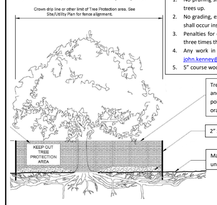
TREE PROTECTION AREA (TPZ)

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 City Arborist (206) 275-7713, john.kenney@mercergov.org.
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

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

2" x 6" steel posts or approved equal

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

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

1

Tree Solutions Inc
Consulting Arborists

1

Table of Trees

4740 W. Mercer Way, Mercer Island, WA

Arborists: Andrea Starbird, George White
Date of Inventory: 11/11/2021
Table Revised: 12/01/2022

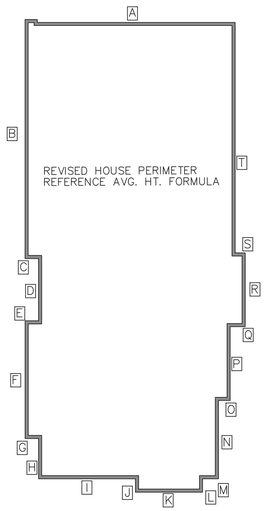
							Dripline Radius (feet)									
Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	S	W	Exceptional Threshold	Exceptional	Above 24 Inches	Minimum Limits of Disturbance (feet)	Reccomended Limits of Distrubance (feet)	Notes
377	*Acer macrophyllum*	*Bigleaf Maple*	34.7	24,25	Good	Good	26.4	26.4	33.4	31.4	30.0	Exceptional - Size	Yes	14	23	Codominant stems diverging at base, property line tree, old chain enveloped in trunk, soil pilings near base, surface roots present, 8" diameter root cut 3' from base on the SW side of tree.
378	*Pinus contorta*	*Lodgepole Pine*	11.5		good	Fair	0.5	13.5	24.5	12.5	6.0	Exceptional - Size	No	5	8	12" codominant stem has been removed, corrected phototropic lean towards the south, growing out of rockery
379	*Pinus nigra*	*Austrian Black Pine*	26.7		Good	Fair	17.1	9.1	26.1	21.1	24.0	Exceptional - Size	Yes	11	18	Codominant at 20', narrow union.
380	*Pinus nigra*	*Austrian Black Pine*	28.3		Good	Fair	19.2	21.2	27.2	9.2	24.0	Exceptional - Size	Yes	12	19	Corrected phototropic lean towards southwest, girdling roots present, concrete fence footing near base, kink in trunk at 40'
381	*Thuja plicata*	*Western Redcedar*	12.9		Good	Good	14.5	14.5	14.5	14.5	30.0		No	5	9	Subdominant, 6" codominant stem has been removed.
382	*Thuja plicata*	*Western Redcedar*	32.5		Good	Good	21.4	21.4	21.4	21.4	30.0	Exceptional - Size	Yes	14	22	Limbs to ground
383	*Prunus spp. (serrula, serrulata)*	*Flowering Cherry*	10.2	6,5,7,1,3	Good	Good	16.4	8.4	12.4	15.4	23.0		No	4	7	Multiple trunks grafted at base, 1.5' from rockery
384	*Thuja plicata*	*Western Redcedar*	45.4		Good	Good	31.9	21.9	26.9	21.9	30.0	Exceptional - Size	Yes	19	30	Codominant trunks at 15', south stem is codominant again at 17', grass debris piled at base, steep slope 2.5' west of base, previously lost top.
385	*Pseudotsuga menziesii*	*Douglas-fir*	20.3		Good	Good	15.8	15.8	15.8	15.8	30.0		No	8	14	Growing near fence, narrow profile
386	*Pseudotsuga menziesii*	*Douglas-fir*	42.0		Good	Excellent	25.8	25.8	25.8	23.8	30.0	Exceptional - Size	Yes	18	28	Significant surface roots present, failed sod planted over surface roots, steep slope directly west of trunk, canopy overhangs fence.

Tree Solutions, Inc.
2940 Westlake Ave. N #200 Seattle, WA 98109

Page 1 of 2

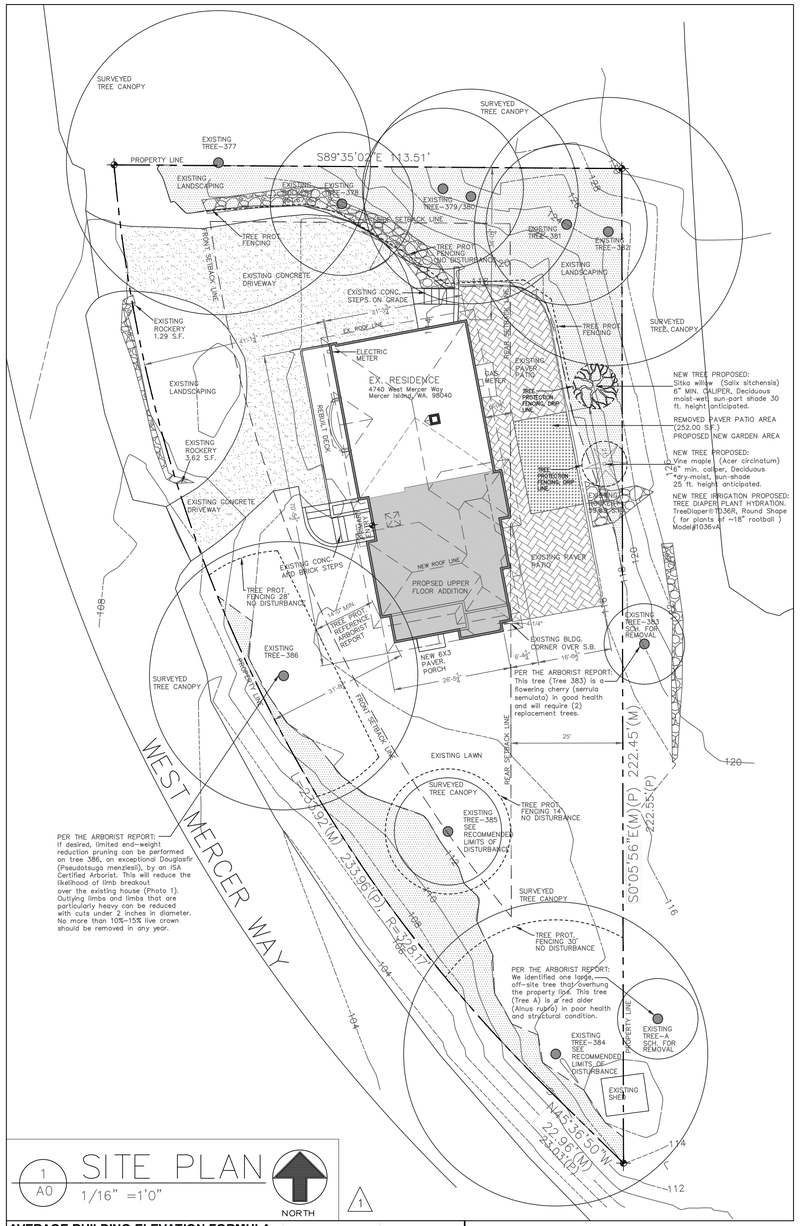
www.treesolutions.net
206-528-4670

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	S	W	Exceptional Threshold	Exceptional	Above 24 Inches	Minimum Limits of Disturbance (feet)	Reccomended Limits of Distrubance (feet)	Notes
A	*Alnus rubra*	*Red alder*	12.0		Poor	Fair	15.3	17.3	10.5	16.5	-		No	5	8	Tree is on neighboring property, leaning on fence, dead top, overhangs property by 15'



2 A0 BLDG HT. CALC.
3/32" =1'0"

1



1 A0 SITE PLAN
1/16" =1'0"

NORTH

1

AVERAGE BUILDING ELEVATION FORMULA

WALL	LOCATION	AVG. ELEV.	WALL LENGTH	MULTIPLIER
A	N GARAGE FAÇADE	112.00	30.85	3455.20
B	W GARAGE/1ST FAÇADE	112.00	34.74	3890.88
C	NW ENTRY FAÇADE	115.00	2.02	232.30
D	W ENTRY ALCOVE	115.00	9.30	1069.50
E	NW ENTRY FAÇADE/2ND BAY	115.00	2.02	232.30
F	W 2ND FLOOR BAY	115.00	17.55	2018.25
G	SW ENTRY FAÇADE/2ND BAY	115.00	2.02	232.30
H	SW LIVING /DECK FAÇADE	115.00	6.00	690.00
I	S LIVING/DECK	115.00	14.42	1658.30
J	W DINING NOOK	115.00	2.00	230.00
K	S DINING NOOK	115.00	10.00	1150.00
L	E DINING NOOK	115.00	2.00	230.00
M	SE DINING	115.00	2.38	273.70
N	E DINING/KIT	115.00	11.68	1343.20
O	S KITCHEN/MASTER CL	115.00	1.75	201.25
P	E KITCHEN/MASTER CL	115.00	11.00	1265.00
Q	S PANTRY MASTER BA	115.00	2.25	258.75
R	E PANTRY/MASTER BA	115.00	11.00	1265.00
S	N PANTRY/MASTER BA	115.00	1.50	172.50
T	E BEDROOM/CRAFT-UTILITY	115.00	34.38	3953.70
	TOTAL		**208.86**	**23822.13**
	AVERAGE BUILDING ELEVATION (23822.13 / 208.86)			**114.058**

1

AREA SUMMARY	EX. AREA	REVISED AREA
SECOND FLOOR AREA	1,073 S.F.	1,805 S.F.
FIRST FLOOR AREA	1,432 S.F.	1,486 S.F.
FIRST FLOOR VOLUME AREA	60 S.F. X 150% = 90 S.F.	
NET ADDED VOLUME AREA		30 S.F.
EX. DECK AREA	35 S.F.	133 S.F.
EX. GARAGE AREA	542 S.F.	542 S.F.
TOTAL CONDITIONED FLOOR AREA	2,505 S.F.	3,321 S.F.

LOT SLOPE SUMMARY

LOT SLOPE CALCULATIONS
Highest Elevation Point of Lot: Feet
Lowest Elevation Point of Lot: Feet
Elevation Difference: Feet
Horizontal Distance Between High and Low Points: Feet
Lot Slope* %

PROJECT INFORMATION

1 MERCER ISLAND PROJECT NUMBER: 2408-230-SUB1-PLANS

PROPERTY OWNER:	KATHRYN and ERIK SPRING 4740 WEST MERCER WAY
TAX PARCEL NUMBER:	404510-0055
PROJECT ADDRESS:	4740 WEST MERCER WAY MERCER ISLAND, WA. 98040
ZONING:	R-15,
JURISDICTION:	CITY OF MERCER ISLAND
PARCEL ACREAGE:	16,710.00 S.F. (0.384 ACRES)
ALLEY: UNIMPROVED	0.00 S.F.

LEGAL DESCRIPTION As taken from the property survey information.

LOTS 11, 12 AND 13, REPLAT OF A PORTION OF LAKE ISLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 26 OF PLATS, PAGE 13, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

LOT SUMMARY SE 13-24-4

LOT AREA:	16,710.00 SQ.FT.
LOT COVERAGE, EXISTING HOUSE:	2,009.92 SQ.FT.
LOT COVERAGE, EXISTING SHED:	37.65 SQ.FT.
LOT COVERAGE, EXISTING DECK:	36.13 SQ.FT.
LOT COVERAGE, DRIVING SURFACES:	2,181.09 SQ.FT.
LOT COVERAGE, EXISTING TOTAL:	4,264.79 SQ.FT.
EXISTING COVERAGE %: OF GROSS LOT:	0.2552 = 25.52%
LOT COVERAGE, REVISED HOUSE:	2,099.64 SQ.FT. (89.72 SQ. FT. ADDED)
LOT COVERAGE, EXISTING SHED:	37.65 SQ.FT.
LOT COVERAGE, REVISED DECK:	31.33 SQ.FT.
LOT COVERAGE, DRIVING SURFACES:	2,181.09 SQ.FT.
LOT COVERAGE, REVISED TOTAL:	4,349.71 SQ.FT.
REVISED COVERAGE %: OF GROSS LOT:	0.2603 = 26.03%
MAX. COVERAGE ALLOWED:	40%: LOT UNDER 15% SLOPE = 6,684.00 SQ. FT.
OCCUPANCY GROUP:	R-3
TYPE OF CONSTRUCTION:	V-N (1-HOUR AS NOTED)

FLOOR AREA RATIO SUMMARY

40% OF GROSS LOT AREA:	16,710.0 X .40 = 6,684.0 SQ. FT. MAXIMUM.
PRPOSED GROSS F.A.R. AREA:	3,833 SQ. FT. AS MODIFIED (22.94%)

IMPERVIOUS AREA SUMMARY

EX. / MODIFIED HOUSE:	2,099.64 SQ. FT.
ROOF OVERHANGS:	409.01 SQ. FT.
DRIVING SURFACES:	2,181.09 SQ.FT.
LOT COVERAGE, EXISTING SHED:	37.65 SQ.FT.
LOT COVERAGE, EXISTING DECK:	16.27 SQ.FT.
EAST PATIO, WALKS:	1,329.44 SQ. FT.
CONCRETE PORCHES-STEPS:	148.21 SQ. FT.
TOTAL IMPERVIOUS AREA:	6,222.71 SQ. FT.
COVERAGE %: OF GROSS LOT :	37.24%
REQUIRED LANDSCAPE AREA:	60.00 % OF LOT AREA
MAXIMUM HARDSCAPE AREA:	1503.9 S.F. (9% OF TOTAL LOT AREA.)
REMOVED HARDSCAPE AREA:	252 S.F. PROPOSED PATIO REDUCTION.

PROJECT DESCRIPTION

ADD SECOND FLOOR AREA OVER AN EXISTING 1-LEVEL PORTION OF AN EXISTING SINGLE FAMILY HOME, PER PLANS.

1

SITE NOTES:

A. EXISTING TREES COVERAGE AS SHOWN REF. SURVEY: AND THE ARBORIST REPORT. TREES REMOVED ARE AS NOTED (A, 383). SEE ARBORIST TREE INFORMATION ON THIS SHEET. ARBORIST TO MONITOR CONSTRUCTION ACTIVITY PER THE SEPARATE REPORT.

B. NEW CONST. AREA EXCAVATION PROPOSED AS 2.5 CU YARDS TO BE STOCKPILED ONSITE AS NOTED. NO EXPORT PROPOSED.

C. EXISTING ROOF DOWNSPOUTS: TO BE INSPECTED FOR VIABILITY AND TO BE CONNECTED TO EXISTING STORM DRAIN PER THE SITE PLAN LOCATION.

D. EXISTING SITE SEWER CONNECTION: TO BE INSPECTED FOR VIABILITY AND TO BE VERIFIED THAT THEY ARE CONNECTED TO THE CITIES SANITARY SYSTEM IN A POSITVE SLOPE. CONFIRM SS LINE CONDITION WITHIN PROPERTY

E. SEE APPENDIX "F" IN THE SEPARATE ARBORIST REPORT. FOR TREE PROTECTION INFORMATION.

F. UTILITY NOTES:
1. ALL PLUMBING UNDER A SEPARATE PERMIT.
2. ALL ELECTRICAL WORK UNDER A SEPARATE PERMIT.
3. WORK SHOWN ON THIS SITE PLAN IS FOR CONCEPTUAL USE ONLY BY THE SUBCONTRACTOR.

G. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO THE START OF CONSTRUCTION AND ADVISE THE OWNER AND DESIGNER OF ANY CONFLICTS OR QUESTIONS TO BE RESOLVED.

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SHEET A0: SITE PLAN, PROJECT / LAND USE AND TREE INFORMATION
SHEET S: SURVEY INFORMATION
SHEET G1: GENERAL NOTES, ENERGY NOTES, GLAZING/DOOR SCHEDULES
SHEET G2: WASHINGTON STATE ENERGY CODE INFORMATION
SHEET A1: DESIGN FOUNDATION PLAN
SHEET A2: EXISTING FLOOR PLANS
SHEET A3: EXISTING EXTERIOR ELEVATIONS
SHEET A4: REVISED FLOOR PLANS
SHEET A5: ROOF PLAN, DETAILS
SHEET A6: REVISED EXTERIOR ELEVATIONS
SHEET A7: BUILDING SECTIONS, DETAILS
SHEET A8: BUILDING SECTIONS
SHEET A10: TYPICAL DETAILS–FOUNDATION
SHEET A11: TYPICAL DETAILS–WINDOW FRAME. SKYLIGHT
SHEET A12: TYPICAL DETAILS–ROOF , FRAMING, DECK FRAMING
SHEET A13: TYPICAL DETAILS–WRAP SEQUENCE, FLASHING
SHEET A14: TYPICAL DETAILS–EXTERIOR, MISC.

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SHEET S1.1: GENERAL STRUCTURAL NOTES.
SHEET S2.1: STRUCTURAL FOUNDATION PLAN.
SHEET S2.2: STRUCTURAL SECOND FLOOR FRAMING PLAN.
SHEET S2.3: STRUCTURAL ROOF FRAMING PLAN.
SHEET S3.0: STRUCTURAL CONCRETE DETAILS.
SHEET S3.1: STRUCTURAL CONCRETE DETAILS.
SHEET S4.0: STRUCTURAL WOOD FRAMING DETAILS.
SHEET S4.1: STRUCTURAL WOOD FRAMING DETAILS.
SHEET S4.2: STRUCTURAL WOOD FRAMING DETAILS.
SHEET S4.3: STRUCTURAL WOOD FRAMING DETAILS.

GHDS "GOLDEN HOME DESIGN SERVICES"
13215 S.E. 183RD STREET
Renton, Washington 98058
(206) 679–9757
ghdschristoferjgolden@gmail.com

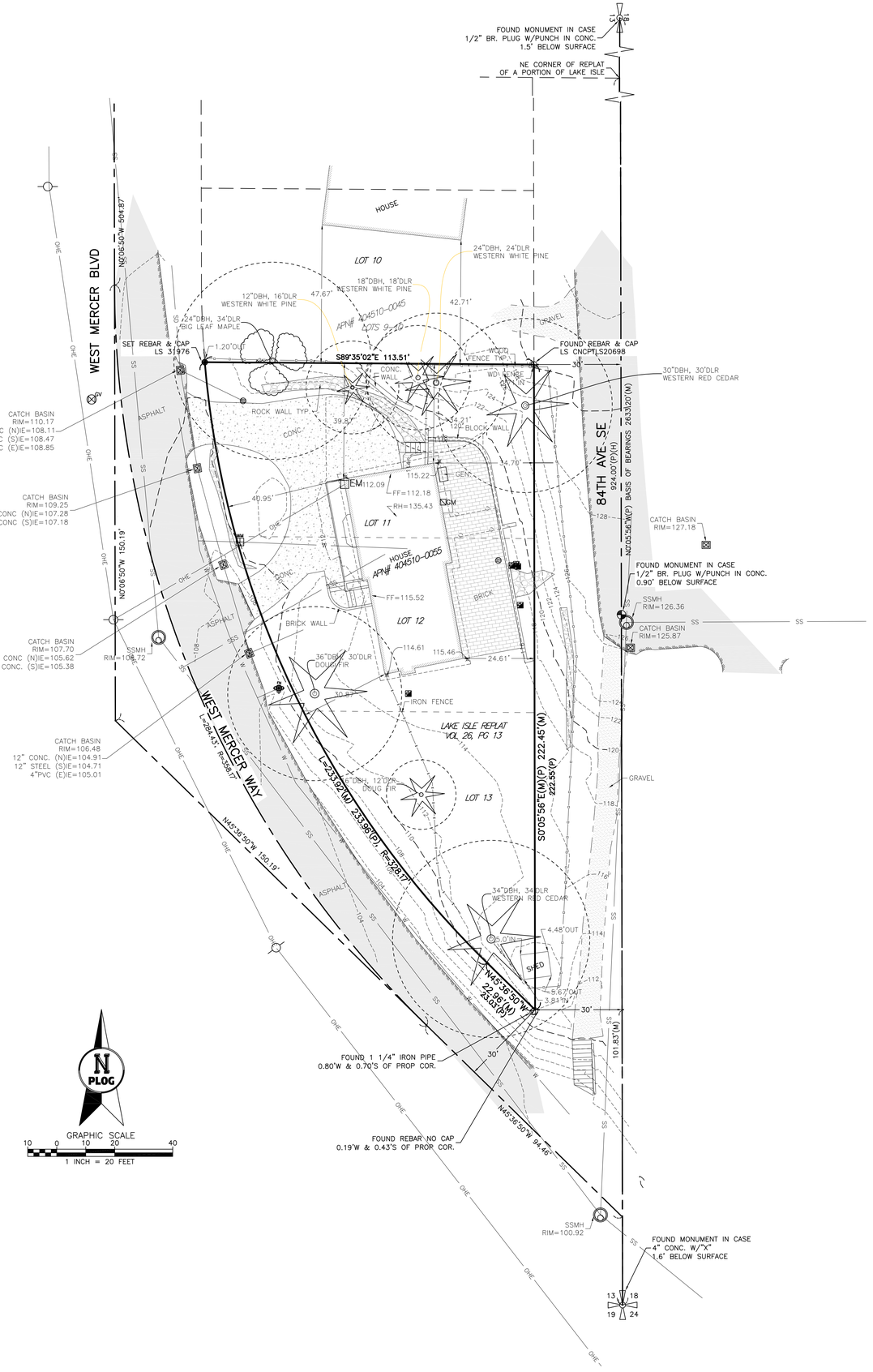
OWNER: Kathryn and Erik Spring
4740 West Mercer Way
Mercer Island, WA. 98040

JOB ADDRESS: 4740 West Mercer Way
Mercer Island, WA. 98040

SITE PLAN
SITE INFORMATION

ISSUE DATE:	7–25–2024
REVISIONS	
1–15–2025	REVISION–1 CORRECTIONS

1 A0



SYMBOL LEGEND

- MONUMENT AS NOTED
- SECTION CORNER
- QUARTER SECTION CORNER
- FOUND REBAR AS NOTED
- SET REBAR AND CAP LS 31976
- FOUND SURFACE MARKER/DISK
- SET SURFACE MARKER/DISK LS 31976
- SEWER MAINTENANCE HOLE
- SEPTIC MAINTENANCE HOLE
- SEWER CLEAN OUT
- SEWER LINE
- STORM DRAIN MAINTENANCE HOLE
- CATCH BASIN (TYPE 2)
- CATCH BASIN (TYPE 1)
- STORM DRAIN CLEAN OUT
- ROUND YARD DRAIN
- SQUARE YARD DRAIN
- STORM DRAIN LINE
- WATER MAINTENANCE HOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- BLOW OFF VALVE
- IRRIGATION VALVE/JUNCTION
- WATER LINE
- GAS VALVE
- GAS METER
- GAS LINE
- CABLE RISER
- CABLE BOX
- CABLE MAINTENANCE HOLE
- FIBER OPTIC MAINTENANCE HOLE
- TELEPHONE MAINTENANCE HOLE
- TRAFFIC SIGNAL MAINTENANCE HOLE
- PAD MOUNTED TRANSFORMER
- HAND HOLE
- A/C COMPRESSOR
- YARD LIGHT
- POWER POLE
- GUY WIRE
- STREET LIGHT
- OVERHEAD UTILITIES (GENERAL/MIXED)
- OVERHEAD ELECTRICAL
- OVERHEAD CABLE
- OVERHEAD TELEPHONE
- UNDERGROUND UTILITIES (GENERAL/MIXED)
- UNDERGROUND ELECTRICAL
- UNDERGROUND CABLE
- UNDERGROUND TELEPHONE
- UNDERGROUND FIBER OPTIC
- BOLLARD
- MAILBOX
- SIGN
- WETLAND FLAG
- SNAG
- DECIDUOUS MULTI-TRUNK
- DECIDUOUS
- CONIFER MULTI-TRUNK
- CONIFER

GENERAL NOTES

1. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND LEICA VIVA TS15 SMART POLE TOTAL STATION/RTK GPS.
2. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090. SURVEY WAS COMPLETED BY A FIELD TRAVERSE.
3. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS, UTILITY LOCATES BY THIRD PARTIES, 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.
4. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.
5. CONTOURS SHOWN ARE BASED ON A FIELD SURVEY.
6. TREE IDENTIFICATION WAS PERFORMED BY SURVEY FIELD PERSONNEL AND SHOULD BE CONSIDERED A BEST GUESS. AN ARBORIST SHOULD BE RELIED UPON FOR MORE ACCURATE AND DETAILED IDENTIFICATION OF TREE SPECIES AND HEALTH.

PROJECT INFORMATION

SURVEYOR:	PLOG ENGINEERING, PLLC P.O. BOX 412 RAVENSDALE, WA 98051 PH.: (206) 420-7130
PROPERTY OWNER:	ERIC & KATIE SPRING 4740 WEST MERCER WAY MERCER ISLAND, WA 98040
TAX PARCEL NUMBER:	404510-0055
PROJECT ADDRESS:	4740 WEST MERCER WAY MERCER ISLAND, WA 98040
PARCEL AREA:	16,710 S.F. (0.384 ACRES ±) AS SURVEYED

REFERENCE SURVEYS

P1 - REPLAT OF LAKE ISLE, VOL 26, PG 13
R1 - AF# 20061023900004
SP1 - AF# 9809099001 SP# M.I. 98-0179

VERTICAL DATUM & CONTOUR INTERVAL

ELEVATIONS SHOWN ON THIS DRAWING ARE BASE ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND WERE ESTABLISHED USING RTK GPS.

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

LEGAL DESCRIPTION

LOTS 11, 12 AND 13, REPLAT OF A PORTION OF LAKE ISLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 26 OF PLATS, PAGE 13, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

PER THE REPLAT OF A PORTION OF LAKE ISLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 26 OF PLATS, PAGE 13, RECORDS OF KING COUNTY, WASHINGTON.

ACCEPTED THE BEARING OF N 00°05'56" W FOR 84TH AVE SE BASED ON FOUND MONUMENTS IN CASE.

ABBREVIATION LEGEND

MON = MONUMENT
DN = DOWN
SP = SHORT PLAT
BLA = BOUNDARY LINE ADJUSTMENT
DBH = DIAMETER AT BREAST HEIGHT (FT)
DLR = DRIP LINE RADIUS (FT)
APN = ASSESSORS PARCEL NUMBER
AF# = AUDITOR'S FILE NUMBER
(M) = AS MEASURED
(C) = AS CALCULATED
(P) = PER PLAT
(D) = PER DEED
(R#) = PER REFERENCE SURVEY
(H) = HELD

THE ORIGINAL SSURVEY DOCUMENT HAS BEEN RE-FORMATTED TO FIT THIS SHEET FOR SUBMITTAL PURPOSES

GHDS
GOLDEN HOME DESIGN SERVICES
13215 S.E 183RD STREET
Renton, Washington 98058
(206) 679-9757
ghdschristoferjgolden@gmail.com

OWNER:
Kathryn and Erik Spring
4740 West Mercer Way
Mercer Island, WA. 98040

JOB ADDRESS:
4740 West Mercer Way
Mercer Island, WA. 98040

BOUNDARY & TOPOGRAPHIC SURVEY

ISSUE DATE:	REVISIONS	
1-15-2025	1	REVISION-1 CORRECTIONS

PLOG ENGINEERING
Surveyors & Civil Engineers
P.O. Box 412
Ravensdale, WA 98051
(206) 420-7130
www.PlogEngineering.com

MARK X. PLOG — STATE OF WASHINGTON — 31976 — REGISTERED PROFESSIONAL LAND SURVEYOR — 10/12/2021

SE1/4, SE1/4, SEC 13, TWP 24N, RNG 4E, W.M.
BOUNDARY & TOPOGRAPHIC SURVEY
ERIC & KATIE SPRING
4740 WEST MERCER WAY
MERCER ISLAND, WA 98040

PROJECT NO.:	REVISION DATE	REVISION NO.:	SHEET
174-21	10/12/2021	0	1 OF 1

SHEET
1 OF 1

Spring Door Schedule

7/25/2024

	LOCATION	DOOR TYPE	MANUFACTURER	FRAME FINISH	SLAB FINISH	HARDWARE	HARDWARE FINISH	MODEL #	Q	W	H	NOTES
A	Main Entry (window-1)	Double Swing-in Thermal Fr.	Simpson or Equal	FIR-STAIN GRADE	FIR-STAIN GRADE	Per Owner	Per owner	7108	2	2.67	6.7	SAFETY GLASS(CLEAR). Architectural mullions
B	Main Entry Closet	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	2	1.67	6.7	Solid Core, 6-Panel, Paint grade, Replace
C	Foyer-Butlers Pantry	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	FL-1800	1	2.5	6.7	Solid Core, Glass, Paint grade
D	Kitchen-Butlers Pantry	Pocket	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.67	6.7	Solid Core, 6-Panel, Paint grade, Replace
E	Butlers Pantry- Patio	Swing-in Thermal Fr.	Simpson or Equal	FIR-STAIN GRADE	FIR-STAIN GRADE	Per Owner	Per owner	7108	1	2.67	6.7	SAFETY GLASS(CLEAR). Architectural mullions
F	Garage Utility-Craft	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.67	6.7	Solid Core, 20-Minute F.R, Self-Closing
G	Garage Door (K)	Overhead Roll-Up	Lux Garage Doors or Eq.	Wood-Stain	Wood	Per Owner	Per owner	Madison Craftsman	1	8.0	7.0	GLAZING STYLE PER EXTERIOR ELEVATION. REPLACE
H	Garage Door (K)	Overhead Roll-Up	Lux Garage Doors or Eq.	Wood-Stain	Wood	Per Owner	Per owner	Madison Craftsman	1	8.0	7.0	GLAZING STYLE PER EXTERIOR ELEVATION. REPLACE
I	Lower Bathroom	Pocket	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.34	6.7	Solid Core, 6-Panel, Paint grade, Replace
J	Utility Craft Storage Closet	Bypass	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	2	2.50	6.7	Solid Core, 6-Panel, Paint grade, Replace
K	Utility Craft Stairwell Closet	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	2	1.50	6.7	Solid Core, 6-Panel, Paint grade
L	Lower Office	Barn	TRUSTILE	PAINT GRADE	PAINT GRADE	Barn Style Per Owner	Per owner	TS 6080	2	2.34	6.7	Solid Core, 6-Panel, Paint grade, Replace
M	Lower Office Closet	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
N	Recreation	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	3.00	6.7	Solid Core, 6-Panel, Paint grade
O	Bedroom-1-Hall	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
P	Bedroom-1 Bathroom-1	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
Q	Bedroom-1	Bypass	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	2	2.00	6.7	Solid Core, 6-Panel, Paint grade, Replace
R	Hall Closet	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
S	Bathroom-1 Hall	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.34	6.7	Solid Core, 6-Panel, Paint grade
T	Recreation Closet	Bypass	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	2	2.50	6.7	Solid Core, 6-Panel, Paint grade, Replace
U	Recreation -Balcony	Swing-in Thermal Fr.	Simpson or Equal	FIR-STAIN GRADE	FIR-STAIN GRADE	Per Owner	Per owner	7108	2	2.50	6.7	SAFETY GLASS(CLEAR). Architectural mullions
V	Bathroom-2 Hall	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
W	Bathroom-2 Closet	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
X	Closet Bathroom-2	Pocket	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.34	6.7	Solid Core, 6-Panel, Paint grade, Replace
Y	Master Bedroom Entry	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	2	2.50	6.7	Solid Core, 6-Panel, Paint grade
Z	Master Bedroom-Closet	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
AA	Master Bedroom-Office	Swing	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
BB	Office-Closet	Pocket	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
CC	Master Closet-Master bath	Pocket	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.50	6.7	Solid Core, 6-Panel, Paint grade
DD	Master Bath Water Closet	Pocket	TRUSTILE	PAINT GRADE	PAINT GRADE	Per Owner	Per owner	TS 6080	1	2.34	6.7	Solid Core, 6-Panel, Paint grade

