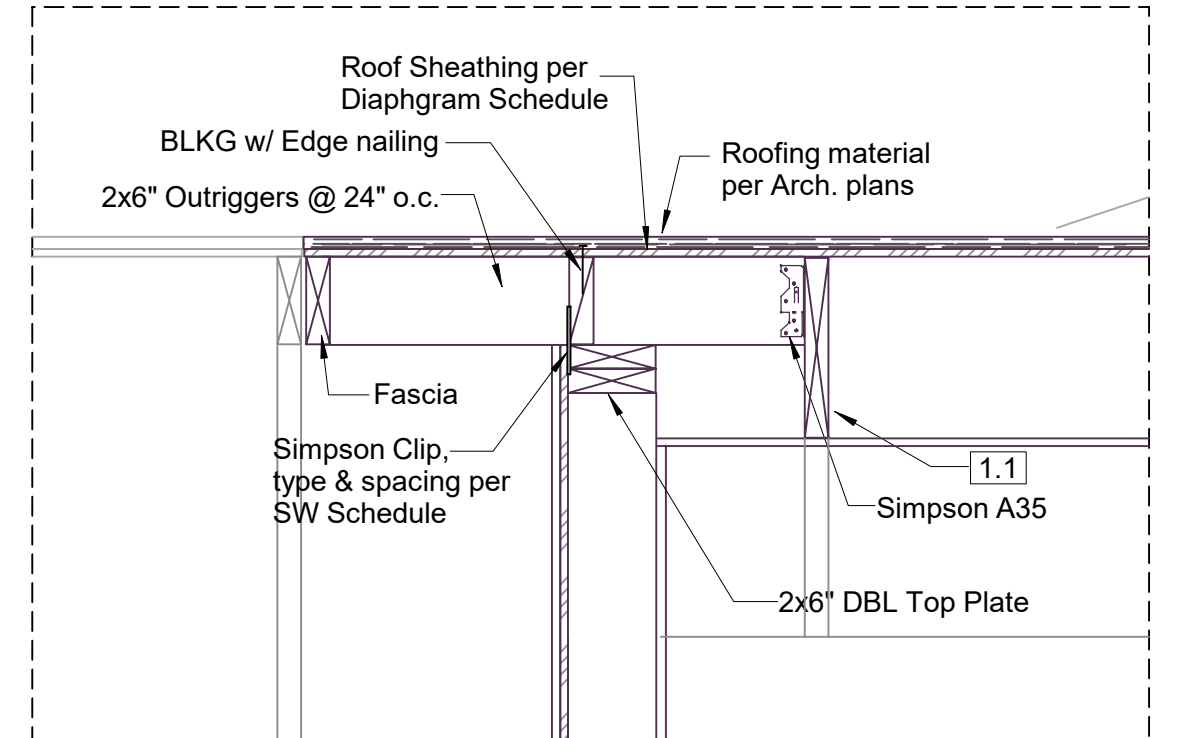
CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S5
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	



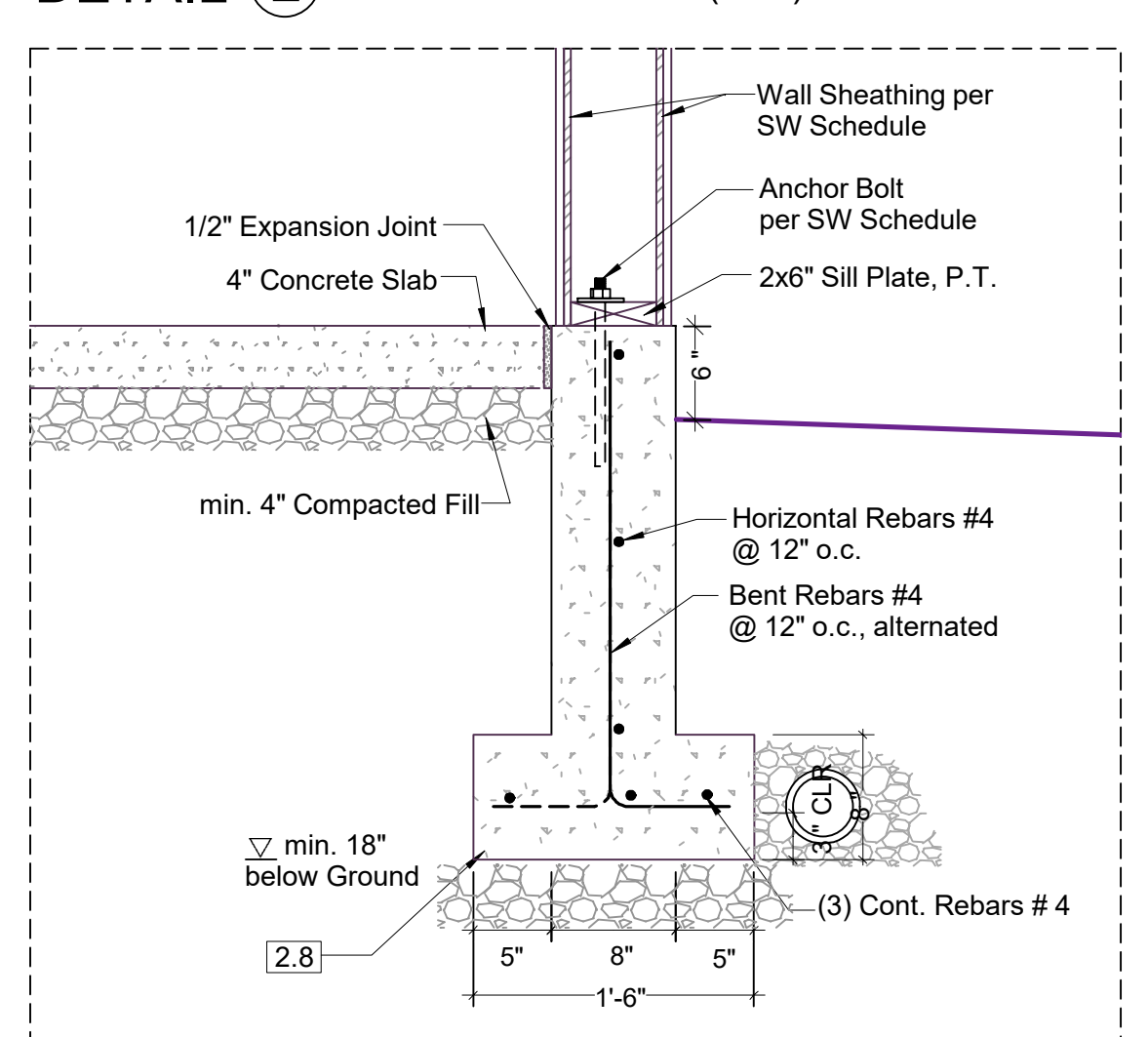
TYPICAL WALL SECTION (TWS) SCALE: 1" = 1'-0" (1:12)



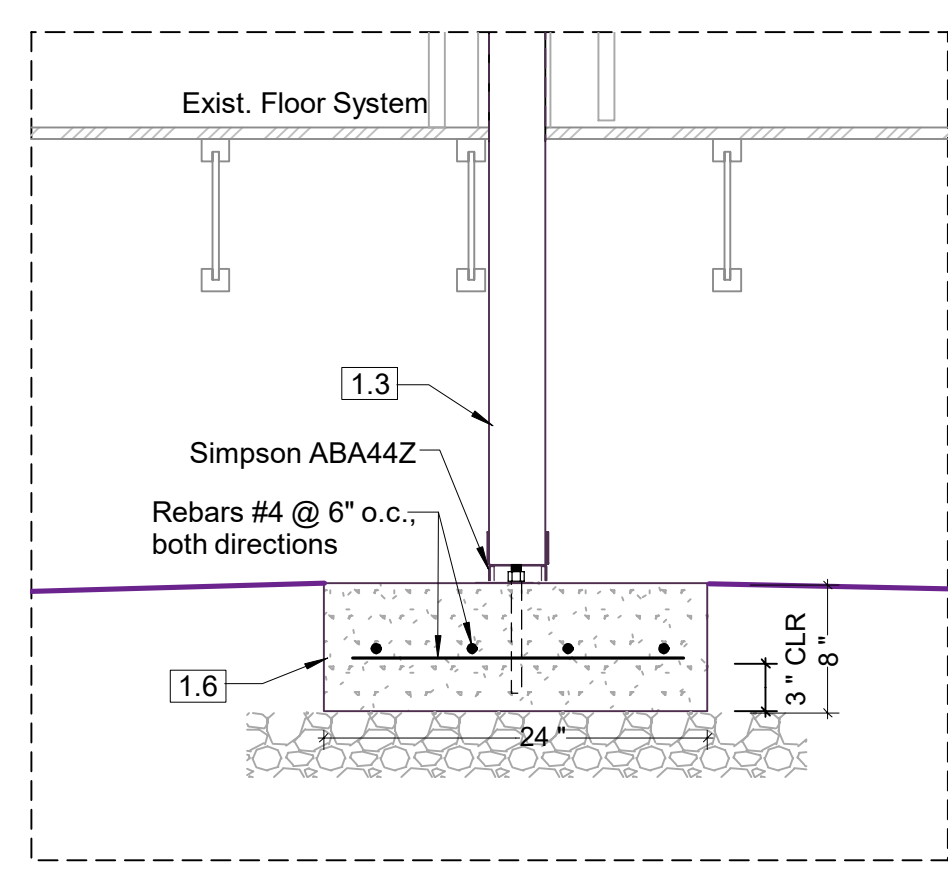
DETAIL 1 SCALE: 1" = 1'-0" (1:12)



