SINGLE FAMILY RESIDENCE

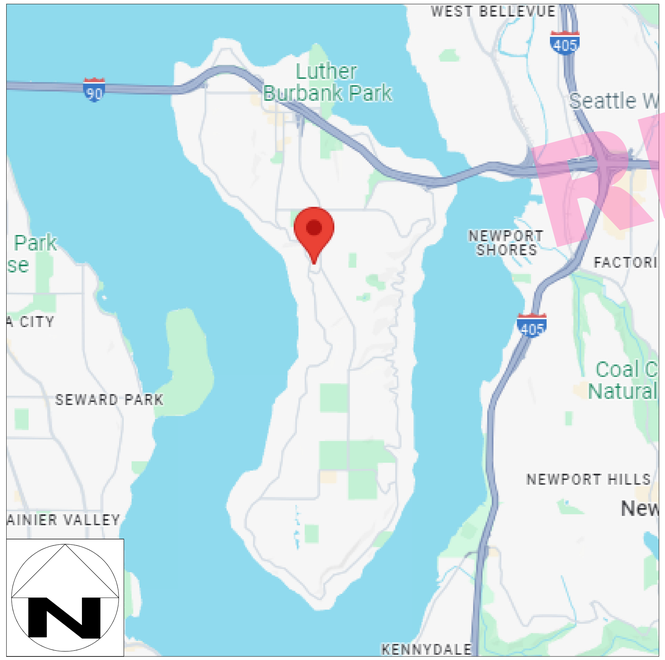
4332 W MERCER WAY
MERCER ISLAND, WA 98040

AS-BUILT DOCUMENTATION

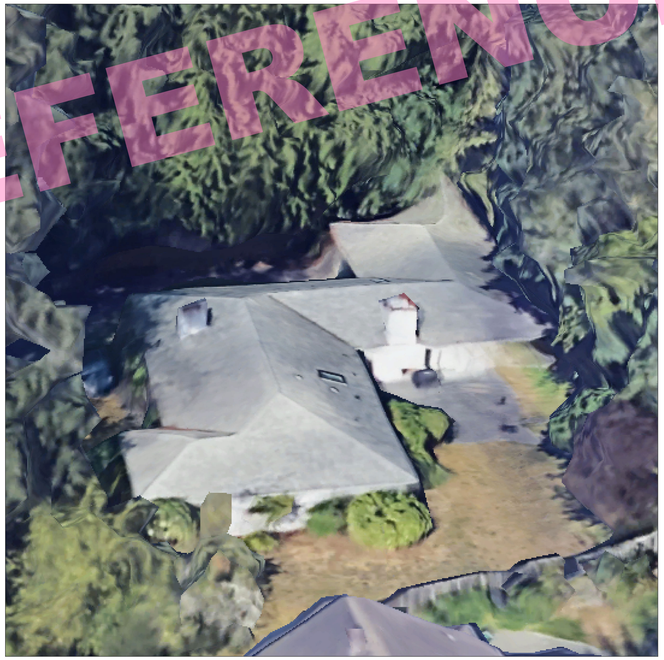
PROJECT LINKS

CLICK HERE TO VIEW YOUR PLANS USING PPM'S WEB VIEWER POWERED BY AUTODESK

VICINITY MAP



AERIAL VIEW



PPM PROJECT CONTACTS

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SHEET INDEX

PPM PRECISION PROPERTY MEASUREMENTS
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855-AS-BUILT

PREPARED FOR
KEN & PHEBE
KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

PLAN TYPE
COVER PAGE

PROJECT NUMBER
2015_WA

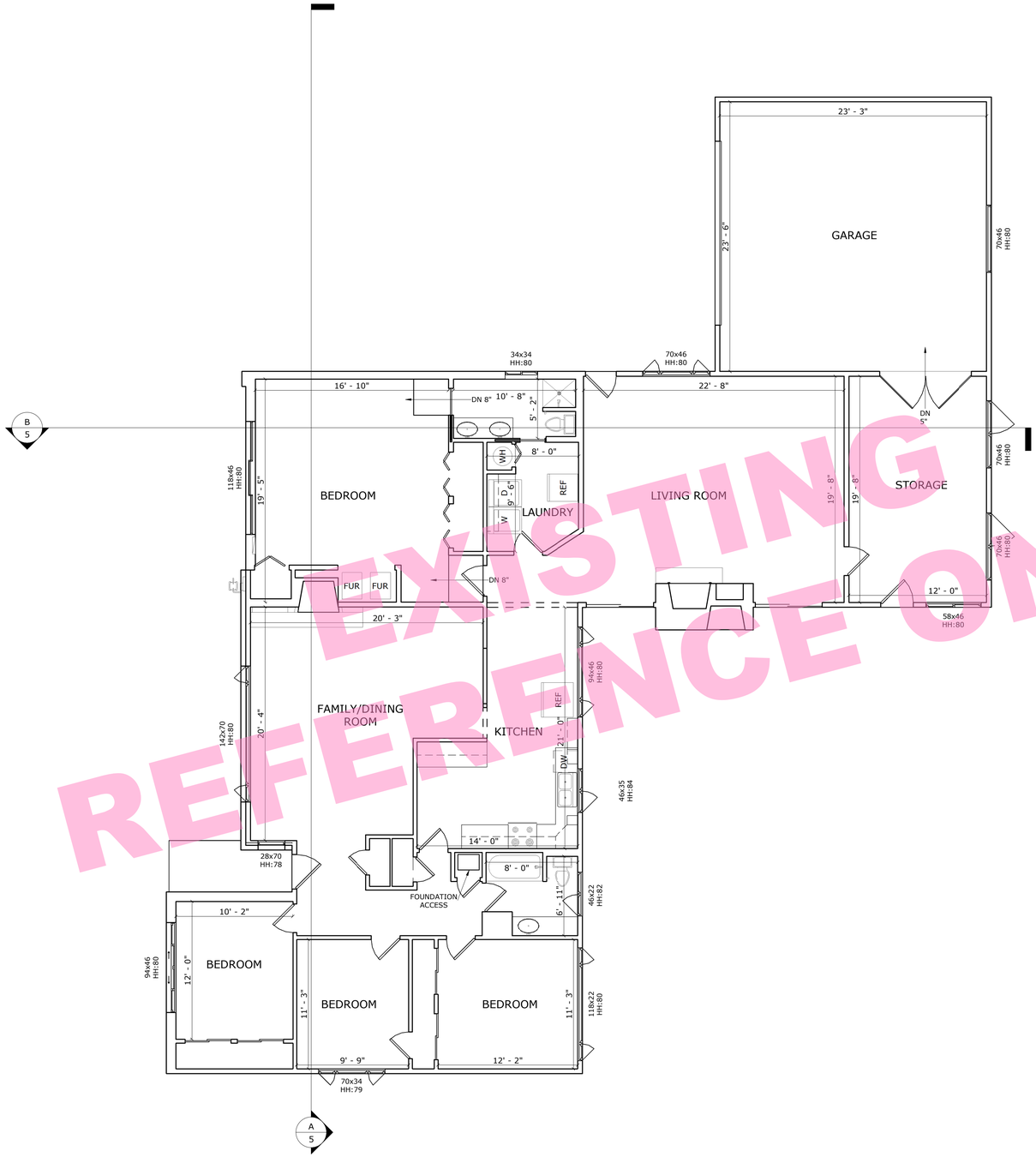
DATE
09/25/2024

SCALE
N.T.S.

SHEET
1
OF
8

LEGEND

LOW CASEWORK	RANGE	TANKLESS WATER HEATER	SOLAR COMPONENTS
UPPER CASEWORK	REFRIGERATOR	WATER HEATER	ELECTRICAL PANEL
FULL HEIGHT CASEWORK	OVEN	WATER SOFTNER	WALL HEATER
W/D = WASHER/DRYER COMBO	DISH WASHER	FLOOR DRAIN	DATUM POINT
W = WASHER	TRASH COMPACTOR	GAS METER	CLG = CEILING HEIGHT
D = DRYER	FURNACE	ELECTRIC METER	HH = HEADER HEIGHT



PPM PRECISION PROPERTY MEASUREMENTS
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KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

PLAN TYPE
1ST FLOOR PLAN

PROJECT NUMBER
2015_WA

DATE
09/25/2024

SCALE
3/16" = 1'-0"

SHEET
2
OF
8

LEGEND

SOFFIT LINE

BEAM LINE

- = CEILING DUPLEX
- = CEILING QUADRAPLEX
- = COVER PLATE
- = ROUND SPEAKER
- = SQUARE SPEAKER
- = HVAC SUPPLY VENT
- = HVAC RETURN VENT
- = ROUND SUPPLY VENT
- = EXHAUST FAN w/o LIGHT
- = EXHAUST FAN w/ LIGHT
- = CEILING FAN w/o LIGHT
- = CEILING FAN w/ LIGHT
- = FLUORESCENT LIGHT
- = TRACK LIGHTING
- = CEILING MOUNTED FIXTURE
- = RECESSED FIXTURE
- = HANGING FIXTURE
- = WALL MOUNTED FIXTURE
- = CEILING HATCH
- (J) = CEILING J-BOX
- (M) = MOTION DETECTOR
- (EQ) = MISC. EQUIPMENT
- (C) = SECURITY CAMERA
- (W) = WIFI BOOSTER
- (GDO) = GARAGE DOOR OPENER
- (EXIT) = EXIT SIGN
- = EMERGENCY DETECTOR
- = STROBE LIGHT
- = SPRINKLER
- = EMERGENCY LIGHT w/o EXIT
- = EMERGENCY LIGHT w/ EXIT
- = CEILING SHOWER HEAD
- = DATUM POINT

PPM PRECISION PROPERTY MEASUREMENTS
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PREPARED FOR
KEN & PHEBE
KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

PLAN TYPE
1ST FLOOR RCP

PROJECT NUMBER
2015_WA

DATE
09/25/2024

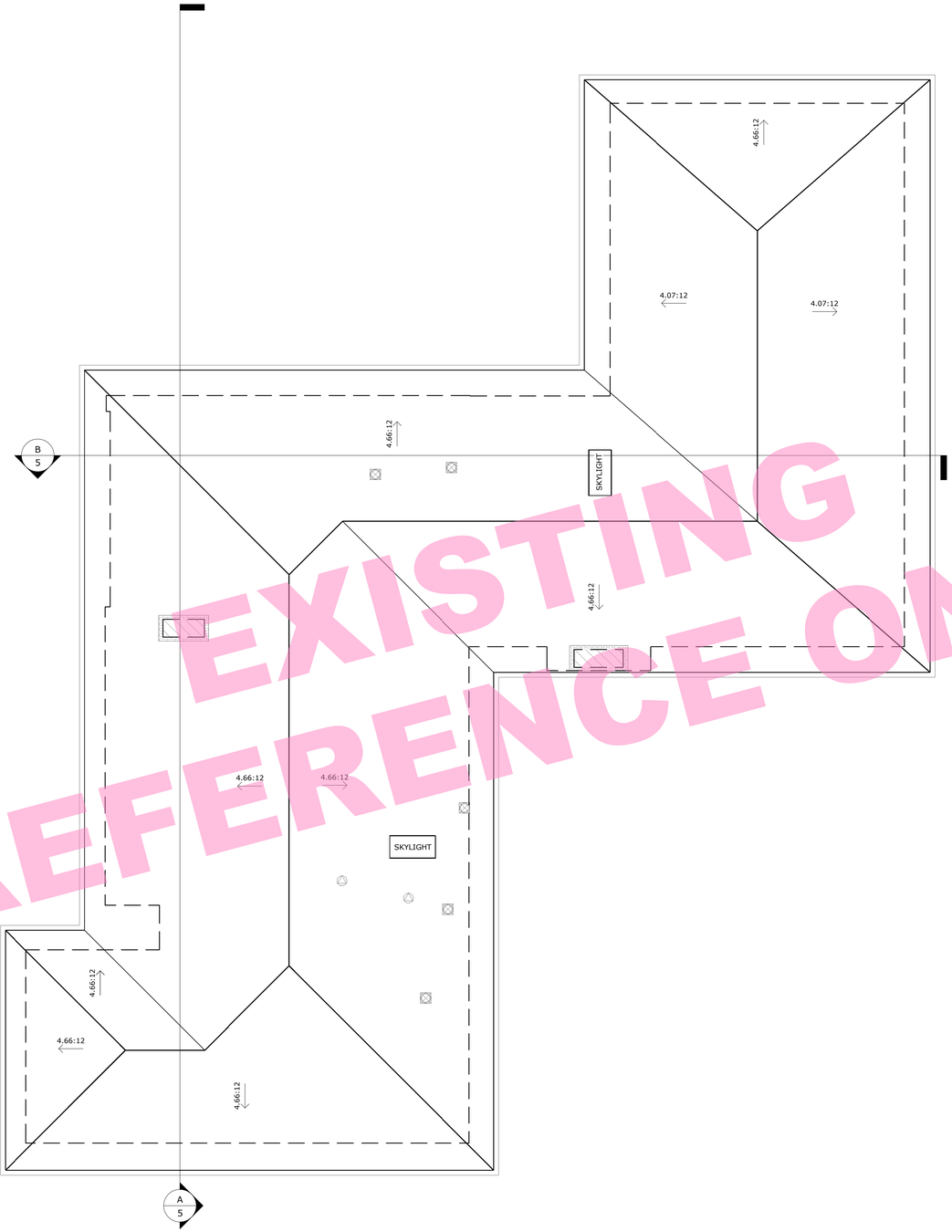
SCALE
3/16" = 1'-0"

LEGEND

CHIMNEY OUTLINE

BUILDING FOOTPRINT

= AIR CONDITIONER
= ROOF DRAIN
= DOWNSPOUT
RTU = ROOF TOP UNIT
= ROOF TOP HATCH
= UTILITY BOX
= ROOF VENT
= DATUM POINT



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PREPARED FOR
KEN & PHEBE
KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

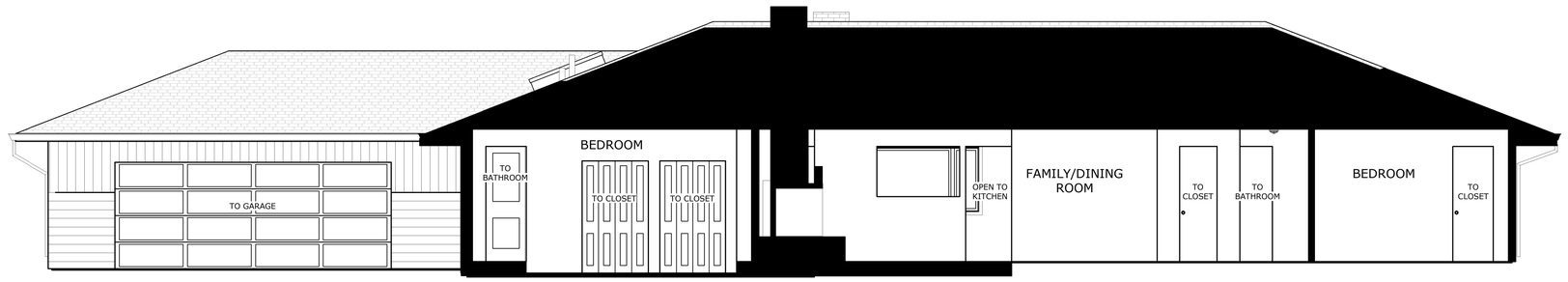
PLAN TYPE
ROOF PLAN

PROJECT NUMBER
2015_WA

DATE
09/25/2024

SCALE
3/16" = 1'-0"

SHEET
4
OF
8



A SECTION A
1/4" = 1'-0"

B SECTION B
1/4" = 1'-0"

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855-AS-BUILT

PREPARED FOR
KEN & PHEBE
KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

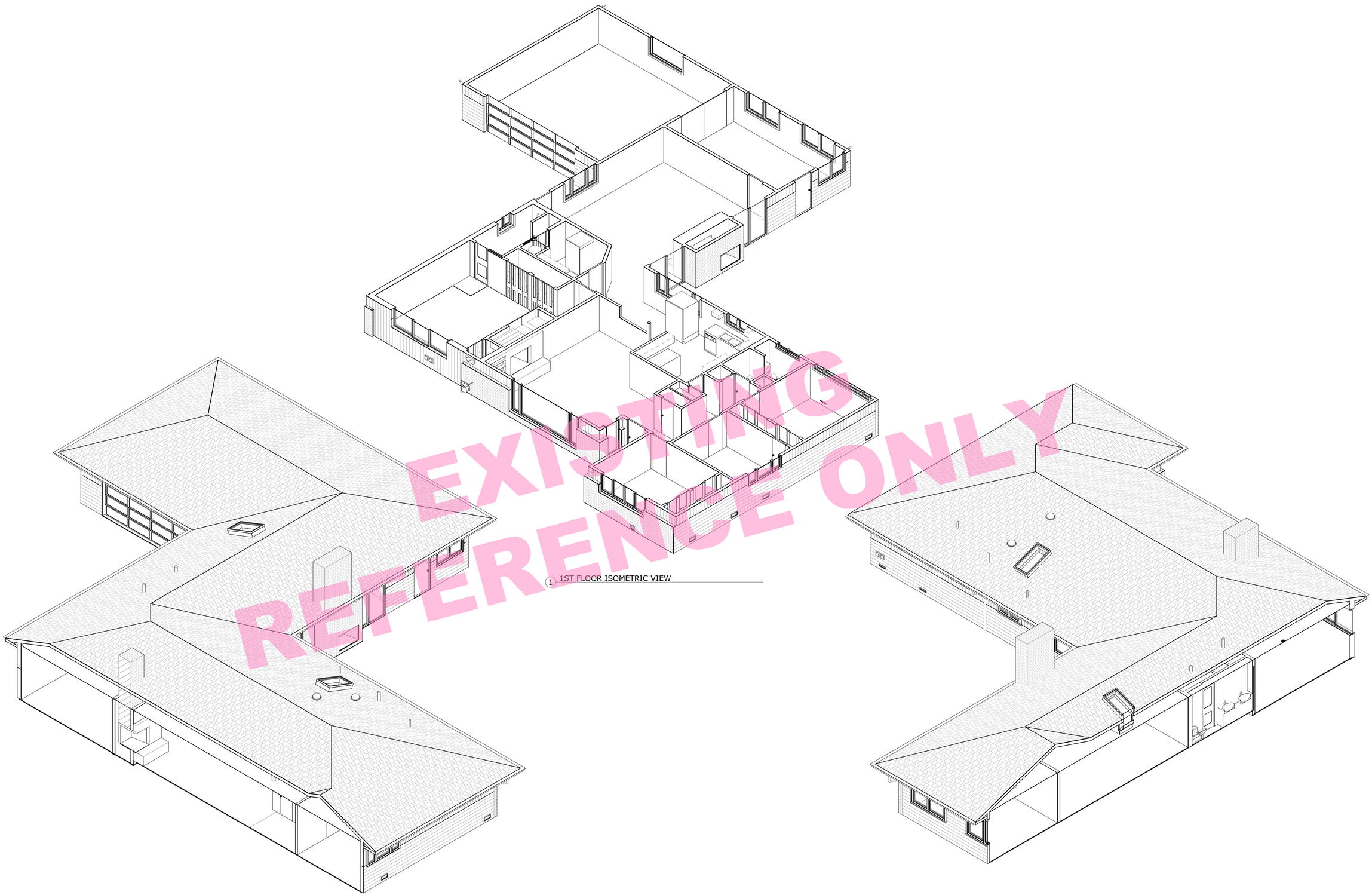
PLAN TYPE
SECTIONS

PROJECT NUMBER
2015_WA

DATE
09/25/2024

SCALE
1/4" = 1'-0"

SHEET
5
OF
8



1 1ST FLOOR ISOMETRIC VIEW

3 SECTION A ISOMETRIC VIEW

4 SECTION B ISOMETRIC VIEW

PRECISION PROPERTY MEASUREMENTS
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PREPARED FOR
KEN & PHEBE
KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

PLAN TYPE
ISOMETRIC VIEWS

PROJECT NUMBER
2015_WA

DATE
09/25/2024

SCALE

LEGEND

FINISHED GRADE LINE

FINISHED FLOOR LINE

X:12 ROOF PITCH LABEL (RISE:RUN)

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

2 EAST
1/4" = 1'-0"

PRECISION PROPERTY MEASUREMENTS
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PREPARED FOR
KEN & PHEBE
KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

PLAN TYPE
EXTERIOR ELEVATIONS

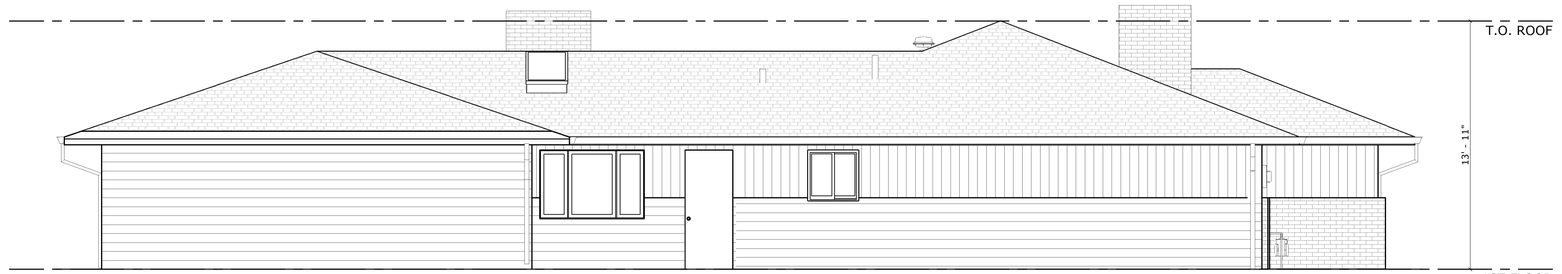
PROJECT NUMBER
2015_WA

DATE
09/25/2024

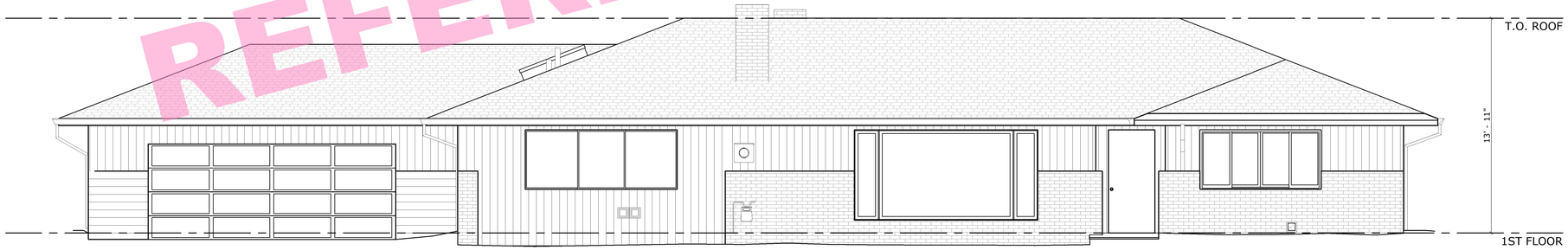
SCALE
1/4" = 1'-0"

LEGEND

FINISHED GRADE LINE	X:12 ROOF PITCH LABEL (RISE:RUN)
FINISHED FLOOR LINE	



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



2 WEST
1/4" = 1'-0"

PRECISION PROPERTY MEASUREMENTS
WWW.PPMCO.NET
855-AS-BUILT

PREPARED FOR
KEN & PHEBE
KEN CHU

PROJECT NAME
4332 W MERCER WAY PROJECT
MERCER ISLAND, WA

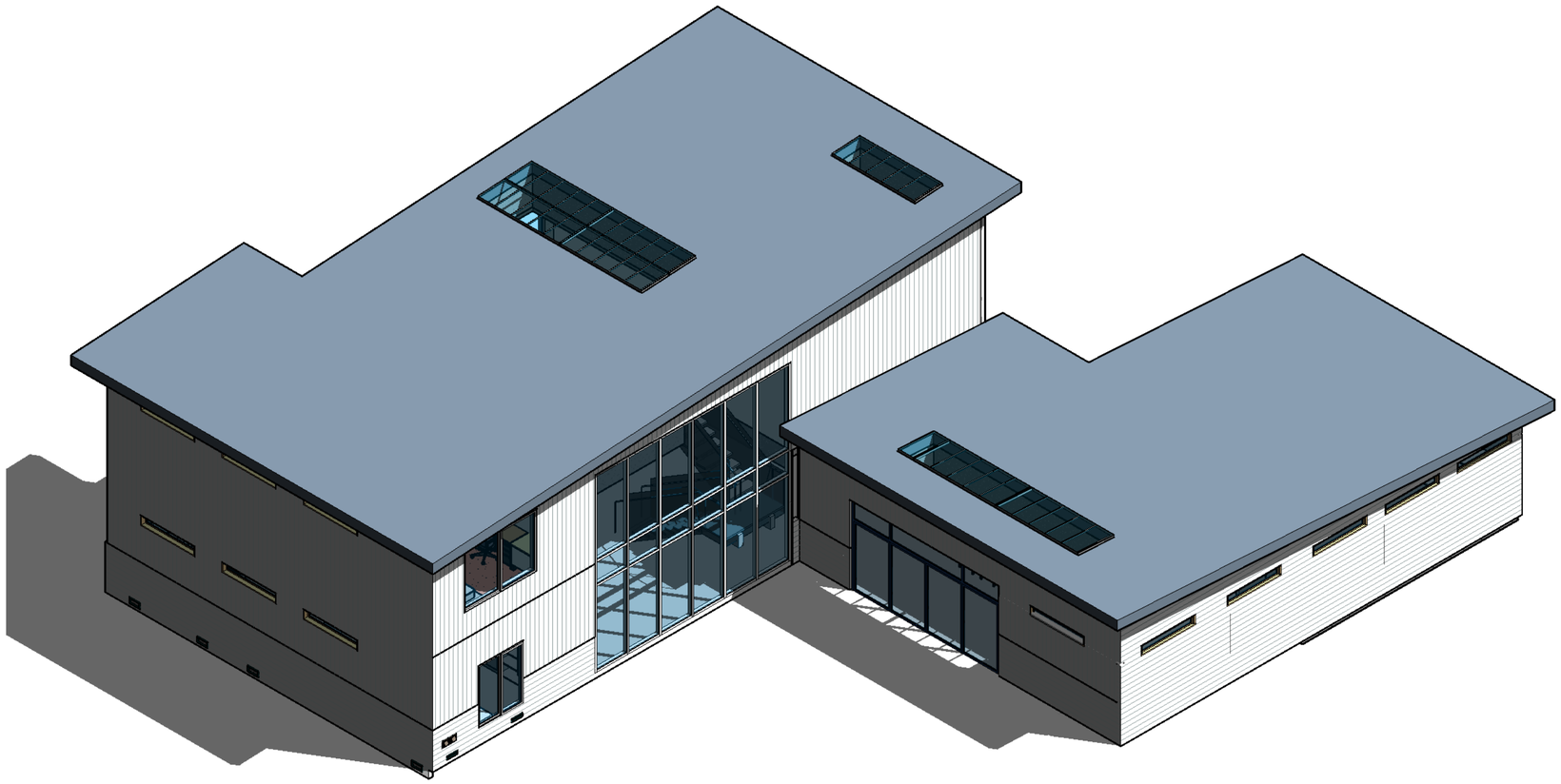
PLAN TYPE
EXTERIOR ELEVATIONS

PROJECT NUMBER
2015_WA

DATE
09/25/2024

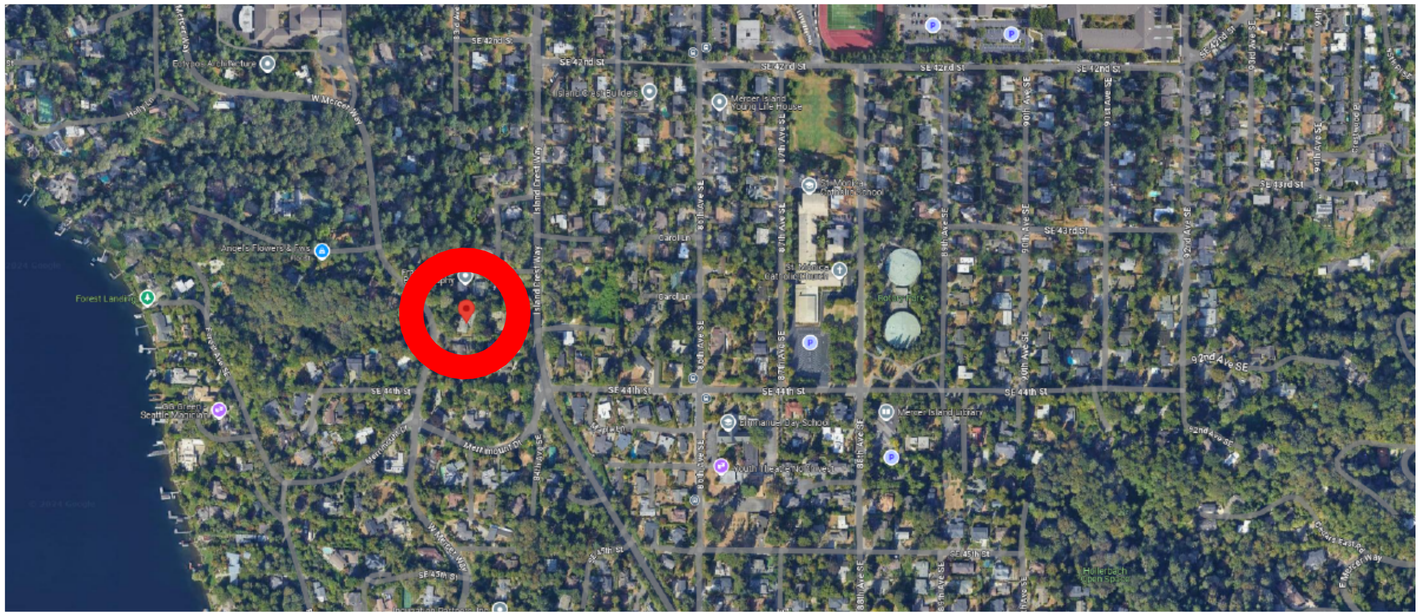
SCALE
1/4" = 1'-0"

SHEET
8
OF
8

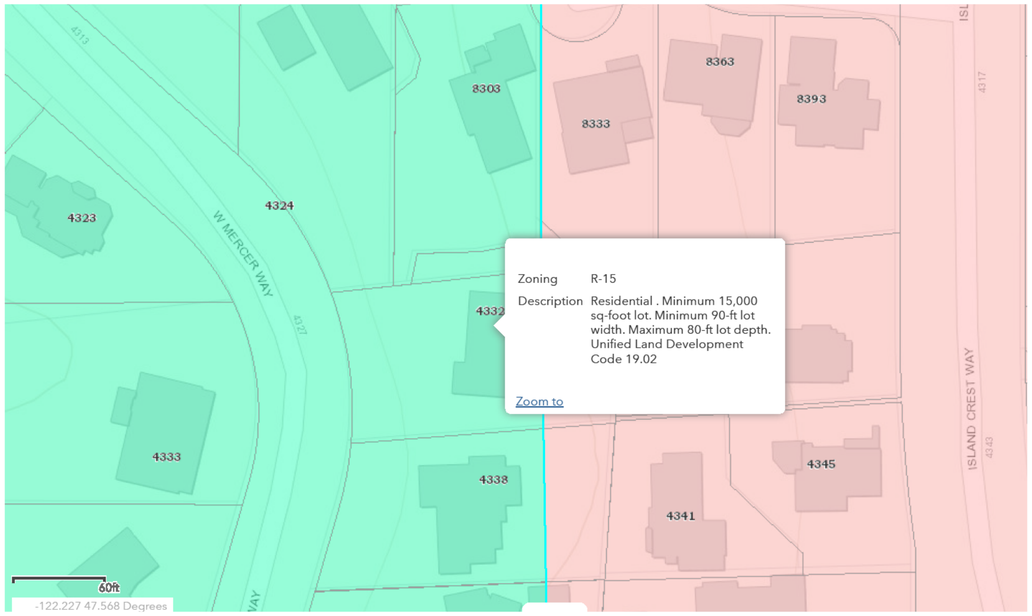


Sheet List	
Sheet Number	Sheet Name
0-Cover	
COVER	COVER SHEET
1-General	
G-010	PROJECT INFORMATION
2-Architecture	
A-010	SITE PLAN WITH LAND USE CALCULATION
A-100	FLOOR PLAN - DEMOLITION
A-101	FLOOR PLAN - LEVEL 01
A-102	FLOOR PLAN - LEVEL 02
A-103	ROOF PLAN
A-111	REFLECTIVE CEILING PLAN - LEVEL 01
A-112	REFLECTIVE CEILING PLAN - LEVEL 02
A-201	BUILDING ELEVATION
A-202	BUILDING ELEVATION
A-301	BUILDING SECTION
A-401	WALL SECTION & ASSEMBLY
A-411	ENLARGED PLAN - STAIRS
A-601	OPENING SCHEDULES

HILLHAVEN GROVE - Mercer Island Home Addition



VICINITY MAP



SITE MAP

3/21/2025 10:19:41 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE
Project number 0433220241014
4332 West Mercer Way, Mercer Island, WA

Owner | Project

COVER SHEET

Sheet Title

Date 10/31/2024
SH | 12" = 1'-0"

Drawn by | Scale

COVER

Sheet Number

PROJECT DESCRIPTION

THE PROJECT IS TO RENOVATE THE LEVEL ONE AND ADD A SECOND LEVEL ON TOP OF THE LEVEL ONE CONDITIONED AREA.