SPRING GLAZING SCHEDULE

8/15/2024

✓	no.	LOCATION	WINDOW TYPE	MANUFACTURER	FRAME-EXTERIOR	FRAME-INTERIOR	PRODUCT CODE	NFRC CERT. DIR. NO.	NOTES	Q	W	H	SF	GAS (NOTE-2)	SHGC (NOTE-3)	LOW-E (NOTE-3)	U-val	Glass
	1	Entry Door (DOOR A)	WOOD/Glass Entry Door System	SIMPSON or EQ.	STAIN	PAINT	7108	TBD	See Threshold Detail	2	2.67	6.80	36.31	AIR	0.14	YES	0.30	Clear
	2	Entry Door Transom	Picture (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	GY-LE270 SN	VPA-FA-10-02295-00012	grids per elevation	1	5.34	3.00	16.02	ARGON	0.27	YES	0.16	Clear
	3	Living Room	Awning	VPI ENDURANCE SERIES	WHITE	WHITE	"LE270-CL SN (3mm-3mm 3/4" IG)"	VPA-FA-20-07306-00002	grids per elevation	1	4.00	6.00	24.00	ARGON	0.21	YES	0.18	Clear
	4	Living Room	Awning	VPI ENDURANCE SERIES	WHITE	WHITE	"LE270-CL SN (3mm-3mm 3/4" IG)"	VPA-FA-20-07306-00002	grids per elevation	1	4.00	6.00	24.00	ARGON	0.21	YES	0.18	Clear
	5	Living Room	Picture (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	GY-LE270 SN	VPA-FA-10-02295-00012	grids per elevation	1	2.50	6.67	16.68	ARGON	0.27	YES	0.16	Clear
	6	Living Room	Sliding Glass Door (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	"340 / Art / 89 - 7/8"" (3mm-3mm)"	VPA-FA-57-00008-00003	ref. floor plan slide	1	5.00	6.68	40.08	ARGON	0.15	YES	0.26	Clear
	7	Living Room	Picture (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	GY-LE270 SN	VPA-FA-10-02295-00012	grids per elevation	1	2.50	6.67	16.68	ARGON	0.27	YES	0.16	Clear
	8	Dining Room South	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	grids per elevation	1	8.00	5.00	40.00	ARGON	0.26	YES	0.22	Clear
	9	Dining Room East	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	grids per elevation	1	4.00	4.00	16.00	ARGON	0.26	YES	0.22	Clear
	10	Kitchen	XOX Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-25-02871-00001	grids per elevation	1	5.00	4.00	20.00	ARGON	0.26	YES	0.22	Clear
	11	Butlers Pantry	WOOD/Glass Entry Door System	SIMPSON or EQ.	STAIN	PAINT	7108	TBD	See Threshold Detail	1	2.67	6.67	17.81	AIR	0.14	YES	0.30	Clear
	12	Butlers Pantry	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	grids per elevation	1	4.00	4.00	16.00	ARGON	0.26	YES	0.22	Clear
	13	Utility Craft Room	XOX Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-25-02871-00001	grids per elevation	1	8.00	5.00	40.00	ARGON	0.26	YES	0.22	Clear
	14	Utility Room	Awning	VPI ENDURANCE SERIES	WHITE	WHITE	"LE270-CL SN (3mm-3mm 3/4" IG)"	VPA-FA-20-07306-00002	Replace	1	2.00	2.00	4.00	ARGON	0.21	YES	0.18	Clear
	15	Lower Bathroom	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	New r/o Replace	1	4.00	2.00	8.00	ARGON	0.26	YES	0.22	Clear
	16	Garage-Shop	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	NOT COND. Repl.	1	4.00	3.00	12.00	ARGON	0.26	YES	0.22	Clear
	17	Garage West	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	NOT COND. Repl.	1	3.84	4.00	15.36	ARGON	0.26	YES	0.22	Clear
	18	Garage West	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	NOT COND. Repl.	1	3.84	4.00	15.36	ARGON	0.26	YES	0.22	Clear
	19	Lower Office	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	Replace	1	3.84	4.00	15.36	ARGON	0.26	YES	0.22	Clear
	20	Master Bedroom West	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	grids per elevation	1	4.00	5.00	20.00	ARGON	0.26	YES	0.22	Clear
	21	Master Bedroom West	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	grids per elevation	1	4.00	5.00	20.00	ARGON	0.26	YES	0.22	Clear
	22	Master Bedroom West	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	grids per elevation	1	4.00	5.00	20.00	ARGON	0.26	YES	0.22	Clear
	23	Master Bedroom South	Sliding Glass Door (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	"340 / Art / 89 - 7/8"(3mm-3mm)"	VPA-FA-57-00008-00003	ref. floor plan slide	1	5.00	6.68	40.08	ARGON	0.15	YES	0.26	Clear
	24	Master Office	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	grids per elevation	1	1.50	4.00	6.00	ARGON	0.26	YES	0.22	Clear
	25	Master Office	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	grids per elevation	1	4.00	4.00	16.00	ARGON	0.26	YES	0.22	Clear
	26	Master Office	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	grids per elevation	1	4.00	4.00	16.00	ARGON	0.26	YES	0.22	Clear
	27	Master Closet	Picture (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	GY-LE270 SN	VPA-FA-10-02295-00012	grids per elevation	1	2.00	2.00	4.00	ARGON	0.27	YES	0.16	Clear
	28	Master Closet	Picture (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	GY-LE270 SN	VPA-FA-10-02295-00012	grids per elevation	1	2.00	2.00	4.00	ARGON	0.27	YES	0.16	Clear
	29	Master Closet	Picture (Safety Glass)	VPI ENDURANCE SERIES	WHITE	WHITE	GY-LE270 SN	VPA-FA-10-02295-00012	grids per elevation	1	2.00	2.00	4.00	ARGON	0.27	YES	0.16	Clear
	30	Master Bath	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	grids per elevation	1	4.00	4.00	16.00	ARGON	0.26	YES	0.22	Clear
	31	Bedroom-1	XOX Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	Egress-Replace	1	8.00	3.50	28.00	ARGON	0.26	YES	0.22	Clear
	32	Bathroom-1	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	Obscure Glass (S.G.)	1	4.00	2.00	8.00	ARGON	0.26	YES	0.22	Clear
	33	Bathroom-2	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	Obscure Glass (S.G.)	1	4.00	2.00	8.00	ARGON	0.26	YES	0.22	Clear
	34	Bedroom-2 Closet	XO Slider	VPI ENDURANCE SERIES	WHITE	WHITE	366 / Art / 89 - 0.75"(3mm-6mm)	VPA-FA-23-02871-00001	Replace	1	5.00	2.00	10.00	ARGON	0.26	YES	0.22	Clear
	35	Bedroom-2 North	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	Egress-Replace	1	5.00	4.00	20.00	ARGON	0.26	YES	0.22	Clear
	36	Bedroom-2 West	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	270 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-20-02667-00001	Egress-Replace	1	3.84	4.00	15.36	ARGON	0.26	YES	0.22	Clear
	37	Recreation West	WOOD/Glass Entry Door System	SIMPSON or EQ.	STAIN	PAINT	7108	TBD	See Threshold Detail	2	2.50	6.67	33.35	AIR	0.14	YES	0.30	Clear
	38	Recreation West	Single Hung	VPI ENDURANCE SERIES	WHITE	WHITE	180 / Art / 89 - 0.75"(3mm-3mm)	VPA-FA-28-02656-00001	Egress-Replace	1	3.84	4.00	15.36	ARGON	0.26	YES	0.22	Clear
	39	Gallery Skylight	Skylight (Laminted-04)	VELUX	AV/AV	DRYWALL-PAINT	04: Double Pleated Shade (Closed)	VEL-N-21-00074-00001	2X6 CURB MOUNTED	1	4.00	4.00	16.00	AIR	0.20	YES	0.33	Clear
			WINDOW TOTALS =							41			697.8	SF.	AVG. U-VALUE		0.219	
			CONDITIONED FLOOR AREA =	3291.0									3291.0	SF.				
			GLAZING IN COND. AREA =	655.08						38			655.08	SF.				
			GLAZING PERCENTAGE OF COND. FLOOR AREA =										19.9%					
								garage windows not in conditioned area		3			42.72	SF.				

3. PROVIDE LOW E- COATIING PER GLAZING SCHEDULE
4. VERIFY ALL BUILDING ROUGH OPENINGS PRIOR TO MANUF. OF WINDOWS.
5. VERIFY ALL CODE REQUIRED EGRESS OPENINGS FOR BEDROOMS
6. PROVIDE FRAME VENTS PER WHOLE HOUSE VENTILATION CODE REQUIREMENTS
7. PROVIDE SAFETY GLAZING PER IRC R308.4:
   - A. All GLAZED DOORS
   - B. BATHTUBS AND SHOWERS WITHIN 60" OF WALKING SURFACE
   - C. WINDOWS WITHIN 24" OF DOORS
   - D. WINDOWS WITHIN 48" OF STAIRWELLS/LANDINGS
8. ALL NEW WINDOWS TO BE NFRC CERTIFIED.
9. ALL EXTERIOR FRAMES TO BE WHITE COLORED VINYL
10. ALL INTERIOR FRAMES WHITE COLORED VINYL
11. ALL WINDOWS TO RECEIVE FACTORY APPLIED FLANGES EXCEPT AT EX. BRICK
12. APPLY FACTORY JAMB EXTENSION WHERE STRUC. SHEAR WALLS ARE PRESENT.
13. HARDWARE PER OWNER.
14. REFERENCE DESIGN DRAWINGS FOR OTHER INFORMATION.

2021 WSEC ENERGY CODE NOTES

2021 WASHINGTON STATE ENERGY CODE –WAC 51–11A, C, & R

1. BUILDING AIR LEAKAGE TESTING, DEMONSTRATING THE BUILDING THERMAL ENV. IS NOT EXCEEDING 5 AIR CHANGES PER HOUR (SEC R402.4.1.2), IS REQUIRED PRIOR TO FINAL INSPECTION. THE TEST RESULTS ARE TO BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE (WSEC R401.3). PROVIDE A WRITTEN REPORT OF THE TEST RESULTS, SIGNED BY THE TESTING PARTY, TO THE BLDG INSPECTOR, PRIOR TO APPROVED FINAL INSPECTION. STEPS 1–6 OF R402.4.1.2 TO BE FOLLOWED.
2. EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE. (WSEC R403.1)
3. NO DUCTS PROPOSED FOR THIS PROJECT. DUCT TESTING NOT REQUIRED.
4. MINIMUM 75% OF ALL PERMANENTLY INSTALLED LUMINAIRES SHALL BE HIGH EFFICACY LAMPS INCLUDING EXTERIOR LIGHTING . (WSEC R404.1).
5. A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE CONTRACTOR OR OWNER AND POSTED ON THE SPACE WHERE THE HEATING UNIT IS LOCATED, OR OTHER APPROVED LOCATION, REFERENCE WSEC R401.3
6. EACH DWELLING UNIT SHALL BE EQUIPPED WITH A VENTILATION SYSTEM. BATHROOM / UTILITY FANS AND KITCHEN HOOD FANS SHALL MEET THE 2021 WSEC EFFICACY AND SONES REQUIREMENTS OF LESS THAN 1.0. REF.: WASHINGTON STSTE RESIDENTIAL CODE 1505.4.1.1 AND 1505.3,

INTEGRATED WHOLE HOUSE VENT SYSTEM

SPECIFICATIONS FOR THE 2021 IMC SECTION 403. REFERENCE 403.3.2.1 THROUGH 403.3.2.5. SEE SEC TABLE R403.3.2.3. WITH WASHINGTON STATE AND CITY OF MERCER ISLAND AMENDMENTS AS NECESSARY. ADDITIONALLY, SYSTEMS MUST MEET REQUIREMENTS NOTED IN SECTION M1503 FOR COOKING AND M1505.4 FOR A BALANCED WHOLE HOUSE VENTILATION SYSTEM. REF. TABLE M1505.4.3(1).

A. SOURCE SPECIFIC VENTILATION REQUIREMENTS
   1. EXHAUST FAN REQUIREMENTS:
      - A– BATHROOMS, LAUNDRIES, AND POWDER ROOMS – 50 CFM. @ 0.25" W.G.
      - B– KITCHENS – 100 CFM @ 0.25" W.G. RANGE HOODS AND DOWN DRAFT RANGES MAY BE RATED AT 100 CFM @ 0.25" W.G. IF APPLICABLE.
   2. EXHAUST DUCT REQUIREMENTS
      - A– BE INSULATED TO R–5 IN UNCONDITIONED SPACES.
      - B– BE EQUIPPED WITH A BACK DRAFT DAMPER
      - C– TERMINATE OUTSIDE THE BUILDING
      - D– COMPLY WITH TABLE 3–3

B. WHOLE HOUSE VENTILATION REQUIREMENT. OUTDOOR AIR SHALL BE SUPPLIED TO ALL HABITABLE ROOMS THROUGH WINDOW FRAME OR TRICKLE VENTS USING THE FOLLOWING METHOD:
   1. FRESH AIR INLET DUCT SHALL COMPLY WITH THE FOLLOWING:
      - A– BE PROTECTED FROM THE ENTRY OF INSECTS, LEAVES AND OTHER MATERIAL.
      - B– NOT RECEIVE FRESH AIR FROM THE FOLLOWING AREAS:
        1) WITHIN TEN FEET OF AN APPLIANCE VENT OUTLET, UNLESS THE VENT OUTLET IS THREE FEET ABOVE THE FRESH AIR INLET.
        2) WHERE IT WILL PICK UP OBJECTIONABLE ODORS, FUMES, OR FLAMMABLE VAPORS.
        3) A HAZARDOUS OR UNSANITARY LOCATION.
        4) A ROOM OR SPACE HAVING FUEL BURNING APPLIANCES THEREIN.
        5) CLOSER THAN 10' FROM A VENT OPENING OF A PLUMBING DRAINAGE SYSTEM UNLESS THE VENT OPENING IS AT LEAST THREE FEET ABOVE THE FRESH AIR INLET
        6) ATTICS, CRAWL SPACES, OR GARAGES.
   2. VENTILATION SYSTEM CONTROLS: REFERENCE SECTION 403.4.5.
      - A– AN AUTOMATIC CONTROL SUCH AS A CLOCK TIMER SHALL BE INSTALLED IN A READILY ACCESSIBLE AND VISIBLE LOCATION. THE TIMER SHALL BE CAPABLE OF CONTINUOUS OPERATION AND HAVE AN AUTOMATIC AND MANUAL CONTROL/MANUAL OVERRIDE OF BOTH THE FAN AND BACKDRAFT DAMPER DURING PERIODS OF POOR AIR QUALITY. PROVIDE PERMANENT SIGNAGE TO INDICATE OPERATION.
      - B– THE INTEGRATED VENTILATION SYSTEM SHALL DEMONSTRATE COMPLIANCE WITH VIAQC SECTION 302.2.2 BY EITHER ON SITE FLOW TESTING OR AN ENGINEERED DESIGN. DEMONSTRATION OF COMPLIANCE SHALL BE MADE AVAILABLE FOR THE INSPECTOR BEFORE A CERTIFICATE OF OCCUPANCY WILL BE ISSUED
      - C– WHOLE–HOUSE VENTILATION SYSTEMS SHALL BE CONFIGURED TO OPERATE CONTINUOUSLY EXCEPT WHERE INTERMITTENT OFF CONTROLS ARE PROVIDED IN ACCORDANCE WITH SECTION 403.4.6.5 AND ALLOWED BY SECTION 403.4.4.2.
   3. ENSURING AIR FLOW THROUGH THE HABITABLE SPACES USING ONE OF THE FOLLOWING METHODS:
      1) ALL ROOM ACCESS DOORS MUST BE UNDERCUT TO PROVIDE 1" MIN. AIR FLOW BELOW.
      2) ALL ROOM ACCESS DOORS MUST HAVE AN INSERTED LOUVERED GRILLE TO ALLOW FOR THE FREE MOVEMENT OF AIR.

INSULATION NOTES REF: 2021 WSEC TABLE: R402.1.1

INSULATION REQUIREMENTS PER THE 2021 WASHINGTON STATE ENERGY CODE.
BAFFLES TO MAINTAIN 1" AIR SPACE ABOVE INSULATION
BAFFLES TO EXTEND 6" ABOVE BATT INSULATION.
BAFFLES TO EXTEND 12" ABOVE LOOSE FILL INSULATION.
INSULATE BEHIND TUBS/SHOWERS, PARTITIONS AND CORNERS.
FACE STAPLE BATTS
FRICTION FIT UNFACED BATTS
INSULATE:
1. USE PVA PAINT WITH A DRY CUP PERM RATING OF 1 MAX. WALLS BETWEEN UNIT AND EXTERIOR OR GARAGE WALL
2. DUCTS IN UNHEATED SPACES
3. ELECTRIC WATER HEATERS IN UNHEATED SPACES
4. GAS WATER HEATERS IN UNHEATED SPACES
5. ALL FRAME CAVITIES THAT ARE EXPOSED DURING CONSTRUCTION ARE TO BE FILLED TO FULL STUD DEPTH WITH BATT INSUL. OR INSUL. W/EQUAVALENT R–VALUE PER 2021 WSEC. SECTION R402.1.1.

INFILTRATION CONTROL

1. EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS, FLOOR AND ROOFS, AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE, INCLUDING ACCESS PANELS INTO UNHEATED SPACES, SHALL BE SEALED, CAULKED, GASKETED OR WEATHER–STRIPPED TO LIMIT AIR LEAKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A WEATHER TIGHT BUILDING.
2. ALL EXTERIOR DOORS, OTHER THAN FIRE–RATED DOORS, SHALL BE DESIGNED TO LIMIT AIR LEAKAGE AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION. NO DOORS ARE CONSIDERED 'FIRE–RATED' ON THIS PROJECT.
3. ALL EXTERIOR WINDOWS SHALL BE DESIGNED TO OMIT INFILTRATION INTO OR FROM THE BUILDING ENVELOPE WHICH SHALL BE SUBSTANTIATED BY TESTING TO STANDARD ASTM E 283–73. SITE–BUILT AND MILLWORK SHOP MADE WOODEN SASH ARE EXEMPT FROM TESTING BUT SHALL BE WEATHER–STRIPPED, CAULKED, AND MADE TIGHTLY FITTING.
4. RECESSED LIGHT FIXTURES TO LIMIT AIR LEAKAGE PER SEC WSEC. R402.4.5. AND PER TABLE R402.4.1.1.

VAPOR BARRIERS / VENTILATION

AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN ROOF–RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AT EXTERIOR WALLS AND UNDER ANY NEW SLABS ON GRADE.

A GROUND COVER OF 6 MIL. (0.006") BLACK POLYVINYL OR EQUIVALENT, SHALL BE LAID OVER THE GROUND UNDER ALL CONC. SLABS AND OVER CRAWL SPACE EARTH. THE GROUND COVER SHALL BE OVERLAPPED ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE FOUNDATION WALL OR GRADE BEAM.

PROVIDE CROSS–VENTILATION AS REQUIRED BY BUILDING CODE AT ALL CRAWL SPACES AND ENCLOSED RAFTER SPACES.

ENSURE THAT INSULATION DOES NOT IMPEDE THE FREE FLOW OF AIR MOVEMENT IN THESE AREAS. BAFFLE FLOOR INSULATION AT CRAWL SPACE VENTS LOCATED IN THE FLOOR JOIST.

HEATING EQUIPMENT

SEPARATE SUBMITTAL REQUIRED FOR ANY NEW GAS HEATING APPLIANCE. PRIOR TO INSTALLATION. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

REQUIRED HEATING SYSTEM EFFICIENCIES ARE DETERMINED BY THE TYPE OF GLAZING INSTALLED. FOR A BREAKDOWN OF REQUIRED HEATING SYSTEMS FOR EACH TYPE OF GLAZING, SEE ATTACHED CALCULATIONS.

HVAC EQUIPMENT FOR LOW–RISE RESIDENTIAL SHALL BE SIZED NO GREATER THAN 150% OF DESIGN LOAD. REFERENCE DESIGN HEAT CALCULATIONS AT LEFT.

OPTIONAL WATER TANK TO BE LABELED PER 1987 NAECA.

1.6 GPF FOR TOILETS, 2.5 GPH FOR SINKS AND SHOWERS, TUB SPOUTS ARE UNLIMITED

WATER HEATERS

PER WSEC R402.4.1.1. SEE NOTE FOR ENERGY CREDITS SHT. A1.1.

WATER HEATERS ARE REQUIRED TO MEET THE REQUIREMENTS OF 1987 NAECA STANDARD AND BE LABELED AS SUCH. IN ADDITION, ELECTRIC WATER HEATERS INSTALLED IN UNHEATED SPACES SHALL BE PLACED ON AN INCOMPRESSIBLE SURFACE OR FLOOR INSULATED TO A MINIMUM OF R–10.

DIRECT THE WATER HEATER RELIEF DISCHARGE LINE TO THE EXTERIOR OF THE BUILDING

PIPING INSULATION

PIPING FOR HOT WATER/STEAM SYSTEMS OF PIPING FOR CONTINUOUSLY CIRCULATING HOT WATER SERVICE SYSTEMS IS REQUIRED TO BE INSULATED PER SEC. R402.4.1.1, SERVICE WATER PIPING TO BE INSULATED WITH R–3.

FIRE SPRINKLERS

NFPA 13D FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13D AND CITY OF MERCER ISLAND STANDARDS, SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.

1

DESIGNER'S GENERAL NOTES

CODE COMPLIANCE:

1

ALL CONSTRUCTION TO COMPLY WITH THE 2021 IBC, IRC, IMC, IPC, 2021 WASHINGTON STATE ENERGY CODE, WA. STATE BUILDING CODE ADOPTION AND AMENDMENT OF THE 2018 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE, RESIDENTIAL. 2022 MERCER ISLAND MUNICIPAL CODE, GRADING CODE AND ENVIRONMENTALLY CRITICAL AREAS REGULATIONS (ECA). SEE CITY OF MERCER ISLAND, WA. AMENDMENTS AS REQUIRED FOR EACH.

1. REFER TO THIS SHEET FOR APPLICABLE BUILDING CODES, FIRE CODES, MECHANICAL, ELECTRICAL, PLUMBING CODES, FEDERAL GLAZING CODES, AND GENERAL ENERGY CODE REQUIREMENTS.
2. NOTIFY THE DESIGNER IN WRITING IMMEDIATELY IF BUILDING CODE REQUIREMENTS CONFLICT WITH OTHER PROJECT REQUIREMENTS, OR IF CODES ARE IN CONFLICT, OR IF THE FIELD INSPECTOR[S] CONTRADICT PLANS EXAMINER APPROVALS OR PRIOR DISCRETIONARY INTERPRETATION(S).
3. REPORT DISCREPANCIES, ERRORS, OMISSIONS, OR INCONSISTENCIES DISCOVERED BY THE CONTRACTOR PROMPTLY AND IN WRITING TO THE DESIGNER AS A REQUEST FOR INFORMATION/INTERPRETATION (RFI).
4. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SELF-PERFORMED WORK AND THE WORK OF ITS SUB-CONTRACTORS IS PERFORMED IN PRECISE ACCORDANCE WITH INDUSTRY STANDARDS, M

Floor (over crawl or exterior)

Plan ID	Component Description	Ref.	Floor U		Area	UA
A7, A8	R30 perim unvented Heated plenum	10-4	0.069		542	37
A7, A8	R38 vented Post/Beam (2021 1.2, 1.3; 2018 1.3-1.5)	10-3	0.02		953	23
A7, A8	R38 vented Joist (2021 1.2, 1.3; 2018 1.3-1.5)	10-3	0.03		55	1
				Sum of Area and UA	1,550	62

Slab on Grade (less than 2 feet below grade)

Plan ID	Component Description	Ref.	Slab F		Slab Perim	FP
S2.1	R0 uninsulated	10-2	0.730		531	388
				Sum of Perimeter and FP	531	388

Below Grade Walls and Slabs

Plan ID	Component Description	Slab Depth	Ref.	Wall U	Wall Area	Wall UA	Slab F	Slab Perim	Slab UA
A7, A8	R21 Batt + R5 ci	3.5' depth	10-1	0.03	96	2.9	0.632	26	16
				Sum of Area, Length and UA	96	2.9		26	16

Links to Download Forms, Checklists and Other Resources

	Link	
Compliance Certificate	Compliance Certificate	Instructions
Insulation Certificate for Residential New Construction	Insulation Certificate	
Duct Testing Affadavits		
Existing Construction	Affidavit, Existing	
New Construction	Affidavit, New	
Prescriptive Checklist for 2018 WSEC	Prescriptive Checklist	
Alterations (Remodel) Worksheet	Worksheet	
EER SEER2 COP HSPF2 Converter	https://www.adlcotengineering.com/eer-seer2-cop-hspf2-kwton-converter	

Ventilation Requirements

Conditioned Floor Area	3,291 sq. ft.	
Number of Bedrooms	1	
Run-Time Percent in Each 4-Hour Segment	100%	
Is the system Balanced?	Balanced	Verify system meets definition of 'Balanced Whole-House Ventilation'
Is the system Distributed?	Distributed	Verify system meets definition of 'Distributed Whole-House Ventilation'
Ventilation Code Section	IRC, Chapter 15	
Whole House Mechanical Ventilation Airflow Rate	50 CFM	

HVAC Thermal Distribution System

Download RS-33 (2018) http://www.energy.wsu.edu/Documents/Duct%20Testing%20Standards%2

Is this a hydronic heating system?	No	
Location of Ducts	Unconditioned Space	Ducts must be in conditioned space to select Option 4.1.
Location of Air Handler	Conditioned Space	

For Existing Construction: Are Any of These Exceptions True?

Are ducts systems documented to have been previously sealed as confirmed through field verification and diagnostic testing per RS-33?	No
Is there less than 40 linear feet in unconditioned spaces? (not excepted under WSEC 2021)	Yes
Are existing duct systems constructed, insulated or sealed with asbestos?	No
Is the project an Addition less than 750 sf of conditioned floor area?	No

Is Duct Testing Required? Yes

Maximum Duct Leakage:

Is this a post-contruction test?	No	
Is the air handler installed?	No	
Maximum total measured duct leakage per square foot	0.03	CFM25 per sq. ft.
Maximum allowable total measured duct leakage	99	CFM25

Heating System Sizing - Proposed Design

Try Out BetterBuiltNW's HVAC Sizing Tool: https://betterbuiltnw.com/resources/hvac-sizing-tool

Nearest Weather Station	Mercer Island	
Indoor Design Temperature	70	F
Outdoor Design Temperature	25	F
Design Temperature Difference (ΔT)	45	F
Conditioned Floor Area of Addition, Proposed Design	3,291	ft2
Conditioned Volume (Leave blank to use default of 8.5 ft. ceiling height)	26,328	ft3
HVAC System Type	All Other Systems (not heat pump)	
Location of HVAC Distribution System	Unconditioned Space	
Sum of UA, including exempt door and window	836	
Envelope Heat Load (Sum of UA X ΔT	37,726	Btu / Hour
Air Leakage Heat Load ((Volume X 0.6) X ΔT) X .018))	12,795	Btu / Hour
Building Design Heat Load Air Leakage + Envelope Heat Loss	50,521	Btu / Hour
Building and Duct Heat Load For ducts located in unconditioned space: Sum of Building Heat Loss X 1.1 For ducts located in conditioned space or ductless: Sum of Building Heat Loss X 1	55,573	Btu / Hour
Maximum Heat Equipment Output Building and Duct Heat Loss X 1.25 for heat pumps	77,802	Btu / Hour
	22.8	kW
Building and Duct Heat Loss X 1.40 for all other systems		

THERMAL ENVELOPE DETAILS - Proposed Design

Conditioned Floor Area of Addition, Proposed Design	3,291	sq. ft
Classification	Medium Dwelling Unit	
Notes	0.25	

Exterior Doors

Plan ID	Component Description	Ref.	Door U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
Exempt									0	0.0
A-1	Code Baseline, U=0.30	-	0.30	2	2.67		6	9	36	10.7
E-11	Code Baseline, U=0.30	-	0.30	1	2.67		6	9	18	5.3
U-37	Code Baseline, U=0.30	-	0.30	2	2.67		6	9	36	10.7
									0	0.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
				Sum of Area and UA					89	26.7
				Exterior Doors Area Weighted U						0.300

Overhead Glazing

Plan ID	Component Description	Ref.	Glazing U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
39	VELUX	Custom	0.33	1	4	0	4	0	16.0	5
									-	
									-	
									-	
									-	
				Sum of Area and UA					16.0	5
				Overhead Glazing Area Weighted U						0.330

Refer to WSEC R402.1

Vertical Glazing Schedule

Rows to Show: 12

	Plan ID	Component Description	Ref.	Glazing U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
	Exempt			-						-	-
1	Sht. G1	U=0.22 (2021 1.1; 2018 1.5)	Table 406.2	0.22	1	23.48638		23.486	0	551.6	121.35
2										-	-
3										-	-
4										-	-
5										-	-
6										-	-
7										-	-
8										-	-
9										-	-
10										-	-
11										-	-
12										-	-
					Sum of Area and UA					551.6	121.4
					Vertical Glazing Area Weighted U						0.220
					Vertical Glazing and Doors Area Weighted U						0.231

Flat/Vaulted Ceilings

Plan ID	Component Description	Ref.	Attic U		Area	UA
A7,A8	R30 blown Attic STD baffled	10-7	0.036		1,073	38.6
A7,A8	R49 blown Scissor 4:12 ADV baffled (2018 1.7)	10-7	0.020		333	6.7
A7,A8	R38 batt Vault vented 2x14 24oc (2018 Code Baseline)	10-7	0.027		163	4.4
A7,A8	2021 U-factor Baseline (Table R402.1.2)	Table R402.	0.024		514	12.3
				Sum of Area and UA	2,083	62.0

Walls (Above Grade)

Plan ID	Component Description	Ref.	Wall U		Net Area	UA
A7, A8	R11 cavity+R9 foam STD 2X4W Lap	10-5	0.088		1,167	103
A7, A8	R21 cavity+R5 foam INT 2X6W Lap	10-5	0.041		1,261	52
				Sum of Area and UA	2,428	154

Project Information

Small dwelling unit example
Spring Residence addition/alteration

Contact Information

GHDS (Golden Home Design Services)
Christofer Golden 26-679-9757
13215 SEW 183rd Street
Renton, WA. 98058

Messages / Comments *

Review required for custom entries: - Overhead Glazing
UA Reduction = -102.11, Proposed UA exceeds baseline by 14%

Window U-value meets selected Option 1.1
Window area is 17% of floor area
-Ducts must be in conditioned space to select Option 4.1.
Whole House Mechanical Ventilation Airflow Rate: 50 CFM with Run Time Percent of 100%, Balanced, Distributed
Maximum allowable total measured duct leakage: 99 CFM25

* Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your AHJ.

ANALYSIS SET UP

What code compliance pathway are you using?	U-Factor Compliance Path / Total UA Alternative
Project Building Type?	Addition
Occupancy Type?	R3 Single family dwellings and townhouses
Code Version?	WSEC 2021 WSEC-R Rev: Oct. 2023, https://www.sbcc.wa.gov/sites/default/files/2023-12/O
Classification:	Medium Dwelling Unit – 3291 sq. ft.
Baseline Description:	Code Baseline - Baseline and proposed window areas are equal.
About Your Selection:	Up to 15 sf exempt window and 24 sf exempt door allowable

RESULTS - Comparison of Baseline and Proposed Design **

Component Performance, R occupancies	Baseline U *	Baseline Area	Baseline UA	Proposed Design U	Proposed Design Area	Proposed Design UA
Doors U =	0.300	89	26.7	0.300	89	26.7
Overhead Glazing U =	0.500	16	8.0	0.330	16	5.3
Vertical Glazing U =	0.300	552	165.5	0.220	552	121.4
Flat/Vaulted Ceilings U =	0.024	2,083	50.0	0.030	2,083	62.0
Wall (above grade) U =	0.056	2,428	136.0	0.064	2,428	154.4
Floors over Crawlspace U =	0.029	1,550	45.0	0.040	1,550	61.6
Slab on Grade F =	0.540	531	286.7	0.730	531	387.6
Below Grade Wall U =	0.040	96	3.8	0.030	96	2.9
Below Grade Slab F =	0.560	26	14.6	0.632	26	16.4

* Values from Table R402.1.2 (Oct 2023)

Baseline UA Total	736.2	Proposed UA Total	838.3
Required Credits	8.0	Proposed Credits	8.0 from Tables 406.2 and 406
		UA Percent Reduction	-14%
		UA Reduction	-102.1

If the Proposed UA ≤ the Target UA, and the Proposed Credits from Table 406 are ≥ those required in Section R406, then the home meets the WSEC.

** Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your AHJ.

Table R406.2 Energy Equalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
1	Combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C403.3.2(5) or C403.3.2(6)	Combustion System	0.0	8.0	8.0

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.1	0.5	Prescriptive compliance based on Table R402.1.3 Vertical Fenestration = U 0.22
2	Air Leakage Control and Efficient Ventilation	Option 2.1	1.0	Per Section R402.4.1.2 / 2.0 ACH50 / For R-2, 0.25 cfm per ft2 at 50 Pa. / HRV with min SHR eff of 0.65 per IRC Section M1505.3 or IMC Section 403.8
3.1 -3.10	High Efficiency HVAC	Option 3.10	2.5	Combination water and space heating requires Tier 2 NEEA Advanced gas fired HP water heater Version 1.0
3.11	High Efficiency HVAC: Smart Thermostat	Option 3.11	0.5	Connected Energy Star Certified smart thermostat.
4	High Efficiency HVAC Distribution System	Option 4.1	0.5	Ducts/distribution system in conditioned space per R403.3.2 Electric resistance, hydronic, ductless and gas fired systems < 80% AFUE systems not permitted
5.1	Efficient Water Heating: Drain Heat Recovery	Not Selected	0.0	-
5.2	Efficient Water Heating: Compact Hot Water Distribution	Not Selected	0.0	-
5.3-5.8	Efficient Water Heating	Option 5.8	2.5	Combination water heating and space heating system with gas-fired heat pump water heater meeting NEEA Tier 2.
6	Renewable Electric Energy 600 kWh	Not Selected	0.0	
7	Appliance Package	Option 7.1	0.5	All of: Energy Star rated, most efficient dishwasher, refrigerator, washinging machine and dryer.
		Energy Credits	8.0	

*Refer to WSEC 2015 Table R406.2 for complete option descriptions and requirements

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4740 West Mercer Way
Mercer Island, WA. 98040

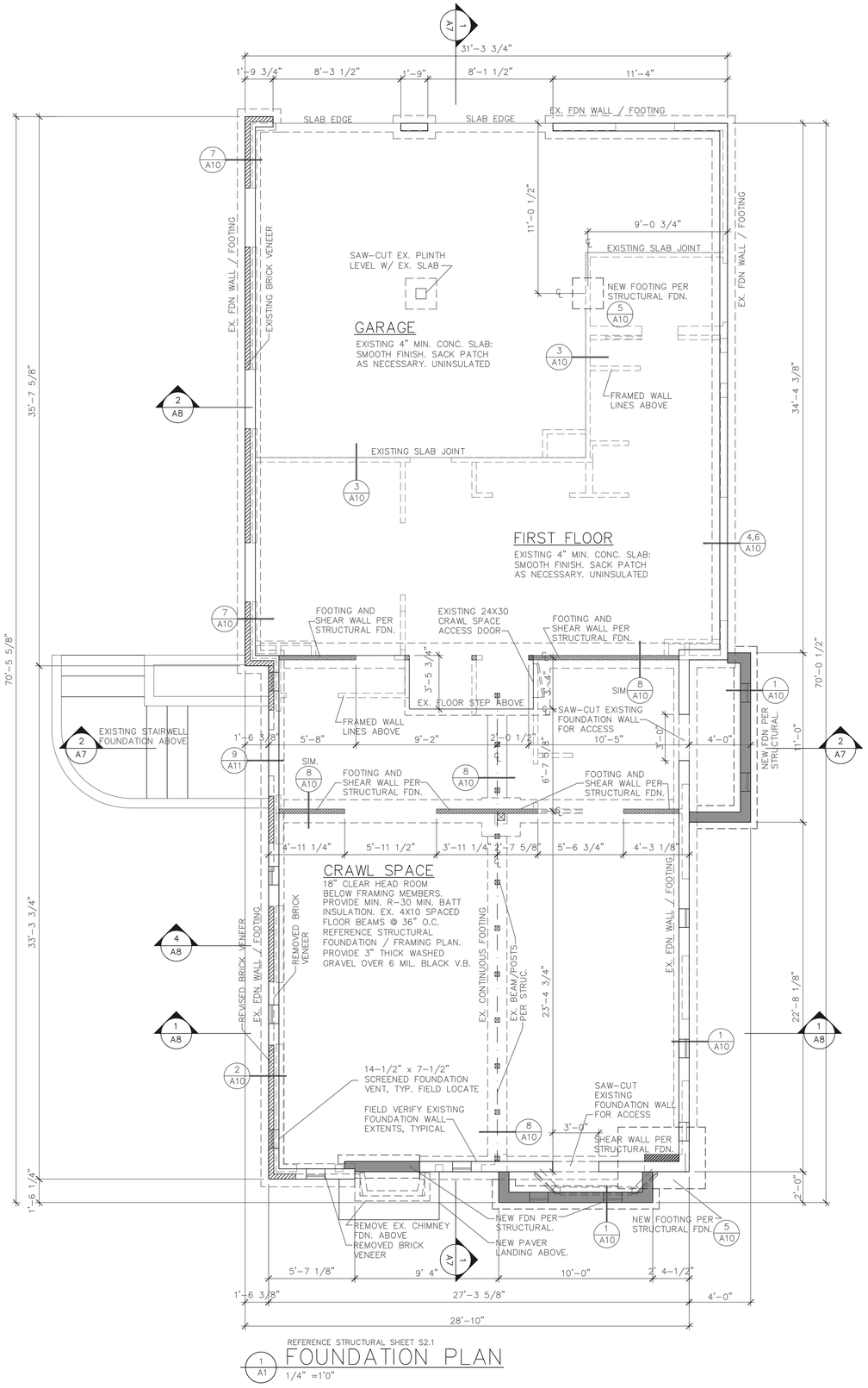
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WASHINGTON STATE ENERGY CODE

ISSUE DATE: 7-25-2024

REVISIONS
1 1-15-2025 REVISION-1 CORRECTIONS

G2



REFERENCE STRUCTURAL SHEET S2.1

1 A1 FOUNDATION PLAN

1/4" =1'0"

FOUNDATION NOTES

1. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
2. VERIFY ALL NEW FOOTINGS TO HAVE A MIN. DEPTH OF 18" BELOW FINISH GRADE.
3. U.O.N. ALL NEW FOUNDATION WALLS ARE 8" WIDE WITH 18" X 8" FOOTING.
4. REFERENCE STRUCTURAL FOUNDATION PLAN FOR MIN. SOIL BEARING ALLOWANCE. AND MINIMUM FOOTING DEPTH. S2.1.
5. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY OR EXPOSED TO EARTH OR WEATHER SHALL BE PRESSURE TRTD.
6. VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
7. NOTE: FOUNDATION IS OFFSET FROM FRAMING 4" AT NEW BRICK VENEER AREAS SEE DIMENSIONAL INFORMATION ON PLAN.
8. NOTE: REFERENCE GEOTECHINCAL REPORT FOR ALL SITE AND FOUNDATION BEARING AND SOIL DRAINAGE ISSUES. SEE SHEET S2.1 FOR ADDITIONAL STRUCTURAL INFORMATION.
9. CONTRACTOR TO CONFIRM ALL SETBACKS PRIOR TO POURING FOUNDATION
10. ALL COND. FLOOR INSULATION TO BE A MIN. R-30 BATTS AND 4-MIL VAPOR BARRIER FACE. PROVIDE MIN. 6 MIL. BLACK PLASTIC VAPOR BARRIER GROUND COVER, LAPPED 12" AT SEAMS AND EXTENDED UP FOUNDATION WALL TO SILL PLATE TYPICAL.
11. PROVIDE MECHANICAL VENTILATION FOR THE NOTED FREE VENT AREA REQUIRED BELOW. PROVIDE INTAKE AND EXHAUST AIR EQUALIZED. PROV. CRAWL AREA WITH DE-HUMIDIFIERS.
12. CRAWL SPACE TO HAVE A MINIMUM OF 24" CLEAR BELOW FLOOR JOIST AND 12" BELOW BEAMS OR GIRDERS AND DUCTS.
13. REF STRUCTURAL ENGINEERS NOTES AND FDN PLAN, SHEET S2.1.

FOUNDATION VENT CALC'S

CRAWL AREA 941 S.F. / 150 = 6.273 S.F. FDN VENT AREA REQ'D
108.75 / 144 X .65 = .49 S.F. PER VENT (14.5" x 7.5")
6.273 S.F. / .49 = 12.8 (13 VENTS REQ'D)

OR: PROVIDE MECHANICAL VENTILATION TO MEET MINIMUM VENT AREA REQUIREMENTS. PROVIDE MAKEUP AIR SOURCE AND EXHAUST PORT TO ENSURE CONTINUOUS AIRFLOW PER MECHANICAL



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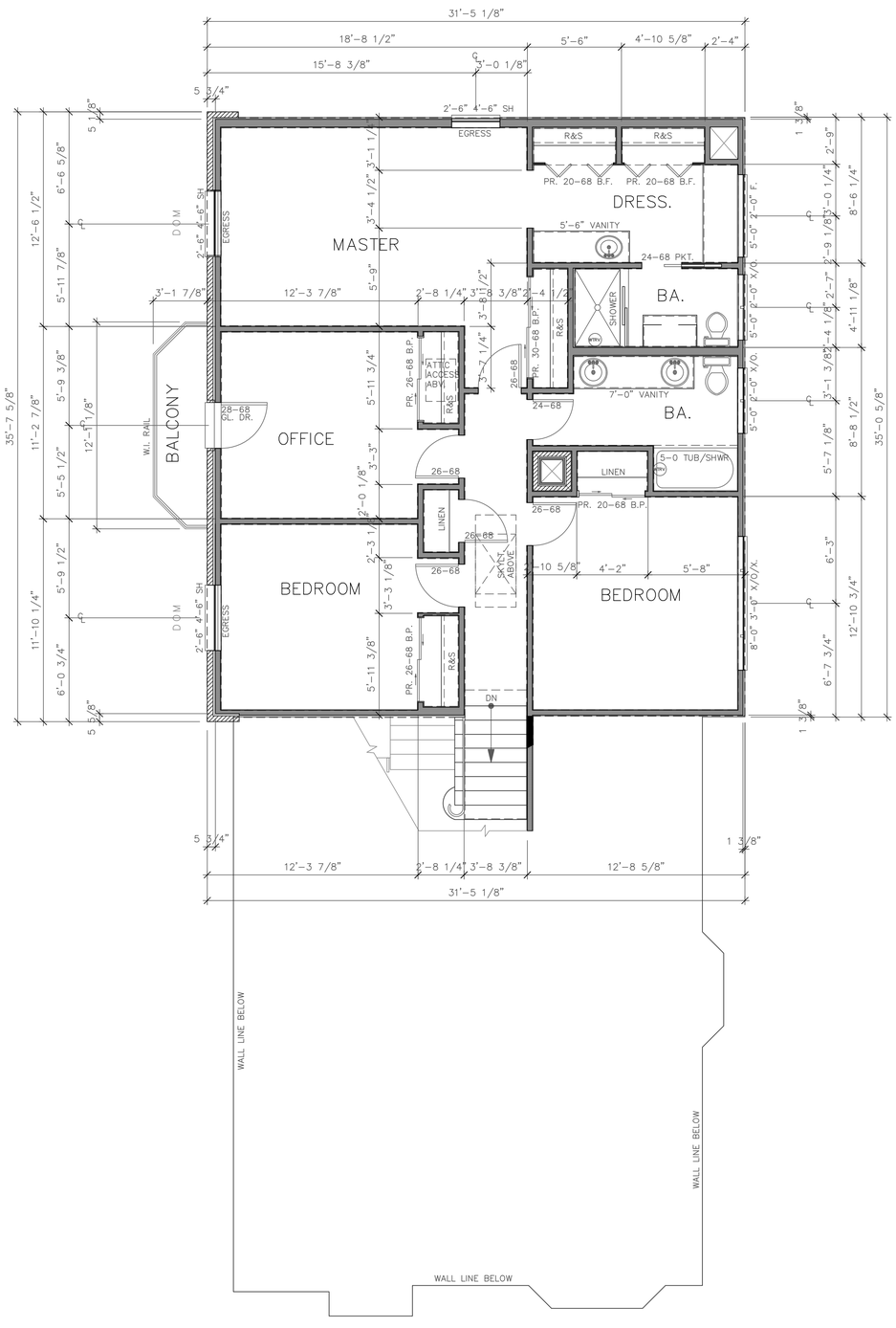
OWNER:
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Mercer Island, WA. 98040

FOUNDATION PLAN

ISSUE DATE:	9-5-2024		
REVISIONS			
1-15-2025	REVISION-1 CORRECTIONS	1	

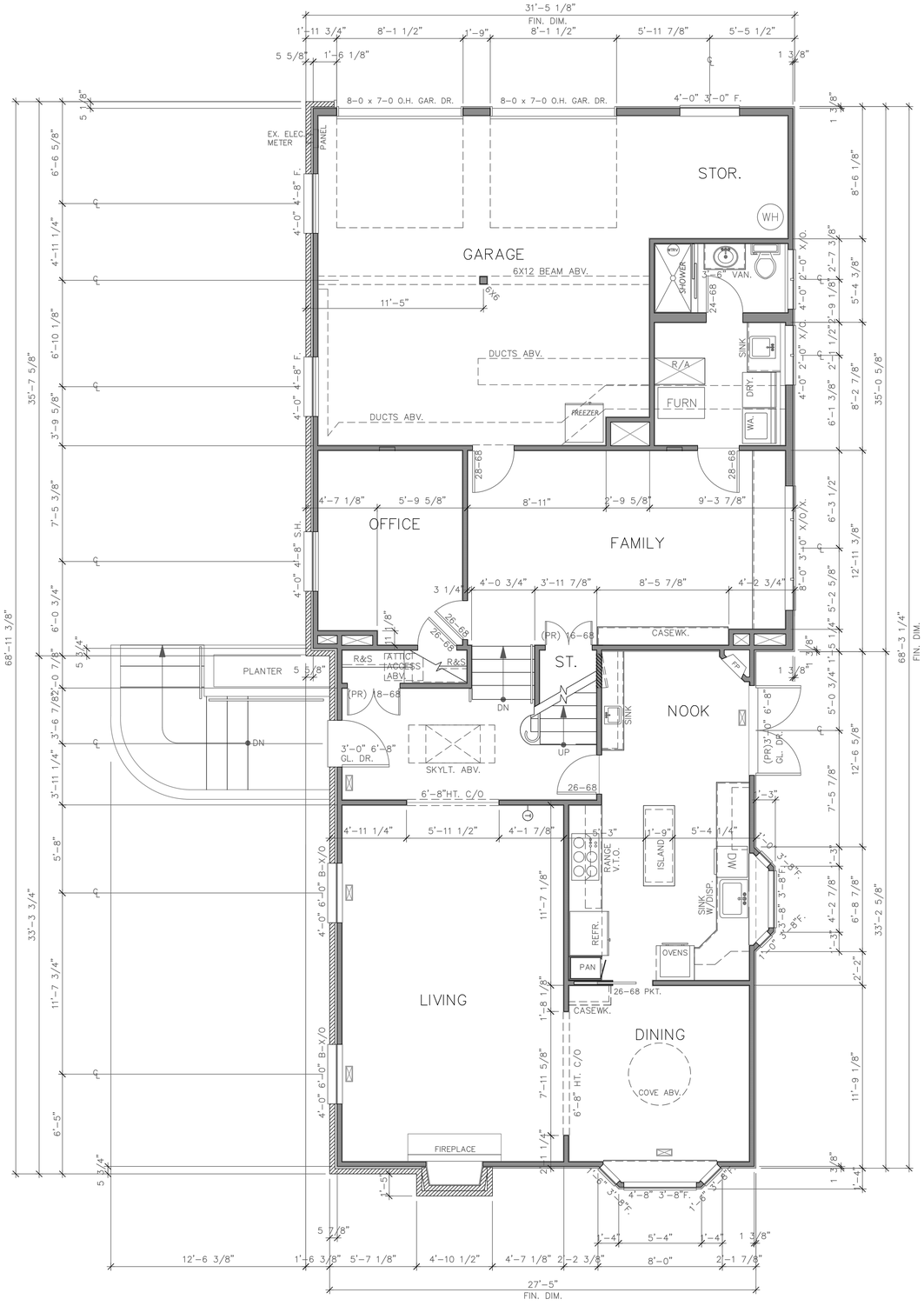
A1



1 A3 EXIST. SECOND FLOOR PLAN

1/4" =1'0"

LIVING SPACE = 1,073 SQ. FT.



1 A3 EXIST. MAIN FLOOR PLAN

1/4" =1'0"

LIVING AREA = 1,432 SQ. FT.
GARAGE AREA = 542 SQ. FT.

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EXISTING FLOOR PLANS

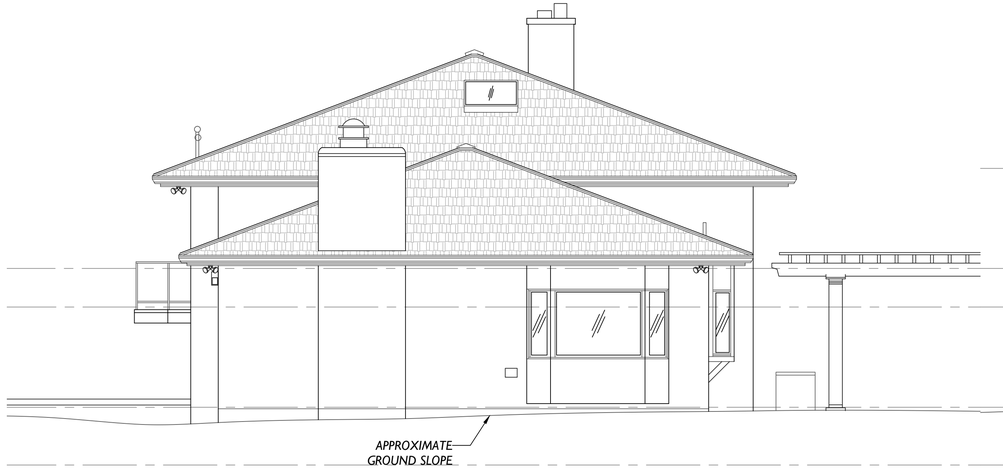
ISSUE DATE:	9-5-2024	
REVISIONS		
1-15-2025	REVISION-1 CORRECTIONS	1

A2



2 A3 NORTH ELEVATION
1/4" =1'0"

1 A3 WEST ELEVATION
1/4" =1'0"



4 A3 SOUTH ELEVATION
1/4" =1'0"



3 A3 EAST ELEVATION
1/4" =1'0"

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EXISTING EXTERIOR ELEVATIONS

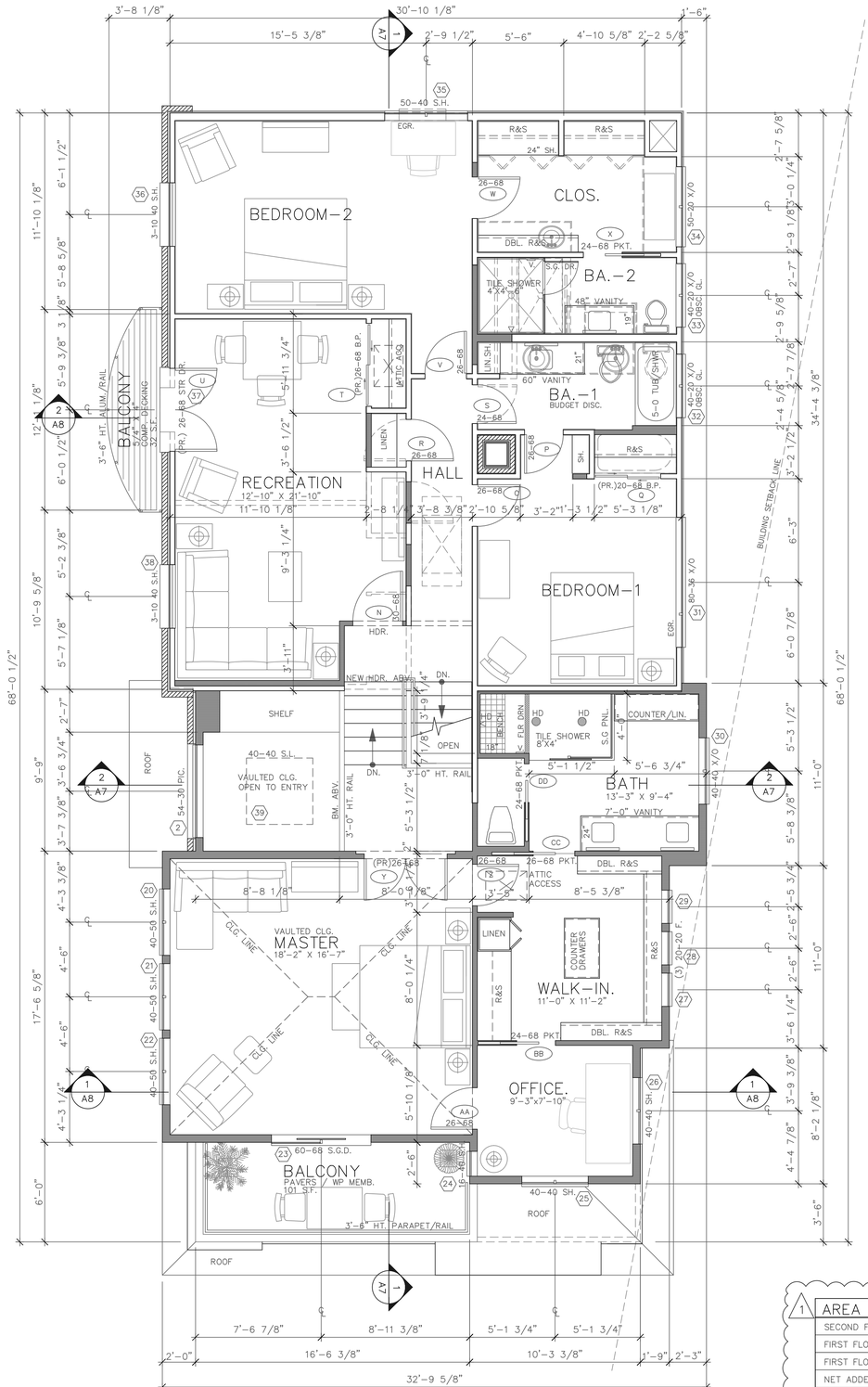
ISSUE DATE: 9-5-2024

REVISIONS	
1-15-2025	REVISION-1 CORRECTIONS

A3

FLOOR PLAN NOTES

1. WRITTEN DIMENSIONS REPRESENT EXISTING CONDITIONS AND ARE FOR REFERENCE. FIELD VERIFY ALL.
2. FIRE BLOCKING AT ALL PLUMBING PENETRATIONS.
3. PLATE HEIGHTS ARE AS INDICATED ON ELEVATIONS, SHEET A5. UNLESS OTHERWISE NOTED.
4. SEE SHEET A13 (A–L) FOR WINDOW/DOOR, HEAD, SILL AND JAMB WRAP SEQUENCE DETAILS.
5. WINDOWS SPECIFIED ARE MFGR. BY: VPI OR EQUAL. U = PER SCHEDULE SHT. G1 – CONTRACTOR TO VERIFY ALL ROUGH OPENINGS PRIOR TO ORDERING.
6. ALL CASEWORK AND FINISHES ARE TO BE CONFIRMED PER OWNER DIRECTION.
7. HANDRAILS TO BE 34" – 38" ABOVE NOSING, WITH HAND GRIP OF 1 1/4" – 2" IN CROSS SECTION, 1–1/2" CLEAR TO FINISH WALL.
8. GUARDRAILS TO BE 36" MIN. ABOVE FINISH FLOOR. CONTRACTOR TO VERIFY TO FIELD INSPECTOR THAT ALL GUARDS AND RAILINGS ARE CAPABLE OF RESISTING 200 LB. LOAD ON TOP RAIL ACTING IN ANY DIRECTION. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH.
9. NEW GLAZING AND ENERGY COMPONENTS PER THE SUMMARIES ON SHEETS G1 AND G2.
10. EACH SLEEPING ROOM SHALL BE PROVIDED W/ A SMOKE DETECTOR (SD) (HARD WIRED AND INTERCONNECTED) SMOKE DETECTORS SHALL BE PROVIDED W/ A BATTERY BACK–UP AND AUDIBLE ALARM. SEE IRC SECTION R313.
11. EACH SLEEPING ROOM AND IN THE IMMEDIATE VICINITY, OUTSIDE OF THE BEDROOMS, ON BOTH LEVELS, SHALL BE PROVIDED W/ A CARBON MONOXIDE (CM) DETECTOR (HARD WIRED AND INTERCONNECTED)
12. BEDROOM EMERGENCY EGRESS WINDOWS: MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT., MIN. NET CLEAR OPENABLE WIDTH OF 20" AND MINIMUM NET CLEAR OPENING HEIGHT OF 24". MAXIMUM FINISHED SILL HEIGHT OF 44" ABOVE FLOOR. VERIFY SPECIFIC WINDOW MANUFACTURERS OPENINGS PRIOR TO CONSTRUCTION.
13. @ ALL TUBS AND SHOWERS:
    * FIREBLOCKING BETWEEN STUDS.
    * LIMIT SHOWER FLOW TO 1.5 G.P.M.
    * WATERPROOF WALL TO WITHIN 72" ABOVE DRAIN INLET.
    * ALL GLAZING WITHIN 70" ABOVE DRAIN INLET TO BE SAFETY GLASS.
    * NO VAPOR BARRIER BEHIND G.W.B.
14. VENT ALL EXHAUST FANS TO OUTSIDE AIR. EXHAUST FANS AND GAS FANS SHALL TERMINATE NO LESS THAN 36" FROM THE OPERABLE PORTION OF WINDOWS AND DOORS. BATHROOM VENTILATION PER IRC TABLE M1506.3. SEE SHEET G1 FOR VENTILATION REQUIREMENTS.
15. WHOLE HOUSE VENTILATION SYSTEM: COMBINED USE OF SOURCE SPECIFIC AND WHOLE HOUSE FANS. FANS INDICATED AS W.H.F. ARE TO BE CONNECTED TO A 24 HR TIMER. SEE SHEET A1. GLAZING/FAN SCHEDULE FOR FAN SIZE AND TYPE. SEE SHEET G1 FOR WHOLE HOUSE VENT. NOTES AND REQUIREMENTS. PROVIDE WINDOW FRAME VENTS AT LIVING AREA WINDOWS WITH A MINIMUM NET. AREA OF 4 SQ. INCHES.



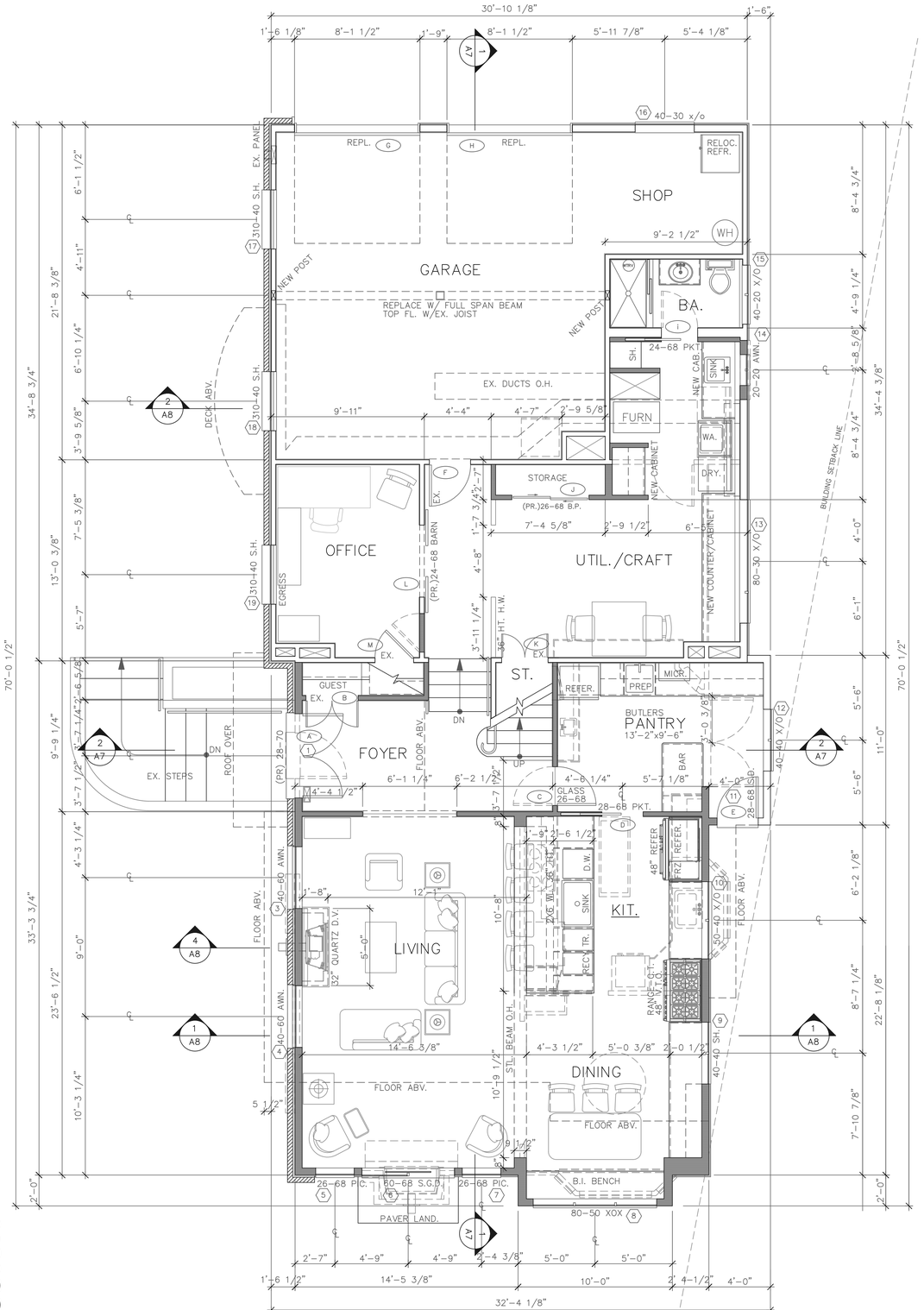
2/A4 REVISED SECOND FLOOR PLAN
1/4" =1'0"

LIVING SPACE = 1,842 SQ. FT.
ADDED AREA = 732 SQ. FT.
DECK AREA = 136 SQ. FT.

EXISTING WALLS | NEW WALLS | WALLS REMOVED

NORTH

1 AREA SUMMARY	EX. AREA	REVISED AREA
SECOND FLOOR AREA	1,073 S.F.	1,805 S.F.
FIRST FLOOR AREA	1.432 S.F.	1,486 S.F.
FIRST FLOOR VOLUME AREA	60 S.F. X 150% = 90 S.F.	
NET ADDED VOLUME AREA	0 S.F.	30 S.F.
EX. DECK AREA	35 S.F.	133 S.F.
EX. GARAGE AREA	542 S.F.	542 S.F.
TOTAL CONDITIONED FLOOR AREA	2,505 S.F.	3,321 S.F.



1/A4 REVISED MAIN FLOOR PLAN
1/4" =1'0"

LIVING AREA = 1,516 SQ. FT.
ADDED AREA = 84 SQ. FT.
GARAGE AREA = 542 SQ. FT.

EXISTING WALLS | NEW WALLS | WALLS REMOVED

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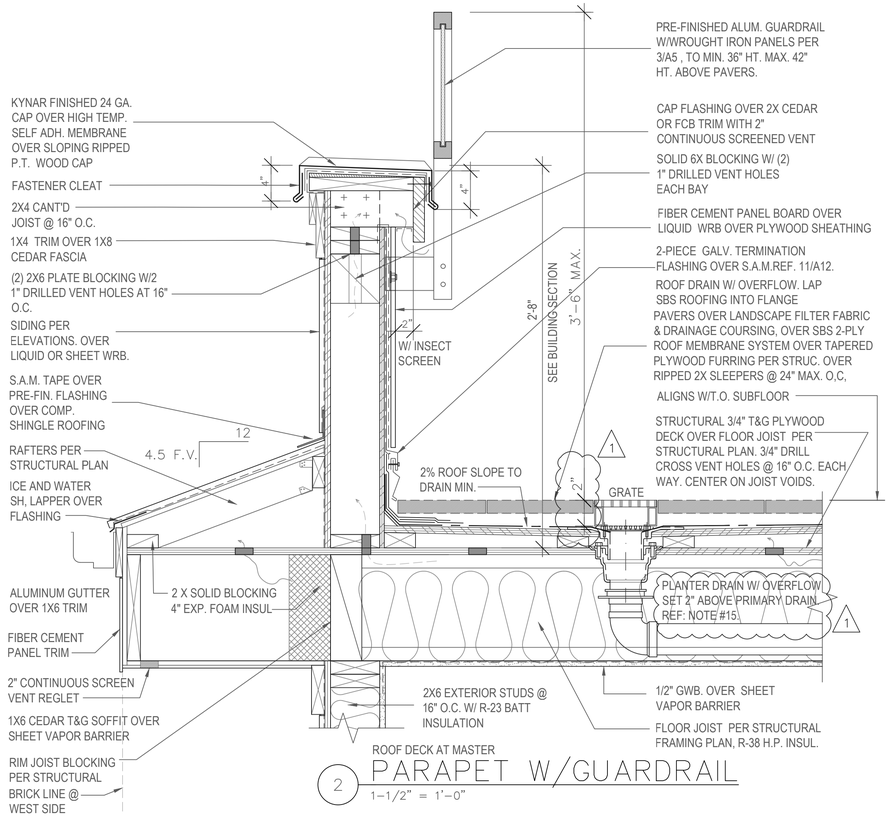
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Mercer Island, WA. 98040

OPTION–1
REVISED FLOOR PLANS

ISSUE DATE: 9–5–2024

REVISIONS	
1–15–2025	REVISION–1 CORRECTIONS

A4



ROOF PLAN NOTES

1. INSTALL ROOFING PER MANUF. SPECIFICATIONS. REFERENCE PLAN AND ELEVATIONS FOR VARYING PITCHED AND ROOF-DECK AREAS. FIELD VERIFY AND MATCH EXISTING ROOF PITCH (4.5 / 12 TBD.)
2. REFERENCE STRUCTURAL ROOF FRAMING PLAN FOR DETAILS, FRAMING MEMBERS / HEADERS AND HOLDOWN-STRAPS.
3. PROVIDE ROOF VENTILATION PER IBC CHAPTER R806.1. ROOF VENT CALCULATIONS AS NOTED BELOW.
4. ROOF MATERIAL TO BE PER EXTERIOR ELEVATIONS/SECTIONS. PROVIDE SHEET METAL FLASHING @ ALL INTERSECTIONS. REFERENCE 1/A13, A-H FLASHING PROFILES.
5. PROV. UNVENTED BLOCKING OVER EXTERIOR WALLS.
6. CHIMNEY HEIGHT TO BE 2'-0" MIN. ABOVE ANY PORTION OF BUILDING WITHIN 10'-0". FIELD VERIFY EXISTING CHIMNEY HEIGHT.
7. REF. EXTERIOR ELEVATIONS A5 AND BUILDING SECTIONS A7 AND A8 FOR PLATE HEIGHTS:
8. CONTRACTOR TO VERIFY LOCATION OF ALL ROOF SUPPORT BRACING OR POSTING AND PROVIDE ADEQUATE BEARING TO FOUNDATION. REFERENCE STRUCTURAL PLAN.
9. TYPICAL ROOF SHEATHING PER STRUCTURAL NOTES. NAIL ROOF SHEATHING PER STRUCTURAL NOTES, S1.0 AND S2.3.
10. REFER TO GENERAL STRUCTURAL NOTES, SHEET S1.0 AND S2.3 FOR ADDITIONAL REQUIREMENTS.
12. CONTINUOUS 2" WIDE PARAPET VENT WITH INSECT MESH SCREEN AT PARAPETS. REFERENCE OVERHANG DETAILS 1, 2, 3, 10 AND 12 / SHEET A12.
13. PROVIDE 2" CONTINUOUS EAVE VENT TO MEET THE NET FREE AREA. PROVIDE AT TOP AND BOTTOM FOR CROSS VENTILATION PROVIDE INSECT MESH SCREENING AT ALL VENTS.
14. LOCATE SOLAR PANELS PER MANUFACTURER AND INSTALLER DATA. REFERENCE SHEET G2 FOR REQUIRED MINIMUM WATTAGE PER WSEC ENERGY CREDIT REQUIREMENTS.
15. PER THE 2024-IPC, 1110.4 MIN. NUMBER OF ROOF DRAINS. Not less than two roof drains shall be installed in roof areas 10,000 square feet (929 m2) or less and not less than four roof drains shall be installed in roofs over 10,000 square feet (929 m2) in area. (1)

I single drain, with overflow, is needed for the 101 s.f. roof deck. 3" hourly rainfall is shown in the Zurn precipitation diagram. Per the Zurn: *ROOF DRAIN VERTICAL REQUIREMENT FOR HORIZONTAL ROOF AREAS AT VARIOUS RAINFALL RATES*". A 3" drain line has 7.06 sq. in. of area, which can drain up to a 2,930 sq. ft. area effectively.

