

**PROJECT INFORMATION**

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edmoran82@gmail.com

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ARBORIST: TREE SOLUTIONS  
2940 WESTLAKE AVENUE N  
SEATTLE, WA 98109  
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CONTACT: JOSH PETTER  
josh@treesolutions.net

PLAN REVIEW: CITY OF MERCER ISLAND  
INSPECTION: CITY OF MERCER ISLAND

**DESIGN CRITERIA**

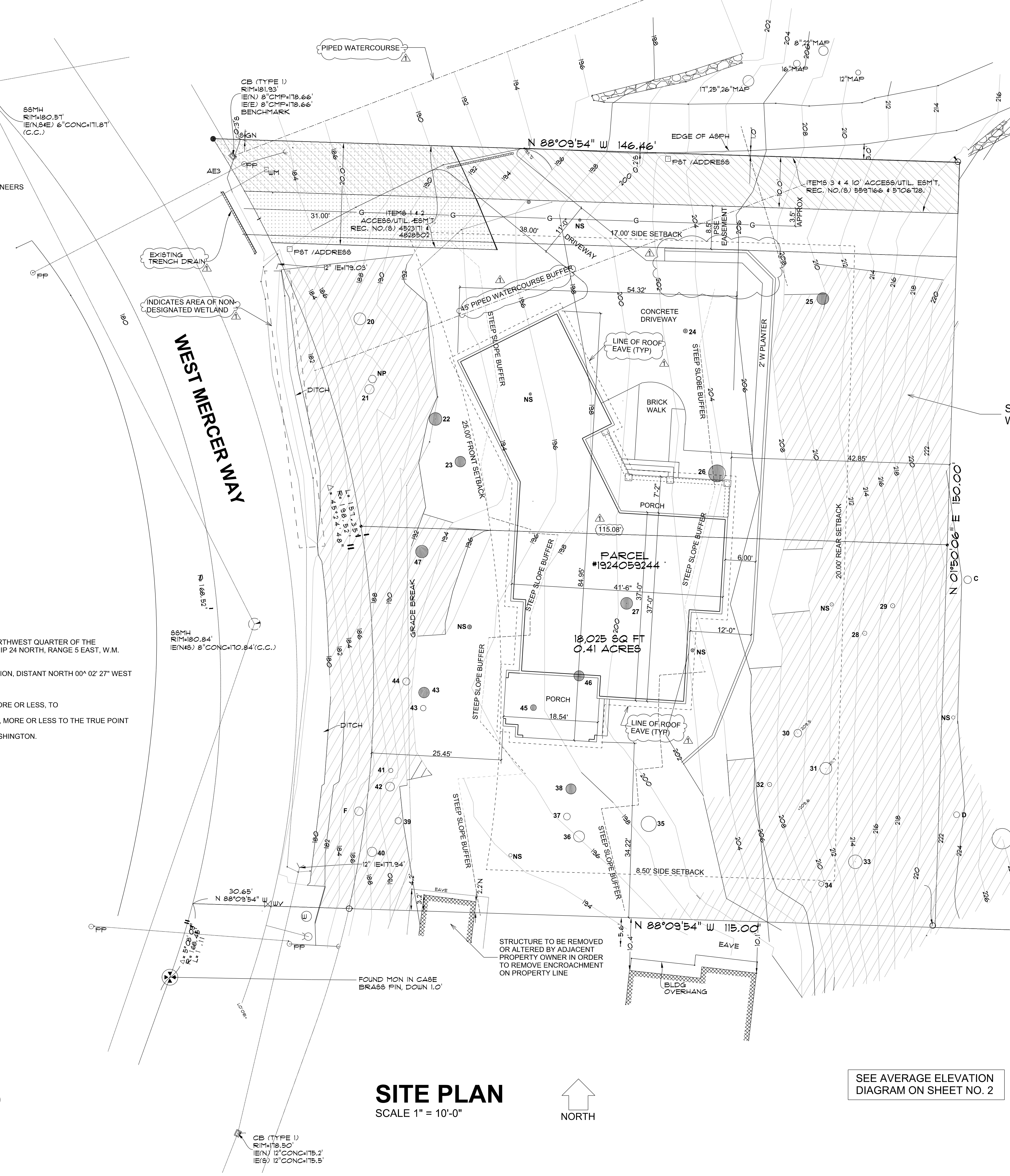
JURISDICTION: CITY OF MERCER ISLAND, WA  
LEGAL DESCRIPTION: THAT PORTION OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M. DESCRIBED AS FOLLOWS:  
BEGINNING ON THE EAST LINE OF SAID SUBDIVISION, DISTANT NORTH 00° 02' 27" WEST MERCER WAY AND THE POINT OF BEGINNING,  
THENCE SOUTH 89° 24' 27" EAST 115 FEET;  
THENCE NORTH 00° 35' 33" EAST 150 FEET;  
THENCE NORTH 89° 24' 27" WEST 107.05 FEET, MORE OR LESS, TO SAID EAST LINE OF WEST MERCER WAY;  
THENCE SOUTHERLY ALONG SAID LINE 150 FEET, MORE OR LESS TO THE TRUE POINT OF BEGINNING;  
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

PROPERTY ADDRESS: 2058 WEST MERCER WAY  
MERCER ISLAND, WA 98040

TAX PARCEL NO: 192405-9244  
EXISTING ZONING: R-15  
GROSS LOT AREA: 18,295 SQ. FT. (0.42 ACRE)  
NET LOT AREA: 17,902 SQ. FT. (0.41 ACRE)  
BUILDING CODES: 2018 IRC  
2018 WSEC  
CONSTRUCTION TYPE: VB  
OCCUPANCY TYPE: R-3 ONE FAMILY DWELING

SEE ADDITIONAL SITE DEVELOPMENT INFORMATION ON SHEET NO. 2

**FIRE PROTECTION NOTE**  
THE STRUCTURE IS TO BE PROVIDED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEM MEETING THE REQUIREMENTS OF NFPA 13R AND ALSO A MONITORED HOUSEHOLD FIRE ALARM PER NFPA 72



- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- CULVERT PIPE
- DITCH (FLOWLINE)
- FIRE HYDRANT
- CATCH ANCHOR
- CATCH BASIN (TYPE 1)
- MONUMENT IN CASE (FOUND)
- POST
- POWER (OVERHEAD)
- POWER POLE
- IRON PIPE (FOUND)
- REBAR (CAP) (SET)
- ROCKERY
- SEWER LINE
- SEWER MANHOLE
- STORM DRAIN LINE
- SIZE TYPE TREE (AS NOTED)
- WATER MH
- WATER LINE
- WATER METER
- WATER VALVE
- STEEP SLOPE AREA
- ITEMS 1 & 2 ACCESS/UTIL. ESM.T. REC. NO.(S) 4523171 & 4828502
- ITEMS 3 & 4 10' ACCESS/UTIL. ESM.T. REC. NO.(S) 5597166 & 5706728.

STEEP SLOPES DENOTED WITH CROSS-HATCHING

**GREENSCAPE CALCULATIONS**  
TOTAL AREA OF FRONT SETBACK = 1300.0 SQ. FT.  
HARDSCAPE = 452.0 SQ. FT.  
GREENSCAPE = 848.0 SQ. FT.  
% OF GREENSCAPE IN FRONT SETBACK = 65.2 %

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SHEET SH-3	SHORING WALL DETAILS & NOTES

SEE ARBORIST REPORT AND TREE SURVEY PLAN DATED FEBRUARY 27, 2023 BY TREE SOLUTIONS, INC. FOR INFORMATION ON TREES TO BE RETAINED AND REMOVED

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

SEE AVERAGE ELEVATION DIAGRAM ON SHEET NO. 2

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REVISIONS	DATE	BY
REVISION 1	12/09/2022	

PROPOSED NEW RESIDENCE FOR:  
**EDWARD & CATHERINE MORAN**  
 5028 WEST MERCER WAY  
 MERCER ISLAND, WA 98040

**PLAN ONE**  
 FINE HOME DESIGN  
 5125 47th Avenue S  
 Seattle, Washington 98118  
 (206) 612-8511 www.planone.biz

DRAWN BY: WMG  
 DATE: APRIL 25, 2022  
 PLAN NO.:  
 SHEET NO.: **1**

LOT COVERAGE		
PROPOSED LOT COVERAGE		
	Impervious Areas (SF)	Pervious Areas (SF)
Proposed House	2664	
Proposed Driveway	1312	
Proposed Retaining Walls	63	
Permeable Pavers		116
Landscaping/Vegetation		13,722
<b>Totals</b>	<b>4039</b>	<b>13,838</b>
<b>Lot Size</b>	<b>18,295</b>	
<b>Max Allowed Impervious Coverage</b>	<b>35 % ( 6403 SF)</b>	
<b>Impervious Lot Coverage</b>	<b>22 %</b>	

LOT COVERAGE CALCULATIONS		
A. Gross Lot Area	18,295	Square Feet
B. Net Lot Area	16,865	Square Feet
C. Allowed Lot Coverage Area	5060	Square Feet
D. Allowed Lot Coverage	35	% Of Lot
E. Existing Lot Coverage	0	Square Feet
F. Total Lot Coverage Area Removed	0	Square Feet
I. Total New Lot Coverage Area		
1. Main Structure Roof Area	2239	Square Feet
2. Vehicular Use (driveway, paved access easements (portion used by the lot for access) parking)	1912	Square Feet
3. Covered Patios and Covered Decks	425	Square Feet
4. Total New Lot Coverage (I 1. + I 2 + I 3)	4576	Square Feet
J. Total Project Lot Coverage Area (E - F) + I 4	4576	
K. Proposed Lot Coverage Area	27.1	% Of Lot

HARDSCAPE CALCULATIONS		
A. Gross Lot Area	18,295	Square Feet
B. Net Lot Area	16,865	Square Feet
H. Total New Lot Hardscape Area		
3. Walkways	119	Square Feet
4. Stairs	44	Square Feet
5. Rockeries and Retaining Walls	70	Square Feet
7. Total New Hardscape Area (H 3 + H 4 + H 5)	233	Square Feet
I. Total Project Hardscape Area	233	Square Feet
J. Total Project Hardscape Area = (I / B) x 100	1.4	Square Feet

LOT SLOPE CALCULATIONS		
Highest Elevation Point of Lot	222	Feet
Lowest Elevation Point of Lot	184	Feet
Elevation Difference	38	Feet
Horizontal Distance Between High and Low Points	127	Feet
Lot Slope	29.9	%



MARK	ELEVATION	WALL LENGTH	ELEV X LENGTH
A	195.27	22.00'	4295.94
B	198.00	25.00'	4950.00
C	199.70	10.00'	1997.00
D	202.21	19.00'	3841.99
E	205.00	26.00'	5330.00
F	204.57	6.00'	1227.42
G	203.10	18.00'	3655.80
H	201.27	17.00'	3421.59
I	199.80	8.50'	1698.30
J	196.71	16.00'	3147.36
K	196.67	2.00'	393.34
L	196.67	2.50'	491.68
M	196.89	11.00'	2165.79
N	197.04	2.50'	492.60
O	195.47	13.50'	2638.85
P	196.89	2.50'	492.23
Q	195.47	23.25'	4544.68
R	193.72	26.58'	5149.08
TOTALS		251.33	49933.43

AVERAGE ELEVATION FORMULA = 49933.43 / 251.33  
AVERAGE ELEVATION = 198.68

**AVERAGE ELEVATION DIAGRAM**  
SCALE 1" = 10'-0"



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5125 47th Avenue S  
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DRAWN BY  
WMG

DATE  
APRIL 25, 2022

PLAN NO.

SHEET NO.  
**2**

**FIRE BLOCKING NOTES**

PROVIDE FIRE BLOCKING PER 2018 IRC AND/OR AS FOLLOWS:

- a) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS AND AT 10' INTERVALS BOTH VERTICAL AND HORIZONTAL.
- b) AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
- c) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS.
- d) IN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES AND SIMILAR OPENINGS THAT AFFORD A PASSAGE FOR FIRE AT FLOOR AND CEILING LEVELS, WITH NON-COMUSTIBLE MATERIALS.
- e) AT OPENINGS BETWEEN ATTIC SPACES AND CHIMNEY CHASES FOR FACTORY BUILT CHIMNEYS.

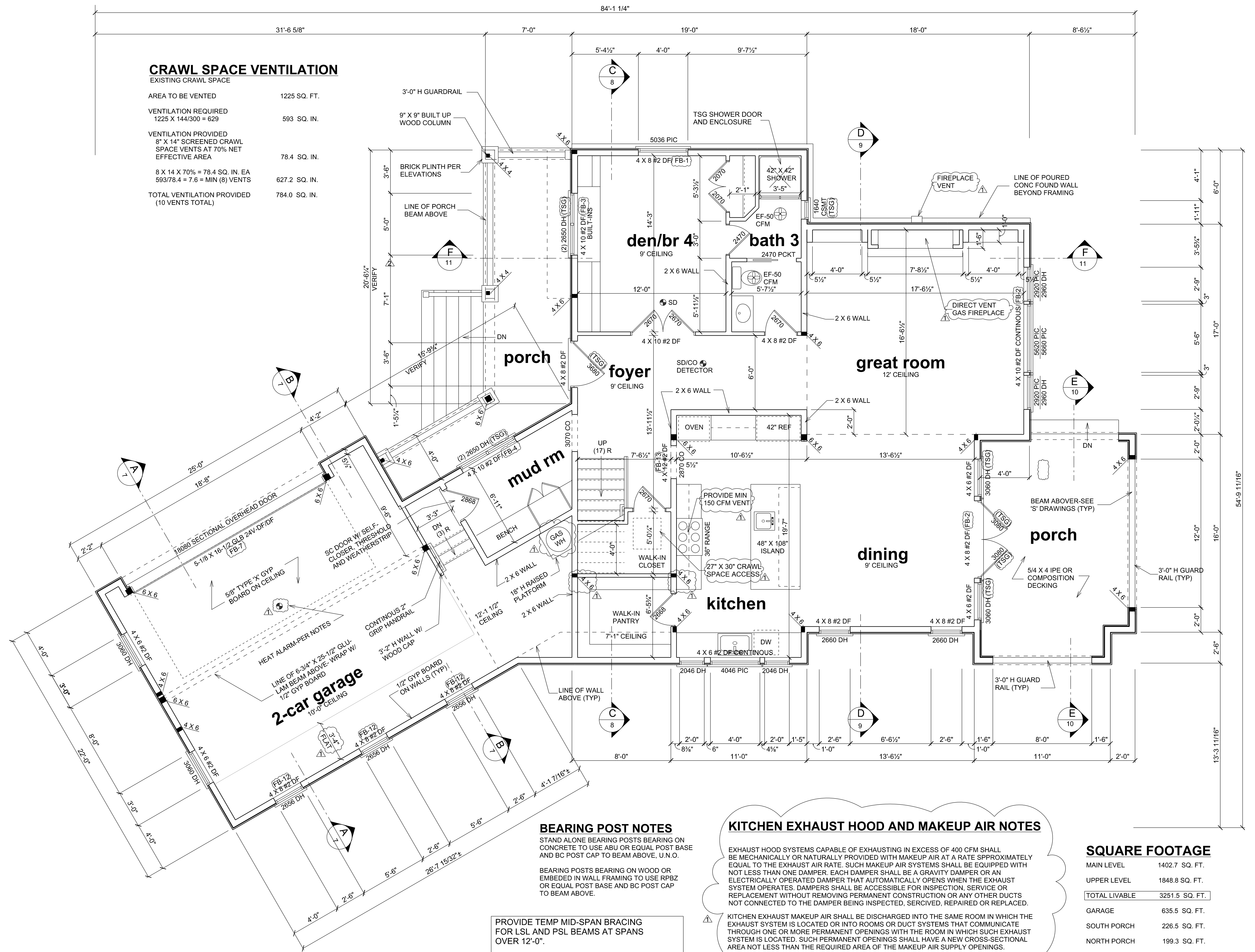
**INDOOR AIR QUALITY**

- 1. VENTILATION PER IRC M1507
- 2. ALL EXHAUST DUCTS TO MEET REQUIREMENTS
- 3. SOURCE SPECIFIC VENTILATION CONTROLLED BY MANUAL SWITCHES AND/OR TIMERS
- 4. PROVIDE VENTILATION CONTROLS PER IRC M1507.3.2
- 5. VENTILATION REQUIREMENTS PER IRC M1507.3.3. FLOOR AREA = 2585 SF, 3 BEDROOMS = 60 CFM AIRFLOW REQUIRED  
(4) PANASONIC FV-GKF32S1 FRESH AIR INLETS @ 18 CFM= 72 CFM PROVIDED
- 6. WHOLE HOUSE VENTILATION TO BE PROVIDED BY LOCAL EXHAUST FAN PER IRC M1507.3.4. WHOLE HOUSE FAN TO BE ENERGY EFFICIENT @ .35 WATTS PER CFM.

**FLOOR PLAN NOTES**

WHEN AND WHERE APPLICABLE

- 1. EXTERIOR WALL FRAMING TO BE 2 X 6 NO.2 HF STUDS AT 16" OC U.N.O.
- 2. INTERIOR WALL FRAMING TO BE 2 X 4 NO. 2 HF STUDS AT 16" OC U.N.O.
- 3. INTERIOR WALL FINISH TO BE 1/2" GYPSUM BOARD U.N.O.
- 4. ALL FRAMING HARDWARE TO BE "SIMPSON" OR EQUAL.
- 5. EXTERIOR WALL SHEATHING TO BE 7/16" OSB APA RATED PANELS. PROVIDE BLOCKING AND 8d NAILS AT 6" OC AT ALL PANEL EDGES U.N.O. NAILING TO TOP PLATE OR TOENAILING TO JOISTS SHALL BE 8d NAILS AT 6" OC OR TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS AT 4'-0" OC U.N.O.
- 6. CRAWL SPACE OR ATTIC ACCESS HATCH TO BE INSULATED TO TO THE SAME VALUE AS THAT OF THE SURFACE IN WHICH IT IS LOCATED AND WEATHERSTRIPPED.
- 7. INSULATE PER PLAN AND SECTIONS.
- 8. ALL HEADERS AND BEAMS TO BE (2) 2 X 8 U.N.O.
- 9. ALL POSTS AND COLUMNS SHALL BE DOUBLE STUD MINIMUM U.N.O. WITH THE BEAM OR HEADER BEARING FULLY ON THE POST OR COLUMN.
- 10. FLOOR SHEATHING SHALL BE 23/32" STURD-I-FLOOR WITH A PANEL INDEX OF 40/20. NAIL TO FRAMING WITH 8d COMMON NAILS AT 4" OC AT PANEL EDGES AND 12" OC IN THE FIELD U.N.O.
- 11. ALL ANCHOR BOLTS AT FOUNDATION SILL SHALL HAVE MIN 3" X 3" X 1/4" PLATE WASHERS.
- 13. INSULATE ABOVE GRADE EXTERIOR 2 X 6 WALLS TO MIN R-21
- 14. INSULATE ABOVE GRADE EXTERIOR 2 X 4 WALLS TO MIN R-13
- 15. INSULATE BELOW GRADE EXTERIOR WALLS TO MIN R-21 ON THE EXTERIOR OR R-21 ON THE INTERIOR.
- 16. INSULATE CEILINGS WITH ATTIC SPACE ABOVE TO MIN R-49
- 17. INSULATE CEILINGS AT SLOPED AREAS TO MIN R-3
- 18. INSULATE CEILINGS AT UNHEATED SLOPED AREAS TO MIN R-30
- 19. INSULATE FLOORS ABOVE UNHEATED AREAS TO MIN R-30
- 20. EXTERIOR DOORS TO BE MIN 'U' VALUE OF 0.20
- 21. VERTICAL GLAZING TO BE MIN 'U' VALUE OF 0.28
- 22. HORIZONTAL GLAZING TO BE MIN 'U' VALUE OF 0.50
- 23. WALL FINISH AT TUB AND/OR SHOWER SURROUNDS TO EXTEND A MIN OF 6'-0" ABOVE FIN FLR.
- 24. ALL OVERHEAD GLAZING TO BE OF TEMPERED SAFETY GLASS (TSG)
- 25. SMOKE DETECTORS TO BE HARD WIRED WITH BATTERY BACK-UP
- 26. WHERE OPERABLE WINDOWS ARE MORE THAN 6'-0" ABOVE OUTSIDE GRADE THE OPERABLE PORTION OF THE WINDOW TO BE MINIMUM OF 2'-0" ABOVE THE INTERIOR WALKING SURFACE PER R613.2
- 27. WATERPROOF DECKS TO BE SLOPED AT 1/4" PER FT AS INDICATED.
- 28. PROVIDE HIGH EFFICIENCY LIGHTING CONTROLS FOR ALL EXTERIOR LIGHTING PER WSEC 505.3, CH 2.
- 29. A MINIMUM OF 75% OF LUMINAIRES MUST BE HIGH EFFICACY LUMINAIRES.
- 30. PROVIDE APPROVED CARBON MONOXIDE DETECTOR OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH LEVEL OF THE DWELLING.
- 31. FASTENERS, INCLUDING NUTS AND WASHERS, IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.
- 32. GUARDRAIL TO SUPPORT 200 LB CONCENTRATED LOAD ON TOP AND 50 PSF ON INFILL COMPONENTS (TYP)



**MAIN LEVEL FLOOR PLAN**  
SCALE 1/4" = 1'-0"



TSG= TEMPERED SAFETY GLASS

SEE SHEETS NOS. S-1, S-7 & S-8 FOR SHEAR WALL SCHEDULE, PLANS, AND GENERAL NOTES

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DATE	BY
12/08/2022	WMG
	REVISION

PROPOSED SINGLE FAMILY RESIDENCE FOR:  
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MERCER, ISLAND, WA

**PLAN ONE**  
FINE HOME DESIGN  
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DATE  
APRIL 25, 2022

PLAN NO.

SHEET NO.

**3**

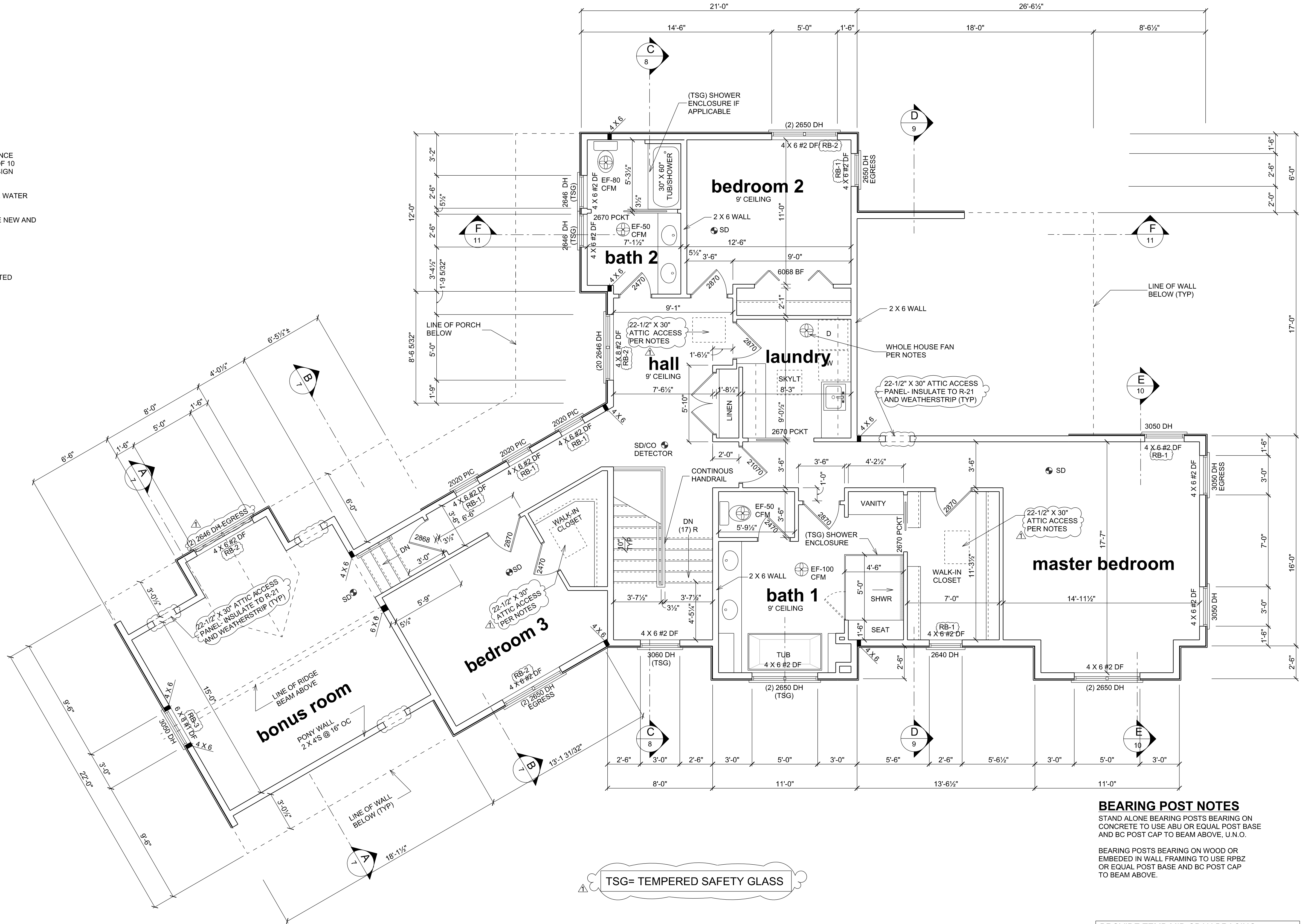
**ENERGY CODE NOTES**

- EACH DWELLING UNIT IS TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE.
- BUILDING AIR LEAKAGE TESTING, DEMONSTRATING THE SPECIFIC LEAKAGE AREA IS LESS THAN OR EQUAL TO 0.3 CFM, IS REQUIRED PRIOR TO FINAL INSPECTION. THE TEST RESULTS SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE.
- DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR AND HOMEOWNER PRIOR TO AN APPROVED FINAL INSPECTION.
- A RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE COMPLYING WITH SEC 105.4 IS REQUIRED TO BE COMPLETED BY THE DESIGN PROFESSIONAL OR BUILDER AND PERMANENTLY POSTED WITHIN 3 FEET OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
- 1.0 ENERGY CREDIT FUEL NORMALIZATION DESCRIPTION:  
(OPTION 1- 1.0 CREDIT) HEAT PUMP  
  
6.0 ENERGY CREDIT OPTION DESCRIPTIONS:  
(OPTION 1.4 - 1.0 CREDIT) EFFICIENT BUILDING ENVELOPE: VERTICAL FENESTRATION U= 0.25, WALL INSULATION R-21 PLUS R-4, FLOOR R-38, SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB, BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB.  
(OPTION 2.2 - 1.0 CREDIT) COMPLIANCE BASED ON SECTION R402.1.2: REDUCE TESTED AIR LEAKAGE TO 2.0 AIR CHANGES PER HOUR MAXIMUM OR 50 PASCALS.  
(OPTION 3.6 - 2.0 CREDITS) DUCTLESS SPLIT SYSTEM HEAT PUMPS WITH NO ELECTRIC RESISTANCE HEATING IN PRIMARY LIVING AREAS. A DUCTLESS HEAT PUMP SYSTEM WITH A MINIMUM HSPF OF 10 SHALL BE SIZED AND INSTALLED TO PROVIDE HEAT TO THE ENTIRE DWELLING UNIT AT THE DESIGN OUTDOOR AIR TEMPERATURE.  
(OPTION 5.2 - 0.5 CREDITS) EFFICIENT WATER HEATING: ENERGY STAR RATED GAS, OR PROPANE WATER HEATER WITH A MINIMUM UEF OF 0.80  
(OPTION 7.1 - 0.5 CREDITS) APPLIANCE PACKAGE: ALL OF THE FOLLOWING APPLIANCES SHALL BE NEW AND INSTALLED IN THE DWELLING UNIT AND SHALL MEET THE FOLLOWING STANDARDS:  
DISHWASHER - ENERGY STAR RATED  
REFRIGERATOR - ENERGY STAR RATED  
WASHING MACHINE - ENERGY STAR RATED  
DRYER - ENERGY STAR RATED, VETLESS DRYER WITH MINIMUM CFE RATING OF 5.2
- PER WSEC R403.3, DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED AND LEAK TESTED
- BLOWER DOOR TESTING- AR LEAKAGE SHALL NOT EXCEED 3.0 AIR CHANGES PER HOUR, AND SHALL BE TESTED PER SEC R402.1.2. PROVIDE A WRITTEN REPORT OF THE TEST RESULTS, SIGNED BY THE TESTING PARTY, TO THE BUILDING INSPECTOR, PRIOR TO APPROVED FINAL INSPECTION.
- THE DESIGN PROFESSIONAL OR BUILDER SHALL COMPLETE AND POST A "INSULATION CERTIFICATE FOR RESIDENTIAL CONSTRUCTION" WITHIN 3 FEET OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
- THE DESIGN PROFESSIONAL OR BUILDER SHALL COMPLETE AND POST A "INSULATION CERTIFICATE FOR RESIDENTIAL CONSTRUCTION" WITHIN 3 FEET OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
- RECESSED CAN LIGHTS ARE TO BE TYPE 1C RATED AND SEALED.
- PER WEC 402.4, THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SEC R402.1.1 THROUGHOUT R402.4.4.
- PER 4403.2.2, DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE IMC OR IRC AS APPLICABLE.

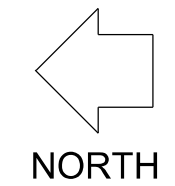
**WHOLE HOUSE FAN NOTES**

VENTILATION REQUIREMENTS PER IRC M1507.3.3  
FLOOR AREA = 3203 SF, 4 BEDROOMS = 90 CFM

- PROVIDE A CENTRALLY LOCATED WHOLE HOUSE EXHAUST FAN WITH A MINIMUM SONE RATING OF 1.5 AND MINIMUM CAPACITY OF 100CFM AND CONNECTED TO AN AUTOMATIC CONTROL TIMER.
- AN AUTOMATIC CONTROL CLOCK TIMER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. THE TIMER SHALL BE CAPABLE OF CONTINUOUS OPERATION AND HAVE AN AUTOMATIC AND MANUAL CONTROL. THE TIMER SHALL BE SET TO OPERATE THE WHOLE HOUSE FAN FOR A MINIMUM OF 8 HOURS.
- INTERIOR DOORS SHALL BE UNDERCUT A MINIMUM OF 1/2" ABOVE THE FINISHED FLOOR.
- FRESH AIR INTAKE DUCT TO BE MINIMUM 7" DIAMETER SMOOTH PIPE FOR A MAXIMUM LENGTH OF 20' AND A MAXIMUM OF 3 ELBOWS.
- FRESH AIR INLET TO BE INSULATED TO A MINIMUM OF R-4 WITHIN HEATED AREAS.
- FRESH AIR INLET TO BE PROTECTED FROM THE ENTRY OF INSECTS, LEAVES AND OTHER MATERIAL
- FRESH AIR INLET NOT TO BE LOCATED AS FOLLOWS:  
A. WITHIN 10' OF AN APPLIANCE OUTLET UNLESS THE VENT OUTLET IS A MINIMUM OF 3' ABOVE THE FRESH AIR INLET.  
B. WHERE IT WILL PICK UP OBJECTIONABLE ODORS, FUMES OR FLAMABLE VAPORS.  
C. A HAZARDOUS OR UNSANITARY LOCATION.  
D. A ROOM OR SPACE HAVING FUEL BURNING APPLIANCES WITHIN.  
E. CLOSER THAN 10' FROM A VENT OPENING OF A PLUMBING DRAINAGE SYSTEM UNLESS THE VENT OPENING IS AT LEAST 3' ABOVE THE FRESH AIR INLET.  
F. IN AN ATTIC, CRAWL SPACE OR GARAGE.
- THE EXHAUST DUCT SHALL TERMINATE OUTSIDE THE BUILDING AND BE EQUIPPED WITH A BACK-DRAFT DAMPER. THE EXHAUST DUCT IN UNCONDITIONED SPACES SHALL BE INSULATED TO A MINIMUM OF R-4.



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



TSG= TEMPERED SAFETY GLASS

**BEARING POST NOTES**  
STAND ALONE BEARING POSTS BEARING ON CONCRETE TO USE ABU OR EQUAL POST BASE AND BC POST CAP TO BEAM ABOVE, U.N.O.  
  
BEARING POSTS BEARING ON WOOD OR EMBEDDED IN WALL FRAMING TO USE RPBZ OR EQUAL POST BASE AND BC POST CAP TO BEAM ABOVE.

PROVIDE TEMP MID-SPAN BRACING FOR LSL AND PSL BEAMS AT SPANS OVER 12'-0".  
  
ALL BEARING POSTS TO CONTINUE DOWN TO FOUNDATION EITHER DIRECTLY OR INDIRECTLY THROUGH BEAMS OR HEADERS BELOW

SEE SHEETS NOS. S-1, S-7 & S-8 FOR SHEAR WALL SCHEDULE, PLANS, AND GENERAL NOTES

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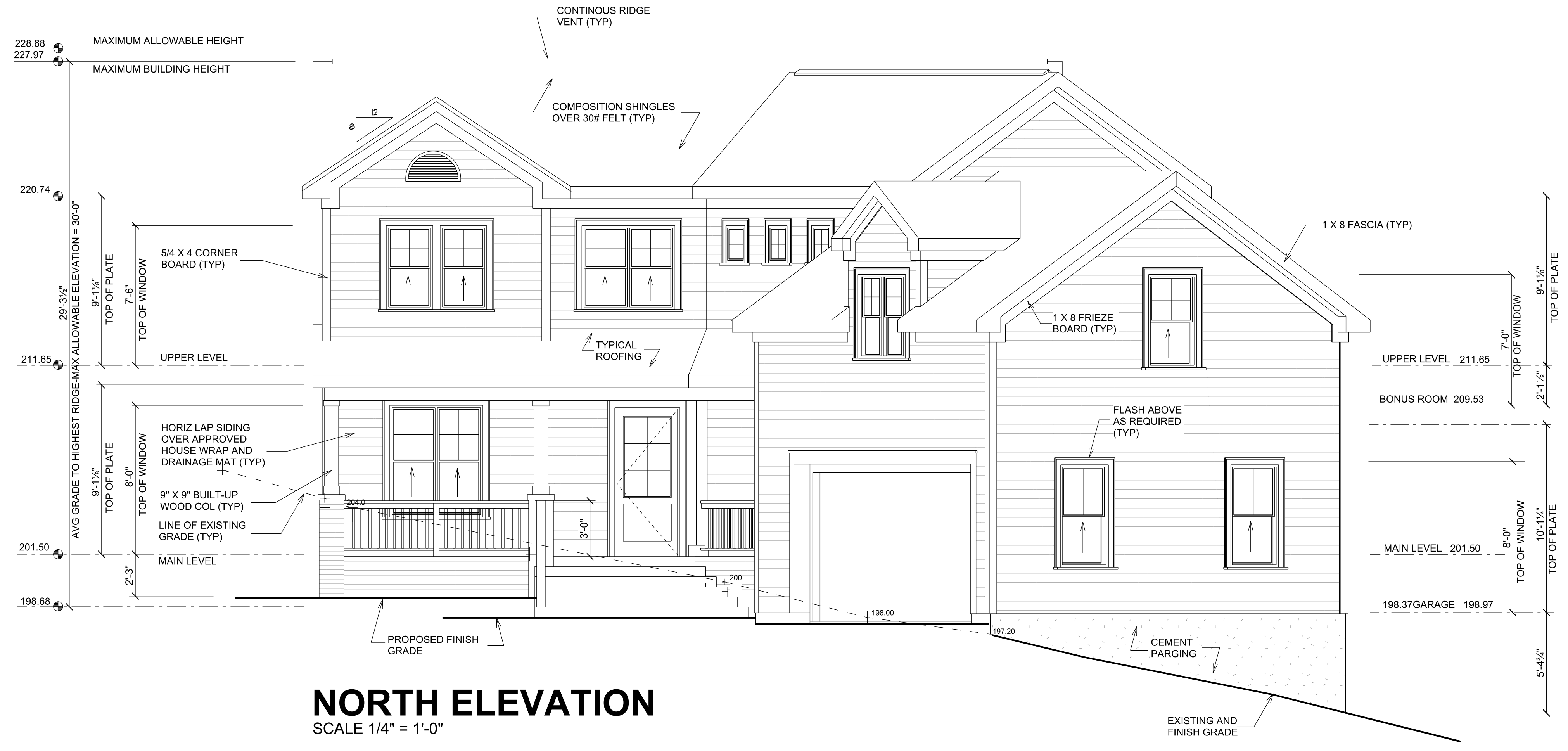
DATE	BY	REVISIONS
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PROPOSED SINGLE FAMILY RESIDENCE FOR:  
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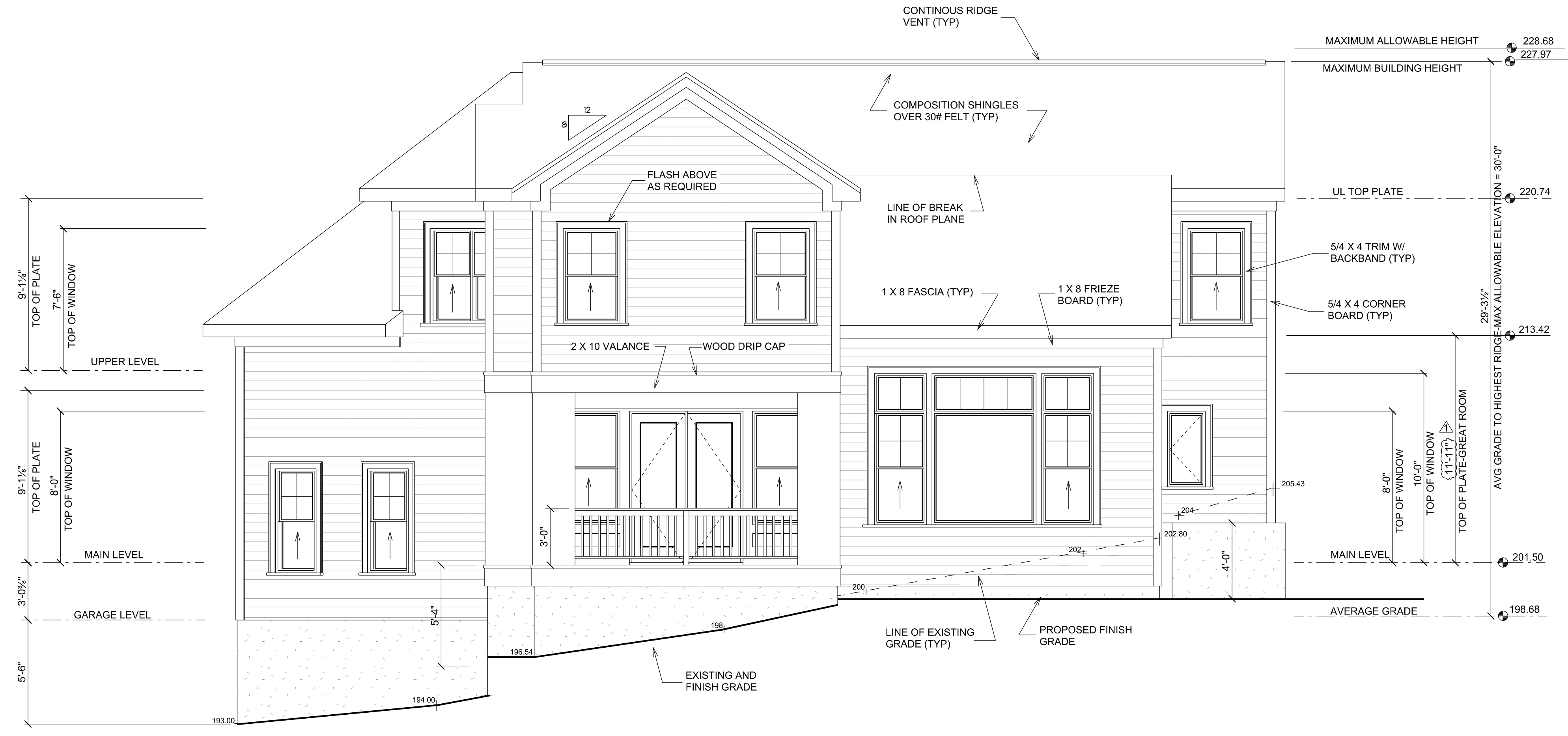
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**NORTH ELEVATION**  
SCALE 1/4" = 1'-0"