SEPARATE PERMIT

MECHANICAL HVAC SYSTEM
ELECTRICAL
PLUMBING
FIRE SPRINKLER

DEFFERED SUBMITTALS

ROOF TRUSSES
PREMANUFACTURED STRUCTURES (STAIRS, ETC.)
EXTERIOR CLADDING
CURTAIN WALL CONSTRUCTION
HVAC SYSTEM
PLUMBING SYSTEM

APPLICABLE CODE

2021 International Building Code (IBC)
2021 International Residential Code (IRC)
2021 International Fire Code (IFC)
2021 International Energy Conservation Code (IECC)
2021 International Plumbing Code (IPC)
2021 International Mechanical Code (IMC)
2021 International Fuel Gas Code (IFGC)
2021 International Existing Building Code (IEBC)
2021 Washington State Existing Building Code
2021 Washington State Building Code
2021 Washington State Mechanical Code
2021 Washington State Residential Code
2021 Washington State Energy Code - Residential Provisions
2021 Washington State Fire Code

ENERGY CODE (2021 WASHINGTON STATE ENERGY CODE)

PER R406.3: DUE TO THE ADDITIONAL CONDITIONED SPACE IS LARGER THAN 1500 SQFT, IT IS CONSIDERED AS MEDIUM DWELLING UNIT: THE REQUIRED CREDIT IS 8.0. (SEE CODE SECTION ON THIS SHEET)

SYSTEM TYPE 4: 3 CREDIT

OPTION 3.7: 2 CREDIT
OPTION 5.1: 0.5 CREDIT
OPTION 5.2: 0.5 CREDIT
OPTION 5.6: 2 CREDIT

TOTAL: 8 CREDIT

BUILDING INFORMATION

OWNER: PHEBE XU & KEN CHU
ADDRESS: 4332 WEST MERCER WAY, MERCER ISLAND, WA 98040
PARCEL NUMBER: 936570-0382-03, 321090-0051-09, 321090-0061-07

LOT SIZE (GROSS): 18,817 SF
LOT SIZE (NET): 18,138.7 SF
LOT SLOPE: 20.67% (SEE CALCULATION IN SITE PLAN A-010)
LEVEL 2 ADDITIONAL AREA: 1914.65 SF

ZONING DISTRICT: R-15
OCCUPANCY TYPE: IRC-1 SINGLE-FAMILY DWELLINGS
CONSTRUCTION TYPE: TYPE VB

PRIMARY STRUCTURAL FRAME: 0 HR
EXTERIOR BEARING WALLS: 0 HR
INTERIOR BEARING WALLS: 0 HR
INTERIOR NONBEARING WALLS AND PARTITIONS: 0 HR
FLOOR CONSTRUCTION AND SECONDARY MEMBERS: 0 HR
ROOF CONSTRUCTION AND SECONDARY MEMBERS: 0 HR

ZONING CODE REQUIREMENT

ALLOWABLE LOT COVEREAGE: 35% X 18,138.7 SF = 6,348.5 SF
ALLOWABLE MAXIMUM HEIGHT: 30' ABOVE AVERAGE BUILDING ELEVATION
REQUIRED LANDSCAPE AREA: 65% X 18,138.7 SF = 11,790.2 SF
ALLOWABLE HARDSCAPE AREA: 9% 18,138.7 SF = 1,632.48 SF
MAX. GROSS FLOOR AREA: 40% X 18,817 SF = 7,526.80 SF

FOR DETAILED INFORMATION, PLEASE REFER TO SHEET A-010 AND THE SITE DEVELOPMENT WORKSHEET.

2021 INTERNATIONAL RESIDENTIAL CODE (IRC)

EMERGENCY EGRESS WINDOWS SHALL MEET THE REQUIREMENTS OF IRC R310. EACH SLEEPING ROOM SHALL HAVE AN OPERABLE RESCUE OPENING. EMERGENCY ESCAPE MINIMUM DIMENSION SHALL MEET IRC R310.2. THE SILL HEIGHT SHALL NOT BE MORE THAN 44" FROM THE FINISH FLOOR TO THE BOTTOM OF THE OPENING. MINIMUM NET CLEAR OPENING SHALL BE 5.7 SQUARE FEET; MINIMUM CLEAR WIDTH 20"; MINIMUM HEIGHT 24".

STAIRWAYS SHALL MEET THE REQUIREMENTS OF IRC R311.7. STAIRWAYS SHALL HAVE A MINIMUM CLEAR WIDTH OF 36" ABOVE HANDRAIL, AND BE NOT LESS THAN 31 1/2" IN WIDTH BELOW HANDRAIL. MINIMUM HEADROOM SHALL NOT BE LESS THAN 6'-8". MAXIMUM RISER IS 7 3/4" AND MINIMUM TREAD IS 10". HANDRAILS SHALL NOT BE LESS THAN 34" OR MORE THAN 38" ABOVE THE SLOPE OF THE PLANE OF THE STAIRS AND SHALL BE CONTINOUS FOR THE FULL RUN OF THE FLIGHT AND SHALL HAVE A MINIMUM SPACE OF 1 1/2" BETWEEN WALL AND TAILING.

PER IRC R312 GURADS SHALL BE INSTALLED ON ALL OPEN SIDED WALKING SURFACES INCLUDING STAIRS, RAMPS, LANDINGS, THAT ARE LOCATED MORE THAN 30" MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW. GUARDS SHALL HAVE OPENINGS SMALL ENOUGH THAT A 4" DIAMETER BALL CANNOT PASS. ALL GUARDS SHALL HAVE A MINIMUM OVERTURN RESISTANCE 200 LBS. PER IRC TABLE 301.5. SEE R311.7.8 FOR STAIR RAILING REQUIREMENTS.

MMC TITLE 17: REQUIRED FIRE SYSTEMS:
NFPA 13D FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13D AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.

R314: SMOKE ALARMS ARE TO BE INSTALLED IN EACH SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND HABITABLE ATTICS. ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WITH BATTERY BACK-UP. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION. SMOKE ALARMS SHALL BE INTERCONNECTED AND COMPLY WITH HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72.
LOW VOLT NFPA 29 IN CHAPTER 29 MAY BE SUBSTITUTED PENDING APPROVAL BY FIRE MASHAL.

R315: CARBON MONOXIDE ALARMS ARE REQUIRED ON EACH FLOOR AND OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS WITHIN WHICH FUEL-FIRED APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES.

SUPPLEMENTAL INFORMATION

TABLE R402.1.2
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE 5 AND MARINE 4	
Fenestration U-Factor[b]	0.30
Skylight U-Factor	0.50
Ceiling U-Factor	0.024
Above-Grade Wall U-Factor	0.056
Floor U-Factor	0.029
Slab on Grade F-Factor	0.54
Below Grade 2' Depth	
Wall *U*-Factor	0.042
Slab *F*-Factor	0.59
Below Grade 3.5' Depth	
Wall *U*-Factor	0.040
Slab *F*-Factor	0.56
Below Grade 7' Depth	
Wall *U*-Factor	0.035
Slab *F*-Factor	0.50

For SI: 1 foot = 304.8 mm, ci = continuous insulation, int = intermediate framing.

a. *U*-factors or F-factors shall be obtained from measurement, calculation or an approved source, or as specified in Section R402.1.5.
b. A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in windborne debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.

TABLE R402.1.3
INSULATION MINIMUM R-VALUES AND FENESTRATION REQUIREMENTS BY COMPONENTS[a]

CLIMATE ZONE 5 AND MARINE 4	
Fenestration U-Factor[b, j]	0.30
Skylight[b] U-Factor	0.50
Ceiling R-Value[e]	60
Wood Frame Wall[g, j] R-Value	20+5 or 13+10
Floor R-Value	30
Below-Grade[c, h] Wall R-value	10/15/21 int + 5TB
Slab[d, f] R-Value & Depth	10, 4 ft

a. *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix A Table A101.4 of chapter 51-11C WAC shall not be less than the *R*-value specified in the table.
b. The fenestration *U*-factor column excludes skylights.
c. "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.
d. R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
e. For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
f. R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
g. For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for *climate zone* 5 of ICC 400.
h. Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78 percent of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.
i. The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "R13+10" means R-13 cavity insulation plus R-10 continuous insulation.
j. A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in windborne debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.

SECTION R406
ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS

R406.1 Scope. This section establishes additional energy efficiency requirements for all new construction covered by this code, including additions subject to Section R502 and change of occupancy or use subject to Section R505 unless specifically exempted in Section R406. Credit from both Sections R406.2 and R406.3 are required.

R406.2 Carbon emission equalization. This section establishes a base equalization between fuels used to define the equivalent carbon emissions of the options specified. The permit shall define the base fuel selection to be used and the points specified in Table R406.2 shall be used to modify the requirements in Section R406.3.

TABLE R406.2
ENERGY EQUALIZATION CREDITS

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

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

TABLE R406.3 (continued)
ENERGY CREDITS

OPTION	DESCRIPTION	CREDIT(S)	
		All Other	Group R-2[b]
3.4[a,d]	Closed-loop ground source heat pump; with a minimum COP of 3.3 **or** Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.5	1.0
3.5[d]	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF2 of 9 (HSPF of 10.0) shall be installed and provide heating to the largest zone of the housing unit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.5	2.0
3.6[a]	Air-source, centrally ducted heat pump with minimum HSPF2 of 9.4 (HSPF of 11.0). A centrally ducted air source cold climate variable capacity heat pump (cc VCHP) found on the NEEP cc VCHP qualified product list with a minimum of ~~9~~ 8.5 HSPF2 (10 HSPF) may be used to satisfy this requirement. In areas where the winter design temperature as specified in Appendix RC is 23°F or below, an air source centrally ducted heat pump shall be a cold climate variable capacity heat pump as listed on the NEEP qualified product list. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.0	N/A
3.7[a,d,e]	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF2 of 9 (HSPF of 10) shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. **Exception:** In homes with total heating loads of 24,000 or less using multi-zone mini-split systems with nominal ratings of 24,000 or less, the minimum HSPF s to claim this credit shall be 8.19 HSPF2 (or 9 HSPF). To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0	3.0
3.8[a,d]	Air-to-water heat pump with minimum COP of 3.2 at 47°F, rated in accordance with AHRI 550/590 by an accredited or certified testing lab. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	1.0	NA

TABLE R406.3 (continued)
ENERGY CREDITS

OPTION	DESCRIPTION	CREDIT(S)	
		All Other	Group R-2[b]
5. EFFICIENT WATER HEATING OPTIONS Only one option from Items 5.3 through 5.8 may be selected in this category. Items 5.1 and 5.2 may be combined with any option.			
5.1	A drain water heat recovery unit(s) shall be installed, which captures waste water heat from at least two showers, including tub/shower combinations. It is acceptable, but not required, for sink water to be connected. Unit shall have a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled. To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.	0.5	0.5
5.2	For Compact Hot Water Distribution system credit, the volume shall store not more than 16 ounces of water between the nearest source of heated water and the termination of the fixture supply pipe where calculated using Section R403.5.2. *Construction documents* shall indicate the ounces of water in piping between the hot water source and the termination of the fixture supply. When the hot water source is the nearest primed plumbing loop or trunk, this must be primed with an On Demand recirculation pump and must run a dedicated ambient return line from the furthest fixture or end of loop to the water heater. To qualify for this credit, the dwelling must have a minimum of 1.5 bathrooms.	0.5	0.5
5.3	Water heating system shall include the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.	0.5	0.5
5.4	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 **or** Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating System **or** Water heater heated by ground source heat pump meeting the requirements of Option 3.4. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.	1.0	1.0

TABLE R406.3 (continued)
ENERGY CREDITS

OPTION	DESCRIPTION	CREDIT(S)	
		All Other	Group R-2[b]
5.5	Water heating system shall include one of the following: Gas-fired heat pump water heater(s) meeting Tier 2 of the NEEA Advanced Water Heating Specification for Gas-Fueled Residential Storage Water Heaters Version 1.0. **or** For R-2 Occupancy, gas-fired heat pump water heater(s) meeting Tier 2 of the NEEA Advanced Water Heating Specification for Gas-Fueled Residential Storage Water Heaters Version 1.0. shall supply domestic hot water to all units. **or** For R-2 Occupancy, gas-fired heat pump water heater(s) meeting ANSI Z21.40.2 and Z21.40.4 or CSA, with a minimum UEF of 1.15, shall supply domestic hot water to all units. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.	1.5	1.5
5.6	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification **or** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.	2.0	2.5
5.7	Water heating system shall include one of the following: Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard *Advanced Water Heating Specification* with the UEF noted above **or** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.	2.5	3.0

3/21/2025 10:19:41 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017356 REGISTERED ARCHITECT SHUDAN HE STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE
Project number 0433220241014
4332 West Mercer Way, Mercer Island, WA

Owner / Project

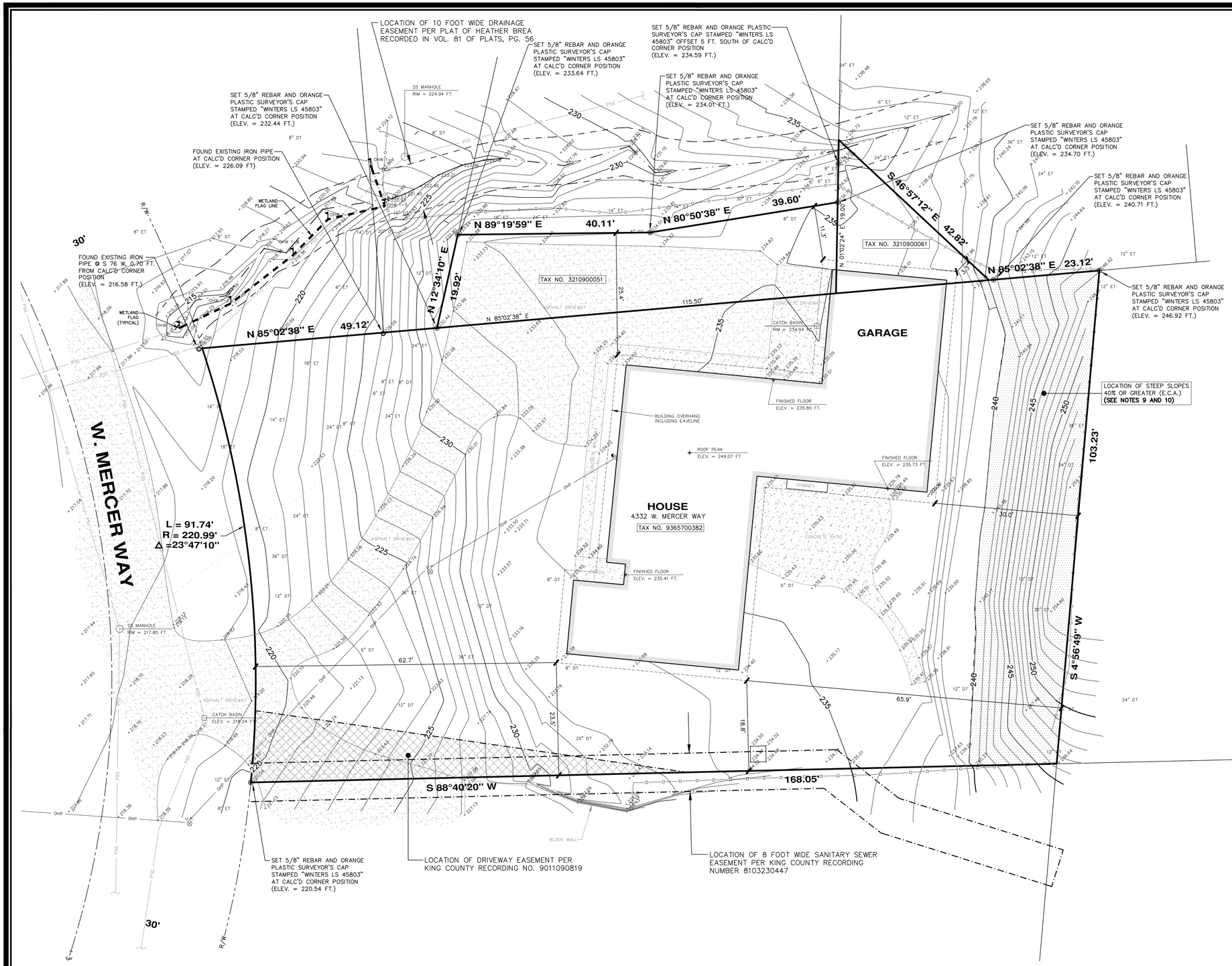
PROJECT INFORMATION

Sheet Title

Date 10/31/2024
Drawn by SH
Scale 12" = 1'-0"

G-010

Sheet Number



SCALE: 1"=10'

0 5 10 20

NOTES *NORTH*

1. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE USING A 10 SECOND "TOTAL STATION" THEODOLITE SUPPLEMENTED WITH A 100 FT. STEEL TAPE. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC CHAPTER 332-130-090.
2. CONTOUR INTERVAL = 1 FT.
3. VERTICAL DATUM = NAVD'88, AS PER DIRECT OBSERVATIONS USING GPS EQUIPMENT ON NOV. 15, 2021.

   HORIZONTAL DATUM = NAD 83/91
4. PARCEL AREA = 18,817 SQ. FT.
5. THIS SURVEY IS RELIANT UPON THE INFORMATION CONTAINED WITHIN CHICAGO TITLE COMPANY TITLE ORDER NO. 0208804-ETU, DATED JULY 01, 2021.
6. UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS APPROXIMATE ONLY AND IS BASED UPON TIES TO ABOVE GROUND STRUCTURES.
7. TAX PARCEL NO(S). 9365700382, 3210900051 & 3210900061
8. TREE DIAMETERS AND DRIPLINES DISPLAYED HEREON ARE APPROXIMATE. FOR SPECIFIC GENUS AND DIAMETER, TREES SHOULD BE EVALUATED BY A CERTIFIED ARBORIST.
9. THE AREA OF ON-SITE STEEP SLOPES 40% OR GREATER = 2,004 SQ. FT. OR 10% OF TOTAL PARCEL AREA.
10. THE LOCATION AND AREA OF STEEP SLOPES AS DISPLAYED HEREON ARE APPROXIMATE AND HAVE BEEN DETERMINED TO THE BEST OF OUR ABILITY FROM FIELD DATA COLLECTED BY US DURING THE COURSE OF THIS SURVEY. FINAL DETERMINATION OF THE LOCATION OF STEEP SLOPES, AND ANY ASSOCIATED BUFFERS, IS DEPENDENT UPON REVIEW AND APPROVAL BY THE CITY OF SEATTLE.
11. WE HAVE DETERMINED TO THE BEST OF OUR ABILITY THE OVERHEAD HIGH VOLTAGE POWERLINE WHICH IS CLOSEST TO THE PROJECT SITE AND HAVE DISPLAYED ITS HORIZONTAL AND VERTICAL LOCATION HEREON. HOWEVER, ADDITIONAL OVERHEAD SERVICE LINES MAY EXIST WHICH ARE NOT OBVIOUS TO US BY FIELD OBSERVATION AND POTENTIALLY IMPACT PROJECT DESIGN. THEREFORE, PRIOR TO DESIGN AND CONSTRUCTION WE RECOMMEND THAT SEATTLE CITY LIGHT BE CONSULTED REGARDING THE POSSIBLE EXISTANCE OF ADDITIONAL SERVICE LINES NOT DISPLAYED HEREON WHICH SHOULD BE CONSIDERED FOR PROJECT DESIGN.

LEGAL DESCRIPTION:

THAT PORTION OF TRACT 25, HARRY WHITE'S PLAT OF EAST SEATTLE ACRE TRACTS, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 3 OF PLATS, PAGE(S) 36, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS

:

BEGINNING AT A POINT IN THE NORTH LINE OF SAID TRACT 25, DISTANT 216.37 FEET SOUTH 84°58'30" WEST FROM THE NORTHWEST CORNER THEREOF; THENCE CONTINUING SOUTH 84°58'30" WEST 195 FEET, MORE OR LESS, TO A POINT ON THE EAST MARGINAL LINE OF WEST MERCER WAY AS NOW ESTABLISHED; THENCE SOUTHERLY ALONG SAID EAST MARGINAL LINE OF WEST MERCER WAY, A DISTANCE OF 93.64 FEET; THENCE NORTH 86°38'10" EAST 170.86 FEET, MORE OR LESS, TO A POINT WHICH BEARS SOUTH 4°52'41" WEST FROM THE POINT OF BEGINNING; THENCE NORTH 4°52'41" EAST 103.23 FEET TO THE POINT OF BEGINNING;

ALSO

THAT PORTION OF TRACT 5, HEATHER BRAE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 81 OF PLATS, PAGE(S) 56, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID TRACT 5; THENCE SOUTH 83°53'45" WEST ALONG THE SOUTH LINE THEREOF 83.50 FEET; THENCE NORTH 11°25'17" EAST 19.92 FEET; THENCE NORTH 88°11'06" EAST 40.11 FEET; THENCE NORTH 79°41'45" EAST 39.60 FEET TO THE EAST LINE OF SAID TRACT 5; THENCE SOUTH 0°05'56" EAST 19.00 FEET TO THE POINT OF BEGINNING;

AND THAT PORTION OF LOT 6 OF SAID PLAT OF HEATHER BRAE LYING SOUTHWESTERLY OF A LINE EXTENDING FROM A POINT ON THE WESTERLY LINE OF SAID LOT WHICH IS 32 FEET NORTHERLY OF THE SOUTHWEST CORNER THEREOF, TO A POINT ON THE SOUTHERLY LINE OF SAID LOT WHICH IS 32 FEET EASTERLY OF SAID SOUTHWEST CORNER.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

LEGEND:

GAS METER	ROCKERY	UTILITY POLE	
ELECTRIC METER	CONCRETE PAVING	OHP	OVERHEAD POWER LINE
WATER VALVE	ASPHALT PAVING	COMM	OVERHEAD COMMUNICATIONS LINE
FIRE HYDRANT	CHAIN LINK FENCE	TELE	UNDERGROUND COMMUNICATIONS LINE
WATER METER	WOODEN FENCE	P	UNDERGROUND POWER LINE
MANHOLE COVER	GAS VALVE	G	UNDERGROUND GAS LINE
CATCH BASIN	POWER POLE	W	UNDERGROUND WATER LINE
		SSS	UNDERGROUND SANITARY SIDE SEWER
		X" PSD	X" DIAMETER STORM MAIN
		X" PSS	X" DIAMETER SEWER MAIN
		X" W	X" DIAMETER WATER MAIN

BRANDON E. WINTERS STATE OF WASHINGTON 45803 REGISTERED PROFESSIONAL LAND SURVEYOR

DATE: 5/9/2024

TOPOGRAPHIC SURVEY
4332 WEST MERCER WAY
MERCER ISLAND, WASHINGTON

CHADWICK WINTERS

LAND SURVEYING AND MAPPING

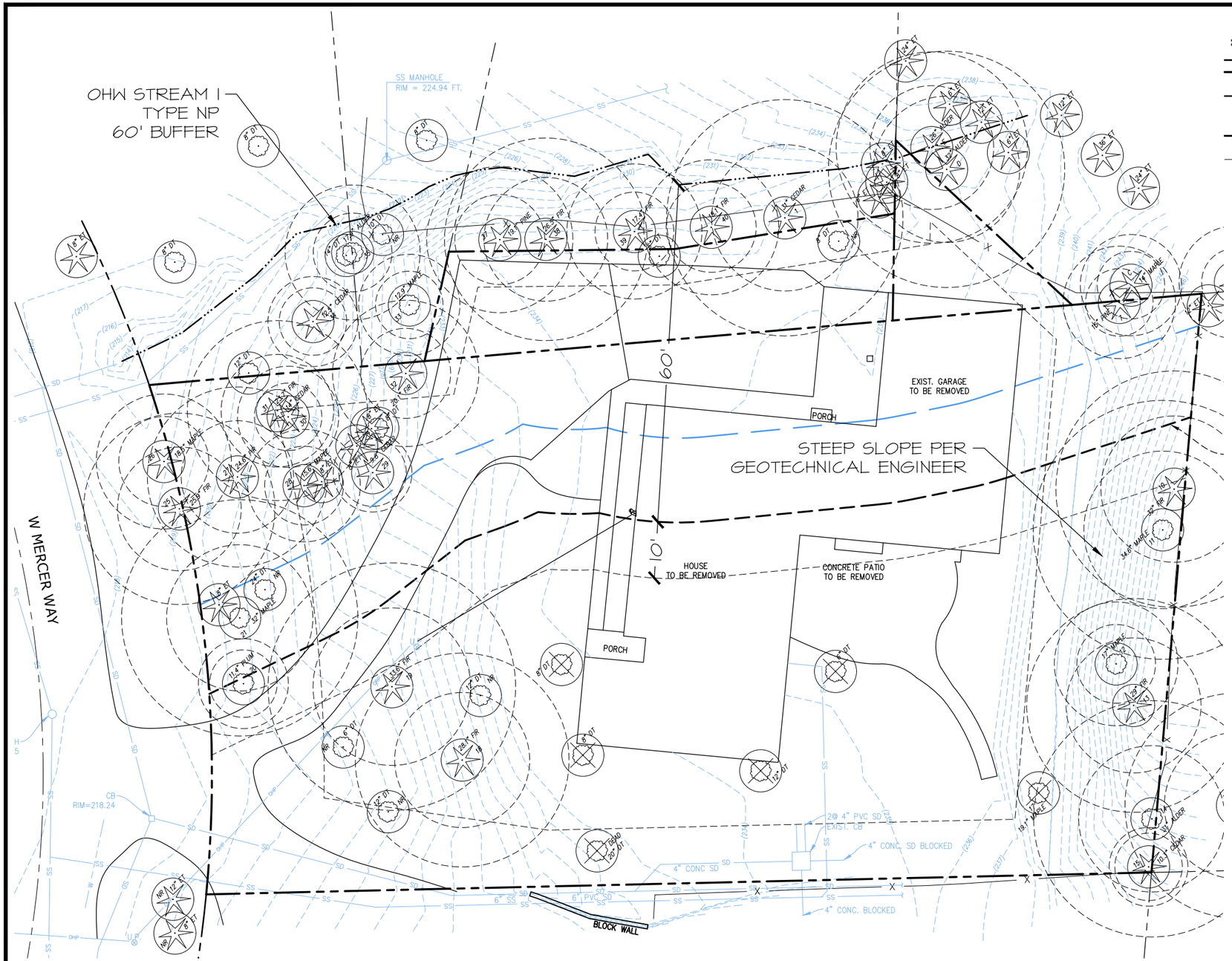
1422 N.W. 85TH ST., SEATTLE, WA 98117

PHONE: 206.297.0996

FAX: 206.297.0997

WEB: WWW.CHADWICKWINTERS.COM

PROJECT #:	21-7329
DRAWING:	21-7329 TOPO.DWG
CLIENT:	KEN CHU
DATE:	05/9/2024
DRAWN BY:	RCS



PLAN LEGEND

- PROPERTY LINE
- SOUTH STREAM ORDINARY HIGH WATER LINE
- 60' STREAM BUFFER
- 10' STRUCTURE SETBACK

GRAPHIC SCALE
(IN FEET)

