LEUNG RESIDENCE

BUILDING PERMIT SUBMITTAL - 31 AUGUST 2022



CITY OF MERCER ISLAND CPD PROJECT NO: PROJECT ADDRESS: ASSESSOR PARCEL NO:

LEGAL DESCRIPTION:

PROJECT DESCRIPTION:

VICINITY MAP



G0 0

G0.02

G1.01

G1.02 G1.03

S1 OF 2

S2 OF 2

C1.0

C2.0 C2.1

C3.0

C4.0

C4.1

L1.01

L1.21

L2.01

A1.01

A2.01

A2.02

A2.11

A2.12

A2.21

A2.22

A2.31

A2.32

A3.11

A3.12 A3.13

A3.14

A4.11 A4.12

A5.01

A9.01

A9.11

S1.00

S1.01

S2.00

S2.01

S2.02

S2.03

S3.00

S3.01

S6.00

S6.01

S6.02

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ISSUANCES DATE DESCRIPTION 2022.08.31 BUILDING PERMIT SUBMITTAL COPYRIGHT BOARD AND VELLUM LLC. ALL RIGHTS RESERVED. ORIGINAL SHEET SIZE IS 22"x34" BOARD & VELLUM PROJECT #: 2021054.00 JURISDICTION PROJECT #: TBD

PLOT DATE: 2022.08.22 **COVER SHEET & GENERAL** INFORMATION

SHEET NO .:



PROJECT INFORMATION

TBD

9102 SE 78TH PLACE, MERCER ISLAND, WA 98040

9197800070

WATERSIDE TGW UND INT IN TRACTS A, C & D

SEE SURVEY FOR FULL DESCRIPTION

REMODEL OF EXISTING SINGLE FAMILY RESIDENCE TO INCLUDE EXTERIOR UPGRADES AND THE ADDITION OF AN ELEVATOR AND A PRIMARY SUITE.

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DRAINAGE P	LAN
SOIL MANAGEMENT P	LAN
GRADING AND PAVING P	LAN
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SITE DET	AILS

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ABBREVIATIONS

AT

AB ABV AC ADJ AFF AFG ANCH APPROX ARCH AW	ANCHOR BOLT ABOVE AIR CONDITIONING ADJUSTABLE ABOVE FINISH FLOOR ABOVE FINISH GRADE ANCHOR APPROXIMATE (LY) ARCHITECT (URAL) AWNING
BF BLDG BM BOT BRG BTWN	BOTTOM FLUSH BUILDING BEAM BOTTOM BEARING BETWEEN
C CB CFM CJ CLG CLR CNTR COL CONC CONST CONT CONTR COORD	CASEMENT CATCH BASIN CUBIC FEET PER MINUTE CEILING JOIST CEILING CLEAR CENTER COLUMN CONCRETE CONSTRUCTION CONTINUOUS CONTRACTOR COORDINATE
D DB DEMO DHW DIA DIM DL DN DRY DS DW DWG	DRYER DROP BEAM DEMOLITION DOMESTIC HOT WATER HEATER DIAMETER DIMENSION DEAD LOAD DOWN DRYER DOWNSPOUT DISHWASHER DRAWING
EW E EA EG ELEC EM EQ EQUIP EXH EXIST EXP EXT	EACH WAY EXISTING EACH EGRESS ELECTRICAL ELECTRIC METER EQUAL EQUIPMENT EXHAUST EXISTING EXPANSION EXTERIOR
FD FDN FIN FJ FL FO FURR FT FTG FURN	FLOOR DRAIN FOUNDATION FINISH FLOOR JOIST FLOOR FACE OF FURRING FOOT FOOTING FURNACE
GA GALV GC GEN GL GM GR GWB	GAUGE, GAGE GALVANIZED GENERAL CONTRACTOR GENERAL GLASS GAS METER GRADE GYPSUM WALL BOARD
HB HC HDR HDW HORIZ HR HT HVAC	HOSE BIB HOLLOW CORE HEADER HARDWARE HORIZONTAL HOUR (FIRE RESISTANT RATING) HEIGHT HEATING, VENTILATION & AC
IG IN INCL INFO INSUL INT ISG	INSULATED GLASS INCH INCLUDING INFORMATION INSULATING, INSULATION INTERIOR INSULATED SAFETY GLASS
JT	JOINT
KD KP	KILN DRIED KING POST
LAM LAV	LAMINATED(D) LAVATORY

DRAWING SYMBOL KEY

DC

DOOR CHIME

B L TG VR T WT VL	LAG BOLT LIVE LOAD LIGHT LIGHTING LOUVER LIGHT WEIGHT MICROLAM LAMINATED VENEER LUMBER
Max Mech Med Mfr Min Misc Misc Mtl Mv	MAXIMUM MECHANICAL MEDIUM MANUFACTURER MINIMUM MISCELLANEOUS METAL MICROWAVE
IEC IIC ITS	NECESSARY NOT IN CONTRACT NOT TO SCALE
)/)D)C)FCI)FOI)H)PP)V	OVER OUTSIDE DIAMETER ON CENTER OWNER FURNISHED CONSTRACTOR INSTALLED OWNER FURNISHED OWNER INSTALLED OVERHEAD OPPOSITE OVEN
PC PLAM PLYWD PSF PSI PSL PT PTD PWR	PIPE COLUMN PLASTIC LAMINATE PLYWOOD POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PARALLEL STRAND LUMBER POINT PRESSURE TREATED PAINTED POWER
)TY)UANT	QUALITY QUANTITY
R REINF REQ'D REF REV RF RFG RM RO	RANGE ROOF DRAIN REINFORCING REQUIRED REFRIGERATOR REVISION ROOF ROOF ROOFING ROOM ROUGH OPENING
GAF GC GCH GCHED GCH GCHED GCHED GCHED GCHED GCHED GCH GCHED GCH GCH GCH GCH GCH GCH GCH GCH GCH GCH	SINK SELF-ADHERED FLASHING SOLID CORE SCHEDULE SCHEDULE SECTION SQUARE FOOT SAFETY GLAZING SINGLE HUNG SIMILAR SLIDING WINDOW OR DOOR SPECIFICATION SPRUCE, PINE, FIR SQUARE SQUARE FOOT STAINLESS STEEL SHELF AND ROD STANDARD STEEL STRUCTURAL SYMMETRICAL
BD F &G EMP HK O OG YP	TO BE DETERMINED TOP FLUSH TONGUE AND GROOVE TEMPORARY, TEMPERATURE THICK TOP OF TOGETHER TYPICAL
JNO	UNLESS NOTED OTHERWISE
/AR /ENT /ERT /G /IF	VARIES VENTILATION VERTICAL VERTICAL GRAIN VERIFY IN FIELD
V V/O VASH V/D VM VS VWM	WASHER WITH WITHOUT CLOTHES WASHER WARMING & DRYER WATER METER WIRE SHELVING WELDED WIRE MESH
Ŧ	NUMBER OF POUND(S)

	NORTH ARROW	X DRA	G SCALE
X SIM	BUILDING ELEVATION DRAWING NUMBER SHEET NUMBER	+ 144.25' + 146.67 (E)	SITE POINT ELEVATIO
X SIM	INTERIOR ELEVATION	FLOOR LEVEL ELEV: 121'-6"	<u>FLOOR ELEVATIO</u> DATU
(XX.XX)	DRAWING NUMBER SHEET NUMBER		<u>SPOT ELEVATIO</u> DATU
XX.XX	BUILDING SECTION DRAWING NUMBER	$\underline{\land}$	REVISION TA
	SHEET NUMBER	W.#	WALL/FLOOR/ROC ASSEMBLY TYPE TA
X SIM	WALL SECTION DRAWING NUMBER SHEET NUMBER	нв †	HOSE BIB
SIM		F 50 CFM	EXHAUST FA AIR FLOW RAT
	DETAIL REFERENCE DRAWING NUMBER SHEET NUMBER	RAMP UP	RAMP UP/DOW PERCENT SLOF
SIM		2%	DECK SLOPE TO DRA
XXXXX	<u>STRUCTURAL DETAIL</u> DRAWING NUMBER SHEET NUMBER	9" / 12"	CEILING/ROOF SLOF RISE / RU
—		SD	SMOKE DETECTO
XXXXX SIM	DRAWING NUMBER SHEET NUMBER		CARBON MONOXIDE ALAR
\	CUT MARK		COMBO SMOKE/CARBO MONOXIDE DETECTO
Q	- — CENTERLINE		CLOTHES ROD AND SHEL
(X)	GRID LINE	12 6	ROOF PITC
ELECT	RICAL SYMBOL	KEY	
Φ	110V DUPLEX OUTLET GFI = GROUND FAULT INTERRUPTER FXT = FXTERIOR	-\$- FLU	GH / SEMI-FLUSH FIXTURE
220 ●	220V OUTLET	-⊕- wal	L-MOUNTED FIXTURE

	VIEW TITLE
+ 144.25' + 146.67 (E)	SITE POINT ELEVATION
FLOOR LEVEL ELEV: 121-6"	<u>FLOOR ELEVATION</u> DATUM
- + 8' - 0" AFF	<u>SPOT ELEVATION</u> DATUM
	REVISION TAG
W.#	WALL/FLOOR/ROOF ASSEMBLY TYPE TAG
нв †	HOSE BIBB
F 50 CFM	EXHAUST FAN AIR FLOW RATE
RAMP UP 2%	RAMP UP/DOWN PERCENT SLOPE
2%	DECK SLOPE TO DRAIN
9" / 12"	CEILING/ROOF SLOPE RISE / RUN
SD	SMOKE DETECTOR
CD	CARBON MONOXIDE ALARM
	COMBO SMOKE/CARBON MONOXIDE DETECTOR
	CLOTHES ROD AND SHELF
12	ROOF PITCH

ELEC

Φ 110V 4-PLEX OUTLET GF (D) FLOOR DUPLEX OUTLET (GFI) 0 FLOOR OUTLET (OTHER) WALL OUTLET (SWITCHED) COM JACK T = TELEPHONEC = CABLE $\mathsf{D}=\mathsf{DATA}$ SINGLE POLE SWITCH D = DIMMERJ = JAMBM = MOTIONT = TIMER3 = 3-WAY SWITCH 4 = 4-WAY SWITCH Τ THERMOSTAT CEILING / WALL SPEAKER (SP) CLG CEILING WIRELESS ACCESS POINT WH WALL HEATER DB DOOR BELL

EY	
-ф-	FLUSH / SEMI-FLUSH FIXTURE
Φ	WALL-MOUNTED FIXTURE
\oplus	PENDANT FIXTURE
\bigotimes	RECESSED CEILING FIXTURE
\bigotimes	RECESSED DIRECTIONAL FIXTURE
æ	SITE LIGHTING FIXTURE
¥	TRACK LIGHTING FIXTURE
$\rightarrow \rightarrow$	UNDERCABINET LIGHT FIXTURE
	SURFACE MOUNT STRIP FIXTURE
K	CORNER STRIP FIXTURE
	CEILING MOUNTED FAN W/ OPTIONAL LIGHTING KIT
//	ELECTRICAL WIRING

- DESIGN CONSULTANTS, AS REQUIRED.
- DRAWINGS. 3.
- AUTHORITY.
- FIELD MEASUREMENTS AS NECESSARY.
- 6. 7.
- DRAWN IN FULL.
- SOUND, WATER AND AIR PROOFED, DURABLE PROJECT.
- - EXCEPTIONS:

a) WINDOWS WHOSE OPENINGS WILL NOT ALLOW A 4-INCH-DIAMETER SPHERE TO PASS THROUGH. b) OPENINGS THAT ARE PROVIDED WITH WINDOW GUARDS THAT COMPLY WITH ASTM F 2006 OR F 2090.

- APPROXIMATE AND FOR REFERENCE ONLY.

FINISHES KEY

NOTE: NOT ALL TYPES ARE USED IN THIS PROJECT. X = ITEMIZED DESCRIPTOR (NUMBER ONLY)

CARPET	
FABRIC FB-X	
GLASS GL-X	
METAL MT-X	
PLASTIC LAMINATE	

PLASTIC LAMINATE	
PL-X	

PAINT PT-X

RESILIENT FLOORING RF-X

CONTRACT GENERAL NOTES

1. GENERAL CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION SITE MEETING WITH OWNER, ARCHITECT AND OTHER GENERAL CONTRACTOR SHALL VERIFY EXISTING GRADE CONDITIONS AND HEIGHT LIMITS WITH ARCHITECT ON SITE PRIOR TO BEGINNING OF WORK AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY IN THE SITE SURVEY AND/OR OTHER

PRIOR TO COMMENCEMENT OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES NOTED AMONG OR BETWEEN THE CONTRACT DOCUMENTS, OWNER-PROVIDED INFORMATION, SITE CONDITIONS, MANUFACTURER RECOMMENDATIONS, OR CODES, REGULATIONS, OR RULES OF JURISDICTIONS HAVING

4. PRIOR TO COMMENCEMENT OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONTRACT DOCUMENTS, OWNER-PROVIDED INFORMATION, AND SITE CONDITIONS, INCLUDING TAKING AND VERIFYING

5. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL GOVERNMENTAL PERMITS, FEES, LICENSES, AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK, EXCEPT FOR THE GENERAL BUILDING PERMIT. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY. WHAT IS REQUIRED BY ONE SHALL BE BINDING AS IF REQUIRED BY

REPETITIVE FEATURES NOT INDICATED IN THE DRAWINGS EVERYWHERE THAT THEY OCCUR SHALL BE PROVIDED AS IF

8. SEE SPECIFICATIONS BOOK FOR REQUIRED SHOP DRAWINGS. GENERAL CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS TO ARCHITECT; AFTER ARCHITECT'S REVIEW, TO GOVERNING AUTHORITY. 9. THE INTENT OF ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS IS TO SHOW DESIGN APPROACH. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY AND BAILIWICK TO PROPERLY INSTALL AND EXECUTE A STRUCTURALLY

10. COORDINATE ALL EXTERIOR PENETRATIONS WITH ARCHITECT PRIOR TO PERFORMING WORK. 11. IT IS THE INTENT OF THE CONTRACT DOCUMENTS THAT ALL WORK COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE INCLUDING LOCAL AND WASHINGTON STATE AMMENDMENTS, THE WASHINGTON STATE ENERGY CODE, AND

OTHER APPLICABLE CODES, RULES, AND REGULATIONS OF JURISDICTIONS HAVING AUTHORITY. 12. EXTERIOR GLAZING TO BE NFRC LABELED PER 2018 WSEC R303.1.3. IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. GLAZING BETWEEN THE FLOOR AND 24 INCHES SHALL BE FIXED OR HAVE OPENINGS THROUGH WHICH A 4-INCH-DIAMETER SPHERE CANNOT PASS.

CONTRACT DIMENSION NOTES

1. DO NOT SCALE THE DRAWINGS. LARGE SCALE DIMENSIONS GOVERN SMALL SCALE DIMENSIONS. GENERAL CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY IN DIMENSIONS, PRIOR TO PROCEEDING WITH WORK. AT NEW CONSTRUCTION, ALL DIMENSIONS ARE TO FACE OF FRAMING, FACE OF CONCRETE, CENTER LINE OF COLUMNS, AND CENTERLINE OF WINDOWS AND DOORS, UNLESS NOTED OTHERWISE. 3. AT EXISTING CONSTRUCTION, DIMENSIONS ARE TO FINISH FACE OF MATERIALS, UNLESS NOTED OTHERWISE.

4. SITE PLAN DIMENSIONS UNACCOMPANIED BY A LICENSED SURVEY IN THE POSTED DRAWING SET ARE CONSIDERED 5. GRAPHIC SCALES ARE PROVIDED FOR REFERENCE ONLY. WHERE DRAWINGS OF DIFFERENT SCALES ARE PROVIDED ON

THE SAME SHEET, GRAPHIC SCALES ARE REMOVED FOR CLARITY. 6. DIMENSIONS WITH ACCOMPANYING TEXT (E.G. CLEAR, HOLD, EQUAL) SHALL BE VERIFIED IN FIELD. ANY CHANGES TO THESE DIMENSIONS REQUIRE APPROVAL BY ARCHITECT.

