8 VICINITY MAP

SCALE: NTS

CITY OF MERCER ISLAND

Chapter 19.02 RESIDENTIAL DEVELOPMENT REGULATIONS SUMMARY

ZONE:	R-15
MIN. LOT SIZE:	15,000 Square Feet (SF)
MIN. LOT WIDTH:	90 Feet (FT)
MIN. LOT DEPTH:	80 FT
MIN. FRONT YARD:	20 FT (10 FT for accessory structures per MICC 19.02.040)
MIN. REAR YARD:	25 FT
MIN. SIDE YARD:	Lot width is 100'; 17% or 17' is cumulative required side yards; min. 5 FT.
MAX. LOT COVERAGE:	Maximum Impervious Surface Limits for Lots; Sites with slopes between 15% to less than 30% maximum coverage = 35% 18,616 x .35% = 6,515 sf
GROSS FLOOR AREA:	MICC 19.02.020: 12,000 – or 40%: 18,616X.40 = 7,446 (max gross floor area allowed) 5433 Proposed
MAX. NO. OF STORIES:	3
BUILDING HEIGHT:	30' from base elevation, 30' max downhill facade
MAX. PROJECTIONS INTO YARDS:	18 Inches

Land clearing, grading, filling, and foundation work are not permitted between October 1st and April 1st on lots such as this one due to the geologic hazards (erosion, potential slide) per MICC 19.07.020. Any work that is proposed during the wet season must submit a Seasonal Development Limitation Waiver for approval by the Building Official.

1

6 ZONING INFO

PROPERTY ADDRESS

8243 W. Mercer Way
Mercer Island, WA 98040

OWNER

HU WEN + LI CHINAN
c/o Mei Young
11900 NE 1st Street, Suite 3083
Bellevue, WA 98005

CITY OF MERCER ISLAND PROJECT NUMBER:

Project Number: PRE-010 (Pre-application meeting project number).

TAX PARCEL NUMBERS:

3358500454

LEGAL DESCRIPTION:

TRACTS 498, 499, 500, 501 AND 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON;
EXCEPT THAT PORTION OF SAID TRACT 574 LYING NORTHEASTERLY OF A LINE PARALLEL WITH AND DISTANT 270 FEET FROM (AS MEASURED AT RIGHT ANGLES TO) THE SOUTHWESTERLY LINE OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60 FEET); TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING; AND TOGETHER WITH ANY UNPLATTED UPLANDS, LYING BETWEEN SAID TRACTS AND THE SHORELANDS ADJOINING;
ALSO TOGETHER WITH THE NORTHEASTERLY 270 FEET OF THAT PORTION OF TRACT 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON, LYING SOUTHWESTERLY OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60 FEET), EXCEPT THE NORTHEASTERLY 150 FEET OF THE SOUTHEASTERLY 80 FEET THEREOF.

DESCRIPTION:

NEW SINGLE FAMILY HOME ON EXISTING VACANT LOT. EXISTING LOT IS APPROXIMATELY 18,616 SQUARE FEET AND THE PROPOSED SINGLE FAMILY HOME IS 3 LEVELS WITH APPROXIMATELY 5433 GROSS SQUARE FEET.

4 GENERAL PROJECT INFO

7 CONCEPTUAL VIEW

OWNER

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email: mei@myirealestate.com

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CIVIL ENGINEER

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SURVEYOR

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Terrane
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ARBORIST

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2 DIRECTORY OF CONTACTS

INDEX	ARCHITECTURAL	DATE OF LAST ISSUANCE
T-1.01	PROJECT OVERVIEW	10/18/19
T-1.02	PROJECT NOTES	10/18/19
1 of 1	SURVEY	10/18/19
A-1.00	SITE PLAN	10/18/19
A-1.01	STEEP SLOPE PLAN	10/18/19
A-1.02	TREE PLAN	10/18/19
A-1.03	HARDSCAPE & COVERAGE	10/18/19
A-2.00	FOUNDATION PLAN	10/18/19
A-2.01	FLOOR PLAN - BASEMENT	10/18/19
A-2.02	FLOOR PLAN - MAIN	10/18/19
A-2.03	FLOOR PLAN - SECOND	10/18/19
A-2.04	ROOF PLAN	10/18/19
A-4.01	ELEVATIONS - EAST & WEST	10/18/19
A-4.02	ELEVATIONS - NORTH & SOUTH	10/18/19
A-5.01	SECTION A-A	10/18/19
A-5.02	SECTION B-B	10/18/19
A-5.03	SECTION D-D	10/18/19
A-6.01	SCHEDULES	10/18/19
A-6.02	ENERGY CODE	10/18/19
A-7.01	DETAILS	10/18/19
A-7.02	DETAILS - STAIRS	10/18/19
A-7.03	DETAILS - WEATHERPROOFING	10/18/19
A-7.04	DETAILS - MANUFACTURERS	10/18/19

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S-0	GENERAL NOTES	10/18/19
S-1	FOUNDATION PLAN	10/18/19
S-2	BASEMENT FLOOR FRAMING	10/18/19
S-3	BASEMENT SHEAR WALLS, HOLDOWNS, AND STRUCTURE	10/18/19
S-4	MAIN FLOOR FRAMING	10/18/19
S-5	MAIN FLOOR SHEAR WALLS, HOLDOWNS, AND STRUCTURE	10/18/19
S-6	SECOND FLOOR FRAMING	10/18/19
S-7	SECOND FLOOR SHEAR WALLS, HOLDOWNS, AND STRUCTURE	10/18/19
S-8	ROOF FRAMING	10/18/19
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SD-2	STRUCTURAL DETAILS	10/18/19
SD-3	STRUCTURAL DETAILS	10/18/19

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C-1	T.E.S.C. PLAN	10/09/19
C-2	T.E.S.C. PLAN	10/09/19
C-3	DRAINAGE PLAN	10/09/19
C-4	DRAINAGE PLAN	10/09/19
C-5	DETAILS	10/09/19

INDEX	ARBORIST	DATE OF LAST ISSUANCE
W-1	PLANTING PLAN AND DETAILS	08/15/19

INDEX	GARAGE STRUCTURAL	DATE OF LAST ISSUANCE
S-1.01	STRUCTURAL NOTES	09/17/19
S-2.01	GARAGE FOUNDATION PLAN	09/17/19
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S-6.01	TYPICAL CONCRETE DETAILS	09/17/19

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SS2.0	SHORING & EXCAVATION PLAN	09/17/19
SS3.0	SHORING ELEVATIONS	09/17/19
SS4.0	SHORING DETAILS	09/17/19

1 DRAWING INDEX

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REGISTERED ARCHITECT
Peter Bocek
5614
STATE OF WASHINGTON

WEN HU RESIDENCE

8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

	DATE	DESCRIPTION
1	12JUL2019	SUBMITTAL SET REV'S
2	18OCT2019	SUB. SET REV S-7
3		
4		
5		

PROJECT RELEASE

	DATE	DESCRIPTION	DATE	DESCRIPTION
1	15SEP17	PRELIM		
2	12MAR2018	PRE-APP REVIEW		
3	30MAY2018	90% REVIEW		
4	12JUL2019	SUBMITTAL REVISIONS		
5	18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

1				
2				
3				
4				
5				

T-1.01

PROJECT OVERVIEW

GENERAL NOTES

1. BUILDING CODE: INTERNATIONAL RESIDENTIAL CODE (IRC) 2015. ALL WORK SHALL COMPLY WITH THE APPLICABLE CODES FOR CITY, COUNTY, AND STATE.
2. UNDER SEPARATE PERMIT:
    - MECHANICAL
    - PLUMBING
    - ELECTRICAL
3. SPECIAL INSPECTIONS:
    - PER CITY REQUIREMENTS
    - PER GEOTECHNICAL REPORT REQUIREMENTS
    - PER STRUCTURAL REQUIREMENTS.
4. THE CONSTRUCTION DOCUMENTS, OF WHICH THESE DRAWINGS ARE A PART OF, ARE CONCEPTUAL IN NATURE. THEY SCHEMATICALLY INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER OF RECORD. THE CONSTRUCTION DOCUMENTS ARE NOT INTENDED TO BE A COMPLETE SET OF INSTRUCTIONS ON HOW TO CONSTRUCT THE BUILDING.
5. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ACCURACY OF THE ENGINEERING DATA SUPPLIED BY OTHERS.
6. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS AMONG ALL DRAWINGS PRIOR TO CONSTRUCTION. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED LENGTHS AND HEIGHTS.
7. IN THE EVENT OF DISCREPANCIES OR CONTRADICTORY INFORMATION ON THE DRAWINGS OR IN THE NOTES OR IN THE SPECIFICATIONS OR ANY OTHER PORTIONS OF THE CONSTRUCTION DOCUMENTS, IT IS THE OBLIGATION OF THE CONTRACTOR TO NOTIFY THE ARCHITECT OF THE DISCREPANCIES AND TO OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK.
8. ALL CONTRACT DOCUMENTS ARE TO BE CONSIDERED AND INTERPRETED FOR BIDDING AND CONSTRUCTION PURPOSES AS A COMPLETE WHOLE. NO PART OF THE CONTRACT DOCUMENTS SHALL BE DISTRIBUTED, CONSIDERED OR USED IN ANY WAY INDEPENDENT OF THE COMPLETE SET OF DOCUMENTS.
9. THE ARCHITECT SHALL HAVE FINAL AUTHORITY WITH REGARDS TO INTERPRETATION OF THE INTENT AND SPIRIT OF THE CONTRACT DOCUMENTS.
10. WHEN USED IN THESE DOCUMENTS, THE TERM "ALIGN" MEANS TO ACCURATELY CONSTRUCT SO THAT THE FINISHED SURFACES ARE IN THE SAME PLANE. THE TERM "TYPICAL", ABBREVIATED "TYP.", MEANS THAT THE CONDITION IS REPRESENTATIVE OF OTHER CONDITIONS ON THE PROJECT. THE TERM "SIMILAR", ABBREVIATED "SIM.", MEANS THAT THE CONDITION IS COMPARABLE TO THE CONDITION REFERENCED. SEE THE PLANS, ELEVATIONS, AND SECTIONS FOR ACTUAL DIMENSIONS, LOCATION AND ORIENTATION. THE TERM "PROVIDE" MEANS TO SUPPLY, INSTALL, AND FINISH A PRODUCT OR MATERIAL IN ITS ENTIRETY. THE TERM "SUBMIT" MEANS TO SUBMIT ITEM FOR REVIEW AND APPROVAL PRIOR TO ORDERING, MANUFACTURING, OR INSTALLING THAT ITEM.
11. THE CONTRACTOR SHALL CONSIDER THE GEOTECHNICAL REPORT (WHERE APPLICABLE) AS A PART OF THE CONTRACT DOCUMENTS AND SHALL REVIEW AND FOLLOW ALL RECOMMENDATIONS AND REQUIREMENTS SET FORTH IN THE REPORT. IN THE EVENT THAT THERE ARE CONFLICTING REQUIREMENTS BETWEEN THE GEOTECHNICAL REPORT AND THE PLANS, DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING AND AWAIT THE ARCHITECT'S DIRECTION PRIOR TO PROCEEDING WITH THE WORK. ARCHITECTS ASSUMES NO RESPONSIBILITY AS TO WHAT THE PHYSICAL PROPERTIES AND CHARACTERISTICS OF THE SOILS ARE ON THE SITE. THIS ARCHITECT ASSUMES THAT ALL INFORMATION PROVIDED BY OTHER PROFESSIONALS IS CORRECT AND ACCURATE.
    A. COVER WITH PLASTIC, CUT SLOPES AND SOIL STOCKPILES DURING WET WEATHER.
    B. CONTRACTOR TO MONITOR ADJACENT STRUCTURES DURING CONSTRUCTION TO DETECT SOIL MOVEMENTS.
    C. WHERE REQUIRED THE GEOTECH ENGINEER SHALL PROVIDE GEOTECHNICAL CONSULTATION, TESTING, AND OBSERVATION SERVICES DURING CONSTRUCTION. GEOTECH IS CONTRACTED WITH OWNER AND OWNER IS RESPONSIBLE FOR PAYMENT OF GEOTECH'S FEES.
    D. IF SOILS ARE FOUND TO BE OTHER THAN INDICATED IN THE GEOTECHNICAL REPORT OR ASSUMED CONDITIONS, NOTIFY THE ARCHITECT, GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.
    E. SILT FENCING, TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES, TREE PROTECTION FENCING AND STEEP SLOPE/SENSITIVE AREA PROTECTION FENCING PER LOCAL STANDARDS. CONTRACTOR SHALL MAINTAIN EROSION CONTROL SYSTEM FOR DURATION OF CONSTRUCTION.
    F. CLEARING AND GRUBBING, AS REQUIRED PER SITE PLAN. SELECTIVE PROTECTION OF EXISTING SIGNIFICANT TREES, PER OWNER. COORDINATE WITH OWNER PRIOR TO CLEARING AND GRUBBING. PROTECT EXISTING TREES DURING THE COURSE OF CONSTRUCTION.
    G. PROVIDE EXCAVATION, FREE-DRAINING BACKFILL AND FILL MATERIALS AS REQUIRED. BACKFILL SUB-GRADE TO 12" BELOW FINISH GRADE UNLESS NOTED OTHERWISE. ALL STRUCTURAL BACKFILL SHALL BE IMPORTED, UNLESS OTHERWISE ALLOWED BY GEOTECH ENGINEER.
    H. EXCAVATION BASED ON DRAWINGS. NOTE ANY REQUIRED OVER-EXCAVATION REQUIRED FOR STANDARD HOUSE FOUNDATION WALLS/FOOTINGS PER THE SOILS REPORT, DEPTHS FOR OVER-EXCAVATION BASED ON SOILS REPORT BORING FINDINGS.
12. THE CONTRACTOR SHALL ASSUME THAT THE SAME FINISH MATERIAL SHALL BE USED FOR ALL SURROUNDING, ABUTTING, AND ADJOINING SURFACES FOR AREAS AND ITEMS NOTED ON THE DRAWINGS, INCLUDING BUT NOT LIMITED TO THE INTERIOR ELEVATIONS AND DETAILS, UNLESS NOTED OTHERWISE. AT NO TIME SHALL THE CONTRACTOR CONSIDER, BID OR INSTALL A DIFFERENT MATERIAL OR A MATERIAL OF LESSER QUALITY OR TYPE THAN THAT WHICH IS INDICATED ON THE DRAWINGS, SPECIFICATION SHEET OR THE PROJECT MANUAL. IN THE EVENT THAT THERE ARE CONFLICTING REQUIREMENTS OR QUESTIONS RELATING TO THE SPECIFIC MATERIALS TO BE USED OR THE INTERFACE WITH ADJOINING MATERIALS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING AND AWAIT THE ARCHITECT'S DIRECTION PRIOR TO BIDDING AND PROCEEDING WITH THE WORK.
13. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED TO PERFORM THE WORK.
14. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
15. THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND SHORING DURING CONSTRUCTION, AS WELL AS ALL SAFETY PRECAUTIONS. THE CONTRACTOR SHALL COMPLY WITH ALL O.S.H.A. AND W.I.S.H.A. HEALTH AND SAFETY STANDARDS.
16. THE CONTRACTOR SHALL MAKE AVAILABLE THE JOB SITE, THE BUILDING UNDER CONSTRUCTION, AND ALL RELATED STRUCTURES AND AREAS TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD AND THE OWNER OR THEIR ASSIGNED REPRESENTATIVES AT ALL TIMES DURING THE NORMAL AND ACCEPTED WORK DAY.
17. THE CONTRACTOR SHALL COORDINATE ALL SUB-CONTRACTORS AND WORK FOR THE PROJECT IN SUCH A METHOD AS TO ALLOW CONSISTENT AND REASONABLE PROGRESS TOWARDS COMPLETION OF THE PROJECT IN A TIMELY MANNER AND TO MEET ALL THE REQUIREMENTS OF THESE DOCUMENTS AND APPLICABLE CODES.
18. ALL DIMENSIONS ARE TO FACE OF STUDS OR CONCRETE UNLESS INDICATED OTHERWISE ON THE PLANS. WINDOWS AND DOORS ARE DIMENSIONED TO THE CENTER OF THE OPENING UNLESS NOTED OTHERWISE.
19. SITE DRAINAGE SHALL CONFORM TO ALL LOCAL REGULATIONS, CODES AND ORDINANCES AND TO APPLICABLE IBC/IRC CODES. ALL ROOF DRAINS, FOUNDATION DRAINS AND SITE DRAINAGE SYSTEMS TO BE TIGHT-LINED UNDERGROUND TO THE MUNICIPAL STORM SEWER OR AN APPROVED STORM WATER COLLECTION SYSTEM WHEN MUNICIPAL STORM SEWERS ARE NOT AVAILABLE OR WHEN LOCAL REGULATIONS REQUIRE. DO NOT CONNECT THE ROOF DRAINS OR OTHER SITE DRAINAGE SYSTEMS TO THE FOUNDATION AND RETAINING WALL PERIMETER FOOTING DRAINS. FINISH GRADING TO HAVE A POSITIVE SLOPE AWAY FROM THE BUILDING AND SHALL FALL A MINIMUM OF 6" WITHIN THE FIRST 10'-0". ALL SITE HARD SURFACES TO HAVE A MINIMUM SLOPE TO DRAINAGE SYSTEMS OF ¼" PER FOOT FOR ASPHALT AND 1/8"PER FOOT FOR CONCRETE UNLESS NOTED OTHERWISE ON THE PLANS.
20. PROVIDE CONTINUOUS 6" ROUND RIGID PERFORATED PERIMETER FOOTING DRAIN IN GRAVEL FILL WITH FILTER FABRIC WRAP AT THE EXTERIOR FACE OF ALL FOUNDATION WALL FOOTINGS. LOCATE THE BOTTOM OF THE DRAINPIPE AT THE LOWEST POINT OF WALL FOOTING AND INSTALL PER THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND THE PLANS AND DRAWINGS. IN THE EVENT THAT THERE ARE CONFLICTING REQUIREMENTS IN THE GEOTECHNICAL REPORT AND THESE DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING AND AWAIT THE ARCHITECT'S DIRECTION PRIOR TO PROCEEDING WITH THE WORK. AS A MINIMUM, ALL WORK SHALL CONFORM TO APPLICABLE IBC/IRC CODES. PROVIDE CAPPED 4" CLEANOUT RISERS TO DAYLIGHT AT FINISHED GRADE AS REQUIRED BY LOCAL MUNICIPAL REGULATIONS AND CODE. WHEN LOCAL REGULATIONS DO NOT DICTATE CLEANOUT REQUIREMENTS, PROVIDE CLEANOUTS AT REGULAR INTERVALS, BUT DO NOT EXCEED 180 DEGREES OF BENDS BETWEEN CLEANOUTS. TIGHT-LINE ALL THE PERIMETER DRAINS TO THE MUNICIPAL STORM SEWER SYSTEM OR TO AN APPROVED DISCHARGE WHEN STORM SEWERS ARE NOT AVAILABLE OR WHEN LOCAL REGULATIONS REQUIRE - SEE GENERAL NOTE #16. DO NOT CONNECT THE PERIMETER DRAIN OR PERIMETER DRAIN TIGHT LINE TO ANY OTHER DRAINAGE TIGHT LINES OR SITE DRAINAGE SYSTEMS.
21. CONNECT ALL DOWNSPOUTS AND ROOF DRAINAGE LINES TO A 6" ROUND RIGID ROOF DRAIN TIGHT-LINE. CONNECT THE TIGHT-LINE TO THE MUNICIPAL STORM SEWER SYSTEM OR TO AN APPROVED DISCHARGE WHEN STORM SEWERS ARE NOT AVAILABLE OR WHEN LOCAL REGULATIONS REQUIRE- SEE GENERAL NOTE #16. PROVIDE CAPPED RISERS AT ALL DOWNSPOUTS AND ROOF DRAINAGE LINES. SEE THE DRAWINGS FOR DOWNSPOUT (DS) LOCATIONS. DO NOT INTERCONNECT THE ROOF DRAINAGE TIGHT-LINE WITH ANY OTHER DRAINAGE TIGHT LINES OR SITE DRAINAGE SYSTEMS.
22. PROVIDE A 6" THICK LAYER OF COMPACTED GRAVEL FILL, SUCH AS CRUSHED ROCK, UNDER ALL INTERIOR CONCRETE SLAB-ON-GRADE FLOORS. PROVIDE A 6 MIL VAPOR RETARDER OVER THE GRAVEL FILL. PROTECT THE VAPOR RETARDER FROM PERFORATION AND DAMAGE. PROVIDE A 4" THICK LAYER OF COMPACTED GRAVEL FILL UNDER ALL EXTERIOR CONCRETE SLABS WHERE MOTOR VEHICLES ARE NOT NORMALLY PARKED OR DRIVEN ON. FOR MOTOR COURTS, DRIVEWAYS, VEHICLE PARKING AREAS AND ALL OTHER EXTERIOR CONCRETE SLABS WHERE MOTOR VEHICLES MAY BE USED, PROVIDE A 6" THICK LAYER OF COMPACTED GRAVEL FILL UNDER THE CONCRETE SLAB.
23. APPROVED GRAVEL FILL CONSISTS OF WASHED, CLEAN, FREE DRAINING GRAVEL RANGING FROM 1/4" TO 3/4" IN SIZE, UNLESS NOTED OTHERWISE IN GEOTECHNICAL REPORT.
24. APPLY WATERPROOFING TO THE EXTERIOR OF ALL CONCRETE FOUNDATION WALLS FROM TOP OF FOOTING TO FINISH GRADE. UNLESS NOTED OTHERWISE, WATERPROOFING SHALL BE "GREYWALL", MANUFACTURED BY RUBBER POLYMER CORPORATION OR EQUAL.
25. ALL EXTERIOR FRAME WALLS TO BE 2X6 STUDS AT 16" O.C. PER THE STRUCTURAL NOTES OF THESE DOCUMENTS, UNLESS NOTED OTHERWISE.
26. WOOD FRAMED FLOOR SYSTEMS THAT SPAN OVER CRAWL SPACES, UNEXCAVATED AREAS, OR OTHER AREAS OF EXPOSED GROUND WITHIN THE PERIPHERY OF THE BUILDING FOUNDATION SHALL MAINTAIN THE FOLLOWING MINIMUM CLEARANCES FROM THE BOTTOM OF THE WOOD MEMBER TO THE GROUND: JOISTS- 18" CLEAR; BEAMS OR GIRDERS- 12" CLEAR.
27. EXTERIOR WOOD FRAMED TRELLISES AND OTHER WOOD FRAMED STRUCTURES EXPOSED TO WEATHER SHALL BE CONSTRUCTED OF CEDAR, REDWOOD, OR PRESSURE TREATED (P.T.) LUMBER. P.T. LUMBER TO CONFORM TO CURRENT AMERICAN WOOD PRESERVERS INSTITUTE STANDARDS. THIS INCLUDES ALL PLYWOOD, TRUSSES, SAWN MEMBERS, GLUE-LAMINATED MEMBERS, ETC., UNLESS NOTED OTHERWISE. ALL NAILS AND CONNECTORS SHALL BE HEAVY COAT GALVANIZED. CUT ENDS OF P.T. MEMBERS TO BE PAINTED WITH AN APPROVED PRESERVATIVE PER AWPA SPECIFICATION M-4.
28. WOOD IN DIRECT CONTACT WITH CONCRETE TO BE PRESSURE TREATED (P.T.). PRESSURE TREAT WITH .25#/CF PENTACHLOROPHENOL PER CURRENT AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARDS. PAINT OR DIP, WITH AN APPROVED PRESERVATIVE, ALL CUT ENDS OR FACES OF P.T. MEMBERS THAT ARE IN DIRECT CONTACT WITH CONCRETE OR EXPOSED TO WEATHER PER AWPA SPECIFICATION M-4. THIS REQUIREMENT INCLUDES ALL CRAWL SPACE POSTS THAT ARE CONNECTED TO THEIR FOOTINGS WITH POST BASES.
29. PROVIDE FIREBLOCKING IN CONCEALED SPACES OF WALLS INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS VERTICALLY AT THE CEILING AND FLOOR LEVEL AND AT 10'-0" O.C. INTERVALS HORIZONTALLY. FIREBLOCK BETWEEN ALL INTERCONNECTIONS OF CONCEALED VERTICAL AND HORIZONTAL SPACES. FIREBLOCK IN OPENINGS AROUND VENTS, PIPES AND DUCTS AT CEILING AND FLOOR LEVELS WITH APPROVED MATERIALS. FIREBLOCK CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF RUN. FIREBLOCK ALL SPACES BETWEEN CHIMNEYS AND THE FLOORS AND CEILINGS THROUGH WHICH THE CHIMNEYS PASS WITH NONCOMBUSTIBLE MATERIAL FASTENED SECURELY IN PLACE. ALL MATERIALS USED FOR FIREBLOCKING SHALL CONFORM TO APPLICABLE IBC/IRC CODES.
30. PROVIDE A MINIMUM OF 1-HOUR OCCUPANCY SEPARATION BETWEEN THE HABITABLE SPACES OF THE HOUSE AND THE GARAGE. SUCH SEPARATION AT WALLS SHALL CONSIST OF ONE LAYER OF 5/8" THICK TYPE X GWB, TAPED AND FINISHED, ON THE GARAGE SIDE OF THE COMMON WALL TO EXTEND FROM THE TOP OF THE GARAGE CONCRETE SLAB OR FOUNDATION TO THE BOTTOM OF THE PROTECTED CEILING ASSEMBLY OR BOTTOM OF THE ROOF SHEATHING UNLESS NOTED OTHERWISE ON THESE DRAWINGS. SCREW GWB TO STUDS (@ 16" O.C.) WITH 1\4" TYPE W DRYWALL SCREWS SPACED@ 12" O.C.- STAGGER PANEL JOINTS. WALL ASSEMBLY SHALL MEET GYPSUM ASSOCIATION FILE #WP 3514 REQUIREMENT. THE PROTECTED CEILING ASSEMBLY SHALL CONSIST OF (2) LAYERS OF 5/8" THICK TYPE X GWB APPLIED PERPENDICULAR TO TRUSSES/FRAMING WITH ALL JOINTS BETWEEN LAYERS OFFSET 24". ATTACH BASE LAYER WITH 1-1/4" TYPE W OR S DRYWALL SCREWS @ 12" O.C.. ATTACH FACE LAYER WITH 1" TYPE S DRYWALL SCREWS @ 12" O.C. IN ADDITION, 1-1/2" TYPE G DRYWALL SCREWS SPACED 12" O.C. SHALL BE PLACED 2" BACK FROM EACH SIDE OF FACE LAYER END JOINT. CEILING ASSEMBLY SHALL MEET GYPSUM ASSOCIATION FILE #FC 5406. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS AND CEILINGS OF THE GARAGE THAT SEPARATE THE GARAGE FROM THE DWELLING UNIT SHALL BE CONSTRUCTED OF A MINIMUM OF 26 GAGE SHEET METAL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.
31. PROVIDE A MINIMUM 1-HOUR OCCUPANCY SEPARATION ON ALL WALLS AND CEILINGS IN SPACES UNDERNEATH STAIRWAYS. SUCH SEPARATION TO CONSIST OF5/8" TYPE X GWB, TAPED AND FINISHED, ON THE UNDER-STAIR SIDE OF THE WALLS AND CEILINGS. STUDS TO BE A MAXIMUM OF 16" O.C.. SCREW GWB TO STUDS (@ 16" O.C.) WITH 1V." TYPE W DRYWALL SCREWS SPACED@ 12" O.C. - STAGGER PANEL JOINTS. WALL ASSEMBLY SHALL CONFORM TO THE REQUIREMENTS OF THE GYPSUM ASSOCIATION FILE #WP 3514.
32. PROVIDE A 20-MINUTE RATED DOOR WITH WEATHER-STRIPPING AND SMOKE SEALED THRESHOLD BETWEEN THE HABITABLE SPACES OF THE HOUSE AND THE GARAGE.
33. IN BASEMENTS, GARAGES, MECHANICAL ROOMS OR OTHER AREAS SUSCEPTIBLE TO MOISTURE INTRUSION, HOLD G.W.B. A MINIMUM OF ¾" OFF OF CONCRETE SLABS ON GRADE OR FINISHED FLOORS.
34. ALL UNDER FLOOR AREAS WITHIN THE PERIPHERY OF THE FOUNDATION SHALL BE ACCESSIBLE BY AN UNOBSTRUCTED MINIMUM CLEAR OPENING OF 18" X 24".
35. PROVIDE A MINIMUM OF 22" X 30" UNOBSTRUCTED ACCESS TO ALL ATTICS OF ROOF AREAS WITH A NET CLEAR HEIGHT OF 30" OR GREATER FROM THE TOP OF THE CEILING JOIST TO THE BOTTOM OF THE RAFTERS.
36. UN-CONDITIONED UNDER-FLOOR AREAS TO BE VENTILATED BY AN APPROVED MECHANICAL MEANS OR BY OPENINGS IN THE EXTERIOR FOUNDATION WALLS. SUCH OPENINGS SHALL HAVE A NET AREA OF NOT LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER FLOOR AREA. OPENINGS WILL HAVE AN APPROVED INSECT SCREEN THAT THE LEAST DIMENSION DOES NOT EXCEED ¼" AND ONE OPENING SHALL BE LOCATED WITHIN 3 FEET OF EACH CORNER OF THE BUILDING.
37. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA IF ALL VENTILATION IS LOCATED AT THE SOFFIT- OR- 1/300 OF ATTIC AREA IF 1/2 OF THE REQUIRED VENTILATION IS LOCATED AT THE SOFFIT AND 1/2 IS LOCATED A MINIMUM OF 3'-0" ABOVE THE SOFFIT VENTILATION OR WHERE THERE IS A CONTINUOUS PYA OR POLY FILM VAPOR BARRIER AT THE WARM SIDE OF THE CEILING. SEE ALSO ROOF PLANS AS APPLICABLE FOR ADDITIONAL CALCULATIONS AND REQUIREMENTS.
38. APPLICATION AND INSTALLATION OF INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH STATE OF WASHINGTON THERMAL INSULATION STANDARDS.
39. ALL LOW SLOPE ROOF AND WATERPROOF DECK AREAS TO HAVE A MINIMUM ROOF SLOPE OF 1/4" PER FOOT. PROVIDE 2X WOOD SLEEPERS AT LOW SIDE OF LOW SLOPE ROOFS AND WATERPROOF DECKS TO FORM CRICKETS TO SLOPE THE ROOF TO DRAIN AS REQUIRED. ALL CRICKET "VALLEYS" TO HAVE A MINIMUM SLOPE OF 1/8" PER FOOT. PROVIDE A CONTINUOUS 3 1/2" HIGH 45 DEGREE WOOD CANT STRIP AT THE INTERSECTION OF ALL HORIZONTAL TO VERTICAL PLANES ON LOW SLOPE ROOFS AND WATERPROOF DECKS HAVING SINGLE PLY MEMBRANE ROOFING, INCLUDING BUT NOT LIMITED TO PARAPET WALLS, BUILDING WALLS, ETC.
40. THE ROOFING INSTALLER MUST BE APPROVED BY THE ROOFING PRODUCT MANUFACTURER AND THE ARCHITECT. INSTALL ROOF ONLY WHEN SATISFACTORY CONDITIONS PREVAIL. APPLY NO ROOFING WHEN MOISTURE IN ANY FORM IS PRESENT. INSTALL ROOFING PER MANUFACTURER'S INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS. FLASH AND COUNTER FLASH ALL ROOF PENETRATIONS. ROOFING MATERIALS, FLASHING AND INSTALLATION TO CONFORM TO APPLICABLE IBC/IRC CODES.
41. PLUMBING RISERS AND VENTS ARE NOT SHOWN IN THE CONSTRUCTION DOCUMENTS FOR CLARITY. PROVIDE PLUMBING ROOF JACKS AND SLEEVES AS REQUIRED PRIOR TO INSTALLING THE ROOFING MATERIAL. ALL ROOF JACKS AND SLEEVES TO BE APPROVED BY THE ROOFING MANUFACTURER PRIOR TO INSTALLATION, WITH LOCATIONS APPROVED BY THE ARCHITECT PRIOR TO PLUMBING WORK COMMENCING.
42. PROVIDE ROOF DRAINS (R.D.) WITH DOWN SPOUTS (D.S.) WHERE INDICATED ON THE PLAN. ALL ROOF DRAINS IN LOW SLOPE ("FLAT") ROOF AND WATERPROOF DECK AREAS WHERE A ROOFING MEMBRANE IS SPECIFIED TO BE INSTALLED SHALL BE CAST IRON AND APPROVED BY THE ROOFING MANUFACTURER AND ARCHITECT FOR USE WITH THE SPECIFIED MEMBRANE PRODUCT. INSTALL PER ROOFING MANUFACTURER'S SPECIFICATIONS. WHEN INDICATED ON THE PLANS, PROVIDE AN OVERFLOW DRAIN (O.D.) HAVING THE SAME SIZE AS THE ADJACENT ROOF DRAIN. THE OVERFLOW DRAIN INLET SHALL BE LOCATED 2" ABOVE THE LOW POINT OF THE ROOF. WHERE AN OVERFLOW DRAIN DAYLIGHTS, EXTEND THE OVERFLOW DRAIN PIPE 1/2" BEYOND THE FACE OF THE FINISHED SIDING/CLADDING AND SEAL AROUND PIPE. WHEN APPLICABLE, PAINT THE EXPOSED OVERFLOW PIPE TO MATCH THE COLOR OF THE SURROUNDING SIDING/CLADDING SURFACE. WHERE AN OVERFLOW DRAIN TERMINATES AT A SOFFIT, PROVIDE AN OFFSET IN THE DRAIN PIPE TO PREVENT SEEING UP THROUGH THE PIPE FROM BELOW. WHEN NO OVERFLOW DRAIN IS INDICATED, THERE SHALL BE A THRU-WALL OVERFLOW SCUPPER OUTLET HAVING AN OPENING AREA THREE TIMES THE SIZE OF THE ROOF DRAIN, AND A MINIMUM OPENING HEIGHT OF 4". SEE THE PROJECT MANUAL FOR THE OVERFLOW SCUPPER METAL AND FINISH. IF THE FINISH IS NOT SPECIFIED, APPROVAL OF THE PROPOSED FINISH BY THE ARCHITECT IS REQUIRED PRIOR TO FABRICATION AND INSTALLATION. DO NOT INTERCONNECT THE ROOF DRAINS TO THE FOUNDATION DRAINS. CONNECT ALL ROOF DRAINS TO THE APPROVED STORM SEWER OR DISCHARGE SYSTEM PER GENERAL NOTES #16 AND #18.
43. WHEN THRU-WALL ROOF DRAIN SCUPPERS ARE INDICATED ON THE DRAWINGS, PROVIDE CUSTOM METAL CONDUCTOR HEAD (C.H.) PER THE DRAWINGS, WITH INTEGRAL OVERFLOW OUTLETS AND CONNECT C.H. TO DOWNSPOUTS (D.S.). EACH THRU-WALL SCUPPER SHALL HAVE A MINIMUM OPENING AREA EQUALING THREE TIMES THE EQUIVALENT ROOF DRAIN PIPE OR DOWNSPOUT OPENING AREA REQUIRED FOR THE ROOF AREA IT SERVES, WITH A MINIMUM OPENING HEIGHT OF 4". ALL METAL THRU-WALL SCUPPER BOXES IN LOW SLOPE ("FLAT") ROOF AND WATERPROOF DECK AREAS WHERE A ROOFING MEMBRANE IS SPECIFIED TO BE INSTALLED SHALL BE APPROVED BY THE ROOFING MANUFACTURER AND ARCHITECT FOR USE WITH THE SPECIFIED MEMBRANE PRODUCT. INSTALL PER ROOFING MANUFACTURER'S SPECIFICATIONS. EACH CONDUCTOR HEAD SHALL BE PROVIDED WITH AN INTEGRAL OVERFLOW DRAIN OPENING. THE INLET FLOW LINE OF THE OVERFLOW OPENING SHALL BE LOCATED A MINIMUM OF2" ABOVE THE LOW POINT OF THE ADJACENT ROOF. DO NOT INTERCONNECT THE DOWNSPOUTS TO THE FOUNDATION DRAINS. CONNECT ALL DOWNSPOUTS TO THE APPROVED STORM SEWER OR DISCHARGE SYSTEM PER GENERAL NOTES #16 AND #18. SEE THE PROJECT MANUAL FOR MATERIAL AND FINISH OF ALL CONDUCTOR HEADS AND DOWNSPOUTS. IF THE FINISH IS NOT SPECIFIED, APPROVAL OF THE PROPOSED FINISH BY THE ARCHITECT IS REQUIRED PRIOR TO FABRICATION AND INSTALLATION.
44. PROVIDE DOWN SPOUTS (D.S.) WHERE INDICATED ON THE PLANS AND DRAWINGS. ALL EXPOSED DOWN SPOUTS SHALL BE SMOOTH, UN-CORRUGATED 3" ROUND METAL, UNLESS NOTED OTHERWISE. METAL FINISH SHALL BE PER THE FINISH SCHEDULE AND SHALL MATCH METAL FINISH FOR THE BUILDING. IF THE FINISH IS NOT SPECIFIED, APPROVAL OF THE PROPOSED FINISH BY THE ARCHITECT IS REQUIRED PRIOR TO INSTALLATION. VERIFY METAL COMPATIBILITY WITH GUTTERS AND CONDUCTOR HEADS PRIOR TO INSTALLATION, AND NOTIFY THE ARCHITECT IF INCOMPATIBILITIES EXIST. ATTACH THE DOWNSPOUT TO THE WALL WITH A "BLIND" (HIDDEN) STRAP. WHEN APPLICABLE, DOWN SPOUTS OR ROOF DRAIN PIPES WITHIN WALLS AND ROOF ASSEMBLIES SHALL BE 3" DIAMETER PVC PLASTIC PIPE INSTALLED WITH A MINIMUM OF BENDS AND DAY-LIGHTED BELOW FINISHED EXTERIOR GRADE TO AN APPROVED STORM DRAINAGE SYSTEM. INSULATE ALL ENCLOSED PVC PIPES WITH UN-FACED BATT INSULATION. ALL ROOF DRAIN PIPES NEXT TO OR OVER FINISHED INTERIOR SPACES TO BE SPRAY FOAM INSULATED OR CAST IRON PER THE HEATING AND PLUMBING NOTES. DO NOT INTERCONNECT THE DOWNSPOUTS TO THE FOUNDATION DRAINS. CONNECT ALL DOWNSPOUTS TO THE APPROVED STORM SEWER OR DISCHARGE SYSTEM PER GENERAL NOTES #16 AND #18.
45. UNLESS INDICATED OTHERWISE ON THE PLANS AND DRAWINGS, PROVIDE A CONTINUOUS 24 GAUGE HALF ROUND SHEET METAL GUTTER AT THE LOW EAVE SIDE OF ALL SLOPED ROOF AREAS. SEE THE FINISH SCHEDULE FOR THE GUTTER METAL AND FINISH. IF THE FINISH IS NOT SPECIFIED, APPROVAL OF THE PROPOSED FINISH BY THE ARCHITECT IS REQUIRED PRIOR TO INSTALLATION.
46. PROVIDE SHEET METAL FLASHING AT ALL VALLEYS AND CHANGES IN ROOF PITCH. SEE THE FINISH SCHEDULE FOR THE FLASHING FINISH. IF THE FINISH IS NOT SPECIFIED, APPROVAL OF THE PROPOSED FINISH BY THE ARCHITECT IS REQUIRED PRIOR TO INSTALLATION. ALL ROOFING AND BUILDING PAPER UNDERLAYMENT TO BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS, AND APPLICABLE IBC/IRC CODES.
47. PROVIDE A MINIMUM OF 24 GAUGE FLASHING AND COUNTER FLASHING AT ALL ROOF PENETRATIONS AND INTERSECTIONS OF ROOF PLANES TO VERTICAL SURFACES AND PARAPET CAPS (UNLESS NOTED OTHERWISE ON PLANS AND SPECIFICATIONS). ALL PARAPET CAPS SHALL HAVE STANDING SEAM JOINTS AND A POSITIVE SLOPE BACK ONTO THE ROOF. SEE THE FINISH SCHEDULE FOR THE METAL AND FINISH. IF THE FINISH IS NOT SPECIFIED, APPROVAL OF THE PROPOSED FINISH BY THE ARCHITECT IS REQUIRED PRIOR TO INSTALLATION.
48. PROVIDE DRIP CAPS AND FLASHING AT ALL HORIZONTAL INTERRUPTIONS OF SIDING AND CHANGES FROM ONE SIDING MATERIAL TO ANOTHER. PROVIDE CONTINUOUS DRIP CAPS, WITH NO JOINTS OR SPLICES, OVER ALL DOOR AND WINDOW HEADS NOT PROTECTED BY AN OVERHANG WITHIN 6" OF THE HEAD (UNLESS NOTED OTHERWISE ON PLANS AND SPECIFICATION). SEE THE FINISH SCHEDULE FOR THE METAL AND FINISH. IF THE FINISH IS NOT SPECIFIED, APPROVAL OF THE PROPOSED FINISH BY THE ARCHITECT IS REQUIRED PRIOR TO INSTALLATION.
49. ALL FLASHING AND SHEET METAL WORK SHALL CONFORM TO THE MOST CURRENT EDITION OF THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) ARCHITECTURAL SHEET METAL MANUAL, UNLESS SPECIFIED OTHERWISE IN THE PROJECT MANUAL (WHERE PROVIDED).
50. INSTALL SILL, JAMB AND HEAD FLASHING PAPER AROUND ALL WALL PENETRATIONS. CONTRACTOR TO SUBMIT FLASHING PAPER TO THE ARCHITECT FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK. INSTALL FLASHING PAPER PER MANUFACTURER'S SPECIFICATIONS AND AS DETAILED IN THESE DOCUMENTS. IN THE EVENT THAT THERE ARE DISCREPANCIES OR CONTRADICTORY REQUIREMENTS OR INFORMATION BETWEEN THE MANUFACTURER'S SPECIFICATIONS AND THESE DOCUMENTS, IT IS THE OBLIGATION OF THE CONTRACTOR TO NOTIFY THE ARCHITECT OF THE DISCREPANCIES IN WRITING AND TO OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. INSTALL A WATER RESISTANT BARRIER ON ALL WALL SURFACES. WATER RESISTANT BARRIER FOR ALL CEMENT PLASTER STUCCO OR E.I.F.S. SYSTEMS SHALL BE TWO (2) LAYERS OF 60-MINUTE GRADE D PAPER- STAGGER ALL HORIZONTAL AND VERTICAL JOINTS BETWEEN SUCCESSIVE LAYERS. WATER RESISTANT BARRIERS FOR ALL OTHER SIDING MATERIALS TO BE TYPE #30 ASPHALT-SATURATED FELT OR #30 BITUMINOUS IMPREGNATED BUILDING PAPER UNLESS NOTED OTHERWISE IN THESE DOCUMENTS. NO SUBSTITUTIONS WITHOUT PRIOR WRITTEN APPROVAL BY THE ARCHITECT. INSTALL ALL WATER RESISTANT BARRIERS IN SHINGLE FASHION - APPLIED HORIZONTALLY WITH EACH SUCCEEDING LAYER LAPPING THE ONE BELOW BY 4" MINIMUM. END LAPS TO BE 9" MINIMUM AND STAGGERED BETWEEN COURSES. WATER RESISTANT BARRIERS TO BE CONTINUOUS AROUND ALL INSIDE AND OUTSIDE COMERS, ANGLES AND BEHIND CONTROL JOINTS. CUT THE WATER RESISTANT BARRIER WITH A SHARP KNIFE AND FIT TIGHTLY AROUND ALL PENETRATIONS. REMOVE ALL WRINKLES IN FLASHING PAPER AND WATER RESISTANT BARRIERS. INSPECT FLASHING PAPER AND WATER RESISTANT BARRIERS FOR HOLES OR TEARS. REPLACE SECTIONS WITH HOLES OR TEARS IN A SHINGLE FASHION FOLLOWING MINIMUM LAP GUIDELINES SET FORTH IN THESE DOCUMENTS PRIOR TO INSTALLING THE SIDING MATERIAL. DO NOT SEAL THE BASE OF THE WALL, DOOR OR WINDOW HEADS, OR AT OTHER HORIZONTAL INTERRUPTION OF SIDING WITH SEALANTS OR OTHERWISE BLOCK THE ESCAPE OF MOISTURE FROM BEHIND THE SIDING MATERIAL.
51. ALL HINGED SHOWER DOORS SHALL OPEN OUTWARD AND SHALL NOT REQUIRE ANY SPECIAL KNOWLEDGE TO OPEN.
52. ALL DOORS SHALL CONFORM TO THE MOST CURRENT EDITION OF THE ARCHITECTURAL WOODWORK INSTITUTE (AWI) QUALITY STANDARDS, CUSTOM GRADE, UNLESS SPECIFIED OTHERWISE IN THE PROJECT MANUAL. DOOR HARDWARE SHALL CONFORM TO THE DOOR AND HARDWARE INSTITUTE (DHI) STANDARDS, UNLESS SPECIFIED OTHERWISE IN THE PROJECT MANUAL. IN THE EVENT THAT THERE ARE CONFLICTING REQUIREMENTS IN AWI AND DHI STANDARDS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING AND AWAIT THE ARCHITECT'S DIRECTION PRIOR TO PROCEEDING WITH THE WORK.
53. ALL NEW GLAZING SHALL COMPLY WITH APPLICABLE IBC/IRC CODES AND WASHINGTON STATE SAFETY GLASS LAW.
54. GLAZING IN LOCATIONS SUBJECT TO HUMAN IMPACT SHALL BE WIRE REINFORCED, FULLY TEMPERED GLASS, LAMINATED SAFETY GLASS OR SHATTER RESISTANT PLASTIC. THE FOLLOWING AREAS SHALL BE CONSIDERED SPECIFIC HAZARDOUS AREAS SUBJECT TO HUMAN IMPACT: GLAZING IN ANY DOOR, FIXED PANEL OR OPERABLE PANEL. GLAZING IN DOORS OR ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, AND SHOWERS - OR ANY BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE STANDING SURFACE OR DRAIN INLET. GLAZING IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHEN THE NEAREST EDGE IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND THE BOTTOM OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE. GLAZING IN RAILINGS. GLAZING WHERE THE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR, THE EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SF., THE EXPOSED TOP EDGE IS GREATER THAN 36" ABOVE THE FLOOR, AND THERE IS ONE OR MORE WALKING SURFACES WITHIN 36" HORIZONTALLY OF THE PLANE OF GLAZING. GLAZING IN WALLS OR FENCES USED AS BARRIERS FOR INDOOR OR OUTDOOR SWIMMING POOLS. GLAZING AT STAIR LANDINGS OR WITHIN 5'-0" FROM THE TOP OR BOTTOM OF STAIRWAYS WHERE THE BOTTOM EDGE OF THE GLASS IS LOCATED LESS THAN 60" ABOVE A WALKING SURFACE.
55. UNLESS NOTED OTHERWISE IN THE DOCUMENTS, ALL EXTERIOR GLAZING SHALL BE DOUBLE-GLAZED AND COMPLY WITH THE 2015 W.S.E.C.
56. EGRESS SHALL BE PROVIDED FROM EACH SLEEPING ROOM. EGRESS WINDOWS SHALL BE PROVIDED WHERE DOORS WHICH OPEN DIRECTLY TO THE EXTERIOR FROM THE SLEEPING ROOM ARE NOT PROVIDED. EGRESS WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24"; MIN. NET CLEAR OPENING WIDTH DIMENSION SHALL BE 20". THE FINISHED SILL HEIGHT SHALL NOT BE MORE THAN 44" ABOVE THE FLOOR.
57. SITE BUILT SHOWER COMPARTMENTS SHALL BE PER PLANS AND DRAWINGS. ALL SHOWERS SHALL MEET THE MINIMUM REQUIREMENTS OF APPLICABLE IBC/IRC CODES, BUT MAY EXCEED THE MINIMUM REQUIREMENTS IF INDICATED SO ON PLANS AND DRAWINGS. TILE OR OTHER NON-ABSORBENT SURFACE MATERIAL SHALL BE INSTALLED IN ALL SHOWERS OR TUB/SHOWER COMBINATIONS AND SHALL EXTEND ABOVE THE DRAIN INLET PER THE INTERIOR ELEVATIONS AND PROJECT MANUAL, BUT AT NO TIME SHALL IT EXTEND LESS THAN 72" ABOVE THE DRAIN INLET. PROVIDE WATERPROOF SHOWER LINING AND RECEPTORS ON ALL SITE-BUILT SHOWER WALLS AND FLOORS PER APPLICABLE IBC/IRC CODES. PROVIDE A WATERPROOF VINYL SHOWER SUB-PAN MEMBRANE AT ALL TILE SHOWER FLOORS. PROVIDE AN APPROVED FLANGED DRAIN AT ALL SHOWER SUB-PANS AND LININGS. RUN THE WATERPROOF SHOWER SUB-PAN MEMBRANE OVER THE SHOWER DRAIN FLANGE AND SECURE WITH A CLAMPING RING OR OTHER DEVISE TO MAKE A WATER TIGHT CONNECTION BETWEEN THE SUB-PAN MEMBRANE AND THE DRAIN. INSTALL ALL WALL TILE OR OTHER NON-ABSORBENT SURFACE IN SHOWERS AND TUB/SHOWER COMBINATIONS OVER A WATERPROOF MEMBRANE APPLIED OVER CEMENTITIOUS BACKING BOARD. WATERPROOF MEMBRANE AND BACKER BOARD TO EXTEND THE FULL HEIGHT OF TILE OR NON-ABSORBENT MATERIAL. WATERPROOF MEMBRANES SHALL EXTEND OVER AND INTO ALL RECESSES, LEDGES, SILLS, CURBS, BENCHES AND OTHER ARCHITECTURAL FEATURES IN THE SHOWER OR TUB/SHOWER COMBINATION AREA. SLOPE ALL CURBS AND RECESSES TO DRAIN INTO THE SHOWER. THE CONTRACTOR SHALL CONFIRM THE COMPATIBILITY OF THE WATERPROOF SHOWER PAN MEMBRANE AND THE WATERPROOF WALL MEMBRANE. AFTER CONFIRMING THE COMPATIBILITY, THE CONTRACTOR SHALL SUBMIT BOTH MEMBRANES TO THE ARCHITECT FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK.
58. INSTALL ALL PREFABRICATED FIREPLACES, STOVES AND RELATED ASSEMBLIES IN ACCORDANCE WITH U.L. APPROVED MANUFACTURER'S SPECIFICATIONS AND APPLICABLE IBC/IRC CODES. DO NOT ALTER STRUCTURAL FRAMING MEMBERS TO ACCOMMODATE THESE INSTALLATIONS WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT AND THE STRUCTURAL ENGINEER OF RECORD. UNLESS SHOWN OTHERWISE, WHEN A FLUSH HEARTH IS INDICATED ON THE PLANS AND DRAWINGS, IT IS THE DESIGN INTENT THAT THE FINISHED SURFACE OF THE PREFABRICATED FIREPLACE FIREBOX AND THE FINISHED FACE OF THE HEARTH ALIGN WITH THE FINISHED FLOOR SURFACE OF THE ROOM. THE GENERAL CONTRACTOR SHALL ADJUST THE FLOOR FRAMING ACCORDINGLY TO ACCOMMODATE THIS RELATIONSHIP AND SHALL VERIFY THE FRAMING REQUIREMENTS, INCLUDING BUT NOT LIMITED TO CLEARANCES TO COMBUSTIBLES, RECESSED FRAMING REQUIREMENTS, HEARTH REQUIREMENTS, ETC., FOR PREFABRICATED FIREPLACES WITH THE APPLIANCE MANUFACTURER PRIOR TO BEGINNING FRAMING. IN THE EVENT THAT THERE ARE CONFLICTING REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING AND AWAIT THE ARCHITECT'S DIRECTION PRIOR TO PROCEEDING WITH THE WORK. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES FROM THE FIREPLACE TO ALL COMBUSTIBLES. ALL METAL CHIMNEYS TO BE STAINLESS STEEL UNLESS NOTED OTHERWISE IN THESE DOCUMENTS. ANCHOR ALL METAL CHIMNEYS AT EACH FLOOR AND ROOF WITH TWO 1-1/2" BY L/8" METAL STRAPS LOOPED AROUND THE OUTSIDE OF THE CHIMNEY INSTALLATION AND NAILED WITH NOT LESS THAN (6) 8D NAILS PER STRAP AT EACH JOIST. PROVIDE A NON-COMBUSTIBLE HEARTH AND FIREPLACE SURROUND FOR ALL PREFABRICATED FIREPLACES PER THESE DRAWINGS AND SPECIFICATIONS, HOWEVER, AT NO TIME SHALL THE HEARTH OR SURROUND BE LESS THAN THAT WHICH IS REQUIRED BY THE MANUFACTURER.
59. PROVIDE A MINIMUM OF 2" CLEAR FROM FIREPLACES, SMOKE CHAMBERS AND CHIMNEYS TO ALL COMBUSTIBLES. SEE APPLICABLE MASONRY FIREPLACE AND CHIMNEY NOTES FOR FURTHER REQUIREMENTS.
60. ALL HABITABLE ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA, EXCEPT WHERE MECHANICAL VENTILATION AND ARTIFICIAL LIGHT IS PROVIDED. NATURAL VENTILATION SHALL BE THROUGH WINDOWS, DOORS, LOUVERS OR OTHER APPROVED OPENINGS TO THE OUTDOORS. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4 PERCENT OF THE FLOOR AREA, EXCEPT IN ROOMS SUPPLIED WITH MECHANICAL VENTILATION PRODUCING .35 AIR CHANGES PER HOUR OR SERVED BY A WHOLE HOUSE VENTILATION SYSTEM SUPPLYING L5 CFM OF OUTSIDE AIR PER OCCUPANT.
61. VENT ALL CLOTHES DRYERS, EXHAUST FANS, AND COOKTOP/RANGE-HOODS TO THE OUTSIDE. LOCATE ALL EXTERIOR BUILDING ENVELOP (WALLS, SOFFITS, ROOF, ETC.) PENETRATIONS BY VENTS PER THESE DRAWINGS. WHEN NOT INDICATED ON THE DRAWINGS, CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS TO THE ARCHITECT FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK. BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH A MECHANICAL VENTILATION SYSTEM CAPABLE OF PROVIDING 50 CFM FOR INTERMITTENT VENTILATION OR 20 CFM FOR CONTINUOUS VENTILATION. INTAKE OPENINGS SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT SUCH AS VENTS, CHIMNEYS, OR STREETS. EXHAUST OPENING SHALL BE LOCATED SO AS NOT TO CREATE A NUISANCE, AND NOT DIRECTED ONTO ANY WALKWAYS. EXHAUST FAN LOCATIONS INDICATED ON THE PLANS ARE SCHEMATIC. ALIGN ALL EXHAUST FANS WITH OTHER CEILING FIXTURES. SEE THE ELECTRICAL PLANS (WHERE APPLICABLE) OR ELECTRICAL CONTRACTOR FOR SCHEMATIC EXHAUST FAN LOCATIONS AND RELATIONSHIPS TO OTHER ELECTRICAL FIXTURES. SEE THE SPECIFICATIONS FOR EXHAUST FAN MANUFACTURER, CFM, AND MODEL NUMBERS AS REQUIRED BY THE WSEC.
62. PROVIDE SMOKE ALARMS AND DETECTORS AS REQUIRED BY IRC SECTION R313. INTERCONNECT ALL SMOKE, HEAT, CARBON MONOXIDE (CO) AND NATURAL GAS DETECTORS IN THE BUILDING IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS. WHEN NATURAL GAS FIRED MECHANICAL UNITS ARE SPECIFIED, PROVIDE A NATURAL GAS DETECTOR IN THE MECHANICAL ROOM IN ADDITION TO THE SMOKE DETECTOR AND CARBON MONOXIDE DETECTOR. ALL DETECTORS SHALL BE 11OV WITH BATTERY BACK-UP. SEE THE ARCHITECTURAL FLOOR PLANS FOR SCHEMATIC DETECTOR LOCATIONS. IN THE EVENT THAT THERE ARE CONFLICTING REQUIREMENTS FOR DETECTOR PLACEMENT OR ADDITIONAL DETECTORS ARE REQUIRED BY CODE, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING AND AWAIT THE ARCHITECT'S DIRECTION PRIOR TO PROCEEDING WITH THE WORK. ALIGN ALL DETECTORS WITH OTHER CEILING FIXTURES. SEE THE ELECTRICAL PLANS (WHERE APPLICABLE) OR ELECTRICAL CONTRACTOR FOR THE PLACEMENT OF OTHER FIXTURES, AND FURTHER NOTES. S.D. INDICATES DETECTOR ON FLOOR PLANS.
63. PROVIDE GUARDRAILS PER THE PLANS AND DRAWINGS. ALL GUARDRAILS SHALL MEET THE MINIMUM REQUIREMENTS OF THE APPLICABLE IBC/IRC CODES, BUT MAY EXCEED THE MINIMUM REQUIREMENTS IF INDICATED SO ON PLANS AND DRAWINGS. GUARDRAILS NOT LESS THAN 36" IN HEIGHT SHALL BE PLACED AT THE OPEN SIDE OF ALL PORCHES, BALCONIES AND RAISED FLOOR AREAS, WHICH ARE MORE THAN 30 INCHES ABOVE GRADE OR FLOOR BELOW. OPEN SIDES OF STAIR WITH A TOTAL RISE OF MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAILS NOT LESS THAN 34" IN HEIGHT MEASURED VERTICALLY FROM THE NOSING OF THE TREADS. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN, WHICH WILL NOT ALLOW A 4" INCH DIAMETER SPHERE TO PASS THROUGH. THE TRIANGULAR OPENINGS FORMED BY THE RISER/TREAD AND THE BOTTOM OF ELEMENT OF A GUARDRAIL AT THE OPEN SIDE OF A STAIR MAY BE OF SUCH SIZE THAT WILL NOT ALLOW A 6" DIAMETER SPHERE TO PASS THROUGH.
64. ONE HANDRAIL SHALL BE PROVIDED AT EVERY STAIRWAY HAVING FOUR OR MORE RISERS. PROVIDE 2 HANDRAILS WHERE INDICATED ON PLANS. HANDRAILS SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS. THE TOP OF HANDRAILS SHALL BE PLACED ABOVE THE NOSING OF TREADS PER THE PLANS AND DRAWINGS, BUT NEVER LESS THAN 34" NOR MORE THAN 38". HANDRAILS ADJACENT TO WALLS SHALL HAVE A CLEAR SPACE OF NOT LESS THAN 1-1/2" BETWEEN THE WALL AND THE HANDRAIL. HANDGRIP PORTION OF HANDRAILS SHALL BE NOT LESS THAN 1-1\4" NOR MORE THAN 2" IN CROSS SECTIONAL DIMENSION, SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS, AND SHALL TERMINATE INTO WALLS OR NEWEL POSTS. STAIR RISER HEIGHT AND TREAD DEPTH SHALL BE PER THESE DOCUMENTS. BUT, IN NO CASE SHALL THE RISER HEIGHT EXCEED 7-3/4" NOR SHALL THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS EXCEED THE SMALLEST BY MORE THAN 3/8". IN NO CASE SHALL THE TREAD DEPTH BE LESS THAN 10" NOR SHALL THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS EXCEED THE SMALLEST BY MORE THAN 3/8". STAIR WIDTH SHALL BE PER THESE DOCUMENTS. BUT, IN NO CASE SHALL THE STAIRWAY BE LESS THAN 36" IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE PERMITTED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4-1/2" ON EITHER SIDE OF THE STAIRWAY, BUT THE MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL, INCLUDING TREADS & LANDINGS, SHALL NOT BE LESS THAN 31-1/2" WHEN A HANDRAIL IS INSTALLED ON ONE SIDE AND 27" WHEN HANDRAILS ARE INSTALLED ON BOTH SIDES.

