

CLIMATIC & GEOGRAPHIC DESIGN CRITERIA (R901.2(1))													
ROOF SNOW LOAD	WIND SPEED	TOPOGRAPHIC EFFECTS	SPECIAL WIND REGION	WINDBORNE DEBRIS ZONE	SEISMIC DESIGN CATEGORY	WEATHERING	FROST LINE DEPTH	TERMITE	WINTER DESIGN TEMP	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
20	80	NO			D2	MODERATE	12	SLIGHT TO MODERATE	22	NO	1000 FIRM	170	61

MANUAL J DESIGN CRITERIA*						
ELEVATION	LATITUDE	WINTER HEATING	SUMMER COOLING	ALTITUDE CORRECTION FACTOR	INTERIOR DESIGN TEMPERATURE	DESIGN TEMPERATURE COOLING
					68	
COOLING TEMPERATURE DIFFERENCE	WIND VELOCITY HEATING	WIND VELOCITY COOLING	CONCIDENT WET BULB	DAILY RANGE	WINTER HUMIDITY	SUMMER HUMIDITY

2018 WSEC & IRC VENTILATION TABLE 402.12	
CLIMATE ZONE	MARINE 4 (R-VALUE (R) OR U-FACTOR)
PENETRATION U-FACTOR (u)	0.24
SKYLIGHT (s) U-FACTOR	0.60
GLAZED PENETRATION SHGC (s-g)	N/A
CEILING R-VALUE (R)	4.0
WOOD FRAME WALL (g-m-n) R-VALUE	20 int.
MASS WALL R-VALUE (R)	15/17 (i)
FLOOR R-VALUE (R)	30 (a)
BASEMENT/CRRAWL WALL R-VALUE (R)	15/10 int. + TB
SLAB (S) R-VALUE & DEPTH	10, 2 ft.

GENERAL NOTES:
 THESE GENERAL NOTES ARE TO BE USED AS A SUPPLEMENT TO THE DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, GENERAL NOTES AND SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF A DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S OWN RISK.

ALL METHODS AND MATERIALS TO CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE, 2018 INTERNATIONAL RESIDENTIAL CODE AS REQUIRED AND 2018 WASHINGTON STATE ENERGY CODE AS AMENDED AND ADOPTED BY APPLICABLE JURISDICTION.

DESIGN CRITERIA (IRC 501): THE ENGINEER LATERAL DESIGN FOR THE BUILDING IS IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE AND IS PROVIDED BY THE ENGINEER OF RECORD.

DESIGN LOADS:
 ROOF: LL+20, DL+10, TL+40
 FLOOR: LL+40, DL+10, TL+50
 DECK: LL+10, DL+60, TL+70

CONCRETE FOUNDATIONS:
 CONCRETE FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH IRC CHAPTER 4.

MIN. CONCRETE COMPRESSIVE STRENGTH (f'c): 3,000 PSI (R40413.3.1)
 MIN. YIELD STRENGTH OF STEEL REINFORCEMENT: 60,000 PSI (R40413.3.7)
 CONCRETE MIXING & DELIVERY SHALL COMPLY WITH ASTM C 94 OR ASTM C 689
 MIN. REINFORCEMENT COVER: IF CAST AGAINST EARTH: 3" MIN COVER. IF CAST AGAINST REMOVABLE FORMS: 1 1/2" FOR NO. 8 BARS AND SMALLER, 2" FOR NO. 6 BARS OR LARGER. (R40913.6.3 & R40413.3.7.4)

FORMS SHALL BE MADE OF AN APPROVED MATERIAL. FORMS SHALL BE POSITIONED AND SECURED BEFORE PLACING CONCRETE AND SHALL PROVIDE SUFFICIENT STRENGTH TO CONTAIN CONCRETE DURING THE CONCRETE PLACEMENT OPERATION (IRC R40413.3.2)

CONCRETE SHALL BE CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE WORKED AROUND EMBEDDED ITEMS AND REINFORCEMENT AND INTO CORNER OF FORMS (IRC 40413.3.2)

FOR S1: 1 foot=304.8mm, etc. = CONTINUOUS INSULATION, int.= INTERMEDIATE FRAMING

R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHERE INSULATION IS INSTALLED IN A CAVITY THAT IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL BE NOT LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.

THE PENETRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS. THE SHGC COLUMN APPLIES TO ALL GLAZED PENETRATION EXCEPT IN CLIMATE ZONES 1 THROUGH 4. SKYLIGHTS SHALL BE PERMITTED TO BE EXCLUDED FROM GLAZED PENETRATION SHGC REQUIREMENTS PROVIDED THAT THE SHGC FOR SUCH SKYLIGHTS DOES NOT EXCEED 0.80.

10/15' MEANS R-10 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-15 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL. 15/17' MEANS R-15 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-15 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL. ALTERNATIVELY, COMPLIANCE WITH 15/10' SHALL BE R-15 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE HOME.

R-5 INSULATION SHALL BE PROVIDED UNDER THE FULL SLAB AREA OF A HEATED SLAB IN ADDITION TO THE REQUIRED SLAB EDGE INSULATION R-VALUE FOR SLABS AS INDICATED IN THE SLAB EDGE INSULATION FOR HEATED SLABS SHALL NOT BE REQUIRED TO EXTEND BELOW THE SLAB.

THERE ARE NO SHGC REQUIREMENTS IN THE MARINE ZONE.

BASEMENT WALL INSULATION SHALL NOT BE REQUIRED IN WARM-HUMID LOCATIONS AS PERMITTED BY FIGURE N1017 AND TABLE N1017.

ALTERNATIVELY, INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY PROVIDING NOT LESS THAN AN R-VALUE OF R-5. THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION. THEREFORE, AS AN EXAMPLE, 15+5' MEANS R-5 CAVITY INSULATION PLUS R-5 CONTINUOUS INSULATION.

MASS WALLS SHALL BE IN ACCORDANCE WITH SECTION N1055. THE SECOND R-VALUE APPLIES WHERE MORE THAN HALF OF THE INSULATION IS ON THE INTERIOR OF THE MASS WALL.

(A) BASEMENT FOOTING.

(N) NON-RESISTANCE U-FACTORS SHALL BE OBTAINED FROM MEASUREMENT, CALCULATION OR AN APPROVED SOURCE OR AS SPECIFIED IN SECTION R4021.5

SMOKE ALARMS AND HEAT DETECTION (R314):
 ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL217 AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND THE HOUSEHOLD FIRE WARNING CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF A DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S OWN RISK.

EXHAUST HOOD MAKEUP AIR (M1909.4): KITCHEN EXHAUST HOODS EXHAUSTING OVER 400CFM SHALL BE EQUIPPED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST RATE. SUCH MAKEUP AIR SYSTEMS SHALL BE EQUIPPED WITH A MEANS OF CLOSURE AND SHALL BE AUTOMATICALLY CONTROLLED TO START AND OPERATE SIMULTANEOUSLY WITH THE EXHAUST SYSTEM.

FIREBLOCKING: SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORES AND BETWEEN TOP STORY AND ROOF SPACE. INSTALL PER IRC 302.11

WATER-RESISTANT GYPSUM BACKING BOARD (IRC 702.3.7): GYPSUM BOARD USED AS A BACKER BOARD FOR CERAMIC TILE SHALL CONFORM TO ASTM C896, C178 OR C1278. WATER-RESISTANT GYPSUM BOARD SHALL NOT BE INSTALLED OVER A VAPOR RETARDER IN A SHOWER OR TUB COMPARTMENT. CUT OR EXPOSED EDGES, INCLUDING THOSE AT WALL INTERSECTIONS, SHALL BE SEALED AS RECOMMENDED BY THE MANUFACTURER.

FASTENERS IN PRESERVATIVE TREATED WOOD (R307.3.7): FASTENERS, INCLUDING NUTS AND WASHERS, FOR PRESERVATIVE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED, GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. STAPLES SHALL BE OF STAINLESS STEEL.

DRIP EDGE (IRC R0209.2.0.5): A DRIP EDGE SHALL BE PROVIDED AT EAVES AND GABLES OF ASPHALT SHINGLE ROOFS AND SHALL EXTEND 28 INCHES BELOW SHEATHING AND 2" UP ROOF DECK.

2018 WASHINGTON STATE ENERGY CODE:
 - SEE COMPLIANCE FORMS ATTACHED

VENTILATING SYSTEM USED: INTERMITTENT WHOLE HOUSE USING EXHAUST FANS (IRC 403.0.6, CHAPTER 01-52 WAC)
 -WHOLE HOUSE FAN SHALL OPERATE INTERMITTENTLY AND CONTINUOUSLY
 -AUTOMATIC 24-HR CLOCK SET TO OPERATE FRACTIONAL ON TIME IN 0.25-0.51
 -OUTDOOR AIR WILL BE DRAWN FROM AIR INLETS INSTALLED IN WINDOWS (403.0.6.1)

FRACTIONAL OPERATION TIME (f) OF 24 HR TIMER TO BE SET BY MECHANICAL CONTRACTOR: 100 CFM FAN (16 CFM @ 25IN WC) WILL BE USED AND SET TO A 4-HOUR CYCLE. THE ON TIME SHALL BE BASED ON TABLE 403.0.1 AND ASHRAE 62.2-2019:
 - 125 MINUTES PER 4-HR CYCLE IF RATE 60 (TABLE M1607.3.3(1)); f=0.2
 - 106 MINUTES PER 4-HR CYCLE IF RATE 75 (TABLE M1607.3.3(1)); f=0.16
 - 107 MINUTES PER 4-HR CYCLE IF RATE 90 (TABLE M1607.3.3(1)); f=0.17
 - 210 MINUTES PER 4-HR CYCLE IF RATE 100 (TABLE M1607.3.3(1)); f=0.21

PERMANENT CERTIFICATE SHALL BE POSTED WITHIN 3 FEET OF THE ELECTRICAL PANEL OR ON THE PANEL ITSELF. THE CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL AND LIST THE FOLLOWING: INSULATION R-VALUES FOR ALL BUILDING FRAMING AND FOUNDATION/SLAB COMPONENTS, DUCT INSULATION OUTSIDE CONDITIONED AREAS, GLAZING U-VALUES AND/OR SHGC VALUES, TYPE AND EFFICIENCY OF HEATING/COOLING SYSTEM AND HEATING EQUIPMENT, DUCT LEAKAGE RATES INCLUDING TEST CONDITIONS AND AIR LEAKAGE RESULTS (WSEC 401.3)

EXHAUST DUCTS: EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS. ALL EXHAUST DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED TO A MINIMUM OF R-4.

HIGH EFFICACY LUMINAIRES (WSEC 404.1): 75% OF ALL LUMINAIRES SHALL BE HIGH EFFICACY.

TESTING (WSEC 402.4.12): REQUIRED FOR ALL BUILDINGS AND SHALL OCCUR ANYTIME AFTER ROUGH-IN AND AFTER INSTALLATION OF PENETRATIONS OF THE BUILDING ENVELOPE. BUILDING ENVELOPE AIR LEAKAGE TESTING SHALL BE PERFORMED PER ASTM C779 AND THE TARGET LEAKAGE RATE IS 0.25 CFM/FT2 (15 L/S/M2) AT 0.5 IN. WG (75 PA)

(1) SUBMIT BUILDING ENVELOPE AIR LEAKAGE TEST REPORTS TO JURISDICTION AND OWNER;
 (2) IF INITIAL TEST RESULT EXCEEDS 0.25 CFM/FT2 (15 L/S/M2), INDICATE THAT INSPECTION AND ALL PRACTICAL CORRECTIVE ACTIONS BE COMPLETED AND DOCUMENTED IN THE AIR LEAKAGE TEST REPORT AND THE BUILDING SHALL BE RE-TESTED;
 (3) INDICATE THAT CORRECTIVE MEASURES AND RETESTING MUST BE REPEATED UNTIL THE TEST RESULT IS 0.40 CFM/FT2 (2.0 L/S/M2) OR LESS;
 (4) INCLUDE AIR BARRIER TEST REPORT IN PROJECT CLOSE OUT DOCUMENTATION PROVIDED TO BUILDING OWNER.

SEALING (WSEC 402.2.2): DUCTS SHALL BE LEAK TESTED IN ACCORDANCE WITH WSU R5-23 USING THE MAXIMUM DUCT LEAKAGE RATES SPECIFIED.
 -POST CONSTRUCTION & ROUGH-IN: TOTAL LEAKAGE TO BE LESS THAN OR EQUAL TO 4CFM PER 100 SF OF CONDITIONED FLOOR AREA AT 0.1 INCHES W.G. FOR ENTIRE SYSTEM, INCLUDING AIR HANDLER ENCLOSURE. ALL REGISTER BOOTHS SHALL BE TAPED OR OTHERWISE SEALED DURING TEST. LEAKAGE TO OUTDOORS SHALL BE LESS THAN OR EQUAL TO 4CFM PER 100 SQUARE FEET OF CONDITIONED FLOOR AREA.

DUCT INSULATION & INSTALLATION (WSEC 402.2.1 & 402.2.3): DUCTS SHALL BE INSULATED TO A MINIMUM R-5, EXCEPT IF LOCATED COMPLETELY WITHIN THE BUILDING THERMAL ENVELOPE. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLenums. INSTALLATION OF DUCTS SHALL NOT DISPLACE REQUIRED INSULATION.

PROJECT CLOSE OUT DOCUMENTATION (C109.6.3): PROJECT CLOSE OUT DOCUMENTATION IS REQUIRED INCLUDING APPLICABLE CALCULATIONS, WSEC ENVELOPE COMPLIANCE REPORTS, AND PENETRATION NPRC RATING CERTIFICATES

CONCRETE SHALL BE CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE WORKED AROUND EMBEDDED ITEMS AND REINFORCEMENT AND INTO CORNER OF FORMS (IRC 40413.3.2)

VERTICAL AND HORIZONTAL WALL REINFORCEMENT SHALL BE THE LONGEST LENGTHS PRACTICAL. WHERE SPLICES ARE NECESSARY IN REINFORCEMENT, THE LENGTH SHALL BE IN ACCORDANCE WITH TABLE R4020.5.4(1) AND FIGURE R4020.5.4(1). THE MAXIMUM GAP BETWEEN NON-CONTACT PARALLEL BARS AT A LAP SPICE SHALL NOT EXCEED THE SMALLER OF ONE-FIFTH THE REQUIRED LAP LENGTH AND 6 INCHES. FOR GRADE 60 STEEL #4 BAR (TABLE R4020.5.4(1)):
 -LAP SPICE LENGTH-TENSION = 30 INCHES
 -TENSION DEVELOPMENT LENGTH FOR STRAIGHT BAR = 23 INCHES
 -TENSION DEVELOPMENT LENGTH FOR 90-DEGREE AND 180-DEGREE WITH NOT LESS THAN 28 INCHES OF SIDE COVER PERPENDICULAR TO PLANE OF HOOK AND 20-DEGREE STANDARD HOOKS WITH NOT LESS THAN 3 INCHES OF COVER ON THE BAR EXTENSION BEYOND HOOK = 0 INCHES
 -TENSION DEVELOPMENT LENGTH FOR BAR WITH 90-DEGREE AND 180 DEGREE STANDARD HOOK HAVING LESS COVER THAN REQUIRED ABOVE = 12 INCHES.

DAMP-PROOFING (IRC R402.6):
 FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE DAMP-PROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE. CONCRETE WALLS SHALL BE DAMP-PROOFED BY APPLYING ANY ONE OF THE MATERIALS LISTED IN R 4061 & R4062

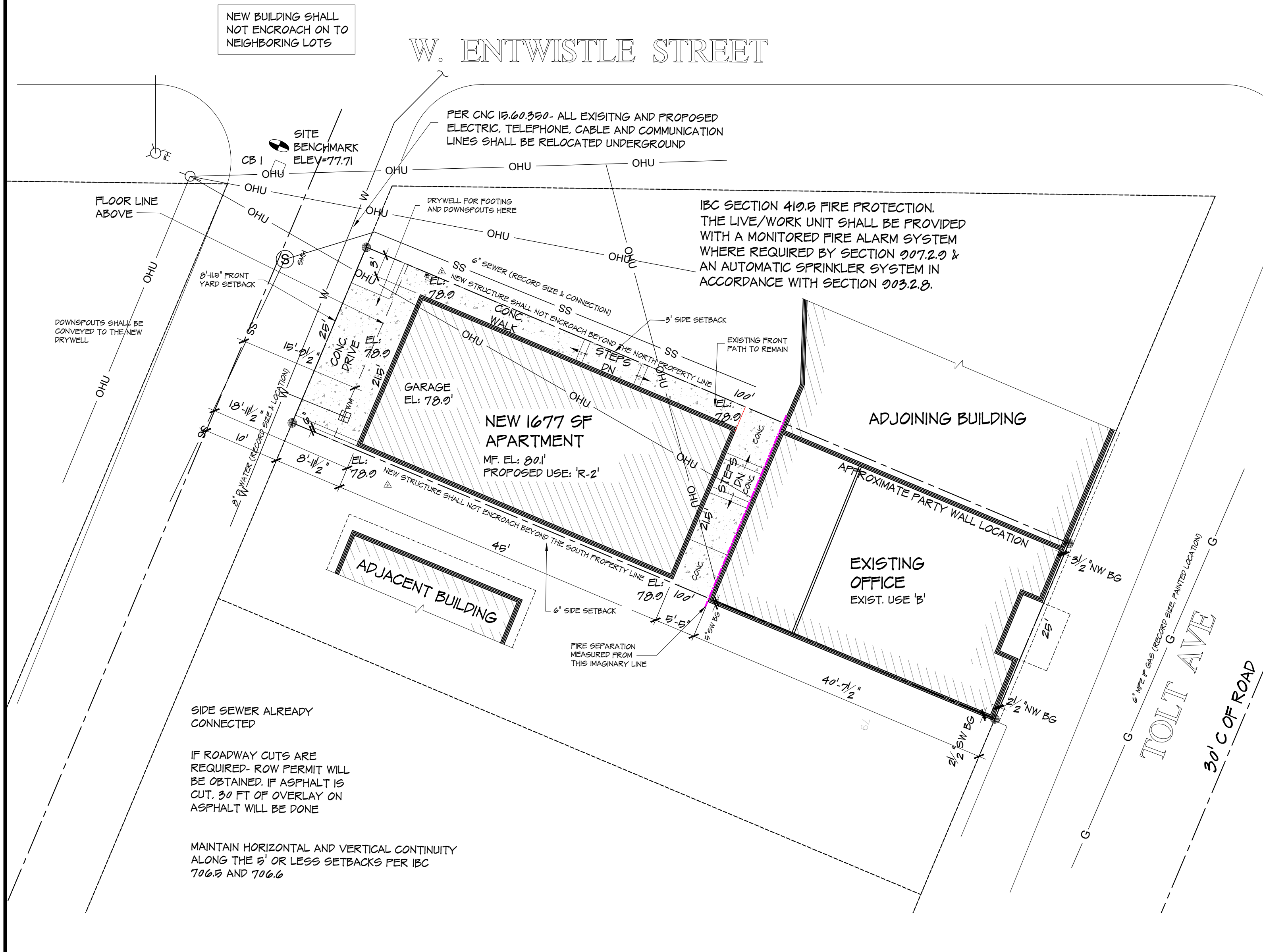
INFILTRATION CONTROL (WSEC 402.2):
 1 EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS AT PENETRATION OF UTILITY SERVICES THROUGH WALLS, FLOOR AND ROOFS, AND ALL OTHER OPENING IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED AND GASKETED OR WEATHERSTRIPPED TO LIMIT AIR LEAKAGE. OTHER EXTERIOR JOINTS AND SEAMS SHALL BE SIMILARLY TREATED, OR TAPED, OR COVERED WITH MOISTURE VAPOR PERMEABLE HOUSEWRAP.
 2 ALL EXTERIOR DOORS OR DOORS SERVING AS ACCESS TO AN ENCLOSED UNHEATED AREA SHALL BE WEATHERSTRIPPED TO LIMIT LEAKAGE AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION.
 3 RECESSED LIGHTING FIXTURES (402.4.4): WHEN INSTALLED IN THE BUILDING ENVELOPE SHALL BE:
 -TYPE IC RATED AND CERTIFIED UNDER ASTM E285 TO HAVE NO MORE THAN 2.0 CFM AIR MOVEMENT
 -THE LIGHTING FIXTURE SHALL BE TESTED AT 76 PASCAALS OR 107 LBS/SF PRESSURE DIFFERENCE AND LABELED SHOWING COMPLIANCE
 -SHALL BE INSTALLED WITH A GASKET OR CAULK AT THE CEILING TO PREVENT AIR LEAKAGE

VAPOR BARRIERS/GROUND COVERS:
 CLASS I (SHEET POLYETHYLENE, IMPERFORATED ALUMINUM FOIL) OR CLASS II (KRAFT-FACED FIBERGLASS BATT) VAPOR RETARDERS ARE REQUIRED ON THE INTERIOR SIDE OF FRAMED WALLS (R702.2)

CLASS III VAPOR RETARDER (LATEX OR ENAMEL PAINT) PERMITTED AT VENTED CLAPPING OVER WOOD STRUCTURAL PANELS, FIBERBOARD, OR GYPSUM, OR CONTINUOUS INSULATION WITH R-VALUE > 2.5 OVER 2 1/4 WALLS OR R-VALUE > 9.75 OVER 2 1/2 WALLS. (R702.7)

VAPOR RETARDER UNDER SLAB (R906.2.3): 6 MIL POLYETHYLENE OR APPROVED VAPOR RETARDER WITH JOINTS LAPPED NOT LESS THAN 6" SHALL BE PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR THE PREPARED SUBGRADE WHERE NO BASE COURSE EXISTS, EXCEPT AT GARAGES, UTILITY BUILDINGS AND OTHER UNHEATED ACCESSORY STRUCTURES.

GROUND COVER (R409.3): 6 MIL BLACK POLYETHYLENE OR APPROVED EQUAL SHALL BE Laid OVER THE GROUND WITHIN CRAWL SPACES AND SHALL BE OVERLAPPED 12" MINIMUM AT THE JOINTS AND SHALL EXTEND TO THE FOUNDATION WALL.



Conditions of approval:

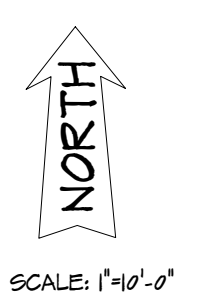
- Street sign shall be installed prior to construction for emergency services & identification of construction site.
- 13R sprinkler system shall be applied for, reviewed, permitted, installed, & Inspected by Fire Authority prior to framing approval to cover with insulation.
- Back flow device shall be installed and new water service line shall be reviewed and approved by Fire Authority in order to provide adequate fire flow for required 13R sprinkler system.
- Monitored fire alarm system shall be applied for, reviewed, permitted, installed, & Inspected by Fire Authority prior to framing approval to cover with insulation.
- Required fire wall & parapet at existing building shall be installed, inspected, & approved prior to final occupancy granted of live work unit.

Reviewed For Code Compliance

David Spencer, CBO
 09/28/2023

17 total plan sheet/pages

Approved plans shall be on site for all required inspections.



LIVE WORK IBC SECTION 419	OCC TYPE	SQ FT	OCC LD	RATIO
MAIN FLOOR B-OFFICE	B	342	2	15%
MAIN FLOOR U GARAGE	U	478	2	
MAIN FLOOR R-2 ENTRY	R-2	75		
MAIN FLOOR STORAGE RM IN GARAGE	U	37		
MAIN FLOOR U COVERED BREEZEWAY	U	117		
2ND FLOOR R-2 RESIDENCE	R-2	1,112	5	
2ND FLOOR U BALCONY	U	73		
TOTAL		2,234		

CODE ANALYSIS:

OCCUPANCY TYPE:
 PROPOSED 1677 SF MIXED USE LIVE/WORK : R-2/U
 EXISTING 020 SF TO PLUS YEAR OLD : B

CONSTRUCTION TYPE: V-B (3 WALLS 1-HR RATED)

BUILDING WILL BE EQUIPPED WITH A FIRE SPRINKLER SYSTEM

ALLOWABLE BUILDING AREA PER IBC TABLE 506.2:
 R-2 : 7000 SF (PROPOSED: 1677 SF)
 U: 16,800 SF (PROPOSED: 020 SF)

OCCUPANT LOAD PER IBC TABLE 1004.8:
 RESIDENTIAL: 1677 / 200 = 8 OCCUPANT
 PARKING GARAGES: 020 / 200 = 3 OCCUPANTS
 TOTAL OCCUPANTS = 12 OCCUPANTS

PROJECT INFORMATION

SCOPE OF WORK:
 CONSTRUCT NEW 1,677 SF. APARTMENT & 020 SF. GARAGE.

PROPERTY INFORMATION:
 PARCEL #: 10010-010
 ADDRESS: 4471 TOLT AVENUE, CARNATION WA 98014
 ZONING: CSD (CENTRAL BUSINESS DISTRICT)
 LOT AREA: 2,800 SF.

SETBACKS:
 FRONT: 0'
 REAR: 0'
 SIDEYARD: 0'
 MAX HT: 30' TO RIDGE
 MAX FLOOR AREA RATIO (FAR): N/A
 IMPERVIOUS: N/A

LOT COVERAGE:
 BUILDING FOOTPRINT (EXISTING & NEW): 2,351 SF.
 COVERAGE: 2361/2800 = 84.0%

LEGAL DESCRIPTION:
 LOT 1, E.B. COWLES ADDITION TO TOWN OF TOLT, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 21 OF PLATS, PAGE 92, IN KING COUNTY, WASHINGTON.

HEIGHT CALCULATION:
 MAX. HEIGHT ALLOWED: 30.0'
 HIGHEST RIDGE: 28.04' < 30.0'

ENERGY CREDITS REQUIRED : 6

HEATING OPTION 2: 10 CREDITS
 AIR LEAKAGE CONTROL & EFFICIENT VENTILATION
 MODEL: MX2-4C36A3

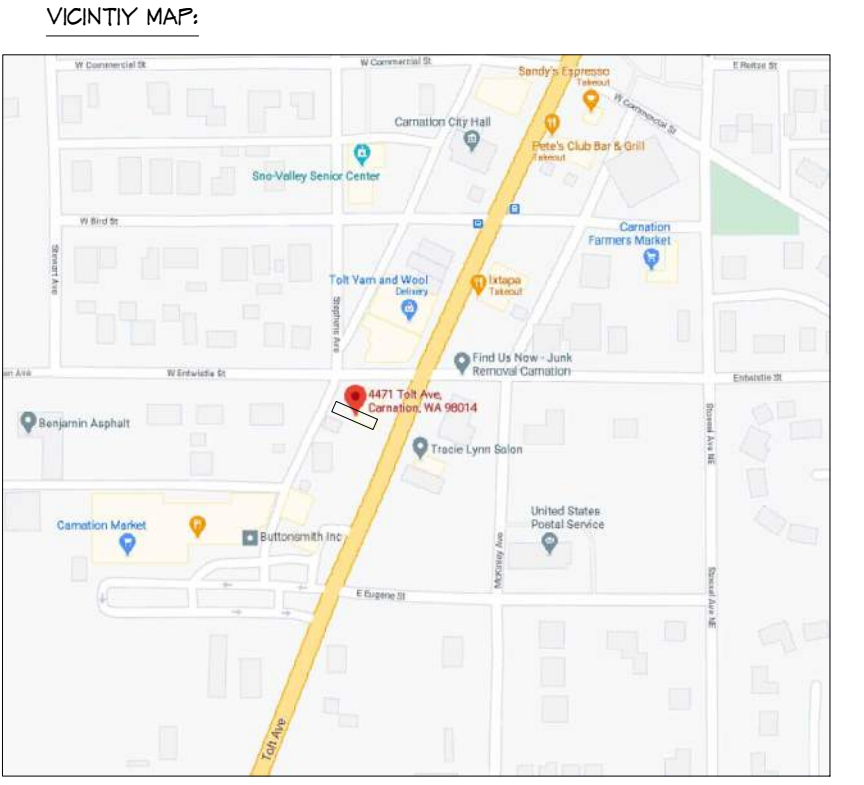
ENERGY OPTION 11: 05 CREDITS
 EFFICIENT BUILDING ENVELOPE

ENERGY OPTION 2.2: 10 CREDITS
 AIR LEAKAGE CONTROL & EFFICIENT VENTILATION

ENERGY OPTION 3.6: 2.0 CREDITS
 HIGH EFFICIENCY HVAC
 OUTDOOR MODEL: (1) MHPM12AC36A3-UI
 INDOOR MODEL: (1) MHPM52SL10-UI
 (2) MHPM52SL10A-UI

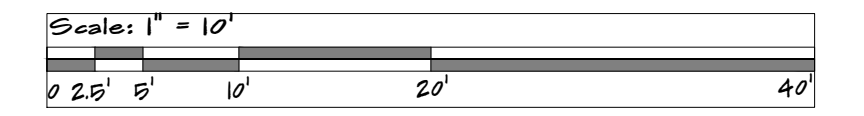
ENERGY OPTION 6.3: 10 CREDITS
 EFFICIENT WATER HEATER
 MODEL #: EC01200VULN-2

ENERGY OPTION 7.1: 05 CREDITS
 APPLIANCE PACKAGE



AREA CALCULATION	
LEVEL/ROOM	NEW
MAIN FLOOR (SF)	438
UPPER FLOOR (SF)	129
NEW TOTAL (SQFT):	1677
GARAGE & STORAGE (SF)	020

SHEET INDEX	
C	COVER-GENERAL NOTES
C-1	DRAINAGE & GRADING PLAN
1	FOUNDATION PLAN
2	MAIN FLOOR FRAMING
3	MAIN FLOOR PLAN
4	UPPER FLOOR FRAMING
5	UPPER FLOOR PLAN
6	ROOF FRAMING
7	ELEVATIONS
8	SECTIONS
AD-1	ARCHITECTURAL DETAILS
AD-2	ARCHITECTURAL DETAILS
AD-3	ADA DETAILS
9	STRUCTURAL DETAILS



REGISTERED ARCHITECT
 Neil Jorgensen, Architect
 11702 98th Ave NE, #105, Kirkland, WA 98034
 www.jarchitects.com • 425.242.0866

PROPOSED RESIDENCE FOR:
 GASS RESIDENCE
 4471 TOLT AVE.
 CARNATION, WA 98014

COVER SHEET

JOB #
 21-001

DATE: 10-05-22
 REV: 09-28-23
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 REV: 09-27-23