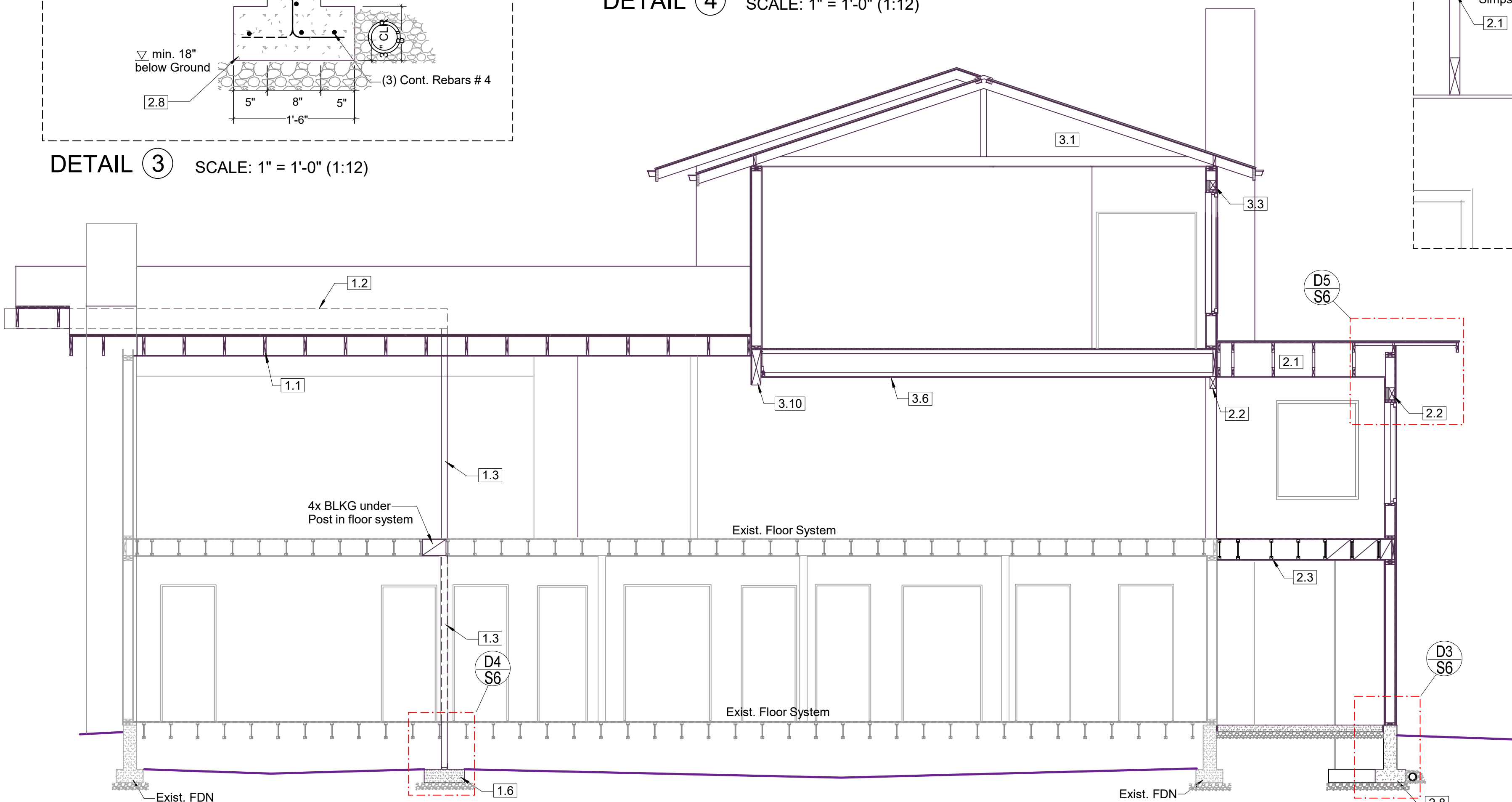
DETAIL 2 SCALE: 1" = 1'-0" (1:12)



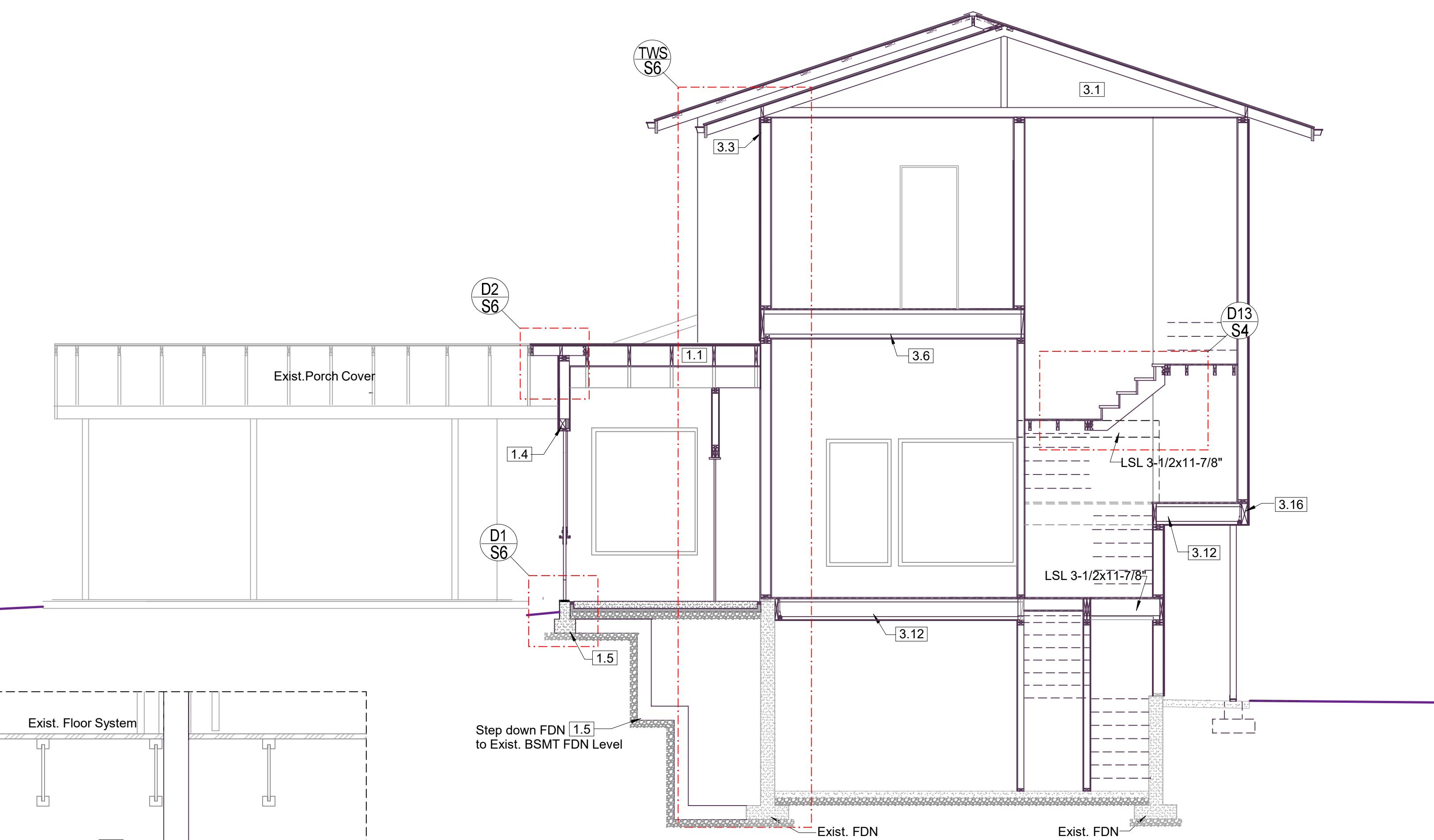
DETAIL 3 SCALE: 1" = 1'-0" (1:12)