SCHEDULES KEY

NOTE: NOT ALL TYPES ARE USED IN THIS PROJECT. X = ITEMIZED DESCRIPTOR (LETTER OR NUMBER)() = REFERENCE PROJECT MANUAL DIVISION

SPECIALTY FINISH	EGSSG	EG = EGRESS SG = TEMPERED	WINDOW TAG
	XXX		DOOR TAG
SOLID SURFACE	SVG XX	SALVAGE TAG	(DIVISION 2)
	L-XX	LIGHTING TAG	(DIVISION 26)
STONE ST-X	(P-XX)	PLUMBING TAG	(DIVISION 22)
	SPC-X	SPECIALTY TAG	(RESERVED)
TILE TL-X	FUR-X	FURNISHINGS TAG	(DIVISION 12)
	EQP-X	EQUIPMENT & APPLIANCE TAG	(DIVISION 11)
WOOD WD-X	(BAC-X)	(BATH) ACCESSORY TAG	(DIVISION 10)
	(DAC-X)	(DECORATIVE) ACCESSORY TAG	(DIVISION 10)
WC-X	$\langle HWC-X \rangle$	(CABINET) HARDWARE TAG	(DIVISION 6)
	(HWD-X)	(DOOR) HARDWARE TAG	(DIVISION 8)
	(HWW-X)	(WINDOW) HARDWARE TAG	(DIVISION 8)



STAIR CODE REQUIREMENTS



R311.7 STAIRWAYS

- STAIRS
- RISER HEIGHT SHALL BE A MAXIMUM OF 7 3/4"
- TREAD DEPTH SHALL BE A MINIMUM OF 10" A NOSING IS NOT REQUIRED WHERE TREAD DEPTH IS MINIMUM 11"
- TREAD WIDTH SHALL BE MINIMUM OF 3'-0"
- CLEAR HEAD HEIGHT TO BE A MINIMUM OF 6'-8" MEASURED VERTICAL FROM THE TREAD NOSING PER R311.7.2
- OPEN RISERS TO NOT ALLOW A 4" DIAMETER SPHERE OR GREATER TO PASS PER R311.7.5.1 • A FLIGHT OF STAIR SHALL NOT HAVE A VERTICAL RISE GREATER THAN 12'-3" PER R311.7.3.
- LANDING WIDTH SHALL BE NO LESS THAN THE WIDTH OF STAIRWAY, AND MINIMUM 36" DEPTH PER R311.7.6.
- HANDRAILS
- HANDRAIL HEIGHT, MEASURED VERTICALLY, SHALL BE BETWEEN 34" AND 38"
- HANDRAILS SHALL BE CONTINUOUS FOR FULL FLIGHT
- HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS HANDRAIL TO BE A MINIMUM OF 1 1/2" IN DIAMETER
- GUARDS
- GUARDS ON THE OPEN SIDES OF STAIRS SHALL HAVE A HEIGHT NOT LESS THAN 34 INCHES MEASURED VERTICALLY FROM
- A LINE CONNECTING THE LEADING EDGES OF THE TREADS PER R312.1.2.1 GUARDS ON THE OPEN SIDE OF STAIRS SHALL NOT HAVE OPENINGS THAT ALLOW PASSAGE OF A SPHERE 4-3/8 INCHES IN
- DIAMETER PER R312 1 3 THE TRIANGULAR OPENINGS AT THE OPEN SIDE OF STAIR FORMED BY THE RISER, TREAD, AND BOTTOM RAIL GUARD SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES IN DIAMETER PER R312.1.1.1
- **GUARDS CODE REQUIREMENTS**



ALL GUARDRAILS OPENINGS TO NOT ALLOW A 4" DIAMETER SPHERE TO PASS THROUGH

R302.7

R312 GUARDS

- GUARDS ARE REQUIRED AT OPEN-SIDED WALKING SURFACES LOCATED MORE THAN 30" ABOVE ADJACENT WALKING
- SURFACE OR GRADE PER GUARDS SHALL NOT BE LESS THAN 36 INCHES IN HEIGHT VERTICALLY ABOVE THE WALKING SURFACE
- GUARDS SHALL NOT HAVE OPENINGS FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT THAT ALLOW
- PASSAGE OF A SPHERE 4 INCHES GUARDRAIL TO BE DESIGNED TO RESIST A 200 LB CONCENTRATED LOAD ON THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS

NOTE: GUARD EXCEPTIONS FOR STAIRS NOTED ON STAIR CODE REQUIREMENTS

VENTILATION & EXHAUST NOTES

REFERENCE: 2018 INTERNATIONAL RESIDENTIAL CODE - CHAPTER 15 CLOTHES DRYER - M1502

- 1. CLOTHES DRYERS SHALL BE EXHAUSTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS PER SECTION
- M1502.1 2. VENTILATION DUCT FOR THE DRYER SHALL BE A MINIMUM 4" DIAMETER. THE MATERIAL SHALL BE 28 GAGE METAL
- WITH A SMOOTH INTERIOR FINISH PER SECTION M1502.3. 3. EXHAUSTS SHALL TERMINATE TO THE EXTERIOR AND CONTAIN A BACKDRAFT DAMPER. SCREENS SHALL NOT BE
- INSTALLED AT THE DUCT TERMINATION PER SECTION M1502.3

RANGE HOOD - M1503, M1505

- 1. RANGE HOODS SHALL TERMINATE TO THE EXTERIOR THROUGH A DUCT. THE DUCT SHALL HAVE A SMOOTH INTERIOR SURFACE, BE AIR TIGHT, SHALL BE EQUIPPED WITH A BACK-DRAFT DAMPER AND SHALL BE INDEPENDENT OF ALL OTHER EXHAUST SYSTEMS 2. VENT SHALL HAVE A MINIMUM EXHAUST RATE OF 100 CFM INTERMITTENT OR 25 CFM CONTINUOUS PER TABLE
- 1505.4.4(1). 3. EXHAUST HOOD SYSTEMS CAPABLE OF EXHAUSTING IN EXCESS OF 400 CFM SHALL BE PROVIDED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST AIR RATE. SUCH MAKEUP AIR SYSTEMS SHALL BE EQUIPPED WITH A MEANS OF CLOSURE AND SHALL BE AUTOMATICALLY CONTROLLED TO START AND OPERATE

MECHANICAL VENTILATION - LOCAL EXHAUST M1505

- 1. SOURCE SPECIFIC EXHAUST VENTILATION SHALL BE REQUIRED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM, INDOOR SWIMMING POOL, SPA, AND OTHER ROOMS WHERE WATER VAPOR OR COOKING ODOR IS PRODUCED PER SECTION M1507.4.
- KITCHENS SHALL VENT AT 100 CFM MIN INTERMITTENT OR 25 CFM CONTINUOUS PER TABLE M1507.4. BATHROOMS, TOILET ROOMS, LAUNDRY ROOMS AND SIMILAR SPACES SHALL VENT AT 50 CFM INTERMITTENT OR 20
- CFM CONTINUOUS PER TABLE M1507.4. 4. EXHAUST AIR FROM BATHROOMS AND TOILET ROOMS SHALL BE EXHAUSTED DIRECTLY OUTDOORS PER SECTION
- M1507.2. 5. ALL VENTILATION SYSTEM CONTROLS SHALL BE READILY ACCESSIBLE. SOURCE SPECIFIC SYSTEMS SHALL BE CONTROLLED BY MANUAL SWITCHES, DEHUMIDISTATS, TIMERS OR OTHER APPROVED MEANS PER SECTION
- M1507.4.2 6. EXHAUST DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED TO A MINIMUM OF R-4 PER SECTION M1507.3.6.4.

WHOLE HOUSE VENTILATION - M1505

- 1. A WHOLE HOUSE VENTILATION SYSTEM SHALL BE PROVIDED TO MEET THE REQUIREMENTS OF SECTION M1505. SIZE OF SYSTEM DETERMINED PER CALCULATION PROVIDED. 2. INTERMITTENTLY OPERATED WHOLE HOUSE VENTILATION SYSTEMS SHALL HAVE THE CAPABILITY FOR CONTINUOUS
- OPERATION, AND SHALL HAVE A MANUAL TIMER AND AN AUTOMATIC CONTROL, SUCH AS A CLOCK TIMER IF REQUIRED. 3. WHOLE HOUSE VENTILATION SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER SECTION AND VENT TO THE
- FXTERIOR 4. WHERE LOCAL EXHAUST VENTS ARE USED FOR WHOLE HOUSE VENTILATION, THE MINIMUM EXHAUST RATE FOR THE
- LOCAL EXHAUST MUST BE MET. 5. THE BUILDING SHALL BE EQUIPPED WITH A WHOLE HOUSE VENTILATION SYSTEM INTEGRATED WITH THE BATHROOM VENTILATION AND SIZED TO ACCOMMODATE AIR MOVEMENT AS CALCULATED BELOW. INLETS SHALL BE SCREENED OR OTHERWISE PROTECTED FROM ENTRY BY LEAVES OR OTHER MATERIAL.

MECHANICAL VENTILATION CALCULATIONS

REFERENCE: 2018 WASHINGTON STATE ENERGY CODE 2018 INTERNATIONAL RESIDENTIAL CODE M1505

PER M1505.4.3 THE WHOLE HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR AT A CONTINUOUS RATE AS DETERMINED IN TABLE BELOW:

DWELLING UNIT FLOOR AREA (NEW + EXISTING))	
UPPER FLOOR	
MAIN FLOOR	
LOWER FLOOR	

TOTALS

INTERMITTENT VENTILATION ADJUSTMENT FACTOR PER M1505.4.3.1

TOTAL REQUIRED INTERMITTENT VENTILATION

INTERMITTENT VENTILATION PROVIDED BY BATHROOM FANS RUNNING @ 50% TIME INTERVAL MINIMUM.

EQUATION 15-1: REFERENCE VENTILATION RATE = $(0.01 \times 101 \text{ AL HOUSE SQUARE FOOT AREA}) + (7.5 \times (\text{NUMBER OF BEDROOMS } + 1))$ $96.6 = (0.01 \times 5.160) + (7.5 \times 5)$

SIMULTANEOUSLY WITH THE EXHAUST SYSTEM PER SECTION M1503.6.

REQUIRED CONTINUOUS VENTILATION PER EQUATION 15-1

TOTAL SF 2,231 SF 2,009 SF 920 SF	<u>Required Airflow</u>
5,160 SF	96.6 CFM
RATE = 50% / 4HF	2
	193.2 CFM

ENERGY CODE REQUIREMENTS

REFERENCE: 2018 WASHINGTON STATE ENERGY CODE

R401.3 COMPLIANCE CERTIFICATE: A RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE COMPLYING WITH WSEC 401.3 IS REQUIRED TO BE COMPLETED BY A DESIGN PROFESSIONAL OR BUILDER AND PERMANENTLY POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED. A UTILITY ROOM. OR AN APPROVED LOCATION INSIDE THE BUILDING.

TABLE R402.1.1 INSULATION & FENESTRATION REQUIREMENTS BY COMPONENT FOR CLIMATE ZONE 5 AND MARINE 4

FENESTRATION U-FACTOR
SKYLIGHT U-FACTOR
CEILING R-VALUE
VAULTED CEILING R-VALUE
WOOD FRAMED WALL R-VALUE
BELOW-GRADE WALL R-VALUE
FLOOR R-VALUE
SLAB ON GRADE R-VALUE & DEPTH

0.50
R-49 ¹
R-38 ¹
R-21 INT
**10/15/21 +
R-30
***R-10,2FT

0.30

INT - (INTERMEDIATE FRAMING) DENOTES STANDARD FRAMING 16 INCHES ON CENTER WITH HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.

· TF

** "10/15/21 + TB" MEANS R-10 CONTINUOUS INSULATION ON THE EXTERIOR OF THE WALL, OR R-15 CONTINUOUS INSULATION ON THE INTERIOR OF THE WALL, OR R-21 CAVITY INSULATION PLUS A THERMAL BREAK BETWEEN THE SLAB AND THE BASEMENT WALL AT THE INTERIOR OF THE BASEMENT WALL. "10/15/21 + 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.

*** R-10 CONTINUOUS INSULATION IS REQUIRED UNDER HEATED SLAB (I.E. RADIANT FLOOR HEATED) ON GRADE FLOORS.

¹ IF ADVANCED FRAMING ALLOWS FULL DEPTH ACROSS ENTIRE SURFACE R-38 IS ACCEPTABLE. INSTALL R-49 IF INSULATION IS REDUCED AROUND CEILING PERIMETER

R402.4 BUILDING AIR LEAKAGE AND TESTING: THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE AND BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE BELOW 5 AIR CHANGES PER HOUR

R403.1 CONTROLS: EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE

R403.3 DUCTS: DUCTWORK IN UNCONDITIONED SPACES SHALL BE INSULATED WITH R-8 INSULATION MINIMUM. DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR AND HOMEOWNER PRIOR TO AN APPROVED FINAL INSPECTION

R404.1 LIGHTING: MINIMUM 90% OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

R406.3 ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS - CREDIT SELECTION: 3 CREDITS REQUIRED - ADDITIONS TO EXISTING BUILDING GREATER THAN 500 SQUARE FEET OF HEATED FLOOR AREA BUT LESS

THAN 1500 SQUARE FEET (SEE AREA CALCULATOR ON G1.02)

ENERGY CREDITS

- 2.3 AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 1.5 CREDITS REDUCE THE TESTED AIR LEAKAGE TO 1.5 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS
- 5.4 EFFICIENT WATER HEATING (SEE SPECIFICATION ON LOWER LEVEL PLAN A2.02) - 1.5 CREDITS ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER I OF NEEA'S ADVANCED WATER HEATING SPECIFICATION 6.1 - RENEWABLE ENERGY (SOLAR PANELS, SEE ROOF PLAN A 2.32) 1.0 CREDIT
- SOLAR ELECTRIC SYSTEM TO MEET REQUIREMENT USING THE NATIONAL RENEWABLE ENERGY LABORATORY CALCULATOR PVWATTS OR APPROVED ALTERNATE BY THE CODE OFFICIAL

TOTAL 4.0 CREDITS

BUILDING CODE SUMMARY

R302.6 DWELLING / GARAGE SEPARATION

- R304 AND R305 ROOM DIMENSION REQUIREMENTS
- BEAMS, GIRDERS AND DUCTS MAY HAVE A CLEAR HEIGHT OF 6'-4".
- THE SHOWERHEAD
- 7'-0"

R308 GLAZING

ALL GLAZING IN HAZARDOUS LOCATIONS SHALL RECEIVE SAFETY GLASS. THE SAFETY GLASS DESIGNATION SHALL BE VISIBLY MARKED ON EACH WINDOW AS REQUIRED BY CODE. THE FOLLOWING AREAS ARE HAZARDOUS LOCATIONS AND SHALL

- **RECEIVE SAFETY GLASS:** GLAZING IN DOORS
- THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE FINISH FLOOR
- GI A7ING
- BATHTUF GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAY

- EMERGENCY ESCAPE AND RESCUE OPENING
- MINIMUM NET CLEAR WIDTH OF 20".
- KNOWLEDGE.

R312 WINDOW FALL PROTECTION

SD: IN EACH SLEEPING ROOM.

NOTES

ISLAND MUNICIPAL CODE SECTION 17.07.

2. FIRE ACCESS:

a.	ACCESS ROADS
	OVER 500' THEY
	DRIVEWAY AT TI
b.	MINIMUM DRIVE
C.	GRADE SHALL N
	ALTERNATIVE RE
	GRADE APPEARE
d.	LENGTH SHALL
	503.2.1)
	CURRENTLY PRO
e.	SURFACE SHALL
	ASPHALT. (IF G
f.	FIRE ACCESS BC
••	APPARATUS TUR
a	

3. FIRE FLOW (HYDRANTS)

a.	A HYDRANT CAP
	"HTTPS://CODES
	INTERNATIONAL
	BUILDING (600')
b.	FIRE HYDRANT: I
	1. THIS WOUL
	2. THIS WOUL
C.	THIS CURRENTL
d.	DISTANCE TO AC
e.	DISTANCE TO RE
f.	DISTANCE FROM

4. SPRINKLERS

. THIS WILL BE DETERMINED ON THE VALUATION FACTOR OF OVER 50% REMODEL COST. b. DECREASED FIRE FLOW, ACCESS, GRADE, OR BUILDING SIZE MAY REQUIRED THE INSTALLATION OF A NFPA 13R OF 13 SPRINKLER SYSTEM. c. WATER METER SIZING IS REQUIRED FOR THE INSTALL OF A FIRE SPRINKLER SYSTEM

5. FIRE ALARM SYSTEMS

LISTED ABOVE.

REFERENCE: 2018 INTERNATIONAL RESIDENTIAL CODE, MERCER ISLAND CITY CODE

THE GARAGE SHALL BE SEPARATED AS FOLLOWS

• MINIMUM 1/2" GYPSUM WALL BOARD APPLIED TO GARAGE SIDE AT WALLS (1 HOUR RATING).

- MINIMUM 5/8" TYPE X GYPSUM WALL BOARD APPLIED TO THE CEILING OF GARAGE. MINIMUM 1/2" GYPSUM WALL BOARD AT STRUCTURES SUPPORTING THE GARAGE CEILING
- MINIMUM 1 3/8" SOLID CORE DOOR, OR 20-MIN FIRE RATED DOORS, EQUIPPED WITH A SELF-CLOSING DEVICE.

HABITABLE SPACE SHALL HAVE A MINIMUM CEILING HEIGHT OF 7'-0".

• BATHROOMS, TOILET ROOMS, AND LAUNDRY ROOM SHALL HAVE A MINIMUM CEILING HEIGHT OF 6'-8". • A SHOWER OR TUB EQUIPPED WITH A SHOWERHEAD MUST HAVE AN AREA OF 30" X 30" WITH 6'-8" CEILING HEIGHT AT

 FOR ROOMS WITH SLOPED CEILINGS, THE REQUIRED FLOOR AREA OF THE ROOM SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 5'-0" AND NOT LESS THAN 50% OF THE REQUIRED FLOOR AREA SHALL HAVE A CEILING HEIGHT LESS THAN

 HABITABLE ROOMS (SLEEPING ROOMS) SHALL HAVE A FLOOR AREA NOT LESS THAN 70 SQUARE FEET. • HABITABLE ROOMS (SLEEPING ROOMS) SHALL NOT BE LESS THAN 7'-0" IN ANY HORIZONTAL DIMENSION.

 GLAZING WITHIN 24" ARC OF EITHER VERTICAL EDGE OF DOOR IN A CLOSED POSITION AND WHERE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE FINISH FLOOR.

