AVERAGE BUILDING ELEVATION (PRIMARY HOUSE)

#	WALL LENGTH	EXIST. GRADE	FINISHED GRADE
A	9.3	278.6	278.2
B	45.6	277.6	277.6
C	32.5	279.7	280.0
D	16.0	281.0	280.5
E	3.0	281.0	280.5
F	15.0	280.6	280.5
F1	6.5	280.8	280.5
F2	2.0	281.0	280.5
G	25.2	281.4	280.5
H	21.0	281.8	280.5
I	22.0	282.2	281.0
J	8.9	281.2	280.5
K	6.1	280.8	280.5
L	2.7	280.4	280.0
M	14.0	279.8	279.8
N	4.9	279.4	279.4
O	9.7	279.2	279.2
P	7.0	279.4	279.4
A.B.E. (USE EACH LOWER NUMBER)			279.7

("ORIGINAL GRADE 277.6" IS USED FOR 'B')

A.B.E. = (W1 x E1 + W2 x E2 + ...) / (W1 + W2 +...) = 279.7

MAX. STRUCTURAL HT. ALLOWED = 279.7 + 30 = 309.7' (SEE SHEET A5, A6)

AVERAGE BUILDING ELEVATION (ADU)

#	WALL LENGTH	EXIST. GRADE	FINISHED GRADE
W	21.5	281.5	280.5
X	19.8	282.0	280.5
Y	21.5	281.5	280.5
Z	19.8	280.5	280.5
A.B.E. (USE EACH LOWER NUMBER)			280.5

A.B.E. = (W1 x E1 + W2 x E2 + ...) / (W1 + W2 +...) = 280.5

MAX. STRUCTURAL HT. ALLOWED = 280.5 + 30 = 310.5' (SEE SHEET A9)

LEGAL DESCRIPTION

LOTS 20, 21 AND 22 IN BLOCK 9 OF EAST SEATTLE ADDITION, AS PER PLAT RECORDED IN VOLUME 3 OF PLATS, PAGE 22 AND 23, IN KING COUNTY, WASHINGTON.

CODE COMPLIANCE

2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 UNIFORM PLUMBING CODE
2018 INTERNATIONAL FIRE CODE
2018 NATIONAL ELECTRICAL CODE
2018 WASHINGTON STATE ENERGY CODE

(ALL CODES ABOVE INCLUDE WASHINGTON STATEWIDE AMENDMENTS)

ABBREVIATIONS

BLK'G	BLOCKING	HORIZ	HORIZONTAL
℄	CENTER LINE	MAX	MAXIMUM
CLR	CLEAR	MFR	MANUFACTURER
CONT	CONTINUOUS	MIN	MINIMUM
CS	CASEMENT WINDOW	o/	OVER
DBL	DOUBLE	O.C.	ON CENTER
DS	DOWNSPOUT	SD	SMOKE DETECTOR
EL	ELEVATION	SG	SAFETY GLASS
EQ	EQUAL	SF	SQUARE FEET
EXIST	EXISTING	SIM	SIMILAR
FTG	FOOTING	SLD	SLIDING WINDOW
FX	FIXED WINDOW	TYP	TYPICAL
HDR	HEADER	UNO	UNLESS NOTED OTHERWISE
HDWD	HARDWOOD	w/	WITH
HGR	HANGER		

PROJECT INFORMATION

ZONING DISTRICT	R-8.4
PROPERTY OWNER	YU HAN TSENG
PARCEL NUMBER	217450-1915
LOT AREA	8,942 S.F.
OCCUPANCY CLASSIFICATION	R-3 / U
CONSTRUCTION TYPE	V-B

LOT SLOPE CALCULATION

HIGHEST ELEVATION POINT	284.5'
LOWEST ELEVATION POINT	273.5'
ELEVATION DIFFERENCE	11'
HORIZ. DISTANCE BETWEEN HIGH AND LOW POINTS	124.5'
LOT SLOPE (11 / 124.5)	8.8 %

LOT COVERAGE

MAX. LOT COVERAGE	40 %
ROOF (PRIMARY RESIDENCE)	2,515 S.F.
ROOF (ADU)	554 S.F.
DRIVEWAY	330 S.F.
TOTAL LOT COVERAGE AREA	3,399 S.F.
LOT COVERAGE	38.0 % (OK!)

HARDSCAPE

MAX. HARDSCAPE AREA	9 %
WALKWAY	74 S.F.
WINDOW WELLS	112 S.F.
TOTAL HARDSCAPE AREA	186 S.F. (2.1% --> OK!)

GROSS FLOOR AREA (GFA)

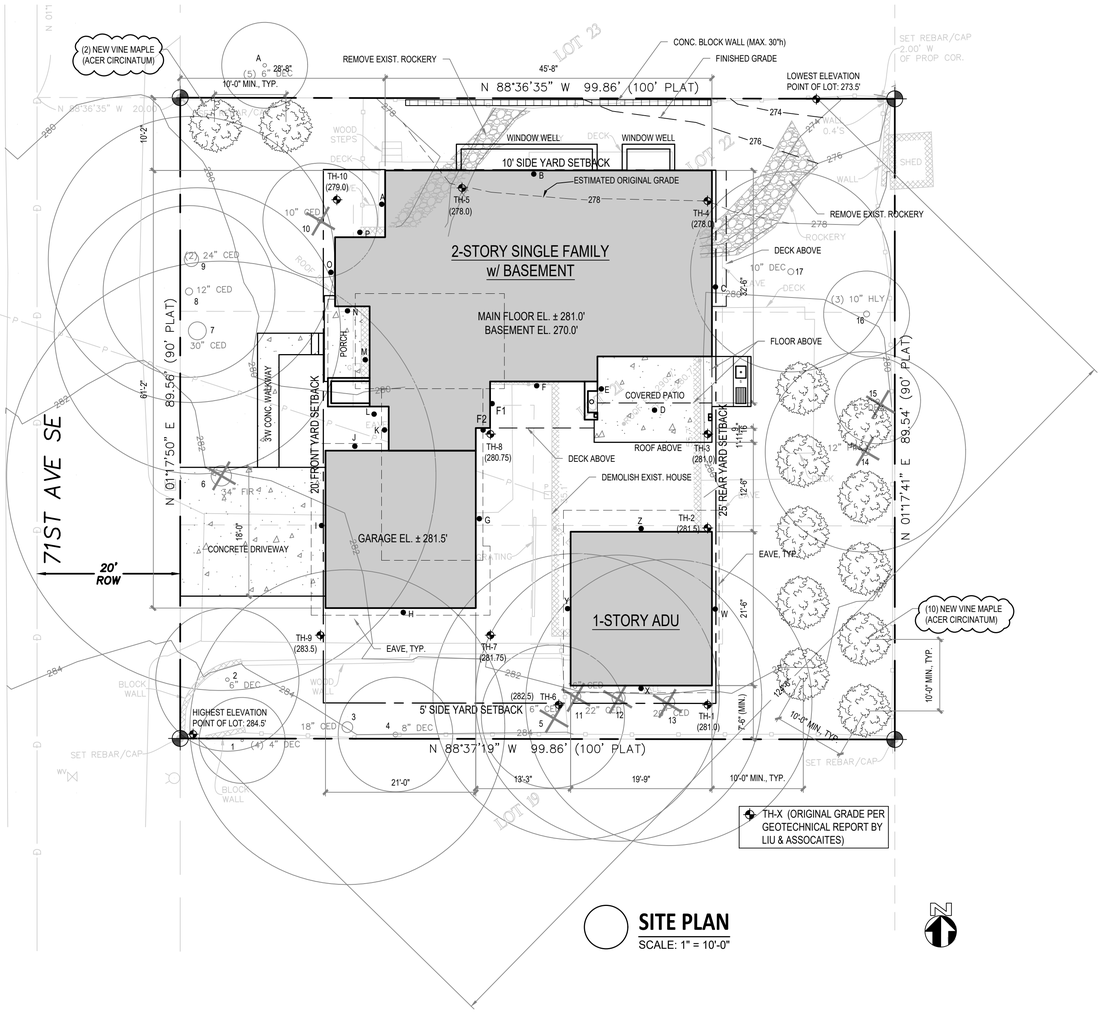
MAX. GROSS FLOOR AREA	45% (40 % + 5 % ADU)
BASEMENT	1,520 S.F.
BASEMENT (EXCLUDED FROM GFA. SEE SHEET A1)	- 1,440 S.F.
MAIN FLOOR	1,520 S.F.
UPPER FLOOR	1,537 S.F.
ADU	424 S.F.
GARAGE	462 S.F.
TOTAL ABOVE GROUND FLOOR AREA	4,023 S.F.
PROPOSED GFA	44.9 % (OK!)
TOTAL FINISHED FLOOR AREA OF PRIMARY RESIDENCE	4,510 S.F.
ADU	424 S.F.
TOTAL FINISHED FLOOR AREA	4,961 S.F.

NFPA 13D FIRE SPRINKLER SYSTEM AND SEPARATE PERMIT ARE REQUIRED.

NFPA 72 CHAPTER 29 MONITORED FIRE ALARM REQUIRED DUE TO ROAD WIDTH. SEPARATE PERMIT REQUIRED.

DEFERRED SUBMITTAL

EXTERIOR METAL STAIR ON UPPER DECK



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

Tree Assessment Form

Site: Tseng Residence, 2720 71st Ave SE, Mercer Island Date: 8/11/2017

Tree #	Species	DBH (inches)	Height (feet)	Crown Ratio (%)	Vigor	Viable	LOD** (feet) N	S	E	W	Defects	Status*** Status	NUMBER OF REPLACEMENT TREES REQUIRED
	On Site Trees												
1	Plum	9*	35	90	Good	Yes	15	13	4	18	6		
2	Cherry	10	35	40	Fair	Yes	12	2	2	12	6	Gumosis	
3	Ash	20	71	80	Good	Yes	15	15	12	18	6		
4	Red cedar	9	28	70	Fair	Yes	8	2	10	4	4	Dead limb tips	
5	Douglas-fir	7	43	40	Good	Yes	8	4	0	14	4		Remove
6	Douglas-fir	25	103	60	Good	Yes	20	22	24	25	10	Two spike knots	Remove 3
7	Sequoia	22	66	60	Good	Yes	4	12	12	12	10	Forks at 6-feet with included bark	
8	Sequoia	14	70	60	Good	Yes	0	2	8	12	10		
9	Sequoia	30*	70	60	Good	Yes	14	6	12	12	10	Included bark 0-4-feet	
10	Red cedar	12	40	70	Good	Yes	8	9	12	9	4		Remove 1
11	Red cedar	13	58	60	Good	Yes	15	18	4	14	4		Remove 2
12	Red cedar	23	76	70	Good	Yes	12	16	10	6	4		Remove 2
13	Red cedar	21	70	70	Good	Yes	15	12	16	8	4		Remove 2
14	Austrian pine	15	62	40	Fair	Yes	3	19	12	11	4		Remove 2
15	Vine maple	7*	14	40	Poor	No	6	5	4	9	4	Severe decay	R. Remove
16	Holly	19*	16	80	Good	Yes	6	6	2	10	4		
17	Plum	100	20	70	Fair	Yes	14	9	8	14	4	Bole decay	TOTAL: 12
	Off Site Trees												
A	Japanese maple	14*	16	80	Good	Yes	14	16	14	14	10		PROPOSED NEW TREES: 12
B	Red cedar	28	70	80	Good	Yes	16	14	16	18	10		

*DBH Multiple Trunks converted to equivalent DBH per ISA Guide
**LOD Limit of Disturbance; Face to side of disturbance, recommended
*** Status "Remove as per plan"---"R. Remove", recommended

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8666 REGISTERED ARCHITECT
CHAOHUA CHANG
STATE OF WASHINGTON

2720 RESIDENCE

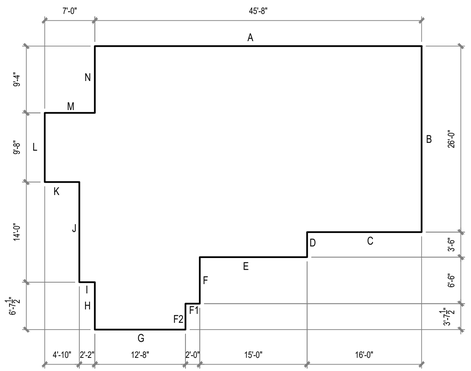
2720 71ST AVENUE SE
MERCER ISLAND WA 98040

NUMBER	DATE	DESCRIPTION OF REVISIONS
	08-05-2021	PERMIT PLANS
	01-22-2022	RESPONSE TO CITY COMMENT #1
	03-23-2022	RESPONSE TO CITY COMMENT #2
	05-04-2022	RESPONSE TO CITY COMMENT #3
	05-25-2022	RESPONSE TO CITY COMMENT #4

SHEET TITLE
SITE PLAN

JOB NUMBER

SHEET NUMBER
A0



WALL SEGMENT	WALL LENGTH (L)	COVERAGE (C)	L x C
A	45.6	86.6 %	39.5
B	26.0	90.0 %	23.4
C	16.0	100 %	16.0
D	3.5	100 %	3.5
E	15.0	100 %	15.0
F	6.5	100 %	6.5
F1	2.0	100 %	2.0
F2	3.7	100 %	3.7
G	12.7	100 %	12.7
H	6.7	100 %	6.7
I	2.1	100 %	2.1
J	14.0	100 %	14.0
K	4.8	100 %	4.8
L	9.7	100 %	9.7
M	7.0	93.9 %	6.6
N	9.3	93.6 %	8.7
TOTAL	184.6		174.9

PORTION OF EXCLUDED BASEMENT FLOOR AREA
= 1,520 x (174.9 / 184.6)
= 1,440 S.F.
(SEE BUILDING ELEVATIONS AND GEOTECHNICAL ENGINEER'S 'ORIGINAL GRADE DETERMINATION REPORT' FOR GRADES)

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

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

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

Summary of Table R406.2

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

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021) Version 1.0

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

Project Information	*Contact Information*

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

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

Authorized Representative _____ *Date* _____

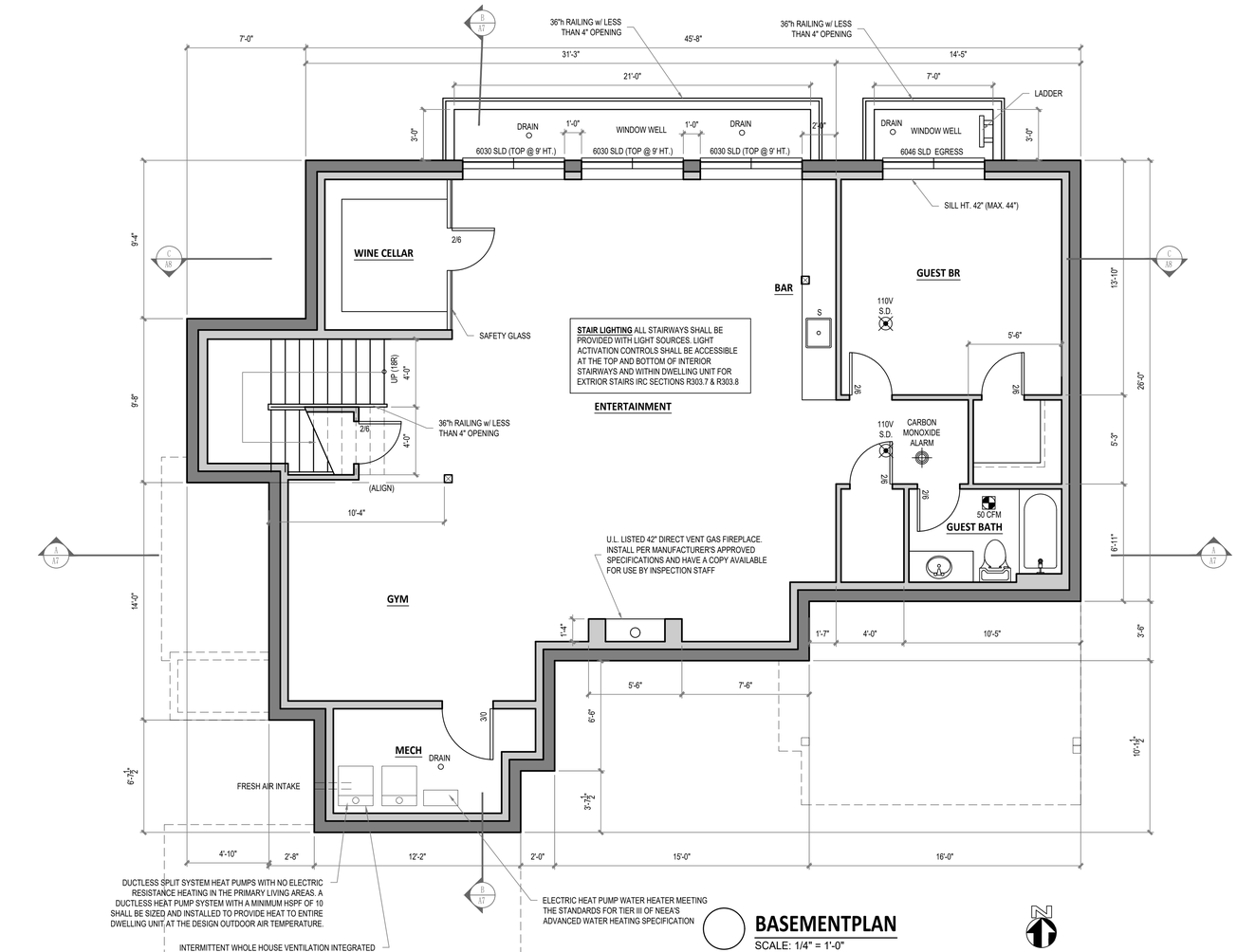
	All Climate Zones (Table R402.1.1)		
		R-Value [a]	U-Factor [a]
	Fenestration U-Factor [b]	n/a	0.30
	Skylight U-Factor [b]	n/a	0.50
	Glazed Fenestration SHGC [b,h]	n/a	n/a
	Ceiling [g]	49	0.026
	Wood Frame Wall [e,h]	21 int	0.056
	Floor	30	0.029
	Below Grade Wall [e,h]	10/15/21 int + TB	0.042
	Slab [d,h] R-Value & Depth	10, 2 ft	n/a
a	R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table.		
b	The fenestration *U*-factor column excludes skylights.		
c	"10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-15 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.		
d	R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.		
e	For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.		
f	R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.		
g	For log structures developed in compliance with Standard ICC-400, log walls shall meet the requirements for climate zone 5 of ICC-400.		
h	Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.		

Summary of Table R406.2 (cont.)

Energy Options	Energy Credit Option Descriptions (cont.)	Credits - select ONE energy option from each category [e]		User Notes
5.1[d]	Efficient Water Heating	0.5	☐	
5.2	Efficient Water Heating	0.5	☐	
5.3	Efficient Water Heating	1.0	☐	
5.4	Efficient Water Heating	1.5	☐	
5.5	Efficient Water Heating	2.0	☑	
5.6	Efficient Water Heating ☐	2.5	☐	
6.1[e]	Renewable Electric Energy (3 credits max)	1.0	☐	
7.1	Appliance Package	0.5	☑	
	Total Credits	6.0	Calculated Total	Client Point

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

1.1	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.24**	0.5
3.6 [2]	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0
5.5	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification ***or*** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	2.0
7.1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: Dishwasher – Energy Star rated Refrigerator (if provided) – Energy Star rated Washing machine – Energy Star rated Dryer – Energy Star rated, ventless dryer with minimum CEF rating of 5.2 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.	0.5



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

PER WSEC R402.4, THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE. THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL (R402.4.1.2).

PER WSEC R402.4, THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE. THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL (R402.4.1.2).

PER WSEC R403.2.2, DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. PER WSEC R404.1, A MINIMUM OF 75 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

AIR LEAKAGE SHALL NOT EXCEED 5 AIR CHANGES/ HOUR AND SHALL BE TESTED AS SUCH. A WRITTEN REPORT OF THE TEST RESULTS, SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE BUILDING INSPECTOR, PRIOR TO CALL FOR FINAL INSPECTION." THE AIR LEAKAGE TEST RESULT SHALL BE DOCUMENTED ON THE FORM WHICH IS AVAILABLE ONLINE AT HTTP://WWW.ENERGY.WSU.EDU/BUILDINGEFFICIENCY/ENERGYCODE.ASPX

THE DESIGN PROFESSIONAL OR BUILDER SHALL COMPLETE AND POST AN "INSULATION CERTIFICATE FOR RESIDENTIAL CONSTRUCTION" WITHIN 3' OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.

WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM OF R-10 INSULATION

PLAN NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL EXTERIOR WALLS TO BE 2x6 FRAMING U.N.O.
3. ALL INTERIOR WALLS TO BE 2x4 FRAMING U.N.O.
4. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
5. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
6. ALL WINDOW HEADS TO BE 8'-0" TO FINISH FLOOR AT THIS FLOOR, U.N.O.
7. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
8. DOOR HT. AT THIS FLOOR IS 8'-0", TYP.
9. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED.
10. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
11. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
12. ALL NEW FENESTRATION ARE NFRC CERTIFIED.

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(O) 425.988.3618
chcarch@gmail.com

8666 REGISTERED ARCHITECT
CHAOHUA CHANG
STATE OF WASHINGTON

2720 RESIDENCE
2720 71ST AVENUE SE
MERCER ISLAND WA 98040

NUMBER	DATE	DESCRIPTION OF REVISIONS
	08-05-2021	PERMIT PLANS
1	01-22-2022	RESPONSE TO CITY COMMENT #1

SHEET TITLE
BASEMENT PLAN

JOB NUMBER

SHEET NUMBER
A1

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

Project Information	*Contact information*
2720 Residence (Primary Residence)	Chaohua Chang
2720 71st Ave SE	13301 SE 79th Pl Unit A205
Mercer Island WA 98040	Newcastle WA 98059

Heating System Type: ○ All Other Systems ◉ Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions: Mercer Island — Design Temperature Difference (ΔT) 45
ΔT = Indoor (70 degrees) - Outdoor Design Temp

Area of Building
Conditioned Floor Area
Instructions: Conditioned Floor Area (sq ft) 4,552
Average Ceiling Height
Instructions: Average Ceiling Height (ft) 10.5 — Conditioned Volume 47,796

Glazing and Doors
Instructions: U-0.24

U-Factor	X	Area	=	UA
0.240		1,204		288.96

Skylights
Instructions

U-Factor	X	Area	=	UA
0.50				---

Insulation
Attic
Instructions: Select R-Value

U-Factor	X	Area	=	UA
No selection				---

Single Rafter or Joist Vaulted Ceilings
Instructions: R-38 Vented

U-Factor	X	Area	UA
0.027		1,804	48.71

Above Grade Walls *(see Figure 1)*
Instructions: R-21 Intermediate

U-Factor	X	Area	UA
0.056		3,402	190.51

Floors
Instructions: Select R-Value

U-Factor	X	Area	UA
No selection			---

Below Grade Walls *(see Figure 1)*
Instructions: R-21 Interior

U-Factor	X	Area	UA
0.042		1,870	78.54

Slab Below Grade *(see Figure 1)*
Instructions: Select conditioning

F-Factor	X	Length	UA
No selection			---

Slab on Grade *(see Figure 1)*
Instructions: R-10 Perimeter

F-Factor	X	Length	UA
0.540		187	100.98

Location of Ducts
Instructions: Conditioned Space — **Duct Leakage Coefficient** 1.00

Figure 1.

