

# ABBREVIATIONS:

ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
BLW	BELOW
BOT	BOTTOM
BOW	BOTTOM OF WALL
CAB	CABINET
CL	CENTERLINE
CONC	CONCRETE
CONT	CONTINUOUS
CP	CENTERPOINT
DET	DETAIL
DIAM	DIAMETER
DIM	DIMENSION
DR	DOOR
DS	DOWNSPOUT
D/W	DISHWASHER
EA	EACH
EK	EXISTING
EXT	EXTERIOR
FOC	FACE OF CONCRETE
FOW	FACE OF WALL
FN GRDE	FINISHED GRADE
FNDN	FOUNDATION
FLR	FLOOR
FR	FIREPLACE
GA	GAUGE
GWB	GYPSUM WALL BOARD
HB	HOSE BIBB
HGT	HEIGHT
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
LV	LOW VOLTAGE
MTL	METAL
MFR	MANUFACTURER
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NFC	NOT FOR CONSTRUCTION
OC	ON CENTER
PL	PROPERTY LINE
RAD	RADIUS
RE	REFER TO
SIM	SIMILAR
TBD	TO BE DETERMINED
TG	TEMPERED GLASS
T&G	TONGUE & GROOVE
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VF	VERIFY IN FIELD
WD	WOOD
WDW	WINDOW

# DUTY OF COOPERATION:

RELEASE + ACCEPTANCE OF THESE DOCUMENTS INDICATES COOPERATION AMONG THE OWNER, THE CONTRACTOR, + JEFFREY ALMETER. ANY ERRORS, OMISSIONS, OR DISCREPANCIES DISCOVERED BY THE USE OF THESE DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO JEFFREY ALMETER. FAILURE TO DO SO SHALL RELIEVE JEFFREY ALMETER FROM ANY RESPONSIBILITY OF THE CONSEQUENCES.

ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT THE CONSENT OF JEFFREY ALMETER IS UNAUTHORIZED. FAILURE TO OBSERVE THESE PROCEDURES SHALL RELIEVE JEFFREY ALMETER OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING OUT OF SUCH ACTIONS.

# PLAN LEGEND:

	EXISTING WALL TO REMAIN
	NEW FULL-HEIGHT WALL
	NEW FULL-HEIGHT CONCRETE WALL
	PARTIAL-HEIGHT WALL
	PROPERTY LINE
	BUILDING / STRUCTURE ABOVE
	BUILDING / STRUCTURE BELOW
	CENTERLINE
	AREA OF DRAWING REVISION
	ELEVATION MARKER
	SECTION MARKER

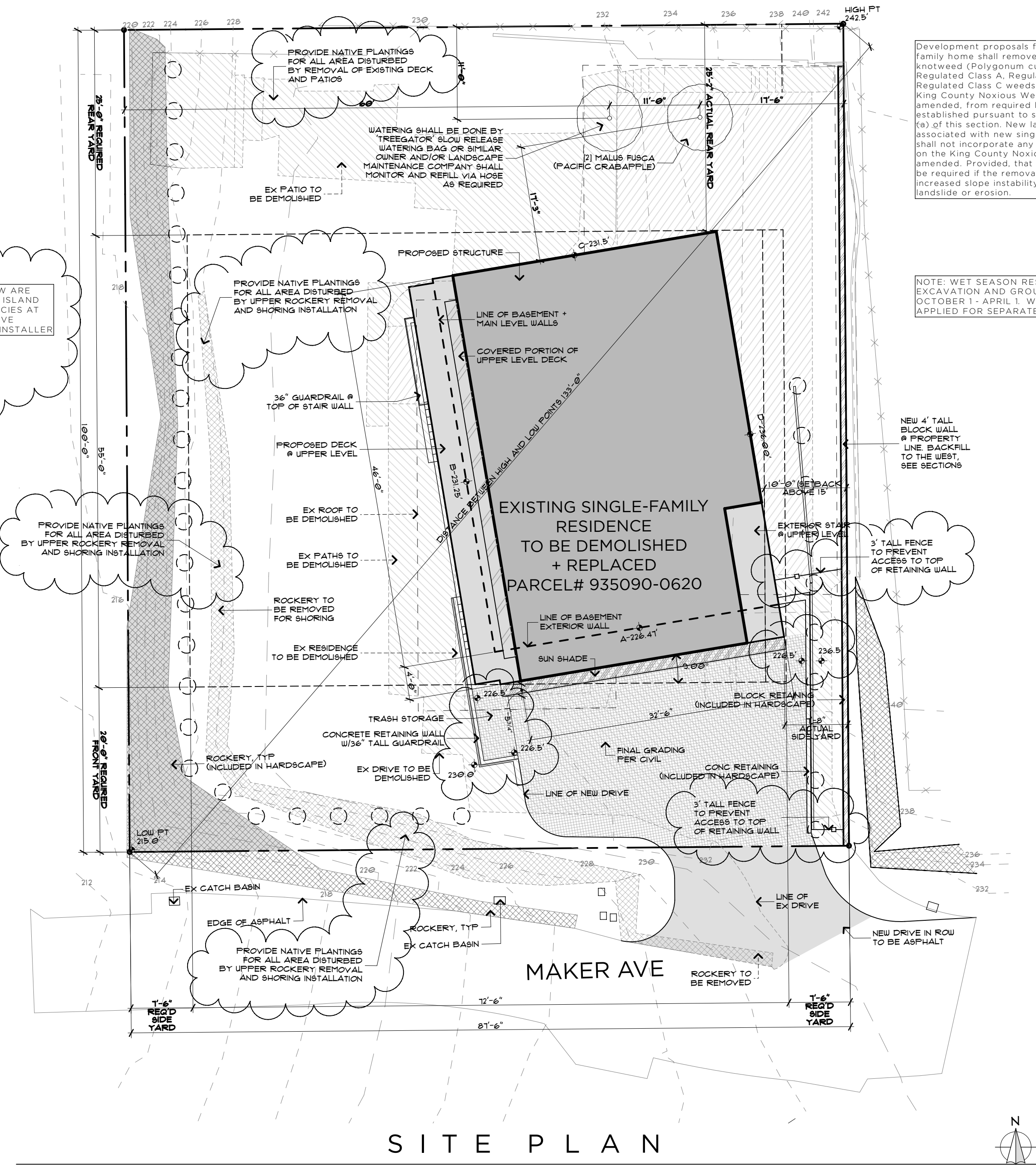
# GENERAL NOTES:

- DO NOT SCALE DRAWINGS.
- THIS PROJECT SHALL COMPLY WITH ALL GOVERNING REGULATIONS, ORDINANCES, BUILDING CODES, OR COVENANTS OF THE AREA IN WHICH IT IS BUILT.
- APPROVAL BY AN INSPECTOR DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE DRAWINGS OR SPECIFICATIONS.
- THE CONTRACTOR SHALL SCHEDULE WALK-THROUGHS AT EACH OF BELOW NOTED INTERVALS.
  - PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
  - PRIOR TO THE COMMENCEMENT OF ALL MECHANICAL + ELECTRICAL WORK.
- PROVIDE ALL NECESSARY BARRICADES, WARNING SIGNS, + DEVICES TO PROTECT PUBLIC + CONSTRUCTION PERSONNEL DURING CONSTRUCTION.
- MAINTAIN ALL REQUIRED ACCESS + EGRESS DURING CONSTRUCTION.

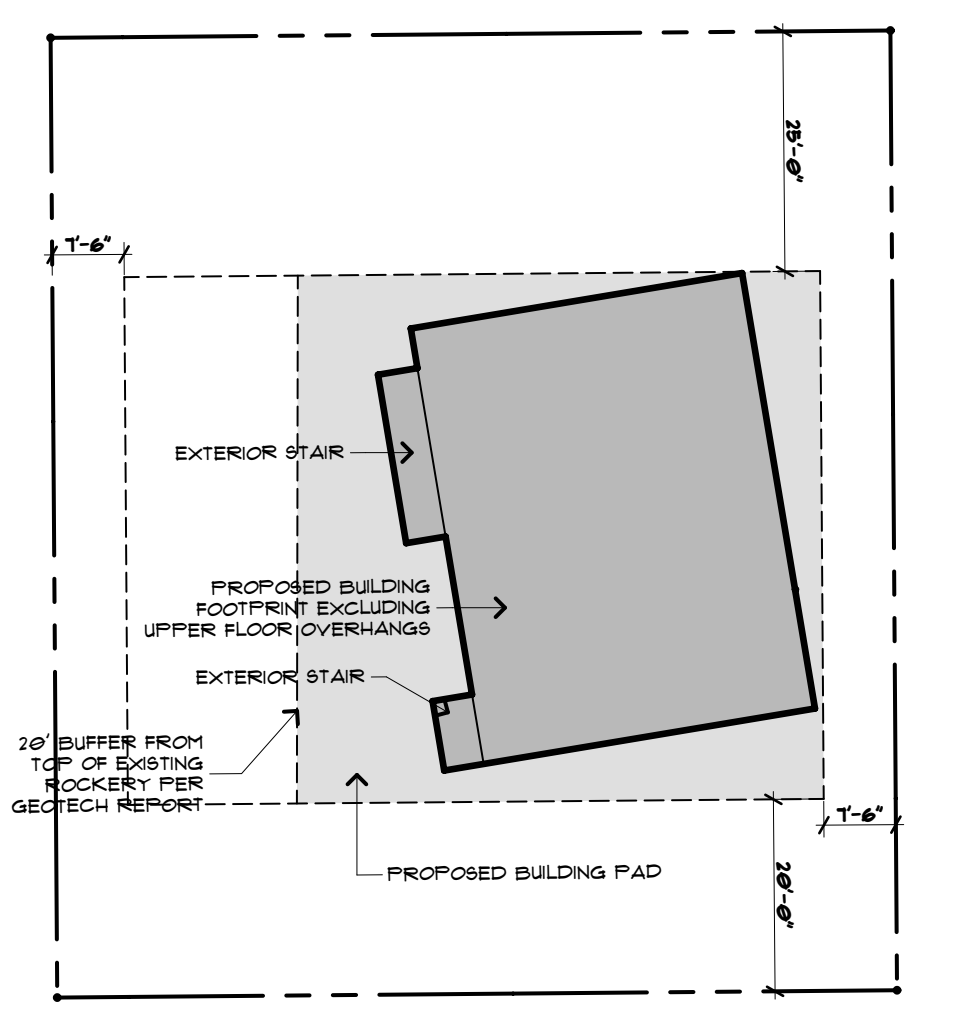
- NOTE: NATIVE PLANTING OPTIONS LISTED BELOW ARE FROM A LIST GENERATED BY 'PROTECT MERCER ISLAND PARKS' WEBSITE. CONSULTATION FOR BEST SPECIES AT THIS LOCATION AND INSTALLATION OF ALL NATIVE PLANTINGS SHALL BE BY A LOCAL LANDSCAPE INSTALLER.
- Baldhip rose
  - Beaked hazelnut/Filbert
  - Big leaf maple
  - Birch
  - Black cottonwood
  - Bracken fern
  - Douglas Or
  - False Solomon's seal
  - Grand Or
  - Horsetail
  - Indian plum
  - Large-leaved avens
  - Low Oregon grape
  - Nootka rose
  - Orange trumpet honeysuckle
  - Oregon ash
  - Red alder
  - Red towering currant
  - Red twig dogwood
  - Rush
  - Salal
  - Salmonberry
  - Shore pine
  - Siberian miner's lettuce
  - Snowberry
  - Sword fern
  - Tall Oregon grape
  - Thimbleberry
  - Trailing blackberry
  - Trillium
  - Vine maple
  - Western red cedar
  - Willow

# MERCER RESIDENCE

## 6950 SE MAKER ST, MERCER ISLAND, WA 98040



SITE PLAN  
SCALE: 1" = 10'



BLDG PAD  
SCALE: 1" = 20'

# LOT COVERAGE / IMPERVIOUS CALCS:

LOT AREA	8,750 FT <sup>2</sup>
MAXIMUM ALLOWABLE IMPERVIOUS COVERAGE:	(35%) 3,062.50 FT <sup>2</sup>
LOT SLOPE CALCULATION:	20.1% SLOPE
HIGH POINT 242.5	
LOW POINT 215.0	
HORIZONTAL DISTANCE 133'	
EXISTING ROOF IMPERVIOUS SURFACE:	3,010 FT <sup>2</sup>
EXISTING DRIVES + WALKS IMPERVIOUS SURFACE:	1,970 FT <sup>2</sup>
EXISTING IMPERVIOUS:	4,980 FT <sup>2</sup>
EXISTING IMPERVIOUS TO BE REMOVED:	4,980 FT <sup>2</sup>
EXISTING IMPERVIOUS SURFACE TO REMAIN:	0 FT <sup>2</sup>
PROPOSED STRUCTURE IMPERVIOUS (INC UPPER DECK):	1,897 FT <sup>2</sup>
PROPOSED DRIVES IMPERVIOUS:	802 FT <sup>2</sup>
PROPOSED HARDSCAPE:	82 FT <sup>2</sup>
TOTAL PROPOSED IMPERVIOUS:	2,781 FT <sup>2</sup>
TOTAL IMPERVIOUS SURFACE UPON COMPLETION:	(31.8%) 2,781 FT <sup>2</sup>
PROPOSED LANDSCAPE AREA (REMAINDER OF LOT (68.2%): 5,969 FT <sup>2</sup>	
EXCEPT AREAS OF EXISTING ROCKERY:	

# HARDSCAPE CALCULATIONS:

LOT AREA	8,750 FT <sup>2</sup>
MAXIMUM ALLOWABLE HARDSCAPE AREA:	(9%) 787.5 FT <sup>2</sup>
EXISTING ROCKERY AT WESTERN PROPERTY:	496 FT <sup>2</sup>
PROPOSED TRASH AREA, STEPS ON GRADE AT SW CORNER, STEPS ON GRADE AT NW CORNER, PATH BETWEEN STEPS (INCLUDING RETAINING WALLS):	91 FT <sup>2</sup>
PROPOSED CONCRETE RETAINING AT DRIVEWAY:	17 FT <sup>2</sup>
PROPOSED BLOCK WALL AT EAST PROPERTY:	63 FT <sup>2</sup>
TOTAL PROPOSED HARDSCAPE:	(7.6%) 667 FT <sup>2</sup>

# FLOOR AREAS:

LOT AREA:	8,750 FT <sup>2</sup>
MAXIMUM ALLOWABLE GFA:	(40%) 3,500 FT <sup>2</sup>
ADDITIONAL GFA FOR ADU:	(5%) 437.5 FT <sup>2</sup>
TOTAL ALLOWABLE GFA W/ADU:	(45%) 3,937.5 FT <sup>2</sup>
MAIN RESIDENCE BASEMENT GFA:	(528 FT <sup>2</sup> )
(INCLUDES STAIRS TO MAIN LEVEL, 81 FT <sup>2</sup> )	
ELEVATOR SHAFT @ BASEMENT:	[20 FT <sup>2</sup> ]
GARAGE GFA:	[476 FT <sup>2</sup> ]
BASEMENT ADU GFA:	[586 FT <sup>2</sup> ]
BASEMENT SUBTOTAL:	[1,610 FT <sup>2</sup> ]
(937.5 FT <sup>2</sup> EXCLUDED SEE BELOW):	
FIRST FLOOR GFA:	1,649 FT <sup>2</sup>
(EXCLUDE STAIR PER 19.02.020.D.2.c):	
ELEVATOR SHAFT:	20 FT <sup>2</sup>
SECOND FLOOR GFA:	1,529 FT <sup>2</sup>
(EXCLUDE ELEVATOR SHAFT):	
SECOND FLOOR COVERED DECK GFA:	66 FT <sup>2</sup>
TOTAL GROSS FLOOR AREA:	(44.9%) 3,936 FT <sup>2</sup>

# BASEMENT FLOOR EXCLUSION CALCS:

WALL SEGMENT	LENGTH	COVERAGE %	RESULT
A	35'	0%	0'
B	46'	59.37%	27'-3"
C	35'	60.42%	21'-1"
D	46'	100%	46'-0"
TOTALS	162'		94'-4"

1,610 FT<sup>2</sup> X 58.23% = 937.5 FT<sup>2</sup> EXCLUDED  
1,610 FT<sup>2</sup> - 937.5 FT<sup>2</sup> = 672.5 FT<sup>2</sup>

# AVERAGE BUILDING ELEVATION CALCS:

SEGMENT "A" ELEVATION:	226.47'
SEGMENT "A" LENGTH:	35'
SEGMENT "A" ELEVATION x LENGTH:	7,926.45 FT <sup>2</sup>
SEGMENT "B" ELEVATION:	231.25'
SEGMENT "B" LENGTH:	46'
SEGMENT "B" ELEVATION x LENGTH:	10,637.5 FT <sup>2</sup>
SEGMENT "C" ELEVATION:	231.50'
SEGMENT "C" LENGTH:	35'
SEGMENT "C" ELEVATION x LENGTH:	8,102.50 FT <sup>2</sup>
SEGMENT "D" ELEVATION:	236.00'
SEGMENT "D" LENGTH:	46'
SEGMENT "D" ELEVATION x LENGTH:	10,856.00 FT <sup>2</sup>
TOTAL OF AGGREGATE ELEVATION:	37,522.45'
TOTAL OF SEGMENT LENGTHS:	162'
AVERAGE BUILDING ELEVATION:	231.62'

# PROJECT INFO:

PROJECT ADDRESS:  
6950 SE MAKER ST  
MERCER ISLAND, WA 98040

SCOPE OF WORK:  
NEW SINGLE FAMILY RESIDENCE

ZONE:  
R-8.4

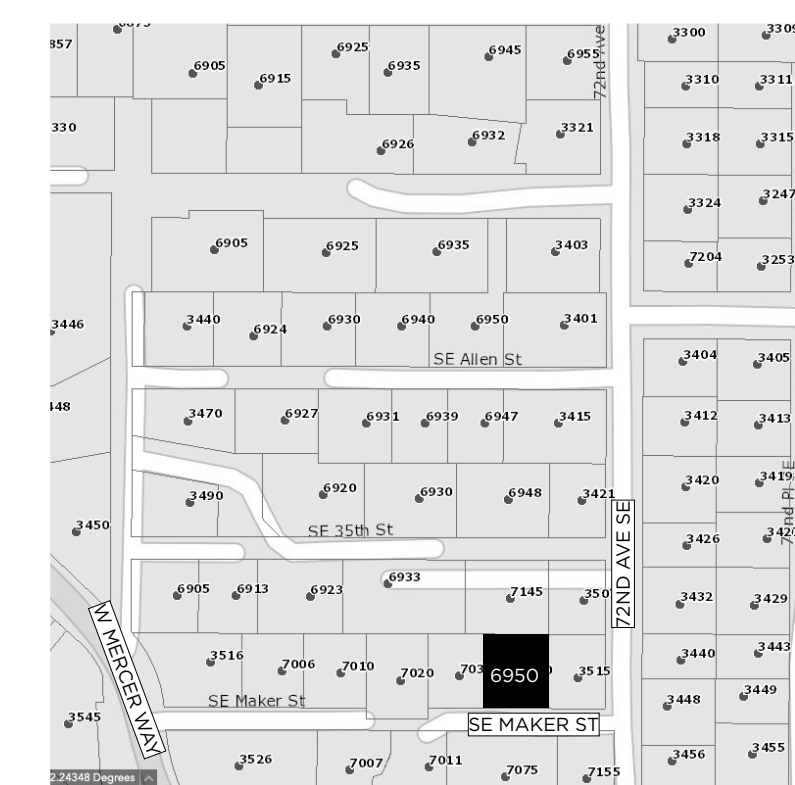
LEGAL DESCRIPTION:  
WHITE BROS 1ST TO EAST SEATTLE 46-47-48 & W/2 OF 49. BLOCK 3, LOT 46 TO 49

ACCESSOR'S PARCEL NUMBER:  
935090-0620

BUILDING CODE + OCCUPANCY:  
2018 IRC, IBC, IFCC, WSEC. 2018 IMC, IFGC, UPC WILL BE DEFERRED PERMITS BY INDIVIDUAL TRADES  
R-3 SINGLE FAMILY RESIDENTIAL (RESIDENCE)  
U STORAGE (GARAGE, STORAGE)

TYPE OF CONSTRUCTION:  
TYPE-VB SPRINKLERED - NFPA 13D  
PROVIDE MONITORED 'CHARTER 29' NFPA 72 FIRE ALARM SYSTEM

# VICINITY MAP:



# PROJECT TEAM:

CLIENT:  
MERCER RESIDENCE  
6950 SE MAKER ST  
MERCER ISLAND, WA 98040

ARCHITECT / APPLICANT:  
JEFFREY ALMETER  
9506 15TH AVE NW  
SEATTLE, WA 98117  
303.903.7873

SURVEYOR:  
TERRANE  
10801 MAIN STREET SUITE 102  
BELLEVUE, WA 98004  
425.458.4488

GEOTECHNICAL ENGINEER:  
GEOTECH CONSULTANTS - ADAM MOYER  
2401 10TH AVE E  
SEATTLE, WA 98102  
425.747.5618

CIVIL ENGINEER:  
GOLDSMITH ENGINEERING - MARK BARBER  
11400 SE 8TH ST, SUITE 450  
BELLEVUE, WA 98004  
425.462.1080

STRUCTURAL ENGINEER:  
DS ENGINEERING - DON SHIN  
3111 14TH PLACE SE  
MILL CREEK, WA 98012  
425.338.4776

CONTRACTOR:  
TBD

# SHEET INDEX:

A10	PROJECT INFORMATION
A11	ENERGY FORMS
	SURVEY
S#1	SHORING PLAN AND SECTIONS
S#2	SHORING NOTES + DETAILS
S#3	PERMANENT SHORING PLAN
C-1	TESS PLAN
C-2	GRADING + DRAINAGE - UTILITY PLAN
C-3	PROFILES AND SECTIONS
C-4	DETAILS AND NOTES
A2.0	BASEMENT FLOOR PLAN
A2.1	FIRST FLOOR PLAN
A2.2	SECOND FLOOR PLAN
A2.3	ROOF PLAN
A3.1	BUILDING ELEVATIONS
A3.2	BUILDING SECTIONS
S10	GENERAL STRUCTURAL NOTES + DETAILS
S11	SECTIONS + DETAILS
S12	SECTIONS + DETAILS (1)
S2.0	FOUNDATION + FIRST FLOOR FRAMING PLANS
S2.2	SECOND FLOOR + ROOF FRAMING PLANS



MERCER RESIDENCE  
6950 SE MAKER ST MERCER ISLAND, WA

PROJECT INFORMATION

RELEASE  
21 MARCH 2022  
PERMIT CORRECTIONS  
20 FEBRUARY 2023  
PERMIT CORRECTIONS  
2 JUNE 2023



**Project Information**  
 STRAND RESIDENCE  
 6550 MAKER STREET  
 MERCER ISLAND, WA 98040

**MECHANICAL INFORMATION**  
 JEFFREY ALMETER  
 9096 137th Ave NW  
 SEATTLE, WA 98117

**Messages / Results \***  
 Review required for custom entries - Doors  
 UA Reduction = 44.7. Proposed UA is better than baseline by 7%  
 UA reduction meets selected Option 3  
 Whole House Mechanical Ventilation Airflow Rate: 270 CFM with Run Time Percent of 50%, Unbalanced, Not Distributed  
 Results assure your work is complete and correct. Results are for conditions at approval. Adjust drawings accordingly per AIA.

**ANALYSIS SET UP**

What code compliance pathway are you using? **Table R602.1 UA Table 402**

Project Building Type? **New Construction**

Occupancy Type? **S1 Single family homes and duplexes**

Code Version? **WSEC 2018**

Classification: Medium Dwelling Unit - 4351 sq. ft.  
 Baseline Description: Code Baseline. Baseline and proposed window areas are equal.  
 About Your Selection: Up to 15 of exempt window and 24 of exempt door allowable

**RESULTS - Comparison of Baseline and Proposed Design**

Component Performance @ occupant	Baseline		Proposed Design	
	U	Area	U	Area
Doors U <sub>f</sub>	0.300	430	0.280	430
Overhead Glazing U <sub>f</sub>	0.300	0	0	0.0
Vertical Glazing U <sub>f</sub>	0.300	460	0.280	460
Floor/Wall/Ceiling U <sub>f</sub>	0.027	1872	0.031	1872
Wall (above grade) U <sub>f</sub>	0.054	3,320	0.054	3,320
Floors over Crawlspace U <sub>f</sub>	0.025	616	0.040	616
Slab on Grade F <sub>u</sub>	0.345	0	0	0.0
Below Grade Wall U <sub>f</sub>	0.542	651	0.055	651
Below Grade Slab F <sub>u</sub>	0.370	140	0.280	140
Baseline UA Total	671.3		566.3	
Proposed UA Total	626.6		566.3	
UA Percent Reduction	7.1%		0.0%	
UA Reduction	44.7		0.0	

Note: Proposed UA is the Target UA, and the Proposed Credits from Table 406 are shown required in Section R606. Does the home meet the WSEC?

**Table R606.2 Fuel Normalization Credits**

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.3)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table 404.3.3.1(1)(c) or 404.3.3.1(2). OR Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/595. Heat pump with electric resistance or fossil fuel supplemental heat requires compliance with WSEC 402.1.2 "Heat Pump Supplementary Heat." Package Terminal Heat Pump (PTAC/PT) requires an HPDF based value. (See SEC Interpretation dated December 2020).	Heat Pump, air-to-air or air to water	1.0	5.0	6.0

**Table R606.3 Energy Credits**

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	0.5	U-0.28 Windows / R-38 Floors or R-10 Fully insulated slab (0.5% reduction in UA)
2	Air Leakage Control and Efficient Ventilation		0.0	
3	High Efficiency HVAC	Option 3.2	1.0	Heat Pump, Air Source with min HPDF of 9.5
4	High Efficiency HVAC Distribution System	Option 4.2	1.0	Duct/Distribution system in conditioned space per R403.3.7
5	Efficient Water Heating		0.0	
5.2-6	Efficient Water Heating	Option 5.3	1.0	Gas or propane water heater with min UEF of 0.91 OR Solar Supplemental OR OSHP
6	Renewable Electric Energy	Option 6.1	1.0	On-site wind or solar electric energy
7	Appliance Package	Option 7.1	0.5	Appliance Package
			<b>Energy Credits</b>	<b>5.0</b>

\*Refer to WSEC 2018 Table R616.3 for complete option descriptions and requirements

**THERMAL ENVELOPE DETAILS - Proposed Design**

Conditioned Floor Area, Proposed Design: 4,351 sq. ft.  
 Classification: Medium Dwelling Unit  
 Notes

**Exterior Doors**

:\sbn\jalmeter\Dropbox\IA\_JOBS\Stand - Mercer Island\05 PERMITS\03 COLLATERAL\STRAND 2.xlsx 4/13/2021

Plan ID	Component	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	
Exempt	MAVIN 28 DR GL LOWE	Custom	0.28	1	7	7	7	21	5.3	
100LITE	MAVIN 28 DR GL LOWE	Custom	0.28	1	2	7	7	14	3.9	
100S	MAVIN 28 DR GL LOWE	Custom	0.28	1	9	7	7	63	17.6	
100B	MAVIN 28 DR GL LOWE	Custom	0.28	1	9	8	8	72	20.2	
110A	MAVIN 28 DR GL LOWE	Custom	0.28	1	4	8	8	48	13.4	
200A	MAVIN 28 DR GL LOWE	Custom	0.28	1	12	8	8	96	26.9	
200A	MAVIN 28 DR GL LOWE	Custom	0.28	1	17	8	8	132	36.3	
								0	0.0	
								0	0.0	
								0	0.0	
								0	0.0	
								0	0.0	
								0	0.0	
Sum of Area and UA (excluding exempt door)									426	128.3
Exterior Doors Area Weighted U									0.280	

Refer to WSEC 606.1.3  
 Refer to WSEC 606.1.4  
 Refer to WSEC 606.1.5  
 Refer to WSEC 606.1.6  
 Refer to WSEC 606.1.7  
 Refer to WSEC 606.1.8  
 Refer to WSEC 606.1.9  
 Refer to WSEC 606.1.10  
 Refer to WSEC 606.1.11  
 Refer to WSEC 606.1.12

**Overhead Glazing**

Plan ID	Component	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	
Sum of Area and UA									0.0	0
Overhead Glazing Area Weighted U										

**Vertical Glazing Schedule**

Plan ID	Component Description	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	R602.1
Exempt	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	3	6	6	12.0	3.36	
1103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	3	6	6	18.0	5.04	
2103B	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	4	6	6	36.0	10.08	
3103C	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	3	6	6	18.0	5.04	
4103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	3	6	6	18.0	5.04	
5103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	4	6	6	36.0	10.08	
6103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	2	6	6	12.0	3.36	
7103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	4	6	6	36.0	10.08	
8111A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	4	6	6	36.0	10.08	
9103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	3	6	6	18.0	5.04	
10103B	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	4	6	6	36.0	10.08	
11103B	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	4	6	6	36.0	10.08	
12103B	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	5	6	6	54.0	15.12	
13103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	4	6	6	36.0	10.08	
14103A	Link 28 Option 1a, 1.3, 1.7, 1.1	Table 406.2	0.28	1	2	6	6	12.0	3.36	
15										
16										
Sum of Area and UA (excluding exempt window)									459.5	138.7
Vertical Glazing Area Weighted U									0.280	
Vertical Glazing and Doors Area Weighted U									0.280	

**Floor/Wall/Ceiling**

Plan ID	Component	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	
18	18 Truss R69 cavity R5 Slough 14" Span	15-3A	0.031						0.2	
Sum of Area and UA									1.873	52.3

**Walls (Above Grade)**

Plan ID	Component	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	
19	R21 cavity/R8 Ins RT 2X6W Lap Code Baseline	10-5	0.054						180	
Sum of Area and UA									3,320	180

**Floor (over crawl or exterior)**

Plan ID	Component	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	
20	R18 Wood Joist Exposed	10-6A	0.040						25	
Sum of Area and UA									616	25

:\sbn\jalmeter\Dropbox\IA\_JOBS\Stand - Mercer Island\05 PERMITS\03 COLLATERAL\STRAND 2.xlsx 4/13/2021

**Slab on Grade (less than 2 feet below grade)**

Plan ID	Component	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	
Sum of Perimeter and FP									0	0

**Below-Grade Walls and Slabs**

Plan ID	Component	Ref.	U	Qt	F <sub>u</sub>	Wt	H	Area	UA	
R10	Perimeter 7" depth w/RT, R10 Full Underlaid (Option 1a-1c)	10-5B	0.055	651	35.4				154	
Sum of Area, Length and UA									651	35.4

**Ventilation Requirements**

Number of Bedrooms	3
Run-Time Percent in Each 4-Hour Segment	50%
Is the system Balanced?	Unbalanced
Is the system Distributed?	Not Distributed
Ventilation Code Section	IRC Chapter 15
Whole House Mechanical Ventilation Airflow Rate	270 CFM

**HVAC Thermal Distribution System**

Is this a hydronic heating system? **No**

Location of Ducts: **Conditioned Space**

Location of Air Handler: **Conditioned Space**

Is Duct Testing Required? **No**

Option 4.2: A maximum of 10 feet of return ducts and 5 feet of supply ducts are allowed to be located outside of the building thermal envelope, if insulated and sealed per R603.3.7.

**Links to Download Forms, Checklists and Other Resources**

Completion Certificate: [Download Certificate](#)  
 Insulation Certificate for Residential New Construction: [Insulation Certificate](#)  
 Duct Testing Addendum: Existing Construction: [Attach, Existing](#); New Construction: [Attach, New](#)  
 Prescriptive Checklist for 2018 WSEC Alterations (Remodel) Worksheet: [Worksheet](#)

**Heating System Sizing - Proposed Design**

Nearest Weather Station: **Dretna Sea Tac AP**

Indoor Design Temperature: **70 F**  
 Outdoor Design Temperature: **24 F**  
 Design Temperature Difference (ΔT): **46 F**

Conditioned Floor Area, Proposed Design: **4,351 sq. ft.**

Conditioned Volume: **36,854 cu. ft.**

HVAC System Type: **Heat Pump**

Location of HVAC Distribution System: **Conditioned Space**

Sum of UA, including exempt door and window: **590**

Envelope Heat Load (Sum of UA x ΔT): **27,418 Btu / Hour**

Air Leakage Heat Load (Infiltration 0.10 ACH @ 70°F): **18,173 Btu / Hour**

Building Design Heat Load: **45,793 Btu / Hour**

Building and Duct Heat Load: **45,793 Btu / Hour**

Maximum Heat Equipment Output (For duct located in conditioned space, Sum of Building Heat Load x 1.1 for duct located in unconditioned space, Sum of Building Heat Load x 1.1 for duct located in unconditioned space, Sum of Building Heat Load x 1.1 for duct located in unconditioned space): **50,371 Btu / Hour**

Building and Duct Heat Load x 1.48 for all other systems

:\sbn\jalmeter\Dropbox\IA\_JOBS\Stand - Mercer Island\05 PERMITS\03 COLLATERAL\STRAND 2.xlsx 4/13/2021



ENERGY FORMS MERCER RESIDENCE 6050SE MAKER ST MERCER ISLAND, WA

RELEASE  
 21 MARCH 2022  
 PERMIT CORRECTIONS  
 20 FEBRUARY 2023  
 PERMIT CORRECTIONS  
 2 JUNE 2023

A 1.1  
 MAKER AVE  
 AUTHORIZED BY: 2/2/21 00651



# TOPOGRAPHIC & BOUNDARY SURVEY

## LEGAL DESCRIPTION

(PER PERSONAL REPRESENTATIVE DEED RECORDING# 20210415002461)

LOTS 46, 47, 48 AND THE WEST ONE-HALF OF LOT 49 IN BLOCK 3 OF WHITE BROTHERS FIRST ADDITION TO EAST SEATTLE, AS PER PLAT RECORDED IN VOLUME 4 OF PLATS, PAGE 100, RECORDS OF KING COUNTY AUDITOR;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

## BASIS OF BEARINGS

HELD N 88°48'41" W BETWEEN MONUMENTS FOUND ON THE CENTERLINE OF SE 32ND ST PER GPS OBSERVATIONS, NAD83/2011 WASHINGTON STATE PLANE, NORTH ZONE.

## REFERENCES

- R1. RECORD OF SURVEY, VOL. 133, PG. 28.
- R2. RECORD OF SURVEY, VOL. 7, PG. 171.
- R3. PLAT OF WHITE & NOBLES FIRST ADD., REC. NO. 1889050232489, RECORDS OF KING COUNTY, WASHINGTON.

## VERTICAL DATUM

NAVD88, PER GPS OBSERVATIONS.

## SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN MAY OF 2021. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 9350900620.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 8,750± S.F. (0.20 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT, EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

## LEGEND

	AREA DRAIN		NAIL AS NOTED
	ASPHALT SURFACE		PAVER SURFACE
	BUILDING		POWER METER
	CENTERLINE ROW		POWER (OVERHEAD)
	COLUMN		ROCKERY
	CONCRETE SURFACE		SEWER LINE
	RETAINING WALL		SEWER MANHOLE
	DECK		STORM DRAIN LINE
	FENCE LINE (WOOD)		SEWER CLEANOUT
	GAS METER		TREE (AS NOTED)
	INLET (TYPE 1)		WATER LINE
	MONUMENT IN CASE (FOUND)		WATER METER
	MONUMENT (SURFACE, FOUND)		WATER VALVE

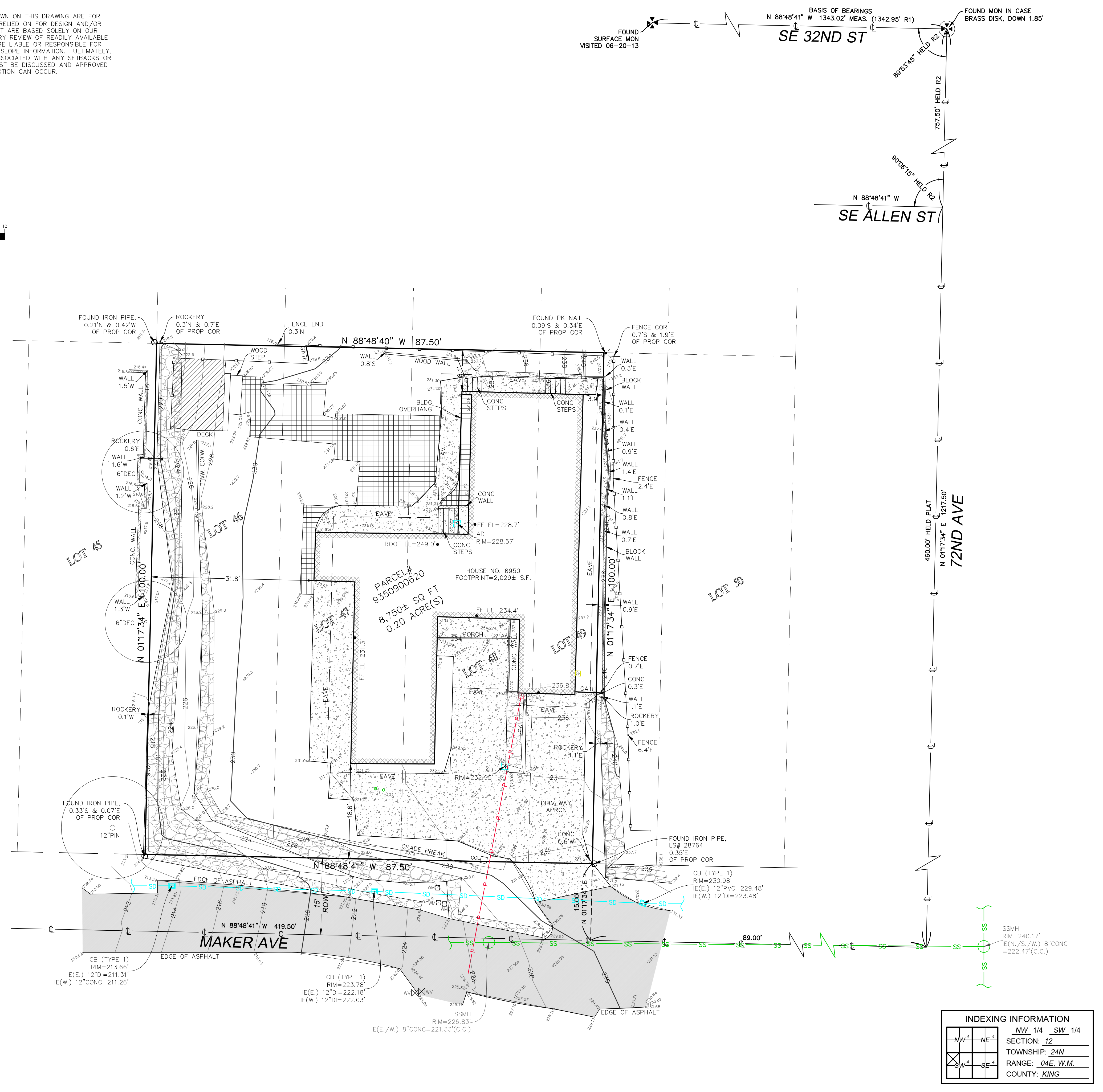
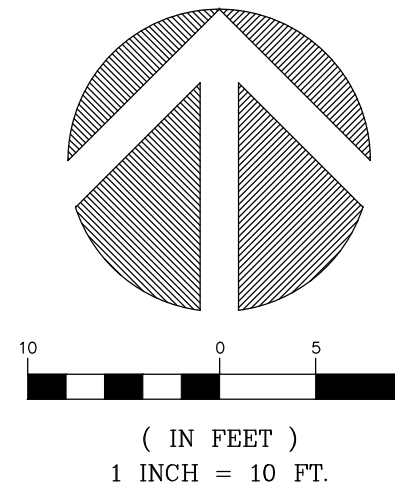
## VICINITY MAP

N.T.S.



## STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

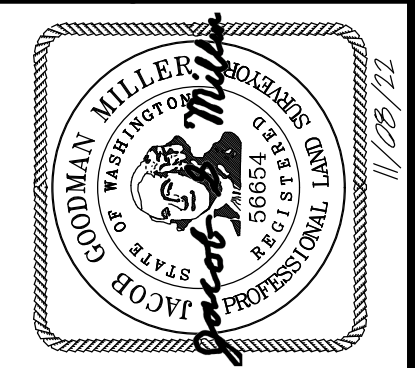


### INDEXING INFORMATION

NW	1/4	SW	1/4
NE	1/4	SE	1/4
SECTION: 12			
TOWNSHIP: 24N			
RANGE: 04E, W.M.			
COUNTY: KING			

**measure success**

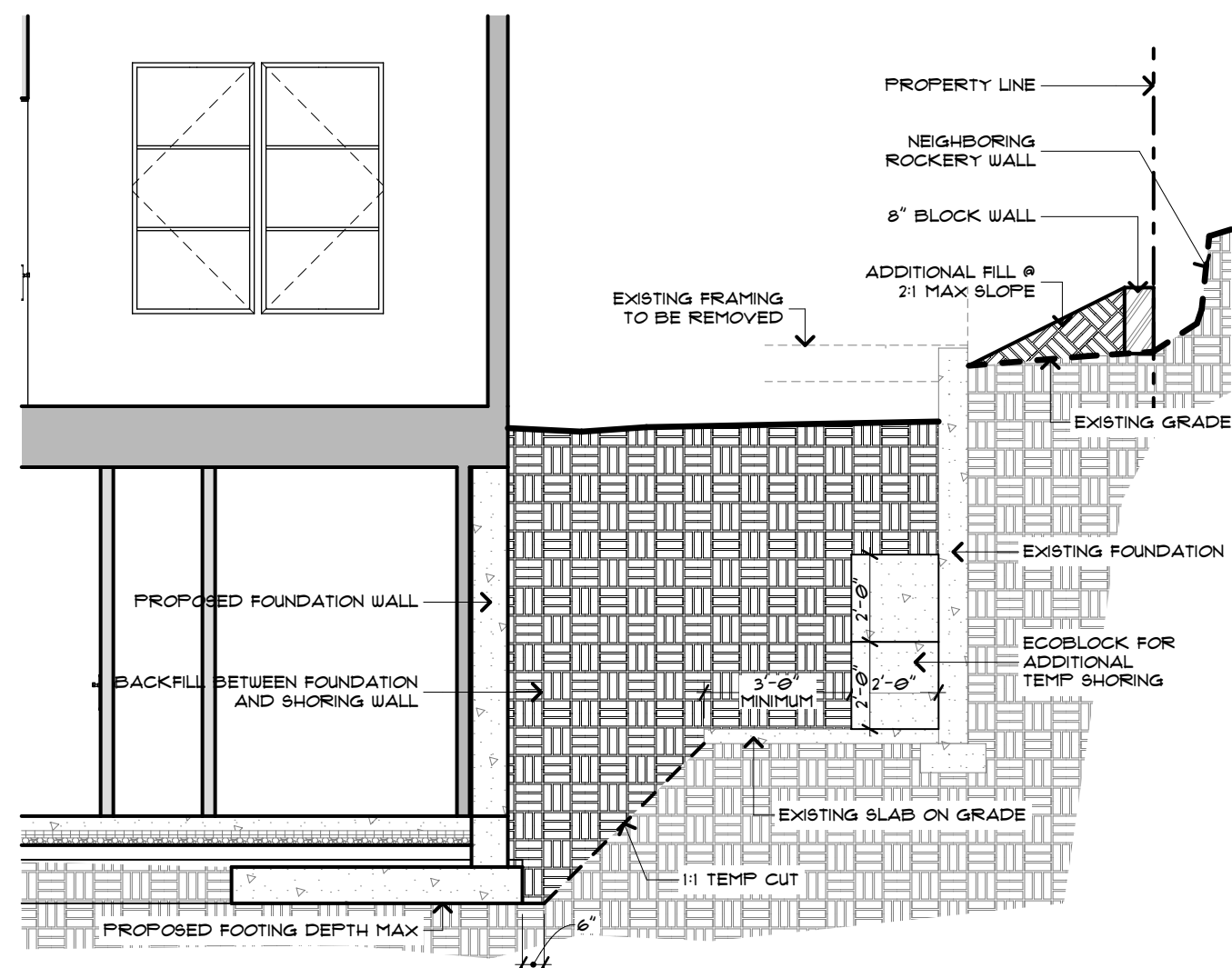
**TOPOGRAPHIC & BOUNDARY SURVEY**  
 PARCEL NO. 9350900620  
**STRAND RESIDENCE**  
 6950 SE MAKER STREET  
 MERCER ISLAND, WA 98040



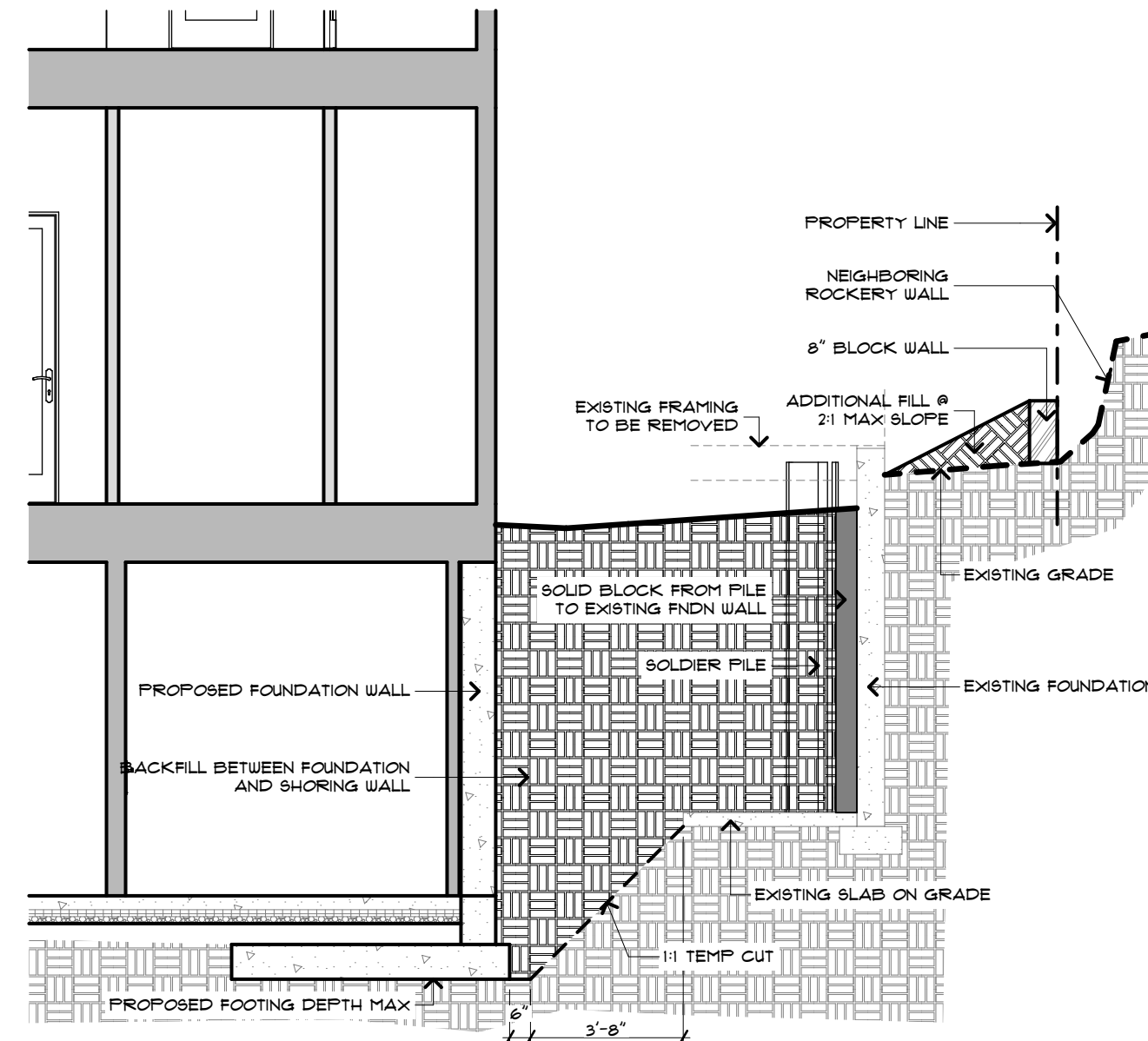
**Terrane**  
 10801 Main Street, Suite 102, Bellevue, WA 98004  
 phone 425.458.4488 support@terrane.net  
[www.terrane.net](http://www.terrane.net)

JOB NUMBER:	210007
DATE:	05/27/2021
DRAFTED BY:	RSN
CHECKED BY:	TBR / JGM
SCALE:	1" = 10'
<b>REVISION HISTORY</b>	
11/8/22	ADD CATCH BASIN
<b>SHEET NUMBER</b>	
1 OF 1	

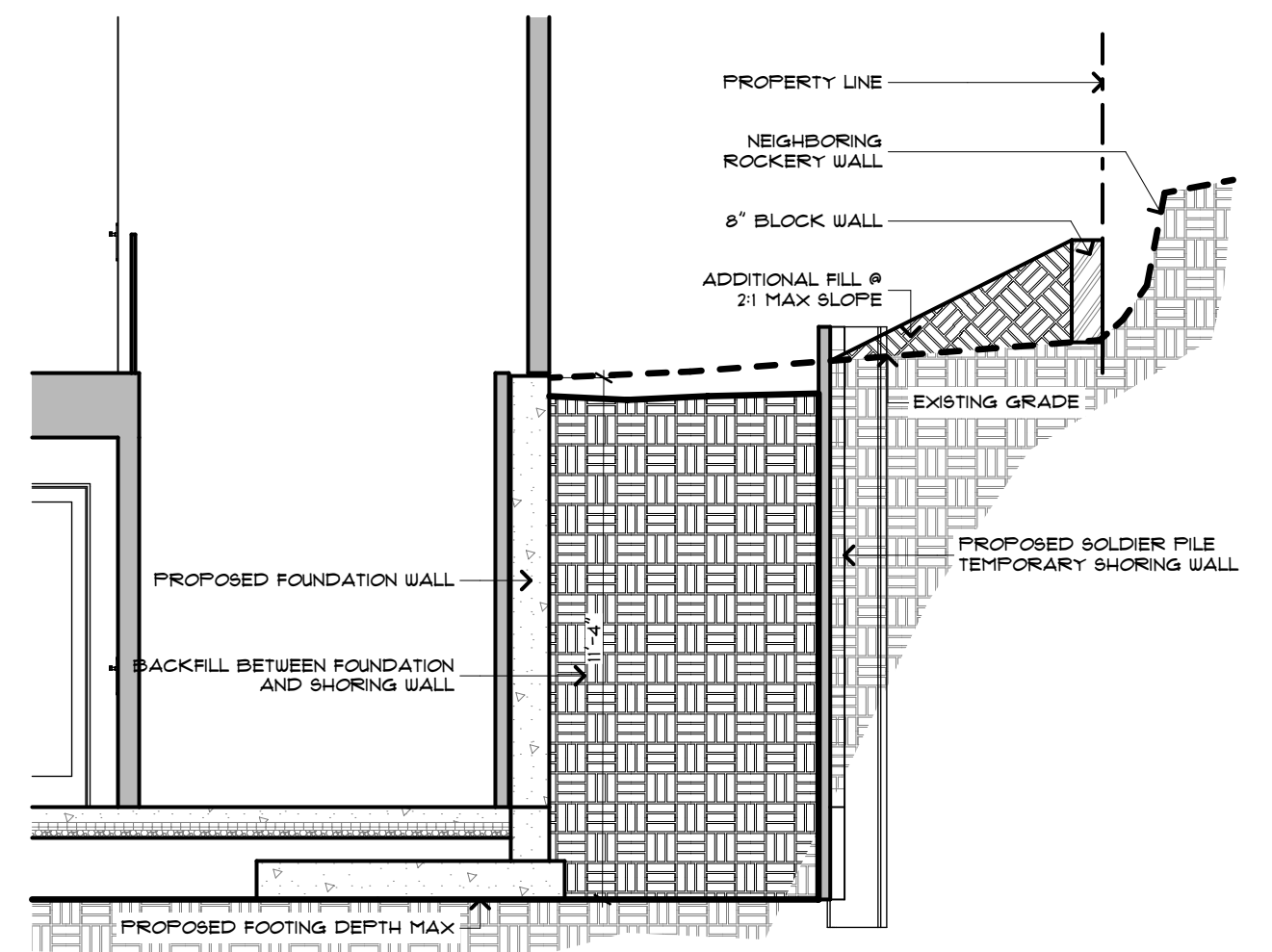




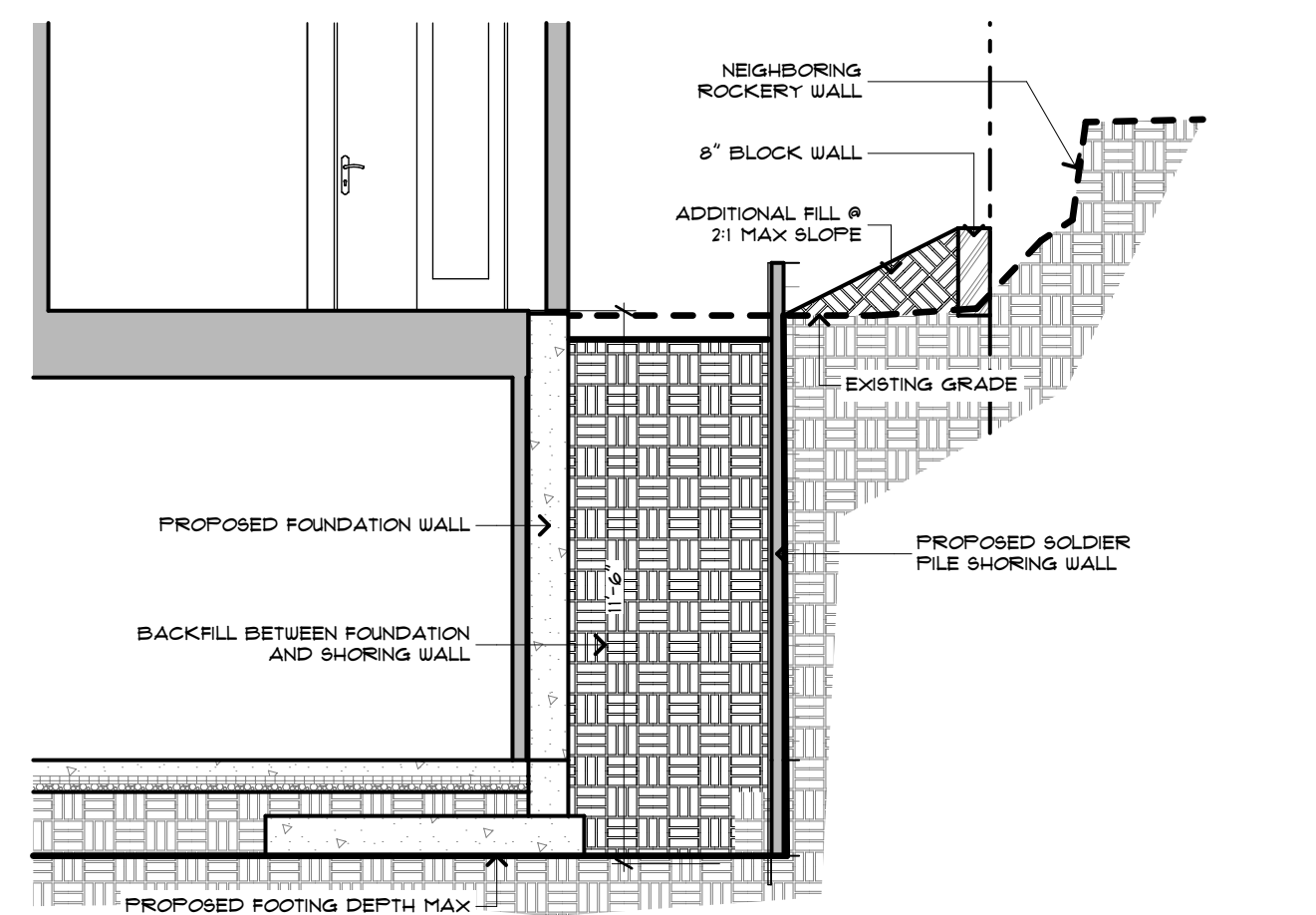
SECTION SH4 4  
SCALE: 1/4" = 1'-0"



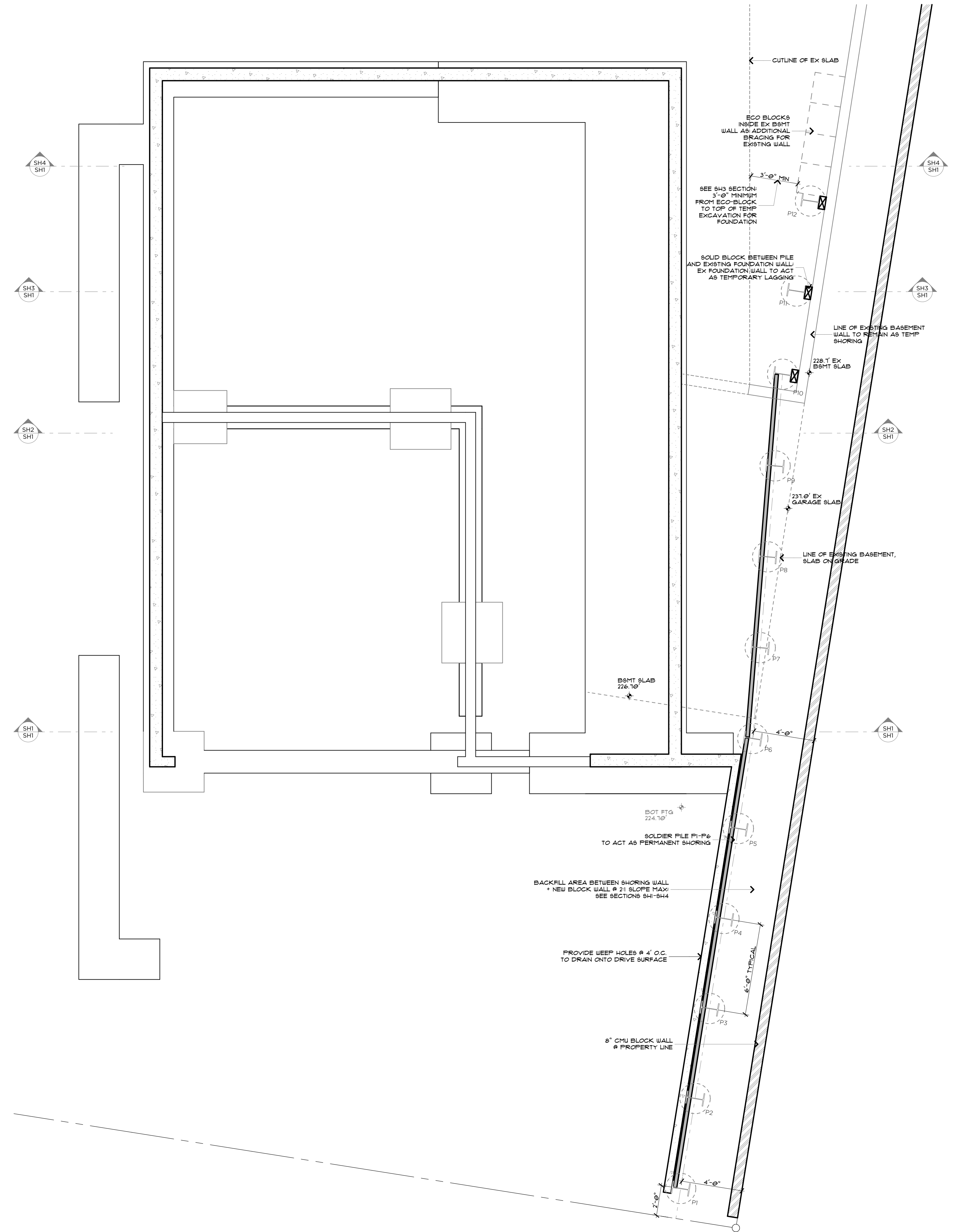
SECTION SH3 3  
SCALE: 1/4" = 1'-0"



SECTION SH2 2  
SCALE: 1/4" = 1'-0"



SECTION SH1 1  
SCALE: 1/4" = 1'-0"



TEMPORARY SHORING PLAN  
SCALE: 1/4" = 1'-0"



# General Structural Notes

The Following Apply Unless Noted Otherwise on the Drawings

## Criteria

- CODE REQUIREMENTS: ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
- REFERENCE DOCUMENTS:
  - TOPOGRAPHIC AND BOUNDARY SURVEY BY Terrane DATED May 27, 2021
  - REPORT ON GEOTECHNICAL INVESTIGATION BY Geotech Consultants, INC, DATED MARCH 21 2022, (Proj #JN-22007)
- DESIGN LOADS: THE SOIL PRESSURE INDICATED ON THE SOIL PRESSURE DIAGRAMS WHERE USED FOR DESIGN.
- SOILS INSPECTION: INSPECTION BY THE SOILS ENGINEER SHALL BE PERFORMED FOR PILE PLACEMENT. ALL PREPARED SOIL BEARING SURFACES SHALL BE INSPECTED BY THE SOILS ENGINEER PRIOR TO PLACEMENT OF PILE. SOIL COMPACTION SHALL BE SUPERVISED/TESTED BY THE GEOTECHNICAL ENGINEER.
- SPECIAL INSPECTION: SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS 110 AND 1701 OF THE INTERNATIONAL BUILDING CODE AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS.

-STRUCTURAL STEEL FABRICATION AND ERECTION (INCLUDING FIELD WELDING AND HIGH-STRENGTH FIELD BOLTING)

- UTILITY LOCATION: THE SHORING CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRILLING PILE HOLES OR CUTTING OR DIGGING IN STREETS OR ALLEYS. THE UTILITIES INFORMATION SHOWN ON THE PLANS MAY BE NOT COMPLETE.
- SPECIAL CONDITIONS: CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES IN THE FIELD AND SHALL NOTIFY THE ENGINEER OF ALL FIELD CHANGES PRIOR TO FABRICATION AND INSTALLATION.
- SOILS: SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR MORE COMPLETE INFORMATION, INCLUDING RECOMMENDATIONS FOR SHORING IN GENERAL, SHORING MONITORING, EXCAVATION, LAGGING, AND DRAINAGE.
- SAWN LUMBER: SAWN LUMBER SHALL CONFORM TO "GRADING AND DRESSING RULES," WEST COAST LUMBER INSPECTION BUREAU (WCLIB), LATEST EDITION. LUMBER SHALL BE THE SPECIES AND GRADE NOTED IN THE LAGGING TABLE.

TIMBER LAGGING SHALL BE PRESSURE TREATED WITH WATERBORNE PRESERVATIVES IN ACCORDANCE WITH AWPB STANDARD U1 AND SHALL MEET A USE CATEGORY OF UC4B OR BETTER. LAGGING SHALL BE 4X10 UNLESS OTHERWISE NOTED ON DRAWINGS.

- STEEL SPECIFICATIONS: DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING SPECIFICATIONS:

- STRUCTURAL STEEL: AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS—ALLOWABLE STRESS DESIGN.
- WELDING: AWS D1.1 (AWS PREQUALIFIED JOINT DETAILS USE 1/4" MINIMUM WELDS UNLESS NOTED OTHERWISE).
- WELDER CERTIFICATION: WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO).vv

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
WIDE FLANGE	A992	50 KSI
PIPE	A53	35 KSI
PLATES, SHAPES, ANGLES, AND RODS	A36	36 KSI
STRUCTURAL BOLTS	A325-N	
WOOD CONNECTION BOLTS	A307	
WELDING ELECTRODES	E70XX	

## Concrete

- CONCRETE: CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF CHAPTER 19 OF THE 2018 IBC. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD CYLINDER TESTS, UNLESS APPROVED OTHERWISE. REQUIRED ULTIMATE COMPRESSIVE STRENGTH OF STRUCTURAL GROUT SHALL BE REACHED BY 7 DAYS FOR TIEBACKS AND 28 DAYS FOR PILES.

f <sub>c</sub> (psi)	Minimum Cement Per Cubic Yard	Max. Water Per 94 LB Cement	Use
-----	1-1/2 Sacks	-----	Pile lean concrete
3,000	6 Sacks (PILING)	6 Gallons	Pile struct. grout

CONCRETE WALL SHALL ATTAIN A 28-DAY STRENGTH OF f<sub>c</sub>=3,000 PSI

AS AN ALTERNATIVE TO THE ABOVE, THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE ALTERNATE MIX DESIGN WILL BE REVIEWED FOR CONFORMANCE TO ACI 318 Ch. 5 WITH SBC REVISIONS.

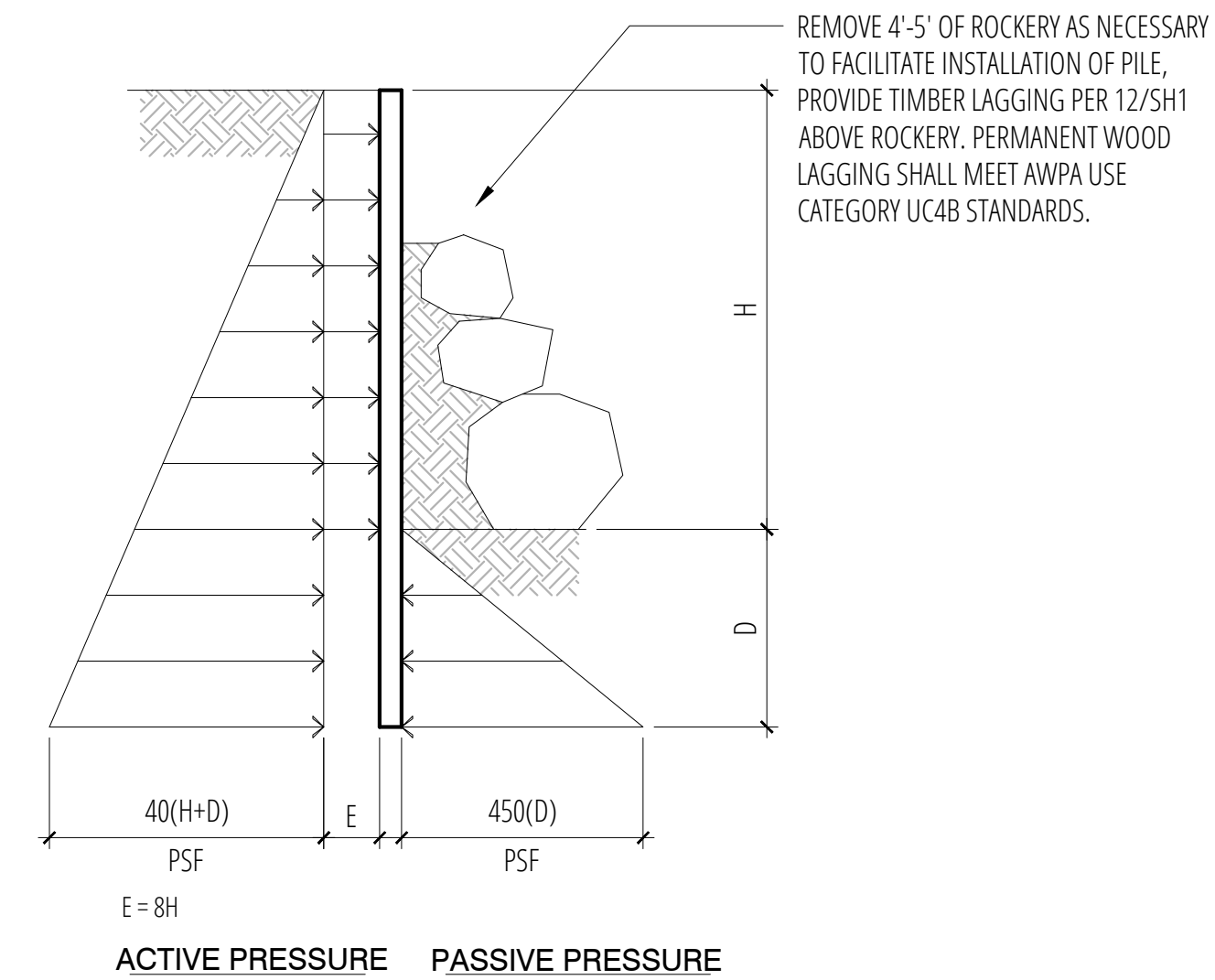
- ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH TABLE ACI 318 TABLE 4.2.1 MODERATE EXPOSURE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, f<sub>y</sub>=60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, f<sub>y</sub>=40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, f<sub>y</sub>=60,000 PSI.

## Pipe and Lagging Construction

- DEMOLITION: SHORING AND SOIL EXCAVATION SHALL BE DONE SIMULTANEOUSLY.
- VERIFICATION: DIMENSIONS AND LOCATION OF EXISTING STRUCTURES SHALL BE VERIFIED PRIOR TO FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBER. NOTIFY ENGINEER ABOUT ANY DISCREPANCIES PRIOR TO FABRICATION.
- STEEL PILE PLACEMENT TOLERANCES:
  - 1" INSIDE PERPENDICULAR TO SHORING WALL.
  - 1" OUTSIDE PERPENDICULAR TO SHORING WALL.
  - 3" LATERALLY.
- LAGGING: TIMBER LAGGING SHALL BE INSTALLED IN ALL AREAS. VOIDS BETWEEN LAGGING AND SOIL SHALL BE BACKFILLED PER THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS. DRAINAGE BEHIND THE WALL MUST BE MAINTAINED. IT IS CONTRACTOR'S RESPONSIBILITY TO LIMIT THE AMOUNT OF EXPOSED SOIL WITHOUT LAGGING TO AVOID LOSS OF SOIL. MAXIMUM HEIGHT OF 4 FEET IS RECOMMENDED. SPECIAL CARE SHOULD BE TAKEN TO AVOID GROUND LOSS DURING EXCAVATION.
- SHORING MONITORING: A SYSTEMATIC PROGRAM OF OBSERVATION SHALL BE CONDUCTED DURING THE PROJECT EXECUTION TO DETERMINE THE EFFECT OF CONSTRUCTION ON ADJACENT FACILITIES AND STRUCTURES IN ORDER TO PROTECT THEM FROM DAMAGE. REFER TO REPORT OF GEOTECHNICAL INVESTIGATION FOR RECOMMENDATIONS. FIELD DATA AND MEASUREMENTS ARE TO BE SUBMITTED TO STRUCTURAL AND GEOTECHNICAL ENGINEER FOR REVIEW.

MONITORING PLAN SHALL INCLUDE THE FOLLOWING:

- THE TOP OF EVERY OTHER PILE SHALL BE MONITORED.
- MULTIPLE REFERENCE POINTS SHOULD BE ESTABLISHED SUFFICIENTLY FAR AWAY FROM THE SHORING TO ACT AS CONTROL POINTS FOR THE MONITORING PLAN
- ESTABLISH A BASELINE READING OF MONITORING POINTS ON THE GROUND SURFACE AND SETTLEMENT-SENSITIVE STRUCTURES BEHIND THE SHORING WALL ALIGNMENT PRIOR TO EXCAVATION AND INSTALLATION OF THE SHORING SYSTEMS.
- A LICENSED SURVEYOR MUST DO THE SURVEYING AT LEAST ONCE A WEEK.
- SURVEY FREQUENCY CAN BE DECREASED AFTER THE SHORING SYSTEM HAS BEEN INSTALLED AND EXCAVATION IS COMPLETE IF THE DATA INDICATES LITTLE OR NO ADDITIONAL MOVEMENT. SURVEYING MUST CONTINUE UNTIL THE PERMANENT STRUCTURE IS COMPLETE UP TO THE TOP OF THE SHORING WALL. THE SURVEY FREQUENCY WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER REVIEW AND APPROVAL BY THE CITY OF MERCER ISLAND BUILDING OFFICIAL (COMBO)
- THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND PROVIDE AN EVALUATION OF WALL PERFORMANCE ALONG WITH SURVEY DATA TO COMBO ON AT LEAST A WEEKLY BASIS. IMMEDIATELY AND DIRECTLY, NOTIFY COMBO IF ANY UNUSUAL OR SIGNIFICANTLY INCREASED MOVEMENT OCCURS.
- IMMEDIATELY AND DIRECTLY NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEERS, IF 0.5 INCHES OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS AND WHEN TOTAL MOVEMENTS REACH 0.5 INCH. AT THAT AMOUNT OF MOVEMENT, THE ENGINEERS AND DESIGNERS SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP REMEDIAL MEASURES SUFFICIENT TO LIMIT TOTAL WALL MOVEMENTS TO WHAT HAS BEEN DEFINED AS ACCEPTABLE BY THE DESIGN TEAM.



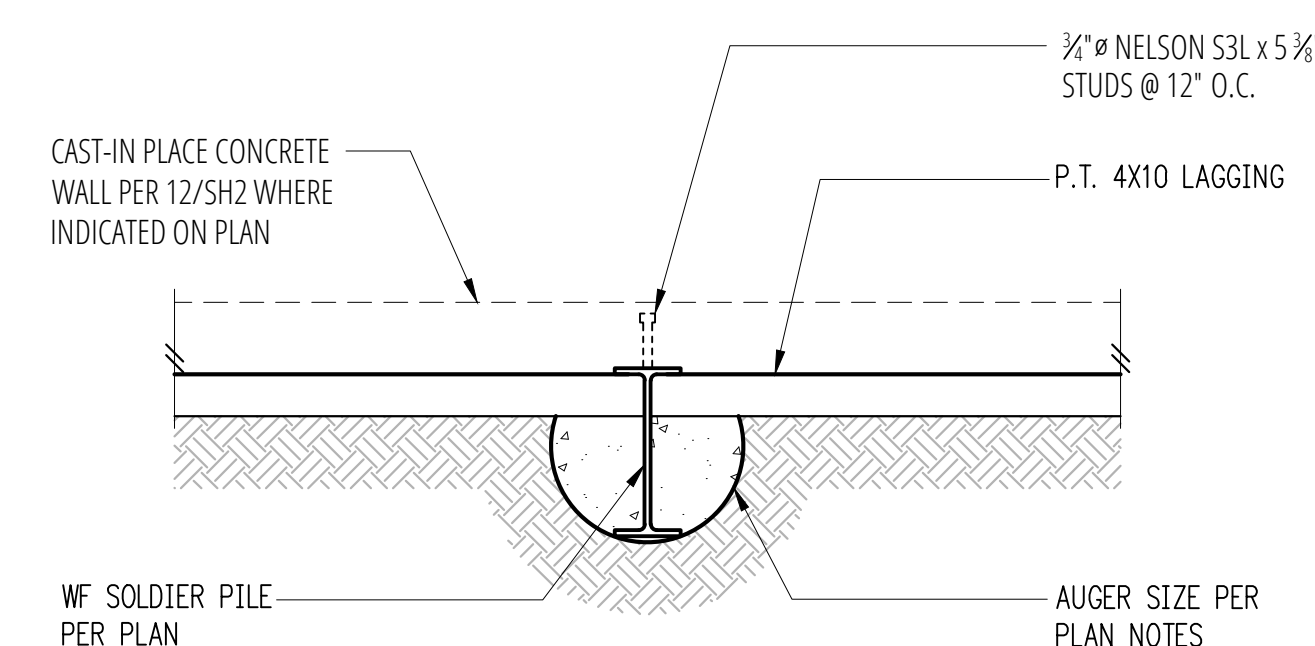
ACTIVE PRESSURE PASSIVE PRESSURE

SAFETY FACTOR = 1.5 & 1.2 FOR SEISMIC LOAD CASE

## 3 West Stabilization Wall Loading Diagram

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

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



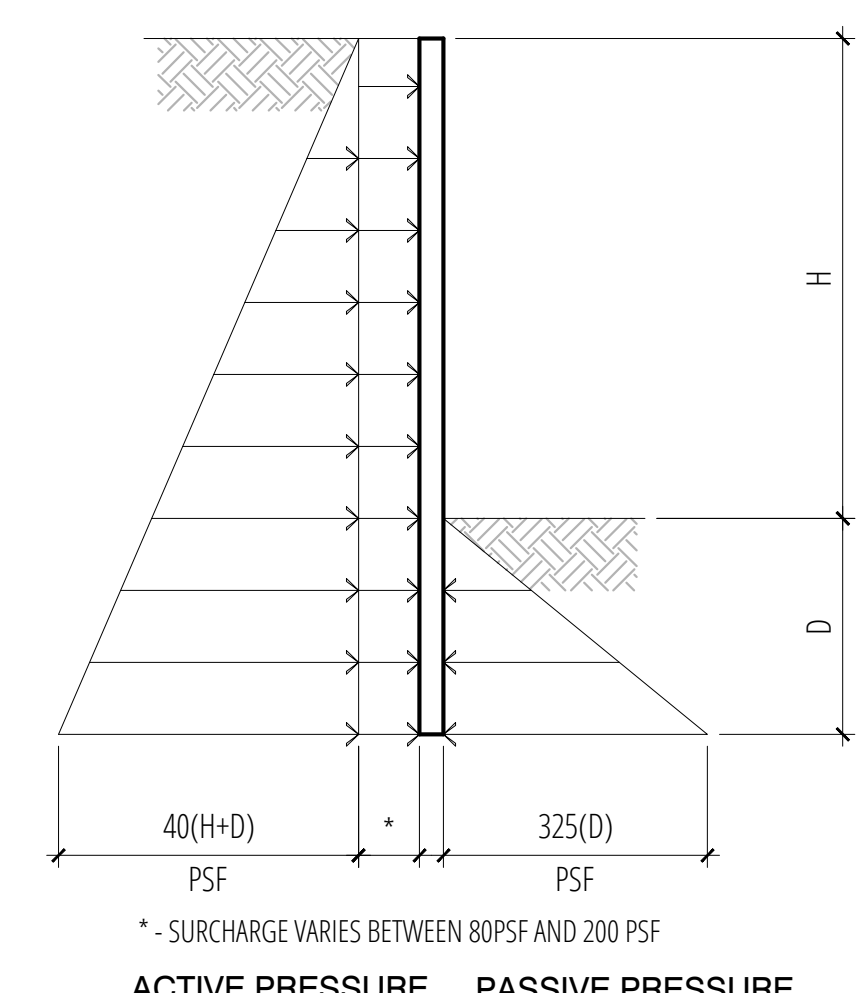
Pile Mark	Auger Dia.	Wide Flange	Max. Height H (ft.)	Min Embed D (ft.)	Min. X (ft.) Above Top of Excavation	Type
P1	24"	W16x100	11'-6"	20'-0"	1'-0"	Cantilever
P2	24"	W16x100	11'-6"	20'-0"	1'-0"	Cantilever
P3	24"	W16x100	11'-6"	20'-0"	1'-0"	Cantilever
P4	24"	W16x100	11'-6"	20'-0"	1'-0"	Cantilever
P5	24"	W16x100	11'-6"	20'-0"	1'-0"	Cantilever
P6	24"	W14x68	11'-6"	15'-0"	1'-0"	Cantilever
P7	24"	W14x68	11'-6"	15'-0"	1'-0"	Cantilever
P8	24"	W14x68	11'-6"	15'-0"	1'-0"	Cantilever
P9	24"	W14x68	11'-6"	15'-0"	1'-0"	Cantilever
P10	24"	W14x68	11'-6"	15'-0"	1'-0"	Cantilever
P11	24"	W14x68	11'-6"	15'-0"	1'-0"	Cantilever
P12	24"	W14x68	11'-6"	15'-0"	1'-0"	Cantilever
P13-P37	24"	W12x40	10'-0"	12'-0"	0'-0"	Cantilever

## 7 Pile Schedule

SCALE:

## 8 Typical Pile Plan

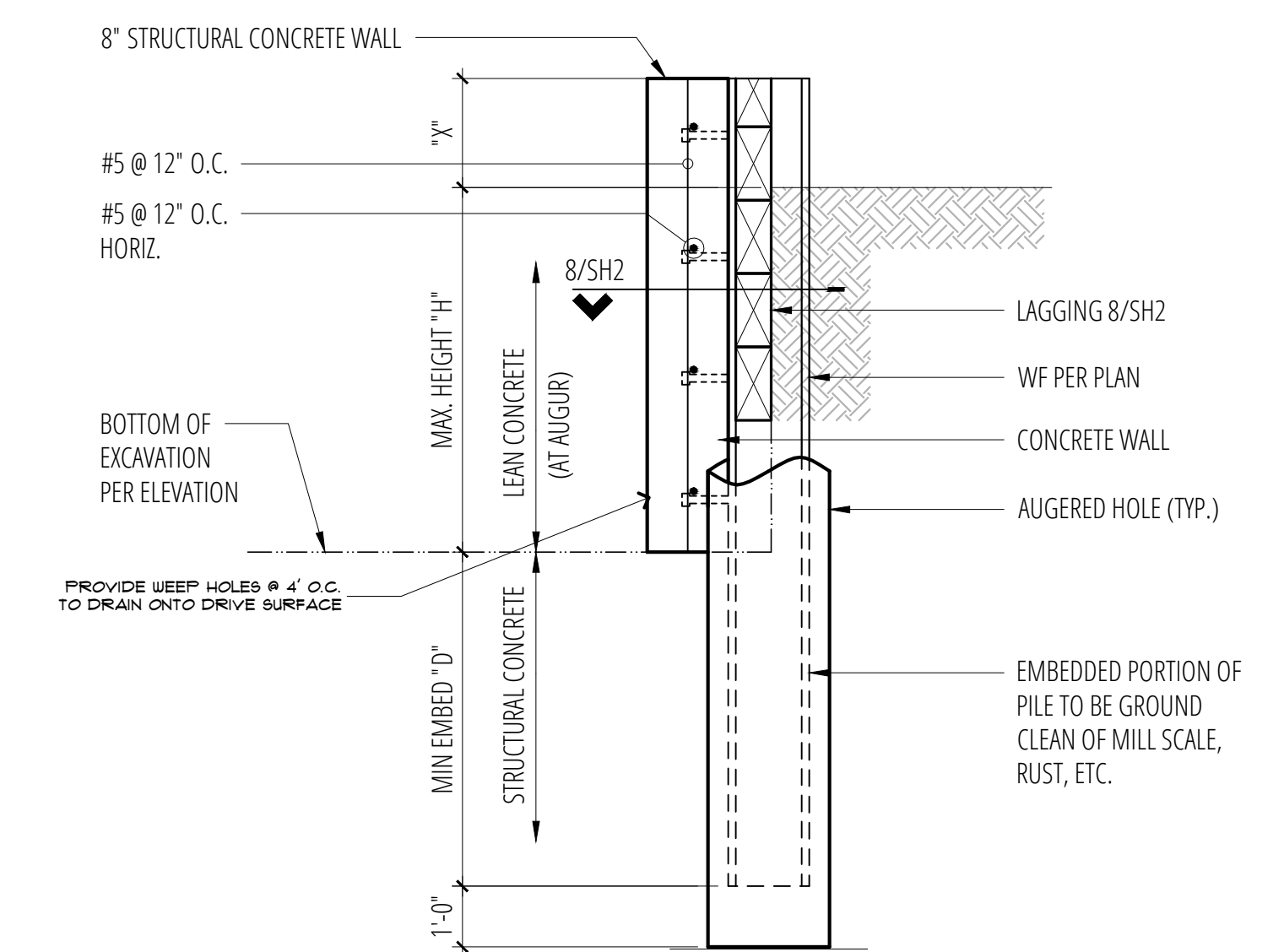
SCALE: 3/4"=1'-0"



\* SURCHARGE VARIES BETWEEN 80PSF AND 200 PSF

## 11 Pile Loading Diagram

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



## 12 Cantilever Pile

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

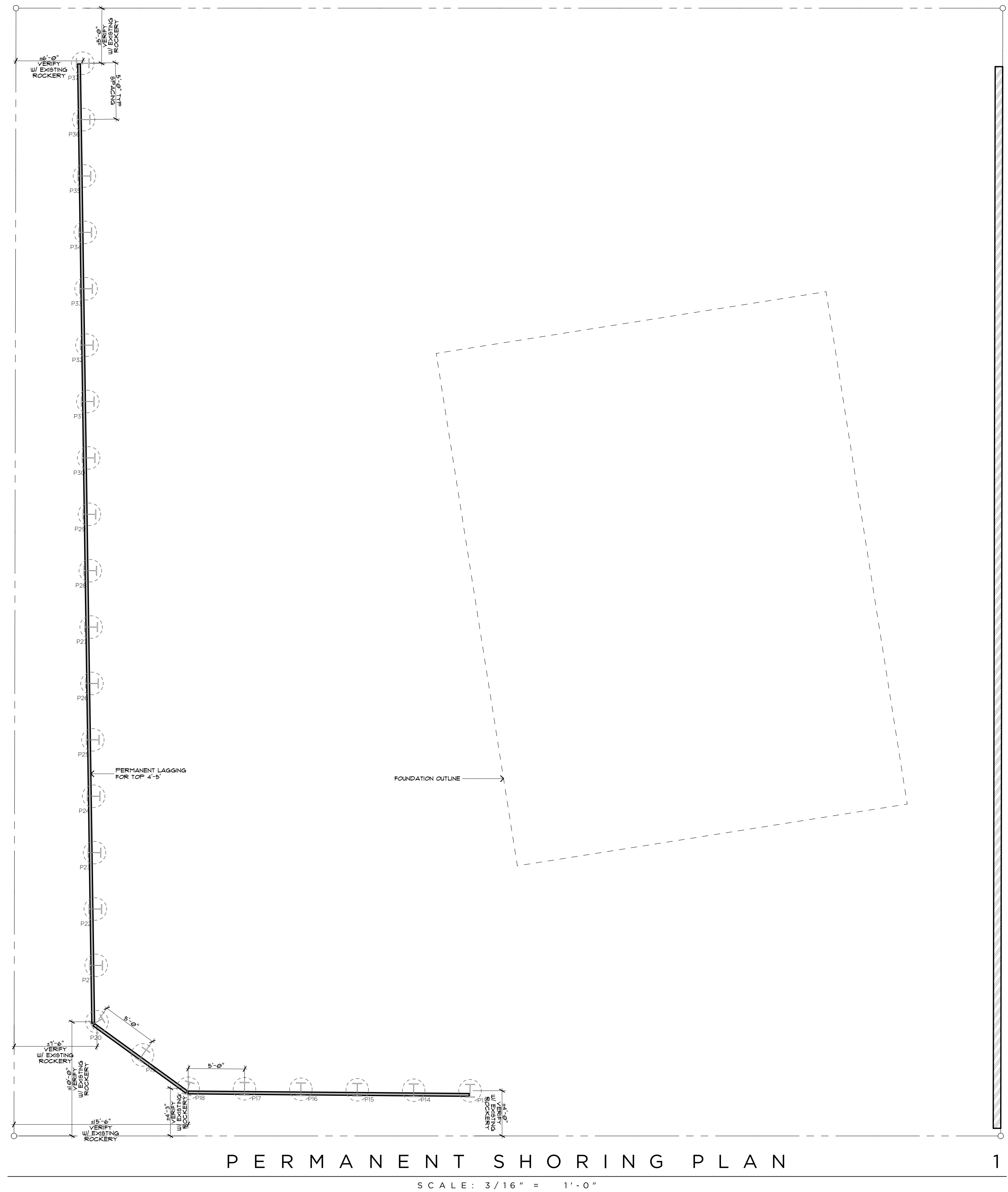


No.	Date	Issue
	1/30/23	Permit
1	4/21/23	Corrections
2	5/17/23	Corrections

Sheet Contents  
SHORING NOTES & DETAILS

Sheet No.