- GLAZING IN WINDOWS THAT MEETS ALL OF THE FOLLOWING:
 - THE TOP EDGE OF GLAZING IS MORE THAN 36" ABOVE FINISH FLOOR

ONE OR MORE WALKING SURFACES ARE WITHIN 36" MEASURED HORIZONTALLY AND IN A STRAIGHT LINE OF THE

GLAZING AT WET SPACES WHERE THE BOTTOM OF EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" (EXCEPTION: FOR GLAZING THAT IS MORE THAN 60" MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, FROM THE WATER'S EDGE OF A

R310 EMERGENCY ESCAPE AND RESCUE OPENINGS

BASEMENTS, HABITABLE ATTICS, AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE

THE OPENING SHALL HAVE MAX CLEAR OPENING SILL HEIGHT OF 44" ABOVE FINISH FLOOR, AND IT SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR TO A YARD THAT OPENS TO PUBLIC WAY.

 THE OPENING SHALL HAVE A NET CLEAR OPENING OF 5.7 SQUARE FEET, WITH MINIMUM NET CLEAR HEIGHT OF 24" AND THE OPENING SHALL BE OPERATIONAL FROM INSIDE THE ROOM WITHOUT THE USE OF KEYS, TOOLS, OR SPECIAL

 WHEN THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72" ABOVE FINISH GRADE BELOW (EXTERIOR SIDE), THE LOWEST PART OF CLEAR OPENING SHALL BE MINIMUM 24" ABOVE FINISH FLOOR. IF CLEAR OPENING IS LESS THAN 24" ABOVE FINISH FLOOR, MAX WINDOW OPENING SHALL NOT ALLOW PASSAGE OF A 4" DIAMETER SPHERE.

R314 SMOKE DETECTORS /315 CARBON MONOXIDE ALARM

PROVIDE A SMOKE DETECTOR AND CARBON MONOXIDE IN THE FOLLOWING LOCATIONS:

SD: OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS. CD: MINIMUM ONE AT EACH STORY OF THE DWELLING INCLUDING BASEMENT.

 ALL CODE SUMMARIES ABOVE ARE FOR REFERENCE ONLY PLEASE REFER TO THE CITY OF MERCER ISLAND'S BUILDING DEPARTMENT AND CODES FOR FURTHER DETAILS

FIRE CODE SUMMARY

REFERENCE: WASHINGTON STATE BUILDING CODE (CHAPTER 19.27 RCW AND 51-54A-002) ADOPTED BY THE MERCER

1. SPECIAL CONSIDERATIONS: REFER TO THE FIRE VALUATION FORM SUBMITTED WITH THE PERMIT DOCUMENTS

a. 0-10% VALUATION = NO FIRE REVIEW b. 11-49% VALUATION = MONITORED FIRE ALARM SYSTEM WITH DEFICIENCIES. c. 50%+ VALUATION= FIRE SPRINKLER SYSTEM INSTALL FIRE SPRINKLER SYSTEM TO BE INSTALLED

> S (DEFINED UNDER IFC 202) UNDER 500' ARE REQUIRED TO BE 20' IN WIDTH. FOR ACCESS ROADS ARE REQUIRED TO BE 26'. IFC 503.2.1, D103.1, MICC 17.07.020) TIME OF REVIEW WAS 15.67'.

(EWAY WIDTHS (FOR PLANNING PURPOSES) ARE OUTLINE IN MICC 19.09.040 NOT EXCEED 10%. GRADES OVER 10% BUT UNDER 20% (MAX) MAY BE EVALUATED FOR CODE REQUESTS. (IFC 503.2.7).

RED TO BE 15.9%. NOT EXCEED 150' FROM FURTHEST PORTION OF THE BUILDING AS ONE WOULD WALK. (IFC

OPOSED AT 149' L BE ABLE TO WITHSTAND AND IMPOSED LOAD OF 75,000 POUNDS AND BE CONSTRUCTED OF GRADE EXCEEDS 15% THIS SHALL BE BRUSHED CONCRETE) (IFC D102.1, MICC 19.09.040) OADS, PRIVATE ACCESS ROADS, DRIVEWAYS IN EXCESS OF 150' SHALL HAVE PROVISIONS FOR FIRE JRN-AROUND AS LISTED/ILLUSTRATED IN APPENDIX D OF THE IFC. q. TURN AROUND MUST BE PROVIDED FOR ACCESS ROADS IN EXCESS 150'. (IFC APPENDIX D'

- PABLE OF FLOWING THE REQUIRED FIRE FLOW AS OUTLINE IN THE HYPERLINK S.ICCSAFE.ORG/CONTENT/IFC2018/APPENDIX-B-FIRE-FLOW-REQUIREMENTS-FOR-BUILDINGS" FIRE CODE APPENDIX B SHALL BE LOCATED WITHIN 300' OF THE FURTHEST PORTION OF THE) FOR A BUILDING WITH AN APPROVED SPRINKLER SYSTEM. (IFC APPENDIX B) : I4-55 1565 GPG AT 90PSI JLD ALLOW FOR A NON-SPRINKLERED HOME NOT TO EXCEED 3600 SQ/FT
- LD ALLOW FOR A SPRINKLERED HOME TO BE =/-11,000 SQ/FT WITH REDUCTION FACTOR. LY DOES NOT MEET REQUIREMENTS WITH 50% REDUCTION DUE TO FIRE SPRINKLER SYSTEM.
- $ACCESS \cdot 183' = GOOD$ REAR OF RESIDENCE FROM HYDRANT 339' = DEFICIENCY
- M ACCESS TO REAR OF HOME 149' +/- (MUST BE UNDER 150')

a. THIS MAY BE REQUIRED AS PART OF THE VALUATION FACTOR. NFPA 72 MONITORED FIRE ALARM SYSTEMS MAY BE REQUIRED AS PART OF MITIGATION FOR DEFICIENCIES AS







 $6 \quad \begin{array}{c} \textbf{EXISTING SECOND FLOOR} \\ \hline 1/16^{"} = 1^{"}-0^{"} \end{array}$

AVERAGE GRADE CALCULATION

MERCER ISLAND MUNIC	CIPAL CODE 19.02.020): WIGHTED	SUM OF MIDPOINT ELEVATIONS		
		N AAA.AA			
BUILDING FACADE	LENGTH		MIDPOINT ELEVATION		TOTAL
Α.	21.54'	Х	180.90	=	3,896.58
B.	36.12'	Х	180.95	=	6,535.91
C.	1.91'	Х	180.86	=	345.44
D.	5.04'	Х	180.90	=	911.73
E.	7.95'	Х	180.85	=	1,437.75
F.	16.18'	Х	180.50	=	2,920.49
G.	4.06'	Х	179.50	=	728.77
H.	11.33'	Х	177.75	=	2,013.90
l.	1.45'	Х	177.00	=	256.65
J.	8.16'	Х	175.95	=	1,435.75
К.	9.54'	Х	173.47	=	1,654.90
L.	4.5	Х	173.61	=	781.24
M.	26.14'	Х	173.62	=	4,538.42
Ν.	24.66'	Х	173.75	=	4,284.67
0.	4.04'	Х	174.21	=	703.80
Р.	8.79'	Х	175.60	=	1.543.52
Q.	1.97'	Х	177.13	=	348.94
R.	8.60'	Х	178.18	=	1,532.34
S.	2.93'	Х	179.30	=	525.34
T.	13.62'	Х	179.70	=	2,447.51
U.	2.91'	Х	180.15	=	524.23
V.	21.62'	Х	180.50	=	3,902.41
W.	10.60'	Х	180.90	=	1,917.54
Х.	3.93'	Х	180.70	=	710.15
TOTAL	257.59'				45,897.98





AVERAGE GRADE REFERENCED TO 0'-0" DATUM GRADE AVERAGE: 178.81' DECIMAL FEET OR (178' - 9 23/32") MAX WALL HEIGHT: 30'-0" OR (208' 9 - 3/4") PROPOSED HEIGHT: 208' - 1 7/16"

AVERAGE MIDPOINT ELEVATION



(45,897.98/257.59) = 178.81

(XXX-XXX) = -X'-X''

AVERAGE GRADE ELEVATION DIAGRAM (NOT TO SCALE) $\overline{(7)}$



PROPOSED SECOND FLOOR 1/16" = 1'-0" 3

2 PROPOSED FIRST FLOOR1/16" = 1'-0"

PROPOSED BASEMENT ✓ 1/16" = 1'-0"

		CONDITIONED	
AREA NAME	AREA (SF)	SPACE	PHASE OF CONSTRUCTION
GARAGE	777 SF	No	EXISTING
No	777 SF		
BASEMENT	920 SF	Yes	EXISTING
MAIN FLOOR	1833 SF	Yes	EXISTING
VIAIN FLOOR (NEW)	176 SF	Yes	NEW CONSTRUCTION
SECOND FLOOR (EXISTING)	1255 SF	Yes	EXISTING
SECOND FLOOR (NEW)	976 SF	Yes	NEW CONSTRUCTION
Yes	5160 SF		
Grand total	5937 SE		$ \rightarrow$

AREA	TYPES

EXISTING
EXISTING - EXTERIOR
NEW CONSTRUCTION
NEW CONSTRUCTION - EXTERIOR

GROSS FLOOR AREA

PER MERCER ISLAND CITY CO	DE 19	.02.020
ZONING	=	R-9.6

THE GROSS FLOOR AREA SHALL NOT EXCEED 8,000 SF OR 40% OF LOT AREA, WHICHEVER IS LESS

LOT AREA

= 14,944 SF

40% OF 14,944 = 5,978 SF < 8,000 SF

MAX. ALLOWABLE GROSS FLOOR AREA = 5,978 SF

<u>GROSS FLOOR AREA</u> THE SUM OF THE FLOOR AREAS BOUNDED BY THE EXTERIOR FACES OF EACH BUILDING ON A RESIDENTIAL LOT.

BASEMENT BELOW GRADE MODIFIER PER TITLE 19 APPENDIX B TOTAL BASEMENT AREA x SUM (WALL SEGMENT COVERAGE x WALL SEGMENT LENGTH) - SEE EXTERIOR ELEVATIONS FOR WALL SEGMENT COVERAGE % (54.469 / 136.8) = 38%

$A = 10.6 \times 3\%$	= 0.318
$B = 23.7 \times 0\%$	= 0
$C = 26.3 \times 0\%$	= 0
$D = 7.9 \times 0\%$	= 0
$E = 5.9 \times 5\%$	= 0.295
$F = 19 \times 58\%$	= 11.02
$G = 9.4 \times 94\%$	= 8.836
$H = 16.8 \times 100\%$	= 16.8
$I = 13 \times 100\%$	= 13
$J = 4.2 \times 100\%$	= 4.2
= BASEMENT AREA	X PERCENT COVERED

= 920 x 38% = 396 SF

GROSS FLOOR AREA = 5,541 < 5,978 SF

ASEMENT MODIFICATION - LESS 396 SF --- --

= **5541 SF** (WITH MODIFIERS) - SEE GROSS FLOOR AREA SUMMARY ABOVE

LEUNG RESIDENCE Roject address: 102 S.E. 78TH Place Tercer Island, wa 98040 Winer: Evin & Nancy Leung
PROJ 9102 (MERC OWNE

REVISION DATE

DESCRIPTION

ISSUANCES DATE DESCRIPTION

2022.08.31	BUILDING PERMIT SUBMITTAL

COPYRIGHT BOARD AND VELLUM LLC. ALL RIGHTS RESERVED. ORIGINAL SHEET SIZE IS 22"x34" BOARD & VELLUM PROJECT #: 2021054.00 BAINBRIDGE PROJECT #: TBD

PLOT DATE: 2022.08.22 CODE DIAGRAMS - LAND USE

SHEET NO .:

NORTH

4 1/16" = 1'-0"

LOT COVERAGE CALCULATIONS

PER MERCER ISLAND CITY CODE 19.02.060

I. LOT COVERAGE IS CALCULATED BY TOTALLING THE FOLLOWING:

1. ALL DRIVABLE SURFACES (DRIVEWAY, PARKING PAD, TURN-AROUNDS ETC. REGARDLESS OF THE MATERIAL TYPE (E.G. PERVIOUS DRIVEWAY COUNTS TOWARDS LOT COVERAGE) 2. ROOF LINE (INCLUDES EAVES AND COVERED DECKS)

II. LOT COVERAGE IS LIMITED TO A PERCENTAGE OF NET LOT AREA; THIS PERCENTAGE VARIES BETWEEN 20-40% DEPENDING ON THE SLOPE OF THE LOT. LOT SLOPE IS CALCULATED BY SUBTRACTING THE LOWEST EXISTING ELEVATION FROM THE HIGHEST EXISTING ELEVATION AND DIVIDING THE RESULTING NUMBER BY THE SHORTEST

LOT SLOPE CALCULATIONS AS FOLLOWS (SEE SURVEY FOR HIGH AND LOW REFERENCE ELEVATIONS) HIGHEST ELEVATION POINT OF LOT = 198.5LOWER ELEVATION POINT OF LOT = 149.2

ELEVATION DIFFERENCE = 49.3HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS $= 156.6^{\circ}$

LOT COVERAGE FOR SLOPES BETWEEN 30% AND 50% = 30%

GROSS LOT AREA		14,944 SF
NET LOT AREA		14,944 SF
ALLOWED LOT COVERAGE AREA		4,483 SF
ALLOWED LOT COVERAGE		30% OF LOT
EXISTING LOT COVERAGE:		
1. MAIN STRUCTURE ROOF AREA		3,189 SF
2. ACCESSORY BUILDING ROOF AREA		0 SF
3. VEHICULAR USE		1,050 SF
4. COVERED PATIOS AND COVERED DECKS		918 SF
5. TOTAL EXISTING LOT COVERAGE (E1 + E2 + E3 + E4)	=	5,157 SF
TOTAL LOT COVERAGE AREA REMOVED		5,157 SF
PROPOSED ADJUSTMENT FOR SINGLE STORY (AREA)		N/A
PROPOSED ADJUSTMENT FOR FLAG LOT		N/A
OTAL NEW LOT COVERAGE AREA		
1. MAIN STRUCTURE ROOF AREA		3,288 SF
2. ACCESSORY STRUCTURE ROOF AREA		0 SF
3. VEHICULAR USE		940 SF
4. COVERED PATIOS AND COVERED DECKS		220 SF
5. TOTAL NEW LOT COVERAGE AREA (I1 + I2 + I3 + I4)	=	4,448 SF
TOTAL PROJECT LOT COVERAGE AREA (E5 - F) + I5	=	4,448 SF
PROPOSED LOT COVERAGE AREA (J/B) x 100	=	29.8%

AREAS - LOT COVERAGE	EXISTING
COVERAGE TYPE	AREA
ATIO / COVERED DECK	918 SF
E ROOF STRUCTURE	3189 SF
USE	1050 SF
	5157 SF

S - LOT COVERAGE P	ROPOSED
COVERAGE TYPE	AREA
DECK	220 SF
IRE	3288 SF
	940 SF
	4448 SF

HARDSCAPE CALCULATIONS

PER MERCER ISLAND CITY CODE 19.02.060

III. ALLOWED: A MAXIMUM OF 9% OF THE LOT AREA CAN BE HARDSCAPE.

1. HARDSCAPE INCLUDES: PATIOS, UNCOVERED STEPS, WALKWAYS, DECKS, RETAINING WALLS, ROCKERIES, AND OTHER HARDENED SURFACES OTHER THAN DRIVABLE SURFACES OR ROOFS. 2. HARDSCAPE IMPROVEMENTS CAN BE WITHIN THE MAXIMUM LOT COVERAGE ALLOWANCE. THAT IS, IF THE PROPOSED LOT COVERAGE IS LESS THAN THE MAXIMUM LOT COVERAGE, THE DIFFERENCE BETWEEN THE MAXIMUM AND PROPOSED AREAS CAN BE USED FOR HARDSCAPE.

