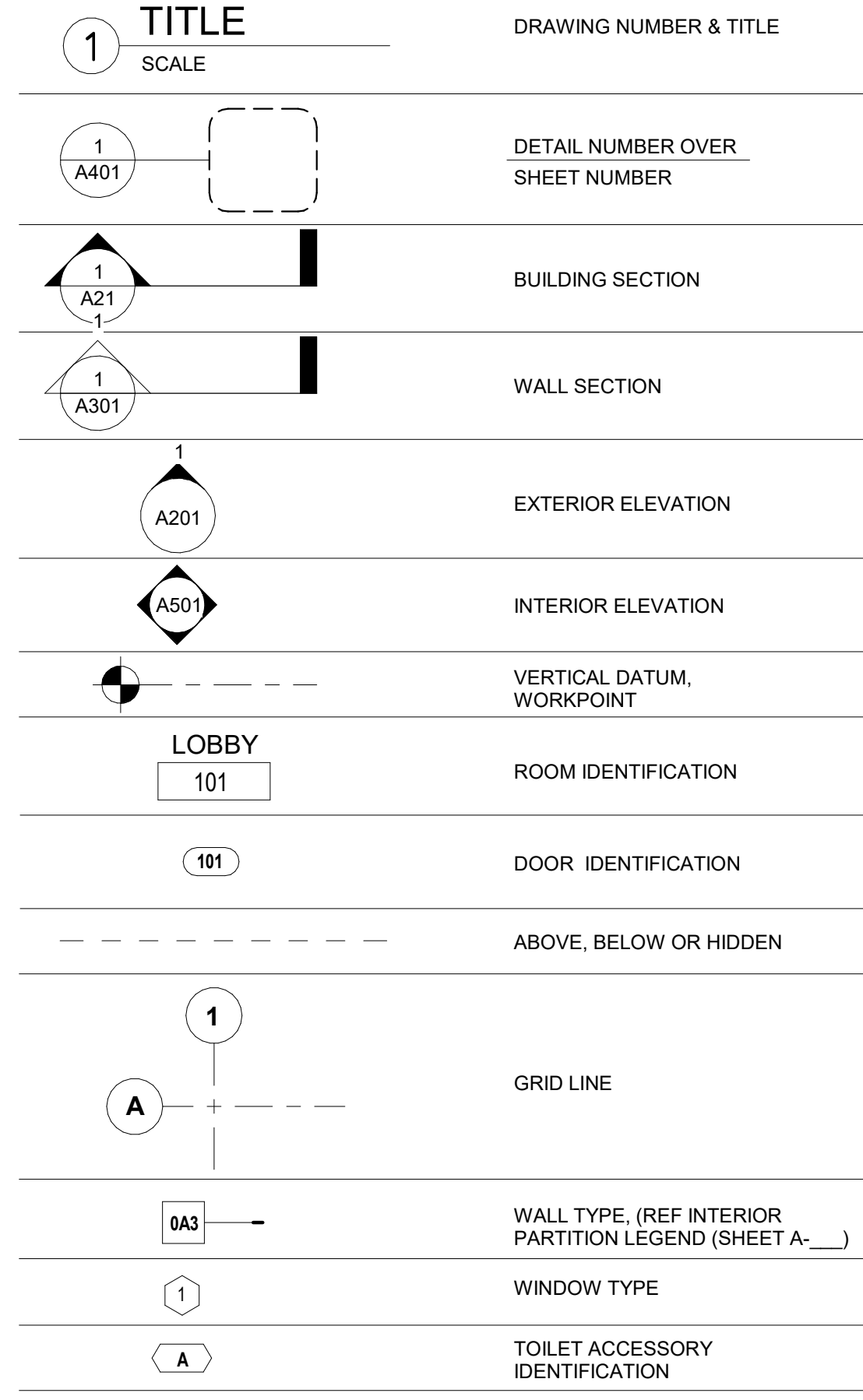


ABBREVIATIONS

Table listing abbreviations for materials, finishes, and construction details such as AMPS, ANCHOR BOLT, ASPHALT CONCRETE, etc.

SYMBOLS



CODE REVIEW

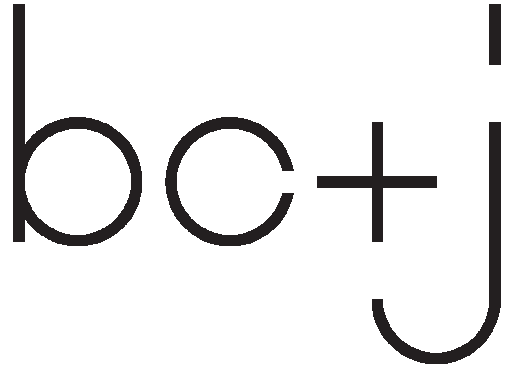
LAND USE CODE REVIEW
CODE STANDARD
MICC TITLE 19
ZONE: R-8.4
LOT SLOPE CALCULATION:
HIGHEST ELEVATION POINT = 490'
LOWEST ELEVATION POINT = 484'
ELEVATION DIFFERENCE = 8'
DISTANCE BETWEEN POINTS = 85'
SLOPE = 7%

PROJECT TEAM

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MERCER ISLAND, WA 98040
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DRAWING INDEX

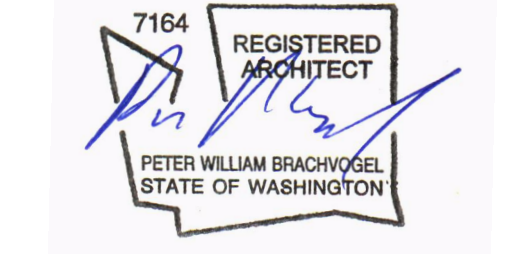
Table listing drawing numbers and titles: A-105 Unnamed, GENERAL G-002 LEGENDS, NOTES & ABBREVIATIONS, G-003 GENERAL NOTES, G-004 GENERAL NOTES, G-005 SURVEY, G-100 ARCHITECTURAL SITE PLAN, ARCHITECTURAL A-100 DEMO PLANS, A-101 FOUNDATION PLAN, A-102 FIRST FLOOR PLAN, A-103 SECOND FLOOR PLAN, A-104 ROOF PLAN, A-201 BUILDING ELEVATIONS, A-202 BUILDING ELEVATIONS, A-301 BUILDING SECTIONS, A-405 ENLARGED STAIR PLANS AND SECTION, A-601 DOOR AND WINDOW SCHEDULE, STRUCTURAL S1.0 GENERAL STRUCTURAL NOTES, S1.1 MAIN FLOOR FRAMING PLAN, S2.2 UPPER FLOOR FRAMING PLAN, S2.3 ROOF FRAMING PLAN, S3.0 TYPICAL CONCRETE DETAILS, S4.0 TYPICAL WOOD DETAILS, S4.1 TYPICAL WOOD FRAMING SECTIONS, 23



Architecture · Planning
Construction Management

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MEMBER: AIA
AMERICAN INSTITUTE
OF ARCHITECTS

NATIONAL COUNCIL
OF ARCHITECTURAL
REGISTRATION BOARDS

PROJECT NAME

BICKEL RESIDNECE

PROJECT ADDRESS

2734 70TH AVE SE
MERCER ISLAND, WA 98040

PROJECT NUMBER

2019

PERMIT SET

4/11/2023

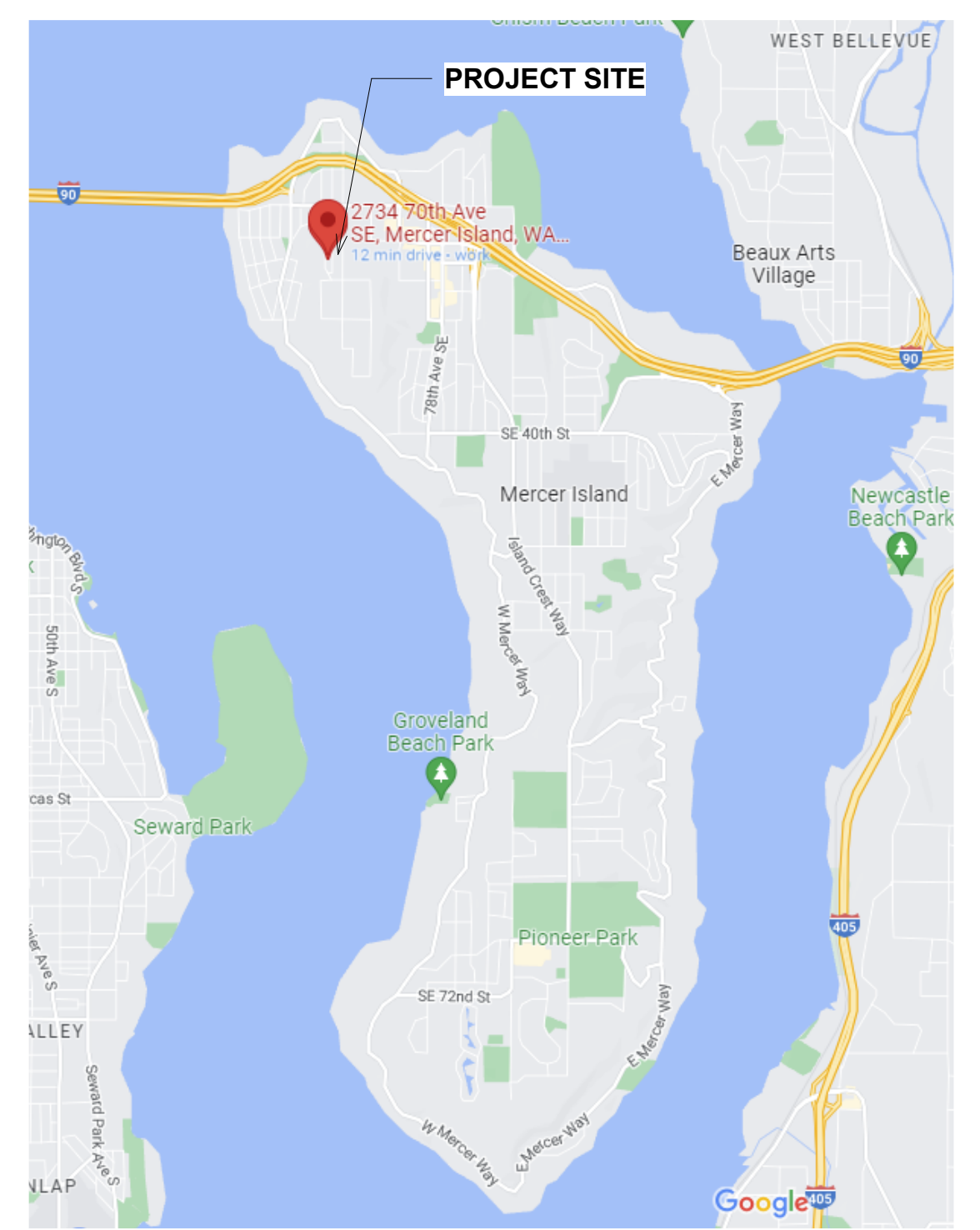
REVISIONS

Table with columns NO., DESCRIPTION, DATE. Row 1: 1 PERMIT SET 01/02/23. Row 2: 2 PERMIT COMMENTS 04/11/23.

PROJECT INFORMATION

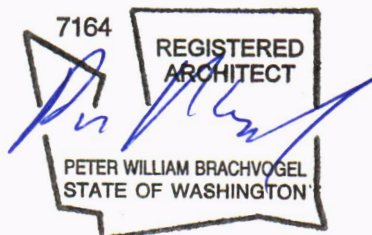
PROJECT ADDRESS:
2734 70TH AVE SE
MERCER ISLAND, WA 98040
ASSESSOR'S PARCEL NUMBER:
217450-2150
LEGAL DESCRIPTION:
EAST SEATTLE ADD
Plat Block: 10
Plat Lot: 13-14-15.
AGENCY HAVING JURISDICTION:
CITY OF MERCER ISLAND
PROJECT DESCRIPTION:
RENOVATION AND ADDITIONS OF A SINGLE FAMILY RESIDENCE AND ATTACHED GARAGE

VICINITY MAP



IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE
SHEET NAME
LEGENDS, NOTES & ABBREVIATIONS
SHEET NUMBER

G-002

MEMBER: AIA
AMERICAN INSTITUTE
OF ARCHITECTSNATIONAL COUNCIL
OF ARCHITECTURAL
REGISTRATION BOARDS

PROJECT NAME

BICKEL RESIDNECE

PROJECT ADDRESS

2734 70TH AVE SE
MERCIER ISLAND, WA 98040

PROJECT NUMBER

2019

PERMIT SET

4/11/2023

REVISIONS

NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23
2	PERMIT COMMENTS	04/11/23

SHEET NAME

GENERAL NOTES

SHEET NUMBER

G-003

CODE NOTES / FIRE:

1. PER BAINBRIDGE ISLAND MUNICIPAL CODE 20.04.100 AMENDMENTS TO SECTION 903 OF INTERNATIONAL FIRE CODE. A FULLY AUTOMATIC SPRINKLER SYSTEM DESIGN INSTALLED AND TESTED PURSUANT TO THE CURRENT EDITION OF NFPA13, NFPA 13R, OR NFPA 13D, AS DETERMINED BY THE FIRE MARSHAL, SHALL BE INSTALLED IN ALL NEW BUILDINGS IN EXCESS OF 5,000 SQUARE FEET OF TOTAL FLOOR AREA.

2. A FULLY AUTOMATIC SPRINKLER SYSTEM MEETING THE STANDARDS SET FORTH IN NOTE 1 ABOVE MAY BE REQUIRED BY THE CHIEF OF THE FIRE DISTRICT FOR ANY NEW BUILDING IN THE CITY, WHEN, IN THE JUDGEMENT OF THE CHIEF, ANY OF THE FOLLOWING CONDITIONS EXIST: HAZARDOUS OPERATIONS, HAZARDOUS CONTENTS, CRITICAL EXPOSURE PROBLEMS, LIMITED ACCESSIBILITY TO THE BUILDINGS (SUCH AS DRIVEWAYS IN EXCESS OF 15% SLOPE),OR OTHER ITEMS WHICH MAY CONTRIBUTE TO DEFINITE FIRE HAZARDS.

3. ALL SPRINKLER SYSTEMS INSTALLED SHALL BE EQUIPPED WITH A LEAK DETECTOR METER WHICH INCLUDES DOUBLE CHECK VALVE ASSEMBLY.

EXISTING BUILDINGS:

4. IF A BUILDING PERMIT IS REQUIRED IN THE REMODELLING OF AN EXISTING STRUCTURE OF 5,000 OR MORE SQUARE FEET TOTAL FLOOR AREA, THE ENTIRE STRUCTURE SHALL BE FULLY SPRINKLERED AS DESCRIBED IN NOTE 1 ABOVE.

CODE NOTES / OTHER:

1. PREMISES IDENTIFICATION: IRC SECTION R319.1. ADDRESSES SHALL BE PROVIDED IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. NUMERALS SHALL BE AT LEAST 4" HIGH WITH ½" STROKE AND BE CONSPICUOUSLY DISPLAYED ON A CONTRASTING BACKGROUND. IF THE BUILDING IS NOT CLEARLY VISIBLE FROM A ROADWAY OR TRAVEL, THE NUMERICAL DESIGNATION (ADDRESS) SHALL ALSO BE DISPLAYED NEAR THE MAIN ENTRANCE TO THE PROPERTY AS WELL AS AT THE DRIVEWAY ENTRANCE THAT LEADS TO THE BUILDING. PROPERTY ADDRESSES SHALL BE POSTED PRIOR TO REQUESTING ANY INSPECTIONS.

2. APPROVED PLANS: IRC SECTIONS R105.7, R106.3.1, R106.4. WHEN THE BUILDING OFFICIAL ISSUES A PERMIT, THE CONSTRUCTION DOCUMENTS SHALL BE APPROVED IN WRITING OR BY STAMP. WORK SHALL BE DONE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS, ANY CHANGES MADE DURING CONSTRUCTION SHALL BE RESUBMITTED FOR APPROVAL. THE BUILDING PERMIT, INSPECTION CARD, AND 1 SET OF APPROVED CONSTRUCTION DOCUMENTS MUST REMAIN ON THE JOB SITE AT ALL TIMES UNTIL THE COMPLETION OF THE PROJECT.

3. HEATING: IRC R303.8. EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A ROOM TEMPERATURE OF 68° F AT A POINT 3' ABOVE THE FLOOR AND 2' FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS. PRIMARY HEATING SOURCES IN ALL NEW AND SUBSTANTIALLY REMODELED BUILDINGS IN DESIGNATED AREAS SHALL NOT BE DEPENDENT UPON WOOD STOVES. NO USED SOLID FUEL BURNING DEVICE SHALL BE INSTALLED IN NEW OR EXISTING BUILDINGS UNLESS SUCH DEVICE IS UNITED STATES ENVIRONMENTAL PROTECTION AGENCY CERTIFIED OR A PELLET STOVE EITHER CERTIFIED OR EXEMPT FROM CERTIFICATION BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

4. SKYLIGHTS: IRC 308.6. THE FOLLOWING TYPES OF GLAZING MAY BE USED: 1) LAMINATED GLASS WITH A MINIMUM .015" POLYVINYL BUTYL INTERLAYER FOR GLASS PANES 16 SQ. FT. OR LESS IN AREA LOCATED SUCH THAT THE HIGHEST POINT OF THE GLASS IS NOT MORE THAN 12' ABOVE A WALKING SURFACE OR OTHER ACCESSIBLE AREA; FOR HIGHER OR LARGER SIZES, THE MINIMUM INTERLAYER THICKNESS SHALL BE .030". 2) FULLY TEMPERED GLASS. 3) HEAT-STRENGTHENED GLASS. 4) WIRED GLASS. 5) APPROVED RIGID PLASTICS. SKYLIGHTS SHALL COMPLY WITH WASHINGTON STATE ENERGY CODE REQUIREMENTS AND BE PROVIDED WITH FLASHING APPROPRIATE FOR THE SKYLIGHT AND THE ROOF COVERING MATERIAL.

5. GYPSUM WALLBOARD FASTENING: IRC R702.3.6 & TABLE R702.3.5. SCREWS FOR ATTACHING GYPSUM BOARD TO WOOD FRAMING SHALL BE TYPE W OR TYPE S IN ACCORDANCE WITH ASTM C 1002 AND SHALL PENETRATE THE WOOD NOT LESS THAN 5/8", AND STRUCTURAL INSULATED PANELS AT LEAST 7/16".
A. 3/8" MINIMUM FROM EDGE AND ENDS FOR NAILS OR SCREWS.
B. FASTENING (NAILS): 7" O.C. MAX. CEILING, 8" WALLS.
C. FASTENING (SCREWS): 12" O.C. CEILING, 16" O.C. WALLS WHEN WALL FRAMING IS 16" O.C., 12" WHEN WALL FRAMING IS 24" O.C. FOOTNOTE E, TABLE R702.3.5. TYPE X GYPSUM WALLBOARD FOR GARAGE CEILINGS BENEATH HABITABLE ROOMS SHALL BE INSTALLED PERPENDICULAR TO THE CEILING FRAMING AND SHALL BE FASTENED AT 6" O.C. BY MINIMUM 1-7/8" 6D COATED NAILS OR EQUIVALENT DRYWALL SCREWS.

6. NUMBER OF BUILDING STORIES: IRC SECTIONS R101.2, R202. IN ACCORDANCE WITH THE SCOPE OF THE 2009 INTERNATIONAL RESIDENTIAL CODE, (IRC) ANY BUILDING THAT EXCEEDS 3 STORIES, MUST BE BUILT IN ACCORDANCE WITH THE 2009 INTERNATIONAL BUILDING CODE (IBC), A BUILDING STORY IS THAT PORTION OF A BUILDING INCLUDED BETWEEN THE UPPER SURFACE OF A FLOOR AND THE UPPER SURFACE OF THE FLOOR OR ROOF NEXT ABOVE. THE FIRST "STORY ABOVE GRADE" IS THE FIRST STORY HAVING ITS FINISHED FLOOR SURFACE ENTIRELY ABOVE GRADE, EXCEPT THAT A BASEMENT SHALL BE CONSIDERED AS A STORY ABOVE GRADE WHERE THE FINISHED SURFACE OF THE FLOOR ABOVE THE BASEMENT IS: 1) MORE THAN 6' ABOVE GRADE PLANE; 2) MORE THAN 6' ABOVE THE FINISHED GROUND LEVEL FOR MORE THAN 50% OF THE TOTAL BUILDING PERIMETER. OR, 3) MORE THAN 12' ABOVE THE FINISHED GROUND AT ANY LEVEL. THE NUMBER OF STORIES IS THE SUM OF THE FIRST STORY ABOVE GRADE PLANE PLUS ALL OF THE STORIES ABOVE.

7. HEIGHT OF BUILDING / GRADE PLANE: IRC SECTION 202. THE BUILDING HEIGHT IS THE VERTICAL DISTANCE FROM GRADE PLANE TO THE AVERAGE HEIGHT OF THE HIGHEST ROOF SURFACE. THE GRADE PLANE IS A REFERENCE PLANE REPRESENTING THE AVERAGE OF THE FINISHED GROUND LEVEL ADJOINING THE BUILDING AT ALL EXTERIOR WALLS. WHERE THE FINISHED GROUND LEVEL SLOPES AWAY FROM THE EXTERIOR WALLS, (WHICH IS REQUIRED) THEN THE REFERENCE PLANE SHALL BE ESTABLISHED BY THE LOWEST POINTS WITHIN THE AREA BETWEEN THE BUILDING AND THE LOT LINE, OR, 6' FROM THE BUILDING, WHICHEVER IS LESS. SEE KCC TITLE 17 FOR HEIGHT RESTRICTIONS AND MEASUREMENT OF HEIGHT FOR CERTAIN AREAS OR ZONES (ZONING CODE).

8. RETAINING WALLS: IBC 1806.1, IRC R105.2, R404. RETAINING WALLS THAT ARE NOT LATERALLY SUPPORTED AT THE TOP AND THAT RETAIN MORE THAN 24" OF UNBALANCED FILL SHALL BE DESIGNED TO ENSURE STABILITY AGAINST OVERTURNING, SLIDING, EXCESSIVE FOUNDATION PRESSURE AND WATER UPLIFT. RETAINING WALLS SHALL BE DESIGNED FOR A SAFETY FACTOR OF 1.5 AGAINST LATERAL SLIDING AND OVERTURNING. RETAINING WALLS THAT DO NOT EXCEED 4' IN HEIGHT, MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL, AND THAT DO NOT SUPPORT A SURCHARGE (LOAD ABOVE) ARE EXEMPT FROM PERMIT REQUIREMENTS, BUT MUST STILL BE CONSTRUCTED PROPERLY AND MUST CONFORM WITH ZONING CODE SETBACK REQUIREMENTS. A SEPARATE PERMIT IS REQUIRED FOR CONSTRUCTION OF A RETAINING WALL.

23. TRAP PRIMERS: UPC SECTION 1007. FLOOR DRAINS OR SIMILAR TRAPS CONNECTED TO THE DRAINAGE SYSTEM AND SUBJECT TO INFREQUENT USE SHALL BE PROTECTED WITH A TRAP SEAL PRIMER, EXCEPT WHERE:

ITS DEMAILED NOT NECESSARY FOR SAFETY OR SANITATION BY EITHER THE BUILDING DEPT. OR THE WATER DEPT. TRAP SEAL PRIMERS SHALL BE ACCESSIBLE FOR MAINTENANCE.

24. GARAGE/DWELLING DOOR: IRC SECTION R302.5.1. OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1-3/8 INCHES IN THICKNESS, SOLID OR HOVEYCOMB CORE STEEL DOORS NOT LESS THAN 1-3/8 INCHES THICK, OR 20MINUTE FIRE-RATED DOORS WITH A SELF CLOSING DEVICE.

25. GARAGE/DWELLING SEPARATION: IRC TABLE R302.6

SEPARATION	MATERIAL
FROM THE RESIDENCE & ATTICS	1/2" GYPSUM BOARD OR EQUIVALENT APPLIED TO GARAGE SIDE

FROM ALL HABITABLE ROOMS ABOVE THE GARAGE	NOT LESS THAN 5/8" TYPE X GYPSUM BOARD OR EQUIVALENT
---	--

STRUCTURE(S) SUPPORTING FLOOR/CEILING ASSEMBLIES USED FOR SEPARATION REQ'D BY THIS SECTION	NOT LESS THAN 1/2" GYPSUM BOARD OR EQUIVALENT
--	---

GARAGES LOCATED LESS THAN 3'-0" FROM A DWELLING UNIT ON THE SAME LOT	NOT LESS THAN 1/2" GYPSUM BOARD OR EQUIVALENT APPLIED TO THE INTERIOR SIDE OF THE WALL
--	--

26. GARAGE FLOOR SURFACE: IRC R309.1. THE GARAGE FLOOR SHALL BE OF CONCRETE OR OTHER APPROVED NONCOMBUSTIBLE MATERIAL, AND SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY. A CARPORT (OPEN ON AT LEAST 2 SIDES) MAY HAVE A FLOOR SURFACE OF ASPHALT.

27. FIRE-RESISTANCE OF EXTERIOR WALLS: IRC SECTION R302.1 TABLE R302.1(1). 1-HR FIRE-RESISTIVE CONSTRUCTION IS REQUIRED WITHIN 8 FEET OF PROPERTY LINES. OPENINGS ARE NOT PERMITTED AT LESS THAN 3' AND ARE LIMITED BETWEEN 3' AND 5'. PROJECTIONS ARE ALLOWED TO BE PROTECTED WITH 1-HOUR FIRE-RESISTANCE RATED CONSTRUCTION ON THE UNDERSIDE WHEN THE PROJECTION IS BETWEEN 2' AND 5' FROM THE PROPERTY LINE. UNPROTECTED, DETACHED GARAGES SHALL BE AT LEAST 3 FEET AWAY FROM OTHER RESIDENTIAL OR ACCESSORY BUILDINGS.

28. FLOOR AREA: IRC SECTION R304. DWELLING UNITS SHALL HAVE AT LEAST ONE HABITABLE ROOM WITH NOT LESS THAN 120 SQUARE FEET OF FLOOR AREA. OTHER HABITABLE ROOMS EXCEPT KITCHENS SHALL HAVE AN AREA OF NOT LESS THAN 70 SQUARE FEET WITH A MINIMUM DIMENSION OF 7' IN ONE DIRECTION.

29. MINIMUM CEILING HEIGHTS: IRC SECTION R305.1 HABITABLE SPACES SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET. BEAMS AND GIRDERS SHALL NOT BE LESS THAN 4 FEET ON CENTER MAY PROJECT NOT MORE THAN 6 INCHES BELOW THE REQUIRED CEILING HEIGHT. CEILING IN BASEMENTS WITHOUT HABITABLE SPACES MAY HAVE A CEILING HEIGHT OF 6'-8" WITH BEAMS PROJECTING TO WITHIN 6'-4" OF THE FINISHED FLOOR. BATHROOMS SHALL HAVE MINIMUM CEILING HEIGHT OF 6'-8" AT THE FRONT CLEARANCE AREAS OF FIXTURES.

30. ATTIC ACCESS: IRC SECTION R807.1. ATTICS WHICH EXCEED 30 SQUARE FEET AND HAVE A VERTICAL HEIGHT OF 30' OR MORE AS MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBER TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS MUST BE PROVIDED WITH AN ACCESS OPENING OF NOT LESS THAN 22" X 30" AND LOCATED IN A HALLWAY, CORRIDOR, OR READILY ACCESSIBLE LOCATION. WHEN THE ACCESS IS LOCATED IN THE CEILING, MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE 30" AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF THE CEILING FRAMING MEMBERS. ATTICS CONTAINING APPLIANCES SHALL BE PROVIDED WITH AN OPENING AND A CLEAR AND UNOBSTRUCTED PASSAGEWAY LARGE ENOUGH TO ALLOW REMOVAL OF THE LARGEST APPLIANCE AND WITH AN OPENING WITH A MINIMUM DIMENSION OF 20" BY 30" AND MAXIMUM PASSAGEWAY OF 20' LONG MEASURED FROM THE OPENING TO THE APPLIANCE. SEE M305.1.3 FOR ADDITIONAL DETAILS. THE ATTIC ACCESS SHALL NOT PENETRATE THE GARAGE/DWELLING FIRE RESISTIVE BARRIER.

31. DOORS & EXITS: IRC SECTION R311.2. AT LEAST ONE EGRESS DOOR SHALL BE PROVIDED IN EACH DWELLING UNIT. THE EGRESS DOOR SHALL BE SIDE-HINGED, WITH A MINIMUM CLEAR WIDTH OF 32" WHEN MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP (USUALLY A 36" DOOR) AND CLEAR HEIGHT OF 78", AND THAT CAN BE OPENED FROM THE INSIDE WITHOUT THE USE OF A KEY, TOOL OR SPECIAL KNOWLEDGE.

32. LANDINGS: IRC SECTION R311.3. THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF EXTERIOR DOORS WITH DIMENSIONS OF AT LEAST 36" MEASURED IN THE DIRECTION OF TRAVEL, AND AT LEAST THE WIDTH OF THE DOOR SERVED. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1.5' LOWER THAN THE TOP OF THE THRESHOLD OF THE DOORWAY, EXCEPT DOORS OTHER THAN THE MAIN EXIT MAY HAVE THE LANDING UP TO 7 ¾" BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING EXCEPT THAT SCREEN AND STORM DOORS MAY; OR, IF NOT THE MAIN EXIT AND THERE ARE TWO OR FEWER RISERS, A LANDING IS NOT REQUIRED. IN ADDITION, AN INTERIOR DOOR MAY OPEN AT THE TOP OF A FLIGHT OF STAIRS PROVIDED THE DOOR DOES NOT SWING OVER THE TOP STEP. EXTERIOR LANDINGS MAY HAVE A SLOPE NOT TO EXCEED 2% (1" IN 48").

33. GUARDS: IRC SECTION R312. PORCHES, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDS NOT LESS THAN 36" IN HEIGHT, INCLUDING AREAS ENCLOSED WITH INSECT SCREENING, EXCEPT WHERE GUARDS ARE REQUIRED AT THE OPEN SIDE OF STAIRS, THE HEIGHT MAY BE REDUCED TO 34" ABOVE THE STAIR NOSINGS. GUARDRAILS SHALL BE DESIGNED SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH, EXCEPT THE TRIANGULAR OPENING BETWEEN A RISER, TREAD AND THE BOTTOM RAIL OF THE GUARD MAY BE OF SUCH SIZE THAT A SPHERE 6" CANNOT PASS THROUGH.

34. HANDRAILS: IRC SECTION R311.7.7 & 311.8.3. ALL STAIRWAYS WITH 4 OR MORE RISERS AND RAMPS EXCEEDING A SLOPE OF 1:12 (8.33%) SHALL HAVE AT LEAST ONE GRIPPABLE HANDRAIL. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN A NEWELL POST OR SAFETY TERMINALS.

35. STAIRWAYS: IRC SECTION R311.7. PRIVATE DWELLING STAIRWAYS SHALL NOT BE LESS THAN 36" IN WIDTH AND SHALL HAVE A HEADROOM CLEARANCE OF NOT LESS THAN 6 FEET 8 INCHES MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSINGS, OR LANDING SURFACES. (SEE ITEM 39 FOR SPIRAL STAIRWAYS.)

36. STAIR RISE & RUN: IRC SECTION R311.7.4. MAXIMUM RISER HEIGHT SHALL BE 7-½ INCHES AND THE MINIMUM TREAD DEPTH SHALL BE 10 INCHES. THE GREATEST RISER HEIGHT MAY NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH. THE RADIUS CURVATURE AT THE LEADING EDGE OF THE TREAD SHALL BE NO GREATER THAN 9/16 INCH. A NOSING NOT LESS THAN ½" INCH BUT NOT MORE THAN 1-¼ INCHES SHALL BE PROVIDED ON STAIRWAYS WITH SOLID RISERS. THE GREATEST NOSING PROJECTION SHALL NOT EXCEED THE SMALLEST NOSING PROJECTION BY MORE THAN 3/8 INCH BETWEEN TWO STORIES, INCLUDING THE NOSING AT THE LEVEL OF FLOORS AND LANDINGS. EXCEPTION: A NOSING IS NOT REQUIRED WHERE THE TREAD DEPTH IS A MINIMUM OF 11 INCHES. OPEN RISERS ARE PERMITTED, PROVIDED THAT THE OPENING BETWEEN TREADS DOES NOT PERMIT THE PASSAGE OF A 4-INCH DIAMETER SPHERE.

37. STAIRWAY ILLUMINATION: R311.7.8, R303.6.1. ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH A LIGHT LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY THAT PROVIDES AT LEAST 1 FOOT CANDLE OF ILLUMINATION MEASURED AT THE CENTER OF TREADS AND LANDINGS. A WALL SWITCH SHALL BE PROVIDED AT EACH FLOOR LEVEL WHERE THE STAIRWAY HAS SIX OR MORE RISERS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY. THE ILLUMINATION OF EXTERIOR STAIRWAYS SHALL BE CONTROLLED FROM INSIDE THE DWELLING UNIT.

38. USABLE SPACE UNDER STAIRS: IRC SECTION R302.7 THE WALLS AND SOFFITS OF ENCLOSED USABLE SPACE UNDER STAIRS SHALL BE PROTECTED ON THE ENCLOSED SIDE BY NOT LESS THAN 1 LAYER OF ½" GYPSUM BOARD.

39. WINDING STAIRWAYS: IRC SECTION R311.7.4.2 WINDING STAIRWAYS SHALL HAVE MINIMUM TREAD DEPTH OF 6" AND A MINIMUM TREAD DEPTH OF 10" MEASURED BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AT THE INTERSECTIONS WITH THE WALKLINE.

40. SPIRAL STAIRWAYS: IRC SECTION R311.7.9.1. SPIRAL STAIRS MUST PROVIDE A CLEAR WALKING AREA MEASURING AT LEAST 26" FROM THE OUTER EDGE OF THE SUPPORTING COLUMN TO THE INNER EDGE OF THE HANDRAIL. THE TREAD RUN MUST BE AT LEAST 7 ½" AT THE POINT 12" FROM WHERE THE TREAD IS THE NARROWEST. THE RISE MUST BE SUFFICIENT TO PROVIDE 6'-6" HEADROOM, AND EACH RISER SHALL NOT EXCEED 9 ½ INCHES.

GENERAL NOTES:

GENERAL:

1. ALL WORK SHALL CONFORM TO THE CURRENT INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO-FAMILY DWELLINGS & THE WASHINGTON STATE BUILDING CODE, AND ALL LOCAL MUNICIPALITY RULES AND REGULATIONS.

ADOPTED CODES:

- 2018 INTERNATIONAL BUILDING CODE (IBC)
 - 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)
 - 2018 INTERNATIONAL MECHANICAL CODE (IMC)
 - 2018 INTERNATIONAL FUEL GAS CODE (IFGC)
 - 2018 UNIFORM PLUMBING CODE (UPC)
 - 2018 INTERNATIONAL FIRE CODE (IFC)
 - 2018 INTERNATIONAL EXISTING BUILDING CODE
 - 2018 INTERNATIONAL SWIMMING POOL AND SPA CODE
 - WASHINGTON STATE ENERGY CODE (WSEC)
 - ICC/ANSI A117-1-09, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, WITH STATEWIDE AND CITY AMENDMENTS
2. THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF BC&J ARCHITECTS AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT & SIGNATURE.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS, AND LEVELS PRIOR TO CONSTRUCTION. ALL WALL DIMENSIONS ARE TO FACE OF STUD OR FACE OF CONCRETE UNLESS NOTED OTHERWISE. ALL FLOOR LEVELS ARE TO TOP OF PLYWOOD SHEATHING UNLESS NOTED OTHERWISE. DO NOT SCALE DRAWINGS FOR CRITICAL DIMENSIONS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAFETY PRECAUTIONS AND METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS WORK.

