

TOTAL NEW + REPLACED HARDSURFACE
492 SF + 6632 SF + 1798 SF + 2651 SF + 4945 SF = **16518 SF**
16518 SF < 2000 SF NEW PLUS REPLACED HARD SURFACE, THEREFORE OKAY

- NOTE: MERCER ISLAND BASES REPLACED HARD SURFACE ON REMOVAL OF EXTERIOR WALLS DOWN TO THE FOUNDATION OR SUBFLR
- ROOF EDGE MEASURED TO EAVE

EXIST'G ROOF SUPPORTED BY EXT WALLS TO BE REMOVED TO FDN 492 SF (BUMP/OUT REPLACES EXIST'G)

NEW SUPPORTING WALL TYP

EXIST'G ROOF SUPPORTED BY EXT WALLS TO BE REMOVED TO SUBFLR 6632 SF

EXIST'G WALL TO REMAIN TYP

EXIST'G ROOF SUPPORTED BY EXT WALL TO BE REMOVED BY SUBFLR 1798 SF

NEW ROOF SUPPORTED BY NEW EXT WALL: 2651 SF

NEW ROOF SUPPORTED BY NEW EXT WALL: 4945 SF

10 NEW + REPLACED HARD SURFACE
T = 40'

	SF
EXISTING HOUSE (INCL. KITCHEN CANTILEVER)	2903
MAIN FLOOR ADDITION OR ALTERATION	
KITCHEN BUMP OUT	276 SF
SOUTH ADDITION	4480 SF
ENTRY CONVERSION	28 SF
EAST SHED CONVERSION	144 SF
TOTAL MAIN FLOOR ADDITION OR ALTERATION	6476 SF
SECOND FLOOR ADDITION	591
TOTAL ADDITIONAL ALTERATION	12386
TOTAL HOUSE SF	3955

MAIN FLOOR ENTRY CONVERSION UN-HEATED SPACE TO HEATED SPACE: 28 SF (FROM GARAGE)

MAIN FLOOR KITCHEN BUMP/OUT REMOVED: 276 SF

UPPER FLOOR ADDITION: 591 SF

MAIN FLOOR CONVERSION EXISTING UN-HEATED SPACE TO HEATED SPACE: 144 SF

MAIN FLOOR ADDN SOUTH: 448 SF

NOTE: ALL MEASUREMENTS TAKEN FROM EXTERIOR FACE OF FRAMING

8 AREAS OF ADDITION
T = 40'

BUILDING AREA	EXISTING AREA	REMOVED AREA	NEW/ADD	SF
UPPER FLOOR	-	-	4739	4739
MAIN FLOOR	24997	255	4923	29665
GROSS BASEMENT AREA	-	-	-	-
GARAGE/CARPORT	4470	271	255	4454
TOTAL FLOOR AREA	29467	526	9917	38858
ACCESSORY BUILDINGS	-	-	-	-
ACCESSORY DWELLING UNIT	-	-	-	-
2ND & 3RD STORY ROOFED DECKS	-	-	-	-
BASEMENT AREA EXCLUDED	-	-	-	-
50% GFA MODIFIER* (MAIN AND UPPER FLOOR x2)	-	-	-	605
200% GFA MODIFIER* (MAIN AND UPPER FLOOR x2)	-	-	-	641
STAIRCASE GFA MODIFIER* (2 FOR A THREE STORY STAIRCASE, x3 FOR A FOUR STORY STAIRCASE)	-	-	-	-
TOTAL BUILDING AREA				40104

NOTE: PER 191600 DEFINITIONS, GROSS FLOOR AREA IS THE TOTAL SQUARE FOOTAGE OF FLOOR AREA BOUNDED BY THE EXTERIOR FACES OF THE BUILDING. PER 191600B, GFA INCLUDES DETACHED ACCESSORY BUILDINGS WITH A GROSS FLOOR AREA OVER 120 SF. (THEREFORE, EXIST'G ACCESSORY STRUCTURES NOT INCLUDED).

(E) ATTACHED GARAGE: 4470 SF

(E) MAIN FLOOR CONVERTED TO UNHEATED GARAGE: 255 SF

MAIN FLOOR ADDITION: 25 SF

(E) MAIN FLOOR: 24997 SF

UPPER FLOOR: 4739 SF

MAIN FLOOR CONVERSION TO HEATED SPACE: 1469 SF + 271 SF = 1740 SF

50% GFA (2x<16): 923 SF + 286 SF = 1209 SF (4605 SF)

TWO-STORY STAIRCASE (SF INCLUDED IN EXIST'G MAIN FLR)

200% GFA (3x>16): 641 SF (4841 SF)

MAIN FLOOR ADDITION: 4527 SF

NOTE: ALL MEASUREMENTS TAKEN FROM EXTERIOR FACE OF WALL

4 GROSS FLOOR AREA
T = 40'

	SF
EXISTING MAIN FLOOR CONDITIONED SPACE	2323
EXISTING MAIN FLOOR UNCONDITIONED (GARAGE)	431
NEW MAIN FLOOR CONDITIONED SPACE	
@ KITCHEN	276
@ ENTRY	28
@ EAST	144
@ SOUTH	448
NEW MAIN FLOOR UNCONDITIONED SPACE (@ GARAGE)	26
NEW SECOND FLOOR CONDITIONED	591
TOTAL NEW CONDITIONED	12386
TOTAL CONDITIONED	3521
TOTAL NEW UNCONDITIONED	26
TOTAL UNCONDITIONED	434

EXIST'G + NEW UNCONDITIONED GARAGE: 434 SF

NEW UNCONDITIONED GARAGE: 26 SF

EXIST'G MAIN FLOOR REPLACES EXIST'G: 276 SF

EXIST'G CONDITIONED MAIN FLOOR: 2323 SF

TOTAL (E) CONDITIONED/UNCONDITIONED FOOTPRINT (INCL. CANTILEVER @ KITCHEN): 2903 SF

NEW CONDITIONED UPPER FLOOR: 591 SF

NEW CONDITIONED MAIN FLOOR: 28 SF

NEW CONDITIONED MAIN FLOOR: 144 SF

NEW CONDITIONED MAIN FLOOR: 448 SF

NOTE: ALL MEASUREMENTS TAKEN FROM EXTERIOR FACE OF FRAMING

7 CONDITIONED SPACE
T = 40'

	SF
A. GROSS LOT AREA	14,250
B. NET LOT AREA	14,250
C. AREA BORROWED FROM LOT COVERAGE	-
D. ALLOWED HARDSCAPE AREA = 9% OF LOT AREA + C	9%
E. ALLOWED HARDSCAPE AREA	1,282.5
F. TOTAL EXISTING HARDSCAPE AREA	
1. UNCOVERED DECKS	460.5
2. UNCOVERED PATIOS	-
3. WALKWAYS	1592
4. STAIRS	-
5. ROCKERES AND RETAINING WALLS	1565
6. OTHER	-
7. TOTAL EXISTING HARDSCAPE AREA (F1 + F2 + F3 + F4 + F5 + F6)	7762
G. (TOTAL HARDSCAPE AREA REMOVED)	225
H. TOTAL NEW HARDSCAPE AREA	
1. UNCOVERED DECKS	-
2. UNCOVERED PATIOS	-
3. WALKWAYS	-
4. STAIRS	-
5. ROCKERES AND RETAINING WALLS	-
6. OTHER	-
7. TOTAL NEW HARDSCAPE AREA (H1 + H2 + H3 + H4 + H5 + H6)	-
I. TOTAL PROJECT HARDSCAPE AREA = (F7 - G) + H7	7537
J. TOTAL PROJECT HARDSCAPE AREA = (I/D) X 100	5.3%

NOTE: PER 191600 DEFINITIONS, HARDSCAPE IS THE SOLID, HARD, ELEMENTS OR STRUCTURES THAT ARE INCORPORATED INTO LANDSCAPING. THE HARDSCAPE INCLUDES, BUT IS NOT LIMITED TO, STRUCTURES OTHER THAN BUILDINGS, PAVED AREAS OTHER THAN DRIVING SURFACES, STAIRS, WALKWAYS, DECKS, PATIOS, AND SIMILAR CONSTRUCTED ELEMENTS. MEASUREMENTS PER SURVEY.

F5 (E) ROCKERES & RETAINING WALLS: 34 SF + 278 SF SF + 111 SF (TO BE REMOVED) = 423 SF

G. TOTAL HARDSCAPE REMOVED: 111 SF

F3 (E) WALKWAYS: 117 SF + 415 SF = 1592 SF

F1 (E) UNCOVERED DECK: 460.5 SF

F5, G (E) ROCKERES AND RETAINING WALLS TO BE REMOVED: 114 SF

F5 (E) ROCKERES & RETAINING WALLS: 1028 SF

GROSS/NET LOT AREA: 14,250 SF

NOTE: ALL MEASUREMENTS TAKEN FROM EXTERIOR FACE OF WALL

3 HARDSCAPE
T = 40'

IMPERVIOUS SURFACE	SF
A1: (E) IMPERVIOUS SURFACE TO REMAIN	3674.7
A2: (E) IMPERVIOUS SURFACE TO BE REMOVED	-776
A3: (E) IMPERVIOUS SURFACE TO BE REPLACED	5229
A4: (N) IMPERVIOUS SURFACE	458.7
TOTAL IMPERVIOUS SURFACE	4588.7
NET INCREASE IN IMPERVIOUS SURFACE	458.7

NOTE: PER 191600 DEFINITIONS, IMPERVIOUS SURFACES INCLUDE WITHOUT LIMITATION THE FOLLOWING:
1. BUILDINGS - THE FOOTPRINT OF THE BUILDING AND STRUCTURES INCLUDING ALL EAVES;
2. VEHICULAR USE - DRIVEWAYS, STREETS, PARKING AREAS AND OTHER AREAS, WHETHER CONSTRUCTED OF GRAVEL, PAVERS, PAVEMENTS, CONCRETE OR OTHER MATERIALS, THAT CAN REASONABLY ALLOW VEHICULAR TRAVEL;
3. SIDEWALKS - PAVED PEDESTRIAN WALKWAYS, SIDEWALKS AND BIKE PATHS;
4. RECREATION FACILITIES - DECKS, PATIOS, PORCHES, TENNIS COURTS, SPORT COURTS, POOLS, HOT TUBS, AND OTHER SIMILAR RECREATIONAL FACILITIES;
5. MISCELLANEOUS - ANY OTHER STRUCTURE OR HARD SURFACE WHICH EITHER PREVENTS OR RETARDS THE ENTRY OF WATER INTO THE SOIL MANTLE AS UNDER NATURAL CONDITIONS PRIOR TO DEVELOPMENT, OR CAUSES WATER TO RUN OFF THE SURFACE IN GREATER QUANTITIES OR AT AN INCREASED RATE OF FLOW FROM PRESENT FLOW RATE UNDER NATURAL CONDITIONS PRIOR TO DEVELOPMENT.
6. PER OCTOBER 26, 2020 EMAIL WITH RUIJI DING, SENIOR DEVELOPMENT ENGINEER, UNCOVERED, PERVIOUS WOOD DECK OVER GRASS/DIRT IS NOT CONSIDERED AS IMPERVIOUS SURFACE.
7. PER NOVEMBER 3, 2020 EMAIL WITH RUIJI DING, SENIOR DEVELOPMENT ENGINEER, ROOF EDGE IS MEASURED TO EAVE (EXCLUDES GUTTERS).

A1: (E) IMPERVIOUS SURFACE TO REMAIN (ROCKERES & RETAINING WALLS): 34 SF + 278 SF = 302 SF

A2: (E) IMPERVIOUS SURFACE TO BE REMOVED (RETAINING WALL): 11 SF + 11 SF = 22 SF

A1: (E) IMPERVIOUS SURFACE TO REMAIN (DRIVEWAY, WALKWAY): 19 SF + 474 SF + 45 SF = 638 SF

A1: (E) IMPERVIOUS SURFACE TO REMAIN (ACCESSORY STRUCTURE): 477 SF

A2: (E) IMPERVIOUS SURFACE (ROOF) TO BE REPLACED: 2394 SF

A3: (E) IMPERVIOUS SURFACE (ROOF) TO BE REPLACED: 2935 SF

A3: (E) IMPERVIOUS SURFACE (ROOF) TO BE REPLACED: 556 SF

A4: (N) IMPERVIOUS SURFACE: 458.7 SF

A1: (E) IMPERVIOUS SURFACE TO REMAIN (RETAINING WALL): 1028 SF

6 IMPERVIOUS SURFACE
T = 40'

	SF
A. GROSS LOT AREA	14,250
B. NET LOT AREA	14,250
C. ALLOWED LOT COVERAGE AREA	5,800
D. ALLOWED LOT COVERAGE	40% OF LOT
E. EXISTING LOT COVERAGE	
1. MAIN STRUCTURE ROOF AREA	35091
2. ACCESSORY BUILDING ROOF AREA	805
3. VEHICULAR USE (DRIVEWAY, PAVED ACCESS EASEMENTS, PARKING)	4679
4. COVERED PATIOS AND COVERED DECKS	-
5. TOTAL EXISTING LOT COVERAGE (E1 + E2 + E3 + E4)	40575
F. (TOTAL LOT COVERAGE AREA REMOVED)	421
G. PROPOSED ADJUSTMENT FOR SINGLE STORY (AREA)	-
H. PROPOSED ADJUSTMENT FOR FLAG LOT	-
I. TOTAL NEW LOT COVERAGE AREA:	
1. MAIN STRUCTURE ROOF AREA	4768
2. ACCESSORY STRUCTURE ROOF AREA	-
3. VEHICULAR USE (DRIVEWAY, PAVED ACCESS EASEMENTS, PARKING)	-
4. COVERED PATIOS AND COVERED DECKS	-
5. TOTAL NEW LOT COVERAGE (I1 + I2 + I3 + I4)	4768
J. TOTAL PROJECT LOT COVERAGE = (E5 - F) + H5	44922
K. PROPOSED LOT COVERAGE = (J/E) X 100	31%

NOTE: MAIN STRUCTURE ROOF AREAS INCLUDE GUTTERS. MEASUREMENTS PER SURVEY.

GROSS/NET LOT AREA: 14,250 SF

E2: (E) ACCESSORY BUILDING ROOF AREA: 477 SF

(E) COVERED DECK UNDER (E) ROOF EAVE: 1617 SF INCLUDED IN E1 (E) MAIN ROOF AREA

(E) ACCESSORY BUILDING ROOF AREA: 328 SF

E1 (E) MAIN STRUCTURE ROOF AREA: 35091 SF

E3: (E) VEHICULAR USE: 4679 SF

F. LOT COVERAGE REMOVED (EXISTING ROOF): 421 SF

I1: NEW MAIN STRUCTURE ROOF AREA: 4680 SF + 88 SF = 4768 SF

2 LOT COVERAGE
T = 40'

MEASUREMENTS	EXISTING SF	FINAL SF
MAIN FLOOR INTERIOR	2390	2795
LOWER FLOOR INTERIOR	-	-
OTHER FLOORS INTERIOR	-	5321
BASEMENT INTERIOR	-	-
ATTACHED GARAGE INTERIOR	4203	4155
COVERED DECKS INTERIOR	1558	150
OTHER INTERIOR	-	-
TOTALS	29661	399260

(E) ATTACHED GARAGE: 4203 SF

(E) + CONVERTED TO UN-HEATED GARAGE: 4155 SF

(E) + NEW MAIN FLOOR: 2795 SF

(E) MAIN FLOOR: 2390 SF

(E) COVERED DECKS INTERIOR: 1558 SF

(E) COVERED DECKS AFTER ADDN: 150 SF

UPPER FLOOR: 5321 SF

DARK OUTLINE OF EXIST'G + NEW

LIGHT OUTLINE OF EXIST'G ONLY

NOTE: ALL MEASUREMENTS TAKEN FROM INTERIOR FACE OF WALL GWB

9 RESIDENTIAL FIRE AREA
T = 40'

A. AVERAGE BUILDING ELEVATION (ABE) CALCULATIONS LOCATED ON SHEET #	A02
B. ALLOWABLE BUILDING HEIGHT (ABE + 30 FT)	2301'
C. PROPOSED BUILDING HEIGHT	23'-6" (224'-0" / 14')
D. BENCHMARK ELEVATION	2003
E. DESCRIBE BENCHMARK LOCATION	FOUND PK NAKL 045 OF PROPERTY CORNER
F. SLOPING LOT (DOWNHILL SIDE) - MAXIMUM HEIGHT OF TOP EXTERIOR WALL FACADE ABOVE LOWEST EXISTING GRADE (30FT MAX)	18'-2 3/4" (2822)
G. ABE AND ALLOWABLE BUILDING HEIGHT SHOWN ON ELEVATIONS PLAN SHEET #	A21-A22
H. TOPO-SURVEY ACCURACY ATTESTED ON PLAN SHEET #	TS

WALL SEGMENT	EXIST'G GRADE	FINSH GRADE	WALL SEGMENT LENGTH	MID-POINT ELEV = EXIST'G OR FINSH GRADE WHICH-EVER IS LOWER. EXIST'G GRADES SHOWN ARE FROM TS TOPOGRAPHIC SURVEY. NEW GRADES ARE SHOWN ON SITE PLAN AND EXT. ELEV. REFER TO EXT. ELEV FOR ADDL. INFO @ MID-POINT LOCATIONS
A	2001'	2001'	a = 60'	
B	1998'	2002'	b = 74'	
C	2002'	2002'	c = 60'	
D	2003'	2003'	d = 74'	

MAX BUILDING HEIGHT

CALCULATION:
 $(2001(60) + (1998(74) + (2002(60) + (2003(74)) / (60+74+60+74) =$
 $53628.36 / 268 = 2001$ AVERAGE BUILDING ELEVATION

2001' (ABE) + 30' (BASE HEIGHT LIMIT) = **2301' MAX BUILDING HEIGHT**

60'-0 1/2'

60'-0 1/2'

60'-0 1/2'

60'-0 1/2'

5 BUILDING HEIGHT
T = 40'

HIGHEST ELEVATION POINT OF LOT	2031.7'
LOWEST ELEVATION POINT OF LOT	199.43'
ELEVATION DIFFERENCE	3.74'
HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS	177.55'
LOT SLOPE	2.1%

NOTE: ELEVATIONS PER SURVEY.

HORIZONTAL DISTANCE: 177.55'

HIGHEST ELEVATION POINT OF LOT: 2031.7'

LOWEST ELEVATION POINT OF LOT: 199.43'

1 LOT SLOPE
T = 40'

FLOISAND STUDIO

1941 1st avenue south, 2e
seattle, wa 98134
ph 206.634.0136

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AYESHA & TYSON HARPER
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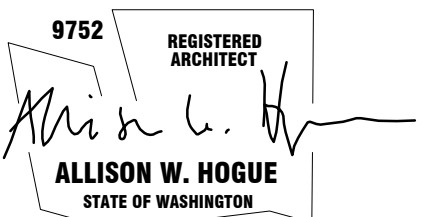
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PROFESSIONAL STAMP



BUILDING DEPT. STAMP

ISSUE DATE
PERMIT 5.12.21

RENDERINGS

A0.4



8 SOUTHWEST BIRD'S-EYE
NTS.



7 NORTHWEST BIRD'S-EYE
NTS.



6 SOUTHEAST ADDITION
NTS.



5 NORTHWEST ADDITION
NTS.



4 SOUTH ELEVATION
NTS.



3 WEST ELEVATION
NTS.




2 NORTH ELEVATION
NTS.



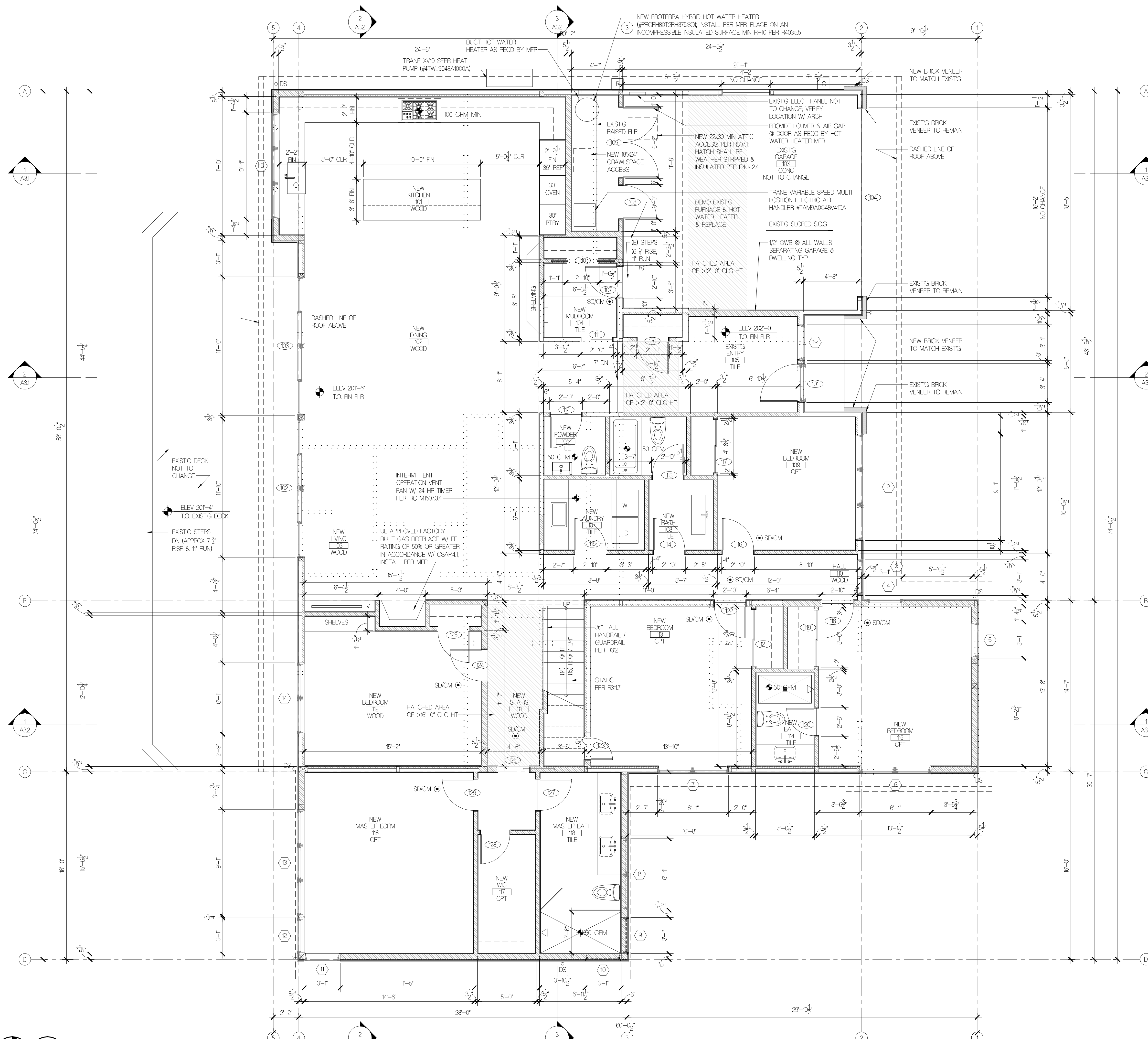
1 EAST ELEVATION
NTS.

LEGEND

-  NEW 2x4 STUD WALL @ 16" OC @ INT; NEW 2x4 STUD WALL OR NON-STRUCTURAL FURRING W/ R-23 BATT INSUL. @ EXTERIOR (UNO); REFER TO STRUCTURAL
-  EXISTING WALL, INCLUDES WINDOWS TO BE PATCHED THAT DON'T EXTEND TO SUBFLR
-  CONCRETE WALL
-  ROOM DESCRIPTION, NUMBER AND FLOOR MATERIAL
-  DOWNSPOUT
-  WINDOW/SKYLIGHT; SEE SCHEDULE 1/A23 & 2/A23; REFER TO 1/A23 FOR EGRESS WINDOW CALLOUT
-  NEW DOOR, EXTERIOR DOOR SCHEDULE 2/A23
-  COMBINED SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR
-  EXHAUST FAN

GENERAL NOTES

1. SEE A02 FOR EGRESS, STAIR, HANDRAIL/GUARDRAIL REQ.
2. PROVIDE 1/2" AIR SPACE MIN BTWN WOOD FRAMING & CONC WALLS.
3. MINIMUM 90% OF ALL INTERIOR LUMINAIRES SHALL BE HIGH EFFICACY LAMPS. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY LUMINAIRES.
4. RECESSED LUMINAIRES INSTALLED IN THE BLDG THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BTWN CONDITIONED AND UNCONDITIONED SPACES. ALL RECESSED LUMINAIRES SHALL BE TYPE IC-RATED AND LABELED CERTIFIED UNDER ASTM E283 AND SHALL HAVE A LABEL ATTACHED SHOWING COMPLIANCE WITH THIS TEST METHOD. ALL RECESSED LUMINAIRES SHALL BE SEALED W/ A GASKET OR CAULK BTWN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.
5. A SMOKE DETECTOR & CARBON MONOXIDE DETECTOR SHALL BE INSTALLED ON ALL FLOORS.
6. PATCH GWB AS REQUIRED IN AREAS NOT SUBJECT TO REMODEL.
7. EXISTING 2x4 WALLS DIMENSIONED AS 2x6, CONTRACTOR TO ADD 2" FURRING TO INTERIOR FACE OF FRAMING TO INSULATE WALLS TO R-21 TYP.
8. DOORS BETWEEN A GARAGE & DWELLING MUST BE SELF-CLOSING & 1 3/8" THICK MIN SOLID WOOD OR STEEL OR BE A 20 MIN FIRE-RATED DOOR.
9. AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED THROUGHOUT THE RESIDENCE PER AV1072. SYSTEM SHALL MEET THE REQUIREMENTS OF NFPA 13D.



MAIN FLOOR PLAN

1/4" = 1'-0"

FLOISAND STUDIO

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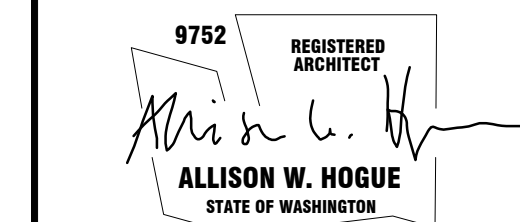
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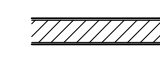

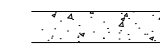

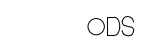
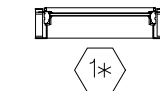
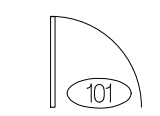


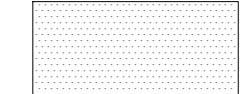
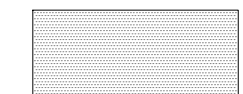
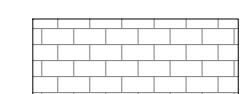

BUILDING DEPT. STAMP

ISSUE	DATE
PERMIT	5.12.21

MAIN FLOOR PLAN

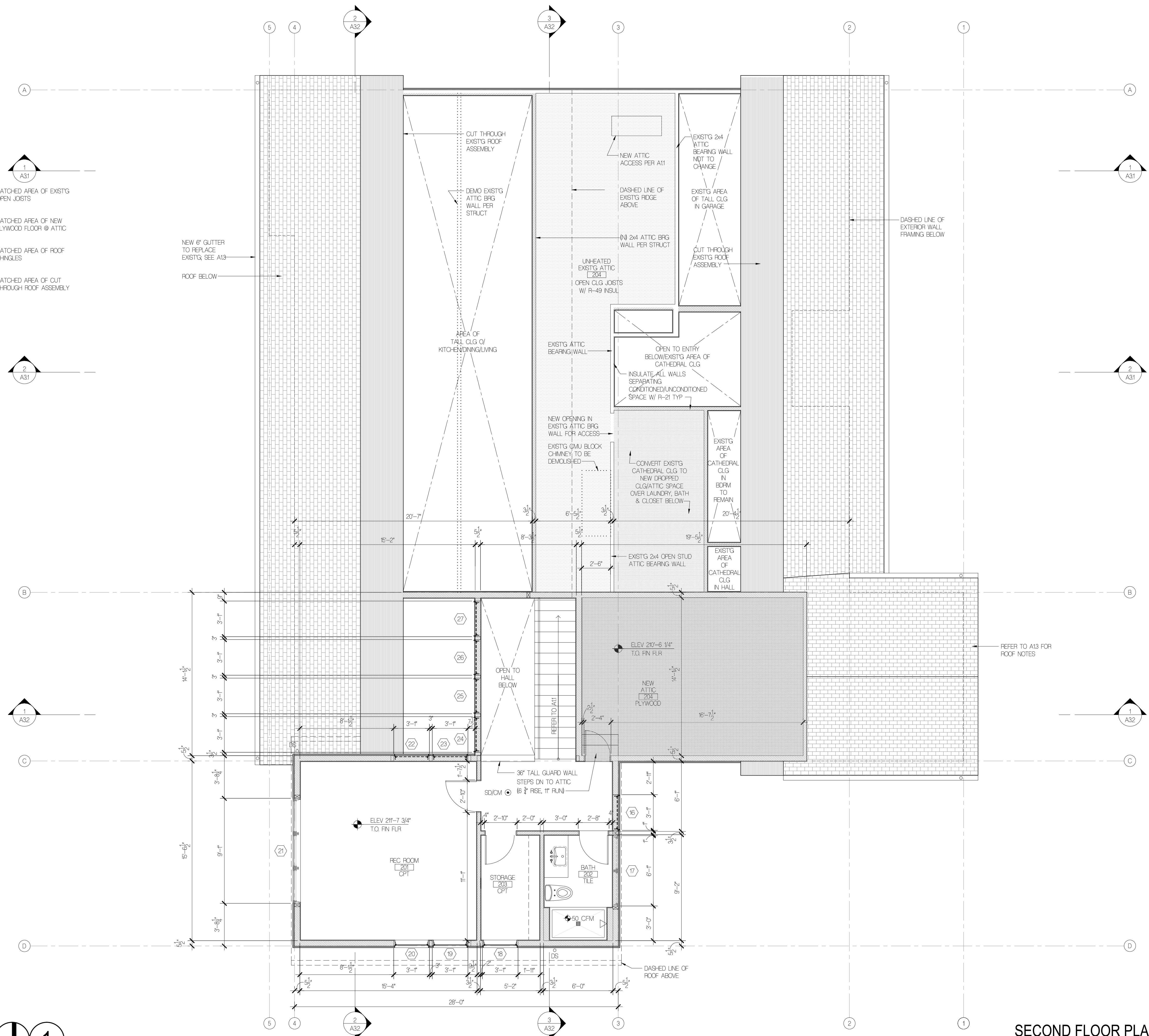
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LEGEND

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-  CONCRETE WALL
-  ROOM DESCRIPTION, NUMBER AND FLOOR MATERIAL
-  DOWNSPOUT
-  WINDOW/SKYLIGHT; SEE SCHEDULE 1/A23 & 2/A23; REFER TO 1/A23 FOR EGRESS WINDOW CALLOUT
-  NEW DOOR EXTERIOR DOOR SCHEDULE 2/A23
-  COMBINED SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR
-  X CFM EXHAUST FAN
-  HATCHED AREA OF EXISTG OPEN JOISTS
-  HATCHED AREA OF NEW PLYWOOD FLOOR @ ATTIC
-  HATCHED AREA OF ROOF SHINGLES
-  HATCHED AREA OF CUT THROUGH ROOF ASSEMBLY

GENERAL NOTES

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5. A SMOKE DETECTOR & CARBON MONOXIDE DETECTOR SHALL BE INSTALLED ON ALL FLOORS.
6. PATCH GWB AS REQUIRED IN AREAS NOT SUBJECT TO REMODEL.
7. EXISTING 2x4 WALLS DIMENSIONED AS 2x6, CONTRACTOR TO ADD 2" FURRING TO INTERIOR FACE OF FRAMING TO INSULATE WALLS TO R-21 TYP.
8. DOORS BETWEEN A GARAGE & DWELLING MUST BE SELF-CLOSING & 1 3/8" THICK MIN SOLID WOOD OR STEEL OR BE A 20 MIN FIRE-RATED DOOR.
9. AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED THROUGHOUT THE RESIDENCE PER AV1072. SYSTEM SHALL MEET THE REQUIREMENTS OF NFPA 13D.