ROOF VENT CALCULATIONS.

ROOF AREA: A EXISTING AREA

1073 S.F. / 300 = 3.58 S.F. VENTING REQ'D.
3.58 S.F. / 2 = 1.79 S.F. VENTING REQ'D AT ROOF RIDGES.
1.79 S.F. / .4 S.F. = 4.4 (5) ROOF JACKS REQ'D (PROVIDED).
VENT JACK NET FREE AIR (12" X 12" X 40% (.4) = 57.6 CU IN. /144 = 0.4

ROOF AREA: B NEW AREA

55 S.F. / 300 = 3.37 S.F. VENTING REQ'D.
3.37 S.F. / 2 = 1.69 S.F. VENTING REQ'D AT ROOF RIDGES.
1.69 S.F. / .4 S.F. = 4.21 (5) ROOF JACKS REQ'D (PROVIDED).

ROOF AREA: C LOWER AREA

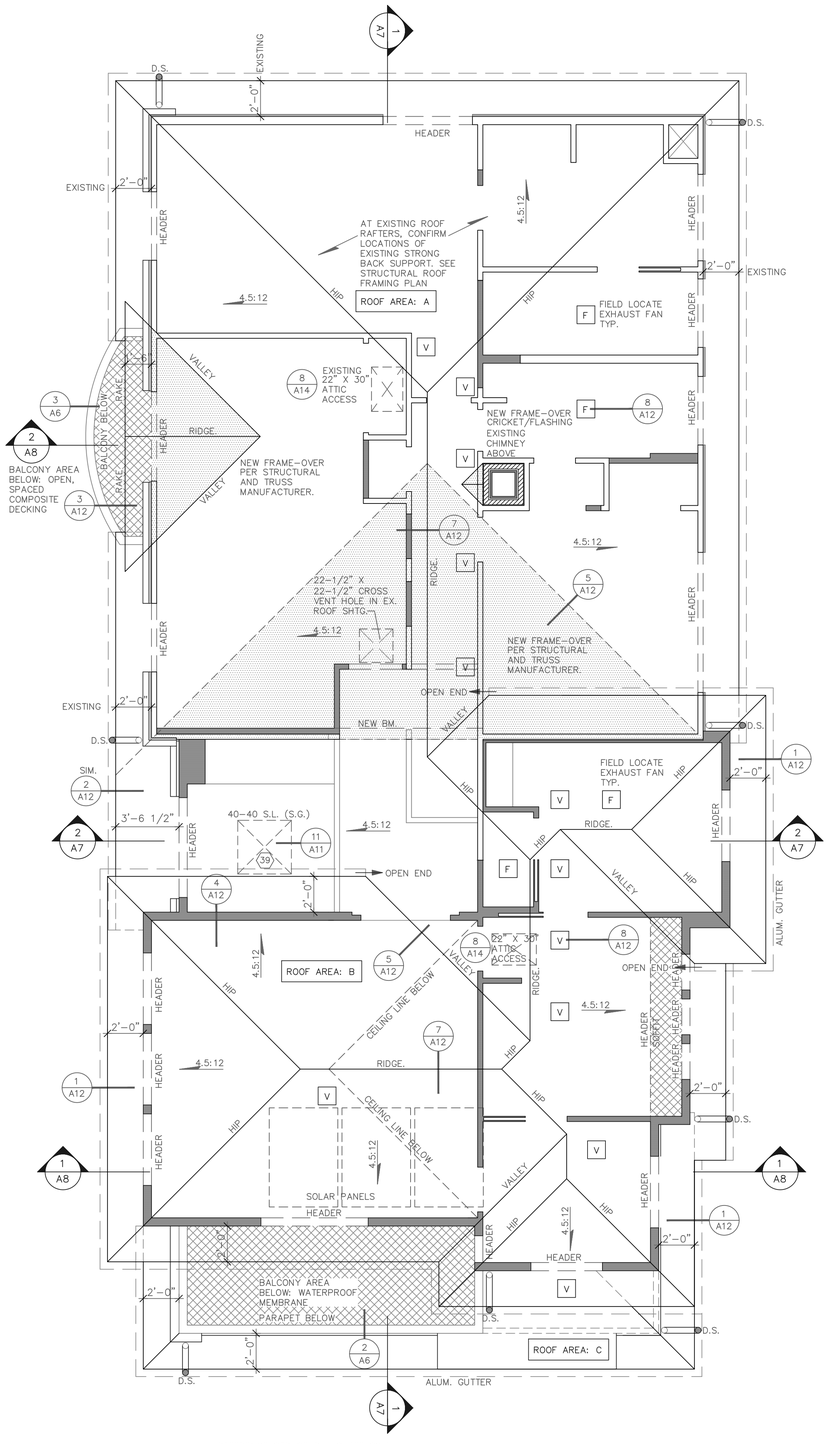
1010 S.F. / 300 = 0.18 S.F. VENTING REQ'D.
0.18 S.F. / 2 = 0.092 S.F. VENTING REQ'D AT ROOF RIDGES.
0.092 S.F. / .4 S.F. = 0.23 (1) ROOF JACK REQ'D (PROVIDED.

RIDGE VENT OPTION:

-ENSURE CONTINUOUS RIDGE VENT OF THE SAME NET FREE AREA. CONTINOUS RIDGE VENTS PROV. MIN. 18 SQ. IN. PER LINEAL FT. VERIFY EXISTING PLAN FOR LOCATIONS

-PROVIDE ROOF VENTILATION PER 2021 SRC CHAPTER R806.

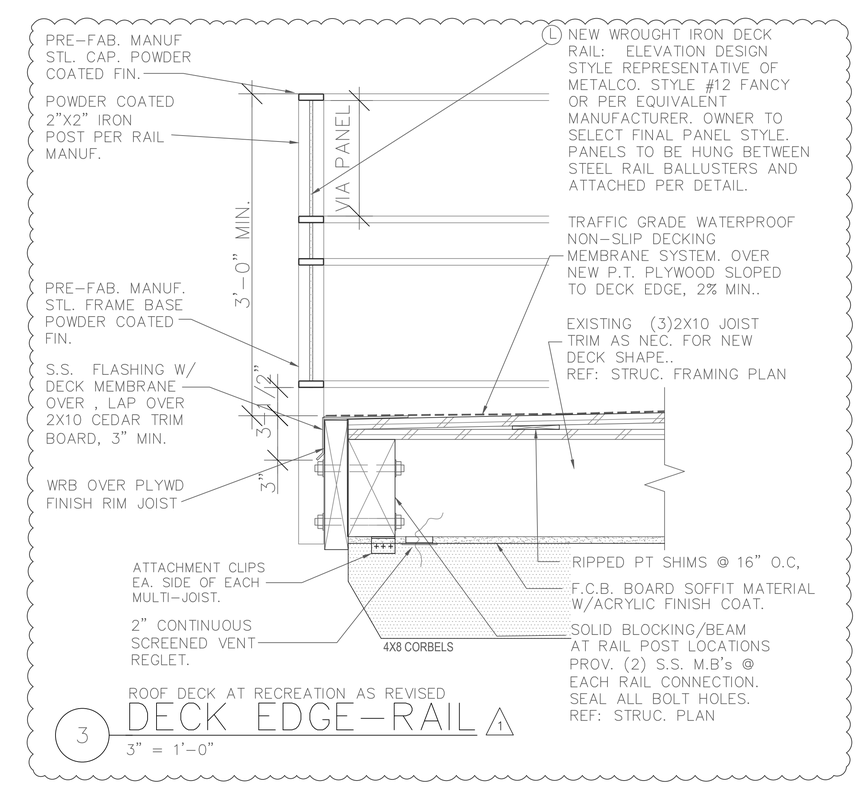
-ENSURE CONT. (3) 1-1/2" SCREENED VENT HOLES @ EACH NEW VENT BLOCK. CONFIRM TRUSS EAVE VENTS ARE NOT BLOCKED.



REFERENCE STRUCTURAL SHEET S2.3

1 / A5 ROOF FRAMING PLAN
1/4" =1'0"

EXISTING WALLS | NEW WALLS | WALLS REMOVED



ROOF DECK AT RECREATION AS REVISED

3 / DECK EDGE-RAIL 1
3" = 1'-0"

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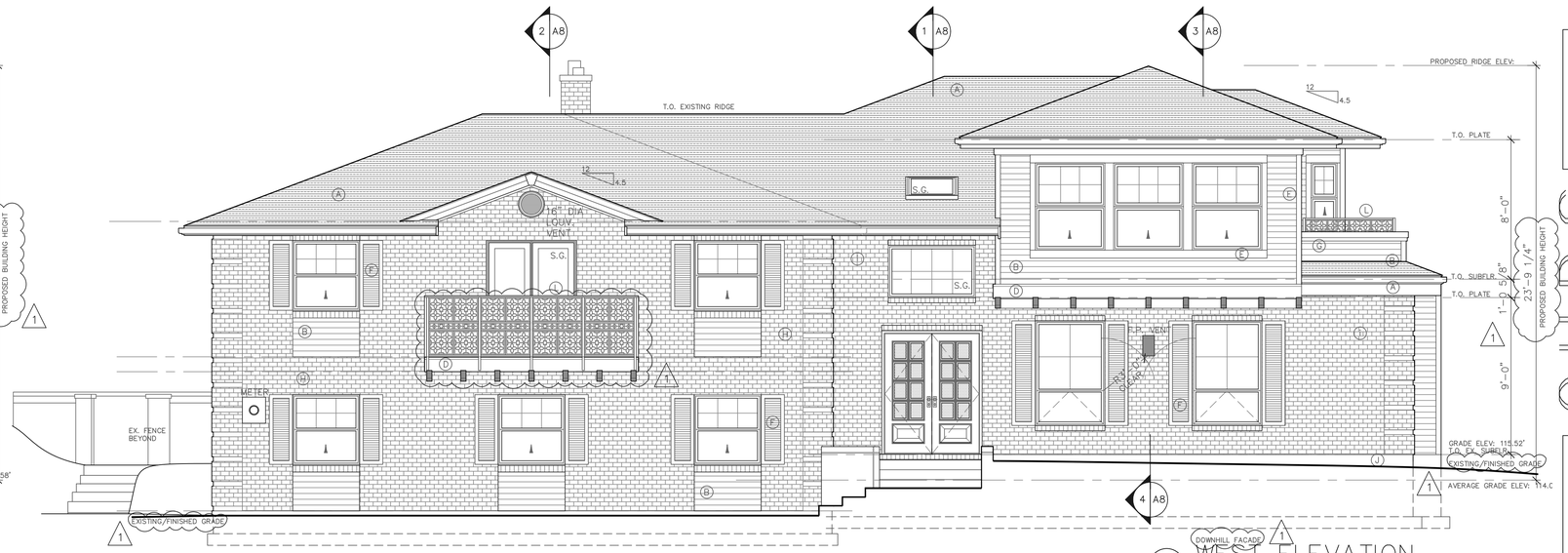
ROOF PLAN

ISSUE DATE:	9-5-2024	
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1-15-2025		

A5



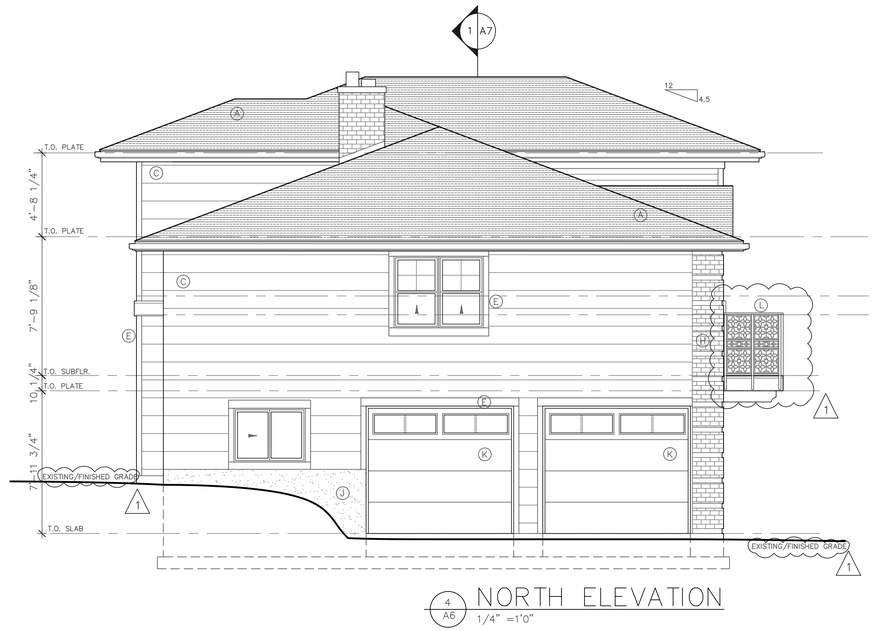
2 A6 SOUTH ELEVATION
1/4" =1'0"



1 A6 WEST ELEVATION
1/4" =1'0"



3 A6 EAST ELEVATION
1/4" =1'0"



4 A6 NORTH ELEVATION
1/4" =1'0"

ELEVATION NOTES

1. @ DECKS, PROVIDE CONTINUOUS PRE-FINISHED METAL RAILINGS W/WROUGHT IRON PATTERN: PER 2-3/A5. MINIMUM. 36" HEIGHT FINISHED. (1)
2. PROVIDE ROOF VENTILATION PER I.R.C SECTION 806. APPLY TO EXISTING ATTIC.
3. PROVIDE 26 GAUGE SHEET METAL FLASHING AND COUNTERFLASHING AT ALL ROOF VALLEYS, ROOF PENETRATIONS, RAKES, EAVES, PARAPETS AND INCLUDING REPLACING CHIMNEY FLASHING.
4. REFER TO I.R.C. SECTION R1001. FOR CHIMNEY CONSTRUCTION. REF. STRUC. NOTES.
5. PROVIDE WEATHERSTRIPPING AT ALL DOORS AND WINDOWS. BACKER-ROD AND CAULK ALL JOINTS AND PENETRATIONS IN EXTERIOR WALL. SEE WRAP SEQUENCE DETAILS, SHEET A12.
6. AT EXISTING EXTERIOR SIDING: REPAIR OR REPLACE AS NECESSARY INCLUDING AT REVISED WINDOW PLACEMENTS. INSTALL NEW WEATHER RESISTANT BARRIER WHERE EXISTING SIDING IS REPLACED.
7. SEE EGRESS OPENING MIN. REQUIREMENT NOTES FOR ALL EGRESS OPENINGS. REF. SHEET A1 GLAZING SCHEDULE NOTES
8. NEW EXTERIOR SIDING COLORS ARE PER OWNER. EXISTING BRICK VENEER TO BE INSPECTED AND RETUCKED AND POINTED AS NEEDED TO ENSURE PROPER MORTAR ADHESION AND MORTAR GAP VENTILATION. OWNER TO REPAINT AS DESIRED.
10. NEW SHEET STYLE W.R.B. TO BE TAPED AT JOINTS.
11. PROVIDE CONTINUOUS PRE-FINISHED METAL GUTTERS TYPICAL. (STYLE AND COLOR PER OWNER).
12. PROVIDE GALVANIZED SHEET METAL FLASHING AND COUNTERFLASHING AT ALL ROOF PENETRATIONS, VALLEYS, RAKES, EAVES, VENTS AND INCLUDING CHIMNEY INTERSECTIONS.
13. PROVIDE WATERPRROOF ROOF/DECK COATING WITH NON-SLIP SURFACE AT ALL BALCONIES. COLOR PER OWNER. INSTALL PER MANUFACTURERS PRECISE INSTRUCTIONS OVER A MIN. 2% SLOPED STRUCTURAL SUBSTRATE. FLASHING PER DETAILS.

ELEVATION MATERIALS

(A) ROOFING SYSTEM: TRU-DEFINITION DURATION ESTATE GRAY ALGAE RESISTANT LAMINATE ARCHITECTURAL ROOFING SHINGLES, (40-YEAR) (OWENS CORNING OR EQUIVALENT MANUFACTURER.) OVER ICE AND WATER SHIELD MEMBRANE (OR INCORPORATION OF SIMILAR 30# MIN. ROOFING W.R.B.) ROOFING COLOR: TO BE VERIFIED PER OWNER.	(G) 24 GA. METAL COPING CAP: AEP SPAN OR EQUAL: MATCH ALMOND COLOR. ALL INTERMEDIATE FLASHINGS TO MATCH ALMOND COLOR
	(H) EXISTING BRICK VENEER. TUCK-REPAIR AS NECESSARY.
	(I) NEW BRICK VENEER. MATCH EXIST. STYLE, QUION, COLOR.
(B) 4" EXP. LAP BOARD SIDING. 5-1/4" FIBER CEMENT. NEW SHEET STYLE WEATHER RESISTANT BARRIER.	(J) CONCRETE FINISH. CLEAR, ELASTOMERIC COATING PROSOCO OR EQ.
(C) 12" EXP. LAP BOARD SIDING. 11-1/4" FIBER CEMENT. NEW SHEET STYLE WRB. VERIFY, MATCH EXISTING.	(K) NEW OVERHEAD GARAGE DOORS. MADISON CRAFTSMAN STYLE WOOD. PAINT OR STAIN GRADE COLOR. LUX GARAGE DOORS OR EQUIVALENT MANUFACTURER. GLAZING STYLE PER EXTERIOR ELEVATION. REPLACE HARDWARE IN GARAGE.
(D) 9-1/4" OR 11-1/4" 2X CEDAR TRIM DECK FASCIA BOARD SMOOTH FINISH. STAIN GRADE.	
(E) WINDOW AND SIDING TRIM BOARDS: CEDAR OR EQUAL 2X OR 5/4" X 4", 6", 10". ROUGH SAWN FINISH, STAIN PER OWNER. REFERENCE DETAILS.	(L) NEW WROUGHT IRON DECK RAIL: ELEVATION DESIGN STYLE REPRESENTATIVE OF METALCO STYLE #12 FANCY OR PER EQUIVALENT MANUFACTURER. OWNER TO SELECT FINAL PANEL STYLE. PANELS TO BE HUNG BETWEEN STEEL RAIL BALLUSTERS AND ATTACHED PER DETAIL.
(F) WINDOW SHUTTERS: EKENA WOOD MILLWORK OR EQUIVALENT MANUF. 15" OR 16" WIDE. MATCH WINDOW SILL OR TRIM BASE HEIGHT.	

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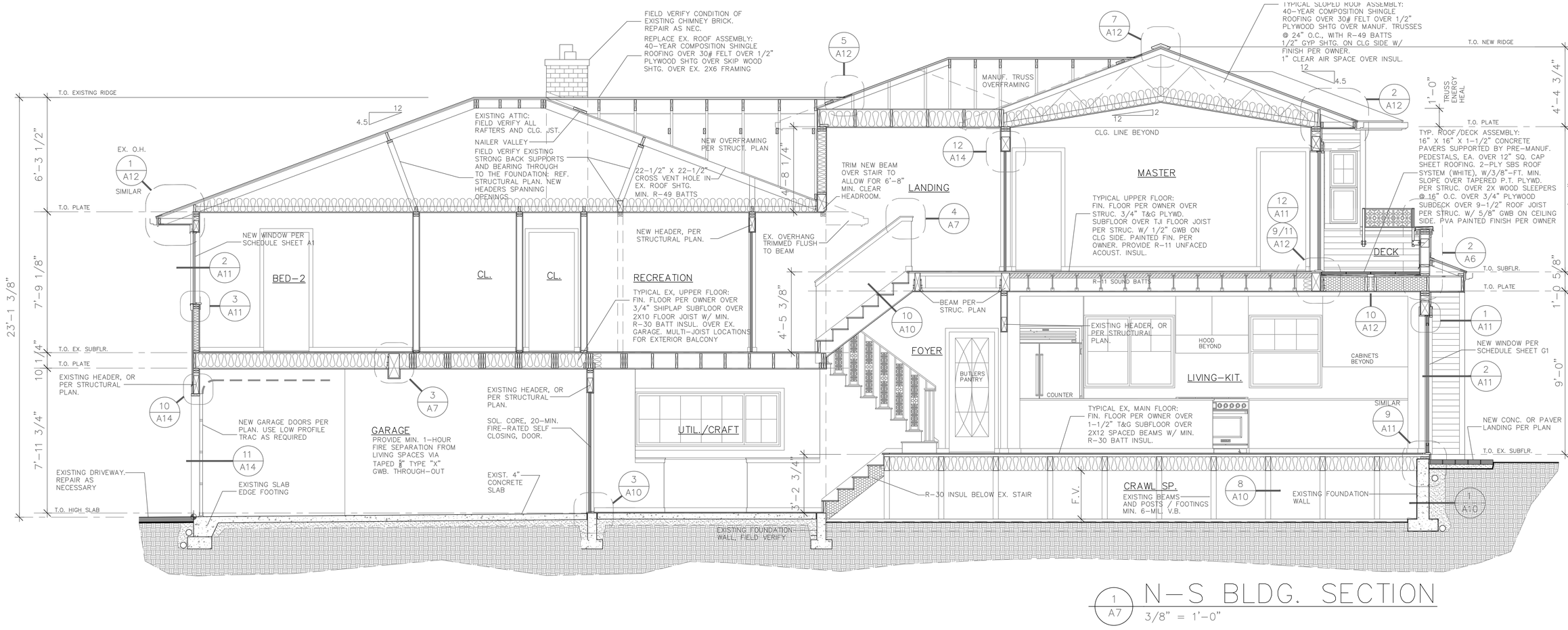
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REVISED EXTERIOR ELEVATIONS

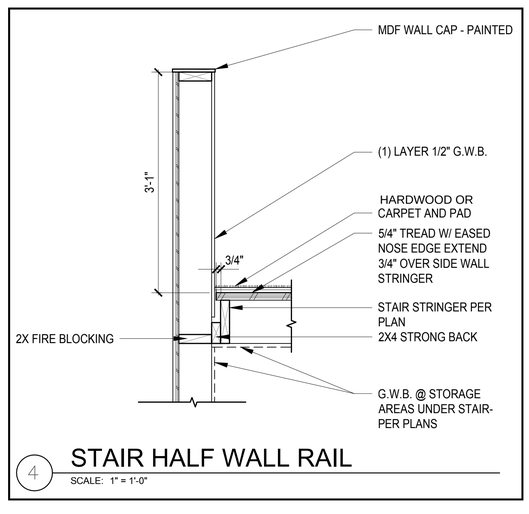
ISSUE DATE:	9-5-2024
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1-15-2025	

A6



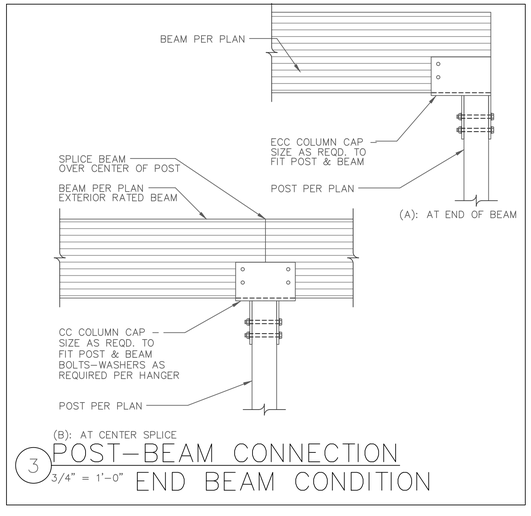
1 A7 N-S BLDG. SECTION

3/8" = 1'-0"



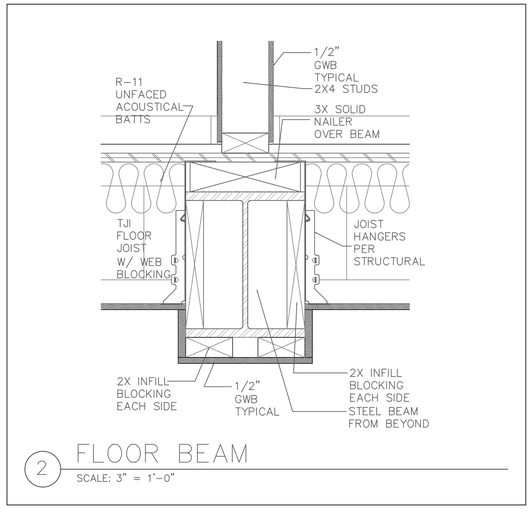
4 STAIR HALF WALL RAIL

SCALE: 1" = 1'-0"



3 POST-BEAM CONNECTION

3/4" = 1'-0" END BEAM CONDITION



2 FLOOR BEAM

SCALE: 3" = 1'-0"

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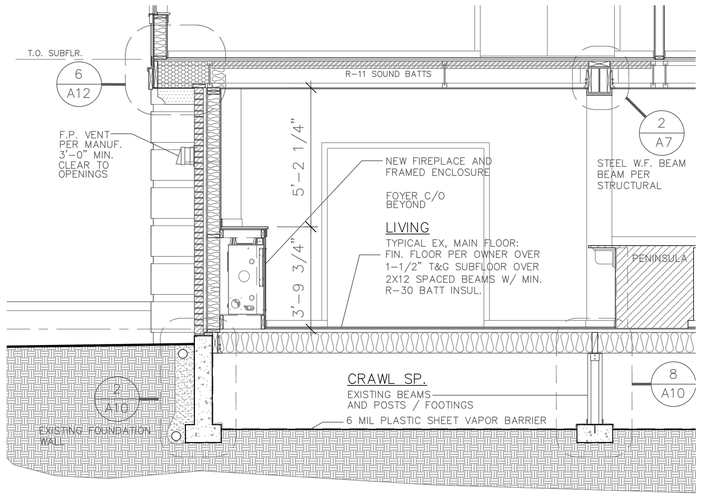
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BUILDING SECTIONS

ISSUE DATE: 9-5-2024

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1-15-2025	REVISION-1 CORRECTIONS

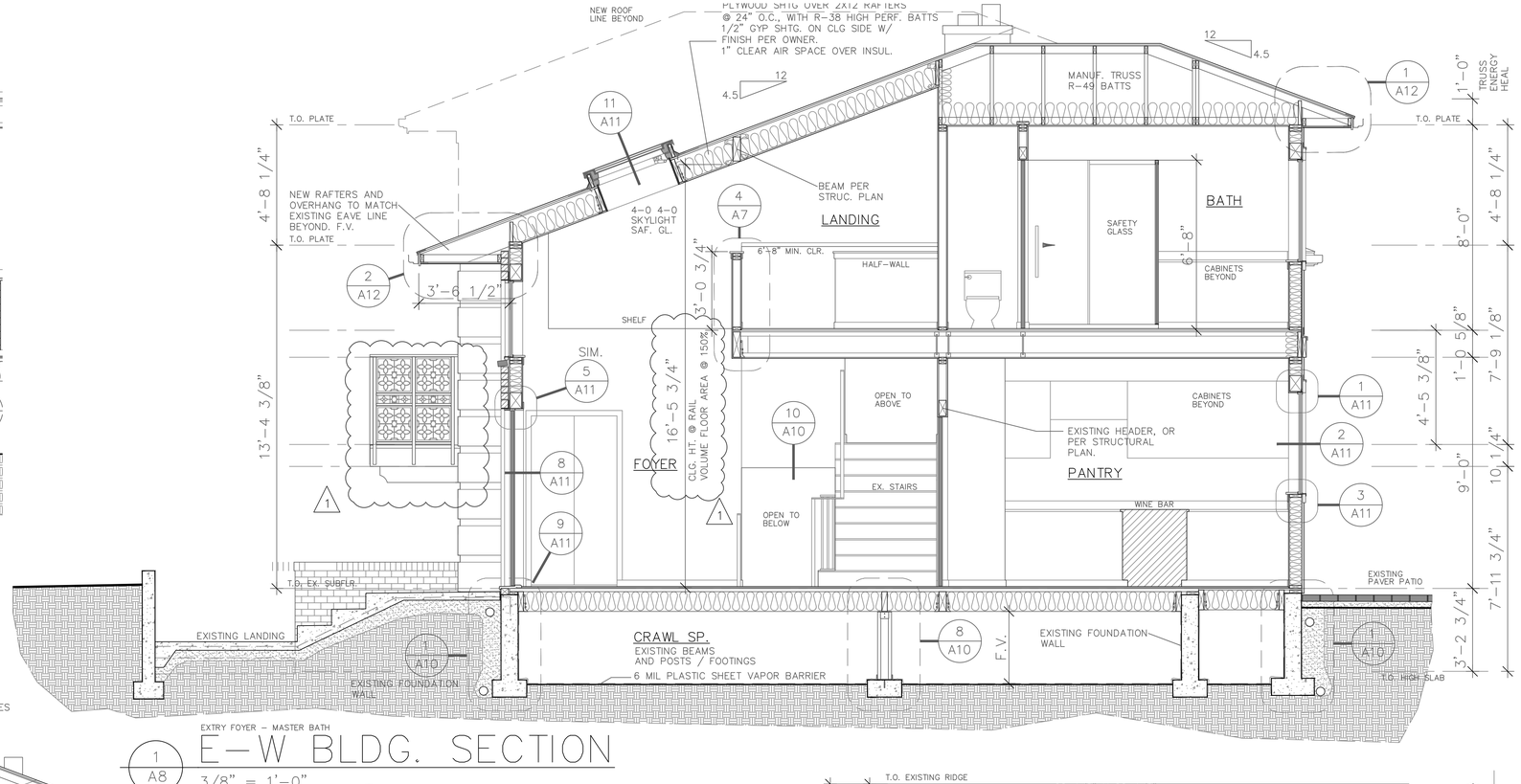
A7



LIVING FIREPACE WALL

4 / A8 E-W LIV.SECTION

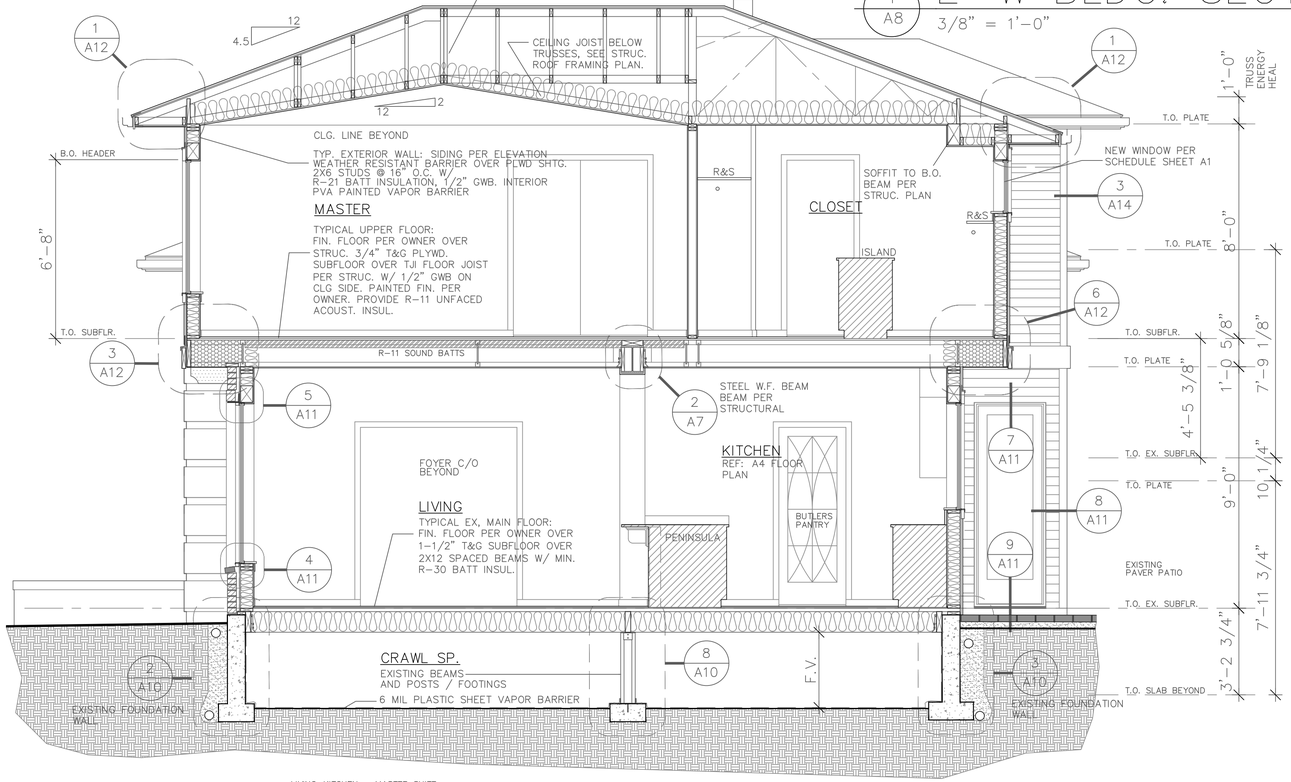
3/8" = 1'-0"



EXTRY FOYER - MASTER BATH

1 / A8 E-W BLDG. SECTION

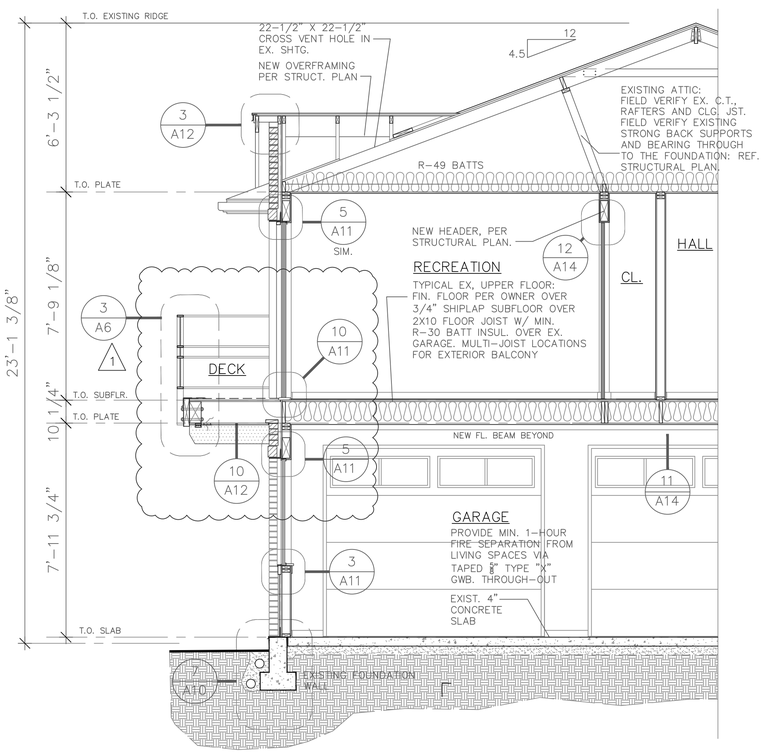
3/8" = 1'-0"



LIVING-KITCHEN - MASTER SUITE

3 / A8 E-W BLDG. SECTION

3/8" = 1'-0"



AT EXISTING GARAGE AND REC.

