

**GENERAL NOTES**

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- CODES/REGULATIONS:**
  - CONSTRUCTION TO CONFORM TO THE 2015 INTERNATIONAL RESIDENTIAL CODE (IRC), WASHINGTON STATE LAWS AND REGULATIONS, CURRENT WASHINGTON STATE RESIDENTIAL ENERGY CODE AND VARIOUS CODES IMPOSED BY LOCAL AUTHORITIES.
  - A SEPARATE PERMIT MAY BE REQUIRED FOR PLUMBING, ELECTRICAL, AND/OR MECHANICAL WORK AS APPLICABLE.
  - A COPY OF THE APPROVED PERMIT PLANS MUST BE ON THE JOB SITE DURING CONSTRUCTION.

- CONTRACTOR'S RESPONSIBILITY:**
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS AND STRUCTURAL MEMBER SIZES.
  - DO NOT SCALE CONTRACT DOCUMENTS.
  - IF ANY DISCREPANCIES IN THE DRAWINGS OR FROM THE CODES ARE NOTED, ARCHITECT IS TO BE NOTIFIED IMMEDIATELY.
  - ALL CHANGES MADE BY THE CONTRACTOR SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
  - THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, SAFETY PRECAUTIONS, ACTS OR OMISSIONS OR PERFORMANCE OF THE CONTRACTOR.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR THE PERFORMANCE AND WEATHERPROOFING OF THE ENTIRE BUILDING, ITS COMPONENT EQUIPMENT, AND PARTS.
  - ALL STRUCTURAL SYSTEMS SUCH AS THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS, (IRC SEC R302)
  - MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
  - ALL WORK MUST FOLLOW CURRENT RRP RULES AND REQUIREMENTS AS DEFINED BY THE EPA AND THE STATE OF WASHINGTON.
  - ALL WASTE AND REFUSE CAUSED IN CONNECTION WITH THE WORK SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF BY THE CONTRACTOR. THE PREMISES SHALL BE LEFT CLEAR AND CLEAN TO THE SATISFACTION OF THE OWNER.
  - CONTRACTOR SHALL DESIGN AND INSTALL SHORING AS REQUIRED TO PERFORM WORK. ENGINEERING, CONSTRUCTION AND SAFETY OF THE SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

- SOILS:**
  - FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING OF 2,000 PSF OR PER GEOTECHNICAL REPORT. ALL FOOTINGS SHALL BE CAST ON UNDISTURBED FIRM NATURAL SOIL OR COMPACTED SOIL OF 2,000 PSF BEARING CAPACITY AT LEAST 1'-6" BELOW LOWEST ADJACENT GRADE, AND FREE OF ORGANIC MATERIALS. FOOTING EXCAVATION SHALL BE FREE OF LOOSE SOILS, DEBRIS, AND FREE WATER AT ALL TIMES. THIS OFFICE TAKES NO RESPONSIBILITY IN VERIFYING THE ACCURACY OF ENGINEERING DATA SUPPLIED BY OTHERS.

- ATTIC REQUIREMENTS:**
  - APPLY ROOFING IN ACCORDANCE WITH IRC CHAPTER 9. PROVIDE ATTIC VENTILATION AS INDICATED ON DRAWINGS AND AS OUTLINED IN IRC SEC R306.
  - THE NET FLOOR VENTILATING AREA SHALL BE NOT LESS THAN 1/50 OF THE AREA OF THE SPACE VENTILATED, EXCEPT THAT THE AREA MAY BE 1/300 PROVIDED AT LEAST 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATION LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH SYSTEMS SUCH AS THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. (IRC SEC R306)
  - ATTIC ACCESS: MINIMUM 22" X 30" WITH MINIMUM 30" HEADROOM, UNOBSTRUCTED, READILY ACCESSIBLE OPENING. IRC SEC R307. ACCESS DOORS SHALL BE WEATHERSTRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES.
  - IN ROOMS NOT PROVIDED WITH AN OPERABLE WINDOW OF 15 SQ. FT. OR GREATER, A MECHANICAL VENTILATION SYSTEM CAPABLE OF PROVIDING 5 AIR CHANGES PER HOUR SHALL BE PROVIDED.
  - VENT DRYER, BATH FANS, AND RANGES/OVENS TO THE OUTSIDE.

- VENTILATION:**
  - VENT FANS SHALL TERMINATE AT THE EXTERIOR OF THE BUILDING PER IRC SECTION M502.3 AND IMC SECTION 501.3.
  - INSULATE ALL DUCTS OUTSIDE OF CONDITIONED SPACE PER WA STATE ENERGY CODE.
  - KITCHEN RANGE HOODS: RANGE HOODS CAPABLE OF EXHAUSTING MORE THAN 400 CFM REQUIRE MAKE-UP AIR PER IRC M503.4.

- GLAZING:**
  - TO BE IN COMPLIANCE WITH IRC SEC R308 AND WASHINGTON STATE SAFETY GLASS LAW, EXCEPTIONS ARE AS OUTLINED IN IRC SEC R308.
  - GLAZING IN LOCATIONS SUBJECT TO HUMAN IMPACT SUCH AS GLASS IN DOORS, GLAZING WITHIN 24" ON EITHER SIDE OF A DOOR OPENING, GLAZING CLOSER THAN 18" TO A FLOOR, SHOWER DOORS AND TUB ENCLOSURES SHALL BE WIRE REINFORCED, TEMPERED GLASS, LAMINATED SAFETY GLASS OR SHATTER RESISTANT PLASTIC.
  - SLIDING GLASS DOORS TO BE SAFETY GLAZING, LAMINATED OR TEMPERED GLASS.
  - SHOWER ENCLOSURES SHALL BE APPROVED WIRE REINFORCED, TEMPERED OR LAMINATED SAFETY GLASS OR SHATTER RESISTANT PLASTIC.
  - GLAZING WITHIN 18" OF FLOOR AND GREATER THAN 18" IN LEAST DIMENSION SHALL COMPLY WITH IMPACT LOADS. SEE PLANS.
  - ALL EXTERIOR WALL GLAZING SHALL BE DOUBLE GLAZED, UNLESS NOTED OTHERWISE, AND COMPLY WITH STATE OF WASHINGTON ENERGY CODE.
  - EGRESS IN EVERY SLEEPING ROOM SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24"; MINIMUM NET CLEAR OPENING WIDTH OF 20" AND A FINISHED SILL HEIGHT NOT MORE THAN 44" ABOVE THE FLOOR. IRC SEC R310.

- ENERGY:**
  - ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO IRC REQUIREMENTS AND THE WASHINGTON STATE ENERGY CODE, LATEST EDITION. VERIFY ALL CONDITIONS BEFORE PROCEEDING WITH WORK.
  - APPLICATION AND INSTALLATIONS OF INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH STATE OF WASHINGTON THERMAL INSULATION STANDARDS.
  - BUILDING AIR LEAKAGE TESTING, PER SEC 502.4.5, IS REQUIRED PRIOR TO FINAL INSPECTION. THE TEST RESULTS SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE.
  - EACH DWELLING UNIT IS TO HAVE ONE PROGRAMMABLE THERMOSTAT FOR REGULATION OF TEMPERATURE PER SEC 503.8.1.
  - A SIGNED AFFIDAVIT DOCUMENTING THE DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR PRIOR TO AN APPROVED FINAL INSPECTION.
  - DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR AND HOMEOWNER PRIOR TO AN APPROVED FINAL INSPECTION.
  - MINIMUM 75% OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH EFFICACY LAMPS PER SEC 404.1.
  - WHERE THE PRIMARY HEATING SYSTEM IS A FORCED-AIR FURNACE, AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THE THERMOSTAT SHALL ALLOW FOR, AT A MINIMUM, A 5-2 PROGRAMMABLE SCHEDULE (WEEKDAYS/WEEKENDS) AND BE CAPABLE OF PROVIDING AT LEAST TWO PROGRAMMABLE SETBACKS PER DAY.

- STAIRS:**
  - MINIMUM HEADROOM 6'-8"; MINIMUM TREAD 10"; MAXIMUM RISER 7 3/4"
  - HANDRAIL: REQUIRED AT ALL STAIRS WITH MORE THAN 4 RISERS PER IRC 3117.8. MINIMUM 34" AND MAXIMUM 38" ABOVE TREAD NOSING. OPEN SIDES OF STAIRS MORE THAN 30" ABOVE ADJACENT FLOOR SHALL HAVE HANDRAILS AND GUARDRAILS, HANDRAIL TO BE 1 1/4"-2" CROSS SECTIONAL DIMENSION AND 1 1/2" AWAY FROM WALL.
  - GUARDRAIL: SHALL BE MIN 36" IN HEIGHT WHERE ADJACENT SURFACE OR GRADE IS 30" OR MORE BELOW. RAILINGS SHALL BE SPACED TO NOT ALLOW THE PASSAGE OF A 4" SPHERE PER IRC 312.
  - INSTALL FIRE BLOCKING AT MID STRINGER SPAN AND AT WALL ALIGN STRINGER.
  - COVER WALLS AND SOFFITS OF USABLE SPACE UNDER STAIR WITH 5/8" TYPE 'X' GYPSUM WALLBOARD.

- INSULATION:**
  - INSULATION TO MEET THE CURRENT WASHINGTON STATE ENERGY CODE REQTS FOR TABLE R402.1.1, TABLE R402.1.3 AND SECTION R402. REFER TO PRESCRIPTIVE TABLE ON SHEET 01.
  - EXISTING WALLS THAT ARE OPENED DURING A REMODEL TO BE INSULATED WITH R-21 BATT (FOR 2x6 WALLS) AND R-15 HIGH DENSITY BATT (FOR 2x4 WALLS) UNLESS NOTED OTHERWISE.
  - WALLS TO BE INSULATED WITH MINIMUM R-21 INSULATION. BELOW GRADE WALLS TO BE INSULATED WITH MINIMUM R-21 INSULATION, ALLOW FOR THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL UNLESS NOTED OTHERWISE.
  - ROOF AND CEILING INSULATED WITH R-49 BLOWN IN AT FLAT CEILINGS AND R-38 HD. BATT AT VAULTED AREAS UNLESS NOTED OTHERWISE.
  - ROOF: ALLOW FOR A MINIMUM 1" CLEAR BETWEEN TOP OF INSULATION AND BOTTOM OF SHEATHING FOR VENTING UNLESS NOTED OTHERWISE.
  - VENTING IS REQUIRED IN EACH JOIST SPACE. WHERE CONTINUOUS VENTING WITH A JOIST SPACE IS INTERRUPTED BY A HEADER (FOR EXAMPLE AT A SKYLIGHT OR HP), PROVIDE (2) 1 1/2" VENTING HOLES AT THE TOP OF THE RAFTER AT THE HEADER TO ALLOW FOR CONTINUOUS THRU-VENTING INTO THE NEXT JOIST SPACE UNLESS NOTED OTHERWISE.
  - FLOORS: INSULATED WITH R-30 BATT INSULATION OVER UNHEATED SPACE UNLESS NOTED OTHERWISE.
  - SLAB-ON-GRADE: PROVIDE EXTRUDED RIGID CLOSED CELL R-10 INSULATION. INSULATION TO PROVIDE THERMAL BREAK BETWEEN SLAB AND FOOTING AND RUN FROM THE TOP OF THE SLAB TO THE BOTTOM OF THE FOOTING. INSULATION MAY BE INTERRUPTED FOR 6" EVERY 2'-0" TO ALLOW FOR DOWELING TO TIE SLAB AND FOOTING TOGETHER. UNLESS NOTED OTHERWISE.

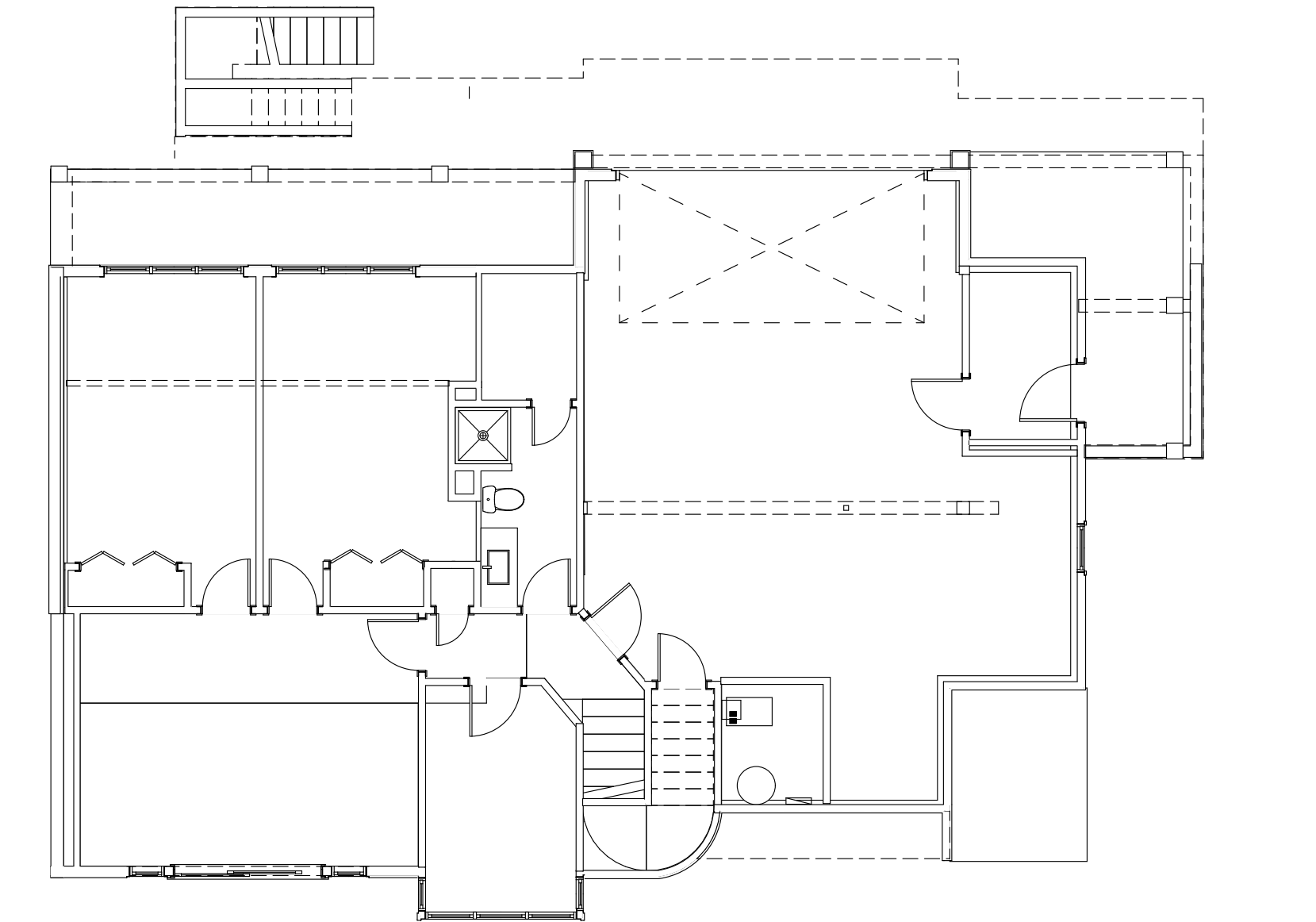
- GARAGE SEPARATION:**
  - REQUIRES 1/2" GWB ON THE GARAGE SIDE. 5/8" TYPE 'X' GWB WHERE THERE IS LIVING SPACE ABOVE. SUPPORTING COLUMNS, WALLS AND BEAMS USE 1/2" GWB PER IRC R302.6.
  - OPENINGS INTO A GARAGE. OPENINGS INTO A GARAGE SHALL HAVE A SOLID WOOD OR HONEYCOMB-CORE STEEL DOOR NOT LESS THAN 1 3/8" THICK, OR 20-MINUTE FIRE RATING. DOORS SHALL BE EQUIPPED WITH A SELF-CLOSING DEVICE PER IRC R302.5.1.

- VAPOR BARRIERS:**
  - AN APPROVED VAPOR BARRIER SHALL BE INSTALLED AT EXTERIOR WALLS AND AT ALL ROOF DECKS, BELOW ENCLOSED JOIST SPACES WHERE CEILING FINISHES ARE DIRECTLY INSTALLED TO JOISTS, AND ANY OTHER WALL OR CEILING SURFACES WHICH RECEIVE INSULATION. THIS VAPOR BARRIER MAY BE A COMPONENT OF THE INSULATION MATERIAL. APPLICATION AND INSTALLATIONS OF INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH STATE OF WASHINGTON THERMAL INSULATION STANDARDS.

- FIRE SAFETY:**
  - SMOKE ALARMS/DETECTORS (S.D.): SMOKE ALARMS/DETECTORS SHALL BE INSTALLED IN ALL SLEEPING ROOMS, IN THE AREA OUTSIDE THE SLEEPING ROOM AND IN OTHER LOCATIONS PER IRC R314. POWER SOURCE AND INTERCONNECTION PER IRC.
  - CARBON MONOXIDE DETECTORS (CMD): SHALL HAVE AN APPROVED CARBON MONOXIDE ALARM INSTALLED OUTSIDE OF EACH SLEEPING AREA IN DWELLING UNITS AND IN EACH LEVEL IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS PER IRC R315. SINGLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL2034 AND SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE, NFPA 720-2012 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  - CARBON MONOXIDE DETECTION SYSTEMS PER IRC 315.2 THAT INCLUDE CARBON MONOXIDE DETECTORS AND AUDIBLE NOTIFICATION APPLIANCES, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION FOR CARBON MONOXIDE ALARMS AND NFPA 720-2012, SHALL BE PERMITTED. THE CARBON MONOXIDE DETECTORS SHALL BE LISTED AS COMPLYING WITH UL 2075. WHERE A HOUSEHOLD CARBON MONOXIDE DETECTION SYSTEM IS INSTALLED, IT SHALL BECOME A PERMANENT FIXTURE OF THE OCCUPANCY.

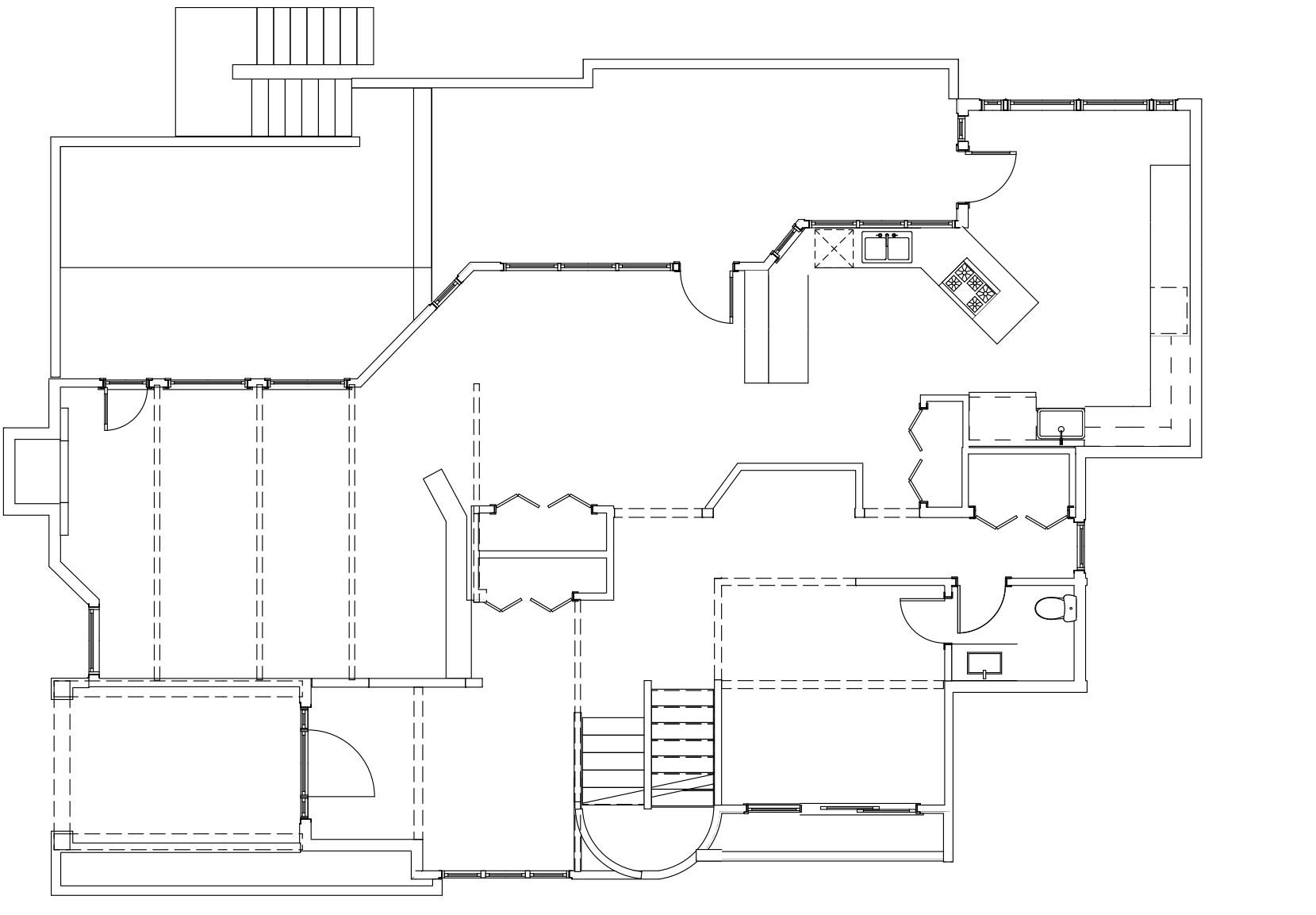
- CERTIFICATE & TESTING**
  - A PERMANENT CERTIFICATE SHALL BE COMPLETED AND POSTED ON OR WITHIN THREE FEET OF THE ELECTRICAL DISTRIBUTION PANEL BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL. THE CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL AND SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL, OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE PREDOMINANT R-VALUES OF INSULATION INSTALLED IN OR ON CEILING/ROOF WALLS, FOUNDATION (SLAB, BELOW-GRADE WALL, AND/OR FLOOR) AND DUCTS OUTSIDE CONDITIONED SPACES; U-FACTORS FOR PENETRATION AND THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING DONE ON THE BUILDING. WHERE THERE IS MORE THAN ONE VALUE FOR EACH COMPONENT, THE CERTIFICATE SHALL LIST THE VALUE COVERING THE LARGEST AREA. THE CERTIFICATE SHALL LIST THE TYPES OF EFFICIENCIES OF HEATING, COOLING, AND SERVICE WATER HEATING EQUIPMENT.
  - THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT EXCEEDING 5 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2 INCHES W.G. (50 PASCALS) WHERE REQUIRED BY THE CODE OFFICIAL. TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL. TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE.

- FIRE SPRINKLERS**
  - INSTALL FIRE SPRINKLER SYSTEM TO ALL AREAS OF DWELLING UNIT. DESIGN TO BE PROVIDED BY OTHERS.
  - SPRINKLERS SHALL BE LISTED RESIDENTIAL SPRINKLERS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE SPRINKLER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  - THE SPRINKLER SYSTEM SHALL BE DESIGNED BY A WASHINGTON STATE CERTIFIED SPRINKLER DESIGNER AND INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION STANDARD (NFPA) 13R WITH THE FOLLOWING ADDITIONS AND MODIFICATIONS:
    - A 1 1/2" MINIMUM WATER METER AND 2" MINIMUM SERVICE LINE IS REQUIRED FOR ALL 13R PLUS SPRINKLER SYSTEMS. THIS IS THE MINIMUM REQUIREMENT AND THE SPRINKLER CALCULATIONS FOR THE PROJECT SHALL DETERMINE THE ACTUAL METER AND SERVICE LINE SIZE. THE PLUMBING CODE MAY STILL REQUIRE A LARGER SIZE. A WATER METER PERMIT WILL NOT BE ISSUED UNTIL THE SPRINKLER PERMIT IS APPROVED.
    - A 1 1/2" MINIMUM BACKFLOW PREVENTER AND RISER IS REQUIRED.
    - A 1 1/2" HOSE CONNECTION IS REQUIRED IN A VISIBLE LOCATION BESIDE THE GARAGE DOOR. THE CHECK VALVE SHALL REMAIN ACCESSIBLE FOR SERVICE. THE FDC PIPE RUN SHALL BE A MINIMUM OF 1/2" AND SHALL MAINTAIN THAT SIZE ALL THE WAY TO THE RISER.
    - THE SPRINKLER SYSTEM SHALL HAVE INSTALLED A MEANS OF NOTIFICATION OF A WATER FLOW EVENT. INTERIOR: YOU MAY CONNECT THE WATER FLOW SWITCH TO THE SOUNDER SIDE OF THE LINE VOLTAGE SMOKE ALARMS. FIREX SMOKE DETECTORS USE PART # 0490B AND KIDDE WITH RELAY/POWER SUPPLY MODULE SMT20X ARE CURRENTLY APPROVED FOR THIS PURPOSE. IF YOU CANNOT INTERFACE THE WATER FLOW SWITCH TO SMOKE ALARMS THEN A SEPARATE HORN, BELL, OR SIREN IS REQUIRED TO BE LOCATED CENTRALLY ON EACH LEVEL INCLUDING THE BASEMENT OR LOWEST LEVEL OF THE STRUCTURE FOR OCCUPANT WATER FLOW NOTIFICATION. EXTERIOR: AN EXTERIOR GRADE 8" POTTER BELL OR EQUIVALENT SHALL BE INSTALLED. THIS SHALL BE ABOVE THE FDC.
    - FULL COVERAGE OF ATTACHED GARAGES IS REQUIRED. IT IS EXPECTED THAT ALL HEADS WILL OPERATE IN THE EVENT OF A CAR FIRE WITHIN THE GARAGE AND THE SYSTEM SHALL BE DESIGNED TO PROVIDE ADEQUATE FLOW. ANY GARAGES WITH MORE THAN 4 HEADS IN THEM NEED TO BE PIPED IN A MANNER THAT A LARGER FLOW IS AVAILABLE THAN WOULD BE NORMALLY DESIGNED. A FULL FLOW SHALL BE PROVIDED FROM THE RISER TO ANY HEADS GREATER THAN 4 WITHIN THE GARAGE.
    - THE SYSTEM DRAIN SHALL BE PIPED ALL THE WAY TO THE EXTERIOR OF THE BUILDING AND NOT CAUSE DAMAGE TO LANDSCAPING WHILE WATER IS FLOWING. HOSE CONNECTIONS ARE NOT ALLOWED.
    - A CABINET CONTAINING A MINIMUM OF TWO SPARE HEADS OF EACH TYPE AND A SPRINKLER WRENCH SHALL BE PROVIDED.
    - ANY CRAWLSPACE THAT HAS A CONCRETE FLOOR AND A FULL SIZED DOOR SHALL BE PRESUMED TO BE A FUTURE STORAGE ROOM AND SPRINKLER COVERAGE SHALL BE PROVIDED.
    - ALL BATHROOMS REGARDLESS OF SIZE SHALL BE COVERED.
    - ALL CLOSETS IN COMMON AREAS OR EGRESS PATHWAYS SHALL BE COVERED.
    - WATER FLOW MONITORING BY A CENTRAL STATION IS REQUIRED.
    - ANY COVERED PORCH WITH A NATURAL GAS OUTLET IS REQUIRED TO HAVE SIDEWALL SPRINKLER COVERAGE USING AN INTERMEDIATE TEMPERATURE SPRINKLER HEAD.



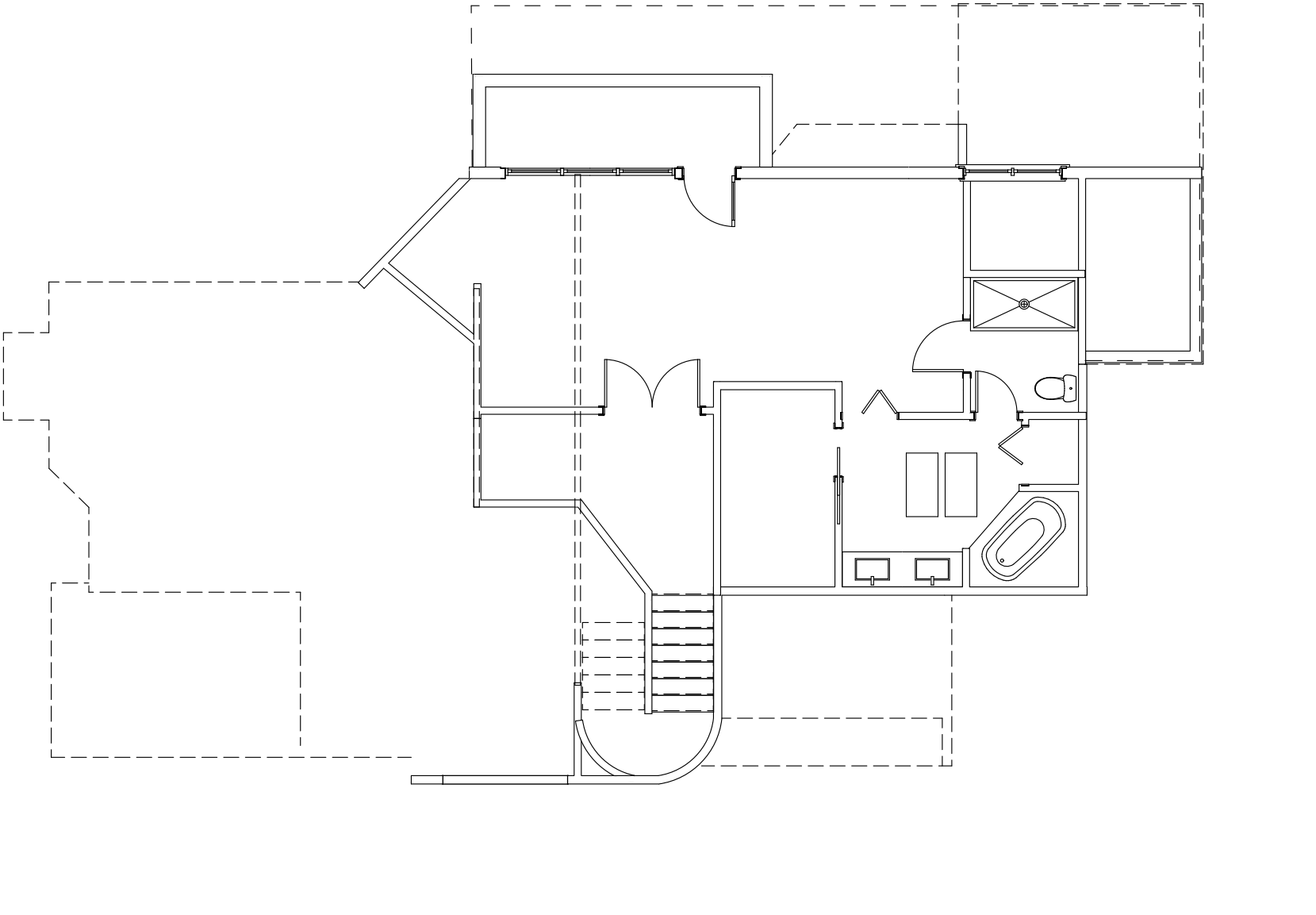
**AS BUILT - LOWER FLOOR**

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



**AS BUILT - MAIN FLOOR**

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



**AS BUILT - UPPER FLOOR**

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

PRESCRIPTIVE REQUIREMENTS - ALL CLIMATE ZONES		
LOCATION	R-VALUE	U-FACTOR
PENETRATION U-FACTOR	N/A	0.28
SKYLIGHT U-FACTOR	N/A	0.50
GLAZED PENETRATION SHGC	N/A	N/A
CEILING	49	0.026
WOOD FRAME WALL	21 INT	0.056
MASS WALL R-VALUE	21/21	0.056
FLOOR	38	0.029
BELOW GRADE WALL	10/15/21 INT + FB	0.042
SLAB R-VALUE AND DEPTH	10, 2 FT	N/A

**PROJECT INFORMATION**

PROJECT OWNER: TROY WERELIUS  
 8452 N MERCER WAY  
 MERCER ISLAND WA 98040

PROJECT ARCHITECT: HEIDI HELEGSON  
 PROJECT DESIGNER: USA MONTALVO  
 H2D ARCHITECTURE + DESIGN  
 23020 EDMONDS WAY, #113  
 EDMONDS, WA 98020

STRUCTURAL ENGINEER: TODD VALENTINE  
 HARRIOTT VALENTINE ENGINEERS  
 1802 1ST AVENUE, SUITE 720  
 SEATTLE, WA 98101  
 206-624-4722 X 27

PROJECT DESCRIPTION: INTERIOR AND REMODEL FOR EXISTING HOME. ADD ADDITION.

PROJECT ADDRESS: 8452 NORTH MERCER WAY

TAX LOT NUMBER: 5452600010

LEGAL DESCRIPTION: MERCER PARK LANE TGV UND INT IN TRS A B C TGV 1/6 UND INT IN POR LOT 5 SD PLAT LY NLY OF FOLG DESC LN BEG AT NW COR LOT 5 TH N 73-54-57 E 67.51 FT TH N 41-48-01 E 112.82 FT TO TPOB TH S 61-41-59 E 15.43 FT TH N 41-48-01 E TO OUTER LIMITS OF 2ND CL 5H LDES & TERMINUS OF SD LN, LOT 1

**LAND USE CODE COMPLIANCE STATISTICS**

ZONE: R-15

CRITICAL AREAS: TYPE 11 CULVERT WATER COURSE, POTENTIAL SLIDE, SEISMIC, AND EROSION HAZARD

LOT COVERAGE: LOT AREA: 11,630 SF  
 EXISTING HOUSE & ROOF: 2413.1 SF  
 EXISTING DRIVEWAY: 894.5 SF  
 EXISTING GRAVEL PARKING: 388.6 SF  
 EXISTING TOTAL LOT COVERAGE: 3682.9 SF  
 NEW ADDITION: 63 SF  
 PROPOSED LOT COVERAGE: 3745.9 SF (32.2%)  
 ALLOWED LOT COVERAGE: 11,630 SF X 40% = 4,652 SF..OK

\*\*REFER TO SHEET 02 FOR ADDITIONAL LAND USE CALCULATIONS

REQD SETBACKS: FRONT: 20'  
 REAR SETBACK: 25'  
 SIDE SETBACK: 10' STREET SIDE, 5' INTERIOR SIDE

PARKING: 3 EXISTING PARKING SPACES TO REMAIN. 2 COVERED, 1 UNCOVERED

BUILDING HEIGHT INFORMATION: BUILDING HEIGHT LIMIT = 30'  
 REFER TO SHEET A2.0 AND A2.1 FOR DETAILED HEIGHT INFORMATION

MAXIMUM GROSS FLOOR AREA RATIO: 40% NET LOT AREA WITH 5% MAX = 4652 SF ALLOWED  
 EXISTING F.A.R. = 3916.4 SF  
 PROPOSED F.A.R. = 4463.5 SF

**ENERGY CREDIT INFORMATION**

ENERGY CREDIT FROM WASHINGTON STATE ENERGY CODE TABLE 406.2

MEDIUM DWELLING UNIT: 9.5 CREDITS  
 ALL DWELLING UNITS NOT INCLUDED IN SMALL OR LARGE.

1a EFFICIENT BUILDING ENVELOPE: 0.5 CREDITS  
 PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS:  
 VERTICAL PENETRATION U = 0.28  
 FLOOR R-59  
 SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB  
 BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB

3a HIGH EFFICIENCY HVAC EQUIPMENT: 1.0 CREDITS  
 GAS, PROPANE, OR OIL-FIRED FURNACE WITH MINIMUM AFUE OF 94%  
 GAS, PROPANE, OR OIL-FIRED BOILER WITH MINIMUM AFUE OF 92%

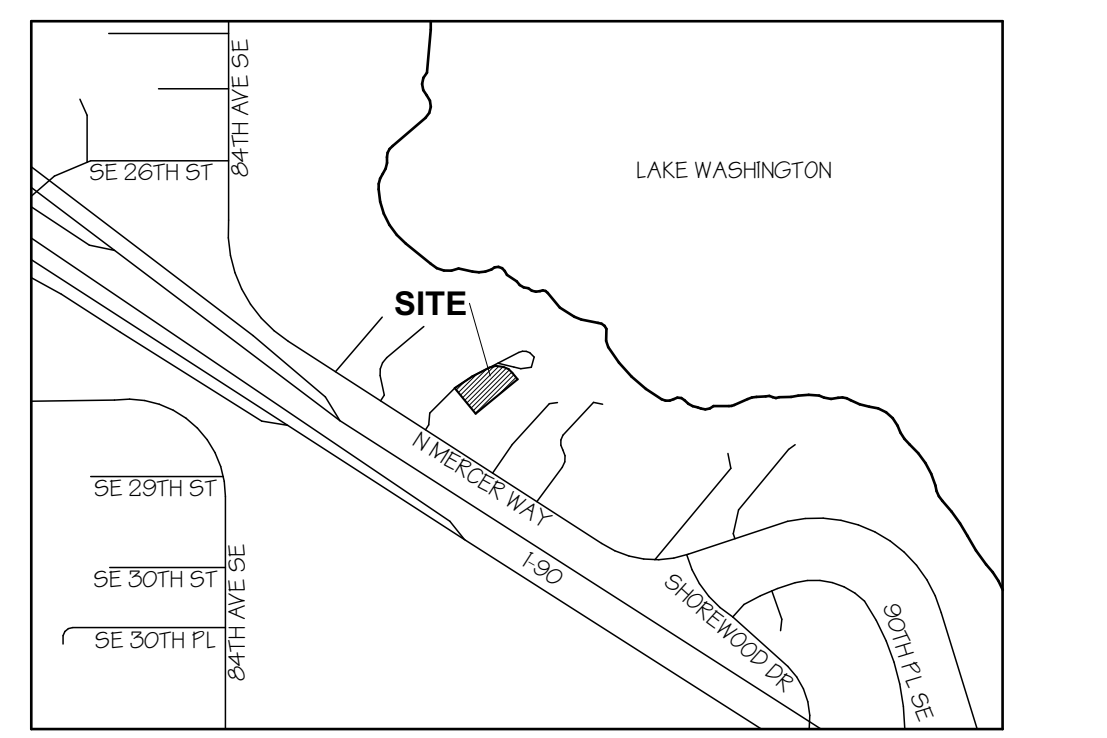
5a EFFICIENT WATER HEATING: 0.5 CREDITS  
 ALL SHOWERHEAD AND KITCHEN SINK FAUCETS INSTALLED IN THE HOUSE SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.

5c EFFICIENT WATER HEATING: 1.5 CREDITS  
 GAS, PROPANE, OR OIL WATER HEATER WITH A MINIMUM EF OF 0.91

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**VICINITY MAP (NTS)**



**WERELIUS RESIDENCE**  
 8452 NORTH MERCER WAY  
 MERCER ISLAND WA 98040



**H 2 D**  
 ARCHITECTURE  
 +  
 DESIGN

23020 EDMONDS WAY, #113  
 EDMONDS, WA 98020  
 P. 206.542.3734  
 www.h2darchitects.com

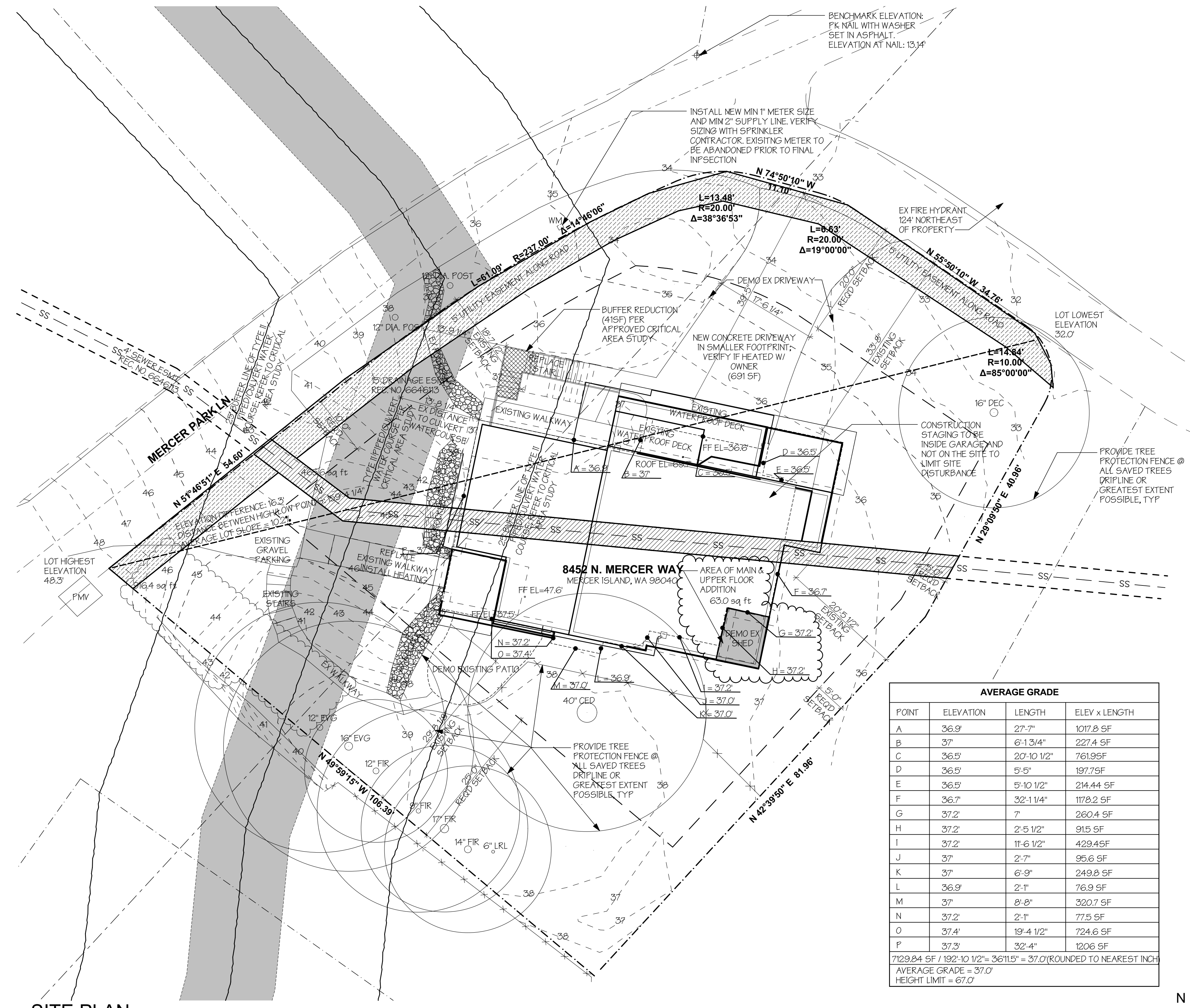
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**PRICING SET**

PROJECT INFORMATION, VICINITY MAP, GENERAL NOTES, AS-BUILT PLANS



<b>EXISTING HARDSCAPE:</b>	EXISTING DECKS: 259.3 SF EXISTING WALKWAYS: 285.7 SF EXISTING EXTERIOR STAIRS: 71.1 SF EXISTING PATIO: 180.3 SF TOTAL EX HARDSCAPE COVERAGE: 796.4 SF (5.5%) ALLOWED HARDSCAPE COVERAGE: 11,630 SF X 9% = 1,046.7 SF (7.0%)
<b>PROPOSED HARDSCAPE:</b>	PROPOSED DECKS: 145.9 SF EXISTING WALKWAYS: 285.7 SF EXISTING EXTERIOR STAIRS: 71.1 SF EXISTING PATIO: 180.3 SF TOTAL PROP. HARDSCAPE COVERAGE: 683.0 SF (5.0%) ALLOWED HARDSCAPE COVERAGE: 11,630 SF X 9% = 1,046.7 SF (7.0%)
<b>EXISTING IMPERVIOUS SURFACE:</b>	EXISTING HOUSE/ROOF: 2,442.3 SF EXISTING DECKS: 217.8 SF EXISTING DRIVEWAY: 874.2 SF EXISTING STREET ON PROPERTY: 434.4 SF EXISTING GRAVEL PARKING: 385.9 SF EXISTING WALKWAYS: 285.7 SF EXISTING STAIRS: 115.1 SF EXISTING ROCKERIES: 17.3 SF EXISTING PATIO (TO BE DEMO-ED): 186.3 SF TOTAL EXISTING IMPERVIOUS SURFACE: 5,088.4 SF (43.9%) ALLOWED IMPERVIOUS SURFACE: 11,630 SF X 40% = 4,652 SF
<b>PROPOSED IMPERVIOUS SURFACE:</b>	PROPOSED HOUSE/ROOF: 2,358.2 SF PROPOSED DECKS: 185.9 SF PROPOSED DRIVEWAY: 691 SF EXISTING STREET ON PROPERTY: 434.4 SF EXISTING GRAVEL PARKING: 385.9 SF EXISTING WALKWAYS TO REMAIN: 173.2 SF EXISTING WALKWAYS TO BE REPLACED: 112.5 SF PROPOSED STAIRS: 102.1 SF EXISTING ROCKERIES: 17.3 SF TOTAL PROPOSED IMPERVIOUS SURFACE: 4,580.4 SF (39.4%) ALLOWED IMPERVIOUS SURFACE: 11,630 SF X 40% = 4,652 SF TOTAL NEW + REPLACED IMPERVIOUS SURFACE: 10,99.9 SF



AVERAGE GRADE			
POINT	ELEVATION	LENGTH	ELEV x LENGTH
A	36.9	27'-7"	1017.8 SF
B	37	6'-1 3/4"	227.4 SF
C	36.5	20'-10 1/2"	761.95 SF
D	36.5	5'-5"	197.75 SF
E	36.5	5'-10 1/2"	214.44 SF
F	36.7	32'-1 1/4"	1178.2 SF
G	37.2	7'	260.4 SF
H	37.2	2'-5 1/2"	91.5 SF
I	37.2	11'-6 1/2"	429.45 SF
J	37	2'-7"	95.6 SF
K	37	6'-9"	249.8 SF
L	36.9	2'-1"	76.9 SF
M	37	8'-8"	320.7 SF
N	37.2	2'-1"	77.5 SF
O	37.4	19'-4 1/2"	724.6 SF
P	37.3	32'-4"	1206 SF
7129.84 SF / 192'-10 1/2" = 36.115' = 37.0 (ROUNDED TO NEAREST INCH)			
AVERAGE GRADE = 37.0			
HEIGHT LIMIT = 67.0'			

