LANZ RESIDENCE

1 SINGLE-FAMILY RESIDENCE

8020 SE 57TH STREET MERCER ISLAND WA 98040

ABBREVIATIONS

ABV	ABOVE
ACT	ACOUSTIC CEILING TILE
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
ARCH	ARCHITECTURAL
ASPH	ASPHALT
AVG	AVERAGE
BLDG	BUILDING
BLKG	BLOCKING
BSMT	BASEMENT
BTW	BETWEEN
BYND	BEYOND
BO	BOTTOM OF
BOT	BOTTOM
CAB	CABINET
CB	CATCH BASIN
CIP	CAST IN PLACE
CHNL	CHANNEL
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CPT	CARPET
CTR	CENTER
DBL	DOUBLE
DEMO	DEMOLISH
DIA	DIAMETER
DIM	DIMENSION
DIR	DIRECTION
DN	DOWN
DW	DISHWASHER
EA	EACH
EG	EGRESS
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR OR ELEVATION
EQ	EQUAL
EXIST, (E)	EXISTING
EXT	EXTERIOR
FAR	FLOOR AREA RATIO
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FFE	FINISHED FLOOR ELEVATION
FLR	FLOOR
FO	FACE OF
FND	FOUNDATION
GA	GAUGE
GALV	GALVANIZED
GWB	GYPSUM WALL BOARD
HB	HOSE BIB
HC	HOLLOW CORE
HORIZ	HORIZONTAL
HR	HOUR
INSUL	INSULATION
INT	INTERIOR
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MTL	METAL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER OR OVERFLOW DRAIN
OPP	OPPOSITE
PL	PROPERTY LINE
PLY	PLYWOOD
PT	PRESSURE TREATED
PNT	PAINT OR PAINTED
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REQD	REQUIRED
RM	ROOM
R.O.W.	RIGHT OF WAY
SF	SQUARE FEET
SIM	SIMILAR
SPEC	SPECIFIED
SPK	SPRINKLER
SS	STAINLESS STEEL
STC	SOUND TRANSMISSION COEFFICIENT
STL	STEEL
STRUCT	STRUCTURE OR STRUCTURAL
T&G	TONGUE & GROOVE
TELE	TELEPHONE
TEMP	TEMPERED
TO	TOP OF
T/D	TELEPHONE/DATA
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
VP	VISION PANEL
W/	WITH
WD	WOOD

SYMBOLS

DOOR DESIGNATION 1.1

WINDOW DESIGNATION 1.1 — 3'-0" WINDOW WIDTH, 5'-0" WINDOW HEIGHT

XX / X.X — DETAIL NUMBER / SHEET NUMBER

1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 X 4 FRAMING

1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 x 6 FRAMING

CAST-IN-PLACE CONCRETE WALL

PROVIDE (1) LAYER 5/8" EXTERIOR GWB AT OVERHANG

PROVIDE CMU WALL

W/D — WASHING/ DRYER MACHINE (COMBO)

W — WASHING MACHINE

D — CLOTHES DRYER

XX / X.X — SECTION MARKER

HWH — ON-DEMAND HOT WATER HEATER

SD — IRC R314 AND IFC 907.2.10.2: SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
1. IN EACH SLEEPING ROOM
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
3. ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES.
4. PER IFC 907.2.10 AND IRC R314.3 SMOKE ALARMS SHALL BE: INSTALLED 20' MIN FROM KITCHEN APPLIANCES OR 10' MIN WITH AN ALARM-SILENCING SWITCH; 3' MIN FROM BATHROOM DOORS
5. SMOKE ALARMS REQUIRED TO BE INSTALLED, HARDWIRED AND INTERCONNECTED, TYP.

SD_{SW} — SMOKE ALARM WITH SWITCH, PER ITEM 4 ABOVE

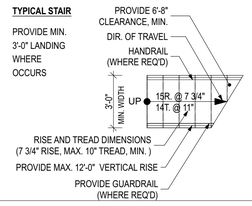
HD — HEAT DETECTOR/HEAT ALARM PER IRC R314.2.1

FAN LOCATION (IRC TABLE M 1505.4.4(1) AND IMC TABLE 403.4.7)
1. AT BATHROOMS AND LAUNDRY, PROVIDE 50 CFM FAN W/ TIMER AT 0.25 W.G. OR GREATER
2. AT KITCHENS, PROVIDE 100 CFM FAN AT 0.25 W.G. OR GREATER
3. VENT ALL EXHAUST FANS TO THE OUTSIDE
4. EXHAUST DUCTS ARE TO BE CONST. OF SMOOTH BORE NONCOMBUSTIBLE MATERIAL AND ARE TO BE INSUL. AS REQUIRED PER WSEC.

CO — IRC R315 AND 2018 IFC 915: AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING. SINGLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2075.

FLOOR STEP DOWN

SOFFIT STEP DOWN



GENERAL NOTES

01 ALL WORK SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE 2018 WASHINGTON STATE ENERGY CODE (WSEC), 2018 INTERNATIONAL BUILDING CODE (IBC), 2018 INTERNATIONAL RESIDENTIAL CODE (IRC), 2018 INTERNATIONAL MECHANICAL CODE (IMC) AND APPLICABLE CODES.

02 CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS AND VERIFY LOCATION OF WORK WITH THE ARCHITECT. NO SCALE MEASUREMENTS SHALL BE USED AS DIMENSIONS FOR WORK. LARGE SCALE DETAILS AND DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER. NOTIFY ARCHITECT WHENEVER DIMENSION DISCREPANCIES ARISE.

03 CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITION OF THE JOB SITE, INCLUDING SAFETY, PROTECTION OF PROPERTY AND THE LIKE DURING THE PERFORMANCE OF THE WORK.

04 CONTRACTOR SHALL PROVIDE METHODS, MEANS, AND FACILITIES REQUIRED TO PREVENT CONTAMINATION OF SOIL, WATER, OR ATMOSPHERE.

05 DIMENSIONS ARE TO:
- FACE OF STRUCTURE, UNLESS NOTED OTHERWISE (UNO)
- DIMENSIONS INDICATED AS CLEAR (CLR) OR FINISH (FIN) ARE TO FINISH FACE.

06 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OWNER'S WORK AND/OR SUPPLIED ITEMS THAT ARE "FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR" OR ARE "NOT IN CONTRACT", BUT ARE ATTACHED TO THE CONTRACTOR'S WORK.

07 DESTINATION OF EXCAVATED SOILS TO BE DETERMINED. SDCI WILL BE NOTIFIED OF DISPOSAL SITE AFTER CONFIRMATION BY EARTHWORK SUBCONTRACTOR.

08 DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

09 FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER.

10 DRAWINGS ISSUED FOR CONSTRUCTION PRIOR TO FINAL PERMITTING APPROVAL ARE SUBJECT TO REVISION. VERIFY CONSTRUCTION DOCUMENTS CONFORM TO PERMIT DRAWINGS BEFORE PROCEEDING WITH WORK. NOTIFY ARCHITECT WHENEVER DISCREPANCIES ARISE.

11 SURVEYOR TO LOCATE BELOW GRADE AND ABOVE GRADE STRUCTURES ON SITE.

12 TOP OF CONCRETE ELEVATIONS AND FINISHED GRADE TO BE VERIFIED IN FIELD, CONTRACTOR TO INFORM ARCHITECT, CIVIL AND STRUCTURAL ENGINEERS IF THERE ARE INCONSISTENCIES WITH THE CONTRACT DOCUMENTS.

13. PER TABLE R402.1.1 FOOTNOTE H, ALL HEADERS ARE REQUIRED TO BE INSULATED TO A MINIMUM OF R-10, REFER TO SECTION SHEETS, A4.00.

14. NOTE THAT ALL ELEVATIONS PROVIDED WITHIN THE PLAN SET REFERENCE VERTICAL DATUM PER LICENSED SURVEYOR, REFER TO LICENSED SURVEY IN PLAN SET.

SHEET INDEX

SHEET INDEX		SHEET INDEX		SHEET INDEX	
ID	SHEET NAME	ID	SHEET NAME	ID	SHEET NAME
A0.00	General Notes	A2.02	First Floor Plan	S-10.0	Roof Framing Details
A0.10	Lot Coverage Plan	A2.03	Second Floor Plan	S-10.1	Framing Sections
A0.11	Average Building Elevation	A2.04	Roof Plan	S-10.2	Framing Details
A0.12	Basement Floor Area Calculation	A3.10	Elevations	S-11.0	Second Level Framing Details
A0.13	Below Grade Story Diagram	A3.11	Elevations	S-11.1	Second Level Floor Framing
A0.16	Land Use Code - Gross Floor Area / Use Diagrams	A3.12	Elevations	S-11.2	Second Level Sections
A0.17	Lot Coverage Diagram - Trees	A3.20	Sections	S-11.3	Second Level Framing Details
A0.20	Arborist Report	A3.21	Sections	S-11.4	Second Level Shear Wall Connections
A0.21	Arborist Report	A3.22	Sections	S12.0	First Level Framing
A0.22	Arborist Report	A8.00	Wall Types	S12.1	First Level Floor Framing
C1	CSWPP PLAN	A8.00a	Wall Types	S12.3	First Level Shear Wall Connections
C2	STORMWATER SITE PLAN	A8.01	Floor Types	S12.4	Steel Framing Details
C3	STORMWATER SITE PLAN	A8.02	Roof Types	S12.5	Steel Framing Details
C4	STORMWATER DETAILS	A8.10	Window Schedule	S12.6	First Level Floor Framing Details
C5	AMENDED SOIL PLAN	A8.11	Window Schedule	S13.0	Foundation Plan
L1.0	Landscape Plan	A8.20	Door Schedule	S13.1	Foundation Wall / Retaining Wall Sections
DR.01	Rendered Elevation	S-1.0	Permanent Soldier Pile & Timber Lagging Retaining Wall		
DR.02	Rendered Elevation	S-2.0	Permanent Soldier Pile & Timber Lagging Retaining Wall		
DR.03	Rendered Elevation	S-3.0	Permanent Soldier Pile & Timber Lagging Retaining Wall		
A1.00.a	Survey	S-4.0	Permanent Soldier Pile & Timber Lagging Retaining Wall		
A1.00.b	Survey	S-5.0	House Structure Notes		
A1.01	Demolition Plan	S-6.0	Shear Wall Details		
A1.02	Excavation Plan	S-7.0	Second Level Shear Walls		
A1.10	Site Plan	S-8.0	First Level Shear Walls		
A2.01	Garage/ Basement Floor Plan	S-9.0	Garage Level Shear Walls		

01 (A0.20, DR.01)

01 (S13.1)

WASHINGTON STATE ENERGY CODE 01

PER WSEC R406.3: PROVIDE 9 CREDITS FOR A LARGE DWELLING UNIT

FUEL NORMALIZATION SYSTEM TYPE SELECTION
SYSTEM TYPE CREDIT #4 - 3.0 POINTs
FOR HEATING SYSTEM USING A HEAT PUMP THAT MEETS FEDERAL STANDARDS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(2) OR C403.3.2(9)

TABLE R406.3 OPTION 1.2: EFFICIENT BUILDING ENVELOPE - 1.0 CREDIT
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS:
VERTICAL FENESTRATION U = 0.25
FLOOR R-38
SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB
BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB

TABLE R406.3 OPTION 2.1: AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION - 1.0 CREDIT
COMPLIANCE BASED ON SECTION R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 2.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS, OR FOR R-2 OCCUPANCIES, OPTIONAL COMPLIANCE BASED ON SECTION R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 0.25 CFM/FT2 MAXIMUM AT 50 PASCALS

TABLE R406.5 OPTION 3.3: HIGH EFFICIENCY HVAC - 0.5 CREDITS
AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPF 2 OF 8.1 (HSPF OF 9.5).

TABLE R406.5 OPTION 3.11: HIGH EFFICIENCY HVAC - 0.5 CREDITS
CONNECTED THERMOSTAT MEETING ENERGY STAR CERTIFIED SMART THERMOSTATS/EPA ENERGY STAR SPECIFICATIONS.

TABLE R406.5 OPTION 5.2: EFFICIENT WATER HEATING - 0.5 CREDITS
FOR COMPACT HOT WATER DISTRIBUTION SYSTEM CREDIT, THE VOLUME SHALL STORE NOT MORE THAN 16 OUNCES OF WATER BETWEEN THE NEAREST SOURCE OF HEATED WATER AND THE TERMINATION OF THE FIXTURE SUPPLY PIPE WHERE CALCULATED USING SECTION R403.5.2. CONSTRUCTION DOCUMENTS SHALL INDICATE THE OUNCES OF WATER IN PIPING BETWEEN THE HOT WATER SOURCE AND THE TERMINATION OF THE FIXTURE SUPPLY. WHEN THE HOT WATER SOURCE IS THE NEAREST PRIMED PLUMBING LOOP OR TRUNK, THIS MUST BE PRIMED WITH AN ON DEMAND RECIRCULATION PUMP AND MUST RUN A DEDICATED AMBIENT RETURN LINE FROM THE FURTHEST FIXTURE OR END OF LOOP TO THE WATER HEATER.

TABLE R406.5 OPTION 5.4: EFFICIENT WATER HEATING - 1.0 CREDIT
WATER HEATING SYSTEM SHALL INCLUDE ONE OF THE FOLLOWING: ENERGY STAR RATED GAS OR PROPANE WATER HEATER WITH A MINIMUM UEF OF 0.91

TABLE R406.5 OPTION 6.1: RENEWABLE ELECTRIC ENERGY OPTION - 1.0 CREDIT
FOR EACH 600 KWH OF ELECTRICAL GENERATION PER HOUSING UNIT PROVIDED ANNUALLY BY ON-SITE WIND OR SOLAR EQUIPMENT A 0.5 CREDIT SHALL BE ALLOWED, UP TO 4.5 CREDITS. GENERATION SHALL BE CALCULATED AS FOLLOWS: FOR SOLAR ELECTRIC SYSTEMS, THE DESIGN SHALL BE DEMONSTRATED TO MEET THIS REQUIREMENT USING THE NATIONAL RENEWABLE ENERGY LABORATORY CALCULATOR PVWATTS OR ALTERNATIVE APPROVED BY THE CODE OFFICIAL. DOCUMENTATION NOTING SOLAR ACCESS SHALL BE INCLUDED ON THE PLANS.

PER WSEC R401.3 - A RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE COMPLYING W/ WSEC W401.3 IS REQ'D TO BE COMPLETED BY THE DESIGN PROFESSIONAL OR BUILDER AND PERMANENTLY POSTED.

PER WSEC R403.1.1 - EACH DWELLING UNIT IS REQ'D TO BE PROVIDED W/ CONTROLS TO MINIMIZE SUPPLEMENTAL HEAT USAGE DURING START-UP, SET-UP AND DEFROST CONDITIONS.

PER WSEC R404.1. - NOT LESS THAN 90 PERCENT OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY

PER WSEC R402.4 - BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED, TESTED AND VERIFIED TO LIMIT AIR LEAKAGE TO A MAXIMUM OF 5 AIR CHANGES PER HOUR

THIS PROJECT DOES NOT REQUIRE SOLAR-READY ZONES PER SRC APPENDIX T SECTION T101.1

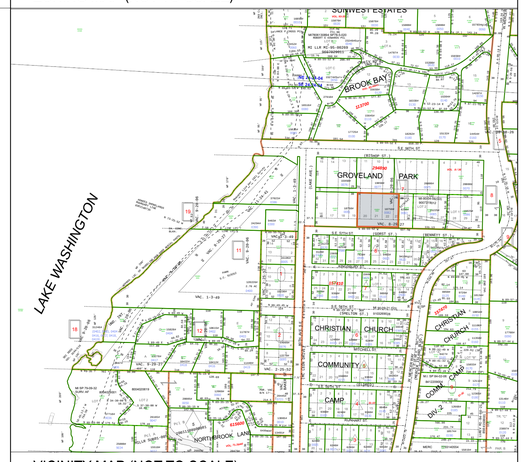
WHOLE HOUSE VENTILATION

A. INSTALL FAN IN DWELLING UNIT MASTER BATH. REFER TO PLAN SHEETS FOR LOCATION. INSTALL 24 HOUR TIMER TO CONTROL EXHAUST FAN. FAN TO OPERATE CONTINUOUSLY. REFER TO SHEET NOTE 7 ON FLOOR PLAN SHEET, A2.01-A2.03.

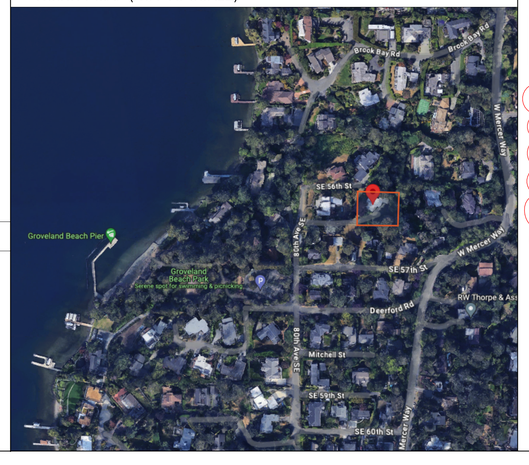
B. EXHAUST FAN TO BE MIN 75 CFM RUNNING CONTINUOUSLY, AT 1.0 SONE, AT .25 WG

C. ALL EXHAUST DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED TO A MINIMUM OF R-8.

ZONING MAP (NOT TO SCALE)



VICINITY MAP (NOT TO SCALE)



PROJECT SUMMARY

ADDRESS:	8020 SE 57TH STREET MERCER ISLAND, WA 98040
OWNER:	LNL BUILDS 8015 SE 60th ST MERCER ISLAND, WA 98040
ARCHITECT:	b9 ARCHITECTS, INC. 610 2ND AVENUE SEATTLE, WA 98104 TEL. 206.297.1284
STRUCTURAL ENGINEER:	LUCIA ENGINEERING, INC. 7307 12TH AVENUE NE, SEATTLE, WA 98115
CIVIL ENGINEER:	OFFE ENGINEERS, PLLC 13932 SE159TH PLACE RENTON, WA 98058-7832
LANDSCAPE ARCHITECT:	ROOT OF DESIGN 2020 MALTBY RD, SUITE 7, PMB 370 BOTHELL, WA 98021
LEGAL DESCRIPTION:	THE EAST 10 FEET OF LOT 19, AND LOTS 20 THROUGH 22, INCLUSIVE, AND THE WEST 20 FEET OF LOT 23, BLOCK 7, GROVELAND ARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME7 OF PLATS, PAGE 48, RECORDS OF KING COUNTY, WASHINGTON TOGETHER WITH THE VACATED BENNET STREET THEREOF SITUATED IN THE CITY OF SEATTLE, COUNTY IF KING, STATE OF WASHINGTON.
APN:	294890-0082
PROJECT DESCRIPTION:	CONSTRUCT A NEW TWO-STORY SINGLE-FAMILY RESIDENCE WITH A BELLOW GRADE BASEMENT AND GARAGE
APPLICABLE CODES:	CITY OF MERCER ISLAND MUNICIPAL CODE 2021 INTERNATIONAL RESIDENTIAL CODE (IRC) 2021 INTERNATIONAL MECHANICAL CODE (IMC) 2021 INTERNATIONAL FUEL GAS CODE (IFGC) 2021 UNIFORM PLUMBING CODE (UPC) 2021 WASHINGTON STATE ENERGY CODE (WCEC) 2021 INTERNATIONAL FIRE CODE (IFC)
CMI PROJECT #:	#CITY OF MERCER ISLAND CN#, #CITY OF MERCER ISLAND DM#,

01, 02

ZONING SUMMARY

ZONE	R-15
TOTAL LOT AREA	18,750 SF | 0.43 ACRES
YARDS:	MICC 19.02.020.C **FRONT**: 20 FT MIN. **SIDE**: FOR LOTS WITH A LOT WIDTH OF MORE THAN 90 FEET, THE SUM OF THE SIDE YARDS' WIDTH SHALL BE A WIDTH THAT IS EQUAL TO AT LEAST 17 PERCENT OF THE LOT WIDTH. MINIMUM SIDE YARD WIDTH. THE MINIMUM SIDE YARD WIDTH IS FIVE FEET OR 33 PERCENT OF THE AGGREGATE SIDE YARD TOTAL WIDTH, WHICHEVER IS GREATER. MINIMUM SIDE YARD REQUIRED: 21.25 FEET X .33 = 7.0125 FEET NORTHSIDE YARD = 7'-6" SOUTH SITE YARD = 21.25 FEET - 7.0125 FEET = 14.2375 FEET = 14'-3" **REAR:** 25 FT
LOT COVERAGE ALLOWED:	**30% MAX: 18,750SF x 0.30 = 5,625 SF**
LOT COVERAGE PROVIDED:	
LOT SLOPE	**EL. 126' - EL. 84' = 42'; 42.00' ÷ 125.04' = 0.335 = 34%**
HARDSCAPE	**9% OF THE NET LOT AREA: 18,750 x 9% = 1,687.5 SF**
LANDSCAPE	**70% REQUIRED PER MICC 19.02.020.F.3**
ALLOWABLE GROSS FLOOR AREA	R-15: 12,000 SF OR 40% OF THE LOT AREA, WHICHEVER IS LESS **18,750 sf x 40% = 7,500**
PROVIDED GROSS FLOOR AREA	**sf**
HEIGHT RESTRICTION	MICC 19.02.020.E HEIGHT LIMIT: 30 FT
AVERAGE BUILDING ELEVATION *CALCULATIONS ON SHEET A0.11*	**108'- 0"**
MAX BUILDING HEIGHT BUILDING HEIGHT	108'-0" + 30'-0" = **138'-0"** 107'-11"
PARKING REQUIRED	3 (AT LEAST 2 COVERED)
TREE REQUIREMENTS	**REFER TO ARBORIST REPORT ON SHEETS A0.20-A0.22** REMOVAL OF EXCEPTIONAL TREES WITH A DIAMETER OF 24 INCHES OR MORE SHALL BE LIMITED TO THE FOLLOWING CIRCUMSTANCES: A. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL RESULT IN AN UNAVOIDABLE HAZARDOUS SITUATION; OR, B. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL LIMIT THE CONSTRUCTIBLE GROSS FLOOR AREA TO LESS THAN 85 PERCENT OF THE MAXIMUM GROSS FLOOR AREA ALLOWED UNDER CHAPTER 19.02 MICC.

REFER TO THE LOT COVERAGE DIAGRAM AND CALCULATIONS ON SHEET A0.10 TO REFERENCE THE AREAS LISTED BELOW

FIRE SPRINKLER NOTES

1. NFPA 13R FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13R AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.
2. NFPA 72 (CHAPTER 29) - MONITORED HOUSEHOLD FIRE ALARM FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.
3. SOLID CORE DOORS SHALL BE INSTALLED AT ALL BEDROOMS, UTILITY AND LAUNDRY ROOMS
4. A MINIMUM THICKNESS OF 5/8" TYPE X GYPSUM WALL BOARD SHALL BE INSTALLED THROUGHOUT ALL INTERIOR WALLS AND CEILINGS.
5. THE SPRINKLER SYSTEM CAN BE SUPPLIED BY A DOMESTIC SERVICE IN ACCORDANCE WITH 2018 INTERNATIONAL FIRE CODE SECTION 903.3.5.1.

02

Architect of Record

b9 architects

400 E Pine Street, Suite 215
Seattle, WA 98104
206.297.1284
www.b9architects.com

Project:
LANZ RESIDENCE

Location:
8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:
Project No.

8914 REGISTERED ARCHITECT Brad Ruaan BRADLEY G. KNOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

General Notes

A0.00

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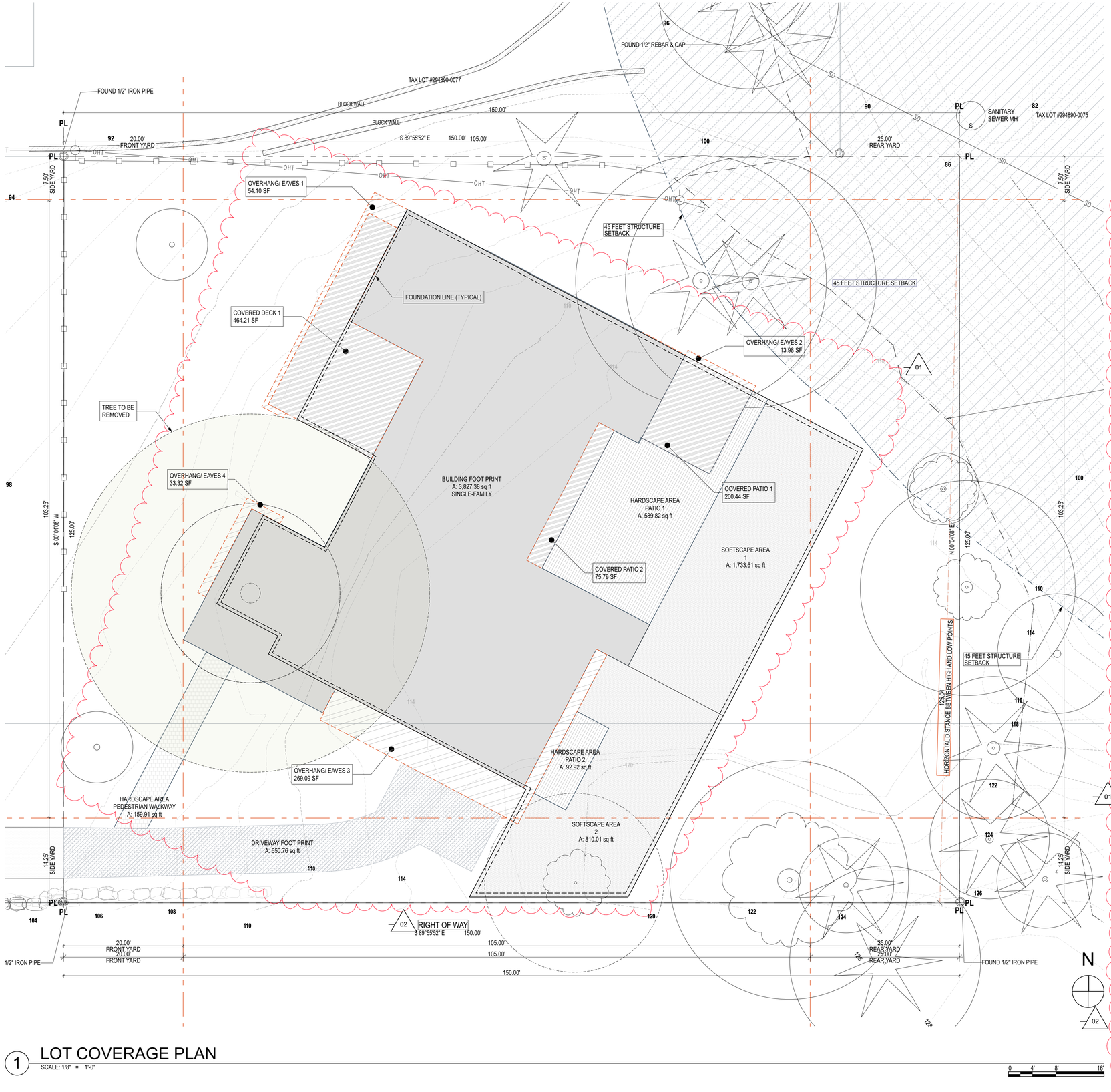

1 LOT COVERAGE PLAN
SCALE: 1/8" = 1'-0"

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MAX BUILDING HEIGHT BUILDING HEIGHT	108'-0" + 30'-0" = **138'-0"** 107'-11"
PARKING REQUIRED	3 (AT LEAST 2 COVERED)
TREE REQUIREMENTS	**REFER TO ARBORIST REPORT ON SHEETS A0.20-A0.22** REMOVAL OF EXCEPTIONAL TREES WITH A DIAMETER OF 24 INCHES OR MORE SHALL BE LIMITED TO THE FOLLOWING CIRCUMSTANCES: A. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL RESULT IN AN UNAVOIDABLE HAZARDOUS SITUATION; OR, B. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL LIMIT THE CONSTRUCTIBLE GROSS FLOOR AREA TO LESS THAN 85 PERCENT OF THE MAXIMUM GROSS FLOOR AREA ALLOWED UNDER CHAPTER 19.02 MICC.

LOT COVERAGE PLAN LEGEND

- PROPERTY LINE
- NEW BUILDING STRUCTURE FOOTPRINT AT GRADE
- NEW BUILDING OVERHANG OR EAVES
- NEW COVERED DECK/PATIO
- NEW DRIVEWAY FOOT PRINT
- 3'-0" — LOT SLOPE: SHORTEST HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS

LOT COVERAGE NOTES AND CALCULATIONS

19.16.010 DEFINITIONS: LOT SLOPE

SLOPE: A MEASUREMENT OF THE INCLINE OF A LOT OR OTHER PIECE OF LAND CALCULATED BY SUBTRACTING THE LOWEST EXISTING ELEVATION FROM THE HIGHEST EXISTING ELEVATION AND DIVIDING THE RESULTING NUMBER BY THE SHORTEST HORIZONTAL DISTANCE BETWEEN THESE TWO POINTS.

HIGHEST ELEVATION POINT OF LOT:	**EL. 126.00'**
LOWEST ELEVATION POINT OF LOT:	**EL. 84.00'**
ELEVATION DIFFERENCE:	**42.00'**
HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS:	**120.17'**

ELEVATION DIFFERENCE ÷ HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS:
42.00' ÷ 123.68' = 0.339 = **34%**
LOT SLOPE PERCENTAGE: 34%

01

19.02.020.F.3: LOT COVERAGE - LANDSCAPE REQUIRED

a. MINIMUM AREA REQUIRED. DEVELOPMENT PROPOSALS FOR SINGLE-FAMILY DWELLINGS SHALL COMPLY WITH THE FOLLOWING STANDARDS BASED ON THE NET LOT AREA:

MAXIMUM LOT COVERAGE (LOT SLOPE 30% TO 50%): **30%**
(HOUSE, DRIVING SURFACES, AND ACCESSORY BUILDINGS)
LOT AREA :18,750 SF x .30 = **5,625 SF**

MAXIMUM LOT COVERAGE ALLOWED: **5,625 SF**

LOT COVERAGE PROPOSED (BELOW): **5587 SF**
29.8%

REQUIRED LANDSCAPE AREA (LOT SLOPE 30% TO 50%): **70%**
LOT AREA: 18,750 SF x .70 = **13,125 SF**

REQUIRED LANDSCAPE AREA: **13,125 SF**

19.02.020.F.3.b: LOT COVERAGE - HARDSCAPE

b. A MAXIMUM OF NINE PERCENT OF THE NET LOT AREA MAY CONSIST OF HARDSCAPE IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, WALKWAYS, DECKS, ETC.

HARDSCAPE PROPOSED (BELOW) **842.65 SF**
PERCENTAGE PROPOSED: **4.5%**

PROPOSED LOT COVERAGE

LOT COVERAGE CHARGEABLE AREAS	
	AREA
BUILDING FOOT PRINT	3,827.38
COVERED DECK 1	459.31
COVERED PATIO 1	200.44
COVERED PATIO 2	75.79
DRIVEWAY FOOT PRINT	650.76
OVERHANG/ EAVES 1	54.10
OVERHANG/ EAVES 2	13.98
OVERHANG/ EAVES 3	269.09
OVERHANG/ EAVES 4	33.32
TOTAL	**5,584.17 ft²**

HARDSCAPE AND SOFTSCAPE LOT COVERAGE AREAS		
		AREA
HARDSCAPE AREA	PATIO 1	589.82
HARDSCAPE AREA	PATIO 2	92.92
HARDSCAPE AREA	PEDESTRIAN WALKWAY	159.91
HARDSCAPE TOTAL		842.65 ft²
SOFTSCAPE AREA	1	1,733.61
SOFTSCAPE AREA	2	810.01
SOFTSCAPE TOTAL		2,543.62 ft²
TOTAL		**3,386.27 ft²**

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Project:
LANZ RESIDENCE

Location:
8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:
Project No.

8914 REGISTERED ARCHITECT Brad Khouri BRADLEY G. KHOURI STATE OF WASHINGTON
Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Lot Coverage Plan

A0.10

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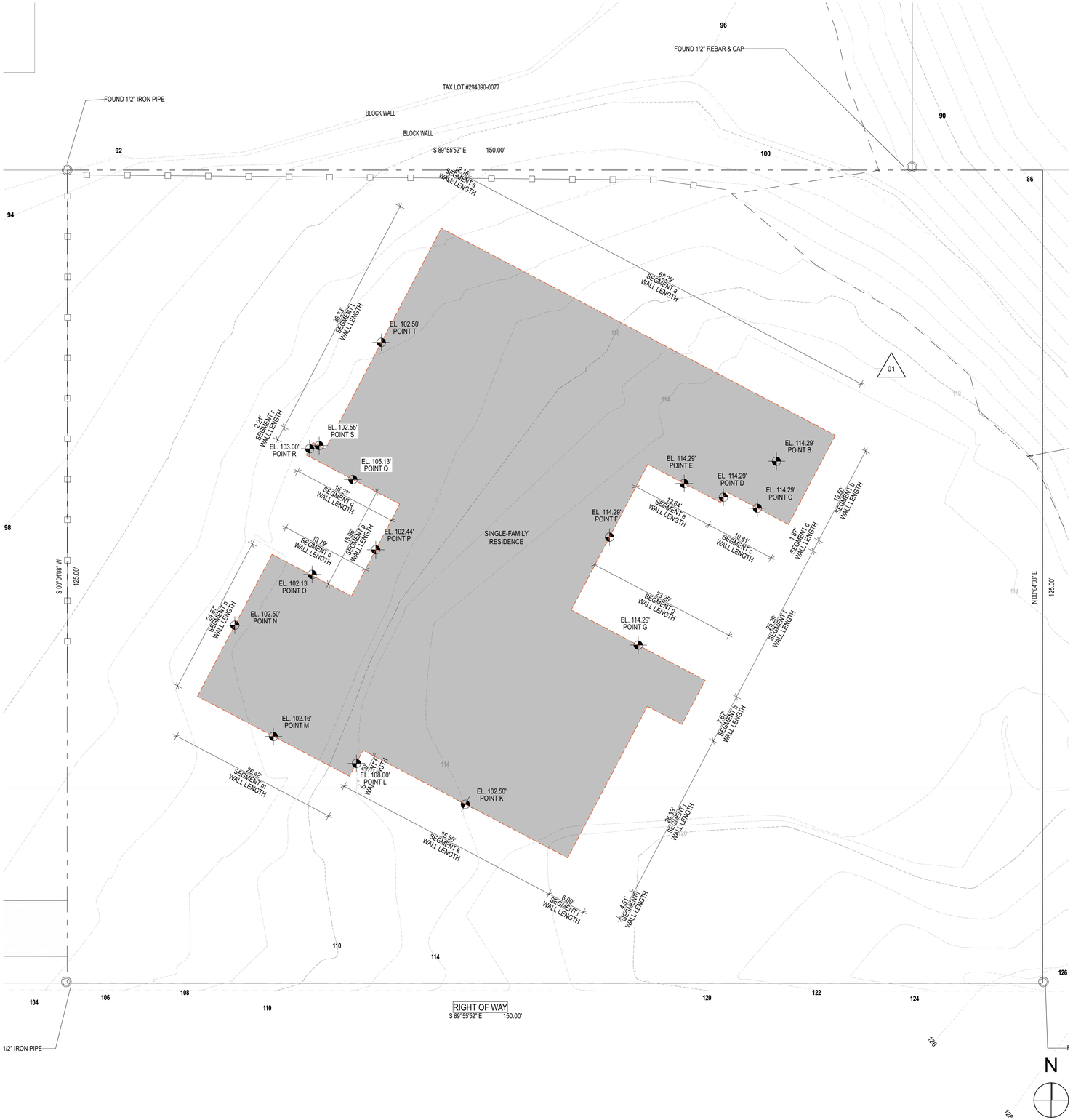

1 AVERAGE BUILDING ELEVATION PLAN

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

0 4' 8' 16'

HEIGHT PLAN LEGEND

- NEW STRUCTURE FOOTPRINT AT GRADE
- BUILDING PERIMETER
- PROPERTY LINE
- DISTANCE a — BUILDING PERIMETER LENGHT
- POINT A 332.20' — MID POINT ELEVATION

HEIGHT MEASUREMENT

BUILDING HEIGHT LIMIT PER 19.02.010.E:

AVERAGE BUILDING ELEVATION CALCULATION BASED ON THE CITY OF MERCER ISLAND CODE 19.02.010.E.4

01

$$\frac{(A \times a) + (B \times b) + (C \times c) + (D \times d) + (E \times e) + (F \times f) + (G \times g) + (H \times h) + (I \times i) + (J \times j) + (K \times k) + (L \times l) + (M \times m) + (N \times n) + (O \times o) + (P \times p) + (Q \times q) + (R \times r) + (S}{a + b + c + d + f + g + h + i + j + k + l + m + n + o + p + q + r + s + t}$$

AVERAGE BUILDING ELEVATION: **138.47' = 138'-6"**

AVERAGE BUILDING ELEVATION

SEGMENT	WALL LENGTH	ELEVATION	SUM
A	68.29	110.71	7560.39
B	15.5	114.39	1773.05
C	10.81	114.39	1236.56
D	1.87	114.39	213.91
E	12.64	114.39	1445.89
F	25.29	114.39	2892.92
G	23.25	114.39	2659.57
H	7.67	115.35	884.73
I	6	115.45	692.70
J	26.33	115.66	3045.33
K	35.56	102.5	3644.90
L	4.51	106	478.06
M	26.42	102.16	2699.07
N	24.67	102.5	2528.68
O	13.79	102.13	1408.37
P	15.96	102.44	1634.94
Q	16.23	104.13	1690.03
R	2.21	102.94	227.50
S	2.16	103.33	223.19
T	38.33	104.5	4005.49
TOTAL	377.49	2176.14	40945.26
AVERAGE BUILDING ELEVATION			108.467
HEIGHT RESTRUCTION			30
MAX ALLOWED BUILDING HEIGHT			138.47

01

Architect of Record

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Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024

City Stamp

Average Building Elevation

A0.11

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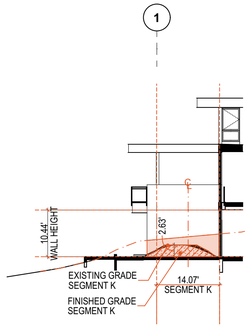
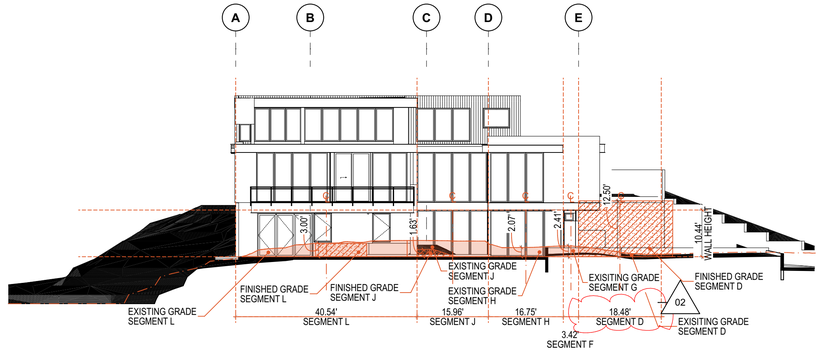




6 NORTH ELEVATION COURT

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

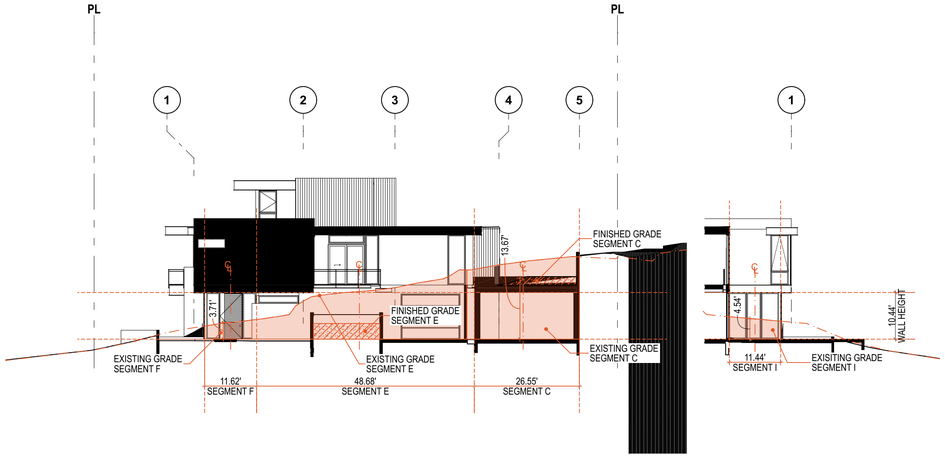
0 8' 16' 32'

7 WEST ELEVATION

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

01

0 8' 16' 32'



4 BASEMENT AREA CLACULATION | SOUTH ELEVATION

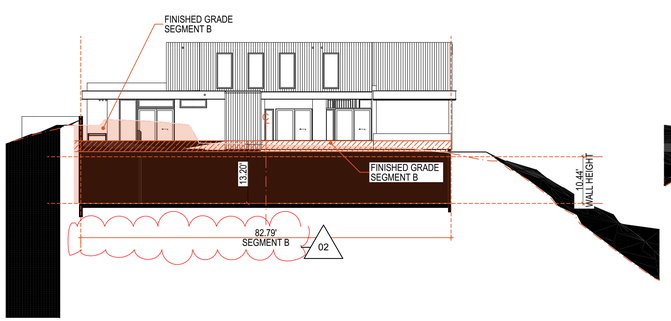
SCALE: 1/16" = 1'-0"

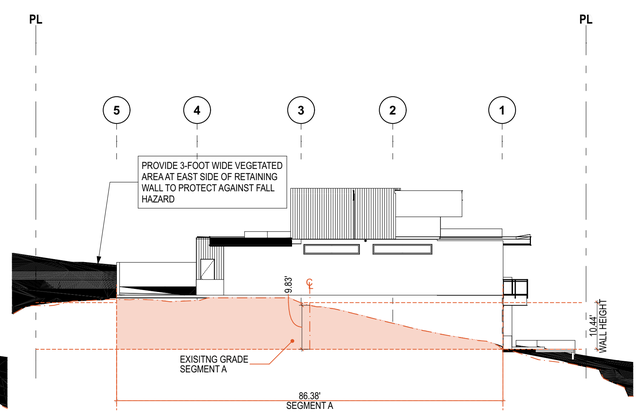
0 8' 16' 32'

5 SOUTH ELEVATION COURT

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

0 8' 16' 32'





3 BASEMENT AREA CLACULATION | EAST ELEVATION

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

0 8' 16' 32'

2 BASEMENT AREA CLACULATION | NORTH ELEVATION

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

0 8' 16' 32'

BASEMENT FLOOR AREA CALCULATIONS LEGEND

- PROPERTY LINE
- TOTAL BASEMENT FLOOR AREA
- WALL SEGMENT AREA COVERAGE EXISITING GRADE
- WALL SEGMENT AREA COVERAGE FINISHED GRAGE
- 3'-0" — WALL SEGMENT LENGTHS
- WALL SEGMENT MID POINT
- EXISTING GRADE

01

BASEMENT FLOOR AREA NOTES AND CALCULATIONS

CITY OF MERCER ISLAND CODE: 19.02.020.F
APPENDIX B BASEMENT FLOO AREA CALCULATION

WALL SEGMENT COVERAGE PERCENTAGE:
(EXISTING GRADE & FINISHED GRADE)

WALL SEGMENT	LENGTH (FEET)	WALL HEIGHT COVERAGE	PERCENTAGE COVERED	RESULT
A	86.38	9.83' / 10.44' x 100	94.16%	81%
B	82.79	FULLY COVERED	100.00%	83%
C	26.55	FULLY COVERED	100.00%	27%
D	18.48	FULLY COVERED	100.00%	18%
E	48.68	5.00' / 10.44' x 100	47.89%	23%
F	3.42	NOT COVERED	0.00%	0%
G	11.62	NOT COVERED	0.00%	0%
H	16.75	NOT COVERED	0.00%	0%
I	11.63	NOT COVERED	0.00%	0%
J	15.96	NOT COVERED	0.00%	0%
K	14.07	2.63' / 10.44' x 100	25.19%	4%
L	40.54	3.00' / 10.44' x 100	28.74%	12%
SUM	376.87			248%

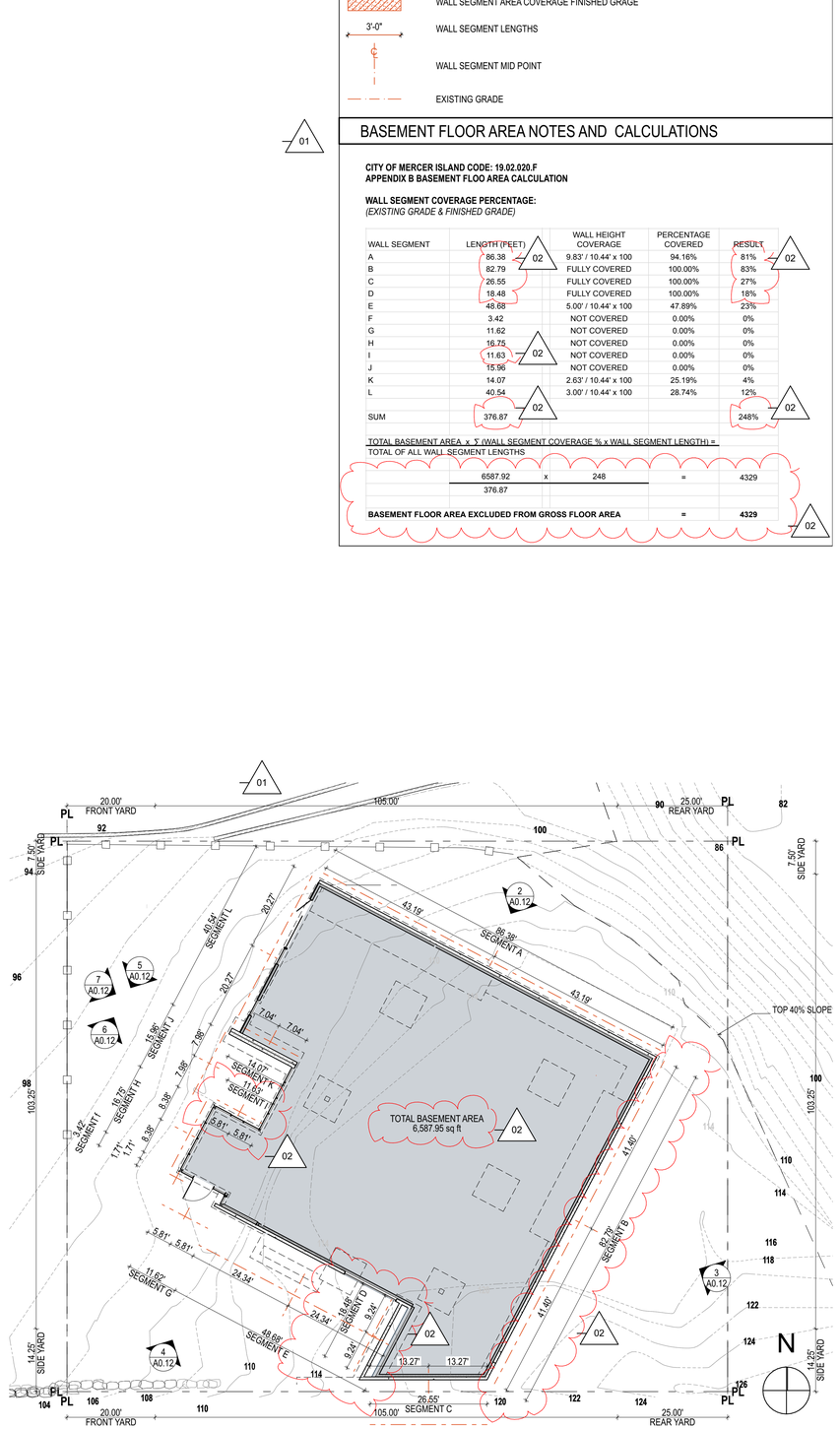
02

TOTAL BASEMENT AREA x Σ (WALL SEGMENT COVERAGE % x WALL SEGMENT LENGTH) =
TOTAL OF ALL WALL SEGMENT LENGTHS

6587.92	x	248	=	4329
376.87				

BASEMENT FLOOR AREA EXCLUDED FROM GROSS FLOOR AREA = **4329**

02



1 BASEMENT FLOOR AREA CALCULATION

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

0 8' 16' 32'

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Project:

LANZ RESIDENCE

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SDCI Number:

Project No.

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00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Basement Floor Area Calculation

A0.12

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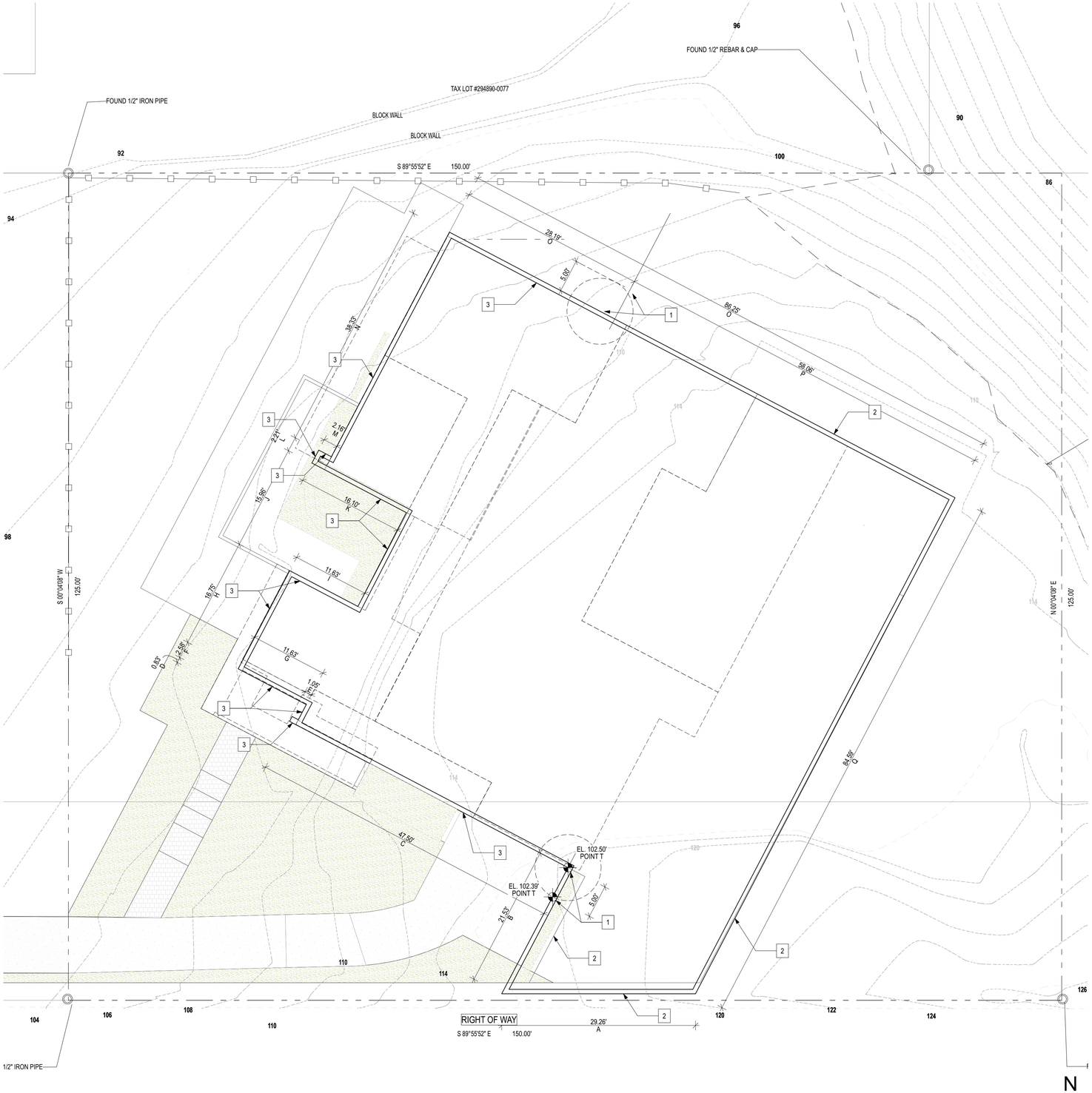

1 BELOW GRADE STORY DIAGRAM

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

0 4' 8' 16'

BELOW GRADE STORY NOTES/CALCULATIONS

1. POINT AT WHICH THE FINISHED FLOOR LEVEL DIRECTLY ABOVE A USABLE UNDER-FLOOR SPACE IS MORE THAN SIX FEET ABOVE GRADE
2. WALL SEGMENT FULLY BELOW GRADE
3. WALL SEGMENT ABOVE GRADE
4. THE FINISHED FLOOR LEVEL DIRECTLY ABOVE A USABLE UNDER-FLOOR SPACE IS ALWAYS LESS THAN TWELVE FEET ABOVE GRADE
5. GRADE IS MEASURED AS THE LOWEST POINT ON THE PROPERTY WITHIN A DISTANCE OF FIVE FEET FROM THE EXTERIOR WALL

BASED ON THE CALCULATIONS BELOW, THE BASEMENT IS NOT CONSIDERED A STORY, THEREFORE THE FIRST FLOOR IS THE FIRST STORY OF THE PROPOSED STRUCTURE.