MERCER RESIDENCE  
6950 SE MAKER ST MERCER ISLAND, WA

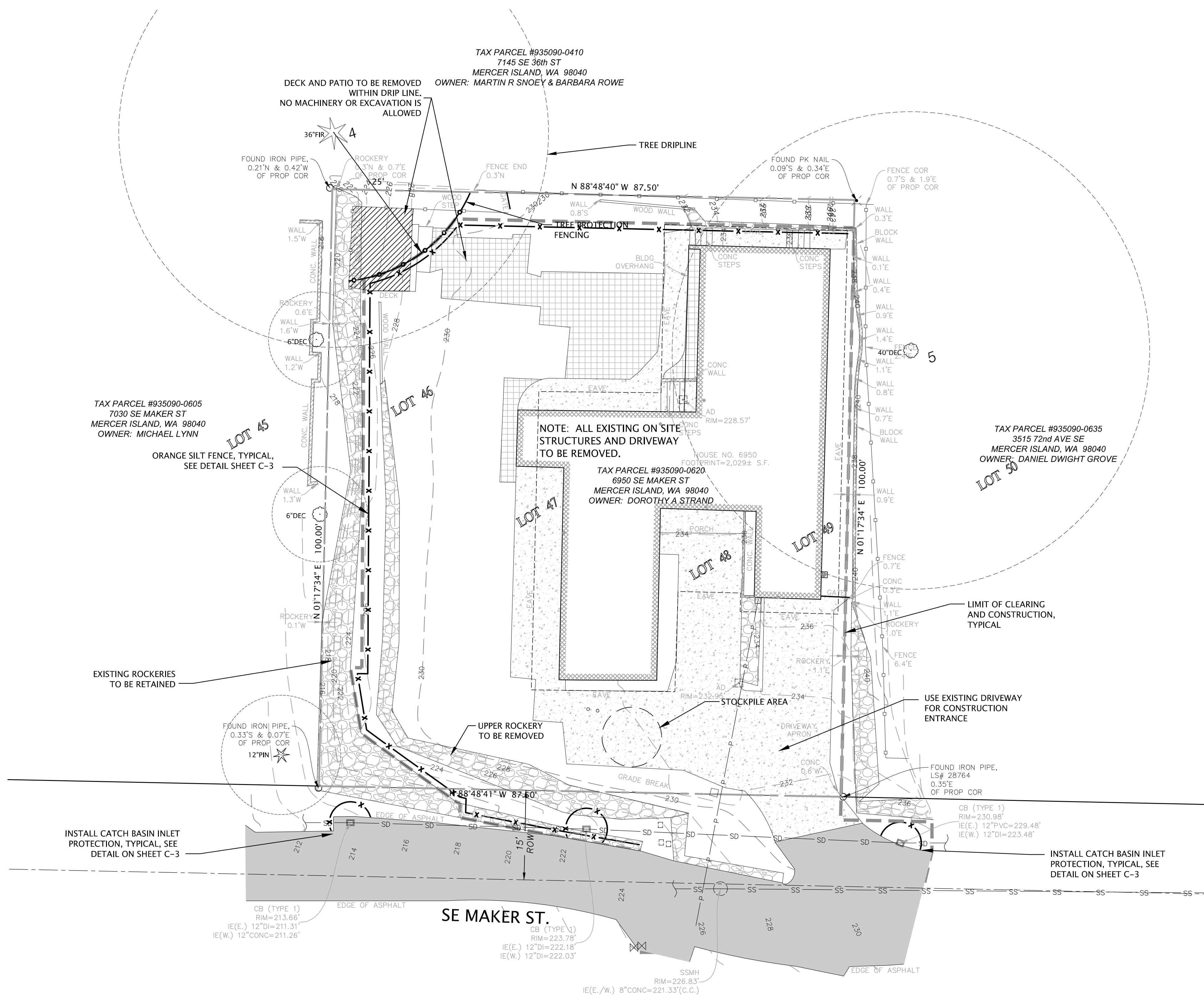
PERMANENT SHORING PLAN

RELEASE  
PERMIT CORRECTIONS  
2 JUNE 2023

SH 3  
MAKER AVE  
00655

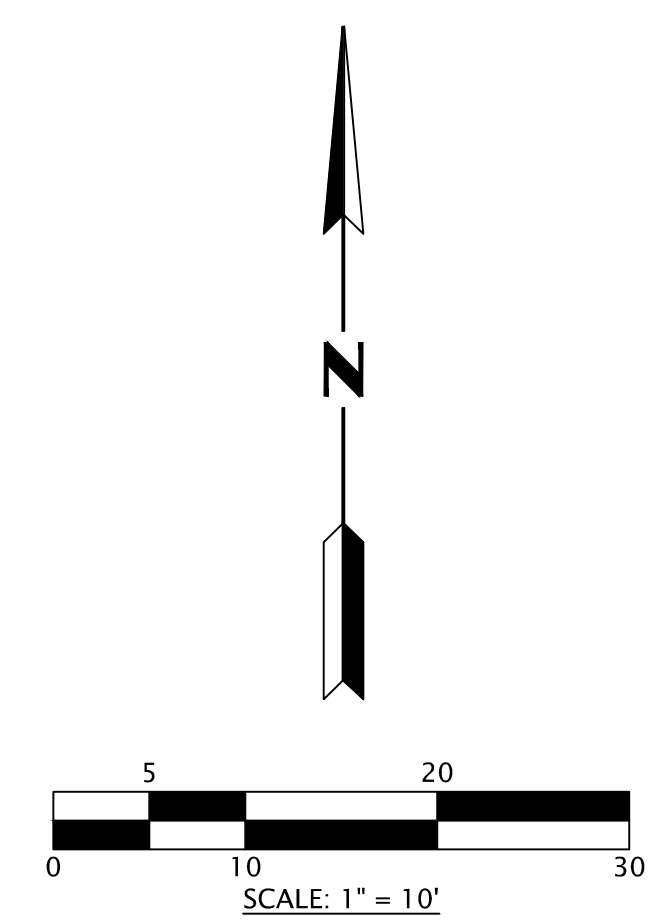


NW ¼, SW ¼ SECTION 12, TOWNSHIP 24 N, RANGE 4 E, W.M.  
CITY OF MERCER ISLAND, KING COUNTY, WASHINGTON



LEGEND

- AREA DRAIN
- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- COLUMN
- CONCRETE SURFACE
- RETAINING WALL
- DECK
- FENCE LINE (WOOD)
- GAS METER
- INLET (TYPE 1)
- MONUMENT IN CASE (FOUND)
- MONUMENT (SURFACE, FOUND)
- NAIL AS NOTED
- PAVER SURFACE
- POWER METER
- POWER (OVERHEAD)
- ROCKERY
- SEWER LINE
- SEWER MANHOLE
- SEWER CLEANOUT
- TREE (AS NOTED)
- WATER LINE
- WATER METER
- WATER VALVE



LEGEND (EROSION)

- EXISTING CONTOUR LINE
- PROPOSED CONTOUR LINE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF CONSTRUCTION
- PROPOSED CATCH BASIN INSERT
- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION

SURVEY NOTE

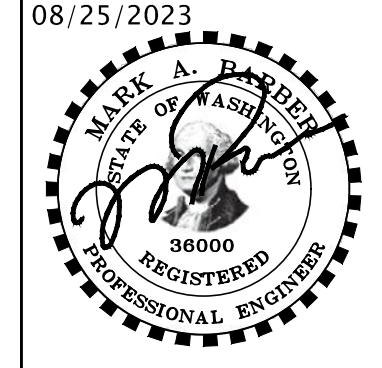
EXISTING SURVEY INFORMATION SHOWN HEREON IS BASED ON SURVEY BY TERRANE SURVEYING & MAPPING, AND ELECTRONIC DRAWING FILES AS PROVIDED ON 03/25/2022. SURVEY INFORMATION HAS NOT BEEN FIELD VERIFIED BY GOLDSMITH.

Digitally signed by Mark Barber  
Date: 2023.08.25  
14:01:35-07'00'



11400 SE 8th St, Suite 450, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009  
T 425-462-1080 www.goldsmithengineering.com

PLOTTED:	2023/08/25 13:20	Eoregon
DRAWN:		
DESIGNED:		
APPROVED:		
FIELD BOOK:		
PAGE #:		



DOROTHY STRAND

TESC PLAN FOR STRAND PROPERTY

6950 SE MAKER ST., CITY OF MERCER ISLAND KING COUNTY, WASHINGTON

JOB NO. 22038  
SHEET  
**C-1**



NW ¼, SW ¼ SECTION 12, TOWNSHIP 24 N, RANGE 4 E, W.M.  
CITY OF MERCER ISLAND, KING COUNTY, WASHINGTON

**STORM & ROOF DRAINAGE SYSTEM  
STRUCTURE TABLE**

NAME	TYPE	VERTICAL	I.E. IN / OUT
CB # 1	TYPE 1, EXISTING	RIM = 213.66	12" SD D.I. IN (E) = 211.31 12" CONC. D.I. OUT (W) = 211.26
CB # 2	TYPE 1, EXISTING TIE INTO	RIM = 223.78	12" EX. SD D.I. IN (E) = 222.18 6" SD PVC IN (N) = 222.03 12" SD D.I. OUT (W) = 222.03
CB # 3	TYPE 1, W/ OIL & WATER SEPARATOR	RIM = 230.77	4" RD PVC IN (N) = 224.90 4" TRENCH RD PCV IN (E) = 224.90 6" SD PVC OUT (S) = 224.90
TRENCH DRAIN	TRENCH DRAIN	RIM = 226.44	4" TRENCH RD PCV OUT (W) = 225.60
X-CB	TYPE I CB	RIM = 230.98	12" PVC IN (E) = 229.48 12" EX. SD D.I. OUT (W) = 229.48
YD # 1	YARD DRAIN	RIM = 230.68	4" RD PVC IN (E) = 227.25 4" RD PVC OUT (S) = 227.25
YD # 2	YARD DRAIN	RIM = 233.08	4" RD PVC IN (S) = 230.57 4" RD PVC OUT (W) = 230.57

**STORM & ROOF DRAINAGE SYSTEM  
PIPE TABLE**

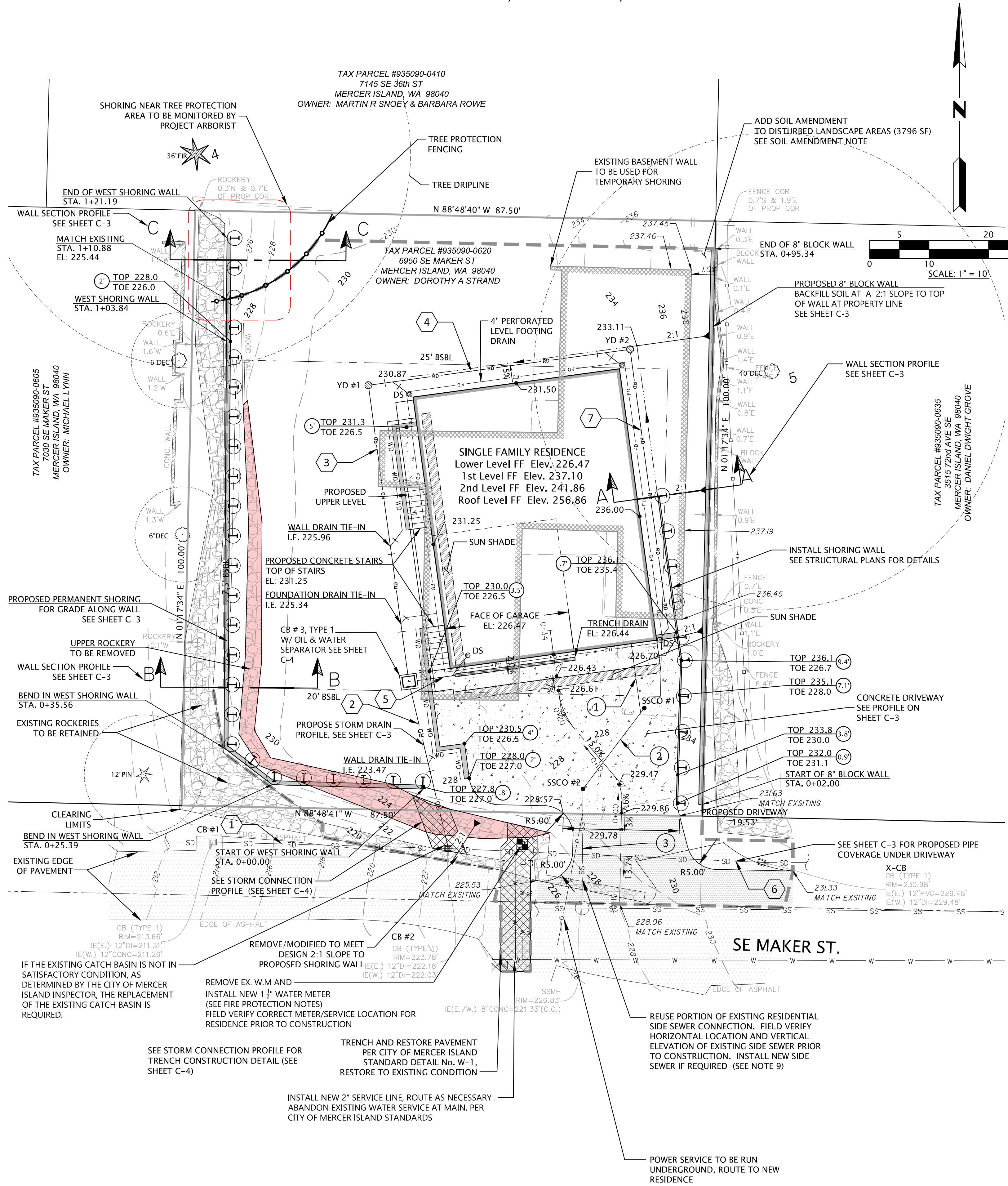
PIPE	SIZE	LENGTH	PIPE INFORMATION
1	12"	40 LF	SD D.I. @ 27.09%
2	6"	29 LF	SD PVC @ 9.97%
3	4"	50 LF	RD PVC @ 4.68%
4	4"	44 LF	RD PVC @ 7.46%
5	4"	8 LF	TRENCH RD PCV @ 8.91%
6	12"	53 LF	EX. SD D.I. @ 13.87%
7	4"	47 LF	RD PVC @ 5.75%

**SANITARY SEWER SYSTEM  
STRUCTURE TABLE**

NAME	TYPE	VERTICAL	I.E. IN / OUT
EX-SSMH # 1	SSMH, EXISTING	RIM = 226.83	6" PVC IN (N) = 221.91 8" D.I. IN (E) = 221.33 8" D.I. OUT (W) = 221.33
HOUSE	LOWER LEVEL FF	RIM = 226.47	6" PVC OUT (S) = 222.86
SSCO # 1	CLEAN OUT W/ TRAFFIC RATED LID	RIM = 227.93	6" PVC IN (N) = 222.63 6" PVC OUT (SW) = 222.63
SSCO # 2	CLEAN OUT W/ TRAFFIC RATED LID	RIM = 228.70	6" PVC IN (NE) = 222.31 6" PVC OUT (S) = 222.31

**SANITARY SEWER SYSTEM  
PIPE TABLE**

PIPE	SIZE	LENGTH	PIPE INFORMATION
1	6"	12 LF	PVC @ 2.00%
2	6"	16 LF	PVC @ 2.00%
3	6"	20 LF	PVC @ 2.00%



**NOTES**

- DEMOLISH EXISTING HOUSE, PATIO, DECK, WALKWAY, WALL AND DRIVEWAY PRIOR TO PROPOSED CONSTRUCTION.
- SITE AREA: 8,750 SF (0.20 AC)
- IMPERVIOUS CALCULATIONS:  
ON-SITE  
HOUSE = 1,888 SF  
CONCRETE DRIVEWAY = 804 SF  
DECK = 61 SF  
STAIRS = 13 SF  
RETAINING WALLS = 49 SF  
NEW AND REPLACED SUBTOTAL = 2,815 SF  
EX. ROCKERY / WALL = 736 SF  
TOTAL IMPERVIOUS = 3,537 SF (40% OF LOT AREA)  
OFF-SITE  
ASPHALT DRIVEWAY = 485 SF  
TOTAL PROJECT IMPERVIOUS = 4,022 SF
- EARTHWORK QUANTITY:  
CUT = 662.75 CY  
FILL = 19.92 CY
- ROOF DRAIN PIPES SHALL MEET MATERIAL STANDARDS FOR SDR35 FOR PVC PIPE AND N-12 FOR SMOOTH-BORE HDPE PIPE.
- FOOTING DRAIN PIPES SHALL MEET MATERIAL STANDARDS FOR D2729 FOR PVC, WITH THE PERFORATIONS DIRECTED DOWNWARD.
- CONTRACTOR SHALL COMPLY WITH THE CITY OF MERCER ISLAND "STORM DRAINAGE REQUIREMENTS" FOR ALL NEW CONSTRUCTION OF DRAINAGE SYSTEM IMPROVEMENTS, INCLUDING ROOF DRAINS, FOOTING DRAINS, AND DRIVEWAY/PARKING AREA DRAINS.
- CONTRACTOR TO COORDINATE EXACT LOCATION OF THE NEW METER WITH THE CITY'S WATER DEPARTMENT DURING CONSTRUCTION.
- THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN ON SE MAKER ST IS REQUIRED PRIOR TO ANY WORK RELATED TO THE SIDE SEWER. 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.

**LEGEND (DEVELOPED)**

- PROPOSED CONCRETE
- PROPOSED ASPHALT PAVEMENT
- TRENCH RESTORATION
- PROPOSED WALL TO BE REMOVED
- PROPOSED SANITARY SIDE SEWER
- PROPOSED SANITARY SIDE SEWER CLEANOUT
- PROPOSED WATER SERVICE LINE
- PROPOSED WATER METER
- PROPOSED YARD DRAIN
- PROPOSED ROOF DRAIN PIPE
- PROPOSED ROOF DRAIN CLEANOUT
- PROPOSED FOOTING DRAIN PIPE
- PROPOSED FOOTING DRAIN PIPE
- PROPOSED DOWNSPOUT
- PROPOSED CONTOUR LINE
- PROPOSED CATCH BASIN, TYPE I

**FIRE PROTECTION NOTES:**

- FIRE SPRINKLER REQUIRED
- BUILDER AND FIRE PROTECTION DESIGNER TO CONFIRM METER AND WATER SERVICE SIZE PRIOR TO CONSTRUCTION OF WATER SERVICE

**SURVEY NOTE**

EXISTING SURVEY INFORMATION SHOWN HEREON IS BASED ON SURVEY BY TERRANE SURVEYING & MAPPING, AND ELECTRONIC DRAWING FILES AS PROVIDED ON 03/25/2022. SURVEY INFORMATION HAS NOT BEEN FIELD VERIFIED BY GOLDSMITH.

**TEMPORARY SHORING**

TEMPORARY SHORING SHALL BE INSTALLED AT THE DIRECTION OF THE PROJECT GEOTECHNICAL ENGINEER.

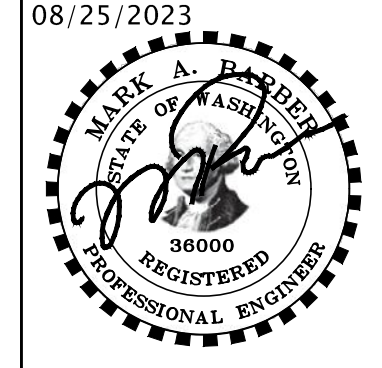
**SOIL AMENDMENT NOTE**

STOCKPILE AND COMPOST AMENDED DISTURBED LANDSCAPED AREAS PER CITY OF MERCER ISLAND POST-CONSTRUCTION SOIL MANAGEMENT  
TOP SOIL LAYER SHALL HAVE A MINIMUM DEPTH OF 8" AND A ORGANIC CONTENT OF 5% IN TURF AREAS AND 10% IN PLANTER BEDS. SUBSOIL BELOW TOP SOIL LAYER SHALL BE SCARIFIED TO A DEPTH OF 4" BELOW TOPSOIL LAYER. PLANTER BEDS SHALL BE MULCH WITH 2" OF ORGANIC MATERIAL.  
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.



**GOLDSMITH**  
LAND DEVELOPMENT SERVICES  
11400 SE 8th St, Suite 450, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009  
T 425 462 1080 www.goldsmithengineering.com

PLOTTED: 2023/08/25 13:52 Eoregon  
DRAWN:  
DESIGNED:  
APPROVED:  
FIELD BOOK:  
PAGE #:



08/25/2023  
DOROTHY STRAND  
GRADING, DRAINAGE AND UTILITY PLAN  
FOR  
STRAND PROPERTY  
6950 SE MAKER ST., CITY OF MERCER ISLAND KING COUNTY, WASHINGTON

JOB NO. 22038  
SHEET  
**C-2**

L:\2023\2023-3 DEVELOPMENT\CAD\HOST DRAWINGS\BUILDING PERMIT\22038P01.dwg 23/08/25 13:52

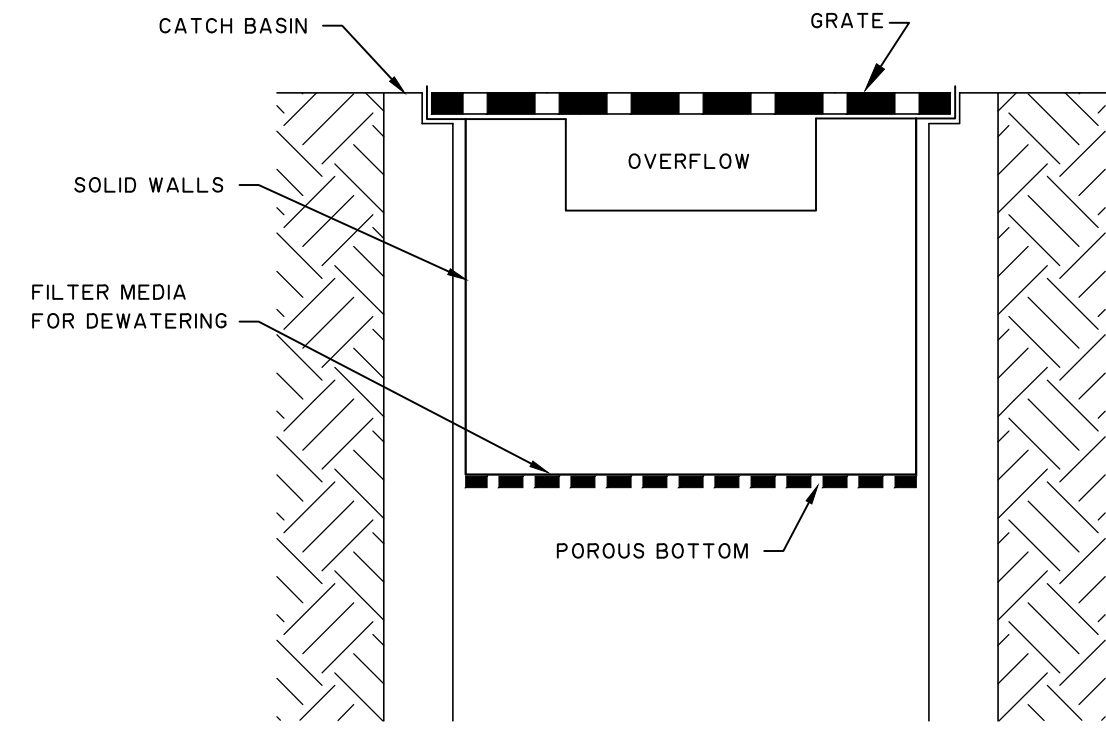
L:\2023\22038\3 DEVELOPMENT\CAD\HOST DRAWINGS\BUILDING PERMIT\22038P01.dwg







NW ¼, SW ¼ SECTION 12, TOWNSHIP 24 N, RANGE 4 E, W.M.  
CITY OF MERCER ISLAND, KING COUNTY, WASHINGTON

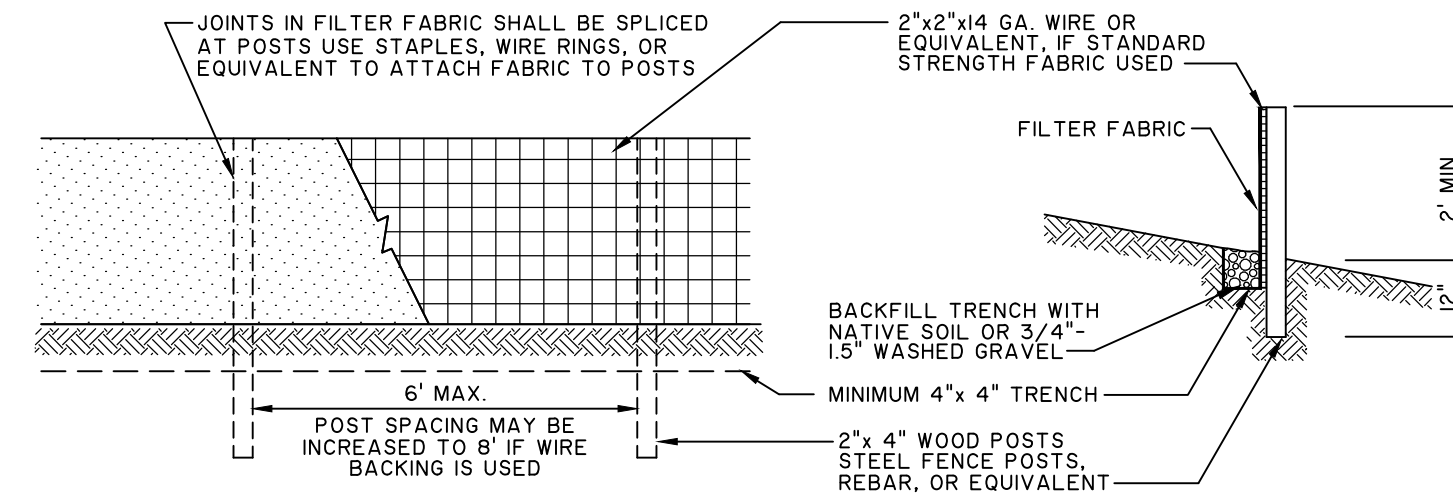


NOTE: THIS DETAIL IS ONLY SCHEMATIC. ANY INSERT IS ALLOWED THAT HAS A MIN. 0.5 C.F. OF STORAGE, THE MEANS TO DEWATER THE STORED SEDIMENT, AN OVERFLOW, AND CAN BE EASILY MAINTAINED.

**MAINTENANCE STANDARDS**

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER, AN ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON-SITE OR HAULED OFF-SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACED AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR BOTH FORMS OF CATCH BASIN PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED PROPERLY.

**CATCH BASIN INSERT DETAIL**  
NTS

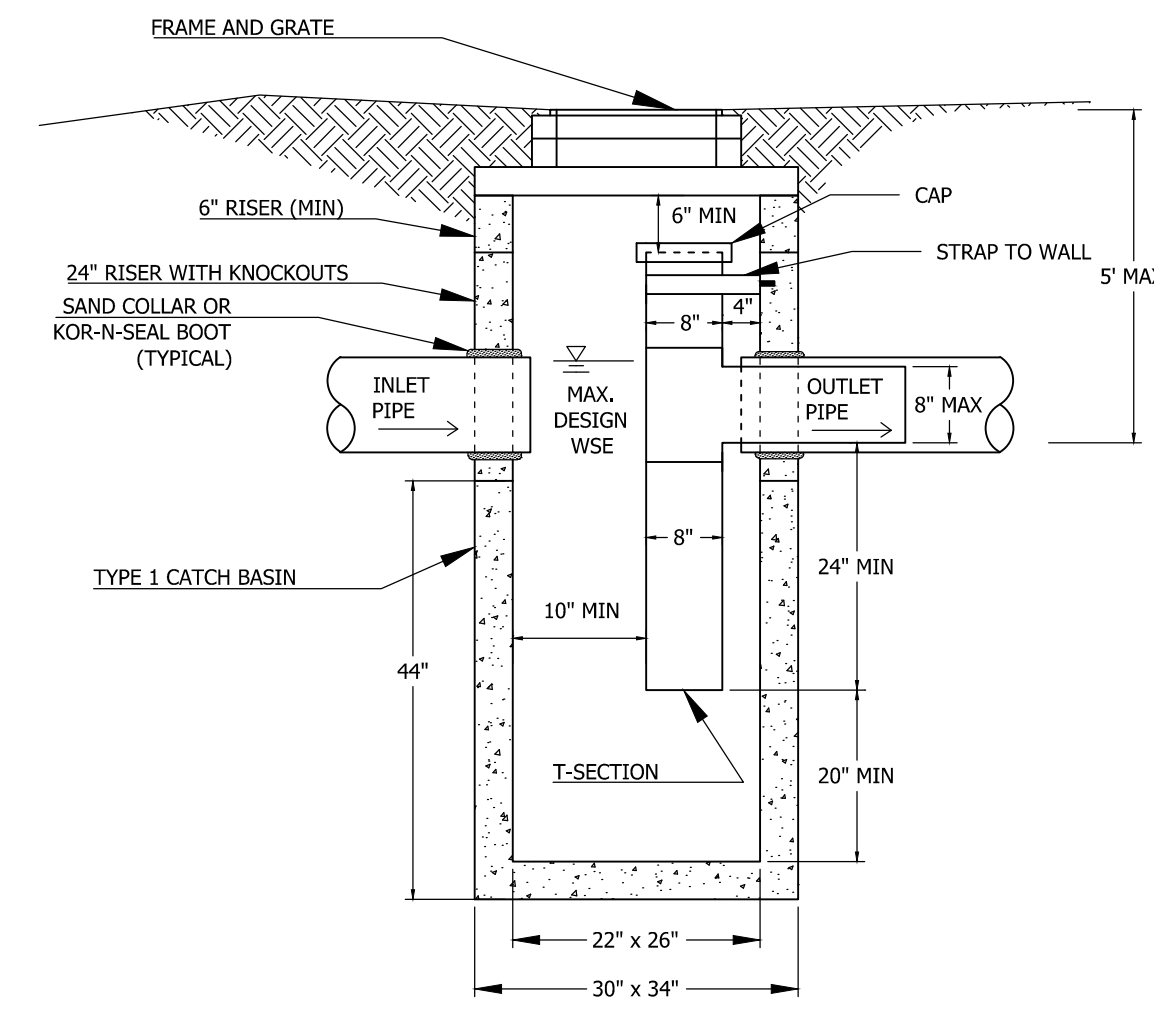


NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

**MAINTENANCE STANDARDS**

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

**SILT FENCE**  
NTS



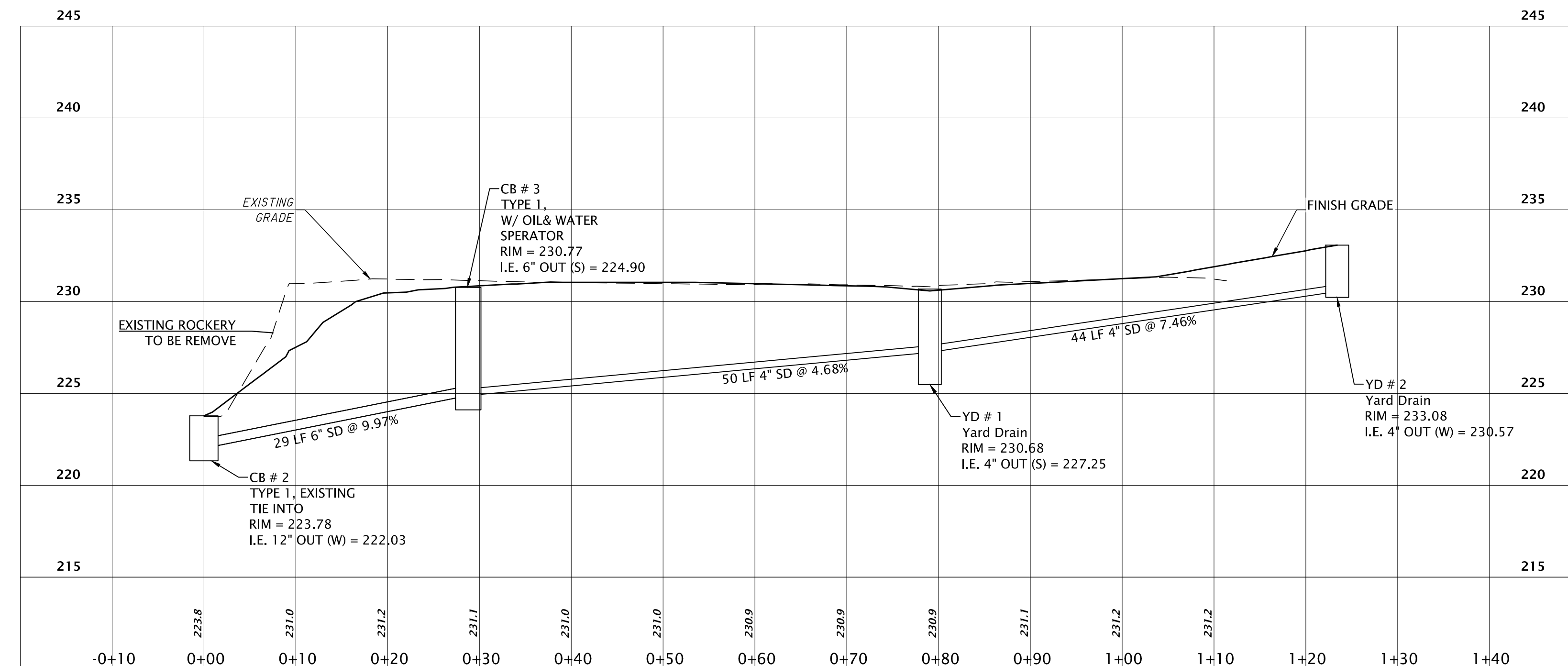
**NOTES**

1. MAX. OUTLET PIPE DIAMETER IS 8 INCHES. VERTICAL RISER SECTION SHALL BE ALIGNED PLUMB VERTICALLY. HORIZONTAL RISER SECTION SHALL MATCH OUTLET PIPE SLOPE.
2. ALL METAL PARTS AND SURFACES MUST BE CORROSION RESISTANT. STEEL HARDWARE SHALL BE GALVANIZED. PIPES SHALL BE PVC. COMPLETE CORROSION PROTECTION MUST BE ASSURED.
3. APPLY NON-SHRINK GROUT TO INSIDE AND OUTSIDE OF ALL JOINTS, RINGS, RISERS AND FRAMES.
4. SLIP SMOOTH-BORE HORIZONTAL LEG OF FLOW CONTROL TEE INSIDE CARRIER PIPE.
5. NO FLOW CONTROL JOINT OUTSIDE OF STRUCTURE.