2 GENERAL NOTES

A/C	AIR CONDITIONING
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
APPR	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BLK	BLOCK
B/S	BUILDING STANDARD
CLG	CEILING
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CO.	COMPANY
DBL	DOUBLE
DIA., Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DTL, DETL	DETAIL
DWG	DRAWING
E	EAST
EA.	EACH
EL, ELEV	ELEVATION
ELECT	ELECTRICAL
EQ.	EQUAL
EQUIP	EQUIPMENT
E.W	EACH WAY
EX.	EXISTING
EXT	EXTERIOR
FIN	FINISH
FLUoR	FLUORESCENT
FLR	FLOOR
FT	FOOT
GA	GAUGE
GALV	GALVANIZE(D)
GC	GENERAL CONTRACTOR
GRND	GROUND
GWB	GYPSUM WALL BOARD
HDWD	HARDWOOD
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTING AND AIR CONDITIONING
I.D.	INSIDE DIA.
IN	INCH
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
LB(S)	POUND(S)
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MANUF	MANUFACTURER
MGR	MANAGER
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OPG	OPENING
OPP	OPPOSITE
PLYWD	PLYWOOD
PR	PAIR
PROJ	PROJECT
PROP	PROPERTY
PT	PRESSURE TREATED
REQ'D	REQUIRED
RM	ROOM
R.O.	ROUGH OPENING
S	SOUTH
SCHED	SCHEDULE
SD	SMOKE DETECTOR
SHT	SHEET
SIM.	SIMILAR
SKYLT	SKYLIGHT
SOG	SLAB-ON-GRADE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STL.	STEEL
STRUC	STRUCTURAL
SUSP.	SUSPENDED
S.V.	SHEET VINYL
S.W.	SIDEWALK
THRU	THROUGH
TNND	TINNED
T.O.C.	TOP OF CONCRETE
T.O.M.	TOP OF MASONRY
TS	TUBE STEEL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITERS LAB
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VT	VINYL TILE
W	WEST
W/	WITH
WDW	WINDOW
W/O	WITHOUT
W.P.	WORKING POINT

∡	ANGLE
&	AND
@	AT
℄	CENTER LINE
#	NUMBER
PL	PROPERTY LINE
SD	SMOKE DETECTOR
SDCM	SMOKE/CARBON MONO DETECTOR
△3	REVISION
9	KEY NOTE
XX-#	ASSEMBLY TYPE
100	ROOM NUMBER
EXH	EXHAUST FAN
WH	WHOLE HOUSE FAN
1 / A-1.00	DETAIL REFERENCE
2 / A-3.00	ELEVATION REFERENCE
3 / A-5.00	SECTION REFERENCE
1	GRID LABEL
W01	EXT. OPENING TAG
D01	DOOR TAG

1 ABBREVIATIONS & SYMBOLS

PB ARCHITECTS INC., P.S.
5506 6TH AVENUE S.
SEATTLE, WA 98108
ph 206.443.9790
fx 206.443.9875

WEN HU
RESIDENCE
8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

	DATE	DESCRIPTION
1	12JUL2019	SUBMITTAL SET REV.S
2	18OCT2019	SUB. SET REV.S #2
3		
4		
5		

PROJECT RELEASE

DATE	DESCRIPTION	DATE	DESCRIPTION
15SEPT17	PRELIM		
12MAR2018	PRE-APP REVIEW		
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

T-1.02
PROJECT NOTES

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER EXHIBIT A ON PAGES 8 AND 9 OF EASEMENT AGREEMENT RECORD NUMBER 20060406000331)

PARCEL A
THAT PORTION OF TRACT 498, 499, 500, 501, AND 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON.
BEGINNING AT THE NORTH CORNER OF TRACT 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE RECORDED IN VOLUME 12 OF PLATS, PAGE 44. THENCE S 41°08'10"W ALONG THE NORTH LINE OF SAID TRACT 292.08 FEET TO A POINT OF INTERSECTION WITH TRACT 498; THENCE S 30°11'25"W 28.25 FEET; THENCE N 67°19'35"W 60.25 FEET; THENCE N 58°56'27"W 38.44 FEET TO THE SOUTH LINE OF TRACT 501; THENCE N 30°11'25"E ALONG SAID LINE 2.02 FEET; THENCE N 41°08'10"E 143.99 FEET; THENCE N 50°00'00"W 80.00 FEET; THENCE N 41°08'10"E 150.02 FEET TO THE SOUTH RIGHT-OF-WAY OF WEST MERCER WAY; THENCE N 50°00'00"W 20.00 FEET ALONG SAID MARGIN TO THE POINT OF BEGINNING.

PARCEL B
THAT PORTION OF TRACT 498, 499, 500, 501, AND 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON.
EXCEPT PARCEL "A" AND THE NORTHEASTERLY 150.00 FEET OF THE SOUTHEASTERLY 80.00 FEET OF THAT PORTION OF SAID TRACT 574 LYING SOUTHWESTERLY OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60.00 FEET).

NOTE:
THE LEGAL DESCRIPTION, LOT LINE LOCATION AND EASEMENT DEPICTED ON THIS DRAWING IS THE SAME AS THE SHORT PLAT THAT WAS SUBMITTED TO THE CITY OF MERCER ISLAND ON OCTOBER 15, 1968 AND APPROVED ON DECEMBER 18,1968. IT IS THE SAME THAT IS SHOWN ON THE KING COUNTY ASSESSOR MAP. THERE ALSO HAS BEEN SEVERAL SURVEYS PERFORMED (VOL. 12, PAGE 118) AND ANOTHER UNRECORDED SURVEY PERFORMED BY GOLDSMITH ON MARCH 22, 1967 THAT ALSO MATCH THE SHORT PLAT LAYOUT. IT APPEARS THAT THE SHORT PLAT DEEDS WERE NOT RECORDED AT KING COUNTY.
IN 1973 THE OWNER THAT SUBMITTED THE 1968 SHORT PLAT SOLD BOTH LOTS. THE LEGAL DESCRIPTIONS USED IN THIS SALE WERE NOT THE SAME AS THE SHORT PLAT.
THE NEW LEGALS IN EFFECT MOVED THE COMMON LOT LINE BETWEEN LOT A AND LOT B APPROXIMATELY 60 EAST OF THE COMMON LINE. IN SUBSEQUENT DEEDS BOTH THE LEGAL DESCRIPTIONS AND EASEMENT CREATED IN THE SHORT PLAT AND THE LEGAL DESCRIPTIONS CREATED IN THE 1973 SALE HAVE BEEN SHOWN IN CONFLICT ON THE SAME DOCUMENTS. IN 2016 WE PERFORMED A SURVEY FOR THE DAUGHTER OF THE OWNERS WHO BOUGHT THE PROPERTY IN 1973. THE DAUGHTER WAS ADAMANT THAT THE LOT LINE WAS THE SAME AS SHOWN ON THE 1968 SHORT PLAT.
THE CURRENT OWNERS REPRESENTATIVE IS IN CONTACT WITH THE TITLE COMPANY TO RESOLVE THE DISCREPANCY OF THE LEGAL

SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN MAY OF 2017. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED JULY 30, 2016 UNLESS OTHERWISE NOTED.
3. BURIED UTILITIES SHOWN BASED ON RECORDS FURNISHED BY OTHERS AND VERIFIED WHERE POSSIBLE IN THE FIELD. TERRANE ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS OR ACCEPT RESPONSIBILITY FOR UNDERGROUND LINES WHICH ARE NOT MADE PUBLIC RECORD. FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO DESIGN CONTACT THE UTILITY OWNER/AGENCY. AS ALWAYS, CALL 1-800-424-5555 BEFORE CONSTRUCTION.
4. SUBJECT PROPERTY TAX PARCEL NO'S. 3358500450 & 3358500454.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS:
   TAX PARCEL NO. 3358500450 UPLAND AREA IS 19,004± S.F. (0.44± ACRES) UPLAND AREA DETERMINED TO THE TOP OF ROCK BULKHEAD.
   TAX PARCEL NO. 3358500454 AREA IS 18,616± S.F. (0.43± ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT FOR TAX PARCEL NO. 3358500454. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. THIS SURVEY WAS PERFORMED WITH THE BENEFIT OF THE TITLE REPORT PREPARED BY CHICAGO TITLE COMPANY, COMMITMENT NO. 0085132-ETU DATED JANUARY 11, 2017 FOR TAX PARCEL NO. 3358500450, HOWEVER NO ACCESS EASEMENTS WERE REFLECTED ON SAID REPORT.
8. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

BASIS OF BEARINGS

NAD83/2011, WASHINGTON NORTH COORDINATE SYSTEM, PER GPS OBSERVATIONS THE CENTERLINE OF W. MERCER WAY BEARS N48°10'07"W BETWEEN FOUND MONUMENTS

REFERENCES

1. PLAT OF SEA SHORE-LAKE EDEN FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, AS RECORDED IN VOLUME 12 OF PLATS, PAGE 44, RECORDS OF KING COUNTY, WASHINGTON.
2. RECORD OF SURVEY IN BOOK 12 OF SURVEYS, PAGE 118, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

CITY OF MERCER ISLAND BENCH MARK NO. 4332
NAVD88
FOUND "1""X1"" LEAD W/ TACK IN CONC (DN 1.1')" INTX. W MERCER WAY & 81ST AVE SE.
ELEVATION = 140.59'

LEGEND

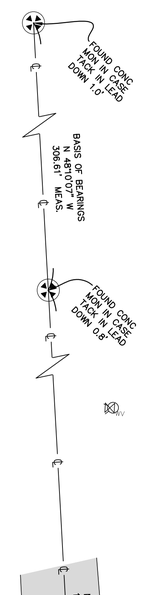
	AREA DRAIN	P	POWER (OVERHEAD)
	ASPHALT SURFACE	PP	POWER POLE
	BRICK SURFACE		REBAR AS NOTED (FOUND)
	BUILDING		REBAR & CAP (SET)
	CENTERLINE ROW		ROCKERY
CO	CLEANOUT	SIZE TYPE	TREE (AS NOTED)
	CONCRETE SURFACE	WM	WATER METER
	WALL AS NOTED	WV	WATER VALVE
100	CONTOUR (MAJOR)		YARD LIGHT
102	CONTOUR (MINOR)		INGRESS/EGRESS EASEMENT
	DECK/DOCK AS NOTED	CALC'D	CALCULATED
	FENCE LINE (CHAIN LINK)	CED	CEDAR TREE
	FENCE LINE (WOOD)	CH	CHERRY TREE
	FIRE HYDRANT	CONC	CONCRETE
G	GAS METER	DEC	DECIDUOUS TREE
	GUY ANCHOR	ELEV	ELEVATION
GP	GUY POLE	FF	FINISH FLOOR
ICB	IRRIGATION CONTROL BOX	FIR	FIR TREE
	NAIL AS NOTED	MAP	MAPLE TREE
	MONUMENT IN CASE (FOUND)	MEAS	MEASURED
		MON	MONUMENT
		PIN	PINE TREE
P	POWER METER	WLLW	WILLOW TREE

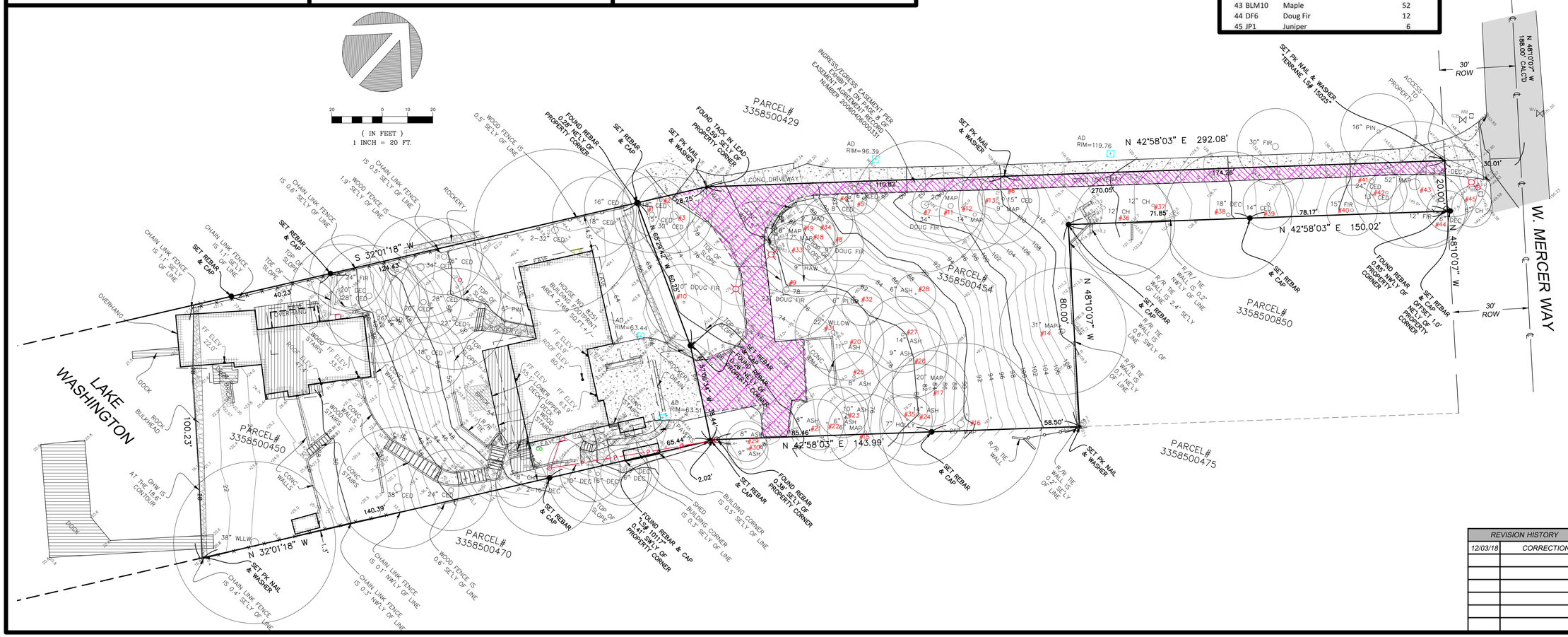
VICINITY MAP

N.T.S.

TREE TABLE

1	THUJA1	Western Red Cedar	15
2	THUJA2	Cedar	18
3	THUJA3	Cedar	30
4	THUJA4	Cedar	8
5	THUJA5	Cedar	6
6	THUJA6	Cedar	15
7	DF1	Doug Fir	34
8	DF1	Doug Fir	9
9	DF1	Doug Fir	23
10	DF1	Doug Fir	10
11	BLM1	Bigleaf Maple	20
12	BLM2	Maple	14
13	BLM3	Maple	9
14	BLM4	Maple	31
15	BLM5	Maple	6
16	BLM6	Maple	25
17	BLM7	Maple	20
18	BLM8	Maple	7
19	BLM9	Maple	10
20	ASH1	Oregon Ash	11
21	ASH2	Ash	8
22	ASH3	Ash	6
23	ASH4	Ash	10
24	ASH5	Ash	14
25	ASH6	Ash	8
26	ASH7	Ash	9
27	ASH8	Ash	14
28	ASH9	Ash	6
29	ASH11	Ash	8
30	ASH12	Ash	9
31	SALIX1	Willow	22
32	PLUM1	Indian Plum	6
33	HAW1	Hawthorn	9
34	MAD1	Madrone	9
35	HOLLY1	Holly	7
36	CH1	Cherry	12
37	PLUM1	Purple Plum	12
38	PLUM2	Purple Plum	18
39	CHAM1	Port Orchard Cedar	14
40	DF5	Doug Fir	15
41	THUJA7	Cedar	24
42	THUJA8	Cedar	13
43	BLM10	Maple	52
44	DF6	Doug Fir	12
45	JP1	Juniper	6





measure success

TOPOGRAPHIC & BOUNDARY SURVEY
NE 1/4 & SE 1/4 & SW 1/4 OF NE 1/4 SEC 36, TWP. 24N., RGE 04E., W.M.
TAX PARCEL NO'S. 3358500450 & 3358500454

HU RESIDENCE
8243 W. MERCER WAY
MERCER ISLAND, WA. 98040

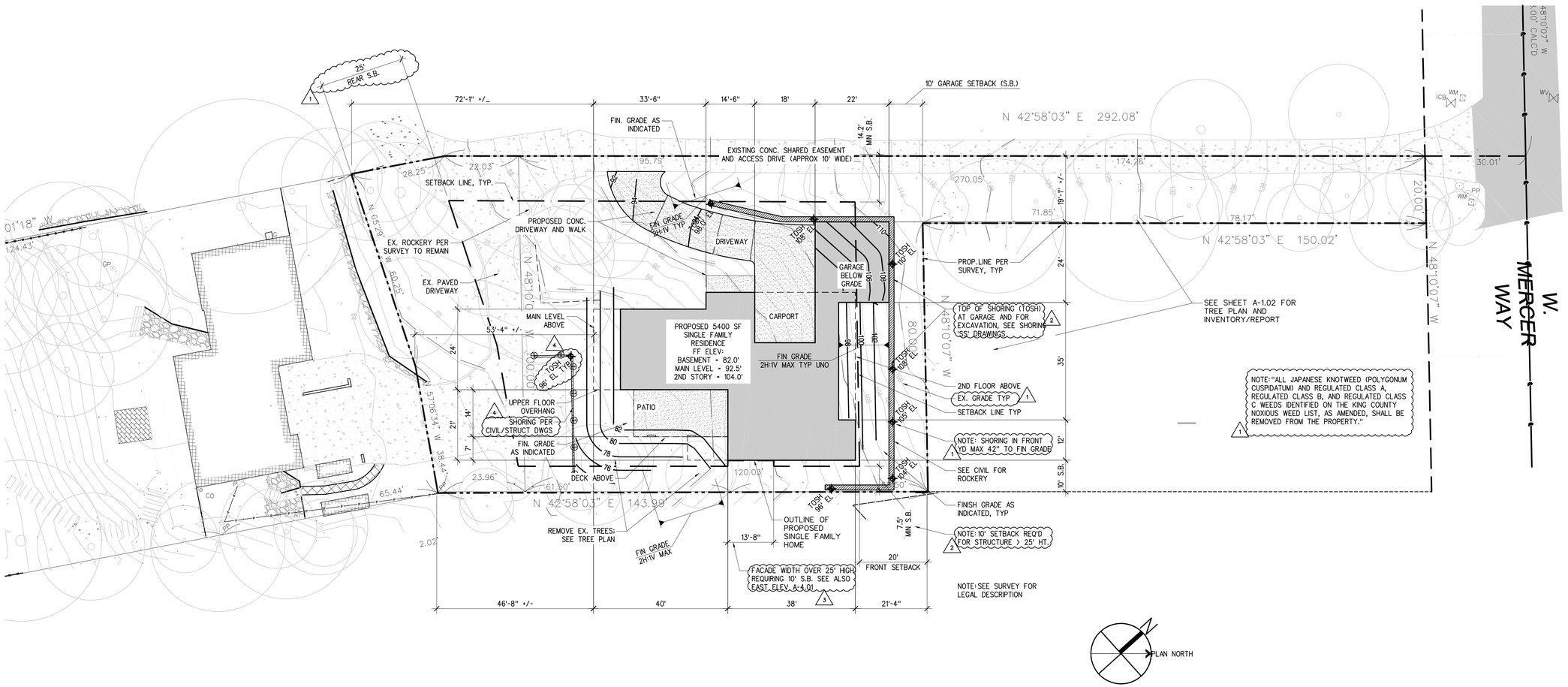
Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net

JOB NUMBER:	160477
DATE:	06/01/17
DRAFTED BY:	VLJ
CHECKED BY:	EJG/JGM
SCALE:	1"=20'

REVISION HISTORY	
12/03/18	CORRECTIONS

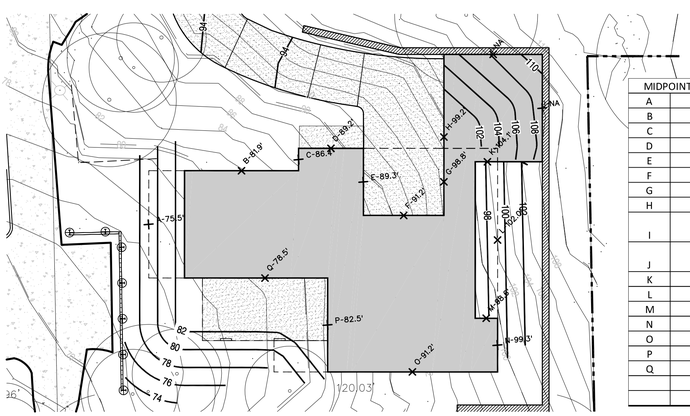
REVISION HISTORY	
09/27/17	PROPOSED ESMT
10/04/17	REV BOUNDARY
07/18/18	ARBORIST'S REPORT
10/11/18	ARBORIST'S REPORT
11/19/18	CORRECTIONS

SHEET NUMBER
1 OF 1



1 SITE PLAN

SCALE: 1/16" = 1'-0" 0 4' 8' 16' 32'



MIDPOINT ELEVATION		wall segment length		TOTALS	COMMENTS
A	75.5	a	24.0	1,812.0	
B	81.9	b	25.5	2,088.5	
C	86.4	c	5.0	432.0	
D	88.2	d	14.5	1,278.9	
E	89.3	e	15.0	1,339.5	
F	91.2	f	18.0	1,641.6	
G	96.0	g	15.0	1,440.0	
H	99.2	h	5.0	496.0	
I	0.0	i	0.0	0.0	NA-wall segment below grade
J	0.0	j	0.0	0.0	NA-wall segment below grade
K	101.0	k	5.0	505.0	
L	102.0	l	35.0	3,570.0	
M	98.6	m	5.0	493.0	
N	99.3	n	12.0	1,191.6	
O	91.2	o	38.0	3,465.6	
P	82.5	p	21.0	1,732.5	
Q	78.5	q	32.0	2,512.0	
			270.0	**23,998.2**	
	Average building Elevation (ABE) =			**88.9**	**(23998.2/270.0)**

2 AVERAGE BUILDING ELEVATION - SEE ALSO ELEVATIONS SHEETS A-4.01, A-4.02

SCALE: 1/16" = 1'-0" 0 4' 8' 16' 32'

LEGAL DESCRIPTION (SEE SURVEY)

(PER STATUTORY WARRANTY DEED UNDER RECORDING NUMBER 20170227001016)
TAX PARCEL NUMBER 3358500454:

TRACTS 498, 499, 500, 501 AND 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON; EXCEPT THAT PORTION OF SAID TRACT 574 LYING NORTHEASTERLY OF A LINE PARALLEL WITH AND DISTANT 270 FEET FROM (AS MEASURED AT RIGHT ANGLES TO) THE SOUTHWESTERLY LINE OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60 FEET);
TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING; AND TOGETHER WITH ANY UNPLATTED UPLANDS, LYING BETWEEN SAID TRACTS AND THE SHORELANDS ADJOINING;
ALSO TOGETHER WITH THE NORTHEASTERLY 270 FEET OF THAT PORTION OF TRACT 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON, LYING SOUTHWESTERLY OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60 FEET), EXCEPT THE NORTHEASTERLY 150 FEET OF THE SOUTHEASTERLY 80 FEET THEREOF.

PB ARCHITECTS INC., P.S.
5006 6TH AVENUE S.
SEATTLE, WA 98108
206.432.9790
206.432.9875

WEN HU RESIDENCE

8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

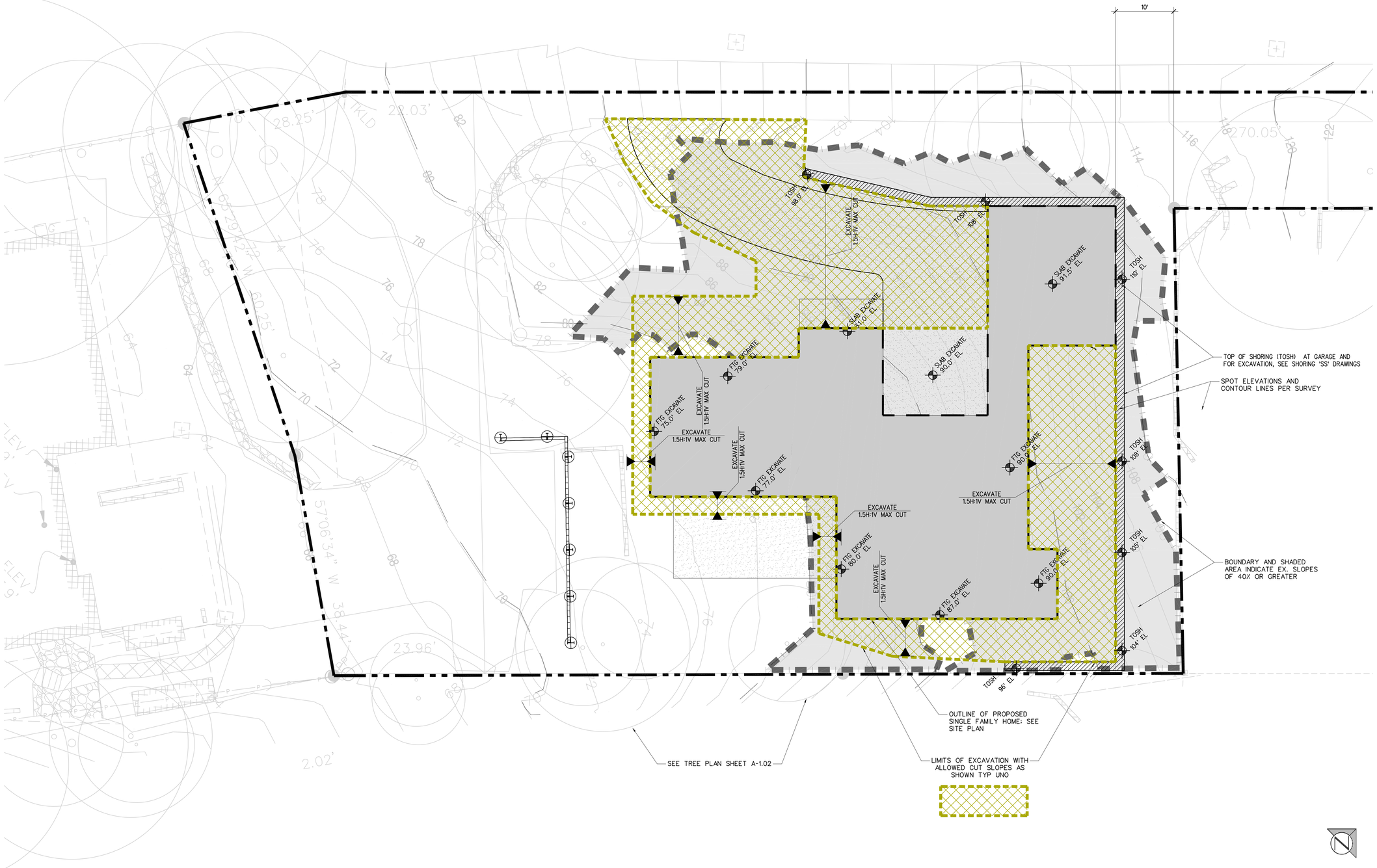
DATE	DESCRIPTION
12JUL2019	SUBMITTAL SET REV'S
18OCT2019	SUB. SET REV S.1/2
14JAN2020	SUB. SET REV S.#3
06DEC2020	SUB. SET REV S.#4

PROJECT RELEASE

DATE	DESCRIPTION	DATE	DESCRIPTION
15SEP17	PRELIM	14JAN2020	SUBMITTAL REVISIONS
12MAR2018	PRE-APP REVIEW	06DEC2020	SUBMITTAL REVISIONS
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

A-1.00
SITE PLAN



1 STEEP SLOPE AND EXCAVATION PLAN

SCALE1/8" = 1'-0"

PB ARCHITECTS INC., P.S.
5506 6TH AVENUE S.
SEATTLE, WA 98108
206.443.9799
206.443.9875

WEN HU RESIDENCE

8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

DATE	DESCRIPTION
12JUL2019	SUBMITTAL SET REV.S
18OCT2019	SUB. SET REV.S.1/2
14JAN2020	SUB. SET REV.S.#3
08DEC2020	SUB. SET REV.S.#4

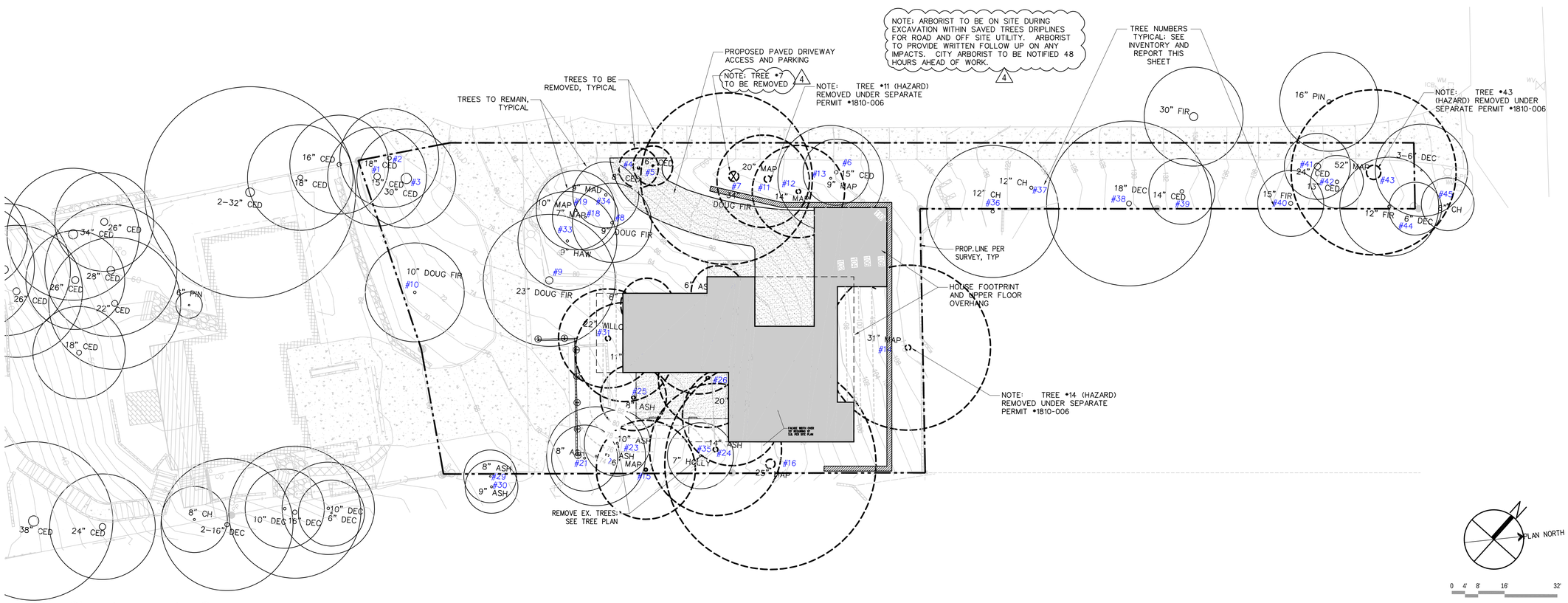
PROJECT RELEASE

DATE	DESCRIPTION	DATE	DESCRIPTION
15SEP17	PRELIM	14JAN2020	SUBMITTAL REVISIONS
12MAR2018	PRE-APP REVIEW	08DEC2020	SUBMITTAL REVISIONS
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

A-1.01

STEEP SLOPE PLAN



1 SITE PLAN - TREES

SCALE: 1/16" = 1'-0"

Vacant Lot (Mercer Island)
REVISED 1/28/19
Page 1 of 5

Washington Tree Experts
9792 Edmonds Way #123
Edmonds, WA 98020
206-362-3380
wtetree@yahoo.com

Client name: Mei Young
Street: 8251 W. Mercer Way
City, Zip: Mercer Island, WA 98040

RE: Tree inventory and report as required by the City of Mercer Island

INVENTORY:

MAP #	SPECIES	TREE TAG#	DIAMETER	EXCEPTIONAL	GENERAL HEALTH	REMOVE/ RETAIN
1	Western Red Cedar (*Thuja plicata*)	THUJA1	15"	NO	GOOD	RETAIN
2	Cedar	THUJA2	18"	NO	GOOD	RETAIN
3	Cedar	THUJA3	30"	YES*	GOOD	RETAIN
4	Cedar	THUJA4	8"	NO	GOOD	REMOVE
5	Cedar	THUJA5	6"	NO	GOOD	REMOVE
6	Cedar	THUJA6	15"	NO	GOOD	RETAIN
7	Doug Fir (*Pseudotsuga menziesii*)	DF1	34"	YES*	GOOD	REMOVE
8	Doug Fir	DF2	9"	NO	GOOD	
9	Doug Fir	D3	23"	NO	GOOD	RETAIN
10	Doug Fir	DF4	10"	NO	GOOD	RETAIN
11	Bigleaf Maple (*Acer macrophyllum*)	BLM1	20"	NO	POOR/ HAZARD	REMOVE
12	Maple	BLM2	14"	NO	FAIR	REMOVE
13	Maple	BLM3	9"	NO	FAIR	RETAIN
14	Maple	BLM4	31"	YES*	POOR/ HAZARD	REMOVE
15	Maple	BLM5	6"	NO	FAIR	REMOVE
16	Maple	BLM6	25"	NO	FAIR	REMOVE
17	Maple	BLM7	20"	NO	FAIR	REMOVE
18	Maple	BLM8	7"	NO	FAIR	RETAIN

_____Washington Tree Experts Certified Arborist_____

Vacant Lot (Mercer Island)
REVISED 1/28/19
Page 2 of 5

19	Maple	BLM9	10"	NO	FAIR	RETAIN
20	Oregon Ash (*Fraxinus latifolia*)	ASH1	11"	NO	FAIR	REMOVE
21	Ash	ASH2	8"	NO	FAIR	RETAIN
22	Ash	ASH3	6"	NO	FAIR	RETAIN
23	Ash	ASH4	10"	NO	FAIR	RETAIN
24	Ash	ASH5	14"	NO	FAIR	REMOVE
25	Ash	ASH6	8"	NO	FAIR	REMOVE
26	Ash	ASH7	9"	NO	FAIR	REMOVE
27	Ash	ASH8	14"	NO	FAIR	REMOVE
28	Ash	ASH9	6"	NO	FAIR	REMOVE
29	Ash	ASH11	8"	NO	FAIR	RETAIN
30	Ash	ASH12	9"	NO	FAIR	RETAIN
31	Willow (*Salix scouleriana*)	SALIX1	22"	YES^	FAIR	REMOVE
32	Indian Plum (*Oemleria cersiformis*)	PLUM1	6"	NO	FAIR	REMOVE
33	Hawthorn (*Crataegus sp.*)	HAW1	9"	NO	GOOD	RETAIN
34	Madrone (*Arbutus menziesii*)	MAD1	9"	YES^	GOOD	RETAIN
35	Holly (*Ilex aquifolium*)	HOLLY1	7"	NO	GOOD	RETAIN
36	Cherry (Prunus serrulata)	CH1	12"	NO	FAIR	RETAIN
37	Purple Plum (Prunus cerasifera)	PLUM1	12	NO	FAIR	RETAIN
38	Purple Plum	PLUM2	18"	NO	FAIR	RETAIN
39	Port Orford Cedar (Chamaecyparis lawsoniana)	CHAM1	14"	NO	GOOD	RETAIN
40	Doug Fir	DF5	15"	NO	GOOD	RETAIN
41	Cedar	THUJA7	24"	NO	GOOD	RETAIN
42	Cedar	THUJA8	13"	NO	GOOD	RETAIN
43	Maple	BLM10	52"	YES*	POOR/ HAZARD	REMOVE
44	Doug Fir	DF6	12"	NO	GOOD	RETAIN
45	Juniper	JP1	6"	NO	GOOD	RETAIN

*exceptional greater than 24" ^=exceptional less than 24"

_____Washington Tree Experts Certified Arborist_____

Vacant Lot (Mercer Island)
REVISED 1/28/19
Page 3 of 5

Protection recommendations:
The best way to protect trees during construction is to limit the amount of disturbance in the critical root zone (CRZ). A common rule to estaolish the CRZ is protect all tree roots within the dripline.

To protect the trees for retention during construction restrict the following within the critical root zone (CRZ) which is equal to the drip line:
- erect barriers or sturdy fencing around to tree to define the tree protection area to be installed prior to and remain in place for the life of the development project to ensure protection
-no grade changes.
-no heavy equipment driven in the protection zone.
-no piling of soil or debris in protection zone.
-no digging or excavating in the CRZ.
-if roots are found outside the CRZ no cutting of roots more than 4" diameter and clean straight cuts on 1-3.9" roots with a handsaw to promote wound closure and prevent the spread of decay in the root crown.
- for all digging operations, insist that exposed roots be cut cleanly to promote quick wound closure and regeneration. Minimize damage by keeping the plants well-watered before and after digging; and covering exposed roots with soil, mulch, or damp burlap as soon as possible.

Retention trees:

SPECIES	TREE TAG#	DIAMETER	GENERAL HEALTH	VIABLE	CRZ
Western Red Cedar (*Thuja plicata*)	THUJA1	15"	GOOD	Y	Dripline
Cedar	THUJA2	18"	GOOD	Y	Dripline
Cedar	THUJA3	30"	GOOD	Y	Dripline
Cedar	THUJA6	15"	GOOD	Y	Dripline
Doug Fir	DF2	9"	GOOD	Y	6' radius
Doug Fir	D3	23"	GOOD	Y	10'radius
Doug Fir	DF4	10"	GOOD	Y	Dripline
Maple	BLM3	9"	FAIR	Y	Dripline
Maple	BLM8	7"	FAIR	Y	Dripline
Maple	BLM9	10"	FAIR	Y	Dripline
Ash	ASH2	8"	FAIR	Y	Dripline
Ash	ASH3	6"	FAIR	Y	Dripline
Ash	ASH4	10"	FAIR	Y	Dripline
Ash	ASH11	8"	FAIR	Y	Dripline
Ash	ASH12	9"	FAIR	Y	Dripline
Hawthorn (*Crataegus sp.*)	HAW1	9"	GOOD	Y	Dripline
Madrone (*Arbutus menziesii*)	MAD1	9"	GOOD	Y	Dripline

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Vacant Lot (Mercer Island)
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Holly (*Ilex aquifolium*)	HOLLY1	7"	GOOD	Y	Dripline
Cherry (Prunus serrulata)	CH1	12"	FAIR	Y	Dripline
Purple Plum (Prunus cerasifera)	PLUM1	12	FAIR	Y	Dripline
Purple Plum	PLUM2	18"	FAIR	Y	Dripline
Port Orford Cedar (Chamaecyparis lawsoniana)	CHAM1	14"	GOOD	Y	Dripline
Doug Fir	DF5	15"	GOOD	Y	Dripline
Cedar	THUJA7	24"	GOOD	Y	Dripline
Cedar	THUJA8	13"	GOOD	Y	Dripline
Doug Fir	DF6	12"	GOOD	Y	Dripline
Juniper	JP1	6"	GOOD	Y	Dripline

The CRZ is equal to the dripline. All disturbance should be outside of the CRZ except for the following:

Tree Doug Fir (DF2) can be retained and preserved despite the driveway construction in the dripline. It is healthy and young Doug Fir that can tolerate the minimum disturbance intrusion into the CRZ. **NO** disturbance to the structural root plate which is approximately 6' radius. No more than 10% of the CRZ should be interrupted which is equal to approximately 12' radius. After care should include an organic layer of mulch at a depth of 2-3" in the dripline and adequate water during the dry season. Upon completion of the project tree should be monitored for the two following growing seasons to inspect for health and vigor.

Tree Doug Fir (DF3) can be retained and preserved despite the building construction in the dripline. The amount of disturbance represents a very small percentage of the CRZ, and the tree can tolerate some intrusion as it is of normal vigor and health. Fencing should be constructed to protect as much of the dripline as possible. There should only be an allowance on the southwest side of the dripline. **NO** disturbance to the structural root plate which is approximately 10' radius and no more than 10% of the CRZ should be interrupted which is equal to approximately 30' radius. After care should include an organic layer of mulch at a depth of 2-3" in the dripline and adequate water during the dry season. Upon completion of the project tree should be monitored for the two following growing seasons to inspect for health and vigor.

If the protection measures are taken, the necessary removals will not negatively impact the trees for retention. Most of the trees for retention are young and viable and have a higher tolerance for disturbance than their more mature counterparts. Neighboring trees will not be adversely affected.

Significant trees on adjacent properties will not be affected by the proposed removals.

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Vacant Lot (Mercer Island)
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Replacement trees:
As per the City of Mercer Island replacement trees should be mostly native. I would recommend a variety as to avoid a monoculture. The following is a list of species that would be suitable:
-Vine Maple (*Acer circinatum*)
-Serviceberry (*Amelenchier* sp.)
-Shore Pine (*Pinus contorta* v. *contorta*)
-Limber Pine (*Pinus flexis*)
-Pacific Yew (*Taxus brevifolia*)
-Pacific Dogwood (*Cornus nutallii*)
-Cascara (*Rhamnus purshiana*)

Prepared by

Jennifer Wells
ISA Certified Consulting Arborist #PN6209A
ISA Qualified Tree Risk Assessor

My firm has been hired on a consult only basis.

To evaluate and to prepare this report I have drawn upon my 20 plus years of experience in the field and my formal education in Forestry and Horticulture. I also followed the protocol of the International Society of Arboriculture (ISA) for tree risk assessment while looking at the overall health of the trees and site conditions. I have been providing consultation regarding the protection of trees during construction and after care for 10 years for residential and commercial clients.

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2

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06DEC2020	SUBMITTAL REVISIONS

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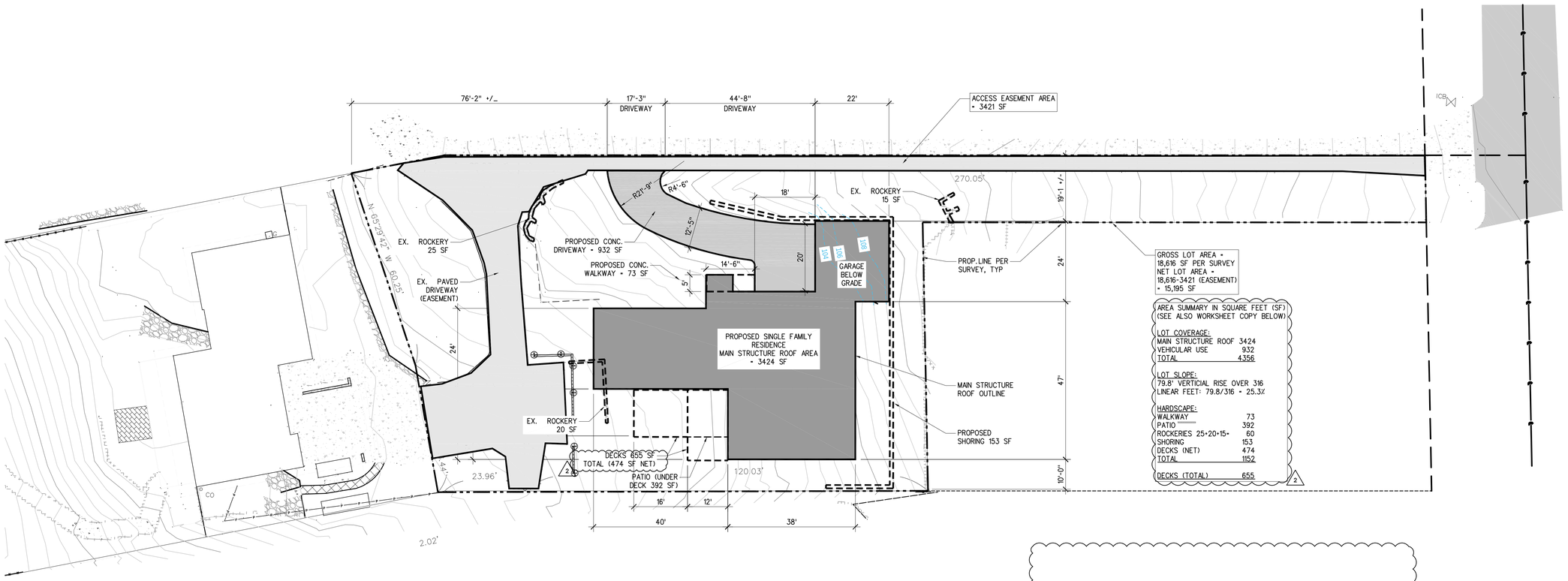
A-1.02
TREE PLAN



LOT COVERAGE

For single family residential development, "lot coverage" is the area of a lot that may be covered by a combination of the buildings and vehicular driving surfaces. The maximum lot coverage for a specific lot is based upon the lots slope (see above). The area of the lot that cannot be used for lot coverage is "required landscaping area"; the landscaping area is typically improved with either hardscape (see below) or softscape.
Please note: *Lot coverage is not the same as impervious surface calculations used for drainage review.*

Lot Slope	Maximum Lot Coverage (House, driving surfaces, and accessory buildings)	Required Landscaping Area
Less than 15%	40%	60%
15% to less than 30%	35%	65%
30% to 50%	30%	70%
Greater than 50% slope	20%	80%

LOT COVERAGE CALCULATIONS

A.	Allowed Lot Coverage	35	% of Lot
B.	Allowed Lot Coverage Area	5318	Square Feet
C.	Gross Lot Area	18616	Square Feet
D.	Net Lot Area	15195	Square Feet
E.	Main Structure Roof Area	3424	Square Feet
F.	Accessory Building Roof Area	0	Square Feet
G.	Vehicular Use (driveway, access easements, parking)	932	Square Feet
H.	Total Existing Lot Coverage Area	0	Square Feet
I.	(Total Lot Coverage Area Removed)	0	Square Feet
J.	Total New Lot Coverage Area	4356	Square Feet
K.	Total Project Lot Coverage Area = (H-I) + J	4356	Square Feet
L.	Proposed adjustment for single story		Square Feet
M.	Proposed adjustment for flag lot		Square Feet
N.	Proposed Lot Coverage = (K/D)x100	29	% of Lot

HARDSCAPE

For single family residential development, hardscape is the solid, hard, elements or structures that are incorporated into landscaping. The hardscape includes, but is not limited to, structures, paved areas, stairs, walkways, decks, patios, and similar constructed elements. The hardscape within the landscaping area consists of materials such as wood, stone, concrete, gravel, permeable pavements or pavers, and similar materials. Hardscape does not include solid, hard elements or structures that are covered by a minimum of two feet of soil intended for softscape (for example, a septic tank covered with at least two feet of soil and planted shrubs is not hardscape). The hardscape does not include driving surfaces or buildings.

Up to 9% of the net lot area may consist of hardscape areas. In addition, unused lot coverage may also be improved with hardscape.

What is the total square footage of all hardscape on property? 1152 Square Feet

What is the total square footage of all decks on property? 655 Square Feet

2

PLAN NORTH

0 4' 8' 16' 32'

1 SITE COVERAGE AND HARDSCAPE

SCALE: 1/16" = 1'-0"

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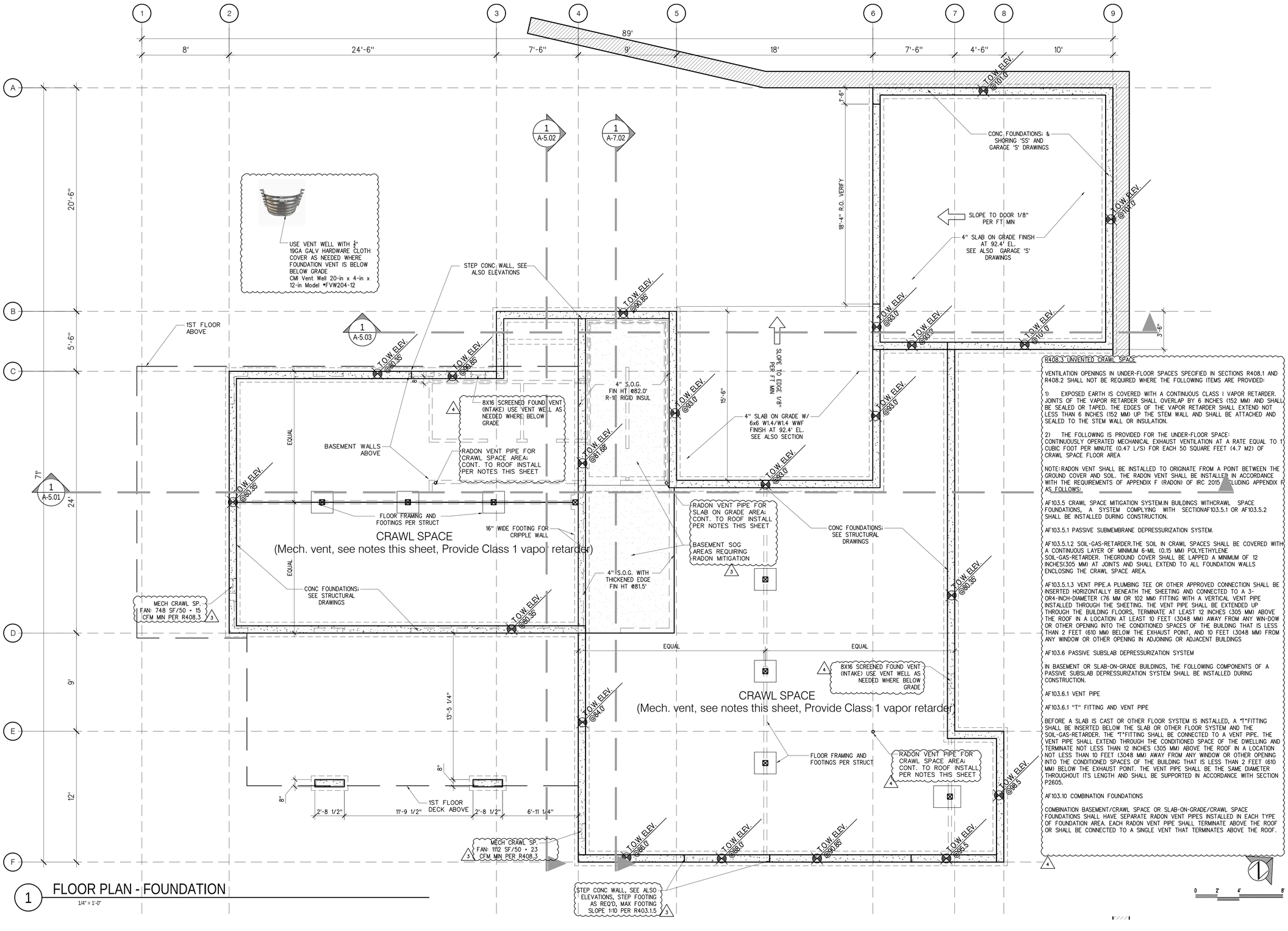
HARDSCAPE COVERAGE

1



R408.3 UNVENTED CRAWL SPACE

VENTILATION OPENINGS IN UNDER-FLOOR SPACES SPECIFIED IN SECTIONS R408.1 AND R408.2 SHALL NOT BE REQUIRED WHERE THE FOLLOWING ITEMS ARE PROVIDED:

1) EXPOSED EARTH IS COVERED WITH A CONTINUOUS CLASS I VAPOR RETARDER. JOINTS OF THE VAPOR RETARDER SHALL OVERLAP BY 6 INCHES (152 MM) AND SHALL BE SEALED OR TAPED. THE EDGES OF THE VAPOR RETARDER SHALL EXTEND NOT LESS THAN 6 INCHES (152 MM) UP THE STEM WALL AND SHALL BE ATTACHED AND SEALED TO THE STEM WALL OR INSULATION.