SEGMENT	WALL LENGTH
A	28.63
B	21.24
C	47.5
D	0.83
E	1.05
F	2.58
G	11.63
H	16.75
I	11.63
J	15.96
K	16.1
L	2.21
M	2.16
N	38.33
O	28.19
P	60.56
Q	84.59
AGGREGATE ABOVE GRADE MORE THAN 6 FEET	**194.92**
TOTAL WALL LENGTH	**389.9**
PERCENTAGE ABOVE GRADE MORE THAN 6 FEET	**49.99%**

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024

City Stamp

Below Grade Story Diagram

A0.13

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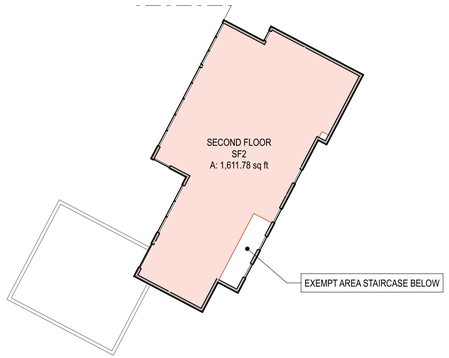
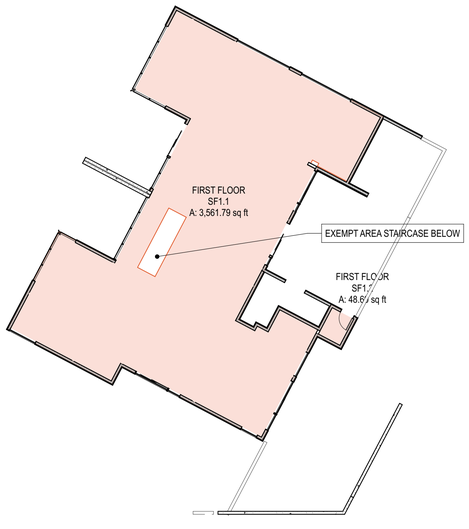


N

3 SECOND FLOOR

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

0 8' 16' 32'



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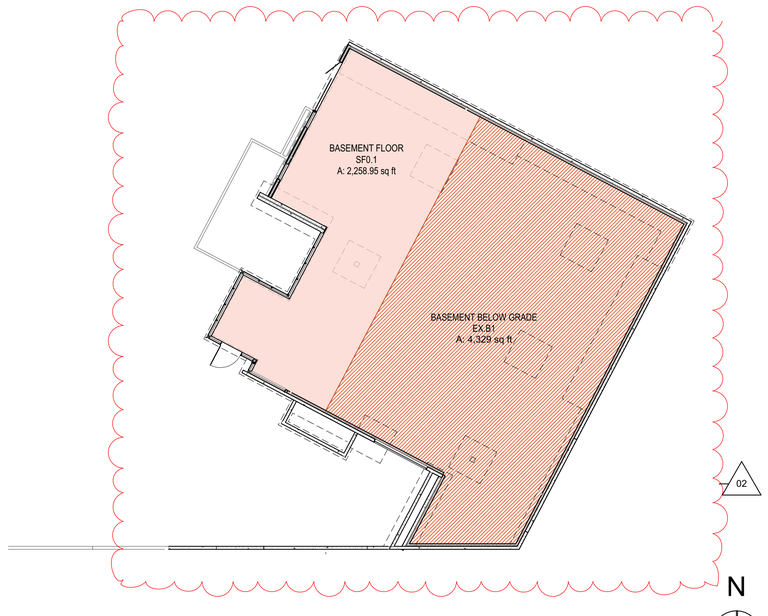
2 FIRST FLOOR

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

0 8' 16' 32'



N

1 GROUND FLOOR/BASEMENT

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

0 8' 16' 32'

PLAN LEGEND

CHARGEABLE GROSS FLOOR AREA

EXEMPT GROSS FLOOR AREA

01

FAR REQUIREMENTS

ZONE: R-15

LOT AREA: 18,750 SF | 0.43 ACRES

GROSS FLOOR AREA ALLOWED: R-15: 12,000 SF OR 40% OF THE LOT AREA, WHICHEVER IS LESS

02 18,750 sf x 40% = 7,500

GROSS FLOOR AREA PROPOSED: **7,481.21** **= 39.9%**

GROSS FLOOR AREA

STORY		FLOOR GROSS AREAS	CHARGEABLE FLOOR GROSS AREAS	CODE EXEMPTION
GROUND FLOOR/BASEMENT				
	EX.B0	4,329.00	0.00	APPENDIX B BASEMENT FLOOR AREA CALCULATION
	SF1.1	2,258.95	2,258.95	
		6,587.95 ft²	2,258.95 ft²	
FIRST FLOOR				
	SF1.1	3,561.79	3,561.79	
	SF1.2	48.69	48.69	
		3,610.48 ft²	3,610.48 ft²	
SECOND FLOOR				
	SF2	1,611.78	1,611.78	
		1,611.78 ft²	1,611.78 ft²	
		11,810.21 ft²	**7,481.21 ft²**	

02

Architect of Record

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Land Use Code - Gross Floor Area / Use Diagrams

A0.16

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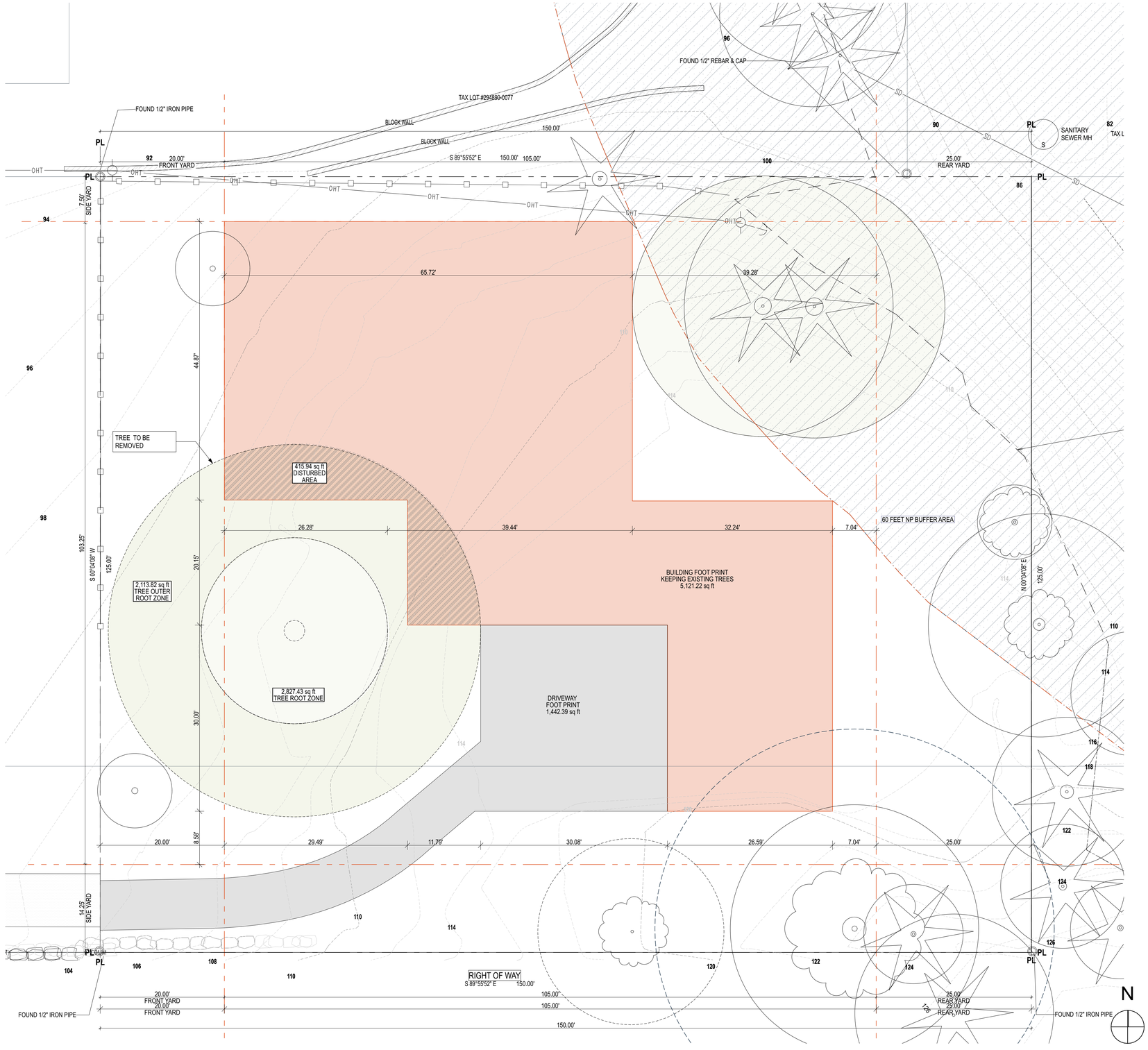

3 LOT COVERAGE DIAGRAM - TREES

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

PROJECT SUMMARY

ADDRESS:	8020 SE 57TH STREET MERCER ISLAND, WA 98040
OWNER:	LNL BUILDS 8015 SE 60th ST MERCER ISLAND, WA 98040
ARCHITECT:	b9 ARCHITECTS, INC. 610 2ND AVENUE SEATTLE, WA 98104 TEL. 206.297.1284
LEGAL DESCRIPTION:	THE EAST 10 FEET OF LOT 19, AND LOTS 20 THROUGH 22, INCLUSIVE, AND THE WEST 20 FEET OF LOT 23, BLOCK 7, GROVELAND ARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME7 OF PLATS, PAGE 48, RECORDS OF KING COUNTY, WASHINGTON TOGETHER WITH THE VACATED BENNET STREET THEREOF SITUATED IN THE CITY OF SEATTLE, COUNTY IF KING, STATE OF WASHINGTON.
APN:	294890-0082
PROJECT DESCRIPTION:	CONSTRUCT A NEW TWO-STORY SINGLE-FAMILY RESIDENCE WITH A BELLOW GRADE BASEMENT AND GARAGE
CMI PROJECT #:	#CITY OF MERCER ISLAND CN#, #CITY OF MERCER ISLAND DM#,

ZONING SUMMARY

ZONE	R-15
TOTAL LOT AREA	18,750 SF | 0.43 ACRES
ALLOWABLE GROSS FLOOR AREA	R-15: 12,000 SF OR 40% OF THE LOT AREA, WHICHEVER IS LESS **18,750 sf x 40% = 7,500**
PROVIDED GROSS FLOOR AREA	
YARDS:	MICC 19.02.020.C **FRONT**: 20 FT MIN. **SIDE**: FOR LOTS WITH A LOT WIDTH OF MORE THAN 90 FEET, THE SUM OF THE SIDE YARDS' WIDTH SHALL BE A WIDTH THAT IS EQUAL TO AT LEAST 17 PERCENT OF THE LOT WIDTH. MINIMUM SIDE YARD WIDTH. THE MINIMUM SIDE YARD WIDTH IS FIVE FEET OR 33 PERCENT OF THE AGGREGATE SIDE YARD TOTAL WIDTH, WHICHEVER IS GREATER. MINIMUM SIDE YARD REQUIRED: 21.25 FEET X .33 = 7.0125 FEET NORTHSIDE YARD = 7'-6" SOUTH SITE YARD = 21.25 FEET - 7.0125 FEET = 14.2375 FEET = 14'-3" **REAR:** 25 FT
HEIGHT LIMIT	MICC 19.02.020.E HEIGHT LIMIT: 30 FT
LOT COVERAGE 19.02.020.F.3.e.ii.a **ALLOWED:** **PROPOSED APPROACH C:**	 **35% MAX: 18,750 x 0.35 = 6,563 SF** **1,442 SF DRIVEWAY AREA + 5,121 SF HOUSE AREA = 6,563 SF**
MAXIMUM FAR: **ALLOWED:** **PROPOSED APPROACH:**	 **0.4 MAX: 18,750 SF x 0.40 = 7,500 SF 7,500 x 0.85 = 6,475 SF** **1,442 SF DRIVEWAY AREA** **5,121 SF HOUSE AREA < 6,475 SF** **5,121 SF HOUSE DOES NOT ALLOW FOR DEVELOPMENT OF AT LEAST 85% OF THE ALLOWABLE FLOOR AREA** **MAINTAINS THE TREE**
LOT SLOPE	**EL. 126' - EL. 84' = 42'; 42.00' ÷ 125.04' = 0.335 = 34%**
HARDSCAPE	**9% OF THE NET LOT AREA: 18,750 x 9% = 1,687.5 SF**
LANDSCAPE	**70% REQUIRED PER MICC 19.02.020.F.3**
PARKING REQUIRED	3 (AT LEAST 2 COVERED)
TREE REQUIREMENTS	**REMOVAL OF EXCEPTIONAL TREES WITH A DIAMETER OF 24 INCHES OR MORE SHALL BE LIMITED TO THE FOLLOWING CIRCUMSTANCES: A. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL RESULT IN AN UNAVOIDABLE HAZARDOUS SITUATION; OR, B. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL LIMIT THE CONSTRUCTIBLE GROSS FLOOR AREA TO LESS THAN 85 PERCENT OF THE MAXIMUM GROSS FLOOR AREA ALLOWED UNDER CHAPTER 19.02 MICC.**

JUSTIFICATION:

PER CODE, THE DIAGRAM ON THIS SHEET DEMONSTRATES THAT THE PROJECT CANNOT ACHIEVE THE ALLOWABLE FLOOR AREA WITHOUT REMOVING THE TREE.

THIS DIAGRAM MAINTAINS THE TREE BY POSITIONING THE DRIVEWAY AND THE HOUSE FURTHER UP THE SLOPE. IT IS COMPLIANT WITH THE ALLOWABLE LOT COVERAGE BUT THIS DOES NOT ALLOW DEVELOPMENT OF AT LEAST 85% OF THE ALLOWABLE FLOOR AREA.

THE ONLY WAY TO ACHIEVE THE ALLOWABLE FLOOR AREA IS THROUGH A SHORTER DRIVEWAY WHICH POSITIONS THE GARAGE AND HOUSE ON TOP OF THE TREE, REQUIRING THE TREE TO BE REMOVED.

Architect of Record

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
01	Building Permit Corrections Cycle 1	09/20/2024

City Stamp

01

Lot Coverage Diagram - Trees

A0.17

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Arborist Report

Tree Protection Plan 8020 SE 57th St, Mercer Island
August 25, 2023

Prepared For:

LNL Builds
Vann Lanz
317 4th Street
Kirkland, WA 98033
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206.715.6200

Prepared By:

Davey Resource Group, Inc.

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Notice of Disclaimer

Assessment data provided by Davey Resource Group is based on visual recording at the time of inspection. Visual records do not include testing or analysis and do not include aerial or subterranean inspection unless indicated. Davey Resource Group is not responsible for discovery or identification of hidden or otherwise non-observable risks. Records may not remain accurate after inspection due to variable deterioration of surveyed material. Risk ratings are based on observable defects and mitigation recommendations do not reduce potential liability to the owner. Davey Resource Group provides no warranty with respect to the fitness of the trees for any use or purpose whatsoever.

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Introduction

Davey Resource Group (DRG) was contracted by Vann Lanz from LNL Builds to inspect and provide an arborist report and tree protection plan for the property 8020 SE 57th St, Mercer Island, WA (parcel #2948900082). The client intends to develop the property.

Using a pen tablet computer, the arborist visited each tree on the site which was visually assessed, and the required tree data was collected within a GIS database. Following data collection, specific tree preservation plan elements were calculated that identified each tree's dripline and Limits of Disturbance (LOD) to better ensure survivability during the planned development. The following details are provided in alignment with the information required by the City of Mercer Island Municipal Code (Mercer Island Municipal Code):

- A numbering system of all existing significant trees on the subject property
- Tree type or species and DSH (Diameter at 4.5' above soil level).
- Identify all Exceptional Trees and differentiate between those less than 24 inches and those greater than or equal to 24 inches in diameter.
- A complete description of each tree's health, condition and viability.
- Determination of significant and exceptional trees as defined by the Mercer Island Municipal Code.
- Determination of the Limits of Disturbance (LOD) of all trees to be preserved and a description of the methods used to establish the Limits of Disturbance (LOD).
- A discussion of the timing for the installation of tree protection measures.
- Any special instructions for tree care when work may be required within the CRZ.
- Map illustrations of tree locations, identification numbers, and dripline dimensions.

Limits of the Assignment

There are many factors that can limit specific and accurate data when performing evaluations of trees, their conditions, and values. The determinations and recommendations presented here are based on current data and conditions that existed at the time of the evaluation and cannot be a predictor of the ultimate outcomes for the trees. A visual inspection was used to develop the findings, conclusions, and recommendations found in this report. Values were assigned to grade the attributes of the trees, including structure and canopy health, and to obtain an overall condition rating. No physical inspection of the upper canopy, sounding, root crown excavation, and resistograph or other technologies were used in the evaluation of the trees.

Methods

Data was collected by a Davey Resource Group (DRG) Inventory Arborist Technician and field verified by International Society of Arboriculture (ISA) Certified Arborists (PN-5408BUM). The results will be used to determine the Tree Protection Zone (TPZ) and any other tree protection measures required during construction. The results will be used to determine the Limits of Disturbance (LOD) and any other tree protection measures required during construction. The location and dripline of all trees six inches or greater in diameter at breast height (DSH, 4.5 ft. above grade) were documented.

The following attributes were collected for each site:

Tree Number: Tree ID number was assigned and a numbered aluminum tag was affixed to the tree.

Species: Trees were identified by genus and species, cultivar if evident, and by common name.

Diameter at Standard Height (DSH): Trunk diameter was recorded to the nearest inch at 4.5 feet (standard height) above grade except where noted. When limbs or deformities occurred at standard height, measurement was taken below 4.5 ft. The DSH of multi-trunk trees was determined by taking the square root of the sum of the DSH for each individual stem squared.

Height: Tree Height estimated to the nearest <5ft.

Avg. Crown Radius: Average dripline distance was measured.

Large (Regulated) Trees: Any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Exceptional Trees: a tree or group of trees that because of unique historical, ecological, or aesthetic value constitutes an important community resource. An exceptional tree is a tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table (see MICC 19.16.010) are considered exceptional trees.

Condition: Condition ratings were based on but not limited to:(1) the condition and environment of the tree's root crown; (2) the condition of the trunk, including decay, injury, callusing, or presence of fungus sporophore; (3) the condition of the limbs, including the strength of crotches, amount of deadwood, hollow areas, and whether there was excessive weight borne by them; (4) the condition and growth rate history of the twigs, including pest damage and diseases; (5) the leaf appearance, including abnormal size and density as well as pest and disease damage.

Using an average of the above factors together with the arborist's best judgment, the general condition of each tree was recorded in one of the following categories adapted from the rating system established by the International Society of Arboriculture and 10th Edition of the Council of Tree & Landscape Appraisers (CTLA) *Guide for Plant Appraisal*[1] :

- **Excellent (81%-100%):** High vigor and near-perfect health with little or no twig dieback, discoloration, or defoliation. Nearly ideal and free of structural defects. Nearly ideal form for the species and generally symmetrical.

[1] Council of Tree and Landscape Appraisers. (2019). *Guide for Plant Appraisal, 10th Edition, Second Printing*. Atlanta, GA: International Society of Arboriculture.

- **Good (61%-80%):** Vigor is normal for the species and has no significant damage due to disease or pests. Twig dieback, discoloration, or defoliation is minor. Well-developed structure with minor defects that can be corrected easily. Minor asymmetries/deviations from species norm. Function and aesthetics are not compromised.
- **Fair (41%-60%):** Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may comprise up to 50% of the canopy. A single structural defect of a significant nature or multiple moderate defects. Structural defects are not practical to correct or would require multiple treatments over several years. Major asymmetries/deviations from species norm. Function and aesthetics are compromised.
- **Poor (21%-40%):** Unhealthy and declining in appearance. Poor vigor and low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig or branch dieback. A single serious structural defect or multiple significant defects. Observed structural problems cannot be corrected. Failure may occur at any time. Largely asymmetrical or abnormal form. Form detracts from aesthetics or intended use to a significant degree.
- **Very Poor (6%-20%):** Poor vigor and appears to be dying. Little live foliage. Single or multiple severe structural defects. Visually unappealing and provides little or no function in the landscape.
- **Dead (0%-5%)**

Tree Preservation Priority: In order to capture the priority for preservation of an individual tree as it relates to planning for development projects, DRG utilized a rating scale of one to four, with one being the highest priority for protection and four being of least concern. The condition rating of an individual tree is an important component of the priority rating, but several other variables are factored in: species desirability, species longevity, species sensitivity to root loss and construction impacts, uniqueness, and aesthetics both of the tree itself and its relation to the site. It is important to note that these are qualitative ratings based solely on the site, individual tree, and existing conditions at the time of the inventory. Proposed development and construction plans are not considered when assigning ratings. The following criteria constituted the basis of tree placement in a particular category of priority:

- **Priority 1:** Highest priority for protection (i.e. particularly good condition, unique tree and/or should be protected at all reasonable cost).
- **Priority 2:** Good or fair condition trees well worth protecting though not uniquely valuable.
- **Priority 3:** Poor condition average tree that will not be missed if it were gone, not worth any special protection measures.
- **Priority 4:** Trees that should be removed under most or any circumstances (i.e., invasive or undesirable species, poor condition or critical trees, particularly high-risk situations, etc.).

Observations

This site is manicured around the house and has a steep slope into a natural unmaintained area toward the northwest. A total of fifteen (15) trees were inspected at the site. Observed onsite were seven (7) good condition trees and eight (8) fair condition trees. According to Mercer Island's exceptional definition onsite there are seven (7) trees. Tree tag # 8036, 8037, 8038, 8039, 8040, 8043, and 8049 have exceptional status.

Tree ID	DSH (in)	Avg. Dripline (ft)	Height (ft)	Species	Observations	Condition	MICC Status	Preservation Priority	Maintenance Task	Maintenance Detail
8036	12	6	15	Dogwood *(Cornus spp.)*	Co dominant	Good	Exceptional	2	Small Tree Routine Prune	Structural Prune
8037	40	30	45	Big leaf maple *(Acer macrophyllum)*	5% deadwood, included bark, mechanical damage to roots	Fair	Exceptional	2	Large Tree Routine Prune	Structural Prune
8038	10.3	6	12	Vine maple *(Acer circinatum)*	5% deadwood, multiple trunks	Fair	Exceptional	3	Small Tree Routine Prune	Structural Prune
8039	33	21	81	Western red cedar *(Thuja pilcata)*	Poor location, on slope	Fair	Exceptional	2	Large Tree Routine Prune	Clearance
8040	34	21	81	Western red cedar *(Thuja pilcata)*	Climbing ivy, on slope	Fair	Exceptional	2	Large Tree Routine Prune	Clearance
8042	11	6	24	Cherry spp. *(Prunus spp.)*	Unbalanced crown, 10% deadwood, Canker, co dominant, climbing ivy, on slope	Fair	Grove	3		
8043	23	18	39	Cherry spp. *(Prunus spp.)*	Unbalanced crown, 10% deadwood, Included bark, multiple leaders, Debris on root collar	Fair	Exceptional (Grove)	3		
8044	15	10	48	Western red cedar *(Thuja pilcata)*	On slope	Good	Grove	2		
8045	26	12	70	Western red cedar *(Thuja pilcata)*	5% deadwood, climbing ivy, on slope	Good	Grove	2		

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LANZ RESIDENCE

Location:
8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:
Project No.

8914 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024

City Stamp

01

Arborist Report

A0.20

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Tree ID	DSH (in)	Avg Dripline (ft)	Height (ft)	Species	Observations	Condition	MICC Status	Preservation Priority	Maintenance Task	Maintenance Detail
8046	11	8	50	Western red cedar *(Thuja pilcata)*	5% deadwood, suppressed, climbing ivy, on slope	Fair	Grove	2		
8047	15	10	70	Douglas fir *(Pseudotsuga menziesii)*	50% deadwood	Fair	Grove	2		
8048	10	8	33	Douglas fir *(Pseudotsuga menziesii)*	5% deadwood, climbing ivy	Good	Significant	2		
8049	46	20	78	Big leaf maple *(Acer macrophyllum)*	5% deadwood, Climbing ivy, epicormic shoot, Light fixture attached to tree about 20 feet up	Good	Exceptional	2	Large Tree Routine Prune	Structural Prune
8050	14	10	50	Big leaf maple *(Acer macrophyllum)*	5% deadwood, climbing ivy	Good	Significant	2	Large Tree Routine Prune	Structural Prune
9999	24	15	58	Western red cedar *(Thuja pilcata)*	on property line	Good	Significant	2		

Pre-Development Tree Care

Successful tree preservation efforts begin in the planning and design phase. In order to select the appropriate trees for preservation and then incorporate those trees into future development plans, site managers and designers need detailed information on the health and status of the existing trees. This report satisfies the conditions of the critical first step in the preservation process: a tree inventory, assessment, and analysis conducted by a qualified professional. The resulting findings guide the beginning stages of the preservation process.

Condition rating and preservation priority rating help nominate potential candidates for preservation. Development plans should ensure that no impact or root damage occurs within the inner root zone and plans should take into consideration the significant reduction in the likelihood of tree survival when the root zone is impacted. After individual trees are selected for preservation, the following action steps are recommended prior to development activities:

- **Prune** trees, as necessary, to remove existing deadwood and stubs. This strategy controls potential future vectors of decay. Clean cuts made at branch collars allow the tree to undergo its natural process of compartmentalizing wounds, preventing the spread of decay. During the pruning process, remove as minimal amount of live foliage as possible and no more than 25% removal in any one season while allowing for the safe and unimpeded operation of construction activities.
- **Install Limits of Disturbance** (LOD) fencing out to the furthest possible radius distance from the tree.
- If the soil within the LOD is compacted, then **aerate the soil** using an air spade to alleviate compaction and promote the flow of oxygen and water to the roots.
- **Add a 3-inch layer of mulch** to the portion of the root zone protected by the LOD. Be sure not to cover/bury the tree root collar. Mulch aids the soil in water retention and also helps insulate the soil from hot and cold weather extremes.
- Where possible, **add a 12-inch layer of wood chips** over any parts of a root zone not protected by the LOD. This aids in reducing the impact of soil compaction from heavy equipment during the upcoming construction activities.

Analysis & Recommendations

As with most tree preservation planning, a critical element is in minimizing root disturbance. When evaluating tree root disturbance during construction there are two considerations; the removal of absorption roots and the removal of anchoring roots. Removal (or compaction in the area) of the absorption roots can cause immediate water stress and a significant decline in tree health. The ability of a tree to survive the loss of absorption roots is dependent on its tolerance of drought, tree health, and the ability to form new roots quickly. Removal of the larger anchoring roots can lead to structural instability. Trees that suffer substantial root loss or damage are seldom good candidates for preservation.

The Critical Root Zone (CRZ) is considered the ideal preservation area of the root zone of a tree. It is measured as one (1) foot of radius for every inch of trunk diameter measured at 4.5 feet from grade. CRZ measurements are calculated from DSH and may not be an accurate representation of the actual dimensions of the root zone of the trees in the field. Many factors can limit root growth and expansion such as the degree of slope, present hardscape or heavily compacted areas, and/or tree health. Final selections for tree preservation are largely determined by the percentage of Critical Root Zone impacted using a commonly accepted method established by Dr. Kim Coder in Construction Damage Assessments: Trees and Sites[2].

Limits of Disturbance & Timing

To ensure the long-term viability of trees and stands identified for protection, construction activities shall comply with the minimum required tree protection through established Limits of Disturbance (LOD) for those trees determined to remain on the site.

- LOD fencing will be installed outside the dripline, at a minimum, of all retained trees. It is recommended that LOD fencing be installed to encompass as much of the tree's root zone as is allowable by design plans.
- Preventative measures are recommended in addition to the installation of tree protection barriers for retained trees including mulching over the drip line, supplemental fertilization for stressed trees, supplemental irrigation as necessary, soil amendments and soil aeration, and pruning to remove deadwood or create clearance on trees to be protected.
- Mulch the root zones of all significant trees to be retained during construction with 3" of organic mulch or arborist wood chips to help maintain moisture, avoid soil compaction, and avoid runoff.
- Install tree protection fencing for all remaining significant trees on the site and all those trees with canopies that extend onto the subject property.
- LOD fencing will follow the edge of building/road/paved paths where necessary and is not required to extend to the dripline where impervious surfaces are determined to be the limiting factor for root development (fence following existing curb does not trigger 'impact' status). Tree protection fencing may be installed at the edge of the impermeable or paved surfaces for those trees whose driplines extend over the edge.
- LOD fencing shall be a minimum of 4 feet high, constructed of chain link or polyethylene laminar safety fencing or similar material.

[2] Dr. Kim Coder, University of Georgia June 1996

Tree Care During Development

Once development begins, several measures are necessary to help ensure optimal outcomes for all trees selected for preservation:

- **Retain a Certified Arborist** on site to monitor activities and assess impacts to trees. The arborist can make as-needed recommendations to improve tree preservation activities throughout the development process. This is particularly important in order to make a timely response when a preserved tree is accidentally damaged or otherwise impacted during development.
- **Signage** instructing site workers not to enter Limits of Disturbance should be posted throughout the job site. Signage should be posted in both English and Spanish as well as any other language as deemed necessary by site managers.
- **Discuss tree protection** regularly at required staff meetings. Reiterate the importance of respecting the Limits of Disturbance as critical to the safety of staff working on site and the success of tree preservation efforts.
- Strictly **enforce** the Limits of Disturbance as "No-Go" zones. No activity, human or machinery, should breach the established LOD.
- **Root prune** where any grading or trenching occurs within the critical root zone.
- Ensure the area within the LOD receives the **weekly watering** equivalent to the amount of average natural rainfall for the specific development site. When the amount of natural rainfall received is less than the historical average, manual watering methods should be employed. The on-site Certified Arborist can make the determination when additional manual watering is necessary.
- **Do not raise or lower the soil grade near the LOD**. A tree relies upon small, non-woody roots called feeder roots for the absorption of water and nutrients. These roots predominantly reside in the upper several inches of soil, just below grade. Lowering the soil grade, even just a few inches, will sever these feeder roots and compromise tree health. Raising the soil above existing grade, such as through the addition of fill soil, buries feeder roots too deep and restricts feeder root access to water and oxygen.

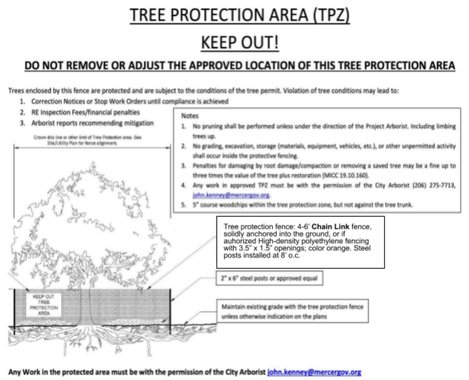
Post-Development

A successful tree preservation effort continues well past the conclusion of development activities:

- The preserved trees should be **re-inspected** for signs of the impact that may have gone undetected during construction and mitigation measures assigned accordingly.
- The preserved trees should be placed on a **seasonal care plan** for two years that includes both monitoring and routine soil inoculation treatments designed to stimulate new root growth.
- Annual monitoring should continue for several years, as the effects of construction may take anywhere from 3 to 7 years to become visibly apparent.

- "Tree Protection Area - Keep Out" or similar signs are required to accompany the LOD fencing at regular intervals and include the contact information of the consulting arborist or entity responsible for enforcing tree protection standards.
- LODs shall be constructed in such a fashion as to not be easily moved or dismantled.
- LODs shall remain in place for the entirety of the project and only be removed, temporarily or otherwise, with authorization by an ISA-certified arborist after submission and approval of intent.
- Any entry or work within the LOD of retained trees is prohibited. This includes but is not limited to the storage of materials, parking, or contaminating soil by washing out equipment.
- Retain a site arborist for the duration of the project that may conduct periodic site visits to investigate tree protection compliance and any changes to tree condition.

Image 1. An example of the required tree protection barrier signage.



Concluding Remarks

This report, along with the tree inventory, is the first step in preserving the health, function, and value of the trees on the site during and after development. Trees and green spaces provide benefits and add value to residential properties. Tree preservation starts with a basic understanding of the health and structure of the trees on the site. With proper care and protection, these trees can continue to thrive. Tree protection guidelines and strategies should be shared with contractors and employers prior to any disturbance at the site.

The suitability of a tree for preservation is a qualitative process based on the interaction of a variety of influencing factors. A tree inventory and arborist report provides a snapshot in time of each individual tree assessed across many of the most important observable factors relative to preservation. Healthy, vigorous trees better tolerate impacts from construction and more readily adapt to the new site conditions that exist after the completion of development. Additionally, tolerance to impact from construction activities varies across species and sites. The percentage impact on the Limits of Disturbance also greatly influences the suitability of a particular tree for preservation.

Successful tree preservation requires a team effort to find the right balance and select the appropriate trees. Using the findings of this report as a guiding foundation, planners are equipped to design, prepare, and implement a tree preservation plan tailored to achieving the optimal outcome.

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Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024

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Arborist Report

A0.21

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Appendix A: Inventory Site Maps

Map 1- Site map overview showing tree ID number. Aerial photos are only used for reference. Map projections may distort tree canopy size and locations.

Appendix B: Site Pictures

Image 2: Tree # 8037 next to the home

Image 3: Tree #8039 and 8040

Image 4: Trees 8039 and 8040 showing the proximity to the garage/shed

Image 5: Trees within a Grove

DAVEY Resource Group

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206-536-2977

1/9/2025

LNL Builds
Vann Lanz
317 4th Street, Kirkland, WA 98033
vann@lnlbuilds.com, 206.715.6200

RE: Modified Tree Protection for 8020 SE 57th St

Davey Resource Group (DRG) was contracted by Vann Lanz from LNL Builds to inspect and provide an arborist report and tree protection plan for the property 8020 SE 57th St, Mercer Island, WA (parcel #2948900082). The client intends to develop the property. DRG provided a Tree Preservation Plan (Arborist Report, August 2023) that provided standard tree protection guidelines for trees designated for retention at the property. In January 2025, the client requested a consultation for modified tree protection strategies around two (2) trees where the proposed tree protection is within the calculated tree protection zone. This letter serves as a supplemental amendment to the tree preservation plan in support of a modified tree protection zone. The subject trees are as follows:

- Tree #8043, Cherry Spp (Prunus spp), 23" DSH
- Tree #8049, Big leaf maple (Acer macrophylum), 46" DSH

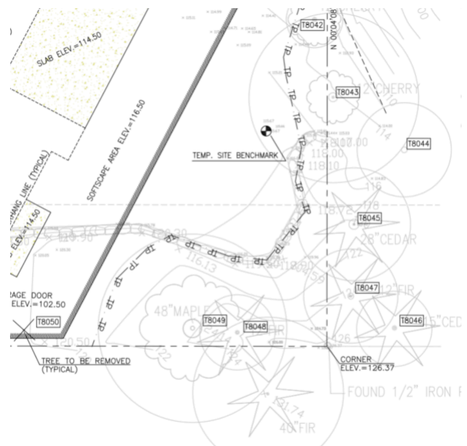
The client intends to establish tree protection fencing along the edge of the existing hardscape on the property. Both subject trees are above the grade of the existing hardscape. They have calculated critical root zones that overlap the existing paved driveway and a stone retaining wall. For both trees, the client intends to establish the limits of disturbance at the edge of this existing hardscape. The construction impacts proposed can be considered minor ingress into the calculated critical root zones for these trees based on their location and existing hardscape. These trees have been well cared for, as evidenced by the past pruning practices and site conditions. They can be considered viable for retention according to the proposed tree protection strategy.

Should you have any additional questions or concerns, please do not hesitate to contact me.

Sincerely,

Ian Scott | Seattle Area Manager
ISA Board Certified Master Arborist® (PN-5408BUM)
ASCA Registered Consulting Arborist #698
Davey Resource Group Incorporated
P: 206-714-3147, www.DaveyResourceGroup.com
ENCL.

Exhibit 1: Excerpt of site plan illustrating the location and canopy radius (dripline) of trees (T8043 and T8049)



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Professional Stamp

02

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

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01

Arborist Report

A0.22

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Return Address:
8015 SE 60TH St
Mercer Island, WA
98040

Please print or type information **WASHINGTON STATE RECORDER'S Cover Sheet** (RCW 65.04)

Document Title(s) (or transactions contained therein): (all areas applicable to your document must be filled in)
1. Utility Easement 2. _____
3. _____ 4. _____

Reference Number(s) of Documents assigned or released:
Additional reference #'s on page _____ of document.

Grantor(s) Exactly as name(s) appear on document
1. Laura Mulholland
2. _____
Additional names on page _____ of document.

Grantee(s) Exactly as name(s) appear on document
1. Vann and Jamie Lanz
2. _____
Additional names on page _____ of document.

Legal description (abbreviated: i.e. lot, block, plat or section, township, range)
Groveland Park Add Vac S 95 ft of 16-17-18 & S 95 ft of W 30 ft of 19 & Por Vac St Adj
Additional legal is on page 1 of document.

Assessor's Property Tax Parcel/Account Number ☐ Assessor Tax # not yet assigned
2948900081 + 2948900082

The Auditor/Recorder will rely on the information provided on this form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

"I am signing below and paying an additional $50 recording fee (as provided in RCW 36.18.010 and referred to as an emergency nonstandard document), because this document does not meet margin and formatting requirements. Furthermore, I hereby understand that the recording process may cover up or otherwise obscure some part of the text of the original document as a result of this request."

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EXCISE TAX NOT REQUIRED
King Co. Records Division
By _____ Deputy
Helen Huang

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When Recorded, Return to:
Vann Lanz
8015 SE 60th St
Mercer Island, WA 98040

UTILITY EASEMENT

GRANTOR: Laura Mulholland

GRANTEE: Vann and Jamie Lanz

LEGAL DESCRIPTION: GROVELAND PARK ADD VAC S 95 FT OF 16-17-18 & S 95 FT OF W 30 FT OF 19 & POR VAC ST ADJ

TAX ACCOUNT NOS. 2948900081 AND 2948900082

GRANTORS' PROPERTY:

PARCEL A (King County Assessor Parcel # 2948900081), 5616 80TH Avenue SE, Mercer Island, WA 98040 described as:

THE SOUTH 95 FEET OF LOTS 16, 17, 18 AND THE WEST 30 FEET OF THE SOUTH 95 FEET OF LOT 19, ALL IN VACATED BLOCK 7, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

TOGETHER WITH THE WEST 150 FEET OF THE NORTH ONE-HALF OF VACATED BENNETT STREET (NOW SOUTHEAST 57TH STREET) ADJOINING.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

GRANTEES' PROPERTY:

PARCEL B (King County Assessor Parcel # 2948900082), 8020 SE 57th Street, Mercer Island, WA 98040 described as:

The land referred to is situated in the County of King, City of Mercer Island, State of Washington, and is described as follows:

THE SOUTHEAST 95 FEET OF THE EAST 10 FEET OF LOT 19, AND THE SOUTH 95 FEET OF LOTS 20, 21 AND 22, AND THE SOUTH 95 FEET OF THE WEST HALF OF LOT 23, BLOCK 7, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, RECORDS OF KING COUNTY, WASHINGTON;

TOGETHER WITH THE NORTH HALF OF VACATED BENNETT STREET (NOW 75TH STREET) ADJOINING;

AND TOGETHER WITH AN EASEMENT FOR ROAD PURPOSES OVER THE SOUTH 15 FEET OF VACATED BENNETT STREET (NOW 75TH STREET).

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON

Unofficial Copy

WITNESSETH:

That Grantor, Laura Mulholland, for and in consideration of TEN DOLLARS ($10.00), and other valuable consideration, the receipt of which is hereby acknowledged, hereby convey to the Grantees, Vann and Jamie Lanz, it successor and/ or assigns, the right, privilege and authority to put in a driveway, and have access for installation of utilities to include but not limited to gas, water, sewer, electric, storm drainage through a portion of the real property legally described above and commonly known as 5616 80TH Avenue SE, Mercer Island, WA 98040 (King County Assessor Parcel # 2948900081), said easement is legally described as follows:

THE SOUTH 15 FEET TO THE FOLLOWING DESCRIBED PARCEL OF LAND;

THE SOUTH 95 FEET OF LOTS 16, 17, 18 AND THE WEST 30 FEET OF THE SOUTH 95 FEET OF LOT 19, ALL IN VACATED BLOCK 7, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

TOGETHER WITH THE WEST 150 FEET OF THE NORTH ONE-HALF OF VACATED BENNETT STREET (NOW SOUTHEAST 57TH STREET) ADJOINING.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON

"Easement Area"; see attached, EXHIBIT A: ACCESS AND UTILITIES EASEMENT MAP.

Grantors shall not erect any structure over or within the Easement Area legally described above.

Grantees shall have the right, without prior notice to Grantors, to install, repair, reconstruct, operate and/or maintain Grantees' facilities within said easement, and to enter upon said real property without incurring any legal obligation or liability.

The Grantees agree that any existing improvements on said real property that may be disturbed or destroyed by Grantees' facilities or activities related to such facilities, will be replaced, repaired, or otherwise restored as reasonably practicable, to the pre-event condition by and at Grantees' expense.

The parties intend and agree on behalf of themselves and on behalf of their heirs, successors and assigns that this Agreement shall be a covenant running with the land and shall be binding upon all parties and their heirs, executors, administrators, successors, assigns, lessees, sub-lessees, tenants and sub-tenants.

GRANTOR **GRANTEE**

Laura Mulholland Vann Lanz

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this day personally appeared before me Laura Mulholland who executed the foregoing instrument and acknowledged the said instrument to be the free and voluntary act and deed of said company, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument of said company.

SUBSCRIBED AND SWORN TO before me
This 9th day of ~~August~~ December 2024

Name: Marissa Drulia's
NOTARY PUBLIC in and for the State of Washington, residing at: Mercer Island, WA
My commission expires: 09/15/2025

Marissa Drulias

MARISSA ANN DRULIAS
Notary Public
State of Washington
Commission # 21027497
My Comm. Expires Sep 15, 2025

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this day personally appeared before me Vann Lanz who executed the foregoing instrument and acknowledged the said instrument to be the free and voluntary act and deed of said company, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument of said company.

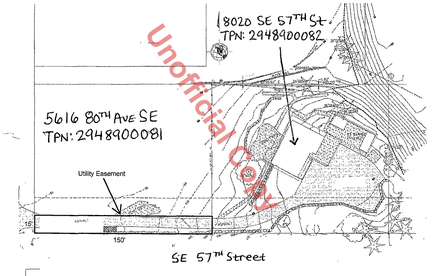
SUBSCRIBED AND SWORN TO before me
This 16th day of ~~August~~ December 2024

Name: Andrew Heimbuhl
NOTARY PUBLIC in and for the State of Washington, residing at: Mercer Island, WA
My commission expires: Sept 15, 2026

ANDREW HEIMBUHL
LICENSE #22021475
NOTARY PUBLIC
COMM. EXP. 9/15/2026
STATE OF WASHINGTON

Unofficial Copy

EXHIBIT A: ACCESS AND UTILITIES EASEMENT MAP



Unofficial Copy

Architect of Record
b9 architects
400 E Pine Street, Suite 215
Seattle, WA 98104
206.297.1284
www.b9architects.com

Project:
LANZ RESIDENCE

Location:
8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:
Project No.

8814 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON
Professional Stamp

Issue ID	Issue Name	Printed Issue Date
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

02

Easement Document

A0.23

© 2025 b9 architects

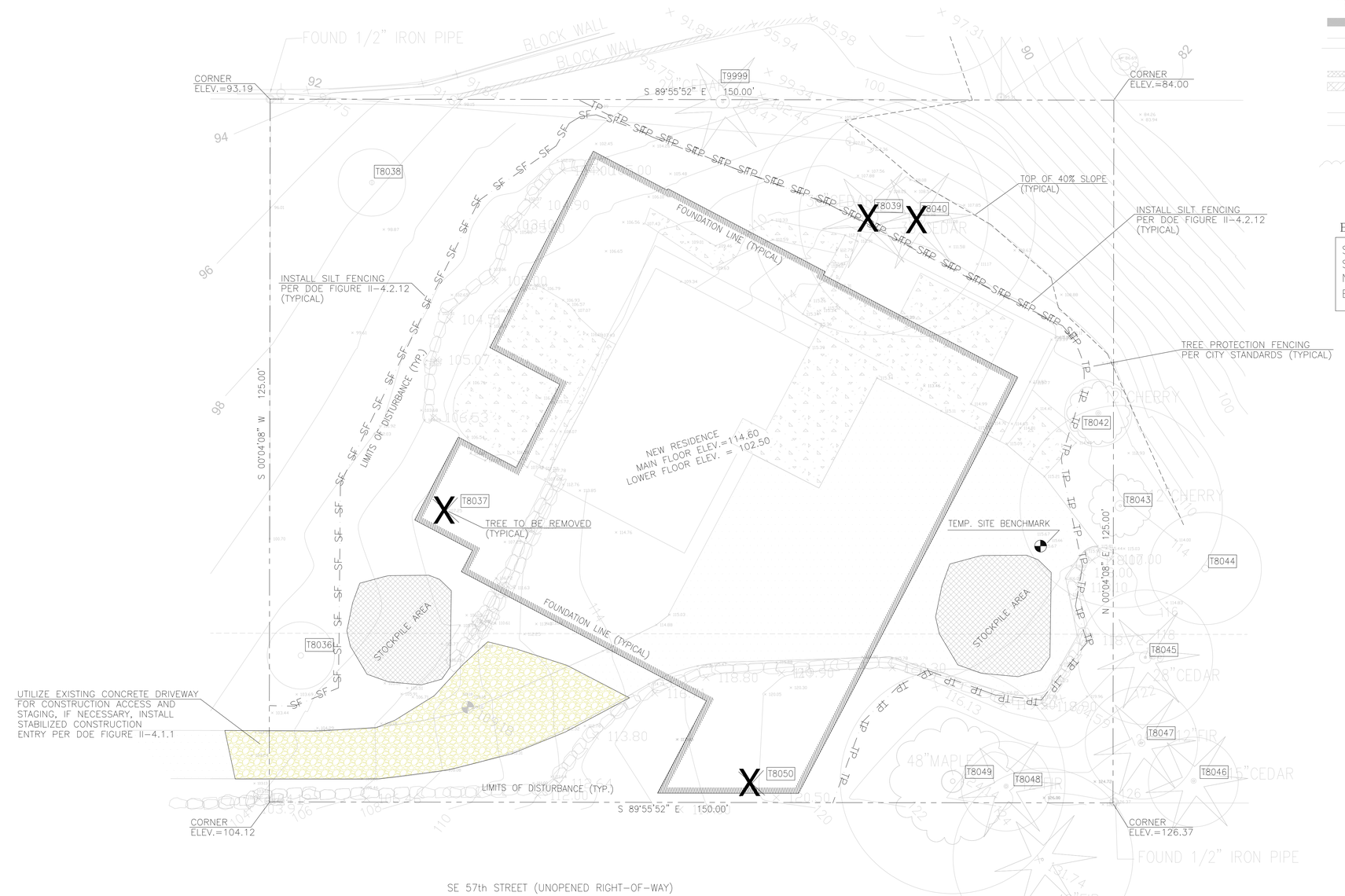
NE 1/4 OF THE SE 1/4 OF SECTION 24, TOWNSHIP 24 NORTH., RANGE 04 EAST, W.M., KING COUNTY, WA.

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILIITES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CALL BEFORE YOU DIG: 811

LEGEND

- AIR CONDITION UNIT
- AREA DRAIN
- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- RETAINING WALL
- ELECTRICAL EASEMENT
- DECK
- FENCE LINE (WOOD)
- GAS LINE
- GAS METER
- HOSE BIB RISER
- HEDGE FOLIAGE LINE
- INLET (TYPE 1)
- INLET (TYPE 1) (SOLID)
- MONUMENT IN CASE (FOUND)
- PAVER SURFACE
- POST
- POWER METER
- POWER (OVERHEAD)
- POWER POLE W/ LIGHT
- REBAR AS NOTED (FOUND)
- REBAR & CAP (SET)
- ROCKERY
- SEWER LINE
- SEWER MANHOLE
- STORM DRAIN LINE
- TREE (AS NOTED)
- WATER LINE
- WATER METER



BENCH MARK

SITE BENCHMARK
SET PK NAIL IN PARKING LOT OF RESIDENCE
NEAR THE EAST SIDE OF PROPERTY
ELEVATION = 115.67' (NAVD88)

DISTURBANCE ACREAGE: 0.27 ACRES

PROJECT PARCEL NUMBER: 294890-0082
PROJECT ADDRESS: 8020 SE 57th STREET
MERCER ISLAND, WASHINGTON 98040

SECTION/TOWNSHIP/RANGE: 24-24N-04E

TOTAL SITE ACREAGE: 0.4304 ACRES
TOTAL IMPERVIOUS AREA: 6,484 SQUARE FEET

TABLE OF CONTENT

SHEET #	DESCRIPTION
1	CSWPP PLAN
2	STORMWATER SITE PLAN
3	STORMWATER SITE PLAN
4	STORMWATER DETAILS
5	AMENDED SOILS PLAN

GRAPHIC SCALE

0 5 10 20

1 inch = 10 feet

PERMIT #: 2403-129

REV. NO.	DATE	DESCRIPTION
1	07/30/24	RESPONSE TO CITY COMMENTS DATED 07/24/2024

01/07/2025

OFFE ENGINEERS
13932 SOUTHEAST 159TH PLACE
RENTON, WASHINGTON 98058
PHONE: 425-260-3412
CONTACT: DARRELL OFFE, P.E.

DRAWN BY SL$ | CHECKED BY DLO
DESIGNED BY DLO

PROJECT: 8020 SE 57th Street
CLIENT: Vann Lanz Residence
SHEET CONTENT: CSWPP Plan

DATE 01/07/2025
JOB NO.
DWG NO.

SHEET 1 OF 5

NE 1/4 OF THE SE 1/4 OF SECTION 24, TOWNSHIP 24 NORTH., RANGE 04 EAST, W.M., KING COUNTY, WA.

NOTE: THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN IS REQUIRED. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED.

NOTE: CONNECT 4" FOUNDATION DRAIN AT LOCATION SHOWN ON PLANS – ONLY!

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILIITES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CALL BEFORE YOU DIG: 811

SIDE SEWER NOTES

S1 14LF., 4" PVC SDR-35 GASKETED SIDE SEWER @ MIN. 2% SLOPE

S2 4" SEWER CLEANOUT PER CITY STD. DETAIL #S-19

LEGEND

- AIR CONDITION UNIT
- AREA DRAIN
- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- RETAINING WALL
- ELECTRICAL EASEMENT
- DECK
- FENCE LINE (WOOD)
- GAS LINE
- GAS METER
- HOSE BIB RISER
- HEDGE FOLIAGE LINE
- INLET (TYPE 1)
- INLET (TYPE 1) (SOLID)
- MONUMENT IN CASE (FOUND)
- PAVER SURFACE
- POST
- POWER METER
- POWER (OVERHEAD)
- POWER POLE W/ LIGHT
- REBAR AS NOTED (FOUND)
- REBAR & CAP (SET)
- ROCKERY
- SEWER LINE
- SEWER MANHOLE
- STORM DRAIN LINE
- TREE (AS NOTED)
- WATER LINE
- WATER METER

BENCH MARK

SITE BENCHMARK
SET PK NAIL IN PARKING LOT OF RESIDENCE
NEAR THE EAST SIDE OF PROPERTY
ELEVATION = 115.67' (NAVD88)

NOTES:

(A) 4" FOUNDATION DRAIN CONNECTION
IE=99.00

(B) CB#1, TYPE II-48"ø
W/SOLID LOCKING FRAME & LID
W/OIL SEPARATOR 6" TEE (SEE DETAIL SHEET 4 OF 5)
RIM=103.65
ELEV.=100.36, 6" TEE OVERFLOW
IE=99.00, 4"(E)-FOUNDATION DRAIN CONNECTION
IE=98.36, 6"(NE)
IE=98.36, 6"(W)
ELEV.=97.36, 6" TEE BOTTOM
ELEV.=96.36, INSIDE FLOOR OF CB #1

(C) 38' SLOT DRAIN
GRATE ELEV.=102.45
IE=101.00, 4"(NW)

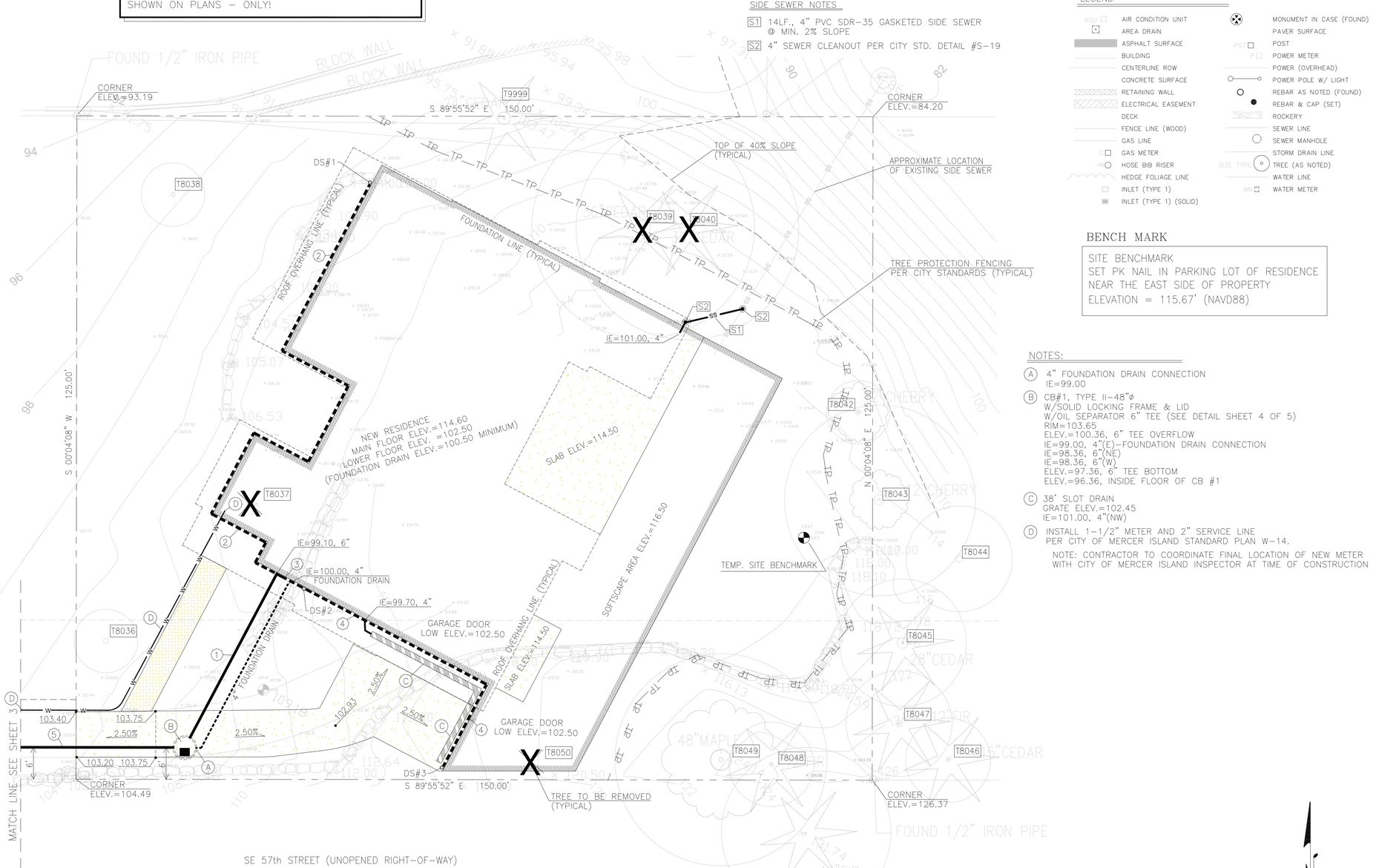
(D) INSTALL 1-1/2" METER AND 2" SERVICE LINE PER CITY OF MERCER ISLAND STANDARD PLAN W-14.
NOTE: CONTRACTOR TO COORDINATE FINAL LOCATION OF NEW METER WITH CITY OF MERCER ISLAND INSPECTOR AT TIME OF CONSTRUCTION

DOWNSPOUT TABLE

DS#1	GROUND=102.50 DOWNSPOUT LINE=101.50, 6"
DS#2	CONCRETE=102.50 DOWNSPOUT LINE=99.25, 6"
DS#3	CONCRETE=102.50 DOWNSPOUT LINE=101.00, 6"

STORM PIPE TABLE

1. 37LF., 6" PVC SDR-35 @ S=2.00%
2. 116LF., 6" PVC SDR-35 @ S=2.00%
3. 6LF., 6" PVC SDR-35 @ S=3.11%
4. 56LF., 6" PVC SDR-35 @ S=3.11%
5. 169LF., 6" PVC SDR-35 @ S=3.17%



NOTE: THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.

STORM PIPE PVC SHALL BE SDR-35 PVC AT SLOPE=2.00% MINIMUM (TYPICAL) UNLESS OTHERWISE NOTED

IMPERVIOUS SURFACES:
ROOF AREA (UNDER EAVES) = 4,968 SQ. FT.
UNCOVERED DRIVEWAY AREA = 651 SQ. FT.
UNCOVERED WALKWAY = 160 SQ. FT.
UNCOVERED SLAB AREA = 683 SQ. FT.
TOTAL IMPERVIOUS AREAS = 6,462 SQ. FEET

GRAPHIC SCALE
0 5 10 20
1 inch = 10 feet

PERMIT #: 2403-129

NO.	DATE	DESCRIPTION
1	07/30/24	RESPONSE TO CITY COMMENTS DATED 07/24/2024

01/07/2025

OFFE ENGINEERS
13932 SOUTHEAST 159TH PLACE
RENTON, WASHINGTON 98058
PHONE: 425-260-3412
CONTACT: DARRELL OFFE, P.E.

CHECKED BY DLO
DRAWN BY SLS
DESIGNED BY DLO

PROJECT 8020 SE 57th Street
CLIENT Vann Lanz Residence
SHEET CONTENT Stormwater Site Plan

DATE 01/07/2025
JOB NO.
DWG NO.
SHEET 2 OF 5

NE 1/4 OF THE SE 1/4 OF SECTION 24, TOWNSHIP 24 NORTH., RANGE 04 EAST, W.M., KING COUNTY, WA.

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILIITES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

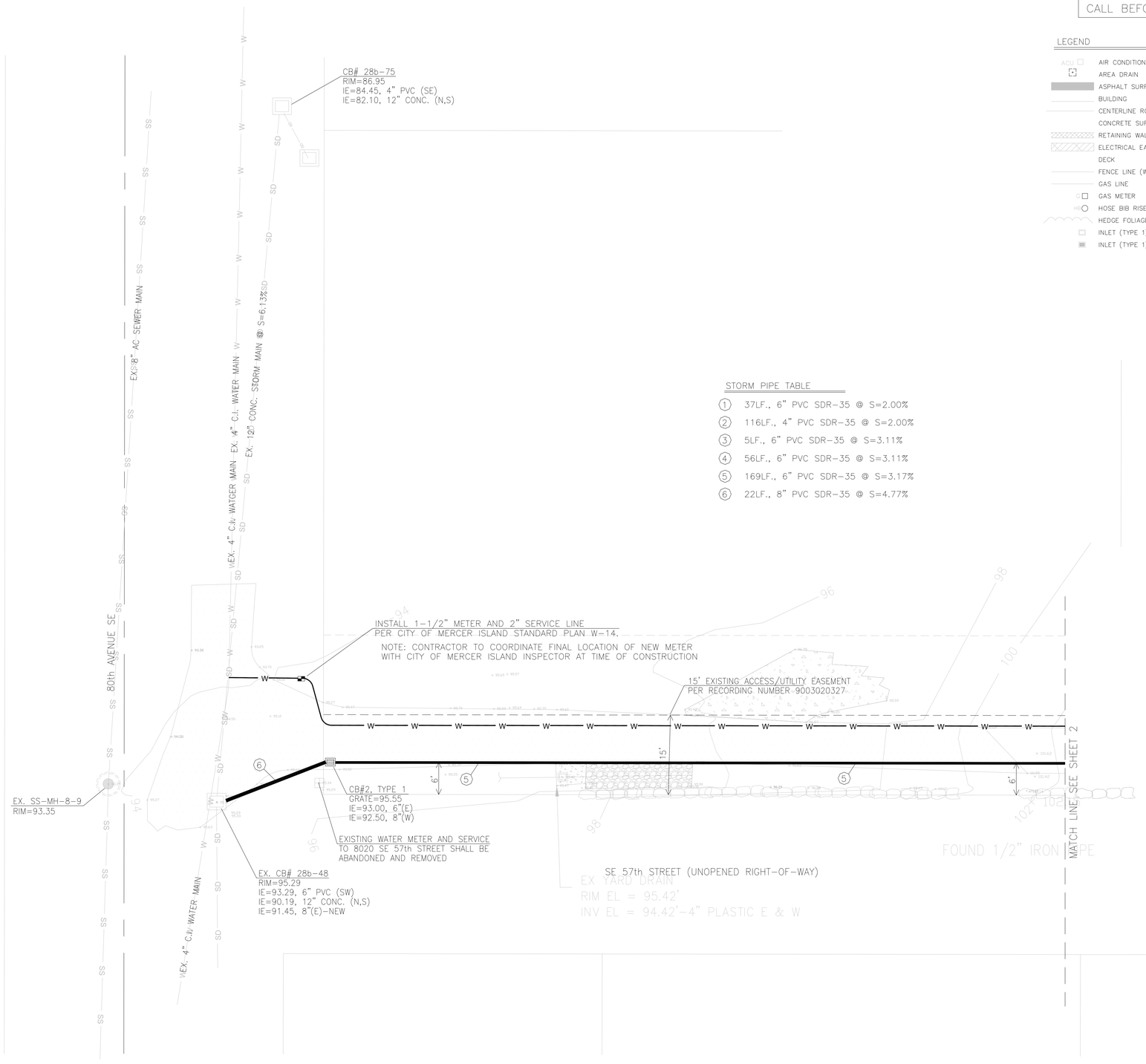
CALL BEFORE YOU DIG: 811

LEGEND

ACU AIR CONDITION UNIT	MONUMENT IN CASE (FOUND)
AREA DRAIN	PAVER SURFACE
ASPHALT SURFACE	PST POST
BUILDING	P POWER METER
CENTERLINE ROW	POWER (OVERHEAD)
CONCRETE SURFACE	POWER POLE W/ LIGHT
RETAINING WALL	REBAR AS NOTED (FOUND)
ELECTRICAL EASEMENT	REBAR & CAP (SET)
DECK	ROCKERY
FENCE LINE (WOOD)	SEWER LINE
GAS LINE	SEWER MANHOLE
G GAS METER	STORM DRAIN LINE
HB HOSE BIB RISER	SIZE TYPE TREE (AS NOTED)
HEDGE FOLIAGE LINE	WATER LINE
INLET (TYPE 1)	WM WATER METER
INLET (TYPE 1) (SOLID)	

STORM PIPE TABLE

1. 37LF., 6" PVC SDR-35 @ S=2.00%
2. 116LF., 4" PVC SDR-35 @ S=2.00%
3. 5LF., 6" PVC SDR-35 @ S=3.11%
4. 56LF., 6" PVC SDR-35 @ S=3.11%
5. 169LF., 6" PVC SDR-35 @ S=3.17%
6. 22LF., 8" PVC SDR-35 @ S=4.77%



GRAPHIC SCALE

0 5 10 20

1 inch = 10 feet

PERMIT #: 2403-129

REV. NO.	DATE	DESCRIPTION
1	07/30/24	RESPONSE TO CITY COMMENTS DATED 07/24/2024

01/07/2025

OFFE ENGINEERS
13932 SOUTHEAST 159TH PLACE
RENTON, WASHINGTON 98058
PHONE: 425-260-3412
CONTACT: DARRELL OFFE, P.E.

DRAWN BY SLS | CHECKED BY DLO

DESIGNED BY DLO

PROJECT 8020 SE 57th Street

CLIENT Vann Lanz Residence

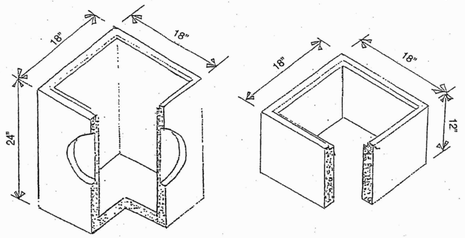
SHEET CONTENT Stormwater Site Plan

DATE 01/07/2025

JOB NO.

DWG NO.

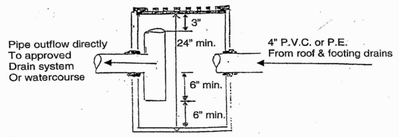
SHEET 3 OF 5



Catch Basin (C.B.)
Depth & Volume are
Minimum Dimensions.

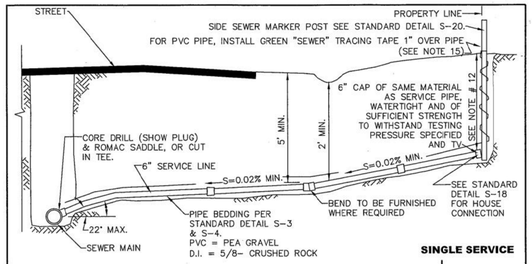
Minimum Volume = 24 gal.

