PROJECT TEAM

OWNER:
Tom & Kim TSO
8802 SE 37th St.
Mesrcer Island WA 98040
email:

DESIGNER:
Kesh Design Lines
Tel: 425.361.7325
email: kesh@keshdesignlines.com

ENGINEERING:
As Needed

PROPERTY DETAILS

JOB NAME: **TSO ADDITION & ADU**
SITE ADDRESS:
8802 SE 37th ST. MERCER ISLAND WA 98040

LEGAL DISCRIPTION:
MADRONA CREST ADD

ZONING: R-8.4 Single Family(Res Use/Zone)

PARCEL # : 502190-0455

SITE DATA

LOT SIZE:	**12,100 SF**
EXISTING STRUCTURE:	
Main Floor:	1,598 SF
2nd Floor:	1,072 SF
TOTAL FINISHED:	**2,670 SF**
ATTACHED GARAGE:	750 SF (To be Remodeled ADU)
Open Porch:	50 SF
Proposed:	
Lower Level:	248 SF
Upper Level:	876 SF
Gross ADU Floor Area	**1,124 SF**

Allowed 40% of Lot Size: 12,100 SF
PROPOSED TOTAL DWELLING SQ. FT. 4,594 SF (38% OK)

LOT COVERAGE

LOT SIZE: 12,100 SF

EXISTING STRUCTURE:	
Exst. House	1,598 SF
Exst. Attached Garage:	750 SF
Exst. Shed (To be Removed)	77 SF
Front Drive Way:	793 SF
HARDSCAPE:	
Patio:	184 SF
Covered Patio:	216 SF
Walk Ways & Paths:	693 SF

PROPOSED ADDITION:
Two Story Addition: 300 SF

Total New Lot Coverage:
12,100 SF x 40% = 4,840 SF
4,840 SF > 3,657 SF OK

EXISTING HARDSCAPE TOTAL: 4,311 SF

PROPOSED ADDITIONAL:	
Addition:	300 SF
Walk Way to ADU (Hardscape)	102 SF
Replaced (Shed Removal)	-77 SF

NEW HARDSCAPE TOTAL: 4,636 SF
Proposed Total Hardscape 38% < Allowable 40% (less then 15% Lot Slope) OK

TOTAL ADDITIONAL HARDSCAPE 325 SF < 500 Sf
No Drainage Report Needed per MICC 15.09.050

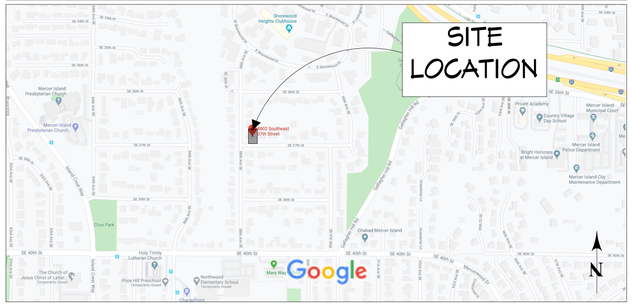
PARKING & OPEN SPACES

Open Space 7,546 SF
Additional ADU Parking Stalls: 2 (Per MICC 19.02.020(G))

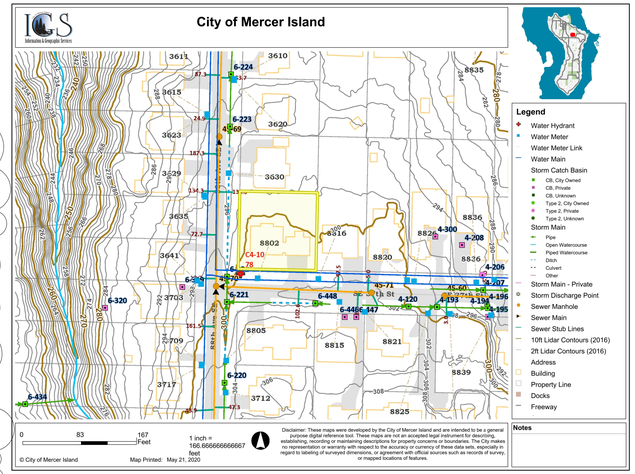
HEIGHT CALCULATIONS

A = 300'
B = 300'
C = 300'
D = 301'
Benchmark Bottom of Power Pole = 302'
Total= 1,201' / 4 = 300.25' Avg. Height
Proposed Height = 300.25' + 25.2" = 325.45 < Allowed Height = 300.25' + 30' = 330" OK
Note: Existing House Height:

VECINITY MAP nts



TOPO & UTILITIES MAP nts



APPLICABLE CODES

CITY OF MERCER ISLAND MUNICIPAL CODE
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL RESIDENTIAL CODE
2015 INTERNATIONAL FIRE CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL FUEL AND GAS CODE
2015 UNIFORM PLUMBING CODE
2012 WASHINGTON CITIES ELECTRICAL CODE
CITY OF MERCER ISLAND ELECTRICAL CODE
STATE ENVIRONMENTAL POLICY ACT (SEPA)
WASHINGTON STATE ENERGY CODE

DESIGN CRITERIA

Wind Speed:	110 mph (IBC Figure 1609A)
Wind Exposure:	Category C
Kzt Factor:	1.6 Per City of Mercer Island Wind Map
Ground Snow Load:	25 psf (Snow drift per ASCE 7-10)
Rain-on-Snow Surcharge:	5 psf added to flat roofs per (ASCE 7-10)
Seismic Design Category:	D2
Rainfall:	1"/Hr (UPC Table D101.1)
Soil Bearing Capacity:	1500 psf (IBC Table 1806.2)

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018) with WA State Amendments

PROJECT NARATIVE

Proposed is a 2 story Addition above and to the rear of the existing 750 SF garage.
One bedroom and One bath on lower level and Master Bed and Bath on upper level - ADU totaling 899 SF.
Principal dwelling unit will be owner occupied.
New construction details will follow the existing design of the house including windows, siding and roof pitch.
2 Additional on site parking will be designated for the ADU
No trees will be removed or distrubed

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A5	ELEVATIONS	S3	WSW DETAILS
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A8	SECTION & DETAILS		Page 1 - 22
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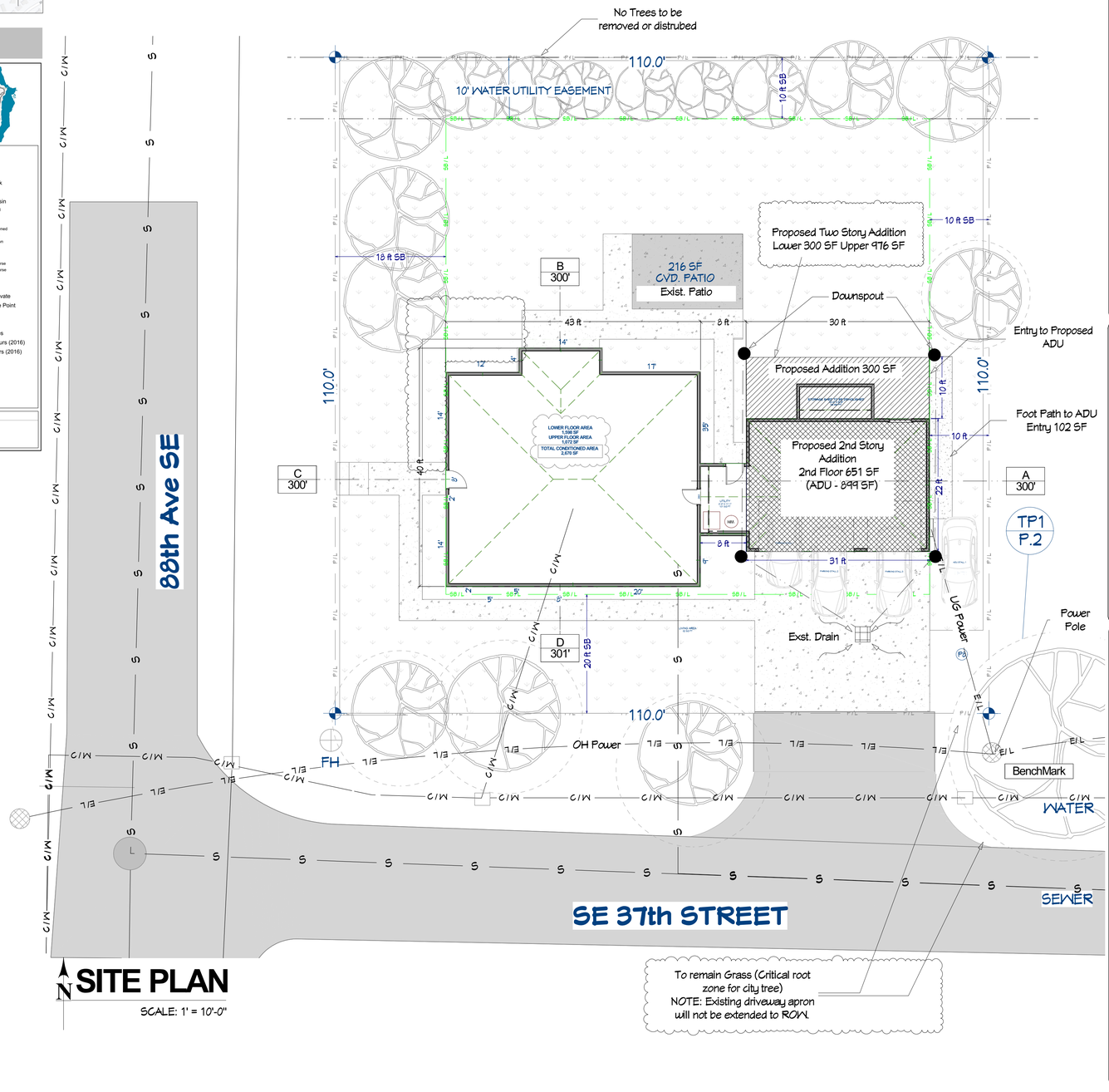
A12			
A13	WINDOW SCHEDULE & ENERGY CALCS.		
D1	DETAILS & NOTES		
D2	DETAILS & NOTES		



SITE PLAN

SCALE: 1" = 10'-0"

SHEET NUMBER **P1** Revision #:

DATE: 11.15.22
DRAWN BY: K.C.

SITE PLAN
SCALE: 1" = 10'-0"

TOM & KIM TSO
ADDITION & ADU
8802 SE 37th ST. MERCER ISLAND WA 98040

Kesh Design Lines
425 361 7325

APPLIANCE PACKAGE & ENERGY CREDITS:

HEAT PUMP SPECS:	CREDITS CLAIMED
Make: MRCOOL Model: DIY-18-HPWMAH-230C25 Energy Star Rated: HSPF 9	1.00
APPLIANCE SPECS.	0.50
Vent-less Dryer: Samsung DVE456100P Clothes Washer: Samsung WF45R6100AP Stove: Frigidaire FFEH3054U S/W/B Refrigerator: Frigidaire FFHB2750T D/S/P/E Dish Washer: Frigidaire FFID2426T D/S	
Note: All Electric & Energy Star Rated	
WATER HEATER SPECS.	0.50
Make: Rheem Model: RTEX-24 Type: Electric Tank less	
EFFICENT BUILDING ENVALOPE:	1.00
TOTAL:	3.00 (Required 3.00)

Specification Sheets for all provided

CHAPTER 1: ADMINISTRATION

R101
TITLE, SCOPE AND PURPOSE

1. THIS COVERSHEET HAS BEEN PREPARED IN A GENERIC OUTLINE FORM FOLLOWING THE STANDARDS SET BY THE INTERNATIONAL RESIDENTIAL CODE (IRC). NOT ALL ITEMS ARE NECESSARILY REQUIRED TO COMPLETE THIS SPECIFIC PROJECT, COORDINATE PLANS WITH IRC.
2. THIS SET OF WORKING DRAWINGS IS CONSIDERED A "BUILDER SET" AND DOES NOT INCLUDE SPECIFICATIONS OR BUILDING MATERIALS LIST. THEREFORE IT IS THE CONTRACTOR/OWNER RESPONSIBILITY TO PROVIDE AND COORDINATE SPECIFICATIONS, INCLUDING PRODUCT SELECTION AND INSTALLATION OR ASSEMBLY. ITEMS CALLED OUT ARE DONE SO FOR CONVENIENCE ONLY.
3. DO NOT SCALE THESE DRAWINGS FOR CRITICAL DIMENSIONS. VERIFY ALL DIMENSIONS AND DATUM'S BEFORE COMMENCING WORK AND BE RESPONSIBLE FOR THEIR ACCURACY AND REPORT DISCREPANCIES / OMISSIONS TO THE ARCHITECT IMMEDIATELY.

CHAPTER 3: BUILDING PLANNING

DESIGN CRITERIA

[B] R301.2 CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA. BUILDINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THE IRC. ADDITIONAL CRITERIA SHALL BE ESTABLISHED BY THE LOCAL JURISDICTION AND SET FORTH IN TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA.

GROUND SNOW LOAD:	25
WIND SPEED:	PER STRUCT
SEISMIC DESIGN CATEGORY:	
SUBJECT TO DAMAGE FROM:	
WEATHERING:	MODERATE
FROST LINE DEPTH:	18"
TERMITE:	MODERATE
WINTER DESIGN TEMP:	26
ICE SHIELD UNDERLAYMENT REQUIRED:	NO
FLOOD HAZARDS:	
AIR FREEZING INDEX:	175
MEAN ANNUAL TEMP:	50.5

301.4 DEAD LOAD.
THE ACTUAL WEIGHTS OF MATERIALS AND CONSTRUCTION SHALL BE USED FOR DETERMINING DEAD LOAD. DEAD LOADS USED FOR THIS PROJECT ARE AS FOLLOWS:

	15 PSF
	12 PSF
	10 PSF

301.5 LIVE LOAD.
THE MINIMUM UNIFORMLY DISTRIBUTED LIVE LOAD SHALL BE AS PROVIDED IN

TABLE R301.5.
TABLE R301.5 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS

ATTICS WITH STORAGE:	20 PSF
WITHOUT STORAGE:	10 PSF
	40 PSF
EXTERIOR BALCONIES:	60 PSF
FIRE ESCAPES:	40 PSF
GUARDRAILS AND HANDRAILS:	200 PLF
GUARDRAIL IN-FILL COMPONENTS:	200 PLF
PASSENGER VEHICLE GARAGES:	200 PSF
ROOMS OTHER THAN SLEEPING ROOMS:	40 PSF
SLEEPING ROOMS:	30 PSF
	40 PSF

301.6 ROOF LOAD.
ROOF SHALL BE DESIGNED FOR THE LIVE LOAD INDICATED IN TABLE R301.6 THE SNOW LOAD INDICATED IN TABLE R301.2(1), WHICHEVER IS GREATER.

TABLE R301.6
MINIMUM ROOF LIVE LOADS IN POUNDS-FORCE PER SQUARE

ROOF SLOPE:	TRIBUTARY LOADED AREA IN SQUARE FEET FOR ANY STRUCTURAL MEMBER		
	0 to 200	2001 to 600	Over 600
FLAT OR RISE LESS THAN 4" PER FOOT (1:3).	20	16	12
RISE LESS 4" PER FLOOR (1:3) to 12" PER FOOT (1:1).	16	14	12
RISE 12" PER FOOT (1:1) AND GREATER.	12	12	12

301.8 NOMINAL SIZES.
...WHERE DIMENSIONS OF LUMBER ARE SPECIFIED, THEY SHALL BE DEEMED TO BE NOMINAL DIMENSIONS UNLESS SPECIFICALLY DESIGNATED AS ACTUAL DIMENSIONS.

R317
317.1 LOCATION REQUIRED.'
IN AREAS SUBJECT TO DECAY DAMAGE AS ESTABLISHED BY TABLE R301.2(1) LOCATIONS ——— REQUIRED BY SECTION R317.1, SHALL BE PRESERVATIVE-TREATED IN ACCORDANCE WITH AWPA U1 FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF AWPA U1
317.1.1 FIELD TREATMENT
FIELD-CUT ENDS, NOTCHES AND DRILLED HOLES OF PRESERVATIVE-TREATED WOOD SHALL BE TREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4.

6.1 GENERAL

- ALL CUTS, HOLES AND INJURIES SUCH AS ABRASIONS OR HOLES FROM REMOVAL OF NAILS AND SPIKES WHICH MAY PENETRATE THE TREATED ZONE SHALL BE FIELD TREATED. AN AWPA ACCEPTED PRESERVATIVE SYSTEM, DETERMINED APPROPRIATE IN ACCORDANCE WITH AWPA M4 SECTION 7, SHALL BE USED FOR FIELD TREATMENT.
- APPLY PRESERVATIVES IN ACCORDANCE WITH THE PRODUCT LABEL.
- COAT ANY SURFACE THAT IS EXPOSED BY DAMAGE OR FIELD FABRICATION WHILE NOT USING EXCESS PRESERVATIVE.
- ANY EXCESS PRESERVATIVE NOT ABSORBED BY THE WOOD PRODUCT SHALL BE CLEANED FROM THE SURFACE PRIOR TO THE USE OF THE PRODUCT.
- BORED HOLES FOR CONNECTORS OR BOLTS MAY BE TREATED BY PUMPING COAL- TAR ROOFING CEMENT MEETING ASTM D5643 INTO HOLES USING A GREASE GUN OR SIMILAR DEVICE.
- CAREFUL ATTENTION SHOULD BE GIVEN TO MATERIALS PLACED INTO WET ENVIRONMENTS.
- AREA TO BE TREATED SHALL BE CLEAN, DRY AND FREE OF EXCESS PRESERVATIVE.

7.1 PRESERVATIVES

- THE PRESERVATIVE SYSTEM FOR FIELD TREATMENT SHALL BE DETERMINED BY THE TYPE OF PRESERVATIVE ORIGINALLY USED TO PROTECT THE PRODUCT.
- THE PRESERVATIVES DESIGNATED IN AWPA M4 SECTIONS 7.1.1, AND 7.1.2 ARE SUITABLE ALTERNATIVES WHEN NO MATCH CAN BE FOUND.

317.1.2 GROUND CONTACT.
ALL WOOD IN CONTACT WITH THE GROUND SHALL BE APPROVED
PRESSURE-PRESERVATIVE-TREATED WOOD SUITABLE FOR GROUND CONTACT USE

317.3 FASTENERS.
FASTENERS FOR PRESSURE PRESERVATIVE AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.
EXCEPTION:
1. ONE-HALF-INCH DIAMETER OR GREATER STEEL BOLTS.
2. FASTENERS OTHER THAN NAILS AND TIMBER RIVETS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 695, CLASS 55 MINIMUM

CHAPTER 4: FOUNDATIONS

R401
GENERAL

401.1 APPLICATION.
THE PROVISIONS SET FORTH IN CHAPTER 4 OF THE IRC SHALL CONTROL THE DESIGN AND CONSTRUCTION OF THE FOUNDATION AND FOUNDATION SPACES FOR ALL BUILDINGS. IN ADDITION TO THE PROVISIONS OF THIS CHAPTER, THE DESIGN AND CONSTRUCTION OF FOUNDATIONS IN AREAS PRONE TO FLOODING AS ESTABLISHED BY TABLE R301.2(1) SHALL MEET THE PROVISIONS OF SECTION R322.

401.4 SOIL TESTS.
IN AREAS LIKELY TO HAVE EXPANSIVE, COMPRESSIBLE, SHIFTING OR OTHER UNKNOWN SOIL CHARACTERISTICS, THE BUILDING OFFICIAL SHALL DETERMINE WHETHER TO REQUIRE A SOIL TEST TO DETERMINE THE SOIL'S CHARACTERISTICS AT A PARTICULAR LOCATION,
401.4.1 GEOTECHNICAL EVALUATION.
IN LIEU OF A COMPLETE GEOTECHNICAL EVALUATION, THE LOAD-BEARING VALUES IN TABLE R401.4.1 SHALL BE USED. TABLE R401.4.1 PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATIONS MATERIALS

CLASS OF MATERIAL	LOAD BEARING PRESSURE (PSF)
CRYSTALLINE BEDROCK	12,000
SEDIMENTARY AND FOLIATED ROCK	4,000
SANDY GRAVEL AND/OR GRAVEL (GW AND GP)	3,000
SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL AND CLAYEY GRAVEL (SW,SP,SM,SC,GM & GC)	2,000***
CLAY, SANDY CLAY, SILTY CLAY,CLAYEY SILT, SILT AND SANDY SILT (CI,ML,MH & CH)	1,500

***U.N.O. 2,000 PSF SOIL BEARING IS ASSUMED FOR THIS PROJECT. VERIFY WITH STRUCTURAL NOTES

R402
MATERIALS

402.2 CONCRETE.
CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AS SHOWN IN TABLE R402.2 . CONCRETE SUBJECT TO WEATHERING AS INDICATED IN TABLE R301.2(1) SHALL BE AIR ENTRAINED AS SPECIFIED IN TABLE R402.2

TABLE R402.2
MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE

TYPE OF LOCATIONS OF CONC. CONSTRUCTION	TRIBUTARY LOADED AREA IN SQUARE FEET FOR ANY STRUCTURAL MEMBER		
	NEGLIGIBLE	MODERATE	SEVERE
BASEMENT WALLS, FNDN'S EXPOSED TO WEATHER.	2,500 psi	2,500 psi	2,500 psi
BASEMENT SLABS & INTERIOR SLABS ON GRADE, EXCEPT GAR. FLOOR SLABS.	2,500 psi	2,500 psi	2,500 psi
BASEMENT WALLS, FNDN WALLS, EXTERIOR WALLS EXPOSED TO WEATHER.	2,500 psi	3,000 psi	3,000 psi
PORCHES, CARPORT SLABS & STEPS EXPOSED TO WEATHER & GARAGE FLOOR SLABS.	2,500 psi	3,000 psi	3,500 psi

R403
FOOTINGS

403.1 GENERAL.
ALL EXTERIOR WALLS SHALL BE SUPPORTED ON CONTINUOUS SOLID OR FULLY GROUTED MASONRY OR CONCRETE FOOTINGS, WOOD FOUNDATIONS, OR OTHER APPROVED STRUCTURAL SYSTEMS, WHICH SHALL BE OF SUFFICIENT DESIGN TO ACCOMMODATE ALL LOADS ACCORDING TO SECTION R301 AND BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R403, OF THE IRC. FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL.

403.1.4.1 FROST PROTECTION.
FOUNDATION WALLS, PIERS AND OTHER PERMANENT SUPPORTS OF BUILDINGS AND STRUCTURES SHALL BE PROTECTED FROM FROST BY EXTENDING FOOTINGS BELOW THE FROST LINE AS SPECIFIED IN TABLE R301.2(1)....
EXCEPTION: DECKS NOT SUPPORTED BY A DWELLING NEED NOT BE PROVIDED WITH FOOTINGS THAT EXTEND BELOW THE FROST LINE.