2) THE FOLLOWING IS PROVIDED FOR THE UNDER-FLOOR SPACE: CONTINUOUSLY OPERATED MECHANICAL EXHAUST VENTILATION AT A RATE EQUAL TO 1 CUBIC FOOT PER MINUTE (0.47 L/S) FOR EACH 50 SQUARE FEET (4.7 M2) OF CRAWL SPACE FLOOR AREA

NOTE:RADON VENT SHALL BE INSTALLED TO ORIGINATE FROM A POINT BETWEEN THE GROUND COVER AND SOIL. THE RADON VENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF APPENDIX F (RADON) OF IRC 2015 INCLUDING APPENDIX F AS FOLLOWS:

AF103.5 CRAWL SPACE MITIGATION SYSTEM.IN BUILDINGS WITHCRAWL SPACE FOUNDATIONS, A SYSTEM COMPLYING WITH SECTIONAF103.5.1 OR AF103.5.2 SHALL BE INSTALLED DURING CONSTRUCTION.

AF103.5.1 PASSIVE SUBMEMBRANE DEPRESSURIZATION SYSTEM.

AF103.5.1.2 SOIL-GAS-RETARDER.THE SOIL IN CRAWL SPACES SHALL BE COVERED WITH A CONTINUOUS LAYER OF MINIMUM 6-MIL (0.15 MM) POLYETHYLENE SOIL-GAS-RETARDER. THEGROUND COVER SHALL BE LAPPED A MINIMUM OF 12 INCHES(305 MM) AT JOINTS AND SHALL EXTEND TO ALL FOUNDATION WALLS ENCLOSING THE CRAWL SPACE AREA.

AF103.5.1.3 VENT PIPE.A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSERTED HORIZONTALLY BENEATH THE SHEETING AND CONNECTED TO A 3- OR4-INCH-DIAMETER (76 MM OR 102 MM) FITTING WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE SHEETING. THE VENT PIPE SHALL BE EXTENDED UP THROUGH THE BUILDING FLOORS, TERMINATE AT LEAST 12 INCHES (305 MM) ABOVE THE ROOF IN A LOCATION AT LEAST 10 FEET (3048 MM) AWAY FROM ANY WIN-DOW OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET (610 MM) BELOW THE EXHAUST POINT, AND 10 FEET (3048 MM) FROM ANY WINDOW OR OTHER OPENING IN ADJOINING OR ADJACENT BUILDINGS

AF103.6 PASSIVE SUBSLAB DEPRESSURIZATION SYSTEM

IN BASEMENT OR SLAB-ON-GRADE BUILDINGS, THE FOLLOWING COMPONENTS OF A PASSIVE SUBSLAB DEPRESSURIZATION SYSTEM SHALL BE INSTALLED DURING CONSTRUCTION.

AF103.6.1 VENT PIPE

AF103.6.1 "T" FITTING AND VENT PIPE

BEFORE A SLAB IS CAST OR OTHER FLOOR SYSTEM IS INSTALLED, A "T"FITTING SHALL BE INSERTED BELOW THE SLAB OR OTHER FLOOR SYSTEM AND THE SOIL-GAS-RETARDER. THE "T"FITTING SHALL BE CONNECTED TO A VENT PIPE. THE VENT PIPE SHALL EXTEND THROUGH THE CONDITIONED SPACE OF THE DWELLING AND TERMINATE NOT LESS THAN 12 INCHES (305 MM) ABOVE THE ROOF IN A LOCATION NOT LESS THAN 10 FEET (3048 MM) AWAY FROM ANY WINDOW OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET (610 MM) BELOW THE EXHAUST POINT. THE VENT PIPE SHALL BE THE SAME DIAMETER THROUGHOUT ITS LENGTH AND SHALL BE SUPPORTED IN ACCORDANCE WITH SECTION P2605.

AF103.10 COMBINATION FOUNDATIONS

COMBINATION BASEMENT/CRAWL SPACE OR SLAB-ON-GRADE/CRAWL SPACE FOUNDATIONS SHALL HAVE SEPARATE RADON VENT PIPES INSTALLED IN EACH TYPE OF FOUNDATION AREA. EACH RADON VENT PIPE SHALL TERMINATE ABOVE THE ROOF OR SHALL BE CONNECTED TO A SINGLE VENT THAT TERMINATES ABOVE THE ROOF.

1 FLOOR PLAN - FOUNDATION

1/4" = 1'-0"

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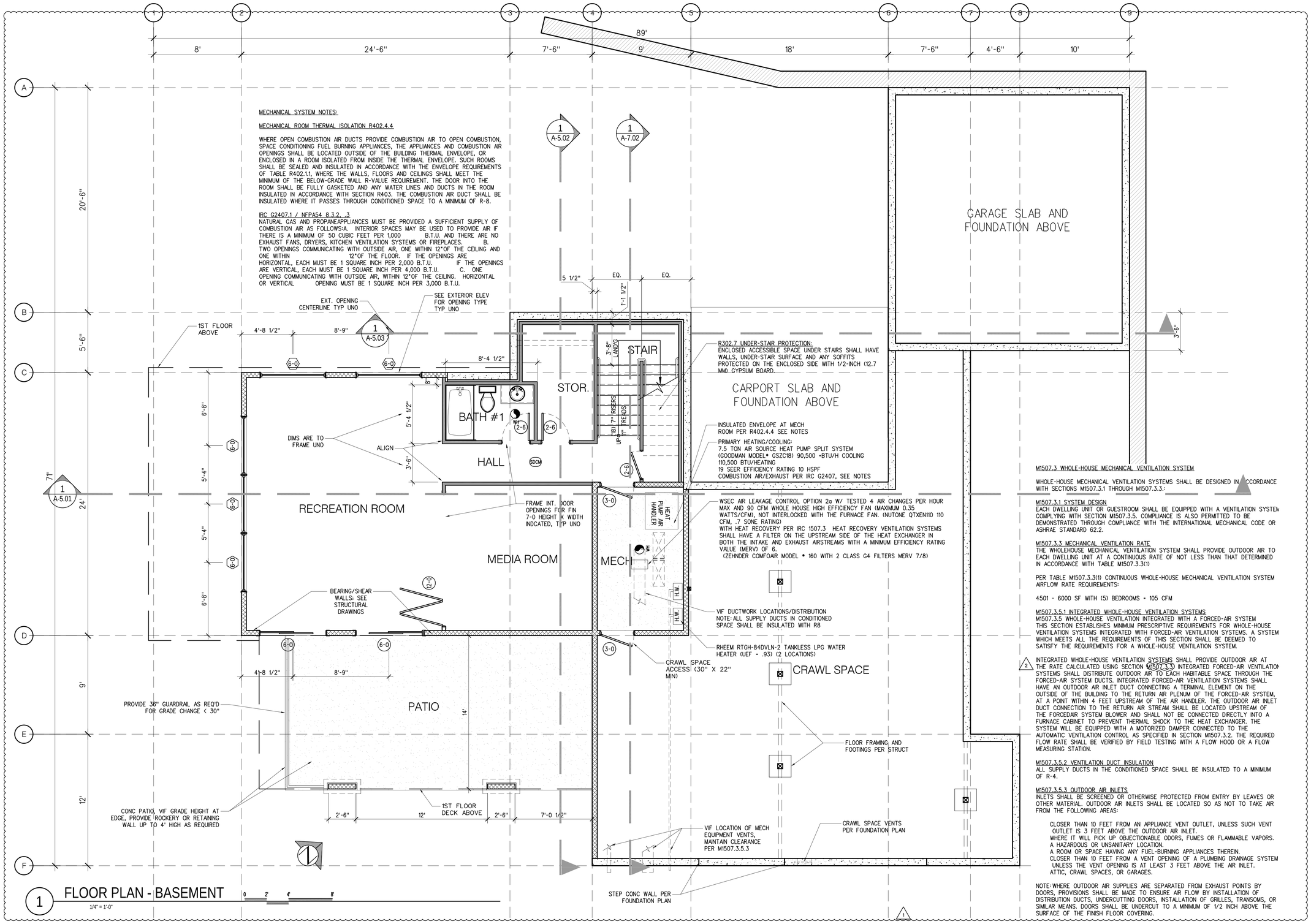
A-2.00

FOUNDATION PLAN



MECHANICAL SYSTEM NOTES:

MECHANICAL ROOM THERMAL ISOLATION R402.4.4

WHERE OPEN COMBUSTION AIR DUCTS PROVIDE COMBUSTION AIR TO OPEN COMBUSTION, SPACE CONDITIONING FUEL BURNING APPLIANCES, THE APPLIANCES AND COMBUSTION AIR OPENINGS SHALL BE LOCATED OUTSIDE OF THE BUILDING THERMAL ENVELOPE, OR ENCLOSED IN A ROOM ISOLATED FROM INSIDE THE THERMAL ENVELOPE. SUCH ROOMS SHALL BE SEALED AND INSULATED IN ACCORDANCE WITH THE ENVELOPE REQUIREMENTS OF TABLE R402.1.1, WHERE THE WALLS, FLOORS AND CEILINGS SHALL MEET THE MINIMUM OF THE BELOW-GRADE WALL R-VALUE REQUIREMENT. THE DOOR INTO THE ROOM SHALL BE FULLY GASKETED AND ANY WATER LINES AND DUCTS IN THE ROOM INSULATED IN ACCORDANCE WITH SECTION R403. THE COMBUSTION AIR DUCT SHALL BE INSULATED WHERE IT PASSES THROUGH CONDITIONED SPACE TO A MINIMUM OF R-8.

IRC G2407.1 / NFPA54 8.3.2, .3
NATURAL GAS AND PROPANE APPLIANCES MUST BE PROVIDED A SUFFICIENT SUPPLY OF COMBUSTION AIR AS FOLLOWS: A. INTERIOR SPACES MAY BE USED TO PROVIDE AIR IF THERE IS A MINIMUM OF 50 CUBIC FEET PER 1,000 B.T.U. AND THERE ARE NO EXHAUST FANS, DRYERS, KITCHEN VENTILATION SYSTEMS OR FIREPLACES. B. TWO OPENINGS COMMUNICATING WITH OUTSIDE AIR, ONE WITHIN 12" OF THE CEILING AND ONE WITHIN 12" OF THE FLOOR. IF THE OPENINGS ARE HORIZONTAL, EACH MUST BE 1 SQUARE INCH PER 2,000 B.T.U. IF THE OPENINGS ARE VERTICAL, EACH MUST BE 1 SQUARE INCH PER 4,000 B.T.U. C. ONE OPENING COMMUNICATING WITH OUTSIDE AIR, WITHIN 12" OF THE CEILING. HORIZONTAL OR VERTICAL OPENING MUST BE 1 SQUARE INCH PER 3,000 B.T.U.

M1507.3 WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M1507.3.1 THROUGH M1507.3.3.:

M1507.3.1 SYSTEM DESIGN
EACH DWELLING UNIT OR GUESTROOM SHALL BE EQUIPPED WITH A VENTILATION SYSTEM COMPLYING WITH SECTION M1507.3.5. COMPLIANCE IS ALSO PERMITTED TO BE DEMONSTRATED THROUGH COMPLIANCE WITH THE INTERNATIONAL MECHANICAL CODE OR ASHRAE STANDARD 62.2.

M1507.3.3 MECHANICAL VENTILATION RATE
THE WHOLEHOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR TO EACH DWELLING UNIT AT A CONTINUOUS RATE OF NOT LESS THAN THAT DETERMINED IN ACCORDANCE WITH TABLE M1507.3.3(1)

PER TABLE M1507.3.3(1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS:

4501 - 6000 SF WITH (5) BEDROOMS = 105 CFM

M1507.3.5.1 INTEGRATED WHOLE-HOUSE VENTILATION SYSTEMS
M1507.3.5 WHOLE-HOUSE VENTILATION INTEGRATED WITH A FORCED-AIR SYSTEM
THIS SECTION ESTABLISHES MINIMUM PRESCRIPTIVE REQUIREMENTS FOR WHOLE-HOUSE VENTILATION SYSTEMS INTEGRATED WITH FORCED-AIR VENTILATION SYSTEMS. A SYSTEM WHICH MEETS ALL THE REQUIREMENTS OF THIS SECTION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS FOR A WHOLE-HOUSE VENTILATION SYSTEM.

2 INTEGRATED WHOLE-HOUSE VENTILATION SYSTEMS SHALL PROVIDE OUTDOOR AIR AT THE RATE CALCULATED USING SECTION M1507.3.3 INTEGRATED FORCED-AIR VENTILATION SYSTEMS SHALL DISTRIBUTE OUTDOOR AIR TO EACH HABITABLE SPACE THROUGH THE FORCED-AIR SYSTEM DUCTS. INTEGRATED FORCED-AIR VENTILATION SYSTEMS SHALL HAVE AN OUTDOOR AIR INLET DUCT CONNECTING A TERMINAL ELEMENT ON THE OUTSIDE OF THE BUILDING TO THE RETURN AIR PLENUM OF THE FORCED-AIR SYSTEM, AT A POINT WITHIN 4 FEET UPSTREAM OF THE AIR HANDLER. THE OUTDOOR AIR INLET DUCT CONNECTION TO THE RETURN AIR STREAM SHALL BE LOCATED UPSTREAM OF THE FORCEDAIR SYSTEM BLOWER AND SHALL NOT BE CONNECTED DIRECTLY INTO A FURNACE CABINET TO PREVENT THERMAL SHOCK TO THE HEAT EXCHANGER. THE SYSTEM WILL BE EQUIPPED WITH A MOTORIZED DAMPER CONNECTED TO THE AUTOMATIC VENTILATION CONTROL AS SPECIFIED IN SECTION M1507.3.2. THE REQUIRED FLOW RATE SHALL BE VERIFIED BY FIELD TESTING WITH A FLOW HOOD OR A FLOW MEASURING STATION.

M1507.3.5.2 VENTILATION DUCT INSULATION
ALL SUPPLY DUCTS IN THE CONDITIONED SPACE SHALL BE INSULATED TO A MINIMUM OF R-4.

M1507.3.5.3 OUTDOOR AIR INLETS
INLETS SHALL BE SCREENED OR OTHERWISE PROTECTED FROM ENTRY BY LEAVES OR OTHER MATERIAL. OUTDOOR AIR INLETS SHALL BE LOCATED SO AS NOT TO TAKE AIR FROM THE FOLLOWING AREAS:

CLOSER THAN 10 FEET FROM AN APPLIANCE VENT OUTLET, UNLESS SUCH VENT OUTLET IS 3 FEET ABOVE THE OUTDOOR AIR INLET.
WHERE IT WILL PICK UP OBJECTIONABLE ODORS, FUMES OR FLAMMABLE VAPORS.
A HAZARDOUS OR UNSANITARY LOCATION.
A ROOM OR SPACE HAVING ANY FUEL-BURNING APPLIANCES THEREIN.
CLOSER THAN 10 FEET FROM A VENT OPENING OF A PLUMBING DRAINAGE SYSTEM UNLESS THE VENT OPENING IS AT LEAST 3 FEET ABOVE THE AIR INLET.
ATTIC, CRAWL SPACES, OR GARAGES.

NOTE: WHERE OUTDOOR AIR SUPPLIES ARE SEPARATED FROM EXHAUST POINTS BY DOORS, PROVISIONS SHALL BE MADE TO ENSURE AIR FLOW BY INSTALLATION OF DISTRIBUTION DUCTS, UNDERCUTTING DOORS, INSTALLATION OF GRILLES, TRANSOMS, OR SIMILAR MEANS. DOORS SHALL BE UNDERCUT TO A MINIMUM OF 1/2 INCH ABOVE THE SURFACE OF THE FINISH FLOOR COVERING.

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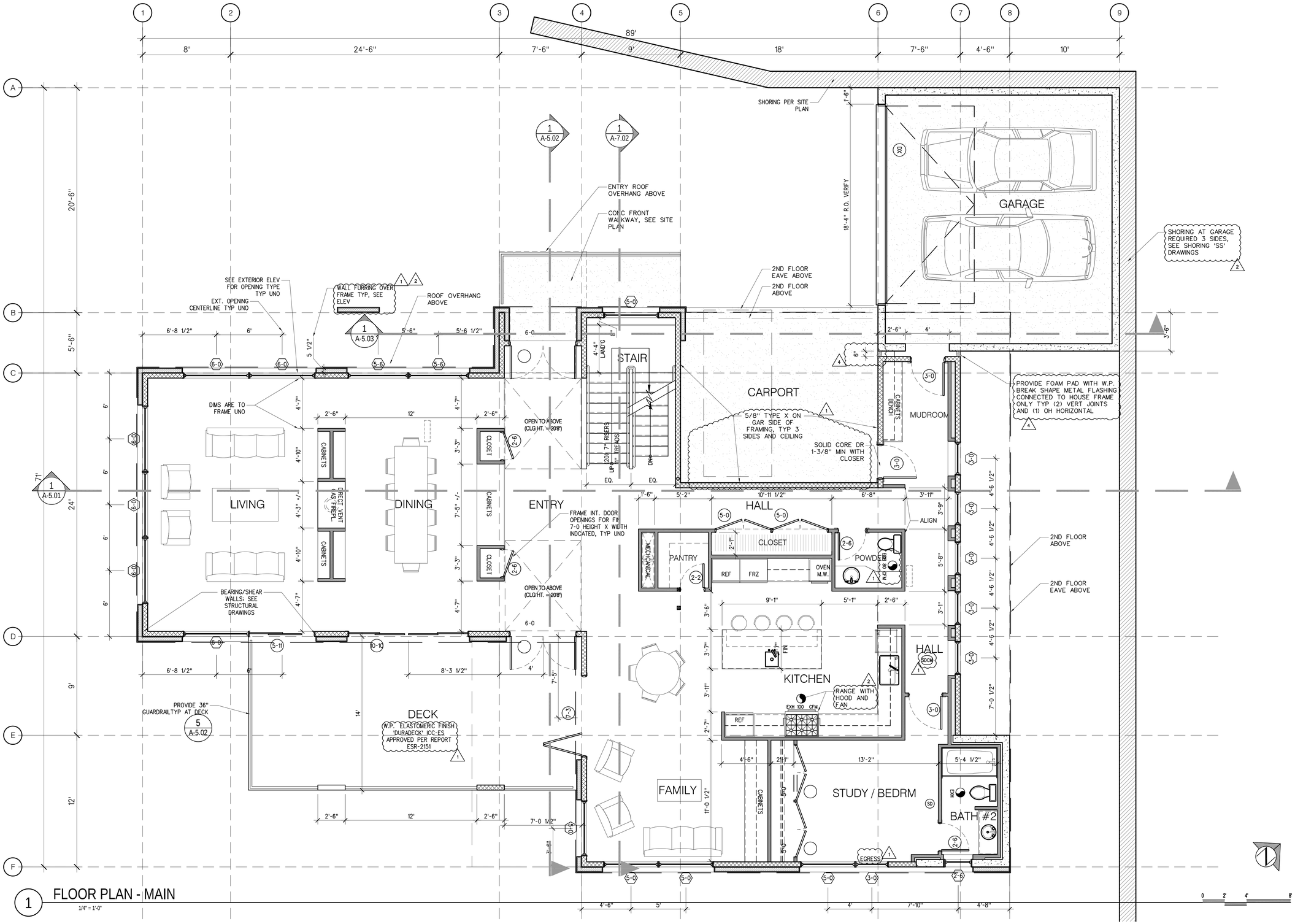
PROJECT PERMIT INFO

A-2.01
FLOOR PLAN - BASEMENT



1 FLOOR PLAN - MAIN

1/4" = 1'-0"

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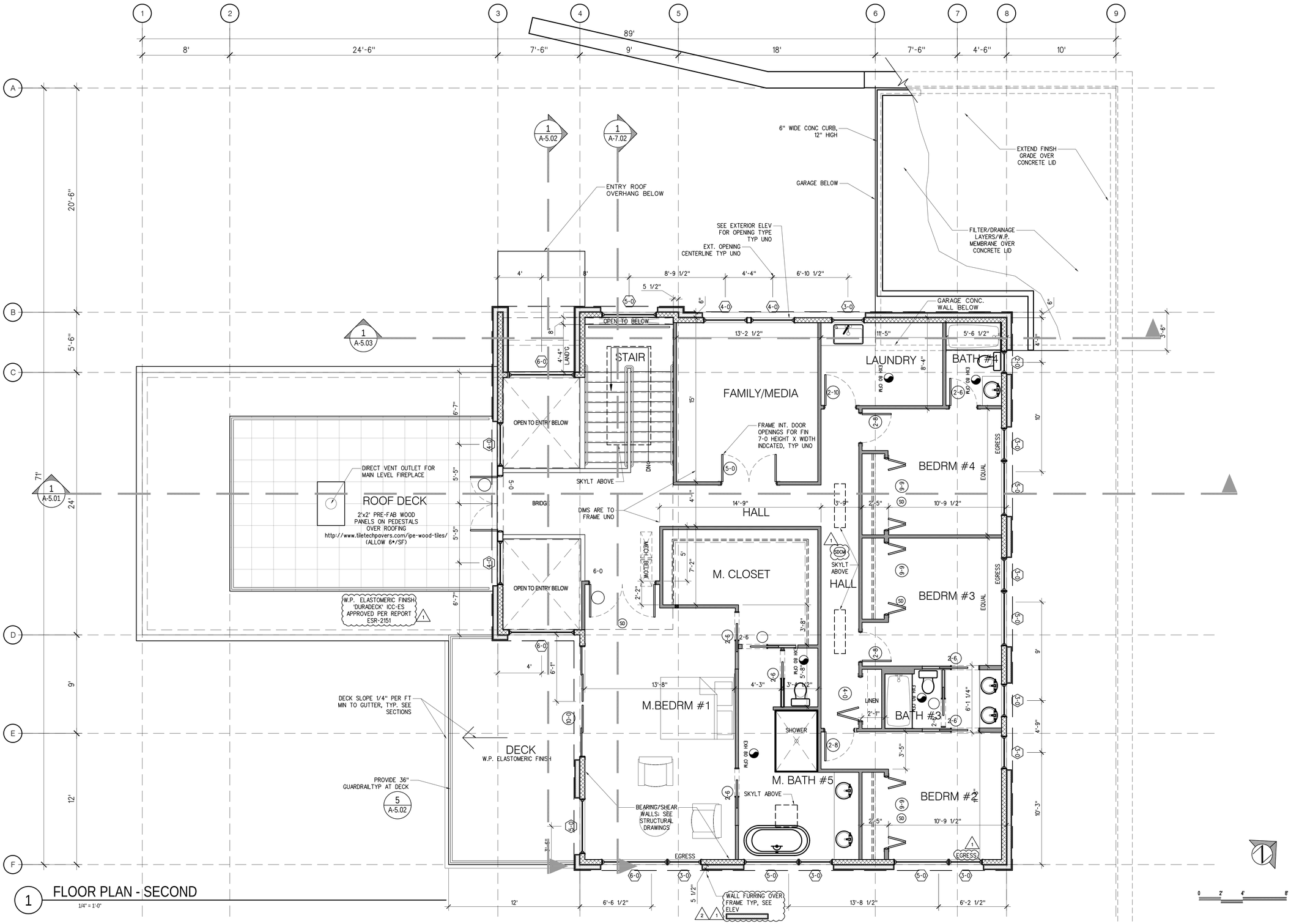
A-2.02

FLOOR PLAN - MAIN



1 FLOOR PLAN - SECOND

1/4" = 1'-0"

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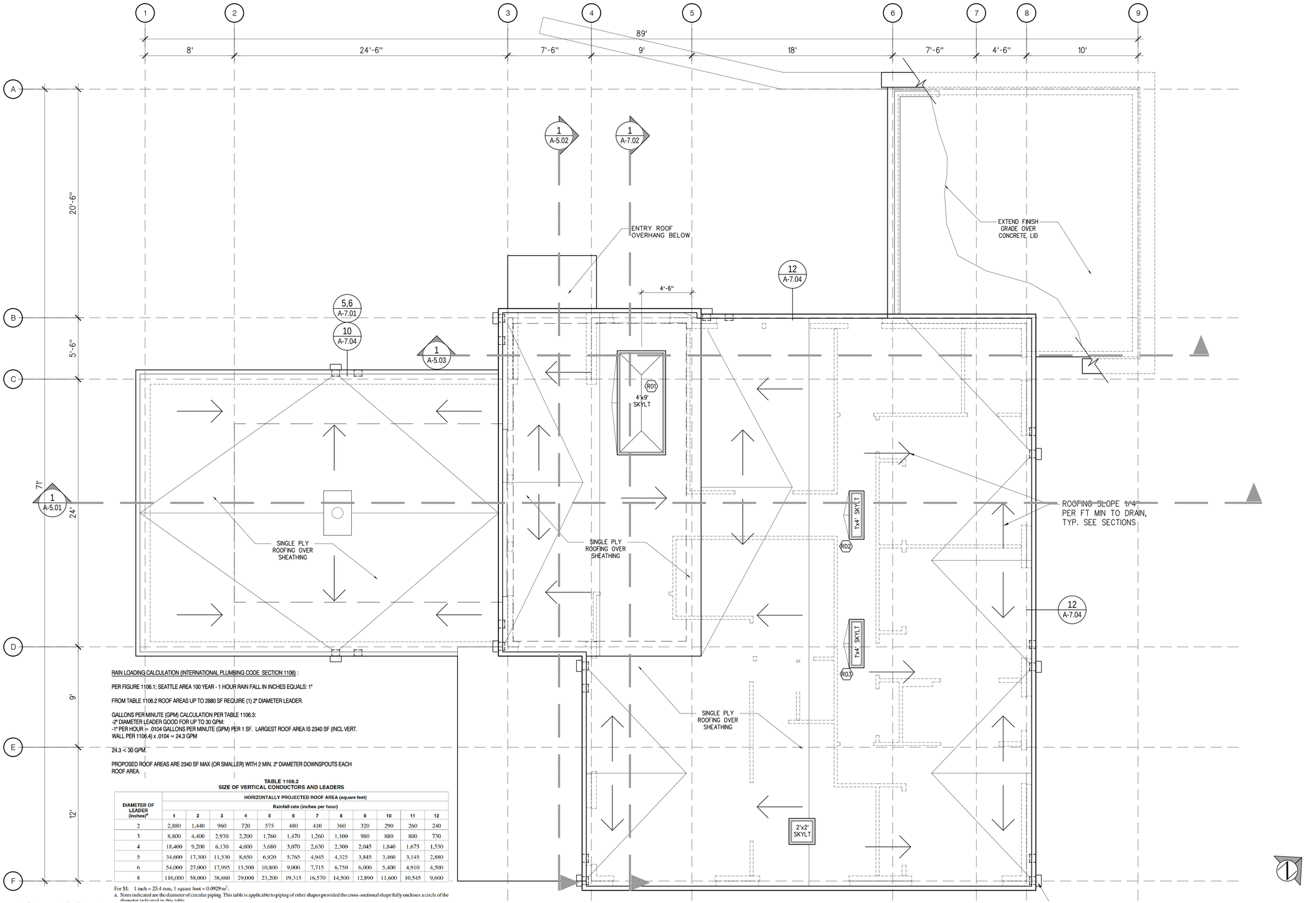
FLOOR PLAN - SECOND



RAIN LOADING CALCULATION (INTERNATIONAL PLUMBING CODE SECTION 1106) :

PER FIGURE 1106.1; SEATTLE AREA 100 YEAR - 1 HOUR RAIN FALL IN INCHES EQUALS: 1"

FROM TABLE 1106.2 ROOF AREAS UP TO 2880 SF REQUIRE (1) 2" DIAMETER LEADER.

GALLONS PER MINUTE (GPM) CALCULATION PER TABLE 1106.3:
-2" DIAMETER LEADER GOOD FOR UP TO 30 GPM:
-1" PER HOUR = .0104 GALLONS PER MINUTE (GPM) PER 1 SF. LARGEST ROOF AREA IS 2340 SF (INCL VERT. WALL PER 1106.4) x .0104 = 24.3 GPM

24.3 < 30 GPM.

PROPOSED ROOF AREAS ARE 2340 SF MAX (OR SMALLER) WITH 2 MIN. 2" DIAMETER DOWNSPOUTS EACH ROOF AREA.

TABLE 1106.2
SIZE OF VERTICAL CONDUCTORS AND LEADERS

DIAMETER OF LEADER (inches)[a]	HORIZONTALLY PROJECTED ROOF AREA (square feet)											
	Rainfall rate (inches per hour)											
	1	2	3	4	5	6	7	8	9	10	11	12
2	2,880	1,440	960	720	575	480	410	360	320	290	260	240
3	8,800	4,400	2,930	2,200	1,760	1,470	1,260	1,100	980	880	800	730
4	18,400	9,200	6,130	4,600	3,680	3,070	2,630	2,300	2,045	1,840	1,675	1,530
5	34,600	17,300	11,530	8,650	6,920	5,765	4,945	4,325	3,845	3,460	3,145	2,880
6	54,000	27,000	17,995	13,500	10,800	9,000	7,715	6,750	6,000	5,400	4,910	4,500
8	116,000	58,000	38,660	29,000	23,200	19,315	16,570	14,500	12,890	11,600	10,545	9,600

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2.
a. Sizes indicated are the diameter of circular piping. This table is applicable to piping of other shapes provided the cross-sectional shape fully encloses a circle of the diameter indicated in this table.

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

PB ARCHITECTS INC., P.S.
5006 6TH AVENUE S.
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206-443-9700
206-443-9875

REGISTERED ARCHITECT
5619
STATE OF WASHINGTON

WEN HU RESIDENCE
8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

DATE	DESCRIPTION
12JUL2019	SUBMITTAL SET REV'S
18OCT2019	SUB. SET REV S-1/2

PROJECT RELEASE

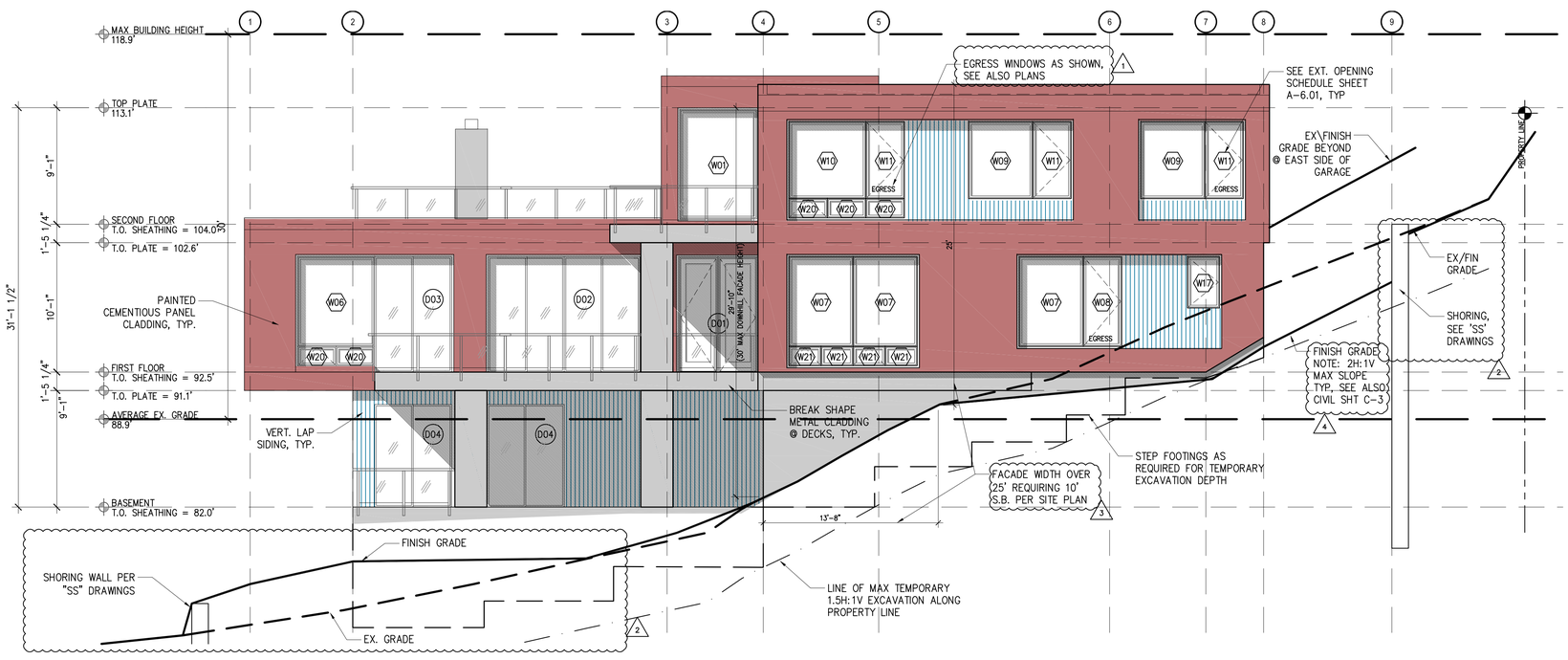
DATE	DESCRIPTION	DATE	DESCRIPTION
15SEP'17	PRELIM		
12MAR2018	PRE-APP REVIEW		
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

A-2.04
ROOF PLAN

2 WEST ELEV

SCALE: 3/16" = 1'-0"



1 EAST ELEV

SCALE: 3/16" = 1'-0"

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WEN HU RESIDENCE

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PROJECT REVISIONS

DATE	DESCRIPTION
12JUL2019	SUBMITTAL SET REVS
18OCT2019	SUB. SET REV.S #2
14JAN2020	SUB. SET REV.S #3
06DEC2020	SUB. SET REV.S #4

PROJECT RELEASE

DATE	DESCRIPTION	DATE	DESCRIPTION
15SEP17	PRELIM	14JAN2020	SUBMITTAL REVISIONS
12MAR2018	PRE-APP REVIEW	06DEC2020	SUBMITTAL REVISIONS
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

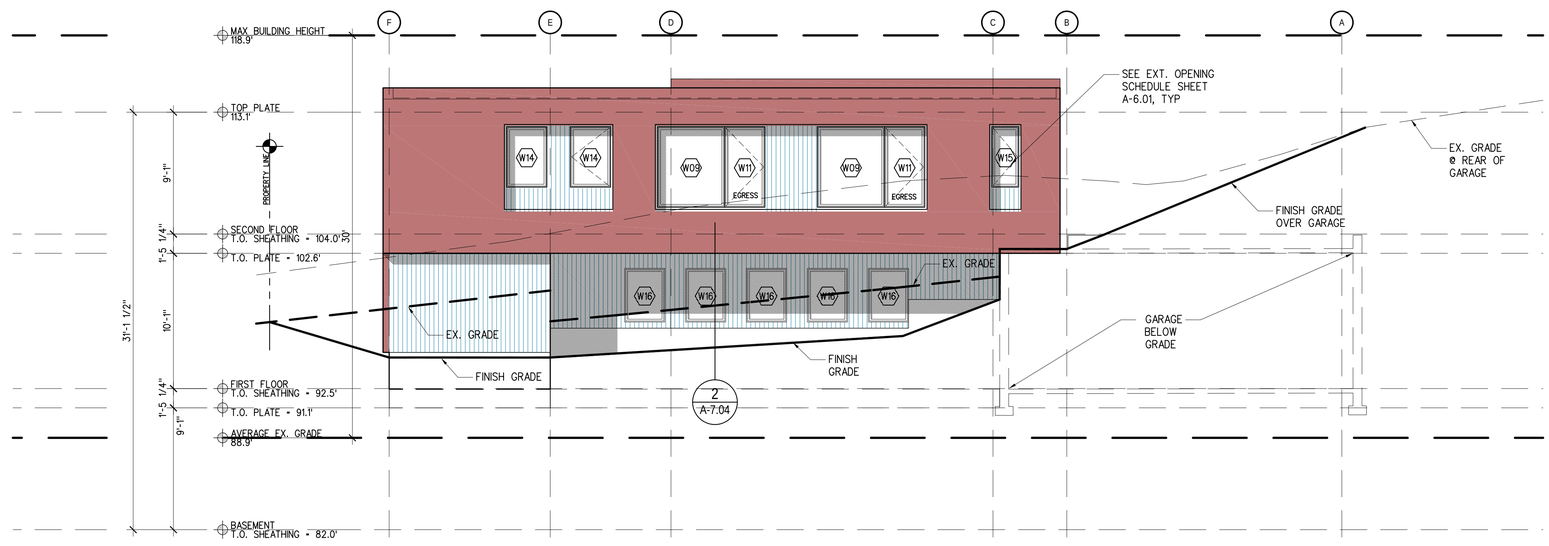
PROJECT PERMIT INFO

A-4.01

ELEVATIONS - EAST & WEST

2 SOUTH ELEV

SCALE: 3/16" = 1'-0"



1 NORTH ELEV

SCALE: 3/16" = 1'-0"

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REGISTERED ARCHITECT
5618
Peter Bleck
STATE OF WASHINGTON

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PROJECT REVISIONS

	DATE	DESCRIPTION
1	12JUL2019	SUBMITTAL SET REVISIONS
2	18OCT2019	SUB. SET REV S-1/2
3		
4		
5		

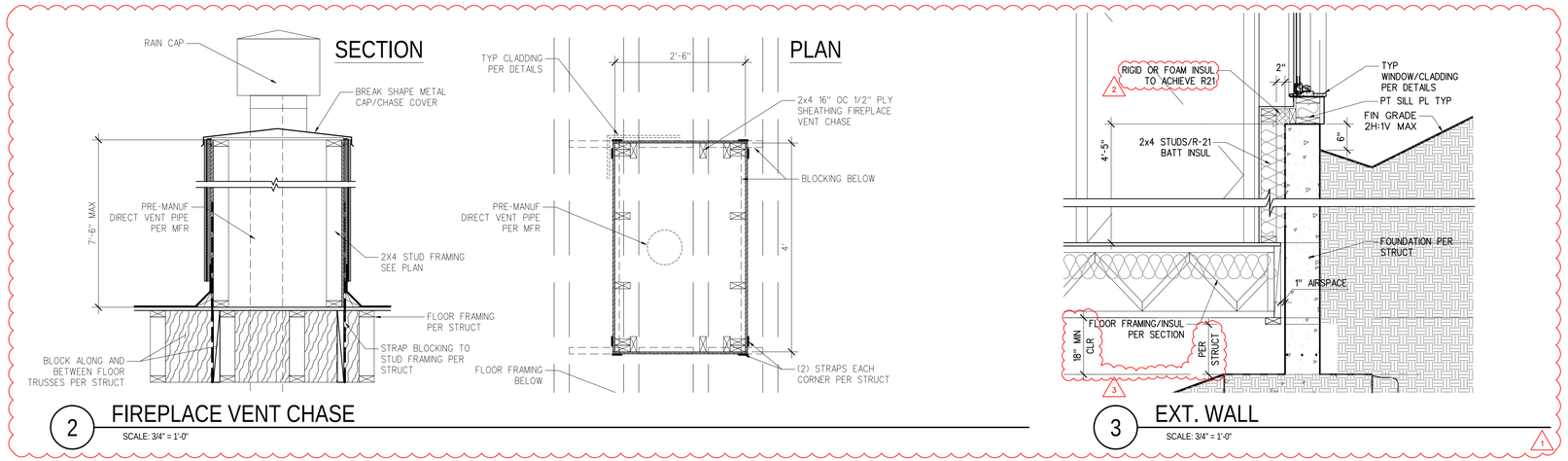
PROJECT RELEASE

DATE	DESCRIPTION	DATE	DESCRIPTION
15SEP'17	PRELIM		
12MAR2018	PRE-APP REVIEW		
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

A-4.02

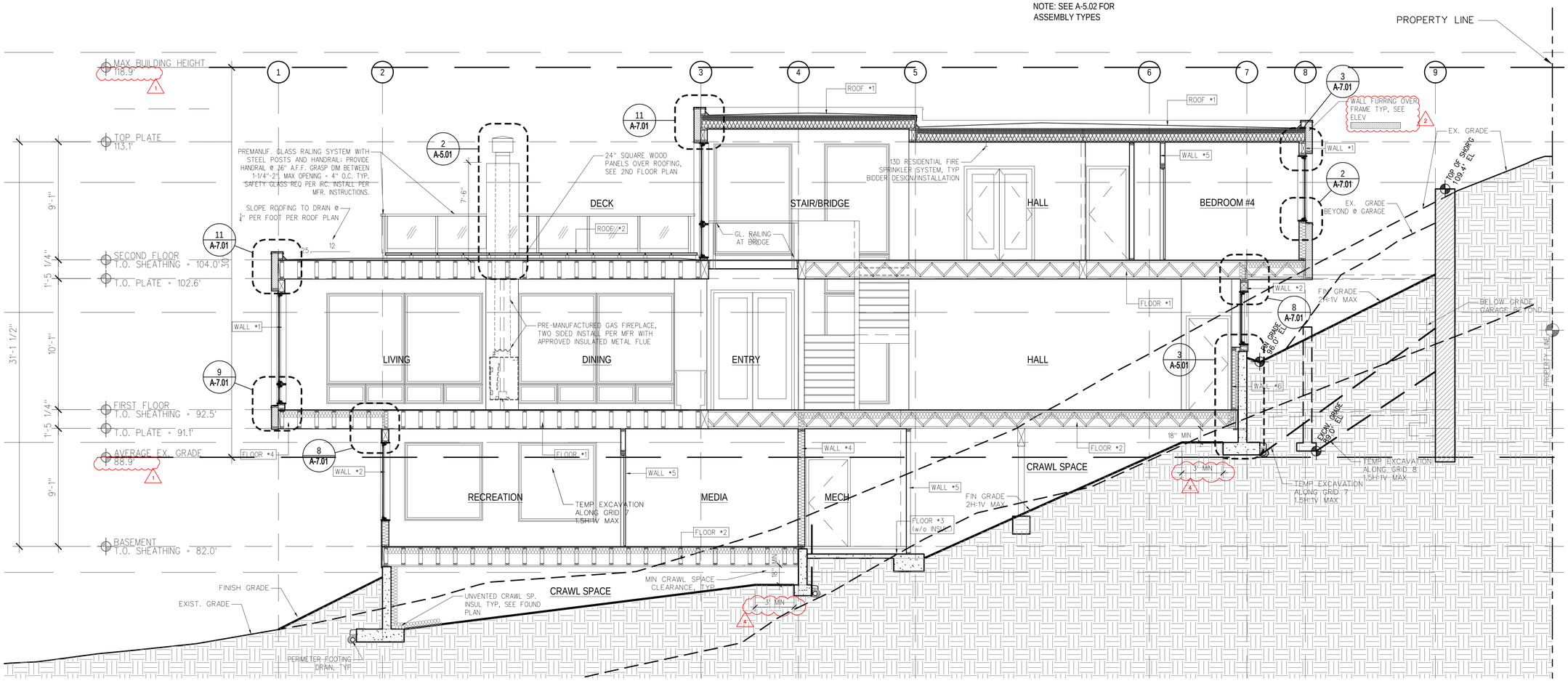
ELEVATIONS - NORTH & SOUTH



2 FIREPLACE VENT CHASE
SCALE: 3/4" = 1'-0"

3 EXT. WALL
SCALE: 3/4" = 1'-0"

NOTE: SEE A-5.02 FOR ASSEMBLY TYPES



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

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PROJECT REVISIONS

	DATE	DESCRIPTION
1	12JUL2019	SUBMITTAL SET REVS
2	18OCT2019	SUB. SET REV S.1/2
3	14JAN2020	SUB. SET REV S.#3
4	06DEC2020	SUB. SET REV S.#4
5		

PROJECT RELEASE

DATE	DESCRIPTION
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12MAR2018	PRE-APP REVIEW
30MAY2018	90% REVIEW
12JUL2019	SUBMITTAL REVISIONS
18OCT2019	SUBMITTAL REVISIONS
14JAN2020	SUBMITTAL REVISIONS
06DEC2020	SUBMITTAL REVISIONS

PROJECT PERMIT INFO

A-5.01
SECTION A-A

GUARDRAIL NOTE: CONTRACTOR SHALL CONFIRM TO INSPECTOR CAPACITY OF GUARD TO RESOLVE 200 LB CONCENTRATED LOAD APPLIED TO THE TOP ACTING IN ANY DIRECTION

NOTES: (FOR INFORMATION ONLY, REFER TO DEFERRED SUBMITTAL/MANUF. INSTRUCTIONS)

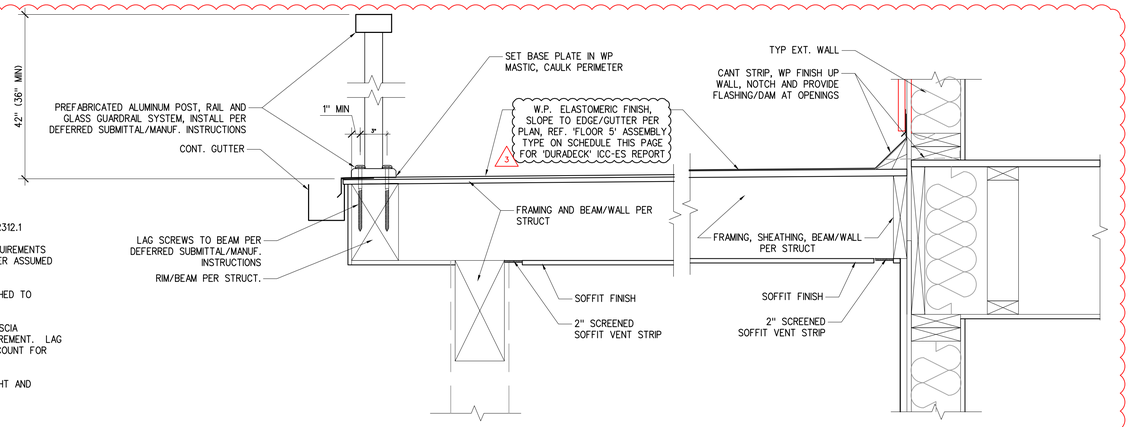
1) GUARDRAILS SHALL CONFORM TO IRC 2015 SECTION R312.1

2) MINIMUM LAG PENETRATION DIMENSION, REFER TO REQUIREMENTS FOR LAG SCREW PENETRATION INTO SOLID LUMBER. LUMBER ASSUMED TO HAVE A MINIMUM 0.43 SPECIFIC GRAVITY (ie: HEM-FIR).

3) RIM JOIST AND BLOCKING MUST BE PROPERLY ATTACHED TO STRUCTURE TO RESIST TRANSFERRED LOADS FROM POSTS.

4) IF USING COMPOSITE MATERIAL AS FASCIA BOARD, FASCIA THICKNESS WILL NOT CONTRIBUTE TO PENETRATION REQUIREMENT. LAG SCREW LENGTH AND BLOCKING MUST BE ADJUSTED TO ACCOUNT FOR ADDITIONAL LENGTH, AS NECESSARY.

5) BOLT PATTERN MAY VARY DEPENDING ON JOIST HEIGHT AND PROJECT TYPE.



5 DECK DETAILS

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

ASSEMBLY TYPES

WALL-1 CEMENTITIOUS PANEL SIDING
BUILDING PAPER
1/2" PLYWOOD SHEATHING
2 X 6 STUDS @ 16" O.C.
R-21 BATT INSULATION + R4
5/8" TYPE X G.W.B.

WALL-2 VERTICAL LAP SIDING
BUILDING PAPER
1/2" PLYWOOD SHEATHING
2 X 6 STUDS @ 16" O.C.
R-21 BATT INSULATION + R4
5/8" TYPE X G.W.B.

WALL-3 METAL BREAK SHAPE PANELS
BUILDING PAPER
1/2" PLYWOOD SHEATHING
2 X 6 STUDS @ 16" O.C.
R-21 BATT INSULATION + R4
5/8" TYPE X G.W.B.

WALL-4 5/8" TYPE X G.W.B.
2 X 6 STUDS @ 16" O.C.
R-21 BATT INSULATION + R4
6 MIL VAPOR BARRIER
1/2" G.W.B.

WALL-5 5/8" TYPE X G.W.B.
2 X 4 STUDS @ 16" O.C.
5/8" TYPE X G.W.B.

WALL-3 W.P. OVER CONC WALL
2" AIRSPACE
2 X 4 STUDS @ 16" O.C.
R-21 BATT INSULATION + R5 ci
5/8" TYPE X G.W.B.

FLOOR-1 FINISH FLOOR PER PLANS
3/4" T&G PLYWOOD
FLOOR FRAMING PER STRUCT.
1/2" G.W.B

FLOOR-2 FINISH FLOOR PER PLANS
3/4" T&G PLYWOOD
FLOOR FRAMING PER STRUCT.
R-38 BATT INSULATION
2' MIN CRAWLSPACE

>>>PROVIDE SPRAY FIRE RETARDANT ON FRAMING FOR FIRE CODE ALTERNATE
6 MIL POLY VAPOR BAR

FLOOR-3 FINISH FLOOR PER PLANS
4" CONCRETE S.O.G.
6 MIL VAPOR BARRIER
R-10 RIGID INSULATION CONTINUOUS FULL SLAB INSULATION FOR 1b EFFICIENT ENVELOPE CREDIT

(RIGID INSUL NOT REQ'D AT GARAGE OR WHERE NOTED)

FLOOR-4 FINISH FLOOR PER PLANS
3/4" T&G PLYWOOD
FLOOR FRAMING PER STRUCT.
R-38 BATT INSULATION
3/8" T&G OR TEXTURED PLY.

FLOOR-5 WATER PROOF FINISH, 'DURADEK' SEE ICC-ES EVAL #ESR 2151
3/4" T&G PLYWOOD
TAPERED DECK JOISTS PER STRUCTURAL
3/8" T&G OR TEXTURED PLY.

ROOF-1 SINGLE PLY WATERPROOF MEMBRANE OVER 1/2 PLYWD UNDERLAYMENT, TAPERED FURRING TO DRAIN PER ROOF PLAN/SECTIONS
SHEATHING PER STRUCTURAL
RAFTERS PER STRUCTURAL
R-19 MIN CLOSED CELL SPRAY FOAM W/ R-19 MIN BATT INSULATION (R-38 TOTAL MIN)

>>>NOTE: APPLY NO VAPOR BARRIER<<<

5/8" TYPE X G.W.B.

ROOF-2 2' SQUARE PRE-FAB IPE PANELS/PEDESTALS OVER 1/2" PLYWD UNDERLAYMENT, TAPERED FURRING TO DRAIN PER ROOF PLAN/SECTIONS

SHEATHING PER STRUCTURAL
RAFTERS PER STRUCTURAL
R-19 MIN CLOSED CELL SPRAY FOAM W/ R-19 MIN BATT INSULATION (R-38 TOTAL MIN)

>>>NOTE: APPLY NO VAPOR BARRIER<<<
5/8" TYPE X G.W.B.