6" & 12" Adjustment Riser

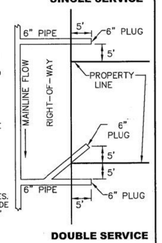


Catch Basin with Oil Separator

S:\DSG\FORMS\StormDrainageRequirements.doc 01/2010



SINGLE SERVICE



DOUBLE SERVICE

NOTES

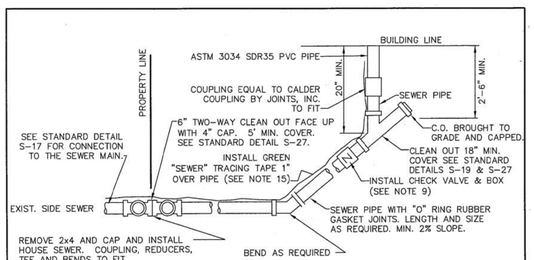
1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION AND BE IN ACCORDANCE WITH CITY STANDARDS.
4. ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS OR MAY BE CDF WHEN DIRECTED BY THE CITY ENGINEER (SEE DETAIL S-3).
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/8 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 6" SEWER PIPE MINIMUM SIZE IN RIGHT-OF-WAY, AND ELSEWHERE AS DIRECTED BY ENGINEER. 2% MIN. GRADE (UNLESS DIRECTED BY ENGINEER), 50% MAXIMUM.
7. ALL A.C. MAINS TO BE TAPPED IN ACCORDANCE WITH WAC 296-62-00775 STATE/FEDERAL GUIDELINES AND CERTIFICATION.
8. CONSTRUCTION IN RIGHT-OF-WAY MUST BE DONE BY A REGISTERED AND LICENSED CONTRACTOR.
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CITY SEWER ORDINANCES.
10. WHERE CITY ENGINEER ALLOWS SIDE SEWER CONNECTIONS TO MANHOLE, INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 18" ABOVE INVERT OF MAIN SEWER.
11. UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6' DEEP AT PROPERTY LINE, OR 5' LOWER THAN THE LOWEST ELEVATION, WHICH EVER IS LOWER.
12. ALL PIPE MATERIALS NOT TO STANDARDS WILL BE ABANDONED AND REPLACED WITH DUCTILE IRON OR PVC PIPE OF THE SAME SIZE.
13. IF A BUILDING SEWER IS TO SERVE MORE THAN ONE PROPERTY, BY JOINT AGREEMENT OF THE OWNERS, AN APPROVED EASEMENT INSURING THAT ALL PROPERTIES INVOLVED SHALL HAVE PERPETUAL USE OF THE SIDE SEWER, HAVING PROVISIONS FOR OPERATION, MAINTENANCE, RECONSTRUCTION AND FOR ACCESS FOR REPAIR PURPOSES, SHALL BE SIGNED BY THE OWNERS. THIS EASEMENT SHALL BE RECORDED WITH THE COUNTY AUDITOR. A SIX INCH (MINIMUM) DIAMETER PIPE SHALL BE USED FOR THE COMMON LINE AND A SIX INCH CLEANOUT EXTENDING TO WITHIN 12 INCHES OF THE GROUND SURFACE SHALL BE PROVIDED AT THE WYE WHERE THE UPPER GRADE CONNECTIONS ARE MADE. BACKWATER VALVES SHALL BE INSTALLED ON SERVICE LINES UPSTREAM OF THE CONNECTION TO THE SHARED SIDE SEWER.
14. THE CITY ENGINEER MAY REQUIRE BACKWATER VALVES ON SIDE SEWERS WHEN DEEMED NECESSARY. THE EFFECTIVE OPERATION AND MAINTENANCE OF ANY BACKWATER VALVE SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE SIDE SEWER.
15. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

SIDE SEWER CONNECTION AND STUB

6-5-2009	NO SCALE	S-17

REV DATE | APPROVED



BUILDING CONNECTION

NOTES

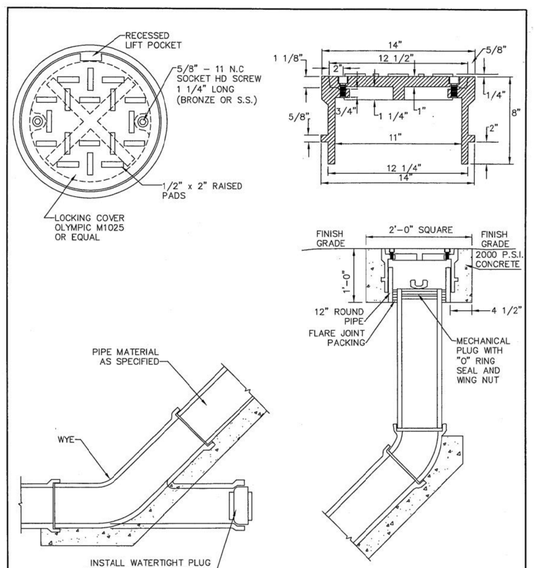
1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
4. 18" MINIMUM COVERAGE OVER PIPE.
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/8 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
8. ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
9. BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
   A. IF CONNECTED TO A SHARED SIDE SEWER.
   B. IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
   C. SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
10. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
11. THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
    6" – WITHIN THE PUBLIC RIGHT-OF-WAY.
    4" – SINGLE FAMILY RESIDENCES.
    6" – 2 TO 6 SINGLE FAMILY RESIDENCES.
    6" – BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
12. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

HOUSE SEWER CONNECTION

6-5-2009	NO SCALE	S-18

REV DATE | APPROVED



FOR PVC PIPE

NOTES

1. SEE S-27 FOR INSTALLATION DETAILS.

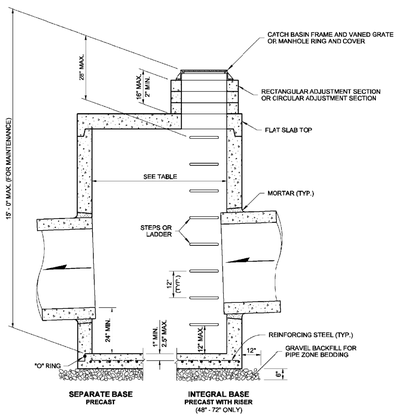
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

CLEAN OUT DETAIL

6-5-2009	NO SCALE	S-19

REV DATE | APPROVED

DRAWN BY: LISA CYFORD



NOTES

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification 9-04.3.**

CATCH BASIN DIMENSIONS

CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES

CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP ①	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

① Corrugated Polyethylene Storm Sewer Pipe **(Standard Specification 9-05.20)**
② **(Standard Specification 9-05.12(1))**
③ **(Standard Specification 9-05.12(2))**

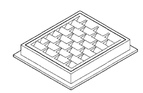
CATCH BASIN TYPE 2

STANDARD PLAN B-10.20-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 02-07-12
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation

DRAWN BY: FERN LOCKELL

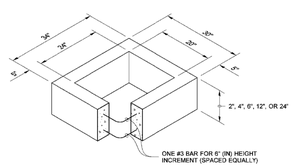


FRAME AND VANED GRATE

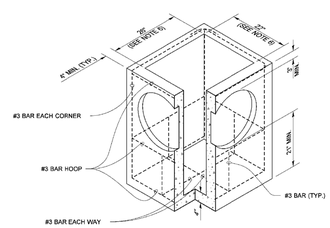
PIPE ALLOWANCES

PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP ★ (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

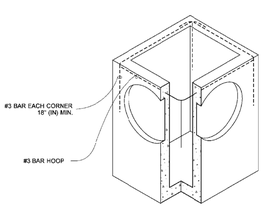
★ CORRUGATED POLYETHYLENE STORM SEWER PIPE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



(SEE NOTE 1)

ALTERNATIVE PRECAST BASE SECTION

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3.**
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the **Precast Base Section**.
7. All pickup holes shall be grouted full after the basin has been placed.

Julie Hollman 2020.09.01 07:52:50 -07'00'

CATCH BASIN TYPE 1

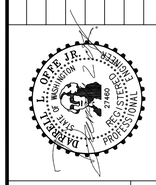
STANDARD PLAN B-5.20-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Roark, Steve Digitally signed by Roark, Steve Date: 2020.05.09 09:45:23 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

PERMIT #: 2403-129

REV. NO.	DATE	DESCRIPTION
1	07/30/24	RESPONSE TO CITY COMMENTS DATED 07/24/2024



01/07/2025

OFFE ENGINEERS
13932 SOUTHEAST 159TH PLACE
RENTON, WASHINGTON 98058
PHONE: 425-260-3412
CONTACT: DARRELL OFFE, P.E.

CHECKED BY DLO
DRAWN BY SLS
DESIGNED BY DLO

PROJECT 8020 SE 57th Street
CLIENT Vann Lanz Residence
SHEET CONTENT Stormwater Details

DATE 01/07/2025
JOB NO.
DWG NO.

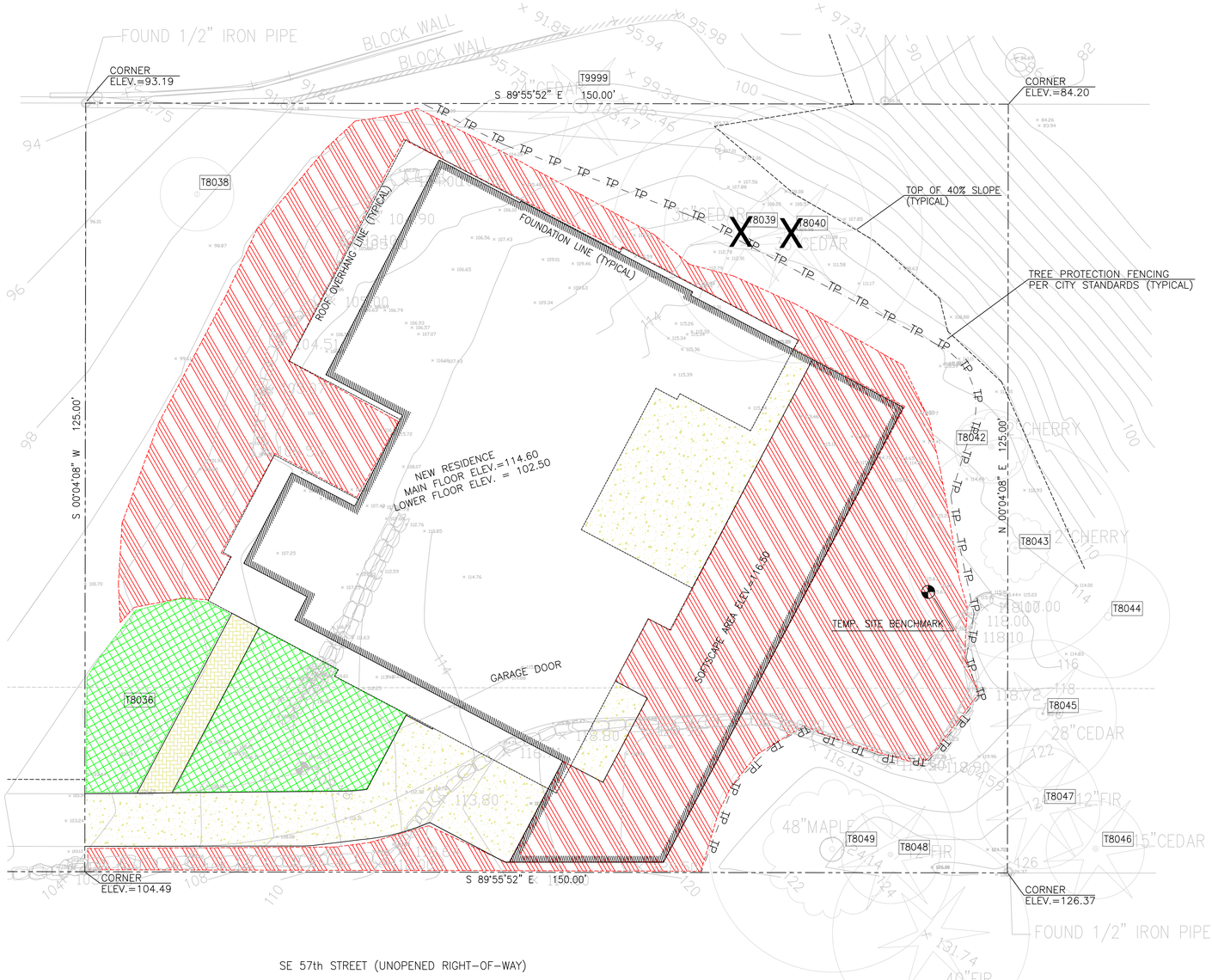
SHEET 4 OF 5

NOTE: THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST–CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST–CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.

AMENDED SOIL MAP

1,048 SQUARE FEET – TURF AREA
AMENDED 8" DEEP (26 CU. YDS.)

5,264 SQUARE FEET – PLANTER AREA
AMENDED 6" DEEP (114 CU. YDS.)



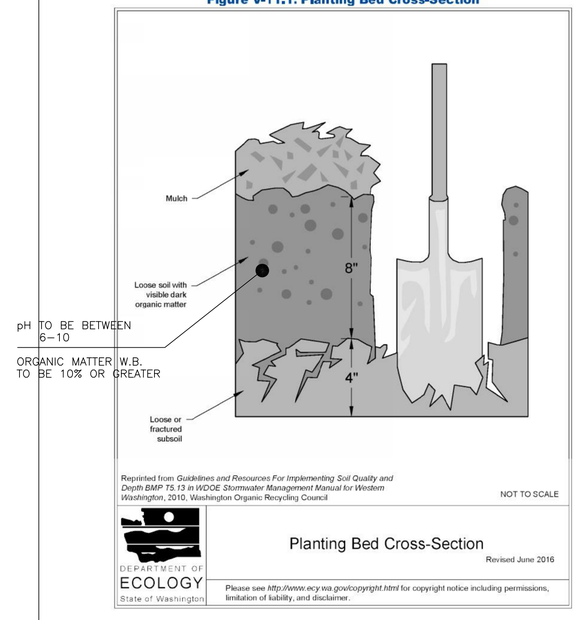
EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILIITES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CALL BEFORE YOU DIG: 811

LEGEND

ACU	AIR CONDITION UNIT
	AREA DRAIN
	ASPHALT SURFACE
	BUILDING
CENTERLINE	ROW
	CONCRETE SURFACE
	RETAINING WALL
	ELECTRICAL EASEMENT
	DECK
	FENCE LINE (WOOD)
	GAS LINE
G	GAS METER
	HOSE BIB RISER
	HEDGE FOLIAGE LINE
	INLET (TYPE 1)
	INLET (TYPE 1) (SOLID)
	MONUMENT IN CASE (FOUND)
	PAVER SURFACE
PST	POST
P	POWER METER
	POWER (OVERHEAD)
	POWER POLE W/ LIGHT
	REBAR AS NOTED (FOUND)
	REBAR & CAP (SET)
	ROCKERY
	SEWER LINE
	SEWER MANHOLE
	STORM DRAIN LINE
SIZE TYPE	TREE (AS NOTED)
	WATER LINE
WM	WATER METER

Figure V-11.1: Planting Bed Cross-Section



2019 Stormwater Management Manual for Western Washington
Volume V - Chapter 11 - Page 930

GRAPHIC SCALE
0 5 10 20
1 inch = 10 feet

PERMIT #: 2403–129

REV. NO.	DATE	DESCRIPTION
1	07/30/24	RESPONSE TO CITY COMMENTS DATED 07/24/2024

01/07/2025

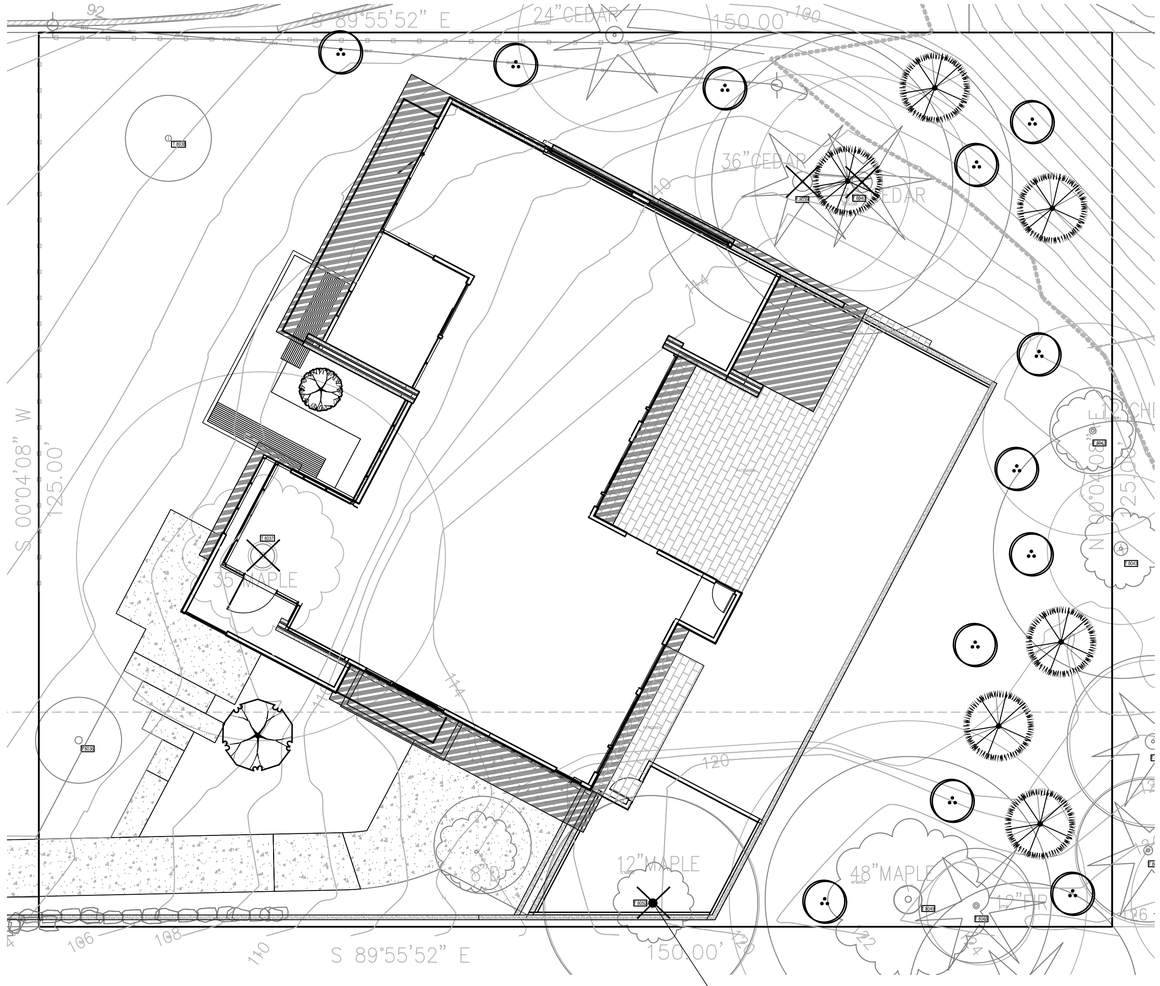
OFFE ENGINEERS
13932 SOUTHEAST 159TH PLACE
RENTON, WASHINGTON 98058
PHONE: 425-260-3412
CONTACT: DARRELL OFFE, P.E.

DRAWN BY SLS
CHECKED BY DLO
DESIGNED BY DLO

PROJECT 8020 SE 57th Street
CLIENT Vann Lanz Residence
SHEET CONTENT Amended Soil Plan

DATE 01/07/2025
JOB NO.
DWG NO.

SHEET 5 OF 5



NORTH

TREE REPLACEMENT CALCULATIONS

0 10 20 30 feet

SCALE: 1" = 10'

TREE REPLACEMENT CALCULATIONS

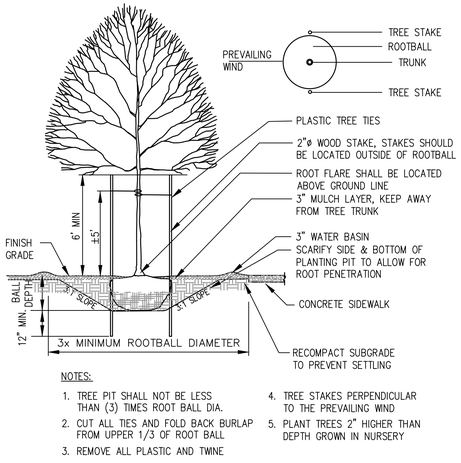
DIAMETER OF REMOVED TREE (MEASURED 4.5' ABOVE GROUND)	TREE REPLACEMENT RATIO	NUMBER OF TREES PROPOSED FOR REMOVAL	NUMBER OF TREES REQUIRED FOR REPLACEMENT BASED ON SIZE/TYPE
LESS THAN 10"	1	0	0
10" UP TO 24"	2	1 (8050)	2
GREATER THAN 24" UP TO 36"	3	0	0
GREATER THAN 36" AND ANY EXCEPTIONAL TREE	6	3 (8037,8039,8040)	18
TOTAL:			20

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QTY
TREES			
	Acer circinatum / Vine Maple	3 stem min, 6' Ht	12
	Acer palmatum 'Bloodgood' / Bloodgood Japanese Maple	2" Cal.	1
	Calocedrus decurrens / Incense Cedar	6'-7' Ht.	6
	Stenartia pseudocamellia / Japanese Stenartia	2" Cal.	1

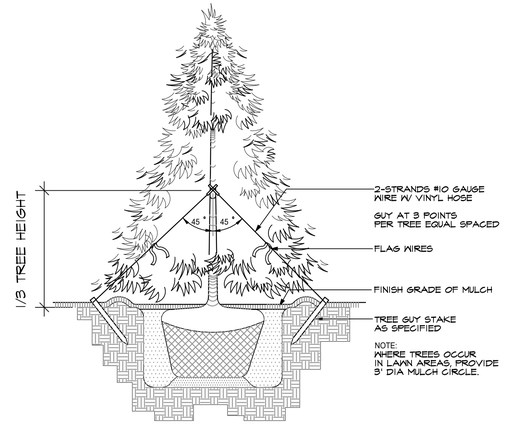
LANDSCAPE NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL OTHER SITE IMPROVEMENTS AND CONDITIONS PRIOR TO STARTING LANDSCAPE WORK.
2. CONTRACTOR SHALL USE CAUTION WHILE EXCAVATING TO AVOID DISTURBING ANY UTILITIES ENCOUNTERED. CONTRACTOR IS TO PROMPTLY ADVISE OWNER OF ANY DISTURBED UTILITIES. LOCATION SERVICE PHONE 1-800-424-5555.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPUTING SPECIFIC QUANTITIES OF GROUND COVERS AND PLANT MATERIALS UTILIZING ON-CENTER SPACING FOR PLANTS AS STATED ON THE LANDSCAPE PLAN AND MINIMUM PLANTING DISTANCES AS SPECIFIED BELOW IN THESE NOTES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE QUANTITIES OF PLANTS THAT ARE REPRESENTED BY SYMBOLS ON THE DRAWINGS.
5. SUBGRADE IS TO BE WITHIN ½" OF ONE FOOT AS PROVIDED BY OTHERS. ALL PLANTING AREAS TO BE CLEARED OF ALL CONSTRUCTION MATERIAL AND ROCKS AND STICKS LARGER THAN 2" DIAMETER.
6. IMPORT 8 INCHES OF COMPOST AMENDED TOPSOIL (25% COMPOST FOR TURF AREAS; 40% COMPOST FOR PLANTING BEDS). SCARIFY SUBSOIL 4" TO INCORPORATE WHERE FEASIBLE WITHOUT IMPACTING TREE ROOTS.
7. 2" DEPTH ORGANIC MULCH IN ALL BED AREAS.
8. ALL PLANT MATERIAL SHALL BE FERTILIZED WITH AGRO TRANSPLANT FERTILIZER 4-2-2 PER MANUFACTURER'S SPECIFICATIONS.
9. ALL PLANT MATERIAL SHALL CONFORM TO AAN STANDARDS FOR NURSERY STOCK, LATEST EDITION. ANY REPLACEMENTS MADE AT ONCE.
   - 9.A. GENERAL: ALL PLANT MATERIAL FURNISHED SHALL BE HEALTHY REPRESENTATIVES, TYPICAL OF THEIR SPECIES OF VARIETY AND SHALL HAVE A NORMAL GROWTH HABIT. THEY SHALL BE FULL, WELL BRANCHED, WELL PROPORTIONED, AND HAVE A VIGOROUS, WELL DEVELOPED ROOT SYSTEM. ALL PLANTS SHALL BE HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT.
   - 9.B. TREES, SHRUBS, AND GROUND COVER: QUANTITIES, SPECIES, AND VARIETIES, SIZES AND CONDITIONS AS SHOWN ON THE PLANTING PLAN. PLANTS TO BE HEALTHY, VIGOROUS, WELL FOLIATED WHEN IN LEAF. FREE OF DISEASE, INJURY, INSECTS, DECAY, HARMFUL DEFECTS, AND ALL WEEDS. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN APPROVAL FROM LANDSCAPE ARCHITECT OR OWNER.
10. ALUMINUM EDGING, PERMALOC OR APPROVED EQUAL, TO BE INSTALLED BETWEEN BARK AND COBBLE.



1 TYPICAL DECIDUOUS TREE PLANTING DETAIL

NTS



2 TYPICAL EVERGREEN TREE PLANTING DETAIL

NTS

Root of Design
206.491.3545
2020 Maltby Rd
Ste 7, PMB 370
Bothell, WA 98021
www.rootofdesign.com

Root of Design

STATE OF WASHINGTON
DEVIN AGEE
LICENSED NO. 1222 EXP. 01/29/2025
LICENSED LANDSCAPE ARCHITECT

Devin Agee

PROJECT TITLE

LANDSCAPE PLAN

8020 SE 57TH ST SEATTLE, WA

DRAWN KJ | DATE 03.12.24

REVISED | DATE

1"=10'-0"

L1

1 WEST RENDERED ELEVATION

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

0 4' 8' 16'

2 EAST RENDERED ELEVATION

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

0 4' 8' 16'

MATERIAL LEGEND:

	CN.01	BOARD FORM CONCRETE
	MT.01	PREFINISHED BLACK METAL EDGE BAND, GUARDRAILS, AND TRIMS)
	MT.02	METAL PANEL SIDING (4 X10 PANELS) COLOR TBD)
	WD.01	VERTICAL WOOD SIDING (6X, STAINED COATED BLACK)

Architect of Record

b9 architects

400 E Pine Street, Suite 215
Seattle, WA 98104
206.297.1284
www.b9architects.com

Project:

LANZ RESIDENCE

Location:

8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:

Project No.

8814 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024

City Stamp

Rendered Elevation

DR.01

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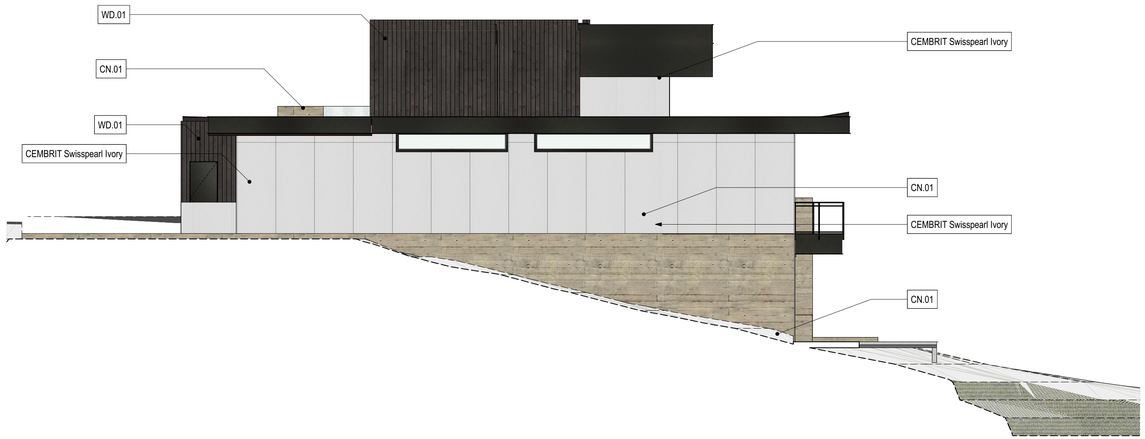

1 NORTH RENDERED ELEVATION

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

0 4' 8' 16'

2 SOUTH RENDERED ELEVATION

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

0 4' 8' 16'

MATERIAL LEGEND:

	CN.01	BOARD FORM CONCRETE
	MT.01	PREFINISHED BLACK METAL EDGE BAND, GUARDRAILS, AND TRIMS)
	MT.02	METAL PANEL SIDING (4 X10 PANELS) COLOR TBD)
	WD.01	VERTICAL WOOD SIDING (6X, STAINED COATED BLACK)

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024

City Stamp

Rendered Elevation

DR.02

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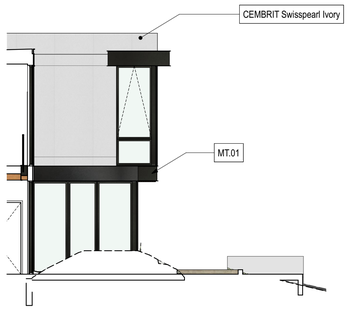
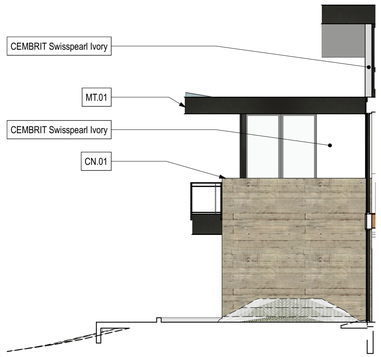


2 COURT SOUTH RENDERED ELEVATION

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

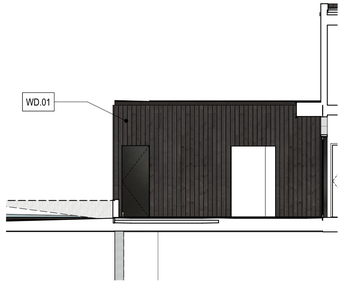
0 4' 8' 16'



1 COURT NORTH RENDERED ELEVATION

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

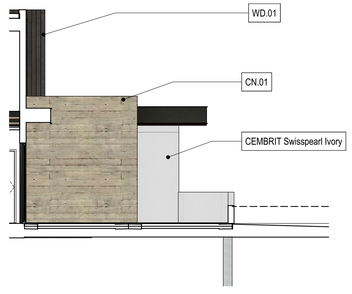
0 4' 8' 16'



4 PATIO SOUTH RENDERED ELEVATION

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

0 4' 8' 16'



3 PATIO NORTH RENDERED ELEVATION

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

0 4' 8' 16'

MATERIAL LEGEND:

	CN.01	BOARD FORM CONCRETE
	MT.01	PREFINISHED BLACK METAL EDGE BAND, GUARDRAILS, AND TRIMS)
	MT.02	METAL PANEL SIDING (4 X10 PANELS) COLOR TBD)
	WD.01	VERTICAL WOOD SIDING (6X, STAINED COATED BLACK)

Architect of Record

b9 architects

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Seattle, WA 98104
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www.b9architects.com

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SDCI Number:

Project No.

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024

City Stamp

Rendered Elevation

DR.03

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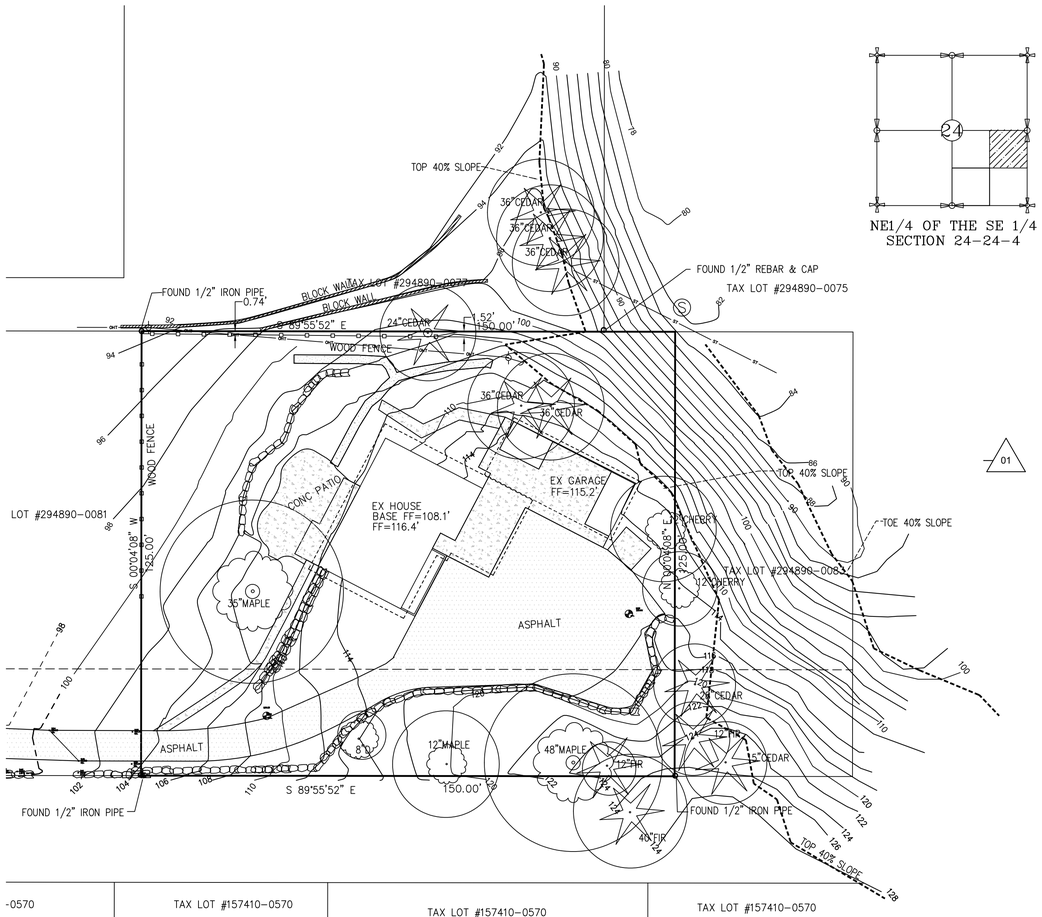
PORTION OF THE NE 1/4, SE 1/4, SECTION 24, TWP. 24 N., RGE. 4 E., W.M.
MERCER ISLAND, WASHINGTON



NE1/4 OF THE SE 1/4
SECTION 24-24-4

01

N

0' 20' 40'

AREA = 18,750 SQ. FT. OR 0.43 ACRES +/-
BASIS OF BEARINGS IS SOUTH LINE OF PROPERTY
KING COUNTY PARCEL NO. 294890-0082

LEGEND

- CB (TYPE 1)
- STMH (TYPE 11)
- SANITARY SEWER MH
- WATER VALVE
- WATER METER/SERVICE
- FIRE HYDRANT
- UTILITY POLE
- GUY WIRE
- SIGNAL CABINET
- POWER JUNCTION BOX
- LIGHT POLE
- GAS VALVE
- POWER VAULT
- POWER PEDESTAL
- ASPHALT ROAD
- CONCRETE
- STREAM
- TELEPHONE VAULT
- TELEPHONE CABINET
- SIGN
- CONIFER TREE W/ DRIPLINE
- DECIDUOUS TREE W/DRIPLINE
- MONITORING WELL
- MAIL BOX
- PK NAIL
- MON IN CASE/
- EX REBAR / PIPE AS NOTED

LEGAL DESCRIPTION

THE EAST 10 FEET OF LOT 19,AND LOTS 20 THROUGH 22, INCLUSIVE AND THE WEST 20 FEET OF LOT 23, BLOCK 7, GROVELAND PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGE 48, RECORDS OF KING COUNTY, WASHINGTON.

TOGETHER WITH THE VACATED BENNET STREET THEROF

SITUATE IN THE CITY OF SEATTLE, COUNTY OF KING, STATE OF WASHINGTON.

TAX PARCEL – 294890-0082

ADDRESS
8020 SE 57th STREET
MERCER ISLAND, WA 98040

SURVEYOR'S NOTES

1. INSTRUMENTATION FOR THIS SURVEY WAS A FOCUS 35 5 SECOND TOTAL STATION. PROCEDURES USED IN THIS SURVEY WERE FIELD TRAVERSE, MEETING OR EXCEEDING STANDARDS SET BY WAC 332-130-090.
2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN JULY 2023, AND SHOWS THE GENERAL CONDITION

BENCH MARK

SITE BENCHMARK
SET PK NAIL IN PARKING LOT OF RESIDANCE
NEAR THE EAST SIDE OF PROPERTY
ELEVATION = 115.67' (NAVD88)

RECORDER'S CERTIFICATE

Filed for record this ____ day of _____, 20___ at ___M, in Volume ___ of _____ at page ____ at the request of Dan M. Touma.

County Auditor _____ Deputy _____

SURVEYOR'S CERTIFICATE

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Survey Recording Act at the request of Vann Lanz in July of 2023.

Daniel M. Touma
Certificate No. 38992

DAN M. TOUMA · STATE OF WASHINGTON · 38992 · REGISTERED PROFESSIONAL LAND SURVEYOR · 7/20/24

BOUNDARY SURVEY
FOR
TAX LOT 294890-0082
8020 SE 57th STREET, MERCER ISLAND, WA 98040

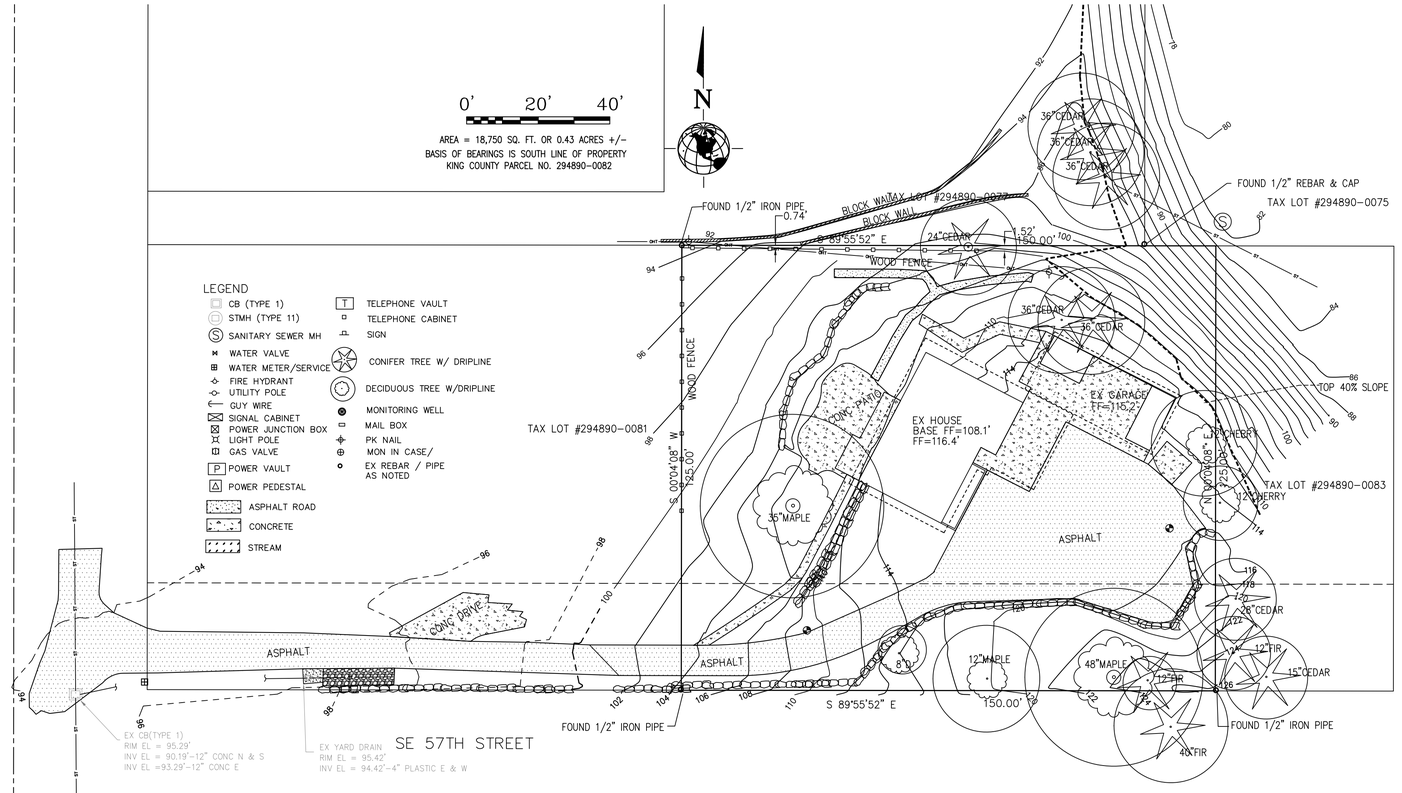
DWN BY RF	DATE 7/20/24	JOB NO. 1019-008
CHKD BY DMT	SCALE 1" = 20'	SHEET 1 OF 2

TOUMA ENGINEERS AND LAND SURVEYORS,PLLC
330 SW 43rd STREET SUITE K412
RENTON WA 98057
206-304-3567

Survey

A1.00.a

PORTION OF THE NE 1/4, SE 1/4, SECTION 24, TWP. 24 N., RGE. 4 E., W.M.
MERCER ISLAND, WASHINGTON



TAX LOT #157410-0570	TAX LOT #157410-0570	TAX LOT #157410-0570	TAX LOT #157410-0570	TAX LOT #157410-0570

DAN M. TOUMA
STATE OF WASHINGTON
38992
REGISTERED
PROFESSIONAL LAND SURVEYOR
2/14/24

BOUNDARY SURVEY

FOR

TAX LOT 294890-0082

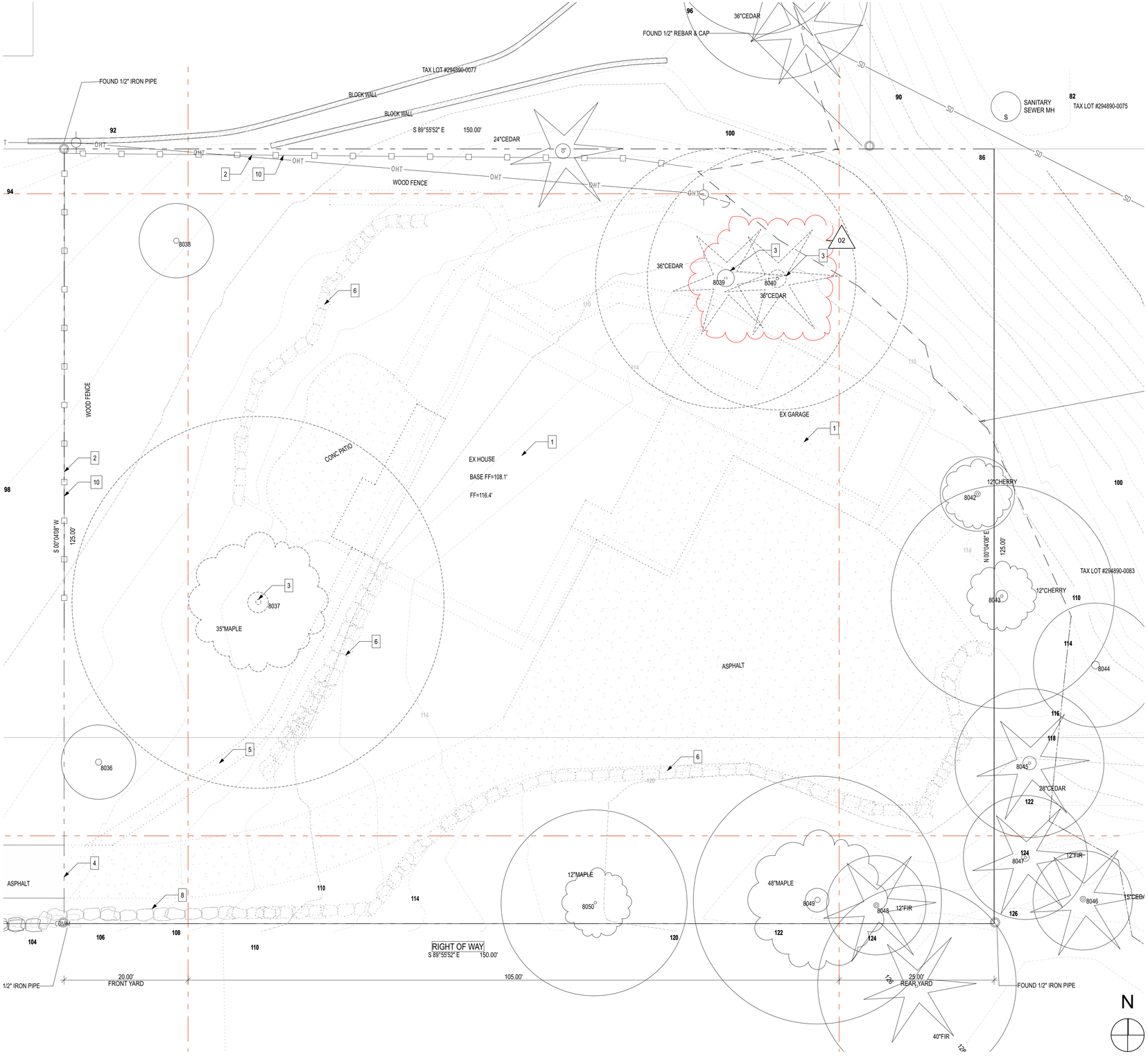
8020 SE 57th STREET, MERCER ISLAND, WA 98040

DWN BY	DATE	JOB NO.
RF	2/14/24	1019-008
CHKD BY	SCALE	SHEET
DMT	1" = 20'	2 OF 2

TOUMA ENGINEERS AND LAND SURVEYORS, PLLC
330 SW 43rd STREET SUITE K412
RENTON WA 98057
206-304-3567

Survey

A1.00.b



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

DEMOLITION PLAN LEGEND

- EXISTING STRUCTURE TO BE DEMOLISHED
- EXISTING TREE TO BE REMOVED

DEMO PLAN NOTES

1. EXISTING STRUCTURE TO BE DEMOLISHED
2. EXISTING FENCE TO BE DEMOLISHED
3. EXISTING TREE TO BE REMOVED, TYP. REFER TO ARBORIST REPORT, REFER TO A1.10
4. EXISTING DRIVEWAY TO REMAIN
5. EXISTING SITE WALL TO BE DEMOLISHED
6. EXISTING ROCKERY TO BE DEMOLISHED
7. EXISTING WALKWAY AND STAIRS TO BE DEMOLISHED
8. EXISTING ROCKERY TO REMAIN
9. EXISTING SITE WALL TO REMAIN
10. EXISTING FENCE TO REMAIN

Architect of Record

b9 architects

400 E Pine Street, Suite 215
Seattle, WA 98104
206.297.1284
www.b9architects.com

Project:

LANZ RESIDENCE

Location:

8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:

Project No.

8814 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Demolition Plan

A1.01

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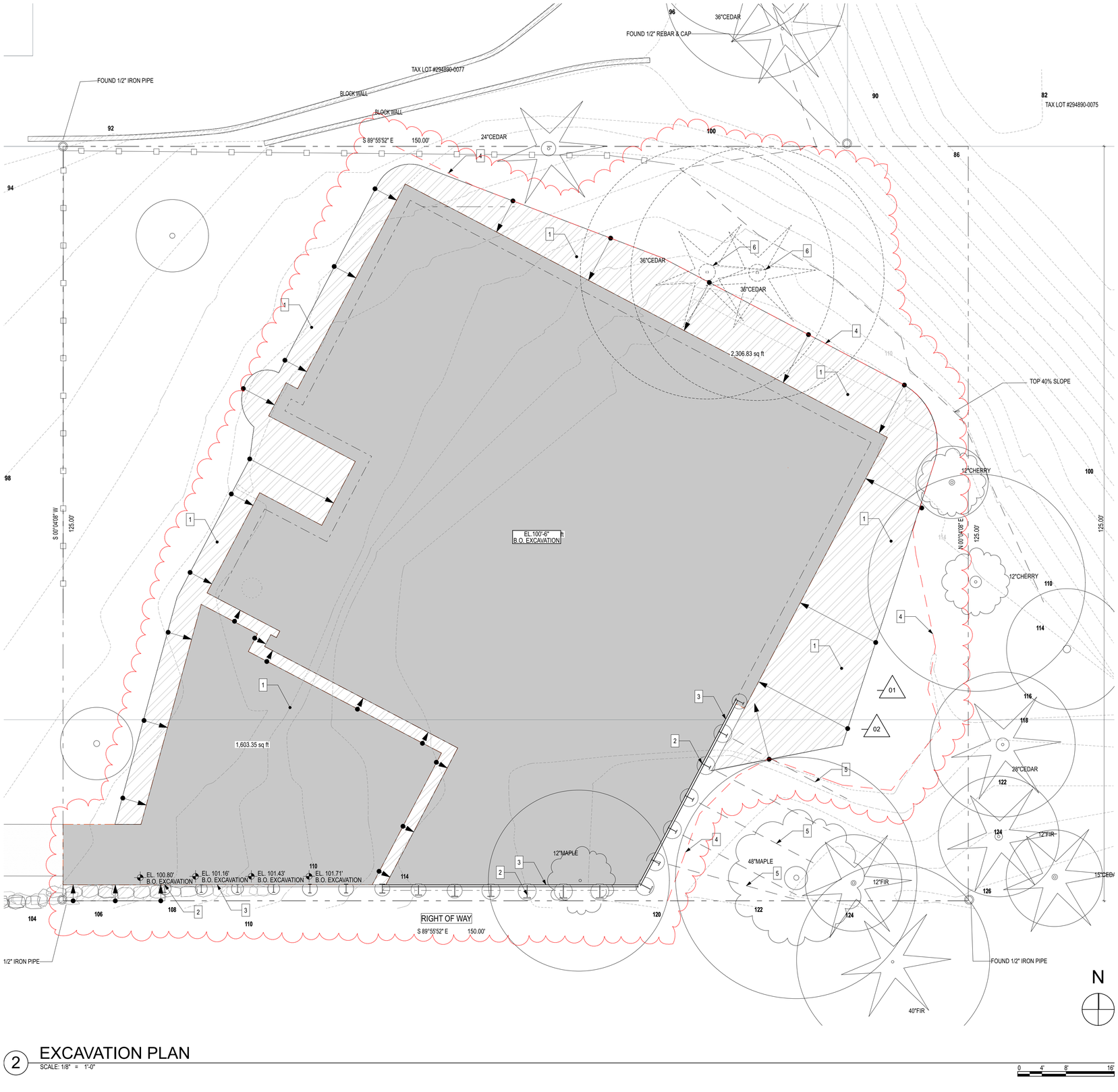

2 EXCAVATION PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

EXCAVATION PLAN LEGEND

- 1:1 CUT TO FIRM SOIL
- BOTTOM OF EXCAVATION TO BE AT FIRM SOIL. WHERE NECESSARY, SEE NOTES ABOVE
- OUTLINE OF STRUCTURE AT GRADE
- DIRECTION OF CUT

EXCAVATION PLAN NOTES

1. PROVIDE 1:1 CUT TO BEARING
2. PROVIDE SOLDIER PILE SHORING PER STRUCTURAL DRAWINGS AT VERTICAL CUT PER GEOTECHNICAL REPORT.
3. PROVIDE TIMBER LAGGING PER STRUCTURAL DESIGN AND AS RECOMMENDED BY GEOTECHNICAL. REFER TO STRUCTURAL DRAWINGS AND GEOTECHNICAL REPORT.
4. PROVIDE TIEBACKS PER STRUCTURAL DRAWINGS AT VERTICAL CUT PER GEOTECHNICAL REPORT.
5. TREE PROTECTION / BOUNDARY OF DISTURBANCE. REFER TO CIVIL DRAWINGS FOR COORDINATED LINE
6. TREE TO BE REMOVED, REFER TO A1.10, CIVIL SHEETS AND L1

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Excavation Plan

A1.02

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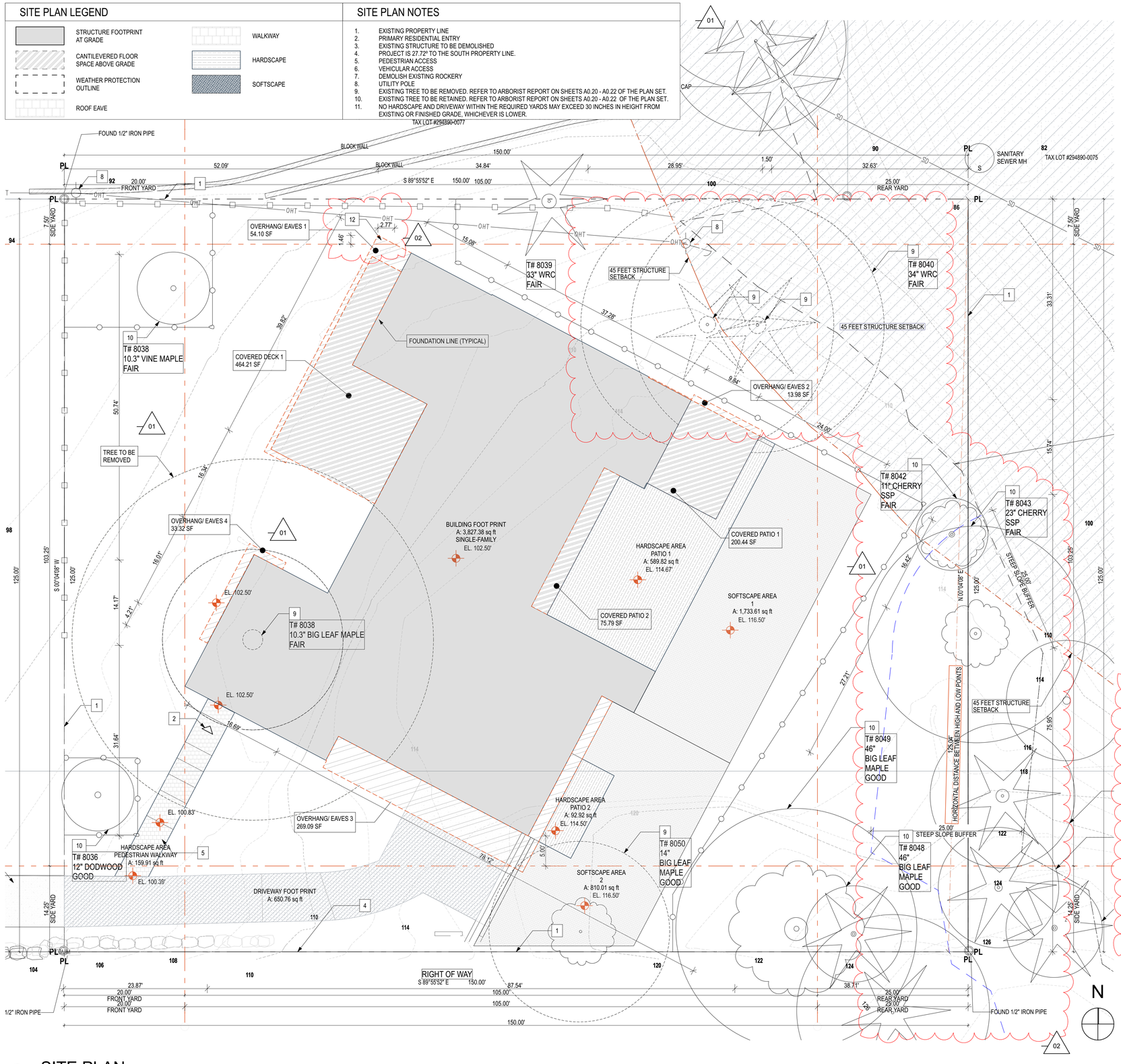
SITE PLAN LEGEND

- STRUCTURE FOOTPRINT AT GRADE
- CANTILEVERED FLOOR SPACE ABOVE GRADE
- WEATHER PROTECTION OUTLINE
- ROOF EAVE
- WALKWAY
- HARDSCAPE
- SOFTSCAPE

SITE PLAN NOTES

1. EXISTING PROPERTY LINE
2. PRIMARY RESIDENTIAL ENTRY
3. EXISTING STRUCTURE TO BE DEMOLISHED
4. PROJECT IS 27.72º TO THE SOUTH PROPERTY LINE.
5. PEDESTRIAN ACCESS
6. VEHICULAR ACCESS
7. DEMOLISH EXISTING ROCKERY
8. UTILITY POLE
9. EXISTING TREE TO BE REMOVED. REFER TO ARBORIST REPORT ON SHEETS A0.20 - A0.22 OF THE PLAN SET.
10. EXISTING TREE TO BE RETAINED. REFER TO ARBORIST REPORT ON SHEETS A0.20 - A0.22 OF THE PLAN SET.
11. NO HARDSCAPE AND DRIVEWAY WITHIN THE REQUIRED YARDS MAY EXCEED 30 INCHES IN HEIGHT FROM EXISTING OR FINISHED GRADE, WHICHEVER IS LOWER.



1 SITE PLAN

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

PROJECT SUMMARY

ADDRESS:	8020 SE 57TH STREET MERCER ISLAND, WA 98040
OWNER:	LNL BUILDS 8015 SE 60th ST MERCER ISLAND, WA 98040
ARCHITECT:	b9 ARCHITECTS, INC. 610 2ND AVENUE SEATTLE, WA 98104 TEL. 206.297.1284
LEGAL DESCRIPTION:	THE EAST 10 FEET OF LOT 19, AND LOTS 20 THROUGH 22, INCLUSIVE, AND THE WEST 20 FEET OF LOT 23, BLOCK 7, GROVELAND ARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME7 OF PLATS, PAGE 48, RECORDS OF KING COUNTY, WASHINGTON TOGETHER WITH THE VACATED BENNET STREET THEREOF SITUATED IN THE CITY OF SEATTLE, COUNTY IF KING, STATE OF WASHINGTON.
APN:	294890-0082
PROJECT DESCRIPTION:	CONSTRUCT A NEW TWO-STORY SINGLE-FAMILY RESIDENCE WITH A BELLOW GRADE BASEMENT AND GARAGE
CMI PROJECT #:	#CITY OF MERCER ISLAND CN#, #CITY OF MERCER ISLAND DM#,

ZONING SUMMARY

ZONE	R-15
TOTAL LOT AREA	18,750 SF | 0.43 ACRES
YARDS:	MICC 19.02.020.C **FRONT:** 20 FT MIN. **SIDE**: FOR LOTS WITH A LOT WIDTH OF MORE THAN 90 FEET, THE SUM OF THE SIDE YARDS' WIDTH SHALL BE A WIDTH THAT IS EQUAL TO AT LEAST 17 PERCENT OF THE LOT WIDTH. MINIMUM SIDE YARD WIDTH THE MINIMUM SIDE YARD WIDTH IS FIVE FEET OR 33 PERCENT OF THE AGGREGATE SIDE YARD TOTAL WIDTH, WHICHEVER IS GREATER. MINIMUM SIDE YARD REQUIRED: 21.25 FEET X .33 = 7.0125 FEET NORTHSIDE YARD = 7'-6" SOUTH SITE YARD = 21.25 FEET - 7.0125 FEET = 14.2375 FEET = 14'-3" **REAR:** 25 FT
LOT COVERAGE ALLOWED:	**30% MAX: 18,750SF x 0.30 = 5,625 SF**
LOT COVERAGE PROVIDED:	
LOT SLOPE	**EL. 126' - EL. 84' = 42'; 42.00' ÷ 125.04' = 0.335 = 34%**
HARDSCAPE	**9% OF THE NET LOT AREA: 18,750 x 9% = 1,687.5 SF**
LANDSCAPE	**7,481.21 REQUIRED PER MICC 19.02.020.F.3**
ALLOWABLE GROSS FLOOR AREA	R-15: 12,000 SF OR 40% OF THE LOT AREA, WHICHEVER IS LESS **18,750 sf x 40% = 7,500**
PROVIDED GROSS FLOOR AREA	**sf**
HEIGHT RESTRICTION	MICC 19.02.020.E HEIGHT LIMIT: 30 FT
AVERAGE BUILDING ELEVATION *CALCULATIONS ON SHEET A0.11*	**108'- 0"**
MAX BUILDING HEIGHT BUILDING HEIGHT	108'-0" + 30'-0" = **138'-0"** 107'-11"
PARKING REQUIRED	3 (AT LEAST 2 COVERED)
TREE REQUIREMENTS	**REFER TO ARBORIST REPORT ON SHEETS A0.20-A0.22** REMOVAL OF EXCEPTIONAL TREES WITH A DIAMETER OF 24 INCHES OR MORE SHALL BE LIMITED TO THE FOLLOWING CIRCUMSTANCES: A. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL RESULT IN AN UNAVOIDABLE HAZARDOUS SITUATION; OR, B. RETENTION OF AN EXCEPTIONAL TREE(S) WITH A DIAMETER OF 24 INCHES OR MORE WILL LIMIT THE CONSTRUCTIBLE GROSS FLOOR AREA TO LESS THAN 85 PERCENT OF THE MAXIMUM GROSS FLOOR AREA ALLOWED UNDER CHAPTER 19.02 MICC.