SECOND FLOOR PLAN
1/4" = 1'-0"

FLOISAND STUDIO

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HARPER RESIDENCE

6551 81ST AVENUE SE
MERCER ISLAND, WA 98040

PROFESSIONAL STAMP



BUILDING DEPT. STAMP

ISSUE	DATE
PERMIT	5.12.21

SECOND FLOOR PLAN

A1.2

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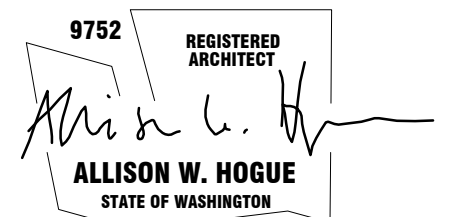
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**HARPER
 RESIDENCE**

6551 81ST AVENUE SE
 MERCER ISLAND, WA 98040

PROFESSIONAL STAMP

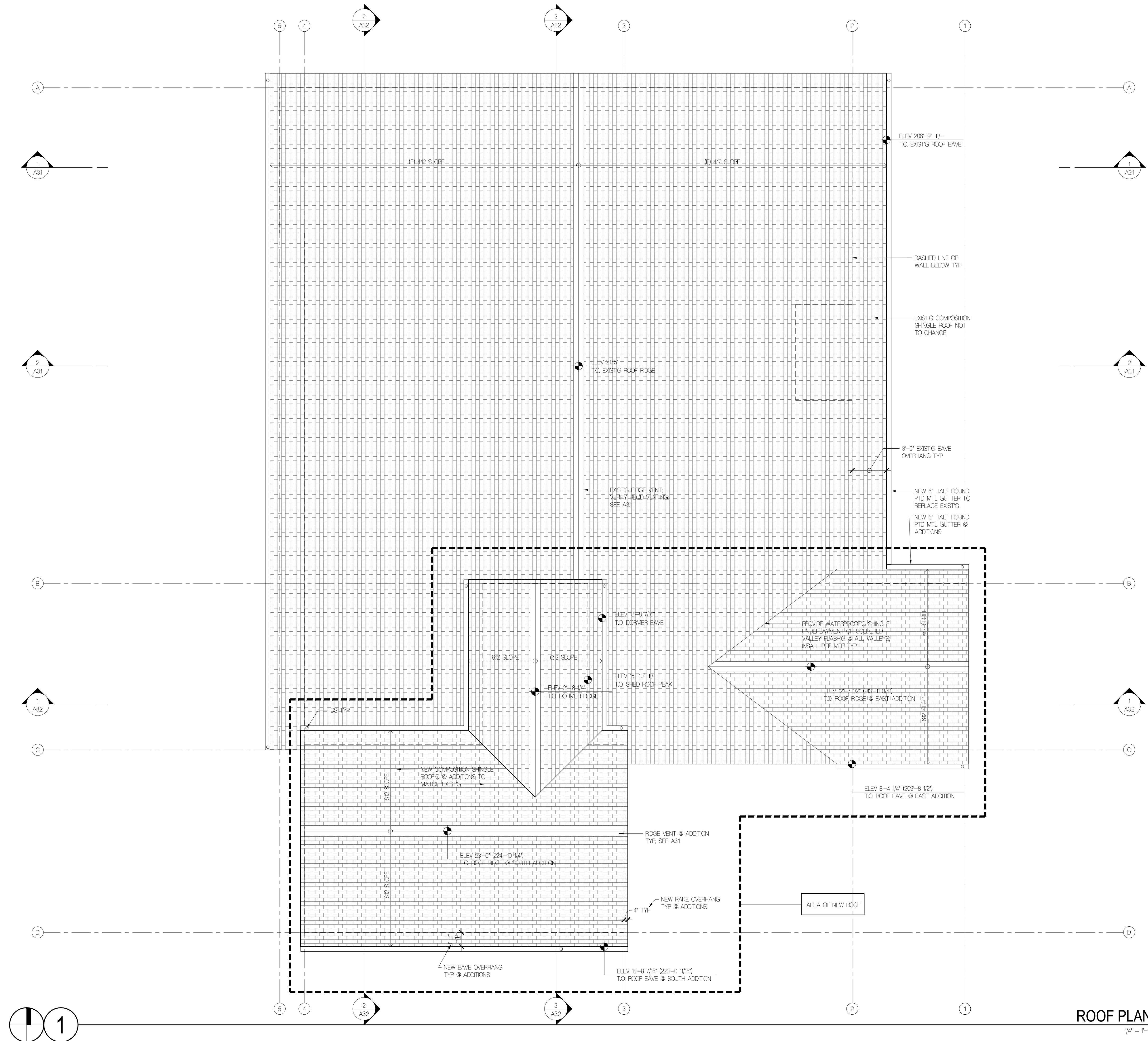


BUILDING DEPT. STAMP

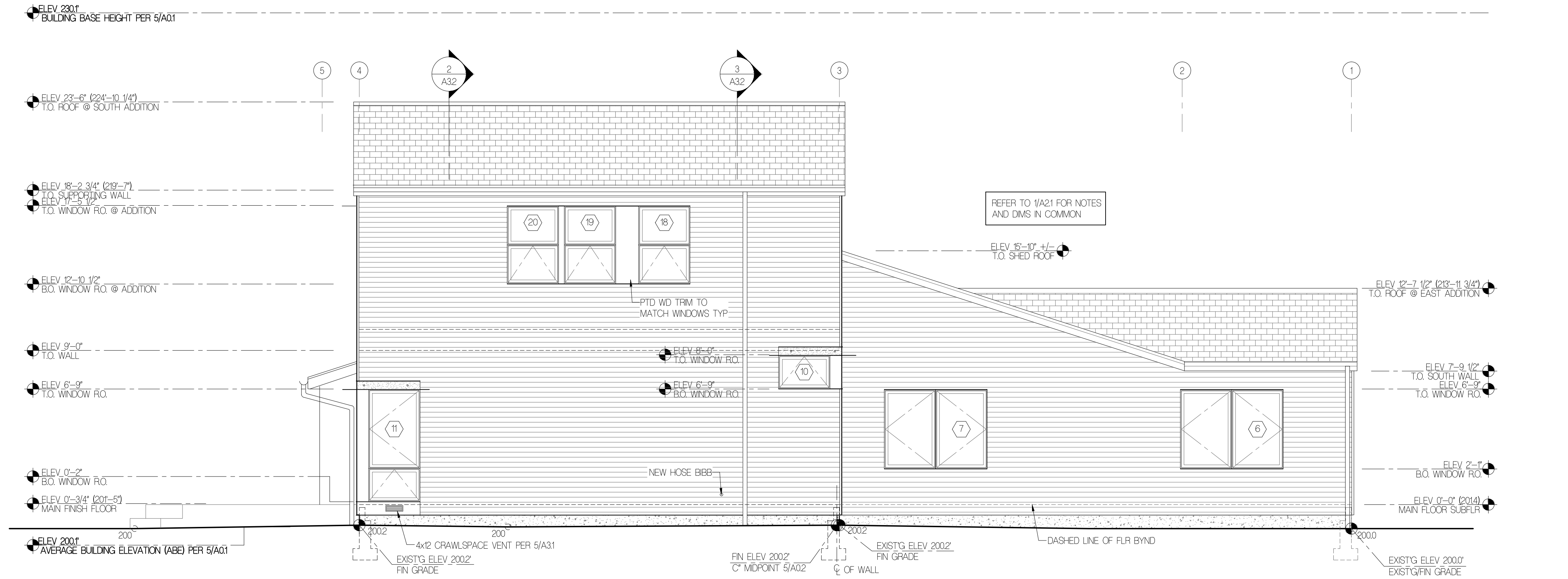
ISSUE	DATE
PERMIT	5.12.21

ROOF PLAN

A1.3



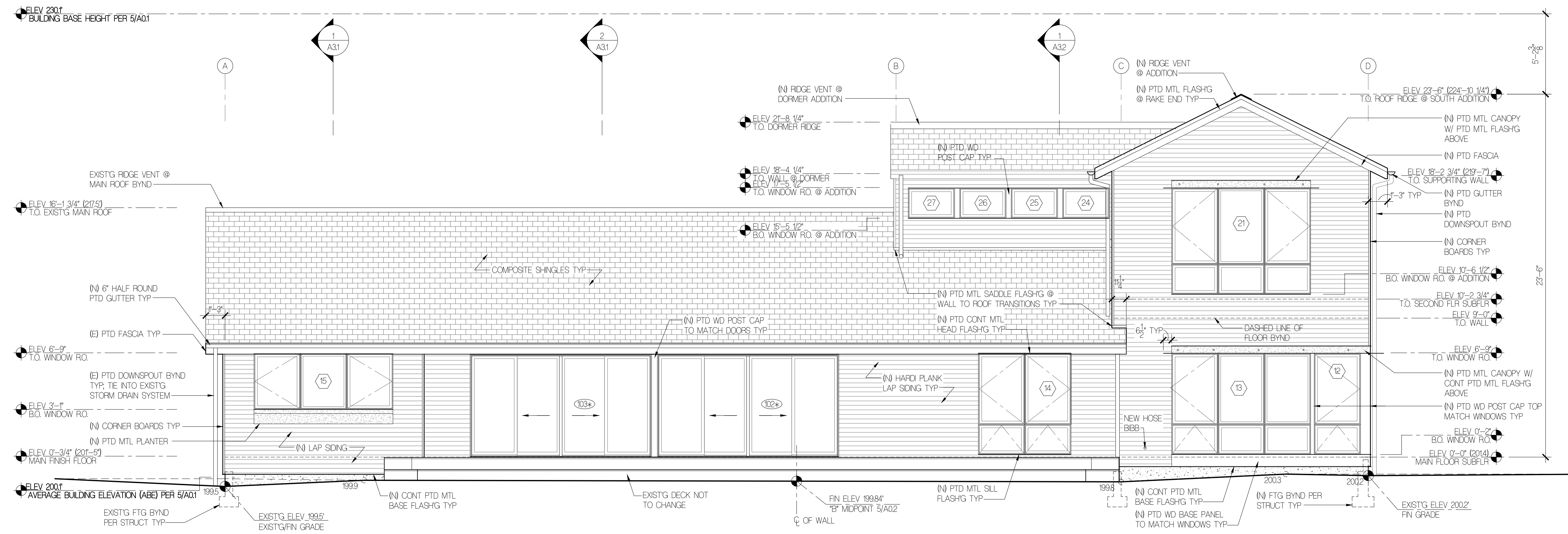
ROOF PLAN
 1/4" = 1'-0"



SOUTH ELEVATION

1/4" = 1'-0"

2



WEST ELEVATION

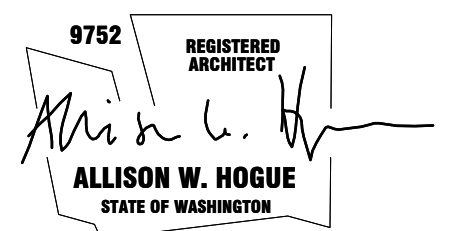
1/4" = 1'-0"

1

HARPER RESIDENCE

6551 81ST AVENUE SE
MERCER ISLAND, WA 98040

PROFESSIONAL STAMP

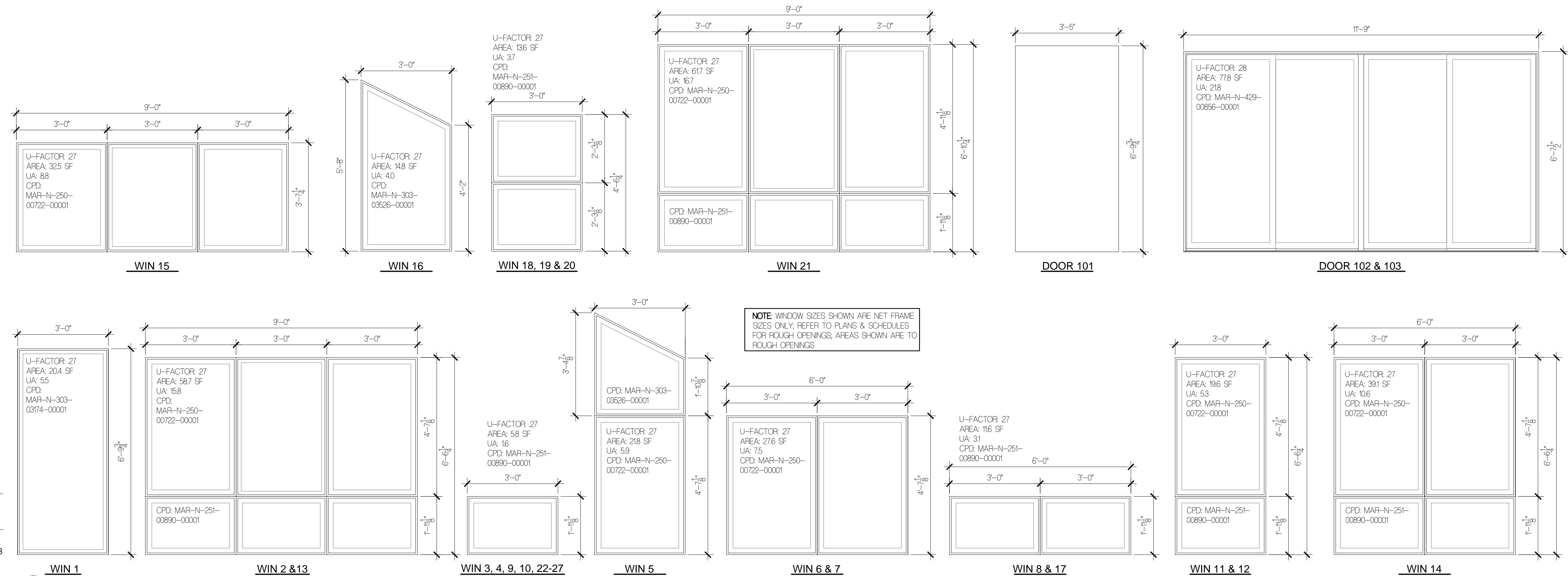
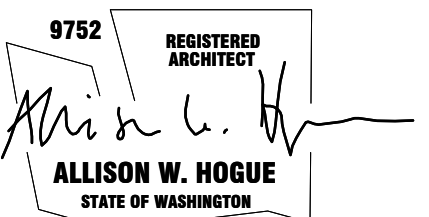


BUILDING DEPT STAMP

ISSUE	DATE
PERMIT	5.12.21

EXTERIOR ELEVATIONS

A2.1



NOTE WINDOW SIZES SHOWN ARE NET FRAME SIZES ONLY; REFER TO PLANS & SCHEDULES FOR ROUGH OPENINGS; AREAS SHOWN ARE TO ROUGH OPENINGS

TOTAL GLAZED DOOR AREA (SEE 2/A2.3): 1566874 SF
TOTAL MARVIN ELEVATE WINDOW AREA (SEE 1/A2.3): 5234597 SF
TOTAL VERTICAL GLAZING AREA: 1566874 SF + 5234597 SF = 6791471 SF
TOTAL UA FOR MARVIN ELEVATE GLAZED DOORS (SEE 2/A2.3): 435924 UA
TOTAL UA FOR MARVIN ELEVATE WINDOWS (SEE 1/A2.3): 141334 UA
TOTAL UA FOR VERTICAL GLAZING: 435924 + 141334 = 577258 UA
AVG U-VALUE FOR ALL VERTICAL GLAZING (UA/AREA): 577258/6791471 = 0.085
0.085 AVERAGE WEIGHTED U-VALUE < 0.28 THEREFORE OKAY

4 VERT GLAZING CALC 3

WINDOW & DOOR DIAGRAMS

1/2" = 1'-0"

EXTERIOR WINDOW SCHEDULE: FOLLOW 2018 WSEC, TABLE R402.11 BUILDING THERMAL ENVELOPE (PRESCRIPTIVE)

MARK	(W x H) MFR RECD ROUGH OPENING	(W x H) ACTUAL FRAME SIZE	(W x H) NET FRAME SIZE	OPERATION	CPD	MFR	MODEL	TYPE/MTL	U-FACTOR	SHGC	VT	AREA	UA	JAMB DEPTH	GLASS TYPE	EXT FINISH	INT FINISH	REMARKS		
1	3'-0" x 6'-10 1/4"	3'-0" x 6'-10 1/2"	3'-0" x 6'-9 3/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.35	6	204	5.5	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
2	9'-0" x 6'-6 3/4"	9'-0" x 6'-7"	9'-0" x 6'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	587	15.8	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
3	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
4	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
5	3'-0" x VARIES	3'-0" x VARIES	3'-0" x VARIES	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	218	5.9	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
6	6'-0" x 4'-7 5/8"	6'-0" x 4'-8"	6'-0" x 4'-7 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	276	7.5	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
7	6'-0" x 4'-7 5/8"	6'-0" x 4'-8"	6'-0" x 4'-7 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	276	7.5	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
8	6'-0" x 1'-11 5/8"	6'-0" x 2'-0"	6'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	116	3.1	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
9	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
10	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
11	3'-0" x 6'-6 3/4"	3'-0" x 7'-0"	3'-0" x 6'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	196	5.3	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
12	3'-0" x 6'-6 3/4"	3'-0" x 7'-0"	3'-0" x 6'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	196	5.3	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
13	9'-0" x 6'-6 3/4"	9'-0" x 7'-0"	9'-0" x 6'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	587	15.8	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
14	6'-0" x 6'-6 3/4"	6'-0" x 7'-0"	6'-0" x 6'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	391	10.6	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
15	9'-0" x 3'-7 3/4"	9'-0" x 3'-8"	9'-0" x 3'-7 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	325	8.8	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
16	3'-0" x VARIES	3'-0" x VARIES	3'-0" x VARIES	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	148	4.0	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
17	6'-0" x 1'-11 5/8"	6'-0" x 2'-0"	6'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	116	3.1	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
18	6'-0" x 4'-6 3/4"	6'-0" x 4'-7"	6'-0" x 4'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	136	3.7	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
19	6'-0" x 4'-6 3/4"	6'-0" x 4'-7"	6'-0" x 4'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	136	3.7	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
20	6'-0" x 4'-6 3/4"	6'-0" x 4'-7"	6'-0" x 4'-6 1/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	136	3.7	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
21	9'-0" x 6'-10 1/4"	9'-0" x 6'-10 1/2"	9'-0" x 6'-9 3/4"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	617	16.7	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
22	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
23	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
24	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
25	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
26	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
27	3'-0" x 1'-11 5/8"	3'-0" x 2'-0"	3'-0" x 1'-11 1/8"	Ⓞ	Ⓢ	MARVIN	ELEVATE	ALUM EXT/WOOD INT	27	.30	51	58	16	4 9/16"	LOW E2 W/ ARGON	EBONY	WHITE			
AVG U-VALUE FOR VERTICAL GLAZING: REFER TO 4/A2.3												TOTAL	5234597	141334						

- NOTES:
- U-VALUES PROVIDED ARE NFRC CERTIFIED & FROM WINDOW / DOOR MANUFACTURER.
 - WINDOWS ARE REFERENCED ON PLANS AND EXTERIOR ELEVATIONS.
 - CONTRACTOR TO VERIFY ALL ROUGH OPENINGS AFTER FRAMING IS COMPLETE AND PRIOR TO ORDERING WINDOWS; WHERE WINDOW JAMBS BUTT INTO PERPENDICULAR WALLS, CONTRACTOR TO CONFIRM RECD CLEARANCES TO ADJACENT EXTERIOR CLADDING ASSEMBLIES.
 - PROVIDE TEMPERED GLASS WHERE REQUIRED BY THE IBC/IRC.
 - VERIFY THAT ALL EGRESS WINDOWS MEET IRC REQUIREMENTS: MIN. 57 SF; 20" CLEAR OPEN WIDTH; 24" MIN CLEAR OPEN HEIGHT; 44" MAX SILL HEIGHT.
 - INCLUDES 1/8" SHIM FOR R.O. @ EACH JAMB; 1/8" OVERALL SHIM @ HEAD & SILL.
 - WINDOW HARDWARE COLOR TO BE MATTIE BLACK.
 - WINDOW SCREEN COLOR TO BE EBONY.
 - REFER TO PLANS FOR CONDITIONED SPACE REQUIREMENTS.
 - INTERIOR GLAZING PROFILE TO BE SQUARE.
 - INSTALLATION METHOD TO BE W/ NAILING FIN.
 - REFER TO EXT ELEVS FOR OPERATION.
 - REFER TO 3/A2.3 FOR NET FRAME SIZES, OPERATIONS, AND CPD NUMBERS.

EXTERIOR DOOR SCHEDULE: FOLLOW 2018 WSEC, TABLE R402.11 BUILDING THERMAL ENVELOPE (PRESCRIPTIVE)

MARK	(W x H) MFR RECD ROUGH OPENING	(W x H) ACTUAL FRAME SIZE	(W x H) NET FRAME SIZE	OPERATION	CPD	MFR	MODEL	TYPE/MTL	U-FACTOR	SHGC	VT	AREA	UA	JAMB DEPTH	GLASS TYPE	EXT FINISH	INT FINISH	SAFETY GLAZING	
001	3'-6" x 6'-10 1/4"	3'-6" x 6'-10 1/2"	3'-3" x 6'-10 3/4"	Ⓞ	Ⓢ	SIMPSON	49800	WOOD	Ⓢ	Ⓢ		233		4 9/16"	N/A	WOOD	WOOD	N/A	
002	11'-0" x 6'-8"	11'-0" x 6'-9"	11'-9" x 6'-7 1/2"	Ⓞ	Ⓢ	MARVIN	ELEVATE SLIDING PATIO DOOR	ALUM EXT/WOOD INT	28	.33	58	778	218	4 9/16"	LOW E2 W/ ARGON	EBONY	BLACK	YES	
003	11'-0" x 6'-8"	11'-0" x 6'-9"	11'-9" x 6'-7 1/2"	Ⓞ	Ⓢ	MARVIN	ELEVATE SLIDING PATIO DOOR	ALUM EXT/WOOD INT	28	.33	58	778	218	4 9/16"	LOW E2 W/ ARGON	EBONY	BLACK	YES	
TOTAL												5568874	435924						

TOTAL VERTICAL GLAZING U-VALUE: REFER TO 4/A2.3

- NOTES:
- U-VALUES PROVIDED ARE NFRC CERTIFIED & FROM WINDOW / DOOR MANUFACTURER.
 - DOORS ARE REFERENCED ON PLANS AND EXTERIOR ELEVATIONS.
 - CONTRACTOR TO VERIFY ALL ROUGH OPENINGS AFTER FRAMING IS COMPLETE AND PRIOR TO ORDERING DOORS; WHERE DOOR JAMBS BUT INTO PERPENDICULAR WALLS, CONTRACTOR TO CONFIRM RECD CLEARANCES TO ADJACENT EXTERIOR CLADDING ASSEMBLIES.
 - ALL EXTERIOR DOORS TO RECEIVE DEAD BOLT OR DEAD LATCH WITH MINIMUM 1/2" THROW.
 - PROVIDE TEMPERED GLASS WHERE REQUIRED BY THE IBC/IRC.
 - PER WSEC R402.3.4, ONE SIDE HINGED OPAQUE DOOR ASSEMBLY UP TO 24 SF IS EXEMPTED FROM THE U FACTOR REQUIREMENTS IN R402.1.
 - INSTALLATION OPTION TO BE NAIL FIN.
 - INTERIOR GLAZING PROFILE TO BE SQUARE.
 - REFER TO EXT ELEVS FOR OPERATIONS.
 - REFER TO 3/A2.3 FOR NET FRAME SIZES, OPERATION, AND CPD NUMBERS.

2 EXTERIOR DOOR SCHEDULE

1 WINDOW SCHEDULE

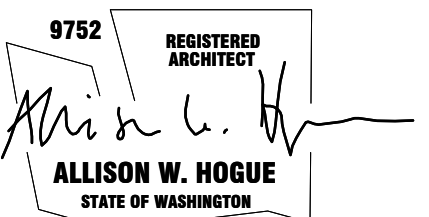


TABLE R402.4.1.1 (continued)
AIR BARRIER AND INSULATION INSTALLATION

COMPONENT	AIR BARRIER CRITERIA*	INSULATION CRITERIA*
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
Floors (including above garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking or floor framing cavity insulation shall be permitted to be in contact with the topside of sheathing or continuous insulation installed on the underside of floor framing and extend from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I, black vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace walls.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.	
Narrow cavities		Batts in narrow cavities shall be cut to fit and installed to the correct density without any voids or gaps or compression, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls. There shall be no voids or gaps or compression where cut to fit. Insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate the wall from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior wall	The air barrier shall be installed behind electrical or communication boxes or air sealed boxes shall be installed.	
HVAC register boots	HVAC supply and return register boots shall be sealed to the subfloor, wall covering or ceiling penetrated by the boot.	
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.	

IC = insulation contact
a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

TABLE R402.4.1.1
AIR BARRIER AND INSULATION INSTALLATION

COMPONENT	AIR BARRIER CRITERIA*	INSULATION CRITERIA*
General Requirements	A continuous air barrier shall be installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Cavity insulation installation		All cavities in the thermal envelope shall be filled with insulation. The density of the insulation shall be at the manufacturers' product recommendation and said density shall be maintained for all volume of each cavity. Batt type insulation will show no voids or gaps and maintain an even density for the entire cavity. Batt insulation shall be installed in the recommended cavity depth. Where an obstruction in the cavity due to services, blocking, bracing or other obstruction exists, the batt product will be cut to fit the remaining depth of the cavity. Where the batt is cut around obstructions, loose fill insulation shall be placed to fill any surface or concealed voids, and at the manufacturers' specified density. Where faced batt is used, the installation tabs must be stapled to the face of the stud. There shall be no compression to the batt at the edges of the cavity due to inset stapling installation tabs. Insulation that upon installation readily conforms to available space shall be installed filling the entire cavity and within the manufacturers' density recommendation.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stair or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier. Batt insulation installed in attic roof assemblies may be compressed at exterior wall lines to allow for required attic ventilation.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.
Windows, skylights and doors	The space between window/door jambs and framing and skylights and framing shall be sealed.	

2

AIR BARRIER & INSULATION INSTALLATION

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

Summary of Table R406.2 (cont.)

Energy Options	Energy Credit Option Descriptions (cont.)	Credits - select ONE energy option from each category ^d	User Notes
5.1 ^d	Efficient Water Heating	0.5 <input type="checkbox"/>	
5.2	Efficient Water Heating	0.5 <input type="checkbox"/>	
5.3	Efficient Water Heating	1.0 <input type="checkbox"/>	
5.4	Efficient Water Heating	1.5 <input type="checkbox"/>	
5.5	Efficient Water Heating	2.0 <input checked="" type="checkbox"/>	ProTerra POPH80 T2 RH375-SO
5.6	Efficient Water Heating	2.5 <input type="checkbox"/>	
6.1 ^a	Renewable Electric Energy (3 credits max)	1.0 <input type="checkbox"/>	
7.1	Appliance Package	0.5 <input type="checkbox"/>	
Total Credits		4.5	CLEAR FORM

- 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.
- Equipment listed in Table C403.3.2(4) or C403.3.2(5)
- Equipment listed in Table C403.3.2(1) or C403.3.2(2)
- 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.
- 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.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

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

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.

- 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.
- Medium Dwelling Unit: 6 credits**
All dwelling units that are not included in #1 or #3
- Large Dwelling Unit: 7 credits**
Dwelling units exceeding 5,000 sf of conditioned floor area
- 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 NAECAs ^b	0.0 <input type="checkbox"/>	
2	Heat pump ^c	1.0 <input checked="" type="checkbox"/>	
3	Electric resistance heat only - furnace or zonal	-1.0 <input type="checkbox"/>	
4	DHP with zonal electric resistance per option 3.4	0.5 <input type="checkbox"/>	
5	All other heating systems	-1.0 <input type="checkbox"/>	

Energy Options	Energy Credit Option Descriptions	Credits - select ONE energy option from each category ^d	User Notes
1.1	e u d e e	0.5 <input type="checkbox"/>	
1.2	Efficient Building Envelope	1.0 <input type="checkbox"/>	
1.3	Efficient Building Envelope	0.5 <input type="checkbox"/>	
1.4	Efficient Building Envelope	1.0 <input type="checkbox"/>	
1.5	Efficient Building Envelope	2.0 <input type="checkbox"/>	
1.6	Efficient Building Envelope	3.0 <input type="checkbox"/>	
1.7	Efficient Building Envelope	0.5 <input type="checkbox"/>	
2.1	Air Leakage Control and Efficient Ventilation	0.5 <input type="checkbox"/>	
2.2	Air Leakage Control and Efficient Ventilation	1.0 <input type="checkbox"/>	
2.3	Air Leakage Control and Efficient Ventilation	1.5 <input type="checkbox"/>	
2.4	Air Leakage Control and Efficient Ventilation	2.0 <input type="checkbox"/>	
3.1 ^a	High Efficiency HVAC	1.0 <input type="checkbox"/>	
3.2	High Efficiency HVAC	1.0 <input type="checkbox"/>	
3.3 ^a	High Efficiency HVAC	1.5 <input type="checkbox"/>	
3.4	High Efficiency HVAC	1.5 <input type="checkbox"/>	
3.5	High Efficiency HVAC	1.5 <input checked="" type="checkbox"/>	Trane XV19
3.6 ^a	High Efficiency HVAC	2.0 <input type="checkbox"/>	
4.1	High Efficiency HVAC Distribution System	0.5 <input type="checkbox"/>	
4.2	High Efficiency HVAC Distribution System	1.0 <input type="checkbox"/>	

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

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
6551 81st Ave SE, Mercer Island, 98040	Allison Hogue
Interior alterations & addition to single family home	allison@floisandstudio.com; (206) 634-0136

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.

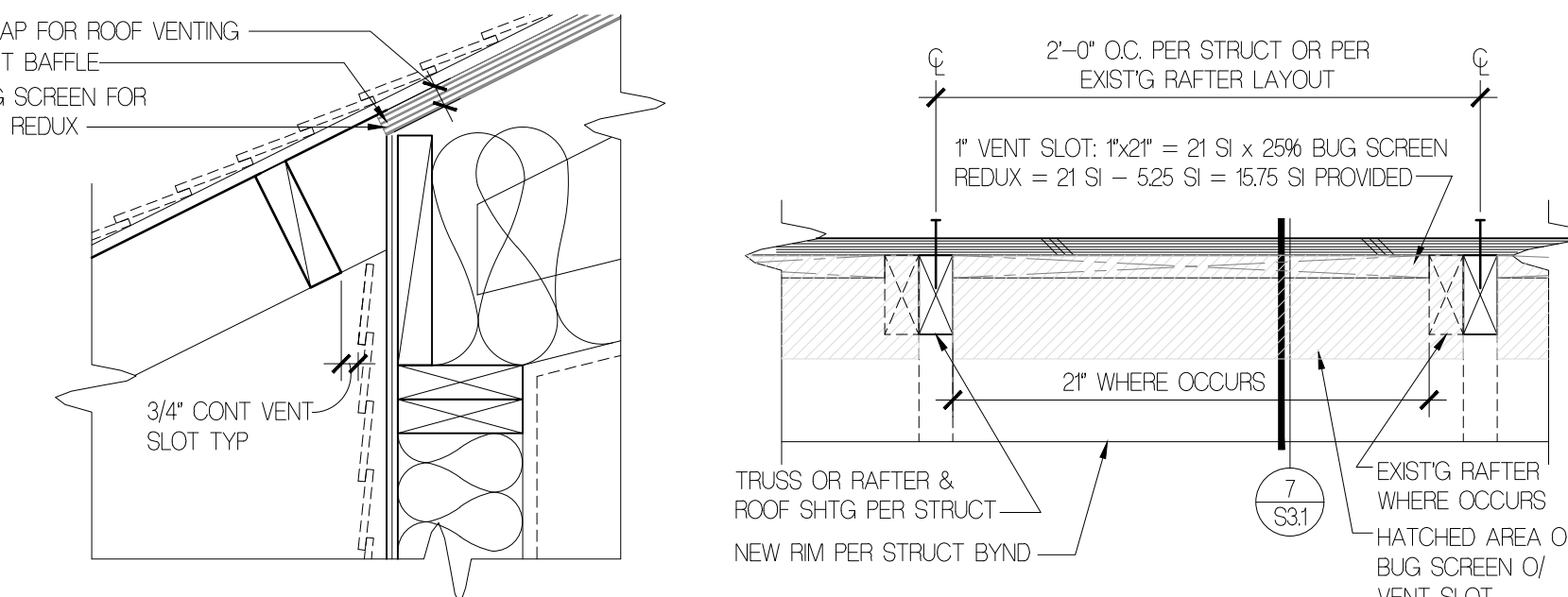
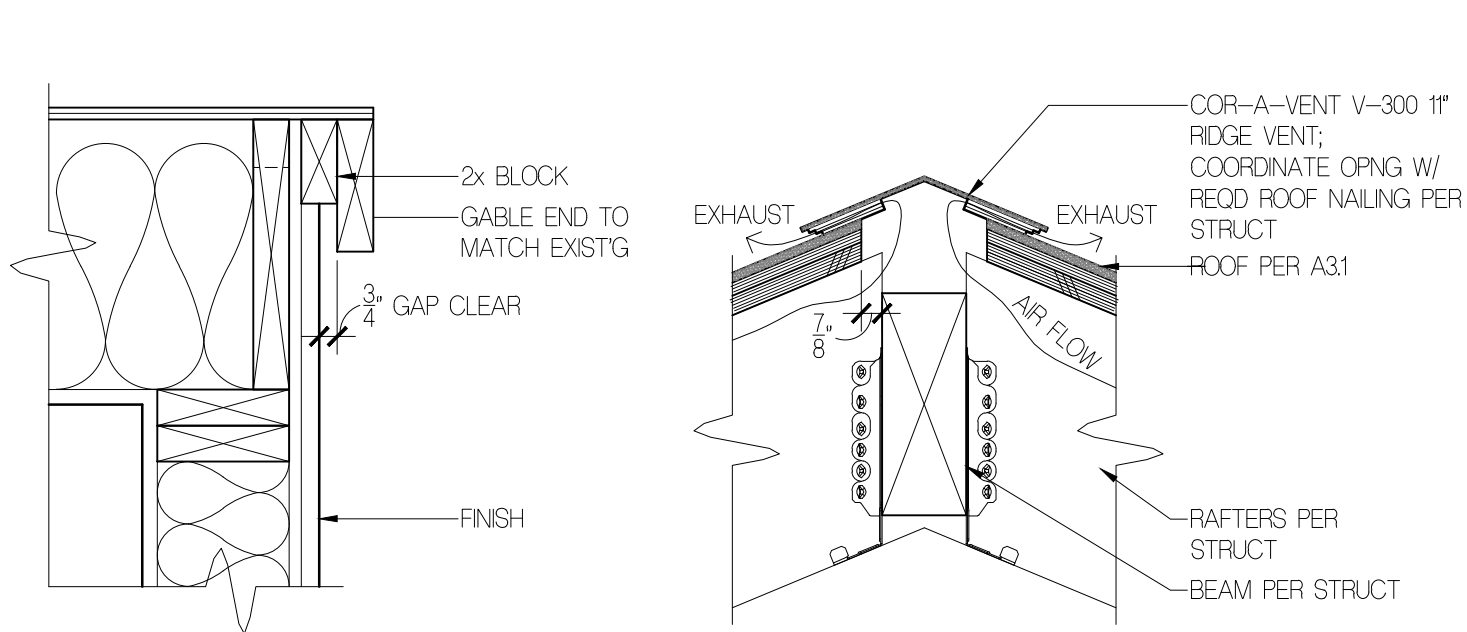
Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative: Allison Hogue Date: 05/21/21

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,c}	n/a	n/a
Ceiling ^e	49 ^j	0.026
Wood Frame Wall ^{e,h}	21 int	0.056
Floor	30	0.029
Below Grade Wall ^{c,h}	10/15/21 int + TB	0.042
Slab ^{d,f} R-Value & Depth	10, 2 ft	n/a

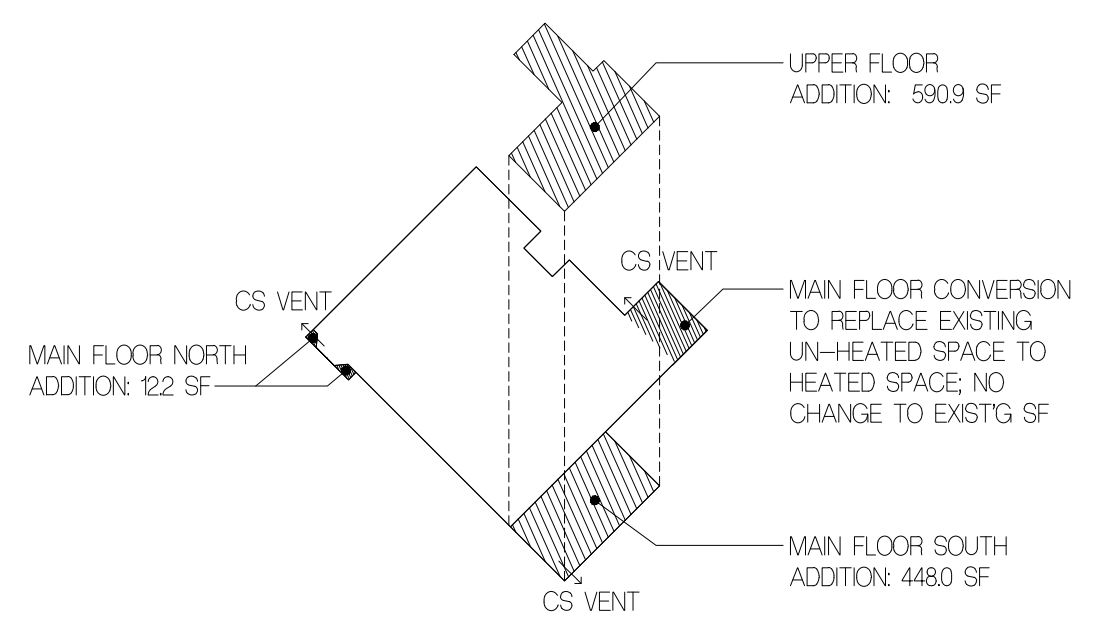
- R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A101.4 shall not be less than the R-value specified in the table.
- The fenestration U-factor column excludes skylights.
- "10/15/21 +5TB^h" 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^h" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB^h" means R-5 thermal break between floor slab and basement wall.
- R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
- 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.
- 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.
- For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for climate zone 5 of ICC 400.
- 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.



CALCULATIONS

EXISTING HOUSE CRAWL SPACE AREA	29034
MAIN FLOOR CRAWL SPACE ADDITION	
@ KITCHEN	122 SF
@ SOUTH	4480 SF
TOTAL MAIN FLOOR CRAWL SPACE ADDITION	4602
TOTAL CRAWL SPACE	33636

REQUIRED CRAWL SPACE VENTING 1 SF PER 1500 SF OF CRAWL SPACE AREA PER R4082 EXCEPTION.
33636 SF OF TOTAL CRAWL SPACE / 1500 = 224 SF OF REQUIRED CRAWL SPACE VENTING, REFER TO EXTERIOR ELEVATIONS FOR SIZE AND LOCATIONS.
NOTE: COVER VENTILATION OPENINGS FOR THEIR HEIGHT & WIDTH W/ APPROVED MATERIALS LISTED IN R4082. OPENINGS SHALL NOT EXCEED 1/4".