403.1.6 FOUNDATION ANCHORAGE.
WHEN BRACED WALL PANELS ARE SUPPORTED DIRECTLY ON CONTINUOUS FOUNDATIONS, THE WALL WOOD SILL PLATE SHALL BE ANCHORED TO THE FOUNDATION IN ACCORDANCE WITH SECTION 403.1.6, OF THE IRC.

- SILL PLATE SHALL BE ANCHORED TO THE FOUNDATION WITH ANCHOR BOLTS SPACED A MAXIMUM OF 6 FEET ON CENTER. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PLATE SECTION WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES FROM EACH END OF THE PLATE SECTION.
- BOLTS SHALL BE AT LEAST 1/2 INCH IN DIAMETER AND SHALL EXTEND A MINIMUM OF 7 INCHES INTO MASONRY OR CONCRETE.
- SILLS AND SOLE PLATES SHALL BE PROTECTED AGAINST DECAY AND TERMITES WHERE REQUIRED BY SECTIONS R318 AND R319, OF THE IRC.

EXCEPTION: FOUNDATION ANCHOR STRAPS, SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2-INCH-DIAMETER ANCHOR BOLTS.

403.1.6.1 FOUNDATION ANCHORAGE IN SEISMIC DESIGN CATEGORIES D0, D1, D2, AND E.

IN ADDITION TO THE REQUIREMENTS OF SECTION R403.1.6 , THE FOLLOWING REQUIREMENTS SHALL APPLY TO WOOD LIGHT-FRAME STRUCTURES IN SEISMIC DESIGN CATEGORIES D1 AND D2.

- 1/4" X 3" X 3" PLATE WASHERS CONFORMING TO SECTION R602.11.1 SHALL BE USED ON EACH BOLT.
- INTERIOR BRACED WALL PLATES SHALL HAVE ANCHOR BOLTS SPACED AT NOT MORE THAN 6 FEET ON CENTER AND LOCATED WITHIN 12 INCHES FROM THE ENDS OF EACH PLATE SECTION WHEN SUPPORTED ON A CONTINUOUS FOUNDATION.
- INTERIOR BEARING WALL SOLE PLATES SHALL HAVE ANCHOR BOLTS SPACED AT NOT MORE THAN 6 FEET ON CENTER AND LOCATED WITHIN 12 INCHES FROM THE ENDS OF EACH PLATE SECTION WHEN SUPPORTED ON A CONTINUOUS FOUNDATION.
- THE MAXIMUM ANCHOR BOLT SPACING SHALL BE 4 FEET FOR BUILDINGS OVER TWO STORIES IN HEIGHT.
- STEPPED CRIPPLE WALLS SHALL CONFORM TO SECTION R602.11.3.

R404
FOUNDATION WALLS

404.1 CONCRETE AND MASONRY FOUNDATION WALLS.
CONCRETE AND MASONRY FOUNDATION WALLS SHALL BE SELECTED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404.1.3 OF THE IRC OR IN ACCORDANCE WITH ACI 318, NCMA TR68-A OR ACI 530/ASCE 5/TMS 402 OR OTHER APPROVED STRUCTURAL STANDARDS.

404.3 WOOD SILL PLATES.
WOOD SILL PLATES SHALL BE A MINIMUM OF 2-INCH BY 4-INCH NOMINAL LUMBER. SILL PLATE ANCHORAGE SHALL BE IN ACCORDANCE WITH SECTIONS R403.1.6 AND R602.11.

CHAPTER 5: FLOORS

R501
GENERAL

501.1 APPLICATION.
FLOOR CONSTRUCTION SHALL BE IN ACCORDANCE TO THE PROVISIONS SET FORTH IN CHAPTER 5 OF THE IRC.

501.2 REQUIREMENTS.
FOR FLOOR CONSTRUCTION LOADING, SEE SECTION R301.

CHAPTER 6: WALL CONSTRUCTION

R601
GENERAL

R601.1 APPLICATION.
WALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE PROVISIONS SET FORTH IN CHAPTER 6 OF THE IRC.

R601.2 REQUIREMENTS.
FOR WALL CONSTRUCTION LOADING, SEE SECTION R301.

R602.3. DESIGN & CONSTRUCTION
SEE TABLE R602.3(1) ON THIS SHEET FOR FASTENER / NAILING SCHEDULE

R613
EXTERIOR WINDOWS AND GLASS DOORS

613.1 GENERAL.
THE PROVISIONS SET FORTH IN SECTION 613 OF THE IRC, SHALL CONTROL THE PERFORMANCE AND CONSTRUCTION REQUIREMENTS FOR EXTERIOR WINDOW SYSTEMS INSTALLED IN WALL SYSTEMS. WATERPROOFING, SEALING AND FLASHING SYSTEMS ARE NOT INCLUDED IN THE SCOPE OF THIS SECTION.

613.2 PERFORMANCE.
EXTERIOR WINDOWS AND DOORS SHALL BE DESIGNED TO RESIST THE DESIGN WIND LOADS SPECIFIED IN TABLE R301.2(2) ADJUSTED FOR HEIGHT AND EXPOSURE PER TABLE R301.2(3).

CHAPTER 7: WALL COVERING

R701
GENERAL

701.1 APPLICATION.
THE PROVISIONS SET FORTH IN CHAPTER 7 OF THE IRC, SHALL CONTROL THE DESIGN AND CONSTRUCTION OF THE INTERIOR AND EXTERIOR WALL COVERING FOR ALL BUILDINGS.

701.2 INSTALLATION.
PRODUCTS SENSITIVE TO ADVERSE WEATHER SHALL NOT BE INSTALLED UNTIL ADEQUATE WEATHER PROTECTION FOR THE INSTALLATION IS PROVIDED. EXTERIOR SHEATHING SHALL BE DRY BEFORE APPLYING EXTERIOR COVER.

CHAPTER 8: ROOF-CEILING CONSTRUCTION

R801
GENERAL

801.1 APPLICATION.
THE PROVISIONS SET FORTH IN CHAPTER 8 OF THE IRC, SHALL CONTROL THE DESIGN AND CONSTRUCTION OF THE ROOF-CEILING SYSTEM FOR ALL BUILDINGS.

801.2 REQUIREMENTS.
ROOF AND CEILING CONSTRUCTION SHALL BE CAPABLE OF ACCOMMODATING ALL LOADS IMPOSED ACCORDING TO SECTION R301 AND OF TRANSMITTING THE RESULTING LOADS TO THE SUPPORTING STRUCTURAL ELEMENTS.

801.3 ROOF DRAINAGE.
IN AREAS WHERE EXPANSIVE OR COLLAPSIBLE SOILS ARE KNOWN TO EXIST, ALL DWELLINGS SHALL HAVE A CONTROLLED METHOD OF WATER DISPOSAL FROM ROOFS THAT WILL COLLECT AND DISCHARGE ALL ROOF DRAINAGE TO THE GROUND SURFACE AT LEAST 5 FEET FROM FOUNDATION WALLS OR TO AN APPROVED DRAINAGE SYSTEM.

CHAPTER 9: ROOF ASSEMBLIES

R901
GENERAL

901.1 SCOPE.
THE PROVISIONS SET FORTH IN CHAPTER 9 OF THE IRC, SHALL GOVERN THE DESIGN, MATERIALS, CONSTRUCTION AND QUALITY OF ROOF ASSEMBLIES.

2015 UNIFORM PLUMBING CODE

313
PROTECTION OF PIPING, MATERIALS, AND STRUCTURES

SECTION 313.12 RATPROOFING
a. STRAINER PLATES ON DRAIN INLETS SHALL HAVE ½-INCH OPENINGS MAX.
b. METER BOXES SHALL BE CONSTRUCTED IN SUCH A MANNER THAT RATS CANNOT ENTER A BLDG BY FOLLOWING THE SERVICE PIPES FROM THE BOX INTO THE BLDG.
c. WHERE OPENINGS HAVE BEEN MADE IN WALLS, FLOORS, OR CLOS FOR THE PASSAGE OF PIPES, SUCH OPENINGS SHALL BE CLOSED AND PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS SECURELY FASTENED TO THE ADJOINING STRUCTURE.
d. TUB WASTE OPENINGS IN FRAMED CONSTRUCTION TO CRAWL SPACES AT OR BELOW THE FIRST FLOOR SHALL BE PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS OR METAL SCREEN, WITH ½-INCH OPENINGS MAX, AND SECURELY FASTENED TO THE ADJOINING STRUCTURE.

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments

GENERAL CONSTRUCTION SPECS. AND CODE COMPLIANCE (2018 IRC, UPC & **2018** W.S.E.C.)

SHEET NUMBER **A2** Revision #:

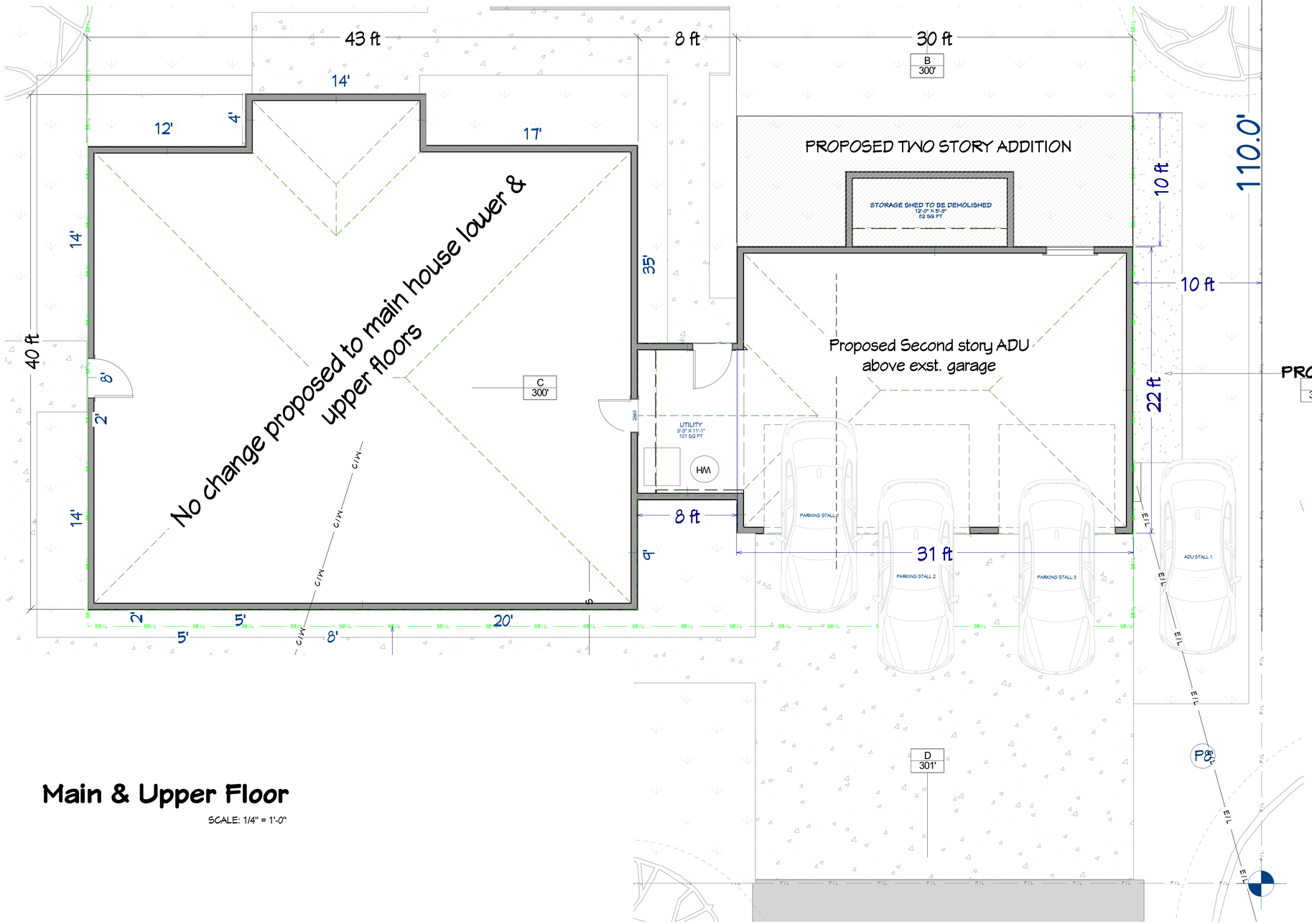
DATE: 06.12.20
REV #: 08.11.22
DRAWN BY: K.C.

GENERAL NOTES

TOM & KIM TSO
ADDITION & ADU
8002 SE 57th ST. MERCER ISLAND WA 98040

KESH DESIGN LINES LLC
425 344 9906

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments



Main & Upper Floor

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

N

AS BUILT

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

SHEET NUMBER A3 Revision #:

DATE: 06.12.20
REV #4: 08.11.22
DRAWN BY: K.C.

AS BUILT

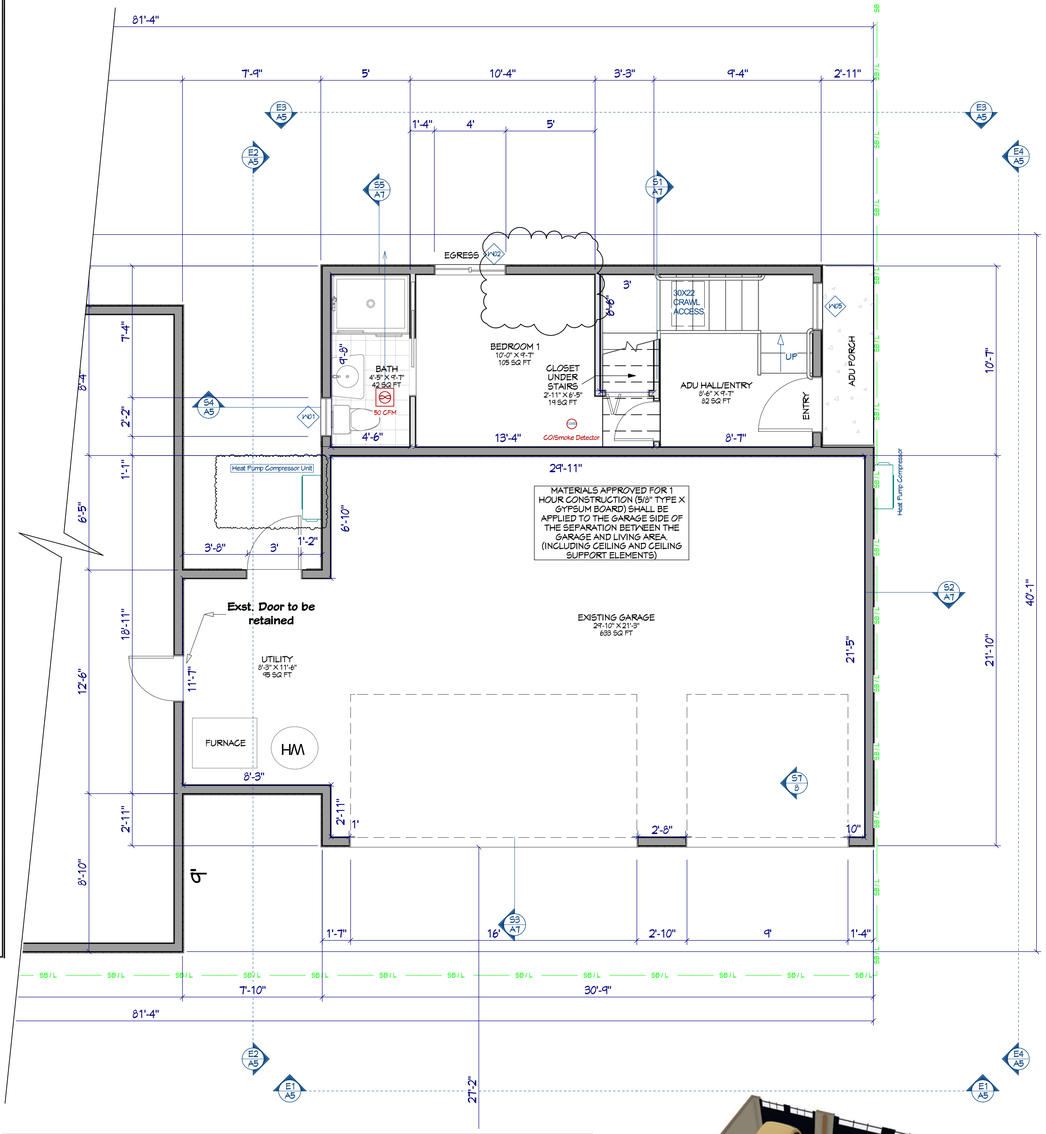
TOM & KIM TSO
ADDITION & ADU
8802 SE 37th ST. MERCER ISLAND WA 98040

KESH DESIGN LINES LLC
425 344 9906

NOTES

1. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
2. SEE STRUCTURAL PLANS FOR ALL HEADERS AND BEAM SIZES
3. BOTTOM OF HEADERS TO BE 8'-0" THIS FLOOR UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR WALLS 2x6 W/ R-21 INSULATION U.N.O.
5. ALL FRAME NAILING TO SATISFY CHAPTER 6 IRC. BLOCK ALL PLYWOOD EDGES. ALL EXTERIOR SHEATING NAILED W/ 10d @ 6" O.C. (EDGE) AND 12" O.C. (FIELD), U.N.O. TYP.
6. PROVIDE DOUBLE JOISTS OR BLOCKING WHERE PARTITIONS OCCUR ABOVE.
7. PROVIDE SOLID BLOCKING OVER SUPPORTS.
8. PLATE HEIGHT 9'-0" THIS FLOOR U.N.O.
9. FIRE BLOCKING TO ALL PLUMBING PENETRATIONS
10. ALL STORAGE AND SPACES UNDER STAIRCASES TO BE FINISHED WITH 5/8" TYPE "X" GYPSUM BOARD.
11. FINISH ALL CEILINGS WITH 1/2" GYPSUM BOARD
12. AT GARAGE USE 1/2" TYPE "X" GYP. BD. AT ALL COMMON WALLS & 5/8" TYPE "X" AT ALL CEILINGS AND ALL EXPOSED BEAMS.
13. PROVIDE 26-GAUGE GALVANIZED SHEET METAL FLASHING ABOVE WINDOWS AND DOORS. (TYP.) / LAP BUILDING PAPER OVER.
14. HOLD SIDING 6" ABV. FINISHED GRADE, TYP.
15. FASTEN MULTI-LAM 2X BEAMS PER IRC STANDARDS, CHAPTER 6, TABLE R602.3(1), TYPICAL DIRECTION.
16. ALL VOIDS TO BE FIRE/DRAFT BLOCKED PER IRC SECTION R602.8.
17. INSTALL WATER HEATER PER I.R.C. CHAPTER 28 AND PER 2015 I.M.C. THE PILOTS, BURNERS, HEATING ELEMENTS, AND SWITCHES SHALL BE A MIN OF 18" ABOVE THE GARAGE FLOOR PER 2015 I.M.C.
18. STRAP THE WATER HEATERS AT POINTS WITH IN THE UPPER 1/3 AND LOWER 1/3 OF ITS VERTICAL DIMENSION. LOWER POINT SHALL BE MINIMUM 24" ABOVE CONTROLS.
19. FURNACE TO BE PLACED 18" ABV. FLOOR ON 1 HOUR FURNACE PLATFORM W/ (2) 3/4" LAYERS PLYWOOD. THE PILOTS, BURNERS, HEATING ELEMENTS, AND SWITCHES SHALL ALSO BE A MIN. OF 18" ABOVE THE GARAGE FLOOR. PROTECT FROM IMPACT PER 2015 I.M.C.
20. DOOR BETWEEN HOUSE AND GARAGE TO BE 20 MIN RATED, SOLID CORE, TIGHT FITTING, WITH SELF CLOSURE.
21. ALL SMOKE DETECTORS TO BE 110 VOLT WITH BATTERY BACKUP, INTERCONNECTED. (S) DENOTES: INSTALL CARBON MONOXIDE ALARMS CMA PER IRC R315.1 (WA AMENDED.)
22. 36" I.C.C. APPROVED DIRECT VENT FIREPLACE W/ 20" D. FLUSH HEARTH. MIN. 6 SQ. IN. O.S. COMB. AIR. INSTALL PER VENT MFRS. PER TERMS OF LISTING AND MFGRS SPECS. PER SECTION R1001 I.R.C.
23. PROVIDE CONT. HANDRAIL AT STAIRS A MIN. OF 1 1/2" FROM WALL. REFER TO DETAIL 1/ ON SHEET NO. 9.
24. LIGHTING CONTROLS FOR INTERIOR STAIRWAYS MUST BE PROVIDED AT THE TOP AND BOTTOM OF THE STAIR.
25. WALLS W/ GREATER THAN 350 PLF REQUIRE A MINIMUM OF A 3x MEMBER AT ABUTTING PANEL EDGES AND SILL PLATES. FOR WALLS BETWEEN 350 AND 600 PLF, ANCHOR BOLT SPACING HAS BEEN DECREASED BY 1/2 (USE 2x SILL PLATE.) PER IRC R403.1.6.
26. TUBS AND SHOWERS:
    - FIRE BLOCKING BETWEEN STUDS.
    - LIMIT SHOWER FLOW TO 1.75 GPM.
    - LIMIT LAV SINK FLOW TO 1.0 GPM, OR LESS.
    - WATERPROOF WALL TO WITHIN "O" ABOVE DRAIN INLET.
    - VAPOR BARRIER BEHIND GYPSUM BD.
    - ALL GLAZING WITHIN "O" ABOVE DRAIN INLET TO BE SAFETY GLASS.
27. (E) DENOTES EGRESSABLE WINDOW W/ A MIN. OF 5.7 SQ. FT. NET CLEAR OPENING & 44" MAX. ABV. FIN FLR. MIN. EGRESSABLE WIDTH IS 20", MIN. HEIGHT IS 24".
28. (S) DENOTES SAFETY GLAZING REQUIRED IN THE FOLLOWING AREAS:
    A. GLAZING LESS THAN 60" ABOVE TUB OR SHOWER
    B. ALL TUB & SHOWER DOORS & ENCLOSURES EXCEPT GLASS BLOCK, GREATER THAN 5" SPHERE UNLESS DECORATIVE GLASS.
    D. ALL WINDOWS WITHIN 24" OF A DOOR SWING, LESS THAN 60" ABOVE FLOOR.
    E. FIXED AND SLIDING PANELS OF SLIDING DOORS.
    F. ALL UNFRAMED SWINGING DOORS.
    G. GLAZING LESS THAN 9" HORIZ. OF STAIR OR LANDING LESS THAN 60" ABOVE FIN. FLR.
    H. GLAZING LESS THAN 60" ABOVE STAIRS.
29. ATTIC ACCESS TO BE A MIN. OF 22"x30" W/INSUL. & WEATHER-STRIPPING PER CODE.
30. WHOLE HOUSE FAN WITH AUTO TIMER AND MANUAL OVERRIDE