ROSS LOT AREA		14,944 SF
IET LOT AREA		14,944 SF
REA BORROWED FROM LOT COVERAGE		35 SF
LLOWED HARDSCAPE AREA = 9% OF LOT AREA + C	=	9.2%
LLOWED HARDSCAPE AREA		1,380 SF
OTAL EXISITNG HARDSCAPE AREA:		
1. UNCOVERED DECKS		249 SF
2. UNCOVERED PATIOS		39 SF
3. WALKWAYS		891 SF
4. STAIRS		INCLUDED ABOVE
5. ROCKERIES AND RETAINING WALLS		49 SF
6. OTHER		N/A
7. TOTAL EXISTING HARDSCAPE AREA (F1 + F2 + F3 + F4 + F5 + F6)	=	1,228 SF
OTAL HARDSCAPE AREA REMOVED		1,179 SF
OTAL NEW HARDSCAPE AREA:		
1. UNCOVERED DECKS		1,011 SF
2. UNCOVERED PATIOS		19 SF
3. WALKWAYS		228 SF
4. STAIRS		INCLUDED ABOVE
5. ROCKERIES AND RETAINING WALLS		26 SF
6. OTHER		4 SF
7. TOTAL NEW HARDSCAPE AREA (H1 + H2 + H3 + H4 + H5 + H6)	=	1,288 SF
)TAL PROJECT HARDSCAPE AREA (F7 - G) + H7	=	1,337 SF
OTAL PROJECT HARDSCAPE AREA (I/B) X 100	=	8.9%

AREAS - HARDSCAPE EXISTING

Occupancy Type	Area
	49 SF
	249 SF
	39 SF
	891 SF
	1228 SF

AREAS - HARDSCAPE PROPOSED	
HARDSCAPE TYPE	AREA
	4 SF
	26 SF
DECK	1011 SF
PATIO	19 SF
	228 SF
	1288 SI

9858 JEFFF		Variation of the set o	Architecture. Interiors. Site Design. boardandvellum.com
LEUNG RESIDENCE	PROJECT ADDRESS:	9102 S.E. / 8IH PLACE MERCER IS/AND, WA 98040	DWNER: Kevin & Nancy Leung
REVISION D ISSUANCES D 2022.08.31 B	ATE ESCRIPT UILDING	TION PERMIT SI	JBMITTAL
COPYRIGHT BOARD AND ORIGINAL SHEET SIZE IS BOARD & VELL JURISDICTION PLOT DATE: ZONING C DIAGRAM SHEET NO.:	D VELLUM LLC S22'x34" UM PROJECT CODE	C. ALL RIGHTS F JECT #: - SITE	RESERVED. 2021054.00 TBD 2022.08.22

LEGAL DESCRIPTION

PARCEL A: LOT 7 OF WATERSIDE, AS PER PLAT RECORDED IN VOLUME 155 OF PLATS, PAGES 39 THROUGH 43, RECORDS OF KING COUNTY: TOGETHER WITH AN UNDIVIDED 1/10 INTEREST IN TRACTS A AND D; AND TOGETHER WITH AN UNDIVIDED 1/7 INTEREST IN TRACT C. SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

PARCEL B:

LOT 6, OF WATERSIDE, AS PER PLAT RECORDED IN VOLUME 155 OF PLATS, PAGES 39 THROUGH 43, RECORDS OF KING COUNTY; TOGETHER WITH AN UNDIVIDED 1/10 INTEREST IN TRACTS A AND D; AND TOGETHER WITH AN UNDIVIDED 1/7 INTEREST IN TRACT C; SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

N 42°16'18" E BETWEEN FOUND CENTERLINE MONUMENTATION ALONG EAST MERCER WAY - AS CALCULATED PER R1

REFERENCES

R1. PLAT OF WATERSIDE, VOL. 155, PG. 39, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88 PER CITY OF MERCER ISLAND BENCHMARK #1694 DB ID: 47232 ELEV: 113.076

SURVEYOR'S NOTES

- I. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN APRIL OF 2021. 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 DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
- 3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
- 4. SUBJECT PROPERTY TAX PARCEL NO. 9197800060 & 9197800070.
- 5. TOTAL SUBJECT PROPERTY AREA PER THIS SURVEY IS 30,078± S.F. (0.69 ACRES)
- 6. THE PROPERTY DESCRIBED HEREON IS THE SAME AS THE PROPERTY DESCRIBED IN FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. 4209-3659547, WITH AN EFFECTIVE DATE OF MARCH 05, 2021 AND THAT ALL EASEMENTS, COVENANTS, AND RESTRICTIONS REFERENCED IN SAID TITLE COMMITMENT OR APPARENT FROM A PHYSICAL INSPECTION OF THE PROPERTY OR OTHERWISE KNOWN TO ME HAVE BEEN PLOTTED HEREON OR OTHERWISE NOTED AS TO THEIR EFFECT ON THE PROPERTY.
- 7. 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.

SITE

02 SE 78th PI, Mercer Island, WA 98040, USA

78th Sr

Restroom 🚯

- THEREIN: FOR: SANITARY SEWER MAINLINE AUGUST 30, 1965 RECORDED:
- THEREIN: RECORDING INFORMATION: 5921613
- FOR (CURRENT CONDITIONS SHOWN HEREON)
- THEREIN: **RECORDED:** RECORDING INFORMATION: 9011050418 IN FAVOR OF:
- WASHINGTON CORPORATION FOR:
- APPLY)
- RECORDING INFORMATION: 9102070608 (BLANKET IN NATURE)
- (BLANKET IN NATURE)
- FEBRUARY 01, 1994 RECORDED: RECORDING NO.: 9402011734

OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED

BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

COUNTY: KING

2 OF 2

TESC General Notes

- 1. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE. REPLACEMENT, AND UPGRADING OF TESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED, VEGETATION/LANDSCAPING IS ESTABLISHED AND THE ENTIRE SITE IS STABILIZED.
- 2. THE BOUNDARIES OF THE CLEARING LIMITS SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE MARKING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- 3. THE TESC FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED PRIOR TO AND/OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- 4. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE.
- 5. THE CESCL, CPESC, OR ESC LEAD SHALL BE IDENTIFIED IN THE SWPPP AND SHALL BE ONSITE OR ON CALL AT ALL TIMES.

- PRACTICES OF EROSION AND SEDIMENT CONTROL AND HAVE THE SKILLS TO ASSESS: A. SITE CONDITIONS AND CONSTRUCTION ACTIVITIES THAT COULD IMPACT THE
- QUALITY OF STORMWATER. B. EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES USED TO
- CONTROL THE QUALITY OF STORMWATER DISCHARGES.
- 7. THE CESCL, CPESC, OR ESC LEAD MUST EXAMINE STORMWATER VISUALLY FOR THE PRESENCE OF SUSPENDED SEDIMENT, TURBIDITY, DISCOLORATION, AND OIL SHEEN AND EVALUATE THE EFFECTIVENESS OF BMPs TO DETERMINE IF IT IS NECESSARY TO INSTALL, MAINTAIN, OR REPAIR BMPs.
- THE CESCL, CPESC, OR ESC LEAD MUST INSPECT ALL AREAS DISTURBED BY 8. CONSTRUCTION ACTIVITIES, ALL BMPs, AND ALL STORMWATER DISCHARGE POINTS AT LEAST ONCE EVERY CALENDAR WEEK AND WITHIN 24 HOURS OF ANY DISCHARGE FROM THE SITE. (INDIVIDUAL DISCHARGE EVENTS THAT LAST MORE THAN ONE DAY DO NOT REQUIRE DAILY INSPECTIONS). THE CESCL OR INSPECTOR MAY REDUCE THE INSPECTION FREQUENCY FOR TEMPORARY STABILIZED, INACTIVE SITES TO ONCE EVERY CALENDAR MONTH.

6. THE CSECL, CPESC, OR ESC LEAD MUST BE KNOWLEDGEABLE IN THE PRINCIPLES AND 9. CONSTRUCTION SITE OPERATORS MUST CORRECT ANY PROBLEMS IDENTIFIED BY THE CESCL, CPESC, OR ESC LEAD BY:

- A. REVIEWING THE SWPPP FOR COMPLIANCE WITH THE 13 CONSTRUCTION SWPPP ELEMENTS AND MAKING APPROPRIATE REVISIONS WITHIN 7 DAYS OF THE INSPECTION.
- B. FULLY IMPLEMENT AND MAINTAIN APPROPRIATE SOURCE CONTROL AND/OR TREATMENT BMPs AS SOON AS POSSIBLE BUT CORRECTING THE PROBLEM WITHIN 10 DAYS.
- C. DOCUMENTING BMP IMPLEMENTATION AND MAINTENANCE IN THE SITE LOG BOOK. (REQUIRED FOR SITES LARGER THAN 1 ACRE BUT RECOMMENDED FOR ALL SITES).
- 10. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN SEDIMENT TRAP.
- 11. 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.
- 12. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

Notes

- 1. SEE BELOW FOR TESC GENERAL NOTES AND SHEET C3.0 FOR GENERAL NOTES.
- 2. MAINTAIN/RELOCATE TESC MEASURES AND PROVIDE ADDITIONAL TESC MEASURES AS REQUIRED TO STABILIZE EXPOSED SOILS, MINIMIZE SEDIMENT TRANSPORT ON SITE, AND MEET ALL SITE DISCHARGE AND PERMIT REQUIREMENTS. ADDITIONAL FACILITIES BEYOND THOSE INDICATED ON THIS PLAN MAY BE REQUIRED, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE ADDITIONAL MEASURES THAT ARE NECESSITATED DUE TO THEIR OPERATIONS AND SEQUENCING OF THE WORK. ALL TESC MEASURES SHALL BE REMOVED FOLLOWING SITE STABILIZATION WITH FINAL PAVING AND PLANTING.
- NOT ALL REQUIRED CB PROTECTION IS INDICATED ON THIS PLAN. INSTALL CB PROTECTION IN ALL EX CATCH BASINS TO REMAIN DURING CONSTRUCTION AND ALL INSTALLED CATCH BASINS. MAINTAIN PROTECTION UNTIL TRIBUTARY SURFACES ARE STABILIZED.
- 4. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES IN AREA OF EXCAVATION AND NOTIFY ENGINEER OF ANY DISCREPANCIES TWO WEEKS PRIOR TO PERFORMING ANY TEMP. SHORING OR EXCAVATION WORK.
- COORDINATE ALL UTILITY INTERRUPTIONS WITH AFFECTED FACILITY OWNERS. PROVIDE MINIMUM 2 WEEKS ADVANCE NOTICE OF SERVICE INTERRUPTIONS.
- COMPLY WITH MERCER ISLAND TESC REQUIREMENTS. AND PROCURE ALL SIDE SEWER PERMITS AND REQUIRED APPROVALS FROM MERCER ISLAND AND/OR KING COUNTY FOR CONSTRUCTION DEWATERING/STORMWATER DISCHARGES. DESIGN AND PROVIDE ADDITIONAL TEMPORARY STORAGE AND WATER QUALITY TREATMENT FACILITIES, INCLUDING BUT NOT LIMITED TO PRETREATMENT AND STORAGE TANKS, SAND FILTRATION, CHEMICAL TREATMENT SYSTEMS, PIPING, PUMPS, AND ANY OTHER SITE DISCHARGES, IF REQUIRED. DETERMINE THE NUMBER, TYPE, AND LOCATION OF TREATMENT SYSTEMS IN ACCORDANCE WITH CONTRACTORS' OPERATIONS.
- PROVIDE SUMPS, PUMPS, STORMWATER TREATMENT SYSTEMS AND INTERCEPTOR SWALES NECESSARY FOR DEWATERING. DETERMINE THE NUMBER, LOCATIONS, AND SIZE OF TEMPORARY SUMPS, PUMPS, AND SWALES IN ACCORDANCE WITH CONTRACTORS' OPERATIONS.
- 8. REMOVE ALL TEMPORARY PIPING AND CAP OR PLUG ALL TEMPORARY PIPE CONNECTIONS UPON TERMINATION OF USE.
- 9. COORDINATE ALL UTILITY DEMOLITION WITH CONSTRUCTION OF NEW SYSTEMS. TEMPORARILY MAINTAIN EXISTING UTILITY SYSTEMS AS REQUIRED TO CONVEY FLOWS FROM PORTIONS OF SITE OUTSIDE CONSTRUCTION AREAS AND PROVIDE TEMPORARY BYPASS AND PUMPING SYSTEMS AS REQUIRED BY CONTRACTOR'S OPERATIONS AND OWNER'S USE OF FACILITIES.
- 10. PROVIDE ALL REQUIRED MONITORING, TESTING, REPORTING, AND ALL OTHER COMPLIANCE MEASURES AS NECESSARY TO MEET PROJECT PERMIT COVERAGE REQUIREMENTS.
- 11. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.

Cut and Fill Quantity Estimate

- NOTE: QUANTITIES NOTED ARE APPROXIMATE AND ARE TO BE USED FOR MUNICIPAL PERMITTING ONLY. CONTRACTOR IS TO PERFORM THEIR OWN QUANTITY TAKE-OFFS BASED ON THE CONTRACT DOCUMENTS.
- CUT: 105 CY UTILITY TRENCHING + 27 CY REGRADING = ± 132 CY FILL: ±30 CY

Detention Tank Sizing

NEW/REPLACED IMPERVIOUS: 2,347 SF

PER MERCER ISLAND ON-SITE DETENTION DESIGN REQUIREMENTS TABLE 1, FOR TYPE C SOILS, 36 LF OF 4' DIAM DETENTION PIPE IS REQUIRED.

Notes

- 1. SEE SHEET C3.0 FOR GENERAL NOTES.
- 2. SEE SHEET C4.0 FOR TYPICAL TRENCH SECTION.
- OPERATIONS.
- INTERRUPTIONS.

- FUNCTIONAL PRIOR TO PAVING.
- PRIOR TO FINAL PAVING/PLANTING.
- OTHERWISE.

AREA DRAIN

CB TYPE 2, SIZE AS NOTED

CLEANOUT

STORM DRAIN 4"

STORM DRAIN 6" & UP DOWNSPOUT CONNECTION

PERF UNDER-DRAIN/

FOOTING DRAIN

RETAINING WALL

TRENCH DRAIN

IMPERVIOUS SURFACE AREA COLLECTED AND ROUTED TO DETENTION TANK: 2,933 SF

3. VERIFY LOCATION AND INVERTS OF ALL EX SYSTEMS AT PROPOSED POCs TO NEW LINES PRIOR TO CONSTRUCTION OF ANY NEW PIPING, AND NOTIFY ENGINEER OF ANY DISCREPANCIES AT LEAST 4 WORKING DAYS PRIOR TO STARTING PIPE LAYING

4. MAINTAIN ALL EXISTING UTILITY SERVICES DURING CONSTRUCTION. PROVIDE TEMPORARY SERVICES AND ALL BYPASS SYSTEMS, INCLUDING PUMPING, AS NECESSARY TO ACCOMPLISH NEW CONSTRUCTION AND MINIMIZE SERVICE

5. PLACE STORM DRAINS AND SANITARY SEWERS AT A MINIMUM SLOPE OF 2% AND A MAXIMUM SLOPE OF 50% UNLESS NOTED OTHERWISE.

6. COORDINATE BLDG SYSTEM CONNECTION LOCATIONS AND IES W/ MECH/PLUMBING CONTRACTOR. PROVIDE ALL REQUIRED FITTINGS FOR CONNECTION.

7. COORDINATE ALL UTILITY INTERRUPTIONS W/ AFFECTED FACILITY OWNERS. PROVIDE MIN 2 WEEKS ADVANCE NOTICE OF ANY SERVICE INTERRUPTION.

8. CONFIRM THAT ALL UNDERGROUND UTILITY SYSTEMS ARE INSTALLED AND

9. WHERE A NEW PIPE CLEARS AN EXISTING OR NEW UTILITY BY 6" OR LESS, PLACE POLYETHYLENE PLASTIC FOAM AS A CUSHION BETWEEN THE UTILITIES. 10. ADJUST ALL NEW AND EX UTILITY CASTINGS TO FINAL FINISHED GRADE

11. TAKE THE NECESSARY PRECAUTIONS DURING TRENCH EXCAVATION TO PROTECT EXISTING UTILITIES FROM DAMAGE AND SETTLEMENT.

12. PROVIDE 2.5' MIN COVER OVER ALL WATER LINES, UNLESS NOTED

13. PROVIDE HERRINGBONE GRATES ON ALL CBs UNLESS NOTED OTHERWISE.

SHEET NO .:

C2.0

PARCEL AREA: 14,944 SF TOTAL DISTURBANCE AREA: 8,926 SF IMPERVIOUS/HARD SURFACE AREA: 1,570 SF DECK OVER IMPERVIOUS SURFACING: 635 SF DECK OVER PERVIOUS SURFACING: 627 SF TURF: 259 SF BARK MULCH: 275 SF SOIL MANAGEMENT PLAN RESTORATION AREA: 5,819 SF

SURFACE 1: HA AREA: 1,570 SF
SURFACE 2: DE Area: 635 SF
SURFACE 3: DE Area: 627 SF
SURFACE 4: TL AREA: 259 SF
SURFACE 5: PL AREA: 5,560 SF
SURFACE 6: BA AREA: 275 SF
SURFACE 7: UN AREA: 3,232 SF
SURFACE 8: BL AREA: 2,786 SF

SOIL MANAGEMENT PLAN KEY

HARD SURFACE

DECKING OVER IMPERVIOUS AREA

DECKING OVER PERVIOUS AREA

TURF, 6" IMPORTED TOPSOIL OVER 6" SCARIFIED SUBGRADE

PLANTING AREA, 6" IMPORTED TOPSOIL OVER 6" SCARIFIED SUBGRADE

BARK MULCH

UNDISTURBED AREAS

BUILDING - MAIN FLOOR FOOTPRINT

THOF WASH TACK THOMAGO	
TRISDICTION STAMP AREA PROJECT ADDRESS: 9102 S.E. 78TH PLACE MERCER ISIAND, WA 98040 OWNER: KEVIN & NANCY LEUNG	
REVISION DATE DESCRIPTION	-
ISSUANCES DATE DESCRIPTION 2022.08.31 BUILDING PERMIT SUBMITTAL	_
COPYRIGHT BOARD AND VELLUM LLC. ALL RIGHTS RESERVED. ORIGINAL SHEET SIZE IS 22"x34" BOARD & VELLUM PROJECT #: 2021054.00 JURISDICTION PROJECT #: TBD	-
PLOT DATE: 2022.08.22	

NORTH 40'

General Notes

- 1. ALL WORK SHALL CONFORM TO THE MERCER ISLAND STORMWATER DRAINAGE GUIDELINES AND THE 2014 DOE MANUAL.
- 2. A COPY OF THE APPROVED PLAN MUST BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- 3. ERRORS AND OMISSIONS ON THE PERMITTED PLANS MUST BE CORRECTED BY THE ENGINEER AND APPROVED BY THE CITY OF MERCER ISLAND.
- 4. ALL PERMITS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT OF WAY MUST BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. 5. PRIOR TO THE START OF CONSTRUCTION WITHIN THE RIGHT OF WAY, THE PERMITTEE SHALL SCHEDULE AND ATTEND
- A PRECONSTRUCTION MEETING WITH THE CITY OF MERCER ISLAND. PERMITTEE SHALL CONTACT MERCER ISLAND INSPECTOR A MINIMUM OF 2 BUSINESS DAYS PRIOR TO NEEDING AN INSPECTION.
- 7. ALL DAMAGE TO CITY INFRASTRUCTURE CAUSED BY THE CONSTRUCTION SHALL BE REPAIRED AS REQUIRED BY THE CITY OF MERCER ISLAND.
- 8. LIMITS OF PAVEMENT RESTORATION IN THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED IN THE FIELD BY THE CITY OF MERCER ISLAND STREET USE INSPECTOR PRIOR TO THE PAVEMENT RESTORATION.
- 9. SURVEYING AND STAKING OF ALL IMPROVEMENTS IN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED PRIOR TO CONSTRUCTION.