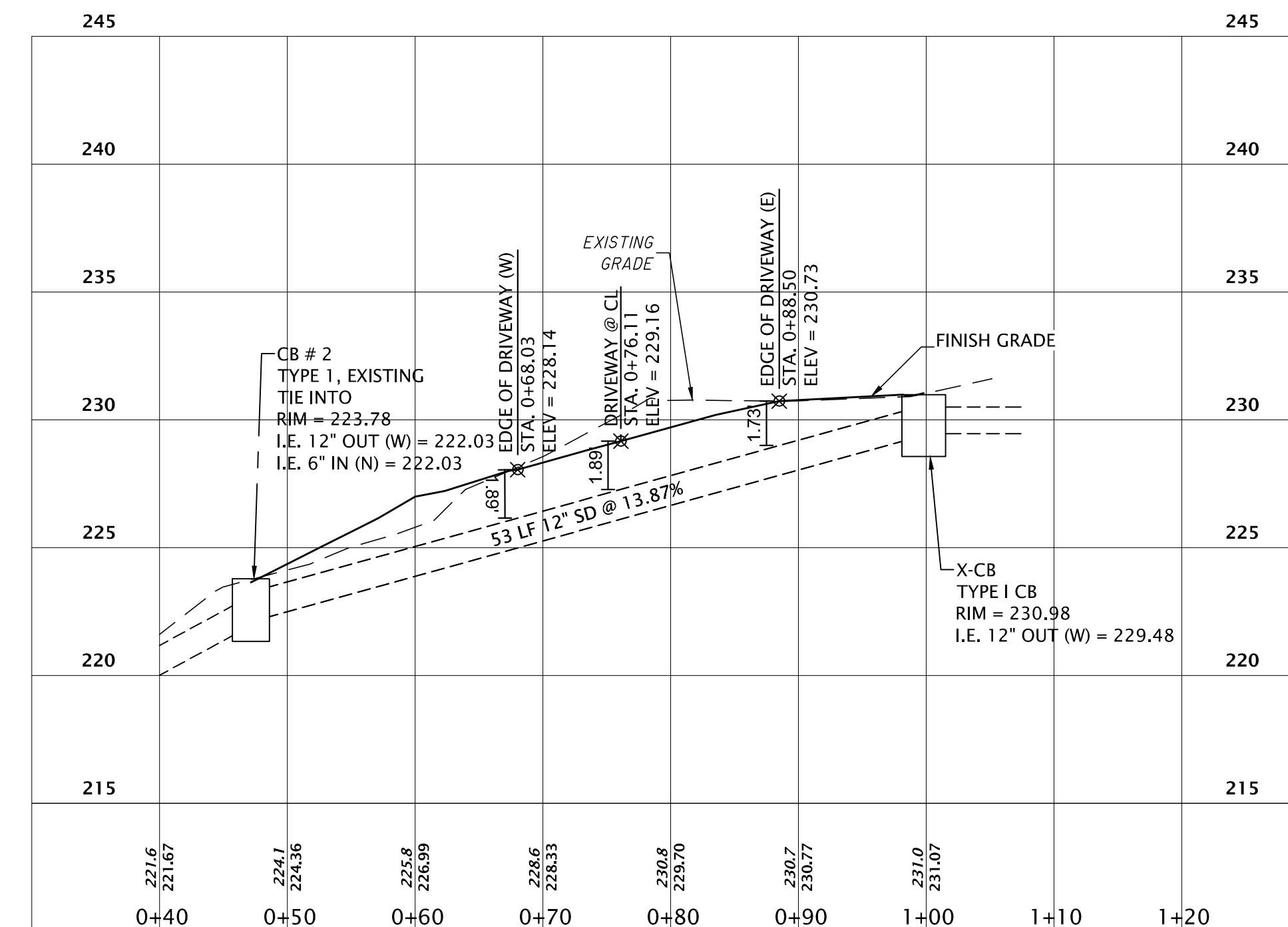
**CB TYPE 1 W/ OIL & WATER SEPARATOR**  
NTS

**STANDARD TESC PLAN NOTES:**

1. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.



**PROPOSE RESIDENTIAL STORM DRAIN CONNECTION PROFILE**  
STA. -0+10.00 TO STA. 1+40.00  
1"=10.00' HORIZ.  
1"=5.00' VERT.



**EXISTING SE MARKER ST. STORM PROFILE**  
STA. 0+40.00 TO STA. 1+20.00  
1"=10.00' HORIZ.  
1"=5.00' VERT.





# PLAN NOTES:

- THIS PROJECT SHALL BE DESIGNED, ENGINEERED, + CONSTRUCTED IN FULL COMPLIANCE W/ ALL CODES + REGULATIONS.
- ALL EXTERIOR WALLS SHALL BE 2x6 UNO.
- ALL INTERIOR WALLS SHALL BE 2x4 UNO.
- ALL HANDRAILS SHALL BE LOCATED @ 36" ABOVE STAIR NOSING WITH A GRASP DIMENSION BETWEEN 1 1/8" - 2".
- ALL HANDRAILS SHALL BE CONTINUOUS OR TERMINATE AT NEWEL POST.
- ALL GUARDRAILS SHALL BE 36" ABOVE FINISHED FLOOR AND DESIGNED SUCH THAT THE MAXIMUM OPENING WILL NOT ALLOW PASSAGE OF A 4" SPHERE.
- ALL GUARDRAILS SHALL BE DESIGNED TO RESIST A 200LB CONCENTRATED LOAD AT THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS.
- 5/8" TYPE 'X' GWB AT ALL GARAGE WALLS AND CEILING AS WELL AS ANY POSTS + BEAMS.
- ACCESSIBLE AREA UNDER STAIR SHALL BE 1/2" GWB MINIMUM.
- PROVIDE A PROGRAMMABLE THERMOSTAT FOR THE PRIMARY SPACE CONDITIONING SYSTEM WITHIN EACH DWELLING UNIT PER SEC R403.11.
- A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
- ALL SHOWERHEADS + KITCHEN SINK FAUCETS INSTALLED IN THE UNIT SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.
- ALL EXHAUST AIR SHALL VENT DIRECTLY TO THE EXTERIOR OF THE BUILDING PER M501.1 AND M506.2.
- ALL NEW STAIRS SHALL MEET THE FOLLOWING REQUIREMENTS:
  - MINIMUM 36" WIDTH.
  - MAXIMUM 7 3/4" RISER, MINIMUM 10" TREAD.
  - MINIMUM 6'-8" HEAD ROOM.
  - MINIMUM LANDING LENGTH 36"
- CONTRACTOR TO COMPLETE AND POST INSULATION CERTIFICATE FOR RESIDENTIAL CONSTRUCTION FORM WITHIN 3' OF ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
- WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM R-10 INSULATION.
- SHOULD AN AIR LEAKAGE TEST BE CONDUCTED, A WRITTEN REPORT OF THE AIR LEAKAGE TEST RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE BUILDING INSPECTOR PRIOR TO CALL FOR FINAL INSPECTION. AIR LEAKAGE SHALL NOT EXCEED 5 AIR CHANGES/HOUR.
- WHOLE HOUSE VENTILATION INTEGRATED WITH FORCED-AIR SYSTEM PER SRC M507.3.5 AND SHALL RUN INTERMITTENTLY.

# WSEC 2018 NOTES:

- THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2018 PRESCRIPTIVE METHOD.
- INSULATION VALUES SHALL BE AS FOLLOWS:
  - ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
  - ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
  - ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
  - ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
  - ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
  - ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
  - ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
  - ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
  - ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
  - ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
- RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
- PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
- PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
- NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5a).
- AT CRAWL SPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT<sup>2</sup> FOR EACH 300 FT<sup>2</sup> OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE. EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
- THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
- AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

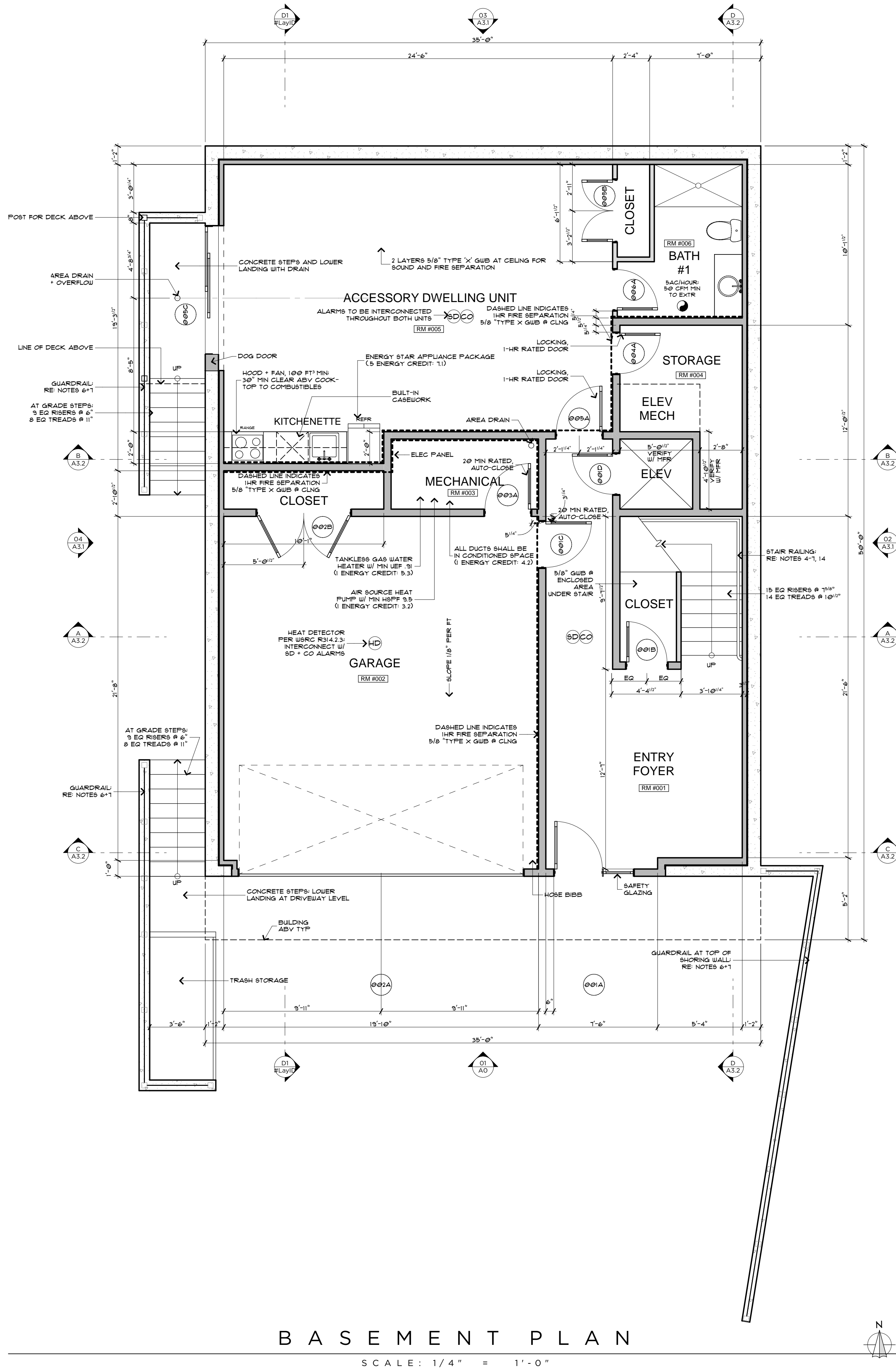
# FLOOR AREAS:

LOT AREA:	8,750 FT <sup>2</sup>
MAXIMUM ALLOWABLE GFA:	(40%) 3,500 FT <sup>2</sup>
ADDITIONAL GFA FOR ADU:	(5%) 437.5 FT <sup>2</sup>
TOTAL ALLOWABLE GFA W/ ADU:	(45%) 3,937.5 FT <sup>2</sup>
MAIN RESIDENCE BASEMENT GFA:	[528 FT <sup>2</sup> ]
(INCLUDES STAIRS TO MAIN LEVEL: 81 FT <sup>2</sup> )	
ELEVATOR SHAFT @ BASEMENT:	[20 FT <sup>2</sup> ]
GARAGE GFA:	[476 FT <sup>2</sup> ]
BASEMENT ADU GFA:	[586 FT <sup>2</sup> ]
<b>BASEMENT SUBTOTAL:</b>	<b>[1,610 FT<sup>2</sup>]</b>
(937.5 FT <sup>2</sup> EXCLUDED SEE BELOW):	672 FT <sup>2</sup>
FIRST FLOOR GFA:	1649 FT <sup>2</sup>
(EXCLUDE STAIR PER 19.02.020.D.2.c):	(81 FT <sup>2</sup> )
ELEVATOR SHAFT:	20 FT <sup>2</sup>
SECOND FLOOR GFA:	1529 FT <sup>2</sup>
(EXCLUDE ELEVATOR SHAFT):	(20 FT <sup>2</sup> )
SECOND FLOOR COVERED DECK GFA:	66 FT <sup>2</sup>
TOTAL GROSS FLOOR AREA:	(44.9%) 3,936 FT <sup>2</sup>

# BASEMENT FLOOR EXCLUSION CALCS:

WALL SEGMENT	LENGTH	COVERAGE %	RESULT
A	35'	0%	0'
B	46'	59.37%	27'-5"
C	35'	60.42%	21'-1"
D	46'	100%	46'-0"
TOTALS	162'		94'-4"

94'-4" / 162' = 58.23%



# BASEMENT PLAN

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

10651 REGISTERED ARCHITECT  
 Jeffrey P. Almeter  
 State of Washington  
 6950 SE MAKER ST  
 MERCER ISLAND, WA

BASEMENT FLOOR PLAN

RELEASE  
 21 MARCH 2022  
 PERMIT CORRECTIONS  
 20 FEBRUARY 2023  
 PERMIT CORRECTIONS  
 2 JUNE 2023

A 2.0

MAKER AVE  
 PROJECT NO. 2021-011  
 00660



# PLAN NOTES:

- THIS PROJECT SHALL BE DESIGNED, ENGINEERED, + CONSTRUCTED IN FULL COMPLIANCE W/ ALL CODES + REGULATIONS.
- ALL EXTERIOR WALLS SHALL BE 2x6 UNO.
- ALL INTERIOR WALLS SHALL BE 2x4 UNO.
- ALL HANDRAILS SHALL BE LOCATED @ 36" ABOVE STAIR NOSING WITH A GRASP DIMENSION BETWEEN 1 1/8" - 2".
- ALL HANDRAILS SHALL BE CONTINUOUS OR TERMINATE AT NEWEL POST.
- ALL GUARDRAILS SHALL BE 36" ABOVE FINISHED FLOOR AND DESIGNED SUCH THAT THE MAXIMUM OPENING WILL NOT ALLOW PASSAGE OF A 4" SPHERE.
- ALL GUARDRAILS SHALL BE DESIGNED TO RESIST A 200LB CONCENTRATED LOAD AT THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS.
- 5/8" TYPE 'X' GWB AT ALL GARAGE WALLS AND CEILING AS WELL AS ANY POSTS + BEAMS.
- ACCESSIBLE AREA UNDER STAIR SHALL BE 1/2" GWB MINIMUM.
- PROVIDE A PROGRAMMABLE THERMOSTAT FOR THE PRIMARY SPACE CONDITIONING SYSTEM WITHIN EACH DWELLING UNIT PER SEC R403.11.
- A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
- ALL SHOWERHEADS + KITCHEN SINK FAUCETS INSTALLED IN THE UNIT SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.
- ALL EXHAUST AIR SHALL VENT DIRECTLY TO THE EXTERIOR OF THE BUILDING PER M501.1 AND M506.2.
- ALL NEW STAIRS SHALL MEET THE FOLLOWING REQUIREMENTS:
  - MINIMUM 36" WIDTH.
  - MAXIMUM 7 3/4" RISER, MINIMUM 10" TREAD.
  - MINIMUM 6'-8" HEAD ROOM.
  - MINIMUM LANDING LENGTH 36"
- CONTRACTOR TO COMPLETE AND POST INSULATION CERTIFICATE FOR RESIDENTIAL CONSTRUCTION FORM WITHIN 3' OF ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
- WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM R-10 INSULATION.
- SHOULD AN AIR LEAKAGE TEST BE CONDUCTED, A WRITTEN REPORT OF THE AIR LEAKAGE TEST RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE BUILDING INSPECTOR PRIOR TO CALL FOR FINAL INSPECTION. AIR LEAKAGE SHALL NOT EXCEED 5 AIR CHANGES/HOUR.
- WHOLE HOUSE VENTILATION INTEGRATED WITH FORCED-AIR SYSTEM PER SRC M507.3.5 AND SHALL RUN INTERMITTENTLY.

# WSEC 2018 NOTES:

- THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2018 PRESCRIPTIVE METHOD.
- INSULATION VALUES SHALL BE AS FOLLOWS:
  - ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
  - ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
  - ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
  - ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
  - ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
  - ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
  - ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
  - ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
  - ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
  - ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
- RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
- PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
- PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
- NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5c).
- AT CRAWL SPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT<sup>2</sup> FOR EACH 300 FT<sup>2</sup> OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE. EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
- THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
- AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

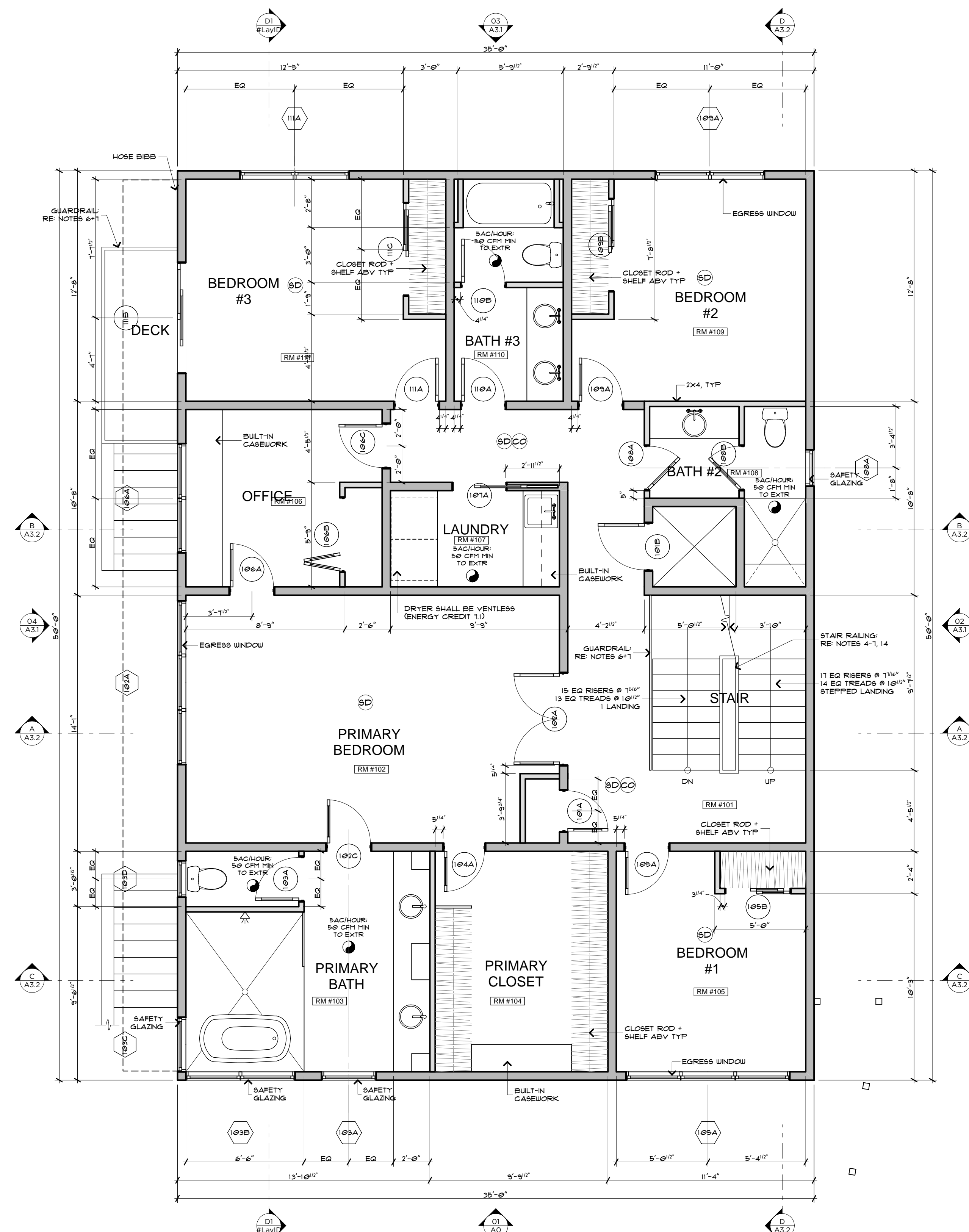
# FLOOR AREAS:

LOT AREA:	8,750 FT <sup>2</sup>
MAXIMUM ALLOWABLE GFA:	(40%) 3,500 FT <sup>2</sup>
ADDITIONAL GFA FOR ADU:	(5%) 437.5 FT <sup>2</sup>
TOTAL ALLOWABLE GFA W/ ADU:	(45%) 3,937.5 FT <sup>2</sup>
MAIN RESIDENCE BASEMENT GFA:	[528 FT <sup>2</sup> ]
(INCLUDES STAIRS TO MAIN LEVEL: 81 FT <sup>2</sup> )	
ELEVATOR SHAFT @ BASEMENT:	[20 FT <sup>2</sup> ]
GARAGE GFA:	[476 FT <sup>2</sup> ]
BASEMENT ADU GFA:	[586 FT <sup>2</sup> ]
<b>BASEMENT SUBTOTAL:</b>	<b>[1,610 FT<sup>2</sup>]</b>
(937.5 FT <sup>2</sup> EXCLUDED SEE BELOW):	672 FT <sup>2</sup>
FIRST FLOOR GFA:	1,649 FT <sup>2</sup>
(EXCLUDE STAIR PER 19.02.020.D.2.c):	(81 FT <sup>2</sup> )
ELEVATOR SHAFT:	20 FT <sup>2</sup>
SECOND FLOOR GFA:	1,529 FT <sup>2</sup>
(EXCLUDE ELEVATOR SHAFT):	(20 FT <sup>2</sup> )
SECOND FLOOR COVERED DECK GFA:	66 FT <sup>2</sup>
TOTAL GROSS FLOOR AREA:	(44.9%) 3,936 FT <sup>2</sup>

# BASEMENT FLOOR EXCLUSION CALCS:

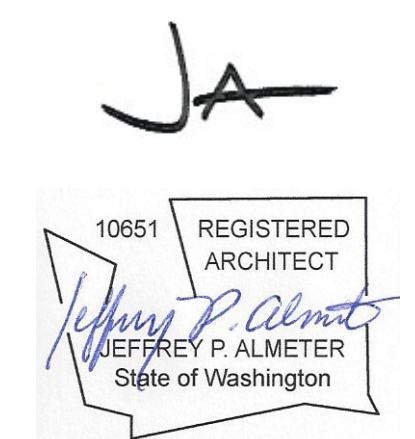
WALL SEGMENT	LENGTH	COVERAGE %	RESULT
A	39'	0%	0'
B	46'	59.37%	27'-3"
C	35'	60.42%	21'-1"
D	46'	100%	46'-0"
TOTALS	162'		94'-4"

94'-4" / 162' = 58.25%



# FIRST FLOOR PLAN

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



MERCER RESIDENCE  
6950 SE MAKER ST MERCER ISLAND, WA  
FIRST FLOOR PLAN

RELEASE  
21 MARCH 2022  
PERMIT CORRECTIONS  
20 FEBRUARY 2023  
PERMIT CORRECTIONS  
2 JUNE 2023

A 2.1

MAKER AVE  
MERCER ISLAND, WA 98040  
00661



# PLAN NOTES:

- THIS PROJECT SHALL BE DESIGNED, ENGINEERED, + CONSTRUCTED IN FULL COMPLIANCE W/ ALL CODES + REGULATIONS.
- ALL EXTERIOR WALLS SHALL BE 2x6 UNO.
- ALL INTERIOR WALLS SHALL BE 2x4 UNO.
- ALL HANDRAILS SHALL BE LOCATED @ 36" ABOVE STAIR NOSING WITH A GRASP DIMENSION BETWEEN 1 1/8" - 2".
- ALL HANDRAILS SHALL BE CONTINUOUS OR TERMINATE AT NEWEL POST.
- ALL GUARDRAILS SHALL BE 36" ABOVE FINISHED FLOOR AND DESIGNED SUCH THAT THE MAXIMUM OPENING WILL NOT ALLOW PASSAGE OF A 4" SPHERE.
- ALL GUARDRAILS SHALL BE DESIGNED TO RESIST A 200LB CONCENTRATED LOAD AT THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS.
- 5/8" TYPE 'X' GWB AT ALL GARAGE WALLS AND CEILING AS WELL AS ANY POSTS + BEAMS.
- ACCESSIBLE AREA UNDER STAIR SHALL BE 1/2" GWB MINIMUM.
- PROVIDE A PROGRAMMABLE THERMOSTAT FOR THE PRIMARY SPACE CONDITIONING SYSTEM WITHIN EACH DWELLING UNIT PER SEC R403.11.
- A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
- ALL SHOWERHEADS + KITCHEN SINK FAUCETS INSTALLED IN THE UNIT SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.
- ALL EXHAUST AIR SHALL VENT DIRECTLY TO THE EXTERIOR OF THE BUILDING PER M501 AND M506.2.
- ALL NEW STAIRS SHALL MEET THE FOLLOWING REQUIREMENTS:
  - MINIMUM 36" WIDTH.
  - MAXIMUM 7 3/4" RISER, MINIMUM 10" TREAD.
  - MINIMUM 6'-8" HEAD ROOM.
  - MINIMUM LANDING LENGTH 36"
- CONTRACTOR TO COMPLETE AND POST INSULATION CERTIFICATE FOR RESIDENTIAL CONSTRUCTION FORM WITHIN 3' OF ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
- WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM R-10 INSULATION.
- SHOULD AN AIR LEAKAGE TEST BE CONDUCTED, A WRITTEN REPORT OF THE AIR LEAKAGE TEST RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE BUILDING INSPECTOR PRIOR TO CALL FOR FINAL INSPECTION. AIR LEAKAGE SHALL NOT EXCEED 5 AIR CHANGES/HOUR.
- WHOLE HOUSE VENTILATION INTEGRATED WITH FORCED-AIR SYSTEM PER SRC M507.3.5 AND SHALL RUN INTERMITTENTLY.

# WSEC 2018 NOTES:

- THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2018 PRESCRIPTIVE METHOD.
- INSULATION VALUES SHALL BE AS FOLLOWS:
  - ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
  - ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
  - ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
  - ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
  - ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
  - ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
  - ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
  - ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
  - ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
  - ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
- RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
- PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
- PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
- NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5c).
- AT CRAWL SPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT<sup>2</sup> FOR EACH 300 FT<sup>2</sup> OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE. EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
- THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
- AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

# FLOOR AREAS:

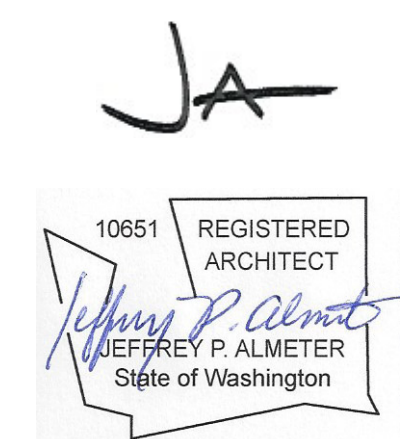
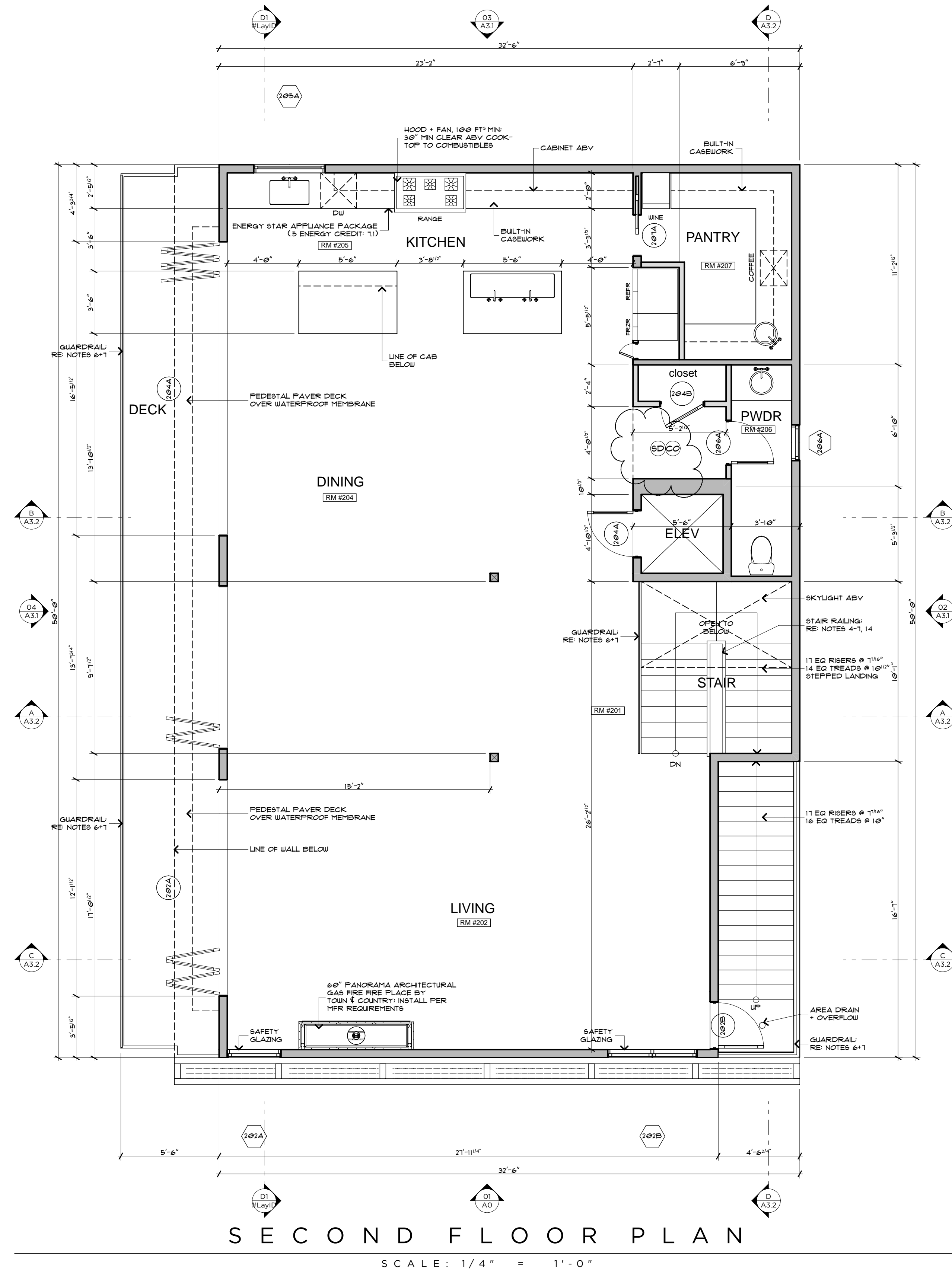
LOT AREA: 8,750 FT<sup>2</sup>  
 MAXIMUM ALLOWABLE GFA: (40%) 3,500 FT<sup>2</sup>  
 ADDITIONAL GFA FOR ADU: (5%) 437.5 FT<sup>2</sup>  
 TOTAL ALLOWABLE GFA W/ ADU: (45%) 3,937.5 FT<sup>2</sup>

MAIN RESIDENCE BASEMENT GFA: [528 FT<sup>2</sup>]  
 (INCLUDES STAIRS TO MAIN LEVEL: 81 FT<sup>2</sup>)  
 ELEVATOR SHAFT @ BASEMENT: [20 FT<sup>2</sup>]  
 GARAGE GFA: [476 FT<sup>2</sup>]  
 BASEMENT ADU GFA: [586 FT<sup>2</sup>]  
**BASEMENT SUBTOTAL: [1,610 FT<sup>2</sup>]**  
 (937.5 FT<sup>2</sup> EXCLUDED SEE BELOW)  
 FIRST FLOOR GFA: 1,649 FT<sup>2</sup>  
 (EXCLUDE STAIR PER 19.02.020.D.2.c): (81 FT<sup>2</sup>)  
 ELEVATOR SHAFT: 20 FT<sup>2</sup>  
 SECOND FLOOR GFA: 1,529 FT<sup>2</sup>  
 (EXCLUDE ELEVATOR SHAFT): (20 FT<sup>2</sup>)  
 SECOND FLOOR COVERED DECK GFA: 66 FT<sup>2</sup>  
 TOTAL GROSS FLOOR AREA: (44.9%) 3,936 FT<sup>2</sup>

# BASEMENT FLOOR EXCLUSION CALCS:

WALL SEGMENT	LENGTH	COVERAGE %	RESULT
A	39'	0%	0'
B	46'	59.37%	27'-5"
C	35'	60.42%	21'-1"
D	46'	100%	46'-0"
TOTALS	162'		94'-4"

94'-4" / 162' = 58.23%



**MERCER RESIDENCE**  
 6950 SE MAKER ST MERCER ISLAND, WA

**SECOND FLOOR PLAN**

RELEASE  
 21 MARCH 2022  
 PERMIT CORRECTIONS  
 20 FEBRUARY 2023  
 PERMIT CORRECTIONS  
 2 JUNE 2023

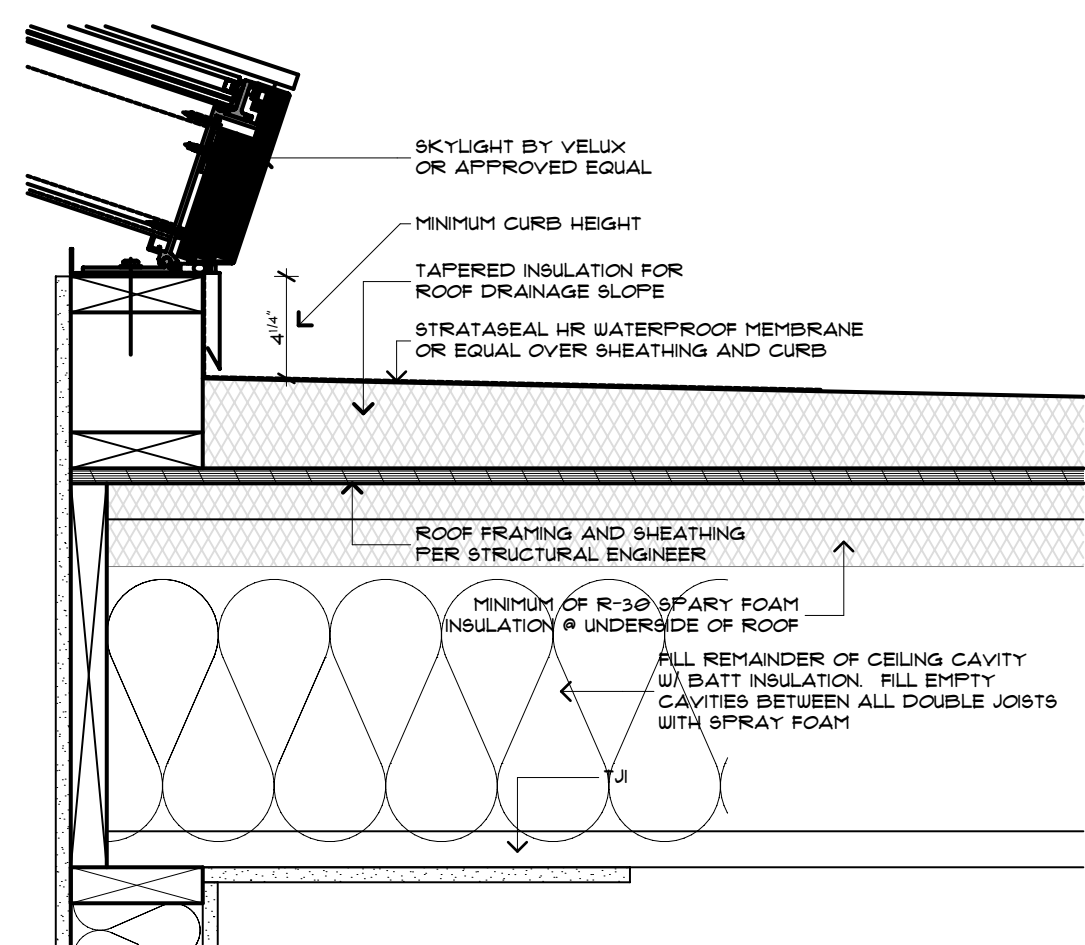
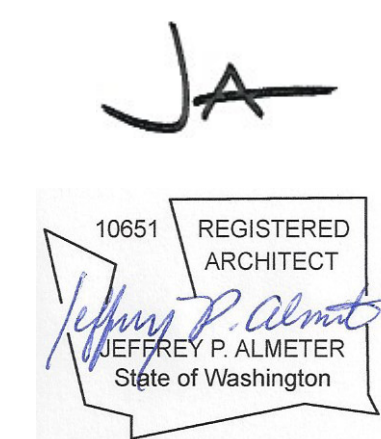


# ROOF NOTES:

1. CHIMNEY SHALL EXTEND A MIN OF 2'-0" ABV ROOF OR PARAPET WITHIN 10'-0" RADIUS OF CHIMNEY. PROVIDE APPROVED SPARK ARRESTOR @ ALL CHIMNEY CAPS. ALL ARCHITECTURAL FEATURES MUST BE PERMITTED BY FLU + SPARK ARRESTOR MFR APPROVAL.
2. COORDINATE DOWNSPOUT LOCATION W/ JEFFREY ALMETER, INC. PRIOR TO INSTALLATION.
3. ALL VENTS SHALL BE LOCATED AWAY FROM VISIBILITY @ PUBLIC RIGHT-OF-WAY.
4. TRUSS MANUFACTURERS TO PROVIDE TRUSS SHOP DRAWINGS TO JEFFREY ALMETER FOR DESIGN APPROVAL A MINIMUM OF 10 BUSINESS DAYS PRIOR TO TRUSS MANUFACTURING.

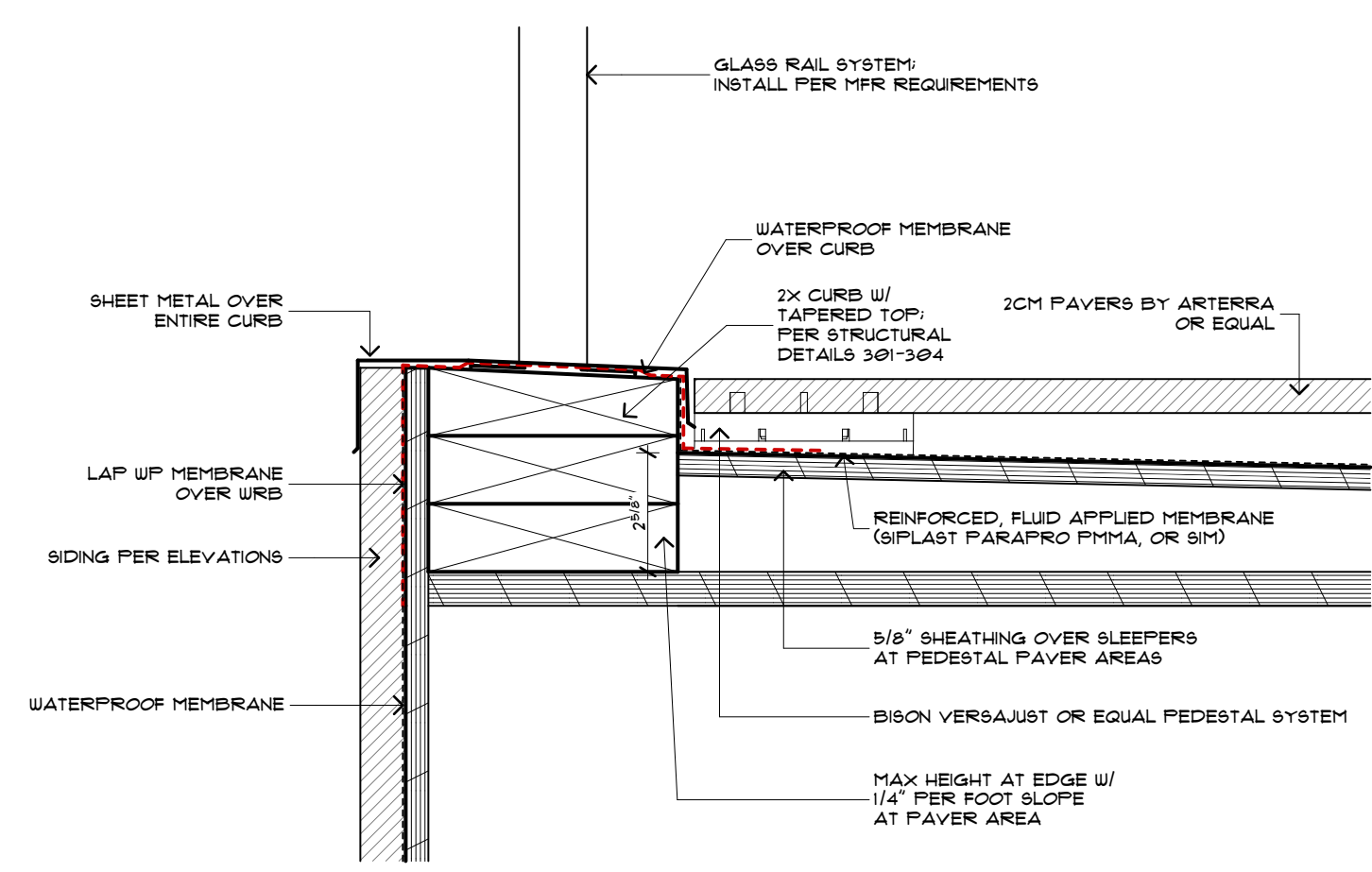
# WSEC 2018 NOTES:

1. THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2018 PRESCRIPTIVE METHOD.
2. INSULATION VALUES SHALL BE AS FOLLOWS:
  - A. ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
  - B. ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
  - C. ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
  - D. ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
  - E. ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
  - F. ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
  - G. ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
  - H. ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
  - I. ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
  - J. ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
3. RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
4. PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
5. PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
6. NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5a).
7. AT CRAWLSPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT<sup>2</sup> FOR EACH 300 FT<sup>2</sup> OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE. EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
8. THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
9. AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.