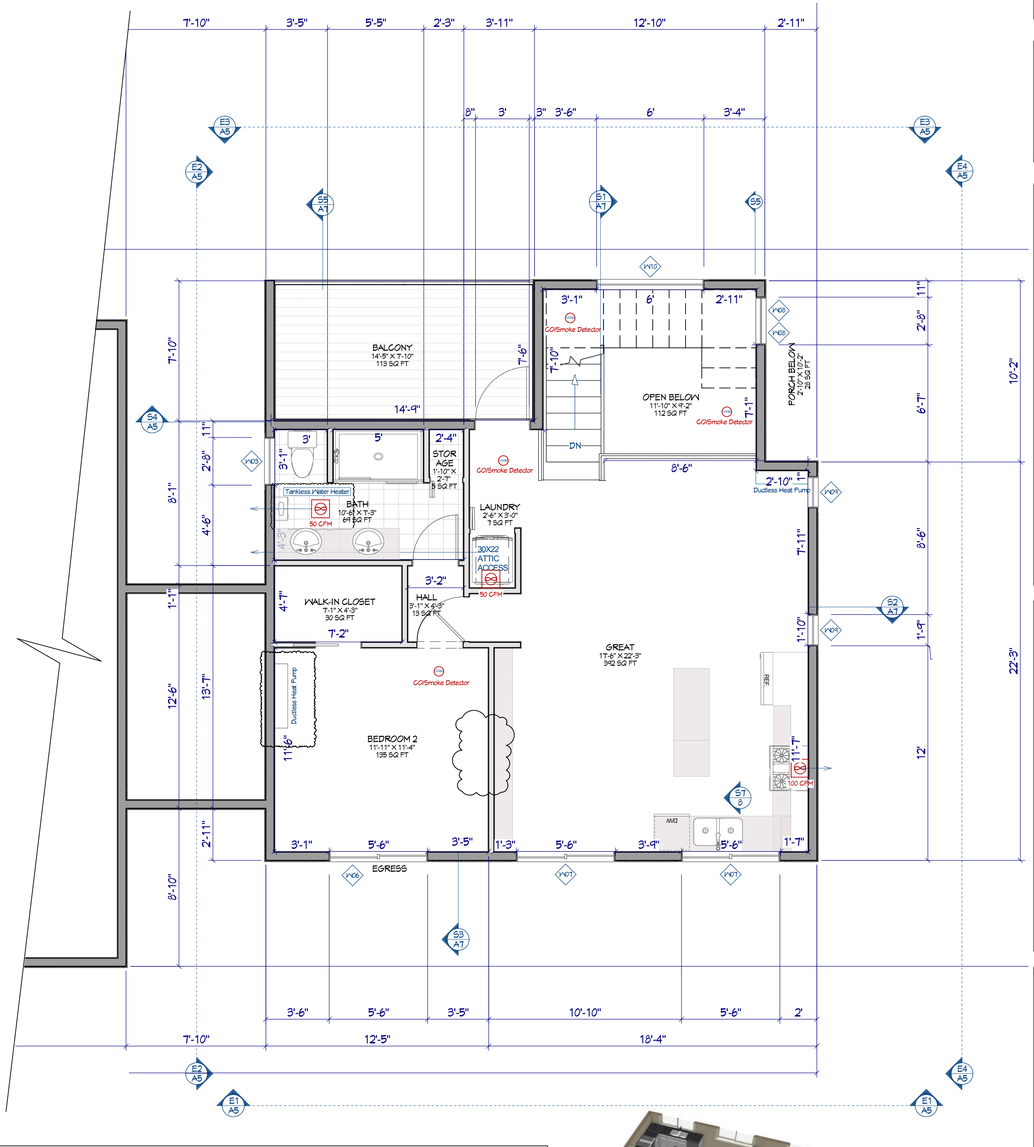
COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments



ROOM AREA GARAGE LEVEL				
ROOM NAME	AREA, INTERIOR (SQ FT)	CEILING HEIGHT	DIMENSIONS	FLOOR
BATH	42	109 1/8"	4'-5" X 9'-7"	1
BEDROOM 1	105	109 1/8", 110 5/8"	10'-0" X 9'-7"	1
CLOSET UNDER STAIRS	19	110 5/8"	2'-11" X 6'-5"	1
ADU HALL/ENTRY	82	109 1/8", 110 5/8"	8'-6" X 9'-7"	1
TOTALS: LOWER	248			

MAIN FLOOR PLAN
SCALE: 1/4" = 1'-0"

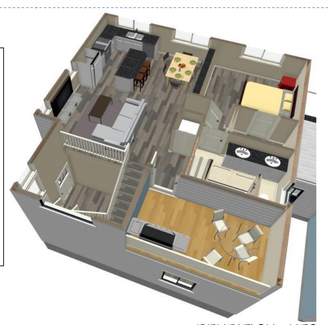
RENDITION - NTS



ROOM AREA UPPER LEVEL				
ROOM NAME	AREA, INTERIOR (SQ FT)	CEILING HEIGHT	DIMENSIONS	FLOOR
GREAT	342	109 1/2"	17'-6" X 22'-3"	2
BEDROOM 2	135	109 1/2"	11'-11" X 11'-4"	2
BATH	69	109 1/2"	10'-6" X 7'-3"	2
WALK-IN CLOSET	30	109 1/2"	7'-1" X 4'-3"	2
LAUNDRY	7	109 1/2"	2'-6" X 3'-0"	2
STORAGE	5	109 1/2"	1'-10" X 2'-7"	2
HALL	13	109 1/2"	3'-1" X 4'-3"	2
BALCONY	113	109 1/2"	14'-5" X 7'-10"	2
TOTALS:	764			

UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"

TOTAL PROPOSED ADU 1,012 SF



RENDITION - NTS

N

PROPOSED MAIN & UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"

SHEET NUMBER A4
Revision #:

DATE: 06.12.20
REV #4: 08.11.22
DRAWN BY: K.C.

PROPOSED
MAIN & UPPER FLOOR

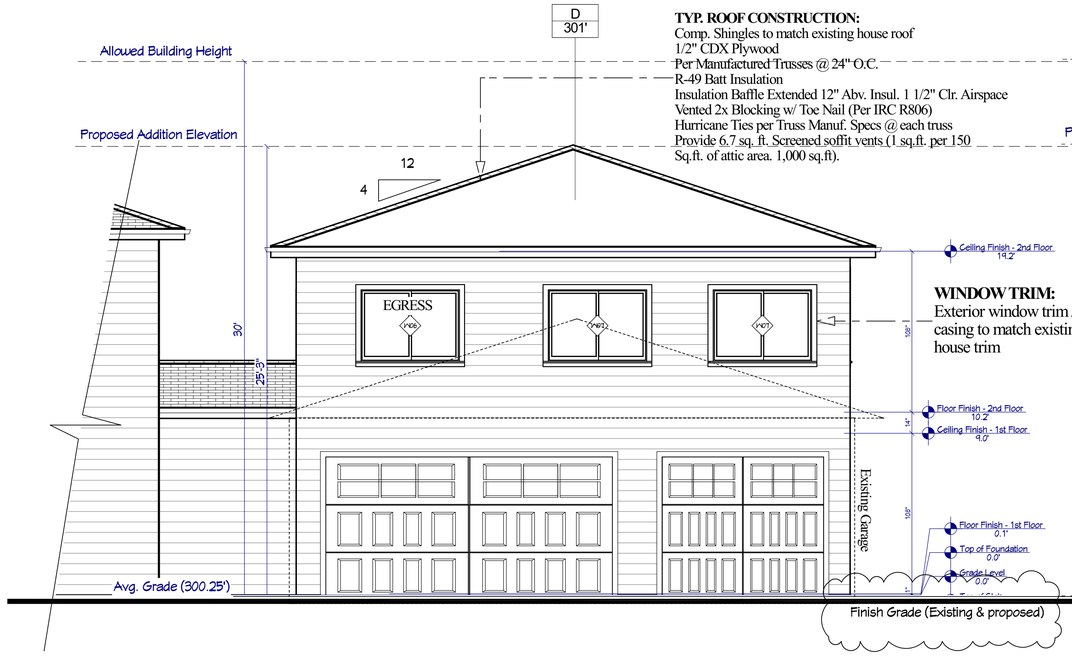
TOM & KIM TSO
ADDITION & ADU
8802 SE 37th ST. MERCER ISLAND WA 98040

KESH DESIGN LINES LLC
425 344 9906

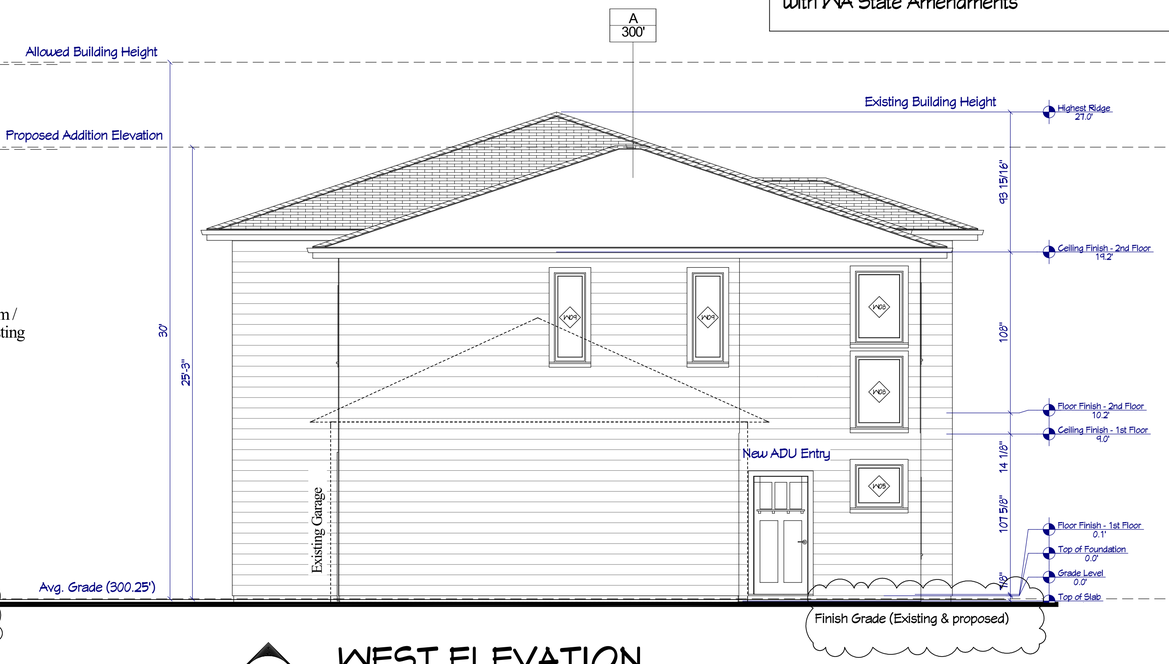
COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments

TYP. ROOF CONSTRUCTION:
Comp. Shingles to match existing house roof
1/2" CDX Plywood
Per Manufactured Trusses @ 24" O.C.
R-49 Batt Insulation
Insulation Baffle Extended 12" Abv. Insul. 1 1/2" Clr. Airspace
Vented 2x Blocking w/ Toe Nail (Per IRC R806)
Hurricane Ties per Truss Manuf. Specs @ each truss
Provide 6.7 sq. ft. Screened soffit vents (1 sq.ft. per 150 Sq.ft. of attic area. 1,000 sq.ft).

WINDOW TRIM:
Exterior window trim / casing to match existing house trim

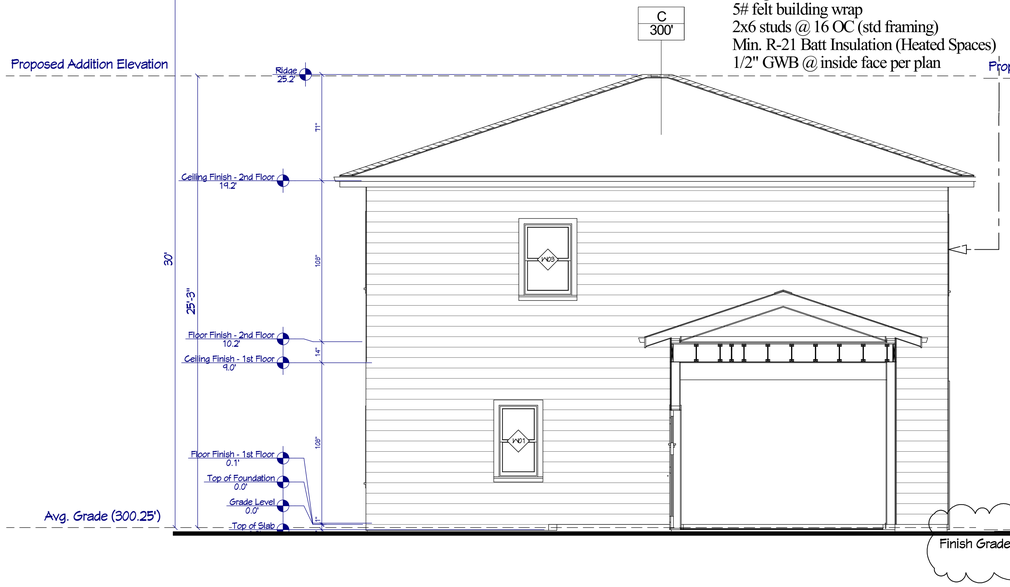


E1 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

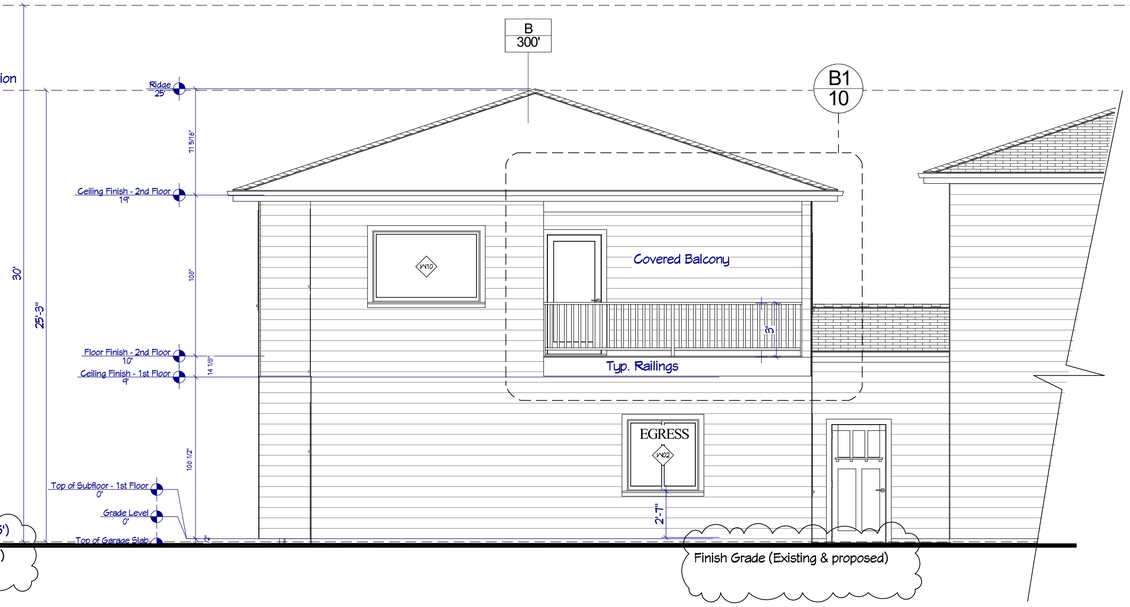


E3 WEST ELEVATION
SCALE: 1/4" = 1'-0"

TYP. EXTERIOR WALL CONSTRUCTION:
Siding to match existing Wood Lap house siding.
5# felt building wrap
2x6 studs @ 16 OC (std framing)
Min. R-21 Batt Insulation (Heated Spaces)
1/2" GWB @ inside face per plan



E2 EAST ELEVATION
SCALE: 1/4" = 1'-0"



E4 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

SHEET NUMBER A5
Revision #:

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REV #: 08.11.22
DRAWN BY: K.C.

ELEVATIONS

TOM & KIM TSO
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KESH DESIGN LINES LLC
425 344 9906

SEE NEW STRUCTURAL (S) SHEETS

SHEET NUMBER A6

Revision #:

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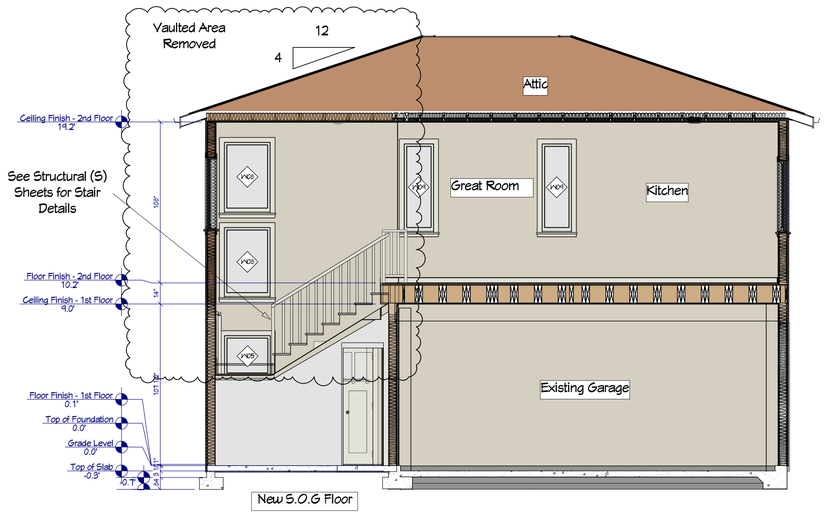
REV #4: 08.11.22
DRAWN BY: K.C.

FOUNDATION and 1st FLOOR FRAMING PLAN

TOM & KIM TSO
ADDITION & ADU
8802 SE 37th ST., MERCER ISLAND WA 98040

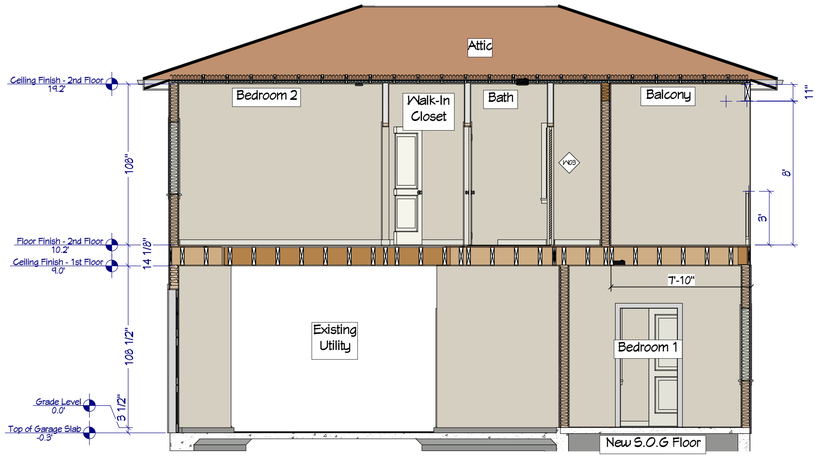
KESH DESIGN LINES LLC
425 344 9906

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments



S1 SECTION

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

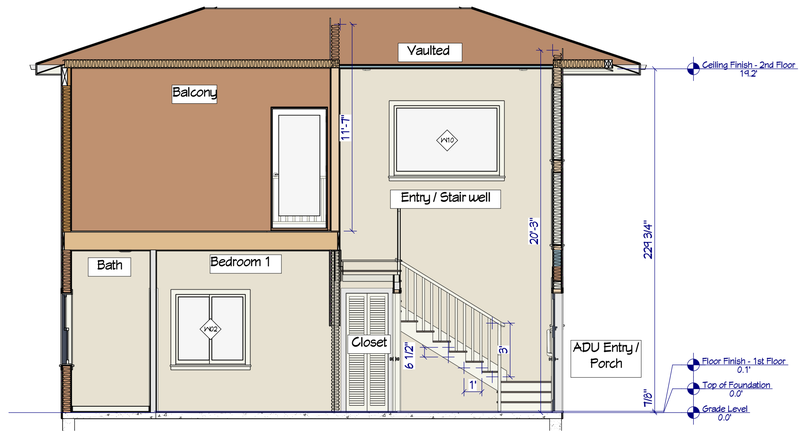


S3 SECTION

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

S2 SECTION

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



S4 SECTION

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

SHEET NUMBER A7 Revision #:

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REV #: 08.11.22
DRAWN BY: K.C.

SECTION

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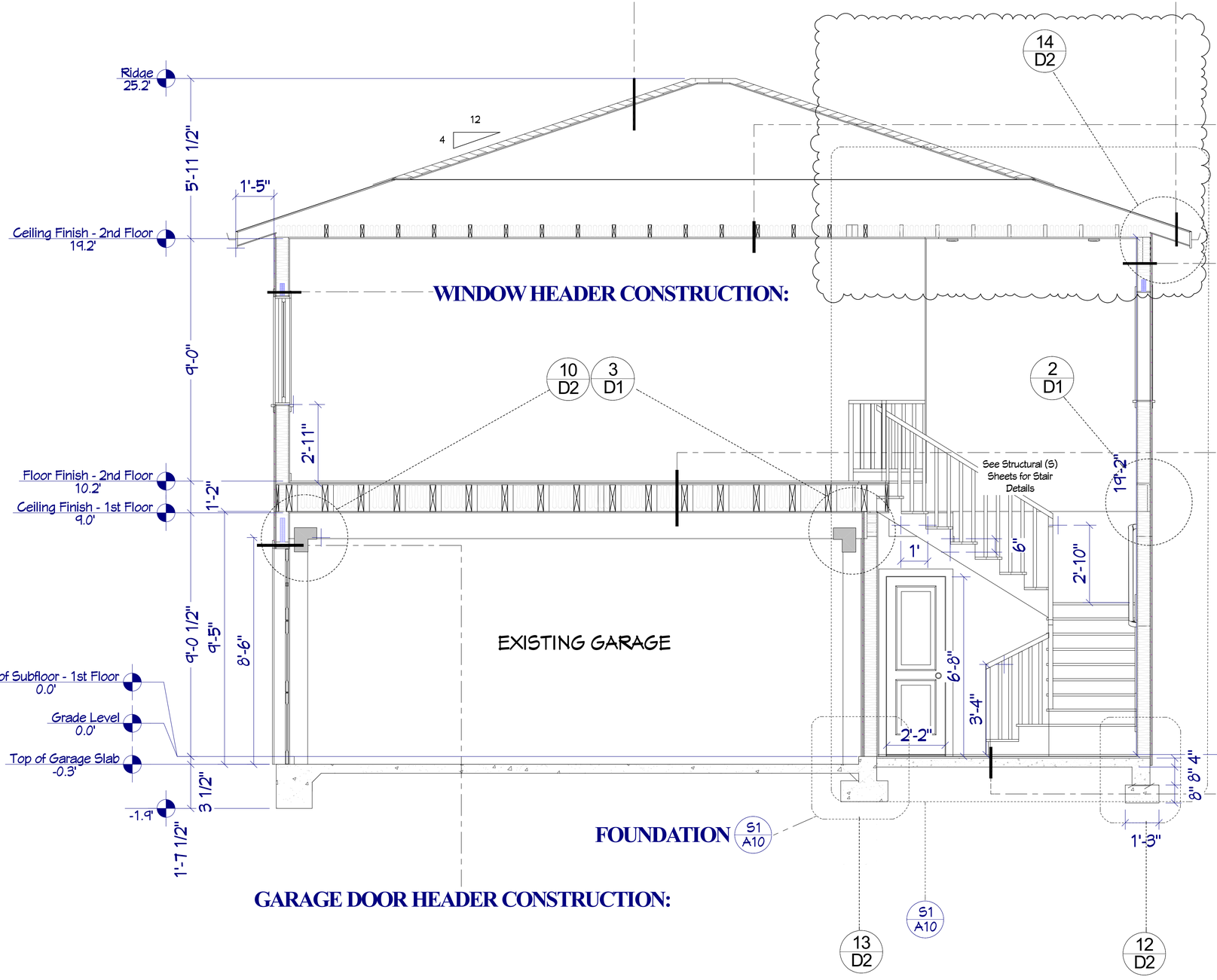
425 344 9906



WINDOW HEADER CONSTRUCTION:

GARAGE DOOR HEADER CONSTRUCTION:

FOUNDATION

TYP. ROOF CONSTRUCTION:
Comp. Shingles to match existing house roof
1/2" CDX Plywood
Per Manufactured Trusses @ 24" O.C.
R-49 Batt Insulation
Insulation Baffle Extended 12" Abv. Insul. 1 1/2" Clr. Airspace
Provide Intake Vents (as detailed or similar)
Vented 2x Blocking w/ Toe Nail (Per IRC R806)
Hurricane Ties per Truss Manuf. Specs @ each truss
Provide Screened soffit vents 1 sq.ft. per 150
Sq.ft. of attic area.(sq.ft).