5. THE CONTRACTOR SHALL NOT SIGNIFICANTLY VARY OR MODIFY THE WORK SHOWN EXCEPT WITH WRITTEN INSTRUCTIONS FROM ARCHITECT.

6. THE CONTRACTOR SHALL REPORT ERRORS AND OMISSIONS TO THE ARCHITECT IMMEDIATELY.

CODE NOTES / BUILDING PLANNING:

1. EGRESS WINDOWS: IRC SECTION R310.1. BASEMENTS, HABITABLE ATTICS, AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WINDOW WELLS SHALL BE PROVIDED WHEN EGRESS WINDOWS HAVE A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND ELEVATION. THE WELL SHALL ALLOW THE WINDOW TO BE FULLY OPENED AND PROVIDE A MINIMUM ACCESSIBLE NET CLEAR OPENING OF 9 SQUARE FEET, WITH A MINIMUM DIMENSION OF 36". WINDOW WELLS WITH A VERTICAL DEPTH OF MORE THAN 44" SHALL BE EQUIPPED WITH A PERMANENT LADDER OR STEPS. SEE ATTACHED STANDARD CONSTRUCTION DETAILS: EMERGENCY EGRESS/RESCUE OPENINGS FOR ADDITIONAL INFORMATION.

2. SMOKE ALARMS: IRC SECTION R314. A SMOKE ALARM LISTED IN ACCORDANCE WITH UL217 SHALL BE INSTALLED IN EACH SLEEPING ROOM, OUTSIDE EACH SLEEPING ROOM, AND ON EACH STORY OF THE DWELLING (INCLUDING BASEMENTS BUT EXCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS). SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE INDIVIDUAL UNIT, INTERCONNECTION AND HARDWIRING IS NOT REQUIRED IN EXISTING BUILDINGS IF THE ALTERATIONS DO NOT RESULT IN THE REMOVAL OF WALL OR CEILING FINISHES UNLESS THERE IS A BASEMENT, ATTIC, OR CRAWL SPACE WHICH COULD PROVIDE ACCESS FOR HARDWIRING AND INTERCONNECTION WITHOUT REMOVING THE INTERIOR FINISH.

3. CARBON MONOXIDE ALARMS: AN APPROVED CARBON MONOXIDE ALARM LISTED WITH UL 2034 SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM AND ON EACH FLOOR OF THE DWELLING UNIT.

4. SAFETY GLAZING: IRC SECTION R308 ALL GLASS LOCATED IN AN AREA CONSIDERED HAZARDOUS MUST BE SAFETY GLAZED:

- GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS, EXCEPT DECORATIVE GLAZING AND GLAZED OPENINGS
- GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE. EXCEPTIONS: DECORATIVE GLAZING, AN INTERVENING WALL OR PERMANENT BARRIER IS BETWEEN THE DOOR AND THE GLAZING, GLAZING IS IN A WALL ON THE LATCH SIDE OF THE DOOR AND PERPENDICULAR TO THE GRADE PLANE, OR CLOSED POSITION; GLAZING ADJACENT TO A DOOR GIVING ACCESS TO A CLOSET WHICH IS LESS THAN 3' IN DEPTH SHALL COMPLY WITH C BELOW; AND GLAZING ADJACENT TO THE FIXED PANEL OF A PATIO DOOR.
- GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEET ALL OF THE FOLLOWING CONDITIONS:
 - a. EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQUARE FEET. AND
 - b. EXPOSED BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR, AND
 - c. EXPOSED TOP EDGE IS GREATER THAN 36" ABOVE THE FLOOR, AND
 - d. 1 OR MORE WALKING SURFACES ARE WITHIN 36" HORIZONTALLY AND IN A STRAIGHT LINE OF THE GLAZING. EXCEPTIONS: DECORATIVE GLAZING; A RAIL AT LEAST 1½" HIGH AND CAPABLE OF WITHSTANDING A HORIZONTAL FORCE AT LEAST 50 POUNDS PER FOOT CONTACTING THE GLASS IS INSTALLED IN FRONT OF THE GLAZING 34" TO 38" ABOVE LINEAR FOOT WITHOUT WALKING SURFACE, OR OUTBOARD PANES IN INSULATING GLASS UNITS AND OTHER MULTIPLE GLAZED PANELS WHEN THE BOTTOM EDGE OF THE GLASS IS 25 FEET OR MORE ABOVE GRADE, ROOF, WALKING SURFACES OR OTHER HORIZONTAL SURFACE ADJACENT TO THE GLASS EXTERIOR.
- GLAZING IN RAILINGS REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE.
- TUB, SHOWER, HOT TUB, WHIRLPOOL, SAUNA, & STEAM ROOM ENCLOSURES AND ANY GLAZING IN A BATHROOM WALL ENCLOSURE, WHERE THE BOTTOM IS LESS THAN 60" ABOVE THE WALKING SURFACE. EXCEPTION: GLAZING MORE THAN 60" MEASURED HORIZONTALLY FROM THE WATERS EDGE OF A HOT TUB, WHIRLPOOL OR BATH TUB.
- GLAZING IN WALLS AND FENCES USED AS THE BARRIER OF INDOOR AND OUTDOOR SWIMMING POOLS AND SPAS WHEN THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE A WALKING SURFACE AND THE GLAZING IS WITHIN 5' OF THE WATER'S EDGE.
- GLAZING WITHIN 36" HORIZONTALLY OF A WALKING SURFACE AND ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WHEN THE EXPOSED SURFACE IS LESS THAN 36" ABOVE THE PLANE OF THE WALKING SURFACE. EXCEPTION: A RAIL, GUARD OR WALL IS INSTALLED MEETING CONDITIONS OF R308.4 (7).
- GLAZING WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 36 INCHES ABOVE THE NOSE OF THE TREAD. EXCEPTION: GUARDS COMPLYING WITH R312 AND THE GLASS IS MORE THAN 18" FROM THE GUARD.

5. NATURAL LIGHT & VENTILATION IRC SECTION R303.1 AND R303.2. ALL HABITABLE ROOMS SHALL BE PROVIDED WITH AGGREGATE-GLAZING AREA OF NOT LESS THAN EIGHT PERCENT (8%) OF THE FLOOR AREA OF SUCH ROOMS. EXCEPT FOR ROOMS WHICH HAVE ARTIFICIAL LIGHT CAPABLE OF AVERAGE ILLUMINATION OF 5 FOOT CANDLES AT A HEIGHT OF 30" ABOVE FLOOR LEVEL, AN ADJOINING ROOM MAY BE CONSIDERED UNDER CERTAIN CONDITIONS OF R303.1.1. VENTILATION SHALL BE PROVIDED THROUGH SOURCE SPECIFIC AND WHOLE HOUSE VENTILATION SYSTEMS DESIGNED AND INSTALLED AS SPECIFIED IN SECTIONS M1507 AND M1508.

6. EXHAUST FANS: IRC SECTION M1507, IMC 501.2, 501.2.1 SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM, INDOOR SWIMMING POOL, SPA, AND OTHER ROOMS WHERE WATER VAPOR OR COOKING ODOR IS PRODUCED. EXHAUST FANS PROVIDING SOURCE SPECIFIC VENTILATION SHALL HAVE A MINIMUM FAN FLOW RATING NOT LESS THAN 50 CFM AT 0.25 INCHES WATER GAUGE FOR BATHROOMS, LAUNDRIES, OR SIMILAR ROOMS AND 100 CFM AT 0.25 INCHES WATER GAUGE FOR KITCHENS. THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED OUTDOORS. AIR SHALL NOT BE EXHAUSTED INTO AN ATTIC, SOFFIT, RIDGE VENT, OR CRAWL SPACE

7. WHOLE HOUSE VENTILATION SYSTEM CONTROLS: IRC SECTION M1507. ALL VENTILATION SYSTEM CONTROLS SHALL BE READILY ACCESSIBLE. INTERMITTENTLY OPERATED SYSTEMS SHALL HAVE A MANUAL CONTROL, AS WELL AS AN AUTOMATIC CONTROL, SUCH AS A CLOCK TIMER. THE AUTOMATIC CONTROL TIMER SHALL BE SET TO OPERATE THE WHOLE HOUSE FAN SYSTEM FOR AT LEAST 8 HOURS A DAY. A LABEL SHALL BE AFFIXED TO THE CONTROL THAT READS "WHOLE HOUSE VENTILATION (SEE OPERATING INSTRUCTIONS)." THE INSTALLER SHALL PROVIDE THE WHOLE HOUSE VENTILATION SYSTEM MANUFACTURER'S OPERATION DESCRIPTION AND OPERATING INSTRUCTIONS.

TABLE M1507.3.3 (1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

FLOOR AREA SQ-FT	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	>7
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

8. CLOTHES DRYERS: IRC SECTIONS M1502, G2439.3 & G2439.5. CLOTHES DRYER EXHAUST DUCTS SHALL TERMINATE OUTSIDE THE BUILDING AT LEAST 3 FEET AWAY FROM ANY OPENINGS AND BE EQUIPPED WITH A BACK DRAFT DAMPER. EXHAUST DUCTS SHALL BE CONSTRUCTED OF MINIMUM 0.016 INCH THICK RIGID METAL DUCTS, HAVING SMOOTH INTERIOR SURFACES WITH JOINTS RUNNING IN THE DIRECTION OF AIR FLOW. DUCTS SHALL NOT BE CONNECTED WITH SHEET METAL SCREWS OR OTHER FASTENERS WHICH COULD OBSTRUCT THE FLOW. EXHAUST DUCTS SHALL BE SUPPORTED AT 4' INTERVALS AND SECURED IN PLACE. APPROVED (UL 2158A) TRANSITION DUCT OF NOT MORE THAN 8" IN LENGTH MAY BE USED WITHIN A DWELLING, PROVIDED THEY ARE NOT CONCEALED WITHIN CONSTRUCTION. DUCT LENGTH SHALL NOT EXCEED A TOTAL COMBINED VERTICAL AND HORIZONTAL LENGTH OF 25 FEET FROM THE CONNECTION OF THE TRANSITION DUCT FROM THE DRYER TO THE OUTLET TERMINAL. THE MAXIMUM LENGTH OF THE DUCT SHALL BE REDUCED IN ACCORDANCE WITH TABLE M1502.4.4.1, EXCEPT THE MANUFACTURER'S INSTRUCTIONS MAY PREVAIL IF THE INSTRUCTIONS ARE PROVIDED TO THE INSPECTOR AT THE TIME OF THE CONCEALMENT INSPECTION. NO SCREENS SHALL BE INSTALLED AT THE DUCT TERMINATION, WHERE THE DUCT IS CONCEALED WITHIN THE BUILDING CONSTRUCTION. THE EQUIVALENT LENGTH OF THE EXHAUST DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG LOCATED WITHIN 6' OF THE EXHAUST DUCT CONNECTION.

TABLE M1502.4.4.1 DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH

EXHAUST DUCT FITTING TYPE	EQUIVALENT LENGTH
4" RAD. MITERED 45 DEGREE ELBOW	2'-6"
4" RAD. MITERED 90 DEGREE ELBOW	5'
6" RAD. SMOOTH 45 DEGREE ELBOW	1'
6" RAD. SMOOTH 90 DEGREE ELBOW	1'-9"
8" RAD. SMOOTH 45 DEGREE ELBOW	1'
8" RAD. SMOOTH 90 DEGREE ELBOW	1'-7"
10" RAD. SMOOTH 45 DEGREE ELBOW	9"
10" RAD. SMOOTH 90 DEGREE ELBOW	1'-6"

9. RANGE HOOD: IRC SECTION M1503, M1901. THE VERTICAL DISTANCE BETWEEN THE COOKING TOP OF A DOMESTIC RANGE AND UNPROTECTED COMBUSTIBLE MATERIAL SHALL NOT BE LESS THAN 30". REDUCED CLEARANCES MAY BE PERMITTED IN ACCORDANCE WITH THE LISTING AND LABELING OF THE RANGE HOODS OR APPLIANCES. COMMERCIAL COOKING EQUIPMENT SHALL NOT BE INSTALLED WITHIN DWELLING UNITS; COOKING APPLIANCES SHALL BE LISTED AND LABELED AS HOUSEHOLD-TYPE APPLIANCES FOR DOMESTIC USE.

10. WATER CLOSET CLEARANCES: IRC FIGURE 307.1. WATER CLOSETS SHALL BE LOCATED IN A CLEAR SPACE OF NOT LESS THAN 30" FROM THE CENTER OF THE FIXTURE TO THE CENTER OF THE FIXTURE TO A WALL OR OTHER SIDE BARRIER SUCH AS A TUB. THE CLEAR SPACE IN FRONT OF THE WATER CLOSET SHALL BE AT LEAST 21". THE CEILING HEIGHT ABOVE THE FIXTURE SHALL BE SUCH THAT THE FIXTURE IS CAPABLE OF BEING USED FOR ITS INTENDED PURPOSE.

11. SHOWER AREAS: IRC FIGURE 307.1, R305, R307. SHOWERS SHALL BE MINIMUM 30"X 30" AND HAVE A MINIMUM 24" CLEARANCE IN FRONT OF THE OPENING, AND AT LEAST 6" CLEARANCE ABOVE THE SHOWER FLOOR OR TUB. A NON-ABSORBENT WALL FINISH SHALL BE PROVIDED TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE SHOWER FLOOR.

12. CHIMNEYS & FIREPLACES: IRC CHAPTER 10. FACTORY-BUILT CH

CODE NOTES / STRUCTURAL:

- MIN. CONCRETE FOOTING SIZE: IRC SECTION R403.1, R403.1.3.
 - SUPPORTING 1 FLOOR: MINIMUM 6" BY 12"
 - SUPPORTING 2 FLOORS: MINIMUM 6" X 15"
 - SUPPORTING 3 FLOORS: MINIMUM 6" X 23"

ALL EXTERIOR WALLS SHALL BE SUPPORTED ON CONTINUOUS FOOTINGS OR OTHER APPROVED STRUCTURAL SYSTEM OF SUFFICIENT DESIGN TO ACCOMMODATE ALL LOADS AND TO TRANSMIT THE RESULTING LOADS TO THE SUPPORTING SOIL WITHIN THE LIMITATIONS DETERMINED FROM THE CHARACTERISTICS OF THE SOIL. FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED NATURAL SOIL OR ENGINEERED FILL.

- MIN. CONCRETE FOOTING REINFORCEMENT: IRC SECTION 403.1.3. AT LEAST ONE #4 BAR IS REQUIRED FOR ALL CONTINUOUS CONCRETE FOOTINGS.
- MIN. CONCRETE FOUNDATION WALL SIZE AND REINFORCEMENT: IRC SECTION 404. WALLS THAT EXCEED 8 FEET IN HEIGHT OR HAVE MORE THAN 4 FEET OF UNBALANCED FILL AND NO PERMANENT LATERAL SUPPORT AT THE TOP OF THE WALL, MUST BE DESIGNED, SIGNED AND SEALED BY A LICENSED WASHINGTON STATE DESIGN PROFESSIONAL.

4. MINIMUM FOOTING DEPTH: IRC SECTION R403.1.4. ALL EXTERIOR FOOTINGS SHALL BE PLACED AT LEAST 12" BELOW THE UNDISTURBED GROUND. INTERIOR FOOTINGS SUPPORTING BEARING OR BRACING WALLS AND CAST MONOLITHICALLY WITH A SLAB ON GRADE SHALL EXTEND TO A DEPTH OF NOT LESS THAN 12" BELOW THE TOP OF SLAB.

5. SLAB ON GRADE FLOOR: IRC R403.1.3.2 IRC R309.1. FOUNDATIONS MUST EXTEND AT LEAST 6" ABOVE FINISH GRADE. MONOLITHIC FOUNDATIONS SHALL HAVE FOOTINGS AT LEAST 12" WIDE, BE AT LEAST 12" BELOW GRADE, EXTEND AT LEAST 6" ABOVE FINISH GRADE, AND SHALL HAVE AT LEAST ONE #4 BAR AT THE BOTTOM OF THE FOOTING AND ONE #4 BAR LOCATED AT THE TOP.

6. FOUNDATION ANCHORAGE: IRC SECTION R403.1.6 & R602.11.1. ANCHOR BOLTS SHALL BE NOT LESS THAN 1/2" DIAMETER, EMBEDDED AT LEAST 7", AND SPACED NO MORE THAN 6' APART. (4" IF OVER 2' DISTANCE BETWEEN BOLTS PER PIECE (SILL, PLATE), WITH A BOLT 1" LOCATED WITHIN 12" OF EACH END OF EACH PIECE. 2" X 3" X 0.229" THICK HOT DIPPED GALVANIZED PLATE WASHERS, AND NUTS SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE. IF FOUNDATION ANCHOR STRAPS ARE USED INSTEAD OF ANCHOR BOLTS, THEY SHALL BE SPACED NO MORE THAN 4' APART (3' IF OVER 2 STORIES).

7. DAMP-PROOF FOUNDATION WALLS: IRC SECTION R406 EXTERIOR FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USABLE SPACES LOCATED BELOW GRADE SHALL BE DAMP PROOFED IN ACCORDANCE WITH IRC R406.1 OR WATERPROOFED IN ACCORDANCE WITH IRC 406.2. FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE BY APPROVED METHODS AND MATERIALS. ALL JOINTS IN MEMBRANE WATERPROOFING SHALL BE LAPPED AND SEALED WITH AN ADHESIVE COMPATIBLE WITH THE MEMBRANE.

8. PIER PADS & COLUMNS: IRC SECTION R407.3. CONCRETE PIER FOOTINGS SHALL HAVE A DEPTH TO WIDTH RATIO NOT TO EXCEED 2:1. OR, SHALL HAVE #4 BARS LOCATED EACH DIRECTION SPACED NOT MORE THAN 12" ON CENTER. (REBAR MUST BE IN PLACE UPON INSPECTION.) POSITIVE CONNECTIONS SHALL BE PROVIDED TO PREVENT LATERAL DISPLACEMENT AT BOTH THE TOP AND BOTTOM OF COLUMNS.

9. FOOTING/PIER SETBACK FROM SLOPE: IRC SECTION R403.1.7 THE PLACEMENT OF BUILDINGS AND STRUCTURES ON OR ADJACENT TO SLOPES STEEPER THAN 1 UNIT VERTICAL IN 3 UNITS HORIZONTAL (33.7%) SHALL CONFORM TO SECTIONS R403.1.7.1 THROUGH R403.1.7.4. (SEE ALSO IRC FIGURE R403.1.7.1) FOOTINGS MUST BE EMBEDDED IN MATERIAL SUFFICIENT TO PROVIDE VERTICAL AND LATERAL SUPPORT FOR THE FOOTING WITHOUT DETRIMENTAL SETTLEMENT.

10. CHIMNEY FOUNDATION: IRC SECTION R1001.2 AND R1003 MASONRY CHIMNEYS SHALL BE SUPPORTED ON FOUNDATIONS OF SOLID MASONRY OR CONCRETE AT LEAST 12 INCHES THICK, AT LEAST 6 INCHES BEYOND EACH SIDE OF THE EXTERIOR DIMENSIONS OF THE CHIMNEY, BE AT LEAST 12" BELOW GRADE, AND ON NATURAL UNDISTURBED EARTH OR ENGINEERED FILL. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN TABLE R1003.2 AND IRC FIGURE R1001.1.

11. FOUNDATION VENTILATION: IRC SECTION R408.2. MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 300 SQUARE FEET OF UNDER-FLOOR SPACE AREA, ONE SUCH VENTILATING OPENING SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING EXCEPT ONE SIDE OF THE BUILDING IS PERMITTED TO HAVE NO VENTILATION OPENINGS, WHEN SUCH IS COVERED FOR THEIR HEIGHT AND WIDTH WITH MATERIALS IDENTIFIED IN IRC R408.2 SUCH THAT THE OPENINGS ARE NOT LARGER THAN 1/4" INCH.

12. PROTECTION AGAINST DECAY: IRC SECTION R317.1, R317.3.1. ALL WOOD IN CONTACT WITH THE GROUND THAT SUPPORTS PERMANENT STRUCTURES INTENDED FOR HUMAN OCCUPANCY SHALL BE PROTECTED AGAINST DECAY BY PRESERVATIVE TREATED WOOD SUITABLE FOR GROUND CONTACT USE AND TREATED IN ACCORDANCE WITH AWPA U1. ALL WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY FOUNDATION WALLS SHALL BE TREATED WOOD OR DECAY-RESISTANT HEARTWOOD OF REDWOOD, BLACK LOCUST, OR CEDARS. CUT ENDS OF PRESSURE-TREATED WOOD SHALL BE TREATED IN ACCORDANCE WITH AWPA M4. (NOTE: ALL FASTENERS USED IN PRESSURE TREATED LUMBER (SILLS, JOISTS OR SILL, RM JOIST TO SILL, ETC.) SHALLS BE HOT DIPPED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER.)

13. POSTS, POLES AND COLUMNS: IRC SECTION R317.1.2, R317.1.4. COLUMNS AND POSTS SUPPORTING PERMANENT STRUCTURES THAT ARE EMBEDDED IN CONCRETE OR IN DIRECT CONTACT WITH THE GROUND OR EMBEDDED IN CONCRETE EXPOSED TO THE WEATHER SHALL BE APPROVED PRESSURE TREATED WOOD SUITABLE FOR GROUND CONTACT USE, POSTS OR COLUMNS WHICH ARE EXPOSED TO WEATHER, OR ARE LOCATED IN BASEMENTS OR CELLARS, SHALL BE SUPPORTED BY PIERS OR METAL PEDESTALS PROJECTING 1 INCH ABOVE THE FLOOR (AND 6" ABOVE EXPOSED EARTH) AND SHALL BE SEPARATED BY AN APPROVED IMPERVIOUS MOISTURE BARRIER, OR MUST BE OF PRESSURE TREATED WOOD, OR WOOD OF NATURAL RESISTANCE TO DECAY. POSTS OR COLUMNS ENCLOSED CRAWL SPACES LOCATED WITHIN THE PERIPHERY OF THE BUILDING, SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS SHALL BE GREATER THAN 8 INCHES FROM EXPOSED GROUND AND MUST BE SEPARATED BY A MOISTURE BARRIER OR BE OF PRESSURE TREATED WOOD.

14. GIRDIS ENTERING MASONRY OR CONCRETE WALL: IRC SECTION R317.1(4) ENDS OF WOOD GIRDERS ENTERING CONCRETE OR MASONRY WALLS MUST HAVE A MINIMUM CLEARANCE OF 1/2" INCH ON TOPS, SIDES AND ENDS, OR SHALL BE OF AN APPROVED SPECIES AND GRADE OF LUMBER PRESURE TREATED OR DECAY RESISTANT HEARTWOOD OF REDWOOD, BLACK LOCUST, BLACK WALNUT OR CEDARS.

15. POST-BEAM CONNECTIONS/FASTENING: IRC R301, R407.3, R502.9. WHERE POSTS AND BEAM OR GIRDER CONSTRUCTION IS USED TO SUPPORT FRAMING, POSITIVE CONNECTIONS SHALL BE PROVIDED TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT. THE CONSTRUCTION OF BUILDINGS AND STRUCTURES SHALL RESULT IN A SYSTEM THAT PROVIDES A COMPLETE LOAD PATH CAPABLE OF TRANSFERRING ALL LOADS FROM THEIR POINT OF ORIGIN THROUGH THE LOAD RESISTING ELEMENTS TO THE FOUNDATION.

16. SPECIFY WOOD SPECIES & GRADES: IRC SECTIONS R502.1, R602.1. LOAD-BEARING DIMENSION LUMBER FOR JOISTS, BEAMS, GIRDERS, STUDS, PLATES AND HEADERS SHALL BE IDENTIFIED BY A GRADE MARK OF A LUMBER GRADING OR INSPECTION AGENCY THAT HAS BEEN APPROVED BY AN ACCREDITATION BODY THAT COMPLIES WITH DOC PS 20. IN LIEU OF A GRADE MARK, FOR WOOD LOCALLY MILLED, A CERTIFICATE OF INSPECTION ISSUED BY A LUMBER GRADING OR INSPECTION AGENCY MEETING THE REQUIREMENTS OF THIS SECTION MAY BE ACCEPTED.

17. FLOOR FRAMING: IRC SECTIONS R502.3, R502.6, R502.6.1, R502.7. THE ENDS OF EACH JOIST, BEAM OR GIRDER SHALL HAVE NOT LESS THAN 1-1/2" OF BEARING ON WOOD OR METAL OR NOT LESS THAN 3" ON MASONRY OR CONCRETE. JOISTS FRAMING FROM OPPOSITE SIDES OVER A BEARING SUPPORT SHALL LAP A MINIMUM OF 3 INCHES AND SHALL BE NAILED TOGETHER WITH A MINIMUM THREE 10D FACE NAILS. JOISTS SHALL BE SUPPORTED laterally AT EACH END AND AT EACH INTERMEDIATE SUPPORT BY FULL-DEPTH, SOLID-BLOCKED WITH LUMBER NOT LESS THAN 2" NOMINAL THICKNESS, OR BY ATTACHMENT TO A HEADER, BAND, OR RIM JOIST OR SHALL BE OTHERWISE PROVIDED WITH LATERAL SUPPORT TO PREVENT ROTATION. SEE IRC TABLES R502.3.1 (1) & (2) FOR FLOOR JOIST SPANS, R502.5 (1) & (2) FOR GIRDER SPANS, AND R502.3.3 (1) & (2) FOR CANTILEVER SPANS. A LOAD PATH FOR LATERAL FORCES SHALL BE PROVIDED BETWEEN FLOOR FRAMING AND BRACED WALL PANELS LOCATED ABOVE OR BELOW A FLOOR.

18. BEARING PARTITIONS: IRC SECTION 502.4. JOISTS UNDER PARALLEL BEARING PARTITIONS SHALL BE OF ADEQUATE SIZE (AS A BEAM) TO SUPPORT THE LOAD. DOUBLE JOISTS, SIZED TO ADEQUATELY SUPPORT THE LOAD, THAT ARE SEPARATED TO PERMIT THE INSTALLATION OF PIPING OR VENTS SHALL BE FULL-DEPTH, SOLID-BLOCKED WITH LUMBER NOT LESS THAN 2 INCHES IN NOMINAL THICKNESS SPACED NOT MORE THAN 4 FEET ON CENTER. BEARING PARTITIONS PERPENDICULAR TO JOISTS SHALL NOT BE OFFSET FROM SUPPORTING GIRDERS, WALLS OR PARTITIONS MORE THAN THE JOIST DEPTH UNLESS SUCH JOISTS ARE OF SUFFICIENT SIZE TO CARRY THE ADDITIONAL LOAD(S).

19. UNDER-FLOOR CLEARANCE: IRC SECTION 317.1. WHEN FLOOR JOISTS OR THE BOTTOM OF A WOOD STRUCTURAL FLOOR ARE LOCATED WITHIN 18" OR WOOD GIRDERS ARE LOCATED WITHIN 12" TO THE EXPOSED GROUND IN CRAWL SPACES OR UNEXCAVATED AREA LOCATED WITHIN THE PERIPHERY OF THE BUILDING FOUNDATION, ALL COMPONENTS OF THE FLOOR ASSEMBLY SHALL BE PRESSURE TREATED WOOD OR WOOD OF NATURAL RESISTANCE TO DECAY, INCLUDING ALL POSTS, BEAMS OR GIRDERS, JOISTS AND SUB-FLOOR. THE UNDER-FLOOR GRADE SHALL BE CLEANED OF ALL VEGETATION AND ORGANIC MATERIAL. ALL WOOD FORMS USED FOR PLACING CONCRETE AND CONSTRUCTION MATERIALS SHALL BE REMOVED BEFORE THE BUILDING IS OCCUPIED

20. UNDER-FLOOR ACCESS: IRC SECTION 408.4. ACCESS SHALL BE PROVIDED TO ALL UNDER-FLOOR SPACES TO ACCESS OPENINGS THROUGH THE FLOOR SHALL BE A MINIMUM OF 18" X 24". OPENINGS THROUGH A PERIMETER WALL SHALL BE AT LEAST 18" X 24". WHEN ANY PORTION OF THE THROUGH WALL ACCESS IS BELOW GRADE, AN AREAWAY OF NOT LESS THAN 16" X 24" SHALL BE PROVIDED. THE BOTTOM OF THE AREAWAY SHALL BE BELOW THE THRESHOLD OF THE ACCESS OPENING. THROUGH WALL ACCESS OPENINGS SHALL NOT BE LOCATED UNDER A DOOR TO THE RESIDENCE. UNDERFLOOR SPACES CONTAINING APPLIANCES SHALL BE PROVIDED WITH AN UNOBSTRUCTED PASSAGEWAY LARGE ENOUGH TO REMOVE THE LARGEST APPLIANCE BUT NOT LESS THAN 30" HIGH BY 22" WIDE, NOR MORE THAN 20' LONG FROM THE OPENING TO THE APPLIANCE. A LEVEL SERVICE SPACE OF AT LEAST 30" BY 30" SHALL BE PROVIDED AT THE FRONT OR SERVICE SIDE OF THE APPLIANCE. SEE M1305.1.4 FOR DETAILS OF MECHANICAL EQUIPMENT ACCESS.

21. WALL FRAMING: IRC SECTIONS 602.3.1, 602.3.2, 602.3.3, 602.3.4, 602.6 & 602.9. STUDS SHALL BE A MINIMUM NO. 3, STANDARD OR STUD GRADE LUMBER, EXCEPT THAT UTILITY STUDS MAY BE USED FOR BEARING STUDS NOT SUPPORTING A FLOOR ABOVE OR NONBEARING STUDS. UTILITY GRADE STUDS SHALL NOT BE SPACED MORE THAN 16" ON CENTER, SUPPORT MORE THAN A ROOF AND CEILING, OR EXCEED 8' IN HEIGHT FOR EXTERIOR AND LOAD BEARING WALLS. THE SIZE, HEIGHT, AND SPACING OF ALL OTHER WOOD-FRAMING STUDS SHALL BE IN ACCORDANCE WITH TABLE R602.3.(5). (MAXIMUM 10 FEET IN SEISMIC DESIGN CATEGORY D2.) STUDS SHALL BE PLACED WITH THEIR WIDE DIMENSION PERPENDICULAR TO THE WALL. WOOD STUD WALLS SHALL BE CAPPED WITH A DOUBLE TOP PLATE INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND INTERSECTIONS WITH BEARING PARTITIONS. END JOISTS SHALL BE OFFSET AT LEAST 24". STUDS SHALL HAVE FULL BEARING ON A NOMINAL 2" OR LARGER PLATE OR SILL HAVING A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE STUDS. WHERE JOISTS, TRUSSES, OR RAFTERS ARE SPACED MORE THAN 16" O.C. AND THE BEARING STUDS ARE SPACED 24" O.C. SUCH MEMBERS SHALL BEAR WITHIN 5" OF THE STUDS BENEATH. CUTTING AND NOTCHING SHALL EXCEED 25% OF THE STUD WIDTH AND NOT LESS THAN 3" HIGH BY 2" NOT EXCEED 40% OF A SINGLE STUD WIDTH IN NON-BEARING PARTITIONS. BORED OR DRILLED HOLES: THE DIAMETER OF THE RESULTING HOLE MAY NOT EXCEED 40% OF THE STUD WIDTH, CAN BE NO CLOSER THAN 5/8" TO THE EDGE OF THE STUD, AND MAY NOT BE LOCATED IN THE SAME SECTION AS A CUT OR NOTCH. SEE IRC SECTION R602.6 FOR EXCEPTIONS SEE IRC SECTIONS R602.6 (1) AND R602.6.1 FOR ADDITIONAL DETAILS. FOUNDATION CRIPPLE WALLS: IRC SECTION R602.9. FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT LESS IN SIZE THAN THE STUDDING ABOVE. WHEN EXCEEDING 4'-0" IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF STUDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY. CRIPPLE WALLS WITH A STUD HEIGHT LESS THAN 14' SHALL BE SHEATHED ON AT LEAST ONE SIDE WITH A WOOD STRUCTURAL PANEL THAT IS FASTENED TO BOTH THE TOP AND BOTTOM PLATES IN ACCORDANCE WITH TABLE R602.3(1) OR THE CRIPPLE WALLS SHALL BE CONSTRUCTED OF SOLID BLOCKING. CRIPPLE WALLS IN SEISMIC DESIGN CATEGORY D2 SHALL BE SUPPORTED ON CONTINUOUS FOUNDATIONS.

22. WALL BRACING: IRC SECTION 602.10. ALL BRACED WALLS AND CRIPPLE WALL BRACING IN SEISMIC DESIGN CATEGORY D2 SHALL BE CONSTRUCTED IN ACCORDANCE WITH IRC TABLE R602.10.2(1), (2), AND (3) AND SECTIONS R602.10 AND R602.11. TYPICALLY BRACED WALL PANELS REQUIRE NAILING PATTERNS OF 6" O.C. ALONG ALL PANEL EDGES. ALL SHEATHING JOINTS MUST BE OVER STUDS (VERTICALLY) OR SOLID BLOCKING (HORIZONTALY).

- BRACED WALL PANELS SHALL BEgin NO MORE THAN 8" 0" FROM EACH END OF A BRACED WALL LINE. IF THE BRACED WALL PANEL IS NOT LOCATED AT THE CORNER, THEN A 24" PANEL IS REQUIRED AT THE CORNER (IN ADDITION TO THE 4' BWP WITHIN 8') OR, A HOLD DOWN DEVICE IS REQUIRED AT THE END OF THE BRACED WALL PANEL END NEAREST THE CORNER.
- SPACING OF INTERIOR BRACED WALL LINES SHALL NOT EXCEED 25 FEET APART (EXCEPT TO ACCOMMODATE UP TO ONE ROOM UP TO 900 SQUARE FEET, AN INCREASE TO 35' IS ALLOWED - ADJUSTMENT FACTORS WILL APPLY, SEE IRC R602.10.1.5).
- BRACED WALL LINES MAY HAVE OFFSETS, OUT OF PLANE OF UP TO 4" 0".
- IN ONE-STORY BUILDINGS, BRACED WALL PANELS SHALL BE SUPPORTED ON CONTINUOUS FOUNDATIONS AT INTERVALS NOT EXCEEDING 50 FEET. IN TWO-STORY BUILDINGS ALL INTERIOR BRACED WALL PANELS SHALL BE SUPPORTED ON CONTINUOUS FOUNDATIONS. (SEE EXCEPTIONS IN IRC SECTION R602.10.7.1).
- INTERIOR BRACED WALL PANELS SHALL BE FASTENED TO BOTH THE FLOOR AND ROOF FRAMING IN ACCORDANCE WITH TABLE R602.3(1) (TYPICALLY 3-180 @ 16" O.C.)
- CRIPPLE WALLS SHALL BE BRACED AS BRACED WALL PANELS IN ACCORDANCE WITH IRC R602.10.9.1 AND TABLES R602.10.1.2 (1) AND (2). A CRIPPLE WALL GREATER THAN 4' SHALL BE DESIGNATED AS THE FIRST STORY WALL FOR PURPOSES OF DESIGNATING THE WALL BRACING REQUIREMENTS (R602.10.7.1).
- WHERE "STEEPED FOUNDATIONS" OCCUR, SEE IRC SECTION R602.11.2 FOR ADDITIONAL REQUIREMENTS FOR STEEPED FOUNDATIONS.
- SEE THE ATTACHED "BRACED WALL PANEL" AND "ALTERNATE BRACED WALL PANEL" DETAILS FOR TYPICAL CONSTRUCTION REQUIREMENTS.