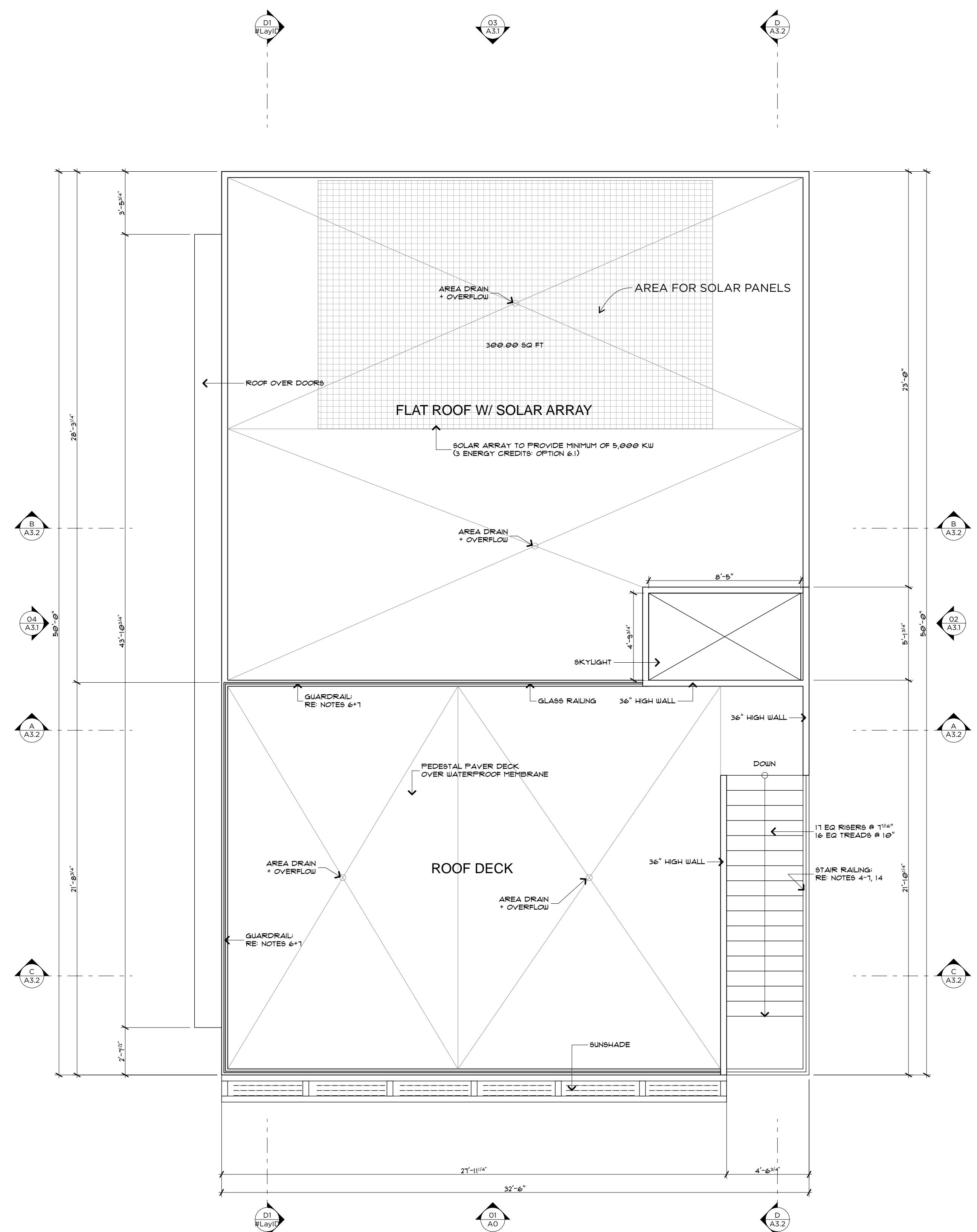
## SKYLIGHT + ROOF DETAIL

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



## ROOF + CURB DETAIL

SCALE: 3" = 1'-0"



## ROOF PLAN

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

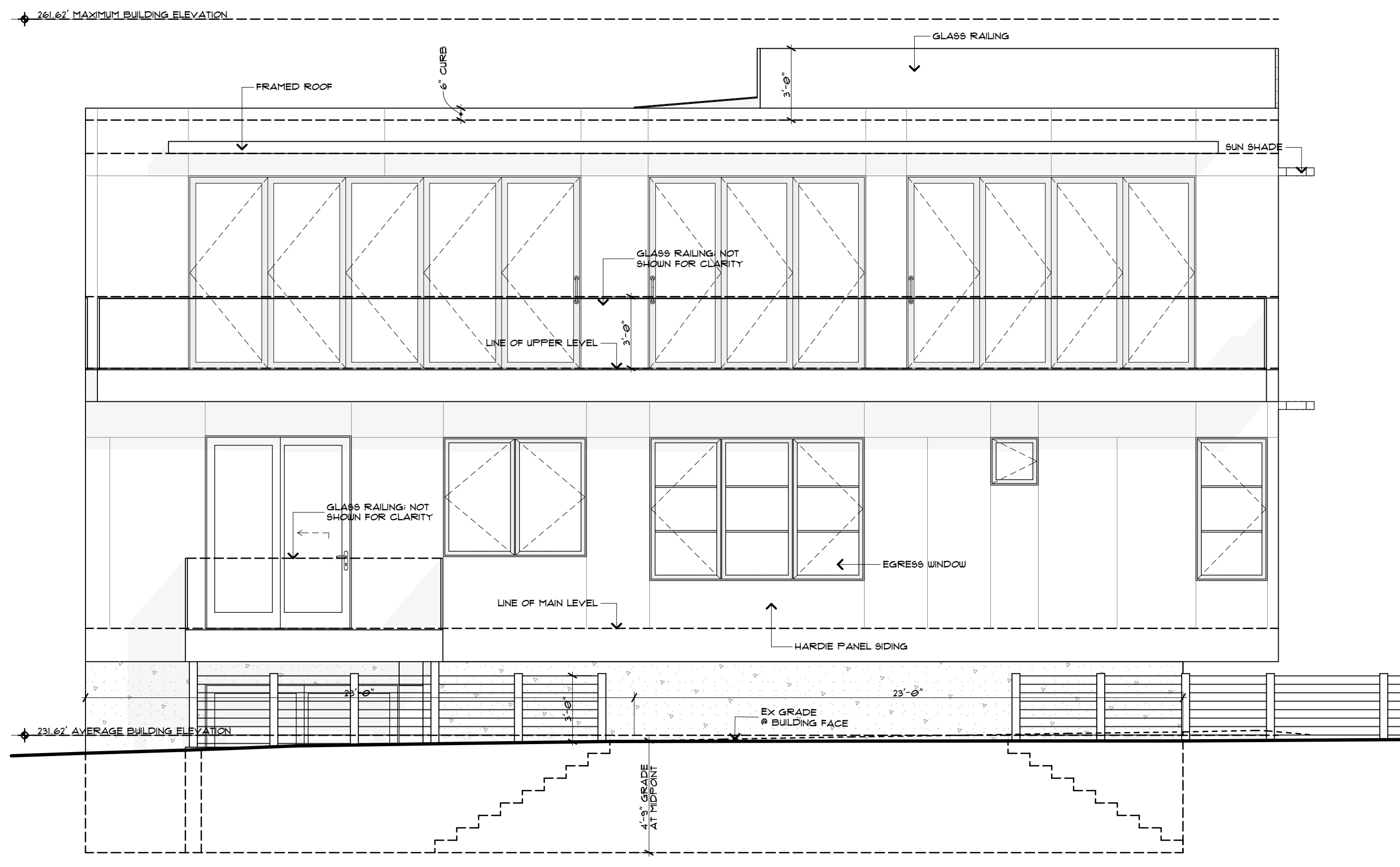
MERCER RESIDENCE  
6950 SE MAKER ST MERCER ISLAND, WA

ROOF PLAN

RELEASE  
21 MARCH 2022  
PERMIT CORRECTIONS  
20 FEBRUARY 2023  
PERMIT CORRECTIONS  
2 JUNE 2023

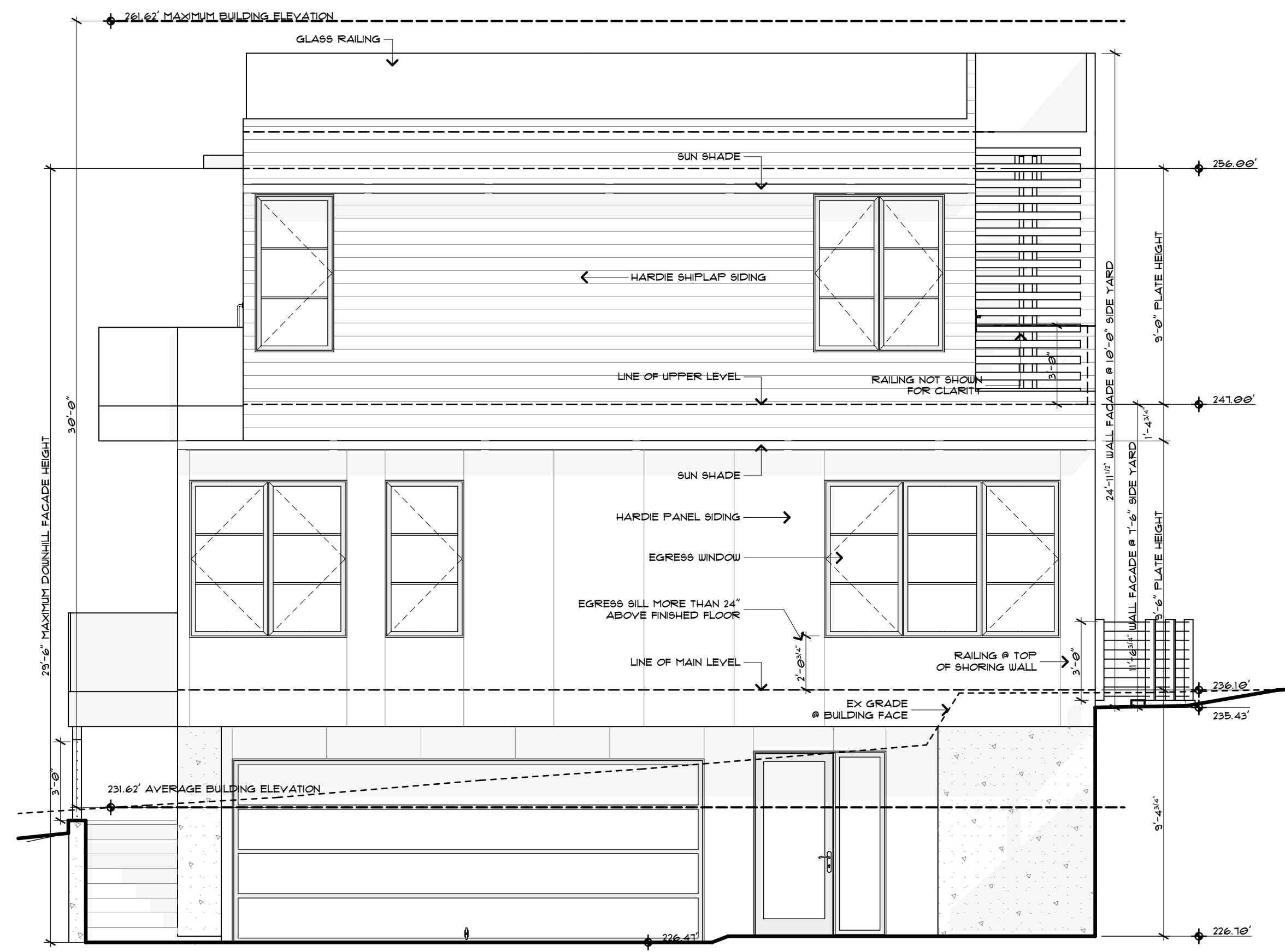






WEST ELEVATION 2

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



SOUTH ELEVATION 1

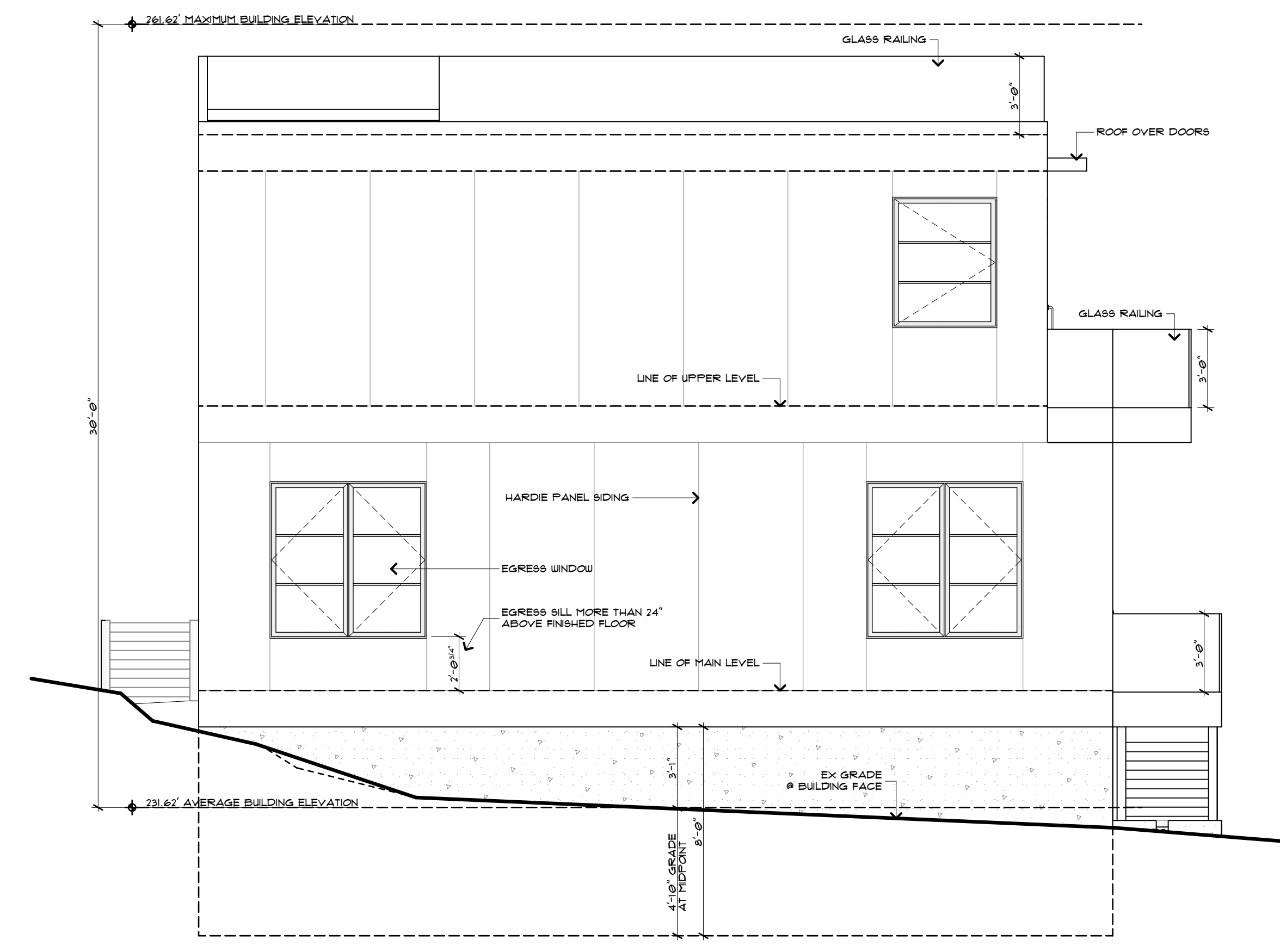
SCALE: 1/4" = 1'-0"

AVERAGE BUILDING ELEVATION CALCS:

SEGMENT "A" ELEVATION:	226.47'
SEGMENT "A" LENGTH:	35'
SEGMENT "A" ELEVATION x LENGTH:	7,926.45 FT <sup>2</sup>
SEGMENT "B" ELEVATION:	231.25'
SEGMENT "B" LENGTH:	46'
SEGMENT "B" ELEVATION x LENGTH:	10,637.5 FT <sup>2</sup>
SEGMENT "C" ELEVATION:	231.50'
SEGMENT "C" LENGTH:	35'
SEGMENT "C" ELEVATION x LENGTH:	8,102.50 FT <sup>2</sup>
SEGMENT "D" ELEVATION:	236.00'
SEGMENT "D" LENGTH:	46'
SEGMENT "D" ELEVATION x LENGTH:	10,856.00 FT <sup>2</sup>
TOTAL OF AGGREGATE ELEVATION:	37,522.45'
TOTAL OF SEGMENT LENGTHS:	162'
AVERAGE BUILDING ELEVATION:	231.62'

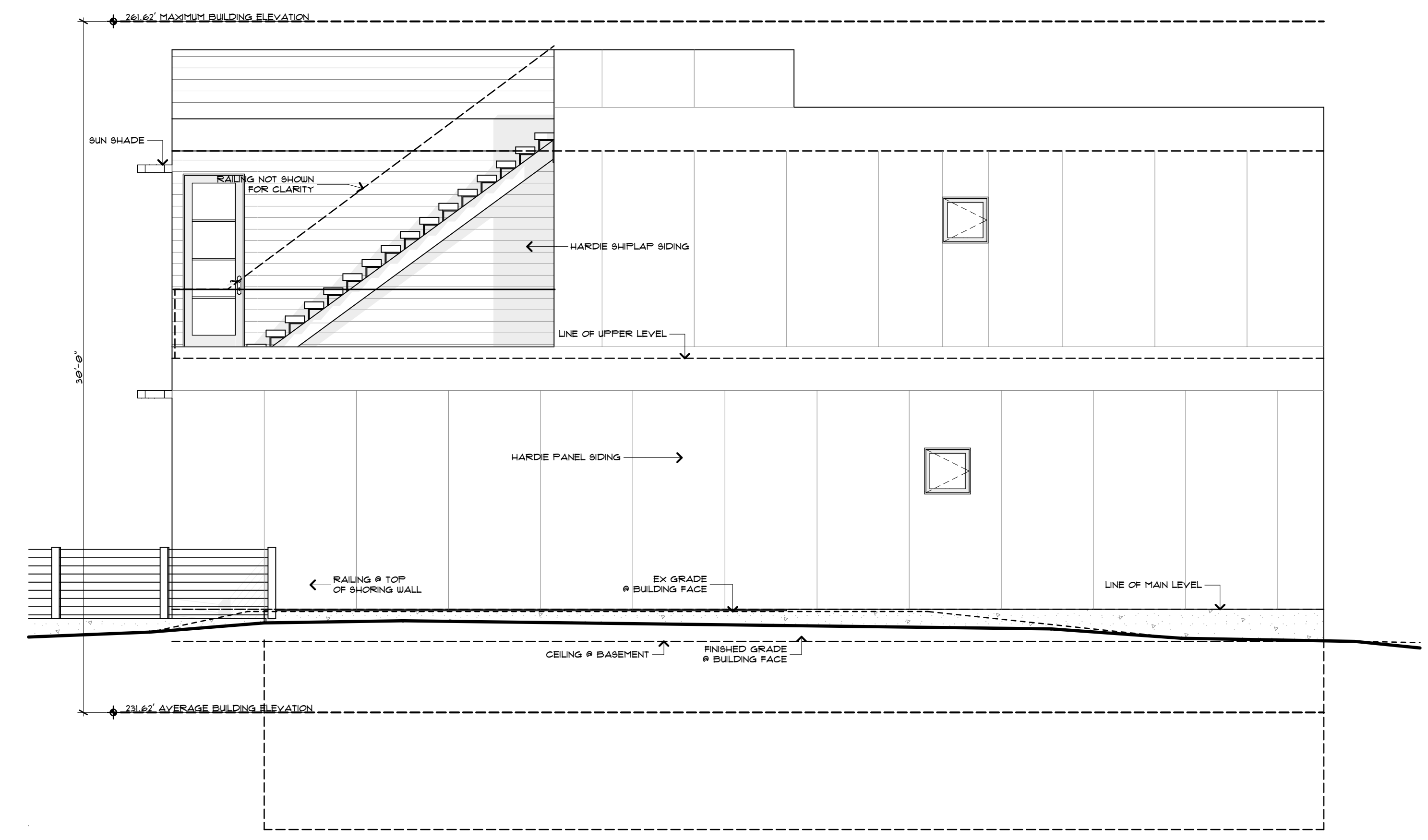
REVIEW AND APPROVAL OF THE DEFERRED SUBMITTAL FOR THE GLASS GUARD SYSTEM AND ATTACHMENTS IS REQUIRED BY THE CITY PRIOR TO FABRICATION OF THE COMPONENTS.

NOTE: ALL EXTERIOR WATERPROOFING OF WALLS INCLUDING DOOR + WINDOW OPENINGS SHALL BE BY GENERAL CONTRACTOR



NORTH ELEVATION 4

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



EAST ELEVATION 3

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



MERCER RESIDENCE  
6950 SE MAKER ST MERCER ISLAND, WA

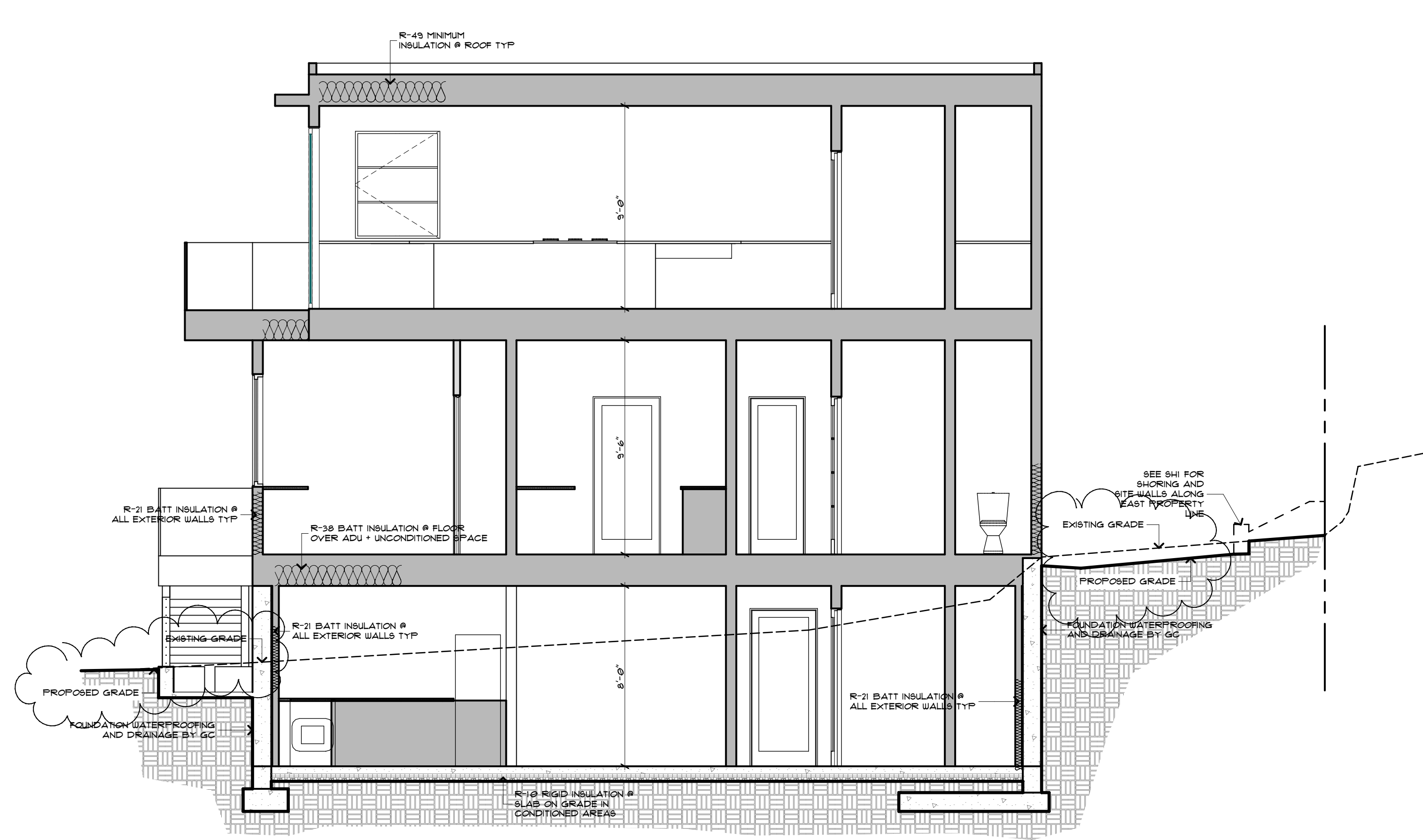
BUILDING ELEVATIONS

RELEASE  
21 MARCH 2022  
PERMIT CORRECTIONS  
20 FEBRUARY 2023  
PERMIT CORRECTIONS  
2 JUNE 2023

A 3.1

MAKER AVE  
REVISED 2/20/23 00664

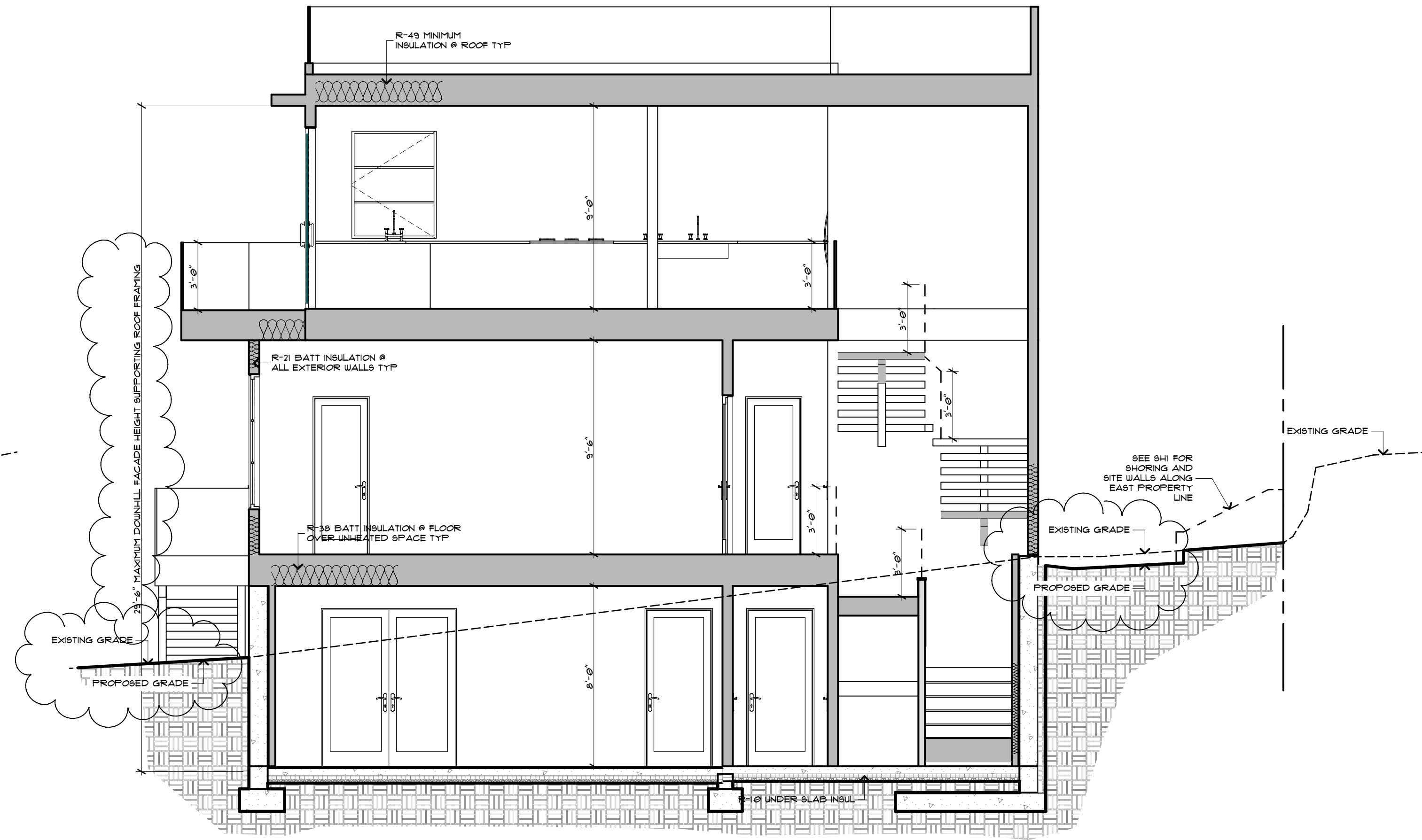




SECTION B - B

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

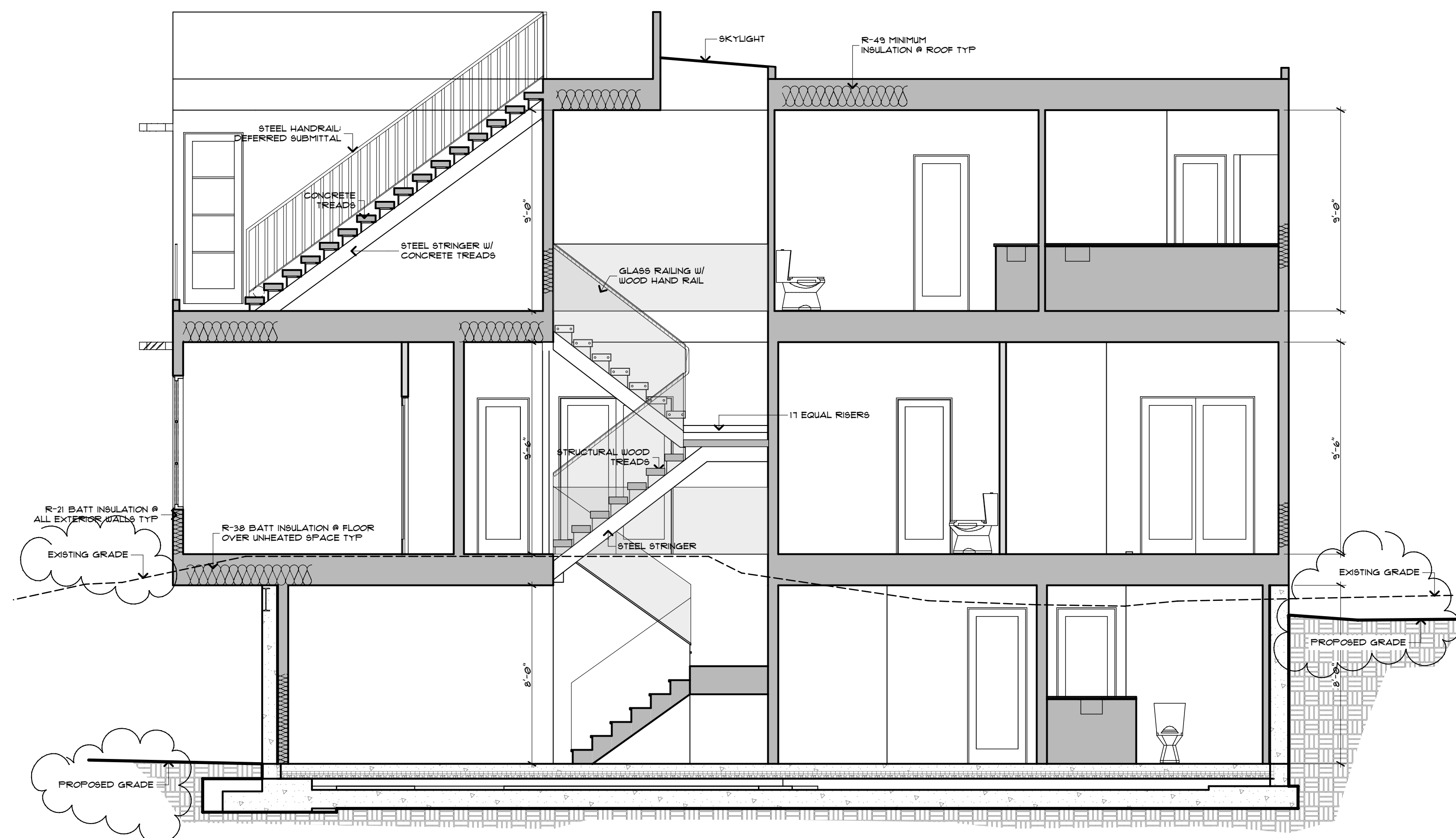
B



SECTION A - A

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

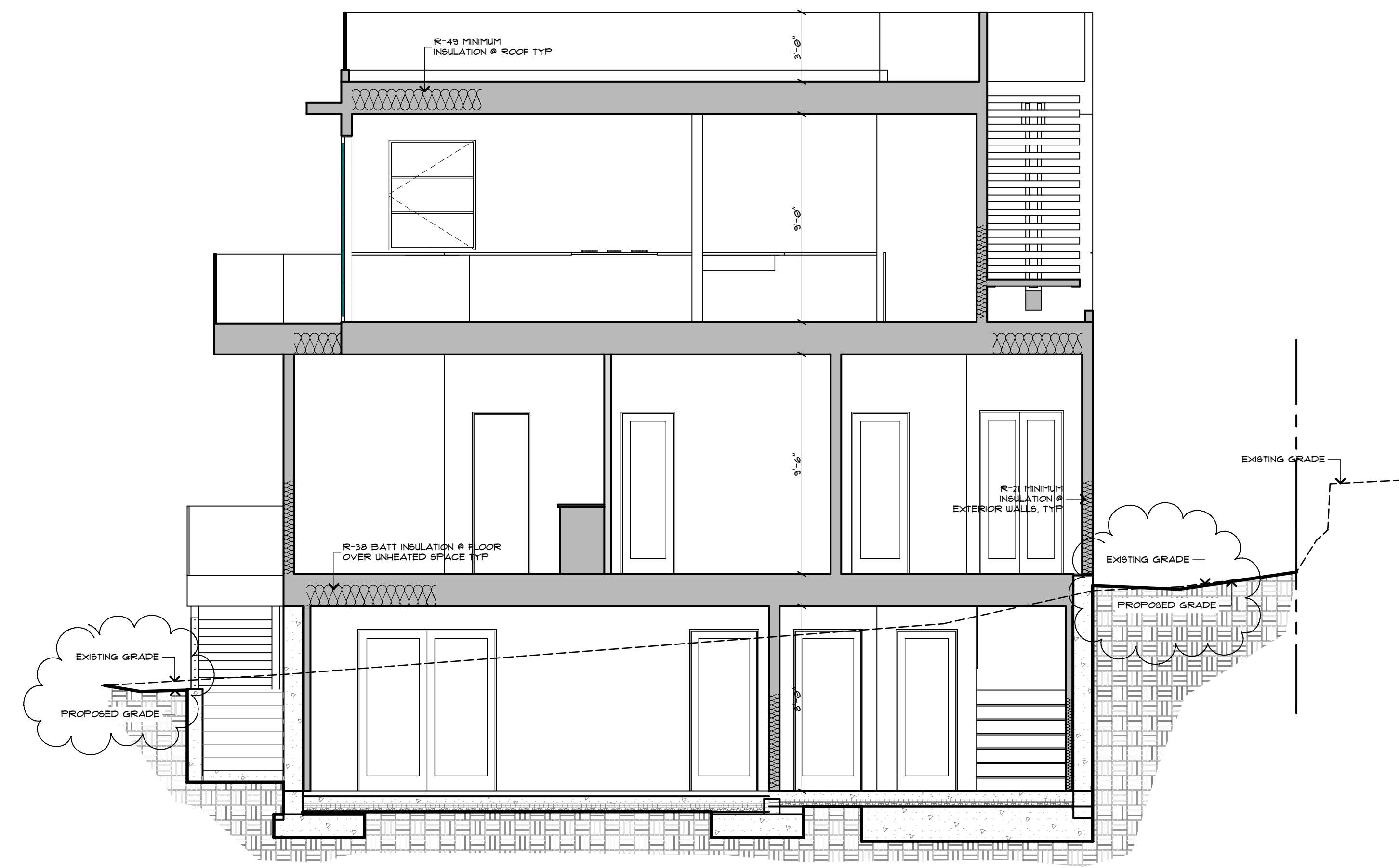
A



SECTION D - D

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

D



SECTION C - C

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

C

REVIEW AND APPROVAL OF THE DEFERRED SUBMITTAL FOR THE GLASS GUARD SYSTEM AND ATTACHMENTS IS REQUIRED BY THE CITY PRIOR TO FABRICATION OF THE COMPONENTS.