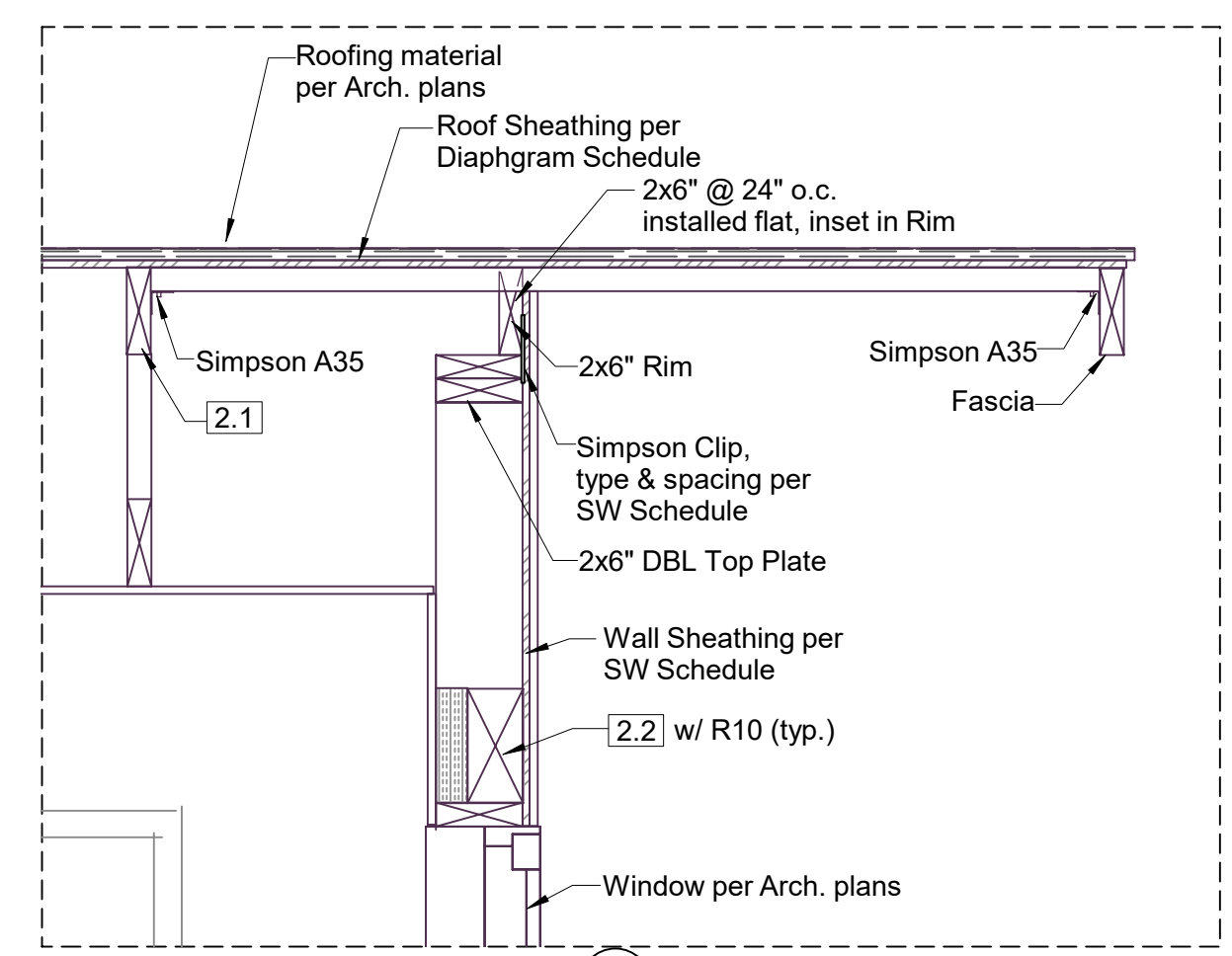
DETAIL 4 SCALE: 1" = 1'-0" (1:12)



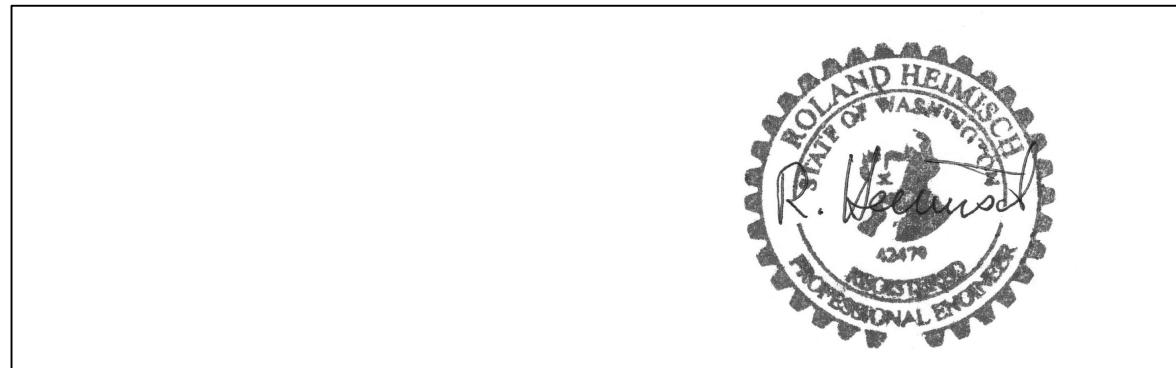
BUILDING SECTION B-B SCALE: 1/4" = 1'-0" (1:48)



BUILDING SECTION A-A SCALE: 1/4" = 1'-0" (1:48)

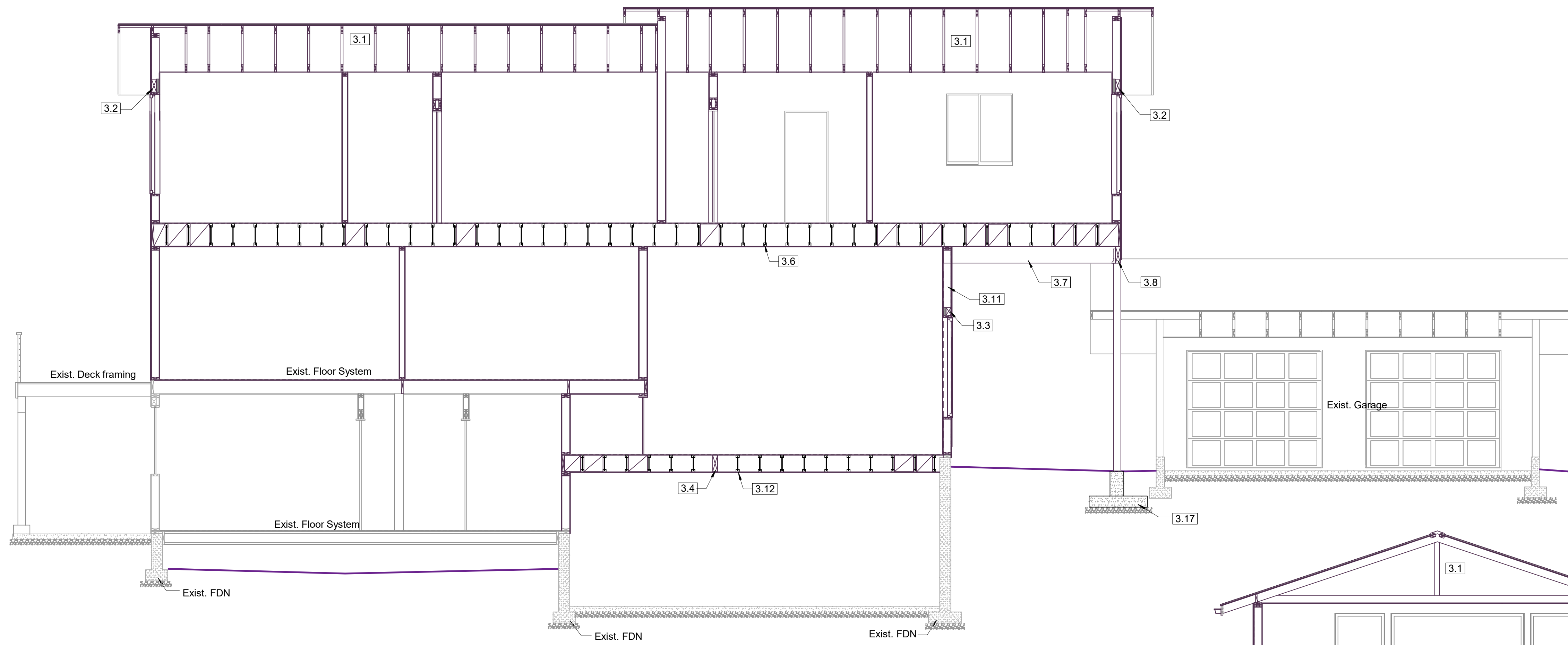


DETAIL 5 SCALE: 1" = 1'-0" (1:12)