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

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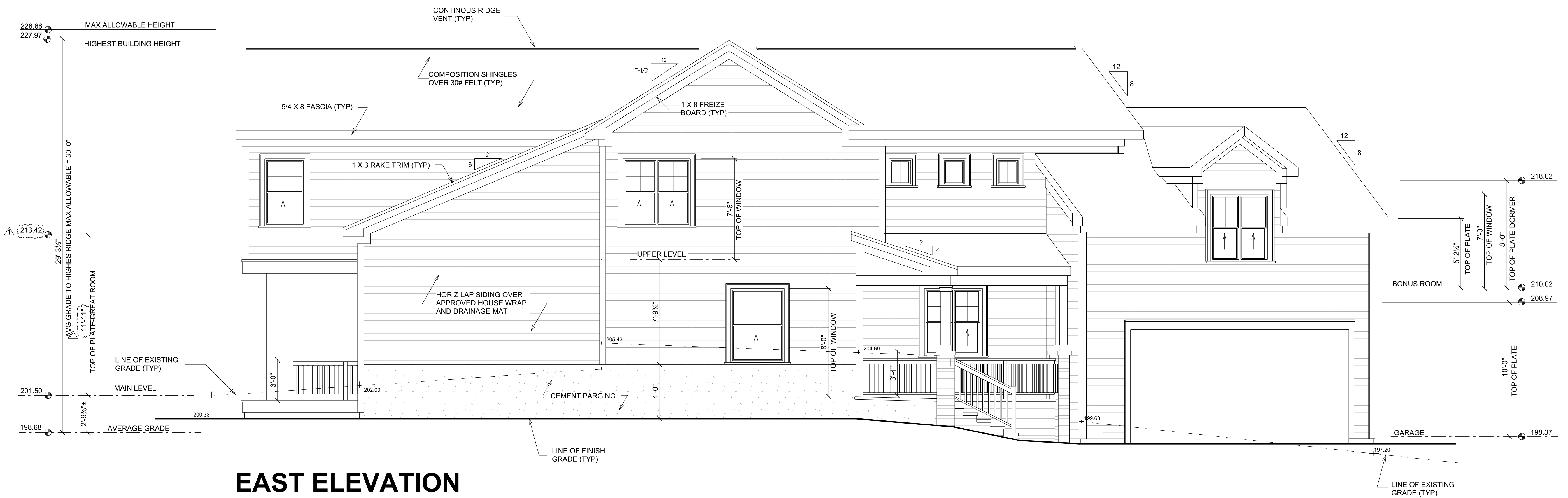
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**WEST ELEVATION**  
SCALE 3/8" 1'-0"



**EAST ELEVATION**  
SCALE 3/8" 1'-0"

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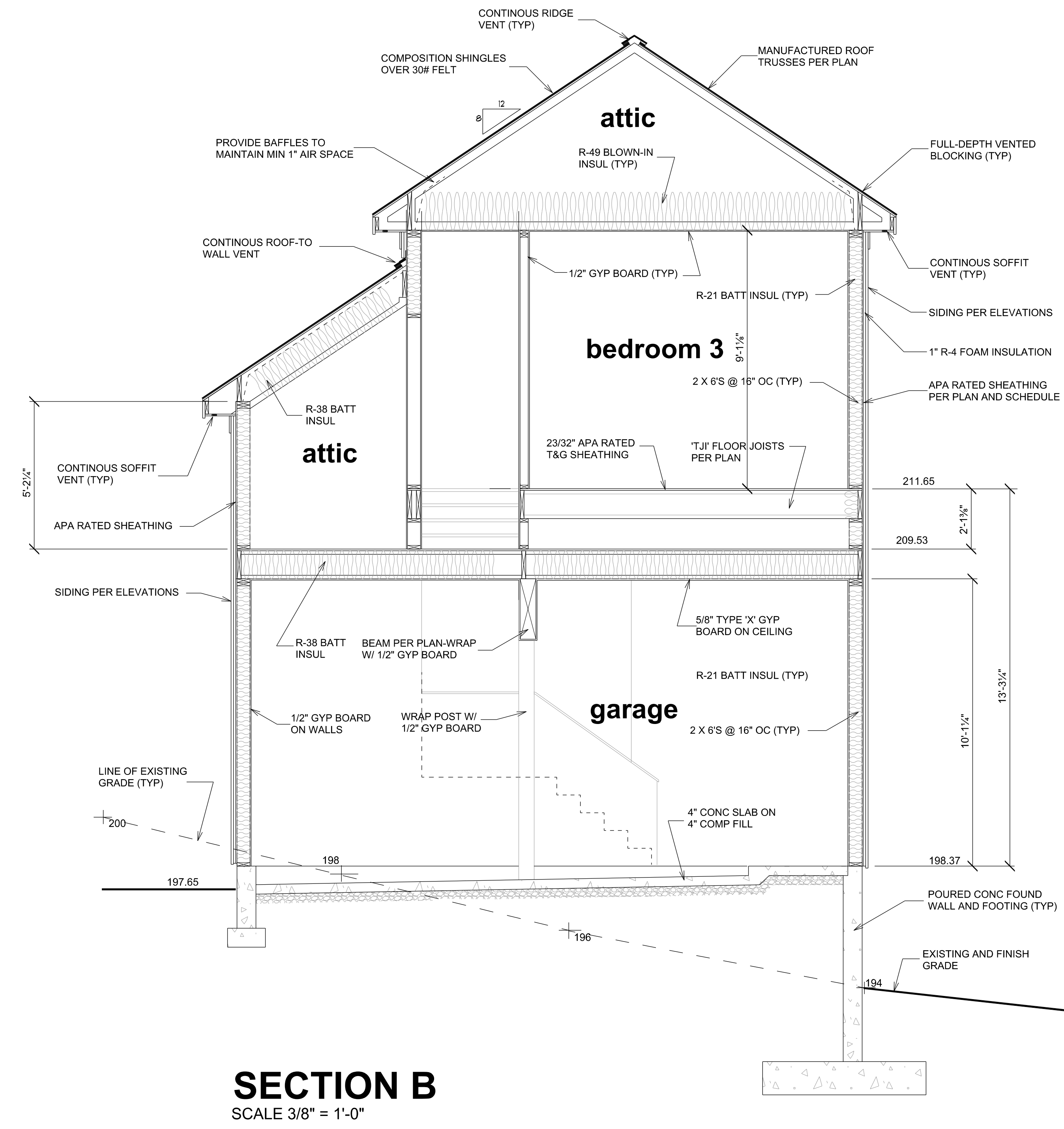
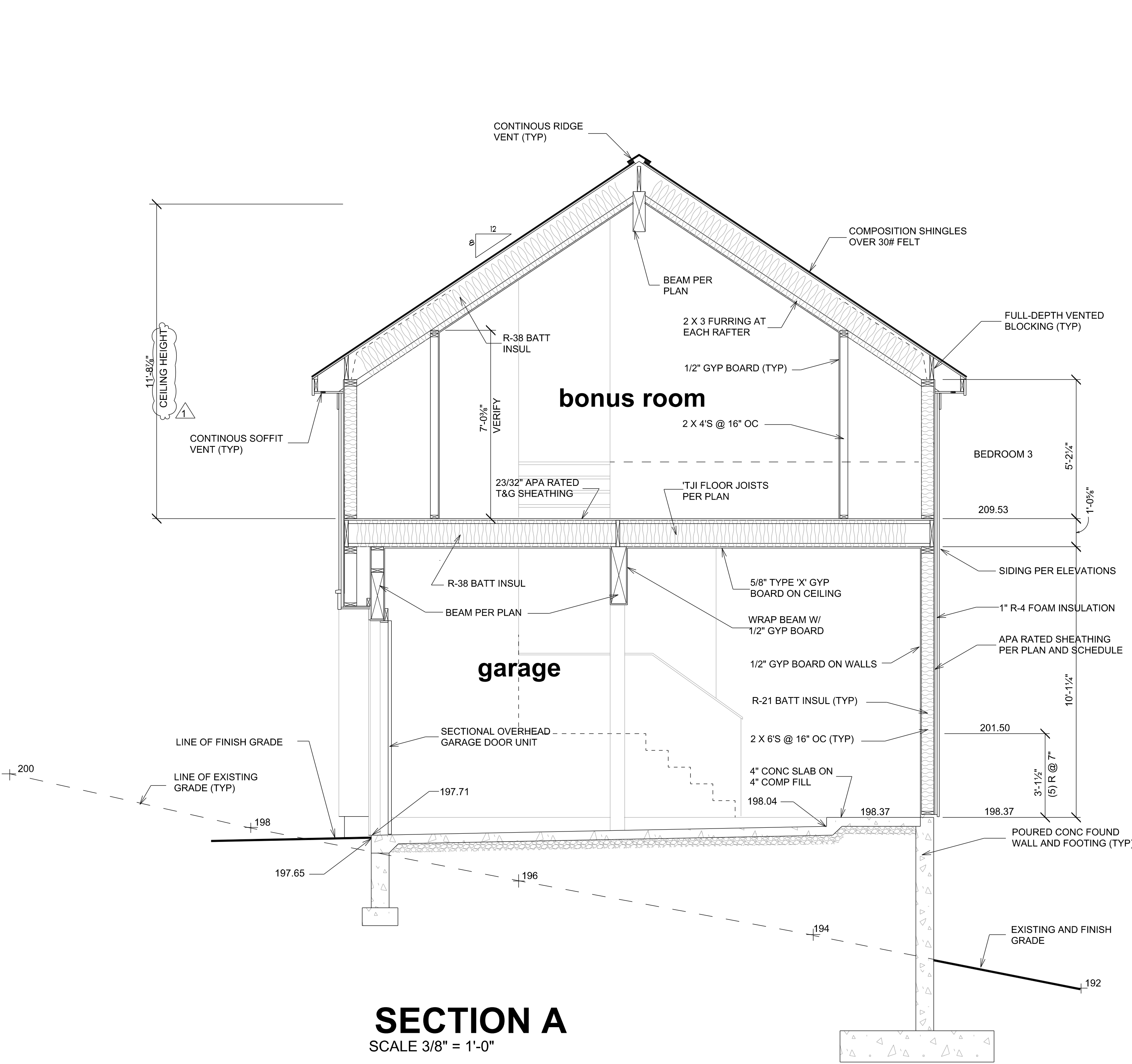
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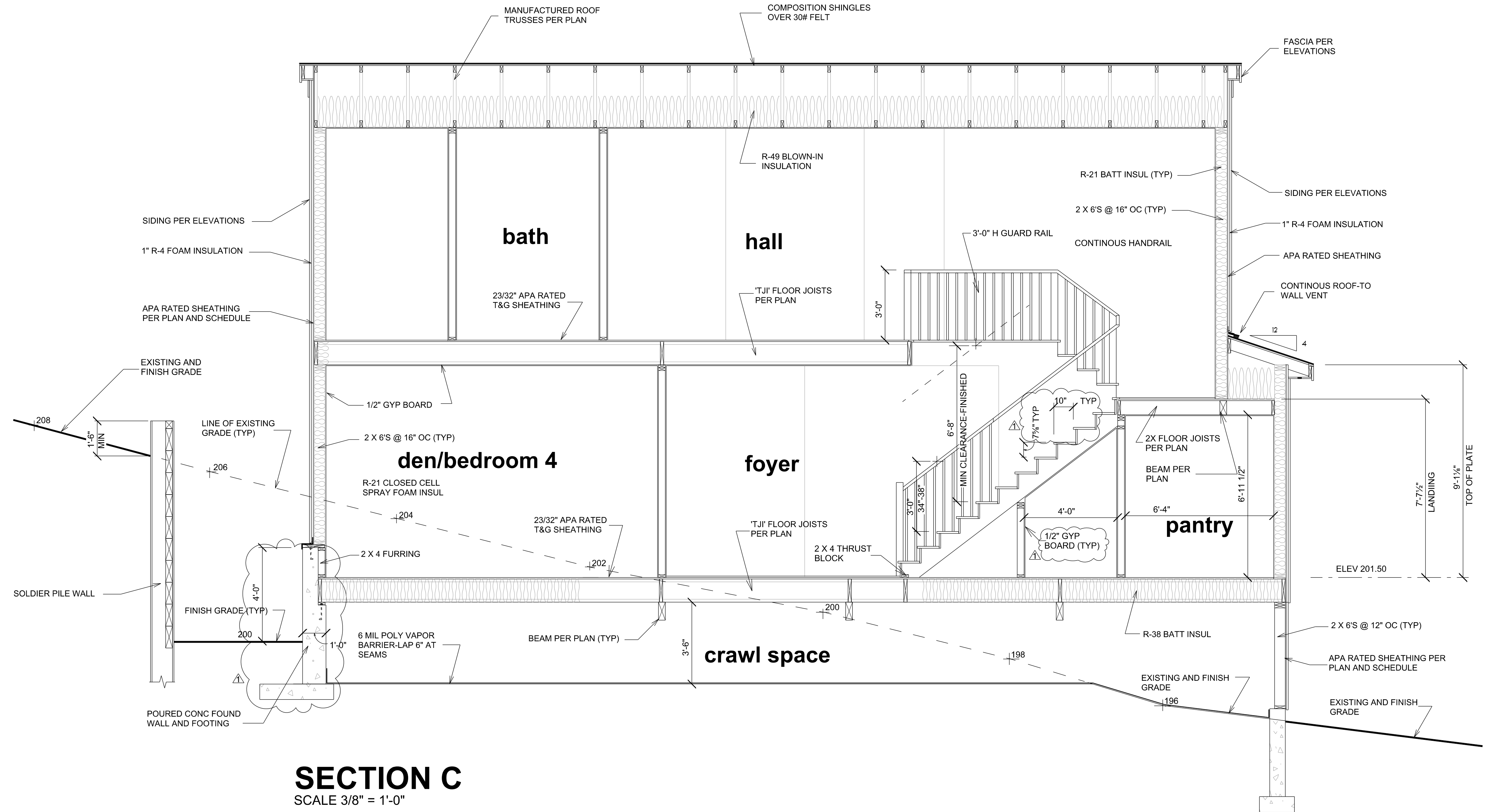
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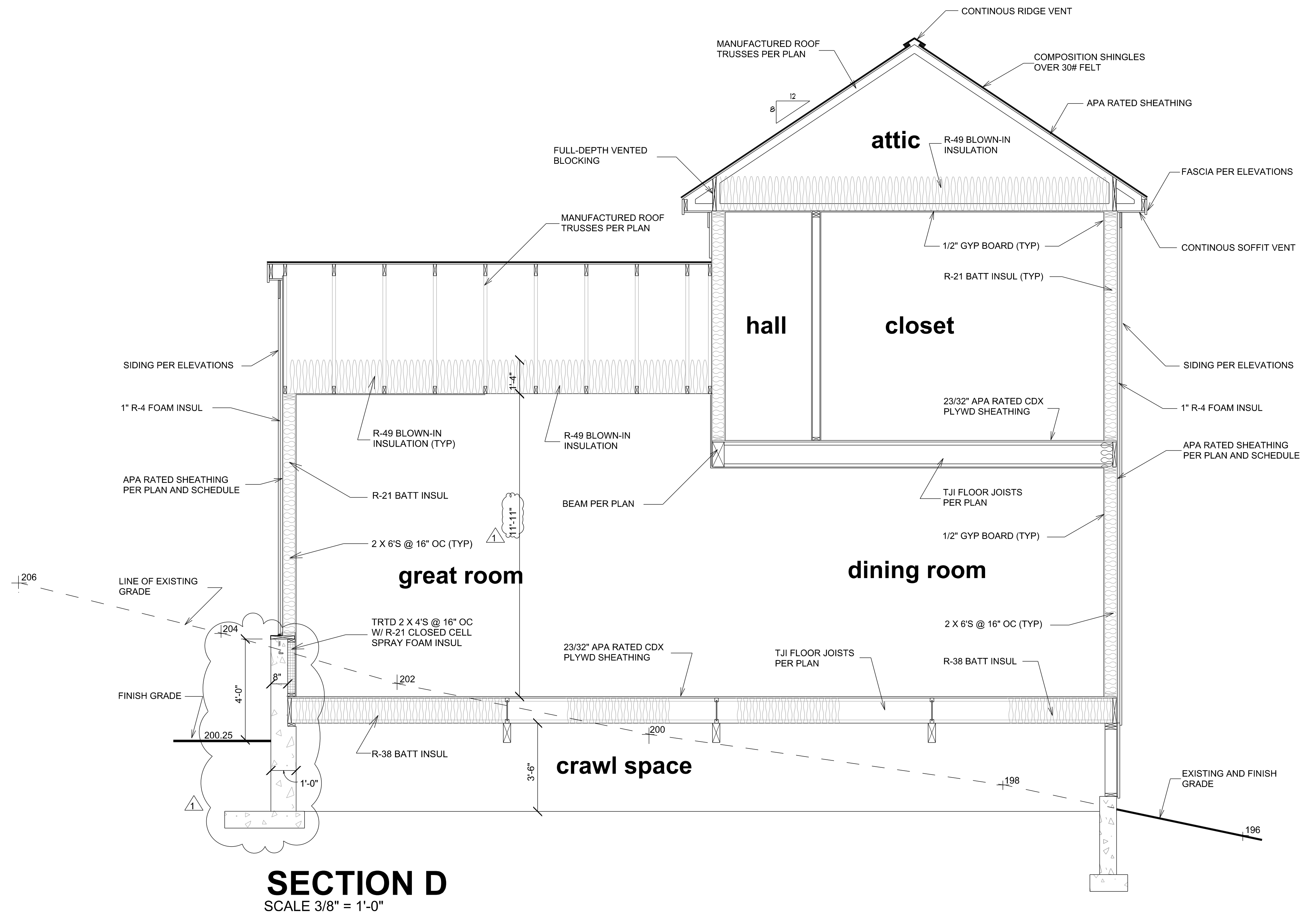
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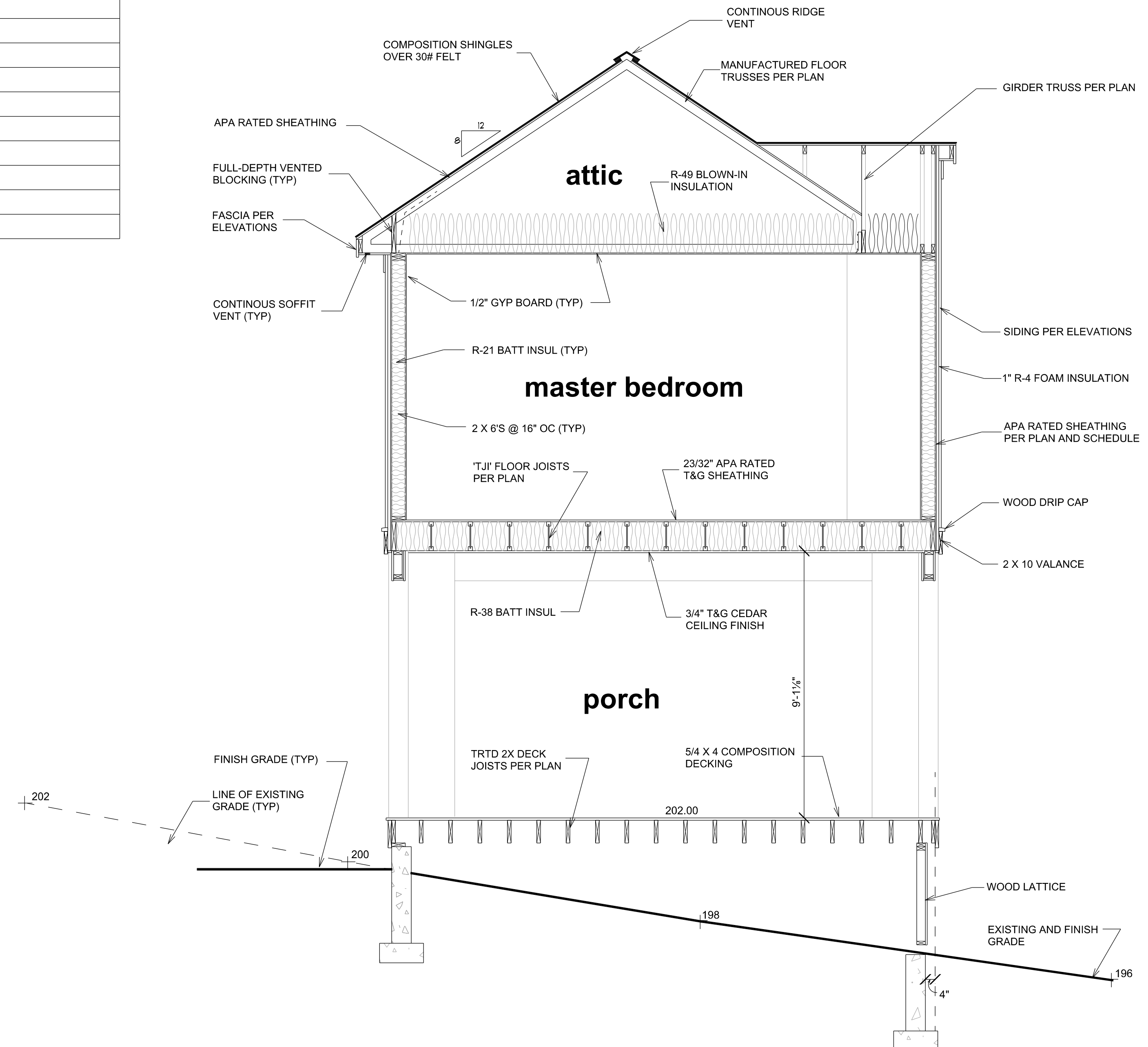
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**GLAZING SCHEDULE:**

ALL GLAZING TO BE NEW, INSULATED, LOW E-366 GLASS. 'U' VALUES SHOWN ARE NFRC CERTIFIED VALUES.  
 ALL DOOR GLAZING AND GLAZING WITHIN 2'-0" OF AN EXTERIOR DOOR SHALL BE TEMPERED SAFETY GLASS.  
 TOTAL CONDITIONED FLOOR AREA = 3203.0 SQ. FT.  
 TOTAL GLAZING AREA = 817.3 SQ. FT. = 19.2 %  
 AREA WEIGHTED AVERAGE 'U' VALUE = 0.280

ROOM	DESCRIPTION	UNIT SIZE	SQUARE FT.	QUANTITY	TOTAL SQ. FT.	'U'	TOTAL 'U'	COMMENTS
FOYER	SIMPSON 5001 INSUL GL 1 LITE FRENCH DOOR	3'-6" X 8'-0"	28.0	1	28.0	0.25	7.0	TEMPERED SG
DEN/BEDROOM 4	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 5'-0"	12.5	2	25.0	0.25	6.3	LOW E-366 GLASS-TEMPERED SAFETY GLASS
	JELD-WEN PREMIUM INSULATED VINYL FIXED WINDOW	5'-0" X 3'-6"	17.5	1	17.5	0.25	4.4	LOW E-366 GLASS
BATHROOM 3	JELD-WEN PREMIUM INSULATED VINYL CASEMENT WINDOW	1'-6" X 4'-0"	6.0	1	6.0	0.25	1.5	LOW E-366 GLASS-TEMPERED SAFETY GLASS
LIVING ROOM	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-9" X 6'-0"	16.5	2	33.0	0.25	8.3	LOW E-366 GLASS
	JELD-WEN PREMIUM INSULATED VINYL FIXED WINDOW	5'-6" X 6'-0"	33.0	1	33.0	0.25	8.3	LOW E-366 GLASS
	JELD-WEN PREMIUM INSULATED VINYL FIXED WINDOW	2'-9" X 2'-0"	5.5	2	11.0	0.25	2.8	LOW E-366 GLASS
	JELD-WEN PREMIUM INSULATED VINYL FIXED WINDOW	5'-6" X 2'-0"	11.0	1	11.0	0.25	2.8	LOW E-366 GLASS
DINING ROOM	SIMPSON 5001 INSUL GL 1 LITE FRENCH DOOR	6'-0" X 8'-0"	48.0	1	48.0	0.25	12.0	LOW E-366 GLASS-DOUBLE HUNG-TEMPERED SAFETY GLASS
	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	3'-0" X 6'-0"	18.0	2	36.0	0.25	9.0	LOW E-366 GLASS-TEMPERED SAFETY GLASS
	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 6'-0"	15.0	2	30.0	0.25	7.5	LOW E-366 GLASS
KITCHEN	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-0" X 4'-6"	9.0	2	9.0	0.25	2.3	LOW E-366 GLASS
	JELD-WEN PREMIUM INSULATED VINYL FIXED WINDOW	4'-0" X 4'-6"	18.0	1	18.0	0.25	4.5	LOW E-366 GLASS
MUD ROOM	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 5'-0"	12.5	2	25.0	0.25	6.3	LOW E-366 GLASS-TEMPERED SAFETY GLASS
STAIRWELL	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	3'-0" X 6'-0"	18.0	1	18.0	0.25	4.5	LOW E-366 GLASS-TEMPERED SAFETY GLASS
HALLWAY	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 4'-6"	11.3	2	22.6	0.25	5.7	LOW E-366 GLASS
	JELD-WEN PREMIUM INSULATED VINYL FIXED WINDOW	2'-0" X 2'-0"	4.0	3	12.0	0.25	2.7	LOW E-366 GLASS
MASTER BEDROOM	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	3'-0" X 5'-0"	15.0	3	45.0	0.25	11.3	LOW E-366 GLASS
	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 5'-0"	12.5	2	25.0	0.25	6.3	LOW E-366 GLASS
MASTER CLOSET	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 4'-0"	10.0	1	10.0	0.25	2.5	LOW E-366 GLASS
MASTER BATH	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 5'-0"	12.5	2	25.0	0.25	6.3	LOW E-366 GLASS-TEMPERED SAFETY GLASS
BEDROOM 2	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 5'-0"	12.5	3	37.5	0.25	9.4	LOW E-366 GLASS
BATHROOM 2	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 4'-6"	11.3	2	22.6	0.25	5.7	LOW E-366 GLASS-TEMPERED SAFETY GLASS
BEDROOM 3	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 5'-0"	12.5	2	25.0	0.25	6.3	LOW E-366 GLASS
BONUS ROOM	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	3'-0" X 5'-0"	15.0	1	15.0	0.25	3.8	LOW E-366 GLASS
	JELD-WEN PREMIUM INSULATED VINYL DOUBLE HUNG WINDOW	2'-6" X 4'-6"	11.3	2	22.6	0.25	5.7	LOW E-366 GLASS
LAUNDRY	VELUX INSULATED ROOF WINDOW	2'-0" X 2'-0"	4.0	1	4.0	0.50	2.0	
					614.7		144.4	

NOTE: 4" OPENING LIMIT CONTROL CONFORMING WITH ASTM-F2090



**SECTION E**  
 SCALE 3/8" 1'-0"

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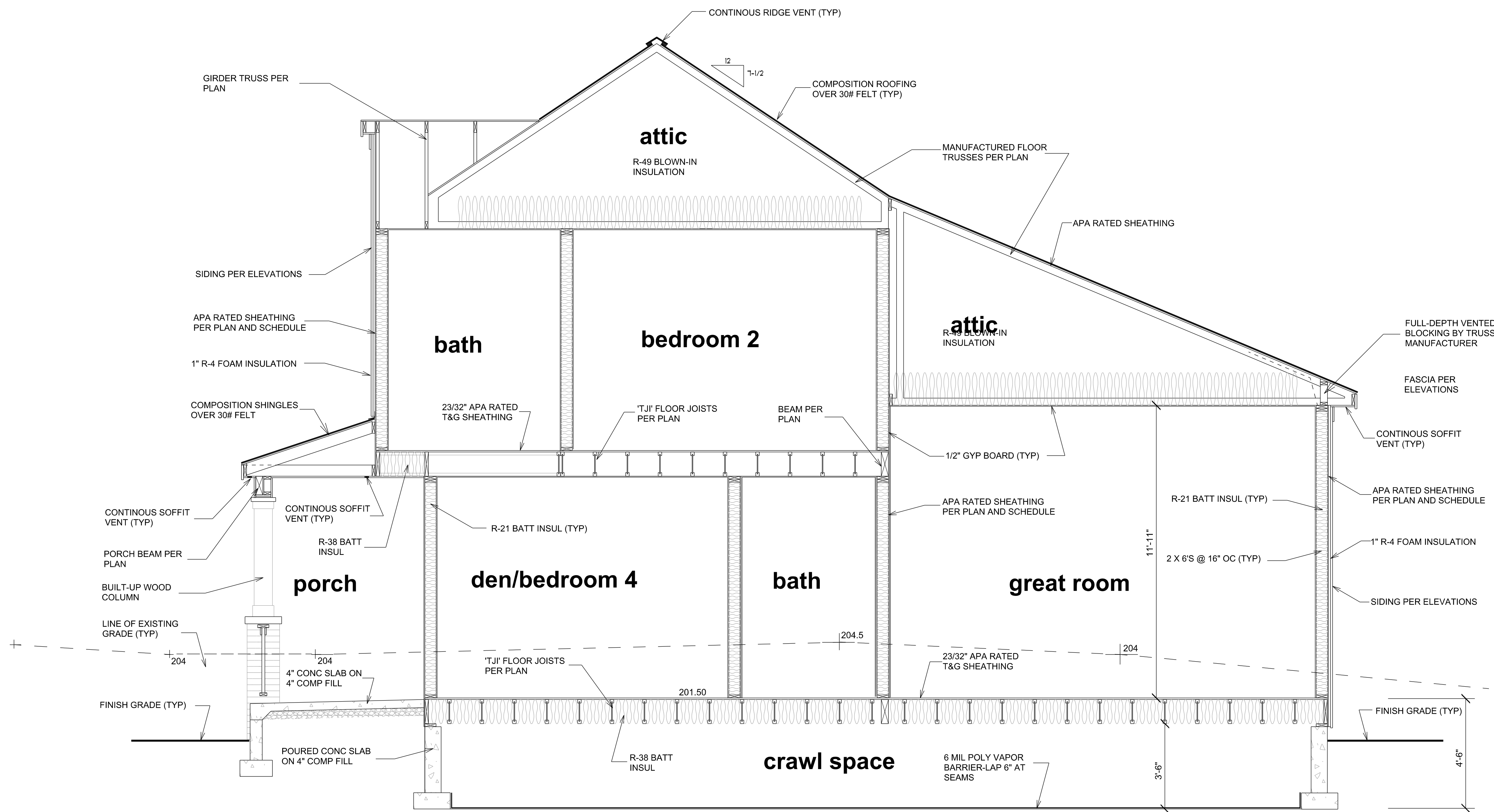
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**SECTION F**  
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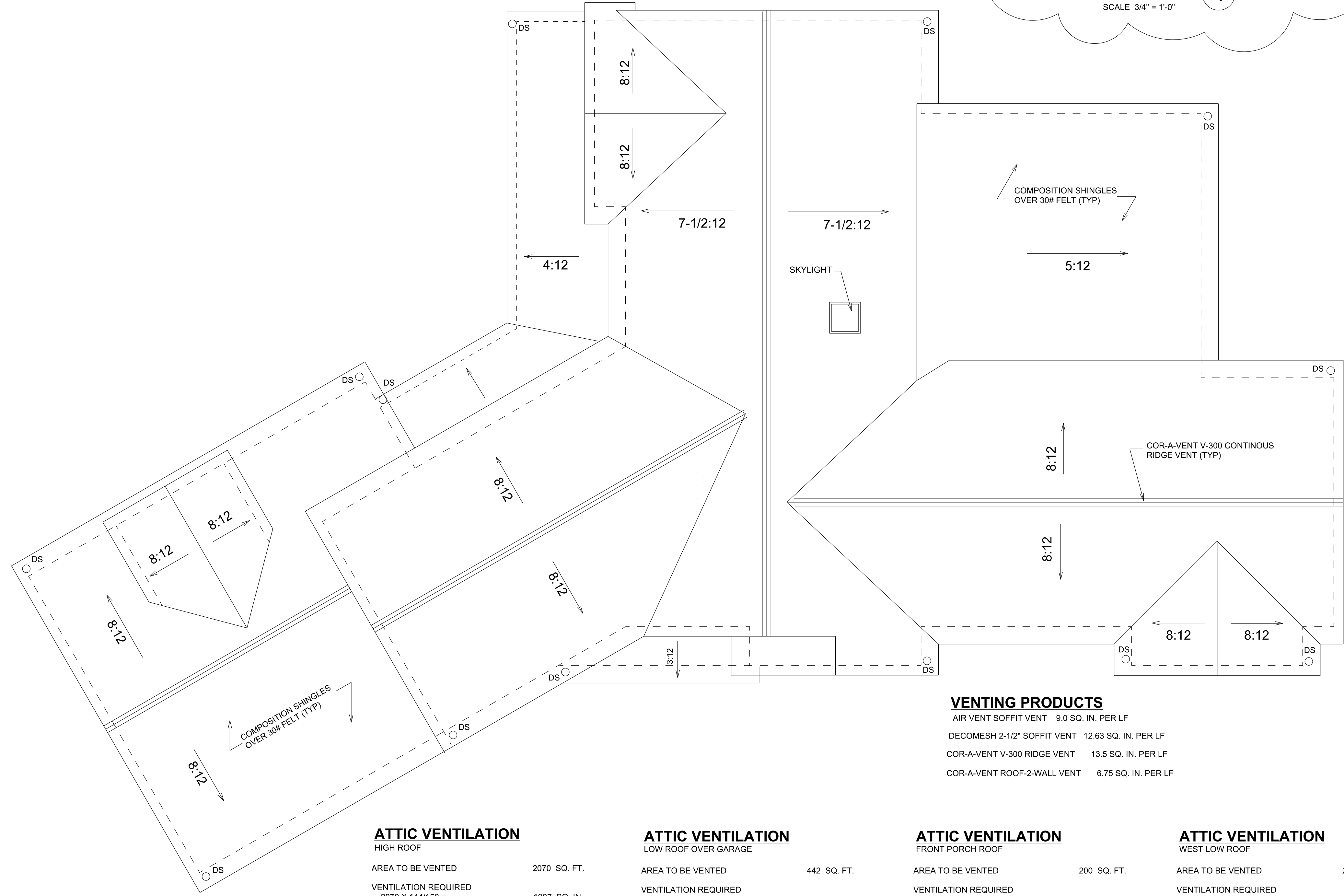
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**11**



**VENTING PRODUCTS**

AIR VENT SOFFIT VENT	9.0 SQ. IN. PER LF
DECOMESH 2-1/2' SOFFIT VENT	12.63 SQ. IN. PER LF
COR-A-VENT V-300 RIDGE VENT	13.5 SQ. IN. PER LF
COR-A-VENT ROOF-2-WALL VENT	6.75 SQ. IN. PER LF

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

**ATTIC VENTILATION**  
HIGH ROOF

AREA TO BE VENTED	2070 SQ. FT.
VENTILATION REQUIRED 2070 X 144/150 =	1987 SQ. IN.
VENTILATION PROVIDED (102) LF CONTINUOUS SOFFIT VENT AT 12.63 SQ. IN. PER FT	1288 SQ. IN.
80 LF CONTINUOUS RIDGE VENT AT 13.5 SQ. IN. PER LF	1377 SQ. IN.
TOTAL VENTILATION PROVIDED	2665 SQ. IN.

**ATTIC VENTILATION**  
LOW ROOF OVER GARAGE

AREA TO BE VENTED	442 SQ. FT.
VENTILATION REQUIRED 442 X 144/150 =	424 SQ. IN.
VENTILATION PROVIDED (46) LF CONTINUOUS SOFFIT VENT AT 9 SQ. IN. PER LF	414 SQ. IN.
(18) LF CONTINUOUS RIDGE VENT AT 13.5 SQ. IN. PER LF	243 SQ. IN.
(7) LF CONTINUOUS ROOF-TO-WALL VENT AT 6.75 SQ. IN. PER LF	47 SQ. IN.
TOTAL VENTILATION PROVIDED	704 SQ. IN.

**ATTIC VENTILATION**  
FRONT PORCH ROOF

AREA TO BE VENTED	200 SQ. FT.
VENTILATION REQUIRED 200 X 144/150 =	192 SQ. IN.
VENTILATION PROVIDED (36) LF CONTINUOUS SOFFIT VENT AT 9 SQ. IN. PER LF	324 SQ. IN.
(36) LF CONTINUOUS ROOF TO WALL VENT AT 6.75 SQ. IN. PER LF	243 SQ. IN.
TOTAL VENTILATION PROVIDED	567 SQ. IN.

**ATTIC VENTILATION**  
WEST LOW ROOF

AREA TO BE VENTED	25 SQ. FT.
VENTILATION REQUIRED 25 X 144/150 =	24 SQ. IN.
VENTILATION PROVIDED (12) LF CONTINUOUS SOFFIT VENT AT 9 SQ. IN. PER LF	108 SQ. IN.
(6) LF CONTINUOUS ROOF TO WALL VENT AT 6.75 SQ. IN. PER LF	41 SQ. IN.
TOTAL VENTILATION PROVIDED	149 SQ. IN.