REFER TO THE LOT COVERAGE DIAGRAM AND CALCULATIONS ON SHEET A0.10 TO REFERENCE THE AREAS LISTED BELOW

LOT COVERAGE CHARGEABLE AREAS	
	AREA
BUILDING FOOT PRINT	3,827.38
COVERED DECK 1	459.31
COVERED PATIO 1	200.44
COVERED PATIO 2	75.79
DRIVEWAY FOOT PRINT	650.76
OVERHANG/ EAVES 1	54.10
OVERHANG/ EAVES 2	13.98
OVERHANG/ EAVES 3	269.09
OVERHANG/ EAVES 4	33.32
TOTAL	**5,584.17 ft²**

HARDSCAPE AND SOFTSCAPE LOT COVERAGE AREAS		
		AREA
HARDSCAPE AREA	PATIO 1	589.82
HARDSCAPE AREA	PATIO 2	92.92
HARDSCAPE AREA	PEDESTRIAN WALKWAY	159.91
TOTAL		842.65 ft²
SOFTSCAPE AREA	1	1,733.61
SOFTSCAPE AREA	2	810.01
TOTAL		2,543.62 ft²
TOTAL		**3,386.27 ft²**

SITE PLAN NOTES

1. EXISTING PROPERTY LINE
2. PRIMARY RESIDENTIAL ENTRY
3. EXISTING STRUCTURE TO BE DEMOLISHED
4. PROJECT IS 27.72º TO THE SOUTH PROPERTY LINE.
5. PEDESTRIAN ACCESS
6. VEHICULAR ACCESS
7. DEMOLISH EXISTING ROCKERY
8. UTILITY POLE
9. EXISTING TREE TO BE REMOVED. REFER TO ARBORIST REPORT ON SHEETS A0.20 - A0.22 OF THE PLAN SET.
10. EXISTING TREE TO BE RETAINED. REFER TO ARBORIST REPORT ON SHEETS A0.20 - A0.22 OF THE PLAN SET.
11. NO HARDSCAPE AND DRIVEWAY WITHIN THE REQUIRED YARDS MAY EXCEED 30 INCHES IN HEIGHT FROM EXISTING OR FINISHED GRADE, WHICHEVER IS LOWER.
12. PROVIDE 2:12 SLOPE AT ROOF PROJECTION INTO MINIMUM SIDE YARD SETBACK PER 19.020.020.C.3.a.ii

Architect of Record

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Site Plan

A1.10

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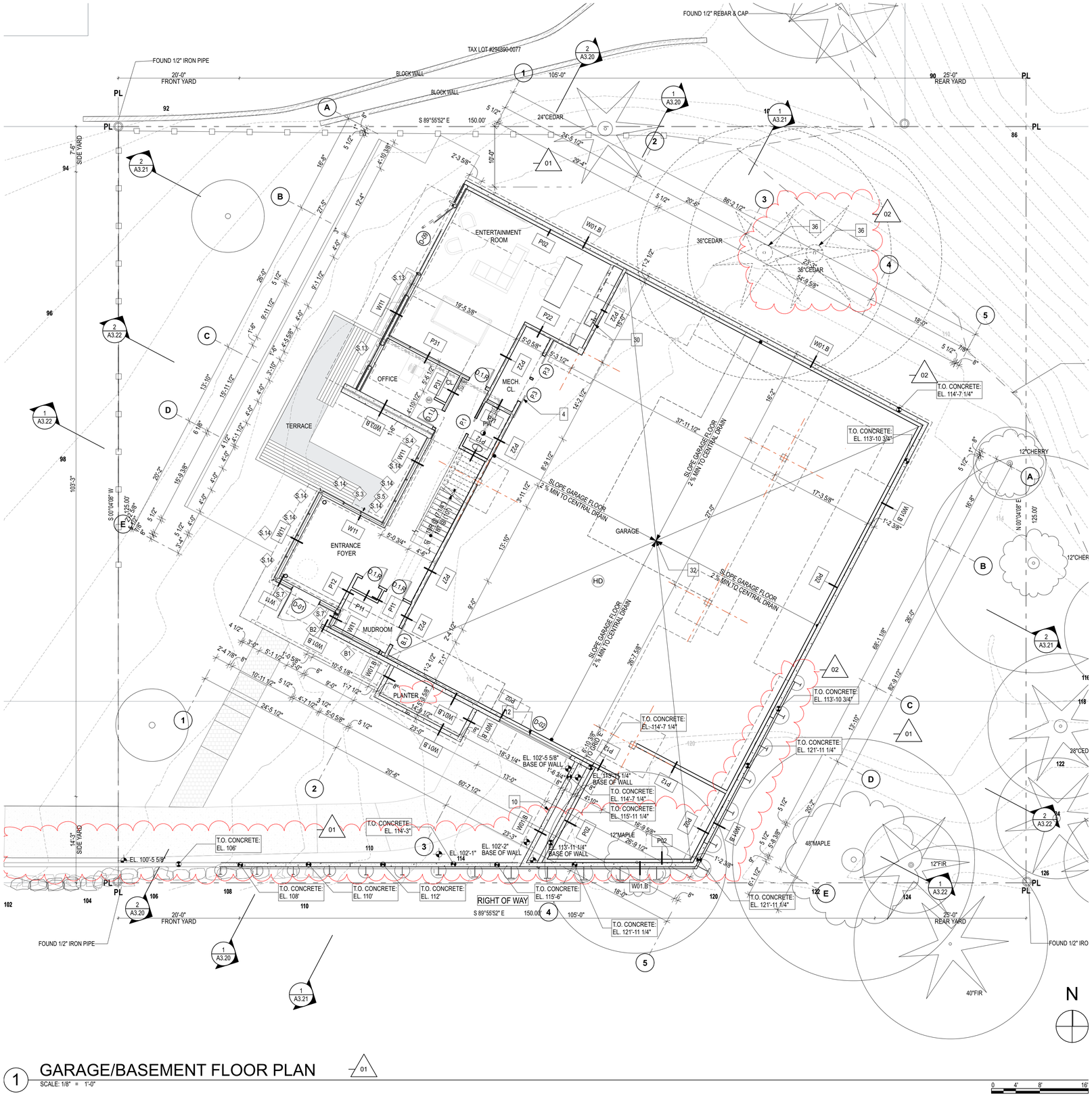

1 GARAGE/BASEMENT FLOOR PLAN

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

0 4' 8' 16'

PLAN NOTES

1. PROPERTY LINE
2. ROOF/DECK ABOVE
3. PEDESTRIAN ACCESS
4. PER R302.5, OPENINGS AND PENETRATIONS THROUGH THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE IN ACCORDANCE WITH SECTIONS R302.5.1 THROUGH R302.5.3.
5. STRUCTURE ABOVE, TYP
6. STRUCTURE BELOW, TYP
7. PROVIDE WHOLE HOUSE EXHAUST FAN WITH A NOISE RATING OF SONE 1.0 OR LESS THAT MEETS THE REQUIREMENTS OF IRC M1505.4. SEE A0.00 WHOLE HOUSE VENTILATION NOTE.
8. PROVIDE ENVIRONMENTAL AIR EXHAUST OUTLETS AT FAN LOCATIONS. THEY SHALL BE PROVIDED A MIN OF 3 FEET FROM OPERABLE OPENINGS INTO THE BUILDING AND PROPERTY LINES PER IRC M1504.3.
9. PER IRC TABLE M1505.4.4(1), AT KITCHEN, PROVIDE MAX 400 CFM LOCAL EXHAUST FAN AT 0.25 W.G. OR GREATER, TO RUN INTERMITTENTLY.
10. PROVIDE GUARDRAIL AT MIN 36" A.F.F. PER IRC R312.1.2. OPENINGS SHALL BE 4" MAX PER IRC R312.1.3, TYP. REFER TO STRUCTURAL DRAWINGS FOR CONNECTION DETAIL AT EXTERIOR ATTACHMENTS TO THE STRUCTURE. AT ALL EXTERIOR LOCATIONS PROVIDE CONNECTION THROUGH VERTICAL WALL SURFACE ONLY, DO NOT PROVIDE CONNECTION THOUGH ROOF MEMBRANE OR PARAPET CAP OR OTHER FLASHING AT TOP OF WALL.
11. PROVIDE HANDRAIL AT 34" - 38" ABOVE TREAD PER IRC R311.7.8.1, 1 1/4" MIN - 1 1/2" MAX GRASP DIMENSION PER IRC R311.7.8.5, 1 1/2" CLEARANCE BETWEEN WALL AND HANDRAIL PER IRC R311.7.8.3 AND CONTINUITY PER R311.7.8.4, TYP.
12. AUTOMATIC GARAGE DOOR OPENER TO CONFORM WITH R309.4: SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 325
13. PROVIDE 6'-8" MIN VERTICAL CLEARANCE TO FINISH AT ALL STAIRS PER IRC R311.7.2, TYP.
14. PER IRC R302.7, PROVIDE MIN 1/2" GYPSUM BOARD BENEATH STAIR AT ACCESSIBLE SPACE, TYP.
15. MIN 5/8" EXTERIOR TYPE 'X' GYPSUM WALLBOARD SEPARATING GARAGE FROM HABITABLE SPACE ABOVE PER IRC R302.6
16. SAUNA DESIGN TO CONFORM WITH M1902 (1-4). PER M1902.4 CONTROLS, SAUNA HEATERS SHALL BE EQUIPPED WITH A THERMOSTAT THAT WILL LIMIT ROOM TEMPERATURE TO NOT GREATER THAN 194°F (90°C). WHERE THE THERMOSTAT IS NOT AN INTEGRAL PART OF THE HEATER, THE HEAT-SENSING ELEMENT SHALL BE LOCATED WITHIN 6 INCHES OF THE CEILING.
17. PROVIDE WOOD-FRAMED EAVE PROJECTION ABOVE. PAINT PER ELEVATIONS.
18. PROVIDE SHORING FOR EXCAVATION ADJACENT TO PROPERTY LINE, PER STRUCTURAL
19. MIN 1/2" GYPSUM WALLBOARD WRAPPING POSTS SUPPORTING GARAGE OR COMMON AREA PER IRC R302.6
20. MIN 1/2" GYPSUM WALLBOARD WRAPPING BEAMS SUPPORTING GARAGE OR COMMON AREA PER IRC R302.6
21. PROVIDE PLANTER, REFER TO LANDSCAPE PLANS FOR PLANTING SCHEDULE
22. VEHICULAR ENTRY
23. TREE PROTECTION AREA, REFER TO PLOT PLAN, SHEET A1.10 AND ARBORIST REPORT, SHEET A0.14
24. TREE DRIP LINE, REFER TO TREE PROTECTION PLAN, SHEET A1.10, PLOT PLAN, SHEET A1.10, AND ARBORIST REPORT, SHEET A0.14
25. PROPOSED DISTURBED AREA WITHIN TREE PROTECTION AREA, PER ARBORIST REPORT, SHEET A0.14.
26. PLUMBING WASTE STACK
27. PROVIDE ROOF OVERHANG ABOVE, TYP.
28. PROVIDE BOLT ON BALCONY BY OTHERS, TYP.
29. HEAT PUMP CONDENSER
30. PROVIDE SINK AND REFRIGERATOR AT WET BAR, NO OTHER APPLIANCES
31. PROVIDE 3-FOOT WIDE VEGETATED AT EAST SIDE OF RETAINING WALL TO PROTECT AGAINST FALL HAZARD
32. SLOPE GARAGE TO COMPLY WITH R309.1 TO FACILITATE THE MOVEMENT OF LIQUIDS TO A CENTER DRAIN
33. WRAP THE WATER SUPPLY LINES AND THE P TRAP WILL BE WITH HEATING TAPES WITH AN ADJUSTABLE THERMOSTAT
34. PROVIDE 60 MIL GAF EVERGUARD TPO SMOOTH MEMBRANE ROOFING
35. SLOPE ROOF 2% PERCENT MIN TO DRAIN
36. TREE TO BE REMOVED, REFER TO A1.02, A1.10, CIVIL SHEETS AND L1

PLAN LEGEND

- DOOR DESIGNATION (1.1)
- WINDOW DESIGNATION (1.1) 3'-0" WINDOW WIDTH, 5'-0" WINDOW HEIGHT
- (XX / X.X) DETAIL NUMBER / SHEET NUMBER
- 1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 X 4 FRAMING
- 1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 x 6 FRAMING
- CAST-IN-PLACE CONCRETE WALL
- PROVIDE (1) LAYER 5/8" EXTERIOR GWB AT OVERHANG
- PROVIDE CMU WALL
- W/D WASHING/ DRYER MACHINE (COMBO)
- W WASHING MACHINE
- D CLOTHES DRYER
- (XX / X.X) SECTION MARKER
- HWH ON-DEMAND HOT WATER HEATER
- SD IRC R314 AND IFC 907.2.10.2: SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
  1. IN EACH SLEEPING ROOM
  2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
  3. ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES.
  4. PER IFC 907.2.10 AND IRC R314.3 SMOKE ALARMS SHALL BE: INSTALLED 20' MIN FROM KITCHEN APPLIANCES OR 10' MIN WITH AN ALARM-SILENCING SWITCH; 3' MIN FROM BATHROOM DOORS
  5. SMOKE ALARMS REQUIRED TO BE INSTALLED, HARDWIRED AND INTERCONNECTED, TYP.
- SD/SW SMOKE ALARM WITH SWITCH, PER ITEM 4 ABOVE
- HD HEAT DETECTOR/HEAT ALARM PER IRC R314.2.1
- FAN LOCATION (IRC TABLE M 1505.4.4(1) AND IMC TABLE 403.4.7)
  1. AT BATHROOMS AND LAUNDRY, PROVIDE 50 CFM FAN W/ TIMER AT 0.25 W.G. OR GREATER
  2. AT KITCHENS, PROVIDE 100 CFM FAN AT 0.25 W.G. OR GREATER
  3. VENT ALL EXHAUST FANS TO THE OUTSIDE
  4. EXHAUST DUCTS ARE TO BE CONST. OF SMOOTH BORE NONCOMBUSTIBLE MATERIAL AND ARE TO BE INSUL. AS REQUIRED PER WSEC.
- CO IRC R315 AND 2018 IFC 915: AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING. SINGLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2075.
- FLOOR STEP DOWN
- SOFFIT STEP DOWN

TYPICAL STAIR (01)

PROVIDE MIN. 3'-0" LANDING WHERE OCCURS

PROVIDE 6'-6" CLEARANCE, MIN.
DIR. OF TRAVEL
HANDRAIL (WHERE REQ'D)
3'-0" MIN. WIDTH
UP
15R. @ 7 3/4"
14T. @ 11"
RISE AND TREAD DIMENSIONS (7 3/4" RISE, MAX. 10" TREAD, MIN.)
PROVIDE MAX. 12'-0" VERTICAL RISE
PROVIDE GUARDRAIL (WHERE REQ'D)

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00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Garage/ Basement Floor Plan

A2.01

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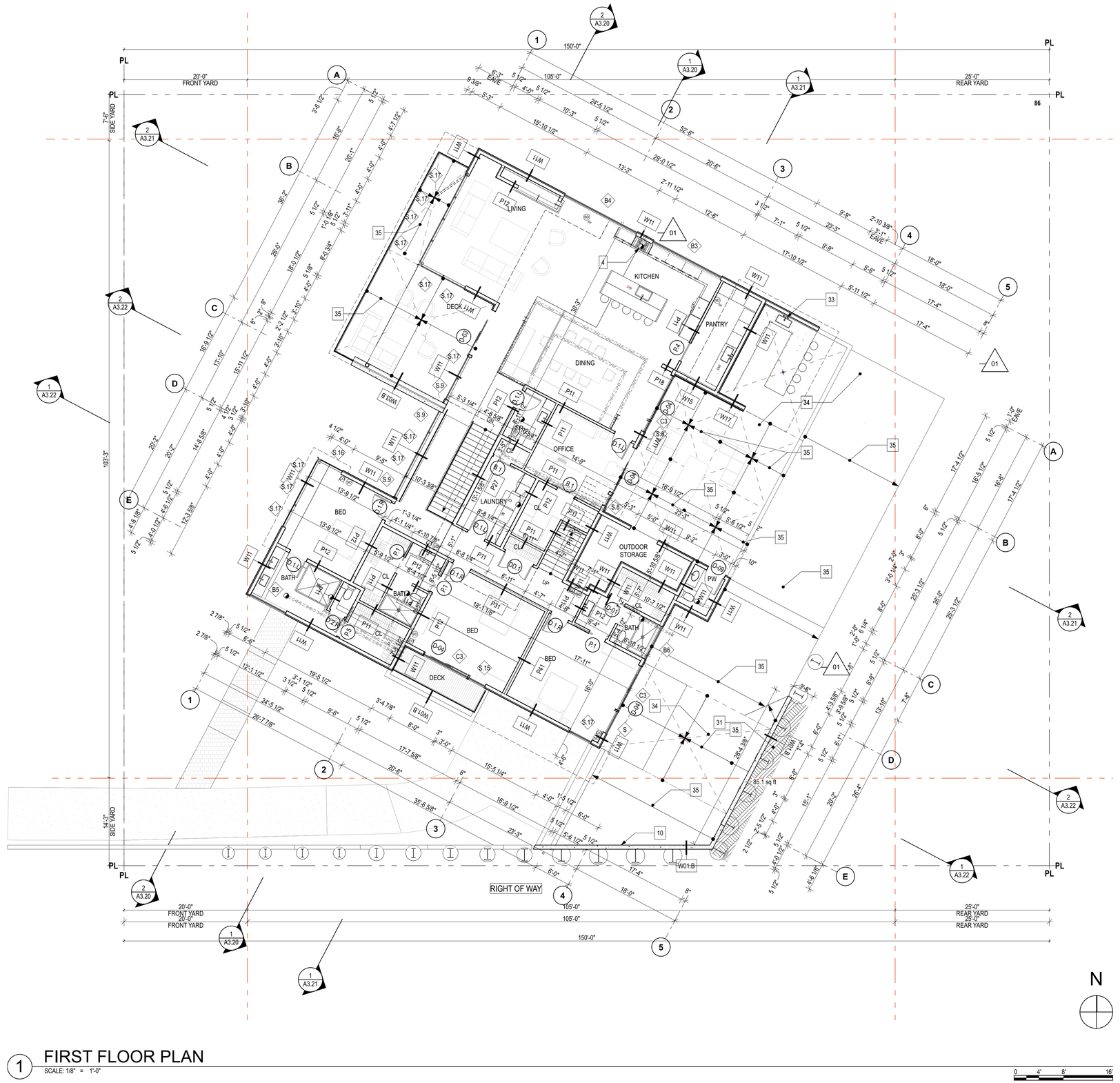

1 FIRST FLOOR PLAN

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

0 4' 8' 16'

PLAN NOTES

1. PROPERTY LINE
2. ROOF/DECK ABOVE
3. PEDESTRIAN ACCESS
4. PER R302.5, OPENINGS AND PENETRATIONS THROUGH THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE IN ACCORDANCE WITH SECTIONS R302.5.1 THROUGH R302.5.3.
5. STRUCTURE ABOVE, TYP
6. STRUCTURE BELOW, TYP
7. PROVIDE WHOLE HOUSE EXHAUST FAN WITH A NOISE RATING OF SONE 1.0 OR LESS THAT MEETS THE REQUIREMENTS OF IRC M1505.4. SEE A0.00 WHOLE HOUSE VENTILATION NOTE.
8. PROVIDE ENVIRONMENTAL AIR EXHAUST OUTLETS AT FAN LOCATIONS. THEY SHALL BE PROVIDED A MIN OF 3 FEET FROM OPERABLE OPENINGS INTO THE BUILDING AND PROPERTY LINES PER IRC M1504.3.
9. PER IRC TABLE M1505.4.4(1), AT KITCHEN, PROVIDE MAX 400 CFM LOCAL EXHAUST FAN AT 0.25 W.G. OR GREATER, TO RUN INTERMITTENTLY.
10. PROVIDE GUARDRAIL AT MIN 36" A.F.F. PER IRC R312.1.2. OPENINGS SHALL BE 4" MAX PER IRC R312.1.3, TYP. REFER TO STRUCTURAL DRAWINGS FOR CONNECTION DETAIL AT EXTERIOR ATTACHMENTS TO THE STRUCTURE. AT ALL EXTERIOR LOCATIONS PROVIDE CONNECTION THROUGH VERTICAL WALL SURFACE ONLY, DO NOT PROVIDE CONNECTION THOUGH ROOF MEMBRANE OR PARAPET CAP OR OTHER FLASHING AT TOP OF WALL.
11. PROVIDE HANDRAIL AT 34" - 38" ABOVE TREAD PER IRC R311.7.8.1, 1 1/4" MIN - 1 1/2" MAX GRASP DIMENSION PER IRC R311.7.8.5, 1 1/2" CLEARANCE BETWEEN WALL AND HANDRAIL PER IRC R311.7.8.3 AND CONTINUITY PER R311.7.8.4, TYP.
12. AUTOMATIC GARAGE DOOR OPENER TO CONFORM WITH R309.4: SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 325
13. PROVIDE 6'-8" MIN VERTICAL CLEARANCE TO FINISH AT ALL STAIRS PER IRC R311.7.2, TYP.
14. PER IRC R302.7, PROVIDE MIN 1/2" GYPSUM BOARD BENEATH STAIR AT ACCESSIBLE SPACE, TYP.
15. MIN 5/8" EXTERIOR TYPE 'X' GYPSUM WALLBOARD SEPARATING GARAGE FROM HABITABLE SPACE ABOVE PER IRC R302.6
16. SAUNA DESIGN TO CONFORM WITH M1902 (1-4). PER M1902.4 CONTROLS, SAUNA HEATERS SHALL BE EQUIPPED WITH A THERMOSTAT THAT WILL LIMIT ROOM TEMPERATURE TO NOT GREATER THAN 194°F (90°C). WHERE THE THERMOSTAT IS NOT AN INTEGRAL PART OF THE HEATER, THE HEAT-SENSING ELEMENT SHALL BE LOCATED WITHIN 6 INCHES OF THE CEILING.
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24. TREE DRIP LINE, REFER TO TREE PROTECTION PLAN, SHEET A1.10, PLOT PLAN, SHEET A1.10, AND ARBORIST REPORT, SHEET A0.14
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29. HEAT PUMP CONDENSER
30. PROVIDE SINK AND REFRIGERATOR AT WET BAR, NO OTHER APPLIANCES
31. PROVIDE 3-FOOT WIDE VEGETATED AT EAST SIDE OF RETAINING WALL TO PROTECT AGAINST FALL HAZARD
32. SLOPE GARAGE TO COMPLY WITH R309.1 TO FACILITATE THE MOVEMENT OF LIQUIDS TO A CENTER DRAIN
33. WRAP THE WATER SUPPLY LINES AND THE P TRAP WILL BE WITH HEATING TAPES WITH AN ADJUSTABLE THERMOSTAT
34. PROVIDE 60 MIL GAF EVERGUARD TPO SMOOTH MEMBRANE ROOFING
35. SLOPE ROOF 2% PERCENT MIN TO DRAIN

PLAN LEGEND

DOOR DESIGNATION 1.1

WINDOW DESIGNATION 1.1 — 3'-0" WINDOW WIDTH, 5'-0" WINDOW HEIGHT

XX / X.X — DETAIL NUMBER / SHEET NUMBER

1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 X 4 FRAMING

1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 x 6 FRAMING

CAST-IN-PLACE CONCRETE WALL

PROVIDE (1) LAYER 5/8" EXTERIOR GWB AT OVERHANG

PROVIDE CMU WALL

W/D — WASHING/ DRYER MACHINE (COMBO)

W — WASHING MACHINE

D — CLOTHES DRYER

XX / X.X — SECTION MARKER

HWH — ON-DEMAND HOT WATER HEATER

SD — IRC R314 AND IFC 907.2.10.2: SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
1. IN EACH SLEEPING ROOM.
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
3. ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES.
4. PER IFC 907.2.10 AND IRC R314.3 SMOKE ALARMS SHALL BE INSTALLED 20' MIN FROM KITCHEN APPLIANCES OR 10' MIN WITH AN ALARM-SILENCING SWITCH; 3' MIN FROM BATHROOM DOORS
5. SMOKE ALARMS REQUIRED TO BE INSTALLED, HARDWIRED AND INTERCONNECTED, TYP.

SD SW — SMOKE ALARM WITH SWITCH, PER ITEM 4 ABOVE

HD — HEAT DETECTOR/HEAT ALARM PER IRC R314.2.1

FAN LOCATION (IRC TABLE M 1505.4.4(1) AND IMC TABLE 403.4.7)
1. AT BATHROOMS AND LAUNDRY, PROVIDE 50 CFM FAN W/ TIMER AT 0.25 W.G. OR GREATER
2. AT KITCHENS, PROVIDE 100 CFM FAN AT 0.25 W.G. OR GREATER
3. VENT ALL EXHAUST FANS TO THE OUTSIDE
4. EXHAUST DUCTS ARE TO BE CONST. OF SMOOTH BORE NONCOMBUSTIBLE MATERIAL AND ARE TO BE INSUL. AS REQUIRED PER WSEC.

CO — IRC R315 AND 2018 IFC 915: AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING. SINGLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2075.

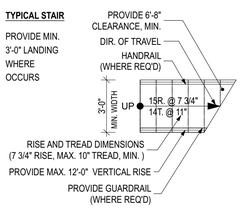
FLOOR STEP DOWN

SOFFIT STEP DOWN

01

TYPICAL STAIR

PROVIDE MIN. 3'-0" LANDING WHERE OCCURS



RISE AND TREAD DIMENSIONS (7 3/4" RISE, MAX. 10" TREAD, MIN.)

PROVIDE MAX. 12'-0" VERTICAL RISE

PROVIDE GUARDRAIL (WHERE REQ'D)

Architect of Record

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Project:

LANZ RESIDENCE

Location:

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MERCER ISLAND, WA 98040

SDCI Number:

Project No.

8914 REGISTERED ARCHITECT Brad Khouri BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024

City Stamp

First Floor Plan

A2.02

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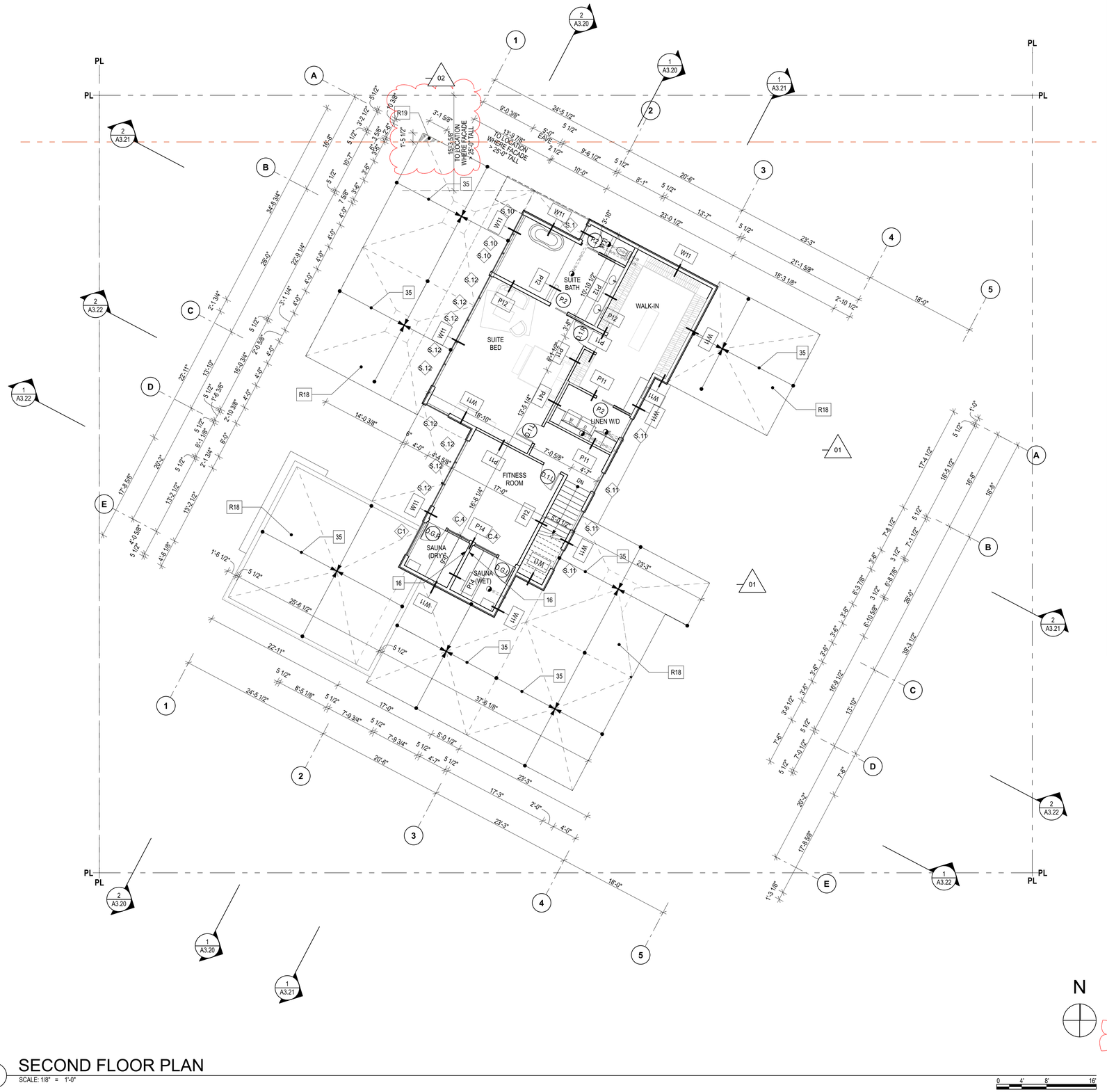

1 SECOND FLOOR PLAN

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

PLAN NOTES

1. PROPERTY LINE
2. ROOF/DECK ABOVE
3. PEDESTRIAN ACCESS
4. PER R302.5, OPENINGS AND PENETRATIONS THROUGH THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE IN ACCORDANCE WITH SECTIONS R302.5.1 THROUGH R302.5.3.
5. STRUCTURE ABOVE, TYP
6. STRUCTURE BELOW, TYP
7. PROVIDE WHOLE HOUSE EXHAUST FAN WITH A NOISE RATING OF SONE 1.0 OR LESS THAT MEETS THE REQUIREMENTS OF IRC M1505.4. SEE A0.00 WHOLE HOUSE VENTILATION NOTE.
8. PROVIDE ENVIRONMENTAL AIR EXHAUST OUTLETS AT FAN LOCATIONS. THEY SHALL BE PROVIDED A MIN OF 3 FEET FROM OPERABLE OPENINGS INTO THE BUILDING AND PROPERTY LINES PER IRC M1504.3.
9. PER IRC TABLE M1505.4.4(1), AT KITCHEN, PROVIDE MAX 400 CFM LOCAL EXHAUST FAN AT 0.25 W.G. OR GREATER, TO RUN INTERMITTENTLY.
10. PROVIDE GUARDRAIL AT MIN 36" A.F.F. PER IRC R312.1.2. OPENINGS SHALL BE 4" MAX PER IRC R312.1.3, TYP. REFER TO STRUCTURAL DRAWINGS FOR CONNECTION DETAIL AT EXTERIOR ATTACHMENTS TO THE STRUCTURE. AT ALL EXTERIOR LOCATIONS PROVIDE CONNECTION THROUGH VERTICAL WALL SURFACE ONLY, DO NOT PROVIDE CONNECTION THOUGH ROOF MEMBRANE OR PARAPET CAP OR OTHER FLASHING AT TOP OF WALL.
11. PROVIDE HANDRAIL AT 34" - 38" ABOVE TREAD PER IRC R311.7.8.1, 1 1/4" MIN - 1 1/2" MAX GRASP DIMENSION PER IRC R311.7.8.5, 1 1/2" CLEARANCE BETWEEN WALL AND HANDRAIL PER IRC R311.7.8.3 AND CONTINUITY PER R311.7.8.4, TYP.
12. AUTOMATIC GARAGE DOOR OPENER TO CONFORM WITH R309.4: SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 325
13. PROVIDE 6'-8" MIN VERTICAL CLEARANCE TO FINISH AT ALL STAIRS PER IRC R311.7.2, TYP.
14. PER IRC R302.7, PROVIDE MIN 1/2" GYPSUM BOARD BENEATH STAIR AT ACCESSIBLE SPACE, TYP.
15. MIN 5/8" EXTERIOR TYPE 'X' GYPSUM WALLBOARD SEPARATING GARAGE FROM HABITABLE SPACE ABOVE PER IRC R302.6
16. SAUNA DESIGN TO CONFORM WITH M1902 (1-4). PER M1902.4 CONTROLS, SAUNA HEATERS SHALL BE EQUIPPED WITH A THERMOSTAT THAT WILL LIMIT ROOM TEMPERATURE TO NOT GREATER THAN 194°F (90°C). WHERE THE THERMOSTAT IS NOT AN INTEGRAL PART OF THE HEATER, THE HEAT-SENSING ELEMENT SHALL BE LOCATED WITHIN 6 INCHES OF THE CEILING.
17. PROVIDE WOOD-FRAMED EAVE PROJECTION ABOVE. PAINT PER ELEVATIONS.
18. PROVIDE SHORING FOR EXCAVATION ADJACENT TO PROPERTY LINE, PER STRUCTURAL
19. MIN 1/2" GYPSUM WALLBOARD WRAPPING POSTS SUPPORTING GARAGE OR COMMON AREA PER IRC R302.6
20. MIN 1/2" GYPSUM WALLBOARD WRAPPING BEAMS SUPPORTING GARAGE OR COMMON AREA PER IRC R302.6
21. PROVIDE PLANTER, REFER TO LANDSCAPE PLANS FOR PLANTING SCHEDULE
22. VEHICULAR ENTRY
23. TREE PROTECTION AREA, REFER TO PLOT PLAN, SHEET A1.10 AND ARBORIST REPORT, SHEET A0.14
24. TREE DRIP LINE, REFER TO TREE PROTECTION PLAN, SHEET A1.10, PLOT PLAN, SHEET A1.10, AND ARBORIST REPORT, SHEET A0.14
25. PROPOSED DISTURBED AREA WITHIN TREE PROTECTION AREA, PER ARBORIST REPORT, SHEET A0.14.
26. PLUMBING WASTE STACK
27. PROVIDE ROOF OVERHANG ABOVE, TYP.
28. PROVIDE BOLT ON BALCONY BY OTHERS, TYP.
29. HEAT PUMP CONDENSER
30. PROVIDE SINK AND REFRIGERATOR AT WET BAR, NO OTHER APPLIANCES
31. PROVIDE 3-FOOT WIDE VEGETATED AT EAST SIDE OF RETAINING WALL TO PROTECT AGAINST FALL HAZARD
32. SLOPE GARAGE TO COMPLY WITH R309.1 TO FACILITATE THE MOVEMENT OF LIQUIDS TO A CENTER DRAIN
33. WRAP THE WATER SUPPLY LINES AND THE P TRAP WILL BE WITH HEATING TAPES WITH AN ADJUSTABLE THERMOSTAT
34. PROVIDE 60 MIL GAF EVERGUARD TPO SMOOTH MEMBRANE ROOFING
35. SLOPE ROOF 2% PERCENT MIN TO DRAIN

ROOF PLAN NOTES

R1. PROPERTY LINE
R2. ROOF/DECK ABOVE
R3. PROVIDE 2X6 PARAPET ON ROOF. REFER PARAPET HEIGHT PLAN AND ELEVATION DRAWINGS FOR HEIGHT, TYP.
R4. PROVIDE PROTECTION BOARD UNDER ROOF DECK SUPPORTS AT WALKING SURFACE
R5. STRUCTURE ABOVE, TYP
R6. STRUCTURE BELOW, TYP
R7. ROOFING MEMBRANE. PROVIDE MIN 18" UP WALL WITH 12" LAP OF WRB.
R8. PROVIDE CRICKET WITH RIGID INSULATION, 3" MIN PER ROOF ASSEMBLIES, REFER TO RELEVANT RC TYPE, A8.01. SLOPE TO DRAIN, MIN. 3/8" PER FOOT
R9. SLOPE ROOF 2 PERCENT MINIMUM TO DRAIN
R10. PROVIDE GUARDRAIL AT MIN 36" A.F.F. PER IRC R312.1.2. OPENINGS SHALL BE 4" MAX PER IRC R312.1.3, TYP. REFER TO STRUCTURAL DRAWINGS FOR CONNECTION DETAIL AT EXTERIOR ATTACHMENTS TO THE STRUCTURE. AT ALL EXTERIOR LOCATIONS PROVIDE CONNECTION THROUGH VERTICAL WALL SURFACE ONLY, DO NOT PROVIDE CONNECTION THOUGH ROOF MEMBRANE OR PARAPET CAP OR OTHER FLASHING AT TOP OF WALL.
R11. NOT USED
R12. INTERNAL ROOF DRAIN, REFER TO PLUMBING FOR ROUTING
R13. NOT USED
R14. NOT USED
R15. CONNECT INTERNAL ROOF DRAIN TO SANITARY SEWER. PROVIDE SECONDARY OVERFLOW PER IRC R903.4. OVERFLOW DRAINS HAVING THE SAME SIZE AS THE ROOF DRAINS SHALL BE INSTALLED WITH THE INLET FLOW LINE LOCATED 2 INCHES (51 MM) ABOVE THE LOW POINT OF THE ROOF, OR OVERFLOW SCUPPERS HAVING THREE TIMES THE SIZE OF THE ROOF DRAINS AND HAVING A MINIMUM OPENING HEIGHT OF 4 INCHES.
R16. NOT USED
R17. LOCATE PLUMBING VENT PENETRATION AT ROOF 10' MIN FROM EDGE OF OCCUPIABLE ROOF DECK PER SEATTLE PLUMBING CODE 906. OTHERWISE EXTEND VENT 7' ABOVE WALKING SURFACE PER SEATTLE PLUMBING CODE 906.
R18. PROVIDE 60 MIL GAF EVERGUARD TPO SMOOTH MEMBRANE ROOFING
R19. PROVIDE 2:12 SLOPE AT ROOF PROJECTION INTO MINIMUM SIDE YARD SETBACK PER 19.020.020.C.3.a.ii

PLAN LEGEND

DOOR DESIGNATION 1.1
WINDOW DESIGNATION 1.1 — 3'-0" WINDOW WIDTH, 5'-0" WINDOW HEIGHT
XX / X.X — DETAIL NUMBER / SHEET NUMBER
1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 X 4 FRAMING
1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 x 6 FRAMING
CAST-IN-PLACE CONCRETE WALL
PROVIDE (1) LAYER 5/8" EXTERIOR GWB AT OVERHANG
PROVIDE CMU WALL
W/D — WASHING/ DRYER MACHINE (COMBO)
W — WASHING MACHINE
D — CLOTHES DRYER
XX / X.X — SECTION MARKER
HWH — ON-DEMAND HOT WATER HEATER
SD — IRC R314 AND IFC 907.2.10.2: SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
1. IN EACH SLEEPING ROOM.
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
3. ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES.
4. PER IFC 907.2.10 AND IRC R314.3 SMOKE ALARMS SHALL BE: INSTALLED 20' MIN FROM KITCHEN APPLIANCES OR 10' MIN WITH AN ALARM-SILENCING SWITCH; 3' MIN FROM BATHROOM DOORS
5. SMOKE ALARMS REQUIRED TO BE INSTALLED, HARDWIRED AND INTERCONNECTED, TYP.
SD SW — SMOKE ALARM WITH SWITCH, PER ITEM 4 ABOVE
HD — HEAT DETECTOR/HEAT ALARM PER IRC R314.2.1
FAN LOCATION (IRC TABLE M 1505.4.4(1) AND IMC TABLE 403.4.7)
1. AT BATHROOMS AND LAUNDRY, PROVIDE 50 CFM FAN W/ TIMER AT 0.25 W.G. OR GREATER
2. AT KITCHENS, PROVIDE 100 CFM FAN AT 0.25 W.G. OR GREATER
3. VENT ALL EXHAUST FANS TO THE OUTSIDE
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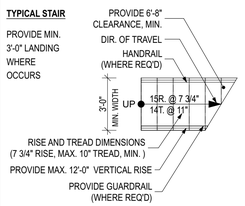
CO — IRC R315 AND 2018 IFC 915: AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING. SINGLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2075.
FLOOR STEP DOWN
SOFFIT STEP DOWN

TYPICAL STAIR

PROVIDE MIN. 3'-0" LANDING WHERE OCCURS



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206.297.1284
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Project:
LANZ RESIDENCE

Location:
8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:
Project No.

8914 REGISTERED ARCHITECT Brad Khoury BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Second Floor Plan

A2.03

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ROOF PLAN NOTES

R1. PROPERTY LINE
R2. ROOF/DECK ABOVE
R3. PROVIDE 2X6 PARAPET ON ROOF. REFER PARAPET HEIGHT PLAN AND ELEVATION DRAWINGS FOR HEIGHT, TYP.
R4. PROVIDE PROTECTION BOARD UNDER ROOF DECK SUPPORTS AT WALKING SURFACE
R5. STRUCTURE ABOVE, TYP
R6. STRUCTURE BELOW, TYP
R7. ROOFING MEMBRANE. PROVIDE MIN 18" UP WALL WITH 12" LAP OF WRB.
R8. PROVIDE CRICKET WITH RIGID INSULATION, 3" MIN PER ROOF ASSEMBLIES. REFER TO RELEVANT RC TYPE, A8.01. SLOPE TO DRAIN, MIN. 3/8" PER FOOT
R9. SLOPE ROOF 2 PERCENT MINIMUM TO DRAIN
R10. PROVIDE GUARDRAIL AT MIN 36" A.F.F. PER IRC R312.1.2. OPENINGS SHALL BE 4" MAX PER IRC R312.1.3, TYP. REFER TO STRUCTURAL DRAWINGS FOR CONNECTION DETAIL AT EXTERIOR ATTACHMENTS TO THE STRUCTURE. AT ALL EXTERIOR LOCATIONS PROVIDE CONNECTION THROUGH VERTICAL WALL SURFACE ONLY, DO NOT PROVIDE CONNECTION THOUGH ROOF MEMBRANE OR PARAPET CAP OR OTHER FLASHING AT TOP OF WALL.
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R18. PROVIDE 60 MIL GAF EVERGUARD TPO SMOOTH MEMBRANE ROOFING
R19. PROVIDE 2:12 SLOPE AT ROOF PROJECTION INTO

01

PLAN LEGEND

DOOR DESIGNATION 1.1
WINDOW DESIGNATION 1.1 — 3'-0" WINDOW WIDTH, 5'-0" WINDOW HEIGHT
XX / X.X — DETAIL NUMBER / SHEET NUMBER

1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 X 4 FRAMING
1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION 2 x 6 FRAMING
CAST-IN-PLACE CONCRETE WALL
PROVIDE (1) LAYER 5/8" EXTERIOR GWB AT OVERHANG
PROVIDE CMU WALL

W/D — WASHING/ DRYER MACHINE (COMBO)
W — WASHING MACHINE
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2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
3. ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES.
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SD SW — SMOKE ALARM WITH SWITCH, PER ITEM 4 ABOVE
HD — HEAT DETECTOR/HEAT ALARM PER IRC R314.2.1

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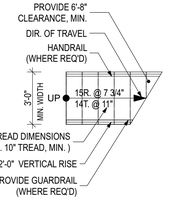
FLOOR STEP DOWN
SOFFIT STEP DOWN

TYPICAL STAIR
PROVIDE MIN. 3'-0" LANDING WHERE OCCURS



N

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

0 4' 8' 16'

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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024

City Stamp

Roof Plan

A2.04

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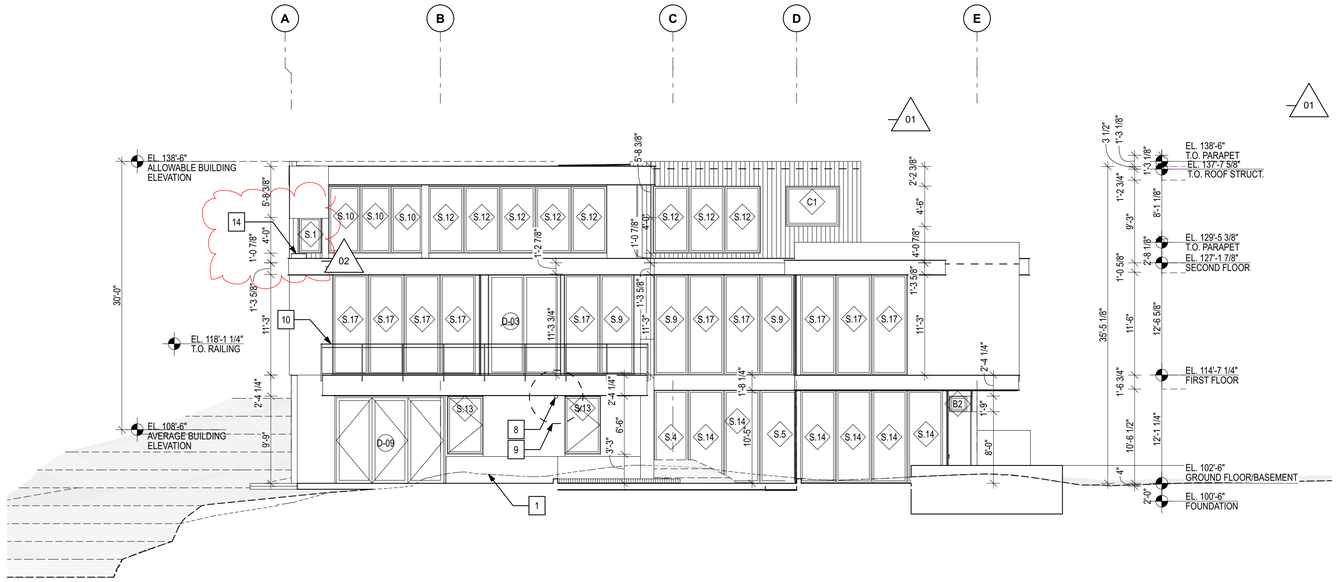
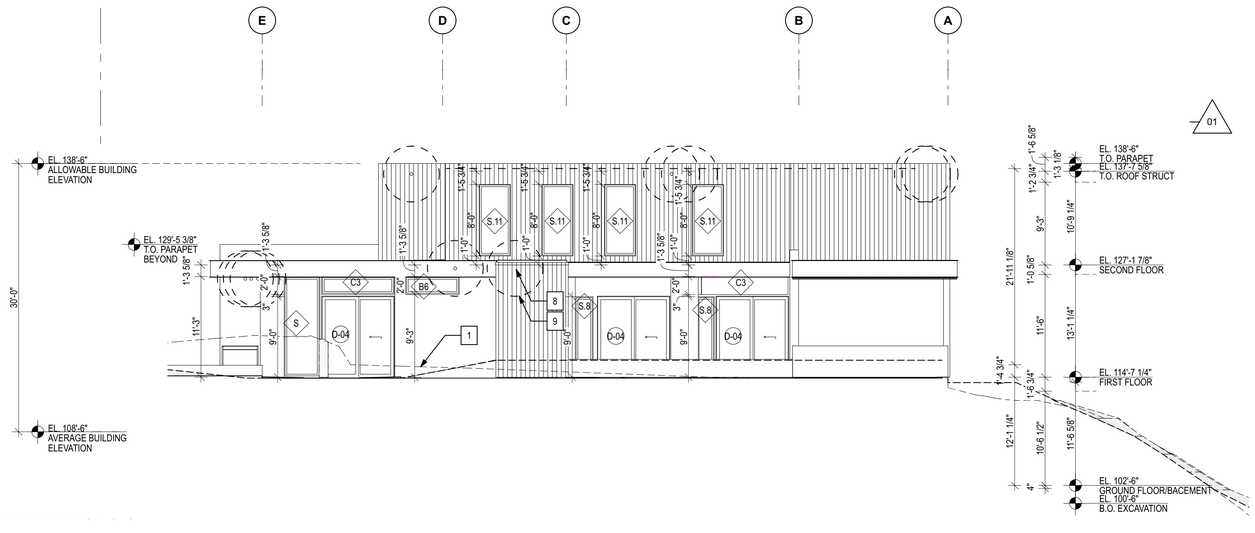


2 WEST ELEVATION

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

0 4' 8' 16'



1 EAST ELEVATION

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

0 4' 8' 16'

ELEVATION NOTES

1. EXISTING GRADE, TYP.
2. DENOTES FOOTING BEYOND, TYP.
3. PROVIDE NON-COMBUSTIBLE STEEL CANOPY PROVIDED BY OTHERS OVER ENTRY DOOR FOR WEATHER PROTECTION, TYP.
4. PROVIDE EXTERIOR LIGHTING AT DOOR ENTRY
5. DENOTES TOP OF ROOF SHEATHING BEHIND PARAPET, TYP.
6. PROVIDE SHORING, REFER TO STRUCTURAL DRAWINGS
7. NOT USED
8. PROVIDE ENVIRONMENTAL AIR EXHAUST OUTLET AT EXTERIOR WALL PER IRC M1504.3, TYP.
9. PROVIDE MINIMUM 3-FOOT CLEARANCE BETWEEN OPERABLE OPENINGS INTO THE BUILDING AND PROPERTY LINES PER IRC M1504.3
10. PROVIDE GUARDRAIL AT MIN 36" A.F.F. PER IRC R312.1.2. OPENINGS SHALL BE 4" MAX PER IRC R312.1.3, TYP. REFER TO STRUCTURAL DRAWINGS FOR CONNECTION DETAIL AT EXTERIOR ATTACHMENTS TO THE STRUCTURE. AT ALL EXTERIOR LOCATIONS PROVIDE CONNECTION THROUGH VERTICAL WALL SURFACE ONLY, DO NOT PROVIDE CONNECTION THOUGH ROOF MEMBRANE OR PARAPET CAP OR OTHER FLASHING AT TOP OF WALL. NOTE ALL INFILL GLASS PANELS BETWEEN STRUCTURAL STANCHIONS AND A STRUCTURAL TOP RAIL MUST BE SAFETY GLAZED
11. ROOF EAVE IN YARD PER MICC 19.02.020.C.3.a
12. POINT AT WHICH THE FINISHED FLOOR LEVEL DIRECTLY ABOVE A USABLE UNDER-FLOOR SPACE IS MORE THAN SIX FEET ABOVE GRADE
13. PROVIDE 3-FOOT WIDE VEGETATED AT EAST SIDE OF RETAINING WALL TO PROTECT AGAINST FALL HAZARD
14. PROVIDE 2:12 SLOPE AT ROOF IN SETBACK PER MICC 19.02.020(C)(3)(a)(ii).

01 02

Architect of Record

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Project No.

8814 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Elevations

A3.10

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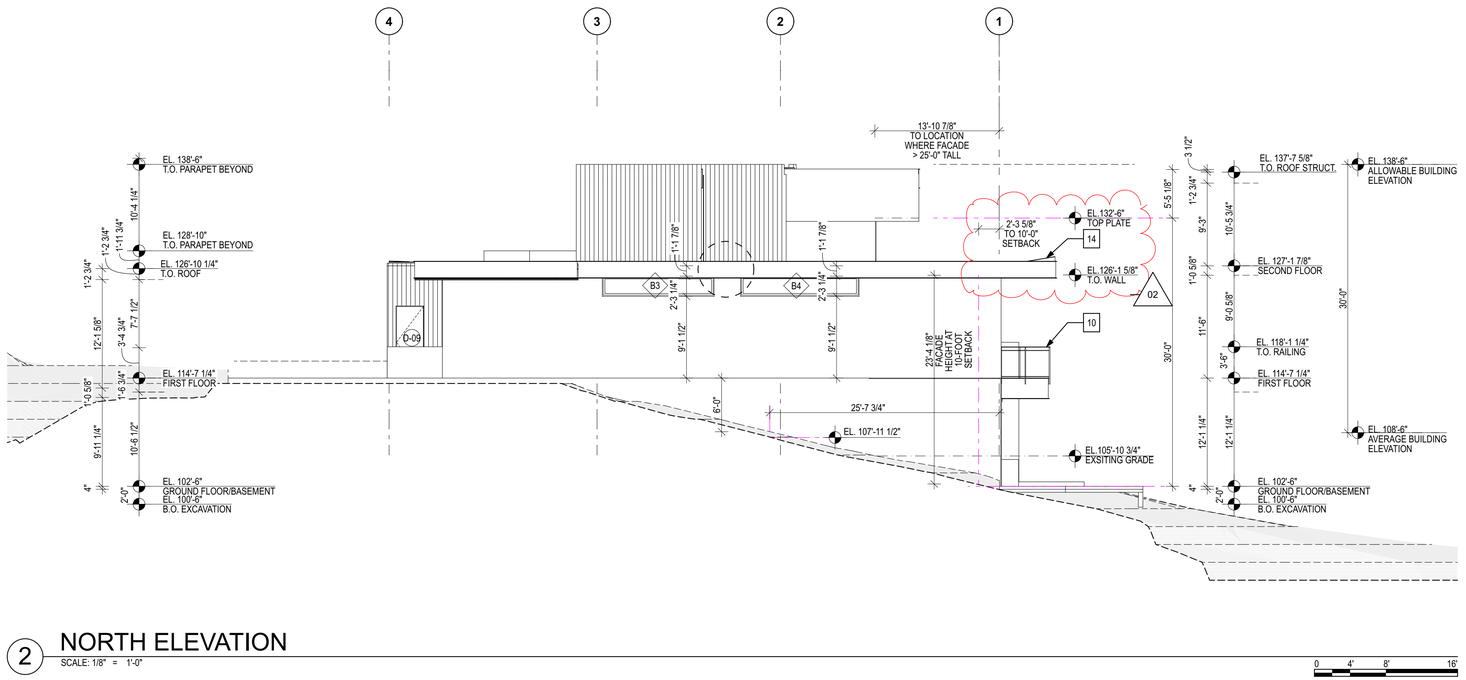
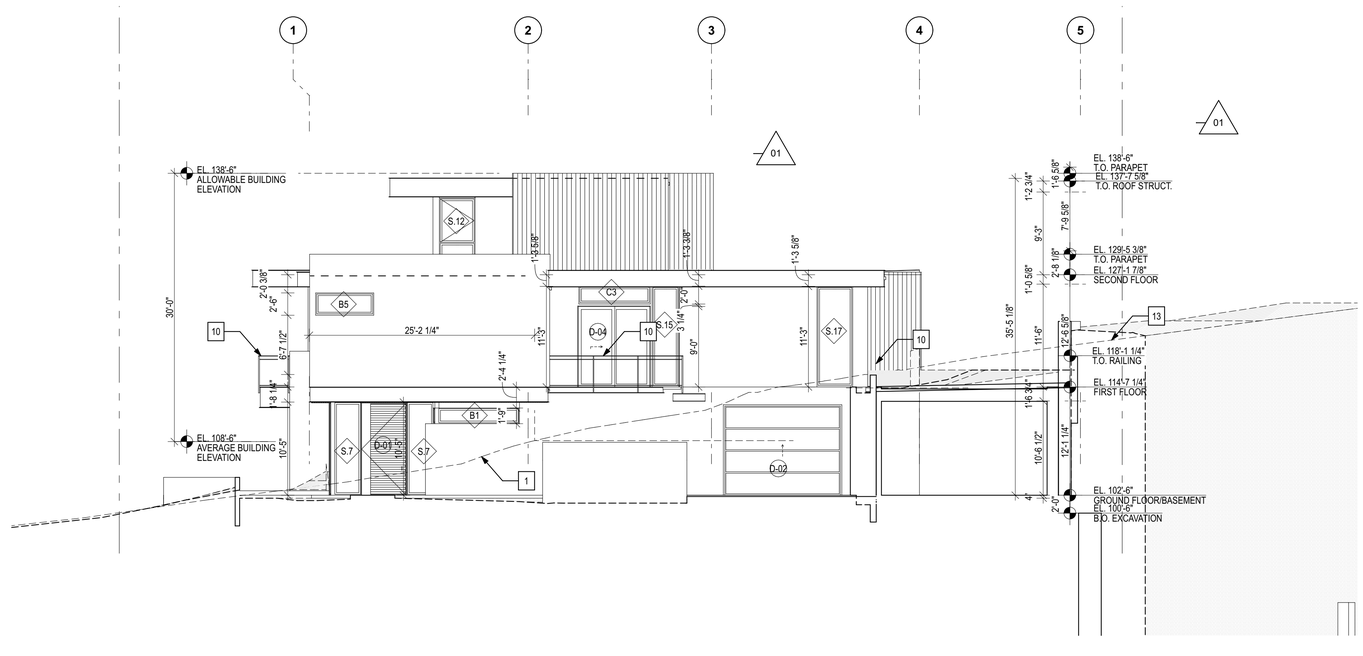


2 NORTH ELEVATION

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



1 SOUTH ELEVATION

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

ELEVATION NOTES

1. EXISTING GRADE, TYP.
2. DENOTES FOOTING BEYOND, TYP.
3. PROVIDE NON-COMBUSTIBLE STEEL CANOPY PROVIDED BY OTHERS OVER ENTRY DOOR FOR WEATHER PROTECTION, TYP.
4. PROVIDE EXTERIOR LIGHTING AT DOOR ENTRY
5. DENOTES TOP OF ROOF SHEATHING BEHIND PARAPET, TYP.
6. PROVIDE SHORING, REFER TO STRUCTURAL DRAWINGS
7. NOT USED
8. PROVIDE ENVIRONMENTAL AIR EXHAUST OUTLET AT EXTERIOR WALL PER IRC M1504.3, TYP.
9. PROVIDE MINIMUM 3-FOOT CLEARANCE BETWEEN OPERABLE OPENINGS INTO THE BUILDING AND PROPERTY LINES PER IRC M1504.3
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11. ROOF EAVE IN YARD PER MICC 19.02.020.C.3.a
12. POINT AT WHICH THE FINISHED FLOOR LEVEL DIRECTLY ABOVE A USABLE UNDER-FLOOR SPACE IS MORE THAN SIX FEET ABOVE GRADE
13. PROVIDE 3-FOOT WIDE VEGETATED AT EAST SIDE OF RETAINING WALL TO PROTECT AGAINST FALL HAZARD
14. PROVIDE 2:12 SLOPE AT ROOF IN SETBACK PER MICC 19.02.020(C)(3)(a)(ii).