9 VENTING @ GABLE END
NTS

8 VENTING @ RIDGE
NTS

7 VENTING SECTION @ RIM
NTS

6 VENTING ELEV @ RIM
NTS

5 CRAWL SPACE VENTING CALCS
NTS

REQUIRED ROOF VENTING NFVA = NET FREE VENT AREA

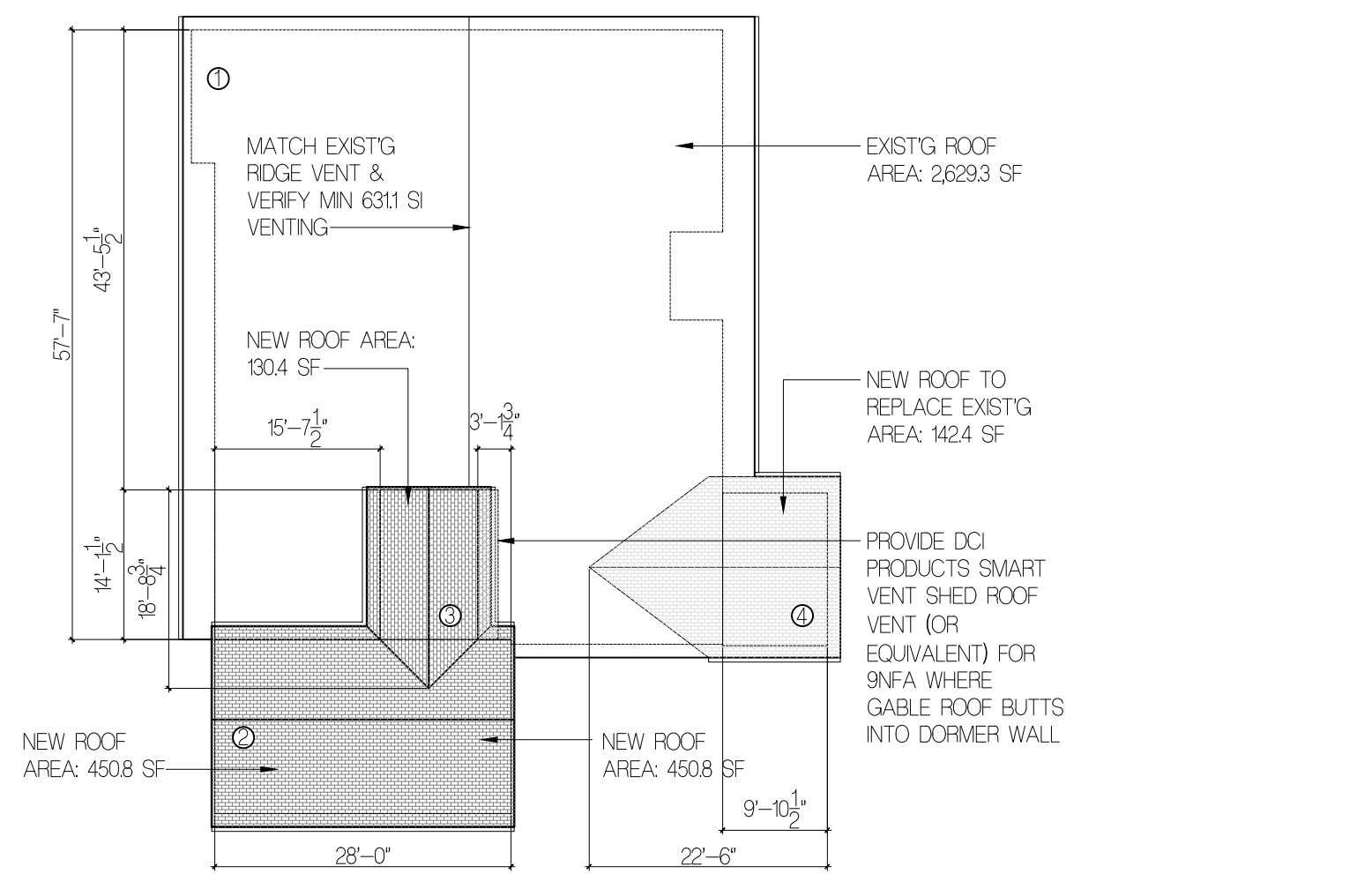
- 1 PRIMARY ROOF:**
- ROOF AREA: 26293 SF = 3786192 SI
 - REQD ROOF VENTING: 3786192 SI / 300 = 12621 SI
 - USEABLE VENT AREA REQD @ RIDGE: 12621 SI / 2 = 6311 SI
 - USEABLE VENT AREA REQD @ EACH EAVE: 6311 SI / 2 = 3156 SI
- AT RIDGE, (E) RIDGE VENT TO REMAIN & VERIFY MIN 6311 SI OF VENTING PROVIDED
 - AT RIM, MATCH (E) & VERIFY MIN 3156 SI OF VENTING PROVIDED
 - AT FRIEZE BLOCK, MATCH EXISTG VENT - 3/4" SKP SHTG GAP ABOVE BLOCK
225 LINEAL INCHES BETWEEN RAFTERS X 3/4" TALL GAP = 16 SI
16 SI PROVIDED > 10.9 SI REQD PER BAY, THEREFORE OKAY

- 2 SOUTH ADDITION ROOF:**
- ROOF AREA: 4608 SF = 663552 SI
 - REQD ROOF VENTING: 663552 SI / 300 = 2212 SI
 - USEABLE VENT AREA REQD @ RIDGE: 2212 SI / 2 = 1106 SI
 - USEABLE VENT AREA REQD @ EACH EAVE: 1106 SI / 2 = 553 SI
 - ** MATCH RIDGE VENTING @ MINIMUM
- AT RIDGE, USE COR-A-VENT V-300 W/ 135 S/LF NFVA
28'-0" LINEAL FT OF RIDGE X 135 S/LF = 378 SI, 378 SI PROVIDED > 110.6 SI REQD, THEREFORE OK
 - AT SOUTH RIM, PROVIDE VENT SLOT EACH BAY PER DETAIL 6 & 7/A31
28'-0" LINEAL FT OF EAVE / 24" RAFTER BAYS = 14 RAFTER BAYS, 69125 SI / @ 14 RAFTER BAYS = 50 SI/BAY REQD
 - AT NORTH RIM, PROVIDE VENT SLOT EACH BAY PER DETAIL 6 & 7/A31
15'-7 1/2" + 3'-1 3/4" = 18'-9 1/4" LINEAL FT OF EAVE / 24" RAFTER BAYS = 9 BAYS, 69125 SI / @ 9 RAFTER BAYS = 77 SI/BAY REQD, 1575 SI (MIN) PROVIDED THEREFORE OKAY
 - AT FRIEZE BLOCK, PROVIDE 3/4" CONT GAP PER 7/A31
22 LINEAL INCHES BETWEEN RAFTERS X 3/4" TALL GAP = 16 SI, 16 SI PROVIDED > 5.0 SI @ SOUTH; 7.7 SI @ NORTH; THEREFORE OK

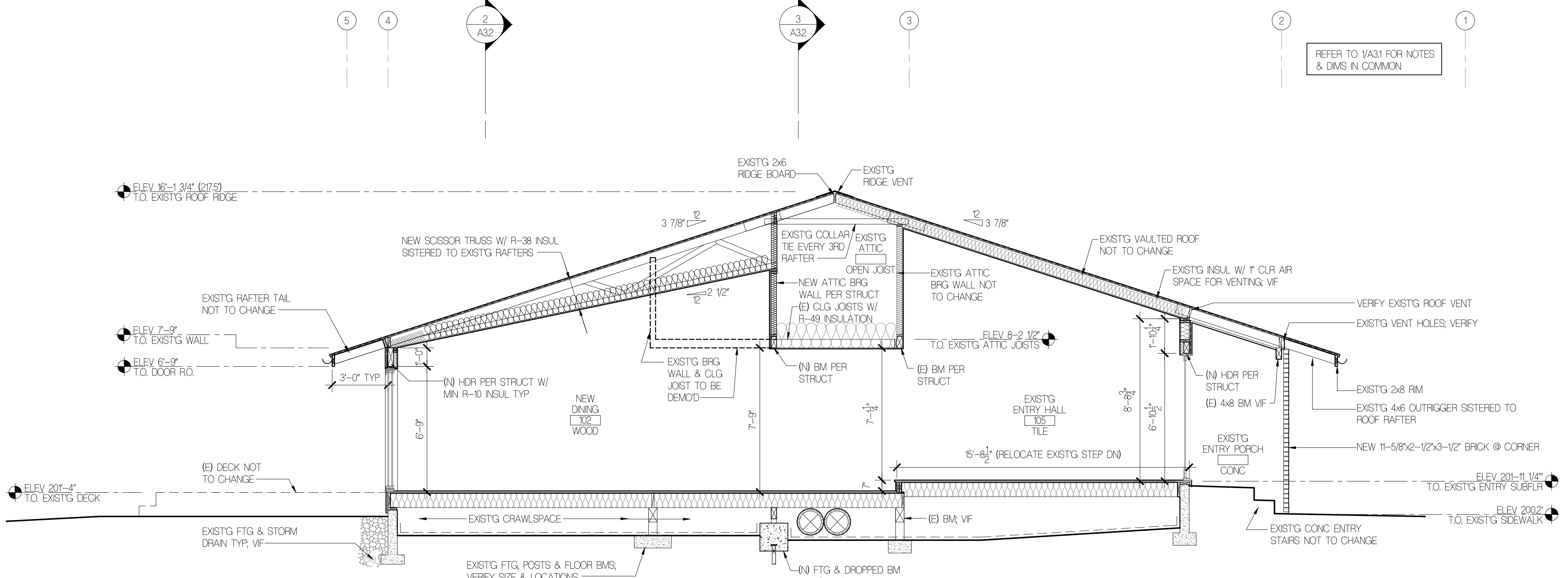
- 3 DORMER ADDITION ROOF:**
- ROOF AREA: 1304 SF = 187716 SI
 - REQD ROOF VENTING: 187716 SI / 300 = 626 SI
 - USEABLE VENT AREA REQD @ RIDGE: 626 SI / 2 = 313 SI
 - USEABLE VENT AREA REQD @ EACH EAVE: 313 SI / 2 = 157 SI
 - ** MATCH RIDGE VENTING @ MINIMUM
- AT RIDGE, USE COR-A-VENT V-300 W/ 135 S/LF NFVA
18'-8 3/4" LINEAL FT OF RIDGE X 135 S/LF = 2528 SI, 2528 SI PROVIDED > 626 SI REQD, THEREFORE OK
 - AT EAST & WEST RIM, PROVIDE VENT SLOT EACH BAY PER DETAIL 6 & 7/A31
14'-1 1/2" LINEAL FT OF EAVE / 24" RAFTER BAYS = 7 RAFTER BAYS, 19625 SI / @ 7 RAFTER BAYS = 28 SI/BAY REQD, 1575 SI (MIN) PROVIDED THEREFORE OK
 - AT FRIEZE BLOCK, PROVIDE 3/4" CONT GAP PER 7/A31
22 LINEAL INCHES BETWEEN RAFTERS X 3/4" TALL GAP = 16 SI, 16 SI PROVIDED > 2.25 SI REQD PER BAY; THEREFORE OK

- 4 REPLACED EAST ROOF:**
- ROOF AREA: 1424 SF = 205056 SI
 - REQD ROOF VENTING: 20,4046 SI / 300 = 684 SI
 - USEABLE VENT AREA REQD @ PEAK: 684 SI / 2 = 342 SI
 - USEABLE VENT AREA REQD @ EAVE: 342 SI / 2 = 171 SI
 - + 25% FOR BUG SCREEN VENTING = 21375 SI
- AT RIDGE, USE COR-A-VENT V-300 W/ 135 S/LF NFVA
22'-6" LINEAL FT OF RIDGE X 135 S/LF = 30375 SI, 30375 SI PROVIDED > 684 SI REQD, THEREFORE OK
 - AT NORTH & SOUTH RIM, PROVIDE VENT SLOT EACH BAY PER DETAIL 6 & 7/A31
9'-10 1/2" LINEAL FT OF EAVE / 24" RAFTER BAYS = 5 RAFTER BAYS, 21375 SI / @ 5 RAFTER BAYS = 4275 SI/BAY REQD, 1575 SI PROVIDED THEREFORE OK
 - AT FRIEZE BLOCK, PROVIDE 3/4" CONT GAP PER 7/A31
22 LINEAL INCHES BETWEEN RAFTERS X 3/4" TALL GAP = 16 SI, 16 SI PROVIDED > 4.275 SI REQD PER BAY; THEREFORE OK

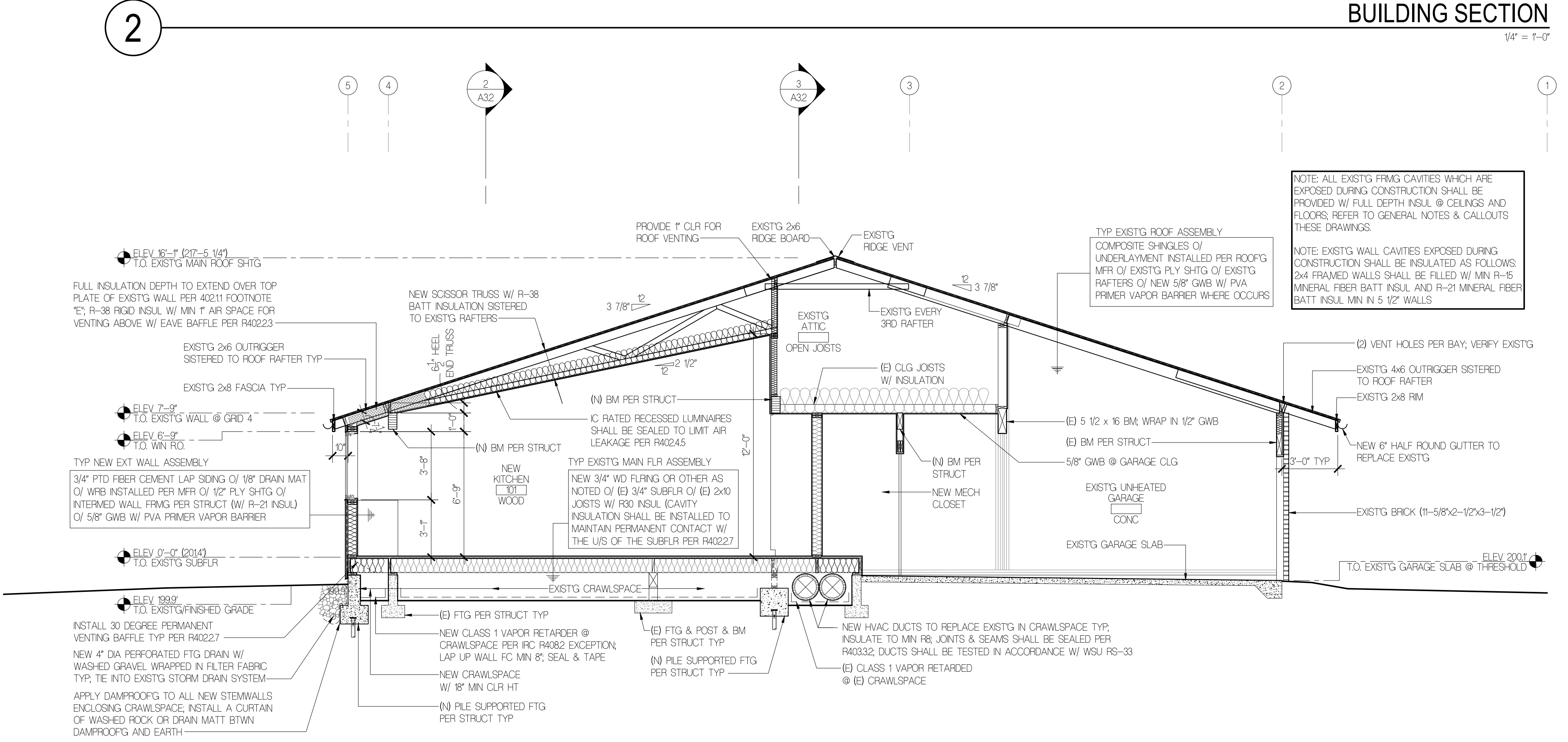
4 ROOF VENTING CALCS
NTS



3 ROOF VENTING DIAGRAM
NTS

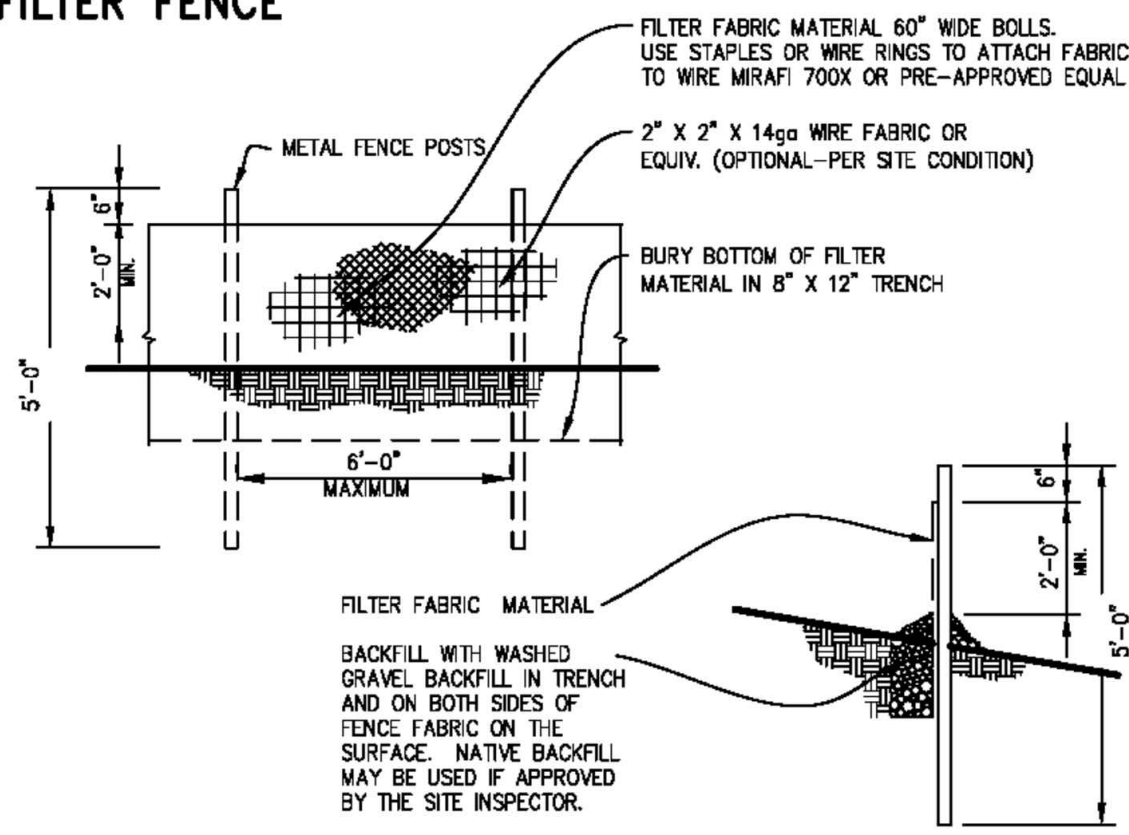


BUILDING SECTION
1/4" = 1'-0"



BUILDING SECTION
1/4" = 1'-0"

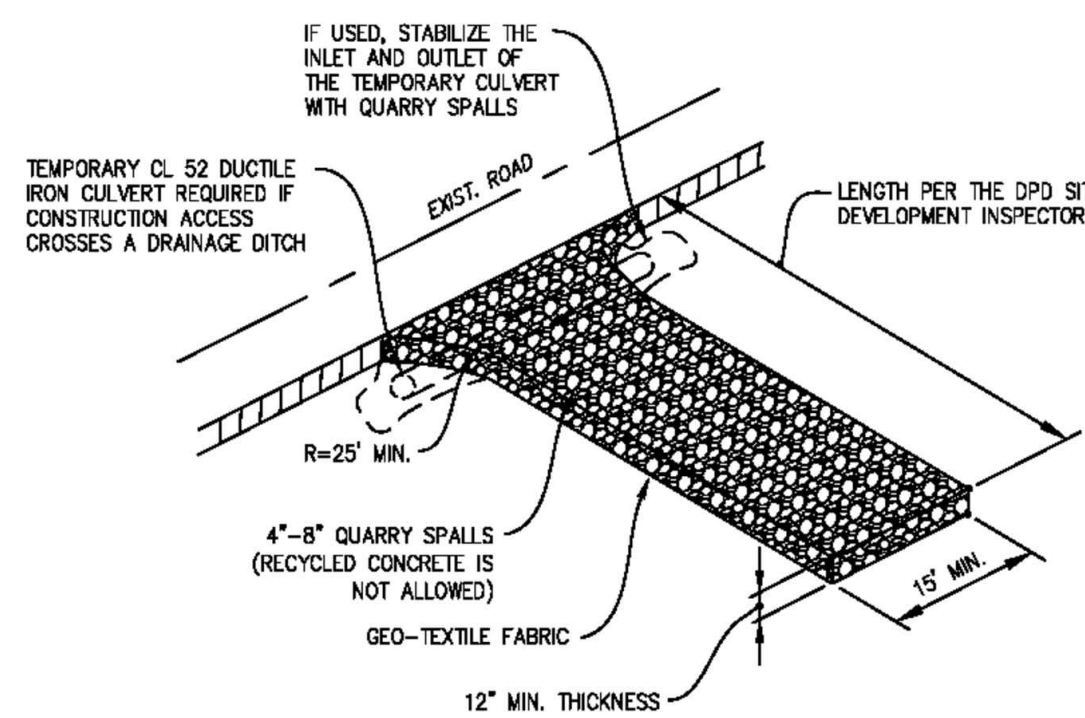
FILTER FENCE



NOTE: ANGLE SILT FENCE BACK UP THE SLOPE AT THE END OF RUN.

SYMBOL: (FF)

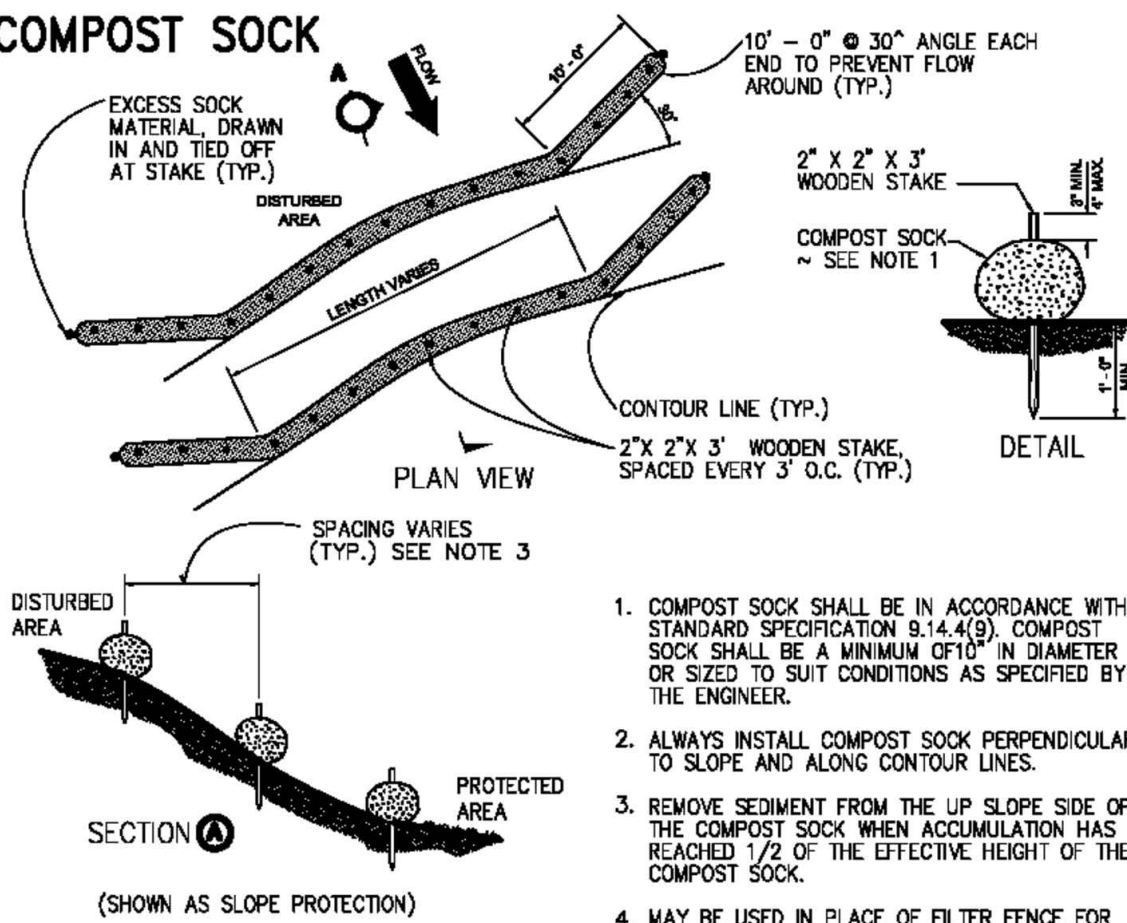
STABILIZED CONSTRUCTION ACCESS



STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND PARKING, INCLUDING PLANTING STRIPS. RECYCLED CONCRETE IS NOT ALLOWED.

SYMBOL: (CA)

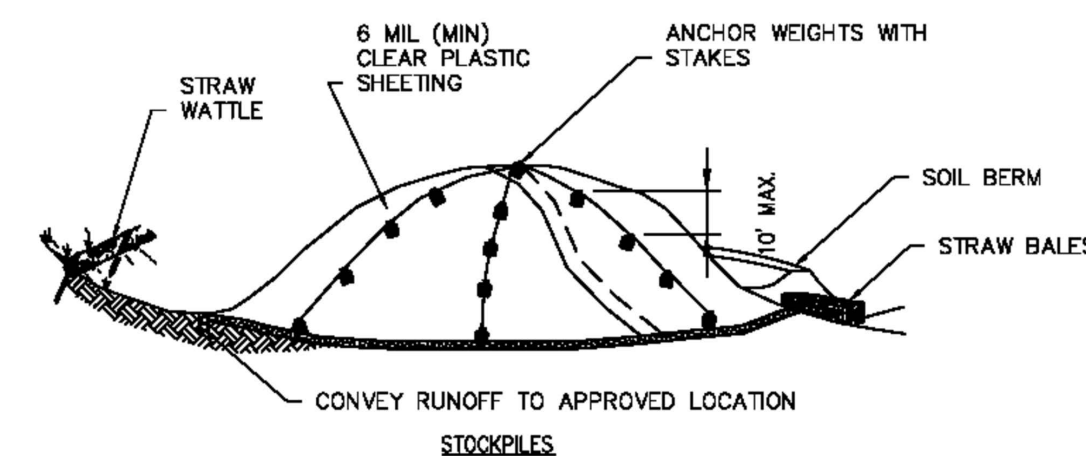
COMPOST SOCK



1. COMPOST SOCK SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 9.14.4(B). COMPOST SOCK SHALL BE A MINIMUM 60" IN DIAMETER OR SIZED TO SUIT CONDITIONS AS SPECIFIED BY THE ENGINEER.
2. ALWAYS INSTALL COMPOST SOCK PERPENDICULAR TO SLOPE AND ALONG CONTOUR LINES.
3. REMOVE SEDIMENT FROM THE UP SLOPE SIDE OF THE COMPOST SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE COMPOST SOCK.
4. MAY BE USED IN PLACE OF FILTER FENCE FOR PREMIER CONTROL.

SYMBOL: (CS)

STOCKPILE AND EXPOSED SLOPE COVERING

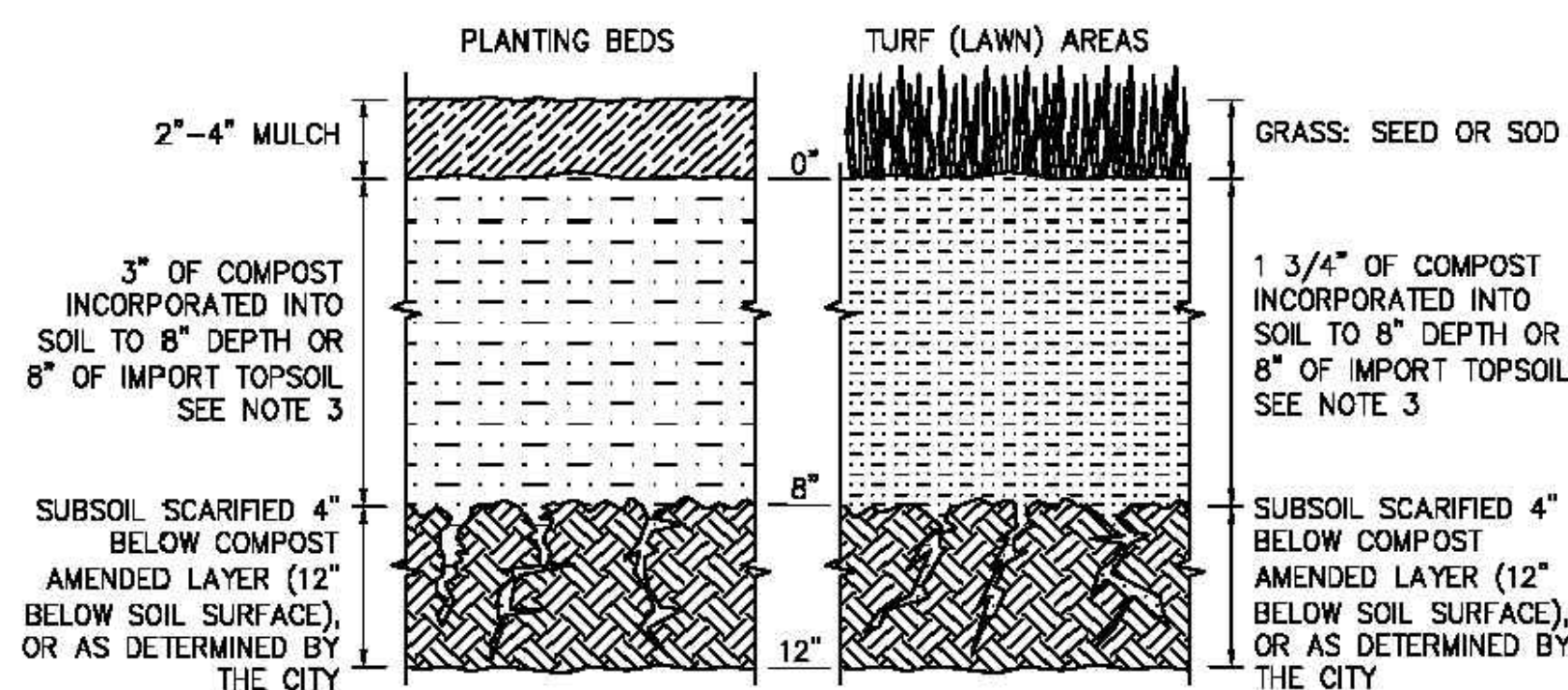


SYMBOL: (SP)

LEGEND

- PROPERTY LINE
- BUILDING
- CONCRETE STOCKPILE
- CONSTRUCTION ACCESS
- FENCE DELINEATING AREAS OF NO GRASS AND DISTURBANCE & TREES/VEGETATION PROTECTION
- PROPERTY CORNER
- CONSTRUCTION ACCESS
- FILTER FENCE

SOIL AMENDMENT



NOTES:

1. POST CONSTRUCTION SOIL AMENDMENT IS REQUIRED ON ALL AREAS NOT COVERED BY IMPERVIOUS SURFACE WHERE SOIL IS DISTURBED DURING CONSTRUCTION.
2. SOIL AMENDMENT MUST PASS A 12 INCH MINIMUM PROBE TEST.

SYMBOL: (SA) AREA REQUIRING SOIL AMENDMENT (ND) NON-DISTURBED AREA (SOIL AMENDMENT NOT REQUIRED)

DETAILS
NOT TO SCALE

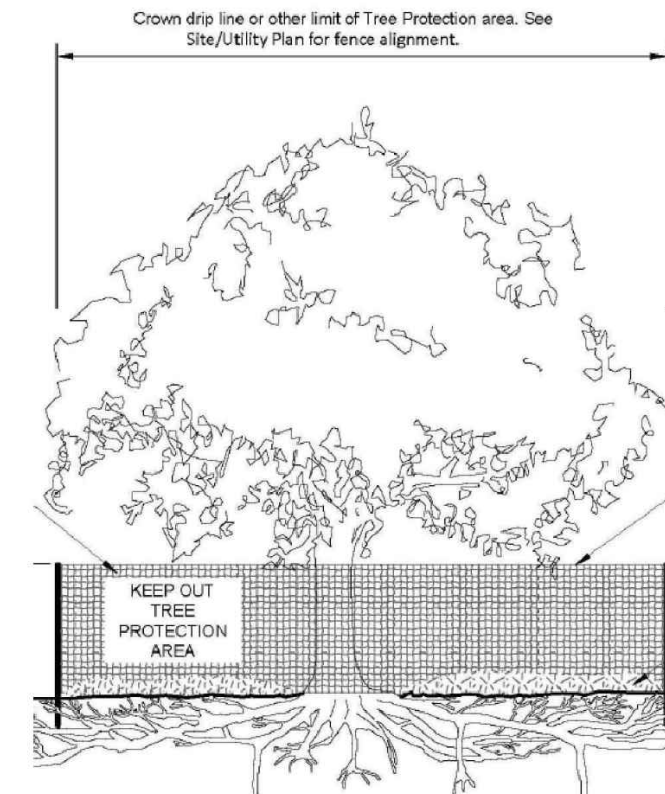
TREE PROTECTION AREA (TPZ)

KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

- Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:
1. Correction Notices or Stop Work Orders until compliance is achieved
 2. RE Inspection Fees
 3. Arborist reports recommending mitigation

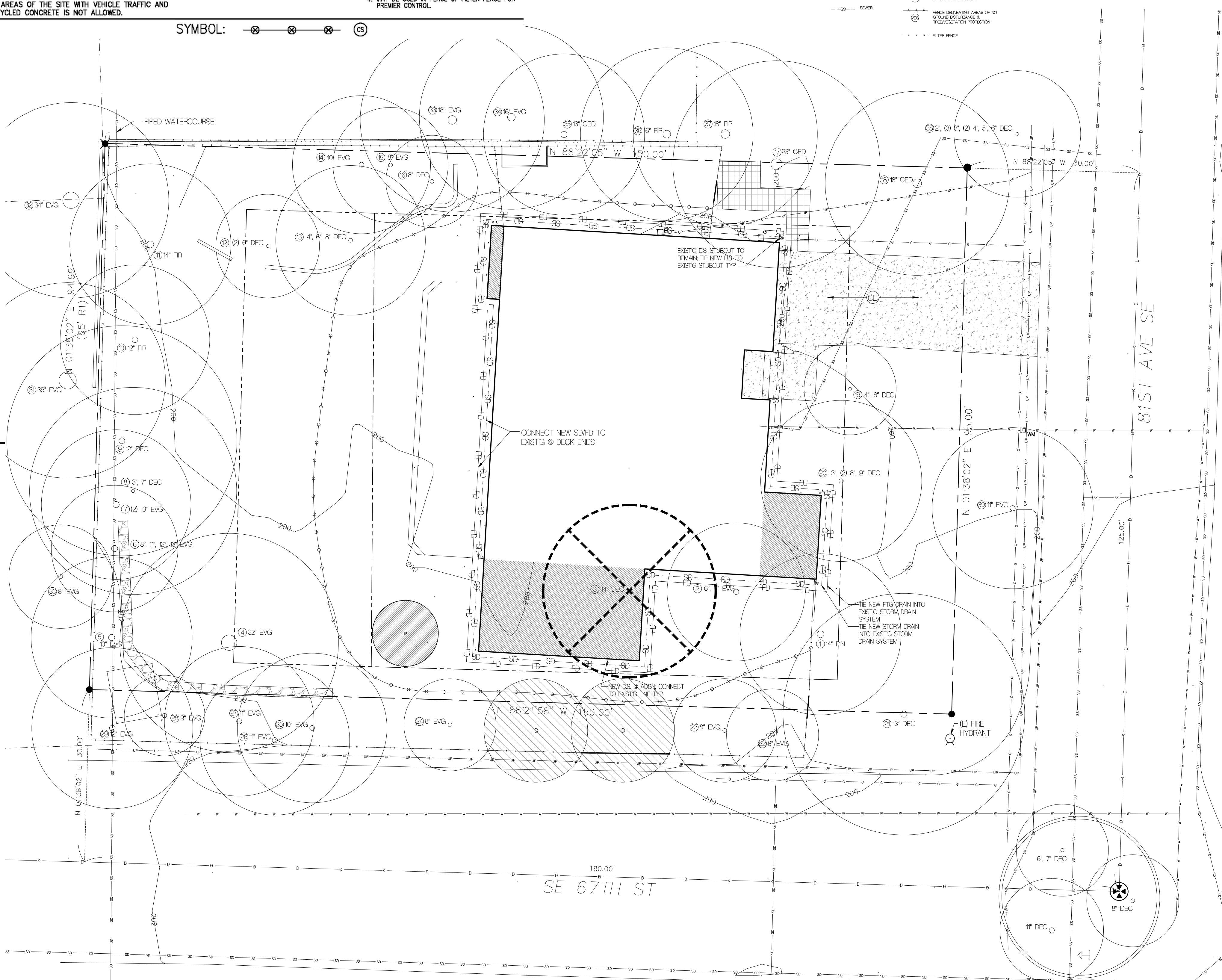
- Notes
1. No pruning shall be performed unless under the direction of an arborist
 2. No equipment shall be stored or operated inside the protective fencing including during fence installation and removal
 3. No storage of materials shall occur inside the protective fencing
 4. Refer to Site/Utility Plan for allowable modifications to the tree protection area.
 5. Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required
 6. Exposed roots: For roots > 1" damaged during construction, make a clean straight cut to remove damaged portion and inform City Arborist



- Tree protection fence: 4-foot chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.
- 2" x 6" steel posts or approved equal
- Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

TREE PROTECTION
NOT TO SCALE



SITE PLAN

FLOISAND STUDIO

1941 1st avenue south, 2e
seattle, wa 98134
ph 206.634.0136

PROJECT OWNER

AYESHA & TYSON HARPER
6551 81ST AVE SE
MERCER ISLAND, WA 98040

ARCHITECT

FLOISAND STUDIO
1941 FIRST AVENUE SOUTH #2E
SEATTLE, WA 98134
CONTACT: ALLISON HOGUE
PHONE: (206) 634-0136

STRUCTURAL ENGINEER

MALSAM TSANG STRUCTURAL
ENGINEERING
122 S JACKSON ST, SUITE 210
SEATTLE, WA 98104
CONTACT: MARC MALSAM
PHONE: (206) 789-6038

GEOTECH

GEOTECH CONSULTANTS, INC.
2401 10TH AVE E
SEATTLE, WA 98102
CONTACT: MARC R. MCGINNIS
PHONE: (425) 747-5618

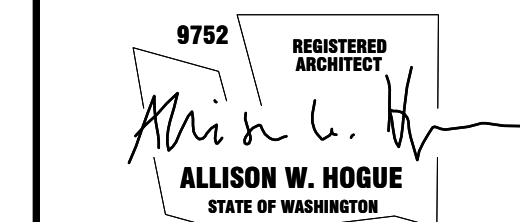
SURVEYOR

TERRANE
10801 MAIN STREET, SUITE 102
BELLEVUE, WA 98003
CONTACT: KATHERINE RYG
PHONE: (425) 233-6091

**HARPER
RESIDENCE**

6551 81ST AVENUE SE
MERCER ISLAND, WA 98040

PROFESSIONAL STAMP



BUILDING DEPT STAMP

ISSUE DATE
PERMIT 5.21.21

**TEMPORARY EROSION
& SEDIMENT CONTROL**

TESC

GENERAL STRUCTURAL NOTES	
(THE FOLLOWING APPLY UNLESS NOTED OTHERWISE ON THE PLANS)	
CRITERIA	
1.	ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC) 2018 EDITION.
2.	DESIGN LOADING CRITERIA FLOOR LIVE LOAD (RESIDENTIAL) 40 PSF FLOOR LIVE LOAD (RESIDENTIAL DECKS AND BALCONIES) 60 PSF SNOW 25 PSF WIND METHOD – DIRECTIONAL PROCEDURE Kz1=16, Gc1=0.8, 10 MPH (RISK CATEGORY II), EXPOSURE "C" ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS SDC D, SITE CLASS D, Ie=10, Se=1467, Sh=0.508, Sds=1174, Cd=0.0181, R=6.5, SEISMIC DESIGN BASE SHEAR Vb=20.9 KIPS
3.	STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
4.	PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL PLAN SECTIONS, BUILDING SECTIONS, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
5.	CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS, CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION"
6.	CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
7.	CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
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 ARCHITECT AND THE STRUCTURAL ENGINEER.
9.	ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERRECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER. MANUFACTURERS INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE AT THE TIME OF INSPECTION FOR THE INSPECTORS USE AND REFERENCE.
GEOTECHNICAL	
10.	SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.
	PASSIVE PRESSURE 300 PCF 2" DIAMETER EXTRA STRONG PIPE PILE CAPACITY 3 TONS
	SOILS REPORT REFERENCE: FOUNDATION, LANDSLIDE, AND EROSION HAZARD CONSIDERATIONS, DATED JANUARY 7, 2021 BY GEOTECH CONSULTANTS, INC. JN 20503
11.	2" DIAMETER EXTRA STRONG PIPE PILES SHALL BE DRIVEN TO REFUSAL. REFUSAL SHALL BE DEFINED AS LESS THAN 1" PENETRATION IN 60SECONDS DURING CONTINUOUS DRIVING OF A 90-LB JACK HAMMER UNDER THE FULL EFFORT OF THE OPERATOR. PIPE PILES SHALL BE INSTALLED IN STRICT ACCORDANCE TO SOILS ENGINEERS REQUIREMENTS. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE A OR B, Fy = 36 KSI. PILES SHALL BE DRIVEN IN NOMINAL SECTIONS AND CONNECTED WITH COMPRESSION FITTED SLEEVE COUPLERS. PIPE JOINTS SHOULD NOT BE WELDED TOGETHER. PILES SHALL BE PLACED WITHIN 3' OF SPECIFIED LOCATION. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRIVING PILES.
RENOVATION	
12.	CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
13.	CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION AND/OR 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 STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 20 PSF.
14.	CONTRACTOR SHALL CHECK FOR DRYROT AT ALL AREAS OF NEW WORK. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.
15.	WHERE NEW EXCAVATIONS EXTEND BELOW AND UNDERMINE EXISTING FOOTINGS THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROVIDE TEMPORARY SUPPORT TO THE STRUCTURE AND EXISTING FOUNDATION AS REQUIRED. THE CONTRACTOR IS RESPONSIBLE TO INSTALL ALL TEMPORARY SUPPORT AS REQUIRED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
CONCRETE	
16.	CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 308 AND ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF fc = 2500 PSI AND MIX SHALL CONTAIN NOT LESS THAN 6-12 BAGS OF GEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. STRUCTURAL DESIGN IS BASED ON A CONCRETE STRENGTH OF fc = 2500 PSI. THEREFORE NO CONCRETE STRENGTH TESTING REQUIRED. CONCRETE EXPOSURE CATEGORIES ARE F1, S0, W0, AND C1.