Sum of UA	707.70	
Envelope Heat Load	31,847	Btu / Hour
Sum of UA x ΔT		
Air Leakage Heat Load	23,229	Btu / Hour
Volume x 0.6 x ΔT x 0.018		
Building Design Heat Load	55,075	Btu / Hour
Air leakage + envelope heat loss		
Building and Duct Heat Load	55,075	Btu / Hour
Ducts in unconditioned space: sum of building heat loss x 1.10		
Ducts in conditioned space: sum of building heat loss x 1		
Maximum Heat Equipment Output	68,844	Btu / Hour
Building and duct heat loss x 1.40 for forced air furnace		
Building and duct heat loss x 1.25 for heat pump		

(07/01/13)

Simple Heating System Size: Washington State

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Project Information	*Contact information*
2720 Residence (ADU)	Chaohua Chang
2720 71st Ave SE	13301 SE 79th Pl Unit A205
Mercer Island WA 98040	Newcastle WA 98059

Heating System Type: ○ All Other Systems ◉ Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions: Mercer Island — Design Temperature Difference (ΔT) 45
ΔT = Indoor (70 degrees) - Outdoor Design Temp

Area of Building
Conditioned Floor Area
Instructions: Conditioned Floor Area (sq ft) 483
Average Ceiling Height
Instructions: Average Ceiling Height (ft) 11.0 — Conditioned Volume 5,313

Glazing and Doors
Instructions: U-0.24

U-Factor	X	Area	=	UA
0.240		250		60.00

Skylights
Instructions

U-Factor	X	Area	=	UA
0.50				---

Insulation
Attic
Instructions: Select R-Value

U-Factor	X	Area	=	UA
No selection				---

Single Rafter or Joist Vaulted Ceilings
Instructions: R-38 Vented

U-Factor	X	Area	UA
0.027		483	13.04

Above Grade Walls *(see Figure 1)*
Instructions: R-21 Intermediate

U-Factor	X	Area	UA
0.056		718	40.21

Floors
Instructions: Select R-Value

U-Factor	X	Area	UA
No selection			---

Below Grade Walls *(see Figure 1)*
Instructions: R-21 Interior

U-Factor	X	Area	UA
0.042			

Slab Below Grade *(see Figure 1)*
Instructions: Select conditioning

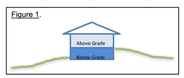
F-Factor	X	Length	UA
No selection			---

Slab on Grade *(see Figure 1)*
Instructions: R-10 Perimeter

F-Factor	X	Length	UA
0.540		483	260.82

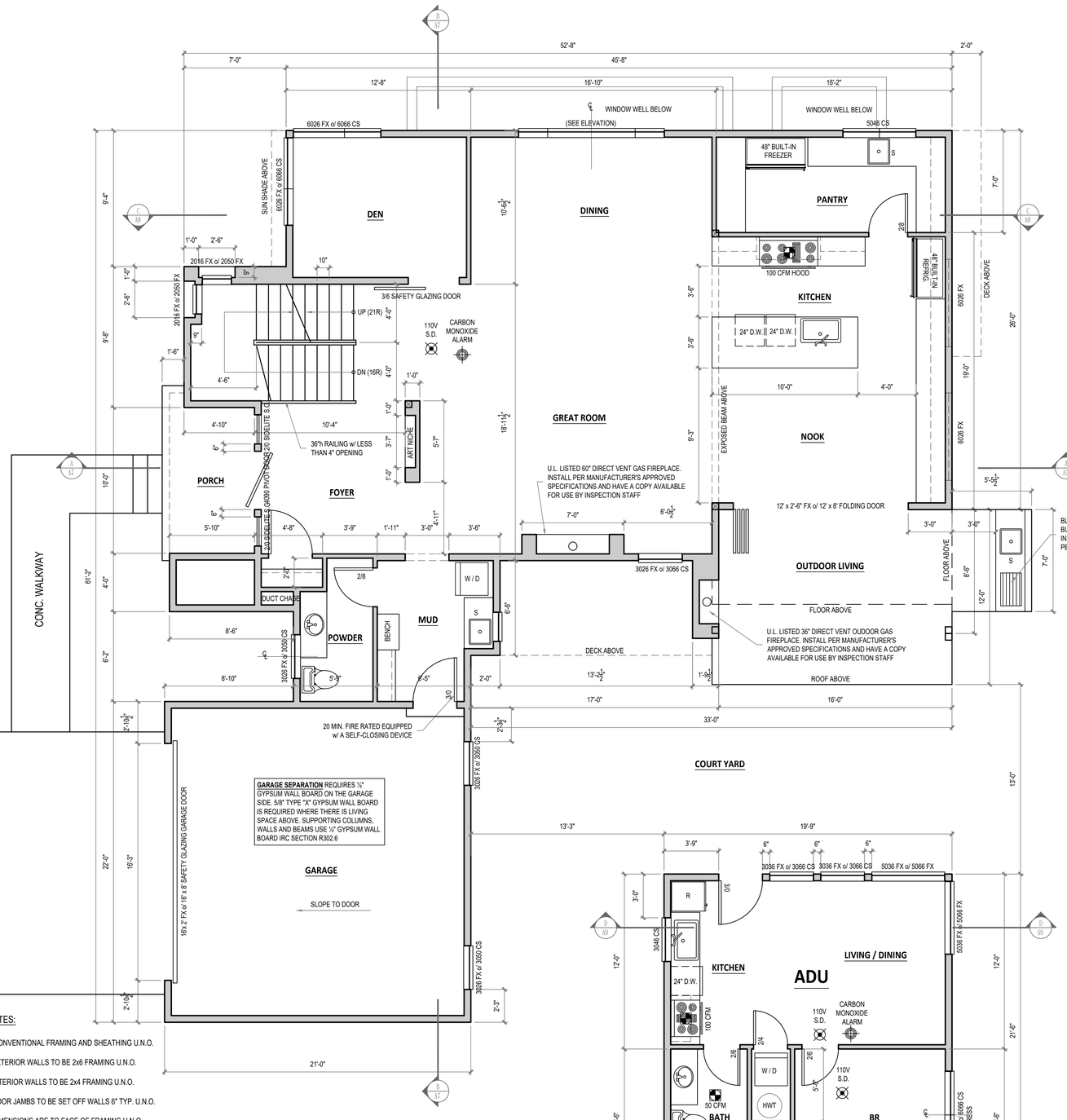
Location of Ducts
Instructions: Conditioned Space — **Duct Leakage Coefficient** 1.00

Figure 1.



Sum of UA	374.07	
Envelope Heat Load	16,833	Btu / Hour
Sum of UA x ΔT		
Air Leakage Heat Load	2,582	Btu / Hour
Volume x 0.6 x ΔT x 0.018		
Building Design Heat Load	19,415	Btu / Hour
Air leakage + envelope heat loss		
Building and Duct Heat Load	19,415	Btu / Hour
Ducts in unconditioned space: sum of building heat loss x 1.10		
Ducts in conditioned space: sum of building heat loss x 1		
Maximum Heat Equipment Output	24,269	Btu / Hour
Building and duct heat loss x 1.40 for forced air furnace		
Building and duct heat loss x 1.25 for heat pump		

(07/01/13)



MAIN FLOOR PLAN

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

PLAN NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL EXTERIOR WALLS TO BE 2x6 FRAMING U.N.O.
3. ALL INTERIOR WALLS TO BE 2x4 FRAMING U.N.O.
4. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
5. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
6. ALL WINDOW HEADS TO BE 8'-0" TO FINISH FLOOR AT THIS FLOOR, U.N.O.
7. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
8. DOOR HT. AT THIS FLOOR IS 8'-0", TYP.
9. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED.
10. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
11. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
12. ALL NEW FENESTRATION ARE NFRC CERTIFIED.

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CHAOHUA CHANG
STATE OF WASHINGTON

2720 RESIDENCE

2720 71ST AVENUE SE
MERCER ISLAND WA 98040

NUMBER	DATE	DESCRIPTION OF REVISIONS
	08-05-2021	PERMIT PLANS
	01-22-2022	RESPONSE TO CITY COMMENT #1
	03-23-2022	RESPONSE TO CITY COMMENT #2
	05-04-2022	RESPONSE TO CITY COMMENT #3

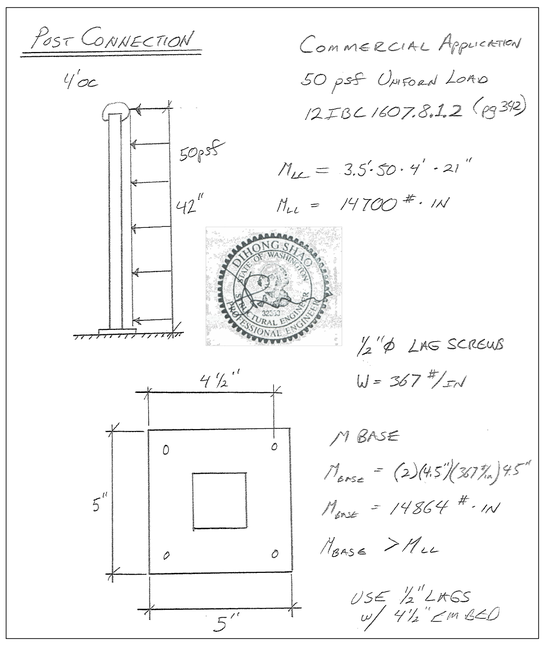
SHEET TITLE
MAIN FLOOR PLAN

JOB NUMBER

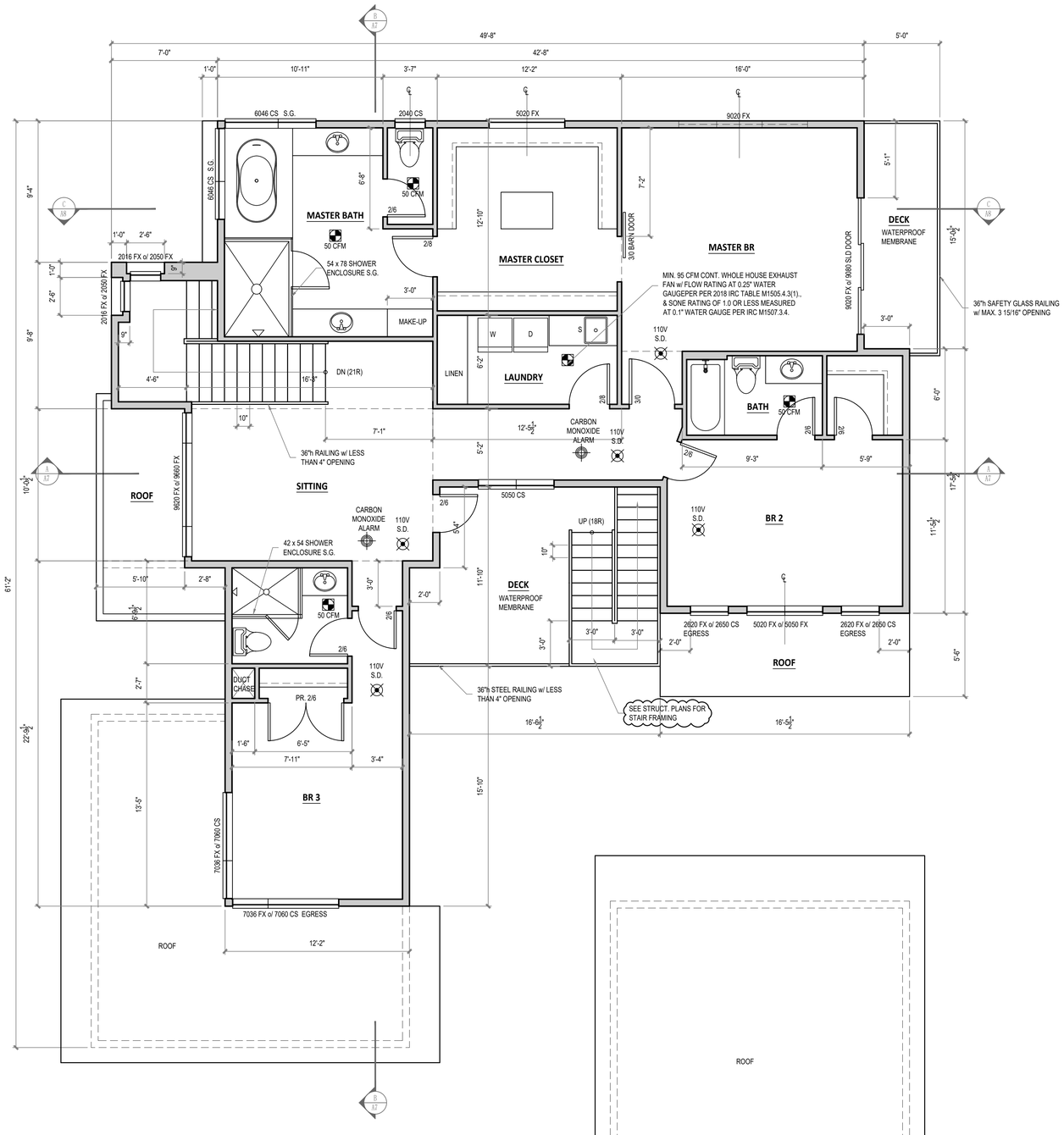
SHEET NUMBER
A2

PLAN NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL EXTERIOR WALLS TO BE 2x6 FRAMING U.N.O.
3. ALL INTERIOR WALLS TO BE 2x4 FRAMING U.N.O.
4. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
5. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
6. ALL WINDOW HEADS TO BE 8'-0" TO FINISH FLOOR AT THIS FLOOR, U.N.O.
7. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
8. DOOR HT. AT THIS FLOOR IS 8'-0", TYP.
9. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED.
10. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
11. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
12. ALL NEW FENESTRATION ARE NFRC CERTIFIED.



TYP. RAILING POST DETAIL
SCALE: NONE



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

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	05-25-2022	RESPONSE TO CITY COMMENT #4

SHEET TITLE
UPPER FLOOR PLAN

JOB NUMBER

SHEET NUMBER
A3

PLI-DEK® SYSTEM

Pli-Dek® innovates waterproofing solutions that are not only guaranteed to be effective, but come with the company support to ensure you feel comfortable and confident using our products. The Pli-Dek® Systems are a 1-hour, Class "A" Fire Rated waterproof deck coating for plywood substrates that offers high durability and low maintenance for exterior use. The System is designed for high traffic pedestrian balconies, roof decks, walkways and stairs where waterproofing and durability are essential. The Pli-Dek® System consists of a galvanized metal lath, polymer cement base coat and intermediate coat, and offers a wide range of durable finishes.
(See Finish Options on back for more details)

BENEFITS

- ICC ESR-2097 (Listed since 1980)
- 1-hour & Class "A" Fire Rated
- Lightweight
- UV Resistant
- Extremely Durable - 6,000 psi
- Los Angeles City Research Report: 25375
- Florida State Approval: 15027
- ADA Compliant Finishes
- Fast Drying & Easy to Install
- Extensive Finish Options
- Installed by Certified Applicators
- Early protection to accelerate finish trade work provideing a turn-key finish

TECHNICAL DATA

Spread of Flame
(ASTM E-108).....Class "A"

Freeze Thaw
(ASTM C-67-03).....Pass

1-Hour
(ASTM E-119).....Pass

Bond Strength - Plywood
(ASTM C-297).....126 psi

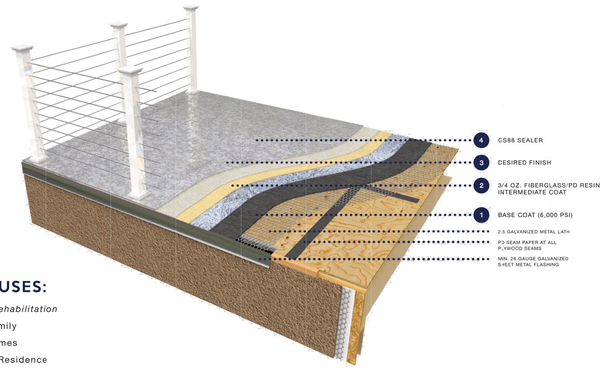
Tensile Strength
(ASTM D-2707L)...1505 PSI After Weathering

Impact Test
(ASTM D-3320).....No Cracking

Water Transmission
(ASTM E-96).....0.31g/24hrs

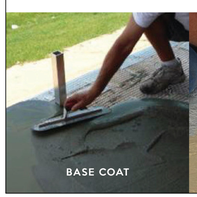
Abrasion Test
(ASTM D-1242).....2.9%

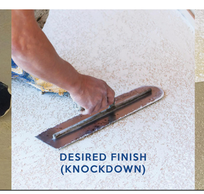
Static Coefficient of Friction
(ASTM C-1028-96).....0.835



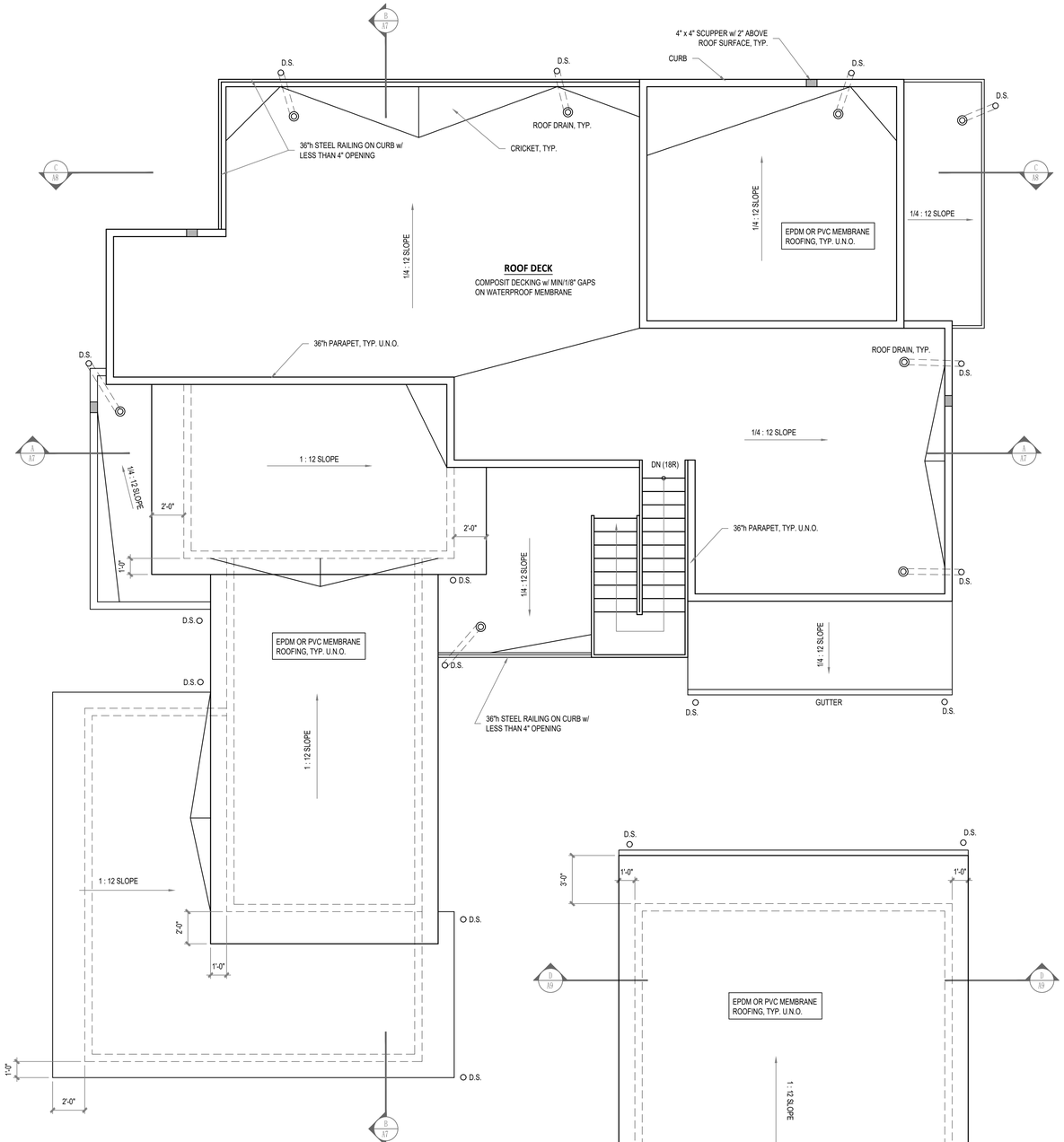
IDEAL USES:

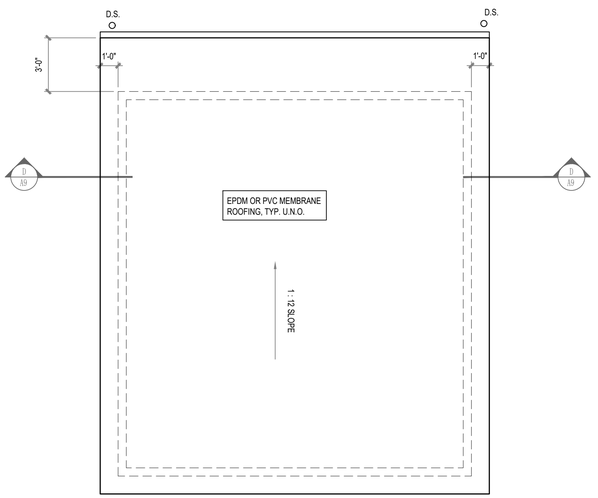
- *New & Rehabilitation*
- Multi-Family
- Tract Homes
- Custom Residence



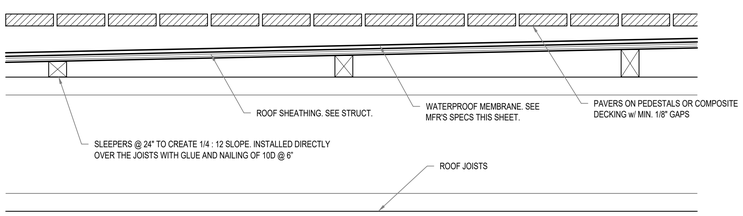


PLI-DEK® SYSTEM

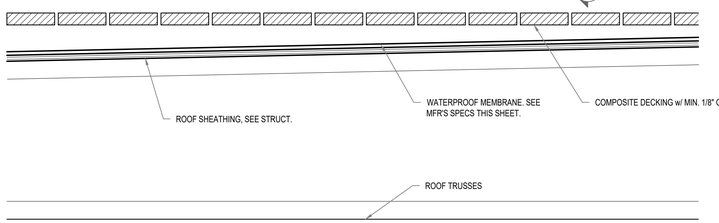




WATERPROOF DECK



ROOF DECK SLOPE (ROOF JOISTS OPTION)



ROOF DECK SLOPE (ROOF TRUSSES OPTION)

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

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	05-04-2022	RESPONSE TO CITY COMMENT #3

SHEET TITLE
ROOF PLAN

JOB NUMBER

SHEET NUMBER
A4

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

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

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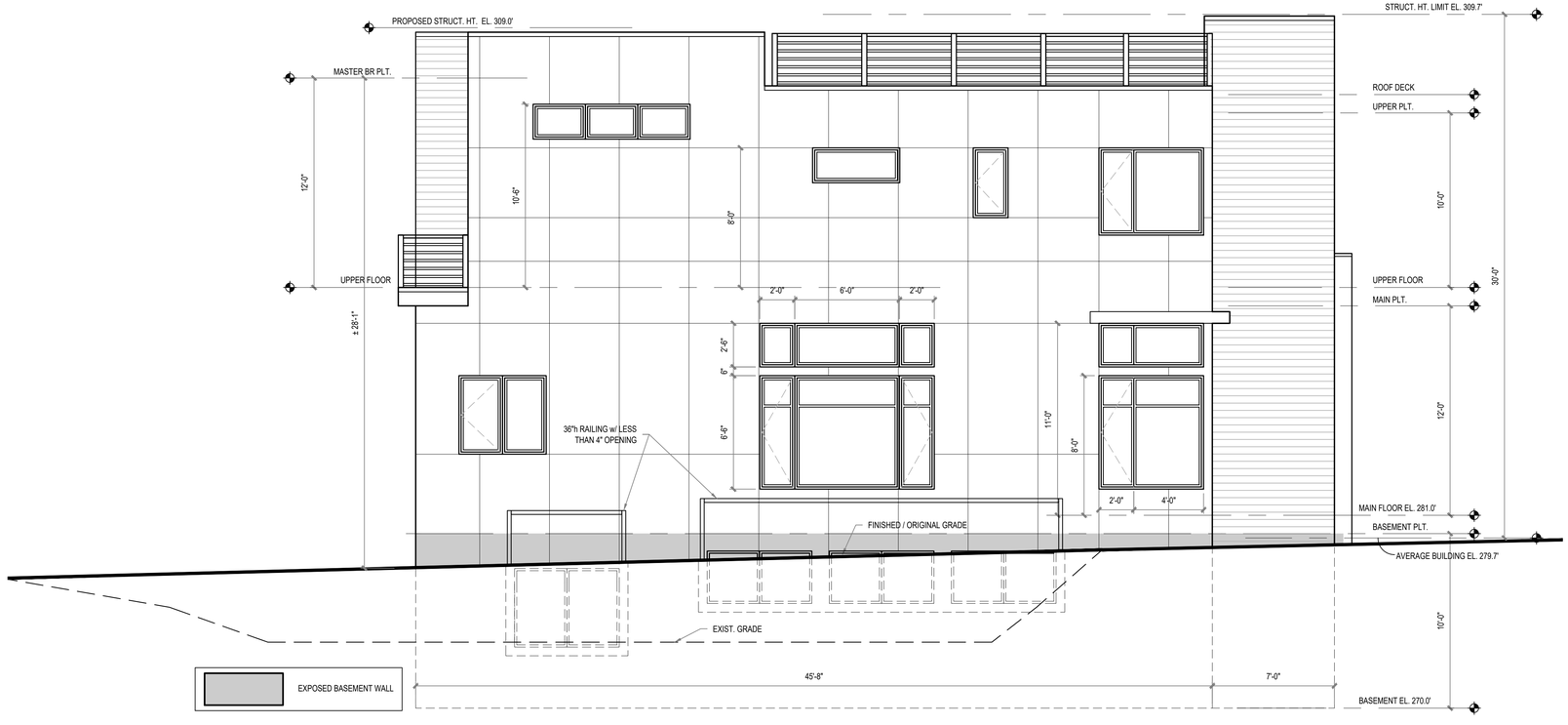
SHEET TITLE
ELEVATIONS

JOB NUMBER

SHEET NUMBER
A5

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



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

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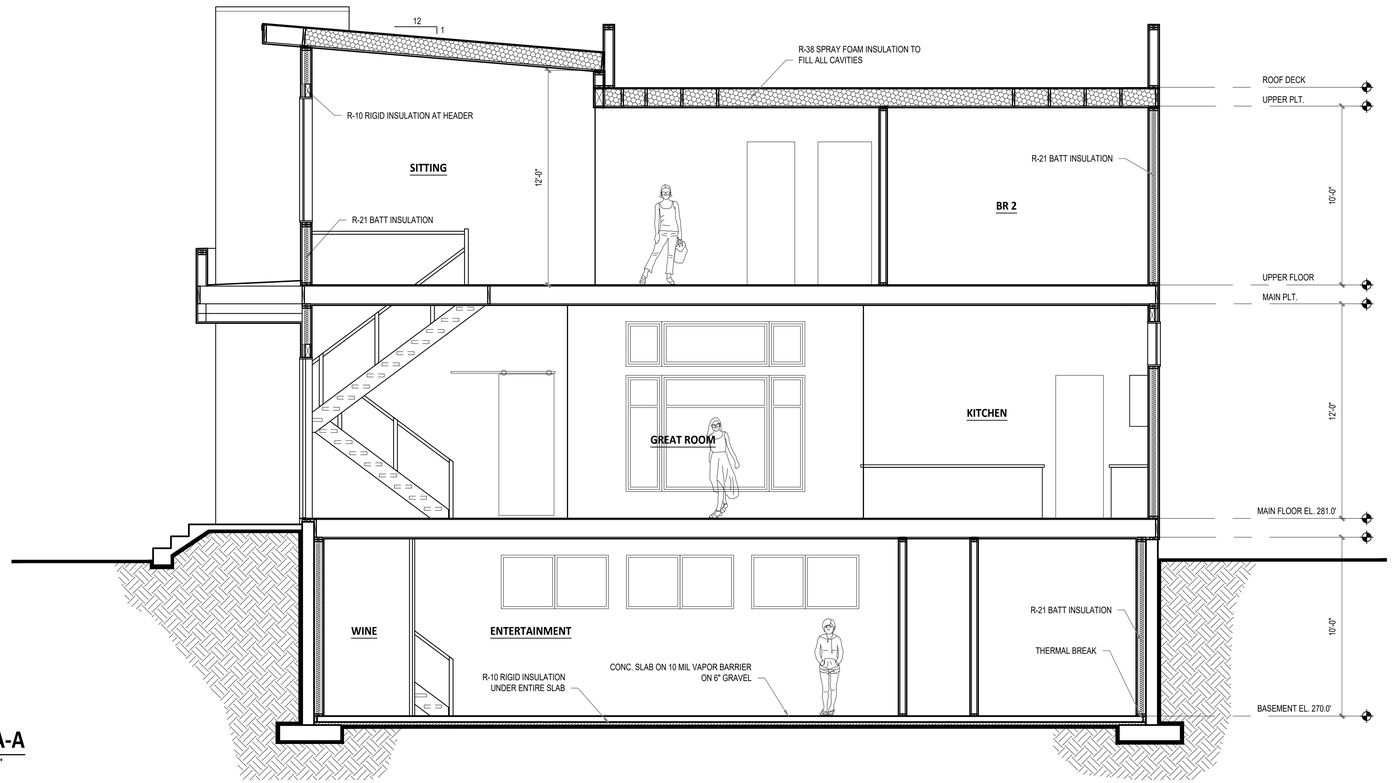
	03-23-2022	RESPONSE TO CITY COMMENT #2