2 / A8 DECK BLDG. SECTION

1/4" = 1'-0"

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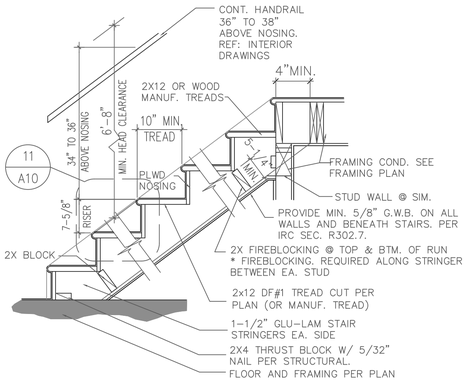
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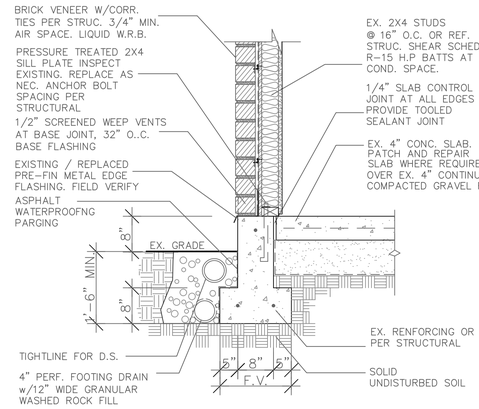
BUILDING SECTIONS

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A8

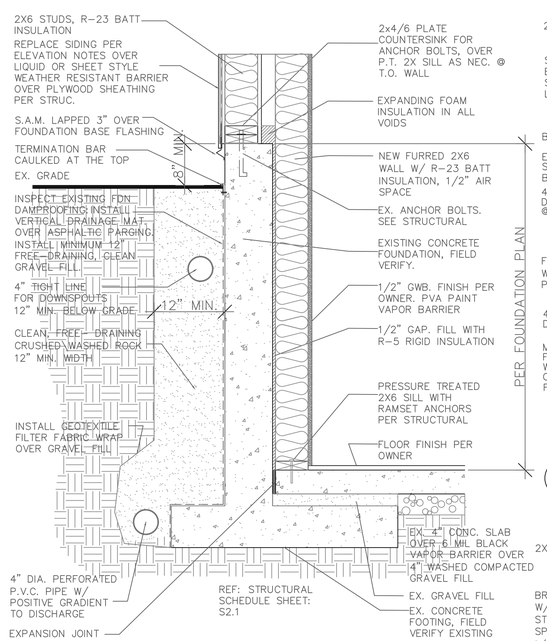


10 INTERIOR STAIR
NO SCALE



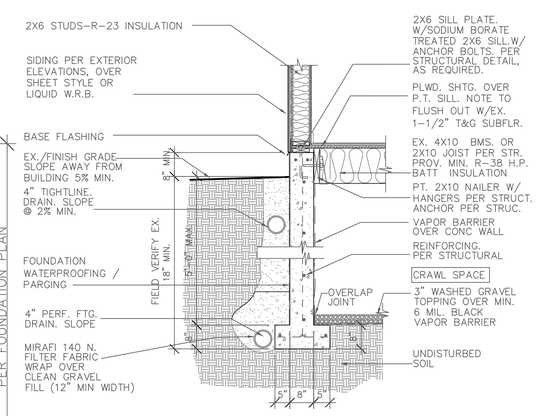
REF: STRUCTURAL SHEET S2.1

7 GARAGE/BSMT FDN. WALL
3/4" = 1'-0"



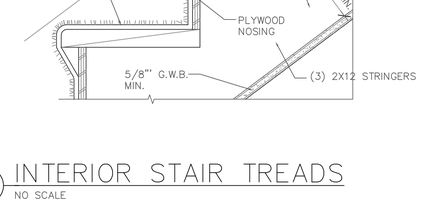
EXISTING HIGH BASEMENT WALLS

4 FOUNDATION WALL
1-1/2" = 1'-0"

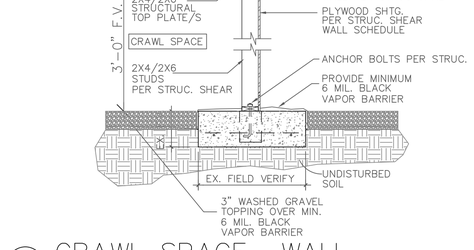


EXISTING/ NEW

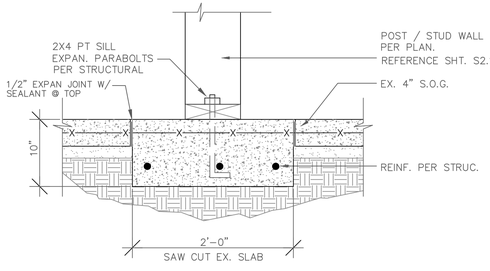
1 PERIMETER FDN.
1"=1'-0"



11 INTERIOR STAIR TREADS
NO SCALE

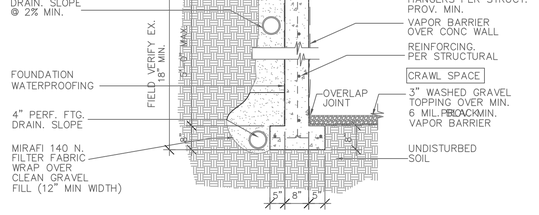


8 CRAWL SPACE WALL
3/4" = 1'-0"



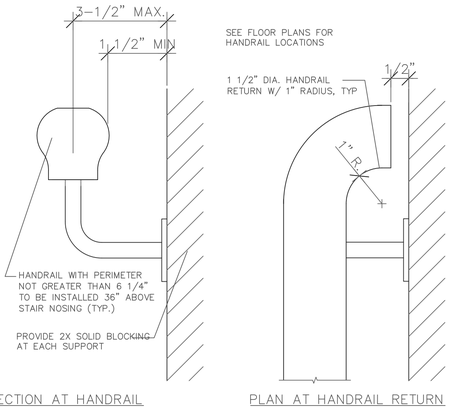
REFERENCE SHEET S2.1 / S2.2

5 RETROFIT FOOTING
1"=1'-0"



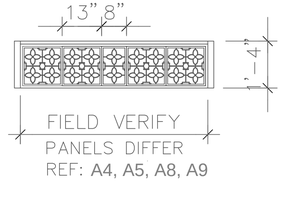
EXISTING / REVISED @ BRICK VENEER

2 PERIMETER FDN.
1"=1'-0"



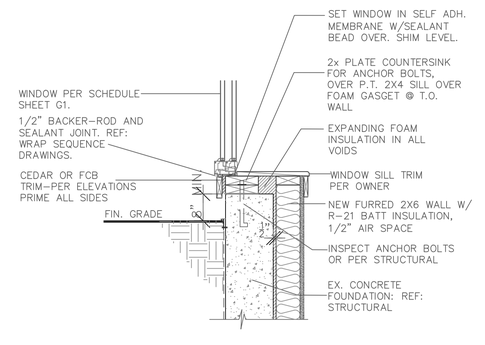
TYPICAL

12 INTERIOR HANDRAIL
SCALE: 6" = 1'-0"

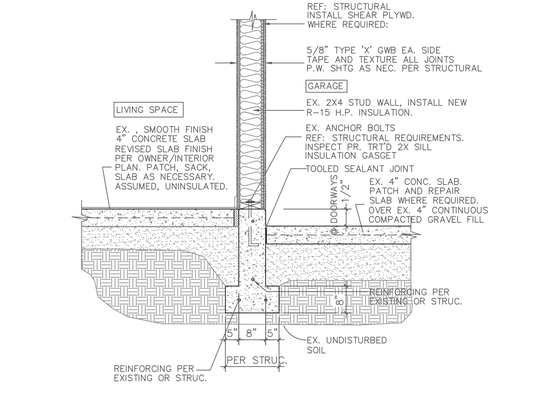


L SEE A5 EXTERIOR ELEVATION KEY

9 WROUGHT IRON RAIL
1/2" =1'0"



6 WINDOW SILL @ CONC. FDN.
1"=1'-0"



FIELD VERIFY EXISTING CONDITION.

3 GARAGE-LIVING FDN WALL
3/4" = 1'-0"

G « H « D « S
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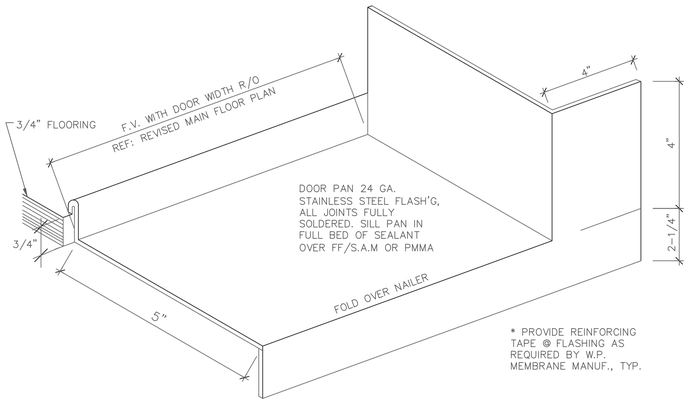
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TYPICAL DETAILS

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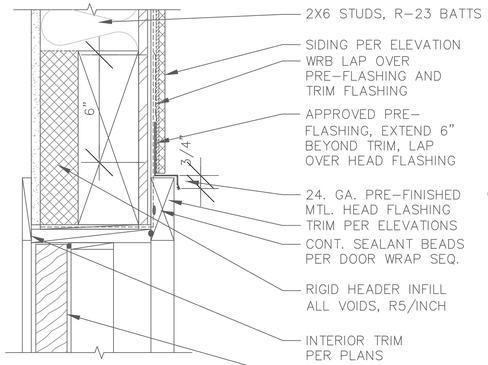
A10



DOWNTURN FLASHING AT CONCRETE PATIO/WALK

10 PATIO DOOR SILL FLASHING

NO SCALE

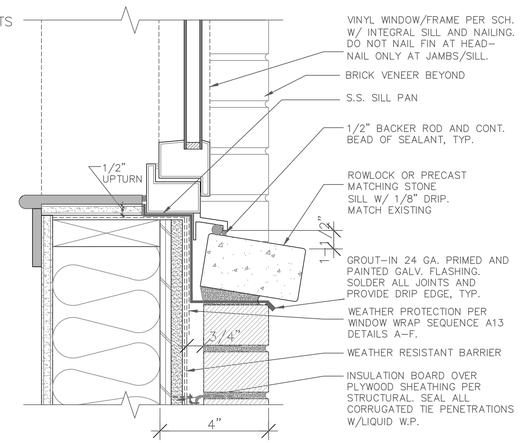


FIBER CEMENT / CEDAR TRIM

7 PRE-HUNG DOOR HEAD

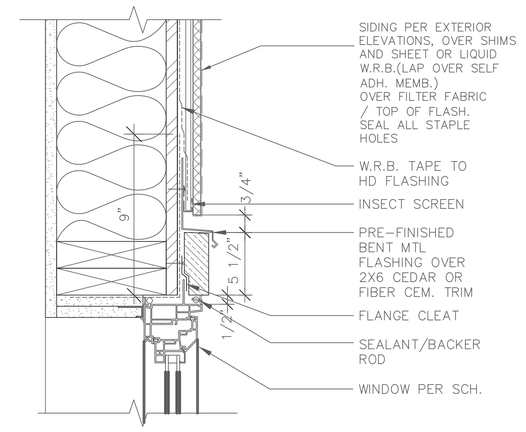
SCALE: 3" = 1'-0"

REFERENCE DOOR WRAP SEQUENCE 2(A-L) / A13



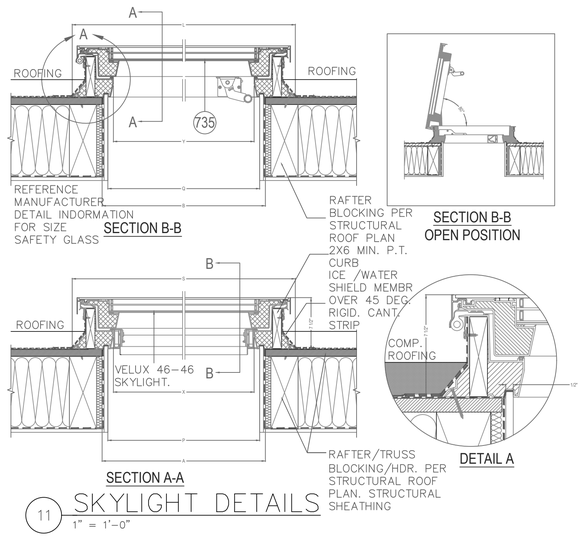
4 WDW. SILL @ BRICK VENEER

3" = 1'-0"



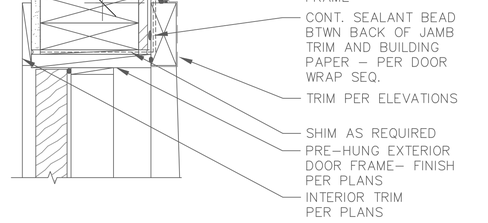
1 WINDOW HEAD @ SIDING

SCALE: 3" = 1'-0"



11 SKYLIGHT DETAILS

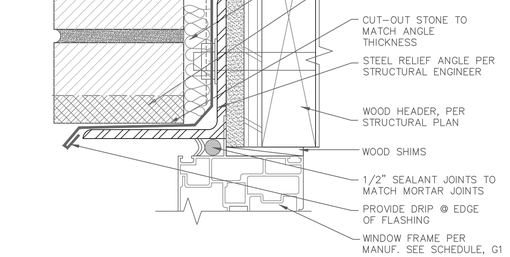
1" = 1'-0"



8 PRE-HUNG DOOR JAMB

SCALE: 3" = 1'-0"

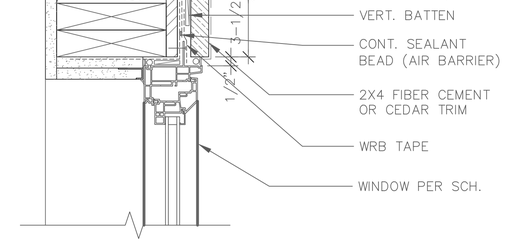
WRAP SEQUENCE 2(A-L) / A13



BRICK VENEER LOCATIONS PER ELEVATION/SECTIONS

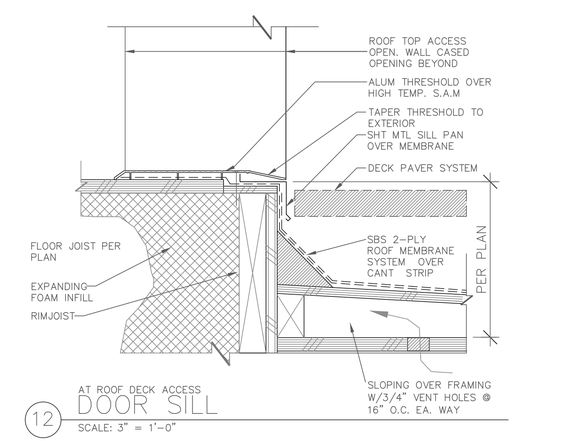
5 RELIEF ANGLE @ WIN/DR HEADS

6" = 1'-0"



2 WINDOW JAMB @ SIDING

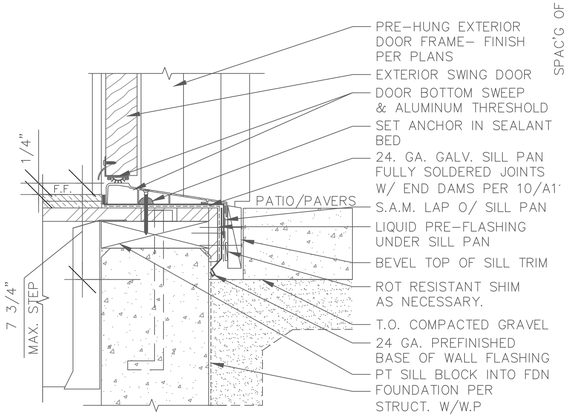
SCALE: 3" = 1'-0"



AT ROOF DECK ACCESS

12 DOOR SILL

SCALE: 3" = 1'-0"

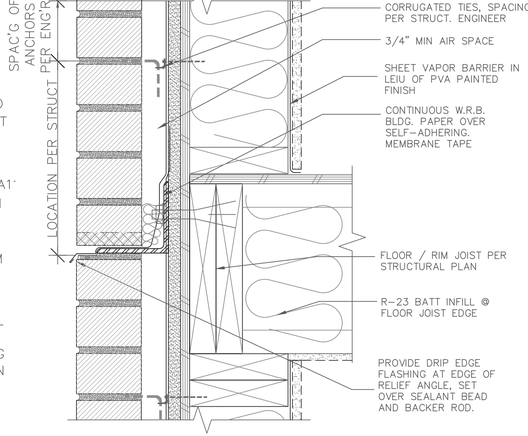


FIBER CEMENT / CEDAR TRIM

9 PRE-HUNG DOOR SILL

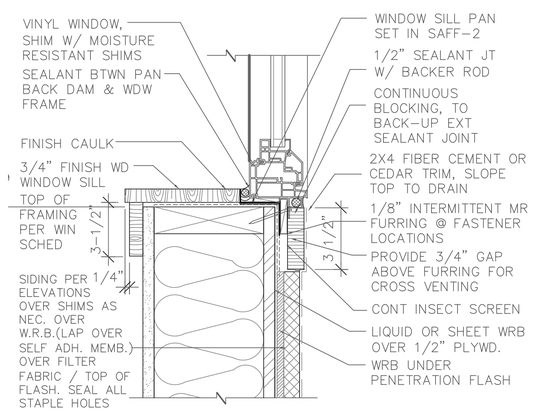
SCALE: 3" = 1'-0"

WRAP SEQUENCE 2(A-L) / A13



6 RELIEF ANGLE SECTION

3" = 1'-0"



3 WINDOW SILL @ DRYVIT SIDING

SCALE: 3" = 1'-0"

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Renton, Washington 98058
(206) 679-9757
ghdschristofer.jgolden@gmail.com

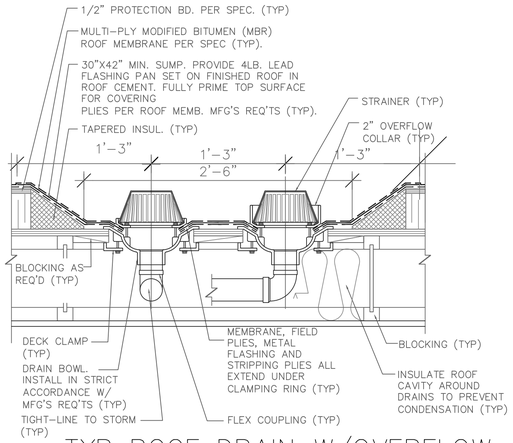
OWNER:
Kathryn and Erik Spring
4740 West Mercer Way
Mercer Island, WA. 98040

JOB ADDRESS:
4740 West Mercer Way
Mercer Island, WA. 98040

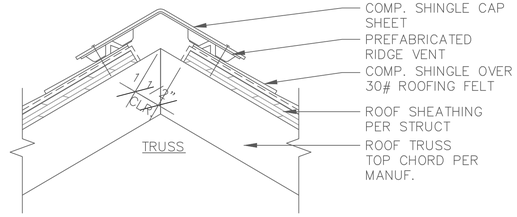
WOOD FRAME SKYLIGHT DETAILS

ISSUE DATE:	9-5-2024	
REVISIONS	1-15-2025	REVISION-1 CORRECTIONS

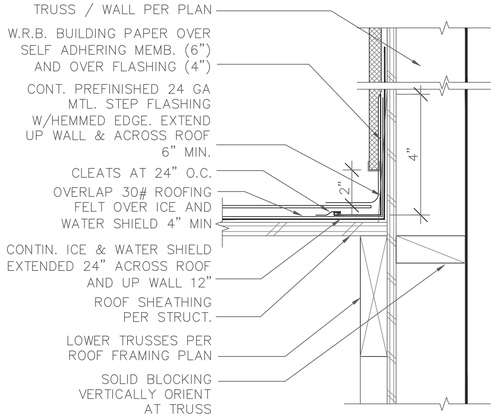
A11



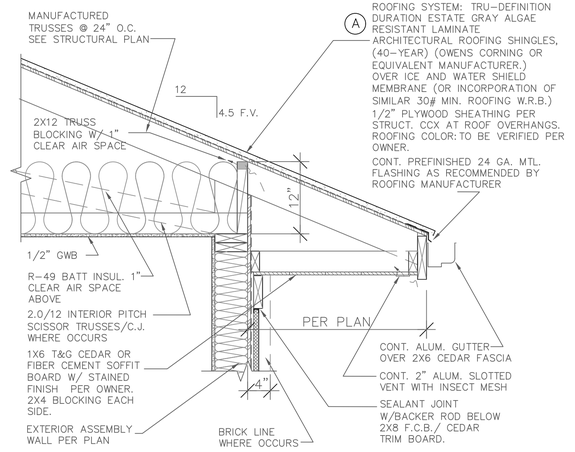
10 TYP ROOF DRAIN W/OVERFLOW
SCALE: 1-1/2" = 1'-0"



ROOF PITCH PER EXTERIOR ELEVATIONS
7 CONTINUOUS RIDGE VENT
SCALE: 3" = 1'-0"



4 ROOF TO SIDE WALL
SCALE: 3"=1'-0"



1 MANUF. TRUSS EAVE
1" = 1'-0"

11 ROOF-WALL TERMINATION FLASH
SCALE: NTS

ROOF PITCH PER EXTERIOR ELEVATIONS
8 STATIC ROOF VENT
SCALE: 3" = 1'-0"
62 SQ. INCHES CLEAR AREA PER VENT

5 ROOF VALLEY FLASHING
SCALE: 3"=1'-0"

2 2X12 RAFTER EAVE
1" = 1'-0"

9 ROOF DECK-WALL
3" = 1'-0"

6 CANTILEVERED FLOOR DETAIL
1-1/2" = 1'-0"

3 RAKE, (TYP)
1" = 1'-0"

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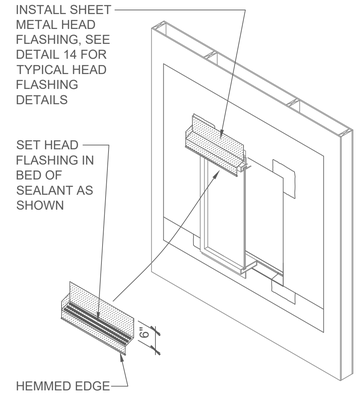
OWNER: Kathryn and Erik Spring
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Mercer Island, WA. 98040

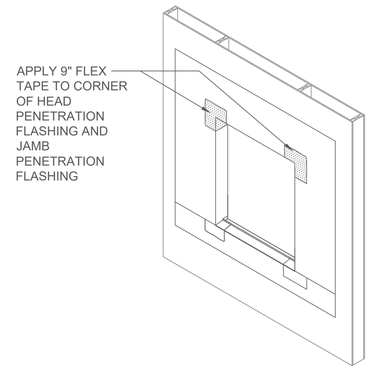
ROOF/FRAMING
ROOF DECK DETAILS

ISSUE DATE:	
9-5-2024	
REVISIONS	
1-15-2025	REVISION-1 CORRECTIONS

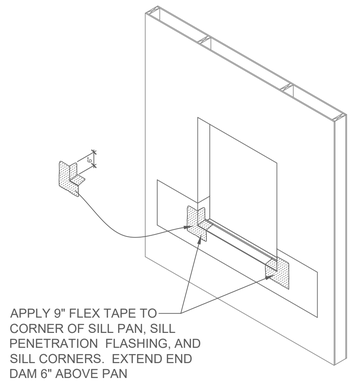
A12



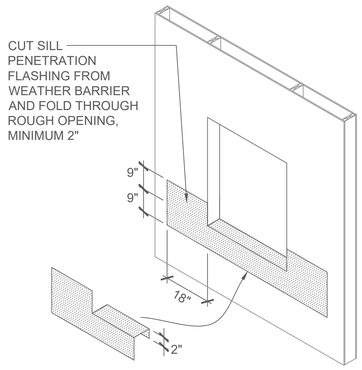
J STEP J HEAD FLASHING
NO SCALE



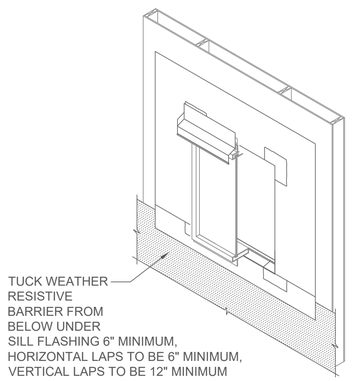
G STEP G HEAD FLASHING CORNER
NO SCALE



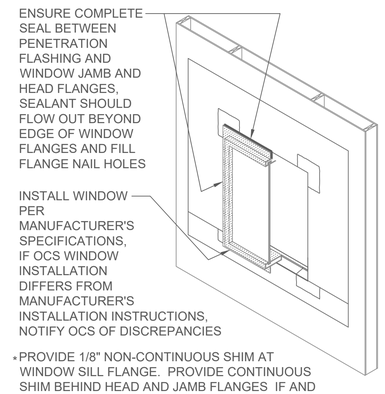
D STEP D SILL PAN CORNER
NO SCALE



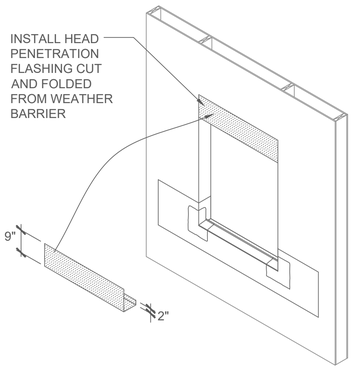
A STEP A SILL PENETRATION FLASHING
NO SCALE



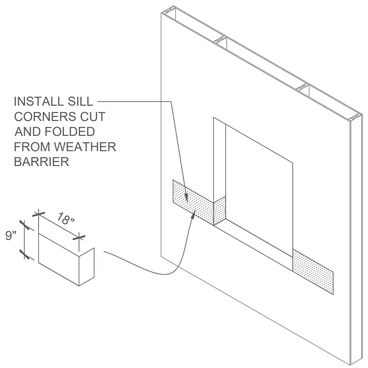
K STEP K WEATHER RESISTIVE BARRIER
NO SCALE



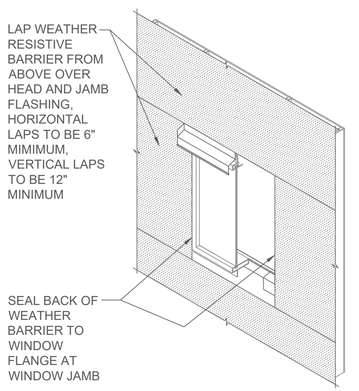
H STEP H INSTALL WINDOW
NO SCALE



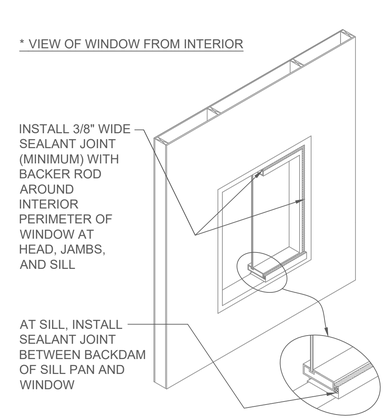
E STEP E HEAD PENETRATION FLASHING
NO SCALE



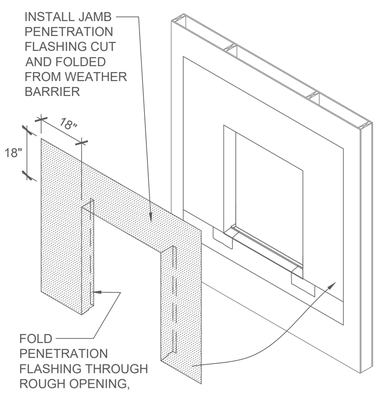
B STEP B SILL CORNERS
NO SCALE



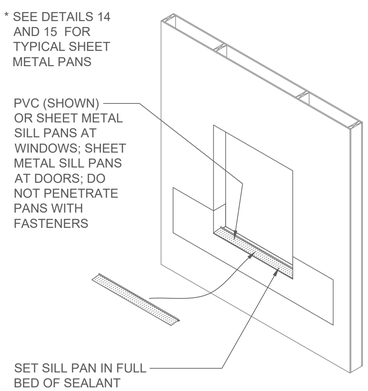
L STEP L WEATHER RESISTIVE BARRIER
NO SCALE