UPPER FLOOR CEILING ASSEMBLY:
Bottom Truss Ceiling
Min. R-49 Batt Insulation
1/2" GWB

TYP. EXTERIOR WALL CONSTRUCTION:
Siding to match existing Wood Lap house siding.
5# felt building wrap
2x6 studs @ 16 OC (std framing)
Min. R-21 Batt Insulation (Heated Spaces)
1/2" GWB @ inside face per plan

UPPER FLOOR ASSEMBLY:
2x12 Floor Joists @ 24" O.C. per plan
5/8" T&G Plywood subfloor

1HR U311 STC 50 - CEILING ASSEMBLY
U311: Resilient furring channels attached 24" o.c. horizontally to one side of 2x4 wood studs 16" or 24" o.c. with 1-1/4" type W screws. 1/2" x 3" gypsum board filler strips attached to floor and ceiling plates with 1-1/4" type W screws 3'-0" o.c. 5/8" (15.9 mm) Fire-Shield C Gypsum Board applied horizontally to channel with 1" type S screws 12" o.c. on all edges and intermediate channels and atttached to top and bottom plates with 1-7/8" type S screws 12" o.c. Vertical butt joints between studs back-blocked with 20" long piece of resilient channel. 5/8" (15.9 mm) Fire-Shield C Gypsum Board applied horizontally on opposite side directly to wood studs with 1-1/4" type W screws spaced 12" o.c. Horizontall joints in line, vertical joints staggered each side. Mineral wool insulation 3" thick friction fit between studs.

FLOOR OVER CRAW SPACE ASSEMBLY:
Finish floor by owner
S.O.G Concrete floor
Min. R-10 Perimeter Rigid foam Insulation

S3 SECTION
SCALE: 1/2" = 1'-0"

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments

SHEET NUMBER A8 Revision #:

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DRAWN BY: K.C.

SECTION & DETAILS

TOM & KIM TSO
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KESH DESIGN LINES LLC
425 344 9906

SEE NEW STRUCTURAL (S) SHEETS

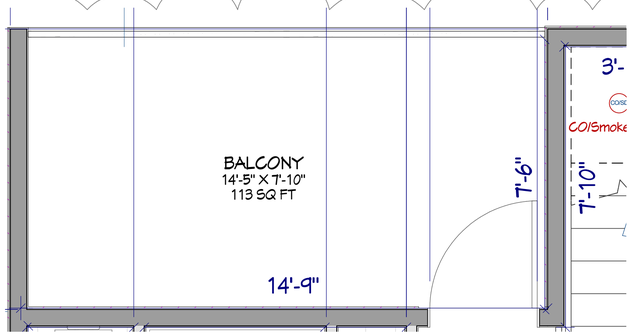
KESH DESIGN LINES LLC
425 344 9906

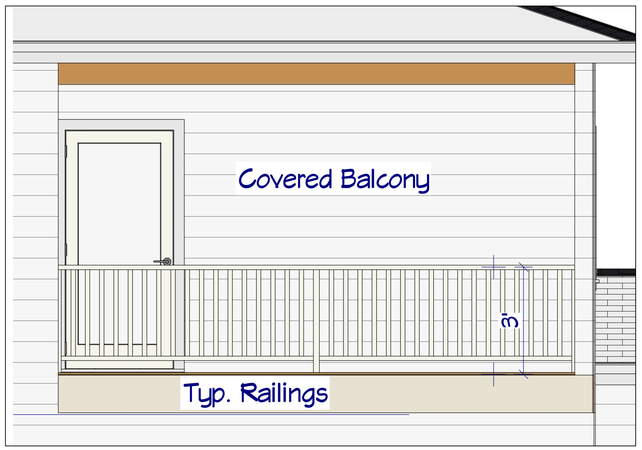
TOM & KIM TSO
ADDITION & ADU
8802 SE 37th ST. MERCER ISLAND WA 98040

FRAMING PLAN & NOTES

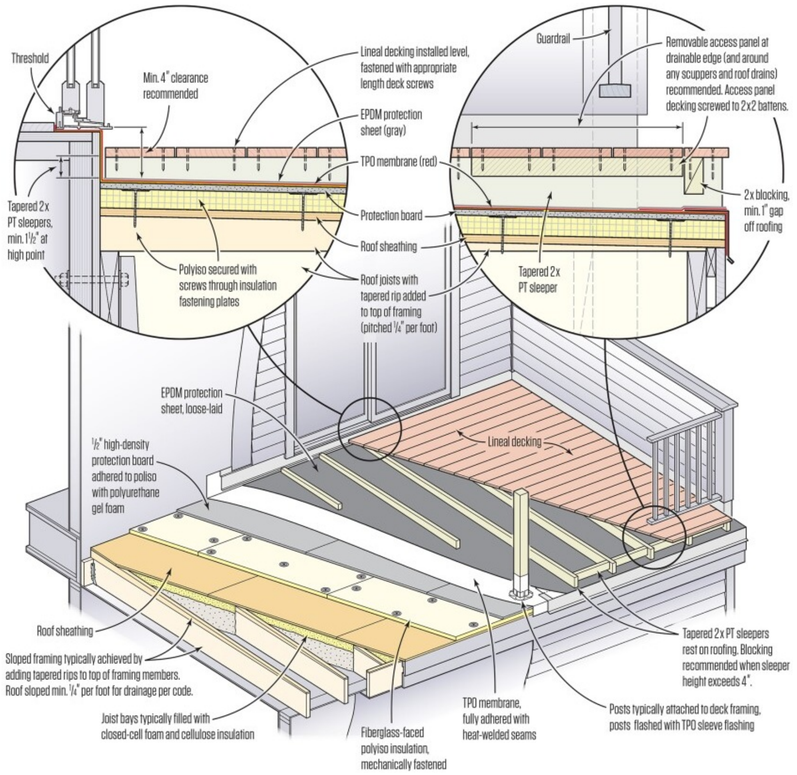
DATE: 06.12.20
REV #4: 08.11.22
DRAWN BY: K.C.

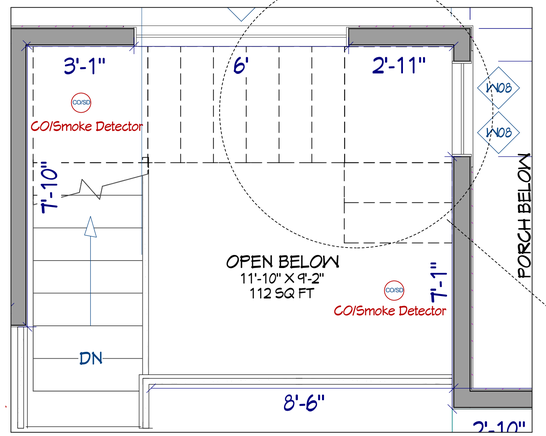
SHEET NUMBER
A9
Revision #:

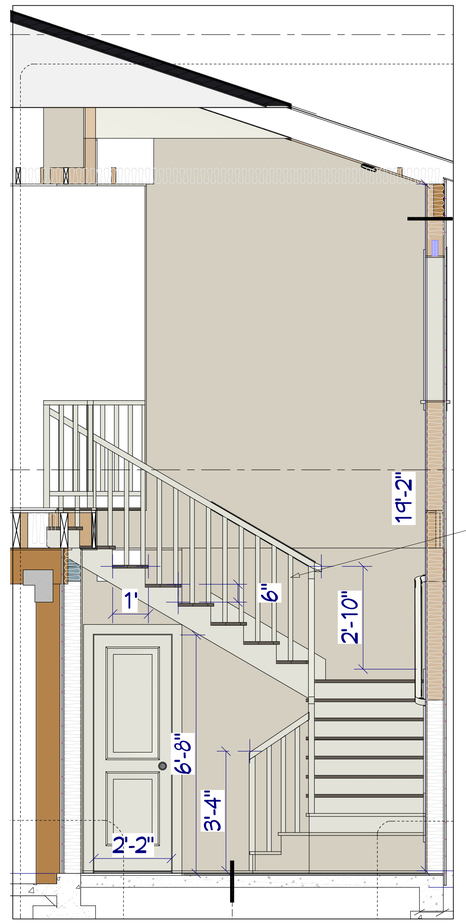




BALCONY FLOOR ASSEMBLY & WATERPROOFING DETAILS



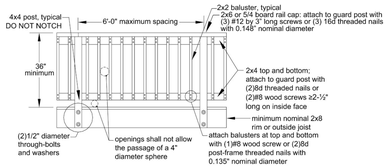




See Structural (S) Sheets for Stair Details

S1 **STAIR DETAILS**

SCALE: = 1'-0"

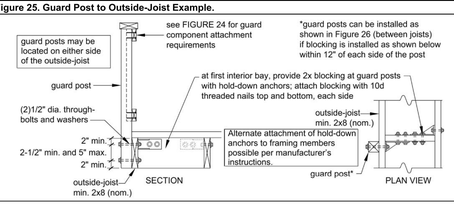


GUARD POST ATTACHMENTS FOR REQUIRED GUARDS

Deck guard posts for required guards shall be a minimum 4x4 (nominal) with an adjusted bending design value not less than 1,100 psi. Joists and rim joists to which guard posts are attached shall be a minimum of 2x8 (nominal).

Guard posts for required guards which run parallel to the deck joists shall be attached to the outside joist per Figure 25. Guard posts for required guards that run perpendicular to the deck joists shall be attached to the rim joist in accordance with Figure 26. Only hold-down anchor models meeting these minimum requirements shall be used. Hold-down anchors shall have a minimum allowable tension load of 1,800 pounds for a 36" maximum guard height and be installed in accordance with the manufacturer's instructions.

Figure 25. Guard Post to Outside-Joist Example.



MISCELLANEOUS NOTES

1. GUARDRAILS TO BE 36" MIN. ABOVE FINISH FLOOR.

2. HANDRAILS TO BE 34" - 38" ABOVE NOSING, WITH HANDGRIP OF 1 1/2" - 2" IN

3. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH.

4. ONE HOUR FIRE SEPARATIONS BETWEEN GARAGE AND DWELLING: INSTALL 1/2" TYPE-X ON ALL WALLS AND CEILINGS, BEARING WALLS. STAGGER JOINTS FROM PLYWOOD BELOW WHERE APPLICABLE.

5. BEDROOM EMERGENCY EGRESS WINDOWS: MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT., WIDTH OF 20" AND MINIMUM 24". MAXIMUM FINISHED SILL HEIGHT OF 44" ABOVE

6. EACH SLEEPING ROOM SHALL BE PROVIDED W/ A SMOKE DETECTOR (INTERCONNECTED) PER SECTION (F) R313.1. SMOKE DETECTORS SHALL BE PROVIDED W/ A BATTERY BACK-UP. PER SEC. (F) R313.1 AND, LOCATED PER SECTION (F) R313.1.

7. ANCHORED VENEER SHALL BE PROVIDED WITH #22 GA. X 3/4" CORROSION RESISTANT ANCHOR TIES. THE ANCHOR TIES SHALL BE SPACED A MAX. OF 24" OC. AND SUPPORT NO MORE THAN 2 SQ. FT. OF VENEER. IN SEISMIC ZONE D 4 4 THE EXTENDED LEG OF THE ANCHOR TIE SHALL LOOP AROUND A #9 GA. CONT. HORZ. JOINT REINFORCEMENT WIRE.

B1 **BALCONY GUARD RAIL DETAILS**

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

SHEET NUMBER **A10**
Revision #:

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STAIR & BALCONY DETAILS

TOM & KIM TSO
ADDITION & ADU
8802 SE 37th ST. MERCER ISLAND WA 98040

KESH DESIGN LINES LLC
425 344 9906

ROOF FRAMING NOTES

1. USE 4x10 OR 6x8 DF #2 FOR BEAMS AND HEADERS U.N.O.
2. ALL RAFTERS TO BE: 2x12 HF #2 AT 24" O.C. TYPICAL U.N.O.
3. ALL TRUSSES TO BE AT 24" O.C. TYPICAL U.N.O.
4. PROVIDE ROOF VENTS PER SEC. R806 IRC.
5. ROOF PITCH TO BE **4 : 12** TPICAL UNLESS OTHERWISE NOTED.
6. 36" O.H. TYPICAL @ EAVES & 6" O.H. TYPICAL @ GABLE ENDS, RAKES.
7. APPROVED ANCHORS SHALL BE USED AT ALL CONNECTIONS OF RAFTERS, JACK OR HIP TRUSSES TO MAIN GIRDER TRUSS (PER TRUSS MANUF.) WHERE APPLICABLE. PROVIDE "SIMPSON" HI FRAMING ANCHORS AT EVERY RAFTER/TRUSS AT EACH END AND AT GABLE END TRUSSES.
8. VENTED BLOCKING OVER SUPPORTS.
9. CHIMNEY HEIGHT TO BE 2'-0" MIN. ABOVE ANY PORTION OF BUILDING WITHIN 10'-0" PER IRC SECTION R1001.6
10. BRACING: (STICK FRAMED AREAS ONLY)
    - (2) 2x4 UP TO 10' LONG.
    - (2) 2x6 10' TO 14' LONG.
    - (3) 2x6 OVER 14' LONG.
11. PLATE HEIGHTS:
    - MAIN FLOOR 9'-0", TYP. U.N.O.
    - UPPER FLOOR 9'-0", TYP. U.N.O
12. TRUSSES:
    - CARRY MFGR. STAMP.
    - DO NOT ALTER WITHOUT BUILDING DEPARTMENT APPROVAL.
    - INSTALL AND BRACE PER MFGR. SPEC.
    - NON-BEARING WALLS SHALL BE HELD DOWN FROM THE TRUSS BOTTOM CHORDS WITH AN APPROVED FASTENER (SUCH AS SIMPSON STC).
13. CONTRACTOR TO VERIFY LOCATION OF ALL ROOF SUPPORT BRACING OR POSTING AND PROVIDE ADEQUATE BEARING TO FOUNDATION.
14. HANGERS AT POSITIVE CONNECTIONS TO BE SIMPSON OR EQUAL.

TRUSS FRAMING NOTES

- TRUSS ENGINEERING: PER IRC R802.10.1 TRUSS ENGINEER OF RECORD WHO WILL REVIEW, APPROVE AND NOTE ON THE DOCUMENTS THAT THEY HAVE FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE ENGINEER-APPROVED DOCUMENTS WILL THEN BE FORWARDED TO THE BUILDING OFFICIAL FOR REVIEW AND APPROVAL PRIOR TO FRAMING INSPECTION'. CITY APPROVED DOCUMENTS SHALL BE ON THE JOB SITE AT INSPECTIONS. TRUSS ENGINEERING SHALL INCLUDE SPECIFIC TRUSS BRACING REQUIREMENTS.

NOTE

VENTILATION CALCULATIONS AND REQUIREMENTS

AT LEAST 40% & NOT MORE THAN 50% OF REQUIRED VENTS SHALL BE IN UPPER PORTION OF VENTILATED ROOF SPACE (MIN. 3' ABOVE EAVE OR CORNICE VENTS) WITH THE BALANCE OF REQUIRED VENTILATION PROVIDED BY EAVE VENTING.

PER IRC 806.1 ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FOR WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION OF EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATING OPENINGS SHALL BE PROVIDED WITH CORROSION RESISTANT WIRE MESH, WITH ⅛" MIN. & ¼" MAX. OPENINGS.

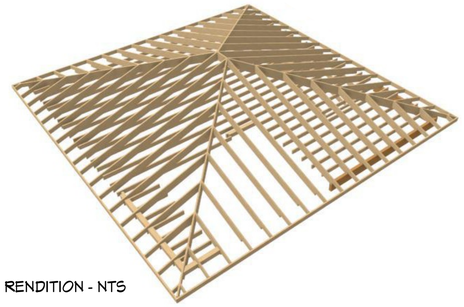
IF EAVE VENTS ARE INSTALLED INSULATION SHALL NOT OBSTRUCT THE FREE FLOW OF AIR (MIN. 1" SPACE BETWEEN INSULATION AND ROOF SHEATHING @ VENT LOCATION.

BAFFLING OF THE VENT OPENINGS SHALL BE INSTALLED. BAFFLES SHALL BE RIGID AND WIND-DRIVEN MOISTURE RESISTANT. IF FEASIBLE BAFFLES SHOULD BE INSTALLED FROM THE TOP OF THE OUTSIDE OF THE EXTERIOR WALL EXTENDING INWARD TO A POINT 6" VERTICALLY ABOVE THE HEIGHT OF NON-COMPRESSED INSULATION, & 12" VERTICALLY ABOVE LOOSE FILL INSULATION. (ALL CALCULATIONS WILL BE NET FREE AREA)

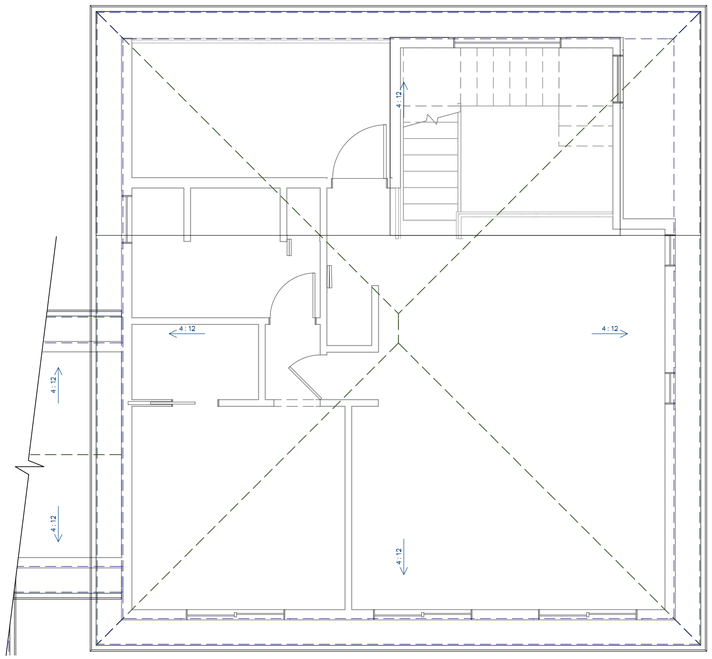
1444 SQ. FT. OF ATTIC AREA/300=4.81 SQ. FT. OF VENTILATION REQUIRED (694 SQ. INCHES)
HIGH VENT @ 347 Sq. In.
LOW VENT @ 347 Sq. In.

NOTE: EAVE VENTING PROVIDED BY (3)-2" DIAMETER "BIRD HOLES" PER EAVE BLOCK. (1⅛" Sq. In. PER BLOCK).

NOTE: UPPER ROOF VENTING PROVIDED BY 1"x1" ROOF VENTS. (.49 @ IN. PER VENT.)



RENDITION - NTS



ROOF PITCH: 4-12 U.O.N

ROOF PLAN

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

FIREBLOCKING AND DRAFTSTOPPING

PER IRC SECTION R602.8 FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED VERTICAL AND HORIZONTAL DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL BE PROVIDED IN WOOD FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:
1) IN CONCEALED SPACED OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS: A) VERTICALLY AT THE CEILING AND FLOOR LEVELS. B) HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
2) AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR IN SOFFITS, DROP CEILINGS, AND COVE CEILINGS.
3) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R311.2.2.
4) AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION.
5) FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES SEE IRC SECTION R1003.19.
6) FIREBLOCKING OF CORNICES OF A TWO FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPERATION. FIREBLOCKING MATERIALS SHALL CONSIST OF MATERIAL LISTED IN IRC SECTION R602.8.1. LOOSE FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED. THE INTEGRITY OF ALL FIREBLOCKS SHALL BE MAINTAINED.

PER IRC SECTION R502.12 DRAFTSTOPPING: WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1,000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROX. EQUAL AREAS. WHERE THE ASSEMBLY IS ENCLOSED BY A FLOOR MEMBRANE ABOVE AND A CEILING MEMBRANE BELOW DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR/CEILING ASSEMBLIES UNDER THE FOLLOWING CIRCUMSTANCES:
1) CEILING IS SUBPENDED UNDER THE FLOOR FRAMING.
2) FLOOR FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-WEB OR PERFORATED MEMBERS.
DRAFTSTOPING MATERIALS SHALL CONSIST OF MATERIALS LISTED IN IRC SECTION R502.12.1.