SHEET TITLE
ELEVATIONS

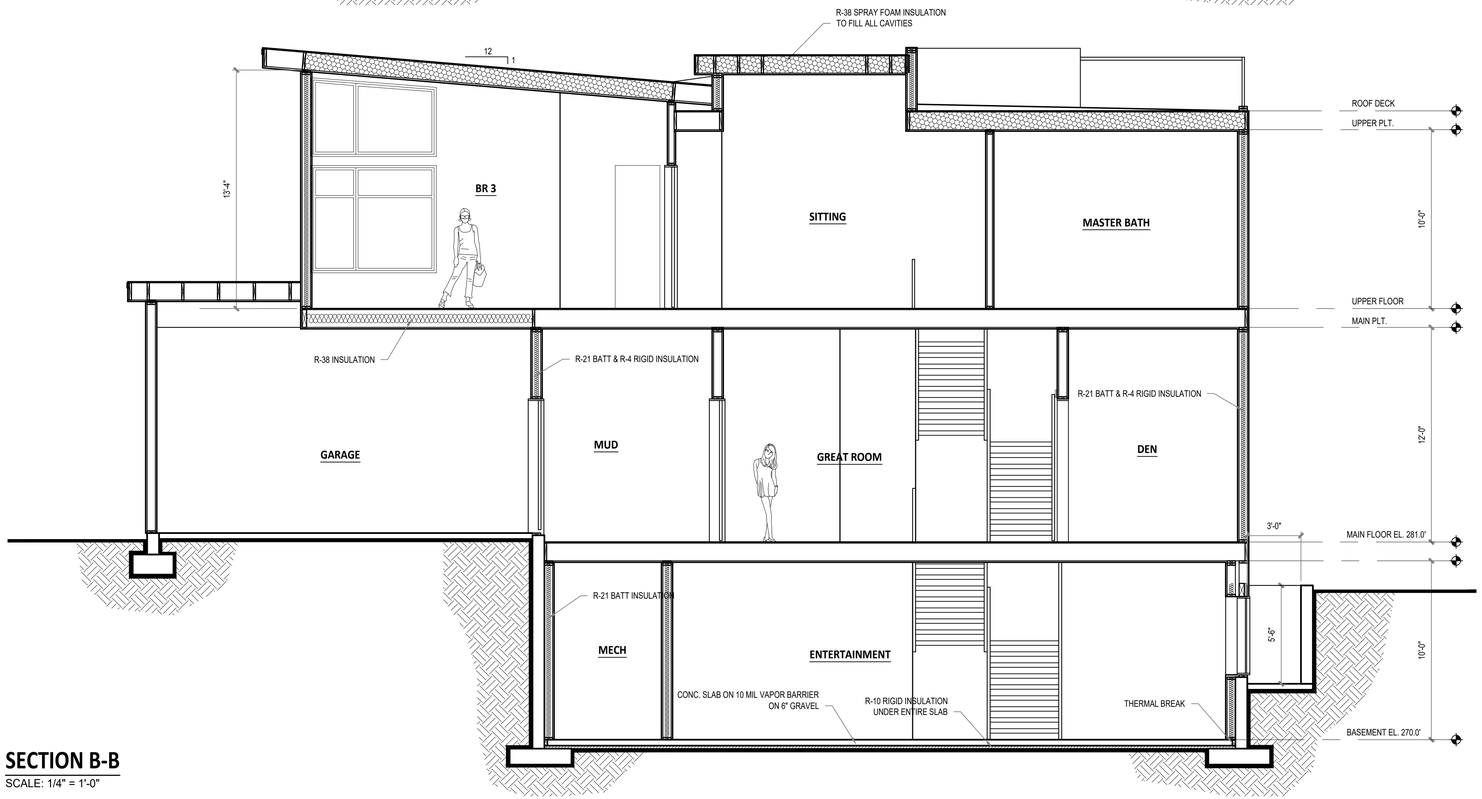
JOB NUMBER

SHEET NUMBER
A6



SECTION A-A

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



SECTION B-B

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

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NUMBER	DATE	DESCRIPTION OF REVISIONS
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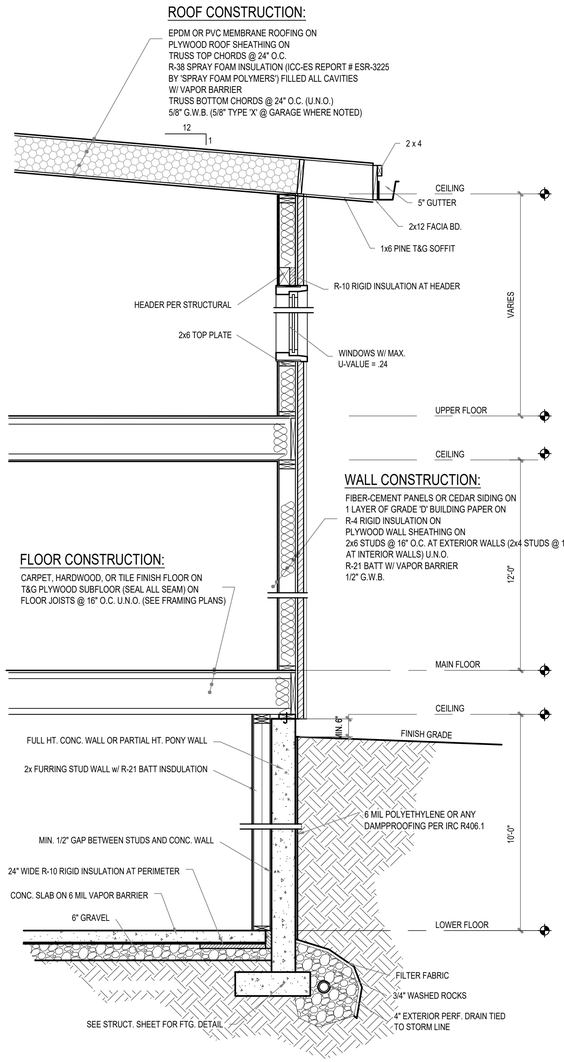
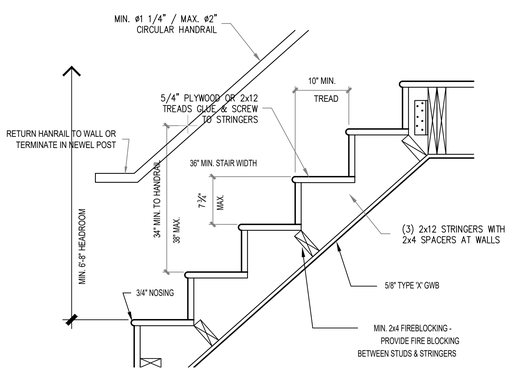
SHEET TITLE
SECTIONS

JOB NUMBER

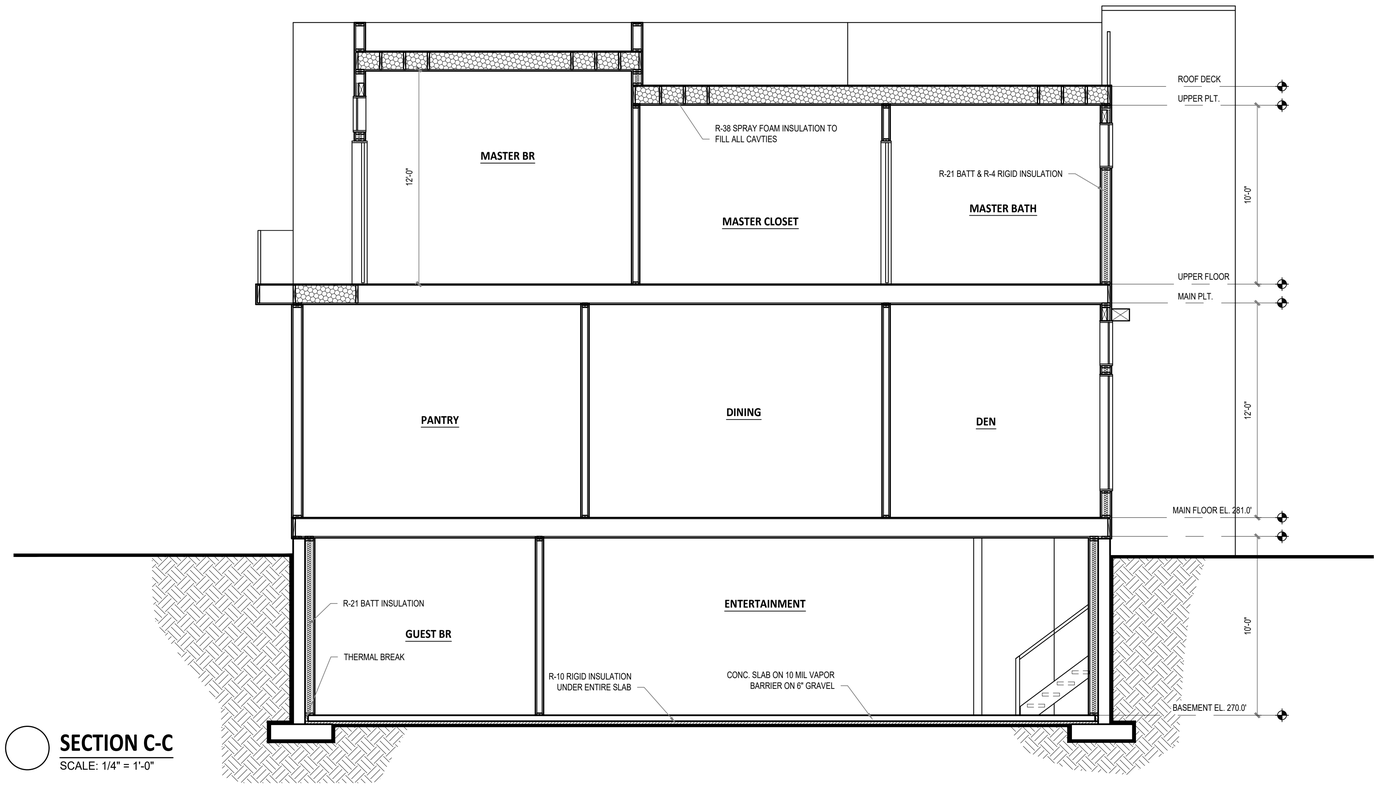
SHEET NUMBER
A7



TYPICAL WALL SECTION
SCALE: 1/2" = 1'-0"



TYPICAL STAIR DETAIL
SCALE: 1" = 1'-0"



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

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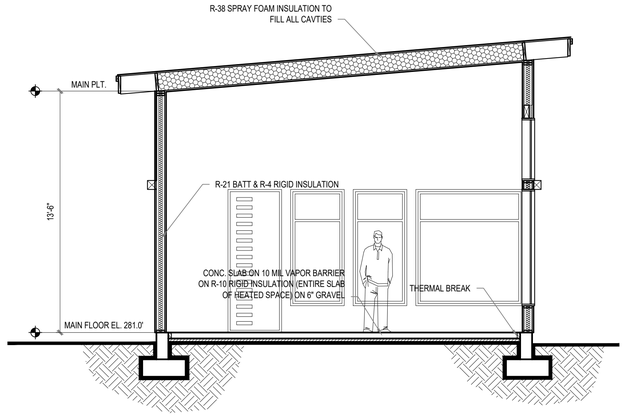
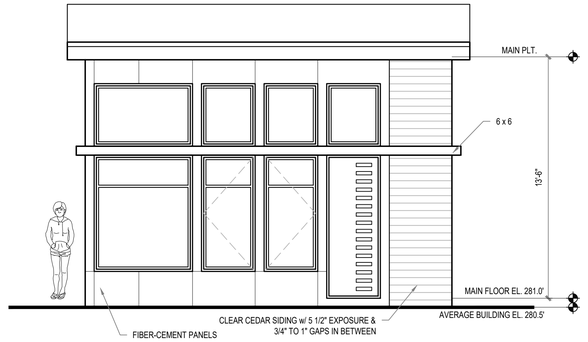
SHEET TITLE
BUILDING SECTIONS

JOB NUMBER

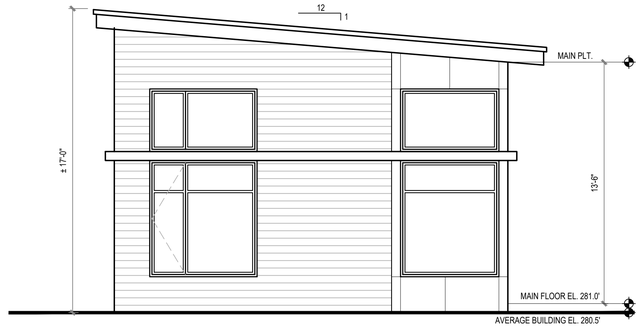
SHEET NUMBER
A8



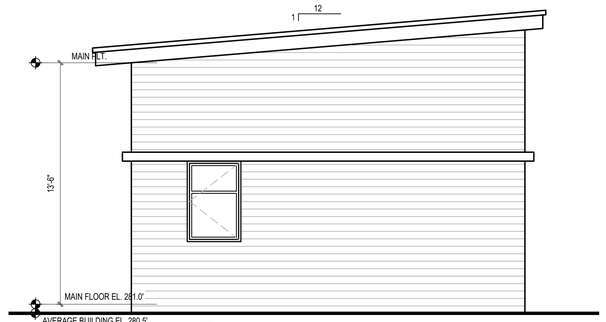
SECTION D-D
SCALE: 1/4" = 1'-0"



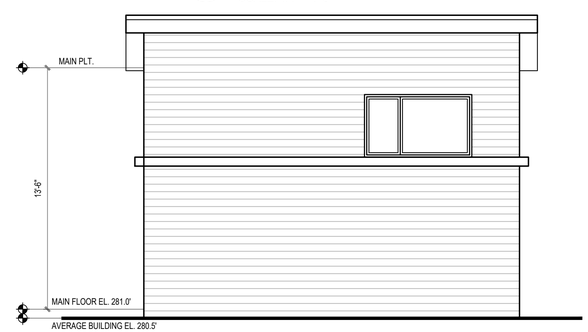
NORTH ELEVATION
SCALE: 1/4" = 1'-0"



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



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



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

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NUMBER	DATE	DESCRIPTION OF REVISIONS
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SHEET TITLE
ADU

JOB NUMBER

SHEET NUMBER
A9

GENERAL STRUCTURAL NOTES:

(THE FOLLOWING NOTES APPLIES TO THE PROPOSED PROJECT UNLESS OTHERWISE NOTED ON THE PLANS AND DETAILS)

ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE 2018 INTERNATIONAL BUILDING CODE

DESIGN LOADING CRITERIA:

1. DESIGN LOADS:

ROOF SNOW LOAD:	25 PSF
ROOF PV PANEL:	4 PSF
ROOF DECK PAVERS W/ PEDESTAL:	10 PSF
FLOOR LIVE LOAD:	40 PSF
DECK LIVE LOAD:	60 PSF
WIND:	98-MPH (3-SECOND GUST), EXPOSURE B, Kzt=1.90
SEISMIC:	SEISMIC USER GROUP I, I=1.0, SITE CLASS SD S_s=1.480; S_1=0.500, Fa=1.000; F_v=1.500, S_{DS}=0.980; S_{D1}=0.500 R=6.5 (WOOD SHEAR WALL) Ωo=3.0 Cd=4.0

FOUNDATION DESIGN:

1500 PSF MAXIMUM DEAD+LIVE LOAD WITH A ONE-THIRD INCREASE ALLOWED UNDER THE SHORT-TERM WIND OR SEISMIC LOADS. CAST FOOTING ON NATIVE SITE SOILS OR STRUCTURAL FILL THAT EXTENDS DOWN TO THESE SOILS.

COEFFICIENT OF FRICTION FOR FOUNDATIO BASE FRICTION	0.40 (SF=1.5)
EQUIVALENT PASSIVE FLUID PRESSURE	400 PCF (SF=1.5)
EARTH PRESSURE FOR YIELDING/ACTIVE CONDITION WALLS	35 PCF
EARTH PRESSURE FOR NON-YIELDING/AT-REST CONDITION WALLS	55 PCF
SEISMIC EARTH PRESSURE FOR BASEMENT WALLS	7H; WHERE H: BURIED DEPTH OF WALL

CONCRETE AND FOUNDATION CONSTRUCTIONS:

1. ALL CONCRETE f'c=3,000 PSI (2,500 PSI USED FOR THE DESIGN), MAXIMUM WATER/CEMENT RATIO =0.45, MINIMUM 5-1/2 SACKS OF CEMENT PER CUBIC YARD. NO SPECIAL INSPECTION REQUIRED. CONCRETE BATCH TICKET OR DELIVERY RECEIPT FOR 3,000 PSI MINIMUM CONCRETE ON SITE FOR BUILDING INSPECTOR VERIFICATION. CONCRETE SHALL BE AIR ENTRAINED. TOTAL AIR CONTENT (PERCENT BY VOLUME OF CONCRETE) SHALL NOT BE LESS THAN 5 PERCENT OR MORE THAN 7 PERCENT.

2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. NO SPECIAL INSPECTION REQUIRED. ASTM A706, GRADE 60, REINFORCING STEEL SHALL BE USED FOR WELDED OR FIELD-BENT BARS, SHEAR WALL BOUNDARY MEMBER REINFORCING, MAIN REINFORCING, SPIRALS, TIES AND STIRRUPS IN THE FRAME MEMBERS (BEAMS AND COLUMNS) COMPRISING THE LATERAL FORCE RESISTING SYSTEM.

3. WELDED WIRE FABRIC PER ASTM A185. FURNISH IN FLAT SHEETS, NOT ROLLS. LAP EDGES 1-1/2 MESH MINIMUM.

4. PROVIDE CONCRETE COVER AS FOLLOWS: FOOTINGS 3", WALLS 1-1/2", AND SLAB ON GRADE 1-1/2".

5. PROVIDE 2#4 LONGITUDINAL BOTTOM BARS IN WALL FOOTINGS. PROVIDE CORNER BARS OF SAME SIZE AND NUMBER AT CORNERS AND INTERSECTIONS, 42 BAR DIAMETERS EACH LEG. PROVIDE VERTICAL DOWELS OF SAME SIZE, NUMBER AND SPACING AS CONCRETE STEM WALL VERTICAL BARS WITH A 90 DEGREE STANDARD HOOK AT THE BOTTOM OF THE FOOTING.

6. REINFORCING CONCRETE WALLS AS FOLLOWS"
   6" WALLS, #4 @ 12" HORIZONTAL AND VERTICAL AT CENTER OF WALL,
   8" WALLS, #5 @ 15" OR #4 @ 12" HORIZONTAL AND VERTICAL AT CENTER OF WALL,
   10" WALLS, #4 @ 16" HORIZONTAL AND VERTICAL AT EACH FACE,
   12" WALLS, #4 @ 12" HORIZONTAL AND VERTICAL AT EACH FACE.
AT OPENINGS OVER 12" SQUARE, PROVIDE 2#5 BARS AT CENTER OF WALL ALL FOUR SIDES, EXCEPT 10" WALLS OR OVER PROVIDE 1#6 BAR EACH FACE ALL FOUR SIDES, EXTENDING 42 BAR DIAMETERS PAST OPENING. PROVIDE 1#5X4'-0" DIAGONAL BAR AT CENTER OF WALL ALL FOUR CORNERS.

AT CORNERS, PROVIDE CORNER BARS IN OUTSIDE FACE OF SAME SIZE AND SPACING AS HORIZONTAL BARS, 42 BAR DIAMETER EACH LEG.

AT INTERSECTIONS, PROVIDE CORNER BARS OF SAME SIZE, NUMBER AND SPACING AS HORIZONTAL BARSOF INTERSECTING WALL, 42 BAR DIAMETER EACH LEG.

PROVIDE 2#4 LONGITUDINAL BARS AT TOP OF WALLS. PROVIDE KEYWAY OR ROUGHENED SURFACE AT CONSTRUCTION JOINTS.

PROVIDE VERTICAL DOWELS OF SAME SIZE, NUMBER AND SPACING AS VERTICAL BARS.

7. GROUT – 5000 PSI MINIMUM 7-DAY CUBE STRENGTH PER ASTM C1157-00. GROUT TO BE PREMIXED, NON-SHRINK "MASTERFLOW 928 GROUT" BY MASTER BUILDERS OR APPROVED EQUAL. ICC CERTIFICATION REQUIRED. USE SPECIFIC GROUT MIX RECOMMENDED BY MANUFACTURER FOR EACH GROUT APPLICATION AND FOLLOW MANUFACTURER'S INSTRUCTIONS.

8. ANCHOR BOLTS, ASTM A307. NO SPECIAL INSPECTION REQUIRED. SET ALL ANCHOR BOLTS BY TEMPLATE WHEREVER POSSIBLE.

9. DRILL-IN EXPANSION BOLTS, "KWIK-BOLT TZ" BY HILTI FASTENING SYSTEMS BY HILTI FASTENING SYSTEM OR APPROVED EQUAL. ICC CERTIFICATION REQUIRED (ERS-1917). SPECIAL INSPECTION REQUIRED.

10. DRILL-IN ADHESIVE BOLTS, "HIT RE-500" ADHESIVE ANCHOR SYSTEM BY HILTI FASTENING SYSTEM OR APPROVED EQUAL. ICC CERTIFICATION REQUIRED (ESR-2322). SPECIAL INSPECTION REQUIRED .

CONSTRUCTION REQUIREMENTS:

1. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY OWNER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN IN THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL BRING ALL DISCREPANCIES TO THE OWNER.

2. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDING WITH THE PLANS AND DETAILS. THIS INCLUDES EXISTING STRUCTURE.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY AND HEALTH PRECAUTIONS INCLUDING HAZARDOUS CONDITIONS AND MATERIALS EXISTED OR CREATED BY OTHER PARTIES THAT WORKING ON THE PROJECT. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CONSTRUCTION METHODS, TECHNIQUES, AND SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL EXISTING COMPONENTS, WHICH ARE REQUIRED TO REMAIN, IN THEIR ORIGINAL CONDITION. THIS INCLUDES WEATHER PROTECTIONS FOR THESE COMPONENTS UNTIL SUCH TIME THAT THE ENTIRE DWELLING INCLUDING THE NEW ADDITION ITSELF IS WEATHER PROTECTED.

5. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER FOR APPROVAL PRIOR FABRICATION OR CONSTRUCTION. CHANGES SHOWN IN SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

6. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURAL. LIMIT CONSTRICTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING CEILING FAMING TO 10 PSF AND ON EXISTING FLOOR FRAMING TO 40 PSF. PROVIDE TEMPORARY PLANKS OR STRUCTURAL SHEATHING OVER THE EXISTING CEILING JOISTS AS REQUIRED TO PROTECT THE EXISTING SOFFIT.

7. CONTRACTOR SHALL CHECK FOR DRY-ROT FOR ALL EXISTING STRUCTURAL COMPONENTS AT EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWN WATER STAINS, WOOD IN CONTACT WITH EARTH AND CONCRETE, AND ALL WOOD MEMBERS IN CRAW SPACES. ALL ROTTEN WOOD SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE OWNER.

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

9. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

10. THE MANUFACTURER'S INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE AT THE TIME OF INSPECTION, FOR THE INSPECTOR'S USE AND REFERENCE.

STRUCTURAL FRAMING REQUIREMENTS:

1. ALL LUMBER SHALL BE KILN DRIED OR MC-19 WITH WWPA GRADED OR APPROVED EQUAL. ALL STRUCTURAL FLOOR, ROOF, AND SHEAR WALL SHALL BE APA RATED. ALL SPECIFIED INDUSTRIAL LUMBERS, NAMELY PARALLAM PSL, MICROLLAM LVL, TIMBERSTRAND LSL, AND TJI SHALL BE MADE BY TRUS-JOIST CORPORATION OR OWNER APPROVED EQUAL.
ALL GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN ACCORDANCE WITH AITC 110, AITC 117 AND ANSI/AITC A190.1. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AITC CERTIFICATE OF CONFORMANCE. USE EXTERIOR TYPE ADHESIVES. BEAMS SHALL BE INDUSTRIAL APPEARANCE GRADE, UON BY THE ARCHITECT. SINGLE SPAN BEAMS SHALL BE COMBINATION 24F-V4, Fb=2400 PSI, Fv=265 PSI, E=1,800,000 PSI; CANTILEVERED SPAN BEAMS SHALL BE COMBINATION 24F-V8, Fb=2400 PSI, Fv=265 PSI, E=1,800,000 PSI.

2. MINIMUM NAILING SHALL COMPLY WITH TABLE 2304.10.1 OF THE 2018 IBC.

3. ALL NAILS SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:
NAIL SIZE, LENGTH, AND DIAMETER
6D 2" 0.113" 8D 2-1/2" 0.131 10D 3" 0.148 16D BOX 3" 0.131
THE FOLLOWING STAPLES MAY BE SUBSTITUTED FOR NAILING OF PLYWOOD
NAIL SIZE, EQUIVALENT STAPLE, AND MINIMUM LENGTH
6D 16GA 1-3/4" 8D 15GA 1-3/4" 10D 13GA 1-3/4"

4. GALVANIZED METAL TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY INCLUDING SIMPSON STRONG WALLS AND SIMPSON GARAGE PORTAL WALLS (WHERE OCCUR) OR OWNER APPROVED EQUAL. IF NO SPESIFIC HANGER IS CALLED OUT, ANY HANGER MADE FOR THE SPECIFIED BEAM OR JOIST CAN BE USED.