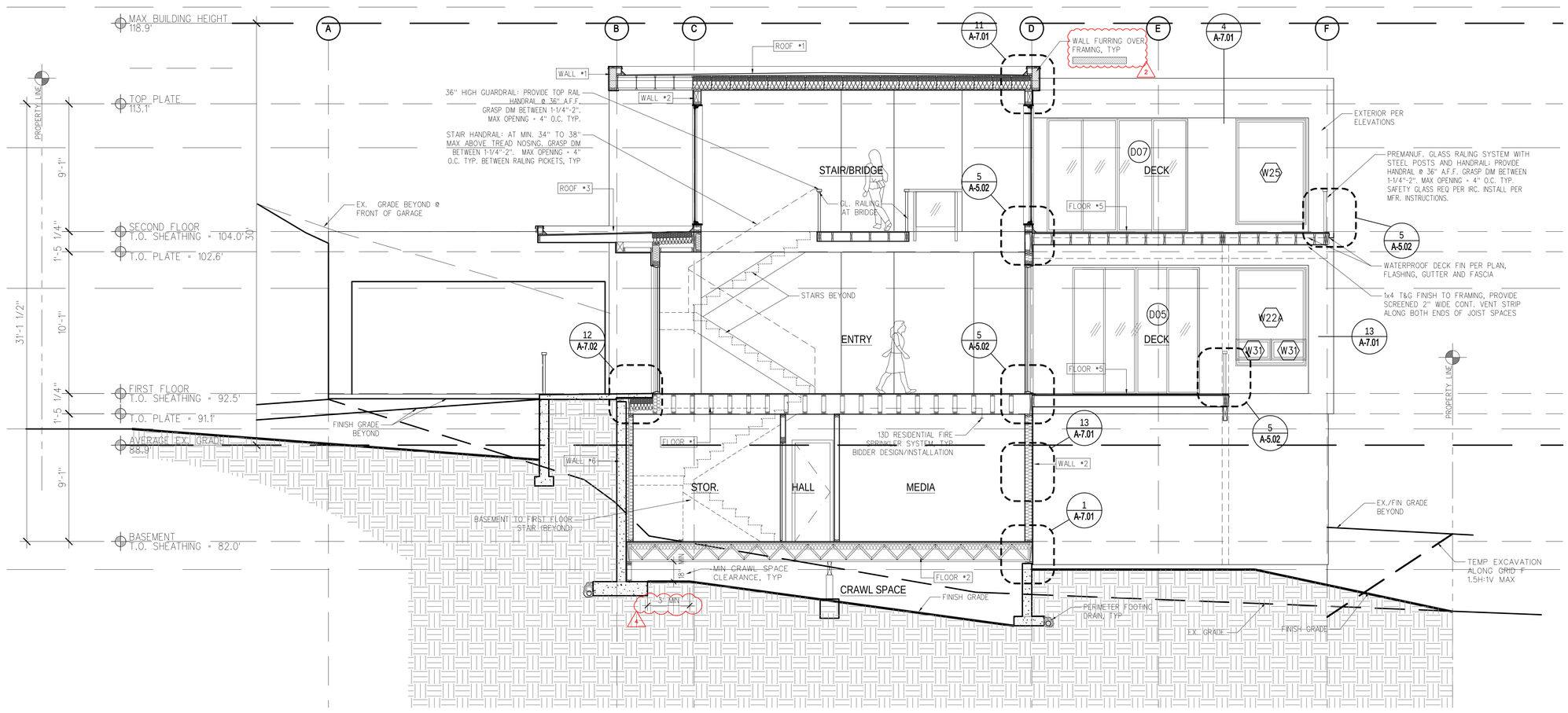
ROOF-3 SINGLE PLY WATERPROOF MEMBRANE
SHEATHING PER STRUCTURAL
TAPERED FRAMING FRAMING PER STRUCTURAL
R-19 MIN CLOSED CELL SPRAY FOAM W/ R-19 MIN BATT INSULATION (R-38 TOTAL MIN)

>>>NOTE: APPLY NO VAPOR BARRIER<<<

3/8" T&G OR TEXTURED PLY. FIN

NOTE: SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND WALL LOCATIONS

4 ASSEMBLY TYPES



1 SECTION B-B

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

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WEN HU RESIDENCE

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PROJECT REVISIONS

DATE	DESCRIPTION
12JUL2018	SUBMITTAL SET REVS
19OCT2018	SUB. SET REV S-1/2
14JAN2020	SUB. SET REV S-#3
08DEC2020	SUB. SET REV S #4

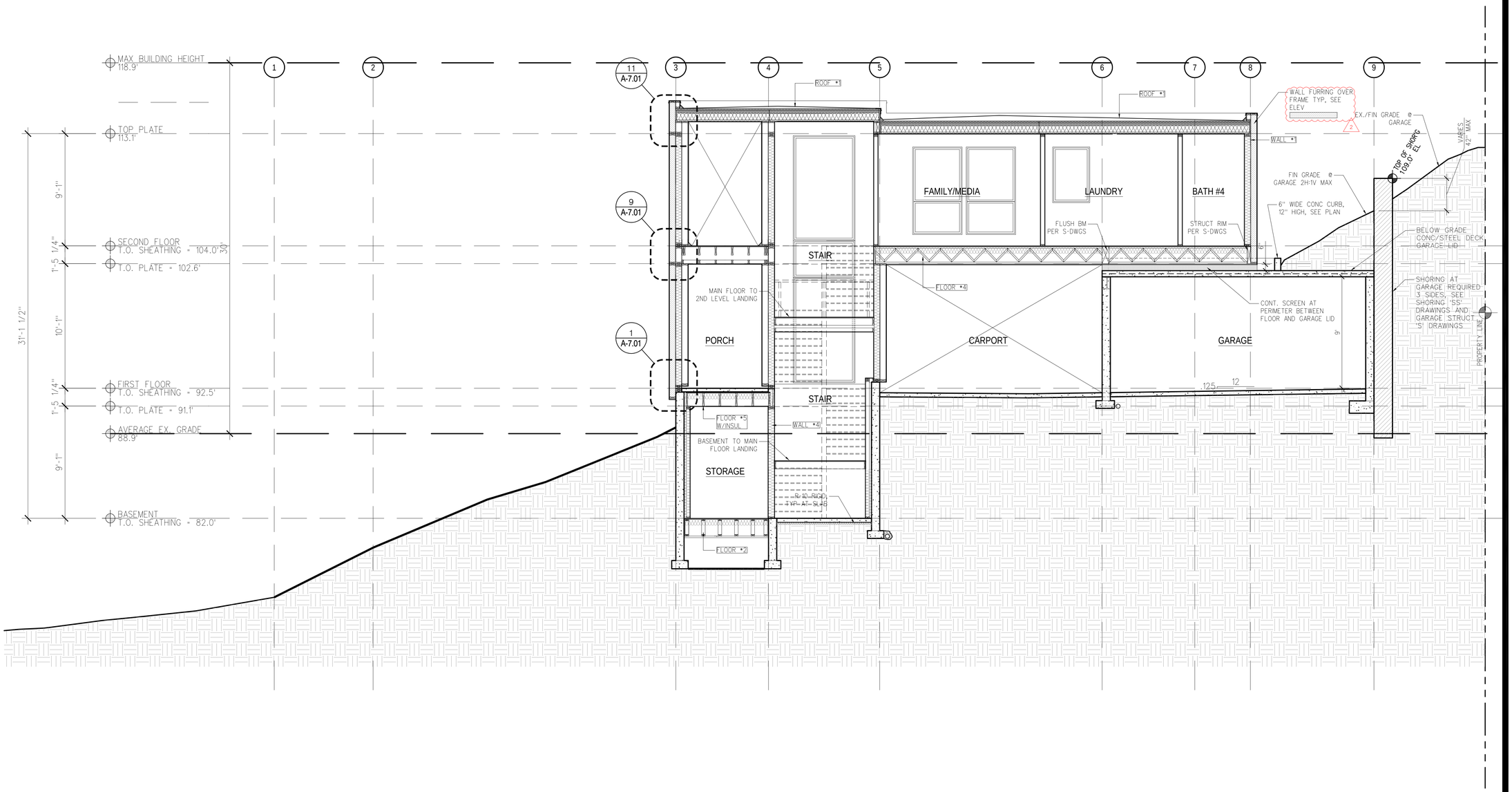
PROJECT RELEASE

DATE	DESCRIPTION
15SEP17	PRELIM
12MAR2018	PRE-APP REVIEW
30MAY2018	90% REVIEW
12JUL2019	SUBMITTAL REVISIONS
18OCT2019	SUBMITTAL REVISIONS
14JAN2020	SUBMITTAL REVISIONS
08DEC2020	SUBMITTAL REVISIONS

PROJECT PERMIT INFO

A-5.02

SECTIONS B-B



1 SECTION D-D

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

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REGISTERED ARCHITECT
5619
STATE OF WASHINGTON

WEN HU RESIDENCE

8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

	DATE	DESCRIPTION
1	12.3.2018	SUBMITTAL SET REV'S
2	18OCT2019	SUB. SET REV'S 1/2
3		
4		
5		

PROJECT RELEASE

	DATE	DESCRIPTION	DATE	DESCRIPTION
1	15SEP'17	PREUM		
2	12MAR'2018	PRE-APP REVIEW		
3	30MAY2018	90% REVIEW		
4	12JUL2019	SUBMITTAL REVISIONS		
5	18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

A-5.03

SECTION D-D

1) "EGRESS" WINDOWS NOTED ON PLAN/ELEV PER IRC R310.2:
MINIMUM NET CLEAR OPENABLE AREA OF 5.7 SQ. FT. ELSEWHERE, AND
MINIMUM NET CLEAR OPENABLE WIDTH OF 20", AND
MINIMUM NET CLEAR OPENABLE HEIGHT OF 24", AND
BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44".
2) SAFETY GLAZING: PROVIDE SAFETY GLAZING PER IRC R308 AND SPECIFICALLY IN WINDOWS PER BELOW:
R308.4.3 GLAZING IN WINDOWS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION:
THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET (0.836 M2),
THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES (457 MM) ABOVE THE FLOOR,
THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES (914 MM) ABOVE THE FLOOR; AND
ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES (914 MM), MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.

1

EXT OPENINGS SCHEDULE

OPENING TYPE	TYPE	STYLE	HEIGHT	WIDTH	Count	Area	Safety Glazing	Fall Protection
Door	D01	Double	9'-0"	6'-0"	2	108.00	X	
Door	D02	Double Sliding	9'-0"	11'-10"	1	106.50	X	
Door	D03	Single Sliding	9'-0"	6'-0"	1	54.00	X	
Door	D04	Single Sliding	8'-0"	6'-0"	2	96.00	X	
Door	D05	Double Sliding	9'-0"	9'-0"	1	81.00	X	
Door	D06	Double	8'-0"	5'-0"	1	40.00	X	
Door	D07	Double Sliding	8'-0"	10'-0"	1	80.00	X	
Door	D08	Single	8'-0"	3'-0"	1	24.00	X	
Door	D09	Garage Door	8'-0"	18'-0"	1	144.00	X	
Window	W01	FIXED	8'-6"	6'-0"	2	102.00		
Window	W02	FIXED	8'-6"	5'-0"	2	85.00		
Window	W03	FIXED	7'-6"	6'-0"	3	135.00	X	
Window	W04	FIXED	7'-6"	5'-0"	1	37.50		
Window	W05	FIXED	7'-6"	4'-0"	2	60.00		
Window	W06	FIXED	7'-0"	6'-0"	8	336.00		
Window	W07	FIXED	7'-0"	5'-0"	4	140.00		
Window	W08	CASEMENT	7'-0"	3'-0"	1	21.00		
Window	W09	FIXED	6'-0"	5'-0"	4	120.00		
Window	W10	FIXED	6'-0"	6'-0"	3	108.00		
Window	W11	CASEMENT	6'-0"	3'-0"	5	90.00		
Window	W13	CASEMENT	4'-6"	4'-0"	1	18.00		
Window	W13	FIXED	4'-6"	4'-0"	1	18.00		
Window	W14	FIXED	4'-6"	3'-0"	3	40.50		
Window	W15	FIXED	4'-6"	2'-0"	1	9.00		
Window	W16	FIXED	4'-0"	3'-0"	5	60.00		
Window	W17	CASEMENT	4'-0"	2'-6"	1	10.00		
Window	W18	FIXED	3'-0"	5'-0"	1	15.00		
Window	W19	AWNING	3'-0"	4'-0"	1	12.00		
Window	W19	FIXED	3'-0"	4'-0"	1	12.00		X
Window	W20	AWNING	1'-6"	3'-0"	3	13.50		X
Window	W20	FIXED	1'-6"	3'-0"	16	72.00		X
Window	W21	FIXED	1'-6"	2'-6"	6	22.50		X
						2,270.50		

1 EXTERIOR OPENINGS SCHEDULE

EXTERIOR SKY LIGHT SCHEDULE

TYPE	STYLE	LENGTH	WIDTH	AREA
R01	SKYLIGHT	9'-0"	4'-0"	36 SQ. FT.
2	SKYLIGHT	4'-0"	1'-0"	4 SQ. FT.
3	SKYLIGHT	4'-0"	1'-0"	4 SQ. FT.
				44 SQ. FT.

3 EXTERIOR SKYLIGHT SCHEDULE

INT DOOR SCHEDULE

Style	TYPE	Width	Count
BI-FOLD	4-0	4'-0"	1
BI-FOLD	6-6	6'-6"	3
BI-FOLD	12-0	12'-0"	1
DOOR	2-2	2'-2"	1
DOOR	2-6	2'-6"	8
DOOR	2-8	2'-8"	3
DOOR	2-10	2'-10"	1
DOOR	3-0	3'-0"	3
DOUBLE DOOR	5-0	5'-0"	5
DOUBLE DOOR	6-0	6'-0"	1
POCKET DOOR	2-6	2'-6"	7

2 INTERIOR DOOR SCHEDULE

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5619 REGISTERED ARCHITECT Peter Black STATE OF WASHINGTON

WEN HU RESIDENCE
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PROJECT REVISIONS

	DATE	DESCRIPTION
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3		
4		
5		

PROJECT RELEASE

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1	15SEPT17	PRELIM
2	12MAR2018	PRE-APP REVIEW
3	30MAY2018	90% REVIEW
4	12JUL2019	SUBMITTAL REVISIONS
5	18OCT2019	SUBMITTAL REVISIONS

PROJECT PERMIT INFO

1		
2		
3		
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5		

A-6.01
SCHEDULES

CITY OF MERCER ISLAND

DEVELOPMENT SERVICES GROUP
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org
Inspection Requests: Online: www.MyBuildingPermits.com VM: 206.275.7730

2015 WSEC & IRC Ventilation Worksheet (Effective July 1, 2016)

INFORMATION IN THESE WORKSHEETS MUST BE INCLUDED IN THE CONSTRUCTION DOCUMENTS

This set of worksheets has been developed to assist permit applicants with documenting compliance with the 2015 Washington State Energy Code. The following worksheets provide much of the required documentation for plan review. **The details, systems, and ratings noted here must also be shown on the drawings.**

PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR CLIMATE ZONE MARINE 4

Component	Fenestration [1]		Ceiling w/ Attic	Vaulted Ceiling	Wood Framed Wall (Int.)[2]	Mass Wall (Above grade)	Below-Grade Wall [2,3]	Framed Floor	Slab R-Value & Depth
	Vertical	Overhead							
Prescriptive Value	U. 0.30 max.	U. 0.50 max.	R-49 min.	R-38 min.	R-21 min.	R-21 min.	R- 10/15/21 Int. + TB	R-30 min.	R-10 min. 2'

[1] *Fenestration is defined as skylights, roof windows, vertical windows (fixed or moveable), opaque doors, glazed doors, glazed block and combination opaque/glazed doors. Fenestration includes products with glass and non-glass glazing materials.*

[2] *Int. (intermediate framing) denotes standard framing 16" o.c. with headers insulated with a minimum R-10 insulation.*

[3] *10/15/21 +TB" means R-10 continuous insulation on the exterior of the wall, or R-15 on the 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 +TB" 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. "TB" means thermal break between floor slab and basement wall.*

Whole House Ventilation (Prescriptive)

Please check the appropriate box to describe which of the four prescriptive Whole House Ventilation Systems you will be using AND fill in the required whole house ventilation rate in CFM's. (See "2015 Residential Whole House Ventilation Rate" Handout.) A complete system required by one of the sections noted below must be specified on the drawings.

	WHOLE HOUSE VENTILATION METHOD	Whole House Ventilation Rate
☐	Intermittent Whole House Ventilation Using Exhaust Fans & Fresh Air Inlets. (IRC M1507.3.4)	
☑	Intermittent Whole House Ventilation Integrated with a Forced Air System. (IRC M1507.3.5)	
☐	Intermittent Whole House Ventilation using a Supply Fan. (IRC M1507.3.6)	
☐	Intermittent Whole House Ventilation Using a Heat Recovery Ventilation System (IRC M1507.3.7)	

Source Specific Exhaust Ventilation & Fan Efficiency

Required in each kitchen, bathroom, water closet compartment, laundry room, indoor swimming pool, spa and other rooms where water vapor or cooking odor is produced. (IRC M 1507.4) Fan efficiency from WAC 51-11R – Table R403.6.1. Kitchen Hoods greater than 400 cfm require makeup air per IRC M1503.4

Minimum Source Specific Ventilation Capacity Requirements

	Bathrooms – Utility Rooms		Kitchens	In-line fan
Intermittently operating	50 cfm min		100 cfm min	
Continuous operation	20 cfm min		25 cfm min	
Minimum Efficacy (cfm/watt)	1.4 cfm/watt if <90cfm	2.8 cfm/watt if >90cfm	2.8 cfm/watt	2.8 cfm/watt

Energy Efficiency Credits

Each dwelling unit shall comply with sufficient options from WSEC Table R406.2 so as to achieve the following minimum number of credits as described on the reverse side of this page.

☐	**Small Dwelling Unit: 1.5 credits** (Dwelling units less than 1500 SF in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building that are greater than 500 SF of heated floor area, but less than 1500 SF. **TOTAL SQUARE FEET OF FENESTRATION:** ____________ (doors, windows, skylights)
☐	**Medium Dwelling Unit: 3.5 credits** (All dwelling units not included in #1 or #3. Exception: Dwelling units serving R-2 occupancies shall require 2.5 credits.
☑	**Large Dwelling Unit: 4.5 credits** (Dwelling Units exceeding 5000 SF of conditioned floor area.
☐	**Additions less than 500 SF: 0.5 credits**

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2015 WSCE – Table R406.2 – circle the options that you will be using for this project

OPTION	DESCRIPTION	CREDIT(S)
1a ☐	**EFFICIENT BUILDING ENVELOPE 1a:** Vertical fenestration U = 0.28 Floor R-38 Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab. **OR** Compliance based on Section R402.1.4: Reduce the Total UA by 5%.	0.5
1b ☑	**EFFICIENT BUILDING ENVELOPE 1b:** Vertical fenestration U = 0.25 Wall R-21 plus R-4 Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab. **OR** Compliance based on Section R402.1.4: Reduce the Total UA by 15%.	1.0
1c ☐	**EFFICIENT BUILDING ENVELOPE 1c:** Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.22 Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38 Basement wall R-21 int plus R-12 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab **OR** Compliance based on Section R402.1.4: Reduce the Total UA by 30%.	2.0
1d ☐	**EFFICIENT BUILDING ENVELOPE 1d:** Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.24. Projects using this option may not use Option 1a, 1b or 1c.	0.5
2a ☐	**AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2a:** Compliance based on R402.4.1.2: Reduce the tested air leakage to 3.0 air changes per hour maximum **AND** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* shall be met with a high efficiency fan (maximum 0.35 watts/cfm), not interlocked with the furnace fan. Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the qualifying ventilation system.***	0.5
2b ☑	**AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2b:** Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum **AND** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.70. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.***	1.0
2c ☐	**AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2c:** Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 air changes per hour maximum. **AND** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.85. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.***	1.5
3a ☐	**HIGH EFFICIENCY HVAC EQUIPMENT 3a:** Gas, propane or oil-fired furnace with minimum AFUE of 94%, or Gas, propane or oiled-fired boiler with minimum AFUE of 92%. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.***	1.0
3b ☑	**HIGH EFFICIENCY HVAC EQUIPMENT 3b:** Air-source heat pump with minimum HSPF of 9.0. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.***	1.0
3c ☐	**HIGH EFFICIENCY HVAC EQUIPMENT 3c:** Closed-loop ground source heat pump; with a minimum COP of 3.3 **OR** Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.***	1.5
3d ☐	**HIGH EFFICIENCY HVAC EQUIPMENT 3d:** Ductless Split System Heat Pumps, Zonal Control: In homes where the primary space heating system is zonal electric heating, a ductless heat pump system shall be installed and provide heating to the largest zone of the housing unit. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.***	1.0

2015 WSCE – Table R406.2 - Continued

OPTION	DESCRIPTION	CREDIT(S)
4 ☐	**HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM:** All heating and cooling system components installed inside the conditioned space. This includes all equipment and distribution system components such as forced air ducts, hydronic piping, hydronic floor heating loop, convectors and radiators. All combustion equipment shall be direct vent or sealed combustion. For forced air ducts: A maximum of 10 linear feet of return ducts and 5 linear feet of supply ducts may be located outside the conditioned space. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Flex duct connections must be made with nylon straps and installed using a plastic strapping tensioning tool. Ducts located outside the conditioned space must be insulated to a minimum of R-8. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.***	1.0
5a ☐	**EFFICIENT WATER HEATING 5a:** All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be rated at 1.0 GPM or less. Plumbing Fixtures Flow Ratings. Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following requirements: 1. Residential bathroom lavatory sink faucets: Maximum flow rate - 3.8 L/min (1.0 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. 2. Residential kitchen faucets: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. 3. Residential showerheads: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum flow rates for all showerheads, kitchen sink faucets, and other lavatory faucets.***	0.5
5b ☐	**EFFICIENT WATER HEATING 5b:** Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.74 **OR** Water heater heated by ground source heat pump meeting the requirements of Option 3c. **OR** For R-2 occupancy, a central heat pump water heater with an EF greater than 2.0 that would supply DHW to all the units through a ce minimum pipe insulation. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.***	1.0
5c ☑	**EFFICIENT WATER HEATING 5c:** Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.91 **OR** Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems **OR** Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards of NEEA's Northern Climate Specifications for Heat Pump Water Heaters ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.***	1.5
5d ☐	EFFICIENT WATER HEATING 5d: A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 52% if installed for unequal flow. Such units shall be rated in accordance CSA B55.1 and be so labeled. ***To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specified the drain water heat recovery units and the plumbing layout needed to install it and labels or other documentation shall be provided that demonstrates that the unit complies with the standard.***	0.5
6 ☐	**RENEWABLE ELECTRIC ENERGY:** For each 1200 kWh of electrical generation per each housing unit provided annually by on-site wind or solar equipment a 0.5 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows: For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTs. ***Documentation noting solar access shall be included on the plans.*** For wind generation projects designs shall document annual power generation based on the following factors: The wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and height of the tower. ***To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.***	0.5

Fenestration Schedule

Please check the applicable boxes and complete the information below

☑ **Weighted Average:** Using the Prescriptive Method, all glazing must have an "area weighted average" U-Factor of 0.30. This means that some windows can have a higher U-factor than 0.30 and some can have a lower U-factor than 0.30, as long as the area weighted average is U-0.30 or lower you may need to complete this form to document glazing compliance when applying for your building permit.

☐ **Dwelling units less than 1500 SF in conditioned floor area:** If using the option for new dwellings less than 1500 SF of conditioned floor area with no more than 300 SF fenestration

Electronic version available at: http://www.energy.wsu.edu/Documents/2015%20Glazing%20Schedule.xlsx

Exemptions	Ref	Glazing U-Factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Glazing Area	Glazing UA
Swing Door (24 SF Max)									
Glazed Fenestration (15 SF Max)									

VERTICAL FENESTRATION (WINDOWS AND GLAZED DOORS)

Plan ID	Component Description	Ref	Glazing U-Factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Glazing Area	Glazing UA
A-4.01/4.02	Exterior Openings	1/A-6.01	.25	Per table					2270.5	567.6

Sum of Vertical Fenestration Area and UA: 2270.5 | 567.6
Area Weighted U = UA/Area: .25

OVERHEAD GLAZING (SKYLIGHT)

Plan ID	Component Description	Ref	Glazing U-Factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Glazing Area	Glazing UA
A-2.04	Skylights	3/A-6.01	.28	1	4		8		32	8.96
				2	1		4		8	2.24

Sum of Overhead Glazing Area and UA: 40 | 11.2
Area Weighted U = UA/Area: .28

Total Sums of Area and UA for Vertical Fenestration and Overhead Glazing Area and UA:

Simple Heating System Size

Electronic version available at: http://www.energy.wsu.edu/Documents/Heat_Sizing_code%20specs_final_2015.xls

Please complete the following information regarding the heating system for this project. The electronic version automatically calculates the information based on the information selected. The paper form below may be used if a computer is not available but will need to be hand calculated.

Conditioned Floor Area (sq ft): 5433
Average Ceiling Height (ft): x 9.3
Conditioned Volume (cu ft): 50527

		U-Factor	X	Area	=	UA
Glazing and Doors	u=	.25		2270 sf		567.6
Skylights	u=	.28		40 sf		11.2
Insulation						
Attic	u=	.026		2723 sf		70.79
Single Rafter or Joist Vaulted Ceilings	u=			sf		
Above Grade Walls	u=	.04		2883 sf		115.3
Floors	u=	.026		2472 sf		64.27
Below Grade Walls	u=	.038		477 sf		18.1
		F-Factor	X	Length	=	UA
Slab Below Grade	f=	.7		78 f		54.6
Slab on Grade	f=			f		

Sum of UA: 901.86

Envelope Heat Load Sum of UA x 45	41583	Btu / Hour
Air Leakage Heat Load Volume x 0.6 x 45 x .018	24556	Btu / Hour
Building Design Heat Load Air Leakage Heat Load + Envelope Heat Load	65139	Btu / Hour
Building and Duct Heat Load Ducts in unconditioned space: Building Design Heat Load x 1.10 Ducts in conditioned space: Building Design Heat Load x 1	71653	Btu / Hour
Maximum Heat Equipment Output Building and Duct Heat Load x 1.40 for Forced Air Furnace Building and Duct Heat Load x 1.25 for Heat Pump	100315	Btu / Hour

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Energy Code Support
WASHINGTON STATE UNIVERSITY
EXTENSION ENERGY PROGRAM

Duct Leakage Affidavit (New Construction)

Permit #: ____________________

House address or lot number: ______________________________

City: ____________________ Zip: ________________

Cond. Floor Area (ft^2): ____________ Source (circle one): Plans Estimated Measured

☐ Duct tightness testing is not required. The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope. Ducts located in crawl spaces do not qualify for this exception.

Air Handler in conditioned space? ☐ yes ☐ no Air Handler present during test? ☐ yes ☐ no

Circle Test Method: Leakage to Outside Total Leakage

Maximum duct leakage:

Post Construction, total duct leakage: (floor area x .04) = _______CFM@25 Pa

Post Construction, leakage to outdoors: (floor area x .04) = ________CFM@25 Pa

Rough-In, total duct leakage with air handler installed: (floor area x .04) = _______CFM@25 Pa

Rough-In, total duct leakage with air handler not installed: (floor area x .03) = _______CFM@25 Pa

Test Result: ____________CFM@25Pa

Ring (circle one if applicable): ☐Open ☐1 ☐2 ☐3

Duct Tester Location: ____________________ Pressure Tap Location: ____________________

I certify that these duct leakage rates are accurate and determined using standard duct testing protocol.

Company Name: __________________________ Technician: ______________________

Technician Signature: ______________________________

Date: ______________________

Phone Number: ____________________

Certificate (Electronic version available at: http://www.energy.wsu.edu/Documents/WSEC-2012-Avery-6878_4_Per_Sheet.pdf)

A permanent certificate shall be posted within three feet of the electrical distribution panel. The certificate shall be completed by the builder or registered design professional and include all of the information as follows:

2012 WSEC Residential Energy Compliance Certificate

Property Address: ______________________________

Conditioned Floor Area ____________ **Date:** / /

Builder or registered design professional :

____

Signature: ______________________________

R-Values

Ceiling: Vaulted R-____ **Floors:** Over unconditioned space R-____
Attic R-____ Slab on grade floor R-____
Walls: Above grade R-____ **Doors:** ____________ R-____
Below, int. R-____ ____________ R-____
Below, ext. R-____ ____________ R-____

U-Factors and SHGC

NRFC rating (or) Windows U-____ SHGC- N/A
Default rating (Appendix A WSEC 2012) Skylights U-____ SHGC- N/A

Table 406.2 Option(s) ____________ ***Total 406.2 Credits*** ____________

Heating, Cooling & Domestic Hot Water

System	Type	Efficiency
Heating		
Cooling		
DHW		

Duct & Building Air Leakage

All ducts & HVAC in conditioned space (yes / no) Insulation R-____
Air handler present (yes / no)
Test Target ________CFM@25Pa Test Result ________CFM@25Pa
Building air leakage target: ACH_{50} < 5.0 - Tested leakage: ACH_{50} = ________

Onsite Renewable Energy Electric Power System

System type: ____________ Rated annual generation ____________ **Kwh**

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5613
REGISTERED ARCHITECT
PETER BOCEK
STATE OF WASHINGTON

WEN HU RESIDENCE

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PROJECT REVISIONS

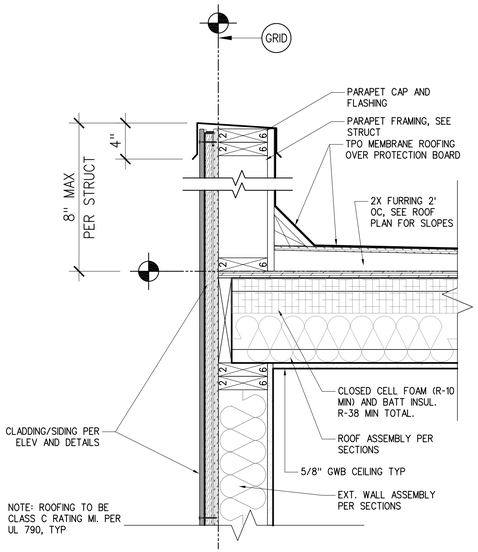
	DATE	DESCRIPTION
1	12JUL2019	SUBMITTAL SET REV.S
2	18OCT2019	SUB. SET REV.S #2
3		
4		
5		

PROJECT RELEASE

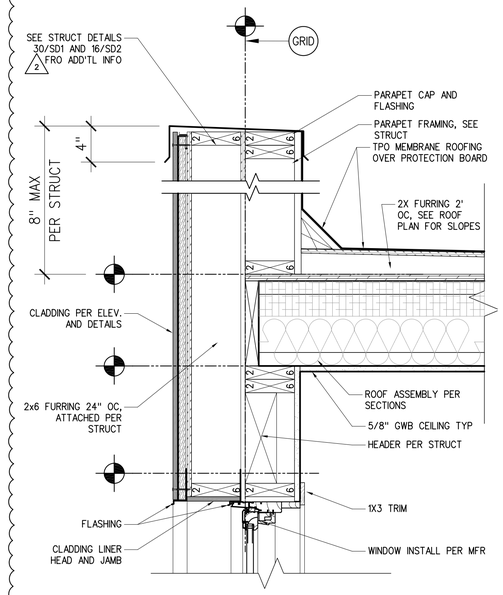
DATE	DESCRIPTION	DATE	DESCRIPTION
15SEPT17	PRELIM		
12MAR2018	PRE-APP REVIEW		
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

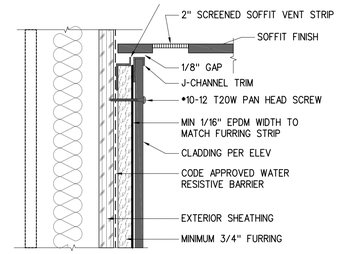
A-6.02
ENERGY CODE



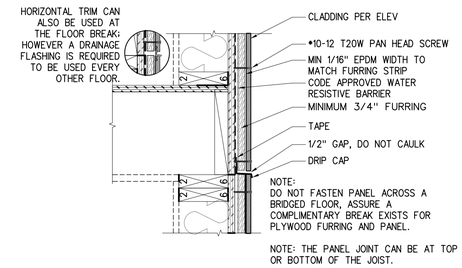
15 PARAPET
SCALE: 1 1/2" = 1'-0"



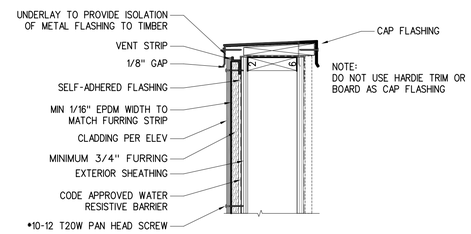
11 FURRED PARAPET
SCALE: 1 1/2" = 1'-0"



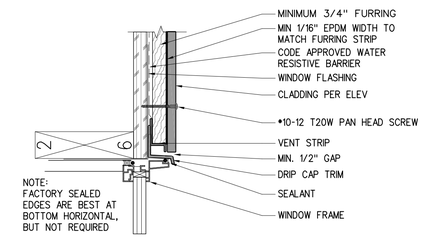
8 WALL & SOFFIT FOR VENTED RAINSCREEN
SCALE: 3" = 1'-0"



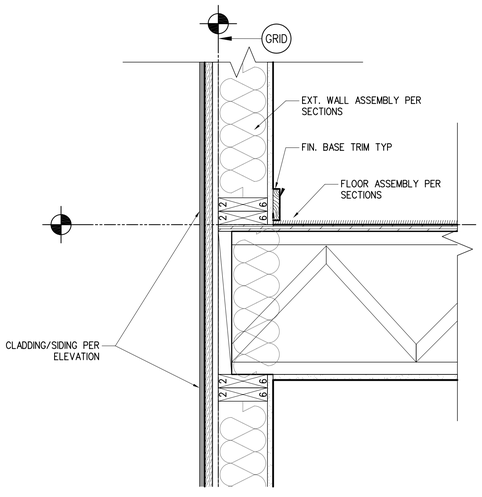
4 PANEL W/ HORIZ. TRIM @ FLOOR BREAK
SCALE: 1 1/2" = 1'-0"



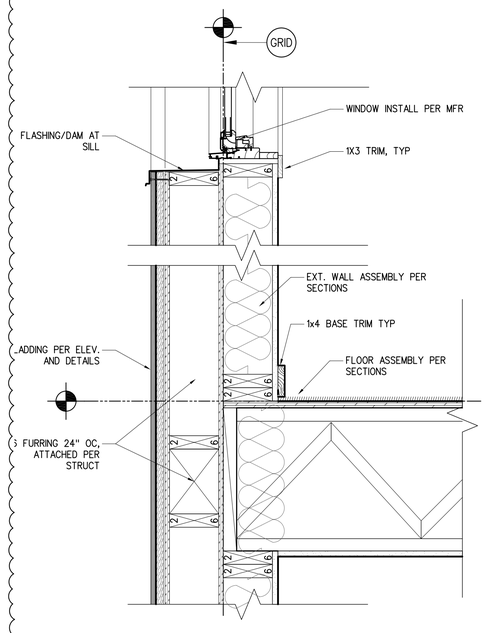
7 VENTED PARAPET WALL
SCALE: 1 1/2" = 1'-0"



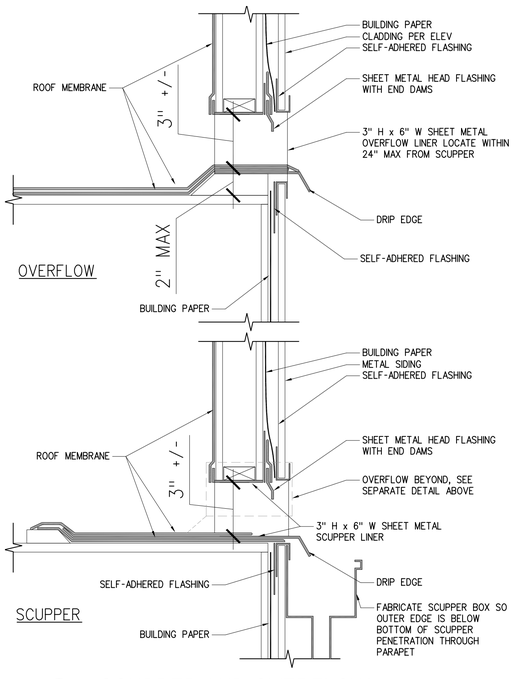
3 WINDOW HEAD
SCALE: 3" = 1'-0"



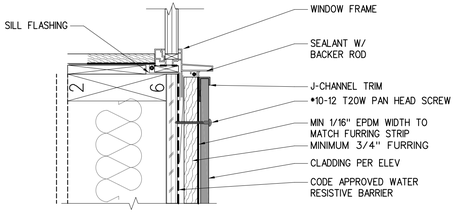
13 EXTERIOR WALL
SCALE: 1 1/2" = 1'-0"



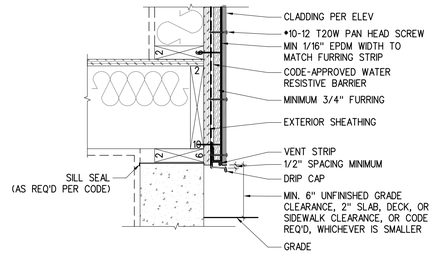
9 FURRED EXTERIOR WALL
SCALE: 1 1/2" = 1'-0"



5,6 SCUPPER AND OVERFLOW
SCALE: 1-1/2" = 1'-0"



2 WINDOW SILL
SCALE: 3" = 1'-0"



1 FOUNDATION @ GRADE
SCALE: 1 1/2" = 1'-0"

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PROJECT REVISIONS

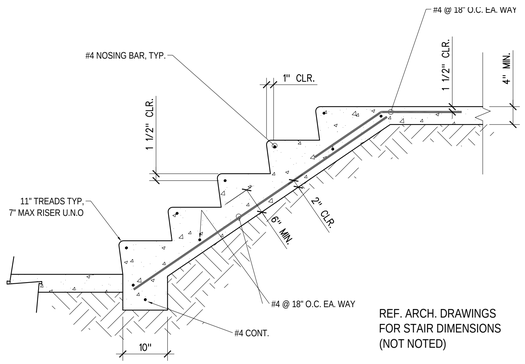
	DATE	DESCRIPTION
1	12JUL2019	SUBMITTAL SET REV'S
2	18OCT2019	SUB. SET REV'S-1/2
3		
4		
5		

PROJECT RELEASE

DATE	DESCRIPTION
15SEPT17	PREUM
12MAR2018	PRE-APP REVIEW
30MAY2018	90% REVIEW
12JUL2019	SUBMITTAL REVISIONS
18OCT2019	SUBMITTAL REVISIONS

PROJECT PERMIT INFO

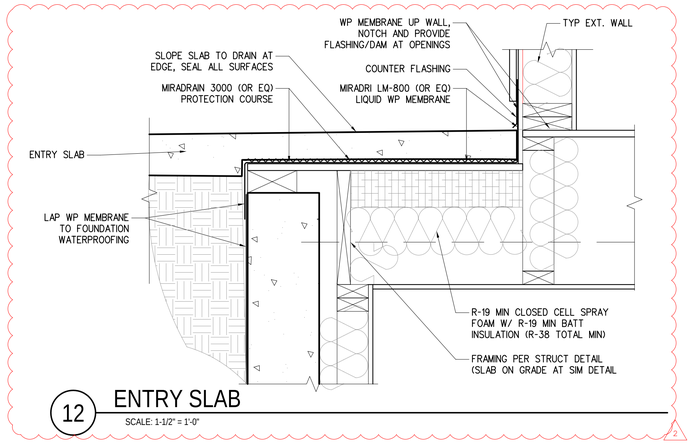
A-7.01
DETAILS



REF. ARCH. DRAWINGS FOR STAIR DIMENSIONS (NOT NOTED)

16 TYPICAL STAIR ON GRADE

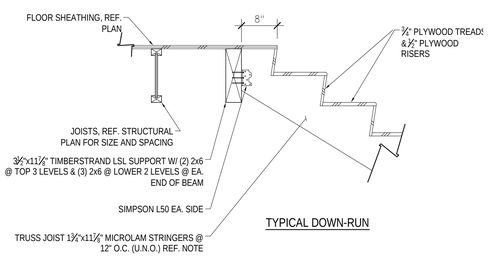
SCALE: 3/4" = 1'-0"



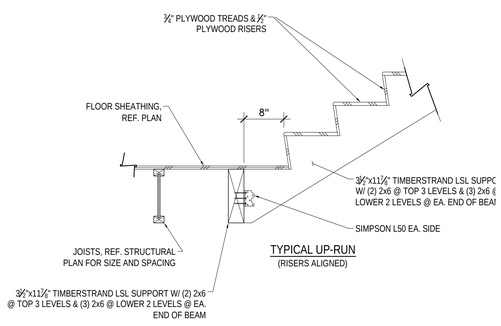
12 ENTRY SLAB

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

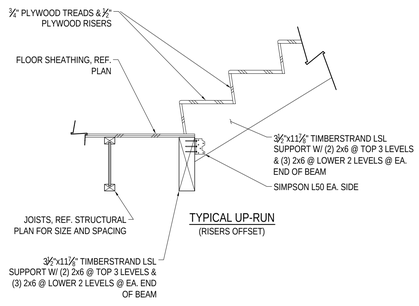
NOTE:
1. USE TRUSS JOIST 3½" X 11⅞" MICROLAM STRINGERS @ 6"O.C. FOR STAIR RUNS WITH 11 OR MORE RISERS
2. REF. ARCH. FOR STAIR DIMENSIONS (NOT NOTED)



TYPICAL DOWN-RUN



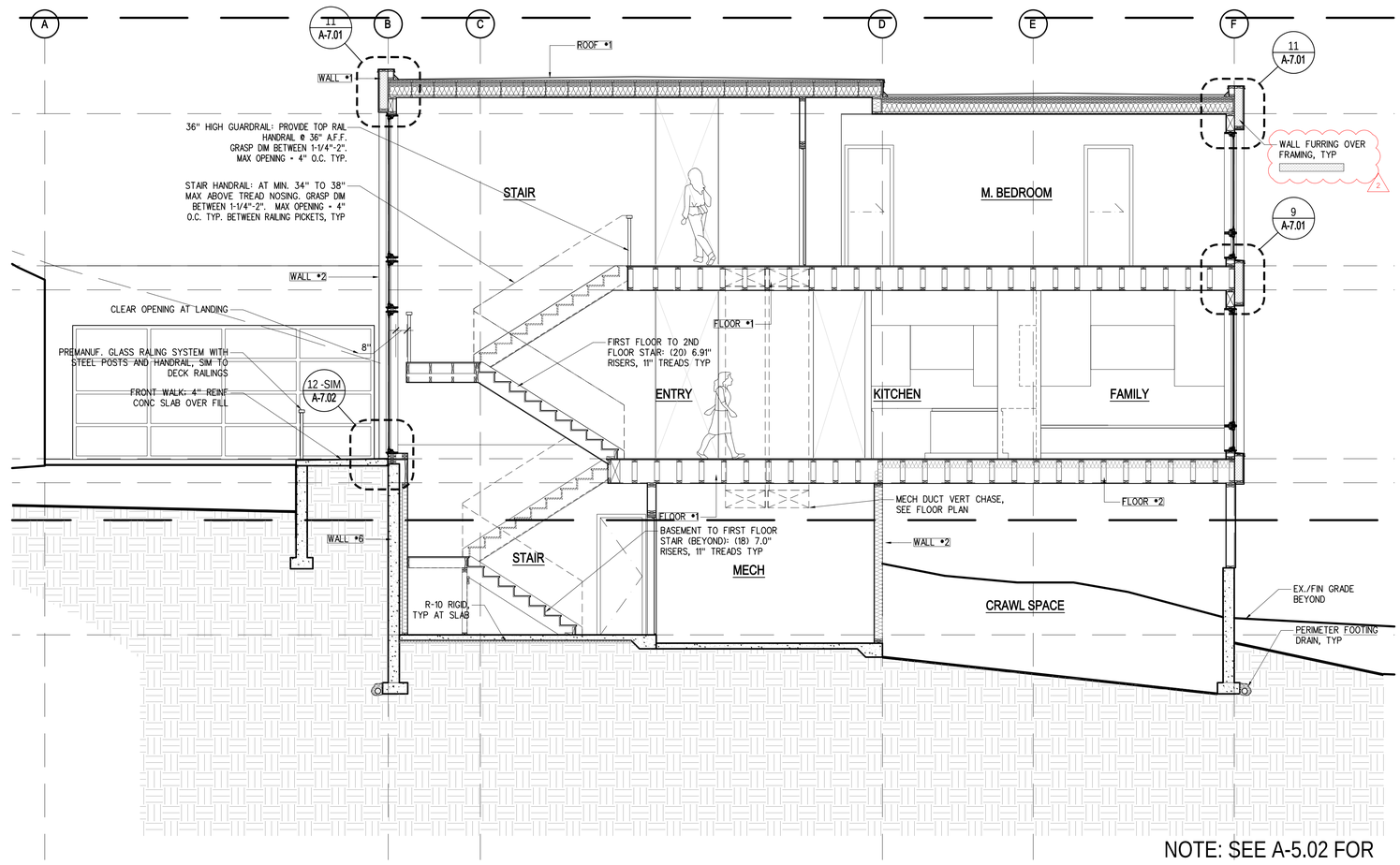
TYPICAL UP-RUN
(RISERS ALIGNED)



TYPICAL UP-RUN
(RISERS OFFSET)

13 STAIRS - TYPICAL STRINGER

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



NOTE: SEE A-5.02 FOR ASSEMBLY TYPES

1 WALL SECTION

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

0 1' 2' 4'

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PROJECT REVISIONS

DATE	DESCRIPTION
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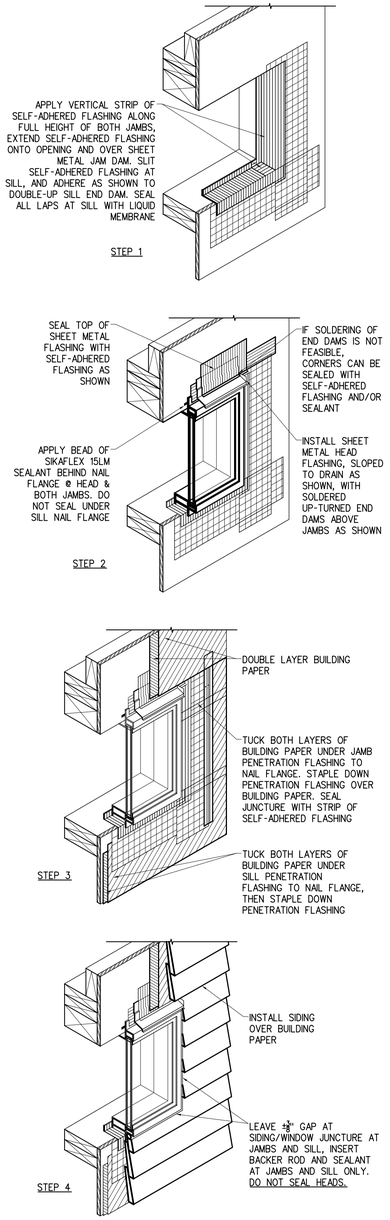
18OCT2019	SUB. SET REV S-1/2

PROJECT RELEASE

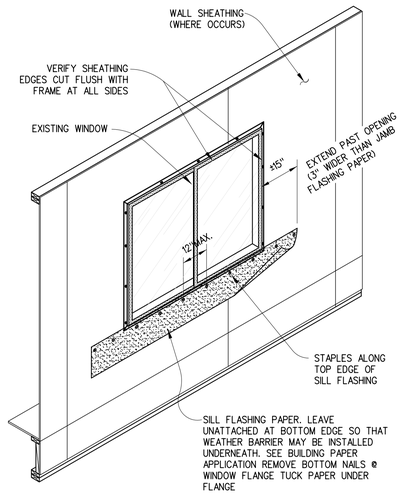
DATE	DESCRIPTION
15SEP'17	PRELIM
12MAR2018	PRE-APP REVIEW
30MAY2018	90% REVIEW
12JUL2019	SUBMITTAL REVISIONS
18OCT2019	SUBMITTAL REVISIONS

PROJECT PERMIT INFO

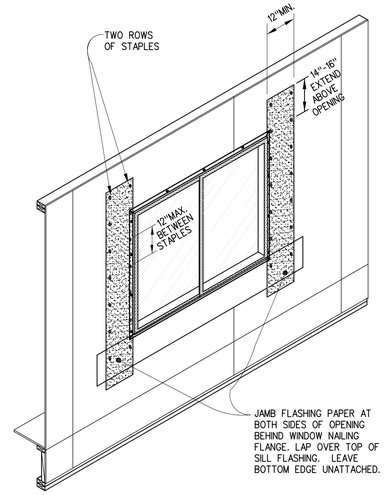
A-7.02
DETAILS - STAIRS



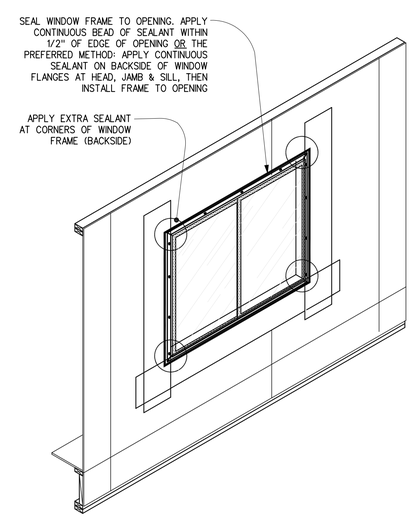
2 ALT. WINDOW WEATHERPROOFING



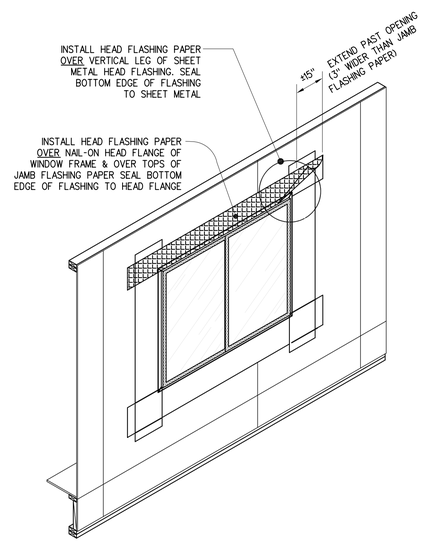
SILL FLASHING - STEP #1



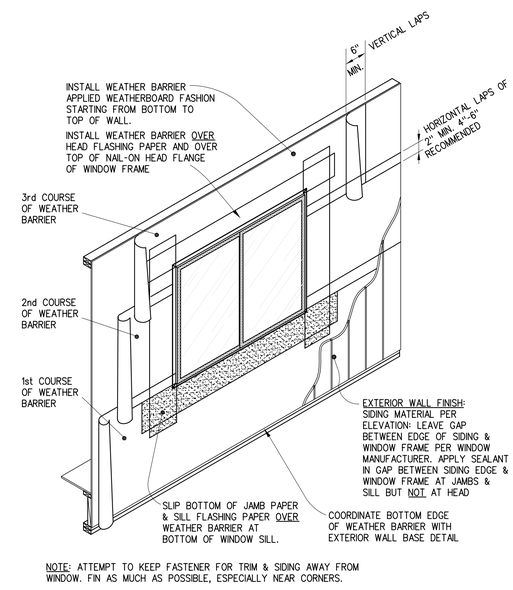
JAMB FLASHING - STEP #2



JAMB FLASHING - WINDOW INSTALL ATION - STEP #3



HEAD FLASHING - STEP #4



NOTE: ATTEMPT TO KEEP FASTENER FOR TRIM & SIDING AWAY FROM WINDOW. FIN AS MUCH AS POSSIBLE, ESPECIALLY NEAR CORNERS.

WEATHER BARRIER APPLICATION - STEP #5

1 WINDOW WEATHERPROOFING

PB ARCHITECTS INC., P.S.
5006 6TH AVENUE S.
SEATTLE, WA 98108
206-443-9790
206-443-9875

REGISTERED ARCHITECT
5618
STATE OF WASHINGTON

WEN HU RESIDENCE
8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

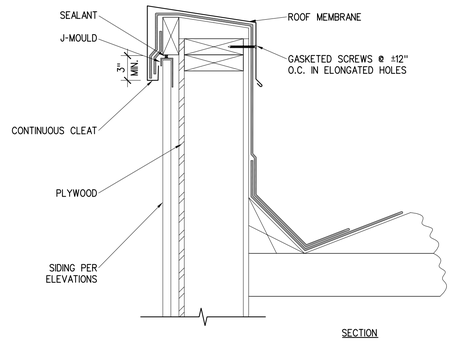
	DATE	DESCRIPTION
1	12JUL2019	SUBMITTAL SET REVS
2	18OCT2019	SUB. SET REV S-1/2
3		
4		
5		

PROJECT RELEASE

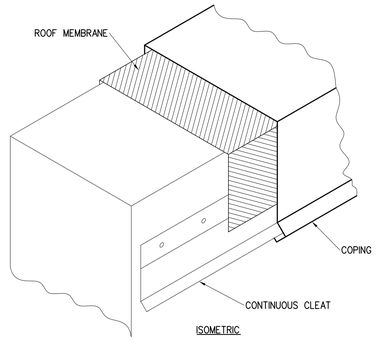
DATE	DESCRIPTION	DATE	DESCRIPTION
15SEP17	PRELIM		
12MAR2018	PRE-APP REVIEW		
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

A-7.03
DETAILS - WEATHERPROOFING



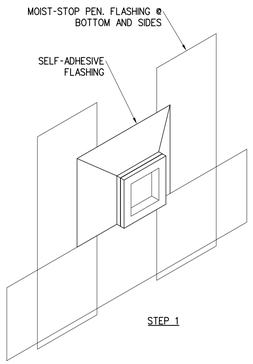
SECTION



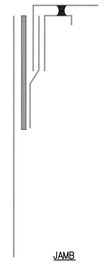
ISOMETRIC

12 PARAPET

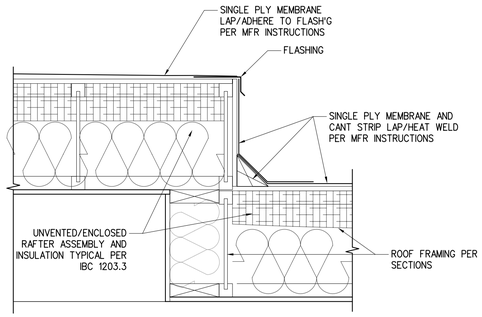
SCALE: NA



STEP 1

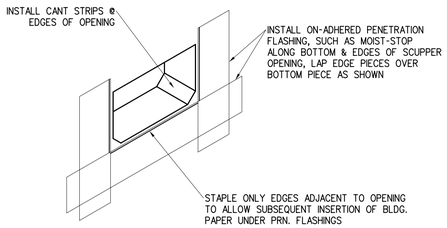


JAMB

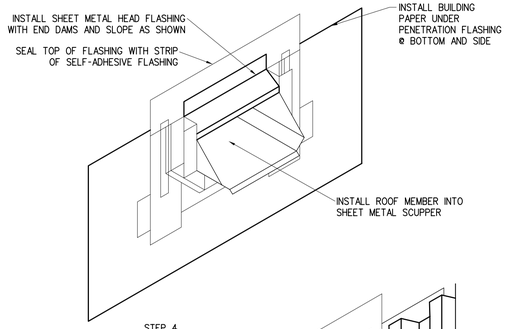


3 ROOF STEP

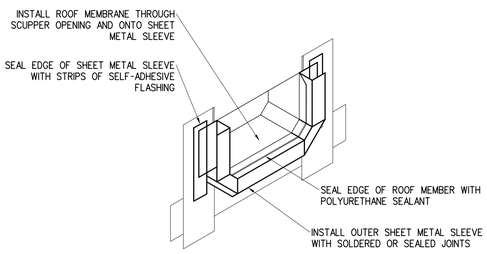
SCALE: 1-1/2" = 1'-0"



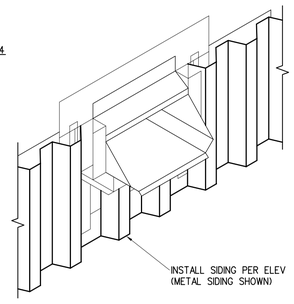
STEP 1



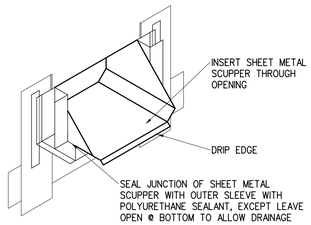
STEP 4



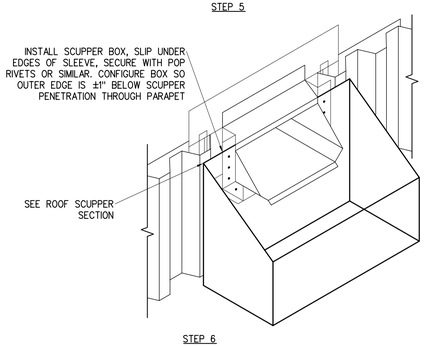
STEP 2



STEP 5



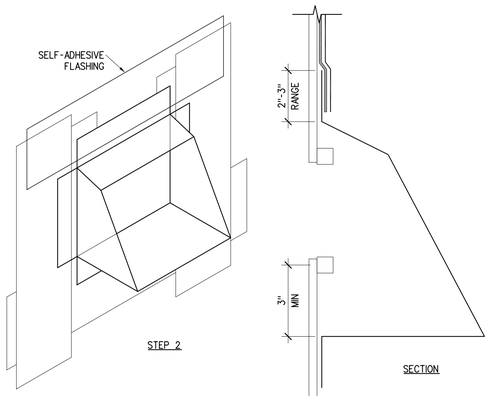
STEP 3



STEP 6

10 ROOF SCUPPER INSTALL

SCALE: NA



STEP 2

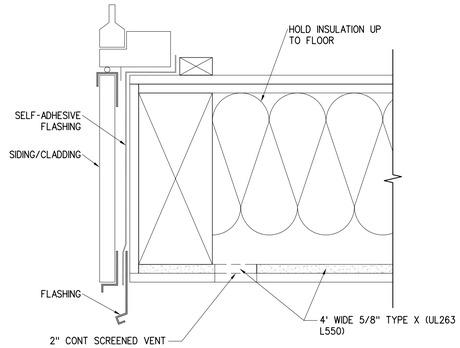
SECTION

NOTE:

ADJUST WIDTH TO ACCOMMODATE NUMBER OF VENTS

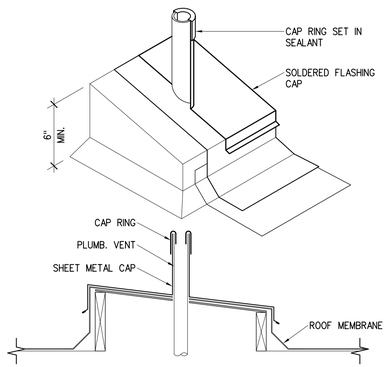
5 VENT COVER

SCALE: NA



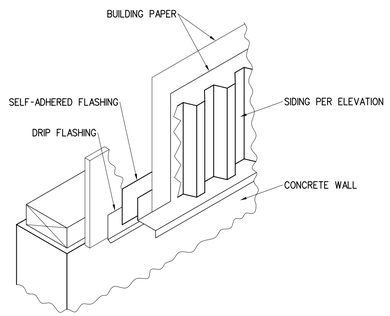
2 CANTILEVER SOFFIT

SCALE: NA



4 ROOF SCUPPER VENT

SCALE: NA



1 WALL BASE

SCALE: NA

PB ARCHITECTS INC., P.S.
5006 6TH AVENUE S.
SEATTLE, WA 98108
206-442-9700
206-442-9875

REGISTERED ARCHITECT
5619
Peter Bleck
STATE OF WASHINGTON

WEN HU RESIDENCE

8243 WEST MERCER WAY
MERCER ISLAND | WA | 98040

PROJECT REVISIONS

DATE	DESCRIPTION
12JUL2019	SUBMITTAL SET REV'S
18OCT2019	SUB. SET REV S-1/2

PROJECT RELEASE

DATE	DESCRIPTION	DATE	DESCRIPTION
15SEP'17	PRELIM		
12MAR2018	PRE-APP REVIEW		
30MAY2018	90% REVIEW		
12JUL2019	SUBMITTAL REVISIONS		
18OCT2019	SUBMITTAL REVISIONS		

PROJECT PERMIT INFO

A-7.04

DETAILS - MANUFACTURERS

GENERAL NOTES:
The Structure has been designed to resist code-required vertical and lateral forces after the construction of all structural elements have been completed. Stability of the structural elements prior to completion is the sole responsibility of the General Contractor. Builder is to verify all dimensions prior to starting work. All changes to structure must be reviewed and approved by Phillips Structural Engineering and then submitted to the jurisdiction for approval. All materials, methods, and workmanship shall be in accordance with the International Building Code (IBC) 2015 Edition. The Builder is responsible for using safe work practices and conforming to all safety ordinances.
Construction observation by the Structural Engineer is for conformance with design aspects only and is not intended in any way to review the General Contractor's construction procedures.