- 10. IF AN EXISTING CURB IS TO BE REMOVED AND REPLACED IN THE SAME LOCATION, THE PERMITTEE SHALL PROVIDE THE STREET USE INSPECTOR A PLAN WITH EXISTING FLOW LINE AND TOP OF CURB ELEVATIONS IDENTIFIED. PERMITTEE TO STAKE THE LOCATION OF THE EXISTING CURB PRIOR TO DEMOLITION.
- 11. THE PERMITTEE SHALL BE RESPONSIBLE FOR REFERENCING AND REPLACING ALL MONUMENTS THAT MAY BE DISTURBED, DESTROYED OR REMOVED BY THE PROJECT AND SHALL FILE AN APPLICATION FOR PERMIT TO REMOVE OR DESTROY A SURVEY MONUMENT WITH THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES, PURSUANT TO RCW 58.24.040(8).
- 12. THE PERMITTEE SHALL NOTIFY THE FIRE DEPARTMENT DISPATCHER AT LEAST TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL WATER SERVICE INTERRUPTIONS, HYDRANT SHUTOFFS, AND STREET CLOSURES OR OTHER ACCESS BLOCKAGE. THE PERMITTEE SHALL ALSO NOTIFY THE DISPATCHER OF ALL NEW, RELOCATED, OR ELIMINATED HYDRANTS RESULTING FROM THIS WORK.
- 13. THE PERMITTEE SHALL LOCATE AND PROTECT ALL CASTINGS AND UTILITIES DURING CONSTRUCTION.
- 14. THE PERMITTEE SHALL CONTACT THE UNDERGROUND UTILITIES LOCATOR SERVICE (1-800-424-5555 OR 811) AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
- 15. IT IS THE SOLE RESPONSIBILITY OF THE PERMITTEE TO VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
- 16. THE PERMITTEE SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURE LIDS, VALVE BOXES, AND UTILITY ACCESS STRUCTURES TO FINISHED GRADE WITHIN AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS.

Datum

NAVD 88

Legend

<u> </u>

7777 XX.Xλ

• TW BW

Notes

- 4. GRADE ALL AREAS TO PROVIDE DRAINAGE AWAY FROM THE BUILDING.
- 5. SLOPE TOP OF WALL BETWEEN TW POINTS CALLED OUT ON THE DRAWINGS. 6. COORDINATE GRADING AROUND BUILDING WITH ARCHITECTURAL & LANDSCAPE DWGS. NOTIFY ENGINEER OF ANY DISCREPANCIES.

- RESTORATION.
- 11. THE SITE IS SUBJECT TO RESTRICTIONS ON GRADING AND CONSTRUCTION ACTIVITIES DURING THE WET SEASON. LAND DISTURBING ACTIVITIES ARE PROHIBITED FROM OCTOBER 1st TO APRIL 30th UNLESS A WET SEASON CONSTRUCTION REQUEST IS SUBMITTED, REVIEWED, AND A WET SEASON CONSTRUCTION APPROVAL LETTER IS GRANTED BY THE CITY OF MERCER ISLAND.
- 17. UTILITY SERVICE CONNECTIONS SHOWN ON THIS PLAN REQUIRE SEPARATE PERMITS AND ARE TO BE MAINTAINED PRIVATELY.
- 18. THE PERMITTEE SHALL PROVIDE FOR ALL TESTING AS REQUIRED BY THE MERCER ISLAND STREET USE INSPECTOR.
- 19. BACKFILL MATERIAL USED IN PUBLIC RIGHT-OF-WAY SHALL MEET STANDARD SPECIFICATIONS AND SHALL BE APPROVED BY CITY OF MERCER ISLAND.
- 20. INSPECTION AND ACCEPTANCE OF ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL BE DONE BY REPRESENTATIVES OF THE CITY OF MERCER ISLAND. IT SHALL BE THE PERMITTEE'S RESPONSIBILITY TO COORDINATE AND SCHEDULE APPROPRIATE INSPECTIONS ALLOWING FOR PROPER ADVANCE NOTICE. THE INSPECTOR MAY REQUIRE REMOVAL AND RECONSTRUCTION OF ANY ITEMS PLACED IN THE RIGHT OF WAY THAT DO NOT MEET CITY STANDARDS OR THAT WERE CONSTRUCTED WITHOUT APPROPRIATE INSPECTIONS.
- 21. THE PERMITTEE SHALL PROVIDE AND MAINTAIN TEMPORARY EROSION CONTROL AND SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE NATURAL OR PUBLIC DRAINAGE SYSTEM. AS CONSTRUCTION PROGRESSES AND UNEXPECTED (SEASONAL) CONDITIONS DICTATE, ADDITIONAL CONTROL FACILITIES MAY BE REQUIRED. DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THE PERMITTEE'S ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES THAT MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES.
- 22. THE PERMITTEE SHALL KEEP ALL PAVED SURFACES IN THE RIGHT OF WAY CLEAN BY SWEEPING.
- 23. AN APPROVED TRAFFIC CONTROL PLAN WILL BE REQUIRED FOR ALL PUBLIC STREETS PRIOR TO BEGINNING CONSTRUCTION.

	WOOD DECKING
а 4 4	CONCRETE SIDEWALK
	CONCRETE DRIVEWAY PAVEMENT
	PAVERS PER LANDSCAPE DWGS
	WOOD MULCH PER LANDSCAPE DWGS
	RETAINING WALL
X	FINISHED GRADE (FG) ELEVATION
XX.XX XX.XX	FG @ TOP OF WALL FG @ BOTTOM OF WALL
<u>GB</u>	GRADE BREAK
	FINISHED GRADE CONTOUR

1. SEE SHEET BELOW FOR GENERAL NOTES.

- 2. PERFORM SUBGRADE PREPARATION IN ACCORDANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS OF GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT.
- 3. FINISHED GRADE INDICATED IS FINAL SURFACE ELEVATION FOLLOWING PLACEMENT OF ALL SURFACING MATERIALS.
- 7. COORDINATE AND VERIFY LAYOUT OF ALL NEW WALKWAYS WITH OWNER PRIOR TO SETTING FORMS OR PERFORMING ANY PREPARATION OR INSTALLATION WORK.
- 8. FINE GRADE AREAS TO DIRECT DRAINAGE TO DRAINAGE COLLECTION STRUCTURES. 9. ADJUST ALL NEW AND EX UTILITY CASTINGS TO FINAL FINISHED GRADE PRIOR TO FINAL PAVING/PLANTING.
- 10. RESTORE ALL UTILITY CUTS IN RIGHT OF WAY PVMT PER CITY OF MERCER ISLAND INSPECTOR. COORDINATE W/ INSPECTOR AS REQUIRED AND PAY ALL COSTS FOR

NTS

SHEET NO .:

SITE DETAILS

ORIGINAL SHEET SIZE IS 22"x34"	
BOARD & VELLUM PROJECT #:	2021054.00
JURISDICTION PROJECT #:	TBD
PLOT DATE:	08/31/2022

DATE	DESCRIPTION	
2022.08.31	BUILDING PERMIT SUBMITTAL	

ISSUANCES

LEUNG S.E. REVISION DATE DESCRIPTION

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Engineering

CIVIL SITE DESIGN

PO Box 171 Edmonds, WA 98020

206.419.0873

4 X

TREE INVENTORY AND TREE REMOVAL CALCULATIONS PROVIDED AS A PART OF ARBORIST REPORT FROM THOMAS QUIGLEY DATED 07/25/2022.

ATTACHED ARBORIST REPORT AS A PART OF SUBMITTAL PACKAGE FOR ADDITIONAL INFORMATION.

Thomas Quigley Kevin Leung Residence February 2022 -Revised July 14, 2022 ISA certified arborist PN655A, TRAQ 9102 SE 78th Place, Mercer Island, WA

Tree #	Species	DBH"	Dripline Radius'	Cndtn	Comments	Status	Remov
	Pseudotsuga menziesii,						
1	Douglas fir	8.0	15'	Good	Tree #1, #2, #3 are growing as a tight clump with shared canopy	Non-regulated	х
	Pseudotsuga menziesii,						
2	Douglas fir	8.8	10'	Good	Tree #1, #2, #3 are growing as a tight clump with shared canopy	Non-regulated	х
	Pseudotsuga menziesii,						
3	Douglas fir	11.5	12'	Good	Tree #1, #2, #3 are growing as a tight clump with shared canopy	Regulated	х
	Prunus lusitanica,						
4	Portuguese laurel	N/A	8'	Good	Laurel not considered a tree, per local understanding and definition.	Not a Tree	X
	Acer macrophyllum,						
5	Big leaf maple	22.8*	12'	Good	To be retained with protection	Regulated	
	Acer circinatum, Vine						
6	maple	5.6*	7'	Excellent	Growing near deck. Smaller caliper than regulated threshold.	Non-regulated	1
	Acer macrophyllum,						
7	Big leaf maple	12.3*	11'	Good	Six-stems, growing at crest of slope.	Regulated	
	Thuja plicata, 'Excelsa',						
8	Excelsa cedar	5.6	8	Good	Not regulated, but on site plan. To be removed	Non-regulated	Х
					• Multi stammed trees. DBH equals the secure sect of the total of		
					wurd-stemmed trees, Don equals the square root of the total of		
				1	leach stem's diameter squared.	1	1

TREE REMOVAL CALCULATION PER 3ICC 19.09.09(A)(1) REGULATED TREES ON-SITE: 3

REGULATED TREES TO BE REMOVED : 1

Retain

REQUIRED PERCENTAGE OF RETAINED REGULATED TREES : 30%

PROVIDED PERCENTAGE OF RETAINED REGULATED TREES : 66%

EXISTING TREE TO REMAIN

- EXISTING HEDGE TO REMAIN

- EXISTING TREE TO REMAIN - EXISTING DECK STAIRS TO BE DEMOLISHED

ROCKERY TO BE REMAIN

UTILITY EASEMENT

- NORTH PORTION OF DECK TO BE DEMOLISHED

- CONCRETE PATIO TO BE DEMOLISHED - EXISTING DECK - DECKING MEMBERS AND RAILINGS -TO BE DEMOLISHED. DECKING SUBSTRUCTURE TO BE MAINTAINED (POST, BEAMS, JOISTS, FOOTINGS). CONTRACTOR TO ADD IN ALLOWANCE FOR SOME SUBSTRUCTURE ELEMENTS TO BE REPLACED PENDING SITE INVESTIGATION

SHEET NO .:

L1.01

SITE DEMO PLAN KEY

UTILITY EASEMENT

TREE PROTECTION FENCING PER DETAIL 2/THIS SHEET

STEEP SLOPE

EXISTING PAVING AND ASPHALT TO BE REMOVED EXISTING DECK AND DECK STAIRS TO BE REMOVED

EXISTING DECK MEMBERS TO BE REPLACED

PROPERTY LINE

SETBACK

EXISTING TREE TO BE RETAINED PROTECT IN PLACE

EXISTING TREE TO BE RETAINED PROTECT IN PLACE

LARGE (REGULATED) TREE TO BE REMOVED 10" CALIPER OR LARGER

> SMALL TREE TO BE REMOVED LESS THAN 10" CALIPER

1 SITE WALL PERMIT - TREE PLAN1" = 10'-0"

G	SCHEDULE				
	BOTANICAL NAME	<u>Common Name</u>	NATIVE STATUS	<u>CAL.</u>	<u>QTY</u>
	ACER PALMATUM 'SANGO KAKU'	CORAL BARK MAPLE	NOT NATIVE	MULTI-STEM 3"-4"	1
	ACER CIRCINATUM	VINE MAPLE	NATIVE	2"-3"	2
	PRUNUS X YEDOENSIS	YOSHINO CHERRY	NOT NATIVE	2"-3"	2

0' 5' 10'

40'

/ed tree ive ground)	TREE REPLACEMENT RATIO	NUMBER OF TREES PROPOSED FOR REMOVAL	NUMBER OF TREES REQUIRED FOR REPLACEMENT BASED ON SIZE/TYPE
6	1	3	0
NCHES	2	1	2
HES	3	0	0
ES AND EES	6	0	0
	TOTAL NUMB	ER OF REPLACEMENT TREES REQUIRED	2
	TOTAL NUMB	ER OF REPLACEMENT	5

LAND USE / ZONING CODE SUMMARY

REFERENCE: MERCER ISLAND CITY CODE 19.02.020

R-9.6 SINGLE FAMILY RESIDENTIAL

14,944 SF

PARCEL A: LOT 7 OF WATERSIDE, AS PER PLAT RECORDED IN VOLUME 155 OF PLATS, PAGES 39 THROUGH 43, RECORDS OF KING COUNTY; TOGETHER WITH AN UNDIVIDED 1/10 INTEREST IN TRACTS A AND D; AND TOEGETHER WITH AN UNDIVIDED 1/7 INTEREST IN TRACT C. SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

20'-0" 20'-0" (THEREFORE OKAY)

1. REQUIREMENTS BASED ON LOT WIDTH: TOTAL SIDE YARDS MUST BE AT LEAST 17% OF THE LOT WIDTH. MINIMUM SIDE YARD WIDTH IS 5' OR 33% OF THE TOTAL SIDE YARD REQUIREMENT, WHICHEVER IS GREATER.

Total minimum side yard required $= 18^{\circ}$ (Lot width (Using Lot width circle) $= 107^{\circ}$ Lot width

LOT WIDTH 107' > 90',

THEREFORE MINUMIM TOTAL SIDEYARD REQUIRMENT = 17%, 17% of 107' = 18'

 VARIABLE SIDE YARD DEPTH REQUIREMENT:
 A. VARIABLE SIDE YARD DEPTH REQUIREMENTS APPLY TO INTERIOR LOT LINES ONLY. (SIDE YARDS ARE AT INTERIOR LOT LINES) B. A MINIMUM SIDE YARD OF 7.5' IS REQUIRED FOR 1) NONGABLED ROOF ENDS WHERE THE HEIGHT IS MORE THAN 15'; OR 2) GABLED ENDS MORE THAN 18'. BOTH MEASUREMENTS ARE TAKEN FROM EXISTING OR FINISHED GRADE, WHICHEVER IS LOWER, TO THE TOP OF THE GABLED ROOF END ADJOINING THE SIDE YARD. (HEIGHT OF PROPOSED GARAGE IS LESS THAN 15') C. A MINIMUM SIDE YARD OF 10' IS REQUIRED FOR SINGLE-FAMILY DWELLINGS WITH A HEIGHT OF MORE THAN 25' MEASURED FROM EXISTING OR

FINISHED GRADE, WHICHEVER IS LOWER, TO THE TOP OF THE EXTERIOR WALL FACADE ADJOINING THE SIDE YARD. (South Side YARD = 10° , see building elevation A3.13)

25'-0" 25'-0" (THEREFORE OKAY)

SEE SHEET A1.02 FOR AVERAGE GRADE CALCULATIONS 30'-0" ABOVE AVERAGE BUILDING ELEVATION TO THE HIGHEST POINT ON THE ROOF. ON DOWNHILL FACADES HEIGHT SHALL BE MEASURED FROM THE EXISTING OR FINISHED GRADE (WHICHEVER IS LOWER AT THE FURTHEST DOWNHILL EXTENT OF THE PROPOSED BUILDING) TO THE TOP OF THE EXTERIOR WALL FACADE SUPPORTING THE ROOF FRAMING.

208'-9 3/4" 208'-1"

SEE G1.03 FOR LOT COVERAGE CALCULATIONS

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Ш	RISDICTION ST	AMP AREA	
LEUNG RESIDEN	PROJECT ADDRESS: 9102 S.E. 78TH PLACE	MERCER ISIAND, WA 98040 OWNER-	KEVIN & NANCY LEUNG
REVISION	DATE	DE	SCRIPTION
ISSUANCES	DESCRIPTION		
DATE			
DATE 2022.08.31	Building Per	RMIT SUBN	1ITTAL
DATE 2022.08.31	Building Per	RMIT SUBN	1ITTAL

2021054.00
TBD

PLOT DATE:	2022.08.22

SITE PLAN

SHEET NO .:

NORTH

40'

0' 5' 10'

20'

$1 \frac{\text{MAIN FLOOR PLAN - DEMOLITION}}{1/4" = 1'-0"}$

WINDOW / DOOR KEY

EXISTING WALL

DEMO WALL

NEW WALL

NEW CONC WALL

0' 2' 4' 8' 16'

(E) EXISTING DOOR OR WINDOW TO REMAIN (D) EXISTING DOOR OR WINDOW TO BE DEMOLISHED (S) EXISTING DOOR OR WINDOW TO BE SALVAGED (R) EXISTING DOOR OR WINDOW TO BE REPLACED IN PLACE

/ellum S ק $\boldsymbol{\sigma}$ Ο \square 9858 REGISTERED ARCHITECT EFFREVALFRED PELLETIER STATE OF WASHINGTON JURISDICTION STAMP AREA RESIDENCE LEUNG ADDF REVISION DATE DESCRIPTION ISSUANCES DATE DESCRIPTION 2022.08.31 BUILDING PERMIT SUBMITTAL COPYRIGHT BOARD AND VELLUM LLC. ALL RIGHTS RESERVED. ORIGINAL SHEET SIZE IS 22"x34" BOARD & VELLUM PROJECT #: 2021054.00 JURISDICTION PROJECT #: TBD PLOT DATE: 2022.08.22 MAIN FLOOR PLAN -DEMOLITION SHEET NO .:

NORTH

DEMOLITION NOTES

- 1. CONTRACTOR TO COORDINATE ALL DEMOLITION SPECIFICS WITH OWNER AND ARCHITECT PRIOR TO WORK.
- 2. SEE SITE DEMOLITION PLAN FOR EXTERIOR HARDSCAPE AND STRUCTURE DEMOLITION AND NOTES. 3. SEE WINDOW & DOOR KEY FOR IDENTIFYING EXISTING, SALVAGED, OR REPLACED ELEMENTS.
- 4. REPLACE EXISTING INTERIOR DOORS IN PLACE UTILIZING EXISTING FRAMES UNLESS NOTED OTHERWISE.
- REMOVE EXISTING FLOOR FINISHES IN ALL ROOMS RECEIVING WORK EXCEPT AT HARDWOOD FLOORS.
 EXISTING EXTERIOR SIDING TO BE PATCHED AND REPAIRED WHERE NEW WORK OCCURS.