WOOD TRUSSES

TRUSSES SHALL BE DESIGNED BY A REGISTERED WASHINGTON STATE ENGINEER AND FABRICATED FROM ONLY THESE DESIGNS. TRUSSES TO BE STAMPED BY THE MANUFACTURER OR BY A QUALITY CONTROL AGENCY SUCH AS THE WASHINGTON STATE TRUSS FABRICATORS COUNCIL. ROOF TRUSS DESIGN SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION. NON-BEARING WALLS SHALL BE HELD AWAY FROM THE TRUSS BOTTOM CHORD WITH AN APPROVED FASTENER (SUCH AS SIMPSON STC) TO ENSURE THAT THE TRUSS BOTTOM CHORD WILL NOT BEAR ON THE WALL. APPROVED HANGERS SHALL BE USED AT ALL CONNECTIONS OF RAFTERS, JACK OR HIP TRUSSES TO THE MAIN GIRDER TRUSS. ALL ROOF TRUSSES SHALL BE FRAMED AND TIED INTO THE FRAME WORK AND SUPPORTING WALLS SO AS TO FORM AN INTEGRAL PART OF THE WHOLE BUILDING. ROOF TRUSSES SHALL HAVE JOINTS WELL FITTED AND SHALL HAVE ALL TENSION MEMBERS WELL TIGHTENED BEFORE ANY LOAD IS PLACED UPON THE TRUSS. DIAGONAL AND SWAY BRACING SHALL BE USED TO BRACE ALL TRUSSES. TRUSSES SHALL BE DESIGNED FOR UNIFORM LOADING AS FOLLOWS:

TOP CHORD	35 PSF OF TRIBUTARY AREA
BOTTOM CHORD	10 PSF OF TRIBUTARY AREA
TILE ROOF	45 PSF TOP CHORD AND 5 PSF BOTTOM CHORD

5/8" FORE CLAY (OR EQUIVALENT) PER IRC SECTION R1001.8

SEE NEW STRUCTURAL (S) SHEETS

Per R802.10 Wood Trusses

ATTIC VENTILATION: AREA / 300

PROVIDE 1" MIN. AIR GAP AT EAVES WITH INSULATION BAFFLES TYP. AT ALL TRUSS BAYS.

PROVIDE GABLE VENTS ALL GABLE ENDS.

PROVIDE GALV. ROOF VENTS ON BACKSIDE OF ROOFLINE ABOVE CONDITIONED AREA.

1. ALL TRUSSES SHALL CARRY MANUFACTURERS STAMP.
2. ALL TRUSSES SHALL BE INSTALLED & BRACED TO MANUFACTURERS SPECIFICATIONS.
3. ALL TRUSSES WILL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPT. APPROVAL OF ENGINEERING CALCULATIONS.
4. ALL TRUSSES SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION.
5. NON BEARING WALLS SHOULD BE HELD DOWN FROM THE TRUSS BOTTOM CHORD W/ SIMPSON STC TO INSURE THAT THE TRUSS BOTTOM CHORD WILL NOT BEAR ON THE WALL.
6. ALL CONNECTIONS OF RAFTERS, JACK OR HIP TRUSSES TO MAIN GIRDER TO BE PROVIDED BY TRUSS MANUFACTURE.
7. ALL ROOF FRAMING 24" O.C.
8. ALL ROOF PITCH 8:12
9. SCISSORS TRUSS CEILING PITCH 2:12.
10. TRUSSES MANUFACTURED BY (TO BE DETERMINED)
11. ALL OVERHANGS 16".

SHEET NUMBER A11 Revision #:

DATE: 06.12.20
REV #4: 08.11.22
DRAWN BY: K.C.

ROOF PLAN

TOM & KIM TSO
ADDITION & ADU
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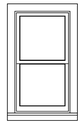
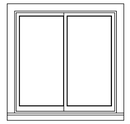
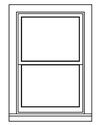
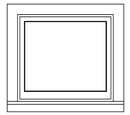
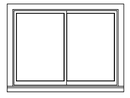
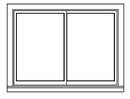
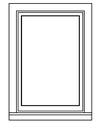
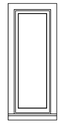
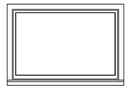
KESH DESIGN LINES LLC
425 344 9906

WINDOW SCHEDULE

ROOM NAME	NUMBER	QTY	FLOOR	WIDTH	HEIGHT	EGRESS	TEMPERED	DESCRIPTION	U-FACTOR	3D EXTERIOR ELEVATION
BATH	W01	1	1	26 "	48 "			DOUBLE HUNG	0.28	
BEDROOM 1	W02	1	1	48 "	48 "	YES		LEFT SLIDING	0.28	
BATH	W03	1	2	32 "	48 "			DOUBLE HUNG	0.28	
ADU HALL/ENTRY	W05	1	1	32 "	24 "		YES	FIXED GLASS	0.28	
BEDROOM 2	W06	1	2	66 "	48 "	YES		RIGHT SLIDING	0.28	
GREAT	W07	2	2	66 "	48 "			RIGHT SLIDING	0.28	
OPEN BELOW/PORCH BELOW	W08	2	2	32 "	48 "			FIXED GLASS	0.28	
GREAT	W09	2	2	21 "	60 "			SINGLE CASEMENT-HR	0.28	
OPEN BELOW	W10	1	2	72 "	48 "			FIXED GLASS	0.28	

DOORS AND WINDOWS

DOORS TO THE EXTERIOR SHALL HAVE MAX. 7 3/4" STEP TO MIN. 36" DEEP X (12" + OPERABLE DOOR WIDTH) MIN. LANDING ALL GLAZING TO BE PER WSEC TABLE 6-1 UNLESS NOTED OTHERWISE.
ALL SKYLIGHTS AND SKYWALLS TO BE SAFETY LAMINATED GLASS UNLESS NOTED OTHERWISE.
FRENCH DOORS TO BE DOUBLE GLAZED NON TESTED ASSUMED U VALUE OF .30, UNLESS NOTED OTHERWISE WITH SAFETY GLAZING.
FACTORY BUILT WINDOWS TO BE CONSTRUCTED TO PERMIT MAXIMUM INFILTRATION OF 0.5 CFM PER LINEAL FOOT OF OPERABLE SASH PERIMETER AS TESTED BY STANDARD ASTM E 283.13.
SITE BUILT AND MILL WORK SHOP BUILT WOODEN SASH ARE EXEMPT FROM INFILTRATION CRITERIA ABOVE BUT MUST BE MADE TIGHTLY FITTING AND WEATHER STRIPPED OR CAULKED.

SLIDING GLASS DOORS TO PERMIT MAXIMUM INFILTRATION OF 0.5 CFM INFILTRATION PER SQUARE FOOT OF DOOR AREA. EACH LIGHT SHALL BEAR THE MANUFACTURER'S LABEL DESIGNATING THE TYPE AND THICKNESS OF GLASS. IDENTIFICATION OF GLAZING, IN HAZARDOUS LOCATIONS SHALL BE IN ACCORDANCE WITH IRC, SECTION (B) 308.4

PROVIDE SOLID CORE DOORS @ ENTRY AND FROM GARAGE TO LIVING AREAS (AS WELL AS ANY OTHER DOORS TO THE EXTERIOR. PROVIDE SELF-CLOSURE DEVICE ON DOOR TO GARAGE, PER IRC. SEE PLANS FOR:
- MAXIMUM GLAZING AREA.
- GLAZING MFG. AND MODEL NUMBERS.
- WEIGHTED U-A CALCULATION FOR SUB-STANDARD GLAZING.

SAFETY GLAZING LOCATIONS AS PER IRC SECTION (B) 308.4:
1. INGRESS AND EGRESS DOORS
2. SLIDING GLASS DOORS, SLIDING GLASS DOORS
3. SHOWER AND BATHTUB ENCLOSURES
4. GLAZING W/ THE EXPOSED EDGE WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF A DOOR IN THE CLOSED POSITION, & BOTTOM EDGE IS LESS THAN 60" ABOVE THE WALKING SURFACE
5. GLAZING GREATER THAN 9 S.F. LESS THAN 18" ABOVE FINISHED FLOOR
6. GLAZING IN GUARDRAILS
7. GLAZING IN STAIRWELLS AND WITHIN 3' OF TOP / BOTTOM OF STAIRS.

UNLESS NOTED OTHERWISE, INSULATION TO BE PER WSEC TABLE 6-1
INSULATION BAFFLES TO MAINTAIN 1" ABOVE INSULATION
BAFFLES TO EXTEND 6" ABOVE BATT INSULATION.
BAFFLES TO EXTEND 12" ABOVE LOOSE FILL INSULATION.
INSULATE BEHIND TUBS/SHOWERS, PARTITIONS AND CORNERS.
FACE STAPLE BATTS
FRICTION FIT FACED BATTS
USE 4 MIL POLY VAPOR RETARDER AT WALLS
USE PVA PAINT WITH A DRY CUP PERM RATING OF 1 MAX.

- WALLS BETWEEN HOUSE AND GARAGE HAVE TO HAVE R-21 U.N.O.
- FLOORS ABV CRAWL SPACES, GARAGE, OR AT CANTILEVERS OVER GRADE HAVE TO HAVE R-30 U.N.O.
- ALL ATTIC AT CEILINGS HAVE TO HAVE R-38 (MIN.) U.N.O.
- DUCTS IN UNHEATED SPACES HAVE TO HAVE R-8
- GAS WATER HEATERS SHALL MEET REQUIREMENTS OF 2012 UPC AND BE SCI LABELED.

MISCELLANEOUS NOTES

1. GUARDRAILS TO BE 36" MIN. ABOVE FINISH FLOOR.

2. HANDRAILS TO BE 34" - 38" ABOVE NOSING, WITH HANDGRIP OF 1 1/2" - 2" IN

3. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH.

4. ONE HOUR FIRE SEPARATIONS BETWEEN GARAGE AND DWELLING. INSTALL 1/2" TYPE-X ON ALL WALLS AND CEILINGS, BEARING WALLS. STAGGER JOINTS FROM PLYWOOD BELOW WHERE APPLICABLE.

5. BEDROOM EMERGENCY EGRESS WINDOWS: MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT., WIDTH OF 20" AND MINIMUM 24". MAXIMUM FINISHED SILL HEIGHT OF 44" ABOVE

6. EACH SLEEPING ROOM SHALL BE PROVIDED W/ A SMOKE DETECTOR (INTERCONNECTED) PER SECTION (F) R313.1. SMOKE DETECTORS SHALL BE PROVIDED W/ A BATTERY BACK-UP. PER SEC. (F) R313.1 AND, LOCATED PER SECTION (F) R313.1.

7. ANCHORED VENEER SHALL BE PROVIDED WITH #22 GA X 3/4" CORROSION RESISTANT ANCHOR TIES. THE ANCHOR TIES SHALL BE SPACED A MAX. OF 24" O.C. AND SUPPORT NO MORE THAN 2 SQ. FT. OF VENEER. IN SEISMIC ZONE 3 & 4 THE EXTENDED LEG OF THE ANCHOR TIE SHALL LOOP AROUND A #3 GA. CONT. HORZ. JOINT REINFORCEMENT WIRE.

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021) Version 1.1

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

Project Information	*Contact Information*
8802 SE 37th ST. MERCER ISLAND WA 98040	Kesh Chavda - KDL Designs LLC
	425 344 9906

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative Kesh Chavda ***Date*** 04/12/2022

All Climate Zones (Table R402.1.1)	R-Value [a]	U-Factor [a]
Fenestration U-Factor [b]	n/a	0.30
Skylight U-Factor [b]	n/a	0.50
Glazed Fenestration SHGC [b,e]	n/a	n/a
Ceiling [g]	49	0.026
Wood Frame Wall [d,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall [c,h]	10/15/21 int + TB	0.042
Slab [d,f] R-Value & Depth	10, 2 ft	n/a

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

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
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Each dwelling unit ***in a residential building*** shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. **Small Dwelling Unit:** 3 credits
   Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
2. **Medium Dwelling Unit:** 6 credits
   All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit:** 7 credits
   Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet:** 1.5 credits
   All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2 and 406.3				
Heating Options	**Fuel Normalization Descriptions**	**Credits - select ONE heating option**		**User Notes**
1	Combustion heating minimum NAECA[b]	0.0	☐	
2	Heat pump[c]	1.0	☑	
3	Electric resistance heat only - furnace or zonal	-1.0	☐	
4	DHP with zonal electric resistance per option 3.4	0.5	☐	
5	All other heating systems	-1.0	☐	
Energy Options	**Energy Credit Option Descriptions**	**Credits - select ONE energy option from each category [d]**		
1.1	Efficient Building Envelope	0.5	☐	
1.2	Efficient Building Envelope	1.0	☐	
1.3	Efficient Building Envelope	0.5	☑	
1.4	Efficient Building Envelope	1.0	☐	
1.5	Efficient Building Envelope	2.0	☐	
1.6	Efficient Building Envelope	3.0	☐	
1.7	Efficient Building Envelope ☐	0.5	☐	
2.1	Air Leakage Control and Efficient Ventilation	0.5	☐	
2.2	Air Leakage Control and Efficient Ventilation	1.0	☐	
2.3	Air Leakage Control and Efficient Ventilation	1.5	☐	
2.4	Air Leakage Control and Efficient Ventilation ☐	2.0	☐	
3.1[a]	High Efficiency HVAC	1.0	☐	
3.2	High Efficiency HVAC	1.0	☐	
3.3[a]	High Efficiency HVAC	1.5	☐	
3.4	High Efficiency HVAC	1.5	☐	
3.5	High Efficiency HVAC	1.5	☐	
3.6[a]	High Efficiency HVAC ☐	2.0	☐	
4.1	High Efficiency HVAC Distribution System	0.5	☐	
4.2	High Efficiency HVAC Distribution System ☐	1.0	☐	

2018 Washington State Energy Code – Residential
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Single Family – New & Additions (effective February 1, 2021)

Summary of Table R406.2 (cont.)				
Energy Options	**Energy Credit Option Descriptions (cont.)**	**Credits - select ONE energy option from each category [d]**		**User Notes**
5.1[d]	Efficient Water Heating	0.5	☐	
5.2	Efficient Water Heating	0.5	☐	
5.3	Efficient Water Heating	1.0	☑	
5.4	Efficient Water Heating	1.5	☐	
5.5	Efficient Water Heating	2.0	☐	
5.6	Efficient Water Heating ☐	2.5	☐	
6.1[e]	Renewable Electric Energy (3 credits max)	1.0	☐	
7.1	Appliance Package	0.5	☑	
	Total Credits	3.0	Calculate Total	Clear Form

a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
d. You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.
e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See the complete Table R406.2 for all requirements and option descriptions.
f. Use the single radiobuttton in the upper right of the second column to deselect radiobuttons in that group.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

For Building Officials Only

NOTE: See Sheet A.02 for:

APPLIANCE SPECS.
HEAT PUMP SPECS.
WATER HEATER SPECS.

SHEET NUMBER A13 Revision #:

DATE: 06.12.20
REV #4: 08.11.22
DRAWN BY: K.C.

WINDOW SCHEDULE ENERGY CALCS.

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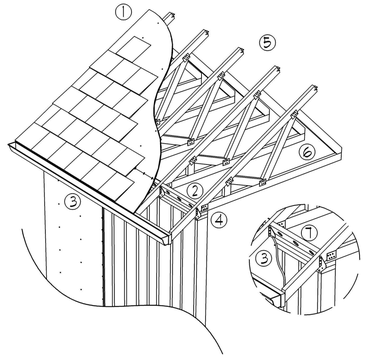
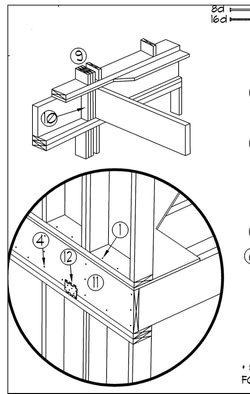
425 344 9906



1. PER ENGINEERING STAGGER SHEATHING 1/8" GAP REQUIRED BETWEEN SHEETS
2. 8d NAILS @ 6" O.C. AT 'BIRD BLOCKING' SHEATHING BREAK
3. EXTEND WALL SHEATHING TO TOP OF DOUBLE TOP PLATE
4. SIMPSON H1, SDWC 6", OR TLOC26 @ EACH TRUSS TO RAFTER PERPENDICULAR TOP PLATE INTERSECTION U.N.O. (2) H2.5A FOR MULTI PLY OR MULTI SDWC OR TLOC26 U.N.O.
5. MFR TRUSSES @ 24" O.C. W/ PLAN ROOF SHEATHING NAIL W/ 8d @ 6" O.C. FOR PANEL EDGES AND 12 O.C. IN FIELD
6. SHEATH ALL GABLE ENDS
7. TOE NAIL BIRD BLOCKING W (2) 8d NAILS

ROOF SHEATHING **1**

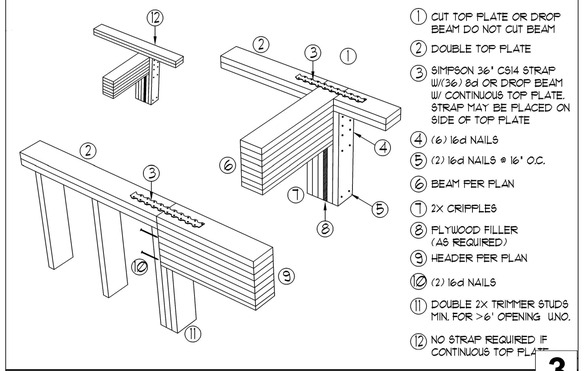


8d
16d

* 1. 2X SOLE PLATE TO RIM W/16d @ 6" O.C. U.N.O. *
2. 3/4 T&G TO RIM: 8d @ 6" O.C.
3. 2X OR MFR FLOOR JOIST
* 4. RIM TO TOP PLATE W/16d @ 4" O.C. U.N.O. *
5. JOIST TO TOP PLATE (3) 8d TOENAILED
* 6. SHEATHING TO STUD SEE SHEAR WALL SCHEDULE
7. DBL 2X TOP PLATE & TOP PLATE TO STUD W/(2) 16d @ 16" O.C.
8. 2X ALIGN STUD W/ FLOOR JOIST
9. MULTIPLE STUDS FOR POINT LOAD FROM ABOVE
10. SQUASH BLOCKS REQUIRED UNDER ALL POINT LOADS
11. RIM BOARD TO FLOOR JOIST W/(3) 16d
12. LTP4 PER SHEARWALL TABLE

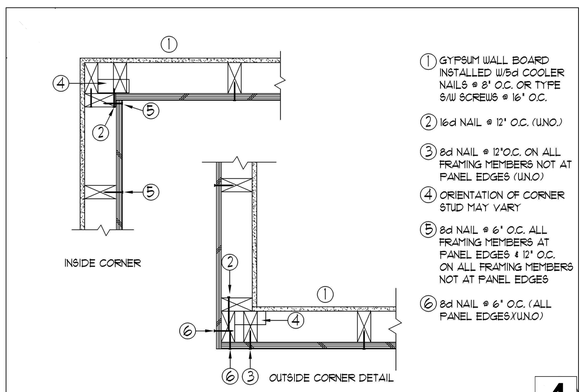
* SEE SHEARWALL TABLE FOR ADDITIONAL NAILING

FLOOR TO FLOOR CONNECTION **2**



1. CUT TOP PLATE OR DROP BEAM DO NOT CUT BEAM
2. DOUBLE TOP PLATE
3. SIMPSON 36" CS14 STRAP W/(36) 8d OR DROP BEAM W/ CONTINUOUS TOP PLATE. STRAP MAY BE PLACED ON SIDE OF TOP PLATE
4. (6) 16d NAILS
5. (2) 16d NAILS @ 16" O.C.
6. BEAM PER PLAN
7. 2X CRIPPLES
8. PLYWOOD FILLER (AS REQUIRED)
9. HEADER PER PLAN
10. (2) 16d NAILS
11. DOUBLE 2X TRIMMER STUDS MIN. FOR >6' OPENING U.N.O.
12. NO STRAP REQUIRED IF CONTINUOUS TOP PLA

BEAM AND HEADER END SUPPORT **3**

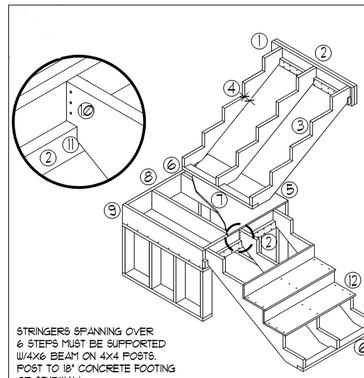


1. GYPSUM WALL BOARD INSTALLED W/5d COOLER NAILS @ 8" O.C. OR TYPE S/W SCREWS @ 16" O.C.
2. 16d NAIL @ 12" O.C. (U.N.O.)
3. 8d NAIL @ 12"O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES (U.N.O)
4. ORIENTATION OF CORNER STUD MAY VARY
5. 8d NAIL @ 6" O.C. ALL FRAMING MEMBERS AT PANEL EDGES & 12" O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES
6. 8d NAIL @ 6" O.C. (ALL PANEL EDGES)(U.N.O)

INSIDE CORNER

6 3 OUTSIDE CORNER DETAIL

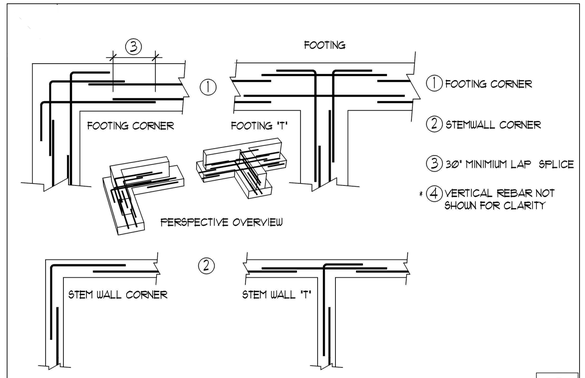
INSIDE/OUTSIDE CORNER **4**



1. FLOOR JOIST OR LANDING
2. 2X4 LEDGER W/2) 10d @ 6" O.C.
3. (3) 2X12 STRINGERS
4. 5-1/2" MINIMUM MATERIAL @ DIAGONAL BETWEEN RISE AND RUN
5. UPPER FLIGHT OF STAIRS SUPPORTED ON 3/4 T&G 8d NAILED @ 6" O.C @ PANEL EDGES 12" O.C. FIELD
6. 2X4 THRUST BLOCK W/10d @ 6" O.C. NAIL TO LANDING JOIST
7. 3/4" T&G SUBFLOOR
8. 2X8 LANDING JOISTS
9. 10d @ 6" O.C. RIM TO TOP PLATE
10. (3) 10d TOE NAILS
11. NOTCH STRINGER TO REST ON LEDGER
12. 2X TREADS W/(3) 10d EACH STRINGER

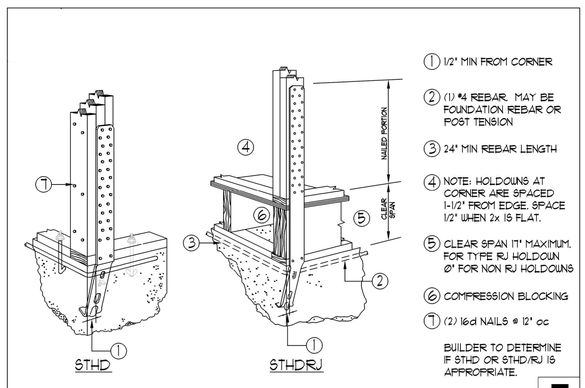
STRINGERS SPANNING OVER 6 STEPS MUST BE SUPPORTED W/4X6 BEAM ON 4X4 POSTS. POST TO 18" CONCRETE FOOTING OR STUDWALL

STAIR LANDING CONNECTION **5**



1. FOOTING CORNER
2. STEMWALL CORNER
3. 30" MINIMUM LAP SPLICE
* 4. VERTICAL REBAR NOT SHOWN FOR CLARITY

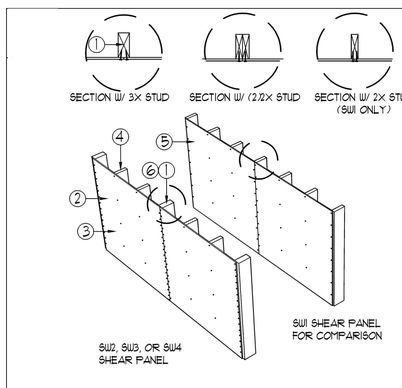
CONCRETE CORNERS **6**



1. 1/2" MIN FROM CORNER
2. (1) #4 REBAR. MAY BE FOUNDATION REBAR OR POST TENSION
3. 24" MIN REBAR LENGTH
4. NOTE: HOLDOUNS AT CORNER ARE SPACED 1-1/2" FROM EDGE, SPACE 1/2" WHEN 2x 15 FLAT.
5. CLEAR SPAN 11" MAXIMUM. FOR TYPE RJ HOLDOWN Ø" FOR NON RJ HOLDOUNS
6. COMPRESSION BLOCKING
7. (2) 16d NAILS @ 12" oc

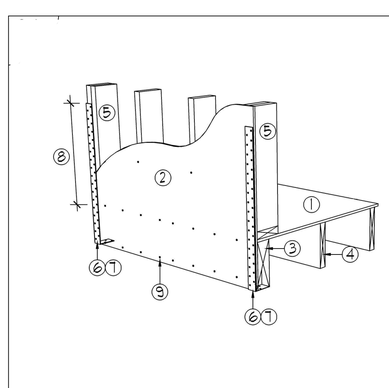
BUILDER TO DETERMINE IF STHD OR STHD/RJ IS APPROPRIATE.