**SITE PLAN**  
SCALE: 1" = 10'

NOTES:  
1. REFER TO CRITICAL AREAS DETERMINATION APPLICATION FOR NOTED LAND USE REVISIONS

**WERELIUS RESIDENCE**  
8452 NORTH MERCER WAY  
MERCER ISLAND WA 98040



**H 2 D**  
ARCHITECTURE  
+  
DESIGN

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www.h2darchitects.com

DATE: 6/2/2020

PRICING SET

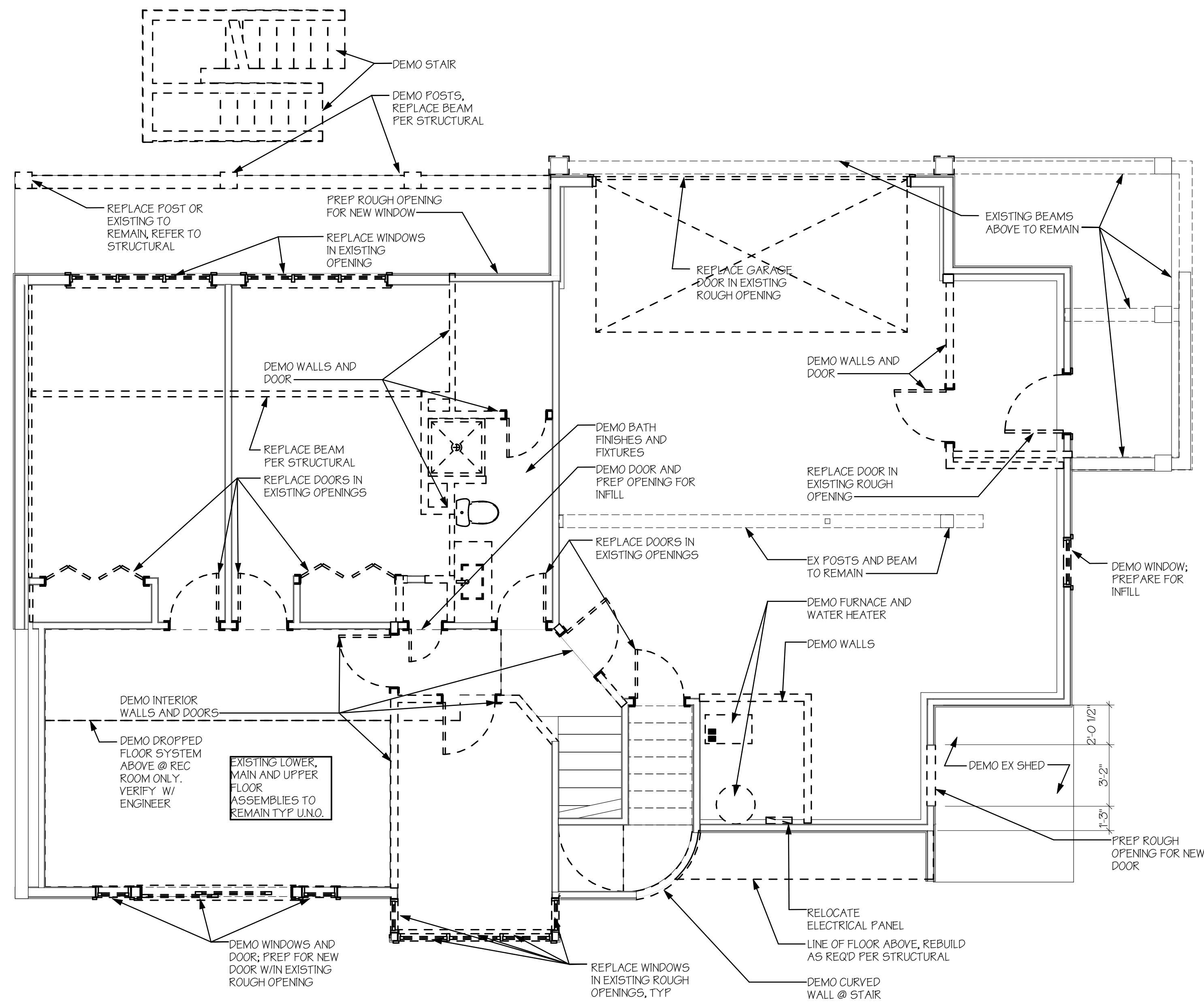
SITE PLAN









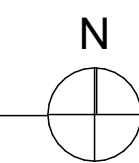


**LOWER FLOOR DEMO PLAN**

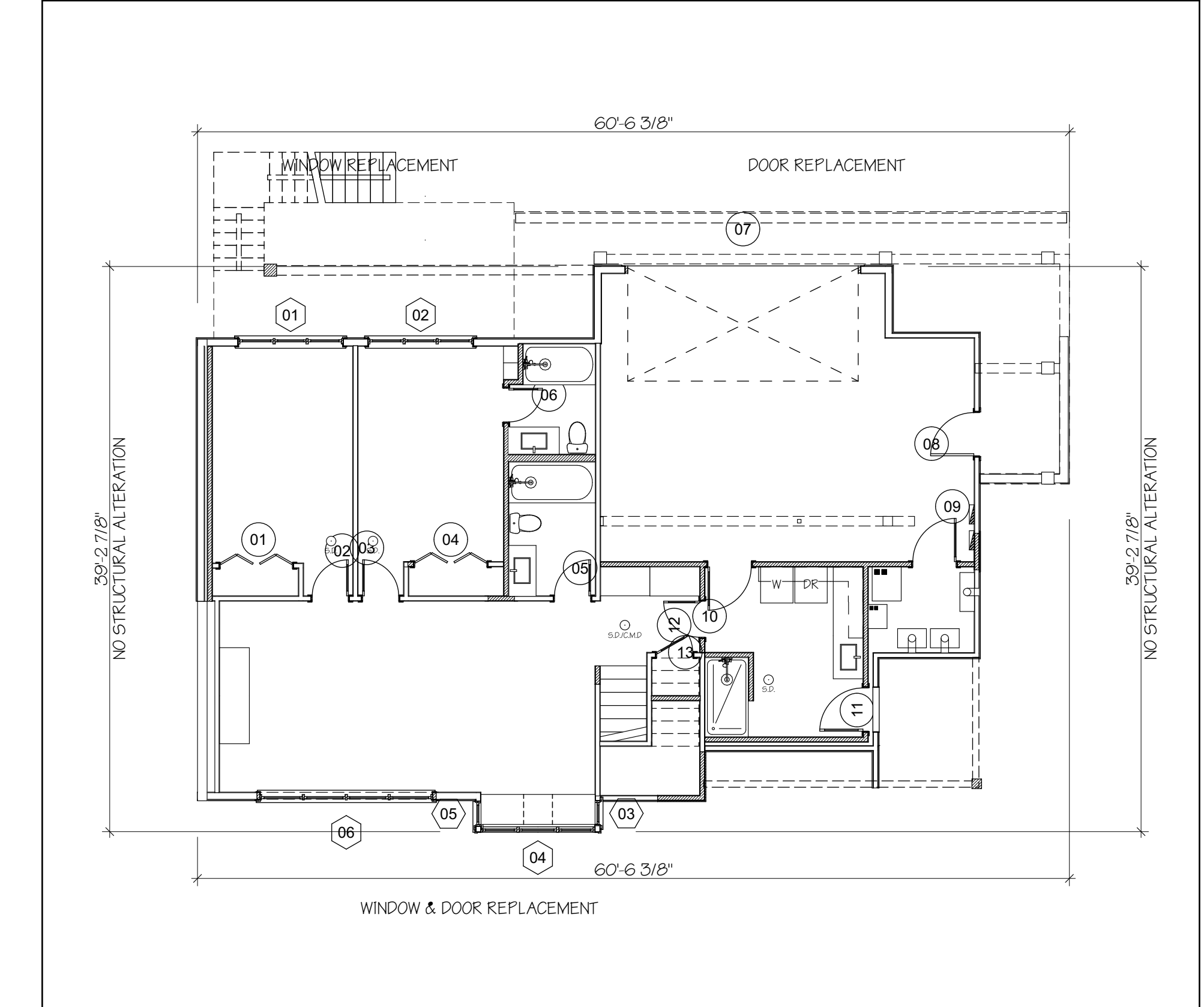
SCALE: 1/4" = 1'-0"

EXISTING WALLS  
 DEMO WALLS

NOTE: VERIFY ALL ITEMS TO BE SALVAGED W/ OWNER PRIOR TO DEMOLITION



**EXTERIOR WALL STRUCTURAL ALTERATION DIAGRAM - 40% THRESHOLD**



**PROPOSED ALTERATION - LOWER FLOOR**

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

TOTAL LENGTH OF LOWER FLOOR EXISTING EXTERIOR WALLS: 199'-6 1/2"  
 LENGTH OF LOWER FLOOR WALLS WITH STRUCTURAL ALTERATIONS: 6'-8" = 3.3%

TOTAL STRUCTURAL ALTERATIONS (ALL FLOORS):  
 TOTAL COMBINED LENGTH OF EXISTING EXTERIOR WALLS @ ALL FLOORS: 538'-7 1/4"  
 TOTAL COMBINED LENGTH OF WALLS @ ALL FLOORS WITH STRUCTURAL ALTERATIONS: 207'-0 3/4" = 38.4%

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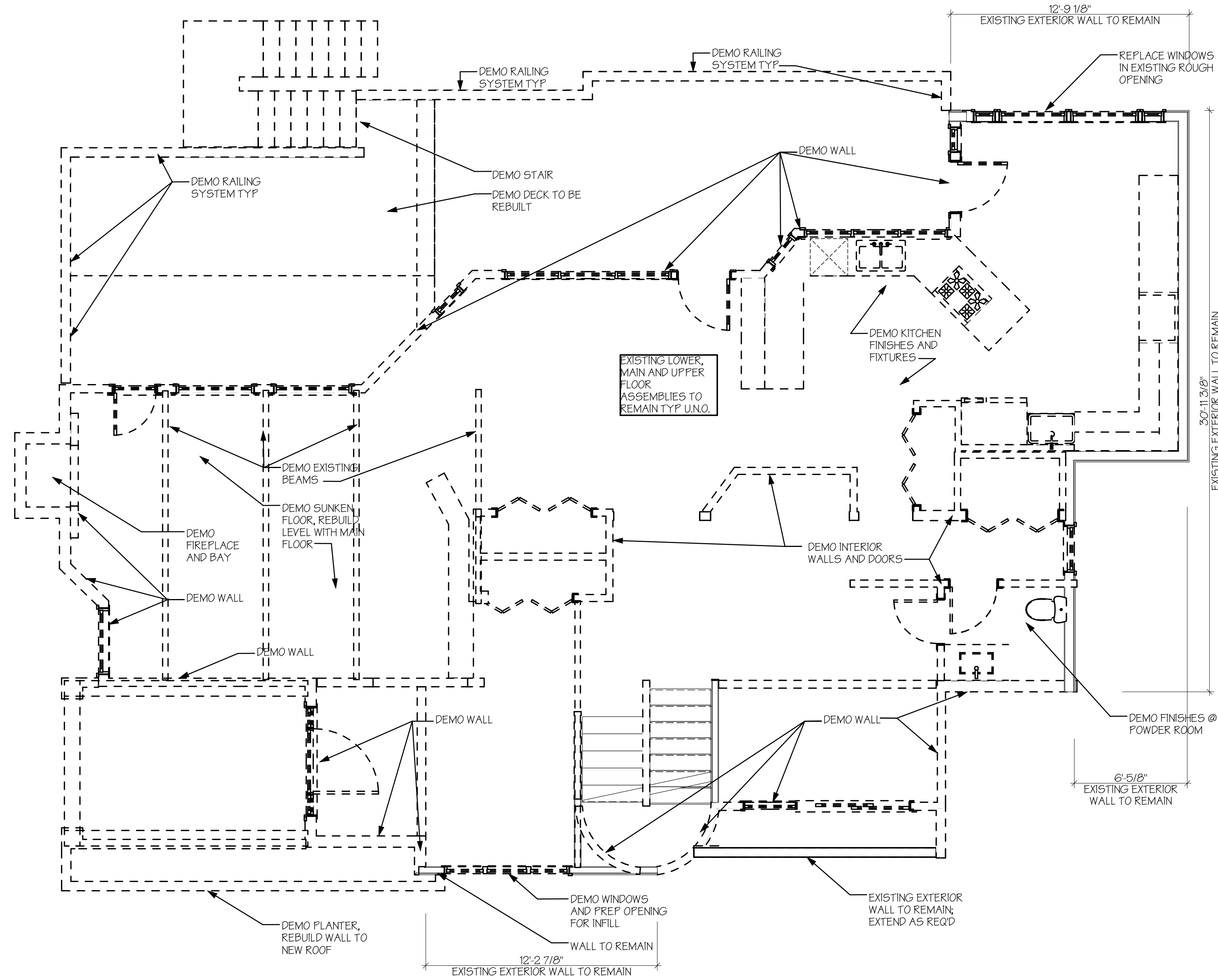
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DEMOLITION PLAN LOWER FLOOR



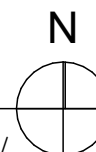


**MAIN FLOOR DEMO PLAN**

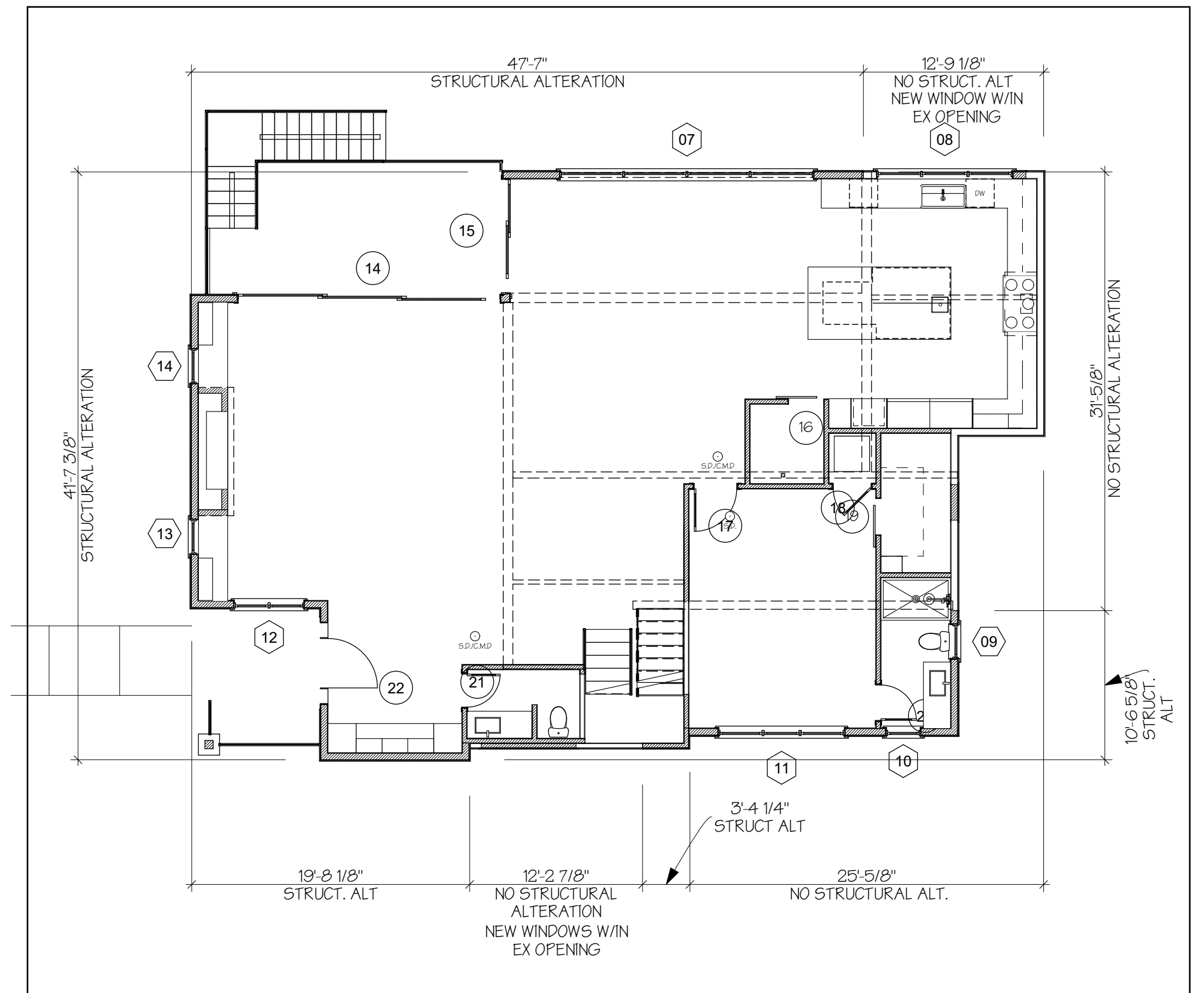
SCALE: 1/4" = 1'-0"

- EXISTING WALLS
- - - DEMO WALLS

NOTE: VERIFY ALL ITEMS TO BE SALVAGED W/ OWNER PRIOR TO DEMOLITION



**EXTERIOR WALL STRUCTURAL ALTERATION DIAGRAM - 40% THRESHOLD**



**PROPOSED ALTERATION - MAIN FLOOR**

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

TOTAL LENGTH OF MAIN FLOOR EXISTING EXTERIOR WALLS: 203'-10 5/8"  
 LENGTH OF MAIN FLOOR WALLS WITH STRUCTURAL ALTERATIONS: 122'-10 5/8" = 60.3%

TOTAL STRUCTURAL ALTERATIONS (ALL FLOORS):  
 TOTAL COMBINED LENGTH OF EXISTING EXTERIOR WALLS @ ALL FLOORS: 538'-7 1/4"  
 TOTAL COMBINED LENGTH OF WALLS @ ALL FLOORS WITH STRUCTURAL ALTERATIONS: 207'-0 3/4" = 38.4%

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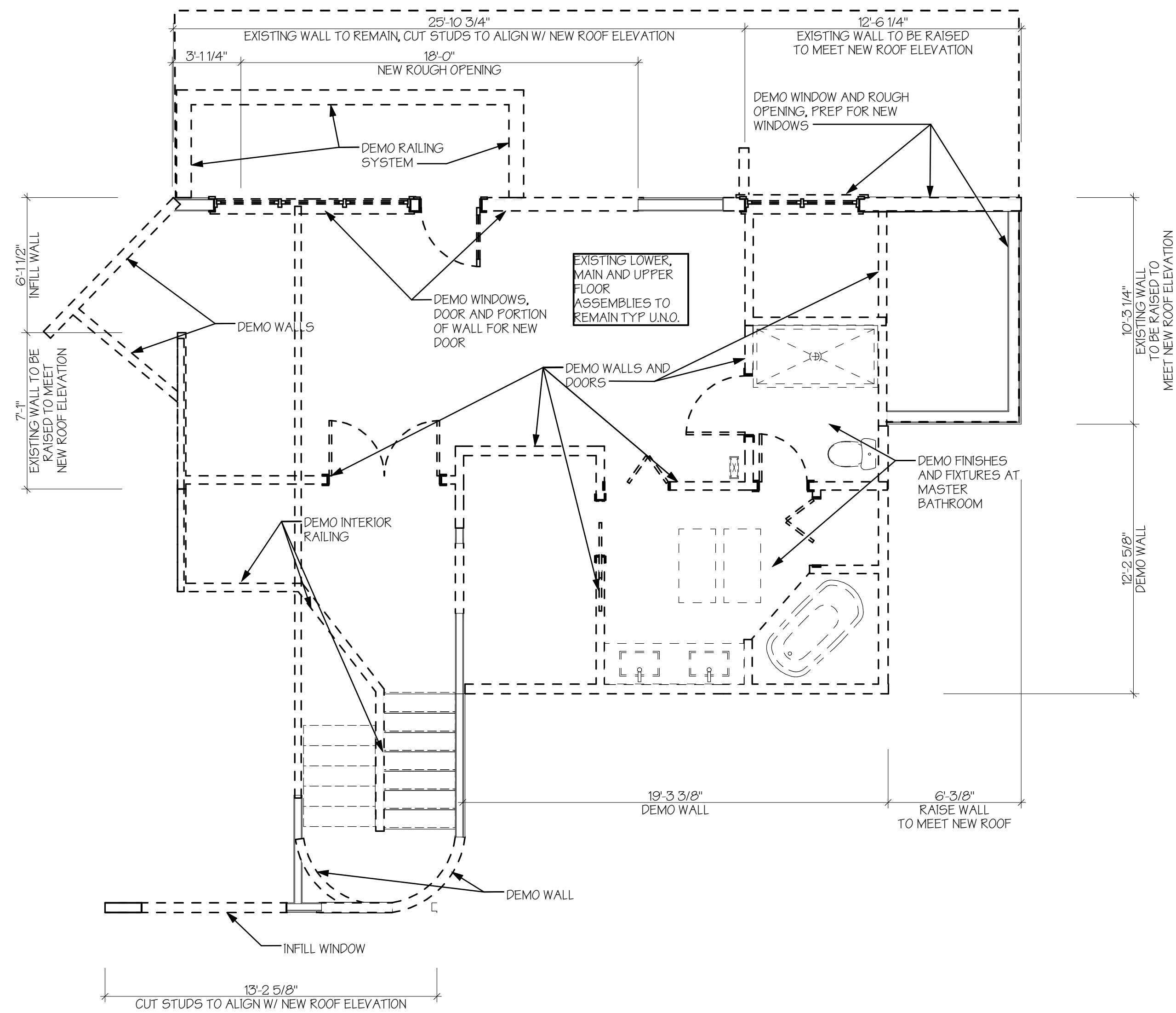
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PRICING SET

DEMOLITION PLAN MAIN FLOOR





UPPER FLOOR DEMO PLAN

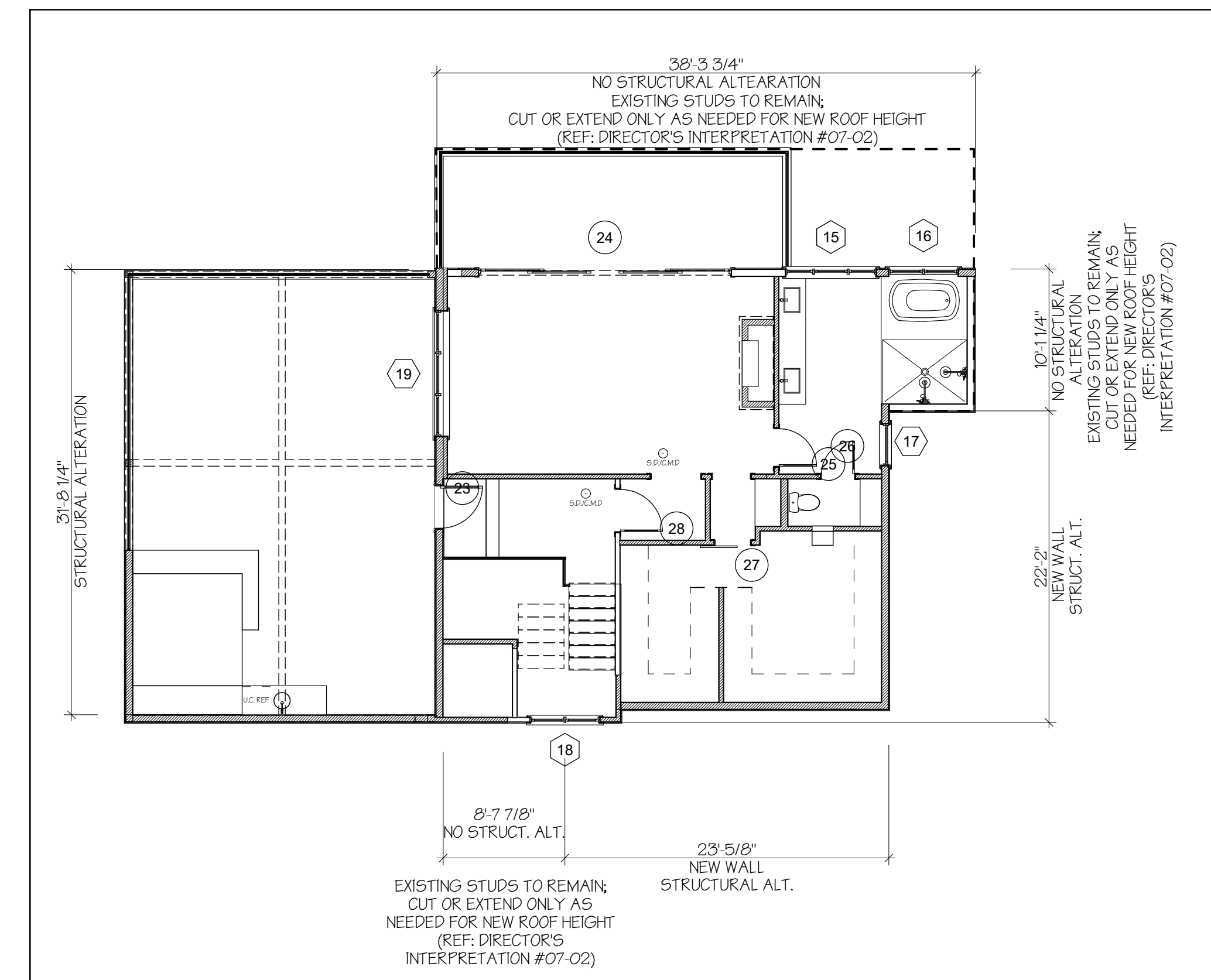
SCALE: 1/4" = 1'-0"

EXISTING WALLS  
 DEMO WALLS

NOTE: VERIFY ALL ITEMS TO BE SALVAGED W/ OWNER PRIOR TO DEMOLITION



EXTERIOR WALL STRUCTURAL ALTERATION DIAGRAM - 40% THRESHOLD



PROPOSED ALTERATION - UPPER FLOOR

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

TOTAL LENGTH OF UPPER FLOOR EXISTING EXTERIOR WALLS: 135'-2 1/8"  
 LENGTH OF UPPER FLOOR EXTERIOR WALLS WITH STRUCTURAL ALTERATIONS: 77'-6 1/8" = 57.3%  
 \*REFER TO DSG POLICY MEMORANDUM ADMINISTRATIVE INTERPRETATION #07-02\*

TOTAL STRUCTURAL ALTERATIONS (ALL FLOORS):  
 TOTAL COMBINED LENGTH OF EXISTING EXTERIOR WALLS @ ALL FLOORS: 538'-7 1/4"  
 TOTAL COMBINED LENGTH OF WALLS @ ALL FLOORS WITH STRUCTURAL ALTERATIONS: 207'-0 3/4" = 38.4%

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DEMOLITION UPPER FLOOR  
 PLAN

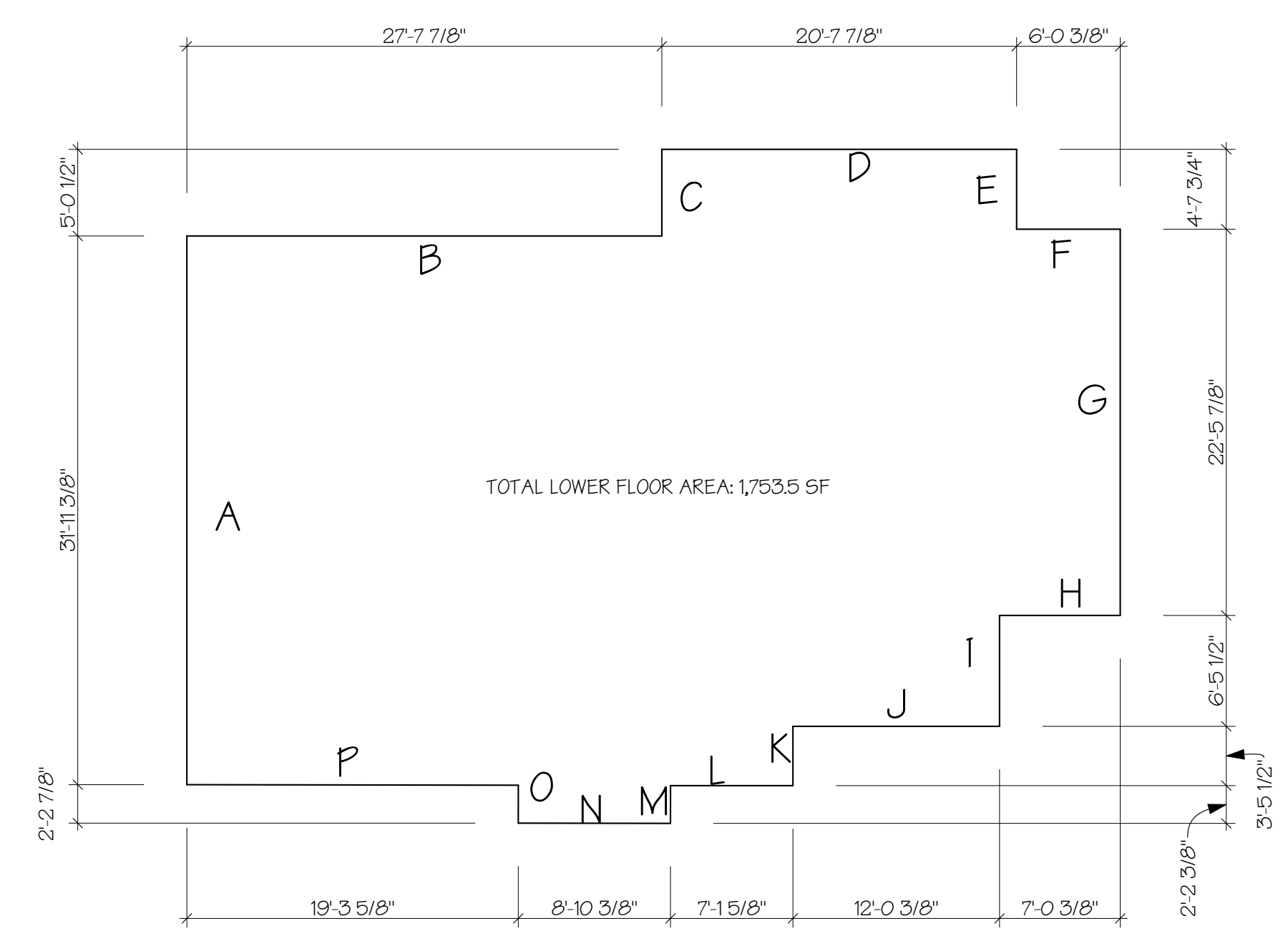




DATE: 6/2/2020

PRICING SET

LOWER FLOOR PLAN



**TABLE OF WALL LENGTHS AND COVERAGE**

WALL SEGMENT	LENGTH X	COVERAGE =	RESULT
A	31'-11 3/8"	76.8%	24'-6 1/2"
B	27'-7 7/8"	0%	0"
C	5'-0 1/2"	0%	0"
D	20'-7 7/8"	0%	0"
E	4'-7 3/4"	0%	0"
F	6'-0 3/8"	0%	0"
G	22'-5 7/8"	0%	0"
H	7'-0 3/8"	0%	0"
I	6'-5 1/2"	0%	0"
J	12'-0 3/8"	0%	0"
K	3'-5 1/2"	0%	0"
L	7'-1 5/8"	0%	0"
M	2'-2 3/8"	0%	0"
N	8'-10 3/8"	0%	0"
O	2'-2 7/8"	0%	0"
P	19'-3 5/8"	10.6%	2'-0 1/2"
TOTALS	187'-1 3/4"	NA	26'-7"

26'-7" / 187'-1 3/4" = 14.2%  
 1,753.5 SF X 14.2% = 249 SF EXCLUDED FROM THE GFA  
 (PER APPENDIX B OF MICC TITLE 19)

**LOWER FLOOR GFA EXEMPTION**

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

**NEW HVAC NOTES:**  
 1. INSTALL NEW HYDRONIC RADIANT SYSTEM @ LOWER FLOOR WALL RADIATORS WITH HIGH EFFICIENCY BOILER, WITH MINIMUM AFUE OF 92%, VENT TO OUTSIDE TYPICAL MAIN AND UPPER JOIST TRACK RADIANT HEAT SYSTEM.  
 2. PROVIDE SHUT OFF VALVE @ CONNECTION TO APPLIANCE.  
 3. INSTALL UNICO DUCTED COOLING SYSTEM THROUGHOUT.  
 4. PER IRC 1506.3.5; PROVIDE WHOLE HOUSE VENTILATION SYSTEM INTEGRATED WITH THE UNICO DUCTED COOLING SYSTEM.  
 5. INTEGRATED WHOLE HOUSE VENTILATION SYSTEM SHALL OPERATE CONTINUOUSLY; PROVIDE CONTROLS TO ALLOW OPERATION OF VENTILATION SYSTEM WITHOUT NEED TO OPERATE HEATING SYSTEM. A LABEL SHALL BE AFFIXED TO THE CONTROLS THAT READS "WHOLE HOUSE VENTILATION (SEE OPERATING INSTRUCTIONS)".  
 6. CONTINUOUS WHOLE HOUSE MECHANICAL VENTILATION MINIMUM AIRFLOW RATE OF 90 CFM. REFER TO IRC TABLE M1507.3.5.

**GAS WATER HEATER NOTES:**  
 1. INSTALL NEW TANKLESS GAS WATER HEATER; RHEEM HIGH EFFICIENCY; 110 GPM INDOOR NATURAL GAS TANKLESS WATER HEATER WITH RECIRCULATION PUMP, #RTGH-RH14MLV W/ 0.94 EFF (CONFIRM SELECTION W/ OWNER PRIOR TO PURCHASING)  
 2. PROVIDE SHUT OFF VALVE @ CONNECTION TO APPLIANCE.  
 3. PER IRC M1307.2 ANCHOR OR STRAP WATER HEATER APPLIANCE TO RESIST HORIZONTAL DISPLACEMENT CAUSED BY EARTHQUAKE MOTION; STRAPPING SHALL BE AT POINTS WITHIN THE UPPER 1/3RD AND LOWER 1/3RD OF THE APPLIANCE'S VERTICAL DIMENSIONS. AT THE LOWER POINT, THE STRAPPING SHALL MAINTAIN A MINIMUM DISTANCE OF 4" ABOVE CONTROLS.

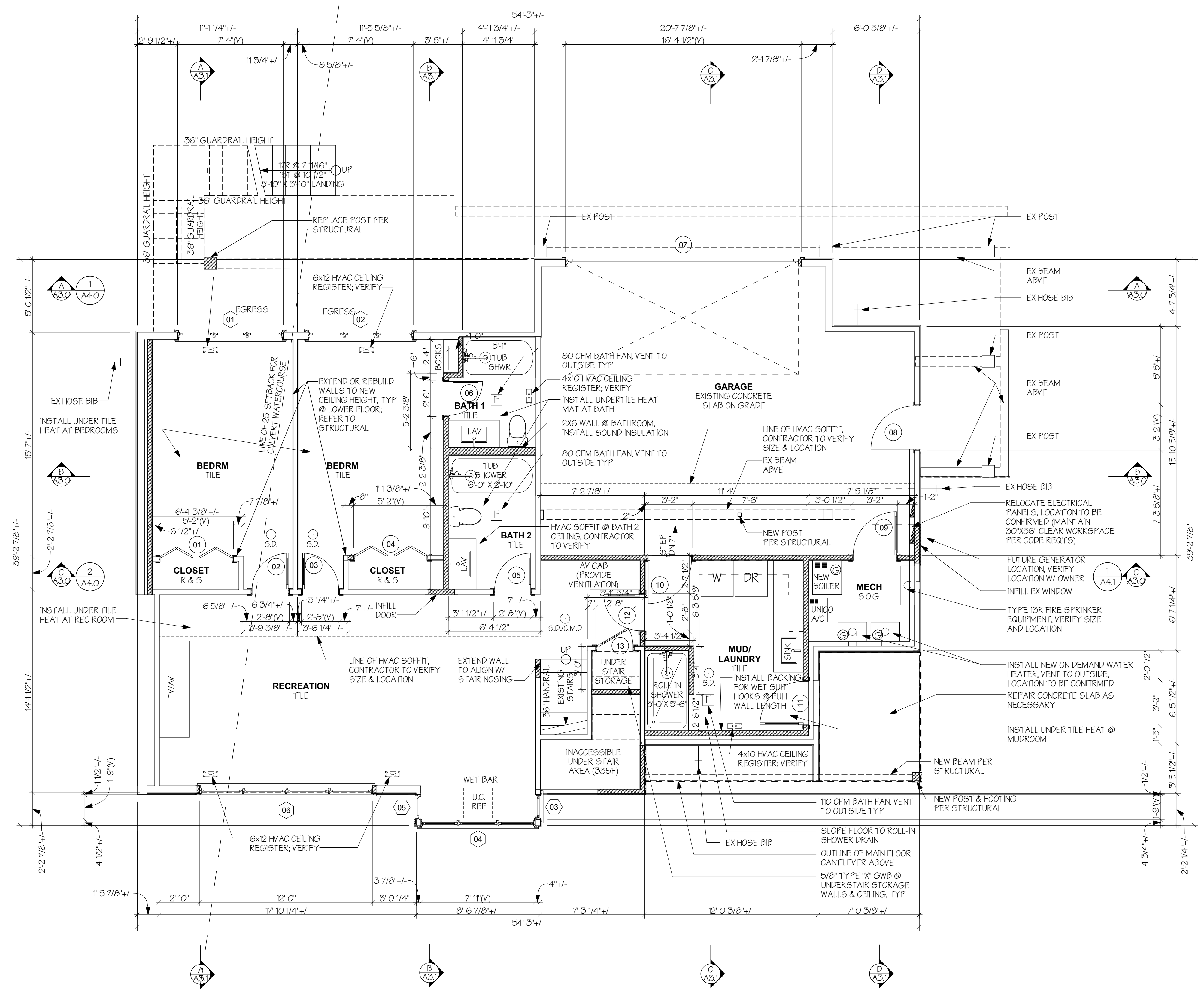
**VENTILATION REQUIREMENTS**  
 VENTILATION NOTES:  
 WHOLE HOUSE VENTILATION TO BE INTEGRATED INTO THE UNICO DUCTED COOLING SYSTEM TO MEET IRC M1507.3.5. PROVIDE CONTINUOUS AIRFLOW OF 90CFM.

**GROSS FLOOR AREA (MEASURED FROM THE OUTSIDE OF EXTERIOR WALLS)**

EXISTING/PROPOSED GROSS LOWER FLOOR AREA:	1,739.2 SF
EXEMPT AREA: BELOW GRADE	-(249 SF)
EXEMPT AREA: UNDER STAIR	(34 SF)
TOTAL GROSS FLOOR AREA AT LOWER FLOOR:	1,456.2 SF

**CONDITIONED FLOOR AREA (MEASURED FROM THE INSIDE OF EXTERIOR WALLS)**

EXISTING LOWER FLOOR AREA	921.6 SF
EXISTING GARAGE CONVERTED TO CONDITIONED AREA:	214.9 SF
TOTAL CONDITIONED AREA AT LOWER FLOOR:	1,136.5 SF

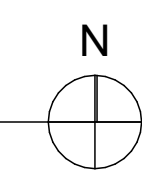


**LOWER FLOOR PLAN**

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

EXISTING WALLS  
 NEW OR MODIFIED WALLS

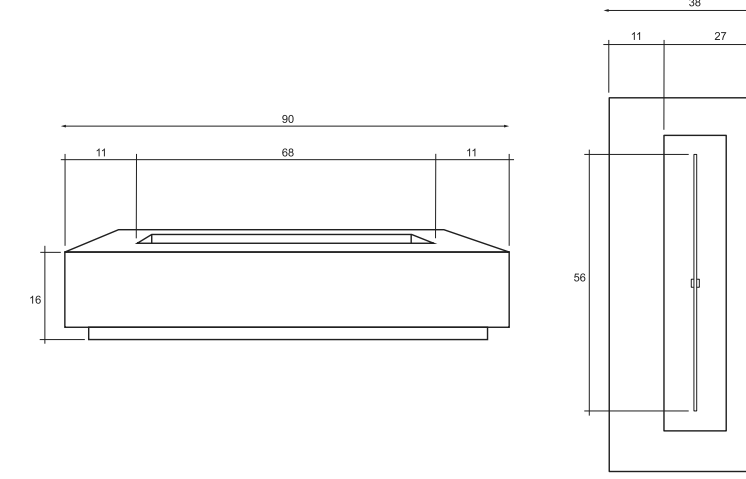
**NOTES:**  
 1. ALL DIMENSIONS ARE GIVEN TO THE FACE OF STUD WALL.  
 2. ALL DOOR AND WINDOW DIMENSIONS ON THIS PLAN ARE ROUGH OPENING SIZES, UNO. REFER TO WINDOW AND DOOR SCHEDULE FOR MORE INFORMATION.  
 3. SEE ATTACHED WSEC FORMS FOR ENERGY CODE COMPLIANCE INFORMATION.  
 4. INSTALL SMOKE DETECTORS (S.D.) AT LOCATIONS SHOWN. HARDWARE AND INTERCONNECT DETECTORS TO POWER SUPPLY AND PROVIDE BATTERY BACKUP AS REQUIRED.  
 5. INSTALL CARBON MONOXIDE ALARMS (C.M.D.) OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS. THE ALARM AND SHALL BE LISTED AS COMPLYING WITH UL 2034 AND SHALL BE INSTALLED IN ACCORDANCE WITH IRC R3103 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.  
 6. UNDERCUT INTERIOR DOORS 1/2" MINIMUM TO PROVIDE AIR FLOW TO ALL HABITABLE SPACES.







SECTION 3: DIMENSIONS & DIAGRAMS



SPECIFICATIONS	
Width	36"
Length	90"
Height	48"
Surface	11'
Burner Size	87" / 45,000 BTU
Weight	450 lbs.
Finish/Stone	12" x 12"
Ignition	Gas Valve
Material	Cast Iron Reinforced Cement

SECTION 4: PARTS LIST

PART NO.	PART NAME	QTY.
01	48" x 11" Burner	1
02	48" x 16" Burner Plate	1
03	70,000 BTU Orifice	1
04	3/8" Mide Barbed fitting	1
05	3/8" Max line hose	1
06	Key	1
07	Gas Key Valve	1
08	12" x 38" x 1/4" Fire Table	1
09	Lava Rock	50 LBS
IF MODEL ONLY		
10	1/2" Propane Hose 10ft	1
11	90,000 BTU LP Regulator	1

TOOLS REQUIRED

- Gloves
- Spray Gun with #2 pHlex Head tip to remove packaging
- Box cutter to cut bands & miscellaneous plastic
- Crescent wrench to attach gas line

SECTION 5: GAS REQUIREMENTS

Read this section before installation. It explains what you need to know about liquid propane & natural gas prior to setting up your fire feature.

LIQUID PROPANE

Your fire feature is not provided with a propane tank. You will need to provide one. Use the following specifications for purchasing your propane tank.

SPECIFICATIONS

The 2-lb. propane gas supply cylinder is constructed and marked in accordance with the specifications for propane gas cylinders as required by the U.S. Department of Transportation (DOT).

MANIFOLD PRESSURE

For plumbed-in liquid propane installation, use a regulator.

- Minimum -8.0" W.C.
- Normal -11.0" W.C.
- Maximum -14.0" W.C. (1/2psi)

SUPPLY PRESSURE

Maximum line pressure for plumbed-in propane is 14" W.C. (3.5 kPa). Minimum line pressure for propane is 11" W.C. (3.0 kPa).

PRESSURE REGULATOR

The unit must be used with the supplies gas pressure regulator and hose assembly. The regulator will control and maintain a uniform gas pressure in the manifold. The burner orifice has been sized for the gas pressure delivered by the regulator. Replacement pressure regulator and hose assemblies must be those specified in the instructions.

CYLINDER SPECIFICATION

Any propane gas supply cylinder used with this fire feature must be approximately 12" in diameter and 18" high. The maximum fuel capacity is 20 lbs. of propane or 5 gallons. Full cylinder weight should be approximately 38 lbs. Always use the cylinder dust cap on the cylinder valve outlet during transport and when the cylinder is not connected to the fire feature. The 20-lb. propane gas cylinder used must include a collar to protect the cylinder valve.

FILLER VALVE

If you do not have an updated filler valve on your existing propane tank, you will need to purchase one at your local hardware store, otherwise you will not be able to refill the propane tank at the refill station.

TRANSPORTING GAS CYLINDER

Only one cylinder should be transported at a time. Be sure that the cylinder is secure and transported in an upright position with the control valve turned off.

NATURAL GAS

Ensure that the service supplying the fire feature is fitted with a positioned shut off valve that is easily accessible.

REQUIREMENTS

Always check the rating plate to make sure the gas supply you are connecting is the gas type for the manufactured fire feature. The installation of this appliance must conform with local codes or, in the absence of local codes, to the National Fuel Gas Code, ANSI Z223.1, NFPA 54, National Fuel Gas Code, Natural Gas and Propane Installation Code, CSA B149.1, or Propane Storage and Handling Code, CSA B146.2 as applicable. Natural gas connection must be performed by a licensed contractor or local gas company representative.

SUPPLY PRESSURE

- Minimum -3.5" W.C.
- Normal -7.0" W.C.
- Maximum -14.0" W.C. (1/2psi)

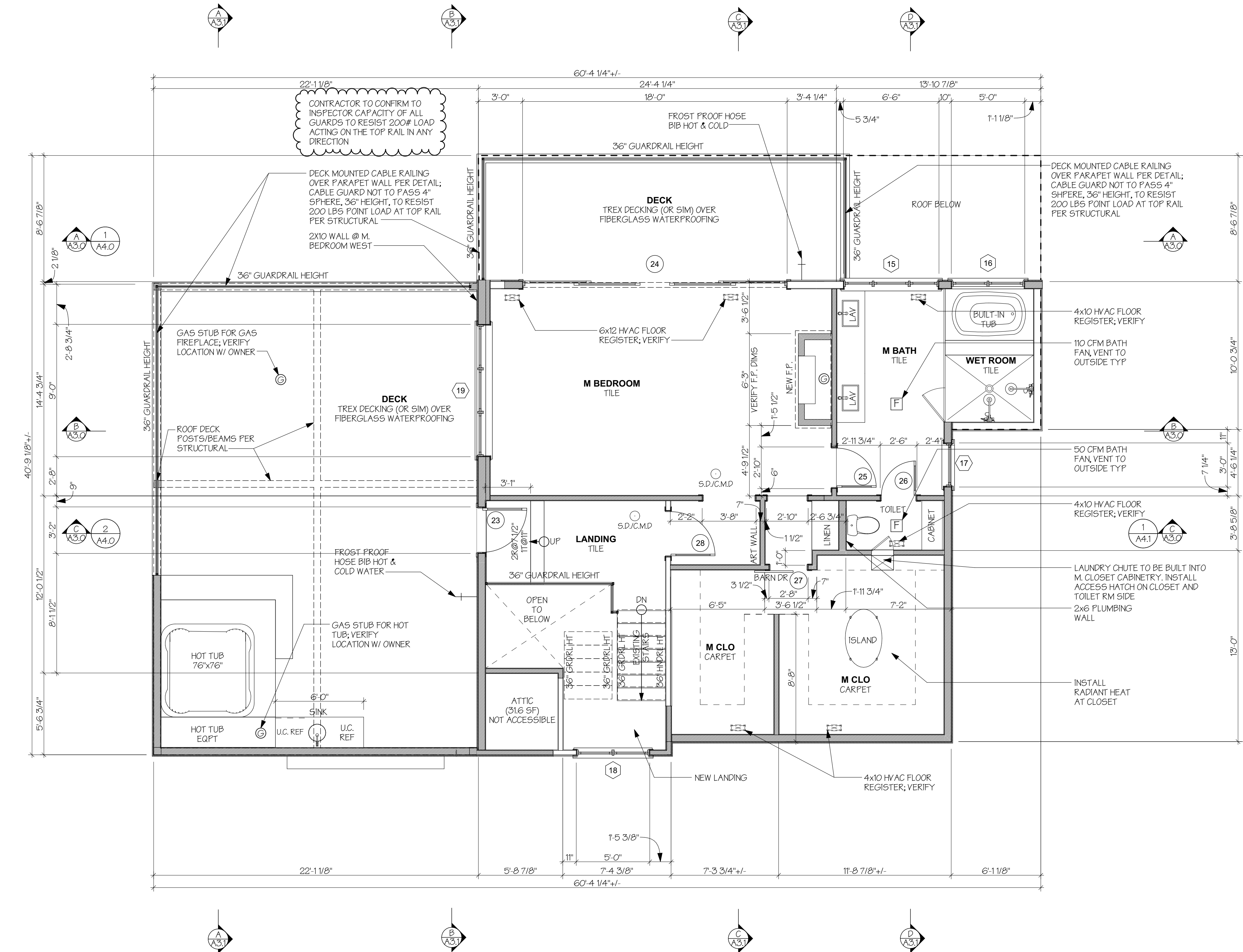
PRESSURE TESTING

If the fire feature is installed with a fixed fuel piping system and equipped with an appliance gas pressure regulator, the fire feature and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressure in excess of 1/2psi (3.5 kPa).