WALL KEY

WINDOW / DOOR KEY

EXISTING WALL

DEMO WALL

NEW WALL

NEW CONC WALL

(E) EXISTING DOOR OR WINDOW TO REMAIN
(D) EXISTING DOOR OR WINDOW TO BE DEMOLISHED
(S) EXISTING DOOR OR WINDOW TO BE SALVAGED
(R) EXISTING DOOR OR WINDOW TO BE REPLACED IN PLACE

S ק $\boldsymbol{\sigma}$ 0 \square 9858 REGISTERED ARCHITECT FFREY AI FRED PELLET STATE OF WASHINGTON JURISDICTION STAMP AREA RESIDENCE LEUNG ADDI REVISION DATE DESCRIPTION ISSUANCES DATE DESCRIPTION 2022.08.31 BUILDING PERMIT SUBMITTAL COPYRIGHT BOARD AND VELLUM LLC. ALL RIGHTS RESERVED. ORIGINAL SHEET SIZE IS 22"x34" BOARD & VELLUM PROJECT #: 2021054.00 JURISDICTION PROJECT #: PLOT DATE: 2022.08.22 UPPER FLOOR PLAN -DEMOLITION

Vellum

NORTH

0' 2' 4'

$1 \frac{\textbf{ROOF PLAN - DEMOLITION}}{1/4" = 1'-0"}$

DEMOLITION NOTES

- CONTRACTOR TO COORDINATE ALL DEMOLITION SPECIFICS WITH OWNER AND ARCHITECT PRIOR TO WORK. SEE SITE DEMOLITION PLAN FOR EXTERIOR HARDSCAPE AND STRUCTURE DEMOLITION AND NOTES.
- SEE WINDOW & DOOR KEY FOR IDENTIFYING EXISTING, SALVAGED, OR REPLACED ELEMENTS.
- REPLACE EXISTING INTERIOR DOORS IN PLACE UTILIZING EXISTING FRAMES UNLESS NOTED OTHERWISE. REMOVE EXISTING FLOOR FINISHES IN ALL ROOMS RECEIVING WORK EXCEPT AT HARDWOOD FLOORS.
- 6. EXISTING EXTERIOR SIDING TO BE PATCHED AND REPAIRED WHERE NEW WORK OCCURS.

WINDOW / DOOR KEY

EXISTING WALL

DEMO WALL

NEW WALL

NEW CONC WALL

(E) EXISTING DOOR OR WINDOW TO REMAIN (D) EXISTING DOOR OR WINDOW TO BE DEMOLISHED (S) EXISTING DOOR OR WINDOW TO BE SALVAGED (R) EXISTING DOOR OR WINDOW TO BE REPLACED IN PLACE

/ellum 3 D $\boldsymbol{\sigma}$ Ο \square 9858 REGISTERE STATE OF WASHINGTO JURISDICTION STAMP AREA RESIDENCE LEUNG REVISION DATE DESCRIPTION ISSUANCES DATE DESCRIPTION 2022.08.31 BUILDING PERMIT SUBMITTAL COPYRIGHT BOARD AND VELLUM LLC. ALL RIGHTS RESERVED. ORIGINAL SHEET SIZE IS 22"x34" BOARD & VELLUM PROJECT #: 2021054.00 JURISDICTION PROJECT #: TBD PLOT DATE: 2022.08.22 **ROOF PLAN - DEMOLITION**

0' 2' 4' 8' 16'

Achitecture Interiors. Site Design.
9858 REGISTERED ARCHITECT ARCHITECT JEFFREY ALFRED PELLETIER STATE OF WASHINGTON
JURISDICTION STAMP AREA
LEUNG RESIDENCE PROJECT ADDRESS: 9102 S.E. 78TH PLACE MERCER ISIAND, WA 98040 MERCER ISIAND, WA 98040 WONER: KEVIN & NANCY LEUNG
REVISION DATE DESCRIPT

WEST ELEVATION - PROPOSED $1/4^{"} = 1^{"}-0^{"}$

0' 2' 4' 8' 16'

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LEUN	PROJECT ADDF	9102 S.E. 78TH MERCER ISIANI	owner: Kevin & Nancy
REVISION	PROJECT ADDF	9102 S.E. 78TH MERCER ISIANI	Owner: Kevin & Nanc) Descriptic
REVISION ISSUANCES DATE 2022.08.31	DATE	9102 S.E. 78TH MERCER ISIANI	DESCRIPTIO
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SECTION NOTES

SEE SHEET G0.01 FOR GENERAL INFORMATION, INCLUDING ENERGY CRITERIA SPECIFIC TO ENCLOSURE ASSEMBLIES.
 SEE SHEET A9.11 FOR ENCLOSURE ASSEMBLIES.

SHEET NO .:

BUILDING SECTIONS

ISSUANCES DATE DESCRIPTION 2022.08.31 BUILDING PERMIT SUBMITTAL COPYRIGHT BOARD AND VELLUM LLC. ALL RIGHTS RESERVED. ORIGINAL SHEET SIZE IS 22"x34" BOARD & VELLUM PROJECT #: 2021054.00 JURISDICTION PROJECT #: TBD PLOT DATE: 2022.08.22

115 Se 9858 REGISTERED ARCHITECT ARCHITECT JEFFREY ALFRED PELLETIER STATE OF WASHINGTON JURISDICTION STAMP AREA **LEUNG RESIDENCE** PROJECT ADDRESS: 9102 S.E. 78TH PLACE MERCER ISIAND, WA 96 NER:

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Vellum

DESCRIPTION

REVISION DATE

FIRST FLOOR 182' - 9 5/8"

AVG. GRADE 178' - 9 3/4"

EXISTING BASEMENT 173' - 7 5/8"

WINDOW NOTES

- WINDOW HEAD HEIGHTS MEASURED FROM TOP OF CONCRETE SLAB OR TOP OF GYPCRETE TOPPING SLAB. WINDOW SCHEDULE INDICATES WINDOW FRAME SIZES. VERIFY WITH ARCHITECT ALL WINDOW SIZES BEFORE FRAMING
- OPENINGS. B. PROVIDE WINDOW SUBMITTALS TO ARCHITECT PRIOR TO ORDERING WINDOWS.
- 4. ALL WINDOW HEADERS & CASINGS SHOULD ALIGN WITH DOOR HEADER CASINGS & TRIMS ON EXTERIOR AND INTERIOR OF BUILDING UNLESS INDICATED OTHERWISE. ADJUST ROUGH OPENING HEIGHTS OR CUT DOWN DOORS AS NECESSARY (CONSULT WITH ARCHITECT AS NECESSARY).
- 5. SEE PROJECT SPECIFICATIONS FOR WINDOW MANUFACTURER AND OTHER INFORMATION. 6. CONTRACTOR TO ORDER EGRESS WINDOWS WITH PROPER EGRESS HARDWARE WHERE REQUIRED TO MEET CODE
- REQUIREMENTS. 7. CONTRACTOR TO VERIFY ALL EGRESS WINDOWS ORDERED MEET CURRENT CODE EGRESS REQUIREMENTS. 8. SEE CONTRACT GENERAL NOTES FOR EXTERIOR GLAZING REQUIREMENTS.

WINDOWS - MAIN HOUSE

			_				SAFETY GLAZING				DOOR					
MARK	WIDTH	HEIGHT	Sill Height	LOCATION	EGRESS	U-FACTOR	TAG	Operation	-		SIZE					
EXISTING BASEM	ENT								MARK	Width	Height	Thickness	LOCATION	EXTERIOR	U FACTOR	NOTES
001	2' - 1"	/' - 1"	0' - 0"	MEDIA		0.30	SG	FIXED	EXISTING BAS	EMENT			1			
002	2' - 1"	7' - 1"	0' - 0"	MEDIA		0.30	SG	FIXED	001	5' - 0"	7' - 0"	0' - 1 3/4"	MEDIA	•	0.30	
003	2' - 1"	7' - 1"	0' - 0"	MEDIA		0.30		FIXED	002	5' - 0"	7' - 0"	0' - 1 3/4"	MEDIA	•	0.30	
004	2' - 1"	7' - 1"	0' - 0"	MEDIA		0.30	SG	FIXED	003	2' - 6"	6' - 8"	0' - 1 3/8"	ELEV MECH			
005	3' - 1"	7' - 1"	0' - 6"	BED S			SG	CASEMENT LEFT	004	2' - 6"	6' - 8"	0' - 1 3/8"	LOWER BATH			
006	3' - 1"	7' - 1"	0' - 6"	BED S			SG	CASEMENT LEFT	005	5' - 0"	6' - 8"	0' - 1 3/8"	BED S			
007	3' - 1"	7' - 1"	0' - 6"	BED S	•		SG	CASEMENT LEFT	006	2' - 6"	6' - 8"	0' - 1 3/8"	BED S			
FIRST FLOOR									007	3' - 0"	6' - 8"	0' - 0"	ELEV			
101	2' - 1"	9' - 3"	0' - 0 3/4"	ENTRY		0.30	SG	FIXED	008	3' - 0"	7' - 0"	0' - 1 3/4"	STORAGE	•		
102	2' - 1"	9' - 3"	0' - 0 3/4"	ENTRY		0.30	SG	FIXED	009	9' - 1 1/2"	7' - 0"					
103	8' - 7"	7' - 1"	2' - 0"	ENTRY		0.30		FIXED	010	9' - 1 1/2"	7' - 0"					
104	6' - 1"	9' - 1"	3' - 0"	KITCHEN		0.30		FIXED	011	14' - 5 1/2"	7' - 0"					
105	1' - 7"	5' - 1"	3' - 0"	KITCHEN		0.30		CASEMENT RIGHT	FIRST FLOOR					•		
106	5' - 1"	9' - 1"	0' - 0"	LIVING		0.30	SG	FIXED	101	3' - 0"	9' - 0"	0' - 1 3/4"	LIVING		0.30	
107	2' - 3"	4' - 8 1/2"	8' - 9"	LIVING		0.30		FIXED	102	2' - 6"	6' - 8"	0' - 1 3/8"	PANTRY			
108	2' - 3"	4' - 8 1/2"	8' - 9"	LIVING		0.30		FIXED	103	2' - 6"	6' - 8"	0' - 1 3/4"	LIVING		0.30	
109	2' - 3"	4' - 8 1/2"	8' - 9"	LIVING		0.30		FIXED	104	16' - 4 1/2"	7' - 11 1/4"	0' - 2 1/4"			0.30	SLIDING DOOR ASSEMBLY
110	2' - 3"	4' - 8 1/2"	8' - 9"	LIVING		0.30		FIXED	105	7' - 0"	7' - Λ"	0' - 0"	DINING		0.00	
111	2' - 3"	4' - 8 1/2"	8' - 9"	LIVING		0.30		FIXED	106	8' - 0"	7' - 0"	0' - 0"	HALL			
112	2' - 3"	4' - 8 1/2"	8' - 9"	LIVING		0.30		FIXED	107	3' - 0"	6' - 8"	0' - 0"	FL EV			
113	13' - 1"	9' - 1"	0' - 0"	DINING		0.30	SG	FIXED	108	3' - 6"	7' _ 0"	0 0	OFFICE		0.30	
115	2' - 3"	4' - 8 1/2"	5' - 1 3/4"	GARAGE		0.30		FIXED	111	2' - 6"	6' - 8"	0 1 3/4		•	0.00	
116	2' - 3"	4' - 8 1/2"	5' - 1 3/4"	GARAGE		0.30		FIXED	112	2 - 0						
117	2' - 3"	4' - 8 1/2"	5' - 1 3/4"	GARAGE		0.30		FIXED	112	5 0	6 8	0 - 0				
118	2' - 3"	4' - 8 1/2"	5' - 1 3/4"	GARAGE		0.30		FIXED	112	0 - 0 0 - 6"	6' 9"	0 - 1 3/0				
119	2' - 3"	4' - 8 1/2"	5' - 1 3/4"	GARAGE		0.30		FIXED	113	2 - 0	0 - 0	0 - 1 3/0				
120	2' - 7"	7' - 1"	0' - 0"			0.30	SG	FIXED	114	2 - 4	0 - 0	0 - 1 3/0				
120	2' - 7"	7'_1"	0' - 0"			0.00	SG	FIXED	110	2 - 0	0 - 0	0 - 1 3/0				
121	2' - 7"	2' - 0"	7' - 0 1/2"			0.00	SG	FIVED		5" - 0"	0 - 0	0'-13/0"	FUTER			
122	2 7	2' _ 0"	7' - 0 1/2"			0.00	SG			41 01	01 011					
120	2' - 7"	2' _ 0"	7' - 0 1/2"			0.00	SG	FIXED	210	4' - 0"	0° - 0°					
124	<u> </u>	2 - 0	3' - 8"		1	0.00	50		211	3' - 0"	0' - 8''	0 1 2/8"	WALK IN GLUSET			
	0 1	20	0 0			0.00		AWNING		2° - 10°	0 - 0	0 10/0				
201	12' 1"	7' 5"	2' 0"	SITTING		0.30			213	2' - b"	0' - 8''	0' - 1 3/8"	TUILET			
201	0, 7,	6' 7"	2 - 0			0.30	50			14' - 6"	0' - 10"	0' - 2 1/4"				
202	0 - 7 5' 0 7/9"	5 0 7 /Q"	2 - 0			0.30	30		SECOND FLOC	JK OL OL	01 01	01 01				
203	J - 0 7/0	J = U 1/0	2 6			0.30	50		201	3' - 0"	6' - 8''	0' - 0"	ELEV			CASED OPENING FOR ELEVATO
204	2'-0"	0'-1"	3' - 0''			0.30	36		202	3' - 0"	6' - 8"	0' - 1 3/8"	LANDING			
200	0 - 1		3' - 0"		•	0.30	<u> </u>		203	2' - 6"	6' - 8"	0' - 1 3/8"	MAIN BEDROOM			
	8' - 1"	0'-1"	I' - U''	BED N	•	0.30	56	CASEIVIENT SIDES	204	2' - 6"	6' - 8"	0' - 1 3/8"	MAIN BEDROOM			
		41 0 7 /0"	0. 0.			0.00			205	2' - 6"	6' - 8"	0' - 1 3/8"	BATH A			
208	5' - U //8"	4' - 0 //8"	3' - U"			0.30	<u> </u>	FIXED	206	2' - 6"	6' - 8"	0' - 1 3/8"	BATH A			
209	8' - 1"	4' - 1"	3' - U"			0.30	56	FIXED	207	3' - 8"	7' - 0"	0' - 1 1/2"	VESTIBULE			
210	5' - 0 7/8"	4' - 0 7/8"	3' - 0"	M BATH		0.30	SG	CASEMENT	208	2' - 10"	6' - 8"	0' - 1 3/8"	LINEN			
211	3' - 7"	/'-1"	0' - 0"	M BED		0.30	SG	CASEMENT SIDES	209	5' - 0"	6' - 8"	0' - 1 3/8"	SITTING			
								CASEMENT								

FIXED

DOORS - MAIN HOUSE

DOOR NOTES

- OPENING SIZE. UNIT DOORS ARE NOTED IN SCHEDULE. VERIFY WITH ARCHITECT ALL DOOR SIZES BEFORE FRAMING OPENINGS.
- AND MAY NOT INDICATE ALL THE NECESSARY OPTIONS OF A DOOR.
- AND ROUGH OPENING SIZES FOR ALL DOORS. PROVIDE DOOR SUBMITTALS TO ARCHITECT PRIOR TO ORDERING DOORS.
- OF BUILDING UNLESS NOTED OTHERWISE.
- 9. ALL EXTERIOR DOORS AND DOORS TO UNHEATED SPACES SHALL BE FULLY WEATHERSTRIPPED. 10. SEE CONTRACT GENERAL NOTES FOR EXTERIOR GLAZING REQUIREMENTS.
- 1. DOOR SCHEDULE INDICATES DOOR PANEL SIZE EXCEPT IN THE CASE OF UNIT DOORS, WHERE IT INDICATES FRAME
- 3. ALL OPERATIONS NOTED ON FLOOR PLANS AND/OR ELEVATIONS. IF A DOOR KEY IS PROVIDED, IT IS FOR CONVENIENCE
- 4. IN REMODELS, EXTERIOR DOOR SIZES INDICATED MAY BE APPROXIMATE. CONTRACTOR TO CONFIRM ACTUAL DOOR SIZES
- 6. ALL WINDOW HEADERS & CASINGS SHOULD ALIGN WITH DOOR HEADER CASINGS & TRIMS ON EXTERIOR AND INTERIOR
- 7. ALL GLAZING IN NEW DOORS TO BE APPROVED SAFETY-GLAZING. CONTRACTOR IS TO VERIFY THAT ALL DOORS REQUIRING SAFETY GLAZING ARE MANUFACTURED AND INSTALLED WITH THE CORRECT GLAZING.
- 8. SEE PROJECT SPECIFICATIONS FOR DOOR MANUFACTURER AND OTHER INFORMATION.