I STEP I INTERIOR SEALANT JOINT
NO SCALE

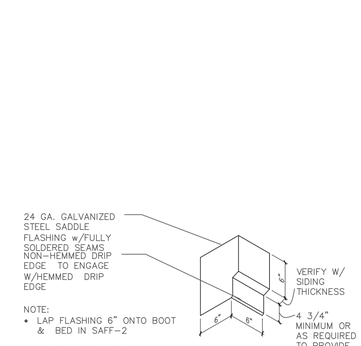


F STEP F JAMB PENETRATION FLASHING
NO SCALE

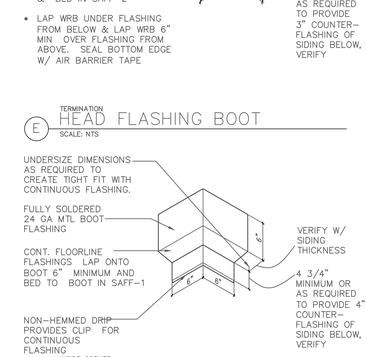


C STEP C SILL PAN
NO SCALE

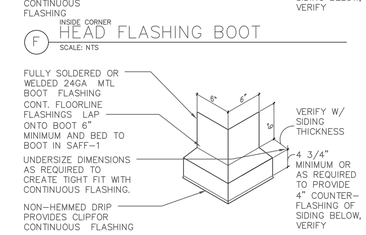
2 WINDOW WRAP SEQUENCE
NO SCALE



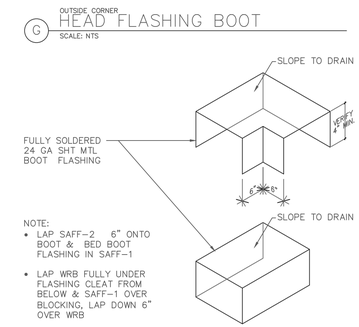
A SADDLE FLASHING
SCALE: NTS



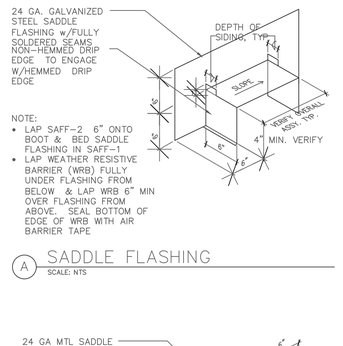
E HEAD FLASHING BOOT
SCALE: NTS



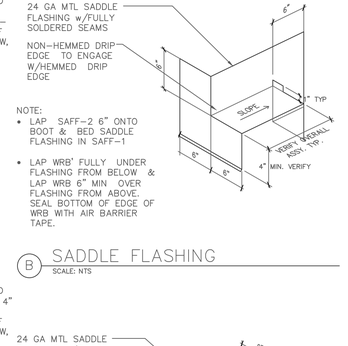
F HEAD FLASHING BOOT
SCALE: NTS



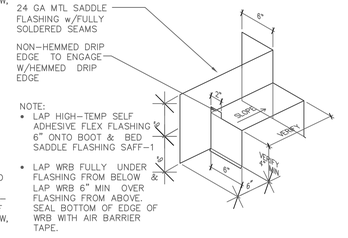
G HEAD FLASHING BOOT
SCALE: NTS



A SADDLE FLASHING
SCALE: NTS



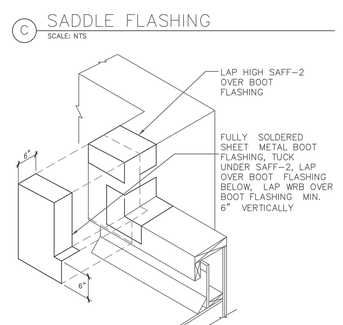
B SADDLE FLASHING
SCALE: NTS



C SADDLE FLASHING
SCALE: NTS

H PARAPET/STEM WALL BOOT
SCALE: NTS

BOOT FLASHINGS FOR UNDER COPING



D ROOF TO SIDING TRANSITION
SCALE: NTS

1 FLASHING PROFILES
NO SCALE

GHDS
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ghdschristoferjgolden@gmail.com

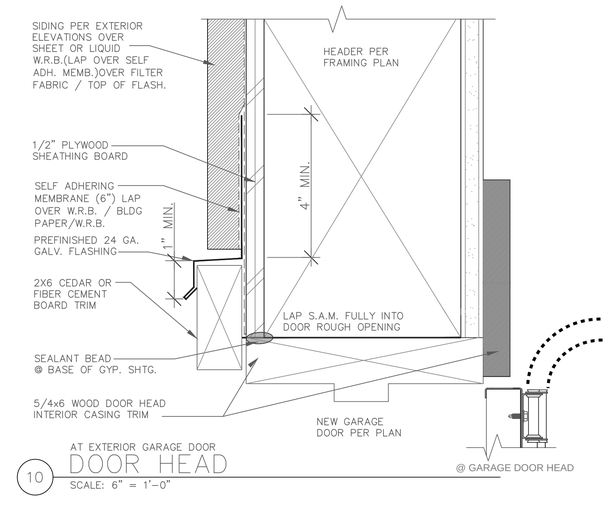
OWNER:
Kathryn and Erik Spring
4740 West Mercer Way
Mercer Island, WA. 98040

JOB ADDRESS:
4740 West Mercer Way
Mercer Island, WA. 98040

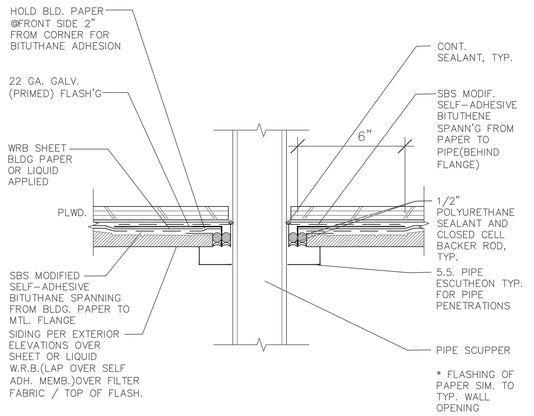
WINDOW WRAP SEQUENCE
PARAPET FLASHING

ISSUE DATE:	9-5-2024	
REVISIONS	1-15-2025	1 REVISION-1 CORRECTIONS

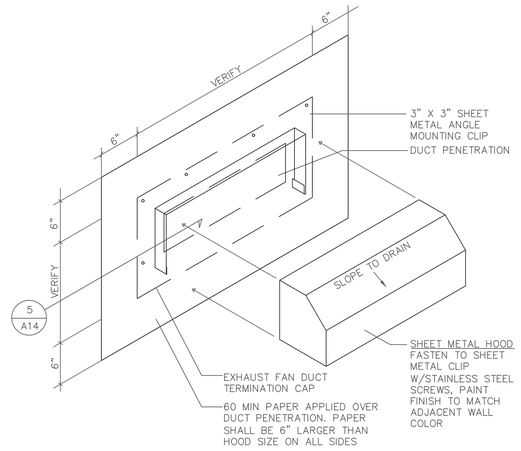
A13



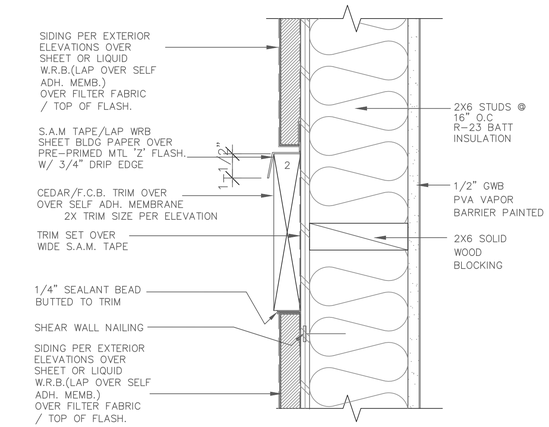
10 AT EXTERIOR GARAGE DOOR
DOOR HEAD
SCALE: 6" = 1'-0"



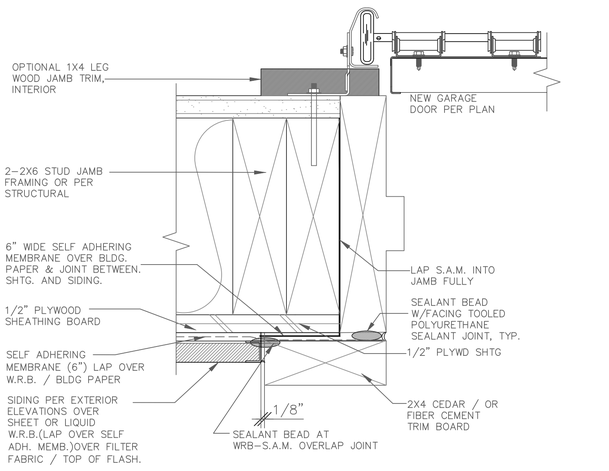
NOTE: COLLAR FLASHING-ALL JOINTS FULLY SOLDERED
7 ## WALL PENETRATION
3" = 1'-0" FOR ALL HORIZ. PIPE PENETRATIONS



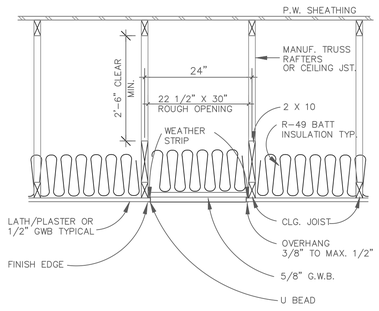
4 ## EXT. WALL VENT HOOD
N.T.S.



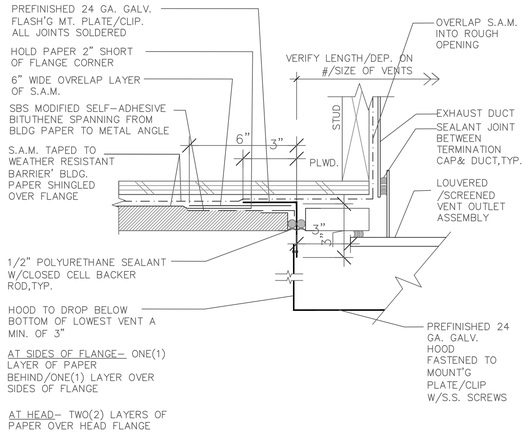
DRYVIT AREAS PER ELEVATIONS
1 ## HORIZONTAL TRIM
3" = 1'-0"



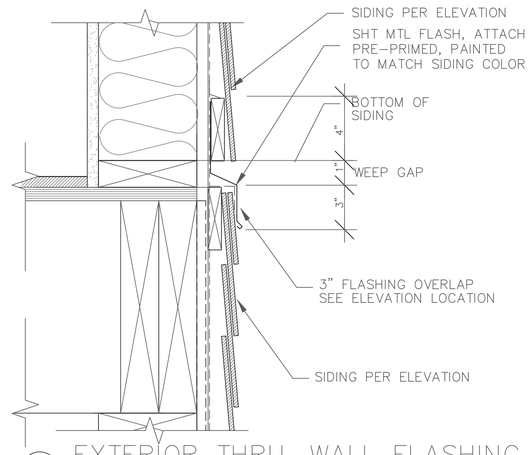
AT EXTERIOR GARAGE DOOR
11 ## DOOR JAMB
SCALE: 6" = 1'-0"



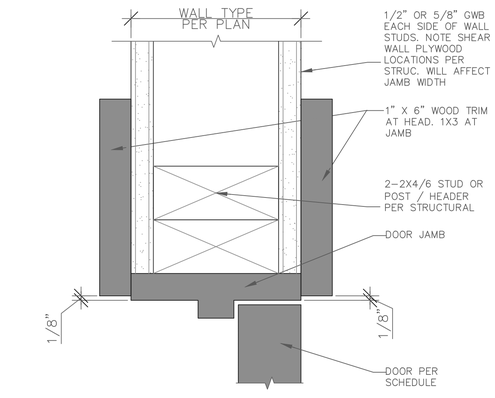
HORIZONTAL
8 ## ATTIC ACCESS DETAIL
NO SCALE



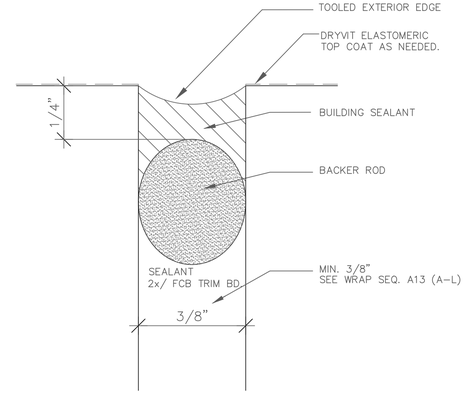
5 ## VENT HOOD ASSEMBLY- PLAN
3" = 1'-0"



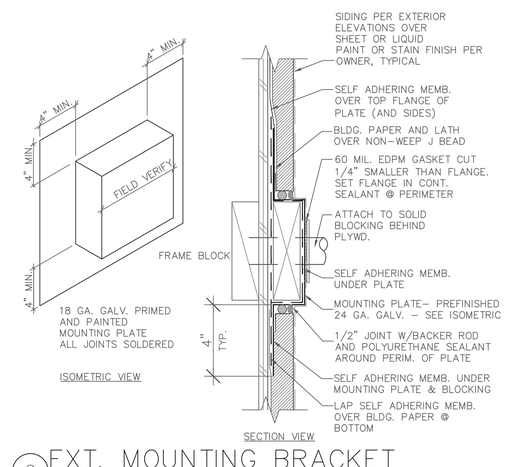
2 ## EXTERIOR THRU-WALL FLASHING
SCALE: 3" = 1'-0"



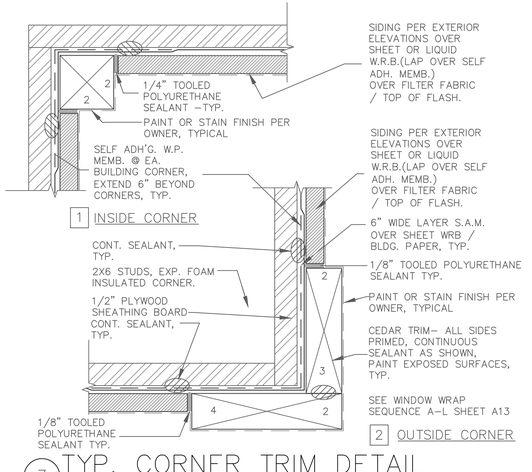
TYPICAL INTERIOR
12 ## DOOR JAMB - HEAD
SCALE: 6" = 1'-0"



9 ## TYP. SEALANT JOINT
6" = 1'-0"



6 ## EXT. MOUNTING BRACKET
3" = 1'-0"



3 ## TYP. CORNER TRIM DETAIL
3" = 1'-0"

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ISSUE DATE: 9-5-2024

REVISIONS	
1-15-2025	REVISION-1 CORRECTIONS

EXTERIOR DETAILS

A14

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GENERAL STRUCTURAL NOTES

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CRITERIA

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

2. DESIGN LOADING CRITERIA

FLOOR LIVE LOAD (RESIDENTIAL)		40 PSF
FLOOR LIVE LOAD (RESIDENTIAL DECKS AND BALCONIES)		60 PSF
SNOW		25 PSF
WIND	METHOD - DIRECTIONAL PROCEDURE Kzt=1.0, GCpi=0.18, 110 MPH (RISK CATEGORY II), EXPOSURE "C"	
EARTHQUAKE	ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS SDC D, SITE CLASS D, Ie=1.0, Ss=1.44, S1=0.5, Sds=0.96, Sd1=0.6, Cs=0.148, R=6.5, SEISMIC DESIGN BASE SHEAR Vsx=8.3 KIPS	

3. 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.

4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTIONS, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTOR'S WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

7. 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.

8. 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.

9. 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. MANUFACTURERS INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE AT THE TIME OF INSPECTION FOR THE INSPECTORS USE AND REFERENCE.

10. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

    STRUCTURAL STEEL

    CONTRACTOR SHALL SUBMIT WALL ELEVATION DRAWINGS OF AT LEAST 1/8"= 1'-0" SCALE INDICATING LOCATIONS OF CONNECTION EMBEDMENTS AND WALL OPENINGS FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH REINFORCEMENT SHOP DRAWINGS.

    APPROVED SETS OF SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT AS REQUIRED BY THE JURISDICTION. IF THERE IS A DOUBT WHETHER OR NOT A POST-PERMIT SUBMITTAL IS NECESSARY OR WILL BE ACCEPTED, CONSULT THE BUILDING CODE REVIEWER FOR THE ORIGINAL PERMIT. NO DRAWING SHOULD BE SUBMITTED TO THE BUILDING OFFICIAL THAT STILL BEARS THE DISPOSITION OF "REVISE AND RESUBMIT" OR SIMILAR LANGUAGE.

11. SHOP DRAWING REVIEW OF DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, 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. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND (1)COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN (2)WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL AS REQUIRED BY THE JURISDICTION.

    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.

QUALITY ASSURANCE

12. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110, 1704 AND 1705 OF THE IBC BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION SHALL BE PERFORMED.

EPOXY GROUTED INSTALLATIONS	PER MANUFACTURER

GEOTECHNICAL

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

ALLOWABLE SOIL PRESSURE	2500 PSF
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	55 PCF/35 PCF
TRAFFIC SURCHARGE	70 PSF
SEISMIC SURCHARGE	8H
PASSIVE PRESSURE	300 PCF
COEFFICIENT OF FRICTION	0.4

SOILS REPORT REFERENCE: GEOTECHNICAL ENGINEERING STUDY, 4740 WEST MERCER WAY, MERCER ISLAND, WASHINGTON, PREPARED BY EARTH SOLUTIONS NW LLC, DATED APRIL 4, 2022, ES-8380

CONCRETE

14. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318 AND ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3000 PSI. SLUMP OF CONCRETE SHALL NOT EXCEED 6". STRUCTURAL DESIGN IS BASED ON A CONCRETE STRENGTH OF f'c = 2500 PSI, THEREFORE NO CONCRETE STRENGTH TESTING REQUIRED. CONCRETE EXPOSURE CATEGORIES ARE F1, S0, W0, AND C1.

    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.

15. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, fy = 60 KSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy = 40 KSI. WELDED WIRE WIRE FABRIC SHALL CONFORM TO ASTM A1064. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, fy = 60 KSI.

16. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-19. LAP ALL CONTINUOUS REINFORCEMENT #6 AND SMALLER 48 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 48 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-19, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

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

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

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

ANCHORAGE

18. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-3G" EPOXY ADHESIVE AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-4057. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A36, UNO.

19. HEAVY DUTY THREADED CONCRETE ANCHORS SPECIFIED ON THE DRAWINGS SHALL BE "TITEN HD SCREW ANCHOR" AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2713 AND ESR-1056, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

20. EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "STRONG-BOLT 2" ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT CONFORMANCE TO ICC-ES REPORT ESR-3037 AND IAPMO-UES REPORT ER-240, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

21. DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE (PDPWL-300MG, 0.145" DIAMETER, UNO) AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2138. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1", UNO. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE.

WOOD

22. ALL 2x LUMBER SHALL BE KILN DRIED OR MC-19, AND ALL LUMBER SHALL BE GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO 17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS	(2x AND 3x MEMBERS)	HEM-FIR NO 2 OR SPRUCE-PINE-FIR NO 2 MINIMUM BASE VALUE, Fb = 850 PSI
	(4x MEMBERS)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fb = 900 PSI
BEAMS	(6x AND LARGER)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fb = 875 PSI
POSTS	(4x MEMBERS)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fc = 1350 PSI
	(6x AND LARGER)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fc = 600 PSI
STUDS, PLATES AND MISC FRAMING		HEM-FIR NO 2 OR SPRUCE-PINE-FIR NO 2

23. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN GLULAM BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI, UNO. ALL CANTILEVER GLULAM BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI, UNO. GLUED LAMINATED COLUMNS SHALL BE DOUGLAS FIR COMBINATION 3, L2D GRADE, Fc = 2300 PSI, Fb = 2000 PSI, E = 1900 KSI.

24. MANUFACTURED LUMBER, PSL, LVL, AND LSL, SHALL BE MANUFACTURED UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PSL, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES REPORT ESR-1387 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.0E)	Fb = 2900 PSI	E = 2000 KSI	Fv = 290 PSI
LVL (2.0E)	Fb = 2600 PSI	E = 2000 KSI	Fv = 285 PSI
LSL (1.55E)	Fb = 2325 PSI	E = 1550 KSI	Fv = 310 PSI
LSL 1-1/4" RIM (1.3E)	Fb = 1700 PSI	E = 1300 KSI	Fv = 425 PSI
PSL COLUMN (1.8E)	Fc = 2500 PSI	E = 1800 KSI	Fv = 190 PSI

    DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE 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 CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

    MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

25. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE PLYWOOD WEB 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 CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED.

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

    WALL SHEATHING SHALL BE 7/16" or 1/2" (NOMINAL) WITH SPAN RATING 24/0

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

    WATERPROOF DECK SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

    FLAT ROOF SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

    ROOF SHEATHING SHALL BE 1/2" or 7/16" (NOMINAL) WITH SPAN RATING 32/16
    FOR ROOFS WITH A PITCH GREATER THAN 2:12

    REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

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

28. PRESSURE TREATED WOOD (INCLUDES PRESERVATIVE AND FIRE TREATED) SHALL BE TREATED PER AWPA STANDARDS. PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO RETENTION OF 0.25 PCF. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. SODIUM BORATE (SBX) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS AND TIMBER CONNECTORS WITHOUT AMMONIA IN DIRECT CONTACT WITH ACQ-A TO A RETENTION LEVEL OF 0.40 PCF), CBA-A (UP TO A RETENTION LEVEL OF 0.41 PCF), CA-B (UP TO A RETENTION LEVEL OF 0.21 PCF), SHALL BE G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS WITH AMMONIA IN DIRECT CONTACT WITH ACQ-A (OVER A RETENTION LEVEL OF 0.40 PCF), CBA-A (OVER A RETENTION LEVEL OF 0.41 PCF), CA-B (OVER A RETENTION LEVEL OF 0.21 PCF), OR WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.

29. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2024. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

    ALL 2x JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS. ALL DOUBLE-JOISTS BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIU" SERIES JOIST HANGERS.

    WHERE CONNECTOR STRAPS CONNECT (2)MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

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

30. WOOD FASTENERS

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

SIZE	TYPE	LENGTH	SHANK Ø	HEAD Ø
8d	COMMON	2-1/2"	0.131"	0.281"
10d	GUN	3"	0.131"	0.281"
12d	GUN	3-1/4"	0.131"	0.281"
16d	BOX	3-1/2"	0.135"	0.344"

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

    NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

    B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2018 EDITION) WITH A LEAD BORE HOLE OF 60-70% OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS. BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. HOLES SHALL BE ACCURATELY ALIGNED IN MAIN MEMBERS AND SIDE PLATES/MEMBERS. BOLTS SHALL NOT BE FORCIBLY DRIVEN.

    C. SDS AND SDWS SCREWS CALLED OUT ON PLAN ARE TIMBER SCREWS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. SCREWS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. EQUIVALENT SCREWS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. LAG SCREWS ARE NOT AN EQUIVALENT SUBSTITUTION.

31. WOOD FRAMING NOTES - THE FOLLOWING APPLY UNLESS NOTED OTHERWISE ON THE PLANS:

    A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC, THE AITC "TIMBER CONSTRUCTION MANUAL", AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", MINIMUM NAILING, SHALL CONFORM TO TABLE 2304.10.2. OF THE IBC, UNO. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

    B. WALL FRAMING: REFER TO ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16"oc, UNO. (2)STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. (2)2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS IN STRUCTURAL WALLS, UNO. NAIL MULTI-MEMBER HEADERS WITH (2)ROWS 10d AT 12"oc. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

    ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE AND BOTTOM PLATE TO EACH STUD WITH (3)10d NAILS. FACE NAIL DOUBLE TOP PLATES WITH 10d AT 12"oc AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE (12)10d NAILS AT 4"oc EACH SIDE OF JOINT. AT TOP PLATE INTERSECTIONS PROVIDE (3)10d FACE NAILS.

    ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH (2)ROWS OF 12d NAILS AT 16"oc, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS AT 4'-0"oc EMBEDDED 7" MINIMUM, UNO. THERE SHALL BE A MINIMUM OF (2)BOLTS PER PLATE SECTION WITH (1)BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4-1/2" FROM EACH END OF THE PLATE SECTION. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH (2)ROWS OF 10d AT 16"oc. UNLESS NOTED OTHERWISE, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH #6 x 1-1/4" TYPE S OR W SCREWS AT 12"oc. UNLESS NOTED OTHERWISE, 7/16" OR 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS AT 6"oc AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS AT 12"oc. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

    C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS, UNO. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL TIMBER JOISTS TO SUPPORTS WITH (3)10d NAILS AND NAIL TJI JOISTS TO SUPPORTS WITH (2)10d NAILS. ATTACH JOISTS TO BEAMS WITH SIMPSON JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH (2)ROWS 10d AT 12"oc. TOENAIL RIM JOIST TO TOP PLATE WITH 10d AT 6"oc. TOENAIL BLOCKING BETWEEN JOISTS TO TOP PLATE WITH (3)10d NAILS.

    UNLESS NOTED OTHERWISE ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS WITH END JOINTS STAGGERED, AND NAILED AT 6"oc WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND AT 12"oc TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 10d AT 12"oc, UNO.

32. NOTCHES AND HOLES IN WOOD FRAMING:

    A. SAWN LUMBER JOISTS AND RAFTERS: NOTCHES AT THE ENDS OF JOISTS SHALL NOT EXCEED 1/4 THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED 1/6 THE JOIST DEPTH, BE LONGER THAN 1/3 THE JOIST DEPTH, OR BE LOCATED IN THE MIDDLE 1/3 OF THE SPAN. HOLES SHALL NOT BE WITHIN 2" OF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER SHALL NOT EXCEED 1/3 THE JOIST DEPTH. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2)TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL BE LOCATED A MINIMUM OF 2" FROM ANY NOTCH.

    B. EXTERIOR AND BEARING WALLS: WOOD STUDS ARE PERMITTED TO BE NOTCHED TO A DEPTH NOT EXCEEDING 1/4 OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40% OF THE STUD WIDTH IS PERMITTED IN WOOD STUDS. HOLES SHALL NOT BE WITHIN 5/8" TO THE EDGE OF THE STUD. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2)TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL NOT BE L

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GENERAL STRUCTURAL NOTES

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

WOOD

35. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION", ANSI/TPI 1 BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	25 PSF
TOP CHORD DEAD LOAD	15 PSF
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	45 PSF
WIND UPLIFT (TOP CHORD)	10 PSF
BOTTOM CHORD LIVE LOAD	10 PSF

(BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD)

REFER TO PLAN FOR ADDITIONAL LOADING

TRUSSES SHALL BE DESIGNED TO NOT ALLOW LIMITED STORAGE PER IBC TABLE 1607.1. WEBS SHALL BE CONFIGURED SO THAT ALL OPENINGS ARE SMALLER THAN 24" WIDE x 42" HIGH.

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. 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, ROOF OVER-FRAMING, 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.

RENOVATION

36. 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.

37. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION AND/OR DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 20 PSF.

38. CONTRACTOR SHALL CHECK FOR DRYROT AT ALL AREAS OF NEW WORK. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.

39. EXISTING REINFORCING SHALL BE SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED.

    A. ALL NEW OPENINGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE.

    B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.

    C. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING, IF POSSIBLE.

    D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE, DOWELS EPOXY GROUTED INTO EXISTING CONCRETE SHALL BE PROVIDED TO MATCH HORIZONTAL REINFORCING, UNO.

40. ALL EXTERIOR MASONRY WALLS SHALL BE INSPECTED AND REPAIRED AS FOLLOWS: SCRAPE ALL LOOSE AND WEAKENED MORTAR OUT TO FULL DEPTH OF THE DETERIORATION; REMOVE AND REPLACE ANY LOOSE MASONRY UNITS; CHECK FOR LOOSE FACING BRICK VENEERS; TUCK POINT ALL JOINTS SOLID. ALL MASONRY RESTORATION AND REPAIR SHALL BE PERFORMED IN SUCH A MANNER THAT THE EXISTING STRUCTURE IS NOT WEAKENED OR LEFT UNSUPPORTED DURING THE PROCESS OF THE WORK. ALL EXTERIOR APPENDAGES SUCH AS FIRE ESCAPES, CORNICES AND EYEBROWS SHALL BE INSPECTED FOR STRUCTURAL INTEGRITY AND THE CONDITION OF THE CONNECTIONS TO THE STRUCTURE. THE CONTRACTOR SHALL PROVIDE THE STRUCTURAL ENGINEER WITH THE RESULTS OF THE INSPECTION.

MASONRY

41. MASONRY VENEER, 5" MAXIMUM THICKNESS SHALL BE ANCHORED TO BACKING WALLS PER SECTION 1404.6 OF THE IBC. VENEER TIES, IF STRAND WIRE, SHALL BE ANCHORED TO THE SUPPORTING WALL WITH CORROSION-RESISTANT METAL TIES NOT LESS THAN 9-GAUGE WIRE AND SHALL HAVE A HOOK EMBEDDED IN THE MORTAR JOINT, OR IF SHEET METAL, SHALL BE NOT LESS THAN 22-GAUGE BY 7/8" CORRUGATED. EACH TIE SHALL BE SPACED NOT MORE THAN 32"oc HORIZONTALLY AND 24"oc VERTICALLY AND SHALL SUPPORT NOT MORE THAN (2)SQUARE FEET OF WALL AREA. VENEER TIES SHALL BE EMBEDDED IN MORTAR OR GROUT AND EXTENDING INTO THE VENEER A MINIMUM OF 1-1/2" WITH NOT LESS THAN 5/8" MORTAR OR GROUT COVER TO OUTSIDE FACE. WHERE VENEER IS ANCHORED TO WOOD BACKINGS BY CORRUGATED SHEET METAL TIES, THE DISTANCE SEPARATING THE VENEER FROM THE SHEATHING MATERIAL SHALL BE A MAXIMUM OF A NOMINAL 1". WHERE THE VENEER IS ANCHORED TO WOOD BACKINGS USING METAL STRAND WIRE TIES, THE DISTANCE SEPARATING THE VENEER FROM THE SHEATHING MATERIAL SHALL BE A MAXIMUM OF 4-1/2". ADDITIONAL METAL TIES SHALL BE PROVIDED AROUND ALL WALL OPENINGS GREATER THAN 16" IN EITHER DIMENSION. METAL TIES AROUND THE PERIMETER OF THE OPENINGS SHALL BE SPACED NOT MORE THAN 3'-0"oc AND PLACED WITHIN 12" OF THE WALL OPENING.

STEEL

42. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI. HP SHAPES SHALL CONFORM TO ASTM A572 GRADE 50, Fy = 50 KSI. OTHER ROLLED SHAPES INCLUDING PLATES, SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STRUCTURAL PIPE SHALL CONFORM TO ASTM A53 GRADE B, Fy = 35 KSI. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE C, Fy = 50 KSI (SQUARE AND RECTANGULAR), Fy = 46 KSI (ROUND). CONNECTION BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325, UNO.

43. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

44. ALL A325 CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A PERSON USING AN ORDINARY SPUD WRENCH.

45. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) 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) AND 40 FT-LBS AT 70 DEGREES(F), AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

Printed By: yael
Printed Date: Aug 16, 2024 - 3:12pm

ABBREVIATIONS

±	PLUS OR MINUS	GL	GLUE LAMINATED TIMBER	OSB	ORIENTED STRAND BOARD
Ø	DIAMETER	GR	GRADE	PLF	POUNDS PER LINEAR FOOT
AB	ANCHOR BOLT	GT	GIRDER TRUSS	PLY	PLYWOOD
ADDL	ADDITIONAL	GWB	GYPSUM WALLBOARD	PREFAB	PREFABRICATED
ALT	ALTERNATE	HD	HOLDOWN	PSF	POUNDS PER SQUARE FOOT
APPROX	APPROXIMATE	HDR	HEADER	PSI	POUNDS PER SQUARE INCH
ARCH	ARCHITECT, ARCHITECTURAL	HF	HEM FIR	PSL	PARALLEL STRAND LUMBER
BLKG	BLOCKING	HGR	HANGER	PT	PRESSURE TREATED LUMBER
BM	BEAM	HM	HIP MASTER	REINF	REINFORCING
BOE	BOTTOM OF EXCAVATION	HORIZ	HORIZONTAL	REQD	REQUIRED
BOT	BOTTOM	HT	HEIGHT	SOG	SLAB ON GRADE
℄	CENTERLINE	IBC	INTERNATIONAL BUILDING CODE	SQ	SQUARE
CLR	CLEARANCE	INT	INTERIOR	STD	STANDARD
CONT	CONTINUOUS	IRC	INTERNATIONAL RESIDENTIAL CODE	SW	SHEARWALL
DBL	DOUBLE	JST	JOIST	T&G	TONGUE AND GROOVE
DF	DOUGLAS FIR	K	KIPS (1000 LBS)	THRD	THREADED
DP	DEEP, DEPTH	KP	KING POST	TPL	TRIPLE
DN	DOWN	L	LENGTH	TRANSV	TRANSVERSE
DS	DRAG STRUT	LBS	POUNDS	TYP	TYPICAL
DWGS	DRAWINGS	LONG	LONGITUDINAL	UNO	UNLESS NOTED OTHERWISE
(E)	EXISTING	LSL	LAMINATED STRUCTURAL LUMBER	VERT	VERTICAL
EA	EACH	LVL	LAMINATED VENEER LUMBER	W	WIDE OR WIDTH
EMBED	EMBEDMENT	MAX	MAXIMUM	w/	WITH
EQ	EQUAL	MB	MACHINE BOLT	w/o	WITHOUT
EQUIV	EQUIVALENT	MFR	MANUFACTURER	WHS	WELDED HEADED STUD
EW	EACH WAY	MIN	MINIMUM	WTS	WELDED THREADED STUD
EXP	EXPANSION	MISC	MISCELLANEOUS	WWM	WELDED WIRE MESH
EXT	EXTERIOR	NO	NUMBER		
FDN	FOUNDATION	NTS	NOT TO SCALE		
FRMG	FRAMING	oc	ON CENTER		
FT	FEET	OPP	OPPOSITE		
FTG	FOOTING				
GA	GAUGE				
GALV	GALVANIZED				

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REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

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GENERAL STRUCTURAL NOTES

S1.1

SCALE - NTS

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PLAN NOTES

1. BOTTOM OF ALL FOOTINGS SHALL BE 18" MINIMUM BELOW LOWEST ADJACENT GRADE, UNO.
2. REFER TO SHEET S3.0 FOR TYPICAL FOUNDATION AND CONCRETE DETAILS.
3. STHD HOLDOWNS ARE DIMENSIONED TO THE CENTERLINE OF STRAP. HDU HOLDOWNS ARE DIMENSIONED TO THE CENTERLINE OF ANCHOR BOLT. DIMENSIONS ARE BASED OFF OF DRAWINGS PROVIDED BY THE ARCHITECT AND SHOULD BE VERIFIED.
4. REFER TO GENERAL STRUCTURAL NOTES SHEET S1.0 FOR ADDITIONAL REQUIREMENTS.
5. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.