Architect of Record

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SDCI Number:

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8914 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Elevations

A3.11

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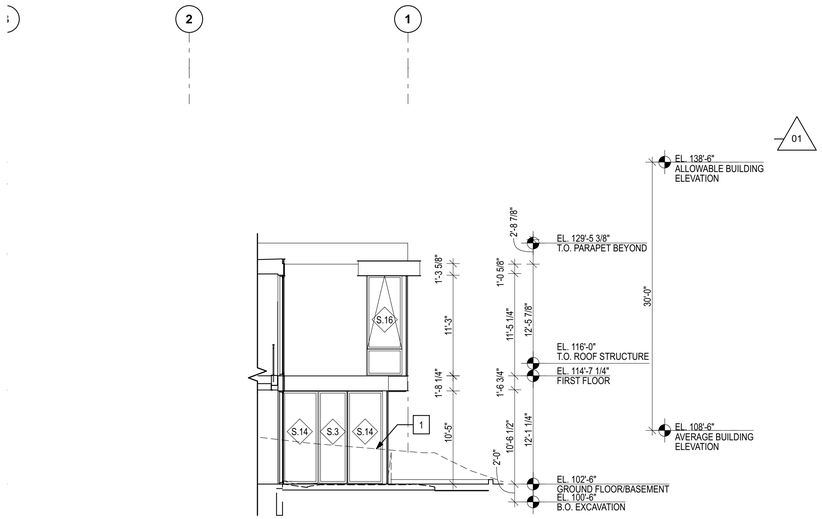
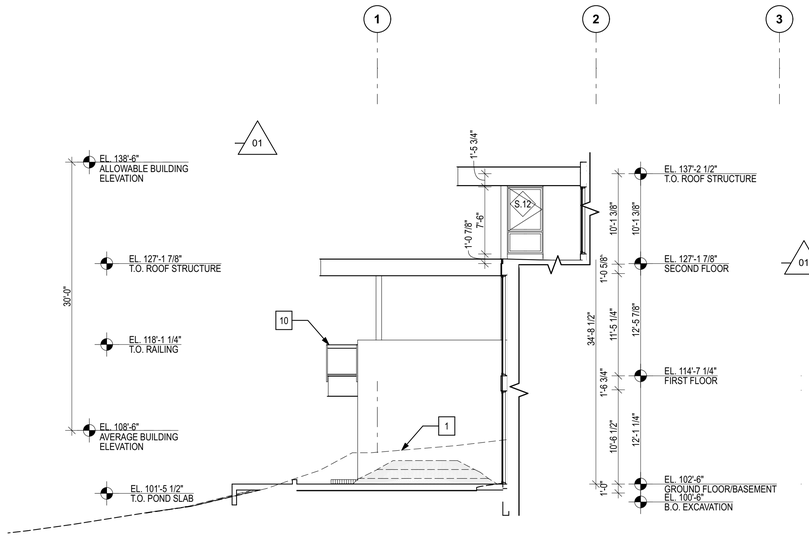


4 SOUTH COURT ELEVATION

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

0 4' 8' 16'



3 NORTH COURT ELEVATION

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

0 4' 8' 16'

ELEVATION NOTES

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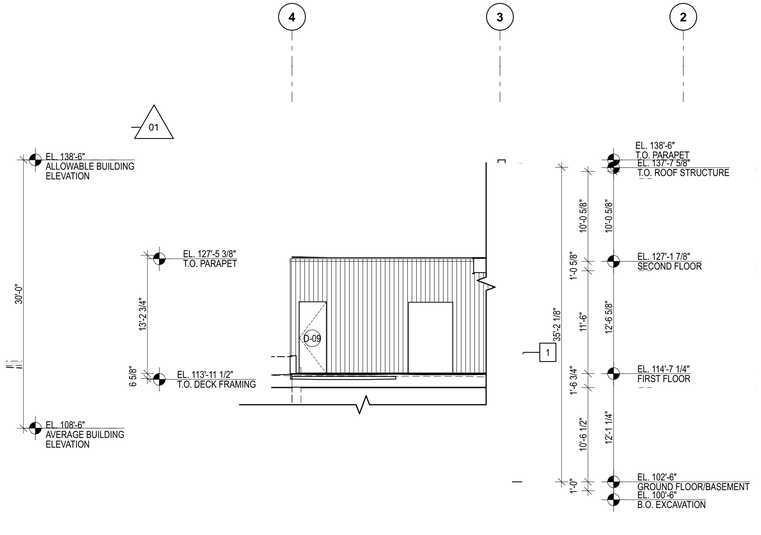
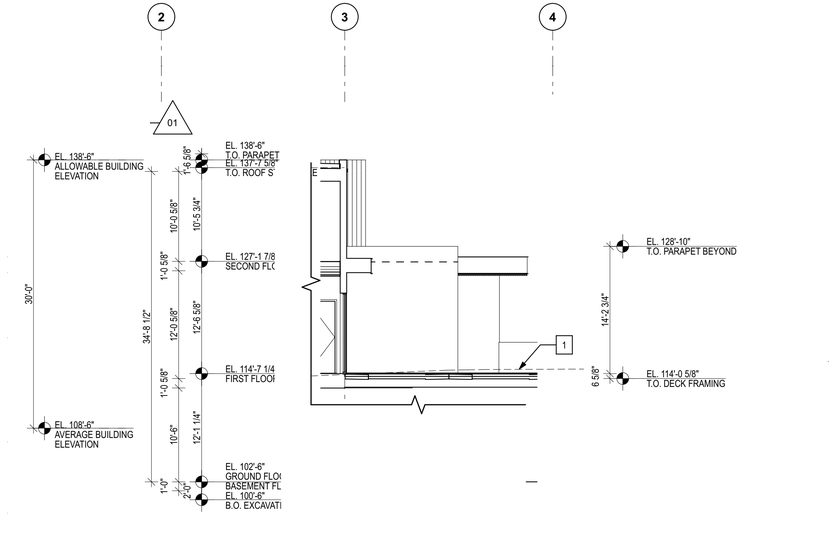
01 02



2 SOUTH PATIO ELEVATION

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

0 4' 8' 16'



1 NORTH PATIO ELEVATION

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

0 4' 8' 16'

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02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

Elevations

A3.12

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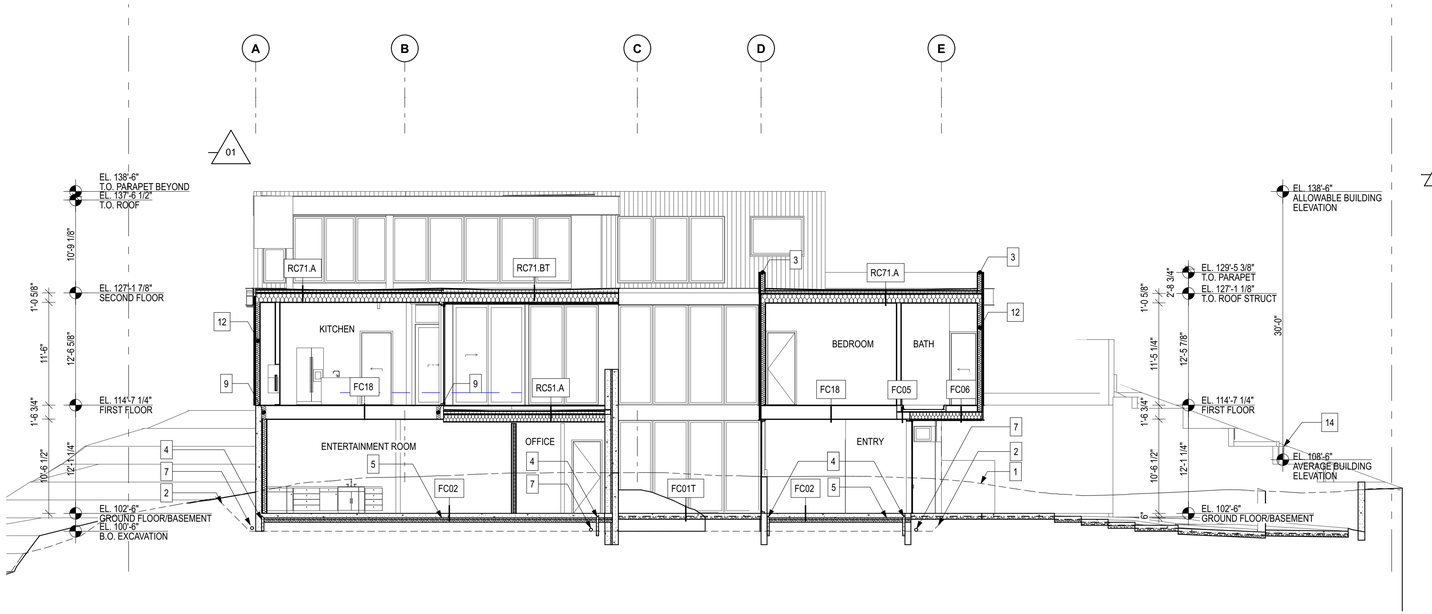
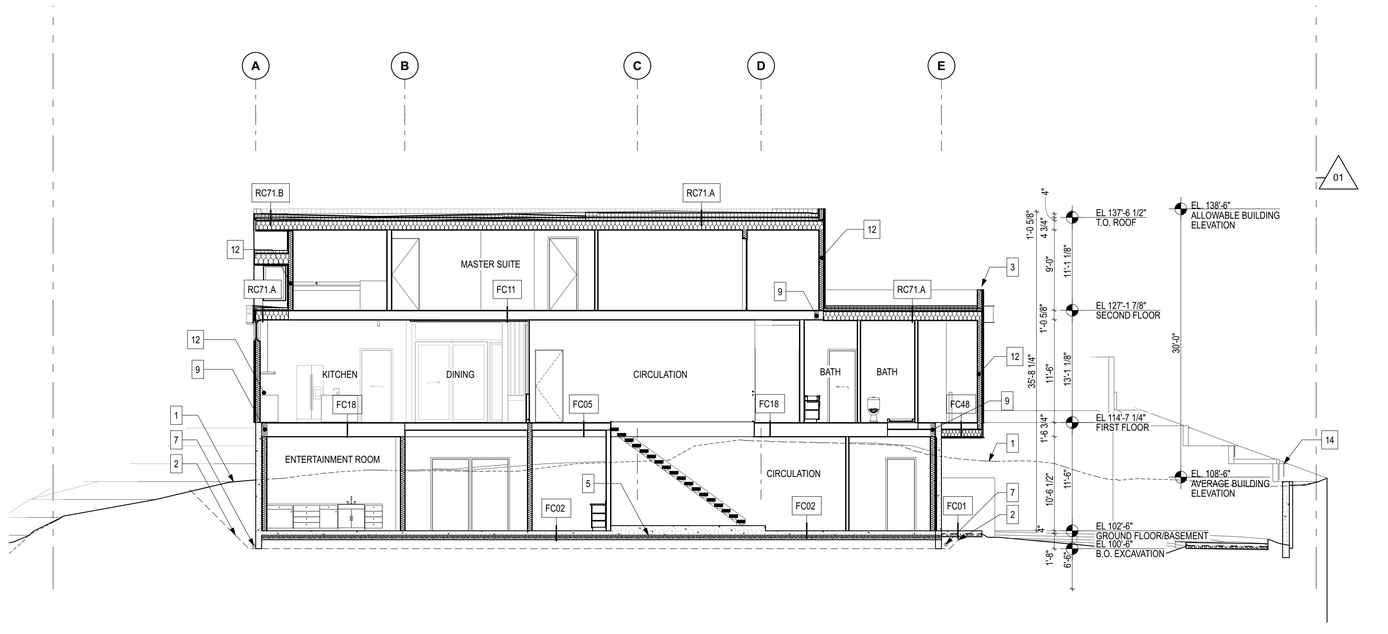


2 LONGITUDINAL SECTION

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

0 4' 8' 16'



1 LONGITUDINAL SECTION

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

0 4' 8' 16'

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17. COLUMN PER STRUCTURAL
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02

Architect of Record

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City Stamp

Sections

A3.20

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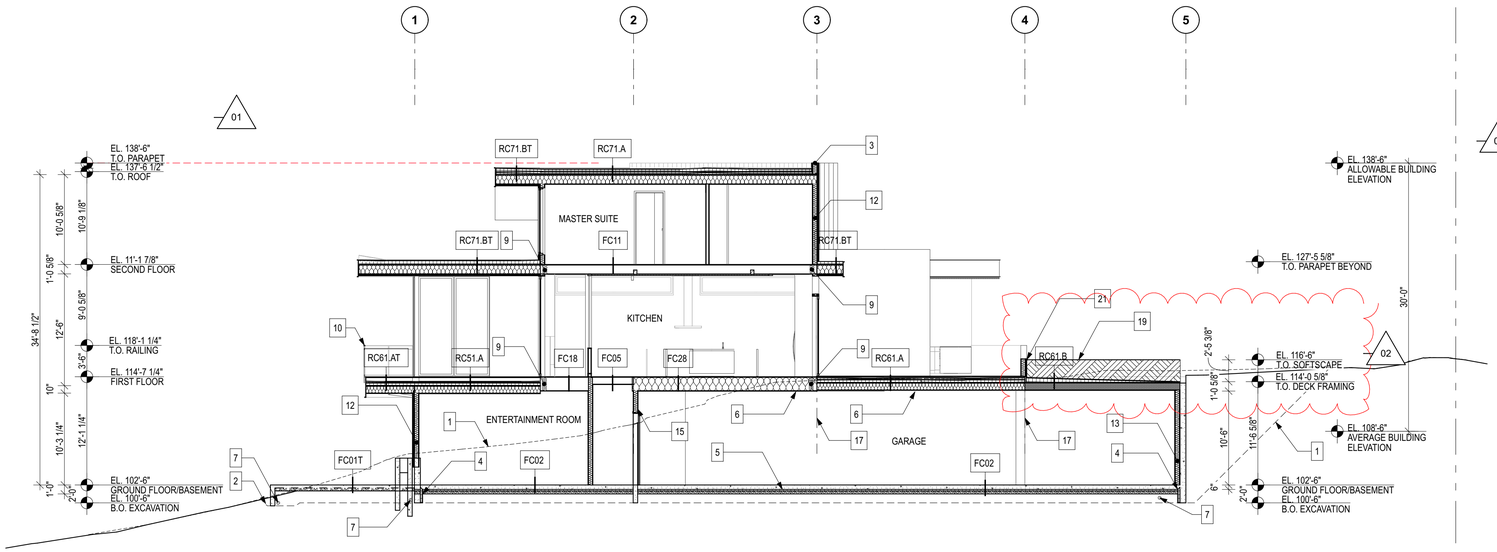
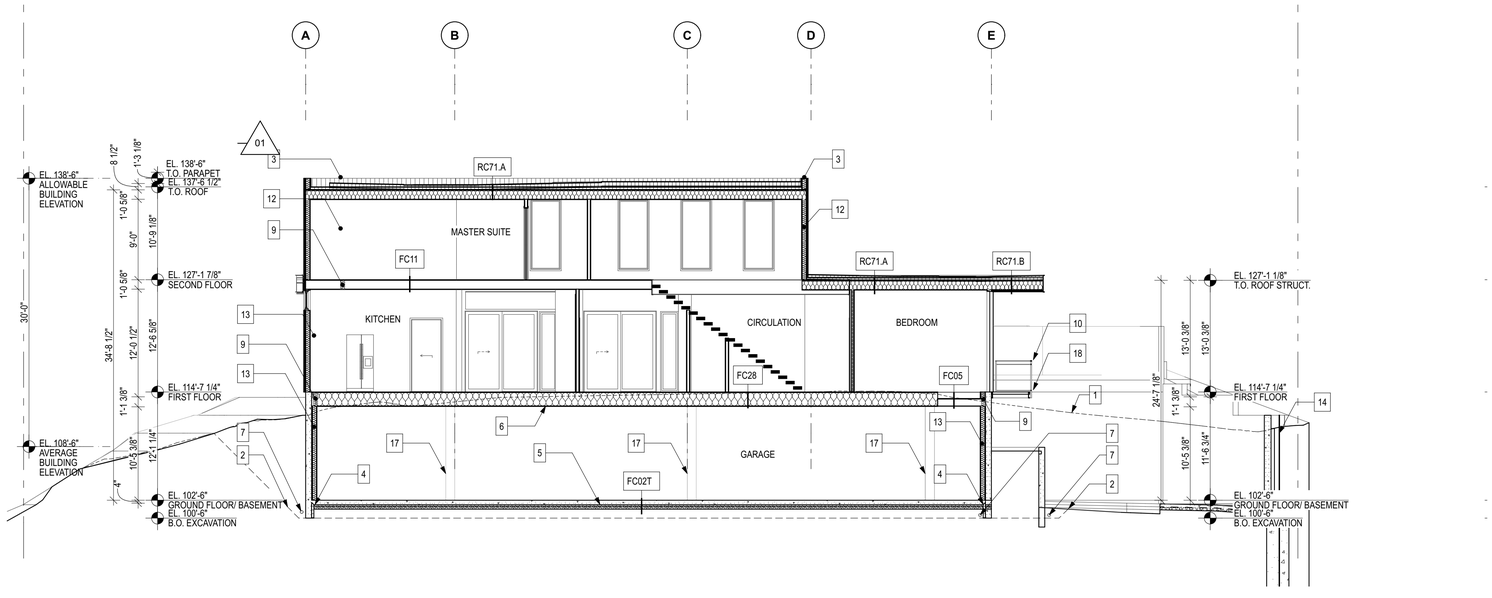


2 TRANSVERSE SECTION

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

0 4' 8' 16'



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City Stamp

Sections

A3.21

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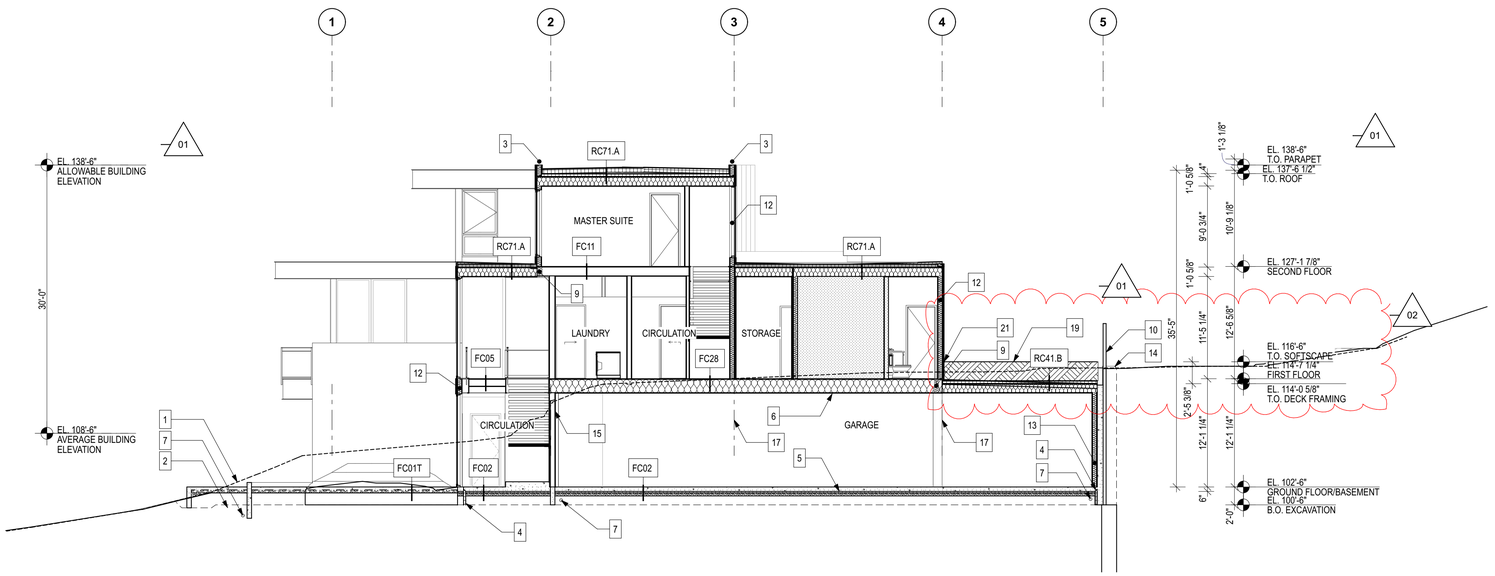
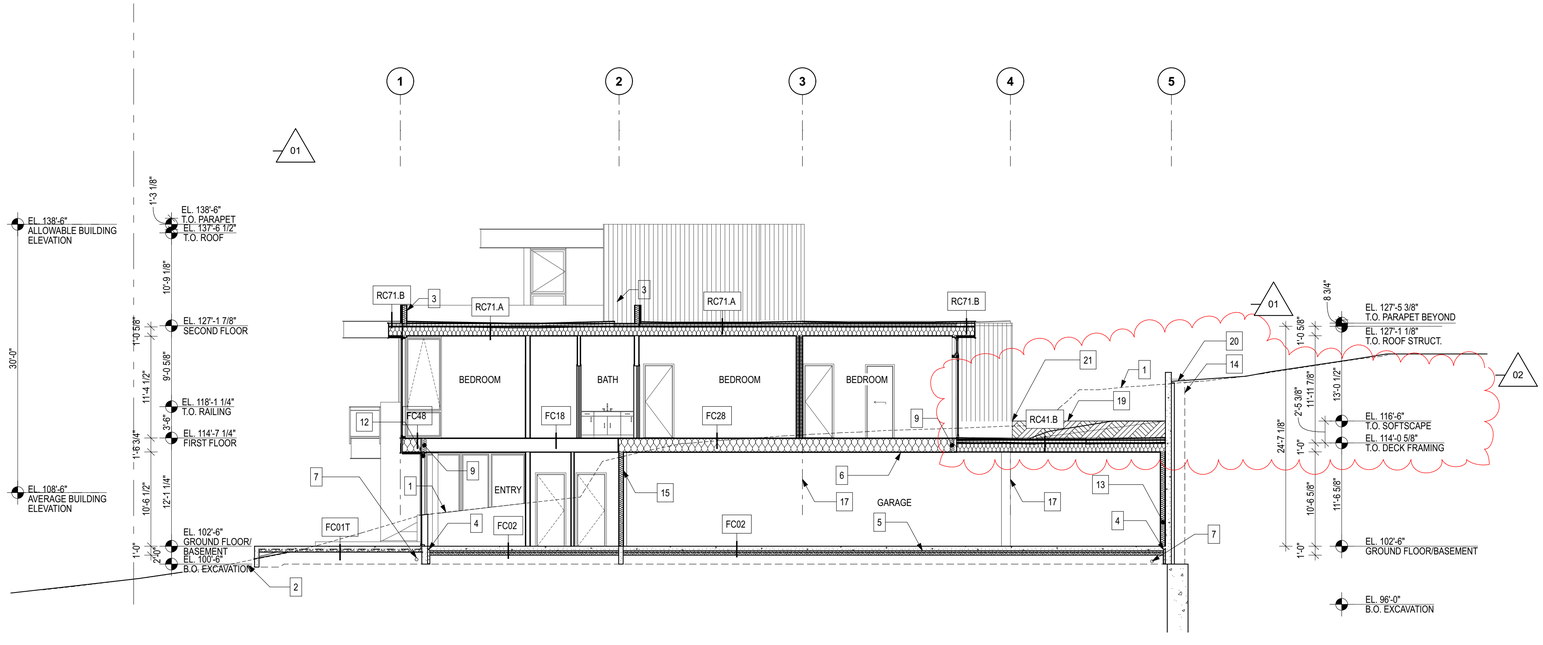


2 TRANSVERSE SECTION

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

0 4' 8' 16'



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City Stamp

Sections

A3.22

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01

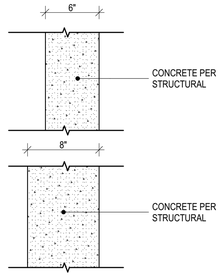
EXTERIOR WALL TYPES

W01

W01.A

6"

CONCRETE WALL PER STRUCTURAL PLANS



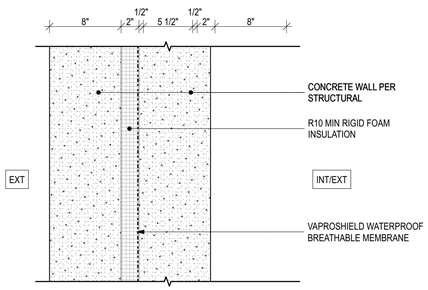
W01.B

8"

CONCRETE WALL PER STRUCTURAL PLANS

NOT USED

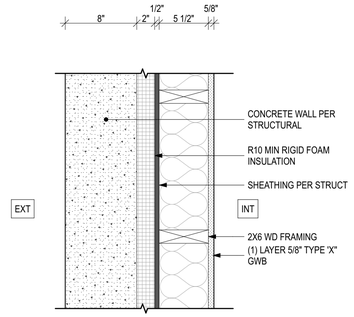
W03.B



W03

CONCRETE WALL PER STRUCTURAL PLANS

WD 2X6 FURRING WALL

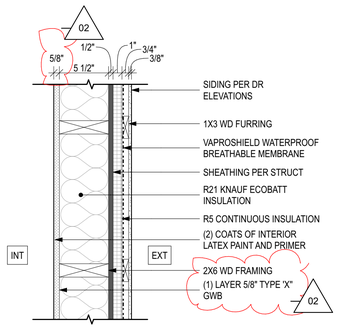


EXTERIOR WALL TYPES

W11

EXTERIOR WALL
SIDING PER DR ELEVATION AND MATERIAL SCHEDULE

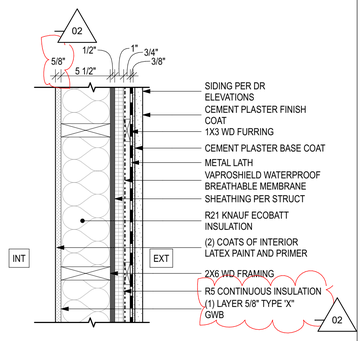
WD 2X6 EXT
MIN R-20 CAVITY + R-5 CONTINUOUS
UNRATED



W15

EXTERIOR WALL
SIDING PER DR ELEVATION AND MATERIAL SCHEDULE

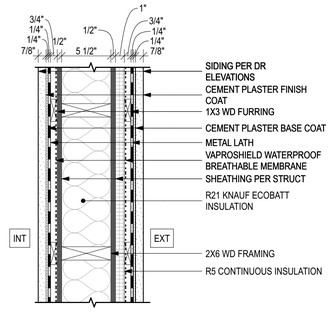
WD 2X6 EXT
MIN R-20 CAVITY + R-5 CONTINUOUS
UNRATED
CEMENT PLASTER
EXTERIOR FINISH



W17

EXTERIOR WALL
SIDING PER DR ELEVATION AND MATERIAL SCHEDULE

WD 2X6 EXT
MIN R-20 CAVITY + R-5 CONTINUOUS
UNRATED
CEMENT PLASTER
EXTERIOR FINISH
BOTH SIDES



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City Stamp

Wall Types

A8.00

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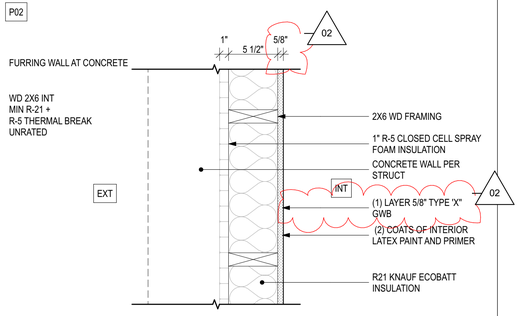
INTERIOR WALL TYPES

P02



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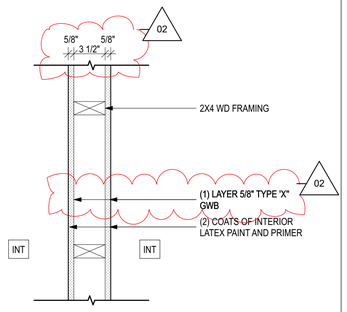

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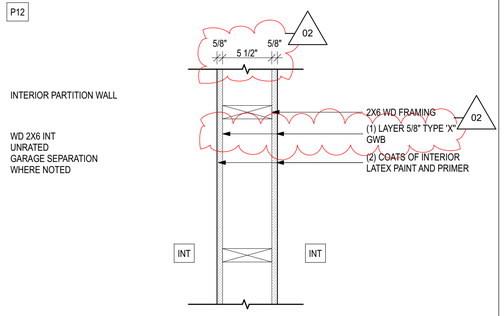

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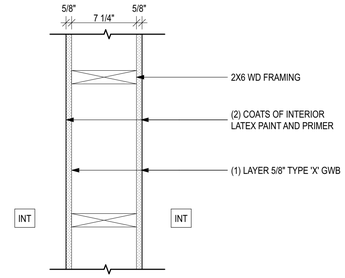
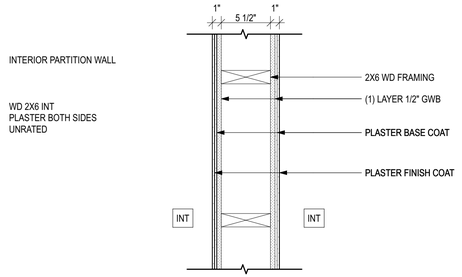


INTERIOR WALL TYPES

P18



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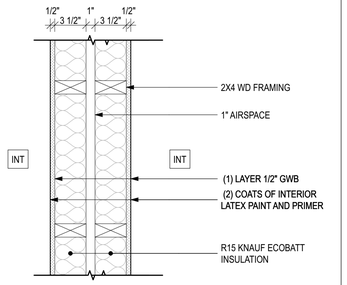

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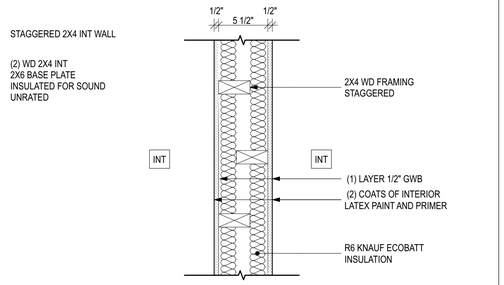

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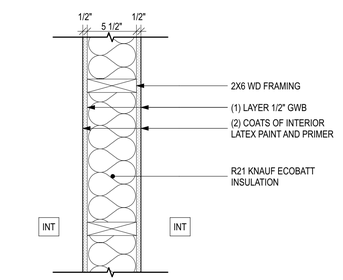

INTERIOR WALL TYPES

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Project:

LANZ RESIDENCE

Location:

8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:

Project No.

8914 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

01

Wall Types

A8.00a

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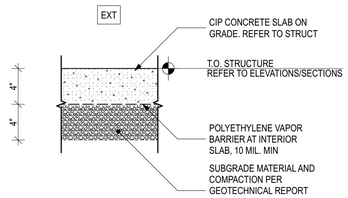
01

FC TYPES

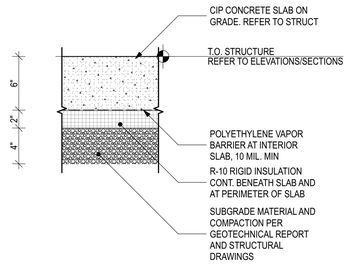
FC01

CONCRETE SLAB ON GRADE
UNINSULATED



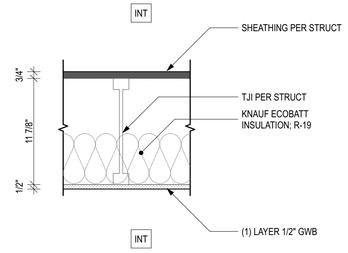
FC02

CONCRETE SLAB ON GRADE
INSULATED



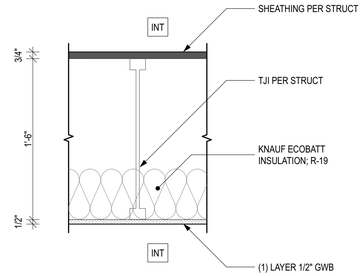
FC11

TJI 11 7/8" INT



FC18

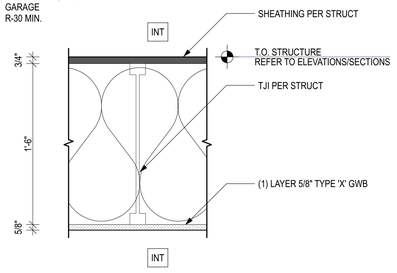
TJI 18" INT



FC TYPES

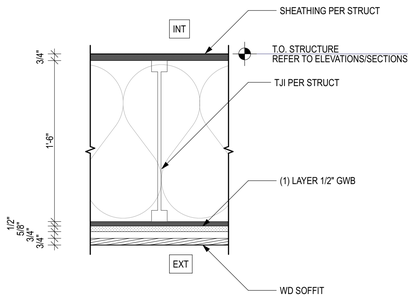
FC28

TJI 18" INT
1 HR RATED
ICC-ESR 1153, ASSEMBLY B
GARAGE
R-30 MIN.



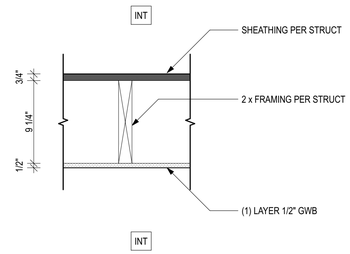
FC48

TJI 18" INT
R-30 MIN.



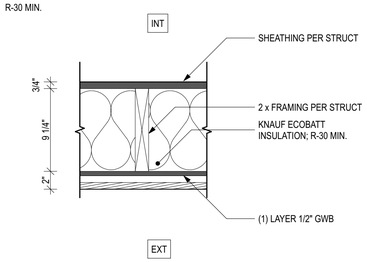
FC05

2 x 10 INT



FC06

2 x 10 INT
R-30 MIN.



FC TYPES

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SDCI Number:

Project No.

8814 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024

City Stamp

Floor Types

A8.01

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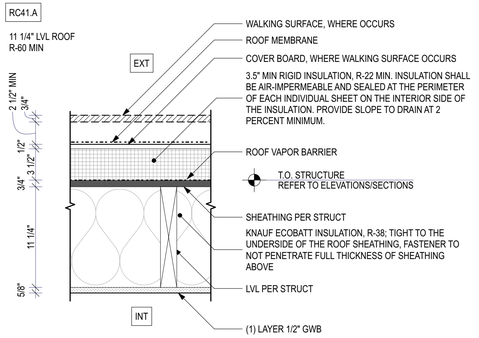
RC TYPES

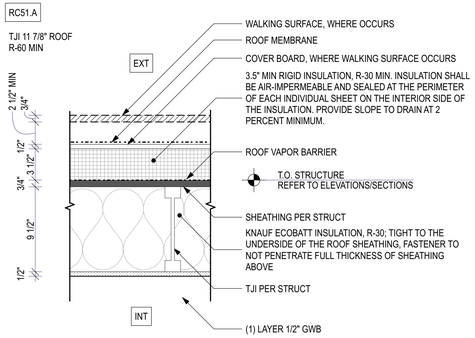
RC41.A

11 1/4" LVL ROOF
R-60 MIN



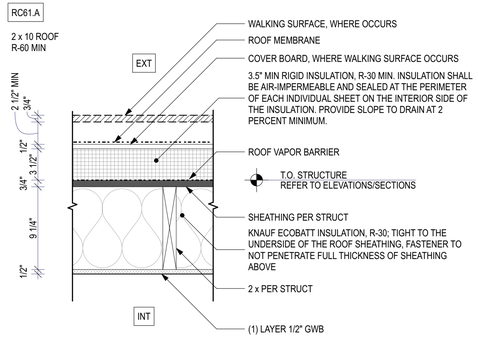
RC51.A

TJI 11 7/8" ROOF
R-60 MIN



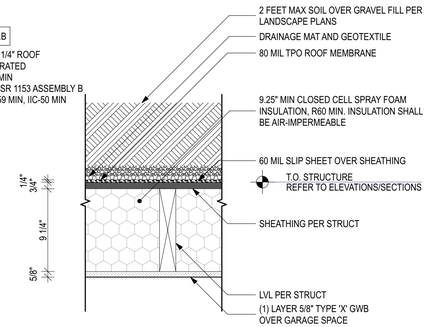
RC61.A

2 x 10 ROOF
R-60 MIN



RC61.B

LVL 9 1/4" ROOF
1-HR RATED
R-60 MIN
ICC-ESR 1153 ASSEMBLY B
STC-59 MIN, IIC-50 MIN

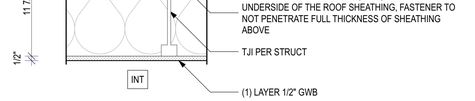


02

RC TYPES

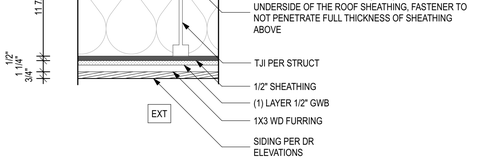
RC71.A

TJI 11 7/8" ROOF
R-60 MIN



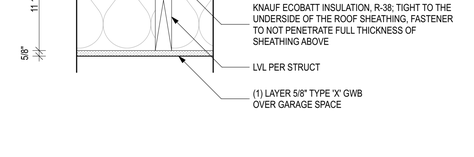
RC71.B

TJI 11 7/8" ROOF
R-60 MIN



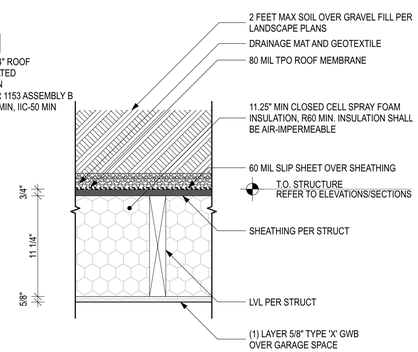
RC81.A

lvl 11 1/4" ROOF
1-HR RATED
R-60 MIN
ICC-ESR 1153 ASSEMBLY B
STC-59 MIN, IIC-50 MIN



RC41.B

LVL 9 1/4" ROOF
1-HR RATED
R-60 MIN
ICC-ESR 1153 ASSEMBLY B
STC-59 MIN, IIC-50 MIN



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Professional Stamp

Issue ID	Issue Name	Printed Issue Date
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

01

Roof Types

A8.02

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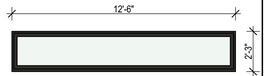
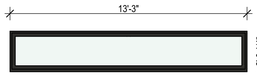
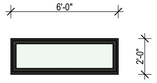
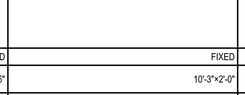
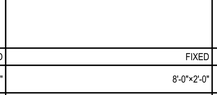
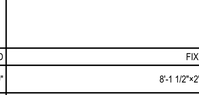
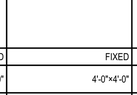
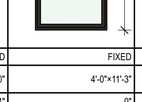
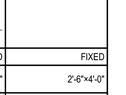
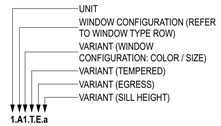
WINDOW TYPES

WINDOW NUMBER	B1	B2	B3	B4	B5	B6
QUANTITY	1	1	1	1	1	1
ELEVATION						
WINDOW TYPE	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED
NOMINAL W x H SIZE	9'-0"×1'-9"	2'-0"×1'-9"	12'-6"×2'-3"	13'-3"×2'-3 1/4"	6'-6"×2'-6"	6'-0"×2'-0"
SILL HEIGHT	8'-0"	8'-0"	9'-1 1/2"	9'-1 1/2"	8'-9"	9'-3"
WINDOW AREA	16.63	4.38	28.13	30.05	16.25	12.00
FRAME MATERIAL	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN
FRAME EXTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
FRAME INTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
U-VALUE	.25	.25	.25	.25	.25	.25
STC RATING	TBD	TBD	TBD	TBD	TBD	TBD
SHGC	TBD	TBD	TBD	TBD	TBD	TBD
FIRE EGRESS	☐	☐	☐	☐	☐	☐
TEMPERED	☒	☒	☒	☒	☒	☒
NOTES						

WINDOW TYPES

WINDOW NUMBER	C1	C3	C3	C3	C.4	S	S.1
QUANTITY	1	1	1	1	2	1	1
ELEVATION							
WINDOW TYPE	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED
NOMINAL W x H SIZE	6'-0"×4'-6"	10'-3"×2'-0"	8'-0"×2'-0"	8'-1 1/2"×2'-0"	4'-0"×4'-0"	4'-0"×11'-3"	2'-6"×4'-0"
SILL HEIGHT	4'-0 7/8"	9'-3"	9'-3 1/4"	9'-3"	4'-0 3/4"	0"	1'-0 7/8"
WINDOW AREA	20.44	20.50	16.00	16.25	16.00	45.00	10.00
FRAME MATERIAL	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN
FRAME EXTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
FRAME INTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
U-VALUE	.25	.25	.25	.25	.25	.25	.25
STC RATING	TBD	TBD	TBD	TBD	TBD	TBD	TBD
SHGC	TBD	TBD	TBD	TBD	TBD	TBD	TBD
FIRE EGRESS	☐	☐	☐	☐	☐	☐	☐
TEMPERED	☒	☒	☒	☒	☒	☒	☒
NOTES							

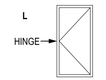
WINDOW TYPES NAMING CONVENTION



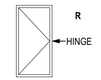
WINDOW NUMBER ID:

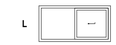
OPERABILITY:

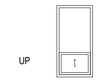
HINGE AT **LEFT** SIDE **EXTERIOR ELEVATION**

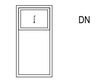


HINGE AT **RIGHT** SIDE **EXTERIOR ELEVATION**









NOTE: ALL INTERIOR WINDOW FRAMES ARE TO BE WHITE VINYL, REFER TO WINDOW SCHEDULE FOR EXTERIOR FRAME COLOR

WINDOW GROUPING DESIGNATIONS

CONFIGURATION:		TYPES:	
VERTICAL WINDOW WITH/WITHOUT OPERABLE PANE	A	FIXED/ PICTURE WINDOW	F
HORIZONTAL WINDOW WITH/WITHOUT OPERABLE PANE	B	SLIDING WINDOW	S
FIXED / PICTURE WINDOW	C	AWNING	A
COMBINATION	D	CASEMENT	C
SPECIALTY WINDOWS	S	SINGLE HUNG	SH
STOREFRONT	ST	DOUBLE HUNG	DH

GENERAL WINDOW NOTES

1. ALL WINDOW SIZES DENOTE **ROUGH OPENING**
2. CONTRACTOR IS RESPONSIBLE FOR ORDERING THE CORRECT WINDOW SIZES, CONTRACTOR SHALL VERIFY ALL ROUGH OPENINGS DURING CONSTRUCTION.
3. **SEE PLANS AND ELEVATIONS FOR HINGE LOCATIONS AND DIRECTIONS.**
4. ALL GLAZING TO BE LOW-E, INSULATED GLAZING, U.O.N.
5. U-FACTORS SHALL BE LABELED AND NFRC CERTIFIED.
6. ALL EMERGENCY ESCAPE AND RESCUE OPENINGS FOR EGRESS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24" AND THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20".
7. HAZARDOUS GLAZING LOCATIONS PER **2018 IBC SECTION 2406.4.**
   1. GLAZING IN DOORS: GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS.
      EXCEPTIONS:
      a. GLAZED OPENINGS OF A SIZE THROUGH WHICH A 3-INCH DIAMETER SPHERE IS UNABLE TO PASS.
      b. DECORATIVE GLAZING.
   2. GLAZING ADJACENT TO DOORS: GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24-INCH ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.
      EXCEPTIONS:
      a. DECORATIVE GLAZING.
      b. WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND GLAZING.
   3. GLAZING ADJACENT TO WINDOWS: GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
      EXCEPTIONS:
      a. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET, AND
      b. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR, AND
      c. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES ABOVE THE FLOOR, AND
      d. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.
   4. GLAZING IN GUARDRAILS AND RAILINGS: ALL GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.
   5. GLAZING AND WET SURFACES: GLAZING IN ENCLOSURES FOR OR WALLS FACING BATHTUBS AND SHOWERS WHERE THE EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.
      EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE FROM THE WATER'S EDGE OF A BATHTUB.
   6. GLAZING ADJACENT TO STAIRWAYS AND RAMPS: GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAT 60 INCHES ABOVE THE PLANE OF THE ADJACENTWALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED TO BE HAZARDOUS LOCATIONS.
      EXCEPTIONS:
      a. THE SIDE OF THE STAIRWAY, LANDING, OR RAMPTHAT HAS GUARD COMPLYING WITH SECTIONS 1015 AND 1607.8, AND THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE RAILING.
      b. GLAZING 36 INCHES OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACES.
   7. GLAZING ADJACENT TO THE BOTTOM STAIRWAY LANDING: GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 60 INCHES ABOVE THE LANDING AND WITHIN A 60-INCH HORIZONTAL ARC THAT IS LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.
      EXCEPTION: GLAZING THAT IS PROTECTED BY A GUARD COMPLYING WITH SECTIONS 1015 AND 1607.8 WHERE THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE GUARD
   8. FIRE DEPARTMENT ACCESS PANELS: FIRE DEPARTMENT GLASS ACCESS PANELS SHALL BE OF TEMPERED GLASS. FOR INSULATING GLASS UNITS, ALL PANES SHALL BE TEMPERED.

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Location:

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SDCI Number:

Project No.

8914 REGISTERED ARCHITECT BRADLEY G. IKHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024

City Stamp

Window Schedule

A8.10

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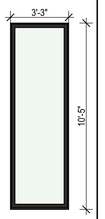
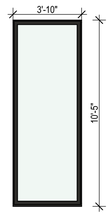
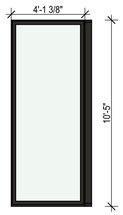
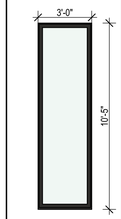
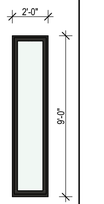
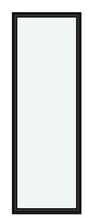
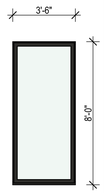
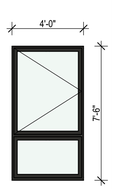
WINDOW TYPES

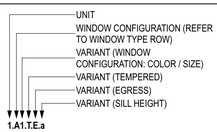
WINDOW NUMBER	S.3	S.4	S.5	S.7	S.8	S.9	S.10	S.11	S.12
QUANTITY	1	1	1	2	2	3	3	4	1
ELEVATION									
WINDOW TYPE	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED	OUTSING
NOMINAL W x H SIZE	3'-3"×10'-5"	3'-10"×10'-5"	4'-1 3/8"×10'-5"	3'-0"×10'-5"	2'-0"×9'-0"	3'-10"×11'-3"	3'-6"×7'-6"	3'-6"×8'-0"	4'-0"×7'-6"
SILL HEIGHT	0"	0"	0"	0"	0"	0"	1'-0 7/8"	1'-0"	1'-0 7/8"
WINDOW AREA	33.85	39.93	49.10	31.25	18.00	43.13	26.25	28.00	30.00
FRAME MATERIAL	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN
FRAME EXTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
FRAME INTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
U-VALUE	.25	.25	.25	.25	.25	.25	.25	.25	.25
STC RATING	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
SHGC	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
FIRE EGRESS	☐	☐	☐	☐	☐	☐	☐	☐	☒
TEMPERED	☒	☒	☒	☒	☒	☒	☒	☒	☒
NOTES									

WINDOW TYPES

WINDOW NUMBER	S.12	S.13	S.14	S.15	S.16	S.17
QUANTITY	8	2	8	1	1	13
ELEVATION						
WINDOW TYPE	FIXED	CASEMENT	FIXED	FIXED	OUTSING	FIXED
NOMINAL W x H SIZE	4'-0"×7'-6"	4'-0"×6'-6"	4'-0"×10'-5"	3'-0"×11'-3"	4'-0"×11'-3"	4'-0"×11'-3"
SILL HEIGHT	1'-0 7/8"	3'-3"	0"	0"	0"	0"
WINDOW AREA	30.00	26.00	41.67	33.75	50.68	45.00
FRAME MATERIAL	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN
FRAME EXTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
FRAME INTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
U-VALUE	.25	.25	.25	.25	.25	.25
STC RATING	TBD	TBD	TBD	TBD	TBD	TBD
SHGC	TBD	TBD	TBD	TBD	TBD	TBD
FIRE EGRESS	☐	☒	☐	☐	☒	☐
TEMPERED	☒	☒	☒	☒	☒	☒
NOTES						

01

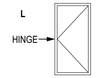
WINDOW TYPES NAMING CONVENTION



WINDOW NUMBER ID:

OPERABILITY:

HINGE AT **LEFT** SIDE **EXTERIOR ELEVATION**



HINGE AT **RIGHT** SIDE **EXTERIOR ELEVATION**

01

NOTE: ALL INTERIOR WINDOW FRAMES ARE TO BE WHITE VINYL, REFER TO WINDOW SCHEDULE FOR EXTERIOR FRAME COLOR

WINDOW GROUPING DESIGNATIONS

CONFIGURATION:		TYPES:	
VERTICAL WINDOW WITH/WITHOUT OPERABLE PANE	**A**	FIXED/ PICTURE WINDOW	**F**
HORIZONTAL WINDOW WITH/WITHOUT OPERABLE PANE	**B**	SLIDING WINDOW	**S**
FIXED / PICTURE WINDOW	**C**	AWNING	**A**
COMBINATION	**D**	CASEMENT	**C**
SPECIALTY WINDOWS	**S**	SINGLE HUNG	**SH**
STOREFRONT	**ST**	DOUBLE HUNG	**DH**

GENERAL WINDOW NOTES

1. ALL WINDOW SIZES DENOTE **ROUGH OPENING**
2. CONTRACTOR IS RESPONSIBLE FOR ORDERING THE CORRECT WINDOW SIZES, CONTRACTOR SHALL VERIFY ALL ROUGH OPENINGS DURING CONSTRUCTION.
3. **SEE PLANS AND ELEVATIONS FOR HINGE LOCATIONS AND DIRECTIONS.**
4. ALL GLAZING TO BE LOW-E, INSULATED GLAZING, U.O.N.
5. U-FACTORS SHALL BE LABELED AND NFRC CERTIFIED.
6. ALL EMERGENCY ESCAPE AND RESCUE OPENINGS FOR EGRESS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24" AND THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20".
7. HAZARDOUS GLAZING LOCATIONS PER **2018 IBC SECTION 2406.4.**
   1. GLAZING IN DOORS: GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS.
      EXCEPTIONS:
      a. GLAZED OPENINGS OF A SIZE THROUGH WHICH A 3-INCH DIAMETER SPHERE IS UNABLE TO PASS.
      b. DECORATIVE GLAZING
   2. GLAZING ADJACENT TO DOORS: GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24-INCH ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.
      EXCEPTIONS:
      a. DECORATIVE GLAZING.
      b. WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND GLAZING.
   3. GLAZING ADJACENT TO WINDOWS: GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
      EXCEPTIONS:
      a. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET, AND
      b. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR, AND
      c. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES ABOVE THE FLOOR, AND
      d. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.
   4. GLAZING IN GUARDRAILS AND RAILINGS: ALL GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.
   5. GLAZING AND WET SURFACES: GLAZING IN ENCLOSURES FOR OR WALLS FACING BATHTUBS AND SHOWERS WHERE THE EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.
      EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE FROM THE WATER'S EDGE OF A BATHTUB.
   6. GLAZING ADJACENT TO STAIRWAYS AND RAMPS: GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAT 60 INCHES ABOVE THE PLANE OF THE ADJACENTWALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED TO BE HAZARDOUS LOCATIONS.
      EXCEPTIONS:
      a. THE SIDE OF THE STAIRWAY, LANDING, OR RAMPTHAT HAS GUARD COMPLYING WITH SECTIONS 1015 AND 1607.8, AND THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE RAILING.
      b. GLAZING 36 INCHES OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACES.
   7. GLAZING ADJACENT TO THE BOTTOM STAIRWAY LANDING: GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 60 INCHES ABOVE THE LANDING AND WITHIN A 60-INCH HORIZONTAL ARC THAT IS LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.
      EXCEPTION: GLAZING THAT IS PROTECTED BY A GUARD COMPLYING WITH SECTIONS 1015 AND 1607.8 WHERE THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE GUARD
   8. FIRE DEPARTMENT ACCESS PANELS: FIRE DEPARTMENT GLASS ACCESS PANELS SHALL BE OF TEMPERED GLASS. FOR INSULATING GLASS UNITS, ALL PANES SHALL BE TEMPERED.
9. **REFER TO FLOOR PLAN FOR ALL EGRESS WINDOWS.**

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Location:

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SDCI Number:

Project No.

8814 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024

City Stamp

Window Schedule

A8.11

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DOOR TYPES

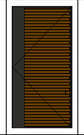
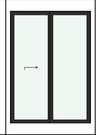
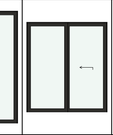
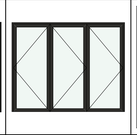
B	BARN DOOR
D	SINGLE SWING DOOR
D.G	SINGLE INT SWING DOOR WITH GLAZING
DD	DOUBLE SWING DOOR
F	BI-FOLD DOORS - (1 PAIR) LEAF
FF	BI-FOLD DOORS - (2 PAIRS) LEAVES
O	OVERHEAD/GARAGE DOOR
P	POCKET DOOR
T	UNIT SLIDING DOORS
S	EXTERIOR ENTRY DOOR

GENERAL DOOR NOTES

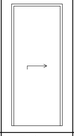
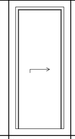
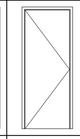
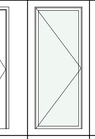
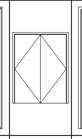
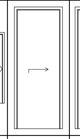
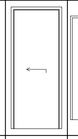
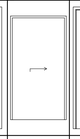
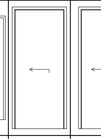
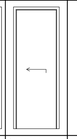
02

1. SEE ARCHITECTURAL PLANS AND ELEVATIONS FOR HINGE DIRECTIONS
2. SWING ESTABLISHED FACING HINGE SIDE OF DOOR (CONTRACTOR TO VERIFY SWING DIRECTION)
3. ALL WIDTHS AND HEIGHTS DENOTE DOOR LEAF SIZES, EXCEPT DOUBLE DOOR UNITS WHICH ARE NOTED AS DOUBLE LEAF SIZE. U.N.O. IN KEY NOTES
4. ALL DOORS WITH GLAZING TO HAVE LOW-E, INSULATED TEMPERED SAFETY GLASS
5. EGRESS DOORS NOTED IN KEY NOTES
6. U-FACTORS SHALL BE LABELED AND NFRC CERTIFIED
7. SC DENOTES SOLID CORE

EXTERIOR DOOR TYPES

DOOR TYPE	D-01	D-02	D-03	D-04	D-09	D-09
QUANTITY	1	1	1	4	1	1
ELEVATION						
LEAF DIMENSIONS	5'-0"×10'-3 3/4"	13'-0"×10'-0"	8'-0"×11'-3"	8'-0"×9'-0"	12'-0"×9'-7"	3'-0"×8'-0"
LEAF THICKNESS	1 3/4"	1 3/4"	1 3/4"	7"	1 3/4"	1 3/4"
DOOR LEAF MATERIAL	SC WOOD	TBD	ALUM / GLASS	ALUM / GLASS	ALUM / GLASS	HOLLOW METAL
DOOR FRAME MATERIAL	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	ALUMINUM THERMALLY BROKEN	HOLLOW METAL
FRAME EXTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
FRAME INTERIOR FINISH	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM	DARK BRONZE ANODIZED ALUMINUM
U-VALUE	.25	.25	.25	.25	.25	.25
SHGC	TBD	TBD	TBD	TBD	TBD	TBD
HARDWARE SET	TBD	TBD	TBD	TBD	TBD	TBD
TEMPERED	☐	☐	☒	☒	☒	☐
NOTES		GARAGE DOOR; AUTOMATIC GARAGE DOOR OPENER TO CONFORM WITH R309.4: SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 325	01			

SF INTERIOR DOOR TYPES

DOOR TYPE	B.1	D-01	D.1.L	D.1.R	D.2.R	D.G.L	D.G.R	DD.1	P.1	P.2	P.3	P.4	P.5	
QUANTITY	3	1	7	7	1	1	1	1	4	3	2	1	1	33
ELEVATION														
LEAF DIMENSIONS	3'-0"×8'-0"	2'-10"×8'-0"	3'-0"×8'-0"	3'-0"×8'-0"	2'-6"×8'-0"	3'-0"×8'-0"	3'-0"×8'-0"	5'-0"×6'-8"	2'-10"×8'-0"	3'-0"×8'-0"	4'-0"×8'-0"	3'-3"×8'-0"	2'-8"×8'-0"	
LEAF THICKNESS	1 3/4"		1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	
DOOR LEAF MATERIAL	SC WOOD	SC WOOD	SC WOOD	SC WOOD	SC WOOD	WOOD / GLASS	WOOD / GLASS	SC WOOD	SC WOOD	SC WOOD	SC WOOD	SC WOOD	SC WOOD	
DOOR FRAME MATERIAL	WOOD	TBD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	
DOOR LEAF FINISH	TBD		TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
TEMPERED	☐	☒	☐	☐	☐	☒	☒	☐	☐	☐	☐	☐	☐	
HARDWARE SET	BARN DOOR; PER GC	TBD	SWING/HINGE; PASSAGE LEVER; LOCKSET PER GC	SWING/HINGE; PASSAGE LEVER; LOCKSET PER GC	SWING/HINGE; PASSAGE LEVER; LOCKSET PER GC	TBD; PER GC	TBD; PER GC	SWING/ HINGE; PASSAGE LEVER	POCKET; PER GC	POCKET; PER GC	POCKET; PER GC	POCKET; PER GC	POCKET; PER GC	
NOTES														

Architect of Record

b9 architects

400 E Pine Street, Suite 215
Seattle, WA 98104
206.297.1284
www.b9architects.com

Project:

LANZ RESIDENCE

Location:

8020 SE 57TH STREET
MERCER ISLAND, WA 98040

SDCI Number:

Project No.

8814 REGISTERED ARCHITECT BRADLEY G. KHOURI STATE OF WASHINGTON

Professional Stamp

Issue ID	Issue Name	Printed Issue Date
00	Building Permit	03/14/2024
01	Building Permit Corrections Cycle 1	09/20/2024
02	Building Permit Corrections Cycle 2	01.17.2025

City Stamp

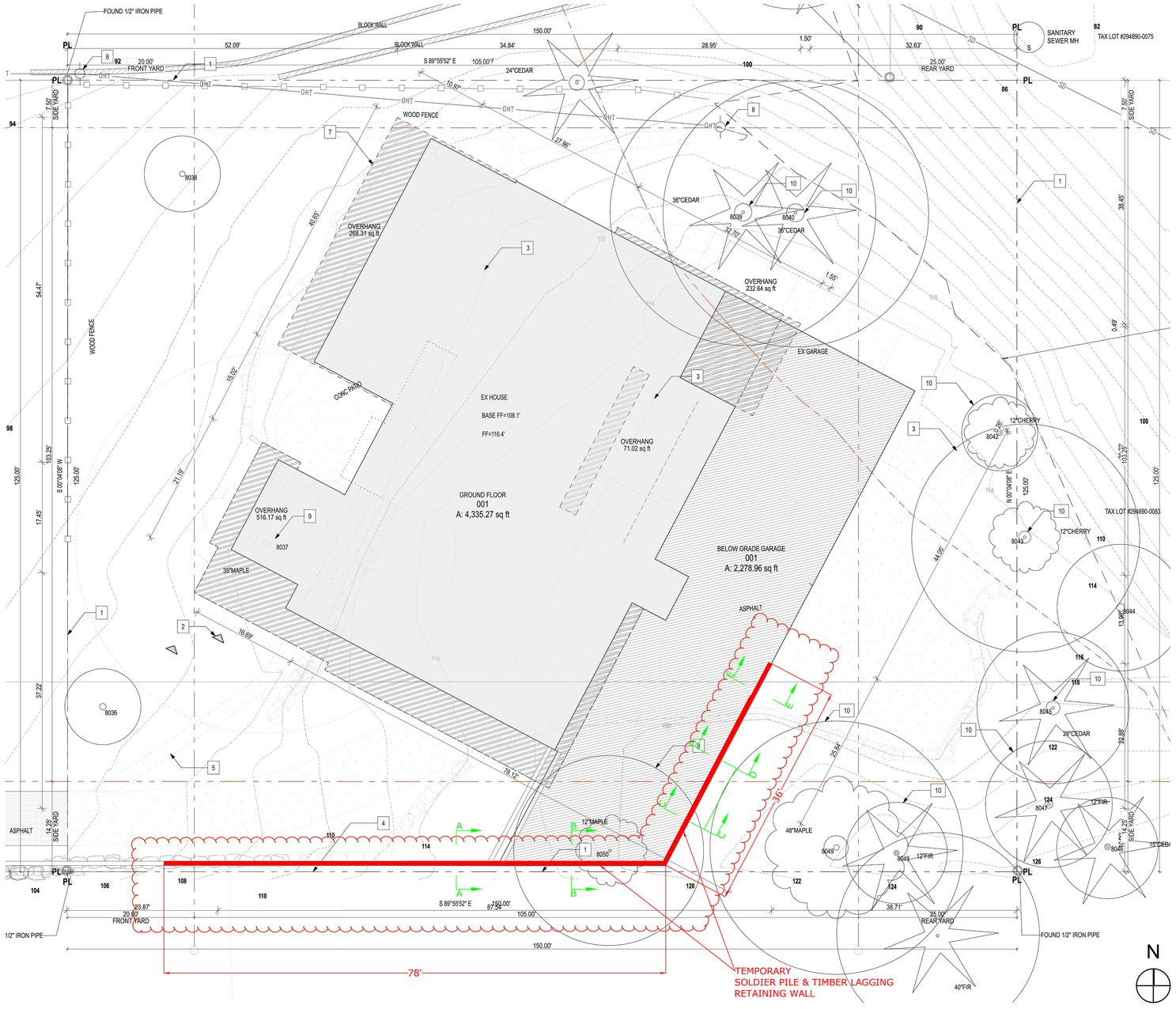
Door Schedule

A8.20

© 2025 b9 architects

LANZ RESIDENCE - SOLDER PILE RETAINING WALL

PERMANENT SOLDIER PILE & TIMBER LAGGING SHORING WALL



1 PLOT PLAN

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

0 4' 8' 16'

OWNER:
Vann Lanz
8020 SE 57th Street
Mercer Island, WA 98040
(206)499-1277

SHORING DESIGNER:
Lucia Engineering, Inc.
Joseph M Lucia
12527 Huckleberry Lane
Arlington, WA 98223
(206)790-8039

GEOTECHNICAL ENGINEER:
Earth Solutions NW, LLC
15365 N.E. 90th Street, Suite 100
Redmond,WA 98052
(425)449-4704

ARCHITECT:
Bradley Khouri
610 2nd Avenue
Seattle, WA 98104
(206)297-1284

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Permanent Soldier Pile
& Timber Lagging
Retaining Wall

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER

01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-1.0

SOLDIER PILE - NOTES:

REFERENCE STANDARDS:

ACI 301-10 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
2021 INTERNATIONAL BUILDING CODE
2018 NATIONAL DESIGN SPECIFICATIONS for WOOD CONSTRUCTION

DESIGN LOADING:
REF. SOIL REPORT
EARTH SOLUTIONS NW, LLC
Dated: October 4, 2023
Pa = 42 PCF
Pp = 200 PCF
Seismic loading = 8H

SEISMIC LOADING:
EQUIVALENT LATERAL FORCE PROCEDURE (ASCE 7-16, SECTION 12.8)
SITE CLASS: D
S_S: 1.462
S_1: 0.507
RISK CATEGORY: II
IMPORTANCE FACTOR: (I_E) 1.0
SEISMIC DESIGN CATEGORY: D

CONCRETE:

CONCRETE MIXTURES: CONFORM TO:
(1) ACI 301 SECTION 4 "CONCRETE MIXTURES"

MATERIALS: CONFORM TO:
(1) ACI 301 SECTION 4.2.1 "MATERIALS" FOR REQUIREMENTS FOR CEMENTITIOUS MATERIALS, AGGREGATES, MIXING WATER AND ADMIXTURES.