		115 15th Avenue East, Suite 100 +1 206 707 8895 Seattle, Washington 98112 info@boardandvellum.com	Architecture. Interiors. Site Design. boardandvellum.com
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EXTERIOR

FLOOR ASSEMBLIES

NOTE: ALL ASSEMBLIES ARE LISTED FROM EXTERIOR TO INTERIOR, TOP TO BOTTOM, UNO.

F.1 EXISTING FLOOR ASSEMBLY FINISH PER SPECIFICATION • EXISTING FLOOR ASSEMBLY ADD ACOUSTICAL INSULATION AS SHOWN

GYPSUM CEILING BOARD

F.2 NEW FLOOR ASSEMBLY FINISH PER SPECIFICATION

 PLYWOOD SUBFLOOR FRAMING PER STRUCTURAL ACOUSTICAL INSULATION AS SHOWN GYPSUM CEILING BOARD

F.3 NEW INSULATED FLOOR ASSEMBLY

 FINISH PER SPECIFICATION PLYWOOD SUBFLOOR PER STRUCTURAL FRAMING PER STRUCTURAL R-38 MIN. SPRAY (R-20 MIN) + BATT INSULATION PLYWOOD SOFFIT + FINISH PER SPECIFICATION

F.4 - NEW INSULATED CONCRETE SLAB FLOOR ASSEMBLY FINISH PER SPECIFICATION SUBFLOOR CONTROL BARRIER CONCRETE SLAB PER STRUCTURAL R-10 MIN. INSULATION GRAVEL

F.5 - NEW CONCRETE SLAB FLOOR ASSEMBLY CONCRETE SLAB PER STRUCTURAL - FINISH PER SPECIFICATION CONTROL BARRIER • GRAVEL (CAPILLARY BREAK PER GEOTECH REPORT)

EXTERIOR INTERIOR

WALL ASSEMBLIES

NOTE: ALL ASSEMBLIES ARE LISTED FROM TOP TO BOTTOM, EXTERIOR TO INTERIOR, UNO.

W.1 EXTERIOR WALL ASSEMBLY SIDING PER ELEVATIONS

- 1X FURRING TYPE III WRB PER SPECIFICATIONS
- SHEATHING PER STRUCTURAL
- 2x6 FRAMING, UNO R-21 INSULATION PER SPECIFICATIONS
- AIR & TYPE III VAPOR BARRIER PER SPEC GYPSUM WALL BOARD

W.2 EXTERIOR RAINSCREEN & FINISH (EXISTING WALL) SIDING PER ELEVATIONS

- 1X FURRING TYPE III WRB PER SPECIFICATIONS
- SHEATHING PER STRUCTURAL
- EXISTING WALL FRAMING ADD R-21 INSULATION PER SPECIFICATIONS
- EXISTING WALL SUBSTRATE

W.3 INTERIOR WALL ASSEMBLY

- FINISH PER SPECIFICATIONS GYPSUM WALL BOARD
- 2x4 FRAMING, UNO
- ACOUSTIC INSULATION PER PLANS GYPSUM WALL BOARD
- FINISH PER SPECIFICATIONS

W.4 INTERIOR WALL ASSEMBLY FINISH PER SPECIFICATIONS

- GYPSUM WALL BOARD
- 2x6 FRAMING, UNO ACOUSTIC INSULATION PER PLANS
- GYPSUM WALL BOARD • FINISH PER SPECIFICATIONS

W.5 EXTERIOR SCREEN WALL (UNCONDITIONED)

- SIDING PER ELEVATIONS
- INFILL FRAMING • FINISH PER SPECIFICATIONS

W.6 - EXTERIOR FOUNDATION FURRING

- (EXISTING OR NEW CONCRETE WALL PER STRUCTURAL)
- CONTROL BARRIER PER SPEC 2" MIN XPS (R-10 MIN)
- 1" AIR GAP
- 2X6 FRAMING
- **R-21 BATT INSULATION** VAPOR BARRIER PER SPEC
- GYPSUM WALL BOARD

W.7 - FOUNDATION CONTROL LAYERS

- UNDISTURBED EARTH OR BACKFILL PER LOCATION CAPILLARY BREAK, GRAVEL DRAINAGE LAYER
- DRAINAGE MAT WITH GEOTEX FABRIC
- WATER CONTROL LAYER (BENTONITE)

W.8 - CONCRETE WALL

 CONCRETE WALL PER STRUCTURAL FINISH PER SPECIFICATION

W.9 NEW INTERIOR WALL ASSEMBLY - FURRING

- FINISH PER SPECIFICATIONS GYPSUM WALL BOARD
- 2x4 FRAMING, UNO
- ACOUSTIC INSULATION PER PLANS • 1/2" SHIM SPACING PER SUBSTRATE

ROOF ASSEMBLIES

NOTE: ALL ASSEMBLIES ARE LISTED FROM EXTERIOR TO INTERIOR, TOP TO BOTTOM, UNO.

- R.1 VAULTED UNVENTED ROOF ASSEMBLY
- STANDING SEAM METAL ROOFING ROOF MEMBRANE - ICE & WATER SHIELD
- SHEATHING PER STRUCTURAL
- FRAMING PER STRUCTURAL • 4" MIN (R-20 MIN) SPRAY FOAM INSULATION
- BATT (R-18 MIN) TO FILL REMAINING CAVITY
- BARRIÈR PER SPEC GYPSUM CEILING BOARD

R.2 VENTED SLOPED ROOF EAVE ASSEMBLY•SS MTL ROOF

- ICE & WATER SHIELD
- SHEATHING
- FRAMING PER STRUCTURAL CORA VENT OR SIMILAR
- FASCIA BOARD TBD

R.3 ATTIC ROOF ASSEMBLY SS MTL ROOF

- ROOF MEMBRANE ICE & WATER SHIELD
- SHEATHING VENTING PER ROOF PLAN
- FRAMING PER STRUCTURAL ATTIC TRUSSES
- ATTIC INSULATION R-49 MIN GYPSUM BOARD CEILING FINISH

R.4 DECK ASSEMBLY - WATER BARRIER

- DECKING PER SPECIFICATIONS SLOPING SLEEPERS
- MEMBRANE ROOFING
- BUILT-UP SLOPE PER PLAN SHEATHING PER STRUCTURAL
- FRAMING PER STRUCTURAL

R.5 PERGOLA ASSEMBLY • 1/4" POLYCARBONATE PER SPECIFICATION GASKETED JOINT CAPS

• SLOPED SLEEPERS - MAINTAIN 1/2" PER FOOT FRAMING PER STRUCTURAL

DESCRIF	PTION

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DATE	DESCRIPTION	

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PLOT DATE: 2022.08.22

ASSEMBLIES

	CR	11.	FOUNDATION NOTES:					
1.	ALL MATERIALS WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CO BUILDING CODE (IBC) INCLUDING WASHINGTON STATE MODIFICATIONS.	ONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2018 INTERNATIONAL		UNDISTURBED EARTH DEPTHS/ELEVATIONS S ESTABLISHED BY THE				
Ζ.	DESIGN LOADING CRITERIA							
	SNOW LOAD FLOOR LIVE LOAD (RESIDENTIAL) FLOOR LIVE LOAD (RESIDENTIAL BALCONIES AND DECKS) GUARDRAILS/BALCONY RAILS (RESIDENTIAL)	ROOF SNOW LOAD, Pf = 25PSF 40 PSF 60 PSF 200 LBS.		LATERAL EARTH PI LATERAL EARTH PI PASSIVE EARTH PF COEFFICIENT OF F				
	WIND (MAIN WIND FORCE RESISTING SYSTEM)	BASIC WIND SPEED = 97 MPH IMPORTANCE FACTOR, I_w = 1.0 BISK CATEGOBY = II		SOILS REPORT REFER				
		TOPOGRAPHIC FACTOR, $K_{zt} = 1.6$ EXPOSURE CATEGORY = C	12.	ALL PILES SHALL BE SU ACCORDANCE WITH AS				
		INTERNAL PRESSURE COEFFICIENT, (GCpi)= 0.18/-0.18		AS INDICATED IN THE (
		RESIDENCE: ULT. WIND BASE SHEAR (PLAN NORTH/SOUTH) = 45.2 KIP ULT. WIND BASE SHEAR (PLAN EAST/WEST) = 31.0 KIP		PILE DIAMETER 3-INCH DIAMETER PIL				
				SUMMARY OF DRIVING				
	EARTHQUAKE (EQUIVALENT LATERAL FORCE PROCEDURE)	Ss=1.458		HAMMER MO				
		S ₁ =0.503 S ₁ =0.604		HYDRAULIC HYDRAULIC				
		IMPORTANCE FACTOR, I _e = 1.0		HYDRAULIC T				
		SITE CLASS D SEISMIC DESIGN CATEGORY= D RISK CATEGORY = II B = 6.5 FOR WOOD STRUCTURAL PANEL SHEAR WALLS		MINIMUM PILE EMBED SLEEVE COUPLERS IN INSTALLATION.				
		OVER STRENGTH FACTOR, $\Omega_0 = 3.0$ DEFLECTION AMPLIFICATION FACTOR, $C_d = 4.0$ REDUNDANCY FACTOR = 1.0		STEEL PIPE SHALL COI IN THE GEOTECHNICAL				
		SEISMIC RESPONSE COEFFICIENT, $C_s = 0.150$ SEISMIC BASE SHEAR (RESIDENCE) = 23.5 KIP		PILE INSTALLATION AND T				
3.	<u>STRUCTURAL DRAWINGS</u> SHALL BE USED IN CONJUNCTION WITH ARC SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AN ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE INTE DIMENSIONS.	CHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR ND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. NDED FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR ALL	13.	<u>DEMOLITION</u> : CONTRA SUPPORT EXISTING CO SAVED WHERE AND AS DEMOLITION DEBRIS S DEMOLITION DEBRIS (
4.	<u>CONTRACTOR</u> SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SI EXISTING CONSTRUCTION SHOWN ON THE STRUCTURAL DRAWINGS	ZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.		a. ALL NEW OPENI OVERCUTTING				
5.	<u>CONTRACTOR</u> SHALL PROVIDE TEMPORARY BRACING FOR THE STRU BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.	ICTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE		b. CONT c. SMAL d. WHERE NEW RE				
6.	<u>CONTRACTOR</u> SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIO TO PERFORM THE WORK. THE STRUCTURAL ENGINEER HAS NO OVE FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE	NS AND THE METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES REQUIRED RALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. , NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE	14.	CONCRETE SHA CONTRACTOR SHALL C AND ALL WOOD MEMBI REPAIRED AS DIRECTE				
7	CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING	TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO	15.					
0	FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAV	WINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.		ALL CONFLICTS AND D				
0.	SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCT ARCHITECT AND THE STRUCTURAL ENGINEER.	STRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE						
9. 10.	ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMP MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION II STATEMENT SPECIAL INSPECTIONS:	ONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING N ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.	16.	CONCRETE SHALL BE MIX 28-DAY STRENGTH (f'c) OF WATER/CEMENT RATIO O CONCRETE STRENGTH (f'				
	THE FOLLOWING CONSTRUCTION TYPES ARE TO BE REVIEWED BY A INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRA INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPER TO SECTION 1704 OF THE 2018 INTERNATIONAL BUILDING CODE. SPE		ALL CONCRETE WITH S C260, C494M, AND C618 ASTM C172 AND AIR C0					
	SPECIAL INSPECTIONS AND TESTS. THE ARCHITECT, STRUCTURAL E ALL INSPECTION REPORTS AND TEST RESULTS.	SPECIAL INSPECTIONS AND TESTS. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION REPORTS AND TEST RESULTS.						
	<u>SOILS</u> : SHALL BE SPECIAL INSPECTED AS REQUIRED IN THE INTERNA GEOTECHNICAL REPORT.	TIONAL BUILDING CODE SECTION 1705.6 AND AS DIRECTED IN THE		WELDED WIRE FABRIC				
	STEEL CONSTRUCTION AND WELDING: SHALL BE SPECIAL INSPECTED 360-16, AISC 341-16, AWS D1.1, AND AWS D1.8.	D AS REQUIRED IN THE INTERNATIONAL BUILDING CODE SECTION 1705.2, AISC	18.	DETAILING OF REINFO				
	WOOD CONSTRUCTION: SPECIAL INSPECTIONS SHALL BE PROVIDED	AS REQUIRED BY THE INTERNATIONAL BUILDING CODE SECTION 1705.5 AS		ם אם מוסב				
	 PERIODIC SPECIAL INSPECTION OF NAILING, BOLTING, ANCHORIN SYSTEM WHERE NAIL SPACING IS 4 INCHES OR LESS. THIS INCLU 	G, AND OTHER FASTENING OF COMPONENTS OF THE LATERAL-LOAD- RESISTING IDES SHEAR WALLS, DIAPHRAGMS, BRACES, HOLD-DOWNS, AND SHEAR PANELS.		dan SI∠E #3 #4 #5				
	POST INSTALLED ANCHORS: PERIODIC SPECIAL INSPECTION IN ACCO	ORDANCE WITH THE PRODUCTS APPROVED ICC-ES REPORT.		"~ PROVIDE CORNER BAF				
				ENDS.				

ARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

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

PRESSURE (RESTRAINED/UNRESTRAINED) PRESSURE (SEISMIC) RESSURE (INCLUDES FACTOR OF SAFETY = 1.5) RICTION (INCLUDES FACTOR OF SAFETY = 1.5)

60 PCF/35 PCF 12H (ULTIMATE LOAD) 300 PCF 0.35

RENCE: FILE NO. 21-537 PREPARED BY PANGEO, INC. DATED JANUARY 25, 2022

UBJECT TO ASTM LOAD TESTING ON A MINIMUM OF 3% OF PILES, UP TO 5 PILES MAXIMUM (1 MINIMUM). TESTING SHALL BE IN ASTM STANDARD D1143-81 FOR PILES UNDER STATIC AXIAL COMPRESSIVE LOAD.

GEOTECHNICAL REPORT PIPE PILES MAY BE ASSIGNED THE FOLLOWING COMPRESSIVE CAPACITIES.

CAPACITY 6 TONS LE (COMPRESSION)

GRITERIA FOR 3-INCH PIN PILE PER GEOTECHNICAL REPORT.

MODEL	HAMMER WEIGHT (LB)/BLOWS PER	3" PILE REFUSAL CRITERIA (SECONDS PER INCH
	MINUTE	OF PENETRATION)
CTB 325	850 / 900	10
CTB 425	1,100 / 900	6
TB 725X	2,000 / 600	3

MENT SHALL BE AS RECOMMENDED IN GEOTECHNICAL REPORT. INDIVIDUAL PILE SECTIONS SHALL BE CONNECTED USING NSTALLED BY WABO CERTIFIED WELDERS. ALTERNATE COUPLING METHODS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO

NFORM TO ASTM A_53, TYPE E OR S, GRADE B, Fy = 35 KSI. MINIMUM PIPE WEIGHT FOR ALL PILES SHALL BE AS RECOMMENDED L REPORT. PIPE PILES SHALL BE GALVANIZED.

TESTING SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER.

RENOVATION

ACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO ONSTRUCTION AS REQUIRED, AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED. SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING ON EXISTING FLOOR SYSTEMS TO 40 PSF.

INGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE. AT CORNERS SHALL NOT BE PERMITTED.

TRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS. ALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING, IF POSSIBLE.

EINFORCING TERMINATES AT EXISTING CONCRETE, THREADED BARS INTO THREADED EXPANSION INSERTS IN EXISTING IALL BE PROVIDED TO MATCH HORIZONTAL REINFORCING, UNLESS OTHERWISE NOTED ON PLANS.

CHECK FOR DRY ROT AT ALL EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWING WATER STAINS, ERS IN BASEMENT AND CRAWL SPACES. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR ED BY THE STRUCTURAL ENGINEER.

VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF TION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL BRING DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER.

CONCRETE

XED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH ACI 318-14 AND ACI 301-16. CONCRETE SHALL ATTAIN A F 3500 PSI BASED ON EXPOSURE CLASS F1, SHALL CONTAIN NO LESS THAN 5-1/2 SACKS OF CEMENT, HAVE A MAXIMUM OF 0.45, MAXIMUM AGGREGATE OF ¾-INCH, AND A SLUMP OF 5 INCHES OR LESS. CONCRETE HAS BEEN DESIGNED BASED ON A f'c) OF 2500 PSI PER INTERNATIONAL BUILDING CODE SECTION 1705.3 EXCEPTION 2.3 TO AVOID SPECIAL INSPECTIONS AND

SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM 18. UNLESS OTHERWISE NOTED THE TOTAL AIR CONTENT SHALL BE 5%. AIR CONTENT SHALL BE SAMPLED IN ACCORDANCE WITH ONTENT MEASURED IN ACCORDANCE WITH ASTM C231 OR C173.

SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENTS S1), GRADE 60, Fy = 60,000 PSI. EXCEPTIONS: ANY BARS OTED ON THE DRAWINGS SHALL BE GRADE 40, Fy = 40,000 PSI.