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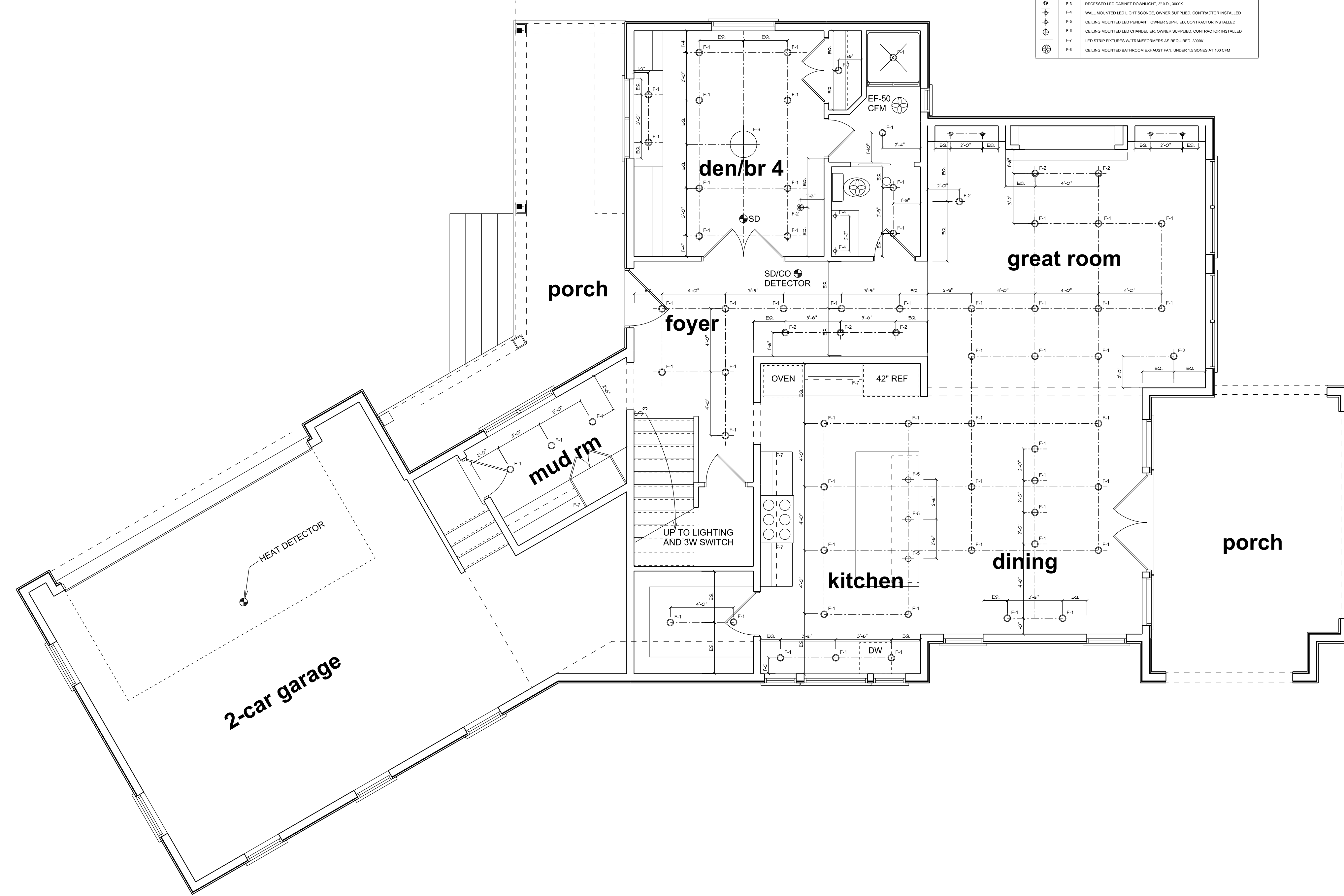
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**12**



FIXTURE LEGEND		
SYMBOL	CODE	DESCRIPTION
	F-1	RECESSED LED DOWNLIGHT, 4" I.D., 3000K
	F-2	RECESSED LED ADJUSTABLE DOWNLIGHT, 4" I.D., 3000K
	F-3	RECESSED LED CABINET DOWNLIGHT, 2" I.D., 3000K
	F-4	WALL MOUNTED LED LIGHT SCONCE, OWNER SUPPLIED, CONTRACTOR INSTALLED
	F-5	CEILING MOUNTED LED RECESSED, OWNER SUPPLIED, CONTRACTOR INSTALLED
	F-6	CEILING MOUNTED LED TRACK/LINEAR, OWNER SUPPLIED, CONTRACTOR INSTALLED
	F-7	LED STRIP FIXTURES W/ TRANSFORMERS AS REQUIRED, 3000K
	F-8	CEILING MOUNTED BATHROOM EXHAUST FAN UNDER 1.0 ROOMS AT 100 CFM

**MAIN LEVEL REFLECTED CEILING PLAN**  
SCALE 1/4" = 1'-0"

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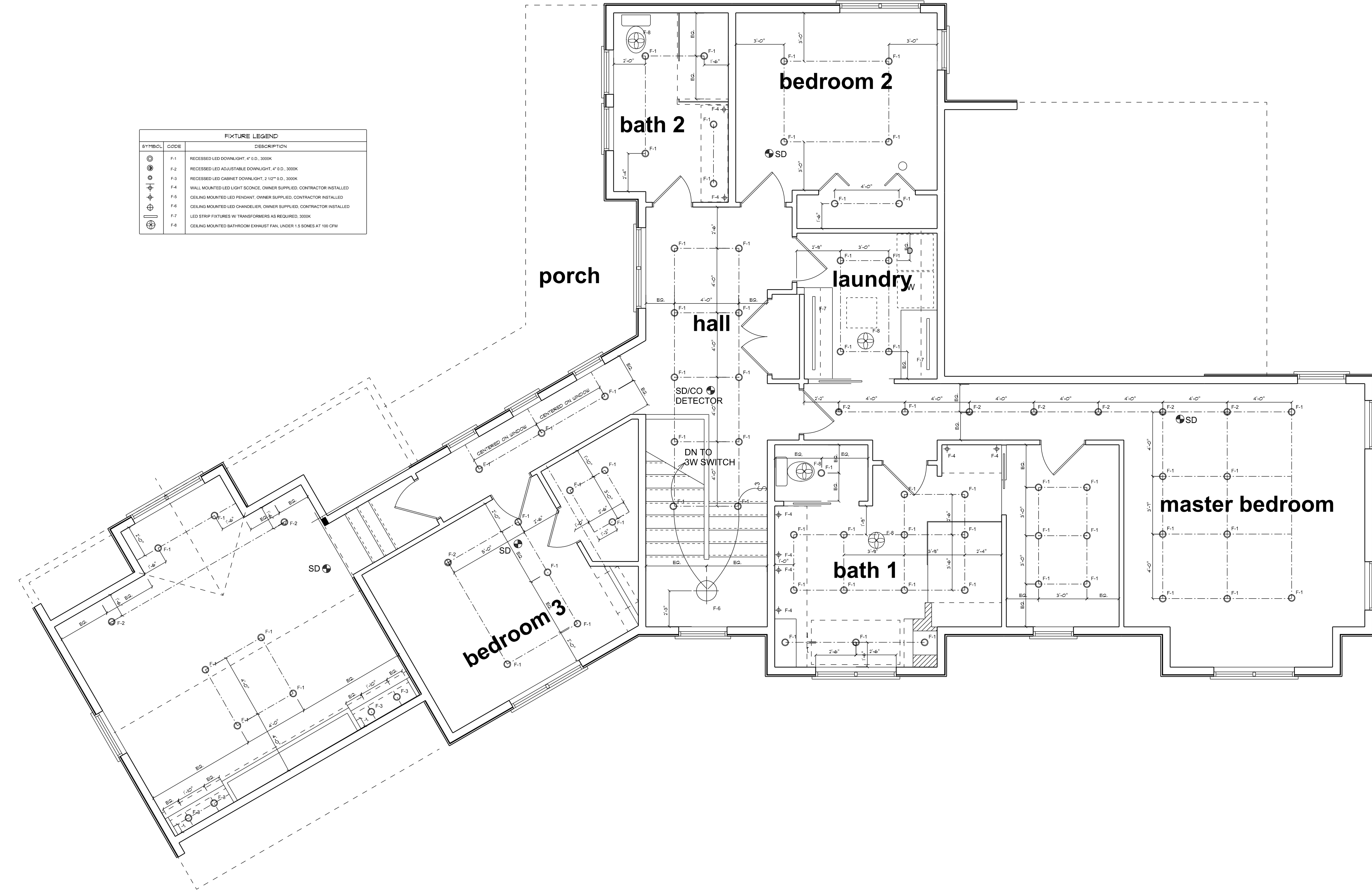
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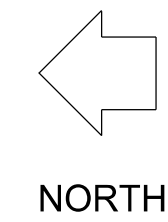
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**UPPER LEVEL REFLECTED CEILING PLAN**  
SCALE 1/4" = 1'-0"



NORTH

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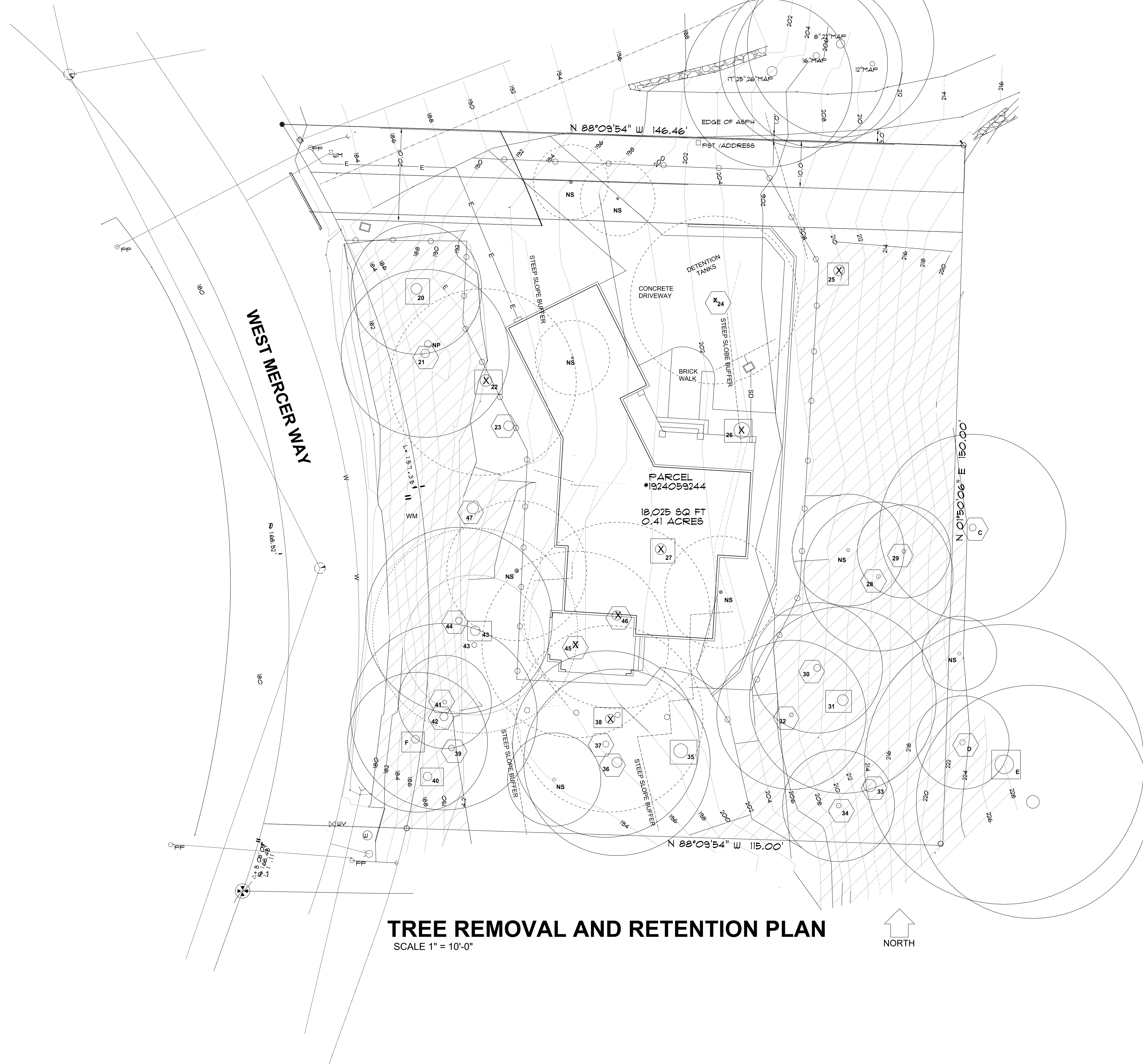
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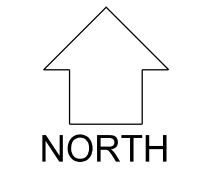
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**TREE REMOVAL AND RETENTION PLAN**  
SCALE 1" = 10'-0"



- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- CULVERT PIPE
- DITCH (FLOWLINE)
- FIRE HYDRANT
- GUY ANCHOR
- CATCH BASIN (TYPE 1)
- MONUMENT IN CASE (FOUND)
- POST
- POWER (OVERHEAD)
- POWER POLE
- IRON PIPE (FOUND)
- RESUR # CAP (SET)
- ROCKERY
- SEWER LINE
- SEWER MANHOLE
- STORM DRAIN LINE
- TREE (AS NOTED)
- WATER M4
- WATER LINE
- WATER METER
- WATER VALVE
- STEEP SLOPE AREA

**CROSS-HATCHED AREAS  
DESIGNATE STEEP SLOPE  
AREAS**

- LIMITS OF CLEARING, GRADING AND EXCAVATION
- DRIP LINES OF TREES TO BE REMOVED
- LINE OF STEEP SLOPE BUFFERS
- W — WATER SERVICE
- SD — STORMWATER DRAIN SYSTEM
- SS — SANITARY SEWER
- E — UNDERGROUND ELECTRICAL SERVICE
- WATER METER
- EXCEPTIONAL TREES WITH DIAMETER OF 24" OR MORE
- EXCEPTIONAL TREES WITH DIAMETER OF LESS THAN 24"

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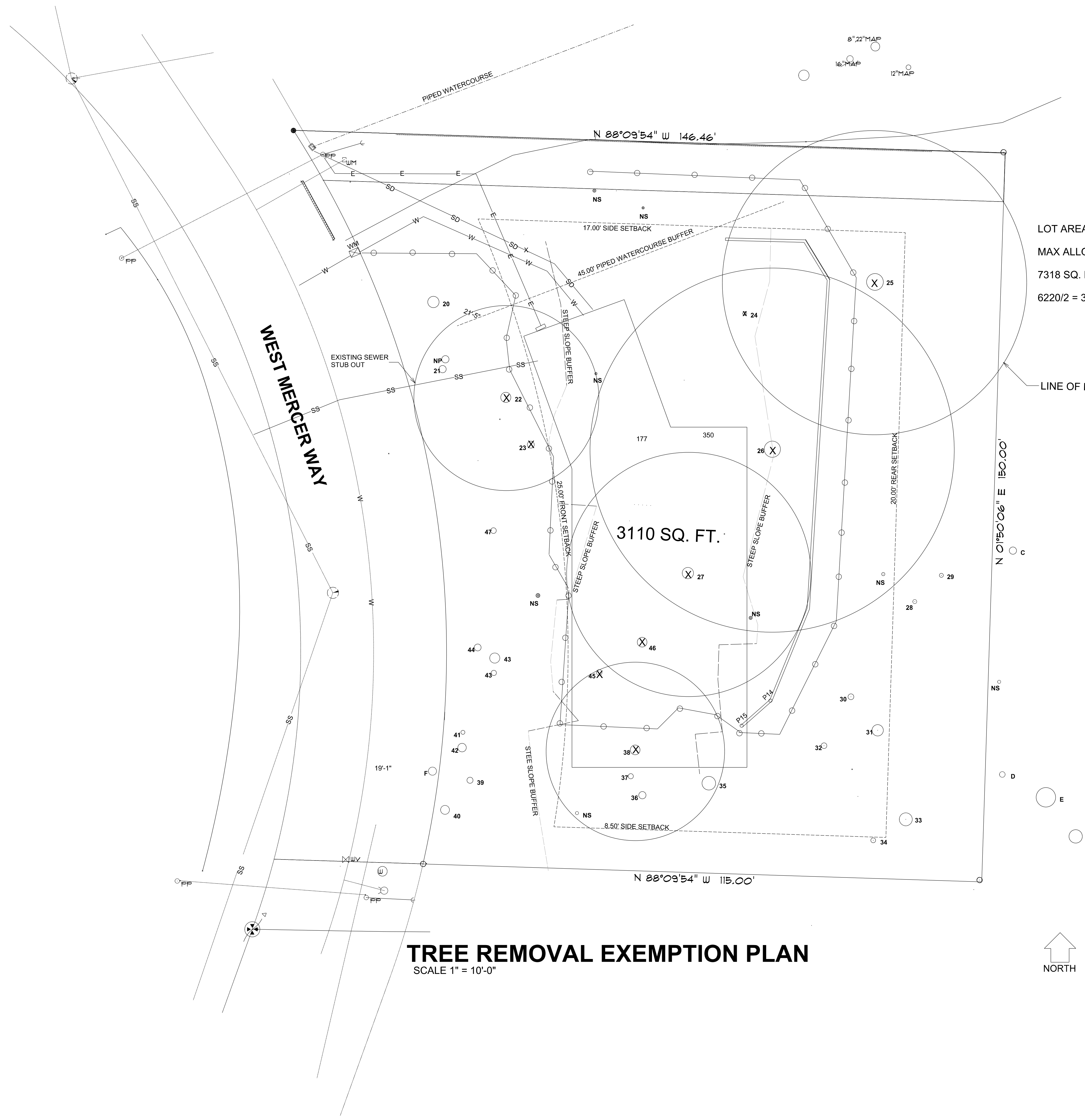
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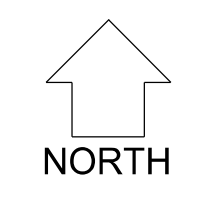


LOT AREA 18,295 SQ. FT.  
 MAX ALLOWABLE GROSS SQUARE FOOTAGE = 7318 SQ. FT. (40 %)  
 7318 SQ. FT. X 85% = 6220 SQ. FT.  
 6220/2 = 3110 SQ. FT. PER FLOOR

**LEGEND**

- ○ TREE PROTECTION FENCING AND LIMITS OF CLEARING, GRADING AND EXCAVATION
- W — WATER SERVICE
- SD — STORMWATER DRAIN SYSTEM
- SS — SANITARY SEWER
- E — UNDERGROUND ELECTRICAL SERVICE
- ⊠ WATER METER

**TREE REMOVAL EXEMPTION PLAN**  
 SCALE 1" = 10'-0"



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STRUCTURAL NOTES

- CODE: IRC, 2018 EDITION.
- LOADS:  
ROOF L.L.: 25 PSF (SNOW)  
FLOOR L.L.: 40 PSF  
DECK L.L.: 60 PSF  
SEISMIC: SITE CLASS = D  
S<sub>s</sub> = 1.439g  
S<sub>1</sub> = 0.552g  
S<sub>0.5</sub> = 0.599g  
S<sub>D1</sub> = 0.552g  
R = 6.5 (WOOD SHEAR WALL)  
  
WIND: 110 M.P.H. (EXPOSURE "B"); 1<sub>w</sub> = 1.0  
  
SOIL BEARING: 1500 PSF PER SOIL'S REPORT BY NELSON GEOTECHNICAL ASSOCIATES, INC. SEPTEMBER 27, 2021, MEMORANDUM DATE 8-6-21 AND LETTER DATE 12-17-21. BOTTOM OF ALL FOUNDATION SHALL BE MINIMUM OF 18" BELOW GRADE.
- CONCRETE:  
F'<sub>c</sub> = 2,500 PSI  
F'<sub>c</sub> = 3,000 PSI AT RETAINING WALLS AND RETAINING WALL FOOTINGS.  
  
MIXING AND PLACING OF ALL CONCRETE AND SELECTION OF MATERIALS SHALL BE IN ACCORDANCE WITH THE ACI CODE 318. PROPORTIONING OF AGGREGATE TO CEMENT SHALL BE SUCH AS TO PRODUCE A DENSE WORKABLE MIX WITH 4" MAXIMUM SLUMP, WHICH CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER. 3/4" CHAMFER ALL EXPOSED EDGES, UNLESS INDICATED OTHERWISE ON ARCHITECTURAL DRAWINGS. AIR ENTRAIN ALL CONCRETE EXPOSED TO WEATHER WITH 3% TO 6% AIR BY VOLUME.
- REINFORCING: DEFORMED BARS GRADE 40 (f<sub>y</sub>=40,000 PSI) AND GRADE 60 (f<sub>y</sub>=60,000 PSI) AT RETAINING WALLS AND RETAINING WALL FOOTINGS. LAP ALL CONTINUOUS REINFORCING BARS 48 BAR DIAMETERS 2'-0" MINIMUM, UNLESS NOTED OTHERWISE. PROVIDE CORNER BARS (2'-0" BEND) FOR ALL HORIZONTAL REINFORCING BARS IN ACCORDANCE WITH THE "ACI DETAILING MANUAL".  
  
CONCRETE COVER TO MAIN REINFORCEMENT SHALL BE:  
FORMED SURFACES -  
WEATHER FACE = 1 1/2"  
EARTH FACE = 2"  
INTERIOR FACE = 3/4"  
FOOTINGS CAST AGAINST EARTH = 3"
- METALS: ALL MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A-36 (f<sub>y</sub>=36,000 PSI) UNLESS NOTED OTHERWISE. MACHINE BOLTS TO BE A-307. ANCHOR BOLTS INTO CONCRETE SHALL BE PLACED ACCURATELY ACCORDING TO SIZE AND LOCATIONS SHOWN AND PROVIDED FOR BY OTHERS. ALL EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ OR APPROVED EQUAL. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION.
- CARPENTRY:  
ALL NAILS TO BE COMMON NAILS. LUMBER GRADES:  
4X BEAMS = D.F. #1  
6X BEAMS = D.F. #1  
POSTS = D.F. #1  
BLOCKING = D.F. #2  
2X STUDS = D.F. #2  
LEDGERS = D.F. #2  
  
ALL LUMBER NOT NOTED ABOVE TO BE D.F. #2 OR BETTER. ALL LUMBER SHALL CONFORM TO "WWPA GRADING RULES FOR WESTERN LUMBER-LATEST EDITION" AND EACH PIECE SHALL BEAR A VALID GRADE STAMP THAT IS NOT TO BE REMOVED FROM THE STRUCTURAL MEMBER. BOLT HEADS AND NUTS BEARINGS AGAINST WOOD SHALL BE PROVIDED WITH STANDARD CUT WASHERS. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
- PLYWOOD:  
ROOF SHEATHING = 1/2" CDX PLYWOOD WITH EXTERIOR GLUE, INDEX 32/16 OR 24/0.  
FLOOR SHEATHING = 3/4" T.&G. PLYWOOD, INDEX 48/24.  
WALL SHEATHING = 1/2" CDX PLYWOOD WITH EXTERIOR GLUE, ALL SHEATHING SHALL CONFORM TO U.S. PRODUCT STANDARD. NAILING SHALL BE AS INDICATED ON PLAN.
- GLU-LAMINATED BEAMS:  
GLU-LAMINATED WOOD BEAMS, SHALL BE KILN DRIED, INDUSTRIAL APPEARANCE, STRESS GRADE COMBINATION 24F-V4 (f<sub>b</sub>=2400 PSI, f<sub>v</sub>=165 PSI) AT SIMPLE SPAN BEAM AND STRESS GRADE COMBINATION 24F-V8 (f<sub>b</sub>=2400 psi, f<sub>v</sub>=165 psi) AT CANTILEVERED BEAMS. PROVIDE TOP TENSION LAMS AT CANTILEVERS.
- TRUSSES:  
TRUSSES ARE AS NOTED ON THE PLANS AND FABRICATED IN ACCORDANCE WITH 2018 IRC. EACH TRUSS SHALL BEAR THE QUALITY CONTROL STAMP, MANUFACTURER PLANTS NAME/ADDRESS, DESIGN LOAD AND MAXIMUM SPACING. TRUSS FABRICATOR TO PROVIDE ALL REQUIRED BRIDGING BLOCKING, BOTH PERMANENT AND ERECTION. DESIGN CRITERIA SHALL MEET OR EXCEED THE FOLLOWING:

- ROOF TRUSS LOADING:  
LIVE LOAD = 25 PSF (SNOW)  
DEAD LOAD = 15 PSF  
TOTAL LOAD DEFLECTION = L/240  
LIVE LOAD DEFLECTION = L/360
- FLOOR TRUSS LOADING:  
LIVE LOAD = 40 PSF FOR FLOORS & 60 PSF FOR DECKS  
DEAD LOAD = 15 PSF  
TOTAL LOAD DEFLECTION = L/360  
LIVE LOAD DEFLECTION = L/480
- SHOP DRAWINGS: SUBMIT 3-SETS OF SHOP DRAWINGS TO ENGINEER FOR REVIEW FOR DESIGN INTENT ONLY PRIOR TO FABRICATION AND AFTER CONTRACTOR REVIEW FOR ROOF AND FLOOR TRUSSES. ALL DIMENSIONS AND QUANTITIES MUST BE VERIFIED AND APPROVED BY THE CONTRACTOR AND IS NOT RESPONSIBILITY OF THE ENGINEER OF RECORD.
  - SPECIAL INSPECTION: PROVIDE SPECIAL INSPECTION PER 2018 IBC. ALL INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT, ARCHITECT, ENGINEER AND OWNER FOR REVIEW.  
  
FOLLOWING STRUCTURAL OBSERVATIONS ARE REQUIRED FOR:  
A. SHEAR WALL, DIAPHRAGM NAILING, STRAPS AND HOLDOWNS.  
B. EXPANSION AND EPOXY GROUT ANCHORS.
  - SPECIAL CONDITION: DURING CONSTRUCTION THE CONTRACTOR SHALL COORDINATE ALL TRADES AND VERIFY DIMENSIONS IN FIELD. OBTAIN ARCHITECT'S APPROVAL PRIOR TO ALL FIELD CHANGES. SEE ARCHITECTURAL DRAWINGS FOR ALL FLOOR OPENING DIMENSIONS AND LOCATIONS, FLOOR FINISHES, ETC. CONTRACTOR SHALL PROVIDE PERMANENT AND TEMPORARY SHORING AS REQUIRED.

NAILING SCHEDULE TABLE 2304.9.1

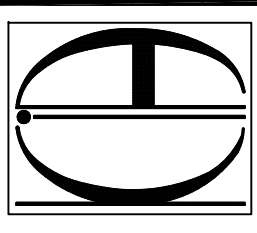
(UNLESS NOTED OTHERWISE ON DRAWINGS)

CONNECTION	NAILS	
1 JOIST TO SILL OR GIRDER: TOENAIL	3 - 8d COMMON (2-1/2" X 0.131"),	3 - 3" X 0.131" NAILS
2 BRIDGING TO JOIST: TOENAIL EACH END	2 - 8d COMMON (2-1/2" X 0.131"),	2 - 3" X 0.131" NAILS
3 1" X 6" (25mm X 152mm) SUBFLOOR OR LESS TO EACH JOIST: FACE NAIL		2 - 8d COMMON (2-1/2" X 0.131")
4 WIDER THAN 1" X 6" (25mm X 152mm) SUBFLOOR TO EACH JOIST: FACE NAIL		3 - 8d COMMON (2-1/2" X 0.131")
5 2" (51mm) SUBFLOOR TO JOIST OR GIRDER: BLIND AND FACE NAIL		2 - 16d COMMON (3-1/2" X 0.162")
6 SOLE PLATE TO JOIST OR BLOCKING: TYPICAL FACE NAIL	16d (3-1/2" X 0.131") AT 16" O.C.,	3" X 0.131" NAILS AT 8" O.C.
SOLE PLATE TO JOIST OR BLOCKING: AT BRACED WALL PANELS	3 - 16d (3-1/2" X 0.131") AT 16" O.C.,	4 - 3" X 0.131" NAILS AT 16" O.C.
7 TOP PLATE TO STUD: END NAIL	2 - 16d COMMON (3-1/2" X 0.162"),	3 - 3" X 0.131" NAILS
8 STUD TO SOLE PLATE: TOENAIL	4 - 8d COMMON (2-1/2" X 0.131"),	3 - 3" X 0.131" NAILS
STUD TO SOLE PLATE: END NAIL	2 - 20d COMMON (3-1/2" X 0.162"),	3 - 3" X 0.131" NAILS
9 DOUBLE STUDS: FACE NAIL	16d (3-1/2" X 0.131") AT 16" O.C.,	3" X 0.131" NAILS AT 8" O.C.
10 DOUBLE TOP PLATES: TYPICAL FACE NAIL	16d (3-1/2" X 0.135") AT 16" O.C.,	3" X 0.131" NAILS AT 12" O.C.
DOUBLE TOP PLATES: LAP SPLICE	8 - 16d COMMON (3-1/2" X 0.135"),	12 - 3" X 0.131" NAILS
11 BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE: TOENAIL	3 - 8d COMMON (2-1/2" X 0.131"),	3 - 3" X 0.131" NAILS
12 RIM JOIST TO TOP PLATE: TOENAIL	8d (2-1/2" X 0.131") AT 6" O.C.,	3" X 0.131" NAILS AT 6" O.C.
13 TOP PLATES, LAPS AND INTERSECTIONS: FACE NAIL	2 - 16d COMMON (3-1/2" X 0.162"),	3 - 3" X 0.131" NAILS
14 CONTINUOUS HEADER, TWO PIECES	16d COMMON (3-1/2" X 0.162") AT 16" O.C. ALONG EDGE	
15 CEILING JOISTS TO PLATE: TOENAIL	3 - 8d COMMON (2-1/2" X 0.131),	5 - 3" X 0.131 NAILS
16 CONTINUOUS HEADER TO STUD: TOENAIL	4 - 8d COMMON (2-1/2" X 0.131")	
17 CEILING JOISTS, LAPS OVER PARTITIONS: FACE NAIL	3 - 16d (3-1/2" X 0.162") MIN., TABLE 2308.10.4.1	
(SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	4 - 3" X 0.131" NAILS, 4 - 3" 14 GAGE STAPLES	
18 CEILING JOISTS TO PARALLEL RAFTER: FACE NAIL	3 - 16d (3-1/2" X 0.162") MIN., TABLE 2308.10.4.1	
(SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	4 - 3" X 0.131" NAILS	
19 RAFTER TO PLATE: TOENAIL	3 - 8d COMMON (2-1/2" X 0.131"),	3 - 3" X 0.131" NAILS
(SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)		
20 1" BRACE TO EACH STUD AND PLATE: FACE NAIL	2 - 8d COMMON (2-1/2" X 0.131"),	2 - 3" X 0.131" NAILS
21 1" X 8" SHEATHING OR LESS TO EACH BEARING: FACE NAIL	2 - 8d COMMON (2-1/2" X 0.131")	
22 WIDER THAN 1" X 8" SHEATHING TO EACH BEARING: FACE NAIL	3 - 8d COMMON (2-1/2" X 0.131")	
23 BUILT-UP CORNER STUDS	16d (3-1/2" X 0.162") AT 24" O.C.,	3" X 0.131" NAILS AT 16" O.C.
24 BUILT-UP GIRDER AND BEAMS	20d COMMON (4" X 0.192") AT 32" O.C.,	3" X 0.131" NAILS AT 24" O.C.
0	2 - 20d COMMON (4" X 0.192"),	3 - 3" X 0.131" NAILS
0	FACE NAIL AT ENDS AND AT EACH END	
25 2" PLANKS	2 - 16d COMMON (3-1/2" X 0.162") AT EACH BEARING	
26 COLLAR TIE TO RAFTER: FACE NAIL	3 - 10d COMMON (3" X 0.148"),	4 - 3" X 0.131" NAILS
27 JACK RAFTER TO HIP: TOENAIL	3 - 10d COMMON (3" X 0.148"),	4 - 3" X 0.131" NAILS
JACK RAFTER TO HIP: FACE NAIL	2 - 16d COMMON (3-1/2" X 0.162"),	3 - 3" X 0.131" NAILS
28 ROOF RAFTER TO 2-BY RIDGE BEAM: TOENAIL	3 - 16d COMMON (3" X 0.162"),	3 - 3" X 0.131" NAILS
ROOF RAFTER TO 2-BY RIDGE BEAM: FACE NAIL	2 - 16d COMMON (3-1/2" X 0.162"),	3 - 3" X 0.131" NAILS
29 JOIST TO BAND JOIST: FACE NAIL	3 - 16d COMMON (3-1/2" X 0.162"),	4 - 3" X 0.131" NAILS
30 LEDGER STRIP: FACE NAIL	3 - 16d COMMON (3-1/2" X 0.162"),	4 - 3" X 0.131" NAILS
a. COMMON OR BOX NAILS MAY BE USED EXCEPT WHERE OTHERWISE STATED.		
b. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AS SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEARWALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.		
c. COMMON OR DEFORMED SHANK (6d - 2" X 0.113; 8d - 2-1/2" X 0.131; 10d - 3" X 0.148")		
d. COMMON (6d - 2" X 0.113; 8d - 2-1/2" X 0.131; 10d - 3" X 0.148")		
e. DEFORMED SHANK (6d - 2" X 0.113; 8d - 2-1/2" X 0.131; 10d - 3" X 0.148")		
f. CORROSION-RESISTANT SIDING (6d - 1 7/8" X 0.106"; 8d - 2-3/8" X 0.128") OR CASING 9 - 6d - 2" X 0.099"; 8d - 2-1/2" X 0.113" NAILS		
g. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6" ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER RON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.		
h. CORROSION-RESISTANT ROOFING NAILS WITH 7/16 INCH DIAMETER HEAD AND 1-1/2 INCH LENGTH FOR 1/2 INCH SHEATHING AND 1-3/4 INCH LENGTH FOR 25/32 INCH SHEATHING		
i. CASING (1-1/2" X 0.08") OR FINISH (1-1/2" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS		
j. PANEL-SUPPORTS AT 24 INCHES CASING OR FINISH NAILS SPACED 8 INCHES ON PANEL, 12 INCHES AT INTERMEDIATE SUPPORTS.		
k. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS (2-1/2" X 0.113") ARE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.		
l. FOR ROOF SHEATHING, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.		
m. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING		
n. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORT.		
o. NAILING INTO P.T. LUMBER SHALL BE WITH HOT DIPPED GALVANIZED OR OTHER APPROVED CORROSION RESISTANT MATERIAL		

REVISION EDITION

1	2	3	4
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DRAWN BY: \_\_\_\_\_  
CHECKED BY: A.G.  
DATE: 11-30-2021



PHONE 425-351-5989  
P.O. BOX 7235  
BELLEVUE, WA 98008

CONSULTING STRUCTURAL ENGINEERS

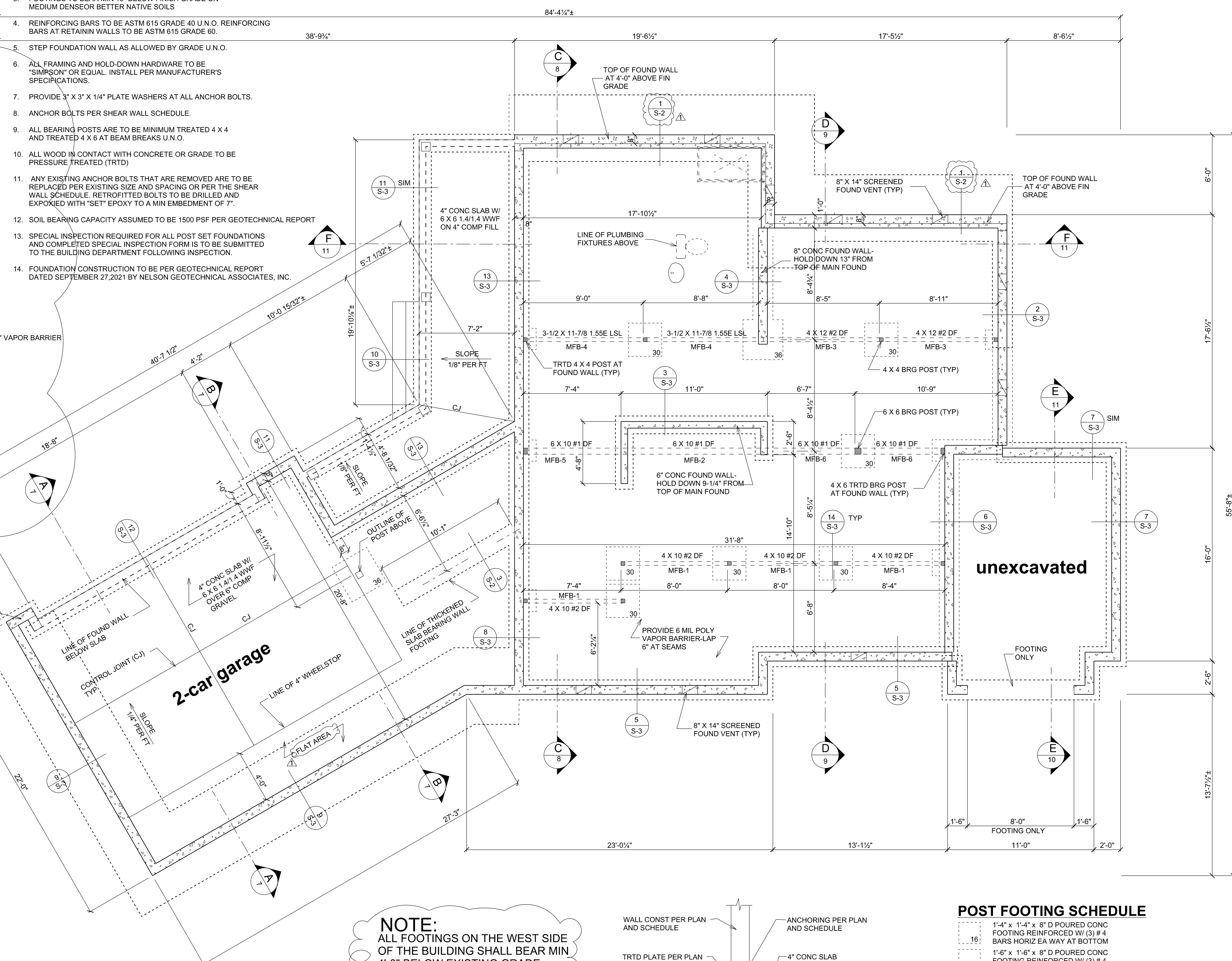
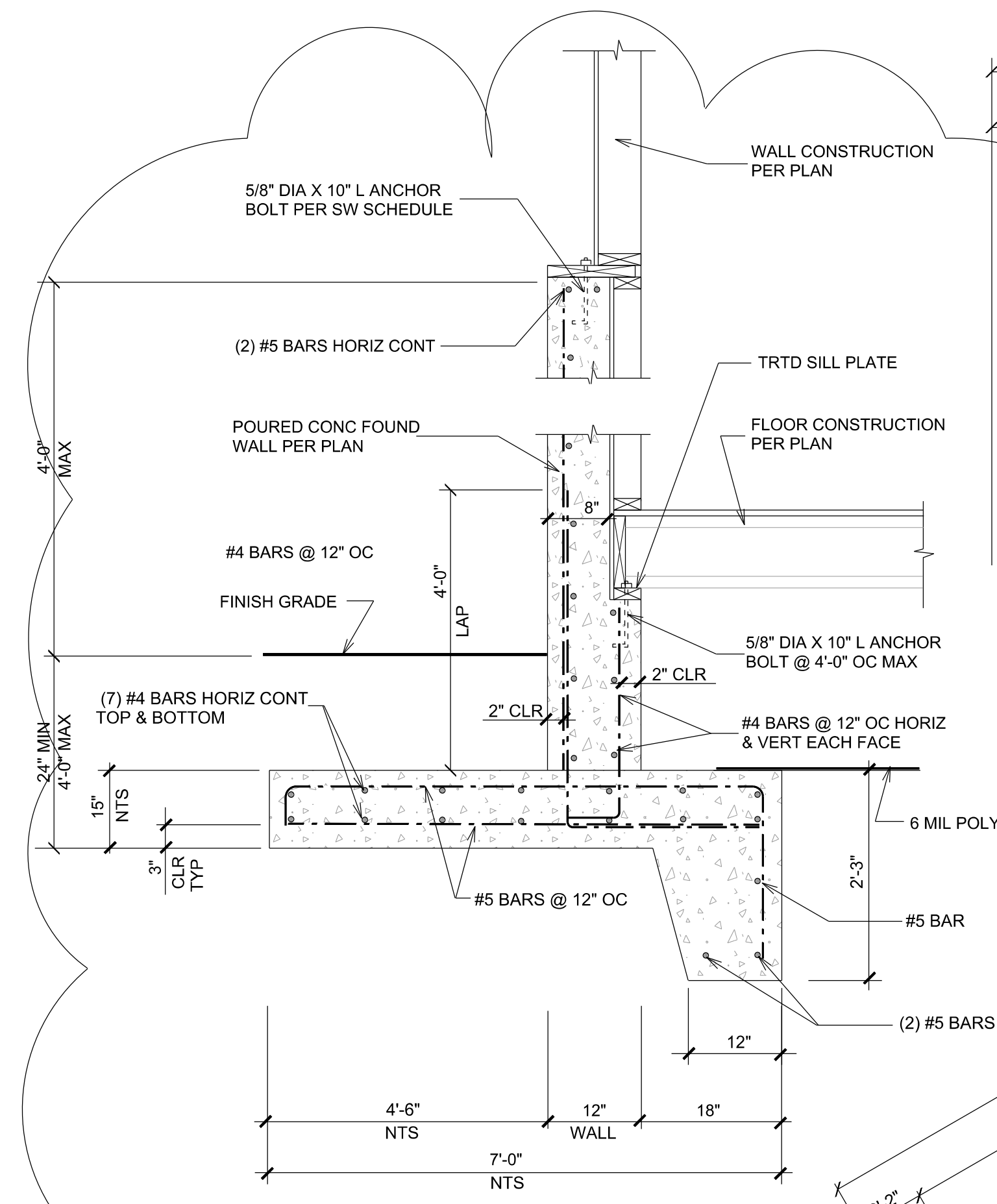
PROPOSED SINGLE FAMILY RESIDENCE  
EDWARD & CATHERINE MORAN  
5000 WEST MERCER WAY  
MERCER ISLAND, WA 98040

STRUCTURAL NOTES

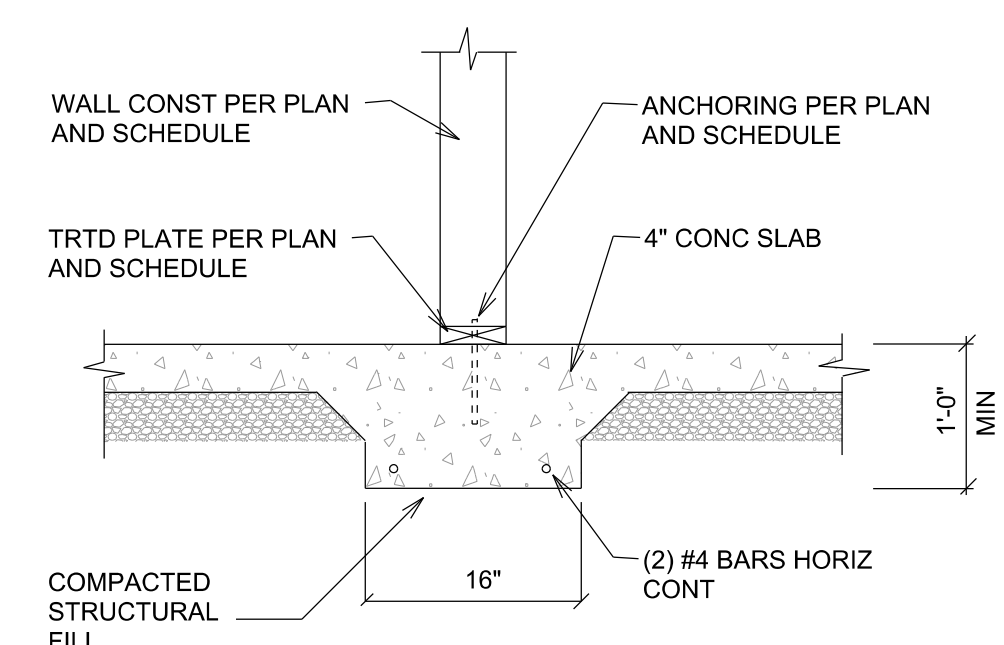
SHEET  
**S-1**  
OF  
-  
JOB #  
171-2101

**FOUNDATION NOTES**

1. VERIFY ALL EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK.
2. CONCRETE STRENGTH TO BE 2500 PSI AT 28 DAYS. CONCRETE STRENGTH AT RETAINING WALLS TO BE 3000 PSI AT 28 DAYS.
3. FOOTINGS TO BEAR MIN 18" BELOW FINISH GRADE ON MEDIUM DENSE OR BETTER NATIVE SOILS.
4. REINFORCING BARS TO BE ASTM 615 GRADE 40 U.N.O. REINFORCING BARS AT RETAINING WALLS TO BE ASTM 615 GRADE 60.
5. STEP FOUNDATION WALL AS ALLOWED BY GRADE U.N.O.
6. ALL FRAMING AND HOLD-DOWN HARDWARE TO BE "SIMPSON" OR EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
7. PROVIDE 3" X 3" X 1/4" PLATE WASHERS AT ALL ANCHOR BOLTS.
8. ANCHOR BOLTS PER SHEAR WALL SCHEDULE.
9. ALL BEARING POSTS ARE TO BE MINIMUM TREATED 4 X 4 AND TREATED 4 X 6 AT BEAM BREAKS U.N.O.
10. ALL WOOD IN CONTACT WITH CONCRETE OR GRADE TO BE PRESSURE TREATED (TRTD).
11. ANY EXISTING ANCHOR BOLTS THAT ARE REMOVED ARE TO BE REPLACED PER EXISTING SIZE AND SPACING OR PER THE SHEAR WALL SCHEDULE. RETROFITTED BOLTS TO BE DRILLED AND EXPOXIED WITH "SET" EPOXY TO A MIN EMBEDMENT OF 7".
12. SOIL BEARING CAPACITY ASSUMED TO BE 1500 PSF PER GEOTECHNICAL REPORT.
13. SPECIAL INSPECTION REQUIRED FOR ALL POST SET FOUNDATIONS AND COMPLETED SPECIAL INSPECTION FORM IS TO BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING INSPECTION.
14. FOUNDATION CONSTRUCTION TO BE PER GEOTECHNICAL REPORT DATED SEPTEMBER 27, 2021 BY NELSON GEOTECHNICAL ASSOCIATES, INC.