MIX DESIGN REQUIREMENTS:

PILE CONCRETE:
ABOVE EXCAVATION LINE (DREDGE LINE): LEAN MIX
BELOW EXCAVATION LINE (DREDGE LINE): LENA MIX

MIX DESIGN NOTES:
LEAN MIX SHALL HAVE A MINIMUM OF 1-1/2 SACKS (141 POUNDS) OF CEMENT AND 200 POUNDS OF FLY ASH PER CUBIC YARD OF CONCRETE.

PORTLAND CEMENT SHALL BE TYPE I, II, OR III CONFORMING TO ASTM C150 / AASHTO M85
FLY ASH SHALL BE TYPE F CONFORMING TO ASTM C618

FINE AGGREGATES SHALL CONFORM TO ASTM C88 / AASHTO M6
COARSE AGGREGATES SHALL CONFORM TO AASHTO M80. CLASS B

SLUMP FOR LEAN -MIX CONCRETE SHALL NOT BE LESS THAN 5 INCHES AND NOT MORE THAN 9 INCHES.

ADMIXTURES SHALL CONFORM TO ASTM C494 / AASHTO M194

MIX DESIGNS ARE TO BE SUBMITTED TO THE SHORING DESIGN ENGINEER FOR APPROVAL PRIOR TO USE

STRUCTURAL STEEL:

REFERENCED STANDARDS:
(1) AISC "MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN"
(2) AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS & BRIDGES"
(3) AWS D1.1 "STRUCTURAL WELDING CODE - STEEL"

MATERIALS: CONFORM TO:
STRUCTURAL WF SHAPES - ASTM A992-GR50
HEADED STUDS SHALL CONFORM TO ASTM A108

PAINT:

CORROSION PROTECTION IS NOT REQUIRED

WELDING:

WELDING AND REPAIR WELDING FOR ALL STEEL FABRICATION SHALL COMPLY WITH THE AWS D1.1/D1.1M, LATEST EDITION, STRUCTURAL WELDING CODE. THE REQUIREMENTS DESCRIBED IN THE REMAINDER OF THIS SECTION SHALL PREVAIL WHENEVER THEY DIFFER FROM EITHER OF THE ABOVE WELDING CODES.

THE CONTRACTOR SHALL WELD STRUCTURAL STEEL ONLY TO THE EXTENT SHOWN IN THE PLANS.
NO WELDING, INCLUDING TACK AND TEMPORARY WELDS SHALL BE DONE IN THE SHOP OR FIELD UNLESS THE LOCATION OF THE WELDS IS SHOWN ON THE APPROVED SHOP DRAWINGS OR APPROVED BY THE ENGINEER IN WRITING.
WELDING PROCEDURES SHALL BE SUBMITTED FOR APPROVAL WITH SHOP DRAWINGS . THE PROCEDURES SHALL SPECIFY THE TYPE OF EQUIPMENT TO BE USED, ELECTRODE SELECTION, PREHEAT REQUIREMENTS, BASE MATERIALS, AND JOINT DETAILS. WHEN THE PROCEDURES ARE NOT PREQUALIFIED BY AWS OR AASHTO, EVIDENCE OF QUALIFICATION TESTS SHALL BE SUBMITTED.

WELDING SHALL NOT BEGIN UNTIL AFTER THE CONTRACTOR HAS RECEIVED THE ENGINEER'S APPROVAL OF SHOP PLANS.
THESE PLANS SHALL INCLUDE PROCEDURES FOR WELDING, ASSEMBLY, AND ANY HEAT-STRAIGHTENING OR HEAT-CURVING.

IN SHIELDED METAL-ARC WELDING, THE CONTRACTOR SHALL USE LOW-HYDROGEN ELECTRODES.
IN SUBMERGED-ARC WELDING, FLUX SHALL BE OVEN-DRIED AT 550°F FOR AT LEAST 2-HOURS, THEN STORED IN OVENS HELD AT 250°F OR MORE. IF NOT USED WITHIN 4-HOURS AFTER REMOVAL FROM A DRYING OR STORAGE OVEN, FLUX SHALL BE REDRIED BEFORE USE.
PREHEAT AND INTERPASS TEMPERATURES SHALL CONFORM TO THE APPLICABLE WELDING CODE AS SPECIFIED IN THIS SECTION. REFER TO APPROVED WELDING PROCEDURES WHEN WELDING MAIN TO STEEL MEMBERS. IF GROOVE WELDS (WEB-TO-WEB OR FLANGE-TO-FLANGE) HAVE BEEN REJECTED, THEY MAY BE REPAIRED NO MORE THAN TWICE. IF A THIRD FAILURE OCCURS, THE CONTRACTOR SHALL:

1. TRIM THE MEMBERS, IF THE ENGINEER APPROVES, AT LEAST ½-INCH ON EACH SIDE OF THE WELD;
2. REPLACE THE MEMBERS AT NO EXPENSE TO THE CONTRACTING AGENCY.

BY USING EXTENSION BARS AND RUNOFF PLATES, THE CONTRACTOR SHALL TERMINATE GROOVE WELDS IN A WAY THAT ENSURES THE SOUNDNESS OF EACH WELD TO ITS ENDS. THE BARS AND PLATES SHALL BE REMOVED AFTER THE WELD IS FINISHED AND COOLED. THE WELD ENDS SHALL THEN BE GROUND SMOOTH AND FLUSH WITH THE EDGES OF ABUTTING PARTS.

THE CONTRACTOR SHALL NOT:

1. WELD WITH ELECTROGAS OR ELECTROSLAG METHODS,
2. WELD NOR FLAME CUT WHEN THE AMBIENT TEMPERATURE IS BELOW 20°F,
3. USE COPED HOLES IN THE WEB FOR WELDING BUTT SPLICES IN THE FLANGES UNLESS THE PLANS SHOW THEM.

TIMBER:

MATERIALS:
TIMBER LAGGING SHALL BE:
HEM FIR No. 1 OR BETTER
DESIGN PROPERTIES:
E = 1,500,000 PSI (NDS Table 4A)
$F_{v\ allowable}$ = 150 PSI (NDS Table 4A)
$F_{p\ allowable}$ = 405 PSI (NDS Table 4A)
$F_{b\ allowable}$ = 975 PSI (NDS Table 4A)
OR
DOUGLAS FIR - LARCH No. 2 OR BETTER
DESIGN PROPERTIES:
E = 1,600,000 PSI (NDS Table 4A)
$F_{v\ allowable}$ = 180 PSI (NDS Table 4A)
$F_{p\ allowable}$ = 625 PSI (NDS Table 4A)
$F_{b\ allowable}$ = 900 PSI (NDS Table 4A)
4x12 LAGGING (TYPICAL) (11.25" x 3.5")
A = 39.38 IN^2 (11.24" x 3.5")
S = 22.96 IN^3 ($11.25 \times 3.5^2 / 6$)
I = 160.78 IN^4 ($11.25 \times 3.5^3 / 3$)

PRESERVATIVE TREATMENT:
NONE REQUIRED

UTILITIES & INTERFERENCES:

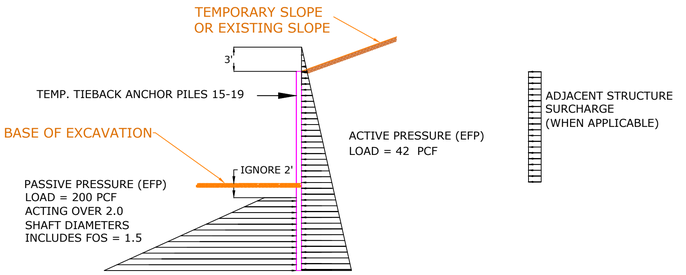
ALL EXISTING UTILITIES AND OTHER OBJECTS WHICH MAY INTERFERE WITH THE INSTALLATION OF THE SHORING SYSTEM ARE TO BE LOCATED PRIOR TO BEGINNING CONSTRUCTION.

POSSIBLE INTERFERENCES BETWEEN THE SHORING AND ANY UTILITY OR OTHER OBJECT(S) IS TO BE PROVIDED TO THE SHORING DESIGNER PRIOR TO THE START OF WORK.

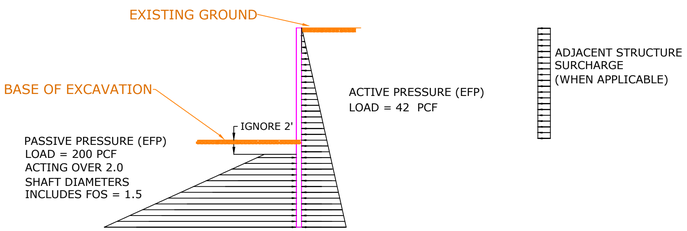
SHORING INSTALLATION REVIEW:

SEE THE GEOTECHNICAL REPORT FOR REQUIRED GEOTECHNICAL INSPECTIONS & REVIEW
THE CITY REQUIRES CONTINUOUS MONITORING OF ALL SHORING INSTALLATION ACTIVITY BY THE GEOTECHNICAL ENGINEER.

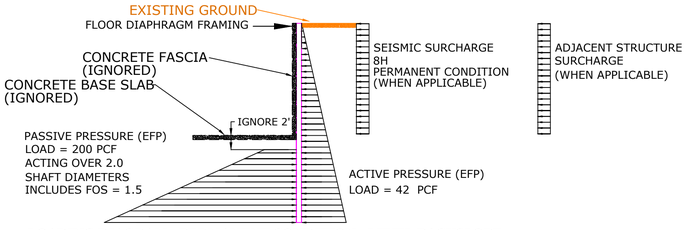
SOLDIER PILE INSTALLATION - REQUIRES CONTINUOUS INSPECTION



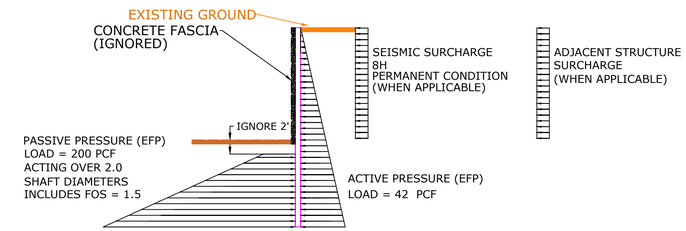
LOADING DIAGRAM - TEMPORARY CONDITION - SLOPED BACKSLOPE



LOADING DIAGRAM - TEMPORARY CONDITION - LEVEL BACKSLOPE



LOADING DIAGRAM - PERMANENT CONDITION - LEVEL BACKSLOPE



LOADING DIAGRAM - TEMPORARY & PERMANENT CONDITION - LEVEL BACKSLOPE

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Permanent Soldier Pile & Timber Lagging Retaining Wall

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-2.0

MANUFACTURE OF STEEL PILES

STEEL PILES SHALL BE MADE OF ROLLED STEEL H OR W-PILE SECTIONS, STEEL PIPE PILES, OR OF OTHER STRUCTURAL STEEL SECTIONS DESCRIBED IN THE CONTRACT. A FULL PENETRATION GROOVE WELD WITH A AXIMUM 1⁄16-INCH OFFSET BETWEEN WELDED EDGES IS REQUIRED FOR SPLICED PILE.

SPLICING STEEL CASINGS AND STEEL PILES

THE ENGINEER WILL NORMALLY PERMIT STEEL PILES TO BE SPLICED. BUT IN EACH CASE, THE CONTRACTOR MUST OBTAIN APPROVAL ON THE NEED AND THE METHOD FOR SPLICING. WELDED SPLICES SHALL BE SPACED AT A MINIMUM DISTANCE OF 10-FEET. ONLY FULL PENETRATION WELDED SPLICES WILL BE PERMITTED. SPLICE WELDS SHALL COMPLY WITH SECTION 6-03.3(25) AND AWS D1.1 STRUCTURAL WELDING CODE. SPLICING OF STEEL PILES SHALL BE PERFORMED IN ACCORDANCE WITH AN APPROVED WELD PROCEDURE. THE CONTRACTOR SHALL SUBMIT A WELD PROCEDURE TO THE ENGINEER FOR APPROVAL PRIOR TO WELDING. ALL JOINTS SHALL BE WELDED BY A WASHINGTON STATE CERTIFIED WELDER.

GEOTECHNICAL REFERENCE:

EARTHWORKS ENGINEERING CONSULTANTS
REPORT DATED: MAY 18, 2021, REVISIONS JULY 6 & 7 2021 AND REPLY TO CITY REVIEW DATED MAY 30, 2023
ACTIVE SOIL PRESSURE:
LEVEL BACK SLOPE: 45 PCF (EQUIVALENT FLUID PRESSURE) TEMPORARY CONDITION
45 PCF PERMANENT CONDITION
SLOPED BACK SLOPE: 65 PCF (EQUIVALENT FLUID PRESSURE) TEMPORARY CONDITION
65 PCF PERMANENT CONDITION
PASSIVE SOIL RESISTANCE: 150 PCF (EQUIVALENT FLUID PRESSURE) FOR FILL SOILS
400 PCF FOR MEDIUM DENSE TO DENSE SOILS
(ACTING OVER 2 SHAFT/PILE DIAMETERS)
REQUIRED MINIMUM PILE EXTENT INTO DENSE , NATIVE STRATA = 5 FEET
SEISMIC LOADING: 8H
TIEBACK ANCHORS:
ALLOWABLE SOIL FRICTION: 3,000 PLF
DECLINATION ANGLE: 15 DEGREES (FROM HORIZONTAL)(+/- 5 DEGREES)
PILE VERTICAL CAPACITY:
SOLDIER PILE ALLOWABLE ADHESION = 1 KIP/SF
SOLDIER PILE END BEARING: 5,000 PSF

TIEBACK ANCHOR TESTING:
PERFORMANCE TEST:

A. TEST EACH ANCHOR. THE MAXIMUM LOAD TEST SHALL NOT EXCEED 80% OF THE GUARANTEED ULTIMATE TENSILE STRENGTH OF THE TENDON. STRESSING SHALL NOT START BEFORE THE GROUT HAS REACHED A COMPRESSIVE STRENGTH OF 3500 PSI. THE FIRST THREE PRODUCTION ANCHORS SHALL BE PERFORMANCE TESTED. OTHER ANCHORS SHALL BE PROOF TESTED. LIFT-OFF TEST SHALL BE PERFORMED ON THE ANCHORS FOR WHICH PERFORMANCE TEST WAS CARRIED OUT.

B. PERFORMANCE TEST SHALL BE MADE BY INCREMENTALLY LOADING AND UNLOADING THE ANCHOR IN ACCORDANCE WITH THE LOAD SCHEDULE. AT EACH INCREMENT THE MOVEMENT OF THE TENDON SHALL BE RECORDED TO THE NEAREST 0.001 INCHES (0.25 MM) WITH RESPECT TO AN INDEPENDENT FIXED REFERENCE POINT. THE JACK LOAD SHALL BE MONITORED WITH A PRESSURE GAUGE CALIBRATED WITH THE JACK AND ACCURATE ENOUGH TO READ 100 PSI (0.069 MPA) CHANGES IN PRESSURE. THE PUMP SHALL BE CAPABLE OF APPLYING EACH LOAD INCREMENT IN LESS THAN 60 SECONDS. A CALIBRATED MASTER GAUGE SHALL BE KEPT ON THE SITE TO PERIODICALLY CHECK THE TEST GAUGE. THE INCREMENT OF LOAD SHALL BE AS FOLLOWS:

AL 0.25P
AL 0.25 P 0.50P
AL 0.25P 0.50P 0.75P
AL 0.25P 0.50P 0.75P 1.00P
AL 0.25P 0.50P 0.75P 1.00P 1.20P
AL 0.25P 0.50P 0.75P 1.00P 1.20P 1.33P TEST LOAD (10 MINUTES)
AL
ADJUST TO LOCK-OFF LOAD WHERE: P = DESIGN LOAD (DESIGN LOADING = 46.5 KIPS)
AL = ALIGNMENT LOAD

C. THE LOAD SHALL BE HELD AT EACH INCREMENT JUST LONG ENOUGH TO OBTAIN MOVEMENT READING. EXCEPT FOR THE READING OF THE RESIDUAL MOVEMENT AT AL, NO MOVEMENT READING NEEDS TO BE TAKEN DURING UNLOADING OF THE ANCHOR. THE TEST LOAD SHALL BE HELD FOR 10 MINUTES. TOTAL MOVEMENTS WITH RESPECT TO A FIXED REFERENCE POINT SHALL BE RECORDED AT 1 MINUTE, 2, 3, 4, 5, 6, AND 10 MINUTES. IF THE TOTAL MOVEMENT BETWEEN 1 MINUTE AND 10 MINUTE EXCEEDS 0.04 INCHES THE TEST LOAD SHALL BE HELD FOR ADDITIONAL 50 MINUTES. TOTAL MOVEMENTS SHALL BE RECORDED AT 15 MINUTES, 20, 25, 30, 45, AND 60 MINUTES. THE TEST LOAD TIME SHALL START WHEN THE TEST LOAD IS REACHED.

PROOF TEST:

A. PROOF TEST SHALL BE PERFORMED BY INCREMENTALLY LOADING THE ANCHORS IN ACCORDANCE WITH THE LOAD SCHEDULE. AT EACH INCREMENT THE MOVEMENT OF THE TENDON SHALL BE RECORDED TO THE NEAREST 0.001 INCHES (0.25 MM) WITH RESPECT TO AN INDEPENDENT FIXED REFERENCE POINT. THE JACK LOAD SHALL BE MONITORED WITH A PRESSURE GAUGE OR LOAD CELL. THE INCREMENTS OF LOAD SHALL BE AS FOLLOWS:

AL
0.25P
0.50P
0.75P
1.00P
1.20P
1.33P TEST LOAD (10 MINUTES)
ADJUST TO LOCK-OFF LOAD

B. THE LOAD SHALL BE HELD AT EACH INCREMENT JUST LONG ENOUGH TO OBTAIN MOVEMENT READING BUT NOT MORE THAN FOR 1 MINUTE. THE TEST LOAD SHALL BE HELD FOR 10 MINUTES. TOTAL MOVEMENTS WITH RESPECT TO A FIXED REFERENCE POINT SHALL BE RECORDED AT 1 MINUTE, 2, 3, 4, 5, 6, AND 10 MINUTES. IF THE TOTAL MOVEMENT BETWEEN 1 MINUTE AND 10 MINUTE EXCEEDS 0.04 INCHES THE TEST LOAD SHALL BE HELD FOR ADDITIONAL 50 MINUTES. TOTAL MOVEMENTS SHALL BE RECORDED AT 15 MINUTES, 20, 25, 30, 45, AND 60 MINUTES. THE TEST LOAD TIME SHALL START WHEN THE PUMP BEGINS TO LOAD THE ANCHOR FROM THE 1.20P LOAD TO THE TEST LOAD. THE PROOF TEST RESULTS SHALL BE COMPARED TO THE PERFORMANCE TEST RESULTS. THE UNIVERSITY'S GEOTECHNICAL ENGINEER WILL DETERMINE WHETHER THERE IS SIGNIFICANT VARIATION FROM THE PERFORMANCE TEST RESULTS. SIGNIFICANT VARIATIONS FROM THE PERFORMANCE TEST RESULTS WILL REQUIRE PERFORMANCE TEST ON THE ANCHOR.

C. LIFT-OFF TEST SHALL BE PERFORMED ON THE SAME ANCHORS FOR WHICH PERFORMANCE TEST WAS CARRIED OUT.

1. AFTER TRANSFERRING THE LOAD TO THE STRESSING ANCHORAGE AND PRIOR TO REMOVING THE JACK, A LIFT-OFF READING SHALL BE MADE. THE LOAD DETERMINED FROM THE LIFT-OFF READING SHALL BE WITHIN 5% OF THE SPECIFIED LOCK-OFF LOAD. IF THE LOAD IS NOT WITHIN 5% OF THE LOCK-OFF LOAD, THE END ANCHORAGE SHALL BE RESET AND ANOTHER LIFT-OFF READING SHALL BE MADE. AN ADDITIONAL LIFT-OFF TEST SHALL BE PERFORMED ON INITIAL PERFORMANCE TEST ANCHORS 7 DAYS AFTER THE LOAD WAS LOCKED-OFF IN THE ANCHOR. ADDITIONAL LIFT-OFF TEST SHALL BE PERFORMED AS REQUIRED TO VERIFY PRODUCTION LOCK-OFF LOAD AND WHEN REQUESTED BY THE ENGINEER.

WELDING:

WELDING AND REPAIR WELDING FOR ALL STEEL FABRICATION SHALL COMPLY WITH THE AWS D1.1/D1.1M, LATEST EDITION, STRUCTURAL WELDING CODE. THE REQUIREMENTS DESCRIBED IN THE REMAINDER OF THIS SECTION SHALL PREVAIL WHENEVER THEY DIFFER FROM EITHER OF THE ABOVE WELDING CODES.

THE CONTRACTOR SHALL WELD STRUCTURAL STEEL ONLY TO THE EXTENT SHOWN IN THE PLANS.
NO WELDING, INCLUDING TACK AND TEMPORARY WELDS SHALL BE DONE IN THE SHOP OR FIELD UNLESS THE LOCATION OF THE WELDS IS SHOWN ON THE APPROVED SHOP DRAWINGS OR APPROVED BY THE ENGINEER IN WRITING. WELDING PROCEDURES SHALL BE SUBMITTED FOR APPROVAL WITH SHOP DRAWINGS . THE PROCEDURES SHALL SPECIFY THE TYPE OF EQUIPMENT TO BE USED, ELECTRODE SELECTION, PREHEAT REQUIREMENTS, BASE MATERIALS, AND JOINT DETAILS. WHEN THE PROCEDURES ARE NOT PREQUALIFIED BY AWS OR AASHTO, EVIDENCE OF QUALIFICATION TESTS SHALL BE SUBMITTED.

WELDING SHALL NOT BEGIN UNTIL AFTER THE CONTRACTOR HAS RECEIVED THE ENGINEER'S APPROVAL OF SHOP PLANS.
THESE PLANS SHALL INCLUDE PROCEDURES FOR WELDING, ASSEMBLY, AND ANY HEAT-STRAIGHTENING OR HEAT-CURVING.

IN SHIELDED METAL-ARC WELDING, THE CONTRACTOR SHALL USE LOW-HYDROGEN ELECTRODES.
IN SUBMERGED-ARC WELDING, FLUX SHALL BE OVEN-DRIED AT 550°F FOR AT LEAST 2-HOURS, THEN STORED IN OVENS HELD AT 250°F OR MORE. IF NOT USED WITHIN 4-HOURS AFTER REMOVAL FROM A DRYING OR STORAGE OVEN, FLUX SHALL BE REDRIED BEFORE USE.
PREHEAT AND INTERPASS TEMPERATURES SHALL CONFORM TO THE APPLICABLE WELDING CODE AS SPECIFIED IN THIS SECTION. REFER TO APPROVED WELDING PROCEDURES WHEN WELDING MAIN TO STEEL MEMBERS. IF GROOVE WELDS (WEB-TO-WEB OR FLANGE-TO-FLANGE) HAVE BEEN REJECTED, THEY MAY BE REPAIRED NO MORE THAN TWICE. IF A THIRD FAILURE OCCURS, THE CONTRACTOR SHALL:

1. TRIM THE MEMBERS, IF THE ENGINEER APPROVES, AT LEAST ½-INCH ON EACH SIDE OF THE WELD;
2. REPLACE THE MEMBERS AT NO EXPENSE TO THE CONTRACTING AGENCY.

BY USING EXTENSION BARS AND RUNOFF PLATES, THE CONTRACTOR SHALL TERMINATE GROOVE WELDS IN A WAY THAT ENSURES THE SOUNDNESS OF EACH WELD TO ITS ENDS. THE BARS AND PLATES SHALL BE REMOVED AFTER THE WELD IS FINISHED AND COOLED. THE WELD ENDS SHALL THEN BE GROUND SMOOTH AND FLUSH WITH THE EDGES OF ABUTTING PARTS.

THE CONTRACTOR SHALL NOT:

1. WELD WITH ELECTROGAS OR ELECTROSLAG METHODS,
2. WELD NOR FLAME CUT WHEN THE AMBIENT TEMPERATURE IS BELOW 20°F,
3. USE COPED HOLES IN THE WEB FOR WELDING BUTT SPLICES IN THE FLANGES UNLESS THE PLANS SHOW THEM.

SHORING MONITORING PLAN

A MONITORING PROGRAM IS TO BE IMPLEMENTED TO VERIFY THE PERFORMANCE OF THE SHORING SYSTEM AND POSSIBLE EXCAVATION EFFECTS ON NEIGHBORING PROPERTIES.

THE FIRST STEP IN THIS PROGRAM SHOULD CONSIST OF SURVEYING THE SHORING WALL LINE & ELEVATIONS AND DOCUMENTING THE CONDITION/LOCATION OF THE SHORING AS INSTALLED.
THIS DOCUMENTATION SHOULD INCLUDE A PHOTOGRAPHIC RECORD, WITH MONITORING POINTS ESTABLISHED AS FOLLOWS:
ELEVATION AND LOCATION POINTS AT TOP OF EVERY PILE

A REGISTERED LAND SURVEYOR SHOULD BE RETAINED TO ESTABLISH THE BASELINE DATA AND AT LEAST ONE OF THE WEEKLY READINGS.

MONITORING OF THE SHORING SYSTEM AND SURROUNDING AREAS SHOULD OCCUR TWO TIMES PER WEEK AS THE EXCAVATION PROCEEDS A REGISTERED LAND SURVEYOR SHOULD BE RETAINED TO PERFORM AT LEAST ONE OF THE WEEKLY READINGS.

THE DATA SHOULD INCLUDE SURVEYING THE VERTICAL AND HORIZONTAL ALIGNMENT OF EVERY MONITORING POINT. THE POINT ON THE SHORING SHOULD BE ESTABLISHED WITHIN 24 HOURS OF THE PILE BEING INSTALLED AND PRIOR TO EXCAVATION NEXT TO THE PILE.

THE PROJECT GEOTECHNICAL ENGINEER SHALL REVIEW THE MONITORING DATA AS IT IS RECORDED. THE GEOTECHNICAL ENGINEER SHALL PROVIDE AN EVALUATION OF WALL PERFORMANCE ALONG WITH SURVEY DATA TO SDCI CITY ON AT LEAST A WEEKLY BASIS. IMMEDIATELY AND DIRECTLY, NOTIFY SDCI IF ANY UNUSUAL OR SIGNIFICANT INCREASED MOVEMENT OCCURS.

SURVEY FREQUENCY CAN BE DECREASED AFTER THE SHORING SYSTEM HAS BEEN INSTALLED AND THE EXCAVATION IS COMPLETE, (INCLUDING FLOOR SLABS AS BRACES), IF THE DATA INDICATES LITTLE OR NO ADDITIONAL MOVEMENT OUTSIDE WHAT IS EXPECTED BY THE SHORING DESIGNER.

SURVEYING MUST CONTINUE UNTIL THE PERMANENT STRUCTURE IS COMPLETE UP TO FINAL GRADING. THE SURVEY FREQUENCY WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER, AFTER CITY REVIEW AND APPROVAL.

IMMEDIATELY AND DIRECTLY, NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEER, WALL DESIGNER, AND THE CITY, IF 0.5 INCHES OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS AND WHEN TOTAL MOVEMENTS REACH 0.5 INCHES. AT THAT AMOUNT OF MOVEMENT, THE ENGINEERS AND ENGINEERS SHALL SHALL DETERMINE THE CAUSE OF ANY ADVERSE DISPLACEMENT AND DEVELOP REMEDIAL MEASURES SUFFICIENT TO LIMIT TOTAL WALL MOVEMENTS TO 1.0 INCH.

UTILITIES & INTERFERENCES:

ALL EXISTING UTILITIES AND OTHER OBJECTS WHICH MAY INTERFERE WITH THE INSTALLATION OF THE SHORING SYSTEM ARE TO BE LOCATED PRIOR TO BEGINNING CONSTRUCTION.

POSSIBLE INTERFERENCES BETWEEN THE SHORING AND ANY UTILITY OR OTHER OBJECT(S) IS TO BE PROVIDED TO THE SHORING DESIGNER PRIOR TO THE START OF WORK.

SHORING INSTALLATION REVIEW:

SEE THE GEOTECHNICAL REPORT FOR REQUIRED GEOTECHNICAL INSPECTIONS & REVIEW
CONTINUOUS MONITORING OF ALL SHORING INSTALLATION ACTIVITY IS REQUIRED BY THE GEOTECHNICAL ENGINEER.

GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REF	CODE OR STANDARD REF	FREQUENCY	REMARKS
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	1705.6	—	PERIODIC	—
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	1705.6	—	PERIODIC	—
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	1705.6	—	CONTINUOUS	—
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY SITE HAS BEEN PROPERLY PREPARED	1705.6	—	PERIODIC	—
SYSTEM OR MATERIAL	**IBC CODE REF**	**CODE OR STANDARD REF**	**FREQUENCY**	**REMARKS**
VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS	1705.7	—	CONTINUOUS	—
DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED	1705.7	—	CONTINUOUS	—
OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	1705.7	—	CONTINUOUS	—
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY DAMAGE TO FOUNDATION ELEMENT	1705.7	—	CONTINUOUS	—
SYSTEM OR MATERIAL	**IBC CODE REF**	**CODE OR STANDARD REF**	**FREQUENCY**	**REMARKS**
INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	1705.8	—	CONTINUOUS	—
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END-BEARING STRATA CAPACITY, RECORD CONCRETE OR GROUT VOLUMES	1705.8	—	CONTINUOUS	—
CONCRETE ELEMENTS	1705.8	—	—	(NOTE 1)

NOTES:
1. REFER TO CONCRETE STRUCTURAL SPECIAL INSPECTIONS.

TESTING FOR SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REF	CODE OR STANDARD REF	FREQUENCY	REMARKS
DRIVEN DEEP FOUNDATIONS (PIN PILES)				
CONCRETE AND CONRETE-FILLED ELEMENTS	1705.7	—	—	(NOTE 3)
DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS AS REQUIRED.	1705.7	—	(NOTE 1)	—
CAST-IN-PLACE DEEP FOUNDATIONS				
CONCRETE ELEMENTS	1705.8	—	—	(NOTE 3)
SPECIALTY ELEMENTS (HELICAL ANCHORS)				
TENSION ANCHORS	1705.7	—	(NOTE 4)	—

NOTES:
1. PER REGISTERED DESIGN PROFESSIONAL.
2. WHERE REPORTING OF MATERIALS AND PROCEDURES FOR FILL PLACEMENT IS NOT REQUIRED.
3. REFER TO CONCRETE TESTING FOR SPECIAL INSPECTIONS.
4. TESTING IN ACCORDANCE WITH DRAWING NOTES AND GEOTECH REPORT.

STRUCTURAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REF	CODE OR STANDARD REF	FREQUENCY	REMARKS
GENERAL INSPECTIONS				
REINFORCING STEEL PLACEMENT	1705.3	ACI 318 20 ACI 318 25.2 ACI 318 25.3 ACI 318 26.6.1-3	PERIODIC	—
WELDING OF REINFORCING STEEL	1705.3	ACI 318 26.6.4 AWS D1.4	—	(NOTE 1)
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	—	—	PERIODIC	—
B. INSPECT-SINGLE PASS FILLET WELDS, MAXIMUM 5/16"	—	—	PERIODIC	—
C. INSPECT ALL OTHER WELDS	—	—	CONTINUOUS	—
PLACEMENT OF CAST-IN-PLACE ANCHOR BOLTS	1705.3	ACI 318 17.8.2	PERIODIC	(NOTE 2)
VERIFY USE OF REQUIRED MIX DESIGN(S)	1705.3 1904.1 1904.2	ACI 318 19 ACI 318 26.4.3 ACI 318 26.4.4	PERIODIC	—
SAMPLING OF CONCRETE FOR STRENGTH, SLUMP, AIR CONTENT TESTS, AND TEMPERATURE DETERMINATION	1705.3	ASTM C172 ASTM C31 ACI 318 26.5 ACI 318 26.12	CONTINUOUS	REFER TO CONCRETE TESTING TABLES
CONCRETE PLACEMENT	1705.3	ACI 318 26.5	CONTINUOUS	—
CONCRETE CURING	1705.3	ACI 318 26.5.3-5	PERIODIC	—
ERECTION OF PRECAST CONCRETE MEMBERS	1705.3	ACI 318 26.9	PERIODIC	(NOTE 3)
VERIFICATION OF FORMWORK	1705.3	ACI 318 26.11.1.2(b)	PERIODIC	(NOTE 4)

NOTES:
1. REFER TO STRUCTURAL STEEL STRUCTURAL SPECIAL INSPECTION TABLE.
2. ALL ANCHOR BOLTS ARE VISUALLY INSPECTED.
3. ALL CONNECTIONS VISUALLY INSPECTED, REFER TO ANCHOR BOLT AND WELDING REQUIREMENTS.
4. SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.

STRUCTURAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REF	CODE OR STANDARD REF	FREQUENCY	REMARKS
POST-INSTALLED ANCHORS	1705.3	ACI 318 17.8.2.4 ACI 318 17.8.2 ICC-EVALUATION REPORT	—	(NOTE 1)
B. MECHANICAL AND ADHESIVE ANCHORS	1705.3	—	PERIODIC	—

NOTES:
1. SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE.

TESTING FOR SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REF	CODE OR STANDARD REF	FREQUENCY	REMARKS
CONCRETE STRENGTH	1705.3 1908.10	ASTM C39, C31,C172 ACI 318 26.5, 26.12	(NOTE 1)	—
CONCRETE SLUMP	1705.3 1908.10	ASTM C143, C172 ACI 318 26.5, 26.12	(NOTE 1)	—
CONCRETE AIR CONTENT	1705.3 1908.10	ASTM C172, C173 ACI 318 26.5, 26.12	(NOTE 1)	—
CONCRETE TEMPERATURE	1705.3 1908.10	ASTM 172, C1064 ACI 318 26.5, 26.12	(NOTE 1)	—
MATERIAL TESTS	1705.3.2	ACI 318 19, 20	VARIOUS	(NOTE 2)

NOTES:
1. AT LEAST ONCE: PER DAY; PER 150 CY; FOR EACH 5,000 SF OF SLAB OR WALL.
2. REQUIRED WHEN ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE FOR MATERIALS.

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Permanent Soldier Pile & Timber Lagging Retaining Wall

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
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PHONE: (206) 790-8039
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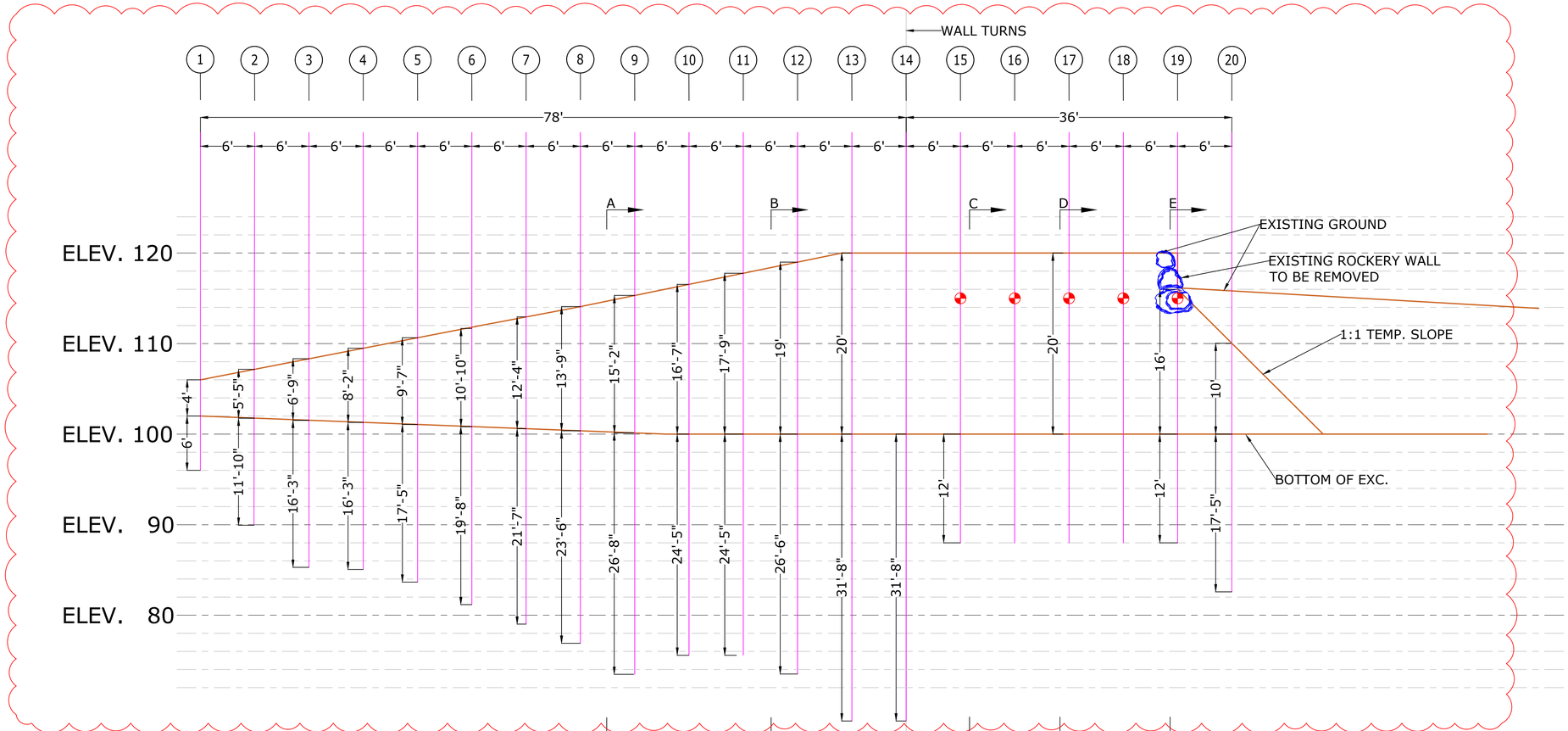
JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER

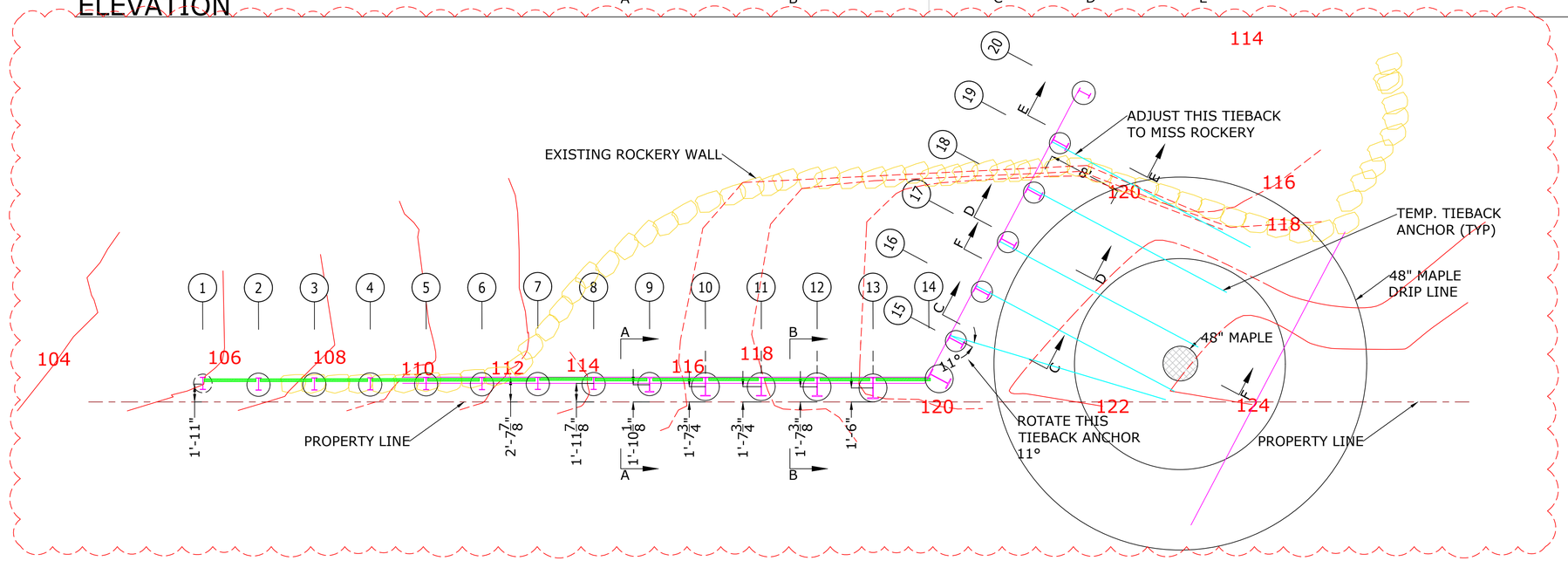
01-16-25

Number	Date	By	Description
7	01-16.25	JML	

SHEET
S-2.1



ELEVATION



PLAN VIEW

LANZ RESIDENCE
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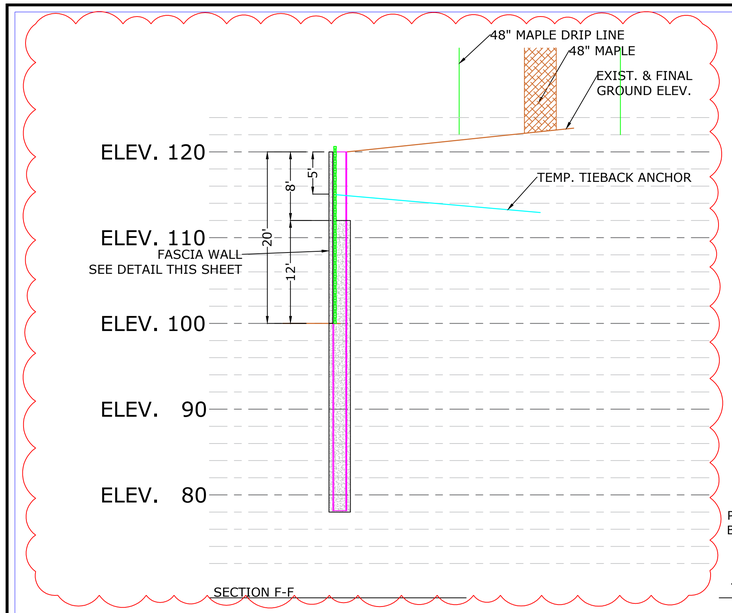
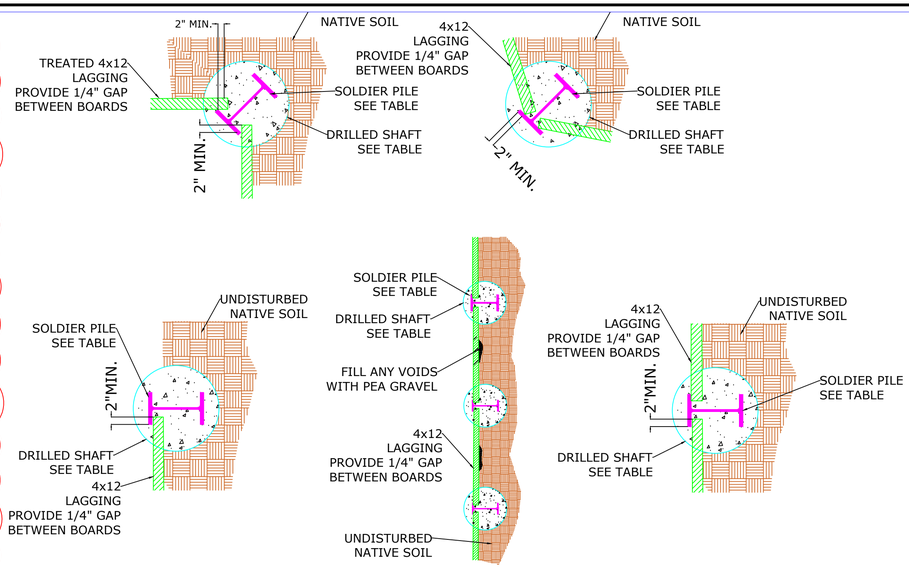
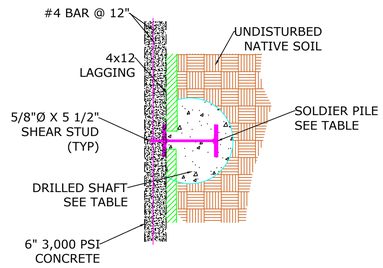
SHEET
S-3.0

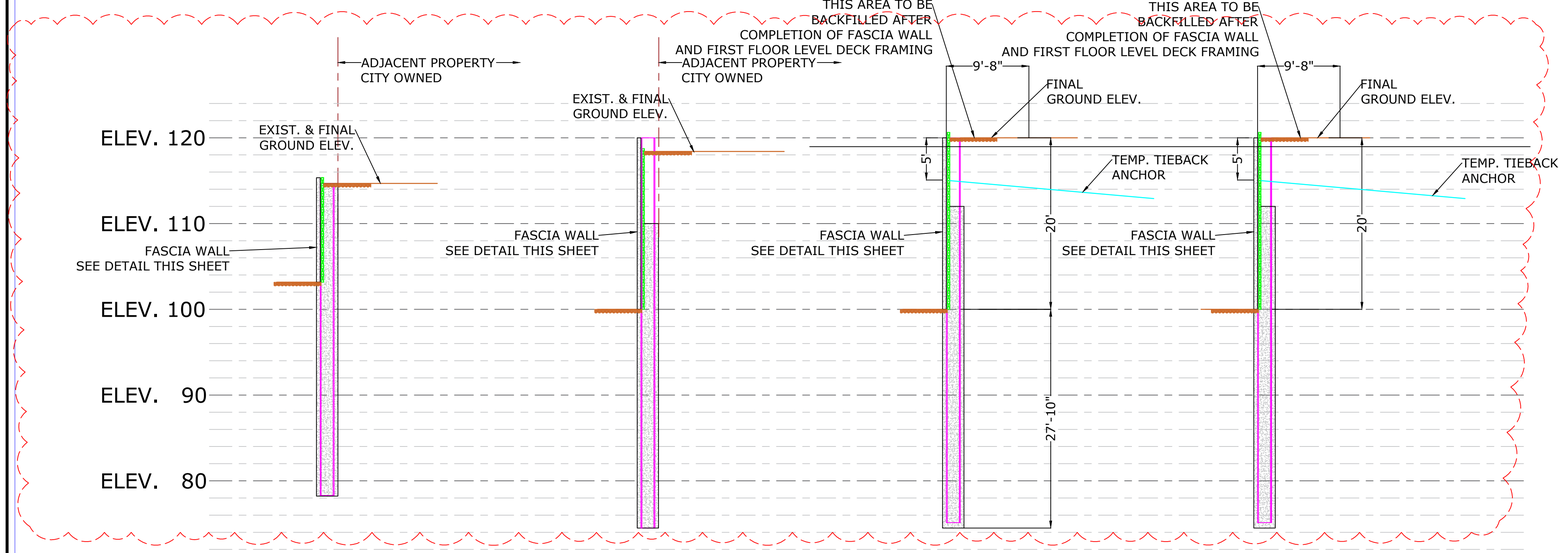


SECTION F-F

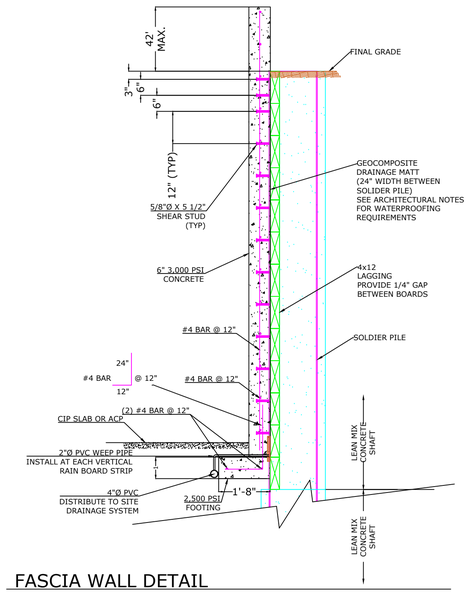


TYPICAL DETAILS - SOLDIER PILE & TIMBER LAGGING





SECTION A-A SECTION B-B SECTION C-C & D-D SECTION E-E



FASCIA WALL DETAIL

PILE INFORMATION

Pile No.	Wide Flange Section	Pile Spacing (FT)	Calculated Wide Flange Pile Length (FT)	Pile Weight (LBS)	Shored Height (FT)	Exist & Final Ground Elev. At Back of Wall	Req'd Embedment Depth (FT)	Predicted Deflection (Inches)	Shaft Diameter (FT)	Lean Mix Concrete (CY Neat)	Timber Lagging	Lagging Area (SF)	Excavation Grade Face of Wall Elev. (FT)	Top of Pile Elev. (FT)	Bottom of Shaft Elev. (FT)	Temporary Tieback Anchors: Tieback Loading (Kips)	Unbonded Length (FT)	Grouted Length (FT)
1	W16 x 26		9.00	234.00	4.00	104.00	6.00	0.10	2.00	1.05	4 x 12		105.00	102.00	96.00			
2	W16 x 26	6.00	18.08	470.08	5.50	105.00	11.83	0.19	2.00	2.10	4 x 12	18.00	108.25	102.00	90.17			
3	W16 x 26	6.00	24.00	624.00	6.75	108.25	16.25	0.92	2.00	2.79	4 x 12	37.50	109.50	101.75	85.50			
4	W16 x 26	6.00	25.25	656.50	8.25	109.50	16.25	0.92	2.00	2.94	4 x 12	46.50	110.50	101.50	85.25			
5	W18 x 40	6.00	28.17	1,126.80	9.75	110.50	17.42	0.89	2.50	5.12	4 x 12	54.00	111.75	101.00	83.58			
6	W18 x 50	6.00	31.08	1,554.00	11.00	111.75	19.08	1.09	2.50	5.65	4 x 12	64.50	113.00	101.00	81.92			
7	W18 x 86	6.00	35.08	3,016.88	12.50	113.00	21.58	1.05	2.50	6.37	4 x 12	72.00	114.00	100.50	78.92			
8	W21 x 111	6.00	41.67	4,625.37	13.75	114.00	26.67	0.96	2.50	7.57	4 x 12	81.00	115.25	100.25	73.58			
9	W24 x 131	6.00	40.92	5,360.52	15.25	115.25	24.42	0.96	3.00	10.71	4 x 12	90.00	116.50	100.00	75.58			
10	W24 x 162	6.00	44.17	7,155.54	16.58	116.50	26.42	1.15	3.00	11.56	4 x 12	99.00	117.75	100.00	73.58			
11	W27 x 217	6.00	50.68	10,997.56	17.75	117.75	31.68	0.57	3.00	13.26	4 x 12	106.50	119.00	100.00	68.32			
12	W27 x 217	6.00	51.68	11,214.56	19.00	119.00	31.68	1.57	3.00	13.52	4 x 12	114.00	120.00	100.00	68.32			
13	W27 x 217	6.00	51.68	11,214.56	20.00	120.00	31.68	1.57	3.00	13.52	4 x 12	120.00	120.00	100.00	68.32			
14	W27 x 217	6.00	51.68	11,214.56	20.00	120.00	31.68	1.57	3.00	13.52	4 x 12	120.00	120.00	100.00	68.32			
15	W18 x 71	6.00	32.00	2,272.00	20.00	120.00	12.00	0.42	2.50	5.81	4 x 12	120.00	120.00	100.00	88.00	46.5	13.1	11.00
16	W18 x 71	6.00	32.00	2,272.00	20.00	120.00	12.00	0.42	2.50	5.81	4 x 12	120.00	120.00	100.00	88.00	46.5	13.1	11.00
17	W18 x 71	6.00	32.00	2,272.00	20.00	120.00	12.00	0.42	2.50	5.81	4 x 12	120.00	120.00	100.00	88.00	46.5	13.1	11.00
18	W18 x 71	6.00	32.00	2,272.00	20.00	120.00	12.00	0.42	2.50	5.81	4 x 12	120.00	120.00	100.00	88.00	46.5	13.1	11.00
19	W18 x 71	6.00	32.00	2,272.00	20.00	120.00	12.00	0.42	2.50	5.81	4 x 12	120.00	120.00	100.00	88.00	46.5	13.1	11.00
20	W18 x 40	6.00	33.42	1,336.80	10.00	117.00	17.42	0.89	2.50	6.07	4 x 12	120.00	116.00	100.00	82.58			
				77,496 LBS						125 CY		1,523 SF						

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JOSEPH M. LUCIA STATE OF WASHINGTON 23314 REGISTERED PROFESSIONAL ENGINEER

01-16-25

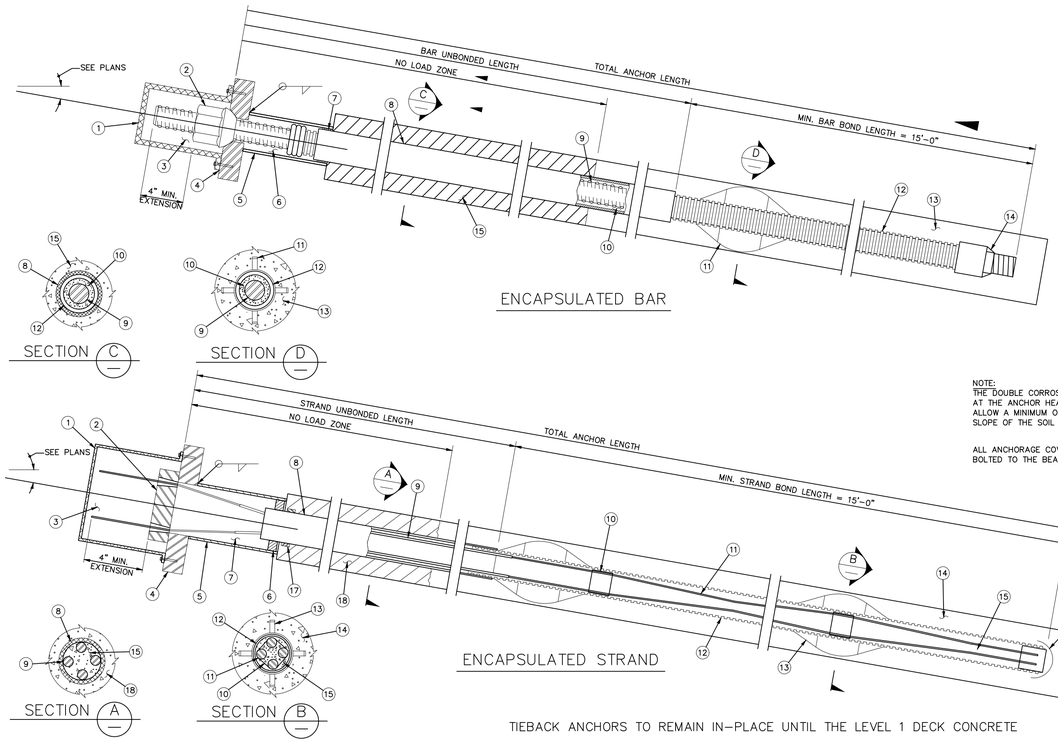
Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-4.0

"T" THREADED HOLLOW BAR SYSTEMS

Bar Designation	Nominal Outer Diameter in (mm)	Average Inner Diameter in (mm)	Cross Sectional Area in^2 (mm^2)	Ultimate Load kips (kN)	Yield Load kips (kN)	Approximate Major Thread Diameter in (mm)	Normal Weight lbs/ft (kg/m)
T30/11	1.18 30	0.43 11	0.64 413	72.0 320	58.5 260	1.30 33	2.2 3.3
T40/20	1.57 40	0.79 20	1.13 726	121.4 540	95.6 425	1.70 43.2	3.8 5.6
T40/16	1.57 40	0.63 16	1.40 903	148.4 660	118.1 525	1.70 43.2	4.8 7.2
T52/26	2.05 52	1.03 26	1.94 1251	208.0 925	170.0 756	2.20 55.9	6.7 9.9
T76N	3.00 76	2.00 51	3.35 2161	319.0 1418	252.0 1120	3.20 81.3	10.2 15.2
T76S	3.00 76	1.77 45	4.03 2600	418.0 1859	330.0 1467	3.20 81.3	13.2 19.7
T103/78	4.06 103	3.00 78	4.87 3142	510.5 2270	404.8 1800	4.20 106.7	17.0 25.3
T103/51	4.06 103	2.00 51	8.80 5677	823.0 3660	600.4 2670	4.20 106.7	30.0 44.6

← USE FOR PILES 15 - 19



ENCAPSULATED BAR

1. ANCHORAGE COVER
2. NUT
3. ANTICORROSION GREASE*
4. BEARING PLATE
5. TRUMPET
6. ANTICORROSION GREASE
7. SEAL
8. SMOOTH PVC BOND BREAKER
9. BAR
10. ENCAPSULATION GROUT
11. CENTRALIZERS
12. CORRUGATED PVC
13. ANCHOR GROUT
14. END CAP
15. NONSTRUCTURAL FILLER

* USE GROUT IF ANCHORAGE COVER IS EXPOSED

ENCAPSULATED STRAND

NOTE:
THE DOUBLE CORROSION PROTECTION SYSTEM AT THE ANCHOR HEAD SHALL BE DETAILED TO ALLOW A MINIMUM OF ± 2" VARIATION IN THE SLOPE OF THE SOIL ANCHOR FOR PLACEMENT TOLERANCE.

ALL ANCHORAGE COVERS SHALL BE BOLTED TO THE BEARING PLATES.