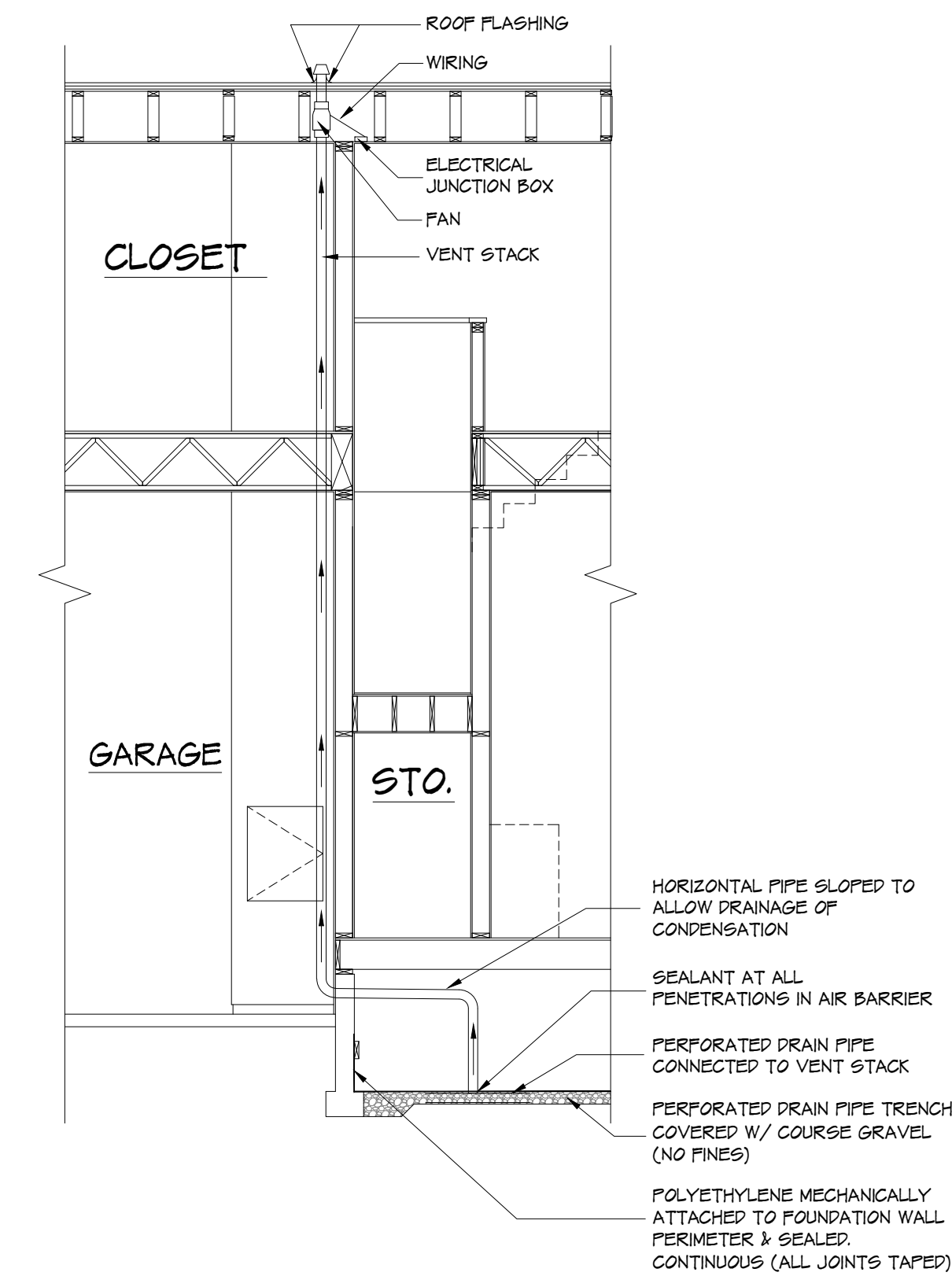
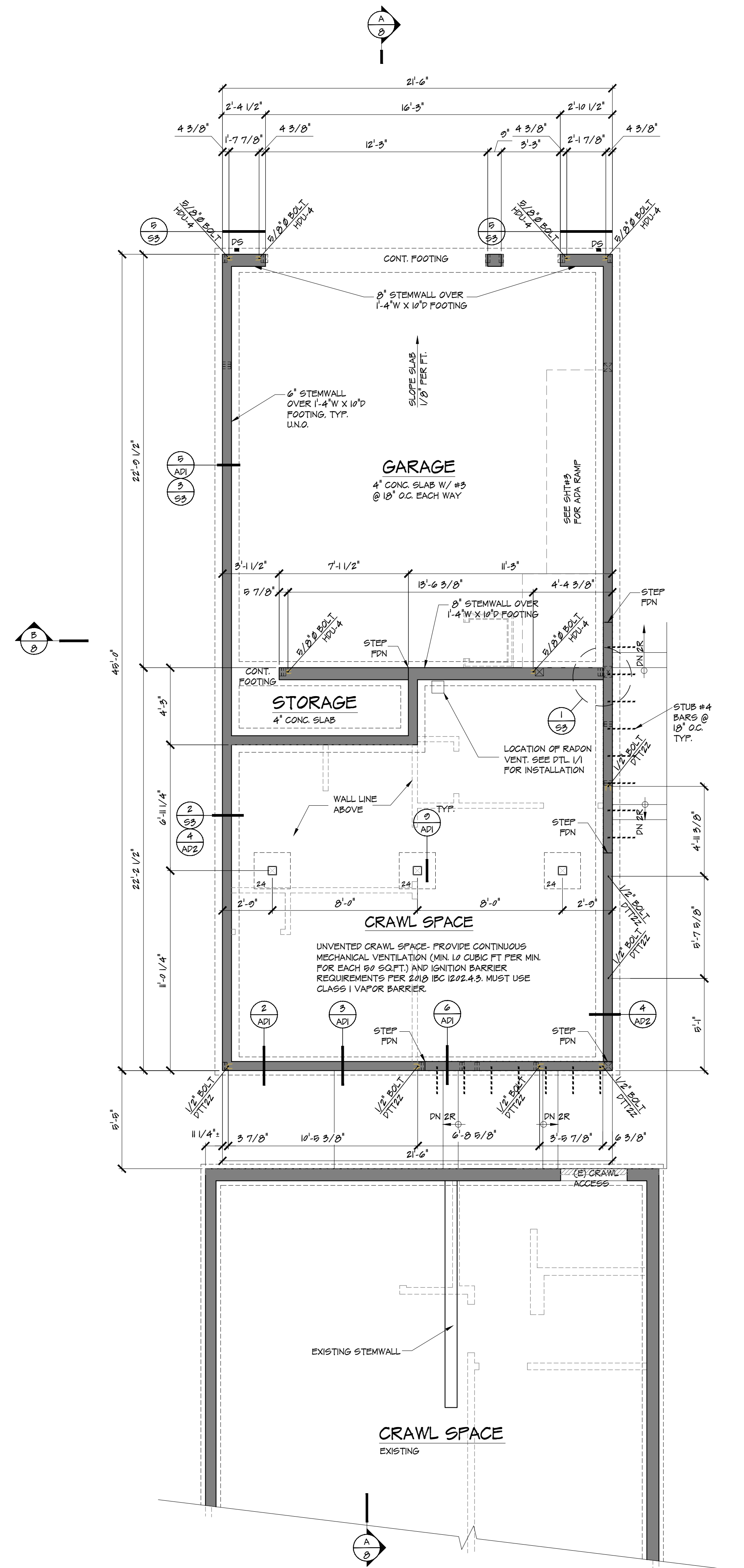
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FOOTING SCHEDULE

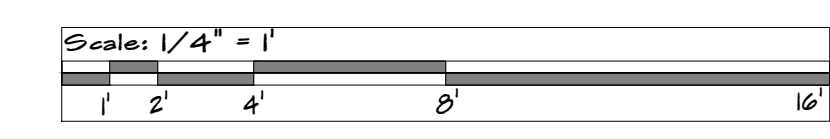
24	24" SQ. x 12" DEEP FOOTING W/ (2) #4 E.W.
30	30" SQ. x 12" DEEP FOOTING W/ (2) #4 E.W.

- NOTES:**
- 6" STEM WALL WITH 16" W/ FOOTING TYPICAL (UNQ.)- SEE DETAIL FOR NOTES & REINFORCING.
 - ANCHOR BOLTS, HOLD-DOWNS & PLATE WASHERS PER ENGINEER OF RECORD- SEE S-SHEETS.
 - ALL WOOD IN DIRECT CONTACT WITH THE GROUND OR CONCRETE TO BE AN APPROVED PRESURE-PRESERVATIVE TREATED WOOD.



1 RADON VENT DTL.

Reviewed For Code Compliance
 David Spencer, CBO
 09/28/2023



REGISTERED ARCHITECT
 NABIL KAUSAL-HAYEK
 STATE OF WASHINGTON
 LICENSE NO. 46136
 9/27/23

PROPOSED RESIDENCE FOR:
 GASS RESIDENCE
 4471 TOLT AVE.
 CARNATION, WA 98014

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

J.A. ARCHITECTS
 Neil Jorgensen, Architect
 11702 88th Ave NE #105, Kirkland, WA 98034
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JOB # 21-001
 DATE: 10-25-22
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SHEET # 1



TYPICAL FLOOR FRAMING

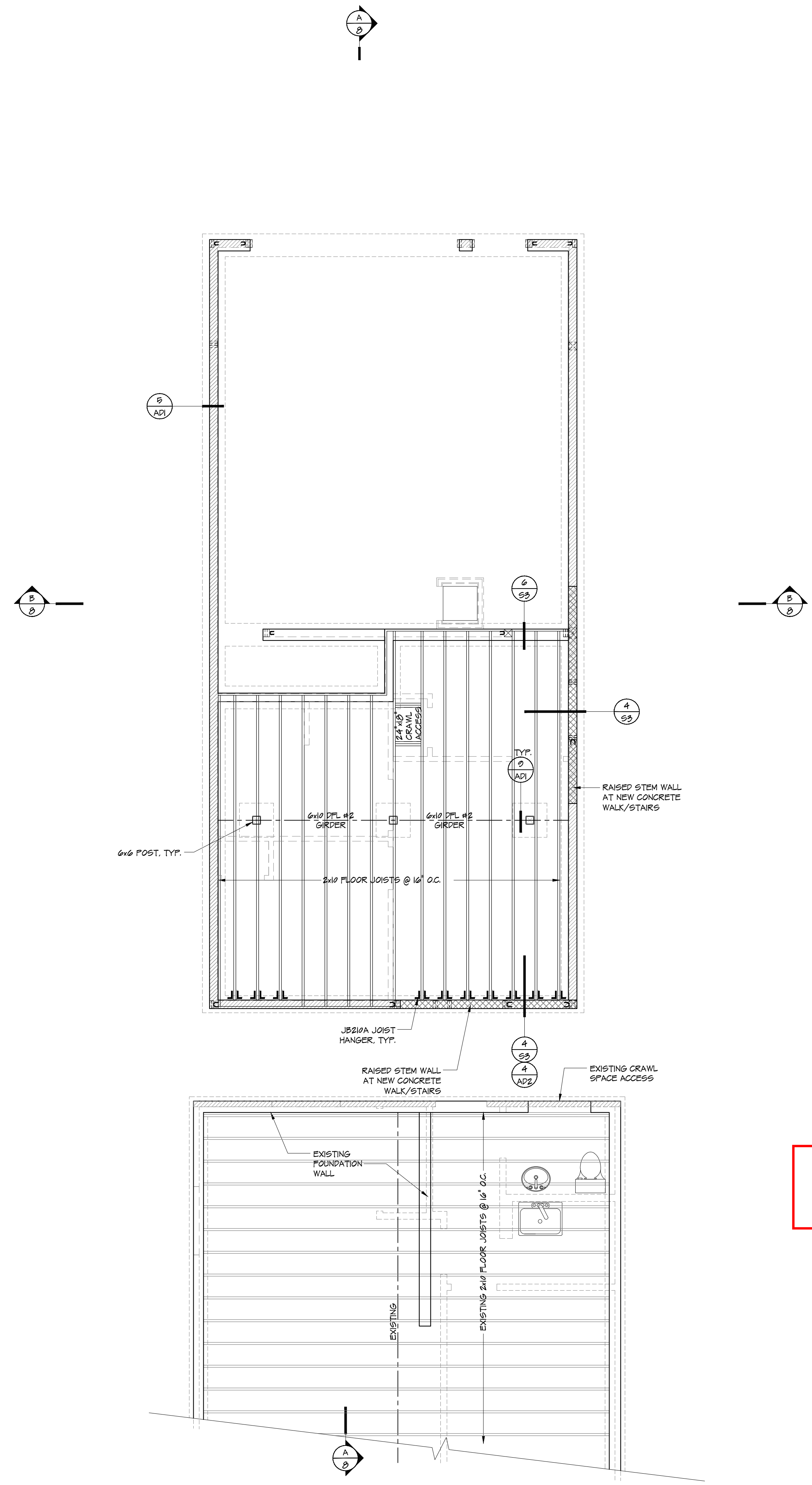
2X10 HF#2 FLOOR JOISTS @ 16" O.C. (MATCH PLAN)

LEGEND

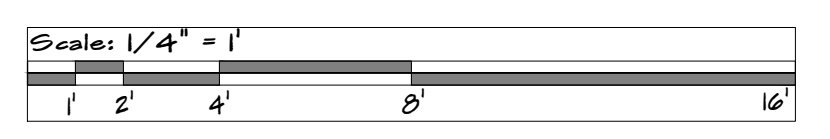
- SB DENOTES CONCENTRATED LOAD FROM ABOVE
- 14'x7' SCREENED FOUNDATION VENT. SEE SHEET #1 FOR VENTILATION CALCULATION

NOTES:

1. 10'x24" MINIMUM CRAWL ACCESS. 16'x24" CRAWL ACCESS IN PERIMETER WALL IF APPLICABLE.
2. 2X10 HF#2 RIM JOIST TYPICAL (UNO). MATCH FLOOR JOIST DEPTH
3. ALL WOOD IN DIRECT CONTACT WITH CONCRETE TO BE PRESSURE PRESERVATIVE TREATED OR SEPARATED BY AN APPROVED VAPOR RETARDER.



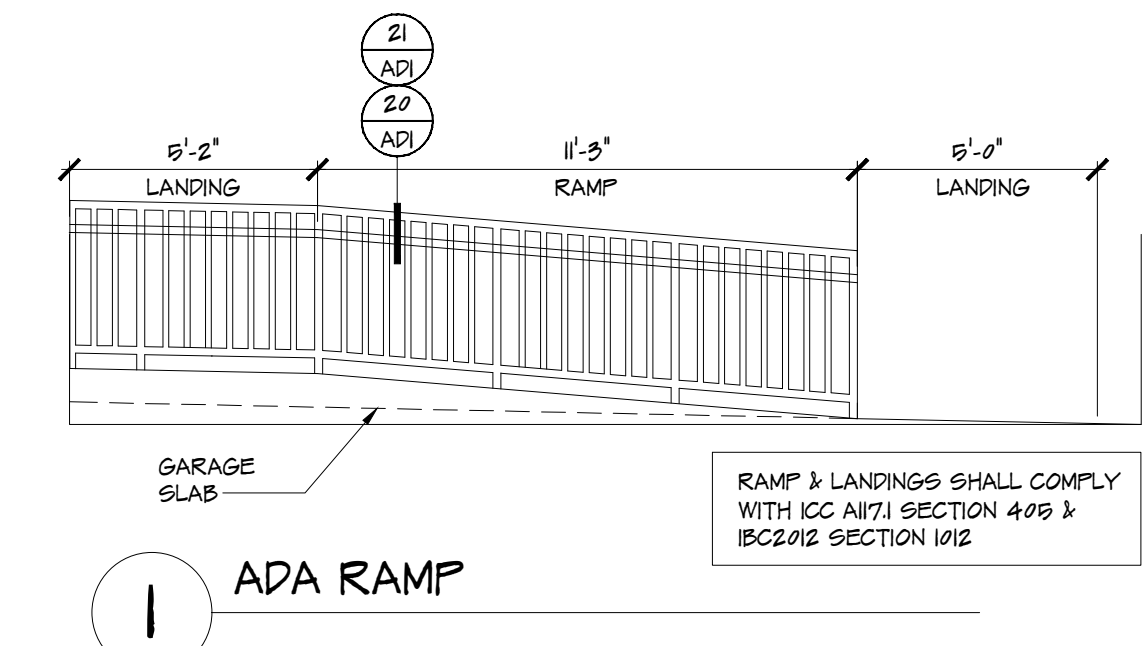
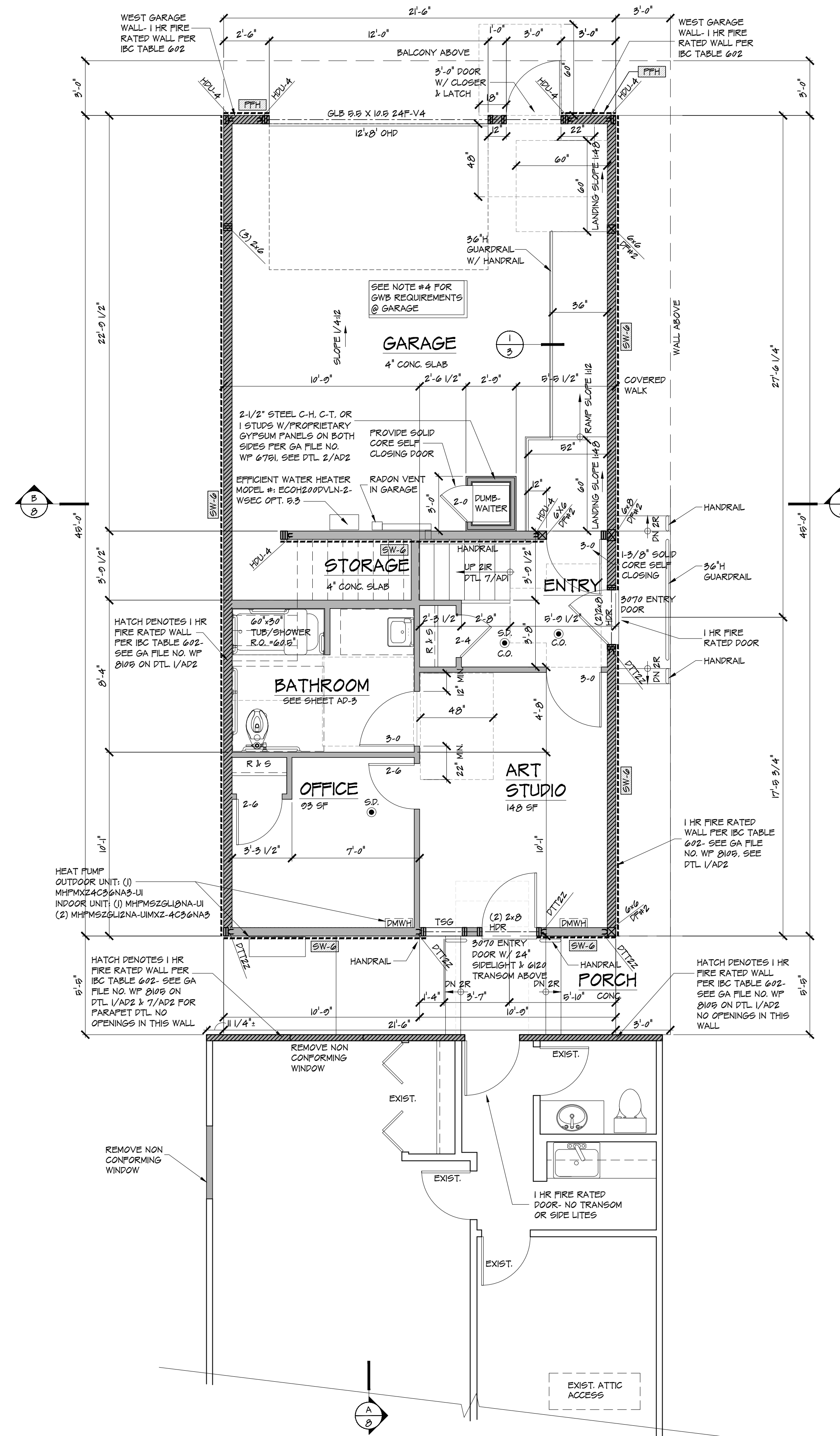
Reviewed For Code Compliance
 David Spencer, CBO
 09/28/2023





- LEGEND**
- SD DENOTES IIV. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
 - CO DENOTES IIV. SMOKE DETECTOR CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
 - 80 CFM MIN BATH FAN
 - [DWH] DUCTLESS MINI WALL HEAD
 - 1 HR FIRE RATED WALL

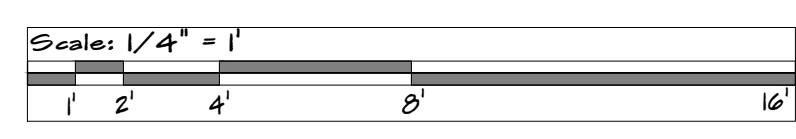
- NOTES:**
1. [SW-X] DENOTES SHEARWALL TYP. SEE S-SHEETS FOR SCHEDULE, DETAILS & NOTES
 2. SECURE HOT WATER HEATER TO FRAMING WITH (2) SEISMIC STRAPS. PROVIDE (2) LAYERS 3/4" P.W. @ PLATFORM
 3. HW/FURN IGNITION SOURCE TO BE NOT LESS THAN 18" ABOVE GARAGE FLOOR.
 4. 1/2" GWB REQUIRED BETWEEN GARAGE AND LIVING SPACE ON WALLS AND SUPPORTING STRUCTURE. 3/8" TYPE 'X' REQUIRED ON GARAGE CEILING WHEN HABITABLE SPACE IS ABOVE GARAGE
 5. FILL CAVITY AT 4X EXTERIOR HEADERS W/ R-10 RIGID INSULATION
 6. IDENTIFICATION MARK SHALL BE APPLIED TO ALL INSULATION MATERIALS AND INSULATION INSTALLED SUCH THAT THE MARK IS READILY OBSERVABLE DURING INSPECTION
 7. PENETRATION PRODUCTS SHALL BE LABELED WITH NFRIC U-FACTOR, SHGC, VT AND LEAKAGE RATING
 8. 2-1/2" X 20GA METAL STUDS @ 16" OC WITH GWB ON ONE SIDE AND 1/2" ACX PLYWOOD ON STORAGE SIDE, UP TO FLOOR DECK OR UNDERSIDE OF ROOF FRAMING.



Reviewed For Code Compliance

David Spencer, CBO

09/28/2023



AREA CALCULATION	
LEVEL/ROOM	NEW
MAIN FLOOR (SF)	430
UPPER FLOOR (SF)	1230
NEW TOTAL (SQFT)	1677
GARAGE & STORAGE (SF)	820

REGISTERED ARCHITECT
NABIL KAUSAL-HAYAT
STATE OF WASHINGTON
46136
9/27/23

PROPOSED RESIDENCE FOR:
GASS RESIDENCE
4471 TOLT AVE.
CARNATION, WA 98014

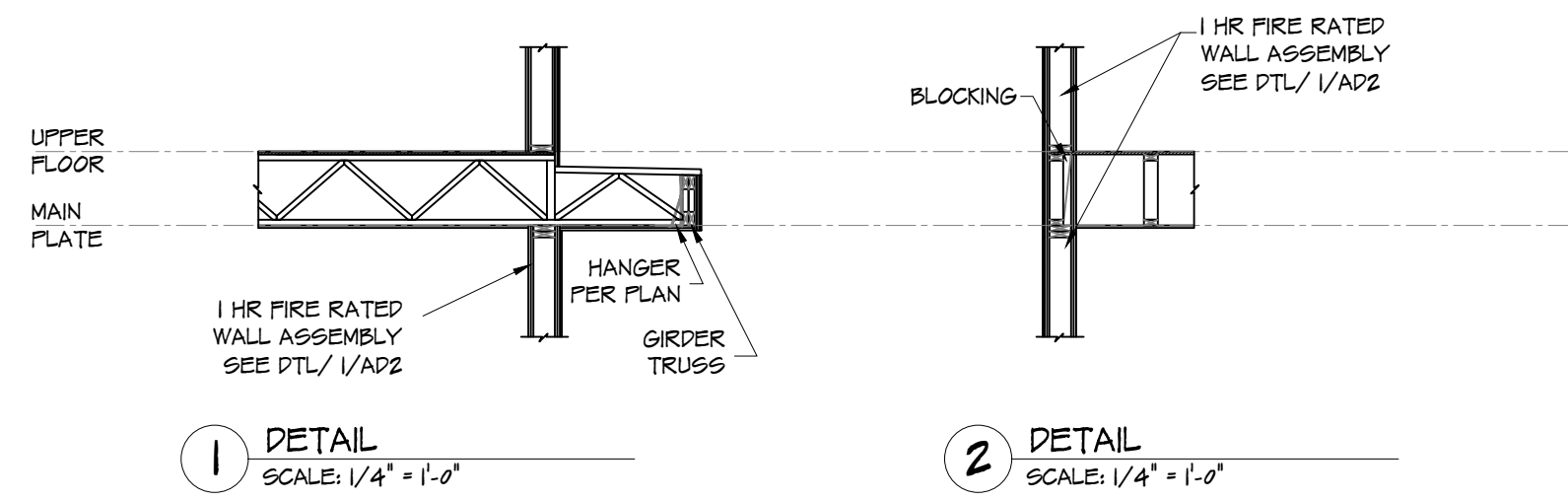
MAIN FLOOR PLAN
SCALE: 1/4" = 1'-0"

JJA ARCHITECTS
Neil Jorgensen, Architect
11702 88th Ave NE, #105, Kirkland, WA 98034
www.jjaarchitects.com • 425.422.0866

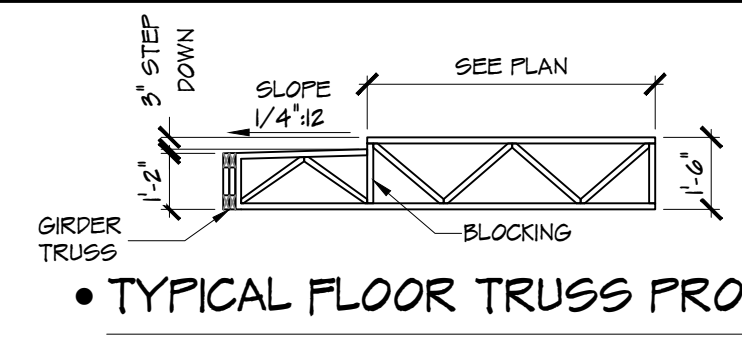
JOB # 21-001

DATE: 10-05-23
REV: 10-06-23
REV: 10-20-23
REV: 10-24-23
REV: 10-27-23

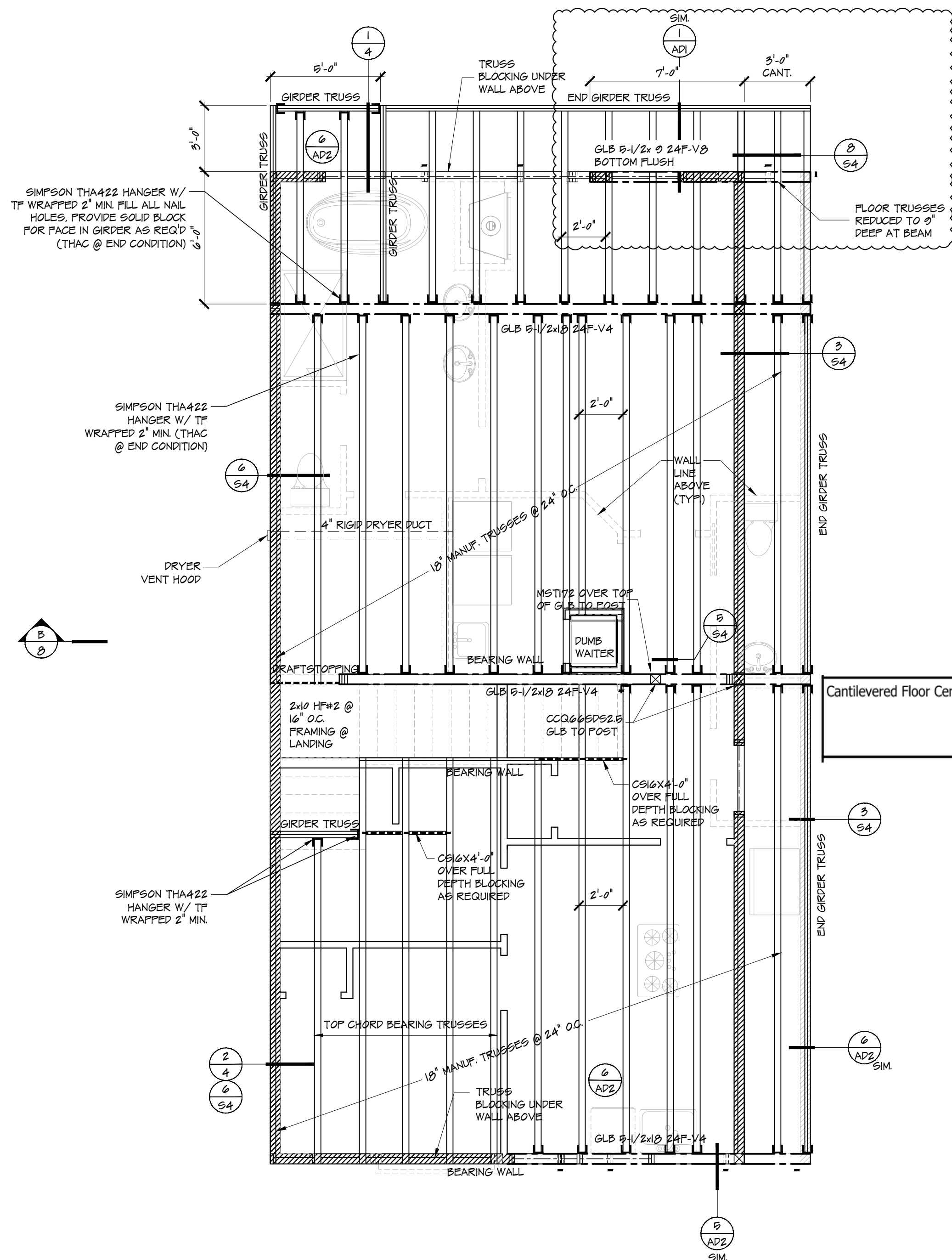
SHEET # 3



1 HR FIRE RATED WALL @ FLOOR FRAMING



TYPICAL FLOOR TRUSS PROFILE

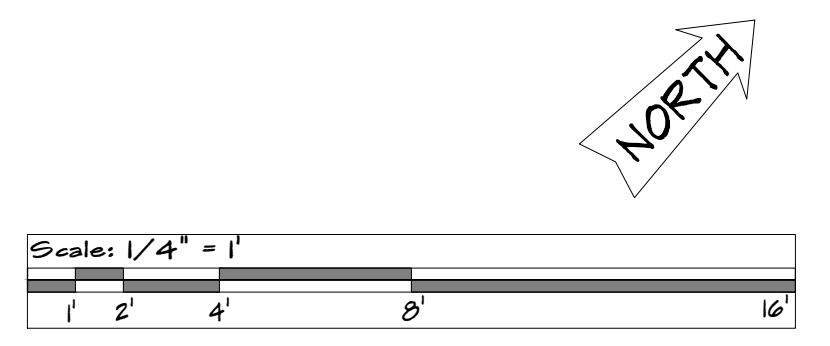
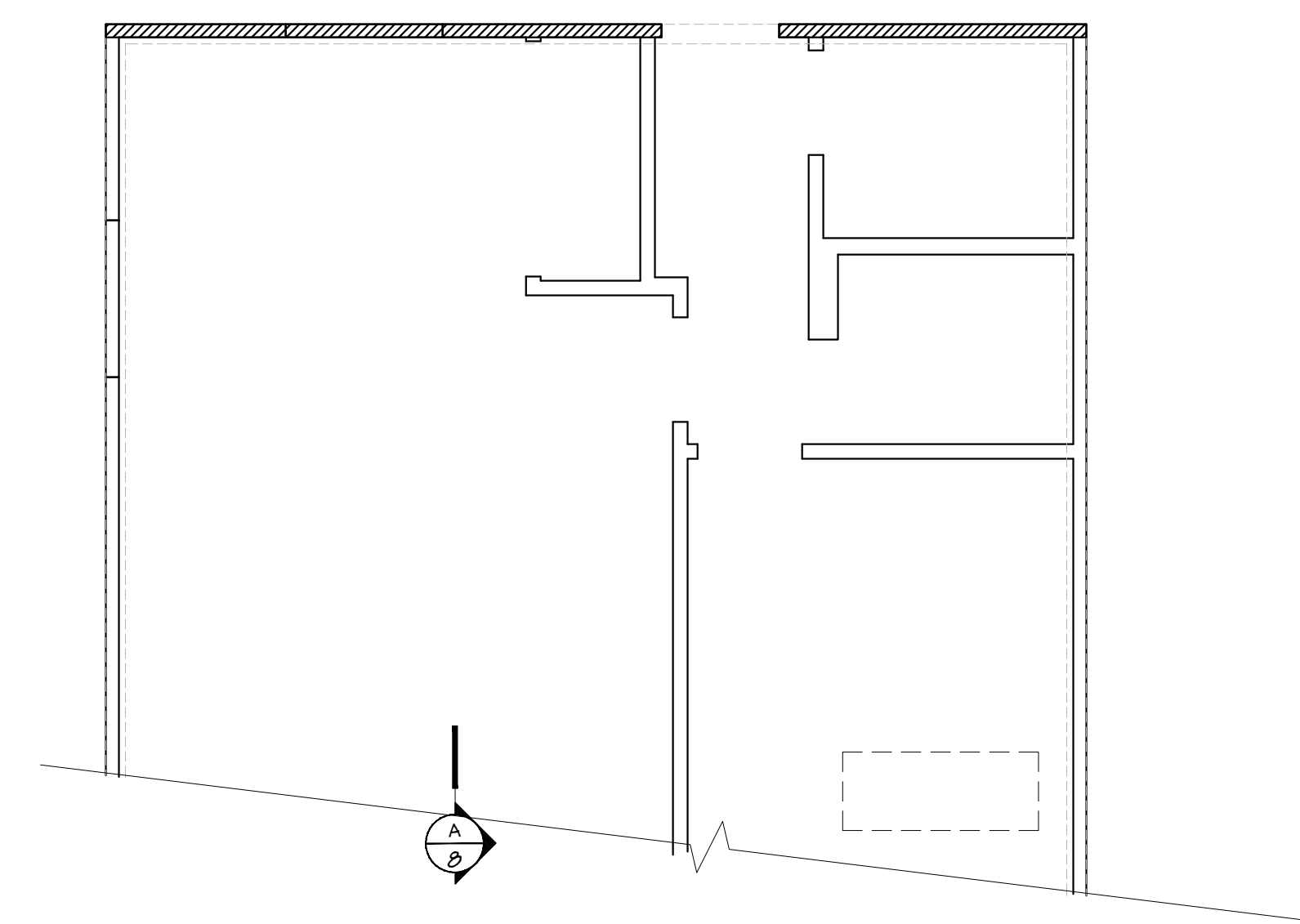


- TYPICAL FLOOR FRAMING**
18" DEEP OPEN WEB WOOD FLOOR TRUSSES @ 24" O.C. (UNLESS NOTED OTHERWISE)
- LEGEND**
- SB --- PENOTES CONCENTRATED LOAD FROM ABOVE. PROVIDE SOLID BLOCKING TO MATCH STUD WIDTH ABOVE MIN.
- NOTES:**
- ALL TRUSS HANGERS TO BE SPECIFIED BY THE TRUSS MANUFACTURER.
 - ANY DEVIATION FROM THE TRUSS LAYOUT SHOWN MUST BE APPROVED BY THE ARCHITECT.
 - DRAFTSTOPPING REQUIRED IN APPROXIMATE EQUAL SPACES NOT EXCEEDING 1,000 SF, AND SHALL CONSIST OF 1/2" GWS OR 3/8" STRUCTURAL PANELS.
 - TRUSS DESIGNS AND DETAILS SHALL BE PREPARED & STAMPED BY AN ENGINEER REGISTERED IN WASHINGTON STATE AND SHALL BE PROVIDED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. TRUSS DRAWINGS SHALL REMAIN ON THE JOB SITE.
 - DROPPED BEAMS & HEADERS ARE SPECIFIED ON THE FLOOR BELOW. FLUSH BEAMS ARE SPECIFIED ON FRAMING PLANS.
 - FLOOR SHEATHING SHALL BE 3/4" T&G OSB OR PLYWOOD. PANEL EDGES W/ 1/4" @ 6" O.C. & PANEL FIELD W/ 1/4" @ 12" O.C. UNLESS NOTED OTHERWISE.