SIMPSON STHD **7**



1. 3x MEMBER AT ADJOINING PANEL EDGES FOR SW3 AND SW4 SHEAR WALL
2. SW2 SHEAR WALL 8d NAIL: 4" EDGE - 12" FIELD SW3 SHEAR WALL 8d NAIL: 3" EDGE - 12" FIELD SW4 SHEAR WALL 8D NAIL: 2" EDGE - 12" FIELD
3. 7/16" OSB SHEATHING
4. 2x MEMBER FOR SHEAR WALLS MID PANEL (FIELD)
5. SHEAR WALL PER PLAN
6. (2) 2X MAY BE USED IN PLACE OF 3X PER SHEAR WALL NOTES

SW2, SW3, SW4 SHEAR WALL NAILING **8**



1. 3/4" T&G PLYWOOD SUBFLOOR
2. SHEAR WALL NAILING PER PLAN
3. FLUSH DOUBLE 2x JOIST OR MFR DOUBLE JOIST WITH WEB STIFFENERS OR BEAM PER PLAN
4. FLOOR JOIST PER PLAN
5. STUD/POST PER SHEAR WALL SCHEDULE
6. MSTC48B3 (WHEN SPECIFIED ON PLAN)
7. (2)CS14 OPTION (36" MIN LENGTH, WRAP AROUND BEAM)
8. 18" MIN TO STUD WALL (CS14 OPTION)
9. NAIL SHEATHING TO BEAM. DO NOT BREAK SHEATHING

SHEAR WALL AT BEAM **9**

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments

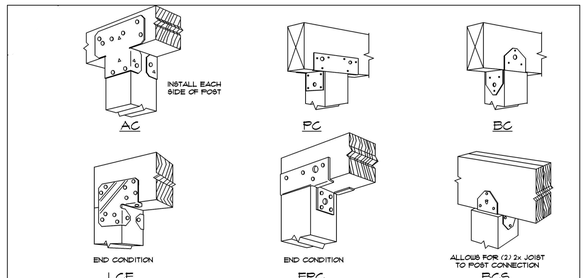
SHEET NUMBER **D1**
Revision #:

DATE: 06.12.20
REV #4: 08.11.22
DRAWN BY: K.C.

DETAILS & NOTES

TOM & KIM TSO
ADDITION & ADU
8802 SE 37th ST. MERCER ISLAND WA 98040

KESH DESIGN LINES LLC
425 344 9906

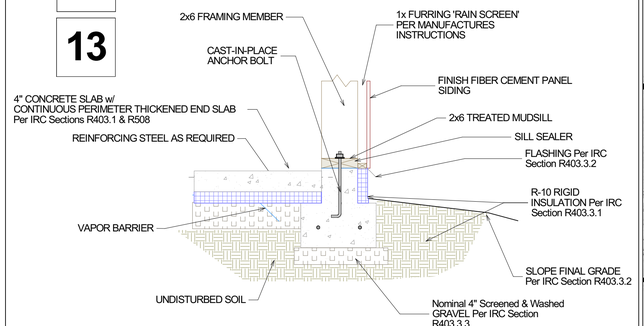


1. WHERE POSTS AND BEAM OR GIRDER CONSTRUCTION IS USED TO SUPPORT FLOOR FRAMING, POSITIVE CONNECTION SHALL BE PROVIDED TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT.
2. ACE/LCE ELIMINATE THE NEED FOR RIGHT AND LEFTS. FOR USE W/ 4x OR 6x LUMBER
3. PC/EPC PROVIDES A CUSTOM CONNECTION FOR POST BEAM COMBINATIONS
4. PBC/BCS OFFER A LIGHT CAP CONNECTION

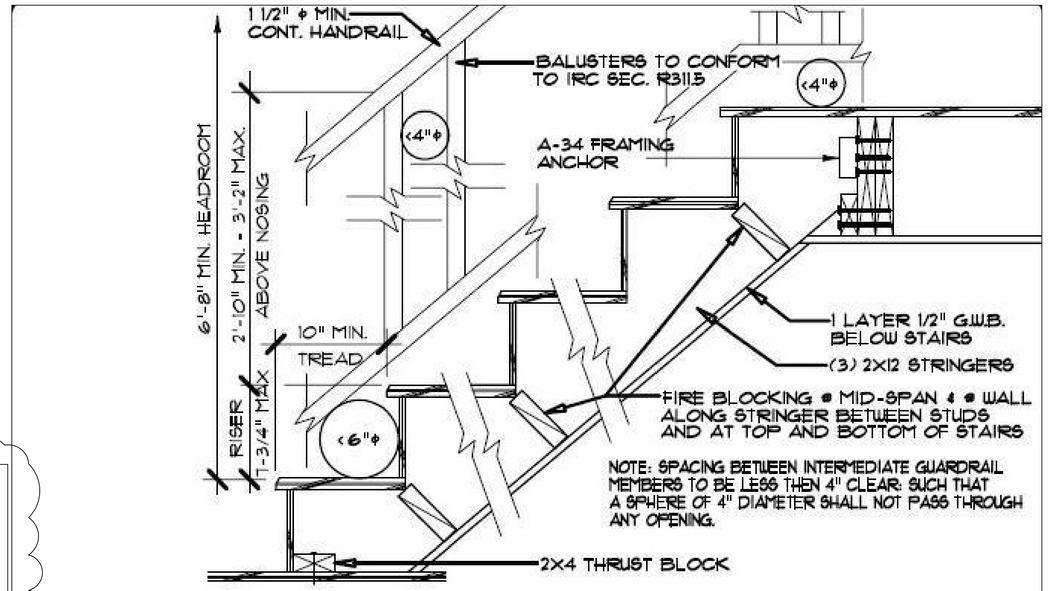
BEAM TO POST CONNECTIONS **10**

12

13

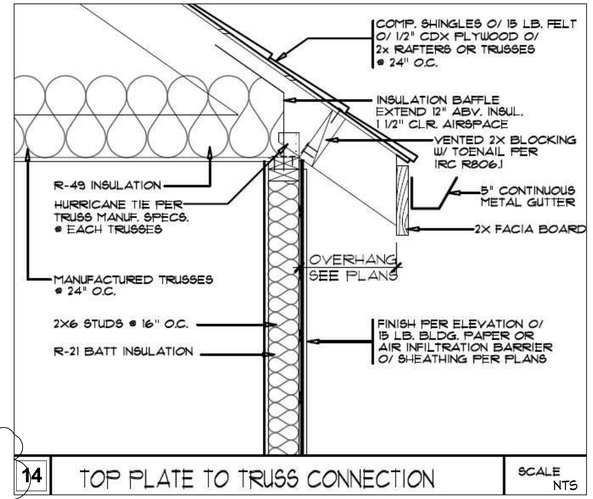


Thickened Concrete Slab Foundation (Typ. NTS) IRC R403.1.3 (Seismic Cat. D)

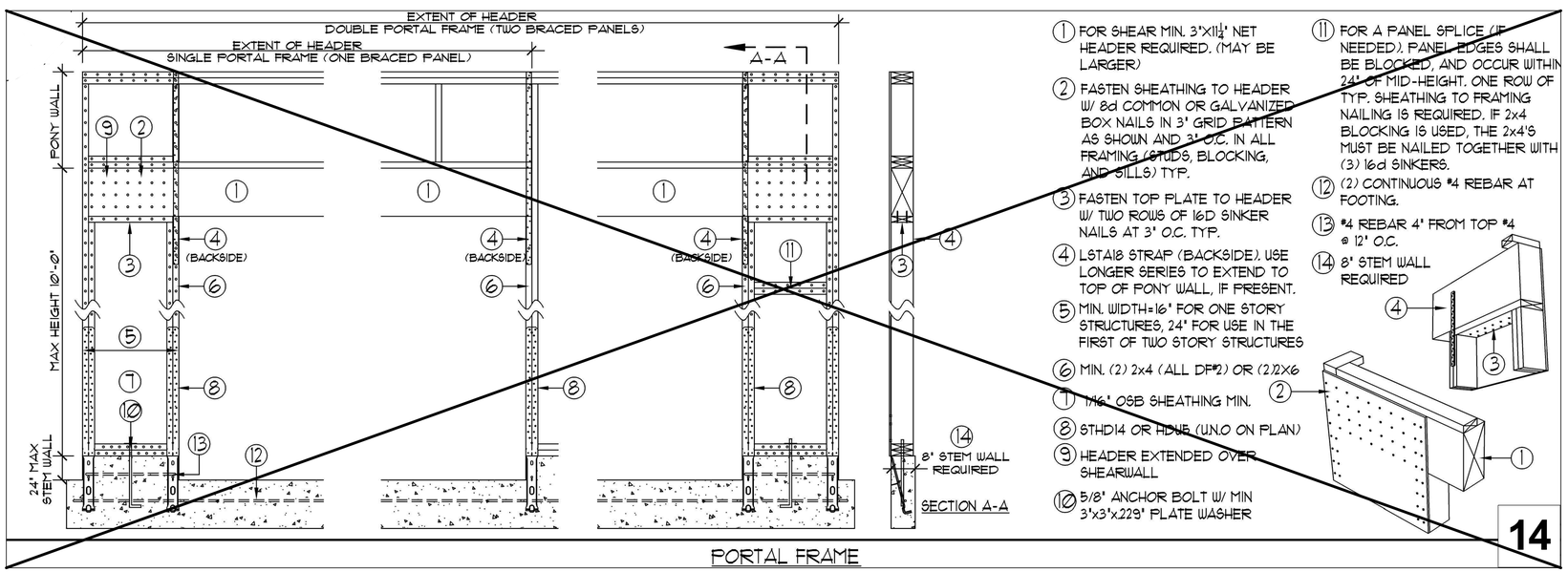


NOTES: PER IRC SECTION 303.6, R311.5.7 ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIR INCLUDING LANDINGS & TREADS. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP OF THE LANDING OF THE STAIRWAY. LIGHTING CONTROLS SHALL BE ACCESSIBLE AT THE TOP & BOTTOM OF EACH STAIRWAY WITHOUT TRAVERSING ANY STEPS. 4 OR MORE RISERS TO HAVE AT LEAST ONE HANDRAIL RUNNING CONTINUOUS THROUGH FULL LENGTH OF STAIR 34" MIN. HT., 38" MAX. HEIGHT. END SHALL RETURN TO WALL OR NEWEL POST OR VOLUTE. HANDRAIL MUST BE STRONG ENOUGH TO RESIST A 200 LB. PT. LOAD IN ANY DIRECTION. HANDRAIL TO BE FRESENT ON AT LEAST ONE SIDE OF STAIR. HAND GRIP PORTION OF HANDRAILS SHALL HAVE CIRCULAR CROSS SECTION OF 1¼" MIN. & 2¾" MAX. EDGES SHALL HAVE A MIN. RADIUS OF ⅛". ALL REQUIRED GUARDRAILS TO BE 36" MIN. IN HEIGHT.

11 WOOD STAIR DETAIL SCALE NTS



14 TOP PLATE TO TRUSS CONNECTION SCALE NTS



1. FOR SHEAR MIN. 3"X11½" NET HEADER REQUIRED. (MAY BE LARGER)
2. FASTEN SHEATHING TO HEADER W/ 8d COMMON OR GALVANIZED BOX NAILS IN 3" GRID PATTERN AS SHOWN AND 3" O.C. IN ALL FRAMING (STUDS, BLOCKING, AND SILLS) TYP.
3. FASTEN TOP PLATE TO HEADER W/ TWO ROWS OF 16D SINKER NAILS AT 3" O.C. TYP.
4. LSTA18 STRAP (BACKSIDE). USE LONGER SERIES TO EXTEND TO TOP OF PONY WALL, IF PRESENT.
5. MIN. WIDTH=16" FOR ONE STORY STRUCTURES, 24" FOR USE IN THE FIRST OF TWO STORY STRUCTURES
6. MIN. (2) 2x4 (ALL DF#2) OR (2)2X6
7. 1/16" OSB SHEATHING MIN.
8. STHD14 OR HDU8 (U.N.O ON PLAN)
9. HEADER EXTENDED OVER SHEARWALL
10. 5/8" ANCHOR BOLT W/ MIN 3"x3"x.229" PLATE WASHER
11. FOR A PANEL SPLICE (IF NEEDED). PANEL EDGES SHALL BE BLOCKED, AND OCCUR WITHIN 24" OF MID-HEIGHT. ONE ROW OF TYP. SHEATHING TO FRAMING NAILING IS REQUIRED. IF 2x4 BLOCKING IS USED, THE 2x4'S MUST BE NAILED TOGETHER WITH (3) 16d SINKERS.
12. (2) CONTINUOUS #4 REBAR AT FOOTING.
13. #4 REBAR 4" FROM TOP #4 @ 12" O.C.
14. 8" STEM WALL REQUIRED

PORTAL FRAME **14**

NO NEW PORTAL FRAMING PROPOSED

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018) with WA State Amendments

SHEET NUMBER **D2** Revision #:

DATE: 06.12.20
REV #4: 08.11.22
DRAWN BY: K.C.

DETAILS & NOTES

TOM & KIM TSO ADDITION & ADU
8002 SE 37th ST. MERCER ISLAND WA 98040

KESH DESIGN LINES LLC
425 344 9906

CODE: INTERNATIONAL BUILDING CODE (IBC) 2018

LOADINGS
- FLOOR LIVE LOAD..... 40 PSF
- DECK LIVE LOAD..... 60 PSF
- ROOF SNOW LOAD..... 25 PSF

WIND CRITERIA
- BUILDING CLASSIFICATION..... II
- ULTIMATE WIND SPEED..... 97 MPH
- WIND EXPOSURE..... B
- TOPOGRAPHIC FACTOR, Kzt..... 1.0

SEISMIC CRITERIA
- SEISMIC RISK CATEGORY..... II
- SPECTRAL RESPONSE COEFFICIENT, Ss 1.40
- SPECTRAL RESPONSE COEFFICIENT, S1 .... 0.50
- SEISMIC SITE CLASS ..... D
- SEISMIC DESIGN CATEGORY..... D

STRUCTURAL DESCRIPTIONS

GENERAL CONDITIONS

1. THE CONTRACTOR SHALL EXAMINE THE STRUCTURAL DRAWINGS AND SHALL NOTIFY THE STRUCTURAL ENGINEER IN WRITING OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK.

2. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.

3. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE THE NOTES, DRAWINGS, AND/OR SPECIFICATIONS DIFFER, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

4. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.

5. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THESE DRAWINGS.

6. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE STRUCTURAL ENGINEER OF ANY CONDITION THAT, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS TO THE STRUCTURE.

7. THE CONTRACTOR SHALL SUPERVISE AND DIRECT HIS WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS DURING CONSTRUCTION. NOTIFY ENGINEER OF ALL FIELD CHANGES PRIOR TO INSTALLATION.

8. REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE STRUCTURAL DRAWINGS.

9. ALL CONSTRUCTION SHALL BE DONE WITH MATERIALS, METHODS, AND WORKMANSHIP ACCEPTED AS GOOD PRACTICE BY THE CONSTRUCTION INDUSTRY AND IN CONFORMANCE WITH THE PROVISIONS OF PREVAILING CODE EDITION OF THE "INTERNATIONAL BUILDING CODE" (IBC) AND STANDARDS REFERENCED THEREIN.

10. PIPES, DUCTS, SLEEVES, OPENINGS, POCKETS, CHASES, BLOCK-OUTS, ETC., SHALL NOT BE PLACED IN SLABS, FOUNDATIONS, ETC., NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR SUCH ITEMS, UNLESS SPECIFICALLY DETAILED ON THESE STRUCTURAL DRAWINGS.

11. ALTERNATE ASSEMBLIES AND MATERIALS WILL BE CONSIDERED FOR REVIEW. ENGINEER MAY REQUEST PAYMENT FOR REVIEW.

FOUNDATION

1. STRUCTURAL DESIGN COMPLIES WITH SOILS REPORT PRODUCED BY:

   N.A.

   FOOTING BEARING PRESSURE: 1500 PSF (ASSUMED)

   LATERAL EARTH PRESSURE ON RETAINING WALLS N.A.

2. SUBGRADE PREPARATION, DRAINAGE PROVISIONS, AND OTHER RELEVANT SOIL CONSIDERATIONS ARE TO BE IN ACCORDANCE WITH SAID SOILS REPORT.

DIMENSIONAL LUMBER, ANCHOR BOLT AND NAILING SPECIFICATIONS

1. MEET REQUIREMENTS OF PS 20-70 AND NATIONAL GRADING RULES FOR SOFTWOOD DIMENSIONAL LUMBER. BEAR STAMP OF WWPA.

2. MINIMUM DIMENSIONAL LUMBER GRADES TO BE:

WALL STUDS, 2X, 3 X.....	HF STUD GRADE
WALL PLATES, 2X, 3X.....	HF STANDARD GRADE U.N.O
JOISTS, 2 X 6.....	HF #2
JOISTS, 2 X 8 AND UP.....	DF #2
BEAMS, HEADERS, 6X	DF #2
BEAMS, HEADERS, 4X.....	DF #2, WWPA GRADING
POSTS, 4X, 6X.....	DF #2 U.N.O
LUMBER NOT NOTED HERE...	DF #2 U.N.O

3. PROVIDE STANDARD CUT WASHERS FOR BOLT HEADS AND NUTS BEARING AGAINST WOOD.

4. ALL SILLS OR PLATES RESTING ON CONCRETE OR MASONRY THAT IS IN CONTACT WITH OR RESTING ON FOUNDATIONS SHALL BE PRESSURE-TREATED DOUGLAS FIR/ HEMFIR IN ACCORDANCE TO WITH AWPA U1 (PLANT/SHOP TREATMENT) AND M4 (FIELD TREATMENT) STANDARDS. ALL BEARING WALL PLATES SHALL HAVE 5/8" Ø x10" J-BOLTS PLACED AT MAXIMUM OF 9" FROM THE END OF A PLATE AND SPACED AT INTERVALS SHOWN ON THE SHEARWALL SCHEDULE (MAXIMUM 4'-0" OC SPACING). PROVIDE BP PLATE WASHER AT ALL FOUNDATION SILL PLATE ANCHOR BOLTS. PROVIDE TWO ANCHOR BOLTS MINIMUM PER SECTION OF SILL. FOR NON-SHEARWALL, PLACE ANCHORS AT 48".

5. BOLTS IN WOOD SHALL NOT BE LESS THAN 7 DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER.

6. NAILS: COMMON WIRE NAILS. NAILING IN ACCORDANCE WITH IBC TABLE 2304.9.1.

7. PRESSURE TREATED WOOD: ALL NAILS INTO PT WOOD SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR STAINLESS STEEL. ALL METAL CONNECTORS IN CONTACT WITH PT WOOD SHALL BE HOT DIPPED GALVANIZED AND MEET ASTM A653 CLASS G185 (1.85 OZ OF ZINC PER SQ FT MINIMUM) OR TYPE 304 / 316 STAINLESS STEEL SIMPSON Z-MAX CONNECTORS MEET THIS REQUIREMENT. FASTENERS AND CONNECTORS USED TOGETHER SHALL BE OF THE SAME TYPE (E.G. HOT DIPPED NAILS WITH HOT DIPPED HANGERS)

8. ALL LUMBER WITH A LEAST DIMENSION OF 2" (NOMINAL) SHALL BE STAMPED "SURFACE-DRY" AND SHALL HAVE A MOISTURE CONTENT WHEN SURFACED AND WHEN INSTALLED OF NO MORE THAN 19 PERCENT. LUMBER WITH A LEAST DIMENSION OF 4" (NOMINAL) OR GREATER SHALL BE STAMPED "SURFACE-GREEN" AND AIR-DRIED TO A MOISTURE CONTENT OF NOT MORE THAN 19 PERCENT PRIOR TO ITS USE IN FRAMING THE STRUCTURE.