0 10 20 30 40 60

SCALE: 1:20

N

NOTES

1. BASE INFORMATION PROVIDED BY NICK BOSSOFF ENGINEERING, INC., 191 NE TARI LANE, STEVENSON, WA 98648, 425.881.5904.

PROJECT 6625
DRAWN SO
SCALE AS NOTED
DATE 05-31-24
REVISED
1/5

FIGURE 1: EXISTING CONDITIONS
CHU PROPERTY
4332 WEST MERCER WAY
MERCER ISLAND, WASHINGTON
PARCEL 9365700382

Altmann Oliver Associates, LLC
AOA Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4569

6625-MIT-05-31-24.dwg

PLANT SCHEDULE

TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY	SIZE (MIN.)	NOTES
AC	ACER CIRCINATUM	VINE MAPLE	9' O.C.	5	2 GAL.	MULTI-STEM (3 MIN.)
CD	CALOCEDRUS DECURRENS	INCENSE CEDAR	9' O.C.	2	2 GAL.	FULL & BUSHY
CC	CORYLUS CORNUTA	WESTERN HAZELNUT	9' O.C.	4	2 GAL.	MULTI-STEM (3 MIN.)
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	9' O.C.	2	2 GAL.	FULL & BUSHY
QG	QUERCUS GARRYANA	GARRY OAK	9' O.C.	2	2 GAL.	FULL & BUSHY
RP	RHAMNUS PURSHIANA	CASCARA	9' O.C.	3	2 GAL.	SINGLE TRUNK

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY	SIZE (MIN.)	NOTES
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY	5' O.C.	6	1 GAL.	MULTI-STEM (3 MIN.)
M	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	3' O.C.	18	1 GAL.	FULL & BUSHY
OC	OEMLERIA CERASIFORMIS	INDIAN PLUM	5' O.C.	8	1 GAL.	MULTI-STEM (3 MIN.)
RS	RIBES SANUINEUM	RED FLOWERING CURRANT	5' O.C.	8	1 GAL.	MULTI-STEM (3 MIN.)
R	ROSA GYMNOCARPA	BALDHIP ROSE	3' O.C.	23	1 GAL.	MULTI-STEM (3 MIN.)
N	ROSA NUTKANA	NOOTKA ROSE	3' O.C.	19	1 GAL.	MULTI-STEM (3 MIN.)
S	SYMPHORICARPOS ALBUS	SNOWBERRY	3' O.C.	39	1 GAL.	MULTI-STEM (3 MIN.)
V	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	3' O.C.	33	1 GAL.	FULL & BUSHY

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY	SIZE (MIN.)	NOTES
	FRAGARIA CHILOENSIS	COAST STRAWBERRY	2' O.C.	350	1 GAL.	FULL & BUSHY
	GAULTERIA SHALLON	SALAL	2' O.C.	25	1 GAL.	FULL & BUSHY
	POLYSTICHUM MUNITUM	SWORD FERN	3' O.C.	200	1 GAL.	FULL & BUSHY

PROJECT 6625
DRAWN SO
SCALE AS NOTED
DATE 05-31-24
REVISED
4/5

FIGURE 4: PLANT SCHEDULE
CHU PROPERTY
4332 WEST MERCER WAY
MERCER ISLAND, WASHINGTON
PARCEL 9365700382

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

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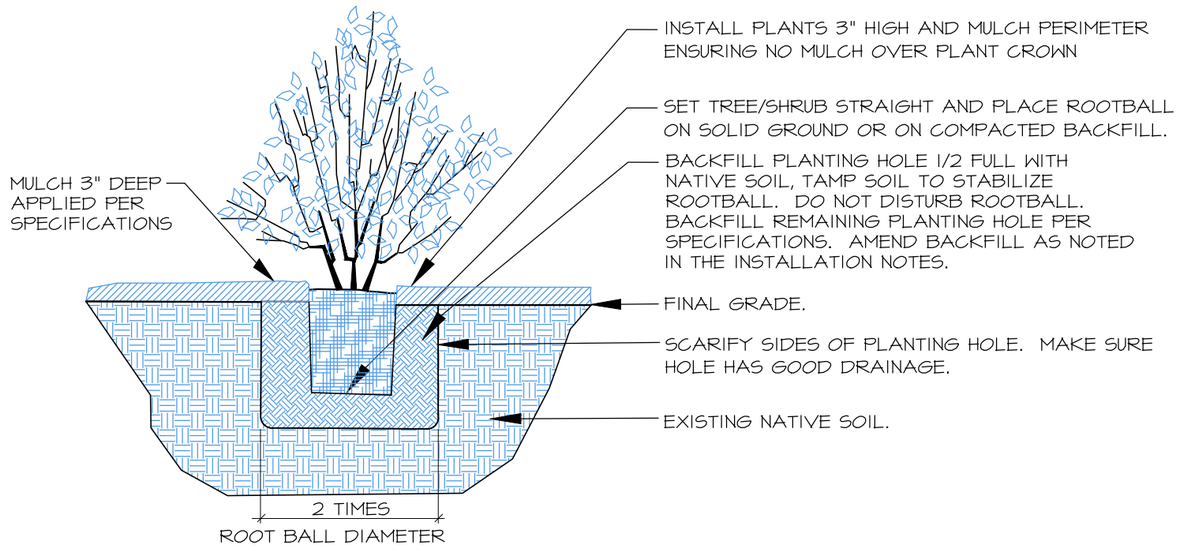
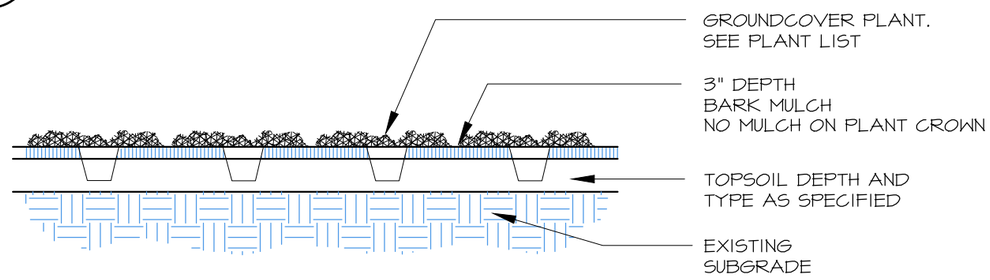
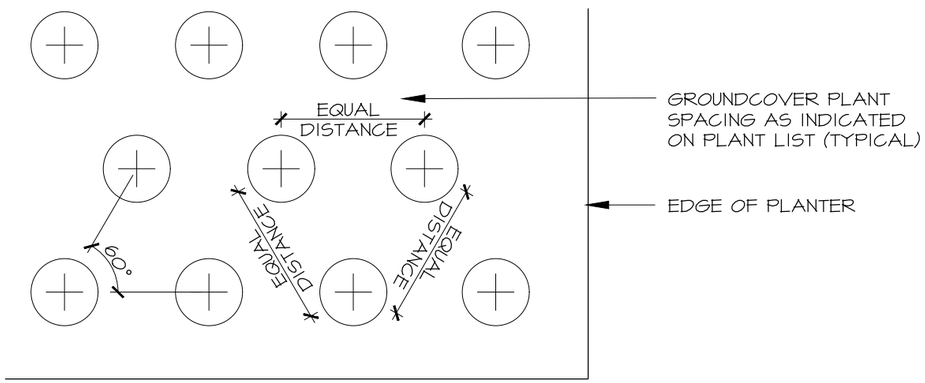


1 CONTAINER TREE/SHRUB PLANTING (TYP.)

SCALE: NTS





2 GROUNDCOVER PLANTING (TYP.)

SCALE: NTS

SPECIFICATIONS

1. PRIOR TO PLANTING, ALL NON-ORGANIC DEBRIS AND NON-NATIVE, INVASIVE VEGETATION SHALL BE HAND-REMOVED AND EXPORTED OFF SITE. EXISTING RHODODENDRON SHALL BE PRUNED BACK. IRRIGATION SHALL BE ADJUSTED TO COVER MITIGATION AREA.
2. PRIOR TO PLANTING, ALL NON-NATURAL MATERIALS SHALL BE REMOVED (GRAVEL, ROCK, CONCRETE) FROM EXISTING DEVELOPED AREAS AND YARD. A 6" LIFT OF IMPORTED CEDAR GROVE 3-WAY TOPSOIL SHALL BE PLACED AND TILLED INTO THE TOP 6" OF SUBGRADE PRIOR TO PLANTING.
3. IMPORTED CEDAR GROVE 3-WAY TOPSOIL SHALL BE PLACED IN THE NON-GRADED AREAS AFTER WEED REMOVAL TO PRE-REMOVED GRADES PRIOR TO PLANTING AND MULCHING.
4. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH.
5. ALL PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT. PITS SHALL BE BACKFILLED WITH A 30/70 MIX OF STEERCO TO NATIVE SOIL. PLANTS SHALL BE INSTALLED 2" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH WOOD CHIPS PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED.
6. ALL PLANTS SHALL BE NURSERY GROWN (IN W. WA OR OR.) FOR AT LEAST 1 YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
7. LANDSCAPE CONTRACTOR TO INSTALL DRIP OR LOW-FLOW IRRIGATION SYSTEM CAPABLE OF HEAD TO HEAD COVERAGE OF ALL PLANTINGS.
8. ALL PLANTINGS SHALL BE IRRIGATED AT A RATE OF ½" OF FLOW 2-3 TIMES WEEKLY, FROM JUNE 15-OCT 15 THE FIRST YEAR AFTER PLANTING. THE SECOND YEAR, FLOW SHOULD BE REDUCED TO PROVIDE ½" OF FLOW 1-2 TIMES WEEKLY FROM JULY 1-SEPT 30. THE SYSTEM CAN BE REMOVED AFTER 3 YEARS.
9. UPON APPROVAL OF PLANTING INSTALLATION BY AOA, MERCER ISLAND WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
10. MAINTENANCE SHALL BE IMPLEMENTED ON A REGULAR BASIS ACCORDING TO THE SCHEDULE BELOW.

ANNUAL MAINTENANCE SCHEDULE

MAINTENANCE ITEM	J	F	M	A	M	J	J	A	S	O	N	D
WEED CONTROL			1		1		1			1		
GENERAL MAINT.			1		1		1			1		
WATERING - YEAR 1						4	8	8	8	4		
WATERING - YEAR 2							4	4	4			

1-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.

MAINTENANCE WILL INCLUDE:
1. REMOVAL OF NON-NATIVE PLANTS, BY HAND, AS LISTED ABOVE.
2. CONTINUED APPLICATION OF IRRIGATION, AS NOTED ABOVE.
3. REMOVAL OF PEST INFESTATIONS, LIKE TENT CATERPILLAR AND SPRUCE APHID.
4. THINNING OF RED ALDER AND MOWING OF TALL GRASSES, AS DIRECTED BY AOA TO ENSURE SURVIVAL OF PLANTED SPECIES.

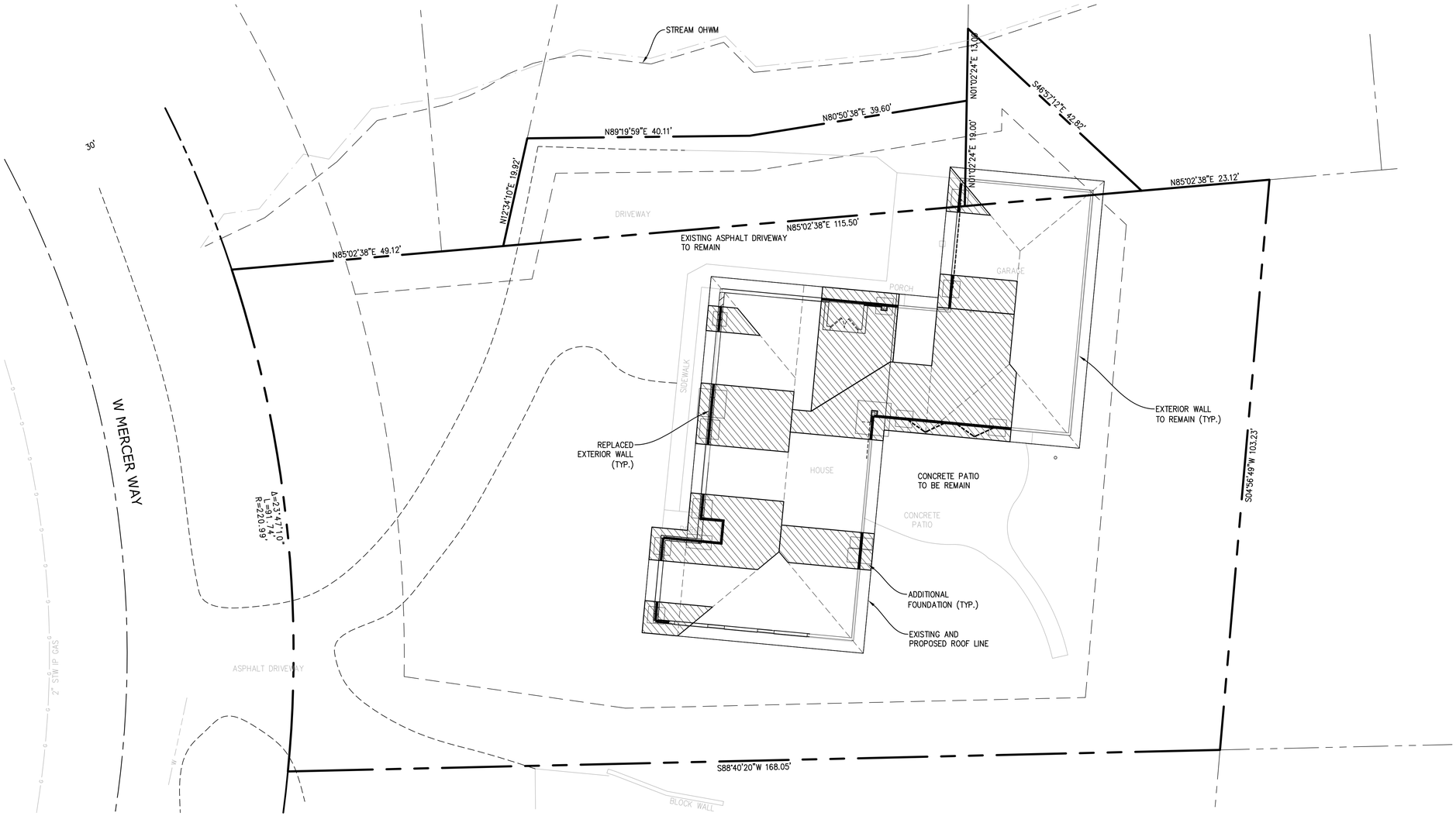
PROJECT 6625
DRAWN SO
SCALE AS NOTED
DATE 05-31-24
REVISED
5/5

FIGURE 5: PLANTING DETAILS & SPECIFICATIONS
CHU PROPERTY
4332 WEST MERCER WAY
MERCER ISLAND, WASHINGTON
PARCEL 9365700382

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4599

6625-MIT-05-31-24.dwg

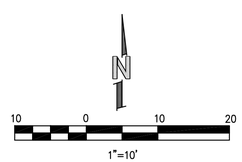
NE 1/4 SEC. 13, TWP. 24 N., RGE. 4 E., W.M.



NEW IMPERVIOUS AREA: 0 SF

REPLACED IMPERVIOUS AREA: 1,549 SF

NEW PLUS REPLACED IMPERVIOUS AREA: 1,549 SF



Nick Bossoff Engineering, Inc.
191 NE Tarl Lane
Stevenson, WA 98648-4201
Phone: (425) 881-5904

NICHOLAS BOSSOFF — STATE OF WASHINGTON — 29631 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 7/2/25

NO.	DATE	REVISION
	04/29/25	PERMIT SUBMITTAL

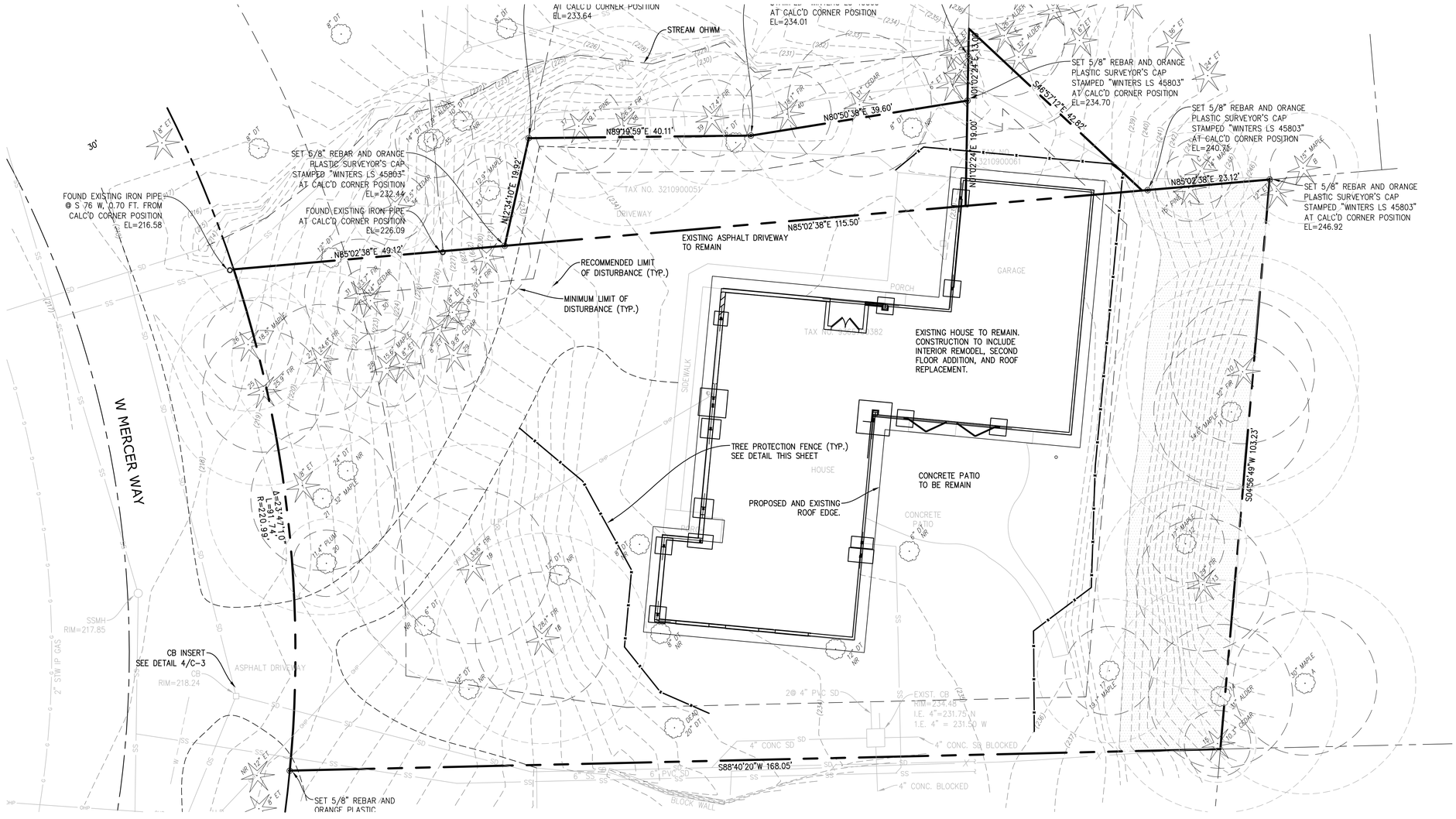
PROJECT MANAGER: N. BOSSOFF, P.E.
DESIGNED: NB
DRAWN: TKB
JOB NUMBER: CHUX-2301
FILE NAME: ECTY-2301pln.dwg

HILLHAVEN GROVE
4332 W MERCER WAY
MERCER ISLAND WASHINGTON

TITLE:
SITE PLAN
NEW AND REPLACED
IMPERVIOUS AREA

SHEET:
C-1

NE 1/4 SEC. 13, TWP. 24 N., RGE. 4 E., W.M.



TREE PROTECTION AREA (TPZ)

KEEP OUT!

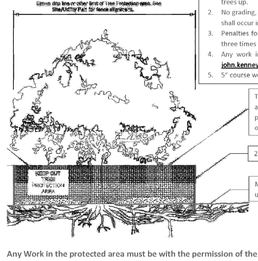
DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

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

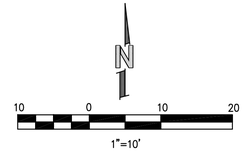
1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction 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.



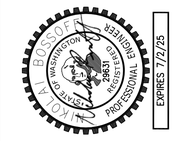
Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

TREE PROTECTION DETAIL

ALL REGULATED TREES ARE TO BE RETAINED.



NB
Nick Bossoff Engineering, Inc.
191 NE Tarl Lane
Stevenson, WA 98648-4201
Phone: (425) 881-5904



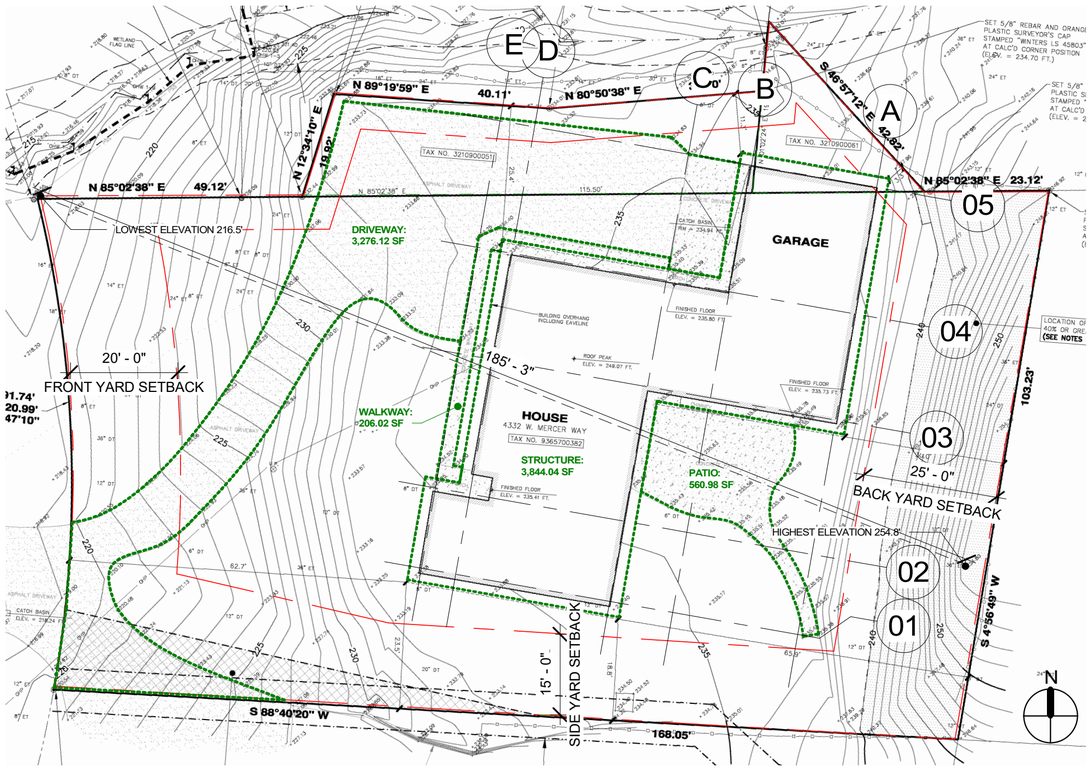
NO.	DATE	REVISION
	04/29/25	PERMIT SUBMITTAL

N. BOSSOFF, P.E.
PROJECT MANAGER:
NB
DESIGNED:
TKB
DRAWN:
CHUX-2301
JOB NUMBER:
ECTY-2301pln.dwg
FILE NAME:

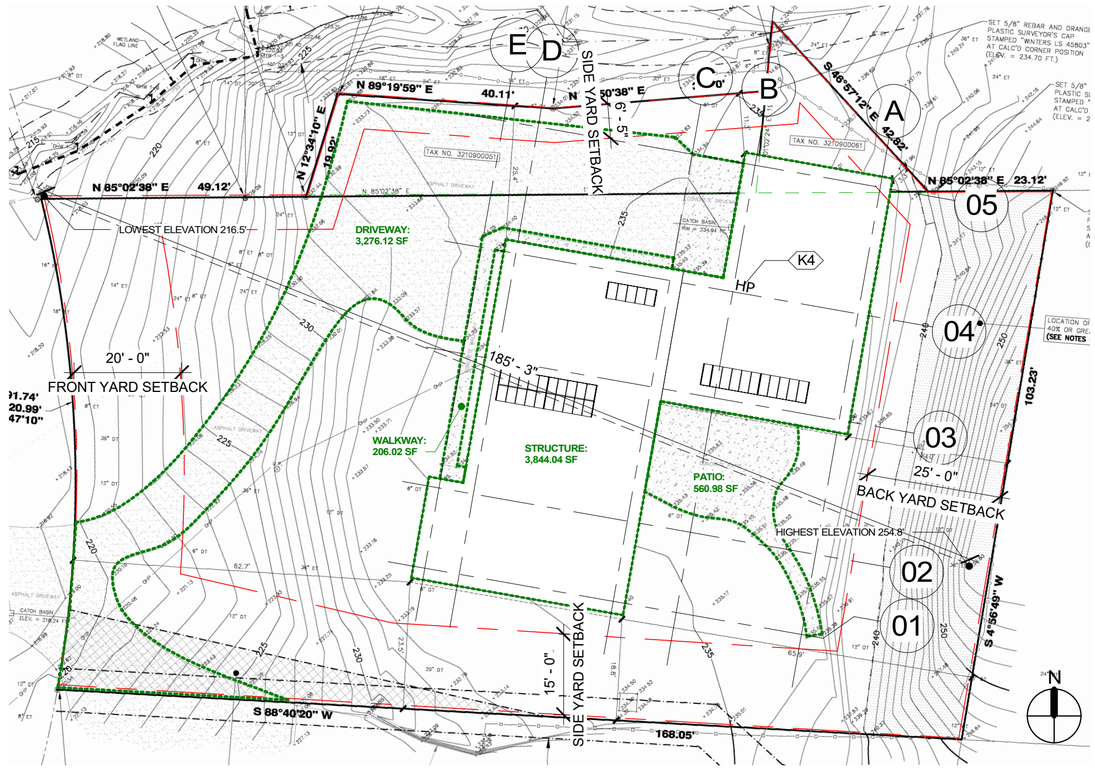
HILLHAVEN GROVE
4332 W MERCER WAY
MERCER ISLAND WASHINGTON

TITLE:
TREE PROTECTION PLAN

SHEET:
C-2



1 EXISTING SITE PLAN
1" = 20'-0"



2 NEW SITE PLAN
1" = 20'-0"

SITE DATA:

LOT SLOPE CALCULATION:
HIGHEST ELEVATION: 254.8' - LOWEST ELEVATION: 216.5' = ELEVATION DIFFERENCE: 38.3'
HORIZONTAL DISTANCE BETWEEN HIGH AND LOW: 185.29'

LOT SLOPE: ELEVATION DIFFERENCEN / DISTANCE = 38.3' / 185.29' = 20.67%

TOTAL PARCEL LOT AREA: 18,138.7 SF

FRONT YARD SETBACK: 20'
BACK YARD SETBACK: 25'
TOTAL SIDE YARD SETBACK (MIN. 17% OF THE LOT WIDTH): 20'

AVERAGE HEIGHT (AVERAGE 33 SPOT ELEVATION @ 10' INTERVAL): 235.03'
FINISHED FLOOR ELEVATION PER SURVEY: 235.41'

ALLOWABLE MAXIMUM HEIGHT: 30' ABOVE ABE
PROPOSED STRUCTURE HEIGHT: **26' 5"** < 30' MAX. IN BUILDING HEIGHT

NEW GROSS FLOOR AREA: L1 AREA + L2 AREA = 3,226.58 SF + 1914.65 SF = 5,154.23 SF < 7,255.48 SF

NOTE:
1. NO TREE ARE PROPOSED FOR REMOVAL;
2. LOT COVERAGE, HARDSCAPE AND IMPERVIOUS SURFACE AREAS REMAIN UNCHANGE.