5. ALL EXTERIOR WALL STUDS ARE 2X6 DOUGLAS FIR NO.2 STUDS AT 16" ON CENTER. ALL INTERIOR BEARING AND SHEAR WALL STUDS ARE 2X4 DOUBLAS FIR NO.2 STUDS AT 16" ON CENTER. PROVIDE ONE BEARING STUD AND ONE FULL HEIGHT STUD AT EACH SIDE OF DOOR AND WINDOW OPENINGS WHEN THEIR ROUGH OPENING WIDTH IS EQUAL OR LESS THAN 3'-0". PROVIDE TWO BEARING STUDS AND TWO FULL HEIGHT STUDS AT EACH SIDE OF DOOR AND WINDOW OPENINGS WHEN THEIR ROUGH OPENING WIDTH IS GREATER THAN 3'-0" OR WALL IS FRAMED WITH (2)2X6 AT 16" ON CENTER. PROVIDE MULTIPLE STUDS UNDER ALL BEAM AND KING-TRUSS BEARING LOCATIONS WITH THEIR TOTAL WIDTH/DEPTH EQUAL OR WIDER/DEEPER THATN THE BEAM/KING-TRUSS WIDTH. THESE MULTIPLE STUDS NEED TO EXTEND DOWN TO THE TOP OF CONCRETE. PROVIDE EQUAL AMOUNT OF MULTIPLE VERTICAL BLOCKING AT JOIST SPACING TO ALLOW CONTIUNITY. THIS ALSO APPLIES TO ALL HOLDOWN STUDS FOR THE SHEAR WALLS. FACE NAIL WALL TOP DOUBLE PLATE WITH 16D @ 12" AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE (6) 16D @ 4" ON CENTER EACH SIDE OF JOINT. FACE NAIL WALL SILL PLATE THROUGH FLOOR SHEATHING TO DOUBLE PLATES, BEAM, OR SUPPORTING MEMBER BELOW WITH 16D @ 6" ON CENTER. MULTIPLE STUD SHALL BE NAILED TOGETHER WITH 16D @ 12" ON CENTER STAGGERED EACH FACE. PROVIDE SOLID BLOCKING BETWEEN STUDS AT MID-HEIGHT FOR ALL STUD WALLS OVER 10FT IN HEIGHT.

6. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENING IN FLOOR. FLOOR JOISTS SHALL BE BLOCKED PER THE JOIST MANUFACTURER'S INSTRUCTIONS.

7. ALL FLOOR FRAMING LUMBERS: DOUGLAS FIR NO.2.
   ALL HEADERS: DOUGLAS FIR NO.2. TYPICAL HEADER 4X8 MINIMUM UNLESS OTHERWISE SHOWN ON THE PLANS.
   ALL POSTS: DOUGLAS FIR NO.2 UNLESS OTHERWISE SHOWN ON THE PLANS
   STUDS, PLATES, AND MISCELLANEOUS LIGHT NON-STRUCTURAL FRAMING: HEM-FIR NO.2

8. METAL PLATE CONNECTED WOOD TRUSSES: WOOD TRUSSES SHALL BE DESIGNED, MANUFACTURED AND INSTALLED PER TRUSS PLATE INSTITUTE (ANSI/TPI 1) SPECIFICATIONS. TPI SPECIFICATIONS SHALL NOT REVISE TRUSS ENGINEER'S AND TRUSS MANUFACTURER'S RESPONSIBILITY NOTED BELOW. WEB AND CHORD SIZES INDICATED ON PLANS AND NOTES ARE MINIMUM ONLY. ROOF DESIGN LIVE LOAD PER DESIGN LOADING CRITERIA. ROOF DESIGN DEAD LOAD 10 PSF MINIMUM TOP CHORD AND 7 PSF MINIMUM BOTTOM CHORD WITH LIVE LOAD OF 40 PSF MINIMUM AT ATTIC FLOOR WHERE APPLICABLE. USE 2X6 MINIMUM BOTTOM CHORD FOR ATTIC FLOOR. ROOF DESIGN WIND UPLIFT 15 PSF MINIMUM TYPICAL, EXCEPT USE 30 PSF MINIMUM WITHIN 10 FEET OF ROOF EAVES OR RAKES. DESIGN TRUSSES FOR SUPPORT OF DEAD, LIVE, SNOWDRIFT, AND WIND LOADS AND MECHANICAL/ELECTRICAL EQUIPMENT, PIPING, ETC AS REQUIRED. SNOW DRIFT LOADING LOCATIONS AND VALUES TO BE DETERMINED BY TRUSS ENGINEER. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS SHOWING TRUSSES, TRUSS TO TRUSS AND TRUSS TO SUPPORTING STRUCTURE CONNECTIONS, ERECTION AND PERMANENT BRACING SIZES AND CONNECTIONS. PROVIDE STANDARD TRUSS CAMBER.
PROVIDE ERECTION BRACING PER MANUFACTURE'S INSTRUCTIONS. PROVIDE AND INSTALL PERMANENT BRACING FOR LATERAL SUPPORT OF INDIVIDUAL WEB AND CHORD MEMBERS AS DESIGNED BY THE TRUSS ENGINEER. PROVIDE AND INSTALL ALL TRUSS TO TRUSS AND TRUSS TO SUPPORTING STRUCTURE CONNECTIONS.
TRUSS ALTERATIONS SHALL NOT OCCUR UNLESS THE APPROVAL OF A DESIGN PROFESSIONAL.

9. VENT BLOCKINGS CALLED OUT IN THE DRAWINGS ARE 2X WOOD BLOCKING WITH (3) EQUAL SPACED 1-1/2" DIAMETER HOLES ON EACH BLOCKING WITH MASH INSTALLED.

10. ROOF SHEATHING: 15/32"(1/2") MINIMUM CDX PLYWOOD OR STRUCTURAL PANEL WITH SPAN RATING OF 32/16, UNBLOCKED, LAID UP WITH FACE GRAIN PERPENDICULAR TO FRAMING BELOW, STAGGER END JOINTS. INSTALL PLYCLIPS AS REQUIRED. NAILING IS AS FOLLOWS: 10D @ 6" DIAPHRAGM BOUNDARIES, OVER EXTERIOR WALLS, AND INTERIOR SHEAR WALLS, 10D @ 6" ALL SUPPORTED EDGES, AND 10D @ 12" FIELD.

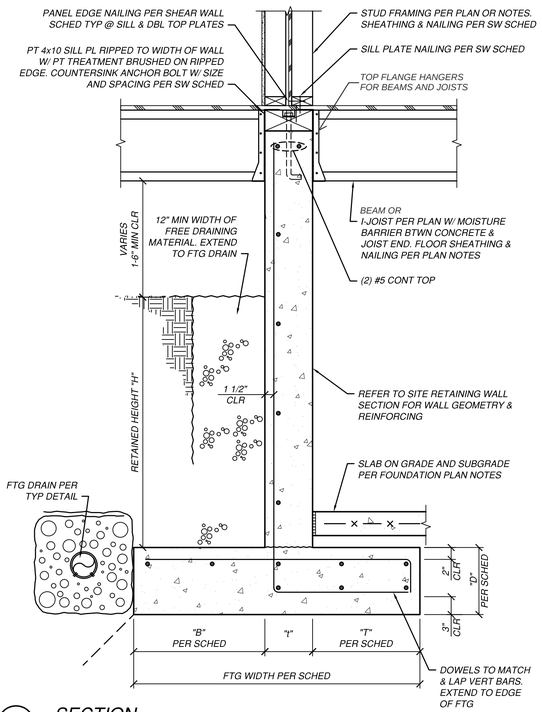
11. FLOOR AND ROOF DECK SHEATHING: 23/32"(3/4") MINIMUM CDX TONGUE AND GROOVE PLYWOOD WITH SPAN RATING OF 40/20, UNBLOCKED FOR FLOOR JOIST SPACED AT 16" ON CENTER; 7/8" MINIMUM CDX TONGUE AND GROOVE PLYWOOD WITH SPAN RATING OF 40/20 UNBLOCKED FOR FLOOR JOIST SPACED AT 24" ON CENTER; LAID UP WITH FACE GRAIN PERPENDICULAR TO FRAMING BELOW, STAGGER END JOINTS. GLUE FLOOR SHEATHING TO ALL SUPPORTS WITH A CONTINUOUS 3/16" DIAMETER BEAD MINIMUM. PROVIDE TWO BEADS AT PANEL JOINTS. NAILING IS AS FOLLOWS: 10D @ 6" DIAPHRAGM BOUNDARIES, OVER EXTERIOR WALLS, AND INTERIOR SHEAR WALLS, 10D @ 6" ALL SUPPORTED EDGES, AND 10D @ 10" FIELD.

12. EXTERIOR/INTERIOR/SHEAR WALL SHEATHING 15/32" (1/2") MINIMUM CDX PLYWOOD WITH SPAN RATING OF 24/0, EXTERIOR SIDE BLOCKED (BLOCK ALL UNSUPPORTED EDGES), NAIL WITH 10D @ 6" ALL EDGES AND 10D @ 12" FIELD. NAIL BOTTOM PLATE TO FRAMING BELOW WITH 16D @ 6".

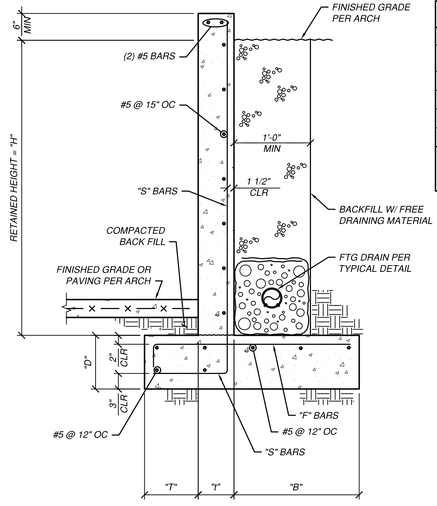
13. WALL SILL PLATES OVER THE CONCRETE ARE TO BE 3X TREATED LUMBER WITH 1/2" DIAMETER ANCHOR BOLTS AT 4'-0" ON CENTER WITH EMBED IN CONCRETE OF 7" MINIMUM. ALL BOLTS SHALL HAVE 3X3X1/4 STEEL WASHER PLATE UNDER BOLT NUTS. THE EDGE OF A WASHER SHOULD NOT BE LOCATED MORE 1/2" AWAY FROM THE INSIDE FACE OF A SHEAR WALL SHEATHING. MINIMUM OF TWO BOLTS PER PLATE WITH BOLT END DISTANCE OF 6" MINIMUM. SHEAR WALL BOTTOM PLATE NAILING AND ALL NAILING AT PRESSURE TREATED PLATE/MEMBERS SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS-STEEL NAILS.

14. WOOD IN CONTACT WITH CONCRETE SHOULD BE PRESERVATIVE-TREATED WOOD IN ACCORDNACE WITH AWPA U1 AND M4 STANDARDS.

15. FASTENERS INSTALLED IN PRESERVATIVE-TREADED OR IN FIRE-RETARDANT-TREATED WOOD SHALL BE HOT-DIPPED ZINE-COATED GALVANIZED WITH A MINIMUM COATING WEIGHT COMPLYING WITH ASTM A153. THIS INCLUDES NUTS AND WASHERS. FASTENERS OTHER THAN NAILS AND TEMBER RIVETS ARE PERMITTED TO BE MACHANICALLY DEPOSITED ZINC-COATED WITH COATING WEIGHTS COMPLYING WITH ASTM B 695, CLASS 55 MINIMUM.



1 SECTION
SCALE:NTS



2 SITE RETAINING WALL SECTION
SCALE:3/4" = 1'-0"

RETAINING WALL SCHEDULE

WALL GEOMETRY						WALL REINFORCING	
WALL TYPE	MAX "H"	"T"	"B"	"t"	"D"	"S" BARS	"F" BARS
1	4'-0"	0'-8"	1'-2"	8"	12"	#5 @ 15"	#5 @ 18"
2	6'-0"	1'-0"	1'-10"	8"	12"	#5 @ 12"	#5 @ 18"
3	8'-0"	1'-9"	2'-1"	8"	12"	#5 @ 10"	#5 @ 12"
4	10'-0"	2'-6"	2'-4"	8"	15"	#6 @ 9"	#5 @ 12"

NOTES:
1. FOUNDATION SHALL BEAR ON UNDISTURBED COMPETENT BEARING SOIL PER GEOTECHNICAL REPORT.

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NUMBER	DATE	DESCRIPTION OF REVISIONS
00	07.29.21	PERMIT SET
01	01.18.22	PERMIT REVIEW-1
01	04.28.22	PERMIT REVIEW-3

SHEET TITLE
GENERAL NOTES

JOB NUMBER

SHEET NUMBER
S0.1

CITY STAMP

COLOR PRINT REQD

NEW CONC WALL

NEW WOOD BEARING & SHEAR WALL

OTHER LINES & COLORS — AS NOTED

LEGEND

ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.

X / Y — X LINEAR FT OF TYPE Y SHEAR WALL; REFER TO 8/S5.5 FOR SCHEDULE AND DETAILS.

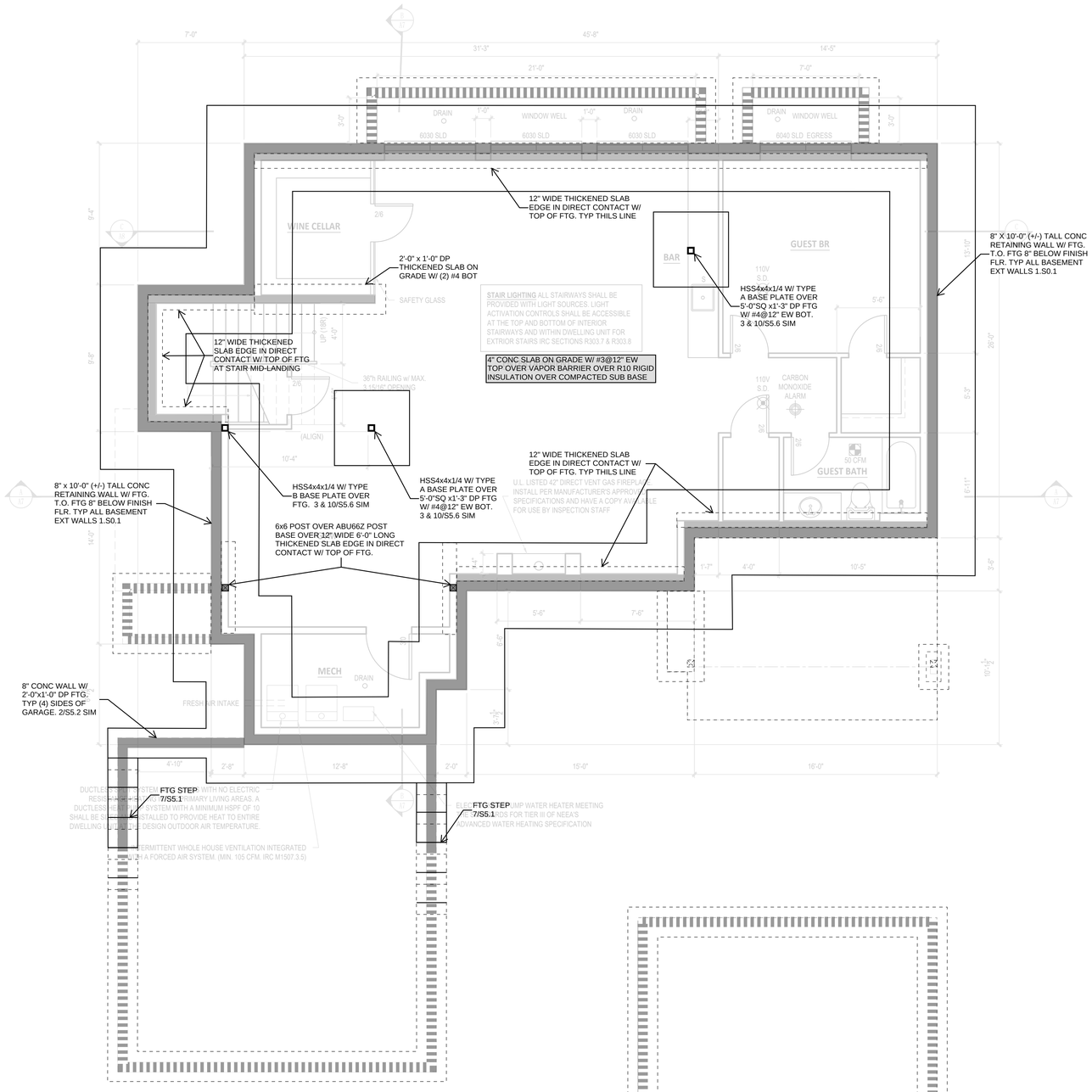
P / Y — TYPE Y PERFORATED SHEAR WALL; REFER TO 6/S5.5 FOR DETAIL.

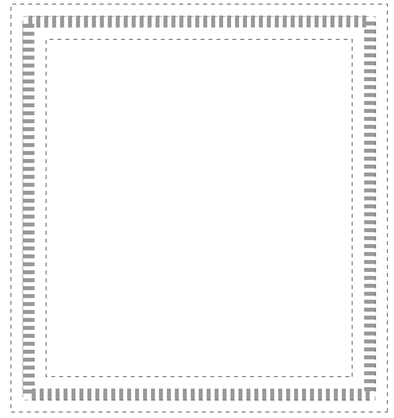
A — A — HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.5 FOR SCHEDULE. CENTER TOP AND BOT STRAPS TO BOT AND TOP OF RIM JOIST RESPECTIVELY & WRAP AROUND RIM JOIST AND/OR BM/HEADER ABOVE & BELOW WHEN TOO LONG

A — 1 — HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND HOLDOWN ANCHOR IN CONC AT BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 & 1/S5.5 FOR SCHEDULES; CENTER TOP STRAP TO BOT OF RIM JOIST & WRAP AROUND RIM JOIST AND/OR BM ABOVE WHEN TOO LONG

STEP IN FLR OR SLAB

* COMBINED HOLDOWN ANCHOR FOR SHEAR WALLS PERPENDICULAR TO EACH OTHER SEE 4/S5.5





FOUNDATION & BASEMENT FLOOR PLAN

1/4"=1'-0"

FOUNDATION AND LOWER FLOOR PLAN NOTES:

1. ALL HEADERS ARE 4x12 UNO; ALL POSTS ARE 4x4/4x6 AND 6x6 IN 2X4 AND 2X6 STUD WALLS RESPECTIVELY UNO.
2. " ⊏ " INDICATES FACE MOUNTED BEAM HANGER WITH SDS FASTENERS UNO.
3. " * " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULATER TO EACH OTHER. SEE 4/S5.5.
4. EXCEPT IN-WALL HEADERS, ALL FLOOR BEAMS ARE TOP FLUSH. UNO.
5. SEE 1/S5.1 AND 2/S5.2 FOR TYPICAL FOUNDATION DETAILS.
6. SEE 7&12/S5.3 FOR STAIR FRAMING DETAILS.
7. SEE 1/S0.1 FOR RETAINING WALL FOUNDATION DETAIL.
8. SEE ARCHITECT FOR TOP OF CONC WALL AND FINISH FLOOR ELEVATIONS.
9. HOLDOWNS SHOWN ARE A REPEAT OF WHAT ARE SHOWN ON THE FLOOR FRAMING ABOVE.
10. DO NOT SCALE RETAINING WALL FOOTING WIDTH FROM THE PLAN.

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SHEET TITLE
FOUNDATION & BASEMENT FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.0

CITY STAMP

COLOR PRINT REQD

NEW CONC WALL

NEW WOOD BEARING & SHEAR WALL

OTHER LINES & COLORS — AS NOTED

LEGEND

ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.

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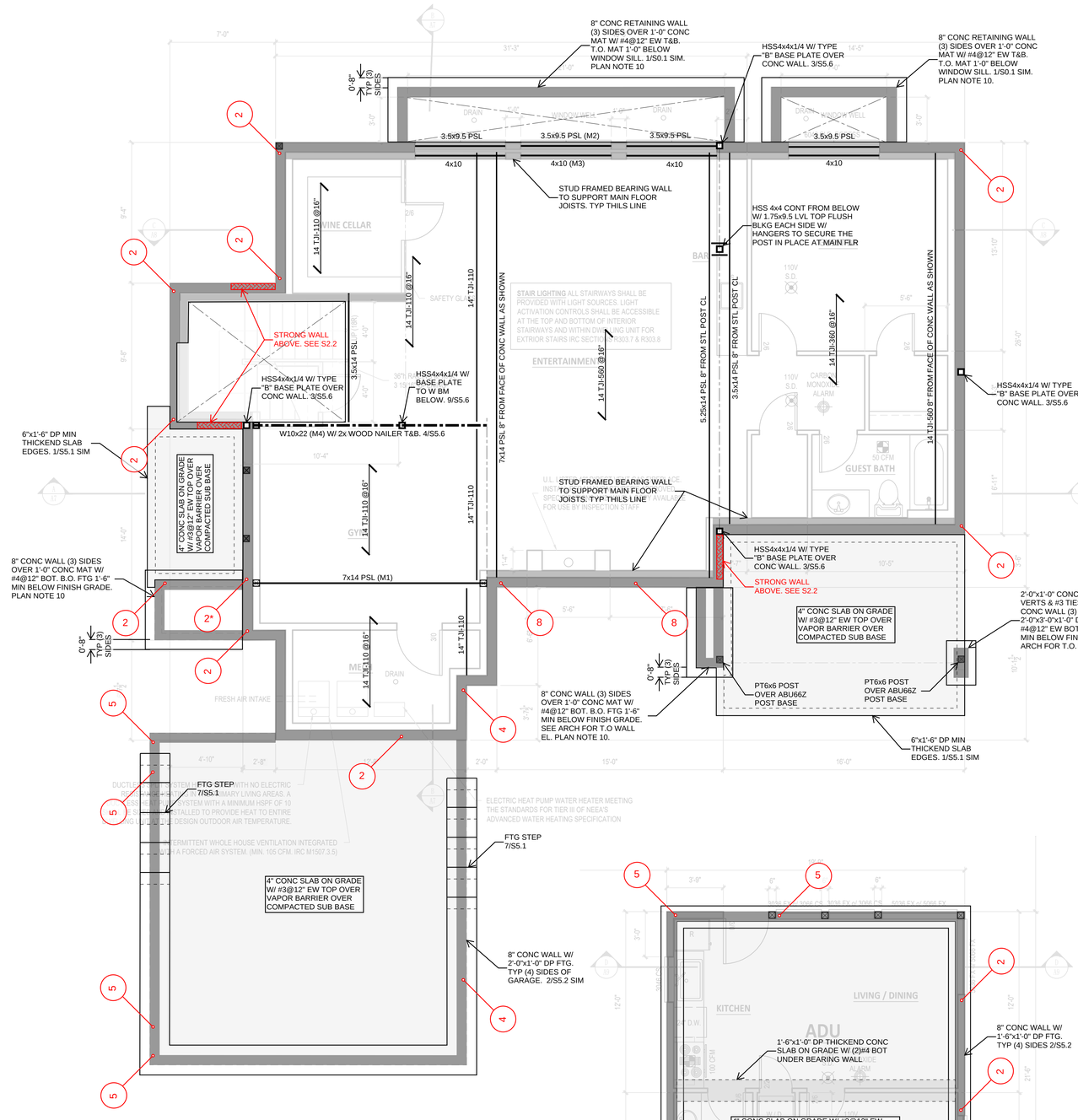

MAIN FLOOR FRAMING PLAN

1/4"=1'-0"

MAIN FLOOR FRAMING PLAN NOTES:

1. ALL HEADERS ARE 4x8 UNO; ALL POSTS ARE 4x4/4x6 AND 6x6 IN 2x4 AND 2x6 STUD WALLS RESPECTIVELY UNO.
2. " ⊏ " INDICATES FACE MOUNTED BEAM HANGER WITH SDS FASTENERS UNO.
3. " ⁎ " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULATER TO EACH OTHER. SEE 4/S5.5.
4. EXCEPT IN-WALL HEADERS, ALL FLOOR BEAMS ARE TOP FLUSH. UNO.
5. SEE 7 & 8/S5.2 FOR FLOOR FRAMING DETAILS.
6. SEE 7&12/S5.3 FOR STAIR FRAMING DETAILS.
7. UNO ALL SHEAR WALLS SHOWN ARE TYPE "6" FOR SOLID WALL PANELS & TYPE "4P" FOR PANELS WITH WINDOW OPENINGS.
8. PROVIDE/INSTALL BC OR BCS OR AC (2-PIECE) OR LCE (2-PIECE) OR LPCZ (2-PIECE) POST CAPS AT ALL BEAM ENDS AT POSTS/WALLS; PROVIDE/INSTALL BC POST BASES FOR ALL POSTS OVER WOOD FRAMING.
9. HOLDOWNS SHOWN ARE A REPEAT OF WHAT ARE SHOWN ON THE FLOOR FRAMING ABOVE.
10. INSTALL #4x1'-4" EPOXY DOWELS @18" (4" EMBED) TO BASEMENT WALLS ALONG FTG/WALL LENGHT FOR LATER INSTALLED SITE WALLS/FTGS. EPOXY DOWELS AT WALL CENTER AND FTG MID DEPTH.