STANDARDS:
All methods, materials and workmanship shall conform to the 2015 International Building Code (IBC) as amended and adopted by the local Building Official or applicable jurisdiction.

DESIGN LOADS
ROOF LOAD: SNOW 30 PSF, DEAD 20 PSF
FLOOR LOADS: LIVE 40 PSF, DECK LIVE 60 PSF, DEAD 15 PSF
WIND SPEED: Vs 3-Sec= 110 MPH, Iw=1.0, EXPOSURE "C"
SEISMIC: DESIGN CATEGORY "D", Ss=1.47, S_1=0.56,
Ie=1.0, Site Class "D", R=6.5

SOILS:
Allowable soil bearing pressure of 3000 PSF is used per project soils report project No. 17-405 by PanGEO dated 2/8/18. It is the contractors responsibility to verify that all footings bear on firm, undisturbed earth or compacted "Structural Backfill" that meet or exceed allowable soil bearing pressure.

FOUNDATIONS:
Bottom of exterior footings shall be a minimum of 18" below finished grade bearing on undisturbed native soils. Back fill with dry soils. Backfill next to retaining walls with a minimum of 12" gravel or free draining soil. Soils under footings and slabs to be 95% compacted to a Modified Proctor Density (ASTM D1557). All construction on fill soil shall be reviewed by a licensed Geotechnical engineer.

CONCRETE:
All concrete materials and placement shall conform to the current ACI code. Concrete shall be made with Portland Cement ASTM C-150 Type II or Type I and shall be Ready-Mixed per ASTM C-94. Min. compressive strength shall be 3000 PSI* at 28 days with a min. water/cement ratio of .45. All concrete shall be air entrained 5 ±1%. Max aggregate size = ⅞".
*Special Inspection not required. 3000 PSI compressive strength has been specified for weathering protection. *Structural design of concrete based on 2500 PSI compressive strength.*

REINFORCING STEEL:
All reinforcing steel to be GRADE 60 PER ASTM A-615. Lap all splices shall be the greater of 32 bar diameters or 18". Lap horizontal steel at corners and intersections in footings and walls with continuous corner bars.
Minimum concrete cover over reinforcing steel:
- INTERIOR FACES OF SLAB AND WALL BARS = 1½ "
- EXPOSED TO WEATHER OR EARTH = 1½" AT #5 AND SMALLER AND 2" AT #6 AND LARGER.
- CONCRETE CAST AGAINST SOIL = 3"

WOOD FRAMING AND CARPENTRY:
General Requirements: Provide minimum nailing per 2015 IBC table 2304.10.1 or as indicated on the drawings. Do not notch or drill structural members, except as permitted by the engineer.
Framing Connectors: Only ICC approved connectors shall be used in framing applications as manufactured by Simpson Strong-Tie or equivalent. Provide maximum size and quantity of fasteners shown in the manufacturer's catalog U.N.O.
Fasteners:
Bolts shall be per ASTM A-307 with standard cut washers or malleable iron washers. Post-installed anchors require engineering confirmation prior to installation. Contact Phillips Structural Engineering for possible alternatives. Nails shall be common wire nails or equivalent pneumatically drive nails (P-nails), American or Canadian manufacturer only as indicated below. P-nails shall be installed per the manufacturer's guidelines.

COMMON WIRE NAIL	DIAMETER (INCHES)	MINIMUM LENGTH (INCHES)	NAIL APPLICATION
8d COMMON	0.131	2½"	SHEATHING
10d COMMON	0.148	2½"	SHEATHING
N/A	0.131	3"	FRAMING
12d COMMON	0.148	3¼"	FRAMING
16d COMMON	0.162	3½"	FRAMING

Wood Sheathing (Structural):
Roof sheathing shall be ½" CDX or 7/16" OSB nailed w/ 8d @ 6" o.c. along panel edges, and 12" o.c. in field. Span index shall be 24/0. Plywood Sub Flooring shall be ¾" T&G CDX or OSB (glued & nailed). Nailing shall be 10d @ 6"o.c. along panel edges, and 12"o.c. in field (U.N.O.) Span index shall be 48/24. Stagger all end laps. All sheathing shall bear the grade trademark of the American Plywood Association (APA).
Studs:
All studs shall be kiln dried (KD) or surface dried (SD). Each stud shall bear the stamp of the West Coast Lumber Inspection Bureau (WCLIB) or Western Wood Products Association (WWPA) showing grade mark or approved equal. All studs shall 2x minimum material and Doug-Fir meeting the following minimum strength properties: Fb= 900psi, Fv=180psi, E=1,600,000psi.

Headers:
All headers not specified or otherwise noted on the plan with spans ≤5'-0" are to be 4x8 DF#2 or (2)2x10 HF#2 with at least one cripple and one king stud at each end. Spans greater than 5'-0" shall have at least two cripples and one king stud U.N.O.
Heavy Timbers:
All timbers above sizes listed above including posts and beams shall be Doug-Fir #2 or better.
Glu-Laminated Beams (GLB):
All GLB shall be in conformance with ANSI A190.1, American National Standards for Structural Glue-Laminated Timber. Grade 24F-V4 shall meet or exceed the following: Fb=2400psi, Fv=240psi, E=1,800,000psi and shall be used at simple spans. Grade 24F-V8 shall be used at continuous spans.
Laminated Veneer Lumber (LVL):
All LVL shall be in conformance with ASTM D2559. LVL shall be made of Doug-Fir (DF)and meet or exceed the following: Fb= 2,600psi, Fv=285psi, E=1,900,000psi.
Parallel Strand Lumber (PSL):
All PSL shall be in conformance with ASTM D2559 and NER-292. PSL strength requirements shall meet or exceed the following: Fb=2,900psi, Fv=290psi, E=2,000,000psi.
Preservative Treatment (P.T.):
All exposed framing including lumber, plywood and deck materials shall be pressure treated with 0.25#/cf pentachlorophenol per AWPA specification P-5 or other approved treatment. All cutting and boring after pressure treatment shall be cared for in accordance with AWPA specification M-4. Exposed framing includes, but is not limited to:
1. Joists, girders and subfloor that is closer than 18" to exposed ground in crawl spaces.
2. Wood framing (including sheathing) that rest on exterior foundation stem walls and is 8" or less from exposed earth.
3. Any other wood product in direct contact with concrete or masonry.
Wood Connectors at P.T. Conditions:
Metal connectors which are in contact with pressure treated wood shall be protected with on of the following: Simpson "ZMAX" G185 Galvanization, Triple Zinc Coated, hot Dipped Galvanized or other approved method.

Pre-Engineered Floor Trusses:
All prefabricated floor trusses shall be designed by or under the direct supervision of a licensed professional engineer registered in the state where the structure is located. The truss shop drawings shall bear the stamp of that engineer and shall be fabricated and installed per the latest Truss Plate Institute standards. All necessary temporary and permanent bridging, blocking, pre-notched plates, hangers, etc. for the stability of the truss elements under gravity and lateral loads shall be designed and detailed/specified and furnished by the manufacturer. The truss manufacturer shall verify all setbacks, dimensions and bearing points prior to fabrication. Maximum allowable deflections shall be as follows:

~Floor Total Load = L/480 or ⅝" (whichever is less)
~Floor Live Load = L/600 or ½" (whichever is less)

Trusses shall be designed for the spans and conditions shown and be constructed from Doug-Fir timber and be furnished and installed in conformance with the manufacturer's published specifications. Additional concentrated loads from mechanical units and misc. equipment shall be accounted for/coordinated with sub-contractors, the designer of record and truss engineer. Framing has been designed assuming Hem-Fir plates w/ 405psi crushing capacity, truss engineer to confirm compatibility.
Where trusses align with shear walls, truss engineer to design and provide a truss that has been designed to transfer lateral wind and seismic forces as shown on the plans. Loading indicated (100plf minimum)shall be designed by the truss engineer to transfer from floor sheathing to shearwall below. Shop drawings including truss engineering shall be submitted to the Engineer of Record for approval prior to submittal to the jurisdiction and fabrication.
Alteration of the truss layout indicated on the plans may require supporting structural and foundation changes, therefore prior approval by the designer and structural engineer is required. Trusses shall not be field altered in any way without written approval from the licensed truss engineer of record.

HOLDOWN AND STRAP TABLE

Holdown Label (G)	Simpson Strong-Tie Product Label (SKU) (A) (B) (C) (F) (G)	Strap/Holdown Attachment and Required Fasteners: Required NAILING and Boundary Studs	Required SCREWS and Boundary Studs	Anchorage to Foundation (D) (E)
[1]	STHD14/STHD14RJ	(2) 2X STUDS W/ (30) 16d Sinker	N/A	EMBEDDED STRAP
[1]Alt	HDU5-SDS2.5	N/A	(2) 2X STUDS W/ (14) SDS SCREWS	SIMPSON SB⅜x24
[2]	HDQ8-SDS3	N/A	(3) 2X STUDS W/ (20) SDS SCREWS	SIMPSON SB⅜x24 (SEE NOTE E)
[3]	HHDQ11-SDS2.5	N/A	6x6 DF#2 POST W/ (24) SDS SCREWS	SIMPSON PABB
[4]	MST48 STRAP	(2) 2X STUDS W/ (34) 16d	N/A	N/A
[5]	MST60 STRAP	(2) 2X STUDS W/ (34) 16d	N/A	N/A
[6]	MSTC48B3 STRAP	(2) 2x STUDS W/ (38) 10d	N/A	N/A
[7]	MSTC66B3 STRAP	(2) 2x STUDS W/ (38) 10d	N/A	N/A

MANDATORY NOTES

A.	INSTALLATION OF ALL HOLDOWN ANCHORS AND STRAPS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.
B.	ALL METAL CONNECTORS IN CONTACT WITH PRESSURE TREATED (P.T.) MATERIAL SHALL BE COATED WITH SIMPSON "Z-MAX" (G-185) GALVANIZATION, TRIPLE ZINC COATED FOR CORROSION PROTECTION.

SUPPLEMENTAL NOTES

C.	ALTERNATE HOLDOWN TYPES MAY BE ACCEPTABLE WITH WRITTEN APPROVAL OF PHILLIPS STRUCTURAL ENGINEERING.
D.	ALTERNATE ADHESIVE ANCHORS MAY BE AVAILABLE, CONTACT PHILLIPS STRUCTURAL ENGINEERING.
E.	IF 6" STEMWALLS ARE USED, THREADED ROD WITH DOUBLE NUT AND PLATE EXTENDED INTO THE FOOTING IS REQ'D. SEE ALTERNATE DETAILING. SB⅜"X24 MAY ONLY BE USED IN 8" STEMWALLS.
F.	STHD10RJ & STHD14RJ HOLDOWNS ARE TYPICALLY TO BE INSTALLED WHERE A RIM JOIST OCCURS.
G.	SIMPSON HDU5-SDS2.5 MAY BE USED AS AN ALTERNATE TO STHD10(RJ) OR STHD14(RJ).

IMPORTANT FRAMING NOTE: GENERAL CONTRACTOR/FRAMER SHALL VERIFY ALL CONCENTRATED LOADS FROM ABOVE TO HAVE SOLID BEARING CONTINUOUS TO THE FOUNDATION (INCLUDING SQUASH BLOCKING IN CRAWLSPACE/FLOOR FRAMING). ANY CHANGES TO FOUNDATION AND STRUCTURE FROM ARCHITECTURAL PLANS SHALL BE NOTED AND ALL AFFECTED PARTIES SHALL BE NOTIFIED.

SYMBOL & ABBREVIATIONS LEGEND:

X — BEAM # CALLOUT (REF. CALCULATIONS)
[x] — HOLD DOWN CALLOUT (REF. HOLDOWN TABLE)
SW#, DW# — SHEARWALL CALLOUT (REF. SHEARWALL TABLE)
X / SD-X — SECTION REFERENCE

A.B.	ANCHOR BOLT
AFF	ABOVE FINISHED FLOOR
C.I.P.	CAST IN PLACE
CONC.	CONCRETE
(E)	EXISTING
E.N.	SHEARWALL EDGE NAIL
E.W.	EACH WAY
FDN.	FOUNDATION
G.T.	GIRDER TRUSS
GWB	GYPSUM WALL BOARD
HDR	HEADER (SEE STRUCTURAL NOTES FOR SIZE)
MFR	MANUFACTURER
(N)	NEW
O.C.	ON CENTER
P.E.	PRE-ENGINEERED
S.W.	SHEARWALL
T.O.F.	TOP OF FRAMING
T.O.W.	TOP OF WALL
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD

SHEAR WALL (SW) AND ANCHORAGE SCHEDULE (O)

Label	ASD S.W. Capacity (PLF) Seismic/Wind	Minimum Required APA Rated Sheathing (panel) (A) (B) (C) (D) (M) (K) (N)	Panel Edge Nailing @ Edges (D) (E)	Stud & Blocking Size @ Adjoining Panel Edges (C) (F) (L)	Rim Joist Or Block Connection To Top Plate (G) (H); (Does not apply to crawlspace)	2x Bottom Plate Attachment: Nailing To Wood Below (I)	Sill Plate Attachment: (e)Anchor Bolt To Concrete Below (J) (K) (M)	Sill Plate Size @ Fdn.
SW6	260/365	7/16"OSB (1) Side	0.131x2½" @ 6" O.C.	2x_	LTP4 @ 36"OC	16d @ 6" O.C. OR 12d @ 4" O.C.	⅝" @ 48" O.C.	2x
SW4	380/532	7/16"OSB (1) Side	0.131x2½" @ 4" O.C.	2x_	LTP4 @ 20"OC	16d @ 4" O.C. OR 12d @ 2½" O.C.	⅝" @ 32" O.C.	2x
SW3	490/685	7/16"OSB (1) Side	0.131x2½" @ 3" O.C.	3x_	LTP4 @ 12"OC	16d @ 3½" O.C.	⅝" @ 18" O.C.	3x
SW2	640/895	7/16"OSB (1) Side	0.131x2½" @ 2" O.C.	3x_	LTP4 @ 10"OC	16d @ 3" O.C.	⅝" @ 12" O.C.	3x
DW4	760/1065	7/16"OSB Each Side	0.131x2½" @ 4" O.C.	3x_	LTP4 @ 8"OC	(2) ROWS 16d @ 4" O.C. & LTP4 @ 16" OC AT BLK'G TO PLATE	⅝" @ 12" O.C.	3x
DW3	980/1370	7/16"OSB Each Side	0.131x2½" @ 3" O.C.	3x_	LTP4 @ 6"OC	(2) ROWS 16d @ 4" O.C. & LTP4 @ 16" OC AT BLK'G TO PLATE	⅝" @ 9" O.C.	3x
DW2	1280/1790	7/16"OSB Each Side	0.131x2½" @ 2" O.C.	3x_	LTP4 @ 6"OC	(2) ROWS 16d @ 4" O.C. & LTP4 @ 16" OC AT BLK'G TO PLATE	⅝" @ 9" O.C.	3x

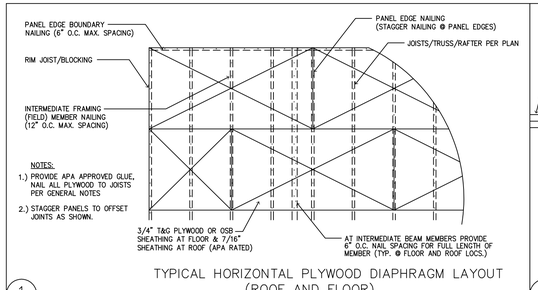
MANDATORY NOTES

A.	ALL SHEATHING PANELS SHALL BE INSTALLED HORIZONTALLY WHERE FRAMING EXCEEDS 16" O.C. SPACING. BLOCK ALL PANEL EDGES.
B.	WHEN SHEATHING IS APPLIED TO BOTH SIDES OF SHEARWALL (DW4 & DW3), STAGGER PANEL EDGES ON OPPOSITE SIDES OF WALL SUCH THAT JOINTS ON OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
C.	BLOCK ALL SHEATHING PANEL EDGES.
D.	SHEARWALL SHEATHING/NAILING SHALL BE PROVIDED THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT SHEARWALLS ARE DESIGNATED BY EXTERIOR BUILDING CORNERS, CORRIDORS, WALL PENETRATIONS OR AS DESIGNATED ON THE PLANS. SEE PLANS & TABLE FOR REQUIRED HOLDOWNS (PERFORATED SHEARWALLS REQUIRE SHEATHING ABOVE & BELOW OPENINGS).
E.	EDGE NAIL SHEATHING AT ALL HOLDOWN POST/STUDS. EDGE NAILING IS REQUIRED TO EACH STUD USED IN A BUILT-UP HOLDOWN POST (MULTIPLE 2X STUDS). SEE TYPICAL DETAILS FOR FURTHER INFORMATION.
F.	INTERMEDIATE STUDS SHALL BE 2X_, MINIMUM AND NAILED WITH 0.131"ø X 2½" FIELD NAILING AT 12" O.C.
G.	USE 0.131"ø x2½" NAILS TYPICALLY FOR LTP CLIPS WHEN INSTALLING OVER SHEATHING. IF LTP CLIPS ARE INSTALLED DIRECTLY TO FRAMING, 0.131"ø X1½" NAILS MAY BE USED. A35 OR RBC CLIPS MAY BE USED WHEN ATTACHING ROOF BLOCKING TO TOP PLATE.
H.	LTP4'S NOT REQ'D WHERE RIM SHEATHING OVERLAPS THE SECOND FLOOR BOTTOM PLATE.
I.	SHEATHING SHALL BE CONTINUOUS OVER BOTTOM PLATE AND RIM OR SILL PLATE PER TYPICAL DETAILING WITH EDGE NAILING AT EACH. WHEN TWO ROWS OF NAILING ARE REQ'D AT DOUBLE SIDED SHEARWALLS SEE TYPICAL DETAILING FOR FASTENERS AND BLKG.
J.	ALL ANCHOR BOLTS SHALL HAVE STEEL PLATE WASHERS 0.229"x3"x3". ANCHOR BOLTS W/ STANDARD 90° BEND SHALL BE EMBEDDED 7" INTO CONCRETE. PLATE WASHERS SHALL EXTEND TO WITHIN ⅜" OF SHEATHING EDGE.
K.	PROVIDE "HOT-DIPPED" GALVANIZED NAILS/BOLTS AND METAL CONNECTORS WHEN ATTACHING TO PRESSURE TREATED MATERIALS.
L.	WHERE 3x STUDS ARE REQ'D AT ADJOINING PANEL EDGES (2) 2x STUDS MAY BE NAILED TOGETHER IN PLACE OF USING A SINGLE 3x. FACE NAIL STUDS TOGETHER W/ 16d AT SAME SPACING SHOWN IN 2X BOTTOM PLATE ATTACHMENT COLUMN. PANEL EDGE NAILING IS REQUIRED TO EACH OF THE DOUBLE STUDS AND SHALL BE STAGGERED.
M.	POST INSTALLED ANCHORS MAY NOT BE A VIABLE ALTERNATIVE. CONTACT PHILLIPS STRUCTURAL ENGINEERING FOR CONSULTATION.
N.	APA RATED PLYWOOD MAY BE USED IN PLACE OF OSB.
O.	ALL NAILING SHALL BE PER IBC TABLE 2304.10.1 U.N.O.

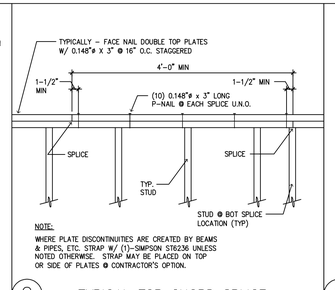
TYPICAL FRAMING NOTES:

1. *Roof and floor diaphragm* nailing per Wood Sheathing Notes.
2. *Solid blocking* shall be provided between the bearings of every rafter or truss and attach to framing with Simpson H2.5T or clip indicated in typical detailing.
3. *Provide solid built-up studs or posts* under all girder trusses, roof beams and floor beams. Solid blocking (squash blocking) is required in all floor cavities under built-up studs/posts. Built-ups or posts shall run continuous to the foundation.
4. *Exterior walls* shall be nailed per SW6 U.N.O. All panel edges shall be blocked per shearwall table.
5. *Where (2) shearwalls meet* at a corner/intersection, the sheathing of each wall shall be edge nailed to the studs/post which the holdown is attached to.
6. *Provide solid rim* where floor joist bear on exterior walls per typical details.
7. *Where floor framing runs parallel* to exterior walls, install 2x blocking panels between rim joist and first joist @ 48" o.c. ~ nail sheathing to blocking w/ 8d @ 3" o.c. (crawlspace framing where rim joist bears on concrete stemwalls are omitted from this requirement).
8. *Roof and floor joists/trusses* are shown schematically on the plan and are not intended to show every location of every joist/truss.
9. *Provide double joists* under interior partition walls when running parallel to each other.
10. *Top plates* are assumed to be continuous and may be spliced per typical detailing on this sheet.
11. *All columns* not specified or shown on the plans are to be a minimum of (2) 2x studs spike laminated together with 16d nails @ 6" o.c. (stagger).
12. *All post-beam intersections* shall contain positive connections to resist against uplift and/or lateral displacement. Anchorage of walls to the foundation shall be provided in accordance with the shearwall schedule.
13. *Typical Walls* shall be framed with Hem-Fir U.N.O. Walls shall be anchored to the foundation per the minimum requirements of SW6 (⅝"Ø A.B. @ 48" o.c. embedded 7" and no more than 12" from ends of each sill and 2 bolts minimum)with 3"x3"x¼" square washers firmly attached between plate and nut. All walls over 10' tall shall have bracing/blocking at 48" o.c. (flat or on edge).

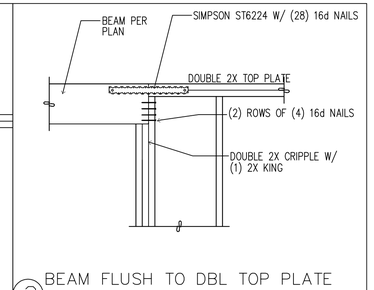
PLAN VERACITY: Every attempt has been made to insure the accuracy of these engineered documents, site conditions, product availability, etc. All information listed above must be verified prior to construction and fabrication. Any changes or deficiencies on or to the plan must be transmitted to Phillips Structural Engineering for written approval.



1 TYPICAL HORIZONTAL PLYWOOD DIAPHRAGM LAYOUT (ROOF AND FLOOR)



2 TYPICAL TOP CHORD SPLICE



3 BEAM FLUSH TO DBL TOP PLATE

REV	DELTA	DATE	REVISION DESCRIPTION
1		4/4/2019	JURISDICTIONAL REVIEW
2		10/18/2019	JURISDICTIONAL REVIEW

PHILLIPS STRUCTURAL ENGINEERING
P.O Box 108, Milton, WA 98354
Phone: (253) 344-1666

TODD WILLIAM PHILLIPS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
10/18/2019
ORIGINAL STAMP MUST BE RED FOR VALIDITY

WEN HU RESIDENCE
8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

GENERAL NOTES

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:
S-0

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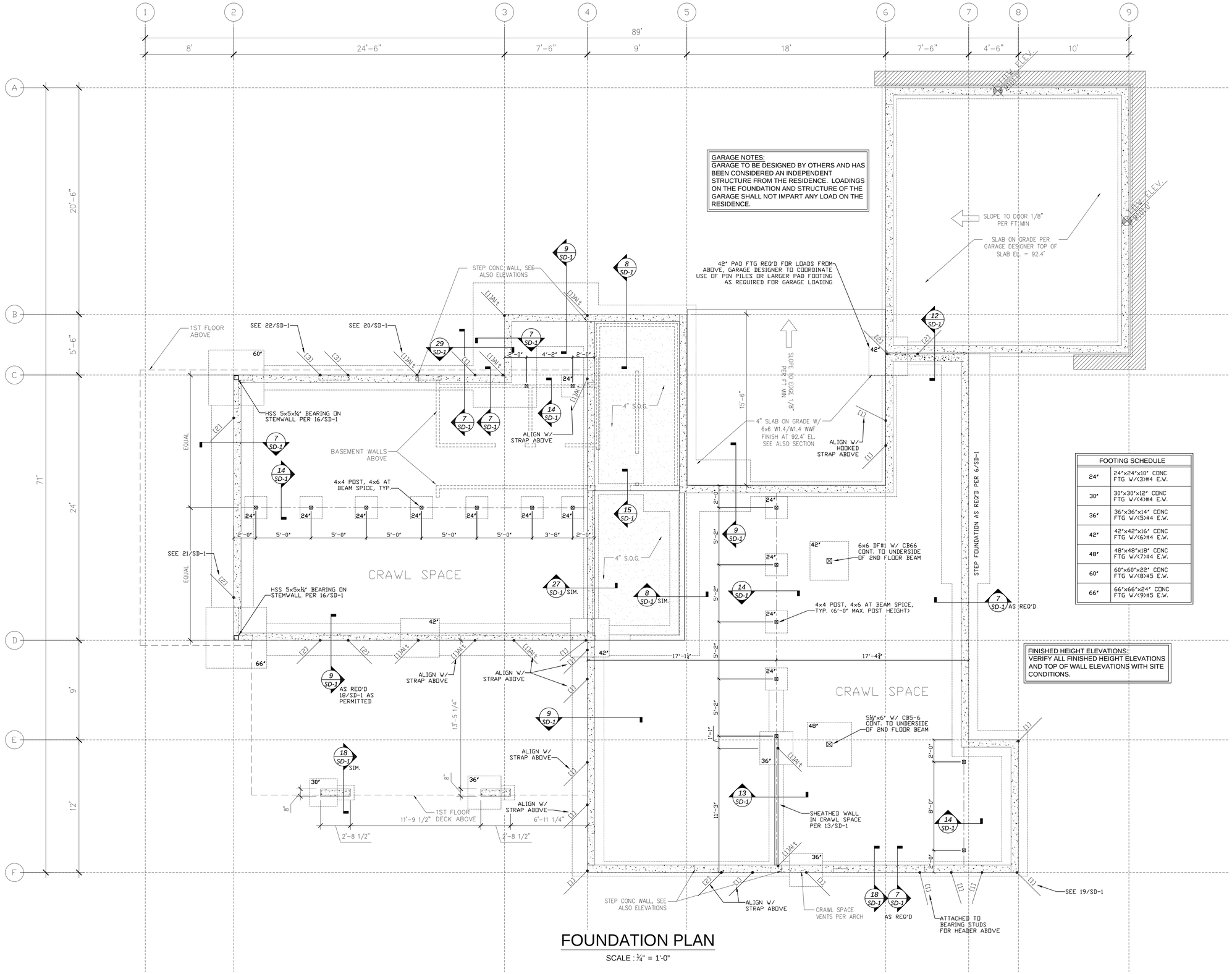

FOOTING SCHEDULE

24"	24"x24"x10" CONC FTG W/(3)#4 E.W.
30"	30"x30"x12" CONC FTG W/(4)#4 E.W.
36"	36"x36"x14" CONC FTG W/(5)#4 E.W.
42"	42"x42"x16" CONC FTG W/(6)#4 E.W.
48"	48"x48"x18" CONC FTG W/(7)#4 E.W.
60"	60"x60"x22" CONC FTG W/(8)#5 E.W.
66"	66"x66"x24" CONC FTG W/(9)#5 E.W.

FOUNDATION PLAN

SCALE : ¼" = 1'-0"

REVISIONS

REV. DELTA	DATE	REVISION DESCRIPTION
1	4/4/2019	JURISDICTIONAL REVIEW
2	10/18/2019	JURISDICTIONAL REVIEW

PHILLIPS STRUCTURAL ENGINEERING
PO Box 108, Milton, WA 98354
Phone: (253) 344-1666

TODD PHILLIPS — STATE OF WASHINGTON — 45394 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

10/18/2019

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REUSE OF DOCUMENTS

WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

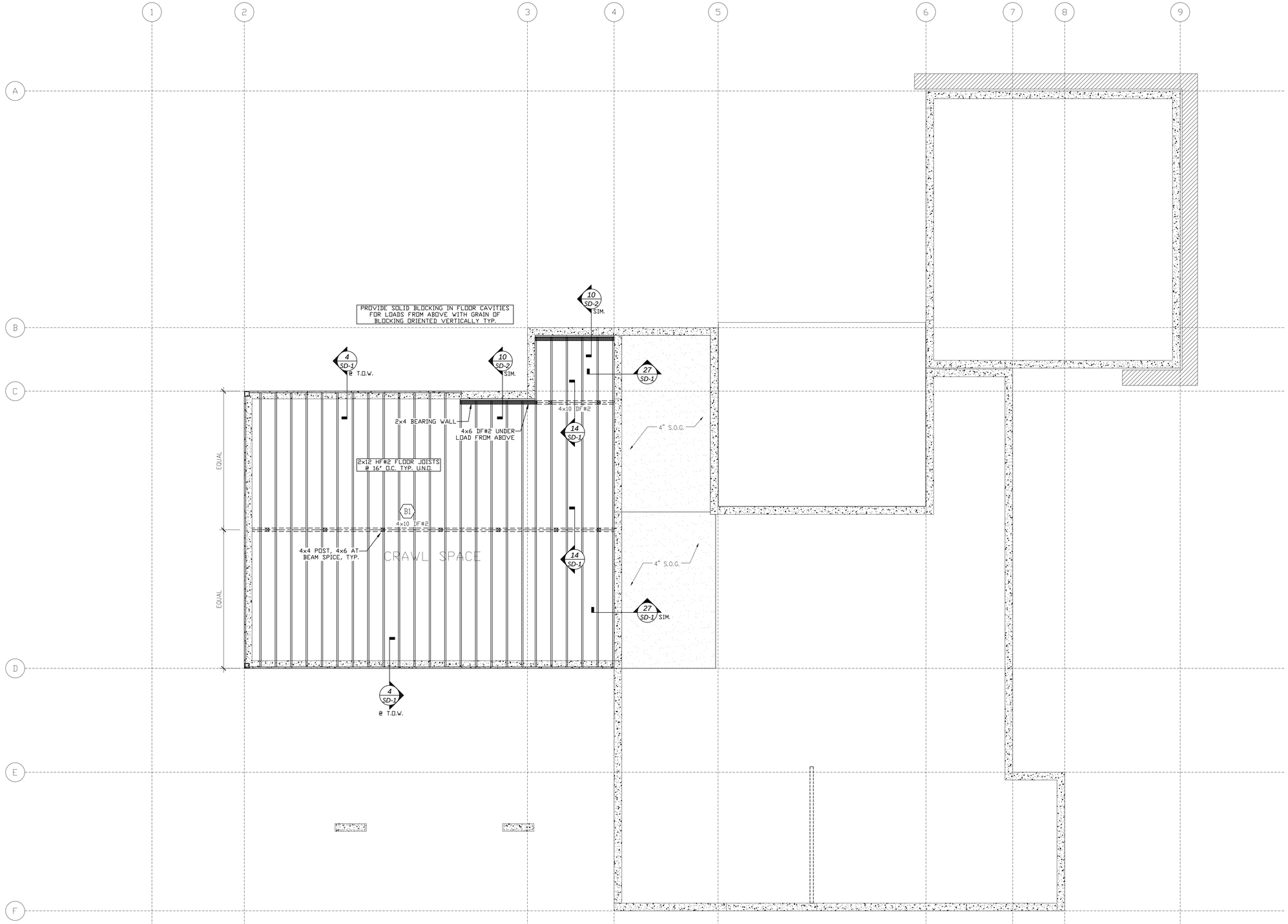
FOUNDATION PLAN

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:

S-1

PHILLIPS STRUCTURAL ENGINEERING



NOTE: ALL WALL FRAMING TO BE DF#2 U.N.O.

BASEMENT FLOOR FRAMING

SCALE : ¼" = 1'-0"

REV. DELTA	DATE	REVISION DESCRIPTION
1	4/4/2019	JURISDICTIONAL REVIEW
2	10/18/2019	JURISDICTIONAL REVIEW

REVISIONS

PHILLIPS STRUCTURAL ENGINEERING
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TODD PHILLIPS
STATE OF WASHINGTON
25394
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

10/18/2019

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WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

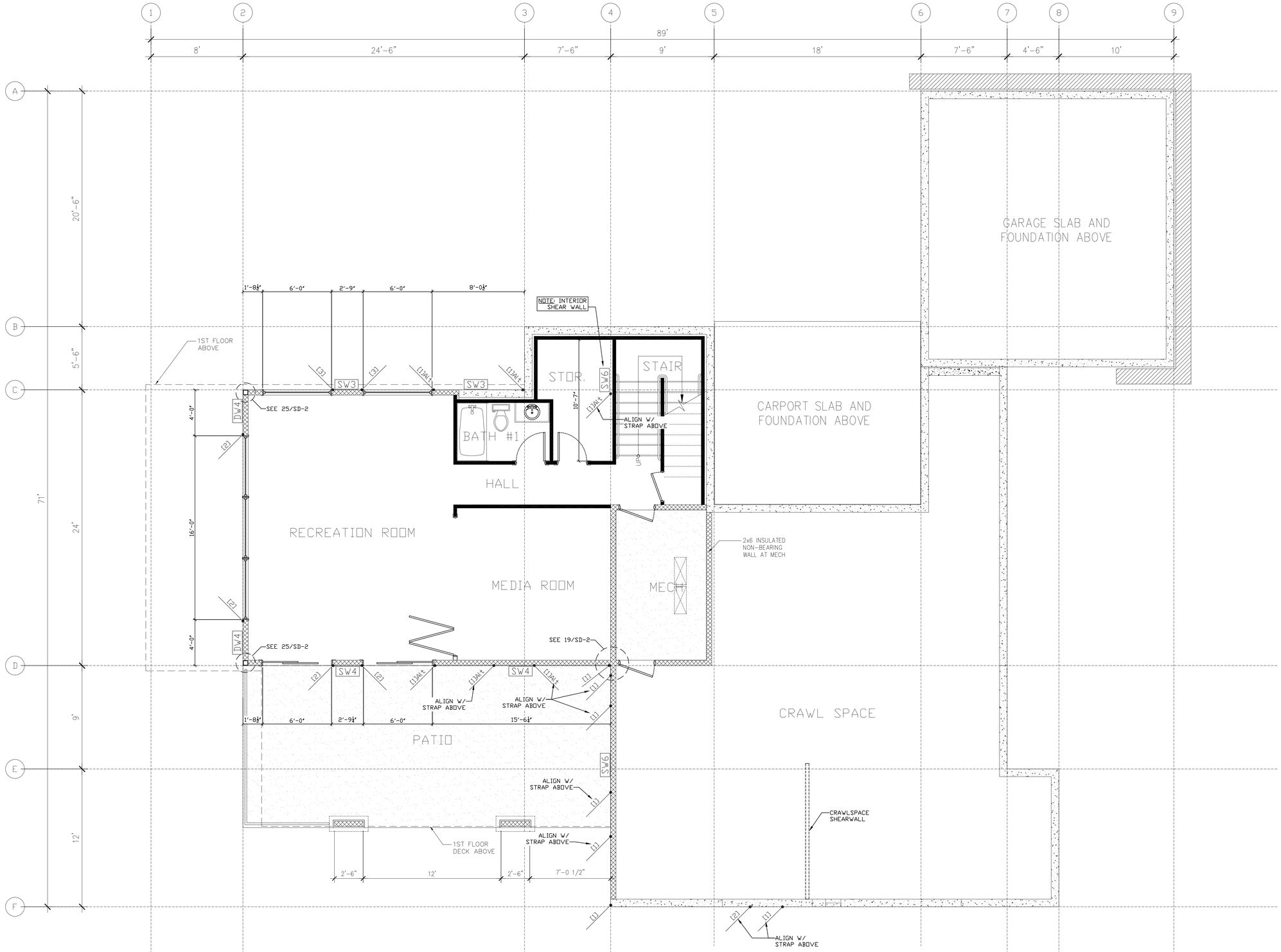
WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

BASEMENT FLOOR FRAMING

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:
S-2

PHILLIPS STRUCTURAL ENGINEERING



NOTE: ALL WALL FRAMING TO BE DF#2 U.N.O.

BASEMENT FLOOR SHEAR WALLS, HOLDOWNS, AND STRUCTURE

SCALE : ¼" = 1'-0"

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TODD PHILLIPS
STATE OF WASHINGTON
21594
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

10/18/2019

ORIGINAL STAMP MUST BE RED FOR VALIDITY

WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

BASEMENT SHEAR WALLS, HOLDOWNS, AND STRUCTURE

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:
S-3

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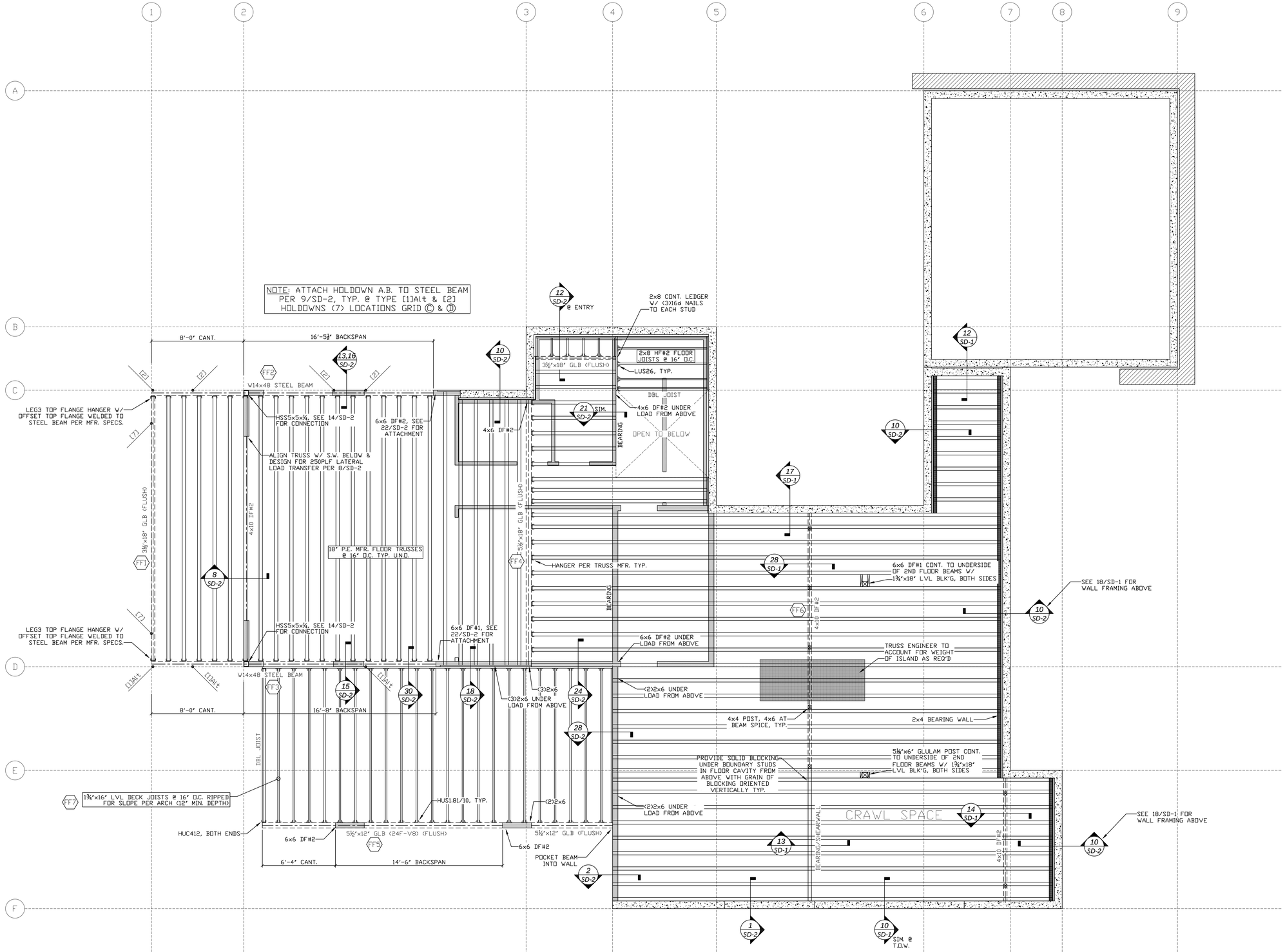

MAIN FLOOR FRAMING

SCALE : ¼" = 1'-0"

REVISIONS

REV. DELTA	DATE	REVISION DESCRIPTION
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2	10/18/2019	JURISDICTIONAL REVIEW

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PO Box 108, Milton, WA 98354
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STATE OF WASHINGTON — TODD PHILLIPS — 23594 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

10/18/2019

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WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

MAIN FLOOR FRAMING

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

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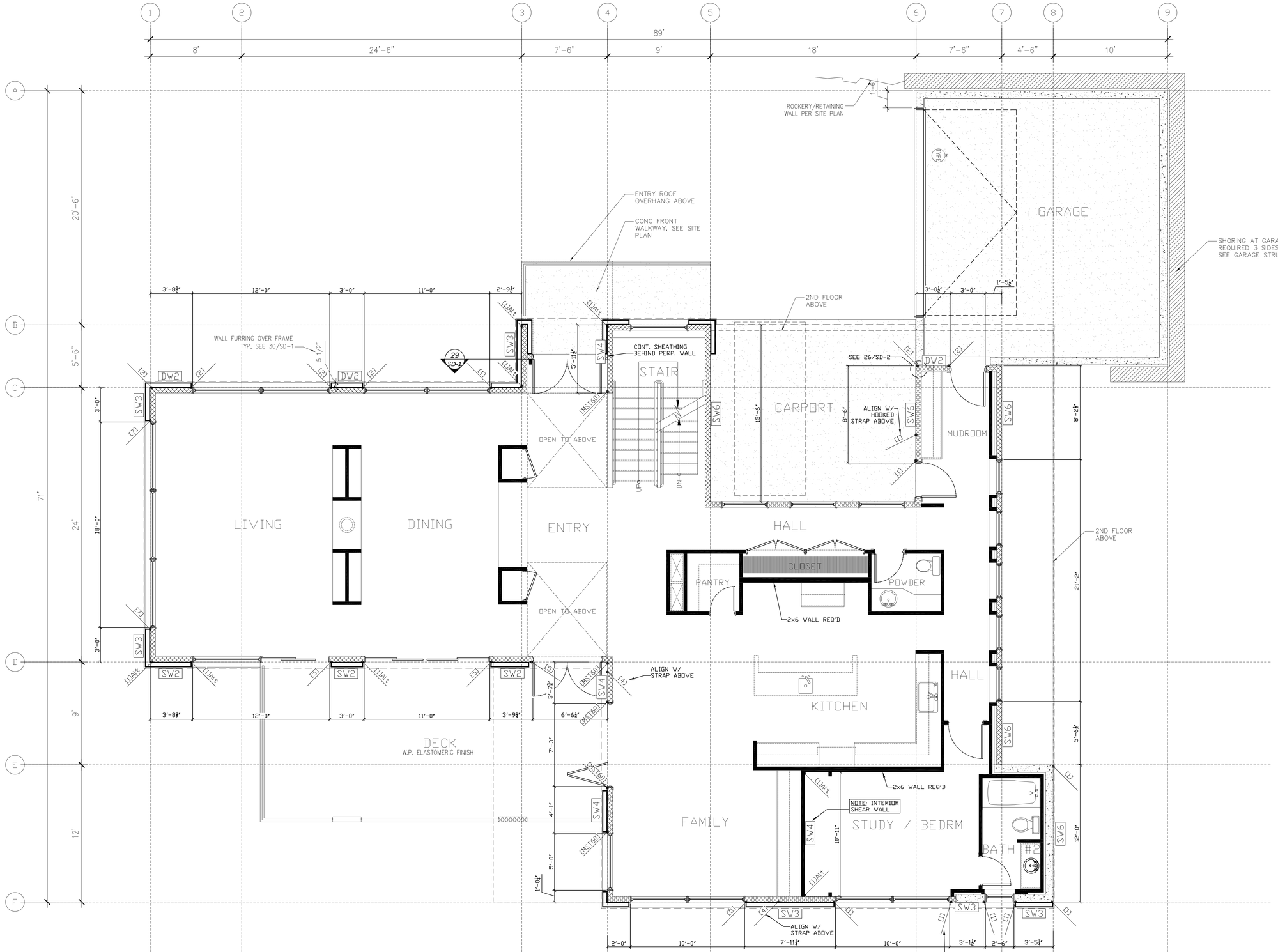
S-4

PHILLIPS STRUCTURAL ENGINEERING



NOTE: ALL WALL FRAMING TO BE DF#2 U.N.O.

MAIN FLOOR SHEAR WALLS, HOLDOWNS, AND STRUCTURE

SCALE : ¼" = 1'-0"

REV. DELTA	DATE	REVISION DESCRIPTION
1	4/4/2019	JURISDICTIONAL REVIEW
2	10/18/2019	JURISDICTIONAL REVIEW

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Phone: (253) 344-1666

STATE OF WASHINGTON TODD PHILLIPS 23394 STRUCTURAL ENGINEER PROFESSIONAL ENGINEER

10/18/2019

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WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

MAIN FLOOR SHEAR WALLS, HOLDOWNS, AND STRUCTURE

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

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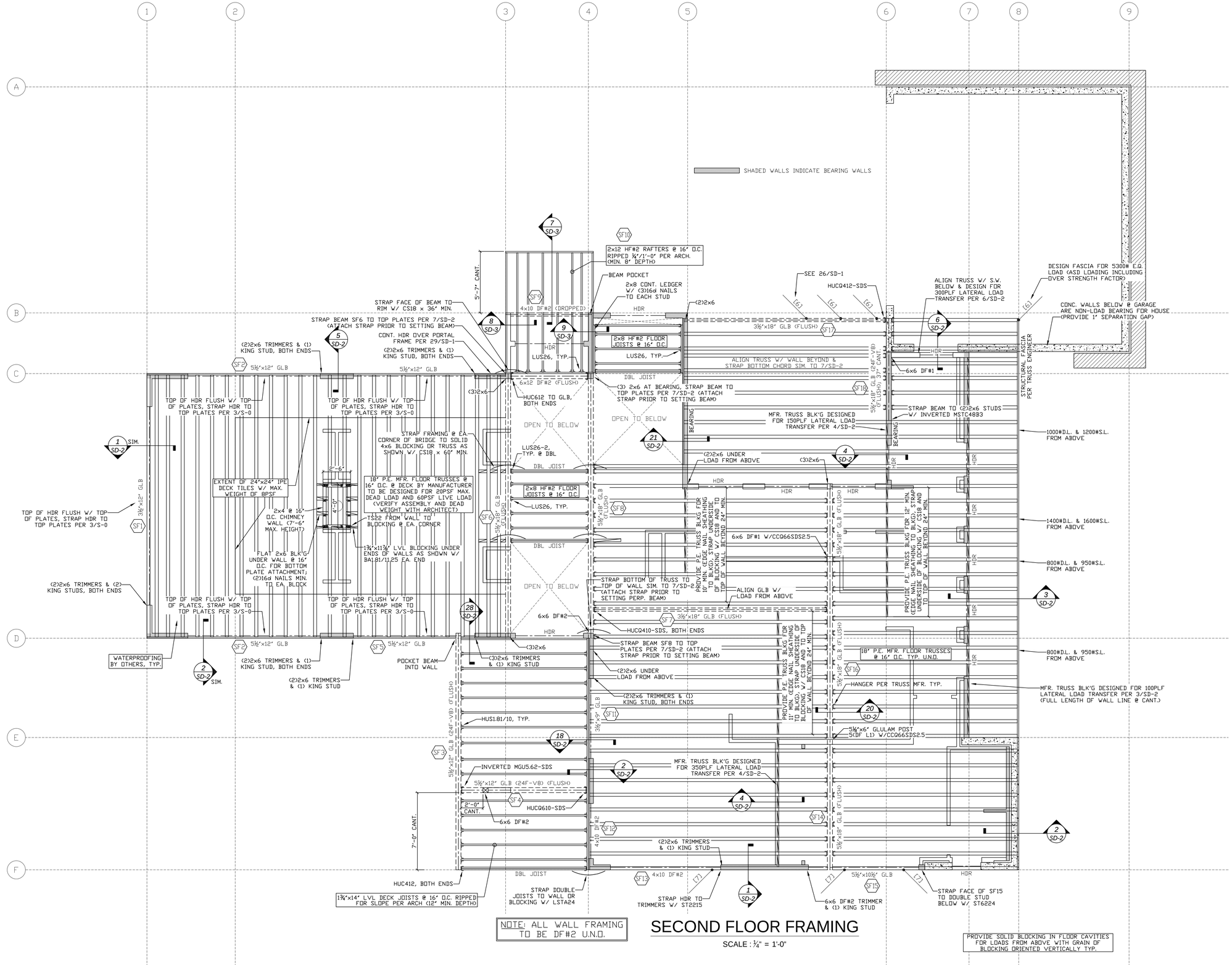
S-5

PHILLIPS STRUCTURAL ENGINEERING



NOTE: ALL WALL FRAMING TO BE DF#2 U.N.O.

SECOND FLOOR FRAMING

SCALE : ¼" = 1'-0"

PROVIDE SOLID BLOCKING IN FLOOR CAVITIES FOR LOADS FROM ABOVE WITH GRAIN OF BLOCKING ORIENTED VERTICALLY TYP.

REV. DELTA	DATE	REVISION DESCRIPTION
1	4/4/2019	JURISDICTIONAL REVIEW
2	10/18/2019	JURISDICTIONAL REVIEW

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10/18/2019
ORIGINAL STAMP MUST BE RED FOR VALIDITY

WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

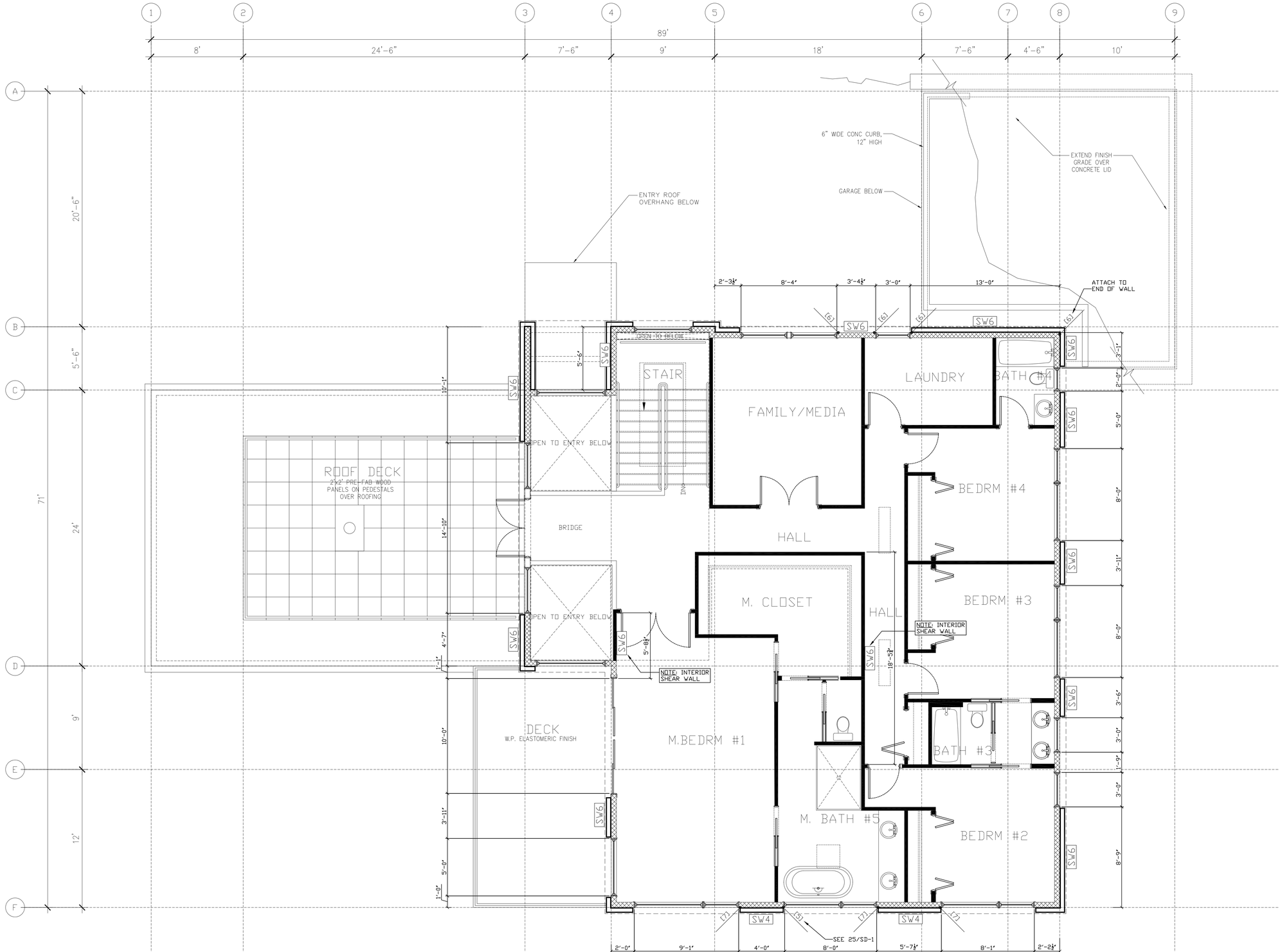
WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

SECOND FLOOR FRAMING

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:
S-6

PHILLIPS STRUCTURAL ENGINEERING



SECOND FLOOR SHEAR WALLS, HOLDOWNS, AND STRUCTURE

SCALE : ¼" = 1'-0"

NOTE: ALL WALL FRAMING TO BE DF#2 U.N.O.