The fire feature must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2psi (3.5 kPa).

GROSS FLOOR AREA (MEASURED FROM THE OUTSIDE OF EXTERIOR WALLS)	
EXISTING UPPER FLOOR AREA:	846.5 SF
EXISTING AREA DEMOLISHED:	(-216 SF)
NEW ADDITION:	254.4 SF
PROPOSED GROSS FLOOR AREA AT UPPER FLOOR:	1,079.35F
EXEMPT AREA: ATTIC	(-316 SF)
DOUBLE-HEIGHT SPACE:	+514 SF
STAIRCASE:	+59 SF
TOTAL FLOOR AREA AT UPPER FLOOR:	1,581.5F

CONDITIONED FLOOR AREA (MEASURED FROM THE INSIDE OF EXTERIOR WALLS)	
EXISTING UPPER FLOOR AREA:	684.1 SF
EXISTING AREA DEMOLISHED:	(-216 SF)
NEW ADDITION:	223.5 SF
DOUBLE HEIGHT SPACE AT UPPER LEVEL (COUNT AT 100%)	514SF
TOTAL CONDITIONED AREA AT UPPER FLOOR:	907.6 SF
TOTAL FLOOR AREA AT UPPER FLOOR:	959 SF



UPPER FLOOR PLAN

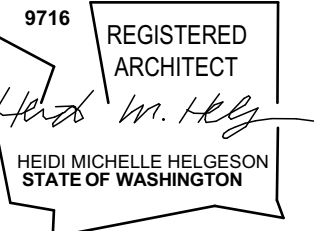
SCALE: 1/4" = 1'-0"

- EXISTING WALLS
- NEW OR MODIFIED WALLS

NOTES:

1. ALL DIMENSIONS ARE GIVEN TO THE FACE OF STUD UNO.
2. ALL DOOR AND WINDOW DIMENSIONS ON THIS PLAN ARE ROUGH OPENING SIZES, UNO. REFER TO WINDOW AND DOOR SCHEDULE FOR MORE INFORMATION.
3. SEE ATTACHED WSEC FORMS FOR ENERGY CODE COMPLIANCE INFORMATION.
4. INSTALL SMOKE DETECTORS (S.D.) AT LOCATIONS SHOWN HARDWARE AND INTERCONNECT DETECTORS TO POWER SUPPLY AND PROVIDE BATTERY BACKUP AS REQUIRED.
5. INSTALL CARBON MONOXIDE ALARMS (C.M.D.) OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS. THE ALARM AND SHALL BE LISTED AS COMPLYING WITH UL 2034 AND SHALL BE INSTALLED IN ACCORDANCE WITH IRC R3153 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS

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UPPER FLOOR PLAN

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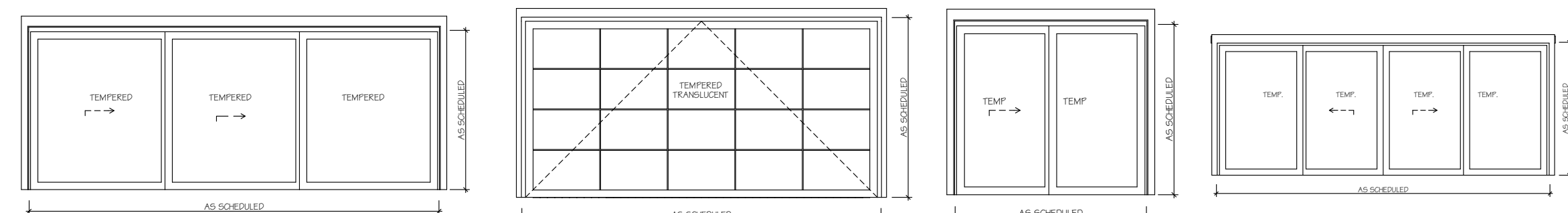


DOOR SCHEDULE											
	ID	R.O. DIMENSIONS *SEE NOTE 1		DOOR LEAF DIMENSIONS		TYPE	THICK	AREA (SF)	NOTES	U-VAL	
		WIDTH	HEIGHT	W	HT						
LOWER FLOOR											
	01	5'-2"	6'-10 1/2"	5'-0"	6'-8"	BI-FOLD	0-1 3/8"	0.00	FR 2'-6" DRS; VERIFY FIT IN EX R.O.		
	02	2'-8"	6'-10 1/2"	2'-6"	6'-8"	SWING	0-1 3/8"	0.00	VERIFY FIT IN EX R.O.		
	03	2'-8"	6'-10 1/2"	2'-6"	6'-8"	SWING	0-1 3/8"	0.00	VERIFY FIT IN EX R.O.		
	04	5'-2"	6'-10 1/2"	5'-0"	6'-8"	BI-FOLD	0-1 3/8"	0.00	FR 2'-6" DRS		
	05	2'-8"	6'-10 1/2"	2'-6"	6'-8"	SWING	0-1 3/8"	0.00			
	06	2'-6"	6'-10 1/2"	2'-4"	6'-8"	SWING	0-1 3/8"	0.00			
	07	16'-4 1/2"	8'-2 1/4"	16'-0"	8'-0"	ROLL-UP	0-1 3/4"	0.00	GARAGE DOOR, VERIFY FIT IN EX R.O. TEMP, TRANS.		
	08	3'-2"	6'-10 1/2"	3'-0"	6'-8"	SWING I	0-1 3/4"	0.00	VERIFY FIT IN EX R.O.		
	09	3'-2"	6'-10 1/2"	3'-0"	6'-8"	SWING	0-1 3/8"	0.00	1-3/8" S.C. 20 MIN RATED DR W/ SELF CLOSER		
	10	3'-2"	6'-10 1/2"	3'-0"	6'-8"	SWING	0-1 3/8"	0.00	1-3/8" S.C. 20 MIN RATED DR W/ SELF CLOSER		
	11	3'-2"	6'-10 1/2"	3'-0"	6'-8"	SWING II	0-1 3/4"	20.00	TEMP. TRANSLUCENT		
	12	2'-8"	6'-10 1/2"	2'-6"	6'-8"	SWING	0-1 3/8"	0.00			
	13	2'-8"	6'-10 1/2"	2'-6"	6'-8"	SWING	0-1 3/8"	0.00	VERIFY HH. @ UNDERSTAIR STORAGE		
MAIN FLOOR											
	14	18'-8"	7'-4 1/2"	18'-6"	7'-2"	LIFT & SLIDE	0-1 3/4"	113.00	OXX, LIFT & SLIDE; TEMPERED	0.30	
	15	8'-2"	7'-4 1/2"	8'-0"	7'-2"	S.G.D. I	0-1 3/4"	46.70	XO TEMPERED	0.30	
	16	2'-7"	6'-10 1/2"	2'-10"	7'-0"	BARN	0-1 3/8"	0.00	OVERSIZE LEAF BY 4"		
	17	3'-2"	6'-10 1/2"	3'-0"	6'-8"	SWING	0-1 3/8"	0.00			
	18	2'-10"	6'-10 1/2"	2'-8"	6'-8"	SWING	0-1 3/8"	0.00			
	19	2'-8"	6'-10 1/2"	2'-10"	7'-0"	BARN	0-1 3/8"	0.00	OVERSIZE LEAF BY 4"		
	20	2'-8"	6'-10 1/2"	2'-6"	6'-8"	SWING	0-1 3/8"	0.00			
	21	2'-6"	6'-10 1/2"	2'-4"	6'-8"	SWING	0-1 3/8"	0.00			
	22	5'-10"	8'-2 1/2"	3'-6"	8'-0"	SWING III	0-1 3/4"	46.70	OVERSIZE ENTRY W/ SIDELITES; TEMPERED		
UPPER FLOOR											
	23	3'-2"	6'-10 1/2"	3'-0"	6'-8"	SWING II	0-1 3/4"	20.00	TEMPERED GLAZING; STORE DOOR	0.20	
	24	18'-0"	7'-3 3/4"	17'-8"	7'-0"	S.G.D. II	0-1 3/4"	110.00	OXXO TEMPERED GLAZING	0.20	
	25	2'-10"	7'-2 1/2"	2'-8"	7'-0"	SWING	0-1 3/8"	0.00			
	26	2'-6"	7'-2 1/2"	2'-4"	7'-0"	SWING	0-1 3/8"	0.00			
	27	2'-8"	7'-2 1/2"	3'-2"	7'-4"	BARN	0-1 3/8"	0.00			
	28	3'-2"	7'-2 1/2"	3'-0"	7'-0"	SWING	0-1 3/8"	0.00			
TOTAL EXTERIOR DOOR AREA:								356.40			

MANUFACTURER: INTERIOR: SIMPSON OR EQUAL, SOLID CORE 1 PANEL DOORS (TO BE SELECTED)  
 EXTERIOR: ANDERSEN, MILGARD OR EQUAL ALUMINUM CLAD EXTERIOR WITH PRIMED PINE INTERIOR (TO BE SELECTED)

- NOTES:  
 1. VERIFY ROUGH OPENING SIZES WITH SELECTED MANUFACTURER REQUIREMENTS  
 2. SEE ELEVATIONS FOR CONFIGURATION  
 3. VERIFY ALL SIZES AND ROUGH OPENINGS PRIOR TO CONSTRUCTION  
 4. CONTACT ARCHITECT IMMEDIATELY WITH QUESTIONS  
 5. ALL GLAZING AT DOORS TO BE TEMPERED.

EXTERIOR DOORS:

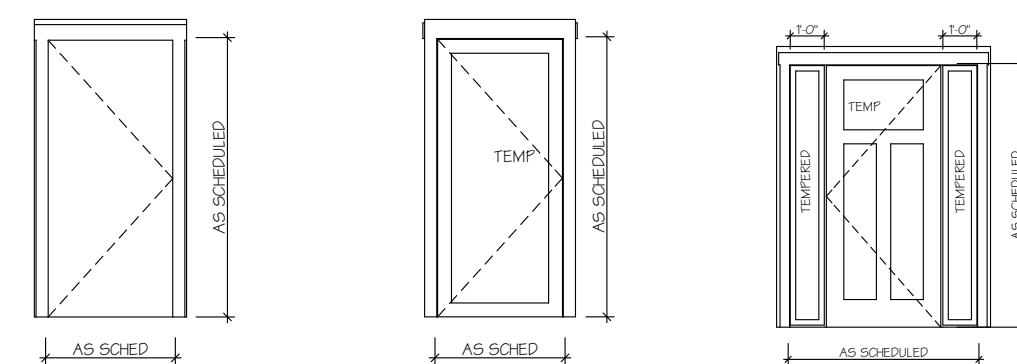


LIFT & SLIDE

ROLL-UP

S.G.D. I

S.G.D. II

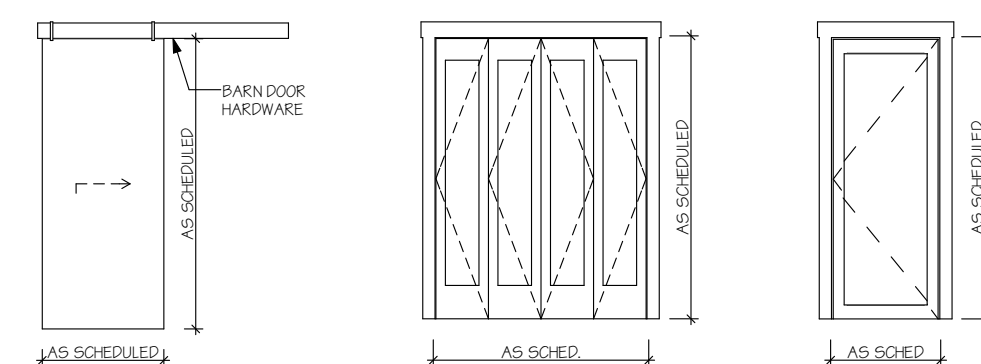


SWING I

SWING II

SWING III

INTERIOR DOORS:



BARN

BI-FOLD

SWING

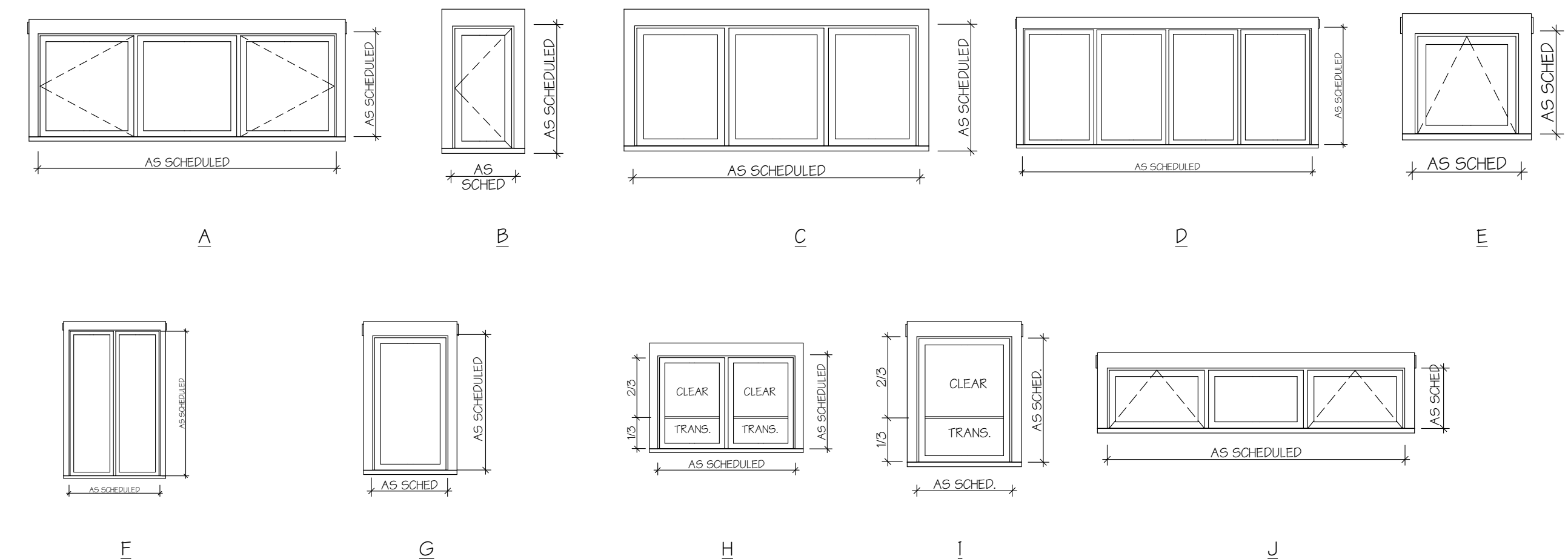
WINDOW SCHEDULE											
	ID	ROUGH OPENING *SEE NOTE 1		ROUGH HEAD FROM SUBFLR.	TYPE	OPER	AREA (SF)	NOTES	U-VAL		
		WIDTH	HEIGHT								
LOWER FLOOR											
	01	7'-4"	4'-0"	6'-10 1/2"	A	C/P/C	29.30	EGRESS, VERIFY FIT IN EX R.O.	0.30		
	02	7'-4"	4'-0"	6'-10 1/2"	A	C/P/C	29.30	EGRESS, VERIFY FIT IN EX R.O.	0.30		
	03	1'-9"	3'-6"	6'-10 1/2"	B	C	6.20	VERIFY FIT IN EX R.O. WIDTH	0.30		
	04	7'-11"	3'-6"	6'-10 1/2"	C	P/P/P	27.70	VERIFY FIT IN EX R.O. WIDTH	0.30		
	05	1'-9"	3'-6"	6'-10 1/2"	B	C	6.20	VERIFY FIT IN EX R.O. WIDTH	0.30		
	06	12'-0"	5'-0"	6'-10 1/2"	D	P/P/P/P	60.00	VERIFY FIT IN EX R.O. WIDTH	0.30		
MAIN FLOOR											
	07	18'-0"	7'-0"	7'-2 1/2"	D	P/P/P/P	96.30	TEMPERED GLAZING	0.30		
	08	9'-8"	3'-6"	7'-2 1/2"	A	C/P/C	33.80		0.30		
	09	2'-6"	2'-6"	6'-10 1/2"	E	A	6.25	TRANSLUCENT; TEMP.	0.30		
	10	2'-6"	2'-6"	6'-10 1/2"	E	A	6.25	TEMPERED, TRANSLUCENT	0.30		
	11	9'-0"	4'-0"	6'-10 1/2"	A	C/P/C	36.00	EGRESS	0.30		
	12	5'-0"	4'-6"	8'-0"	F	P/P	22.50		0.30		
	13	2'-6"	4'-6"	8'-0"	G	P	11.25		0.30		
	14	2'-6"	4'-6"	8'-0"	G	P	11.25		0.30		
UPPER FLOOR											
	15	6'-6"	3'-6"	7'-2 1/2"	A	C/P/C	22.80		0.30		
	16	5'-0"	3'-6"	7'-2 1/2"	H	P/P	17.50	TEMPERED, UPPER: CLEAR; LOWER: TRANSLUCENT	0.30		
	17	3'-0"	4'-0"	7'-2 1/2"	I	P	12.00	UPPER: CLEAR; LOWER: TRANSLUCENT, TEMP.	0.30		
	18	5'-0"	8'-0"	7'-2 1/2"	F	P/P	40.00	TEMPERED	0.30		
	19	9'-0"	2'-0"	7'-2 1/2"	J	A/P/A	22.80	VERIFY ALIGN HH. W/ DOOR #26	0.30		
TOTAL EXTERIOR WINDOW AREA:							497.40				

MANUFACTURER: ANDERSEN, MILGARD, OR EQUAL (TO BE SELECTED)  
 SERIES: ALUMINUM CLAD EXTERIOR WITH PRIMED PINE INTERIOR

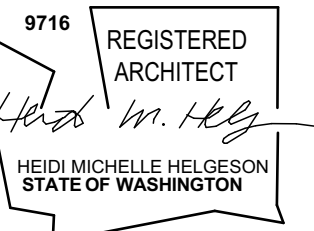
- NOTES:  
 1. VERIFY ROUGH OPENING SIZES WITH SELECTED MANUFACTURER REQUIREMENTS  
 2. SEE ELEVATIONS FOR CONFIGURATION  
 3. VERIFY ALL SIZES AND ROUGH OPENINGS PRIOR TO CONSTRUCTION  
 4. VERIFY EXISTING ROUGH OPENINGS WHERE WINDOWS ARE BEING REPLACED IN THE EXISTING OPENINGS PRIOR TO ORDERING THE WINDOWS  
 5. CONTACT ARCHITECT IMMEDIATELY WITH QUESTIONS  
 6. TRANSLUCENT GLASS TO BE SATIN ETCH. PROVIDE GLASS SAMPLE TO OWNER/ARCH FOR APPROVAL PRIOR TO ORDERING

KEY

A	= AWNING
C	= CASEMENT
H.S.	= HORIZONTAL SLIDER
P	= PICTURE
S.H.	= SINGLE HUNG
H	= HOPPER



WERELIUS RESIDENCE  
 8452 NORTH MERCER WAY  
 MERCER ISLAND WA 98040



H 2 D  
 ARCHITECTURE  
 +  
 DESIGN

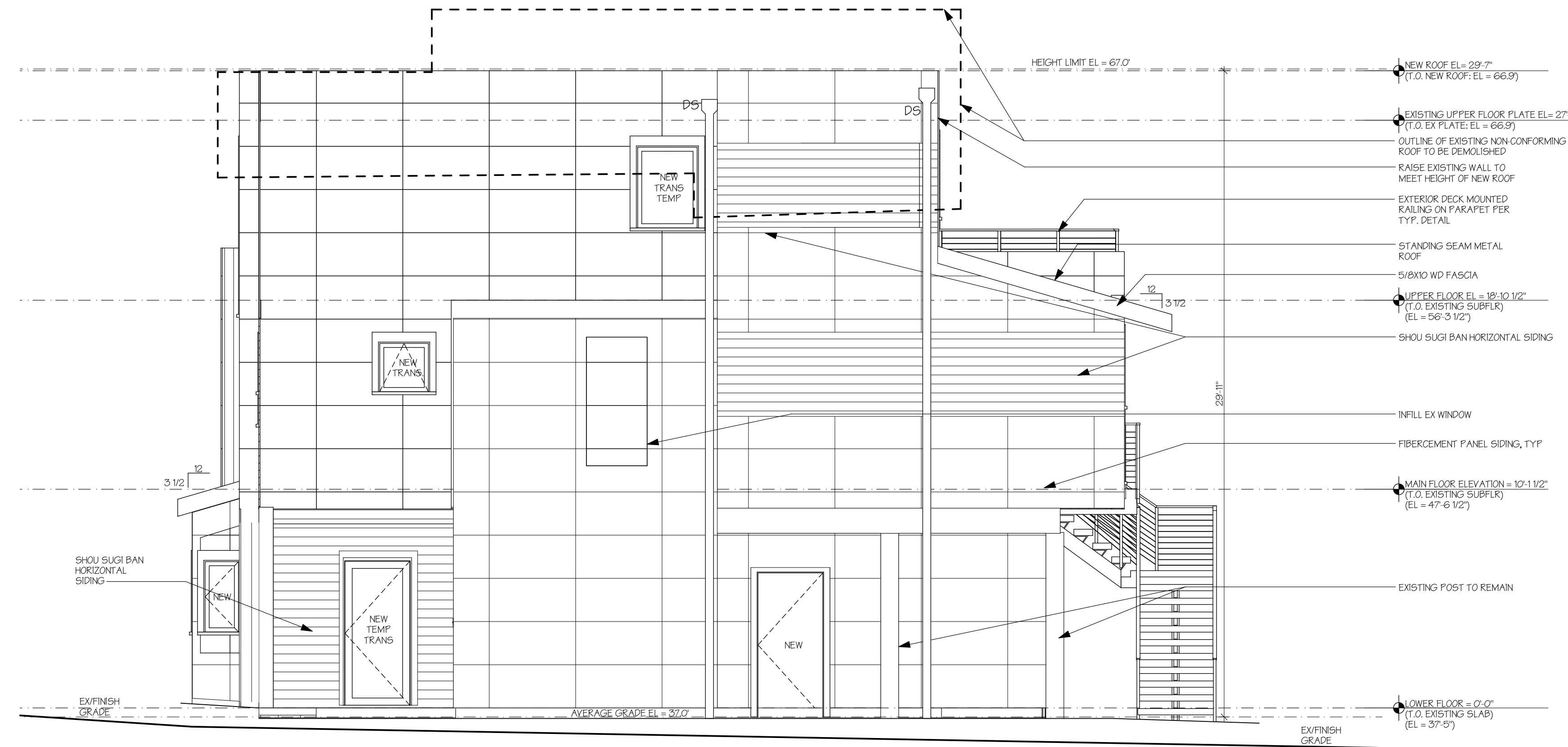
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 www.h2darchitects.com

DATE: 6/2/2020

PRICING SET

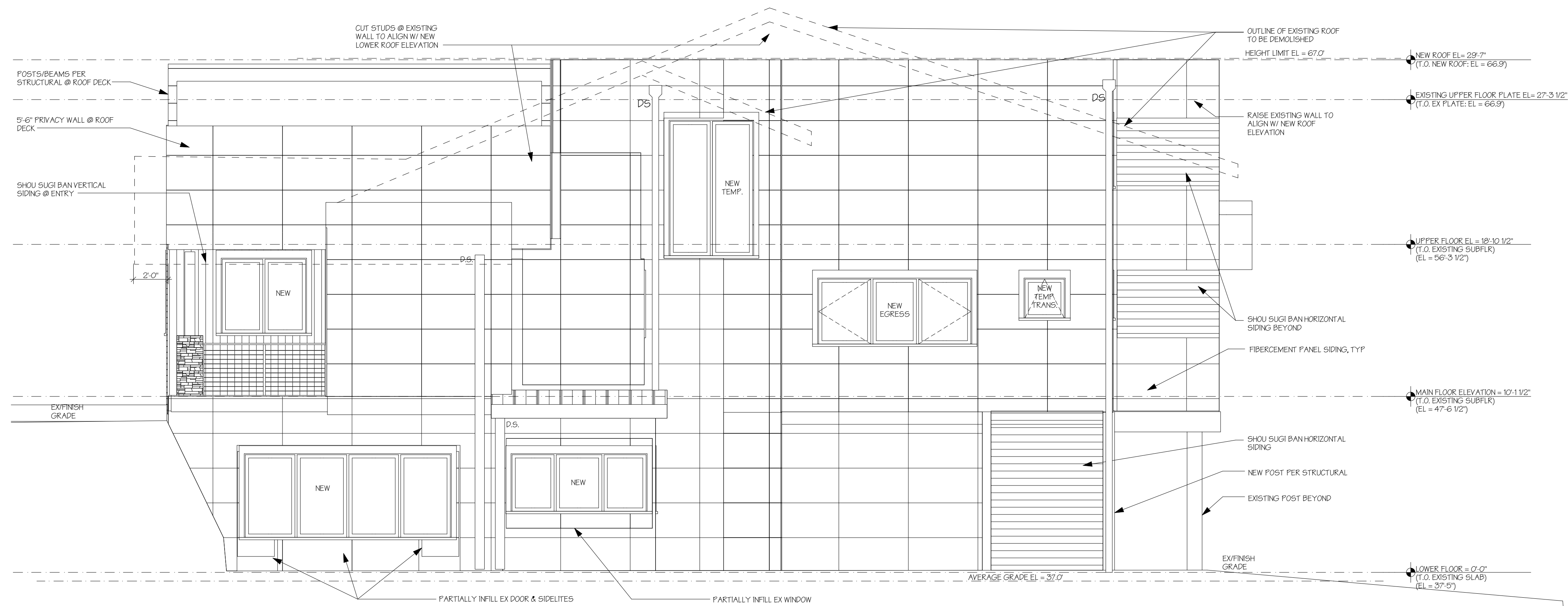
WINDOW AND DOOR  
 SCHEDULES





**EAST ELEVATION**

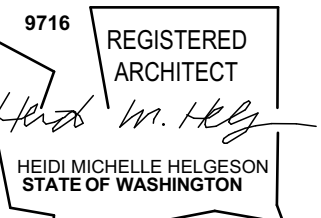
SCALE: 1/4" = 1'-0"



**SOUTH ELEVATION**

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

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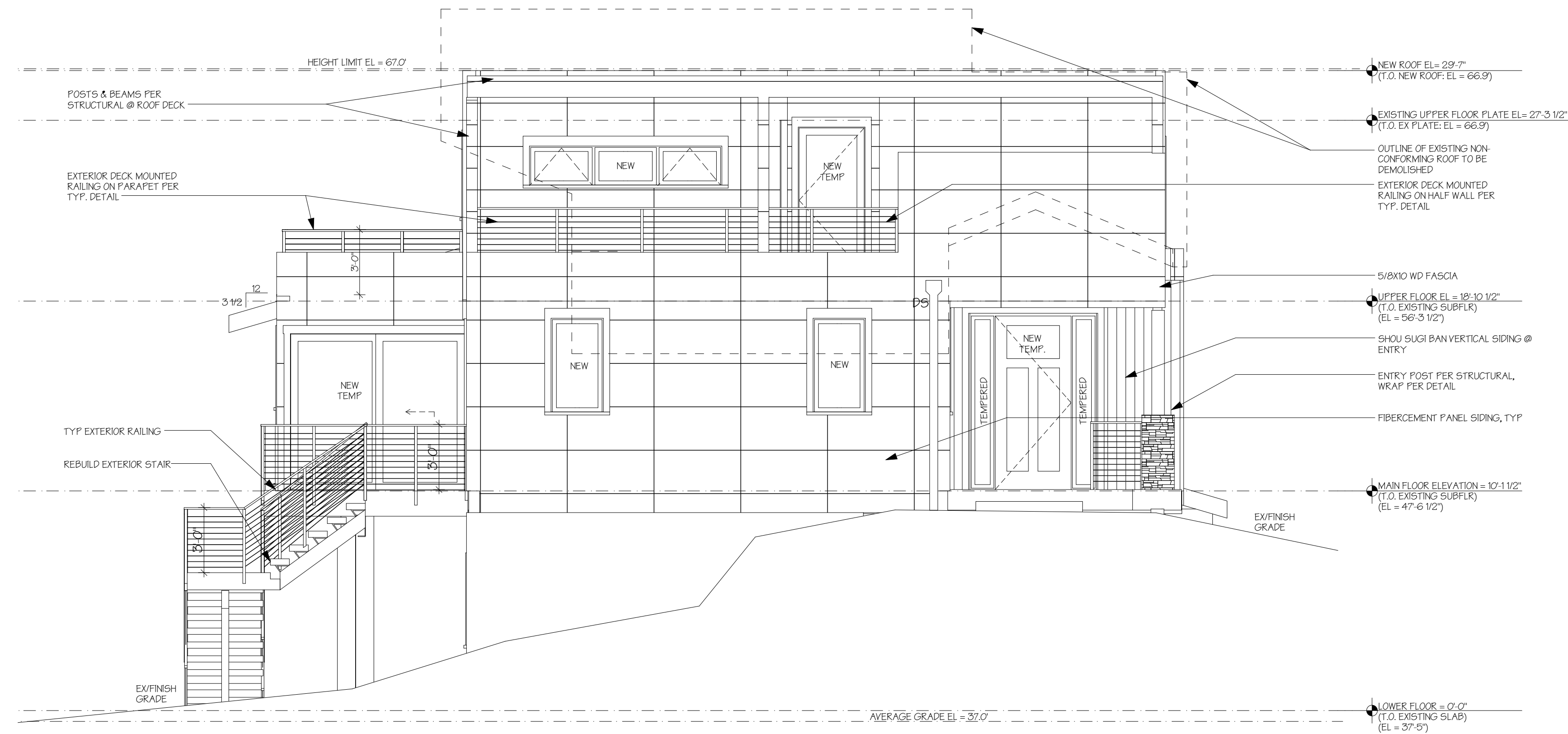
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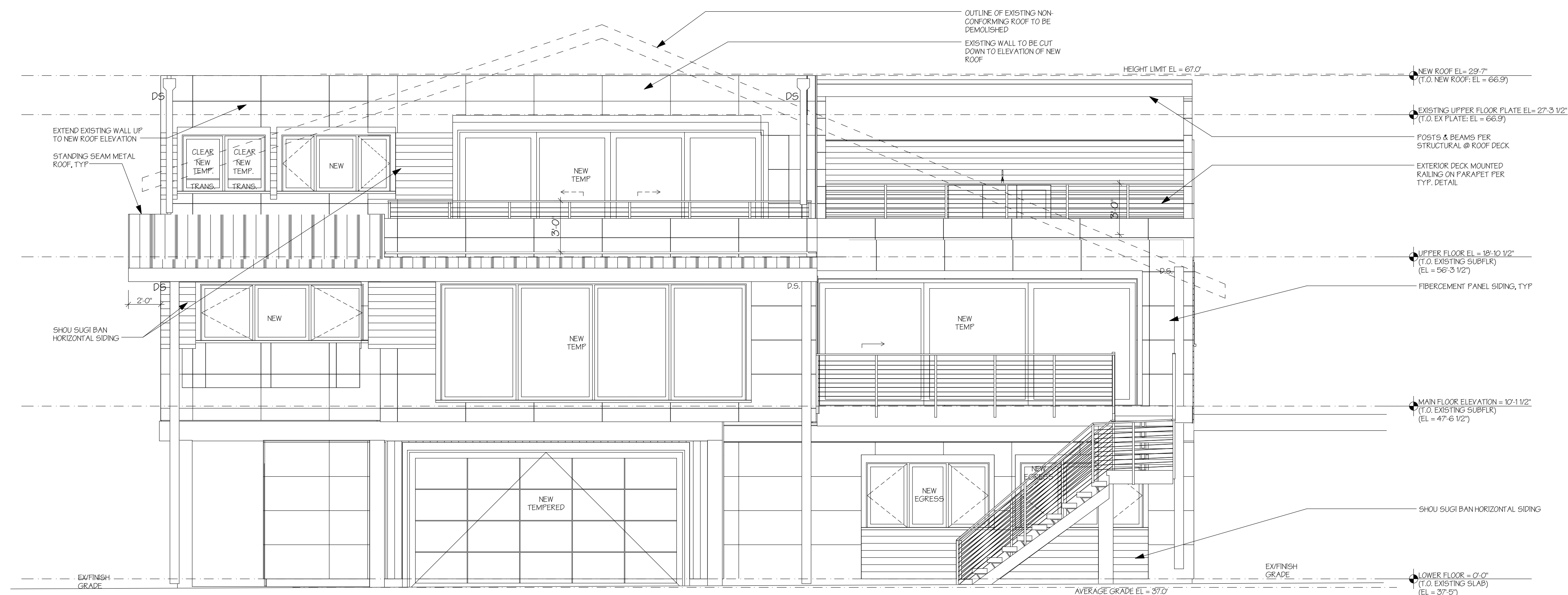
PRICING SET

EXTERIOR ELEVATIONS



**WEST ELEVATION**

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



**NORTH ELEVATION**

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

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**H 2 D**  
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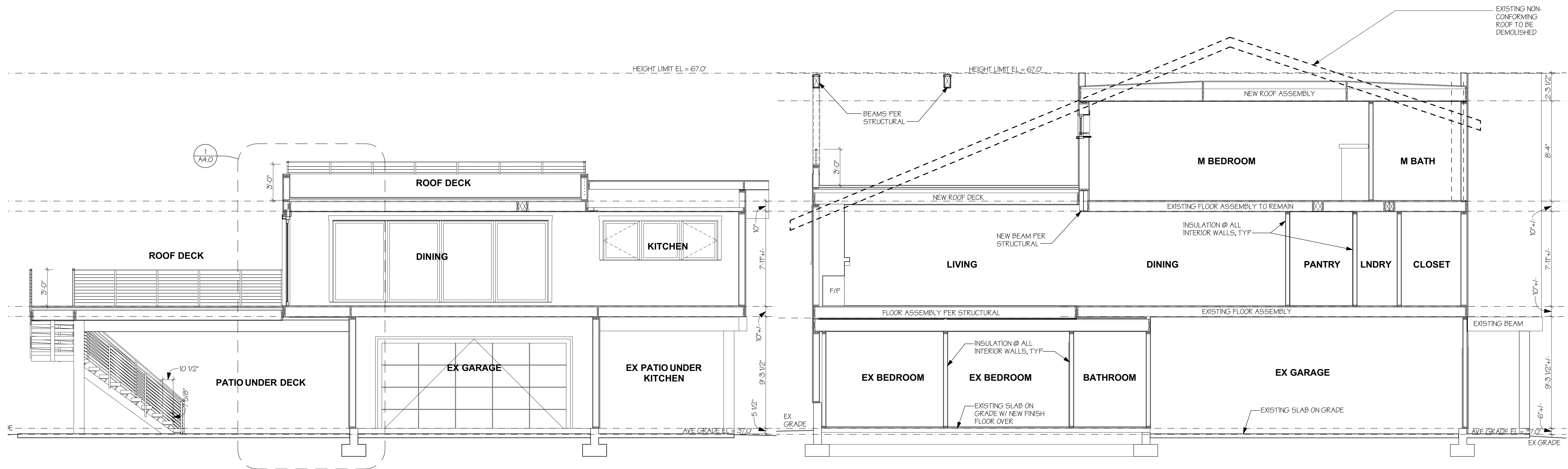
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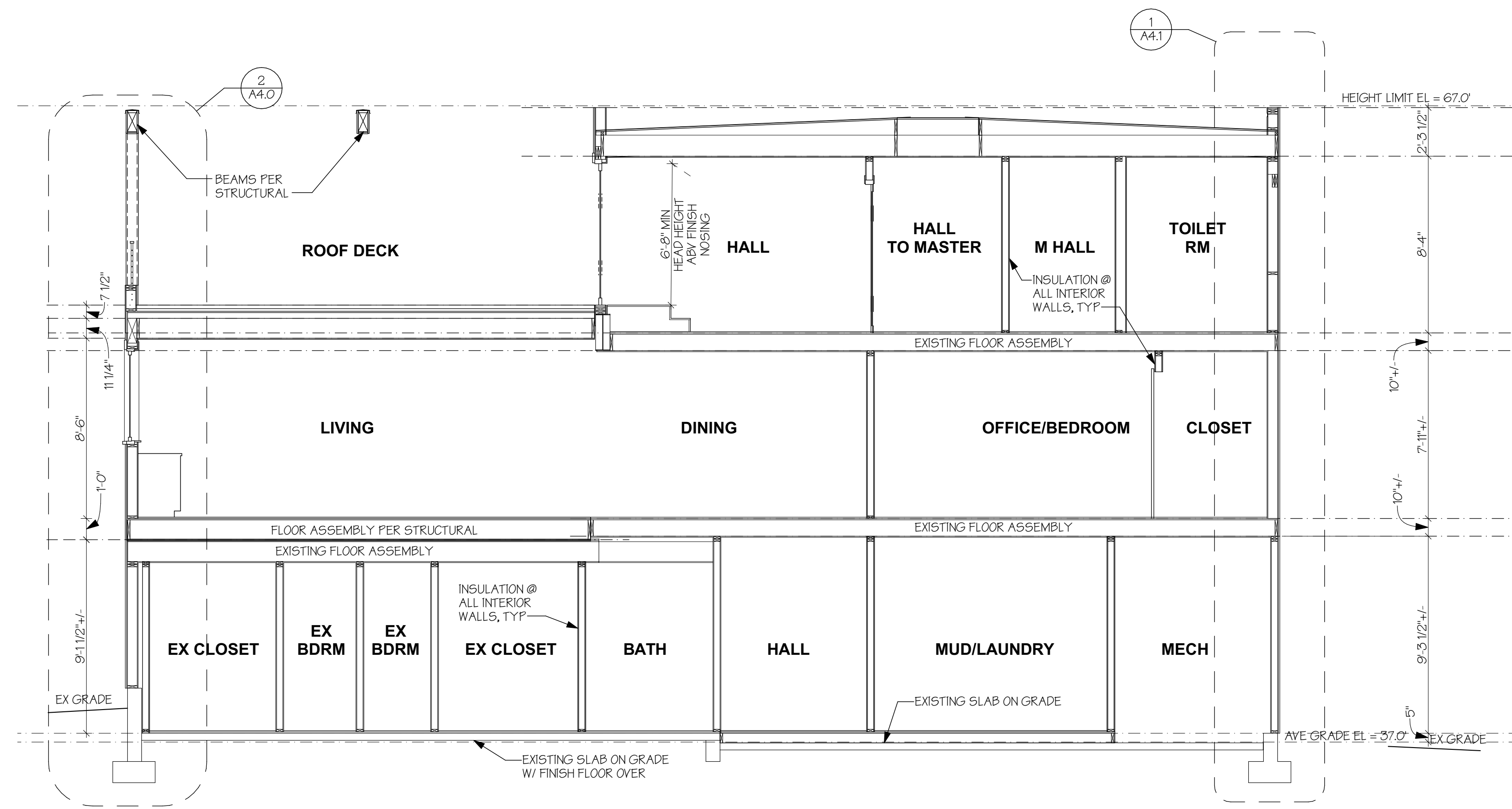
EXTERIOR ELEVATIONS





**A** BUILDING SECTION  
SCALE: 1/4" = 1'-0"

**B** BUILDING SECTION  
SCALE: 1/4" = 1'-0"



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

WERELIUS RESIDENCE  
8452 NORTH MERCER WAY  
MERCER ISLAND WA 98040

9716 REGISTERED ARCHITECT  
*Heidi M. Hely*  
HEIDI MICHELLE HELGESON  
STATE OF WASHINGTON



H 2 D  
ARCHITECTURE  
+  
DESIGN

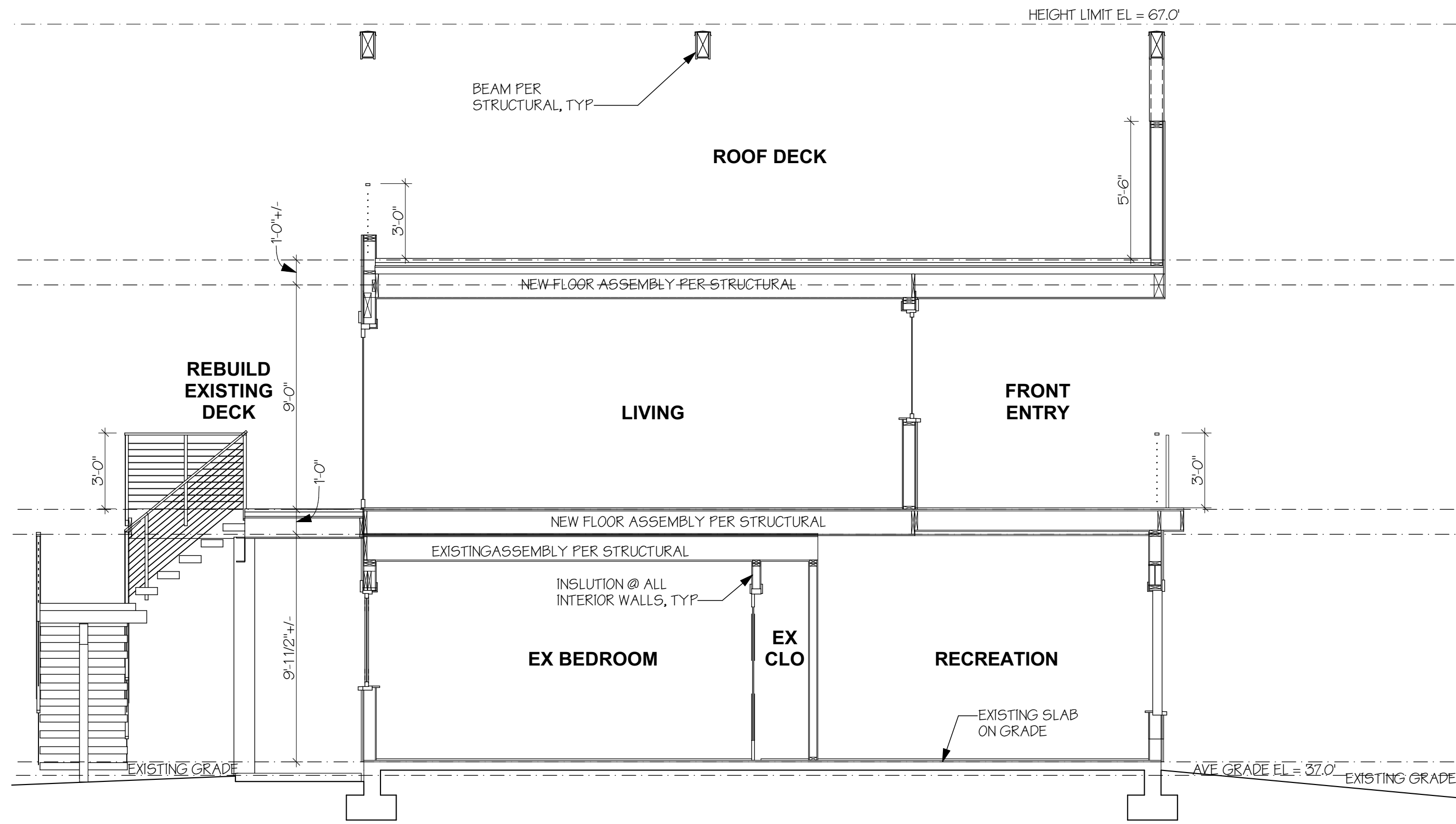
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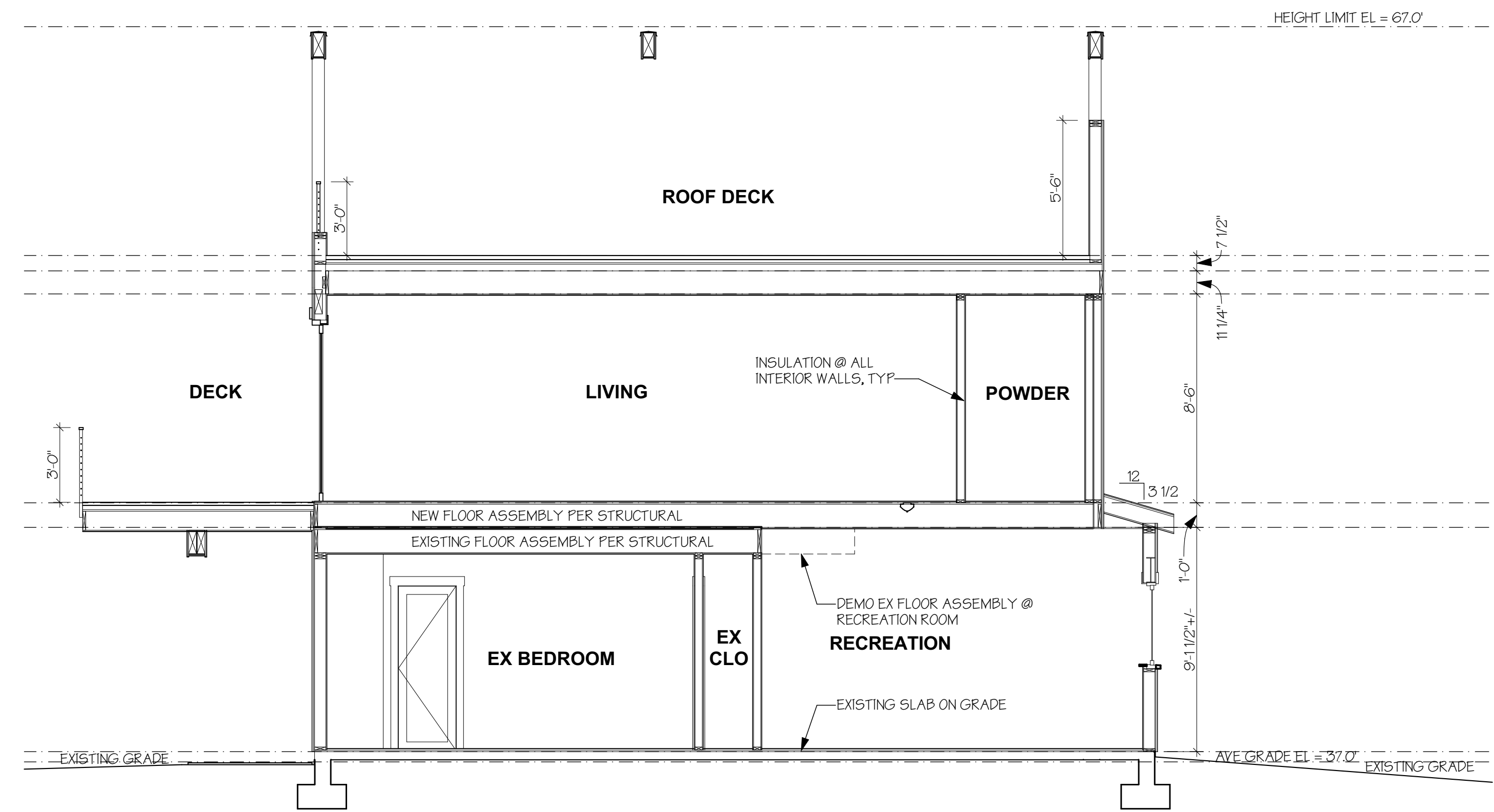
PRICING SET