**NOTE:**  
ALL FOOTINGS ON THE WEST SIDE OF THE BUILDING SHALL BEAR MIN 4'-0" BELOW EXISTING GRADE



**POST FOOTING SCHEDULE**

16	1'-4" x 1'-4" x 8" D POURED CONC FOOTING REINFORCED W/ (3) #4 BARS HORIZ EA WAY AT BOTTOM
18	1'-6" x 1'-6" x 8" D POURED CONC FOOTING REINFORCED W/ (3) #4 BARS HORIZ EA WAY AT BOTTOM
24	2'-0" x 2'-0" x 8" D POURED CONC FOOTING REINFORCED W/ (3) #4 BARS HORIZ EA WAY AT BOTTOM
30	2'-6" x 2'-6" x 10" D POURED CONC FOOTING REINFORCED W/ (4) #4 BARS HORIZ EA WAY AT BOTTOM
36	3'-0" x 3'-0" x 1'-0" D POURED CONC FOOTING REINFORCED W/ (4) #4 BARS HORIZ EA WAY AT BOTTOM
48	4'-0" x 4'-0" x 1'-0" D POURED CONC FOOTING REINFORCED W/ (5) #4 BARS HORIZ EA WAY AT BOTTOM
54	4'-6" x 4'-6" x 1'-0" D POURED CONC FOOTING REINFORCED W/ (6) #4 BARS HORIZ EA WAY AT BOTTOM

**FOUNDATION PLAN**  
SCALE 1/4" = 1'-0"



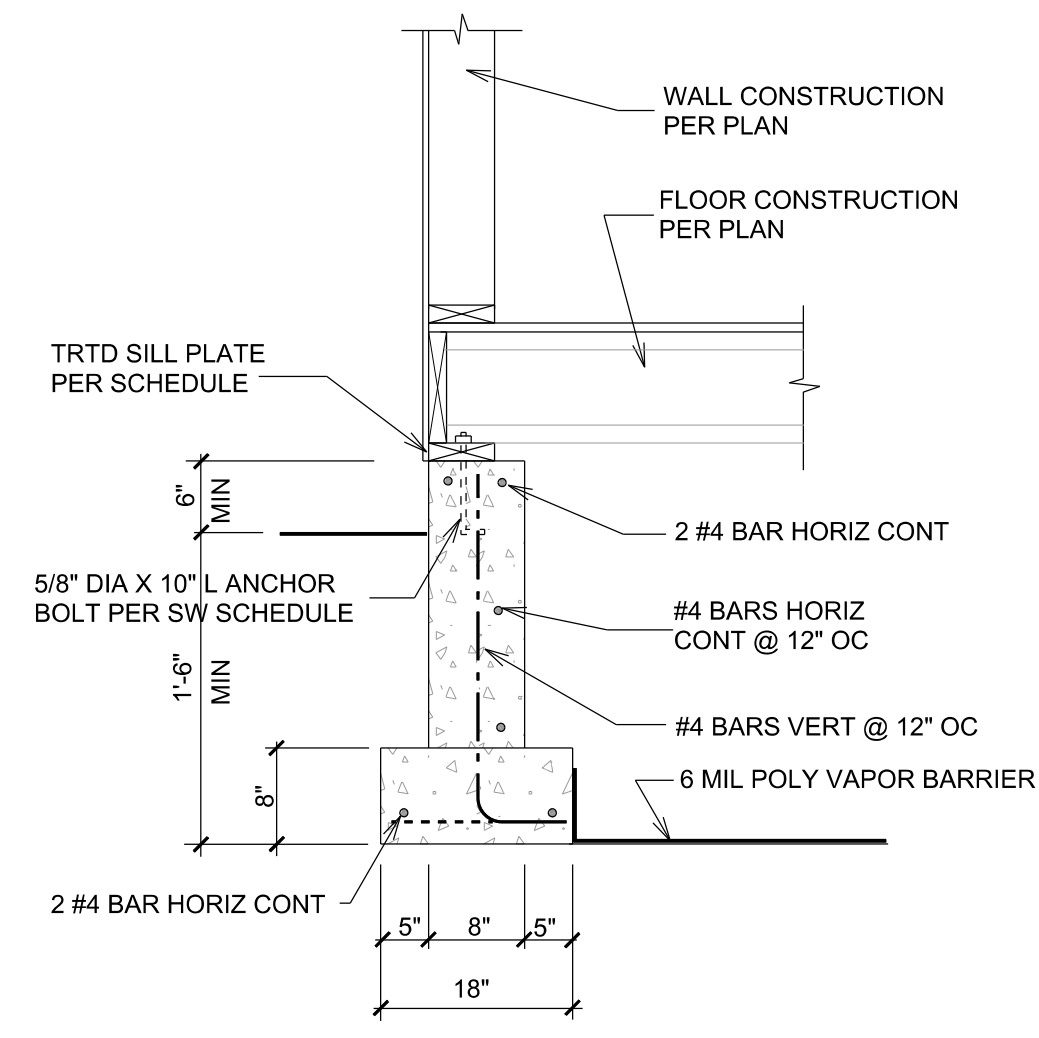
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DRAWN BY:	A.G.	
CHECKED BY:	A.G.	03/31/2023
DATE:	11-30-2021	
	2	
	3	
	4	

**PROPOSED NEW RESIDENCE**  
**EDWARD & CATHERINE MORAN**  
5028 WEST MERCER WAY  
MERCER ISLAND, WA 98040

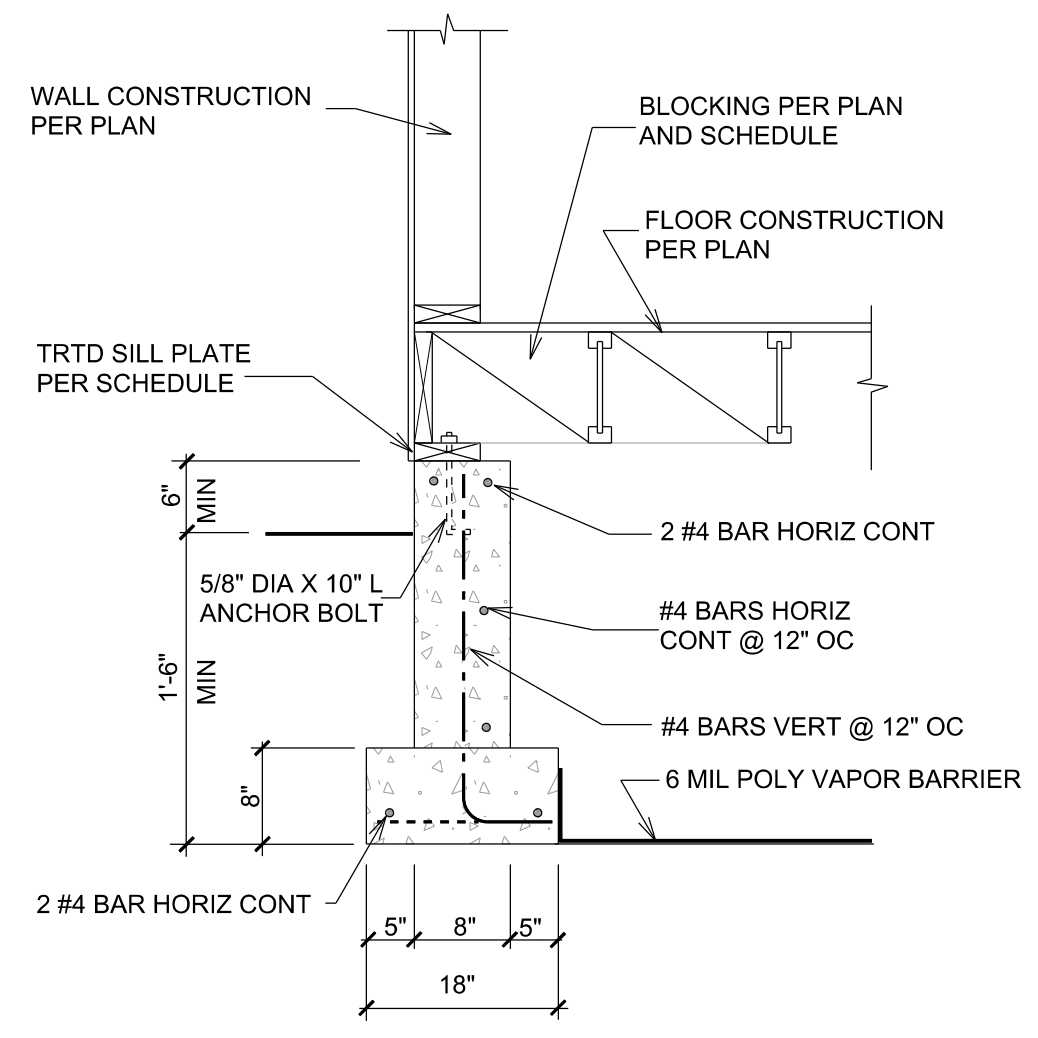
**FOUNDATION PLAN**

SHEET	<b>S-2</b>
JOB #	

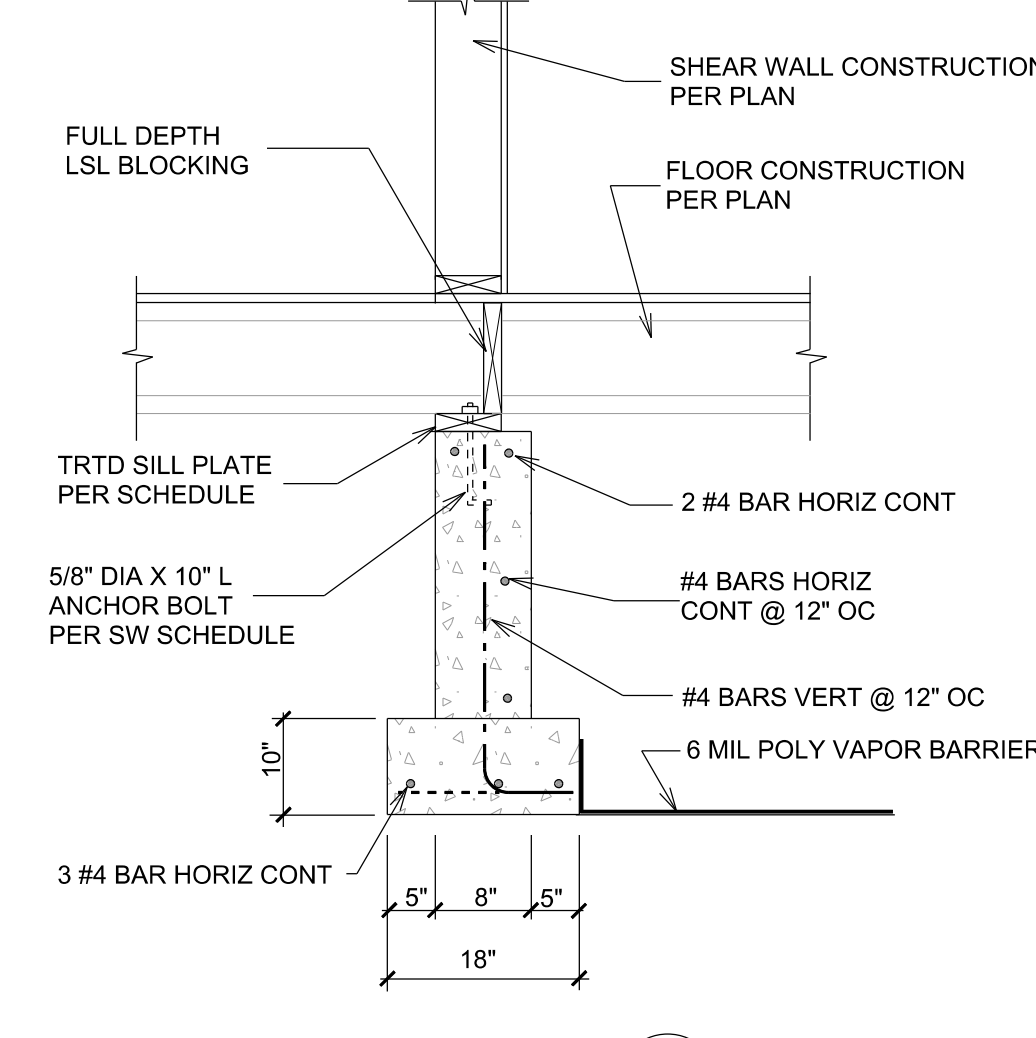




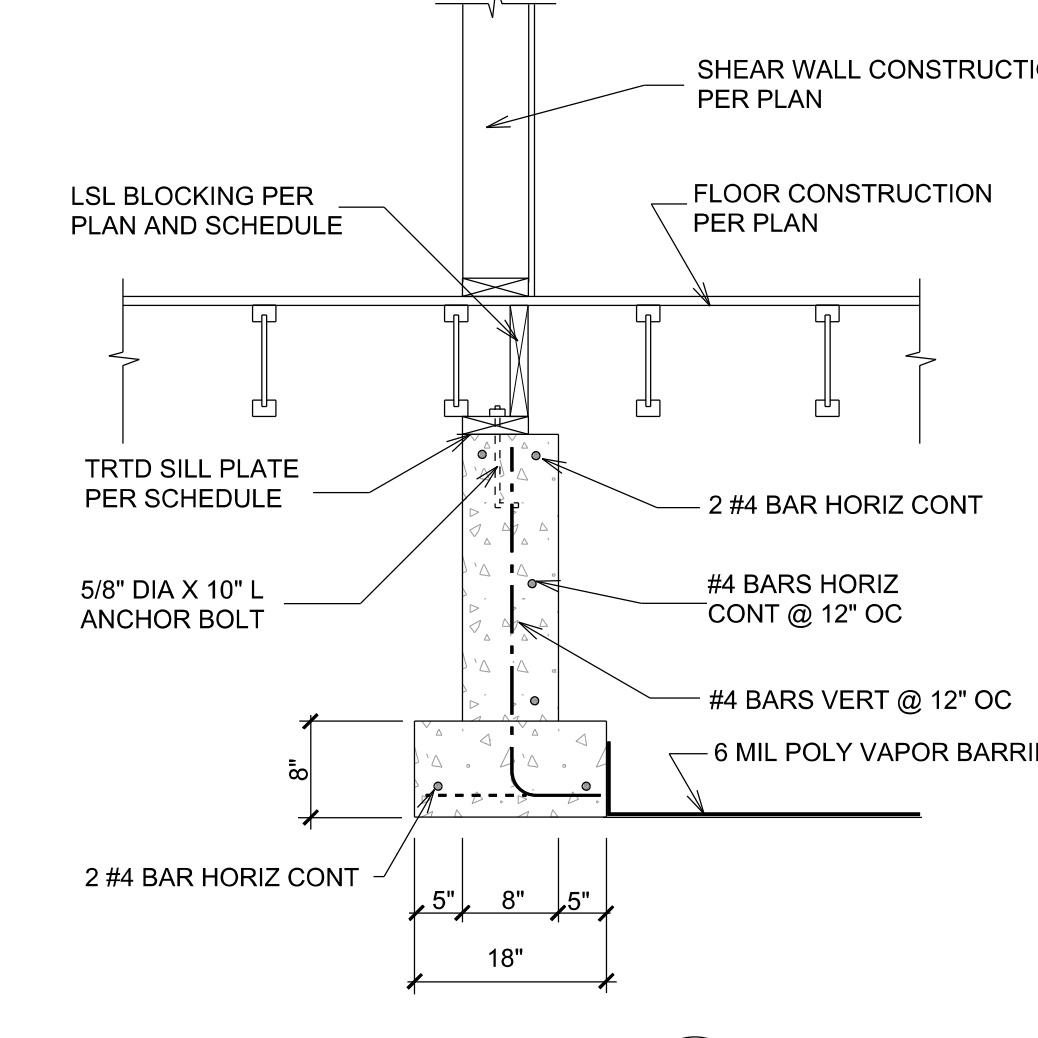
**DETAIL 1**  
SCALE 3/4" = 1'-0"



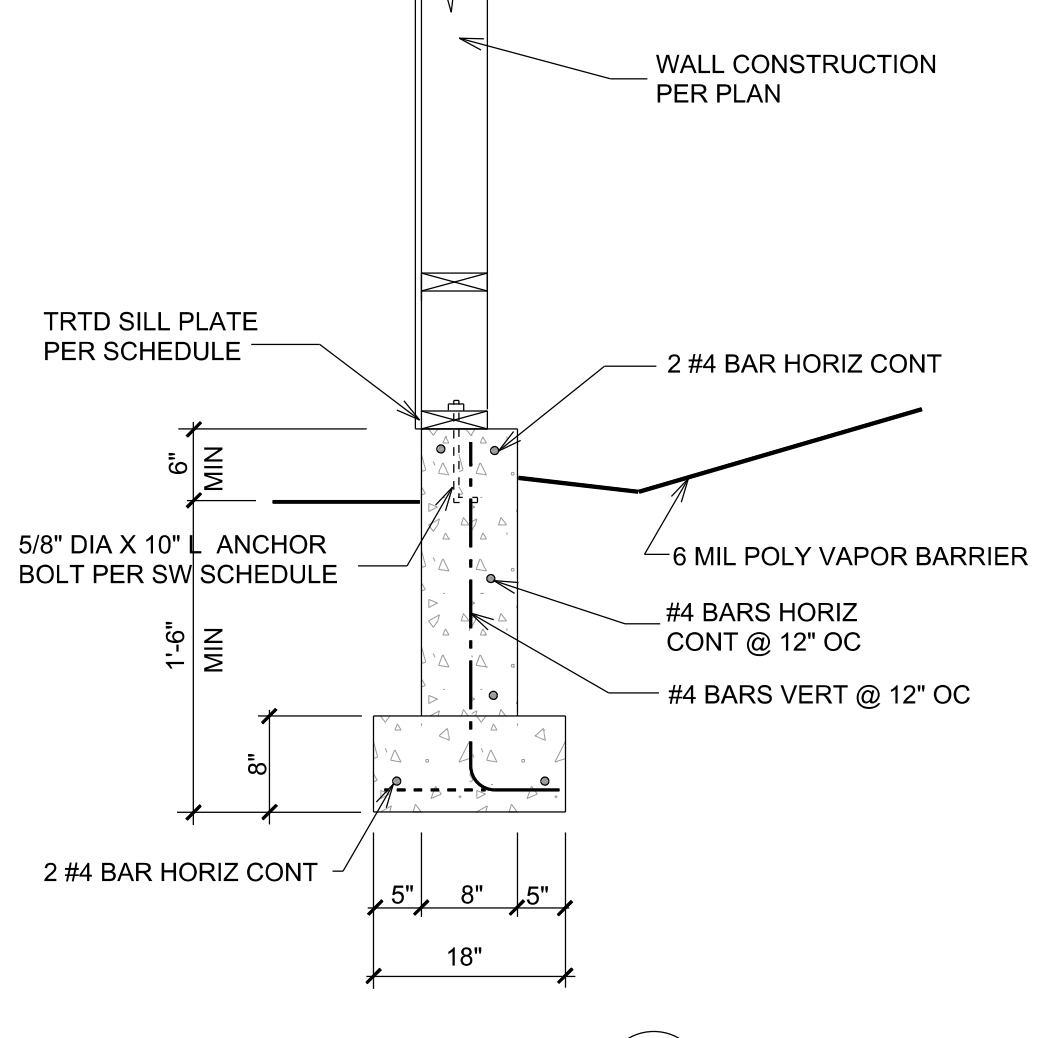
**DETAIL 2**  
SCALE 3/4" = 1'-0"



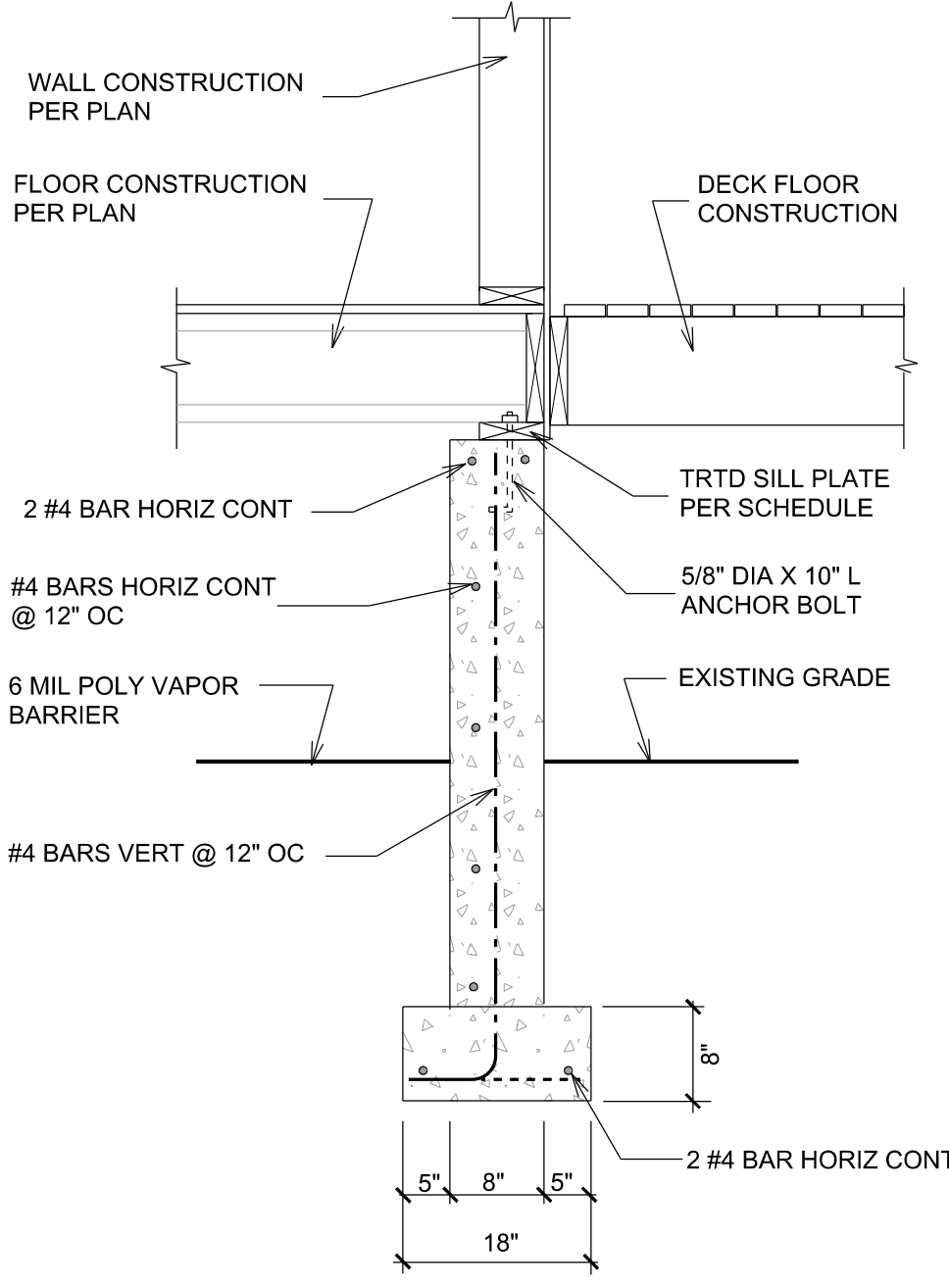
**DETAIL 3**  
SCALE 3/4" = 1'-0"



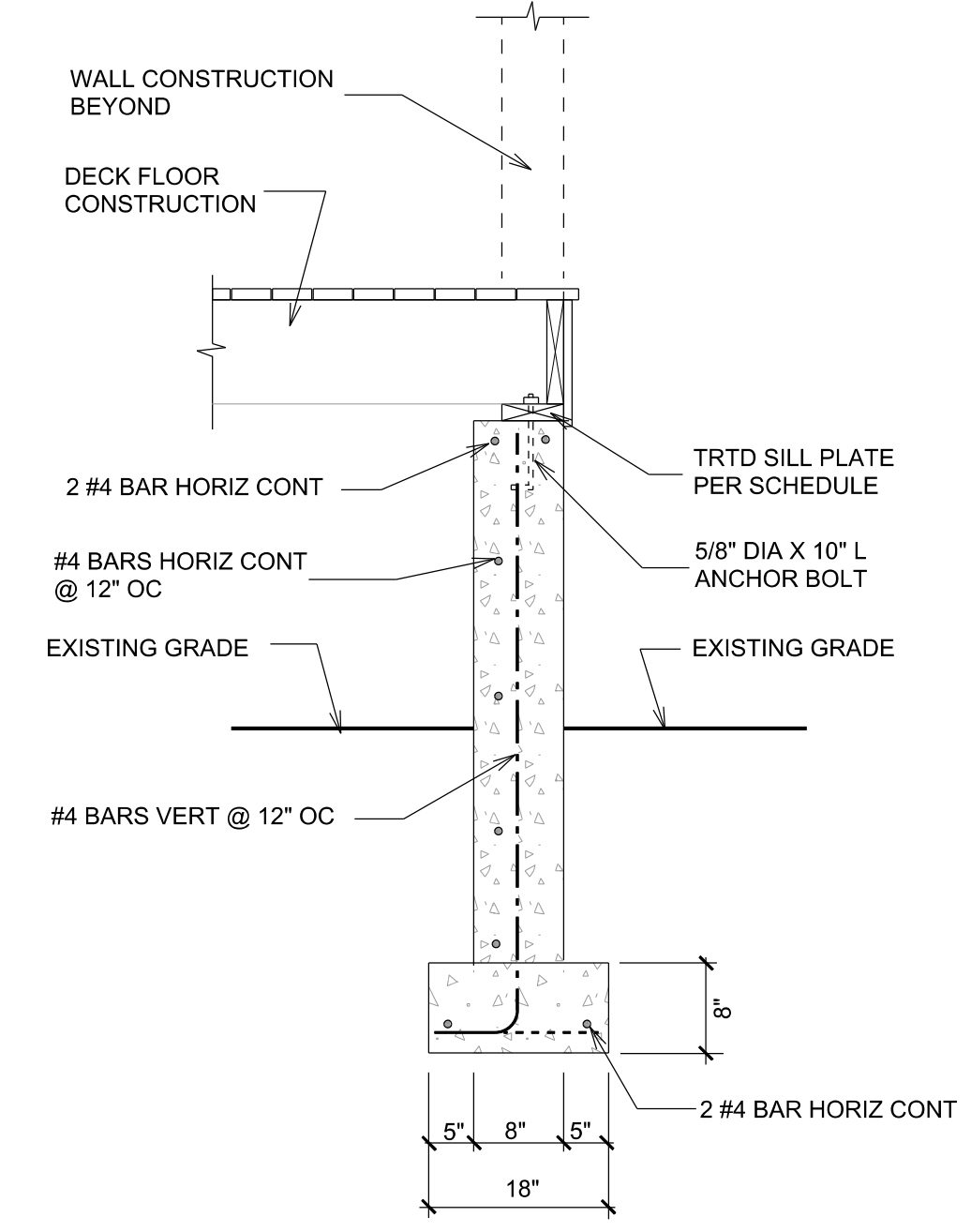
**DETAIL 4**  
SCALE 3/4" = 1'-0"



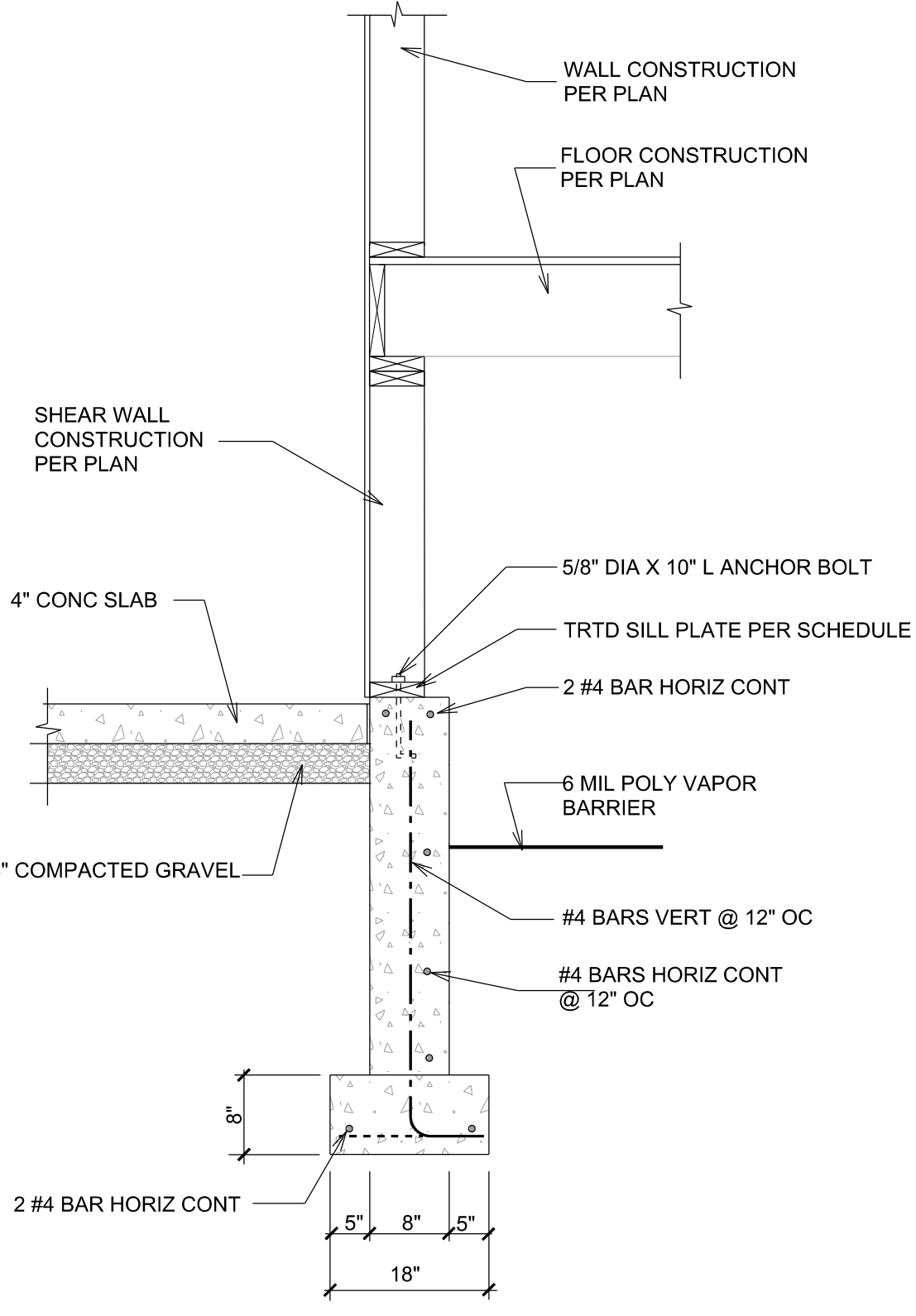
**DETAIL 5**  
SCALE 3/4" = 1'-0"



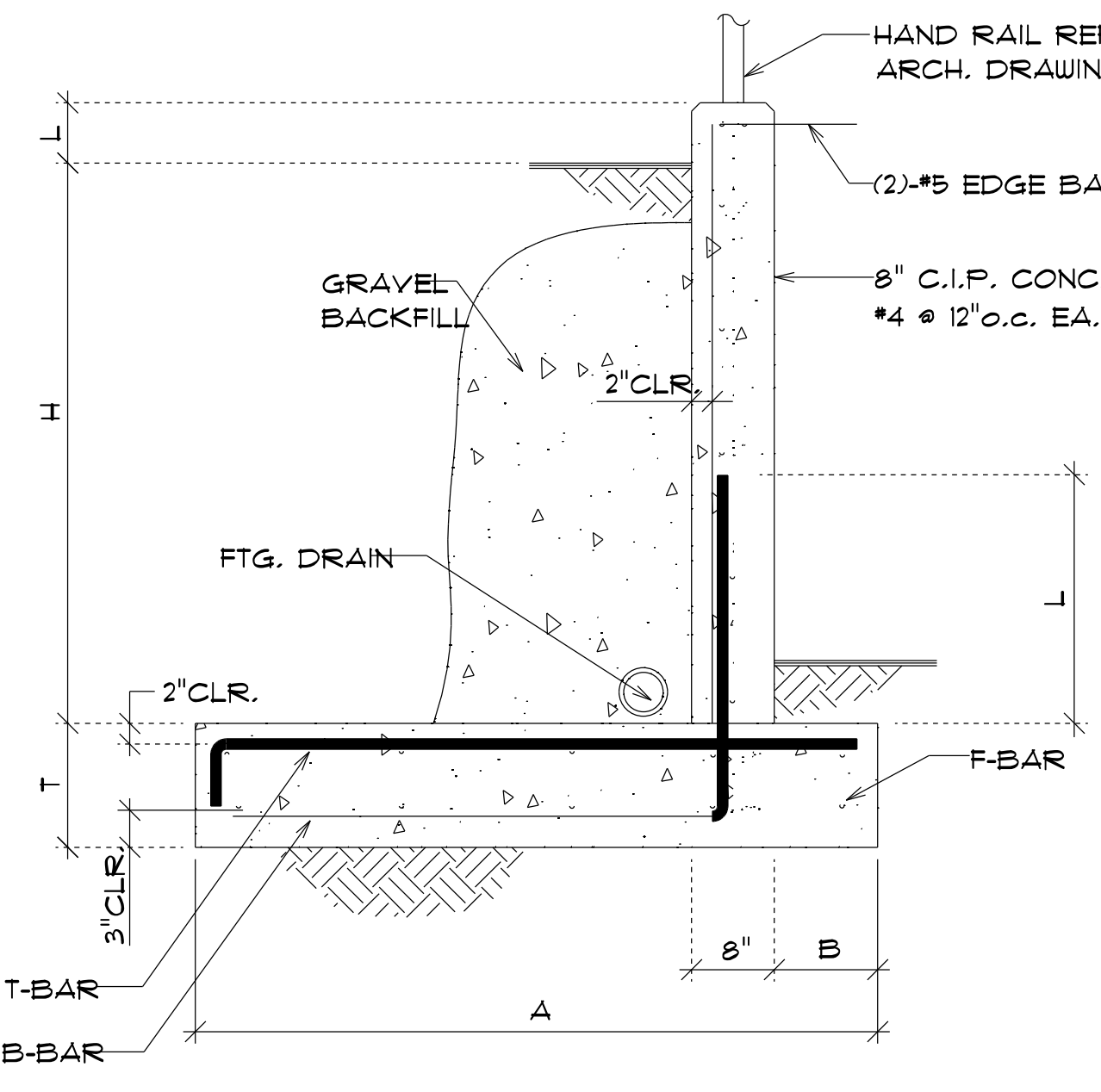
**DETAIL 6**  
SCALE 3/4" = 1'-0"



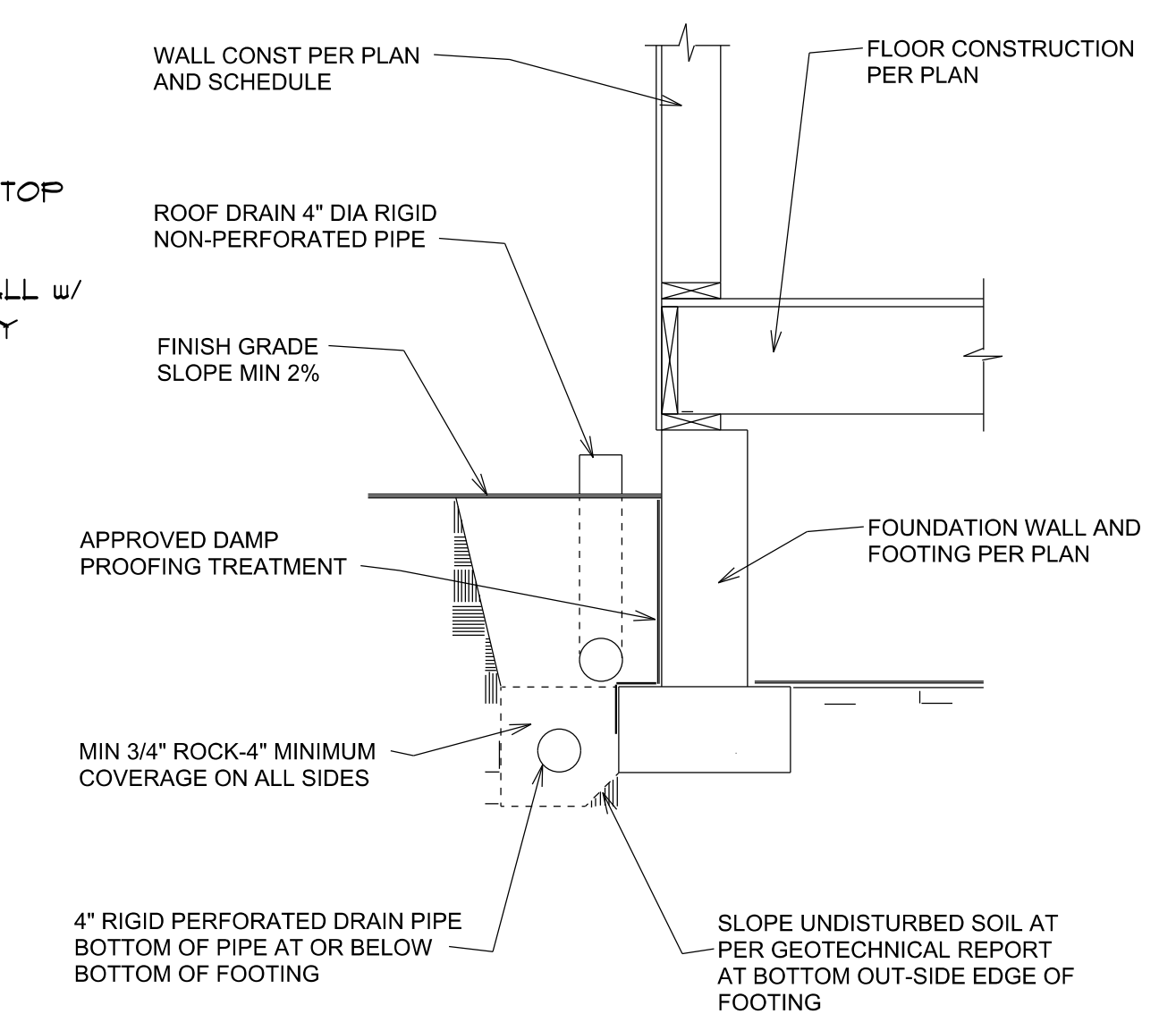
**DETAIL 7**  
SCALE 3/4" = 1'-0"