FOOTING SCHEDULE

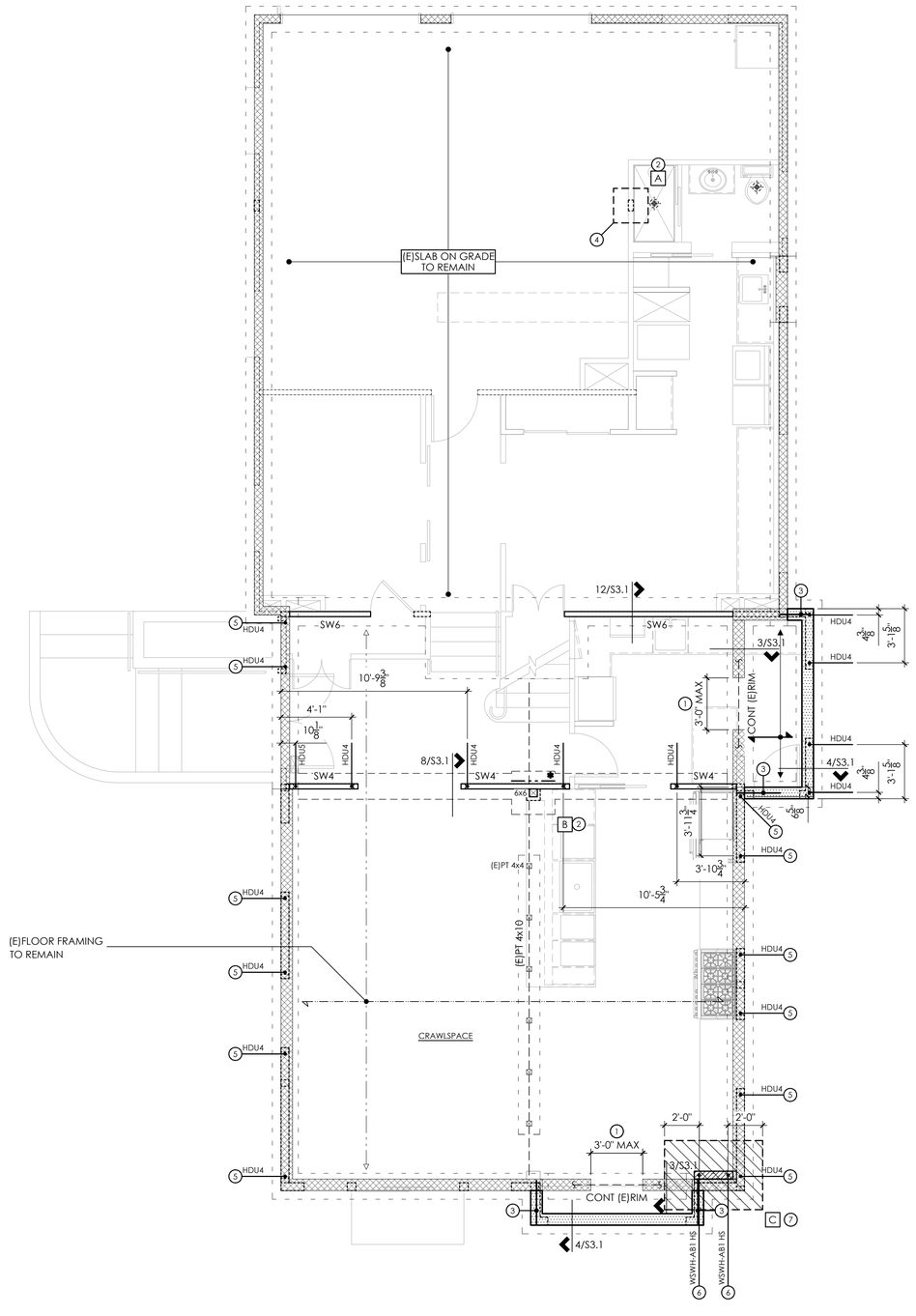
MARK	SIZE	REINFORCING
A	2'-0" SQ x 8" DP	(3)#4 EW BOT
B	2'-6" SQ x 12" DP	(4)#4 EW BOT
C	4'-0" W x 22" DP	#5 AT 6"oc TRANSV BOT (8)#5 LONG BOT

FOOTNOTES

1. SAW CUT (E)STEM WALL FOR CRAWLSPACE ACCESS PER ARCH
2. CENTER FOOTING UNDER POST ABOVE
3. #4 x 2'-6" DOWELS TO MATCH HORIZ WALL AND FOOTING REINFORCING - EPOXY GROUT EMBED 4" MIN. NO SPECIAL INSPECTION REQUIRED.
4. SAW CUT SLAB ON GRADE TO ALLOW FOR NEW FOOTING. PROVIDE REINFORCEMENT TO MATCH FOOTING EPOXY EMBEDDED w/ SIMPSON SET-3G, MIN 4" EMBED
5. EPOXY EMBED HOLDOWN INTO EXISTING FOUNDATION PER 12/S3.0 - SPECIAL INSPECTION REQUIRED
6. LOCATE AB FOR WSWH ABOVE USING WSWH-RT TEMPLATE - PROVIDE WSWH-HSR EXTENSION KIT AS REQUIRED TO EXTEND TO FOOTING BELOW w/ MIN 16" EMBEDMENT AND INSTALL PER 11/S3.1
7. CENTER FOOTING UNDER WSWH FROM ABOVE

LEGEND

- CONCRETE WALL BELOW
- (E)CONCRETE WALL BELOW
- STRUCTURAL WALL ABOVE
- (E)STRUCTURAL WALL ABOVE
- SPAN AND EXTENTS
- (E)SPAN AND EXTENTS
- (E)HEADER/BEAM
- HEADER/BEAM BELOW FRAMING - TYP
- (X) NUMBER OF BUILT UP STUDS
- PLUMBING PENETRATION ABOVE
- HORIZ CS16 x 3'-0" - BEAM TO BEAM
- DS DRAG STRUT - NAIL THRU SHEATHING w/ 8d AT 4"oc INTO ENTIRE LENGTH OF MEMBER



FOUNDATION PLAN

FIRTST FLOOR WALLS SHOWN DASHED

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REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

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FOUNDATION PLAN

S2.1

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

Plotted By - YNel
Plotted Date - Aug 16, 2024 - 3:13pm

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PLAN NOTES

1. TYPICAL NEW FLOOR FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 11-7/8" TJI's PER JOIST SCHEDULE, UNO. PROVIDE DBL JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH.
2. TYPICAL WATER PROOF DECK FRAMING CONSISTS OF 1-1/2" CONCRETE PAVERS (20 PSF MAX) OVER 2x SLEEPERS OVER 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 2x10's AT 16"oc, UNO.
3. GLUE AND NAIL FLOOR SHEATHING w/ 8d AT 6"oc AT FRAMED PANEL EDGES AND OVER SHEAR-WALLS AND AT 12"oc IN FIELD, UNO.
4. TYPICAL NEW ROOF FRAMING CONSISTS OF 7/16" or 1/2" APA RATED SHEATHING (SPAN RATING 32/16) OVER 2x6's AT 16"oc, UNO. PROVIDE H2.5A CLIPS EACH END OF ALL RAFTERS, AND H2.5A EACH SIDE OF MULTIPLE RAFTERS, UNO.
5. NAIL ROOF SHEATHING w/ 8d AT 6"oc AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12"oc IN THE FIELD, UNO.
6. "SW_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL NEW EXTERIOR WALLS ARE SW6, UNO.
7. ALL REQUIRED HEADERS ARE SHOWN ON PLAN AND SHALL BE (2)2x8, UNO. REFER TO DETAIL 8/S4.0 FOR ADDITIONAL REQUIREMENTS.
8. PROVIDE (2)BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS AND BEAMS 6'-0" IN LENGTH AND OVER, UNO.
9. WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW, UNO.
10. TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS, UNO.
11. REFER TO SHEET S4.0 FOR TYPICAL WOOD FRAMING DETAILS.
12. REFER TO GENERAL STRUCTURAL NOTES SHEET S1.0 FOR ADDITIONAL REQUIREMENTS.
13. DO NOT SCALE DRAWINGS. REFER TO ARCH DRAWINGS FOR ALL DIMENSIONS.

FLUSH BEAM SCHEDULE

MARK	SIZE ①	BRG STUDS	HANGER - UNO
B1	LSL 1-3/4 x 11-7/8	2	HUS1.81/10
B2	GL 3-1/2 x 11-7/8 OR LSL 3-1/2 x 11-7/8	2 2	HHUS410 ② HHUS410
B3	GL 5-1/2 x 11-7/8 OR PSL 5-1/4 x 11-7/8	3 3	HGUS5.50/10 HGUS5.50/10
B4	PSL 7 x 11-7/8	4	HGUS7.25/10

① ALL GLULAM BEAMS ARE 24F-V4 - UNO
② PROVIDE HUC410 WHERE REQUIRED - UNO

JOIST SCHEDULE ①②

MAX LENGTH	SIZE	SPACING	FACE MOUNT HANGER	TOP FLANGE HANGER
18'-0"	11-7/8" TJI 110	16"oc	IUS1.81/11.88	ITS1.81/11.88
18'-9"	11-7/8" TJI 210	16"oc	IUS2.06/11.88	ITS2.06/11.88
19'-3"	11-7/8" TJI 230	16"oc	IUS2.37/11.88	ITS2.37/11.88
20'-0"	11-7/8" TJI 360	16"oc	IUS2.37/11.88	ITS2.37/11.88
22'-0"	11-7/8" TJI 560	16"oc	IUS3.56/11.88	ITS3.56/11.88

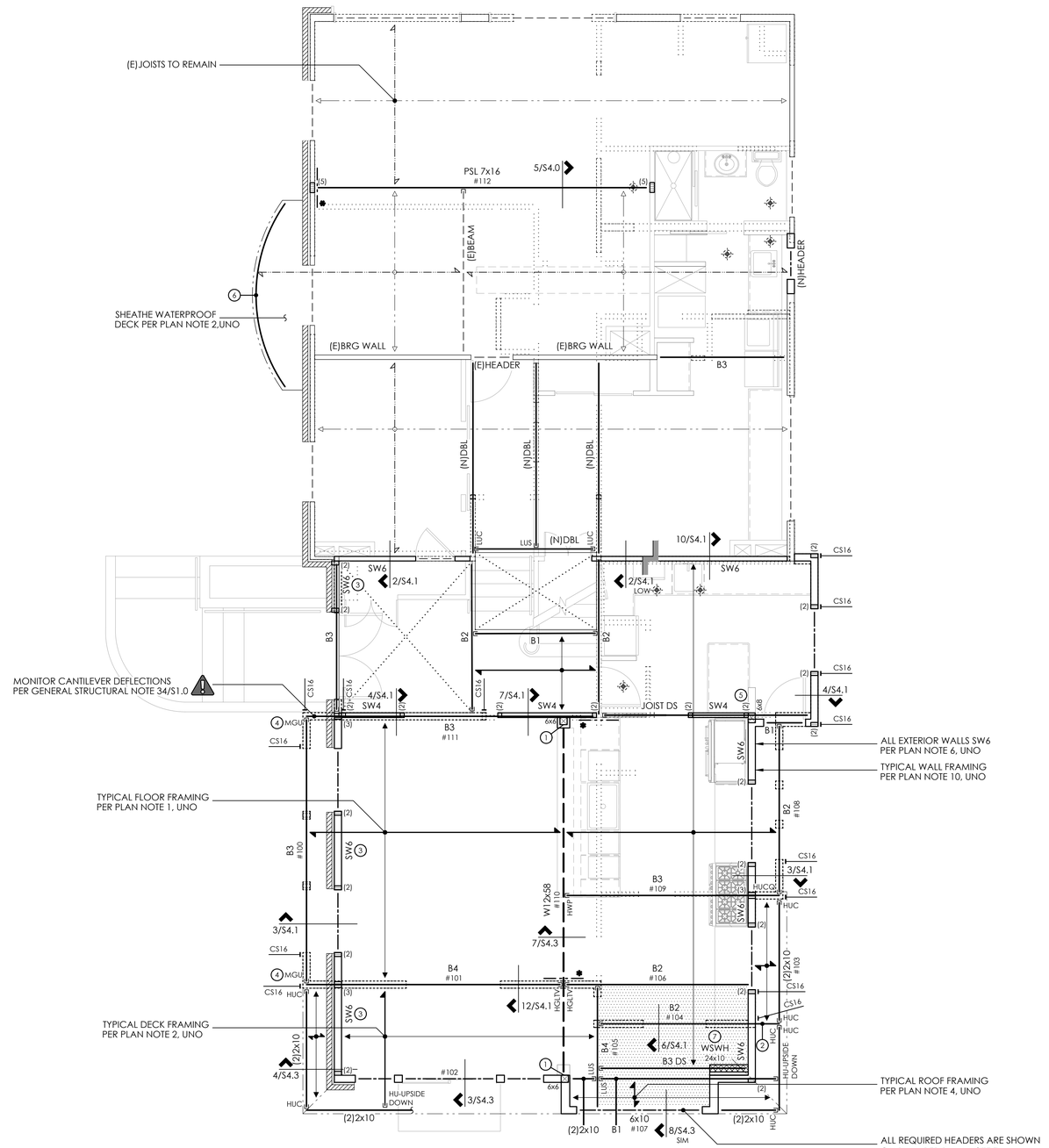
① DESIGN BASED ON DL=15 PSF, LL=40 PSF, △LL< L/480, TJ-PRO RATING OF 40
② SHEETROCK CEILING APPLIED TO BOTTOM FACE OF JOISTS

FOOTNOTES

① CONNECT STEEL BEAM TO WOOD POST BELOW PER 8/S4.3
② NOTCH AND TAPER JOIST TO MATCH RAFTER DEPTH - 9-1/2" MIN, NO OVERCUTS
③ SHEATH WALL PRIOR TO FURRING OUT WALL
④ ONE FLANGE CONCEALED
⑤ PROVIDE 0.22"Ø x6" SDWS TIMBER SCREWS FROM STUD TO POST STAGGERED AT 12"oc, (8)SCREWS MIN
⑥ BEND (4)3/8" PLYWOOD x 8'-0" L ± TO RADIUS PER ARCH - USE CONSTRUCTION ADHESIVE INBETWEEN EACH PLY. STAGGER JOINTS 32"oc MIN BETWEEN PLYS AND ONLY (1) JOINT ALLOWED ON EA JOIST. NAIL THRU BUILT-UP RIM w/ (4)10d EA (E)JOIST
⑦ INSTALL SIMPSON STRONG-WALL STRENGTH WOOD SHEARWALL AND HOLDOWN IN STRICT ACCORDANCE w/ ESR-2652 AND ADDITIONAL SIMPSON INSTALLATION REQUIREMENTS PER MFR. SEE 6/S4.1 FOR TOP CONNECTION

LEGEND

- STRUCTURAL WALL BELOW
- STRUCTURAL WALL ABOVE
- (E)STRUCTURAL WALL BELOW
- (E)STRUCTURAL WALL ABOVE
- (E)BRICK VENEER PER ARCH
- STEP PER ARCH
- SPAN AND EXTENTS
- (E)SPAN AND EXTENTS
- (E)HEADER/BEAM
- HEADER/BEAM BELOW FRAMING - TYP
- STEEL BEAM PER PLAN
- (X) NUMBER OF BUILT UP STUDS
- PLUMBING PENETRATION ABOVE
- HORIZ CS16 x 3'-0" - BEAM TO BEAM
- DS DRAG STRUT - NAIL THRU SHEATHING w/ 8d AT 4"oc INTO ENTIRE LENGTH OF MEMBER
- COMMAND: BD BLOCK DIAPHRAGM - PROVIDE FLAT 2x4 BLKG w/ 8d AT 4"oc AT ALL PANEL EDGES AND 8d AT 12"oc IN THE FIELD



SECOND FLOOR FRAMING PLAN

SECOND FLOOR WALLS SHOWN DASHED
FIRST FLOOR WALLS SHOWN SOLID

N

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SECOND FLOOR FRAMING PLAN

S2.2

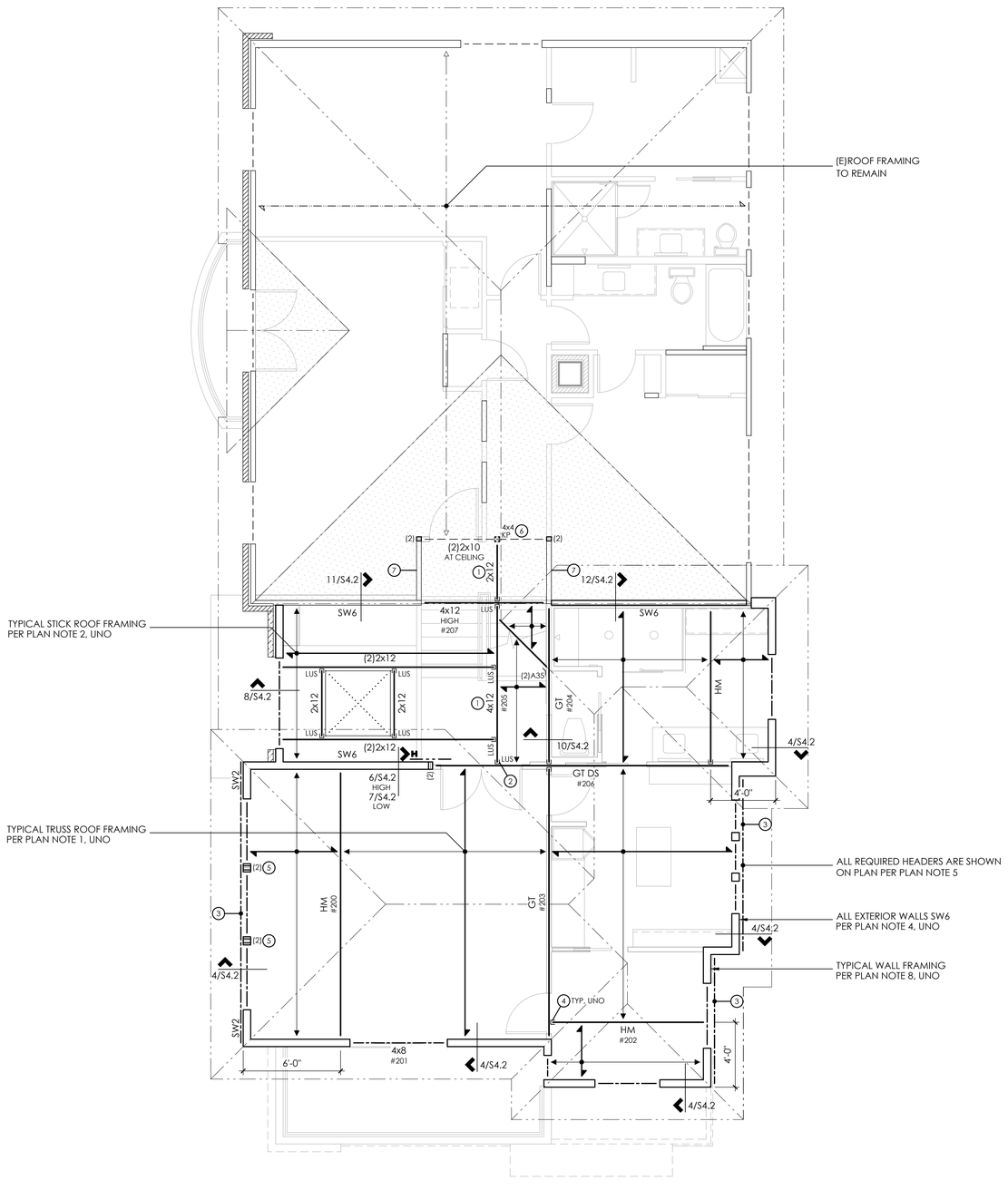
SCALE - 1/4" = 1'-0"

Plotted On - Print
Plotted Date - Aug 16, 2024 - 3:13pm

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PLAN NOTES

1. TYPICAL NEW TRUSS ROOF FRAMING CONSISTS OF 7/16" or 1/2" APA RATED SHEATHING (SPAN RATING 32/16) OVER PRE-MANUFACTURED TRUSSES AT 24"oc, UNO. PROVIDE H2.5A CLIPS EACH END OF ALL TRUSSES, AND H2.5A EACH SIDE OF ALL MULTIPLE TRUSSES, UNO. REFER TO ARCH DRAWINGS FOR TRUSS PROFILE.
2. TYPICAL NEW STICK ROOF FRAMING CONSISTS OF 7/16" or 1/2" APA RATED SHEATHING (SPAN RATING 32/16) OVER 2x12's AT 24"oc, UNO. PROVIDE H2.5A CLIPS EACH END OF ALL RAFTERS, H2.5A EACH SIDE OF MULTIPLE RAFTERS, UNO.
3. NAIL ROOF SHEATHING w/ 8d AT 6" oc AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12"oc IN FIELD, UNO.
4. "SW_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
5. ALL REQUIRED HEADERS ARE SHOWN ON PLAN AND SHALL BE (2)2x8, UNO. REFER TO DETAIL 8/S4.0 FOR ADDITIONAL REQUIREMENTS.
6. PROVIDE (2)BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS, BEAMS, AND GIRDER TRUSSES 6'-0" IN LENGTH AND OVER, UNO.
7. WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW, UNO.
8. TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS, UNO.
9. REFER TO SHEET S4.0 FOR TYPICAL WOOD FRAMING DETAILS.
10. REFER TO GENERAL STRUCTURAL NOTES SHEET S1.0 FOR ADDITIONAL REQUIREMENTS.
11. DO NOT SCALE DRAWINGS. REFER TO ARCH DRAWINGS FOR ALL DIMENSIONS.



FOOTNOTES

1. BEAM TO MATCH EXISTING RIDGE LINE
2. TRUSS MANUFACTURER TO DESIGN FOR A 2000 LBS POINT LOAD FROM BEAM. PROVIDE VERTICAL MEMBER FOR BEAM CONNECTION
3. PROVIDE HORIZ CS16 AT HEADER AND SILL PER 11/S4.0
4. HANGER PER TRUSS MANUFACTURER
5. PROVIDE (2)A35 TOP AND BOTTOM OF POST
6. PROVIDE AC4 TOP AND (2)A34 BOT
7. OVER FRAMING BEARS DOWN TO WALL

LEGEND

- STRUCTURAL WALL BELOW
- (E)STRUCTURAL WALL BELOW
- (E)BRICK VENEER PER ARCH
- NEW BRICK VENEER PER 9/S4.0
- SPAN AND EXTENTS
- (E)SPAN AND EXTENTS
- (E)HEADER/BEAM
- HEADER/BEAM BELOW FRAMING - TYP
- SLOPE DN - DIRECTION OF SLOPE
- (X) - NUMBER OF BUILT UP STUDS
- HORIZ CS16 x 3'-0" - BEAM TO BEAM
- H - HTS30C - BEAM TO TOP PLATE
- OVERFRAMING - 2x6 AT 24"oc w/ 6'-0" MAX SPAN OR POST DOWN TO (E)RAFTERS
- GT - GIRDER TRUSS
- HM - HIP MASTER
- KP - KING POST

Plotted By: Neil
Plotted Date: May 16, 2024 - 3:13pm

ROOF FRAMING PLAN

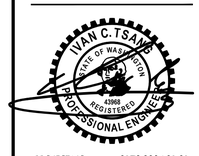
SECOND FLOOR WALLS SHOWN SOLID

N

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4740 W MERCER WAY

MERCER ISLAND, WA



PROJECT NO	0179.2024.01.01
PROJECT MANAGER	RAF
DRAWN	JSD
ENGINEER	ELLY JOHNSON
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REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

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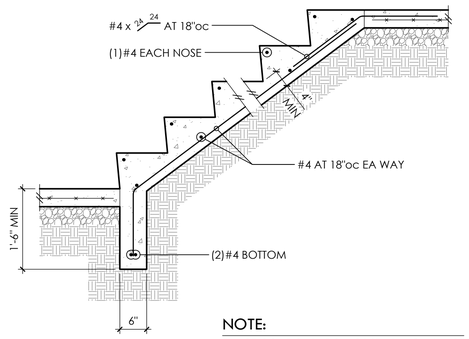
ROOF FRAMING PLAN

S2.3

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

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1

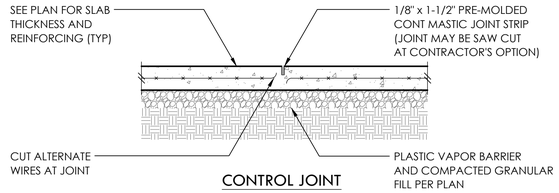


NOTE:

EXACT CONFIGURATION OF STAIR INCLUDING TREAD AND RISER DIMS PER ARCH DRAWINGS

TYPICAL STAIR ON GRADE

2

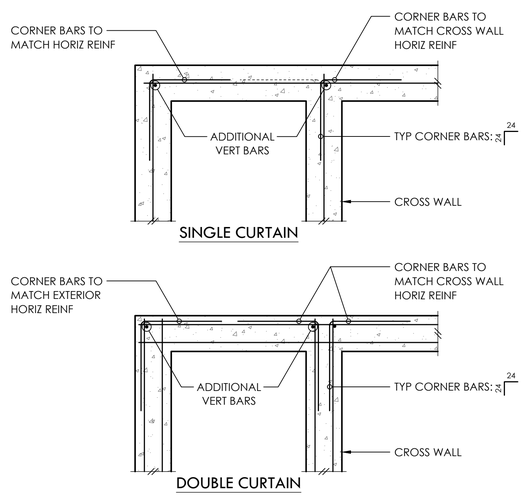


NOTE:

PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 200 SQUARE FEET OR LESS. AREAS TO BE APPROX SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.

TYPICAL SLAB JOINTS

3

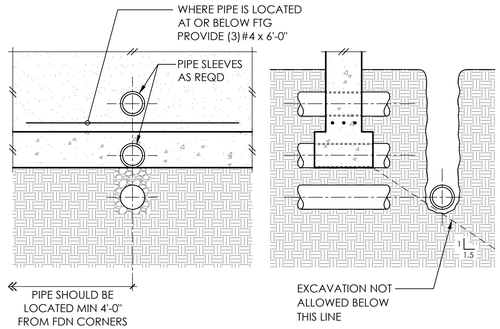


TYP CORNER BARS AT CONCRETE WALLS AND FTGS

4

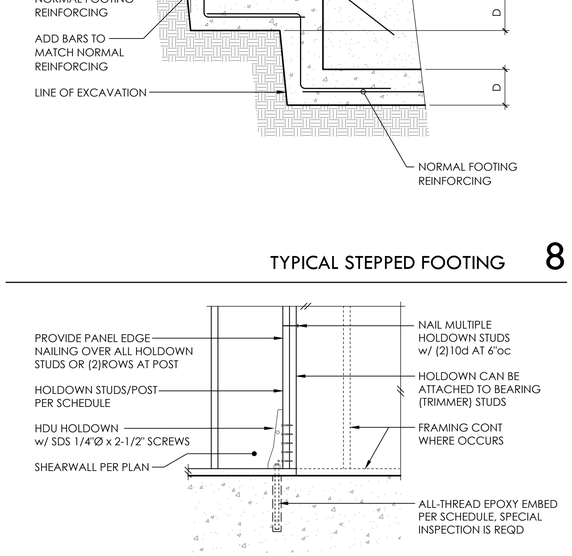
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6



PIPE AND TRENCH LOCATIONS

7

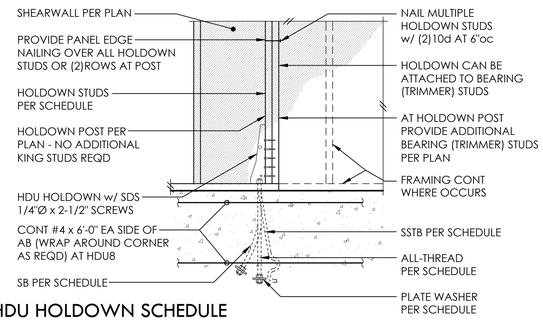


TYPICAL STEPPED FOOTING

8

9

10



HDU HOLDOWN SCHEDULE

PLAN	AT STEMWALL		AT FOOTING ①②			HD POST③	
MARK	AB	EMBED	ALL-THREAD	WASHER	EMBED	4x WALL	6x WALL
HDU2	5/8"Ø - SSTB16(L)	12-5/8"	5/8"Ø	1-3/4"SQ x 1/2	9"	(2)2x4	(2)2x6
HDU4	5/8"Ø - SB5/8 x 24	18"	5/8"Ø	1-3/4"SQ x 1/2	9"	(2)2x4	(2)2x6
HDU5	5/8"Ø - SB5/8 x 24	18"	5/8"Ø	1-3/4"SQ x 1/2	9"	(2)2x4	(2)2x6
HDU8	7/8"Ø - SB7/8 x 24	18"	7/8"Ø	2-1/2"SQ x 1/2	12"	4x6	6x6

① ALL HOLDOWN ANCHOR BOLTS THAT NEED TO BE EMBEDDED INTO FOOTING ARE SPECIFICALLY SHOWN ON PLAN
② A307 ALL-THRD w/ PLATE WASHER PER SCHEDULE AND DOUBLE NUT BOT OR EQUIVALENT SIMPSON PAB
③ MINIMUM SIZE OF POST UNO ON FRAMING PLANS

11

HDU HOLDOWN SCHEDULE

PLAN	AT STEMWALL		AT FOOTING③		HD POST②	
MARK	AB①	EMBED	ALL-THREAD	EMBED	4x WALL	6x WALL
HDU2	5/8"Ø ALL-THREAD	12"	5/8"Ø	8"	(2)2x4	(2)2x6
HDU4	5/8"Ø ALL-THREAD	12"	5/8"Ø	8"	(2)2x4	(2)2x6
HDU5	5/8"Ø ALL-THREAD	12"	5/8"Ø	8"	(2)2x4	(2)2x6
HDU8	7/8"Ø ALL-THREAD	16"	-	-	4x6	6x6

① A307 ALL-THREAD AND MAINTAIN 1-3/4" EDGE DISTANCE
② MINIMUM SIZE OF POST UNO ON FRAMING PLANS
③ MINIMUM 1'-6" WIDE x 1'-0" DEEP FOOTING

12

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IVAN C. TSANG — STATE OF WASHINGTON — 43968 — REGISTERED PROFESSIONAL ENGINEER

PROJECT NO	0179.2024.01.01
PROJECT MANAGER	RAF
DRAWN	JSD
ENGINEER	ELLY JOHNSON
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	ELLYJ@MALSAM-TSANG.COM

REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

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TYPICAL CONCRETE DETAILS

S3.0

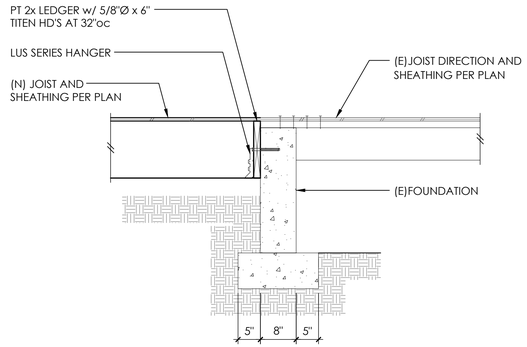
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Plotted by: ellyj
Plotted Date: Aug 16, 2024 - 3:13pm