BUILDING SECTIONS

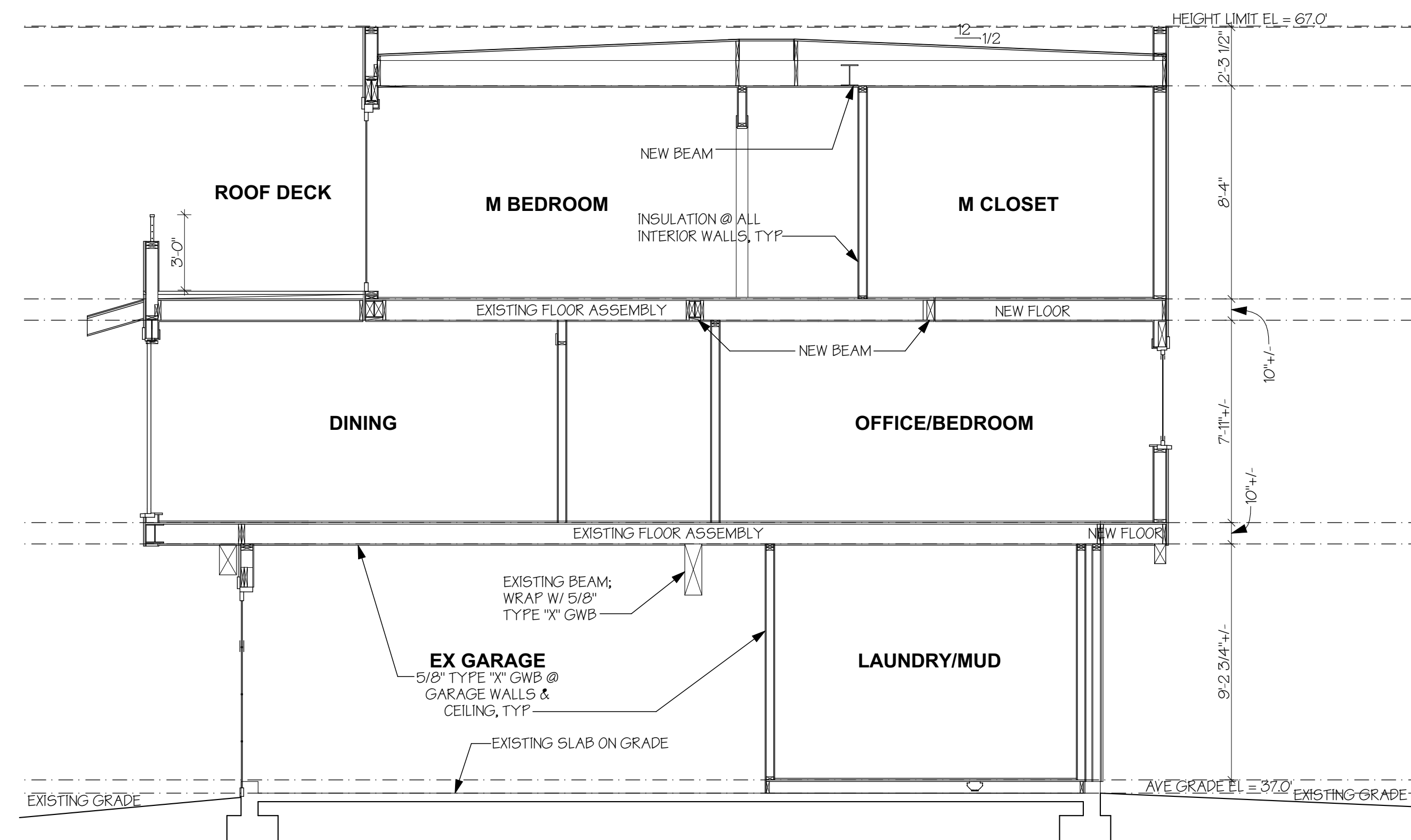
A3.0



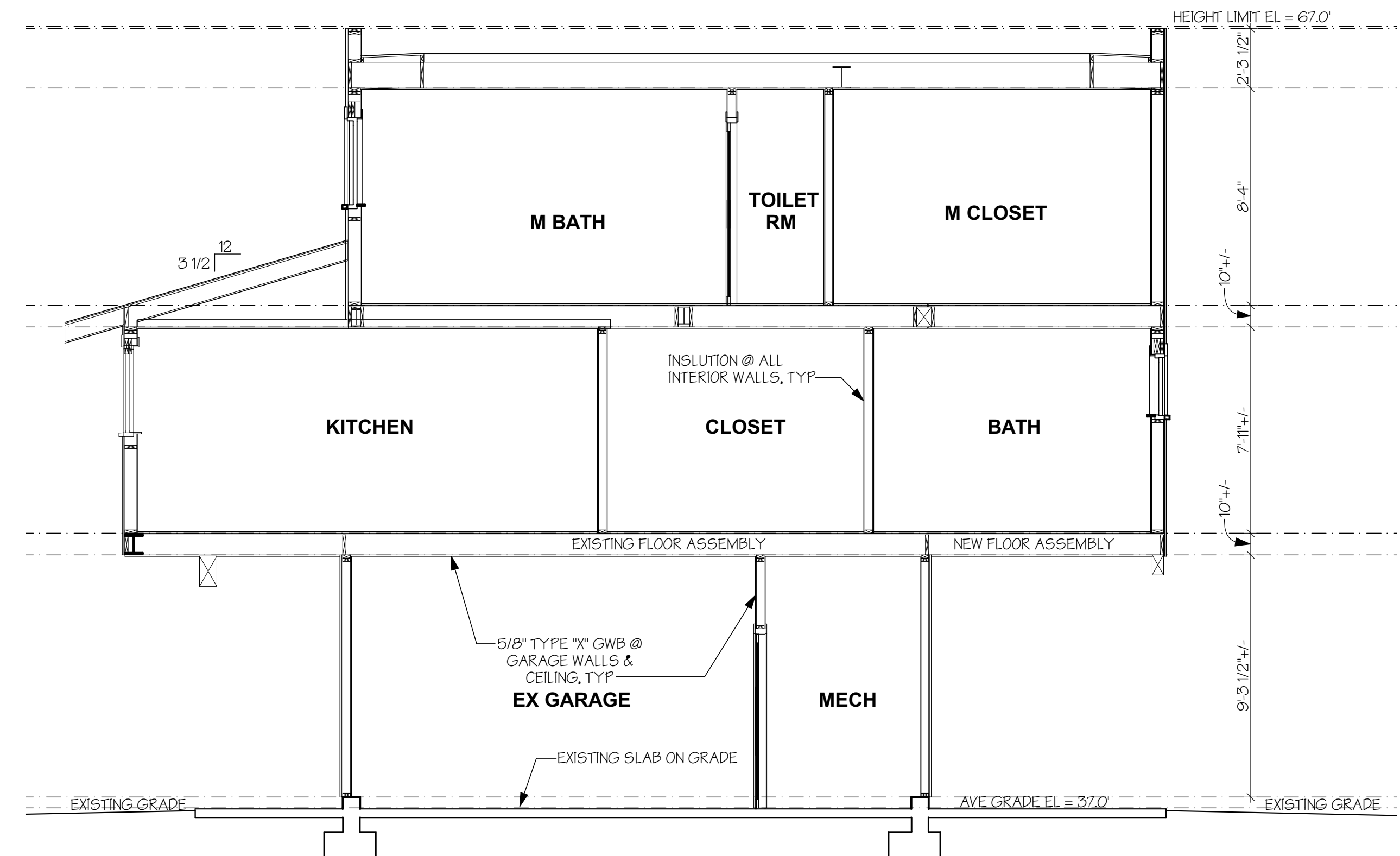
**A** BUILDING SECTION  
SCALE: 1/4" = 1'-0"



**B** BUILDING SECTION  
SCALE: 1/4" = 1'-0"



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



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

WERELIUS RESIDENCE  
8452 NORTH MERCER WAY  
MERCER ISLAND WA 98040

9716 REGISTERED ARCHITECT  
*Heidi M. Helgeson*  
HEIDI MICHELLE HELGESON  
STATE OF WASHINGTON



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DESIGN

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PRICING SET

BUILDING SECTIONS





**TYP WATERPROOF ROOF DECK ASSEMBLY**

- TREX DECKING (OR SIMILAR)
- P.T. SLEEPERS PER STRUCTURAL
- FIBERGLASS WATERPROOFING SYSTEM; SLOPE MIN 1/4":12"
- MARINE GRADE PLYWOOD OR PER STRUCTURAL AND MANUFACTURER
- SLEEPERS CUT TO SLOPE (VERIFY W/ STRUCTURAL)
- FRAMING PER STRUCTURAL
- MIN R-30 INSULATION: 3" CLOSED CELL SPRAY FOAM INSULATION (R-19 +/-) W/ MIN R-19 UNFACED BATT OR BLOWN-IN INSULATION; NON VENTED
- 5/8" GWB
- PVA PRIMER

**TYP ROOF DECK PARTIAL WALL ASSEMBLY**

- SIDING PER ELEVATIONS
- 3/4" VENTED AIRSPACE W/ 1X4 P.T. FURRING STRIPS @ 16" O.C.
- 1 1/2" FURRING (FLUSH W/ EXTERIOR RIGID INSULATION BELOW)
- HENRY BLUESKIN VP100 BUILDING WRAP OR BETTER
- CDX PLYWOOD SHEATHING PER STRUCTURAL
- 2X6 FRAMING PER STRUCTURAL
- CDX PLYWOOD SHEATHING PER STRUCTURAL
- HENRY BLUESKIN VP100 BUILDING WRAP OR BETTER
- SIDING PER ELEVATIONS

- HEADER PER STRUCTURAL W/ R-10 FOAM
- METAL FLASHING OVER WD TRIM, TYP

**TYP NEW MAIN FLOOR ASSEMBLY OVER UNCONDITIONED SPACE**

- FINISH FLOOR
- PLYWOOD SHEATHING PER STRUCTURAL
- FRAMING PER STRUCTURAL
- R-30 BATT INSULATION
- FURRED FRAMING TO MATCH CEILING HEIGHT @ ROOF DECKS
- 1/2" T&G CEDAR SOFFIT

**TYP WATERPROOF DECK ASSEMBLY**

- TREX DECKING (OR SIMILAR)
- P.T. SLEEPERS PER STRUCTURAL
- FIBERGLASS WATERPROOFING SYSTEM; SLOPE MIN 1/4":12"
- MARINE GRADE PLYWOOD OR PER STRUCTURAL AND MANUFACTURER
- SLEEPERS CUT TO SLOPE (VERIFY W/ STRUCTURAL)
- FRAMING PER STRUCTURAL
- 1/2" T&G CEDAR SOFFIT

ROOF DECK MEMBRANES MUST MEET AC309 STANDARDS OR HAVE ICC ES APPROVAL FOR USE AS A ROOF DECK MEMBRANE

- 2" CONTINUOUS FLUSH VENT W/ NON-CORROSIVE WIRE INSECT SCREEN

**TYP NEW MAIN FLOOR ASSEMBLY OVER UNCONDITIONED SPACE**

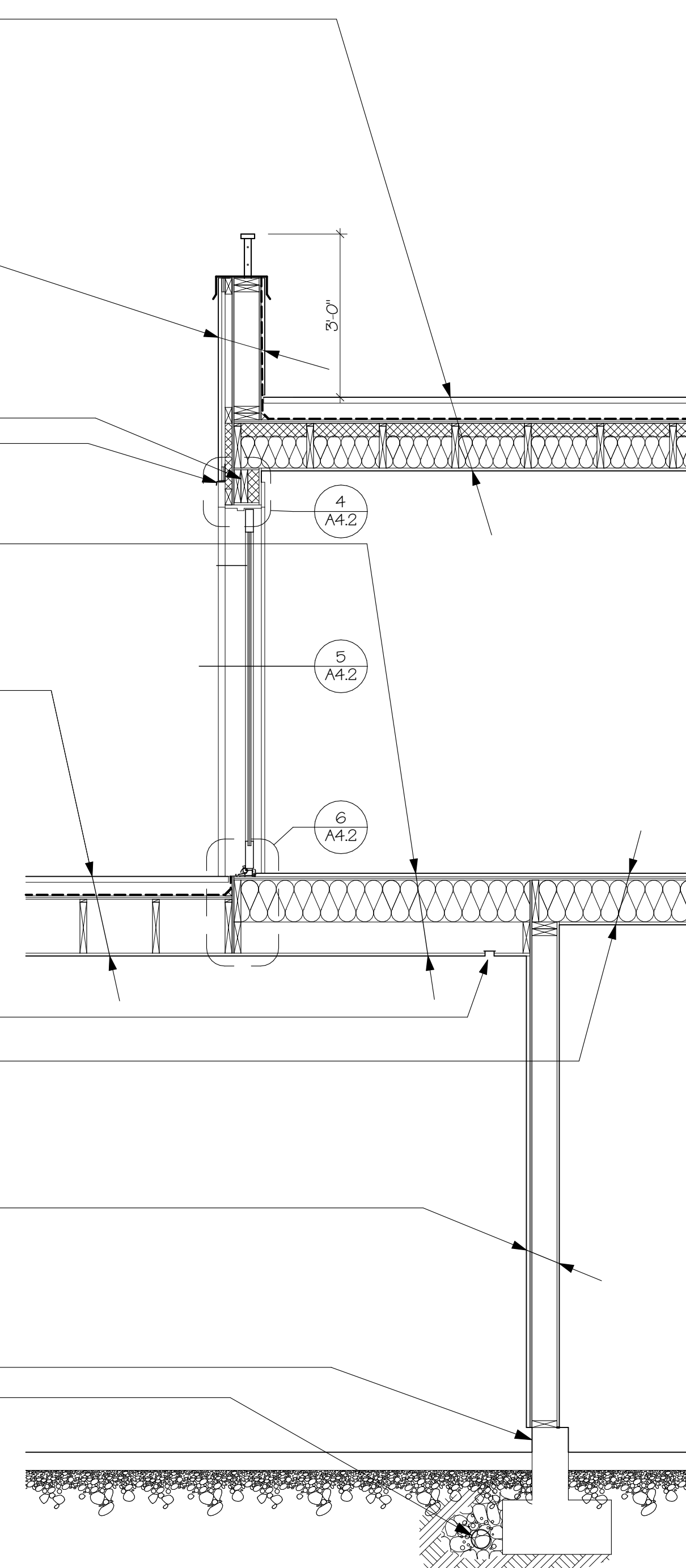
- FINISH FLOOR
- PLYWOOD SHEATHING PER STRUCTURAL
- FRAMING PER STRUCTURAL
- R-30 BATT INSULATION
- 5/8" GWB (5/8" TYPE X GWB @ AREAS OVER GARAGE)
- PVA PRIMER

**TYP EX EXTERIOR WALL ASSEMBLY @ GARAGE**

- SIDING PER ELEVATIONS
- 3/4" VENTED AIRSPACE W/ 1X4 P.T. FURRING STRIPS @ 16" O.C.
- 1 1/2" FURRING (FLUSH W/ EXTERIOR RIGID INSULATION BELOW)
- HENRY BLUESKIN VP100 BUILDING WRAP OR BETTER
- EXISTING SHEATHING OR PER STRUCTURAL
- EXISTING FRAMING
- 1/2" GWB
- PVA PRIMER

- EXIST CONCRETE FOUNDATION AND FOOTING TO REMAIN OR PER STRUCTURAL
- EXIST FOOTING DRAIN TO REMAIN (VERIFY)

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



- METAL CAP FLASHING

- BEAM PER STRUCTURAL, WRAP W/ FIBERCEMENT SIDING

- POST BEYOND PER STRUCTURAL, WRAP W/ FIBERCEMENT SIDING

- TYP WATERPROOF ROOF DECK ASSEMBLY PER 1/A4.0

- TYP ROOF DECK PARTIAL WALL ASSEMBLY PER 1/A4.0

- BEAM PER STRUCTURAL

- METAL FLASHING OVER WD TRIM, TYP

**TYP NEW FLOOR ASSEMBLY**

- FINISH FLOOR
- PLYWOOD SHEATHING PER STRUCTURAL
- FRAMING PER STRUCTURAL
- SOUND INSULATION
- 5/8" GWB

**TYP MAIN FLOOR EXTERIOR WALL ASSEMBLY**

- SIDING PER ELEVATION
- 3/4" VENTED AIRSPACE W/ 1X4 P.T. FURRING STRIPS @ 16" O.C.
- 1 1/2" RIGID INSULATION
- HENRY BLUESKIN VP100 BUILDING WRAP OR BETTER
- CDX PLYWOOD SHEATHING PER STRUCTURAL
- 2X6 FRAMING PER STRUCTURAL
- R-21 BATT INSULATION
- 1/2" GWB
- PVA PRIMER

**TYP LOWER FLOOR CONDITIONED EXTERIOR WALL ASSEMBLY**

- SIDING PER ELEVATION
- 3/4" VENTED AIRSPACE W/ 1X4 P.T. FURRING STRIPS @ 16" O.C.
- 1 1/2" RIGID INSULATION
- HENRY BLUESKIN VP100 BUILDING WRAP OR BETTER
- CDX PLYWOOD SHEATHING PER STRUCTURAL
- EXISTING FRAMING
- R-21 BATT INSULATION
- 2X4 FRAMING FURRING WALL
- R-21 RIGID INSULATION @ EXISTING CONCRETE STEM WALL
- 1/2" GWB
- PVA PRIMER

**TYP EXISTING CONCRETE SLAB ON GRADE**

- FINISH FLOORING
- EXISTING SLAB ON GRADE

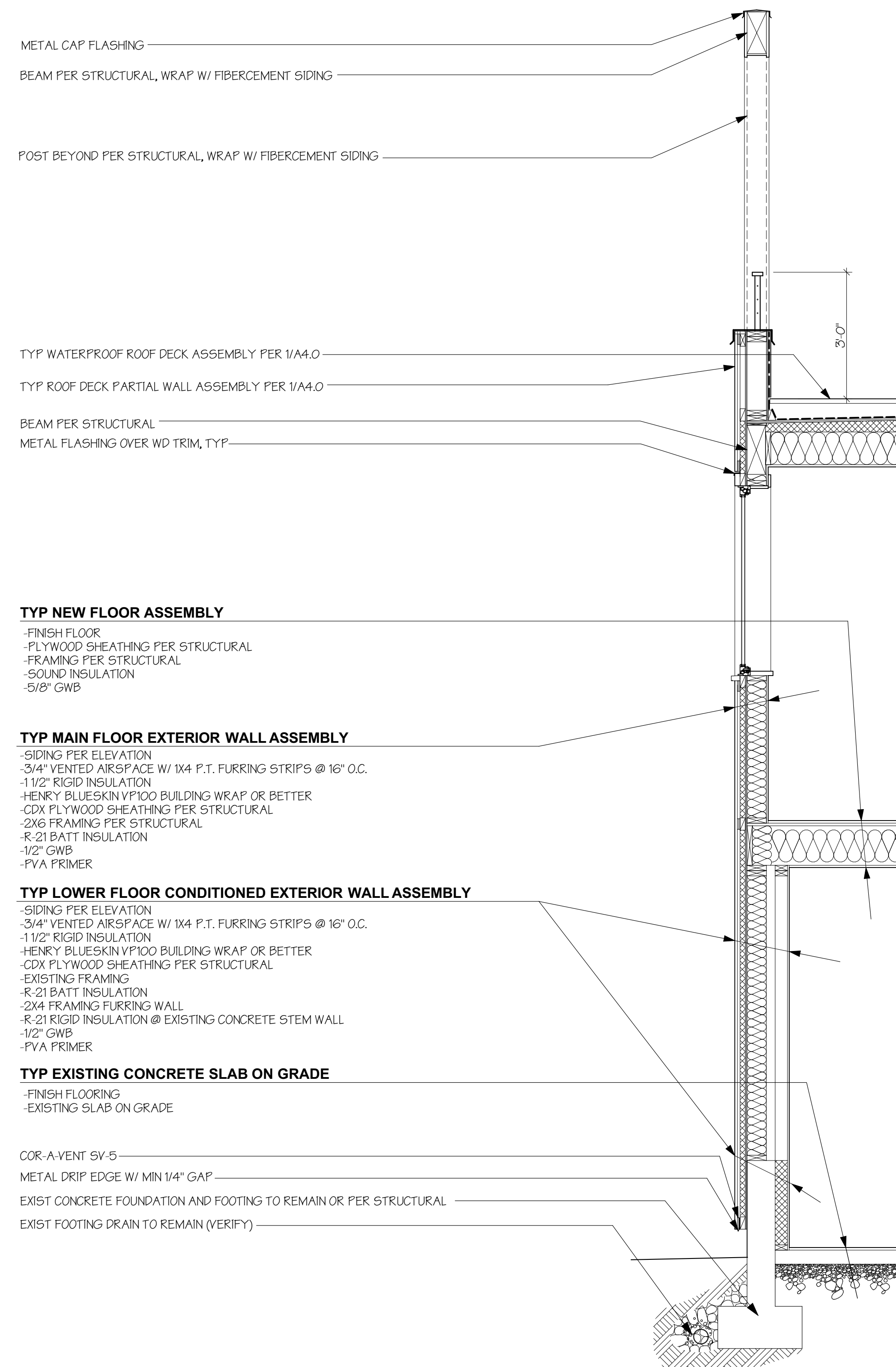
- COR-A-VENT SV-5

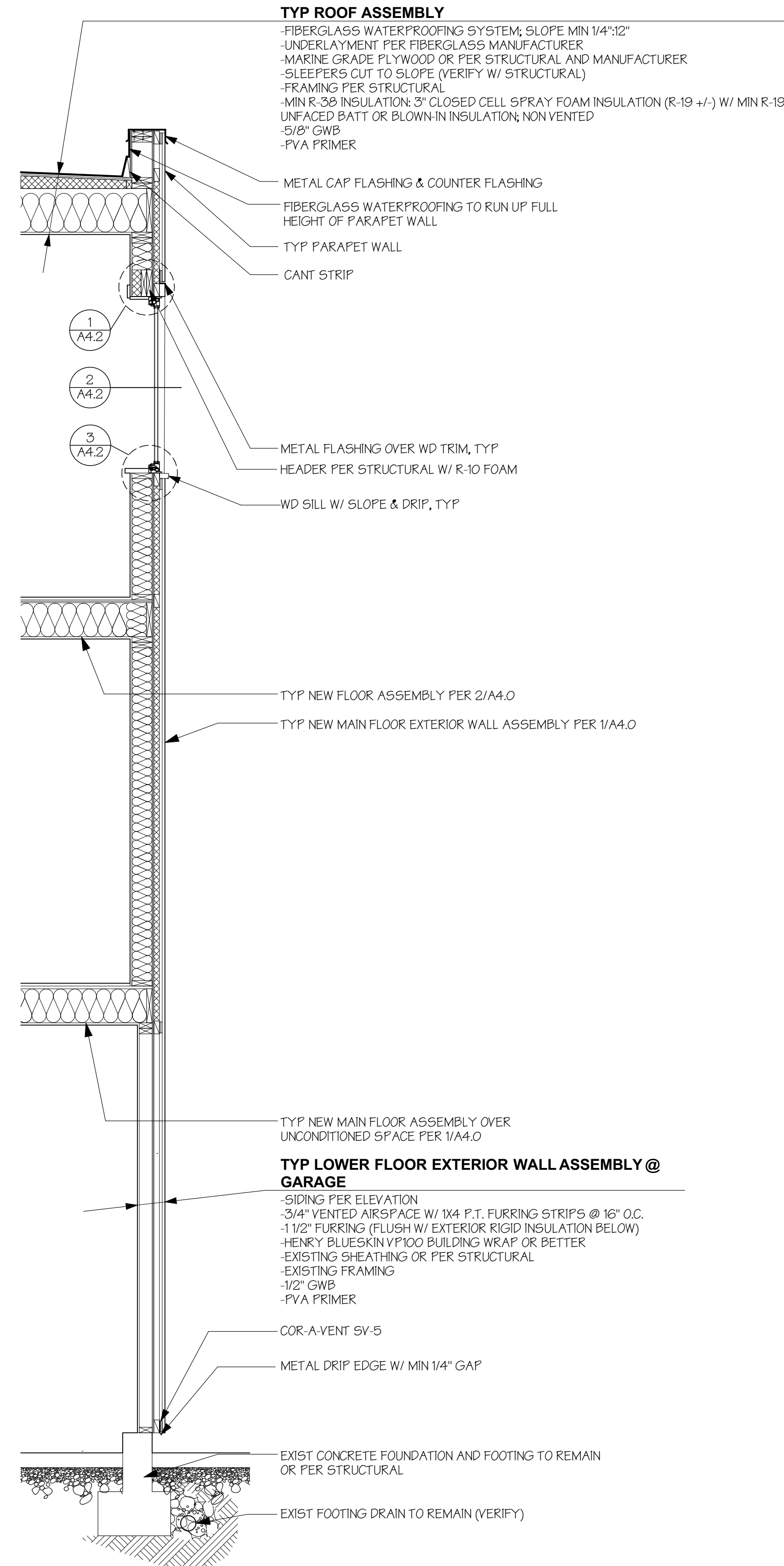
- METAL DRIP EDGE W/ MIN 1/4" GAP

- EXIST CONCRETE FOUNDATION AND FOOTING TO REMAIN OR PER STRUCTURAL

- EXIST FOOTING DRAIN TO REMAIN (VERIFY)

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





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

**haysite** ENGINEERING  
 reinforced plastics DATA

GPO-3 H900 12/8/2009

H900 is recognized throughout the world as a reliable, consistent GPO-3 material. Standard size sheets are available in thicknesses ranging from .094" to 2.00". H900 also exhibits excellent smoke, flame and toxicity characteristics. Govt. Spec I-24768/6. Standard color - red.

Physical	Test Method	Unit	Result
Barcol Hardness	Barcol	Scale	62
Specific Gravity	D-792		1.80
Density, Lbs./in <sup>3</sup>		Lbs./Cu. In.	0.065
Water Absorption, %	D-229	%	0.20
UL Flammability, File# E81893	UL94	Class	94V-0
Flame Resistance, Seconds			
Ignition Time	D-229	Seconds	130
Burning Time	D-229	Seconds	33
Radiant Panel	E-162	Flame Spread	5.0
Smoke Density at 4.0 minutes, flaming	E-662	Optical Density	0.33
Tunnel Test, 1/4" Thickness	E-84	Flame Spread	<25
Temperature Class*	--	Degrees C	160
<b>Mechanical</b>			
Tensile Strength, PSI	D-638	PSI	9,000
Flexural Strength, PSI	D-790	PSI	18,000
Modulus of Elasticity in Flexure, PSI	D-790	X10 <sup>4</sup> PSI	1.50
Compressive Strength, PSI	D-695	PSI	30,000
Bond Strength, 1/2" Thickness, PSI	D-229	PSI	1400
Shear Strength, PSI	D-732	PSI	14,000
Impact Strength, Izod Edgewise	D-256	Ft lbs/in. Notch	8.0

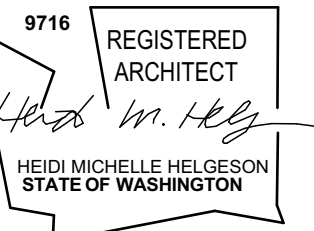
**haysite** ENGINEERING  
 reinforced plastics DATA

GPO-3 H900 12/8/2009

Electrical			
Dielectric Strength, J, Short Time In Oil 1/16", VPM	D-149	VPM	450
Dielectric Strength, Parallel, Step-By-Step In Oil, KV	D-149	KV	55.0
Arc Resistance, Seconds	D-495	Seconds	190
Comparative Track Index	CTI	Seconds	600+
Inline Plane Track Resistance -	D-2303	Minutes	1000
Dielectric Constant @60HZ	D-150		5.20
Dissipation Factor @ 60 Hz	D-150		0.06

Unless otherwise indicated, all properties published are based on test performed on standard ASTM test samples and according to ASTM test methods. Values shown are for test samples made from production materials and they are believed to be conservative. No warranty is to be construed, however, in fabricated or molded form, parts may vary considerably from this standard test data. Where specific or unusual applications arise, test should be made on actual parts, and test procedures agreed upon between Haysite Reinforced Plastics and the customer.

WERELIUS RESIDENCE  
 8452 NORTH MERCER WAY  
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H 2 D  
 ARCHITECTURE  
 +  
 DESIGN

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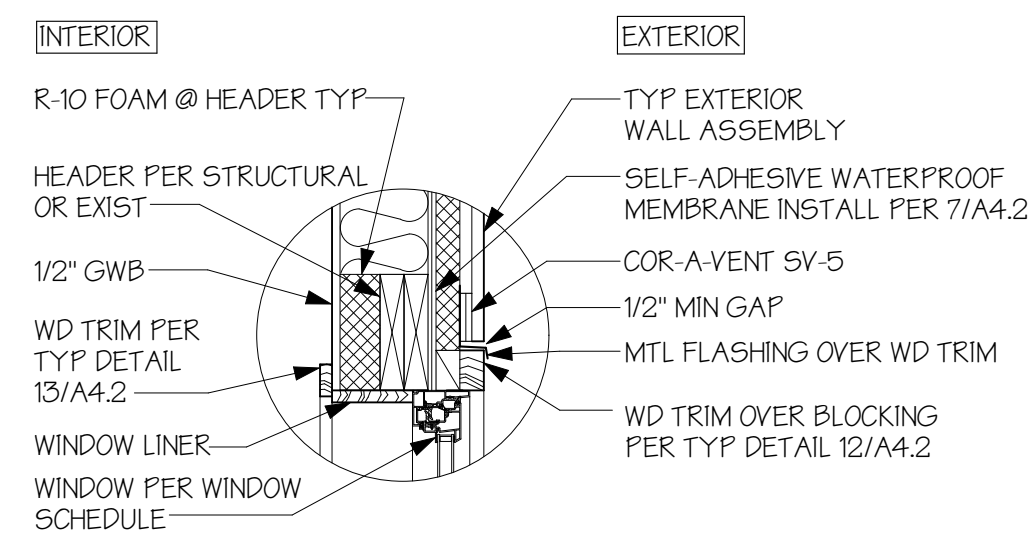
DATE: 6/2/2020

PRICING SET

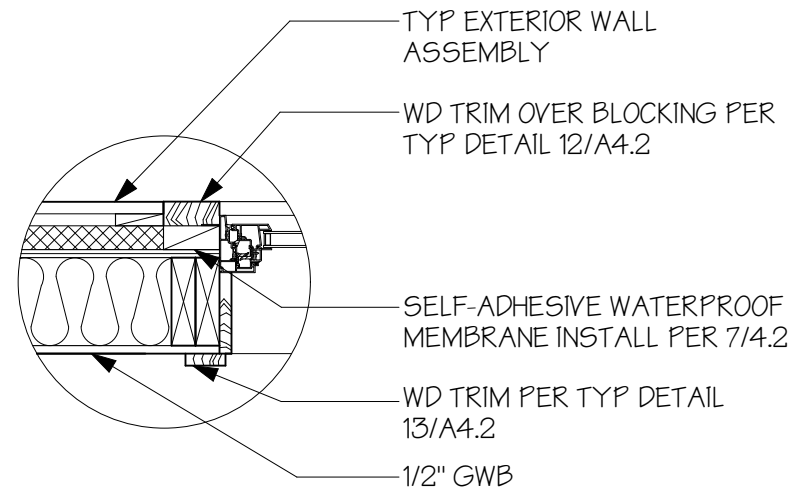
WALL SECTION

A4.1

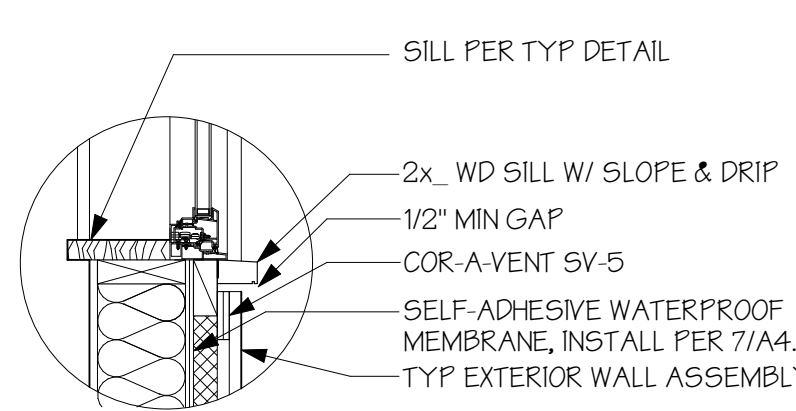




**1 TYP WINDOW HEAD**  
1" = 1'-0"

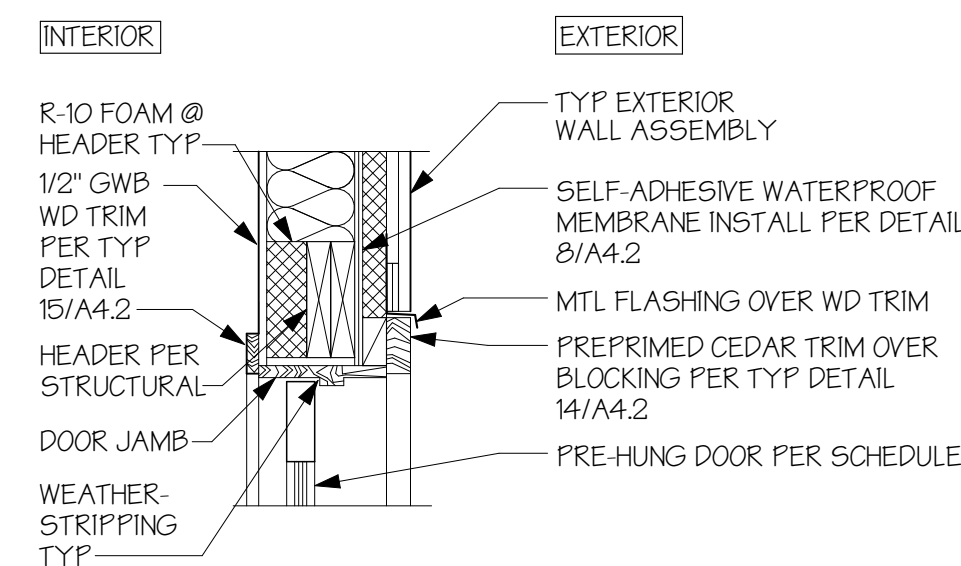


**2 TYP WINDOW JAMB**  
1" = 1'-0"

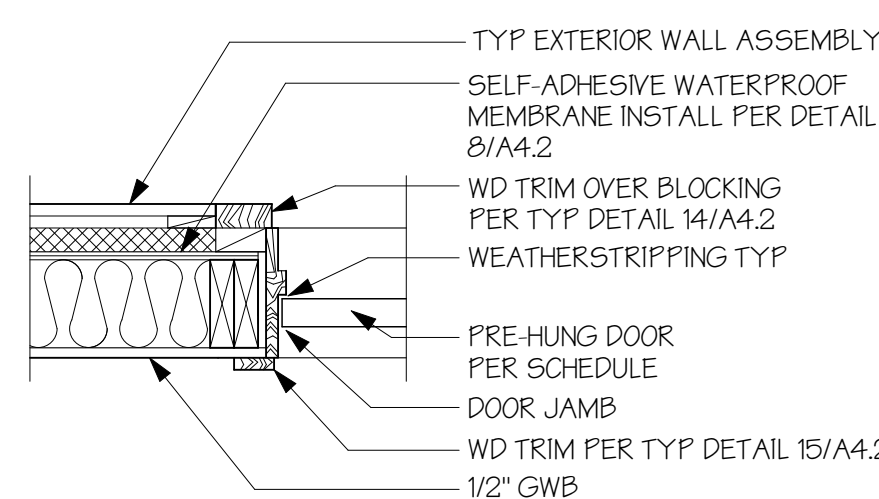


**3 TYP WINDOW SILL**  
1" = 1'-0"

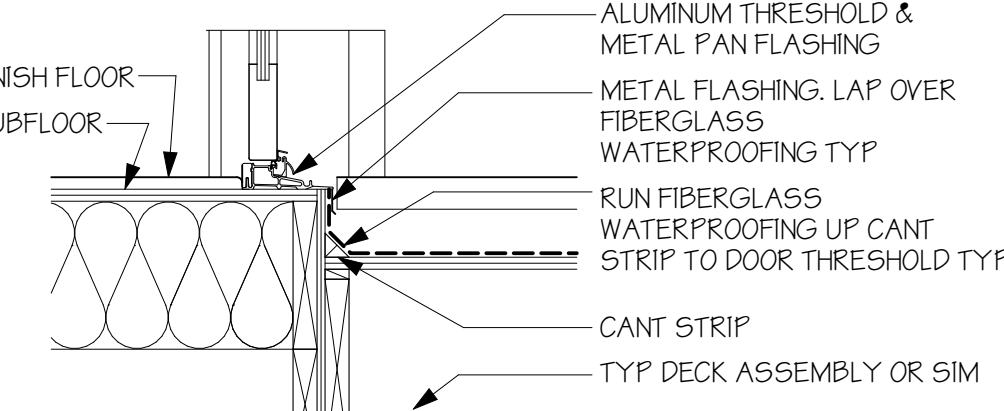
TYPICAL WINDOW NOTE:  
1. INSTALL BACKER ROD AND/OR FOAM INSULATION @ ANY GAP BETWEEN WINDOW AND ROUGH FRAME, TYP



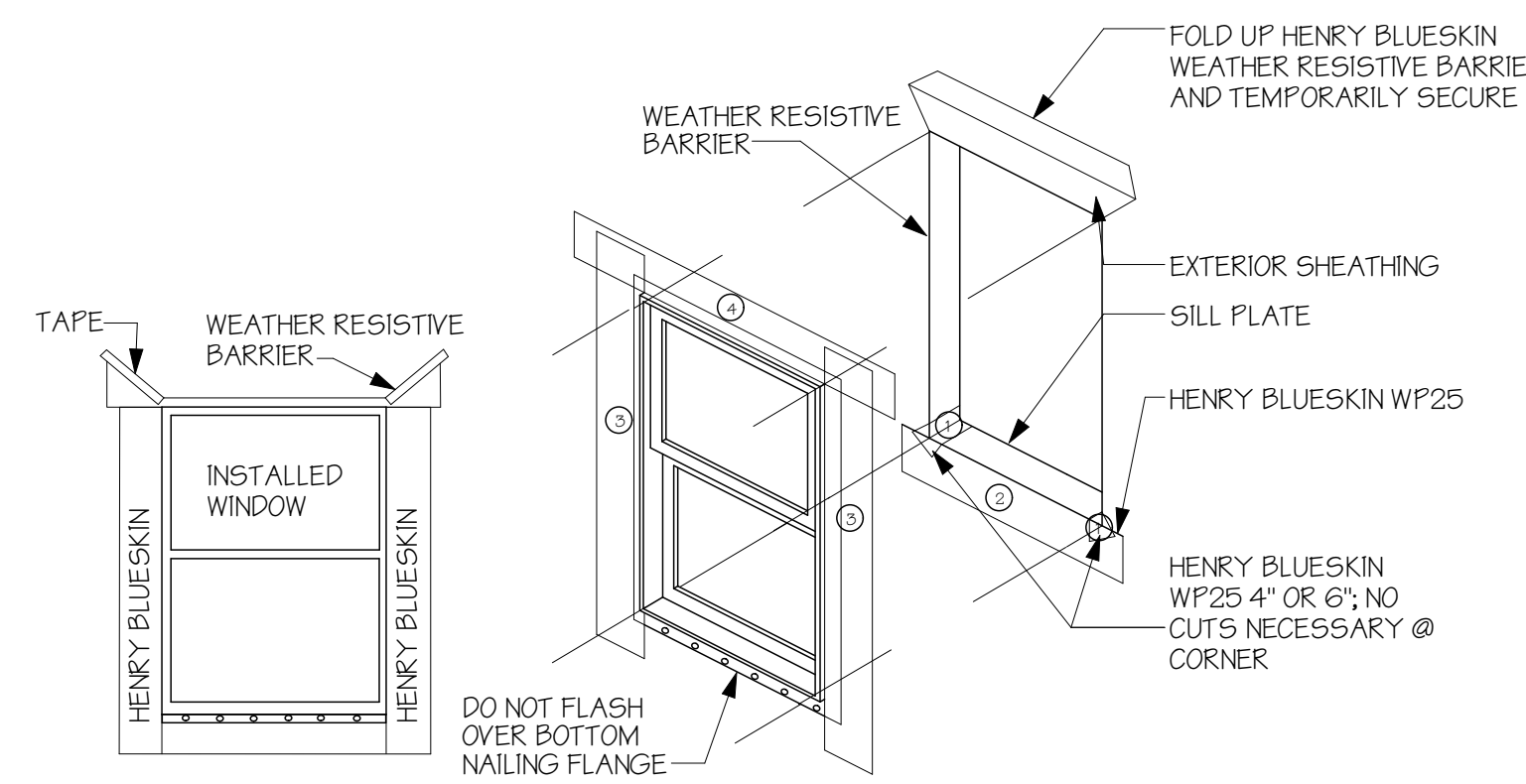
**4 TYP EXTERIOR DOOR HEAD**  
1" = 1'-0"



**5 TYP EXTERIOR DOOR JAMB**  
1" = 1'-0"

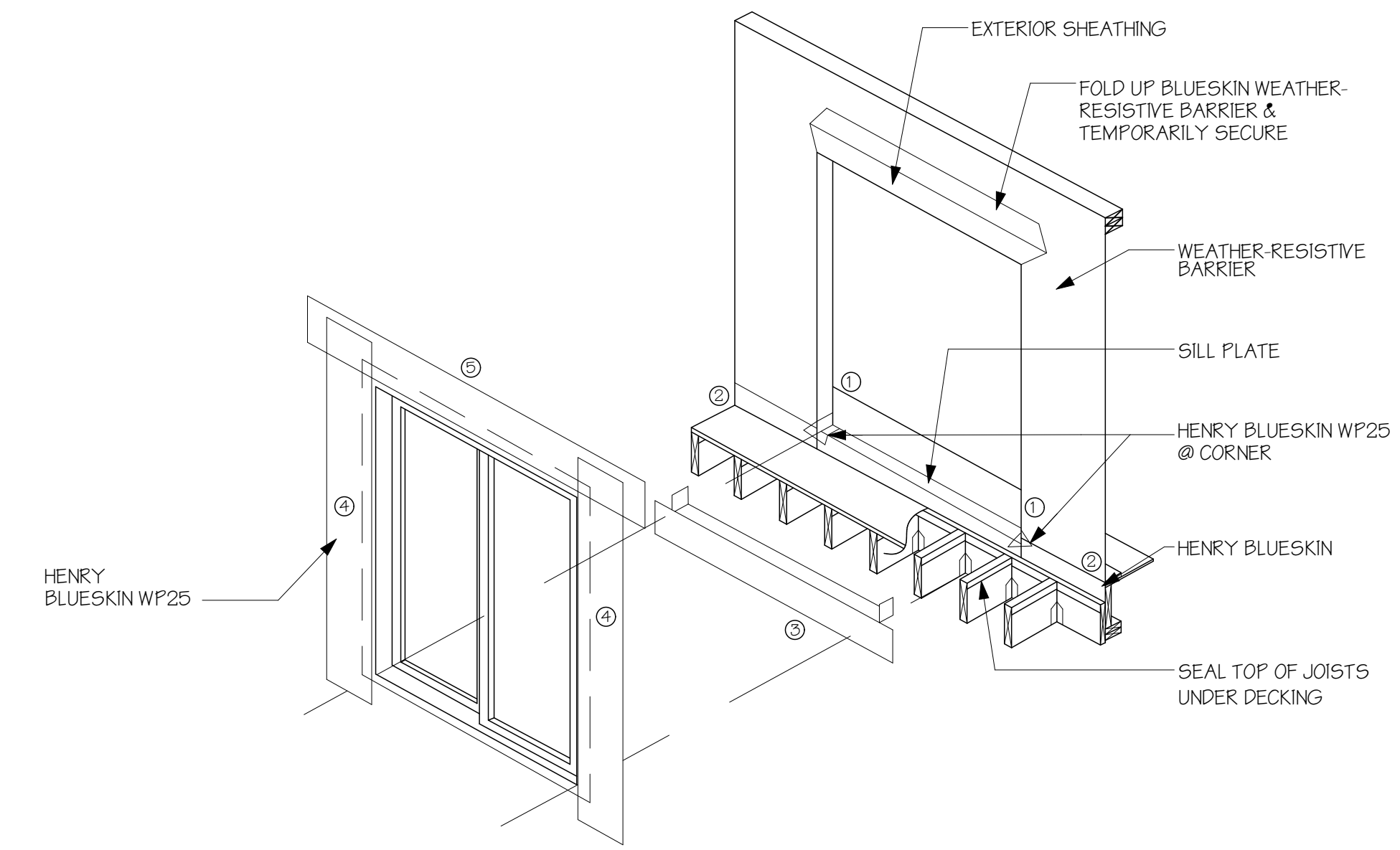


**6 TYP DOOR THRESHOLD**  
1" = 1'-0"



- WINDOW FLASHING
1. CUT THE BLUESKIN FLUSH WITH THE ROUGH OPENING
  2. CUT THE BLUESKIN AT 45 DEGREE ANGLE TO A POINT 9\"/>
  - 3. FOLD UP BLUESKIN FLAP AT HEAD AND TEMPORARILY SECURE WITH TAPE
  - 4. CUT BLUESKIN WP25 (4\") TO FIT THE DEPTH OF THE SILL ADDING 3\"/>
  - 5. FOLD BLUESKIN WP25 ALONG THE SPLIT BACKING PAPER
  - 6. SLIDE INTO CORNER
  - 7. PEEL OFF ONE BACKING STRIP AFTER ANOTHER AND PRESS ON FIRMLY
  - 8. STARTING AT THE CORNER, SPREAD THE LOOSE END OF THE BLUESKIN WP25 GRADUALLY ONTO THE WALL FACE
  - 9. USE BOTH THUMBS FOR A UNIFORM APPLICATION AND PRESS ON FIRMLY
  - 10. REPEAT STEPS 8 AND 9 TO SEAL ALL CORNERS
  - 11. CUT BLUESKIN WP25 6\"/>
  - 12. FOLD BLUESKIN WP25 ALONG THE SPLIT BACKING PAPER
  - 13. RELEASE FIRST BACKING PAPER AND SEAL TO RO
  - 14. PEEL OFF SECOND BACKING PAPER AND SEAL ONTO THE WALL FACE/FAÇADE AND PRESS ON FIRMLY
  - 15. REPEAT STEPS 11-14 TO SEAL ALL EDGES OF THE RO: SILL, JAMBS, AND HEAD
  - 16. INSTALL THE WINDOW ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. UNLESS SPECIFIED, SEALANT IS NOT REQUIRED BEHIND THE NAIL FLANGE
  - 17. USE BLUESKIN WP25 4\"/>
  - 18. BOTTOM FLANGE REMAINS UNTAPED JAMB FLASHING EXTENDS 2\"/>
  - 19. HEAD FLASHING EXTENDS 1\"/>
  - 20. DRAPE THE BLUESKIN FLAP OVER THE HEAD FLASHING
  - 21. SEAL THE 45 DEGREE CUTS WITH BLUESKIN

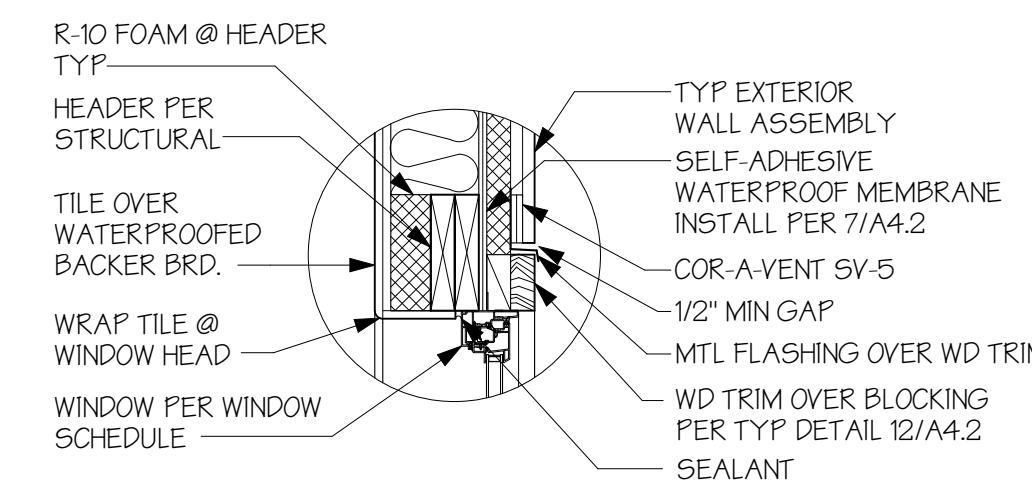
**7 HENRY BLUESKIN WP25 FLASHING DTL**  
N.T.S.