# WSEC 2018 NOTES:

- THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2018 PRESCRIPTIVE METHOD.
- INSULATION VALUES SHALL BE AS FOLLOWS:
  - ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
  - ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
  - ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
  - ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
  - ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
  - ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
  - ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
  - ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
  - ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
  - ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
- RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
- PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
- PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
- NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5c).
- AT CRAWLSPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT² FOR EACH 300 FT² OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE, EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
- THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R602.41 THROUGH R602.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
- AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

# DOOR SCHEDULE: (ALL GLAZING TO BE NFRC CERTIFIED)

DOOR NO.	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	HARDWARE	NOTES / REMARKS
001A	3'-0"	7'-0"	ENTRY	CLAD WOOD	PAINTED	TBD	WITH 2'-0" SIDELIGHT
001B	2'-8"	7'-0"	SWING	WOOD	PAINTED	TBD	
001C	3'-0"	7'-0"	SWING	WOOD	PAINTED	TBD	20-MIN RATED, AUTO-CLOSE
001D	2'-8"	7'-0"	SWING	WOOD	PAINTED	TBD	LOCKING, ELEVATOR
002A	18'-0"	7'-0"	OVERHEAD	WOOD	PAINTED	TBD	
002B	6'-0"	7'-0"	SWING	WOOD	PAINTED	TBD	
003A	3'-0"	7'-0"	SWING	WOOD	PAINTED	TBD	20 MIN RATED, AUTO-CLOSE
004A	2'-8"	7'-0"	SWING	WOOD	PAINTED	TBD	LOCKING, 1-HR RATED
005A	3'-0"	7'-0"	SWING	WOOD	PAINTED	TBD	LOCKING, 1-HR RATED
005B	4'-0"	7'-0"	SWING	WOOD	PAINTED	TBD	
005C	9'-0"	7'-0"	BI-FOLD	CLAD WOOD	PAINTED	TBD	3-PANEL
005C	9'-0"	8'-0"	BI-FOLD	CLAD WOOD	PAINTED	TBD	3-PANEL, SAFETY GLAZING
006A	2'-8"	7'-0"	SWING	WOOD	PAINTED	TBD	
101A	2'-4"	7'-0"	SWING	WOOD	PAINTED	TBD	
101B	2'-8"	7'-0"	SWING	WOOD	PAINTED	TBD	ELEVATOR, LOCKING
102A	5'-0"	7'-0"	SWING	WOOD	PAINTED	TBD	PAIR
102B	8'-0"	7'-0"	SLIDER	CLAD WOOD	PAINTED	TBD	LOCKING, SAFETY GLAZING
102C	2'-8"	7'-0"	SWING	WOOD	PAINTED	TBD	
103A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
104A	2'-4"	7'-0"	SWING	WOOD	PAINTED	TBD	
105A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
105B	3'-6"	7'-0"	BYPASS	WOOD	PAINTED	TBD	CLOSET
106A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
106B	4'-0"	7'-0"	BI-FOLD	WOOD	PAINTED	TBD	
106C	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
107A	3'-0"	7'-0"	POCKET	WOOD	PAINTED	TBD	
108A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
108B	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
109A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
109B	5'-0"	7'-0"	BYPASS	WOOD	PAINTED	TBD	CLOSET
110A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
110B	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
111A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
111B	6'-0"	8'-0"	SLIDER	CLAD WOOD	PAINTED	TBD	2-PANEL, WITH SCREEN
111C	5'-0"	7'-0"	BYPASS	WOOD	PAINTED	TBD	CLOSET
202A	12'-0"	8'-0"	BI-FOLD	CLAD WOOD	PAINTED	TBD	4-PANEL, SAFETY GLAZING
202B	2'-8"	7'-8"	SWING	WOOD/GLASS	PAINTED	TBD	SAFETY GLAZING
204A	2'-8"	7'-0"	SWING	WOOD	PAINTED	TBD	ELEVATOR, LOCKING
204A	16'-4"	8'-0"	BI-FOLD	CLAD WOOD	PAINTED	TBD	6-PANEL, SAFETY GLAZING
204B	11'-0"	7'-0"	SWING	WOOD	PAINTED	TBD	
204B	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
206A	2'-6"	7'-0"	SWING	WOOD	PAINTED	TBD	
207A	2'-4"	7'-0"	POCKET	WOOD	PAINTED	TBD	

# WINDOW SCHEDULE: (ALL GLAZING TO BE NFRC CERTIFIED)

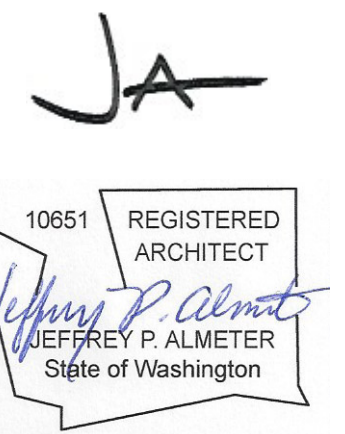
WINDOW NO.	WIDTH	HEIGHT	HEADER	TYPE	MATERIAL	FINISH	NOTES / REMARKS
102A	9'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	TRIPLE, EGRESS
103A	3'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	
103B	6'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	PAIR
103C	3'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	
103D	2'-0"	2'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	
105A	9'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	TRIPLE, EGRESS
106A	6'-0"	5'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	PAIR
108A	2'-0"	2'-0"	7'-0"	CASEMENT	CLAD WOOD	PAINTED	
109A	6'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	PAIR, EGRESS
111A	6'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	PAIR
202A	3'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	
202B	5'-0"	6'-0"	8'-0"	CASEMENT	CLAD WOOD	PAINTED	PAIR
205A	4'-0"	5'-0"	8'-0"	FIXED	CLAD WOOD	PAINTED	
206A	2'-0"	2'-0"	7'-0"	CASEMENT	CLAD WOOD	PAINTED	

# NANAWALL SYSTEM CPD INFO

CPD #	U-factor	SHGC	VT	Condensation Resistance	Air Leakage	Ventilation Rating (Standard Screen)	Ventilation Rating (Enhanced Screen)			
NAN-M-1-03122-00001	0.30	0.21	0.39	59						
Group ID	Manufacturer Product Code	Frame/Sash Type	Glazing Layers	Low-E	Gap Widths	Spacer	Gap Fill	Grid	Divider	Tint
1	*Outswing-Floor Mounted-Flush Sill: SKN 165 / Arg / Clear - 1" (1/4"-5/32")	WAWA	2	0.019(2)	0.625	TP-D	Fill 1: ARG/AIR(90/10)	N	-	CL

# PELLA SLIDING DOOR CPD INFO

CPD #	U-factor	SHGC	VT	Condensation Resistance	Air Leakage	Ventilation Rating (Standard Screen)	Ventilation Rating (Enhanced Screen)			
PEL-N-237-00945-00001	0.28	0.17	0.39	57						
Group ID	Manufacturer Product Code	Frame/Sash Type	Glazing Layers	Low-E	Gap Widths	Spacer	Gap Fill	Grid	Divider	Tint
1	*Pine - 3mm 366 Arg 3mm - 13/16"	WAWA	2	0.02(2)	0.58	SS-D	Fill 1: ARG/AIR(90/10)	N	-	CL



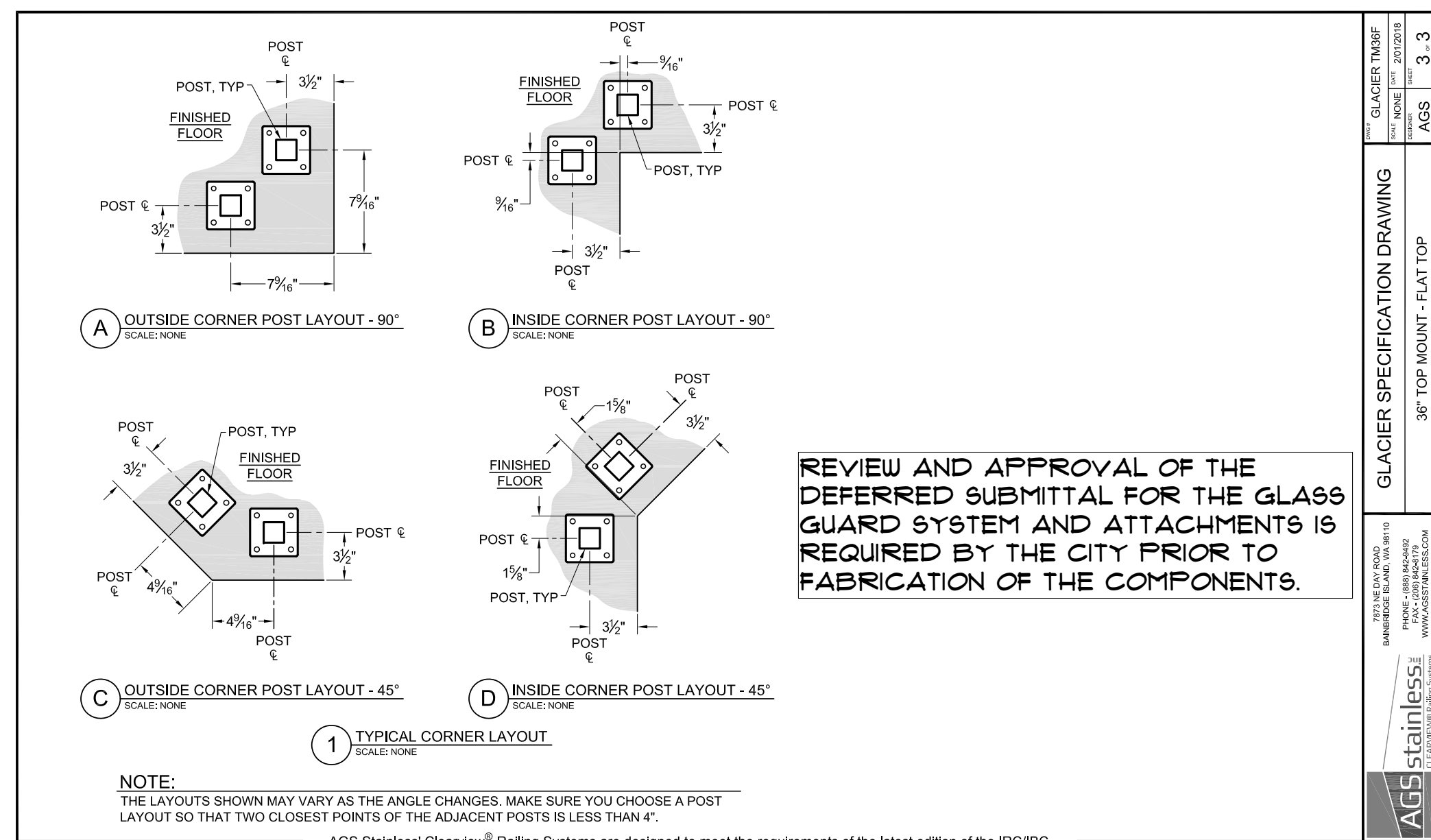
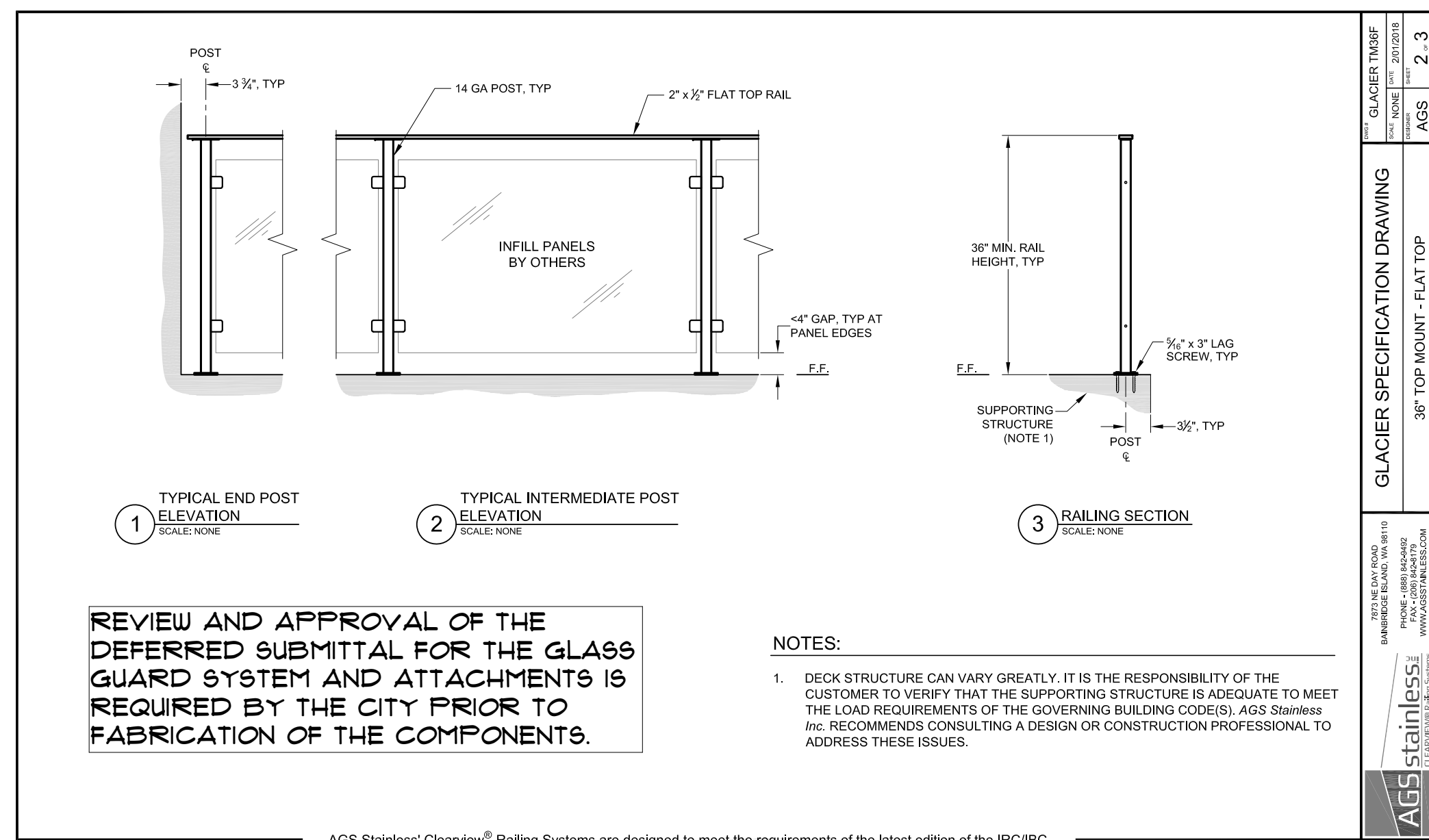
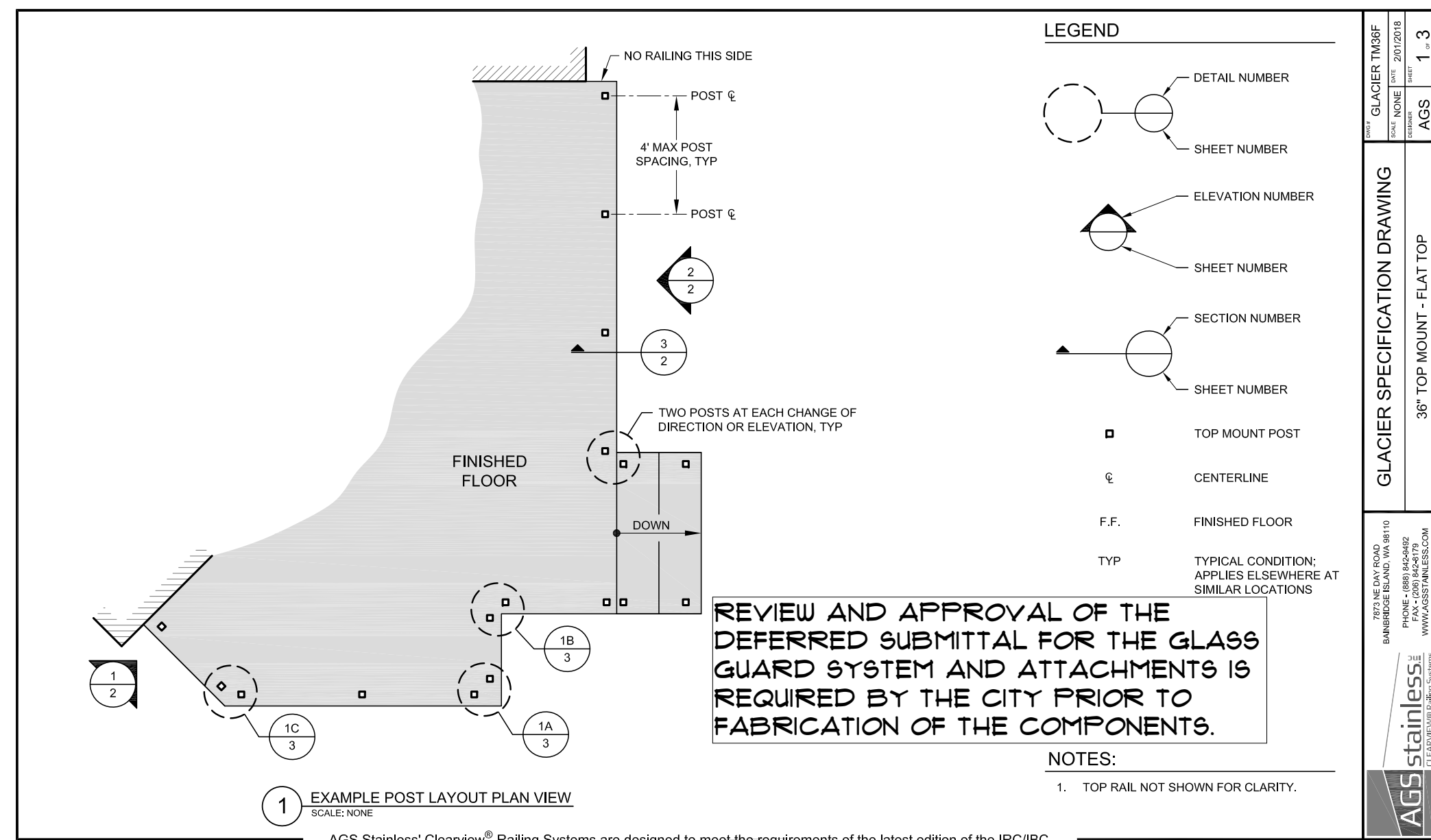
MERCER RESIDENCE  
6050 SE MAKER ST  
MERCER ISLAND, WA

DOOR + WINDOW SCHEDULES

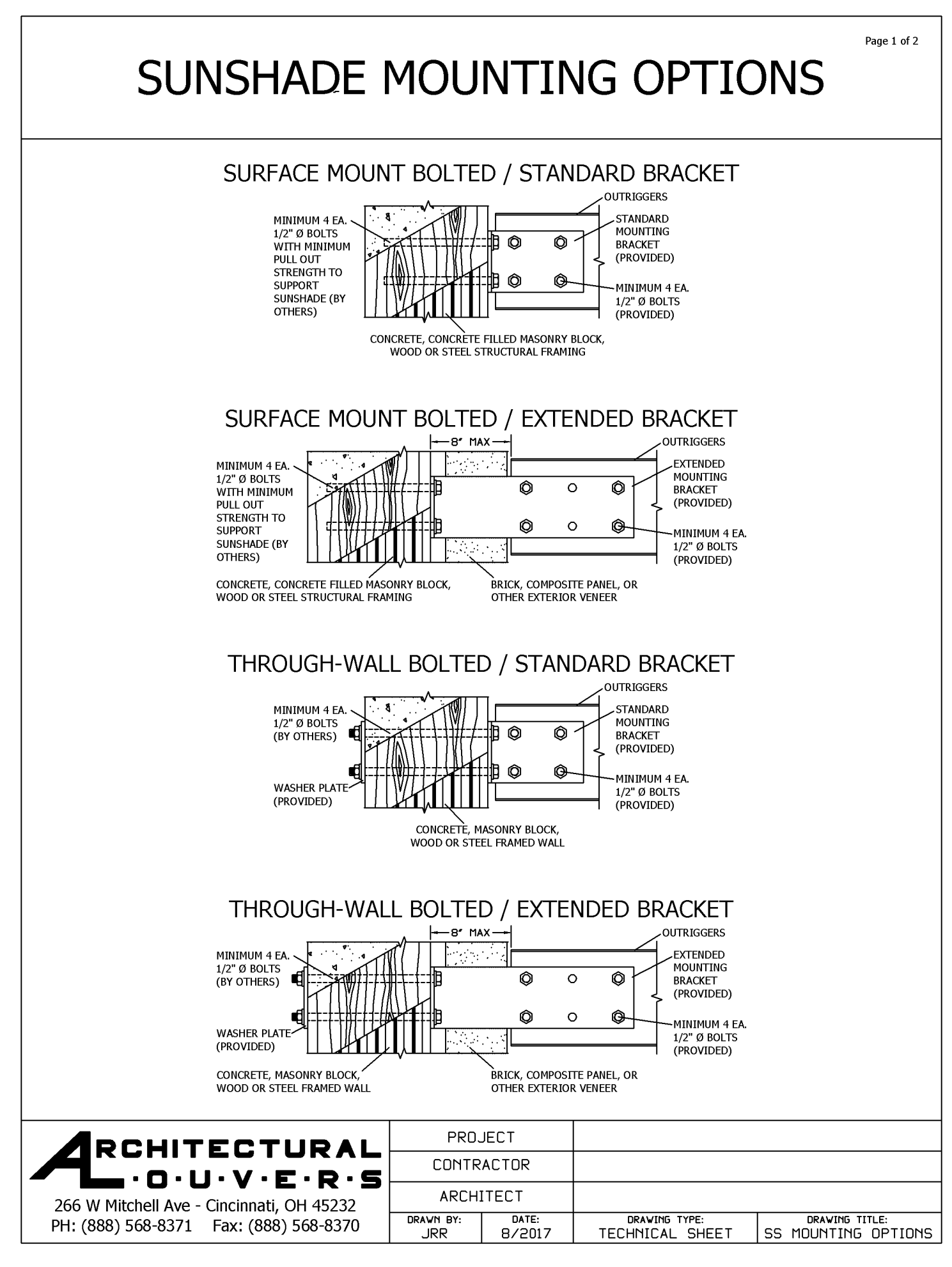
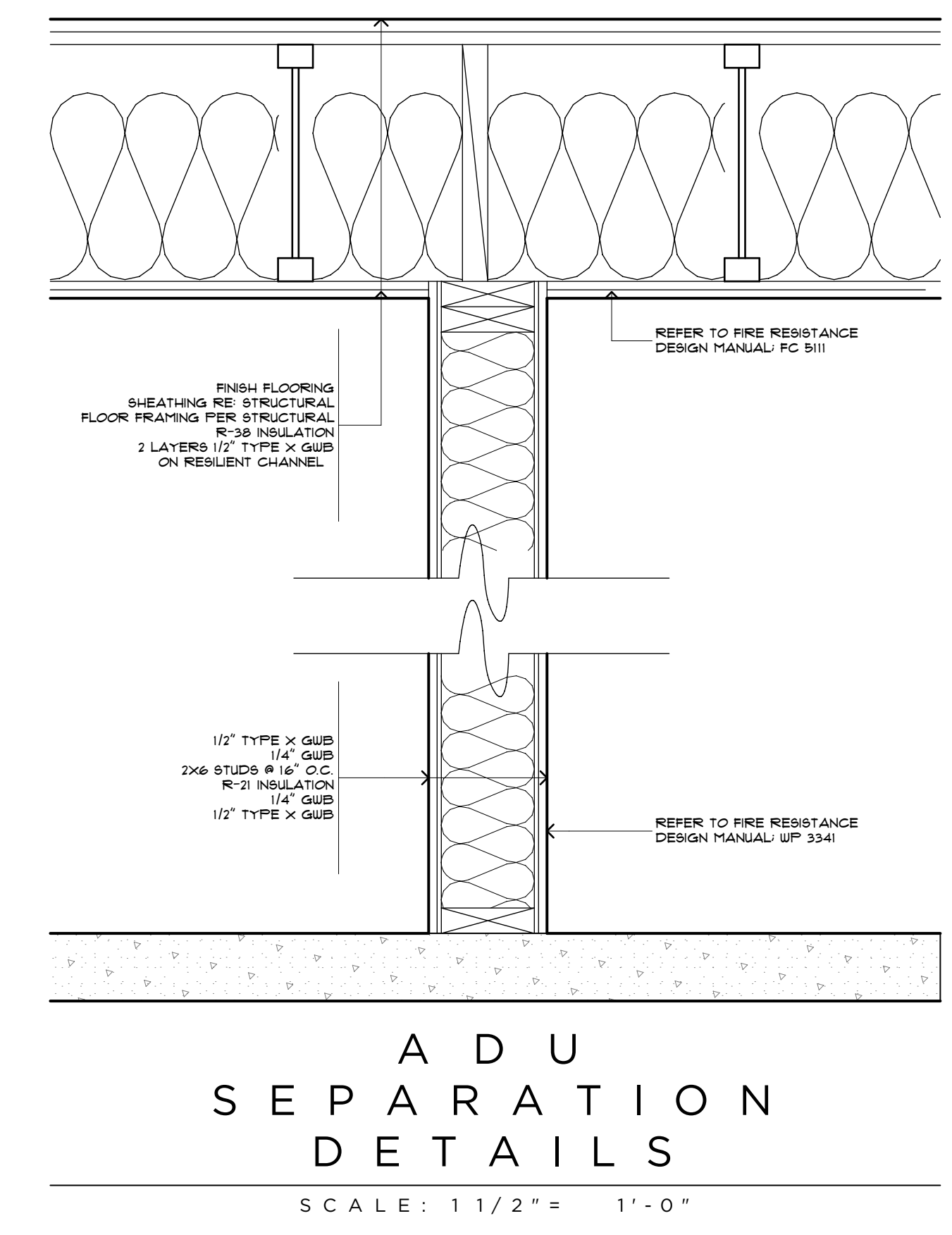
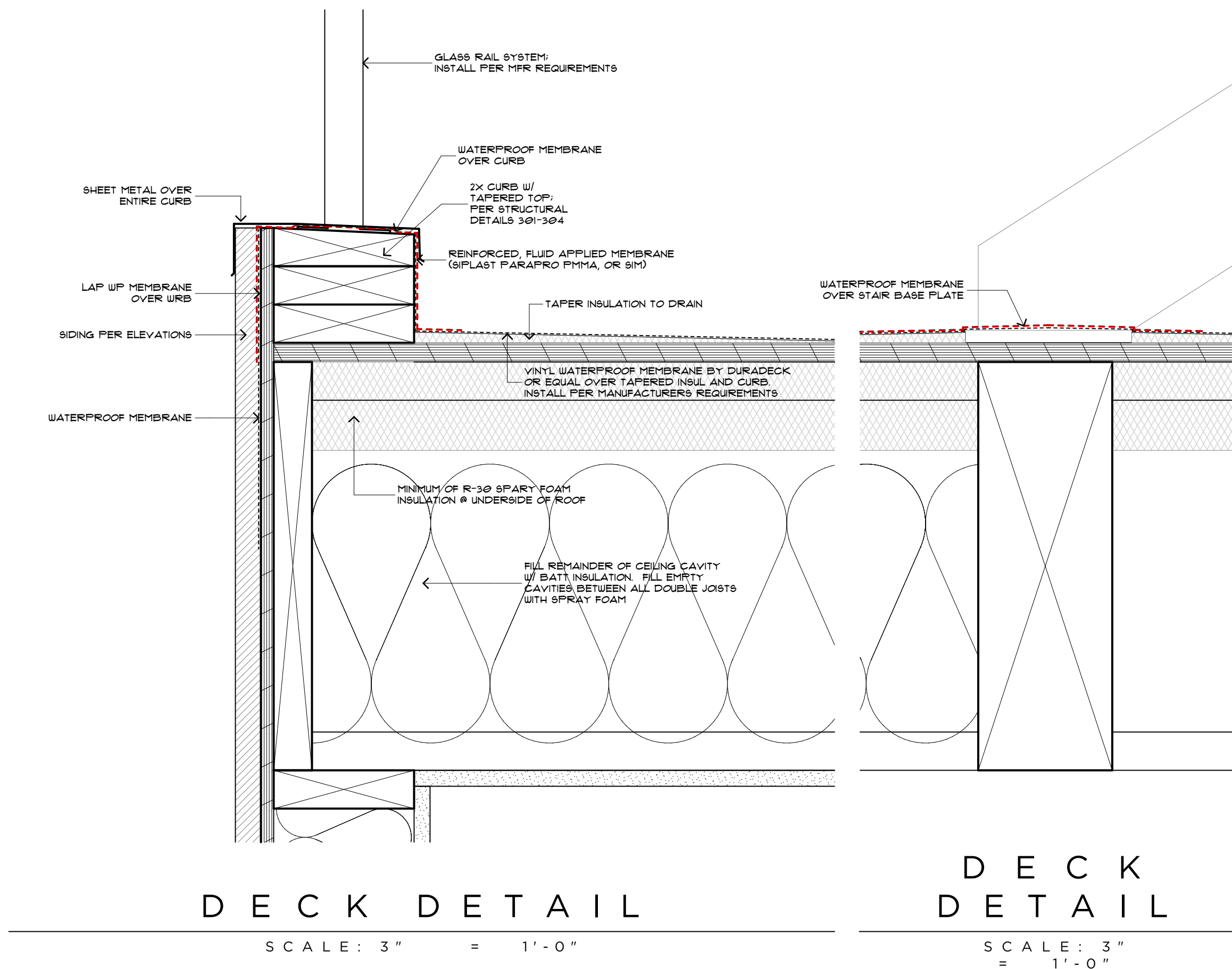
RELEASE  
21 MARCH 2022  
PERMIT CORRECTIONS  
20 FEBRUARY 2023  
PERMIT CORRECTIONS  
2 JUNE 2023

A 4 . 1



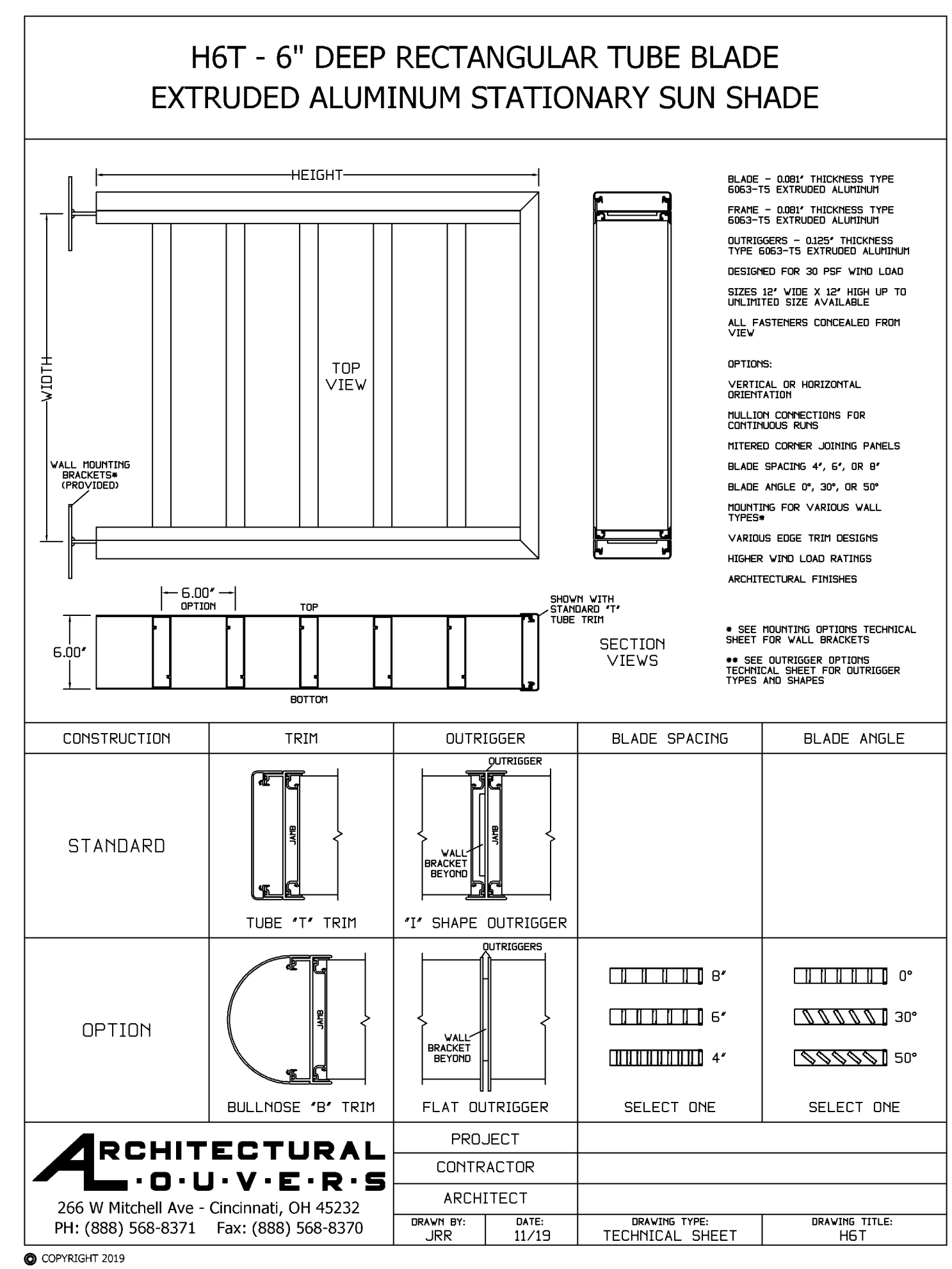


**GLASS RAILING DETAIL**



**SUNSHADE DETAIL**

SCALE: 1" = 1'-0"



**SUNSHADE DETAIL**

SCALE: 1" = 1'-0"



MERCER RESIDENCE  
6950 SE MAKER ST MERCER ISLAND, WA

DETAILS

RELEASE  
21 MARCH 2022  
PERMIT CORRECTIONS  
20 FEBRUARY 2023  
PERMIT CORRECTIONS  
2 JUNE 2023

A 4.2

MAKER AVE  
REVISED 8/20/23  
00667



**STRUCTURAL NOTES:**

**CODE:**

INTERNATIONAL BUILDING CODE 2018, SEATTLE BUILDING CODE 2018, ASCE/SEI 7-16  
 LOADS: ROOF LIVE(SNOW) = 25 PSF, FLOOR LIVE = 40 PSF, DECK LIVE = 60 PSF  
 ROOF DEAD = 25 PSF (INCLUDE SOLAR PANEL), FLOOR DEAD = 12 PSF  
 ROOF DECK DEAD = 20 PSF  
 SEIS: RISK CATEGORY 'II', DESIGN CATEGORY 'D'  
 R = 6.5 (WOOD FRAME WALL SHT'G W/ STRUCTURAL PANELS)  
 R = 5.0 (SPECIAL REINFORCED CONCRETE SHEAR WALLS)  
 $S_s = 1.414$  g,  $S_1 = 0.492$  g,  $F_a = 1.00$ ,  $F_v = 1.208$ ,  $S_{ps} = 0.343$  g,  $S_{p1} = 0.593$  g  
 WIND: 110 MPH, EXPOSURE 'B',  $K_{zt} = 1.38$

**FOUNDATIONS:**

EXTEND FOOTINGS TO FIRM UNDISTURBED SOIL, ALLOWABLE BEARING CAPACITY OF 3,000 PSF. ALL EXTERIOR FOOTINGS SHALL EXTEND A MINIMUM OF 1'-6" BELOW ADJACENT EXTERIOR FINISH GRADE. USE ACTIVE EARTH PRESSURE 35 psf (NORTH & WEST WALL) 55 psf (EAST WALL) FOR LATERAL EARTH PRESSURE AND SEISMIC INCREASE OF 94 (UNIFORM DISTRIBUTION) FOR CONCRETE WALL. SEE THE SOIL REPORT # JN 22001 FROM GEOTECH CONSULTANTS, INC (MARCH 21, 2022) FOR THE ADDITIONAL RECOMMENDATIONS OF SLAB ON GRADE, COMPACTION AND ETC.

**CAST-IN-PLACE CONCRETE:**

$F_c = 3,000$  PSI @ 28 DAYS. MINIMUM 5-1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 3" OR LESS. MAXIMUM SIZED AGGREGATE IS 1-1/2 INCHES. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905, 1906 AND ACT 301, INCLUDING TESTING PROCEDURES. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. ALL REINFORCING STEEL DOUELS, ANCHOR BOLTS AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO POURING CONC.

**REINFORCING STEEL:**

ALL REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND THE MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION BY CRSI. DEFORMED REINFORCING STEEL BARS SHALL CONFORM TO ASTM GRADE 60. ALL REINFORCING BAR BENDS SHALL BE MADE COLD, WITH A MINIMUM RADIUS OF 6 BAR DIAMETERS (1"-1" MINIMUM). CORNER BARS (2"-0" BEND) SHALL BE PROVIDED FOR ALL HORIZONTAL REINFORCEMENT. LAP ALL BARS A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE. UNLESS OTHERWISE NOTED ON THE DRAWINGS REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM COVER:

CONCRETE CAST AGAINST EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER	3/4"
1/2" BAR AND SMALLER	1/2"
SLAB-ON-GRADE (FROM TOP SURFACE)	1 1/2"

**STRUCTURAL TIMBER:**

ALL GRADES SHALL CONFORM TO WUPA GRADING RULES FOR WESTERN LUMBER, LATEST EDITION. PROVIDE CUT WASHERS UNDER ALL NUTS AND BOLTS BEARING AGAINST WOOD. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESURE TREATED. ALL STRUCTURAL LUMBER SHALL BE NOTED BELOW:

6x BEAM & POST, 2x6 STUDS, 2x8, 2x10	DOUGLAS-FIR / LARCH #2
2x6 STUD WITH 1/2" PLYWOOD WALL SHT'G	
INTERIOR 2x STUDS, LUMBER NOT NOTED	HEM-FIR #2

MISCELLANEOUS HANGERS TO BE SIMPSON OR APPROVED EQUAL. ALL HANGERS SHALL BE FASTENED TO WOOD WITH MAXIMUM NAILS-ALL HOLES SHALL BE NAILED. ALL NAILS SHALL BE COMMON WIRE NAILS. PROVIDE NAILING SHALL BE IN ACCORDANCE WITH 'IBC 2018' TABLE 2304.10.1 FASTENING SCHEDULE.

**ROOF & FLOOR SHEATHING:**

ROOF SHEATHING SHALL BE 3/4" APA RATED SHEATHING, 5-PLY, SPAN RATING 32/16, INSTALLED LONG DIMENSION ACROSS SUPPORTS. PANEL END JOINTS SHALL OCCUR AT SUPPORTS. NAIL AT PANEL EDGES WITH 10d COMMON (#148"x2 1/2") @ 6" O.C. AND 12" O.C. AT INTERMEDIATE SUPPORTS. FLOOR SHEATHING SHALL BE 3/4" T&G SPAN RATING 40/20 WITH 10d COMMON @ 6" O.C. (EDGE) AND 12" O.C. (INTER). USE #8 SCREWS (2 1/2" LONG) IN LIEU OF 10d COMMON NAILS AT FLOOR CONTRACTOR'S OPTION. INSTALL PLYWOOD CLIP AT 48 INCHES ON CENTER. BLOCKING IS REQ'D ALL PANEL EDGES.

**ANCHOR BOLTS:**

ANCHOR BOLTS TO BE A-307 OR BETTER. ANCHOR BOLTS INTO CONCRETE SHALL BE 3/4" WITH 1 INCHES OF EMBEDMENT AND SPACED NOT MORE THAN 4' APART. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIER WITH BOLT LOCATED NOT MORE THAN 12 INCHES OR NOT LESS THAN 4 INCHES FROM EACH END OF EACH PIER. A PROPERLY SIZED NUT WITH 3"x3"x1/4" PLATE WASHER SHALL BE TIGHTENED ON EACH ANCHOR BOLT TO THE P.T. 2x6 SILL PLATE.

**PLYWOOD OR OSB WEB JOISTS:**

JOISTS ARE SHOWN ON PLANS A 'TJ' TO BE TRUS JOIST OR EQUAL. JOIST ASSEMBLY TO BE TESTED UNDER 'IBC 2018' TESTING PROCEDURES. COMPLETE JOIST DESIGN BEARING THE STAMP OF A REGISTERED PROFESSIONAL ENGINEER TO BE SUBMITTED FOR REVIEW. JOIST MANUFACTURER SHALL PROVIDE ALL SPECIALTY ITEMS FOR A NORMAL AND COMPLETE INSTALLATION OF THE JOISTS. INSTALL DOUBLE JOISTS UNDER PARTITIONS EXTENDING ONE HALF OR MORE OF JOIST SPAN.

**MacMILLAN PARALLAM (P&L):**

PARALLAM SHOWN ON PLAN TO BE TRUS JOIST MacMILLAN'S PARALLAM 22E OR APPROVED EQUAL. OTHER THAN MacMILLAN'S PARALLAM 22E SHALL HAVE ICBO APPROVALS SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.  
 $F_b = 2,300$  psi,  $F_v = 230$  psi,  $F_c = 650$  psi,  $E = 2,200,000$  psi.

**MICROLAM (LVL):**

MICROLAM SHOWN ON PLAN TO BE LEVEL TRUSS JOIST MICROLAM 20E OR APPROVED EQUAL. OTHER THAN MICROLAM 20E SHALL HAVE ICBO APPROVALS SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.  
 $F_b = 2,600$  psi,  $F_v = 285$  psi,  $F_c = 750$  psi,  $E = 2,000,000$  psi.

**GLUED-LAMINATED TIMBER:**

LAMINATED TIMBER SHALL BE DOUGLAS-FIR/LARCH KILN DRIED, STRESS GRADE COMBINATION 24F-V4 (Fb=2,400 PSI, Fv=165 PSI) FOR SIMPLE SPAN. A.I.T.C. CERTIFICATE OF CONFORMANCE REQUIRED. GLU-LAMS SHALL CONFORM TO A.I.T.C. STANDARDS IT. FABRICATOR SHALL SUBMIT DETAILS AND SPECIFICATIONS TO THE ENGINEER AND BUILDING DEPARTMENT FOR APPROVAL PRIOR TO FABRICATION.

**STRUCTURAL STEEL:**

WIDE FLANGE SHAPES TO BE ASTM A992, GRADE 50,  $F_y = 50$  KSI. CHANNELS, ANGLES, AND PLATES TO BE ASTM A36,  $F_y = 36$  KSI. HSS SECTIONS SHALL BE ASTM A500, GRADE B,  $F_y = 46$  KSI. WELD TO BE 3/16" MINIMUM CONTINUOUS FILLET, BY CERTIFIED WELDERS USING E70XX ELECTRODES. ALL WELDS SHALL CONFORM TO THE LATEST EDITION OF AWS D11. BOLT SHALL BE BEARING TYPE CONNECTIONS USING A325-N BOLTS. ALL BOLTS SHALL BE INSTALLED WITH HARDEN WASHERS CONFORMING TO ASTM F-436 AND NUTS CONFORMING TO ASTM A-563. ALL STEELS EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED. ALL STEEL NOT EXPOSED TO WEATHER SHALL BE SHOP PRIMED.

**SPECIAL CONDITIONS:**

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD. ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT OR ENGINEER. THE CONTRACTOR SHALL PROVIDED ADEQUATE SHORING AS REQUIRED UNTIL PERMANENT CONNECTIONS AND STIFFENING HAVE BEEN INSTALLED. THE CONTRACTOR SHALL VERIFY SIZE AND ALL LOCATIONS OF ALL OPENINGS IN THE FLOOR, ROOF, AND WALLS WITH ALL THE APPROPRIATE DRAWINGS. THE CONTRACTOR SHALL COORDINATE WITH THE BUILDING DEPARTMENT FOR ALL BUILDING DEPARTMENT REQUIRED INSPECTIONS. DO NOT SCALE THE DRAWINGS. THE DETAILS SHOWN ARE TYPICAL AND SHALL BE USED FOR LIKE OR SIMILAR CONDITIONS NOT SHOWN.