1. ANCHORAGE COVER
2. ANCHOR HEAD AND WEDGES
3. ANTICORROSION GREASE
4. BEARING PLATE
5. TRUMPET
6. SEAL
7. ANTICORROSION GREASE
8. PVC OR POLYETHYLENE TUBE
9. INDIVIDUALLY GREASED AND SHEATHED STRAND.
10. SPACER
11. STRAND
12. CORRUGATED PVC
13. CENTRALIZER
14. ANCHOR GROUT
15. ENCAPSULATION GROUT
16. END CAP
17. TENSION RING TO RESIST SPLITTING FORCE OF DEFLECTED STRANDS.
18. NON-STRUCTURAL FILLER

TIEBACK ANCHORS TO REMAIN IN-PLACE UNTIL THE LEVEL 1 DECK CONCRETE SLAB HAS BEEN INSTALLED AND HAS REACHED FULL STRENGTH AT WHICH TIME THEY MAY BE LEFT AS-IS OR DETENSIONED AT THE ENGINEER'S DIRECTION

TIEBACK ANCHOR DETAILS

TIEBACK ANCHOR DETAILS

Material Properties of Post-Tension Strands

Posted on January 29, 2010

The following is a list of basic formulas for 270 ksi, 7-wire Prestressing steel strand (per ASTM-A416) used in Post-Tensioned concrete.

Assume 0.5" diameter strand has cross-sectional area of 0.153 sq.in. and weight of 0.525 lbs/ft.
Assume 0.6" diameter strand has cross-sectional area of 0.217 sq.in. and weight of 0.740 lbs/ft.

Minimum Ultimate Tensile Strength (MUTS) = (Grade of Steel) x (Cross-Sectional Area)
0.5" inch diameter = (270 ksi) x (0.153 sq.in.) = 41.3 kips

0.6" inch diameter = (270 ksi) x (0.217 sq.in.) = 58.6 kips

Minimum Yield Strength = 90% of MUTS = MUTS x 0.90 *(per ASTM-A416)*
0.5" inch diameter = (41.3 kips) x (0.90) = 37.2 kips

0.6" inch diameter = (58.6 kips) x (0.90) = 52.7 kips

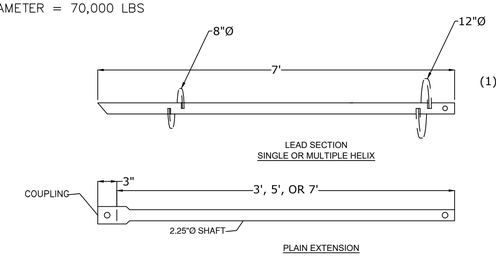
Jacking Force = 80% of MUTS = MUTS x 0.80 *(per ACI Code)*
0.5" inch diameter = (41.3 kips) x (0.80) = 33.0 kips

0.6" inch diameter = (58.6 kips) x (0.80) = 46.9 kips

"Jacking Force" is the force that tendons are stressed to.

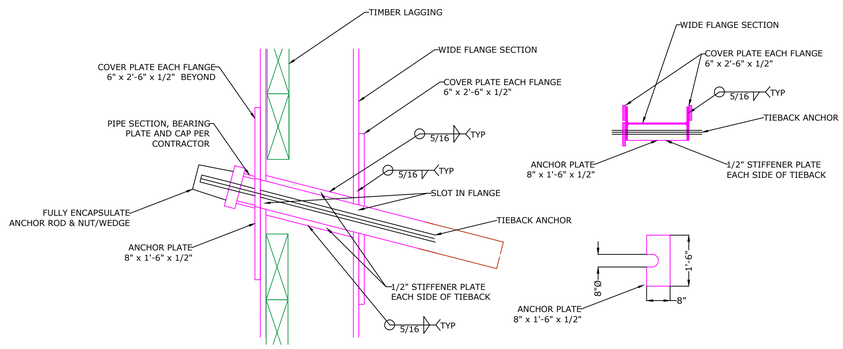
Allowable Initial Force = (Jacking Force) minus (Short-Term Losses) = 70% of MUTS = MUTS x 0.70 *(per ACI-318)*

THIS DRAWING COVER 2.25" DIAMETER HELI-PILE SOLID ROUND CORNER SQUARE SHAFT HELICAL PILES.
SOLID ROUND CORNER SQUARE SHAFT MATERIAL IS PER ASTM A29 OR AISI 1044, Fy=70 KSI
ALL HELIX MATERIAL IS 0.5" THICK AND IS PER ASTM A656 Gr 80 TYPE 7 (Fy=80 KSI).
CONNECTION BOLTS ARE 0.75" DIAMETER ASTM A449, 3" LONG, THREADS OUTSIDE THE SHEAR ZONE.
ALL WELDS MINIMUM 0.25" FILLET WITH ER70S ELECTRODE.
ALL STEEL IS GALVANIZED PER ASTM B633-85 FE/ZN 5, TYPE III ULTIMATE AXIAL MECHANICAL CAPACITY IS 55,000 LBS.
ULTIMATE SHAFT TORQUE CAPACITY IS 5,500 FT-LBS. ULTIMATE HELIX MECHANICAL CAPACITY:
6"-12" DIAMETER = 70,000 LBS



(1) SEE TABLE FOR SIZE & NUMBER REQUIRED

HELICAL ANCHOR DETAIL



SET 8' FROM TOP OF PILE

TIEBACK ANCHOR POCKET DETAIL

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

House Structure
Notes

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-4.1

GENERAL NOTES

1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE DRAWINGS, SPECIFICATIONS, AND THE CODES, RULES AND REGULATIONS OF INTERNATIONAL BUILDING CODE (IBC) 2021 EDITION.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
3. IF ANY ERRORS OR OMISSIONS APPEAR IN THESE DRAWINGS, SPECIFICATIONS, OR OTHER DOCUMENTS; THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OR ARCHITECT IN WRITING OF SUCH OMISSION OR ERROR BEFORE PROCEEDING WITH THE WORK.
4. MANUFACTURED MATERIALS SHALL BE APPROVED BY THE CHECKING AGENCY PRIOR TO THEIR USE. ALL REQUIREMENTS OF THOSE APPROVALS SHALL BE FOLLOWED.
5. ALL STRUCTURAL SYSTEMS THAT ARE TO BE COMPOSED OF MANUFACTURED COMPONENTS TO BE FIELD ERECTED SHALL BE APPROVED BY THE CHECKING AGENCY PRIOR TO THEIR USE AND SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER
6. FRAMING MEMBERS THAT ARE NOT DIMENSIONED SHALL BE EQUALLY SPACED BETWEEN DIMENSIONED POINT OR MEMBERS.
7. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR THE FOLLOWING:
   SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS AND THRESHOLD REQUIREMENTS.
   SIZE AND LOCATION OF ALL NON-BEARING PARTITIONS.
   SIZE AND LOCATION OF ROOF, FLOOR AND WALL OPENINGS.
   SIZE AND LOCATION OF DEPRESSED AREAS, CHANGES IN ELEVATION, FLOOR AND ROOF DRAINS,
   SLOPES, CONCRETE CURBS, LEDGES, PADS AND ISLANDS, CHAMFERS, GROOVES, INSERTS, ETC.
   DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SIZE, WEIGHT AND LOCATION OF MACHINES AND EQUIPMENT BASES.
8. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
9. OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN STRUCTURAL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6 INCHES NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
10. SPECIFICATIONS, CODES, AND STANDARDS NOTED IN THE CONTRACT DOCUMENTS SHALL BE OF THE LATEST APPROVED ISSUE, INCLUDING SUPPLEMENTS, UNLESS OTHERWISE NOTED. MATERIAL SPECIFICATIONS ARE ASTM LATEST EDITION.
11. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

DESIGN CRITERIA

LIVE LOADS

ROOF SNOW LOAD	25.0 PSF BASIC

DEAD LOADS

SUPERIMPOSED ROOF DEAD LOAD	
FRAMING, CEILING, ETC.	15 PSF
SUPERIMPOSED WALL DEAD LOAD	
EXTERIOR WALLS.	10 PSF

WIND DESIGN (PER 1615 -1622)	
BASIC WIND SPEED	110 MPH
EXPOSURE	B
IMPORTANCE FACTOR	1.0
TOPOGRAPHIC FACTOR	1.38

SEISMIC DESIGN (PER 1615 - 1633)
SEISMIC CATEGORY II
IMPORTANCE FACTOR= 1.0
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
Ss = 1.466
S1 = 0.508 SITE CLASS = D
Sds = 1.173 SEISMIC RISK CATEGORY = D
BASIC SEISMIC FORCE-RESISTING SYSTEMS:
LIGHT FRAMED WALLS SHEATHED WITH
WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE.
DESIGN BASE SHEAR: 47.88 KIPS
R= 6.5 - Wood Framed
R = 5.0 - Concrete
ANALYSIS METHODS USED:
WIND; METHOD 2 - ANALYTICAL PROCEDURE
SEISMIC; METHOD 2 - EQUIVALENT LATERAL FORCE

MAPPED SPECTRAL RESPONSE
ACCELERATIONS OBTAINED FROM THE USGS - SEISMIC HAZARD MAPS & DATA

FOUNDATIONS

1. ALL FOUNDATIONS SHALL BE FOUNDED A MINIMUM OF 18" BELOW LOWEST ADJACENT FINAL FINISH FLOOR OR GRADE. EXPOSED SOIL SHALL BE INSPECTED FOR COMPLIANCE BY THE ENGINEER OR HIS REPRESENTATIVE PRIOR TO CONSTRUCTING CONCRETE FORMS AND/OR PLACING REINFORCING STEEL. ANY EXCESS OR NON-COMPLYING MATERIAL AS DETERMINED BY THE ENGINEER OR HIS REPRESENTATIVE SHALL BE REMOVED AND REPLACED AS DIRECTED.
2. THE ALLOWABLE SOIL BEARING LOAD IS PER THE GEOTECHNICAL REPORT.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE DETAILED, INCLUDING HOOKS AND BENDS, AND PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 OR A-706, GRADE 40 OR BETTER,
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185,
4. ALL REINFORCING BAR BENDS SHALL BE MADE COLD,
5. REINFORCING SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS,
6. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE VERTICAL REINFORCING, RESPECTIVELY, UON,
7. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED AND REVIEWED BY THE STRUCTURAL ENGINEER
8. WELDING OF REINFORCEMENT SHALL BE WITH LOW HYDROGEN ELECTRODES IN CONFORMANCE WITH ACI 318-95 AND THE RECOMMENDATIONS OF THE AMERICAN WELDING SOCIETY, AWS DI,4 AND WITH THE REVIEW OF THE STRUCTURAL ENGINEER

CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE' ACI 318 AND ACI 301, WITH MODIFICATIONS AS NOTED IN THE CONTRACT DOCUMENTS,
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 TYPE 1 OR TYPE H,
3. COARSE AND FINE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33,
4. WATER SHALL BE CLEAR AND SHALL CONFORM TO ASTM C-94,
5. CONCRETE MIXING OPERATION SHALL CONFORM TO ASTM C-94,
6. ADD TO ALL CONCRETE EXPOSED TO WEATHER MICROAIR OR MBVR AIR ENTRAINING AGENT TO ATTAIN 5 PERCENT +1- 1 PERCENT ENTRAINED AIR, BY VOLUME, CONFORMING TO ASTM C-260, ALL REFERENCE DATA USED FOR PAST PERFORMANCE DESIGN SHALL HAVE CONTAINED THE SAME ADMIXTURE BRAND AS THAT USED IN THE MIX SUBMITTED,
7. CONCRETE STRENGTHS SHALL BE VERIFIED BY 28-DAY CYLINDER TESTS, UNLESS OTHERWISE APPROVED, CONCRETE SHALL BE AS FOLLOWS:

ELEMENT TYPE	STRENGTH PSI CONCRETE
FOOTINGS, GRADE BEAMS	2,500 NORMAL WT
SLAB ON GRADE	2,500 NORMAL WT
FOUNDATION STEM WALLS	3,000 NORMAL WT
RETAINING WALLS	3,000 NORMAL WT

A MINIMUM 5 SACK MIX SHALL BE USED TO ACHIEVE THE DESIGN STRENGTHS LISTED ABOVE.

8. CONTRACTOR MAY USE AN ADMIXTURE SYSTEM TO PRODUCE FLOWABLE CONCRETE, MAXIMUM SLUMP SHALL NOT EXCEED 10 INCHES MEASURED AT THE PUMP, THE WATER/CEMENTIOUS MATERIAL RATIO OF THE APPROVED MIXES SHALL BE MAINTAINED OR LOWERED WHEN FLOWABLE CONCRETE IS USED,
9. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT PLACED IN CAST-IN-PLACE CONCRETE:

	CONCRETE COVER (MINIMUM)
A . CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
B. CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 THROUGH #18 BARS	2"
#5 BAR, W31 OR D31 WIRE, A1413 SMALLER	1 1/2"
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS, JOISTS	
#14 AND #18 BARS	1 1/2"
#11 BARS AND SMALLER	3/4"
BEAMS, COLUMNS:	
PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1 1/2"

10. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 304 AND THE CONTRACT DOCUMENTS. SANDBLAST ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED,
11. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE,
12. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING, REINFORCING SHALL NOT BE CUT, CORING OF CONCRETE IS NOT PERMITTED EXCEPT AS INDICATED,
13. CURING COMPOUNDS USED ON CONCRETE TO RECEIVE A FINISH SHALL BE APPROVED BY THE FINISH APPLICATOR BEFORE USE.

DESIGN LOADING:
REF. SOIL REPORT
EARTH SOLUTIONS NW, LLC
Dated: October 4, 2023
Pa = 42 PCF
Pp = 200 PCF
Seismic loading = 8H
Allowable Bearing Pressure = 2,500 PSF

WOOD

1. FRAMING LUMBER SHALL BE GRADED AND MARKED IN CONFORMANCE WITH WCLB STANDARD GRADING AND DRESSING RULES FOR WEST COAST LUMBER NO, 16, LATEST EDITION. UNLESS OTHERWISE NOTED ON THE DRAWINGS, LUMBER GRADES SHALL BE AS FOLLOWS:
   A. JOISTS: 2" AND 3" THICKNESS, HEM FIR NO, 1,
   B. BEAMS AND STRINGERS: DOUGLAS FIR NO, 1,
   C. POST AND TIMBERS: DOUGLAS FIR NO, 1,
   D. PLATES AND MISCELLANEOUS LIGHT FRAMING: HEM FIR STANDARD,
   E. STUDS: HEM FIR STUD.
   F. ALL BOLTED CONNECTIONS TO BE 3/4"Ø A302 BOLTS

2. MINIMUM NAILING REQUIREMENTS:

   UNLESS OTHERWISE NOTED, MINIMUM NAILING SHALL CONFORM TO THE GOVERNING CODE AND AS FOLLOWS:
   A. JOISTS OR RAFTERS TO SIDES OF STUDS 8-INCH OR LESS 3-16DB
   B. FOR EACH ADDITIONAL 4-INCH IN DEPTH OF JOISTS 1-16DC
   C. JOISTS OR RAFTERS AT ALL BEARINGS - TOENAILS EACH SIDE 2-10DD
   D. STUDS TO BEARING - TOENAILS EACH SIDE 2-10DE
   E. BLOCKING BETWEEN JOISTS OR RAFTERS TO JOIST OR RAFTERS - TOENAILS EACH SIDE EACH END 2-10D TO JOIST OR RAFTER BEARINGS - TOENAILS EACH SIDE 2-10D
   F. CROSS-BRIDGING BETWEEN JOISTS OR RAFTERS TOE NAILS EACH END 2-8D
   G. BLOCKING BETWEEN STUDS - TOENAILS EACH END 2-10D
   H. DOUBLE TOP PLATES - LOWER PLATE TO TOP OF STUD 2-16D
   J. UPPER TO LOWER PLATE - STAGGERED 16D @ 16" O,C,
   K. MULTIPLE JOISTS - STAGGERED 16D @ 12" O,C,
   L. MULTIPLE JOISTS STAGGER FOR WIDTHS MORE THAN 4 INCHES 16D @ 12" O,C.

3. INDIVIDUAL MEMBERS OF BUILT-UP POSTS AND BEAMS SHALL EACH BE ATTACHED WITH 16D SPIKES AT 12" O,C. STAGGERED, MIN,
4. ALL NAILS SHALL BE COMMON WIRE NAILS, WHENEVER POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED, THERE SHALL BE A MINIMUM OF 2 NAILS AT ALL WOOD CONTACTS AND JOINTS USING 8D NAILS FOR 1-INCH THICK MATERIAL, 16D NAILS FOR 2-INCH THICK MATERIAL, AND 40D NAILS FOR 3-INCH THICK MATERIAL, ALL CONTINUOUS CONTACTS PROVIDE MINIMUM NAILS AT 12" O,C, WITH NAIL SIZES AS CALLED ABOVE,
5. NOTATIONS ON DRAWINGS RELATING TO FRAMING CLIPS, JOIST HANGERS, AND OTHER CONNECTING DEVICES REFER TO CATALOG NUMBERS OF STRONG-TIE CONNECTORS MANUFACTURED BY THE SIMPSON COMPANY, EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THAT THEY HAVE ICBO APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES AND ARE REVIEWED BY THE STRUCTURAL ENGINEER,
6. AT SAWN TIMBER JOISTS WITH THICKNESS-TO-DEPTH RATIO OF 1:6 AND GREATER, PROVIDE CROSS-BRIDGING AT 8' 0" O,C, AND SOLID BLOCKING AT BEARING POINTS,
7. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE GOVERNING CODE,
8. ALL BEARING AND EXTERIOR STUD WALLS SHALL BE 2X6 @6"O.C. BELOW SECOND FLOOR AND 2X4 @ 16" O.C. ELSEWHERE, UNLESS OTHERWISE NOTED.
9. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHTS AND AT INTERVALS NOT TO EXCEED 8 FEET OF ALL STUD-BEARING WALLS OVER 8 FEET IN HEIGHT,
10. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF INTERIOR NONBEARING STUD PARTITIONS FOR LOCATION AND SIZE OF OPENINGS IN STUD WALLS, AND FOR ALL WALL FINISH DETAILS,
11. ALL CANTS AND CRICKETS SHALL BE PLACED OVER BASIC ROOF SHEATHING. SEE ARCHITECTURAL DRAWINGS FOR DETAILS AND LOCATIONS,
12. ALL WOOD STUD WALL SILL PLATES SHALL BE ATTACHED TO CONCRETE OR MASONRY WITH 1/2-INCH DIAMETER ANCHOR BOLTS AT 48" O.C., UNLESS OTHERWISE NOTED ,
13. ALL WOOD STUD WALLS SHALL HAVE LOWER WOOD PLATE ATTACHED TO WOOD FRAMING BELOW WITH 16D NAILS AT 6" 0.C, STAGGERED UNLESS SHOWN OTHERWISE.
14. FASTEN ALL POSTS TO CONCRETE WITH "CB" COLUMN BASE OR EQUAL,
15. ALL WOOD PLATES AND BLOCKING IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE IN ACCORDANCE WITH AWPS-FDN, AND BEAR THAT QUALITY MARK,
16. PROVIDE STANDARD CUT WASHERS UNDER ALL BOLTS HEADS AND NUTS IN CONTACT WITH WOOD.
17. ATTACH TIMBER JOISTS TO FLUSH HEADERS AND BEAMS WITH "U" SERIES METAL JOIST HANGERS TO SUIT THE JOIST SIZE.
18. ALL PLYWOOD SHALL BE HEM FIR, STRUCTURAL 2 OR BETTER AND SHALL CONFORM TO APA C-D INTERIOR GRADE WITH EXTERIOR GLUE, WITH UBC STANDARD 23-2 AND WITH PRODUCT STANDARD PSI, WOOD-BASED STRUCTURAL-USE PANELS SHALL CONFORM WITH UBC STANDARD 23-3 AND WITH PRODUCT STANDARD PS2, TYPE AND THICKNESS SHALL BE AS SPECIFIED ON THE PLANS.
19. PLYWOOD NAILING, USE UNLESS OTHERWISE NOTED:

A. ROOF:	8D @ 6" O.C. AT SHEET EDGES
	8D @ 12" O.C. AT INTERMEDIATE BEARING POINTS
B. FLOOR:	10D @ 6" O.C. AT SHEET EDGES
	10D @ 10" O.C. AT INTERMEDIATE BEARING POINTS
C. WALLS:	8D @ 6" O.C. AT EDGES
	8D @ 12" O.C. AT INTERMEDIATE BEARING POINTS

PLYWOOD AND WOOD-BASED STRUCTURAL-USE PANELS USED FOR WALL SHEATHING SHALL HAVE SOLID BLOCKING AT ALL EDGES.
20. MACHINE APPLIED NAILING IS SUBJECT TO A SATISFACTORY DEMONSTRATION AND THE APPROVAL OF THE CHECKING AGENCY AND THE ARCHITECT, NAIL HEADS SHALL NOT PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER. EDGE DISTANCES SHALL BE MAINTAINED, SHINERS SHALL BE REMOVED AND REPLACED, THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE, MACHINE APPLIED NAILING ONLY ON PLYWOOD GREATER THAN 5/16".

STRUCTURAL STEEL, MISC. METAL

1. STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL BE BASED ON THE LATEST EDITION AND SUPPLEMENTS OF THE AISC "SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN", STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS,

TYPE OF MEMBER	ASTM SPECIFICATION	FY
WIDE FLANGE SHAPES	A572 OR A992	50 KSI
PLATES, SHAPES, ANGLES, AND RODS	A36	36 KSI
HOLLOW STRUCTURAL SECTION (ROUND)	A53 (GRADE B)	36 KSI
HOLLOW STRUCTURAL SECTION (SQUARE OR RECTANGLE)	A500 (GRADE B)	46 KSI
ANCHOR RODS (EMBEDDED IN CONCRETE)	A307	

2. ALL WELDS SHALL BE PREQUALIFIED IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WELDERS CERTIFIED IN THE JURISDICTION HAVING AUTHORITY OVER THIS PORTION OF THE WORK, USE E70XX ELECTRODES.3, WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED, WELD SIZE SHALL BE AISC MINIMUM, UNLESS OTHERWISE NOTED.

ANCHORAGE

1. EXPANSION ANCHORS SHALL BE ZINC PLATED IN ACCORDANCE WITH ASTM B 633, AND CONFORM WITH FS FF-S-325, GROUP II, TYPE 4, CLASS 1,
2. SLEEVE ANCHORS SHALL BE ZINC PLATED IN ACCORDANCE WITH ASTM B 633, AND CONFORM WITH FS FF-S-325, GROUP II, TYPE 3, CLASS 3,
3. FLUSH SHELL ANCHORS SHALL ZINC PLATED IN ACCORDANCE WITH ASTM B 633, AND CONFORM WITH FS FF-S-325, GROUP VIII, TYPE 1,
4. ADHESIVE ANCHORS SHALL CONSIST OF ALL-THREAD ANCHOR ROD, NUT, WASHER AND EPOXY INJECTION GEL OR ADHESIVE CAPSULE SYSTEM, ANCHOR RODS SHALL BE MANUFACTURED FROM A-36 MATERIAL, ZINC PLATED IN ACCORDANCE WITH ASTM B 633,
5. ALL RELATED PRODUCTS, MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS,
6. NOTATIONS ON DRAWINGS RELATING TO EXPANSION, SLEEVE, FLUSH OR ADHESIVE ANCHORS AND OTHER CONNECTING DEVICES REFER TO CONNECTORS MANUFACTURED BY POWERS FASTENING, INC, EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THAT THEY HAVE ICBO APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES AND ARE REVIEWED BY THE STRUCTURAL ENGINEER

SPECIAL INSPECTION

1. SPECIAL INSPECTION BY A REGISTERED DEPUTY BUILDING INSPECTOR, APPROVED BY THE ARCHITECT AND THE CHECKING AGENCY SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE THE PROJECT SPECIFICATIONS FOR FURTHER REQUIREMENTS, SPECIAL INSPECTIONS SHALL NOT BE REQUIRED WHEN THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION,
   SOIL
   EXCAVATION
   SOIL COMPACTION
   CONCRETE
   DESIGN STRENGTHS GREATER THAN 2,500 PSI PLACING OF REINFORCING STEEL
   WELDING
   STRUCTURAL STEEL
   REINFORCING STEEL
   FABRICATED TIMBER JOISTS
   EXPANSION TYPE ANCHOR BOLTS
   STRUCTURAL MASONRY CONSTRUCTION
   PILING, DRILLED OR DRIVEN
   STRUCTURAL STEEL FABRICATION
2. ALL PREPARED SOIL-BEARING SURFACES SHALL BE INSPECTED BY THE SOILS ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL,
3. EXPANSION TYPE ANCHORS SHALL BE APPROVED BY THE CHECKING AGENCY FOR THEIR USE AND SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS,
4. THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING OFFICIAL SHALL BE FURNISHED WITH COPIES OF ALL TEST RESULTS.

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

House Structure
Notes

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JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-5.0

SHEAR WALL SCHEDULE

MARK	SHEATHING	NAILING (5)		LUMBER			SHEAR TRANSFER					1.4 INCREASE FOR WIND
		EDGE (E.N.)	FIELD	ALLOWABLE SHEAR	SILL PL	TOP PL'S	"A" SILL PL TO CONC.	"B" BLKG TO TOP PL.	"C" SILL PL RIM/JST/BLKG (F.N.)	"D" SHEAR WALL INTERSECTIONS	CAPACITY	CAPACITY
P1-8-6	3/8" APA RATED SHEATHING, ONE SIDE	8d@6"	8d@ 6"	2x	2x	(2)2x	5/8 @ 48"	A35@20" OR LPT4 @ 30"	16d @ 5"	16d @ 8"	270 PLF	378 PLF
P1-8-4	3/8" APA RATED SHEATHING, ONE SIDE	8d@4"	8d@ 6"	2x	2x	(2)2x	5/8 @ 40"	A35@16" OR LPT4 @ 20"	16d @ 5"	16d @ 5"	360 PLF	504 PLF
P1-8-3	3/8" APA RATED SHEATHING, ONE SIDE	8d@2-1/2"	8d@4"	2x	3x	(2)2x	5/8 @ 36"	A35@12" OR LPT4 @ 15"	20d @ 4"	16d @ 3 1/2"	530 PLF	742 PLF
P1-8-2	3/8" APA RATED SHEATHING, ONE SIDE	8d@2"	8d@ 3"	3x(9)	3x	(2)2x	5/8 @ 24"	A35@9" OR LPT4 @ 11"	20d @ 3"	1/2" x4 1/2" LAG @ 9"	610 PLF	854 PLF
P2-8-4	3/8" APA RATED SHEATHING, TWO SIDE	8d@4"	8d@ 6"	3x(9)	3x	(2)2x	5/8 @ 12"	LPT4 @ 9"	(2)ROWS 20d @ 3"	1/2" x4 1/2" LAG @ 6"	720 PLF	1008 PLF
P2-8-3	3/8" APA RATED SHEATHING, TWO SIDE	8d@2"	8d@ 6"	3x(9)	3x	(2)2x	5/8 @ 12"	LPT4 @ 7"	(2)ROWS 20d @ 3"	1/2" x4 1/2" LAG @ 5"	980 PLF	1372 PLF
P2-8-2	3/8" APA RATED SHEATHING, TWO SIDE	8d@2"	8d@3"	3x(9)	3x	(2)2x	5/8 @ 12"	LPT4 @ 6"	(2)ROWS 20d @ 3"	1/2" x4 1/2" LAG @ 4 1/2"	1220 PLF	1708 PLF

ROOF & FLOOR DIAPHRAGM NAILING SCHEDULE

DIA. #	DIAPHRAGM SHEATHING	NAILING (INCHES o.c.) 15/32" SHEATHING W/ 10d COMMON			
		EDGE (E.N.)	FIELD	ALLOWABLE SHEAR (KLF)	NOTES
	UNBLOCKED, OTHER		6	0.20	2x
	UNBLOCKED CASE#1		6	0.28	2x
1	BLOCKED	6	6	0.32	3x
2	BLOCKED	4	6	0.43	3x
3	BLOCKED	2.5	4	0.67	3x
4	BLOCKED	2	3	0.73	3x
5	BLOCKED	2	3	0.82	3x

DIAPHRAGM NOTES:

1. APA RATED SHEATHING, STURD-I-FLOOR EXP1/EXP2/EXT OR C-C/C-D PLYWOOD
2. STRUCTURAL 1 APA RATED SHEATHINGEXP1/EXT OR STRUCT 1 PLYWOOD
3. PROVIDE 3x'S (76mm) AT ADJOINING PANEL EDGES W/NAILS STAGGERED.
4. ALL MEMBERS TO BE 4x MINIMUM W/2 LINES OF FASTENERS (ICBO ER 1952)
5. ALL MEMBERS TO BE 4x MINIMUM W/3 LINES OF FASTENERS (ICBO ER 1952)
6. SPECIAL INSPECTION REQUIRED IN ACCORDANCE WITH ICBO ER 1952
7. PROVIDE BOUNDARY NAILING @ ALL PANEL EDGES, CASES 3,4,5 & 6.
8. ALL MEMBERS TO BE 3x (76mm) MINIMUM.

SHEAR WALL FRAMING NOTES:

1. IN ADDITION TO THE TYPICAL WALL FRAMING REQUIREMENTS PROVIDE FRAMING AT SHEAR WALLS AS INDICATED.
2. SEE SCHEDULE FOR SHEATHING AND NAILING REQUIRED. SCHEDULE ASSUMES HEM-FIR OR BETTER LUMBER. STAGGER PANEL JOINTS EACH SIDE OF WALL WHERE SHEATHING IS REQUIRED BOTH SIDE OF WALL.
3. STUD BLOCKING THICKNESS SHOWN ARE MINIMUM SIZES BASED ON SHEAR WALL NAILING REQUIREMENT. PROVIDE LARGER STUD WHERE REQUIRED OTHERWISE.
4 BLOCK ALL PANEL EDGES.
5. 10d SHALL BE 0.148x3". 8d SHALL BE 0.131X2 ½". DRIVE ALL NAILS FLUSH WITH THE FACE OF . TOLERANCE IS +1/16 to -0
6. PLATES ON CONCRETE SHALL BE TREATED. SEE GENERAL STRUCTURAL NOTES.
7. NAIL OR LAG SHEATHING & STUD AT SHEAR WALL INTERSECTION AS INDICATED.
8. WHERE ONLY ONE HOLDOWN IS SPECIFIED LOCATE ON OPENING SIDE OF HOLDOWN STUDS. SEE WALL ELEVATION AT RIGHT.
9. (2)2x MAY BE USED IN LIEU OF 3x AT PANEL JOINTS. STITCH NAIL THE STUDS TOGETHER PER SHEAR TRANSFER 'C'. SEE 'PLAN VIEW 1'. REFER TO APA TECHNICAL PUBLICATION TT-076.

TYPICAL WALL FRAMING NOTES:

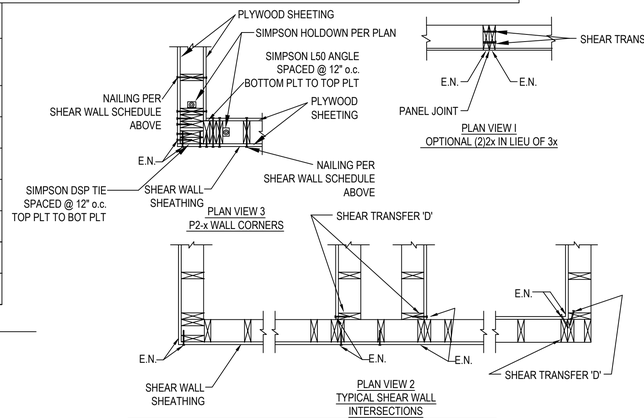
1. PROVIDE TYPICAL WALL FRAMING INDICATED, EXCEPT WHERE NOTED OTHERWISE.
2. SEE ARCHITECTURAL DRAWINGS FOR FIRE BLOCKING AND BACKING FOR FINISHES AND FURNISHINGS.

TYPICAL ROOF & FLOOR DIAPHRAGM FRAMING NOTES:

1. ROOF AND FLOOR DIAPHRAGMS ARE UNBLOCKED, U.L.N. AND NAILED ACCORDING TO THE FASTENING SCHEDULE OF IBC TABLE 2304.9.1.

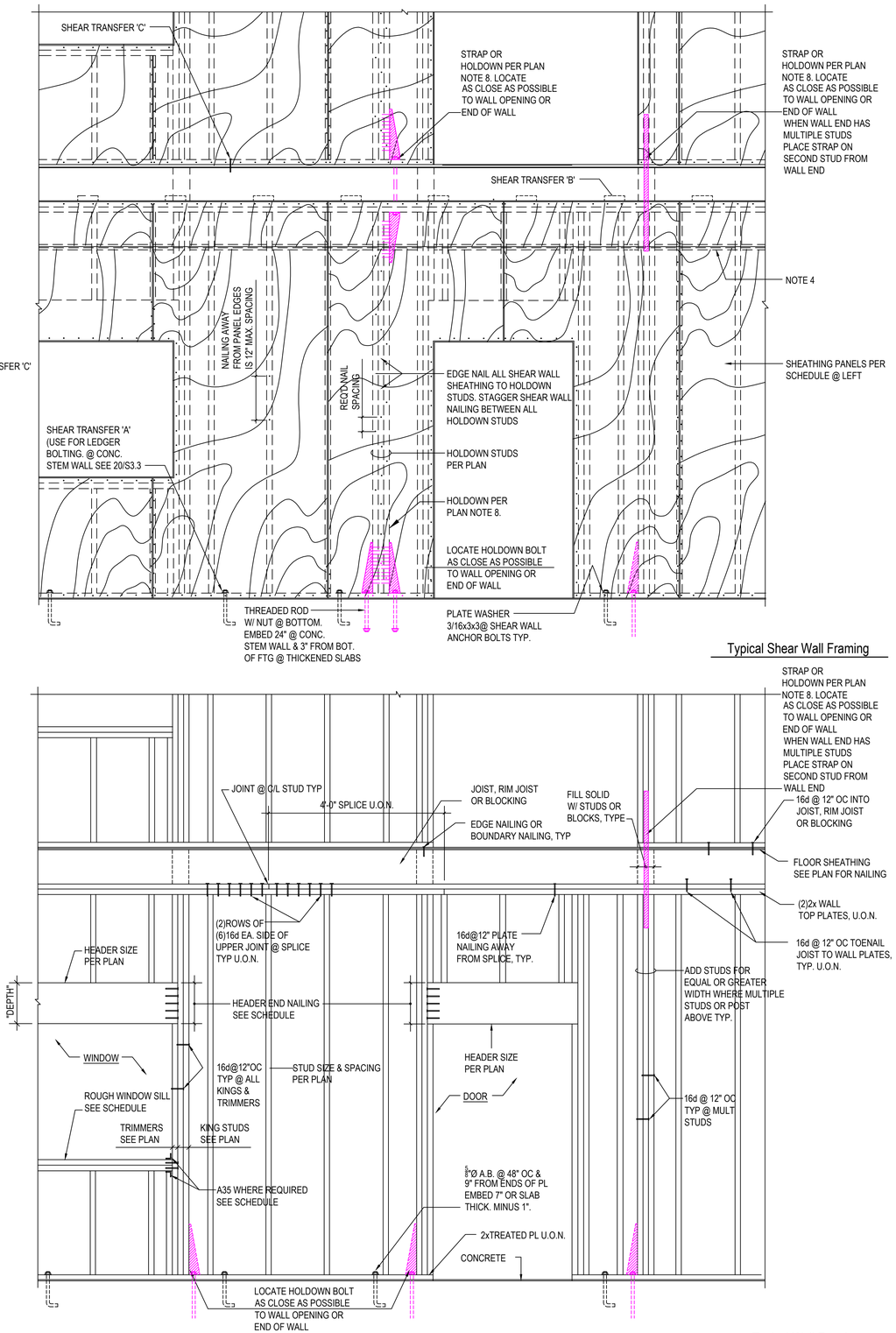
HEADER END NAILING	
NOMINAL DEPTH	END ATTACHMENT
4	(4)16d
6	(6)16d
8	(8)16d
10	(10)16d
12	(12)16d
14	(14)16d
16	(16)16d
18	(18)16d

ROUGH WINDOW SILL			
HORIZ ROUGH OPENING	NUMBER OF SILLS REQUIRED	END ATTACHMENT	REF.
0 TO 6'	1	(2)16d END NAIL	20/S6.1
> 6'	2	(2)16d END NAIL, +A35 EA END @ EA SILL	20/S6.1



MINIMUM NAILING SCHEDULE

CONNECTION	NAILS
1. Joist to sill or girder, toenail	(3) 8d
2. Bridging to joist, toenail each end	(2) 8d
3. 1" x 6" sub floor or less to each joist, face nail	(2) 8d
4. Wider than 1"x6" sub floor to each joist, face nail	(3)8d
5. 2" subfloor to joist or girder, blind and face nail	(2)16d
6. Sole plate to joist or blocking, typical face nail	16d at 16" o.c.
Sole plate to joist or blocking, at braced wall panels	(3)16d per 16"
7. Top plates to stud, end nail	(4)16d
8. Stud to sole plate	(4)8d, toenail or (2) 16d, end nail
9. Double stud, face nail	16d at 24" o.c.
10. Double top plates, typical face nail	16d at 16" o.c.
Double top plates, lap splice	(8)16d
11. Blocking between joist or rafters to top plate, toenail	(3)8d
12. Rim joist to top plate, toenail	8d at 6" o.c.
13. Top plates, laps and intersections, face nail	(2)16d
14. Continuous header, two pieces	16d at 16" o.c. along each edge
15. Ceiling joist to plate, toenail	(3)8d
16. Continuous header to studs, toenail	(4)8d
17. Ceiling joist, lap over partitions face nail	(3)16d
18. Ceiling joist to parallel rafters, face nail	(3)16d
19. Rafter to plate, toenail	(3)8d
20. 1" brace to each stud and plate, face nail	(2)8d
21. 1"X8" sheathing or less to each bearing , face nail	(2)8d
22. Wider than 1"x8" sheathing to each bearing face nail	(5)8d
23. Built up corner studs	16d at 24" o.c.
24. Built up girder and beams	



Typical Shear Wall Framing

Typical Wall Framing
Scale: N.T.C.

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

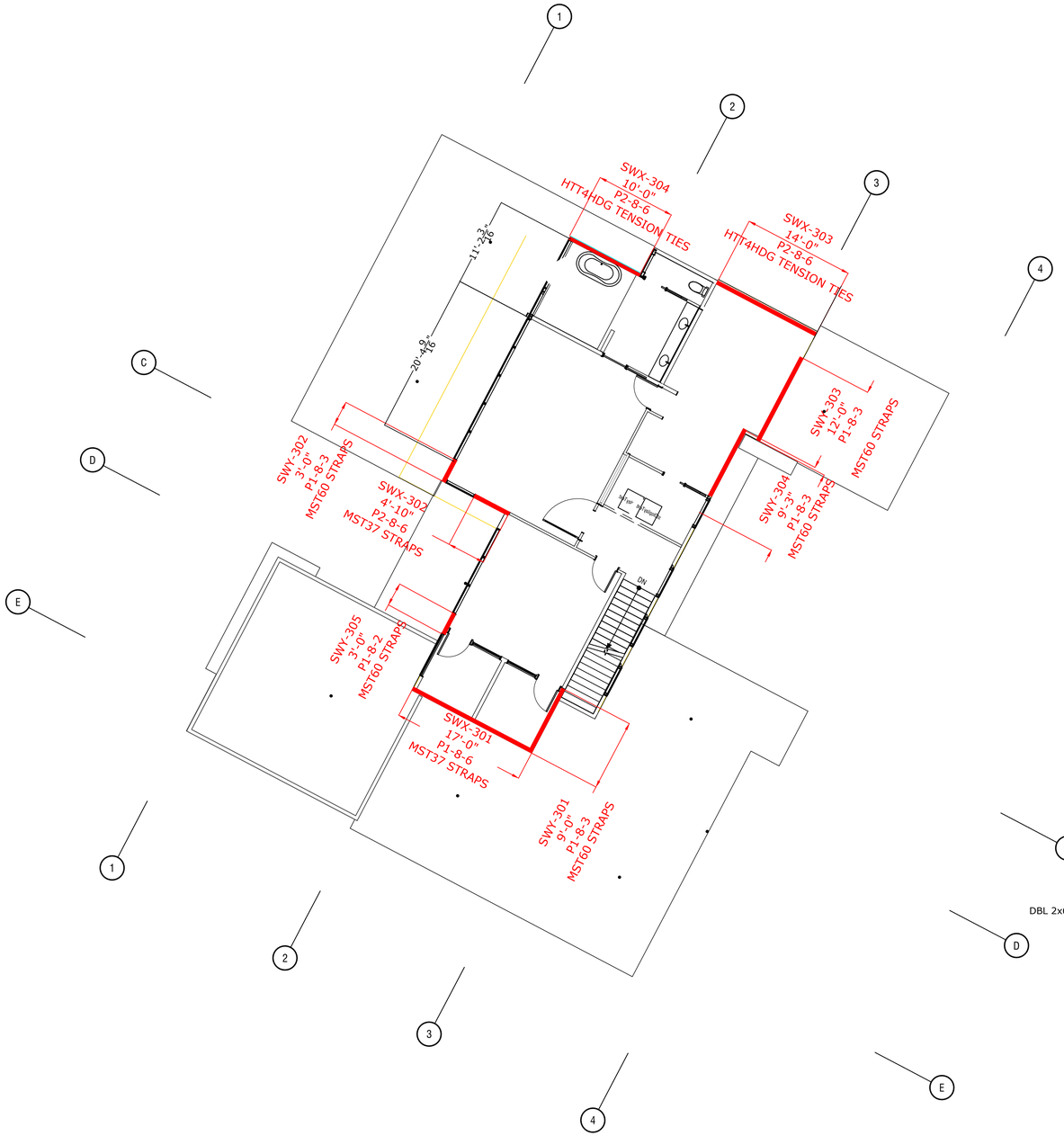
Shear Wall Details

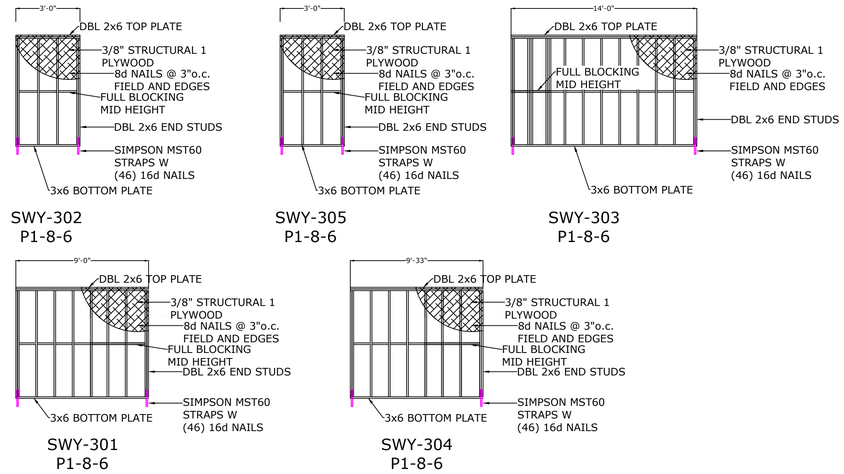
LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

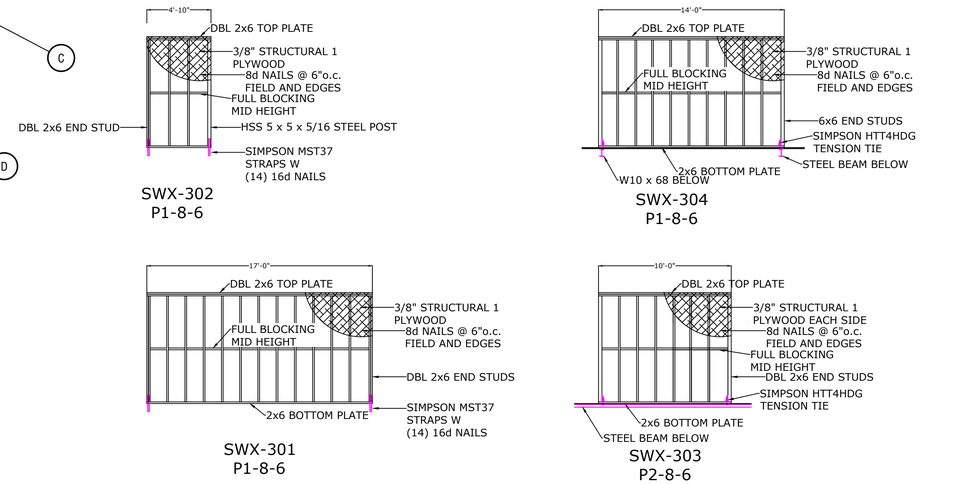
JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-6.0







SECOND FLOOR LEVEL - SHEAR WALLS

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Second Level
Shear Walls

LUCIA ENGINEERING, INC.
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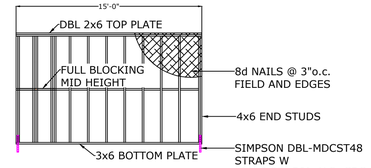
JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

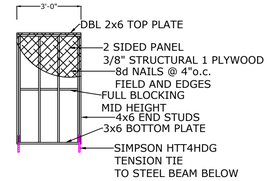
Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-7.0

FIRST FLOOR LEVEL - SHEAR WALLS



SWY-203
P1-8-6



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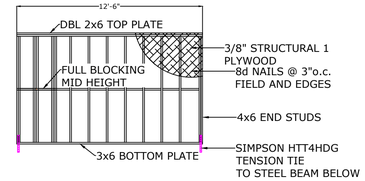

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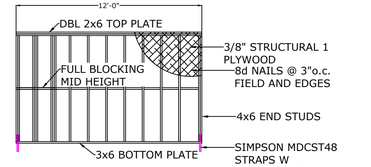

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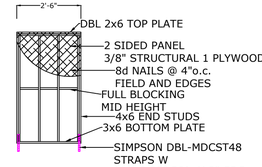
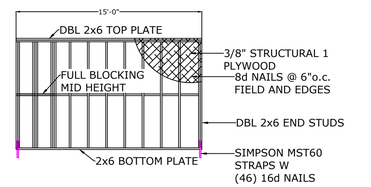


SWY-202
P1-8-6

SWX-203
P1-8-6

SWX-206
P1-8-6



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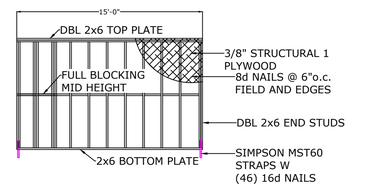

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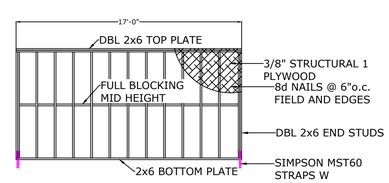

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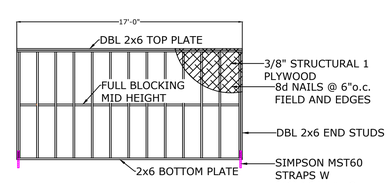

SWX-202
P1-8-6

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

First Level
Shear Walls

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
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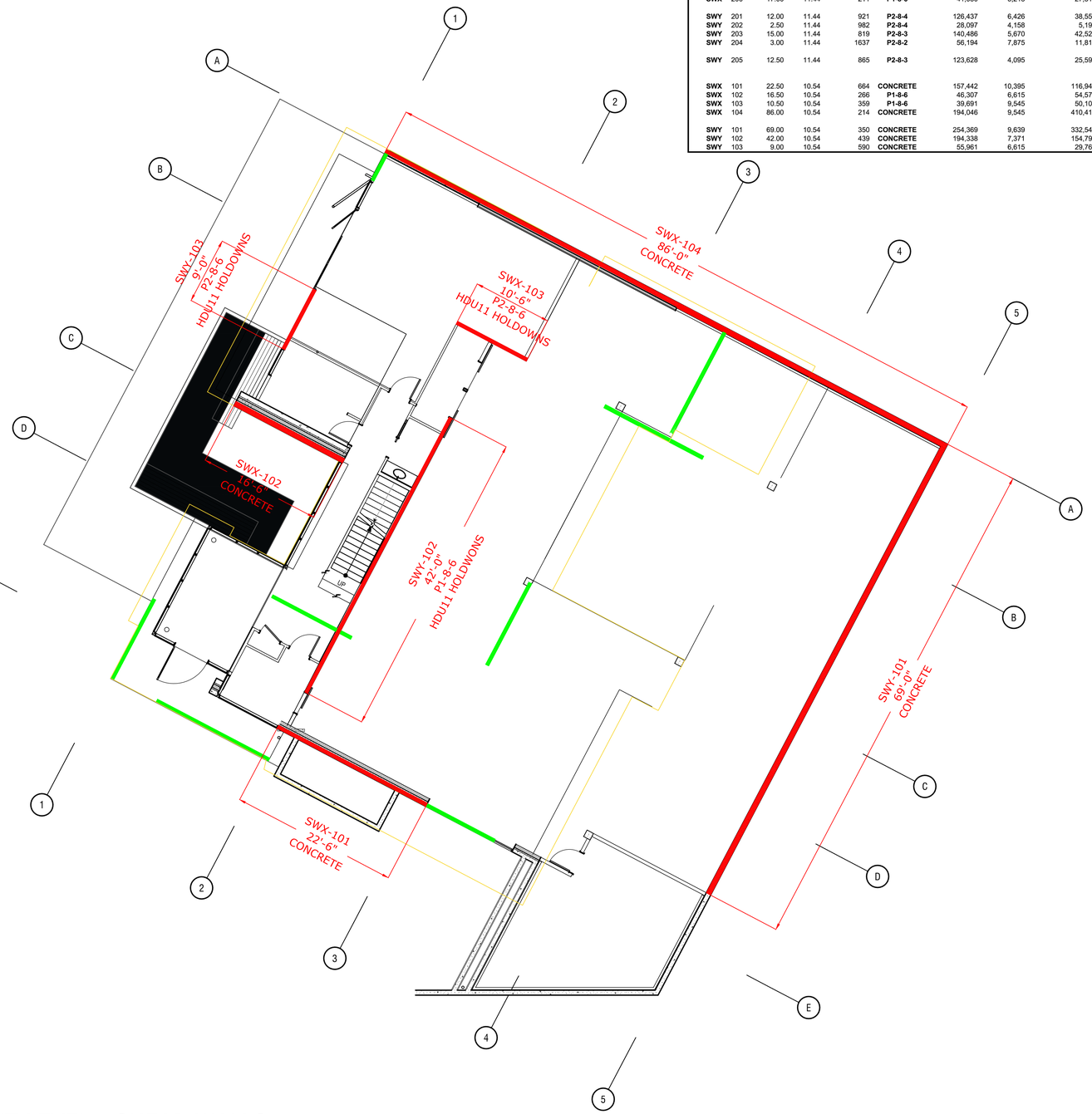
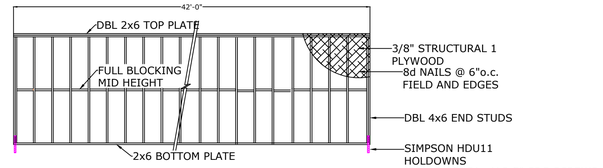
JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

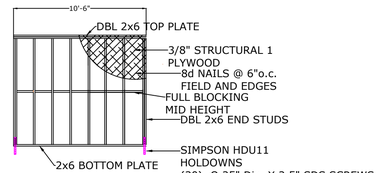
SHEET
S-8.0

Shear Wall Designation		Length	Height	Shear Loading	Shear Wall Type	Overturning Moment	60% Dead Load	Resisting Moment	Strap Load From Above	Strap/Holdown Load	Strap/Holdown Type	Uplift Resistance Provided	Notes:
SWX	301	17.00	8.00	145	**P1-8-6**	19,653	3,465	29,453		952	**MST37**	2,140	**(14) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWX	302	4.83	8.00	324	**P1-8-6**	12,506	2,205	5,325		2,133	**MST37**	2,140	**(14) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWX	303	10.00	8.00	226	**P1-8-6**	18,045	3,182	15,908		1,486	**MST37**	2,140	**(14) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWX	304	17.00	8.00	133	**P1-8-6**	18,045	3,182	27,043		874	**MST37**	2,140	**(14) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWY	301	9.00	8.00	632	**P1-8-3**	45,486	3,213	14,459		4,697	**MST60**	5,405	**(46) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWY	302	3.00	8.00	557	**P1-8-3**	13,378	945	1,418		4,144	**MST60**	5,405	**(46) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWY	303	12.00	8.00	697	**P1-8-3**	66,891	4,725	28,350		5,180	**MST60**	5,405	**(46) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWY	304	9.33	8.00	597	**P1-8-3**	44,594	3,150	14,895		4,442	**MST60**	5,405	**(46) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWY	305	3.00	8.00	557	**P1-8-3**	13,378	945	1,418		4,144	**MST60**	5,405	**(46) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWX	201	17.00	11.44	211	**P1-8-6**	41,080	6,930	58,905	952	2,961	**HDQ8**	4,915	**7/8" Dia. Anchor Bolt, (20) 1/4" x 3" SDS SCREWS**
SWX	202	17.00	11.44	211	**P1-8-6**	41,080	4,410	37,485	2,133	4,290	**HDQ8**	4,915	**7/8" Dia. Anchor Bolt, (20) 1/4" x 3" SDS SCREWS**
											MST60	5,405	**(46) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWX	203	12.00	11.44	289	**P1-8-6**	39,639	6,363	38,178	1,486	4,259	**HDQ8**	4,915	**7/8" Dia. Anchor Bolt, (20) 1/4" x 3" SDS SCREWS**
SWX	204	15.00	11.44	235	**P1-8-6**	40,359	6,363	47,723	874	3,141	**MST60**	5,405	**(46) 16d NAILS x 2.5" - DBL 2 x 6 END STUDS**
SWX	205	15.00	11.44	235	**P1-8-6**	40,359	-	-	-	2,691	**HDQ8**	4,915	**7/8" Dia. Anchor Bolt, (20) 1/4" x 3" SDS SCREWS**
SWX	206	17.00	11.44	211	**P1-8-6**	41,080	3,213	27,311	4,697	6,924	**HDQ8**	4,915	**7/8" Dia. Anchor Bolt, (20) 1/4" x 3" SDS SCREWS**
SWY	201	12.00	11.44	921	**P2-8-4**	126,437	6,426	38,556	4,697	14,698	**DBL HHDQ11**	16,850	**1" Dia. Anchor Bolt, (24) 1/4" x 2.5" SDS SCREWS**
SWY	202	2.50	11.44	982	**P2-8-4**	28,097	4,158	5,198	4,697	14,273	**DBL HHDQ11**	16,850	**1" Dia. Anchor Bolt, (24) 1/4" x 2.5" SDS SCREWS**
SWY	203	15.00	11.44	819	**P2-8-3**	140,486	5,670	42,525	4,144	13,132	**HHDQ11**	11,810	**1" Dia. Anchor Bolt, (24) 1/4" x 2.5" SDS SCREWS**
SWY	204	3.00	11.44	1637	**P2-8-2**	56,194	7,875	11,813	5,180	21,287	**DBL MDCST48**	22,624	**(44) 0.25" Dia. x 3" SDS SCREWS - 4 x 6 END STUDS**
											HDQ8	4,915	**7/8" Dia. Anchor Bolt, (20) 1/4" x 3" SDS SCREWS**
SWY	205	12.50	11.44	865	**P2-8-3**	123,628	4,095	25,594	4,442	14,005	**DBL MDCST48**	22,624	**(44) 0.25" Dia. x 3" SDS SCREWS - 4 x 6 END STUDS**
											HDQ8	4,915	**7/8" Dia. Anchor Bolt, (20) 1/4" x 3" SDS SCREWS**
SWX	101	22.50	10.54	664	**CONCRETE**	157,442	10,395	116,944	2,961	9,496	**Concrete Stem Wall**		
SWX	102	16.50	10.54	266	**P1-8-6**	46,307	6,615	54,574	4,290	6,695	**HDU11**	8,030	**(30) 0.25" Dia. X 2.5" SDS SCREWS - 4 x 6 END STUDS**
SWX	103	10.50	10.54	359	**P1-8-6**	39,691	9,545	50,109	4,259	7,130	**HDU11**	8,030	**(30) 0.25" Dia. X 2.5" SDS SCREWS - 4 x 6 END STUDS**
SWX	104	86.00	10.54	214	**CONCRETE**	194,046	9,545	410,414	3,141	5,286	**Concrete Stem Wall**		
SWY	101	69.00	10.54	350	**CONCRETE**	254,369	9,639	332,546	14,698	18,245	**Concrete Stem Wall**		
SWY	102	42.00	10.54	439	**CONCRETE**	194,338	7,371	154,791	14,698	19,150	**Concrete Stem Wall**		
SWY	103	9.00	10.54	590	**CONCRETE**	55,961	6,615	29,768	14,273	19,756	**Concrete Stem Wall**		





SWY-102
P1-8-6



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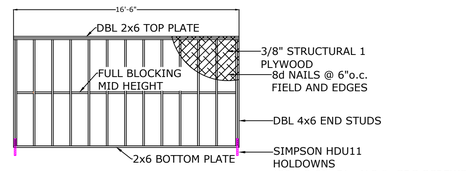