9. NOTCHING AND BORING OF BEAMS AND JOISTS IS NOT ALLOWED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

REQUIRED? (Y/N)		MATERIAL / ACTIVITY	EXTENT
Y	N	**1704.2.5 Inspection of Fabricators** Verify fabrication/quality control procedures	Periodic
Y	N	**1705.1.1 Special Cases** (work unusual in nature, including but not limited to alternative materials and systems, unusual design applications, materials and systems with special manufacturer's requirements)	
		1705.2 Steel Construction	
Y	N	1. Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents)	Each submittal
Y	N	2. Material verification of structural steel	Periodic
Y	N	3. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)	Continuous
Y	N	4. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents	Periodic
		5. Structural steel welding:	
Y	N	a. Inspection tasks Prior to Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1)	Observe or Perform as noted (4)
Y	N	b. Inspection tasks During Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1)	Observe (4)
Y	N	c. Inspection tasks After Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3)	Observe or Perform as noted (4)
		d. Nondestructive testing (NDT) of welded joints: see Commentary	
Y	N	1) Complete penetration groove welds 5/16" or greater in risk category III or IV	Periodic
Y	N	2) Complete penetration groove welds 5/16" or greater in risk category II	Periodic
Y	N	3) Thermally cut surfaces of access holes when material t > 2"	Periodic
Y	N	4) Welded joints subject to fatigue when required by AISC 360, Appendix 3, Table A-3.1	Periodic
Y	N	5) Fabricator's NDT reports when fabricator performs NDT	Each submittal (5)
		6. Structural steel bolting:	
Y	N	a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1)	Observe or Perform as noted (4)
Y	N	b.Inspection tasks During Bolting (Observe the QA tasks listed in AISC 360, Table N5.6-2)	Observe (4)
		1) Pre-tensioned and slip-critical joints	
Y	N	a) Turn-of-nut with matching markings	Periodic
Y	N	b) Direct tension indicator	Periodic
Y	N	c) Twist-off type tension control bolt	Periodic
Y	N	d) Turn-of-nut without matching markings	Continuous
Y	N	e) Calibrated wrench	Continuous
		2) Snug-tight joints	Periodic
Y	N	c. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3)	Perform (4)
Y	N	7. Inspection of steel elements of composite construction prior to concrete placement in accordance with QA tasks listed in AISC 360, Table N6.1	Observe or Perform as noted (4)
		1705.2.2 Steel Construction Other Than Structural Steel	
		1. Material verification of cold-formed steel deck:	
Y	N	a. Identification markings	Periodic
Y	N	b. Manufacturer's certified test reports	Each submittal
		2. Connection of cold-formed steel deck to supporting structure:	
Y	N	a. Welding	Periodic
Y	N	b. Other fasteners (in accordance with AISC 360,Section N6)	
Y	N	1) Verify fasteners are in conformance with approved submittal	Periodic
Y	N	2) Verify fastener installation is in conformance with approved submittal and manufacturer's recommendations	Periodic
		3. Reinforcing steel	
Y	N	a. Verification of weldability of steel other than ASTM A706	Periodic
Y	N	b. Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, boundary elements of special concrete structural walls and shear reinforcement	Continuous
Y	N	c. Shear reinforcement	Continuous
Y	N	d. Other reinforcing steel	Periodic
		4. Cold-formed steel trusses spanning 60 feet or greater	
Y	N	a. Verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package	Periodic
		1705.3 Concrete Construction	
Y	N	1. Inspection of reinforcing steel installation (see 1705.2.2 for welding)	Periodic.
Y	N	2. Inspection of prestressing steel installation	Periodic
Y	N	3. Inspection of anchors cast in concrete where allowable loads have been increased per section 1908.5 or where strength design is used	Continuous
(Y)	N	4. Inspection of anchors and reinforcing steel post-installed in hardened concrete: Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Periodic or as required by the research report issued by an approved source
Y	N	5. Verify use of approved design mix	Periodic
Y	N	6. Fresh concrete sampling, perform slump and air content tests and determine temperature of concrete	Continuous
Y	N	7. Inspection of concrete and shotcrete placement for proper application techniques	Continuous
Y	N	8. Inspection for maintenance of specified curing temperature and techniques	Periodic
		9. Inspection of prestressed concrete:	
Y	N	a. Application of prestressing force	Continuous
Y	N	b. Grouting of bonded prestressing tendons in the seismic-force-resisting system	Continuous
		10. Erection of precast concrete members	
Y	N	a. Inspect in accordance with construction documents	In accordance with construction documents
Y	N	b. Perform inspections of welding and bolting in accordance with Section 1705.2	In accordance with Section 1705.2
Y	N	11.Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs	Periodic
Y	N	12. Inspection of formwork for shape, lines, location and dimensions	Periodic
Y	N	13. Concrete strength testing and verification of compliance with construction documents	Periodic

Notes:
1. The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional.
2. The list of Special Inspectors may be submitted as a separate document, if noted so above.

3. Special Insepctions as required by Section 1704.2.5 are not required where the fabricator is approved in accordance with IBC Section 1704.2.5.2

4. Observe on a random basis, operations need not be delayed pending these inspections. Perform these tasks for each welded joint, bolted connection, or steel element.

5. NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ. Refer to AISC 360, N7.

CONCRETE AND REINFORCING

1. CONCRETE SHALL CONFORM TO THE INDICATED REFERENCE CODES AND STANDARDS EXCEPT AS MODIFIED BELOW:

   ACI-301 - "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
   ACI-318 - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
   ACI-305R - "HOT WEATHER CONCRETING"
   ACI-306R - "COLD WEATHER CONCRETING"
   ACI-304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"

2. CONCRETE MIX SPECIFICATIONS

LOCATION	COMP. SRENGTH	W/C RATIO	AIR CONTENT	REMARK
FOOTING	3000 PSI (MIN. OF 5.5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE)			
SLAB ON GRADE	3000 PSI (MIN. OF 5.5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE)			
FOUNDATION WALL	3000 PSI (MIN. OF 5.5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE)			
TOPPING	N.A.			

   a. TOTAL AIR CONTENT IS SPECIFIED IN THE TABLE ABOVE. AIR CONTENT TOLERANCE SHALL BE ± 1% AND SHALL BE MEASURED AT THE POINT OF PLACEMENT. (AFTER PUMPING IF APPLICABLE). ALL CONCRETE EXPOSED TO THE WEATHER SHALL HAVE AN APPROVED ADMIXTURE TO ENTRAIN AIR - 5% TOTAL AIR REQUIRED. CONCRETE THAT CAN BE SUBJECTED TO FREEZING AND THAWING DURING CONSTRUCTION SHALL BE AIR ENTRAINED.

3. PROVIDE GRADE 60 KSI (A615) FOR CONCRETE STEEL REINFORCING

REQUIRED? (Y/N)		MATERIAL / ACTIVITY	EXTENT
		1705.4 Masonry Construction	
		(A) Level A, B and C Quality Assurance:	
Y	N	1. Verify compliance with approved submittals	Periodic
		(B) Level B Quality Assurance:	
Y	N	1. Verification of f'm and f'AAC prior to construction	Periodic
		(C) Level C Quality Assurance:	
Y	N	1. Verification of f'm and f'AAC prior to construction and for every 5,000 SF during construction	Periodic
Y	N	2. Verification of proportions of materials in premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout, as delivered to the project site	Continuous
Y	N	3. Verify placement of masonry units	Periodic
		(D) Levels B and C Quality Assurance:	
Y	N	1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project	Continuous
Y	N	2. Verify compliance with approved submittals	Periodic
Y	N	3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons	Periodic
Y	N	4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages	Periodic
Y	N	5. Verify construction of mortar joints	Periodic
Y	N	6. Verify placement of reinforcement, connectors, and prestressing tendons and anchorages	Level B - Periodic Level C - Continuous
Y	N	7. Verify grout space prior to grouting	Level B - Periodic Level C - Continuous
Y	N	8. Verify placement of grout and prestressing grout for bonded tendons	Continuous
Y	N	9. Verify size and location of structural masonry elements	Periodic
Y	N	10. Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.	Level B - Periodic Level C - Continuous
Y	N	11. Verify welding of reinforcement (see 1705.2.2)	Continuous
Y	N	12. Verify preparation, construction, and protestion of masonry during cold weather (temperature below 40oF) or hot weather (temperature above 90oF)	Periodic
Y	N	13. Verify application and measurement of prestressing force	Continuous
Y	N	14. Verify placement of AAC masonry units and construction of thin-bed mortar joints (first 5000 SF of AAC masonry)	Continuous
Y	N	15. Verify placement of AAC masonry units and construction of thin-bed mortar joints (after the first 5000 SF of AAC masonry)	Level B - Periodic Level C - Continuous
Y	N	16. Verify properties of thin-bed mortar for AAC masonry (first 5000 SF of AAC masonry)	Continuous
Y	N	17. Verify properties of thin-bed mortar forAAC masonry (after the first 5000 SF of AAC masonry)	Level B - Periodic Level C - Continuous
Y	N	18. Prepare grout and mortar specimens	Level B - Periodic Level C - Continuous
Y	N	19. Observe preparation of prisms	Level B - Periodic Level C - Continuous
		1705.5 Wood Construction	
Y	N	1. Inspection of the fabrication process of wood structural elements and assemblies in accordance with Section 1704.2.5	Periodic
Y	N	2. For high-load diaphragms, verify grade and thickness of structural panel sheathing agree with approved building plans	Periodic
Y	N	3. For high-load diaphragms, verify nominal size of framing members at adjoining panel edges, nail or staple diameter and length, number of fastener lines, and that spacing between fasteners in each line and at edge margins agree with approved building plans	Periodic
Y	N	4. Metal-plate-connected wood trusses spanning 60 feet or greater: verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package	Periodic
		1705.6 Soils	
		1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	
Y	N	2. Verify excavations are extended to proper depth and have reached proper material.	Periodic
Y	N	3. Perform classification and testing of controlled fill materials.	Periodic
Y	N	4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill	Periodic Continuous
Y	N	5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly	Periodic
		1705.7 Driven Deep Foundations	
Y	N	1. Verify element materials, sizes and lengths comply with requirements	Continuous
Y	N	2. Determine capacities of test elements and conduct additional load tests, as required	Continuous
Y	N	3. Observe driving operations and maintain complete and accurate records for each element	Continuous
Y	N	4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element	Continuous
Y	N	5. For steel elements, perform additional inspections per Section 1705.2	See Section 1705.2
Y	N	6. For concrete elements and concrete-filled elements, perform additional inspections per Section 1705.3	See Section 1705.3
Y	N	7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge	In accordance with construction documents
Y	N	8. Perform additional inspections and tests in accordance with the construction documents	In accordance with construction documents
		1705.8 Cast-in-Place Deep Foundations	
Y	N	1.Observe drilling operations and maintain complete and accurate records for each element	Continuous
Y	N	2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes	Continuous
Y	N	3. For concrete elements, perform additional inspections in accordance with Section 1705.3	See Section 1705.3
Y	N	4. Perform additional inspections and tests in accordance with the construction documents	In accordance with construction documents
		1705.9 Helical Pile Foundations	
Y	N	1. Verify installation equipment, pile dimensions, tip elevations, final depth, final installation torque and other data as required.	Continuous
Y	N	2. Perform additional inspections and tests in accordance with the construction documents	In accordance with construction documents
		1705.10.1 Structural Wood Special Inspections For Wind Resistance	
Y	N	1. Inspection of field gluing operations of elements of the main windforce-resisting system	Continuous
Y	N	2. Inspection of nailing, bolting, anchoring and other fastening of components within the main windforce-resisting system	Periodic
		1705.10.2 Cold-formed Steel Special Inspections For Wind Resistance	
Y	N	1.Inspection during welding operations of elements of the main windforce-resisting system	Periodic
Y	N	2.Inspections for screw attachment, bolting, anchoring and other fastening of components within the main windforce-resisting system	Periodic
		1705.10.3 Wind-resisting Components	
Y	N	1. Roof cladding	Periodic
Y	N	2. Wall cladding	Periodic
Y	N	**1705.11.1 Structural Steel Special Inspections for Seismic Resistance Inspection of structural steel in accordance with AISC 341**	In accordance with AISC 341
		1705.11.2 Structural Wood Special Inspections for Seismic Resistance	
Y	N	1. Inspection of field gluing operations of elements of the seismic-force resisting system	Continuous
Y	N	2. Inspection of nailing, bolting, anchoring and other fastening of components within the seismic-force-resisting system	Periodic
		1705.11.3 Cold-formed Steel Light-Frame Construction Special Inspections for Seismic Resistance	
Y	N	1. Inspection during welding operations of elements of the seismic-force-resisting system	Periodic
Y	N	2. Inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system	Periodic

STRUCTURAL AND MISCELLANEOUS STEEL

STEEL MEMBERS, HARDWARE, FASTENERS SHALL BE HOT DIPPED GALVANIZED OR EPOXY PAINTED PER ARCHITECT REQUIREMENTS. ALL CUT, REPAIRED AND EXPOSED SURFACE SHALL BE PAINTED WITH (2) COAT OF 95% ZINC RICH PAINT PER ASTM A780. COLOR TO MATCH EXISTING.

STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:
- TUBE COLUMNS: ASTM A500, GRADE B (Fy = 46 KSI)
- WIDE FLANGE COLUMNS / BEAMS: ASTM 572 GR50
- STEEL PIPE: SCHEDULE 40, CONFORMING TO ASTM A53, TYPE E OR S, GRADE B (Fy = 35 KSI.)
- ALL OTHER STEEL: ASTM A36 (Fy = 36 KSI) OR ASTM A992
- BOLTS: ASTM A307 (WOOD/STEEL CONN)
- BOLTS: ASTM A325/A490 WITH LOCK WASHERS (STEEL/STEEL AND STEEL/CONC CONN)
- ANCHOR BOLTS: ASTM A307 (WOOD FRAMING)
- ANCHOR BOLTS: ASTM A325 (STEEL FRAMING)

ALL SLIP CRITICAL CONNECTIONS SHALL BE ASTM A325 BOLTS AND SHALL BE ENGINEER-APPROVED, SELF-LOAD INDICATING TYPES, AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

STRUCTURAL STEEL WELDING
CONFORM TO THE AWS CODES D1.1 AND D1.3, AND USE ONLY CERTIFIED WELDERS. WELDS NOT SPECIFIED ARE TO BE 1/4" CONTINUOUS FILLET MINIMUM. INCREASE WELD SIZE TO AWS MINIMUM SIZES, BASED ON PLATE THICKNESS. USE DRY E70 ELECTRODES. ALL WELDING SHALL CONFORM TO THE AWS CODES, AND SHALL BE BY CERTIFIED WELDERS. WELDS NOT SPECIFIED SHALL BE 1/4" CONTINUOUS FILLET MINIMUM. USE DRY E70 ELECTRODES.

DRAWING LIST

SHEET NUMBER	SHEET NAME	ISSUE DATE
S-0	GENERAL NOTES AND SPECIFICATIONS	07-20-22
S-1	FRAMING PLANS	07-20-22
S-2	FRAMING DETAILS	07-20-22
S-3	WSW DETAILS	07-20-22

Grand total: 4

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DRAWING INFO

ISSUE DATE	07-20-22
ISSUED FOR	PERMIT
PROJECT N	22126
ENGINEER	BB

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

GENERAL NOTES AND SPECIFICATIONS

S-0

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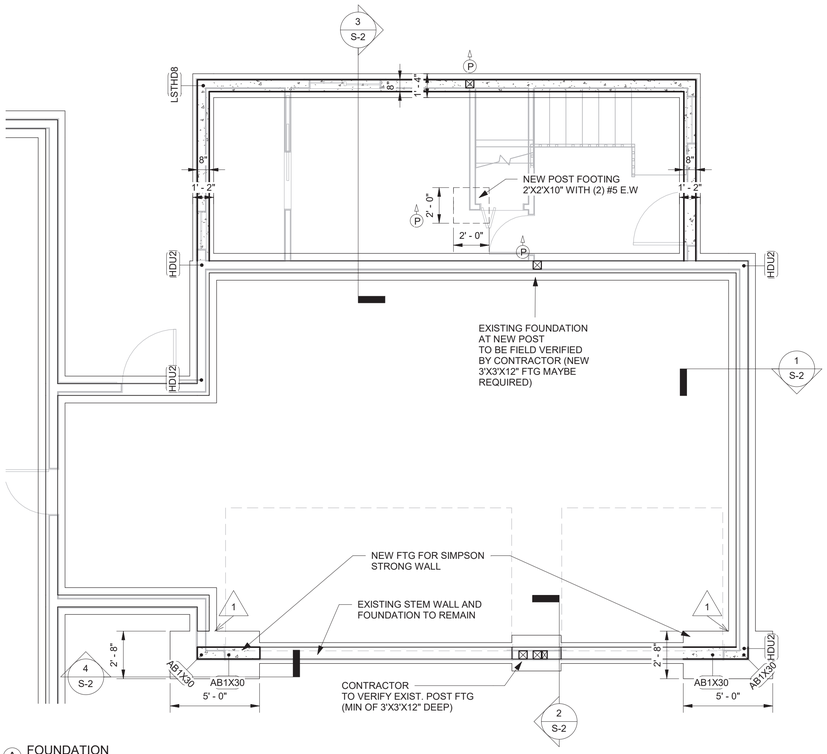
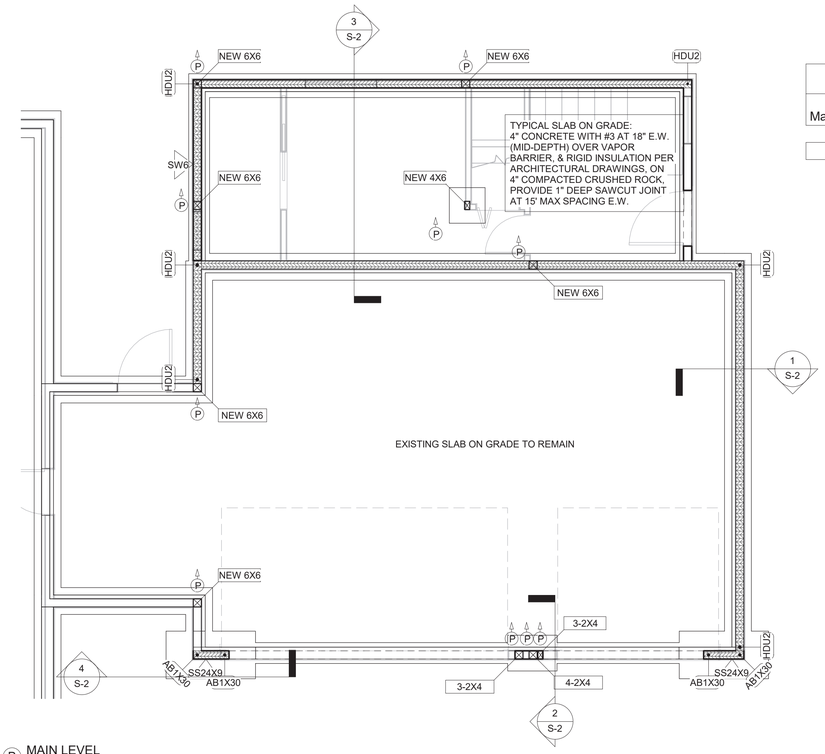
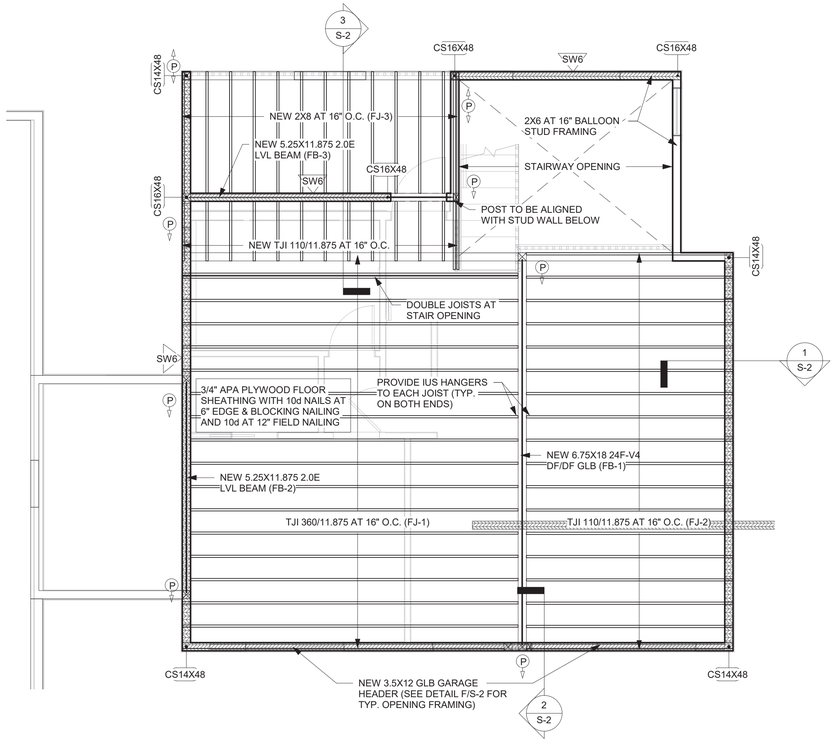


A FOUNDATION
1/4" = 1'-0"

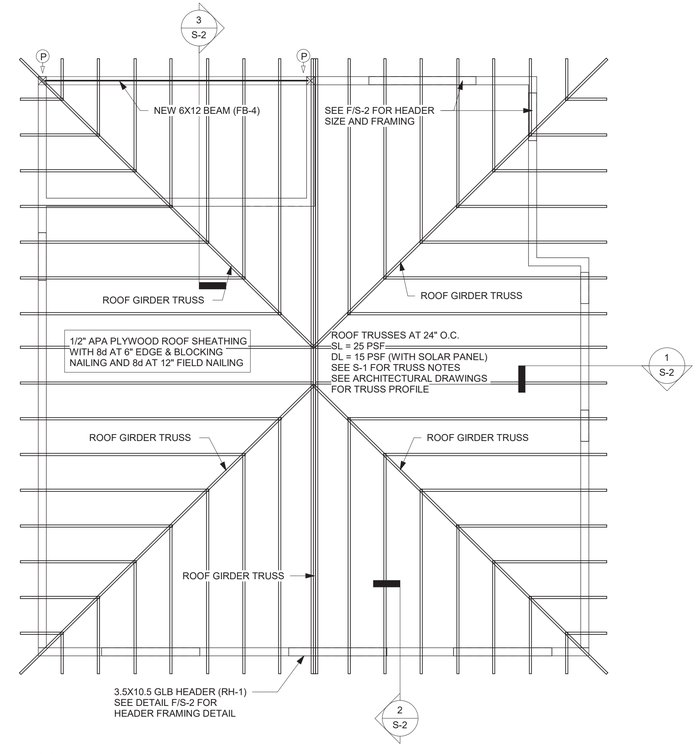


B MAIN LEVEL
1/4" = 1'-0"

FOOTING SCHEDULE						
Mark △	TYPE	WIDTH / DIAMETER	LENGTH / DIAMETER	THICKNESS	COUNT	REINFORCEMENT
1	Footing-Rectangular	2' - 8"	5' - 0"	1' - 0"	2	3 - #4 E.W.