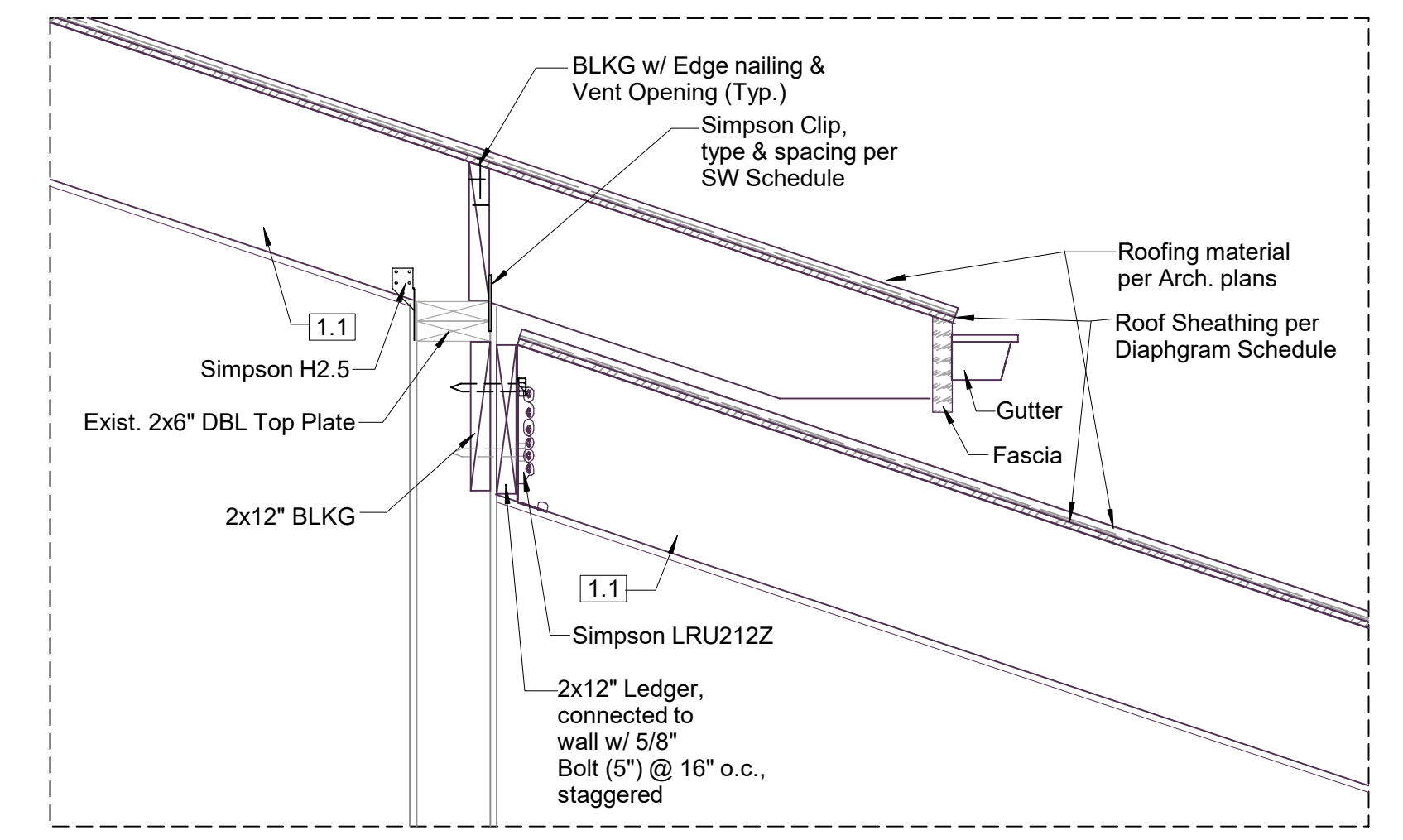


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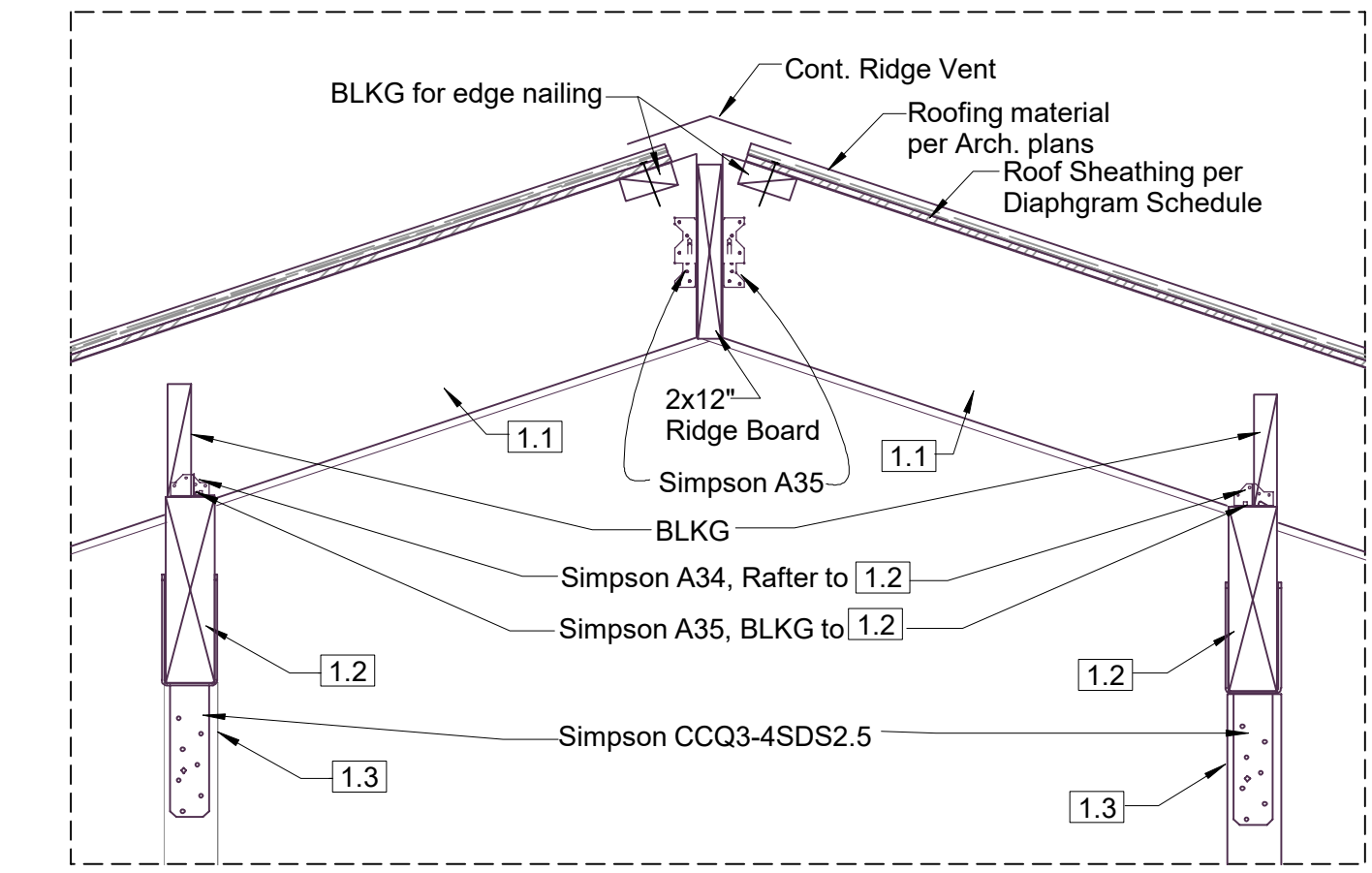
CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S6
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	