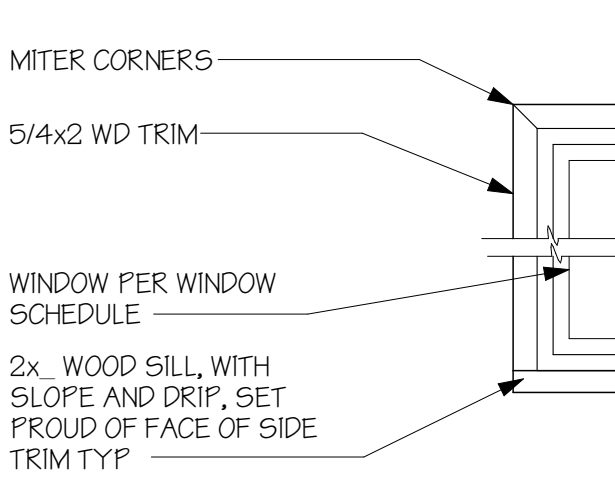
- TIE-IN WITH WEATHER RESISTIVE BARRIER INSTRUCTIONS
1. INTEGRATE INSTALLATION OF HENRY BLUESKIN WEATHER-RESISTIVE BARRIER WITH HENRY BLUESKIN WP25 TO FORM WATER SHEDDING LAP'S
  2. SCORE AND FOLD WEATHER-RESISTIVE BARRIER ABOVE HEADER TO ALLOW FOR HENRY BLUESKIN WP25 INSTALLATION
  3. INSTALL HENRY BLUESKIN WP25 HEAD FLASHING UNDER WEATHER-RESISTIVE BARRIER
  4. FOLD WEATHER-RESISTIVE BARRIER BACK OVER HEAD FLASHING AND SEAL WITH HENRY BLUESKIN TAPE

NOTES:  
1. VISIT RESIDENTIAL.HENRY.COM FOR THE MOST CURRENT DETAILS, INSTALLATION VIDEOS AND PRODUCT DATA SHEETS  
2. INSTALL HENRY BLUESKIN WP25 IN ORDER AS SHOWN BY NUMBERS

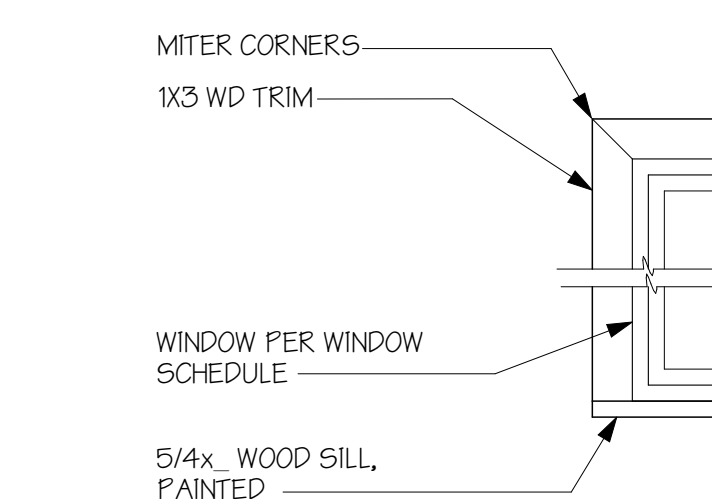
**8 HENRY BLUESKIN WP25 FLASHING DTL @ EXTERIOR**  
N.T.S.



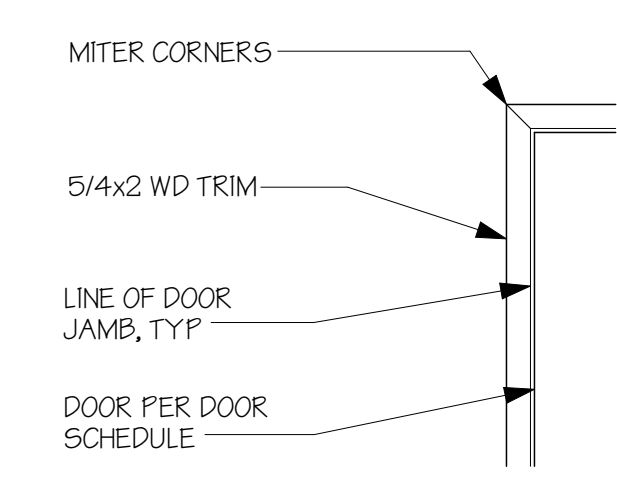
**9 TYP WNDW HEAD @ SHOWER**  
1" = 1'-0"



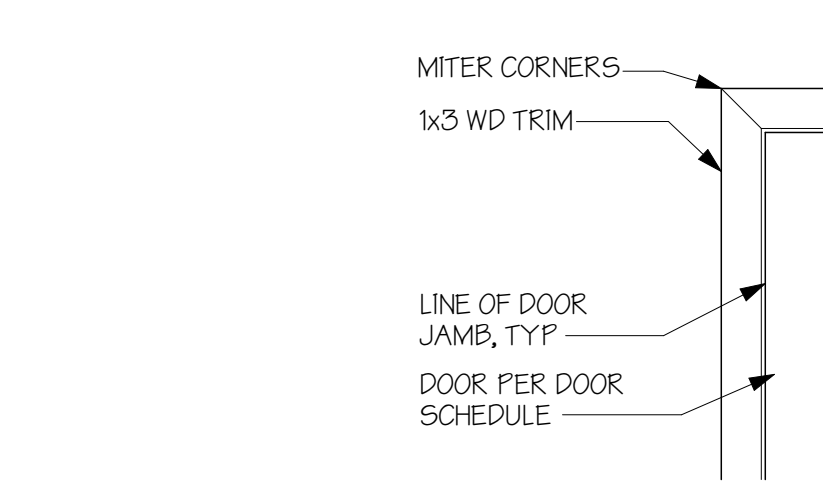
**12 TYP EXT. WNDW TRIM**  
1" = 1'-0"



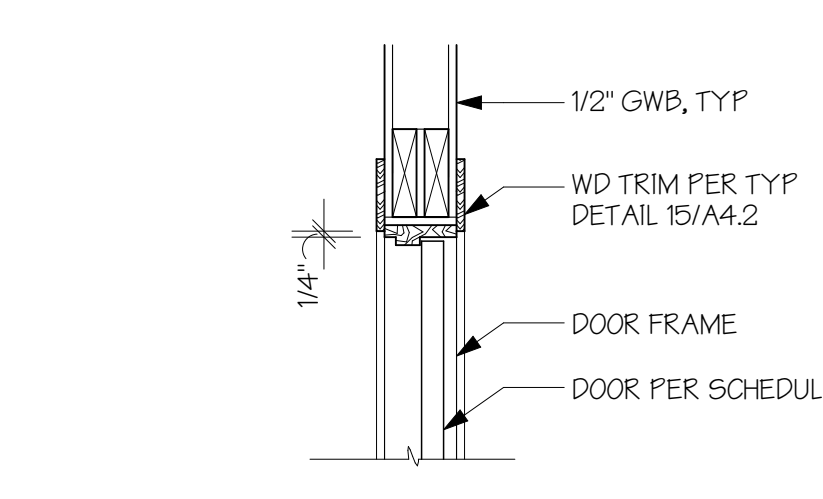
**13 TYP INT. WNDW TRIM**  
1" = 1'-0"



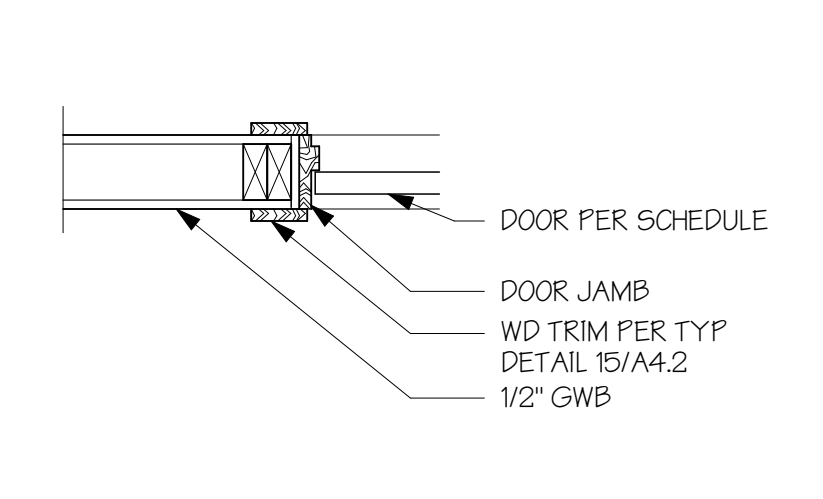
**14 TYP EXT. DOOR TRIM**  
1" = 1'-0"



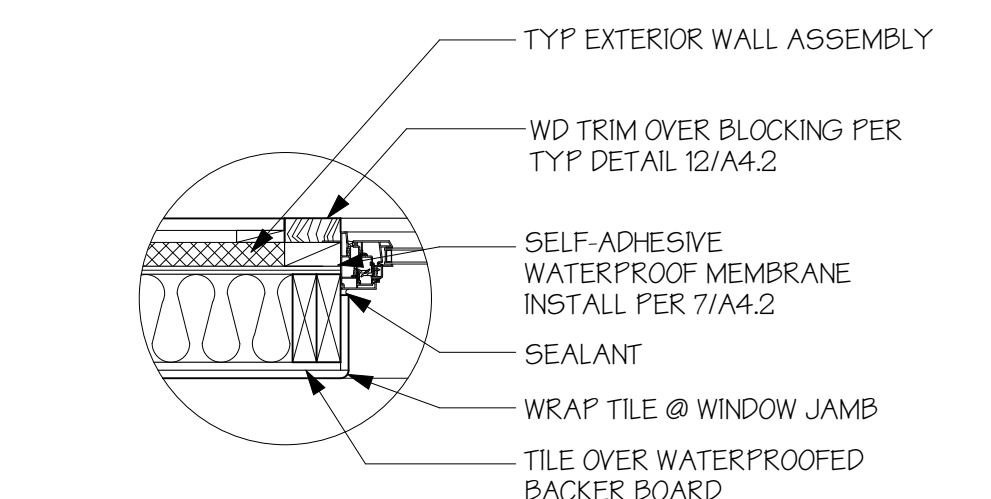
**15 TYP INT. DOOR TRIM**  
1" = 1'-0"



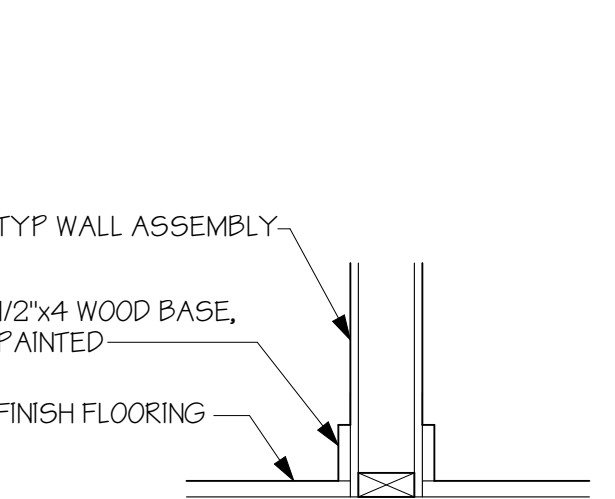
**16 TYP INT DOOR HEAD**  
1" = 1'-0"



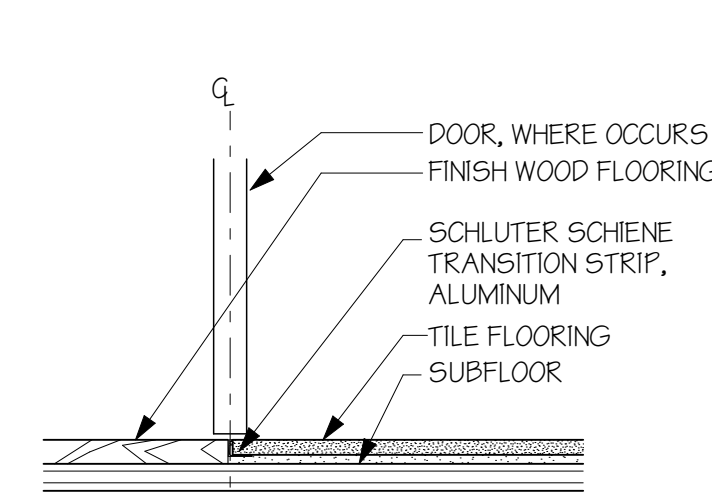
**17 TYP INT DOOR JAMB**  
1" = 1'-0"



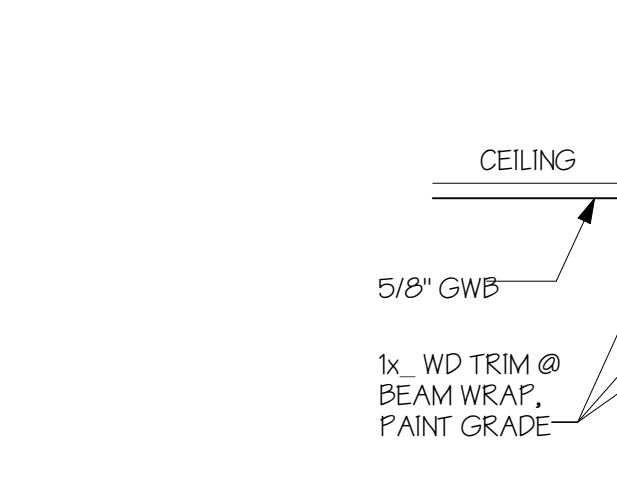
**10 TYP WNDW JAMB @ SHOWER**  
1" = 1'-0"



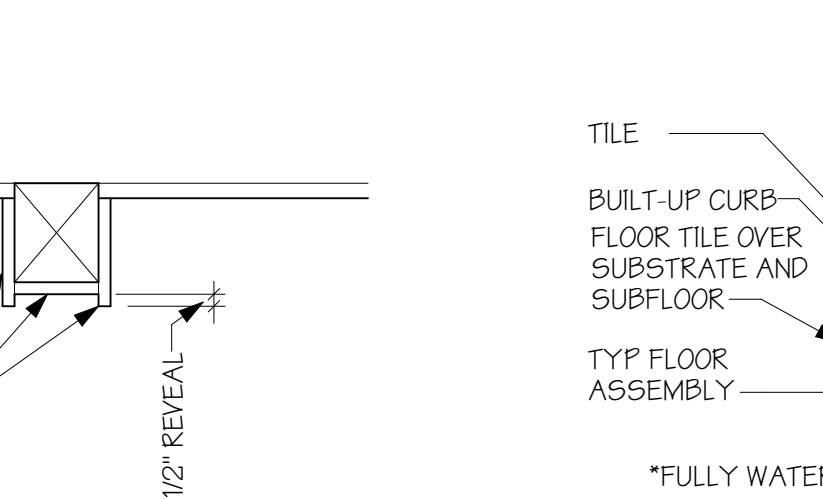
**18 TYP WD BASE DTL**  
3/4\"/>



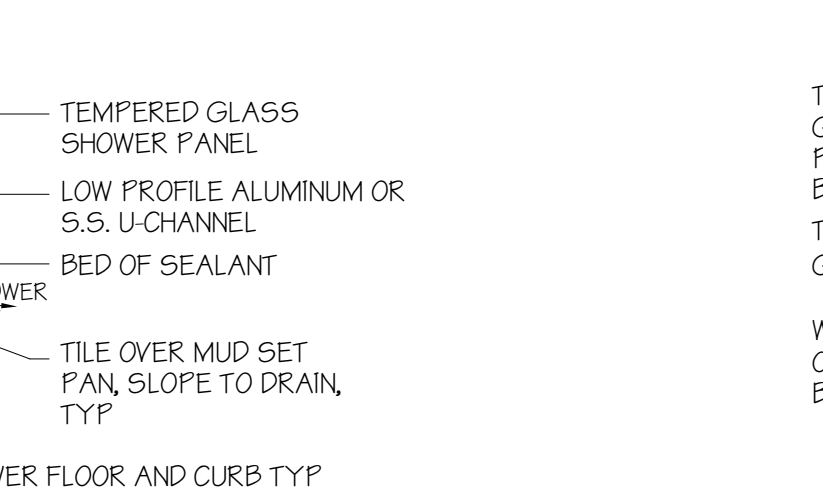
**19 TYP WD TO TILE TRANSITION**  
1-1/2\"/>



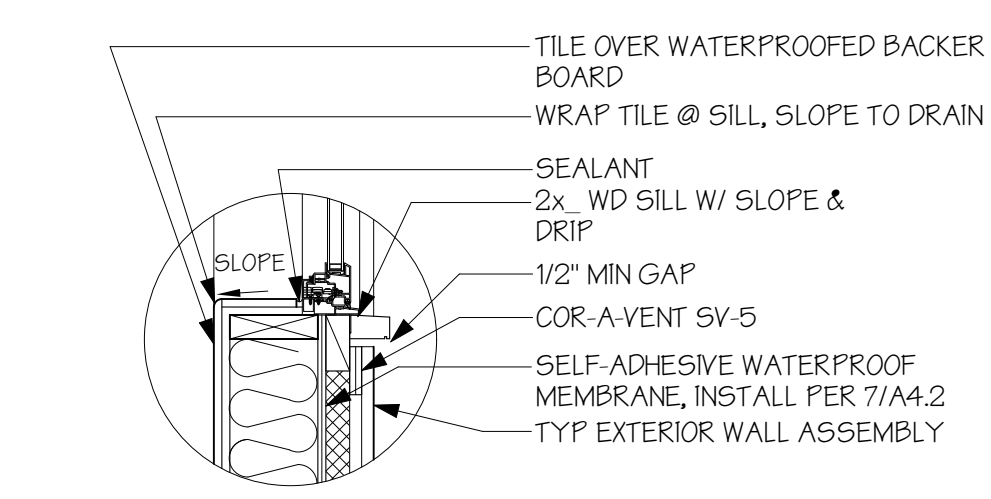
**20 TYP BOX BEAM DETAIL**  
1-1/2\"/>



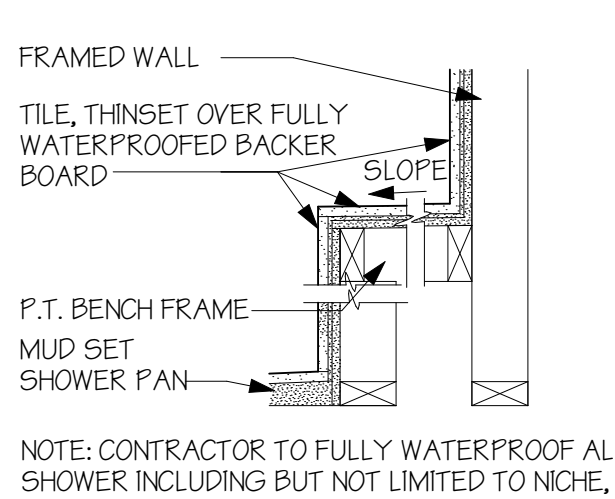
**21 TYP U-CHANNEL DTL @ CURB**  
1" = 1'-0"



**22 TYP U-CHANNEL @ WALL**  
1" = 1'-0" PLAN VIEW



**11 TYP WNDW SILL @ SHOWER**  
1" = 1'-0"



**23 TYP BENCH DTL - SECTION**  
1-1/2\"/>

NOTE: CONTRACTOR TO FULLY WATERPROOF ALL AREAS OF SHOWER INCLUDING BUT NOT LIMITED TO NICHE, WALLS, SHOWER PAN, AND CURB





GENERAL STRUCTURAL NOTES  
(THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE PLANS)

CRITERIA

- ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE INTERNATIONAL BUILDING CODE (2015 EDITION), & SEATTLE BUILDING CODE MODIFICATIONS TO THE INTERNATIONAL BUILDING CODE.
- DESIGN LOADING CRITERIA:

FLOOR LIVE LOAD (RESIDENTIAL) . . . . .	40 PSF
FLOOR LIVE LOAD (RESIDENTIAL DECKS) . . . . .	60 PSF
ROOF SNOW LOAD (Pf) . . . . .	25 PSF

WIND:

BASIC WIND SPEED (3-SECOND GUST) . . . . .	110 MPH
WIND IMPORTANCE FACTOR (Iw) . . . . .	1.0
WIND EXPOSURE . . . . .	B
TOPOGRAPHICAL FACTOR (Kzt) . . . . .	1.60

EARTHQUAKE:

LAT. / LONG. . . . .	47.585 / -122.224
SEISMIC IMPORTANCE FACTOR (Ie) . . . . .	1.0
SEISMIC USE GROUP . . . . .	I
MAPPED SPECTRAL RESPONSE (Ss/S1) . . . . .	1.39g/0.48g
SPECTRAL RESPONSE COEF. (SDS/SD1) . . . . .	1.11g/0.48g
SEISMIC FORCE RESISTING SYSTEM . . . . .	PLYWOOD SHEAR WALLS
DESIGN BASE SHEAR . . . . .	17.27k
SEISMIC RESPONSE COEFFICIENT (Cs) . . . . .	0.143
SEISMIC DESIGN CATEGORY . . . . .	D
RESPONSE MODIFICATION FACTOR (R) . . . . .	6.5
ANALYSIS PROCEDURE . . . . .	EQUIVALENT LATERAL FORCE

REFERENCE: USGS NATIONAL SEISMIC HAZARD MAPPING PROJECT, 2008 DATA

- 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.

- 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. CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO COMMENCING EXCAVATION. THE CONTRACTOR SHALL BRING ALL CONFLICTS AND DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER.

- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE RETAINED UNDAMAGED WHERE NOTED ON THE PLANS. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF. ALL NEW OPENINGS THROUGH EXISTING CONCRETE OR MASONRY WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE.

- CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE 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 OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

- SPECIAL INSPECTION OF EPOXY GROUTED INSTALLATIONS SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS 109 AND 1704 OF THE INTERNATIONAL BUILDING CODE AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS.

- SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

A. STRUCTURAL STEEL

APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.

GEOTECHNICAL

- FOUNDATION NOTES: 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 (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) 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.

ALLOWABLE SOIL PRESSURE. . . . . 1200 PSF  
LATERAL EARTH PRESSURE . . . . . 45 PCF

SOILS REPORT REFERENCE: PANGE0 INCORPORATED, FILE NO. 19-150

CONCRETE

- CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF F'c = 2,500 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS.

THE MINIMUM AMOUNTS OF CEMENT AND MAXIMUM AMOUNTS OF WATER MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE CONCRETE 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 301. 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.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT SHALL BE IN ACCORDANCE WITH TABLE 19.3.2.1 OF THE ACI 318.

- REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 40, FY = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

- REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 318. LAP ALL CONTINUOUS REINFORCEMENT 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

- CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:  
A. FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE . . . 3"  
B. ALL OTHER SURFACES . . . . . 1 1/2"

- NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

ANCHORAGE

- EXPANSION BOLTS INTO CONCRETE AND GROUTED MASONRY UNITS SHALL BE "STRONG-BOLT" ANCHORS AS MANUFACTURED BY THE SIMPSON COMPANY AND INSTALLED IN STRICT ACCORDANCE WITH ICC ESR 1771, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS.

- EPOXY-GROUTED ITEMS SPECIFIED ON THE DRAWINGS SHALL BE GROUTED WITH "SET-XP" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON COMPANY AND INSTALLED IN STRICT ACCORDANCE WITH ICC ESR 2508.

STEEL

- STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE LATEST EDITIONS OF THE AISC SPECIFICATIONS AND CODES:

- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360)
- CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES (AISC 303)
- SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. BOLTS IN SHEAR OR BEARING TYPE CONNECTIONS NEED ONLY BE TIGHTENED TO THE SNUG TIGHT CONDITION PER SECTION 8(C).

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING MINIMUM STANDARDS. PLATES, ANGLES, AND CHANNELS SHALL CONFORM TO ASTM A36, FY = 36 KSI. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, FY = 50 KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, FY = 35 KSI. SQUARE OR RECTANGULAR STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, FY = 46 KSI. ANCHOR BOLTS AND CONNECTION BOLTS SHALL CONFORM TO ASTM A307. THREADED ROD AND STUDS SHALL CONFORM TO ASTM A36.

- ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED.

WOOD

- FRAMING LUMBER SHALL BE KILN DRIED OR MC-15, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS: (2X MEMBERS)	HEM-FIR NO. 2 MINIMUM BASE VALUE, FB = 850 PSI
(3X & 4X MEMBERS)	DOUGLAS FIR NO. 1 MINIMUM BASE VALUE, FB = 1000 PSI
STRUCTURAL LIGHT FRAMING: (INCL. 3X AND 4X POSTS)	DOUGLAS FIR NO. 2 MINIMUM BASE VALUE, FB = 900 PSI
BEAMS AND STRINGERS: (INCL. 6X AND LARGER)	DOUGLAS FIR NO. 1 MINIMUM BASE VALUE, FB = 1350 PSI
POSTS AND TIMBERS: (6X6 AND LARGER)	DOUGLAS FIR NO. 1 MINIMUM BASE VALUE, FC = 1000 PSI
STUDS, PLATES & MISC. FRAMING:	DOUGLAS FIR OR HEM-FIR STANDARD GRADE

2X6 STUDS AND PLATES: HEM-FIR NO. 3/ STUD GRADE

2X AND 3X T & G DECKING HEM-FIR COMMERCIAL DEX,  
MINIMUM BASE VALUE, FB = 1350 PSI

- ENGINEERED LUMBER MEMBERS SHALL BE MANUFACTURED UNDER A PROCESS 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 LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPROPRIATE NER REPORT AND GLED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER.

PSL	FB = 2900 PSI	E = 2000 KSI	FV = 290 PSI	NER-292
LSL	FB = 2250 PSI	E = 1500 KSI	FV = 285 PSI	NER-481
LVL	FB = 2600 PSI	E = 1800 KSI	FV = 285 PSI	NER-126

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE WEYERHAUSER 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 ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

ALL PROPOSED HOLE SIZES AND LOCATIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL TWO WORKING DAYS PRIOR TO DRILLING HOLES.

- PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAUSER CORPORATION AND SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S PUBLISHED SPECIFICATIONS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS, STIFFENERS, ETC., SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. 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 ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED.

ALL HOLES SHALL CONFORM TO THE MANUFACTURERS SPECIFICATIONS. IF THREE OR FEWER HOLES ARE PROPOSED FOR A SINGLE JOIST, HOLES SHALL CONFORM TO THE WEYERHAUSER ILEVEL TJI ALLOWABLE HOLE CHART. IF MORE THEN THREE HOLES ARE PROPOSED FOR ONE SINGLE JOIST, ALL HOLE SIZES AND LOCATIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL TWO WORKING DAYS PRIOR TO DRILLING HOLES.

- PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH APA STANDARDS. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND SPAN RATING MAY BE USED IN LIEU OF PLYWOOD.

- FLOOR SHEATHING SHALL BE 1/2" (NOM.) WITH SPAN RATING 24/0.
- FLOOR SHEATHING SHALL BE 3/4" (NOM.) WITH SPAN RATING 40/20.
- WALL SHEATHING SHALL BE 1/2" (NOM.) WITH SPAN RATING 24/0.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING.

- ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY. ALL WOOD EXPOSED TO WEATHER WITHOUT THE ADEQUATE PROTECTION OF A ROOF OR EAVE SHALL BE AN APPROVED WOOD OF NATURAL RESISTANCE TO DECAY OR PRESSURE TREATED. SUCH MEMBERS INCLUDE HORIZONTAL MEMBERS SUCH AS GIRDBERS, JOISTS, AND DECKING; OR VERTICAL MEMBERS SUCH AS POSTS, POLES, AND COLUMNS.

- TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR MOST RECENT CATALOG. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE 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 MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED. HANGERS IN DIRECT CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE EITHER STAINLESS STEEL (SST300), POST HOT-DIPPED GALVANIZED(HDG) OR GALVANIZED WITH A MINIMUM OF 1.850Z ZINC PER SQUARE INCH (ZMAX). UNLESS NOTED OTHERWISE, ALL LUMBER JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS, AND ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITI" OR "IUT" SERIES JOIST HANGERS.

- NAILS - NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
6D	2"	0.113"
8D	2-1/2"	0.131"
10D	3"	0.148"
12D	3-1/4"	0.148"
16D	3-1/2"	0.162"

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 SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

- TONGUE AND GROOVE STRUCTURAL ROOF AND FLOOR DECKING SHALL BE INSTALLED AS FOLLOWS: 2X DECKING SHALL BE TOENAILED THROUGH THE TONGUE AND FACENAILED WITH ONE 16D NAIL PER PIECE PER SUPPORT. 3X AND 4X DECKING SHALL BE

TOENAILED WITH ONE 40D NAIL AND FACENAILED WITH ONE 60D NAIL PER SUPPORT. COURSES SHALL BE SPIKED TOGETHER WITH 8" SPIKES AT 30" O.C. (MAXIMUM) AND AT 10" (MAXIMUM) FROM EACH END OF EACH PIECE. SPIKES SHALL BE INSTALLED IN PREDRILLED EDGE HOLES.

- WOOD FRAMING NOTES—THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN:

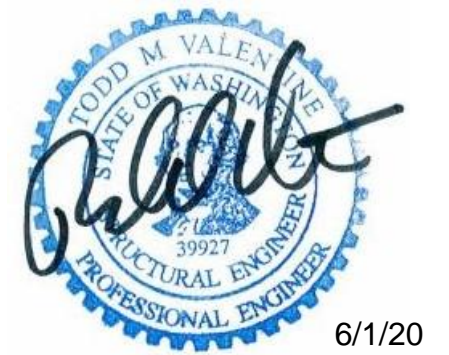
- ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

- WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2X4 STUDS @ 16" O.C. AT INTERIOR WALLS AND 2X6 @ 16" O.C. AT EXTERIOR WALLS. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 2X8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16D NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16D NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16D AT 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE SIX 16D NAILS AT 4" O.C. EACH SIDE OF JOINT. ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16D NAILS AT 12" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS (WITH 7" MINIMUM EMBEDMENT) @ 4'-0" O.C. UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH 16D @ 12" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES NAILED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH NAILS AT 7" O.C. USE 5D COOLER NAILS FOR 1/2" GWB AND 6D COOLER NAILS FOR 5/8" GWB. WHEN NOT OTHERWISE NOTED, PROVIDE 1/2" (NOM.) APA RATED SHEATHING (SPAN RATING 24/0) ON EXTERIOR SURFACES NAILED AT ALL PANEL EDGES (BLOCK UNSUPPORTED EDGES), TOP AND BOTTOM PLATES WITH 8D @ 6" O.C. AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8D @ 12" O.C. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS.

- FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH TWO 16D NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH METAL JOIST HANGERS IN ACCORDANCE WITH TIMBER CONNECTOR NOTE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 16D @ 12" O.C. STAGGERED. UNLESS OTHERWISE NOTED ON THE PLANS, ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS AND NAILED WITH 8D NAILS @ 6" O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" O.C. TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ALL ROOF AND FLOOR SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16D @ 12" O.C. UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS PROVIDE FLAT 2X BLOCKING AT ALL UNFRAMED PLYWOOD PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED.

HV

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6/1/20

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Mercer Island, WA 98040

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7/26/19	Framing Revisions
11/7/20	Corrections #1
4/3/20	Framing Revisions
4/17/20	Construction
4/24/20	Trellis Revisions
6/1/20	Corrections #2

Building Department Approval

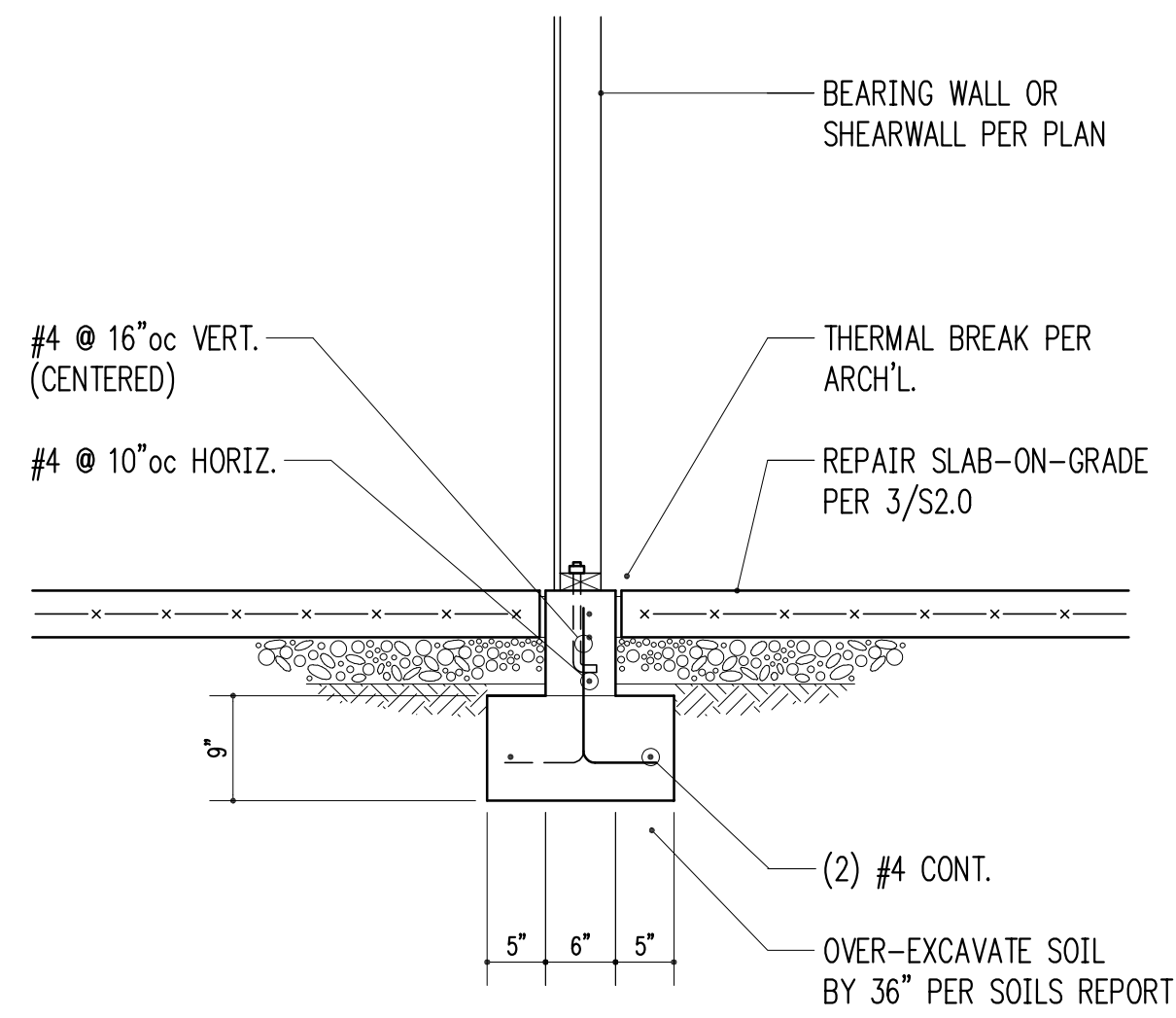
Drawing Title  
**GENERAL STRUCTURAL NOTES**

Drawing Number

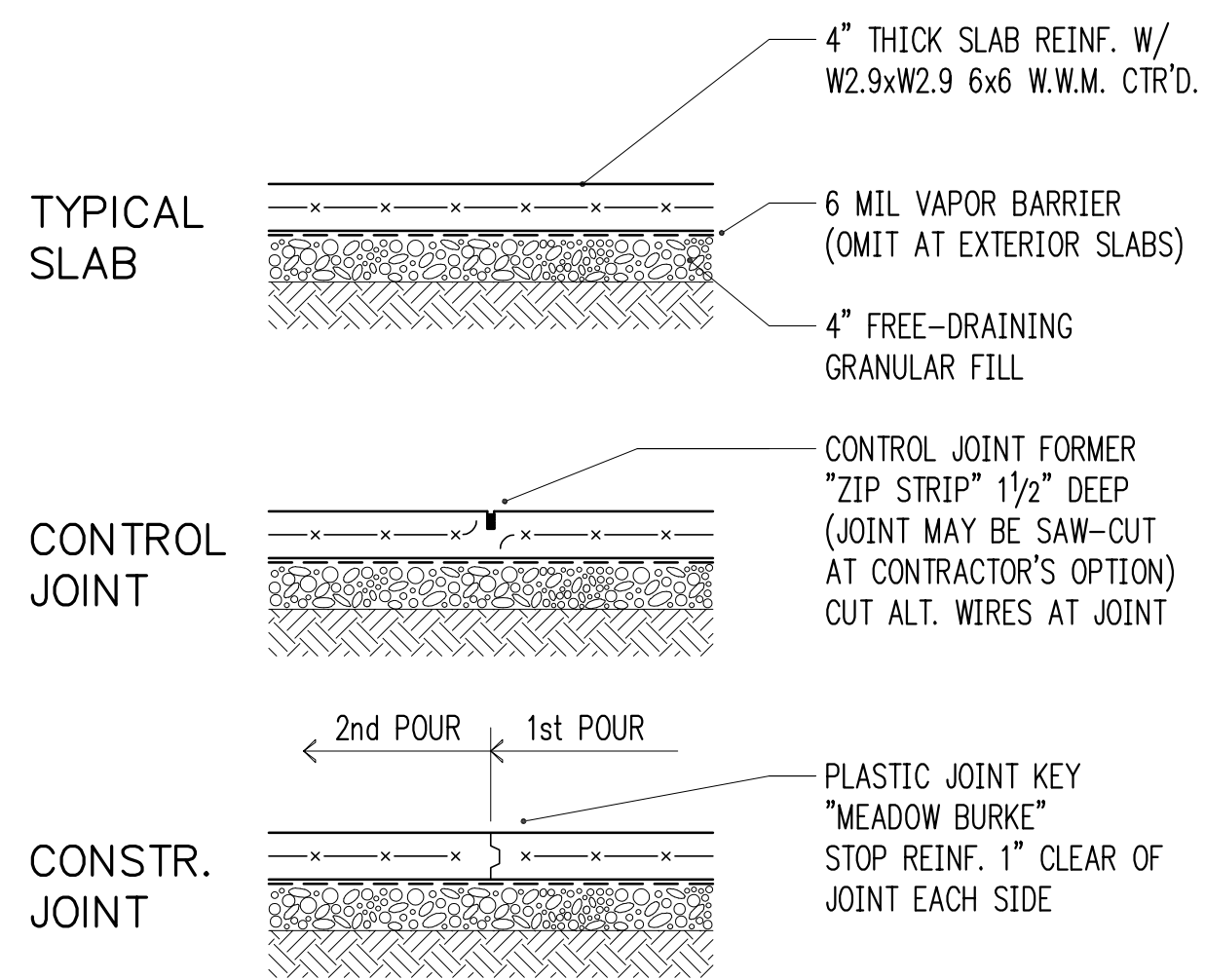
**S1.0**

WERELIUS RESIDENCE



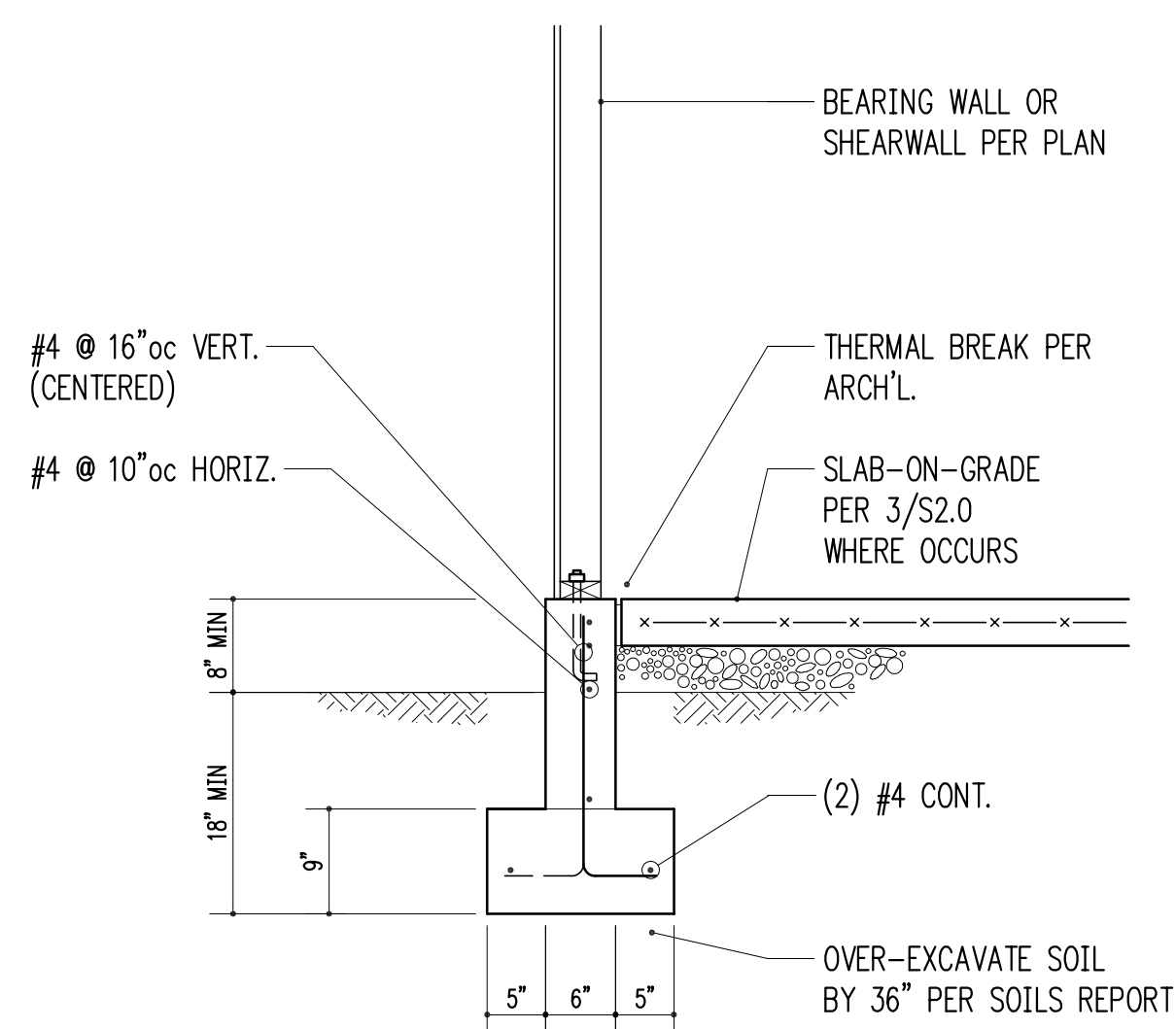


3/4" = 1'-0" 2

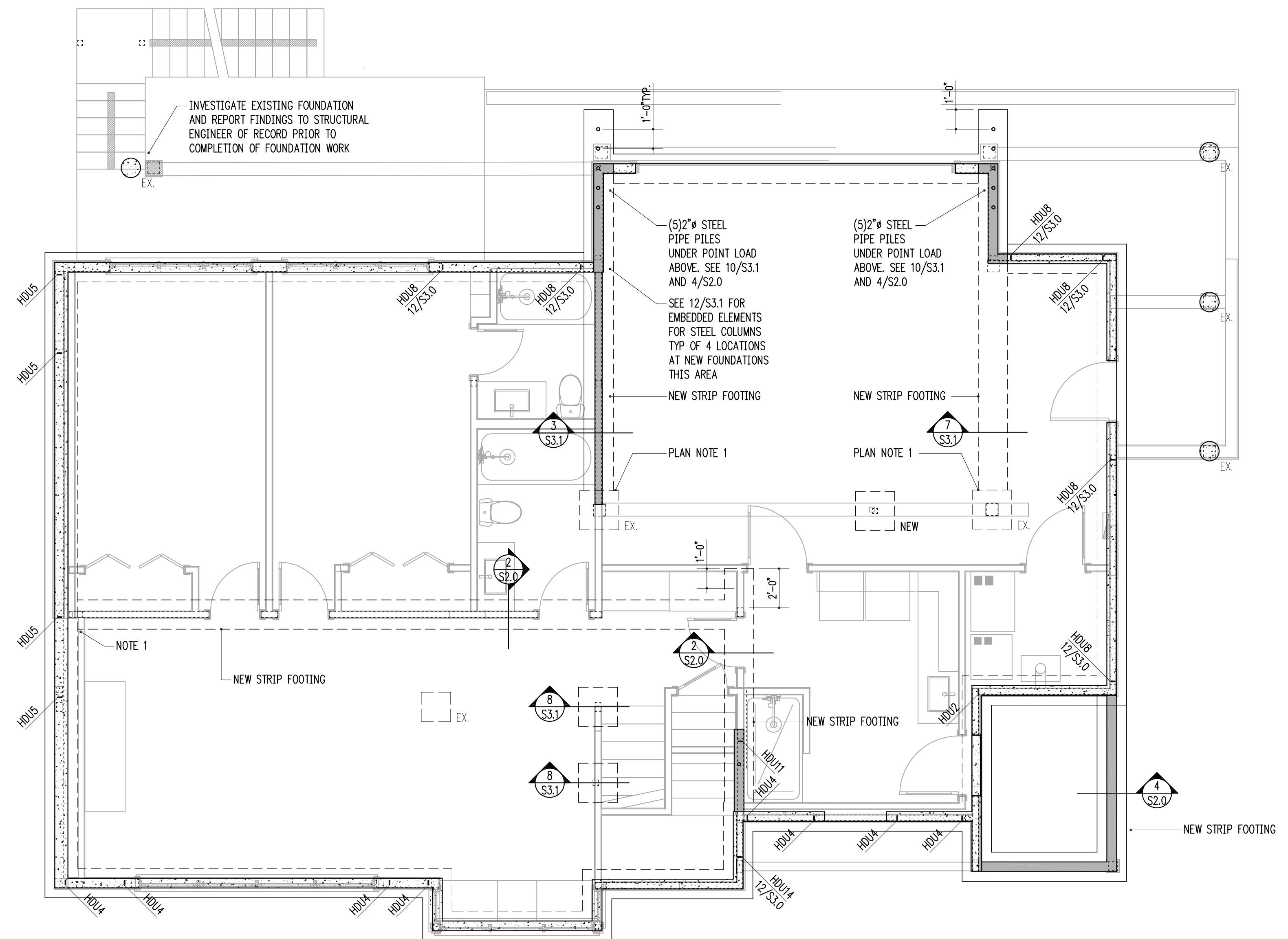


SLAB-ON-GRADE (NOT INSULATED)