NOTE: See structural calc's pages S57 & S63

4 1 piece(s) 5 1/2" x 18" 24F-V4 DF Glulam
The CQ66SDS2.5 along with the MST172 strap over the beam to the post resist the uplift at the support. . approved by EOR

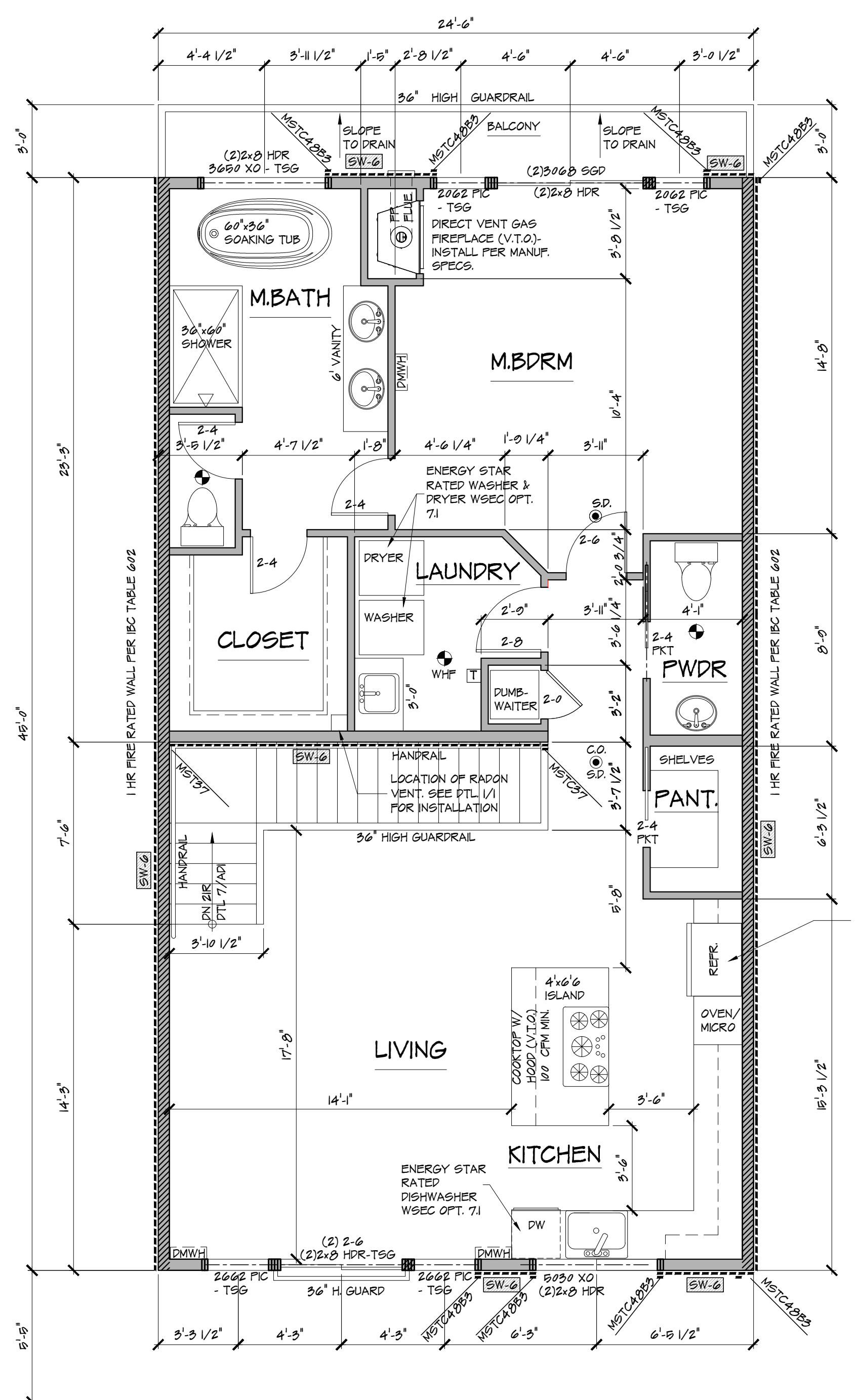
Reviewed For Code Compliance
David Spencer, CBO
09/28/2023





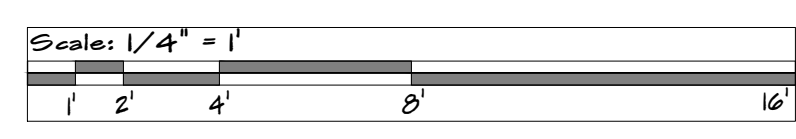
- LEGEND**
- SD ● DENOTES IIV. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
 - CO ● DENOTES IIV. SMOKE DETECTOR CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
 - T --- WHOLE HOUSE FAN INTERMITTENT TIMER- SEE COVER SHEET FOR FRACTIONAL ON TIME
 - [PMWH] --- DUCTLESS MINI WALL HEAD
 - [Hatched] --- 1 HR FIRE RATED WALL

- NOTES:**
- 1 [SW-6] DENOTES SHEARWALL TYP. SEE S-SHEETS FOR SCHEDULE, DETAILS & NOTES
 - 2 AFFIX LABEL NEAR CONTINUOUSLY OPERATED WHOLE HOUSE FAN CONTROL THAT READS "WHOLE HOUSE VENTILATION CONTROL- SEE OPERATING INSTRUCTIONS" INSULATION
 - 3 FILL CAVITY AT 4X EXTERIOR HEADERS W/ R-10 RIGID INSULATION
 - 4 IDENTIFICATION MARK SHALL BE APPLIED TO ALL INSULATION MATERIALS AND INSULATION INSTALLED SUCH THAT THE MARK IS READILY OBSERVABLE DURING INSPECTION
 - 5 PENETRATION PRODUCTS SHALL BE LABELED WITH NFRC U-FACTOR, SHGC, VT AND LEAKAGE RATING

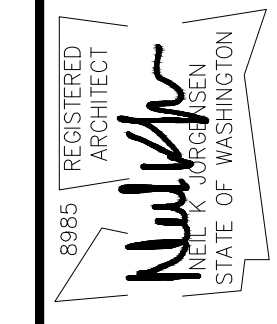


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 09/28/2023



AREA CALCULATION	
LEVEL/ROOM	NEW
MAIN FLOOR (S.F.)	450
UPPER FLOOR (S.F.)	1250
NEW TOTAL (SQ.FT.)	1677
GARAGE & STORAGE (S.F.)	820



Neil Jorgensen, Architect
 11702 88th Ave NE #105, Kirkland, WA 98034
 www.jaarchitects.com • 425.242.0366

PROPOSED RESIDENCE FOR:
 GASS RESIDENCE
 4471 TOLT AVE.
 CARNATION, WA 98014

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

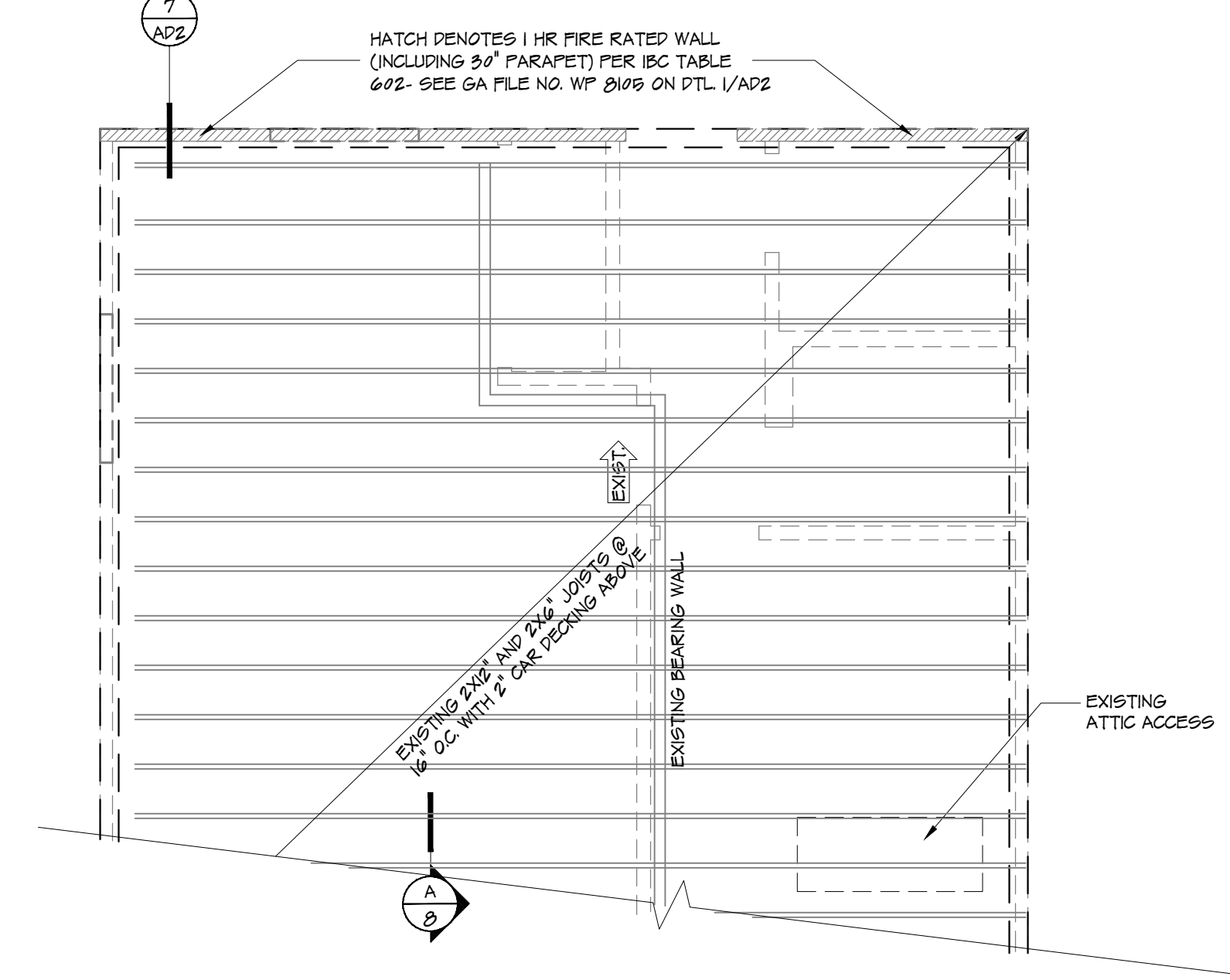
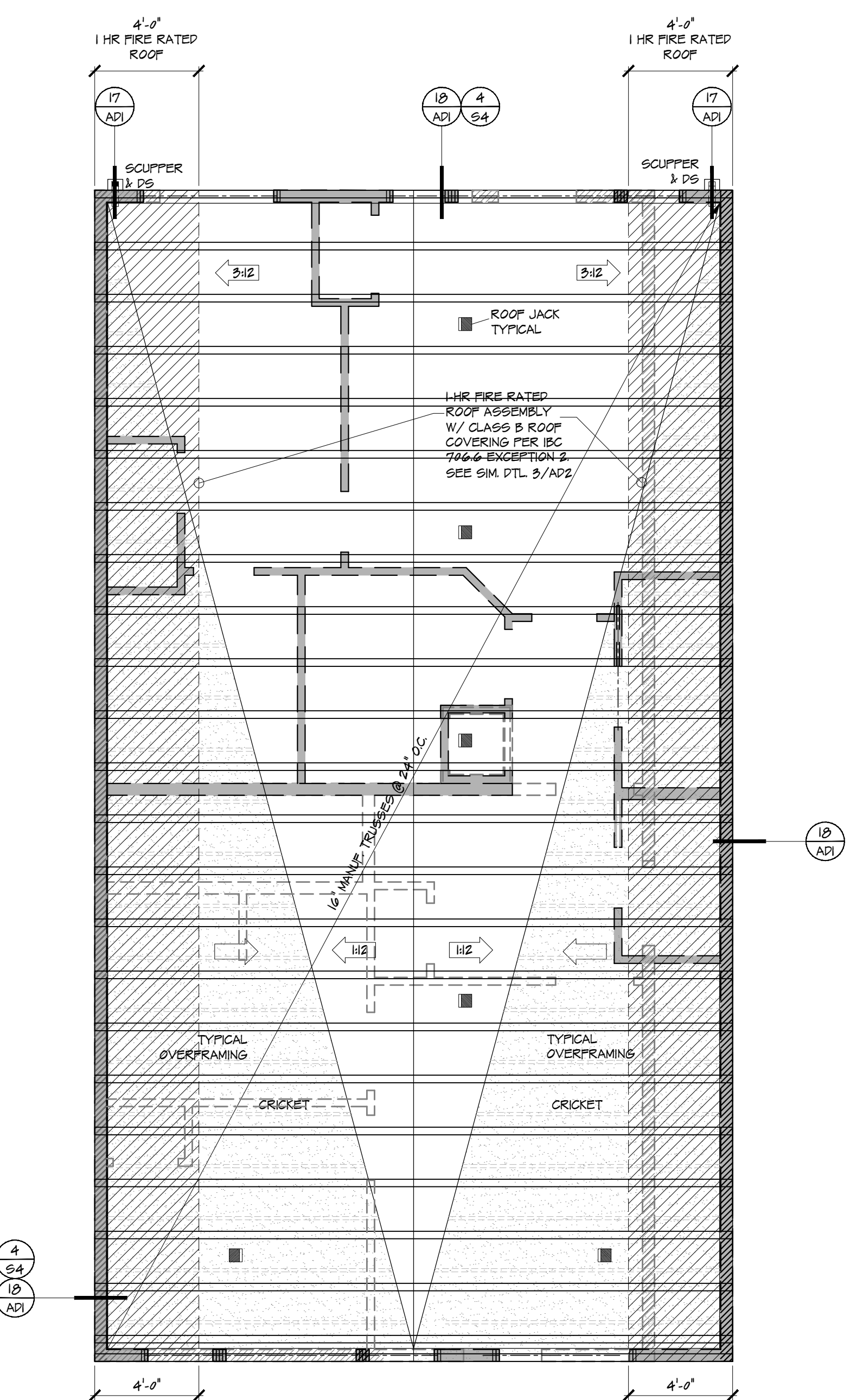
JOB #
21-001
 DATE: 10-05-23
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SHEET #
5

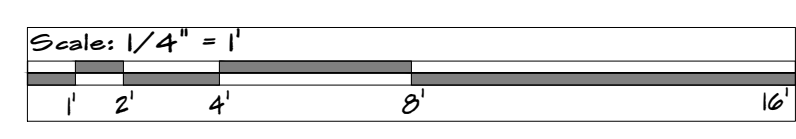


UPPER ROOF VENTILATION	
ROOF AREA:	1279
VENTILATION REQUIRED (AREA/44/300)	612
VENTILATION PROVIDED:	
VENT BLOCKS (TOTAL BLOCKS):	36
LOWER TOTAL (71 SL PER BLOCK):	256
LOW ROOF JACKS: (4) @ 49 SL EA:	98
*TOTAL LOWER PROVIDED:	354
% AT LOWER (80 MIN. 60 MAX.):	0.92
% REQ'D AT UPPER (40 MIN. 80 MAX.):	0.42
UPPER AREA REQUIRED (UPPER % TOTAL AREA):	258
ROOF JACKS TOTAL (UPPER AREA/49 SL):	5.27
USE:	6
*UPPER TOTAL PROVIDED:	294
*TOTAL VENT PROVIDED (LOWER+UPPER):	648

- NOTES:**
- VENT BLOCKS TO HAVE (3) 2" DIAMETER SCREENED HOLES LOCATION NOTED PER PLAN. NOTE: VENTED EAVES AND GABLE END VENTS ARE NOT PERMITTED WHEN BUILDING IS LOCATED 5' FROM A PROPERTY LINE.
 - PROVIDE SOLID BEARING UNDER ALL GIRDER TRUSSES OF MULTIPLE STUDS TO MATCH TRUSS WIDTH, UNLQ.
 - ALL TRUSS BOTTOM CHORDS TO BE DESIGNED AS ATTICS WITHOUT STORAGE (W/ PFF LL). TRUSSES SHALL BE DESIGNED WITH A BOTTOM CHORD OPENING LESS THAN 42"x24" WHERE (2) OR MORE TRUSSES HAVE THE SAME WEB CONFIGURATION.
 - ROOF TRUSSES & DESIGN TO CONFORM TO IRC R802.10.1
 - ROOF OVERFRAMING: 2x4 RAFTERS @ 24" O.C. W/ 2x4 POST SUPPORT @ 48" O.C. STAGGERED. BRACE POSTS OVER 6'-0" (IN 2X PLAT DIRECTION).
 - TRUSS DESIGNS AND DETAILS SHALL BE PREPARED & STAMPED BY AN ENGINEER REGISTERED IN WASHINGTON STATE AND SHALL BE PROVIDED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. TRUSS DRAWINGS SHALL REMAIN ON THE JOB SITE.
 - DROPPED BEAMS & HEADERS ARE SPECIFIED ON THE FLOOR BELOW. FLUSH BEAMS ARE SPECIFIED ON FRAMING PLANS.
 - ROOF SHEATHING SHALL BE 1/2" T&G OSB OR FLYWOOD. NAIL PANEL EDGES W/ 10d @ 6" O.C. & PANEL FIELD W/ 10d @ 12" O.C. UNLESS NOTED OTHERWISE.



Reviewed For Code Compliance
 David Spencer, CBO
 09/28/2023



REGISTERED ARCHITECT
 Neil Jorgensen, Architect
 11702 88th Ave NE, #105, Kirkland, WA 98034
 www.jarchitects.com • 425.242.0366

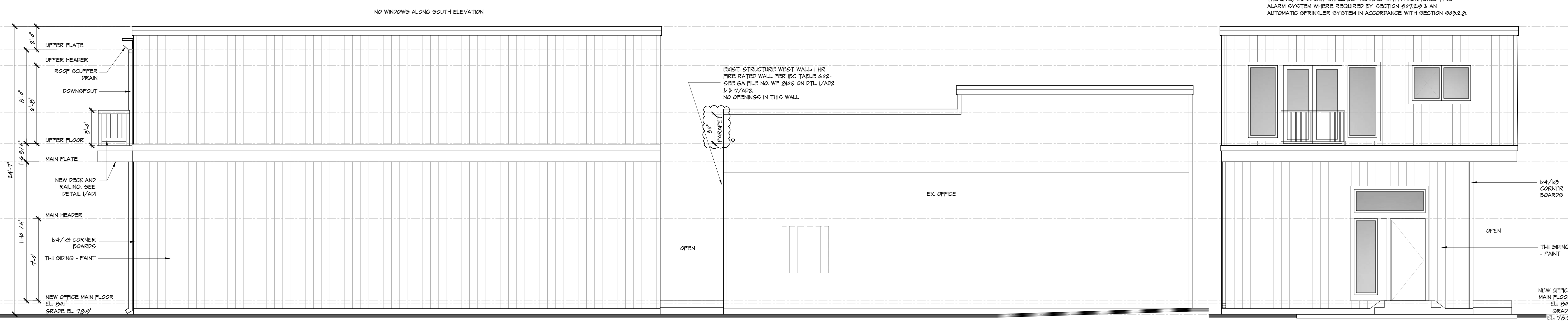
PROPOSED RESIDENCE FOR:
 GASS RESIDENCE
 4471 TOLT AVE.
 CARNATION, WA 98014

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

JOB # 21-001

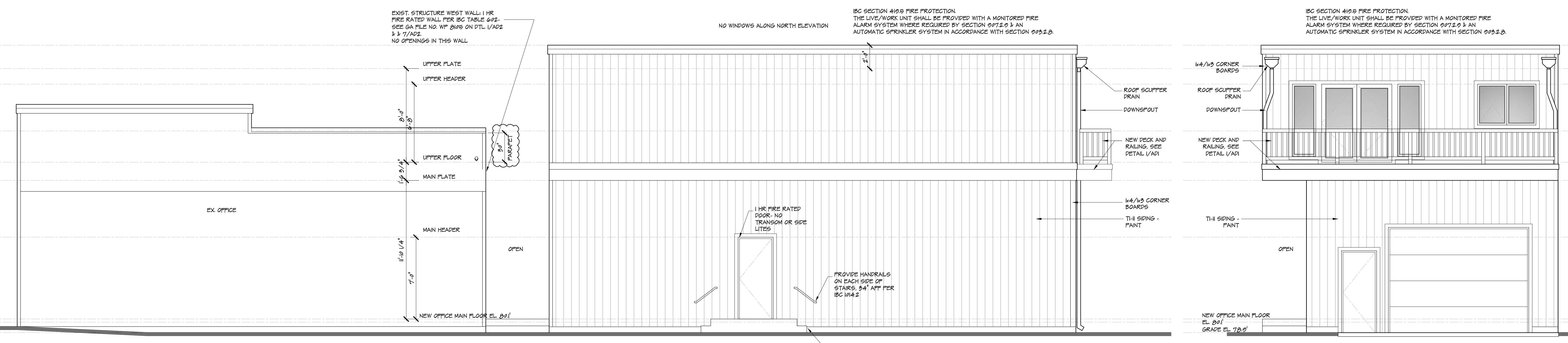
DATE: 10-05-22
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 REV: 10-24-22
 REV: 10-27-22

SHEET # 6



SOUTH ELEVATION

EAST ELEVATION

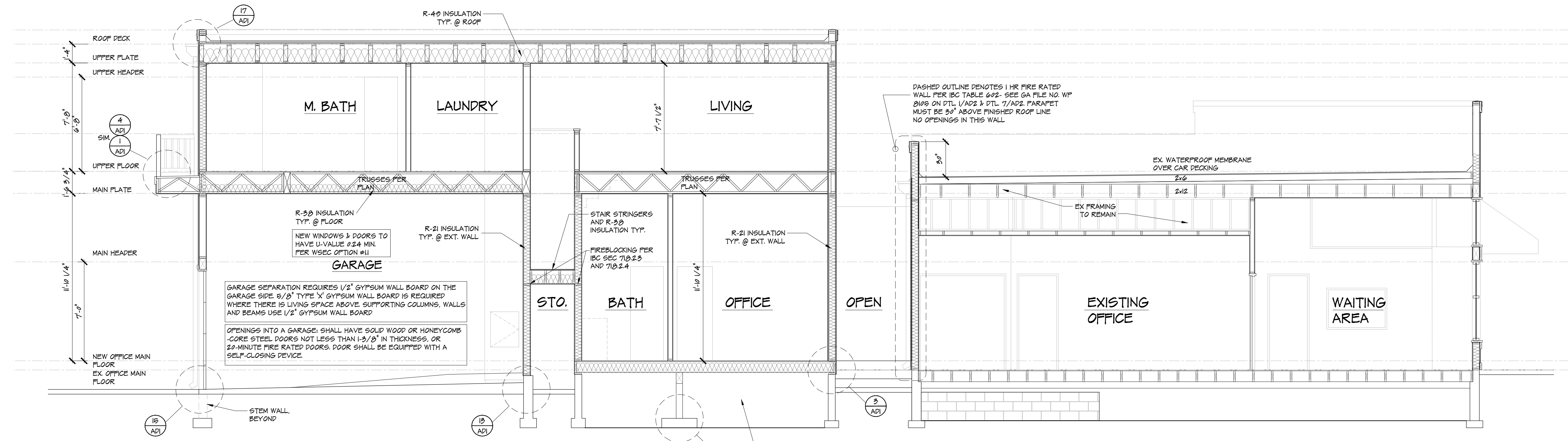


NORTH ELEVATION

WEST ELEVATION

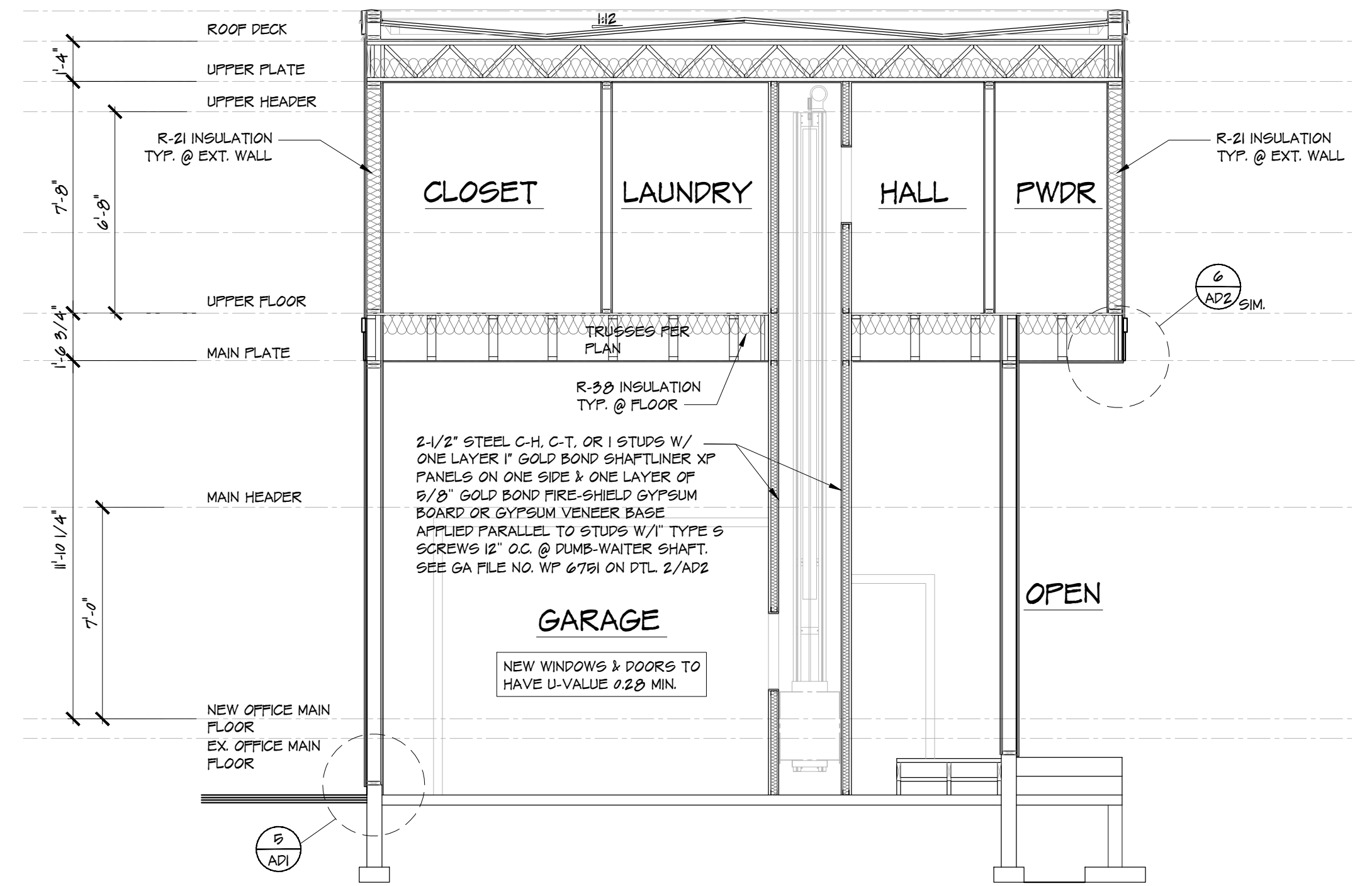
Reviewed For Code Compliance

David Spencer
 David Spencer, CBO
 09/28/2023



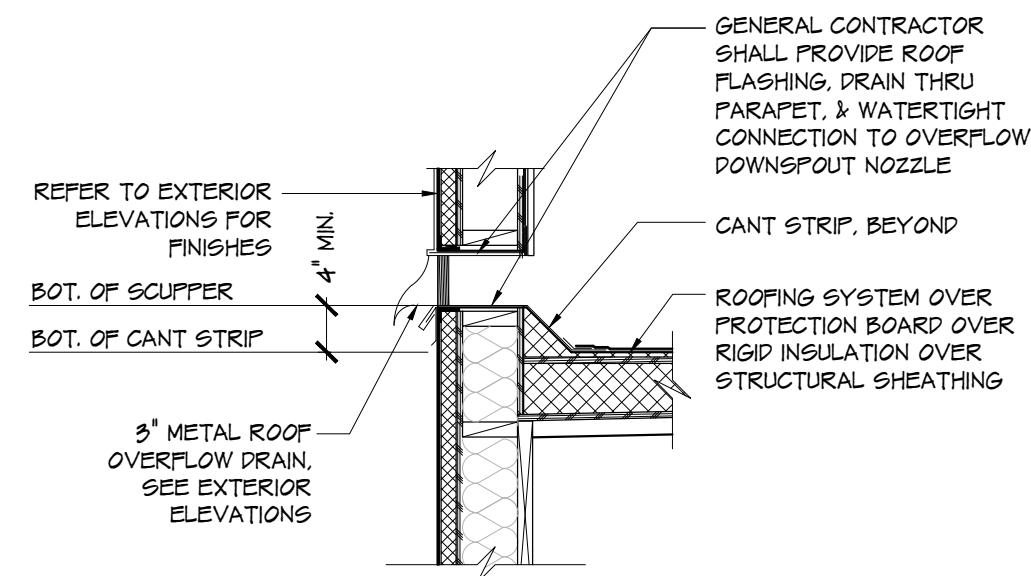
SECTION 'A'

UNVENTED CRAWL SPACE W/ RADON CONTROL- PROVIDE CONTINUOUS MECHANICAL VENTILATION (MIN. 1.0 CUBIC FT PER MIN. FOR EACH 50 SQ.FT.) AND IGNITION BARRIER REQUIREMENTS PER 2019 IBC 1202.4.3. MUST USE GLASS 1 VAPOR BARRIER. SEE SHT. 1 FOR RADON VENT LOCATION.