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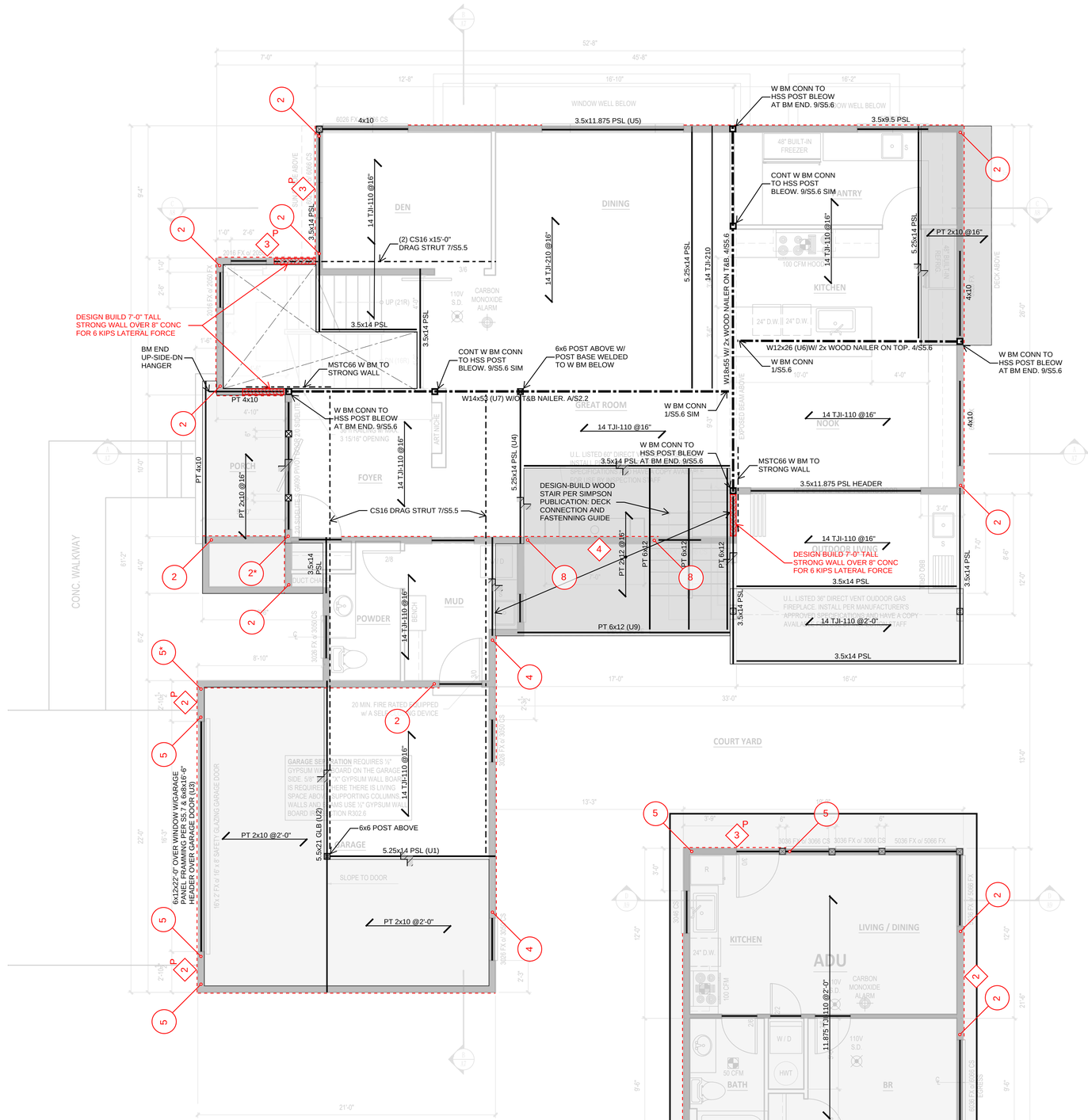

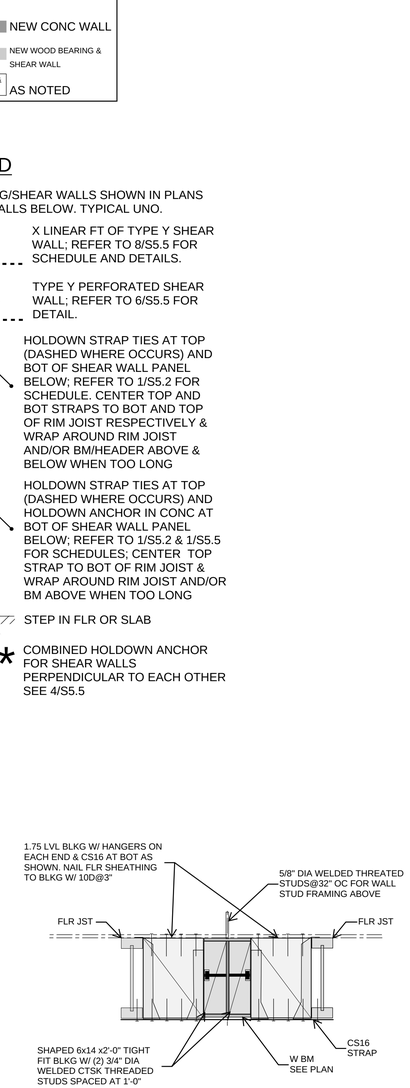

A "W" STL BM LATERAL BLOCKING SUPPORT

UPPER FLOOR & LOWER ROOF FRAMING PLAN

1/4"=1'-0"

UPPER FLOOR FRAMING PLAN NOTES:

1. ALL HEADERS ARE 4x8 UNO; ALL POSTS ARE 4x4/4x6 AND 6x6 IN 2x4 AND 2x6 STUD WALLS RESPECTIVELY UNO.
2. " ⊏ " INDICATES FACE MOUNTED BEAM HANGER WITH SDS FASTENERS UNO.
3. " ⁎ " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULATER TO EACH OTHER. SEE 4/S5.5.
4. EXCEPT IN-WALL HEADERS, ALL FLOOR BEAMS ARE TOP FLUSH. UNO.
5. SEE 7 & 8/S5.2 FOR FLOOR FRAMING DETAILS.
6. SEE 7&12/S5.3 FOR STAIR FRAMING DETAILS.
7. UNO ALL SHEAR WALLS SHOWN ARE TYPE "6" FOR SOLID WALL PANELS & TYPE "4P" FOR PANELS WITH WINDOW OPENINGS.
8. PROVIDE/INSTALL BC OR BCS OR AC (2-PIECE) OR LCE (2-PIECE) OR LPCZ (2-PIECE) POST CAPS AT ALL BEAM ENDS AT POSTS/WALLS; PROVIDE/INSTALL BC POST BASES FOR ALL POSTS OVER WOOD FRAMING.
9. ALL STUD FRAMING BE FULL HEIGHT FROM FLOOR TO BOTTOM OF UPPER/ROOF FRAMING.

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DIHONG SHAO — STATE OF WASHINGTON — 36539 — REGISTERED STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

2720 RESIDENCE

2720 71ST AVENUE SE
MERCER ISLAND WA 98040

NUMBER	DATE	DESCRIPTION OF REVISIONS
00	07.29.21	PERMIT SET
01	01.18.22	PERMIT REVIEW-1
01	04.28.22	PERMIT REVIEW-3

SHEET TITLE
UPPER FLOOR & LOWER ROOF FRAMING PLAN

JOB NUMBER

SHEET NUMBER
S2.2

CITY STAMP

COLOR PRINT REQD

NEW CONC WALL

NEW WOOD BEARING & SHEAR WALL

OTHER LINES & COLORS — AS NOTED

LEGEND

ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.

X / Y — X LINEAR FT OF TYPE Y SHEAR WALL; REFER TO 8/S5.5 FOR SCHEDULE AND DETAILS.

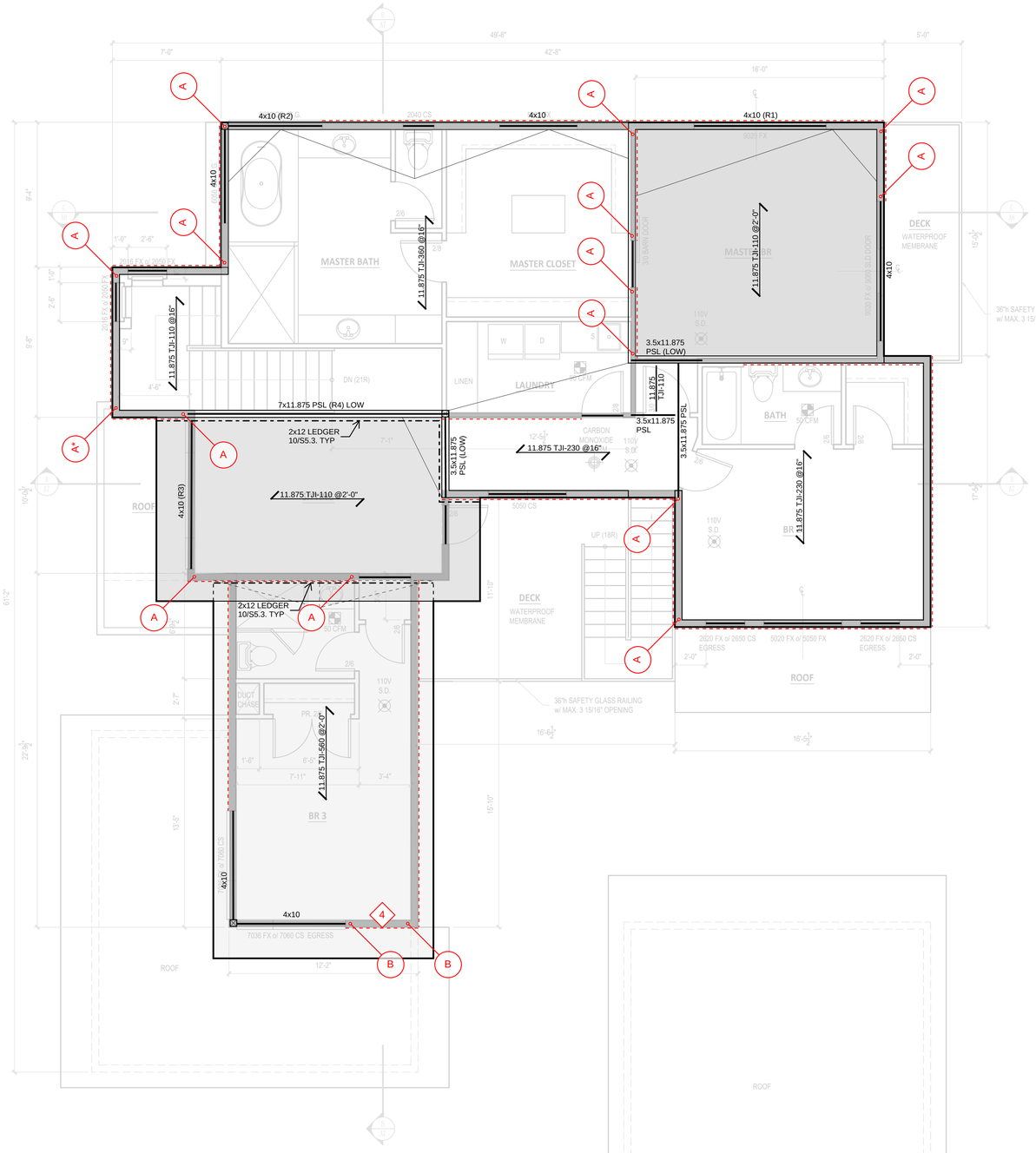
P / Y — TYPE Y PERFORATED SHEAR WALL; REFER TO 6/S5.5 FOR DETAIL.

A A — HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 & 1/S5.5 FOR SCHEDULE. CENTER TOP AND BOT STRAPS TO BOT AND TOP OF RIM JOIST RESPECTIVELY & WRAP AROUND RIM JOIST AND/OR BM/HEADER ABOVE & BELOW WHEN TOO LONG

A 1 — HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND HOLDOWN ANCHOR IN CONC AT BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 & 1/S5.5 FOR SCHEDULES; CENTER TOP STRAP TO BOT OF RIM JOIST & WRAP AROUND RIM JOIST AND/OR BM ABOVE WHEN TOO LONG

STEP IN FLR OR SLAB

* COMBINED HOLDOWN ANCHOR FOR SHEAR WALLS PERPENDICULAR TO EACH OTHER SEE 4/S5.5



ROOF FRAMING PLAN

1/4"=1'-0"

ROOF FRAMING PLAN NOTES:

1. ALL HEADERS ARE 4x8 UNO; ALL POSTS ARE 4x4/4x6 AND 6x6 IN 2x4 AND 2x6 STUD WALLS RESPECTIVELY UNO.
2. " ⊏ " INDICATES FACE MOUNTED BEAM HANGER WITH SDS FASTENERS UNO.
3. " * " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULATER TO EACH OTHER. SEE 4/S5.5.
4. EXCEPT IN-WALL HEADERS, ALL BEAMS ARE TOP FLUSH AT LOWER ROOF. UNO.
5. SEE 3 & 4/S5.2 FOR TYPICAL ROOF FRAMING DETAILS.
6. SEE 5 & 9/S5.2 FOR TALL PARAPET DETAILS.
7. UNO ALL SHEAR WALLS SHOWN ARE TYPE "6" FOR SOLID WALL PANELS & TYPE "4P" FOR PANELS WITH WINDOW OPENINGS.
8. SEE 3 & 4/S5.4 FOR ROOF DIAPHRAGM TO INTERIOR AND EXTERIOR SHEAR WALL CONNECTIONS IF ROOF TRUSSES ARE USED.
9. ALL STUD FRAMING SUPPORTING ROOF FRAMING BE FULL HEIGHT FROM UPPER FLOOR TO BOT OF ROOF FRAMING.

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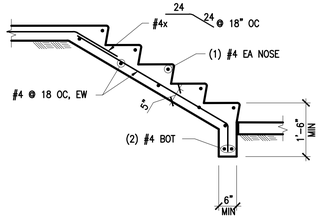
SHEET TITLE
ROOF FRAMING PLAN

JOB NUMBER

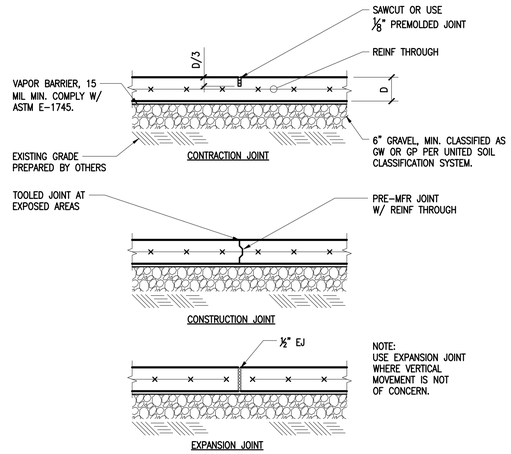
SHEET NUMBER
S2.3

CITY STAMP

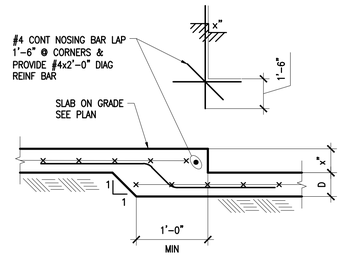


NOTES:
1. SEE ARCH FOR STAIR DIMENSIONS AND CONFIGURATION.

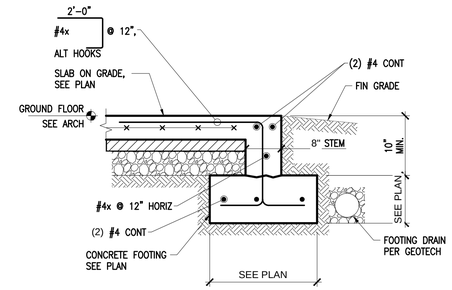
1 STAIR ON GRADE
1/2"=1'-0"



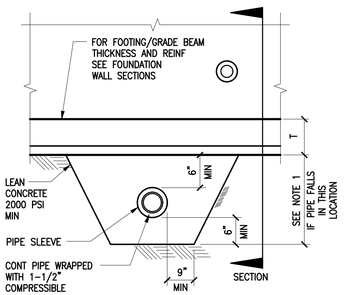
2 SLAB JOINT DETAILS
1"=1'-0"



3 DEPRESSED SLAB ON GRADE
1"=1'-0"

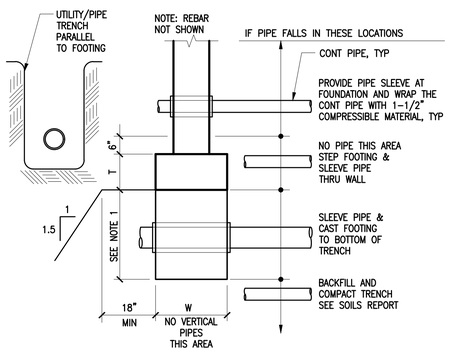


4 SLAB EDGE AT GARAGE DOOR
1"=1'-0"

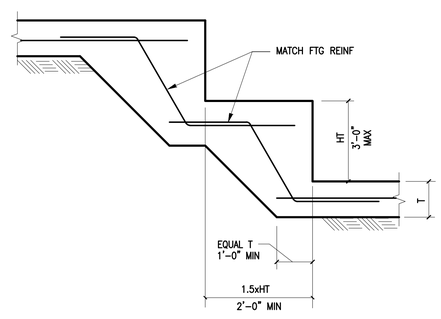


NOTES:
1. SINGLE PIPES 8"ø OR LESS PERPENDICULAR TO AND GREATER THAN 24" CLEAR BELOW FOOTINGS DO NOT REQUIRE CONCRETE ENCASEMENT. (PIPE GROUPINGS BELOW 24" SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER).
2. PIPES LARGER THAN 8"ø SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.

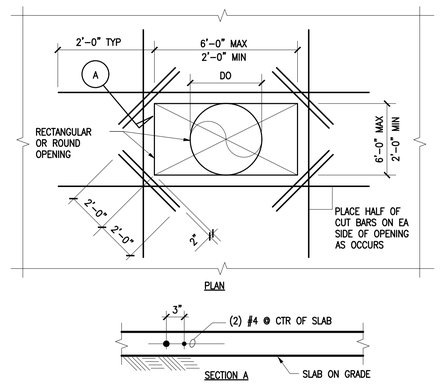
5 PIPE CLEARANCE AT STRIP FOOTING/GRADE BEAM
1/2"=1'-0"



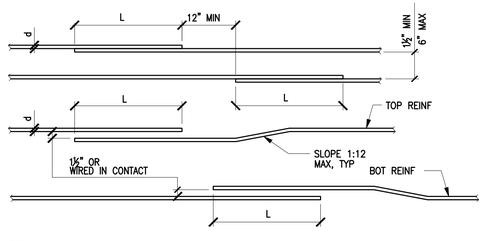
6
1"=1'-0"



7 STEPPED FOOTING
1/2"=1'-0"



8 OPENING IN CONCRETE SLAB
1"=1'-0"



NOTES:
1. SCHEDULE APPLIES TO UNCOATED GRADE 60 BARS IN NORMAL WEIGHT CONCRETE.
2. FOR LIGHTWEIGHT CONCRETE MULTIPLY LENGTH IN SCHEDULE BY 1.3.
3. ALL SPLICES SHALL BE CLASS B SPLICES UNLESS INDICATED OTHERWISE.
4. TOP BARS (INDICATED WITH "T" IN SCHEDULE) ARE HORIZONTAL TOP BARS WITH MORE THAN 12" OF CONC CAST BLW THE BARS.
5. BOTTOM BARS (INDICATED WITH "B" IN SCHEDULE) ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW HORIZONTAL BARS.
6. ANY PORTION OF A STRAIGHT BAR EMBEDMENT LENGTH NOT WITHIN THE CONFINED CORE SHALL BE INCREASED BY A FACTOR OF 1.6.
7. ALL HORIZONTAL SPLICES SHALL BE STAGGERED AS SHOWN. IF MORE THAN 50% OF VERTICAL REINFORCING IS LAP SPLICED WITHIN THE REQUIRED LAP SPLICE LENGTH, THE LAP SPLICE LENGTH SHALL BE INCREASED BY 33%.
8. LAP SPLICES LISTED IN THE SCHEDULE ARE CLASS B LAPS, FOR CLASS A LAPS REDUCE LENGTH BY 25%.
9. FOR f'c=4500psi USE VALUES FOR 4000psi.

10 REINFORCING SPLICE SCHEDULE
3/4"=1'-0"

SPLICE OR DEVELOPMENT LENGTH (INCHES)

NORMAL WT. CONCRETE f'c (psi)	"CLASS B" TENSION LAP SPLICE SCHEDULE																	
	0.375"		0.500"		0.625"		0.750"		0.875"		1.000"		1.128"		1.270"		1.410"	
	#3		#4		#5		#6		#7		#8		#9		#10		#11	
	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B
3000	28	22	38	29	47	36	56	43	81	63	93	72	105	81	116	90	128	98
4000	25	19	33	25	41	31	49	37	71	54	81	62	91	70	101	78	111	85
5000	22	17	29	23	36	28	44	34	63	49	72	56	81	63	90	69	99	76
6000	20	16	27	21	33	26	40	31	58	45	66	51	74	57	82	63	90	70
–	DEVELOPMENT LENGTH "Ld" SCHEDULE																	
3000	22	17	29	22	36	28	43	33	63	48	72	55	81	62	90	69	98	76
4000	19	15	25	19	31	24	37	29	54	42	62	48	70	54	78	60	85	66
5000	17	13	23	17	28	22	34	26	49	38	56	43	63	48	69	54	76	59
6000	16	12	21	16	26	20	31	24	45	34	51	39	57	44	63	49	70	54

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SHEET TITLE
TYPICAL CONCRETE DETAIL

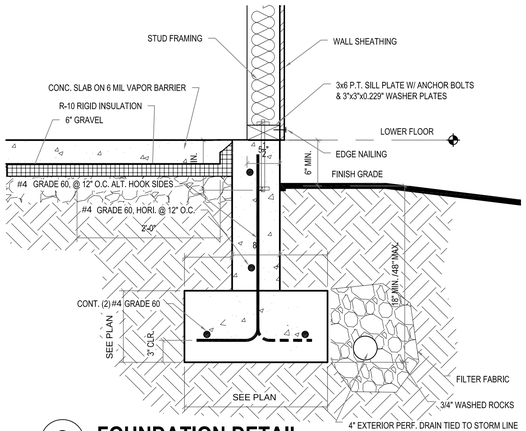
JOB NUMBER

SHEET NUMBER
S5.1

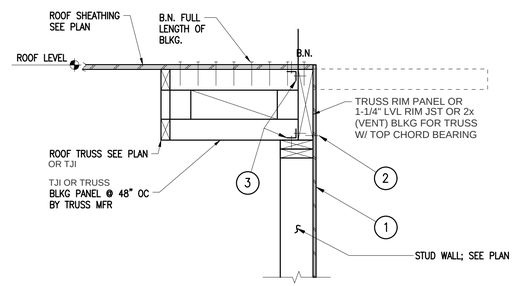
CITY STAMP

STRAP TIE SCHEDULE			
TYPE	MANUFACTURER	PRODUCT	NOTES
A	SIMPSON	ST6224 ON (2) 2X	2.54 KIPS
B	SIMPSON	MSTC28 ON (2) 2X	3.46 KIPS
C	SIMPSON	MSTC40 ON (2) 2X	4.75 KIPS
D	SIMPSON	MSTC66 ON (2) 2X	5.86 KIPS

1 STRAP TIE SCHEDULE
NTS

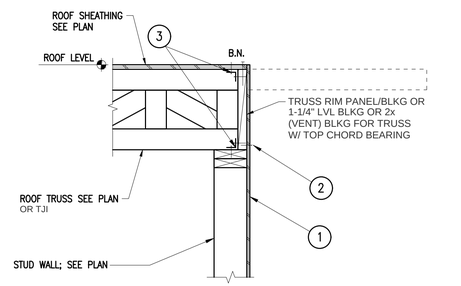


2 **FOUNDATION DETAIL**
SCALE: 1" = 1'-0"



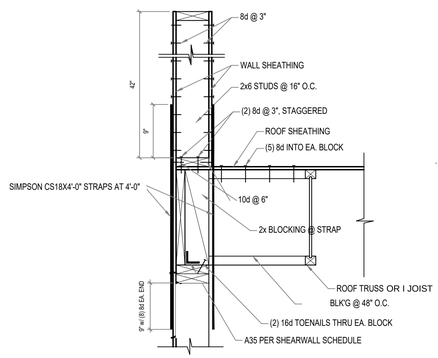
NOTES:
1. SEE 8/S5.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.

3 ROOF TRUSSES PARALLEL
NTS



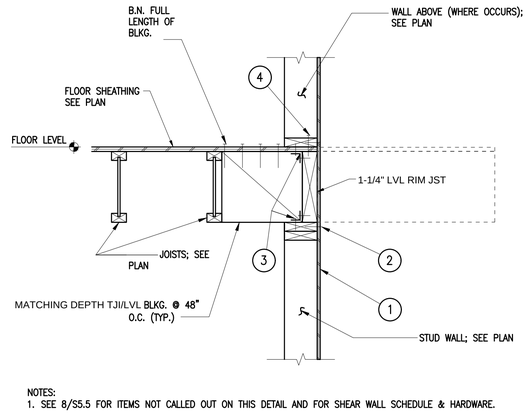
NOTES:
1. SEE 8/S5.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.
2. WHERE THERE IS NO WALL ABOVE, USE #6 x ¾" LONG SCREWS TO SHEATHING ABOVE.

4 ROOF TRUSSES PERPENDICULAR
NTS



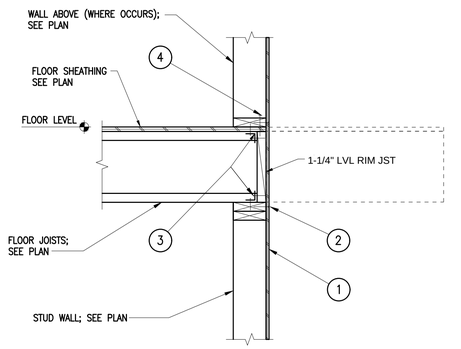
5 ROOF - WALL DETAIL
SCALE: 1" = 1'-0" (JOIST PARALLEL TO SHEARWALLS)

6 FOUNDATION DETAIL
SCALE: 1 = 1'-0"



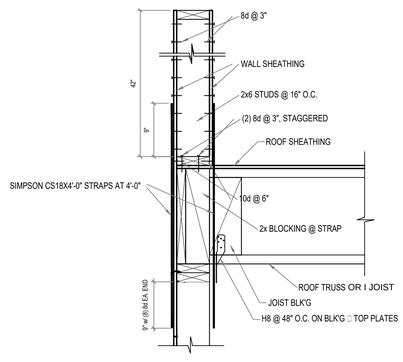
NOTES:
1. SEE 8/S5.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.

7 FLOOR JOISTS PARALLEL
NTS

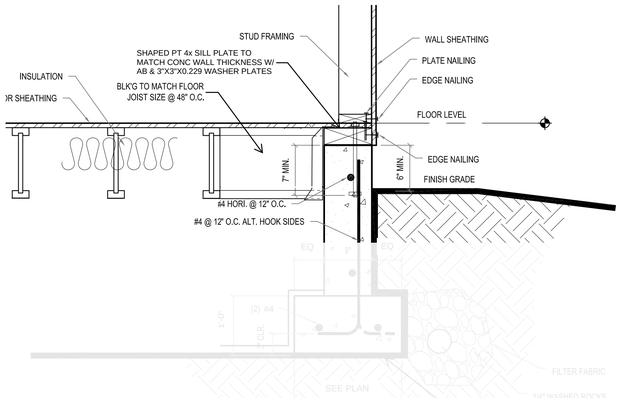


NOTES:
1. SEE 8/S5.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.