KEYNOTES

K1 PER **R314.2.3** A HEAT DETECTOR OR HEAT ALARM RATED FOR AMBIENT OUTDOOR TEMPERATURES AND HUMIDITY SHALL BE INSTALLED IN NEW GARAGES THAT ARE ATTACHED TO OR LOCATED UNDER NEW AND EXISTING DWELLINGS. HEAT DETECTORS AND HEAT ALARMS SHALL BE INSTALLED IN A CENTRAL LOCATION AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

K2 PER **M1505.4.4(1),** BATHROOMS EXHAUST FAN MINIMUM: 50 CFM INTERMITTENT, TYP.

K3 MECHANICAL EXHAUST HOOD OR DOWNDRAFT VENTILATION SYSTEM OF OWNER'S CHOICE; PER **M1505.4.4(1)**, KITCHEN'S MINIMUM: 160 CFM FOR INTERMITTENT ELECTRIC RANGE, OR 250 CFM COMBUSTION RANGE. IF DOWNDRAFT IS USED, 300 CFM INTERMITTENT REQUIRED.

K4 SYSTEM TYPE 4 HEAT PUMP COMPLIES FEDERAL STANDARS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(2) OR C403.3.2(9) OR AIR TO WATER HEAT PUMP UNITS THAT ARE CONFIGURED TO PROVIDE BOTH HEATING AND COOLING AND ARE RATED IN ACCORDANCE WITH AHRI 550/590.

K5 PER **IRC R302.6** DWELLING/GARAGE FIRE SEPARATION. 5/8" TYPE X GYPSUM BOARD IS REQUIRED BETWEEN GARAGE AND HABITABLE SPACE ABOVE; 1/2" GYPSUM BOARD IS REQUIRED BETWEEN GARAGE AND HABITABLE SPACE ON GARAGE SIDE OF WALLS.

K6 20 MIN RATED OR SOLID CORE ENTRY DOORS WITH SELF-LATCHING AND EQUIPPED WITH A SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE.

3/21/2025 10:19:41 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

REGISTERED ARCHITECT
23017354
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE
Project number 0433220241014
4332 West Mercer Way, Mercer Island, WA

Owner / Project

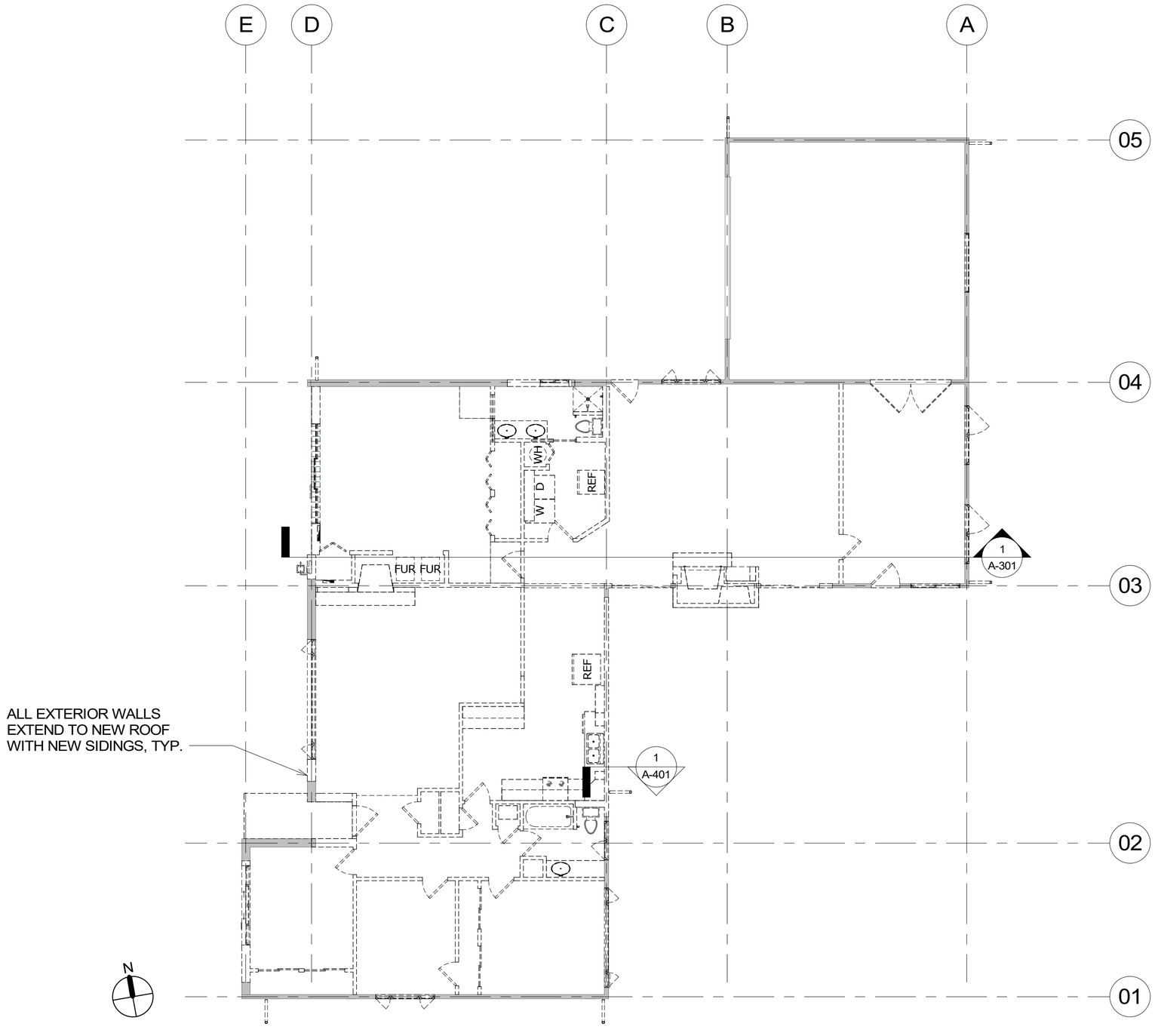
SITE PLAN WITH LAND USE CALCULATION

Sheet Title

Date 10/31/2024
Drawn by: SH
Scale: As indicated

A-010

Sheet Number



1 FLOOR PLAN - DEMOLITION
1/8" = 1'-0"

GENERAL NOTES

1. CODES: ALL WORK SHALL CONFORM APPLICABLE LAND USE AND BUILDING CODES AS AMENDED BY AUTHORITIES HAVING JURISDICTION.
2. DO NOT SCALE DIMENSIONS FROM DRAWINGS. USE CALCULATED DIMENSIONS ONLY. NOTIFY THE ARCHITECT IMMEDIATELY IF ANY CONFLICTS EXIST.
3. CONTRACTOR SHALL VERIFY ALL CONDITIONS PRIOR TO INITIATING THE WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
4. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT. PROVIDE ALL BUCK-OUT, BLOCKING, BACKING, AND JACKS REQUIRED FOR INSTALLATIONS.
5. DIMENSIONS ARE TO FINISH FACE OF WALL UNLESS OTHERWISE NOTED. INTERIOR WALL FRAMING 2x4 WOOD STUDS UNLESS OTHERWISE NOTED.
6. HALFTONE ELEMENTS ARE EXISTING CONDITION THAT ARE NOT IN THE SCOPE OF WORK
7. EXISTING CONDITION ARE BASED ON SITE OBSERVATION, PHOTO DOCUMENTATION AND CLIENT DESCRIPTION. VERIFY DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION.
8. PER **R302.11**, FIRE BLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE

LEGEND

- GYPSUM WALL BOARD
- WOOD
- CONCRETE
- GRAVEL
- PLYWOOD
- BATT INSULATION
- WOOD FRAMING
- SKYLIGHT OPENING
- TO BE DEMOLISHED
- EXHAUST FAN
- SMOKE DETECTOR
- CO DETECTOR
- HEAT DETECTOR WITH ALARM
- COMBINED SMOKE & CO DETECTOR

KEYNOTES

K1 PER **R314.2.3** A HEAT DETECTOR OR HEAT ALARM RATED FOR AMBIENT OUTDOOR TEMPERATURES AND HUMIDITY SHALL BE INSTALLED IN NEW GARAGES THAT ARE ATTACHED TO OR LOCATED UNDER NEW AND EXISTING DWELLINGS. HEAT DETECTORS AND HEAT ALARMS SHALL BE INSTALLED IN A CENTRAL LOCATION AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

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K6 20 MIN RATED OR SOLID CORE ENTRY DOORS WITH SELF-LATCHING AND EQUIPPED WITH A SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE.

3/21/2025 10:19:42 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner / Project

FLOOR PLAN - DEMOLITION

Sheet Title

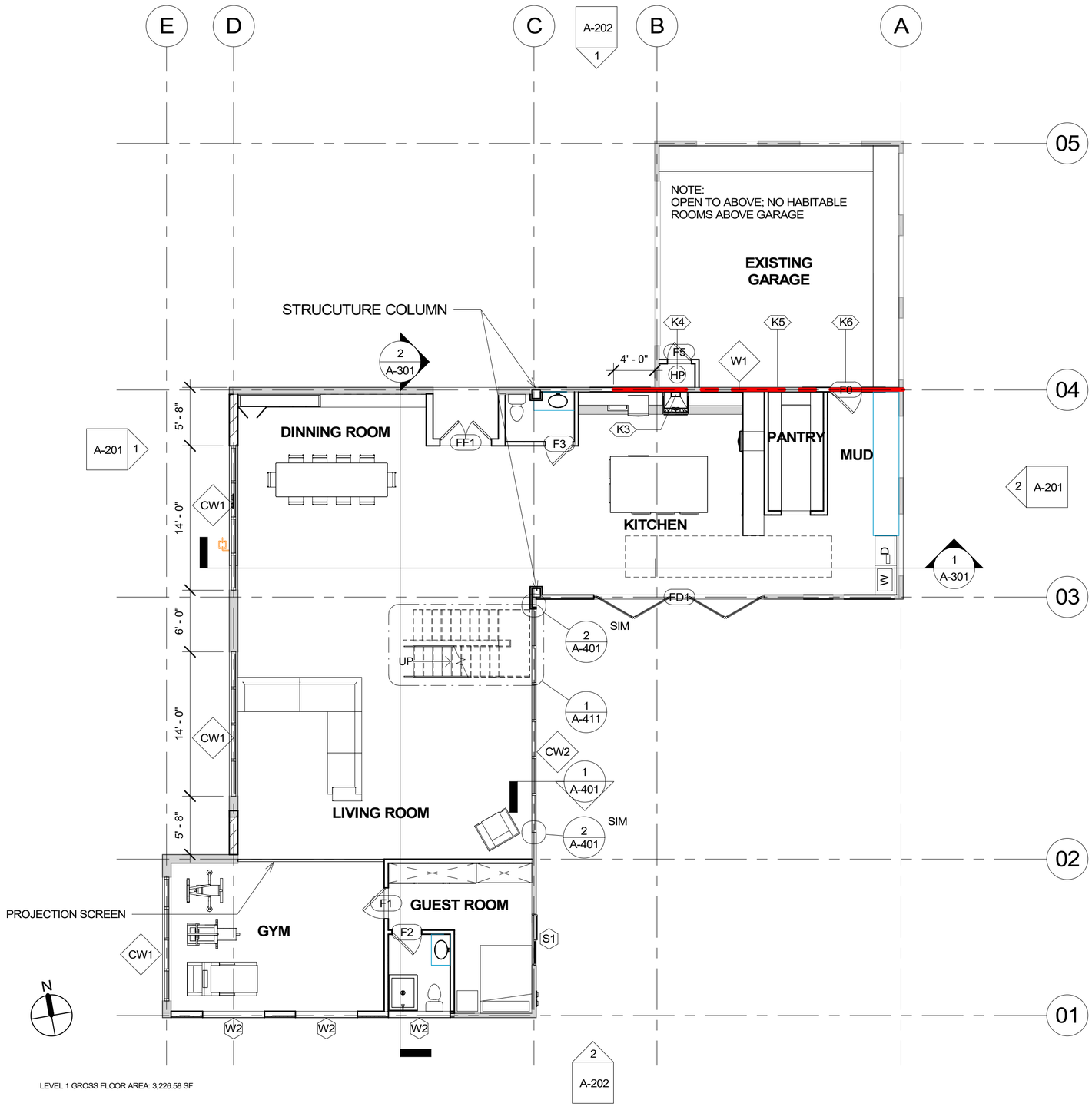
Date 10/31/2024

Drawn by: SH

Scale: As indicated

A-100

Sheet Number



LEVEL 1 GROSS FLOOR AREA: 3,226.58 SF

1 FLOOR PLAN - NEW
1/8" = 1'-0"

GENERAL NOTES

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LEGEND

- GYPSUM WALL BOARD
- WOOD
- CONCRETE
- GRAVEL
- PLYWOOD
- BATT INSULATION
- WOOD FRAMING
- SKYLIGHT OPENING
- TO BE DEMOLISHED
- EXHAUST FAN
- SMOKE DETECTOR
- CO DETECTOR
- HEAT DETECTOR WITH ALARM
- S/C COMBINED SMOKE & CO DETECTOR

KEYNOTES

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3/21/2025 10:19:42 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

Stamp: 23017354 REGISTERED ARCHITECT — SHUDAN HE — STATE OF WASHINGTON

Owner

HILLHAVEN GROVE

Project number 0433220241014

Project: 4332 West Mercer Way, Mercer Island, WA

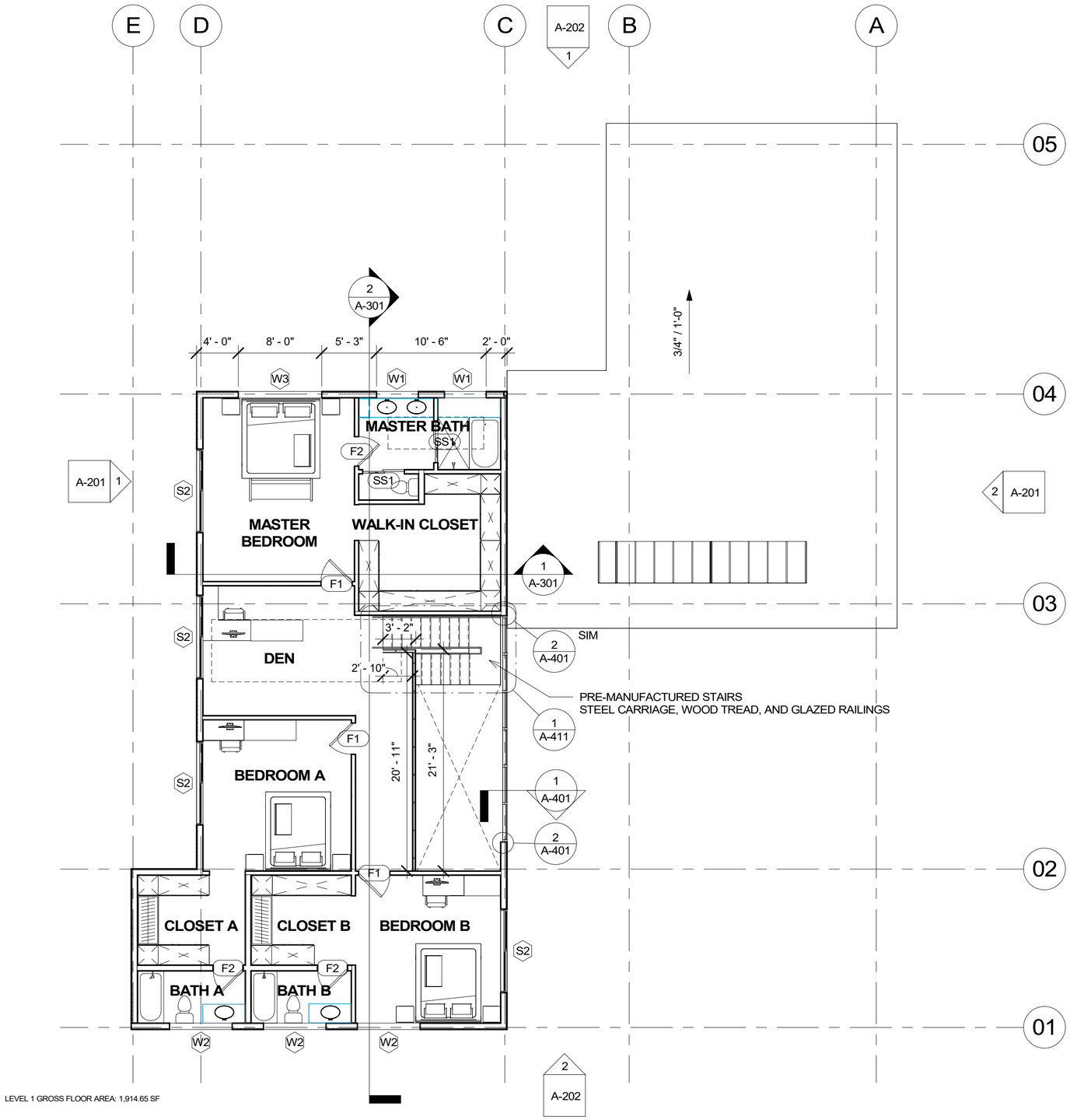
Sheet Title: FLOOR PLAN - LEVEL 01

Drawn by: SH

Date: 10/31/2024

Scale: As indicated

Sheet Number: A-101



LEVEL 1 GROSS FLOOR AREA: 1,914.65 SF

1 LEVEL 2
1/8" = 1'-0"

GENERAL NOTES

1. CODES: ALL WORK SHALL CONFORM APPLICABLE LAND USE AND BUILDING CODES AS AMENDED BY AUTHORITIES HAVING JURISDICTION.
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LEGEND

- GYPSUM WALL BOARD
- WOOD
- CONCRETE
- GRAVEL
- PLYWOOD
- BATT INSULATION
- WOOD FRAMING
- SKYLIGHT OPENING
- TO BE DEMOLISHED
- EXHAUST FAN
- SMOKE DETECTOR
- CO DETECTOR
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KEYNOTES

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K6 20 MIN RATED OR SOLID CORE ENTRY DOORS WITH SELF-LATCHING AND EQUIPPED WITH A SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE.

3/21/2025 10:19:43 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner / Project

FLOOR PLAN - LEVEL 02

Sheet Title

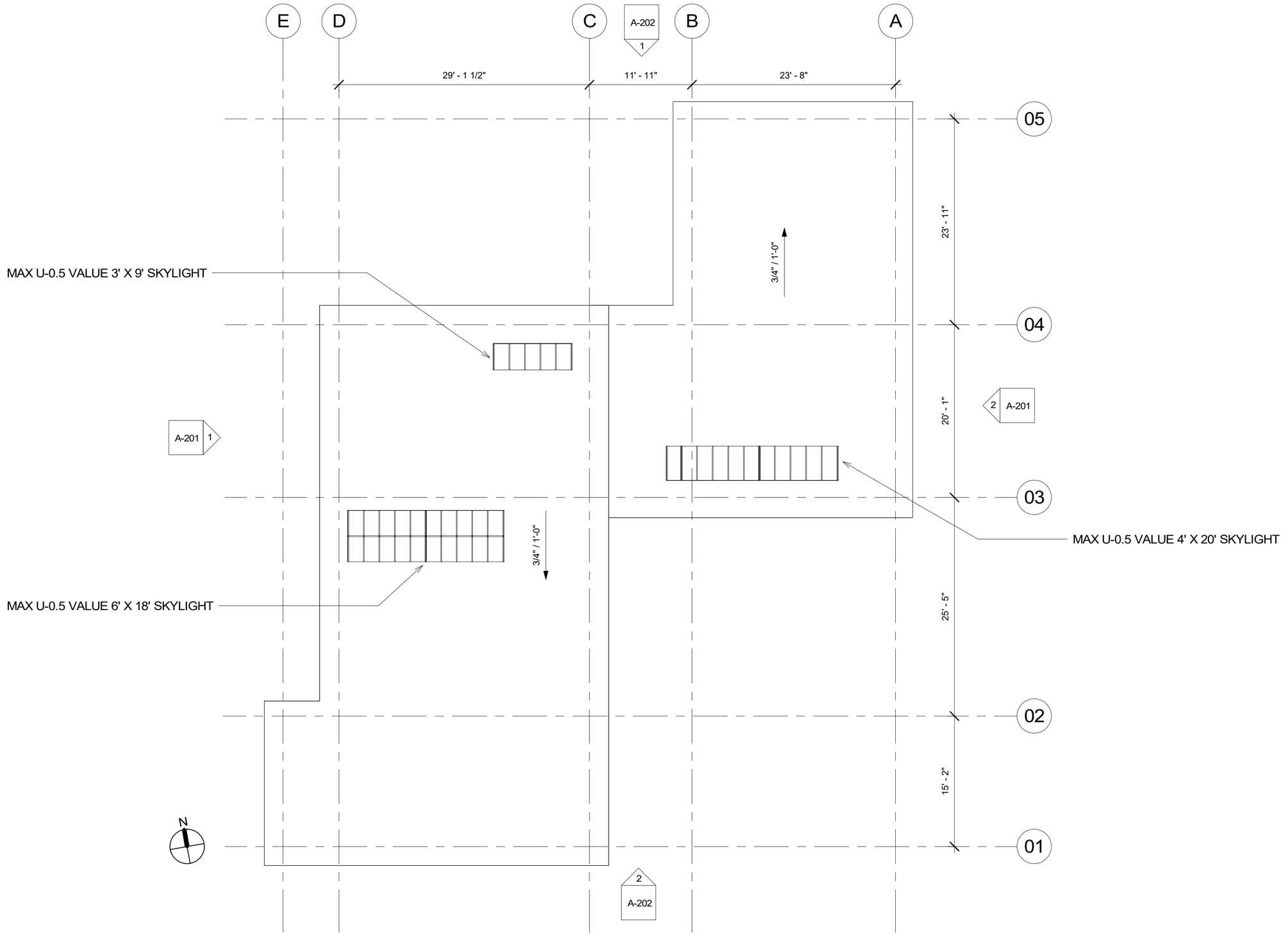
Date 10/31/2024

Drawn by: SH

Scale: As indicated

A-102

Sheet Number



1 ROOF PLAN - NEW
1/8" = 1'-0"

GENERAL NOTES

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LEGEND

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- WOOD
- CONCRETE
- GRAVEL
- PLYWOOD
- BATT INSULATION
- WOOD FRAMING
- SKYLIGHT OPENING
- TO BE DEMOLISHED
- EXHAUST FAN
- SMOKE DETECTOR
- CO DETECTOR
- HEAT DETECTOR WITH ALARM
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KEYNOTES

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3/21/2025 10:19:43 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23917354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE
Project number 0433220241014
4332 West Mercer Way, Mercer Island, WA

Owner / Project

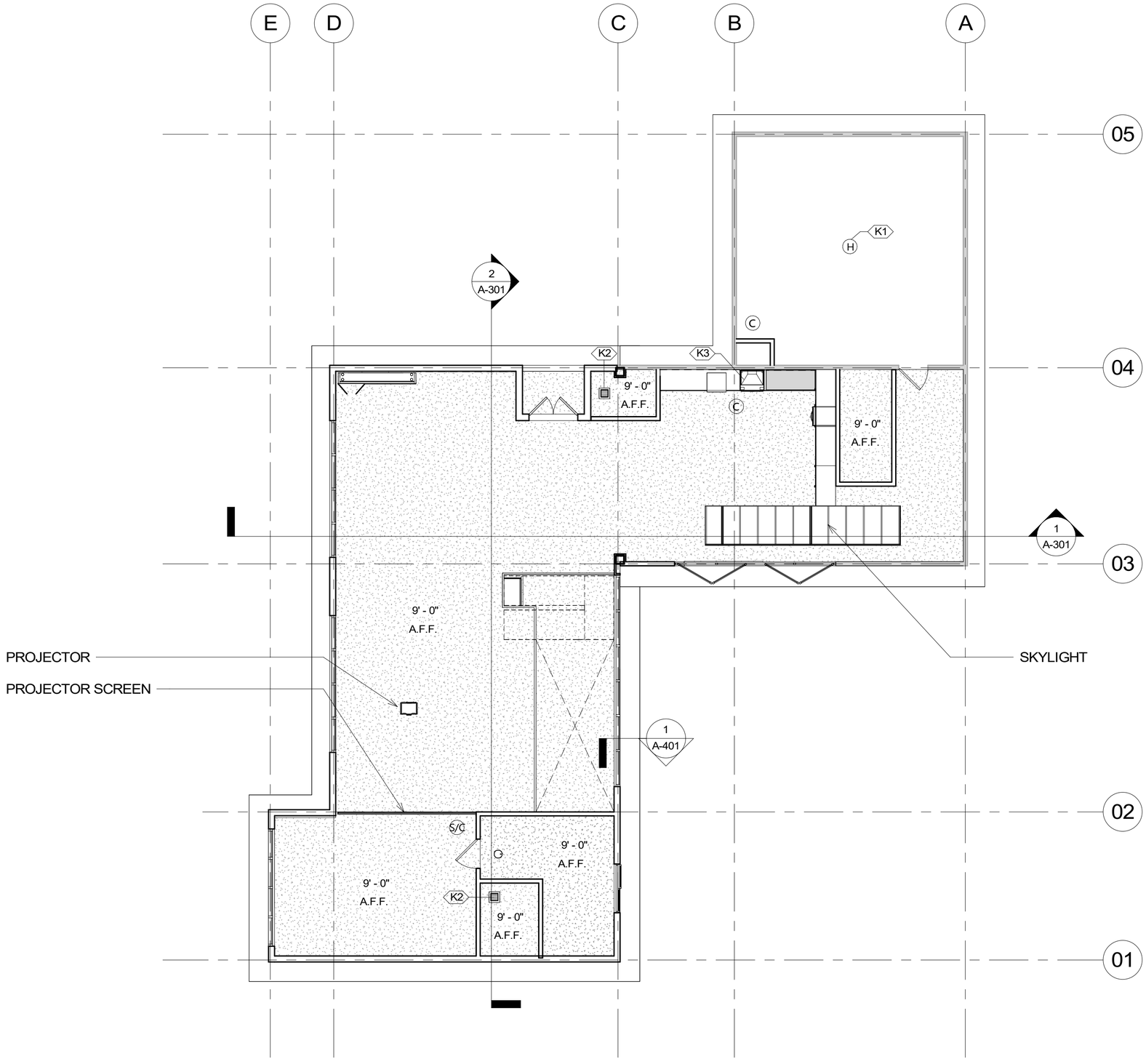
ROOF PLAN

Sheet Title

Date 10/31/2024
Drawn by: SH
Scale: As indicated

A-103

Sheet Number



1 REFLECTED CEIILNG PLAN - NEW
1/8" = 1'-0"

GENERAL NOTES

1. CODES: ALL WORK SHALL CONFORM APPLICABLE LAND USE AND BUILDING CODES AS AMENDED BY AUTHORITIES HAVING JURISDICTION.
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KEYNOTES

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3/21/2025 10:19:43 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner / Project

REFLECTIVE CEILING PLAN - LEVEL 01

Sheet Title

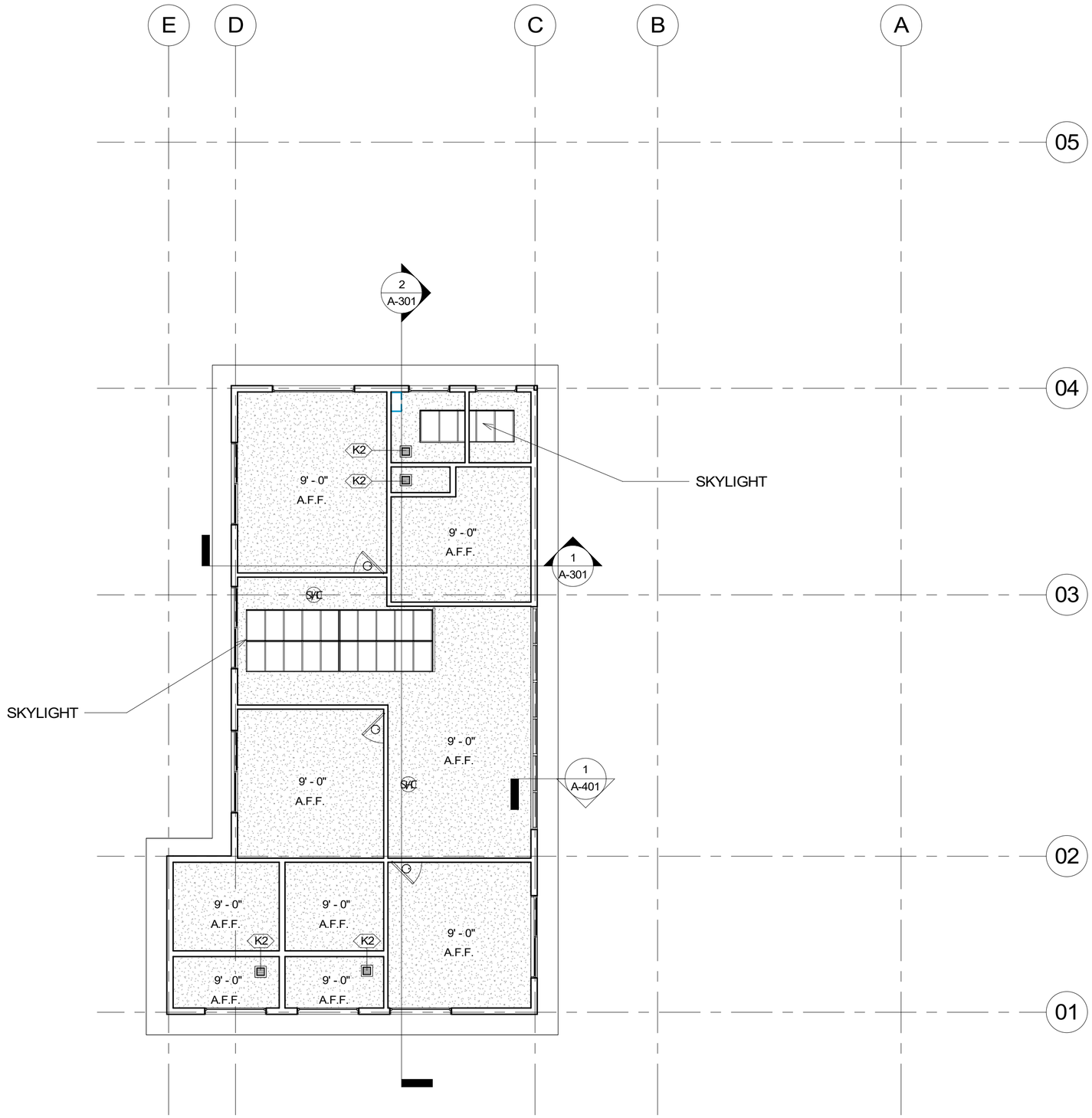
Date 10/31/2024

Drawn by: SH

Scale: As indicated

A-111

Sheet Number



1 LEVEL 2
1/8" = 1'-0"

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- COMBINED SMOKE & CO DETECTOR

KEYNOTES

K1 PER **R314.2.3** A HEAT DETECTOR OR HEAT ALARM RATED FOR AMBIENT OUTDOOR TEMPERATURES AND HUMIDITY SHALL BE INSTALLED IN NEW GARAGES THAT ARE ATTACHED TO OR LOCATED UNDER NEW AND EXISTING DWELLINGS. HEAT DETECTORS AND HEAT ALARMS SHALL BE INSTALLED IN A CENTRAL LOCATION AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

K2 PER **M1505.4.4(1),** BATHROOMS EXHAUST FAN MINIMUM: 50 CFM INTERMITTENT, TYP.