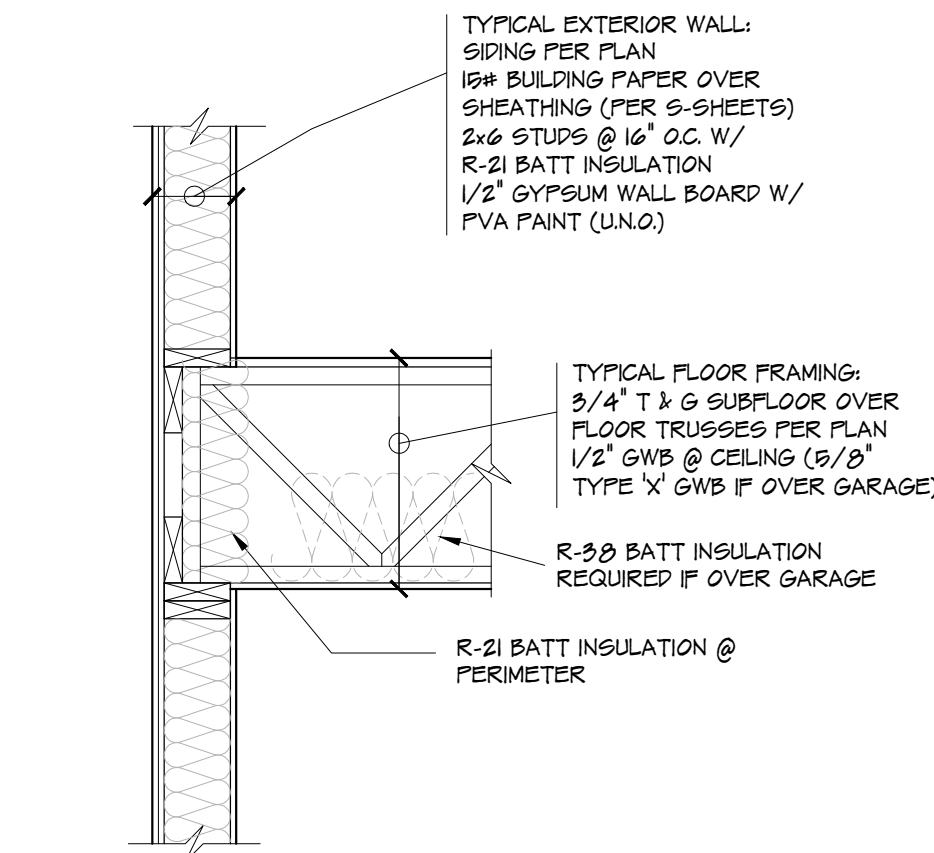


SECTION 'B'

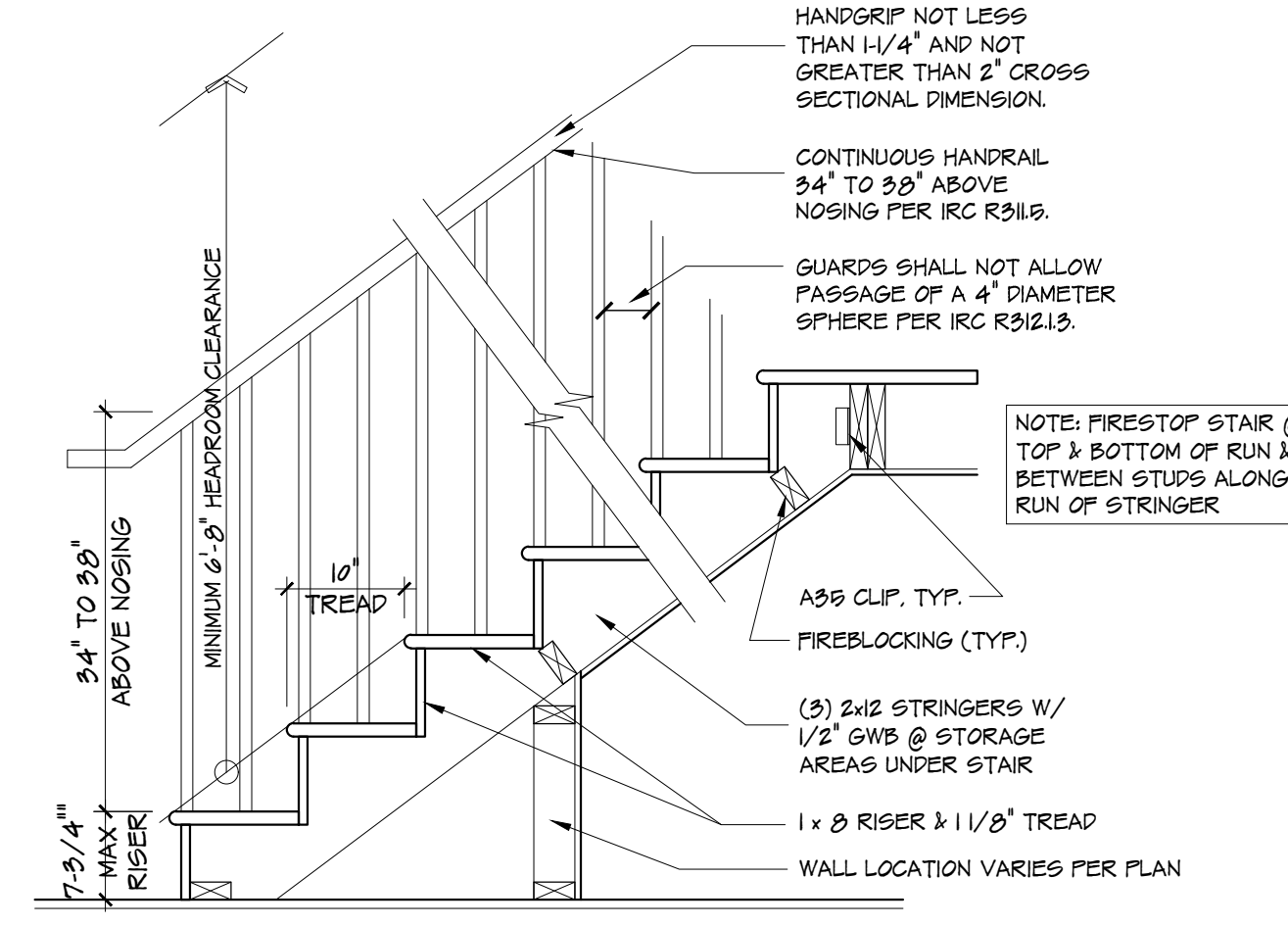
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 09/28/2023



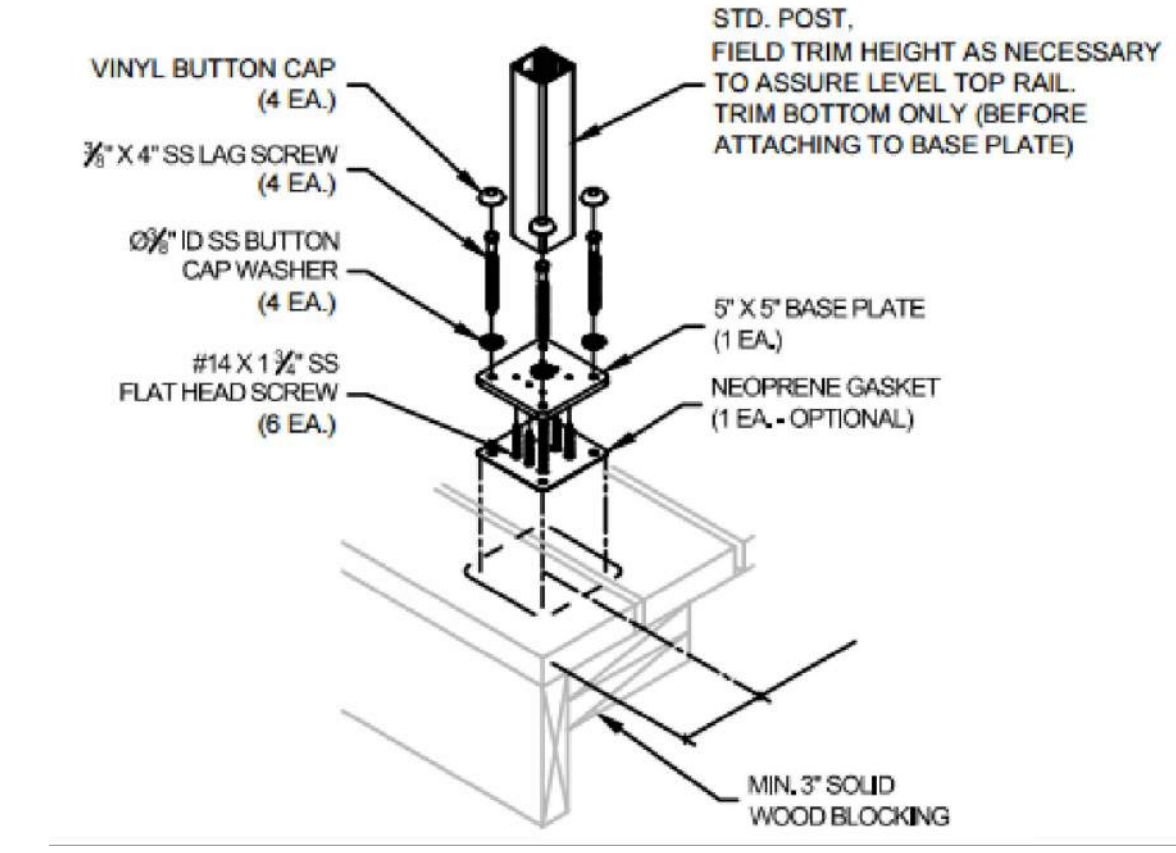
19 ROOF OVERFLOW DRAIN
SCALE: 1" = 1'-0"



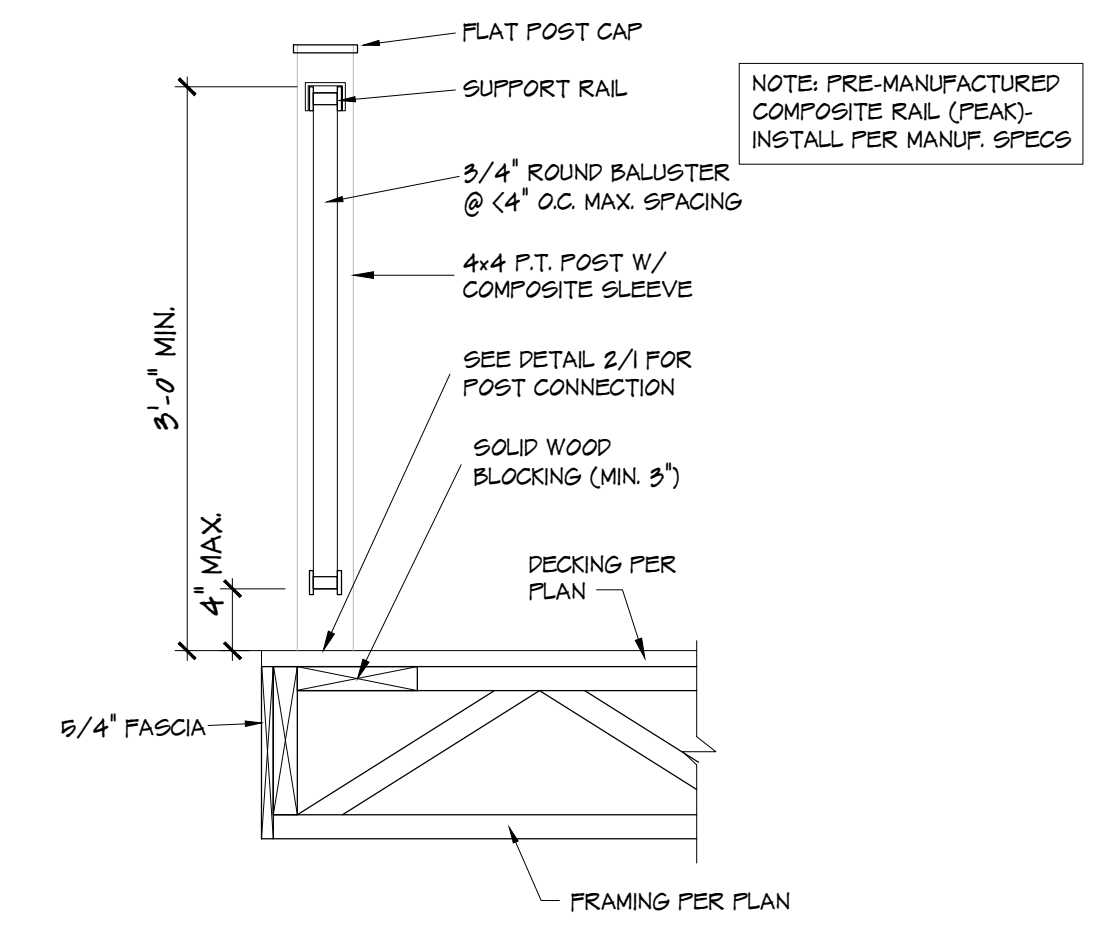
11 TYPICAL WALL @ FLOOR FRAMING
SCALE: 3/4" = 1'-0"



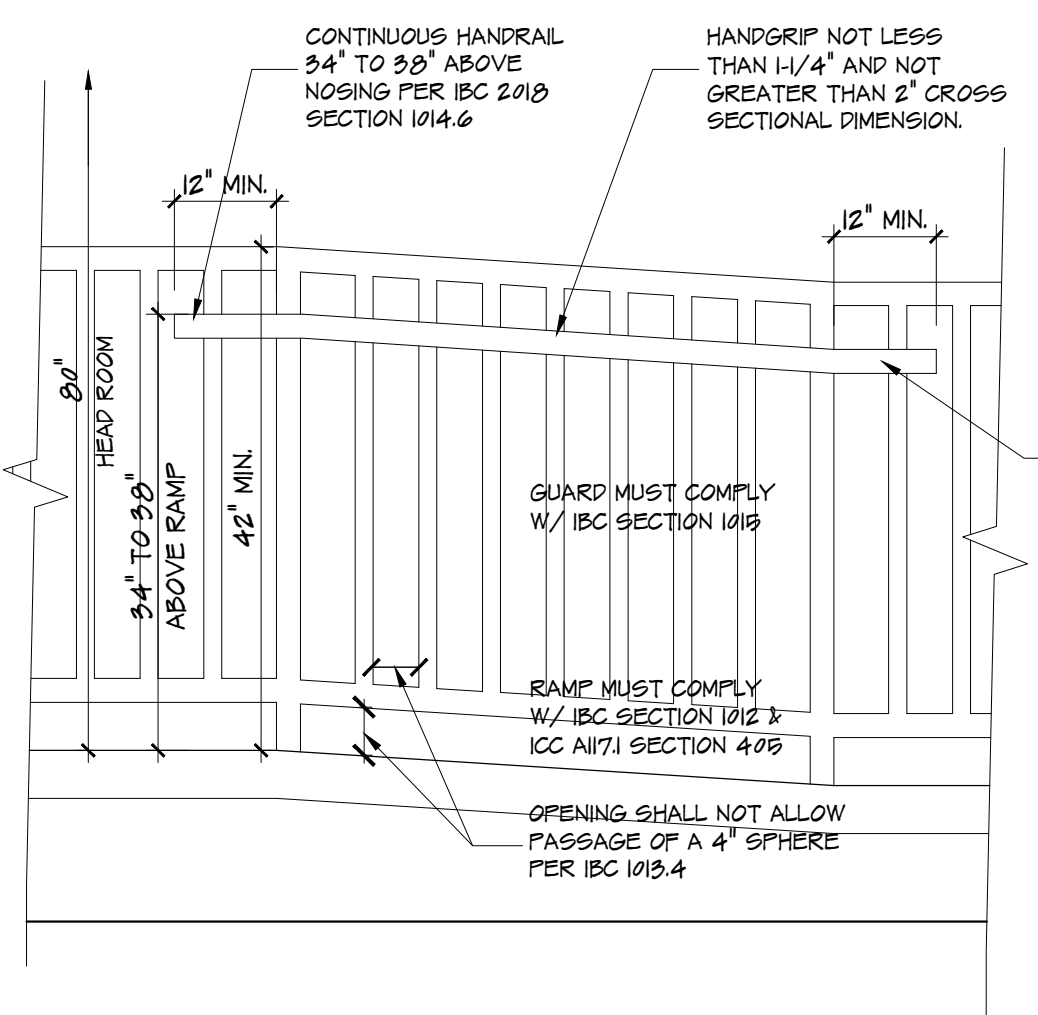
7 TYPICAL STAIR
SCALE: 3/4" = 1'-0"



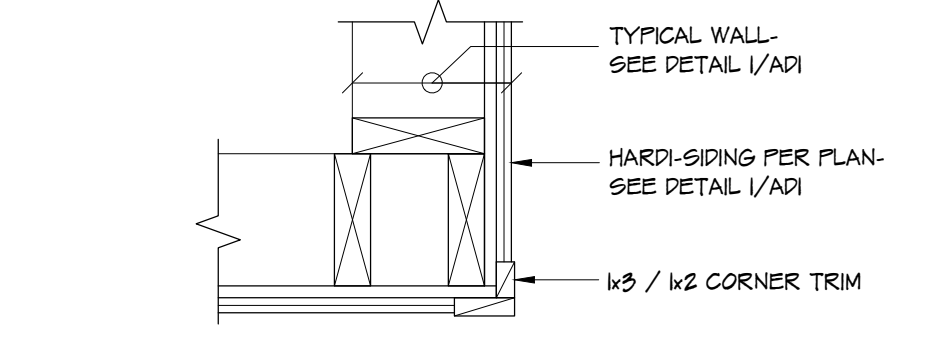
4 TYP. SURFACE MOUNT TO WOOD CONNECTION
SCALE: NTS



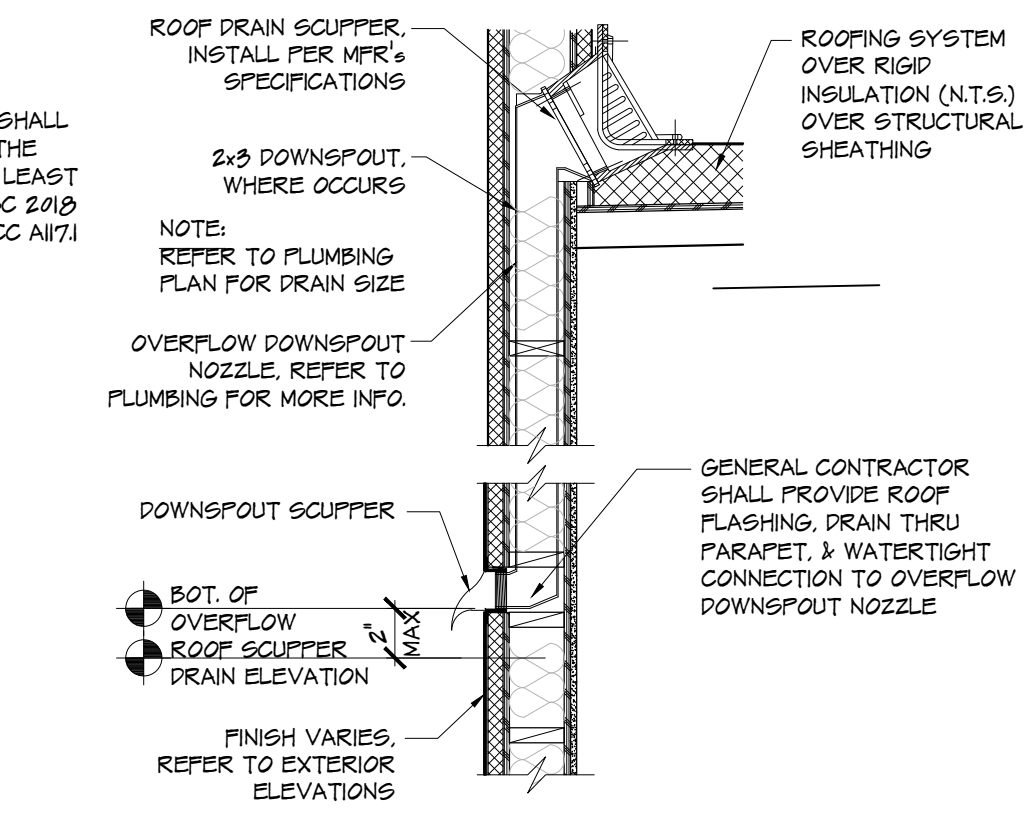
1 DECK RAILING DETAIL
SCALE: 1/2" = 1'-0"



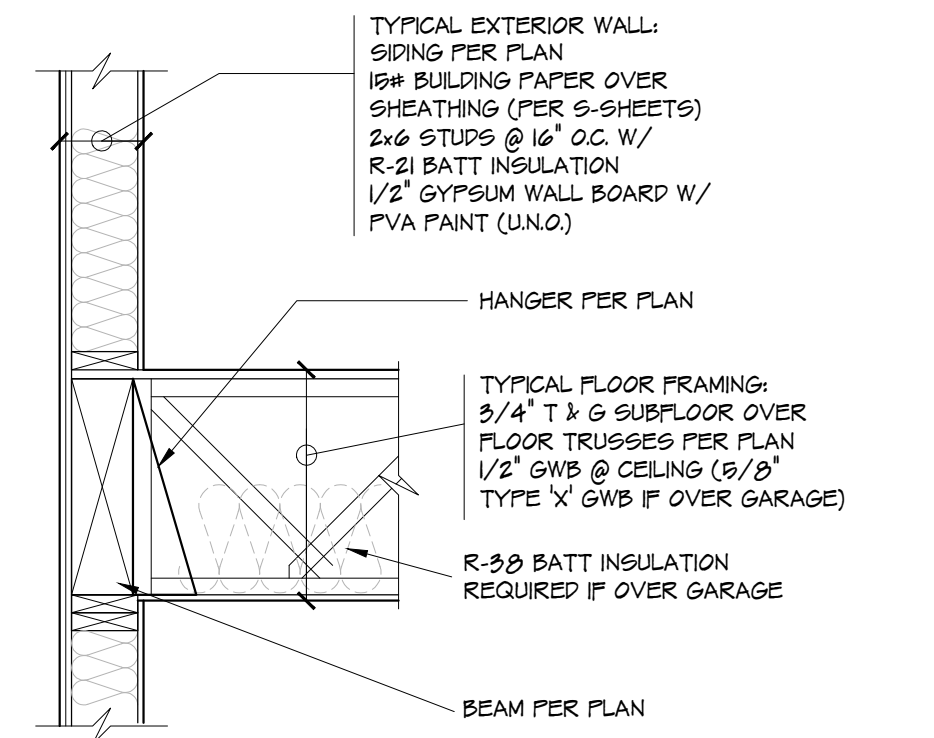
20 TYPICAL RAMP
SCALE: 3/4" = 1'-0"



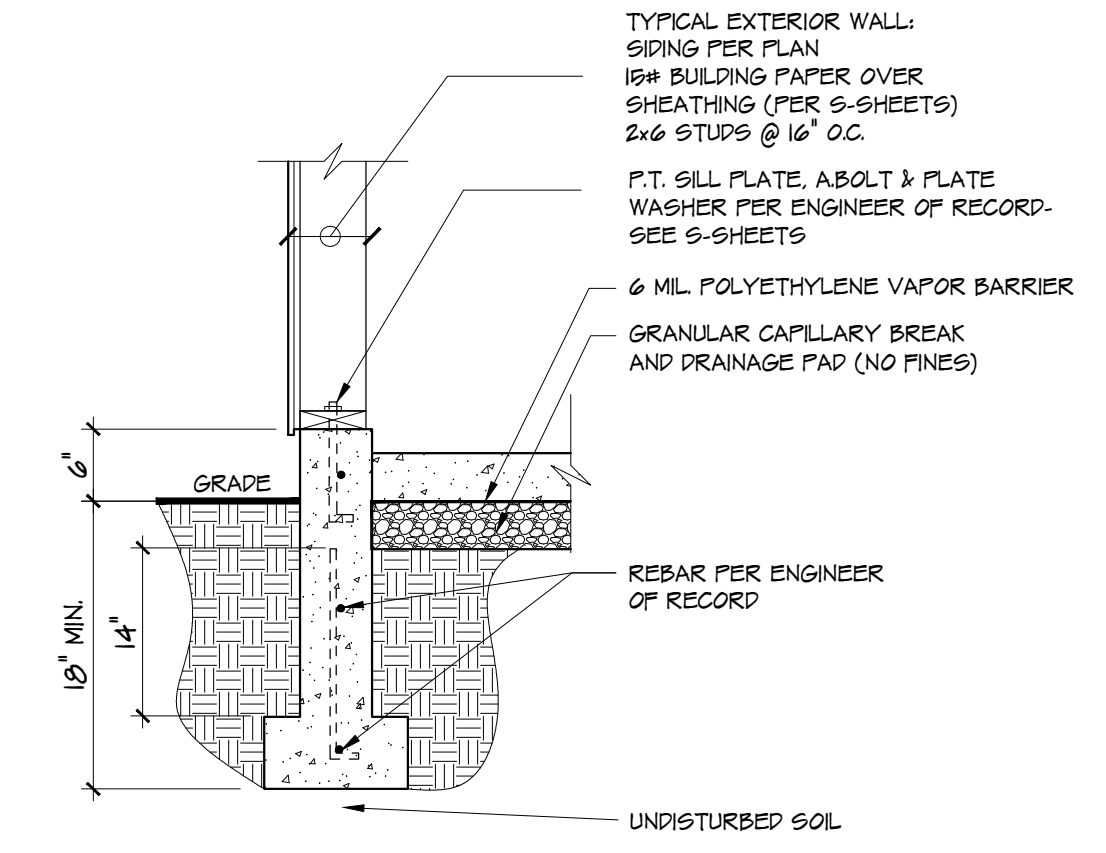
12 CORNER TRIM DETAIL
SCALE: 1/2" = 1'-0"



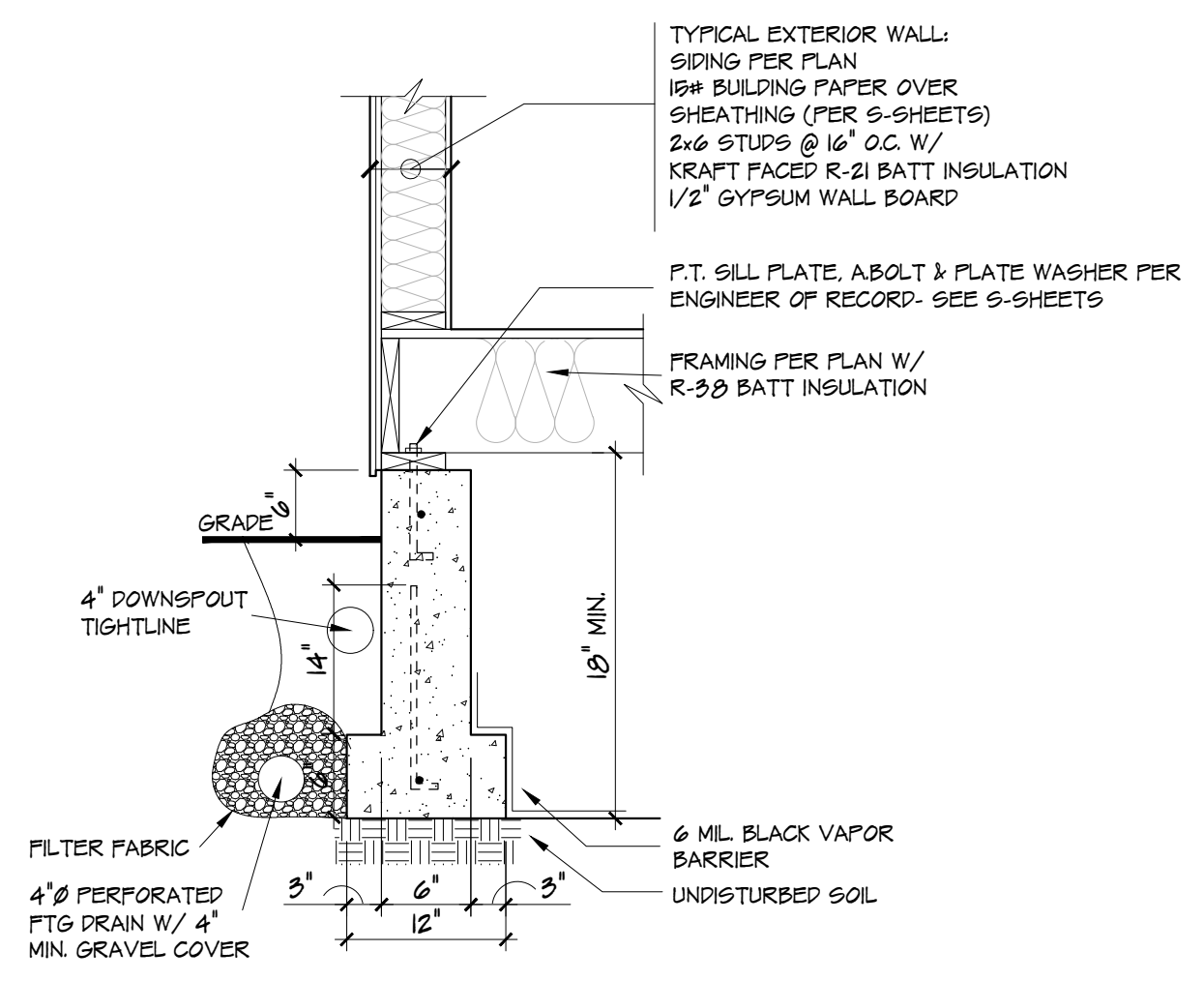
16 ROOF DRAIN W/ IN-WALL DOWNSPOUT
SCALE: 1" = 1'-0"



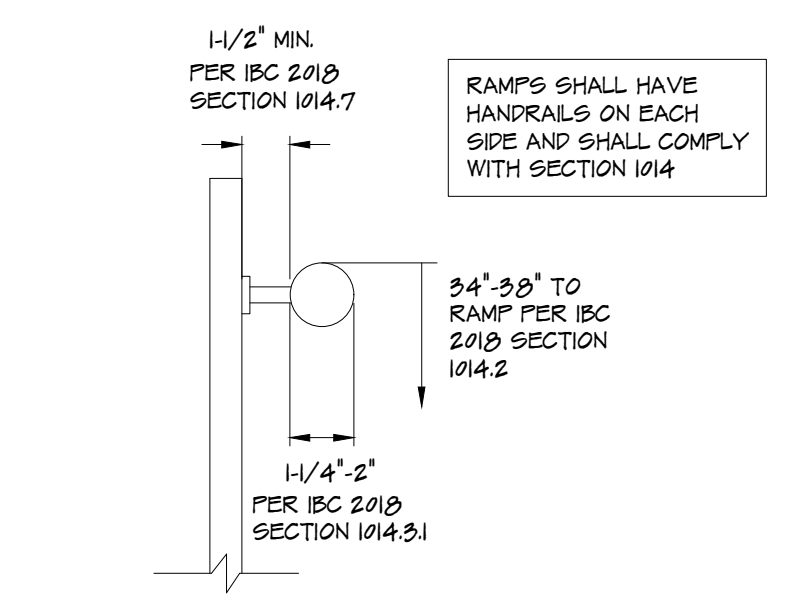
8 TYPICAL WALL @ FLOOR FRAMING
SCALE: 3/4" = 1'-0"



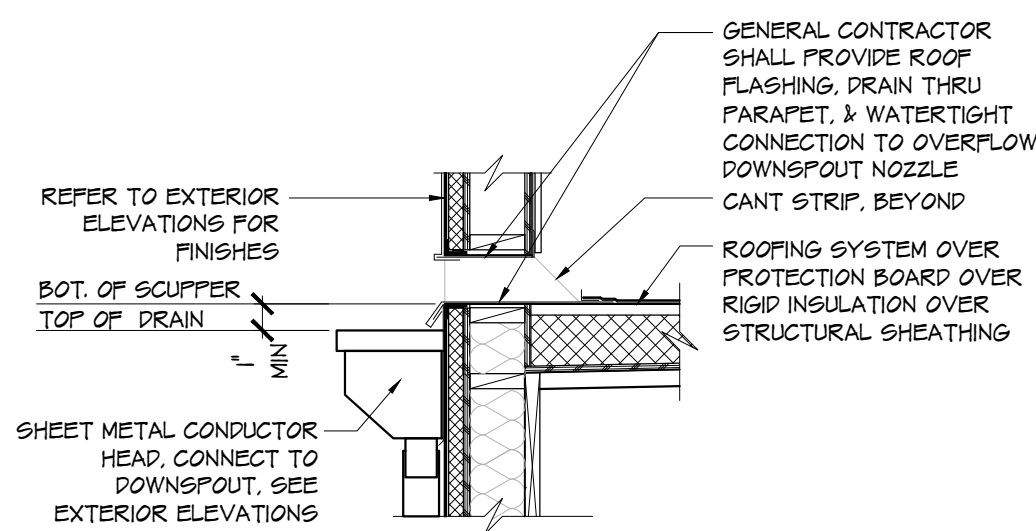
5 GARAGE SLAB DETAIL
SCALE: 3/4" = 1'-0"



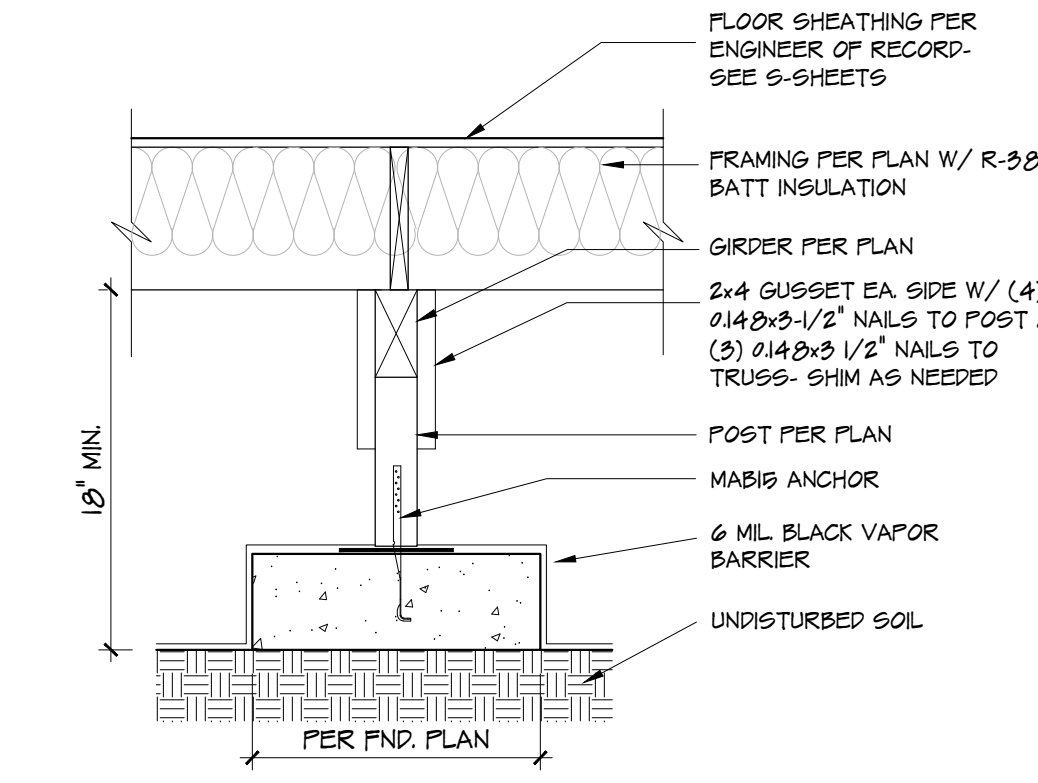
2 TYPICAL STEM WALL
SCALE: 3/4" = 1'-0"