23. OPENINGS IN EXTERIOR & INTERIOR WALLS (HEADERS): IRC SECTION R602.7. HEADERS SHALL BE IDENTIFIED AT THE POINT OF CONTACT WITH THE EXTERIOR OR INTERIOR WALLS AND SHALL BE SIZED TO SUPPORT THE LOAD ABOVE IN ACCORDANCE WITH IRC TABLES R502.5(1) AND R502.5(2), OR AS DESIGNED TO SUPPORT THE LOADS AS SPECIFIED IN IRC TABLE R301.5. ALTERNATELY, WOOD STRUCTURAL BOX HEADERS MAY BE USED IN ACCORDANCE WITH IRC SECTION R602.7.1, TABLE R602.7.2 AND FIGURE R602.7.2. EACH END OF ALL HEADERS SHALL HAVE AT LEAST 1.5" OF FULL-WIDTH BEARING.

24. FIRE-BLOCKS & DRAFT-STOPS: IRC SECTIONS R602.8, R502.12. FIRE BLOCKING & DRAFT STOPPING SHALL BE INSTALLED TO CUT OFF ALL CONCEALED VERTICAL AND HORIZONTAL DRAFT OPENINGS AND SHALL FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND BETWEEN A TOP STORY AND AN ATTIC. FIRE BLOCKING SHALL BE PROVIDED IN CONCEALED SPACES OF WOOD STUD WALLS AND PARTITIONS, VERTICALLY AT THE CEILING AND FLOOR LEVELS. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET; AND AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS, AS WELL AS STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND OPENINGS AROUND VENTS, PIPES AND DUCTS AT CEILING AND FLOOR LEVELS. FIRE BLOCKING MATERIAL SHALL NOT BE USED AS A FIRE BLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED. FIRE BLOCKING OF CHIMNEYS AND FIREPLACES SHALL BE IN ACCORDANCE WITH IRC SECTION R1001.16. WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW A CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY, DRAFT STOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1000 SQUARE FEET. DRAFT STOPPING MATERIALS SHALL CONSIST OF MATERIALS LISTED IN SECTION R502.12.1. ALL FIRE BLOCKING AND DRAFT STOPPING SHALL BE IN PLACE PRIOR TO REQUESTING A FRAMING INSPECTION.

25. SIDING TYPE IRC SECTION R703.3, R703.4, R703.5, R703.8, R703.9, R703.10, TABLE R703.4. EXTERIOR WALL COVERINGS SHALL BE INSTALLED, ATTACHED AND FLASHED IN ACCORDANCE WITH THE PROVISIONS OF IRC SECTION R703 AND THE SIDING MANUFACTURER'S INSTALLATION INSTRUCTIONS. PLEASE NOTE THAT MASONRY WALL COVERINGS EXCEEDING 3" IN THICKNESS REQUIRE AN ENGINEERED DESIGN IN SEISMIC DESIGN CATEGORY D2 (ALL OF KITSAP COUNTY). SEE #67

26. WEATHER RESISTIVE BARRIER: IRC SECTIONS R701.2, R703.2, R703.4 R703.8, R703.9.1 PRODUCTS SENSITIVE TO ADVERSE WEATHER SHALL NOT BE INSTALLED UNTIL ADEQUATE WEATHER PROTECTION FOR THE INSTALLATION IS PROVIDED. EXTERIOR SHEATHING SHALL BE DRY BEFORE APPLYING EXTERIOR COVER. THE EXTERIOR WALL ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED TO PROVIDE A WATER-RESISTANT BARRIER BEHIND THE EXTERIOR VENEER. ASPHALT-SATURATED FELT OR OTHER APPROVED WEATHER RESISTANT MATERIAL SUCH AS HOUSE WRAP SHALL BE APPLIED OVER THE SHEATHING OF ALL EXTERIOR WALLS EXCEPT WHERE PANEL SIDING WITH SHIPLAP JOINTS OR OTHER APPROVED WEATHER RESISTIVE METHODS ARE USED. SUCH FELT OR HOUSE WRAP MATERIAL SHALL BE APPLIED HORIZONTALLY, WITH THE UPPER LAYER OVERLAPPING THE LOWER LAYER BY NOT LESS THAN 2". APPROVED CORROSION-RESISTIVE FLASHINGS SHALL BE PROVIDED IN ALL EXTERIOR WALLS IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL OR THE BUILDING STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE. APPROVED CORROSION-RESISTANT FLASHINGS SHALL BE INSTALLED AT EXTERIOR WINDOW AND DOOR OPENINGS, AT INTERSECTION OF CHIMNEYS OR OTHER MASONRY OR STRUCTURE, WITH FRAMING OR STUCCO WALLS, WITH PROJECTING LIPS ON BOTH SIDES UNDER STUCCO COPINGS, UNDER AND AT THE ENDS OF MASONRY, WOOD OR METAL COPINGS AND SILLS; CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM; WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION; AT WALL AND ROOF INTERSECTIONS; AND AT BUILT-IN GUTTERS.

27. ANCHORED STONE AND MASONRY VENEER: IRC SECTION R301.2.2.3.2. **** ENGINEERING REQUIRED **** BUILDINGS WITH ANCHORED STONE AND MASONRY VENEER SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE EXCEPT WHERE THE MASONRY VENEER HAS A MAXIMUM THICKNESS OF 3 INCHES AS PERMITTED WITHIN THE LIMITATIONS OF IRC SECTION R703.7, EXCEPTION 2.

28. SIDING/EARTH SEPARATION: IRC SECTION R317. WOOD SIDING, SHEATHING AND WALL FRAMING ON THE EXTERIOR OF THE BUILDING USED WITHIN 6" OF EARTH SHALL BE PRESSURE TREATED WOOD OR WOOD OF NATURAL RESISTANCE TO DECAY AS IDENTIFIED IN ITEM #52 OF THIS CHECKLIST.

29. DECKS & EXTERIOR STAIRS: IRC SECTION R317, R502.2.2. PRESSURE TREATED WOOD SHALL BE USED FOR THOSE PORTIONS OF EXPOSED WOOD MEMBERS AND MEMBERS SUBJECT TO WIND DRIVEN RAIN, SUCH AS WITHIN A COVERED PORCH, THAT FORM THE STRUCTURAL SUPPORTS OF BUILDINGS, BALCONIES, PORCHES OR SIMILAR APPURTENANCES, INCLUDING ALL JOISTS, BEAMS, GIRDERS, DECKING AND POSTS, POLES AND COLUMNS. TREATMENT MUST BE APPLIED BY MANUFACTURER, SEE ITEM #62 OF THIS CHECK-LIST. LEDGER BOARDS FASTENED TO A WALL SHALL BE PROPERLY FLASHED AND POSITIVELY CONNECTED. WHERE SUPPORTED BY ATTACHMENT TO AN EXTERIOR WALL, DECKS SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE AND DESIGNED FOR BOTH VERTICAL AND LATERAL LOADS AS APPLICABLE. SUCH ATTACHMENT SHALL NOT BE ACCOMPLISHED BY THE USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL.

30. WOOD TRUSSES: IRC SECTION R502.11, R602.10. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH APPROVED ENGINEERING PRACTICE, ENGINEERING DATA AND INSTALLATION SPECIFICATIONS, INCLUDING THE TYPE OF ROOFING TO BE USED, SHALL BE AVAILABLE ON SITE AT FRAMING INSPECTION. TRUSSES SHALL BE SUPPORTED laterally AT POINTS OF BEARING BY SOLID BLOCKING TO PREVENT ROTATION AND LATERAL DISPLACEMENT, AND BRACED IN ACCORDANCE WITH THE INDIVIDUAL TRUSS DESIGN DRAWINGS. TRUSS MEMBERS SHALL NOT BE CUT, NOTCHED OR OTHERWISE ALTERED IN ANY WAY WITHOUT THE SPECIFIC APPROVAL OF A REGISTERED DESIGN PROFESSIONAL (STRUCTURAL CALCULATIONS REQUIRED). ALTERATIONS RESULTING IN THE ADDITION OF LOAD (E.G., HVAC EQUIPMENT, WATER HEATERS, ETC.) THAT EXCEED THE DESIGN LOAD SHALL NOT BE PERMITTED WITHOUT SPECIFIC ENGINEERING JUSTIFYING THE DESIGN.

31. RAFTERS: IRC SECTION R802.3, R802.8 RAFTERS SHALL BE FRAMED TO RIDGE BOARD OR TO EACH OTHER WITH A GUSSET PLATE AS A TIE. THE RIDGE BOARD SHALL BE AT LEAST 1" NOMINAL THICKNESS, AND ALL VALLEY OR HIP RAFTERS SHALL BE AT LEAST 2" NOMINAL THICKNESS. RAFTER TIES SHALL BE PLACED NOT MORE THAN 4' ON CENTER. SEE IRC TABLES R02.5.(11) THROUGH R02.5.(19) FOR ALL OTHER ALLOWED SPANS. WHEN THE POINT-TO-THICKNESS RATIO EXCEEDS 5 TO 1 THE ROOF RAFTERS AND CEILING JOISTS SHALL BE PROVIDED LATERAL SUPPORT AT POINTS OF BEARING TO PREVENT ROTATION.

32. RAFTER OPENINGS: IRC SECTION R802.9. WHEN THE HEADER JOIST SPAN DOES NOT EXCEED 4' THE HEADER JOIST MAY BE A SINGLE MEMBER OF THE SAME SIZE AS THE CEILING JOIST OR RAFTER. SINGLE TRIMMER JOISTS MAY BE USED TO CARRY A SINGLE HEADER JOIST THAT IS LOCATED WITHIN 3' OF THE TRIMMER JOIST BEARING. TRIMMER AND HEADER RAFTERS SHALL BE DOUBLED AND OF SUFFICIENT SIZE TO SUPPORT ALL LOADS WHEN THE SPAN OF THE HEADER EXCEEDS 4'. APPROVED HANGERS SHALL BE USED WHEN THE SPAN EXCEEDS 6'. TAIL JOISTS OVER 12' LONG SHALL BE SUPPORTED AT THE HEADER BY FRAMING ANCHORS OR ON LEDGER STRIPS NOT LESS THAN 2" X 2".

33. CEILING JOISTS: IRC SECTIONS R802.4, R802.8, AND R802.8.1 CEILING JOIST SPANS SHALL BE IN ACCORDANCE WITH IRC TABLES R802.4 (1) AND R802.4 (2) OR SPECIFICALLY DESIGNED FOR APPLIED LOADS. RAFTERS AND CEILING JOISTS HAVING A DEPTH-TO-THICKNESS RATIO EXCEEDING 5 TO 1 SHALL BE PROVIDED WITH LATERAL SUPPORT AT POINTS OF BEARING TO PREVENT ROTATION. RAFTERS AND CEILING JOISTS HAVING A DEPTH-TO-THICKNESS RATIO EXCEEDING 6 TO 1 SHALL BE SUPPORTED laterally BY SOLID BLOCKING, DIAGONAL BRIDGING (WOOD OR METAL) OR CONTINUOUS 1" X 3" WOOD STRIP NAILED ACROSS THE RAFTER CEILING JOISTS AT INTERVALS NOT EXCEEDING 8'.

34. ROOF SHEATHING: IRC SECTION R803. ALLOWABLE SPANS FOR LUMBER USED AS ROOF SHEATHING SHALL CONFORM TO TABLE R803.1 SPACED LUMBER SHEATHING ("SKIP SHEATHING") IS PROHIBITED IN SEISMIC DESIGN CATEGORY D2. WOOD STRUCTURAL PANELS SHALL BE IDENTIFIED BY GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN APPROVED AGENCY AND SHALL COMPLY WITH THE GRADES AND SPANS SPECIFIED IN TABLE R503.2.1 (1).

35. ROOF DRAINAGE & COVERING IRC SECTION R801.3, R903, R904, R905. ALL STRUCTURES SHALL HAVE A CONTROLLED METHOD OF WATER COLLECTION AND DISPOSAL FROM ROOFS (TYPICALLY GUTTERS), WATER SHALL DISCHARGE TO AN APPROVED DRAINAGE SYSTEM OR TO SPLASH BLOCKS WHERE A DRAINAGE SYSTEM IS NOT REQUIRED, ROOFS THAT DO NOT DRAIN OVER EDGES SHALL HAVE ROOF DRAINS INSTALLED AT THE LOW POINT OF THE ROOF AS WELL AS OVERFLOW DRAINS. SEE IRC R903.4. ROOF SLOPE SHALL BE INDICATED ON THE PLANS AND SELECTED ROOF COVERING MUST BE APPROPRIATE FOR THE ROOF FITCH. ROOF COVERINGS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. FLASHING SHALL BE INSTALLED AT WALL & ROOF INTERSECTIONS, AT CHANGES IN ROOF SLOPE OR DIRECTION, AND AROUND ROOF OPENINGS. WHERE FLASHING IS METAL THE METAL SHALL BE CORROSION-RESISTANT WITH A MINIMUM THICKNESS OF 0.019 INCH (NO. 26 GALVANIZED SHEET). ROOF DEAD LOADS ARE LIMITED TO A MAXIMUM OF 15 POUNDS PER SQUARE FOOT UNLESS THE ADDITIONAL BRACING PROVISIONS OF R301.2.2.2 ARE PROVIDED.

36. ATTIC VENTILATION: IRC SECTION R806. ENCLOSED ATTICS AND RAFTER SPACES SHALL HAVE CROSS VENTILATION. FOR EACH SEPARATE SPACE, THE TOTAL NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1 TO 150 OF THE AREA OF THE SPACE VENTILATED, THE TOTAL AREA IS PERMITTED TO BE REDUCED TO 1 TO 300, PROVIDED AT LEAST 50% AND NOT MORE THAN 80% OF THE REQUIRED VENTILATING AREA IS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3' ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. VENT OPENINGS SHALL BE PROVIDED WITH CORROSION RESISTANT WIRE MESH WITH 1/8" MINIMUM TO 1/2" MAXIMUM OPENINGS. A MINIMUM OF A 1-INCH AIRSPACE MUST BE MAINTAINED BETWEEN THE INSULATION AND THE ROOF SHEATHING AT THE LOCATIONS OF THE VENTS.

37. CHIMNEY HEIGHT: IRC R1003.9, R1003.20 CHIMNEYS SHALL EXTEND AT LEAST 2' HIGHER THAN ANY PORTION OF A BUILDING WITHIN 10', BUT SHALL NOT BE LESS THAN 3' ABOVE THE HIGHEST POINT WHERE THE CHIMNEY PASSES THROUGH THE ROOF. CHIMNEYS SHALL BE PROVIDED WITH CRICKETS WHEN THE DIMENSION PARALLEL TO THE RIDGELINE IS GREATER THAN 30" AND DOES NOT INTERSECT THE RIDGELINE. THE CRICKET AND CHIMNEY SHALL BE BUILT & FLASHED ACCORDING TO FIGURE R1003.20 AND TABLE R1003.20.

CODE NOTES / ENERGY:

1. FOUNDATION INSULATION: IECC R402.2.9. SLAB-ON-GRADE INSULATION, AT LEAST R-10 INSTALLED INSIDE THE FOUNDATION WALL, SHALL EXTEND DOWNWARD FROM THE TOP OF THE SLAB FOR A MINIMUM DISTANCE OF 24" OR DOWNWARD AND THEN HORIZONTALLY BENEATH THE SLAB FOR A MINIMUM COMBINED DISTANCE OF 24". FOR SLABS INSTALLED INSIDE A FOUNDATION WALL, THE INSULATION SHALL BE INSTALLED TO PROVIDE A THERMAL BREAK BETWEEN THE SLAB EDGE AND THE FOUNDATION. INSULATION INSTALLED OUTSIDE THE FOUNDATION SHALL EXTEND FROM THE TOP OF THE BELOW-GRADE WALL TO THE TOP OF THE FOOTING. INSULATION USED ON THE INTERIOR SIDE OF THE EXTERIOR WALL, DECKS SHALL BE INSTALLED TO PROVIDE A THERMAL BREAK BETWEEN THE BELOW-GRADE WALL TO THE BELOW-GRADE FLOOR LEVEL. ABOVE GRADE INSULATION SHALL BE PROTECTED.

2. UNDER-FLOOR INSULATION: IECC R402.2.7. FLOORS OVER UNCONDITIONED SPACES, SUCH AS VENTED CRAWL SPACES, UNCONDITIONED BASEMENTS AND GARAGES SHALL BE INSULATED WITH AT LEAST R-30 INSULATION. INSULATION SUPPORTS SHALL HOLD INSULATION IN SUBSTANTIAL CONTACT WITH THE SUBFLOOR AND SHALL BE INSTALLED SUCH THAT SPACING IS NO MORE THAN 24 INCHES ON CENTER.

3. WALL INSULATION: IECC TABLE R402.1.1 ABOVE GRADE EXTERIOR WALLS SHALL BE INSULATED WITH MINIMUM R-21 INSULATION FACED BATTS SHALL BE FACE-STAPLED (NOT INSET-STAPLED) TO AVOID COMPRESSION. BELOW GRADE WALLS SHALL BE INSULATED EITHER ON THE EXTERIOR TO A MINIMUM LEVEL OF R-10, OR ON THE INTERIOR TO THE SAME LEVEL AS WALLS ABOVE GRADE. HEADERS SHALL BE INSULATED WITH MINIMUM R-10 INSULATION.

4. ATTIC INSULATION: IECC TABLE R402.1.1. WHERE EAVE VENTS ARE INSTALLED RIGID BAFFLES SHALL BE INSTALLED TO DEFLECT THE INCOMING AIR ABOVE SURFACE OF THE INSULATION.

5. VAULTED CEILING INSULATION: IECC R402.2.1.1. OPEN-BLOWN OR POURED LOOSE FILL INSULATION MAY BE USED IN VAULTED SPACES WHERE THE SLOPE OF THE CEILING IS NOT MORE THAN 3 FEET IN 12 AND THERE IS AT LEAST 30 INCHES OF CLEAR DISTANCE FROM THE TOP OF THE BOTTOM CHORD OF THE TRUSS OR CEILING JOIST TO THE UNDERSIDE OF THE SHEATHING AT THE ROOF RIDGE. A MINIMUM OF 1" OF AIRSPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING. THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/10TH OF THE AREA OF THE SPACE VENTILATED, WITH 50 PERCENT OF THE REQUIRED VENTILATING AREA PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3' ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. WHEN FEASIBLE, THE BAFFLES SHALL BE INSTALLED FROM THE TOP OF THE OUTSIDE OF THE EXTERIOR WALL, EXTENDING INWARD, TO A POINT 6" VERTICALLY ABOVE THE HEIGHT OF NON-COMPRESSED INSULATION, AND 12" VERTICALLY TO THE AUTOMATIC VENTILATION CONTROL. ROOF/CEILING ASSEMBLIES WHERE THE VENTILATION SPACE ABOVE THE INSULATION IS LESS THAN AN AVERAGE OF 12 INCHES SHALL BE PROVIDED WITH A VAPOR RETARDER. FACED BATT INSULATION WHERE USED AS A VAPOR RETARDER SHALL BE FACE STAPLED. SINGLE RAFTER JOIST VAULTED CEILING CAVITIES SHALL BE OF SUFFICIENT DEPTH TO ALLOW A MINIMUM 1" VENTED AIR SPACE ABOVE THE INSULATION.

6. HATCHES AND DOORS: IECC R402.2.4. ACCESS DOORS FROM CONDITIONED TO UNCONDITIONED SPACES (SUCH AS ATTIC AND CRAWL SPACE ACCESS DOORS) SHALL BE WEATHER-STRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES. A WOOD FRAMED OR EQUIVALENT BAFFLE OR RETAINER MUST BE PROVIDED WHEN LOOSE FILL INSULATION IS INSTALLED. THE PURPOSE OF WHICH IS TO PREVENT THE LOOSE FILL INSULATION FROM SPILLING INTO THE LIVING SPACE WHEN THE DOOR IS OPENED, AND TO PROVIDE A PERMANENT MEANS OF MAINTAINING THE INSTALLED R-VALUE OF THE LOOSE FILL INSULATION.

7. DUCT INSULATION: IECC R403.2.1. ALL HEATING DUCTS WITHIN UNCONDITIONED SPACES SHALL BE INSULATED TO A MINIMUM OF R-8. DUCTS INSTALLED UNDER SLABS SHALL BE INSULATED TO A MINIMUM OF R5.

8. PIPE INSULATION: IECC R403. HOT WATER PIPES OUTSIDE OF THE CONDITIONED SPACE SHALL BE INSULATED TO A MINIMUM OF R-4.

9. VAPOR RETARDER: IRC R801.3. VAPOR RETARDERS SHALL BE INSTALLED ON THE WARM SIDE (IN WINTER) OF INSULATION. VAPOR RETARDERS ARE NOT REQUIRED IN ROOF/CEILING ASSEMBLIES WHERE THE VENTILATION SPACE ABOVE THE INSULATION AVERAGES 12" OR GREATER OR WHERE ALL OF THE INSULATION IS INSTALLED BETWEEN THE ROOF MEMBRANE AND THE STRUCTURAL ROOF DECK. FACED BATT INSULATION WHERE USED AS A VAPOR RETARDER SHALL BE FACED STAPLED.

10. VAPOR BARRIER IN CRAWL-SPACE: IRC R408.1. A GROUND COVER OF 6 MIL BLACK POLYETHYLENE SHALL BE LAID OVER THE GROUND WITHIN CRAWL SPACES. THE GROUND COVER SHALL BE OVERLAPPED 12" MINIMUM AT THE JOINTS AND SHALL EXTEND TO THE FOUNDATION WALL.

11. WINDOW OR WALL PORTS: IRC SECTION M1508.4.5. OUTDOOR AIR SHALL BE DISTRIBUTED TO EACH HABITABLE ROOM BY INDIVIDUAL OUTDOOR AIR INLETS. INDIVIDUAL ROOM OUTDOOR AIR INLETS SHALL HAVE A CONTROLLABLE AND SECURE OPENING AND BE CAPABLE OF A TOTAL OPENING AREA OF NOT LESS THAN 4 SQUARE INCHES. OUTDOOR AIR INLETS SHALL BE LOCATED SO AS NOT TO TAKE AIR FROM WITHIN 10 FEET OF A PLUMBING VENT OPENING, OR AN APPLIANCE VENT OUTLET, OR WHERE IT WILL PICK UP OBJECTIONABLE ODORS, FUMES OR FLAMMABLE VAPORS.

12. MAKE-UP THROUGH FURNACE: IRC M1508.5.1. INTEGRATED FORCED-AIR VENTILATION SYSTEMS SHALL DISTRIBUTE OUTDOOR AIR TO EACH HABITABLE ROOM THROUGH THE FORCED-AIR SYSTEM DUCTS. INTEGRATED FORCED-AIR VENTILATION SYSTEMS SHALL HAVE AN OUTDOOR AIR INLET DUCT CONNECTING TO A TERMINAL ELEMENT ON THE OUTSIDE OF THE BUILDING TO THE RETURN AIR PLENUM OF THE FORCED-AIR SYSTEM. AT A POINT WITHIN 4 FEET UPSTREAM OF THE AIR HANDLER, THE OUTDOOR AIR INLET DUCT CONNECTION TO THE RETURN AIR STREAM SHALL BE LOCATED UPSTREAM OF THE FORCED-AIR SYSTEM BLOWER AND SHALL NOT BE CONNECTED DIRECTLY INTO A FURNACE CABINET TO PREVENT THERMAL SHOCK TO THE HEAT EXCHANGER. THE SYSTEM WILL BE EQUIPPED WITH A MOTORIZED DAMPER CONNECTED TO THE AUTOMATIC VENTILATION CONTROL. THE REQUIRED FLOW RATE SHALL BE VERIFIED BY FIELD TESTING WITH A FLOW HOOD OR A FLOW MEASURING STATION. THE WHOLE HOUSE VENTILATION SYSTEM SHALL BE CONTROLLED BY A 24-HOUR CLOCK TIMER WITH THE CAPABILITY OF CONTINUOUS OPERATION, MANUAL AND AUTOMATIC CONTROL. THIS CONTROL WILL CONTROL THE FORCED AIR SYSTEM BLOWER AND THE AUTOMATIC DAMPER. THE 24-HOUR TIMER SHALL BE READILY ACCESSIBLE. THE 24-HOUR TIMER SHALL BE OPERATING IN THE WHOLE HOUSE VENTILATION SYSTEM WITHOUT ENERGIZING OTHER ENERGY-CONSUMING APPLIANCES. AT THE TIME OF FINAL INSPECTION, THE AUTOMATIC CONTROL TIMER SHALL BE SET TO OPERATE THE WHOLE HOUSE SYSTEM FOR AT LEAST 8 HOURS A DAY. A LABEL SHALL BE AFFIXED TO THE CONTROL THAT READS "WHOLE HOUSE VENTILATION (SEE OPERATING INSTRUCTIONS)."

98. ENERGY CODE COMPLIANCE CERTIFICATE: IECC R401.3. A PERMANENT CERTIFICATE SHALL BE POSTED WITHIN THREE FEET OF THE ELECTRICAL DISTRIBUTION PANEL. THE CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL. THE CERTIFICATE SHALL LIST THE PREDOMINANT R-VALUES OF INSULATION INSTALLED IN OR ON CEILING/ROOF, WALLS, FOUNDATION (SLAB, BASEMENT WALL, CRAWLSPACE WALL AND/OR FLOOR), AND DUCTS OUTSIDE THE CONDITIONED SPACE; U-FACTORS FOR PENETRATION; AND THE SOLAR HEAT GAIN COEFFICIENT (SHGC) OF PENETRATION. FIGURE 1: TYPICAL PRESCRIPTIVE BRACED WALL PANEL (PER IRC TABLE R402.10.2)

THERMAL REQUIREMENTS

MINIMUM REQUIREMENTS BASED ON WSEC TABLE R402.1.1. THESE REQUIREMENTS MAY BE MODIFIED TO MORE ACCURATELY REFLECT LOCAL CLIMATE TO FULLY COMPLY WITH THE PRESCRIPTIVE REQUIREMENTS BASED ON CREDIT SYSTEM. PLEASE REFER TO COVER PAGE FOR PROJECT-SPECIFIC THERMAL REQUIREMENTS.

CLIMATE ZONE: 4C, KING COUNTY, WA



SSMH
RIM = 481.97
INV N-S = 488.47



VICINITY MAP
NTS

LEGAL DESCRIPTION

LOTS 13, 14 AND 15, BLOCK 10, OF EAST SEATTLE ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 3 OF PLATS, PAGE 22, IN KING COUNTY, WASHINGTON; SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

ACCEPTED A BEARING OF N 0°25'17" E ALONG THE CENTERLINE OF 70TH AVENUE PER RECORD OF SURVEY RECORDED UNDER KING COUNTY RECORDING NO. 2013050990005.

PROJECT INFORMATION

SURVEYOR: SITE SURVEYING, INC.
21923 NE 11TH ST
SAMMAMISH, WA 98074
PHONE: 425.298.4412

PROPERTY OWNER: JOHN BICKEL
2734 70TH AVENUE SE
MERCER ISLAND, WA 98040

TAX PARCEL NUMBER: 217450-2150

PROJECT ADDRESS: 2734 70TH AVENUE SE
MERCER ISLAND, WA 98040

ZONING: R-8.4

JURISDICTION: CITY OF MERCER ISLAND

PARCEL ACREAGE: 10,125 S.F. (± 0.232 ACRES)
AS SURVEYED

GENERAL NOTES

- THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
- INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND NIKON NIVO 5.C TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 352-130-090.
- THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN MAY 2014 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
- ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

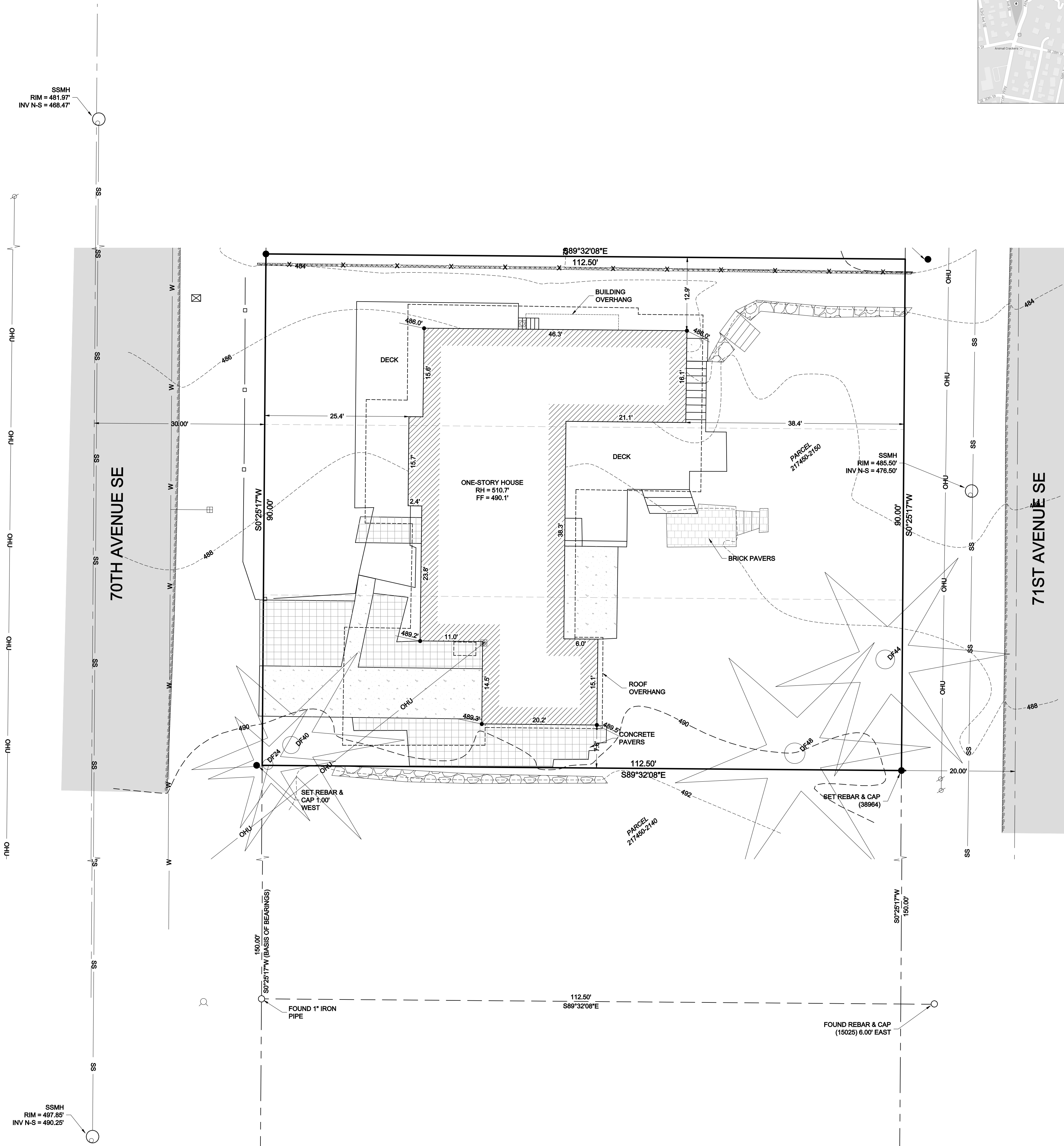
VERTICAL DATUM & CONTOUR INTERVAL

ELEVATIONS SHOWN ON THIS DRAWING ARE ON AN ASSUMED DATUM.

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0' FOR THIS PROJECT.



SSMH
RIM = 497.85
INV N-S = 490.25



LEGEND

- FOUND MONUMENT AS DESCRIBED
- SET REBAR & CAP (38964)
- ⊠ POWER METER
- ⊠ GAS METER
- ⊠ LIGHT POLE
- ⊠ TELEPHONE PEDESTAL
- ⊠ ELECTRICAL VAULT
- SANITARY SEWER MANHOLE
- ⊠ ELECTRICAL JUNCTION BOX
- ⊠ CABLE HAND HOLE
- ⊠ WATER METER
- ⊠ WATER VALVE
- ⊠ ELECTRICAL VAULT
- SS- APPROXIMATE LOCATION SANITARY SEWER LINE
- SD- APPROXIMATE LOCATION STORM DRAIN LINE
- X- CHAINLINK FENCE
- ▭ CONCRETE WALL
- ▭ WOOD FENCE
- ▭ GRAVEL SURFACE
- ▭ ASPHALT SURFACE
- ▭ CONCRETE SURFACE
- DS DECIDUOUS
- DF DOUGLAS FIR
- CE CEDAR
- MP MAPLE
- * INDICATES MULTI-TRUNK



SW 1/4, NW 1/4, SEC 12, TWP 24N, RNG 4E, W.M.