K3 MECHANICAL EXHAUST HOOD OR DOWNDRAFT VENTILATION SYSTEM OF OWNER'S CHOICE; PER **M1505.4.4(1)**, KITCHEN'S MINIMUM: 160 CFM FOR INTERMITTENT ELECTRIC RANGE, OR 250 CFM COMBUSTION RANGE. IF DOWNDRAFT IS USED, 300 CFM INTERMITTENT REQUIRED.

K4 SYSTEM TYPE 4 HEAT PUMP COMPLIES FEDERAL STANDARS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(2) OR C403.3.2(9) OR AIR TO WATER HEAT PUMP UNITS THAT ARE CONFIGURED TO PROVIDE BOTH HEATING AND COOLING AND ARE RATED IN ACCORDANCE WITH AHRI 550/590.

K5 PER **IRC R302.6** DWELLING/GARAGE FIRE SEPARATION. 1/2" GYPSUM BOARD IS REQUIRED BETWEEN GARAGE AND HABITABLE SPACE ON GARAGE SIDE OF WALLS.

K6 20 MIN RATED OR SOLID CORE ENTRY DOORS WITH SELF-LATCHING AND EQUIPPED WITH A SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE.

3/21/2025 10:19:44 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner

Project

REFLECTIVE CEILING PLAN - LEVEL 02

Sheet Title

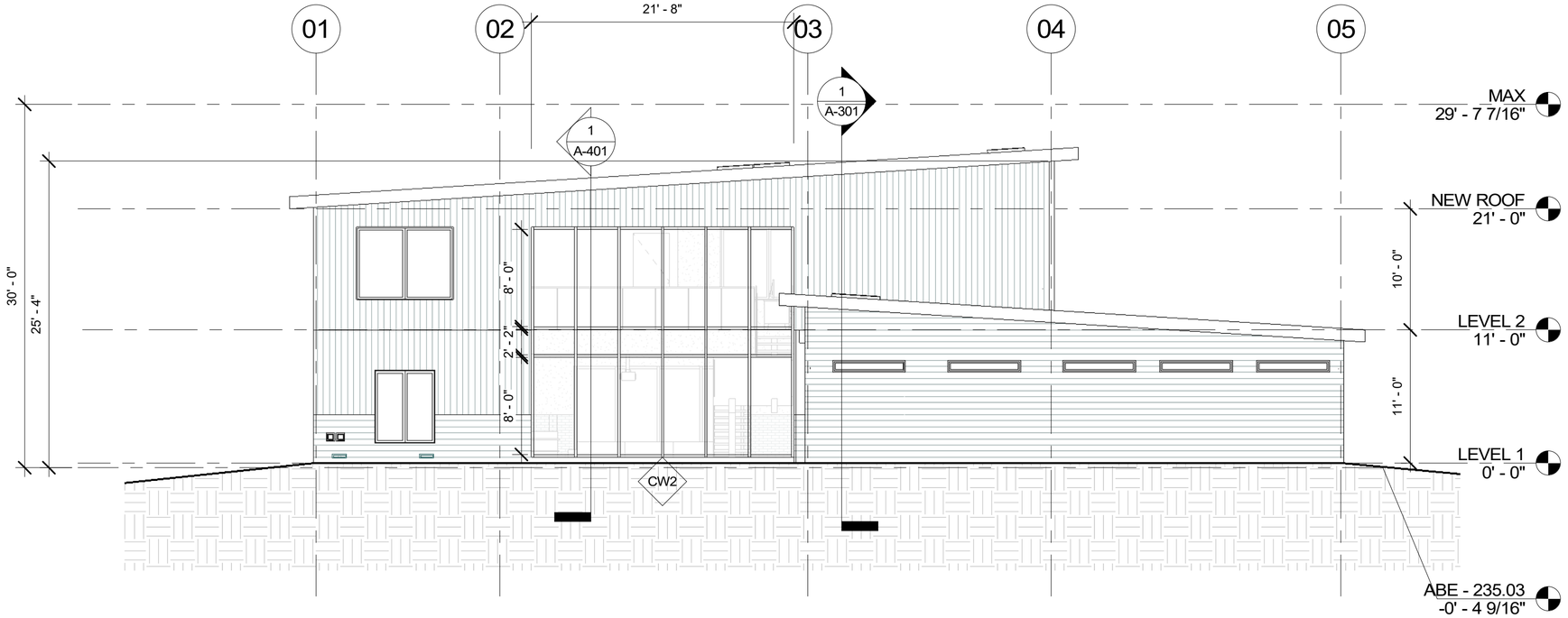
Date 10/31/2024

Drawn by: SH

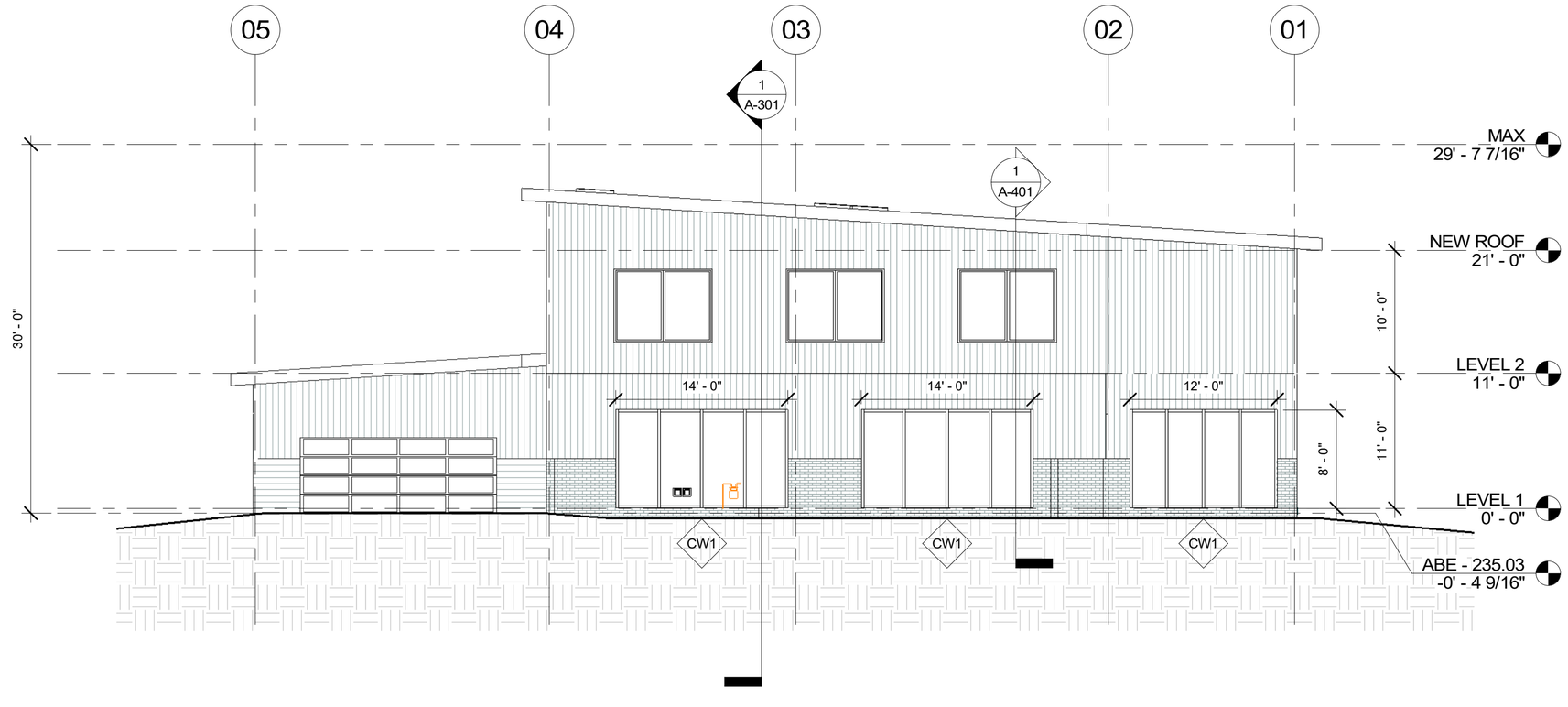
Scale: As indicated

A-112

Sheet Number



2 ELEVATION - E
1/8" = 1'-0"



1 ELEVATION - W
1/8" = 1'-0"

3/21/2025 10:19:44 AM

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner

Project

BUILDING ELEVATION

Sheet Title

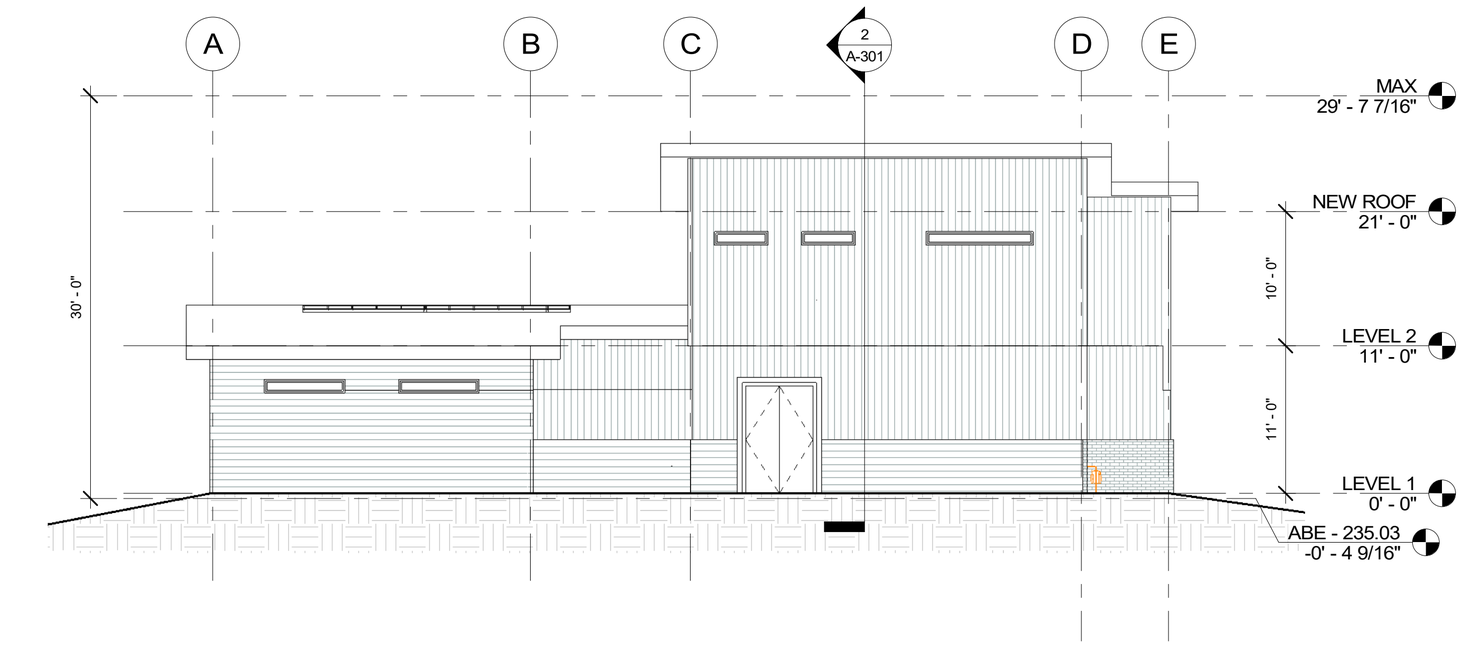
Date 10/31/2024

Drawn by: SH

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

A-201

Sheet Number



1 ELEVATION - N
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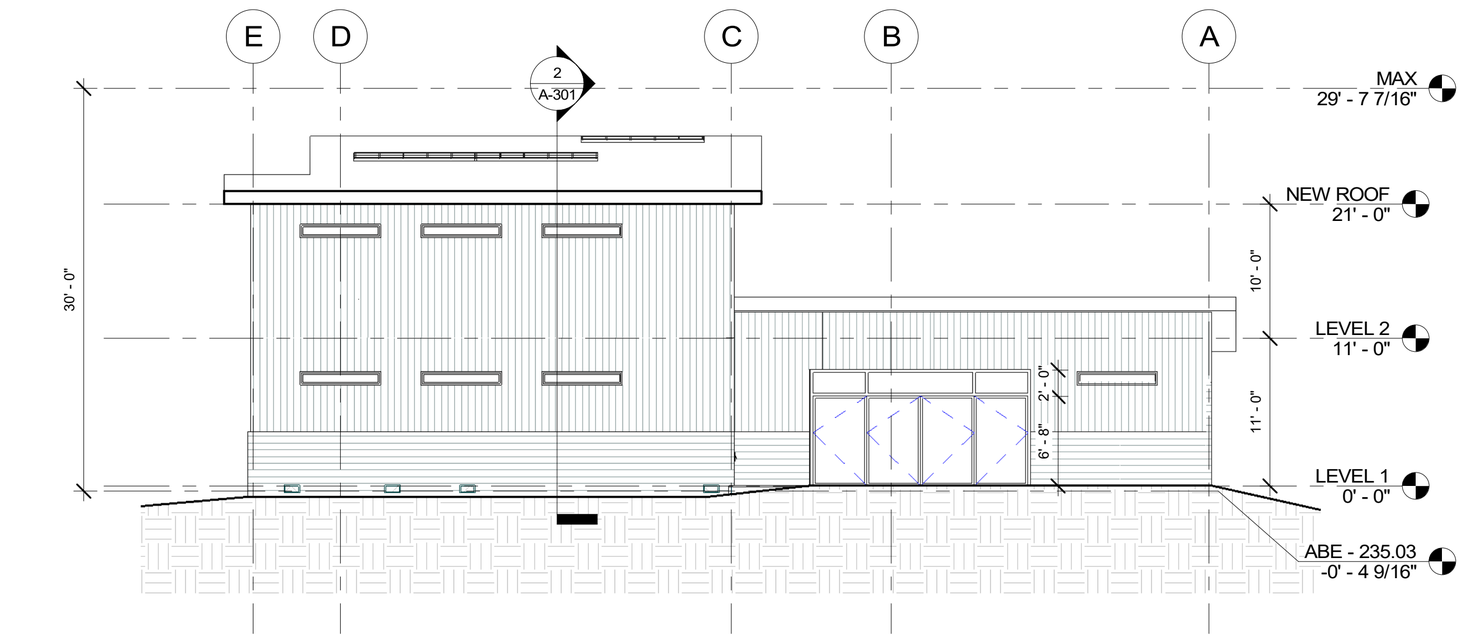

2 ELEVATION - S
1/8" = 1'-0"

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SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

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HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner / Project

BUILDING ELEVATION

Sheet Title

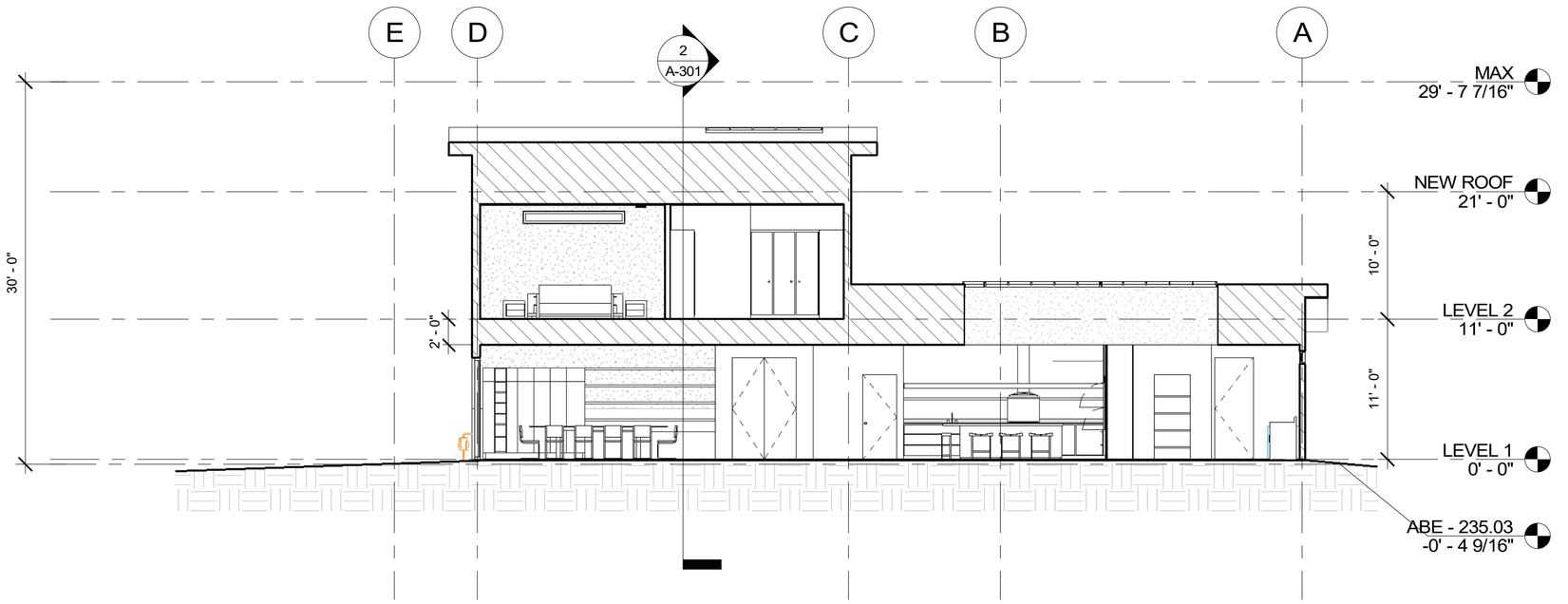
Date 10/31/2024

Drawn by: SH

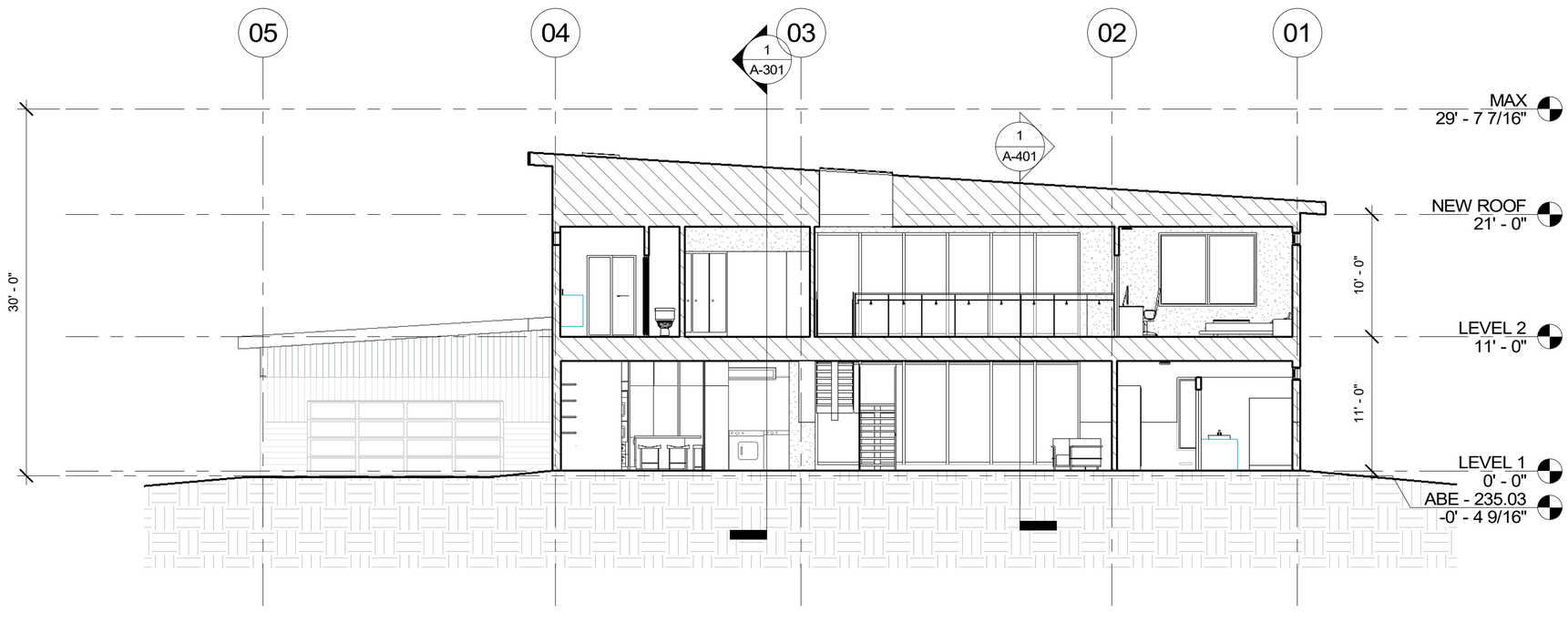
Scale: 1/8" = 1'-0"

A-202

Sheet Number



1 Section 1
1/8" = 1'-0"



2 Section 2
1/8" = 1'-0"

NOTE:
CEILING R-VALUE: MIN. 60 TYP.
WOOD FRAME WALL R-VALUE: MIN. 20 CAVITY INSULATION + MIN. 5 CONTINOUS INSULATION OR MIN. 13 CAVITY INSULATION + MIN. 10 CONTINOUS INSULATION TYP.

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SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017359 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

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HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner / Project

BUILDING SECTION

Sheet Title

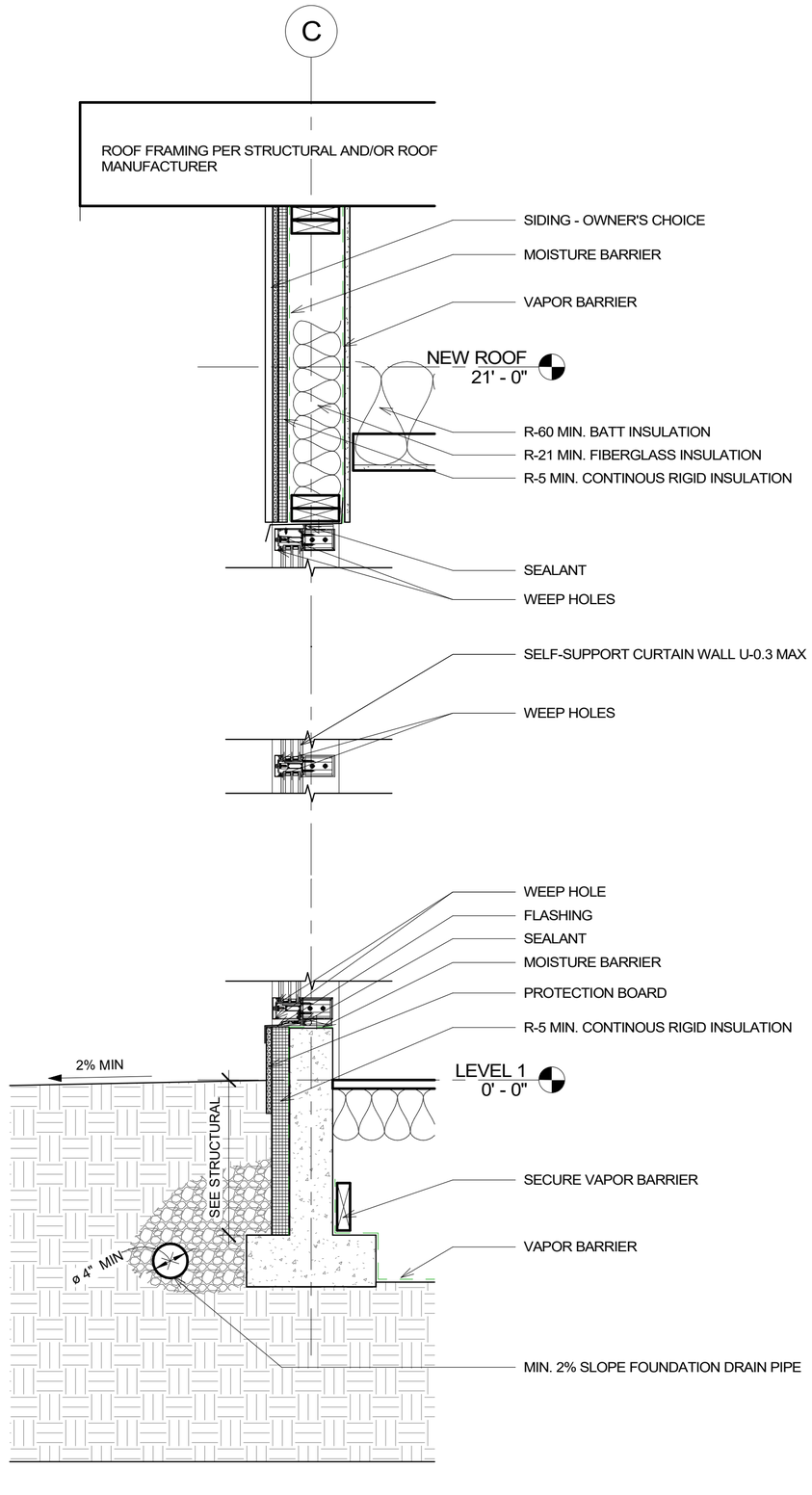
Date 10/31/2024

Drawn by: SH

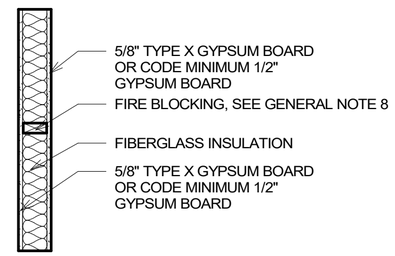
Scale: 1/8" = 1'-0"