17.	THE MINIMUM AMOUNTS OF CEMENT MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL (OWNERS PRIOR TO PLACING ANY CONCRETE). THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 308-14 SECTION 26.2. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.
18.	REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, fy = 60 KSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy = 40 KSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, fy = 60 KSI.
19.	DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT #6 AND SMALLER 48 BAR DIAMETERS OR 2-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 48 BAR DIAMETERS OR 2-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 308-14, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
20.	NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
20.	CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS: FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3" FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER) 2" FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR SMALLER) 1-1/2" COLUMN TIES OR SPIRALS AND BEAM STIRRUPS 1-1/2" SLABS AND WALLS (INT. FACE) GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"
21.	SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.
ANCHORAGE	
22.	EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BARS) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" EPOXY ADHESIVE AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2508 AND IAPMO-UES REPORT ER-265. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A36, UNO.
23.	HEAVY DUTY THREADED CONCRETE ANCHORS SPECIFIED ON THE DRAWINGS SHALL BE "TITEN HD SCREW ANCHOR" AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2713 AND ESR-1556, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.
24.	EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "STRONG-BOLT 2" ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT CONFORMANCE TO ICC-ES REPORT ESR-3037 AND IAPMO-UES REPORT ER-240, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.
25.	DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE (POPWAL-300MG, 0.145" DIAMETER, UNO) AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2108. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1", UNO. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE.
WOOD	
26.	ALL 2x LUMBER SHALL BE KILN DRIED OR MC-19, AND ALL LUMBER SHALL BE GRADED AND MARKED IN CONFORMANCE WITH WCLB STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS: JOISTS (2x, 3x, 4x MEMBERS) DOUGLAS FIR-LARCH NO 2 AND BEAMS MINIMUM BASE VALUE, Fb = 900 PSI BEAMS (6x AND LARGER) DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fb = 875 PSI POSTS (4x MEMBERS) DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fc = 1650 PSI (6x AND LARGER) DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fc = 600 PSI STUDS, PLATES AND MSC FRAMING DOUGLAS FIR-LARCH NO 2
27.	GLULAM MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN GLULAM BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI, UNO. ALL CANTILEVER GLULAM BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI, UNO. GULUED LAMINATED COLUMNS SHALL BE DOUGLAS FIR COMBINATION 3, L2D GRADE, Fc = 2300 PSI, Fb = 2000 PSI, E = 1900 KSI.
28.	MANUFACTURED LUMBER, PSL, LVL, AND LSL, SHALL BE MANUFACTURED UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PSL, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES REPORT ESR-1897 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL. WITH THE LENGTH OF THE MEMBER. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: PSL (20E) Fb = 2900 PSI E = 2000 KSI Fv = 290 PSI LVL (20E) Fb = 2600 PSI E = 2000 KSI Fv = 285 PSI LSL (155E) Fb = 2325 PSI E = 1550 KSI Fv = 310 PSI PSL COLUMN (18E) Fc = 2500 PSI E = 1800 KSI Fv = 190 PSI
	DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

	MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.
29.	PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED.
30.	PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION, ANSIPTR 1 BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS: TOP CHORD LIVE LOAD 25 PSF TOP CHORD DEAD LOAD 10 PSF BOTTOM CHORD DEAD LOAD 5 PSF TOTAL LOAD 40 PSF WIND UPLIFT (TOP CHORD) 20 PSF BOTTOM CHORD LIVE LOAD 10 PSF (BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD) REFER TO PLAN FOR ADDITIONAL LOADING
	TRUSSES SHALL BE DESIGNED TO NOT ALLOW LIMITED STORAGE PER IBC TABLE 1607.1. WEBS SHALL BE CONFIGURED SO THAT ALL OPENINGS ARE SMALLER THAN 24" WIDE x 42" HIGH.
	WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL) SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HPS, VALLEYS, AND INTERSECTION AREAS, USE OF GORDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ROOF OVER-FRAMING, ETC. SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSSES TO TRUSS AND TRUSS TO GROSS TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.
31.	PLYWOOD SHEATHING SHALL BE GRADE C-0, EXTERIOR GLUE OR STRUCTURAL I, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS-1 OR PS-2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LEU OF PLYWOOD. WALL SHEATHING SHALL BE 7/16" OR 1/2" (NOMINAL) WITH SPAN RATING 2/0 FLOOR SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24 WATERPROOF DECK SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24 FLAT ROOF SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24 ROOF SHEATHING SHALL BE 1/2" OR 7/16" (NOMINAL) WITH SPAN RATING 32/16 FOR ROOFS WITH A PITCH GREATER THAN 2:12 REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.
32.	ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESURE-TREATED WITH AN APPROVED PRESERVATIVE OR GILDED LAYERS OF ASPHALT IMPREGATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.
33.	PRESSURE TREATED WOOD (INCLUDES PRESERVATIVE AND FIRE TREATED) SHALL BE TREATED PER AWWA STANDARDS. PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO RETENTION OF 0.25 PCF. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. SODIUM BORATE (SBX) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS AND TIMBER CONNECTORS WITHOUT AMMONIA IN DIRECT CONTACT WITH ACC-A TO A RETENTION LEVEL OF 0.40 PCF, CBA-A (UP TO A RETENTION LEVEL OF 0.41 PCF), CA-B (UP TO A RETENTION LEVEL OF 0.21 PCF), SHALL BE 685 OR 485, HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS WITH AMMONIA IN DIRECT CONTACT WITH ACC-A (OVER A RETENTION LEVEL OF 0.40 PCF), CBA-A (OVER A RETENTION LEVEL OF 0.41 PCF), CA-B (OVER A RETENTION LEVEL OF 0.21 PCF), OR WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.
34.	TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2019. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. ALL 2x JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL T&J JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MLU" SERIES JOIST HANGERS. WHERE CONNECTOR STRAPS CONNECT @MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.
35.	WOOD FASTENERS A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS: SIZE TYPE LENGTH DIAMETER 8d COMMON 2-1/2" 0.31" 10d GUN 3" 0.31" 12d GUN 3-1/4" 0.31" 16d GUN 3-1/2" 0.31"
	IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL. NAILS – PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.
B.	ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING OUT WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2018 EDITION) WITH A LEAD BORE HOLE OF 60-70% OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

	BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. HOLES SHALL BE ACCURATELY ALIGNED IN MAIN MEMBERS AND SIDE PLATES/MEMBERS. BOLTS SHALL NOT BE FORCIBLY DRIVEN.
C.	SDS AND SDSMS SCREWS CALLED OUT ON PLAN ARE TIMBER SCREWS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. SCREWS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. EQUIVALENT SCREWS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. LAG SCREWS ARE NOT AN EQUIVALENT SUBSTITUTION.
36.	WOOD FRAMING NOTES – THE FOLLOWING APPLY UNLESS NOTED OTHERWISE ON THE PLANS: A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC, THE AITC "TIMBER CONSTRUCTION MANUAL", AND THE AFRPA NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. MINIMUM NAILING SHALL CONFORM TO TABLE 2304.01 OF THE IBC, UNO. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. B. WALL FRAMING REFER TO ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16"oc, UNO. (2)STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. (2)2x4 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS IN STRUCTURAL WALLS, UNO. NAIL MULTI-MEMBER HEADERS WITH (2)ROWS 10d AT 12"oc. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT. ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE AND BOTTOM PLATE TO EACH STUD WITH (3)10d NAILS. FACE NAIL DOUBLE TOP PLATES WITH 10d AT 12"oc AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE (2)10d NAILS AT 4"oc EACH SIDE OF JOINT. AT TOP PLATE INTERSECTIONS PROVIDE (3)10d FACE NAILS. ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH (2)ROWS OF 12d NAILS AT 16"oc, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS AT 4'-0"oc EMBEDDED 7" MINIMUM, UNO. THERE SHALL BE A MINIMUM OF (2)BOLTS PER PLATE SECTION WITH (1)BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4-1/2" FROM EACH END OF THE PLATE SECTION. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH (2)ROWS OF 10d AT 16"oc. UNLESS NOTED OTHERWISE, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH #6 x 1-1/4" TYPE S OR W SCREWS AT 12"oc. UNLESS NOTED OTHERWISE, 7/16" OR 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 2/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS AT 6"oc AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS AT 12"oc. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS. C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS, UNO. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL TIMBER JOISTS TO SUPPORTS WITH (3)10d NAILS AND NAIL T&J JOISTS TO SUPPORTS WITH (2)10d NAILS. ATTACH JOISTS TO BEAMS WITH SIMPSON JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH (2)ROWS 10d AT 12"oc. TOENAIL RM JOIST TO TOP PLATE WITH 10d AT 6"oc. TOENAIL BLOCKING BETWEEN JOISTS TO TOP PLATE WITH (3)10d NAILS. UNLESS NOTED OTHERWISE ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE Laid UP WITH GRAIN PERPENDICULAR TO SUPPORTS WITH END JOINTS STAGGERED, AND NAILED AT 6"oc WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND AT 12"oc TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE GLUE CENTERED BETWEEN JOISTS/STRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 10d AT 12"oc, UNO.
37.	NOTCHES AND HOLES IN WOOD FRAMING: A. SAWN LUMBER JOISTS AND RAFTERS: NOTCHES AT THE ENDS OF JOISTS SHALL NOT EXCEED 1/4 THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED 1/6 THE JOIST DEPTH, BE LONGER THAN 1/3 THE JOIST DEPTH, OR BE LOCATED IN THE MIDDLE 1/3 OF THE SPAN. HOLES SHALL NOT BE WITHIN 2" OF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER SHALL NOT EXCEED 1/3 THE JOIST DEPTH. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2)TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL BE LOCATED A MINIMUM OF 2" FROM ANY NOTCH. B. EXTERIOR AND BEARING WALLS: WOOD STUDS ARE PERMITTED TO BE NOTCHED TO A DEPTH NOT EXCEEDING 1/4 OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40% OF THE STUD WIDTH IS PERMITTED IN WOOD STUDS. HOLES SHALL NOT BE WITHIN 5/8" TO THE EDGE OF THE STUD. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2)TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL NOT BE LOCATED AT THE SAME SECTION AS A NOTCH. C. CUTS, NOTCHES, AND HOLES IN MANUFACTURED LUMBER, PREFABRICATED PLYWOOD WEB JOISTS, AND PREFABRICATED TRUSSES ARE PROHIBITED EXCEPT WHERE NOTED ON STRUCTURAL PLANS OR PERMITTED BY MANUFACTURERS RECOMMENDATIONS.
38.	ELECTRICAL, MECHANICAL, PLUMBING, AND DRAINAGE SYSTEMS SHALL BE DESIGNED TO ACCOMMODATE THE DIFFERENTIAL SHRINKAGE OR MOVEMENT OF THE WOOD STRUCTURE (3/8" PER FOOT).

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PROFESSIONAL STAMP



STRUCTURAL CONTENTS ONLY

BUILDING DEPT. STAMP

ISSUE	DATE
PERMIT	5/21

S0.1







PLAN NOTES: (TYPICAL, UNLESS NOTED OTHERWISE)

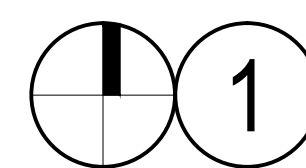
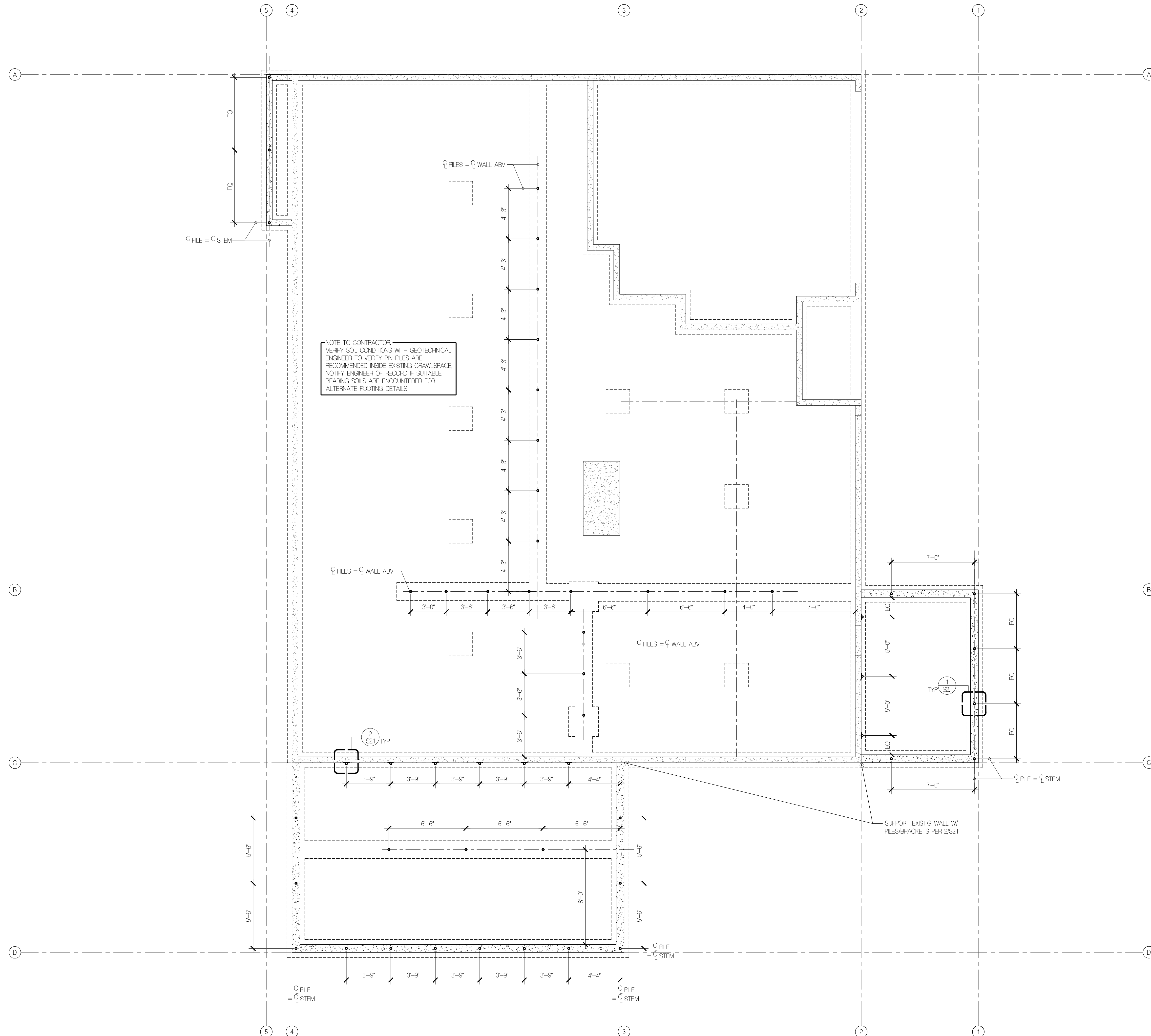
1. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. REFER TO SOILS REPORT FOR ADDITIONAL PILE INSTALLATION REQUIREMENTS.
3. CONTRACTOR TO VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS, SURVEY DRAWINGS, AND EXISTING SITE CONDITIONS.
4. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.

PILE SPECIFICATIONS

1. 2" DIAMETER EXTRA STRONG PIPE PILES SHALL BE DRIVEN TO REFUSAL. REFUSAL SHALL BE DEFINED AS LESS THAN 17 PENETRATION IN 60 SECONDS DURING CONTINUOUS DRIVING OF A 90-LB JACK HAMMER UNDER THE FULL EFFORT OF THE OPERATOR.
2. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE A OR B, F_y=36 KSI. PILES SHALL BE DRIVEN IN NOMINAL SECTIONS AND CONNECTED WITH COMPRESSION FITTED SLEEVE COUPLERS. PIPE JOINTS ARE NOT ALLOWED TO BE WELDED TOGETHER.
3. PIPE PILES NEED TO BE PLACED WITHIN 3" OF SPECIFIED LOCATION. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRIVING PILES.

STRUCTURAL LEGEND

-  EXISTING CONC WALL
-  NEW CONC WALL
-  EXISTING FOOTING
-  NEW FOOTING
-  2" DIA EXTRA-STRONG PIPE PILE (3-TON CAPACITY) REFER TO 1/S21 FOR EMBEDMENT INTO FOOTING
-  4" DIA EXTRA-STRONG PIPE PILE W/ BRACKET PER 2/S21



PIN PILE PLAN

1/4" = 1'-0"

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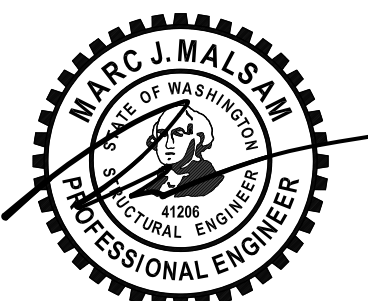
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**HARPER
RESIDENCE**

6551 81ST AVENUE SE
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PROFESSIONAL STAMP



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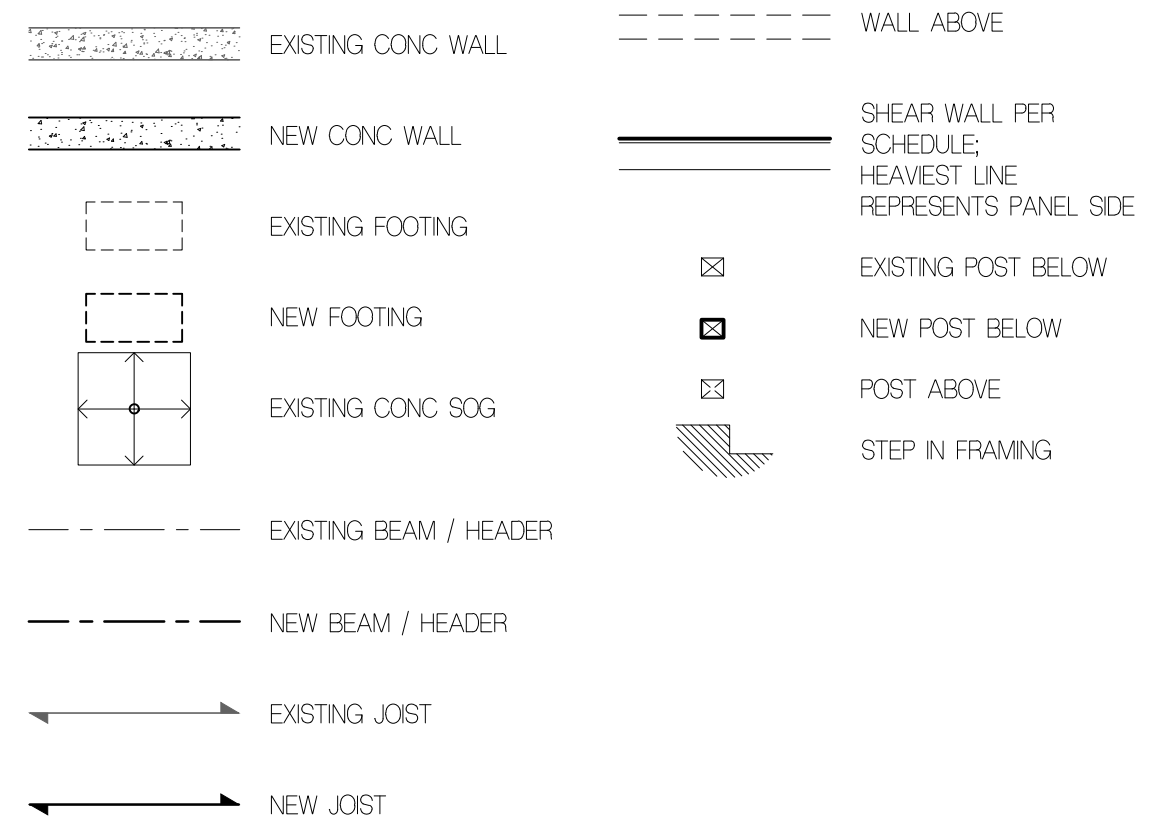
PIN PILE PLAN

S1.0

FOUNDATION PLAN NOTES (TYPICAL, UNLESS NOTED OTHERWISE)

- EXISTING CRAWLSPACE FOUNDATIONS ARE SHOWN FOR REFERENCE. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF EXISTING FOUNDATION ELEMENTS WHERE MINIMUM SIZE IS SPECIFIED - NOTIFY ENGINEER OF DISCREPANCIES FROM ASSUMED CONDITIONS. BOTTOM OF ALL NEW EXTERIOR FOOTINGS SHALL BE 8" MINIMUM BELOW LOWEST ADJACENT GRADE, UNO.
- REFER TO SHEET S20 FOR TYPICAL FOUNDATION AND CONCRETE DETAILS.
- TYPICAL FLOOR FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 2x10s AT 16" O.C. UNO. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH.
- GLUE AND NAIL FLOOR SHEATHING w/ 8d AT 6" O.C. AT FRAMED PANEL EDGES AND AT 12" O.C. IN THE FIELD, UNO.
- "SW_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/530 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
- ALL HEADERS SHALL BE 4x10, UNO. PROVIDE PT 4x6 POSTS AT SPLICES, PT 4x4 POSTS ELSEWHERE, UNO. REFER TO DETAIL 4/S21 FOR ADDITIONAL REQUIREMENTS.
- REFER TO GENERAL STRUCTURAL NOTES SHEET S10 FOR ADDITIONAL REQUIREMENTS.
- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.

STRUCTURAL LEGEND

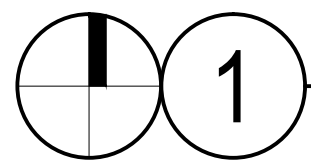
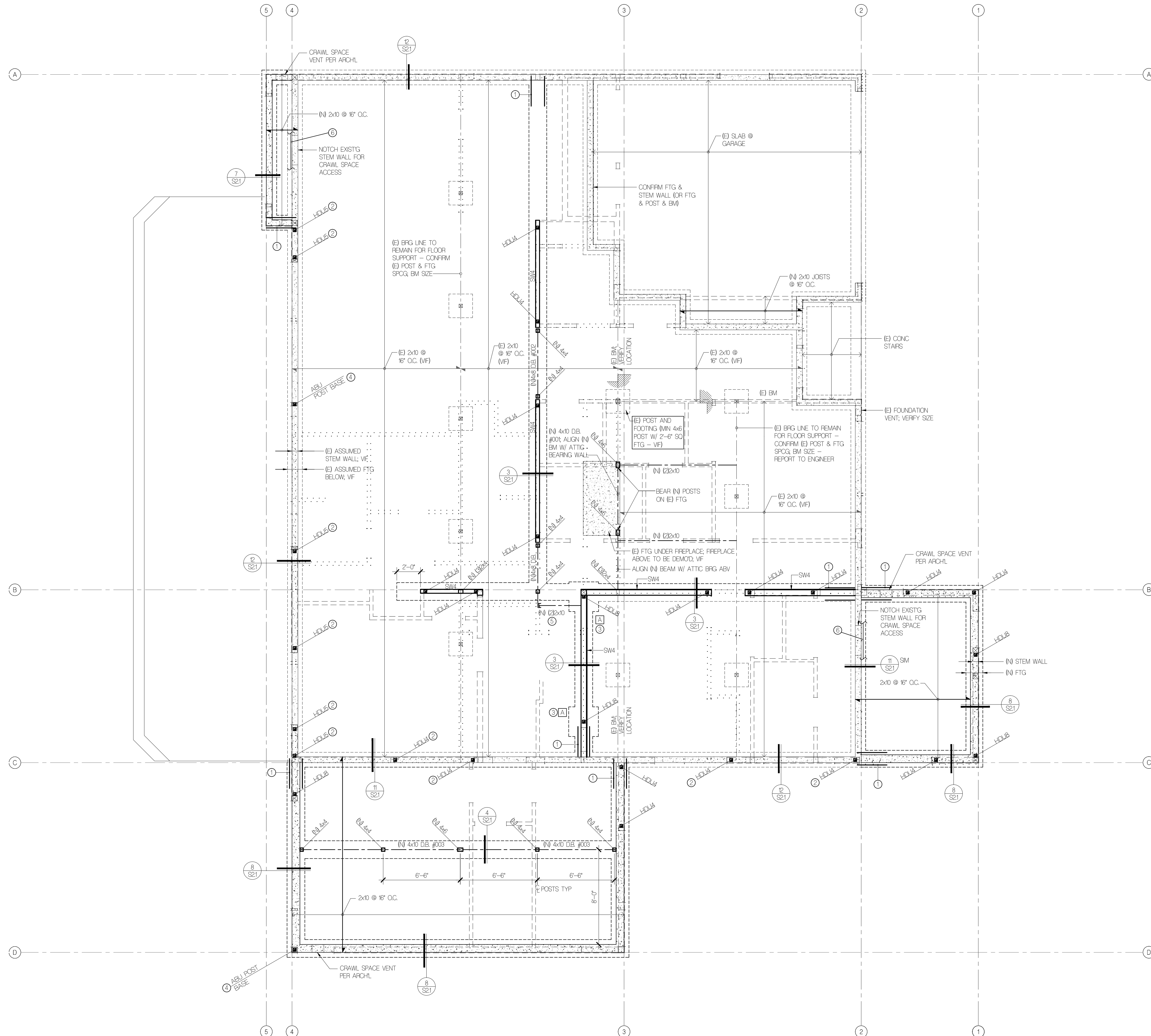


FOOTNOTES

- #4 x 2'-6" DOWELS TO MATCH HORIZ WALL AND FOOTING REINFORCING - EPOXY GROUT EMBED 4" MIN - NO SPECIAL INSPECTION REQD
- EPOXY EMBED HOLDOWN ANCHOR BOLT IN EXISTING STEM WALL PER EPOXY HOLDOWN SCHEDULE
- CENTER FOOTING ON HOLDOWN ANCHOR ROD
- ANCHOR POST BASE W/ 5/8" ANCHOR ROD - EPOXY GROUT EMBED 8"
- PROVIDE (N) DEL JOIST WHERE (N) STAIR STRINGERS BEAR ON FLOOR FRAMING
- VERIFY (E) RM IS CONTINUOUS OVER CUT-IN ACCESS LOCATION

FOOTING SCHEDULE

MARK	SIZE	REIN
A	2'-6" SQ x 16" CP	(3) #4 EA WAY, TOP AND BOTTOM



FOUNDATION & MAIN FLOOR FRAMING PLAN

1/4" = 1'-0"

FLOISAND STUDIO

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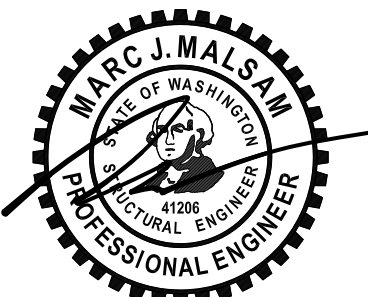
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FOUNDATION & MAIN FLOOR FRAMING

S1.1

ADDN ROOF FRAMING NOTES

(TYPICAL, UNLESS NOTED OTHERWISE)

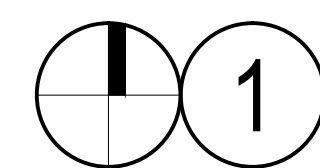
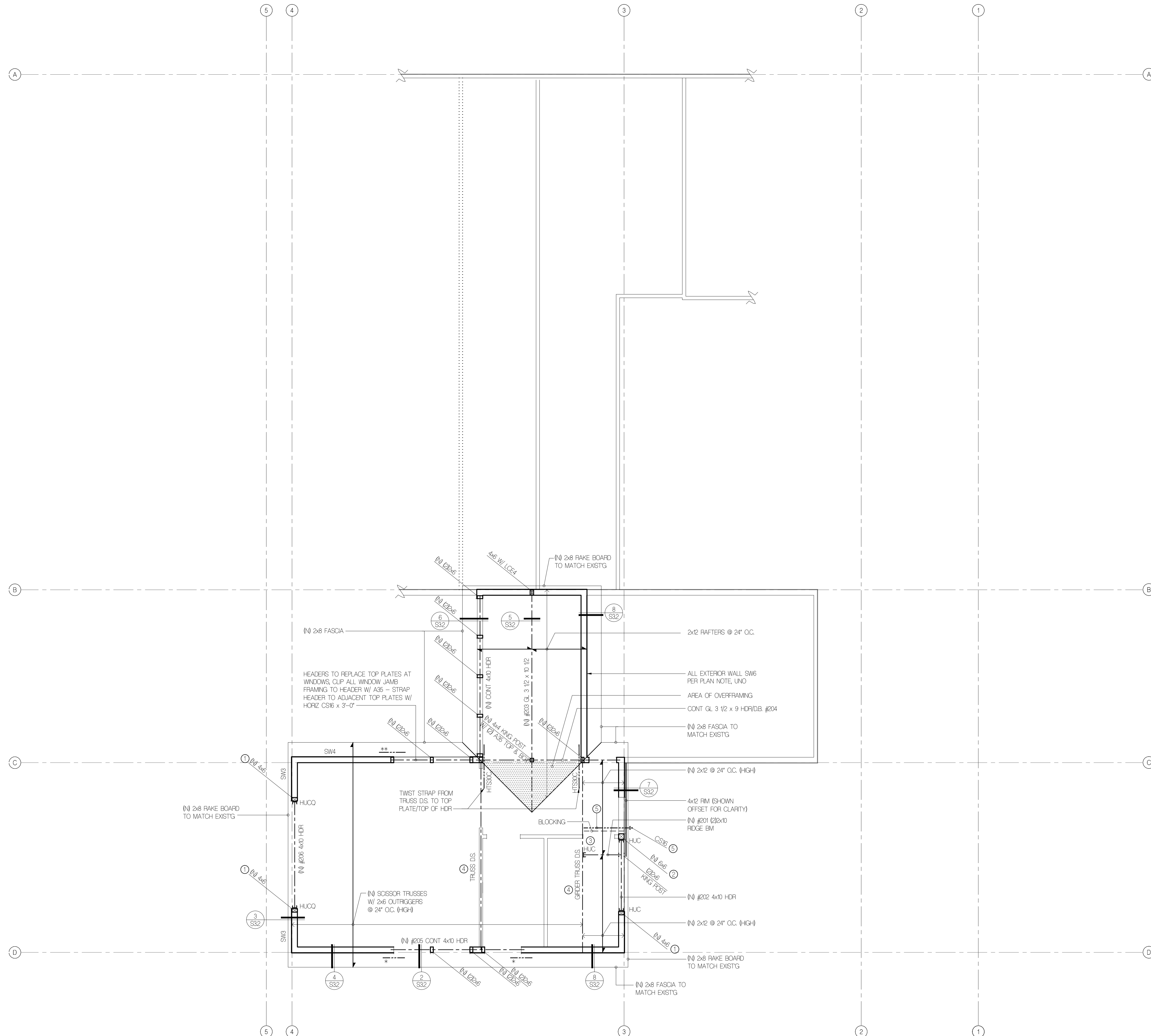
- TYPICAL ROOF FRAMING CONSISTS OF 7/16" or 1/2" APA RATED SHEATHING (SPAN RATING 32/16) OVER PREFABRICATED TRUSSES OR 2x12S AT 24" O.C. UNO. PROVIDE H25A CLIPS EACH END OF ALL TRUSSES, H25A EACH SIDE OF ALL MULTIPLE TRUSSES, UNO. REFER TO ARCHITECTURAL DRAWINGS FOR TRUSS PROFILE.
- TYPICAL CRICKET FRAMING CONSISTS OF 3/4" APA RATED SHEATHING (SPAN RATING 48/24) OVER 2x SLEEPERS AT 24" O.C. TO ENAL SLEEPERS W/ (2)1x4 AT 24" O.C. OVER TYPICAL ROOF FRAMING. PROVIDE VENTING BELOW CRICKET ROOF FRAMING AS REQUIRED.
- NAIL ROOF SHEATHING W/ 8d AT 6" O.C. AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12" O.C. IN THE FIELD, UNO.
- "SW_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/540 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
- ALL HEADERS REQUIRED ARE SHOWN ON PLAN. REFER TO DETAIL 8/530 FOR ADDITIONAL REQUIREMENTS.
- PROVIDE (2) BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS, BEAMS, AND GRIDER TRUSSES 6'-0" IN LENGTH AND OVER, UNO.
- WHERE POSTS OCCUR PROVIDE SOLID VERTICAL GRAIN BLOCKING SOLID THRU FLOOR TO MATCHING SUPPORTS BELOW.
- TYPICAL WALL FRAMING CONSISTS OF 2x6s AT 16" O.C. AT EXTERIOR WALLS AND 2x4s OR 2x6s AT 16" O.C. AT INTERIOR WALLS PER ARCH DRAWINGS, UNO.
- REFER TO SHEET S40 FOR TYPICAL WOOD FRAMING DETAILS.
- REFER TO GENERAL STRUCTURAL NOTES SHEET S10 FOR ADDITIONAL REQUIREMENTS.
- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.