SWX-102
P1-8-6

GARAGE-BASEMENT LEVEL - SHEAR WALLS

LANZ RESIDENCE
8020 SE 57th Street
Mercier Island, WA 98040

Garage Level
Shear Walls

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Number	Date	By	Description
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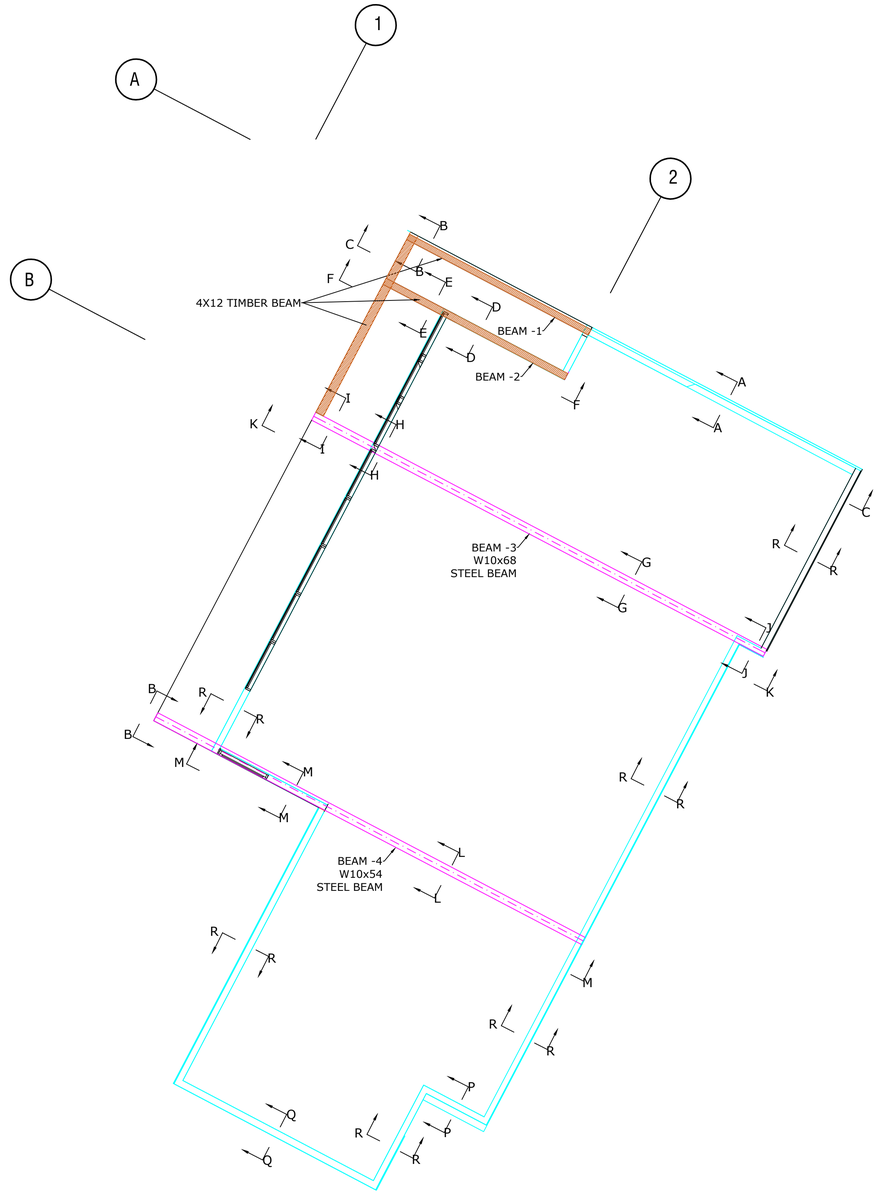
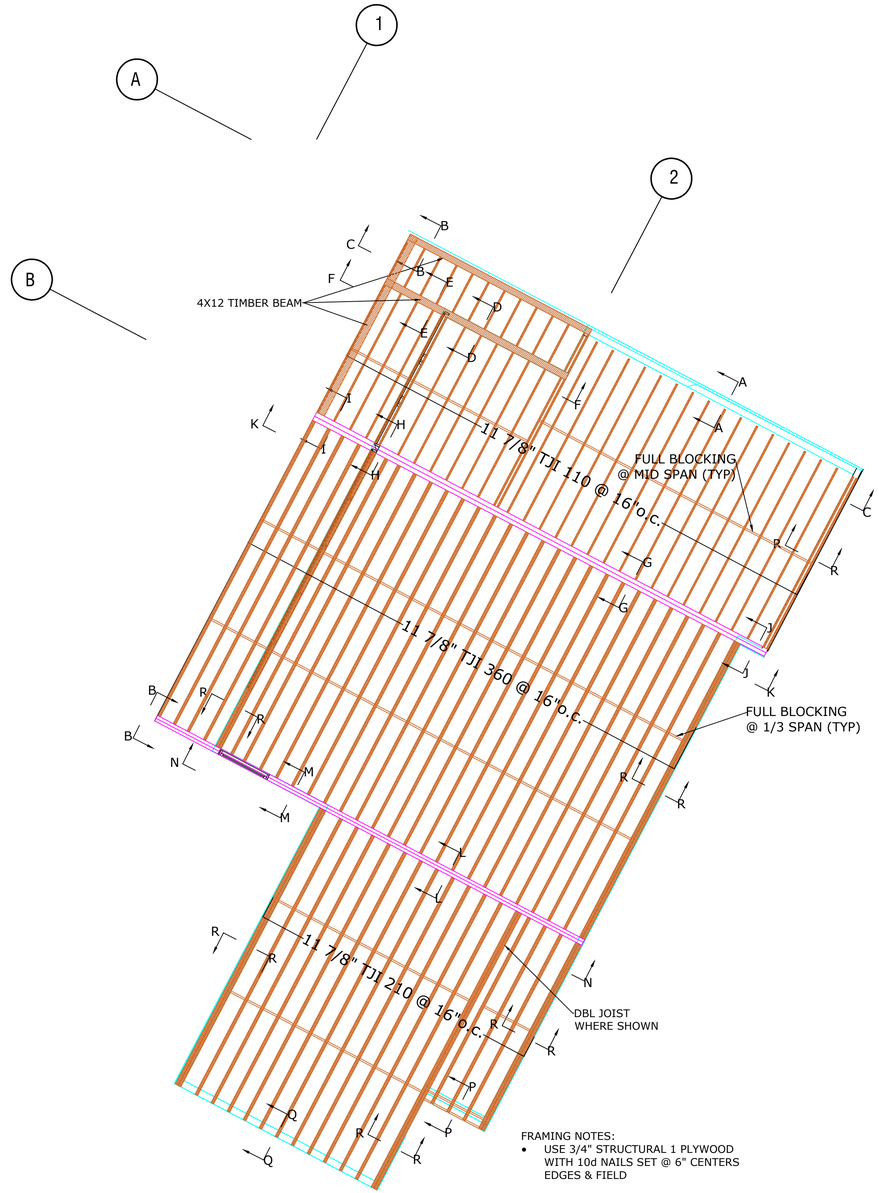
SHEET
S-9.0





FRAMING NOTES:

- USE 3/4" STRUCTURAL 1 PLYWOOD WITH 10d NAILS SET @ 6" CENTERS EDGES & FIELD

ROOF FRAMING

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Roof Framing Details

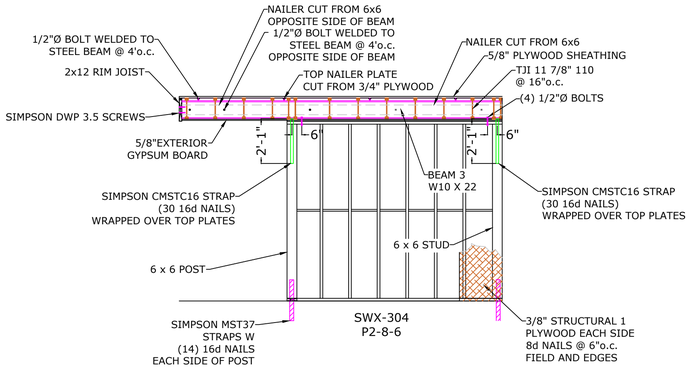
LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER

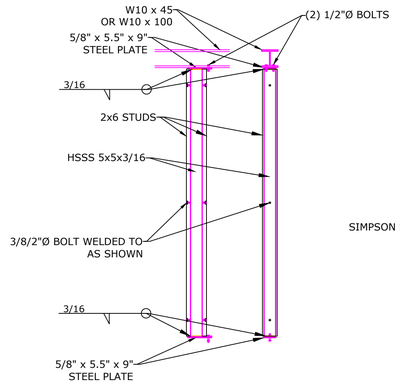
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

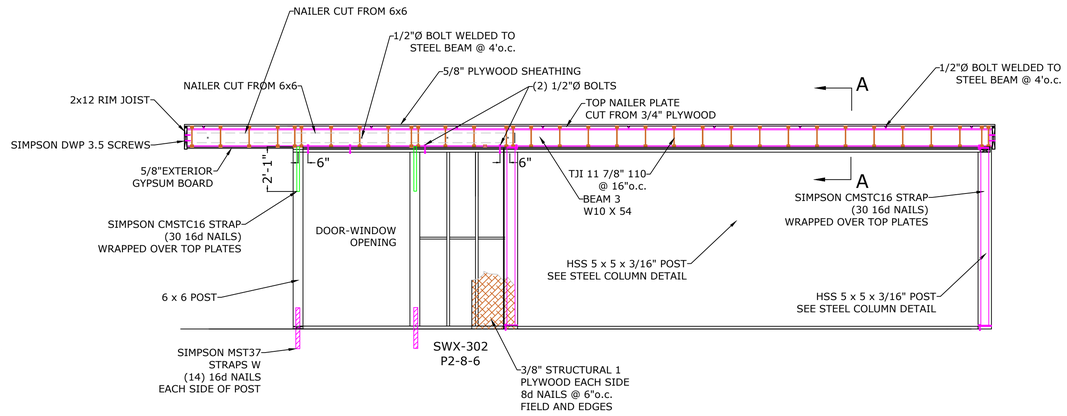
SHEET
S-10.0



SECTION F-F - BEAM 2



STEEL COLUMN DETAIL



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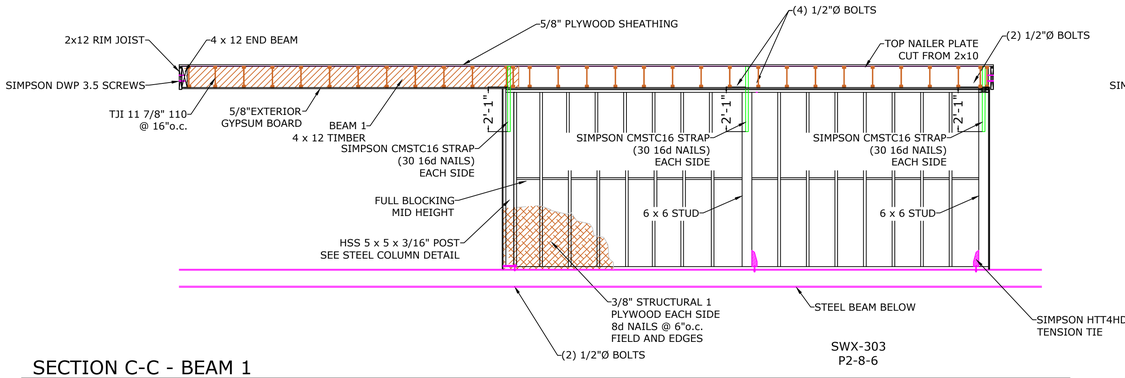
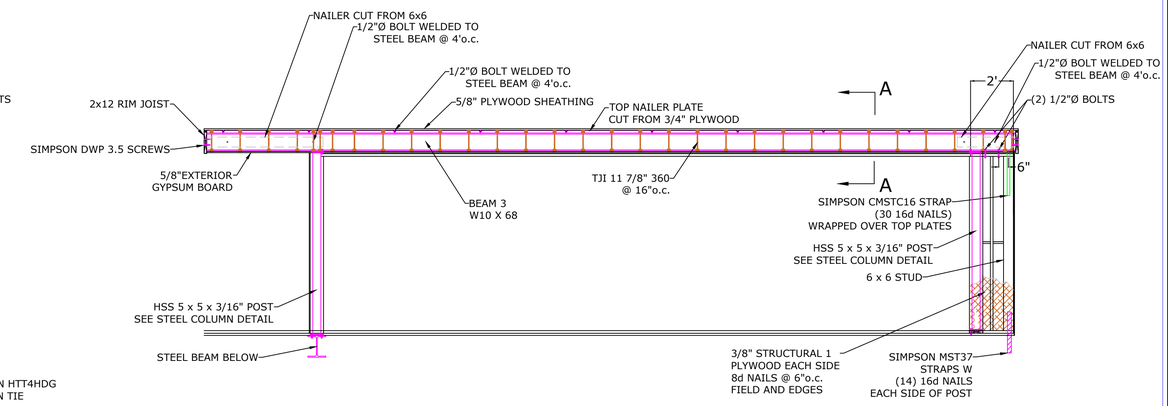


SECTION C-C - BEAM 1



SECTION K-K - BEAM 3

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Framing Sections

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
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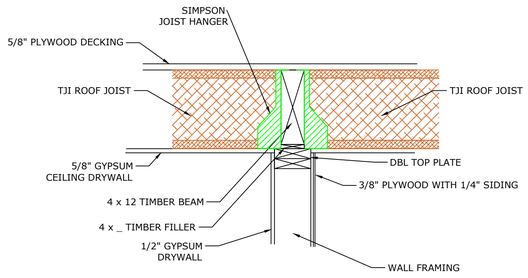
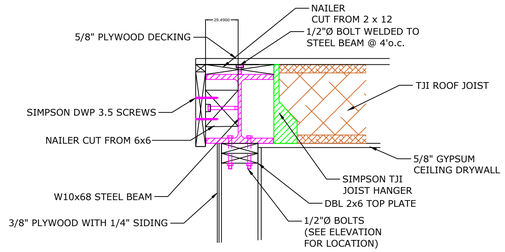
JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

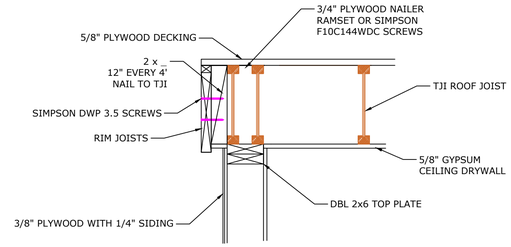
SHEET
S-10.1



SECTION E-E



SECTION J-J



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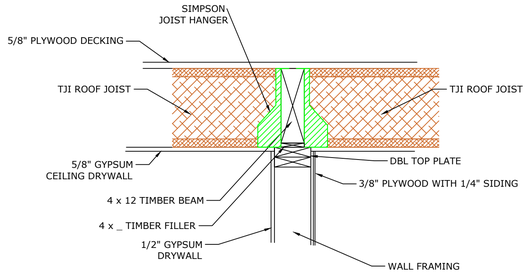
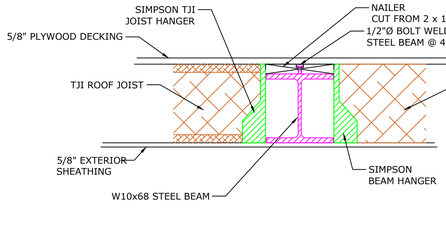
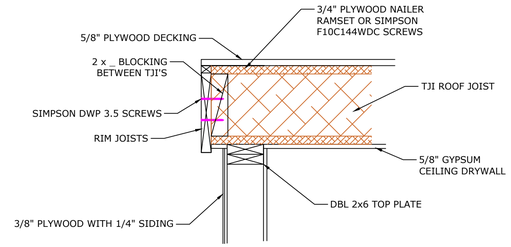


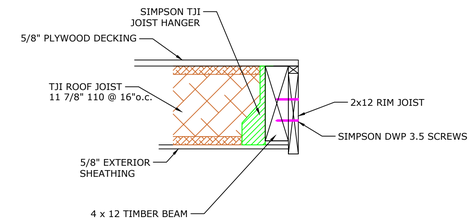
SECTION D-D



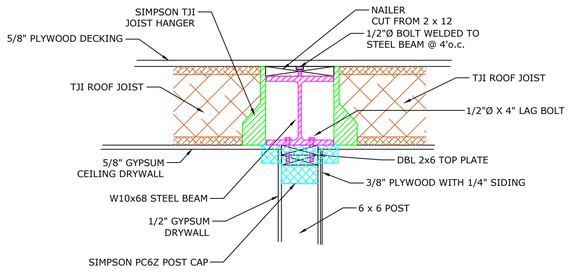
SECTION I-I



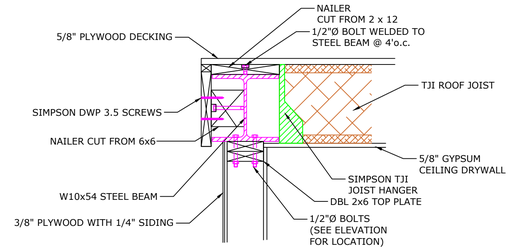
SECTION P-P & Q-Q



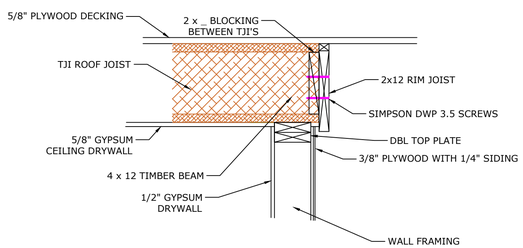
SECTION B-B



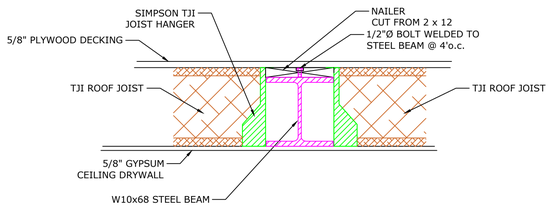
SECTION H-H



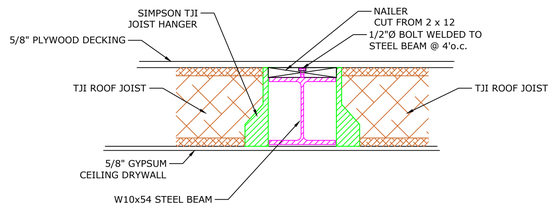
SECTION M-M



SECTION A-A



SECTION G-G



SECTION L-L

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

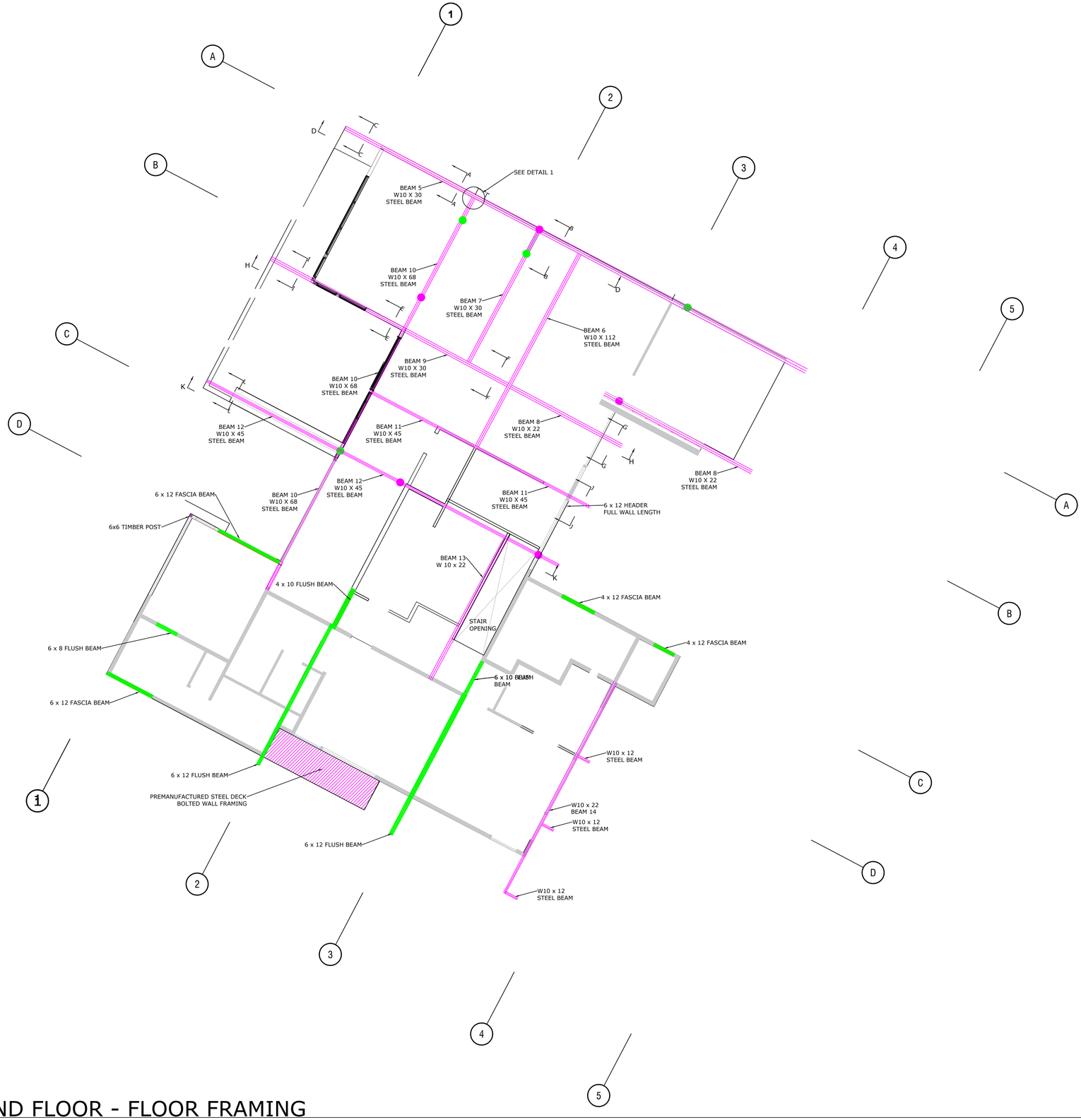
Framing Details

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-10.2



SECOND FLOOR - FLOOR FRAMING

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Second Level
Framing Details

LUCIA ENGINEERING, INC.
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JOSEPH M. LUCIA
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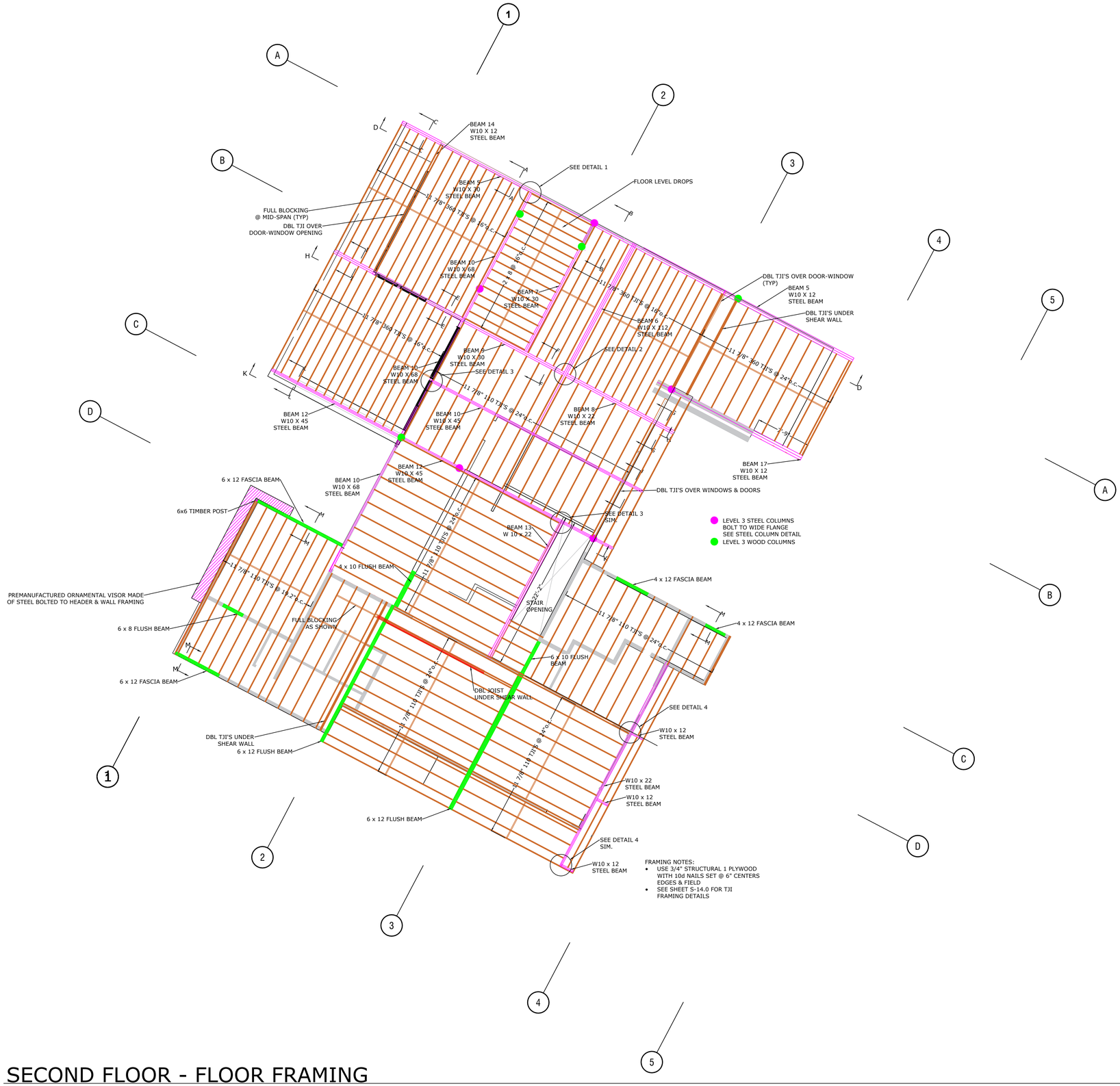
PROFESSIONAL ENGINEER

01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-11.0



SECOND FLOOR - FLOOR FRAMING

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Second Level
Floor Framing

LUCIA ENGINEERING, INC.
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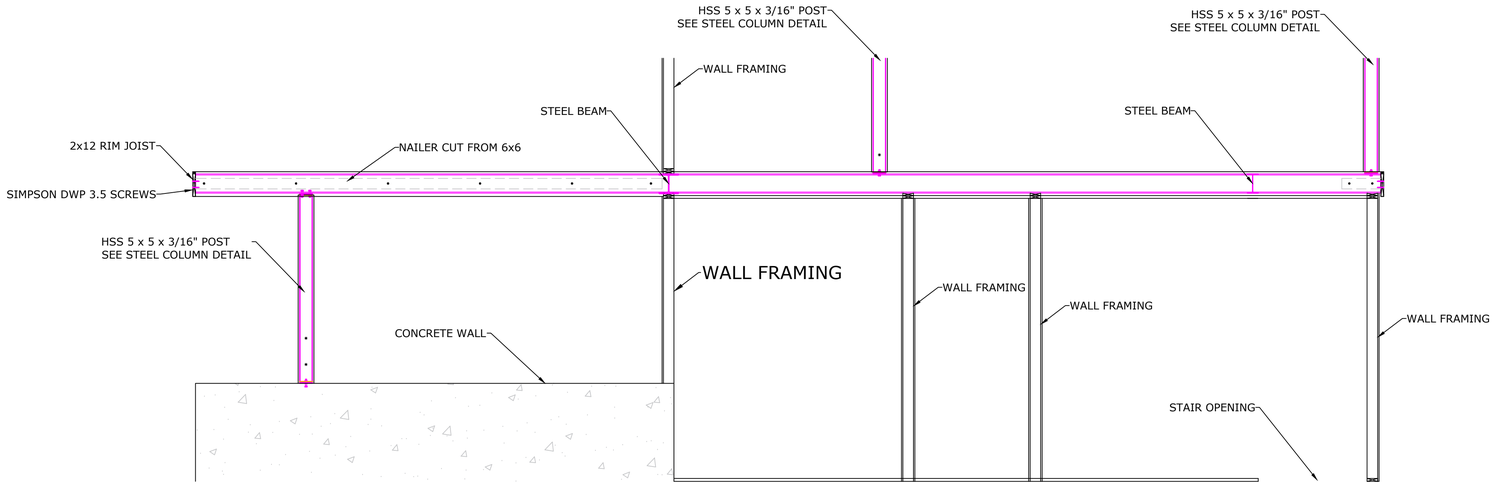
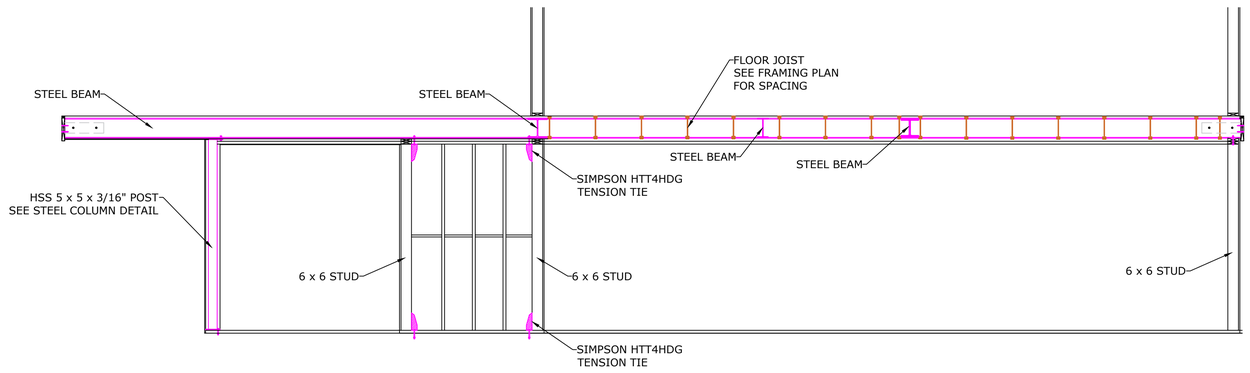
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

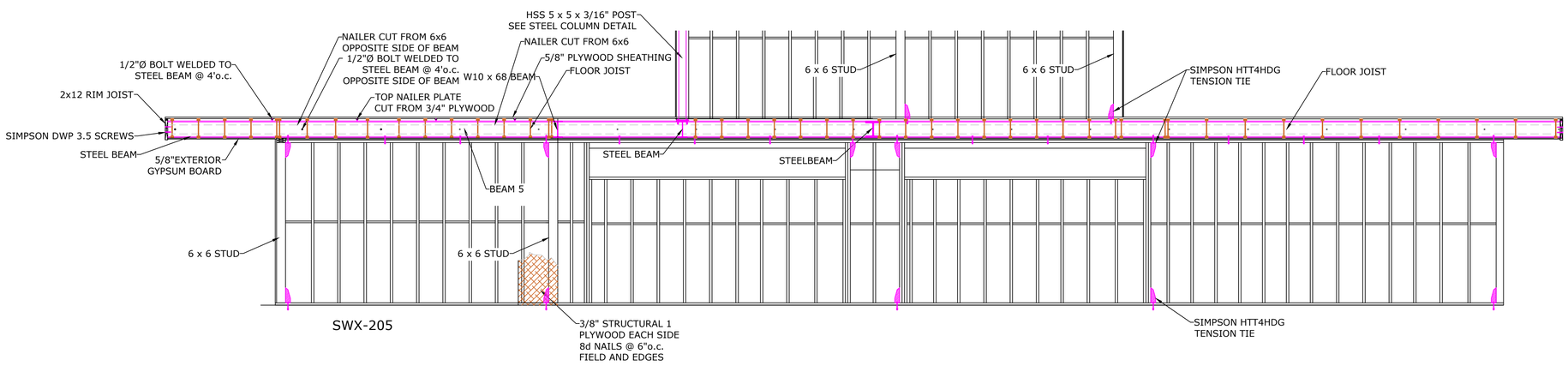
SHEET
S-11.1



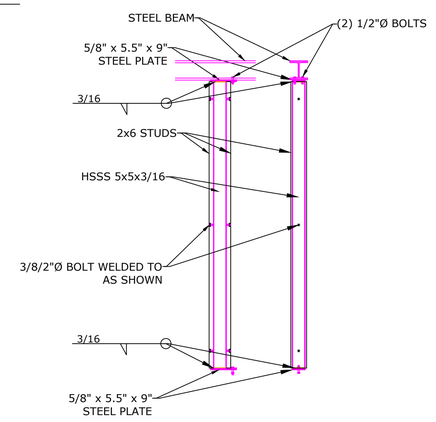
SECTION K-K - BEAM 12



SECTION H-H - BEAM 9



SECTION F-F - BEAM 5



STEEL COLUMN DETAIL

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Second Level
Sections

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
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JOSEPH M. LUCIA
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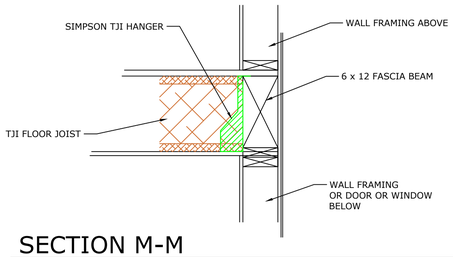
PROFESSIONAL ENGINEER

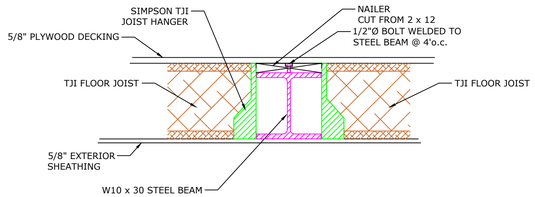
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

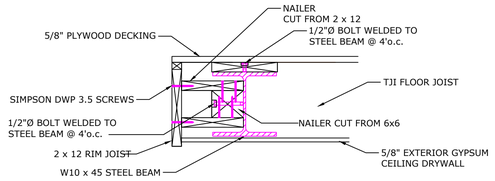
SHEET
S-11.2



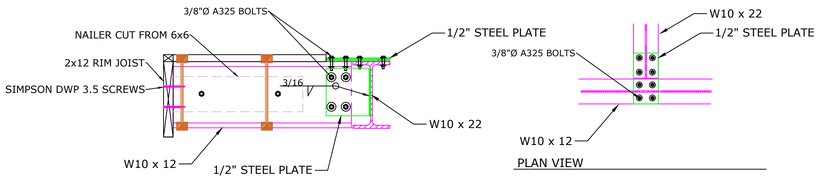
SECTION M-M



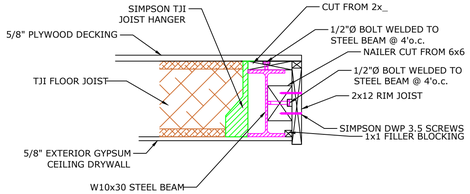
SECTION I-I



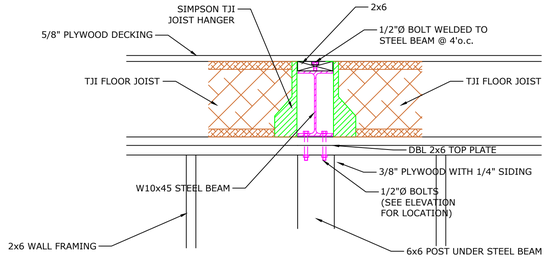
SECTION L-L



DETAIL 4

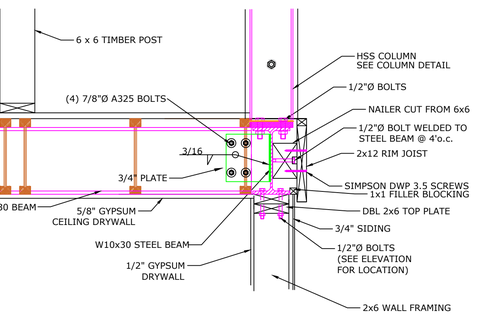


SECTION C-C

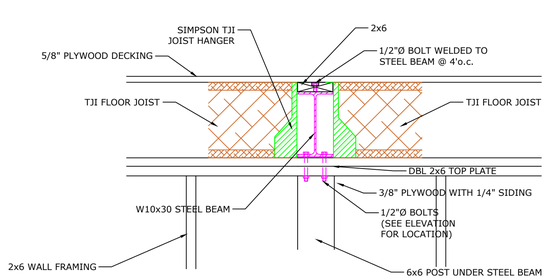


SECTION J-J

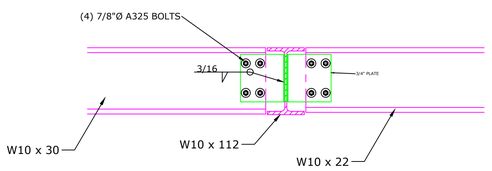
DETAIL 3



SECTION B-B

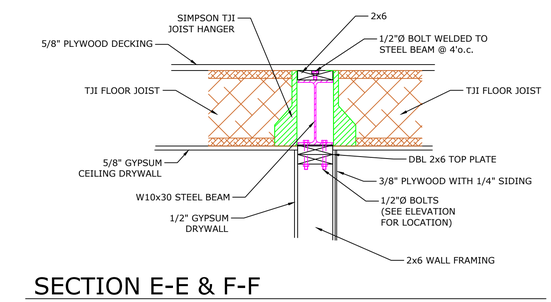


SECTION G-G

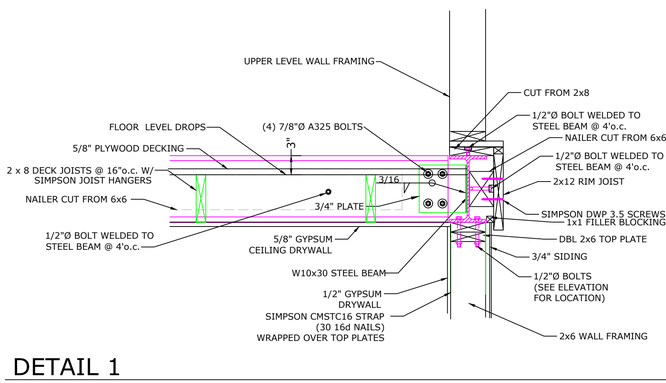


DETAIL 2

SECTION A-A



SECTION E-E & F-F



DETAIL 1

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Second Level
Framing Details

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-11.3

SECOND FLOOR - FLOOR FRAMING - SHEAR WALL CONNECTIONS

LANZ RESIDENCE
8020 SE 57th Street
Mercier Island, WA 98040

Second Level
Shear Wall
Connections

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
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JOSEPH M. LUCIA
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REGISTERED
PROFESSIONAL ENGINEER

01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-11.4

FIRST FLOOR - FLOOR FRAMING

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

First Level
Framing

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
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JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER

01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-12.0

FIRST FLOOR - FLOOR FRAMING

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

First Level
Floor Framing

LUCIA ENGINEERING, INC.
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JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-12.1

FIRST FLOOR - FLOOR FRAMING - SHEAR WALL CONNECTIONS

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

First Level
Shear Wall
Connections

LUCIA ENGINEERING, INC.
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JOSEPH M. LUCIA
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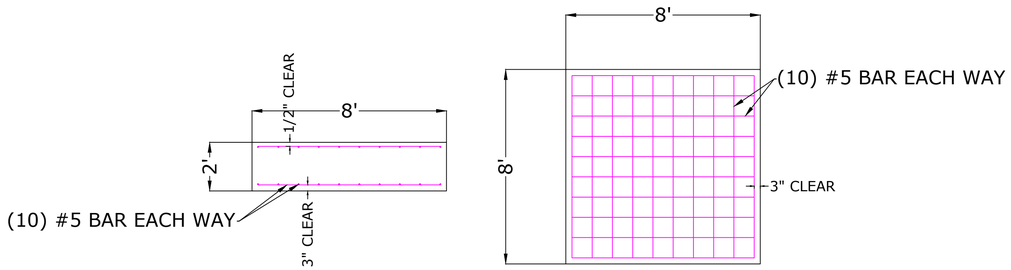
23314
REGISTERED
PROFESSIONAL ENGINEER

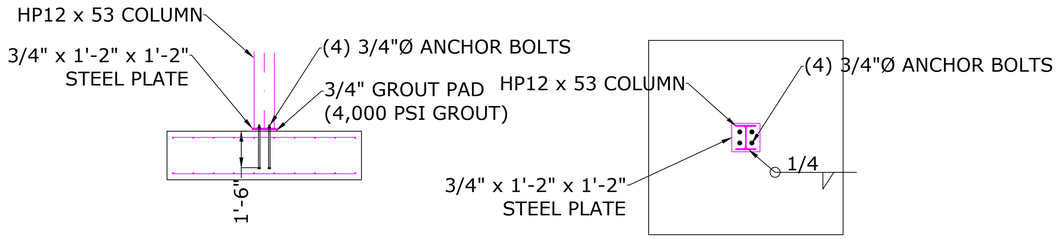
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

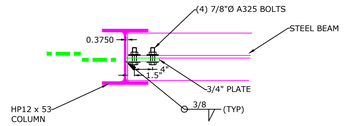
SHEET
S-12.3



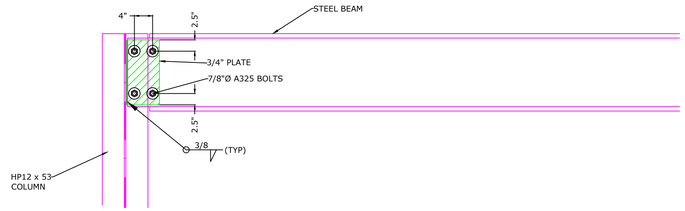
COLUMN FOOTING DETAIL



COLUMN TO FOOTING DETAIL

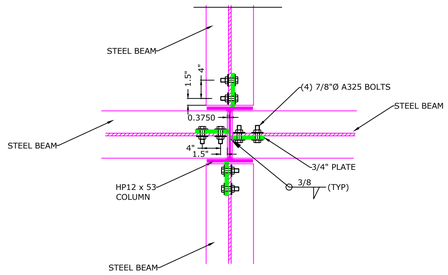


PLAN

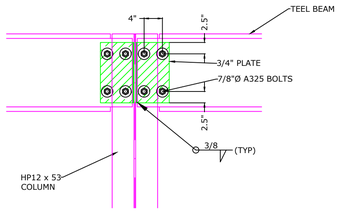


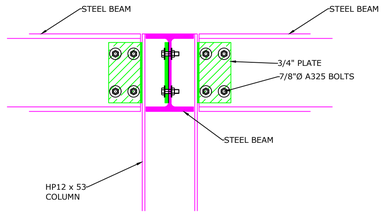
ELEVATION

DETAIL D



PLAN

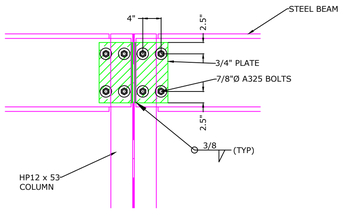


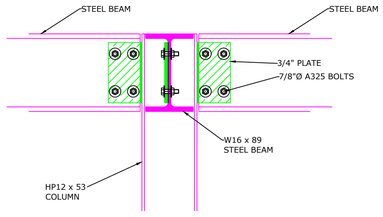


ELEVATION

DETAIL B

PLAN





ELEVATION

DETAIL C

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

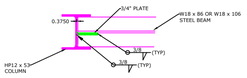
Steel Framing Details

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-12.4



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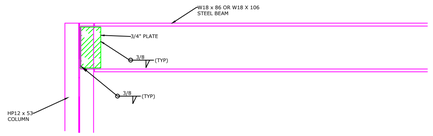
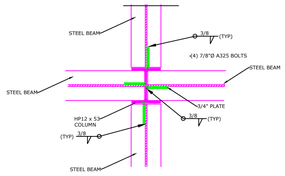
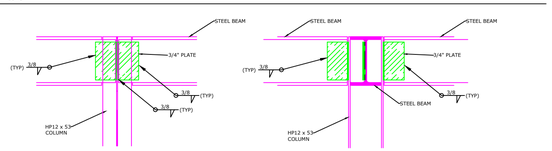


ELEVATION

DETAIL D

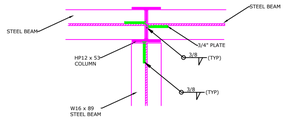


PLAN



ELEVATION

DETAIL B



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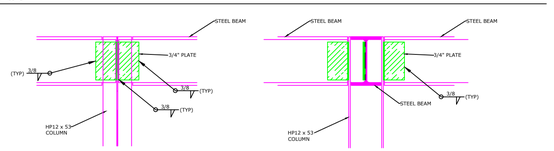
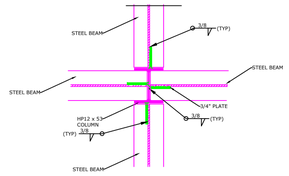


ELEVATION

DETAIL C



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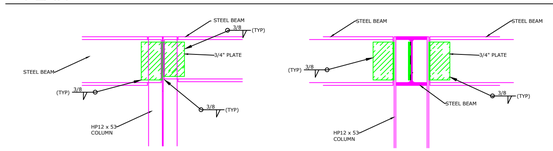
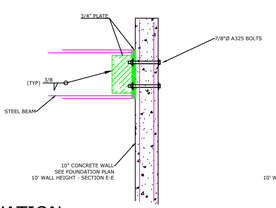
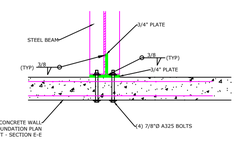


ELEVATION

DETAIL F

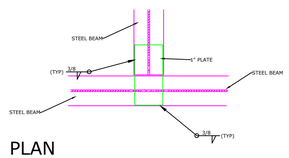


ELEVATION

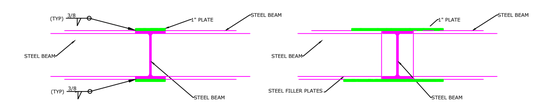


PLAN

DETAIL E



PLAN



ELEVATION

ALTERNATE WELDED CONNECTIONS

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Steel Framing Details

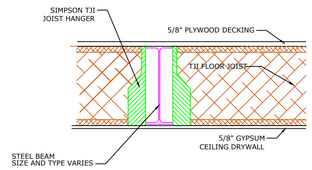
LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
PHONE: (206) 790-8039
E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
REGISTERED
PROFESSIONAL ENGINEER

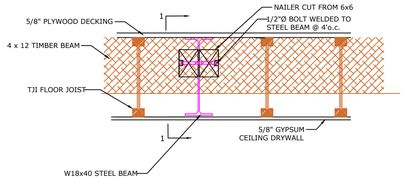
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

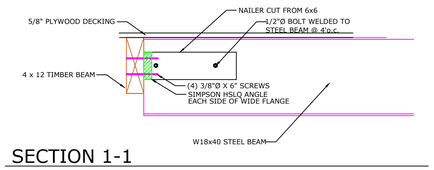
SHEET
S-12.5



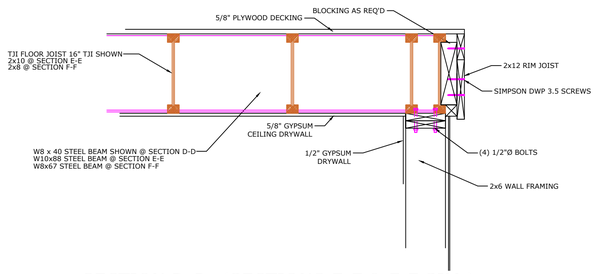
SECTION H-H



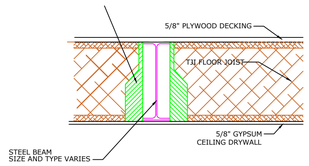
SECTION G-G



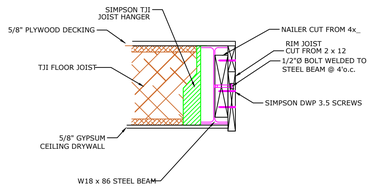
SECTION 1-1



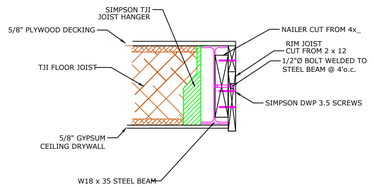
SECTION D-D (SECTIONS E-E & F-F SIM.)



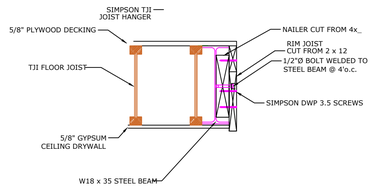
SECTION J-J



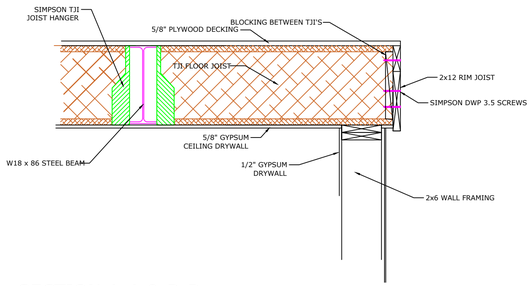
SECTION C-C



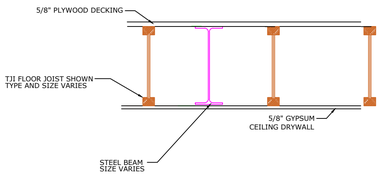
SECTION I-I (SECTION J-J, OPPOSITE HAND)



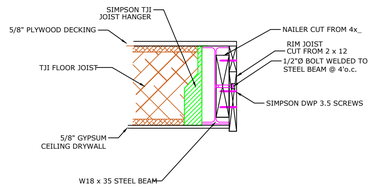
SECTION L-L



SECTION A-A & B-B



SECTION I-I



SECTION K-K

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

First Level
Framing Details

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
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E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
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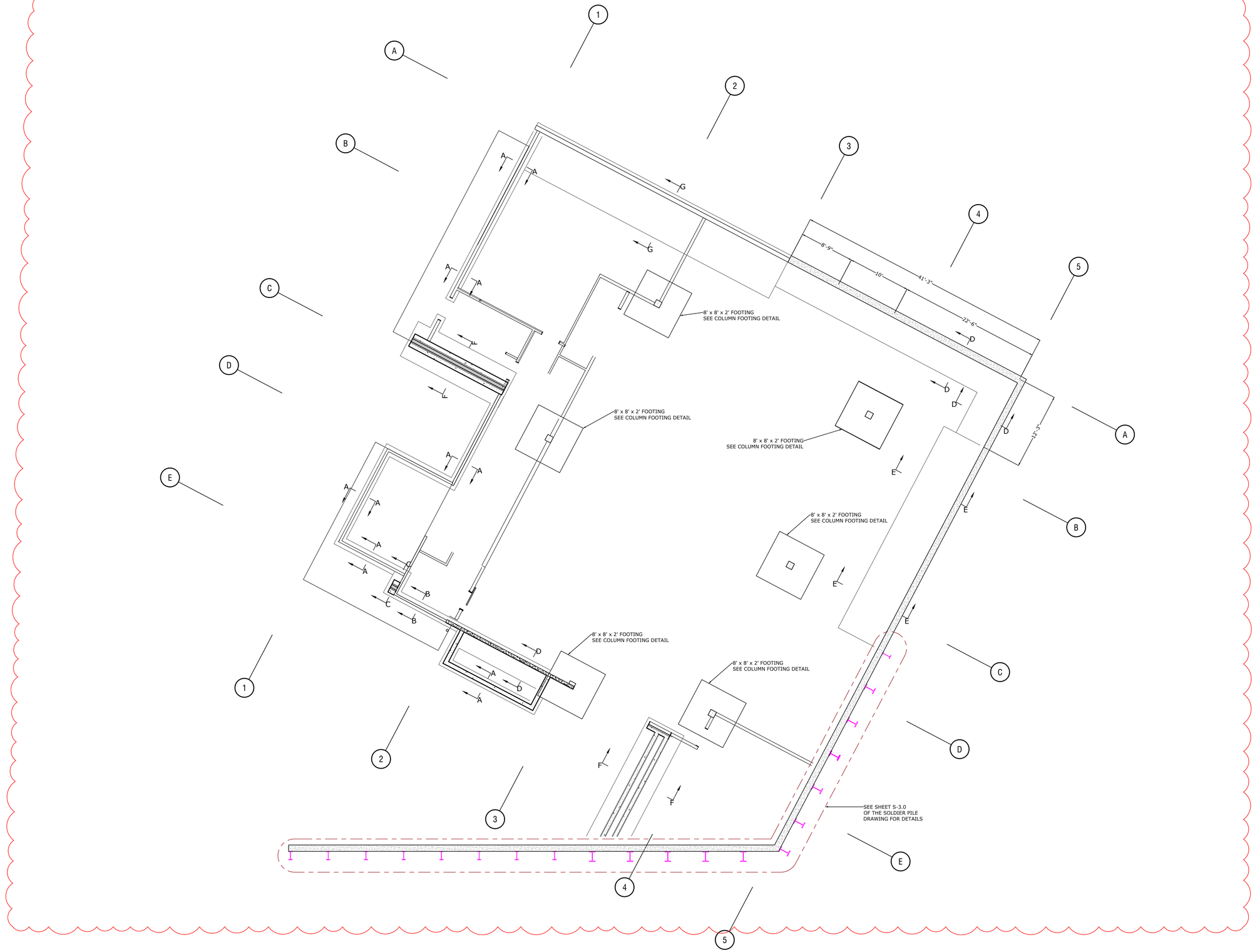
PROFESSIONAL ENGINEER

01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-12.6



FOUNDATION PLAN

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Foundation Plan

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
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JOSEPH M. LUCIA
STATE OF WASHINGTON
23314
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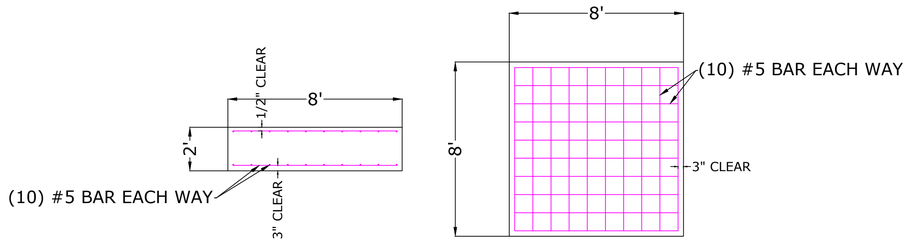
PROFESSIONAL ENGINEER

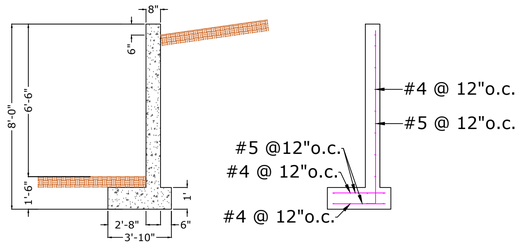
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

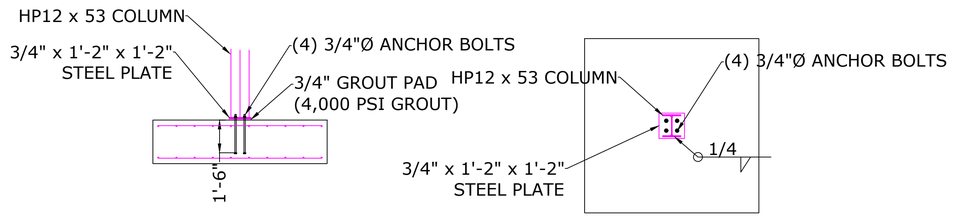
SHEET
S-13.0



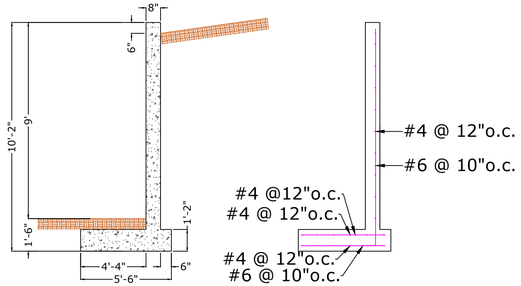
COLUMN FOOTING DETAIL



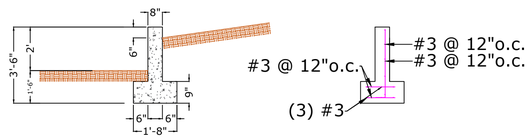
8' WALL HEIGHT DETAIL - SECTION C-C



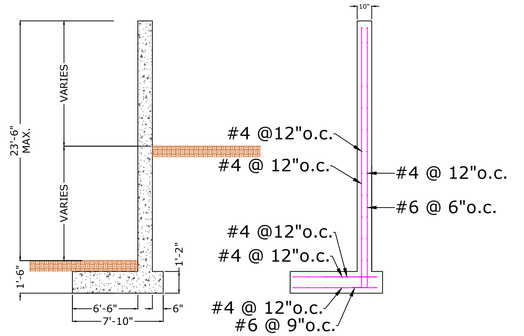
COLUMN TO FOOTING DETAIL



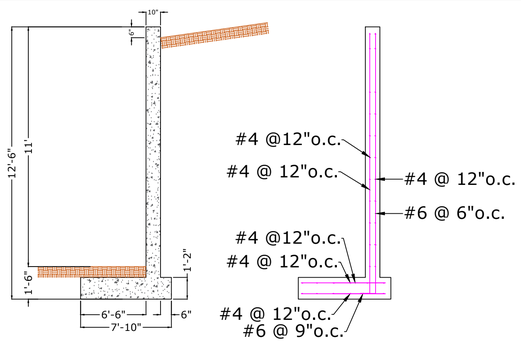
10.17' WALL HEIGHT DETAIL - SECTION D-D



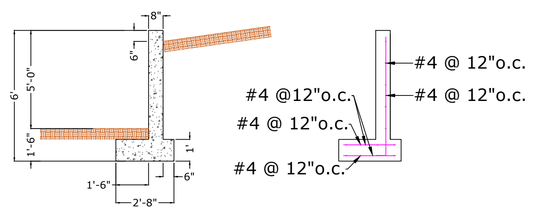
STANDARD FOOTING DETAIL - SECTION A-A



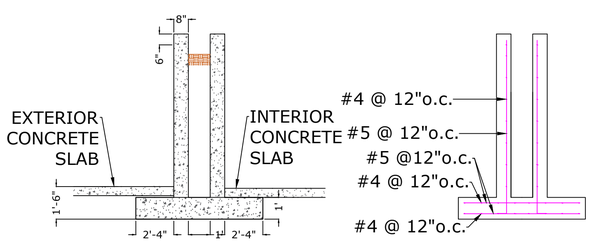
12.5' WALL HEIGHT DETAIL - SECTION G-G



12.5' WALL HEIGHT DETAIL - SECTION E-E



6' WALL HEIGHT DETAIL - SECTION B-B



CANTILEVERED WALLS WALL HEIGHT DETAIL - SECTION F-F

LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Foundation Wall Sections
Retaining Wall Sections

LUCIA ENGINEERING, INC.
12527 Huckleberry Lane
Arlington, Washington 98223
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E-MAIL: joe@luciaeng.com

JOSEPH M. LUCIA
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23314
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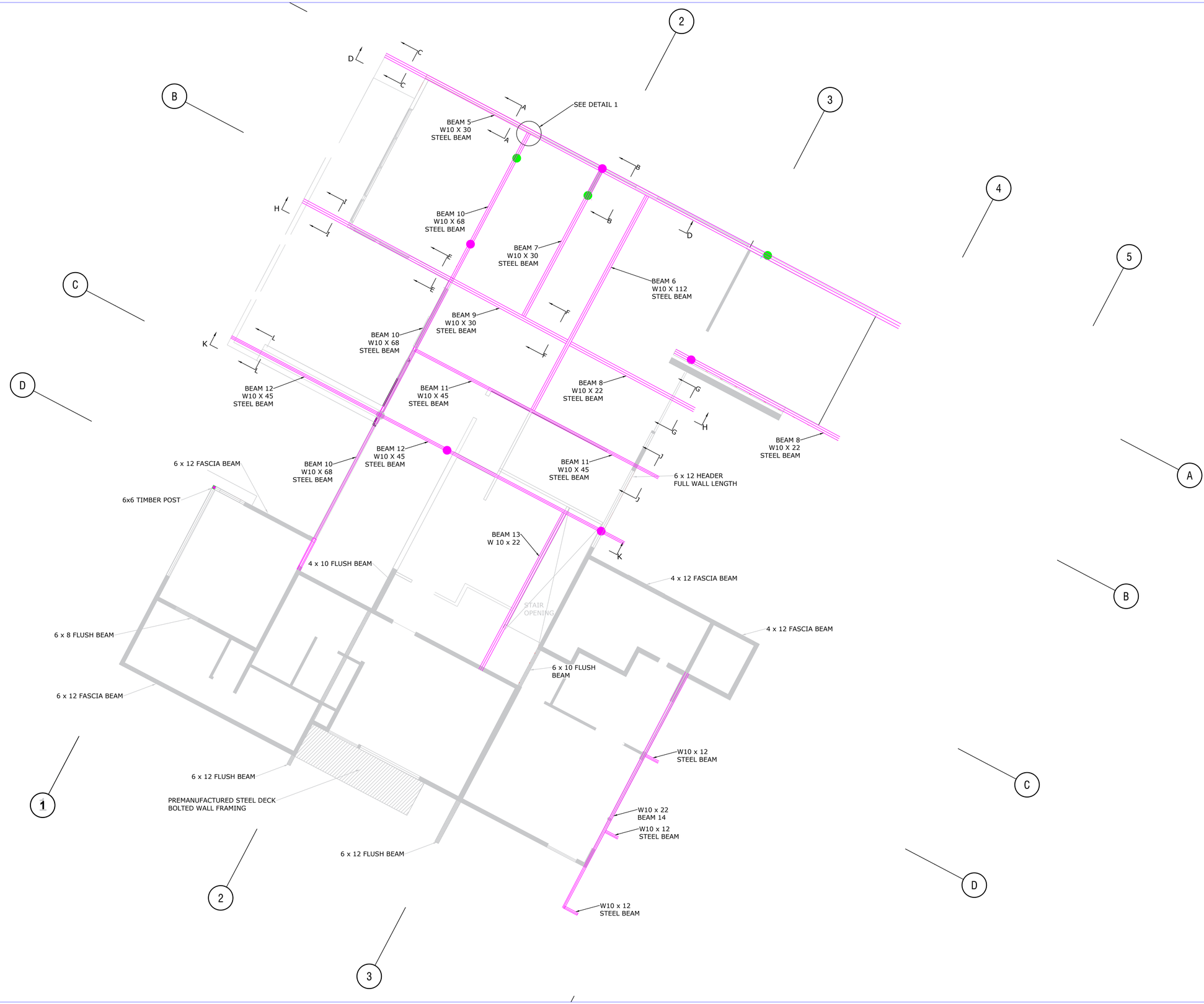
01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-13.1



LANZ RESIDENCE
8020 SE 57th Street
Mercer Island, WA 98040

Foundation Wall Sections
Retaining Wall Sections

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01-16-25

Number	Date	By	Description
7	01-16-25	JML	

SHEET
S-14.0