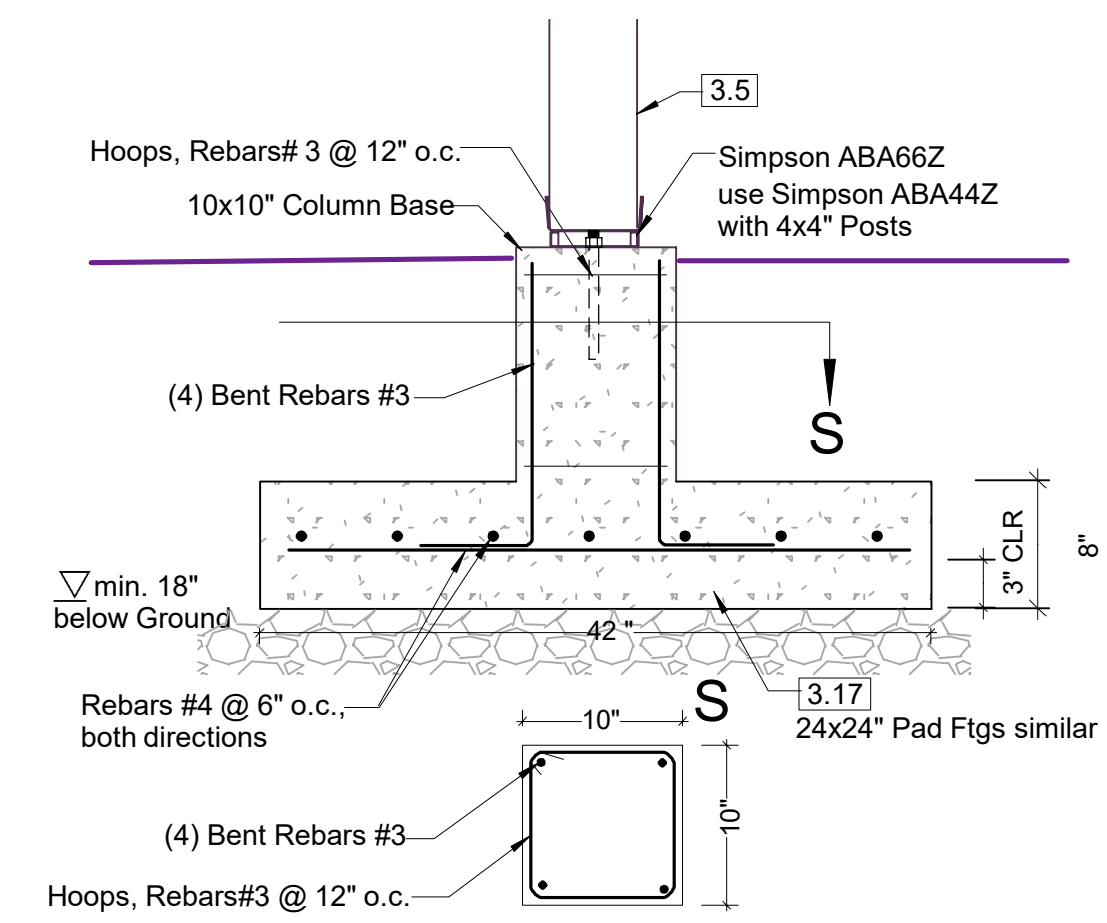
BUILDING SECTION C-C SCALE: 1/4" = 1'-0" (1:48)



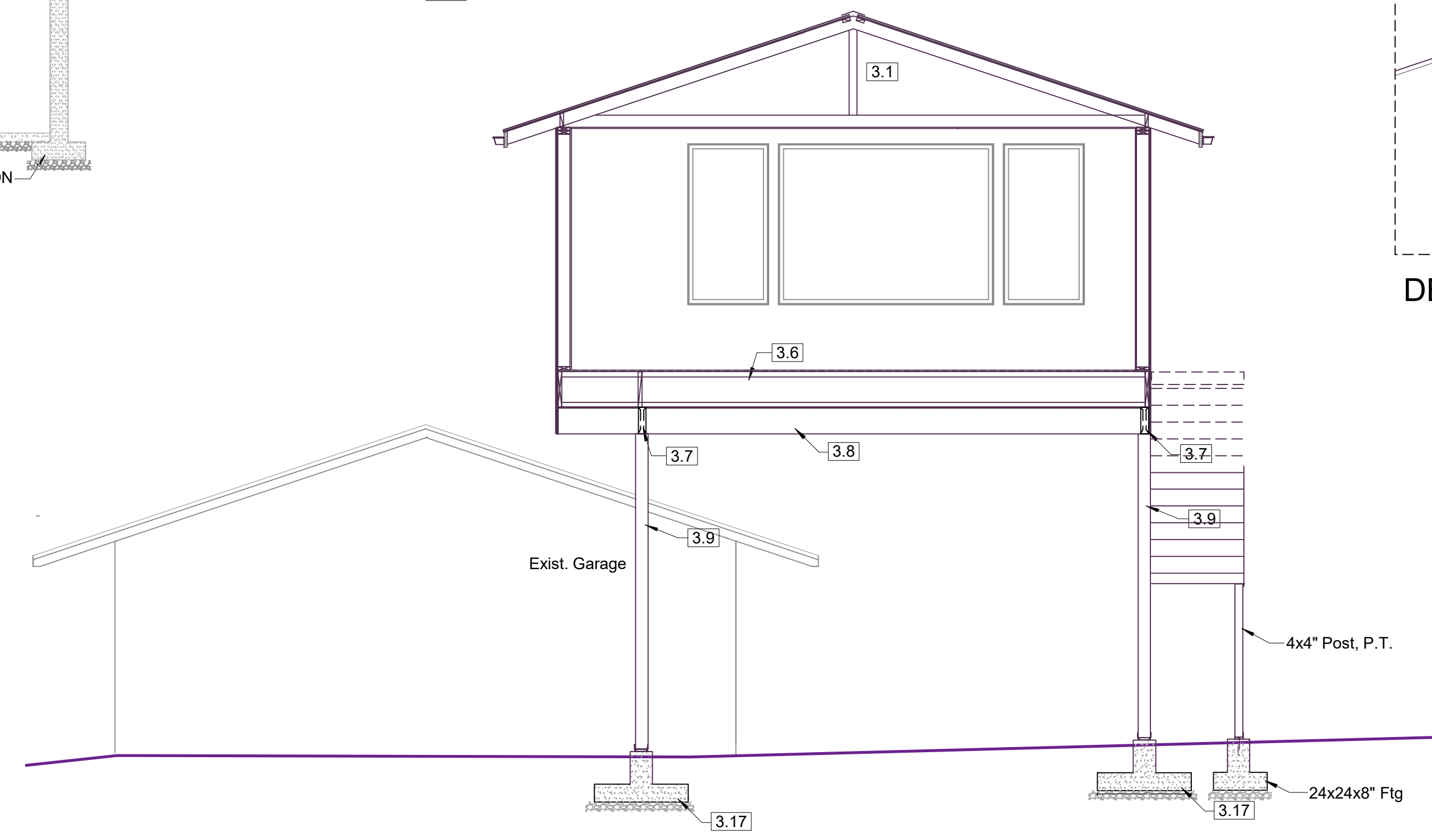
DETAIL 7 SCALE: 1" = 1'-0" (1:12)



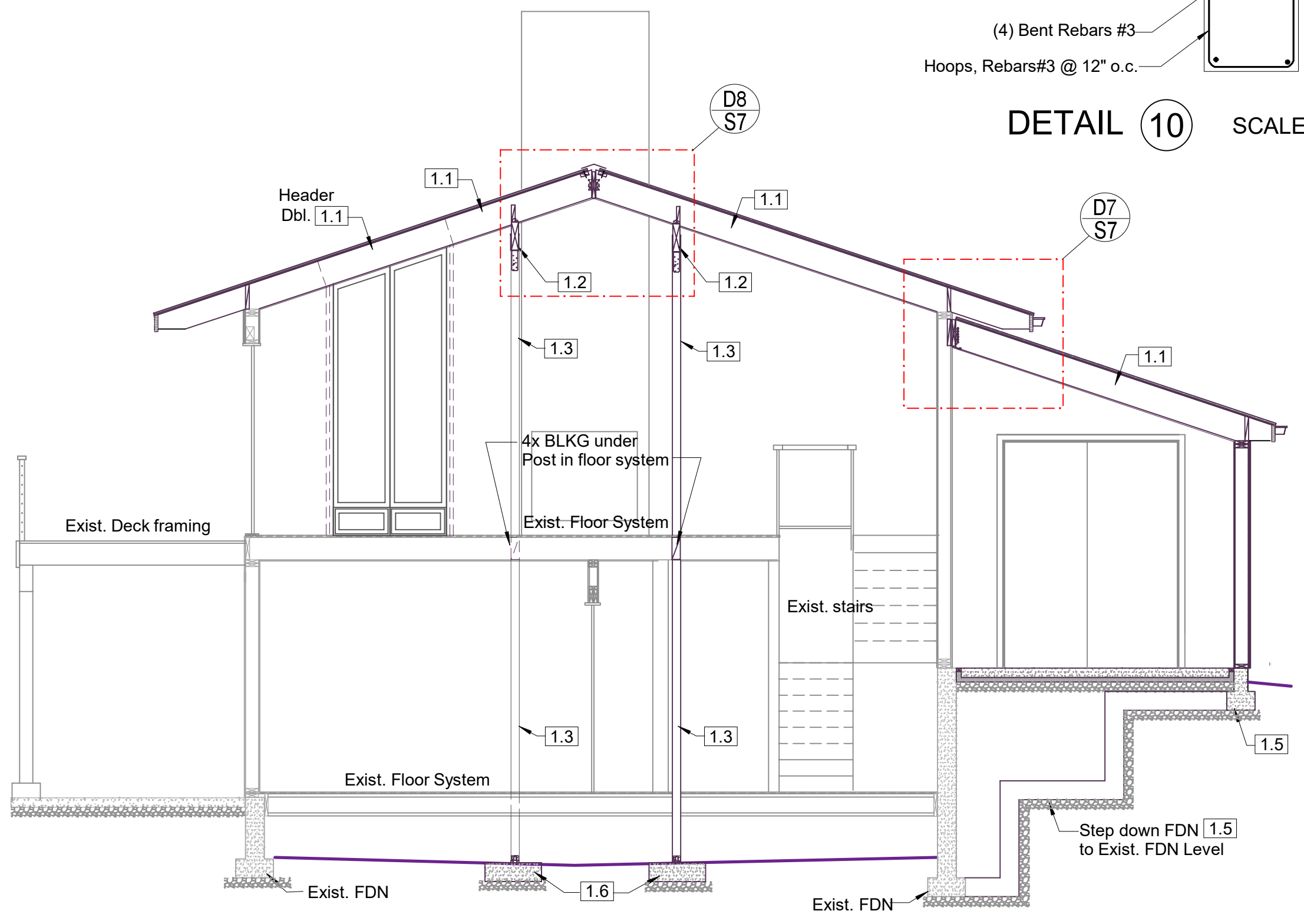
DETAIL 8 SCALE: 1" = 1'-0" (1:12)