STRUCTURAL LEGEND

	STRUCTURAL WALL BELOW		SHEAR WALL; SEE 3/S30 HEAVIEST LINE REPRESENTS PANEL SIDE
	NEW JOIST/RAFTER		POST PER PLAN
	NEW BEAM / HEADER		METAL HANGERS
	BLOCKING		DROPPED BEAM / HEADER
	HORIZ CS16 x 3'-0" BEAM TO BEAM OR HDR TO TOP PL.		D.S. DRAG STRUT - NAIL THRU SHEATHING W/ 8d @ 4" O.C. INTO ENTIRE LENGTH OF MEMBER
	HORIZ (2)CS16 x 3'-0" BEAM TO BEAM OR HDR TO TOP PL.		OVERFRAMING - 2x6 @ 24" O.C. W/ 6'-0" MAX SPAN OR POST DOWN MID-SPAN TO FRAMING BELOW

FOOTNOTES

- CLIP POST TO SLOPED TO PLATE W/ (2)LS50 AND TO BOTTOM PLATE W/ (2)A35
- PROVIDE PC6Z POST CAP TO SLOPED 4x12 RIM (SEE 12/S32) AND CLIP TO BOTTOM PL W/ (2)A35
- TRUSS MFR TO DESIGN FOR 800 LBS POINT LOAD AND PROVIDE VERT MEMBER TO RECEIVE HANGER
- SHEATH AND NAIL TRUSS PER SW6 - DRILL TO VENT AS REQUIRED
- PROVIDE HORIZ CS16 NAILED TO BOTTOM OF FULL DEPTH 2x BLOCKING - WRAP UP OUTSIDE OF 4x12 RIM (SEE 12/S32)



ADDN ROOF FRAMING PLAN

1/4" = 1'-0"

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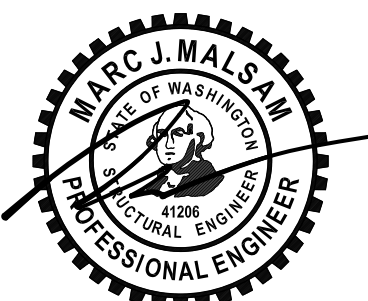
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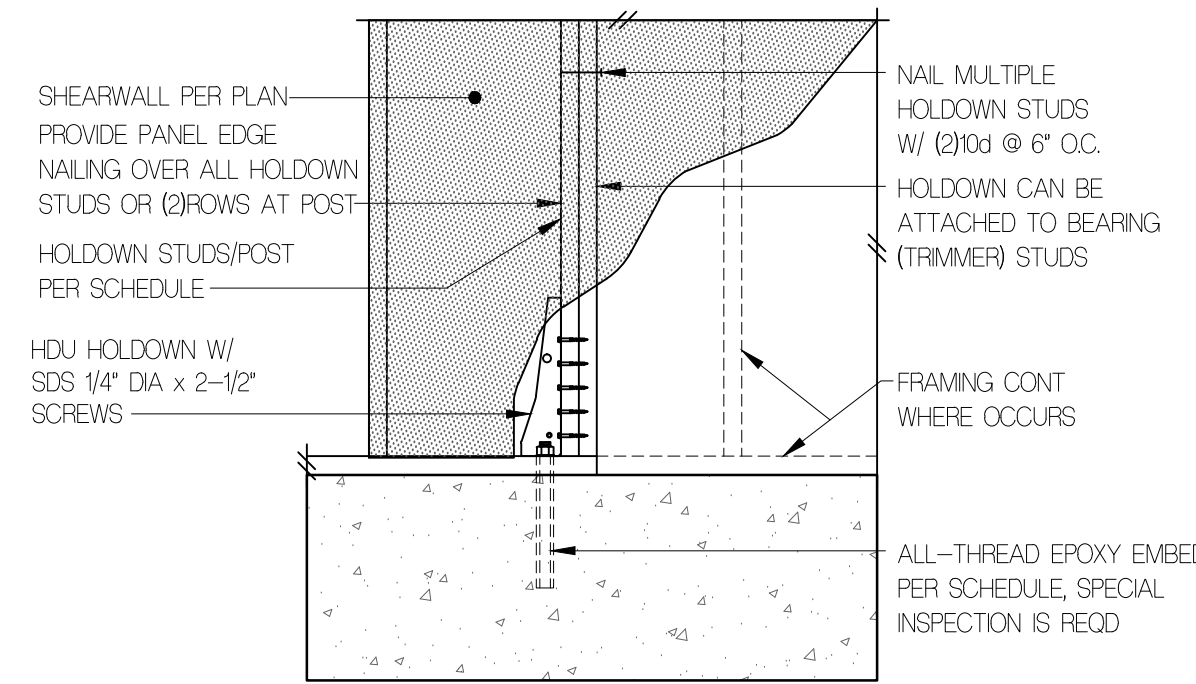
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ADDN ROOF FRAMING PLAN

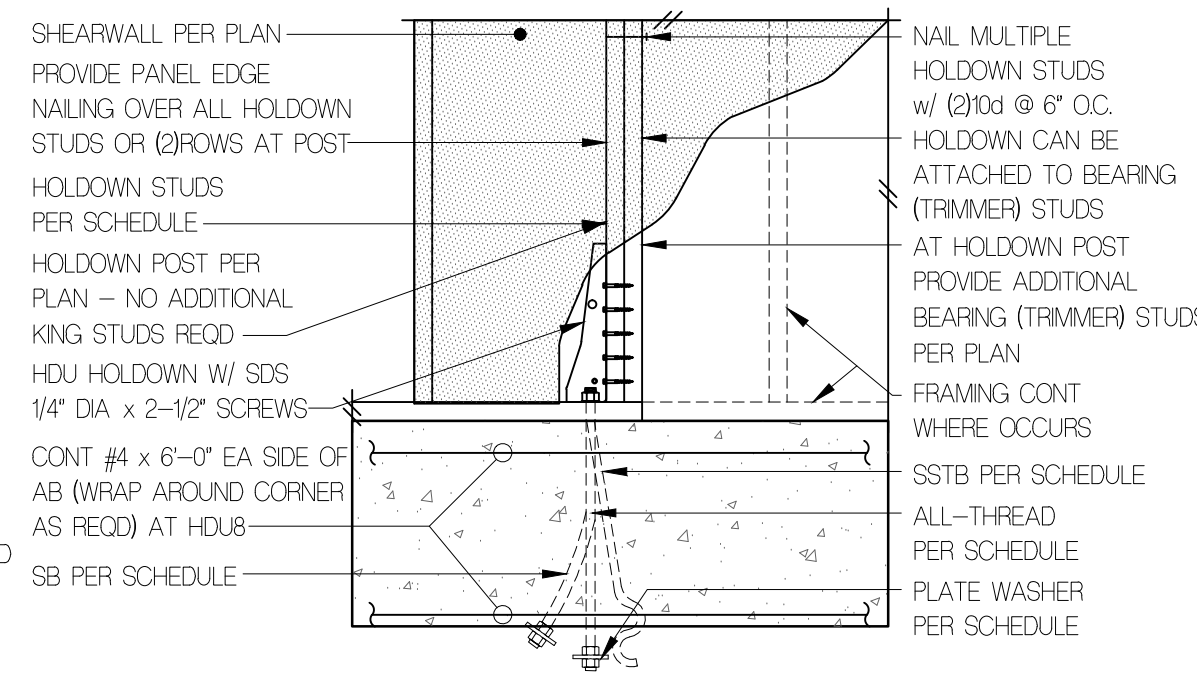
S1.3



HDU EPOXY HOLD-DOWN SCHEDULE

PLAN MARK	AT STEMWALL		AT FOOTING ③		HD POST ②	
	AB ①	EMBED	ALL-THREAD	EMBED	4x WALL	6x WALL
HDL2	5/8\" DIA ALL-THREAD	12"	5/8\" DIA	8"	(2)2x4	(2)2x6
HDL4	5/8\" DIA ALL-THREAD	12"	5/8\" DIA	8"	(2)2x4	(2)2x6
HDL5	5/8\" DIA ALL-THREAD	12"	5/8\" DIA	8"	(2)2x4	(2)2x6
HDL8	7/8\" DIA ALL-THREAD	16"	-	-	4x6	6x6

- ① A307 ALL-THREAD AND MAINTAIN 1-3/4\" EDGE DISTANCE
- ② MINIMUM SIZE OF POST UNO ON FRAMING PLANS
- ③ MINIMUM 1-6\" WIDE x 1-0\" DEEP FOOTING



HDU HOLD-DOWN SCHEDULE

PLAN MARK	AT STEMWALL		AT FOOTING ①		HD POST ②	
	AB	EMBED	ALL-THREAD	WASHER	EMBED	4x WALL
HDL2	5/8\" DIA - SSB8(L)	12-5/8\"	5/8\" DIA	1-3/4\"SQ x 1/2	9"	(2)2x4
HDL4	5/8\" DIA - SB5/8 x 24	18"	5/8\" DIA	1-3/4\"SQ x 1/2	9"	(2)2x4
HDL5	5/8\" DIA - SB5/8 x 24	18"	5/8\" DIA	1-3/4\"SQ x 1/2	9"	(2)2x4
HDL8	7/8\" DIA - SB7/8 x 24	18"	7/8\" DIA	2-1/2\"SQ x 1/2	12"	4x6

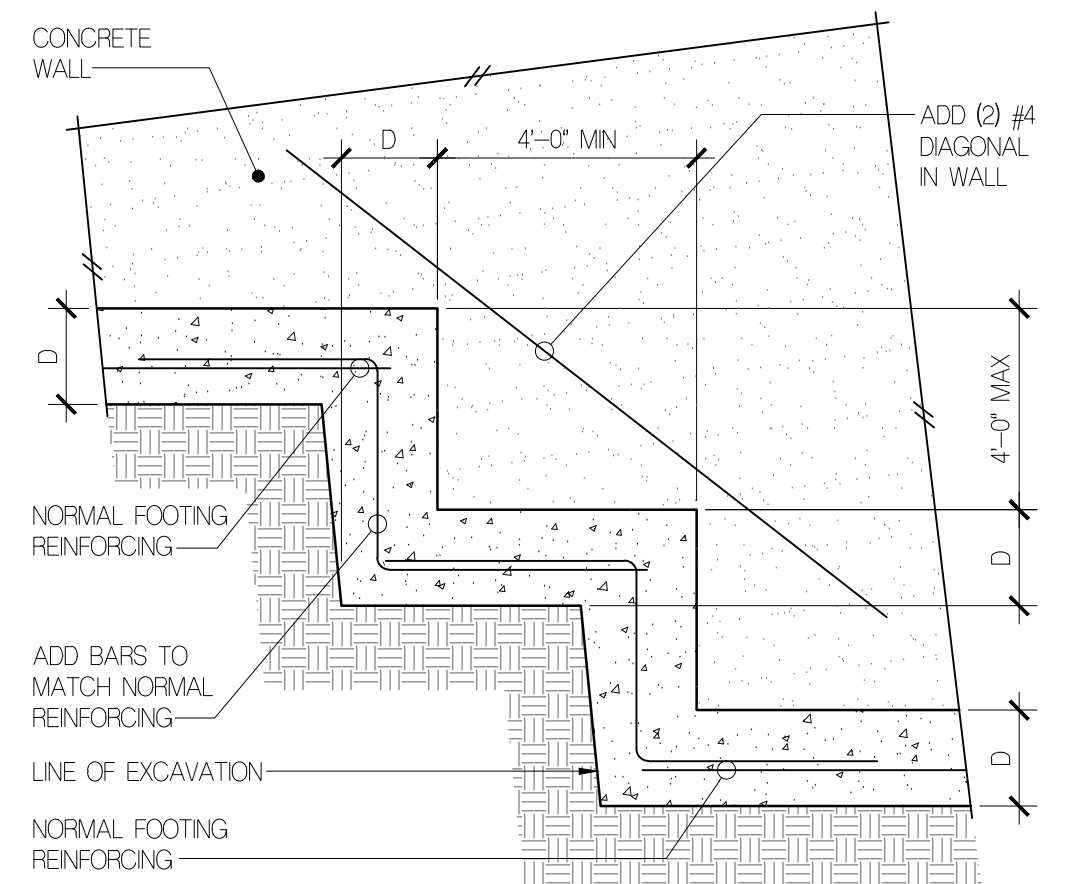
- ① A307 ALL-THRD w/ PLATE WASHER PER SCHEDULE AND DOUBLE NUT BOT OR EQUIVALENT SIMPSON PAB
- ② MINIMUM SIZE OF POST UNO ON FRAMING PLANS

12 TYP HDU EPOXY HOLD-DOWN 3/4\" = 1-0\"

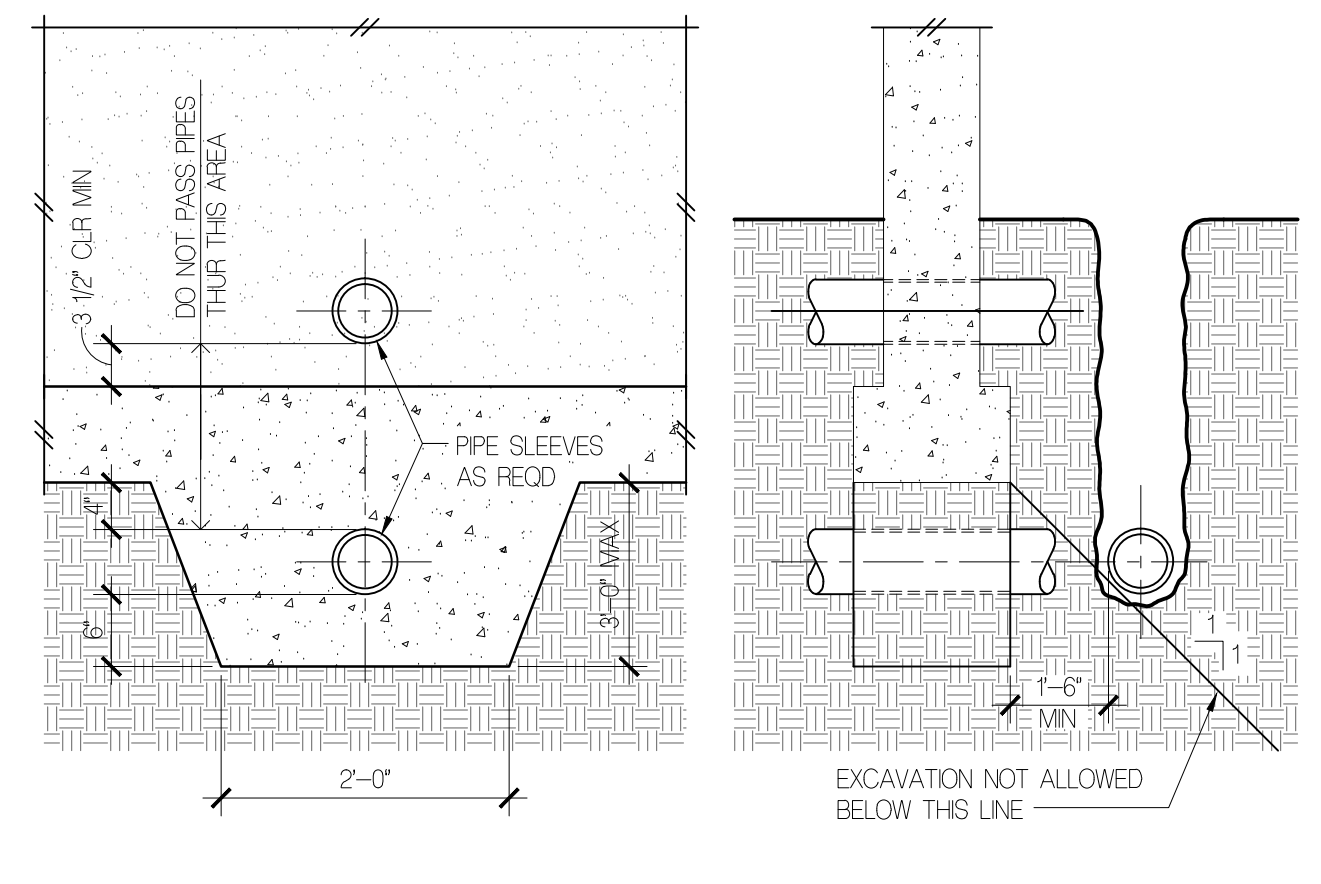
11 TYP HDU HOLD-DOWN 3/4\" = 1-0\"

10 NOT USED 3/4\" = 1-0\"

9 NOT USED



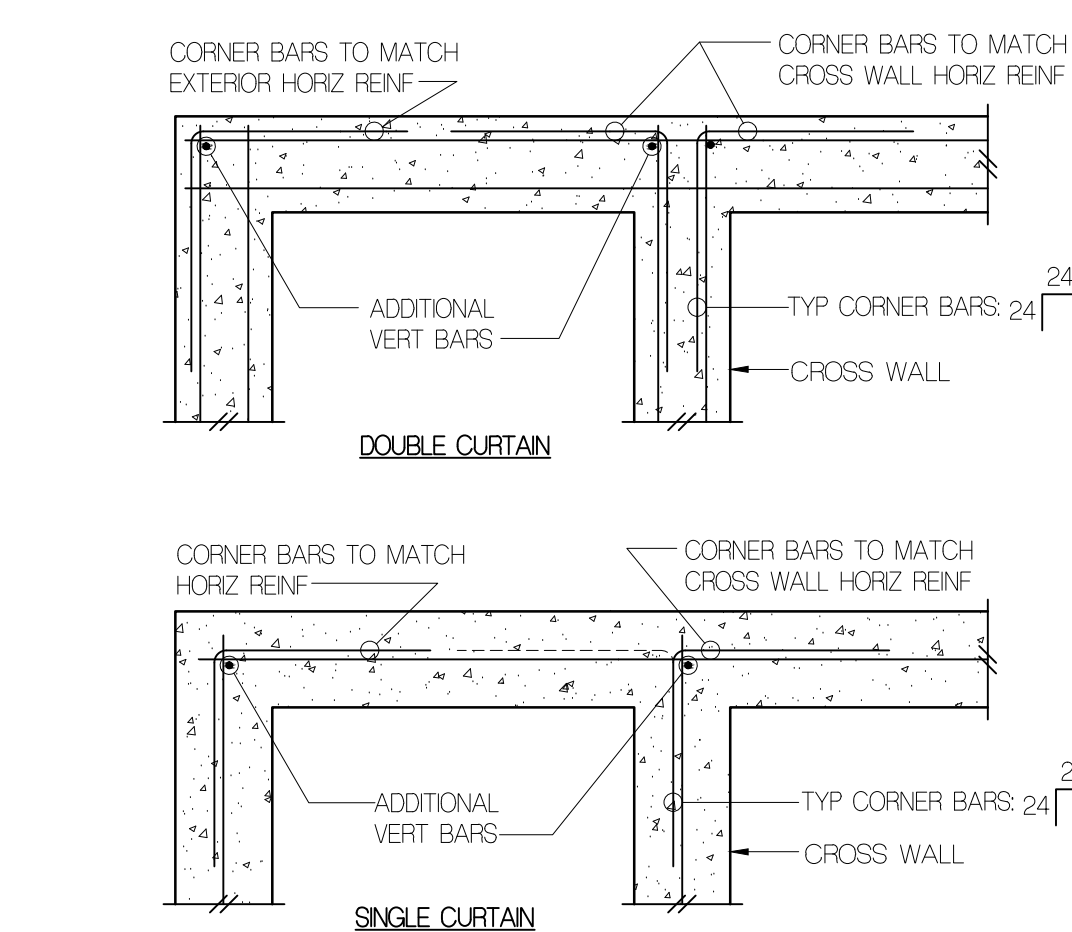
8 TYP STEPPED FOOTING 3/4\" = 1-0\"



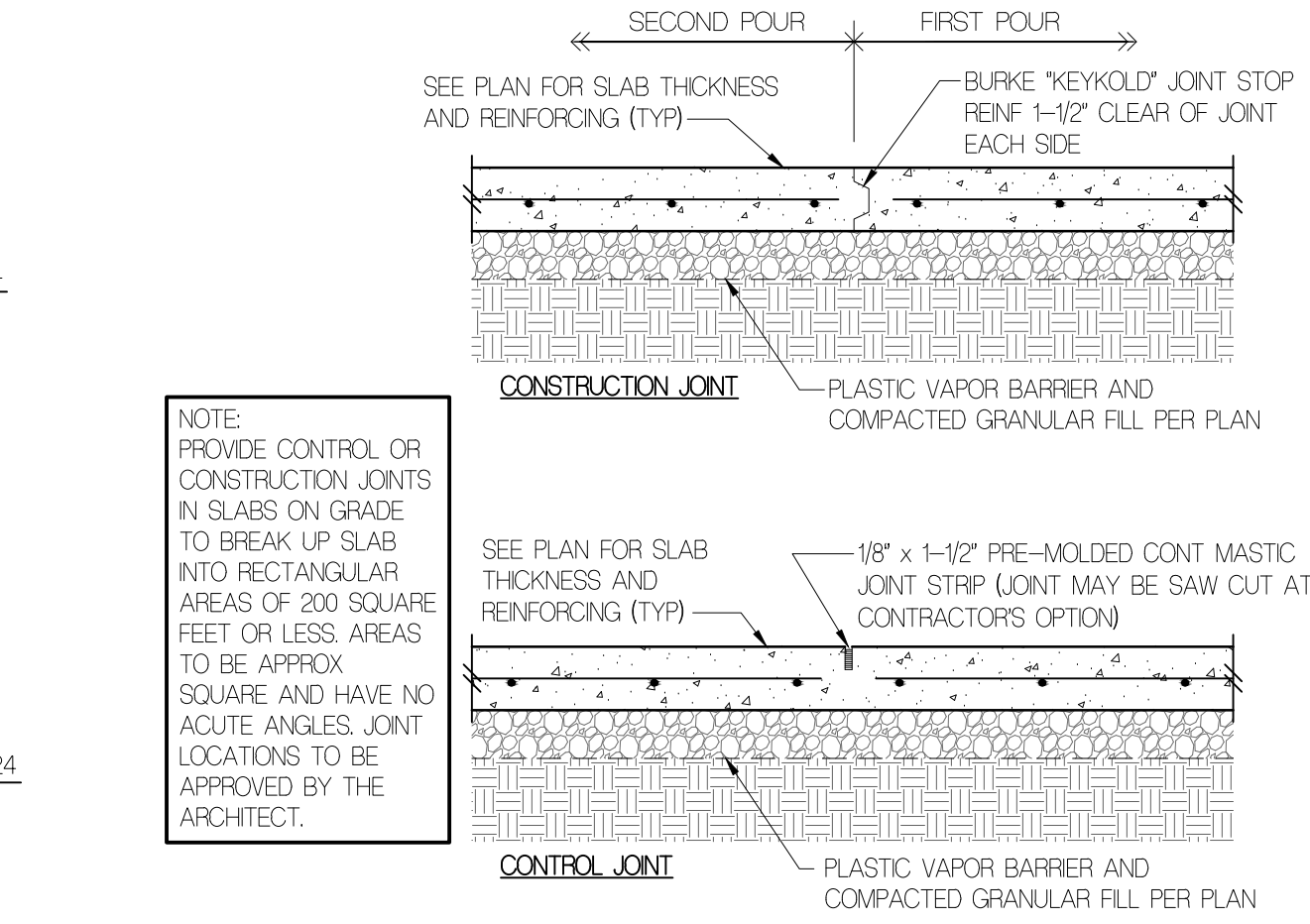
7 PIPE & TRENCH LOCATIONS 3/4\" = 1-0\"

6 NOT USED 3/4\" = 1-0\"

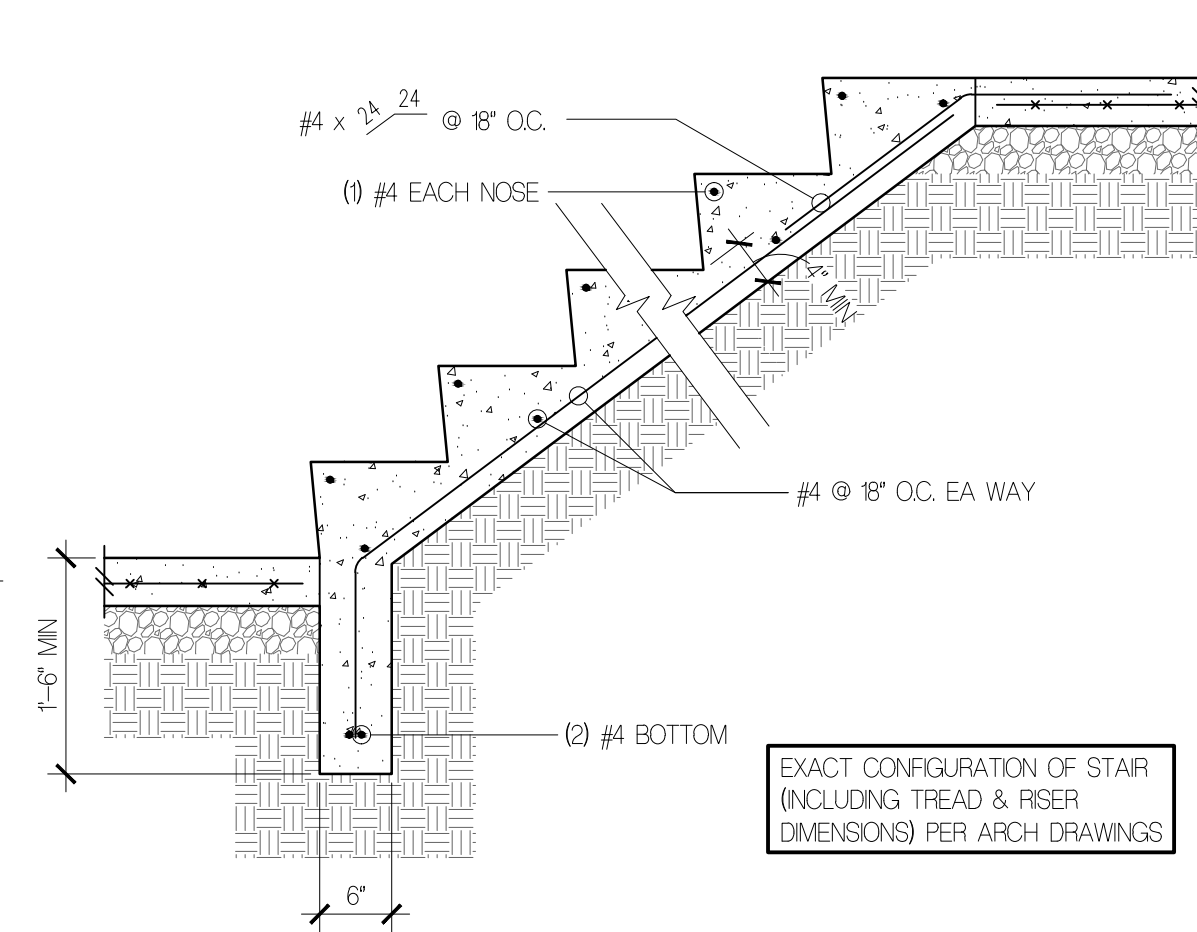
5 NOT USED



4 TYP CORNER BARS @ CONC 3/4\" = 1-0\"



3 TYP SLAB ON GRADE 3/4\" = 1-0\"



2 TYP STAIR ON GRADE 3/4\" = 1-0\"

1 NOT USED 3/4\" = 1-0\"

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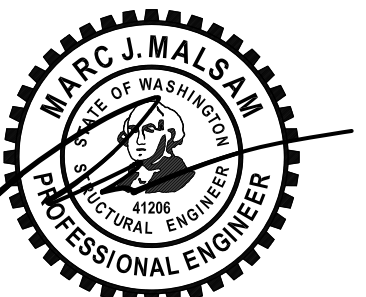
TYP CONCRETE DETAILS

S2.0

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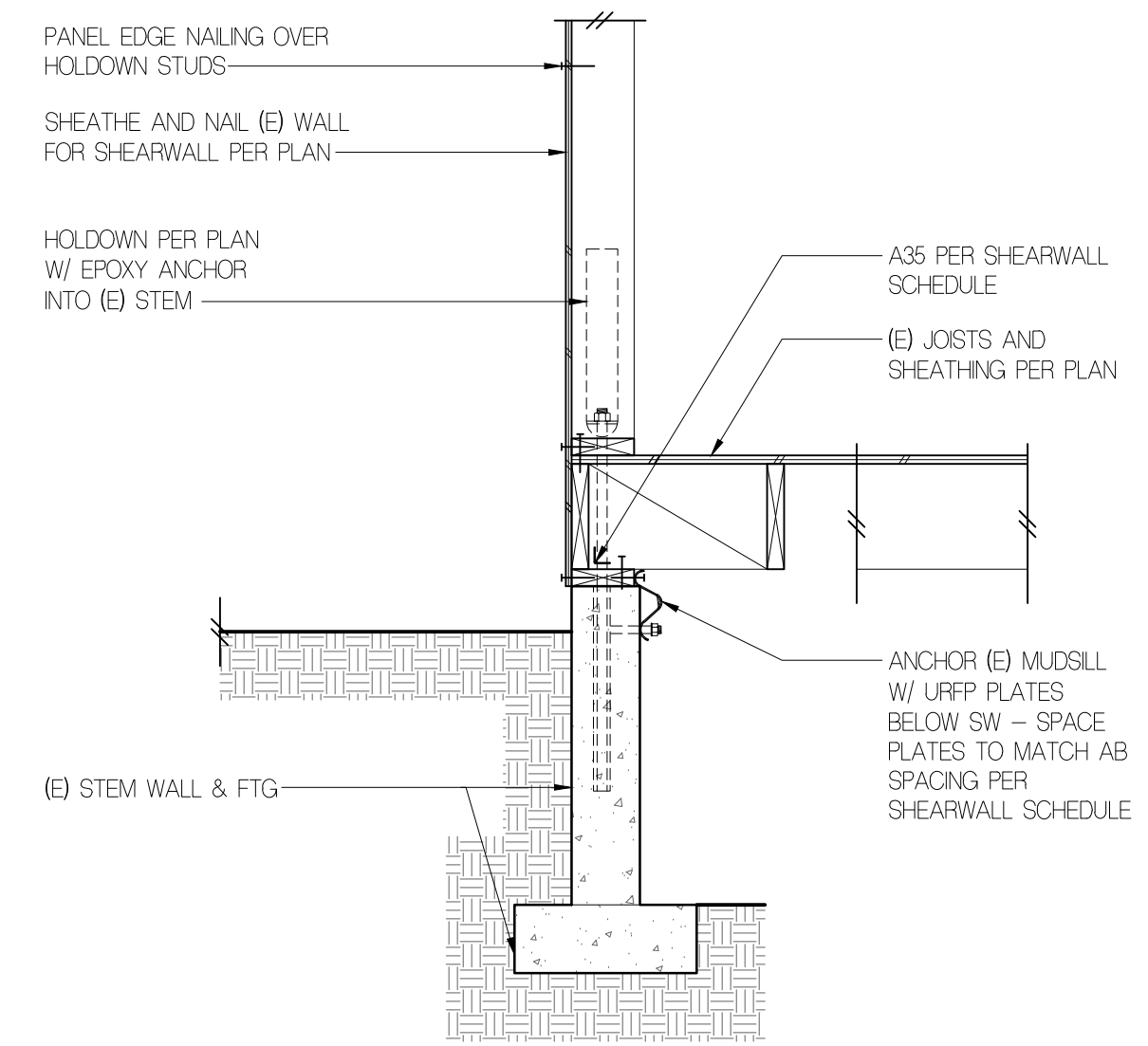
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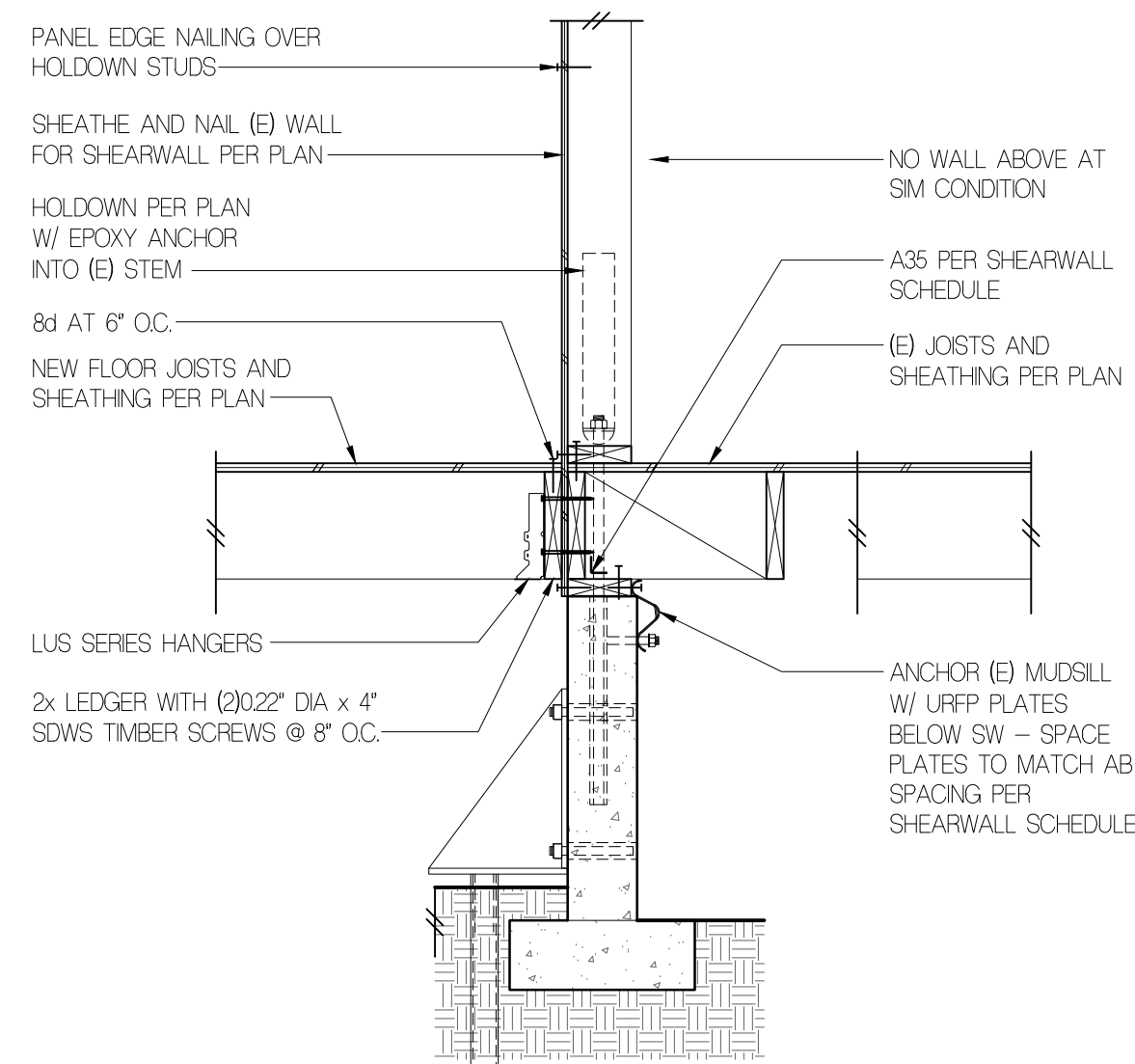
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CONCRETE DETAILS

S2.1



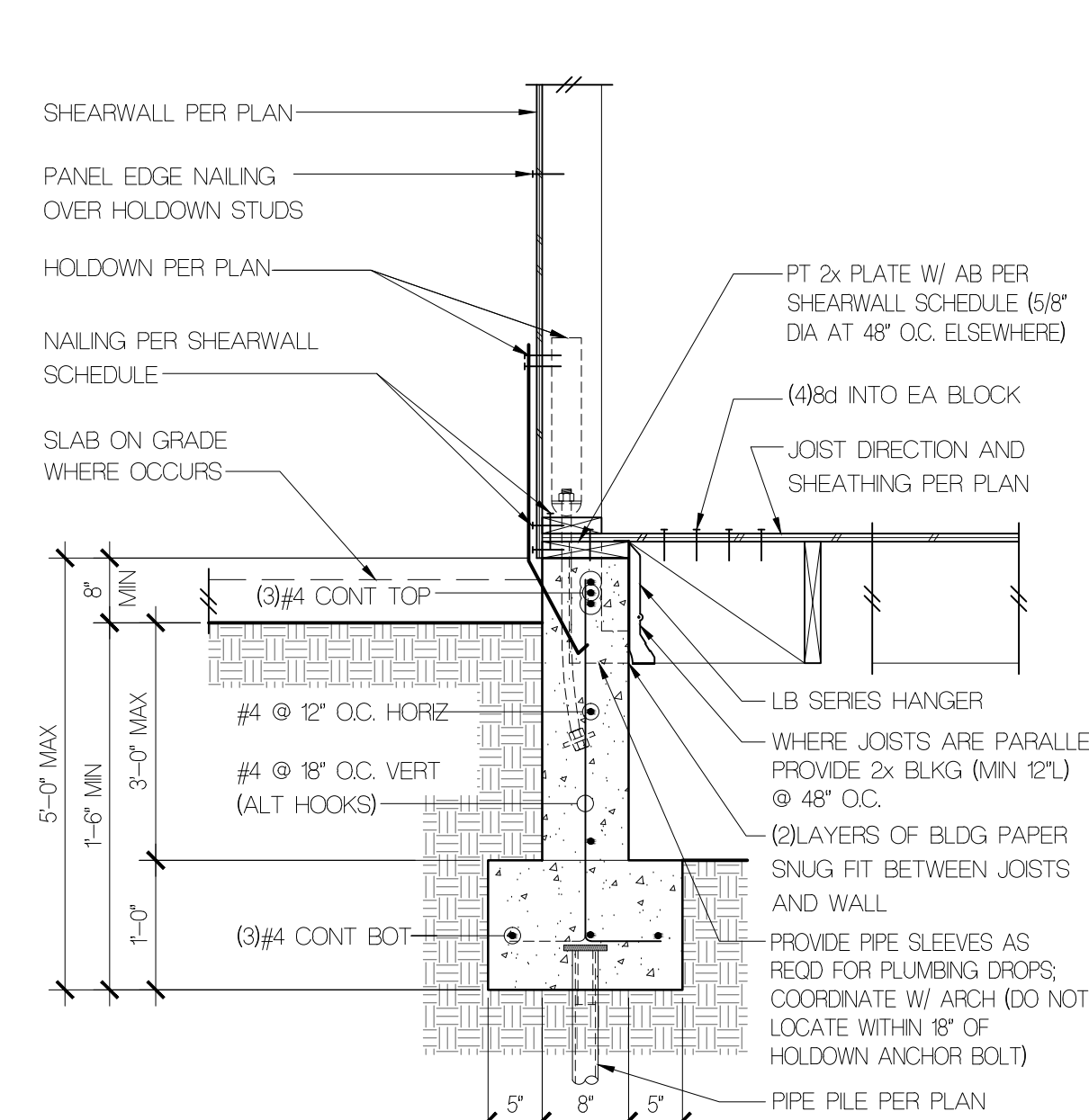
12 HOLDOWN @ (E) FTG
3/4" = 1'-0"



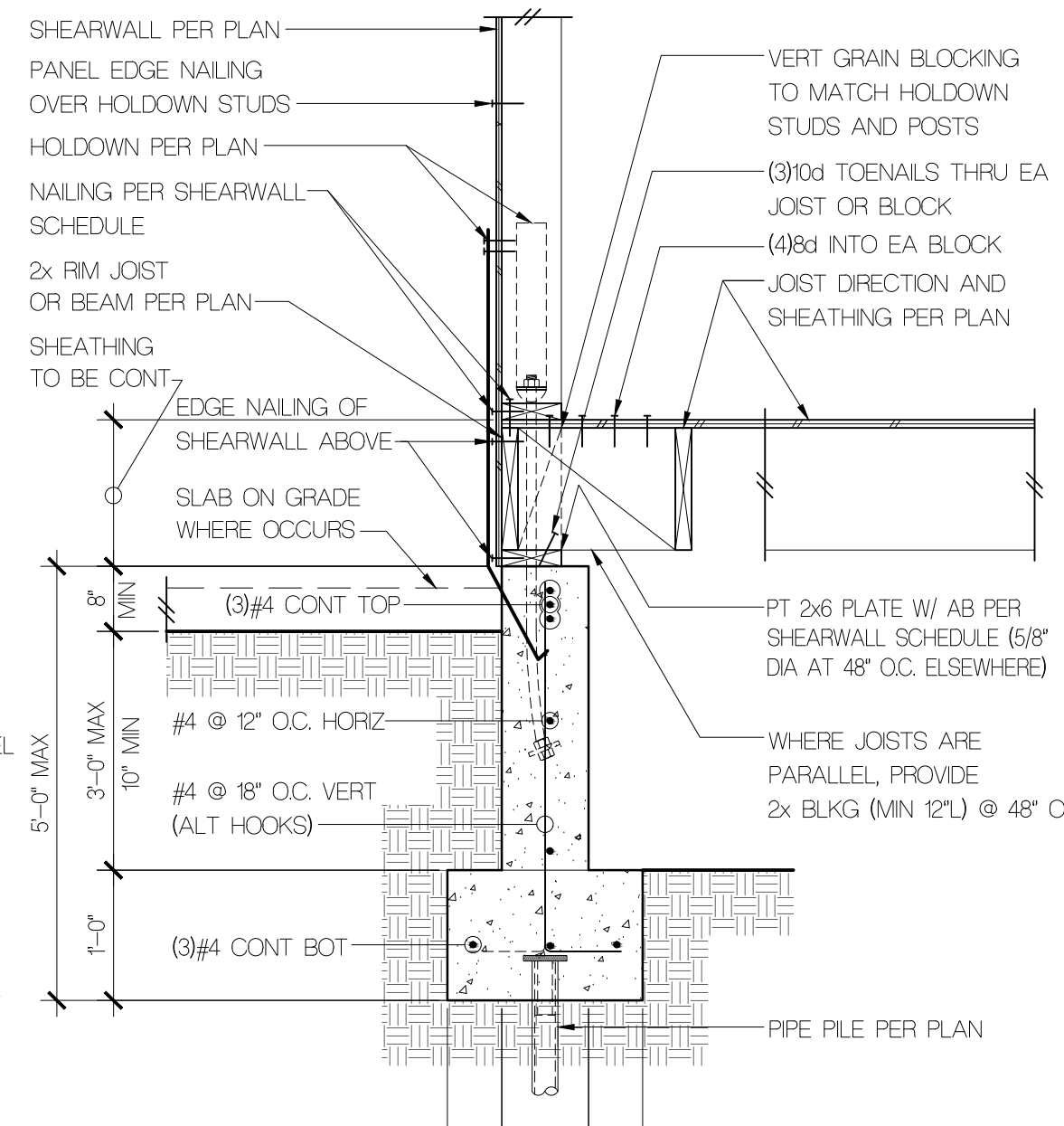
11 HOLDOWN @ (E) FTG
3/4" = 1'-0"