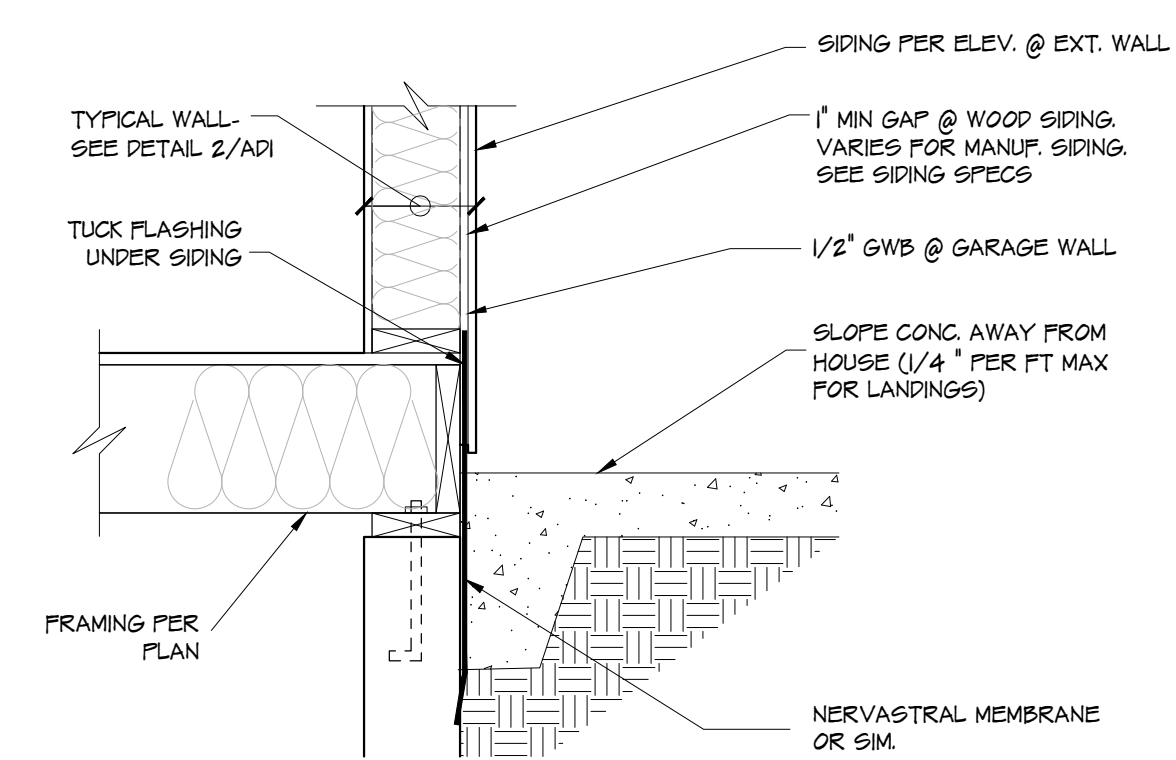
21 TYPICAL HANDRAIL
SCALE: 3/4" = 1'-0"



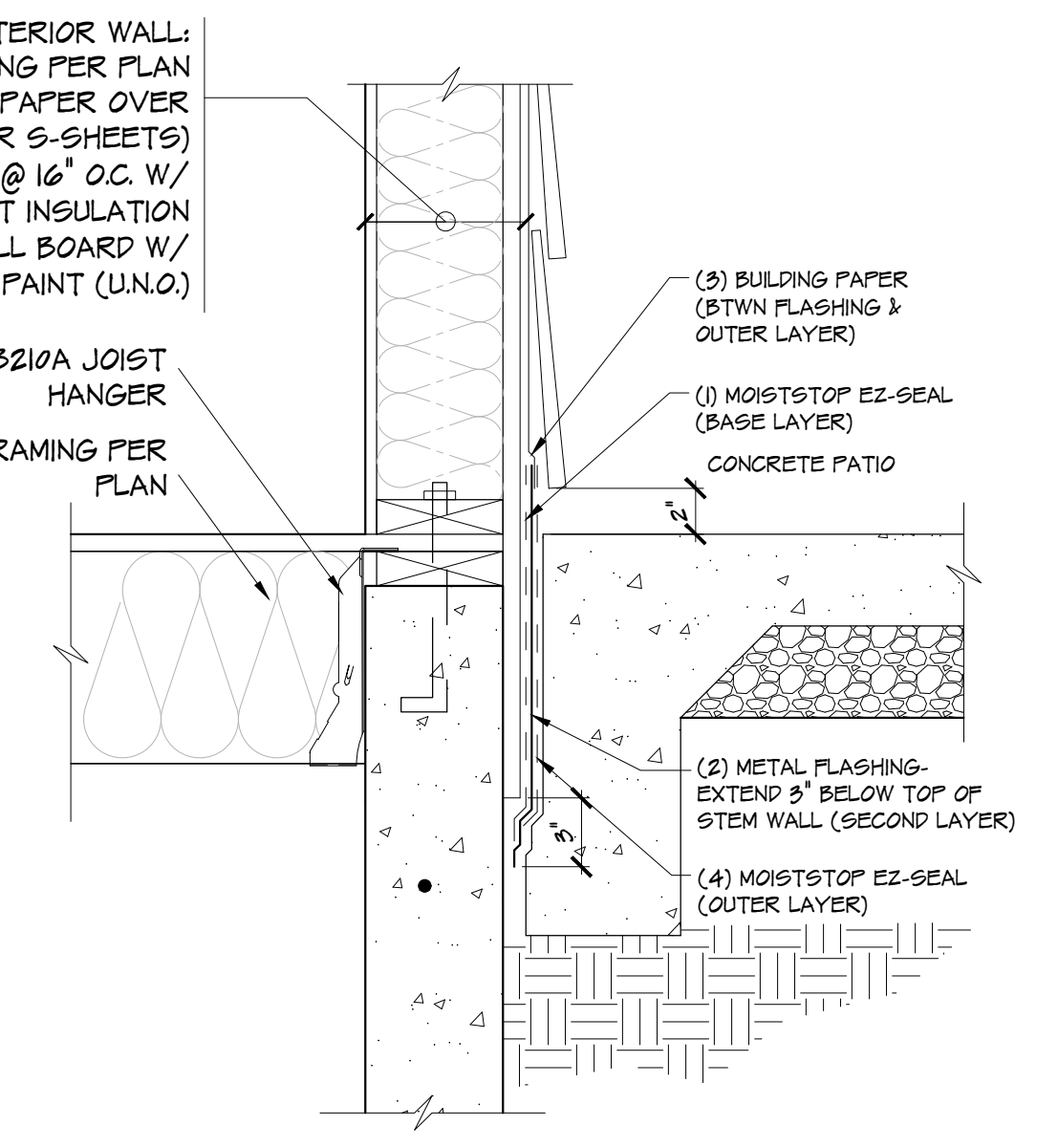
17 ROOF SCUPPER DRAIN
SCALE: 1" = 1'-0"



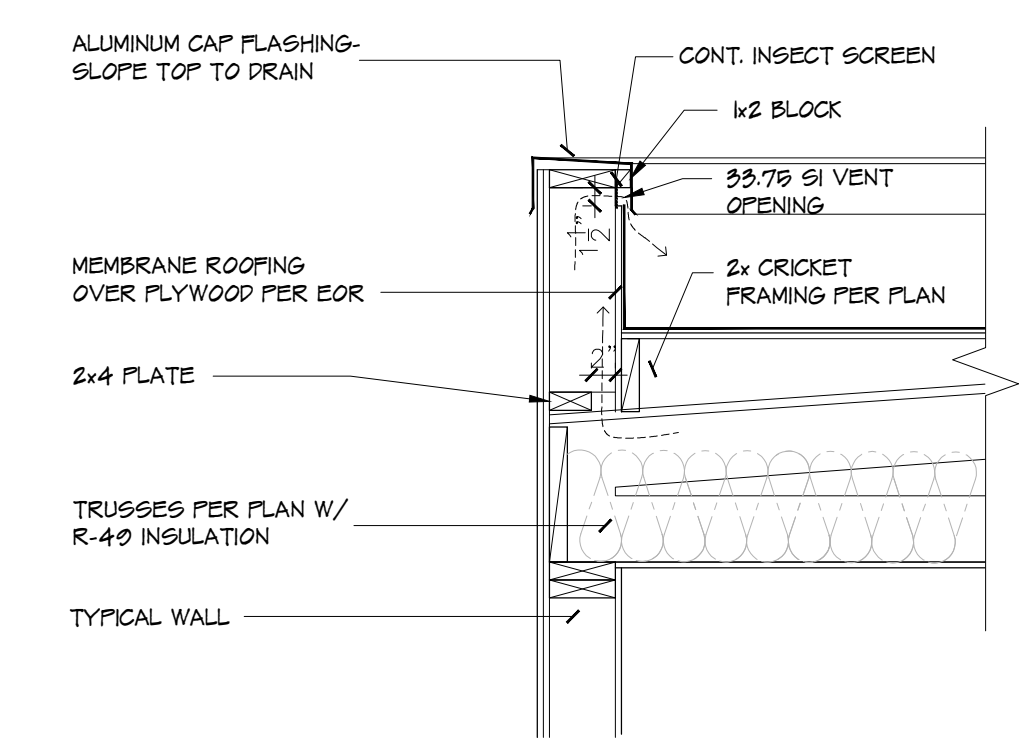
9 TYPICAL ISOLATED FOOTING
SCALE: 3/4" = 1'-0"



6 TYPICAL PATIO/ GARAGE
SCALE: 1" = 1'-0"



3 TYPICAL PATIO
SCALE: 1/2" = 1'-0"

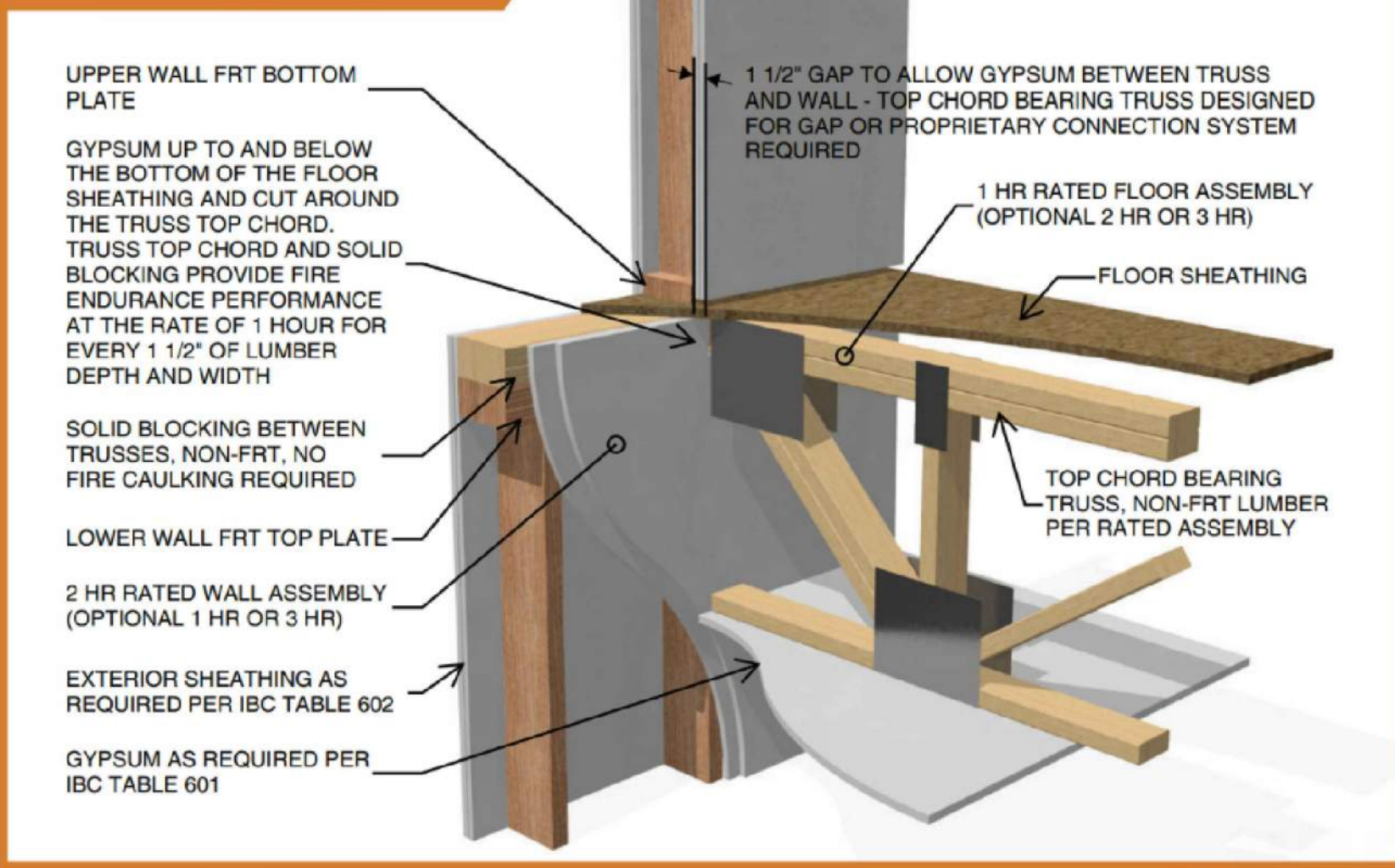


18 TYPICAL ROOF DETAIL
SCALE: 1/2" = 1'-0"

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09/28/2023

FIGURE 2 (optional)



5 TYPICAL 1 HR FIRE RATED WALL @ FLOOR FRAMING
SCALE: NTS

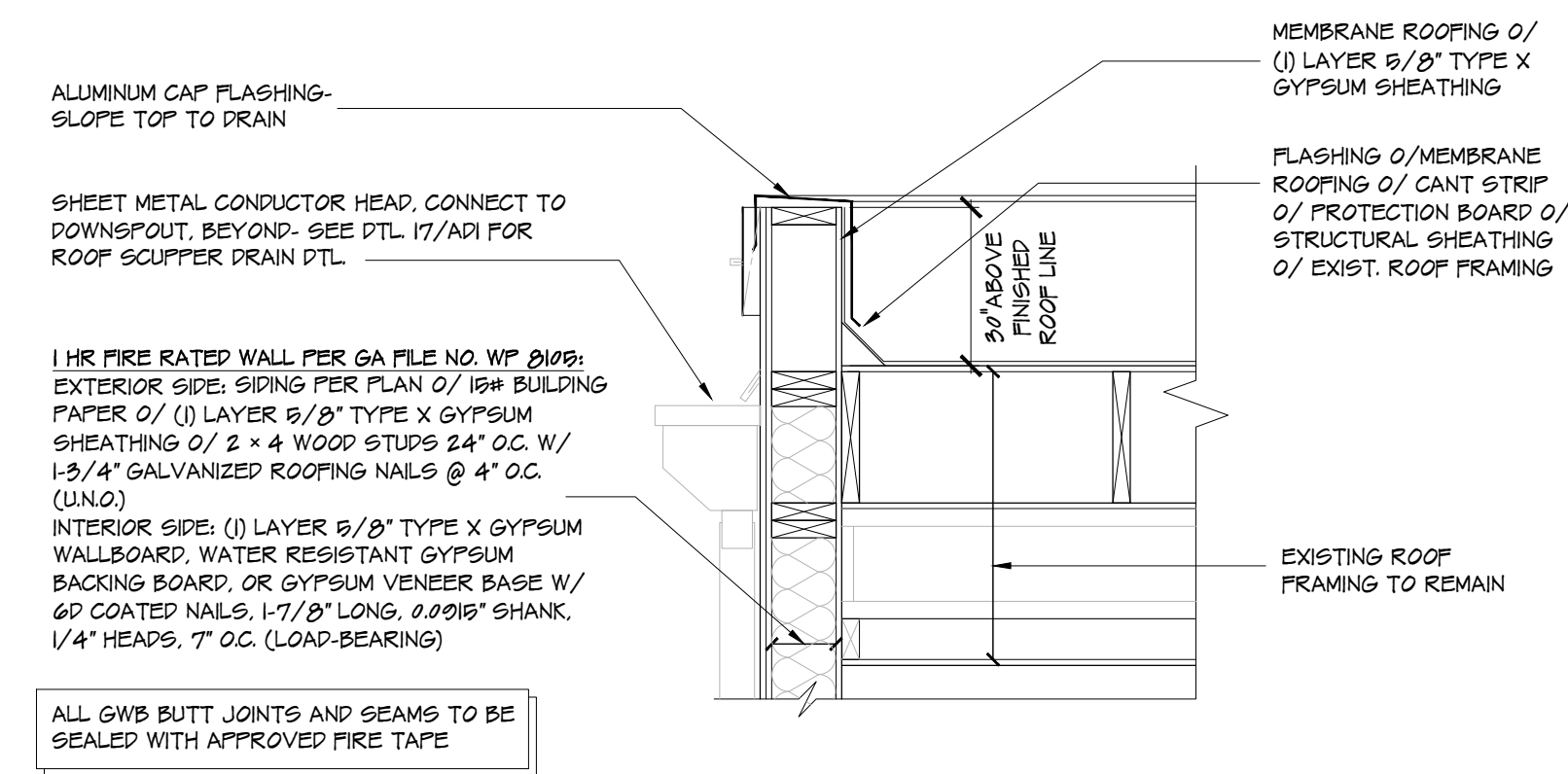
FLOOR-CEILING SYSTEMS, WOOD FRAMED			
GA FILE NO.	GENERIC	1 HOUR FIRE	
FC 5512			
GYPSUM BOARD, WOOD TRUSSES			
<p>Fire Design: Base layer 1/2" type X gypsum wallboard or gypsum veneer base applied perpendicular to wood trusses 24" o.c. with 1-1/4" Type S screws 24" o.c. Face layer 1/2" type X gypsum wallboard or gypsum veneer base applied perpendicular to trusses with 1-7/8" Type S screws 12" o.c. and 1-1/2" Type G screws 12" o.c. placed 3" back from either side of end joints. Joints offset 24" from base layer joints. Chord and web members fabricated from 2 x 4 lumber with 20 ga. steel connector plates having a minimum tooth length of 5/16". Plate design values based upon a safety factor of 4. Trusses have a minimum depth of 12". 19/32" T&G plywood with exterior glue applied at right angles to top of trusses with 6d common nails 6" o.c. Plywood end joints staggered 48".</p>			
		<p>Approx. Ceiling Weight: 4 psf (Fire) Fire Test: FM FC214 - 1-hour, 7-6-78</p>	
<p>NOTE: USE TYPE X GLASS MAT GYPSUM SHEATHING INSTEAD GYPSUM WALL BOARD AT SUFFIT CONDITION</p>			

6 TYPICAL 1 HR FIRE RATED FLOOR-CEILING SYSTEM
SCALE: NTS

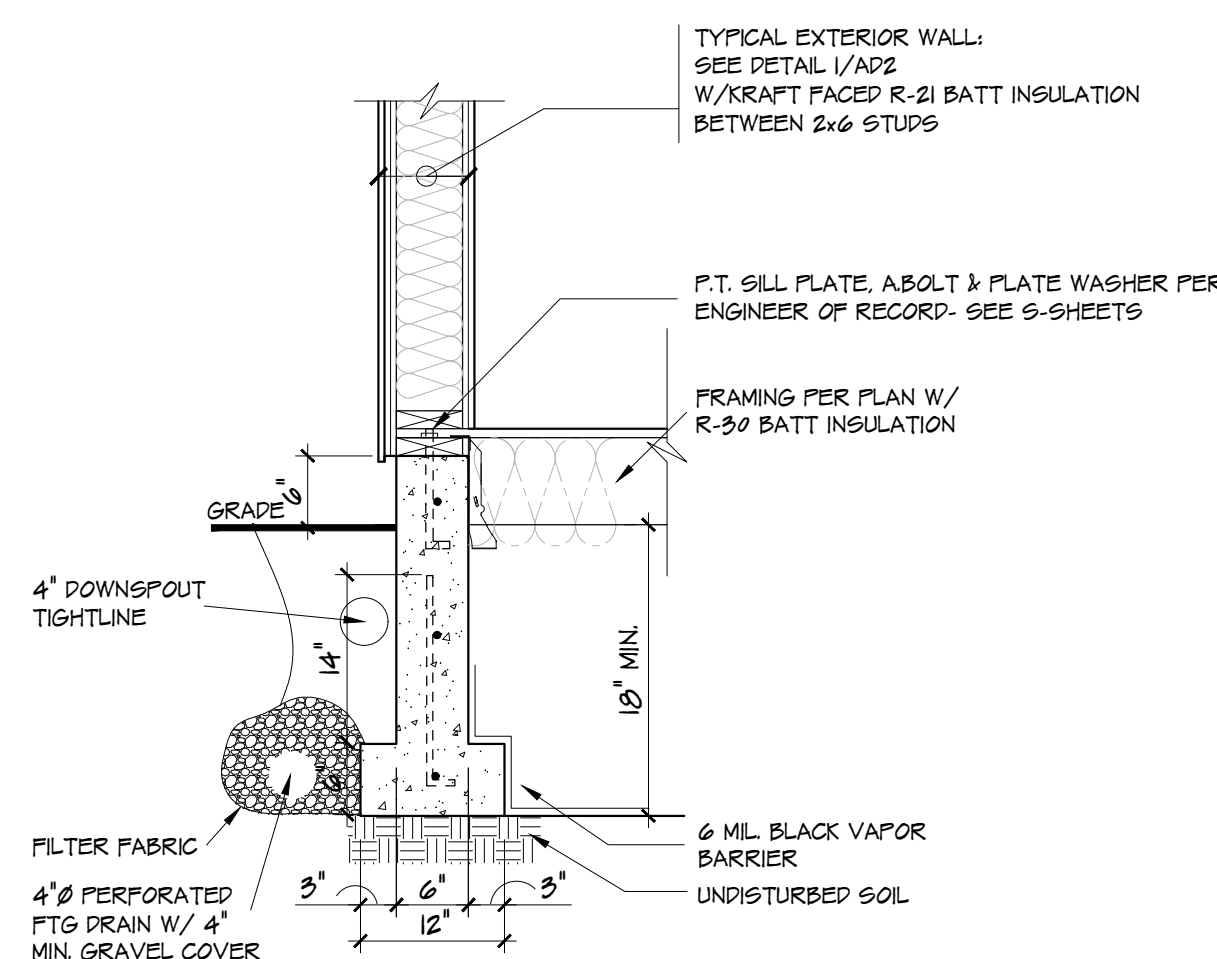
ROOF-CEILING SYSTEMS			
GA FILE NO.	PROPRIETARY	1 HOUR FIRE	
RC 2603			
WOOD TRUSSES, RESILIENT CHANNELS, INSULATION, DAMPER, GYPSUM BOARD			
<p>Fire Design: One layer 5/8" proprietary type X gypsum board or gypsum veneer base applied at right angles to resilient channels 12" o.c. with 1-1/8" Type S screws 8" o.c. Gypsum board end joints attached with screws 8" o.c. to additional pieces of channel 60" long located 3" back on either side of end joint. Resilient channels applied at right angles to bottom chord of pitched wood trusses 24" o.c. with 1-1/4" Type S or W screws. Optional glass fiber or mineral wool batt or loose fill insulation applied directly over gypsum board. Trusses supporting 15/32" plywood or OSB roof sheathing applied at right angles to trusses with construction adhesive and 6d ring shank nails 12" o.c. Optional ceiling damper.</p>			
<p>PROPRIETARY GYPSUM BOARD National Gypsum Company - 5/8" Gold Bond® Fire-Shield C™ Gypsum Board</p>			
		<p>Approx. Ceiling Weight: 3 psf (Fire) Fire Test: UL R3501, 00NK42686, 8-16-01, UL Design P533</p>	

GA FILE NO.	PROPRIETARY	1 HOUR FIRE	
RC 2604			
WOOD TRUSSES, RESILIENT CHANNELS, INSULATION, DAMPER, GYPSUM PANELS			
<p>Fire Design: One layer 5/8" proprietary type X gypsum panel applied at right angles to resilient channels 16" o.c. (12" o.c. when insulation is draped over channels) with 1" Type S screws 12" o.c. Gypsum panel end joints attached with screws 8" o.c. to additional pieces of channel 60" long located 3" back on either side of end joint. Resilient channels applied at right angles to bottom chord of pitched wood trusses 24" o.c. with 1-1/4" Type S or W screws. Glass fiber insulation secured to wood structural panels or draped over channels. Trusses supporting 15/32" wood structural panels applied at right angles to trusses with construction adhesive and 6d ring shank nails 12" o.c. Optional ceiling damper.</p>			
<p>PROPRIETARY GYPSUM PANEL United States Gypsum Company - 5/8" Sheetrock® Brand Firecode® C Panels</p>			
		<p>Approx. Ceiling Weight: 2.5 psf (Fire) Fire Test: UL R15858, 02NK24136, 3-20-03, UL Design P544, UL R15858, 02NK41925, 9-30-02, UL Design P531, UL R1319, 98NK41378, 11-20-98, UL Design P522, UL R13446, 10CA05196, 10-21-10, 4787948264, 5-25-17, UL Design P554</p>	

3 1 HR FIRE RATED ROOF ASSEMBLY
SCALE: NTS



7 FIRE RATED PARAPET ASSEMBLY
SCALE: 1-1/2" = 1'-0"



4 TYPICAL STEM WALL @ 1 HR FIRE RATED WALL
SCALE: 3/4" = 1'-0"

GA FILE NO.	GENERIC	1 HOUR FIRE	
WP 8105			
GYPSUM WALLBOARD, GYPSUM SHEATHING, WOOD STUDS			
<p>Fire Design: EXTERIOR SIDE: One layer 48" wide 5/8" type X gypsum sheathing applied parallel to 2 x 4 wood studs 24" o.c. with 1-3/4" galvanized roofing nails 4" o.c. at vertical joints and 7" o.c. at intermediate studs and top and bottom plates. Joints of gypsum sheathing may be left untreated. Exterior cladding to be attached through sheathing to studs. INTERIOR SIDE: One layer 5/8" type X gypsum wallboard, water-resistant gypsum backing board, or gypsum veneer base applied parallel or at right angles to studs with 6d coated nails, 1-7/8" long, 0.0915" shank, 1/4" heads, 7" o.c. (LOAD-BEARING)</p>			
		<p>Thickness: 4-3/4" without cladding (Fire) Approx. Weight: 6 psf without cladding (Fire) Fire Test: See WP 3510 (UL R3501-47, -48, 9-17-65, UL Design U309, UL R1319-129, 7-22-70, UL Design U314)</p>	
<p>NOTE: USE 2X6 WOOD STUDS IN LIEU OF 2X4</p>			

INSULATION IN WALLS – When not specified as a component of a fire-tested wall or partition system, either faced or unfaced mineral wool, glass fiber, or cellulose fiber insulation of a thickness not exceeding that of the cavity depth shall be permitted to be added within the stud cavity. Adding fibrous insulation may improve the STC.

STUD SIZES AND DEPTHS – Greater stud sizes (depths) shall be permitted to be used in metal- or wood-stud systems. Metal studs of greater mil thickness than those tested for fire performance shall be permitted. The assigned fire rating of any load-bearing system shall also apply to the same system when used as a nonload-bearing system. Indicated stud spacings are maximums for fire performance of the system. Greater stud depth may improve the STC; however, increasing the steel thickness of the stud or decreasing stud spacing may reduce the STC.

1 TYPICAL 1 HR FIRE RATED EXTERIOR WALL
SCALE: NTS

SHAFT WALLS			
GA FILE NO.	PROPRIETARY	1 HOUR FIRE	50 to 54 STC SOUND
WP 6751			
GYPSUM BOARD, STEEL STUDS			
<p>Fire Design: One layer 2" x 24" proprietary type X gypsum panels inserted between 2-1/2" floor and ceiling J runners with tab-flange section of 2-1/2" steel C-H, C-T, or I studs between panels. OPPOSITE SIDE: One layer 5/8" proprietary type X gypsum board or gypsum veneer base applied parallel or at right angles to studs with 1" Type S screws 12" o.c. (NLB)</p>			
		<p>Thickness: 3-1/8" (Fire) 6-5/8" (Sound) Approx. Weight: 7 psf (Fire) 7.5 psf (Sound) Fire Test: UL R3501, 93NK22748, 9-15-93, 97NK24041, 7-14-97, 13NK02062, 1-14-13, UL Design W419, System A, UL Design U499, FM WP-755, 2-27-85 Sound Test: NGC 2019014, 2-19-19</p>	
<p>PROPRIETARY GYPSUM BOARD National Gypsum Company - 5/8" Gold Bond® Fire-Shield® Gypsum Board - 1" Gold Bond® Shaftliner XP®</p>			

2 SHAFT WALL DTLS.
SCALE: NTS

Reviewed For Code Compliance

David Spencer, CBO
09/28/2023

GENERAL STRUCTURAL NOTES

BUILDING CODE
2018 INTERNATIONAL BUILDING CODE

DESIGN METHOD
ALLOWABLE STRESS DESIGN (ASD)

FLOOR LOADS
DEAD LOAD: **15 psf**
LIVE LOAD: **40 psf**
DECK LIVE LOAD: **60 psf**

ROOF LOADS
DEAD LOAD: **15 psf**
LIVE LOAD (SNOW): **25 psf**

WIND DESIGN DATA
1. BASIC WIND SPEED: **110 MPH**
2. RISK CATEGORY: **II**
3. WIND EXPOSURE: **B**
4. $K_{zt} = 1.0$
5. ANALYSIS PROCEDURE: ENVELOPE SIMPLIFIED

SEISMIC DESIGN DATA
1. SEISMIC IMPORTANCE FACTOR: **1.0**
2. RISK CATEGORY: **II**
3. SPECTRAL RESPONSE ACCEL (S_s): **1.167**
4. SITE CLASS: **D (ASSUMED)**
5. SPECTRAL RESPONSE COEFF (S_{DS}): **0.804**
6. SEISMIC DESIGN CATEGORY: **D**
7. LFRS: WOOD SHEATHED SHEARWALLS
8. SEISMIC RESPONSE COEFFICIENT (C_s): **0.124**
9. RESPONSE MODIFICATION FACTOR (R): **6.5**
10. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

GENERAL

1. ANY DISCREPANCY FOUND AMONG THE DRAWINGS, THESE NOTES, AND THE SITE CONDITIONS SHALL BE REPORTED TO THE DESIGNER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTORS RISK.

2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CONTRACT DRAWINGS.

3. DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING. THE CONTRACTOR SHALL PROVIDE ERECTION BRACING, FORMWORK, AND TEMPORARY CONSTRUCTION SHORING IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. ANY DEVIATION MUST BE APPROVED IN WRITING PRIOR TO ERECTION.

4. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.

5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION PROCEDURES.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.

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

8. ALL DETAILS DESIGNATED AS STANDARD OR TYPICAL SHALL OCCUR IN ADDITION TO ANY OTHER SPECIFIC DETAIL CALLED OUT.

9. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ENGINEER SO THE PROPER REVISIONS MAY BE MADE. MODIFICATIONS TO CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.

FOUNDATIONS

1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATION IN THE **INTERNATIONAL** BUILDING CODE TABLE 1804.2. FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 18 OF THIS CODE.

2. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES:

ALLOW. SOIL BEARING	1500 PSF
SOIL FRICTION	.30
EQUIV. FLUID PRESSURES	
ACTIVE PRESSURE	35 PCF
AT REST PRESSURE	50 PCF
PASSIVE PRESSURE	250 PCF

3. ALL FOOTINGS SHALL BE FOUNDED AT LEAST 12" BELOW THE UNDISTURBED GROUND SURFACE OR TO FROST DEPTH. ALL FOOTINGS SHALL BE FOUNDED ON COMPACTED FILL OR UNDISTURBED NATURAL GRADE UNLESS OTHERWISE NOTED.