**DETAIL 8**  
SCALE 3/4" = 1'-0"

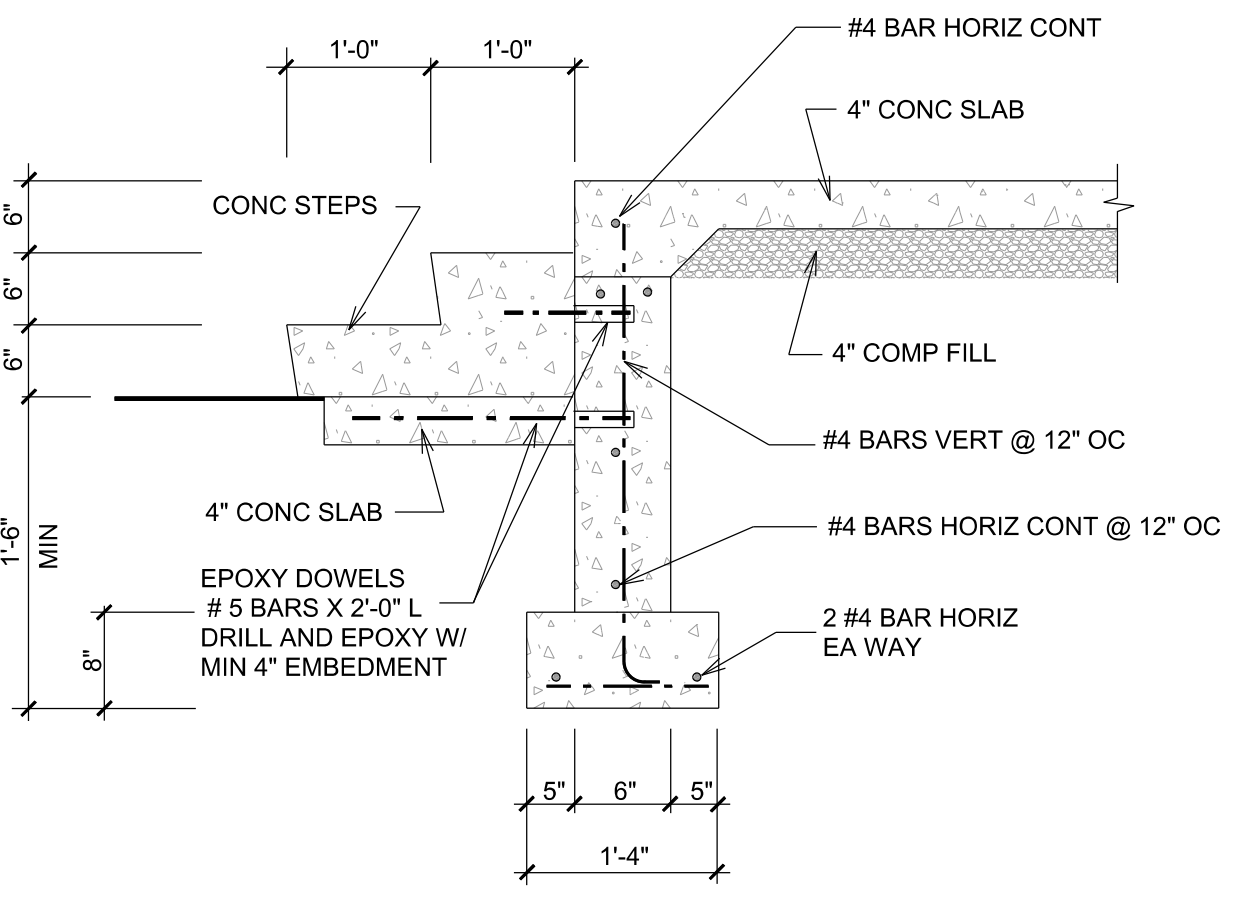


**DETAIL 9**  
SCALE 3/4" = 1'-0"

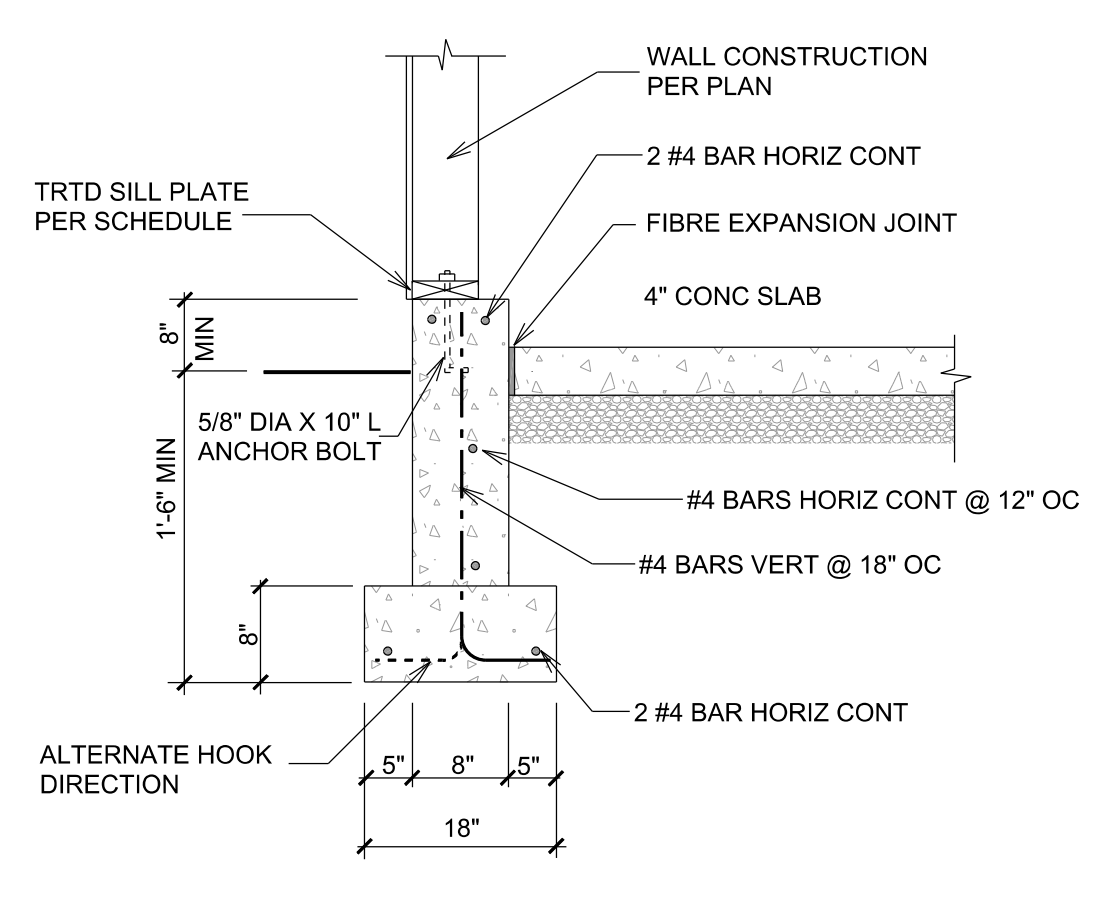


**TYPICAL DRAINAGE DETAIL**  
SCALE 3/4" = 1'-0"

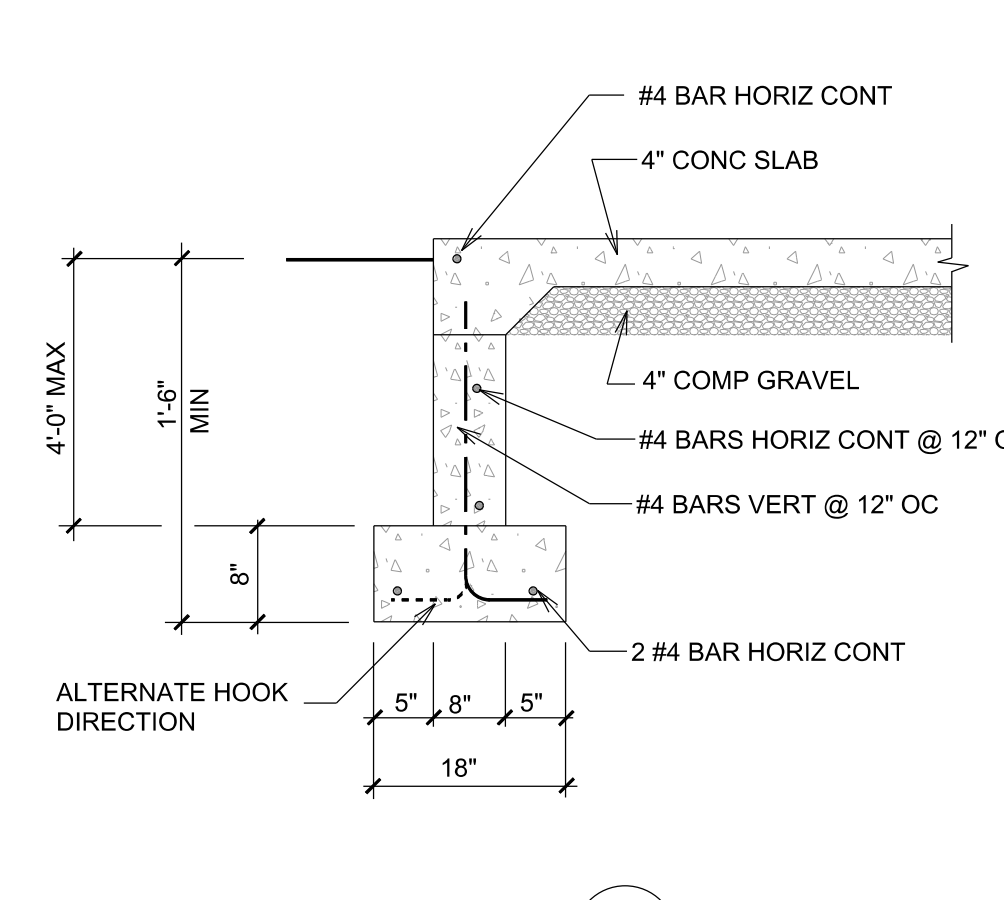
RETAINING WALL SCHEDULE							
H	A	B	L	T	B-BAR	T-BAR	F-BAR
2'-0"	2'-0"	6"	2'-0"	12"	#4 @ 12" o.c.	#4 @ 16" o.c.	(3)-#4 T, 4 B.
4'-0"	3'-0"	6"	2'-0"	12"	#4 @ 12" o.c.	#4 @ 12" o.c.	(4)-#4 T, 4 B.
6'-0"	4'-6"	9"	3'-0"	12"	#5 @ 12" o.c.	#5 @ 16" o.c.	(5)-#4 T, 4 B.
8'-0"	6'-0"	12"	4'-0"	15"	#7 @ 12" o.c.	#5 @ 12" o.c.	(6)-#4 T, 4 B.



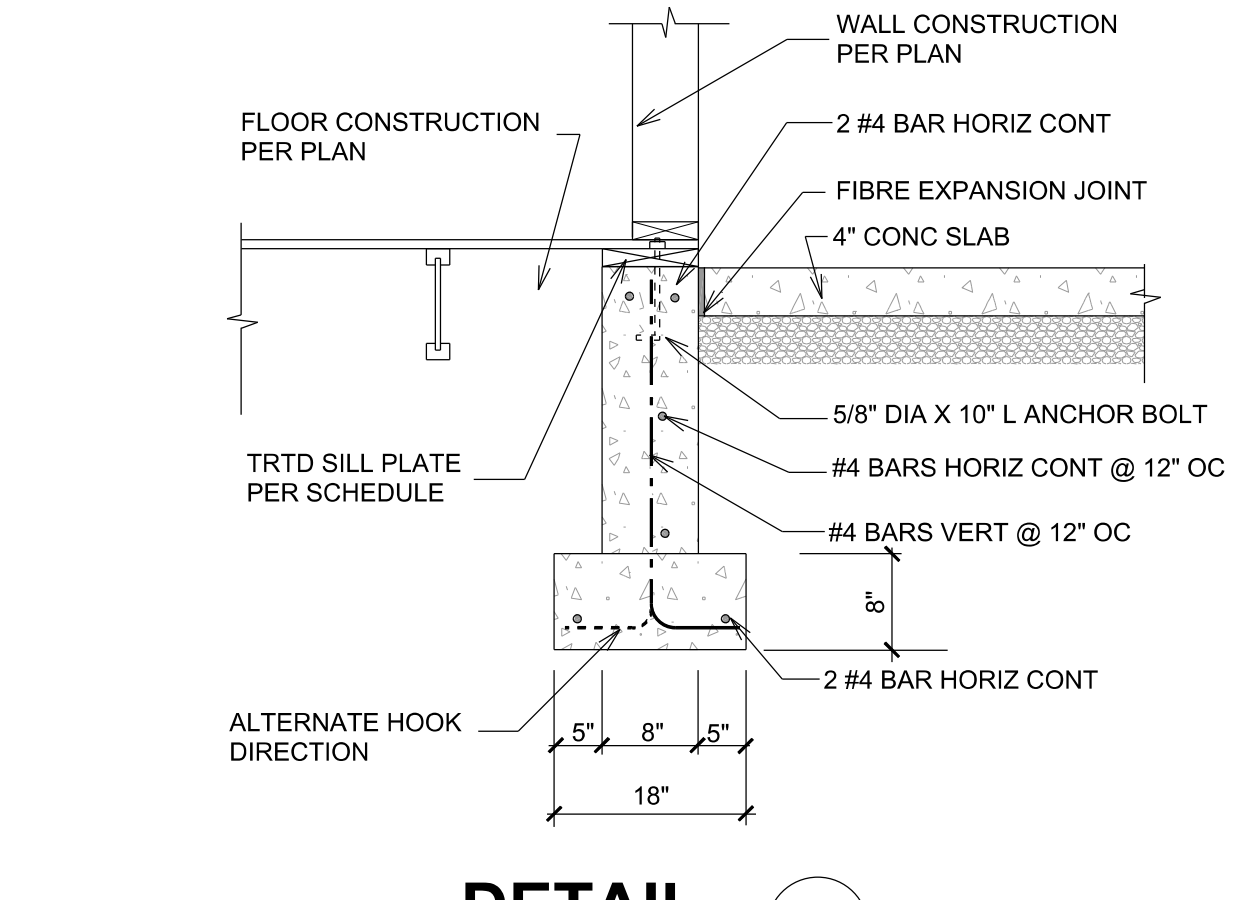
**DETAIL 10**  
SCALE 3/4" = 1'-0"



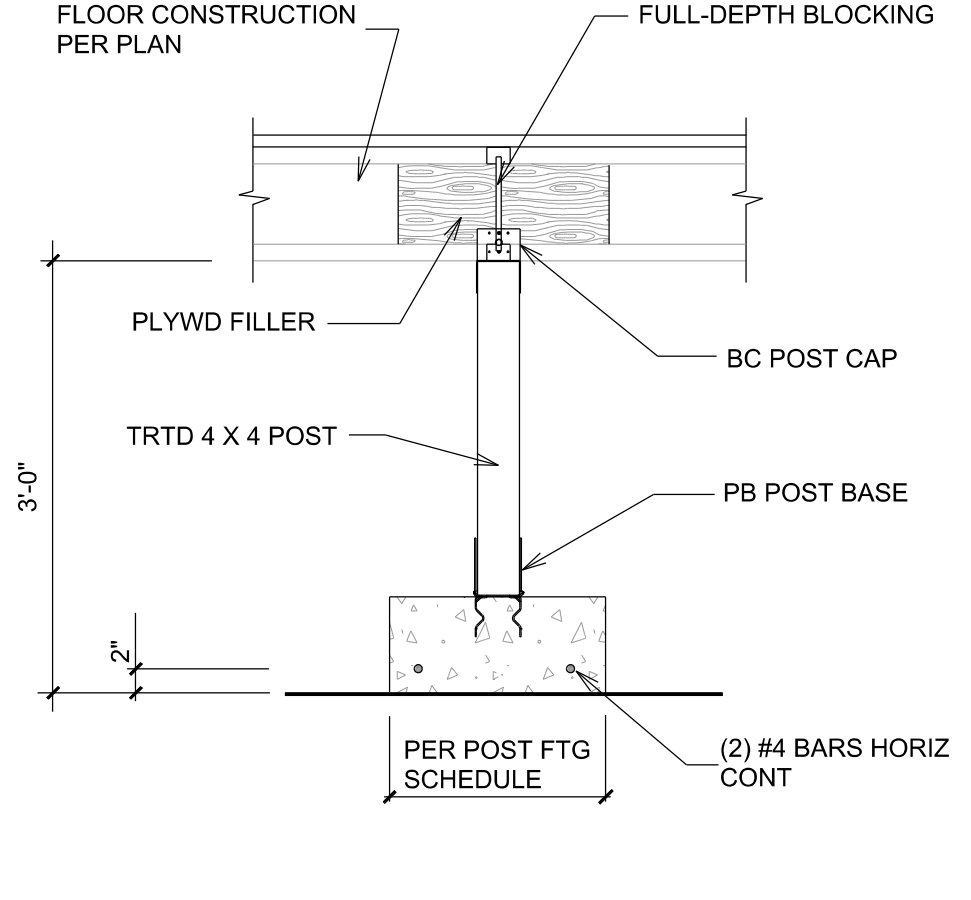
**DETAIL 11**  
SCALE 3/4" = 1'-0"



**DETAIL 12**  
SCALE 3/4" = 1'-0"



**DETAIL 13**  
SCALE 3/4" = 1'-0"



**DETAIL 14**  
SCALE 3/4" = 1'-0"

REVISION EDITION

1	2	3	4
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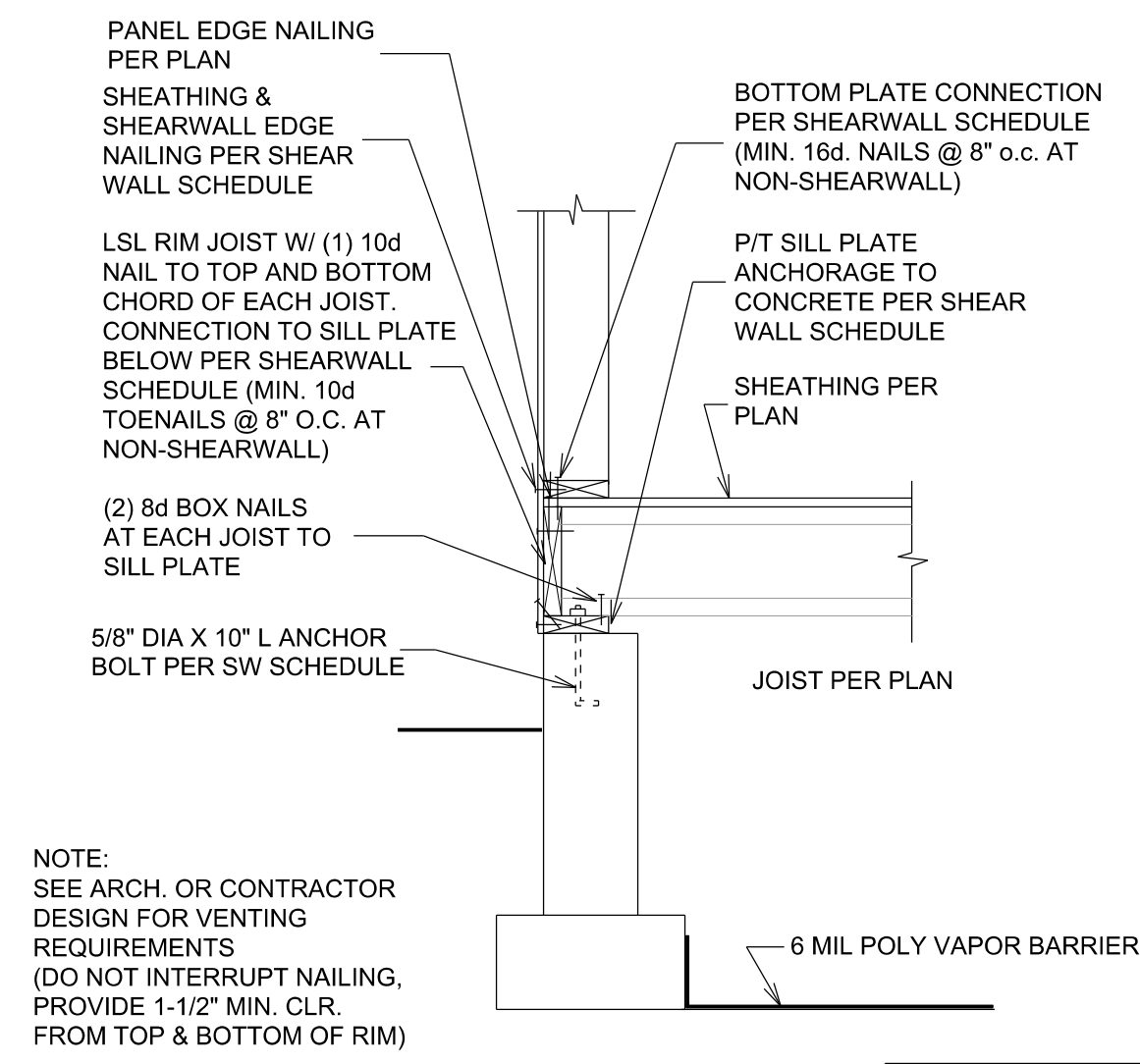
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CHECKED BY: A.G.  
DATE: 11-30-2021

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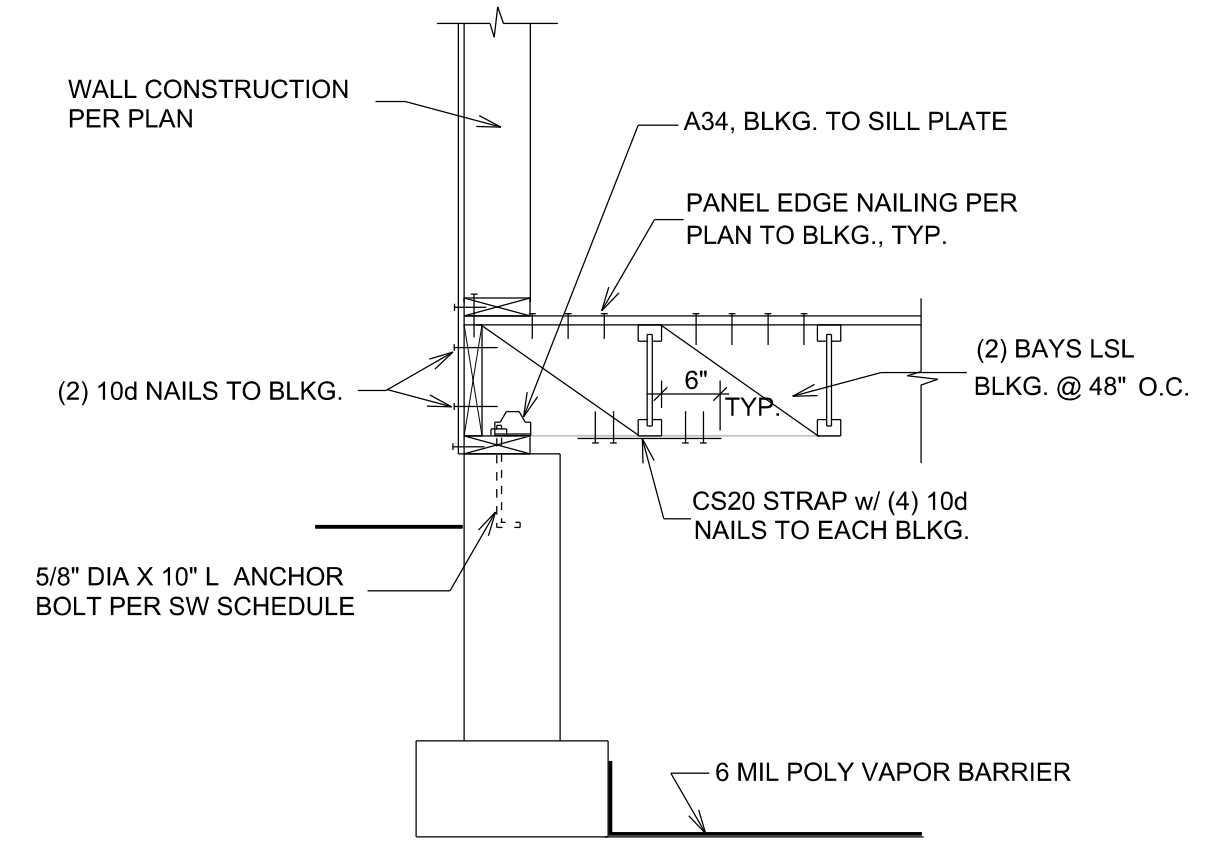
K/A: C.C. CONSULTING STRUCTURAL ENGINEERS

**PROPOSED NEW RESIDENCE**  
**EDWARD & CATHERINE MORAN**  
5028 WEST MERCER WAY  
MERCER ISLAND, WA 98040

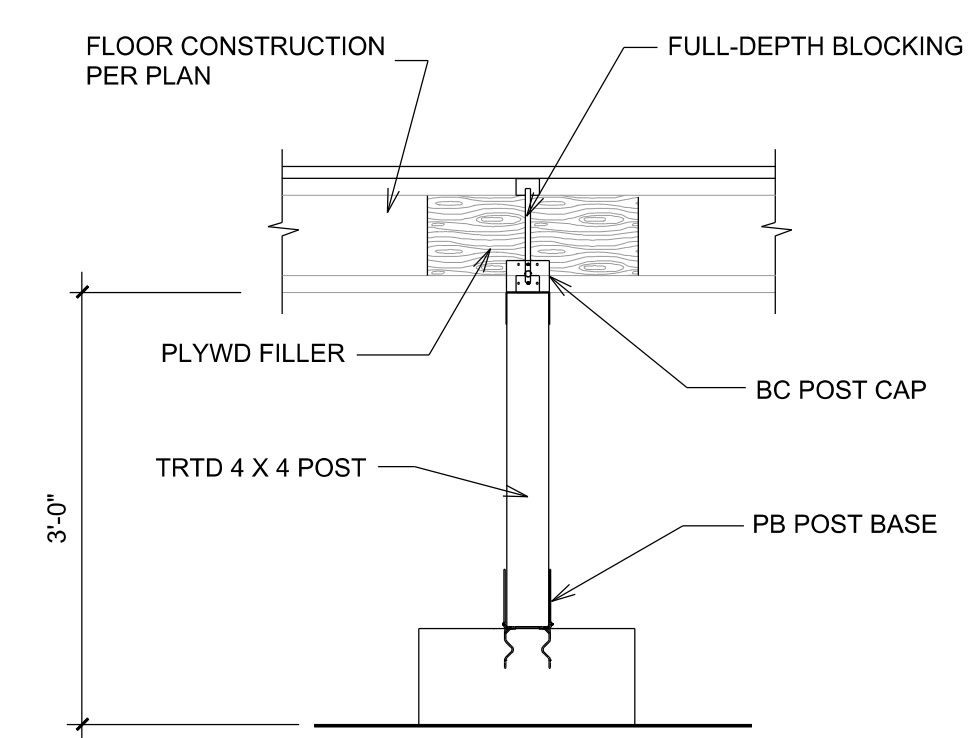
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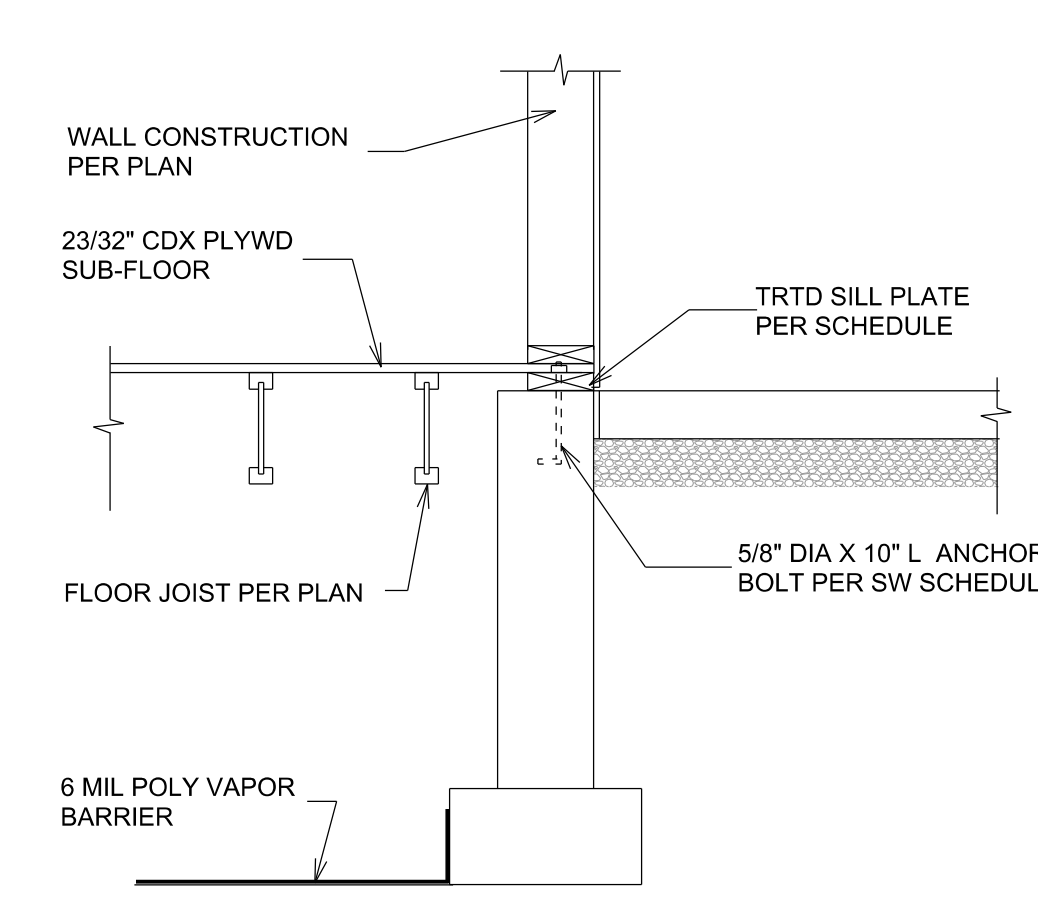
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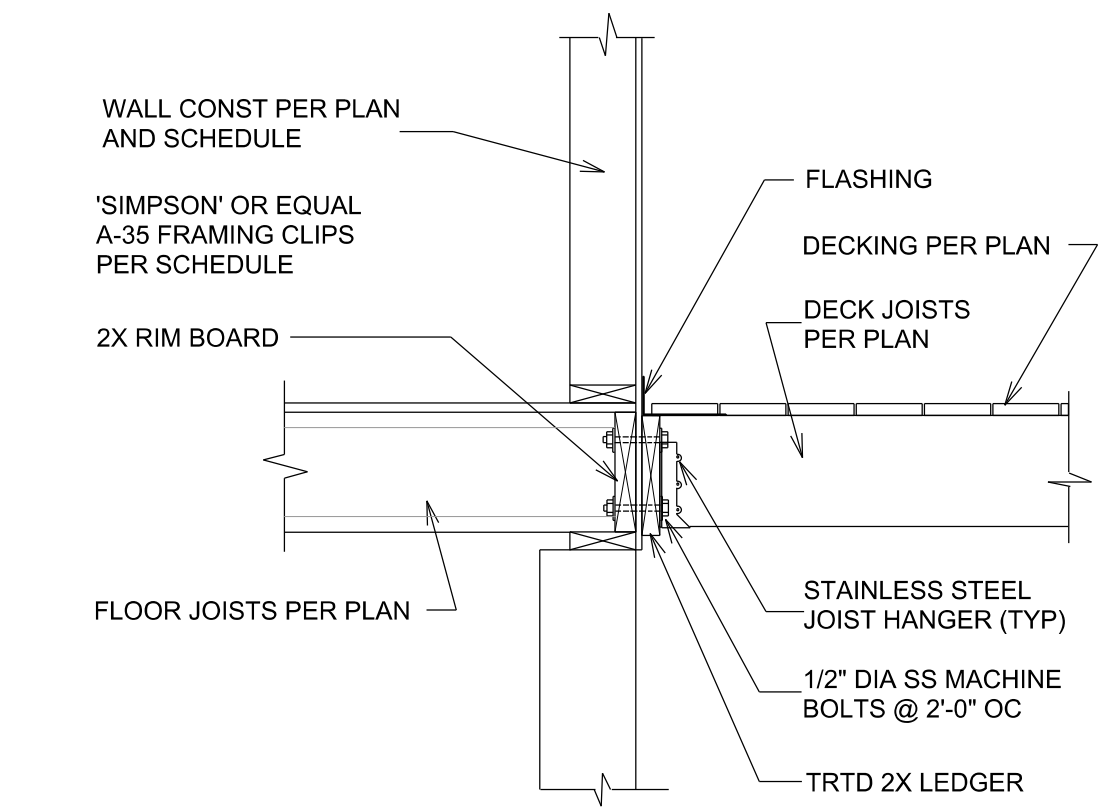
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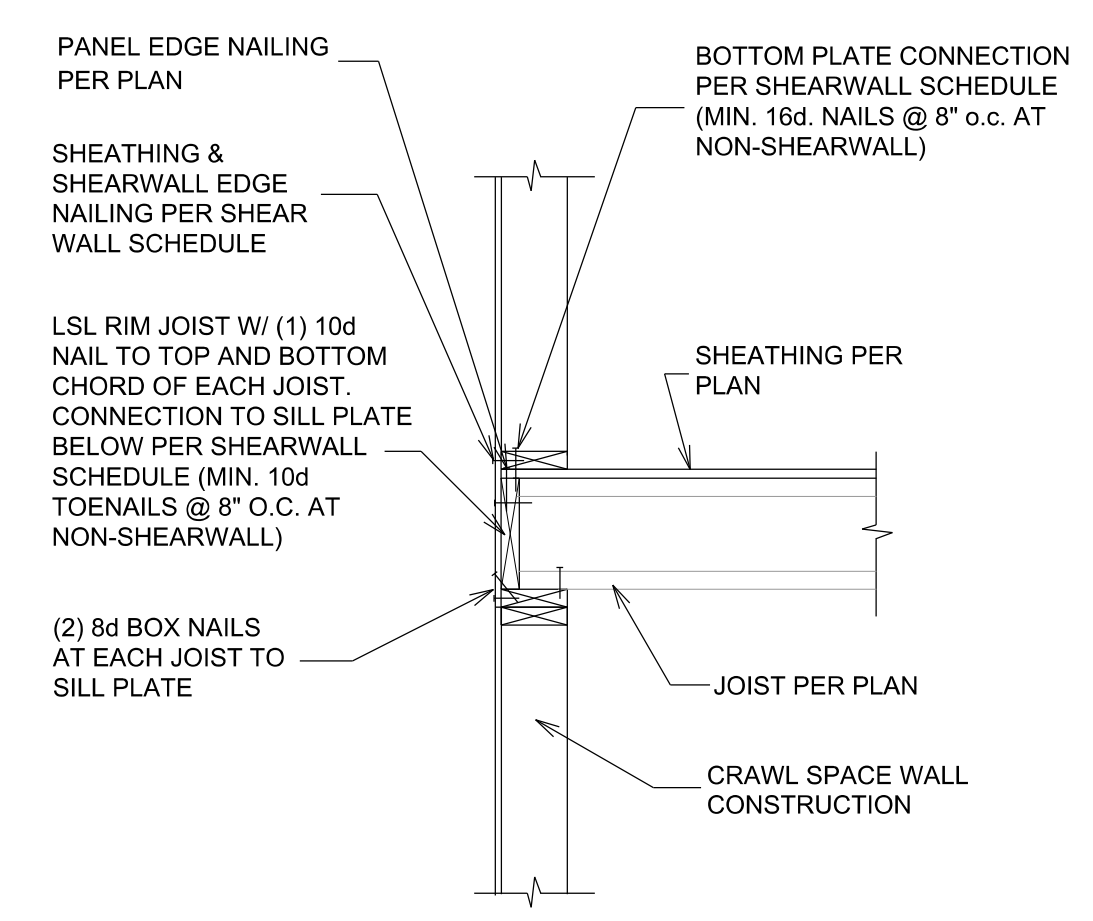
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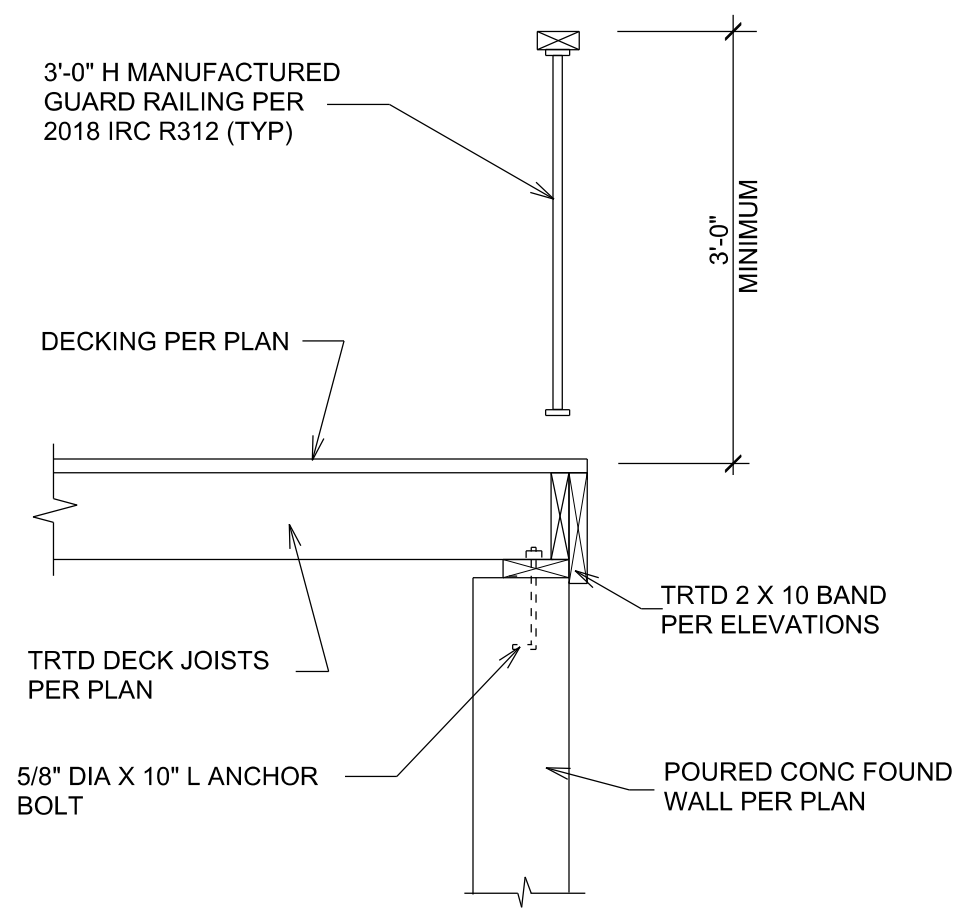
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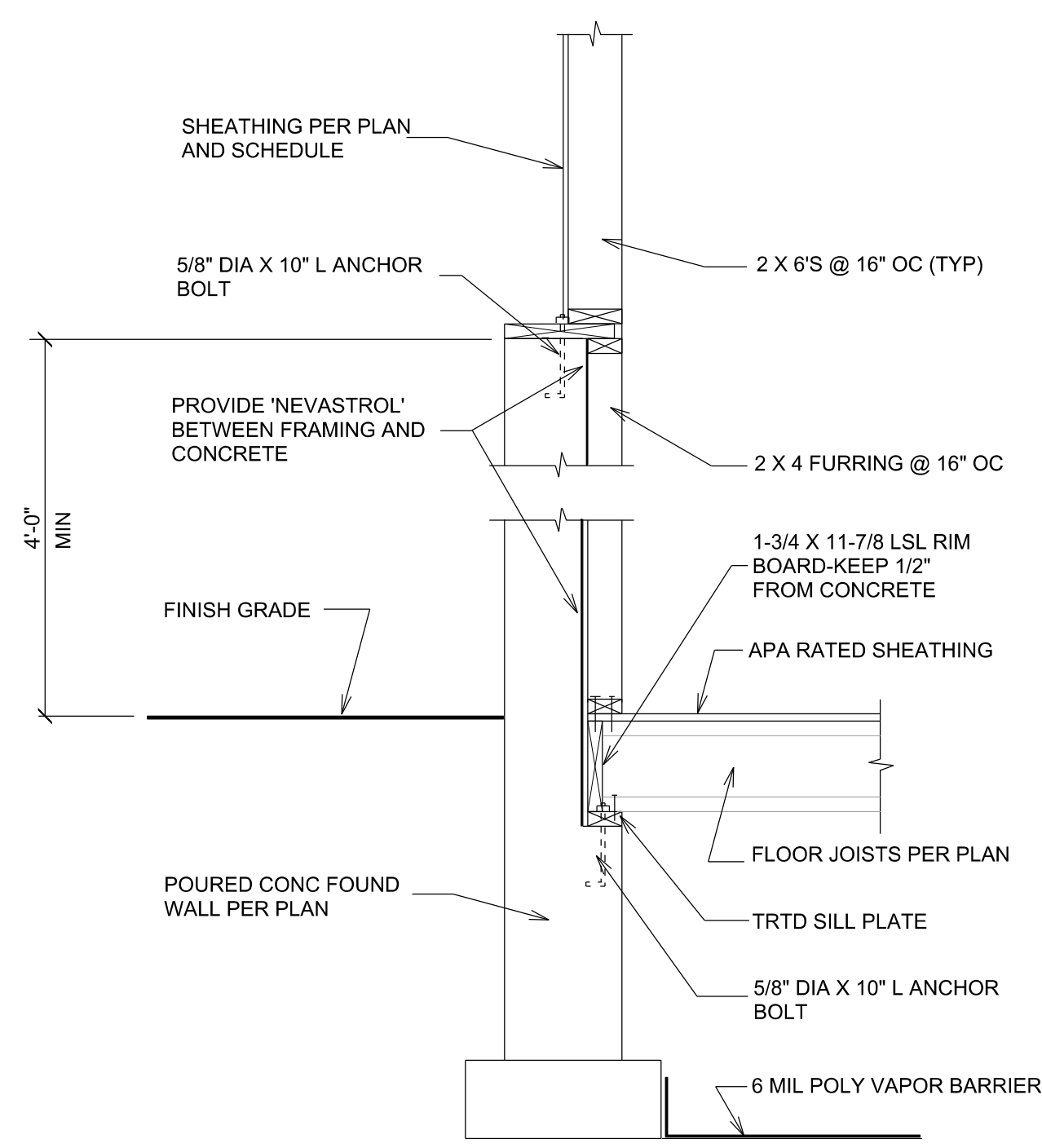
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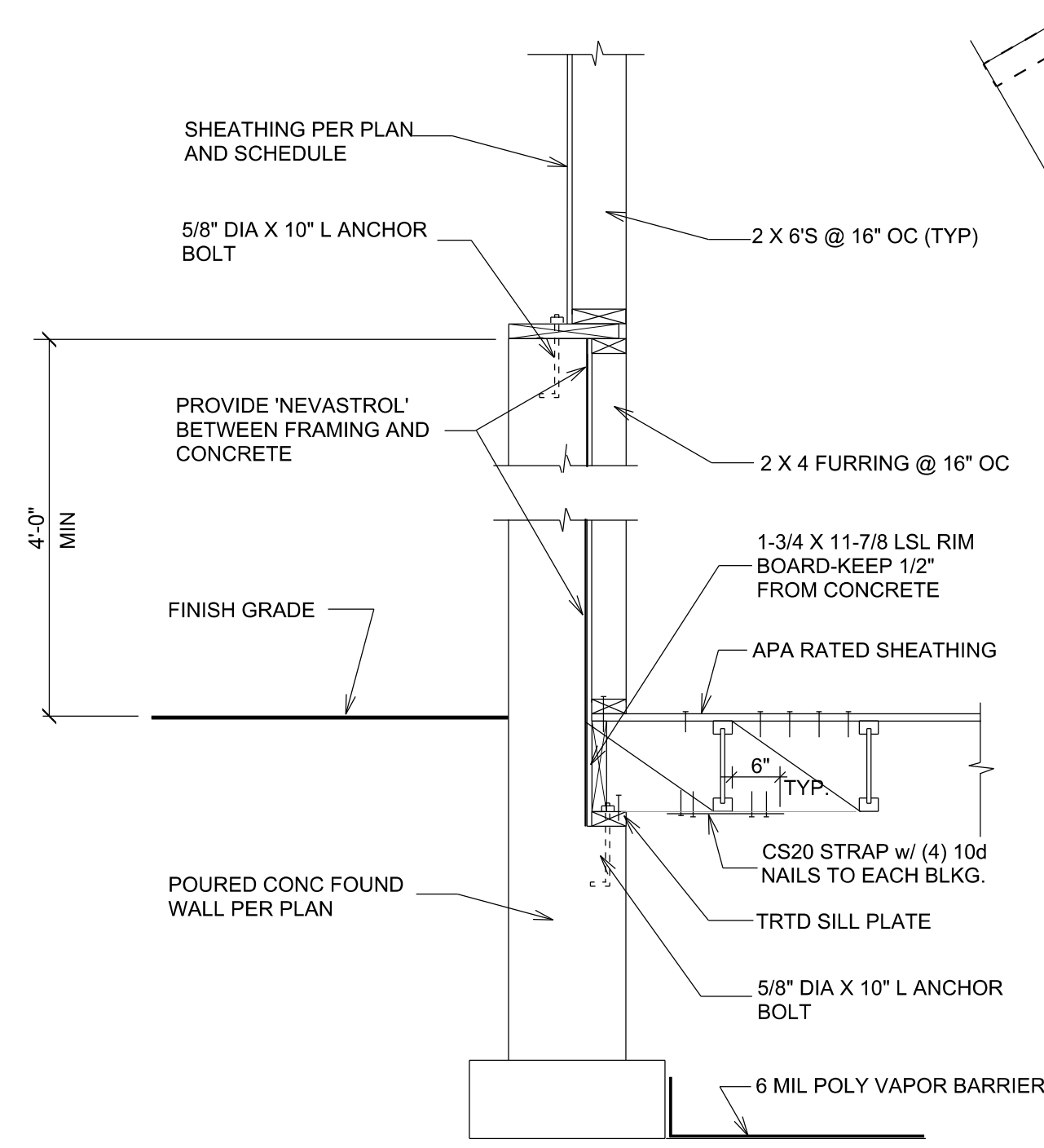
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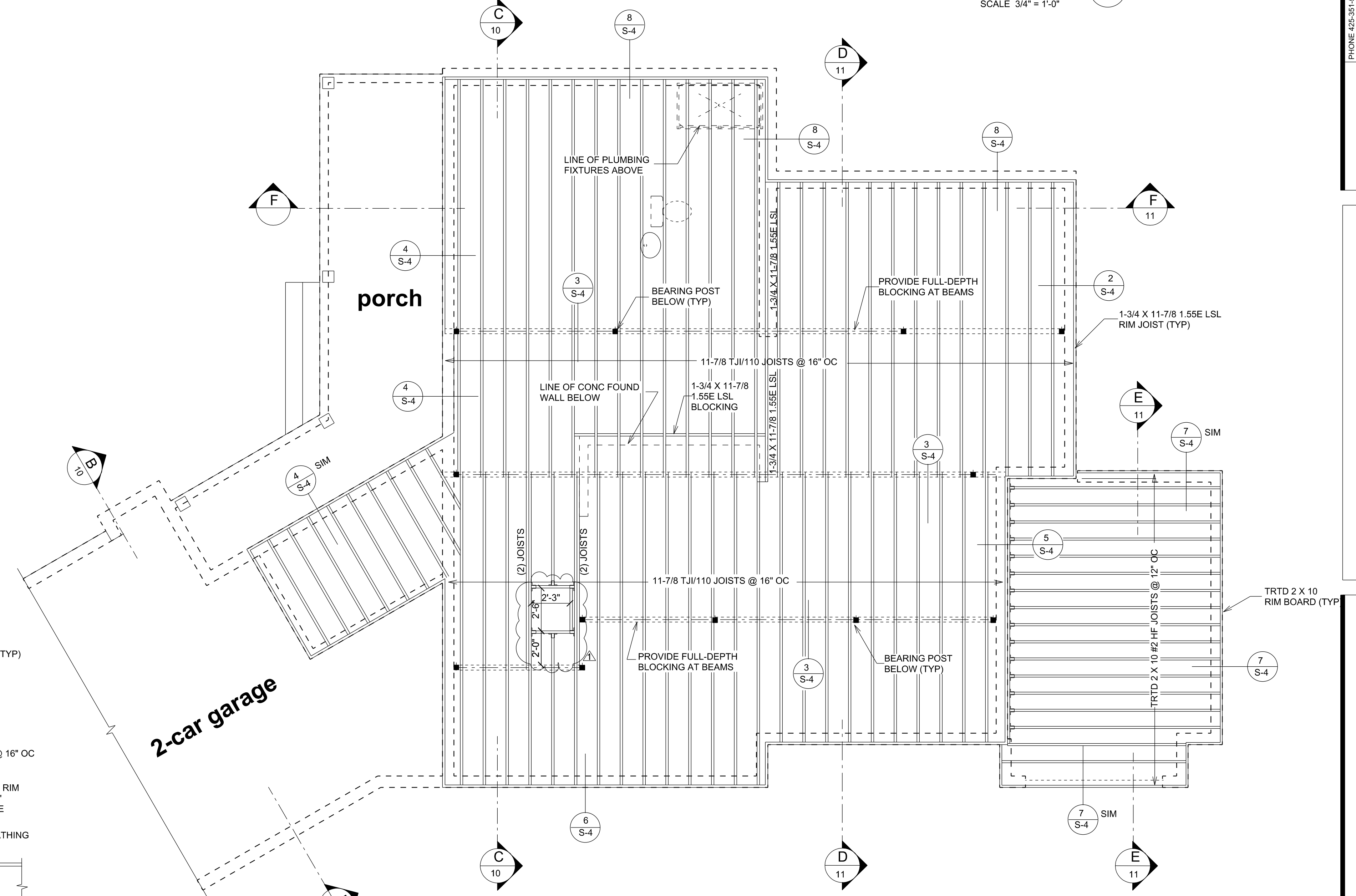
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**DETAIL 8**  
SCALE 3/4" = 1'-0"