REV. DELTA	DATE	REVISION DESCRIPTION
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PO Box 108, Milton, WA 98354
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TODD PHILLIPS
STATE OF WASHINGTON
23594
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

10/18/2019

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WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

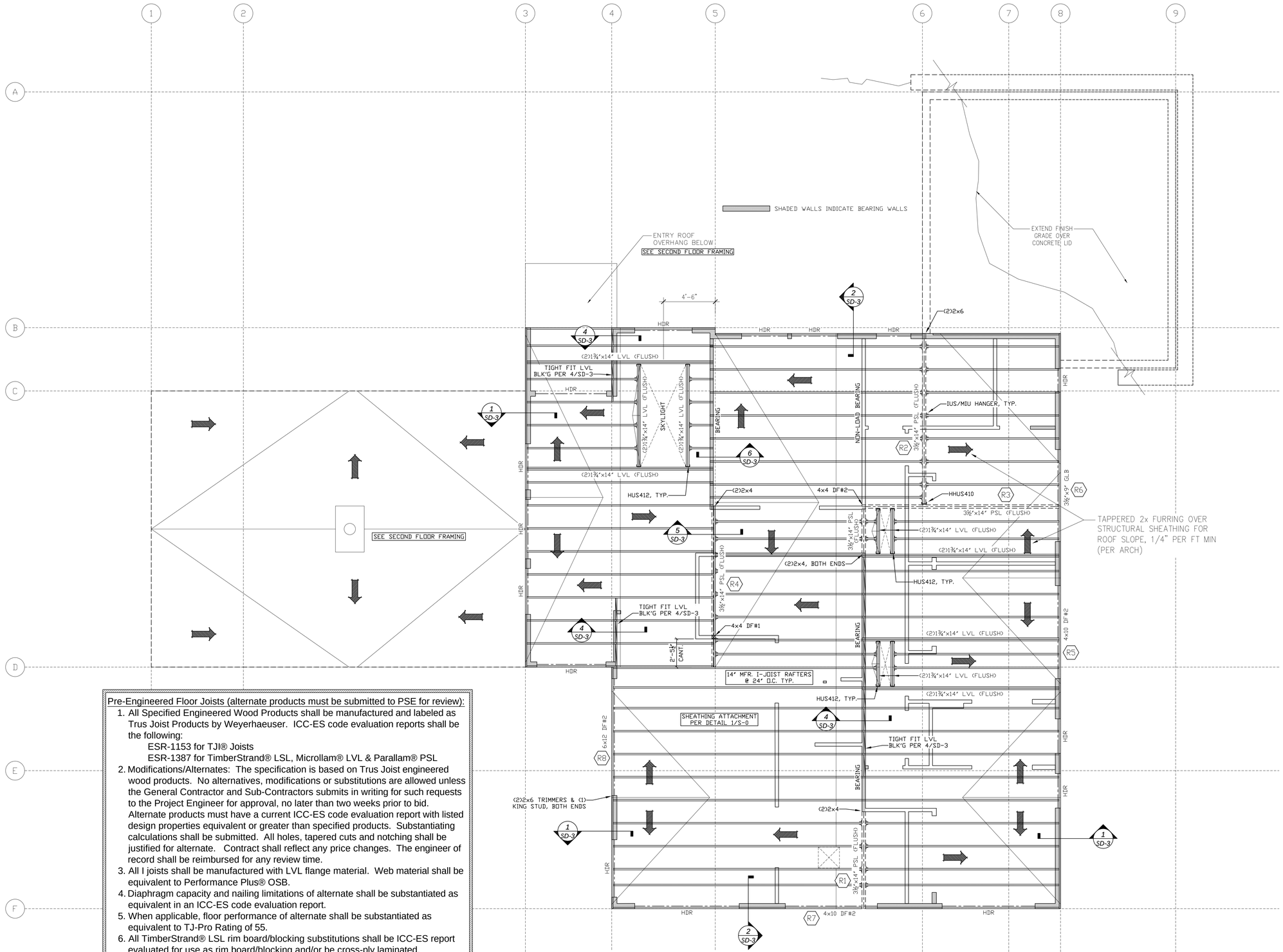
WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

SECOND FLOOR SHEAR WALLS, HOLDOWNS, AND STRUCTURE

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:
S-7

PHILLIPS STRUCTURAL ENGINEERING



Pre-Engineered Floor Joists (alternate products must be submitted to PSE for review):

1. All Specified Engineered Wood Products shall be manufactured and labeled as Trus Joist Products by Weyerhaeuser. ICC-ES code evaluation reports shall be the following:
   ESR-1153 for TJI® Joists
   ESR-1387 for TimberStrand® LSL, Microllam® LVL & Parallam® PSL
2. Modifications/Alternates: The specification is based on Trus Joist engineered wood products. No alternatives, modifications or substitutions are allowed unless the General Contractor and Sub-Contractors submits in writing for such requests to the Project Engineer for approval, no later than two weeks prior to bid. Alternate products must have a current ICC-ES code evaluation report with listed design properties equivalent or greater than specified products. Substantiating calculations shall be submitted. All holes, tapered cuts and notching shall be justified for alternate. Contract shall reflect any price changes. The engineer of record shall be reimbursed for any review time.
3. All I joists shall be manufactured with LVL flange material. Web material shall be equivalent to Performance Plus® OSB.
4. Diaphragm capacity and nailing limitations of alternate shall be substantiated as equivalent in an ICC-ES code evaluation report.
5. When applicable, floor performance of alternate shall be substantiated as equivalent to TJ-Pro Rating of 55.
6. All TimberStrand® LSL rim board/blocking substitutions shall be ICC-ES report evaluated for use as rim board/blocking and/or be cross-ply laminated.
7. All equivalent fire and sound ratings for floor/ceiling assemblies shall be substantiated in an ICC-ES code evaluation report or similar third party evaluation as equivalent to TJI joist assemblies.
8. For Trus Joist Product availability call 1-888-453-8358.

NOTE: ALL WALL FRAMING TO BE DF#2 U.N.O.

ROOF FRAMING

SCALE : ¼" = 1'-0"

PROVIDE SOLID BLOCKING IN FLOOR CAVITIES FOR LOADS FROM ABOVE WITH GRAIN OF BLOCKING ORIENTED VERTICALLY TYP.

REVISIONS

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Phone: (253) 344-1666

TODD PHILLIPS — STATE OF WASHINGTON — 21594 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

10/18/2019

ORIGINAL STAMP MUST BE RED FOR VALIDITY

WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

ROOF FRAMING

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

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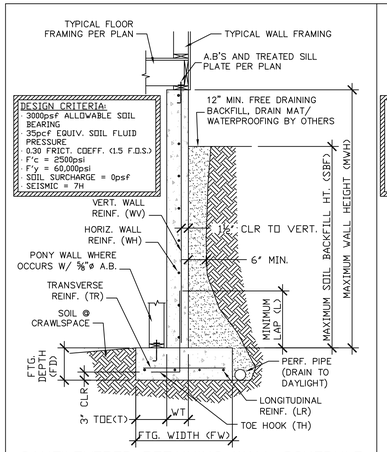
S-8

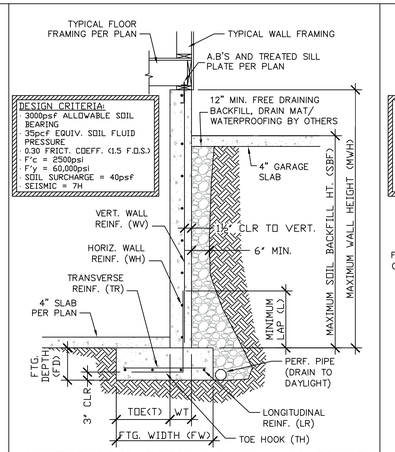
PHILLIPS STRUCTURAL ENGINEERING



CANTILEVERED RETAINING WALL SCHEDULE

MAX. WALL HEIGHT	MAX. SOIL BACKFILL HEIGHT	FTG WIDTH	TOE	WALL THICKNESS	FTG DEPTH	WALL VERT.	WALL HORIZ.	TOE HOOK	REBAR LAP	TRANS. REINF.	LONG. REINF.
MWH	SBF	FW	T	WT	FD	WV	WH	TH	L	TR	LR
10'	5'	3'-6"	0'-7"	8"	11"	#4@16"	#4@12"	10"	20"	#4@18"	5-#4
10'	6'	4'-3"	0'-7"	8"	11"	#4@15"	#4@12"	10"	20"	#4@18"	5-#4
10'	7'	5'-0"	0'-7"	8"	12"	#4@10"	#4@12"	10"	20"	#4@18"	7-#4
10'	8'	5'-11"	0'-9"	8"	12"	#4@9"	#4@12"	12"	20"	#4@18"	8-#4
10'	9'	6'-8"	0'-9"	8"	12"	#5@8"	#4@12"	12"	24"	#4@18"	9-#4
11'	10'	7'-3"	0'-9"	8"	14"	#5@7"	#4@12"	12"	30"	#4@18"	7-#5

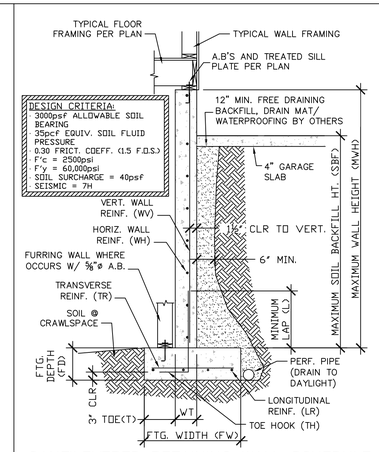
CANTILEVERED RETAINING WALL (SOIL HIGH/SOIL LOW) 7



CANTILEVERED RETAINING WALL SCHEDULE

MAX. WALL HEIGHT	MAX. SOIL BACKFILL HEIGHT	FTG WIDTH	TOE	WALL THICKNESS	FTG DEPTH	WALL VERT.	WALL HORIZ.	TOE HOOK	REBAR LAP	TRANS. REINF.	LONG. REINF.
MWH	SBF	FW	T	WT	FD	WV	WH	TH	L	TR	LR
10'	5'	2'-8"	1'-4"	8"	11"	#4@16"	#4@12"	18"	20"	#4@18"	4-#4
10'	6'	3'-3"	1'-9"	8"	11"	#4@14"	#4@12"	24"	20"	#4@18"	4-#4
10'	7'	3'-10"	1'-9"	8"	12"	#4@9"	#4@12"	24"	20"	#4@18"	5-#4
10'	8'	4'-4"	1'-9"	8"	12"	#4@8"	#4@12"	24"	20"	#4@18"	6-#4
10'	9'	4'-10"	1'-10"	8"	12"	#5@8"	#4@12"	24"	24"	#4@18"	7-#4
11'	10'	5'-8"	2'-2"	8"	14"	#5@6"	#4@12"	28"	30"	#4@18"	9-#4

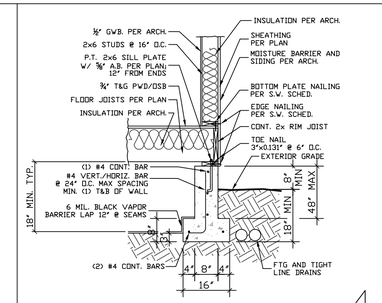
CANTILEVERED RETAINING WALL (SLAB LOW/HIGH) 8



CANTILEVERED RETAINING WALL SCHEDULE

MAX. WALL HEIGHT	MAX. SOIL BACKFILL HEIGHT	FTG WIDTH	TOE	WALL THICKNESS	FTG DEPTH	WALL VERT.	WALL HORIZ.	TOE HOOK	REBAR LAP	TRANS. REINF.	LONG. REINF.
MWH	SBF	FW	T	WT	FD	WV	WH	TH	L	TR	LR
10'	5'	3'-8"	0'-7"	8"	11"	#4@16"	#4@12"	10"	20"	#4@18"	5-#4
10'	6'	4'-5"	0'-7"	8"	11"	#4@14"	#4@12"	10"	20"	#4@18"	6-#4
10'	7'	5'-2"	0'-7"	8"	12"	#4@9"	#4@12"	10"	20"	#4@18"	7-#4
10'	8'	5'-11"	0'-9"	8"	12"	#4@9"	#4@12"	12"	20"	#4@18"	8-#4
10'	9'	6'-9"	0'-9"	8"	12"	#5@8"	#4@12"	12"	24"	#4@18"	9-#4
11'	10'	7'-5"	0'-9"	8"	14"	#5@6"	#4@12"	12"	30"	#4@18"	8-#5

CANTILEVERED RETAINING WALL (SLAB HIGH/SOIL LOW) 9



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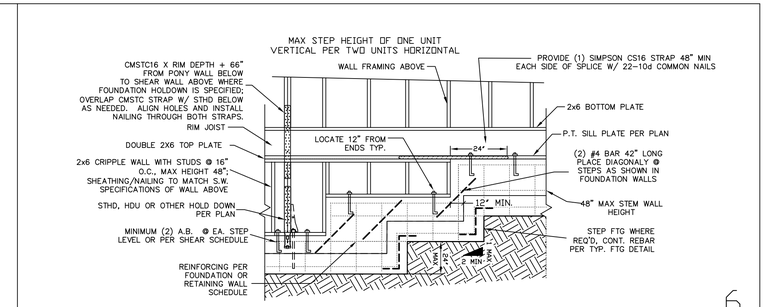

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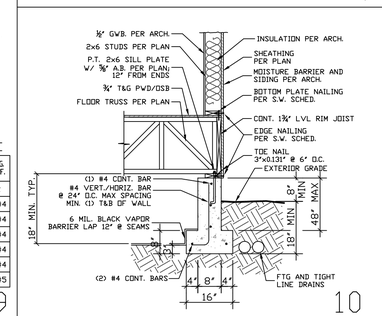

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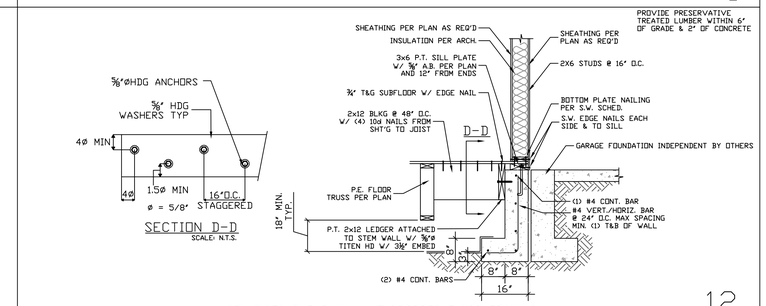
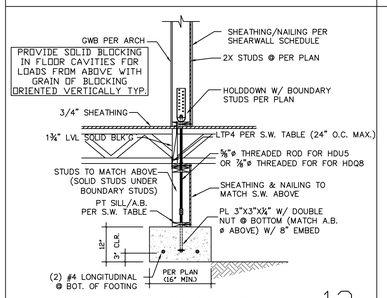
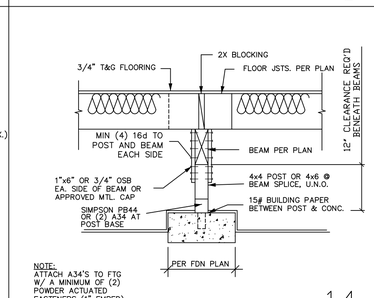


DBL SIDED SHEAR WALL AT DROPPED FLOOR FRAMING 12



CRAWL SPACE SHEARWALL 13



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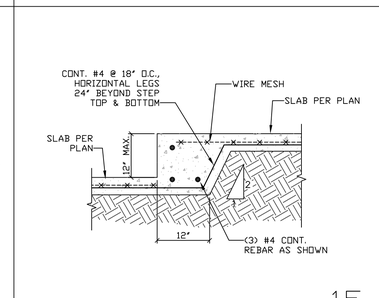

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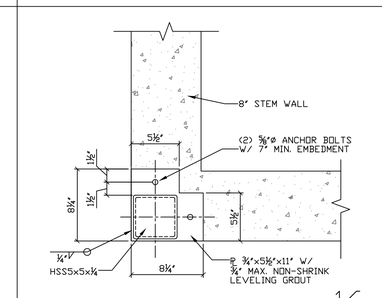

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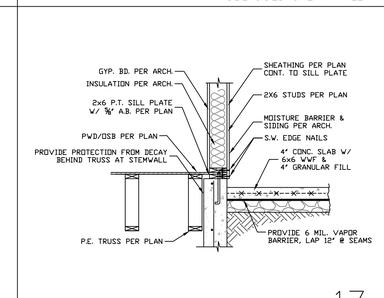

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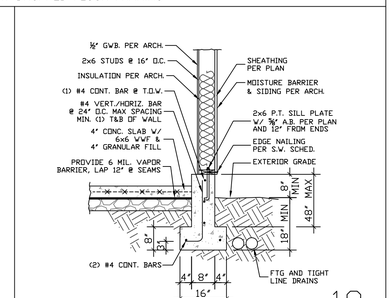

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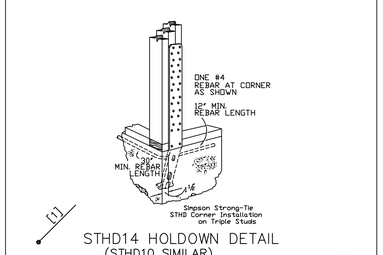
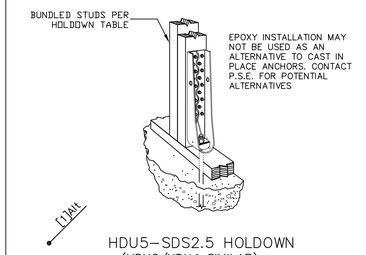


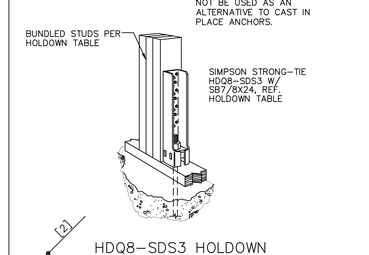
STHD14 HOLDOWN DETAIL
(STHD10 SIMILAR)

19



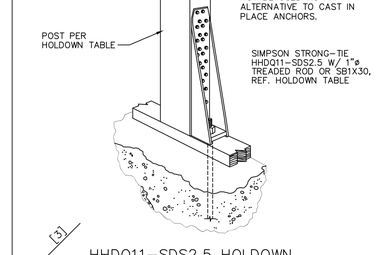
HDU5-SDS2.5 HOLDOWN
(HDU2/HDU4 SIMILAR)

20



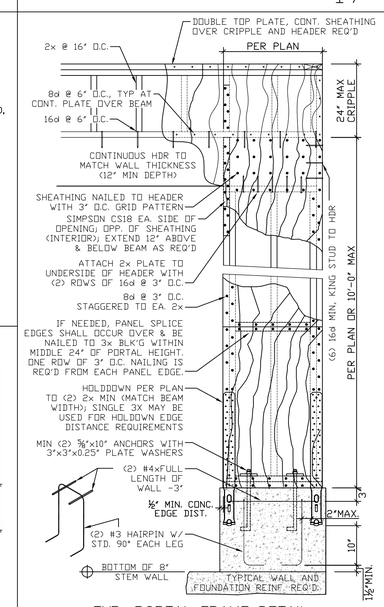
HDQ8-SDS3 HOLDOWN

21

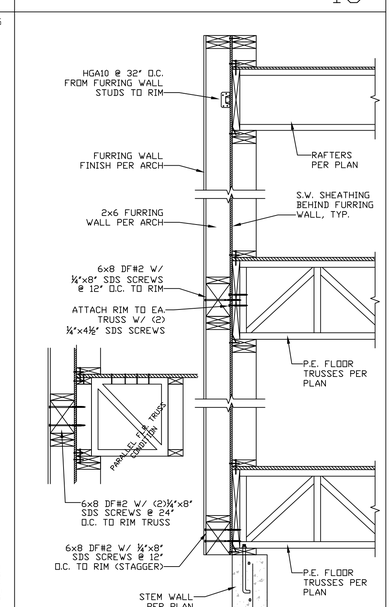


HHDQ11-SDS2.5 HOLDOWN
(HHDQ14 SIMILAR)

22



TYP. PORTAL FRAME DETAIL 29



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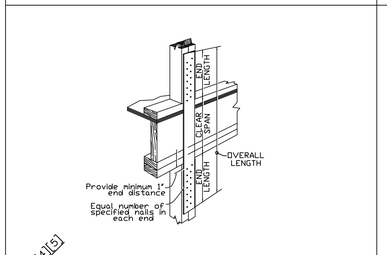
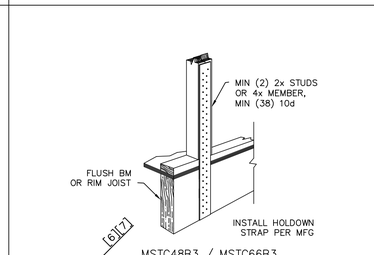


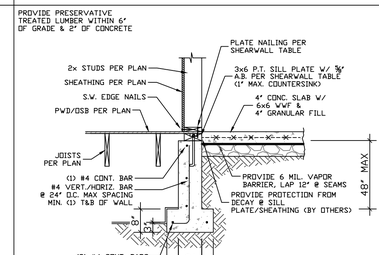
MST48/MST60 HOLDOWN DETAIL

25



MSTC48B3 / MSTC66B3
HOLDOWN DETAIL

26



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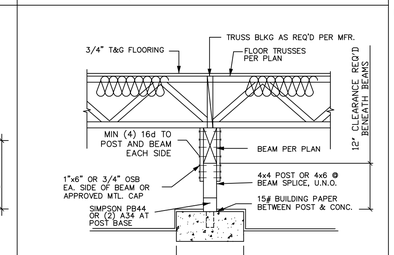


28

REV. DELTA	REVISIONS	DATE	REVISION DESCRIPTION
	1	4/4/2019	JURISDICTIONAL REVIEW
	2	10/18/2019	JURISDICTIONAL REVIEW

PHILLIPS STRUCTURAL ENGINEERING
PO Box 108, Milton, WA 98354
Phone: (253) 344-1666

STATE OF WASHINGTON
TODD M. PHILLIPS
34594
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
10/18/2019
ORIGINAL STAMP MUST BE RED FOR VALIDITY

ALL VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE DESIGNER FOR RESOLUTION WITH THE ENGINEER PRIOR TO PROCEEDING WITH WORK; FAILURE TO COMPLY BY THE CONTRACTOR SHALL BE THEIR SOLE RESPONSIBILITY FOR ANY COSTS NECESSARY FOR REMEDIAL WORK.

REUSE OF DOCUMENTS

WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

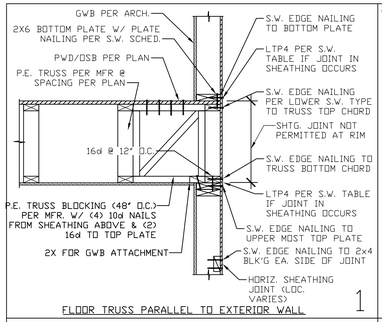
STRUCTURAL DETAILS

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

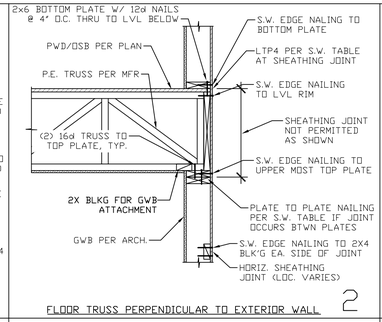
SHEET NO:
SD-1

PHILLIPS STRUCTURAL ENGINEERING

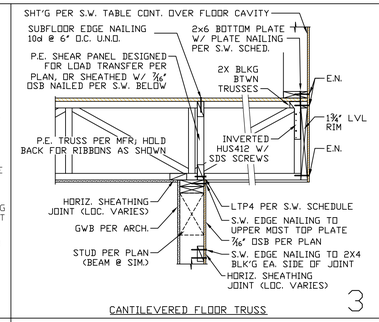
PHILLIPS STRUCTURAL ENGINEERING



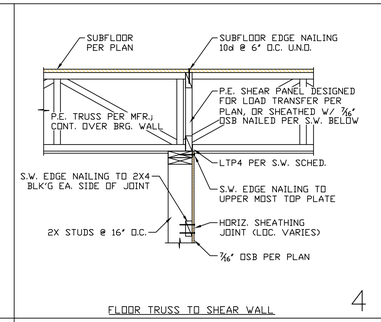
FLOOR TRUSS PARALLEL TO EXTERIOR WALL 1



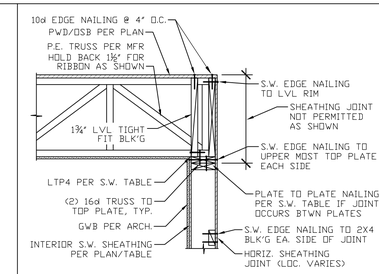
FLOOR TRUSS PERPENDICULAR TO EXTERIOR WALL 2



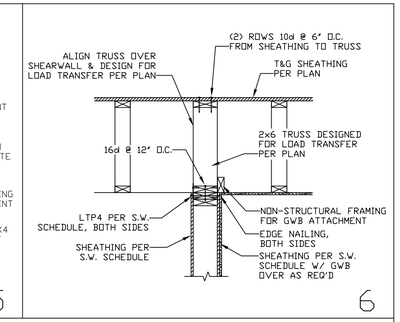
CANTILEVERED FLOOR TRUSS 3



FLOOR TRUSS TO SHEAR WALL 4



DOUBLE SIDED SHEAR WALL AT FLOOR FRAMING 5



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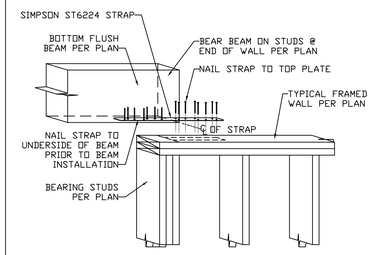

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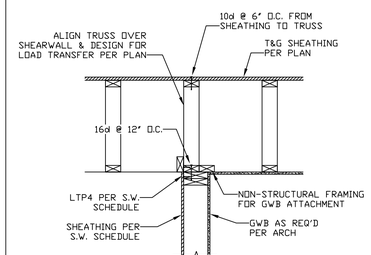

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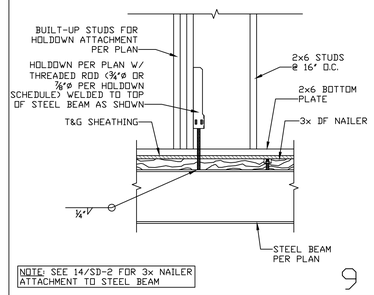
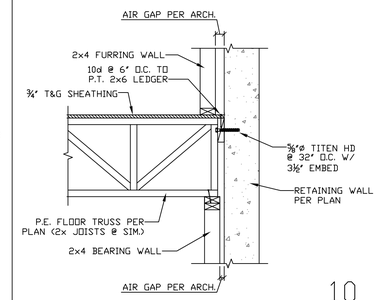


NOTE: SEE 14/SD-2 FOR 3x NAILER ATTACHMENT TO STEEL BEAM

9



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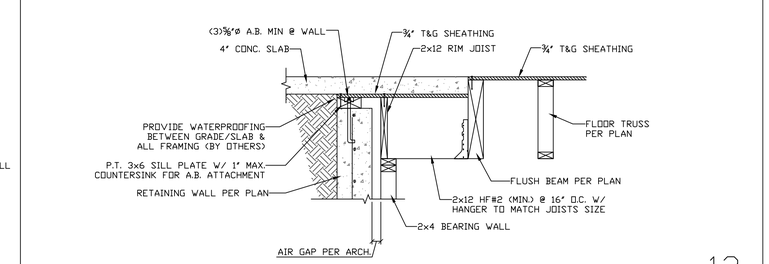

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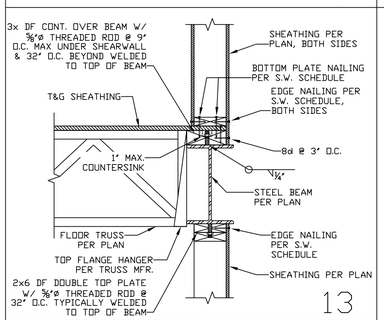

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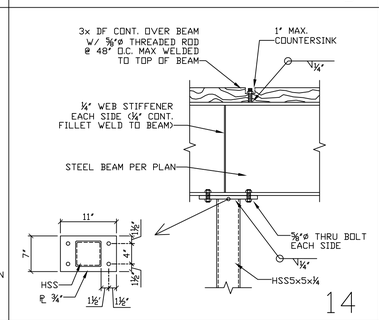

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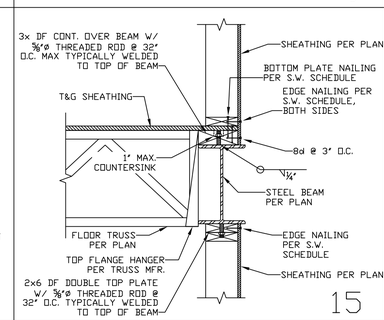

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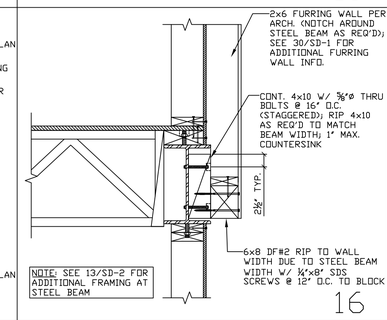
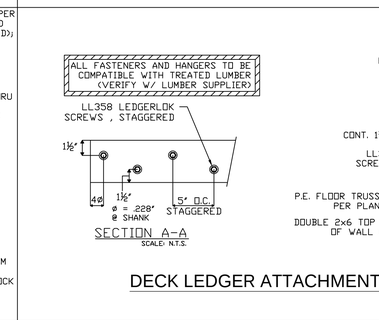
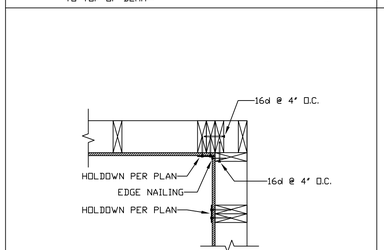


NOTE: SEE 13/SD-2 FOR ADDITIONAL FRAMING AT STEEL BEAM

16



DECK LEDGER ATTACHMENT DETAIL (TRUSS PERPENDICULAR) 18



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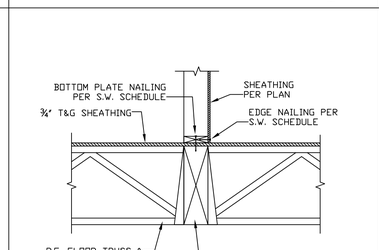

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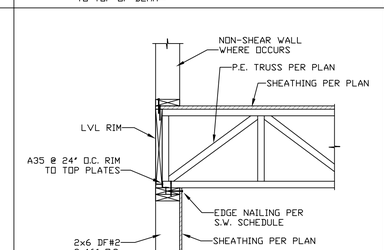

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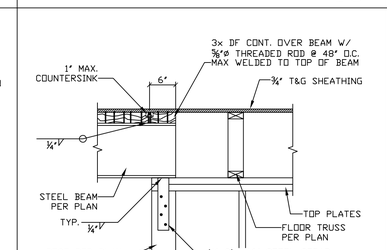

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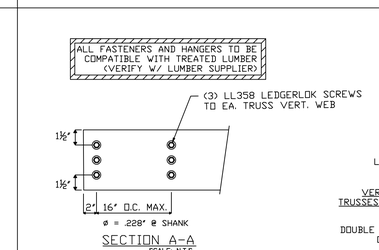
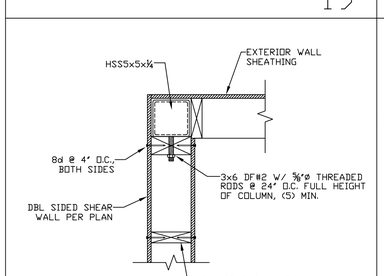


DECK LEDGER ATTACHMENT DETAIL (TRUSS PARALLEL) 24



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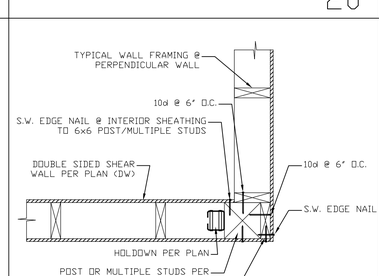

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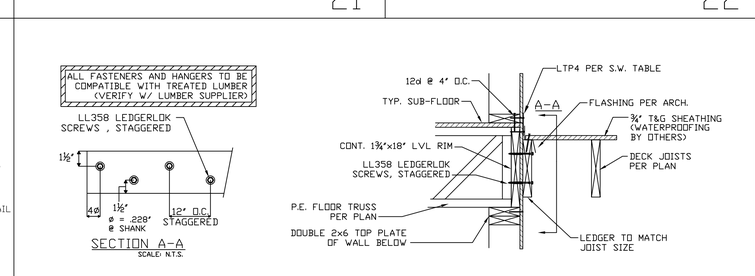
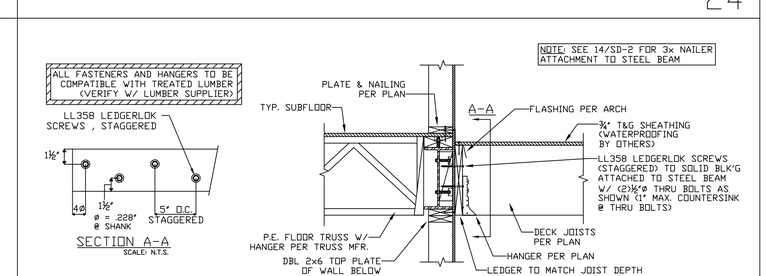


DECK LEDGER ATTACHMENT DETAIL (TRUSS PERPENDICULAR) 28



DECK LEDGER ATTACHMENT DETAIL (TRUSS PERP. TO STEEL BEAM) 30

REVISIONS

REV. DELTA	DATE	REVISION DESCRIPTION
1	4/4/2019	JURISDICTIONAL REVIEW
2	10/18/2019	JURISDICTIONAL REVIEW

PHILLIPS STRUCTURAL ENGINEERING
PO Box 108, Milton, WA 98354
Phone: (253) 344-1666

STATE OF WASHINGTON
TODD PHILLIPS
38394
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
10/18/2019
ORIGINAL STAMP MUST BE RED FOR VALIDITY

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WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

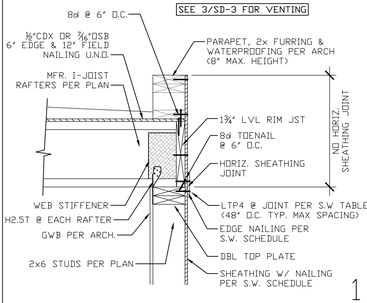
STRUCTURAL DETAILS

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:
SD-2

PHILLIPS STRUCTURAL ENGINEERING

PHILLIPS STRUCTURAL ENGINEERING



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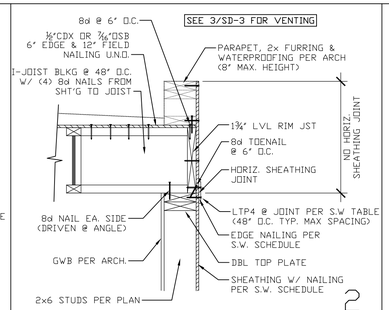

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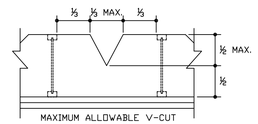

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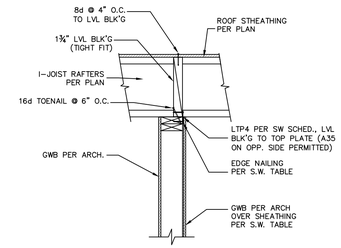

BLOCKING OVER SHEARWALL
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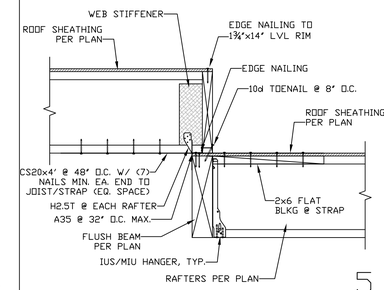

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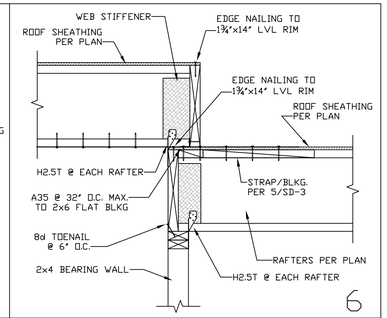

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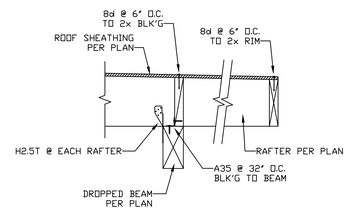

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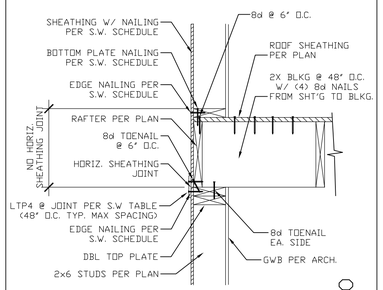

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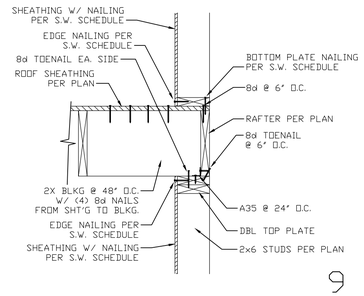

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REV. DELTA	REVISION DESCRIPTION	DATE
1	JURISDICTIONAL REVIEW	4/4/2019
2	JURISDICTIONAL REVIEW	10/18/2019

PHILLIPS STRUCTURAL ENGINEERING
PO Box 108, Milton, WA 98354
Phone: (253) 344-1666

TODD PHILLIPS — STATE OF WASHINGTON — 38394 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

10/18/2019

ORIGINAL STAMP MUST BE RED FOR VALIDITY

ALL VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE DESIGNER FOR RESOLUTION WITH THE ENGINEER PRIOR TO PROCEEDING WITH WORK; FAILURE TO COMPLY BY THE CONTRACTOR SHALL BE THEIR SOLE RESPONSIBILITY FOR ANY COSTS NECESSARY FOR REMEDIAL WORK.

WEN HU RESIDENCE

8251 WEST MERCER WAY
MERCER ISLAND, WA 98040

WIND SPEED:	110 MPH
WIND EXPOSURE:	C
ROOF SNOW LOAD:	30 PSF

STRUCTURAL DETAILS

DRAWN BY:	AMS
DRAWING DATE:	OCT. 30, 2018
SCALE:	N.T.S. (U.N.O.)
PSE NUMBER:	PSE 18.094

SHEET NO:
SD-3

PHILLIPS STRUCTURAL ENGINEERING

PHILLIPS STRUCTURAL ENGINEERING

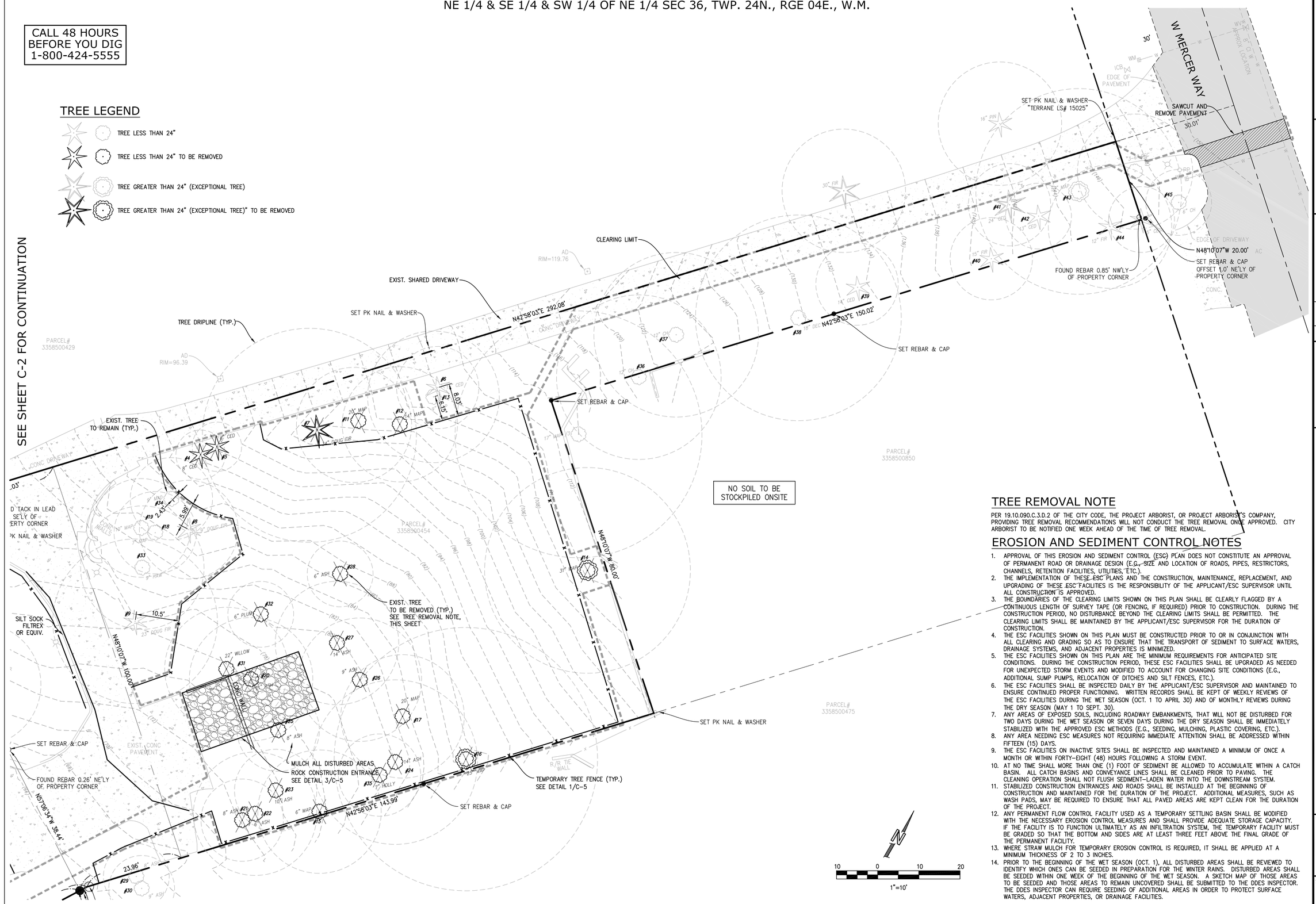
NE 1/4 & SE 1/4 & SW 1/4 OF NE 1/4 SEC 36, TWP. 24N., RGE 04E., W.M.

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555

TREE LEGEND

- TREE LESS THAN 24"
- TREE LESS THAN 24" TO BE REMOVED
- TREE GREATER THAN 24" (EXCEPTIONAL TREE)
- TREE GREATER THAN 24" (EXCEPTIONAL TREE)" TO BE REMOVED

SEE SHEET C-2 FOR CONTINUATION



TREE REMOVAL NOTE

PER 19.10.090.C.3.D.2 OF THE CITY CODE, THE PROJECT ARBORIST, OR PROJECT ARBORIST'S COMPANY, PROVIDING TREE REMOVAL RECOMMENDATIONS WILL NOT CONDUCT THE TREE REMOVAL ONCE APPROVED. CITY ARBORIST TO BE NOTIFIED ONE WEEK AHEAD OF THE TIME OF TREE REMOVAL.

EROSION AND SEDIMENT CONTROL NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G., ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.).
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES DURING THE WET SEASON (OCT. 1 TO APRIL 30) AND OF MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPT. 30).
7. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
8. ANY AREA NEEDING ESC MEASURES NOT REQUIRING IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
9. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN FORTY-EIGHT (48) HOURS FOLLOWING A STORM EVENT.
10. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
11. STABILIZED CONSTRUCTION ENTRANCES AND ROADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
12. ANY PERMANENT FLOW CONTROL FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
13. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 TO 3 INCHES.
14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE DDES INSPECTOR. THE DDES INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.

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

STATE OF WASHINGTON NICHOLAS J. BOSSOFF 29631 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/2/21

NO.	DATE	REVISION
1	09/21/18	PERMIT SUBMITTAL
2	06/19/19	CITY COMMENTS
3	10/09/19	CITY COMMENTS
4	02/01/21	CITY COMMENTS
5		
6		

PROJECT MANAGER: N. BOSSOFF, P.E.
DESIGNED: NB
DRAWN: TKB
JOB NUMBER: PBAR-1801
FILE NAME: PBAR-1801pln.dwg

WEN HU RESIDENCE
8251 W MERCER WAY
MERCER ISLAND WASHINGTON

TITLE: T.E.S.C. PLAN

SHEET: C-1

NE 1/4 & SE 1/4 & SW 1/4 OF NE 1/4 SEC 36, TWP. 24N., RGE 04E., W.M.

BASIS OF BEARINGS

NAD83/2011, WASHINGTON NORTH COORDINATE SYSTEM, PER GPS OBSERVATIONS THE CENTERLINE OF W. MERCER WAY BEARS N48°10'07"W BETWEEN FOUND MONUMENTS

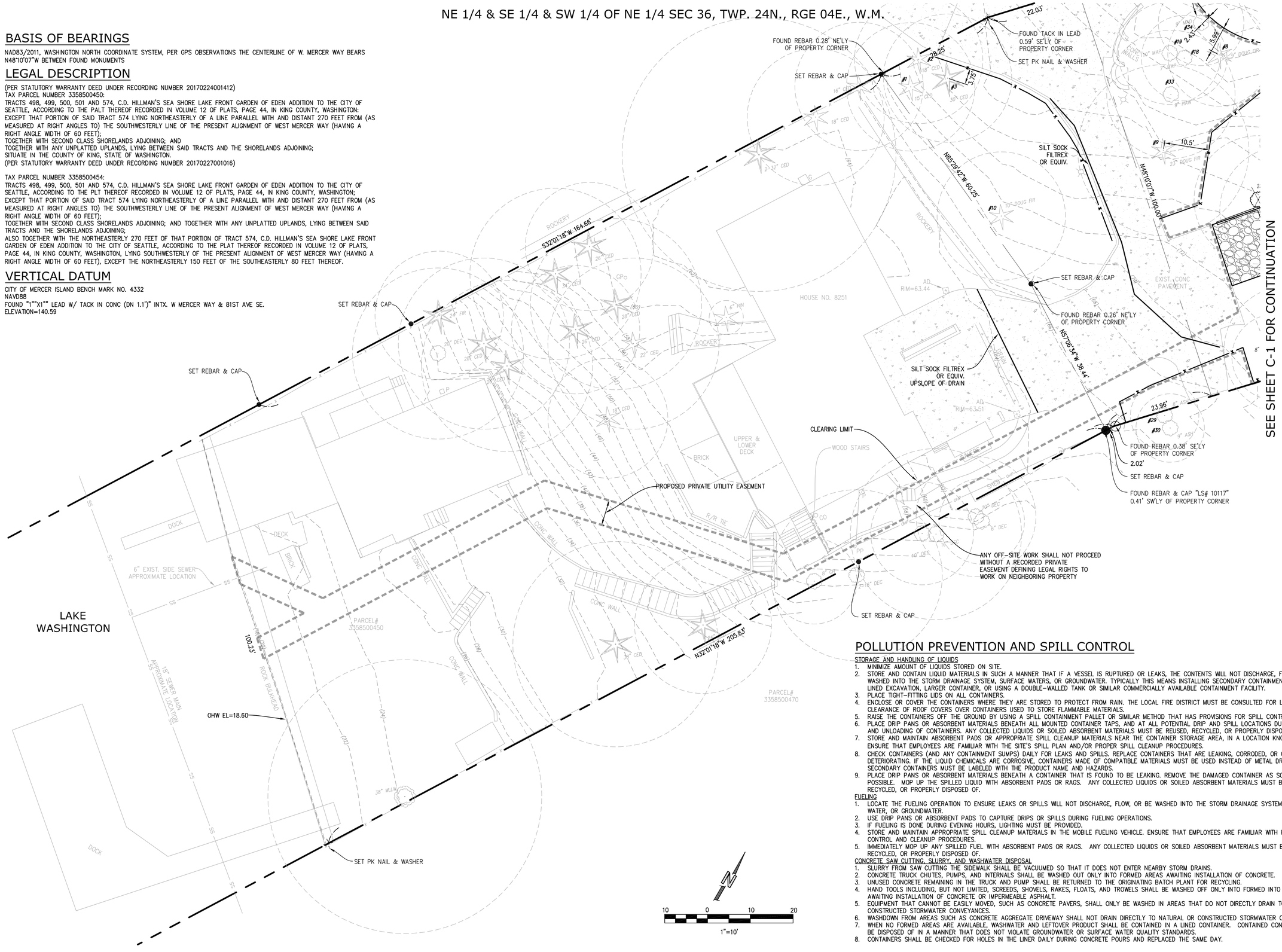
LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED UNDER RECORDING NUMBER 20170224001412)
TAX PARCEL NUMBER 3358500450:
TRACTS 498, 499, 500, 501 AND 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PALT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON:
EXCEPT THAT PORTION OF SAID TRACT 574 LYING NORTHEASTERLY OF A LINE PARALLEL WITH AND DISTANT 270 FEET FROM (AS MEASURED AT RIGHT ANGLES TO) THE SOUTHWESTERLY LINE OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60 FEET);
TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING; AND
TOGETHER WITH ANY UNPLATTED UPLANDS, LYING BETWEEN SAID TRACTS AND THE SHORELANDS ADJOINING;
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.
(PER STATUTORY WARRANTY DEED UNDER RECORDING NUMBER 20170227001016)

TAX PARCEL NUMBER 3358500454:
TRACTS 498, 499, 500, 501 AND 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON;
EXCEPT THAT PORTION OF SAID TRACT 574 LYING NORTHEASTERLY OF A LINE PARALLEL WITH AND DISTANT 270 FEET FROM (AS MEASURED AT RIGHT ANGLES TO) THE SOUTHWESTERLY LINE OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60 FEET);
TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING; AND TOGETHER WITH ANY UNPLATTED UPLANDS, LYING BETWEEN SAID TRACTS AND THE SHORELANDS ADJOINING;
ALSO TOGETHER WITH THE NORTHEASTERLY 270 FEET OF THAT PORTION OF TRACT 574, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON, LYING SOUTHWESTERLY OF THE PRESENT ALIGNMENT OF WEST MERCER WAY (HAVING A RIGHT ANGLE WIDTH OF 60 FEET), EXCEPT THE NORTHEASTERLY 150 FEET OF THE SOUTHEASTERLY 80 FEET THEREOF.

VERTICAL DATUM

CITY OF MERCER ISLAND BENCH MARK NO. 4332
NAVD88
FOUND "1""X1"" LEAD W/ TACK IN CONC (DN 1.1')" INTX. W MERCER WAY & 81ST AVE SE.
ELEVATION=140.59



SEE SHEET C-1 FOR CONTINUATION

POLLUTION PREVENTION AND SPILL CONTROL

STORAGE AND HANDLING OF LIQUIDS

1. MINIMIZE AMOUNT OF LIQUIDS STORED ON SITE.
2. STORE AND CONTAIN LIQUID MATERIALS IN SUCH A MANNER THAT IF A VESSEL IS RUPTURED OR LEAKS, THE CONTENTS WILL NOT DISCHARGE, FLOW, OR BE WASHED INTO THE STORM DRAINAGE SYSTEM, SURFACE WATERS, OR GROUNDWATER. TYPICALLY THIS MEANS INSTALLING SECONDARY CONTAINMENT, SUCH AS A LINED EXCAVATION, LARGER CONTAINER, OR USING A DOUBLE-WALLED TANK OR SIMILAR COMMERCIALLY AVAILABLE CONTAINMENT FACILITY.
3. PLACE TIGHT-FITTING LIDS ON ALL CONTAINERS.
4. ENCLOSE OR COVER THE CONTAINERS WHERE THEY ARE STORED TO PROTECT FROM RAIN. THE LOCAL FIRE DISTRICT MUST BE CONSULTED FOR LIMITATIONS ON CLEARANCE OF ROOF COVERS OVER CONTAINERS USED TO STORE FLAMMABLE MATERIALS.
5. RAISE THE CONTAINERS OFF THE GROUND BY USING A SPILL CONTAINMENT PALLET OR SIMILAR METHOD THAT HAS PROVISIONS FOR SPILL CONTROL.
6. PLACE DRIP PANS OR ABSORBENT MATERIALS BENEATH ALL MOUNTED CONTAINER TAPS, AND AT ALL POTENTIAL DRIP AND SPILL LOCATIONS DURING FILLING AND UNLOADING OF CONTAINERS. ANY COLLECTED LIQUIDS OR SOILED ABSORBENT MATERIALS MUST BE REUSED, RECYCLED, OR PROPERLY DISPOSED OF.
7. STORE AND MAINTAIN ABSORBENT PADS OR APPROPRIATE SPILL CLEANUP MATERIALS NEAR THE CONTAINER STORAGE AREA, IN A LOCATION KNOWN TO ALL. ENSURE THAT EMPLOYEES ARE FAMILIAR WITH THE SITE'S SPILL PLAN AND/OR PROPER SPILL CLEANUP PROCEDURES.
8. CHECK CONTAINERS (AND ANY CONTAINMENT SUMPS) DAILY FOR LEAKS AND SPILLS. REPLACE CONTAINERS THAT ARE LEAKING, CORRODED, OR OTHERWISE DETERIORATING. IF THE LIQUID CHEMICALS ARE CORROSIVE, CONTAINERS MADE OF COMPATIBLE MATERIALS MUST BE USED INSTEAD OF METAL DRUMS. NEW OR SECONDARY CONTAINERS MUST BE LABELED WITH THE PRODUCT NAME AND HAZARDS.
9. PLACE DRIP PANS OR ABSORBENT MATERIALS BENEATH A CONTAINER THAT IS FOUND TO BE LEAKING. REMOVE THE DAMAGED CONTAINER AS SOON AS POSSIBLE. MOP UP THE SPILLED LIQUID WITH ABSORBENT PADS OR RAGS. ANY COLLECTED LIQUIDS OR SOILED ABSORBENT MATERIALS MUST BE REUSED, RECYCLED, OR PROPERLY DISPOSED OF.

FUELING

1. LOCATE THE FUELING OPERATION TO ENSURE LEAKS OR SPILLS WILL NOT DISCHARGE, FLOW, OR BE WASHED INTO THE STORM DRAINAGE SYSTEM, SURFACE WATER, OR GROUNDWATER.
2. USE DRIP PANS OR ABSORBENT PADS TO CAPTURE DRIPS OR SPILLS DURING FUELING OPERATIONS.
3. IF FUELING IS DONE DURING EVENING HOURS, LIGHTING MUST BE PROVIDED.
4. STORE AND MAINTAIN APPROPRIATE SPILL CLEANUP MATERIALS IN THE MOBILE FUELING VEHICLE. ENSURE THAT EMPLOYEES ARE FAMILIAR WITH PROPER SPILL CONTROL AND CLEANUP PROCEDURES.
5. IMMEDIATELY MOP UP ANY SPILLED FUEL WITH ABSORBENT PADS OR RAGS. ANY COLLECTED LIQUIDS OR SOILED ABSORBENT MATERIALS MUST BE REUSED, RECYCLED, OR PROPERLY DISPOSED OF.

CONCRETE SAW CUTTING, SLURRY, AND WASHWATER DISPOSAL

1. SLURRY FROM SAW CUTTING THE SIDEWALK SHALL BE VACUUMED SO THAT IT DOES NOT ENTER NEARBY STORM DRAINS.
2. CONCRETE TRUCK CHUTES, PUMPS, AND INTERNALS SHALL BE WASHED OUT ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE.
3. UNUSED CONCRETE REMAINING IN THE TRUCK AND PUMP SHALL BE RETURNED TO THE ORIGINATING BATCH PLANT FOR RECYCLING.
4. HAND TOOLS INCLUDING, BUT NOT LIMITED, SCREEDS, SHOVELS, RAKES, FLOATS, AND TROWELS SHALL BE WASHED OFF ONLY INTO FORMED INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR IMPERMEABLE ASPHALT.
5. EQUIPMENT THAT CANNOT BE EASILY MOVED, SUCH AS CONCRETE PAVERS, SHALL ONLY BE WASHED IN AREAS THAT DO NOT DIRECTLY DRAIN TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.
6. WASHDOWN FROM AREAS SUCH AS CONCRETE AGGREGATE DRIVEWAY SHALL NOT DRAIN DIRECTLY TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.
7. WHEN NO FORMED AREAS ARE AVAILABLE, WASHWATER AND LEFTOVER PRODUCT SHALL BE CONTAINED IN A LINED CONTAINER. CONTAINED CONCRETE SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.
8. CONTAINERS SHALL BE CHECKED FOR HOLES IN THE LINER DAILY DURING CONCRETE POURS AND REPLACED THE SAME DAY.