10 NOT USED
3/4" = 1'-0"

9 NOT USED
3/4" = 1'-0"



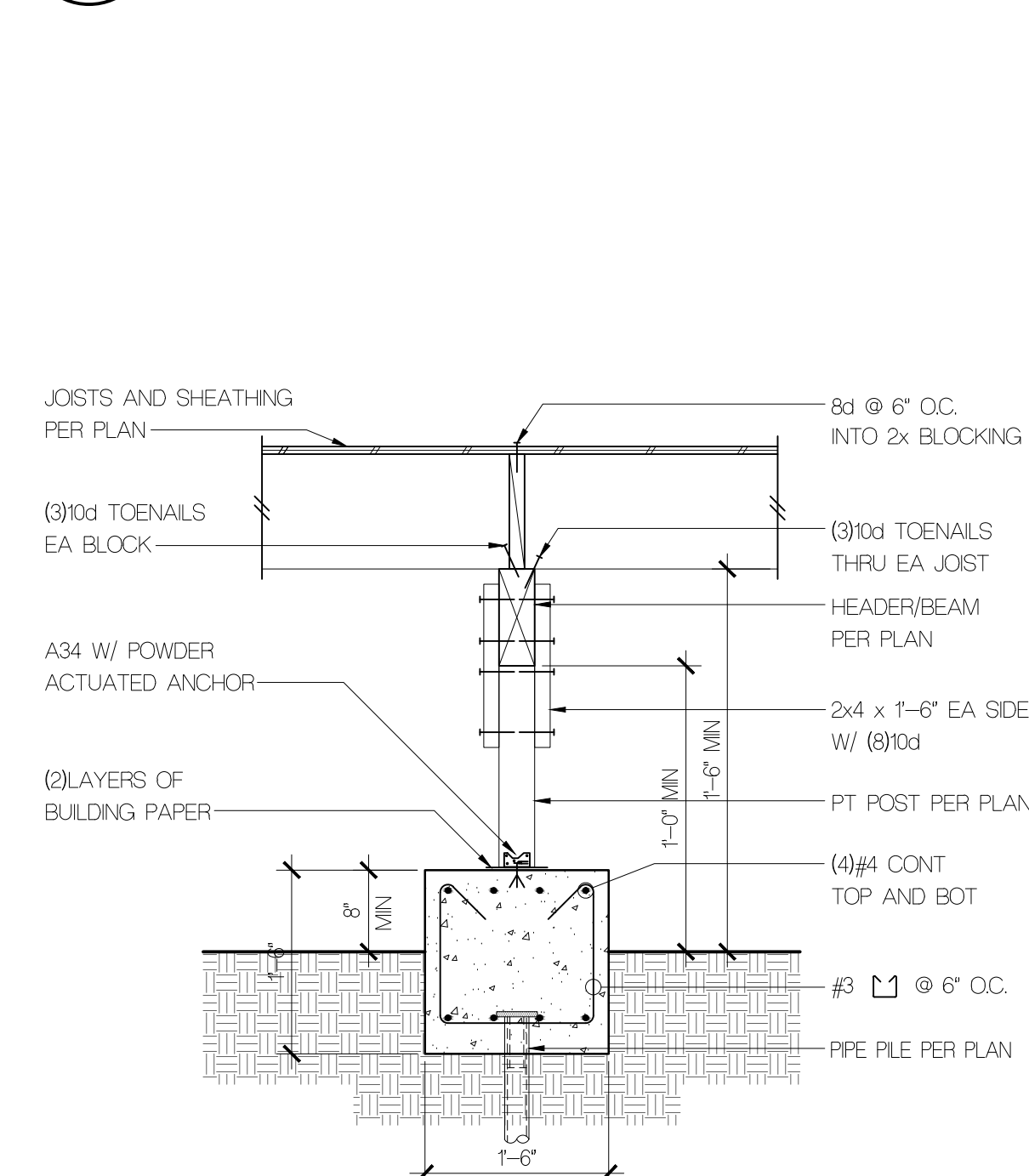
8 8" EXT FRMG @ CRAWL SPACE
3/4" = 1'-0"



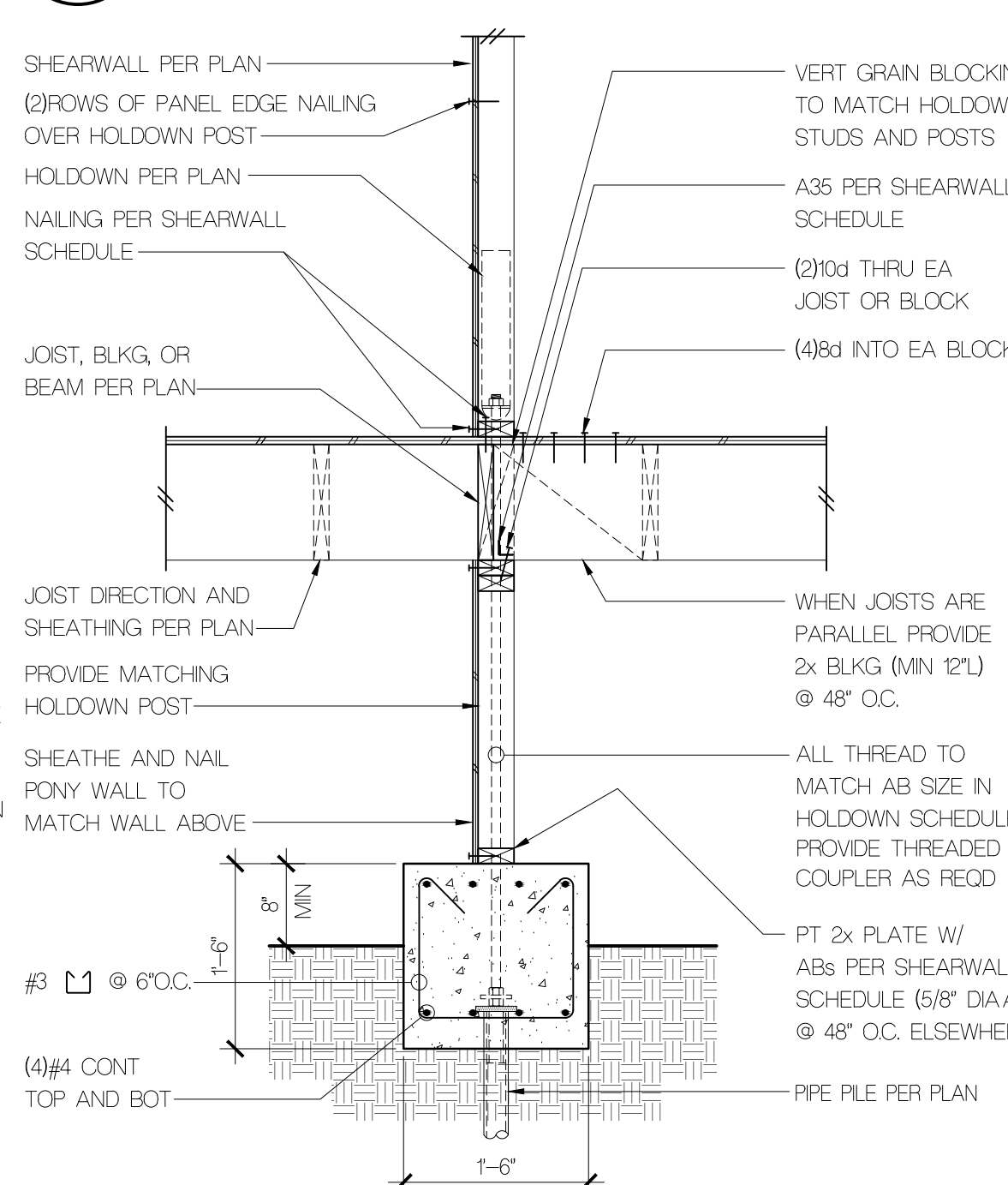
7 2" DIA PILE @ 8" EXT FRMG
3/4" = 1'-0"

6 NOT USED
3/4" = 1'-0"

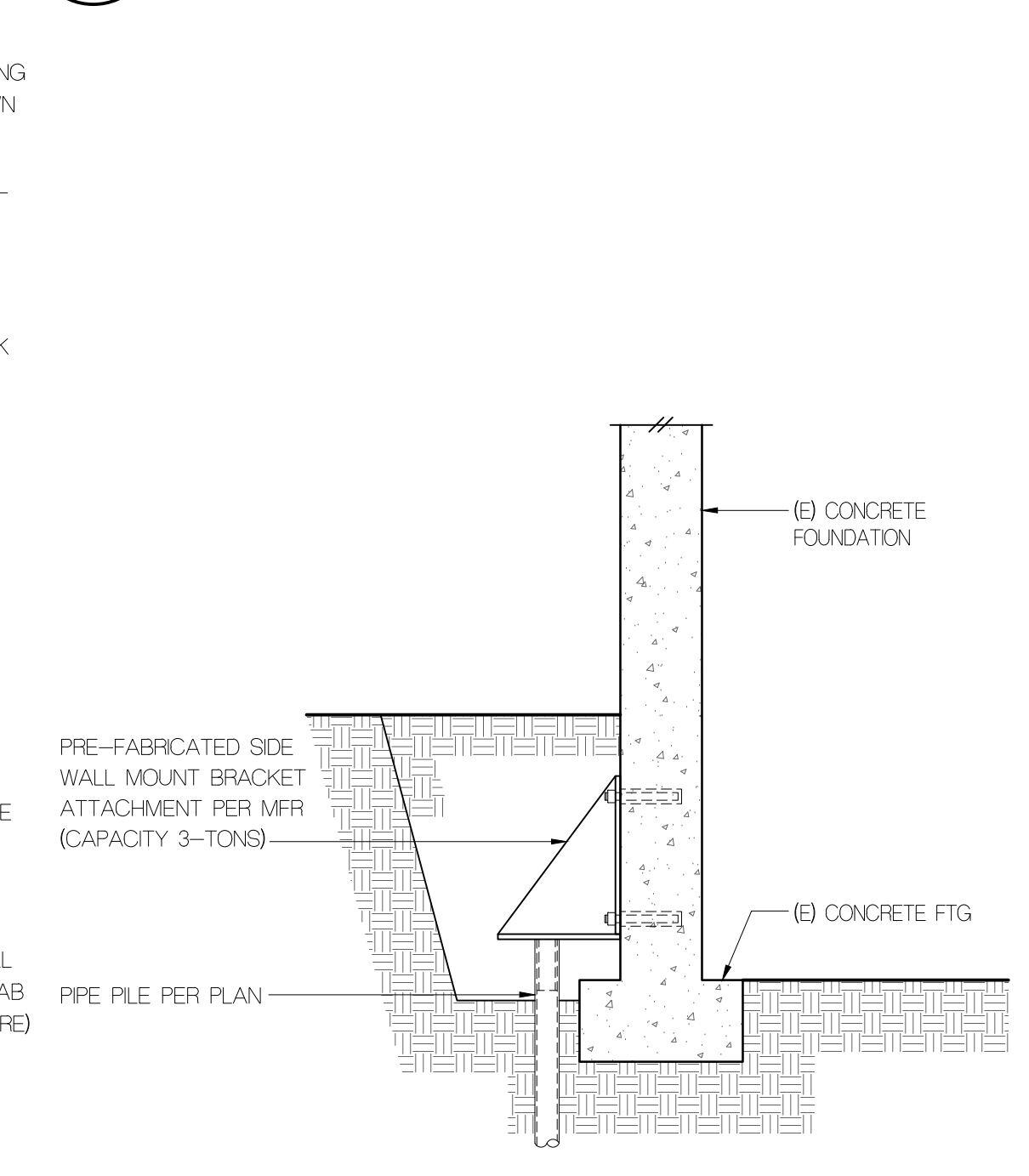
5 NOT USED
3/4" = 1'-0"



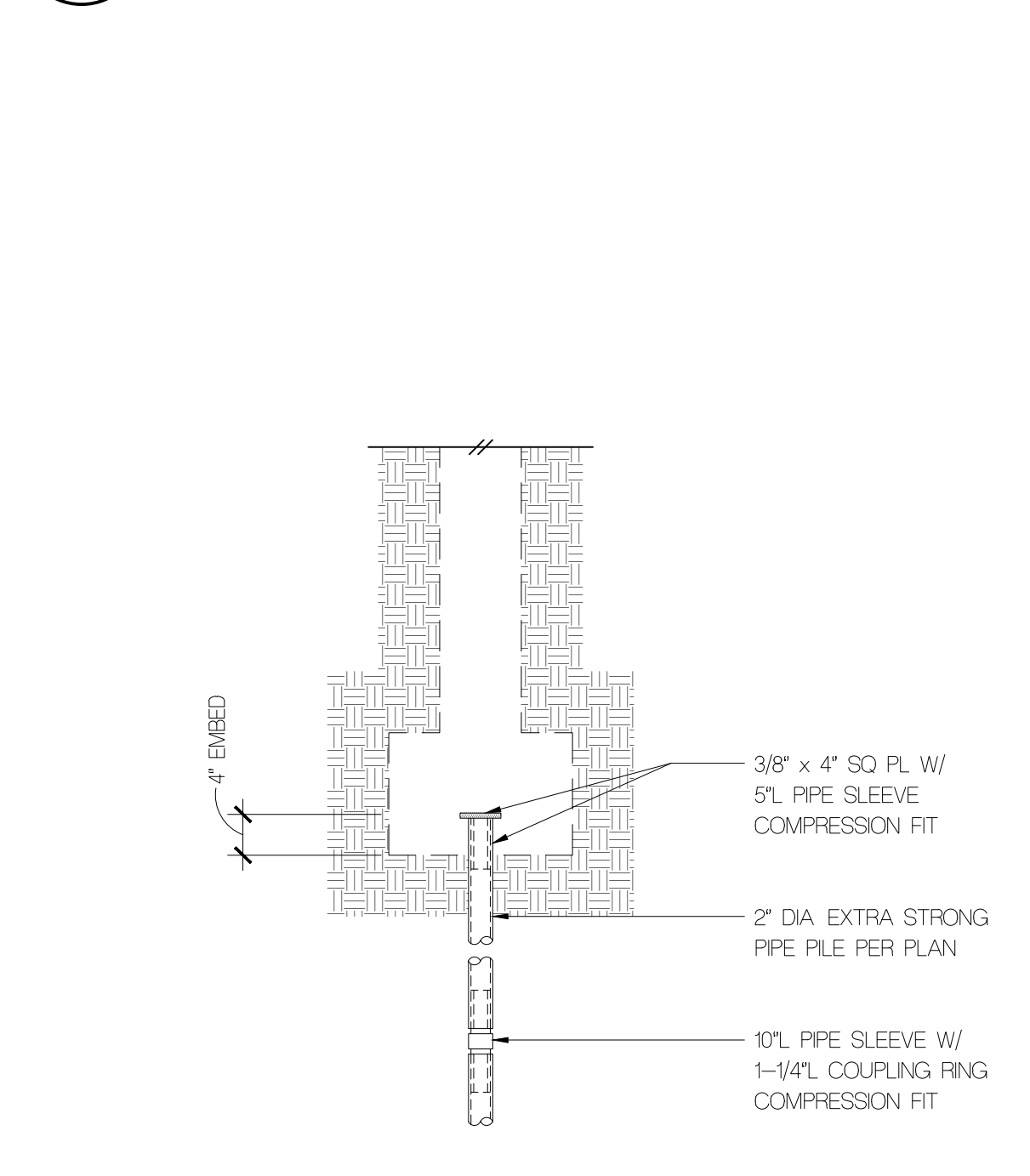
4 2" DIA PILE @ POST FTG
3/4" = 1'-0"



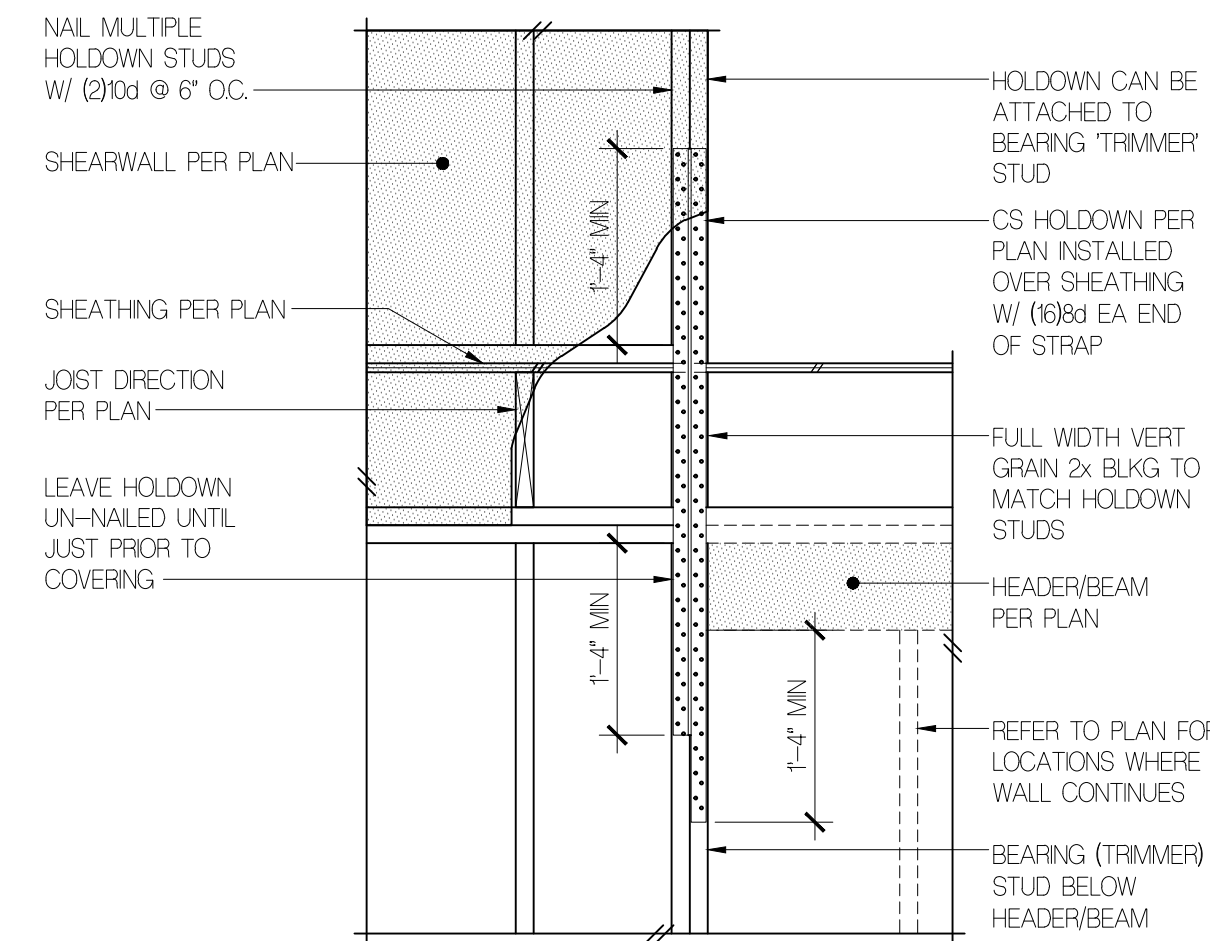
3 2" DIA PILE @ INT PONY SW
3/4" = 1'-0"



2 2" DIA PIPE PILE SIDE WALL
3/4" = 1'-0"



1 2" DIA TYP PIPE PILE
3/4" = 1'-0"

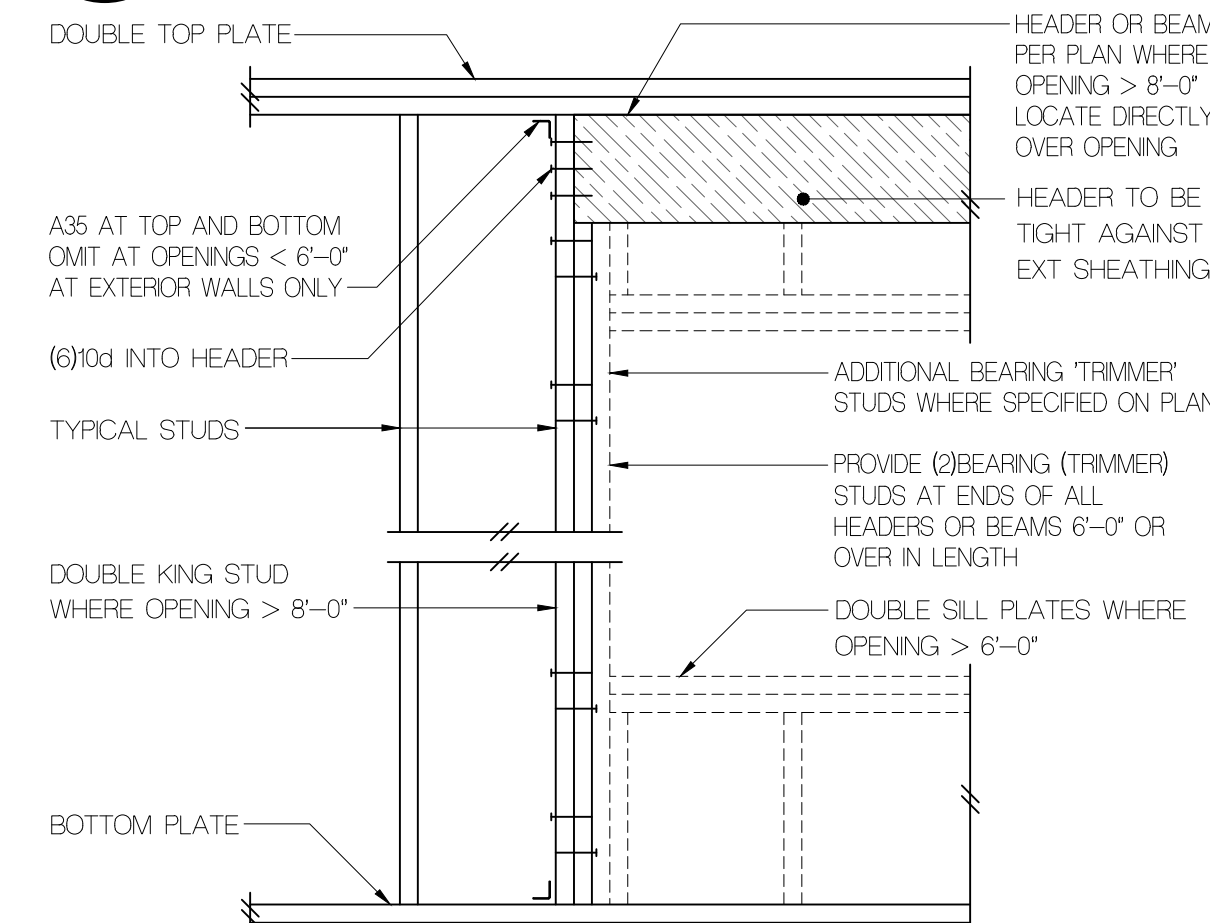


12 CS16 HOLDOWNS $3/4" = 1'-0"$

11 NOT USED $3/4" = 1'-0"$

10 NOT USED $3/4" = 1'-0"$

9 NOT USED $3/4" = 1'-0"$



8 TYP HDR SUPPORT $3/4" = 1'-0"$

7 TYP TOP PL SPLICE $3/4" = 1'-0"$

6 TYP FLUSH & DROPPED BM $3/4" = 1'-0"$

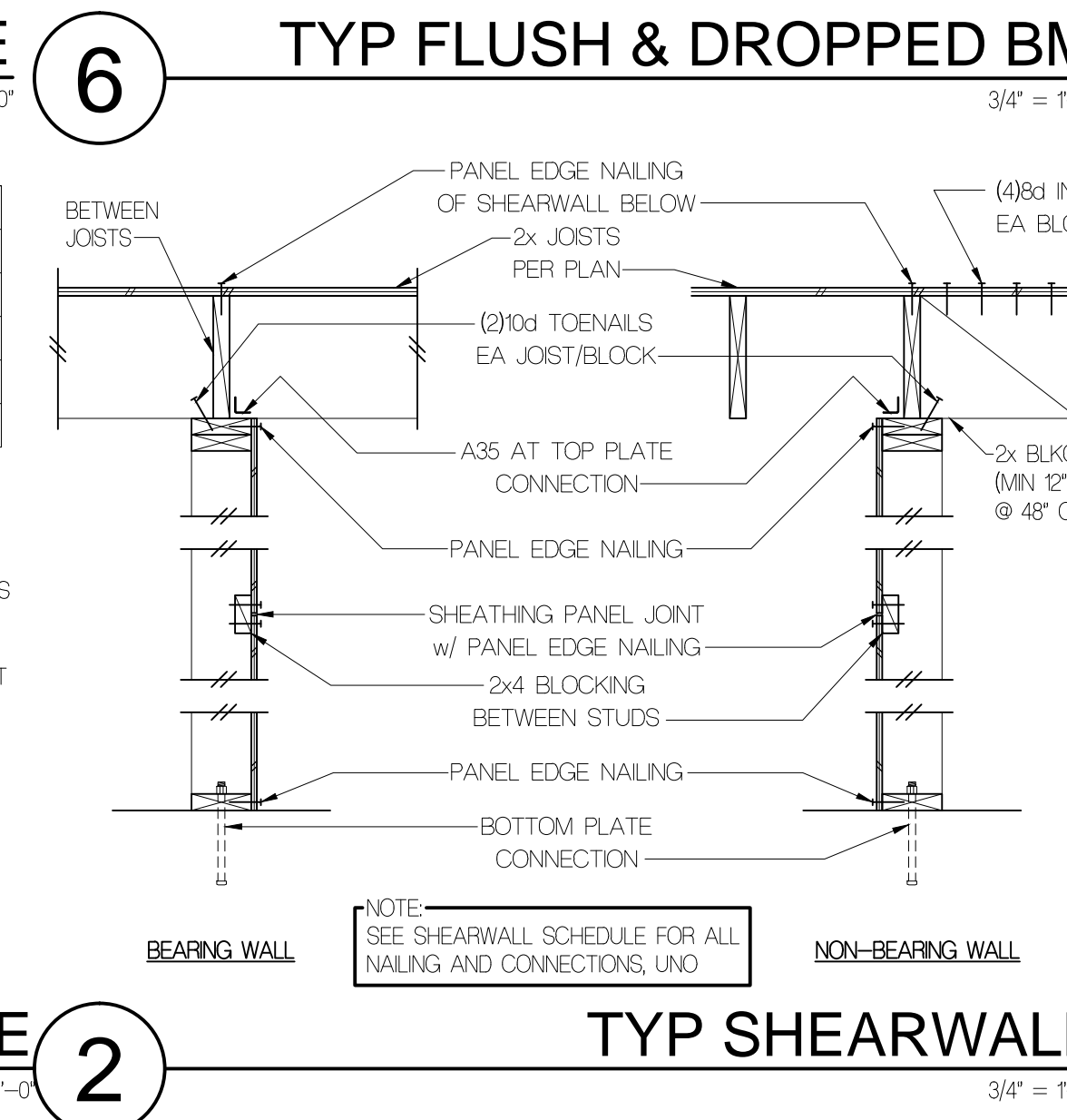
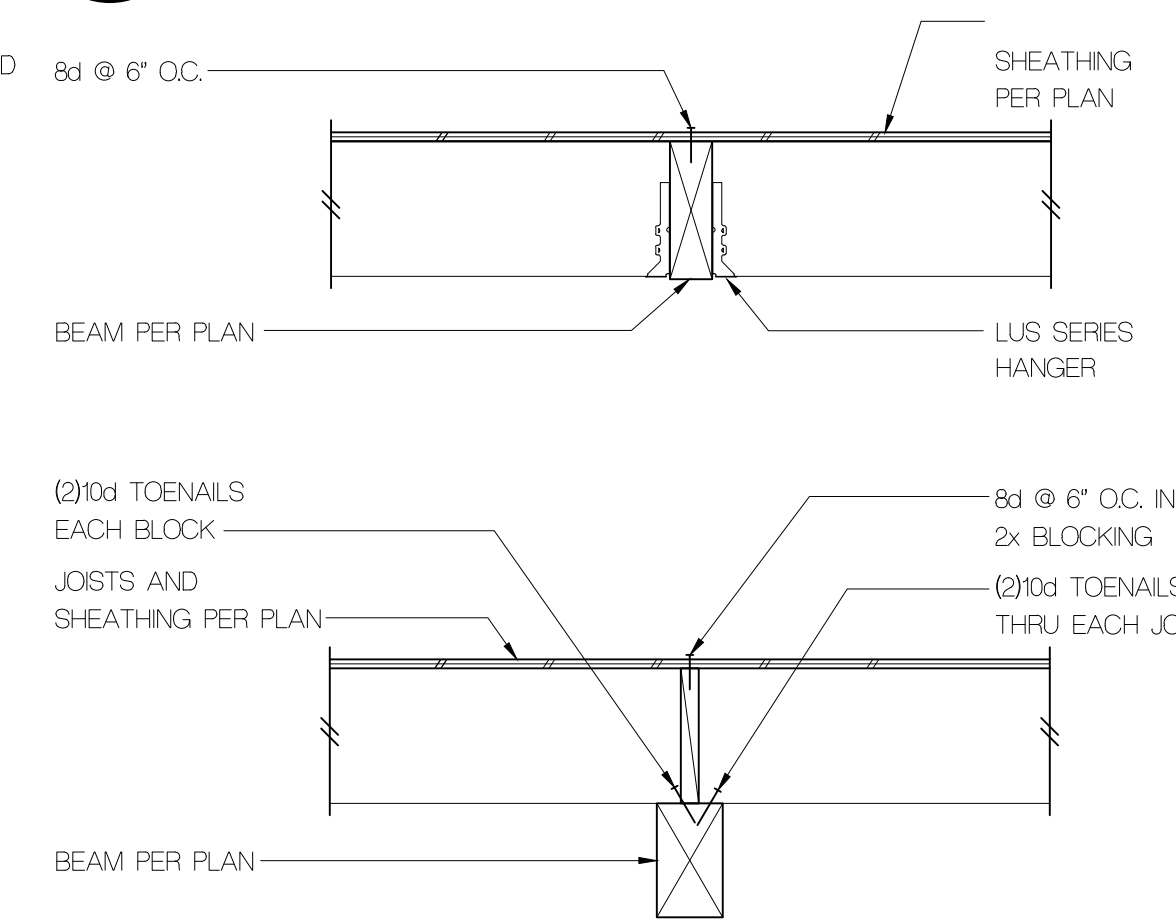
5 TYP CCQ/ECCQ $3/4" = 1'-0"$

MARK	SHEATHING	PANEL EDGE NAILING	TOP PLATE CONNECTION		BASE PLATE CONNECTION	
			T/J/2x	RIM/BEAM (8)	AT WOOD	AT CONCRETE
SW6	1/2" PLY or 7/16" OSB	8d AT 6"oc	10d AT 6"oc	A35 AT 30"oc	12d AT 6"oc	5/8" DIA AB AT 48"oc
SW4	1/2" PLY or 7/16" OSB	8d AT 4"oc	10d AT 4"oc	A35 AT 18"oc	12d AT 4"oc	5/8" DIA AB AT 42"oc
SW3 (4)	1/2" PLY or 7/16" OSB	8d AT 3"oc	(2)ROWS 10d AT 6"oc	A35 AT 16"oc	(2)ROWS 12d AT 6"oc	5/8" DIA AB AT 36"oc
SW2 (4)	1/2" PLY or 7/16" OSB	8d AT 2"oc	(2)ROWS 10d AT 4"oc	A35 AT 12"oc	(2)ROWS 12d AT 4"oc	5/8" DIA AB AT 24"oc

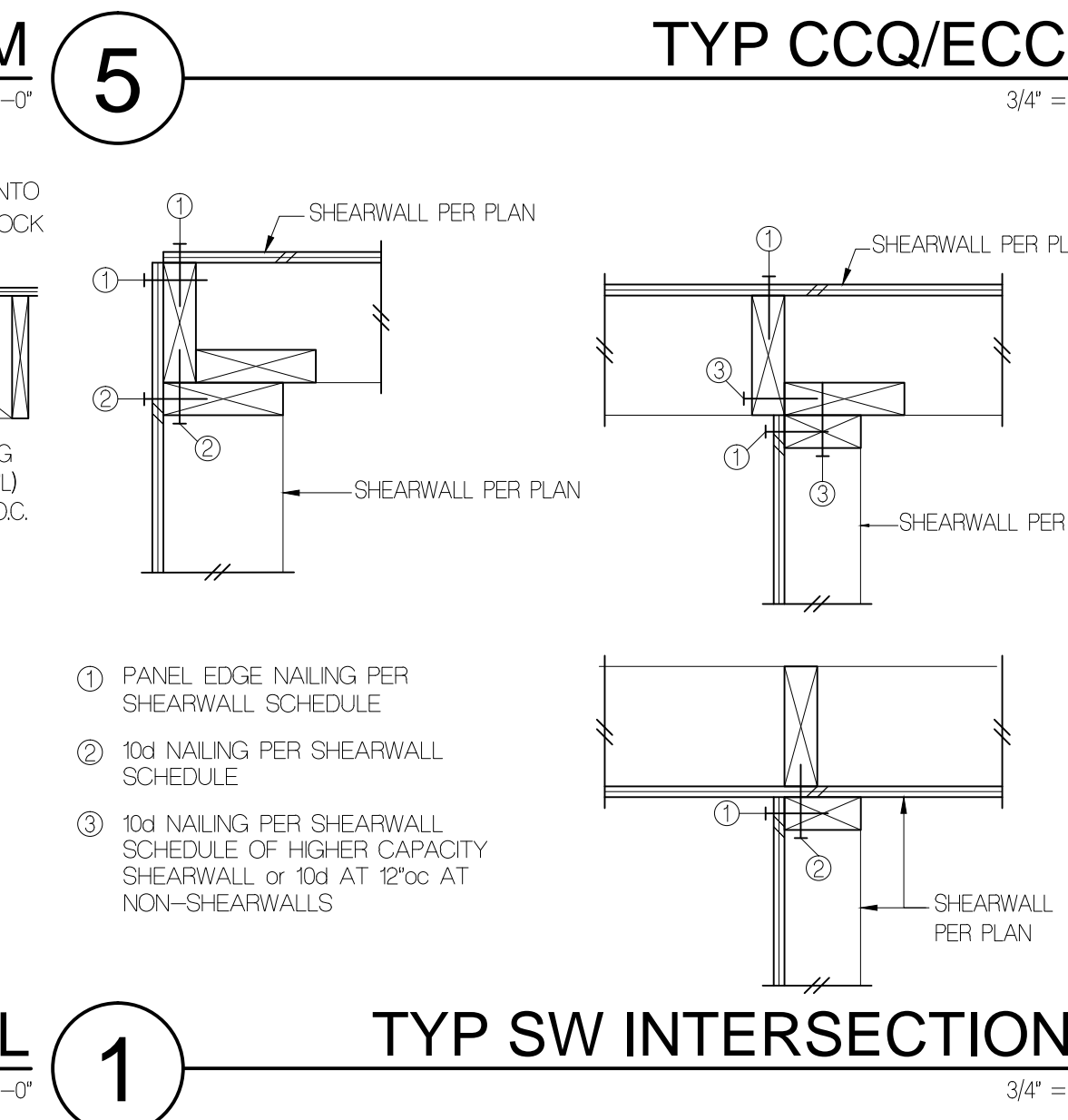
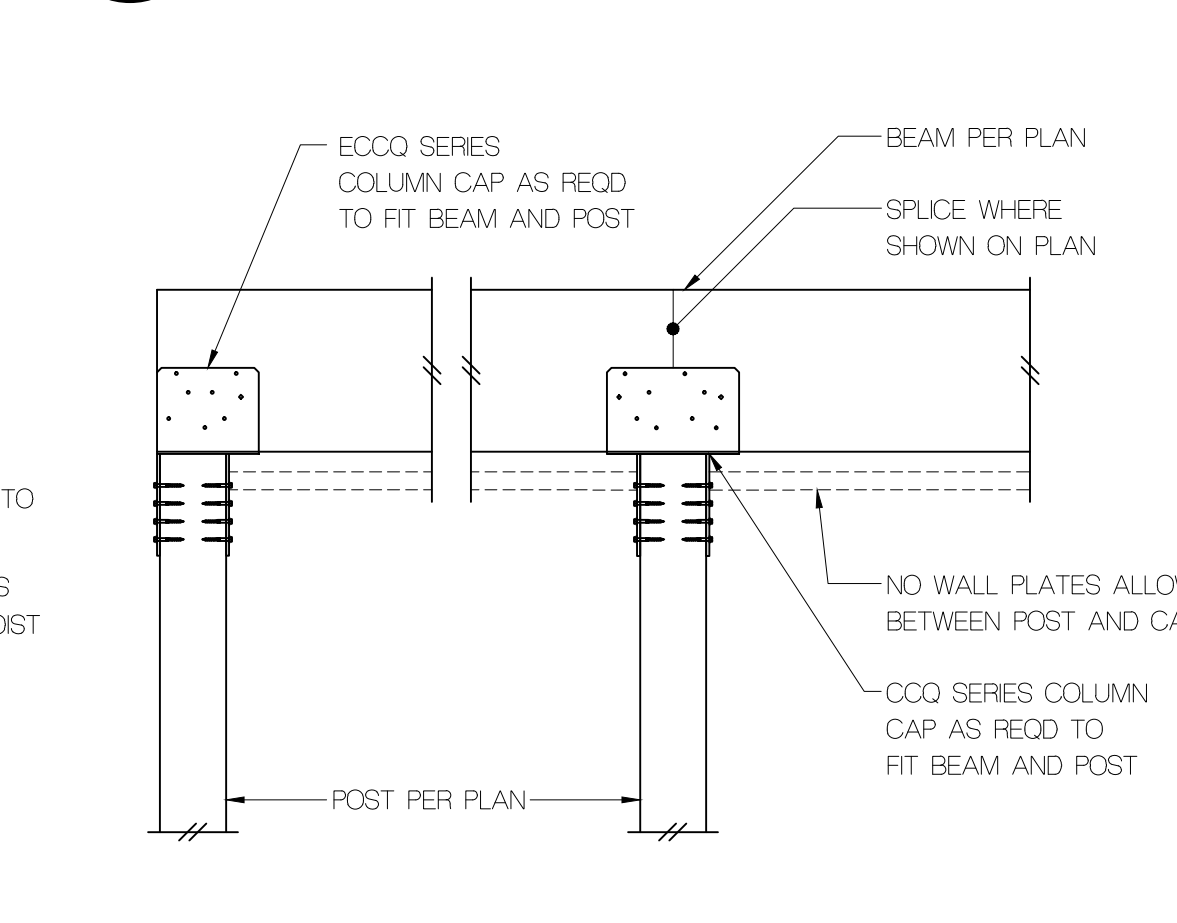
- BLOCK PANEL EDGES WITH 2x4 LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12"OC.
- 8d NAILS SHALL BE 0.131" DIA x 2-1/2", 10d NAILS SHALL BE 0.131" DIA x 3", AND 12d NAILS SHALL BE 0.131" DIA x 3-1/4".
- EMBED CAST IN PLACE ANCHOR BOLTS AT LEAST 7". EPOXY EMBED POST INSTALLED 5/8" DIA THREADED ROD 5' MIN W/ SET-XP OR USE 5/8" DIA x 8" TITEN HD SCREWS, UND. ALL BOLTS SHALL HAVE 3" x 3" x 0.229" PLATE WASHERS. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING.
- 3x STUDS OR DBL STUDS NAILED TOGETHER W/ 10d NAILING IS REQD AT ABUTTING PANEL EDGES OF SW3, AND SW2. REFER TO DETAIL C, WHERE 3x STUDS ARE USED, STAGGER NAILS AT ADJOINING PANEL EDGES.
- TWO STUDS MINIMUM OR POST PER PLAN ARE REQUIRED AT EACH END OF ALL SHEARWALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING.
- ALL NEW EXTERIOR WALLS SHALL BE SW6, UNLESS NOTED OTHERWISE.
- NAILS SHALL NOT BE SPACED LESS THAN 3/8" FROM EDGES OF SHEATHING. SHEATHING NAILS SHALL BE DRIVEN SO THEIR HEADS ARE FLUSH WITH SHEATHING (NOT COUNTERSUNK).
- LTP4s INSTALLED OVER SHEATHING WITH 8d (0.131" DIA x 2-1/2") NAILS MAY BE SUBSTITUTED FOR A35s AT CONTRACTORS OPTION.
- A35s OR LTP4s MAY BE ELIMINATED PER DETAIL A OR DETAIL B.