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SCALE 3/4" = 1'-0"

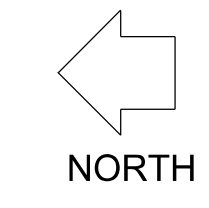


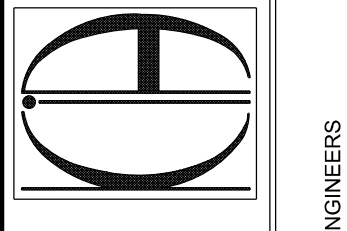
**MAIN LEVEL FLOOR FRAMING PLAN**  
SCALE 1/4" = 1'-0"

PROVIDE TEMP MID-SPAN BRACING FOR LSL AND PSL BEAMS AT SPANS OVER 12'-0".  
ALL BEARING POSTS TO CONTINUE DOWN TO FOUNDATION EITHER DIRECTLY OR INDIRECTLY THROUGH BEAMS OR HEADERS BELOW

**BEARING POST NOTES**  
STAND ALONE BEARING POSTS BEARING ON CONCRETE TO USE ABU OR EQUAL POST BASE AND BC POST CAP TO BEAM ABOVE, U.N.O.  
BEARING POSTS BEARING ON WOOD OR EMBEDDED IN WALL FRAMING TO USE RPBZ OR EQUAL POST BASE AND BC POST CAP TO BEAM ABOVE.

SEE SHEET NOS. S-7 & S-8 FOR SHEAR WALL PLANS, SCHEDULE AND NOTES



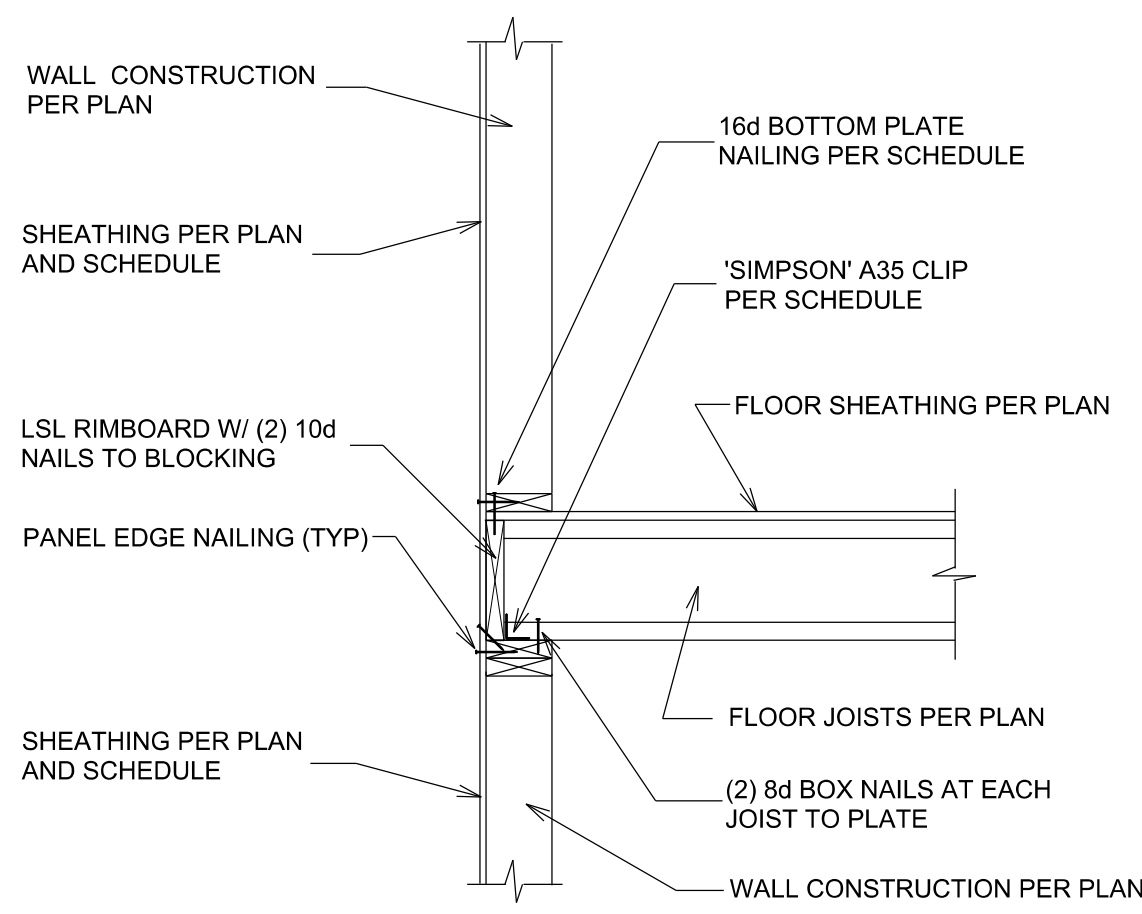
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CHECKED BY:	A.G.			
DATE:	11-30-2021			
 PHONE: 425-591-5899 BELLEVUE, WA 98008 K I A C O CONSULTING STRUCTURAL ENGINEERS				

**PROPOSED NEW RESIDENCE**  
**EDWARD & CATHERINE MORAN**  
5028 WEST MERCER WAY  
MERCER ISLAND, WA 98040

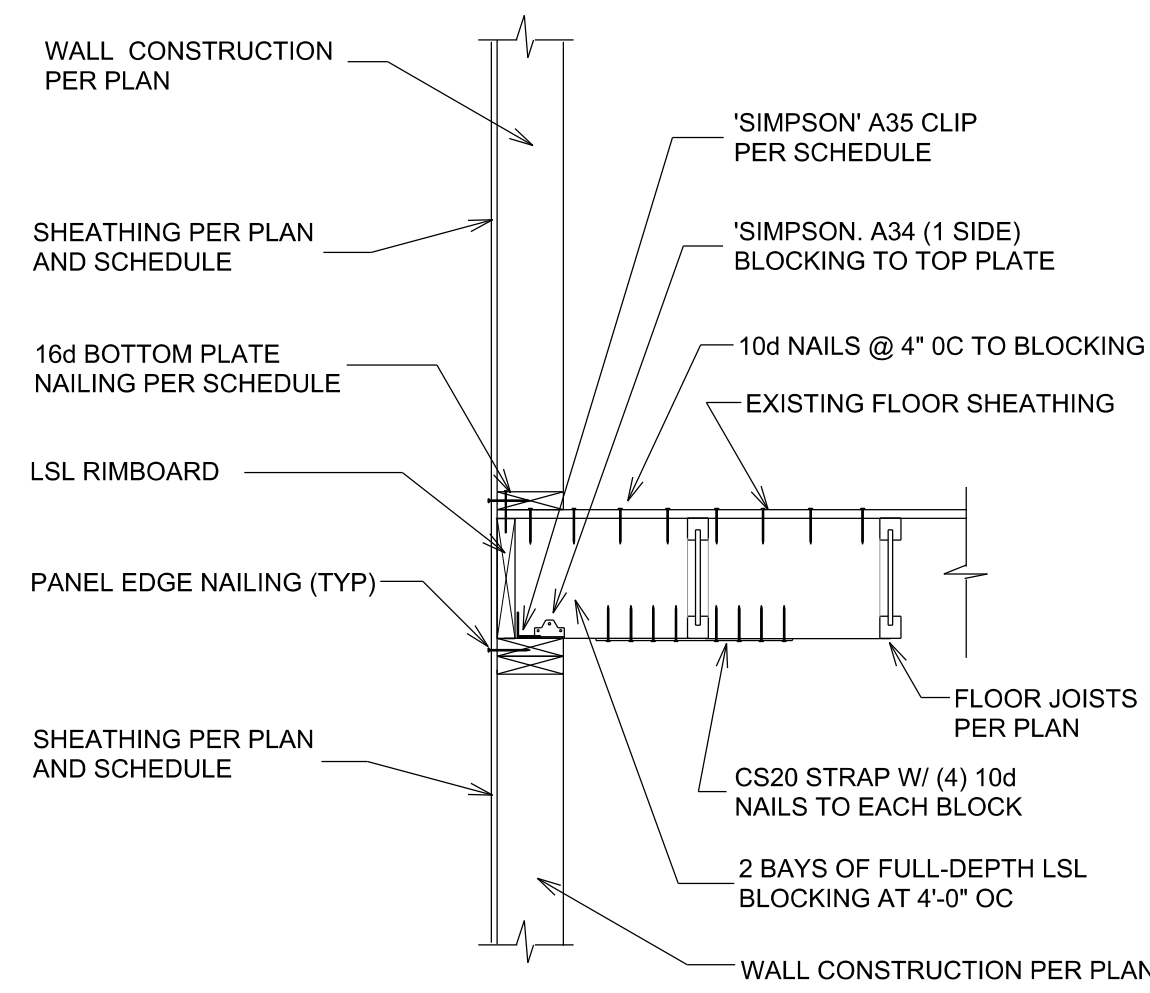
**MAIN LEVEL FLOOR FRAMING**

SHEET	<b>S-4</b>
OF	4
JOB #	

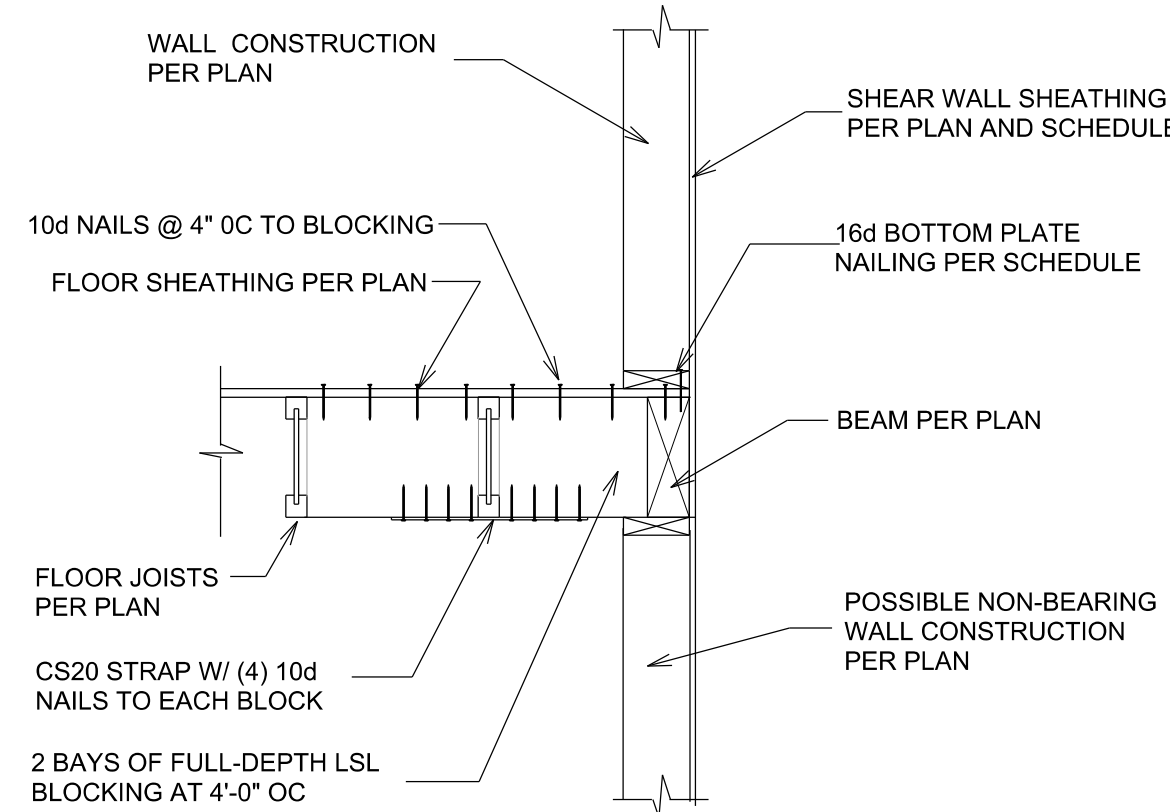




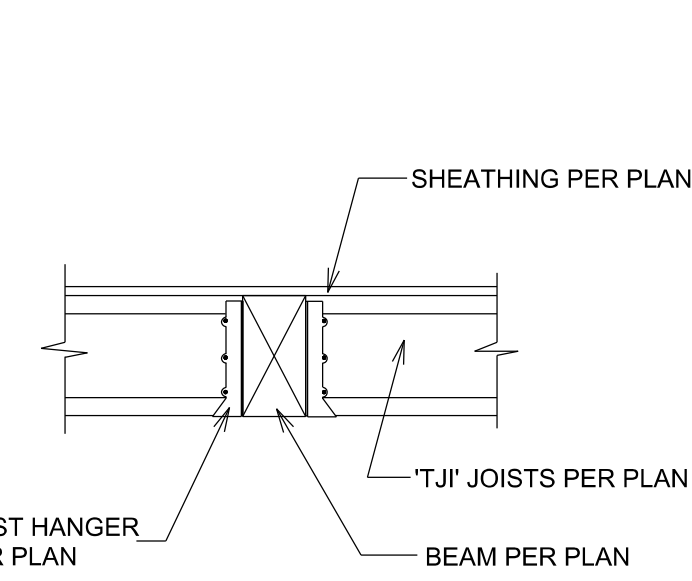
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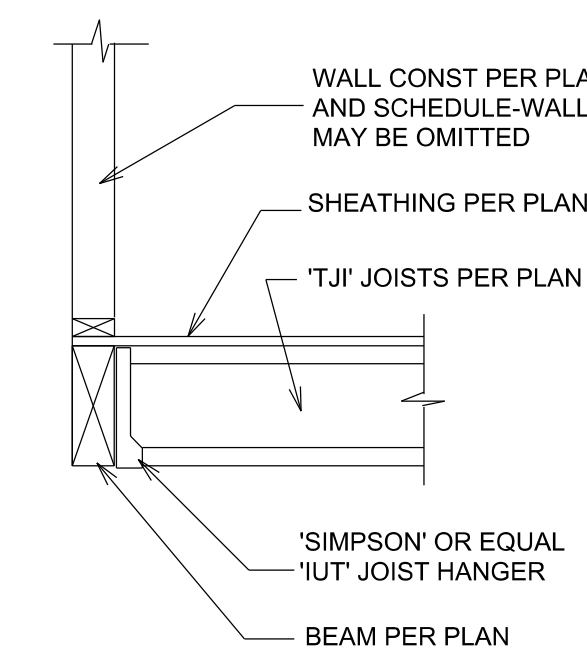
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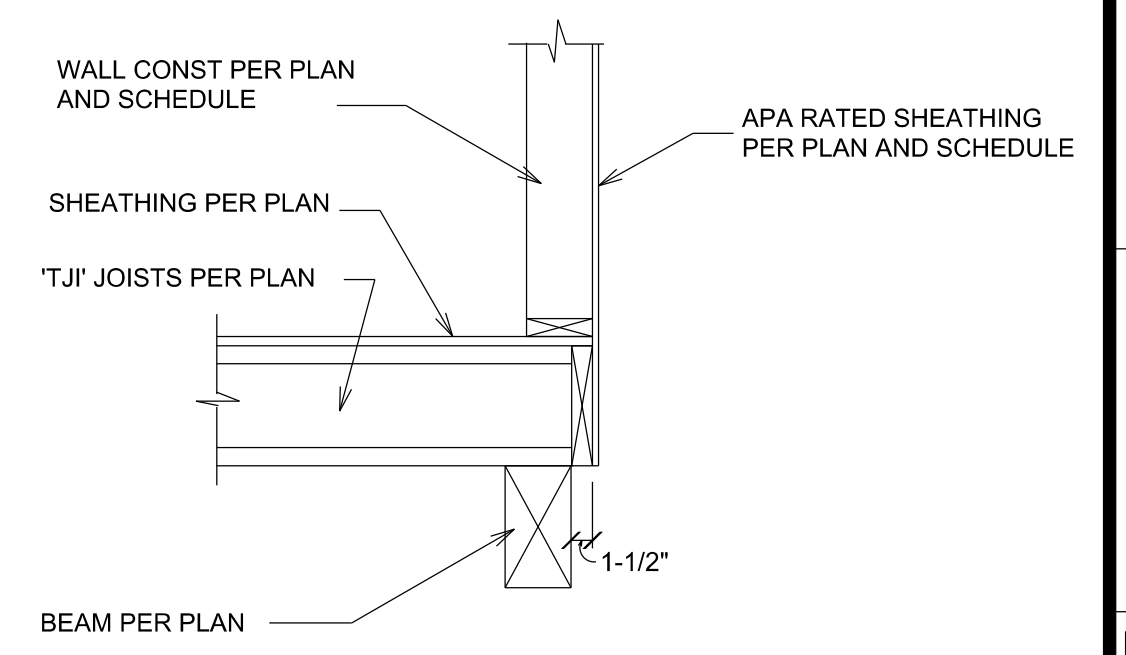
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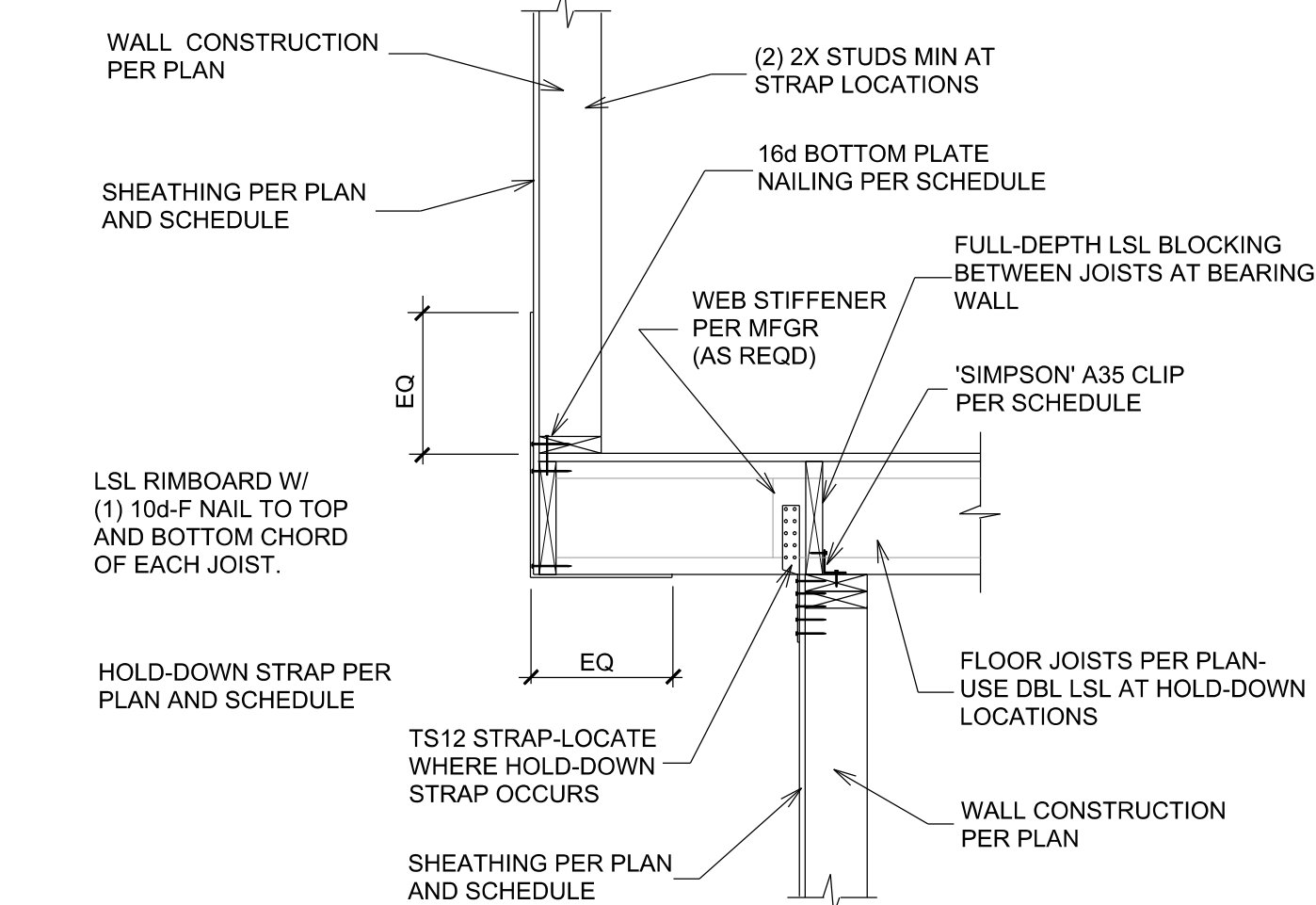
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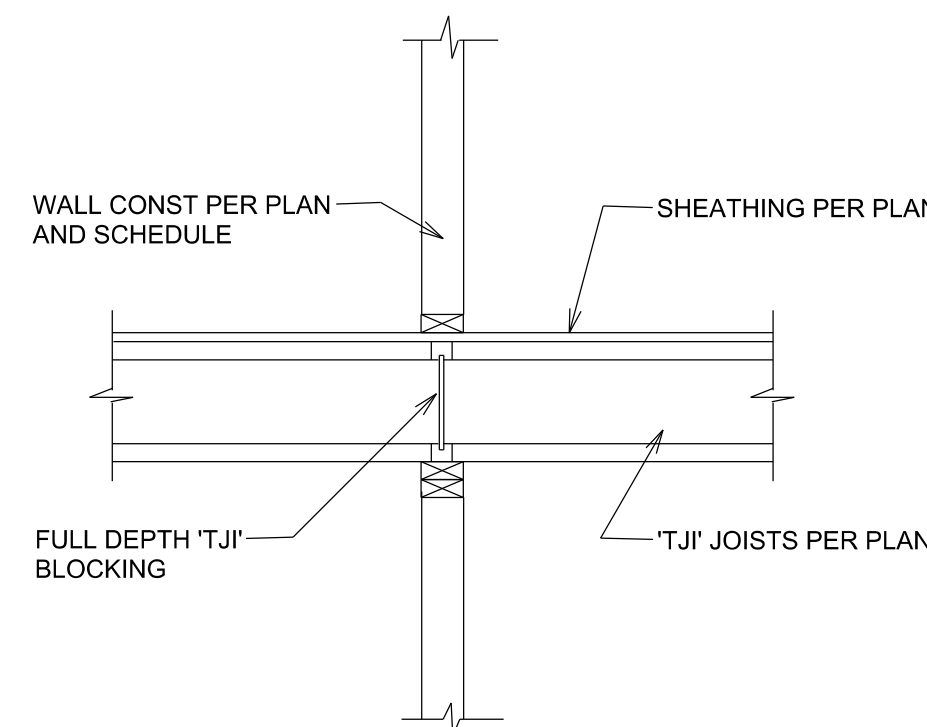
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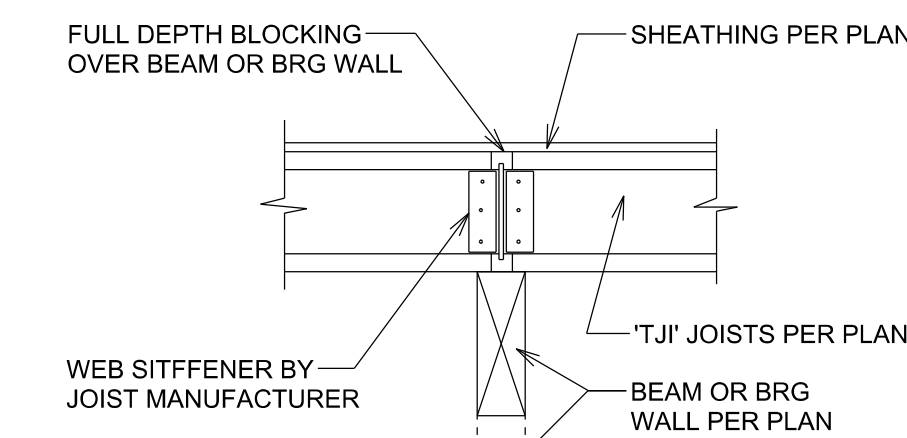
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SCALE 3/4" = 1'-0"



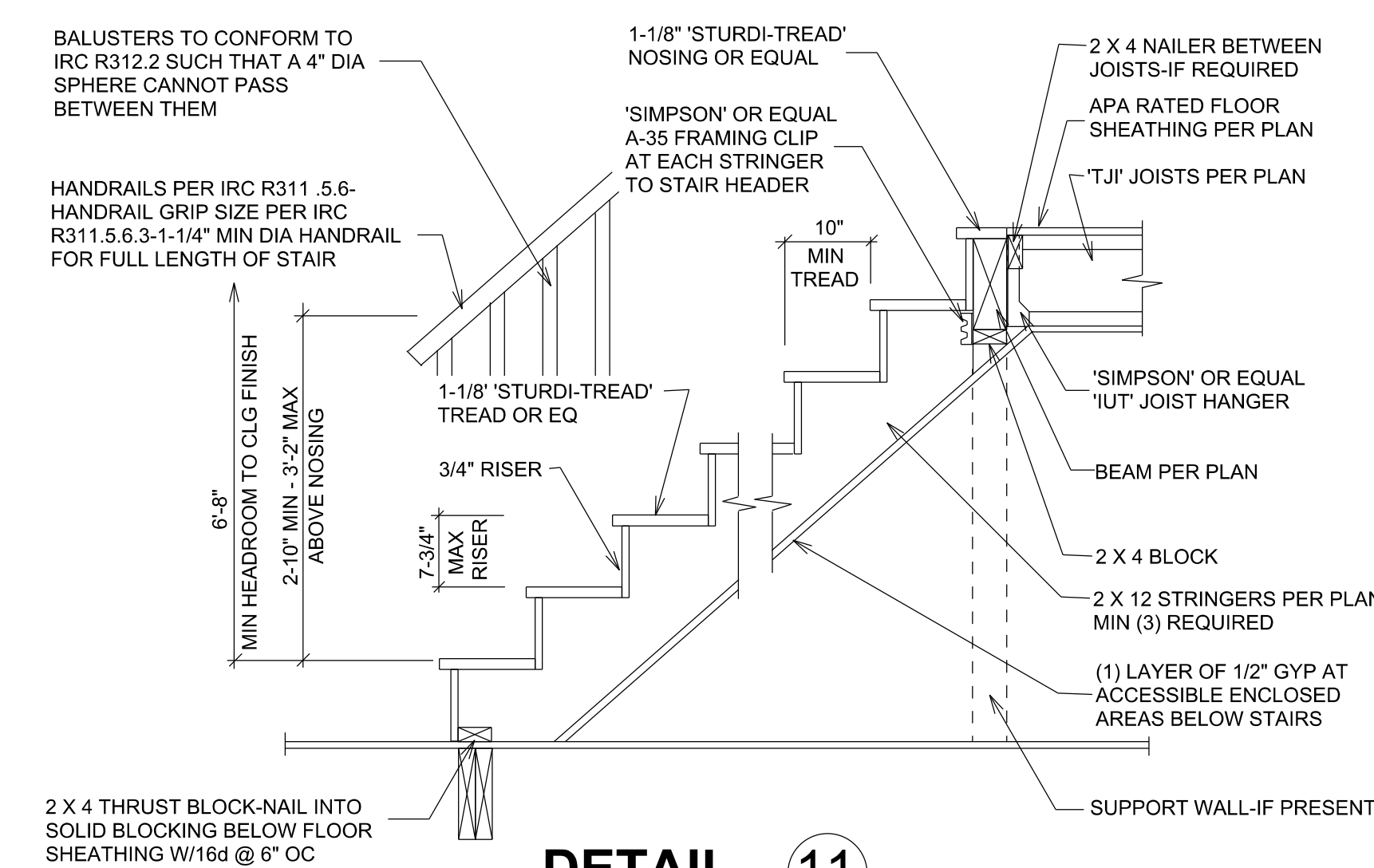
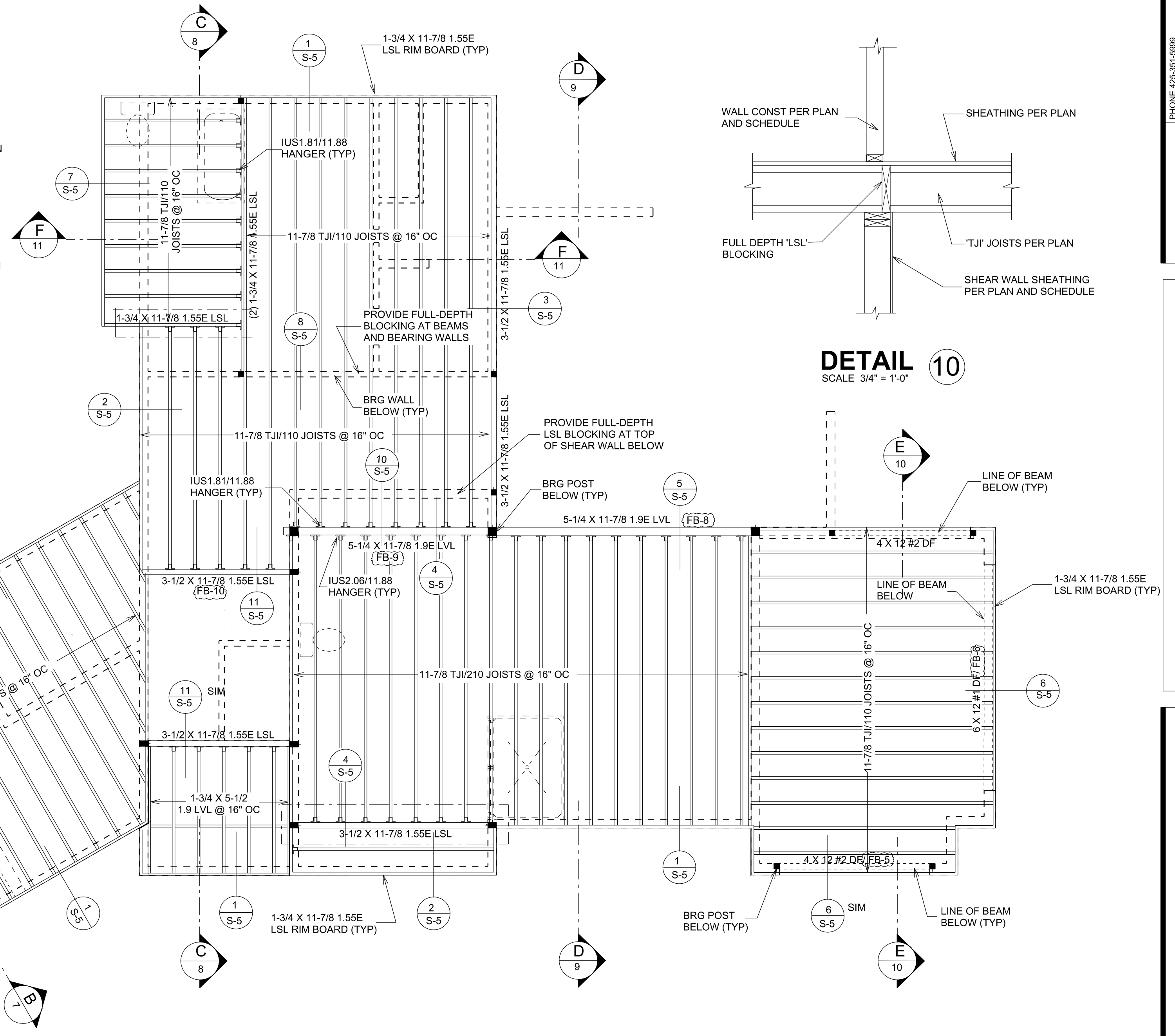
**DETAIL 7**  
SCALE 3/4" = 1'-0"



**DETAIL 8**  
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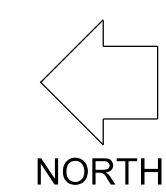


**DETAIL 9**  
SCALE 3/4" = 1'-0"



**DETAIL 11**  
SCALE 3/4" = 1'-0"

**UPPER LEVEL FLOOR FRAMING PLAN**  
SCALE 1/4" = 1'-0"



- FIELD VERIFY ALL HOLD DOWN AND STRAP LOCATIONS.
- BEARING POSTS BELOW POINT LOADS MUST CONTINUE DOWN TO FOUNDATION EITHER DIRECTLY OR THROUGH BEAMS OR HEADERS BELOW.
- INSTALL ALL HOLD-DOWN AND STRAPS PER MANUFACTURER'S SPECIFICATIONS.
- PROVIDE TEMPORARY MID-SPAN BRACING FOR LSL AND PSL BEAMS AT SPANS OVER 12'-0" IN LENGTH.