3/4" = 1'-0" 3



3/4" = 1'-0" 4



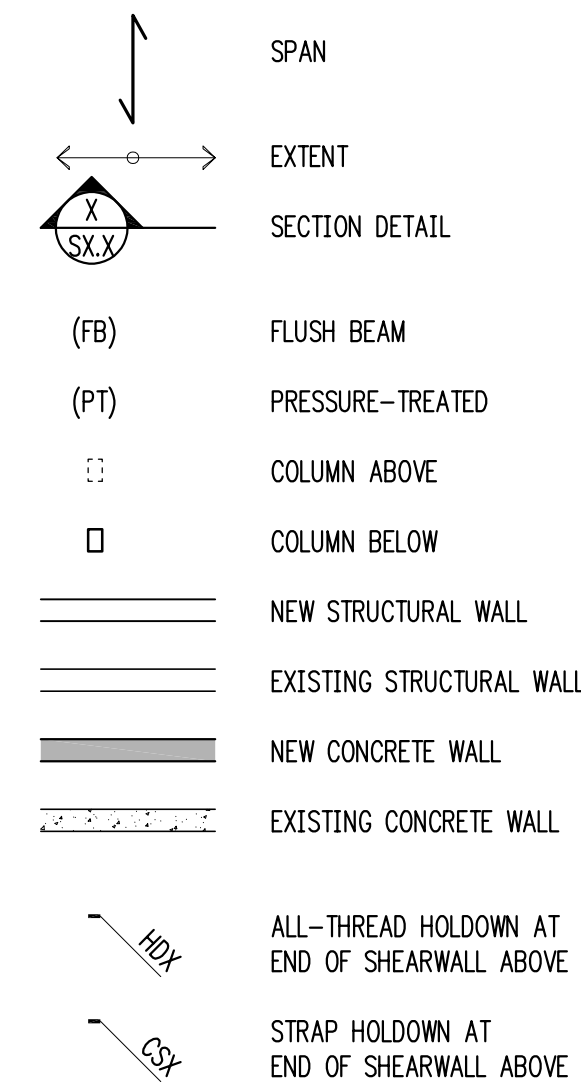
FOUNDATION PLAN  
scale: 1/4" = 1'-0"

HANGER SCHEDULE

MEMBER (FLAT ONLY)	HANGER	FACE NAILING	CAPACITY (Cd = 1.0)
2x10 or 2x12	LUS210	10d COMMON	1275 lb
(2)2x10	HUS210-2	0.162x3/2	2110 lb
4x10	HUC410	0.162x3/2	2680 lb
11 7/8" TJI 560	IUS3.56/11.88	10d COMMON	1405 lb
(2) 1 3/4"x9/4 LVL	HUC410	0.162x3/2	2680 lb

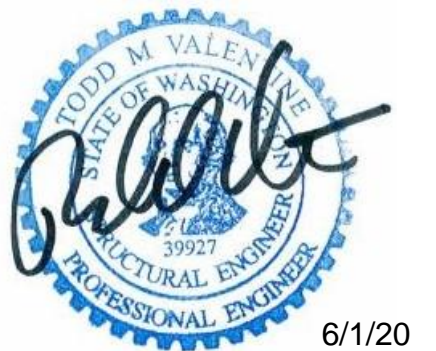
NOTE! EXISTING FRAMING MEMBERS AS INDICATED ON THIS PLAN ARE ASSUMED FOR DESIGN PURPOSES ONLY. HARRIOTT VALENTINE ENGINEERS SHALL NOT BE HELD LIABLE FOR LOCATION/ SIZE OF EXISTING MEMBERS AS CALLED ON THIS PLAN. EXISTING MEMBERS SHALL BE VERIFIED AND REPORTED TO STRUCTURAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

LEGEND



FOUNDATION PLAN NOTES

- WHERE NEW CONCRETE WALLS OR FOOTING ABUT EX. CONCRETE, PROVIDE DOWELS #4 x 2'-0" TO MATCH HORIZ. REINFORCING, EMBED 5" IN EPOXY GROUT.
- SEE 10/S4.0 FOR TYPICAL HOLD-DOWN REQUIREMENTS AT CONCRETE WALLS AND FOOTINGS.
- SLAB-ON-GRADE SHALL BE PLACED AND CURED FOR A MINIMUM OF SEVEN DAYS BEFORE RETAINING WALLS ARE BACKFILLED. SEE RETAINING WALL DETAILS FOR SPECIFIC CONFIGURATION.
- SEE 11/S3.0 FOR CORNER REINFORCING AT NEW CONCRETE STEMS AND FOOTINGS



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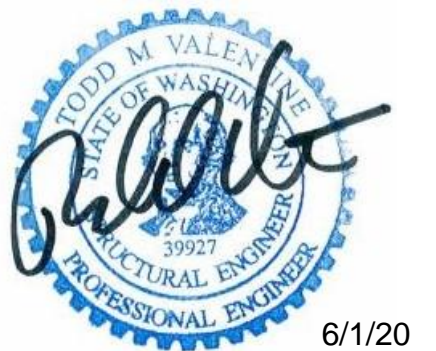
Building Department Approval

Drawing Title  
**FOUNDATION PLAN**

Drawing Number  
**S2.0**

WERELIUS RESIDENCE





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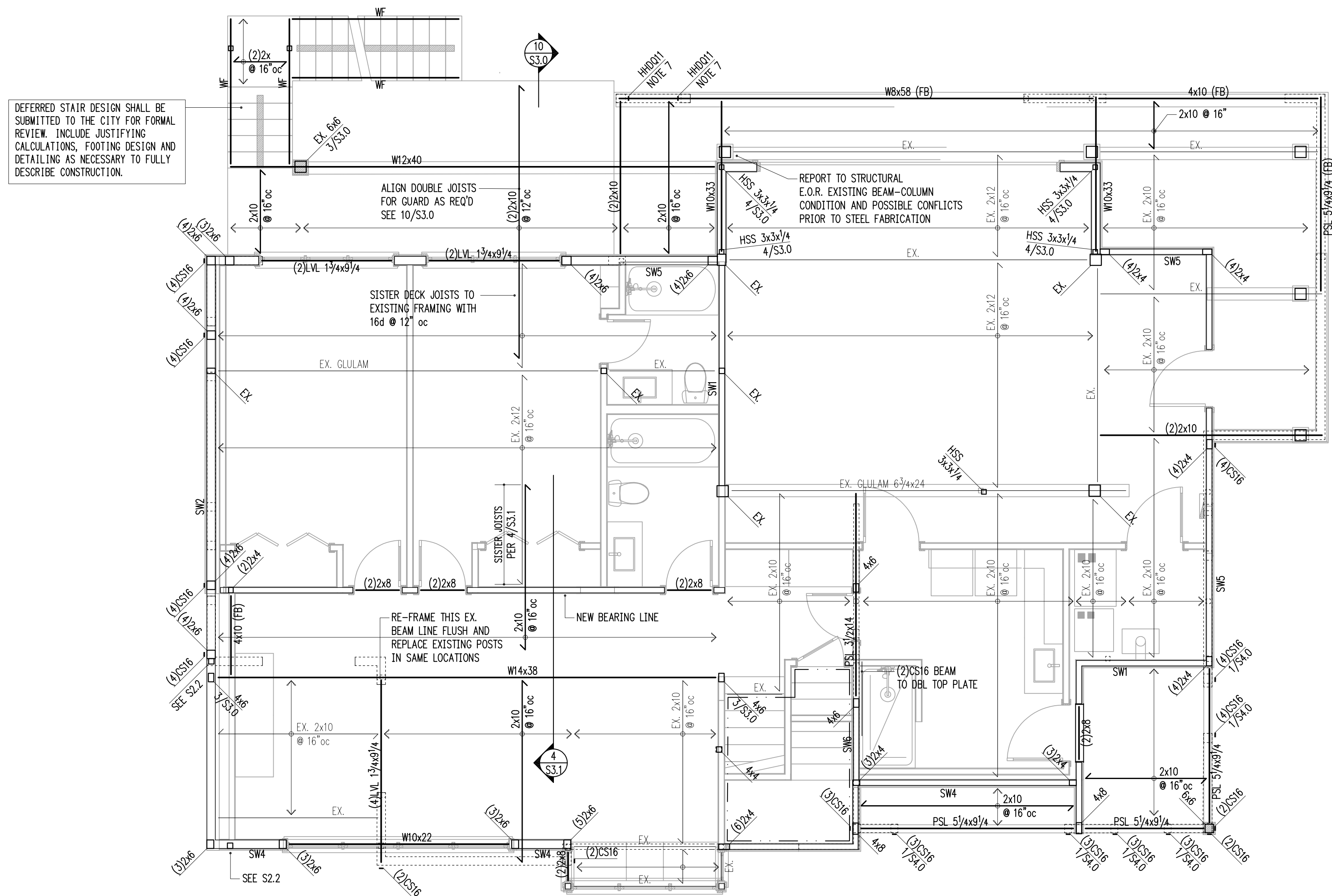
Building Department Approval

Drawing Title  
**MAIN FLOOR FRAMING PLAN**

Drawing Number

**S2.1**

WERELIUS RESIDENCE



DEFERRED STAIR DESIGN SHALL BE SUBMITTED TO THE CITY FOR FORMAL REVIEW. INCLUDE JUSTIFYING CALCULATIONS, FOOTING DESIGN AND DETAILING AS NECESSARY TO FULLY DESCRIBE CONSTRUCTION.

3/4" = 1'-0" 2

3/4" = 1'-0" 3

1 MAIN FLOOR FRAMING PLAN (BASEMENT WALLS)  
S2.1 scale: 1/4" = 1'-0"

HANGER SCHEDULE

MEMBER (FLAT ONLY)	HANGER	FACE NAILING	CAPACITY (Cd = 1.0)
2x10 or 2x12	LUS210	10d COMMON	1275 lb
(2)2x10	HUS210-2	0.162x3/2	2110 lb
4x10	HUC410	0.162x3/2	2680 lb
11 7/8" TJI 560	IUS3.56/11.88	10d COMMON	1405 lb
(2) 1 3/4x9 1/4 LVL	HUC410	0.162x3/2	2680 lb

NOTE! EXISTING FRAMING MEMBERS AS INDICATED ON THIS PLAN ARE ASSUMED FOR DESIGN PURPOSES ONLY. HARRIOTT VALENTINE ENGINEERS SHALL NOT BE HELD LIABLE FOR LOCATION/ SIZE OF EXISTING MEMBERS AS CALLED ON THIS PLAN. EXISTING MEMBERS SHALL BE VERIFIED AND REPORTED TO STRUCTURAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

LEGEND

- SPAN
- EXTENT
- SECTION DETAIL
- (FB) FLUSH BEAM
- (PT) PRESSURE-TREATED
- ⋮ COLUMN ABOVE
- COLUMN BELOW
- ▬ NEW STRUCTURAL WALL
- ▬ EXISTING STRUCTURAL WALL
- ▬ NEW CONCRETE WALL
- ▬ EXISTING CONCRETE WALL
- ALL-THREAD HOLDOWN AT END OF SHEARWALL ABOVE
- STRAP HOLDOWN AT END OF SHEARWALL ABOVE

FRAMING PLAN NOTES

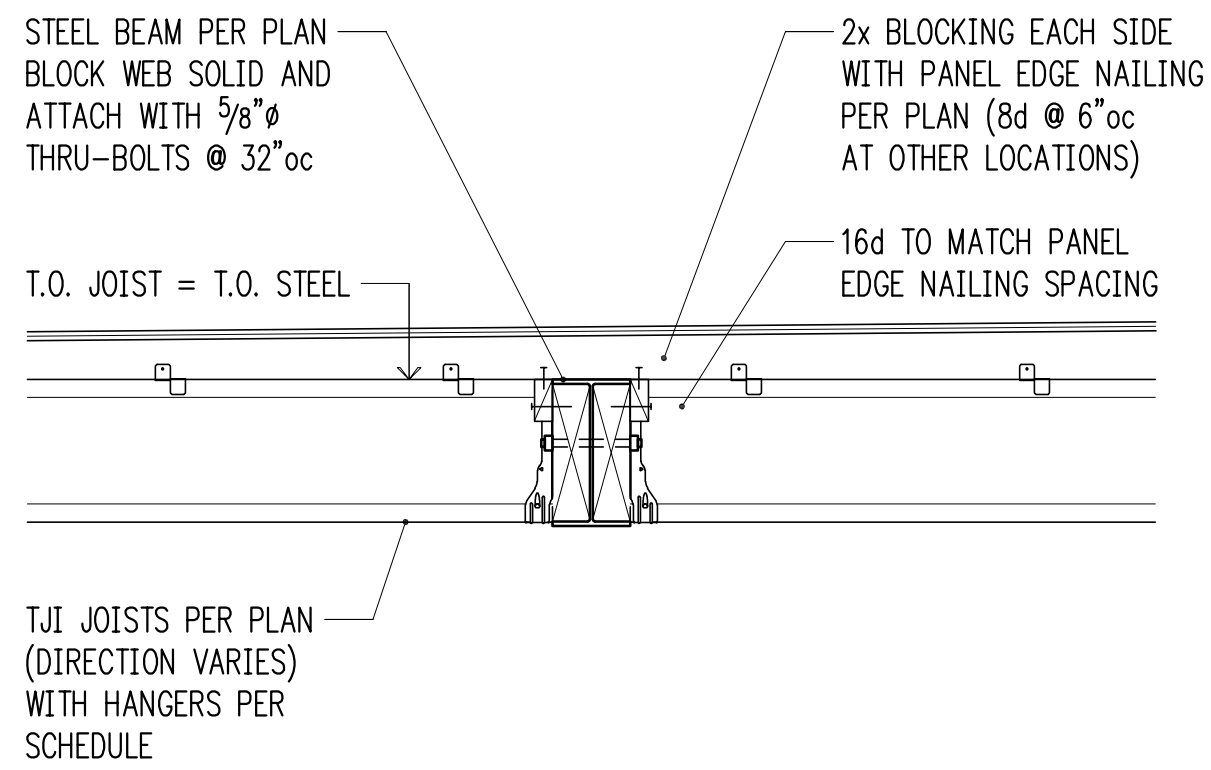
- SW\_\_\_ INDICATES SHEARWALL TYPE PER SCHEDULE 8/S4.0. REFER TO DETAILS FOR TYPICAL SHEARWALL CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL INFORMATION.
- REFER TO GENERAL STRUCTURAL NOTES FOR FLOOR OR ROOF SHEATHING TYPE, THICKNESS, AND NAILING.
- COLUMNS SHALL BE DOUBLE STUD MINIMUM, UNLESS NOTED OTHERWISE. SEE 11/S4.0.
- AT ALL SHEARWALLS PROVIDE DOUBLE TOP PLATES AND SPLICE PER 12/S4.0.
- CS\_\_\_ INDICATES COILED STRAP TYPE PER SCHEDULE 6/S4.0. REFER TO DETAILS FOR TYPICAL STRAP ASSEMBLY.
- POSTS □, INCLUDING ENDS OF WALL OPENINGS, SHALL BE (2)2x6 UNLESS NOTED OTHERWISE.
- WELD THREADED RODS FOR HOLD DOWNS AND BOTTOM PLATE ATTACHMENT TO STEEL BEAMS BELOW

1-1/2" = 1'-0" 4

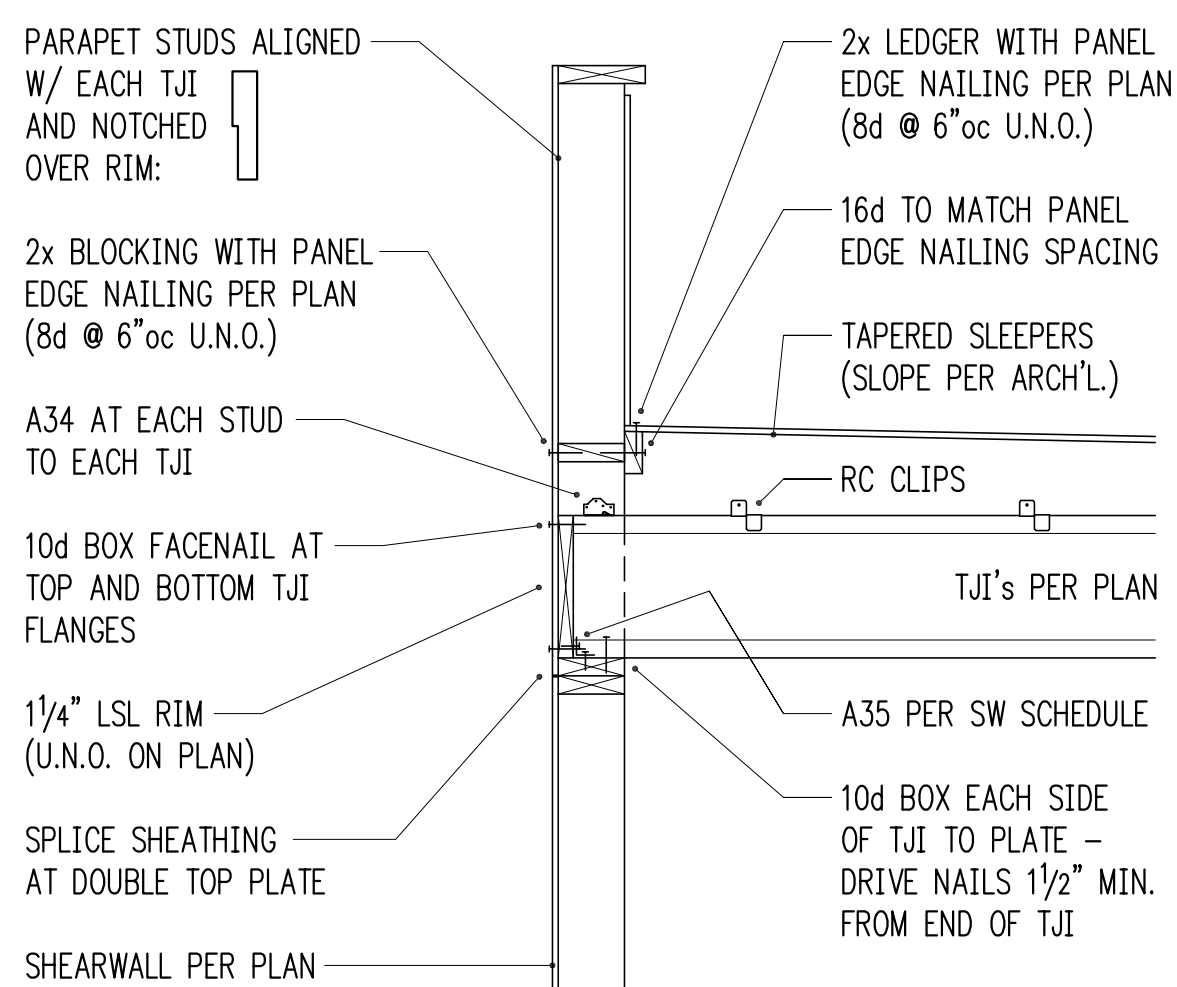




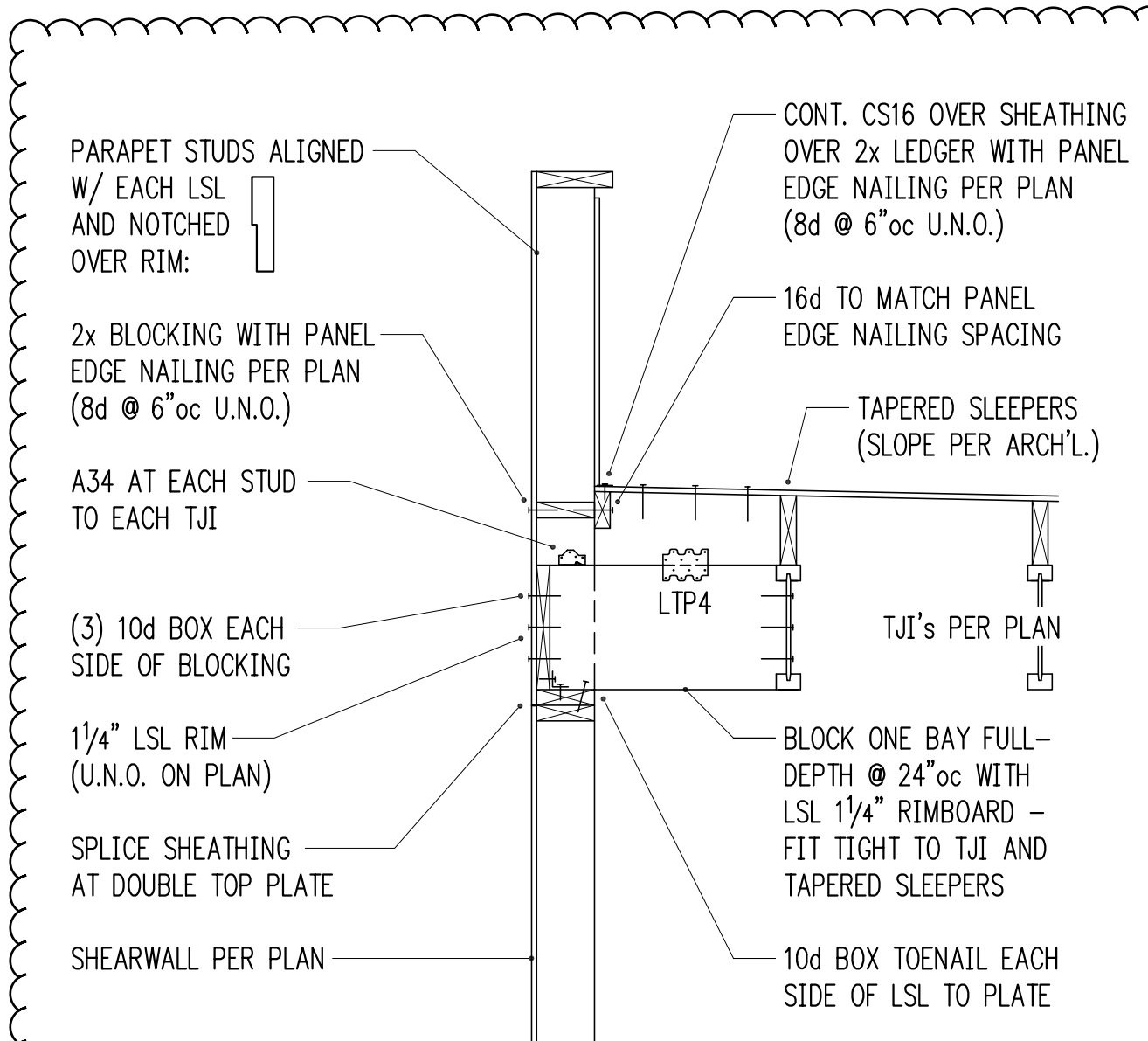




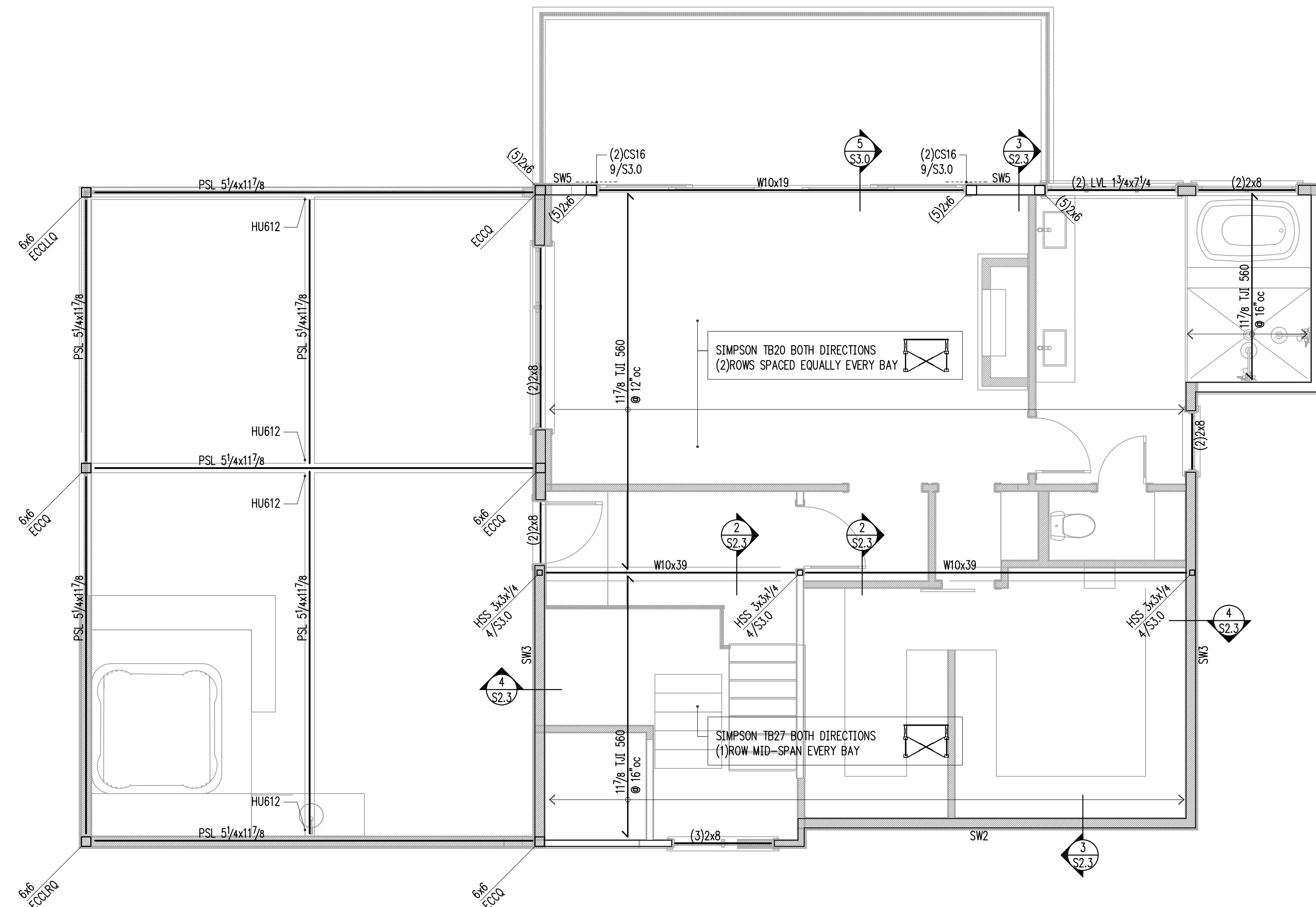
3/4" = 1'-0" 2



3/4" = 1'-0" 3



3/4" = 1'-0" 4



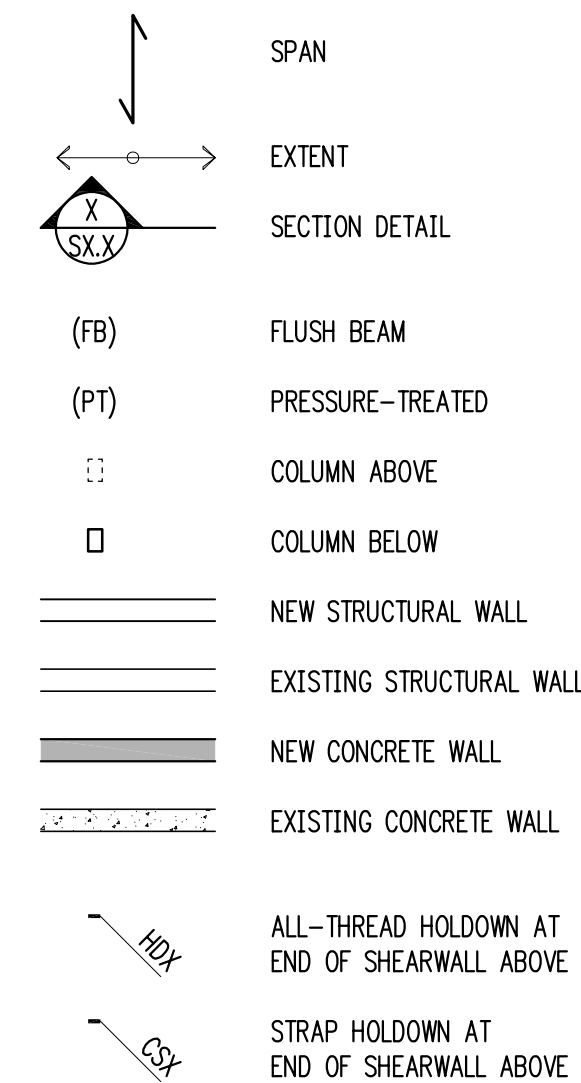
1 ROOF FRAMING PLAN (SECOND FLOOR WALLS)  
S2.3 scale: 1/4" = 1'-0"

HANGER SCHEDULE

MEMBER (FLAT ONLY)	HANGER	FACE NAILING	CAPACITY (Cd = 1.0)
2x10 or 2x12	LUS210	10d COMMON	1275 lb
(2)2x10	HUS210-2	0.162x3/2	2110 lb
4x10	HUC410	0.162x3/2	2680 lb
11 7/8" TJI 560	IUS3.56/11.88	10d COMMON	1405 lb
(2) 1 3/4"x9/4" LVL	HUC410	0.162x3/2	2680 lb

NOTE! EXISTING FRAMING MEMBERS AS INDICATED ON THIS PLAN ARE ASSUMED FOR DESIGN PURPOSES ONLY. HARRIOTT VALENTINE ENGINEERS SHALL NOT BE HELD LIABLE FOR LOCATION/ SIZE OF EXISTING MEMBERS AS CALLED ON THIS PLAN. EXISTING MEMBERS SHALL BE VERIFIED AND REPORTED TO STRUCTURAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

LEGEND



FRAMING PLAN NOTES

- SW \_\_\_ INDICATES SHEARWALL TYPE PER SCHEDULE 8/S4.0. REFER TO DETAILS FOR TYPICAL SHEARWALL CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL INFORMATION.
- REFER TO GENERAL STRUCTURAL NOTES FOR FLOOR OR ROOF SHEATHING TYPE, THICKNESS, AND NAILING.
- COLUMNS SHALL BE DOUBLE STUD MINIMUM, UNLESS NOTED OTHERWISE. SEE 11/S4.0.
- AT ALL SHEARWALLS PROVIDE DOUBLE TOP PLATES AND SPLICE PER 12/S4.0.
- CS\_\_\_ INDICATES COILED STRAP TYPE PER SCHEDULE 6/S4.0. REFER TO DETAILS FOR TYPICAL STRAP ASSEMBLY.
- POSTS □, INCLUDING ENDS OF WALL OPENINGS, SHALL BE (2)2x6 UNLESS NOTED OTHERWISE.



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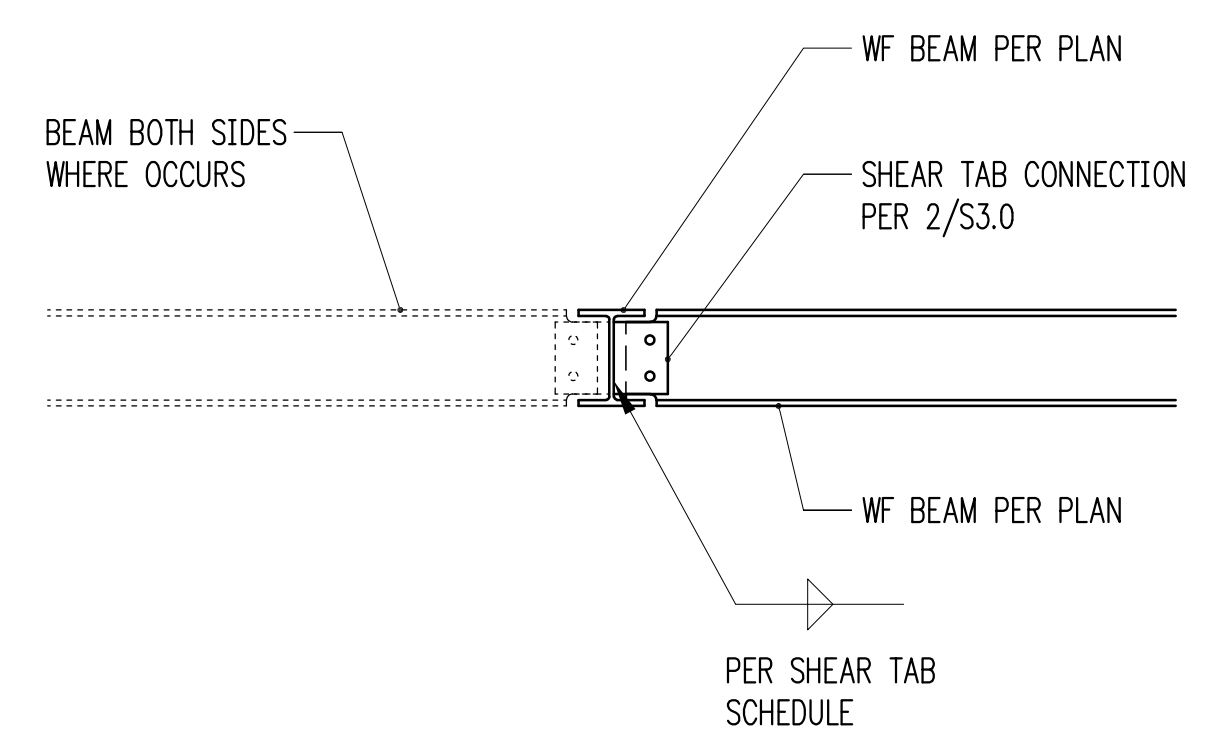
Building Department Approval

Drawing Title  
**ROOF FRAMING PLAN**

Drawing Number

**S2.3**

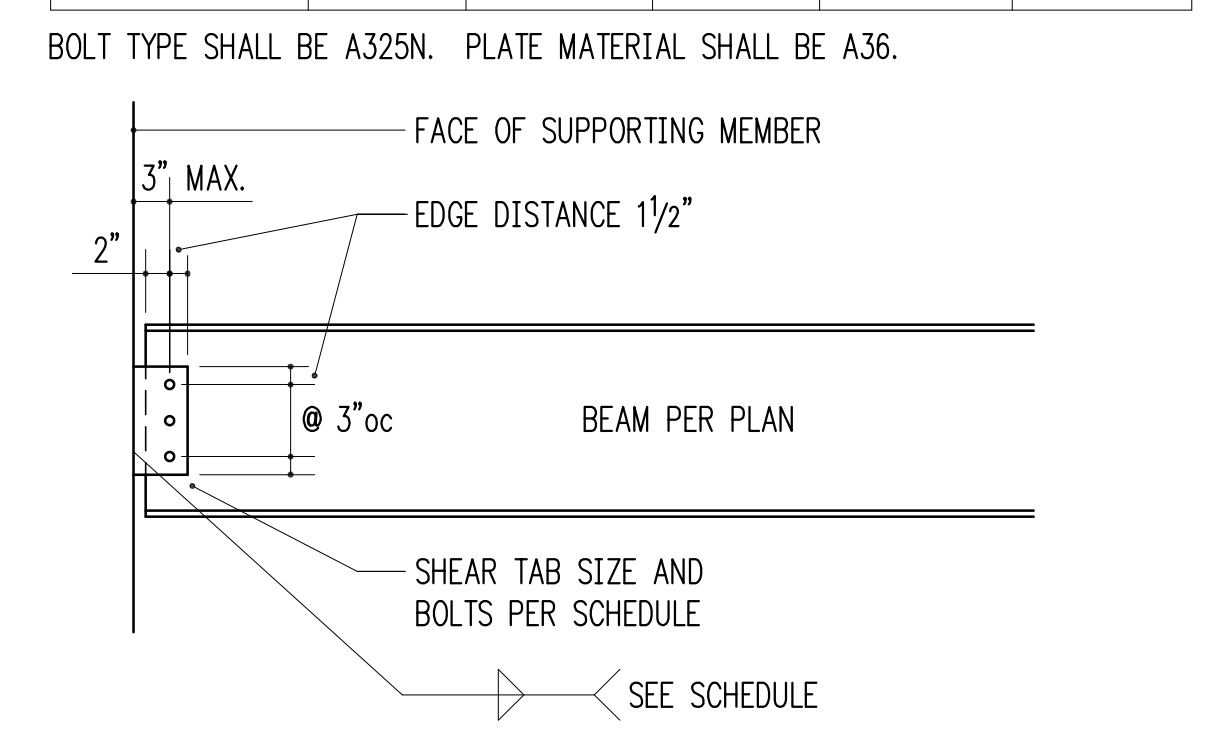




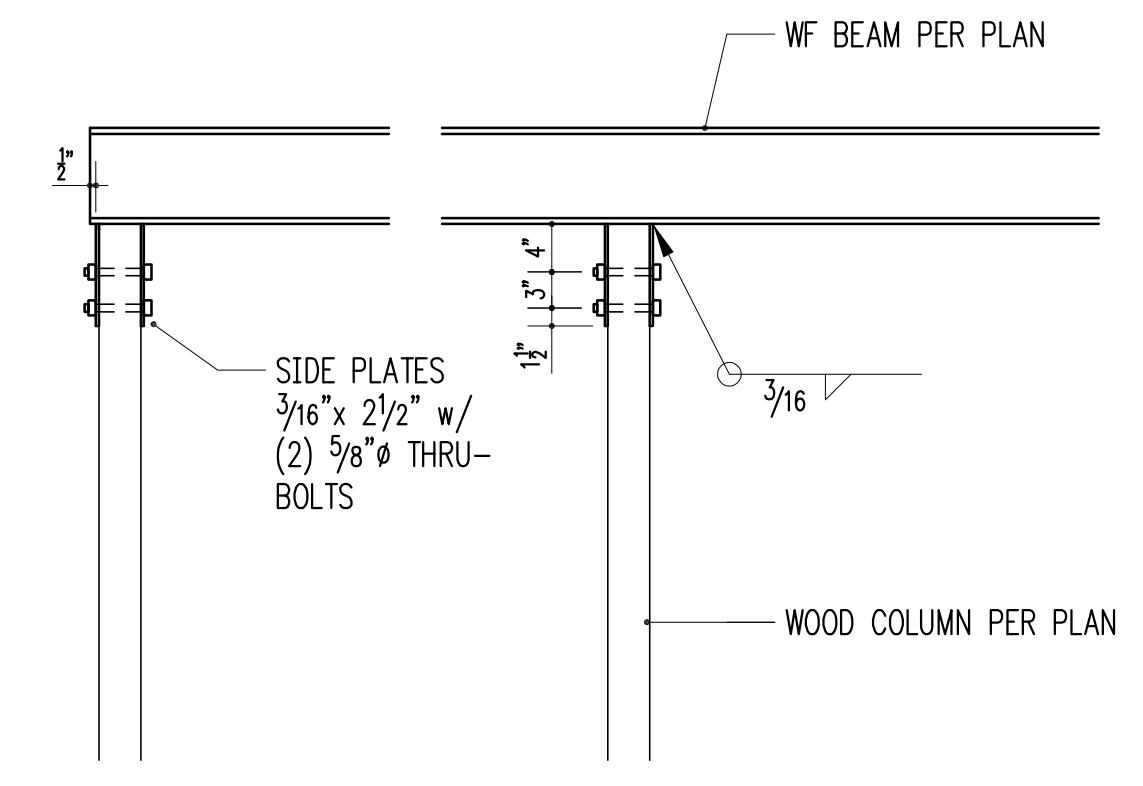
WF BEAM TO SIDE OF WF BEAM  
 3/4" = 1'-0" 1

**SHEAR TAB SCHEDULE**

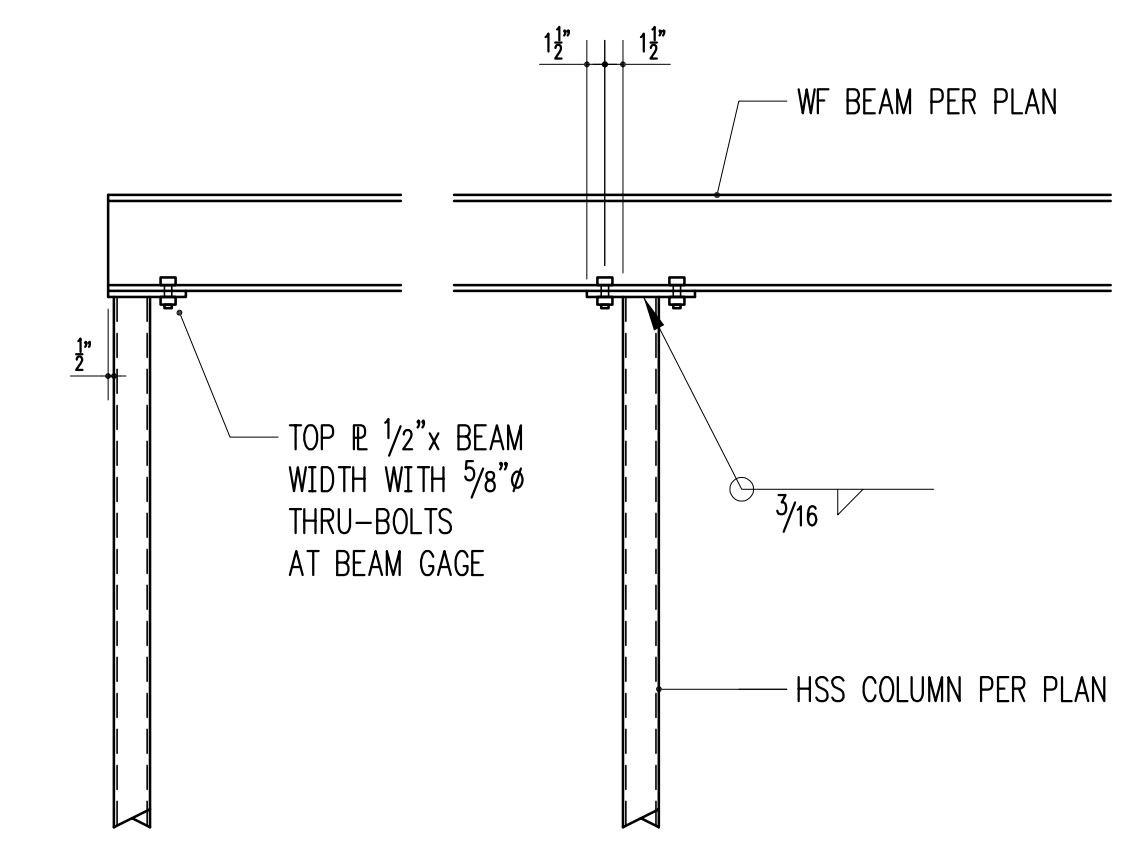
BEAM SIZE	# BOLTS	BOLT SIZE	R THICK.	WELD SIZE	CAPACITY
W8, W10	(2)	3/4"Ø	1/4"	3/16"	8,200 lb
W14 OR DEEPER	(3)	3/4"Ø	1/4"	3/16"	16,300 lb



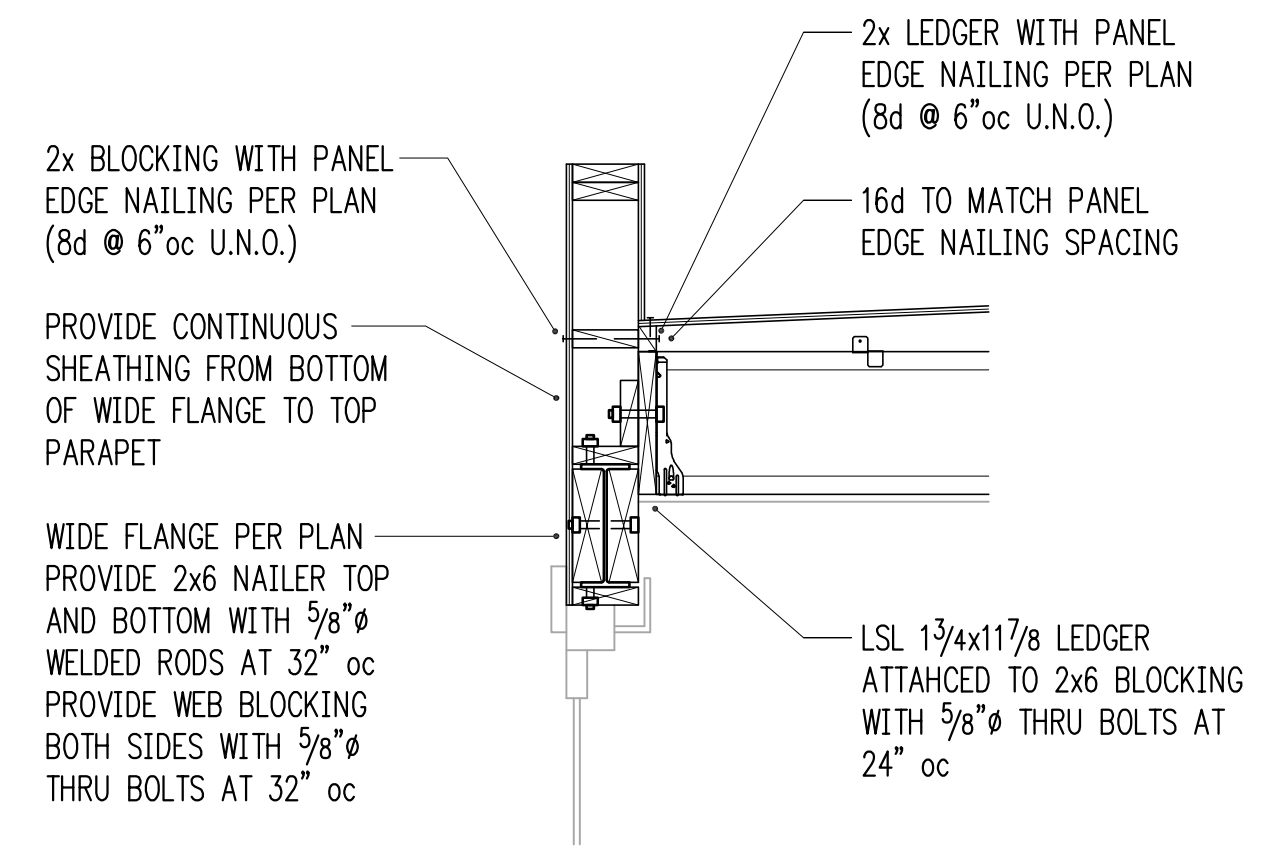
TYPICAL SHEAR TAB CONNECTION  
 3/4" = 1'-0" 2