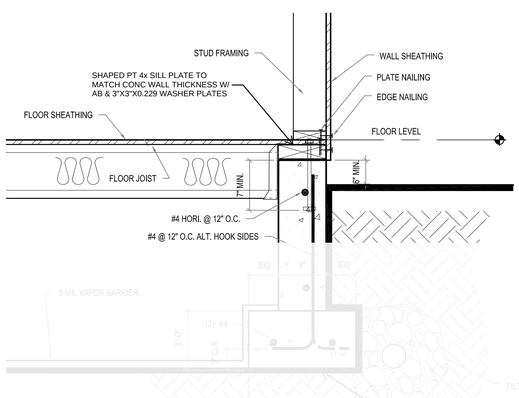
8 FLOOR JOISTS PERPENDICULAR
NTS



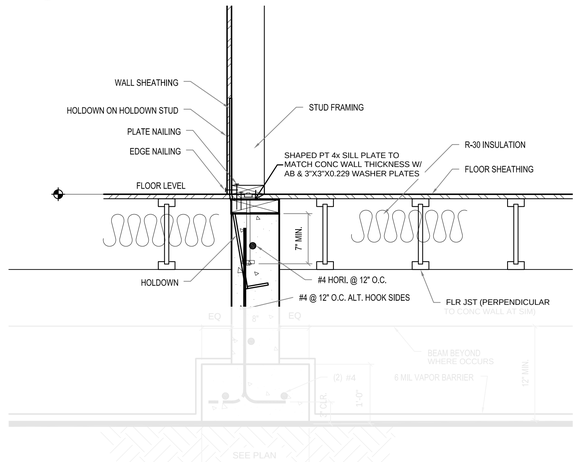
9 ROOF - WALL DETAIL
SCALE: 1" = 1'-0" (JOIST PERPENDICULAR TO SHEARWALL)



10 **FOUNDATION DETAIL**
SCALE: 1 = 1'-0"



11 **FOUNDATION DETAIL**
SCALE: 1 = 1'-0"



12 **FOUNDATION DETAIL**
SCALE: 1 = 1'-0"

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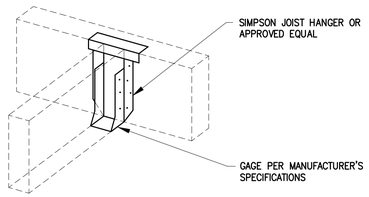
SHEET TITLE
TYPICAL FRAMING DETAIL

JOB NUMBER

SHEET NUMBER
S5.2

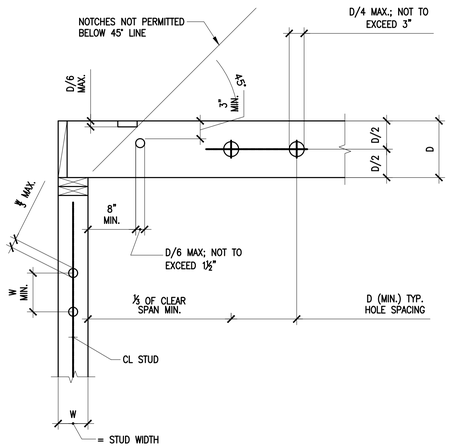
CITY STAMP

HANGER SCHEDULE	
JOIST/BEAM	TYP HANGER
2x12	JB212A
11⅞" TJI210	ITS2.06/11.88
11⅞" TJI360	ITS2.37/11.88
(2) 11⅞" TJI210	MIT4.28/11.88
1¾x11⅞ LVL	BA1.81/11.88 (MIN)
3½x11⅞ PSL	BA3.56/11.88 (MAX)
5¼x11⅞ PSL	HB5.50/11.88
5¼x16 PSL	HGLTV5.516

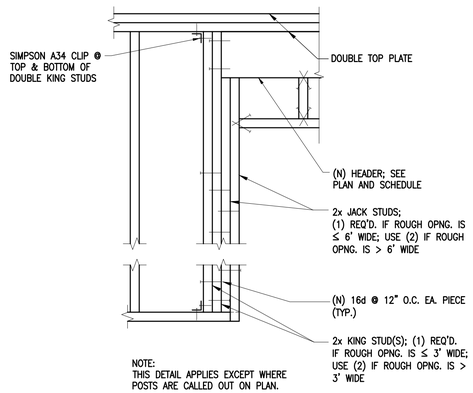


NOTE:
THIS TYPE OF HANGER TO BE USED TYPICAL WHERE APPLICABLE UNLESS NOTED OR SHOWN OTHERWISE ON THE PLANS AND DETAILS. USE SIZE AND TYPE OF NAILS AS REQUIRED BY MANUFACTURER AND FULLY DRIVE IN ALL NAILS.

1 HANGER DETAIL AND SCHEDULE
NTS



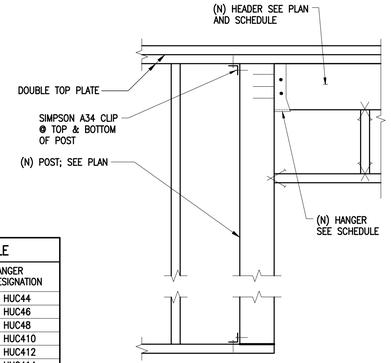
2 ALLOWABLE HOLES & NOTCHES IN JOISTS & STUDS
1"=1'-0"



NOTE:
THIS DETAIL APPLIES EXCEPT WHERE POSTS ARE CALLED OUT ON PLAN.

TRADITIONAL HEADER DETAILS

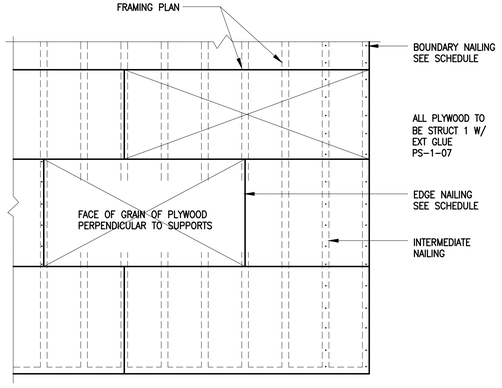
HEADER SCHEDULE		
PLAN DESIGNATION	HEADER SIZE	HANGER DESIGNATION
H44	4x4	HUC44
H46	4x6	HUC46
H48	4x8	HUC48
H410	4x10	HUC410
H412	4x12	HUC412
H414	3½x14 PSL	HUC414
H66	6x6	HUC66
H68	6x8	HUC68
H610	6x10	HUC610
H612	6x12	HUC612
H614	5¼x14 PSL	HUC614



NOTE:
THIS DETAIL APPLIES EXCEPT WHERE (N) POSTS ARE CALLED OUT ON PLAN AT HEADER LOCATIONS.

HEADER DETAILS AT POSTS

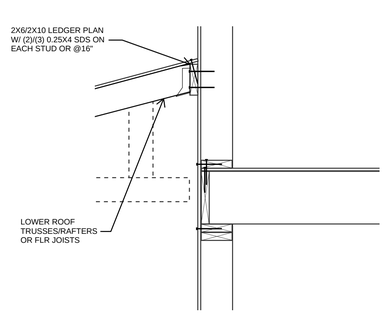
3 TYPICAL HEADER DETAILS
1"=1'-0"



DIAPHRAGM SCHEDULE					
LOCATION	PLYWOOD	PANEL ID	BOUN. NAILS	EDGE NAILS	INTER. NAILS
FLAT ROOF DECK	23/32" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"
SLOPED ROOF	23/32" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"
FLOOR	23/32" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"

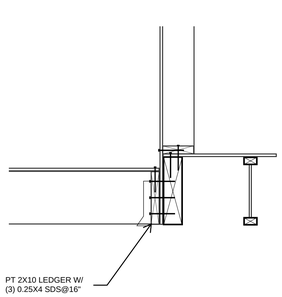
NOTES:
1. USE BOUNDARY NAILING AT ALL HIPS, RIDGES, VALLEYS AND OPENINGS.
2. USE COMMON NAIL FOR ALL DIAPHRAGM NAILING.
3. PLYWOOD SHALL BE GLUED (SUB-FLOOR ADHESIVE) FOR FLOORS.
4. USE 23/32" PLYWOOD T & G AT FLAT ROOF.
5. MIN EDGE DISTANCE FOR NAILS SHALL BE ⅜".
6. MIN SHEATHING SHEET SIZE SHALL BE 2'-0"x4'-0".
7. NAILS SHALL NOT BE OVERDRIVEN. OPERATOR TO ADJUST AIR PRESSURE OF PNEUMATIC NAILER AS REQUIRED TO AVOID HEAD OF NAIL PENETRATING SKIN OF PLYWOOD SHEATHING.
8. NAILS SHALL BE COMMON WIRE TYPE.
9. SEE PLANS FOR AREAS OF BLOCKED DIAPHRAGMS.
10. USE BOUNDARY NAILING AT ALL CONNECTIONS TO SHEAR WALLS.

9 ROOF & FLOOR DIAPHRAGM
NTS



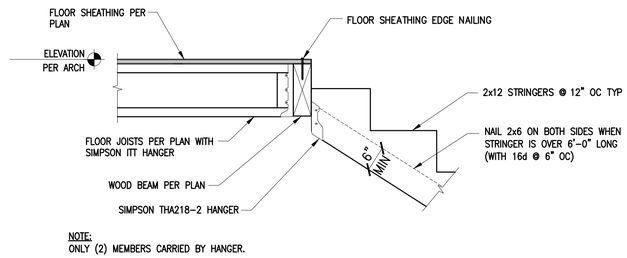
NOTE: SEE GN & TYPICAL FRAMING DETAILS FOR ALL OTHER FRAMING INFO

10 LOWER ROOF FRAMING AT EXTERIOR WALL



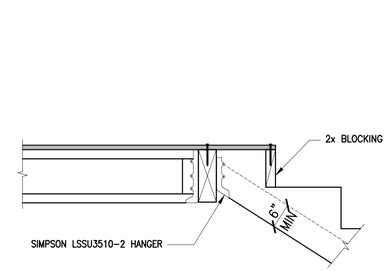
NOTE: SEE GN & TYPICAL FRAMING DETAILS FOR ALL OTHER FRAMING INFO

11 DECK FRAMING AT FLOOR & EXTERIOR WALL



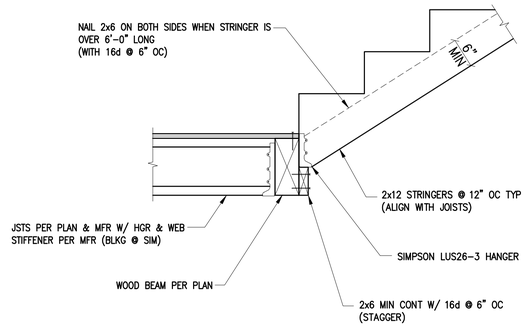
NOTE:
ONLY (2) MEMBERS CARRIED BY HANGER.

ALTERNATE 1



ALTERNATE 2

7 TYPICAL STAIR STRINGER CONN.
SCALE: 1"=1'-0"



12 TYPICAL STRINGER CONNECTION
SCALE: 1"=1'-0"

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DIHONG SHAO
STATE OF WASHINGTON
32539
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

2720 RESIDENCE
2720 71ST AVENUE SE
MERCER ISLAND WA 98040

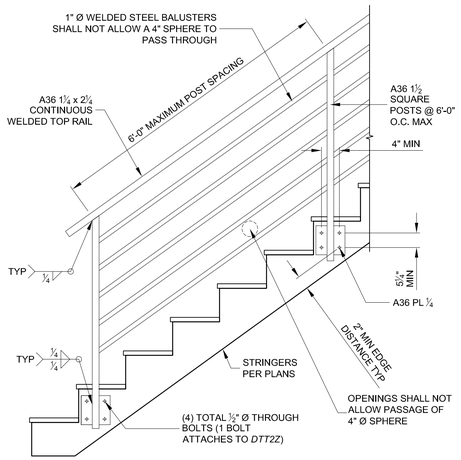
NUMBER	DATE	DESCRIPTION OF REVISIONS
00	07.29.21	PERMIT SET
01	01.18.22	PERMIT REVIEW-1
01	04.28.22	PERMIT REVIEW-3

SHEET TITLE
TYPICAL FRAMING DETAIL

JOB NUMBER

SHEET NUMBER
S5.3

CITY STAMP



TYPICAL STAIR GUARD ELEVATION

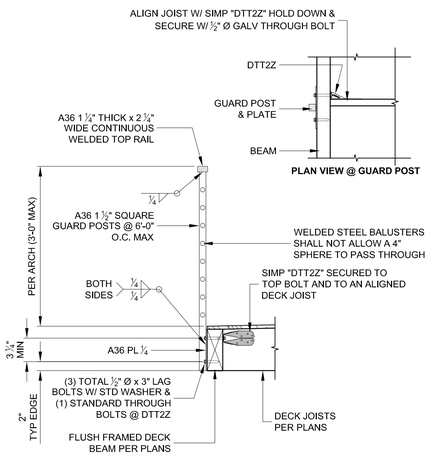
SCALE: 3/4" = 1'-0"

3 TYP. INT. SHEAR WALL @ ROOF TRUSS

NTS

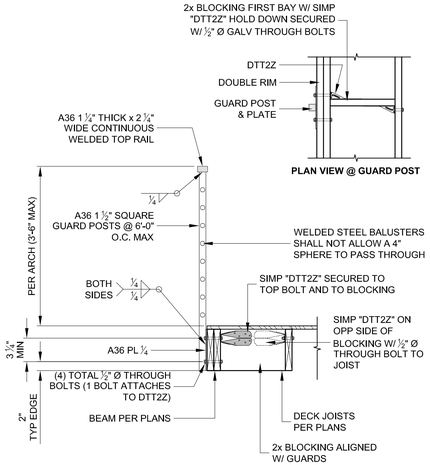
4 TRUSSES PAR. TO INT. SHEAR WALL & GABLE END TRUSS

NTS



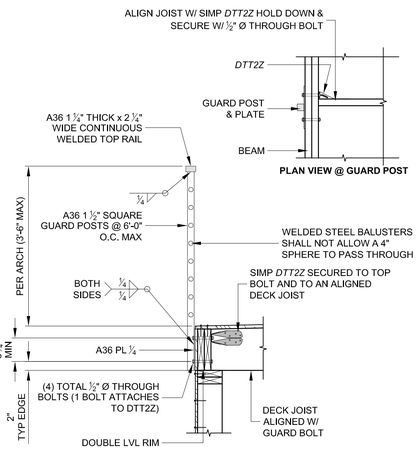
GUARD RAIL TO BEAM

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



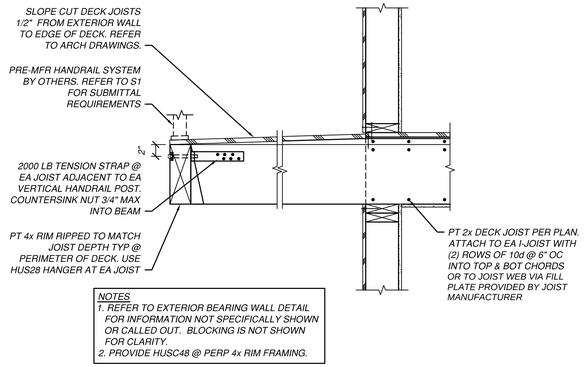
GUARD RAIL TO RIM @ PARALLEL

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



GUARDRAIL TO JOIST

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



9 DECK DETAIL

SCALE: 1" = 1'-0"

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SHEET TITLE
DECK AND RAILING DETAILS

JOB NUMBER

SHEET NUMBER
S5.4

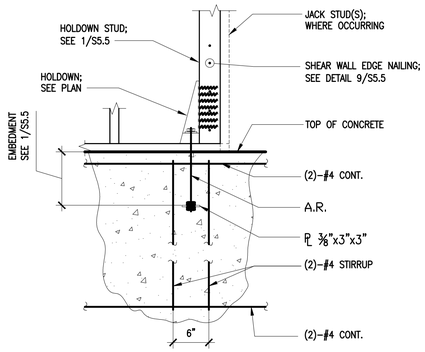
CITY STAMP

HOLDOWN SCHEDULE

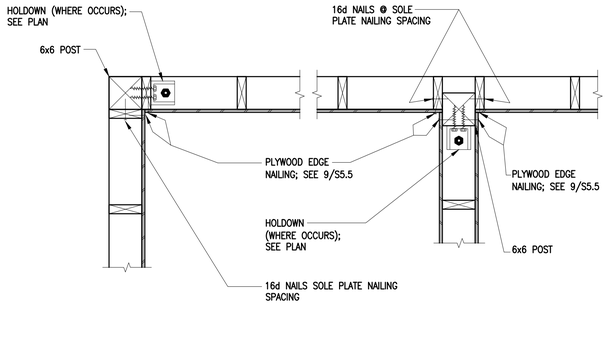
TYPE	SIMPSON HARDWARE	WALL STUD SIZE; SEE PLAN	STUD SIZE AT HOLDOWN	ANCHOR ROD DIA.	ANCHOR ROD EMBEDMENT (SEE 2/S5.5)
2	HDU2	4" STUDS	4x4*	5/8"	8"
		6" STUDS	4x6*		
4	HDU4	4" STUDS	4x4*	5/8"	9"
		6" STUDS	4x6*		
5	HDU5	4" STUDS	4x4	5/8"	10"
		6" STUDS	4x6		
8	HDU8	4" STUDS	4x4	7/8"	12"
		6" STUDS	4x6		
11	HDU11	4" STUDS	4x4	1"	14"
		6" STUDS	4x6		
14	HDU14	4" STUDS	4x4	1"	14"
		6" STUDS	4x6		

NOTES:
1. SEE PLAN FOR HODOWN TYPES AND LOCATIONS.
2. SEE PLAN FOR TYPICAL STUD SIZES IN SHEARWALLS.
3. REFER TO DETAIL 2/S5.5 FOR TYPICAL HOLDOWN INSTALLATION DETAILS.
4. ALT. USE (2) 2x STUDS.

1 HOLDOWN SCHEDULE
NTS



2 TYPICAL HOLDOWN DETAIL
SCALE: 1"=1'-0"



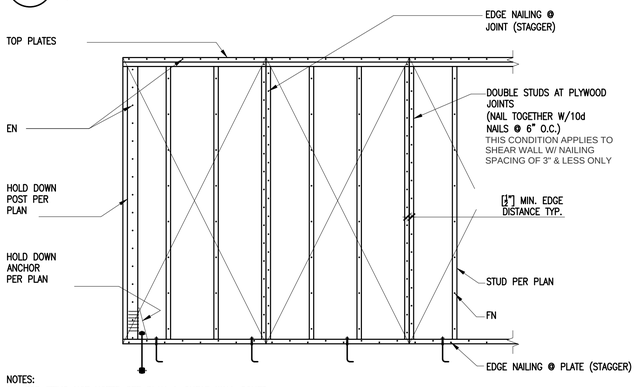
PLAN VIEW

SHEAR WALL SCHEDULE

TYPE	STUD SIZE AND SPACING*	PLYWOOD (1) SHEATHING	EDGE NAILS (2) / FIELD NAILS	FRAMING CLIPS (3)	SOLE PLATE NAILING (4)	SILL PLATE BOLTS (5)
◇2	2x STUDS @ 16" O.C. PER PLAN	15/32" PLYWOOD	10d @ 2" O.C. / 10d @ 12" O.C.	(2)-A35 @ 12" O.C.	16d @ 2½" O.C.	5/8" ø BOLTS @ 16" O.C.
◇3	2x STUDS @ 16" O.C. PER PLAN	15/32" PLYWOOD	10d @ 3" O.C. / 10d @ 12" O.C.	A35 @ 9" O.C.	16d @ 3" O.C.	5/8" ø BOLTS @ 24" O.C.
◇4	2x STUDS @ 16" O.C. PER PLAN	15/32" PLYWOOD	10d @ 4" O.C. / 10d @ 12" O.C.	A35 @ 12" O.C.	16d @ 4" O.C.	5/8" ø BOLTS @ 32" O.C.
◇6	2x STUDS @ 16" O.C. PER PLAN	15/32" PLYWOOD	10d @ 6" O.C. / 10d @ 12" O.C.	A35 @ 18" O.C.	16d @ 6" O.C.	5/8" ø BOLTS @ 48" O.C.

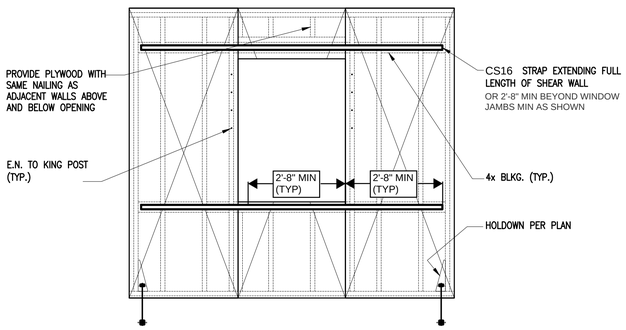
NOTES:
1. SEE PLANS FOR SHEAR WALL TYPE, LOCATIONS, AND HOLDOWNS.
2. REFER TO SHEET S5.2 FOR TYPICAL SHEAR WALL CONSTRUCTION DETAILS.
3. REFER TO DETAIL 9/S5.5 FOR TYPICAL SHEAR WALL ELEVATION.
4. REFER TO DETAIL 2/S5.5 FOR TYPICAL HOLDOWN INSTALLATION DETAILS.
5. PLYWOOD SHALL BE PLACED ON THE SIDE OF THE WALL WHERE THE SYMBOL ◇ OCCURS ON THE PLAN.
6. ALL INFORMATION IN THE ABOVE SCHEDULE RELATES TO THE ITEMS SHOWN IN THE WALL SECTIONS ON SHEET S5.2. ALL COMPONENTS FOR EACH SHEAR WALL TYPE OCCUR IN THE WALLS BETWEEN THE LEVEL REPRESENTED BY THE FRAMING PLAN, WHERE THE SHEAR WALL TYPES AND LOCATIONS ARE SHOWN, AND THE LEVEL ABOVE.
7. EXAMPLE: A SHEAR WALL SHOWN ON THE GROUND FLOOR PLAN WITH A MARK ◇ NEXT TO IT SHALL HAVE ALL REQUIRED COMPONENTS FOR TYPE ◇ SHEAR WALL INSTALLED IN THE WALL BETWEEN THE GROUND FLOOR AND THE FIRST FLOOR.
8. AT CONCRETE FOOTINGS, USE 5/8" DIAMETER SILL PLATE BOLTS WITH MINIMUM 7" EMBEDMENT INTO THE CONCRETE. REFER TO THE SCHEDULE ABOVE FOR BOLT SPACING. SEE GENERAL NOTES FOR INFORMATION ABOUT ANCHOR RODS AND EPOXY BOLTS.
9. BLOCK ALL UNSUPPORTED PLYWOOD EDGES WITH MINIMUM 2x LAID FLAT BEHIND EDGES OF PLYWOOD.
10. SEE GENERAL NOTES FOR PLYWOOD GRADES AND SPECIFICATIONS.
11. AT WALLS WITH 2x STUDS, DOUBLE THE STUDS AT PLYWOOD JOINTS PER DETAIL 9/S5.5.

8 SHEARWALL SCHEDULE
NTS



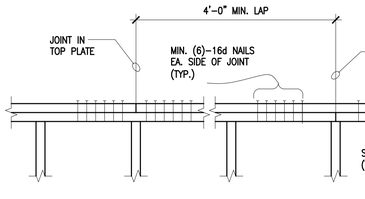
NOTES:
1. FOR ITEMS NOT NOTED SEE PLAN & SHEAR WALL SCHED.
2. MINIMUM PANEL DIMENSION IS 1'-0".
3. USE FULL SIZE PANELS WHERE POSSIBLE.
4. FIELD NAILING (FN) @ 12" UON.
5. [2x] SOLID BLOCKING @ HORIZONTAL JOINTS.

6 PERFORATED SHEARWALL ELEVATION
1/2"=1'-0"



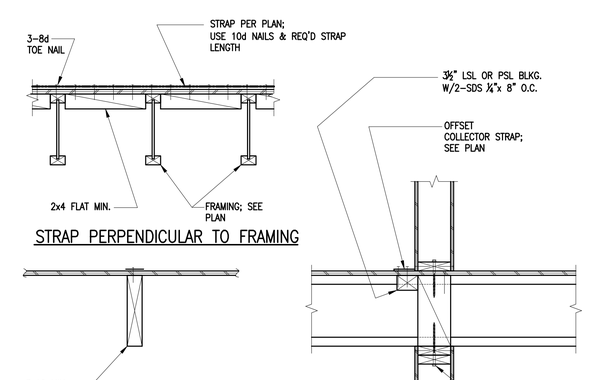
NOTE: HOLDOWN LOCATIONS NOT SHOWN FOR CLARITY.

9 TYPICAL SHEARWALL ELEVATION
1/2"=1'-0"



NOTE:
SEE PLAN AND DETAILS FOR SIZE OF STUDS AND DOUBLE TOP PLATE.

7 TYPICAL STUD WALL TOP PLATE SPLICE
1"=1'-0"



12 HORIZONTAL STRAP DETAIL
NTS

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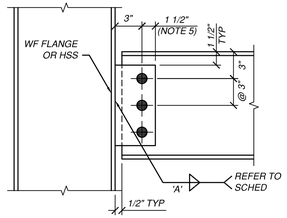
SHEET TITLE
LATERAL DETAIL AND SCHEDULE

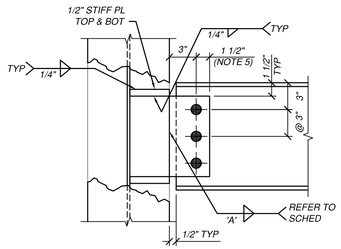
JOB NUMBER

SHEET NUMBER
S5.5

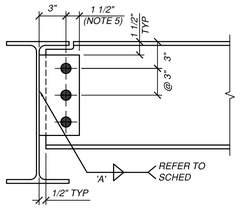
CITY STAMP



BEAM TO COLUMN FLANGE DETAIL



BEAM TO COLUMN WEB DETAIL



BEAM TO BEAM DETAIL

SHEAR PLATE SCHEDULE

BEAM SIZE	SHEAR PLATE		BOLTS REQ'D
	THICK	WELD 'A'	
W8	3/8"	5/16"	(2) 3/4"Ø
W10	3/8"	5/16"	(2) 3/4"Ø
W12	3/8"	5/16"	(3) 3/4"Ø
W14	3/8"	5/16"	(3) 3/4"Ø
W16	3/8"	5/16"	(4) 3/4"Ø
W18	3/8"	5/16"	(5) 3/4"Ø
W21	1/2"	3/8"	(5) 1"Ø
W24	1/2"	3/8"	(6) 1"Ø
W27	1/2"	3/8"	(7) 1"Ø

NOTES:
1. ALL CONNECTION PLATES SHALL BE A36 STEEL.
2. ALL BOLTS SHALL BE A325-N AND SHALL BE INSTALLED PER AISC SPECIFICATIONS.
3. BOLT HOLES SHALL BE STANDARD SIZE. OVERSIZED HOLES ARE NOT PERMITTED.
4. SCHEDULE APPLIES TO ALL SHEAR CONNECTIONS UNO.
5. INCREASE TO 1 3/4" FOR 1"Ø BOLTS

1 TYPICAL SHEAR PLATE CONNECTION DETAIL
SCALE:NTS

NOTES:
1. REFER TO TYPICAL WELD ACCESS HOLE DETAIL OR AISC SEISMIC DESIGN MANUAL TABLE 1-1.