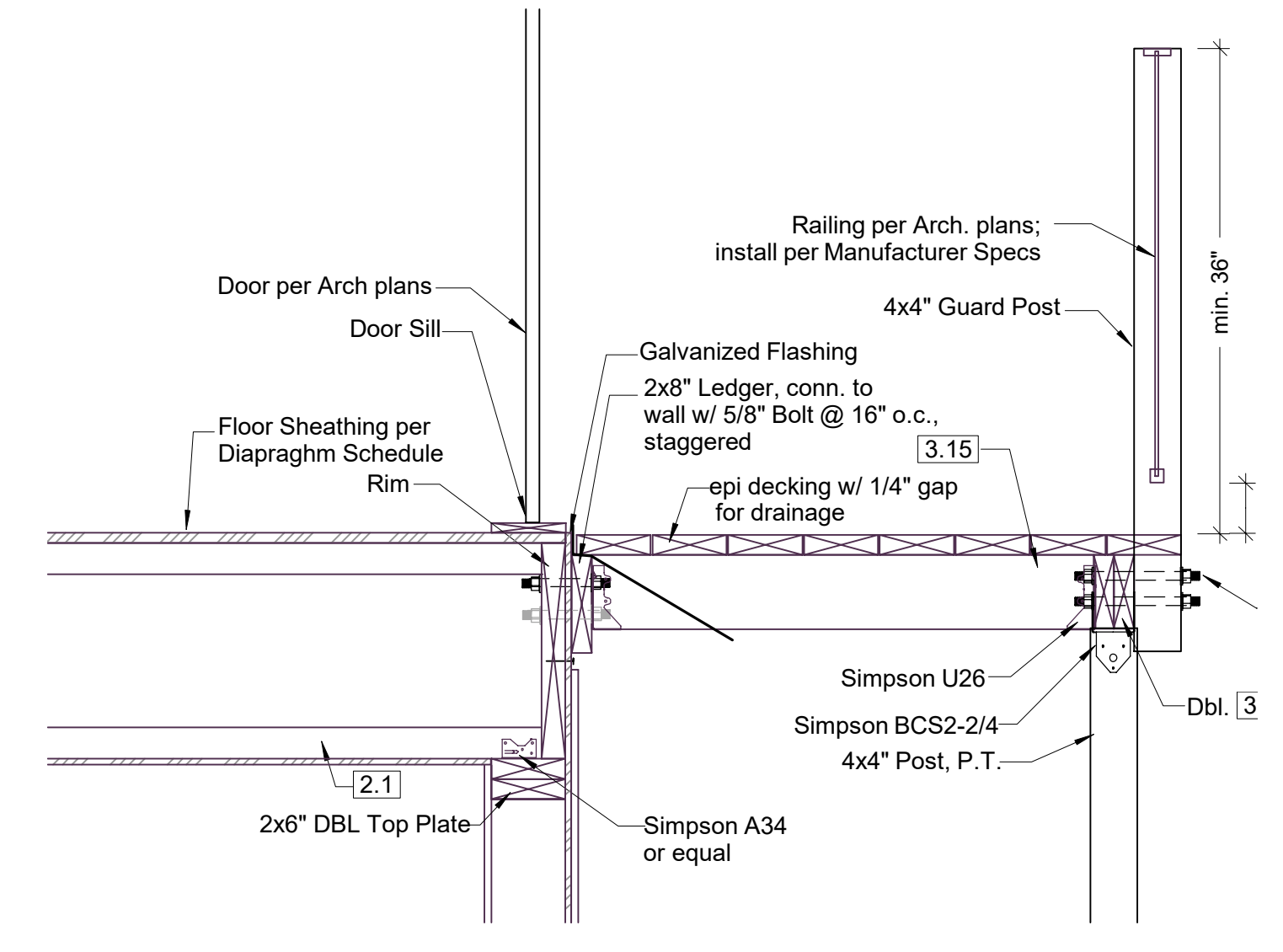
DETAIL 10 SCALE: 1" = 1'-0" (1:12)



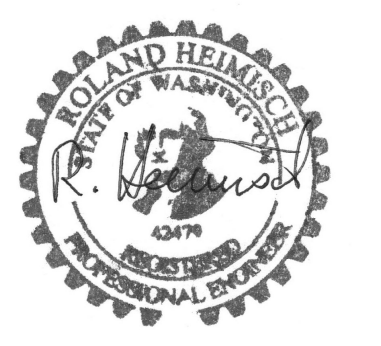
BUILDING SECTION E-E SCALE: 1/4" = 1'-0" (1:48)



BUILDING SECTION D SCALE: 1/4" = 1'-0" (1:48)

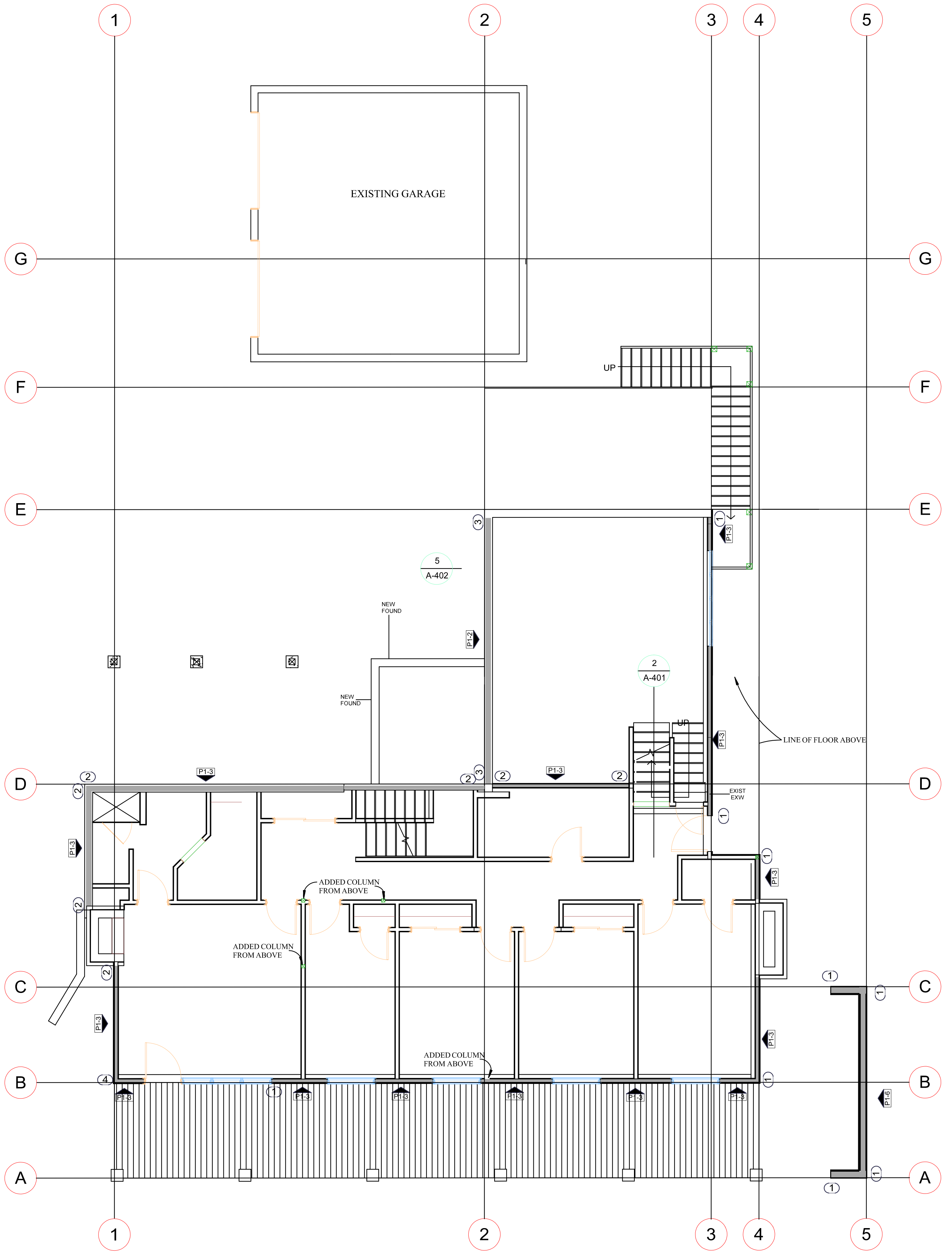


DETAIL 9 SCALE: 1" = 1'-0" (1:12)