4. COMPACTION: MATERIAL FOR FILLING AND BACKFILLING SHALL CONSIST OF THE EXCAVATED MATERIAL AND/OR IMPORTED BORROW AND SHALL BE FREE OF ORGANIC MATTER, TRASH, LUMBER, OR OTHER DEBRIS. ALL WALLS SHALL BE ADEQUATELY BRACED PRIOR TO BACKFILLING. FILL AND BACKFILL SHALL BE DEPOSITED IN LAYERS NOT TO EXCEED 8 INCHES THICK, PROPERLY MOISTENED TO APPROXIMATE OPTIMUM REQUIREMENTS AND THOROUGHLY ROLLED OR COMPACTED WITH APPROVED EQUIPMENT IN SUCH A MANNER AND EXTENT AS TO PRODUCE A RELATIVE COMPACTION OF 90% OF MAXIMUM POSSIBLE DENSITY AS DETERMINED BY ASTM D1557. HAND TAMPERS SHALL WEIGH AT LEAST 50 POUNDS EACH AND SHALL HAVE A FACE AREA NOT IN EXCESS OF 64 SQUARE INCHES. HAND TAMPERS MAY BE OPERATED EITHER MANUALLY OR MECHANICALLY AND SHALL BE USED WHERE LARGER POWER DRIVEN COMPACTION EQUIPMENT CANNOT BE USED.

CONCRETE

1. ALL CONCRETE UNLESS OTHERWISE NOTED SHALL BE REGULAR WEIGHT HARD ROCK TYPE (150 PCF) AGGREGATES SHALL CONFORM TO ASTM C33 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.05%.

2. ALL CONCRETE DESIGN IS BASED ON A 28 DAY COMPRESSIVE STRENGTH (f_c) OF 2500 PSI. WHERE 3000 PSI CONCRETE IS REQUIRED BY THE BUILDING DEPARTMENT FOR WEATHERING PURPOSES ONLY, NO SPECIAL INSPECTION IS REQUIRED.

3. CEMENT SHALL CONFORM TO ASTM C150, TYPE I, CSA NORMAL.

4. MAXIMUM SLUMP SHALL NOT EXCEED 4 INCHES IN FLATWORK.

5. PLACEMENT OF CONCRETE SHALL CONFORM WITH ACI 301.

6. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE (5) DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.

7. POUR JOINTS CAN BE USED TO MINIMIZE EFFECTS OF SHRINKAGE AS WELL AS PLACED AT POINTS OF LOW STRESS. RECOMMENDED MAXIMUM AREA OF POUR JOINTS IS 400 SF.

8. MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL FOR FORMED WORK SHALL BE AS FOLLOWS:

 INTERIOR WALL: 3/4"
 EXT. WALLS, EXPOSED TO WEATHER: 1 1/2"
 EXPOSED TO EARTH OR WEATHER (#5 OR SMALLER): 1 1/2"

*NOTE: CONCRETE CAST AGAINST GROUND SHALL HAVE 3" MIN. COVERAGE

9. PIPES AND CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED.

10. CONCRETE MIXES SHALL BE PROVIDED IN ACCORDANCE WITH ACI 318 (WHEN STRENGTH DATA FROM TRIAL BATCHES OR FIELD EXPERIENCE ARE NOT AVAILABLE). ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F_c) OF 2500 PSI, WITH A MINIMUM CEMENT CONTENT OF 470 LBS/CUBIC YARD (5 SACKS PER CUBIC YARD). MIXES SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. NO MORE THAN A 1" PLUS TOLERANCE SHALL BE ALLOWED.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 ($f_y = 60$ KSI) FOR BAR SIZES NO. 4 & LARGER, GRADE 40 ($f_y = 40$ KSI) FOR NO. 3 BARS.

2. ALL REINFORCING STEEL SHALL BE LAPPED AS NOTED ON THE PLANS. WHERE LAP OR SPLICE LOCATIONS ARE NOT SPECIFICALLY INDICATED ON THE CONSTRUCTION DOCUMENTS, LAPS AND/OR SPLICES SHALL BE 42 BAR DIA AND BE WELL STAGGERED. NO MORE THAN 50% OF HORIZONTAL OR VERTICAL BARS SHALL BE SPLICED AT ONE LOCATION.

3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185 AND SHALL BE 6x6 W1.4xW1.4 UNLESS OTHERWISE NOTED. LAP REINFORCEMENT 6" MINIMUM.

4. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED. SLAB ON GRADE REINFORCEMENT SHALL BE PLACED AT MID-DEPTH OF SLAB AND SHALL BE HELD SECURELY IN PLACE WITH MECHANICAL DEVICES DURING PLACING OF THE CONCRETE.

FRAMING LUMBER

1. FRAMING LUMBER SHALL BE DOUG-FIR NO. 2 FOR STUDS AND JOISTS, DOUG-FIR NO. 1. FOR BEAMS AND POSTS. GRADES ARE TYPICAL UNLESS OTHERWISE NOTED ON PLANS. LUMBER TO BE GRADE MARKED PER WCLIB SPECIFICATIONS.

2. GLU-LAMINATED MEMBERS SHALL BE 24F-V4 (DF-L) FOR SINGLE SPAN AND 24F-V8 FOR CONTINUOUS SPAN & CANTILEVERED.

3. STRUCTURAL SHEATHING SHALL BE APA RATED PLYWOOD OR OSB, EXPOSURE 1 SHEATHING CONFORMING TO EITHER COMMERCIAL STANDARDS P51-83, APA PRP-108, OR VOLUNTARY PRODUCT STANDARD PSE-92. PROVIDE A MINIMUM OF 3/8" EDGE DISTANCE ON ALL NAILS AND 1/8" EXPANSION JOINT BETWEEN ALL PANEL EDGES. MINIMUM SHEATHING REQUIREMENTS ARE AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE PLANS:

4. NAILING SHALL CONFORM TO TABLE 2304.9.1 OF THE INTERNATIONAL BUILDING CODE UNLESS NOTED OTHERWISE. USE COMMON NAILS THROUGHOUT UNLESS NOTED OTHERWISE.

5. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

6. PROVIDE PROPERLY SIZED WASHERS UNDER HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

7. PROVIDE 3"x3"x0.229" WASHERS AT ALL ANCHOR BOLTS.

8. BOLT HOLES SHALL BE NOMINAL DIAMETER OF BOLT PLUS 1/16" UNLESS NOTED OTHERWISE. LAG BOLT PILOT HOLES SHALL BE PRE-DRILLED TO 60% OF THE NOMINAL DIAMETER OF THE LAG BOLT UNLESS NOTED OTHERWISE.

9. ALL SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WITH 3/8" MINIMUM DIAMETER BOLTS SPACED AT A MAXIMUM OF 48" ON CENTER. BOLTS MUST BE EMBEDDED A MINIMUM OF 7" INTO CONCRETE OR MASONRY. SEE PLANS AND DETAILS FOR SPECIFIC REQUIREMENTS WHERE APPLICABLE.

10. PROVIDE DOUBLE JOIST UNDER ALL PARALLEL PARTITION WALLS AND SOLID BLOCKING UNDER PERPENDICULAR PARTITION WALLS.

11. WHERE LEDGERS, SILL PLATES, POSTS, OR STUDS ARE IN DIRECT CONTACT WITH CONCRETE OR MASONRY, USE PRESERVE TREATED LUMBER OR PROVIDE GRACE VYCOR PLUS BARRIER BETWEEN WOOD MEMBERS AND CONCRETE OR MASONRY.

12. ALL FASTENERS IN CONTACT WITH PRESERVE TREATED LUMBER OR EXPOSED TO THE ELEMENTS SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.

GLUED-LAMINATED TIMBER

1. ADHESIVE SHALL BE FOR WET USE.

2. LAMINATIONS SHALL BE OF DOUGLAS FIR/WESTER LARCH, COMBINATION 24F-V4 FOR SIMPLE SPAN BEAMS AND 24F-V8 FOR CONTINUOUS MULTIPLE SPAN AND CANTILEVERED BEAMS, FABRICATED IN ACCORDANCE WITH AITC A190.1 AND ASTM D 3737.

3. FABRICATION SHALL BE BY A LICENSED FABRICATOR.

4. GLULAM BEAMS EXPOSED TO WEATHER SHALL BE PROPERLY SEALED OR FLASHED TO PREVENT DECAY.

PREFABRICATED WOOD JOISTS/TRUSSES

1. THE JOISTS/TRUSSES SHALL BE MANUFACTURED BY TRUS JOIST, OR APPROVED EQUAL AND SHALL BE FABRICATED IN ACCORDANCE WITH ASTM D 5055. (SUBSTITUTIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER IN WRITING, PRIOR TO INSTALLATION)

2. SEE PLANS FOR SIZE, TYPE, AND LOCATIONS OF JOISTS/TRUSSES.

3. THE JOISTS/TRUSSES ARE TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE PLANS AND THE MANUFACTURER'S INSTALLATION REQUIREMENTS AND RECOMMENDATIONS. CONTRACTOR SHALL GIVE NOTIFICATION PRIOR TO ENCLOSING THE JOISTS/TRUSSES TO PROVIDE AN OPPORTUNITY FOR INSPECTION OF THE INSTALLATION. PROVIDE BRIDGING, CONTINUOUS LATERAL BRACING, AND DIAGONAL BRACING BETWEEN THE JOISTS/TRUSSES PER THE MANUFACTURER'S RECOMMENDATIONS.


4. DRAWINGS AND CALCULATIONS SHALL BE STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER. THE DRAWINGS SHALL SHOW ALL CRITICAL DIMENSIONS AS WELL AS THE LOADS THE JOISTS/TRUSSES ARE DESIGNED TO SUPPORT. THE JOISTS/TRUSSES ARE TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE PLANS, APPROVED FABRICATOR DRAWINGS, AND INSTALLATION SUGGESTIONS.

DEFERRED SUBMITTALS

CONTRACTOR TO SUBMIT DRAWINGS & CALCULATIONS BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT TO ARCHITECT/ENGINEER BEFORE SUBMITTING TO JURISDICTION FOR REVIEW & PERMITTING.

ITEM
1. WOOD FLOOR & ROOF TRUSSES

Reviewed For Code Compliance


David Spencer, CBO
09/28/2023

ABBREVIATION LIST

A.B.	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION ANCHORAGE
ANCH	ARCHITECTURAL
ASD	ALLOWABLE STRESS DESIGN
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BM	BEAM
BP	BASE PLATE
BRG	BEARING
CIP	CAST-IN-PLACE
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONT	CONTINUOUS
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DL	DEAD LOAD
DP	DEEP
EA	EACH
EF	EACH FACE
EL	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
(E)	EXISTING
FLR	FLOOR
FS	FAR SIDE
FT	FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLU-LAMINATED BEAM
GYP	GYP SUM
HF	HEMLOCK FIR
HORIZ	HORIZONTAL
INCL	INCLUDE
K	KILOPOUND
L	ANGLE
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MISC	MISCELLANEOUS
MIN	MINIMUM
NS	NEAR SIDE
NTS	NOT TO SCALE
OF	OUTSIDE FACE
PCF	POUNDS PER CUBIC FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
QTY	QUANTITY
REINF	REINFORCING
RF	ROOF
SCHED	SCHEDULE
SF	SQUARE FOOT
SHTG	SHEATHING
SIM	SIMILAR
SLV	SHORT LEG VERTICAL
SPECS	SPECIFICATIONS
SS	STAINLESS STEEL
STD	STANDARD
STRUCT	STRUCTURAL
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TOB	TOP OF BEAM
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TYP	TYPICAL
ULT	ULTIMATE
U.N.O	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
WF	WIDE FLANGE
W/O	WITHOUT
WT	WEIGHT
WWF	WELDED WIRE FABRIC



Gass Residence

4471 Tolt Ave
Carnation, WA 98014

Owner:

Gass Family

Architect/Designer:

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PO Box 82581,
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Structural Engineer:

Nabil Kausal-Hayes, PE



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Revisions:

Revision	Issue Date
2	8/1/23

Issue Set: Permit Response

Issue Date: September 27th, 2023

Drawn By: XCH

Checked By: NKH

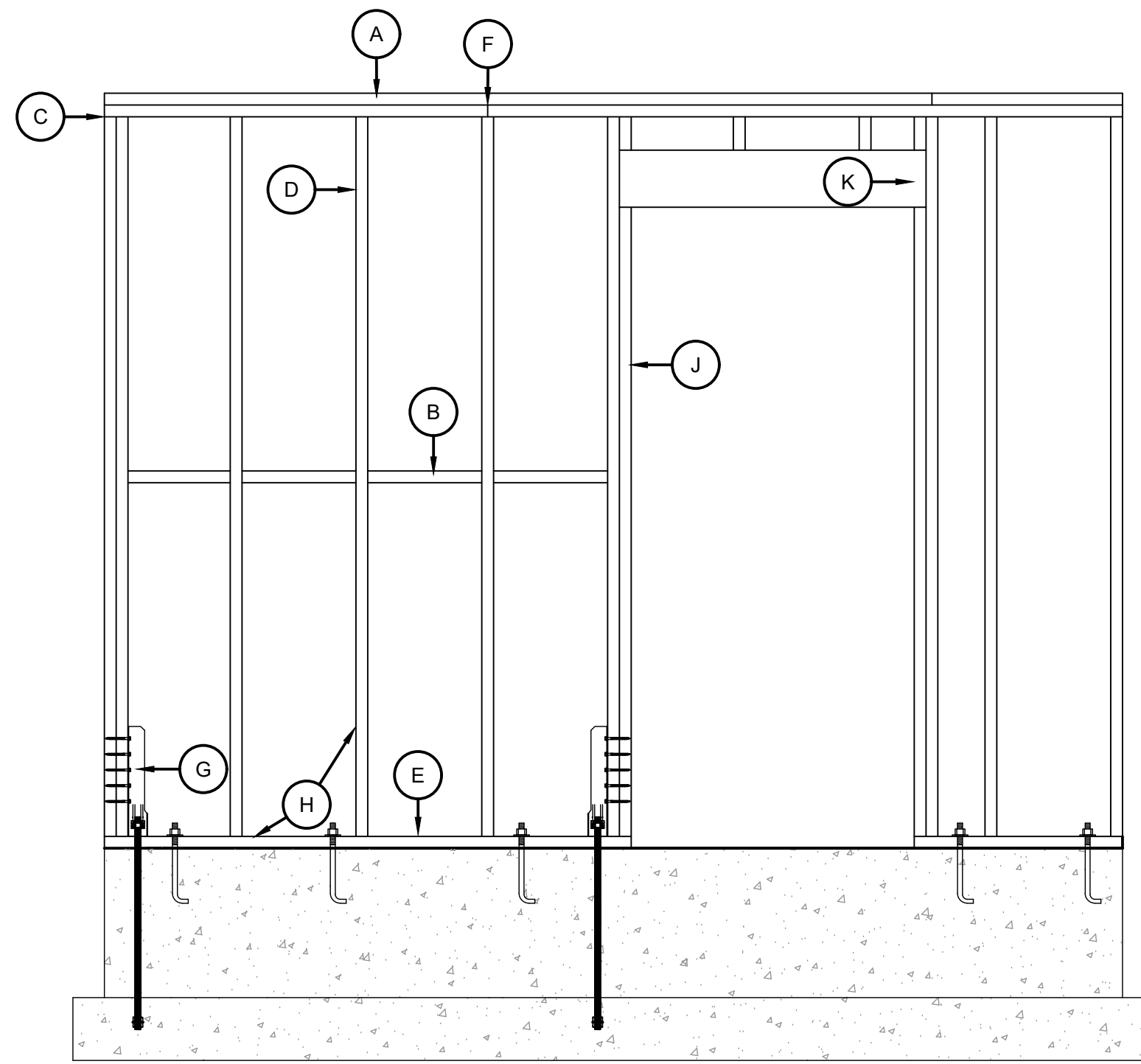
Sheet Name:

GENERAL STRUCTURAL NOTES

Sheet:

S1

Job Number: 20-172



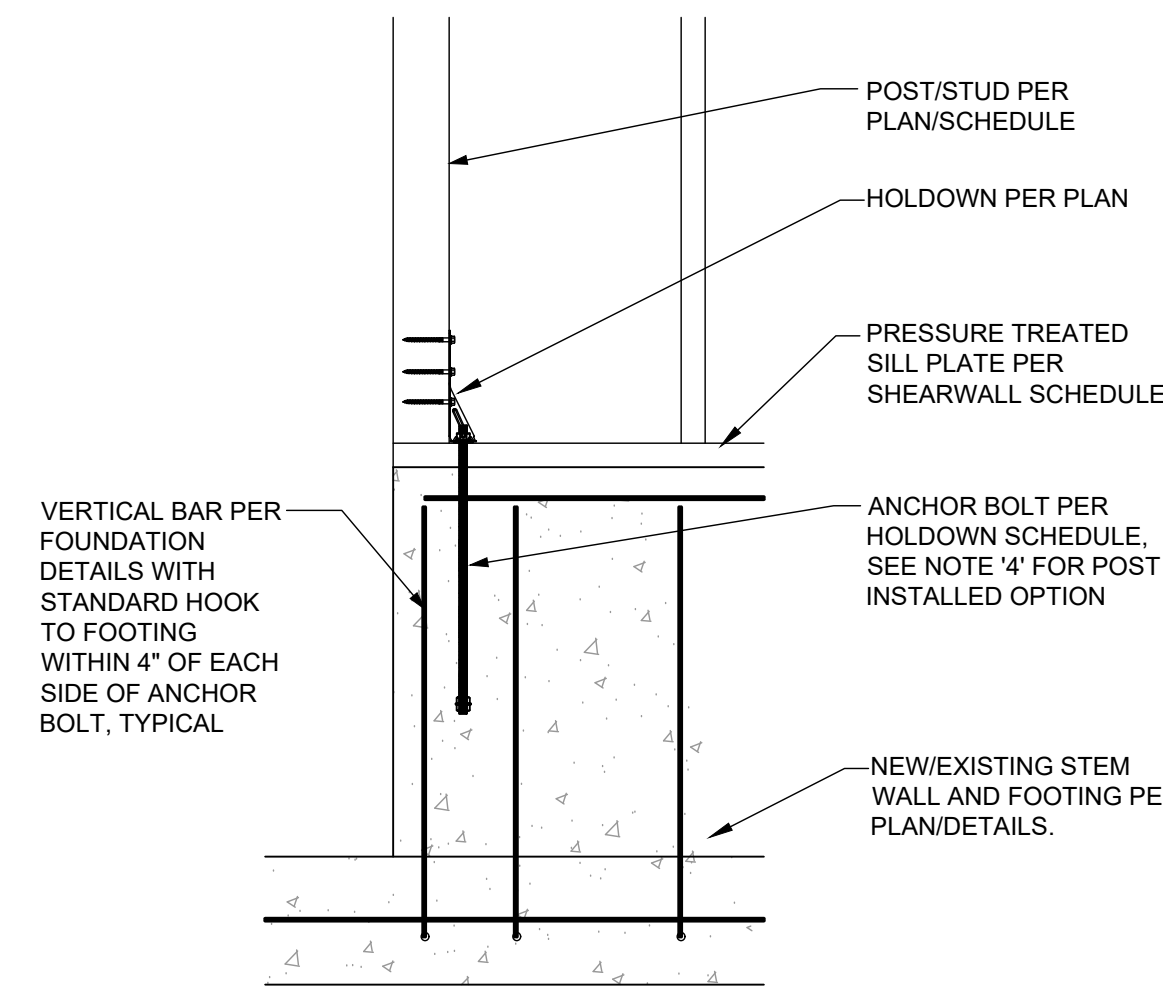
- A DOUBLE TOP PLATE W/ EDGE NAILING (STAGGER)
- B SHEARWALL EDGE NAILING AT ALL PANEL EDGES. BLOCKING AT ALL PANEL EDGES WHERE APPLICABLE.
- C EDGE NAILING TO HOLDDOWN POST (FULL HEIGHT) STAGGER INTO DOUBLE STUDS
- D STUDS AT 16" ON CENTER
- E PRESSURE TREATED SILL PLATE WITH EDGE NAILING AND ANCHOR BOLTS PER SHEARWALL SCHEDULE.
- F TOP PLATE SPLICE NAILING TO BE (12) 10d COMMONS (MIN). LAP 48" MINIMUM. CENTER SPLICE ON STUD.
- G HOLDDOWN PER SCHEDULE AND PLAN
- H COORDINATE ALL STUD AND PLATE SIZES w/ SHEARWALL SCHEDULE REQUIREMENTS
- I EDGE NAILING TO POSTS, TRIM STUDS, AND KING STUDS
- J BEARING STUD FOR HEADER

1 TYPICAL SHEARWALL ELEVATION
S2 NTS

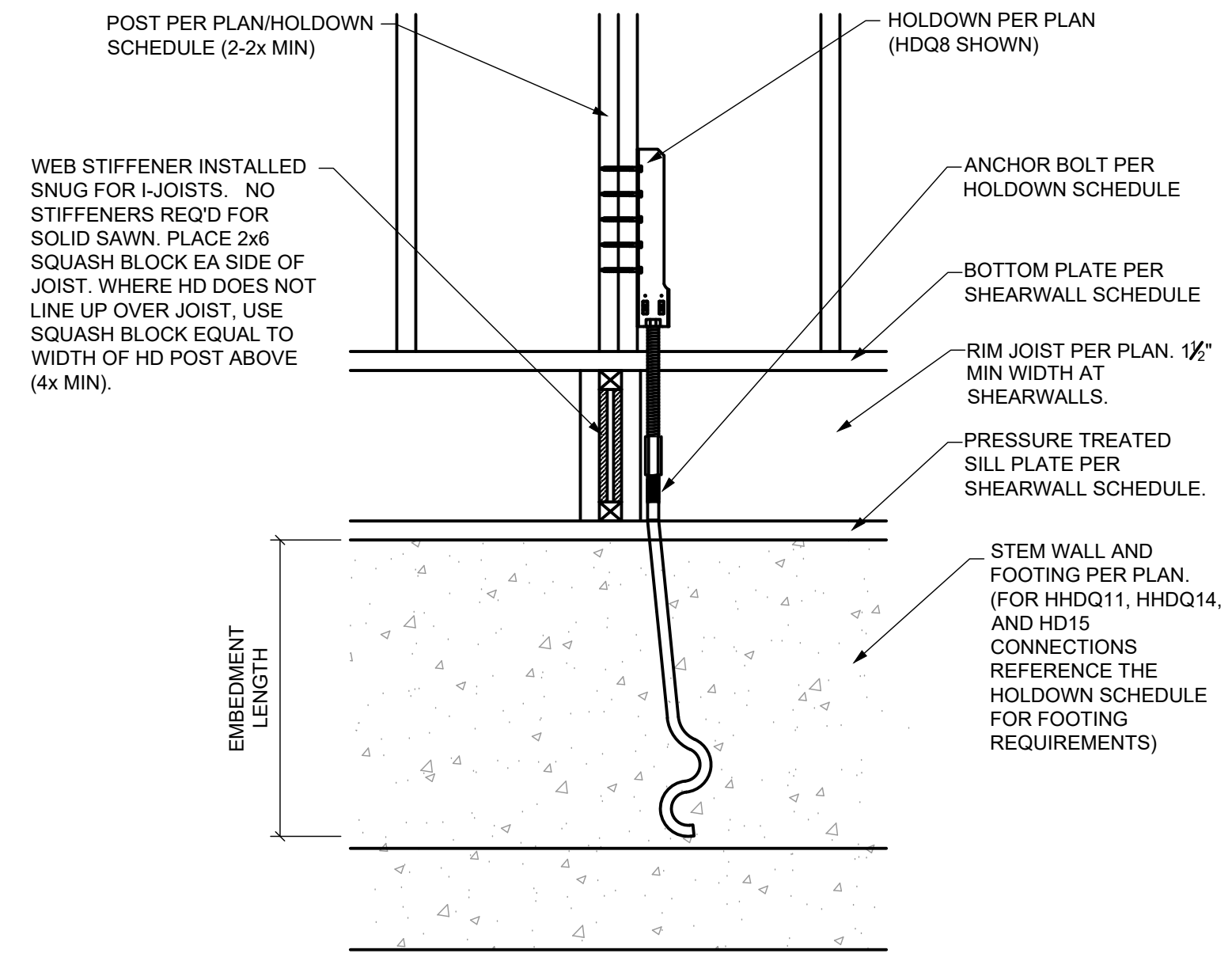
SHEARWALL SCHEDULE								
SHEARWALL MARK	SHEATHING MATERIAL	FASTENER TYPE AND SIZE	PANEL EDGE NAILING	PANEL FIELD NAILING	SILL PLATE MATERIAL AND ANCHOR BOLT SIZE AND SPACING (MIN EMBED 7")	BOTTOM PLATE SIZE AND CONNECTION	ALLOWABLE CAPACITY FOR SEISMIC LOADS	ALLOWABLE CAPACITY FOR WIND LOADS
SW-6	1/2" OSB OR PLYWOOD SHEATHING ONE FACE	10d COMMON NAIL (1-1/2" MIN PENETRATION INTO FRAMING MEMBERS)	6" O.C.	12" O.C.	PT 2x SILL PLATE w/ 1/2" Ø AB @ 36" O.C.	2x BOTTOM PLATE w/ 16d AT 6" O.C. INTO RIM JOIST/BLOCKING	310 PLF	435 PLF
SW-4			4" O.C.		PT 2x SILL PLATE w/ 1/2" Ø AB @ 24" O.C.	2x BOTTOM PLATE w/ 16d AT 4" O.C. INTO RIM JOIST/BLOCKING	460 PLF	645 PLF
SW-3			3" O.C.		PT 3x SILL PLATE w/ 1/2" Ø AB @ 20" O.C.	3x BOTTOM PLATE w/ 16d AT 4" O.C. INTO RIM JOIST/BLOCKING	600 PLF	840 PLF
SW-2			2" O.C.		PT 3x SILL PLATE w/ 1/2" Ø AB @ 14" O.C.	3x BOTTOM PLATE w/ (2) ROWS OF SIMPSON 6" SDW SCREWS AT 6" O.C. INTO RIM JOIST AND BLOCKING	770 PLF	1077 PLF
PFH	PORTAL FRAME WITH HOLDDOWNS PER DETAIL 5/S3							

SHEARWALL NOTES

- ALL STUDS, BLOCKING, TOP AND BOTTOM PLATES SHALL BE DOUG-FIR NO. 2 UNLESS NOTED OTHERWISE ON PLANS. ALL SHEATHING EDGES MUST BE BACKED WITH 2x OR WIDER FRAMING (SEE NOTE #3).
- SHEATHING MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY. ALL SHEARWALL SHEATHING MUST EXTEND TO THE OUTSIDE EDGE OF ALL HOLDDOWN POSTS AND CORNERS, AND TO THE INSIDE EDGE OF FRAMING AROUND OPENINGS.
- WHERE SHEATHING NAILING IS SHEARWALL TYPE SW-3 AND GREATER, ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN A SINGLE 3-INCH NOMINAL MEMBER. ADDITIONALLY, WHERE SHEARWALLS ARE SHEATHED ON BOTH FACES, ALL STUDS AND PLATES RECEIVING EDGE NAILING FROM BOTH FACES MUST BE A SINGLE 3-INCH NOMINAL MEMBER OR PANEL JOINTS MUST BE OFFSET. (2)2x MAY BE SUBSTITUTED FOR A SINGLE 3x MEMBER PROVIDED THE STUDS ARE STITCH NAILED TOGETHER w/ 10d NAILS STAGGERED AT 6" O.C. FROM EACH SIDE.
- SHEARWALL NAILING CRITERIA IS BASED ON TABLE 4.2A OF THE AF&PA SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC. VALUES ARE BASED ON OSB OR PLYWOOD SHEATHING w/ DOUG-FIR NO. 2 FRAMING AND COMMON NAILS.
- HOLDDOWNS AND OTHER CONNECTIONS MAY BE REQUIRED AT THE ENDS OF MANY SHEARWALLS. SIZES AND LOCATIONS OF THESE CONNECTORS ARE INDICATED ON THE PLANS. REFER TO THE APPROPRIATE DETAILS AND/OR HOLDDOWN SCHEDULE FOR ADDITIONAL INFORMATION REGARDING ANCHOR BOLTS, EMBEDMENT LENGTH, ETC. WHERE (2) 2xS ARE USED AS A HOLDDOWN POST, SHEARWALL EDGE NAILING MUST BE STAGGERED INTO EACH MEMBER OF THE POST.
- ANCHOR BOLTS MUST BE EMBEDDED A MINIMUM OF 7" INTO CONCRETE OR GROUTED CMU, AND SHALL BE PLACED TO PROVIDE A MINIMUM OF 2" COVER. PROVIDE 3" COVER FOR CONCRETE CAST AGAINST SOIL.
- ALL MACHINE BOLTS SHALL BE ASTM A307 OR BETTER. HILTI KWIK BOLTS/SIMPSON TITEN HD BOLTS OF THE SAME DIAMETER AS SHOWN IN THE SHEARWALL SCHEDULE MAY BE SUBSTITUTED FOR ANCHOR BOLTS INTO EXISTING CONCRETE. BOLTS SHALL BE EMBEDDED A MINIMUM OF 3x INTO EXISTING CONCRETE.
- ALL NAILS AND CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD (EXCEPT FOR BORITE TREATED WOOD) MUST BE HOT DIPPED GALVANIZED OR STAINLESS STEEL TO RESIST CORROSION.
- NAILS MUST BE STAGGERED WHEN SPACED AT 2" O.C.
- PROVIDE A MINIMUM OF 3" x 3" x 0.229" PLATE WASHERS AT ALL ANCHOR BOLTS. THE EDGE OF THE PLATE WASHER MUST BE LOCATED NO MORE THAN 1/2" FROM THE INSIDE FACE OF THE SHEARWALL SHEATHING. FOR SHEARWALLS SHEATHED ON BOTH FACES, SQUARE PLATE WASHERS SHALL HAVE A MINIMUM SQUARE DIMENSION OF SILL PLATE WIDTH MINUS 1". (E.G. 4.5" x 4.5" x 0.229" WASHER FOR 3x6 SILL PLATE.)