TOPOGRAPHIC SURVEY
JOHN BICKEL
2734 70TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.	14-211
DRAWN BY:	EFJ
CHECKED BY:	TNW
DATE:	05-20-14
SHEET	1 OF 1

ARCHITECTURAL SITE NOTES

- REFER TO SURVEY FOR ADDITIONAL NOTES AND INFORMATION FOR EXISTING CONDITIONS.
- VERIFY ALL UNDERGROUND UTILITIES AND SITE GRADES PRIOR TO CONSTRUCTION.
- COORDINATE PROPERTY CORNERS WITH SURVEYOR.
- CONTRACTOR SHALL VISIT THE SITE AND APPRAISE HIMSELF/ HERSELF OF THE EXISTING CONDITIONS AND SEQUENCE PRIOR TO ANY CLEARING OR DEMOLITION WORK.
- VERIFY ALL TOP OF SLAB ELEVATIONS AT ALL BUILDING AND PROPERTY LINES.
- CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF ALL MECHANICAL AND ELECTRICAL PADS AND BASE, ALONG WITH POWER, WATER AND / OR DRAINAGE INSTALLATIONS BEFORE PROCEEDING WITH THE WORK.
- FINAL GRADING AROUND BUILDING SHOULD HAVE POSITIVE SLOPE AWAY FROM BUILDING FOR POSITIVE DRAINAGE.
- DRAINAGE SHALL COMPLY WITH COMI STORMWATER CONTROL REQUIREMENTS
- ALL DOWNSPOUTS SHALL BE LOCATED WHERE EXISTING. DAYLIGHTING SHALL NOT BE DIRECTED TO THE ROW AND SHALL NOT CAUSE DOWNSTREAM EROSION
- MECHANICAL EQUIPMENT LOCATED OUTDOORS SHALL BE INSTALLED ON A REINFORCED CONCRETE PAD OVER COMPACTED FILL TO 90% DENSITY

LOT SLOPE CALCULATION:

HIGHEST ELEVATION POINT = 490'
 LOWEST ELEVATION POINT = 484'
 ELEVATION DIFFERENCE = 6'
 DISTANCE BETWEEN POINTS = 85'
 SLOPE = 7%

ALLOWABLE LOT COVERAGE (PER MICC 19.02.020.F):40%

LOT AREA: 9900 SQ FT.
 PROPOSED LOT COVERAGE (HOUSE + DECK + DRIVEWAY): 3271 SF
 LOT COVERAGE: 33%
 (SEE PLAN FOR DETAIL)

ALLOWABLE HARDSCAPE (PER MICC 19.02.020.F):9%

LOT AREA: 9900 SQ FT.
 PROPOSED HARDSCAPE: 899 SF
 LOT COVERAGE: 9%
 (SEE PLAN FOR DETAIL)

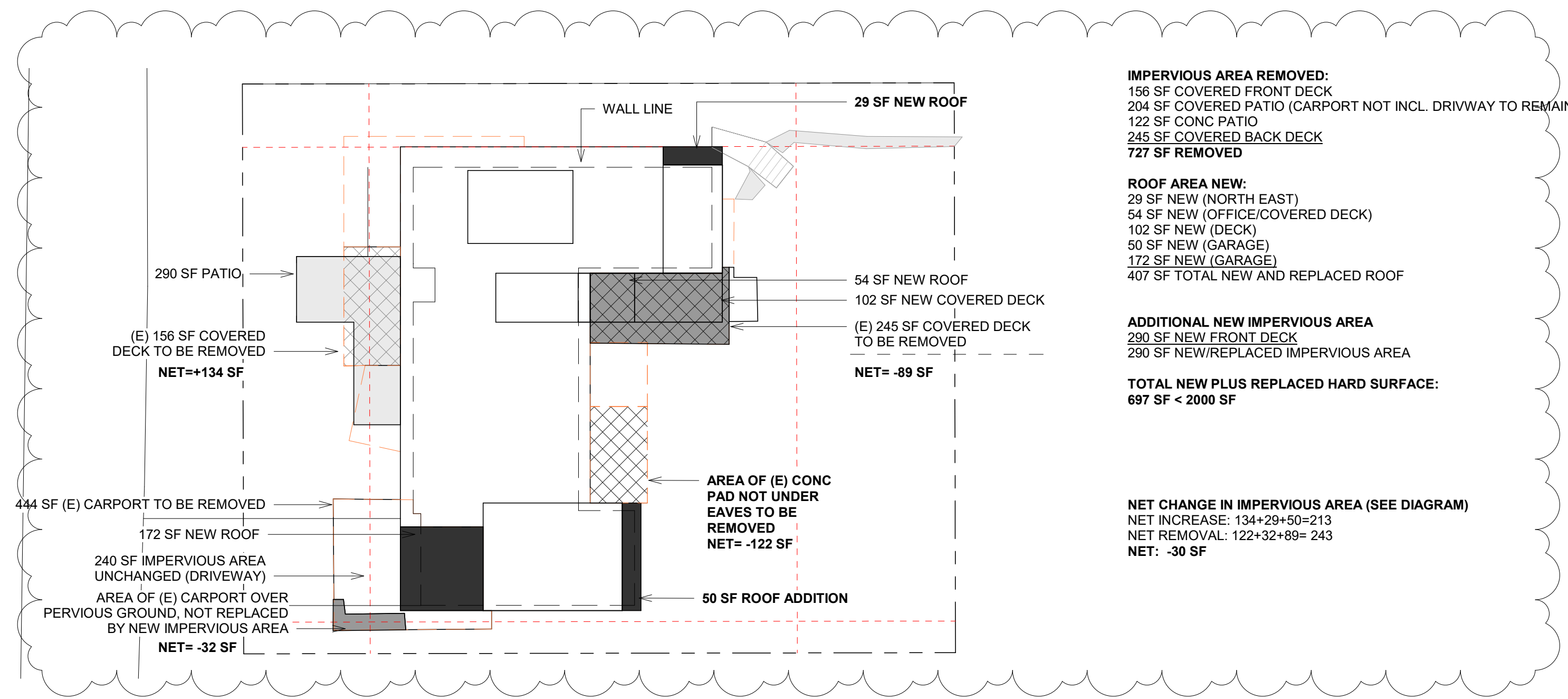
GROSS FLOOR AREA (PER MICC 19.02.020.D):

5,000 SQUARE FEET OR 40 PERCENT OF THE LOT AREA, WHICHEVER IS LESS
 40% OF 9900=3960SF
 TOTAL GROSS SF PER 19.02.020.D = 3,558 SF OR 35%

BUILDING AREA LOCATION	CONDITIONED	UNCONDITIONED
ACCESSORY	0 SF	98 SF
GARAGE	0 SF	582 SF
BASEMENT	0 SF	310 SF
FIRST FLOOR	1764 SF	0 SF
SECOND FLOOR	804 SF	0 SF
TOTAL	2568 SF	990 SQ FT

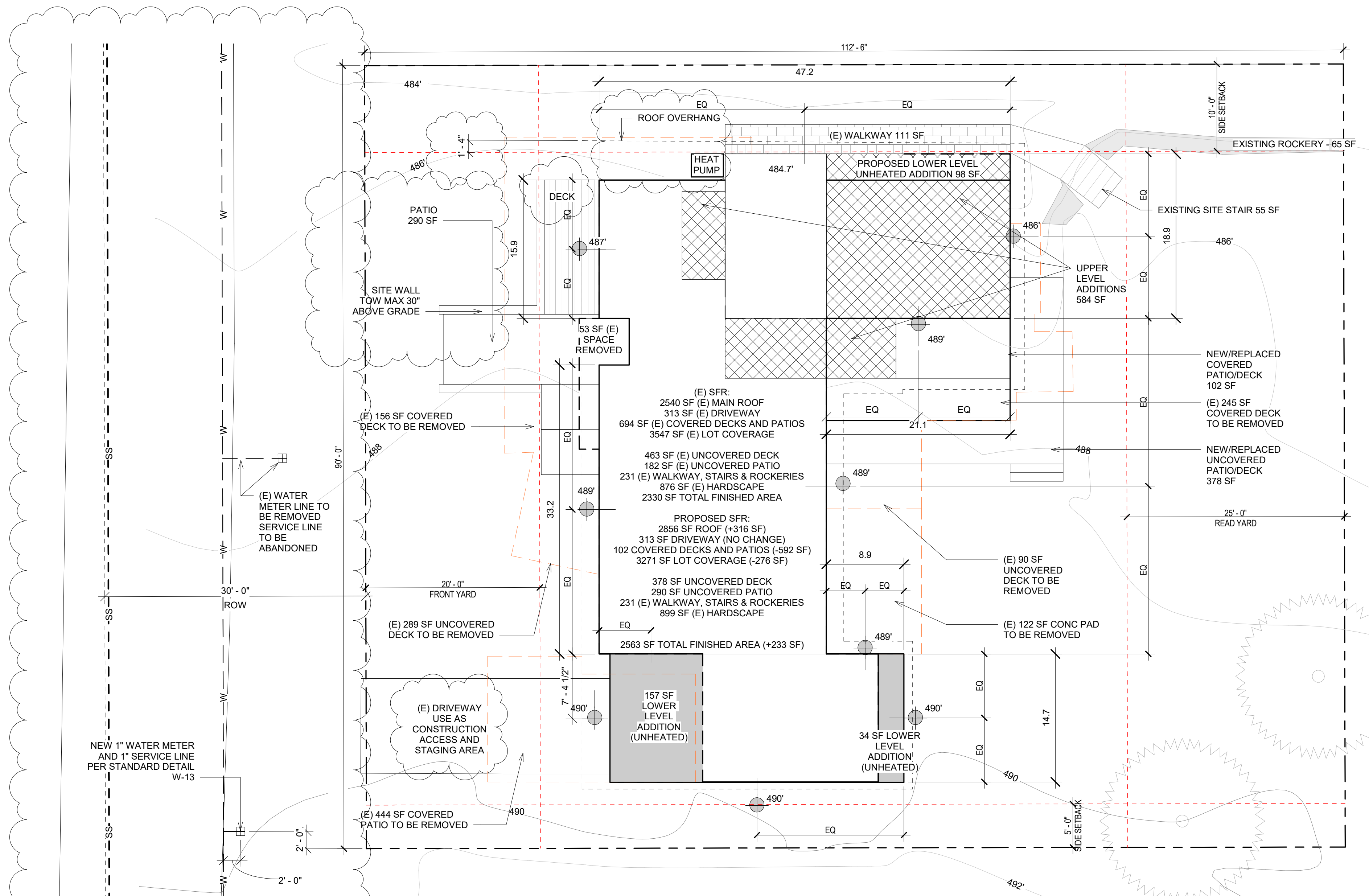
BUILDING HEIGHT PER MCC 19.02.020.E

BUILDING HEIGHT LIMIT = 30'
 AVERAGE GRADE CALCULATION:
 AVERAGE BUILDING ELEVATION = (WEIGHTED SUM OF THE MID-POINT ELEVATIONS) ÷ (TOTAL LENGTH OF WALL SEGMENTS)
 WEIGHTED SUM OF THE MID-POINT ELEVATIONS:
 $(484.7 \times 47.2) + (486 \times 15.9) + (489 \times 21.1) + (489 \times 38) + (489 \times 8.8) + (490 \times 15.3) + (490 \times 33.8) + (490 \times 14.7) + (490 \times 33.3) + (487 \times 15.9) =$
 $(22877.84) + (7738.2) + (10317.81) + (18682) + (4303.2) + (7497) + (16562) + (7203) + (16563.4) + (7743.3) = 120855.04$
 TOTAL LENGTH OF WALL SEGMENTS:
 $47.2 + 18.9 + 21.1 + 38 + 8.8 + 15.3 + 33.8 + 14.7 + 33.3 + 15.9 = 247$
 AVERAGE BUILDING ELEVATION = $120855.04 / 247 = 489.29'$
 TOP OF (E) ROOF (NO CHANGE) = 511.7'
 BUILDING HEIGHT = 24.41'
***NOTE - NO CHANGE TO BUILDING HEIGHT PROPOSED**



2 IMPERVIOUS AREA DIAGRAM

SCALE: 1/16" = 1'-0"



1 SITE PLAN

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

PROJECT INFORMATION

PROJECT ADDRESS:
 2734 70TH AVE SE
 MERCER ISLAND, WA 98040

ASSESSOR'S PARCEL NUMBER:
 217450-2150

LEGAL DESCRIPTION:
 EAST SEATTLE ADD
 Plat Block: 10
 Plat Lot: 13-14-15.

AGENCY HAVING JURISDICTION:
 CITY OF MERCER ISLAND

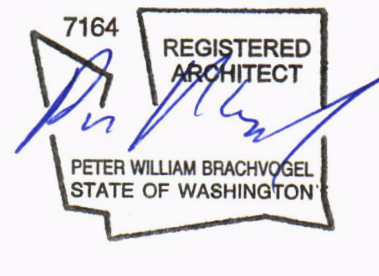
PROJECT DESCRIPTION:
 RENOVATION AND ADDITIONS OF A SINGLE FAMILY RESIDENCE AND ATTACHED GARAGE



Architecture · Planning
 Construction Management

197 Parfitt Way SW, Suite 120
 Bainbridge Island, WA 98110
 206.780.9113
 bbandj.com

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MEMBER: AIA
 AMERICAN INSTITUTE
 OF ARCHITECTS

NATIONAL COUNCIL
 OF ARCHITECTURAL
 REGISTRATION BOARDS

PROJECT NAME

BICKEL RESIDENCE

PROJECT ADDRESS

2734 70TH AVE SE
 MERCER ISLAND, WA 98040

PROJECT NUMBER

2019

PERMIT SET
 4/11/2023

REVISIONS

NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23
2	PERMIT COMMENTS	04/11/23

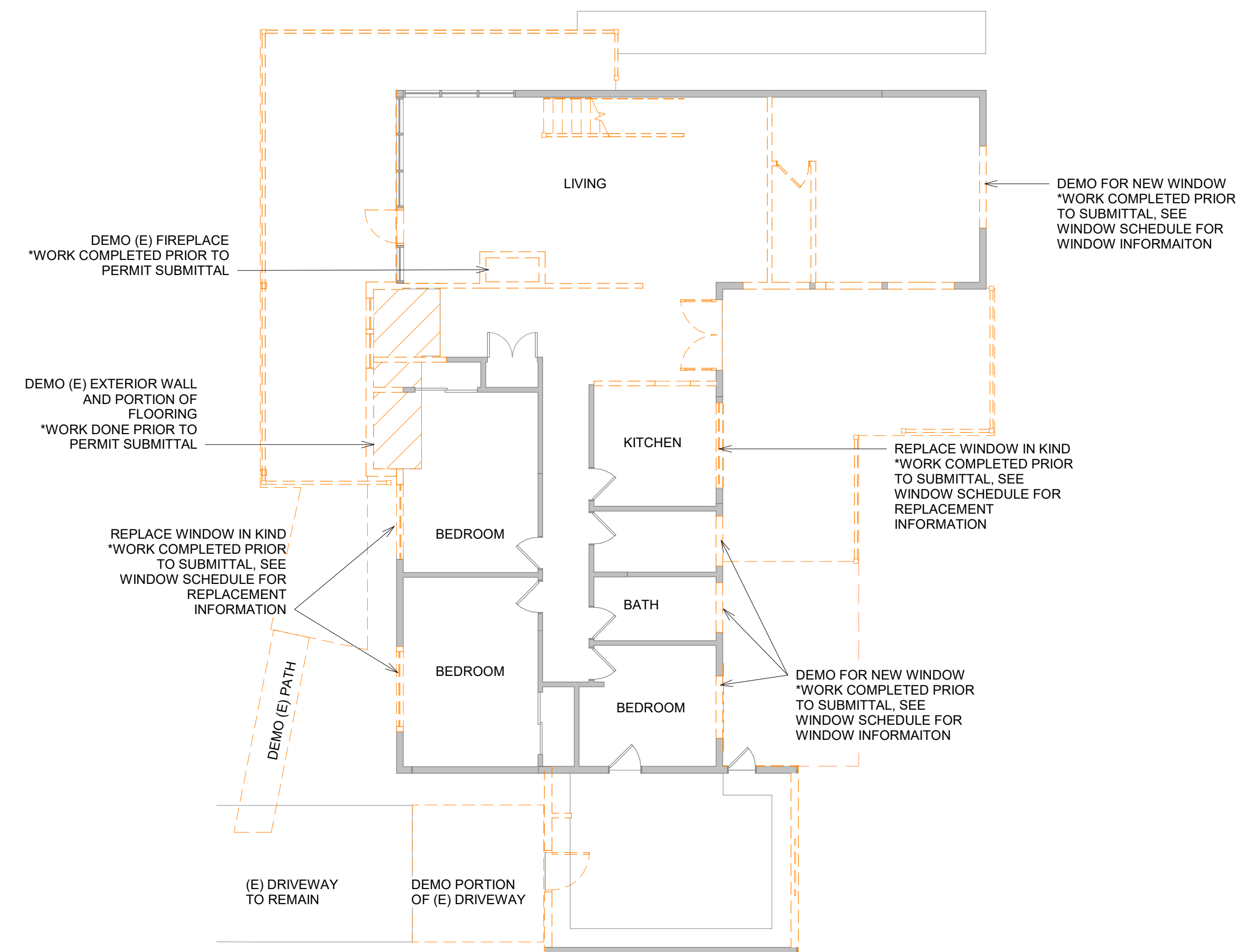
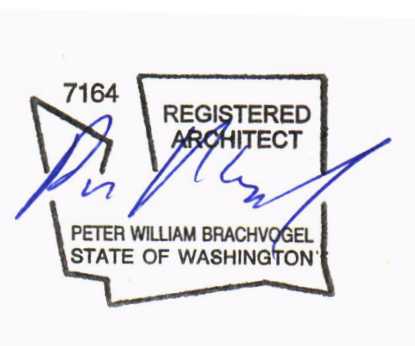
SHEET NAME

ARCHITECTURAL SITE PLAN

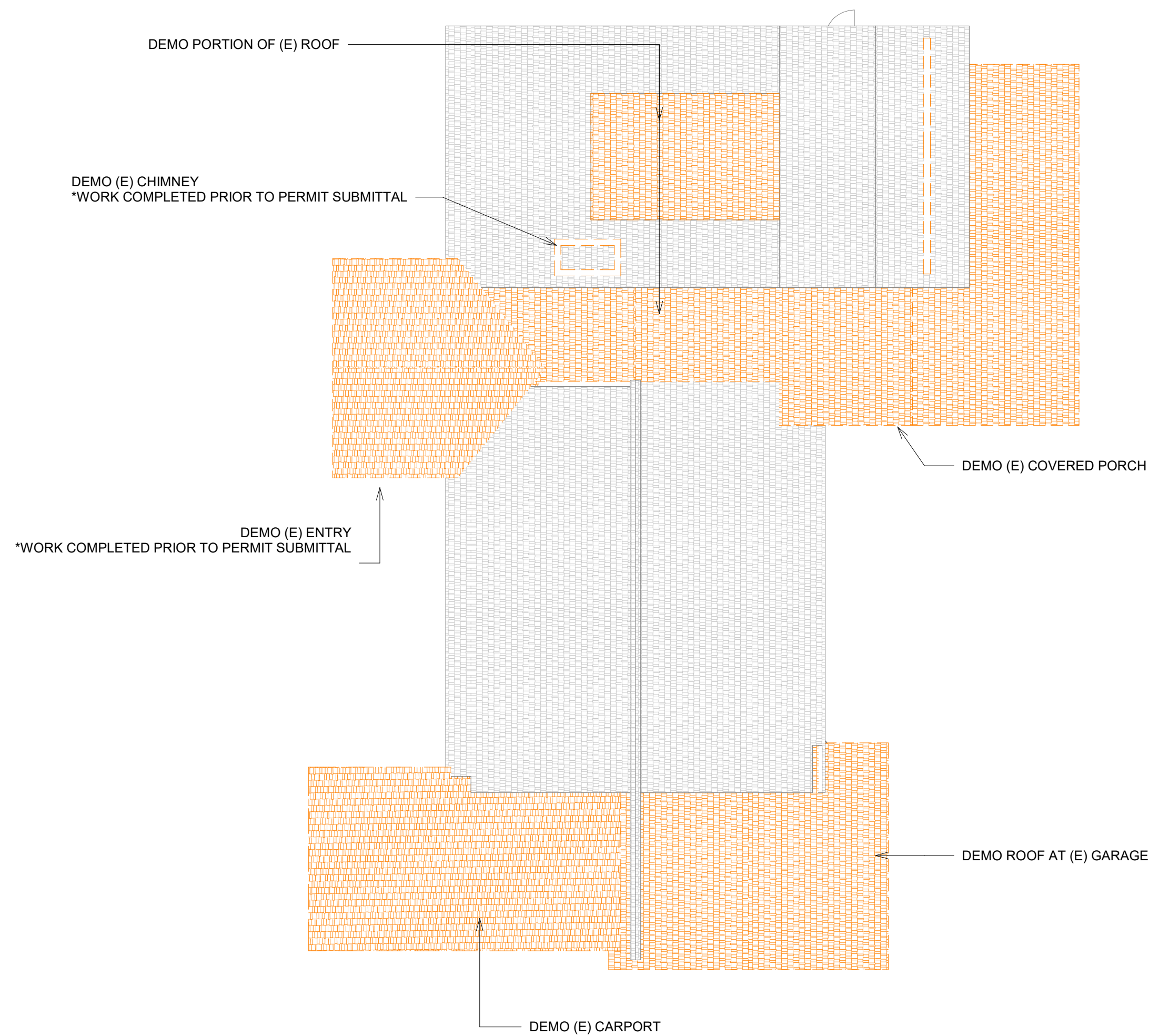
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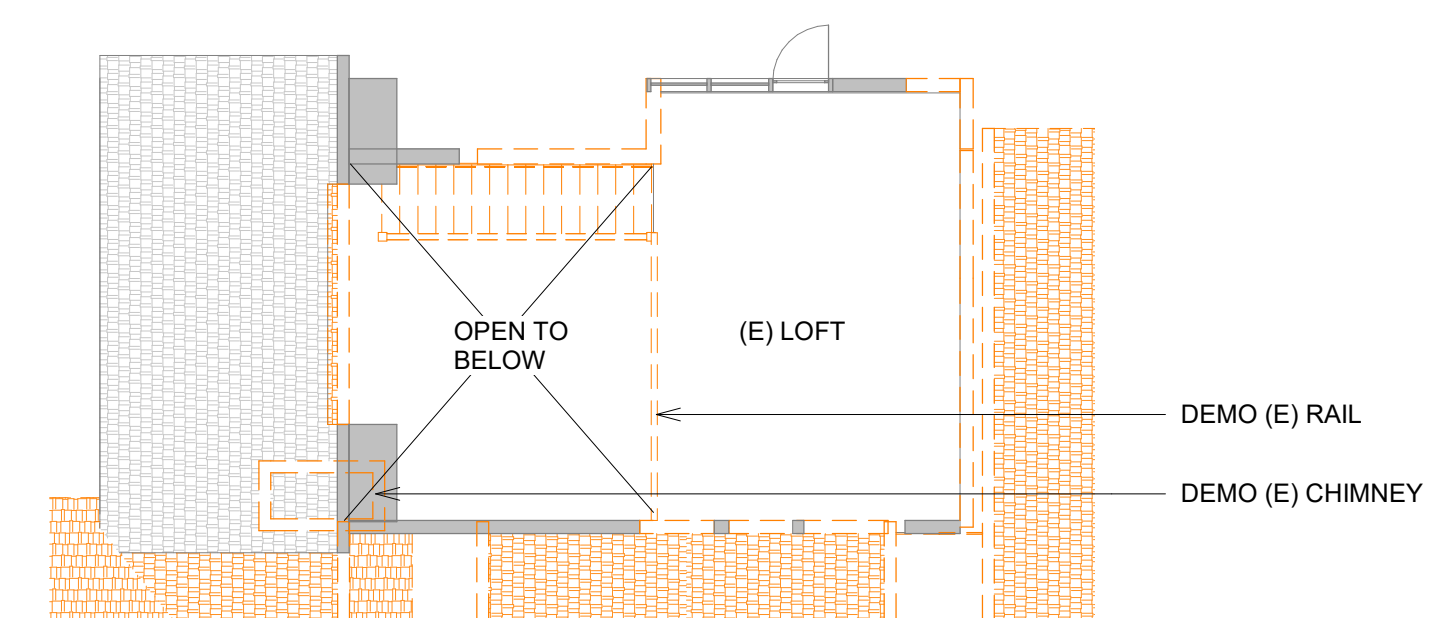
IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE



1 (1) FIRST FLOOR PLAN DEMO
SCALE: 1/8" = 1'-0"



3 (3) ROOF PLAN EXISTING DEMO
SCALE: 1/8" = 1'-0"



2 (2) SECOND FLOOR PLAN DEMO
SCALE: 1/8" = 1'-0"

IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE



REVISIONS

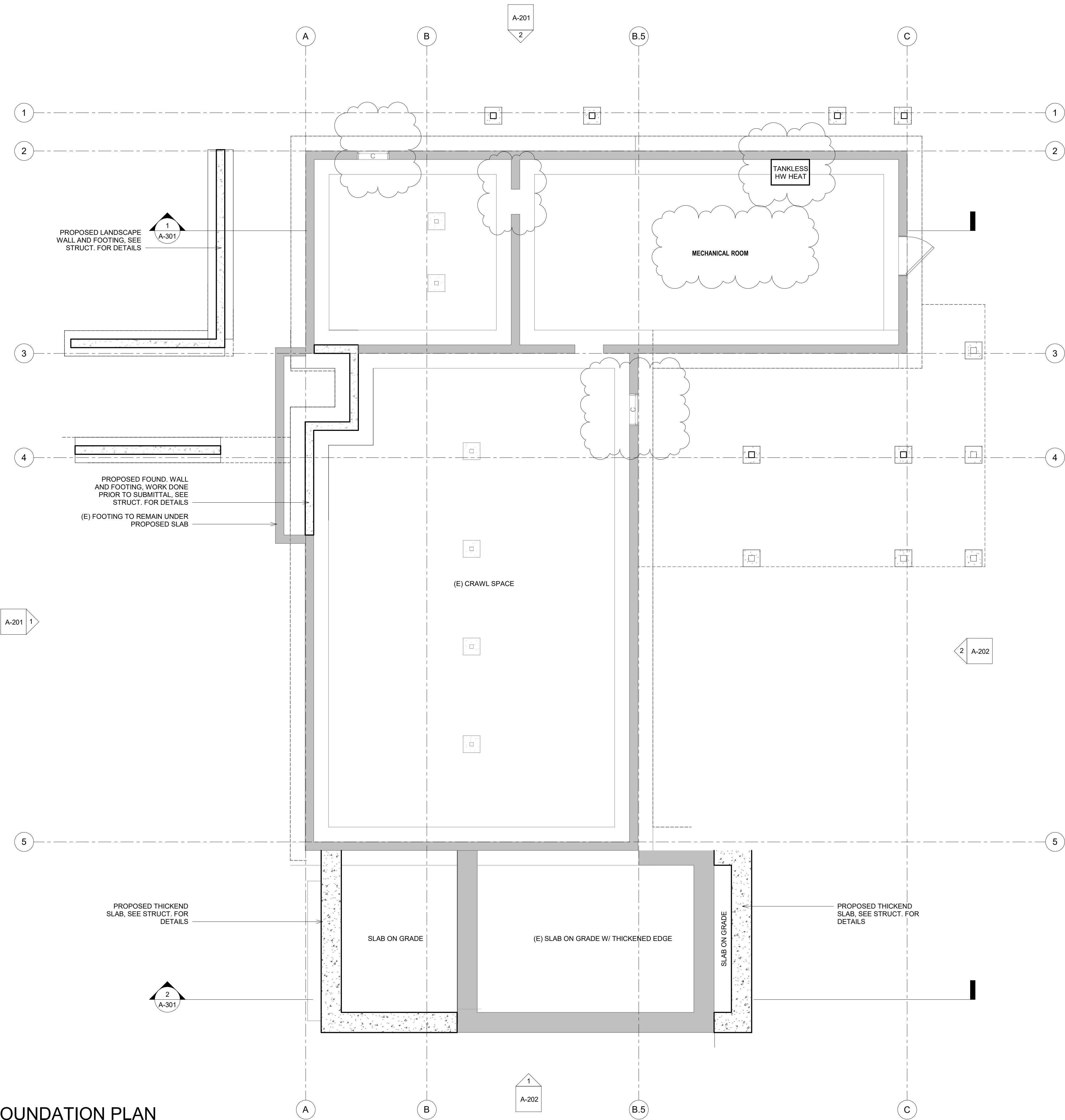
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CONSTRUCTION PLAN LEGEND

- ⊙ SDCMD SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR
- ⊗ SMOKE DETECTOR
- T THERMOSTAT
- ⊕ EXTERIOR HOSE BIB
- ⊖ EXHAUST FAN (CFM)
- SG SAFETY GLAZING
- ⎓ ELECTRICAL PANEL
- E TYP INTERIOR PARTITION: 5/8" GWB, 2x4, 5/8" GWB U.N.O BY STRUCTURAL
- 1 HR PARTITION: 5/8" TYPE X GWB, 2x6 WITH R21 INSUL, 5/8" TYPE X GWB
- DOWNSPOUT

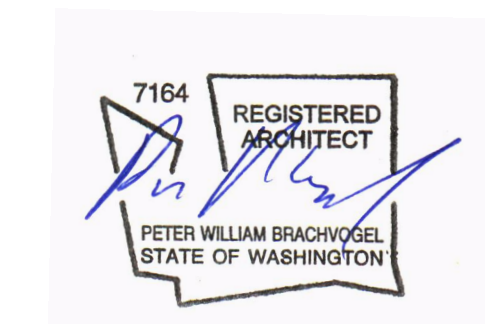
CONSTRUCTION PLAN NOTES

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5. PROVIDE AND INSTALL SOUND ATTENUATION BATT INSULATION AT ALL BATHROOM PARTITIONS AND IN ALL WASTE LINE, FLOOR AND PARTITION CAVITIES.
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7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL WALL BLOCKING AND BRACING REQUIRED FOR WALL AND CEILING MOUNTED ITEMS.
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9. STOVE AND FLUE ASSEMBLIES SHALL BE UL LISTED, MEET ALL IRC REQUIREMENTS AND BE INSTALLED PER ALL MAUF. REQUIREMENTS INCLUDING NON-COMBUSTABLE ADJACENT SURFACES.
10. SMOKE ALARM SINGLE OR MULTIPLE SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS: OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, IN EACH ROOM USED FOR SLEEPING PURPOSES, IN EACH STORY WITHIN A DWELLING UNIT, INCLUDING BASEMENTS AND CELLARS BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. SMOKE ALARMS SHALL EMIT A SIGNAL WHEN THE BATTERIES ARE LOW. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN AS REQUIRED FOR OVERCURRENT PROTECTION. WHEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE WILL ACTIVATE ALL OF THE ALARMS.
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1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE



REVISIONS

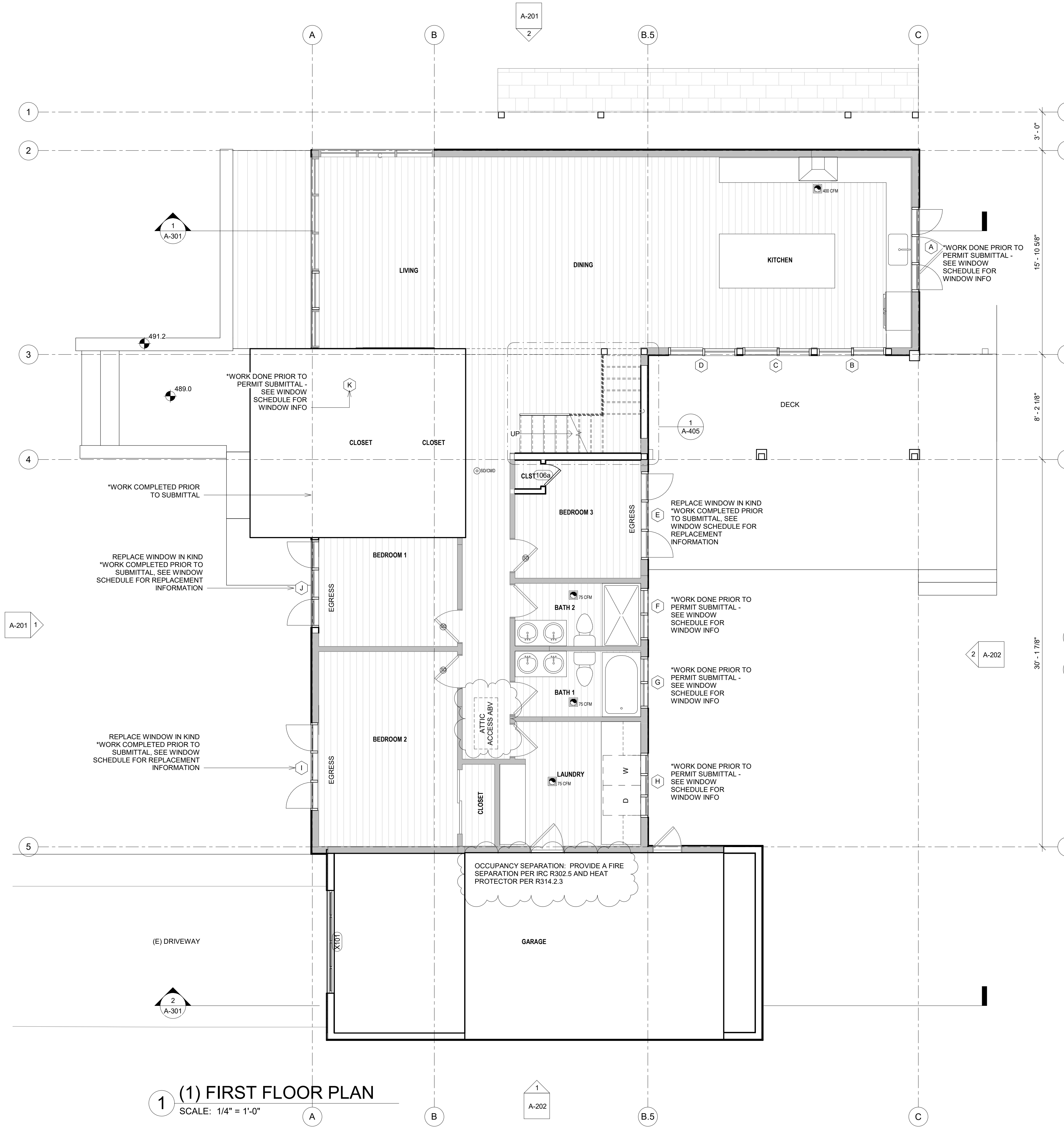
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- E TYP INTERIOR PARTITION: 5/8" GWB, 2x4, 5/8" GWB UNO BY STRUCTURAL
- 1 HR PARTITION: 5/8" TYPE X GWB, 2x6 WITH R21 INSUL, 5/8" TYPE X GWB
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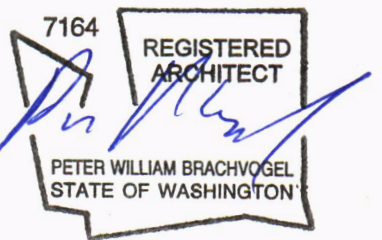
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1 (1) FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

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REVISIONS

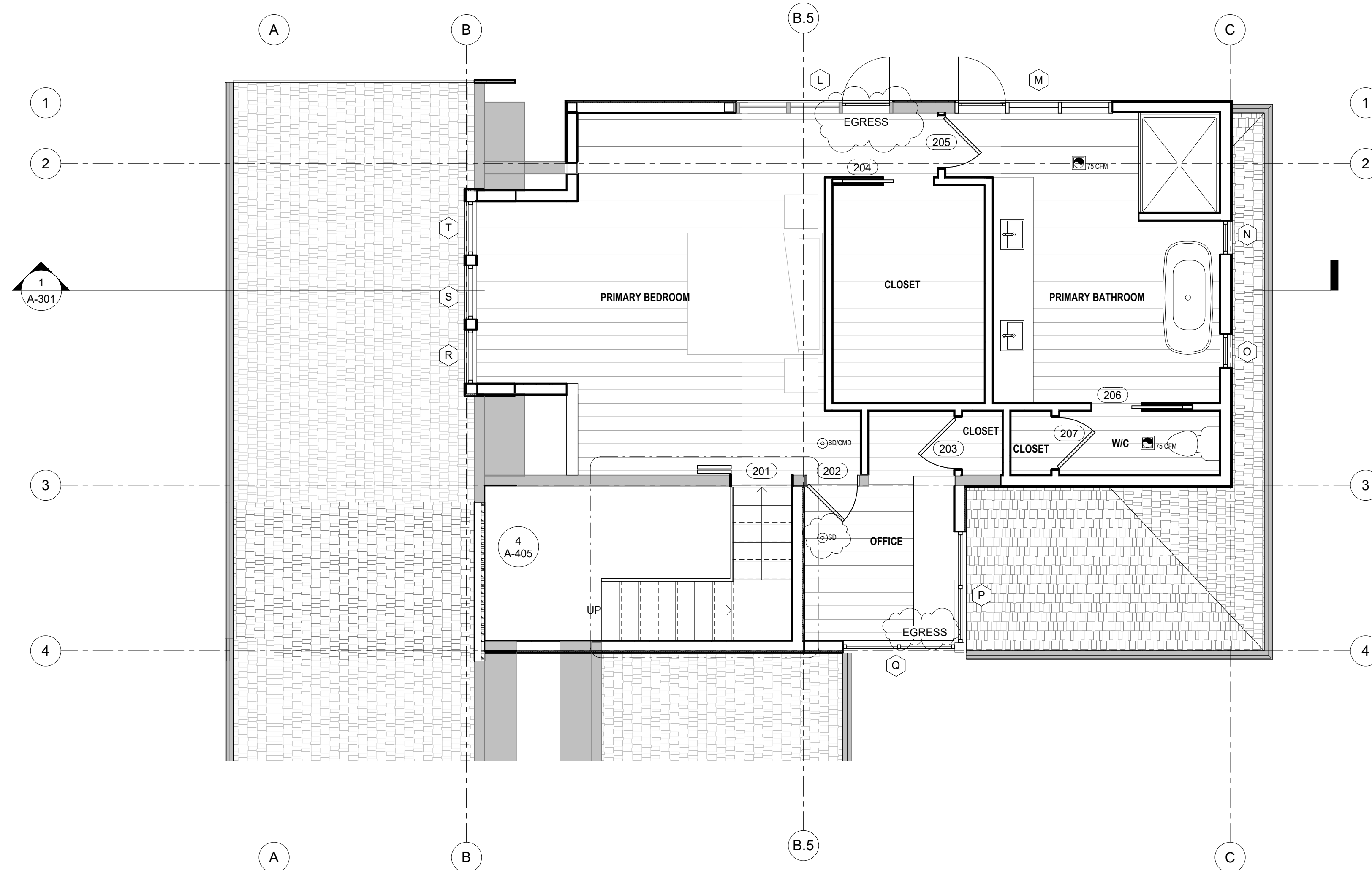
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- ALL NEW CONSTRUCTION SHALL BE STABILIZED AGAINST LATERAL MOVEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2018 INTERNATIONAL RESIDENTIAL CODE AND STATE OF WASHINGTON BUILDING CODE AND ALL APPLICABLE SEISMIC REQUIREMENTS.
- STOVE AND FLUE ASSEMBLIES SHALL BE UL LISTED, MEET ALL IRC REQUIREMENTS AND BE INSTALLED PER ALL MAUF. REQUIREMENTS INCLUDING NON-COMBUSTIBLE ADJACENT SURFACES.
- SMOKE ALARM, SINGLE OR MULTIPLE SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS: OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, IN EACH ROOM USED FOR SLEEPING PURPOSES, IN EACH STORY WITHIN A DWELLING UNIT, INCLUDING BASEMENTS AND CELLARS BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. SMOKE ALARMS SHALL EMIT A SIGNAL WHEN THE BATTERIES ARE LOW. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN AS REQUIRED FOR OVERCURRENT PROTECTION. WHEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE WILL ACTIVATE ALL OF THE ALARMS.
- CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS WITH ATTACHED GARAGES OR FUEL BURNING APPLIANCES IN THE FOLLOWING LOCATIONS: OUTSIDE EACH SEPARATE DWELLING UNIT IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER SOURCE FROM BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. ALARM WIRING SHALL BE DIRECTLY CONNECTED WITHOUT A DISCONNECTING SWITCH OTHER THAN REQUIRED FOR OVERCURRENT PROTECTION.
- SAFETY GLASS SHALL BE PROVIDED IN HAZARDOUS LOCATIONS PER 2406.3
- PER R302.11, FIRE BLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.