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JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S7
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	



LOWER LEVEL SHEAR WALL PLAN
SCALE 1:64

SHEAR WALL SCHEDULE - NAILING PATTERN

SHEARWALL TYPE	APA RATED SHEATHING THICKNESS & GRADE	SPAN INDEX	COMMON or GALVANIZED BOX NAILS	NAILING		WALL STUD GRADE &	BLKG REQ'D	BLOCK SIZE	ABUTTING PLYWOOD PANEL EDGE MEMBER SIZE	TOP PLATE NAILING SIZE & SPACING	SOLE PLATE NAILING SIZE &	FOUNDATION ANCHOR BOLTS SIZE & SPACING	ALLOWABLE LOAD SEISMIC / WIND (PLF)
				EDGE	FIELD								
P1-6	7/16" ONE FACE	24/0	8d	6" o.c.	12" o.c.	HEM-FIR @ 16" o.c.	yes	2x	2x	16d @ 5"	16d @ 5"	5/8" @ 48" o.c.	225 / 315 PLF
P1-3 ²	15/32" ONE FACE	24/0	10d	3" o.c.	12" o.c.	HEM-FIR @ 16" o.c.	yes	3x	3x	(2) ROWS 16d @ 4"	(2) ROWS 16d @ 4"	5/8" @ 36" o.c.	565 / 790 PLF
P1-2 ²	15/32" ONE FACE	24/0	10d	2" o.c.	12" o.c.	HEM-FIR @ 16" o.c.	yes	3x	3x	(2) ROWS 16d @ 3"	(2) ROWS 16d @ 3"	5/8" @ 24" o.c.	725 / 1015 PLF
P2-3 ²	15/32" BOTH FACES	24/0	10d	3" o.c.	12" o.c.	HEM-FIR @ 16" o.c.	yes	3x	3x	(2) ROWS 16d @ 3"	(2) ROWS 16d @ 3"	5/8" @ 18" o.c.	1130 / 1580 PLF

STRAP SCHEDULE

SYMBOL	STRAP	WOOD MEMBER	NAILS
(A)	MST37	(2) 2x	20 - 16d
(B)	MST48	(2) 2x	34 - 16d
(C)	MST60	(2) 2x	46 - 16d
(D)	MSTC48B3	(2) 2x	12-10d (Face), 4-10d (Bottom); 38-10d (Studs)

	THICKNESS & GRADE	SPAN INDEX	NAIL TYPE	NAILING		
				BDRY	EDGE	FIELD
FLOOR NAILING	3/4" CDX T&G APA RATED SHEATHING	48/24	10d	6" o.c.	6" o.c.	12" o.c.
ROOF NAILING	7/16" APA RATED SHEATHING	24/0	8d	6" o.c.	6" o.c.	12" o.c.

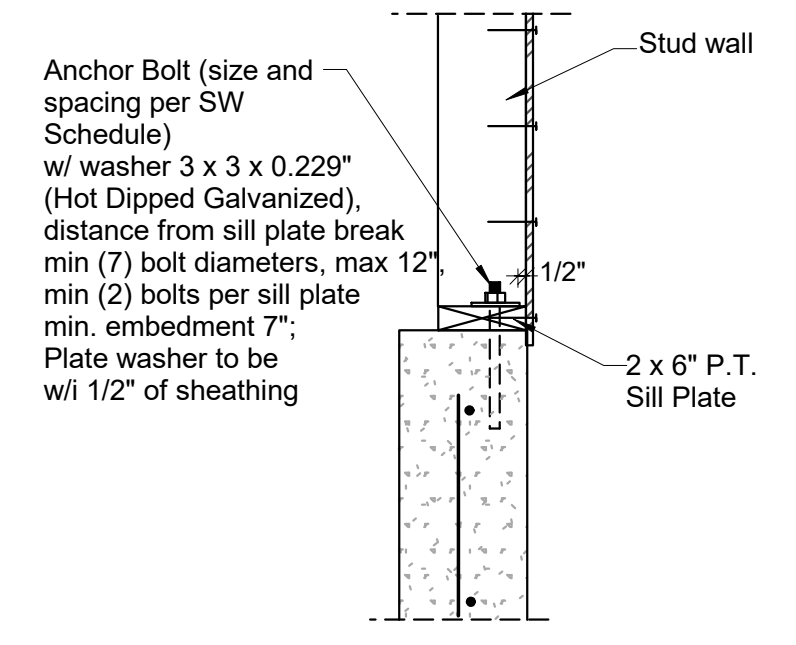
NOTE:
For all non-Shear Walls use nailing pattern, bolt and clip size/spacing for P1-6

HOLDOWN SCHEDULE

SYMBOL	HOLDOWN	EMBED. With EPOXY SET-XP	BOLT TYPE	MIN. WOOD MEMBER THICKNESS
(1)	HDU2	7"	5/8"	(2) 2x
(2)	HDU5	11"	5/8"	(2) 2x
(3)	HDU8	15"	7/8"	(2) 2x

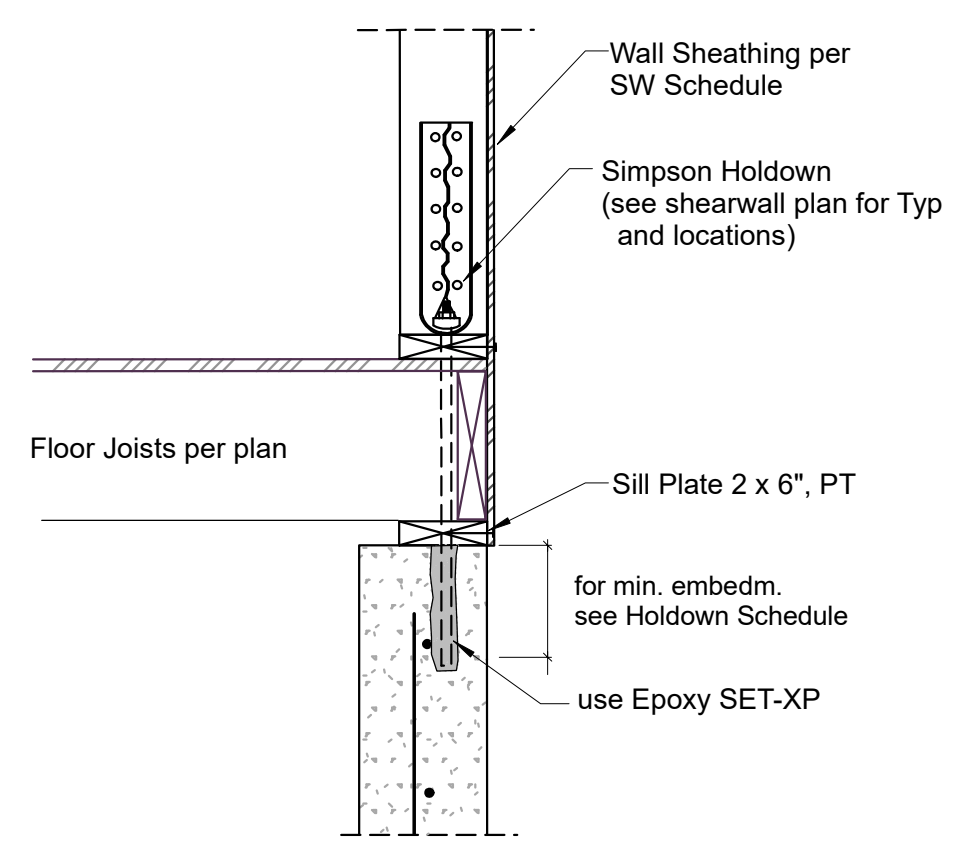
SHEAR WALL NOTES

- ALL SHEAR WALLS SHALL CONFORM TO IBC SECTION 23 REQMTS. APPLY NAILING TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKINGS. SHEATHING SHALL BE INSTALLED VERTICALLY W/ 4x10 SHEETS FROM THE SILL PLATE AT THE FOUNDATION TO THE LOWER OF THE DOUBLED TOP PLATES AT THE MAIN LEVEL AND FROM THE UPPER OF THE DOUBLE TOP PLATES OF THE WALL TO THE TOP OF THE DOUBLED TOP PLATE AT THE UPPER LEVEL(S).
- WHERE APA SHEATHING IS APPLIED ON BOTH FACES OF THE WALL AND NAILS SPACING IS LESS THAN 6" O.C. EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBER, OR FRAMING SHALL BE 3x NOMINAL AND NAILS ON EACH SIDE SHALL BE STAGGERED, WHERE ALLOWABLE SHEAR VALUES EXCEED 350PLF (NAIL SPACING 4" OR LESS, OR SHEAR WALLS W/ PLYWOOD APPLIED ON EACH SIDE OF THE STUD WALL) FOUNDATION SILL PLATES AND FRAMING ABUTTING PANEL EDGES SHALL BE 3x NOMINAL OR (2) 2x W/ STAGGERED NAILING.
- ABOVE LISTED ALLOWABLE SHEAR CAPACITIES ARE ADJUSTED FOR USE OF HEM-FIR STUDS, SPACED NO MORE THAN 16" O.C. AND SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS.
- ALL FASTENERS SHALL BE DRIVEN FLUSH W/ SURFACE OF SHEATHING.
- PROVIDE A SINGLE JOIST OR MIN. 2x SOLID BLOCKING BELOW AND AT THE TOP OF ALL SHEARWALLS.