5 TYPICAL MOMENT CONNECTION
SCALE: 1" = 1'-0"

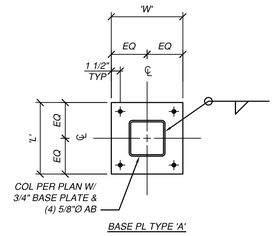
NOTES:
1. REFER TO TYPICAL WELD ACCESS HOLE DETAIL OR AISC SEISMIC DESIGN MANUAL TABLE 1-1 FOR GEOMETRY.
2. REMOVE BACKUP BAR, BACKGOUGE, AND ADD 5/16" FILLET WELD AT BEAM FLANGE & CONTINUITY CJP WELDS.

6 SEISMIC MOMENT CONNECTION
SCALE: 1" = 1'-0"

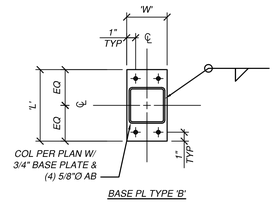
NOTES:
1. BEVEL AS REQUIRED PER AWS D1.1 FOR SELECTED GROVE WELD PROCEDURE.
2. LARGER OF t_{bf} OR 1/2" (PLUS 1/2t_{bf} OR MINUS 1/4t_{bf}).
3. 3/4t_{bf} TO t_{bf} W; 3/4" MIN (±1/4").
4. 3/8" MIN RADIUS (PLUS NOT LIMITED, MINUS 0).
5. 3t_{bf} (±1/2").
6. REFER TO FEMA 353 DOCUMENT, RECOMMENDED SPECIFICATIONS AND QUALITY ASSURANCE GUIDELINES FOR STEEL MOMENT-FRAME CONSTRUCTION FOR SEISMIC APPLICATIONS, FOR FABRICATION DETAILS INCLUDING CUTTING METHODS AND SMOOTHNESS REQUIREMENTS.

7 TYPICAL WELD ACCESS HOLE

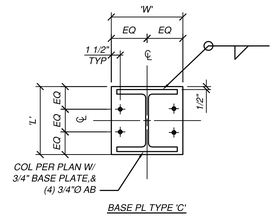
11 SECTION
SCALE: 1" = 1'-0"



BASE PL TYPE 'A'



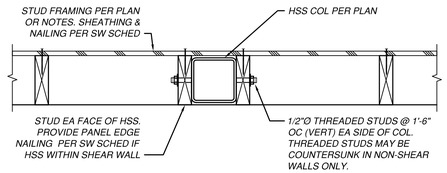
BASE PL TYPE 'B'



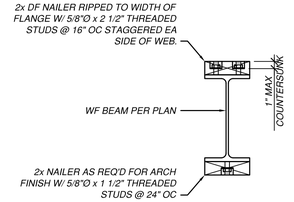
BASE PL TYPE 'C'

3 TYPICAL BASE PLATE DETAILS
SCALE:NTS

NOTES:
1. WELD ALL THREADED STUDS PER NELSON STUD WELDING REQUIREMENTS.
2. ALL THREADED STUDS SHALL HAVE WASHERS

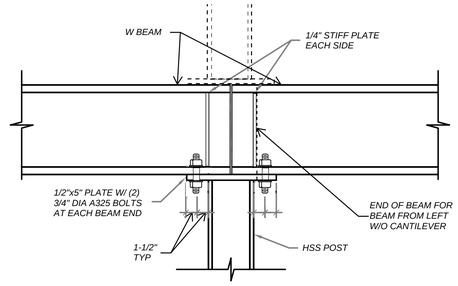


COLUMN NAILERS



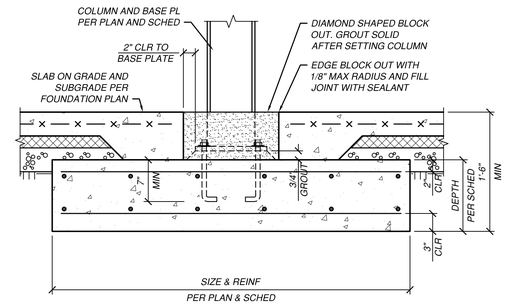
BEAM NAILER

4 TYPICAL WOOD NAILERS TO STEEL FRAMING
SCALE: 1 1/2" = 1'-0"



NOTE: CONN FOR POST ABOVE STL BM SIMILAR TO POST TO BM CONN BOLEW

9 W BEAM TO HSS POST CONNECTION
SCALE: 1" = 1'-0"



10 ISOLATED FOOTING DETAIL
SCALE: 1" = 1'-0"

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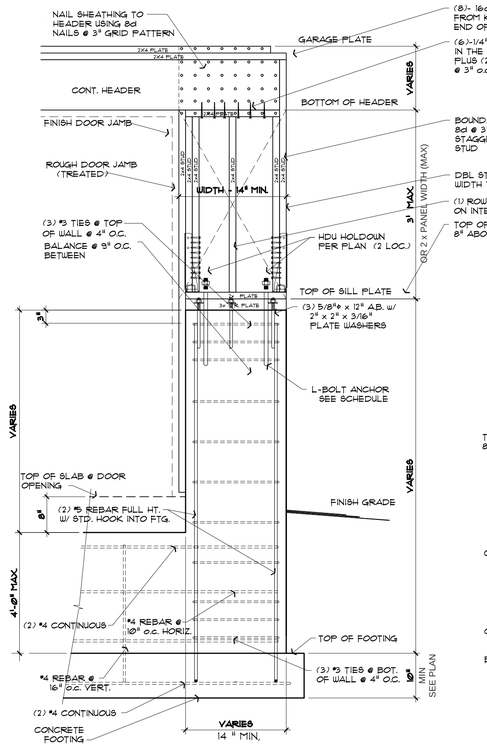
SHEET TITLE
STEEL DETAILS

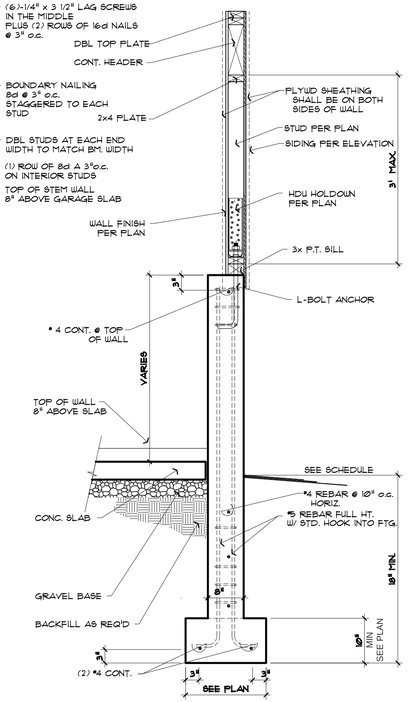
JOB NUMBER

SHEET NUMBER
S5.6

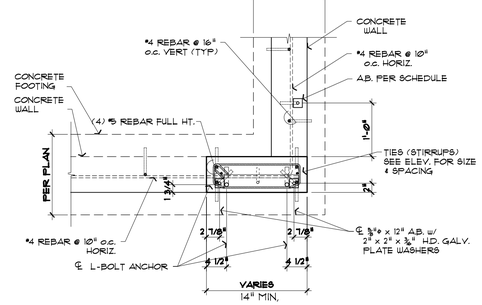
CITY STAMP



ELEVATION



SECTION



PLAN

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SHEET TITLE
GARAGE PANEL DETAIL

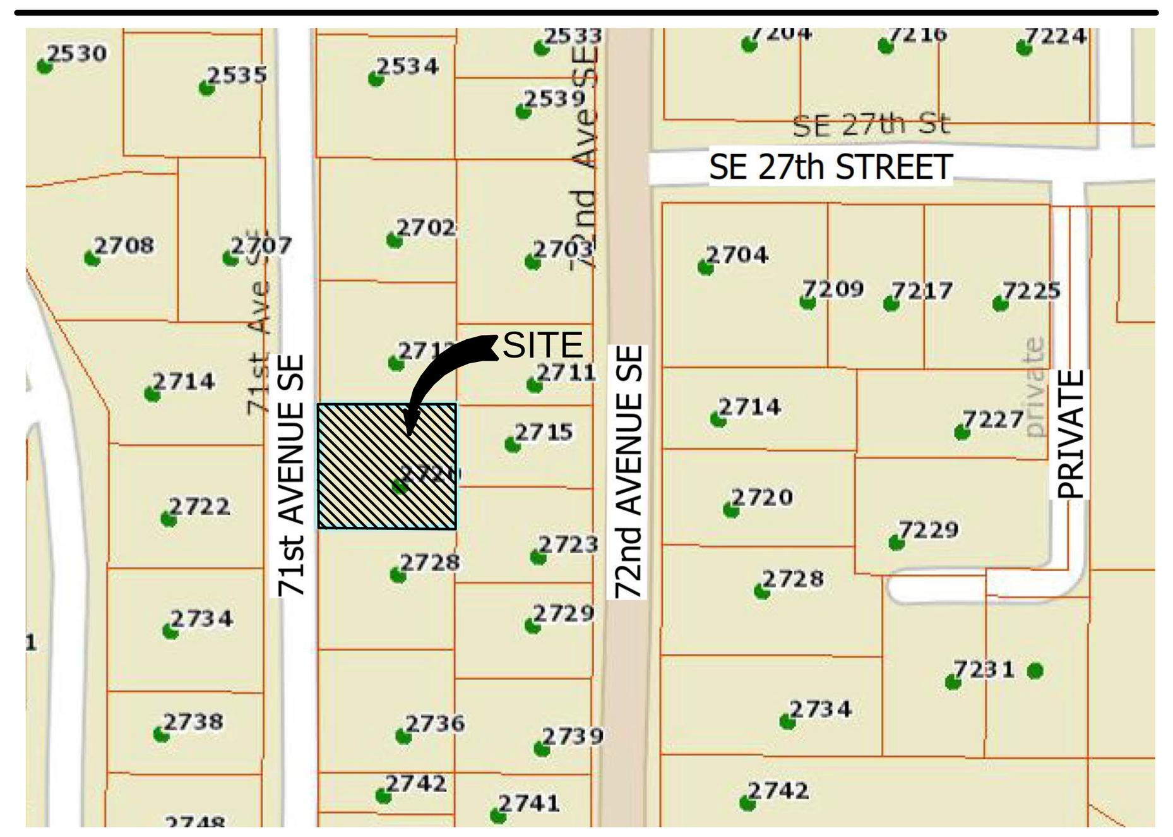
JOB NUMBER

SHEET NUMBER
S5.7

CITY STAMP

VICINITY MAP

N.T.S.



ORGANIC SOIL REQUIREMENT

MINIMUM 10% ORGANIC MULCH & COMPOST SOIL REQUIRED

SOIL AMENDMENT REQUIRED

COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5.

SOIL INSPECTION REQUIRED BY ENGINEER

A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.

TREE PROTECTION

(TP) ....CHAIN LINK FENCE REQ FOR TREE PROTECTION

TREE PROTECTION NOTES

(REF: SEATTLE TREE CONSULTING, DOUGLAS SMITH, CERTIFIED ARBORIST)

-FOR THE TREES BEING RETAINED, TREE PROTECTION FENCING SHOULD BE INSTALLED AT THE OUTER EDGE OF THE DRIP LINE OR AS CLOSE TO IT AS IS PRACTICALLY POSSIBLE.

-FENCING SHOULD BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES AND REMAIN IN PLACE FOR THE DURATION OF THE PROJECT. FENCING SHOULD ONLY BE MOVED TEMPORARILY IF MINOR DISTURBANCES MUST OCCUR WITHIN THE DRIP LINE AND THE FENCING SHOULD BE REPLACED IMMEDIATELY ONCE THAT PORTION OF THE WORK IS COMPLETED.

-THE TREE PROTECTION AREA IS DESIGNATED TO BE AN AREA OF NO IMPACT, NO STORING OF MATERIALS, NO ENCROACHMENT AND NO STAGING OF DEBRIS.

-THE TREE PROTECTION FENCING SHOULD HAVE SIGNS EVERY 8' FACING ACCESS THAT INDICATE THE AREA IS A TREE PROTECTION ZONE.

-TRENCHING THROUGH THE CRZ FOR UTILITIES IS NOT PERMITTED (TUNNELING IS THE PREFERRED METHOD).

-GRADE CHANGES IN THE CRZ ARE NOT PERMITTED.

-VEHICLE MAINTENANCE AND WASHING OF EQUIPMENT (ESPECIALLY CONCRETE), IS NOT PERMITTED.

-NO ATTACHING ANYTHING TO THE TREE WITH CINCHING KNOTS OR HARDWARE.

-ROOT FLARE SHOULD BE PROTECTED WITH CHIPS SO THAT LAWN MAINTENANCE EQUIPMENT DOES NOT HAVE TO WORK CLOSE TO THE SYSTEM.

-PROPER CLEARANCES SHOULD BE MONITORED.

-THE CRZ OR CRITICAL ROOT ZONE NEEDS TO BE PROTECTED. THE INNER CRZ IS 50 % OF THE RADIUS OF THE CRZ AND THERE SHOULD BE ZERO DISTURBANCE IN THIS ZONE. A DISTURBANCE OF UP TO 33 % OF THE OUTER CRZ IS PERMISSIBLE PROVIDED THAT ANY HEAVY DIGGING EQUIPMENT WORKS TOWARD THE TREE, AND THAT ANY ROOTS ENCOUNTERED THAT ARE OVER 1" IN DIAMETER ARE EXCAVATED AROUND WITH HAND TOOLS AND CUT CLEAN WITH A SHARP SAW BEHIND THE EXCAVATION ZONE SO THAT THE ROOT CAN BIFURCATE AND CONTINUE TO GROW. IN SOME CASES, IF EXCESSIVE PRUNING HAS BEEN DONE, THE CRZ CAN BE LARGER THAN THE DRIP LINE RADIUS.

[A] CLEARING LIMIT NOTE

ALL SELECTIVE CLEARING, TRENCHING AND OTHER WORK WITHIN THE DRIPLINES OF SIGNIFICANT TREES SHALL BE BY LOW IMPACT/HAND METHODS ONLY AND WORK SHALL BE ADJUSTED AS POSSIBLE TO MINIMIZE ANY DISTURBANCE TO THE SIGNIFICANT AND RETAINED TREES AND PROTECTED UNDERSTORY. CONSTRUCTION MATERIALS AND VEHICLES SHALL NOT BE STORED OUTSIDE THE CLEARING LIMITS.

[B] TREE DRIPLINE NOTE

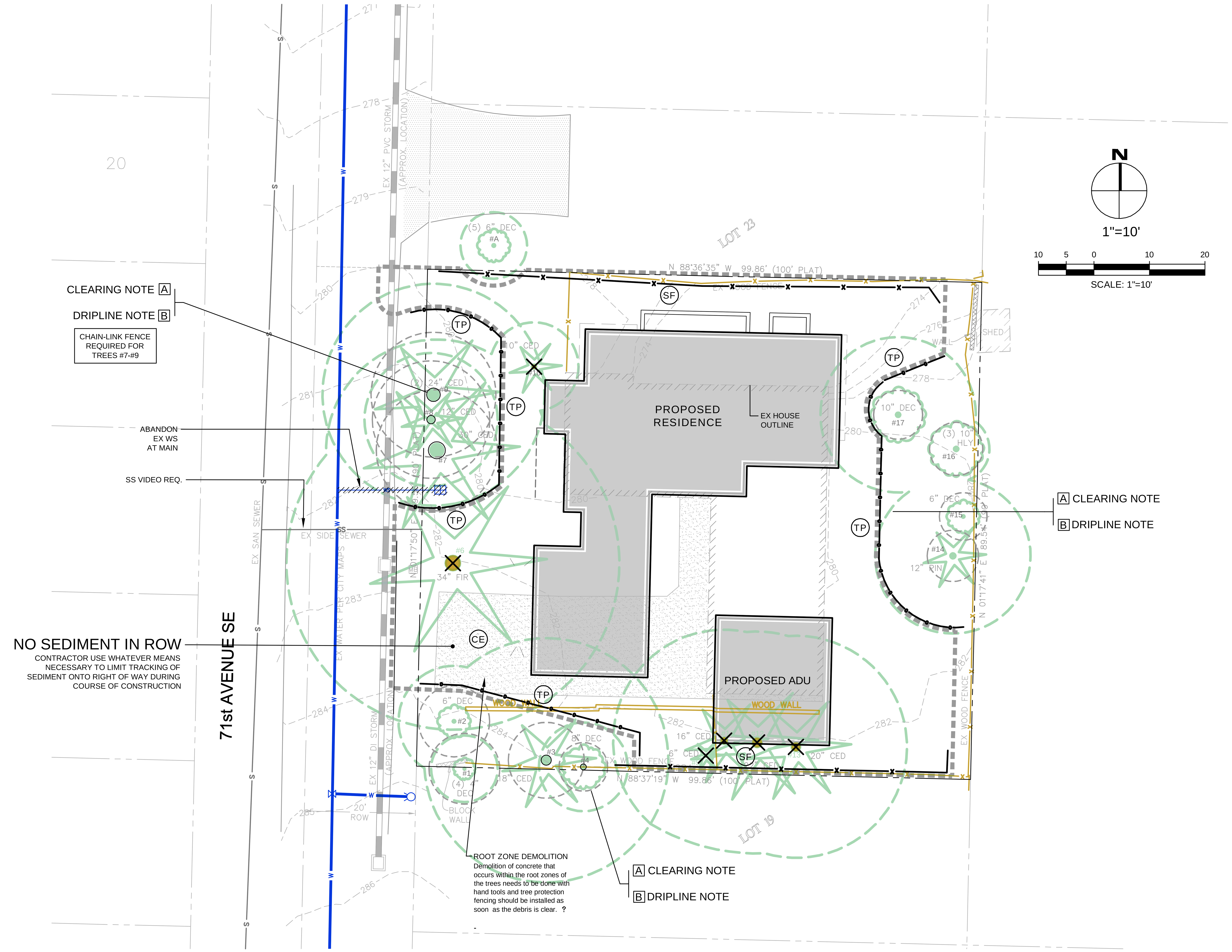
WORK WITHIN THE DRIPLINE OF TREES TO BE SAVED MUST BE UNDER THE DIRECTION OF A CERTIFIED ARBORIST (TYP.) SEE ALSO CLEARING LIMIT NOTE ON THIS SHEET.

EROSION CONTROL LEGEND

SHEET C1.2

EROSION CONTROL NOTES

SHEET C1.2



NO.	DATE	BY	REVISIONS

APPLICANT:
SHERRY

DATE: May 03, 2022
JOB# 1643
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

May 03, 2022
JEFFREY E. [illegible] STATE OF WASHINGTON 39766 REGISTERED PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

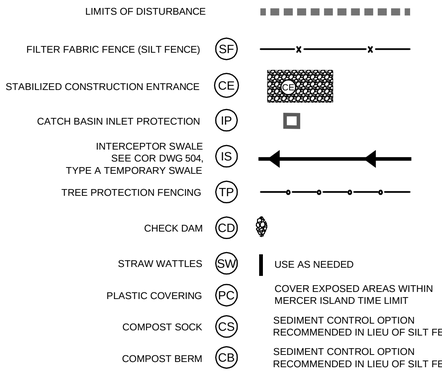
EROSION CONTROL PLAN
TREE PROTECTION PLAN

2720 RESIDENCE
2720 71st AVENUSE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C1.0

APN 217450-1915

EROSION CONTROL LEGEND



RECOMMENDED CONSTRUCTION SEQUENCE

A DETAILED CONSTRUCTION SEQUENCE IS NEEDED TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE APPLIED AT THE APPROPRIATE TIMES. A RECOMMENDED CONSTRUCTION SEQUENCE IS PROVIDED BELOW:

1. HOLD AN ONSITE PRE-CONSTRUCTION MEETING.

2. POST SIGN WITH NAME AND PHONE NUMBER OF ESC SUPERVISOR (MAY BE CONSOLIDATED WITH THE REQUIRED NOTICE OF CONSTRUCTION SIGN).

3. FLAG OR FENCE CLEARING LIMITS.

4. INSTALL CATCH BASIN PROTECTION, IF REQUIRED.

5. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).

6. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).

7. CONSTRUCT SEDIMENT PONDS AND TRAPS.

8. GRADE AND STABILIZE CONSTRUCTION ROADS.

9. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.

10. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

11. RELOCATE SURFACE SURFACE WATER CONTROLS OR TESC MEASURES, OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE TESC IS ALWAYS IN ACCORDANCE WITH CITY OF MERCER ISLAND TESC REQUIREMENTS.

12. COVER ALL AREAS THAT WILL BE UN-WORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) OR TWO DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.

13. STABILIZE ALL AREAS WITHIN SEVEN DAYS OF REACHING FINAL GRADE.

14. SEED, SOD, STABILIZE, OR COVER ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.

15. UPON COMPLETION OF THE PROJECT, STABILIZE ALL DISTURBED AREAS AND REMOVE BMPS IF APPROPRIATE.

DENUDED AREAS REQUIREMENTS

APRIL 1 TO SEPT 30
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 7 DAYS OF CONSTRUCTION. PLEASE READ ALL CITY TESC NOTES ON SHEET C1.2.

OCT 1 TO MARCH 31
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING. IF AN EROSION PROBLEM ALREADY EXISTS ON THE SITE, OTHER COVER PROTECTION AND EROSION CONTROL WILL BE REQUIRED.

EROSION CONTROL NOTES

D.8.2 STANDARD ESC PLAN NOTES
THE STANDARD ESC PLAN NOTES MUST BE INCLUDED ON ALL ESC PLANS. AT THE APPLICANT'S DISCRETION, NOTES THAT IN NO WAY APPLY TO THE PROJECT MAY BE OMITTED; HOWEVER, THE REMAINING NOTES MUST NOT BE RENUMBERED. FOR EXAMPLE, IF ESC NOTE #3 WERE OMITTED, THE REMAINING NOTES SHOULD BE NUMBERED 1, 2, 4, 5, 6, ETC.

1. APPROVAL OF THIS EROSION AND 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/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.

3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.

4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.

5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.

6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY CITY OF MERCER ISLAND.

7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.

8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).

9. ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.

10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.

11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.

12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.

13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL

14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

CITY NOTES

1. ANY CHANGES TO THE APPROVED PLANS REQUIRES CITY APPROVAL THROUGH A REVISION.

2. APPLICANT IS RESPONSIBLE FOR ANY DAMAGES TO UNDERGROUND UTILITIES CAUSED FROM THIS CONSTRUCTION.

3. CATCH BASIN FILTERS SHOULD BE PROVIDED FOR ALL STORM DRAIN CATCH BASINS/INLETS DOWNSLOPE AND WITHIN 500 FEET OF THE CONSTRUCTION AREA. CATCH BASIN FILTERS SHOULD BE DESIGNED BY THE MANUFACTURER FOR USE AT CONSTRUCTION SITES AND APPROVED BY THE CITY INSPECTOR. CATCH BASIN FILTERS SHOULD BE INSPECTED FREQUENTLY, ESPECIALLY AFTER STORM EVENTS. IF THE FILTER BECOMES CLOGGED, IT SHOULD BE CLEANED OR REPLACED.

4. CONTRACTORS SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITES.

5. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL "ONE CALL" AT 1.800.424.5555

6. DO NOT BACKFILL WITH NATIVE MATERIAL ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL MUST BE IMPORTED

7. EROSION CONTROL: ALL "LAND DISTURBING ACTIVITY" IS SUBJECT TO PROVISIONS OF MERCER ISLAND ORDINANCE 95C-118 "STORM WATER MANAGEMENT." SPECIFIC ITEMS TO BE FOLLOWED AT YOUR SITE:

8. PROTECT ADJACENT PROPERTIES FROM ANY INCREASED RUNOFF OR SEDIMENTATION DUE TO THE CONSTRUCTION PROJECT THROUGH THE USE OF APPROPRIATE "BEST MANAGEMENT PRACTICES" (BMP) EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO, SEDIMENT TRAPS, SEDIMENT PONDS, FILTER FABRIC FENCES, VEGETATIVE BUFFER STRIPS OR BIOENGINEERED SWALES.

9. CONSTRUCTION ACCESS TO THE SITE SHOULD BE LIMITED TO ONE ROUTE. STABILIZE ENTRANCE WITH QUARRY SPALLS TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING THE STORM DRAINS.

10. PREVENT SEDIMENT, CONSTRUCTION DEBRIS, PAINTS, SOLVENTS, ETC., OR OTHER TYPES OF POLLUTION FROM ENTERING PUBLIC STORM DRAINS. KEEP ALL POLLUTION ON YOUR SITE.

11. ALL EXPOSED SOILS SHALL REMAIN DENUDED FOR NO LONGER THAN SEVEN (7) DAYS AND SHALL BE STABILIZED WITH MULCH, HAY, OR THE APPROPRIATE GROUND COVER. ALL EXPOSED SOILS SHALL BE COVERED IMMEDIATELY DURING ANY RAIN EVENT.

12. INSTALLATION OF CONCRETE DRIVEWAYS, TREES, SHRUBS, IRRIGATION, BOULDERS, BERMS, WALLS, GATES, AND OTHER IMPROVEMENTS ARE NOT ALLOWED IN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR APPROVAL, AND AN ENCROACHMENT AGREEMENT AND RIGHT OF WAY PERMIT FROM THE SENIOR DEVELOPMENT ENGINEER.

13. OWNER SHALL CONTROL DISCHARGE OF SURFACE DRAINAGE RUNOFF FROM EXISTING AND NEW IMPERVIOUS AREAS IN A RESPONSIBLE MANNER. CONSTRUCTION OF NEW GUTTERS AND DOWNSPOUTS, DRY WELLS, LEVEL SPREADERS OR DOWNSTREAM CONVEYANCE PIPE MAY BE NECESSARY TO MINIMIZE DRAINAGE IMPACT TO YOUR NEIGHBORS. CONSTRUCTION OF MINIMUM DRAINAGE IMPROVEMENTS SHOWN OR CALLED OUT ON THIS PLAN DOES NOT IMPLY RELIEF FROM CIVIL LIABILITY FOR YOUR DOWNSTREAM DRAINAGE.

14. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.

15. REMEMBER: EROSION CONTROL IS YOUR FIRST INSPECTION.

16. ROOF DRAINS MUST BE CONNECTED TO THE STORM DRAIN SYSTEM AND INSPECTED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO ANY BACKFILLING OF PIPE.