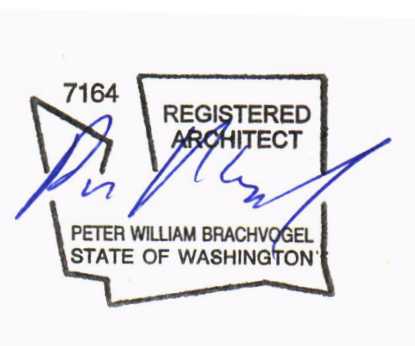
CONSTRUCTION PLAN LEGEND

- ⊙ SD/CMD SMOKE DETECTOR/ CARBON MONOXIDE DETECTOR
- ⊙ SMOKE DETECTOR
- T THERMOSTATS
- ⊕ EXTERIOR HOSE BIB
- CFM EXHAUST FAN (CFM)
- SG SAFETY GLAZING
- ELECTRICAL PANEL
- E
- TYP INTERIOR PARTITION: 5/8" GWB, 2x4, 5/8" GWB U.N.O BY STRUCTURAL
- 1 HR PARTITION: 5/8" TYPE X GWB, 2x6 WITH R21 INSUL, 5/8" TYPE X GWB
- DOWNSPOUT



1 (2) SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE



REVISIONS

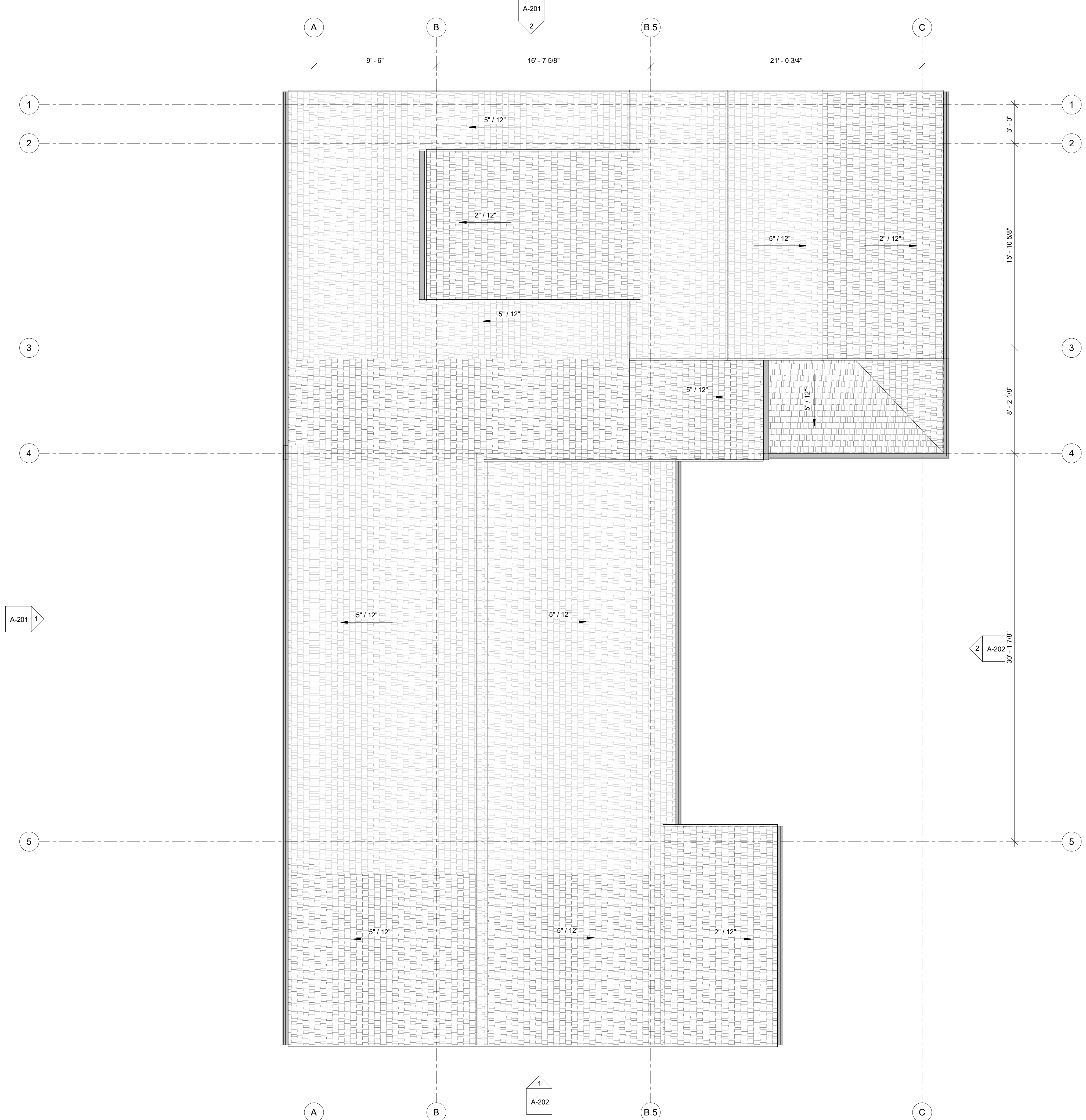
NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23
2	PERMIT COMMENTS	04/11/23

ROOF PLAN NOTES

- ALL DIMENSIONS SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS ARE GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES OR CONDITIONS ADVERSELY AFFECTING THE DESIGN PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL REVIEW ALL ROOFING AND ROOFING FLASHING DETAILS WITH ROOFING MANUFACTURER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ROOF ASSEMBLY AND ROOFING DETAILS IN ORDER TO ACHIEVE A WEATHERPROOF ROOFING ASSEMBLY.
- NO PLUMBING VENT STACKS OR EXHAUST VENTS WILL BE ALLOWED ON FRONT PORTION OF BUILDING ROOF FACING THE STREET. ALL ROOFTOP PENETRATIONS, PIPES, VENT STACKS SHALL BE FLASHED ACCORDING TO ACCEPTABLE INDUSTRY STANDARDS. RESPONSIBILITY FOR ALL ROOFTOP FLASHING DETAILS SHALL BE WITH GENERAL CONTRACTOR / ROOFING SUBCONTRACTOR.
- ALL EAVES SHALL HAVE CONTINUOUS 2" EAVE VENTS INSTALLED IN SOFFITS. ATTIC VENTILATION: NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/150th OF THE AREA OF THE SPACE VENTILATED. A VAPOR BARRIER (P.V.A. PAINT) WILL BE INSTALLED ON THE WARM SIDE OF ATTIC INSULATION. A MINIMUM OF 1" AIR SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND ROOF SHEATHING AT EAVE VENT LOCATIONS.
- INSTALL ALUMINUM GUTTERS AND DOWNSPOUTS AT LOCATIONS SHOWN ON ROOF PLAN AND BUILDING ELEVATIONS. PROVIDE BASKET STRAINER LEAFGUARDS IN GUTTERS AT TOP OF ALL DOWNSPOUTS. ALL DOWNSPOUTS LOCATIONS PROVIDE VERT PVC STORM WATER PIPING CONNECTED TO TIGHTLINED SYSTEM DRAINING TO DAYLIGHT DISCHARGE. CONTRACTOR TO COORDINATE THIS ITEM PRIOR TO FOUNDATION WORK. GUTTERS AND DOWNSPOUT TO MATCH APPROVED ROOF COLOR SAMPLES. PROVIDE AND INSTALL SCREENED GUTTER GUARDS AT ALL GUTTERS.
- INSTALL CONTINUOUS EXPOSED METAL FLASHING OVER CONTINUOUS 36" WIDE (MIN.) "GRACE ICE & WATER SHIELD MEMBRANE" AT ALL ROOF VALLEYS BELOW ROOFING.
- ACCESS DOORS FROM CONDITIONED SPACES TO UNCONDITIONED SPACES (E.G., ATTICS AND CRAWL SPACES) SHALL BE WEATHERSTRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES. ACCESS SHALL BE PROVIDED TO ALL EQUIPMENT WHICH PREVENTS DAMAGING OR COMPRESSING THE INSULATION. A WOOD FRAMED OR EQUIVALENT BAFFLE OR RETAINER IS REQUIRED TO BE PROVIDED WHEN LOOSE FILL INSULATION IS INSTALLED, THE PURPOSE OF WHICH IS TO PREVENT THE LOOSE FILL INSULATION FROM SPILLING INTO THE LIVING SPACE WHEN THE ATTIC ACCESS IS OPENED AND TO PROVIDE A PERMANENT MEANS OF MAINTAINING THE INSTALLED R-VALUE OF THE LOOSE FILL INSULATION.

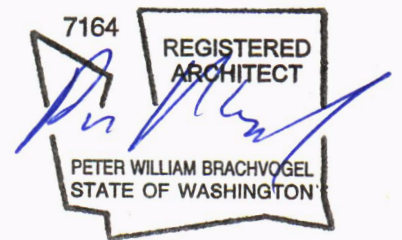
ROOF VENT CALCULATION

1376 SQ FT OF ATTIC / 150 = 9.17 SQ FT OF VENT
 9.17 SQ FT = 1320 SQ IN / 2 = 660 SQ IN INTAKE, 660 SQ IN EXHAUST
 ROOF RIDGE VENT = 45 LINEAR FT X 20" PER LINEAR FOOT* = 900 SQUARE INCHES
 EAVE VENTS = 75 LINEAR FEET X 12 IN = 900 LINEAR INCHES X 1" VENT = 900 SQUARE INCHES
 TOTAL INTAKE = 900 SQ INCHES
 TOTAL EXHAUST = 900 SQ INCHES
 *PROVIDE CONT RIDGE VENT THAT MEETS 20" PER LINEAR FEET NFVA



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

IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE



REVISIONS

NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23
2	PERMIT COMMENTS	04/11/23

ELEVATION NOTES

- ALL DIMENSIONS SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS ARE GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES OR CONDITIONS ADVERSELY AFFECTING THE DESIGN PRIOR TO PROCEEDING WITH THE WORK.
- REFER TO ROOF PLAN FOR OVERHANG DIMENSIONS.
- ALL EXTERIOR SIDING AND TRIM: SMOOTH FACE EXPOSED
- DOWNSPOUTS MAY NOT BE SHOWN FOR CLARITY

BUILDING HEIGHT PER MCC 19.02.020.E

BUILDING HEIGHT LIMIT = 30'

AVERAGE BUILDING CALCULATION =

AVERAGE BUILDING ELEVATION = (WEIGHTED SUM OF THE MID-POINT ELEVATIONS) ÷ (TOTAL LENGTH OF WALL SEGMENTS)

WEIGHTED SUM OF THE MID-POINT ELEVATIONS:
(484.7x47.2)+(486x18.9)+(489x21.1)+(489x38)+(489x8.8)+(490x15.3)+(490x33.8)+(490x14.7)+(498x33.3)+(487x15.9)=
(22877.84)+(9185.4)+(10317.9)+(18582)+(4303.2)+(7497)+(16562)+(7203)+(16583.4)+(7743.3)=120855.04

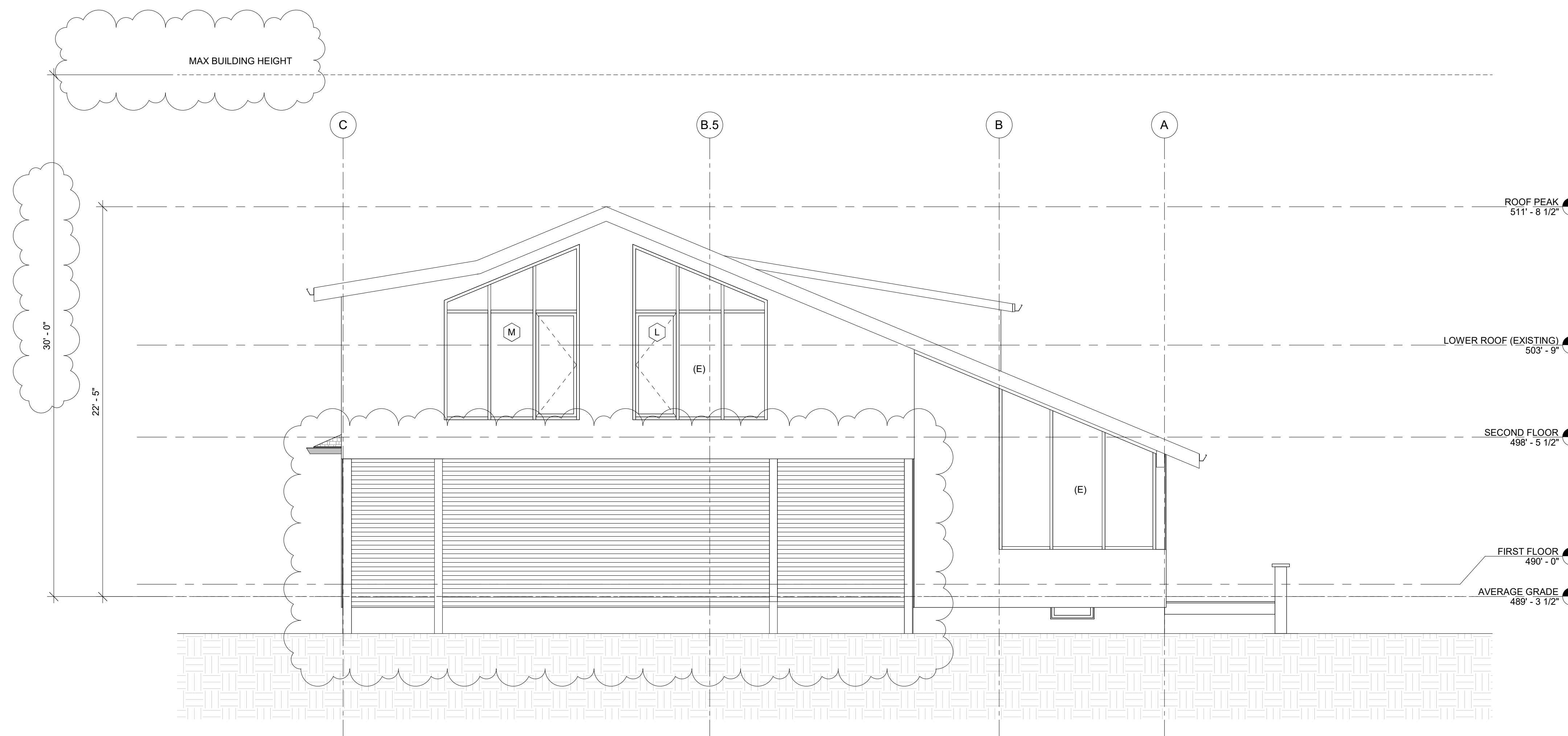
TOTAL LENGTH OF WALL SEGMENTS:
47.2+18.9+21.1+38+8.8+15.3+33.8+14.7+33.3+15.9=247

AVERAGE BUILDING ELEVATION=120855.04/247=489.29'

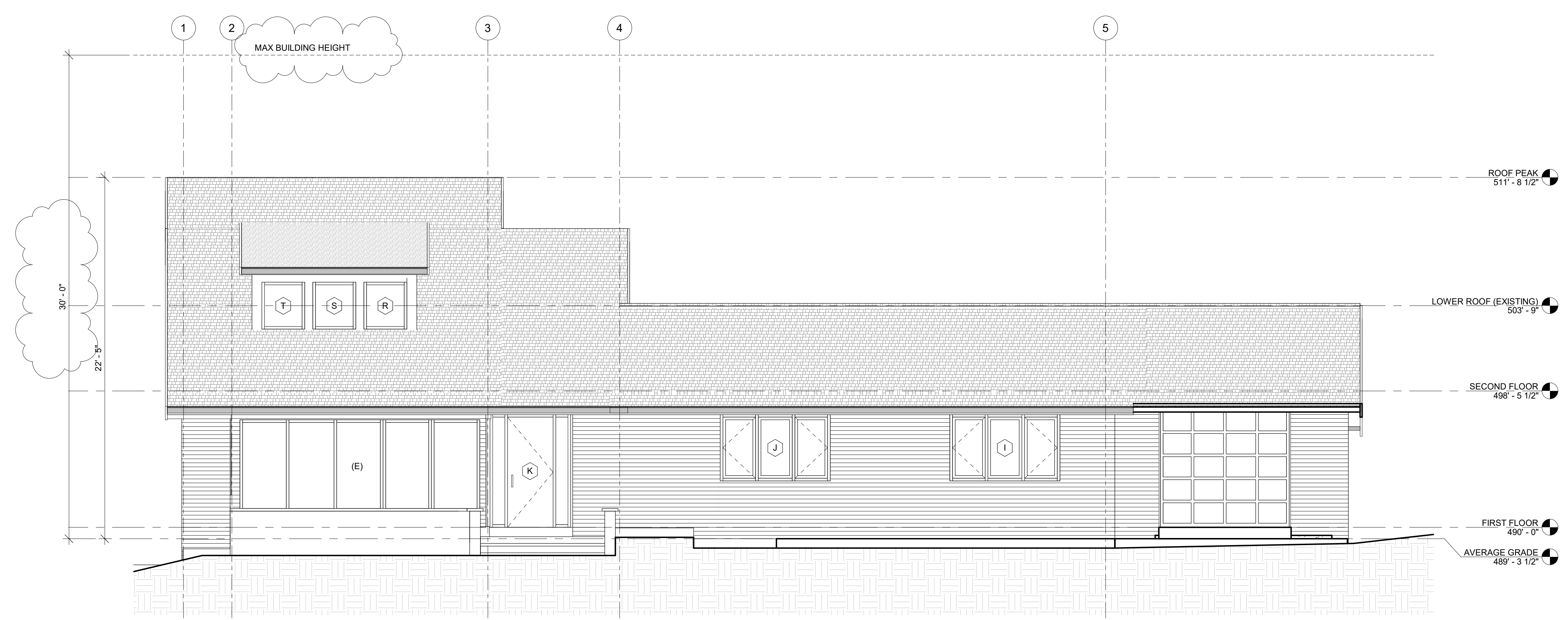
TOP OF (E) ROOF (NO CHANGE) = 511.7'

BUILDING HEIGHT = 22.41'

***NOTE - NO CHANGE TO BUILDING HEIGHT PROPOSED**

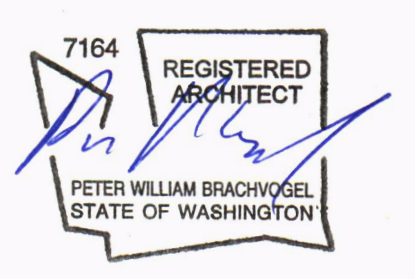


2 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



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

IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE



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NATIONAL COUNCIL
OF ARCHITECTURAL
REGISTRATION BOARDS

PROJECT NAME

BICKEL RESIDENCE

PROJECT ADDRESS

2734 70TH AVE SE
MERCIER ISLAND, WA 98040

PROJECT NUMBER

2019

PERMIT SET
4/11/2023

REVISIONS

NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23
2	PERMIT COMMENTS	04/11/23

SHEET NAME

BUILDING ELEVATIONS

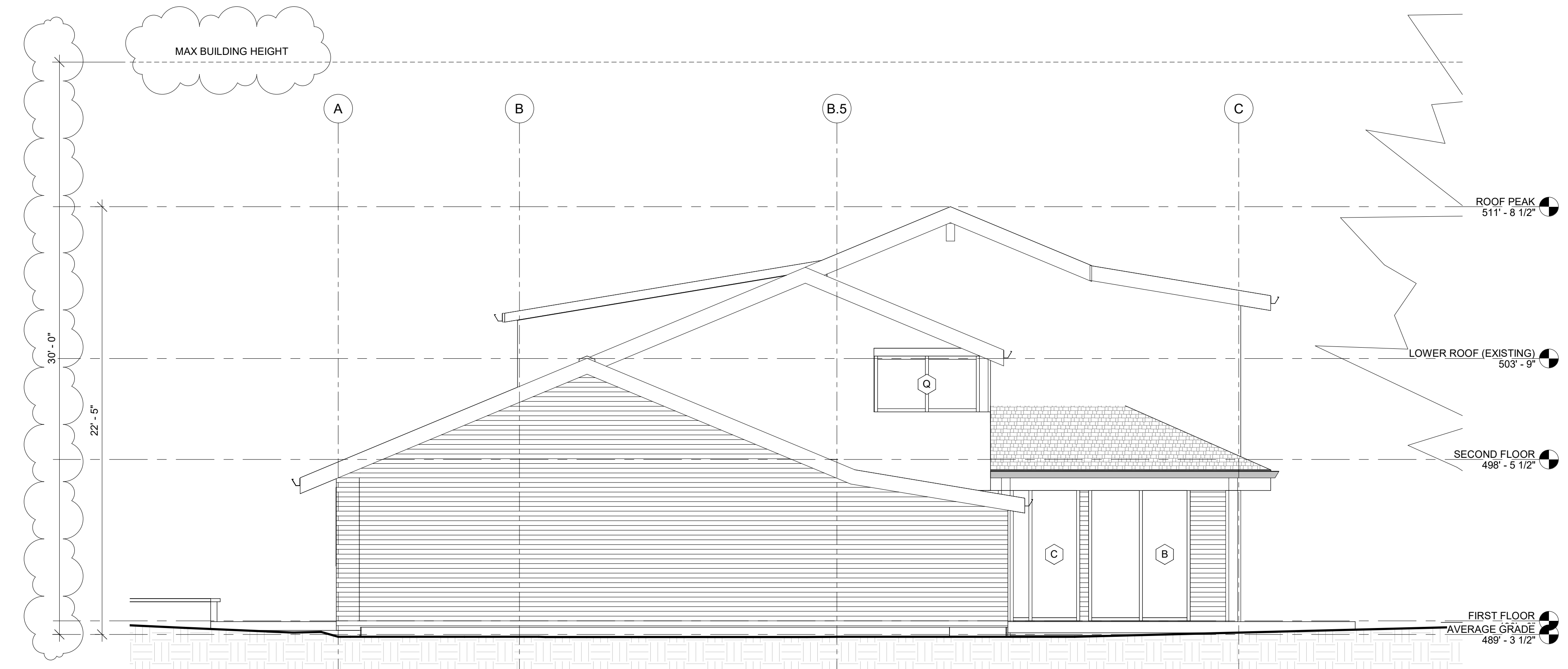
SHEET NUMBER

A-202

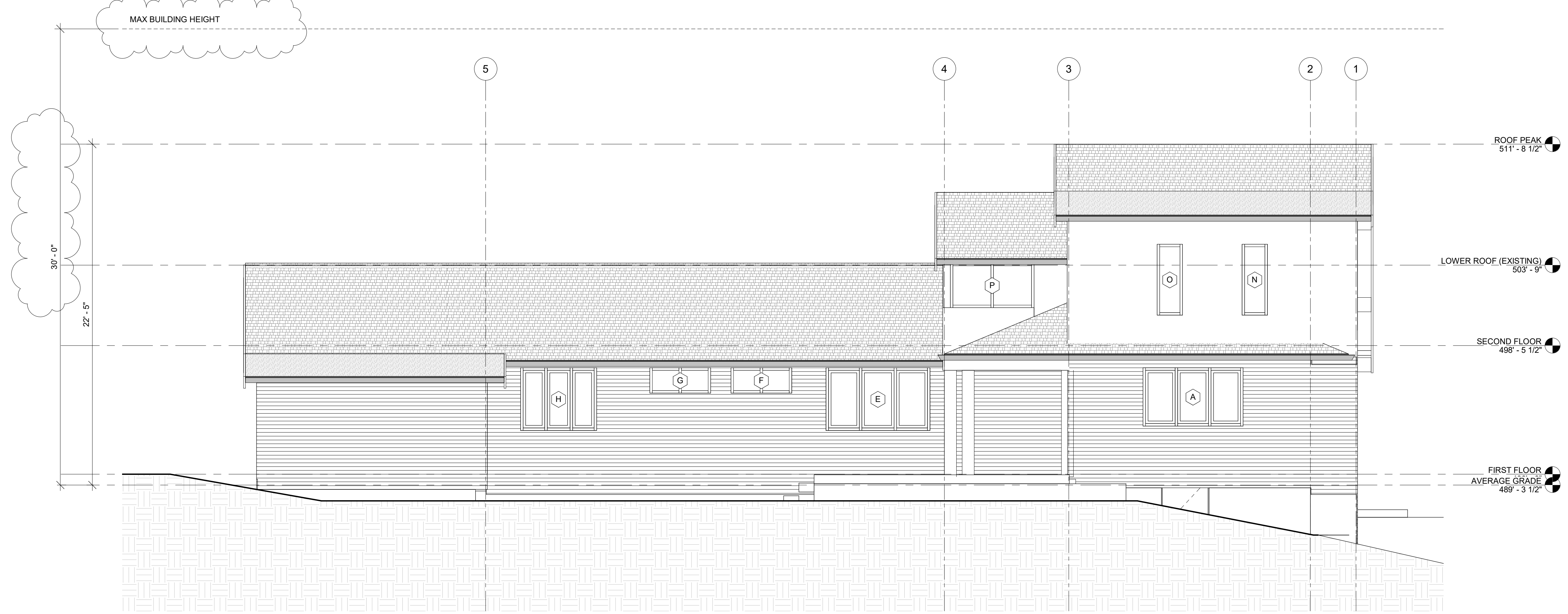
ELEVATION NOTES

- ALL DIMENSIONS SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS ARE GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES OR CONDITIONS ADVERSELY AFFECTING THE DESIGN PRIOR TO PROCEEDING WITH THE WORK.
- REFER TO ROOF PLAN FOR OVERHANG DIMENSIONS
- ALL EXTERIOR SIDING AND TRIM: SMOOTH FACE EXPOSED
- DOWNSPOUTS MAY NOT BE SHOWN FOR CLARITY

BUILDING HEIGHT PER MCC 19.02.020.E
 BUILDING HEIGHT LIMIT = 30'
 AVERAGE GRADE CALCULATION:
 AVERAGE BUILDING ELEVATION = (WEIGHTED SUM OF THE MID-POINT ELEVATIONS) ÷ (TOTAL LENGTH OF WALL SEGMENTS)
 WEIGHTED SUM OF THE MID-POINT ELEVATIONS:
 $(484 \times 7 \times 2) + (486 \times 18.9) + (489 \times 21.1) + (489 \times 38) + (489 \times 8.8) + (490 \times 15.3) + (490 \times 33.8) + (490 \times 14.7) + (498 \times 33.3) + (487 \times 15.9) =$
 $(22877.84) + (9165.4) + (11031.7) + (18582) + (4303.2) + (7497) + (16562) + (17203) + (16583.4) + (7743.3) = 120855.04$
 TOTAL LENGTH OF WALL SEGMENTS:
 $47.2 + 18.9 + 21.1 + 38 + 8.8 + 15.3 + 33.8 + 14.7 + 33.3 + 15.9 = 247$
 AVERAGE BUILDING ELEVATION = $120855.04 / 247 = 489.29'$
 TOP OF (E) ROOF (NO CHANGE) = 511.7
 BUILDING HEIGHT = 22.41'
***NOTE - NO CHANGE TO BUILDING HEIGHT PROPOSED**

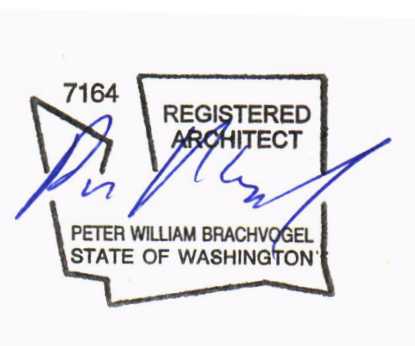


1 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

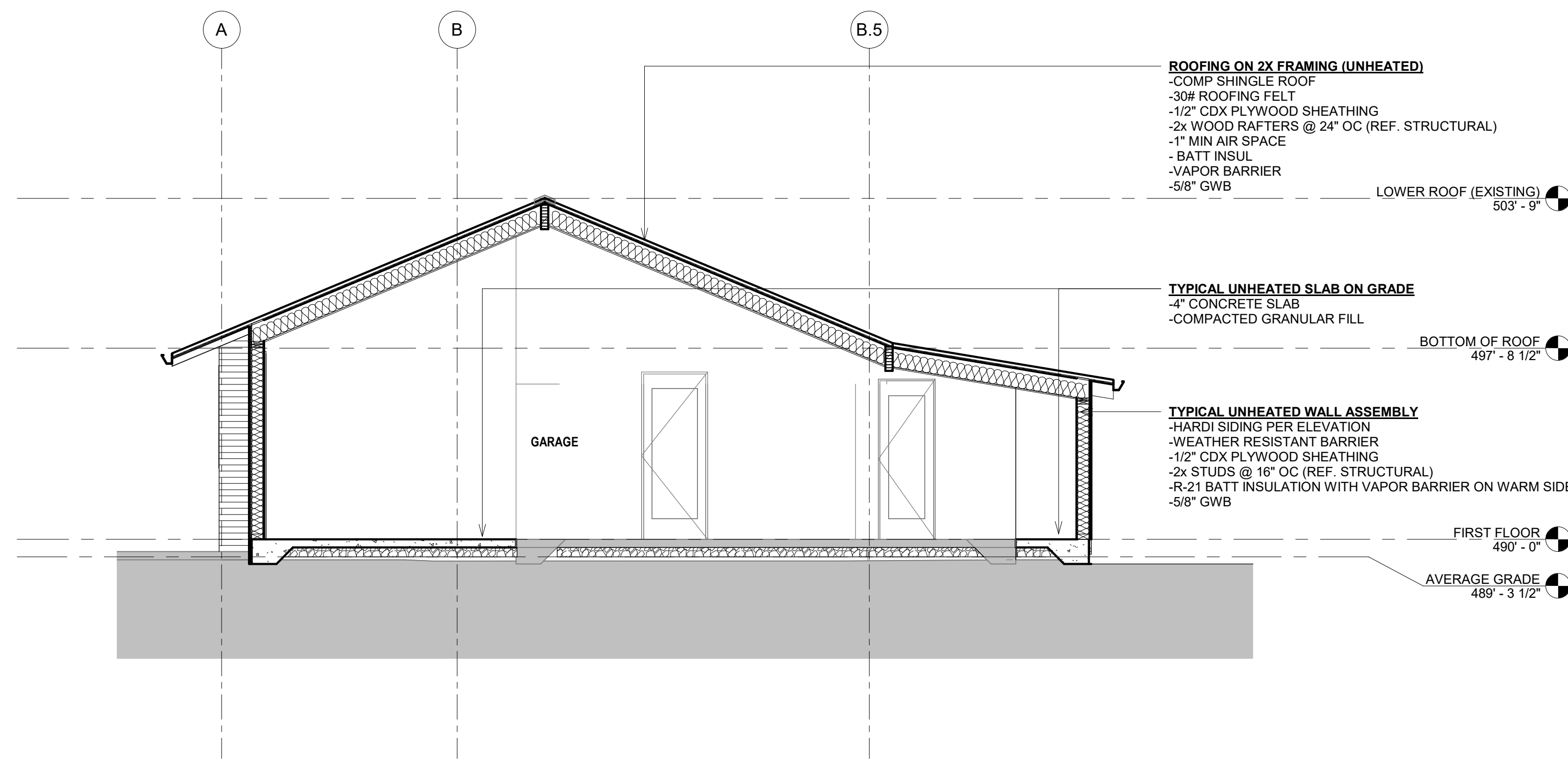


2 EAST ELEVATION
SCALE: 1/4" = 1'-0"

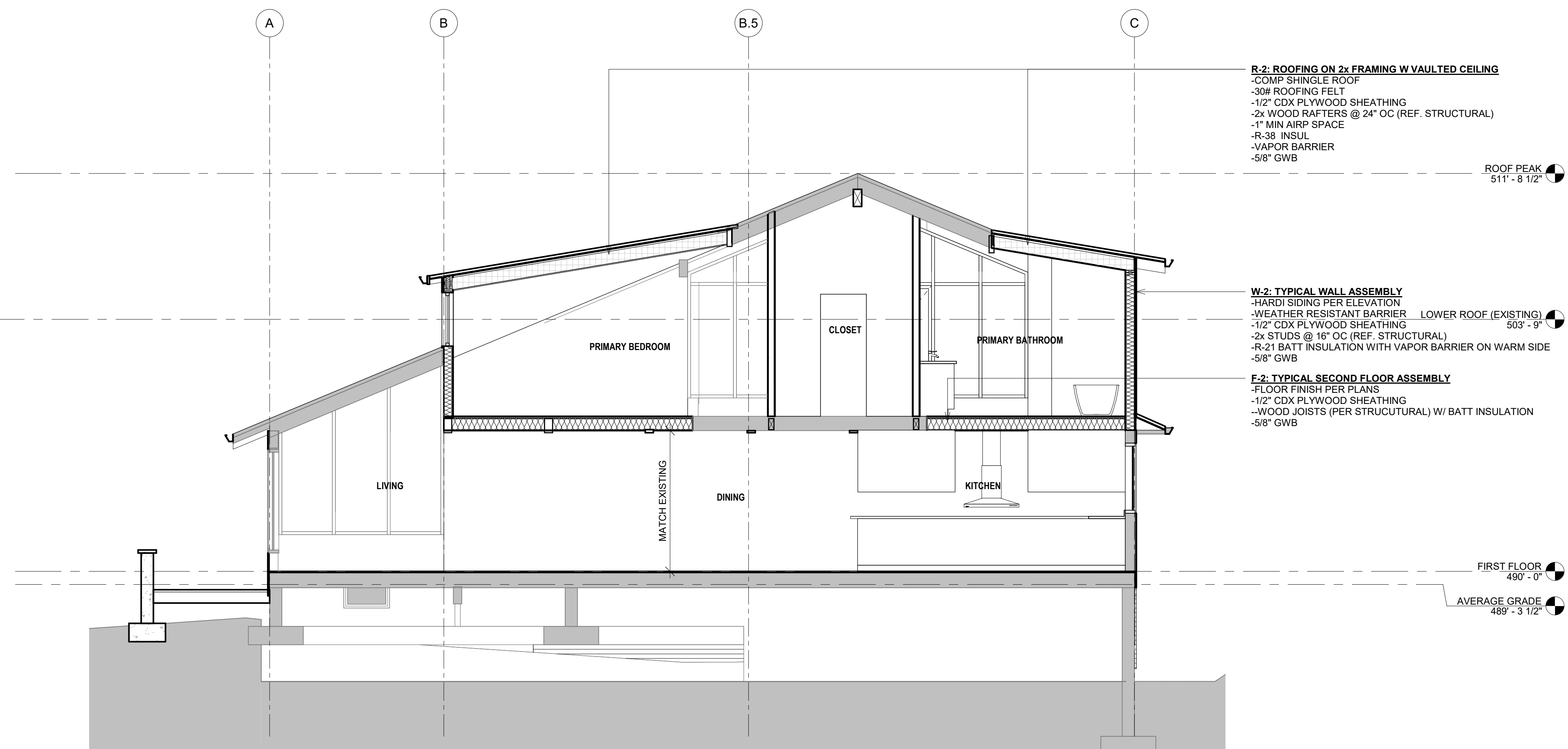
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NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23