A-301

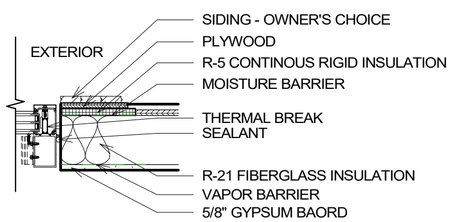
Sheet Number



1 WALL SECTION @ CURTAIN WALL
1" = 1'-0"



W1 WALL DETAIL@ GARAGE SEPARATION
3/4" = 1'-0"



2 JAMB DETAIL @ CURTAIN WALL
1" = 1'-0"

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SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23917354 REGISTERED ARCHITECT SHUDAN HE STATE OF WASHINGTON

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HILLHAVEN GROVE
Project number 0433220241014
4332 West Mercer Way, Mercer Island, WA

Owner / Project

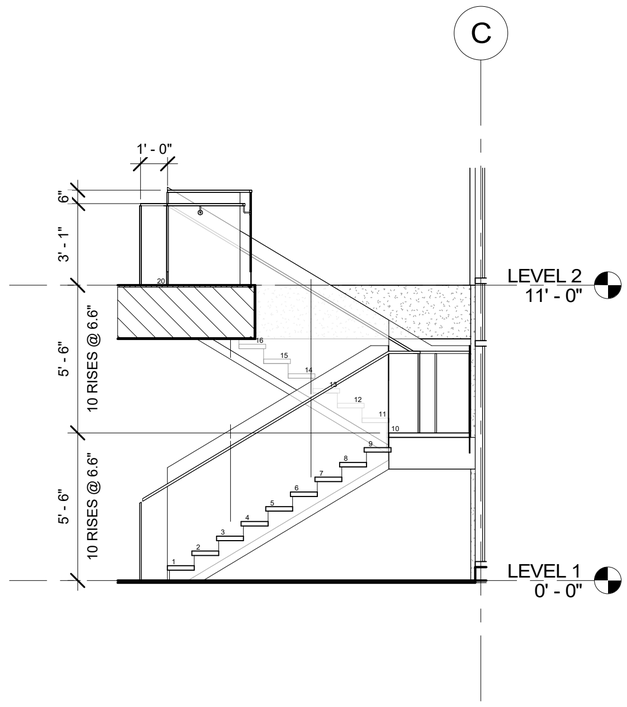
WALL SECTION & ASSEMBLY

Sheet Title

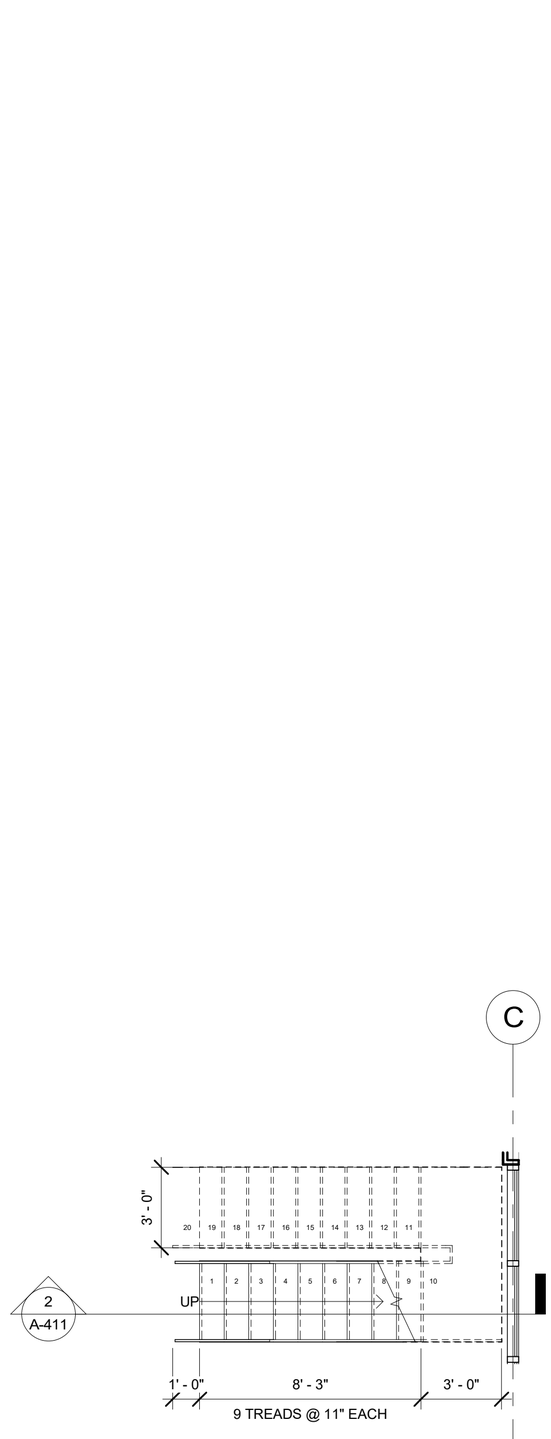
Date 10/31/2024
Drawn by: SH
Scale: As indicated

A-401

Sheet Number



2 ENLARGED SECTION - STAIRS
1/4" = 1'-0"



1 ENLARGED PLAN - STAIRS
1/4" = 1'-0"

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SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

Revision

23017354 REGISTERED ARCHITECT
SHUDAN HE
STATE OF WASHINGTON

Stamp

HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner / Project

ENLARGED PLAN - STAIRS

Sheet Title

Date 10/31/2024

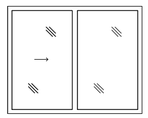
Drawn by: SH

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

A-411

Sheet Number

Window Schedule				
Type Mark	Height	Width	Sill Height	Phase Created
S1	6' - 0"	5' - 0"	2' - 6"	New Construction
S2	6' - 0"	8' - 0"	2' - 6"	New Construction
W1	1' - 0"	4' - 0"	7' - 6"	New Construction
W2	1' - 0"	6' - 0"	7' - 6"	New Construction
W3	1' - 0"	8' - 0"	7' - 6"	New Construction



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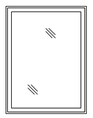
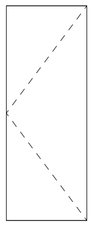


W

Door Schedule				
Type Mark	Clear Width	Height	Phase Created	Fire Rating
F0	3' - 0"	8' - 0"	New Construction	20 MIN
F1	3' - 0"	8' - 0"	New Construction	NR
F2	2' - 10"	6' - 8"	New Construction	NR
F3	2' - 8"	6' - 8"	New Construction	NR
F5	2' - 4"	6' - 8"	New Construction	NR
FD1	16' - 0"	6' - 8"	New Construction	NR
FF1	5' - 0"	8' - 0"	New Construction	NR
SS1	4' - 0"	6' - 8"	New Construction	NR



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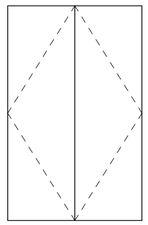

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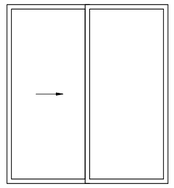

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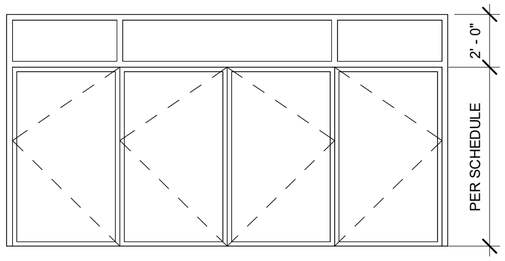

FD

NOTE: PER WSEC 2021:
VERTICAL FENESTRATION U-VALUE SHALL BE 0.3 OR LESS;

SHUDAN HE
ARCHITECTURE

Date	Description	Revision Number

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STATE OF WASHINGTON

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HILLHAVEN GROVE

Project number 0433220241014

4332 West Mercer Way, Mercer Island, WA

Owner / Project

OPENING SCHEDULES

Sheet Title

Date 10/31/2024

Drawn by: SH

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

A-601

Sheet Number

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GENERAL NOTES

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE 2021 EDITION.

CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS AND EXISTING CONDITIONS IN FIELD BEFORE PROCEEDING WITH ANY CONSTRUCTION OR DEMOLITION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR FIELD CHANGES.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTION AND SOIL EXCAVATIONS AS REQUIRED, IN A MANNER SUITABLE TO THE WORK SEQUENCE. TEMPORARY SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH. FOUNDATIONS WALLS GREATER THAN 4 FEET SHALL NOT BE BACKFILLED UNTIL THE FLOOR FRAMING AND ALL CONNECTIONS TO THE FLOOR FRAMING PER THESE DETAILS ARE COMPLETE.

CHANGES: NO CHANGES TO THESE STRUCTURAL DRAWINGS ARE PERMITTED WITHOUT WRITTEN CONSENT OF THE ENGINEER. CHANGES WILL BE BILLED TO THE CLIENT, OWNER OR CONTRACTOR AT THE ENGINEER'S HOURLY RATE.

SUBMITTALS: SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL THE FOLLOWING: STRUCTURAL STEEL, STEEL CANOPIES, GLUED-LAMINATED MEMBERS AND PRE-MANUFACTURED WOOD MEMBERS.

DESIGN DRAWINGS AND CALCULATIONS, FOR PRE-MANUFACTURED WOOD TRUSSES AND JOISTS SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN, AND SHALL BE SUBMITTED TO THE ARCHITECT AND BUILDING OFFICIAL FOR REVIEW PRIOR TO FABRICATION.

DESIGN LOADS

LIVE LOADS: LIVE LOADS ARE DETERMINED IN ACCORDANCE WITH ASCE CH. 7
L = 40 PSF (RESIDENTIAL)

SNOW LOADS: SNOW LOADS ARE DETERMINED IN ACCORDANCE WITH ASCE CH. 7 WITH THE FOLLOWING FACTORS:

GROUND SNOW LOAD PG	= 25 PSF	CT = 1.0	CE = 1.0
ROOF SNOW LOAD PS	= 25 PSF	IS = 1.0	

WIND LOADS: WIND LOADS ARE BASED ON ASCE 7-16 CH. 28 (ENVELOPE PROCEDURE) WITH THE FOLLOWING FACTORS:

EXPOSURE CATEGORY	= C	IW = 1.0
VELOCITY (3 SEC)	= 110 MPH (ULT)	KZT = 1.67

DESIGN WIND PRESSURED FOR DETERMINING FORCES ON COMPONENTS AND CLADDING ARE DETERMINED IN ACCORDANCE WITH ASCE 7-16 CHAPTER 30.

SEISMIC LOADS: SEISMIC LOADS ARE BASED ON THE EQUIVALENT LATERAL FORCE PROCEDURE IN ASCE 7-16 SECTION 12.8 WITH THE FOLLOWING FACTORS:

RISK CATEGORY = II	SS = 1.427
SITE CLASS = D	S1 = 0.496
DESIGN CATEGORY = D	SDS = 0.951
IE = 1.0	
R = 6.5 (WOOD SHEAR WALL)	CS = 0.146 (ULT.)
R = 3.5 (ORDINARY STEEL MOMENT FRAME)	CS = 0.27 (ULT.)

FOUNDATIONS

CONCRETE FOUNDATIONS SHALL BEAR ON STIFF, COMPETENT, UNDISTURBED NATIVE SOIL. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN CONFIRMATION FROM THE BUILDING OFFICIAL THAT THE NATIVE SOIL AT THIS PROJECT IS ADEQUATE TO SUPPORT THE FOLLOWING BEARING PRESSURE: 1500 PSF.

WHERE FOOTINGS MUST BEAR ON STRUCTURAL FILL DUE TO INADEQUATE SOIL CONDITIONS, THE FILL SHALL BE MIXED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

BOTTOM OF FOOTING ELEVATION SHALL BE LOCATED AT MINIMUM FROST DEPTH 18" BELOW TOP OF FINISHED GRADE UNLESS REQUIRED OTHERWISE BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL CONFIRM THE MINIMUM FROST DEPTH WITH THE BUILDING OFFICIAL PRIOR TO EXCAVATION.

CONCRETE

CONCRETE WORK SHALL COMPLY, IN GENERAL, WITH ACI 301 (LATEST EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

CONCRETE MIXES: CONCRETE MIXES SHALL CONFORM ACI 318 CH. 5. MINIMUM CONCRETE STRENGTH F'C AT 28 DAYS SHALL BE AS FOLLOWS:

SLAB-ON-GRADE, CURBS AND PADS	- 2500 PSI
FOOTINGS	- 2500 PSI
WALLS, STEMS	- 2500 PSI

WATER/CEMENT RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENT RATIO SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS AND SHALL NOT EXCEED 0.55. WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, BUT SHALL CONFORM TO ASTM C 464 AND BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CACL AND OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

REINFORCING STEEL: ALL REINFORCING SHALL BE DEFORMED BAR (REBAR) WITH BAR DIAMETERS SPECIFIED IN THESE DRAWINGS AND PROPERTIES BELOW:

ALL REINFORCING UNLESS NOTED OTHERWISE	- ASTM A615, GRADE 60
#3 STIRRUPS AND TIES	- ASTM A615, GRADE 40
WELDED REBAR	- ASTM A706, GRADE 60
GALVANIZED WELDED WIRE FABRIC	- ASTM A165

REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."

REINFORCING STEEL SHALL BE LAPPED AS NOTED ON THE DRAWINGS. WHERE LAP LENGTH IS NOT SHOWN, REINFORCING BARS SHALL BE LAPPED AS FOLLOWS:

#5 AND SMALLER	- 48 BAR DIAMETERS
#6 AND LARGER	- 60 BAR DIAMETERS

MINIMUM CONCRETE COVER OVER REINFORCING SHALL BE AS FOLLOWS:

NONSTRUCTURAL SLAB-ON-GRADE	- MID-DEPTH
WALL BARS: INTERIOR FACE	- 3/4"
EXPOSED TO EARTH/WEATHER	- 1-1/2" (#5 AND SMALLER), 2" (#6 AND LARGER)
FOOTINGS: BOTTOM BARS	- 3" (CAST AGAINST EARTH)
TOP BARS	- 1-1/2"
SIDE BARS	- 2"

PROVIDE SUPPORTS AS REQUIRED FOR PROPER ALIGNMENT AND CONCRETE COVER AROUND THE REINFORCEMENT. CONSULT THE CRSI MANUAL OF STANDARD PRACTICE MSP-1 FOR SPECIFIC INFORMATION.

DRYPACK

DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT, FIVE STAR OR EQUIVALENT. INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED.

ANCHORS

USE OF DRILLED CONCRETE ANCHORS, INCLUDING EXPANSION BOLTS AND ADHESIVE ANCHORS, WHERE NOT SPECIFIED IN THESE DOCUMENTS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER, ARCHITECT AND THE BUILDING INSPECTOR

EXPANSION BOLTS: EXPANSION BOLTS IN SOLID CONCRETE SHALL BE WEDGE-TYPE ANCHORS MADE OF CARBON STEEL. BOLT SIZE, SPACING AND EMBEDMENT LENGTH SHALL BE AS DESIGNATED IN THESE DRAWINGS. BOLTS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS WITH INSPECTION PER SCHEDULE. EXPANSION BOLTS SHALL BE SIMPSON STRONG BOLT 2 OR APPROVED EQUAL. A CURRENT ICBO OR ICC REPORT SHALL BE SUBMITTED FOR ALTERNATES.

ADHESIVE ANCHORS: ADHESIVE OR EPOXY TYPE ANCHORS IN SOLID CONCRETE SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHOR SIZE, SPACING AND EMBEDMENT LENGTH SHALL BE AS DESIGNATED IN THESE DRAWINGS. ADHESIVE SHALL BE SIMPSON SET 3G. A CURRENT ICBO OR ICC REPORT SHALL BE SUBMITTED FOR ALTERNATES.

THREADED RODS SHALL BE CONFORM WITH F1554, GRADE 55. DOWELS SHALL CONFORM WITH ASTM A615, GRADE 60. ALL ADHESIVE (EPOXY) BOLTS SHALL HAVE I.C.C. RATING FOR MATERIAL INTO WHICH INSTALLATION TAKES PLACE. ANCHORS AT EXTERIOR LOCATIONS SHALL BE HOT DIPPED GALVANIZED.

WOOD

SAWN LUMBER: STRUCTURAL SAWN LUMBER SHALL BE KILN DRIED AND BE OF THE SPECIES AND GRADE NOTED BELOW OR BETTER:

USE	GRADE	FB (PSI)
WALL STUDS	HEM FIR STUD	675
PLATES	DOUGLAS FIR #2	1000
4X BEAMS	HEM FIR #2	850
6X BEAMS	HEM FIR #2	675
6X COLUMNS	DOUGLAS FIR #2	1200
4X COLUMNS	DOUGLAS FIR #2	1000

ALL WOOD CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY (OR APPROVED EQUAL), AND OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. ALL WOOD CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE TRIPLE ZINC G-185 GALVANIZED (1.85 OZ/SQ FT COATING).

MINIMUM WOOD NAILING REQUIREMENTS: UNLESS OTHERWISE NOTED ON THE DRAWINGS, TYPICAL WOOD FRAMING SHALL BE FASTENED PER IBC 2021 TABLE 2304.10.2.

RATED SHEATHING: STRUCTURAL PANELS SHALL BEAR THE APA TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION. SHEATHING SHALL BE AS FOLLOWS:
SHEAR WALL SHTG MIN. 7/16" 32/16 MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)
ROOF SHTG MIN. 15/32" 32/16 MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)
SUB FLOOR SHTG MIN. 3/4" 48/24 T&G MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)

SHEATHING SHALL BE ORIENTATED OVER THE SUPPORTS AS SHOWN ON THE DRAWINGS. SHEAR WALL SHEATHING SHALL BE BLOCKED AT ALL PANEL EDGES AS SHOWN IN THE SHEAR WALL SCHEDULE.

PREMANUFACTURED OPEN WEB WOOD TRUSSES: TRUSSES SHALL BE DESIGN BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON, WHO IS REGULARLY ENGAGED IN THE DESIGN OF PLATE-CONNECTED WOOD TRUSSES. TRUSS DESIGN SHALL BE ACCORDANCE WITH IBC SECTION 2303.4.

TRUSSES SHALL BE DESIGN FOR THE FOLLOWING DEAD LOADS:

	TOP CHORD	BOTTOM CHORD	TOTAL
ROOF TRUSSES	15 PSF	5 PSF	20 PSF

IN ADDITION TO DEAD LOADS, THE DESIGN SHALL INCLUDE THE LIVE, WIND, SNOW AND SNOW DRIFT LOADS AS IDENTIFIED IN THE "DESIGN LOADS" SECTION OF THESE DRAWINGS. IN ADDITION, THE TRUSS DESIGN SHALL INCLUDE CONCENTRATED AND AXIAL LOADS SHOWN ON FRAMING PLANS AND HANGER SCHEDULES IN THESE DRAWINGS. ROOF TRUSSES SHALL BE DESIGNED FOR WIND NET UPLIFT OF 10 PSF UNLESS OTHERWISE NOTED ON THE DRAWINGS. FLOOR TRUSSES SHALL BE DESIGN FOR MAXIMUM LIVE LOAD DEFLECTION = 1/2" AND MINIMUM LIVE LOAD DEFLECTION RATIO = L/480.

TRUSSES SHALL BE FABRICATED BY A MANUFACTURER WHO IS A MEMBER OF THE TRUSS PLATE INSTITUTE. TRUSSES SHALL BE SUPPLIED WITH THE PROPER HANGERS, END CONNECTIONS, BRIDGING, BRACING TO PROVIDE LATERAL STABILITY OF ALL TRUSS MEMBERS, AND TIE-DOWN CONNECTIONS TO BEAMS AND TOPS OF WALLS. TRUSSES SHALL BE SUPPLIED WITH TAPERED HARDWOOD SHIMMING SO THAT EVERY CHORD BEARS ON THE FULL WIDTH OF EVERY SUPPORT, WITHOUT NOTCHING THE TRUSS MEMBERS. THE TRUSS MANUFACTURER IS RESPONSIBLE FOR ENSURING THE BEARING SEAT DOES NOT EXCEED THE SILL PLATE CAPACITY OF THE SUPPORTING ELEMENT.

BUILDING OFFICIAL INSPECTIONS

THE FOLLOWING RECOMMENDED MINIMUM ITEMS SHALL BE INSPECTED BY A QUALIFIED INDIVIDUAL PROVIDED BY THE BUILDING OFFICIAL:
-FOOTINGS BEAR ON COMPETENT NATIVE SOIL PER THE "FOUNDATIONS" SECTION ABOVE
-FOOTING REINFORCEMENT
-SHEAR WALL SILL PLATE ANCHORS AND WASHERS PER SCHEDULE
-SHEAR WALL NAILING AND SHEAR CLIPS PER SCHEDULE
-SHEAR WALL HOLD-DOWNS
-VERIFY TYPE, SIZE AND GRADE OF STRUCTURAL STEEL MEMBERS AND BOLTS

STRUCTURAL STEEL

ALL CONSTRUCTION SHALL BE PER AISC. ALL STRUCTURAL STEEL SHALL BE AS FOLLOWS:

ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 KSI), U.N.O.

ALL WIDE FLANGE STEEL SHALL BE ASTM A572, GRADE 50, OR A992, GRADE 50 (Fy = 50 KSI).

ALL BOLTS SHALL BE ASTM F3125 GRADE A325N, UNLESS NOTED OTHERWISE AND SHALL BE INSTALLED AS BEARING-TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE (I.E. A TYPE "N" CONNECTION), UNO. BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION USING ANY AISC APPROVED METHOD. ALL HIGH-STRENGTH BOLTING SHALL BE PERIODICALLY INSPECTED BY AN INDEPENDENT TESTING LABORATORY.

ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 55, U.N.O.

STANDARD HOLES SHALL BE USED UNLESS OVERSIZE OR SLOTTED HOLES ARE SPECIFICALLY NOTED. HARDENED WASHERS SHALL BE PROVIDED AT ALL OVERSIZE OR SLOTTED HOLES.

SHOP DRAWINGS OF ALL STRUCTURAL STEEL SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION. SEE "SHOP DRAWINGS" SECTION.

WELDING

WELDERS HOLDING VALID W.A.B.O. CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES SHALL PERFORM ALL WELDING. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY.

ALL WELDING DONE BY E70 SERIES, U.N.O. ALL WELDING SHALL BE PER LATEST AWS STANDARDS.

THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

PAINTING

PRIOR TO FINISHING CLEAN ALL SURFACES OF RUST, SCALE, GREASE AND FOREIGN MATTER IN ACCORDANCE WITH PAINT MANUFACTURER'S REQUIREMENTS. DO NOT PRIME SURFACES IN DIRECT CONTACT WITH CONCRETE OR WHERE FIELD WELDING IS REQUIRED. FINAL CONDITION OF ALL STEEL SHALL BE PRIMED (MINIMUM (1) COAT) AND PAINTED. VERIFY COLOR WITH OWNER.

SPECIAL INSPECTION - STRUCTURAL ONLY

SPECIAL INSPECTION IS TO BE PROVIDED FOR THE ITEMS LISTED BELOW IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING SAFETY DEPARTMENT. "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE CITY OR COUNTY INSPECTIONS REQUIRED BY SECTION 110.3 OF THE IBC. SPECIAL INSPECTION IS REQUIRED PER SECTIONS 1704 AND 1705 FOR THE FOLLOWING:

1. EPOXY AND ADHESIVE ANCHORS IN CONCRETE:
A) DURING THE PLACEMENT OF ANCHORS IN HARDENED CONCRETE

2. WELDING:
A) SEE ATTACHED TABLES FOR THE QUALITY ASSURANCE AND QUALITY CONTROL REQUIREMENTS PER AISC 360-16 CHAPTER N WHICH SHALL APPLY TO ALL STEEL CONNECTIONS.

3. HIGH-STRENGTH BOLTING:
A) SEE TABLES ON THIS SHEET FOR THE QUALITY ASSURANCE AND QUALITY CONTROL REQUIREMENTS PER AISC 360-16 CHAPTER N WHICH SHALL APPLY TO ALL STEEL CONNECTIONS.

3. SEE FOLLOWING TABLES FOR ADDITIONAL INFORMATION INCLUDING REQUIRED AISC QUALITY ASSURANCE INSPECTIONS FOR WELDING, BOLTING AND OTHER INSPECTION TASKS. PER AISC 360-16 SECTION N5.3 AND AISC 341-10 SECTION J5.4, IT IS ACCEPTABLE, WITH THE ENGINEER AND PIERCE COUNTY'S APPROVAL, FOR THE TASKS NOTED IN THE VARIOUS QUALITY ASSURANCE TABLES TO BE COORDINATED BETWEEN THE FABRICATOR'S INSPECTOR AND THE OWNER'S INSPECTOR SO THAT THE INSPECTION IS PERFORMED BY ONLY ONE OF THE REQUIRED PARTIES. FOR THIS PROVISION, THE FABRICATOR MUST BE AISC CERTIFIED AND HAVE A PIERCE COUNTY APPROVED INSPECTION PROGRAM.

4. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
A) THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATION.
B) THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE STRUCTURAL ENGINEER OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
C) UPON COMPLETION OF THE ASSIGNED WORK THE STRUCTURAL ENGINEER SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

FOR ADDITIONAL INFORMATION ON SPECIAL STRUCTURAL INSPECTIONS SEE IBC AND MATERIAL SPECIFIC TABLES ON THE FOLLOWING SHEETS OR CONTACT THE STRUCTURAL ENGINEER PRIOR TO START OF CONSTRUCTION.

SHEET INDEX

12/11/2024

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YUK KWAN TSUI
STATE OF WASHINGTON
24334
REGISTERED PROFESSIONAL ENGINEER
12/11/2024

4332 MERCER ISLAND ADDITION

4332 WEST MERCER WAY
MERCER ISLAND, WA

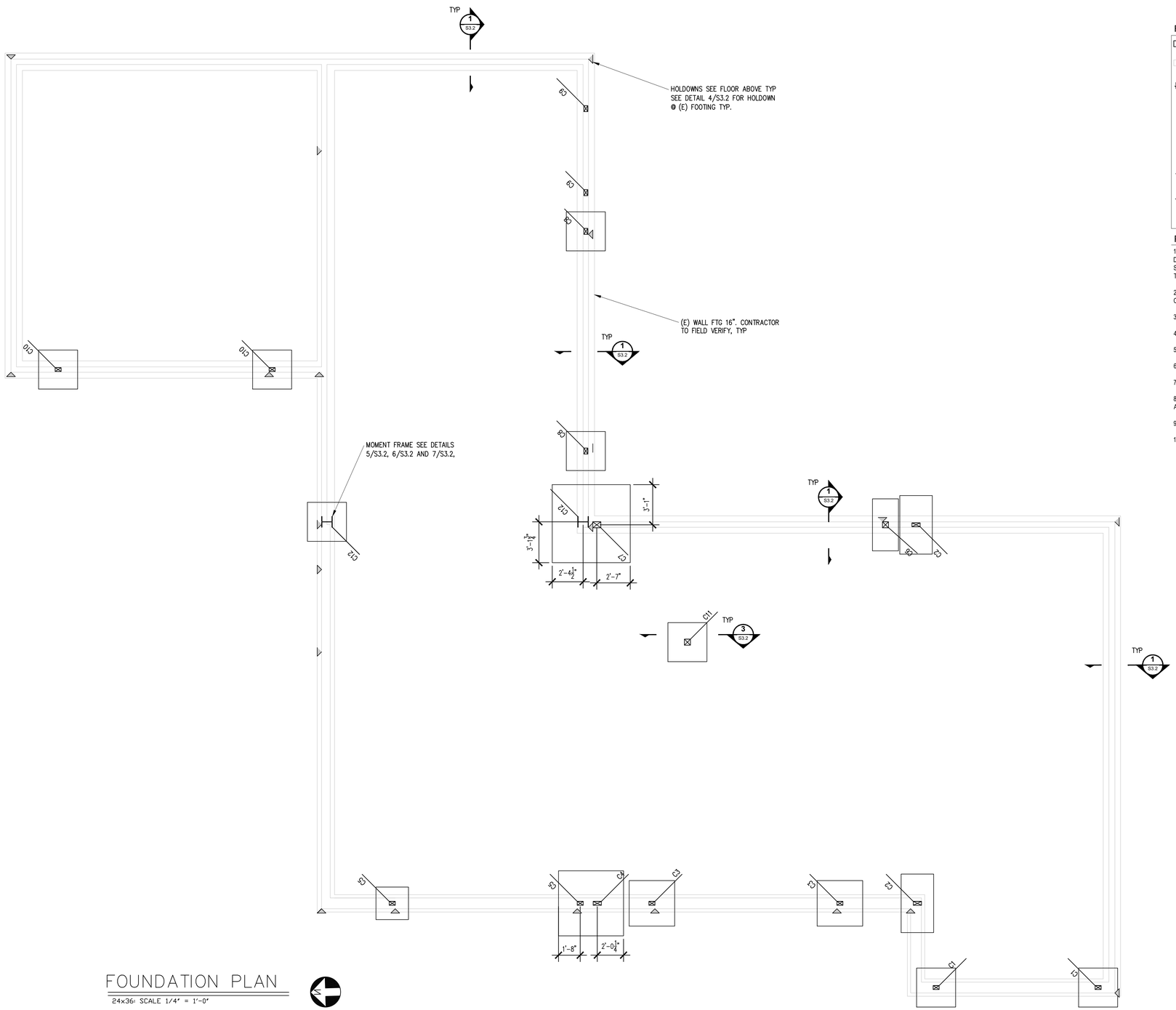
JOB # 2024065

REV	DESCRIPTION	DATE

Drawn By:

Drawing Title:
STRUCTURAL NOTES

Sheet
S1.0



FOUNDATION PLAN

24x36□ SCALE 1/4" = 1'-0"

FLOOR PLAN LEGEND

	LOAD BEARING WALL
	EXISTING
B-XX	BEAM/HEADER, U.N.O
⊠	POST
△	HOLD-DOWN LOCATION
⊓	HANGER
K / #	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
K / #	FORCE TRANSFER SHEAR WALL SEE DETAIL S6/3.3

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. STRUCTURAL DRAWINGS ARE SCHEMATIC. DO NOT SCALE. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR THE DEMOLITION.