4 SHEARWALL NAILING DTLS $3/4" = 1'-0"$

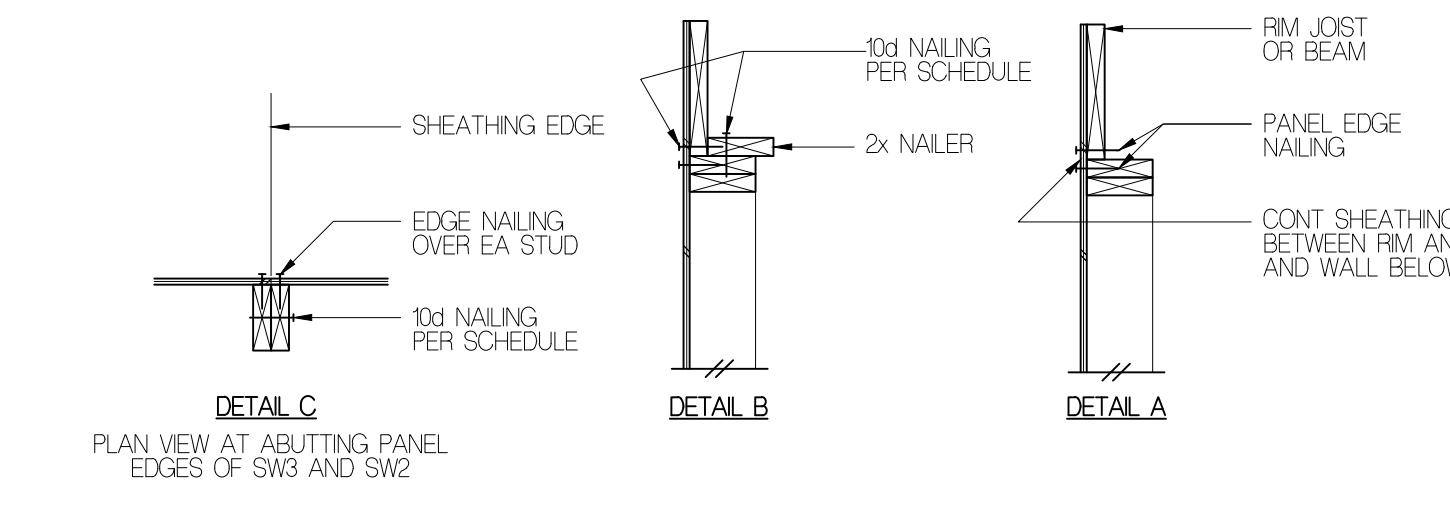
3 SHEARWALL SCHEDULE $3/4" = 1'-0"$



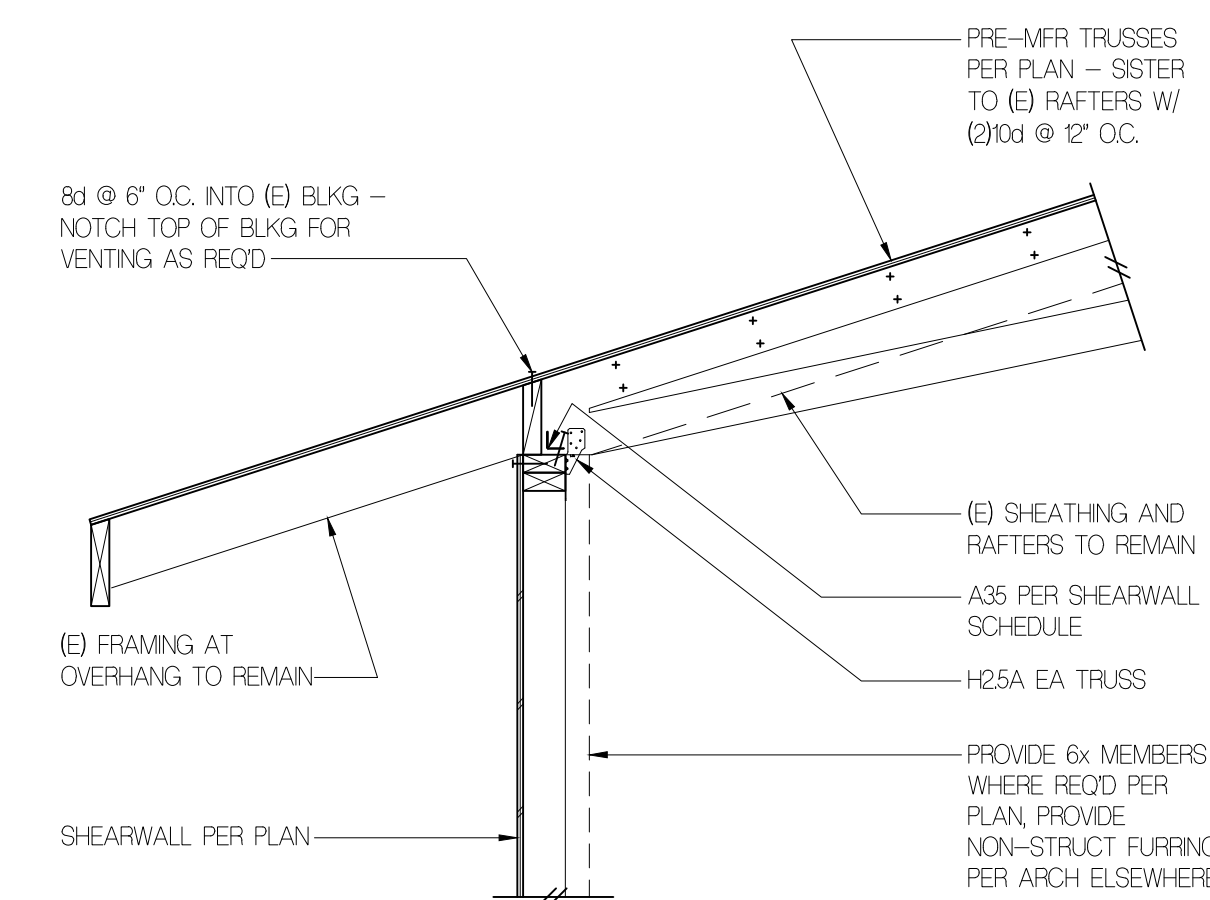
2 TYP SHEARWALL $3/4" = 1'-0"$



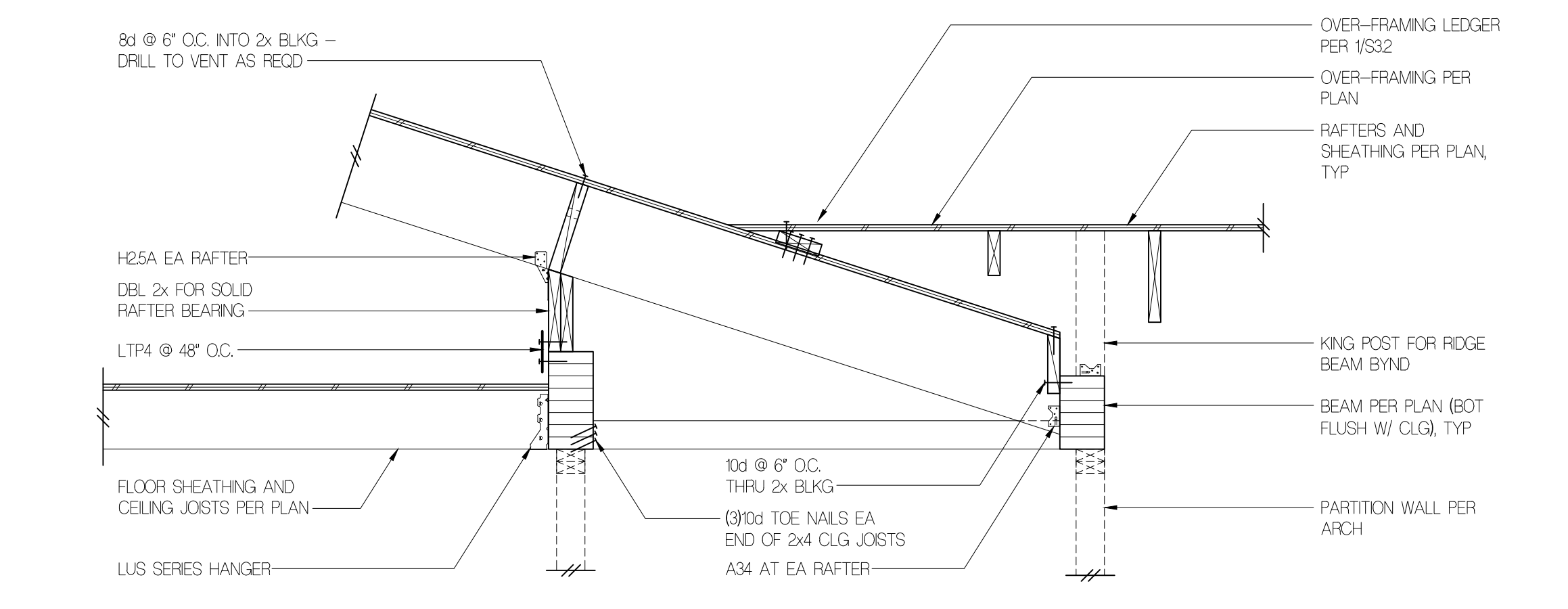
1 TYP SW INTERSECTIONS $3/4" = 1'-0"$



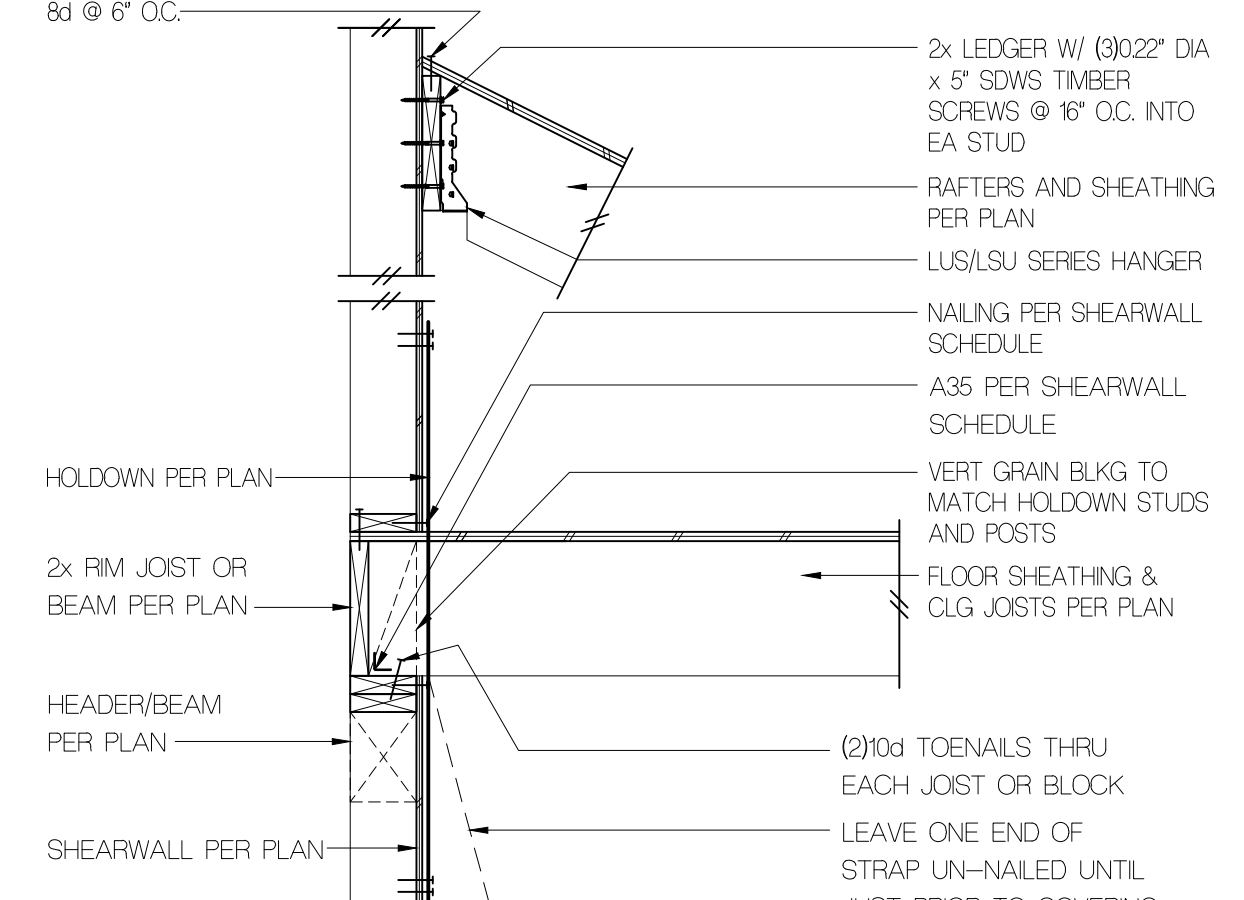
4 SHEARWALL NAILING DTLS $3/4" = 1'-0"$



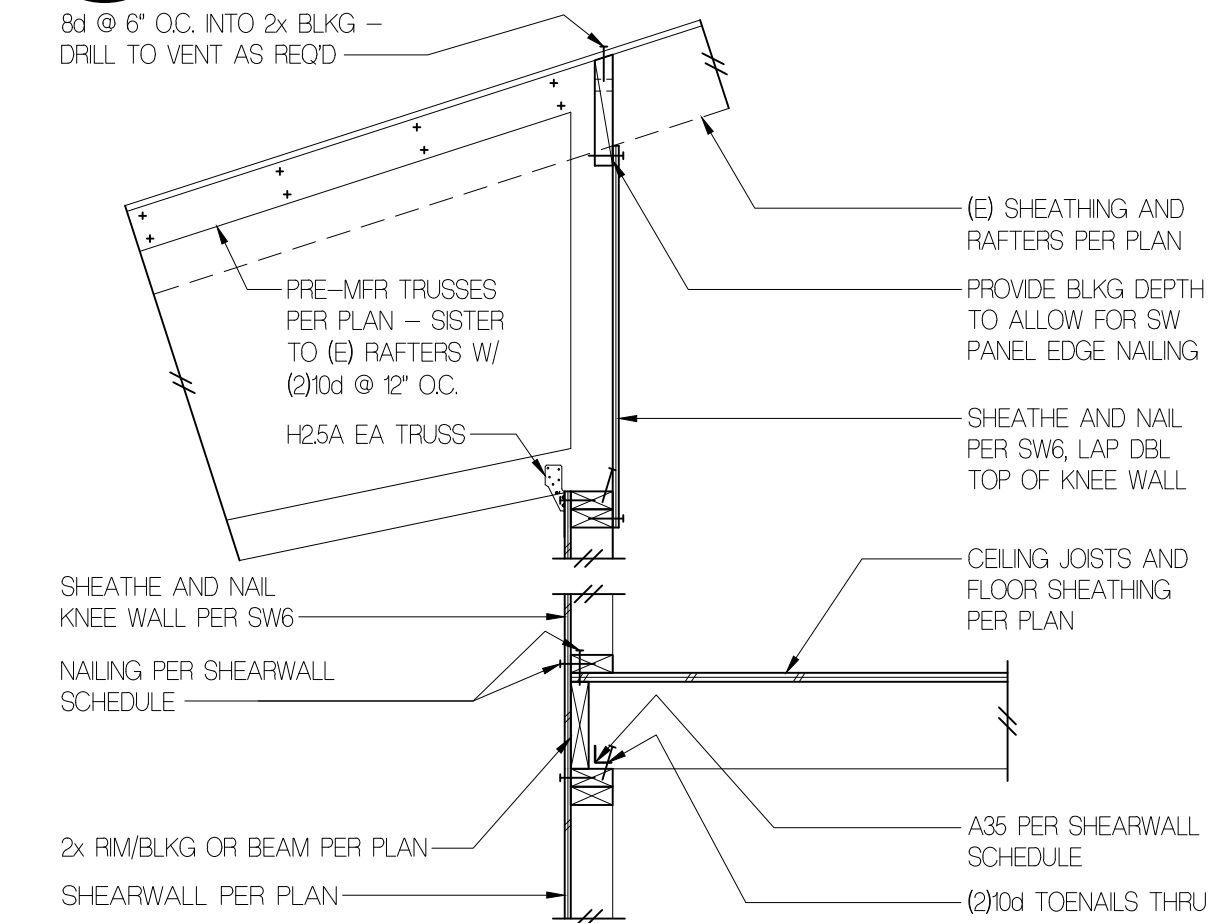
12 EXT WALL @ TRUSS CONNEX
3/4" = 1'-0"



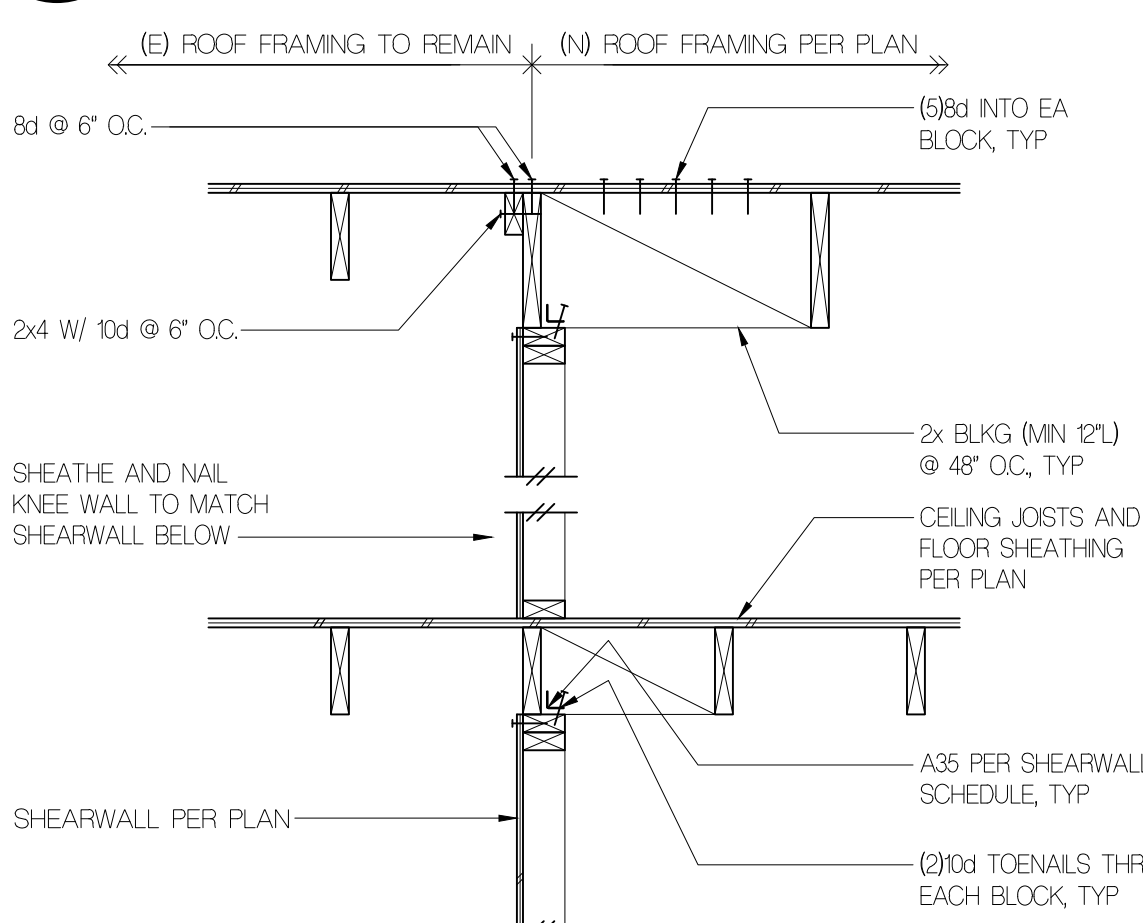
11 OVERFRMG @ EAST ADDITION
3/4" = 1'-0"



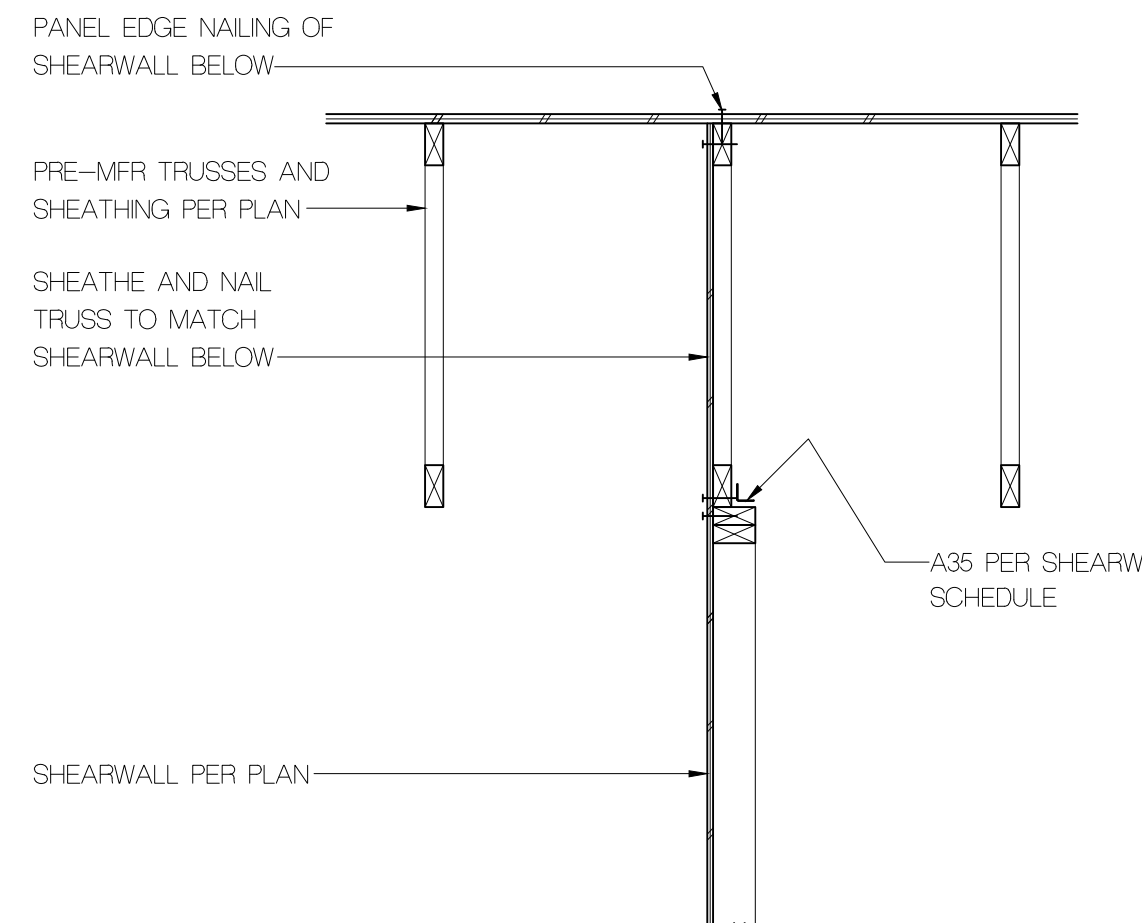
9 EXT FLR FRMG SHTG
3/4" = 1'-0"



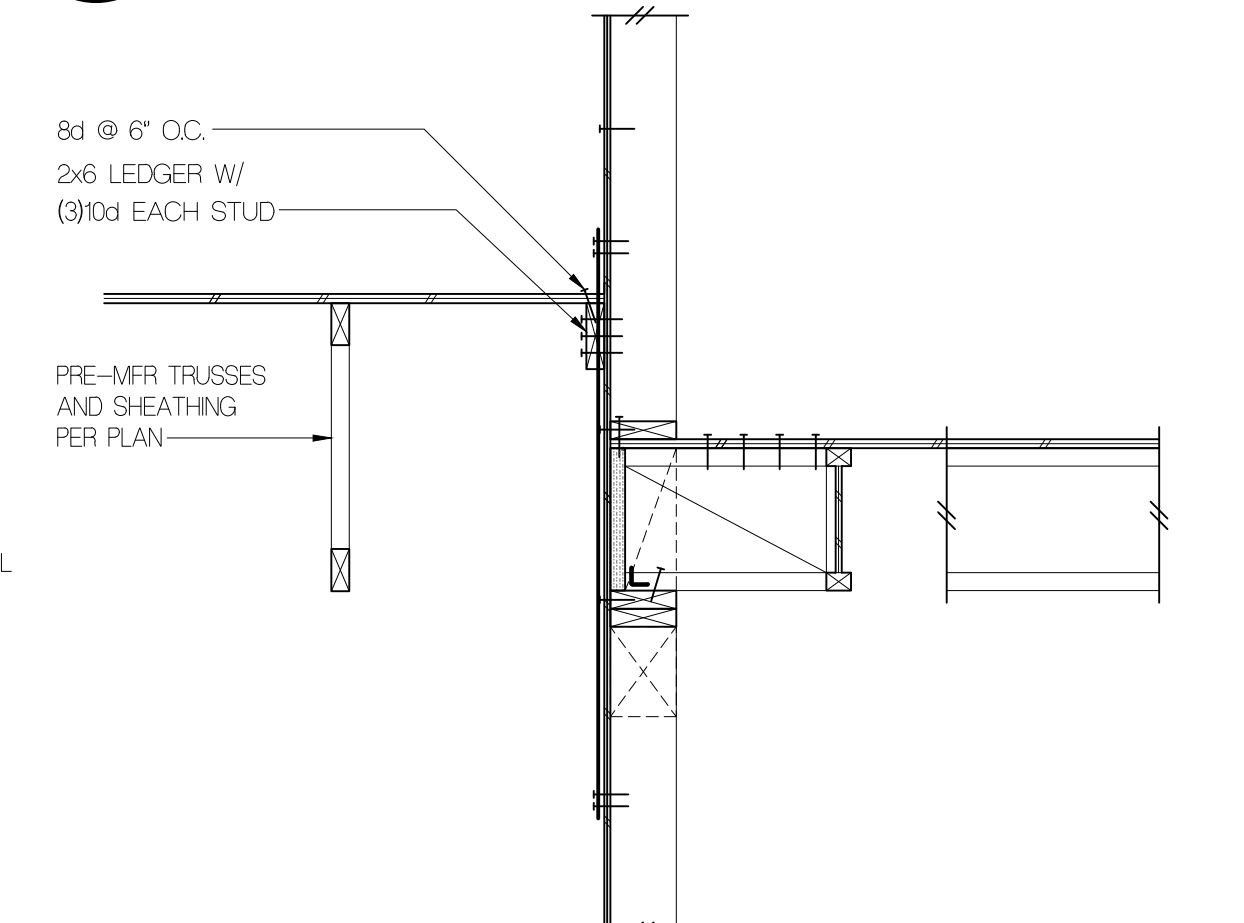
8 INT WALL @ TRUSS CONNEX
3/4" = 1'-0"



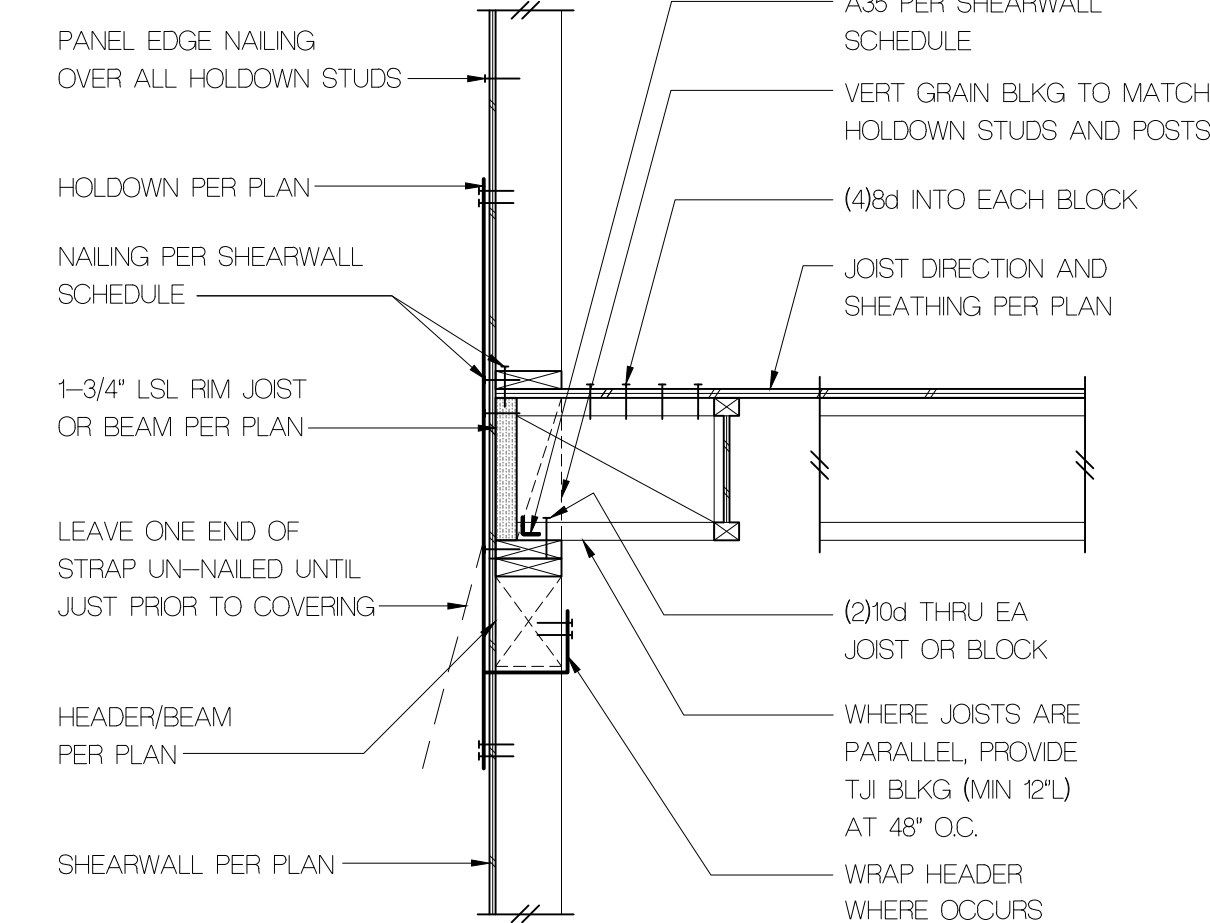
7 (E) TO (N) ROOF CONNEX
3/4" = 1'-0"