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

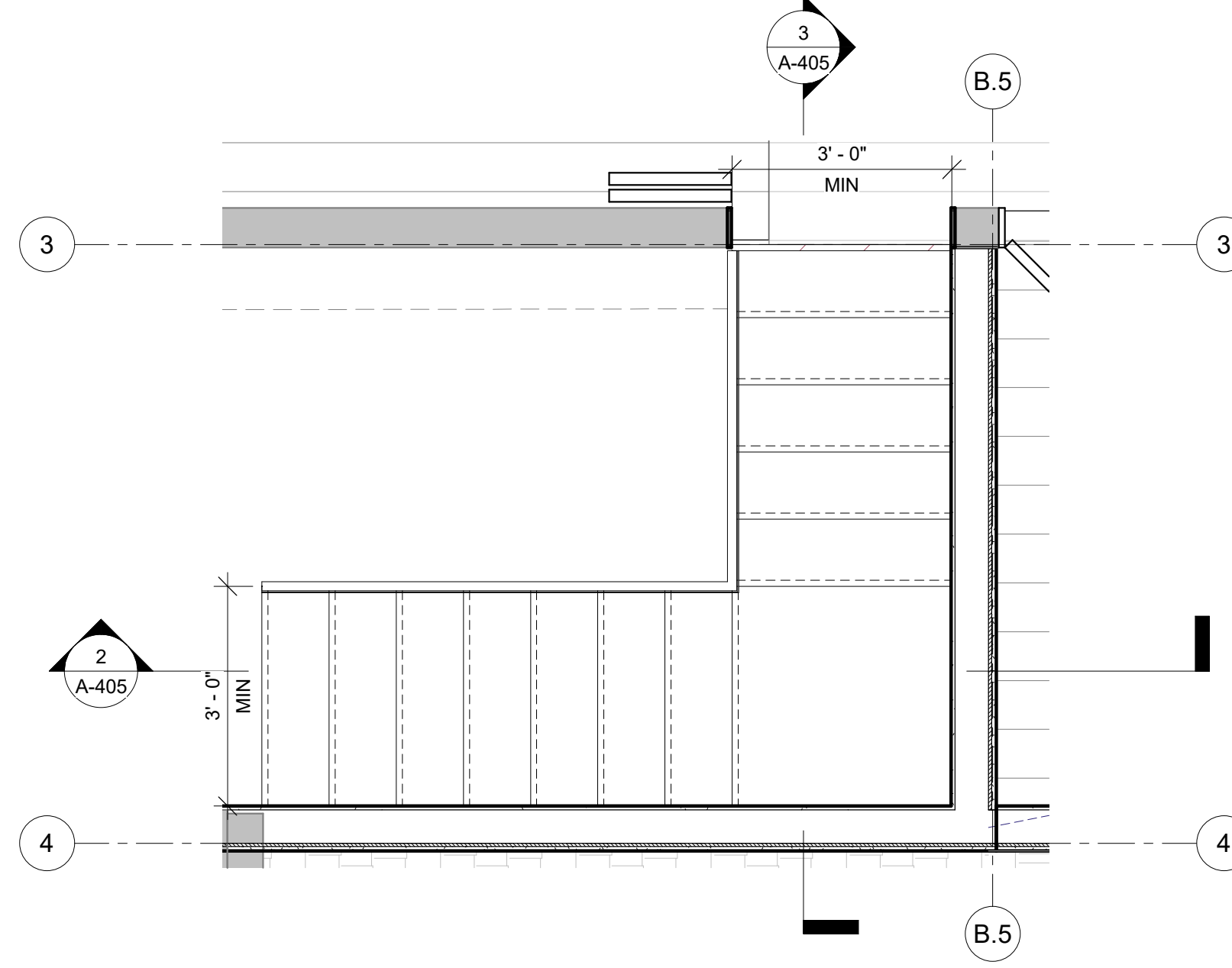


1 SECTION A
SCALE: 1/4" = 1'-0"

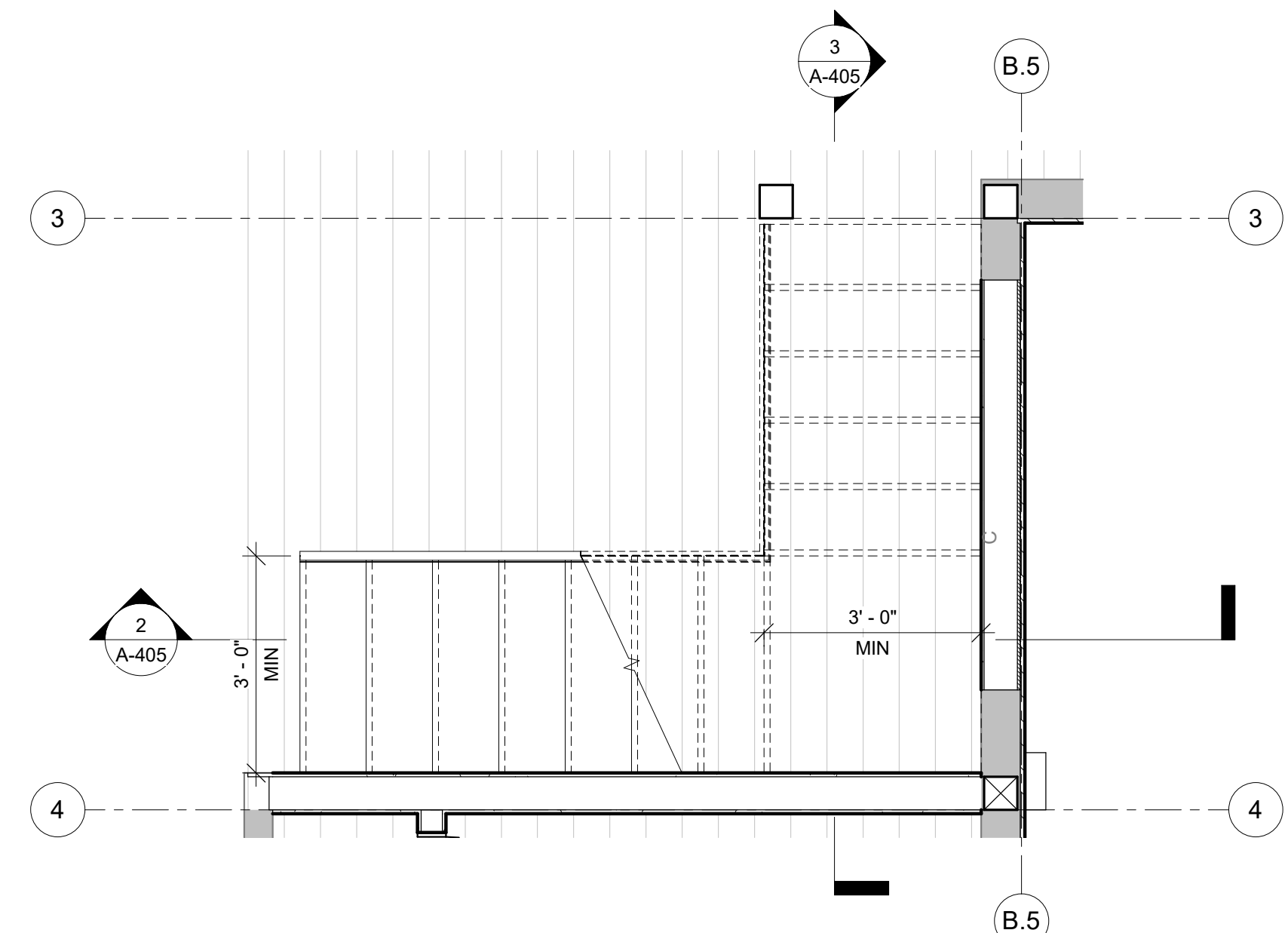
IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE

STAIR NOTES

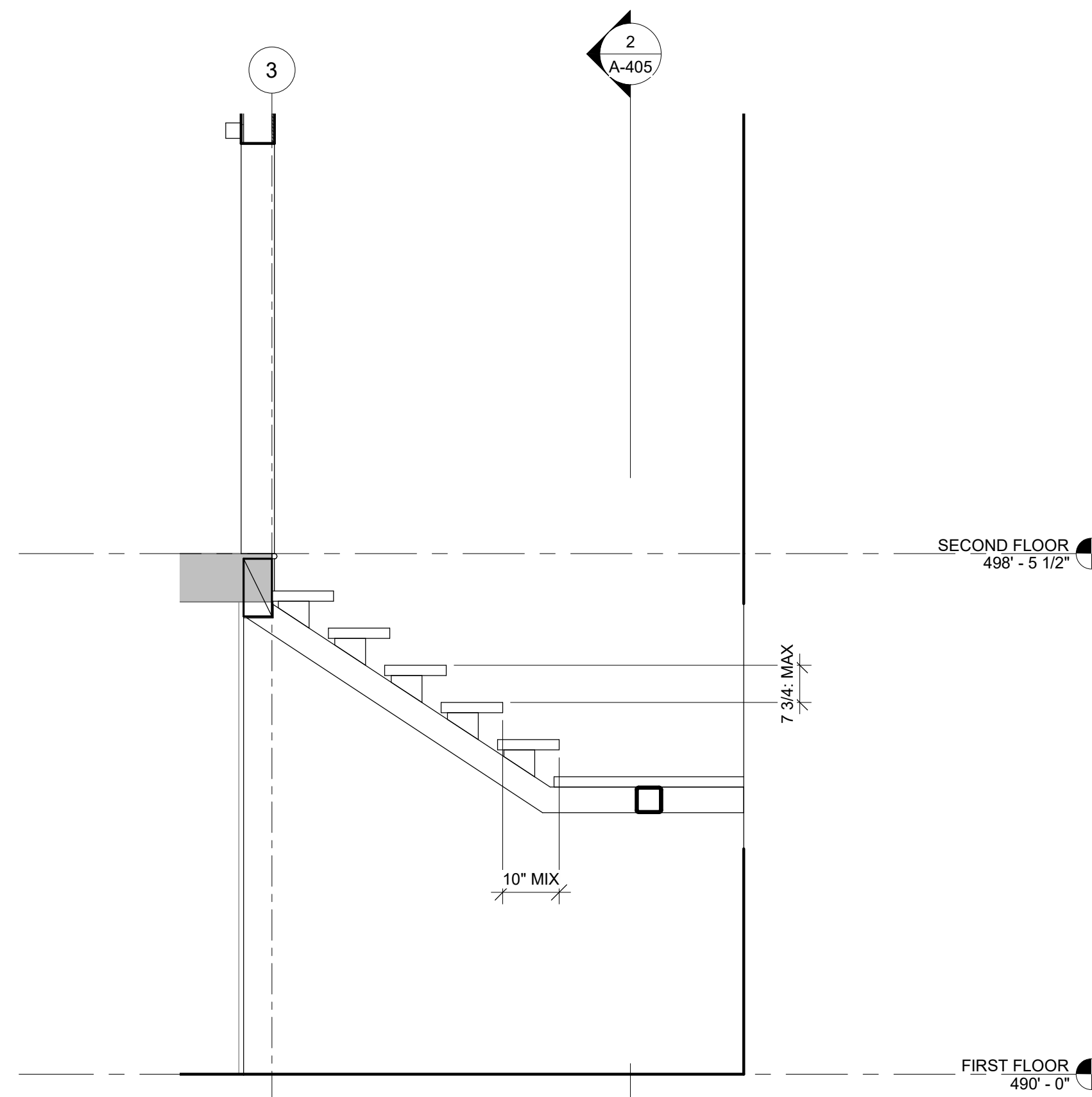
1. STAIRWAY ILLUMINATION SHALL BE PROVIDED PER IRC303.6. ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. STAIRWAY ILLUMINATION SHALL RECEIVE PRIMARY POWER FROM THE BUILDING WIRING.
2. STAIRWAYS SHALL COMPLY WITH R311.7:
 - A. R311.7.1 STAIRWAYS: R311.7.1 WIDTH: STAIRWAYS SHALL NOT BE LESS THAN 36" IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4.5 INCHES ON EITHER SIDE OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL NOT BE LESS THAN 31 1/2 INCHES WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27" WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.
 - B. R311.7.2 HEADROOM: THE MINIMUM HEADROOM IN ALL PARTS OF THE STAIRWAY SHALL NOT BE LESS THAN 6 FEET 8 INCHES MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY.
 - C. R311.7.4.1 RISER HEIGHT: THE MAXIMUM RISER HEIGHT SHALL BE 7 3/4". THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8".
 - D. R311.7.4.2 TREAD DEPTH: THE MINIMUM TREAD DEPTH SHALL BE 10". THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREADS LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8".
 - E. R311.7.4.3 PROFILE: THE RADIUS OF CURVATURE AT THE NOSING SHALL BE NO GREATER THAN 9/16". A NOSING NOT LESS THAN 3/4", NOT MORE THAN 1 1/4" SHALL BE PROVIDED ON STAIRWAYS WITH SOLID RISERS. THE GREATEST NOSING PROJECTION SHALL NOT EXCEED THE SMALLEST NOSING PROJECTION BY MORE THAN 3/8" BETWEEN STORIES INCLUDING THE NOSING AT THE LEVEL OF FLOORS AND LANDINGS. BEVELING OF NOSINGS SHALL NOT EXCEED 1/2". OPEN RISERS ARE PERMITTED, PROVIDED THAT THE OPENING BETWEEN TREADS DOES NOT PERMIT THE PASSAGE OF A 4" DIAMETER SPHERE. EXCEPTIONS: A NOSING IS NOT REQUIRED WHEN THE TREAD DEPTH IS A MINIMUM OF 11".
 - F. R311.7.5 LANDINGS FOR STAIRWAYS: THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY. A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE OF MORE THAN 12 FEET BETWEEN FLOOR LEVELS OR LANDINGS. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE WIDTH OF THE STAIRWAY SERVED. EVERY LANDING SHALL HAVE A MINIMUM DIMENSION OF 36" MEASURED IN THE DIRECTION OF TRAVEL.
3. RAILINGS SHALL BE COMPLY WITH R311.7.7:
 - A. R311.7.7. HANDRAILS: HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS AND SHALL BE CONTINUOUS FROM TOP TO BOTTOM OF A FLIGHT OF STAIRS.
 - B. R311.7.7.1: HEIGHT: HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE, ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES AND NOT MORE THAN 38 INCHES. SEE EXCEPTIONS FOR VOLUTE TURNOUTS AND STARTING EASING PER THIS CODE SECTION.
 - C. R311.7.7.3: GRIP SIZE: ALL REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY. HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1 1/4 INCHES AND NOT GREATER THAN 2 INCHES. IF THE HANDRAIL IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES AND NOT GREATER THAN 6 1/4 INCHES WITH A MAXIMUM CROSS SECTION OF DIMENSION OF 2 1/4 INCHES. EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCH.



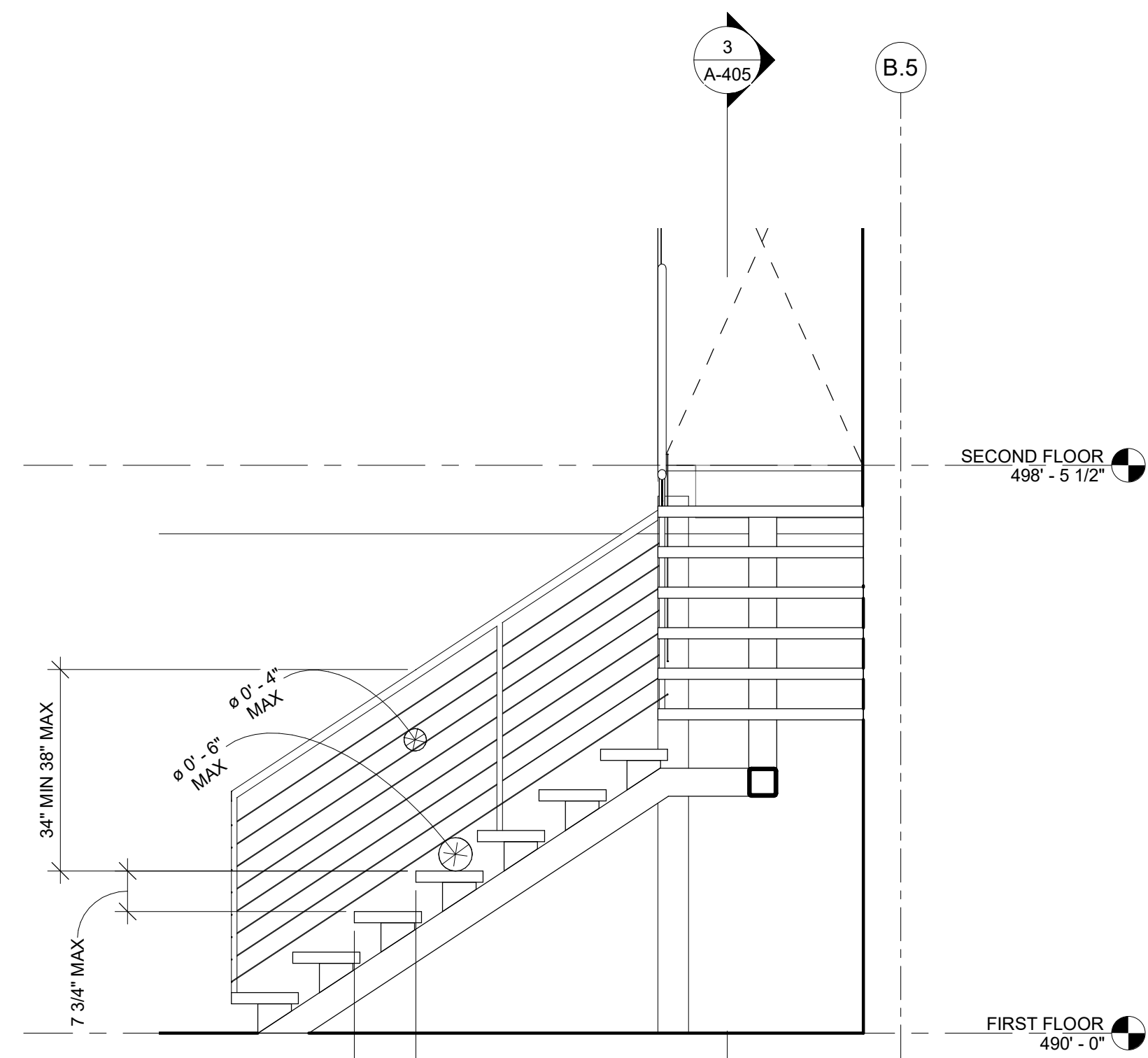
4 ENLARGED STAIR PLAN - 2ND FLOOR
SCALE: 1/2" = 1'-0"



1 ENLARGED STAIR PLAN - 1ST FLOOR
SCALE: 1/2" = 1'-0"



3 STAIR SECTION B
SCALE: 1/2" = 1'-0"



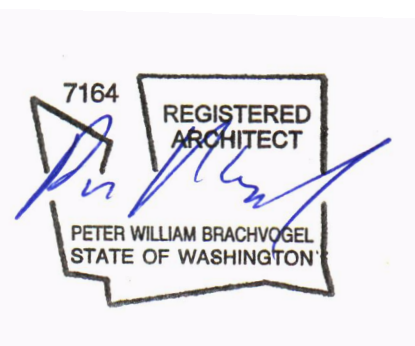
2 STAIR SECTION A
SCALE: 1/2" = 1'-0"



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PROJECT NAME
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PROJECT ADDRESS
2734 70TH AVE SE
MERCIER ISLAND, WA 98040

PROJECT NUMBER
2019

PERMIT SET
4/11/2023

NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23

SHEET NAME
ENLARGED STAIR PLANS
AND SECTION

SHEET NUMBER

A-405

IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE

INTERIOR DOOR SCHEDULE

DOOR NO.	TYPE	DOOR		MFR	MODEL	DOOR		UNDER CUT	FIRE RATING	COMMENTS
		WIDTH	HEIGHT			MAT'L	FIN.			
FIRST FLOOR										
106a	A	1'-8"	6'-8"	SIMPSON	SOLID CUSTOM DOOR					
SECOND FLOOR										
201	D	2'-4 1/8"	5'-11 5/8"	REAL BARN DOOR CO			WD	STN		
202	A	2'-6"	6'-8"	SIMPSON	SOLID CUSTOM DOOR		WD	STN		
203	A	2'-6"	6'-8"	SIMPSON	SOLID CUSTOM DOOR		WD	STN		
204	B	2'-6"	6'-8"	SIMPSON	SOLID CUSTOM DOOR		WD	STN		
205	A	2'-6"	6'-8"	SIMPSON	SOLID CUSTOM DOOR		WD	STN		
206	B	2'-6"	6'-8"	SIMPSON	SOLID CUSTOM DOOR		WD	STN		
207	A	2'-6"	6'-8"	SIMPSON	SOLID CUSTOM DOOR		WD	STN		

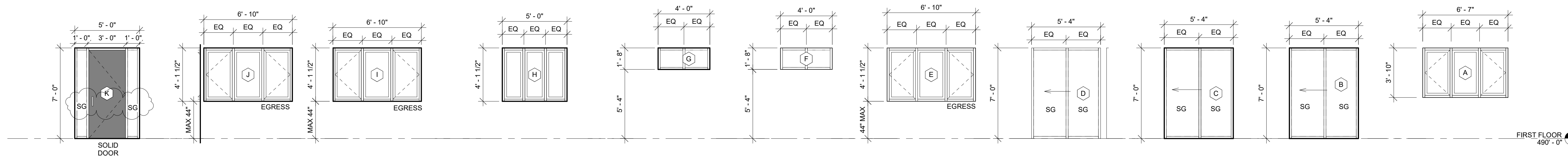
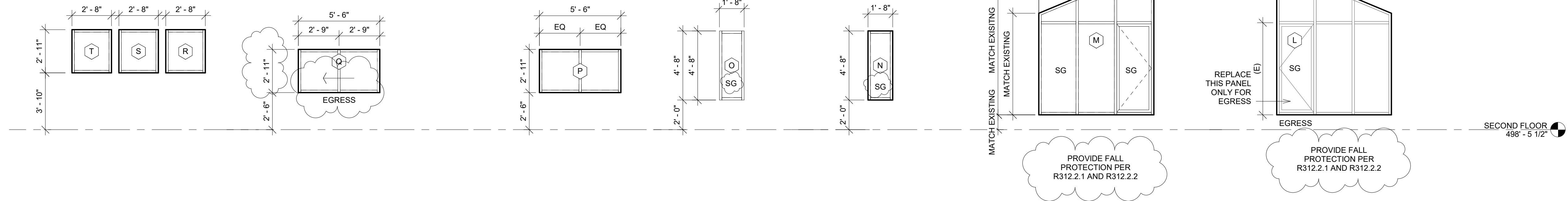
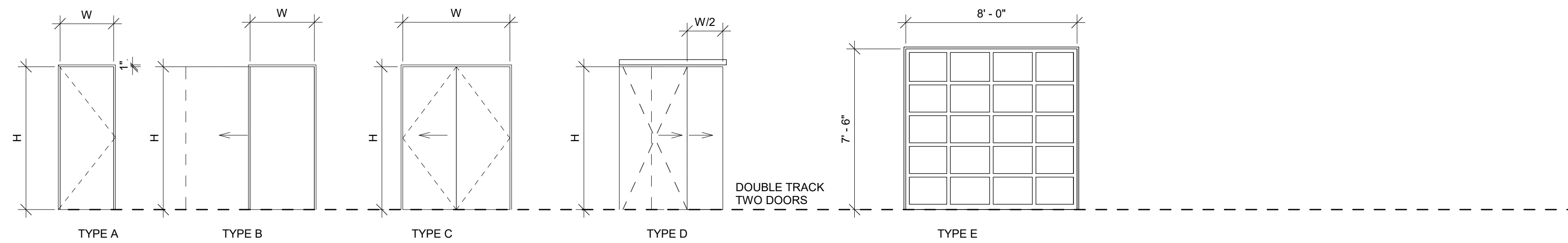
EXTERIOR NON GLAZED DOOR SCHEDULE

DOOR NO.	TYPE	DOOR		MFR	MODEL	DOOR		COMMENTS
		WIDTH	HEIGHT			MAT'L	FIN.	
FIRST FLOOR								
X101		8'-0"	7'-6"	NW DOOR	MODERN CLASSIC OVERHEAD DOOR	AL/GL	AND	

DOOR AND WINDOW NOTES

- ALL FENESTRATION SHALL BE U-30 OR LOWER
- ALL FENESTRATION SHALL BE MILGARD ULTRA C650
- PER R402.4.3 AIR LEAKAGE OF FENESTRATION, WINDOWS, SKYLIGHTS AND SLIDING GLASS DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN .3 CFM PER SQUARE FOOT, AND SWINGING DOORS NO MORE THAN 0.5 CFM PER SQUARE FOOT, WHEN TESTED IN ACCORDANCE TO NFRC 400 OR AAMA/WDMA/CSA 1011/S.2/A440 BY AN ACCREDITED, INDEPENDENT LABORATORY AND LISTED AND LABELED BY THE MANUFACTURER
- THE CONTRACTOR SHALL SEAL AROUND ALL EXTERIOR WINDOWS, DOORS, VENTS AND OTHER SUCH PENETRATIONS WITH A CONTINUOUS BEAD OF CAULKING TO PROVIDE FOR A WEATHER-TIGHT STRUCTURE. IN ADDITION, ALL EXTERIOR OPENINGS (WINDOWS, DOORS, VENTS, CORRIDOR OPENINGS) SHALL BE FLASHED WITH A FLASHING MEMBRANE AS SHOWN ON THE WINDOW DETAIL SHEET. USE METAL HEAD FLASHING ABOVE ALL EXTERIOR DOORS AND WINDOWS. FURNISH AND INSTALL FLASHINGS IN ACCORDANCE WITH SMACNA STANDARDS.
- EMERGENCY ESCAPE: ONE WINDOW OR DOOR IN THE BASEMENT AND IN EACH BEDROOM MUST MEET THESE REQUIREMENTS: 1) 5.7 SQFT MIN NET CLEAR OPEN AREA, 2) 20" MIN CLEAR OPEN WIDTH AND 24" MIN CLEAR OPEN HEIGHT AND 44" MAX SILL HEIGHT
- NATURAL LIGHT: PER IRC R303.1 WINDOW AREA FOR NATURAL LIGHT MUST BE 8 PERCENT OF FLOOR AREA
- SECURITY REQUIREMENTS: PER IRC R329.1 BUILDING ENTRANCE DOORS SHALL BE CAPABLE OF LOCKING. THEY SHALL BE EQUIPPED WITH A DEAD-LOCKING LATCH BOLT WITH AT LEAST 1/2 IN THROW THAT PENETRATES THE STRIKER NOT LESS THAN 1/4 IN. BUILDING ENTRANCE DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. VISITOR OBSERVATION PORT REQUIRED FOR EXTERIOR DOORS. ON BUILDING ENTRANCE DOORS, LOCKS MUST BE ABLE TO BE OPENED WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT
- SAFETY GLAZING: ALL GLASS LOCATED IN AN AREA THAT THE IRC CONSIDERED HAZARDOUS PER R308 SHALL BE SAFETY GLAZING. THESE INCLUDE THE FOLLOWING LOCATIONS:
 - GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BI-FOLD DOORS
 - GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE
 - GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS THE FOLLOWING CONDITIONS
 - THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET AND
 - THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE THE FLOOR AND
 - THE TOP EDGE OF THE GLAZING IS MORE THAN 36" ABOVE THE FLOOR AND
 - ONE OR MORE WALKING SURFACES ARE WITHIN 36" MEASURED HORIZONTALLY AND IN A STRAIGHT LINE OF THE GLAZING
 - ALL GLAZING IN RAILINGS REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE
 - ALL GLASS SHOWER ENCLOSURES SHALL BE LAMINATED SAFETY GLASS OR FULLY TEMPERED
 - SKYLIGHTS SHALL BE MADE OF LAMINATED GLASS, FULLY TEMPERED OR HEAT STRENGTHENED GLASS PER IRC R308.6.2
- SRC R312.2.1 - FOR ANY WINDOW WHERE THE TOP OF THE SILL OF AN OPERABLE WINDOW OPENING IS LOCATED LESS THAN 24 INCHES ABOVE THE FINISHED FLOOR AND GREATER THAN 72 INCHES ABOVE FINISHED GRADE, SHOW ON THE PLANS THAT THE OPENING COMPLIES WITH ONE OF THE FOLLOWING:
 - HAS OPENINGS LESS THAN 4 INCHES.
 - PROVIDE WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH ASTM F 2090.
 - PROVIDE WINDOW OPENING CONTROL DEVICES THAT COMPLY WITH R312.2.2

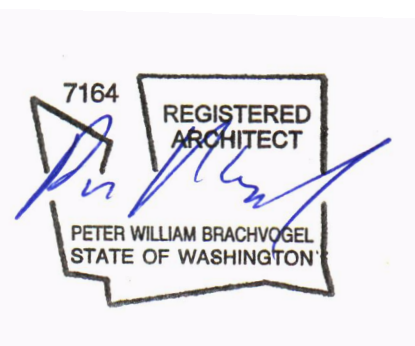
DOOR TYPE LEGEND



Architecture · Planning
Construction Management

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MEMBER: AIA
AMERICAN INSTITUTE
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NATIONAL COUNCIL
OF ARCHITECTURAL
REGISTRATION BOARDS

PROJECT NAME
BICKEL RESIDNECE

PROJECT ADDRESS
2734 70TH AVE SE
MERCIER ISLAND, WA 98040

PROJECT NUMBER
2019

PERMIT SET
4/11/2023

REVISIONS		
NO.	DESCRIPTION	DATE
1	PERMIT SET	01/02/23
2	PERMIT COMMENTS	04/11/23

SHEET NAME
DOOR AND WINDOW
SCHEUDLE
SHEET NUMBER

A-601

IF THIS SHEET IS NOT 24" x 36" THEN NOT TO SCALE

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

CRITERIA

1. ALL NEW MATERIALS, WORKSMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2018 EDITION).

2. DESIGN LOADING CRITERIA

ROOF LIVE LOAD (SNOW, IRREDUCIBLE, NOT INCLUDING DRIFT)	25 PSF
FLOOR LIVE LOAD (RESIDENTIAL)	40 PSF
FLOOR LIVE LOAD (STORAGE, NON REDUCIBLE)	125 PSF
STAIR AND CORRIDOR LIVE LOAD, NON REDUCIBLE	60 PSF

DESIGN LOADING CRITERIA - LATERAL LOADS	
WIND	VULT + 100 MPH (3-SECOND GUST), VASD = 11 MPH (3-SECOND GUST) ENCLOSED BUILDING EXPOSURE 'B', Kz1+1.0 DIRECTIONAL PROCEDURE PER ASCE 7-16 CH7

EARTHQUAKE	RISK CATEGORY 2, Ie = 1.0
	Se = 1.40, S1 = 0.56,
	SITE CLASS = D (ASSUMED),
	Fa = 1.2, Fv = 1.8
	Sds = 0.53, Sd1 = 5.0,
	SDC = D
BFERS = FLYWOOD SHEAR WALLS R = 6.5	
C4 + J1, RHO = 1.3	
DESIGN BASE SHEAR V = 15.43K	
EQUIVALENT LATERAL FORCE PROCEDURE	

DESIGN LOADING CRITERIA - DEAD LOADS

ROOF DEAD LOAD	5 PSF
FLOOR DEAD LOAD (RESIDENTIAL UPPER FLOORS)	11 PSF
WOOD FRAMED WALL DEAD LOAD (INTERIOR/EXTERIOR)	8/2 PSF
CONCRETE WALL DEAD LOAD (8" WALLS)	100 PSF

SEE PLANS FOR ADDITIONAL LOADING CRITERIA

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL AND ALL OTHER DISCIPLINES' DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

DISCREPANCIES - THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING, DURING THE BIDDING PERIOD, OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS OR OF ANY VARIATIONS NEEDED IN ORDER TO CONFORM TO CODES, RULES AND REGULATIONS. UPON RECEIPT OF SUCH INFORMATION, THE ENGINEER WILL SEND WRITTEN INSTRUCTIONS TO ALL CONCERNED. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND WORK SHALL BE PERFORMED IN A MANNER AS DIRECTED BY THE ENGINEER.

4. 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 FIELD VERIFIED BY THE CONTRACTOR OR THE CONTRACTOR'S SUBCONTRACTOR.

5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ERECTION PLANS AND INSTALLATION OF SHORING SYSTEMS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE SHORING SUPPLIER. THE SHORING SHALL NOT BE SUPPORTING ON THE EXISTING STRUCTURE.

CHANGES IN FIELD CONDITIONS DURING CONSTRUCTION WILL REQUIRE RE-EVALUATION BY THE CONTRACTOR AND THEIR SHORING INSTALLER.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

7. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ONLY ON SHOP DRAWINGS WILL NOT SATISFY THIS REQUIREMENT.

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

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

INSPECTIONS

STRUCTURAL ELEMENTS	FREQUENCY OF INSPECTION	CODE REFERENCE
CONCRETE	PERIODIC	IBC 1903.4 TABLE 1109.3 ITEM 1
REINFORCING STEEL AND PLACEMENT	PERIODIC	IBC 1903.4 TABLE 1109.3
DRILLED AND EPOXYED BOLTS, RODS AND ANCHORS	PERIODIC	IBC 1109.11
DRILLED AND EPOXYED REINFORCING	CONTINUOUS	IBC TABLE 1109.3
EXPANSION BOLTS AND THREADED EXPANSION INSERTS	PERIODIC	IBC TABLE 1109.3
CONCRETE FORMWORK	PERIODIC	IBC TABLE 1109.3
WOOD SHEATHED SHEAR WALLS AND DIAPHRAGMS (ANY SHEATHING WITH NAILS SPACED AT 4" ON CENTER OR LESS)	PERIODIC	IBC 1109.3.2
WOOD SHEAR WALL HOLD-DOWN ANCHORS	PERIODIC	IBC 1109.3.2

SHALL BE SUPERVISED IN ACCORDANCE WITH SECTION 109, SECTION 1104, AND SECTION 1108 OF THE INTERNATIONAL BUILDING CODE AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT. THE ARCHITECT, STRUCTURAL ENGINEER, AND SEATTLE DEPARTMENT OF PLANNING AND DEVELOPMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION REPORTS AND TEST RESULTS.