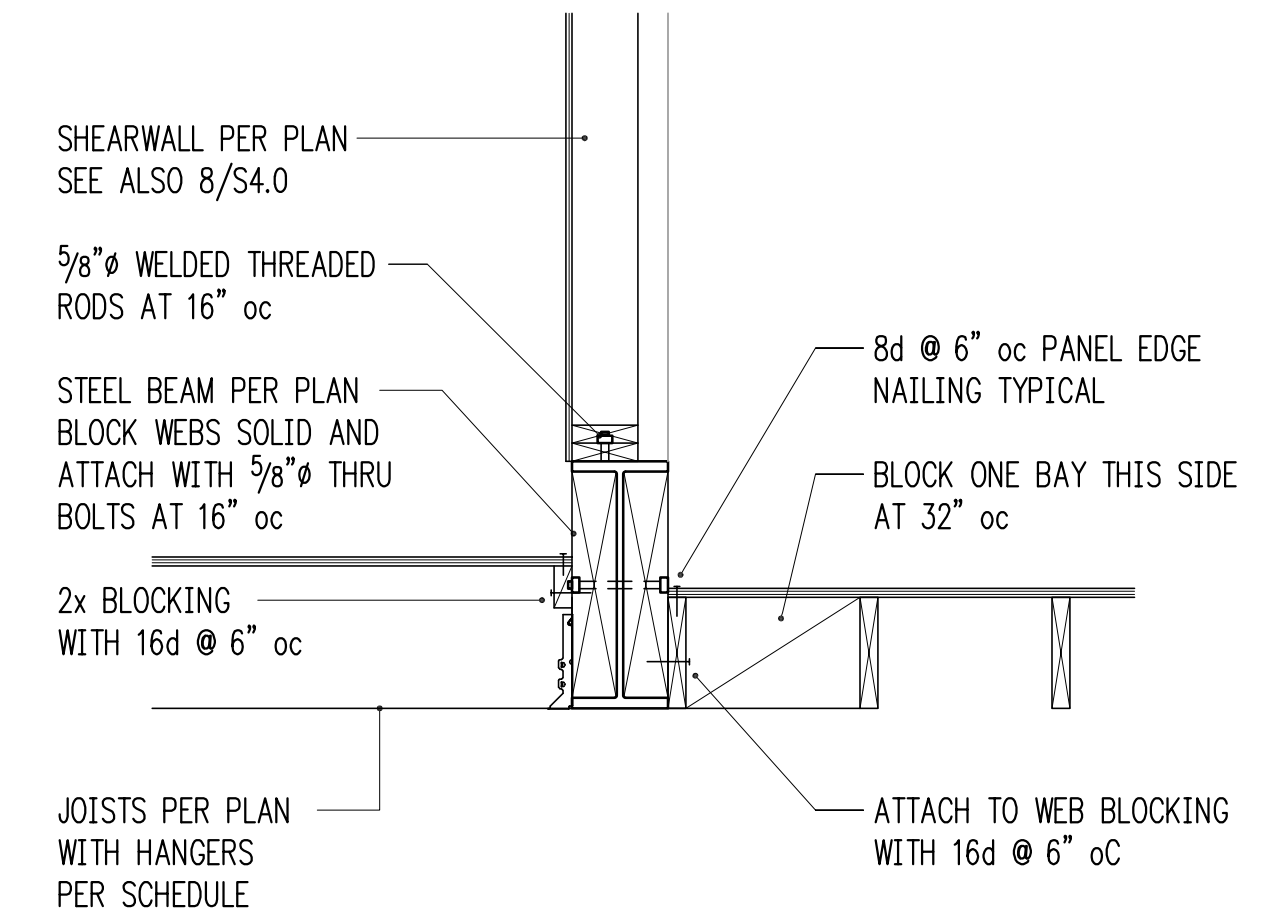
WF BEAM BEARING ON WOOD COLUMN  
 3/4" = 1'-0" 3



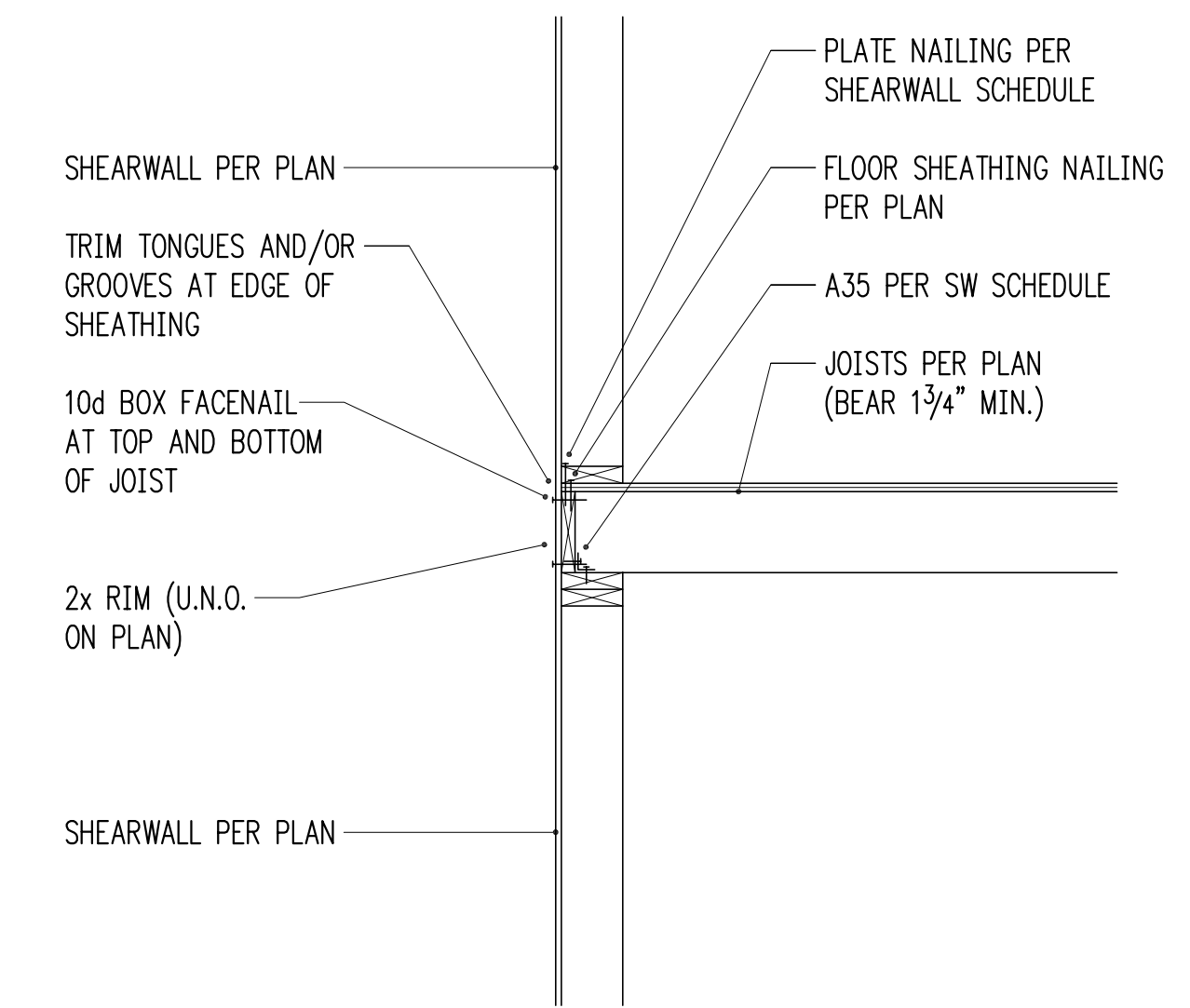
WF BEAM BEARING ON HSS COLUMN  
 3/4" = 1'-0" 4



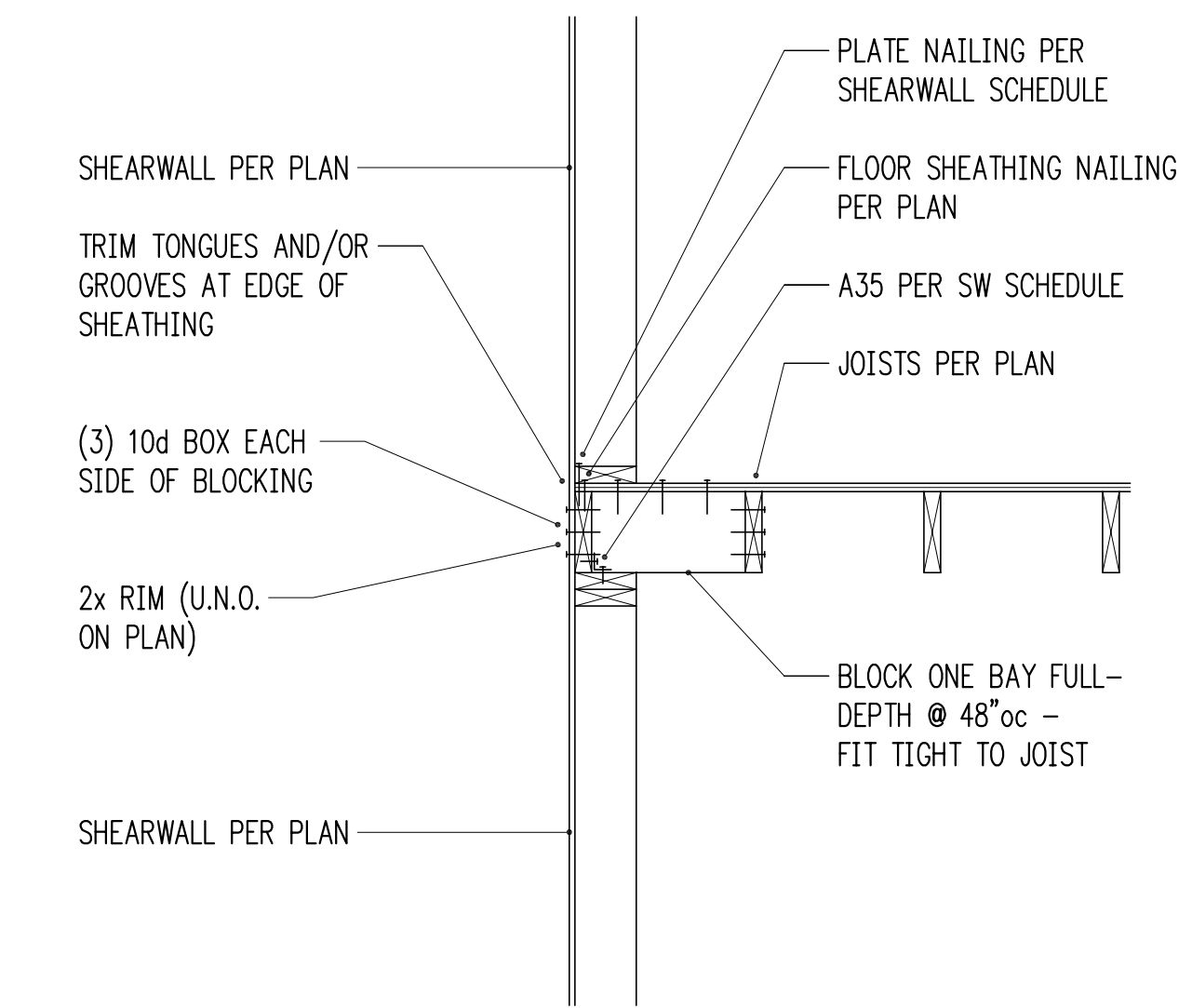
3/4" = 1'-0" 5



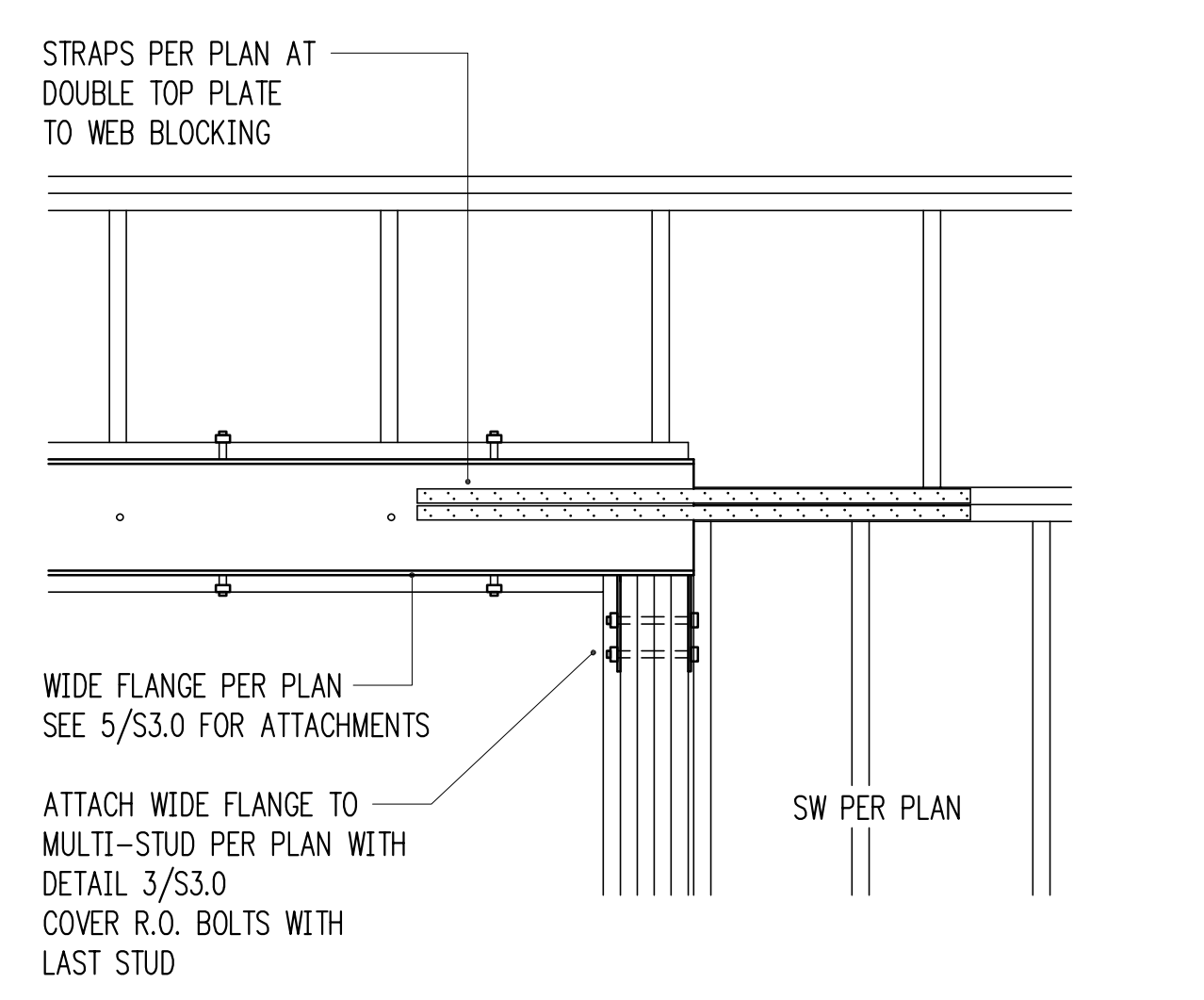
3/4" = 1'-0" 6



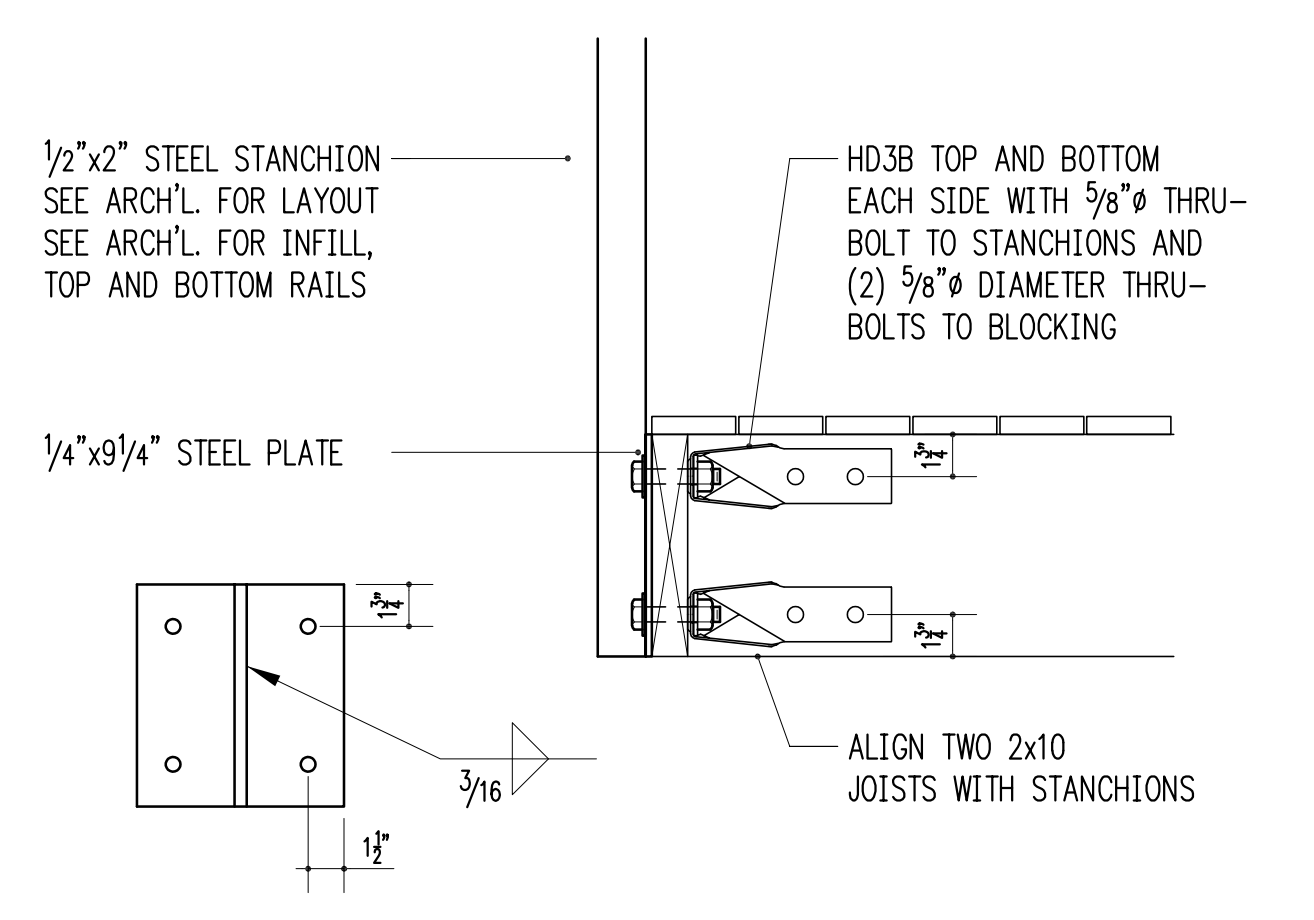
3/4" = 1'-0" 7



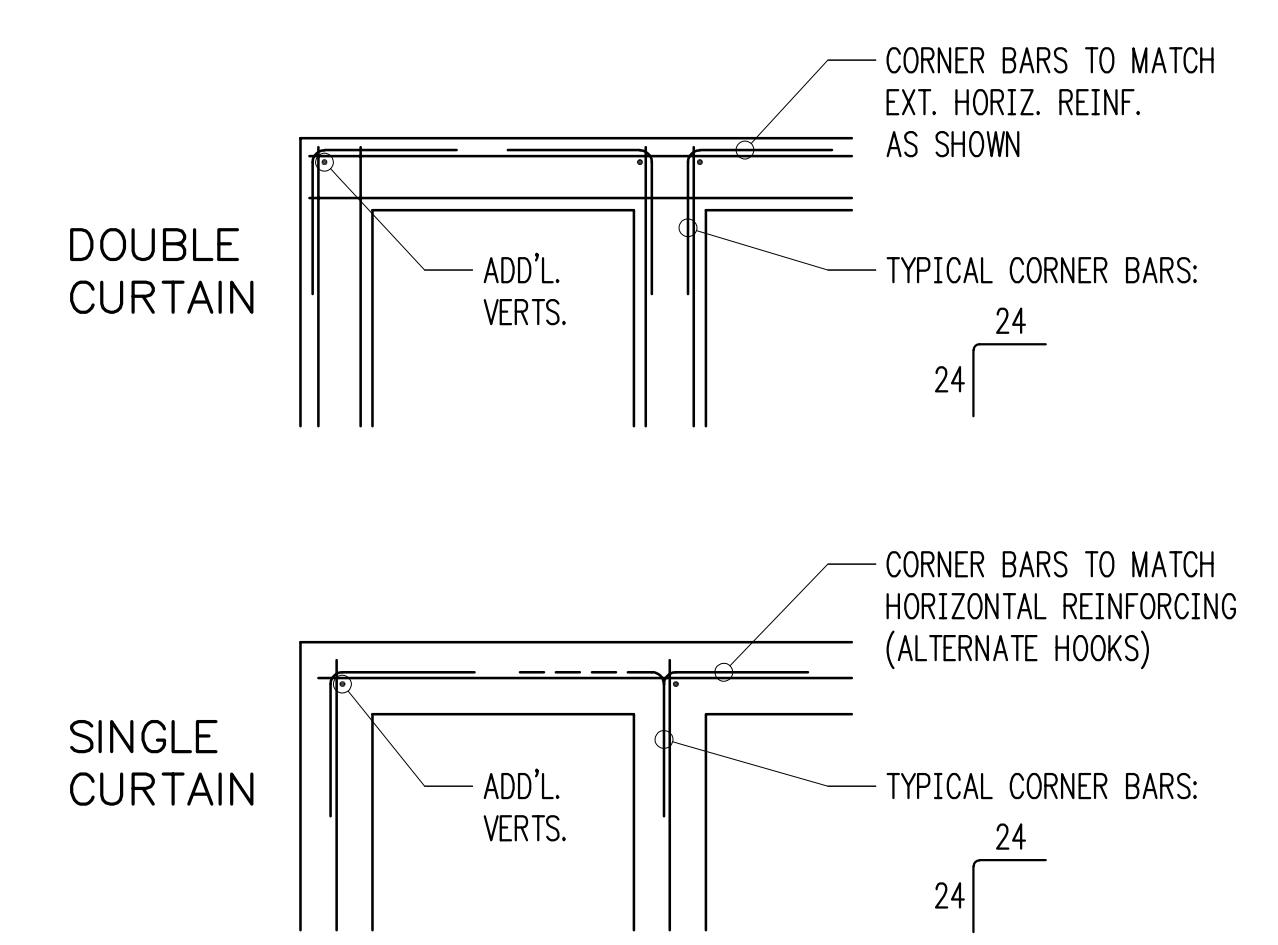
3/4" = 1'-0" 8



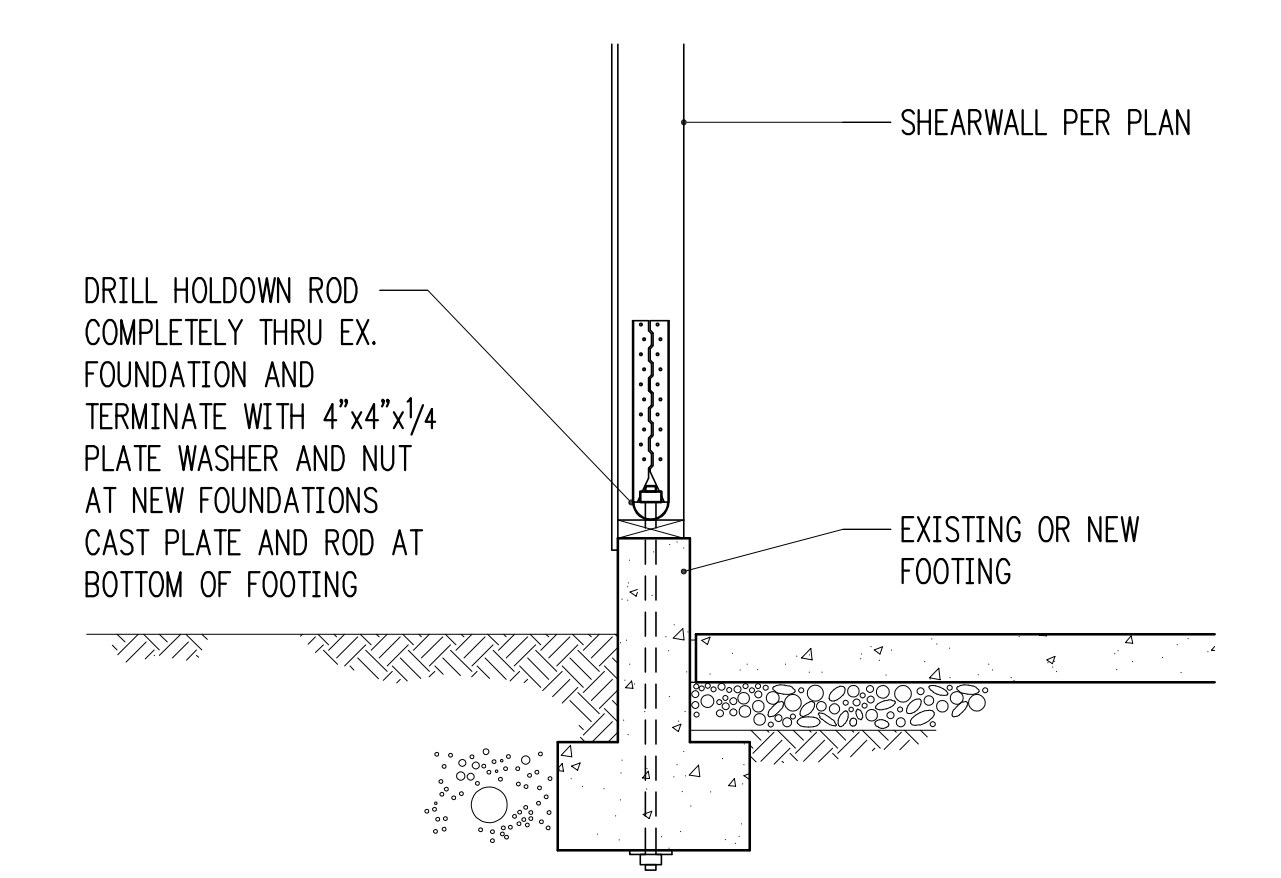
3/4" = 1'-0" 9



1-1/2" = 1'-0" 10



TYPICAL CORNER BARS AT CONCRETE WALLS  
 3/4" = 1'-0" 11



3/4" = 1'-0" 12



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Building Department Approval

Drawing Title  
**STRUCTURAL DETAILS**

Drawing Number

**S3.0**

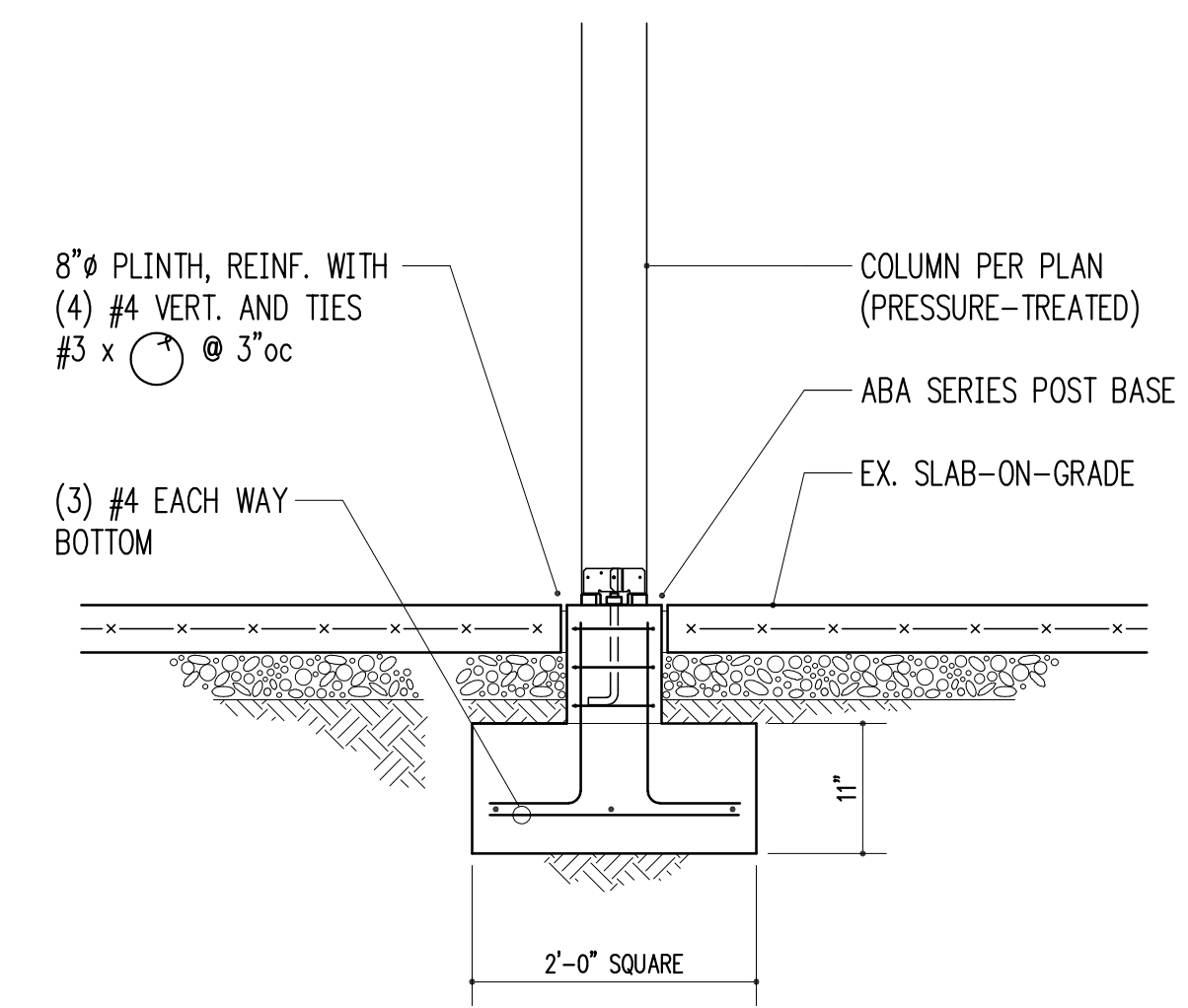
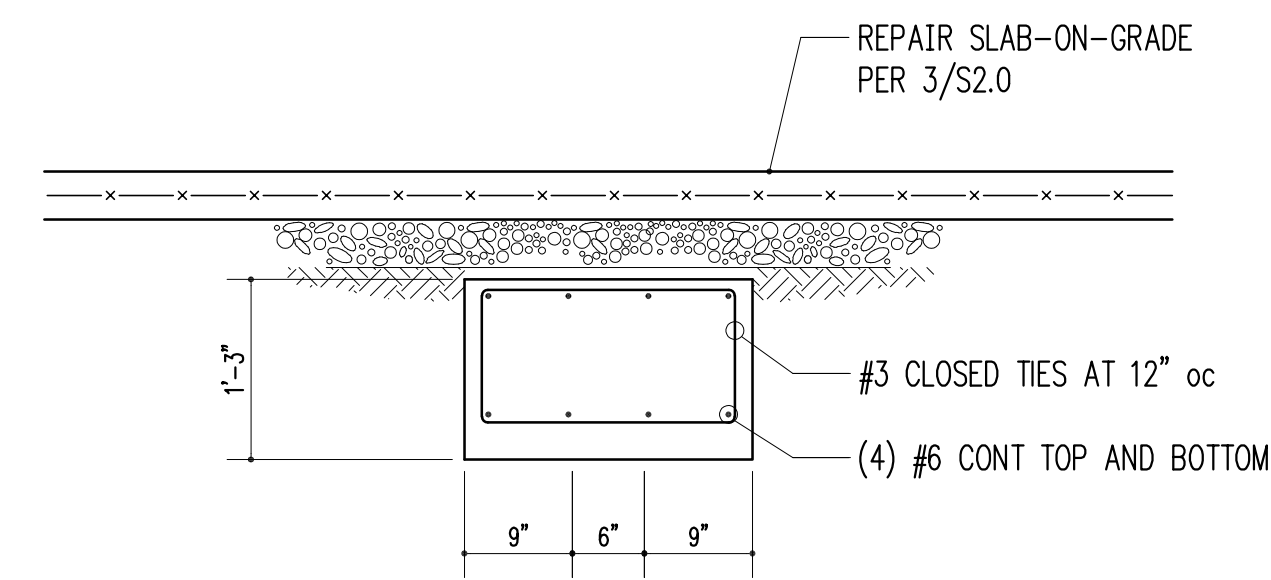
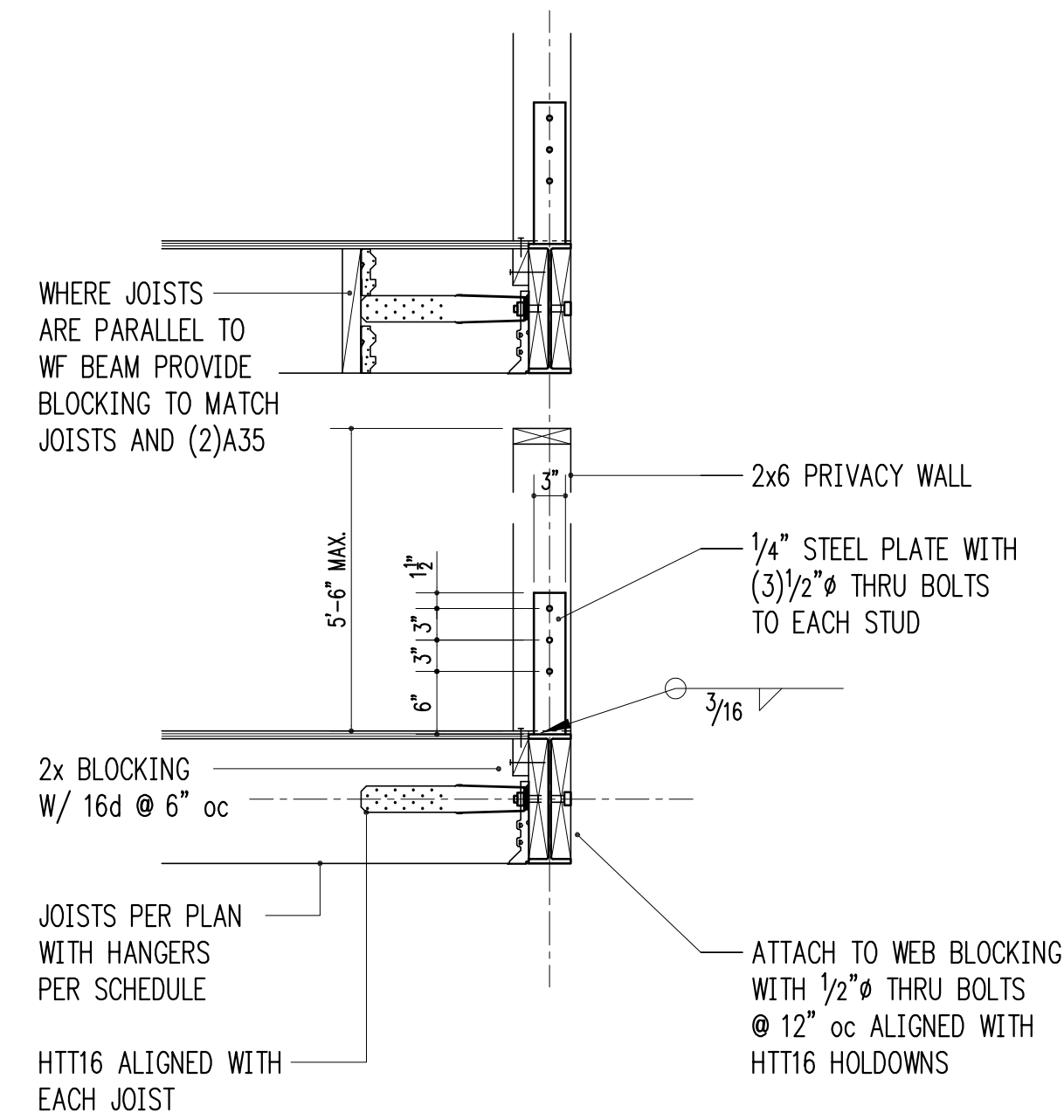
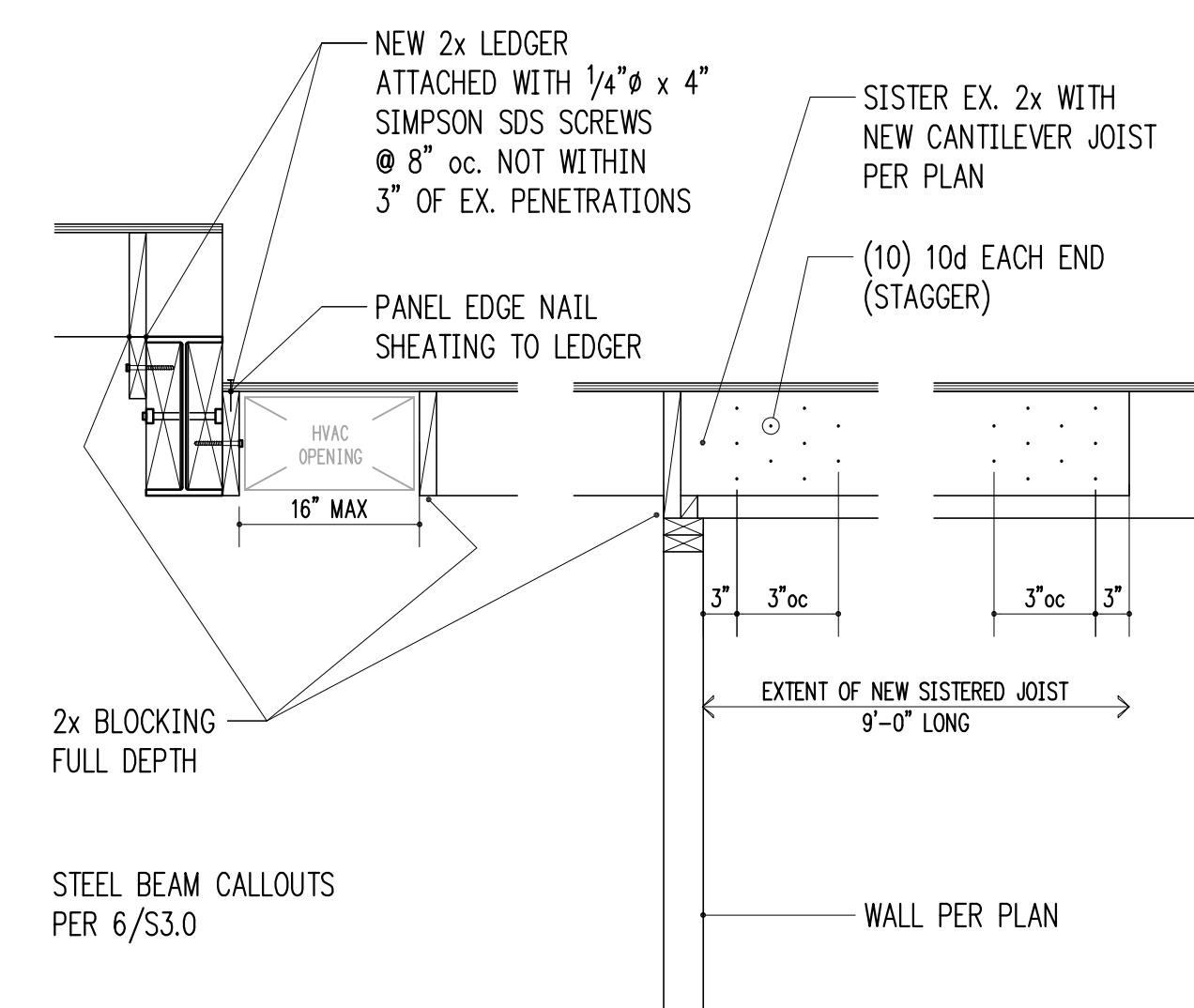
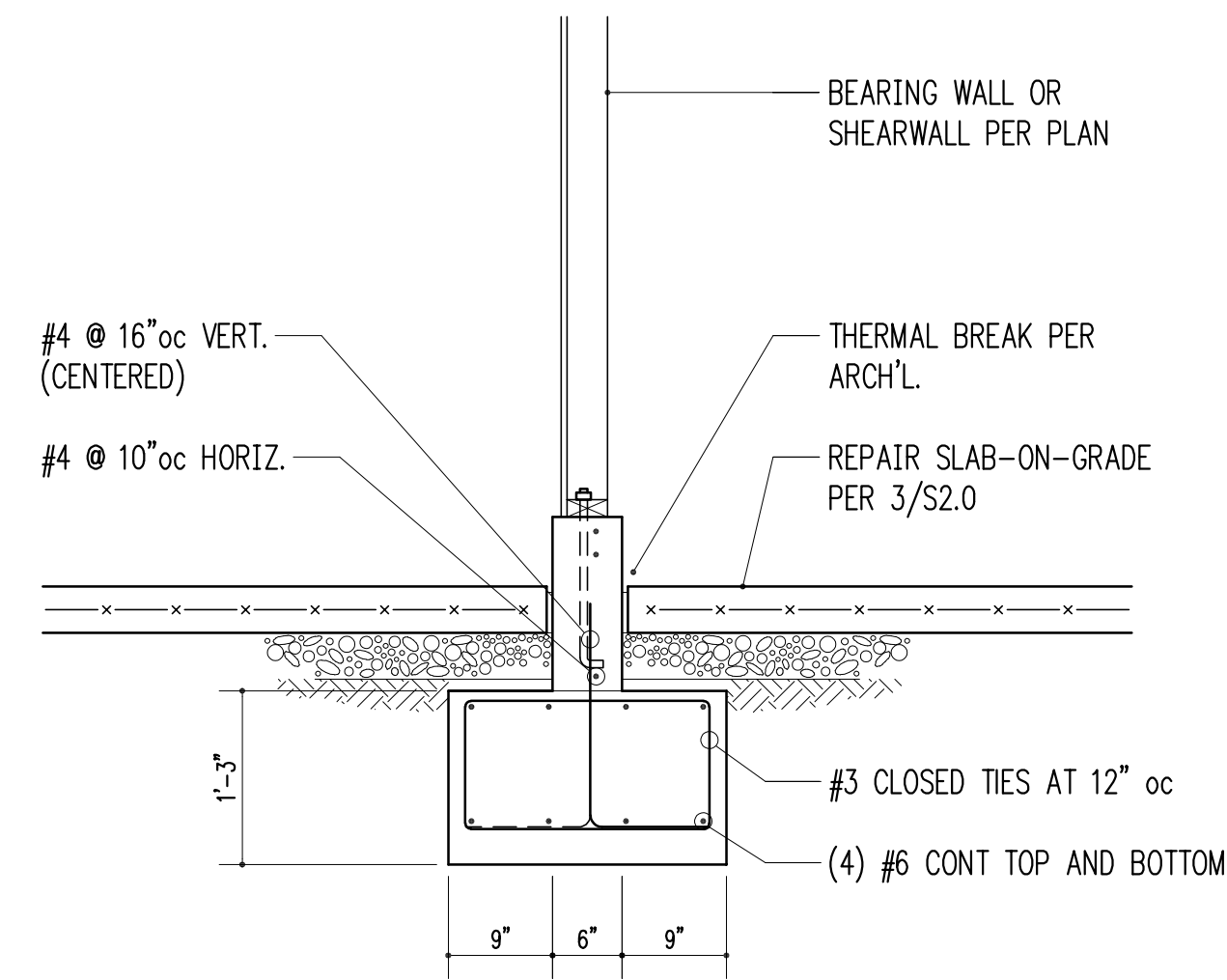
WERELIUS RESIDENCE