SHALL CONFORM TO ASTM A-185

RCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI SP-66-04 AND ACI 318-14 CHAPTER 25. LAP S AS FOLLOWS:

MINIMUM LAP LENGTH MINIMUM HOOK EMBEDMENT 6-INCHES 24-INCHES 31-INCHES 8-INCHES 11-INCHES 39-INCHES

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. FIELD BENDING OF GRADE 60 REINFORCEMENT SHALL NOT BE ALLOWED.

CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS: 19.

> FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ALL OTHER CASES

- 20.
- 21 117-10 AND ACI 117.1R-14.

- CODE. SUBSTITUTIONS SHALL HAVE CURRENT ICC-ES APPROVAL
 - A. CONCRETE ANCHORS

22

- a. SIMPSON STRONG-TIE "STRONG-BOLT 2" (ICC-ES ESR-3037)
- b. SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713) c. HILTI "KWIK BOLT TZ" (ICC-ES ESR-1917)
- ACCORDANCE WITH ICC-ES AC308. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:
 - a. SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-2508)
 - b. SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4057) c. SIMPSON STRONG-TIE "AT-XP" (IAPMO UES ER-263)
 - d. HILTI "HIT-RE 500-V3" (ICC-ES ESR-3814)
 - e. HILTI "HIT-HY 200" (ICC-ES ESR-3187)
- 23 AS FOLLOWS:
 - AISC 360-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.

 - AISC 341-16 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
 - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
 - AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE D1.1 AND D1.4

24. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER

26

PLATES, ANGLES, AND RODS STRUCTURAL TUBING (SQUARE OR RECTANGULAR) ANCHOR BOLTS (EMBEDDED IN MASONRY OR CONCRETE) CONNECTION BOLTS (3/4" ROUND, UNLESS SHOWN OTHERWI THREADED RODS FOR EPOXY GROUTED CONNECTIONS

- 25. STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.
- FABRICATION AND ERECTION REQUIREMENTS.
- 27 XX ELECTRODES UNLESS OTHERWISE NOTED. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED.
- 28 COAST LUMBER NO. 17, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS.

JOISTS: (2X, 3X, AND 4X MEMBERS) **BEAM AND STRINGERS:** (6 X AND LARGER MEMBERS) POSTS AND TIMBERS: (6 X AND LARGER MEMBERS) **STUDS PLATES & MISCELLANEOUS LIGHT FRAMING**

3" 1-1/2"

SLABS-ON-GRADE: UNLESS NOTED OTHERWISE SHALL BE 4" CONCRETE, REINFORCED WITH 6X6 W1.4XW1.4 WELDED WIRE FABRIC CENTERED IN SLAB. UNLESS OTHERWISE DIRECTED BY SOILS REPORT PROVIDE MINIMUM 10 MIL VAPOR BARRIER OVER 4" OF COMPACTED SAND OR GRAVEL.

CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES. TOLERANCES FOR ALL STRUCTURAL CONCRETE AND REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI

POST INSTALLED ANCHORS

POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER—OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REINFORCEMENT. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND ICC-ES REPORT. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE INTERNATIONAL BUILDING

 MECHANICAL ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. PRE-APPROVED MECHANICAL ANCHORS INCLUDE:

2. ADHESIVE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN

STEEL

STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE LATEST EDITIONS OF THE A.I.S.C. SPECIFICATIONS AND CODES

AISC 303-16 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AMENDED BY THE DELETION OF THE FOLLOWING SENTENCE IN PARAGRAPH 4.2.1: "THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY DETAIL CONFIGURATION OF CONNECTIONS DEVELOPED BY THE FABRICATOR AS PART OF HIS PREPARATION OF THESE SHOP DRAWINGS."

	ASTM SPECIFICATION A36	Fy 36 KSI
	A500 (GRADE B) A307	46 KSI
ISE)	A325-N A36 OR A307 GRADE C	36 KSI

ALL BEAM PENETRATIONS NOT SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC 303-10. ANY STRUCTURAL STEEL THAT IS EXPOSED TO VIEW UPON COMPLETION OF THE PROJECT SHALL BE CONSIDERED ARCHITECTURALLY EXPOSED. SEE PROJECT SPECIFICATIONS FOR SPECIFIC

ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70

WOOD

FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST

HEM-FIR NO. 2 MINIMUM BASE VALUE, $F_b = 850 PSI$ **DOUGLAS FIR LARCH NO. 1** MINIMUM BASIC DESIGN STRESS, Fb = 1,350 PSI DOUGLAS FIR LARCH NO. 1 MINIMUM BASIC DESIGN STRESS, $F_b = 1,200$ PSI, $F_c = 1,000$ PSI DOUGLAS FIR LARCH OR HEM-FIR NO. 2, MINIMUM BASIC DESIGN STRESS $F_b = 850 \text{ PSI}$, $F_c = 1,300 \text{ PSI}$

GLUED LAMINATED MEMBERS SHALL BE FABRICATED AND IDENTIFIED AS REQUIRED BY ASTM D3737 AND AITC A190.1. EACH MEMBER SHALL BEAR AN 29. AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. ALL GLUED LAMINATED MEMBERS SHALL CONFORM TO APA PERFORMANCE STANDARD PRG-305. UNLESS OTHERWISE NOTED ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, $F_b = 2,400$ PSI, $F_V = 265$ PSI, E = 1,800,000 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, $F_b = 2,400$ PSI, $F_v = 265$ PSI, E = 1,800,000 PSI.

WHERE REQUIRED BEAMS AND COLUMNS SHALL BE PRESSURE TREATED AFTER MANUFACTURE IN ACCORDANCE WITH AMERICAN WOOD-PRESERVATIVES ASSOCIATION STANDARD U1.

LAMINATED VENEER LUMBER (LVL): EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, 30. THE GRADE, PRODUCT DESIGNATION OR TYPE, THE PRODUCTION DATE, SPECIES OR SPECIES GROUP DESIGNATION, AND THE QUALITY CONTROL AGENCY. MEMBERS SHALL BE GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. STRUCTURAL CAPACITIES SHALL BE ESTABLISHED IN ACCORDANCE WITH ASTM D5456 AND PRODUCT SHALL HAVE AN APPROVED ICC-ES EVALUATION REPORT. MEMBERS SHALL BE TRANSPORTED AND STORED PER MANUFACTURERS RECOMMENDATIONS AND SHALL NOT BE EXPOSED TO PROLONGED MOISTURE. MINIMUM REQUIRED DESIGN PROPERTIES: Fb = 2600 PSI, Fv = 285 PSI, E = 2,000,000 PSI.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER, ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION". ANSI / TP 1-2014 FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

TOP CHORD LIVE LOAD	REFER TO DESIGN LOADING CRITERIA
MINIMUM TOP CHORD DEAD LOAD	10 PSF
WIND UPLIFT (TOP CHORD)	VARIES, TO BE CALCULATED BY TRUSS MANUFACTURER REFER TO DESIGN LOADING CRITERIA

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANG-NAIL OR EQUAL) AND SHALL BE CONFIGURED SUCH THAT THE MAXIMUM OPENING BETWEEN MEMBERS DOES NOT EXCEED 42"X24". SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS MEETING THE REQUIREMENTS OF INTERNATIONAL BUILDING CODE SECTION 2303.4 TO THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING OFFICIAL FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BEAR THE STAMP AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC. SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS-TO-TRUSS AND TRUSS-TO-GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING. THE TRUSS MANUFACTURER SHALL COORDINATE LOCATIONS AND SUPPORT CONFIGURATIONS OF PLUMBING, MECHANICAL UNITS, DUCT WORK, AND OTHER MISCELLANEOUS ITEMS WITH THE CONTRACTOR PRIOR TO FABRICATION. TRUSSES SHALL BE DESIGNED TO SUPPORT ALL LOADS ASSOCIATED WITH SUCH ITEMS. THE TRUSS SHOP DRAWINGS SHALL INCLUDE ALL DESIGN LOADS AND APPROVED HANGER CONNECTION DETAILS TO TRUSS CHORDS. FOR SUPPORT OF HUNG MECHANICAL SYSTEM COMPONENTS. ANY VARIATION FROM THE BEARING POINTS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL.

- PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1-09 OR PS 2-18 AND AMERICAN PLYWOOD ASSOCIATION PERFORMANCE STANDARD PRP-108. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS. EACH PANEL SHALL BE IDENTIFIED FOR GRADE AND GLUE TYPE BY THE TRADEMARKS OF AN APPROVED TESTING AND GRADING AGENCY.
- ALL WOOD PLATES IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE, PROVIDE 33. 2 LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC, AND CONCRETE OR MASONRY

PRESSURE TREATED LUMBER SHALL COMPLY WITH THE AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD U1, COMMODITY SPECIFICATION A AS INDICATED BELOW OR HAVE EQUIVALENT ICC-ES APPROVAL.

PROPOSED USE		AWPA USE CATEGORY
RESIDENTIAL DECKS	DECKING	3B
	JOISTS ABOVE GROUND	3B
	JOISTS IN CONTACT WITH GROUND	4A
	POSTS	4A
	RAILING	3B
	LEDGERS	3B
SAWN LUMBER	ABOVE GROUND	3B
	GROUND CONTACT	4A
PLYWOOD	DAMP ABOVE GROUND	2
	EXTERIOR ABOVE GROUND	3B
	GROUND CONTACT	4A
SILL PLATES	IN CONTACT WITH CONCRETE OR MASONRY	2
INTERIOR LEDGERS	IN CONTACT WITH CONCRETE OR MASONRY	2

ALL TREATED LUMBER SHALL BEAR THE QUALITY MARK OF AN ACCREDITED INSPECTION AGENCY. THE QUALITY MARK SHALL INCLUDE:

A. IDENTIFICATION OF TREATING MANUFACTURER

B. TYPE OF PRESERVATIVE USED

C. MINIMUM PRESERVATIVE RETENTION (PCF)

- D. END USE FOR WHICH THE PRODUCT IS TREATED
- E. IDENTITY OF THE ACCREDITED INSPECTION AGENCY
- F. STANDARD TO WHICH THE PRODUCT IS TREATED

34. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER TO ACHIEVE THE MAXIMUM PUBLISHED ALLOWABLE LOAD. ALL CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. SHIMS, WHERE REQUIRED, SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. ALL LAG SCREWS SHALL BE INSTALLED IN PRE-DRILLED HOLES.

35. WOOD FASTENERS:

Α.	NAIL SIZES	(

SIZE 6d 10d 12d 16d

36.

INTERNATIONAL BUILDING CODE.

HEIGHT.

STUD SIZ 2X4 2X6

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS (WITH 7" MINIMUM EMBEDMENT) @ 4' 0" O.C. UNLESS INDICATED OTHERWISE. PROVIDE 3"x3" x1/4" HOT-DIPPED GALVANIZED PLATE WASHERS AT ALL ANCHOR BOLTS. INDIVIDUAL MEMBERS OF BUILT UP POSTS SHALL BE NAILED TO EACH OTHER WITH 16d NAILS @ 12" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES NAILED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH NAILS AT 7" O.C. USE 5d COOLER NAILS FOR 1/2" GWB AND 6d COOLER NAILS FOR 5/8" GWB. PROVIDE 15/32" APA RATED SHEATHING (SPAN RATING 24/0) ON EXTERIOR SURFACES NAILED AT ALL PANEL EDGES (BLOCK UNSUPPORTED EDGES), TOP AND BOTTOM PLATES WITH 8d NAILS @ 6" O.C. AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH NAILS @ 12" O.C. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS.

TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS OF 16d @ 12" O.C. ATTACH RAFTERS AND ROOF TRUSSES AT BEARING LINES WITH H2.5 @ 24" O.C. UNLESS OTHER METAL CONNECTIONS ARE INDICATED.

TONGUE AND GROOVE STRUCTURAL ROOF AND FLOOR DECKING SHALL BE INSTALLED AS FOLLOWS:

B. 3X AND 4X DECKING SHALL BE TOENAILED WITH ONE 40d NAIL AND FACE NAILED WITH ONE 60d NAIL PER SUPPORT. COURSES SHALL BE SPIKED TOGETHER WITH 8" SPIKES AT 30" O.C. (MAXIMUM) AND AT 10" (MAXIMUM) FROM EACH END OF EACH PIECE. SPIKES SHALL BE INSTALLED IN PREDRILLED EDGE HOLES.

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

UNLESS NOTED OTHERWISE ALL SAWN LUMBER JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS AND ALL PREFABRICATED PLYWOOD WEB JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS.

ALL CONNECTIONS/FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED OR FIRE-RETARDANT-TREATED WOOD, SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL. HOT DIPPED GALVANIZED FASTENERS SHOULD CONFORM TO ASTM STANDARD 153, AND HOT DIPPED GALVANIZED CONNECTORS SHOULD CONFORM TO ASTM STANDARD A653 (CLASS G-185). STAINLESS STEEL FASTENERS AND CONNECTORS SHOULD BE TYPE 304 OR 316. NOTE: ELECTROPLATED GALVANIZED FASTENERS AND CONNECTORS ARE NOT TO BE USED WITH PRESSURE TREATED WOOD. SIMPSON PRODUCT FINISHES CORRESPONDING TO THE ABOVE REQUIREMENTS ARE ZMAX (HOT DIPPED GALVANIZED) AND SST300 (STAINLESS STEEL). STAINLESS STEEL HARDWARE AND FASTENERS SHALL NOT BE COMBINED WITH UNTREATED OR GALVANIZED MATERIAL.

SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

ENGTH	DIAMETER
)" -	0.113"
2-1/2"	0.131"
3"	0.148"
3-1/4"	0.148"
3-1/2"	0.162"

DESIGN IS BASED ON COMMON STEEL WIRE NAILS MEETING THE REQUIREMENTS OF ASTM F1667. USE OF ALTERNATE FASTENERS MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO THE START OF CONSTRUCTION.

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

WOOD FRAMING NOTES — THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE AS SPECIFIED ABOVE. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. INSTALLATION OF BOLTS AND LAG SCREWS SHALL CONFORM TO SECTIONS 12.1.3 AND 12.1.4 OF THE 2018 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. NATURALLY DURABLE OR PRESSURE TREATED WOOD SHALL BE PROVIDED WHERE REQUIRED BY SECTION 2304.12 OF THE

B. WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2X6 AT 16" O.C. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 2 x 8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED AND SHALL BEAR FULLY ON A MINIMUM OF TWO STUDS. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE SOLID BLOCKING BETWEEN STUDS AT MID HEIGHT OF ALL STUD WALLS OVER 10' IN

STUDS MAY BE NOTCHED, CUT, OR PENETRATED WITH ROUND BORED HOLES AS FOLLOWS:

MUM NOTCH / CUT MA	AXIMUM BORED HOLE
1-3	3/8"
2-1	1/8"
	MUM NOTCH / CUT MA 1-3 2-1

BORED HOLES SHALL NOT BE LOCATED WITH 5/8" FROM THE EDGE OF THE STUD OR AT THE SAME LOCATION AS A NOTCH OR CUT.

WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d AT 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS AT 4" O.C. EACH SIDE OF JOINT.

NOTCHES AT THE END OF JOISTS AND RAFTERS SHALL NOT EXCEED 1/4 THE DEPTH OF THE MEMBER. NOTCHES IN THE TOP OR BOTTOM SHALL NOT EXCEED 1/6 THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED WITHIN THE MIDDLE 1/3 OF THE SPAN. THE DIAMETER OF ROUND HOLES BORED IN JOISTS AND RAFTERS SHALL NOT EXCEED 1/3 OF THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED WITHIN 2" FROM THE TOP OR BOTTOM EDGE.

UNLESS OTHERWISE NOTED ON THE PLANS, APA RATED ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS AND ATTACHED WITH 10d NAILS @ 6" O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" O.C. TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE_AND_GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ALL ROOF AND FLOOR SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d NAILS @ 12" O.C. UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS PROVIDE FLAT 2X BLOCKING AT ALL UNFRAMED PANEL EDGES AND FASTEN SHEATHING TO FRAMING/BLOCKING AS SPECIFIED.

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revision d	ATE		DES	SCRIPTION
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UAIE C		LC. ALL RIG		 D.
ORIGINAL SHEET SIZE I	s 22"x34")JECT #	: 202	1054.00
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Sheet No.:				

- NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES.
- WWM CENTERED, U.N.O. PREPARED SOILS AND PROVIDE
- STRUCTURAL FILL OVER RE-COMPACTED NATIVE SOIL PER

	WALLS BELOW
	WALLS ABOVE
\boxtimes	COLUMNS BELOW
[x]	COLUMNS ABOVE
ורח	HANGER
,777	ABRUPT CHANGE IN SLAB/FRAMING
FB	INDICATES FLUSH BEAM

	HOLDOWN SO	CHEDULE		
ANCHOR BOLT ③	EPOXY EMBED	CAST- ② IN-PLACE	MIN. NO. OF END STUDS	1
5∕8"Ø	7"	5"	2	
5∕8"Ø	121⁄2"	7"	3	

RET	AINING W	ALL SCHEDULE			
		STEM REINFORCING FOOTING REINFORC		EINFORCING	
B2	tf	VERT.	HORIZ.	TOP	LONGIT.
8"	10"	#4 @ 10"	#4 @ 12"	#4 @ 18"	(3)#4
1'-6"	10"	#4 @ 10"	#4 @ 12"	#4 @ 18"	(4)#4
2'-3"	10"	#4 @ 10"	#4 @ 12"	#4 @ 18"	(6)#4

	3	2	1
	7	6	5
W (2)#4 #4@12"oc HO #4@18"oc VE			
	11	10	9