GEOTECHNICAL

11. FOUNDATION AND SLAB NOTES: SUB-GRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN BY THE INDIVIDUAL TESTING AGENCY OR LOCAL BUILDING OFFICIAL AT THE TIME OF EXCAVATION.

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 OR BUILDING INSPECTOR. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.

ALLIQUABLE SOIL PRESSURE	1500 PSF (ASSUMED)
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	55 PCF/25 PCF (ASSUMED)
PASSIVE EARTH PRESSURE	250 PCF (ASSUMED)
SEISMIC EARTH PRESSURE	84 (ASSUMED)
COEFFICIENT OF FRICTION	0.35 (ASSUMED)

REMODELING/ RENOVATION

12. DEMOLITION: 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 SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADS (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF.

- A. ALL NEW OPENINGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE.
- B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
- C. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING, IF POSSIBLE.

D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE, THREADED BARS INTO THREADED EXPANSION INSERTS IN EXISTING CONCRETE SHALL BE PROVIDED TO MATCH HORIZONTAL OR VERTICAL REINFORCING, UNLESS OTHERWISE NOTED ON PLANS.

13. CONTRACTOR SHALL CHECK FOR DRYROT AT ALL EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWING WATER STAINS, AND ALL WOOD MEMBERS IN BASEMENT AND CRAWL SPACES. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.

CONCRETE

14. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 308. CONCRETE SHALL ATTAIN A 28 DAY STRENGTH OF $f_c' = 2500$ PSI AND MIX SHALL CONTAIN NOT LESS THAN 9 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 308 SECTION 5.3. 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 C160-06, C494M-05a, C618-05, C895-06, AND C1071-01. TOTAL AIR CONTENT SHALL BE IN ACCORDANCE WITH ACI 308 TABLE 4.4.1.

15. REINFORCING STEEL SHALL CONFORM TO ASTM A616 (INCLUDING SUPPLEMENT S1), GRADE 60, $f_y = 60,000$ PSI. EXCEPTION: ANY BARS SPECIFICALLY NOTED ON THE DRAWINGS AS 'GRADE 40', $f_y = 40,000$ PSI. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A616(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN AWS. D14 ARE SUBMITTED.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.

16. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 9P-66 (04) AND THE LATEST EDITION OF ACI 318. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

17. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE	3"
FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER	2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS	1 1/2"
SLABS AND WALLS (INTERIOR FACE)	3/4"

18. CONCRETE WALL REINFORCING: PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS	4 # 16 HORIZ.	4 # 16 VERTICAL	1 CURTAIN
8" WALLS	5 # 16 HORIZ.	5 # 16 VERTICAL	1 CURTAIN

19. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

20. EMBEDDED ITEMS IN CAST-IN-PLACE CONCRETE: EMBEDDED ITEMS IN CAST-IN-PLACE CONCRETE SHALL NOT BE 'LET-SET' UNLESS SPECIFICALLY APPROVED BY ENGINEER OF RECORD. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, REINFORCING STEEL, ANCHOR BOLTS, DEFORMED BAR ANCHORS, EMBED PLATES, OR OTHER MISCELLANEOUS STEEL SHAPES TO BE CAST INTO CONCRETE.

21. EPOXY GROUTED ITEMS SPECIFIED ON THE DRAWINGS SHALL BE GROUTED WITH HIT HY-2000 ADHESIVE ANCHOR SYSTEMS AS MANUFACTURED BY HILTI, INC. OR SET-3G HIGH STRENGTH ADHESIVE ANCHOR SYSTEM AS MANUFACTURED BY SIMPSON STRONG-TIE OR AN ENGINEER APPROVED ALTERNATE THAT HAS ICC TEST DATA FOR THEIR SPECIFIC PRODUCT AND APPLICATION. INSTALL IN STRICT ACCORDANCE WITH ICC REPORTS FOR SPECIFIC EPOXY UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. HOLE SIZE SHALL BE 1/8" LARGER THAN BAR, ROD OR BOLT SIZE. NOTE: NO WELDING IS TO TAKE PLACE WITHIN 24" OF HARDENED EPOXY.

22. EXPANSION BOLTS INTO CONCRETE SHALL BE Kwik Bolt TIE WEDGE ANCHORS AND THREADED EXPANSION INSERTS INTO CONCRETE OR CONCRETE MASONRY UNIT SHALL BE Kwik Bolt 3 MASONRY ANCHORS AS MANUFACTURED BY HILTI, INC. OR APPROVED EQUAL INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. INSERTS INTO CONCRETE MASONRY UNITS SHALL BE FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT AND INSERT INSTALLATION. ANCHORS SHALL HAVE A CURRENT ICC REPORT.

WOOD

23. FRAMING LUMBER SHALL BE KILN DRIED, AND GRADED AND MARKED IN CONFORMANCE WITH U.C.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 16, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS, UNLESS OTHERWISE NOTED ON THE PLANS:

JOISTS: (2 X MEMBERS)	DOUG FIR #1 MINIMUM BASIC DESIGN STRESS, Fb = 3000 PSI
(3 X AND 4 X MEMBERS)	DOUG FIR #1 MINIMUM BASIC DESIGN STRESS, Fb = 1000 PSI
BEAMS AND STRINGERS: (INCLUDING 6 X 10 AND LARGER MEMBERS)	DOUG FIR #1 MINIMUM BASIC DESIGN STRESS, Fb = 1000 PSI
POSTS AND TIMBERS: (6 X 6 AND LARGER)	DOUG FIR #2 MINIMUM BASIC DESIGN STRESS, Fb = 900 PSI
STUDS, PLATES & MISCELLANEOUS LIGHT FRAMING:	DOUG FIR STANDARD GRADE MINIMUM BASIC DESIGN STRESS, Fb = 575 PSI
BOLTED FRAMING: STUDS, LEDGERS, AND PLATES	DOUG FIR #2 MINIMUM BASIC DESIGN STRESS, Fb = 900 PSI
PRESSURE TREATED FRAMING: LEDGERS, AND PLATES	HEM FIR #2 MINIMUM BASIC DESIGN STRESS, Fb = 800 PSI

24. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ANSI / AITC A1901-2001, AMERICAN NATIONAL STANDARDS INSTITUTE AND ASTM D3131-05. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F V4, $F_b = 2,400$ PSI, $F_v = 165$ PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F V8, $F_b = 2,400$ PSI, $F_v = 165$ PSI. CAMBER ALL GLULAM BEAMS TO 2,000 FT RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS. USE 'LEGS' SERIES HANGERS AS REQUIRED TO FIT GLULAM BEAMS UNON.

25. ENGINEERED LUMBER SHALL BE DESIGNED AND MANUFACTURED TO THE STANDARDS SET FORTH IN ASTM D5456, ICC E5 REPORT ESR-1381, AND THE CANADIAN CONSTRUCTION MATERIALS CENTRE (CMC) REPORTS NO. 1161-R (PSL ONLY) AND 12671-R (LSL ONLY). 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 MEMBERS ARE TO BE FREE OF MECHANICAL CONNECTIONS IN FULL-LENGTH MEMBERS. ADHESIVES SHALL BE OF THE WATERPROOF TYPE CONFORMING TO THE REQUIREMENTS OF ASTM D-2599.

PARALLEL STRAND LUMBER (PSL): $F_b = 2300$ PSI, $E = 2.0 \times 10^6$ PSI, $F_v = 230$ PSI.
LAMINATED STRAND LUMBER (LSL): $F_b = 2250$ PSI, $E = 1.9 \times 10^6$ PSI, $F_v = 400$ PSI.
LAMINATED VENEER LUMBER (LVL): $F_b = 2800$ PSI, $E = 2.0 \times 10^6$ PSI, $F_v = 205$ PSI.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURE BY THE TRUS-JOIST CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL PARALLEL BEAM HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH BEAM PROVIDED, USE 'YGI' SERIES HANGERS AS REQUIRED TO FIT BEAM UNON.

26. FLYWOOD SHEATHING SHALL BE GRADE C D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PSI. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS.

27. ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN DIRECT CONTACT WITH SOIL SHALL BE PRESSURE-TREATED WITH ALKALINE COPPER QUATERNARY (ACQ). ALL WOOD MEMBERS (INCLUDING PLATES) IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH SODIUM BORATE (SBC).

ALL METAL CONNECTORS IN CONTACT WITH 'ACQ' PRESSURE-TREATED LUMBER SHALL BE TYPE 304 OR 316 STAINLESS STEEL. THIS INCLUDES WASHERS, SCREWS, NAILS, HANGERS AND ANY OTHER MISCELLANEOUS LIGHT GAGE METAL CONNECTORS. WHERE ACO LUMBER IS USED IN INTERIOR CONDITIONS, G85 (HOT-DIP GALVANIZED TO 105 OUNCES PER SQUARE FOOT) METAL CONNECTORS MAY BE USED IN LIEU OF STAINLESS STEEL. METAL CONNECTORS 1/2" THICK OR GREATER NEED NOT BE GALVANIZED FOR INTERIOR USE. METAL CONNECTORS 1/2" THICK PLUS ARE TO BE GALVANIZED FOR EXTERIOR USE, UNLESS SPECIFIED OTHERWISE BY THE ARCHITECT.

28. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE 'STRONG-TIE' BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO. C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE ICCO 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 STRIPS 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.

ALL JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH 'U' SERIES JOIST HANGERS. ALL DOUBLE OR TRIPPLE JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH 'HU' SERIES JOIST HANGERS.

29. HOLD-DOWNS CALLED OUT BY LETTERS 'HDL' ARE MANUFACTURED BY THE SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO. C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. EACH SIMPSON HOLD-DOWN SHALL BE BOLTED TO A MINIMUM OF (2) FULL HEIGHT STUDS. SEE SCHEDULE ON PLANS FOR FURTHER STUD REQUIREMENTS. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. ALL HOLD-DOWNS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

30. WOOD FRAMING NOTES-- THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

A. 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 2304.101 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.

B. WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2 x 4 STUDS @ 16' O.C. AT INTERIOR WALLS AND 2 x 6 @ 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 2 x 8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID HEIGHT OF ALL STUD WALLS OVER 8' IN HEIGHT.

ALL STUD WALLS ATTACHED TO CONCRETE FOUNDATION WALLS SHALL HAVE THEIR LOWER WOOD PLATES BOLTED WITH 5/8" DIAMETER ANCHOR BOLTS @ 6'-0" O.C. WITH 3" x 3" x 1/4" SQUARE WASHERS OR 3" DIAMETER ROUND WASHERS UNLESS OTHERWISE NOTED. LAYOUT OF WALL PLATES, STUDS, AND ANCHORS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 2308.6 OF THE 2018 IBC. ALL SILL PLATE PIECES SHALL HAVE A MINIMUM OF TWO ANCHOR BOLTS EMBEDDED INTO CONCRETE, WITH THE FIRST ANCHOR BOLT LOCATED NOT MORE THAN 12" FROM THE END OF THE PLATE, AND NO CLOSER THAN 4" TO THE END. ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12" O.C. STAGGERED, 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 AND APA RATED WOOD SHEATHING ON EXTERIOR SURFACES NAILED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH NAILS AT 1" O.C. USE 5d COOLER NAILS FOR 1" GUB AND 6d COOLER NAILS FOR 5/8" GUB. USE 8d COMMON, GALVANIZED NAILS FOR EXTERIOR SHEATHING.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND MORE THAN ONE-HALF OF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE BRIDGING @ 8' O.C. AND SOLID BLOCKING AT ALL BEARING POINTS. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

TOWNAL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH 16d @ 12' O.C. STAGGERED.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN 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. (18" O.C. AT FLOORS) TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES OR PROVIDE SOLID BLOCKING. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE AND GROOVE JOINTS AT UNBLOCKED EDGES OR SHALL BE SUPPORTED WITH SOLID BLOCKING. TOWNAL BLOCKING TO PLATE WITH 16d @ 12" O.C. OR (2) 16d EACH END AT SUPPORTS UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS, INSTALL FLAT 2X BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED.

D. NAILING: MINIMUM NAIL DIAMETER AND LENGTH SHALL BE AS FOLLOWS:

SHEATHING NAILS	NAIL SIZE ON DRAWINGS OR DETAILS	DIAMETER AND LENGTH
	8d	0.91" x 2 1/2"
FRAMING NAILS	8d	0.91" x 2 1/2"
	16d	0.148" x 3"
	16d	0.161" x 3 1/2"



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12/2022

BICKEL RESIDENCE

2734 70th AVE SE
MERCER ISLAND, WA 98040

REVISIONS		
NO.	DATE	DESCRIPTION

TITLE

GENERAL
STRUCTURAL
NOTES

DESIGNED	ANB
DRAWN	KPH
CHECKED	MTS
DATE	12/12/2022
JOB NUMBER	

SHEET NO.

S1.0

REVIEW



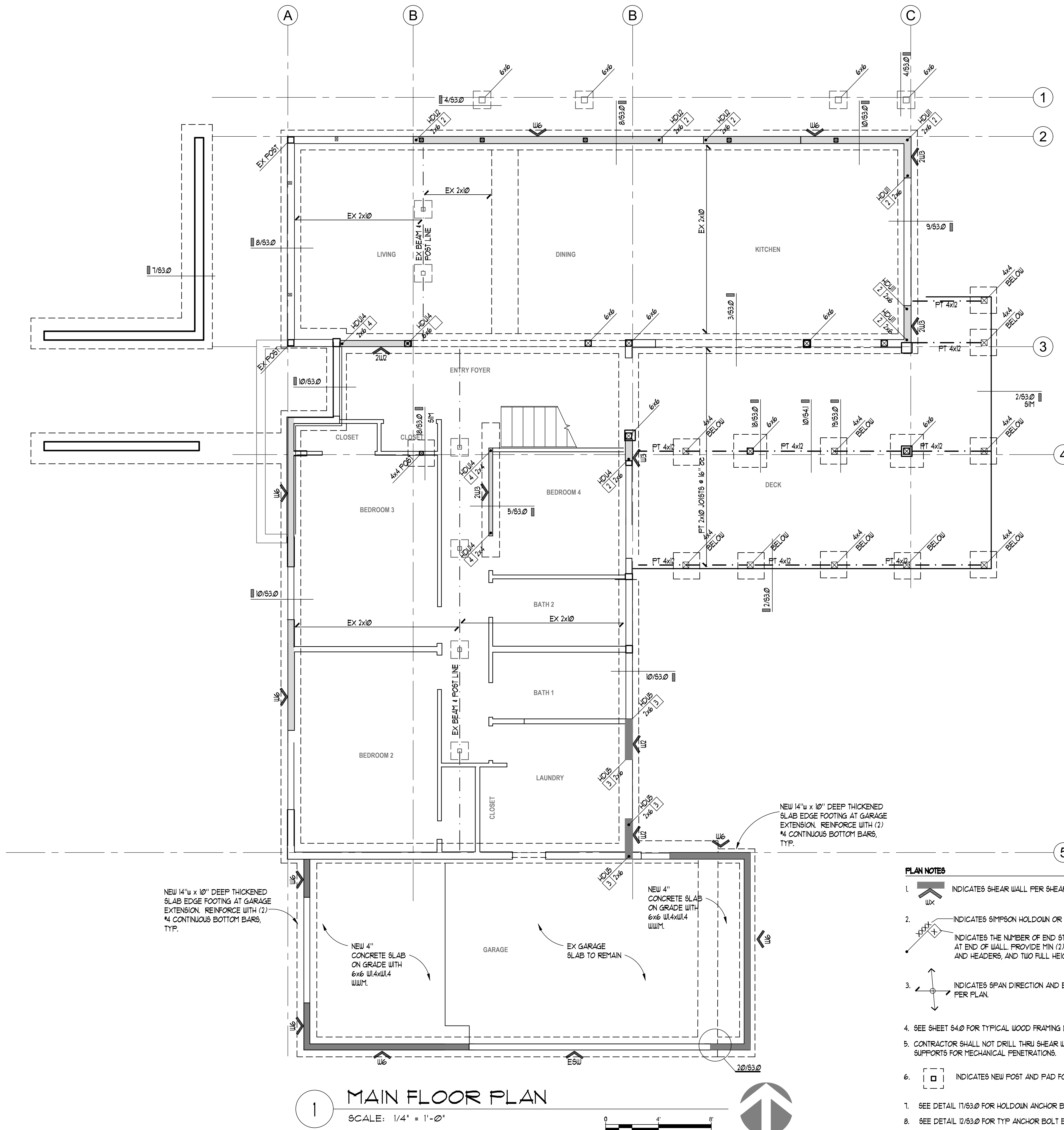
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12/2012

BICKEL RESIDENCE
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NEW 14" x 10" DEEP THICKENED
SLAB EDGE FOOTING AT GARAGE
EXTENSION. REINFORCE WITH (2)
#4 CONTINUOUS BOTTOM BARS,
TYP.

NEW 4" CONCRETE SLAB
ON GRADE WITH
6x6 W4x11.4
W4M1.

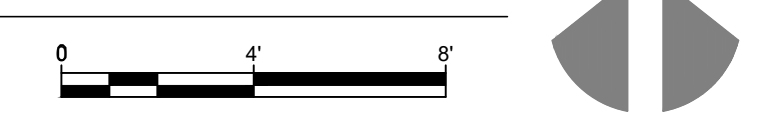
EX GARAGE
SLAB TO REMAIN

NEW 14" x 10" DEEP THICKENED
SLAB EDGE FOOTING AT GARAGE
EXTENSION. REINFORCE WITH (2)
#4 CONTINUOUS BOTTOM BARS,
TYP.

PLAN NOTES

- INDICATES SHEAR WALL PER SHEAR WALL SCHEDULE 10/64.0
- INDICATES SIMPSON HOLDOWN OR OTHER REQUIREMENT PER PLAN
- INDICATES THE NUMBER OF END STUDS OR BEARING STUDS REQUIRED AT END OF WALL. PROVIDE MIN (2) BEARING STUDS BELOW ALL BEAMS AND HEADERS, AND TWO FULL HEIGHT STUDS AT END OF ALL SHEAR WALLS
- INDICATES SPAN DIRECTION AND EXTENT OF FLOOR JOISTS PER PLAN.
- SEE SHEET S4.0 FOR TYPICAL WOOD FRAMING DETAILS
- CONTRACTOR SHALL NOT DRILL THRU SHEAR WALL END STUDS OR BEAM SUPPORTS FOR MECHANICAL PENETRATIONS.
- INDICATES NEW POST AND PAD FOOTING. SEE 18 AND 19/63.0
- SEE DETAIL 17/63.0 FOR HOLDOWN ANCHOR BOLTS
- SEE DETAIL 12/63.0 FOR TYP ANCHOR BOLT EMBEDMENT
- SEE SHEET S3.0 FOR TYPICAL CONCRETE DETAILS

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



NO.	DATE	DESCRIPTION

TITLE	
MAIN FLOOR FRAMING PLAN	
DESIGNED	ANB
DRAWN	KFH
CHECKED	MIS
DATE	12/12/2012
JOB NUMBER	

SHEET NO.

S2.1

REVIEW



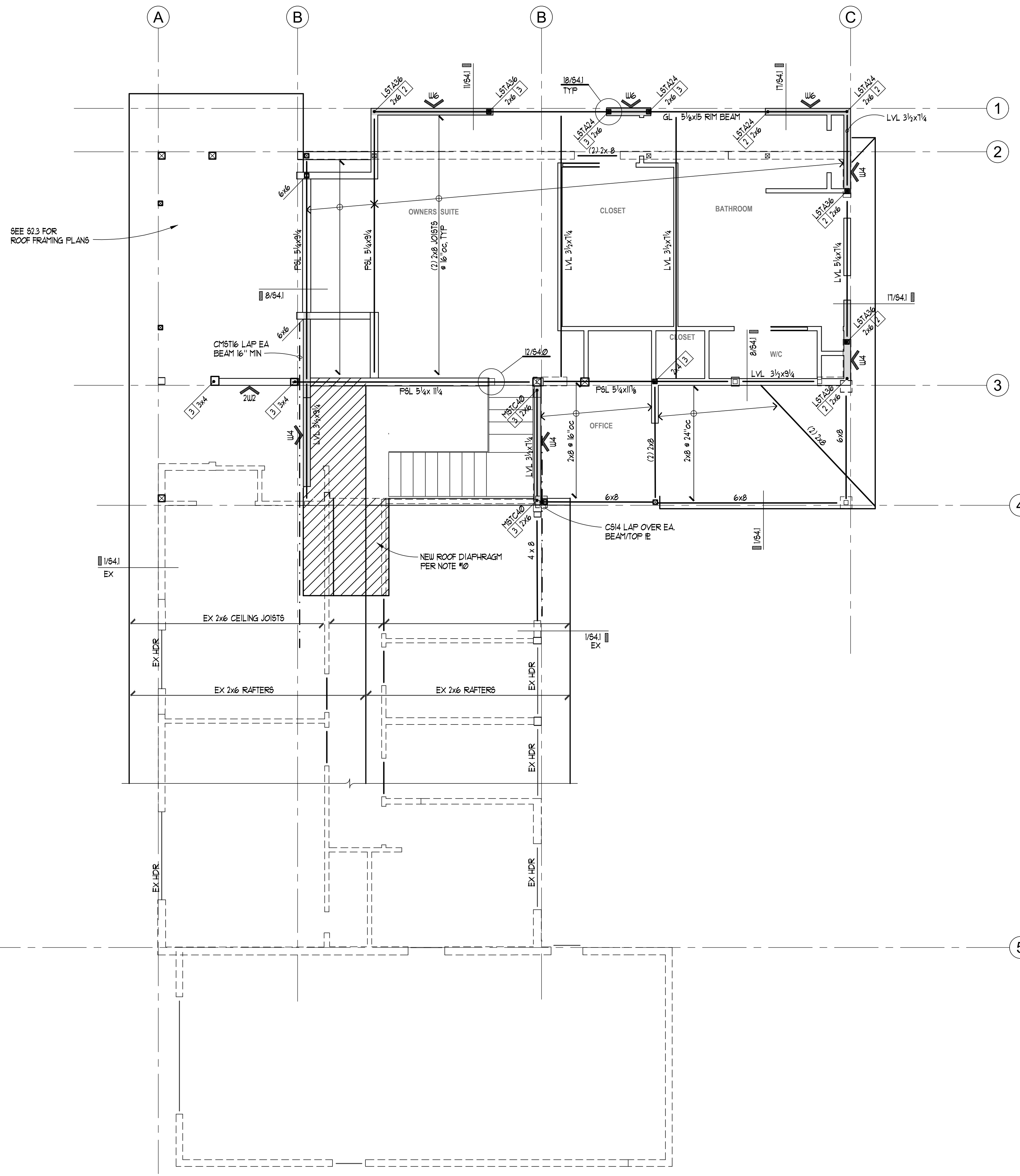
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12/02/22

BICKEL RESIDENCE
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SEE 623 FOR
ROOF FRAMING PLANS

PLAN NOTES

1. NEW BLOCKED FLOOR DIAPHRAGM IS TO BE 3/4" CDX FLYWOOD WITH MIN. PANEL INDEX OF 32/16, NAILED WITH 2x4s AT:
 - 4" OC AT ALL DIAPHRAGM BOUNDARIES AND SHEAR WALLS
 - 6" OC AT ALL SUPPORTED PANEL EDGES (BLOCKED)
 - 12" OC AT FIELD
2. INDICATES SHEAR WALL PER SHEAR WALL SCHEDULE 10/64.0
3. INDICATES SIMPSON HOLDOWN OR OTHER REQUIREMENT PER PLAN
4. INDICATES SPAN DIRECTION AND EXTENT OF FLOOR JOISTS. PER PLAN PROVIDE 2x8 JOISTS @ 16" OC U.O.N.
5. INDICATES BEAM OR HEADER PER PLAN. PROVIDE MIN. PROVIDE MIN (2) 2x8 TYP AT FLOORS. PROVIDE MIN (2) END STUDS TO SUPPORT NEW BEAMS AND HEADERS
6. SEE SHEET 64.0 FOR TYPICAL WOOD FRAMING DETAILS
7. INDICATES WALL BELOW
8. SEE 20/64.0 FOR TYPICAL HANGER SCHEDULE
9. CONTRACTOR SHALL NOT DRILL THRU SHEAR WALL END STUDS OR BEAM SUPPORTS FOR MECHANICAL PENETRATIONS.
10. INDICATES AREA OF ROOF DIAPHRAGM TO BE RENAILED w/ 2x4s AT:
 - 2" AT SHEAR WALLS
 - 3" AT PANEL EDGES (3x BLOCKING REQUIRED)
 - 12" AT FIELD

REVISIONS

NO.	DATE	DESCRIPTION

TITLE

**UPPER FLOOR
FRAMING PLAN**

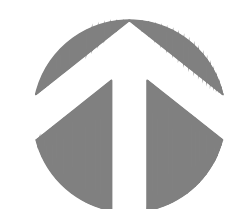
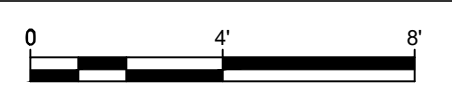
DESIGNED	ANB
DRAWN	KPH
CHECKED	MTS
DATE	12/17/2022
JOB NUMBER	

SHEET NO.

S2.2

REVIEW

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





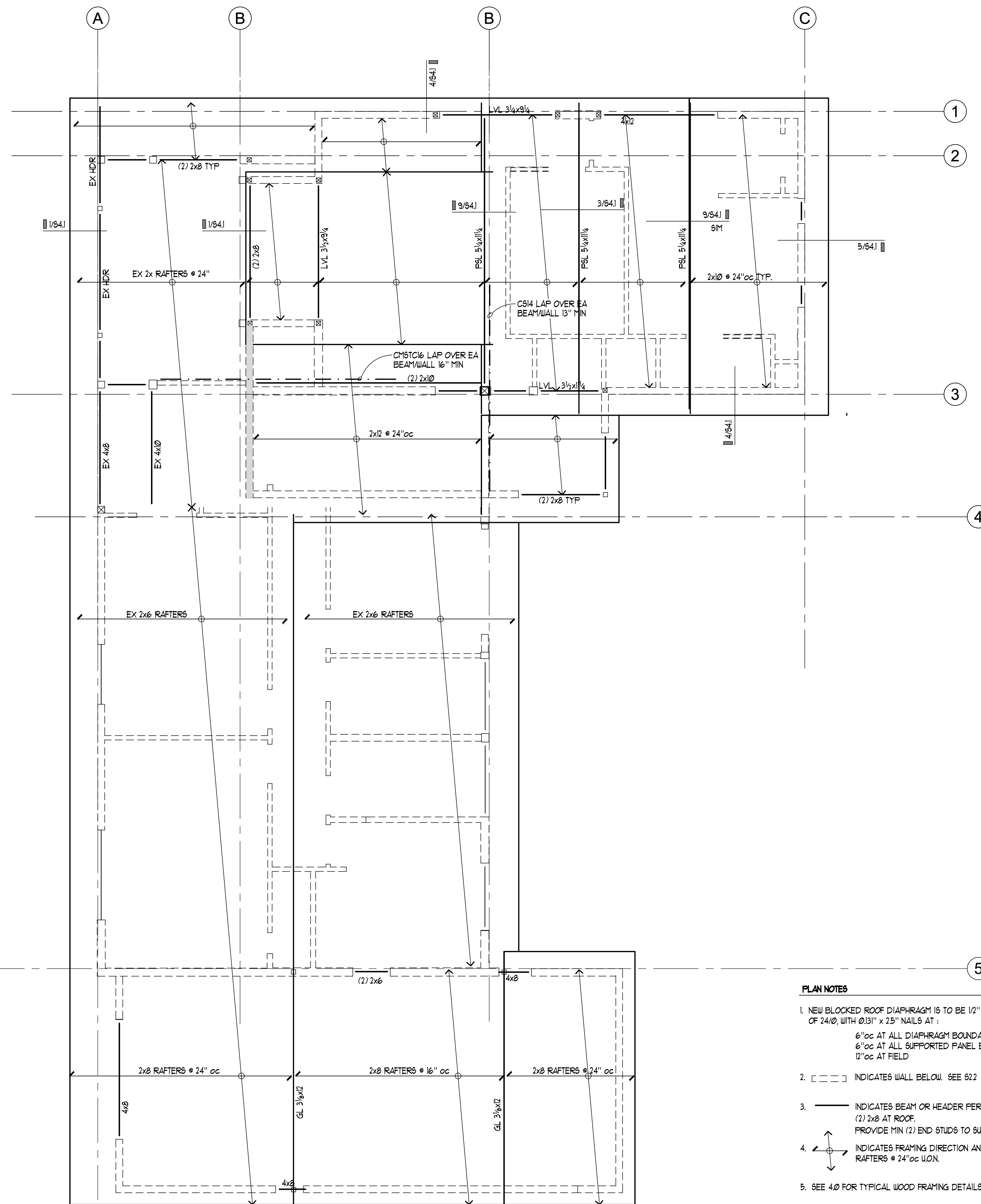
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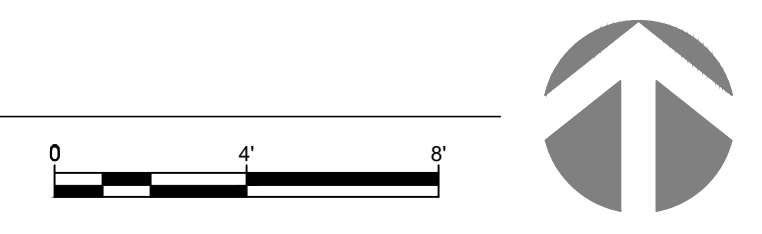
BICKEL RESIDENCE
2734 70th AVE SE
MERCER ISLAND, WA 98040



PLAN NOTES

- NEW BLOCKED ROOF DIAPHRAGM IS TO BE 1/2" CDX PLYWOOD w/ MIN. PANEL INDEX OF 24/0, WITH Ø19" x 25" NAILS AT:
 - 6" oc AT ALL DIAPHRAGM BOUNDARIES AND SHEAR WALLS
 - 6" oc AT ALL SUPPORTED PANEL EDGES (BLOCKED)
 - 12" oc AT FIELD
- [---] INDICATES WALL BELOW. SEE S22 & 10/84/0 FOR SHEAR WALL LOCATIONS
- INDICATES BEAM OR HEADER PER PLAN. PROVIDE MIN. (2) 2x8 AT ROOF. PROVIDE MIN (2) END STUDS TO SUPPORT NEW BEAMS AND HEADERS
- ↔ INDICATES FRAMING DIRECTION AND EXTENTS. PROVIDE 2x10 RAFTERS @ 24" oc U.O.N.
- SEE 4.0 FOR TYPICAL WOOD FRAMING DETAILS

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



REVISIONS		
NO.	DATE	DESCRIPTION

TITLE
ROOF FRAMING PLAN

DESIGNED	ANS
DRAWN	KPH
CHECKED	MIS
DATE	12/1/2022
JOB NUMBER	

SHEET NO.

S2.3

REVIEW

REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE

(For Grade 60, Uncoated Bars, Normal Weight Concrete)

I MINIMUM STRAIGHT DEVELOPMENT LENGTH (l_d)

BAR SIZE	$f'c = 3000$ PSI	
	TOP BARS	OTHER BARS
#3	22"	17"
#4	29"	22"
#5	37"	28"
#6	44"	33"

* "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.
IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY 43%.

II MINIMUM LAP SPLICE LENGTHS (l_s)

BAR SIZE	$f'c = 3000$ PSI	
	TOP BARS	OTHER BARS
#3	29"	21"
#4	38"	27"
#5	48"	34"
#6	58"	41"

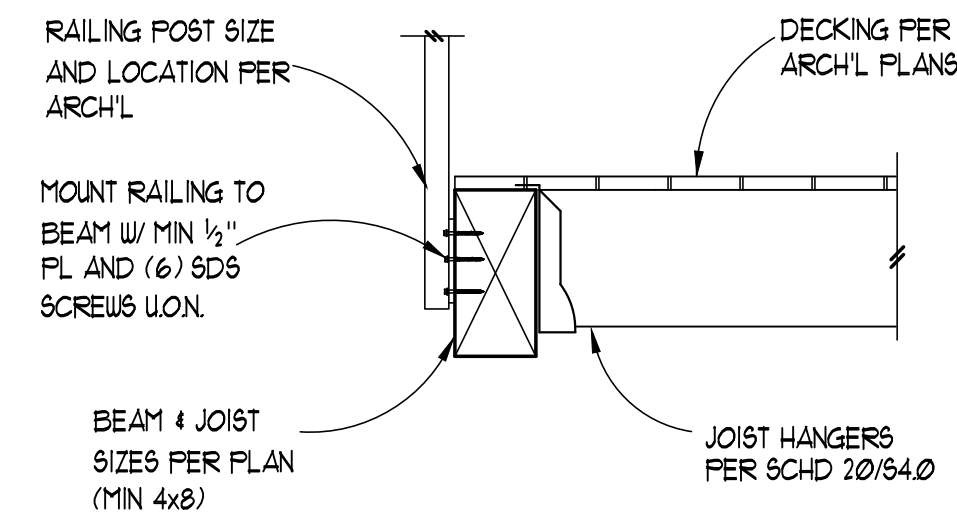
SPLICES IN HORIZONTAL REINFORCING SHALL NOT OCCUR IN BOTH CURTAINS OF REINFORCING AT THE SAME LOCATION.