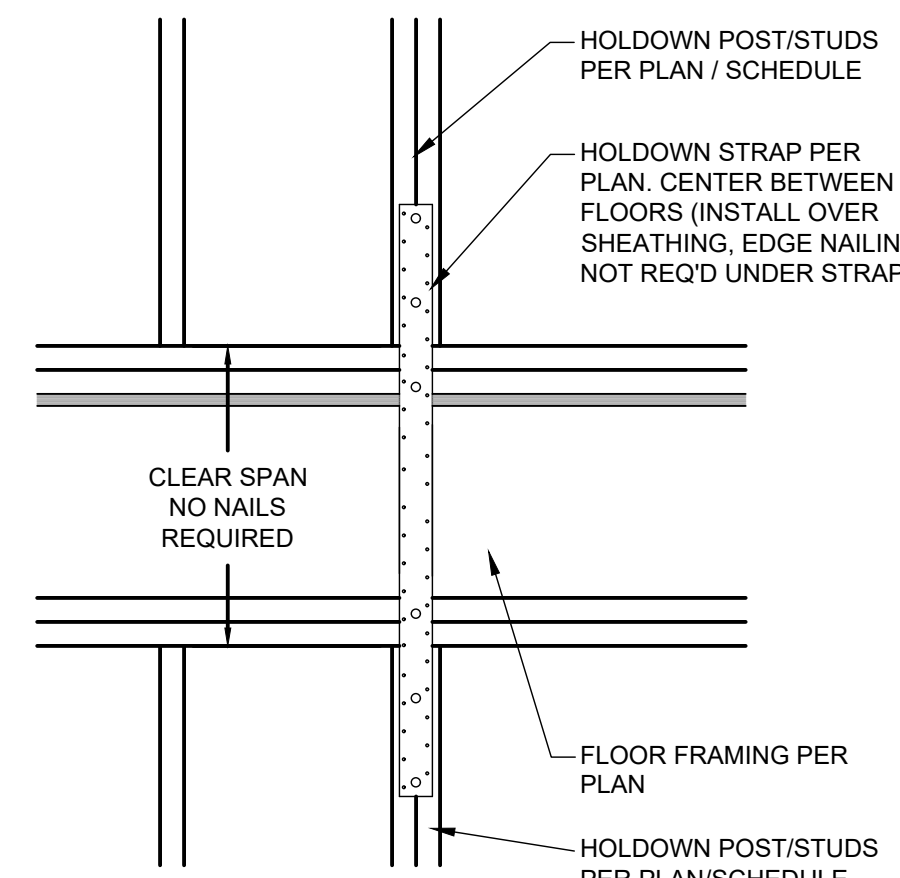


2 TYP BOLTED HOLDDOWN
S2 1" = 1'-0"

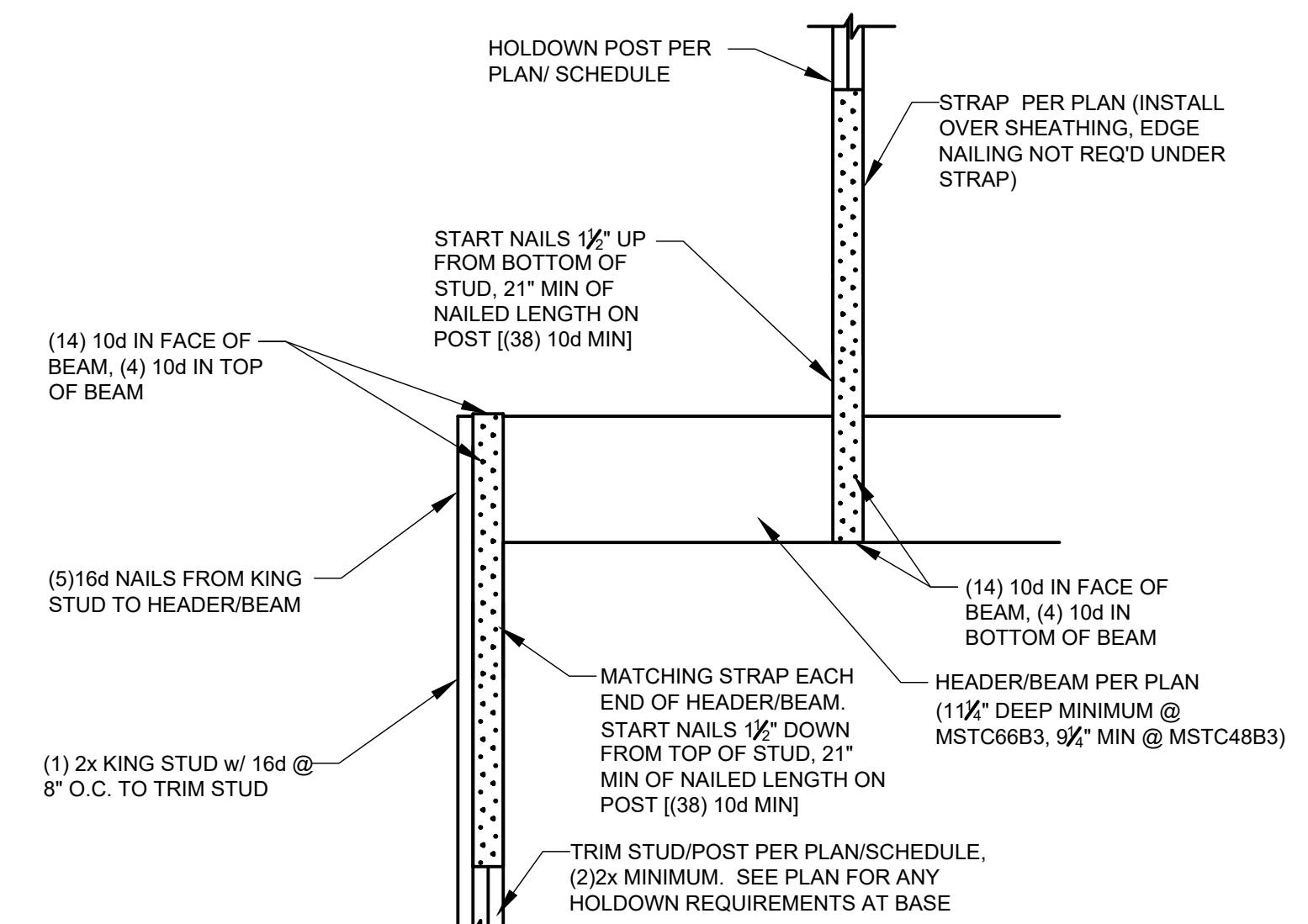


2 TYP BOLTED HOLDDOWN
S2 1" = 1'-0"

2 TYP BOLTED HOLDDOWN
S2 1" = 1'-0"



3 TYP FLR TO FLR STRAP
S2 1" = 1'-0"



4 STRAP HD @ BEAM/HEADER
S2 NTS

HOLDDOWN SCHEDULE							
HOLDDOWN MARK	THREADED ROD SIZE	EMBED INTO CONCRETE	MIN EDGE DISTANCE	MINIMUM POST SIZE	TOTAL FASTENERS	CAPACITY	REMARKS
DTT2Z	1/2" Ø	10"	2 1/2"	(2) 2x	(8) SDS 1/2" x 1 1/2"	2145#	SEE DET 2/S2
HDU4	3/8" Ø	12"	3"	(2) 2x	(10) SDS 1/2" x 2 1/2"	4565#	SEE DET 2/S2
MST37	N/A	N/A	N/A	(2) 2x	(22) 16d	2710#	SEE DET 3/S2
MSTC48B3	N/A	N/A	N/A	(2) 2x	(38) 16d	3975#	SEE DET 4/S2

HOLDDOWN NOTES

- ALL-THREAD BOLTS SHALL CONFORM TO ASTM A307.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH (f'c) SHALL BE 2500 PSI. MINIMUM WALL THICKNESS IS 8". U.N.O. ON PLAN OR DETAILS.
- ALL HOLDDOWNS REQUIRE A (2)2x POST UNLESS NOTED OTHERWISE. WHERE HOLDDOWNS ARE INSTALLED INTO THE WIDE FACE OF THE STUD, STUDS MUST BE STITCH NAILED TOGETHER w/ 16d SINKERS STAGGERED AT 4" O.C.
- FOR POST INSTALLED CONDITIONS, THREADED ROD MAY BE PLACED IN SIMPSON SET-XP OR HILTI HY-150 EPOXY, UNO.
- MINIMUM EDGE DISTANCE IS FOR FORMED CONCRETE EXPOSED TO WEATHER OR SOIL. FOR CONCRETE CAST AGAINST SOIL PROVIDE 3" CLEAR TO ANCHOR BOLT.
- NAILS/SCREWS TO HOLDDOWN POST SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
- WHEN FIELD CONDITION BECOME LESS THAN MINIMUM SHOWN, CONTACT ENGINEER PRIOR TO PROCEEDING.
- ALL HOLDDOWN BOLTS MUST BE RE-TIGHTENED JUST PRIOR TO ENCLOSING SECOND SIDE OF WALL.

Reviewed For Code Compliance

David Spencer, CBO
09/28/2023



Gas Residence

4471 Tolt Ave
Carnation, WA 98014

Owner:
Gass Family

Architect/Designer:
J3 Architects, LLC
PO Box 82581,
Kenmore, WA 98028
w: www.j3architectsllc.com
p: 206-412-9296

Structural Engineer:
Nabil Kausal-Hayes, PE



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Revisions:

Revision	Issue Date

Issue Set: Permit Response

Issue Date: September 27th, 2023

Drawn By: XCH

Checked By: NKH

Sheet Name:
SHEARWALL & HOLDDOWN SCHEDULES

Sheet:

S2

Job Number: 20-172

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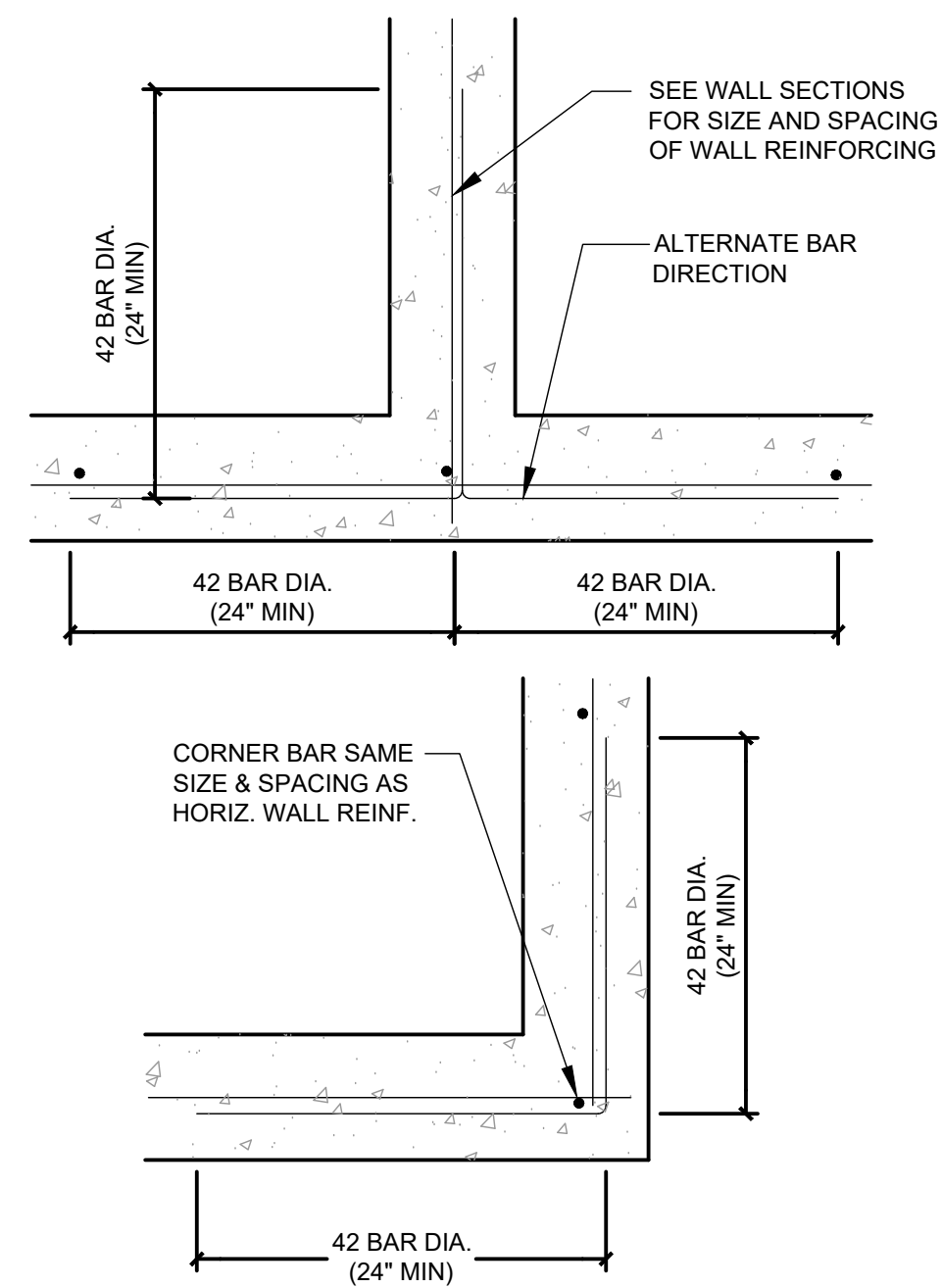
Drawn By: XCH
Checked By: NKH

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STRUCTURAL
DETAILS

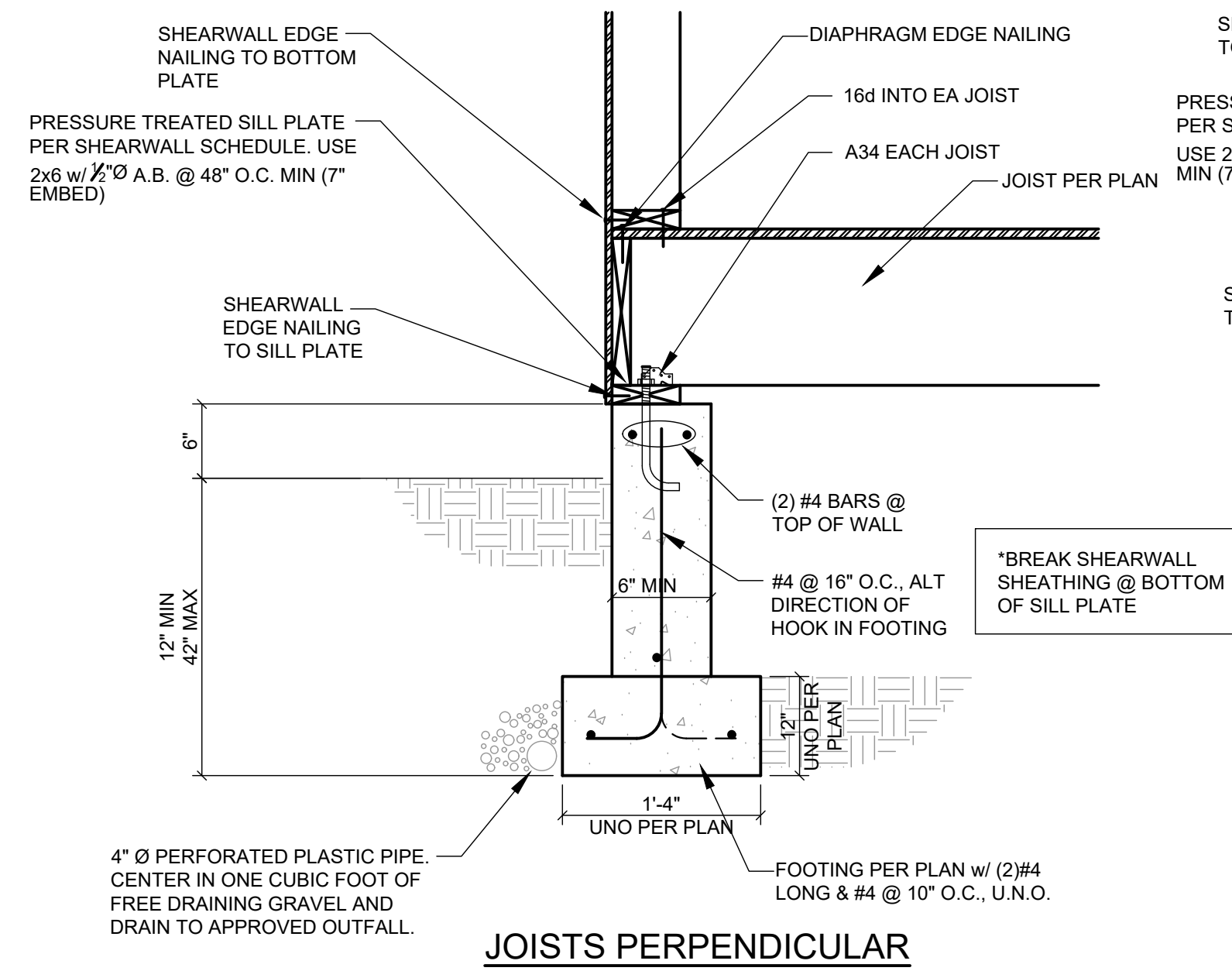
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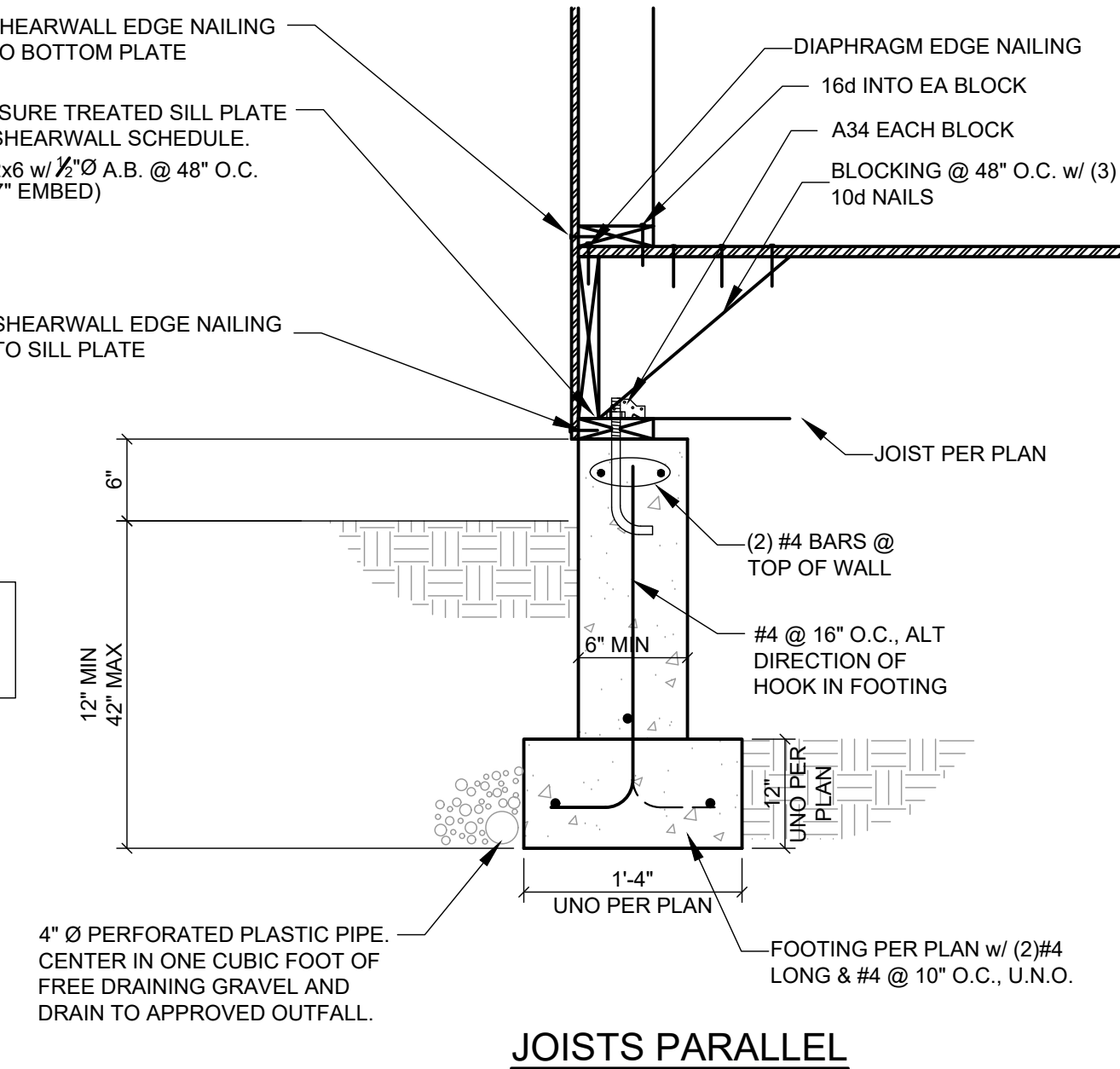
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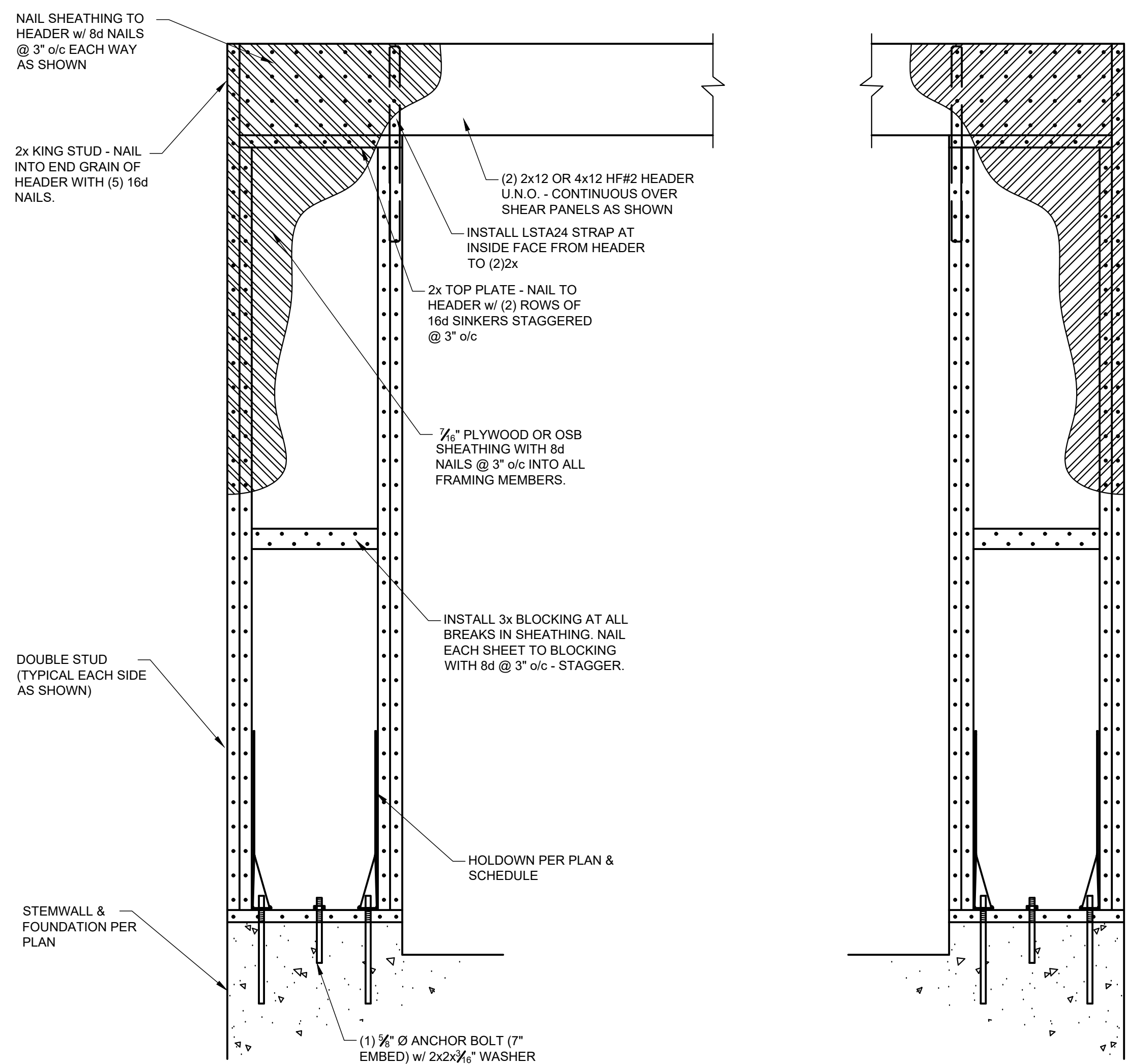
1 TYP CORNER REINFORCEMENT
S3 1" = 1'-0"



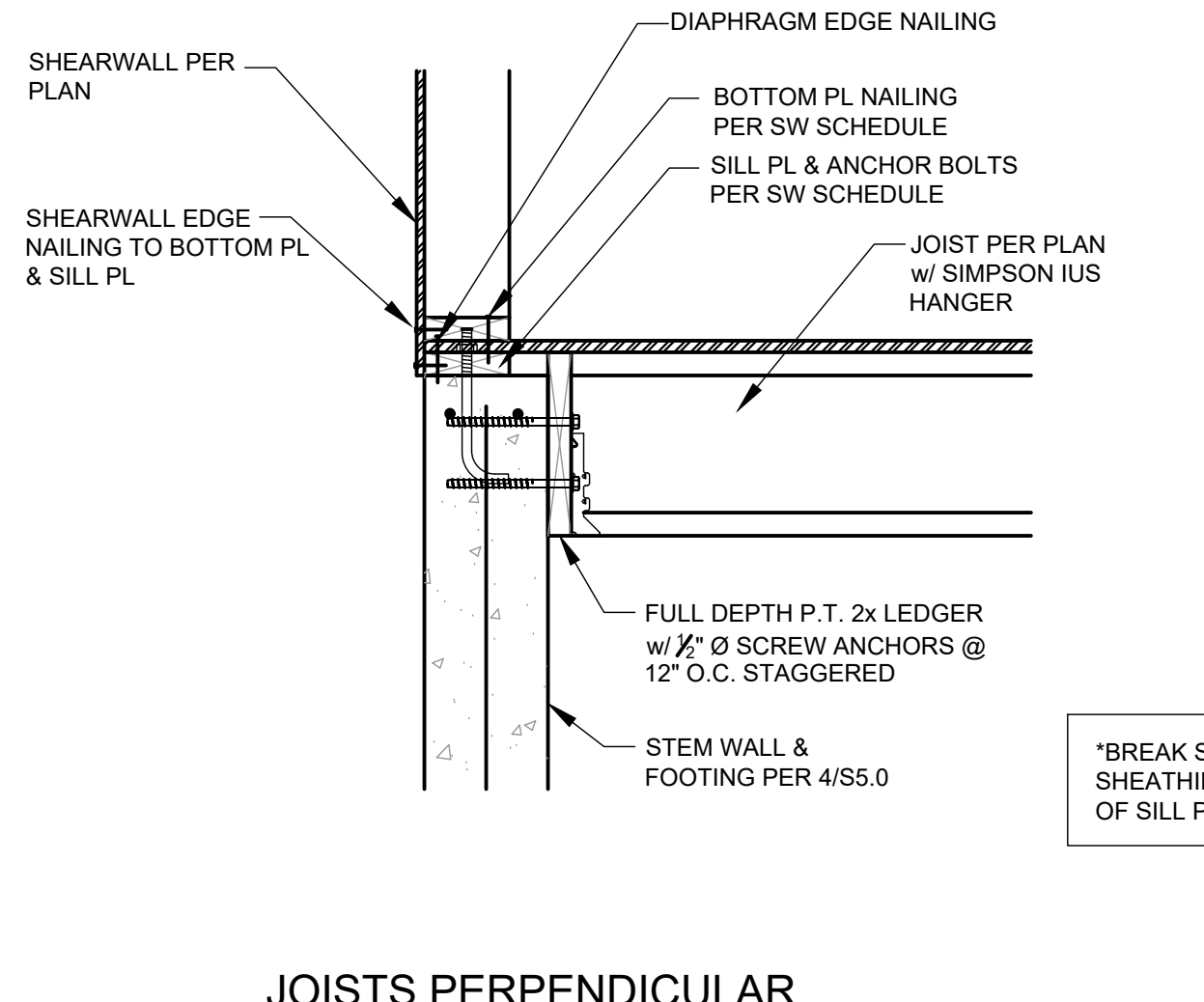
2 WALL TO FOUNDATION
S3 1" = 1'-0"



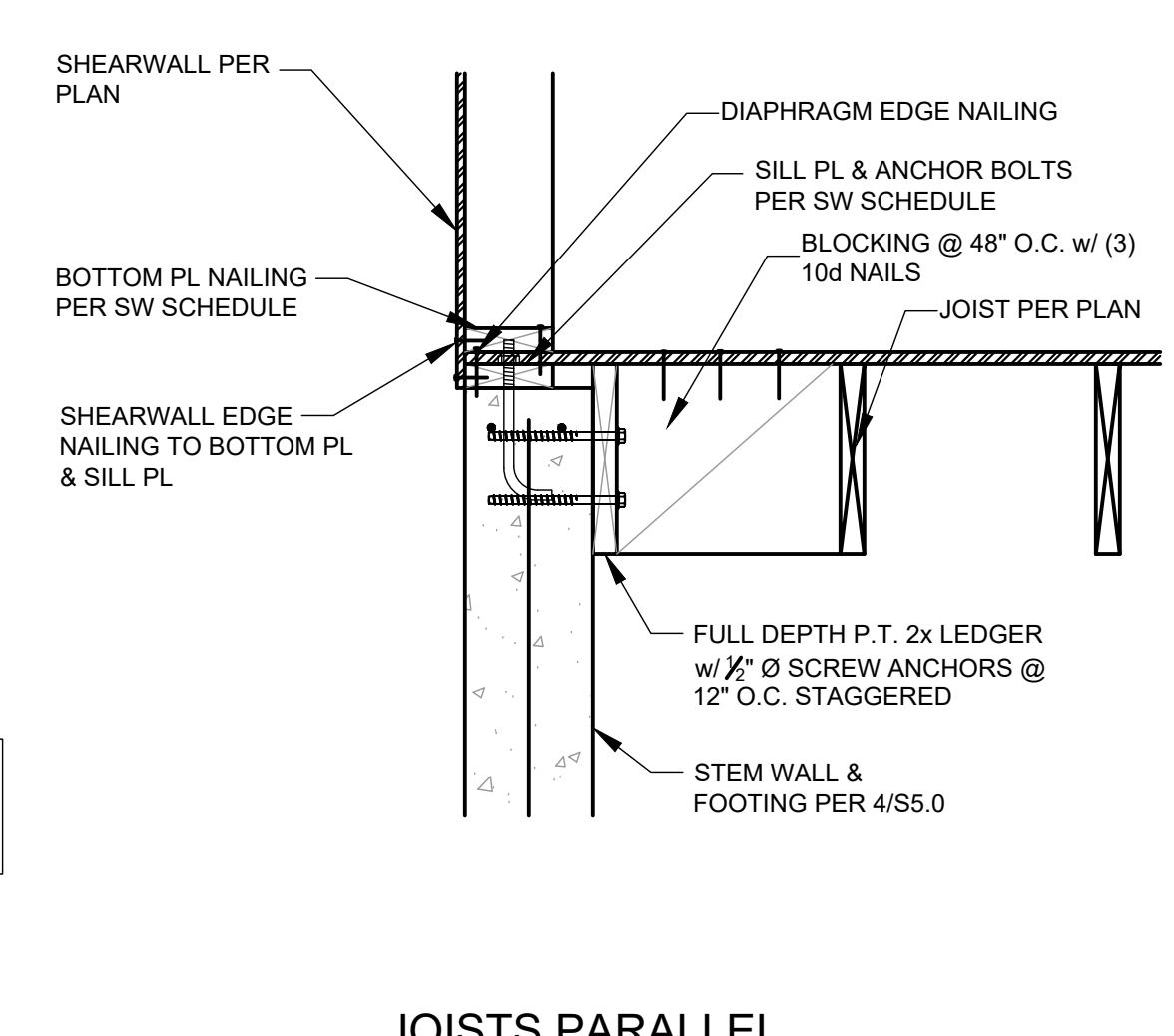
3 WALL TO FOUNDATION
S3 1" = 1'-0"