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

NICHOLAS A. BOSSOFF STATE OF WASHINGTON 29631 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/2/21

NO.	DATE	REVISION
1	09/21/18	PERMIT SUBMITTAL
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PROJECT MANAGER: N. BOSSOFF, P.E.
DESIGNED: NB
DRAWN: TKB
JOB NUMBER: PBAR-1801
FILE NAME: PBAR-1801pln.dwg

WEN HU RESIDENCE
8251 W MERCER WAY
MERCER ISLAND WASHINGTON

TITLE: T.E.S.C. PLAN

SHEET: C-2

NE 1/4 & SE 1/4 & SW 1/4 OF NE 1/4 SEC 36, TWP. 24N., RGE 04E., W.M.

POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES

A. SOIL RETENTION. RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.

B. SOIL QUALITY. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
   A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE DEFINITION OF "COMPOSTED MATERIALS" IN WAC 173-350-220, WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
   B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.

THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

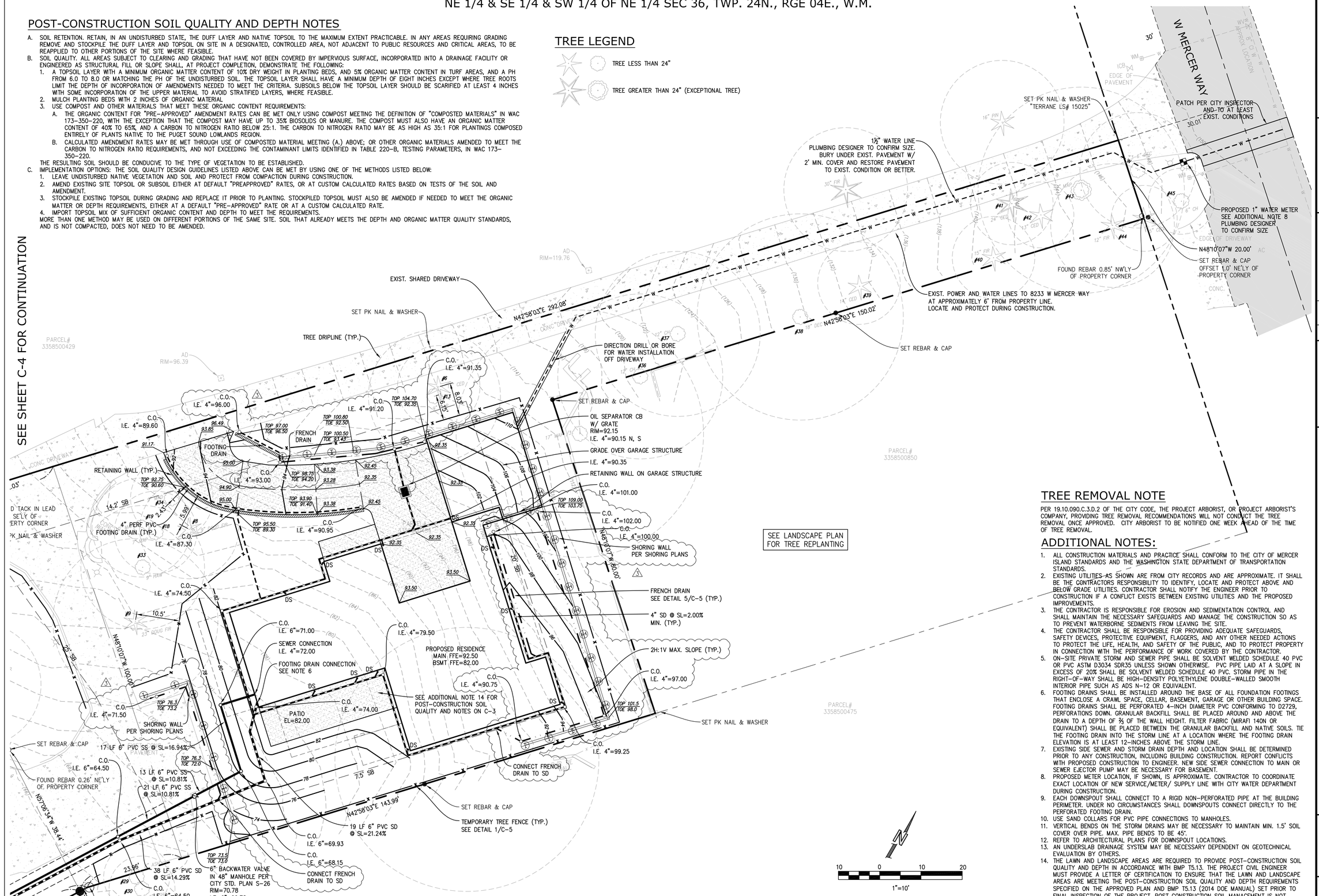
C. IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PREAPPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
3. STOCKPILE EXISTING TOPSOIL DURING GRADING AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

TREE LEGEND

TREE LESS THAN 24"

TREE GREATER THAN 24" (EXCEPTIONAL TREE)



TREE REMOVAL NOTE

PER 19.10.090.C.3.D.2 OF THE CITY CODE, THE PROJECT ARBORIST, OR PROJECT ARBORIST'S COMPANY, PROVIDING TREE REMOVAL RECOMMENDATIONS WILL NOT CONDUCT THE TREE REMOVAL ONCE APPROVED. CITY ARBORIST TO BE NOTIFIED ONE WEEK AHEAD OF THE TIME OF TREE REMOVAL.

ADDITIONAL NOTES:

1. ALL CONSTRUCTION MATERIALS AND PRACTICE SHALL CONFORM TO THE CITY OF MERCER ISLAND STANDARDS AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARDS.
2. EXISTING UTILITIES AS SHOWN ARE FROM CITY RECORDS AND ARE APPROXIMATE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO IDENTIFY, LOCATE AND PROTECT ABOVE AND BELOW GRADE UTILITIES. CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION IF A CONFLICT EXISTS BETWEEN EXISTING UTILITIES AND THE PROPOSED IMPROVEMENTS.
3. THE CONTRACTOR IS RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL AND SHALL MAINTAIN THE NECESSARY SAFEGUARDS AND MANAGE THE CONSTRUCTION SO AS TO PREVENT WATERBORNE SEDIMENTS FROM LEAVING THE SITE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
5. ON-SITE PRIVATE STORM AND SEWER PIPE SHALL BE SOLVENT WELDED SCHEDULE 40 PVC OR PVC ASTM D3034 SDR35 UNLESS SHOWN OTHERWISE. PVC PIPE LAID AT A SLOPE IN EXCESS OF 20% SHALL BE SOLVENT WELDED SCHEDULE 40 PVC. STORM PIPE IN THE RIGHT-OF-WAY SHALL BE HIGH-DENSITY POLYETHYLENE DOUBLE-WALLED SMOOTH INTERIOR PIPE SUCH AS ADS N-12 OR EQUIVALENT.
6. FOOTING DRAINS SHALL BE INSTALLED AROUND THE BASE OF ALL FOUNDATION FOOTINGS THAT ENCLOSE A CRAWL SPACE, CELLAR, BASEMENT, GARAGE OR OTHER BUILDING SPACE. FOOTING DRAINS SHALL BE PERFORATED 4-INCH DIAMETER PVC CONFORMING TO D2729, PERFORATIONS DOWN. GRANULAR BACKFILL SHALL BE PLACED AROUND AND ABOVE THE DRAIN TO A DEPTH OF ⅔ OF THE WALL HEIGHT. FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) SHALL BE PLACED BETWEEN THE GRANULAR BACKFILL AND NATIVE SOILS. TIE THE FOOTING DRAIN INTO THE STORM LINE AT A LOCATION WHERE THE FOOTING DRAIN ELEVATION IS AT LEAST 12-INCHES ABOVE THE STORM LINE.
7. EXISTING SIDE SEWER AND STORM DRAIN DEPTH AND LOCATION SHALL BE DETERMINED PRIOR TO ANY CONSTRUCTION, INCLUDING BUILDING CONSTRUCTION. REPORT CONFLICTS WITH PROPOSED CONSTRUCTION TO ENGINEER. NEW SIDE SEWER CONNECTION TO MAIN OR SEWER EJECTOR PUMP MAY BE NECESSARY FOR BASEMENT.
8. PROPOSED METER LOCATION, IF SHOWN, IS APPROXIMATE. CONTRACTOR TO COORDINATE EXACT LOCATION OF NEW SERVICE/METER/ SUPPLY LINE WITH CITY WATER DEPARTMENT DURING CONSTRUCTION.
9. EACH DOWNSPOUT SHALL CONNECT TO A RIGID NON-PERFORATED PIPE AT THE BUILDING PERIMETER. UNDER NO CIRCUMSTANCES SHALL DOWNSPOUTS CONNECT DIRECTLY TO THE PERFORATED FOOTING DRAIN.
10. USE SAND COLLARS FOR PVC PIPE CONNECTIONS TO MANHOLES.
11. VERTICAL BENDS ON THE STORM DRAINS MAY BE NECESSARY TO MAINTAIN MIN. 1.5' SOIL COVER OVER PIPE. MAX. PIPE BENDS TO BE 45°.
12. REFER TO ARCHITECTURAL PLANS FOR DOWNSPOUT LOCATIONS.
13. AN UNDERSLAB DRAINAGE SYSTEM MAY BE NECESSARY DEPENDENT ON GEOTECHNICAL EVALUATION BY OTHERS.
14. THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN AND BMP T5.13 (2014 DOE MANUAL) SET PRIOR TO FINAL INSPECTION OF THE PROJECT. POST CONSTRUCTION SOIL MANAGEMENT IS NOT REQUIRED ON SLOPES STEEPER THAN 33%.

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STATE OF WASHINGTON NICHOLAS D. BOSSOFF 29631 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/2/21

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4		
5		
6		

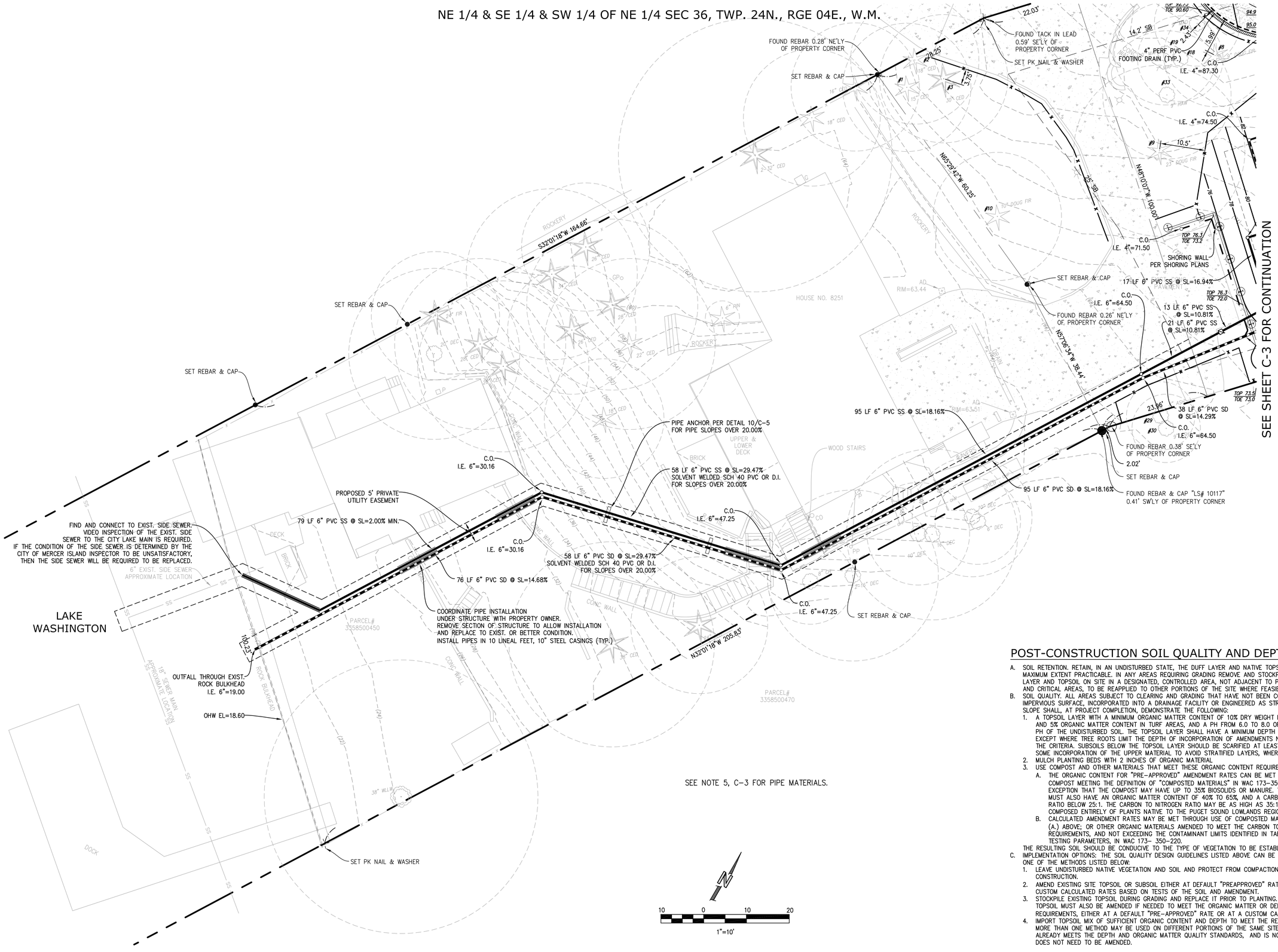
PROJECT MANAGER: N. BOSSOFF, P.E.
DESIGNED: NB
DRAWN: TKB
JOB NUMBER: PBAR-1801
FILE NAME: PBAR-1801pln.dwg

WEN HU RESIDENCE
8251 W MERCER WAY
MERCER ISLAND WASHINGTON

TITLE: DRAINAGE PLAN

SHEET: C-3

NE 1/4 & SE 1/4 & SW 1/4 OF NE 1/4 SEC 36, TWP. 24N., RGE 04E., W.M.



POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES

A. SOIL RETENTION. RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.

B. SOIL QUALITY. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
   A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE DEFINITION OF "COMPOSTED MATERIALS" IN WAC 173-350-220, WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
   B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173- 350-220.

THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

C. IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PREAPPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
3. STOCKPILE EXISTING TOPSOIL DURING GRADING AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS. MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

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NICHOLAS A. BOSSOFF STATE OF WASHINGTON 29631 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/2/21

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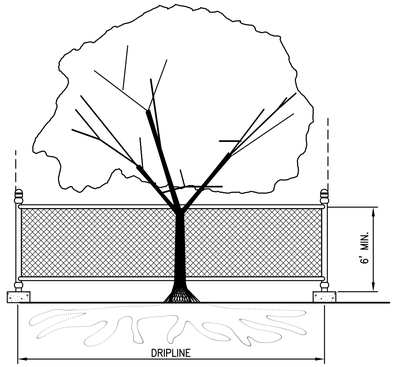
N. BOSSOFF, P.E.
PROJECT MANAGER:
NB
DESIGNED:
TKB
DRAWN:
PBAR-1801
JOB NUMBER:
PBAR-1801pln.dwg
FILE NAME:

WEN HU RESIDENCE
8251 W MERCER WAY
MERCER ISLAND WASHINGTON

TITLE:
DRAINAGE PLAN

SHEET:
C-4

NE 1/4 & SE 1/4 & SW 1/4 OF NE 1/4 SEC 36, TWP. 24N., RGE 04E., W.M.

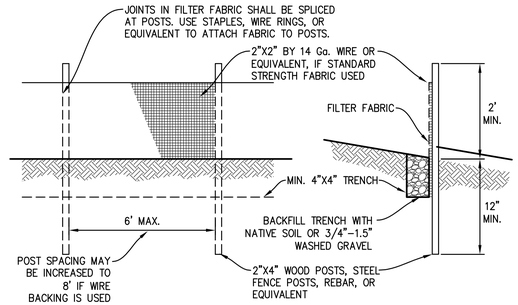


TREE PROTECTION DURING CONSTRUCTION

1. 6-FT. HIGH TEMPORARY CHAIN LINK FENCE SHALL BE PLACED AT THE DRIPLINE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE THE TREE(S). INSTALL FENCE POSTS USING PIER BLOCKS ONLY. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
2. FOR ROOTS OVER 1-IN DIA. THAT ARE DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE.
3. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.

TREE PROTECTION (1)

SCALE: NTS



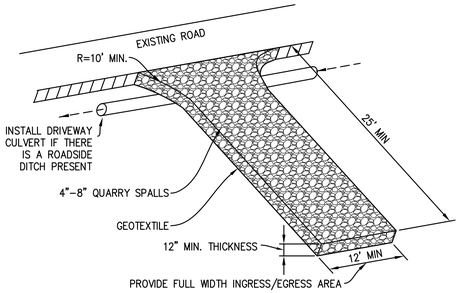
NOTE: FILTER FABRIC FENCE SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

MAINTENANCE STANDARDS

1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGN OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCUR, REPLACE THE FENCE AND/OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6" HIGH.
5. IF THE FILTER FABRIC HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

SILT FENCE (2)

SCALE: NTS

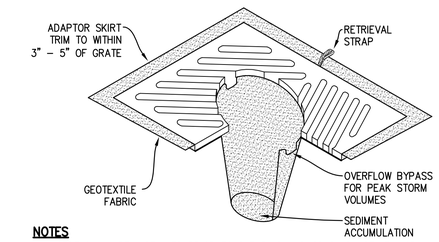


MAINTENANCE STANDARDS

1. QUARRY SPALLS (OR HOG FUEL) SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH. IF WASHING IS USED, IT SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK, AND WASH WATER SHALL DRAIN TO A SEDIMENT TRAP OR POND.
3. ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON-SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREET, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP.
4. ANY ROCK SPALLS THAT ARE LOOSENED FROM THE PAD AND END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
5. IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING (SECTION 5.4.1) SHALL BE INSTALLED TO CONTROL TRAFFIC.

ROCK CONSTRUCTION ENTRANCE (3)

SCALE: NTS

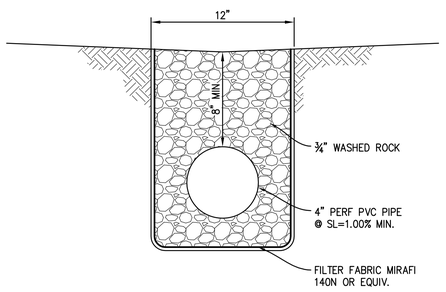


NOTES

1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

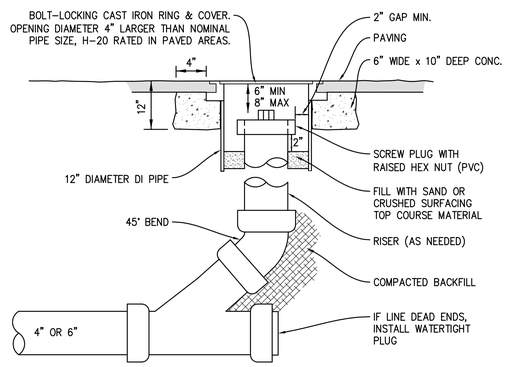
CB INSERT (4)

SCALE: NTS



FRENCH DRAIN (5)

SCALE: NTS

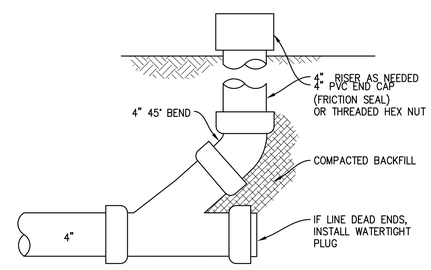


NOTE:

THIS DETAIL IS FOR PAVED AREAS. FOR UNPAVED AREAS, BURY PVC END CAP 6" BELOW GRADE.

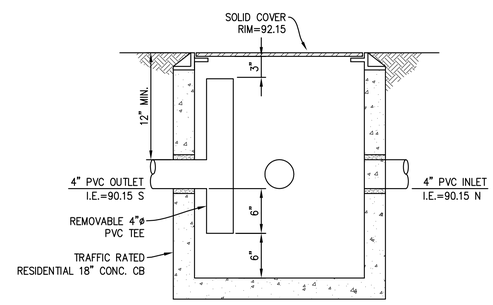
CLEANOUT (PAVED AREAS) (6)

SCALE: NTS



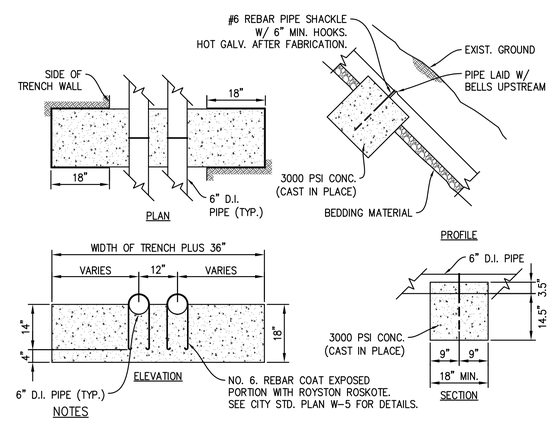
CLEANOUT (UNPAVED AREAS) (7)

SCALE: NTS



OIL SEPARATOR CB (8)

SCALE: NTS



NOTES

1. PIPE ANCHORS TO BE USED ONLY AS APPROVED BY THE ENGINEER.
2. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI
3. TIE ROD ASSEMBLIES SHALL BE COATED WITH ROYSTON ROSKOTE #612SM OR APPROVED EQUAL.

PIPE ANCHOR (10)

SCALE: NTS

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DRAWN: TKB
JOB NUMBER: PBAR-1801
FILE NAME: PBAR-1801pln.dwg

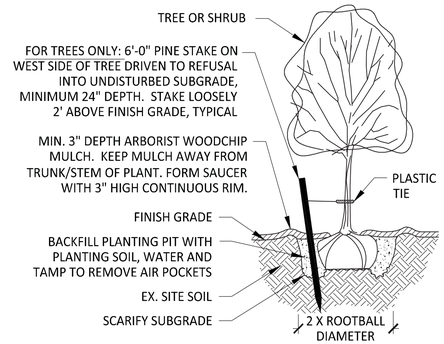
WEN HU RESIDENCE
8251 W MERCER WAY
MERCER ISLAND WASHINGTON

TITLE: DETAILS

SHEET: C-5

PLANT SCHEDULE

Common Name	Scientific Name	Container Size	Minumum Height	Spacing	Zone 1 QTY
Small Trees					
Cascara	*Rhamnus purshiana*	#2	18"	15'	5
Douglas Fir	*Pseudotsuga menziesii*	#2	18"	15'	5
				TOTAL:	**10**

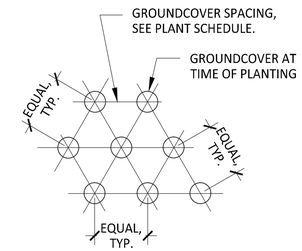


TYPICAL TREE OR SHRUB PLANTING

NOT TO SCALE

NOTES:

1) MULCH COMPLETELY BETWEEN ALL PLANTS.
2) STAKE TREES 5' IN HEIGHT OR GREATER.
3) PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH FINISHED GRADE.
4) COMPLETELY REMOVE ALL WIRE AND LOOSEN FABRIC ON BALLED & BURLAPPED PLANTS.
5) SCARIFY SIDES OF PLANTING PITS PRIOR TO BACKFILLING.



TYPICAL GROUNDCOVER SPACING

NOT TO SCALE

GENERAL NOTES:

1. PLANT SPECIES PER PLANTING SCHEDULE, OFFSETTING PLANTS FROM EXISTING VEGETATION AS APPROPRIATE GENERALLY 3 FEET FROM EXISTING SHRUBS AND 15 FEET FROM PLANTED AND MATURE TREES RESPECTIVELY.

2. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION SPECIFYING THE QUANTITY AND SPECIES OF PLANTS WITH NAMES OF SUPPLIERS, ADDRESSES, AND PHONE NUMBERS.

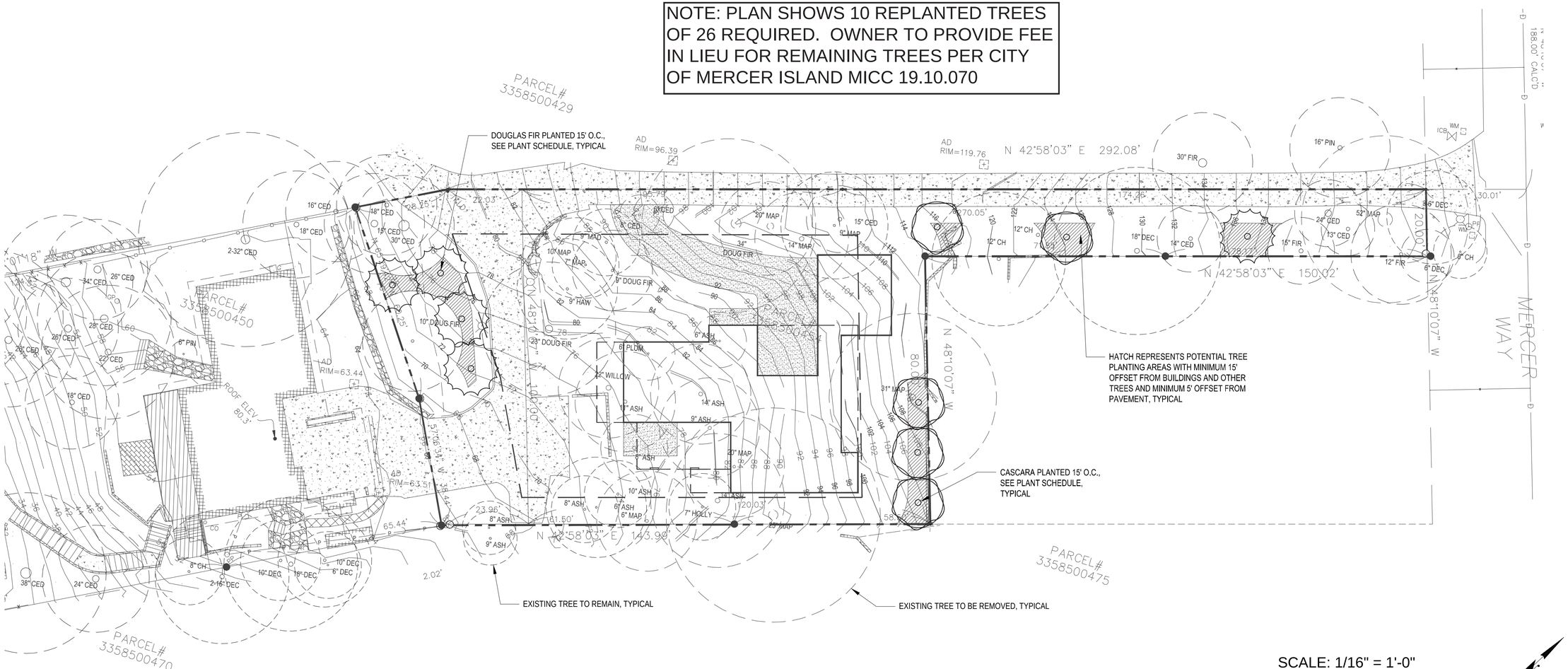
3. PLANTS WILL BE INSPECTED WHEN THEY ARRIVE ON SITE TO VERIFY THEY MEET NURSERY STOCK STANDARDS. THE INSPECTOR RESERVES THE RIGHT TO REFUSE ANY AND ALL MATERIAL IF IT IS DETERMINED THAT PLANT MATERIAL DOES NOT SPECIFICATIONS.

4. SUBSTITUTIONS OF PLANT SPECIES OR SIZES MAY BE PERMITTED BASED ON PLANT AVAILABILITY, BUT ONLY WITH PRIOR APPROVAL BY THE MITIGATION CONSTRUCTION MONITOR.

5. PLANT MATERIAL SHALL CONFORM TO AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z601-2004 OR MOST RECENT EDITION) FOR PLANT SIZE AND CONDITION FOR SPECIFIED MATERIAL.

6. PLACE 2, 5-GALLON BUCKETS OF MULCH OR ARBORIST CHIPS AROUND EACH PLANTING AND PULL BACK TO MAKE RING OR BROADCAST MULCH WITH 3 INCHES OF MULCH OR ARBORIST CHIPS.

NOTE: PLAN SHOWS 10 REPLANTED TREES OF 26 REQUIRED. OWNER TO PROVIDE FEE IN LIEU FOR REMAINING TREES PER CITY OF MERCER ISLAND MICC 19.10.070



SCALE: 1/16" = 1'-0"

0' 16' 32' 48' 64'

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SEATTLE, WA 98103
206-634-9193

PLANTING PLAN AND DETAILS

WEN HU RESIDENCE
8243 WEST MERCER WAY
MERCER ISLAND, WA
98040

REVISION:

DATE:	DESCRIPTION:

DATE:
8/15/2019

SHEET NO.
W-1
OF SHEETS

2

STRUCTURAL NOTES

01000 - GENERAL REQUIREMENTS
THE STRUCTURAL NOTES SUPPLEMENT THE PLANS AND SPECIFICATIONS. ANY DISCREPANCY FOUND BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, SITE CONDITIONS, AND ARCHITECTURAL PLANS SHALL BE REPORTED TO THE ARCHITECT WHO SHALL CORRECT THE DISCREPANCY IN WRITING. ANY WORK COMPLETED AFTER DISCOVERY OF THE DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. REFER TO ARCHITECTURAL PLANS FOR OPENINGS, ARCHITECTURAL TREATMENTS, AND DIMENSIONS NOT SHOWN. CONSULT MECHANICAL PLANS FOR DUCTS AND PIPES ETC. NOT SHOWN.

THE CONTRACTOR SHALL PROVIDE BRACING AND SUPPORT REQUIRED FOR TEMPORARY CONSTRUCTION LOADS AND FOR STRUCTURAL COMPONENTS AS REQUIRED DURING ERECTION. BACKFILL BEHIND WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK INCLUDING BUT NOT LIMITED TO EXCAVATION, SHORING, AND OTHER WORK WITH ALL UTILITIES AND ADJACENT PROPERTIES. CALL THE UTILITY LOCATE SERVICE PRIOR TO ANY WORK AT 1-800-424-5555.

01001 - CODE REQUIREMENTS
ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE AS ADOPTED BY MERCER ISLAND, WASHINGTON.

01100 - DESIGN LOADS
DEAD LOADS:
ACTUAL WEIGHT OF MATERIALS OF CONSTRUCTION AND PERMANENT EQUIPMENT.

FLOOR LIVE LOADS:
FLOORS (RESIDENTIAL) 40 PSF

ROOF LIVE LOADS:
ROOF 20 PSF

SNOW LOAD DESIGN DATA:
Pg = 20 PSF, Pf = 20 PSF, Ce = 0.9, Is = 1.0, Ct = 1.0, 25 PSF UNIFORM

WIND DESIGN DATA:

BASIC WIND SPEED	110 MPH (3-SECOND GUST)	
WIND IMPORTANCE FACTOR	Iw = 1.0	
WIND EXPOSURE	EXPOSURE B	
TOPOGRAPHICAL FACTOR	Ktz = 2.00	
INTERNAL PRESSURE COEFFICIENT	GCpi = +/- 0.18	
COMPONENT/CLADDING WIND PRESSURE	P(C) = 25 PSF	

EARTHQUAKE DESIGN DATA:

SEISMIC IMPORTANCE FACTOR	Ie = 1.0	
OCCUPANCY CATEGORY	II	
SPECTRAL RESPONSE ACCELERATIONS	Ss = 1.466	S1 = 0.557
SITE CLASS	D	
SPECTRAL RESPONSE COEFFICIENTS	SDS = 0.977	SD1 = 0.571
SEISMIC DESIGN CATEGORY	D	
CONCRETE LEVEL - BEARING WALL SYSTEM	R = 5.0	Cs = 0.194

01200 - FOUNDATIONS
EARTHWORK AND FOUNDATIONS SHALL BE CONSISTENT WITH GEOTECHNICAL ENGINEERING RECOMENDATIONS. ALL FOUNDATIONS SHALL BE FOUNDED ON COMPETENT NATIVE MATERIAL OR BY OTHER MEANS AS DEFINED BY THE GEOTECHNICAL ENGINEER.

SEE THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY PANGEO INC., (PROJECT 17-405) DATED FEBRUARY 8, 2018. FOUNDATIONS SHALL BE SUPPORTED ON CONVENTIONAL FOOTINGS WITH ALLOWABLE BEARING PRESSURE OF 3000 PSF.

DESIGN PARAMETERS ARE AS FOLLOWS:

ACTIVE EARTH PRESSURE (YIELDING)	35 PCF
ACTIVE EARTH PRESSURE (AT-REST)	55 PCF
PASSIVE EARTH PRESSURE	300 PCF (ALLOWABLE)
COEFFICIENT OF FRICTION	0.30 (ALLOWABLE)
SEISMIC SURCHARGE	7H UNIFORM
SOIL PROFILE	SITE CLASS D

01300 - SHOP DRAWING SUBMITTAL PROCESS
SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION. IF SHOP DRAWINGS DIFFER FROM THE APPROVED DESIGN DRAWINGS, NEW DESIGN DRAWINGS BEARING THE SEAL AND SIGNATURE OF A LICENSED STATE OF WASHINGTON STRUCTURAL ENGINEER SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO FABRICATION.

01400 - INSPECTIONS AND SPECIAL INSPECTIONS
THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT. SPECIAL INSPECTION FOR ELEVATED CONCRETE SLAB IS REQUIRED.

SPECIAL INSPECTIONS ARE NOT REQUIRED FOR GROUP R-3 OCCUPANCIES UNLESS OTHERWISE REQUIRED BY THE BUILDING OFFICIAL.

01402: QUALITY ASSURANCE REQUIREMENTS
THE QUALITY ASSURANCE PLAN SHALL BE TO VERIFY THAT THE SPECIAL INSPECTIONS NOTED IN SECTION 01400 AND THE STRUCTURAL OBSERVATION NOTED IN SECTION 01500 HAVE BEEN COMPLETED AND THAT SUPPORTING DOCUMENTATION NOTED IN SUCH SECTIONS HAS BEEN PROVIDED.

QUALITY ASSURANCE PLAN IS NOT REQUIRED FOR STRUCTURES OF LIGHT WOOD FRAMING WITH DESIGN SPECTRAL RESPONSE AT SHORT PERIODS, SDS, NOT EXCEEDING 0.50g.

QUALITY ASSURANCE PLAN IS NOT REQUIRED FOR WIND EXPOSURE B WHERE BASIC WIND SPEED IS LESS THAN 120 MPH.

SUMMARY: A QUALITY ASSURANCE PLAN IS NOT REQUIRED BY CODE FOR THIS STRUCTURE.

01500 - STRUCTURAL OBSERVATION
STRUCTURAL OBSERVATION IS NOT REQUIRED.

01600 - QUALITY ASSURANCE REQUIREMENTS
THE QUALITY ASSURANCE PLAN SHALL BE TO VERIFY THAT THE SPECIAL INSPECTIONS NOTED IN SECTION 01400 AND THE STRUCTURAL OBSERVATION NOTED IN SECTION 01500 HAVE BEEN COMPLETED AND THAT SUPPORTING DOCUMENTATION NOTED IN SUCH SECTIONS HAS BEEN PROVIDED.

QUALITY ASSURANCE PLAN IS NOT REQUIRED FOR STRUCTURES OF LIGHT WOOD FRAMING WITH DESIGN SPECTRAL RESPONSE AT SHORT PERIODS, SDS, NOT EXCEEDING 0.50g.

QUALITY ASSURANCE PLAN IS NOT REQUIRED FOR WIND EXPOSURE B WHERE BASIC WIND SPEED IS LESS THAN 120 MPH.

SUMMARY: A QUALITY ASSURANCE PLAN IS NOT REQUIRED BY CODE FOR THIS STRUCTURE.

01700 - EXECUTION REQUIREMENTS
INSTALLATION OF ALL STRUCTURAL COMPONENTS SHALL BE AS REQUIRED PER ALL LOCAL CODES.

02000: SITE CONSTRUCTION
ALL SITE CONSTRUCTION SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AS NOTED IN THE GEOTECHNICAL ENGINEERING REPORT (SEE SECTION 01300) AND IN SUBSEQUENT DIRECTIVES.

02100 - EXCAVATION SUPPORT AND PROTECTION
EXCAVATION FOR FOUNDATIONS SHALL BE PER PLAN DOWN TO UNDISTURBED NATIVE MATERIAL PER THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. OVER-EXCAVATED AREAS SHALL BE BACKFILLED WITH LEAN CONCRETE OR PER GEOTECHNICAL RECOMMENDATIONS AT THE CONTRACTOR'S EXPENSE.

EXCAVATION SLOPES SHALL BE SAFE AND SHALL NOT BE GREATER THAN THE LIMITS SPECIFIED BY LOCAL, STATE, AND NATIONAL SAFETY REGULATIONS.

INSTALLATION OF CONSTRUCTION SHORING, IF REQUIRED, SHALL BE PER THE SHORING DRAWINGS, NOTES, AND SPECIFICATIONS.

02200 - BACKFILL AND COMPACTION
BACKFILL SHALL NOT BE PLACED UNTIL THE REMOVAL OF FORMWORK AND OF ANY DEBRIS. BACKFILL BEHIND ALL WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED. ALL BACKFILL MATERIAL AND PLACEMENT PROCEDURES SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS.

03000 - CAST-IN-PLACE CONCRETE
CONCRETE CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE STANDARD ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

CEMENT AND CONCRETE SHALL CONFORM TO IBC SECTION 1903. ADMIXTURES SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SHALL COMPLY WITH ACI 318-14
SECTION 3.6. CONCRETE EXPOSED TO FREEZING AND THAWING SHALL HAVE AN AIR ENTRAINING ADMIXTURE CONFORMING TO IBC SECTION 1904.2. THE USE OF WATER SOLUBLE CHLORIDE ION SHALL NOT BE USED.

CONCRETE MIX DESIGNS SHALL MEET THE FOLLOWING REQUIREMENTS:
(1) 28 DAY MAX. STRENGTH f'c [PSI] (2) MAX. WATER / CEMENT RATIO (3) MAX. SLUMP [IN] (4) AIR ENTRAINMENT [%] (5) SPECIAL INSPECTION REQUIRED (6) MIN. 90 LB SACKS OF CEMENT (7) LOCATION AND APPLICATION.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
3000	0.45	4+/-1	5+/-1	NO		EXTERIOR SLAB ON GRADE
3000	0.45	4+/-1	0+/-1	NO		INTERIOR SLAB ON GRADE
3000	0.50	5+/-1	0+/-1	NO		FOOTINGS
4000	0.45	5+/-1	5+/-1	NO		WALLS
4000	0.45	5+/-1	5+/-1	YES		ELEVATED SLABS

CHAMFER ALL EXPOSED CORNERS PER THE ARCHITECTURAL PLANS OR 3/4 INCH IF NOT SPECIFIED BY THE ARCHITECT.

03100 - REINFORCING STEEL
REINFORCING STEEL DETAILING, FABRICATION, AND PLACEMENT SHALL BE PER ACI 318-14. REINFORCING STEEL SHALL MEET THE FOLLOWING REQUIREMENTS:

ASTM A-615 DEFORMED BARS GRADE 40 (fy=40 KSI) FOR #3 BARS ONLY
ASTM A-615 DEFORMED BARS GRADE 60 (fy=60 KSI) FOR #4 BARS AND LARGER
ASTM A-706 DEFORMED BARS GRADE 60 (fy=60 KSI) FOR ALL WELDABLE BARS
ASTM A-185 SMOOTH BAR (fy=60 KSI) FOR WELDED WIRE FABRIC

REINFORCING FOR SLABS ON GRADE SHALL BE 6X6 W1.4XW1.4 WELDED WIRE FABRIC OR FIBER MESH UNLESS NOTED OTHERWISE. PROVIDE LAP SPLICES PER THE LAP SPLICE SCHEDULE ON SHEET S6.0. REINFORCING STEEL AT ALL WALLS, SLABS, AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS ELSE CORNER BARS SHALL BE PROVIDED.

COVER REQUIREMENTS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH
ALL BAR SIZES . . . . . 3"
FORMED SURFACE EXPOSED TO EARTH OR WEATHER
#6 AND LARGER . . . . . 2"
#5 AND SMALLER . . . . . 1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER
WALLS AND JOISTS
#14 AND #18 BARS . . . . . 1 1/2"
#11 BARS AND SMALLER . . . . . 3/4"
SLABS AND JOISTS
#14 AND #18 BARS . . . . . 1 1/2"
#11 BARS AND SMALLER . . . . . 1"
BEAMS, COLUMNS
PRIMARY REINFORCEMENT . . . . . 1 1/2"
TIES, STIRRUPS, AND SPIRALS . . . 1 1/2"

REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. REINFORCING STEEL SHALL NOT BE FIELD BENT EXCEPT AS NOTED IN THE DESIGN DRAWINGS. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD EXCEPT AS NOTED ON THE DESIGN DRAWINGS.

03200 - CONCRETE WALL REINFORCING
PLACE TWO HORIZONTAL #5 BARS AT EACH FLOOR LEVEL OR TOP OF WALL ELEVATION. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCEMENT AT EACH WALL CORNER AND INTERSECTION. PROVIDE TWO VERTICAL #5 BARS AT EACH WALL CORNER AND INTERSECTION. AT ALL WALL OPENINGS PROVIDE TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENINGS. EXTEND THE HORIZONTAL BARS THE LAP SPLICE DISTANCE PAST THE OPENING OR EXTEND AS FAR AS POSSIBLE AND HOOK. PROVIDE ONE #5 BAR BY 4'-0" LONG DIAGONALLY AT EACH CORNER OF THE WALL OPENING. ALL CONCRETE SHALL BE PLACED AND CONSOLIDATED WALLS SHALL BE REINFORCED PER SCHEDULE BELOW U.N.O.:

WALL THICKNESS	HORIZONTAL	VERTICAL	LOCATION
6"	#4 AT 14"OC	#5 AT 18"OC	CENTERLINE
8"	#4 AT 10"OC	#5 AT 15"OC	CENTERLINE
10"	#4 AT 16"OC	#5 AT 18"OC	EACH FACE
12"	#4 AT 12"OC	#5 AT 18"OC	EACH FACE

EPOXY ALL HORIZONTAL STEEL INTO EXISTING FOUNDATION WITH FOUR INCH EMBEDMENT. RE: NOTES SECTION 08100 FOR EPOXY TYPE.

05000 - STRUCTURAL STEEL
DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "AISC 360-10 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS". MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING U.N.O.:

STRUCTURAL W SHAPE	ASTM A-992	Fy = 50 KSI
S, M, AND C SHAPES	ASTM A-36	Fy = 36 KSI
STEEL ANGLES	ASTM A-36	Fy = 36 KSI
PLATE MATERIAL	ASTM A-36	Fy = 36 KSI
STRUCTURAL PIPE	ASTM A-53 GRADE B	Fy = 35 KSI
STRUCTURAL HSS	ASTM A-500 GRADE B	Fy = 46 KSI
ANCHOR RODS	ASTM F1554	Fy = 36 KSI
WOOD CONNECTION BOLTS	ASTM A-307 GRADE A	
WELDING ELECTRODES	E7018	

ALL WELDING SHALL CONFORM TO THE AWS D1.4 "STRUCTURAL WELDING CODE". ALL WELDING SHALL BE PERFORMED BY A WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO) AND AMERICAN WELDING SOCIETY (AWS) CERTIFIED WELDERS. ALL COMPLETE PENETRATION (CP) WELDS SHALL BE ULTRASONICALLY TESTED. ALL FILLET WELDS SHALL BE VISUALLY INSPECTED RE: S1.1.

STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A-123. ALL FIELD WELDS EXPOSED TO WEATHER SHALL BE COATED WITH BRUSH APPLIED ZINC-RICH PAINT COMPLYING WITH ASTM A-780.

ALL STRUCTURAL STEEL TO RECEIVE ONE COAT OF PAINT (PRIME COAT). PROVIDE A MINIMUM FRY-FILM THICKNESS OF ONE MIL. PREPARE SURFACE TO MEET REQUIREMENTS OF SSPC-SP2. TOUCHUPS OF ABRASIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. UNO. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION RELATING TO FINISH PAINT OR OTHER FINISH REQUIREMENTS.

08100 - EPOXY ADHESIVE ANCHORS
CONCRETE
EPOXY SPECIFIED IN THE DRAWINGS SHALL BE SIMPSON STRONG-TIE SET-XP EPOXY ADHESIVE. ANCHOR ROD, THREADED ROD, OR REINFORCING DIAMETER AND EMBEDMENT PER PLAN. INSTALLATION PER ESR-2508.

08200 - EXPANSION ANCHORS
CONCRETE
EXPANSION ANCHORS SPECIFIED IN THE DRAWINGS SHALL BE SIMPSON STRONG-TIE STRONG-BOLT WEDGE ANCHOR. ANCHOR DIAMETER AND EMBEDMENT PER PLAN. INSTALLATION PER SECTION 4.3 OF ESR-1771.

08300 - SCREW ANCHORS
CONCRETE
SCREW ANCHORS SPECIFIED IN THE DRAWINGS SHALL BE SIMPSON STRONG-TIE TITEN HD. ANCHOR DIAMETER AND EMBEDMENT PER PLAN. INSTALLATION PER ESR-2713.

5 STRUCTURAL DRAWING LIST

SHEET	DESCRIPTION	Sheet Issue Date	Rev	Rev Date
S1.01	Structural Notes	03/06/20		
S2.01	Garage Foundation Plan	03/06/20		
S2.02	Garage Roof Framing Plan	03/06/20		
S6.01	Typical Concrete Details	03/06/20		

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03/06/20

No.	REVISION	DATE

JOB #: 19098
ENG: TKE
DRAWN: AVA
SCALE: 3/4" = 1'-0"

KEY ISSUE DATES:
SD: SD
DD: DD
CD: CD
PERMIT: 09/17/19
OTHER: BD

Structural Notes
Wen Garage
8243 West Mercer Way
Mercer Island, WA 98040

S1.01

FOUNDATION KEY NOTES

1. SAW CUT (E) CONCRETE STEM
2. (E) VERTICAL STEEL ASSUMED, VERIFY. LOCALLY DEMO STEM IF NO VERTICAL STEEL PRESENT.
3. EPOXY HORIZONTAL STEEL (FOOTING & STEM) INTO (E) FOOTING (BEND BARS UP INTO BOTTOM OF FOOTING)
4. UNDERMINE BELOW (E) FOOTING & POUR TO UNDERSIDE OF (E) FOOTING.
5. GEOTECHNICAL ENGINEER TO ACCESS SOIL PROPERTIES TO DETERMINE MAXIMUM TEMPORARY SLOPE CUT DURING CONSTRUCTION.

FOUNDATION NOTES

1. ALL SOIL BEARING SURFACES ARE SUBJECT TO INSPECTION AND APPROVAL BY THE GEOTECHNICAL ENGINEER PRIOR TO REINFORCING AND CONCRETE PLACEMENT.
2. CENTER INTERIOR FOOTINGS ON WALLS OR COLUMNS TYPICAL U.N.O.
3. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
4. SEE ARCHITECTURAL PLANS FOR WALL LOCATIONS.
5. CONCRETE WALLS ARE 8" THICK TYPICAL U.N.O.
6. SEE SHEET S2.1 FOR WOOD FRAMING LEGEND, NOTES, AND SCHEDULES.
7. PROVIDE 4" DIAMETER PERFERATED FOOTING DRAINS AT PERIMETER OF FOUNDATIONS TYPICAL. PROVIDE 4" DIAMETER TIGHTLINES FOR DOWNSPOUTS.

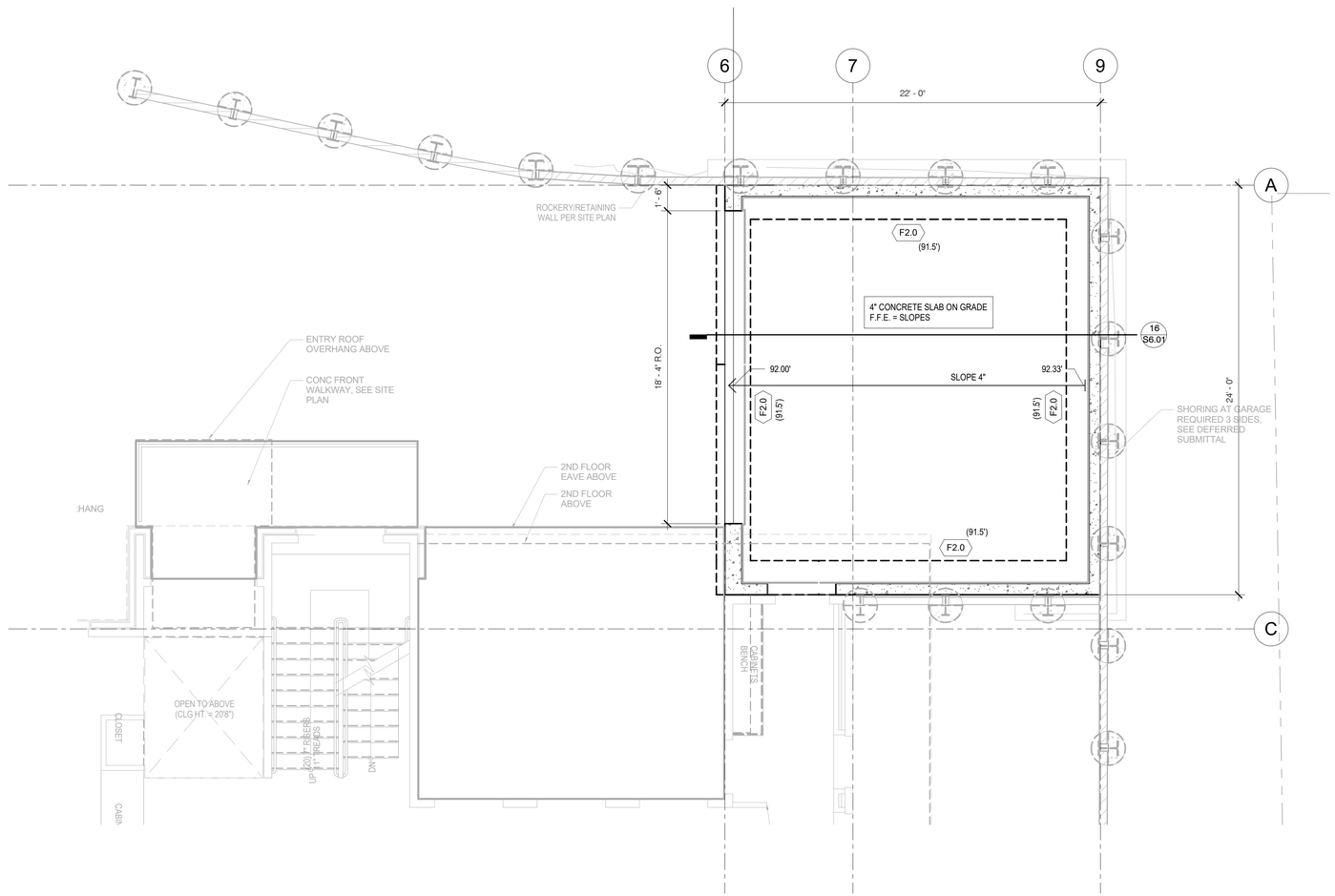
FOUNDATION SCHEDULE

MARK	DEPTH	WIDTH	LENGTH	REINFORCING	DETAILS
F2.0	12"	2'-0"	RE: PLAN	(3) #5 CONT. BOTTOM	-

FOUNDATION LEGEND

- F1 — SEE FOOTING TYPE THIS SHEET
- (-3'-0") — TOP OF FOOTING ELEVATION
- 2'-0" — TOP OF CONCRETE ELEVATION
- S.J. — SHRINKAGE CONTROL JOINT PER DETAIL 2/S6.0
- C.J. — CONSTRUCTION JOINT PER DETAIL 3/S6.0
- S — STEPPED FOOTING PER DETAIL 4&5/S6.0
- SLOPE — SLOPE SLAB 1/4" PER FOOT U.N.O. PER PLAN
- HDU 2 — HOLDOWNS INDICATED ON THE FOUNDATION PLAN ARE SHOWN HALFTONE FOR REFERENCE ONLY. REFER TO THE S2.1 SHEET FOR SPECIFICS OF EMBEDDED ITEMS RELATED TO HOLDOWNS.

Note:
ALL SECTION CUTS ARE TYPICAL



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

1 Garage Foundation Plan

GRAPHIC SCALE
-4' 0' 2' 4' 8'
(1 inch = 4 foot)

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ENG: TYE
CKD: JWA
SCALE: As indicated

KEY ISSUE DATES:
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DD:
CD:
PERMIT: 09/17/19
OTHER: BID

Garage Foundation Plan

Wen Garage
8243 West Mercer Way
Mercer Island, WA 98040

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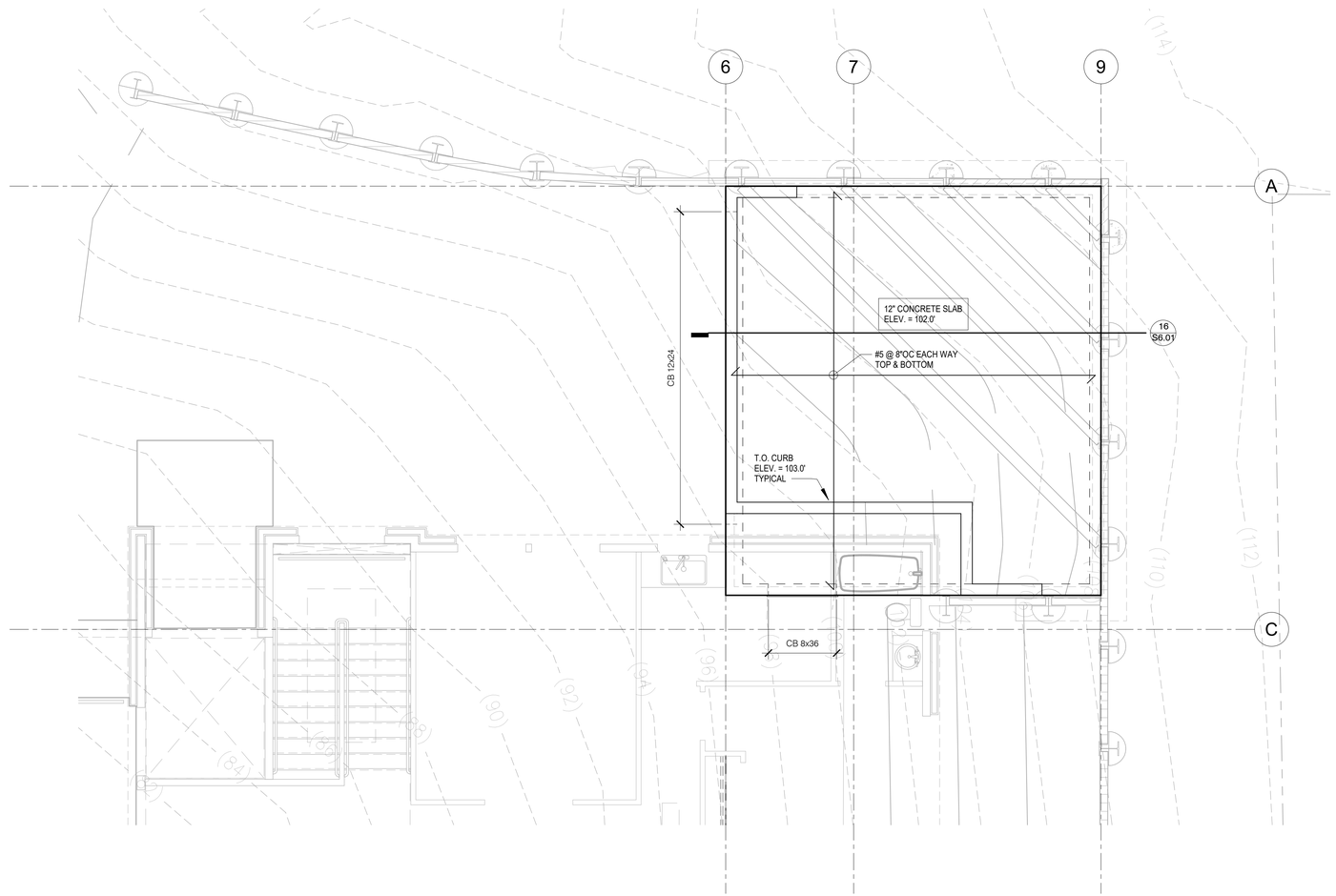

SCALE: 1/4" = 1'-0"

1 Garage Roof Framing Plan

GRAPHIC SCALE

-4' 0' 2' 4' 8'

(1 inch = 4 foot)

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Garage Roof Framing Plan

Wen Garage
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BAR SIZE	f'c=3000 PSI		
	Ld	OTHER BARS LAP SPLICE	TOP BARS LAP SPLICE
#3	16"	21"	28"
#4	22"	28"	37"
#5	27"	36"	46"
#6	33"	43"	56"

LAP SPLICE SCHEDULE NOTES:

1. TENSION LAP SPLICE SHOWN ABOVE FOR CONCRETE COVER GREATER THAN OR EQUAL TO BAR DIAMETER AND CENTER TO CENTER SPACING GREATER THAN OR EQUAL TO TWO BAR DIAMETERS
   (SPACING AND COVER CASE1). TENSION LAP SPLICE SHOWN ABOVE ARE CLASS B SPLICES.
2. "OTHER BARS" ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW THE BAR.
3. "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
4. COMPRESSION LAP SPLICES SHALL BE 30 BAR DIAMETERS MIN. U.N.O. ON THE DRAWINGS
5. DEVELOPMENT LENGTH (Ld) IS "OTHER BARS", CLASS A.