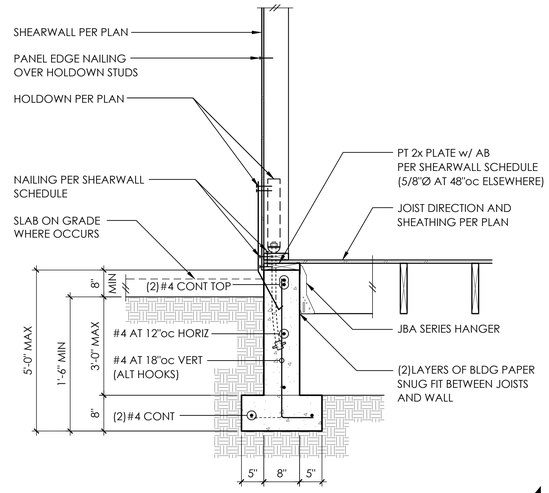
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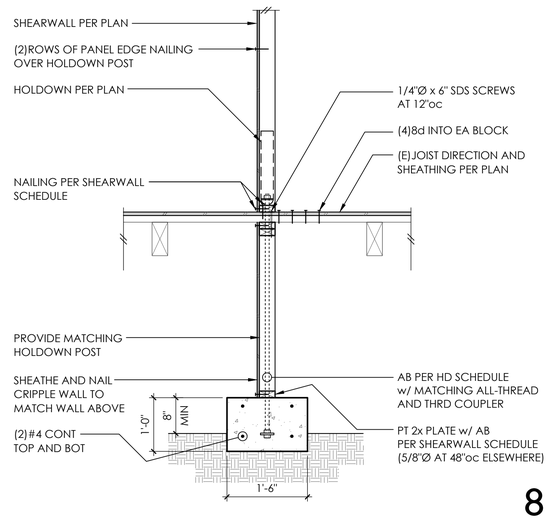
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3



4



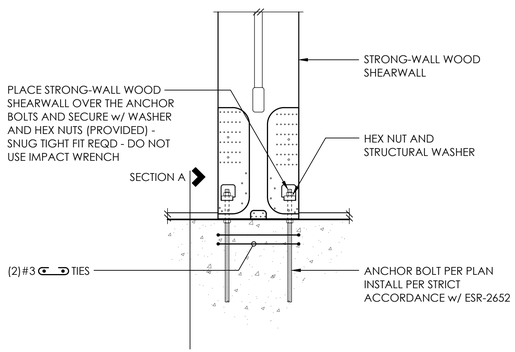
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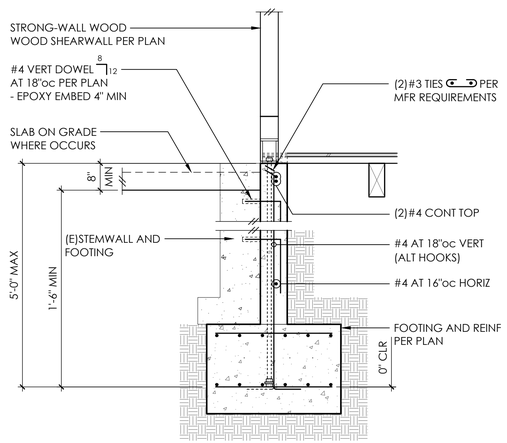
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9



INSTALL SIMPSON STRONGWALL AND ANCHORAGE IN STRICT ACCORDANCE w/ ESR-2652

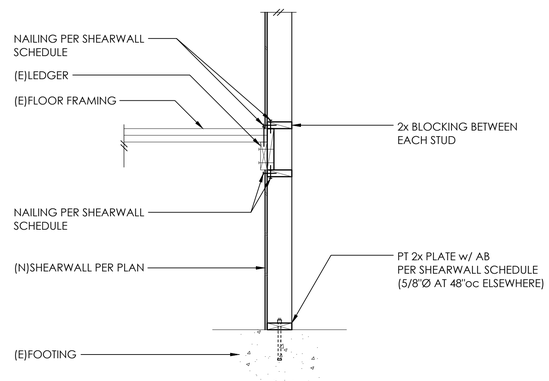
CONTRACTOR TO REFER TO SIMPSON STRONG WALL SHOP DRAWINGS AND PRODUCT INSTALLATION GUIDELINES TO ENSURE INSTALLATION CONFORMANCE



SECTION A

STRONG-WALL - BASE CONNECTION

11



12

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	ELLYJ@MALSAM-TSANG.COM

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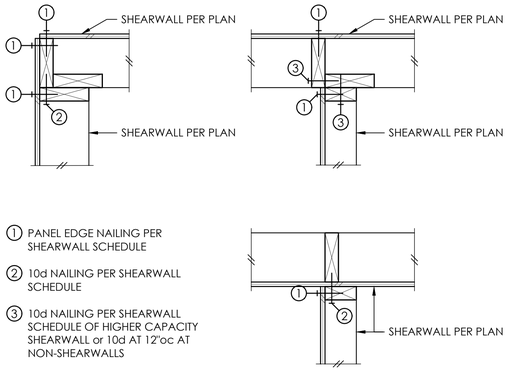
CONCRETE DETAILS

S3.1

SCALE - 3/4" = 1'-0"

Plotted By: jvtsang
Plotted Date: Aug 16, 2024 - 3:13pm

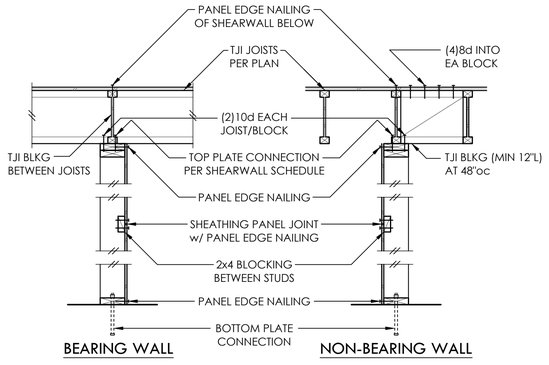
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1. PANEL EDGE NAILING PER SHEARWALL SCHEDULE
2. 10d NAILING PER SHEARWALL SCHEDULE
3. 10d NAILING PER SHEARWALL SCHEDULE OF HIGHER CAPACITY SHEARWALL or 10d AT 12"oc AT NON-SHEARWALLS

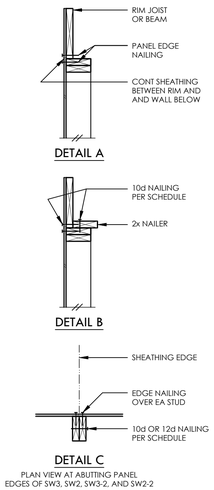
SCALE: 1-1/2" = 1'-0"

TYPICAL SHEARWALL INTERSECTIONS 1



NOTE:
SEE SHEARWALL SCHEDULE FOR ALL NAILING AND CONNECTIONS, UNO

TYPICAL SHEARWALL CONSTRUCTION 2



PLAN VIEW AT ABUTTING PANEL EDGES OF SW3, SW2, SW3-2, AND SW2-2

SHEARWALL SCHEDULE ①②③④⑤⑥⑦

MARK	SHEATHING	PANEL EDGE NAILING	TOP PLATE CONNECTION		BASE PLATE CONNECTION	
			TJI	RIM/BEAM ⑤	AT WOOD	AT CONCRETE
SW6	1/2" PLY or 7/16" OSB	8d AT 6"oc	10d AT 6"oc	A35 AT 30"oc ⑦	12d AT 6"oc	5/8"Ø AB AT 48"oc
SW4	1/2" PLY or 7/16" OSB	8d AT 4"oc	10d AT 4"oc	A35 AT 18"oc ⑦	12d AT 4"oc	5/8"Ø AB AT 42"oc
SW3 ④	1/2" PLY or 7/16" OSB	8d AT 3"oc	(2)ROWS 10d AT 6"oc	A35 AT 16"oc ⑦	(2)ROWS 12d AT 6"oc	5/8"Ø AB AT 36"oc
SW2 ④	1/2" PLY or 7/16" OSB	8d AT 2"oc	(2)ROWS 10d AT 4"oc	A35 AT 12"oc ⑦	(2)ROWS 12d AT 4"oc	5/8"Ø AB AT 24"oc
SW3-2④	1/2" PLY or 7/16" OSB EA SIDE	8d AT 3"oc EA SIDE	N/A	A35 AT 8"oc	(2)ROWS 12d AT 3"oc	5/8"Ø AB AT 18"oc
SW2-2④	1/2" PLY or 7/16" OSB EA SIDE	8d AT 2"oc EA SIDE	N/A	A35 AT 6"oc	(3)ROWS 12d AT 3"oc	5/8"Ø AB AT 12"oc

① BLOCK PANEL EDGES WITH 2x4 LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d AT 12"oc.

② 8d NAILS SHALL BE 0.131"Ø x 2-1/2" x 0.281"Ø, 10d NAILS SHALL BE 0.131"Ø x 3" x 0.281"Ø , AND 12d NAILS SHALL BE 0.131"Ø x 3-1/4" x 0.281"Ø, UNO.

③ EMBED ANCHOR BOLTS AT LEAST 7". ALL BOLTS SHALL HAVE 3" x 3" x 0.229" PLATE WASHERS. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) w/ SHEATHING. AT 2x6 SW3-2 AND SW2-2 WALLS, PROVIDE 4-1/2" x 3" x 0.229" PLATE WASHERS CENTERED ON PLATE.

④ 3x STUDS OR DBL STUDS NAILED TOGETHER w/ 10d OR 12d NAILING IS REQD AT ABUTTING PANEL EDGES OF SW3, SW2, SW3-2, AND SW2-2. REFER TO DETAIL C. WHERE 3x STUDS ARE USED, STAGGER NAILS AT ADJOINING PANEL EDGES. ABUTTING PANEL EDGES SHALL BE OFFSET EACH SIDE OF WALL AT SW3-2 AND SW2-2.

⑤ TWO STUDS MINIMUM OR POST PER PLAN ARE REQUIRED AT EACH END OF ALL SHEARWALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING.

⑥ ALL EXTERIOR WALLS SHALL BE SW6, UNLESS NOTED OTHERWISE.

⑦ NAILS SHALL NOT BE SPACED LESS THAN 3/8" FROM EDGES OF SHEATHING. SHEATHING NAILS SHALL BE DRIVEN SO THEIR HEADS ARE FLUSH WITH SHEATHING (NOT COUNTERSUNK).

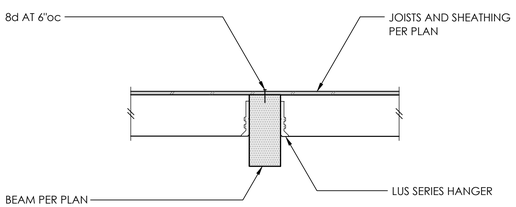
⑧ LTP4's INSTALLED OVER SHEATHING WITH 8d (0.131"Ø x 2-1/2" x 0.281"Ø) NAILS MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.

⑨ A35's OR LTP4's MAY BE ELIMINATED PER DETAIL A OR DETAIL B.

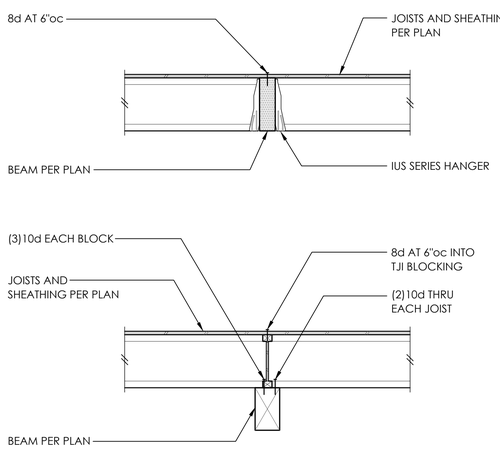
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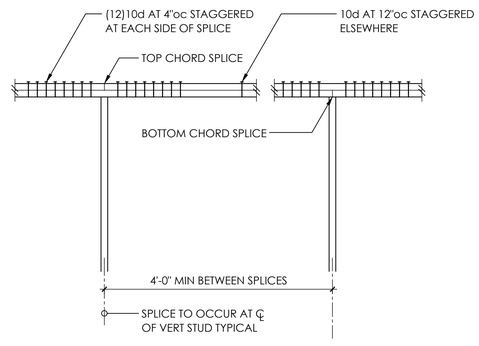
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TYPICAL TOP FLUSH BEAM 5



TYPICAL FLUSH AND DROPPED BEAM 6

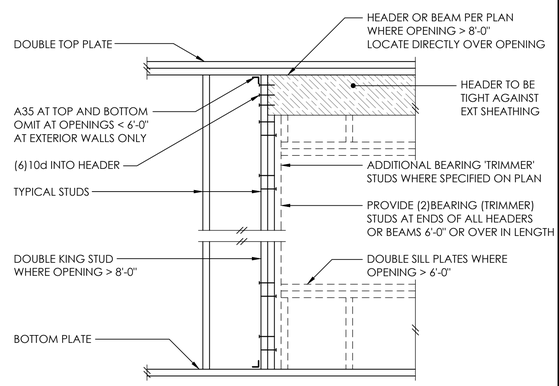


NOTE:
1. NAILING AT TOP PLATE SPLICES MAY BE ELIMINATED w/ CS16 x 30"

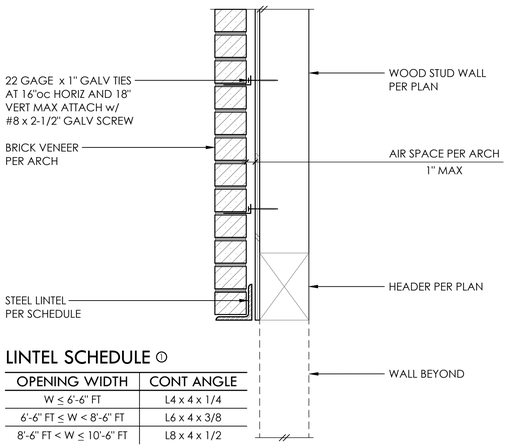
2. WHERE VERTICAL PENETRATIONS THRU PLATE EXCEED 1" FOR A 4x WALL OR 3" FOR A 6x WALL - PROVIDE CS16 x 30" AT TOP PLATE

3. MINIMUM EDGE DISTANCE FOR VERTICAL PENETRATIONS THRU TOP PLATE IS 1-1/4"

AT SHEARWALLS
TYPICAL TOP PLATE SPLICE 7



TYPICAL HEADER SUPPORT 8

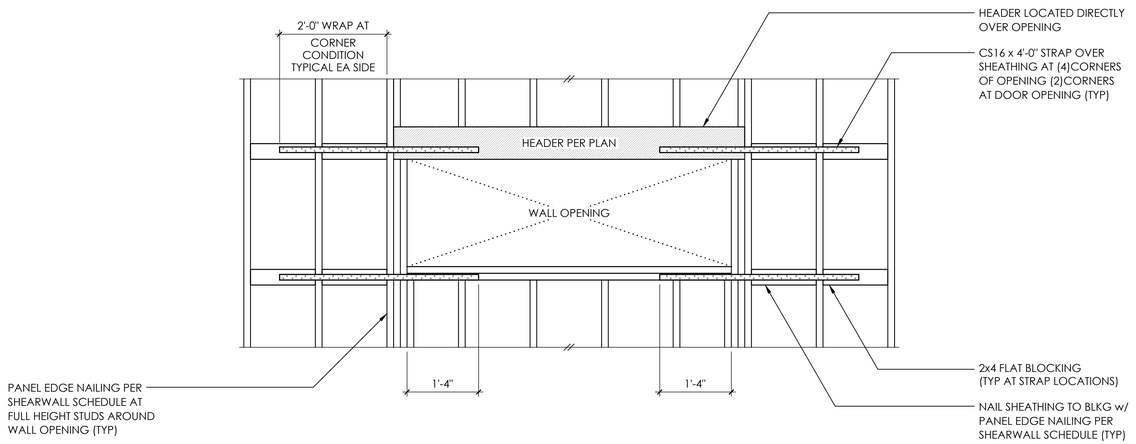


LINTEL SCHEDULE ①

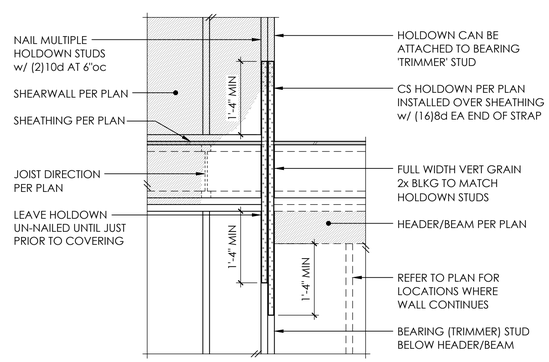
OPENING WIDTH	CONT ANGLE
W ≤ 6'-6" FT	L4 x 4 x 1/4
6'-6" FT ≤ W < 8'-6" FT	L6 x 4 x 3/8
8'-6" FT < W ≤ 10'-6" FT	L8 x 4 x 1/2

① PROVIDE 4" MIN BEARING EA END

SCALE: 1-1/2" = 1'-0"
BRICK VENEER TIES 9



11



TYPICAL CS16 HOLDOWN 12



PROJECT NO 0179.2024.01.01
PROJECT MANAGER RAF
DRAWN JSD
ENGINEER ELLY JOHNSON
206.902.7289
ELLYJ@MALSAM-TSANG.COM

REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

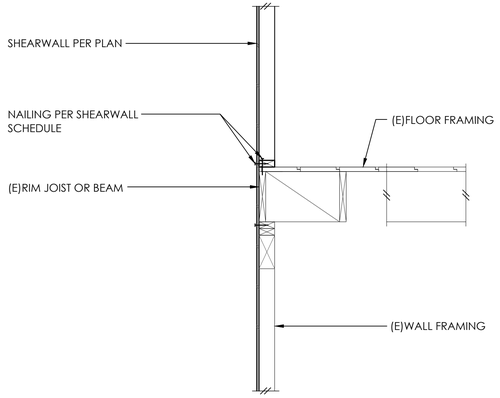
ARCH GOLDEN DESIGN SERVICES
425.255.3871

TYPICAL WOOD FRAMING DETAILS

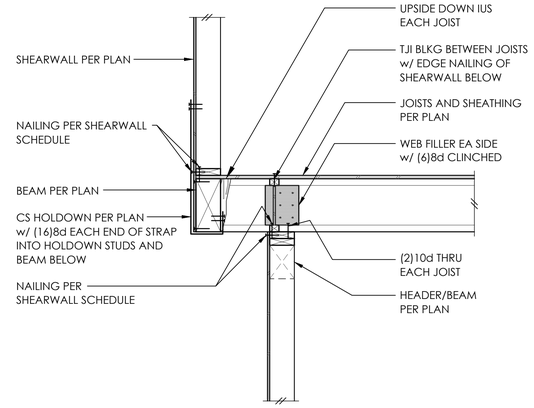
S4.0
SCALE - 3/4" = 1'-0"

Plotted By: YNel
Plotted Date: May 16, 2024 - 3:13pm

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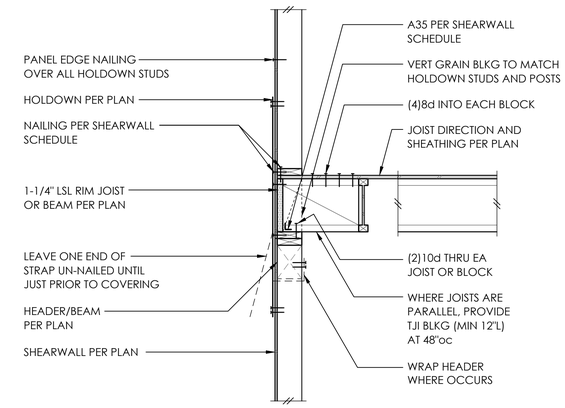


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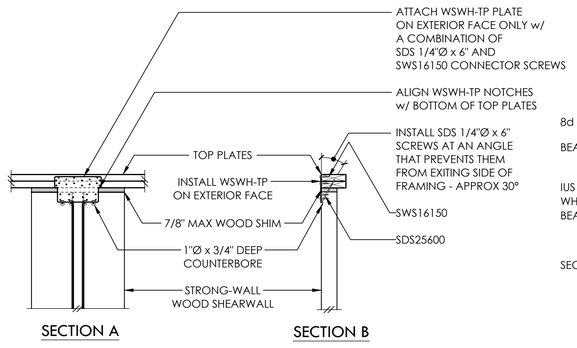


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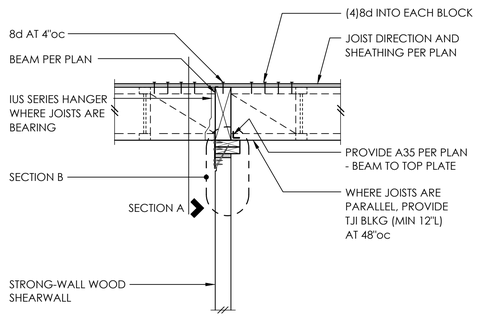


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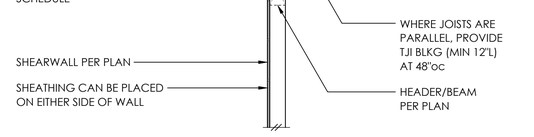
INSTALL SIMPSON STRONGWALL AND ANCHORAGE IN STRICT ACCORDANCE w/ ESR-2652

CONTRACTOR TO REFER TO SIMPSON STRONG WALL SHOP DRAWINGS AND PRODUCT INSTALLATION GUIDELINES TO ENSURE INSTALLATION CONFORMANCE

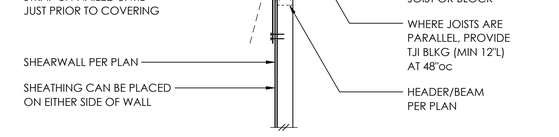


STRONG-WALL - TOP CONNECTION

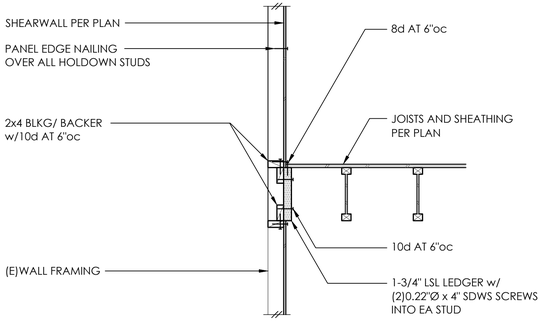
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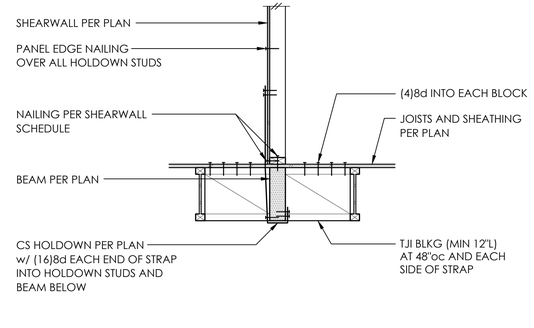


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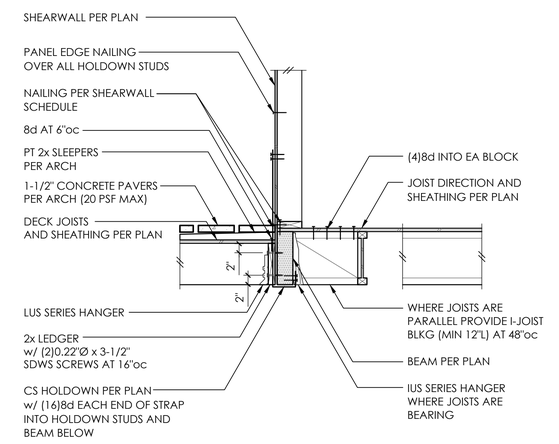


9

10



11



12

MALSAM TSANG STRUCTURAL ENGINEERING
122 S JACKSON ST - SUITE 210
SEATTLE, WA 98104 - 206.789.6038

4740 W MERCER WAY
MERCER ISLAND, WA

IVAN C. TSANG
STATE OF WASHINGTON
43968
REGISTERED
PROFESSIONAL ENGINEER

PROJECT NO	0179.2024.01.01
PROJECT MANAGER	RAF
DRAWN	JSD
ENGINEER	ELLY JOHNSON
	206.902.7289
	ELLYJ@MALSAM-TSANG.COM

REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

ARCH GOLDEN DESIGN SERVICES 425.255.3871

WOOD FRAMING DETAILS

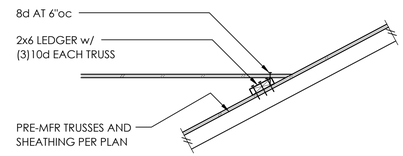
S4.1
SCALE - 3/4" = 1'-0"

Plotted by: yael
Plotted Date: Aug 16, 2024 - 3:13pm

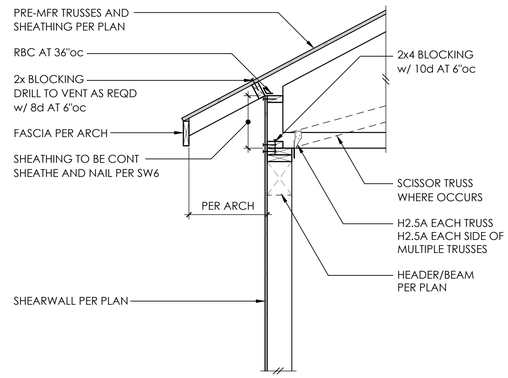
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1

2



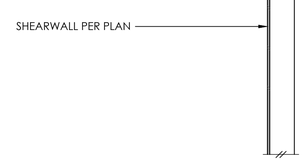
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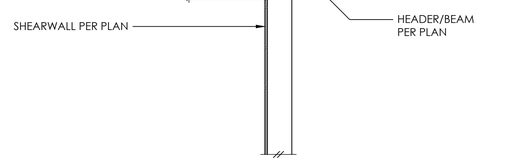
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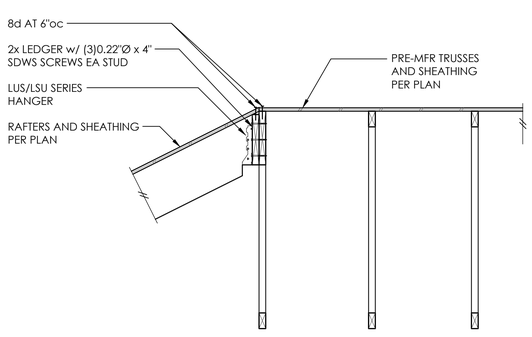
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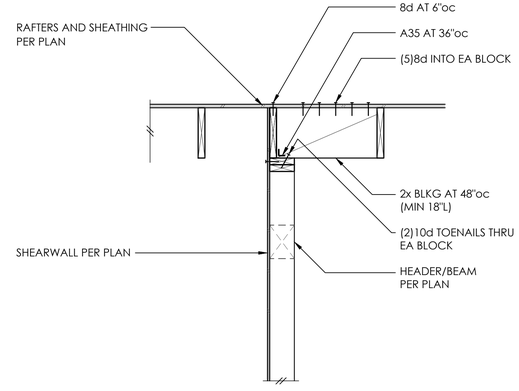
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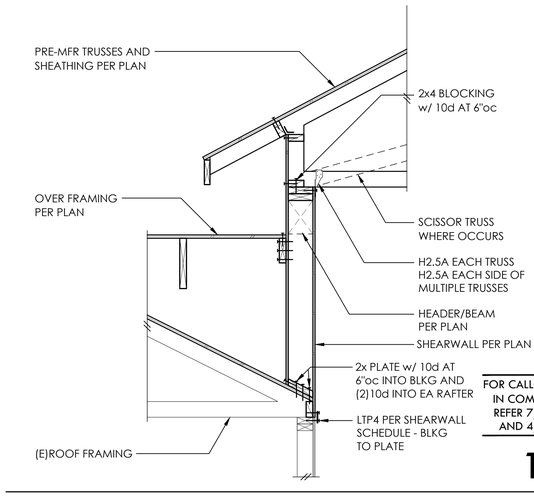
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11



12



FOR CALLOUTS
IN COMMON
REFER 7/S4.2
AND 4/S4.2

MALSAM TSANG
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4740 W MERCER WAY
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PROJECT NO	0179.2024.01.01
PROJECT MANAGER	RAF
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	ELLYJ@MALSAM-TSANG.COM

REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

ARCH GOLDEN DESIGN SERVICES 425.255.3871

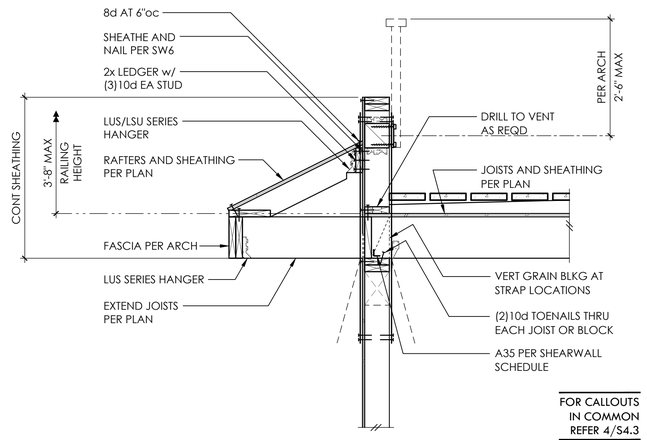
WOOD FRAMING DETAILS

S4.2

SCALE - 3/4" = 1'-0"

Plotted By: rafael
Plotted Date: May 16, 2024 - 3:14pm

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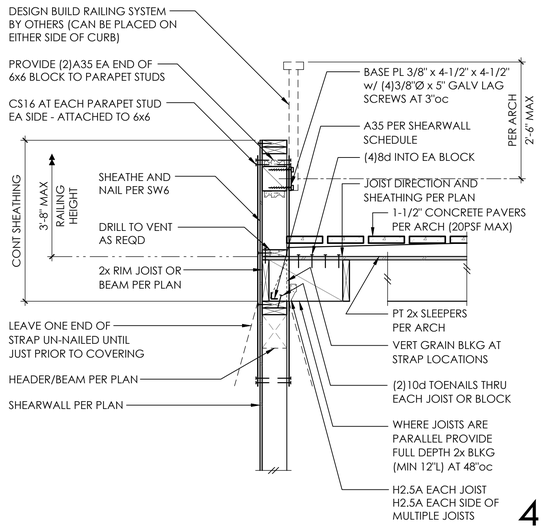


FOR CALLOUTS IN COMMON REFER 4/S4.3

1

2

3



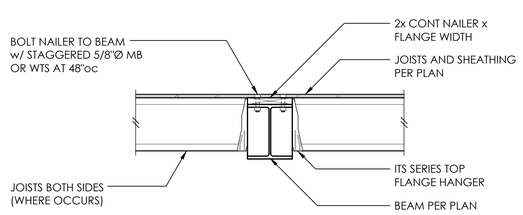
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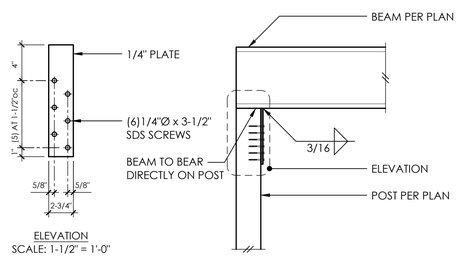
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MERCER ISLAND, WA

5

6



TYPICAL TOP FLUSH BEAM 7



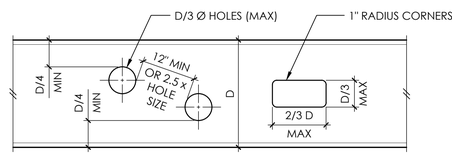
ELEVATION
SCALE: 1-1/2" = 1'-0"

8

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10

11



1. CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF ALL BEAM PENETRATIONS w/ MECHANICAL DRAWINGS. ALL PENETRATIONS LARGER THAN 2"Ø SHALL BE SHOWN ON SHOP DRAWINGS OR SKETCHES AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FIELD CUTTING NOT PERMITTED WITHOUT APPROVAL.
2. OPENINGS MAY OCCUR IN MIDDLE HALF OF BEAM LENGTH ONLY.
3. NO CUTTING MAY OCCUR IN TOP OR BOTTOM QUARTER OF BEAM DEPTH.
4. ADJACENT OPENINGS MUST BE SPACED AT THE GREATER OF, 12" OR 2.5 x LARGER OPENING SIZE, EDGE TO EDGE.
5. MAXIMUM SIZES OF OPENINGS SHALL BE D/3 Ø OR D/3 x 2D/3 AS SHOWN.
6. NO OPENINGS SHALL OCCUR WITHIN 12" OF AN ADJACENT BEAM CONNECTION.
7. REQUIRED OPENINGS NOT MEETING ABOVE CRITERIA SHALL BE SUBMITTED TO ENGINEER FOR REINFORCING DESIGN.

TYPICAL STEEL BEAM PENETRATIONS 12



PROJECT NO 0179.2024.01.01
PROJECT MANAGER RAF
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ENGINEER ELLY JOHNSON
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REV	DESCRIPTION	DATE
	PERMIT SET	8.16.24

ARCH GOLDEN DESIGN SERVICES
425.255.3871

WOOD FRAMING DETAILS

S4.3
SCALE - 3/4" = 1'-0"

Plotted By: rafael
Plotted Date: Aug 16, 2024 - 3:14pm