6 SW EXTENSION THRU ATTIC
3/4" = 1'-0"



5 TRUSSES PARALLEL @ WALL
3/4" = 1'-0"



4 EXT FLR FRMG W/ TJI'S
3/4" = 1'-0"

3 NOT USED
3/4" = 1'-0"

2 NOT USED

1 NOT USED

HARPER
RESIDENCE

6551 81ST AVENUE SE
MERCER ISLAND, WA 98040

PROFESSIONAL STAMP



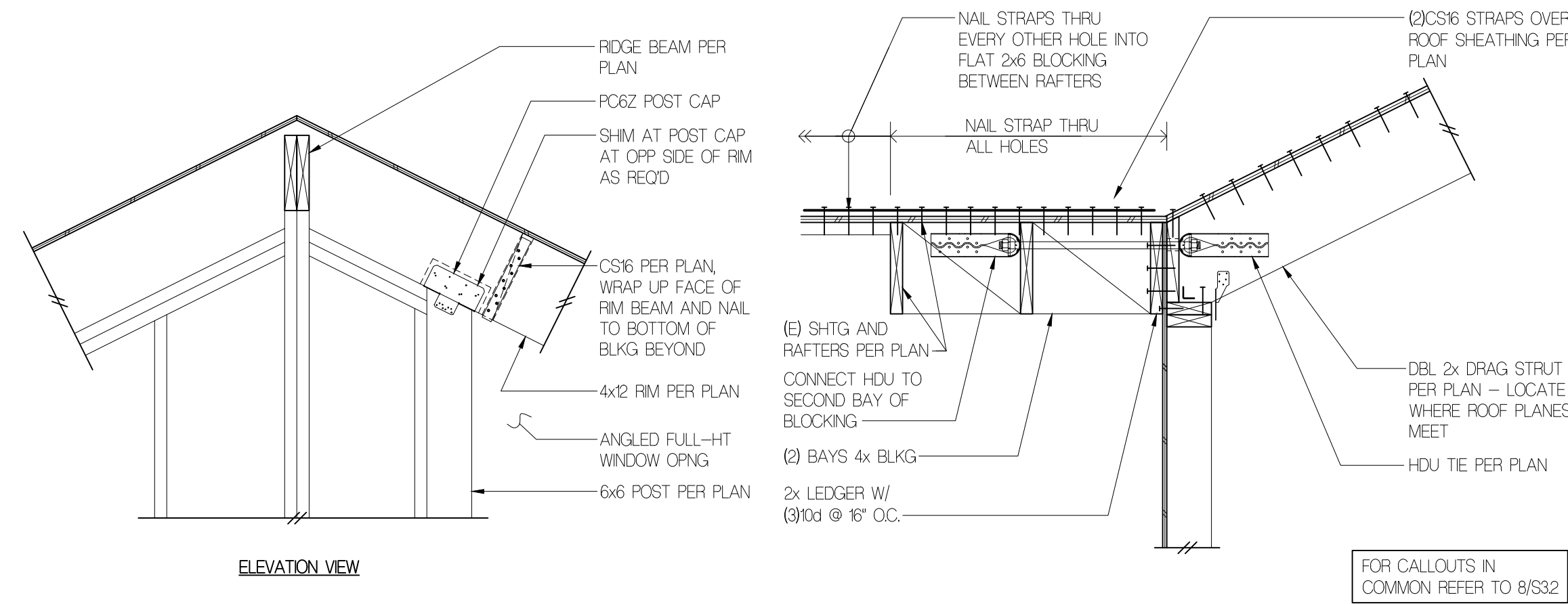
STRUCTURAL CONTENTS ONLY

BUILDING DEPT. STAMP

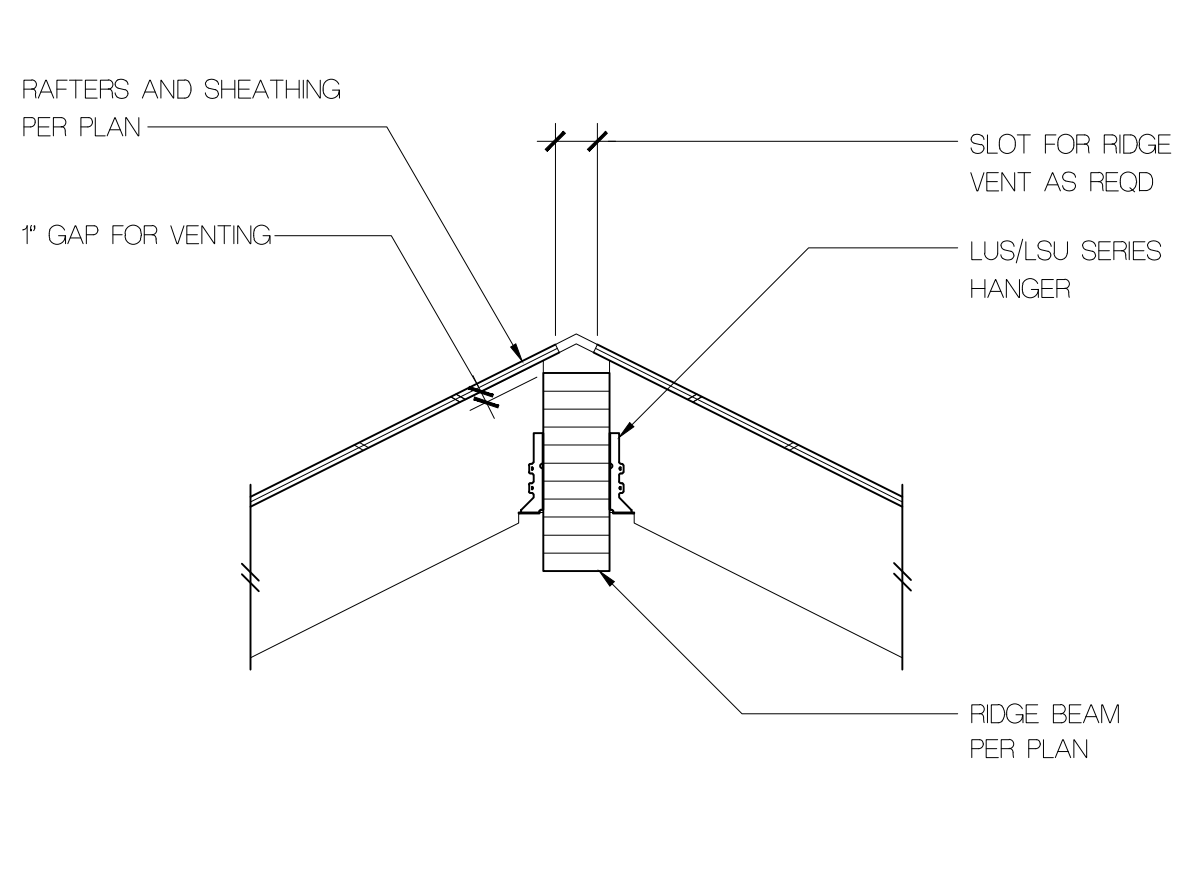
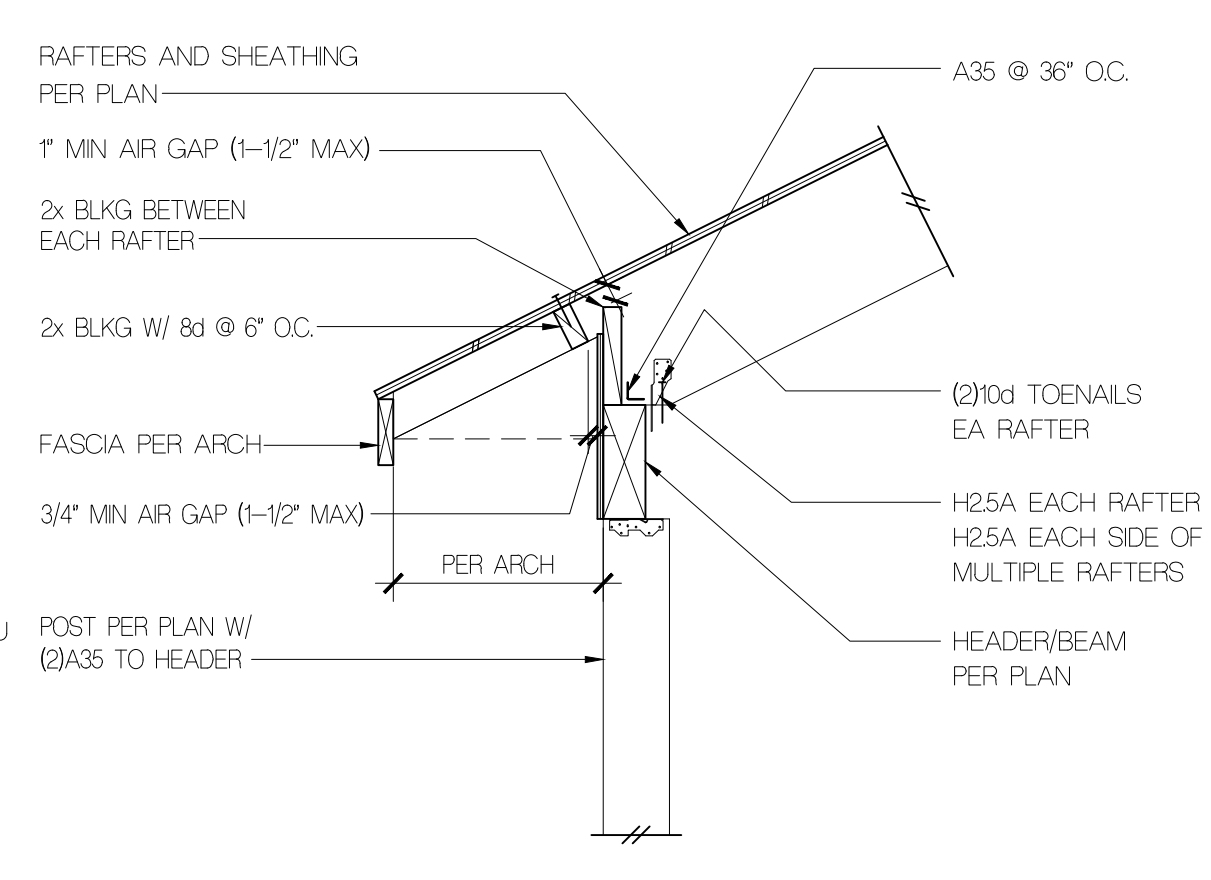
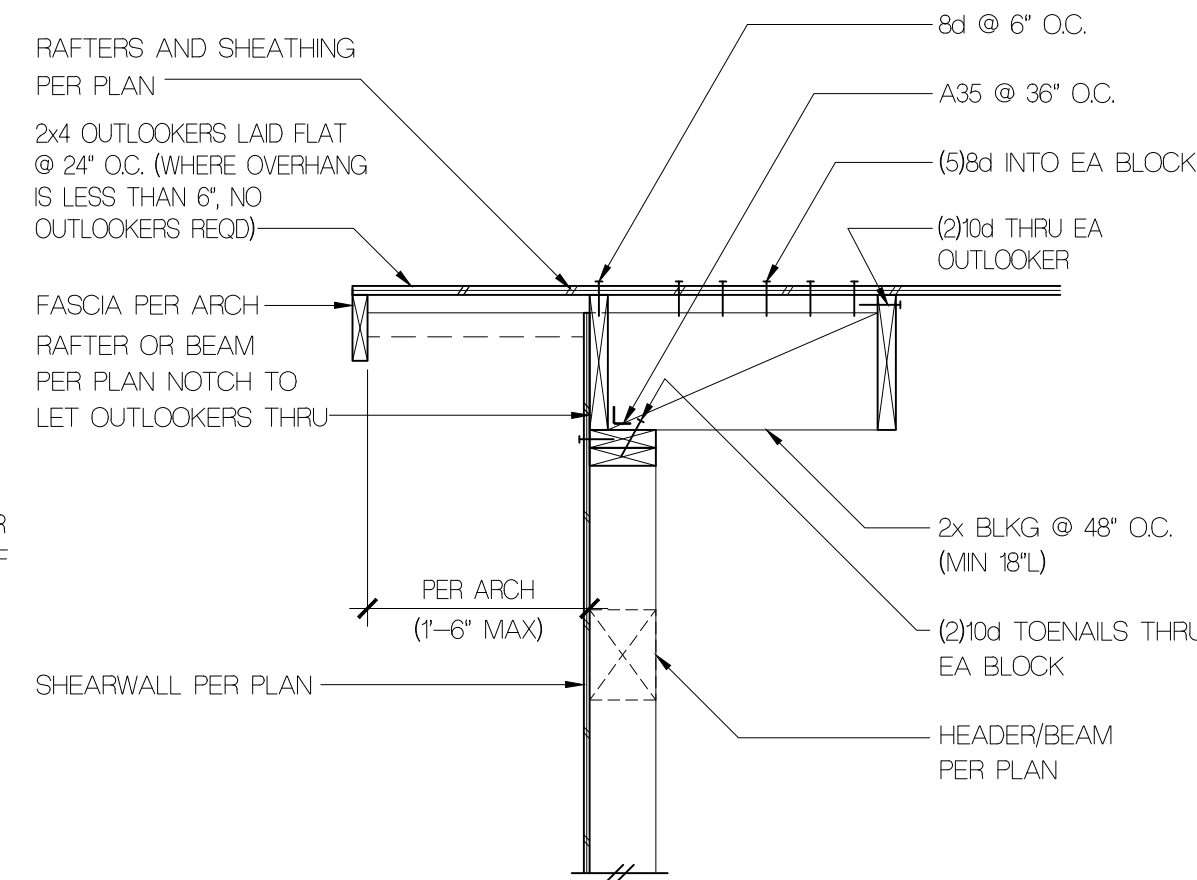
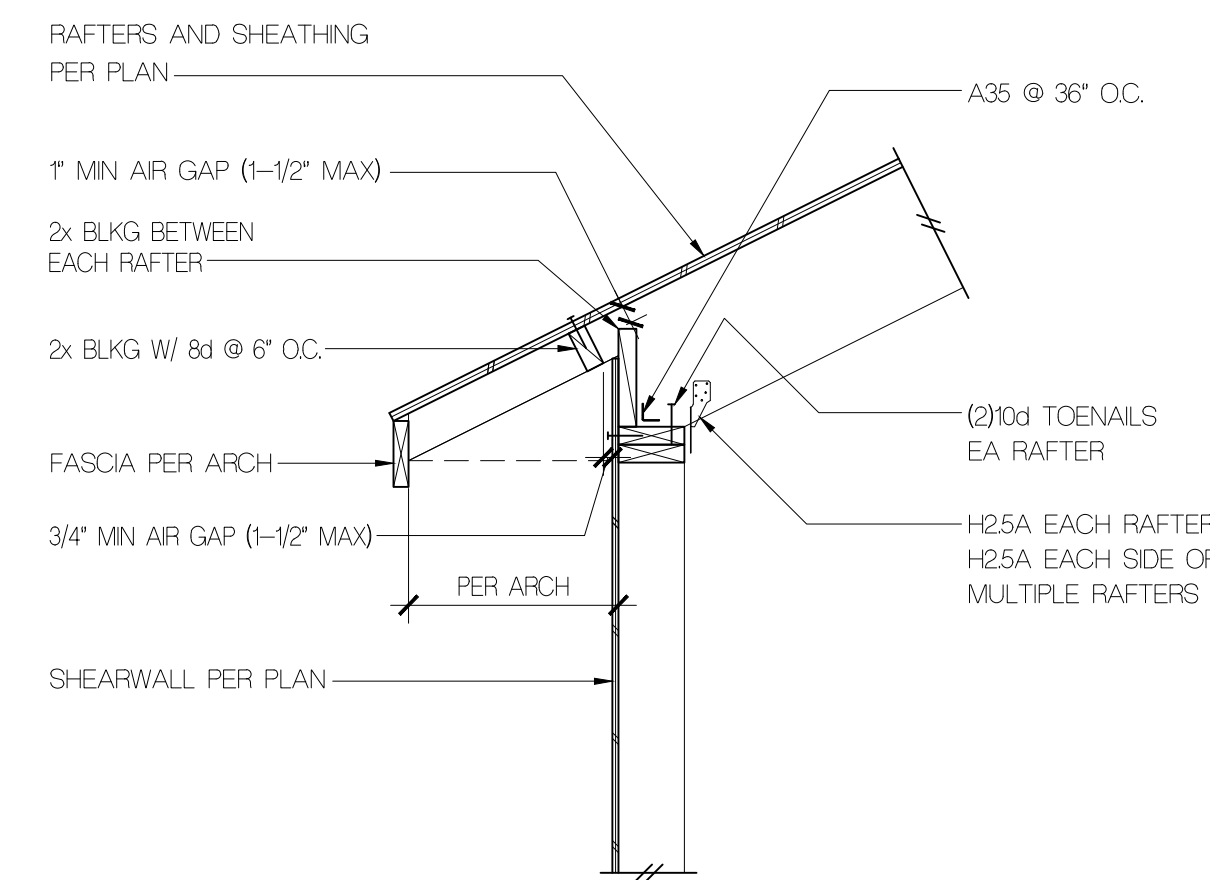
ISSUE: _____ DATE: _____
PERMIT: _____ 5.12.21

WOOD FRAMING
DETAILS

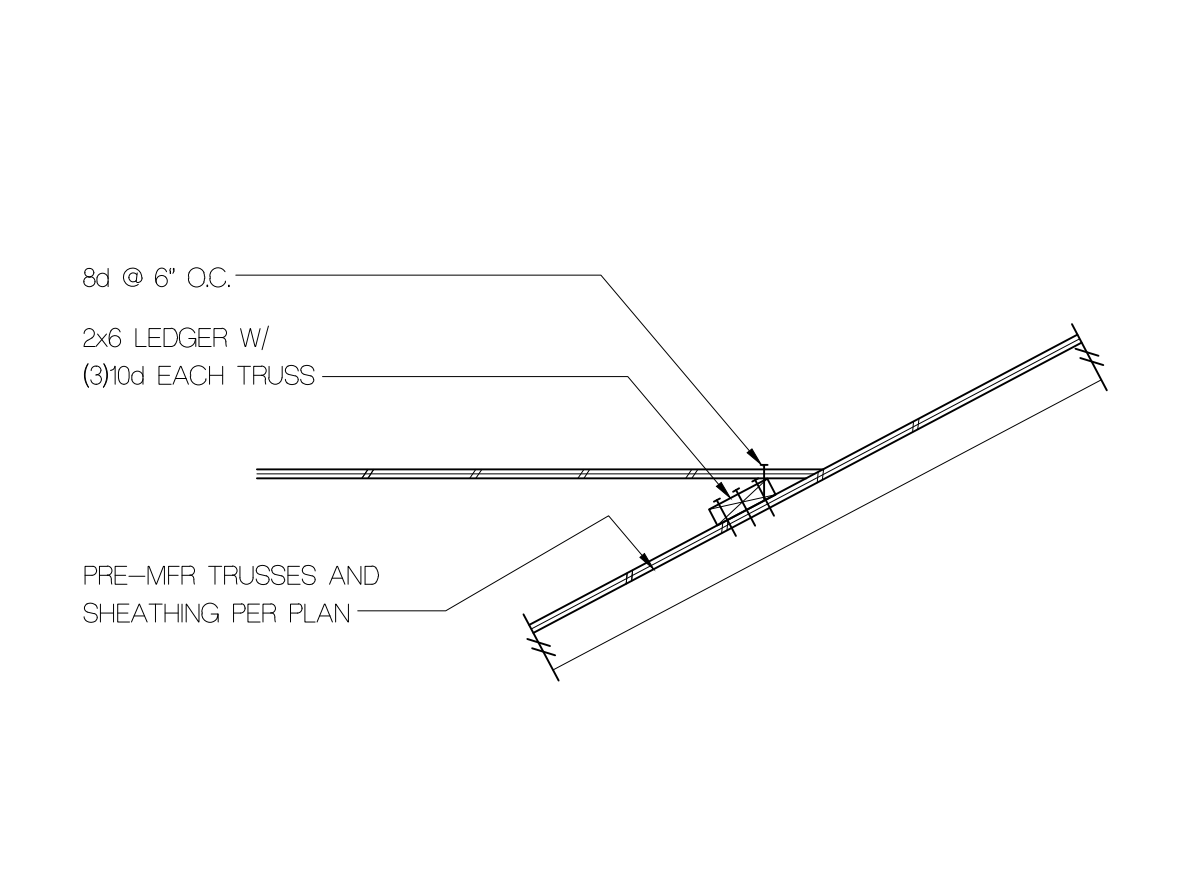
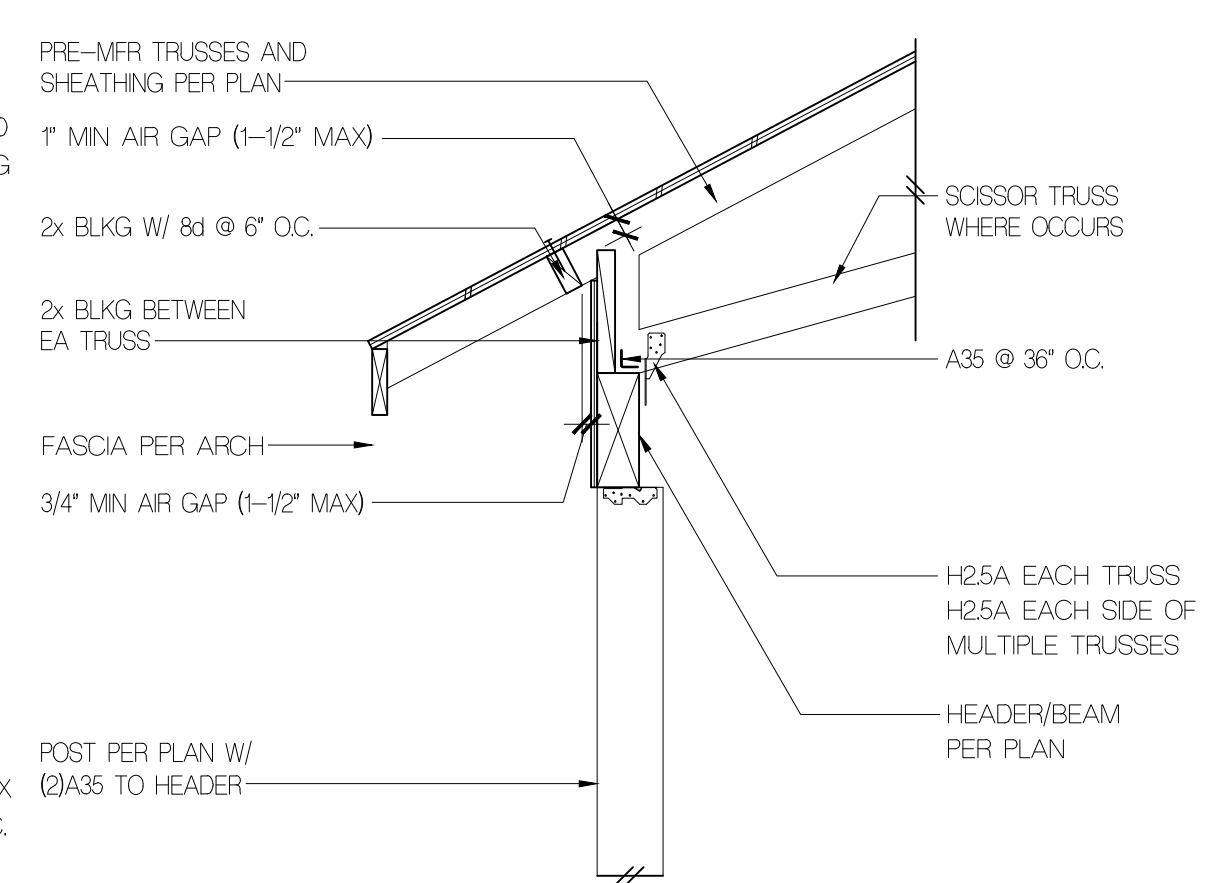
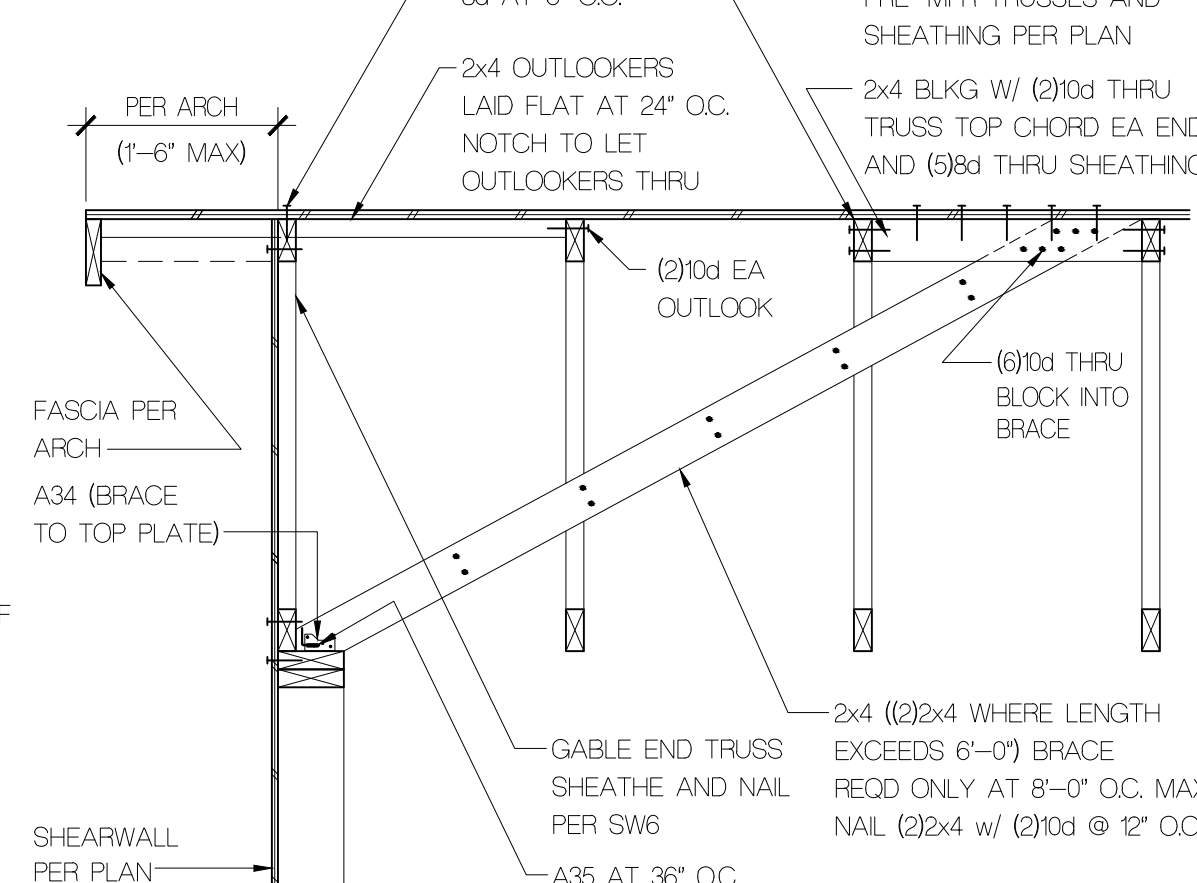
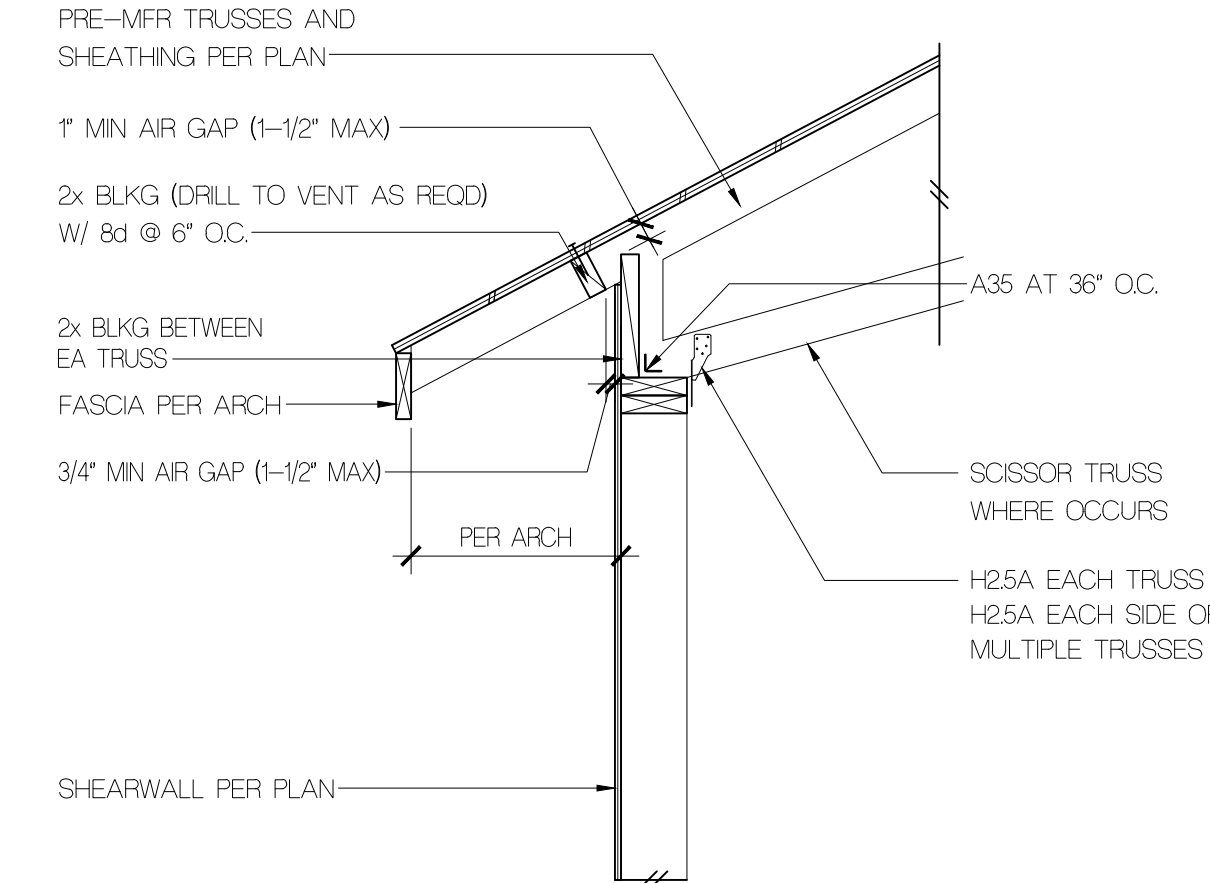
S3.1



12 ELEV @ EAST ADDITION $3/4" = 1'-0"$ **11** NEW TO EXIST'G ROOF DTL $3/4" = 1'-0"$ **10** NOT USED **9** NOT USED



8 EXT BEARING WALL $3/4" = 1'-0"$ **7** EXT NON-BEARING WALL $3/4" = 1'-0"$ **6** BEAM AND POST $3/4" = 1'-0"$ **5** RIDGE BM W/ LUS/LSU $3/4" = 1'-0"$

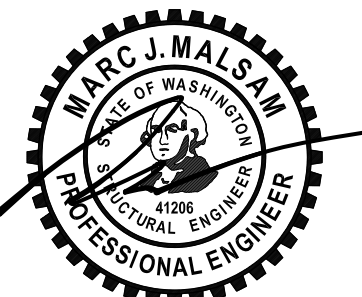


4 INTERMED HEEL @ EXT WALL $3/4" = 1'-0"$ **3** EXT NON-BEARING WALL $3/4" = 1'-0"$ **2** INTERMED HEEL @ BM $3/4" = 1'-0"$ **1** OVERFRAMING CONNEX $3/4" = 1'-0"$

HARPER RESIDENCE

6551 81ST AVENUE SE
MERCER ISLAND, WA 98040

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ISSUE DATE
PERMIT 5.12.21

WOOD FRAMING DETAILS

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20070831001943)

LOT 161, MERCER RIDGE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 61 OF PLATS, PAGE(S) 44 AND 45, RECORDS OF KING COUNTY, WASHINGTON. SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

N 01°26'23" E BETWEEN FOUND CENTERLINE MONUMENTATION ALONG 80TH AVE SE PER R1

REFERENCES

R1. MERCER RIDGE PLAT, VOL. 61, PG. 44, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

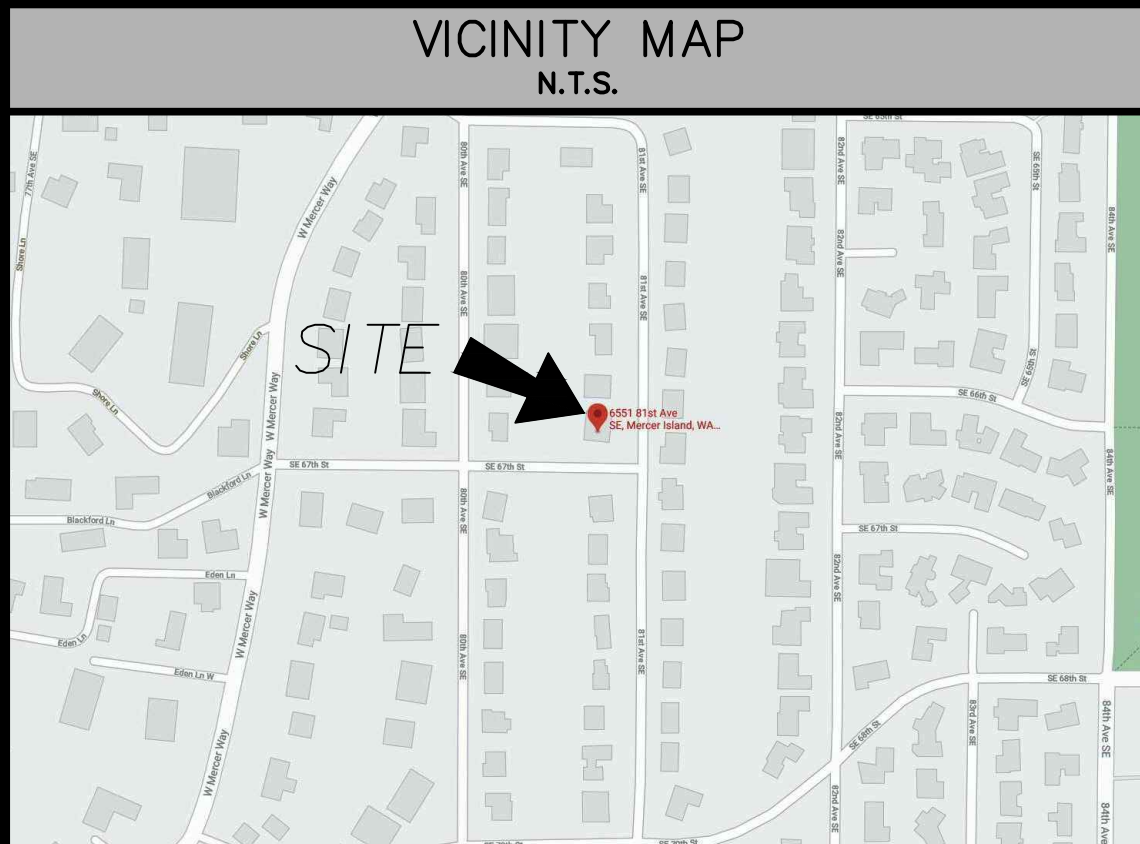
NAVD88 PER CITY OF MERCER ISLAND BENCHMARK #1969 (ID# 46997) ELEV: 208.707

SURVEYOR'S NOTES

- 1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN DECEMBER OF 2020. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 545280-0805
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 14,250 ± S.F. (0.33 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

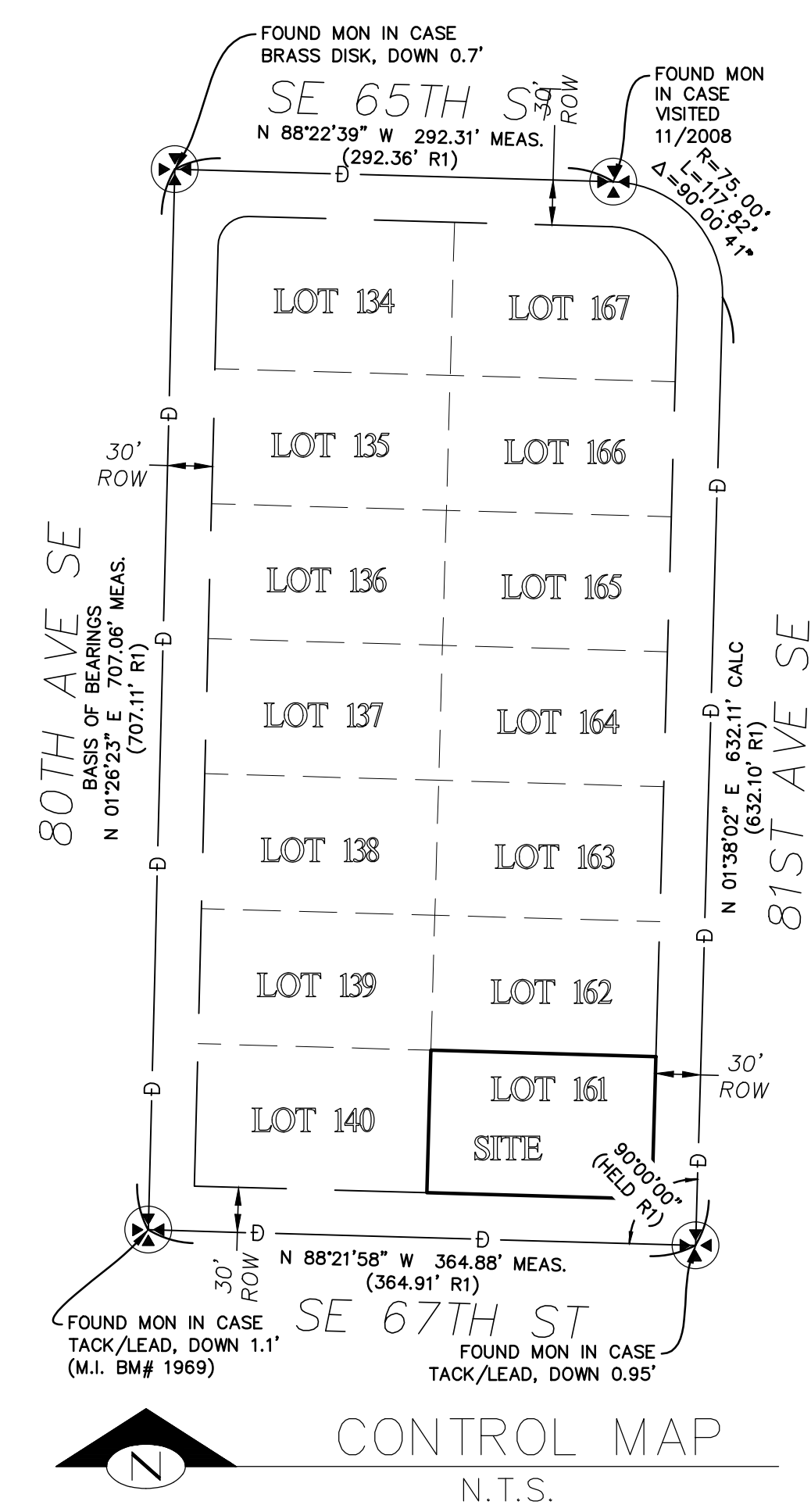
TOPOGRAPHIC & BOUNDARY SURVEY

LEGEND table with symbols for ASPHALT SURFACE, PAVEMENT SURFACE, BUILDING, CENTERLINE ROW, CONCRETE SURFACE, RETAINING WALL, DECK, FENCE LINE (CHAIN LINK), FENCE LINE (WOOD), FIRE HYDRANT, GAS LINE, GAS METER, INLET (TYPE 1), NAIL AS NOTED, MONUMENT IN CASE (FOUND), POWER METER, POWER (UNDERGROUND), REBAR AS NOTED (FOUND), REBAR & CAP (SET), ROCKERY, SEWER LINE, SEWER MANHOLE, SIGN (AS NOTED), STORM MANHOLE, STORM DRAIN LINE, TREE (AS NOTED), WATER LINE, WATER METER, WATER VALVE.



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

INDEXING INFORMATION table with grid coordinates NW, NE, SW, SE and section/county/parish info.



measure success

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 5452800805
HARPER RESIDENCE
6551 81ST AVE SE
MERCER ISLAND, WA 98040

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

Table with columns for JOB NUMBER, DATE, DRAFTED BY, CHECKED BY, SCALE, REVISION HISTORY, SHEET NUMBER.