2. DIMENSIONS AND LOCATION OF EXISTING FOUNDATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

3. ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.

4. ALL 4" LOAD BEARING WALL SHOULD BE 2X4 HF#2 @ 16" OC.

5. ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16"O.C.

6. ALL POST SHALL BE DF#2 U.N.O.

7. ALL BEAM AND HEADER SHOULD BE HF#2 U. N. O.

8. ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR/AND FOUNDATION .

9. All BEAM AT TOP PLATE/WALL CONNECTION SEE DETAIL 5/S3.3.

10. TYPICAL STAIR AND STAIR LANDING DETAIL SEE DWG 10/S3.1 - 15/S3.1

Label	FTG SIZE (ft)	FTG THK (in)
C1	3 X 3	12
C2	3 X 4	12
C3	3.5 X 3.5	12
C4	3.5 X 3.5	12
C5	2.5 X 2.5	12
C6	2 X 4	12
C7	4 X 4	12
C8	3 X 3	12
C10	3 X 3	12
C11	3 X 3	12
C12	3 X 3	12
C4+C5	5 X 5	14
C7+C12	6 X 6	14

Label	COLUMN
C1	4x6 DF#2
C2	4x10 DF#2
C3	4x10 DF#2
C4	4x10 DF#2
C5	4x6 DF#2
C6	6x6 DF#2
C7	6x10 DF#2
C8	4x6 DF#2
C9	4x6 DF#2
C10	4x6 DF#2
C11	6X6 DF#2
C12	W10x88

12/11/2024

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12/11/2024

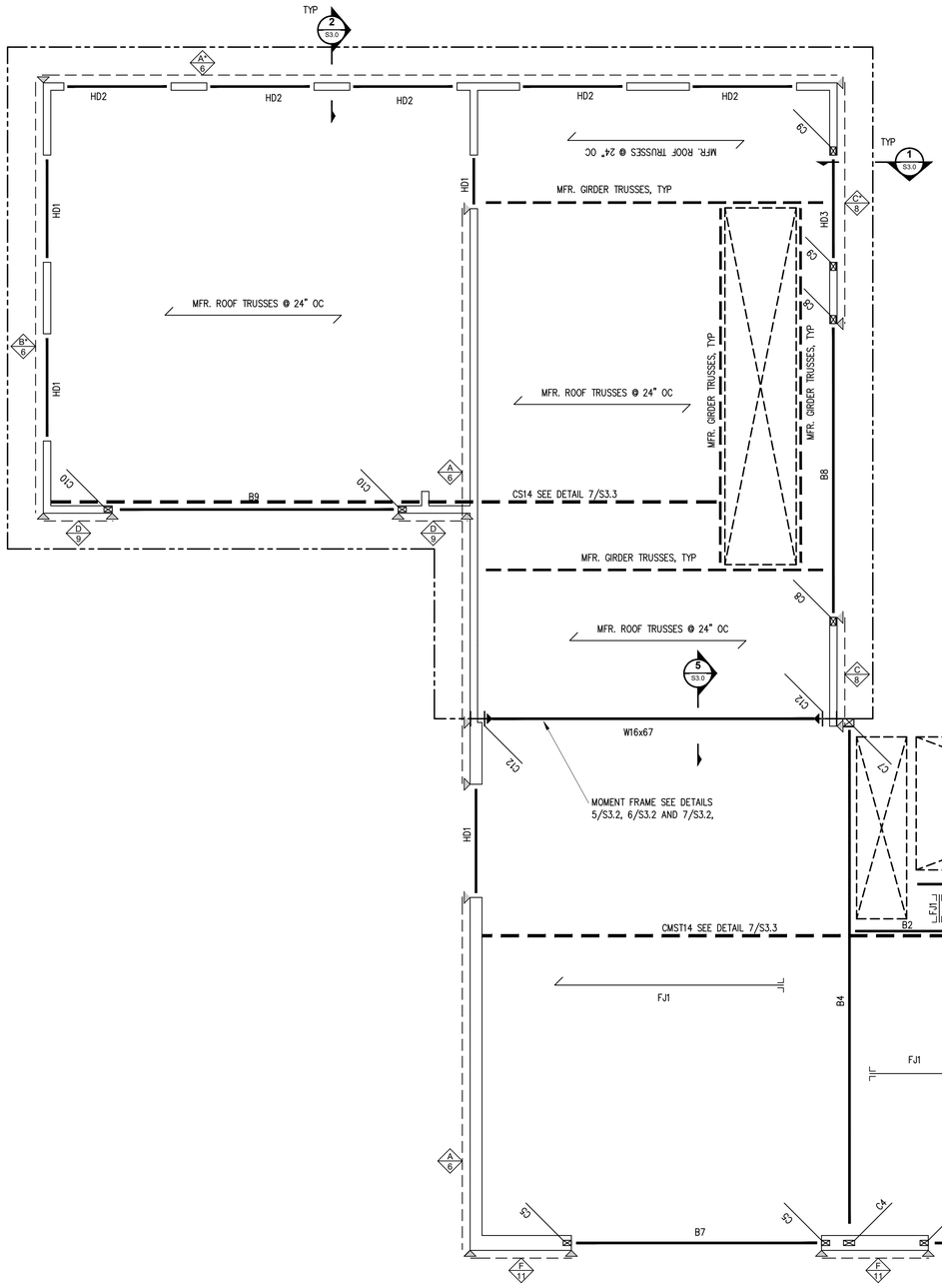
4332 MERCER ISLAND ADDITION

4332 WEST MERCER WAY
MERCER ISLAND, WA

JOB # 2024065

REV	DESCRIPTION	DATE

Drawn By:
Drawing Title:
FOUNDATION PLAN
Sheet
S2.0



2ND FLOOR FRAMING PLAN

24x36\ SCALE 1/4" = 1'-0"

FLOOR PLAN LEGEND

	LOAD BEARING WALL
	EXISTING
B-XX	BEAM/HEADER, U.N.O
⊠	POST
△	HOLD-DOWN LOCATION
⊔	HANGER
A / 6	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
A / 6	FORCE TRANSFER SHEAR WALL SEE DETAIL S6/3.3

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. STRUCTURAL DRAWINGS ARE SCHEMATIC. DO NOT SCALE. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR THE DEMOLITION.

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6. ALL POST SHALL BE DF#2 U.N.O.

7. ALL BEAM AND HEADER SHOULD BE HF#2 U .N. O.

8. ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR/AND FOUNDATION .

9. All BEAM AT TOP PLATE/WALL CONNECTION SEE DETAIL 5/S3.3.

10. TYPICAL STAIR AND STAIR LANDING DETAIL SEE DWG 10/S3.1 - 15/S3.1

Label	Material
RHD1	4 x 8 HF No.2
RHD2	4 x 8 DF No.2
RHD3	3 1/2" x 9" 24F-V4 DF Glulam
RB1	5 1/2" x 18" 24F-V4 DF Glulam
FJ1	16" TJI® 110
HD1	4 x 12 DF No.2
HD2	4 x 8 HF No.2
HD3	3 1/2" x 9" 24F-V4 DF Glulam
B1	3 1/2" x 13 1/2" 24F-V4 DF Glulam
B2	3 1/2" x 12" 24F-V4 DF Glulam
B3	5 1/2" x 16" 24F-V4 DF Glulam
B4	8 3/4" x 21" 24F-V4 DF Glulam
B5	5 1/2" x 16" 24F-V4 DF Glulam
B6	8 3/4" x 21" 24F-V4 DF Glulam
B7	3 1/2" x 16 1/2" 24F-V4 DF Glulam
B8	3 1/2" x 12" 24F-V4 DF Glulam
B9	3 1/2" x 10 1/2" 24F-V4 DF Glulam

Label	COLUMN
C1	4x6 DF#2
C2	4x10 DF#2
C3	4x10 DF#2
C4	4x10 DF#2
C5	4x6 DF#2
C6	6x6 DF#2
C7	6x10 DF#2
C8	4x6 DF#2
C9	4x6 DF#2
C10	4x6 DF#2
C11	6X6 DF#2
C12	W10x88

12/11/2024

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4332 MERCER ISLAND ADDITION

4332 WEST MERCER WAY
MERCER ISLAND, WA

JOB # 2024065

DATE
DESCRIPTION
REV

Drawn By:
Drawing Title:
2ND FLOOR FRAMING PLAN

Sheet
S2.1

12/11/2024

FLOOR PLAN LEGEND

	LOAD BEARING WALL
	EXISTING
B-XX	BEAM/HEADER, U.N.O
⊠	POST
△	HOLD-DOWN LOCATION
⊓	HANGER
A/B	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
A/B	FORCE TRANSFER SHEAR WALL SEE DETAIL S6/3.3

PLAN NOTES:

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3. ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.

4. ALL 4" LOAD BEARING WALL SHOULD BE 2X4 HF#2 @ 16" OC.

5. ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16"O.C.

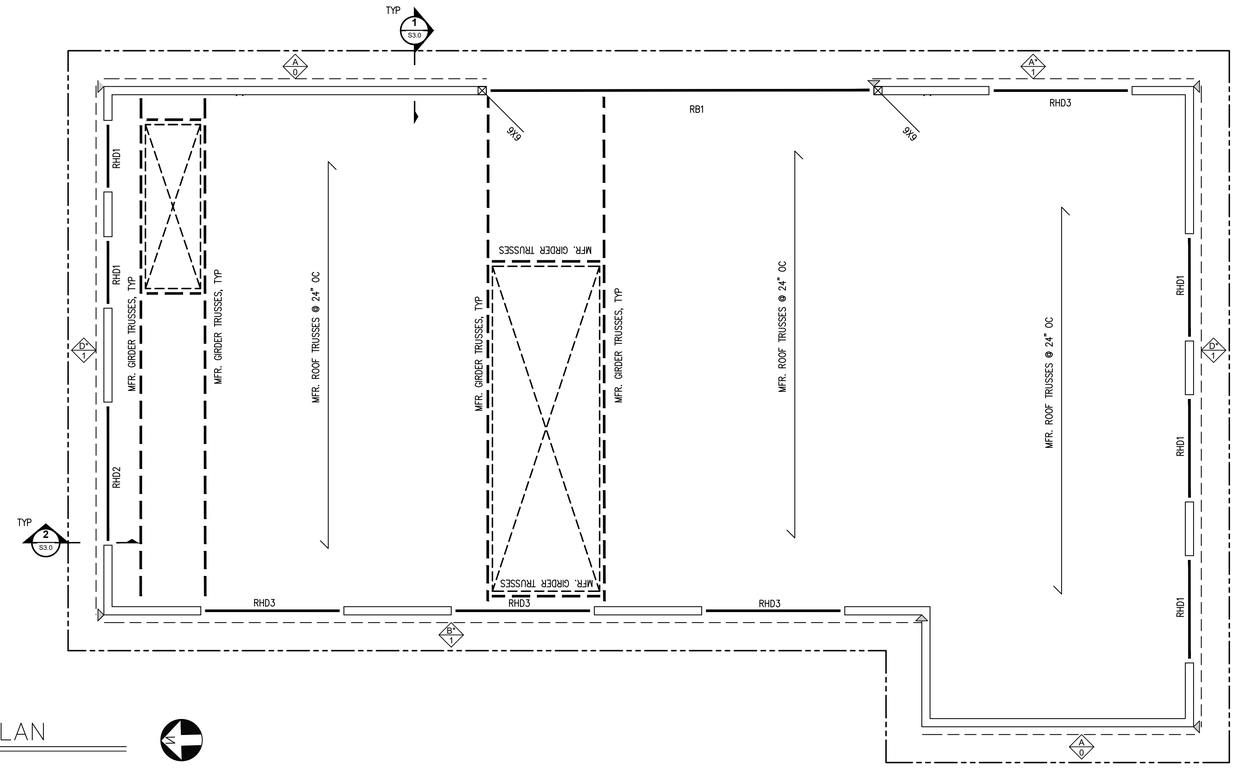
6. ALL POST SHALL BE DF#2 U.N.O.

7. ALL BEAM AND HEADER SHOULD BE HF#2 U .N. O.

8. ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR/AND FOUNDATION .

9. All BEAM AT TOP PLATE/WALL CONNECTION SEE DETAIL 5/S3.3.

10. TYPICAL STAIR AND STAIR LANDING DETAIL SEE DWG 10/S3.1 - 15/S3.1



ROOF FRAMING PLAN

24x36: SCALE 1/4" = 1'-0"

Label	Material
RHD1	4 x 8 HF No.2
RHD2	4 x 8 DF No.2
RHD3	3 1/2" x 9" 24F-V4 DF Glulam
RB1	5 1/2" x 18" 24F-V4 DF Glulam
FJ1	16" TJI® 110
HD1	4 x 12 DF No.2
HD2	4 x 8 HF No.2
HD3	3 1/2" x 9" 24F-V4 DF Glulam
B1	3 1/2" x 13 1/2" 24F-V4 DF Glulam
B2	3 1/2" x 12" 24F-V4 DF Glulam
B3	5 1/2" x 16" 24F-V4 DF Glulam
B4	8 3/4" x 21" 24F-V4 DF Glulam
B5	5 1/2" x 16" 24F-V4 DF Glulam
B6	8 3/4" x 21" 24F-V4 DF Glulam
B7	3 1/2" x 16 1/2" 24F-V4 DF Glulam
B8	3 1/2" x 12" 24F-V4 DF Glulam
B9	3 1/2" x 10 1/2" 24F-V4 DF Glulam

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4332 MERCER ISLAND ADDITION

4332 WEST MERCER WAY
MERCER ISLAND, WA

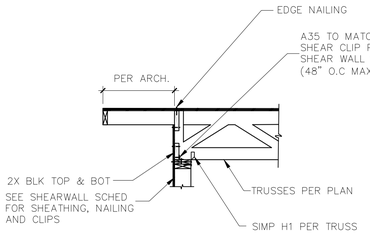
JOB # 2024065

REV	DESCRIPTION	DATE

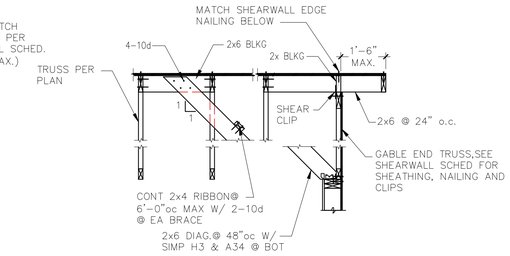
Drawn By:

Drawing Title:
ROOF FRAMING PLAN

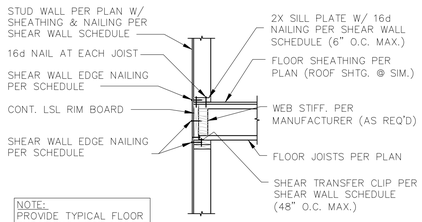
Sheet
S2.2



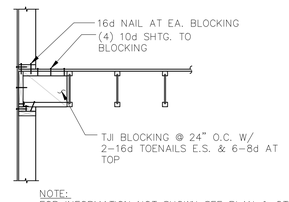
1 S3.0 TYP. ROOF TRUSS // TO WALL
SCALE: 1/2"=1'-0"



2 S3.0 TYP. GABLE END ROOF CONNECTION
SCALE: 1/2"=1'-0"



3 S3.0 TYP. EXT. WALL JSTS. PERP.
SCALE: 1/2"=1'-0"



4 S3.0 TYP. EXT. WALL JST. PARALLEL
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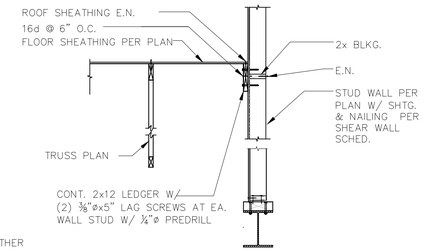
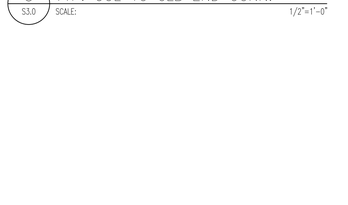
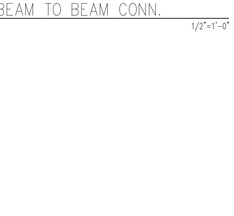


5 S3.0 TYP. ROOF FRAMING @ FRONT PORCH
SCALE: 1/2"=1'-0"



6 S3.0 TYP. COL TO GLB END CONN.
SCALE: 1/2"=1'-0"



7 S3.0 TYP. BEAM TO BEAM CONN.
SCALE: 1/2"=1'-0"

8 S3.0 TYP. FLOOR JOISTS TO WOOD BEAM
SCALE: 1/2"=1'-0"

12/11/2024

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12/11/2024

4332 MERCER ISLAND ADDITION

4332 WEST MERCER WAY
MERCER ISLAND, WA

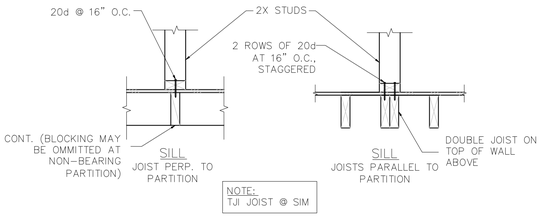
JOB # 2024065

REV	DESCRIPTION	DATE

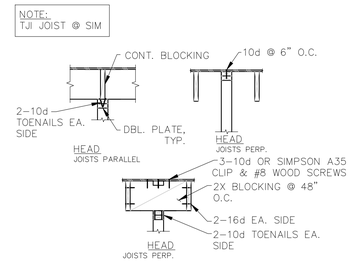
Drawn By:

Drawing Title:
TYPICAL STRUCTURAL DETAILS

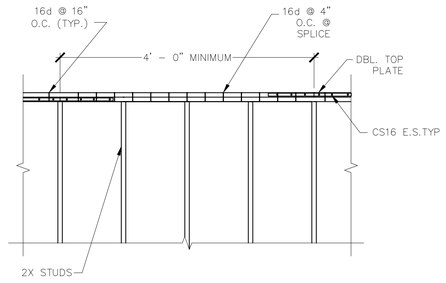
Sheet
S3.0



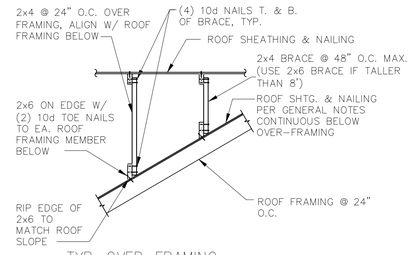
1 TYP. JOIST FRAMING AT NON-LOAD BEARING STUD WALLS
SCALE: 1/2"=1'-0"



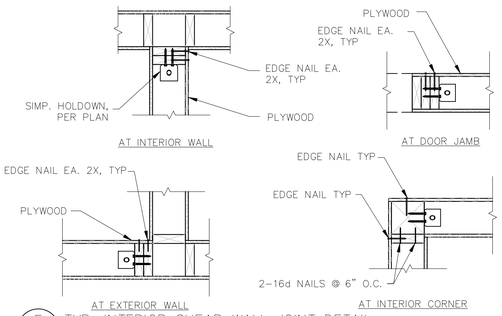
2 TYP. JOIST FRAMING AT STUD WALLS
SCALE: 1/2"=1'-0"



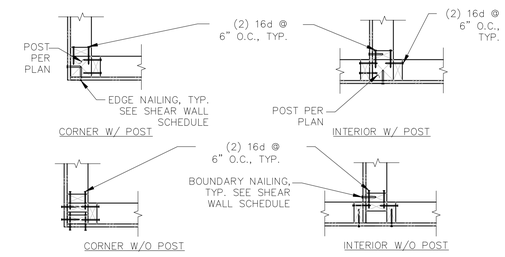
3 TYP. TOP PLATE SPLICE
SCALE: 1/2"=1'-0"



4 TYP. OVER-FRAMING PERP. TO ROOF FRAMING
SCALE: 3/4"=1'-0"

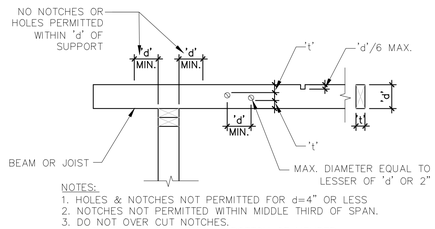


5 TYP. INTERIOR SHEAR WALL JOINT DETAIL
SCALE: 1/2"=1'-0"



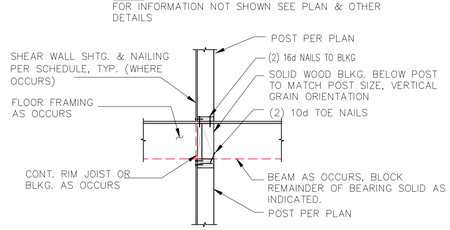
NOTS:
1. SEE FRAMING PLAN FOR SHEAR WALL, FACE OF WALL, ONE SIDE,TWO SIDE AND SCHEDULE REFERENCES.
2. ALL STUDS 1½" THICK U.N.O.

6 TYP. INTERIOR SHEAR WALL JOINT DETAIL
SCALE: 1/2"=1'-0"

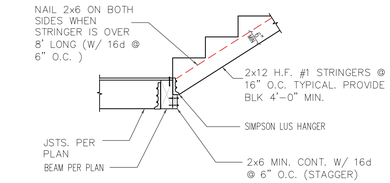


NOTES:
1. HOLES & NOTCHES NOT PERMITTED FOR d=4" OR LESS
2. NOTCHES NOT PERMITTED WITHIN MIDDLE THIRD OF SPAN.
3. DO NOT OVER CUT NOTCHES.
4. NOTCHES NOT PERMITTED IN BOTTOM OF MEMBER.

7 TYP. NOTCHES & HOLES IN JOISTS/BEAMS
SCALE: 1/2"=1'-0"

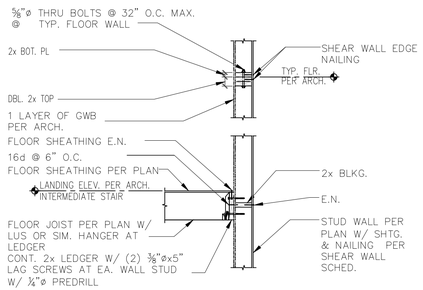


8 TYP. POST @ FLOOR
SCALE: 1/2"=1'-0"

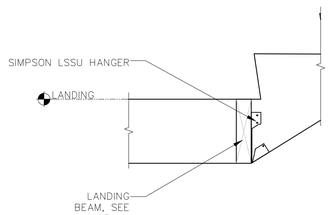


NOTES:
1) STRAP & BLKG. REQ'D @ SHEAR WALLS ONLY.
2) FRAMING ABOVE NOT SHOWN FOR CLARITY.

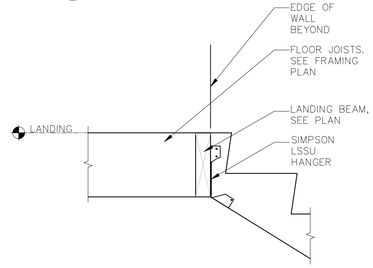
9 TYP. PLATE HT. STEP
SCALE: 3/4"=1'-0"



10 TYP. FRAMING @ STAIR LANDING
SCALE: 1/2"=1'-0"

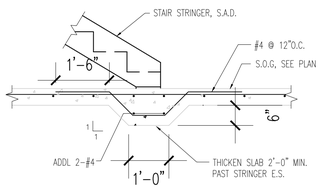


11 TYP. STAIR AT LANDING
SCALE: 1/2"=1'-0"

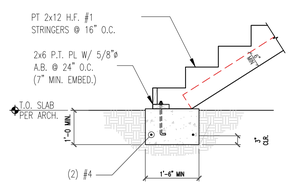


12 TYP. STAIR AT LANDING
SCALE: 1/2"=1'-0"

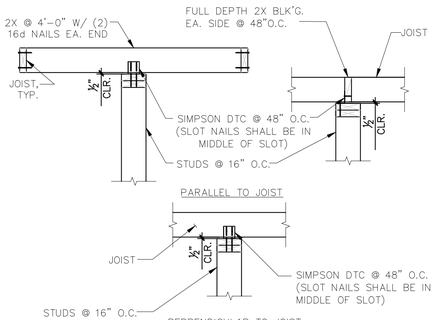
13 TYP. STRINGER CONNECTION
SCALE: 3/4"=1'-0"



14 STAIR STRINGER FOOTING
SCALE: NTS



15 EXT. STAIR STRINGER FOOTING
SCALE: NTS



NOTE:
DO NOT INSTALL NON-BEARING PARTITIONS UNTIL DEAD LOEAD IS IN PLACE(AT ROOF CONSTRUCTION AND WHERE A DEFLECTION SPACE HAS BEEN PROVIDED FOR THIS REQUIREMENT MAY BE WAIVED).