SEE SHEETS NOS. S-1, S-7 & S-8 FOR SHEAR WALL SCHEDULE PLANS, NOTES AND DETAILS

**BEARING POST NOTES**

STAND ALONE BEARING POSTS BEARING ON CONCRETE TO USE ABU OR EQUAL POST BASE AND BC POST CAP TO BEAM ABOVE, U.N.O.  
BEARING POSTS BEARING ON WOOD OR EMBEDDED IN WALL FRAMING TO USE RP2Z OR EQUAL POST BASE AND BC POST CAP TO BEAM ABOVE, U.N.O.

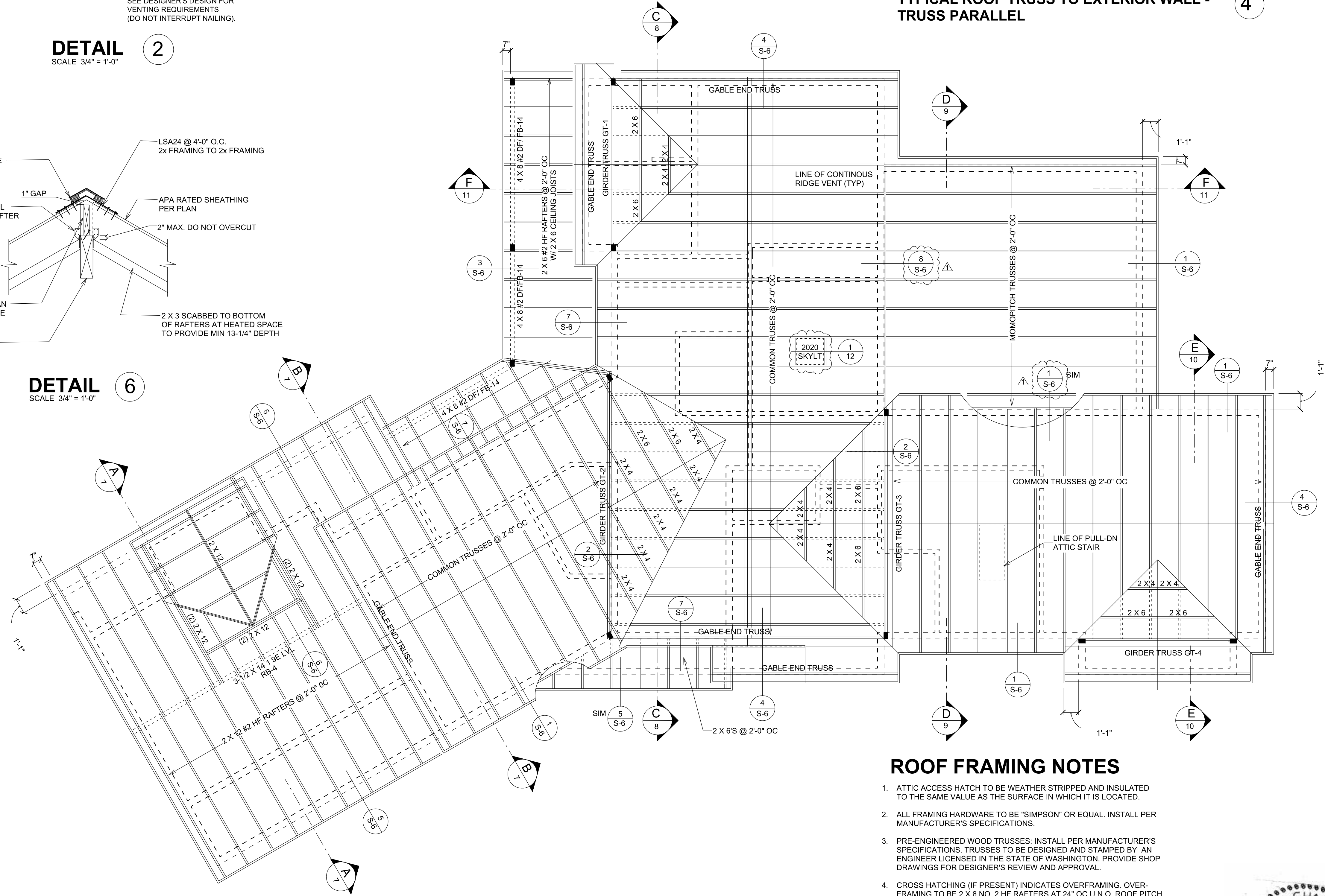
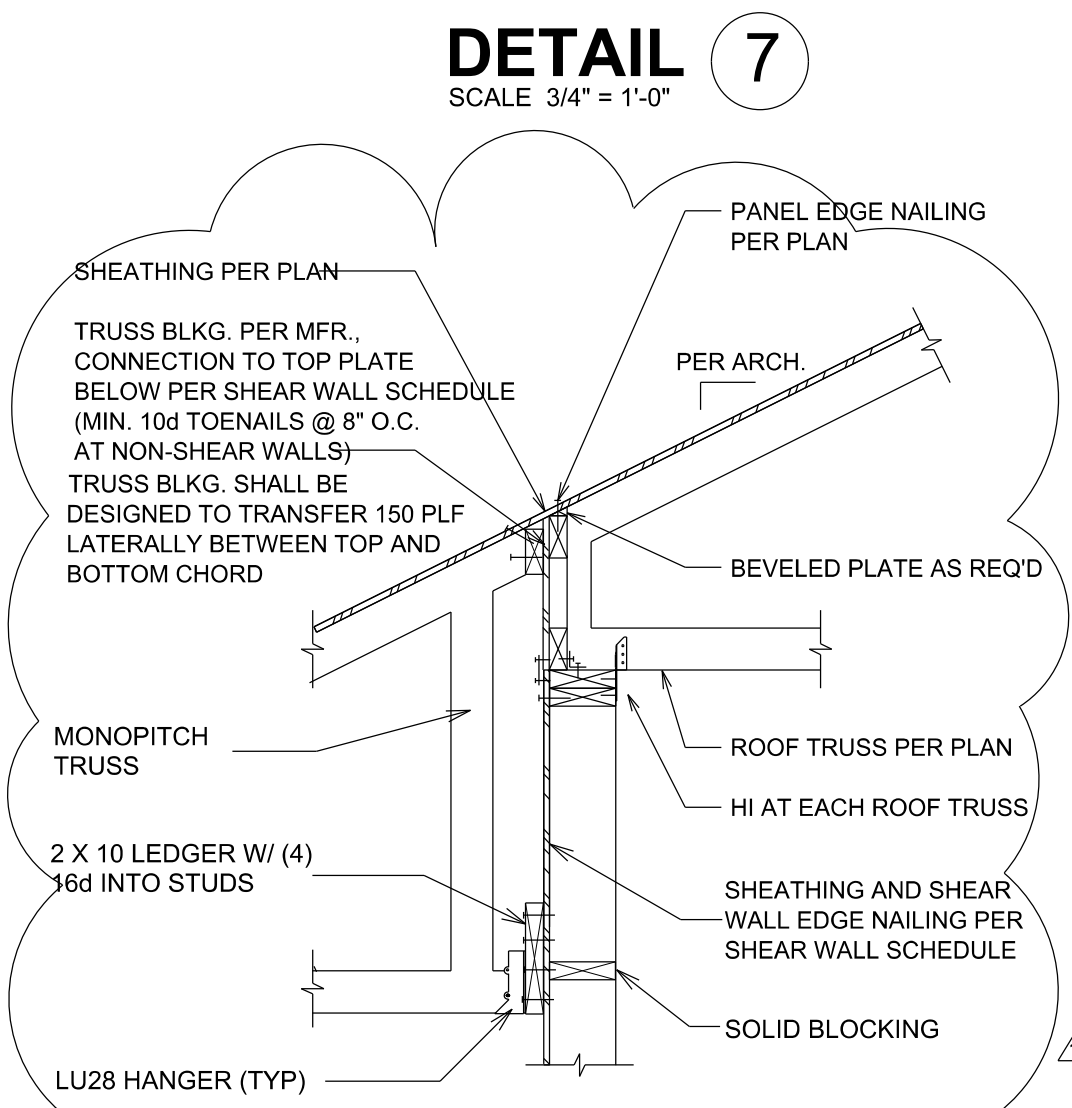
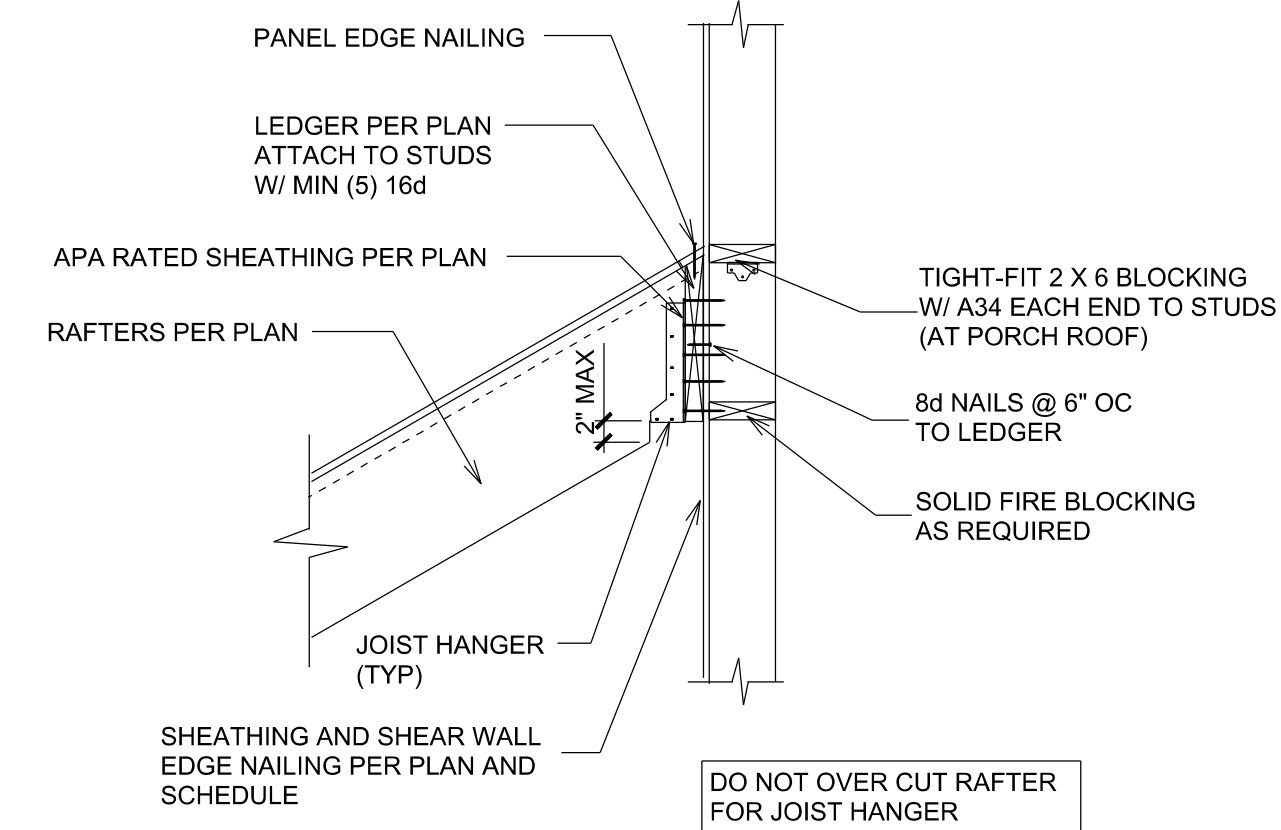
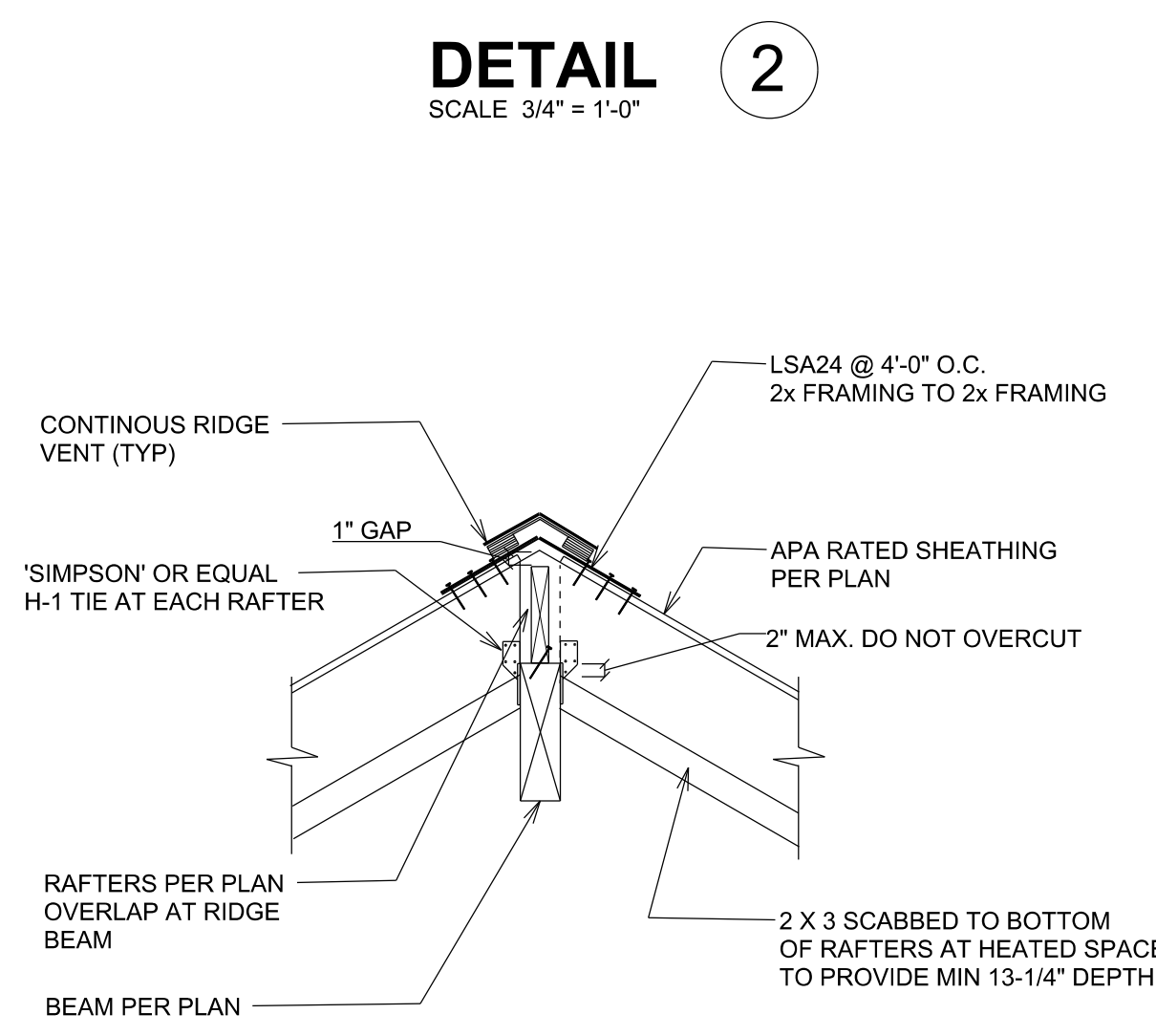
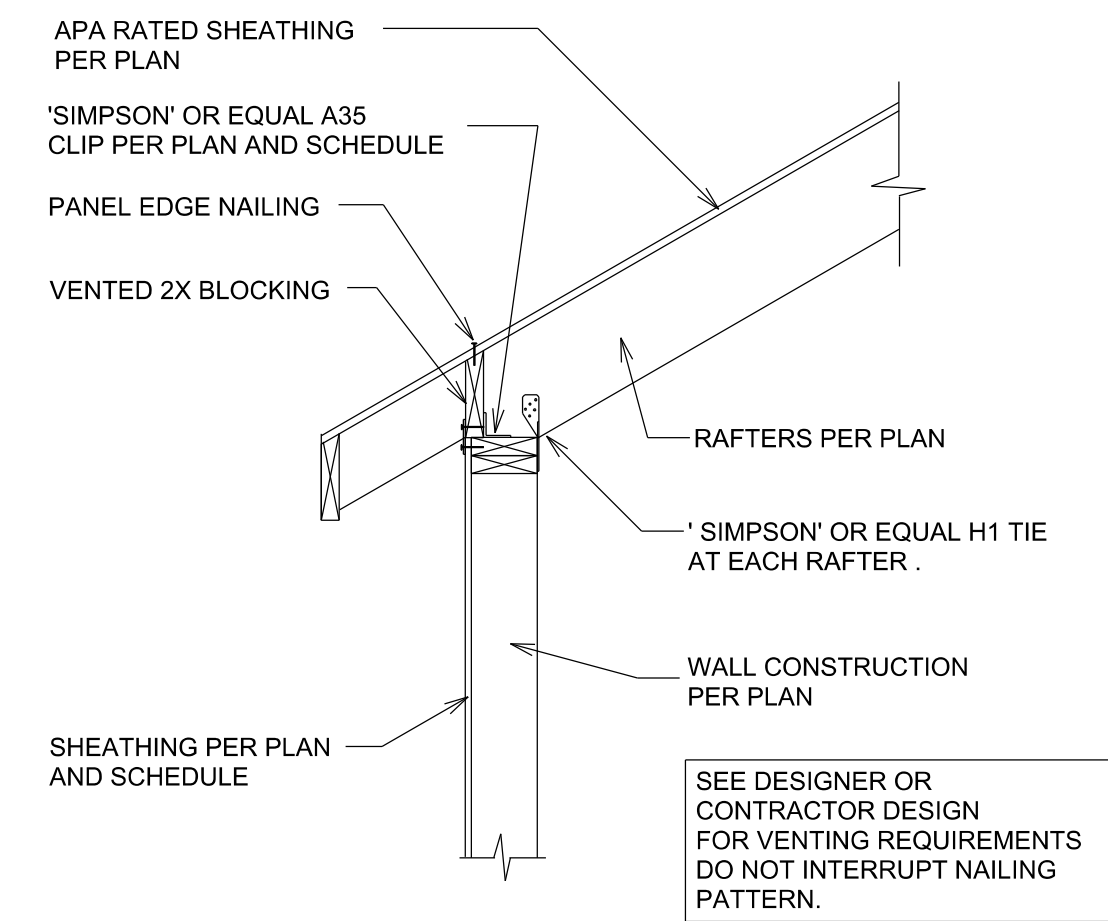
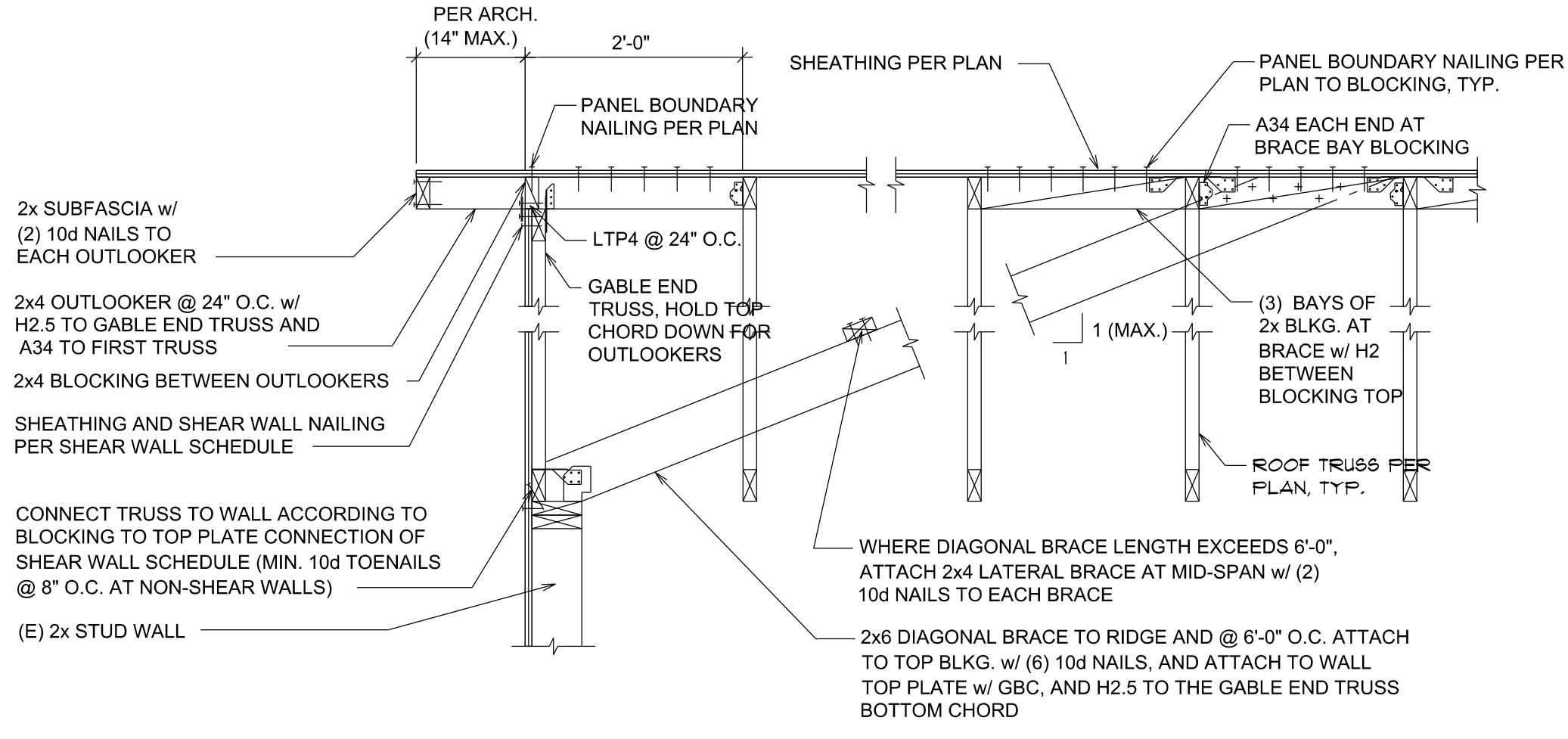
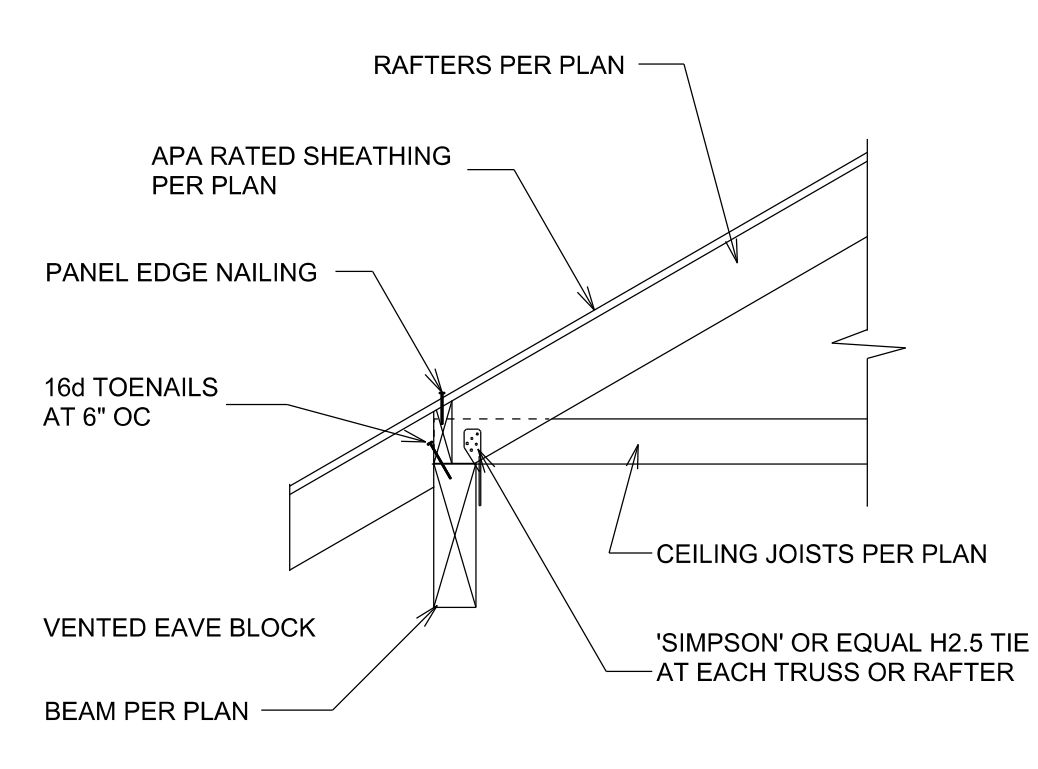
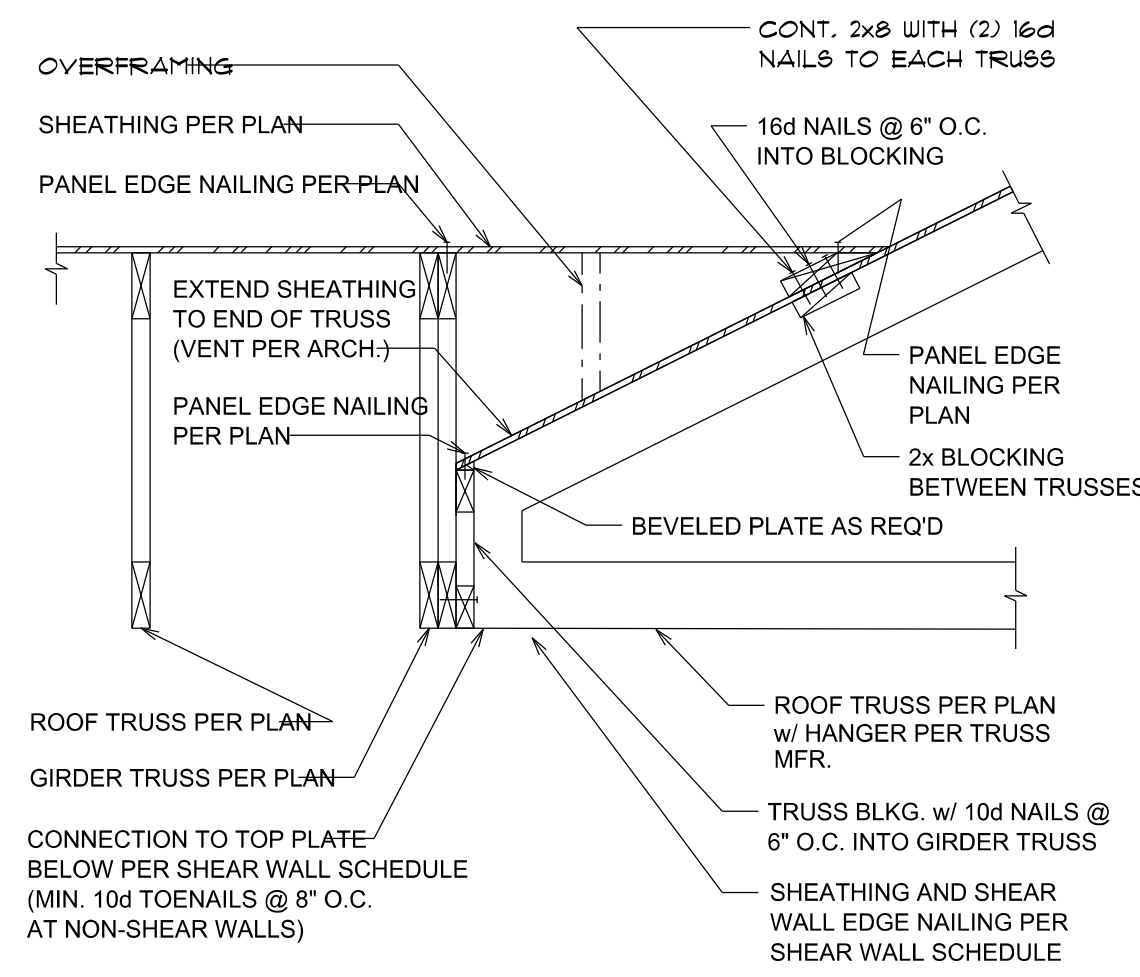
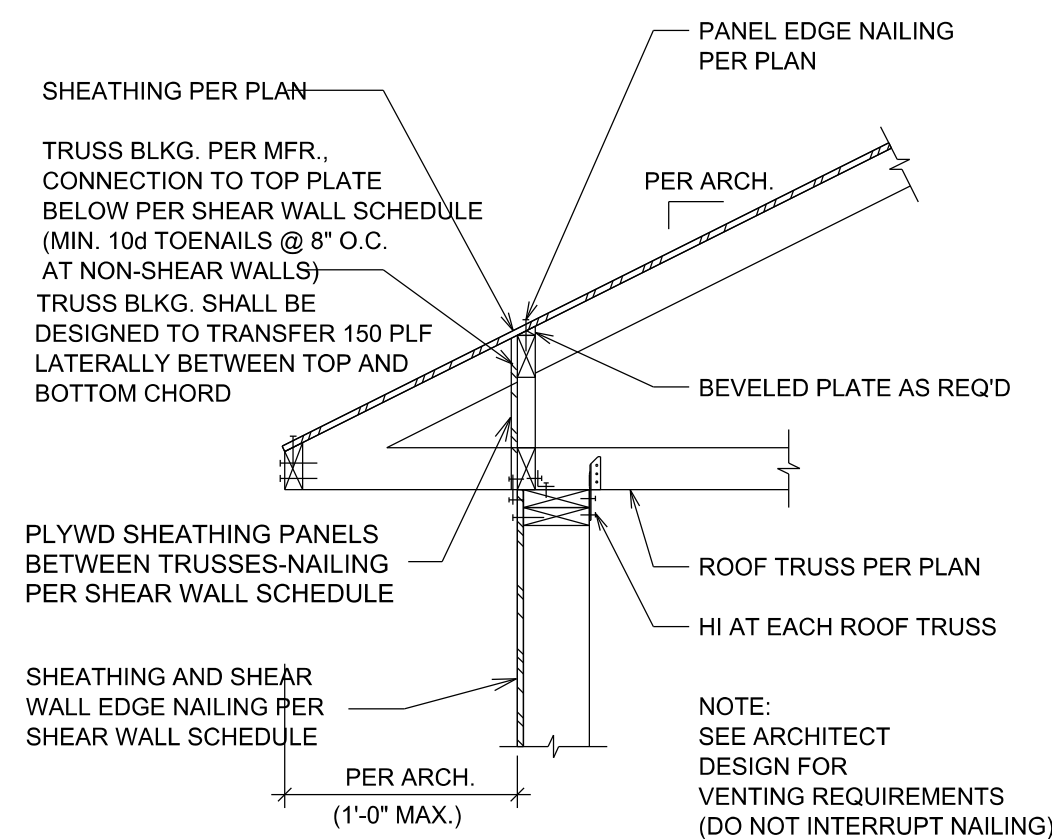


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**PROPOSED NEW RESIDENCE**  
**EDWARD & CATHERINE MORAN**  
5000 WEST MERCER WAY  
MERCER ISLAND, WA 98040

**UPPER LEVEL FLOOR FRAMING**

SHEET  
**S-5**  
JOB #



**ROOF FRAMING NOTES**

- ATTIC ACCESS HATCH TO BE WEATHER STRIPPED AND INSULATED TO THE SAME VALUE AS THE SURFACE IN WHICH IT IS LOCATED.
- ALL FRAMING HARDWARE TO BE "SIMPSON" OR EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- PRE-ENGINEERED WOOD TRUSSES: INSTALL PER MANUFACTURER'S SPECIFICATIONS. TRUSSES TO BE DESIGNED AND STAMPED BY AN ENGINEER LICENSED IN THE STATE OF WASHINGTON. PROVIDE SHOP DRAWINGS FOR DESIGNER'S REVIEW AND APPROVAL.
- CROSS HATCHING (IF PRESENT) INDICATES OVERFRAMING. OVERFRAMING TO BE 2 X 6 NO. 2 HF RAFTERS AT 24" OC U.N.O. ROOF PITCH PER PLAN.
- ALL POST DOWNS TO BE POSITIVELY CONNECTED WITH "SIMPSON" OR EQUAL FRAMING ANCHORS.
- PROVIDE "SIMPSON" OR EQUAL H1 TIE AT EACH END OF RAFTER OR TRUSS.
- ROOF SHEATHING SHALL BE MINIMUM 7/16" APA RATED SHEATHING WITH A PANEL INDEX OF 24/0. NAIL TO FRAMING WITH 8d COMMON NAILS AT 4" OC AT PANEL EDGES AND 12" OC IN THE FIELD.



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**PROPOSED NEW RESIDENCE**  
**EDWARD & CATHERINE MORAN**  
 5028 WEST MERCER WAY  
 MERCER ISLAND, WA 98040

**ROOF FRAMING PLAN**

SHEET	<b>S-6</b>
OF	1
JOB #	

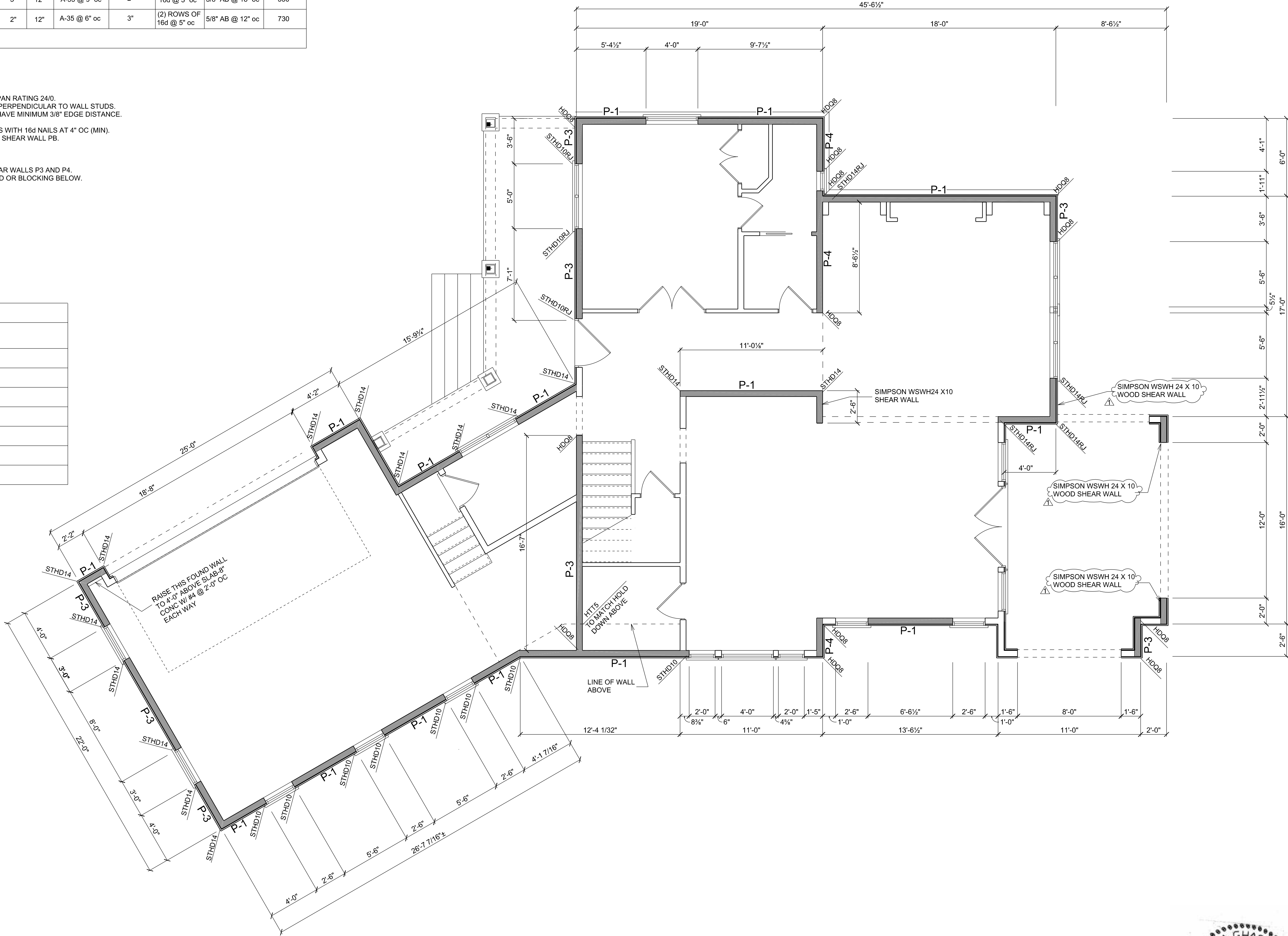
SHEAR WALL SCHEDULE (DOUG FIR STUDS, TOP & BOTTOM PLATES)											
MARK	SHEATHING	BLOCKING	NOMINAL THICKNESS OF SINGLE BLOCKING SILL PLATE	NAIL SIZE	NAIL SPACING		CONNECTION OF JOISTS TO BLOCKING TO TOP PLATES	NOMINAL THICKNESS OF SINGLE BLOCKING RIM JOIST	BOTTOM PLATE CONNECTION		SHEAR CAPACITY (LB/FT)
					EDGE	FIELD			WOOD	CONCRETE	
P-1	7/16" APA RATED SHEATHING (ONE SIDE)	YES	2"	8d COMMON	6"	12"	A-35 @ 18" oc	2"	16d @ 6" oc	5/8" AB @ 32" oc	280
P-2	7/16" APA RATED SHEATHING (ONE SIDE)	YES	2"	8d COMMON	4"	12"	A-35 @ 12" oc	2"	16d @ 4" oc	5/8" AB @ 24" oc	430
P-3	7/16" APA RATED SHEATHING (ONE SIDE)	YES	3"	8d COMMON	3"	12"	A-35 @ 9" oc	2"	16d @ 3" oc	5/8" AB @ 18" oc	550
P-4	7/16" APA RATED SHEATHING (ONE SIDE)	YES	3"	8d COMMON	2"	12"	A-35 @ 6" oc	3"	(2) ROWS OF 16d @ 5" oc	5/8" AB @ 12" oc	730

**SHEAR WALL & HOLD-DOWN NOTES (U.N.O.)**

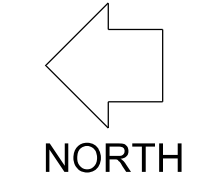
1. APA RATED SHEATHING SHALL BE EXP1/EXP2/EXT OR C-C/C-D/STRUCT II, SPAN RATING 24/0.
2. PLYWOOD AT SHEAR WALLS MAY BE LAID WITH FACE GRAIN PARALLEL OR PERPENDICULAR TO WALL STUDS.
3. FASTENERS SHALL BE DRIVEN FLUSH WITH SURFACE OF SHEATHING AND HAVE MINIMUM 3/8" EDGE DISTANCE.
4. PROVIDE PLYWOOD EDGE NAILING TO ALL POSTS INSIDE SHEAR WALLS.
5. NAIL END STUDS ALL OF ALL SHEAR WALLS TO TRANSVERSE BEARING WALLS WITH 16d NAILS AT 4" OC (MIN).
6. OFFSET PANEL JOINTS ON EACH SIDE OF WALL MINIMUM ONE STUD BAY AT SHEAR WALL PB.
7. USE 1/4" X 3" X 3" PLATE WASHERS ON ALL ANCHOR BOLTS.
8. SOLID BLOCKING SHALL BE INSTALLED AT ALL PLYWOOD JOINTS.
9. BOTTOM PLATE SHALL BE 3X NOMINAL AT SHEAR WALLS P3 AND P4.
10. STUDS AND BLOCKING AT PLYWOOD JOINTS SHALL BE 3X NOMINAL AT SHEAR WALLS P3 AND P4.
11. FOR DOUBLE ROWS OF BOTTOM PLATE NAILS, PROVIDE DOUBLE RIM BOARD OR BLOCKING BELOW.