**SPECIAL INSPECTIONS:**

REINFORCING & ANCHOR BOLT PLACEMENT	PERIODIC & PRIOR TO ALL CONCRETE POUR
CONCRETE PLACEMENT	PERIODIC & PRIOR TO ALL CONCRETE POUR
CURING & FORM WORK PROCEDURES	CONTINUOUS
EXPANSION BOLTS & INSERTS	PERIODIC INCLUDING TORQUE TESTS
EPOXY GROUTED RODS & REBAR	PERIODIC INCLUDING INSPECTION OF HOLE CLEANLINESS & EMBEDMENT DEPTH PRIOR TO ALL INSTALLATION
A325-N BOLT CONNECTION	CONTINUOUS
SOIL COMPACTION	CONTINUOUS

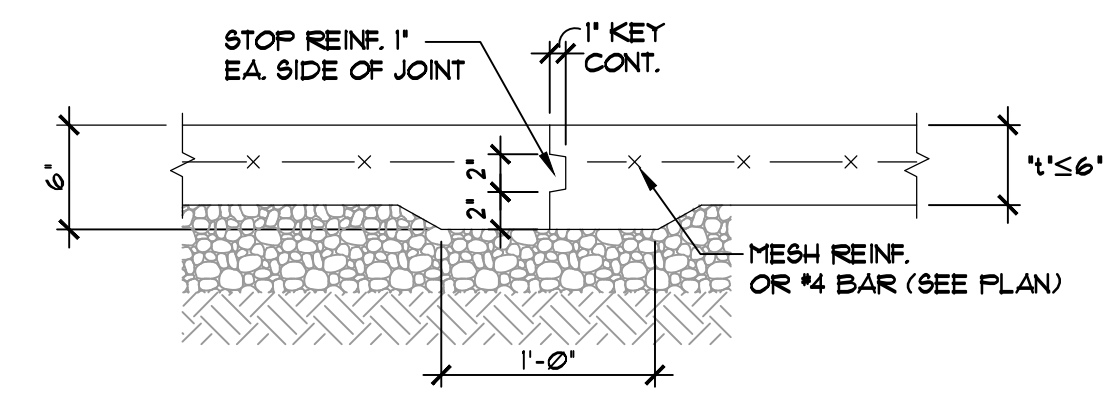
**TYPICAL EXTERIOR WALL CONSTRUCTION:**

- SHEATHING: 1/2" APA RATED SHEATHING, EXTERIOR GLUE, EXTERIOR SIDE OF WALL. PANELS ARE APPLIED WITH LONG DIMENSION ACROSS STUDS. ALL PANEL EDGES BLOCKED, NAILING:
  - @13 1/2"x2 1/2" NAIL @ 6" O.C. : EDGES AND BOUNDARIES
  - @13 1/2"x2 1/2" NAIL @ 12" O.C. : FIELD.
- BOLTS AT P.T. 2x6 SILL PLATE TO CONCRETE WITH 3/4" A BOLTS @ 48" O.C. A BOLTS TO BE PLACED 4" TO 12" FROM END OF EACH PLATE. ALL A BOLTS SHALL BE SECURED WITH 3"x3"x1/4" PLATE WASHER.
- EXTERIOR STUD SHALL BE 2x6 DF #2
- FASTEN DOUBLE PLATE TO JOIST OR BLOCKING ABOVE WITH @148"x3" TOE NAIL @ 6" O.C.
- 8d COMMON: @13 1/2"x2 1/2", 10d COMMON: @148"x3", 16d COMMON: @161"x3 1/2"

MARK	APA RATED SHEATHING (1) (3) (4)	NAIL SIZE & SPACING AT PANEL EDGES (3) (4)	STUD & BLOCKING SIZE AT ADJOINING PANEL EDGES (2) (5) (10)	RIM JOIST OR BLK'G CONN. TO TOP PLATE (6) (7)	2x PLATE ATTACHMENT NAILING TO WOOD BELOW	SILL PLATE ATTACHMENT AB. TO CONC. BELOW SILL PLATE AT PDN. (8) (11) (5)	SEIS	WIND
W6	15/32" ONE SIDE	@148" x 2 1/2" @ 6" O.C.	2x6 DF #2	CLIP @ 16" O.C.	@148" x 3 1/4" @ 6" O.C.	3/4" AB. @ 48" O.C.	310	435
W4	15/32" ONE SIDE	@148" x 2 1/2" @ 4" O.C.	2x6 DF #2	CLIP @ 16" O.C.	@148" x 3 1/4" @ 4" O.C.	3/4" AB. @ 32" O.C.	460	645
(W8)	15/32" ONE SIDE	@148" x 2 1/2" @ 3" O.C.	3x6 DF #2	CLIP @ 12" O.C.	@148" x 3 1/4" @ 3" O.C.	N/A	600	840

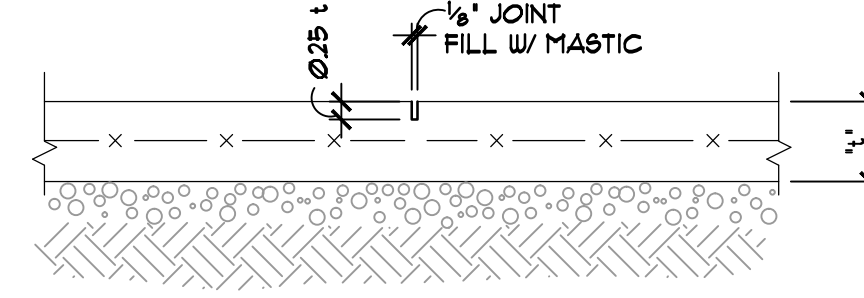
**NOTES:**

- 15/32" APA RATED SHEATHING (5-PLY) 32/16 SPAN RATING). PANELS ARE APPLIED WITH LONG DIMENSION ACROSS STUDS.
- BLOCKING IS REQUIRED AT ALL PANEL EDGES.
- PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNED BY EXTERIOR OF THE BUILDING, CORRIDORS, WINDOWS, OR DOORWAYS OR AS DESIGNATED ON PLANS. SEE PLANS FOR HOLD-DOWN REQUIREMENTS. WALLS DESIGNATED AS PERFORATED SHEAR WALLS REQUIRE SHEATHING ABOVE AND BELOW ALL OPENINGS.
- SHEATHING EDGE NAILING REQUIRED AT ALL HOLD-DOWN POST. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLD-DOWN POST. REFER TO THE HOLD-DOWN DETAILS FOR ADDITIONAL INFORMATION.
- INTERMEDIATE FRAMING TO BE WITH 2x MINIMUM MEMBERS. FIELD NAILING @148"x2 1/2" @ 12" O.C.
- BASED ON @13 1/2"x2 1/2" LONG NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE @13 1/2"x2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.
- FRAMING CLIPS: A35 OR LTP4 OR APPROVED EQUIVALENT.
- ANCHOR BOLTS SHALL BE PROVIDED WITH STEEL PLATE WASHER 1/4"x3"x3". EMBED ANCHOR BOLTS 1" MINIMUM INTO THE CONCRETE.
- PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESURE TREATED FRAMING MEMBERS.
- AT ADJOINING PANEL EDGES USE A SINGLE 3x6 DF #2 STUD FOR 'W' SHEAR WALL.
- CONTACT THE ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST-IN-PLACE ANCHOR BOLTS. (SPECIAL INSPECTION WILL BE REQUIRED)
- SHEAR WALL SCHEDULE BASED ON 2018 IBC FOR DOUG-FIR LARCH FRAMING.
- USE SIMPSON 3/8" TITEN HD WITH STEEL PLATE WASHERS 1/4"x3"x3" EMBED 3/4" MINIMUM AT EXISTING CONC. STEM WALL. INSTEAD OF 3/4" ANCHOR BOLTS.



**01 CONSTRUCTION JOINT**  
N.T.S.

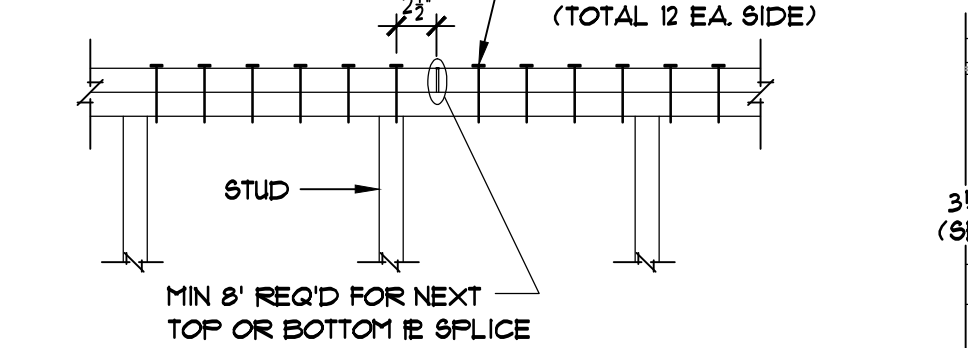
**NOTE:** SLAB JOINTS TO BE LOCATED BY THE CONTRACTOR W/ APPROVAL OF THE ARCHITECT. JOINTS TO BE LAID OUT IN A RECTANGULAR PATTERN NOT MORE THAN 20 FEET IN ANY DIRECTION W/ A MAXIMUM ENCLOSED AREA OF 400 SQ. FEET.



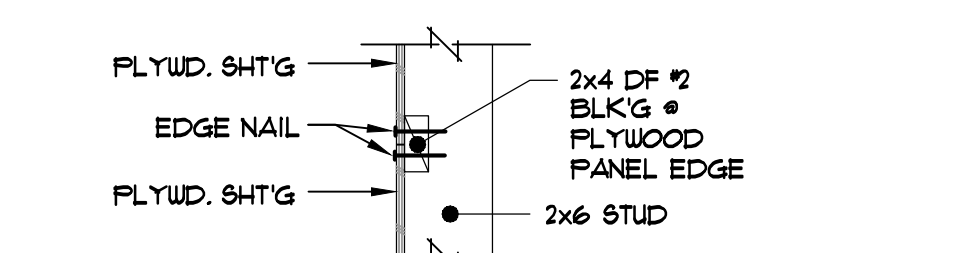
**02 TYP. CORNER REINF.**  
SCALE: 1" = 1'-0"



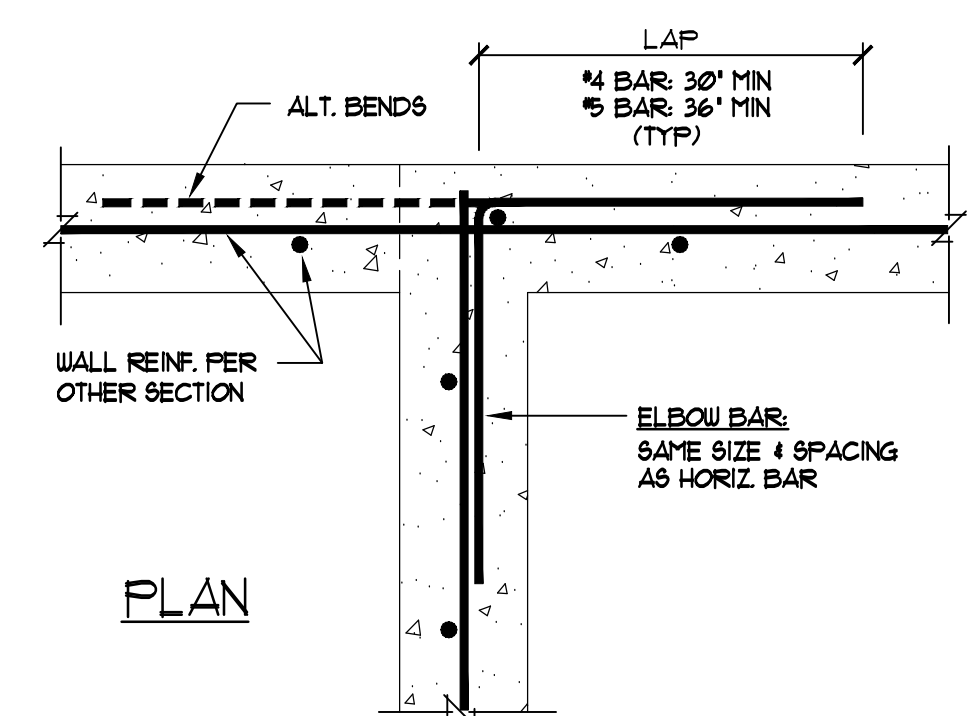
**04 CONTROL JOINT**  
N.T.S.



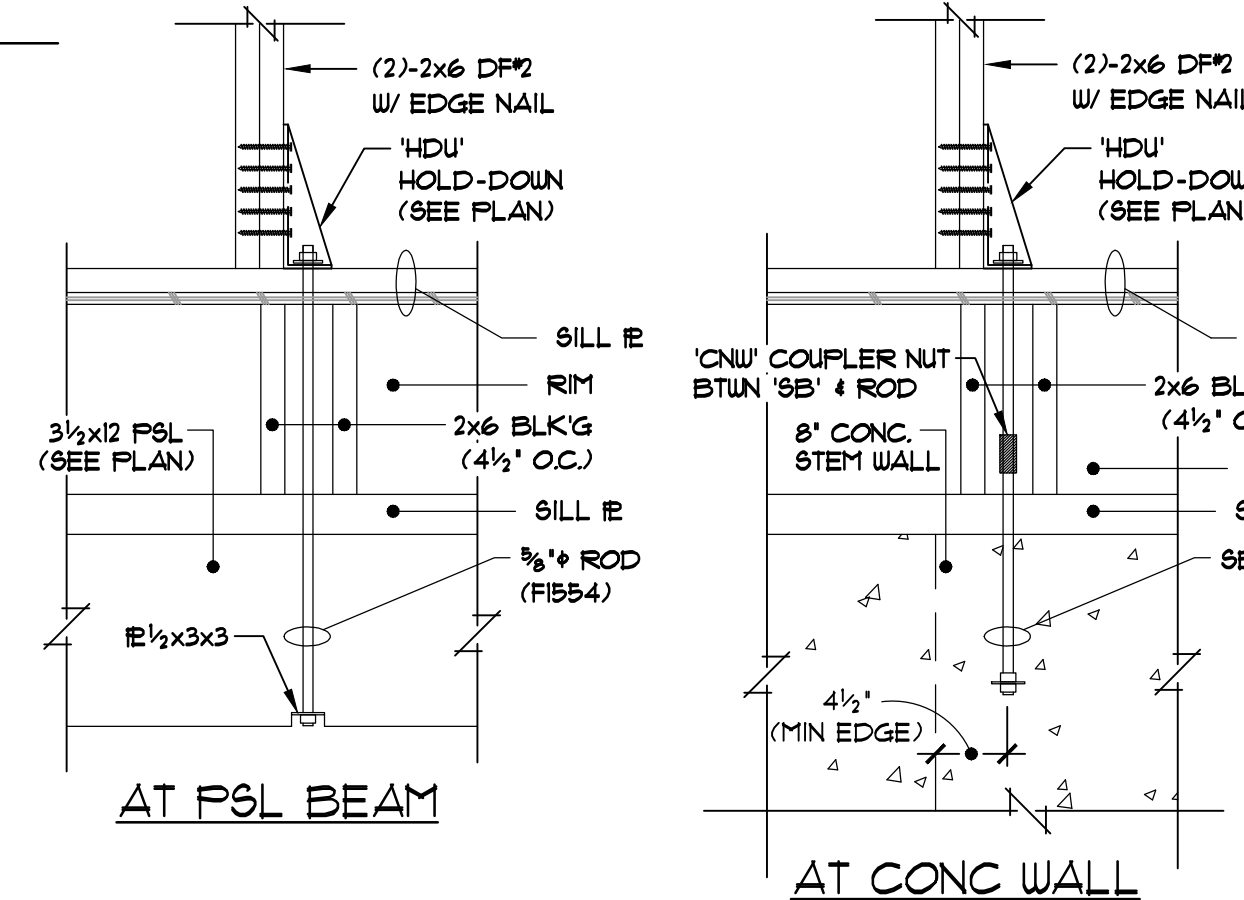
**05 TYP. SPLICE**  
SCALE: 1" = 1'-0"



**06 BLOCKING**  
SCALE: 1" = 1'-0"

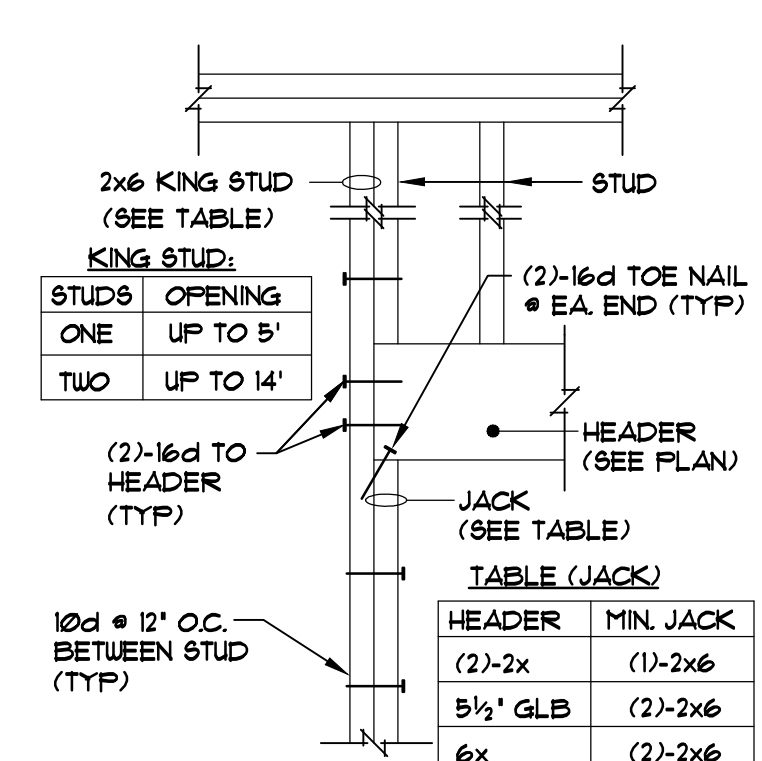


**02 TYP. CORNER REINF.**  
SCALE: 1" = 1'-0"



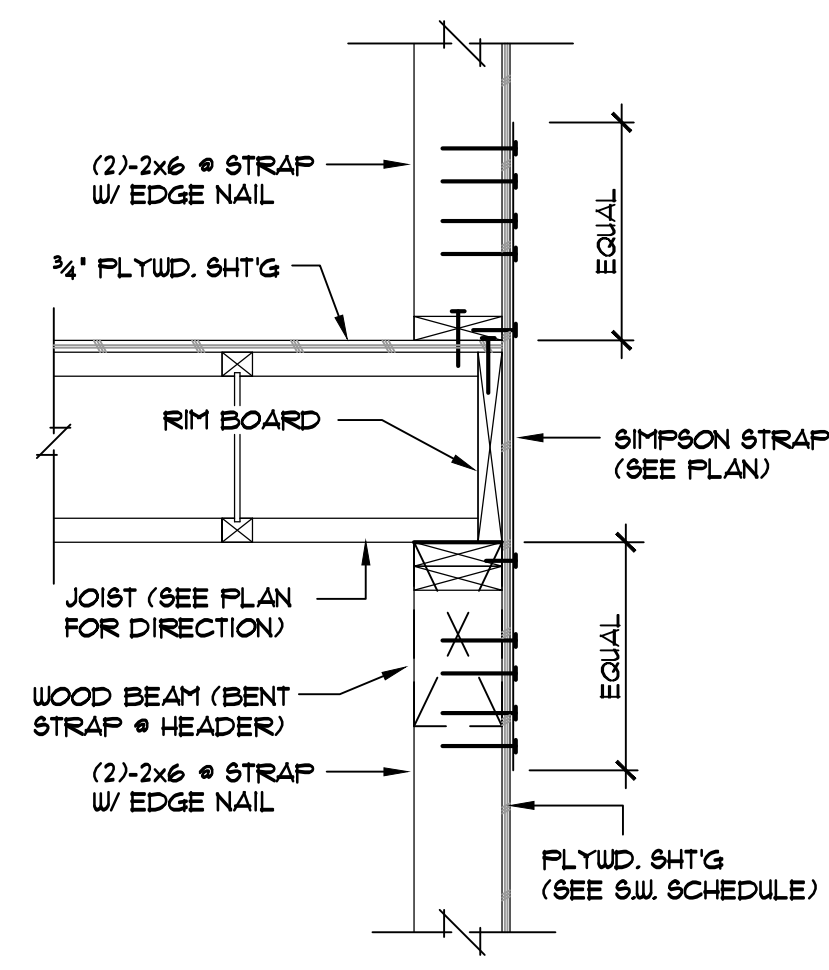
HOLD DOWN	WOOD MEMBER	8DS SCREWS	ANCHOR BOLT	MIN. A. BOLT EMBEDMENT
HDU2	(2) 2x6	(6) 8DS 1/4"x2 1/2"	8B 3/8"x24	18"
HDU4	(2) 2x6	(10) 8DS 1/4"x2 1/2"	8B 3/8"x24	18"
HDU5	(2) 2x6	(14) 8DS 1/4"x2 1/2"	3/8"x12" LAG SCREW	

**07 TYP. HOLD-DOWN**  
SCALE: 1" = 1'-0"

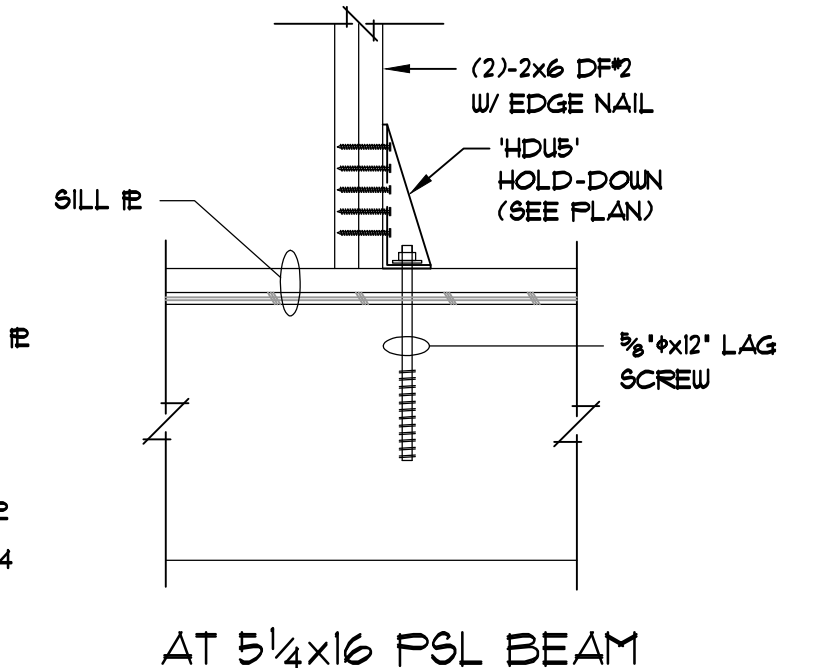


BEAM PERP. TO WALL (TYP. W.O.N.)  
 4x, 3 1/4x P&L: (2)-2x6 JACKS MIN. UNDER BEAM  
 6x, 5 1/4x P&L: (3)-2x6 JACKS MIN. UNDER BEAM

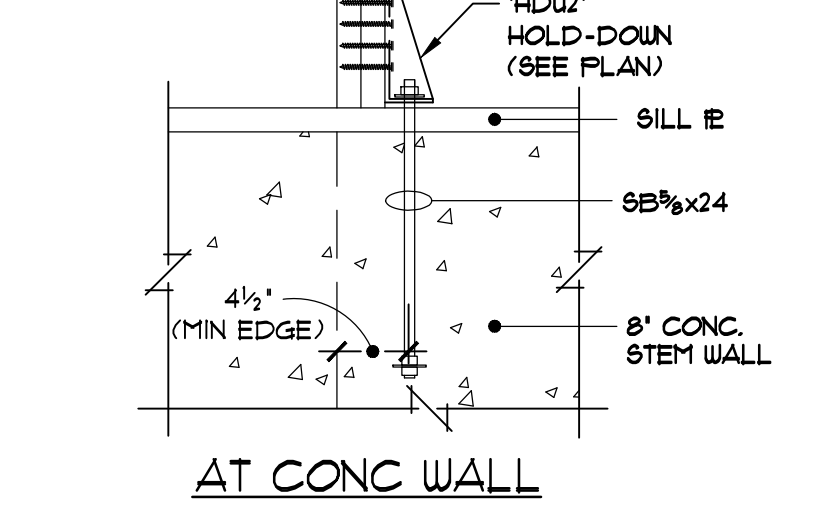
**08 HEADER**  
SCALE: 1" = 1'-0"



**03 TYP. STRAP**  
SCALE: 1" = 1'-0"



**09 TYP. CONC. STAIR**  
SCALE: 1" = 1'-0"



**09 TYP. CONC. STAIR**  
SCALE: 1" = 1'-0"

MARK	SIZE	REINFORCEMENT
F3.5	3'-6"x3'-6"x12"	(4)-#5 (3'-0") EACH WAY (3' FROM BOTTOM OF FOOTING)
F4.0	4'-0"x4'-0"x14"	(5)-#5 (3'-6") EACH WAY (3' FROM BOTTOM OF FOOTING)