5 PORTAL FRAME DETAIL
S3 1" = 1'-0"

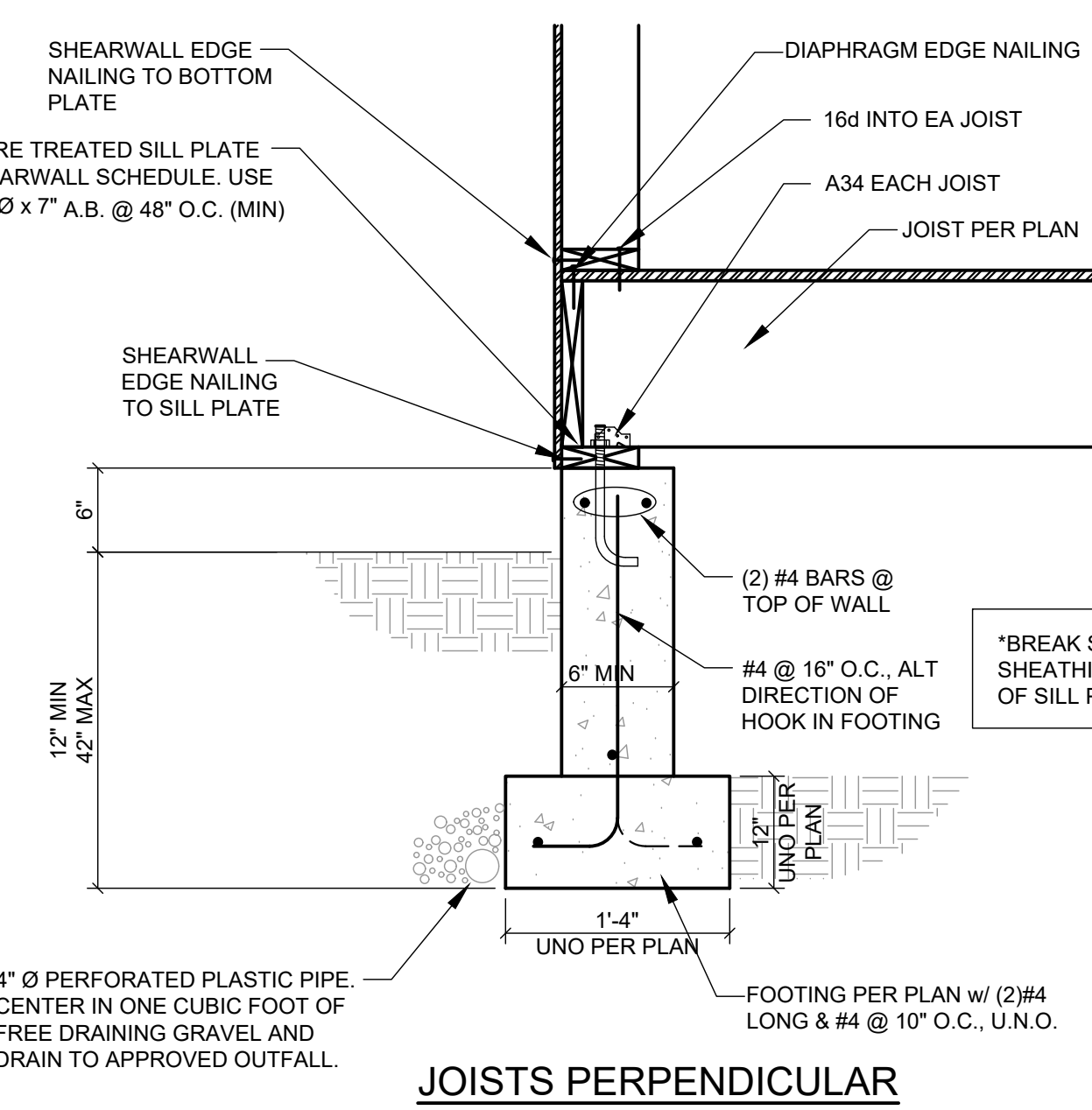


4 SHEARWALL & FLOOR FRAMING TO CONC. WALL
S3 1" = 1'-0"

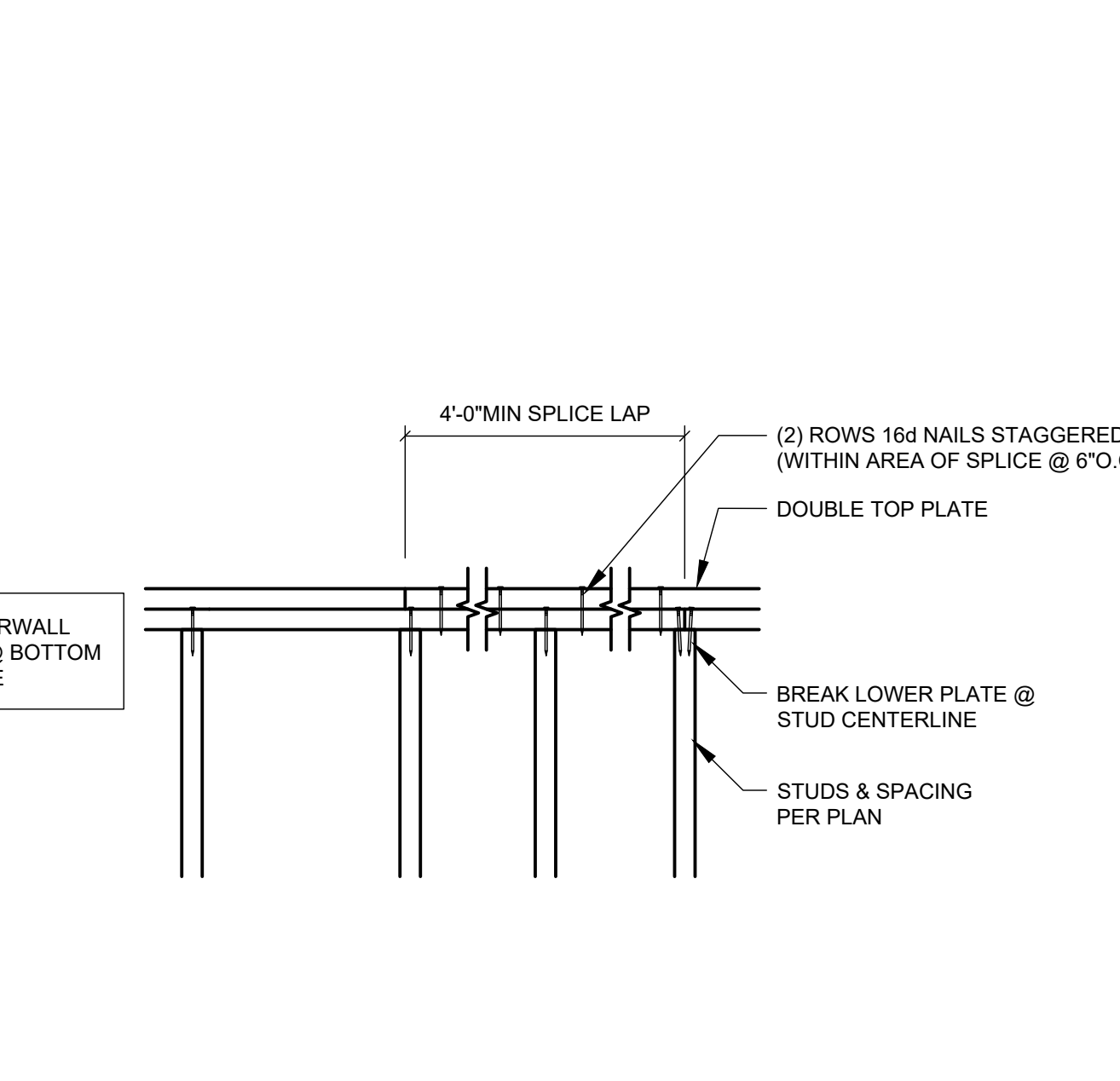


JOISTS PARALLEL

Reviewed For Code Compliance
David Spencer, CBO
09/28/2023



6 WALL TO FOUNDATION
S3 1" = 1'-0"



7 TYPICAL TOP PLATE SPLICE
S3 NTS

Gass Residence

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Structural Engineer:
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Revisions:

Revision	Issue Date
1	5/4/23
2	8/1/23
4	9/27/23

Issue Set: Permit Response

Issue Date: September 27th, 2023

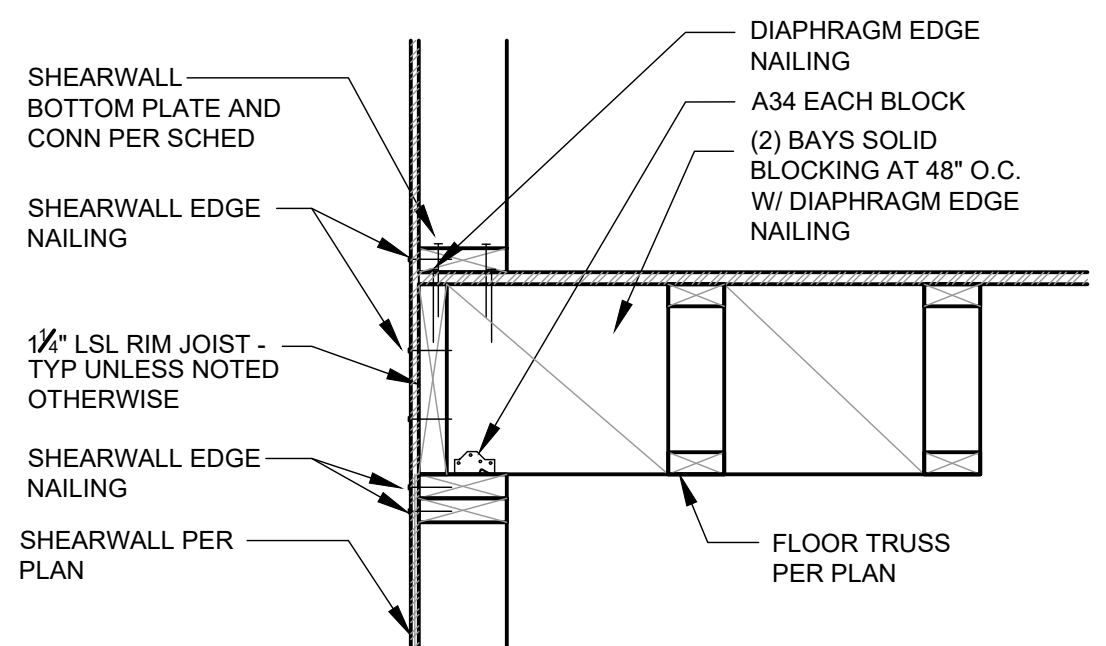
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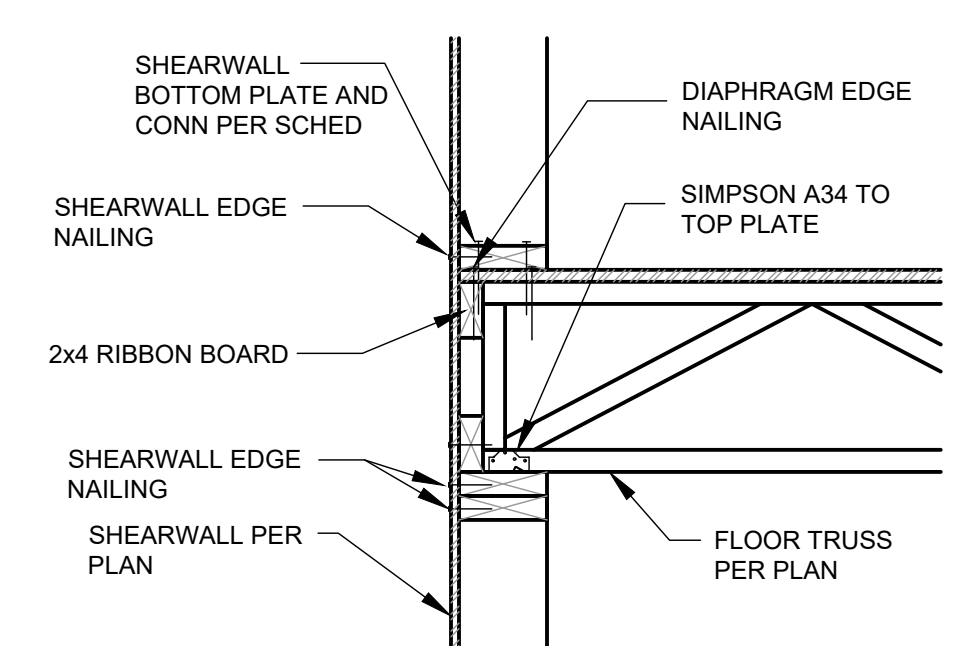
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Job Number: 20-172

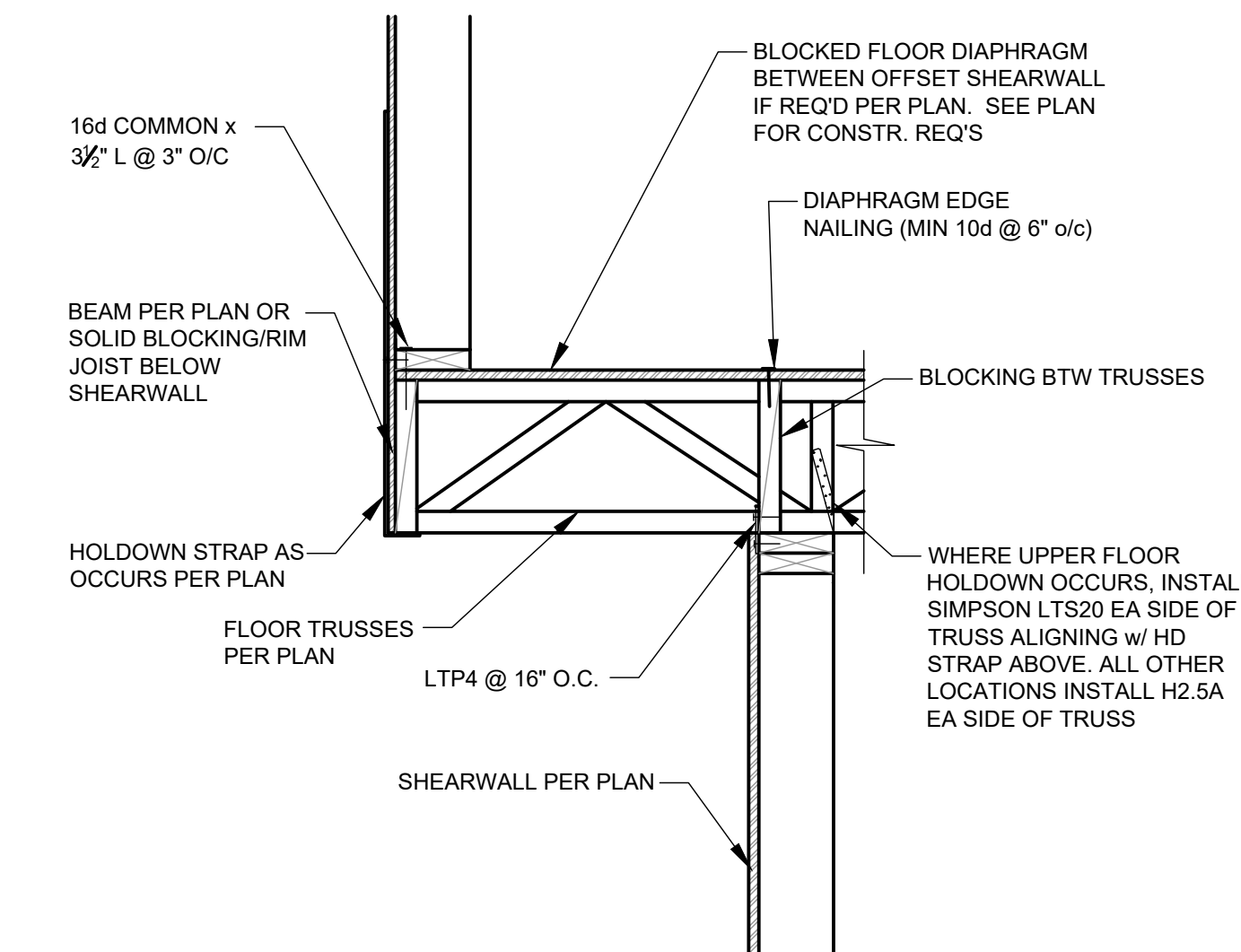


TRUSSES PARALLEL

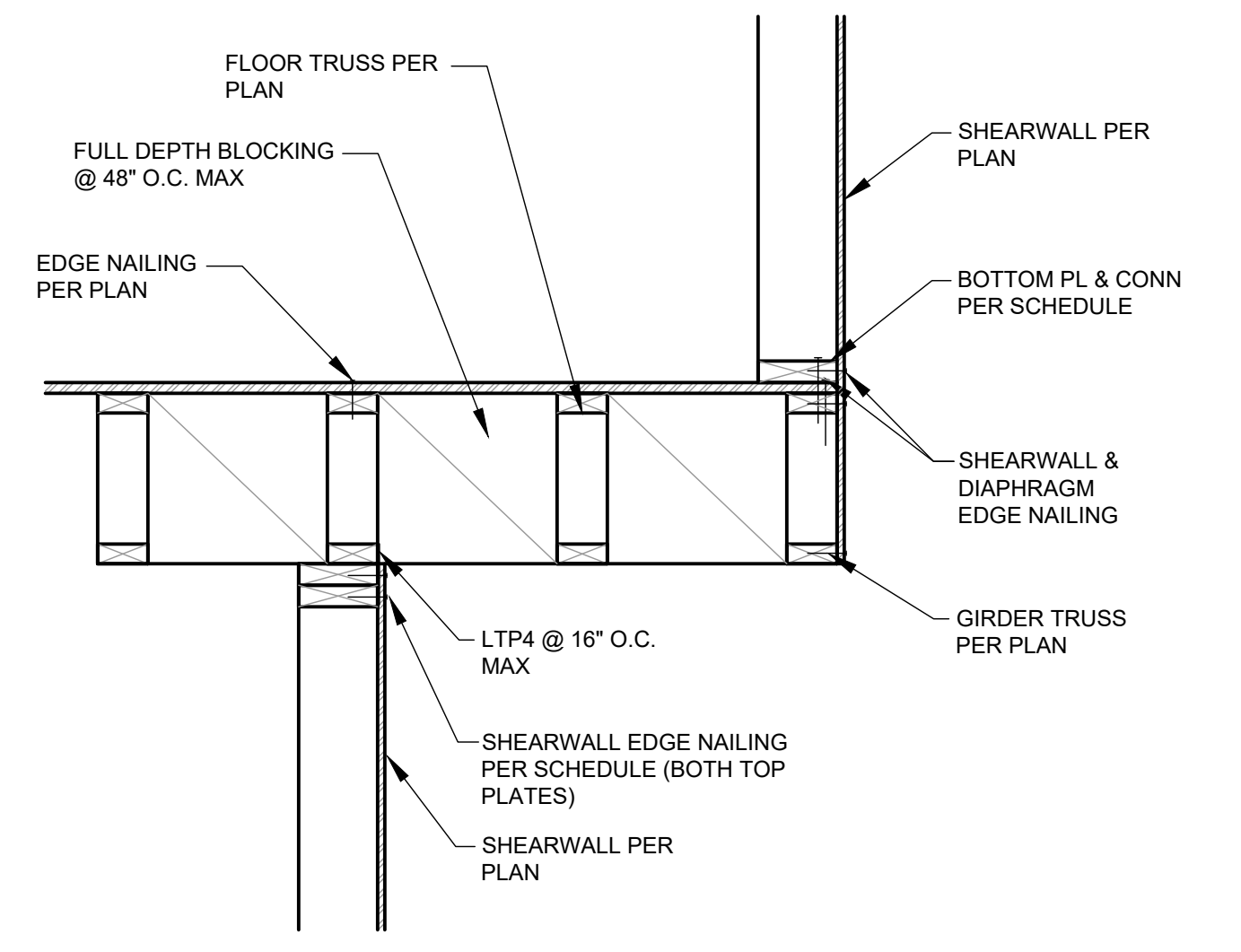


TRUSSES PERPENDICULAR

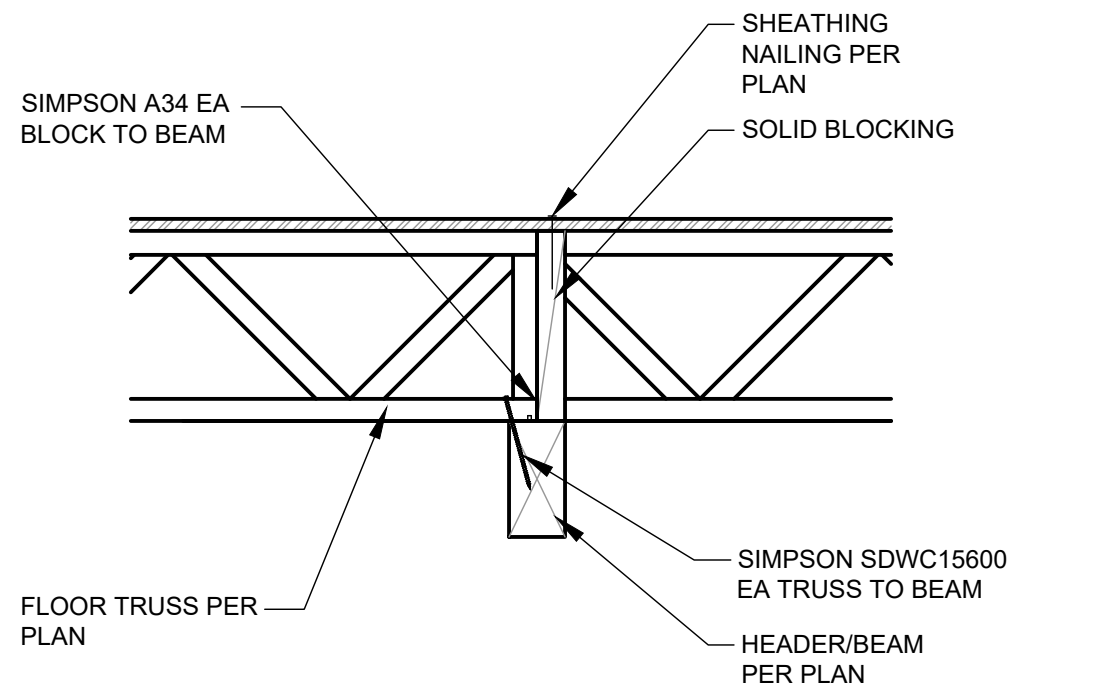
1 FLOOR TRUSS TO WALL CONNECTION
S4 1" = 1'-0"



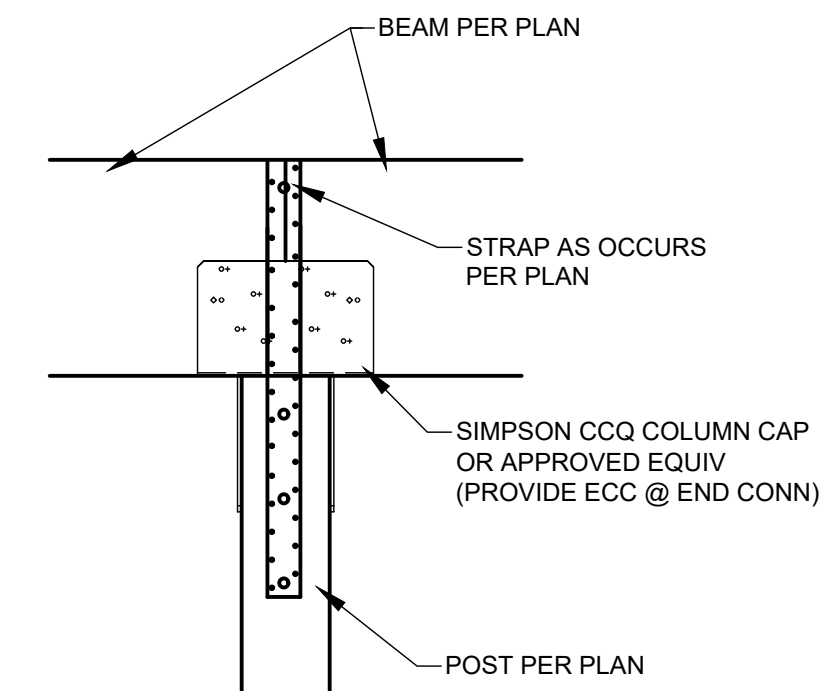
2 OFFSET SHEARWALL CONN
S4 1" = 1'-0"



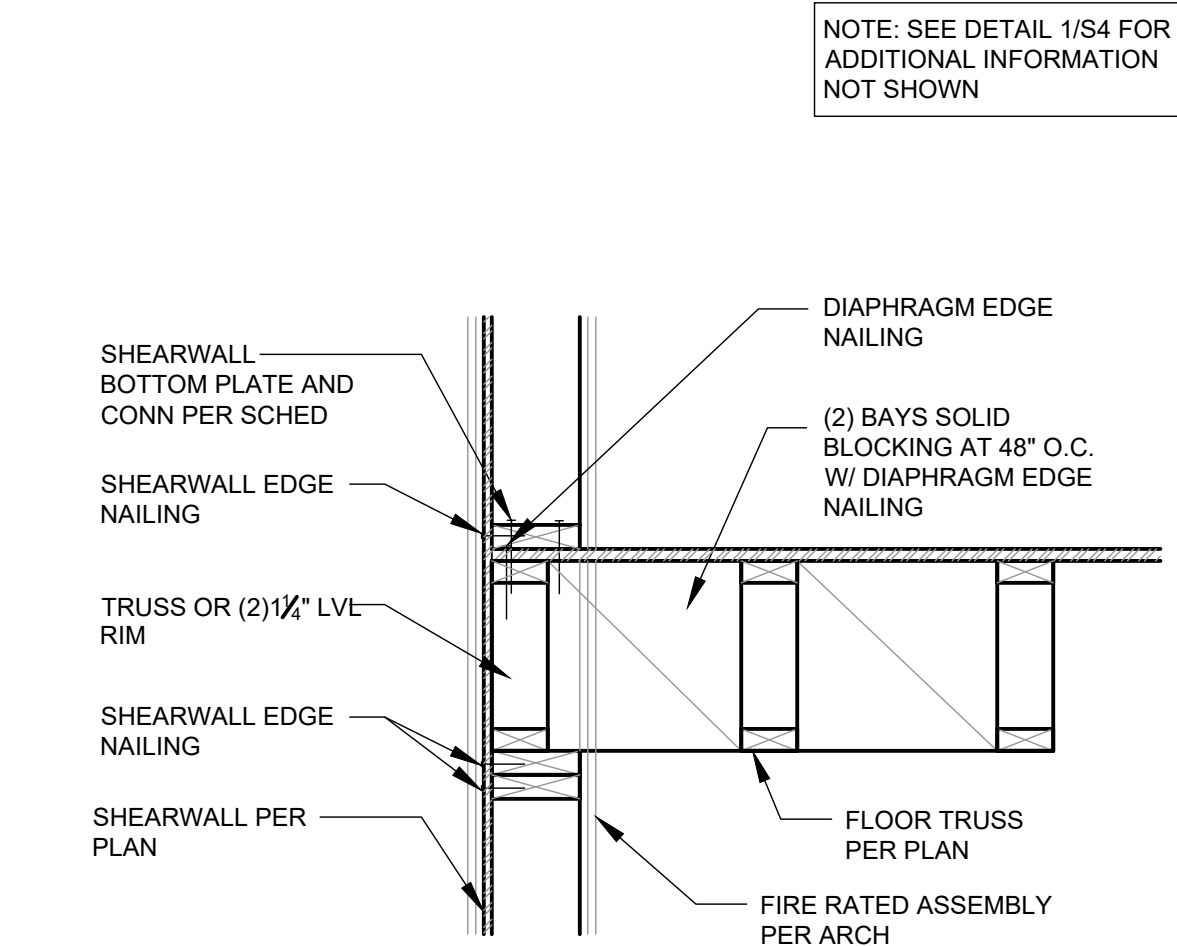
3 OFFSET SHEARWALL CONN.
S4 1" = 1'-0"



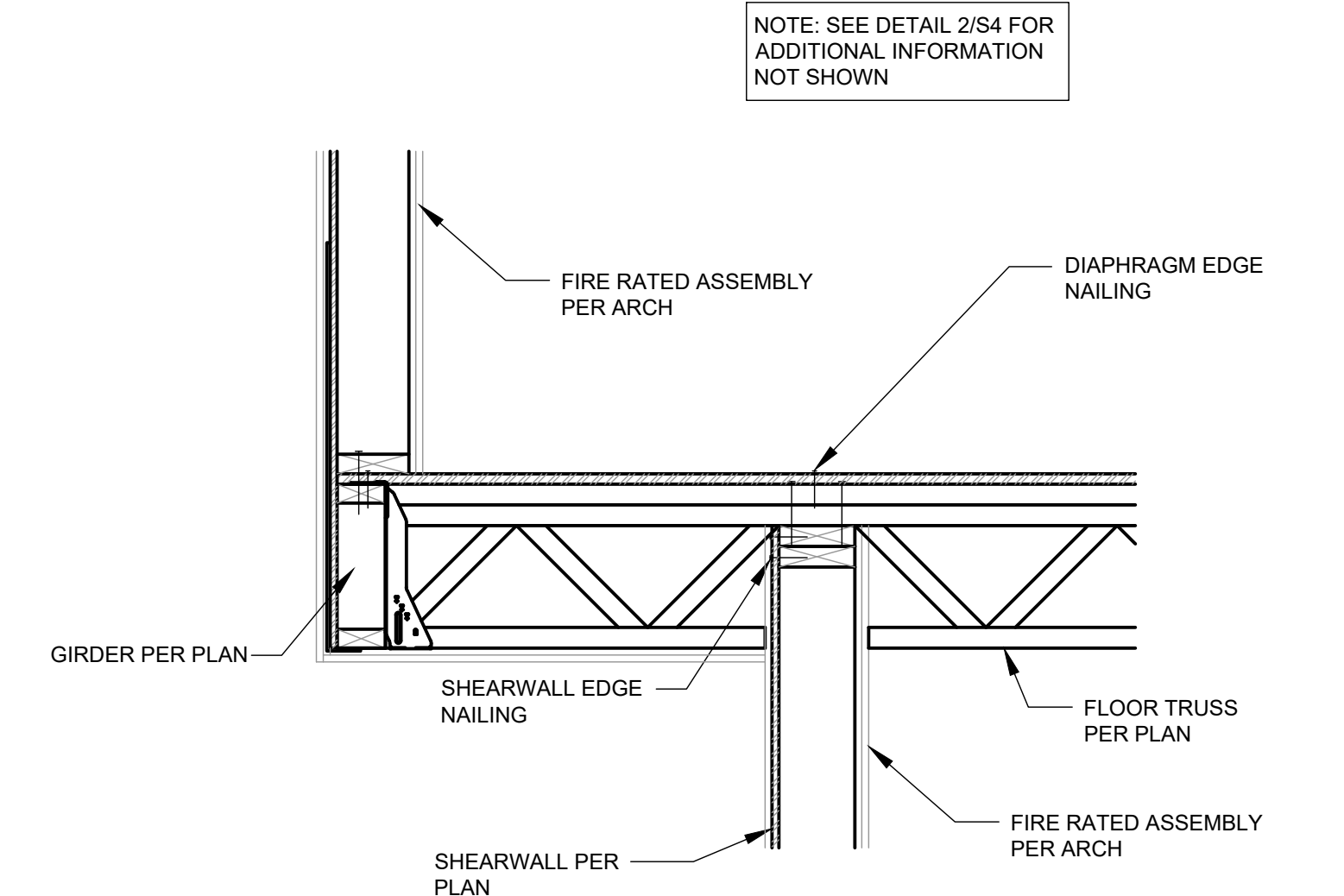
4 TRUSS TO HEADER/BEAM
S4 1" = 1'-0"



5 TYPICAL BEAM TO POST
S4 1" = 1'-0"

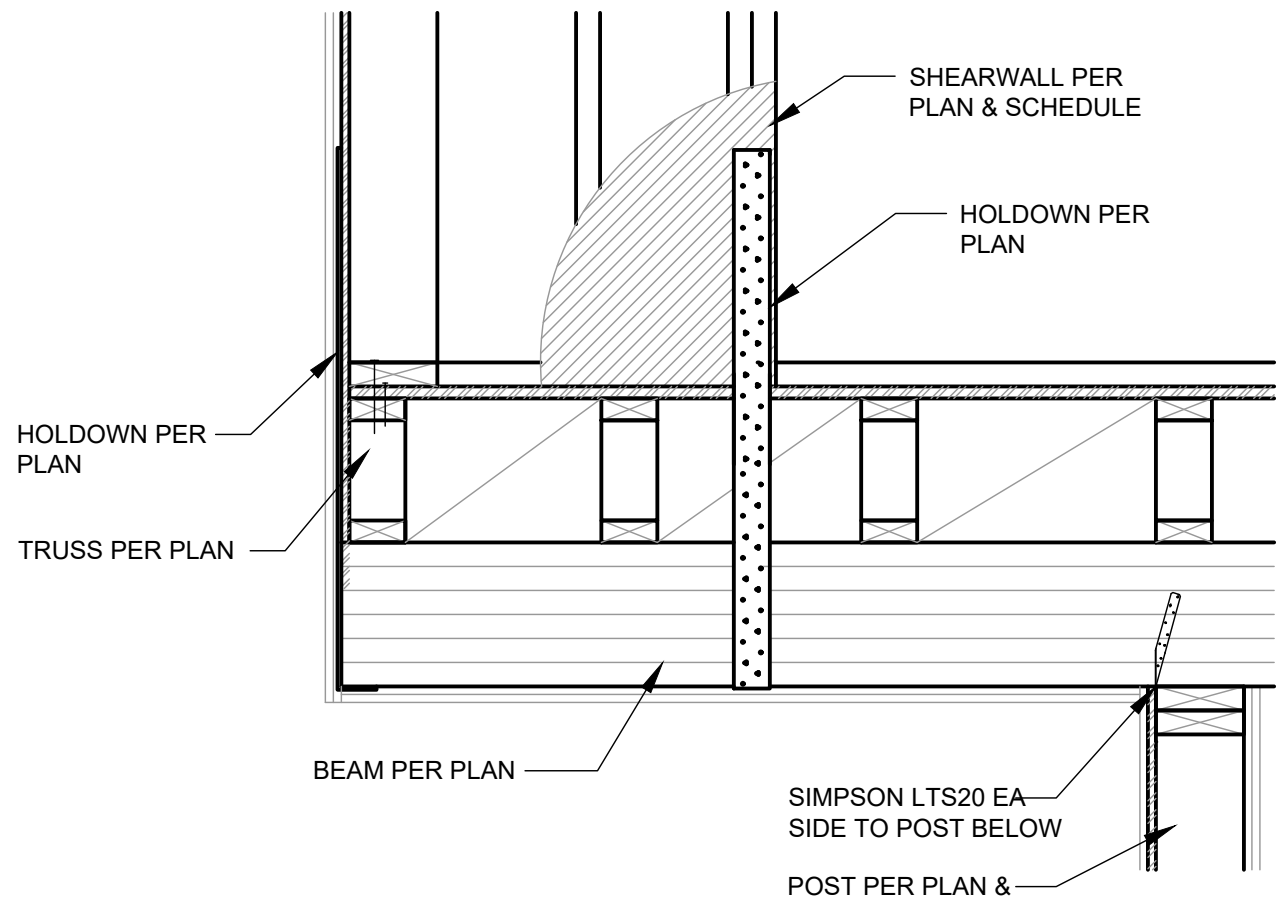


6 FLOOR TRUSS TO WALL CONN.
S4 1" = 1'-0"



7 FLOOR TRUSS TO WALL CONN.
S4 1" = 1'-0"

NOTE: SEE DETAIL 2 & 3/S4 FOR ADDITIONAL INFORMATION NOT SHOWN



8 FLOOR TRUSS TO WALL CONN.
S4 1" = 1'-0"

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09/28/2023