SCALE: NONE

1 TYPICAL LAP SPLICE SCHEDULE

BAR SIZE	D	STANDARD 180 DEGREE HOOK			STANDARD 90 DEGREE HOOK		
		D	A OR G	J	BAR SIZE	D	A OR G
#3	6db	2 1/4"	5"	3"	#3	2 1/4"	6"
#4	6db	3"	6"	4"	#4	3"	8"
#5	6db	3 3/4"	7"	5"	#5	3 3/4"	10"
#6	6db	4 1/2"	8"	6"	#6	4 1/2"	1'-0"

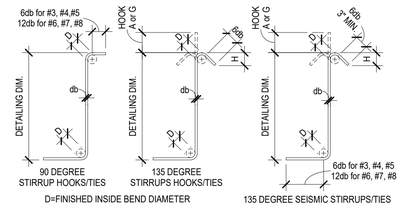
STANDARD 180 DEGREE HOOK — STANDARD 90 DEGREE HOOK

D=FINISHED INSIDE BEND DIAMETER

SCALE: NONE

2 STANDARD HOOK DETAILS

BAR SIZE	D	D	STIRRUP HOOKS/TIES			SEISMIC STIRRUP/TIE
			90 DEGREE	135 DEGREE		135 DEGREE SEISMIC HOOK
			A or G	A or G	APPROX. H	A or G	APPROX. H
#3	4db	1 1/2"	4"	4"	2 1/2"	4 1/4"	3"
#4	4db	2"	4 1/2"	4 1/2"	3"	4 1/2"	3"
#5	4db	2 1/2"	6"	5 1/2"	3 3/4"	5 1/2"	3 3/4"
#6	6db	4 1/2"	1'-0"	7 3/4"	4 1/2"	7 3/4"	4 1/2"

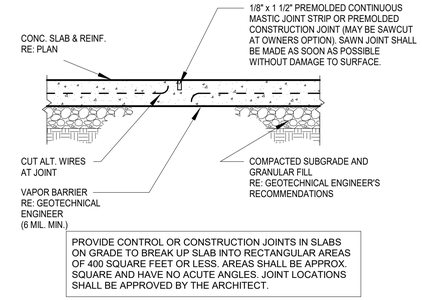


90 DEGREE STIRRUP HOOKS/TIES — 135 DEGREE STIRRUPS HOOKS/TIES — 135 DEGREE SEISMIC STIRRUPS/TIES

D=FINISHED INSIDE BEND DIAMETER

SCALE: NONE

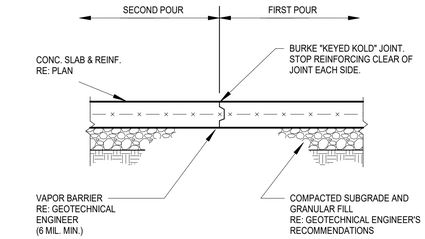
3 STIRRUP and TIE HOOK DETAILS



PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 400 SQUARE FEET OR LESS. AREAS SHALL BE APPROX. SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS SHALL BE APPROVED BY THE ARCHITECT.

SCALE: NONE

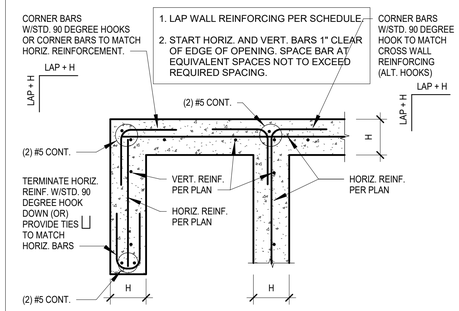
4 TYPICAL SHRINKAGE CONTROL JOINT (S.J.)



PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 400 SQUARE FEET OR LESS. AREAS SHALL BE APPROX. SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS SHALL BE APPROVED BY THE ARCHITECT.

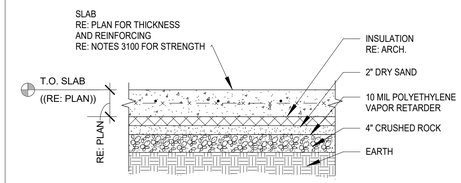
SCALE: NONE

5 TYPICAL CONSTRUCTION JOINT (C.J.)



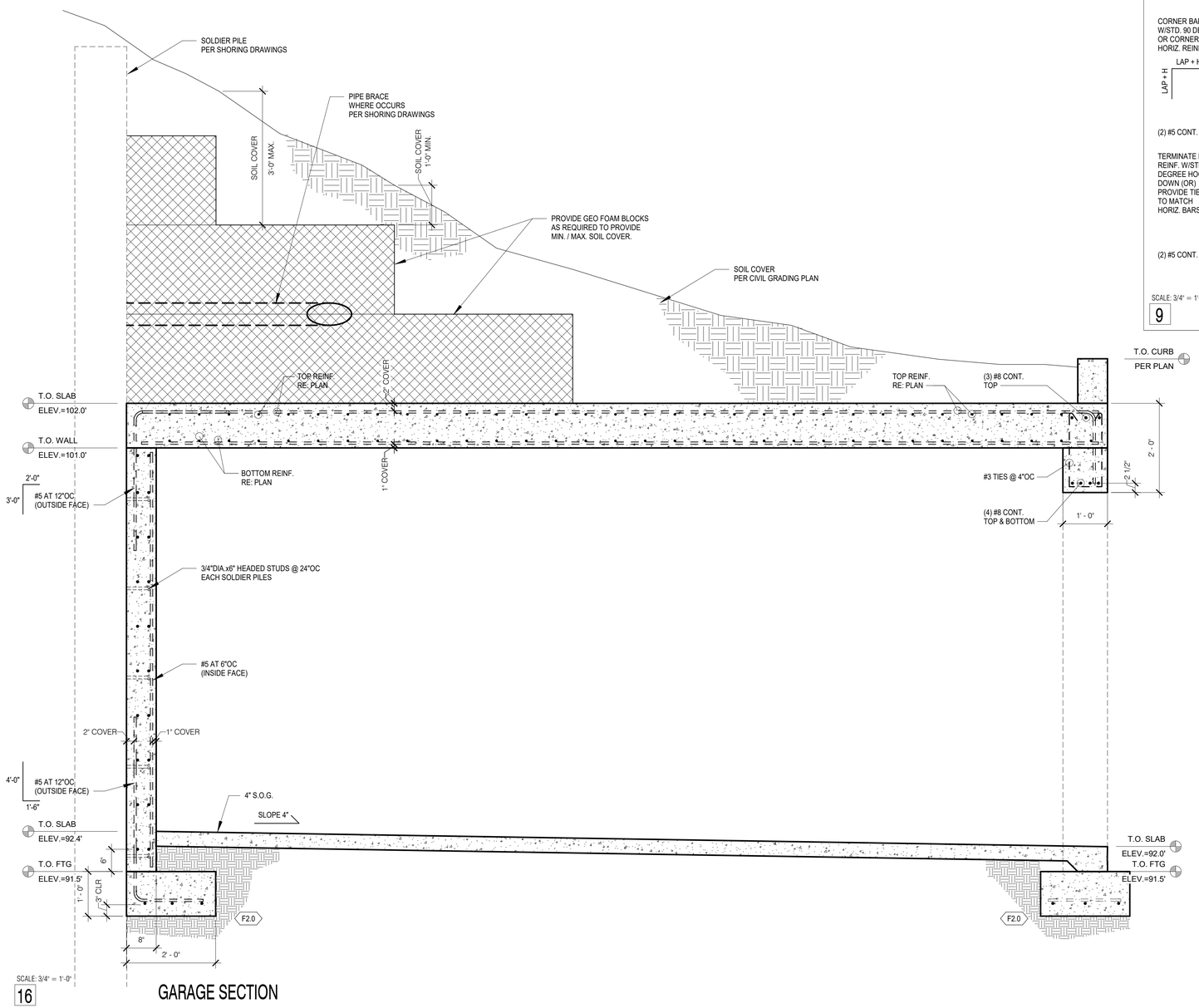
SCALE: 3/4" = 1'-0"

9 SINGLE CURTAIN WALL REINFORCEMENT PLACEMENT



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

10 TYPICAL INTERIOR SLAB ON GRADE



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

16 GARAGE SECTION

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Typical Concrete Details

Wen Garage
8243 West Mercer Way
Mercer Island, WA 98040

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ABBREVIATIONS

&	AND
@	AT
'	FEET (FOOT)
"	INCH (INCHES)
#	POUND(S), NUMBER
=	EQUAL(S)
A.B.	ANCHOR BOLT
ABV.	ABOVE
ADD.	ADDITIONAL
ADJ.	ADJACENT
ALUM.	ALUMINUM
ALT.	ALTERNATE
APPROX.	APPROXIMATE(LY)
ARCH.	ARCHITECT(URAL)
ASSY.	ASSEMBLY
B. (BTM.)	BOTTOM
BEL.	BELOW
BEN	BOUNDARY EDGE NAILING
B.F.	BRACED FRAME
BLDG.	BUILDING
BLK.(G.)	BLOCK (ING)
BLW.	BELOW
BM.	BEAM
BMU	BRICK MASONRY UNIT
BN	BOUNDARY NAILING
BNDRY.	BOUNDARY
B.O.	BOTTOM OF
B.O.E.	BOTTOM OF EXCAVATION
B.O.F.	BOTTOM OF FOOTING
BRDG.	BRIDGE, BRIDGING
BRG.	BEARING
BTWN.	BETWEEN
C	CAMBER
CAMB.	CAMBER(ED)
CANT.	CANTILEVER(ED)
CF	CUBIC FOOT
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION JOINT
CL	CENTER LINE
CLG.	CEILING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CTSK.	COUNTERSINK
CTR.	CENTER(ED)
CY	CUBIC YARD
CMU	CONCRETE MASONRY UNIT
d	PENNY (NAILS)
DB	DROPPED BEAM
DBA	DEFORMED BAR ANCHORS
DBL.	DOUBLE
DCW	DEMAND CRITICAL WELD
DEPT.	DEPARTMENT
DET.	DETAIL
DF	DOUGLAS FIR
DIA. / Ø	DIAMETER
DIAG.	DIAGONAL
DIAPH.	DIAPHRAGM
DIM.	DIMENSION
DN.	DOWN
D.O.	DITTO (REPEAT)
DP.	DEEP
D.S.	DRAG STRUT
DWG.	DRAWING(S)
DWL.	DOWELS(S)
(E)	EXISTING
EA.	EACH
E.E.	EACH END
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATOR
EMBD.	EMBED(MENT)
EN	EDGE NAIL
ENG.	ENGINEER
EQ.	EQUAL
EQPT.	EQUIPMENT
E.W.	EACH WAY
EXP.	EXPANSION
EXST.	EXISTING
EXT.	EXTERIOR
FAB.	FABRICATION
FB	FLUSH BEAM
FDN.	FOUNDATION
F.F.	FINISH FLOOR
FIN.	FINISH(ED)
FLG.	FLANGE
FLR.	FLOOR
FN	FIELD (FACE) NAIL
F.O.	FINISHED OPENING
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
FRM.	FRAME (FRAMING)
F.S.	FAR SIDE
FT.	FEET (FOOT)
FRTW	FIRE RETARDANT TREATED WOOD
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZE(D)
GB.	GRADE BEAM
GLB	GLUE LAMINATED BEAM
GRD.	GRADE
GWB	GYPSUM WALLBOARD
GYP.	GYPCRETE
HD	HOLDOWN
H.D.G.	HOT DIPPED GALVANIZED
HGR.	HANGER
HORIZ.	HORIZONTAL
HR	HEADER
H.S.B.	HIGH STRENGTH BOLT
HT.	HEIGHT

ABBREVIATIONS

I.D.	INSIDE DIAMETER
I.E.	INVERT ELEVATION
I.F.	INSIDE FACE
IN.	INCH(ES)
INFO.	INFORMATION
INT.	INTERIOR
JST.	JOIST
JT.	JOINT
K	KIPS (1000 LB.)
LAT.	LATERAL
LB.	POUND(S)
L.B.	LAG BOLTS(S)
LG.	LONG(ITUDINAL)
LGTH.	LENGTH
LGMF.	LIGHT GAUGE METAL FRAMING
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SLOTTED HOLE(S)
L.W.	LIGHT WEIGHT
MAT.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MBM	METAL BUILDING MANUFACTURER
MECH.	MECHANICAL
M.E.J.	MASONRY EXPANSION JOINT
MEZZ.	MEZZANINE
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTL.	METAL
N.L.B.	NON-LOAD BEARING
NO.	NUMBER
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
N.W.C.	NORMAL WEIGHT CONCRETE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.H.	OPPOSITE HAND
OPNG.	OPENING
OPP.	OPPOSITE
ORNT.	ORIENTATION
OSB	ORIENTED STRAND BOARD
O.W.J.	OPEN WEB JOIST
PAR.	PARALLEL
P/C	PRECAST
PEN	PANEL EDGE NAIL
PERP.	PERPENDICULAR
PL.	PLATE
PL	PROPERTY LINE
PLMBG.	PLUMBING
PLYWD.	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.T.	PRESERVATIVE TREATED
PT	POST TENSION(ED)
QTY.	QUANTITY
R. (RAD.)	RADIUS
RE: (REF.)	REFERENCE
REINF.	REINFORCEMENT
REQ.	REQUIRED
R.F.	RIGID FRAME
R.O.	ROUGH OPENING
R.S.	ROUGH SAWN
SCH.	SCHEDULE
SCHED.	SCHEDULE
SCL	STRUCTURAL COMPOSITE WOOD
SHT.	SHEET
SIM.	SIMILAR
S.J.	SHRINKAGE CONTROL JOINT
SKW.	SKEW(ED)
S.O.G.	SLAB ON GRADE
SPC.	SPACE(S) (ING)
SPEC.	SPECIFICATION(S)
SQ.	SQUARE
STD.	STANDARD
STGR.	STAGGER
STIFF.	STIFFENER(S)
STIR.	STIRRUP(S)
STL.	STEEL
STRUC.	STRUCTURAL
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED(TION)
SYMM.	SYMMETRICAL
T.	TOP
T.&B.	TOP AND BOTTOM
TEMP.	TEMPORARY
T.&G.	TONGUE AND GROOVE
THK.	THICK(NESS)
THRD.	THREADED
TN	TOE NAIL
T.O.S.	TOP OF (STEEL) (SHEATHING) (SLAB)
T.O.W.	TOP OF WALL
TRANSV.	TRANSVERSE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
V.	VERTICAL
VERT.	VERTICAL
VIF	VERIFY IN FIELD
W.	WIDE (WIDTH)
W/	WITH
W/O	WITHOUT
WD.	WOOD
W.H.S.	WELDED HEADED STUDS
W.P.	WORK POINT
W.S.	WELDED STUD
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC
X-STG	EXTRA STRONG
XX-STG	DOUBLE EXTRA STRONG
YD	YARD

00100- CODE REQUIREMENTS

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE, AS AMENDED BY THE CITY OF MERCER ISLAND.

00101- EASEMENTS

ALL EASEMENTS, IF REQUIRED, SHALL BE THE RESPONSIBILITY OF THE OWNER.

00200- DESIGN LOADS AND CONSIDERATIONS

EARTHWORK AND FOUNDATIONS SHALL BE CONSISTENT WITH GEOTECHNICAL ENGINEERING RECOMENDATIONS. SEE THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY PANGEO INC. (PROJECT 17-405) DATED FEBRUARY 8,2018.

SEE DETAILS ON SS4 FOR SPECIFIC DESIGN LOADING DIAGRAMS. DESIGN PARAMETERS ARE AS FOLLOWS:
ACTIVE EARTH PRESSURE (LEVEL) 45 PCF
ACTIVE EARTH PRESSURE (SLOPING)55 PCF
PASSIVE EARTH PRESSURE 300 PCF (ALLOWABLE)
COEFFICIENT OF FRICTION0.30 (ALLOWABLE)
SEISMIC SURCHARGE 7H UNIFORM
SOIL PROFILE SITE CLASS D

THE SHORING SYSTEM IS PERMANENT.

00300- UTILITIES AND ADJACENT PROPERTIES

STABILITY AND EROSION PROTECTION OF EXISTING & CUT SLOPES, AND THE COORDINATION OF THE EXCAVATION, SHORING AND OTHER WORK WITH ALL UTILITIES AND ADJACENT PROPERTIES IS THE RESPONSIBILTY OF THE CONTRACTOR PRIOR TO DRILLING AND EXCAVATION.

LOCATE AND DISCONNECT ANY UNDERGROUND POWER, COMMUNICATION, GAS AND WATER LINES PRIOR TO DRILLING & EXCAVATION. CONTRACTOR SHALL VERIFY OVERHEAD CLEARANCES PRIOR TO MOBILIZATION AND CONSTRUCTION.

THE CONTRACTOR SHALL VERIFY THE EXACT ELEVATION, LOCATION AND SIZE OF ALL UNDERGROUND UTILITIES OR STRUCTURES PRIOR TO SHORING INSTALLATION. TIEBBACKS SHALL BE NO CLOSER THAN 3 FEET TO ANY UTILITY, UNLESS OTHERWISE SHOWN.

00301- DRAINAGE CONTROL

THE CONTRACTOR SHALL TAKE MEASURES TO CONTROL ALL SURFACE WATER RUNOFF FLOW AND FLOWS FROM EXISTING SUBSURFACE DRAINAGE FEARTURES INCLUDING PERCHED WATER. IN NO CASE SHALL THE CONTRACTOR ALLOW THE WALL SYSTEM TO BE EXPOSED TO HYDROSTATIC PRESSURES OR ALLOW SURFACE WATER TO FLOW INTO THE EXCAVATION.

00400- BASELINE SURVEY AND MONITORING

GRADE CHANGES ARE SIGNIFICANT, BUT THE TIEBACK SYSTEM UTILIZED SHOULD MINIMIZE ANY GROUND MOVEMENTS DURING CONSTRUCTION. HOWEVER, EXISTING STRUCTURES OR IMPROVEMENTS TO BE SAVED THAT ARE NEAR THE CONSTRUCTION ZONE SHOULD HAVE BASELINE PHYSICAL LOCATION DATA ESTABLISHED PRIOR TO BEGINNING WORK. AS A MINIMUM, OPTICAL SURVEY POINTS (POINTS KNOWN, OR PK'S) SHOULD BE ESTABLISHED AT THE CORNERS AND MIDPOINT OF THE RESIDENTIAL STRUCTURE. THE SELECTION OF MONITORING POINTS SHOULD BE MADE WITH CONCURRENCE OF THE GEOTECHNICAL ENGINEER.

THE MONITORING PROGRAM SHOULD INCLUDE MEASUREMENT OF CHANGES IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS. THE MONITORING SHOULD BE PERFORMED AT LEAST WEEKLY WHILE ACTIVE WALL CONSTRUCTION IS UNDERWAY. THE MONITORING SHOULD BE BY A LICENSED SURVEYOR, AND THE RESULTS BE PROMPTLY SUBMITTED TO THE GEOTECHNICAL ENGINEER FOR REVIEW. THE RESULTS OF THE MONITORING WILL ALLOW THE DESIGN TEAM TO CONFIRM DESIGN PARAMETERS, AND FOR THE CONTRACTOR TO MAKE ADJUSTMENTS TO MEANS AND METHODS OF CONSTRUCTION, IF NECESSARY.

00401- MONITORING AND QUALITY CONTROL

THE OWNER SHALL PROVIDE MONITORING AND QUALITY CONTROL OF ALL SHORING WALLS INCLUDINGSOLDIER PILE WALLS, BERMS, AND ADJACENT GROUND SYRFACES AND BUILDINGS OF STRUCTURES AS FOLLOWS:

THE GEOTECHNICAL ENGINEER OF RECORD SHALL PROVIDE FULL TIME OBSERVATION MONITORING OF THE EXCAVATION, SOLDIER PILE INSTALLATION, TIEBACK INSTALLATION, AND VERFICATION AND PROOF TESTING. INSTALLATION INCLUDES DRILLING OF PILE & TIE BACK HOLES AND PLACEMENT OF LEAN MIX AND STRUCTURAL GROUT. A COMPLETE AND ACCURATE RECORD SHALL BE KEPT OF ALL PILE AND TIEBACK DEPTHS, QUANTITIES OF LEAN MIX AND STRUCTURAL GROUT PER PILE AND TIEBACK AND ANY UNUSUAL CONDITIONS ENCOUNTERED.

A QUALIFIED TESTING AGENCY SHALL PERFORM WELDING INSPECTIONS AND STRUCTRAL GROUT SAMPLING AND TESTING.

THE CONTRACTOR SHALL PROVIDE TESTING EQUIPMENT THAT HAS BEEN CALIBRATED IN THE PAST 60 DAYS. MEASUREMENTS OF ANCHOR MOVEMENT SHALL BE OBTAINED WITH EQUIPMENT ACCURATE TO 0.001 INCH.

PRECONSTRUCTION BASELINE SURVEY:
A LICENSED SURVEYOR HIRED BY THE OWNER, SHALL ESTABLISH BASELINE READINGS OF BENCHMARKS AND MONITORING POINTS ON THE GROUND SURFACE AND SETTLEMENT-SENSITIVE STRUCTURES BEHIND THE SHORING WALL ALIGNMENT PRIOR TO EXCAVATION AND INSTALLATION OF THE SHORING SYSTEM. STATIONARY BENCHMARKS SHALL BE SET AT LEAST 40 FEET AWAY FROM THE MONITORING POINTS. MONITORING POINTS ESTABLISHED ALONG THE CURBLINE AND CENTERLINE OF ADJACENT ROADWAYS NEED TO BE MONITORED WHEN TOTAL WALL MOVEMENTS REACH 0.5 INCH OR AT SDOT REQUEST. THE MINIMUM MONITORING POINT SPACING ALONG THE TOP OF ALL SOIL NAIL WALLS SHALL BE 20 FEET AND AT THE TOP OF EVERY OTHER SOLDIER PILE. THE SURVEY SHALL HAVE AN ACCURACY OF 0.01 FEET. A VISUAL AND PHOTGRAPHIC SURVEY SHALL BE MADE OF ADJACENT BUILDINGS PRIOR TO CONSTRUCTION.

REPORTS:
SURVEY MONITORING RESULTS SHALL BE TRANSMITTED TO THE GEOTECHNICAL ENGINEER AND GENERAL CONTRACTOR WITHIN 24 HOURS OF EACH SURVEY. THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND PROVIDE AN EVALUATION OF WALL PERFORMANCE AND A GRAPHICAL REPRESENTATION OF WALL MOVEMENT VERSUS TIME ALONG WITH THE SURVEY DATA TO GENERAL CONTRACTOR, SHORING INSTALLER, SHORING ENGINEER, DPD AND ON AT LEAST A WEEKLY BASIS.

CONSTRUCTION MONITORING:
THE GENERAL CONTRACTORS SHALL OBSERVE THE CONDITIONS ABOVE THE SHORING ON A DAILY BASIS FOR SIGNS OF GROUND OR BUILDING MOVEMENTS. THE GEOTECHNICAL, SHORING ENGINEER SHALL BE IMMEDIATELY AND DIRECTLY NOTIFIED IF SIGNS OF MOVEMENT SUCH AS: NEW CRACKS IN STRUCTURES, INCREASED SIZE OF OLD CRACKS OR SEPARATION OF JOINTS IN STRUCTURES, FOUNDATIONS, STREETS OR PAVED AND UNPAVED SURFACES ARE OBSERVED.

THE SURVEYOR AND GENERAL CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER SHORING ENGINEER, DPD IMMEDIATELY AND DIRECTLY IF MORE THAN 0.5 INCH OF DISPLACEMENT OCCURS. AT THAT TIME THE GEOTECHNICAL ENGINEER AND SHORING ENGINEER SHALL PREPARE A REMEDIAL PLAN. REMEDIAL MEASURES SHALL BE IMPLEMENTED TO PREVENT DEFLECTIONS FROM EXCEEDING 1.0 INCH.

DRILLLING AND EXCAVATION OPERATIONS SHALL BE IMMMEDIATELY SUSPENDED IF GROUND SUBSIDENCE IS OBSERVED, OR IF ADJACENT STRUCTURES ARE DAMAGED AS A RESULT OF THE DRILLING OR EXCAVATION OPERATION.

SHORING INSTALLATION AND EXCAVATION IN AREAS ADJACENT TO BUILDINGS:
THE SURVEYOR AND GENERAL CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER, SHORING ENGINEER AND DPD IMMEDIATELY AND DIRECTLY IF THE 0.5 INCH DAMAGE THRESHOLD IS APPROACHED. SHORING INSTALLATION AND EXCAVATION SHALL NOT CONTINUE UNTIL REMEDIAL ACTION IS TAKEN TO ENSURE THAT 0.5 INCH IS NOT EXCEEDED.

00405 - INSPECTION

CONTINUOUS OBSERVATION BY THE GEOTECHNICAL ENGINEER IS REQUIRED FOR THE SHORING SYSTEM INSTALLATION INCLUDING DRILLING OF PILE HOLES, INSTALLATION OF SOLDIER PILES AND LEAN MIX CONCRETE. A COMPLETE & ACCURATE RECORD SHALL KEPT OF ALL PILE DEPTHS, QUANTITY OF LEAN MIX PER PILE, AND ANY UNUSUAL CONDITIONS ENCOUNTERED.

SPECIAL INSPECTION SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR. SPECIAL INSPECTION IS REQUIRED FOR SHORING WELDING AND CORROSION PROTECTION. TESTING OF LEAN MIX CONCRETE IS NOT REQUIRED.

00600- MATERIALS

LEAN MIX CONCRETE 1 1/2 SACK MIX (ABOVE BOE)

STRUCTURAL CONCRETE	3000PSI MIX IN TOE OF HOLE (BELOW BOE)	
STRUCTURAL STEEL	WF SECTIONS	ASTM A992 Fy = 50 KSI
	CHANNELS	ASTM A36 Fy = 36 KSI
	STEEL ANGLES	ASTM A36 Fy = 36 KSI
	PLATE MATERIAL	ASTM A36 Fy = 36 KSI
	STRUCTURAL PIPE	ASTM A53 Fy = 35 KSI GRADE B
	STRUCTURAL BOLTS	ASTM A 325-N
	WELDED HEADED STUDS (WHS)	ASTM A -108
	WELDING ELECTRODES	E70-XX WITH CHARPY V-NOTCH
	TOUGHNESS OF AT LEAST 20 FT-LBS AT 0 DEGREES F.	
TIMBER LAGGING	P.T. HF NO. 2 4X12	

TIMBER LAGGING SHALL BE PRESERVATIVE TREATED WITH WATER BORNE PRESERVATIVES IN ACCORDANCE WITH AWPA U1 (A OR F) TO A MINIMUM RETENTION OF 0.4 LBS/CU. FT. (0.21 LBS/CU. FT. FOR CA-B) ANY SAWN ENDS OF SUCH TREATED LAGGING SHALL BE FIELD TREATED WITH TWO BRUSHED COATS OF THE SAME PRESERVATIVE. LAGGING SHALL BE GAPPED PER THE GEOTECHNICAL ENGINEER TO PERMIT SEEPAGE.

DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE 14TH EDITION OF THE AISC "STEEL CONSTRUCTION MANUAL AND THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 360-10.

00601- CORROSION PROTECTION1

THE PILES AND PIPE BRACES FOR THIS PROJECT ARE PERMANENT AND DO REQUIRE CORROSION PROTECTION. USE ZINC CLAD II ETHYL SILICATE INORGANIC ZINC-RICH COATING TO 5.0 MIL THICKNESS ON ALL SOLDIER PILES. COATING SHALL BE APPLIED TO EACH PILE FOR THE "UPSTAND HEIGHT" PLUS 2FT.

00602- WELDING

WELDING SHALL CONFORM TO AWS D1-04 "STRUCTURAL WELDING CODE." WELDING ELECTRODES SHALL BE E70XX. ALL WELDING SHALL BE PERFORMED BY WABO AND AWS CERTIFIED WELDERS. ALL COMPLETE PENETRATION WELDS (CP) SHALL BE ULTRASONIC TESTED. ALL SINGLE PASS FILLET WELDS SHALL BE VISUALLY INSPECTED. MINIMUM WELD SIZE IS 1/4" CONTINUOUS FILLET.

00603- SUBMITTALS

SUBMITTALS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION;

1. CONSTRUCTION SEQUENCE NARRATIVE & DESCRIPTION INCLUDING EQUIPMENT LIST AND KEY PERSONNEL.
2. LEAN CONCRETE MIX & STRUCTURAL CONCRETE MIX DESIGN
3. CERTIFIED STEEL MILL REPORTS
4. STRUCTURAL GROUT MIX DESIGN FOR TIEBACKS AS NEEDED
5. STRUCTURAL STEEL AND EMBEDDED ITEMS

00604- EXCAVATION

THE DISPOSAL SITE FOR EXCAVATION SPOILS, INCLUDING FACILITY NAME AND ADDRESS SHALL BE PROVIDED TO THE BUILDING DEPARTMENT SITE DEVELOPMENT INSPECTOR AT THE PRECONSTRUCTION MEETING.

ANY VOIDS BETWEEN THE FACE OF THE EXCAVATION AND THE LAGGING SHALL BE FILLED IMMEDIATELY WITH AN PERMEABLE, FREE DRAINING MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER. THIS SHALL INCLUDE CDF OR LEAN CONCRETE GROUT BEHIND THE UPPER TWO-THIRDS OF THE CUT FACE OF THE SHORING SYSTEM IF APPROVED BY THE GEOTECHNICAL ENGINEER. NO EXCAVATION FOR A LOWER LIFT SHALL PROCEED UNTIL THE INSTALLATION OF THE LIFT ABOVE IS COMPLETED, INCLUDING BACKFILLING BEHIND THE LAGGING.

THE CONTRACTOR SHALL LIMIT THE OPEN FACE OF THE EXCAVATION TO 4 FEET VERTICAL, UNLESS OTHERWISE APPROVED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL EXCAVATE THE WALL FACE AND INSTALL THE TIMBER LAGGING IN SUCH A MANNER AS TO MAINTAIN A SAFE WORK AREA AND AVOID EXCESSIVE SLOUGHING, CAVING OR OVERBREAK. THE CONTRACTOR SHALL RESPONSIBLE FOR THE MEANS AND METHODS USED FOR TEMPORARY FACE STABILITY AND MEANS TO CONTROL EXCESSIVE OVERBREAK, AS APPROVED BY THE GEOTECHNICAL ENGINEER. EXCAVATION SHALL PROCEED TO A BOTTOM OF EXCAVATION (BOE) DEPTH NO GREATER THAN SHOWN ON THE PLANS.

REMOVE LEAN MIX FROM THE PILE TO ALLOW PLACEMENT OF WOOD LAGGING. CARE BY THE EXCAVATOR SHALL BE TAKEN TO PREVENT EXCESSIVE POUNDING OR SHAKING OF THE SHORING WALL.

ANY VOIDS BETWEEN THE FACE OF THE EXCAVATION AND THE LAGGING SHALL BE FILLED WITH AN APPROVED PERMEABLE, FREE DRAINING MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER.

GROUNDWATER:
THE GEOTECHNICAL REPORT INDICATES THAT THE GROUNDWATER TABLEN IS UNLIKELY TO BE ENCOUNTERED ABOVE THE BOTTOM OF EXCAVATION ELEVATION - LOCAL PERCHED GROUNDWATER MAY BE ENCOUNTERED. REFER TO THE GEOTECHNICAL REPORT.

00605 - SLOPE PROTECTION

THE CONTRACTOR SHALL PROTECT CUT SLOPES WITH PLASTIC IF CONSTRUCTION OCCURS DURING WET WEATHER. PLASTIC SHEETING SHALL BE OVERLAPPED AT LEAST 12 INCHES. SURFACE DRAINAGE AROUND THE EXCAVATION SHALL BE CONTROLLED BY THE CONTRACTOR TO PREVENT WATER FROM FLOWING INTO THE EXCAVATION. CUT SLOPES SHALL BE EXCAVATED TO INTERSECT THE BACKSIDE OF THE DRILLED HOLE.

CLEAR PLASTIC SHALL HAVE A MINIMUM THICKNESS OF 6 MIL AND SHALL MEET THE REQUIREMENTS OF WSDOT / APWA SECTION 9-14.5.

CONTRACTOR SHALL MONITOR SLOPES FOR ANY SIGNS OF DISTRESS AND TAKE CORRECTIVE ACTIONS AS REQUIRED BY THE GEOTECHNICAL ENGINEER.

00700- SOLDIER PILES

SOLDIER PILES ARE TO BE INSTALLED IN 24 INCH DIAMETER HOLES U.N.O AND BACKFILLED WITH LEAN MIX CONCRETE, TYPICAL U.N.O. REFER TO SHORING ELEVATIONS. ALL HOLES SHALL BE DRILLED IN AN ACCEPTABLE MANNER WITHOUT LOSS OF GROUND AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES TO THE GEOTECHNICAL ENGINEERS SATISFACTION

TEMPORARY CASING OR OTHER APPROVED METHODS SHALL BE USED AS REQUIRED FOR PILE INSTALLATION TO MINIMIZE GROUND LOSS SHOULD CAVING SOIL CONDITIONS BE ENCOUNTERED. WHEN CASING HOLES ARE REQUIRED, THE CASING SHALL BE OF SUFFICIENT STRENGTH AND RIGIDITY TO WITHSTAND ALL INSTALLATION AND REMOVAL STRESSES. TO PREVENT DISTORTION CAUSED BY PLACING ADJACENT PILES AND TO PREVENT COLLAPSE DUE TO SOIL OR HYDROSTATIC PRESSURE.

ALTERNATE PILE PLACEMENT AT LEAST 24 HOURS TO ALLOW CONCRETE TO HARDEN PRIOR TO DRILLING ADHACENT PILES.

INSTALLATION TOLERANCES SHALL BE AS FOLLOWS;

PLAN DIRECTION	3 INCHES PARALLEL TO WALL
	1 INCH PERPENDICULAR TO WALL
VERTICAL DIRECTION	1 1/2% OF TOTAL LENGTH, 3" MAXIMUM IN ELEVATION

SHOULD GROUNDWATER BE ENCOUNTERED DURING DRILLING FOR SOLDIER PILES, THE CONTRACTOR SHALL BE PREPARED TO USE TEMPORARY CASING OR OTHER METHODS TO KEEP THE SIDEWALLS OF THE HOLE OPEN WITHOUT SIGNIFICANT RAVELING OR CAVING.

GEOTECHNICAL ENGINEER SHALL BE PRESENT DURING DRILLING OPERATION TO VERIFY THAT THE CONTRACTORS DRILLING METHOD AND PROCEDURES ARE APPROPRIATE FOR THE GROUND CONDITONS.

00200- DESIGN LOADS AND CONSIDERATIONS

EARTHWORK AND FOUNDATIONS SHALL BE CONSISTENT WITH GEOTECHNICAL ENGINEERING RECOMENDATIONS. SEE THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY PANGEO INC. (PROJECT 17-405) DATED FEBRUARY 8,2018.

SEE DETAILS ON SS4 FOR SPECIFIC DESIGN LOADING DIAGRAMS. DESIGN PARAMETERS ARE AS FOLLOWS:
ACTIVE EARTH PRESSURE (LEVEL) 45 PCF
ACTIVE EARTH PRESSURE (SLOPING)55 PCF
PASSIVE EARTH PRESSURE 300 PCF (ALLOWABLE)
COEFFICIENT OF FRICTION0.30 (ALLOWABLE)
SEISMIC SURCHARGE 7H UNIFORM
SOIL PROFILE SITE CLASS D

THE SHORING SYSTEM IS PERMANENT.

09990 ADDITIONAL CITY COMMENTS

GRADING SEASON — NOTE THAT NO GRADING SHALL BE PERFORMED BETWEEM OCTOBER 31st, AND APRIL 1st.

Structural Drawing List (Shoring)

SHEET	DESCRIPTION	Issued	Rev	Rev Date
SS1.0	Shoring Notes	03/06/20		
SS2.0	Shoring and Excavation Plan	03/06/20	12/01/20	
SS3.0	Shoring Elevations	03/06/20	12/01/20	
SS4.0	Shoring Details	03/06/20		

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)
www.ctengineering.com

03/06/20

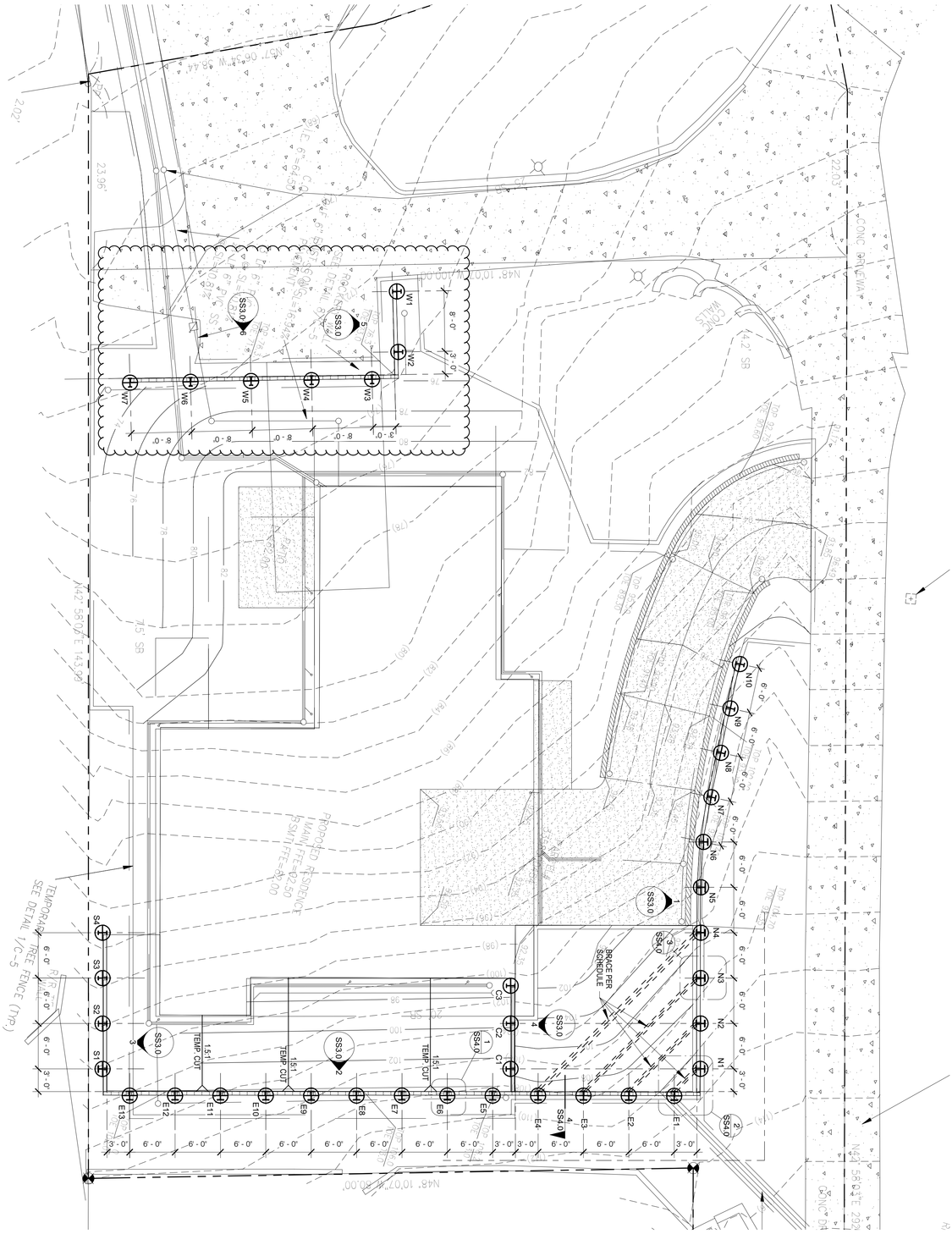
No.	REVISION	DATE

JOB #: 19098
ENG: TRE
CAD: JMA
SCALE:
KEY ISSUE DATES:
PERMIT: 09/17/19

Shoring Notes
Wen Residence
8243 West Mercer Way
Mercer Island, WA

SS1.0

12/1/2020 2:41:25 PM
L:\19098 Wen Garage & SH\GISTRUCTREVIT\19098 Shoring (R18).rvt



Shoring and Excavation Plan

Wen Residence
8243 West Mercer Way
Mercer Island, WA

SS2.0

JOB #:	19098
ENG:	TRE
CAD:	JMA
SCALE:	1/8" = 1'-0"
KEY ISSUE DATES:	
PERMIT:	09/17/19

No.	REVISION	DATE

12/01/20

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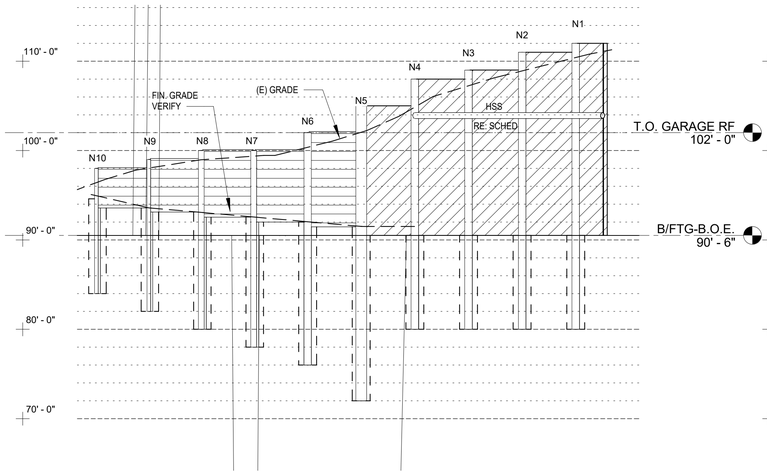
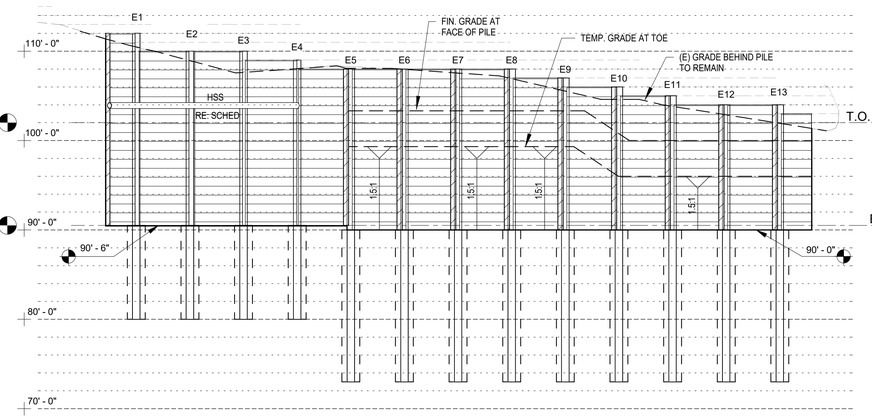


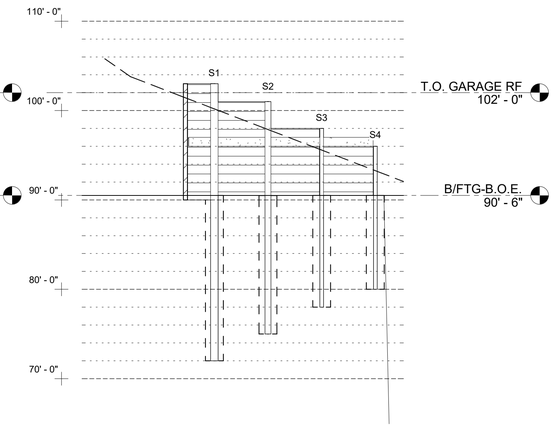
SCALE: 1/8" = 1'-0"

1 North Elevation



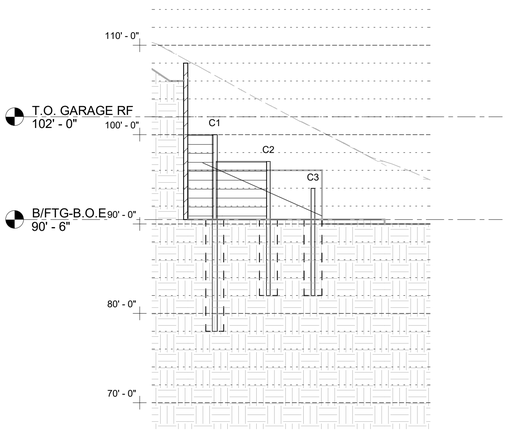
SCALE: 1/8" = 1'-0"

2 East Elevation



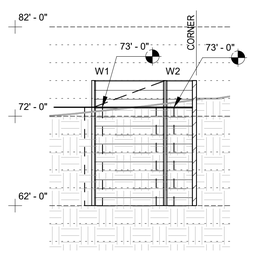
SCALE: 1/8" = 1'-0"

3 South Elevation



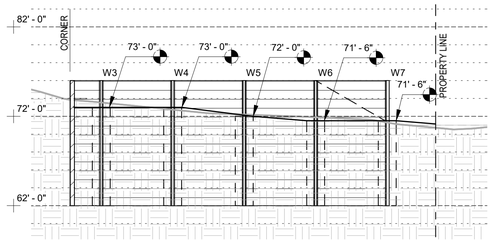
SCALE: 1/8" = 1'-0"

4 South Elevation of Garage



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

5 West Elevation



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

6 West Elevation

Structural Shoring Schedule

Pile No`	Pile	Hole DIA	T.O.P.	B.O.P.	Brace Elev	Pile No` Brace
C1	W14X30	24"	100' - 0"	78' - 0"	0' - 0"	
C2	W14X22	24"	97' - 0"	82' - 0"	0' - 0"	
C3	W14X22	24"	94' - 0"	82' - 0"	0' - 0"	
E1	W14X82	24"	112' - 0"	80' - 0"	104' - 0"	HSS 6" DIA. SCHED 80
E2	W14X82	24"	110' - 0"	80' - 0"	104' - 0"	HSS 6" DIA. SCHED 80
E3	W14X82	24"	110' - 0"	80' - 0"	104' - 0"	HSS 6" DIA. SCHED 80
E4	W14X82	24"	109' - 0"	80' - 0"	104' - 0"	HSS 8" DIA. SCHED 80
E5	W14X61	24"	108' - 0"	73' - 0"	0' - 0"	
E6	W14X61	24"	108' - 0"	73' - 0"	0' - 0"	
E7	W14X61	24"	108' - 0"	73' - 0"	0' - 0"	
E8	W14X61	24"	108' - 0"	73' - 0"	0' - 0"	
E9	W14X61	24"	107' - 0"	73' - 0"	0' - 0"	
E10	W14X61	24"	106' - 0"	73' - 0"	0' - 0"	
E11	W14X61	24"	105' - 0"	73' - 0"	0' - 0"	
E12	W14X61	24"	104' - 0"	73' - 0"	0' - 0"	
E13	W14X61	24"	104' - 0"	73' - 0"	0' - 0"	
N1	W14X82	24"	112' - 0"	80' - 0"	104' - 0"	HSS 6" DIA. SCHED 80
N2	W14X82	24"	111' - 0"	80' - 0"	104' - 0"	HSS 6" DIA. SCHED 80
N3	W14X82	24"	109' - 0"	80' - 0"	104' - 0"	HSS 6" DIA. SCHED 80
N4	W14X82	24"	108' - 0"	80' - 0"	104' - 0"	HSS 8" DIA. SCHED 80
N5	W14X99	24"	105' - 0"	72' - 0"	0' - 0"	
N6	W14X61	24"	102' - 0"	76' - 0"	0' - 0"	
N7	W14X43	24"	100' - 0"	78' - 0"	0' - 0"	
N8	W14X43	24"	100' - 0"	80' - 0"	0' - 0"	
N9	W14X22	24"	99' - 0"	82' - 0"	0' - 0"	
N10	W14X22	24"	98' - 0"	84' - 0"	0' - 0"	
S1	W14X82	24"	103' - 0"	72' - 0"	0' - 0"	
S2	W14X43	24"	101' - 0"	75' - 0"	0' - 0"	
S3	W14X22	24"	98' - 0"	78' - 0"	0' - 0"	
S4	W14X22	24"	96' - 0"	80' - 0"	0' - 0"	
W1	W14X22	24"	76' - 0"	62' - 0"	0' - 0"	
W2	W14X22	24"	76' - 0"	62' - 0"	0' - 0"	
W3	W14X22	24"	76' - 0"	62' - 0"	0' - 0"	
W4	W14X22	24"	76' - 0"	62' - 0"	0' - 0"	
W5	W14X22	24"	76' - 0"	62' - 0"	0' - 0"	
W6	W14X22	24"	76' - 0"	62' - 0"	0' - 0"	
W7	W14X22	24"	76' - 0"	62' - 0"	0' - 0"	

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12/01/20

No.	REVISION	DATE

JOB #: 19098
ENG: TRE
CAD: JMA
SCALE: 1/8" = 1'-0"
KEY ISSUE DATES:
PERMIT: 09/17/19

Shoring Elevations

Wen Residence
8243 West Mercer Way
Mercer Island, WA

SS3.0

12/1/2020 2:41:26 PM
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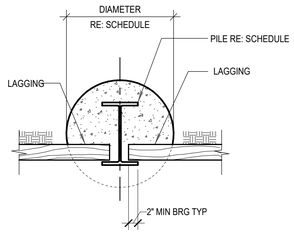
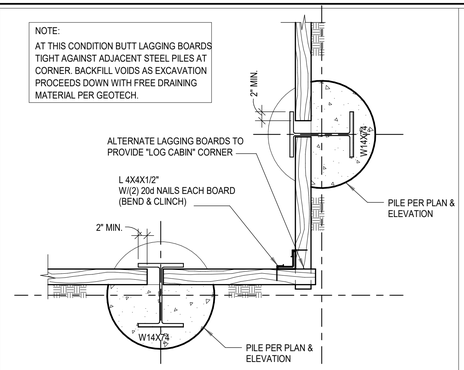


SCALE: 3/4" = 1'-0"

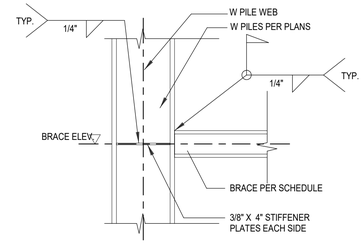
1 TYPICAL PILE DETAIL

NOTE:
AT THIS CONDITION BUTT LAGGING BOARDS TIGHT AGAINST ADJACENT STEEL PILES AT CORNER. BACKFILL VOIDS AS EXCAVATION PROCEEDS DOWN WITH FREE DRAINING MATERIAL PER GEOTECH.



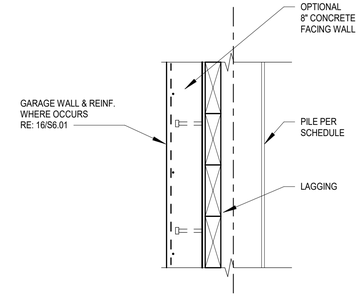
SCALE: 3/4" = 1'-0"

2 TYPICAL BUTTED CORNER DETAIL



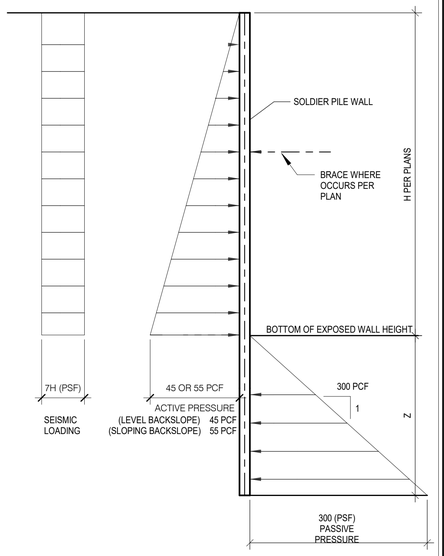
SCALE: 3/4" = 1'-0"

3 TYPICAL BRACE DETAIL



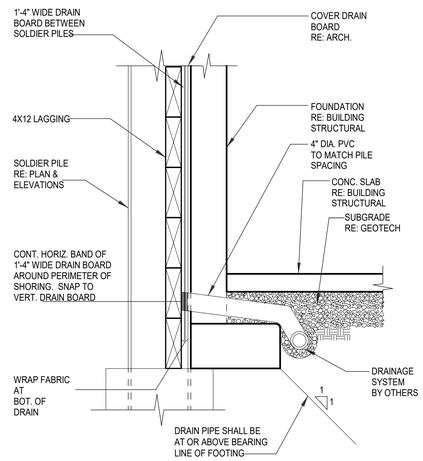
SCALE: 3/4" = 1'-0"

4 TYPICAL PILE DETAIL



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

10 WALL DESIGN PARAMETERS - SINGLE BRACE & CANTILEVER PILE



1. WHERE PVC PIPE PASSES THROUGH OR BENEATH WALLS, THE PVC PIPE SHALL BE PROTECTED BY A SLEEVE WITH A 1 INCH MINIMUM ANNULAR GAP AND THE GAP BETWEEN THE PVC PIPE AND THE SLEEVE SHALL BE SEALED WITH A FLEXIBLE SEALANT.
2. DOWNSPOUT LINES MUST NOT BE CONNECTED TO FOUNDATION DRAINS.
3. PVC PIPE SHALL CONFORM TO ASTM 3034, SDR 35.
4. PERFORATED DRAIN PIPE SHALL BE PVC, SCHEDULE 40, CONFORMING TO ASTM D 2729.

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

20 TYPICAL SECTION

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JOB #: 19098
ENG: TRE
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SCALE: 3/4" = 1'-0"

KEY ISSUE DATES:

PERMIT: 09/17/19

Shoring Details

Wen Residence
8243 West Mercer Way
Mercer Island, WA

SS4.0

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