NO.	DATE	DESCRIPTIONS
1	2/2/2023	CORRECTIONS

**D.S Engineering**  
 Consulting Structural Engineers  
 3121 147th Place SE  
 Mill Creek, WA 98012  
 T: 425-338-4776



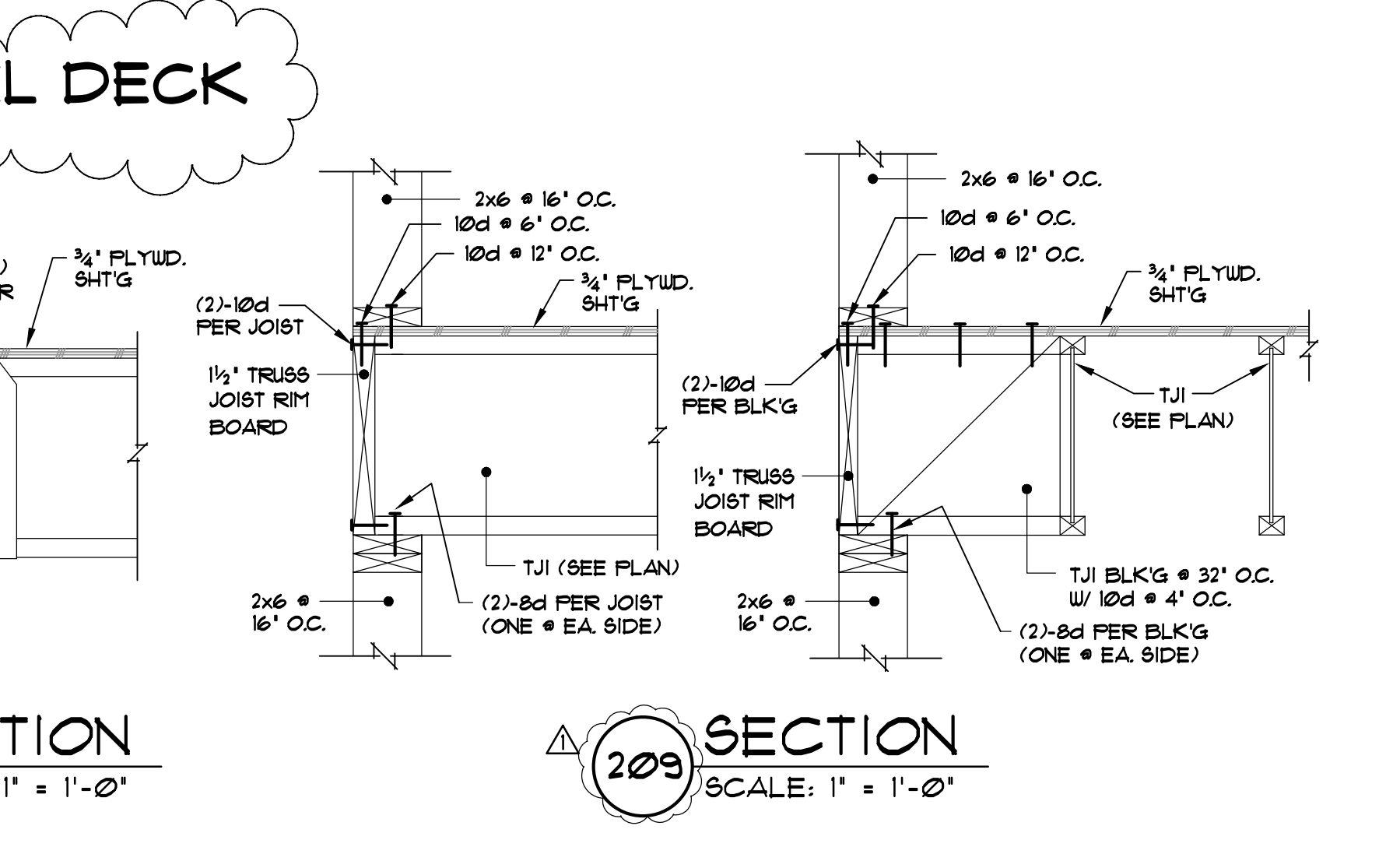
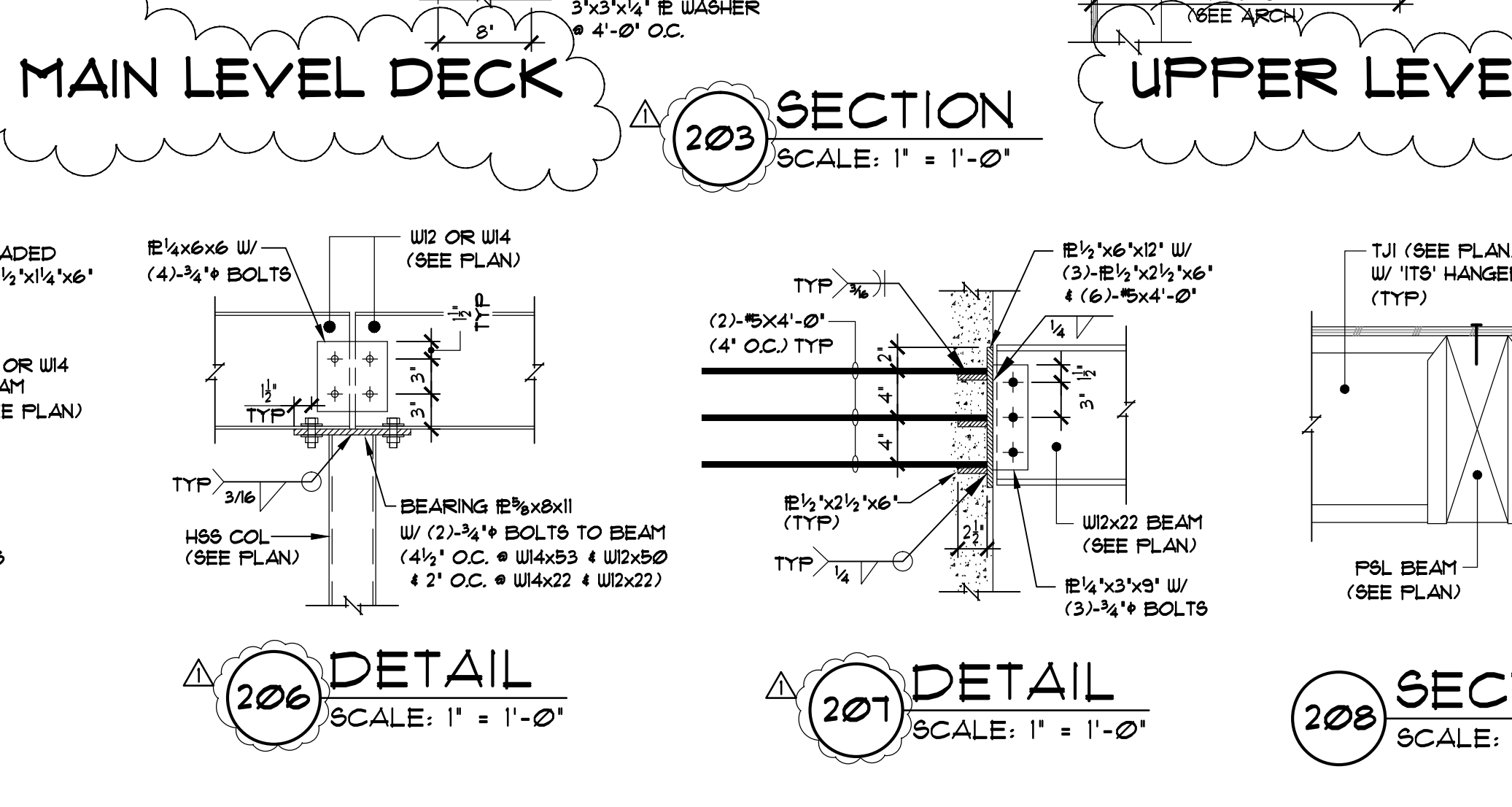
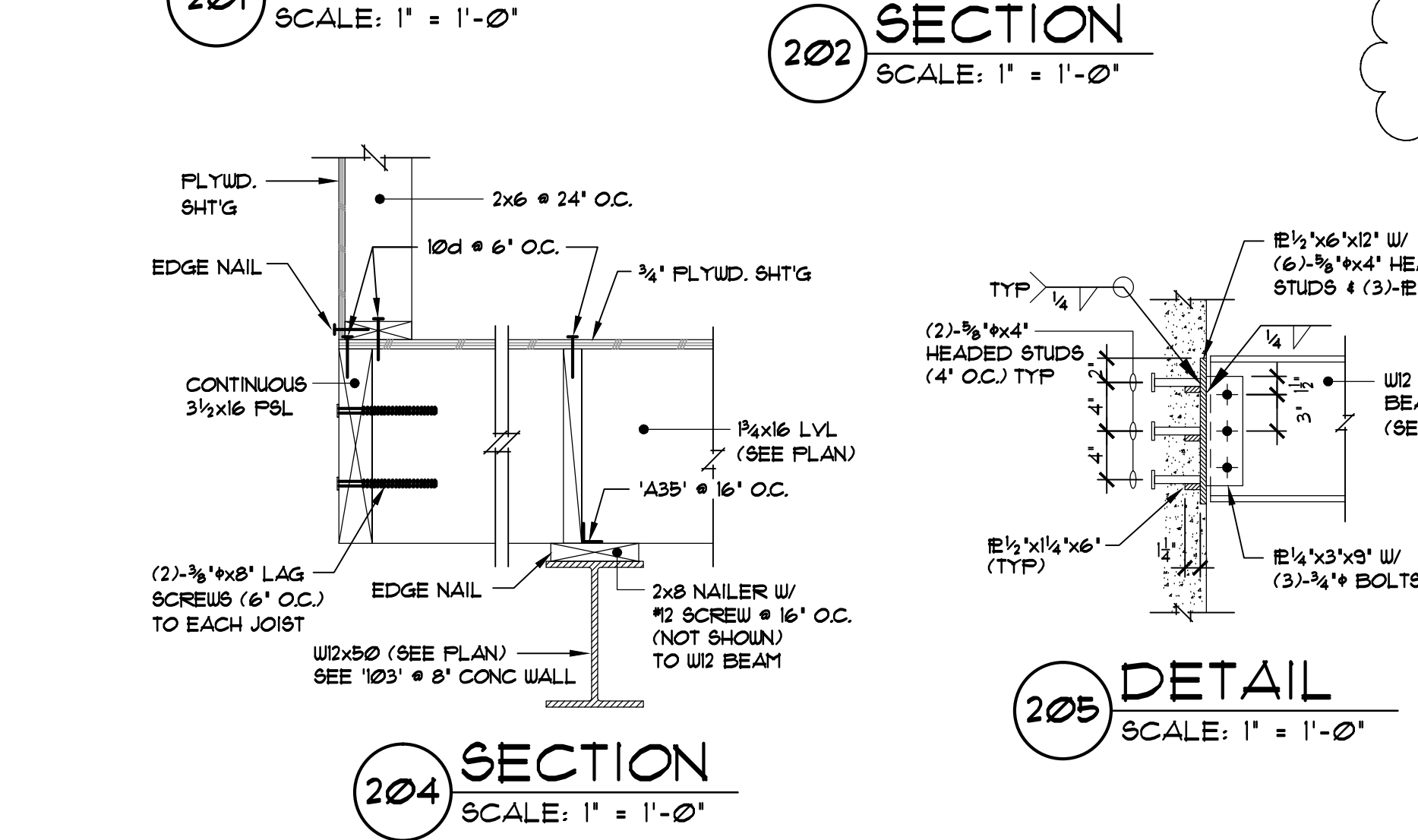
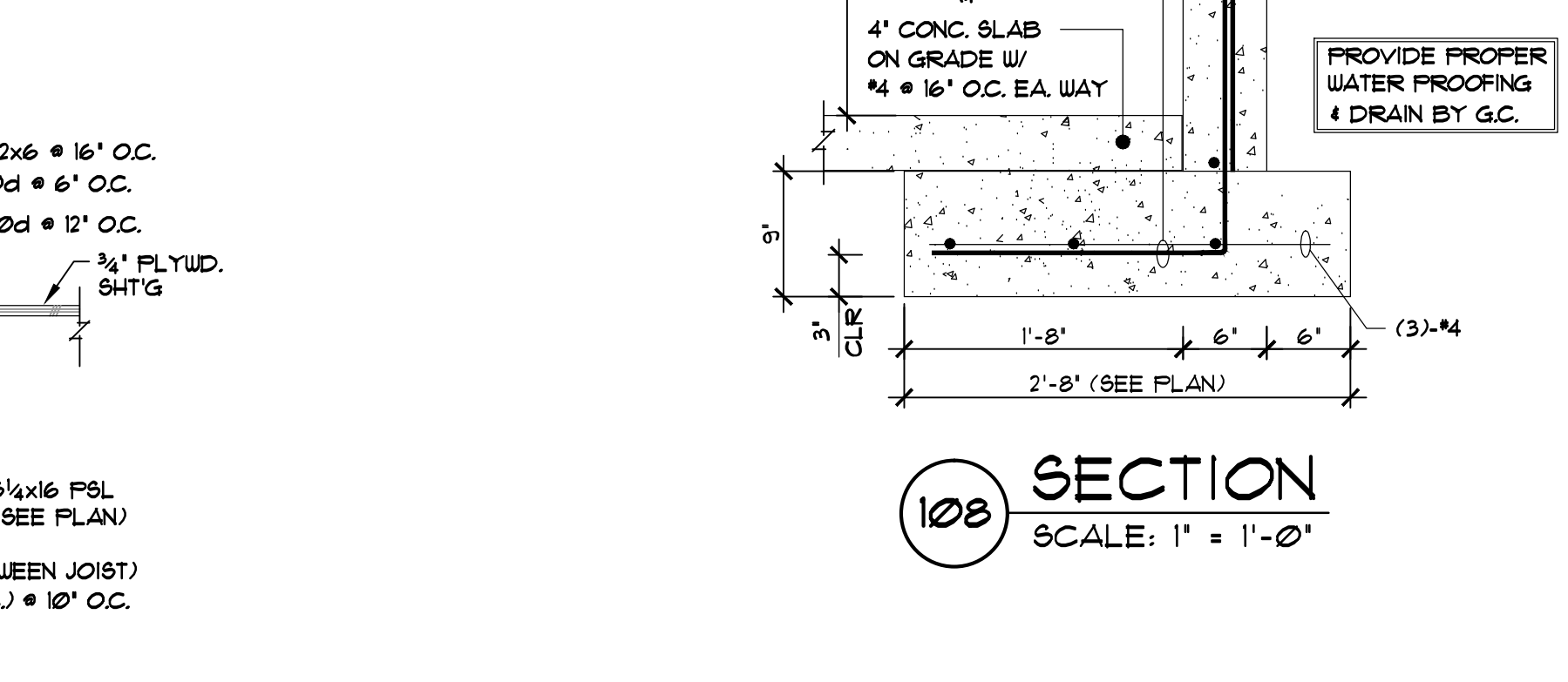
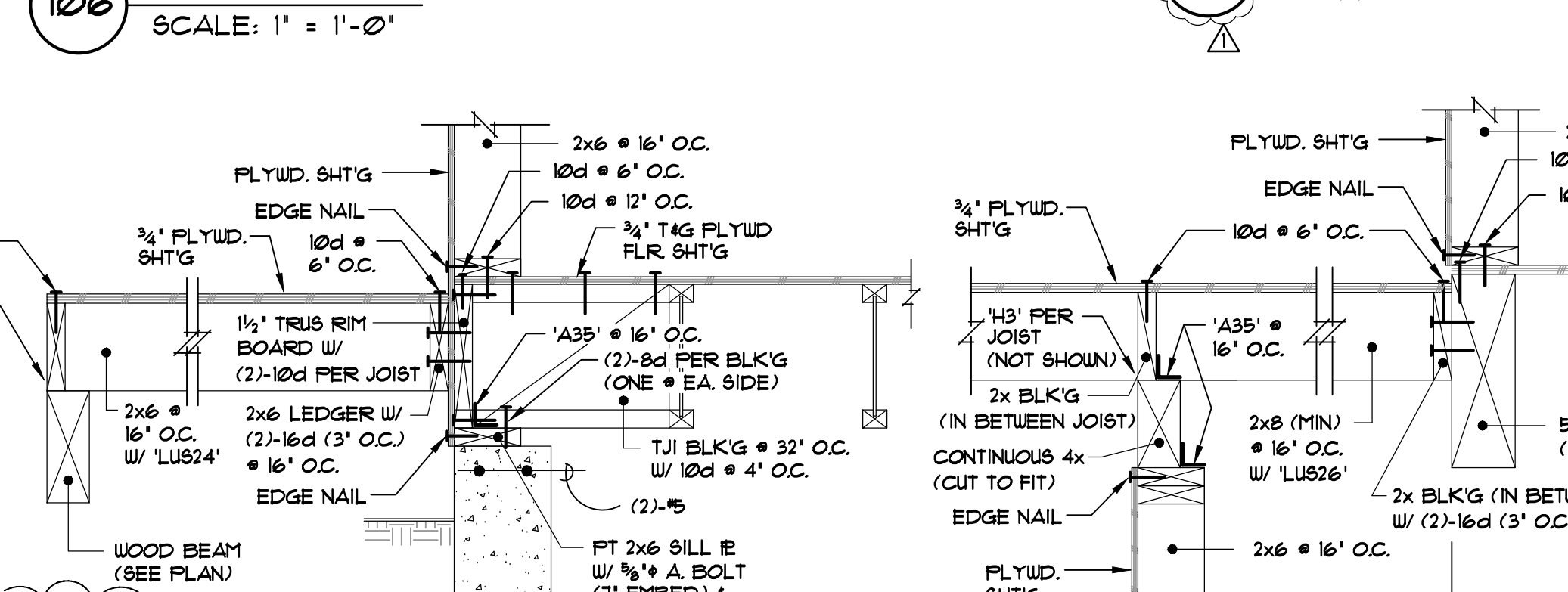
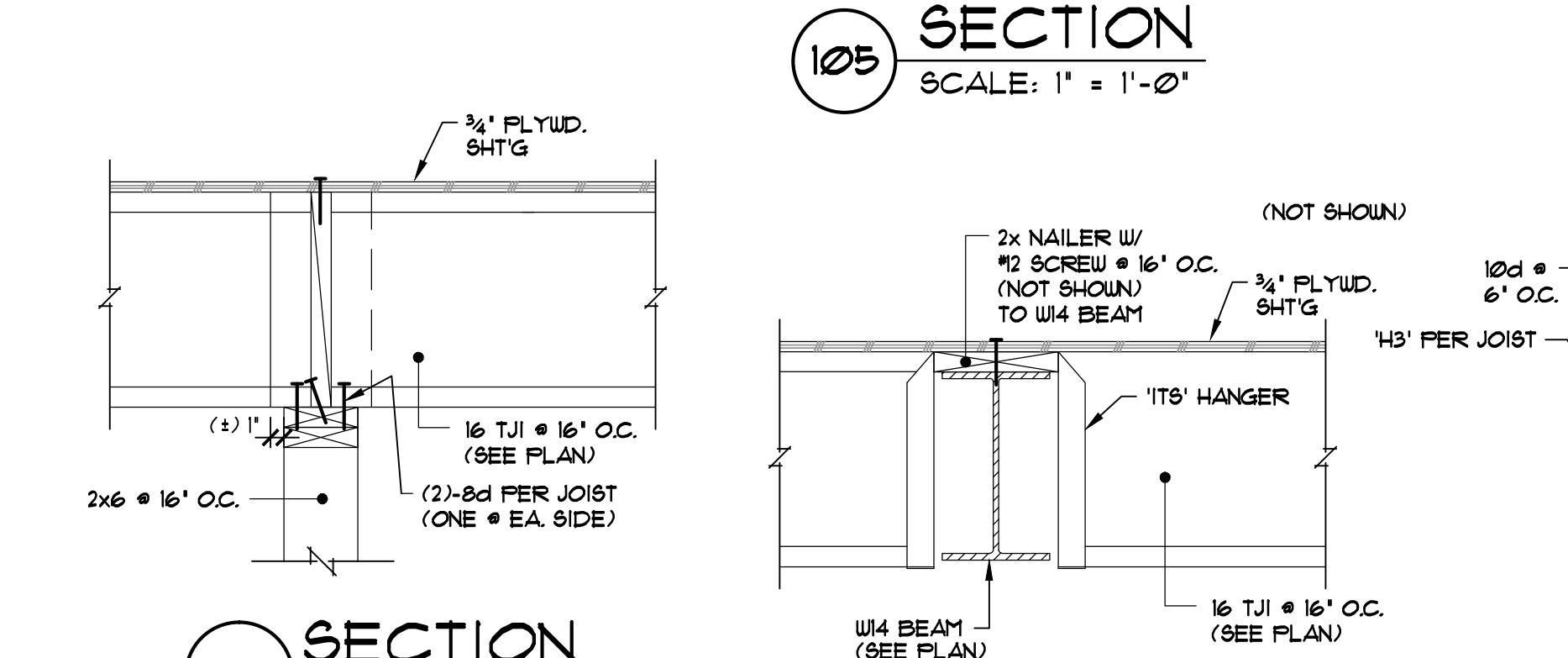
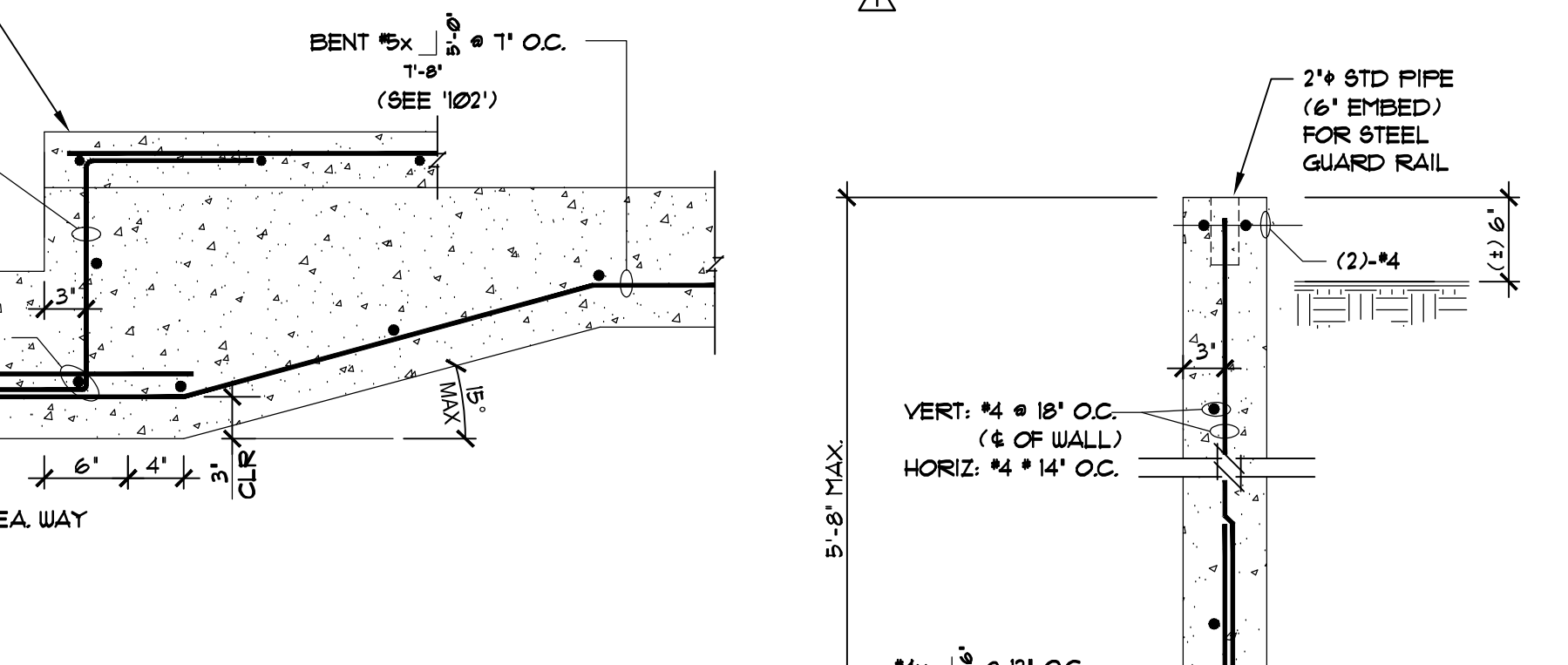
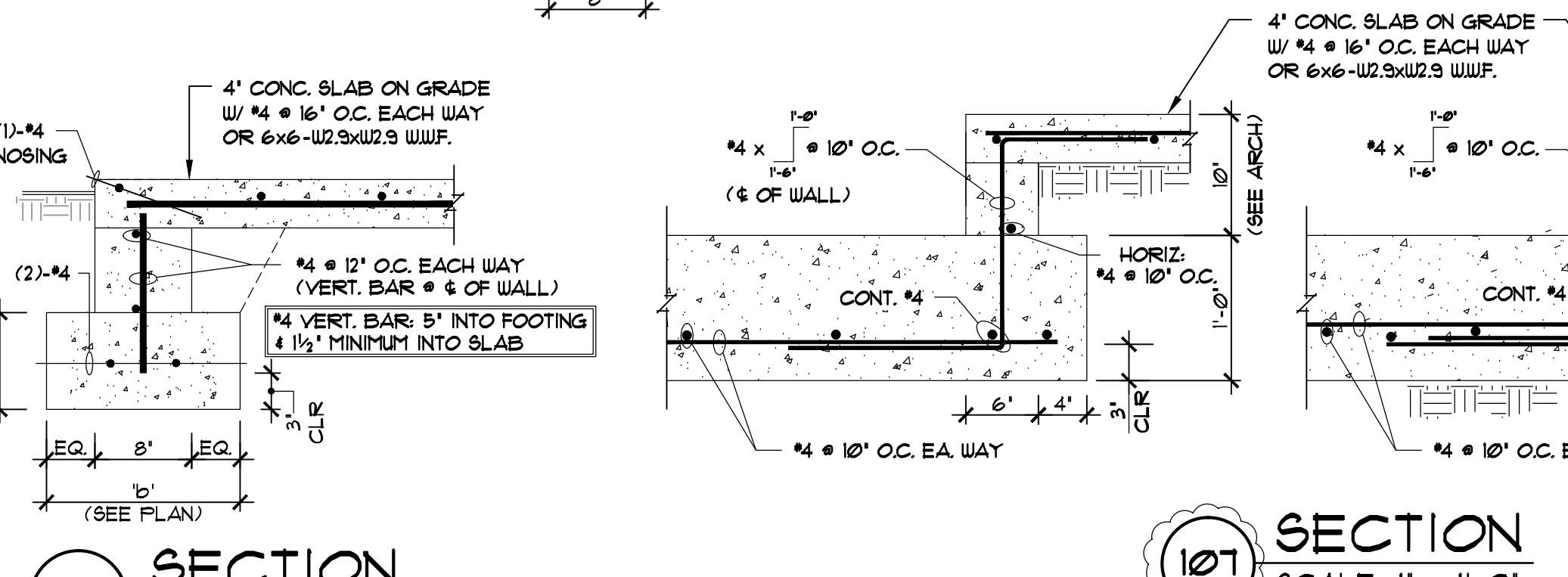
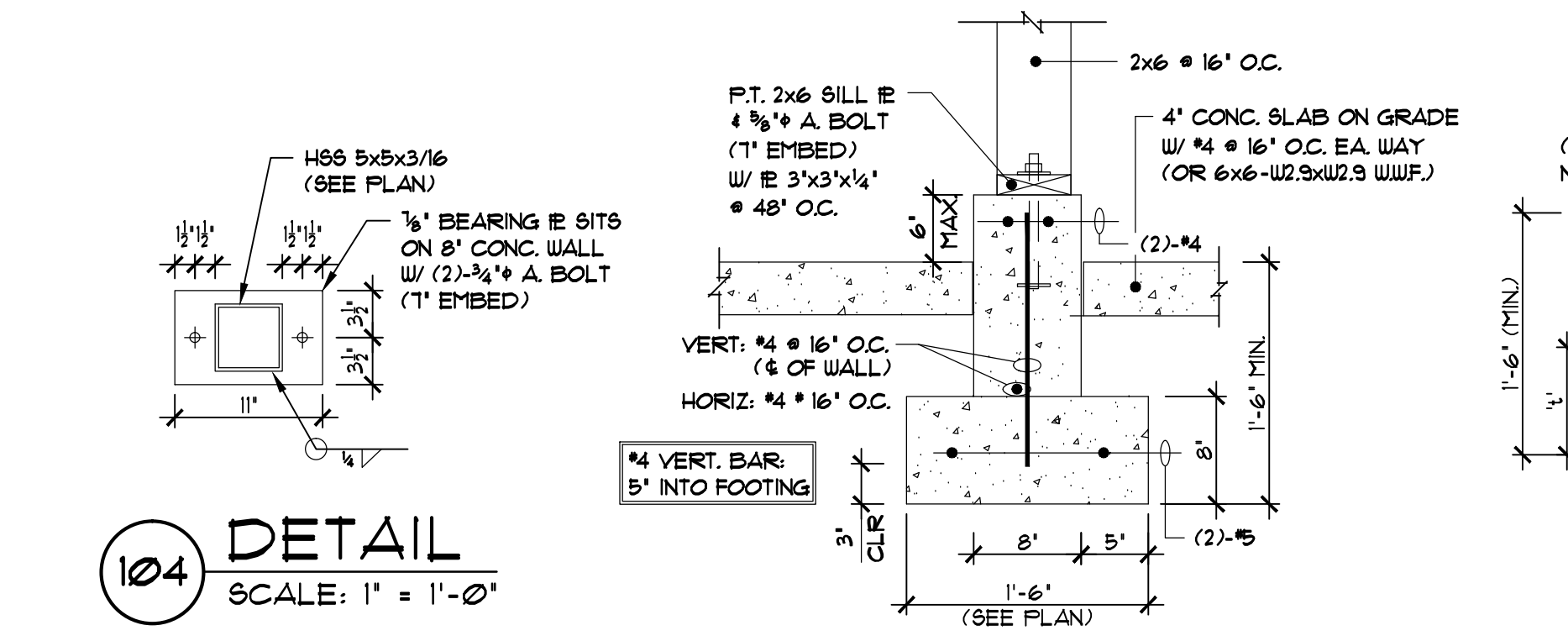
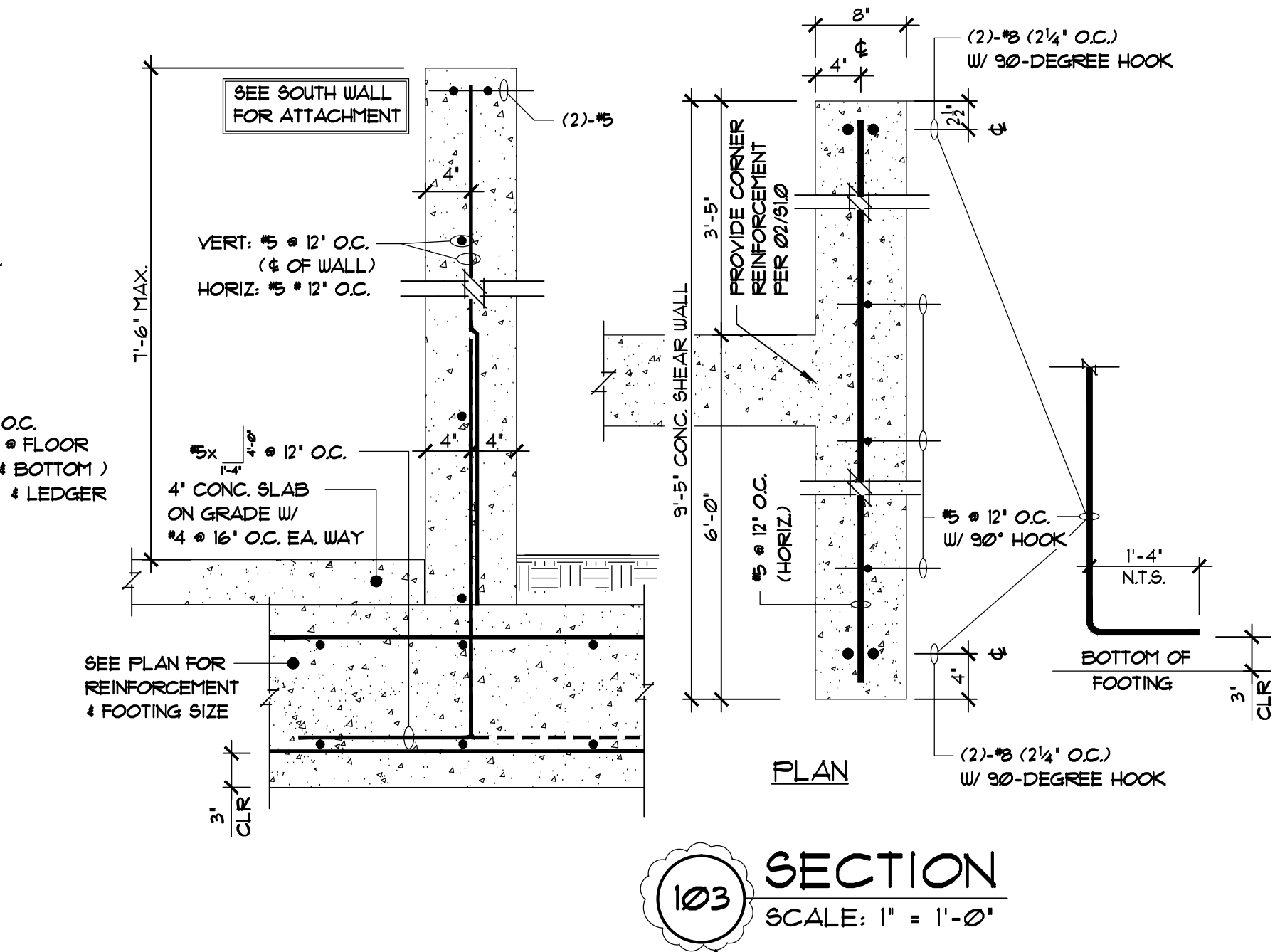
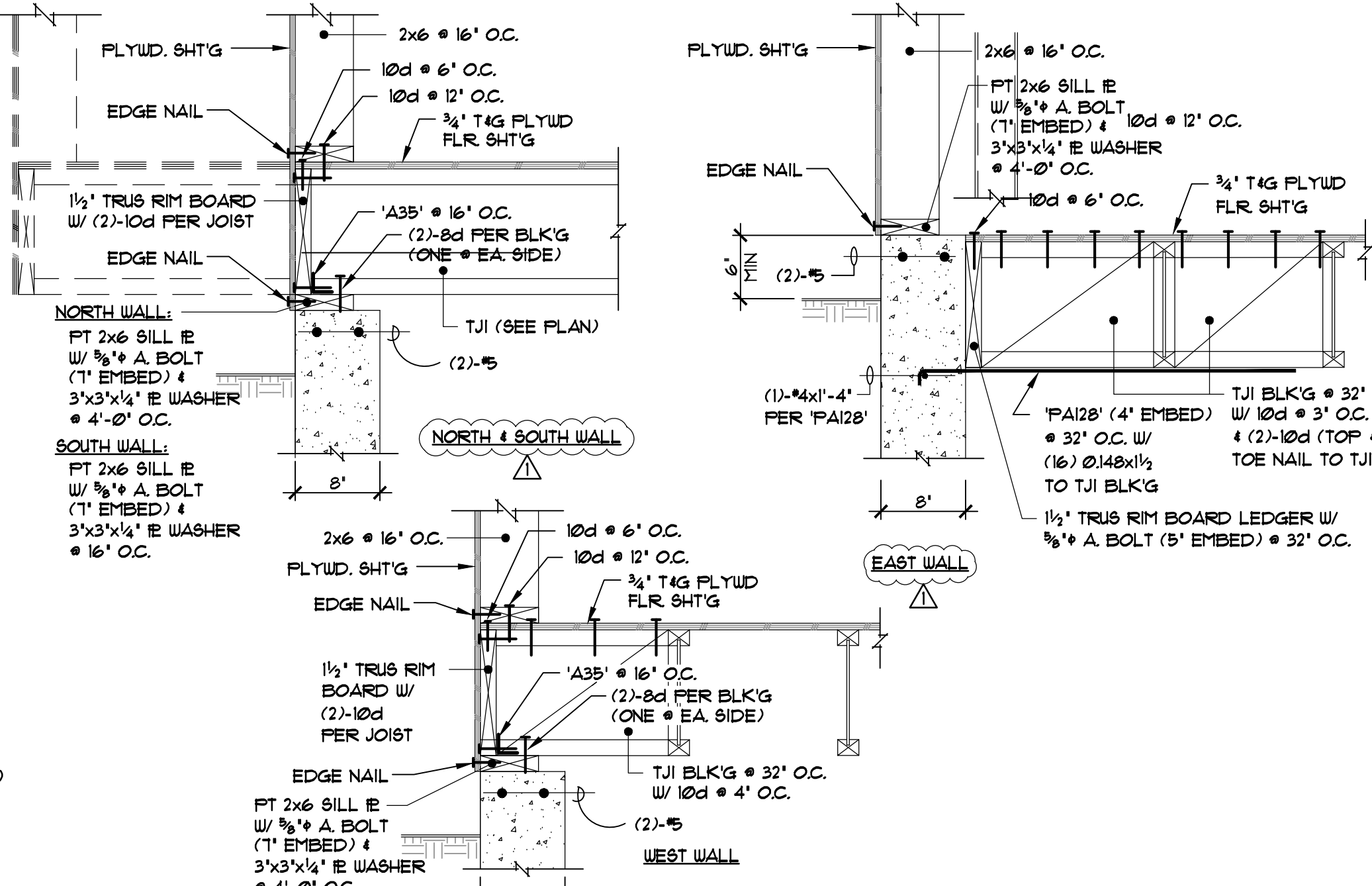
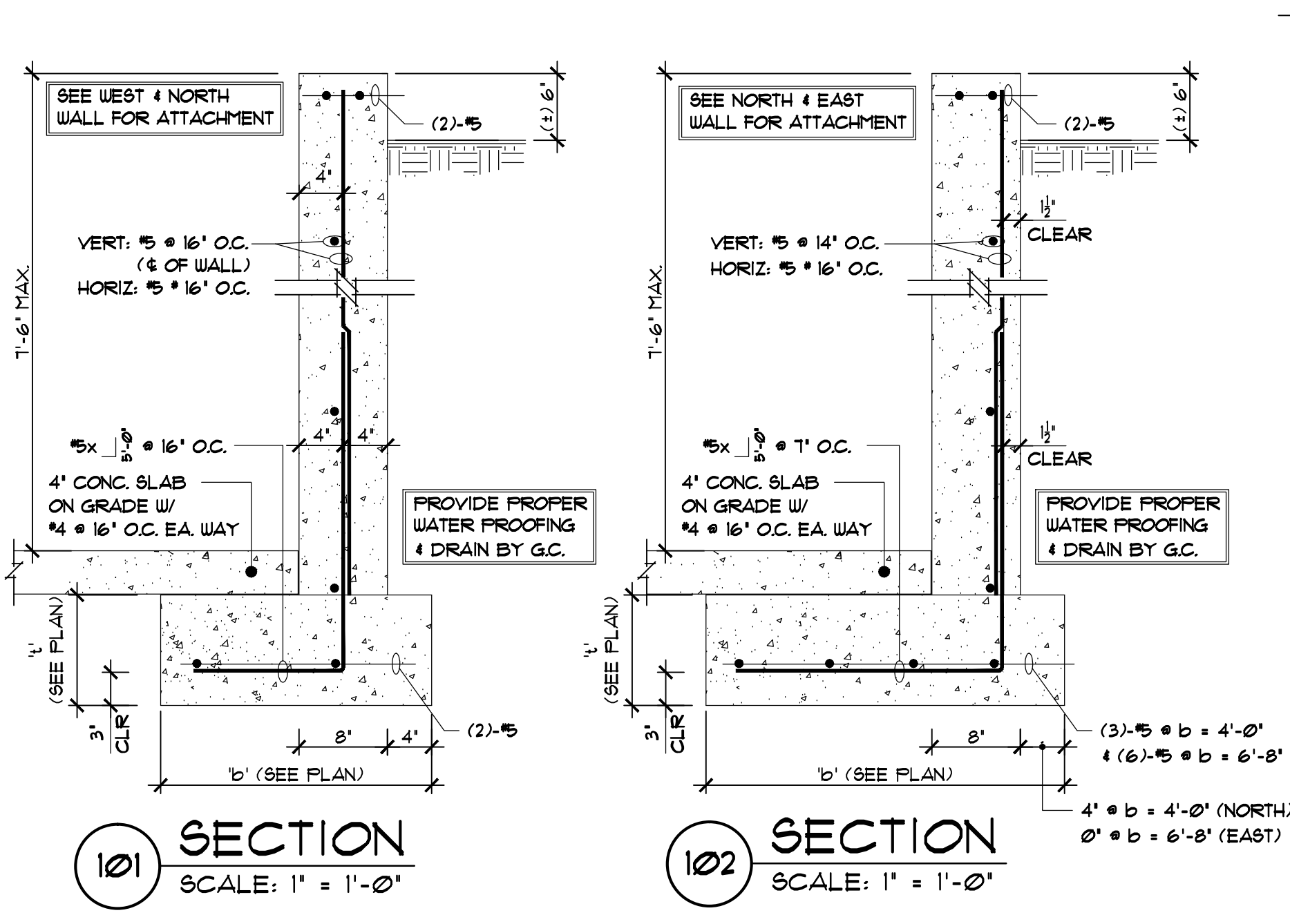
**PROJECT:**  
 MERCER RESIDENCE  
 6950 SE MAKER STREET  
 MERCER ISLAND, WA 98040

DATE: June 22, 2022  
 SCALE: SEE PLAN  
 JOB NO.: 22-300  
 DRAWN: D.S.  
 CHECK: D.S.

**SHEET TITLE**  
 GENERAL NOTES  
 DETAILS  
 AND SECTIONS

**SHEET**  
S1.0





**MAIN LEVEL DECK**

**UPPER LEVEL DECK**

REVISIONS:

NO.	DATE	DESCRIPTIONS
1	2/2/2023	CORRECTIONS

**D.S Engineering**  
Consulting Structural Engineers  
3121 147th Place SE  
Mill Creek, WA 98012  
T: 425-338-4776



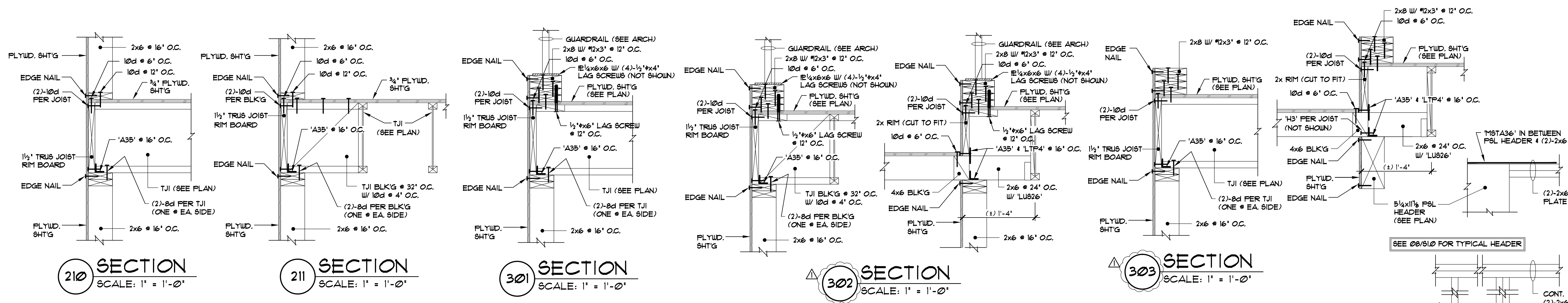
PROJECT:  
**MERCER RESIDENCE**  
6950 SE MAKER STREET  
MERCER ISLAND, WA 98040

DATE: June 22, 2022  
SCALE: SEE PLAN  
JOB NO.: 22-300  
DRAWN: D.S.  
CHECK: D.S.

SHEET TITLE  
**SECTIONS & DETAILS**

SHEET  
**S1.1**





210 SECTION  
SCALE: 1" = 1'-0"

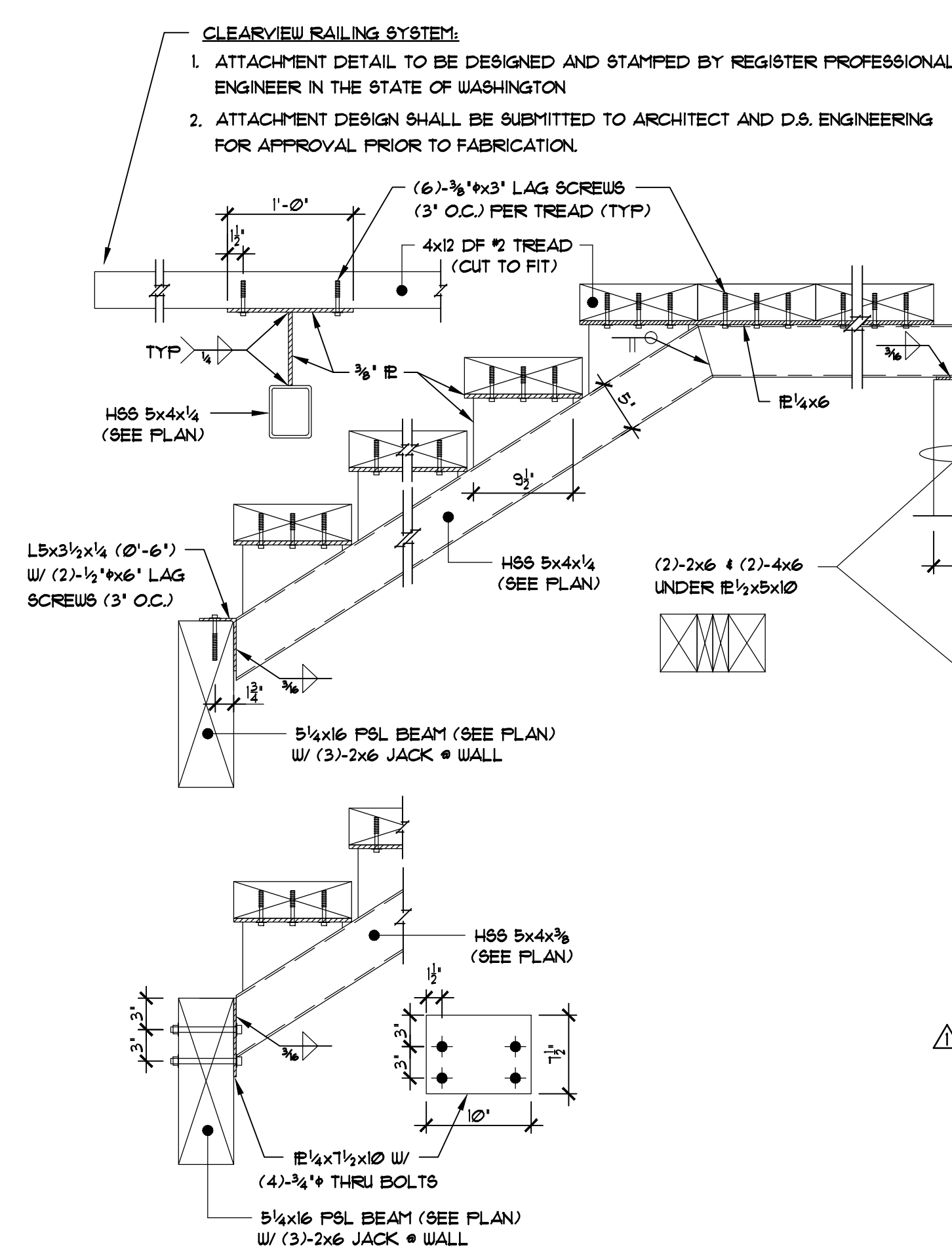
211 SECTION  
SCALE: 1" = 1'-0"

301 SECTION  
SCALE: 1" = 1'-0"

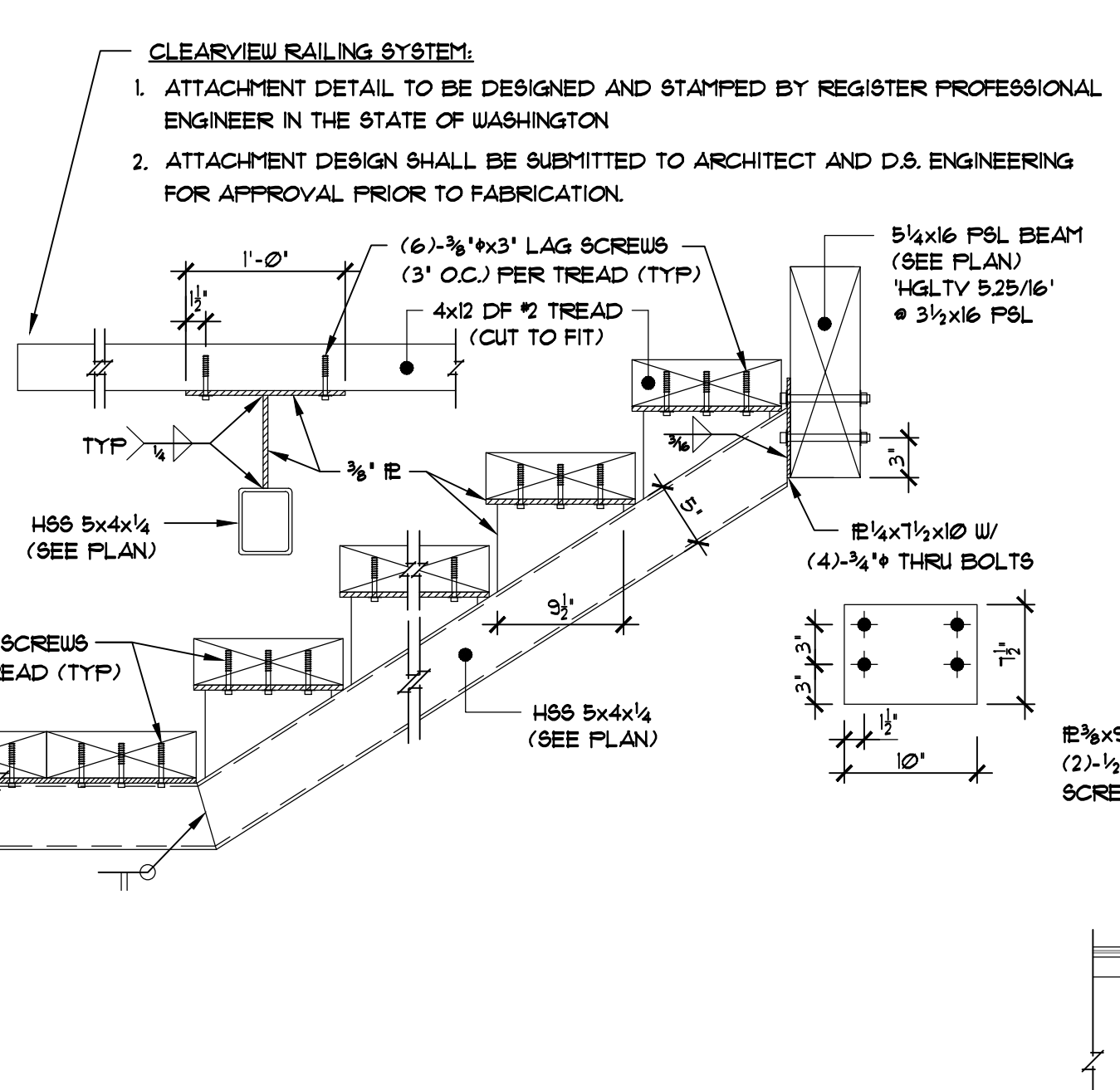
302 SECTION  
SCALE: 1" = 1'-0"

303 SECTION  
SCALE: 1" = 1'-0"

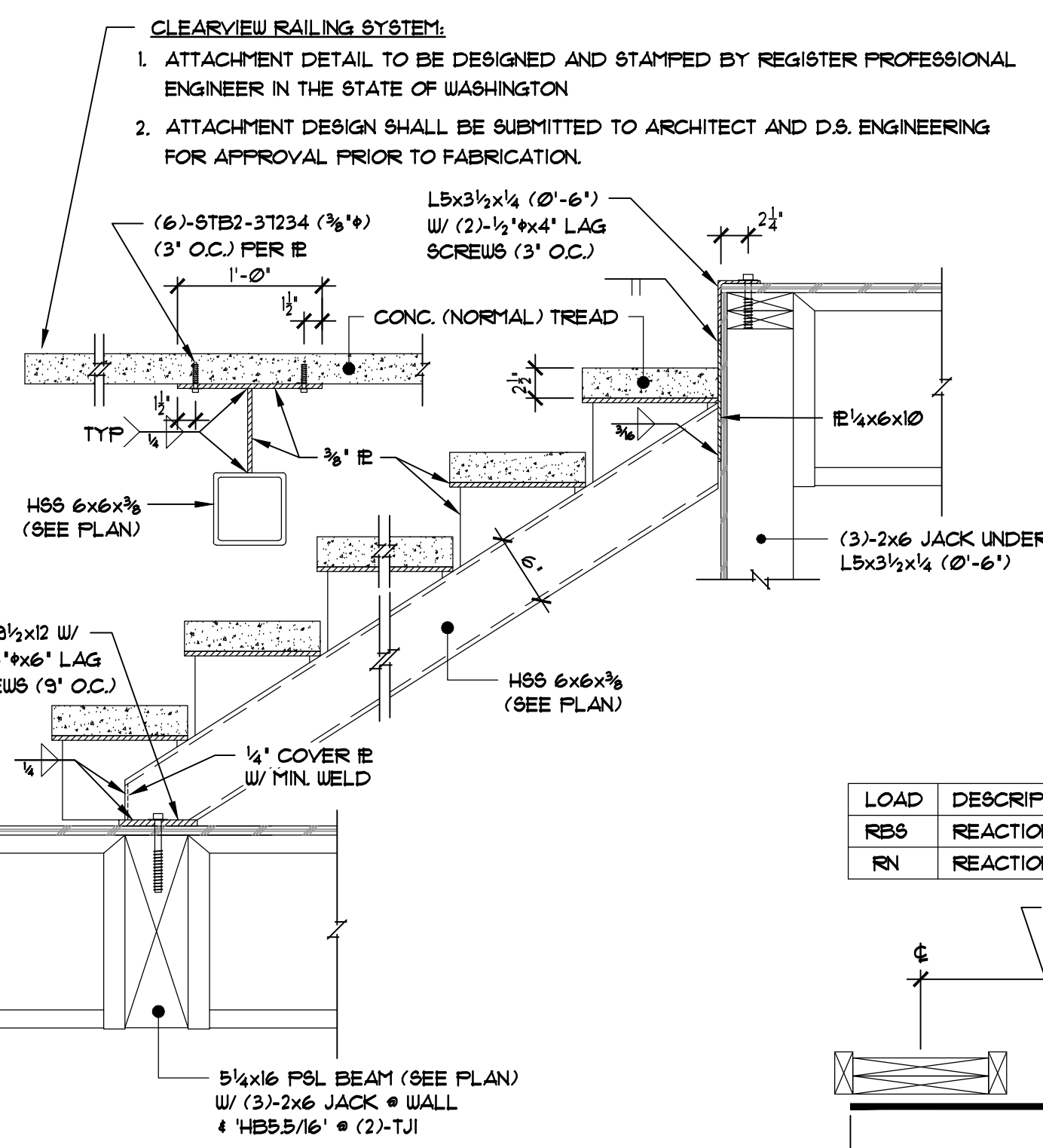
304 SECTION  
SCALE: 1" = 1'-0"



STAIR (INTERIOR)  
SCALE: 1" = 1'-0"

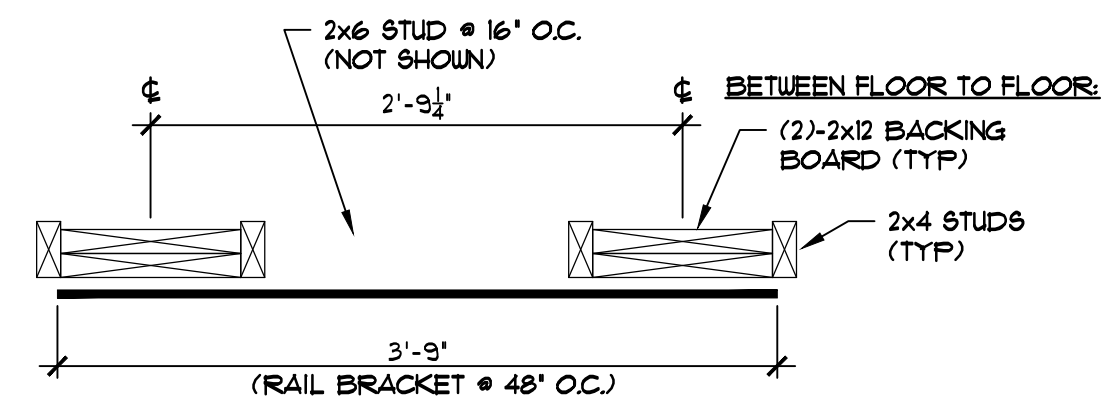


STAIR (EXTERIOR)  
SCALE: 1" = 1'-0"



ATTCHMENT @ ELEVATOR  
SCALE: 1" = 1'-0"

LOAD	DESCRIPTION	Lbf
RBS	REACTION TO BUFFER OR SAFETY ENGAGEMENT	4,671 •
RN	REACTION DUE TO NORMAL OPERATION	7,886 •



REVISIONS:

NO.	DATE	DESCRIPTIONS
2	2/2/2023	CORRECTIONS
3	3/14/2023	CORRECTIONS

**D.S. Engineering**  
Consulting Structural Engineers  
3121 147th Place SE  
Mill Creek, WA 98012  
T: 425-338-4776



PROJECT:  
MERCER RESIDENCE  
6950 SE MAKER STREET  
MERCER ISLAND, WA 98040

DATE: June 22, 2022  
SCALE: SEE PLAN  
JOB NO.: 22-300  
DRAWN: D.S.  
CHECK: D.S.

SHEET TITLE  
SECTIONS  
& DETAILS

SHEET  
**S1.2**