C UPPER LEVEL
1/4" = 1'-0"



D ROOF PLAN
1/4" = 1'-0"

IMPORTANT NOTES ON DRAWING REVIEW, FIELD VERIFICATION, TEMPORARY SHORING AND WATERPROOFING:

1. CONTRACTOR MUST REVIEW STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION & NOTIFY DESIGN TEAM/OWNER OF ANY DISCREPANCY IN COMPARISON WITH ARCHITECTURAL DOCUMENTS OR FIELD CONDITIONS.
2. IN REMODEL/RETROFIT PROJECTS, CONTRACTOR MUST FIELD VERIFY & NOTIFY DESIGN TEAM/OWNER OF EXISTING MECHANICAL, PLUMBING, AND ELECTRICAL LINES THAT MAY INTERFERE WITH STRUCTURAL WORK PRIOR TO CONSTRUCTION. STRUCTURAL DRAWINGS MAY NOT REFLECT ALL EXISTING FRAMING CONDITIONS DUE TO LIMITED AVAILABLE INFORMATION.
3. CONTRACTOR IS SOLELY RESPONSIBLE IN PROVIDING PROPER TEMPORARY SHORING PRIOR TO REMOVING ANY STRUCTURAL ELEMENTS.
4. ENGINEER IS NOT RESPONSIBLE FOR WATERPROOFING SYSTEM OR DETAILS. CONTRACTOR/OWNER SHALL CONSULT WITH QUALIFIED PROFESSIONALS AS REQUIRED

IMPORTANT NOTES ON FOUNDATION AND FRAMING:

1. ALL FOOTINGS SHALL BEAR ON SUITABLE SOIL SUCH AS MIN. OF MEDIUM DENSE NATIVE SOIL OR COMPACTED STRUCTURAL FILL (NO SOFT OR ORGANIC MATERIALS). GEOTECHNICAL ENGINEER MAY BE REQUIRED TO ASSESS EXISTING SOIL CONDITIONS.
2. FOR FRAMING LUMBER TYPES AND GRADES, AND CONCRETE MIX REQUIREMENTS PLEASE SEE S-0
3. FOR PLYWOOD/OSB SHEARWALL SCHEDULE, PLEASE SEE S-XX
4. FOR COMMON HEADER FRAMING DETAIL AND HEADER SIZE, SEE S-XX
5. PROVIDE (2) 2X6 OR (3) 2X4 STUD POSTS AT EACH END OF BEAMS, UNLESS NOTED OTHERWISE ON PLAN
6. SLAB ON GRADE SHALL BE MIN. 4" THICK WITH #3 AT 18" EACH WAY (AT MID-DEPTH) ON 6" COMPACTED CRUSHED ROCK. SAWCUT JOINT (1" DEEP) AT 15 FT MAX. SPACING EACH WAY SHALL BE DONE WITHIN 4 TO 12 HOURS AFTER FINISHING, DEPENDING ON WEATHER.
7. FLOOR SHEATHING SHALL BE 3/4" PLYWOOD OR OSB WITH 10d AT 6" NAILING AT EDGES & BLOCKING AND AT 12" AT FIELD
8. ROOF SHEATHING SHALL BE 1/2" PLYWOOD OR OSB WITH 8d AT 6" NAILING AT EDGES & BLOCKING AND AT 12" AT FIELD

IMPORTANT NOTES ON TRUSS AND LUMBER PACKAGE/LUMBER PACKAGE REVIEW:

1. TRUSS FRAMING LAYOUT SHOWN IS GENERAL CONCEPT ONLY. CONTRACTOR/ TRUSS SUPPLIER MUST SUBMIT TRUSS SHOP DRAWINGS INCLUDING TRUSS TEMPORARY/ PERMANENT BRACING PLANS FOR ENGINEER'S REVIEW
2. TRUSS FRAMING PROFILE/ LAYOUT SHOULD CONFORM TO BOTH STRUCTURAL AND ARCHITECTURAL DRAWINGS. ANY DEVIATIONS SHALL BE APPROVED BY ENGINEER/ ARCHITECT PRIOR TO TRUSS DESIGN WORK.
3. TRUSS DEFLECTION CRITERIAS:
FLOOR/DECK TOTAL LOAD = L/480 — ROOF TOTAL LOAD = L/240
FLOOR/DECK LIVE LOAD = L/600 — ROOF SNOW LOAD = L/300
** MAXIMUM TOTAL LOAD DEFLECTION SHOULD NOT EXCEED 1.0" IN ALL CASES
4. FLOOR/ROOF FRAMING LAYOUT AND CONNECTORS (SUCH AS LUMBER PACKAGE BY SUPPLIERS) MUST BE SUBMITTED FOR ENGINEER'S REVIEW PRIOR TO CONSTRUCTION

FRAMING SYMBOLS:

SS24	SIMPSON WSW WOOD STRONG WALL (24" WIDE)	P	CONTINOUS POST
SW6	PLYWOOD SHEARWALL	P	POST STOPS BELOW THIS FLOOR
A	SHEARWALL HOLDOWN	P	POST STARTS AT THIS FLOOR

LEGEND AND NOTES
1/4" = 1'-0"

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DRAWING INFO

ISSUE DATE	07-20-22
ISSUED FOR	PERMIT
PROJECT N	22126
ENGINEER	BB

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

FRAMING PLANS

S-1

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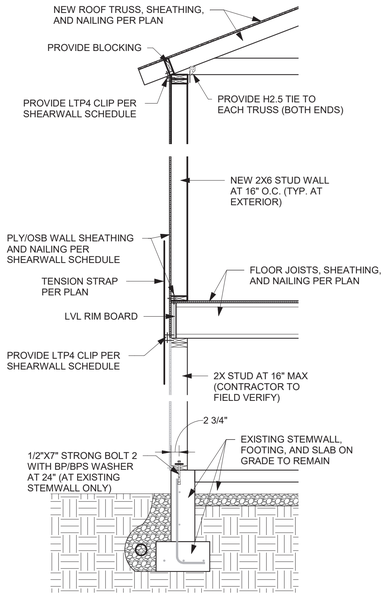
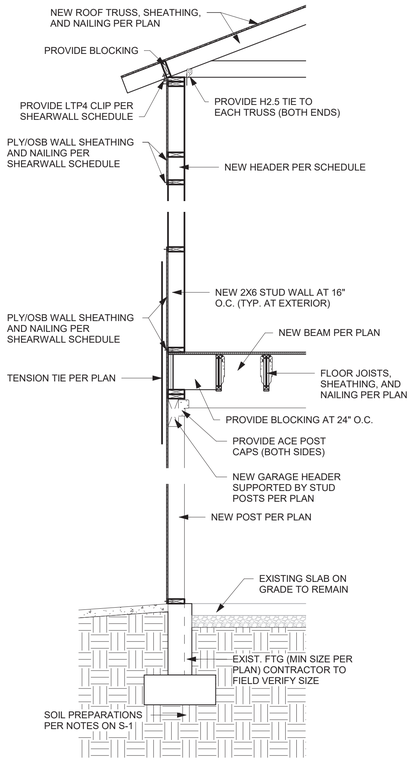
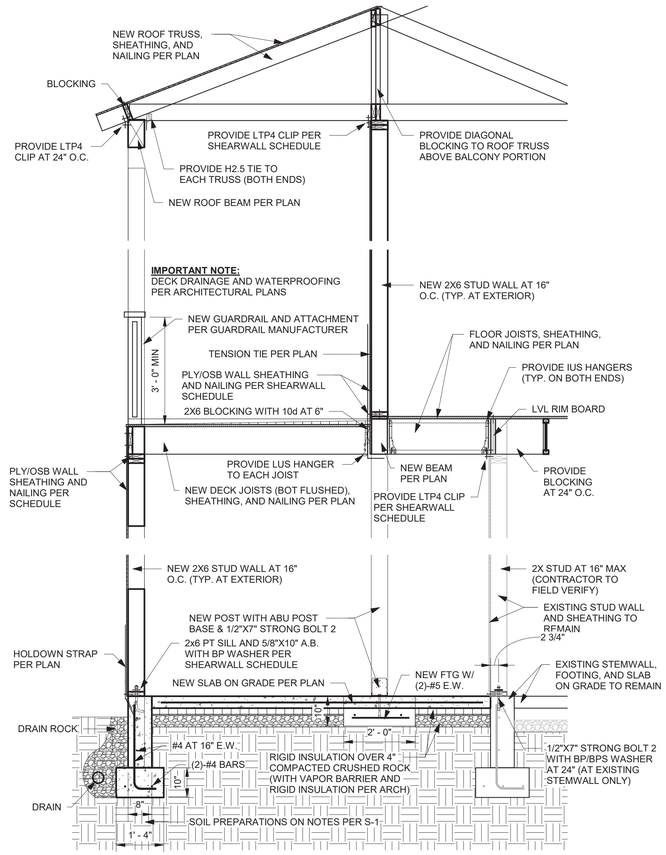


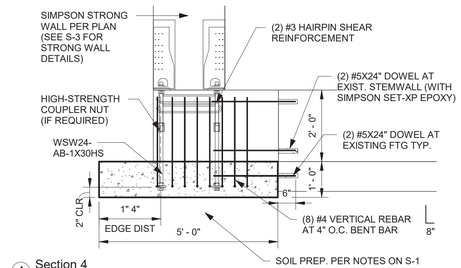
1 Section 1
1/2" = 1'-0"



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



3 Section 3
1/2" = 1'-0"



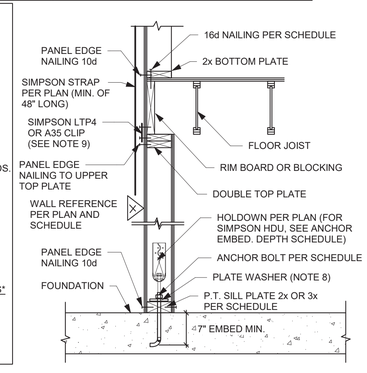
4 Section 4
1/2" = 1'-0"

TYPE	PLYWOOD OR OSB SHEATHING (NOTE 7)	PANEL EDGE NAILING (NOTE 4)	PANEL EDGE STUDS AND BLKG	ANCHOR BOLTS AT SILL PLATE (NOTE 8)	TOP/SILL PLATE TO BLOCKING/ RIM (NOTE 9)	BOTTOM PLATE TO BLOCKING/ RIM (NOTE 4)	CAPACITY (LRFD) (SEISMIC/WIND)
SW6	15/32" PLY/OSB ONE SIDE	10d COM AT 6"	2x	5/8" AT 36" O.C.-2x	SIMPSON LTP4 AT 24" O.C.	16d COM AT 6" O.C.-NARROW	496 PLF/ 696 PLF
SW4	15/32" PLY/OSB ONE SIDE	10d COM AT 4"	2x (SEE NOTE 5)	5/8" AT 24" O.C.-2x	SIMPSON LTP4 AT 16" O.C.	16d COM AT 4" O.C.-NARROW	736 PLF/ 1032 PLF
SW3	15/32" PLY/OSB ONE SIDE	10d COM AT 3"	3x	5/8" AT 18" O.C.-2x	SIMPSON LTP4 AT 12" O.C.	16d COM AT 3" O.C.-WIDE	960 PLF/ 1344 PLF
SW2	15/32" PLY/OSB ONE SIDE	10d COM AT 2"	3x	5/8" AT 12" O.C.-2x	SIMPSON LTP4 AT 8" O.C.	16d COM AT 2" O.C.-WIDE	1232 PLF/ 1724 PLF
SW44	15/32" PLY/OSB TWO SIDES	10d COM AT 4"	2x	5/8" AT 18" O.C.-3x	SIMPSON LTP4 AT 16" O.C. B.S.	(2) 16d COM AT 4" O.C.-WIDE	1472 PLF/ 2064 PLF
SW33	15/32" PLY/OSB TWO SIDES	10d COM AT 3"	3x	5/8" AT 16" O.C.-3x	SIMPSON LTP4 AT 12" O.C. B.S.	(2) 16d COM AT 3" O.C.-WIDE	1920 PLF/ 2688 PLF
SW22	15/32" PLY/OSB TWO SIDES	10d COM AT 2"	3x	5/8"AT 12" O.C.-3x	SIMPSON LTP4 AT 8" O.C. B.S.	(2) 16d COM AT 2" O.C.-WIDE	2464 PLF/ 3448 PLF

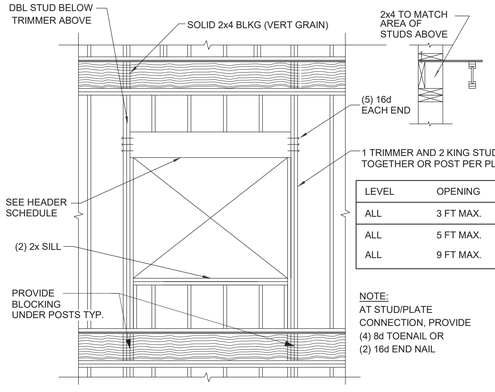
SHEARWALL SCHEDULE NOTES:

1. ALL PANEL EDGES TO OCCUR OVER STUDS, PLATES, RIMS OR HORIZONTAL BLOCKING AT WALLS
2. NAIL SHEATHING TO INTERMEDIATE SUPPORTS/ FIELD NAILING 10d AT 12" O.C.
3. ALL NAILS INTO 3x MEMBERS SHALL BE STAGGERED.
   (2)2x STUDS MAY BE USED IN LIEU OF 3x STUDS AT PANEL JOINTS.
   NAIL STUDS TOGETHER W/2 ROWS 16d COMMON AT 6" O.C. AT SINGLE SIDE SHEATHING AND NAIL WITH 2 ROWS OF 16d COMMON AT 3" O.C. AT DOUBLE SHEATHED WALLS.
4. COM DENOTES COMMON NAILS. MIN. NAIL PENETRATION INTO PLATE, RIM OR BLOCKING SHALL BE 1 5/8". STAGGER BOTTOM PLATE NAILING
5. FOR SHEARWALL SW4, ALL FRAMING MEMBERS RECEIVING EDGE NAILINGS FROM ABUTTING PANELS SHALL BE 3X OR (2) 2X NAILED TOGETHER WITH 16d AT 6"
6. WHERE SHEATHING IS APPLIED TO BOTH SIDES OF WALL, OFFSET PANEL EDGES TO FALL ON DIFFERENT STUDS.
7. PROVIDE SHEAR WALL SHEATHING AND NAILING FOR ENTIRE LENGTH OF WALLS NOTED ON PLAN. PROVIDE HOLDOWNS PER PLAN AT EACH END OF WALL, UNO. PROVIDE (2) 2X STUDS AT ENDS OF ALL SHEARWALL. FACE NAIL MULTIPLE STUDS WITH 16d AT 12" PROVIDE PANEL EDGE NAILING IN EACH HOLDOWN STUD AT END OF WALL.
8. ALL FOUNDATION SILL PLATES SHALL BE PT MEMBERS AND THE ANCHOR BOLTS SHALL HAVE MIN. OF 7" EMBEDMENT WITH SIMPSON'S BP/ BPS WASHER PLATE. END OF WALL ANCHOR BOLTS SHALL BE LOCATED MAX 12" AND MIN 5" FROM END OF THE PLATE.
9. WHERE NOTED IN DETAILS, USE SIMPSON A35 IN LIEU OF LTP4 PLATES SPACE AT 2/3 OF LTP4 SPACING.

SIMPSON HOLDOWN	SIMPSON CAST IN PLACE ANCHOR BOLTS*	SIMPSON EPOXY ALL THREAD ANCHORS*
HDU2	SSTB16 (5/8"ANCHOR WITH 12 5/8" MIN. EMBED.)	5/8" (12" EMBED WITH SET-3G)
HDU4	SB 5/8X 24 (5/8"ANCHOR WITH 18" MIN. EMBED.)	5/8" (14" EMBED WITH SET-3G)
HDU5	SB 5/8X 24 (5/8"ANCHOR WITH 18" MIN. EMBED.)	5/8" (16" EMBED WITH SET-3G)
HDU8	SB 7/8X 24 (7/8"ANCHOR WITH 18" MIN. EMBED.)	
HDU11	SB 1X 30 (1" ANCHOR WITH 24" MIN. EMBED.)	* ALL ANCHORS SHALL BE 2.5" MIN.
HDU14	SB 1X 30 (1" ANCHOR WITH 24" MIN. EMBED.)	FROM EDGE OF CONCRETE WALL



E SHEARWALL SCHEDULE
3/4" = 1'-0"



LEVEL	OPENING	HEADER
ALL	3 FT MAX.	4X8 DF #2 U.N.O.
ALL	5 FT MAX.	4X10 DF #2 U.N.O.
ALL	9 FT MAX.	3.5X10.5 GLB

NOTE:
AT STUD/PLATE CONNECTION, PROVIDE (4) 8d TOENAIL OR (2) 16d END NAIL

F TYP. WALL OPENING FRAMING
3/4" = 1'-0"

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BASRI BASRI STATE OF WASHINGTON 43789 STRUCTURAL ENGINEER PROFESSIONAL ENGINEER

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DRAWING INFO

ISSUE DATE	07-20-22
ISSUED FOR	PERMIT
PROJECT N	22126
ENGINEER	BB

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

FRAMING DETAILS

S-2

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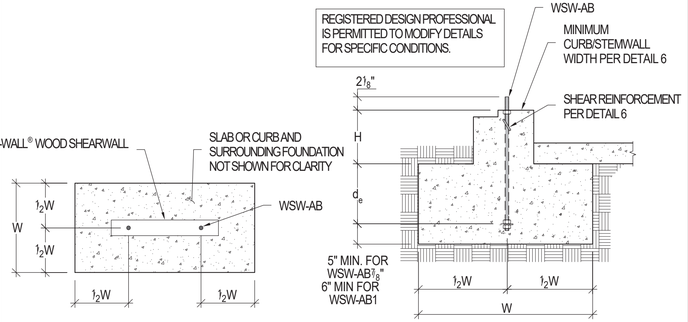
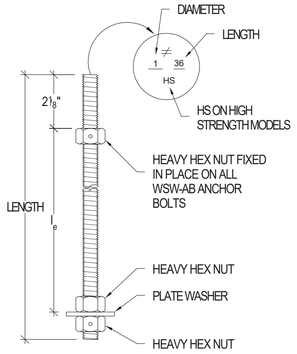


WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE								
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB 7/8 ANCHOR BOLT			WSW-AB1 ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT	W (lbs) (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
			13,100	27	9	17,100	32	11
		HIGH STRENGTH	15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
			13,100	23	8	17,100	28	10
		HIGH STRENGTH	15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

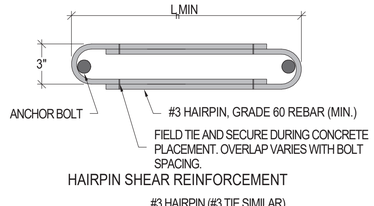
NOTES :
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C-F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO SECTION VIEW FOR d_e

2500 PSI CONCRETE ANCHORAGE SOLUTIONS 4

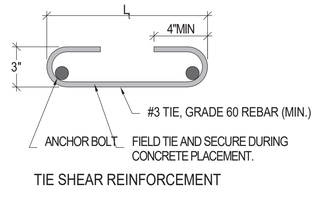


WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

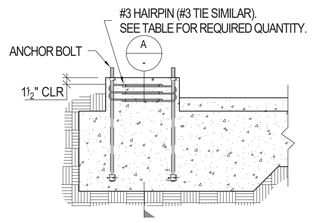
WSW ANCHOR BOLTS 5



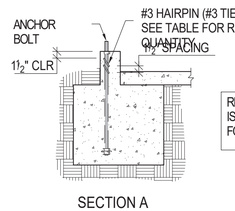
HAIRPIN SHEAR REINFORCEMENT



TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



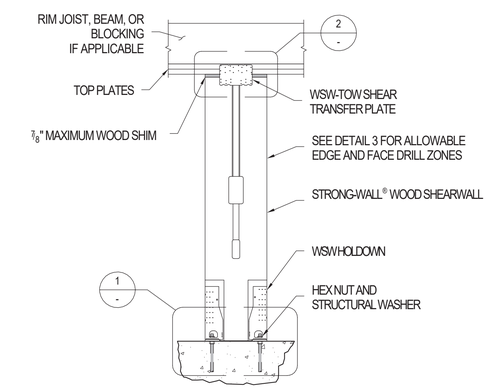
SECTION A

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE							
MODEL	SEISMIC[3]			WIND[4]			
	L_c OR L_w (in.)	SHEAR REINFORCEMENT	MIN. CURB/ STEMWALL WIDTH (in.)	SHEAR REINFORCEMENT	MIN. CURB/ STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD V (lbs.) [6]	
						6" MIN CURB/STEMWALL	
						UNCRACKED	CRACKED
WSW12	10 1/4"	(1) #3 TIE	8[5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6		

NOTES :
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

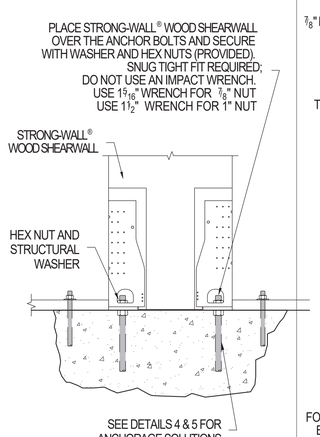
STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS 6



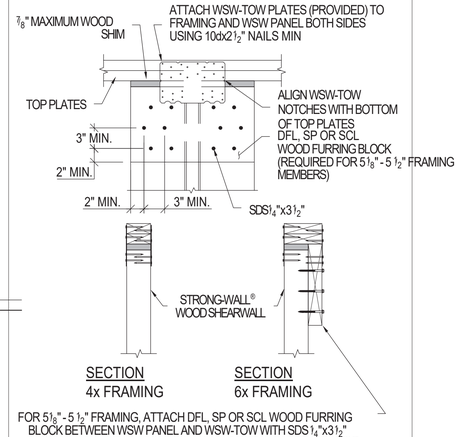
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WSW DESIGNED TO PROVIDE 1/8" GAP BETWEEN LSL AT BASE OF WSW AND CONCRETE. ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSW ON CONCRETE 0

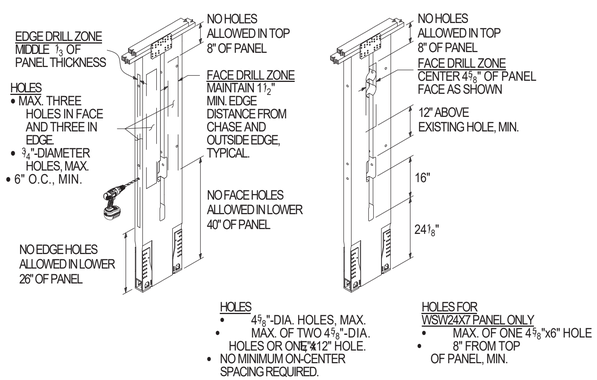


STANDARD INSTALLATION 1



FOR 5 1/8" - 5 1/2" FRAMING, ATTACH DFL, SP OR SCL WOOD FURRING BLOCK BETWEEN WSW PANEL AND WSW-TOW WITH SDS 1/4"x3 1/2" SCREWS (MIN.) OR 16d COMMON NAILS (8 TOTAL FASTENERS FOR WSW12, 10 FOR WSW18 AND 14 FOR WSW24). MINIMUM BLOCK SIZE IS 5 1/2"x11 7/8"x WSW PANEL WIDTH.

STANDARD TOP CONNECTION 2



ALLOWABLE SMALL HOLES
FACE AND EDGE DRILL ZONES

ALLOWABLE LARGE HOLES
IN ADDITION TO ALLOWABLE SMALL HOLES

TRIM ZONE AND ALLOWABLE HOLES 3

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DRAWING INFO

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REVISION SCHEDULE

NO.	DATE	DESCRIPTION

WSW DETAILS

S-3

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