ANCHOR BOLT DETAIL (TYP.)

SCALE: 1" = 1'-0" (1:12)



HOLDOWN DETAIL (TYP.)

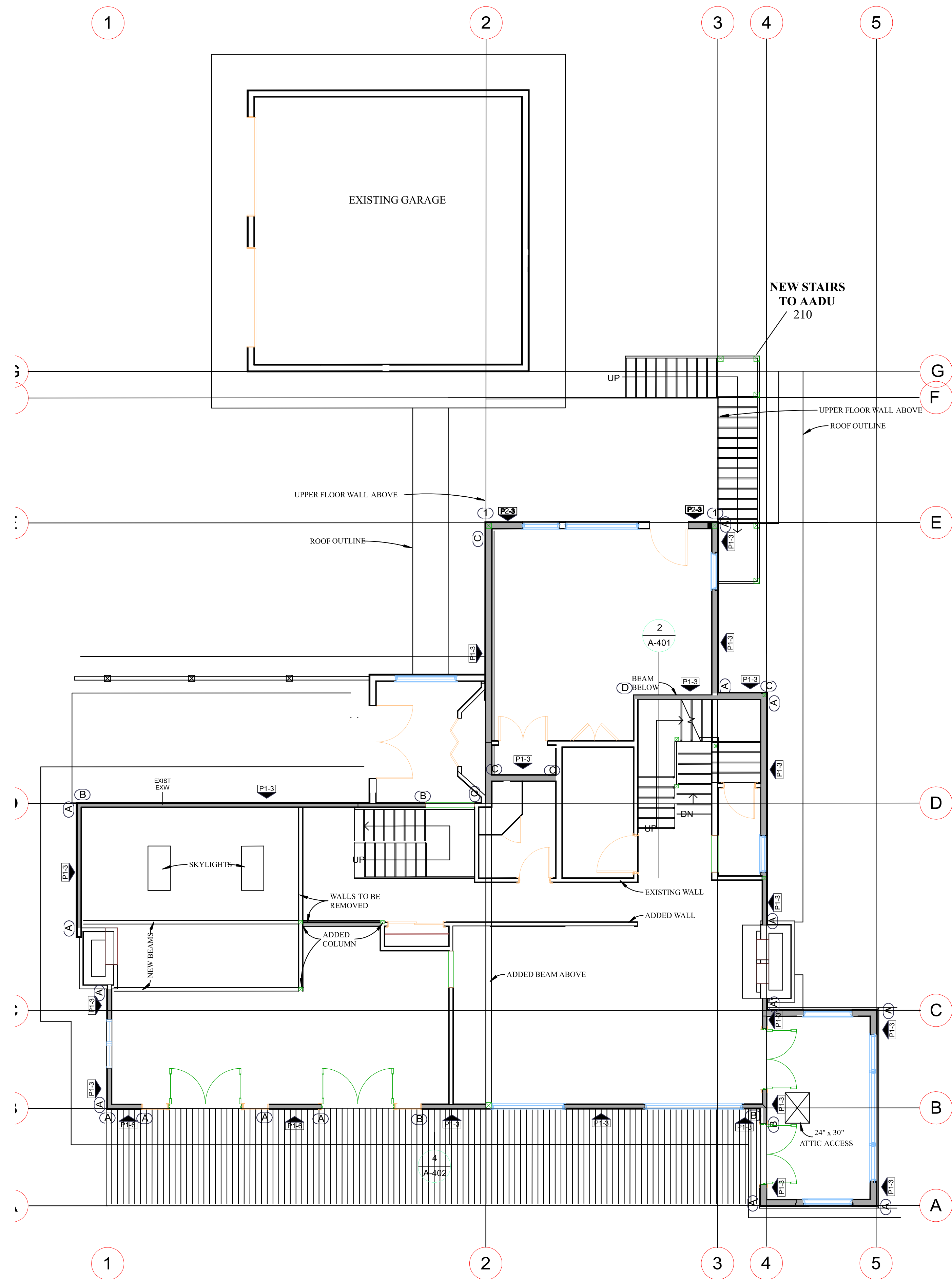
SCALE: 1" = 1'-0" (1:12)

Revision 10/28/2024

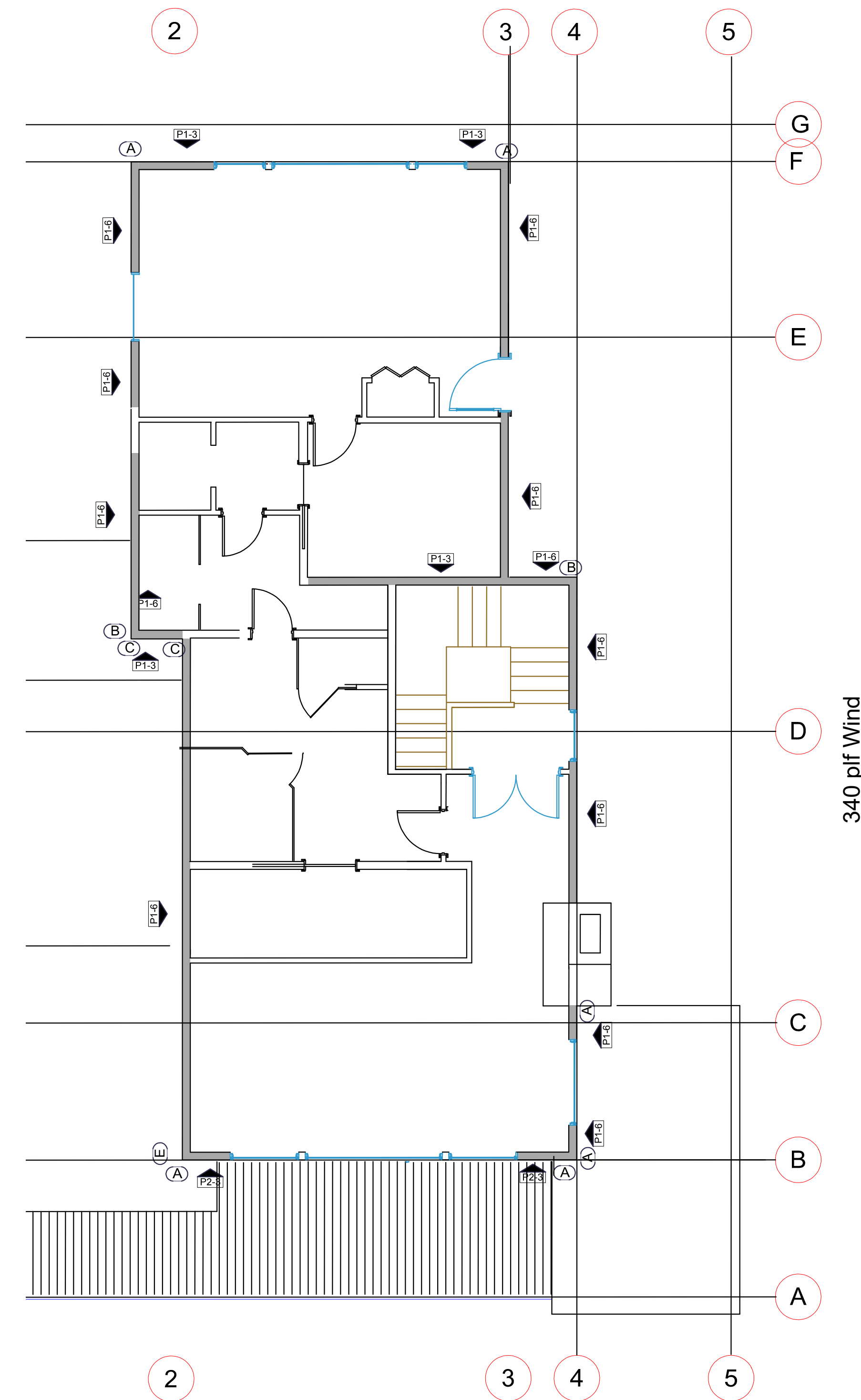


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BUILDER:	Renee Lund	SHEET
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PROJECT #:		
DESCRIPTION:	Remodel and Addition	
DATE:	07/29/2023 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	



MAIN LEVEL SHEAR WALL PLAN
SCALE 1:64



UPPER LEVEL SHEAR WALL PLAN
SCALE 1:64

Revision 10/28/2024



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ENGINEERING

BUILDER:	Renee Lund	SHEET
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DATE:	07/29/2023 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	