16 TYP. NON-BEARING DETAIL
SCALE: 1/2"=1'-0"

12/11/2024

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REGISTERED PROFESSIONAL ENGINEER
12/11/2024

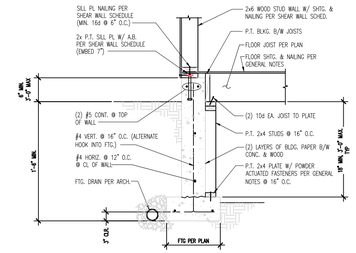
4332 MERCER ISLAND ADDITION

4332 WEST MERCER WAY
MERCER ISLAND, WA

JOB # 2024065

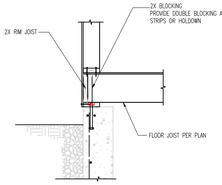
REV	DESCRIPTION	DATE

Drawn By:
Drawing Title:
TYPICAL STRUCTURAL DETAILS
Sheet
S3.1

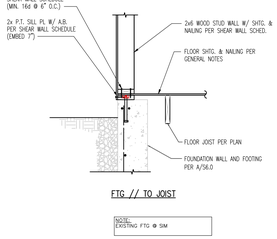


FTG PERP. TO JOIST

NOTE: EXISTING FTG @ SIM

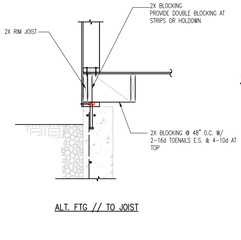


ALT. FTG PERP. TO JOIST

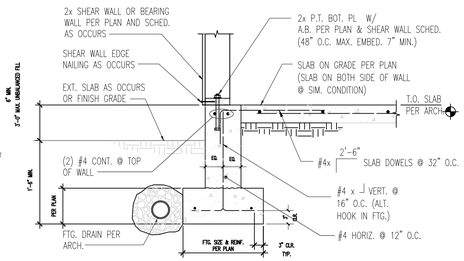


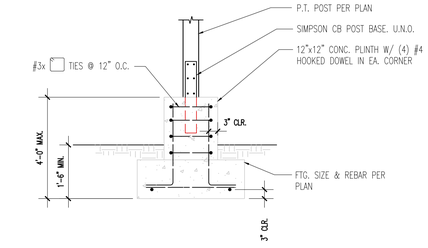
FTG // TO JOIST

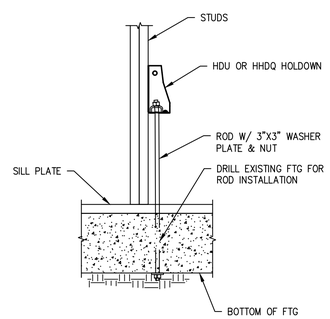
NOTE: EXISTING FTG @ SIM

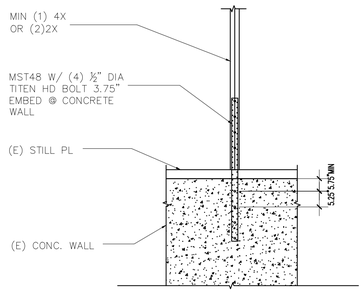


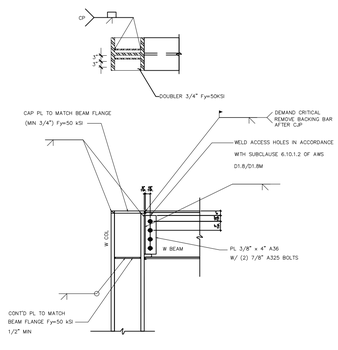
ALT. FTG // TO JOIST

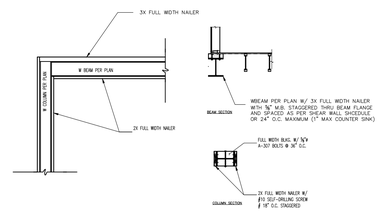


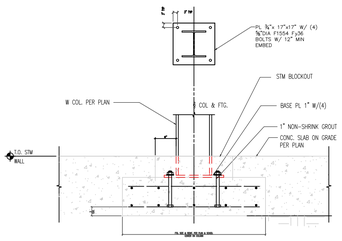












4 S3.2 HOLDWODN @ EXISTING WALL FTG
SCALE:

5 S3.2 RBS BEAM TO COL. MOMENT CONN. @ TOP
SCALE: 1"=1'-0"

6 S3.2 W BEAM & COL DETAILS
SCALE: 3/4"=1'-0"

7 S3.2 TYP. W COLUMN DETAIL
SCALE: 3/4"=1'-0"

1 S3.2 TYP. EXTERIOR FOUNDATION PERP. TO JOIST
SCALE: 3/4"=1'-0"

2 S3.2 TYP. EXT. STUD WALL FTG.
SCALE: 1/2"=1'-0"

3 S3.2 TYP. EXTERIOR SQUARE FTG.
SCALE: 1/2"=1'-0"

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4332 MERCER ISLAND ADDITION

4332 WEST MERCER WAY
MERCER ISLAND, WA

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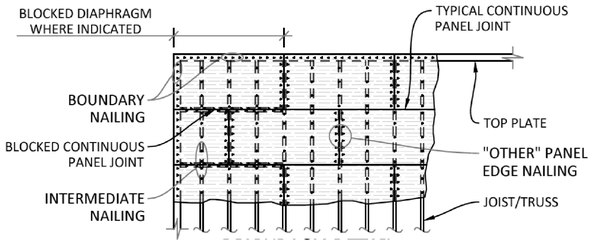
TYPICAL STRUCTURAL DETAILS

Sheet
S3.2



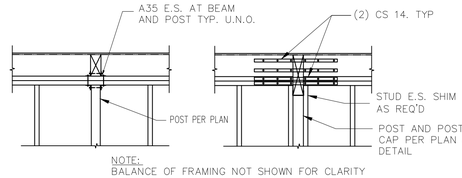
DIAPHRAGM NAILING SCHEDULE

LOCATION	SHEATHING	BLKG REQD	SIZE OF NAIL	NAIL SPACING AT BOUNDARIES AND "OTHER" PANEL EDGES	NAIL SPACING AT INTERMEDIATE FRAMING MEMBERS	NAIL SPACING AT BLOCKED PANEL JOINTS
ROOF	SEE STRUCT NOTES	NO	10d	6" OC	12" OC	6" OC
SUB-FLR		NO	10d & GLUE	4" OC	12" OC	4" OC

NOTE:
*PROVIDE ⅛" GAP @ TYP. PANEL JOINT

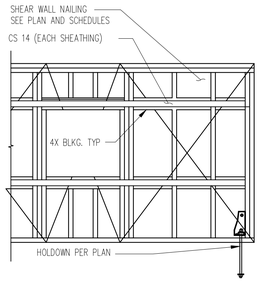
DIAPHRAGM NOTES
1. ALL DIAPHRAGM SHEATHING IS TO BE STAGGERED IN THE DIRECTION OF THE PLYWOOD SPAN PER DIAPHRAGM DETAIL
2. PROVIDE BOUNDARY NAILING CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE DIAPHRAGM
3. NAILS SHALL BE COMMON OR GALVANIZED BOX
4. ALL FRAMING MEMBERS SHALL BE 2x MINIMUM NOMINAL WIDTH

1 TYP. PLY. DIAPHRAGM NAILING
SCALE 1/4" = 1'-0"

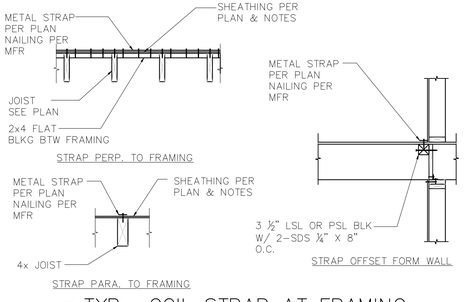


NOTE:
BALANCE OF FRAMING NOT SHOWN FOR CLARITY

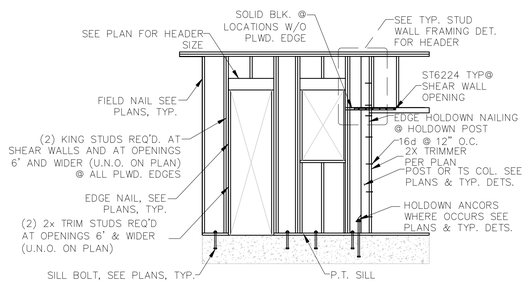
5 TYP. BEAM @ WALL CONNECTION
SCALE NTS



6 TYP. PERFORATED SHEAR WALL
SCALE NTS



7 TYP. COIL STRAP AT FRAMING
SCALE NTS



TYP MINIMUM KING STUD AND TRIM			
WIDTH OF OPENING	8'-0"	6'-0"	4'-0"
NUMBER OF TRIMMERS	3	2	1
NUMBER OF KING STUD	4	3	2

NOTES:
1. USE 2x6 AT 16" O.C. AT ALL EXTERIOR WALLS.
2. SEE PLANS FOR SPECIAL FRAMING REQUIREMENTS.
3. HEADER SIZES SHOWN IN SCHEDULES ABOVE ARE MINIMUM HEADER SIZES, SEE PLANS FOR WHERE LARGER HEADER SIZES ARE REQUIRED.
4. IF CALLED OUT STUD HEIGHTS AT ANY GIVEN FLOOR LEVEL EXCEED LIMITATIONS, CONTACT STRUCTURAL ENGINEER FOR CLARIFICATION.
5. TRIMMERS AT 4x4 USE 1-4x4 AND 1-2x4 AND AT 3x4 USE 1-3x4 AND 1-2x4.
6. NAIL TRIMMERS TOGETHER W/ 16d NAILS @ 12" O.C. STAGGERED EACH FACE.
7. SEE PLANS FOR SHEAR WALL FRAMING REQUIREMENTS.

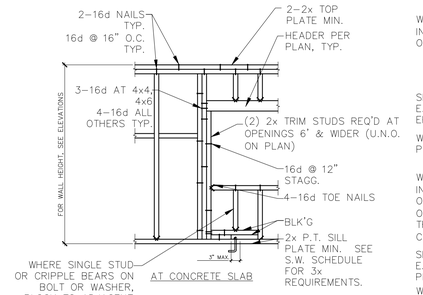
2 TYP. SHEAR WALL FRAMING
SCALE NTS

SHEAR WALL SCHEDULE

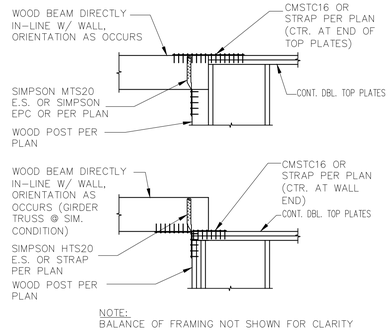
MARK	SHEATHING	SIDE	PANEL NAILING SIZE	PANEL NAILING EDGE	PANEL NAILING FIELD	PANEL BLOCKING	BOT PLATE FASTENING	SILL PLATE	ANCHOR BOLTS (MIN. 7" EMBED)	SHEAR CLIP	VALUE (PLF)
A	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	6" O.C.	12" O.C.	2x	16d @ 6"OC	2x	5/8" x 10" @ 48" O.C. OR TITEN HD 5/8"x8 @48" O.C.	SIMPSON LTP4/A35 @ 18" O.C.	230
B	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	4" O.C.	12" O.C.	3x	16d @ 4"OC	3x (2) 2x	5/8" x 12" @ 42" O.C. OR TITEN HD 5/8"X8 @36" O.C.	SIMPSON LTP4/A35 @ 18" O.C.	380
C	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	3" O.C.	12" O.C.	3x	16d @ 3"OC	3x (2) 2x	5/8" x 12" @ 36" O.C. OR TITEN HD 5/8"X8 @32" O.C.	SIMPSON LTP4/A35 @ 16" O.C.	420
D	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	10d	3" O.C.	12" O.C.	3x	16d @ 3"OC	3x (2) 2x	5/8" X 12" @ 24" O.C. OR TITEN HD 5/8"X8 @24" O.C.	SIMPSON LTP4/A35 @ 12" O.C.	560
E	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	6" O.C.	12" O.C.	3x	(2) ROW 16d @ 6"OC	3x (2) 2x	5/8" X 12" @ 32" O.C. OR TITEN HD 5/8"X8 @24" O.C.	SIMPSON LTP4 & A35. @ 24" O.C.	520
F	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	4" O.C.	12" O.C.	3x	(2) ROW 16d @ 4"OC	3x (2) 2x	5/8" X 12" @ 24" O.C. OR TITEN HD 5/8"X8 @18" O.C.	SIMPSON LTP4 & A35. @ 16" O.C.	760
G	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	3" O.C.	12" O.C.	3x	(2) ROW 16d @ 3"OC	3x (2) 2x	5/8" x 12" @ 16" O.C.	SIMPSON LTP4 & A35. @ 12" O.C.	980
H	15/32" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	10d	3" O.C.	12" O.C.	3x	(2) ROW 16d @ 3"OC	3x (2) 2x	5/8" x 12" @ 12" O.C.	SIMPSON LTP4 & A35. @ 9" O.C.	1,200

NOTES:
1. SOME SHEAR WALLS LISTED MAY NOT BE USED IN THIS PROJECT. REFER TO PLAN FOR TYPES USED.
2. 8d NAIL = 2 1/2" x 0.131" COMMON OR 2 1/2" x 0.113" GALVANIZED BOX.
   10d NAIL = 3" x 0.148" COMMON OR 3" x 0.128" GALVANIZED BOX.
3. IF ANCHOR BOLT SPACING IS GREATER THAN SHEAR WALL LENGTH INSTALL (1) ANCHOR BOLT WITHIN 12" OF EACH END.
4. NAIL SIZES SHOWN ARE FOR COMMON NAILS OR GALVANIZED BOX. POWER DRIVEN NAILS SHALL COMPLY WITH ESR 1539 FOR RECOMMENDED SPACING AND INSTALLATION TO COMPLY WITH THE ABOVE SHEAR WALL SCHEDULE.
5. SILL PLATE ANCHORS SHALL INCLUDE A STEEL PLATE WASHER NOT LESS THAN 0.229"x3"x3" IN SIZE PER AF&PA SDPWS SECTION 4.3.6.4.3. THE HOLE IN THE PLATE WASHER SHALL BE PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN ½" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING.
6. IN SEISMIC DESIGN CATEGORY D, E, OR F, WHERE SHEAR DESIGN VALUES EXCEED 700 POUNDS PER LINEAR FOOT (350 PLF ASD), ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN A SINGLE 3-INCH NOMINAL MEMBER, OR TWO 2-INCH NOMINAL MEMBERS FASTENED TOGETHER IN ACCORDANCE WITH SECTION 2306.1 TO TRANSFER THE DESIGN SHEAR VALUES BETWEEN FRAMING MEMBERS. WOOD STRUCTURAL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
7. WHERE PANELS ARE APPLIED TO BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHAL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
8. SHEAR WALL NAILING MUST BE INSTALLED SUCH THAT THE NAIL HEAD OR CROWN IS FLUSH WITH THE SURFACE OF SHEATHING. OVERDRIVEN OR OVER PENETRATED NAILS WILL NOT BE ALLOWED OR COUNTED AS APPROPRIATE NAILING.

SHEAR WALL SCHEDULE
SCALE NTS



3 TYP. STUD WALL OPENING FRAMING
SCALE NTS



NOTE:
BALANCE OF FRAMING NOT SHOWN FOR CLARITY

4 TYP. TIE STRAP CONN. DETAILS
SCALE NTS

HOLDOWN SCHEDULE

MARK	HOLDOWN	WOOD MEMBER	WOOD FASTENER	ANCHOR BOLT	ANCHOR BOLT EMBEDMENT (IN)	COMMENTS SEE NOTES BELOW	VALUE (LBS)
0	NONE REQUIRED						
1	SIMPSON MST37	(2) 2x	(22) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	2,135
2	SIMPSON MST48	(2) 2x	(32) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	3,425
3	SIMPSON MST60	(2) 2x	(48) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	4,830
4	SIMPSON CMST12	(1) 4x	(86) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED 39" END LENGTH	9,215
5	SIMPSON LSTHD8 OR LSTHD8RJ	(2) 2x SEE NOTES	(24) 16d SINKERS	N/A	8"	SEE NOTES 1, 2, 3, AND 4 USE (3) 2x AT CORNERS	1,220
6	SIMPSON HDU2-SDS2.5	(2) 2x	(6) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB16	12-5/8"	SEE NOTES 1, 2, 3, AND 4	2215
7	SIMPSON HDU4-SDS2.5	(2) 2x	(14) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB20	16-5/8"	SEE NOTES 1, 2, 3, AND 4	3285
8	SIMPSON HDU5-SDS2.5	(2) 2x	(14) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB24	20-5/8"	SEE NOTES 1, 2, 3, AND 4	4340
9	SIMPSON HDU8-SDS2.5	(1) 4x	(20) SIMPSON SDS SCREWS	7/8" DIA. SIMP. SB7/8x24	18"	SEE NOTES 1, 2, 3, AND 4	5820
10	SIMPSON HHDQ11-SDS2.5	(1) 6x	(24) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	8030
11	SIMPSON HHDQ14-SDS2.5	(1) 6x	(30) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	12375
12	SIMPSON HDU14-SDS2.5	(1) 6x	(36) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	12425

NOTES:
1. DOUBLE STUDS ARE REQUIRED AT HOLDOWNS UNLESS NOTED OTHERWISE. DOUBLE STUDS SHALL BE LAMINATED TOGETHER WITH 16d NAILS AT 6" O.C. FULL HEIGHT (TYPICAL).
2. PROVIDE HOLDOWN NOTED WITHIN 6" FROM EACH END OF EACH SHEAR WALL SHOWN ON PLANS.
3. ADD (2) EXTRA VERTICAL DOWEL WITH STANDARD HOOK IN FOOTING AT EACH ANCHOR BOLT LOCATION.
4. ADJUST FOOTING AND STEM WALL HEIGHT TO ACCOMMODATE ANCHOR BOLT EMBEDMENT REQUIREMENTS.
5. ADJUST FOOTING AND STEM WALL HEIGHT TO ACCOMMODATE ANCHOR BOLT EMBEDMENT REQUIREMENTS.
6. SEE THREADED ROD ANCHOR DETAIL.
7. FOR EXISTING STEM WALL, DRILL AND EPOXY ANCHOR. USE A307 THREADED ROD WITH SIMPSON SET-XP EPOXY. SEE PLANS AND DETAILS FOR REQUIRED EMBEDMENT.
8. ALL HOLDOWN ANCHORS AND BOLTS SHALL BE INSTALLED IN THE CORRECT LOCATION IN THE TOP OF THE CONCRETE WALL AND SECURED TO THE FORMS PRIOR TO CONCRETE INSTALLATION. THERE IS NO PRACTICAL SOLUTION TO POST-INSTALLED HOLDOWN ANCHORS IN THE TOP OF THE 8" CONCRETE STEM WALL. NO EPOXY OR MECHANICAL ANCHOR BOLT ALTERNATIVES WILL BE OFFERED FOR MISSING OR MISPLACED EMBEDDED ANCHORS. CONCRETE FOOTINGS AND STEM WALLS MAY HAVE TO BE REMOVED AT CONTRACTOR'S EXPENSE TO MITIGATE MISPLACED, MISALIGNED, OR MISSING HOLDOWN ANCHORS OR BOLTS.

HOLDOWN SCHEDULE
SCALE NTS

12/11/2024

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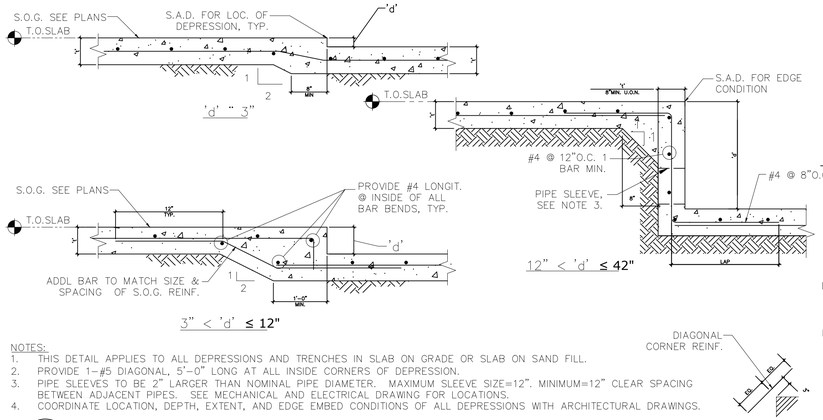
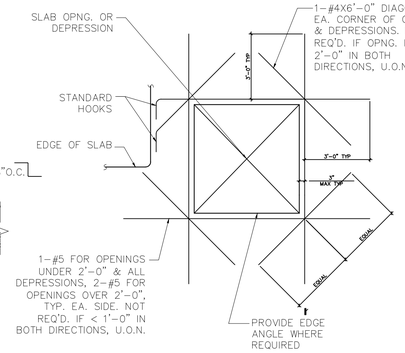
Drawn By:
Drawing Title:
SHEAR WALL DETAILS

Sheet
S3.3

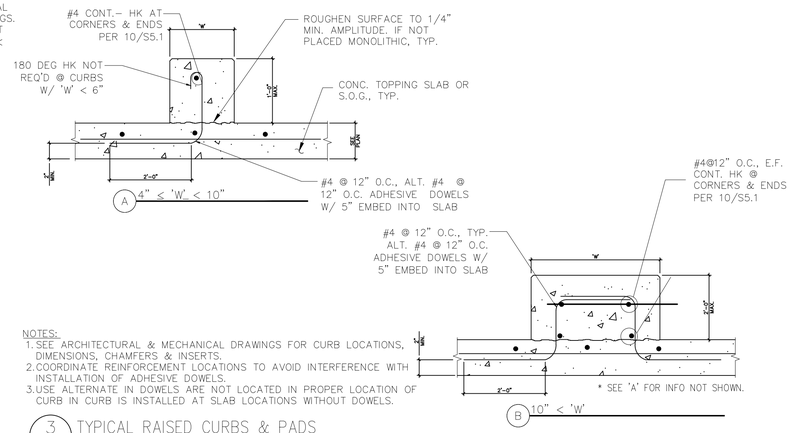


NOTES:
1. THIS DETAIL APPLIES TO ALL DEPRESSIONS AND TRENCHES IN SLAB ON GRADE OR SLAB ON SAND FILL.
2. PROVIDE 1–#5 DIAGONAL, 5'–0" LONG AT ALL INSIDE CORNERS OF DEPRESSION.
3. PIPE SLEEVES TO BE 2" LARGER THAN NOMINAL PIPE DIAMETER. MAXIMUM SLEEVE SIZE=12". MINIMUM=12" CLEAR SPACING BETWEEN ADJACENT PIPES. SEE MECHANICAL AND ELECTRICAL DRAWING FOR LOCATIONS.
4. COORDINATE LOCATION, DEPTH, EXTENT, AND EDGE EMBED CONDITIONS OF ALL DEPRESSIONS WITH ARCHITECTURAL DRAWINGS.

1 SLAB ON GRADE DEPRESSION
SCALE: 1/2"=1'–0"

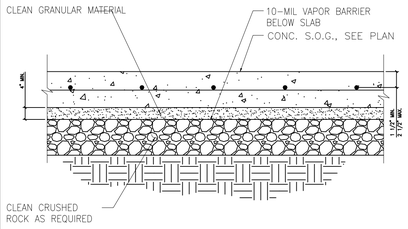


2 SLAB PENETRATION REINFORCING
SCALE: 1/2"=1'–0"



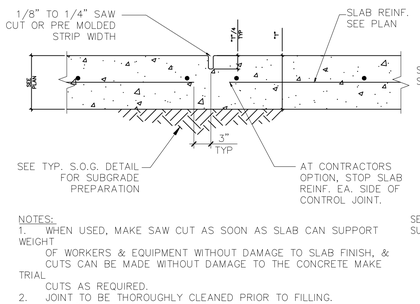
NOTES:
1. SEE ARCHITECTURAL & MECHANICAL DRAWINGS FOR CURB LOCATIONS, DIMENSIONS, CHAMFERS & INSERTS.
2. COORDINATE REINFORCEMENT LOCATIONS TO AVOID INTERFERENCE WITH INSTALLATION OF ADHESIVE DOWELS.
3. USE ALTERNATE IN DOWELS ARE NOT LOCATED IN PROPER LOCATION OF CURB IN CURB IS INSTALLED AT SLAB LOCATIONS WITHOUT DOWELS.

3 TYPICAL RAISED CURBS & PADS
SCALE: 1/2"=1'–0"



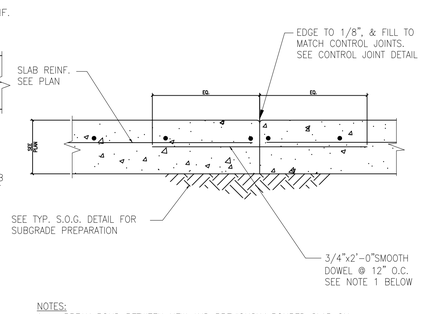
NOTES:
1. SEE GEOTECHNICAL REPORT.
2. SEE SPECIFICATIONS FOR GRANULAR MATERIAL & CRUSHED ROCK.
3. SEE PLANS FOR LOCATIONS OF COLUMN BLOCKOUTS, CONSTRUCTION JOINTS, CONTROL JOINTS AND SLAB DEPRESSIONS.

4 TYP. SUBGRADE PREP. & SLAB ON GRADE DETAIL
SCALE: 1/2"=1'–0"



NOTES:
1. WHEN USED, MAKE SAW CUT AS SOON AS SLAB CAN SUPPORT WEIGHT OF WORKERS & EQUIPMENT WITHOUT DAMAGE TO SLAB FINISH, & CUTS CAN BE MADE WITHOUT DAMAGE TO THE CONCRETE MAKE TRIAL CUTS AS REQUIRED.
2. JOINT TO BE THOROUGHLY CLEANED PRIOR TO FILLING.
3. PROVIDE FILLER MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS & APPLY STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. FILLER MATERIAL SHALL BE APPLIED WHEN SLAB IS UNDER PERMANENT TEMPERATURE CONTROL, SUCH AS AT THE COMPLETION OF THE BUILDING SHELL, WHENEVER POSSIBLE. IF PERMANENT TEMPERATURE CONTROL IS NOT ESTABLISHED, A MINIMUM OF 90 DAYS AFTER THE COMPLETION OF SLAB CONSTRUCTION SHALL ELAPSE PRIOR TO APPLYING THE JOINT FILLER.

5 CONTROL JOINTS AT SLAB ON GRADE
SCALE: 1/2"=1'–0"



NOTES:
1. BREAK BOND BETWEEN NEW AND PREVIOUSLY POURED SLAB ON GRADE BY SPRAYING OR PAINTING EXPOSED SIDE OF KEY WITH CURING COMPOUND OR FORM OIL.
2. LONG STRIP CONSTRUCTION METHOD SHALL BE USED FOR ALL SLAB ON GRADE, UNLESS OTHERWISE APPROVED BY RESIDENT ENGINEER.
3. SUBGRADE SHALL BE FREE OF STANDING WATER AT TIME OF CONCRETE PLACEMENT.

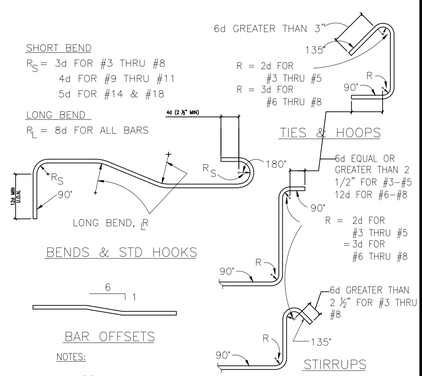
6 CONSTRUCTION JOINTS AT SLAB ON GRADE
SCALE: 1/2"=1'–0"

LAP SPLICE LENGTHS
(INCHES)(1,2)
GRADE 60 REINFORCING BARS, NORMAL WEIGHT CONCRETE

BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
f'c'= 3000PSI	TOP BAR (3)	21	28	35	46	62	82	104	132	162
	OTHER BAR	16	21	27	35	48	63	80	101	124
f'c'= 4000PSI	TOP BAR (3)	20	24	30	40	54	71	90	114	140
	OTHER BAR	16	19	23	30	41	55	69	88	108
f'c'= 5000 PSI	TOP BAR (3)	20	22	27	35	48	63	80	102	125
	OTHER BAR	16	17	21	27	37	49	62	79	96

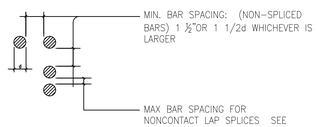
NOTES:
1. LAP SPLICE LENGTHS, WHERE PERMITTED, SHALL BE IN ACCORDANCE WITH THIS TABLE UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.
2. EMBEDMENT LENGTHS OF DOWELS SHALL BE EQUAL TO LENGTHS FOR "OTHER" BARS.
3. TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

7 REINFORCING LAP SPLICE TABLE
SCALE: NTS



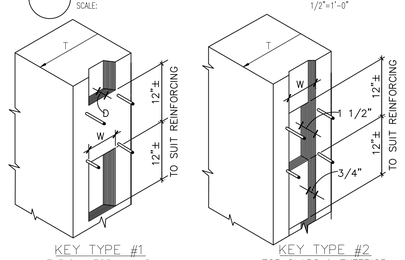
NOTES:
1. 'd' IS NOMINAL BAR DIAMETER
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

8 HOOKS AND BENDS
SCALE: NTS



NOTES:
1. COLUMN DOWELS, TYPICAL HORIZONTAL WALL STEEL AND TYPICAL WALL STEEL DOWELS MAY BE WIRED TOGETHER INSTEAD OF SPACING AS SHOWN ABOVE.
2. CLEAR DISTANCE LIMITATION BETWEEN BARS SHALL APPLY ALSO TO THE CLEAR DISTANCE BETWEEN A CONTACT LAP SPLICE AND ADJACENT SPLICES OF BARS.
3. BARS SPLICED BY NONCONTACT LAP SPLICES SHALL NOT BE SPLICED TRANSVERSELY FURTHER APART THAN ONE–FIFTH THE REQUIRED LAP SPLICE LENGTH, NOR 6".

9 BAR SPACING & SLAB ON GRADE DETAIL
SCALE: NTS

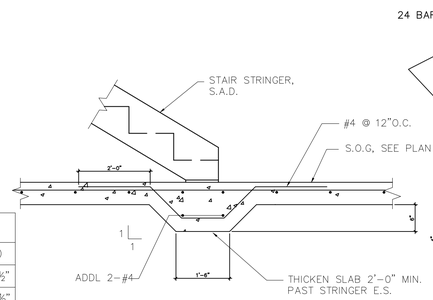


KEY SCHEDULE

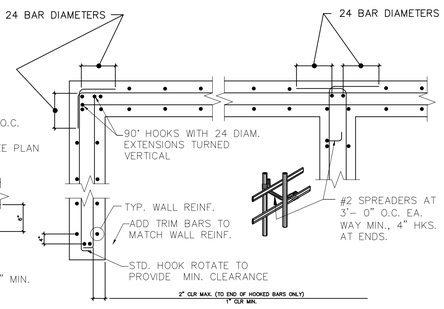
T	W	D	T	W	D
EQUAL LESS THAN 6" WALL OR SLAB	'T'	1 ½"	13"	7 ¼"	1 ½"
7"	7"	1 ½"	14" TO 16"	9 ¼"	2 ½"
8" TO 12"	5 ½"	1 ½"	18" & OVER	11 ¼"	2 ½"

NOTES:
1. BEFORE PLACING 2ND POUR, ALL SURFACES ARE TO BE ROUGHENED TO ¼" AMPLITUDE & THOROUGHLY CLEANED, SEE SPECIFICATIONS.
2. DETAILS APPLY TO BOTH HORIZONTAL & VERTICAL CONSTRUCTION JOINTS.

10 CONSTRUCTION JOINTS IN WALLS & SLABS
SCALE: 1/2"=1'–0"



11 STAIR STRINGER FOOTING
SCALE: 1/2"=1'–0"



NOTES:
1. WALLS WITH SINGLE CURTAIN OF STEEL SIMILAR TO ABOVE WITH HORIZONTAL HOOKS AT CORNERS ONLY.
2. SPLICES IN HORIZONTAL REINFORCEMENT SHALL BE STAGGERED.

12 WALL DETAIL REINF. @ CORNERS & INTER.
SCALE: NTS

12/11/2024

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YUK KWAN TSUI
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54334
REGISTERED PROFESSIONAL ENGINEER
12/11/2024

4332 MERCER ISLAND ADDITION
4332 WEST MERCER WAY
MERCER ISLAND, WA

JOB # 2024065

REV	DESCRIPTION	DATE

Drawn By:
Drawing Title: TYPICAL STRUCTURAL DETAILS
Sheet S3.4