3/4" = 1'-0" 1

3/4" = 1'-0" 2

3/4" = 1'-0" 3

3/4" = 1'-0" 4

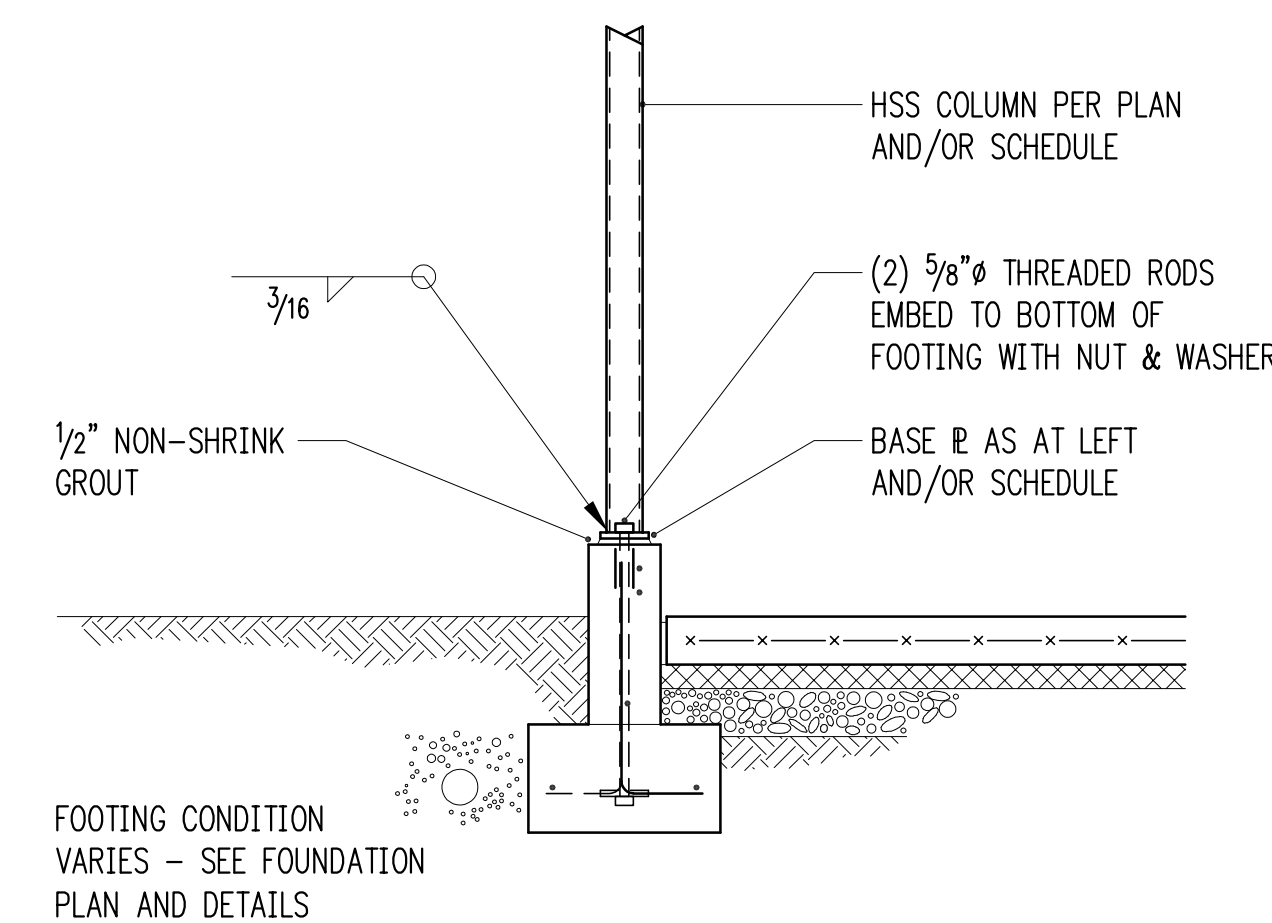
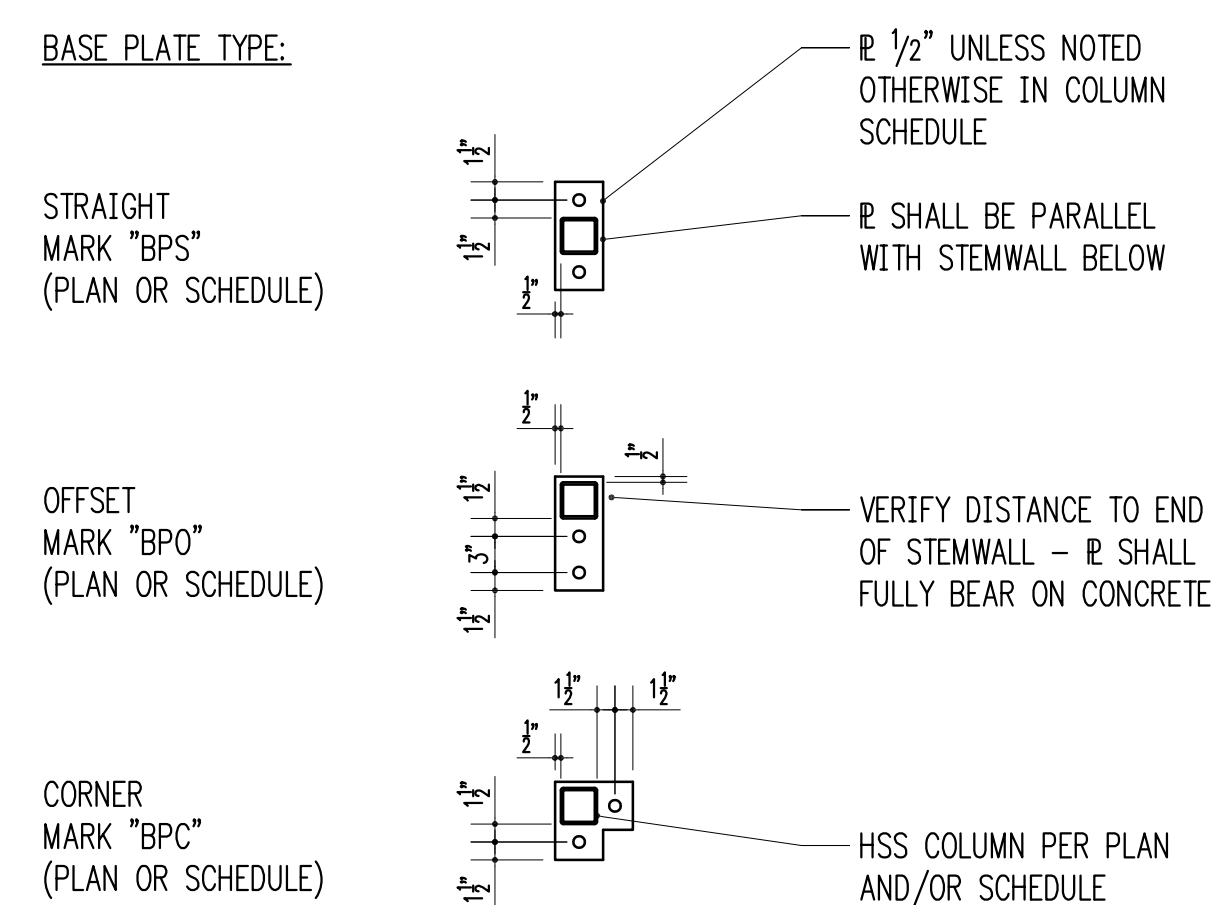
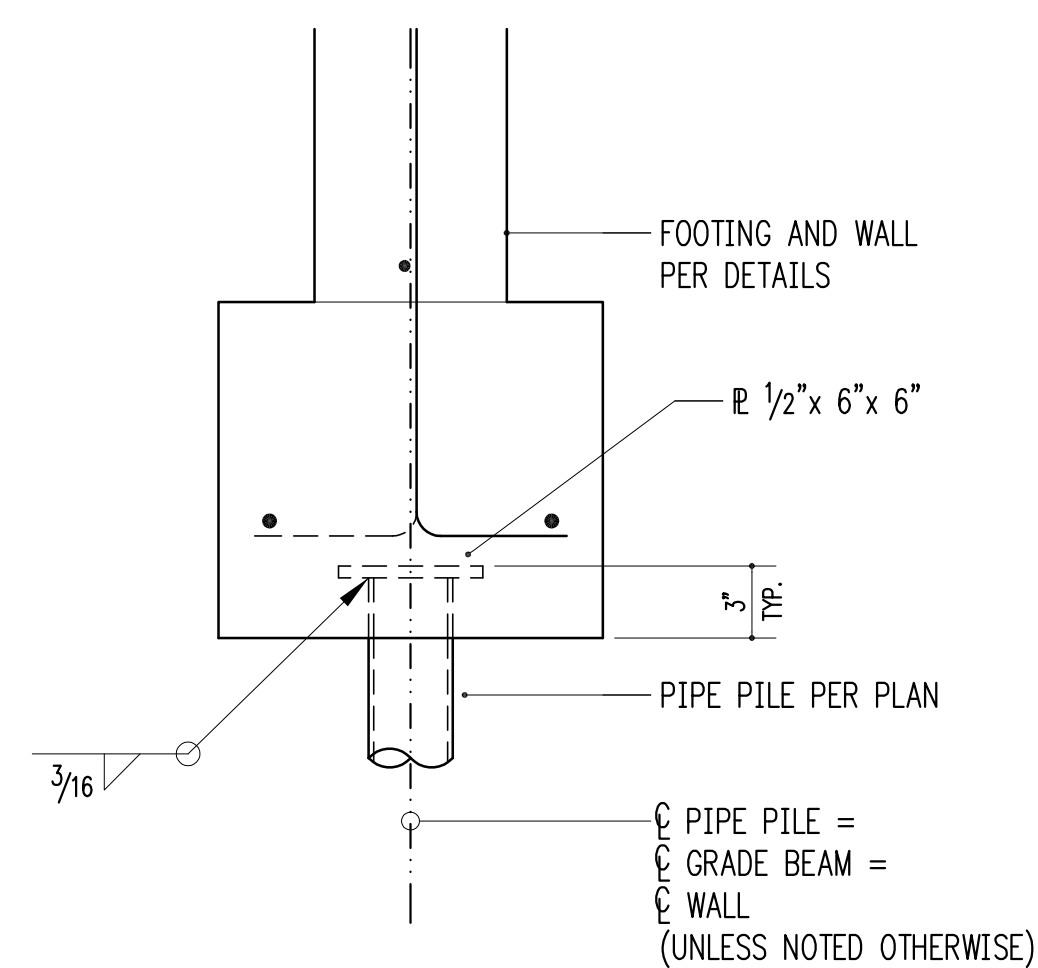


3/4" = 1'-0" 5

3/4" = 1'-0" 6

3/4" = 1'-0" 7

3/4" = 1'-0" 8

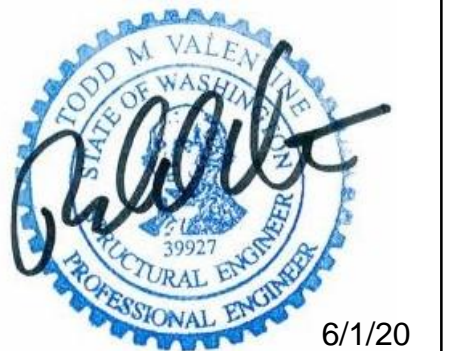


3/4" = 1'-0" 9

1-1/2" = 1'-0" 10

HSS COLUMN BASE PLATES

3/4" = 1'-0" 12



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4/17/20	Construction
4/24/20	Trellis Revisions
6/1/20	Corrections #2

Building Department Approval

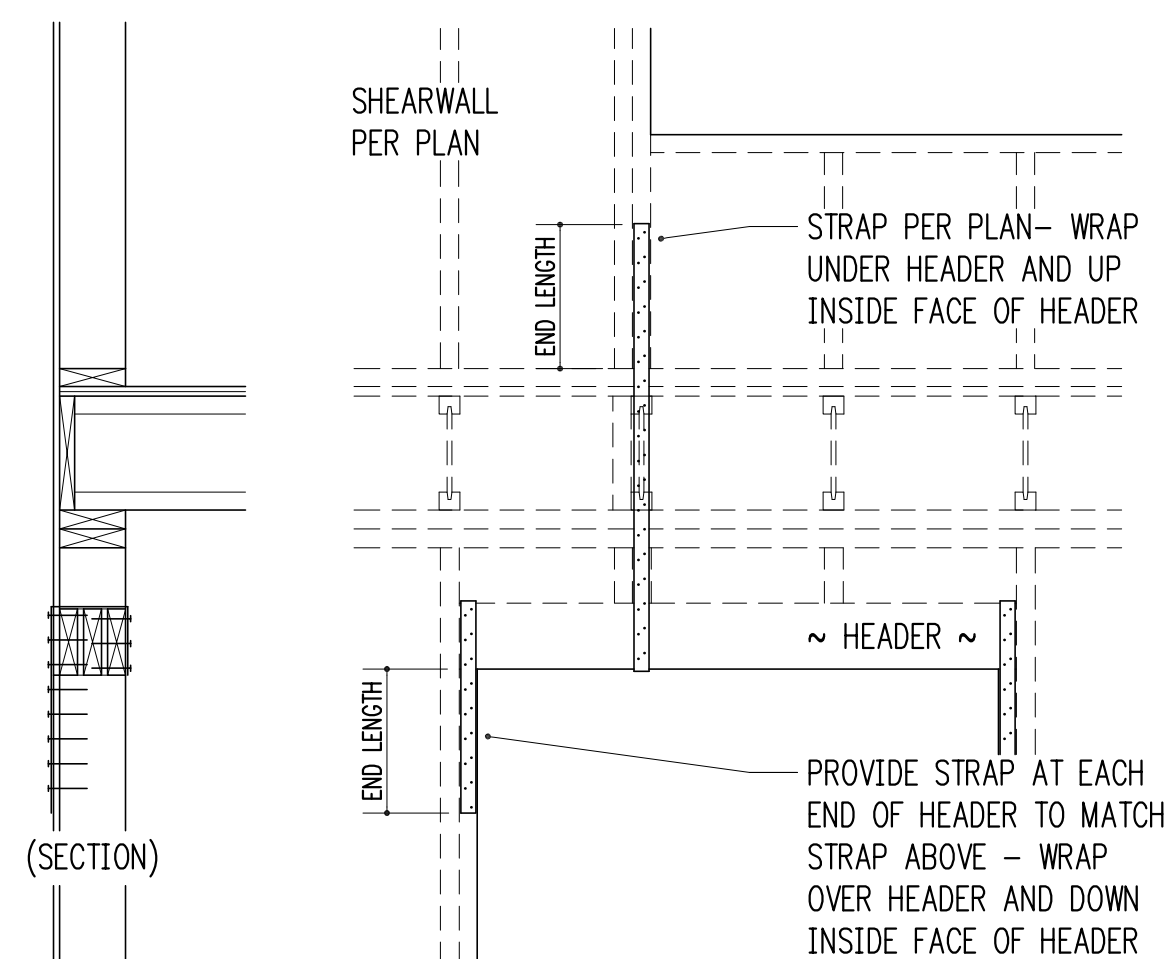
Drawing Title  
**STRUCTURAL DETAILS**

Drawing Number

**S3.1**

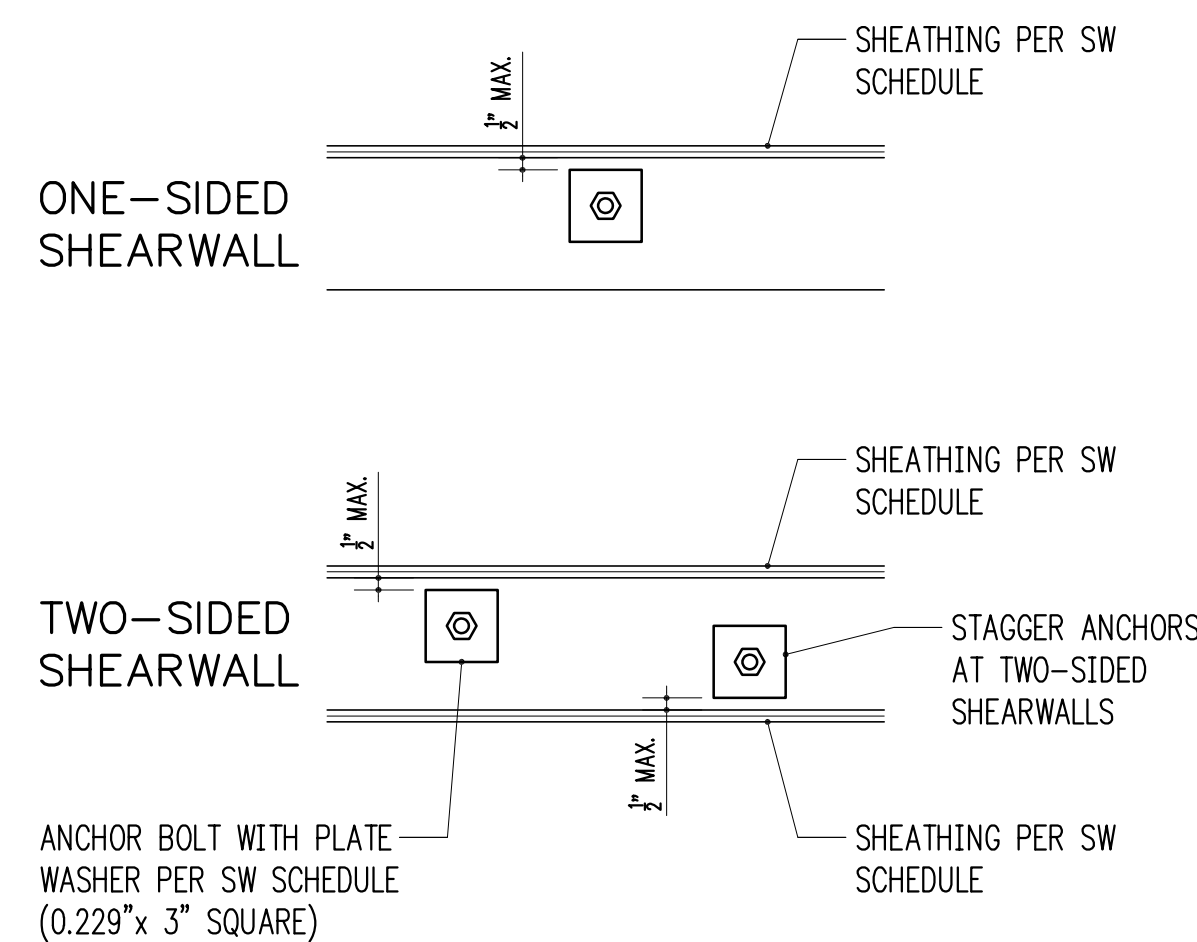
WERELIUS RESIDENCE





TYPICAL STRAPPED HEADER

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



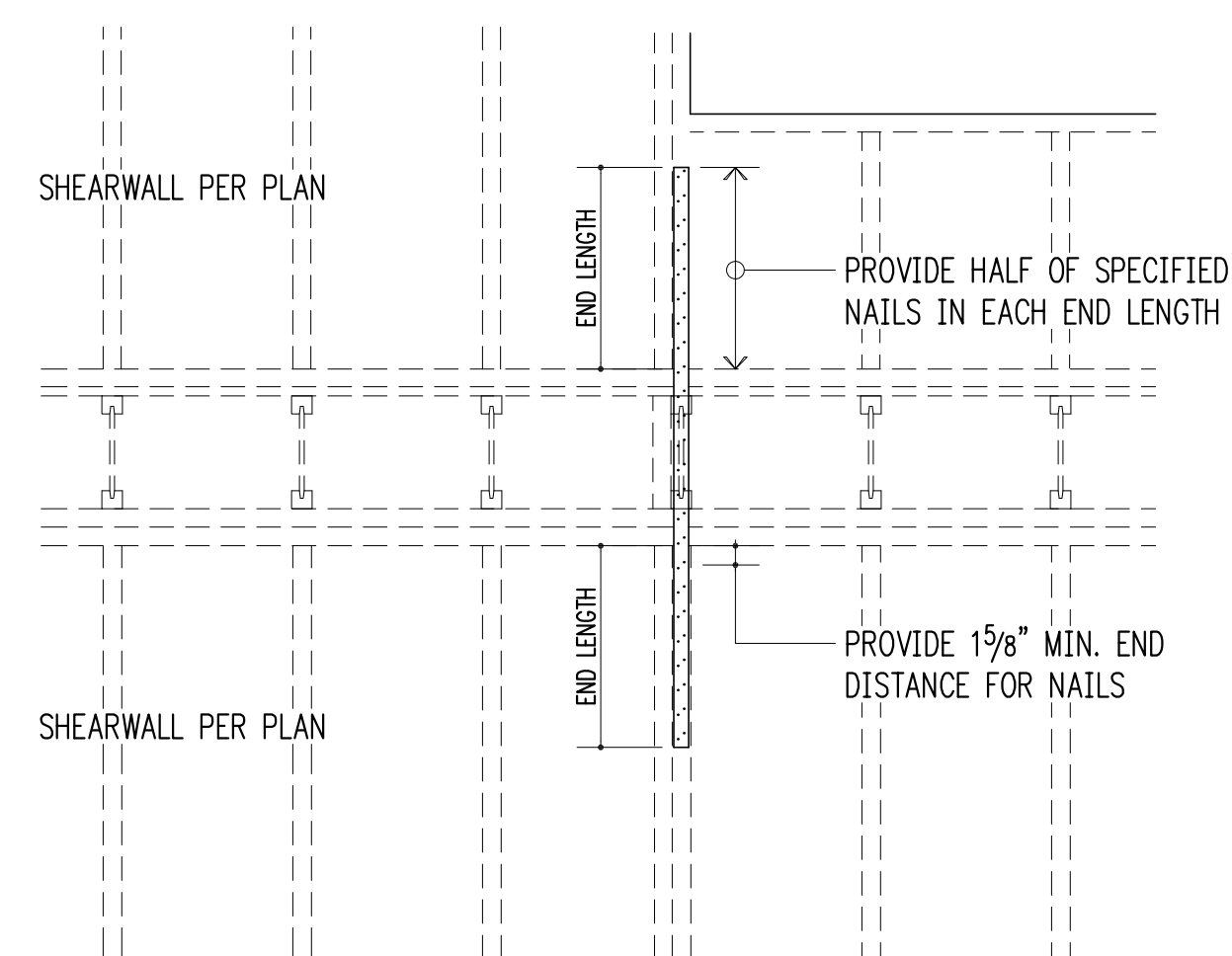
TYPICAL SHEARWALL ANCHOR BOLT PLACEMENT

$1-1/2" = 1'-0"$

STRAP SCHEDULE (NOT ALL USED)

MARK	END LENGTH	NAILS	NAIL SPACING
CMST12	44"	(98) 10d x 3"	1 3/4"
CMST14	34"	(76) 10d x 3"	1 3/4"
CMSTC16	25"	(58) 12d x 3 1/4"	1 1/2"
CS14	19"	(36) 8d x 2 1/2"	2 1/16"
CS16	14"	(26) 8d x 2 1/2"	2 1/16"
CS18	12"	(22) 8d x 2 1/2"	2 1/16"
CS20	9"	(16) 8d x 2 1/2"	2 1/16"
CS22	8"	(14) 8d x 2 1/2"	2 1/16"

- 10d AND 12d DIAMETER = 0.148"; 8d DIAMETER = 0.131".
- USE HALF OF THE REQUIRED NAILS IN EACH MEMBER BEING CONNECTED (i.e. IN EACH END LENGTH).



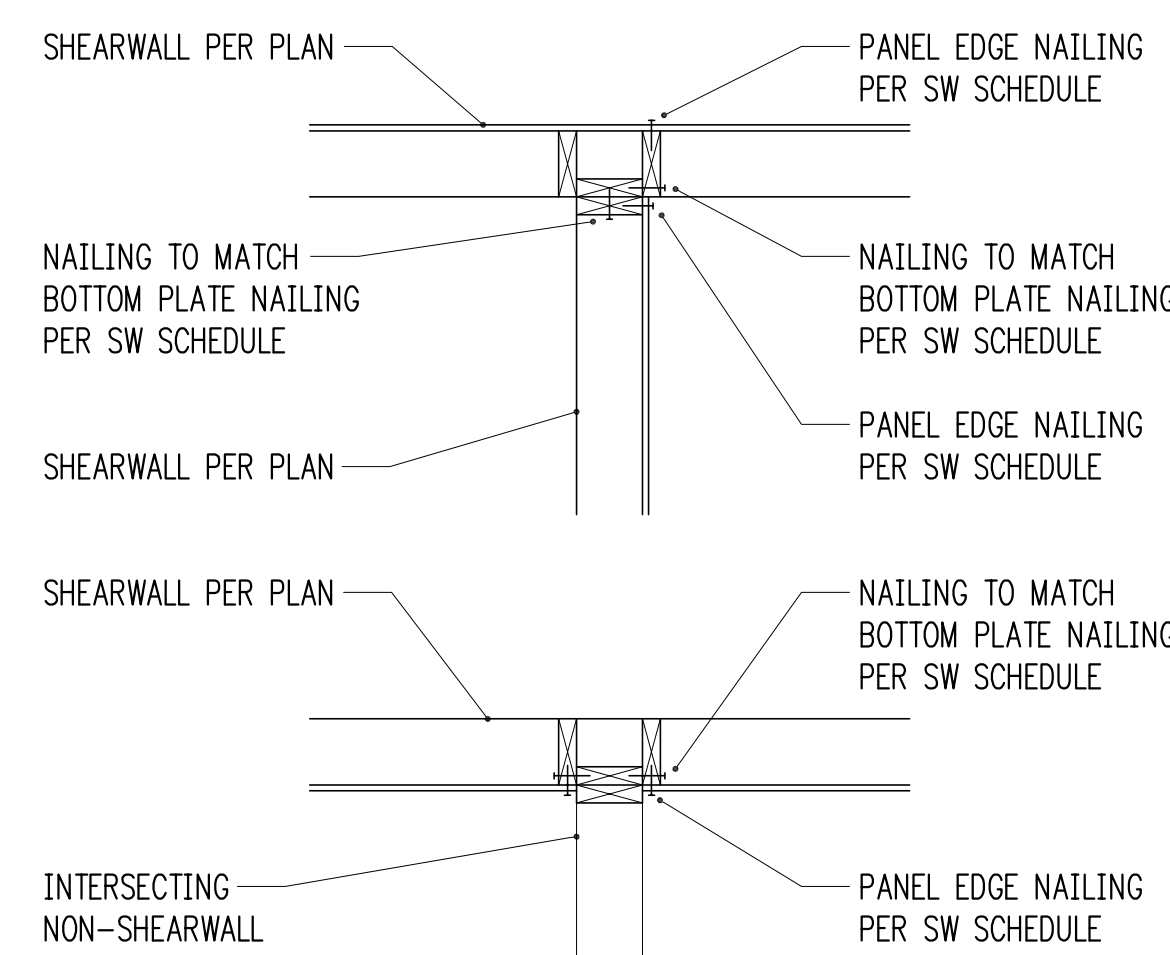
TYPICAL STRAP HOLDDOWN AT FLOOR

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

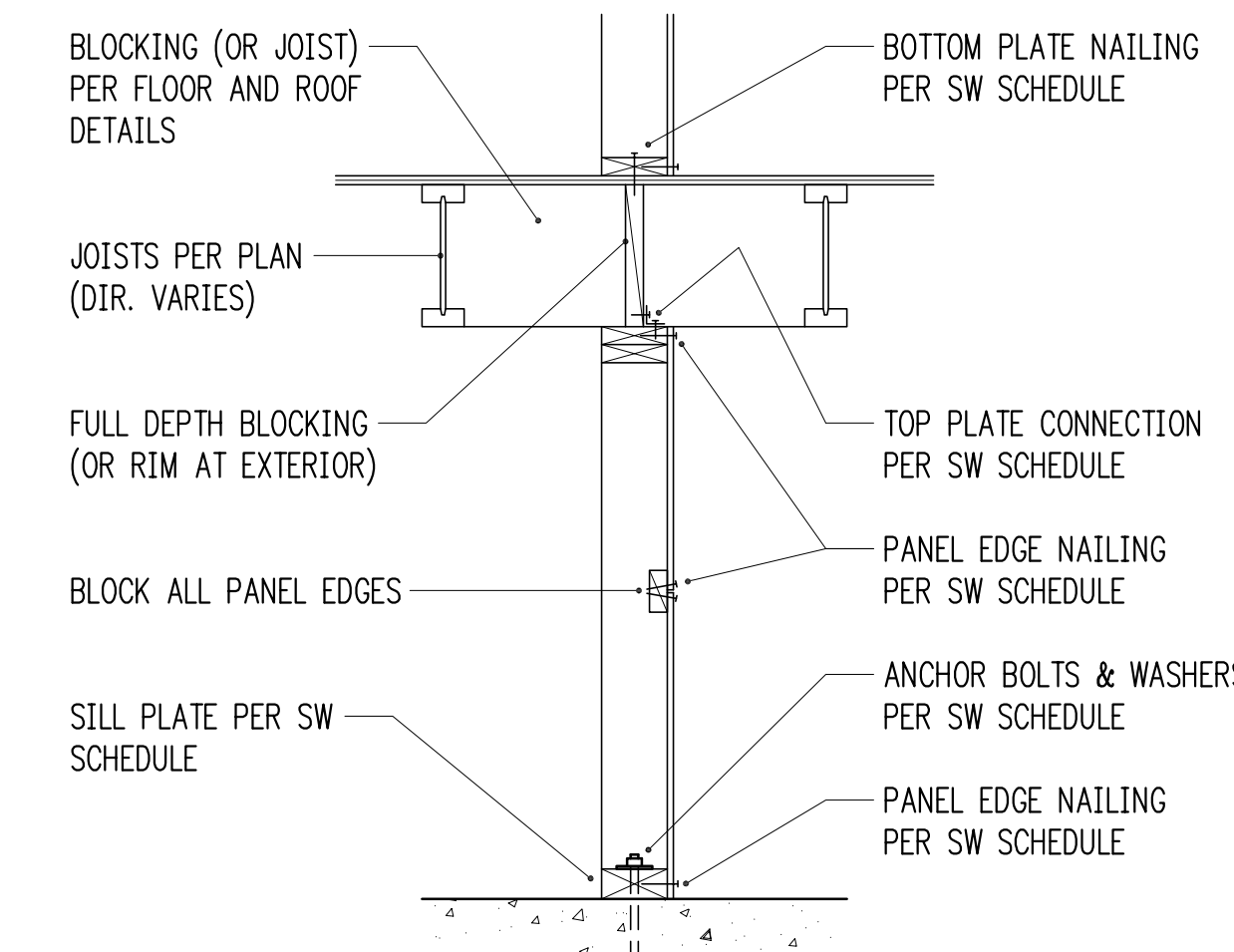
SHEARWALL SCHEDULE (NOT ALL USED ON PLANS)

MARK	SHEATHING <sup>1</sup>	STUDS AT ABUTTING PANEL EDGES <sup>2</sup>	PANEL EDGE NAILING <sup>3,4</sup>	RIM JOIST OR BLOCKING TO TOP PLATE		BOTTOM PLATE ATTACHMENT		
				SOLID RIM	TJI RIM	BOTTOM PLATE TO RIM JOIST BELOW <sup>4</sup>	ANCHOR BOLT TO CONCRETE <sup>5</sup>	SILL PLATE AT FOUND.
SW1	15/32" CDX PLYWOOD	2x	8d @ 6"oc	A35 @ 24"oc	16d @ 6"oc	16d @ 6"oc	5/8" @ 48"oc	2x
SW2	15/32" CDX PLYWOOD	2x	8d @ 4"oc	A35 @ 15"oc	16d @ 4"oc	16d @ 4"oc	5/8" @ 32"oc	2x
SW3	15/32" CDX PLYWOOD	3x	8d @ 3"oc	A35 @ 12"oc	N/A - USE SOLID RIM	16d @ 3"oc	5/8" @ 16"oc	2x
SW4	15/32" CDX PLYWOOD	3x	8d @ 2"oc	A35 @ 9"oc	N/A - USE SOLID RIM	16d @ 2"oc	5/8" @ 12"oc	2x
SW5	15/32" CDX PLYWOOD BOTH SIDES	3x	8d @ 3"oc	A35 @ 6"oc	N/A - USE SOLID RIM	(2) ROWS 16d @ 3"oc	5/8" @ 12"oc	3x
SW6	15/32" CDX PLYWOOD BOTH SIDES	3x	8d @ 2"oc	A35 @ 4 1/2"oc	N/A - USE SOLID RIM	(2) ROWS 16d @ 2"oc	5/8" @ 12"oc	3x

1. WALL SHEATHING SHALL CONSIST OF APA RATED PLYWOOD WITH SPAN RATING 24/0. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF PANELS. 7/16" APA RATED SHEATHING (OSB) MAY BE USED IN PLACE OF 15/32" CDX.
2. STUDS AT ABUTTING PANEL EDGES MAY CONSIST OF (2)2x STUDS IN PLACE OF 3x STUDS - NAIL (2)2x STUDS TOGETHER WITH BOTTOM PLATE ATTACHMENT NAILING.
3. BLOCK ALL PANEL EDGES W/ 2x4 FLAT, ATTACH W/ PANEL EDGE NAILING. TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SHEARWALLS. END STUDS SHALL RECEIVE PANEL EDGE NAILING. INTERMEDIATE STUDS SHALL BE 2x STUDS. NAIL SHEATHING TO INTERMEDIATE FRAMING MEMBERS WITH 8d @ 12"oc.
4. 8d NAILS SHALL BE 0.131" DIAMETER x 2 1/2" (COMMON). 16d NAILS SHALL BE 0.135" DIAMETER x 3 1/2" (BOX).
5. ANCHORS TO CONCRETE SHALL CONSIST OF CAST-IN-PLACE ANCHOR BOLTS, EXPANSION BOLTS, EPOXY GROUTED ALL-THREADS, OR TITEN HD HEAVY DUTY SCREW ANCHORS. CAST-IN-PLACE ANCHOR BOLTS HAVE A 7" EMBED AND SHALL BE J-BOLTS OR SHALL HAVE A HEX NUT AT THE BOTTOM END. EXPANSION BOLTS SHALL HAVE 5" EMBED AND SHALL NOT BE USED AT STEM WALL LOCATIONS WITH EDGE DISTANCE LESS THAN 5" (INSTEAD, USE EPOXY GROUTED ALL-THREADS OR TITEN HD ANCHORS). EPOXY GROUTED ANCHORS SHALL HAVE 5" EMBED AND 2 1/2" MIN. EDGE DISTANCE. TITEN HD ANCHORS SHALL HAVE 3 1/2" EMBED AND 1 3/4" MIN. EDGE DISTANCE. AT ALL ANCHOR BOLTS, PROVIDE STEEL PLATE WASHERS THAT ARE A MINIMUM OF 0.229" (3 GAUGE) x 3" x 3" (SIMPSON BP5/8-3 OR SIMILAR). PLACE BOLTS PER ANCHOR BOLT PLACEMENT DETAIL.



TYPICAL SHEARWALL INTERSECTIONS



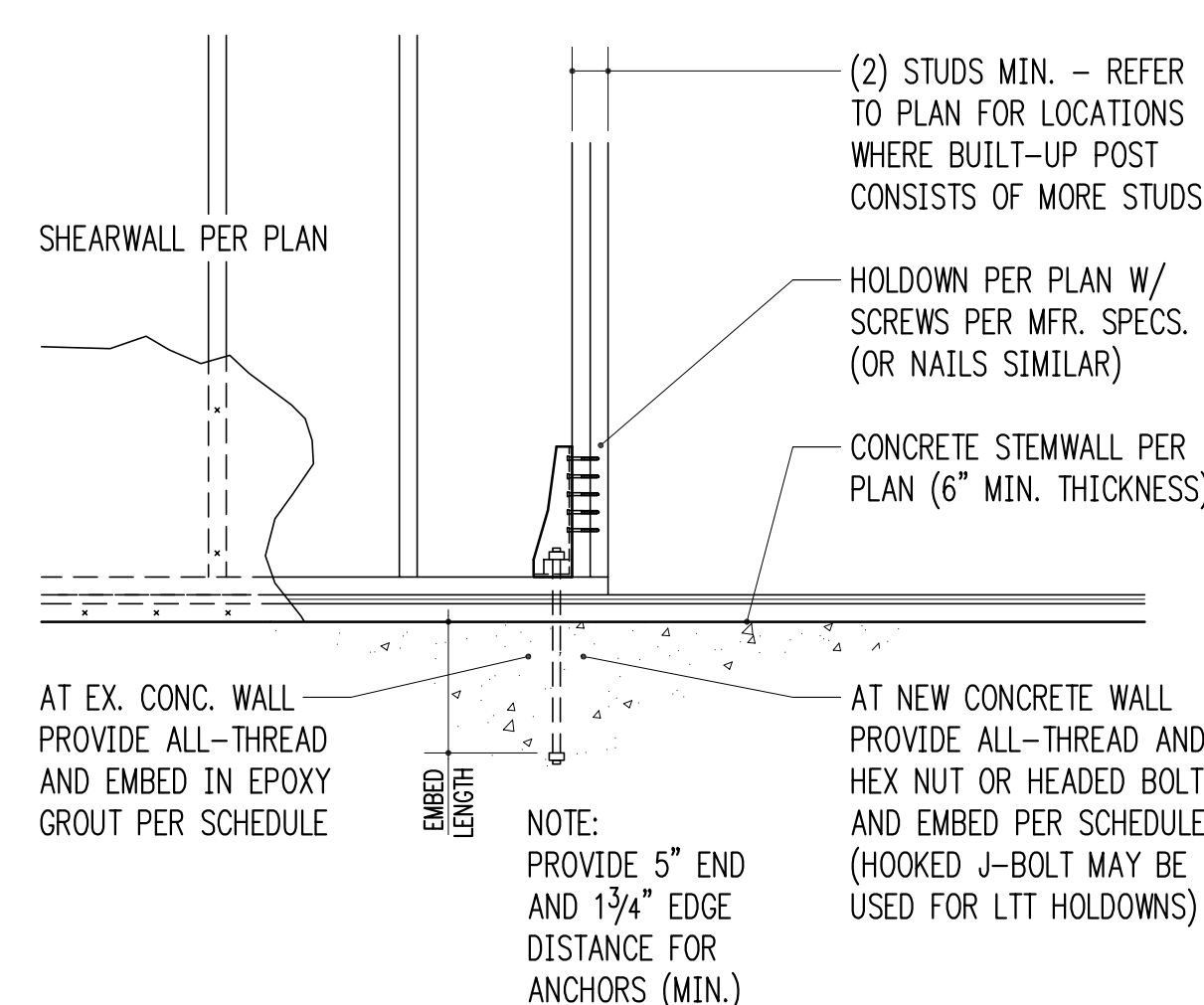
TYPICAL SHEARWALL SECTION

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

HOLDOWN SCHEDULE (NOT ALL USED ON PLANS)

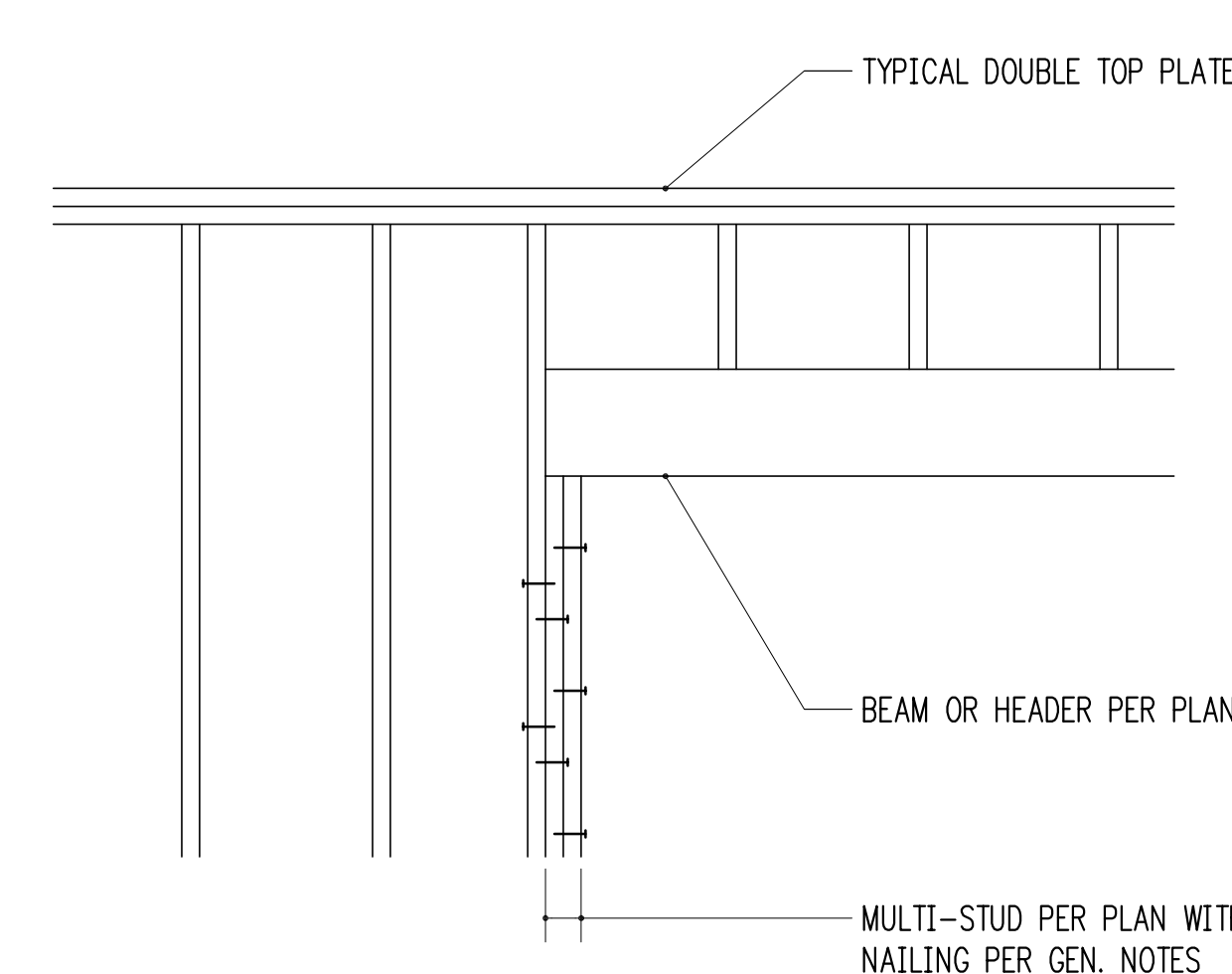
MARK	FASTENERS TO STUDS <sup>1</sup>	ANCHOR DIA. <sup>2</sup>	EMBEDMENT LENGTH		SSTB <sup>5</sup>
			EPOXY <sup>3</sup>	CAST-IN <sup>4</sup>	
HDU2	(6) 1/4" @ x 2 1/2" SCREWS	5/8"	12"	11"	SSTB16
HDU4	(10) 1/4" @ x 2 1/2" SCREWS	5/8"	24"	24"	SSTB20
HDU5	(14) 1/4" @ x 2 1/2" SCREWS	5/8"	N/A	37"	SSTB24
HDU8	(20) 1/4" @ x 2 1/2" SCREWS	7/8"	N/A - SEE 12/S3.0		
HDU11	(30) 1/4" @ x 2 1/2" SCREWS	1"	N/A - SEE 12/S3.0		
HDU14	(36) 1/4" @ x 2 1/2" SCREWS	1"	N/A - SEE 12/S3.0		

- 10d AND 12d DIAMETER = 0.148"; 16d DIAMETER = 0.162". SCREWS SHALL BE SIMPSON "SDS" TYPE SCREWS, INSTALL PER SIMPSON RECOMMENDATIONS.
- PROVIDE A36 OR A307 ALL-THREAD AT EPOXY AND CAST-IN ANCHORS.
- PROVIDE SIMPSON "SET-XP" EPOXY PER GENERAL STRUCTURAL NOTES. SPECIAL INSPECTION IS REQUIRED.
- AT CAST-IN ANCHORS PROVIDE HEAVY HEX NUT AT BOTTOM OF ALL-THREAD. HOOKED J-BOLT MAY BE USED FOR LTT HOLDDOWNS.
- AT 3x SILL PLATES, PROVIDE LONGER SSTB MODELS.



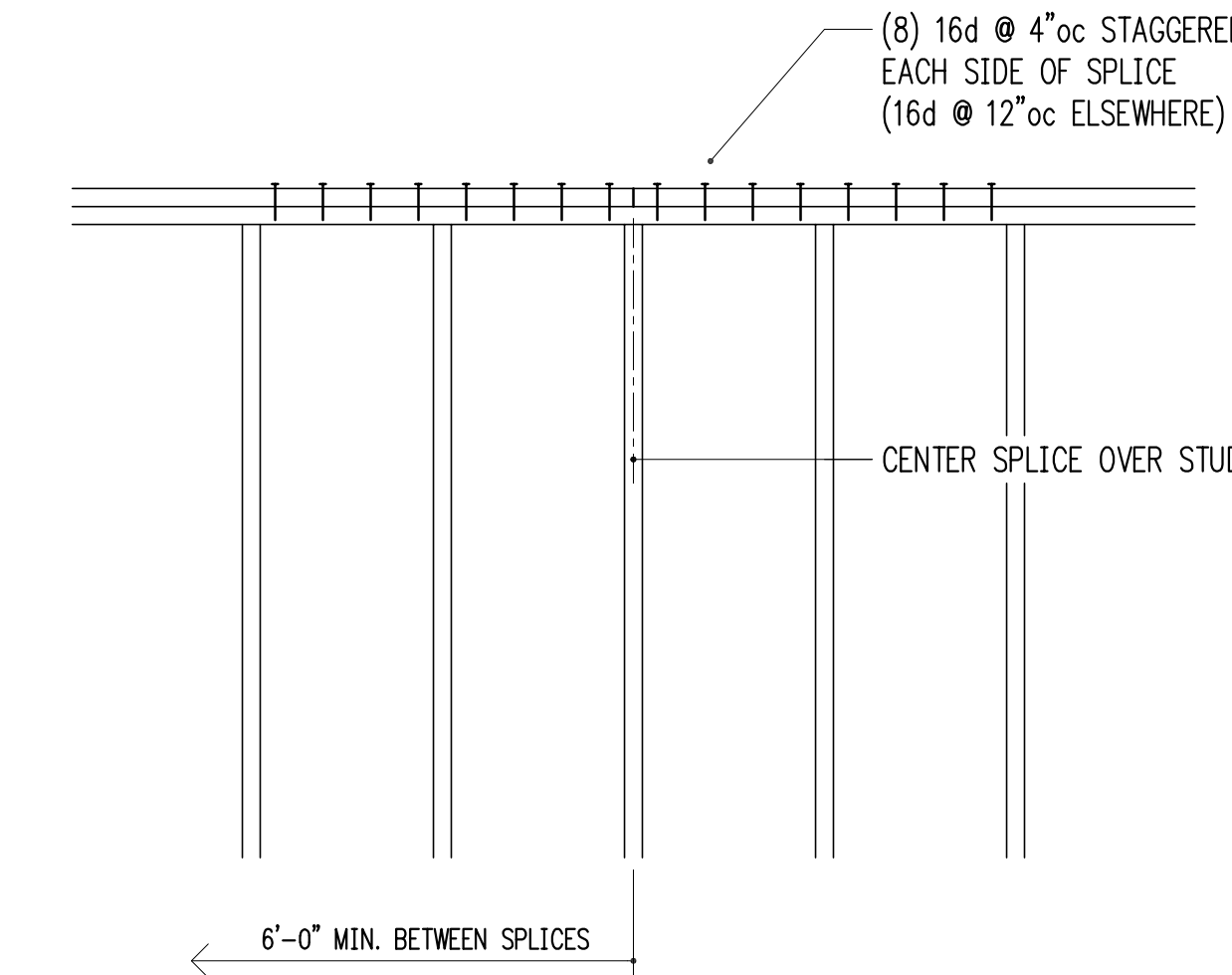
TYPICAL HOLDDOWN AT CONCRETE

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



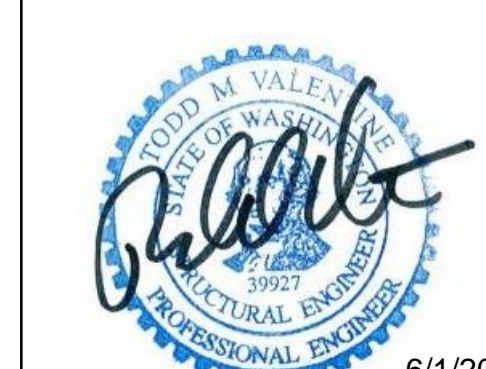
TYPICAL MULTIPLE-STUD POST CONSTRUCTION

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



TYPICAL TOP PLATE SPLICE CONSTRUCTION

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



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Issue Date	Issue Description
6/18/19	Permit
7/16/19	Framing Revisions
7/26/19	Framing Revisions
1/17/20	Corrections #1
4/3/20	Framing Revisions
4/17/20	Construction
4/24/20	Trellis Revisions
6/1/20	Corrections #2

Building Department Approval

Drawing Title  
**STRUCTURAL DETAILS**

Drawing Number

**S4.0**

WERELIUS RESIDENCE