NAIL DESCRIPTION	NAIL SIZE
8d COMMON	0.131" DIA X 2-1/2" LONG
10d COMMON	0.148" DIA X 3" LONG
16d COMMON	0.162" DIA X 3-1/2" LONG

HOLD-DOWN SCHEDULE		
HOLD-DOWN OR STRAP	POST/END STUD (MIN)	NAILS/BOLTS
CS16	2X	(22) 10d X 2-1/2"
(2) CS16	(2) 2X	(44) 10d X 2-1/2"
CMSTC16	(2) 2X	(50) 10d X 3-1/4"
HTT5	(2) 2 X 6 OR 4 X 6	(26) 16d X 1-1/2" SIMPSON SB 5/8" X 24 BOLT
HDQ8	4 X 6	(20) 1/4" X 3" SDS SCREWS (28) 1" X 30" BOLT
STHD10/10RJ	(2) 2X	(28) 10d X 3-1/4"
STHD14/14RJ	(2) 2X	(30) 10d X 3-1/4"



**MAIN LEVEL SHEAR WALL PLAN**  
SCALE 1/4" = 1'-0"



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1 12/08/2022  
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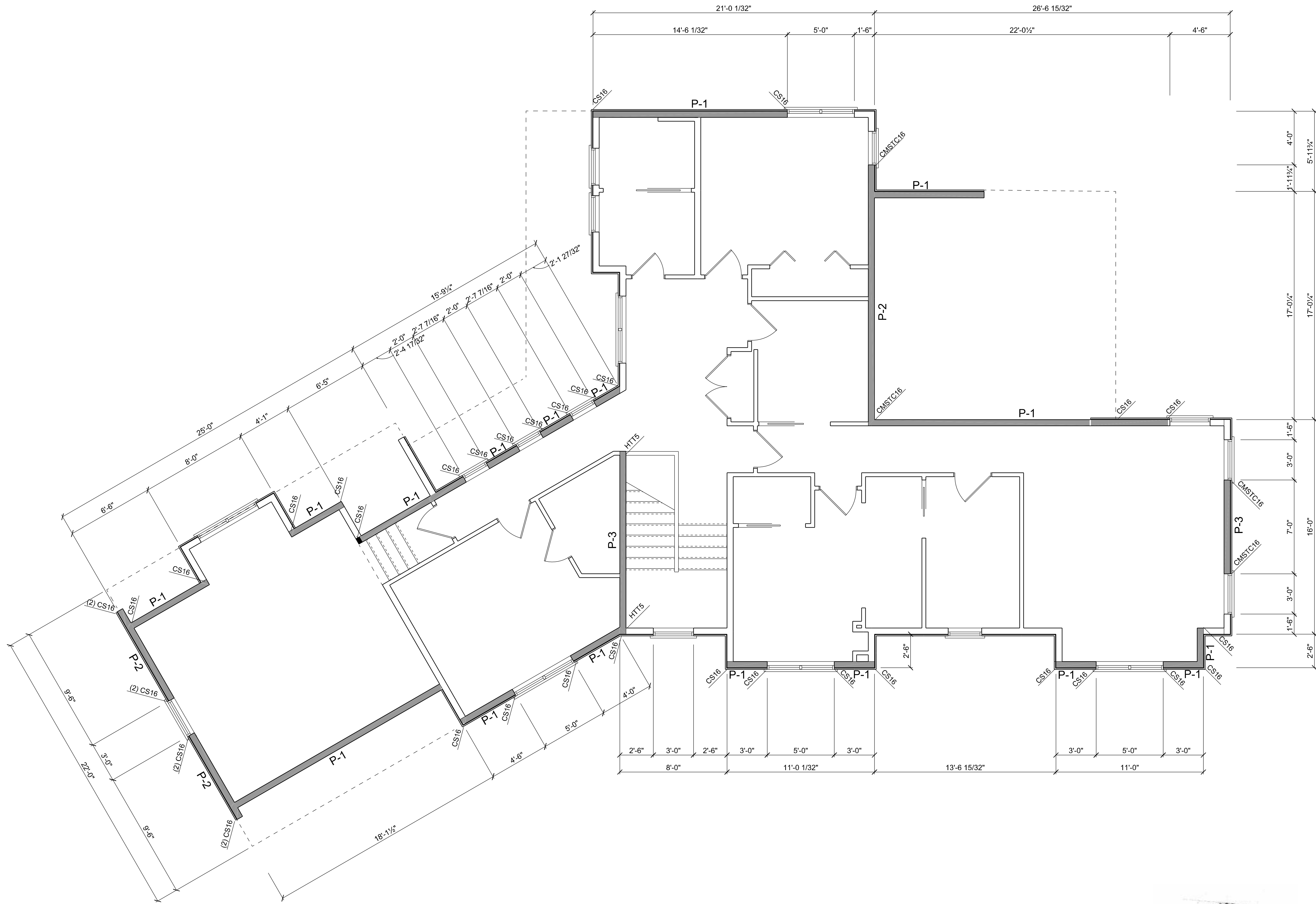
PHONE: 425-351-5899  
RELEVUE, WA 98008

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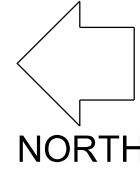
**PROPOSED NEW RESIDENCE**  
**EDWARD & CATHERINE MORAN**  
5028 WEST MERCER WAY  
MERCER ISLAND, WA 98040

**MAIN LEVEL SHEAR WALL PLAN**

SHEET  
**S-7**  
OF  
-  
JOB #



**UPPER LEVEL SHEAR WALL PLAN**  
SCALE 1/4" = 1'-0"



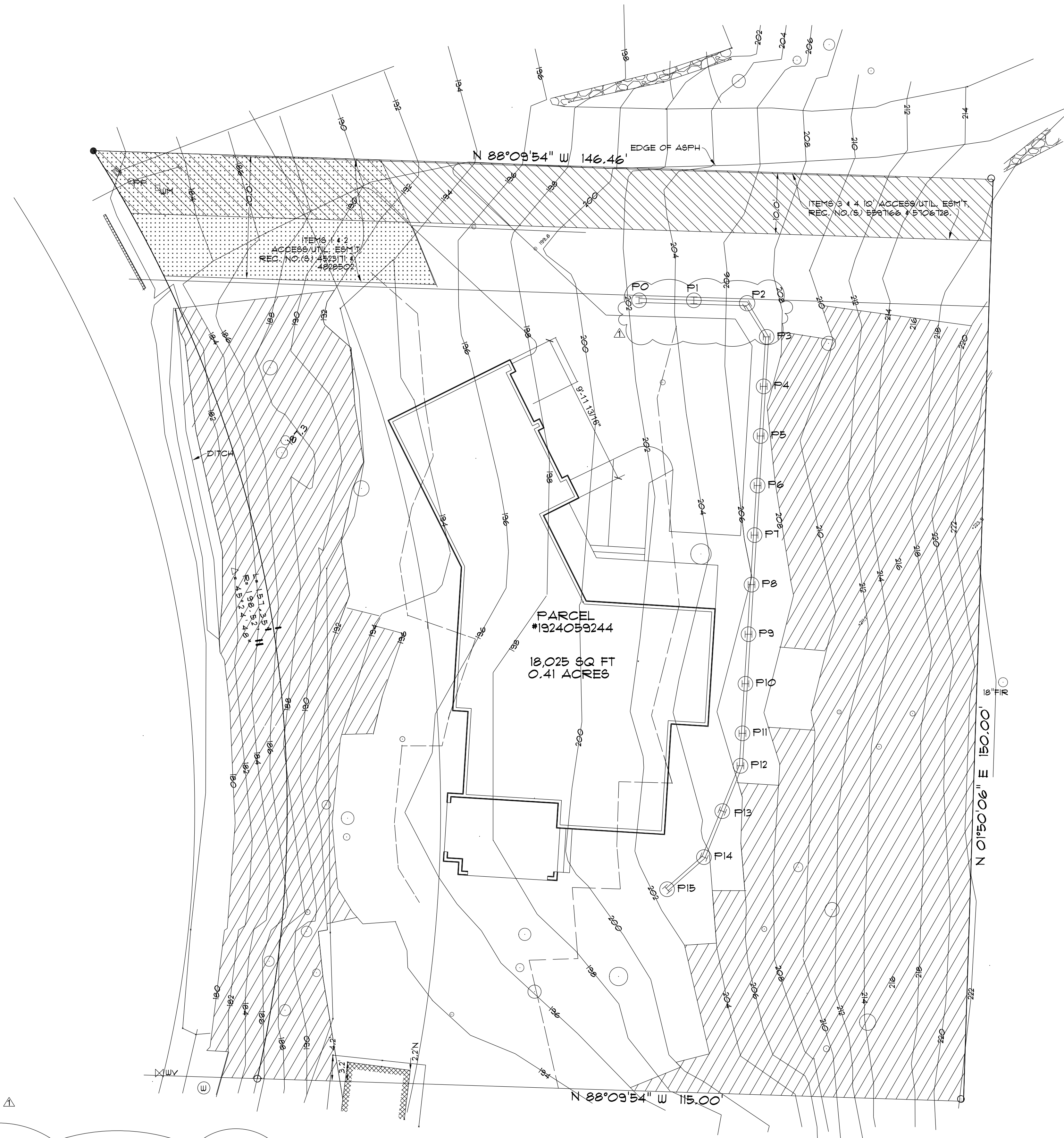
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**PROPOSED NEW RESIDENCE**  
**EDWARD & CATHERINE MORAN**  
 5028 WEST MERCER WAY  
 MERCER ISLAND, WA 98040

**UPPER LEVEL SHEAR WALLS**

SHEET  
**S-8**  
 OF  
 -  
 JOB #





PILE SCHEDULE					
"H" (FT) MAX. HT	"D" (FT) MIN. EMBED	PILE SECTION F <sub>y</sub> =50 KSI	AUGER DIAMETER (INCHES)	SPACING ON CENTER	PILE NUMBER
6'-6" OR LESS	13'-0"	W16X26	30"	8'-0"	P0, P15
8'-6"	16'-0"	W16X31	30"	8'-0"	P1, P2
10'-6"	20'-0"	W16X50	30"	8'-0"	P3, P4, P5, P6, P7, P8
12'-0"	21'-0"	W16X100	30"	8'-0"	P9, P10, P11, P12, P13, P14

**SHORING PLAN**  
SCALE: 1"=10'-0"

CROSS HATCHING INDICATES  
STEEP SLOPE AREAS  
DASHED LINES INDICATE  
STEEP SLOPE BUFFER

- SEE SOIL'S REPORT FOR RECOMMENDATIONS DURING EXCAVATION AND TEMPORARY SHORING.
- MAXIMUM TEMPORARY CUT SLOPE IS: 1.5H:1V
- CONTRACTOR MAY REVISE THE NUMBER OF FILES ACCORDING TO SITE CONDITION WITH SOIL'S ENGINEER AND STRUCTURAL ENGINEER APPROVAL.
- SOIL'S ENGINEER SHALL INSPECT AND APPROVE ALL EXCAVATION AND FILE PLACEMENT. PROVIDE SPECIAL INSPECTION BY GEOTECH PER 2018 IBC.

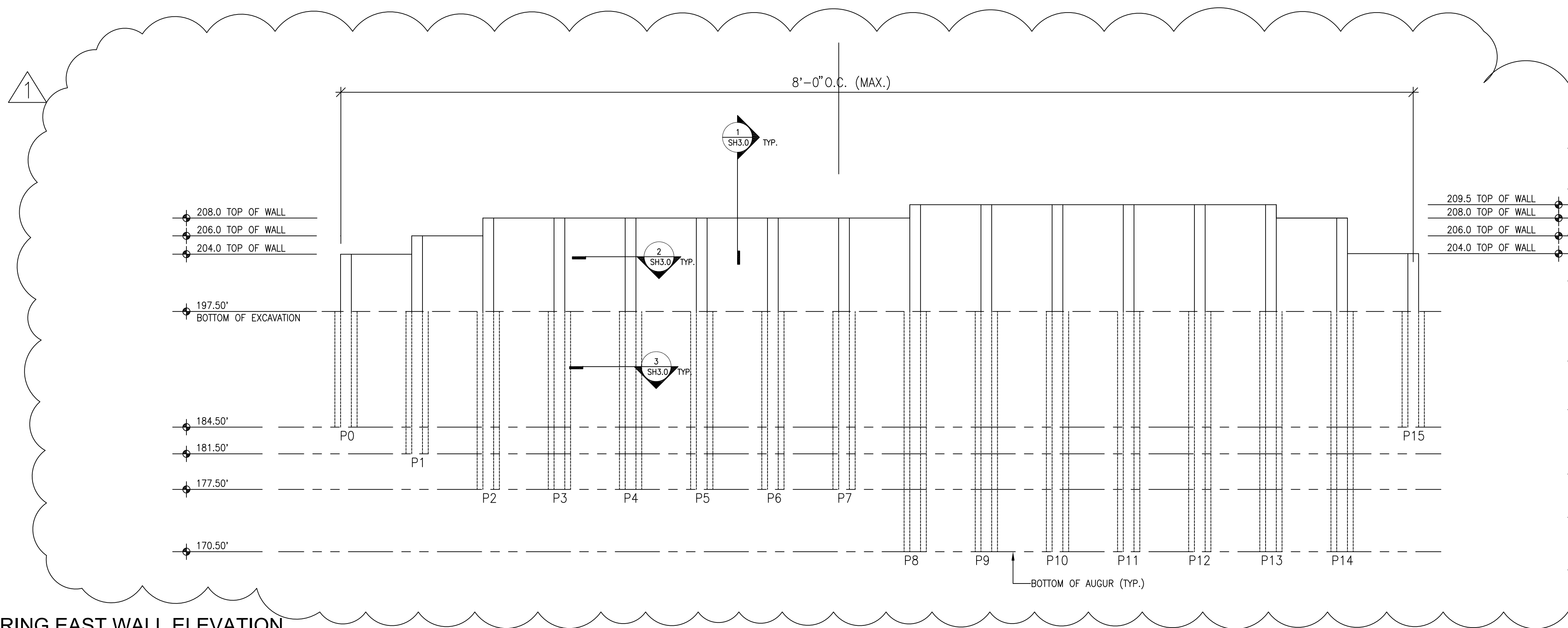
PHONE 425-351-5989  
P.O. BOX 7258  
BELLEVUE, WA 98008

K.A. CO.  
CONSULTING STRUCTURAL ENGINEERS

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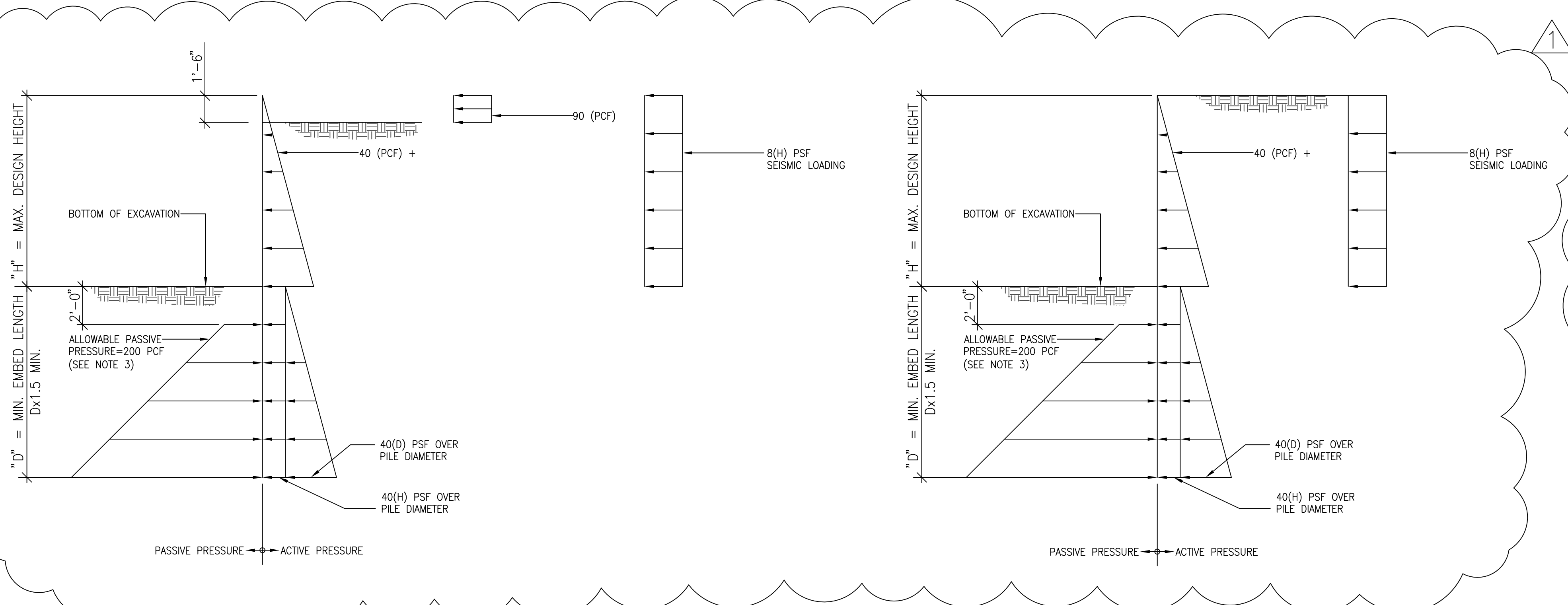
**PROPOSED NEW RESIDENCE**  
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MERCER ISLAND, WA 98040

**SHORING WALL PLAN**



- NOTES:
1. SAFETY FACTOR = 1.5 (PER SOIL'S REPORT)
  2. MINIMUM EMBEDMENT SOLDIER PILE BELOW THE BASE OF EXCAVATIONS PER PILE SCHEDULE ON SHEET SH-1.
  3. PASSIVE EARTH PRESSURE IS TAKEN OVER 2-PILE DIAMETERS.
  4. EARTH PRESSURE ON LAGGING BETWEEN SOLDIER PILES IS REDUCED BY 50% PER SOIL'S REPORT.
  5. MAXIMUM PILE SPACING IS 8'-0".
  6. CONTRACTOR TO VERIFY EXISTING GRADES.
  7. SEE SOIL'S REPORT FOR RECOMMENDATION DURING EXCAVATION AND TEMPORARY SHORING.
  8. SOIL'S ENGINEER SHALL PROVIDE SPECIAL INSPECTION PER 2018 IBC.
  9. PROVIDE SURVEY MONITORING PROGRAM AS REQUIRED BY THE SOIL'S ENGINEER.
  10. REFER SOIL'S REPORT FOR MAINTANANCE SCHEDULE AND DEBRIS CLEAN UP.

1 SHORING EAST WALL ELEVATION  
SCALE: 1/8"=1'-0"



PILE SCHEDULE					
"H" (FT) MAX. HT	"D" (FT) MIN. EMBED	PILE SECTION Fy=50 KSI	AUGER DIAMETER (INCHES)	SPACING ON CENTER	PILE NUMBER
6'-6" OR LESS	13'-0"	W16X26	30"	8'-0"	P0, P15
8'-6"	16'-0"	W16X31	30"	8'-0"	P1, P2
10'-6"	20'-0"	W16X50	30"	8'-0"	P3, P4, P5, P6, P7
12'-0"	27'-0"	W16X100	30"	8'-0"	P8, P9, P10, P11, P12, P13, P14

3 SOIL PRESSURE DIAGRAM (P1 THRU P8 & P16)

2 SOIL PRESSURE DIAGRAM (P9 THRU P15)

REVISION EDITION 12-8-22  
 BLDG DEPT. 2  
 DRAWN BY: A.G.  
 CHECKED BY: A.G.  
 DATE: 11-30-2021

PHONE: 425-351-5999  
 P.O. BOX 7255  
 BELLEVUE, WA 98008

K I A C O  
 CONSULTING STRUCTURAL ENGINEERS

PROPOSED SINGLE FAMILY RESIDENCE  
 EDWARD & CATHERINE MORAN  
 5000 WEST MERCER WAY  
 MERCER ISLAND, WA 98040

ELEVATIONS & NOTES

## GENERAL SHORING NOTES

1. CODE REQUIREMENTS: ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2015 EDITION.
2. REFERENCE DOCUMENTS: GEOTECHNICAL PROJECT NO. JN16346 BY GEOTECH CONSULTANTS, INC. DATED SEPTEMBER 19, 2016 AND SUPPLEMENTAL LETTER. TOPOGRAPHY AND BOUNDARY SURVEY AS PROVIDED BY THE OWNER.
3. DESIGN LOADS: IN ADDITION TO THE DEAD LOADS, THE SOIL PRESSURES SHOWN ON SHEET SH2.0 WERE USED FOR THE DESIGN.
4. SUBMITTALS: SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR CONSTRUCTION FOR CONC. MIX. DESIGN, STRUCTURAL STEEL, AND MISCELLANEOUS METAL. PROPOSED DEMOLITION AND SHORING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
5. INSPECTION: INSPECTION BY A QUALIFIED SOILS ENGINEER AND APPROVED TESTING LAB WILL BE PROVIDED BY OWNER FOR PILE PLACEMENT. SOIL'S ENGINEER SHALL INSPECT PILE PLACEMENT AND PREPARED SOIL BEARING SURFACES PRIOR TO INSTALLATION OF PILES. SUBMIT DAILY REPORTS TO THE CITY OF BELLEVUE, SOIL'S ENGINEER, AND STRUCTURAL ENGINEER.
6. SPECIAL CONDITION: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITION IN THE FIELD AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF ALL FIELD CHANGES PRIOR TO FABRICATION AND INSTALLATION.
7. UTILITY LOCATION: THE CONTRACTOR SHALL UTILIZE THE SERVICES OF THE "UTILITY LOCATOR SERVICE" (1-800-424-5555) TO VERIFY THE EXTENT AND LOCATIONS OF SITE UTILITIES. SOLDIER PILES WHICH INTERFERE WITH UTILITIES SHALL BE RELOCATED. NEW PILE LOCATIONS SHALL BE APPROVED BY STRUCTURAL ENGINEER.
8. CONCRETE: CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE.

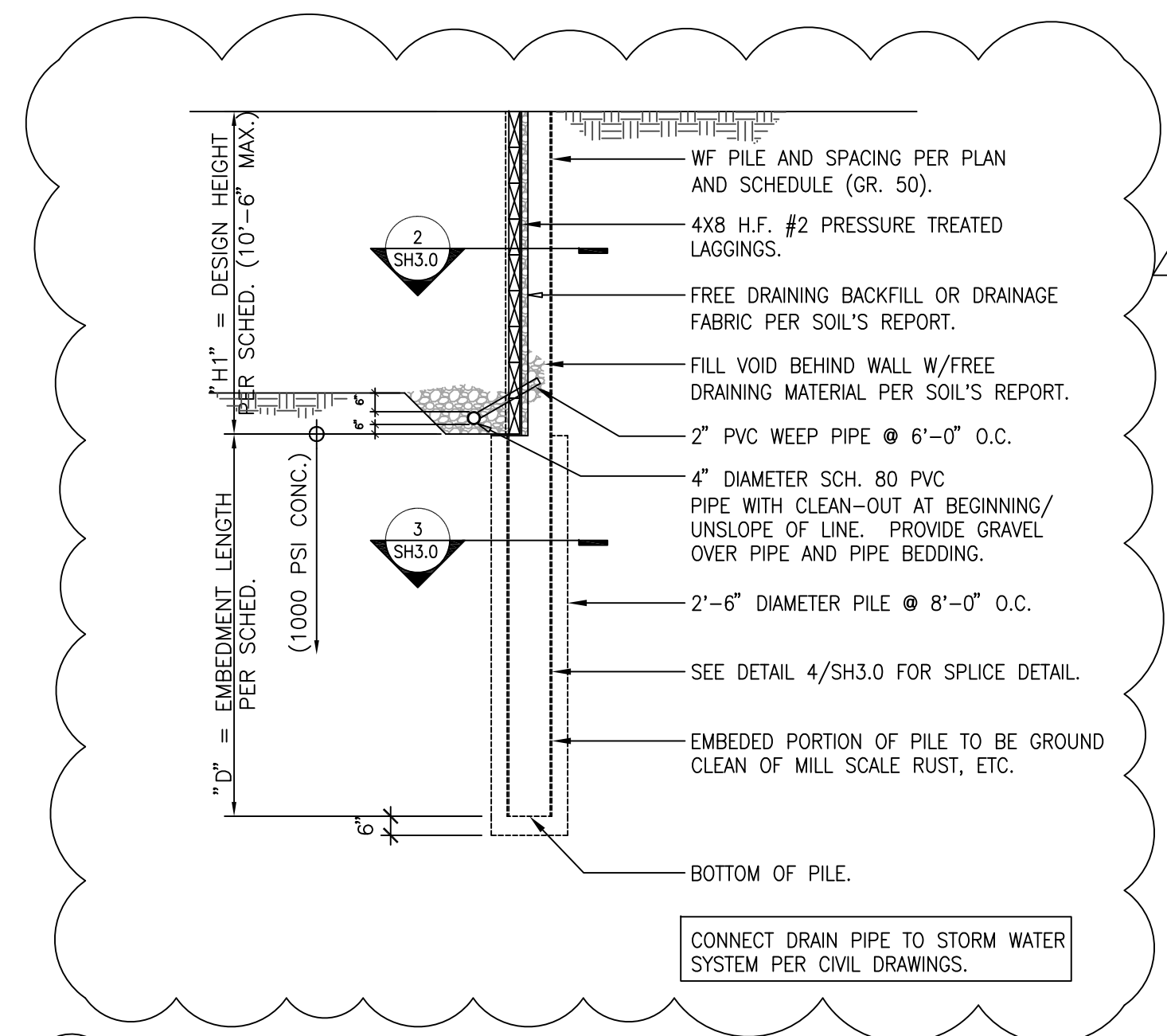
f'c (PSI)	MIN. CEMENT PER CUBIC YARD	USE
1000	1 1/2 SACKS	PILE STRUCTURAL GROUT

AS AN ALTERNATE TO THE ABOVE, THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS TO THE STRUCTURAL ENGINEER FOR REVIEW TWO WEEKS PRIOR TO PLACING CONCRETE.

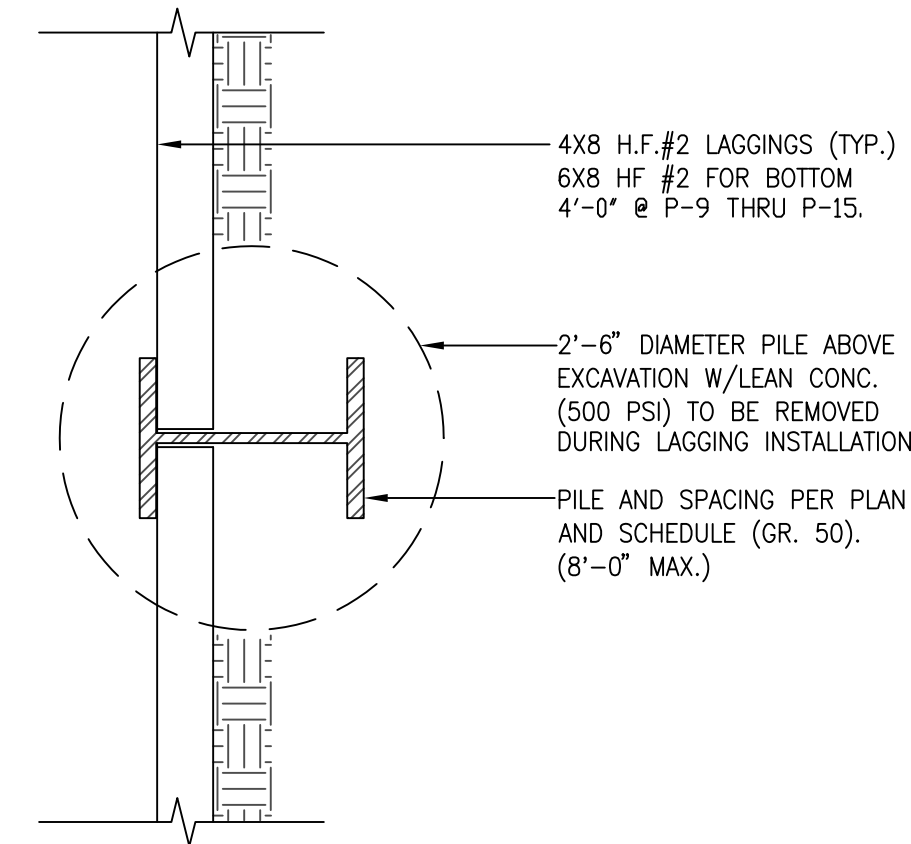
9. STEEL: DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
  - A. SPECIFICATIONS: AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
  - B. WELDING: AWS D1.1, LATEST EDITION. AWS PREQUALIFIED JOINT DETAILS.
  - C. WELDER CERTIFICATION: WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO)
  - D. WIDE FLANGE: ASTM A 992 (Fy=50,000 PSI)
  - E. WELDING ELECTRODES: E70XX
10. TIMBER LAGGING: LAGGING SHALL CONFORM TO "GRADING RULES," WEST COAST LUMBER INSPECTION BUREAU (WCLIB), LATEST EDITION. LAGGING SHALL BE DOUGLAS FIR-LARCH NO.1 ROUGH CUT ; Fb = 1000 PSI. LAGGING SHALL BE PRESSURE-TREATED WITH WATERBORNE PRESERVATIVES. FIELD CUTS WHICH EXPOSE UNTREATED WOOD ARE TO BE FIELD TREATED IN ACCORDANCE WITH AWPA STANDARDS.
11. SOILS: SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR MORE COMPLETE INFORMATION, INCLUDING RECOMMENDATIONS FOR SHORING IN GENERAL, SHORING, MONITORING, EXCAVATION, DRAINAGE AND SITE PROTECTION.
12. FINAL TOP OF PILE: TOP OF PILES SHALL BE CUT OFF A MINIMUM OF ONE FOOT BELOW TOP OF GRADE.
13. REFER GEOTECHNICAL REPORT DATED 9-27-21, MEMORANDUM DATED 8-6-21 AND LETTER DATED 12-17-21 FOR ADDITIONAL INFORMATION.

## SHORING PROCEDURE

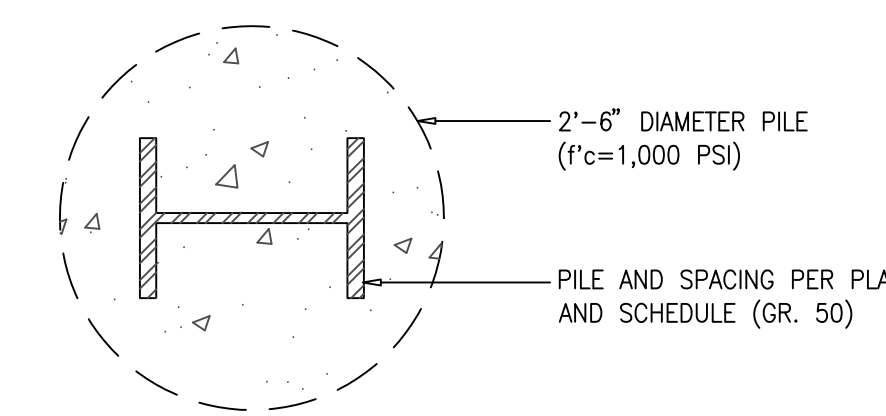
1. HOLE DIGGING: PILE HOLES SHALL BE DRILLED WITHOUT LOSS OF GROUND AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES. THIS MAY INVOLVE CASING THE HOLES OR OTHER METHODS OF PROTECTION FROM CAVING. SEE GEOTECHNICAL REPORT AND SURVEY FOR POSSIBLE OBSTRUCTIONS AND RECOMMENDATIONS.
2. LAGGING: TIMBER LAGGING SHALL BE INSTALLED AT ALL SHORING WALLS. VOIDS BETWEEN LAGGING AND SOIL SHALL BE BACK FILLED PER SOIL'S REPORT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE OF EXPOSED SOIL TO 4 FT. OR LESS, ALSO SEE SOIL'S REPORT RECOMMENDATIONS.
3. DRAINAGE: INSTALL DRAINAGE TO THE FACE OF THE TIMBER LAGGING FOR TEMPORARY AND PERMANENT SOLDIER PILE WALLS ACCORDING TO RECOMMENDATIONS OF THE 2015 I.B.C. AND AS SPECIFIED IN THE SOIL'S REPORT.
4. MONITORING: MONITORING OF THE SHORING SYSTEM, CONDUCTED BY THE GENERAL CONTRACTOR, MUST INCLUDE MEASUREMENTS OF VERTICAL AND HORIZONTAL MOVEMENTS AT THE TOP AND BOTTOM OF EACH SOLDIER PILE ON DAILY BASIS DURING THE EXCAVATION AND WEEKLY BASIS UNTIL WALL CONSTRUCTION IS COMPLETE. ADDITIONAL MONITORING POINTS MAY BE AT THE DIRECTION OF THE SOIL'S ENGINEER AND THE BUILDING DEPARTMENT. ALL READINGS SHOULD BE PROVIDED TO KIA CO., A.D. SHAPIRO ARCHITECTS, P.S., AGES ENGINEERING, LLC. AND BUILDING DEPARTMENT. ALSO, SEE SOIL'S REPORT FOR MONITORING INSTRUCTIONS AND RECOMMENDATIONS.



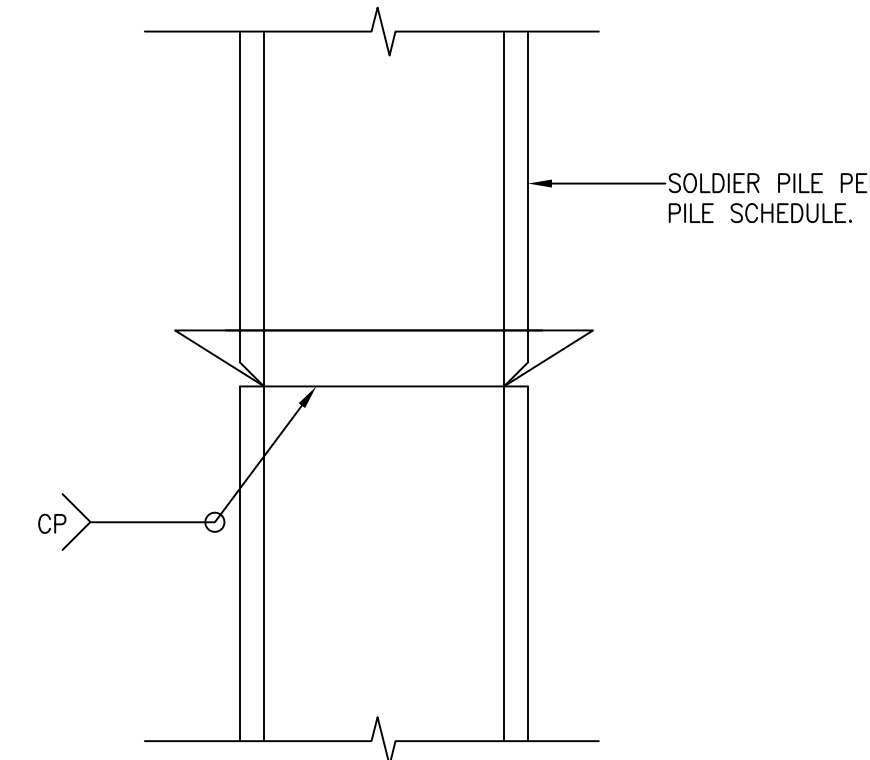
**1 CANTILEVER PILE DETAIL**  
SCALE: 1/4"=1'-0"



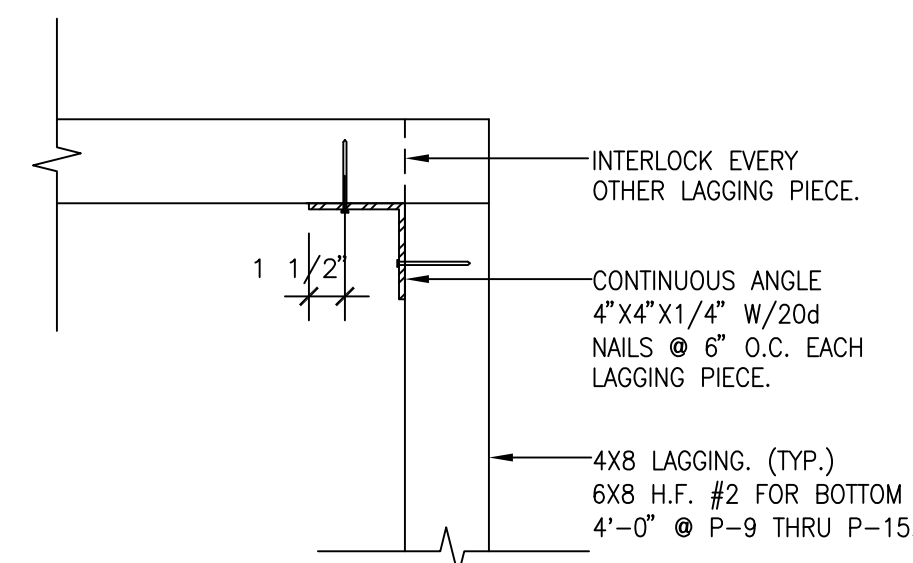
**2 PILE SECTION DETAIL**  
SCALE: 1"=1'-0"



**3 PILE SECTION DETAIL**  
SCALE: 1"=1'-0"



**4 SOLDIER PILE SPLICE DETAIL**  
SCALE: 1 1/2"=1'-0"



**5 CORNER DETAIL**  
SCALE: 1 1/2"=1'-0"

### PILE SCHEDULE

*H* (FT) MAX. HT	*D* (FT) MIN. EMBED	PILE SECTION Fy=50 KSI	AUGER DIAMETER (INCHES)	SPACING ON CENTER	PILE NUMBER
6'-6" OR LESS	13'-0"	W16X26	30"	8'-0"	P0, P15
8'-6"	16'-0"	W16X31	30"	8'-0"	P1, P2
10'-6"	20'-0"	W16X50	30"	8'-0"	P3, P4, P5, P6, P7
12'-0"	27'-0"	W16X100	30"	8'-0"	P8, P9, P10, P11, P12, P13, P14

REVISION EDITION	12-8-22			
DRAWN BY:	CHECKED BY: A.G.	DATE: 11-30-2021		
		K I A CONSULTING STRUCTURAL ENGINEERS		

PROPOSED SINGLE FAMILY RESIDENCE  
EDWARD & CATHERINE MORAN  
5000 WEST MERCER WAY  
MERCER ISLAND, WA 98040

PLANS

SHEET  
**SH-3**  
OF  
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JOB #  
171-2101