17. SILENT FENCE: CLEAN AND PROVIDE REGULAR MAINTENANCE OF THE SILT FENCE. THE FENCE IS TO REMAIN VERTICAL AND IS TO FUNCTION PROPERLY THROUGHOUT THE TERM OF THE PROJECT.

18. WORK IN PUBLIC RIGHT OF WAY REQUIRES A RIGHT-OF-WAY USE PERMIT.

19. REFER TO WATER SERVICE PERMIT FOR ACTUAL LOCATION OF NEW WATER METER AND SERVICE LINE DETERMINED BY MERCER ISLAND WATER DEPARTMENT.

16. THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN IS REQUIRED. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED. ALTERNATELY, A PRESSURE TEST OF THE SIDE SEWER, FROM SEWER MAIN TO POINT OF CONNECTION, MAY BE SUBSTITUTED FOR THE VIDEO INSPECTION.

20. NEWLY INSTALLED SIDE SEWER REQUIRES A 4 P.S.I. AIR TEST OR PROVIDE 10' OF HYDROSTATIC HEAD TEST.

21. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.

22. THE LIMITS AND EXTENDS OF THE PAVEMENT IN THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED BY THE CITY ENGINEER PRIOR TO FINALIZE THE PROJECT.

NO.	DATE	BY	REVISIONS

APPLICANT:
SHERRY

DATE: May 03, 2022
JOB# 1643
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

May 03, 2022
JEFFREY E. RUPERT
STATE OF WASHINGTON
36766
REGISTERED
PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

NOTES

2720 RESIDENCE
2720 71st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C1.2

APN 217450-1915

SANITARY SEWER IMPROVEMENTS

(1) -

(2) 6" SDR 35 PVC SANITARY SEWER(SS) @ MIN 1.0 %.

(3) -

(4) 6" SEWER CLEANOUT PER MERCER ISLAND DETAIL S-19.

(7) LOCATE AND VIDEO CONDITION OF EXISTING SANITARY SIDE SEWER. REPLACE LINE IF FOUND DEFECTIVE AS DETERMINED BY CITY INSPECTOR.

(8) -

WATER IMPROVEMENTS

(10) -NEW SF RESIDENTIAL WATER SERVICE & METER PIT. CONFIRM REQUIRED SIZE WITH BUILDING PERMIT REVIEW. INSTALL PER MERCER ISLAND DETAIL W-13, W-14, OR W-14A DEPENDING ON SIZE REQUIREMENT.

(11) MIN 1.5" 250 PSI PRIVATE HDPE WATER (ASTM D2239) FROM METER TO HOUSE. RECOMMENDED DEPTH=36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER.

(12) -

(14)

STORM DRAIN

(20) 4" STORM DRAIN (3034 PVC) @ MIN 1 % GRADE.

(21) 4" FOUNDATION DRAIN (3034 PVC) @ MIN 1 % GRADE.

(22) 6" STORM DRAIN (3034 PVC) @ MIN 1 % GRADE.

(23) -

(24) -

(25) -1 1/2" FOOTING DRAIN FORCE MAIN @ MIN. 36" DEPTH.

(26) -

(28) -

(29) ~~-BED & TRENCH PIPE PER CITY DETAIL S-3. COMPACT TRENCH TO 95 -% STD PROCTOR UNDER PAVED AREAS.~~

STORM DRAIN STRUCTURES

(30) -

(31) -TYPE 1 CB WITH VANED LID. MAX 5' RIM TO FL DEPTH.

(32) -

(33) -

(34) -

(35) -

(36) 6" WIDE NDS DURASLOPE CHANNEL DRAIN KIT OR EQUAL. USE TRAFFIC RATED, GALVANIZED STEEL GRATE OR EQUAL.

(39) -

(40) -TYPE 40 CATCH BASIN. IN DRIVEWAY INCLUDE OIL/WATER TURNED DOWN ELBOW OR RISER TEE

(41) -

(43) -

(46) -

(47) -

(48) -FOOTING DRAIN SUMP PUMP: USE 1/3 HP HYDROMATIC SUMP PUMP OR EQUAL. 120V, 1/3 HP, SINGLE PHASE, 8.0 AMP 1-1/2" DISCHARGE. PLACE IN 24" GREEN ULTRA-RIB PVC PIPE OR EQUAL. FIELD LOCATE FOOTING DRAIN SUMP PUMP. RECOMMEND 12V BATTERY BACKUP AND WI-FI CONNECTIVITY.

SURVEYOR

TOPOGRAPHIC & BOUNDARY SURVEY BY:
TERRANE LAND SURVEYING
10801 MAIN STREET, SUITE 102
BELLEVUE, WA 98004
PHONE 425.458.4488
WWW.TERRANE.NET

BENCHMARK

CONTACT SURVEYOR FOR BENCHMARK.

VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

MINIMUM 10% ORGANIC MULCH & COMPOST SOIL REQUIRED

[A] CLEARING LIMIT NOTE

ALL SELECTIVE CLEARING, TRENCHING AND OTHER WORK WITHIN THE DRIPLINES OF SIGNIFICANT TREES SHALL BE BY LOW IMPACT/HAND METHODS ONLY AND WORK SHALL BE ADJUSTED AS POSSIBLE TO MINIMIZE ANY DISTURBANCE TO THE SIGNIFICANT AND RETAINED TREES AND PROTECTED UNDERSTORY. CONSTRUCTION MATERIALS AND VEHICLES SHALL NOT BE STORED OUTSIDE THE CLEARING LIMITS.

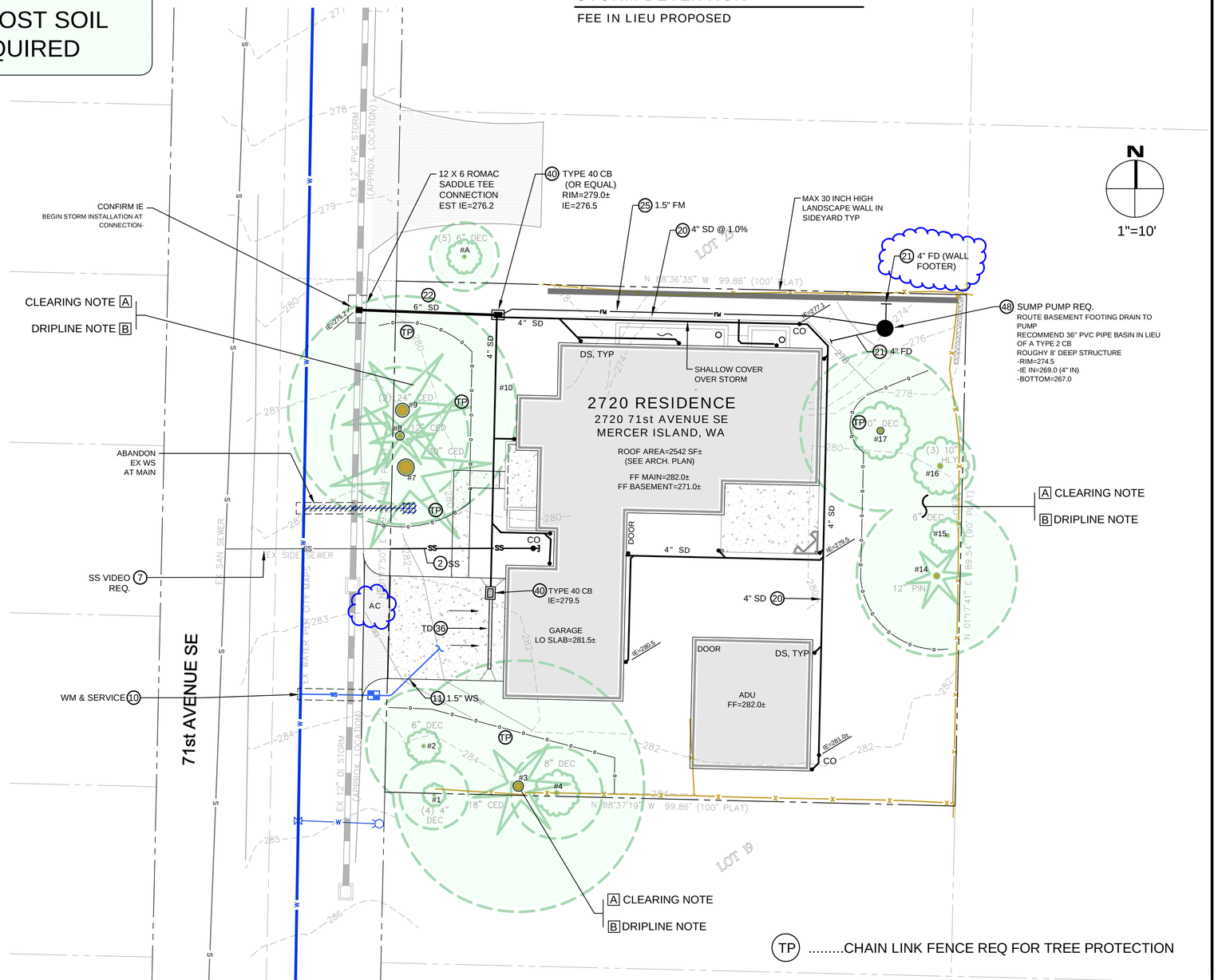
[B] TREE DRIPLINE NOTE

WORK WITHIN THE DRIPLINE OF TREES TO BE SAVED MUST BE UNDER THE DIRECTION OF A CERTIFIED ARBORIST (TYP.) SEE ALSO CLEARING LIMIT NOTE ON THIS SHEET.

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

STORM DETENTION

FEE IN LIEU PROPOSED



NO.	DATE	BY	REVISIONS

APPLICANT:
SHERRY

DATE: Apr 29, 2022
JOB# 1643
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

Apr 29 2022 JEFFREY E. DUFFY STATE OF WASHINGTON 39766 REGISTERED PROFESSIONAL ENGINEER

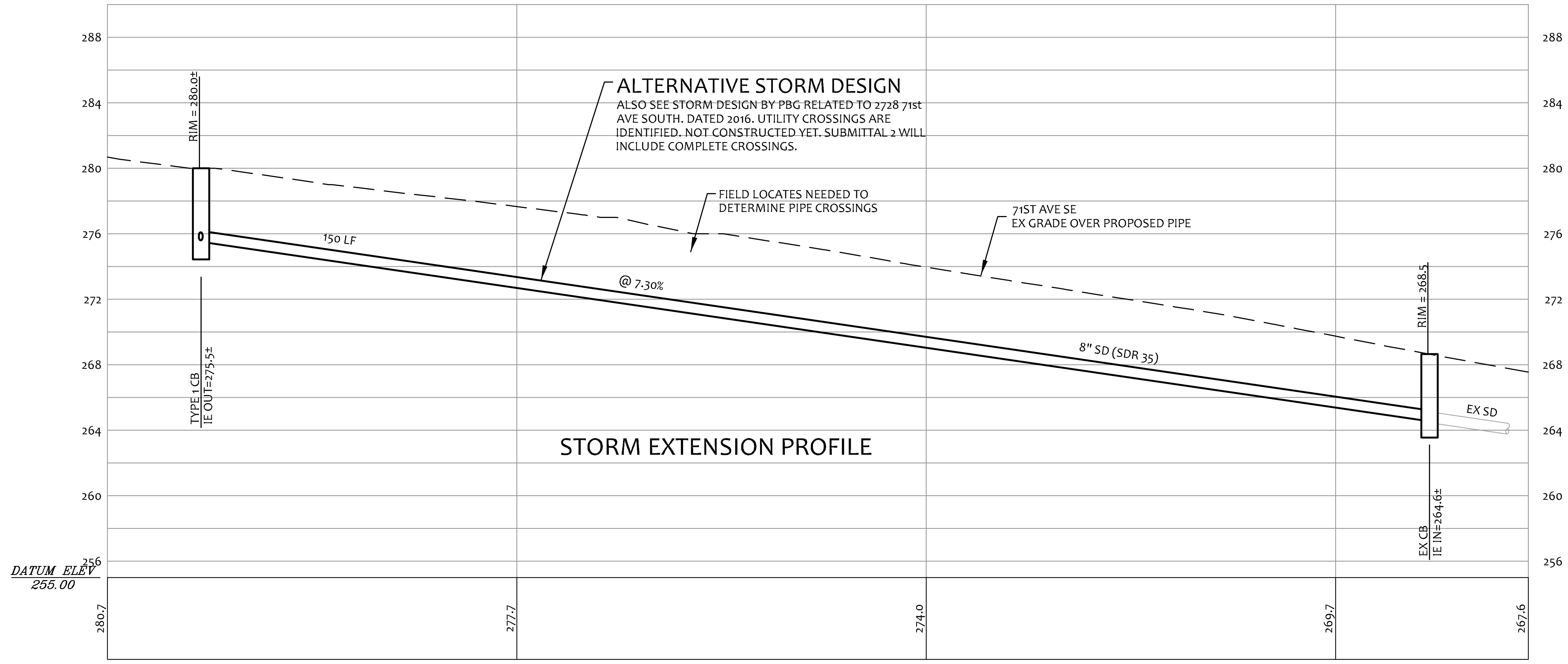
CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

DRAINAGE PLAN

2720 RESIDENCE
2720 71st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C2.0

APN 217450-1915



71ST AVE SE STORM DRAIN

SCALE: H 1"=10'
SCALE: V 1"=5'

NO.	DATE	BY	REVISIONS

APPLICANT:
SHERRY

DATE: Sep 07, 2017
JOB# 1643
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE

CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

71st AVE SE STORM DRAIN

2720 RESIDENCE
2720 71st AVENUSE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C2.1
APN 217450-1915

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER QUIT CLAIM DEED RECORDED #20150127001215)

LOTS 20, 21 AND 22 IN BLOCK 9 OF EAST SEATTLE ADDITION, AS PER PLAT RECORDED IN VOLUME 3 OF PLATS, PAGE 22 AND 23, IN KING COUNTY, WASHINGTON.

BASIS OF BEARINGS

HELD BEARING N 89°29'46" W ALONG S.E. 24TH ST. AS SHOWN HEREON, AND PER REFERENCE 1

REFERENCES

1. R.O.S. PER K.C.R.N. 20061213900004
2. R.O.S. PER K.C.R.N. 9001189001 (ALIGNMENT OF S.E. 27TH ST)
3. HEDLUND S.P. PER K.C.R.N. 7709099012
4. R.O.S. PER K.C.R.N. 20070629900010
5. PLAT OF EAST SEATTLE PER VOL. 3, PG 22&23 KING COUNTY WA

VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

SURVEYOR'S NOTES

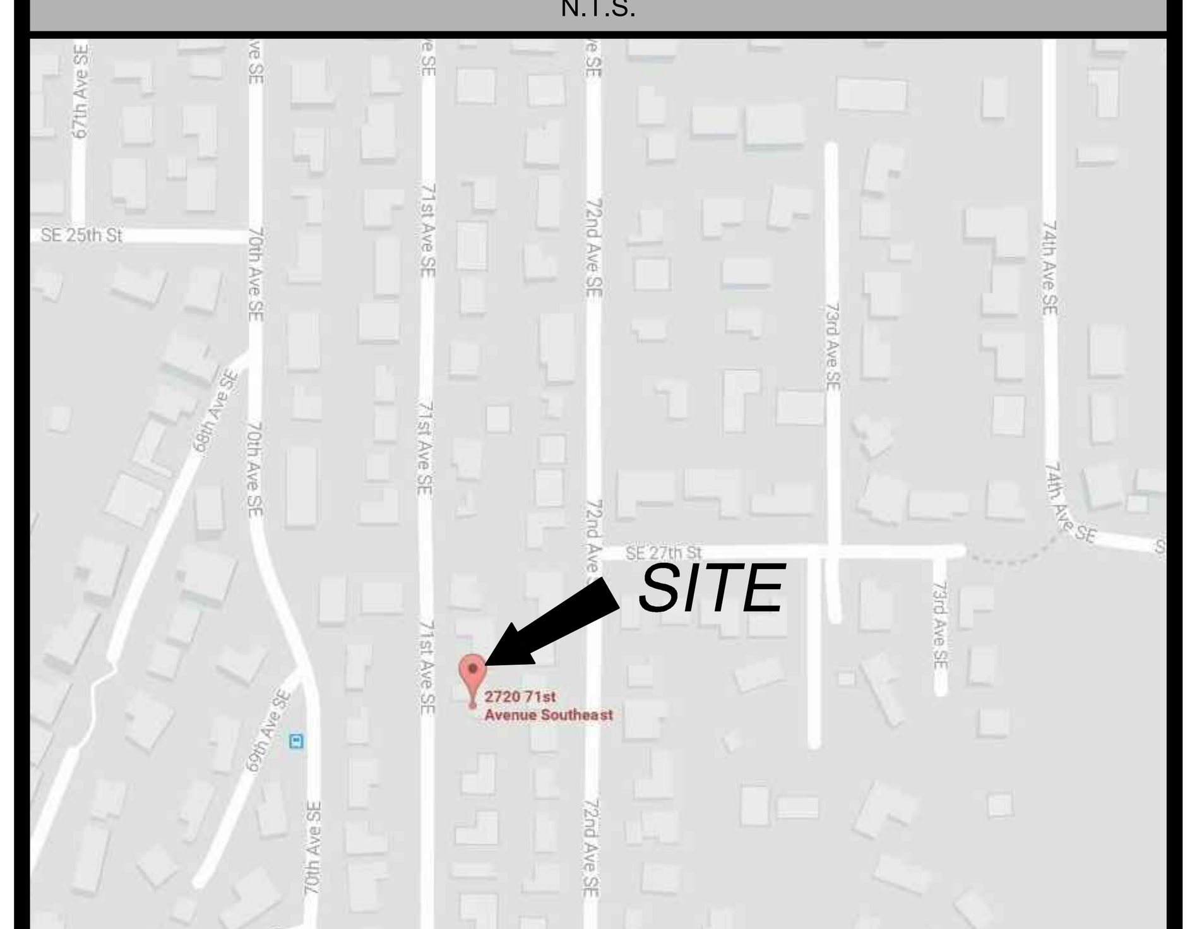
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN MAY OF 2017. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. BURIED UTILITIES SHOWN BASED ON RECORDS FURNISHED BY OTHERS AND VERIFIED WHERE POSSIBLE IN THE FIELD. TERRANE ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS OR ACCEPT RESPONSIBILITY FOR UNDERGROUND LINES WHICH ARE NOT MADE PUBLIC RECORD. FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO DESIGN CONTACT THE UTILITY OWNER/AGENCY. AS ALWAYS, CALL 1-800-424-5555 BEFORE CONSTRUCTION.
4. SUBJECT PROPERTY TAX PARCEL NO. 217450-1915
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 8,943 ± S.F. (0.21 ± ACRES) – 9,000 S.F. PER KING COUNTY ASSESSOR'S
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.

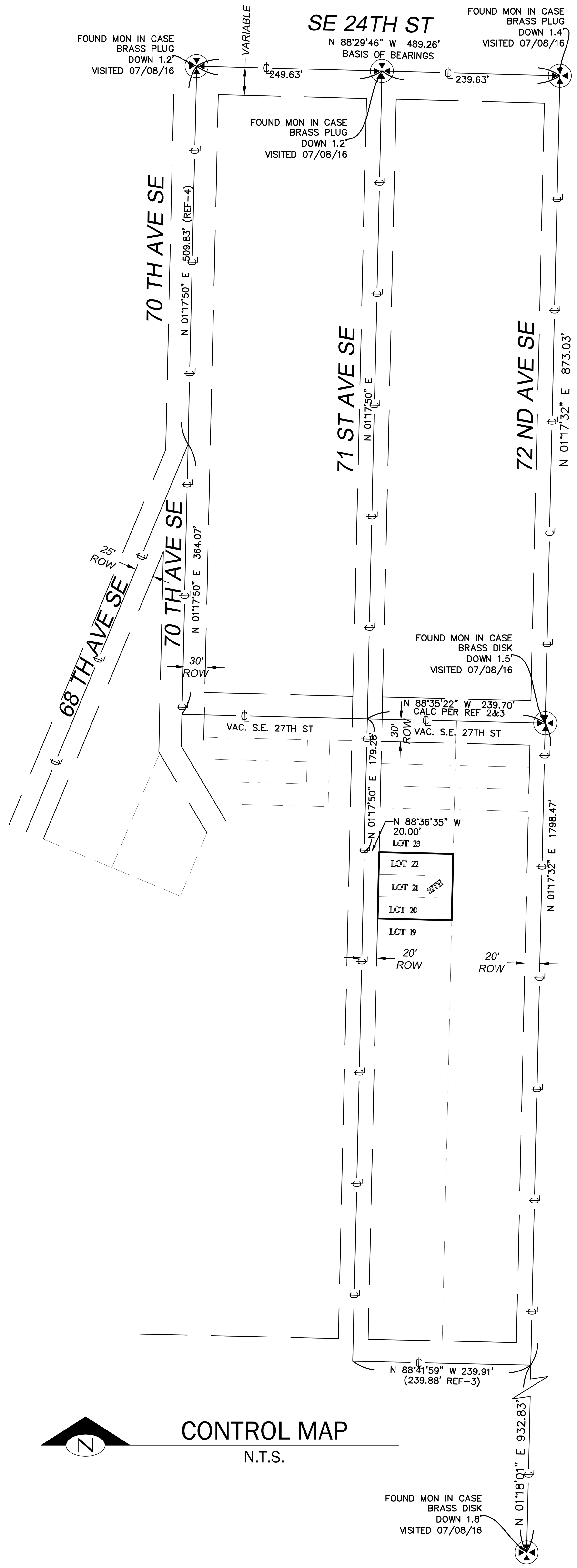
LEGEND

- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- CONCRETE WALL
- DECK
- FENCE LINE (WOOD)
- FIRE HYDRANT
- GAS METER
- MAILBOX (RESIDENTIAL)
- MONUMENT IN CASE (FOUND)
- POWER METER
- POWER (OVERHEAD)
- REBAR & CAP (SET)
- ROCKERY
- SEWER LINE
- SEWER MAINTENANCE
- TREE (AS NOTED)
- WATER VALVE

VICINITY MAP

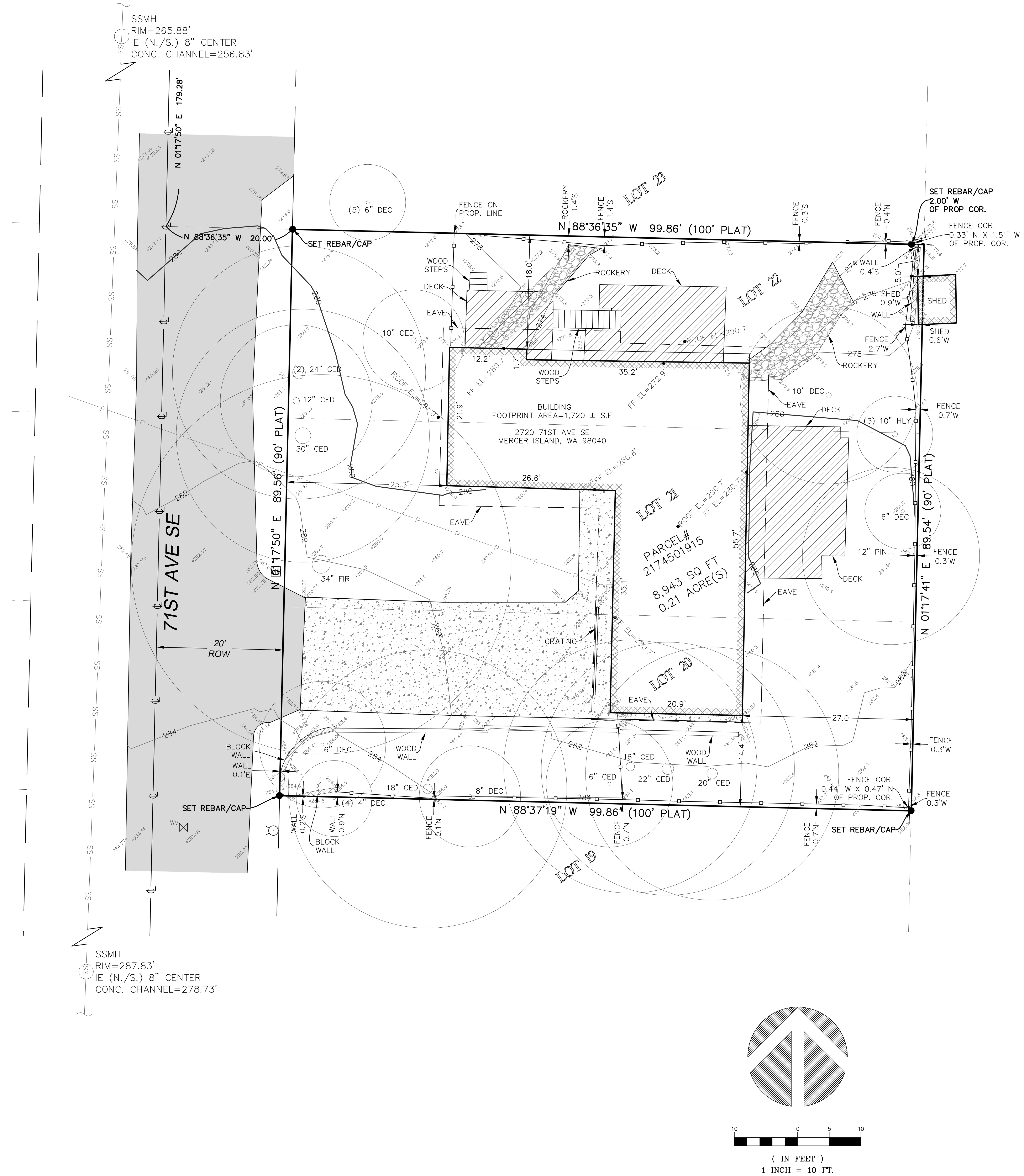
N.T.S.





CONTROL MAP

N.T.S.



TOPOGRAPHIC & BOUNDARY SURVEY
NW 1/4 OF NW 1/4 SEC 12, TWP. 24 N., RGE 04 E., W.M.
PARCEL NO. 2174501915

TSENG RESIDENCE
2720 71ST AVE SE
MERCER ISLAND, WA 98040

EDWIN J. GREEN JR. STATE OF WASHINGTON 15025 REGISTERED PROFESSIONAL LAND SURVEYOR 06/07/17

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

JOB NUMBER:	170719
DATE:	06/01/17
DRAFTED BY:	IDV-SMS
CHECKED BY:	EJG
SCALE:	1"= 10'

REVISION HISTORY

SHEET NUMBER

1 OF 1