III MINIMUM EMBEDMENT LENGTHS (l_{dn}) FOR STANDARD END HOOKS

A. for general uses:

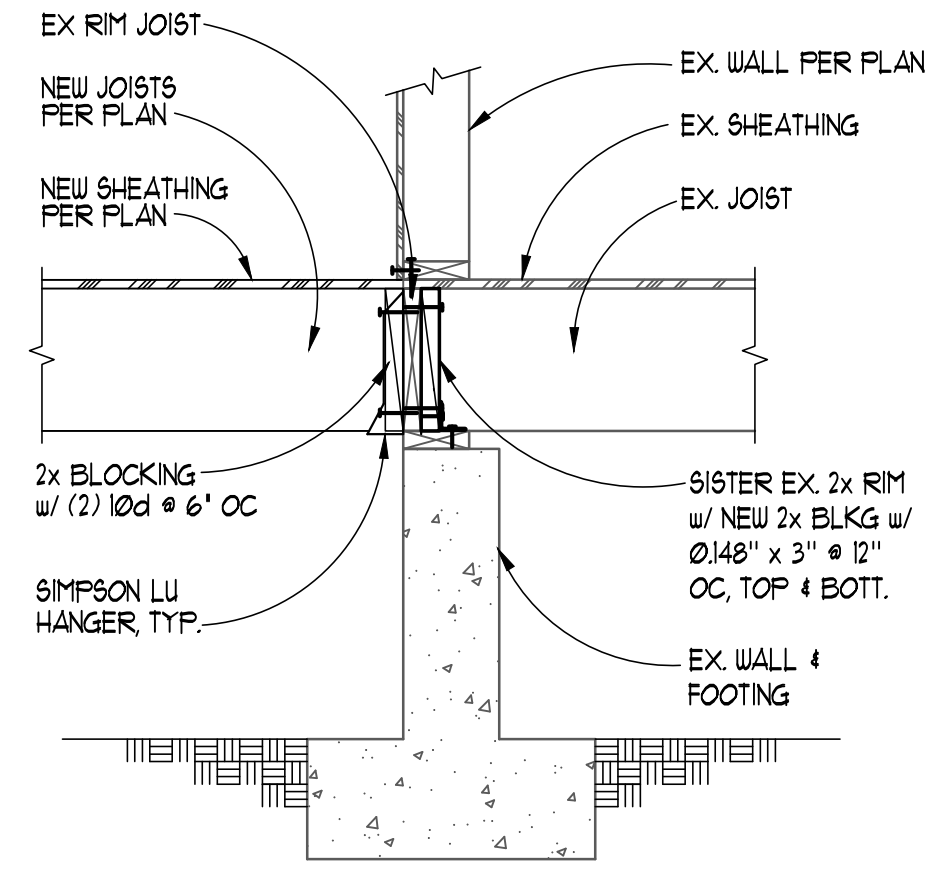
BAR SIZE	$f'c = 3000$ PSI
#3	7"
#4	9"
#5	11"
#6	13"

1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN $2\frac{1}{2}$ ".
2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2".
3. 90° HOOKS ONLY



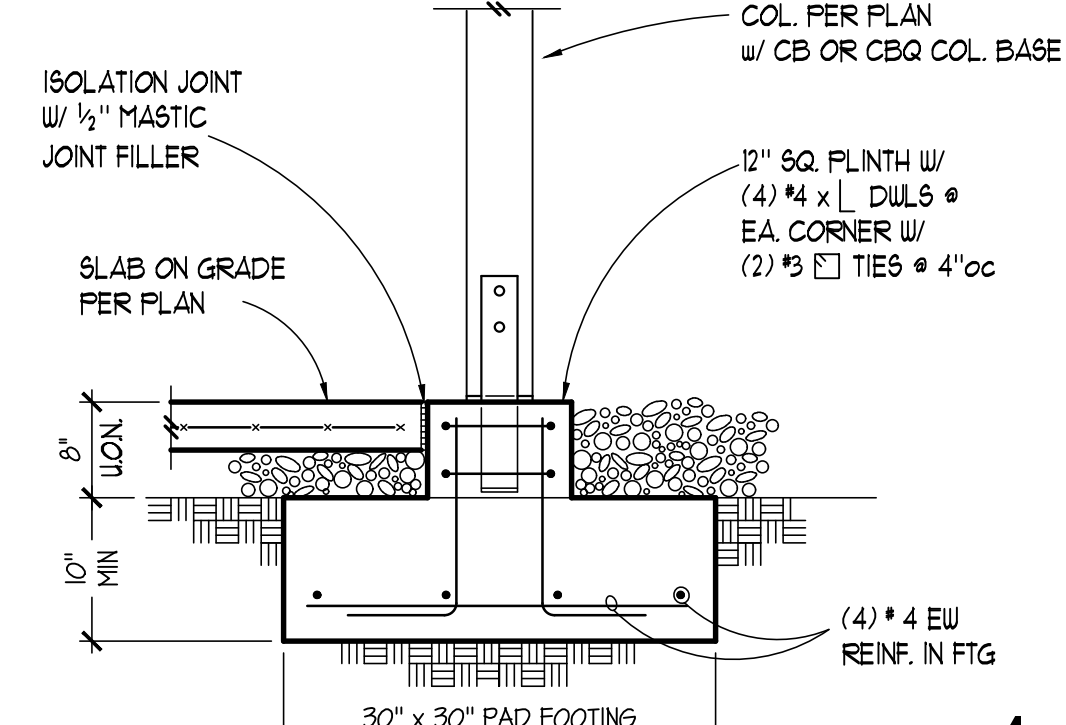
DECK EDGE BEAM SECTION

2



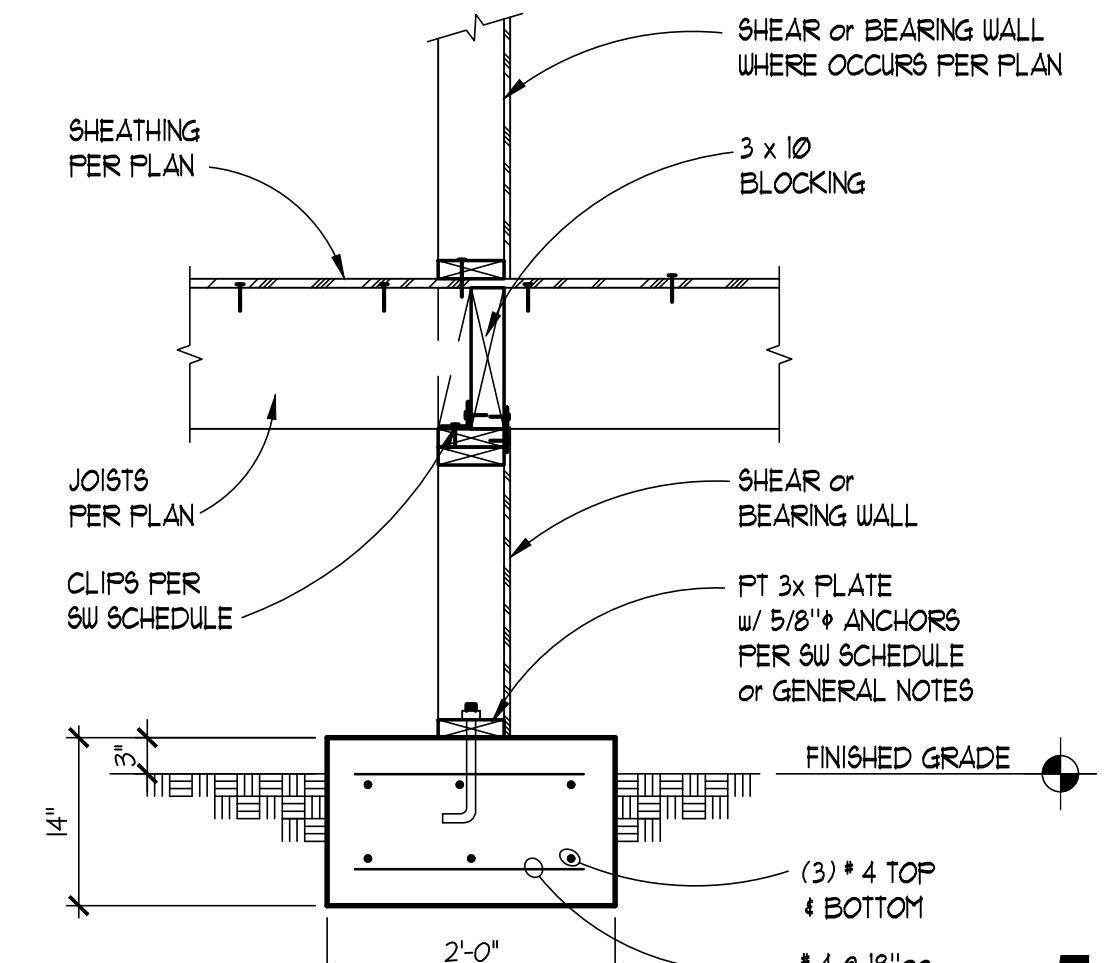
NEW FRAMING AT EXISTING FOUNDATION

3



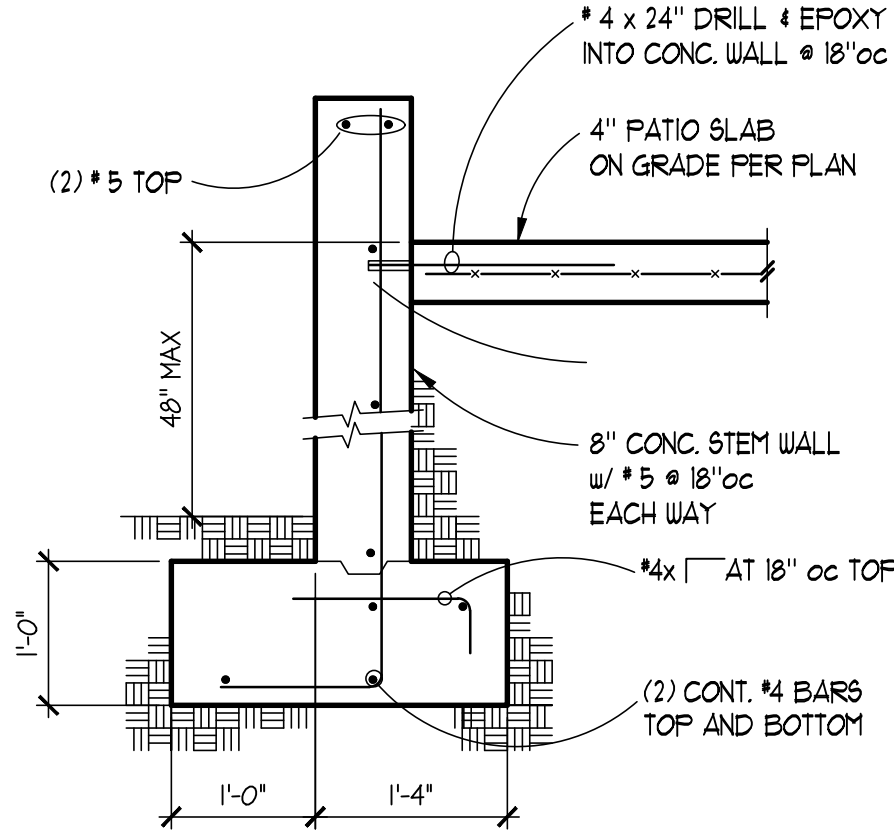
NEW PAD FOOTING AT EXTERIOR

4



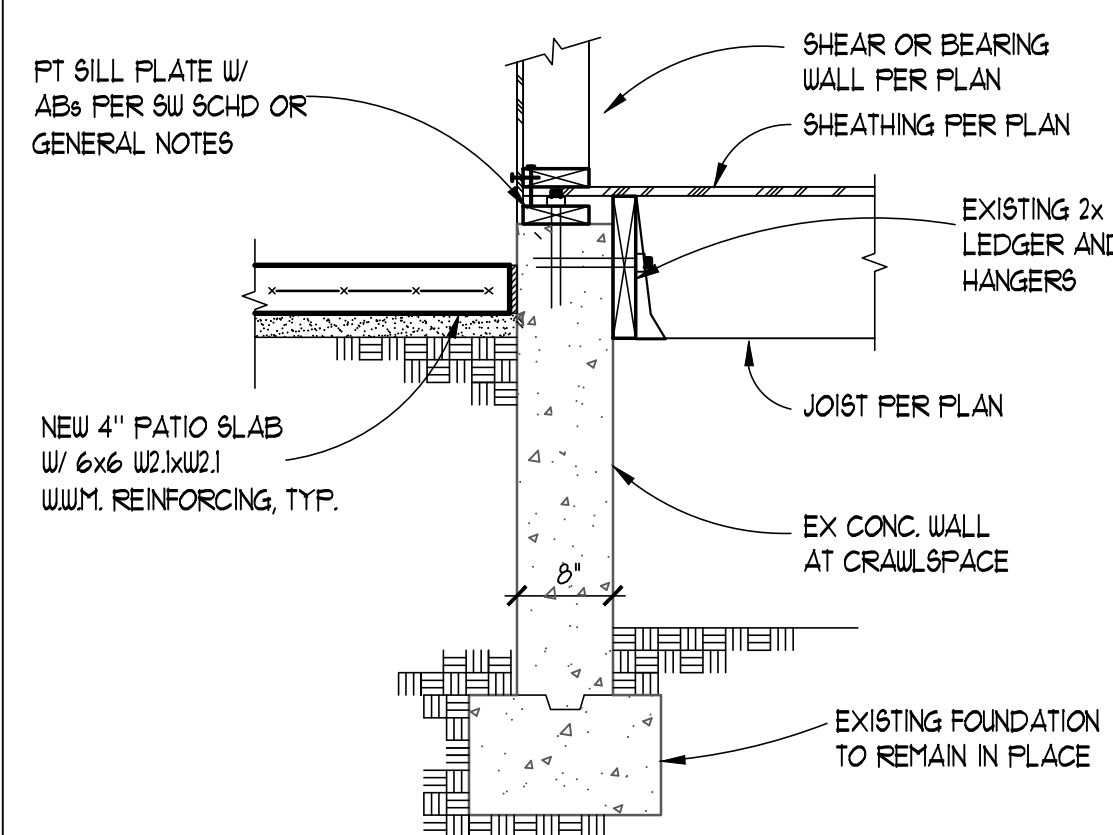
NEW INTERIOR FOOTING AT SHEAR WALL

5



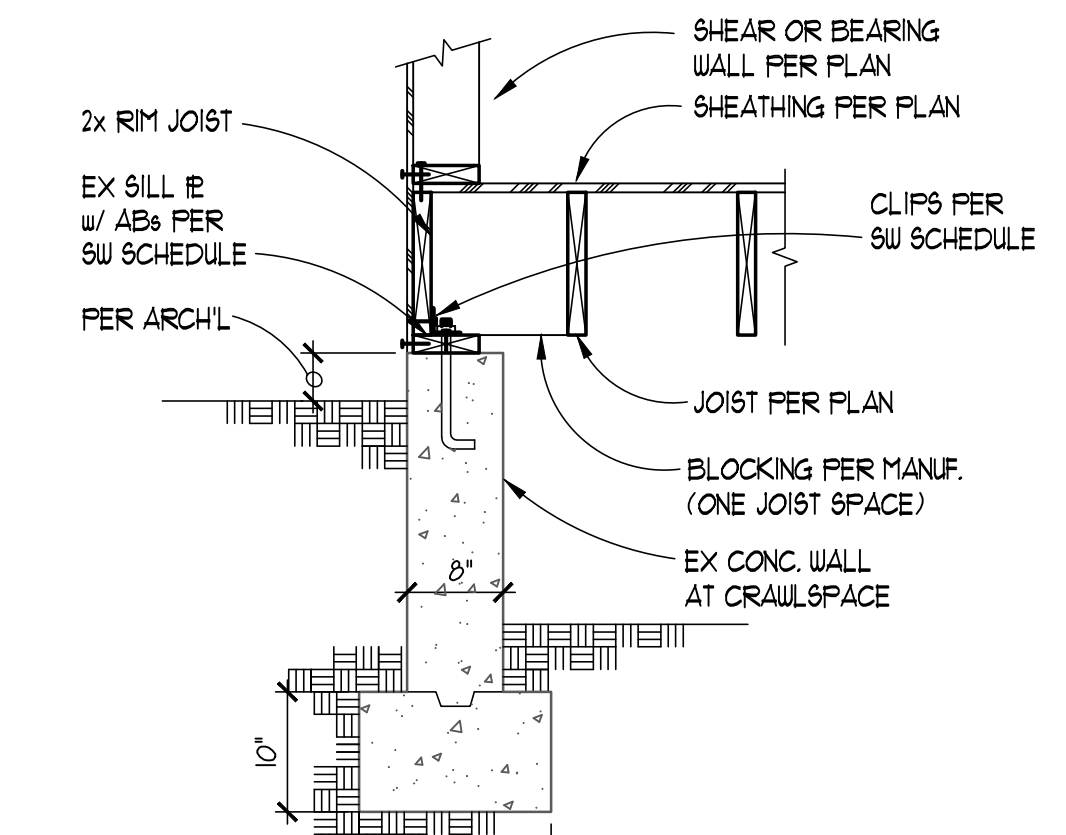
SECTION THROUGH PATIO EDGE WALL

7



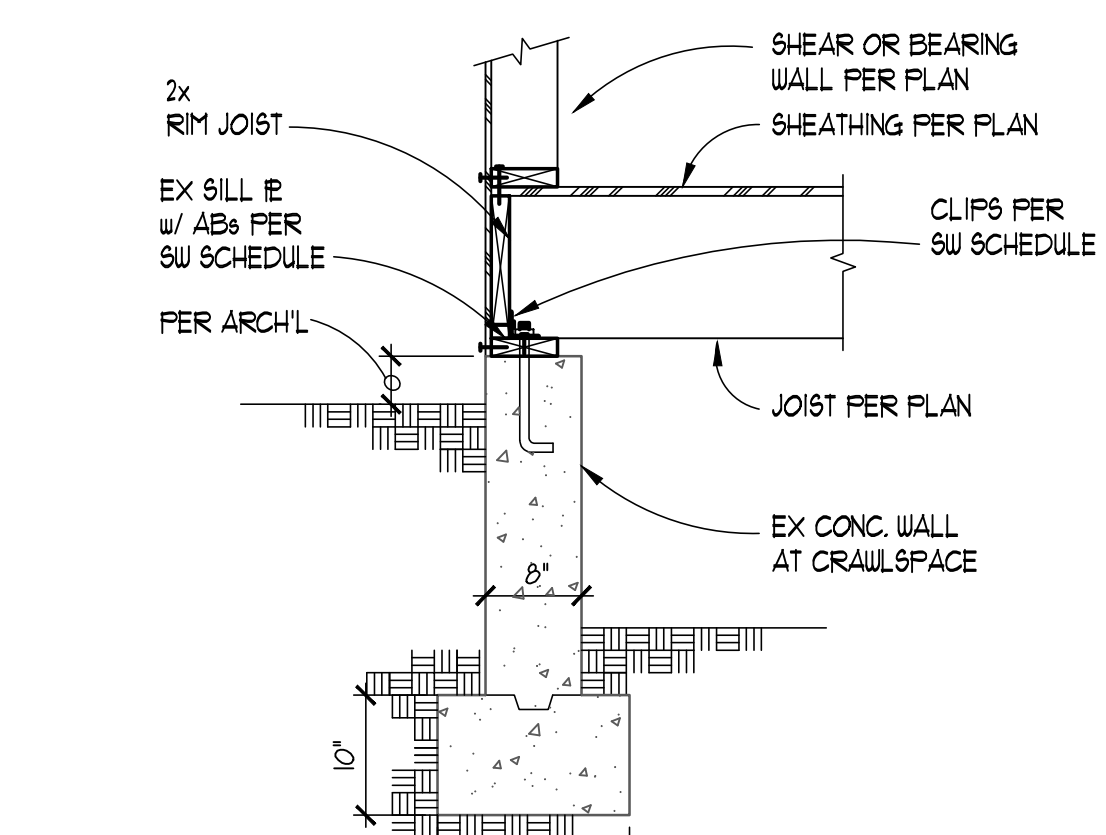
SECTION AT NEW PATIO SLAB

8



CRAWLSPACE FOOTING AT PARALLEL JOISTS

9



TYPICAL CRAWLSPACE FOOTING SECTION

10

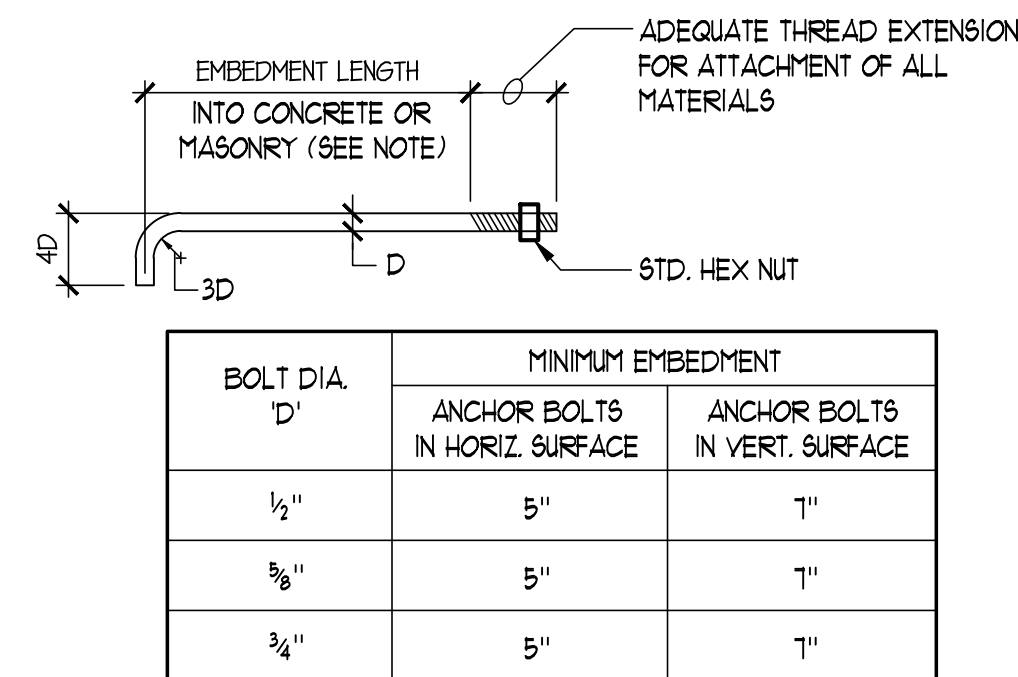
ANCHOR BOT DIA. 'D' (CAP.)	MINIMUM EMBEDMENT DEPTH (l_e)		
	INTO 6" STEM	INTO 8" STEM	INTO MIN. 16" WIDE FTG.
5/8" (5.6k)	14"	12"	9"
3/4" (7.7k)	20"	14"	9"
7/8" (10.1k)	N/A	24"	11"
1" (14.1k)	N/A	N/A	15"
1 1/8" (20.7k)	N/A	N/A	20"

HOLDOWN EMBEDMENTS LISTED ARE BASED ON THE ALLOWABLE CAPACITIES DEVELOPED IN CONCRETE WALLS WITH TYPICAL REINFORCING SPACED NOT MORE THAN 18" ON CENTER.

ANCHOR CAPACITIES SHOWN ARE FOR HEAVY HEX HEAD TYPE BOLTS CONFORMING TO ASTM F1554, GRADE A36 OR A307. ALTERNATE ANCHORTYPES MAY BE ALLOWED, BUT MAY REQUIRE EMBEDMENTS GREATER THAN THOSE SHOWN. PRE-ENGINEERED ANCHORS SUCH AS '98TB' AND 'FAB' ANCHORS MANUFACTURED BY SIMPSON STRONG TIE, ARE ALLOWED PROVIDED THEY HAVE CURRENT ICC REPORTS FOR CAPACITIES GREATER THAN OR EQUAL TO THOSE LISTED. PRE-ENGINEERED ANCHORS SHOULD BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.

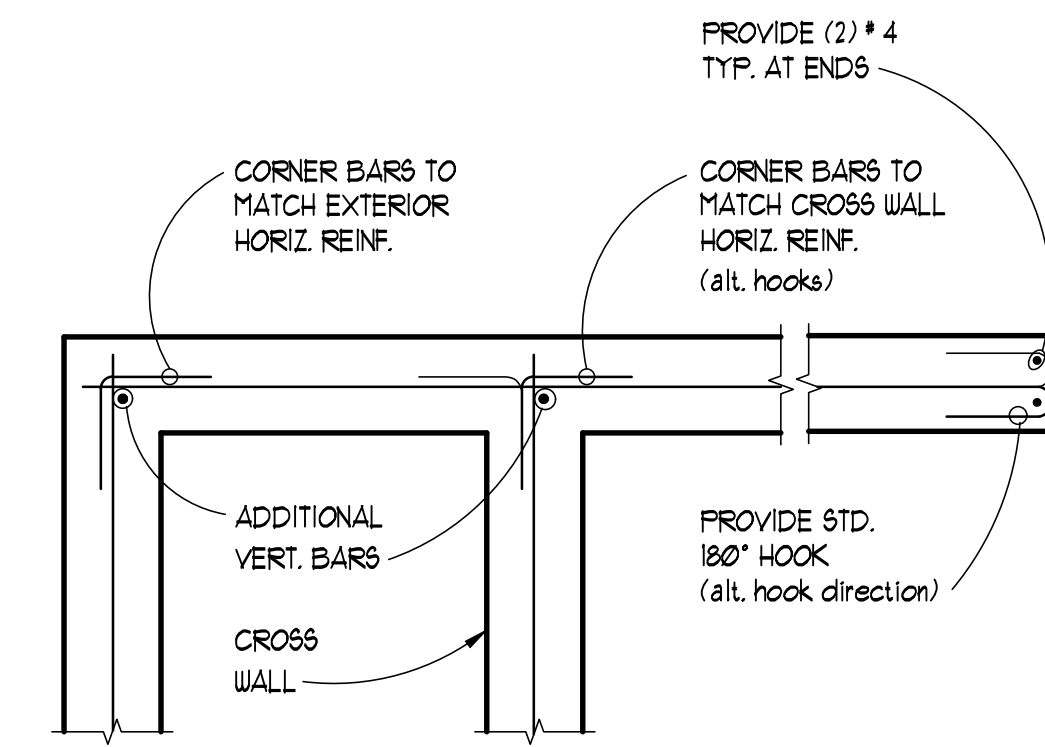
HOLDOWN ANCHOR BOLT EMBEDMENT SCHEDULE

11



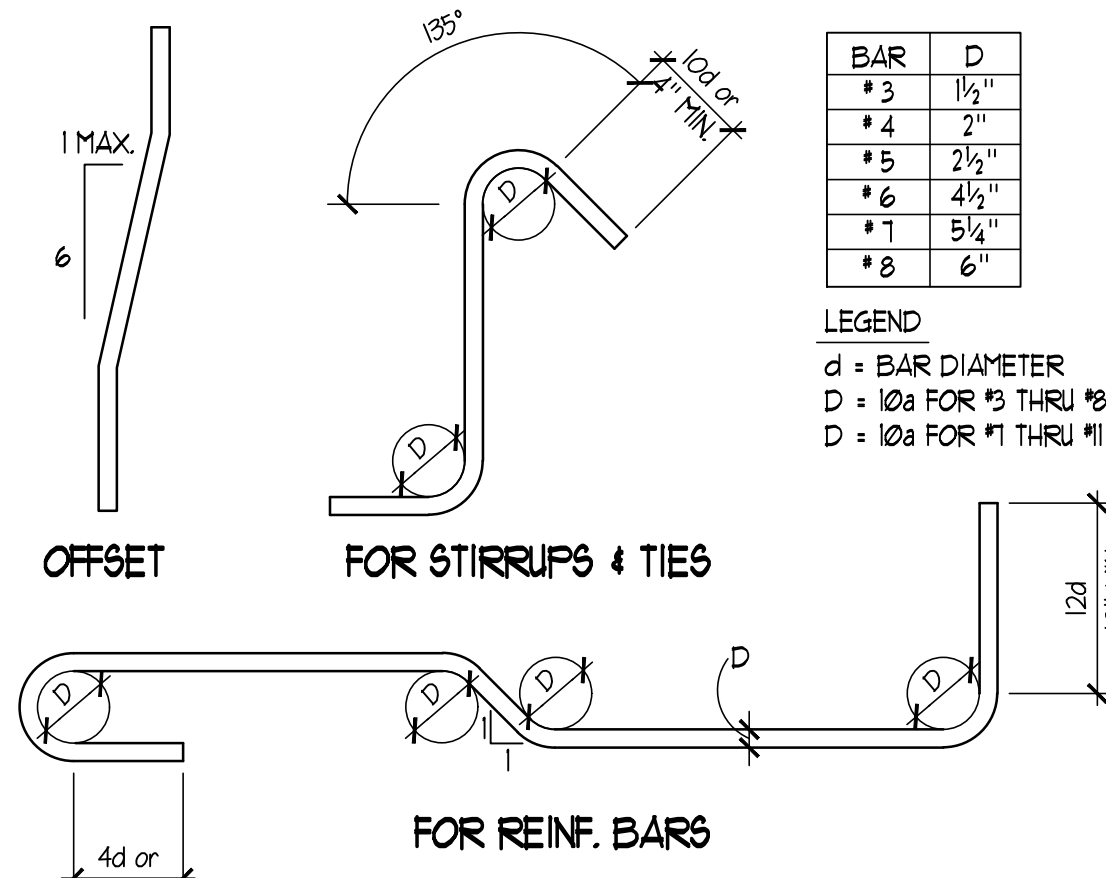
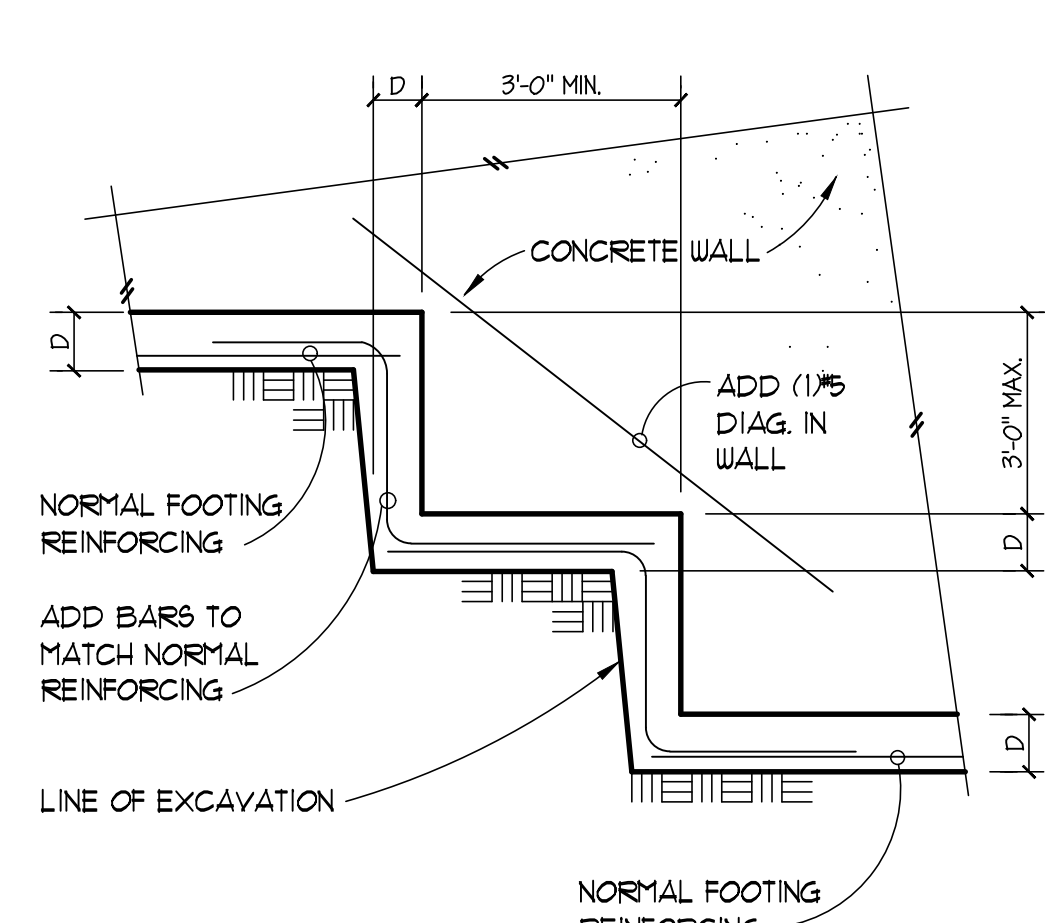
TYP. ANCHOR BOLT

12



TYPICAL CORNER AND END BAR ARRANGEMENT AT CONCRETE WALLS

13



REBAR BENDING SCHEDULE

15

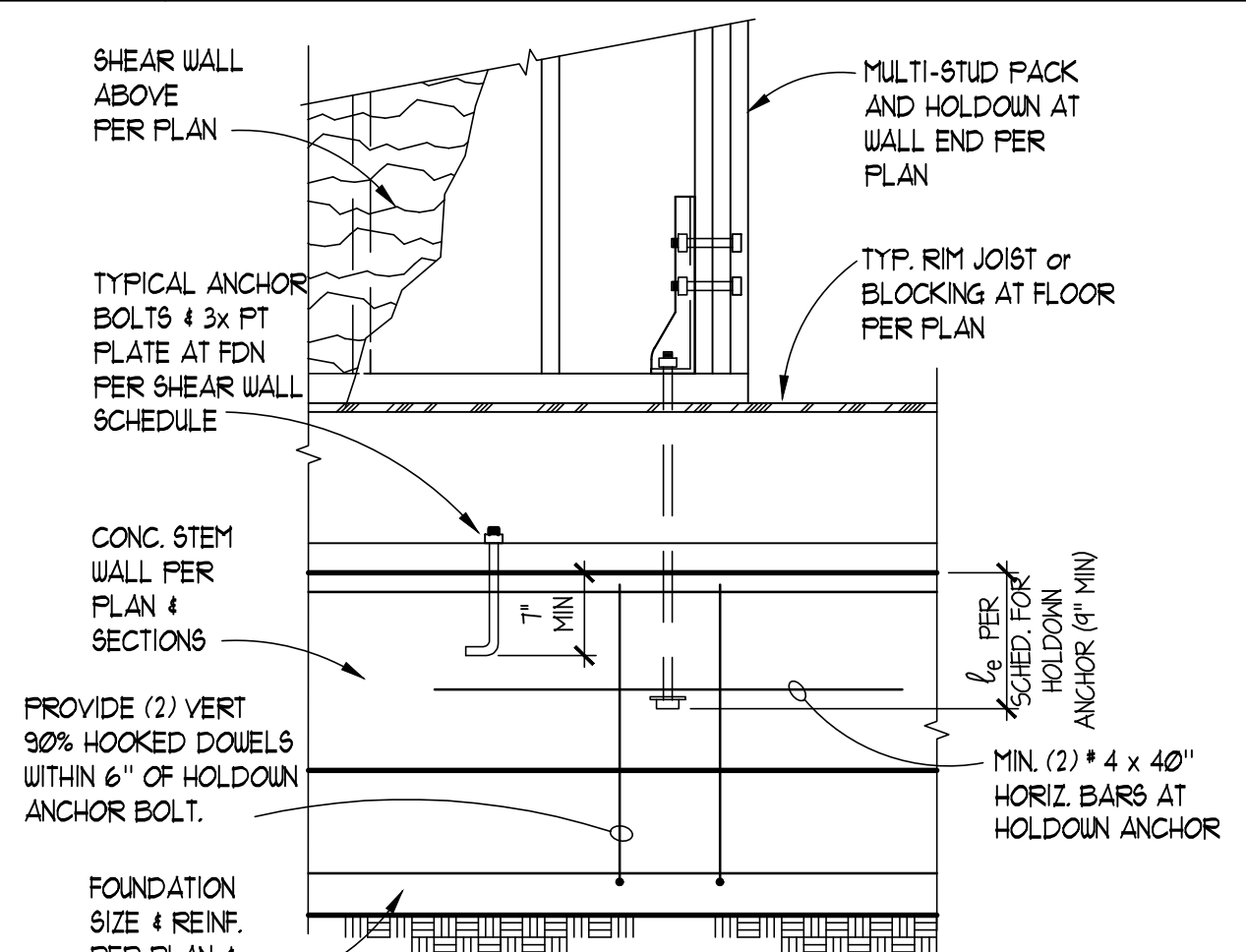
HOLDOWN ANCHOR SCHEDULE

CALLOUT	ANCHOR SIZE	CAPACITY (Klbs)
HDU2	5/8" A.B.	262
HDU4	3/4" A.B.	413
HDU5	5/8" A.B.	543
HDU8	3/4" A.B.	835
HDU11	1" A.B.	1121

HOLDOWNS SPECIFIED ON PLANS ARE MANUFACTURED BY SIMPSON STRONG TIE, INC. UNLESS OTHERWISE NOTED. CAPACITIES ARE BASED ON THE MOST RECENT CATALOGUE AND ICC REPORTS FOR THE MODELS LISTED.

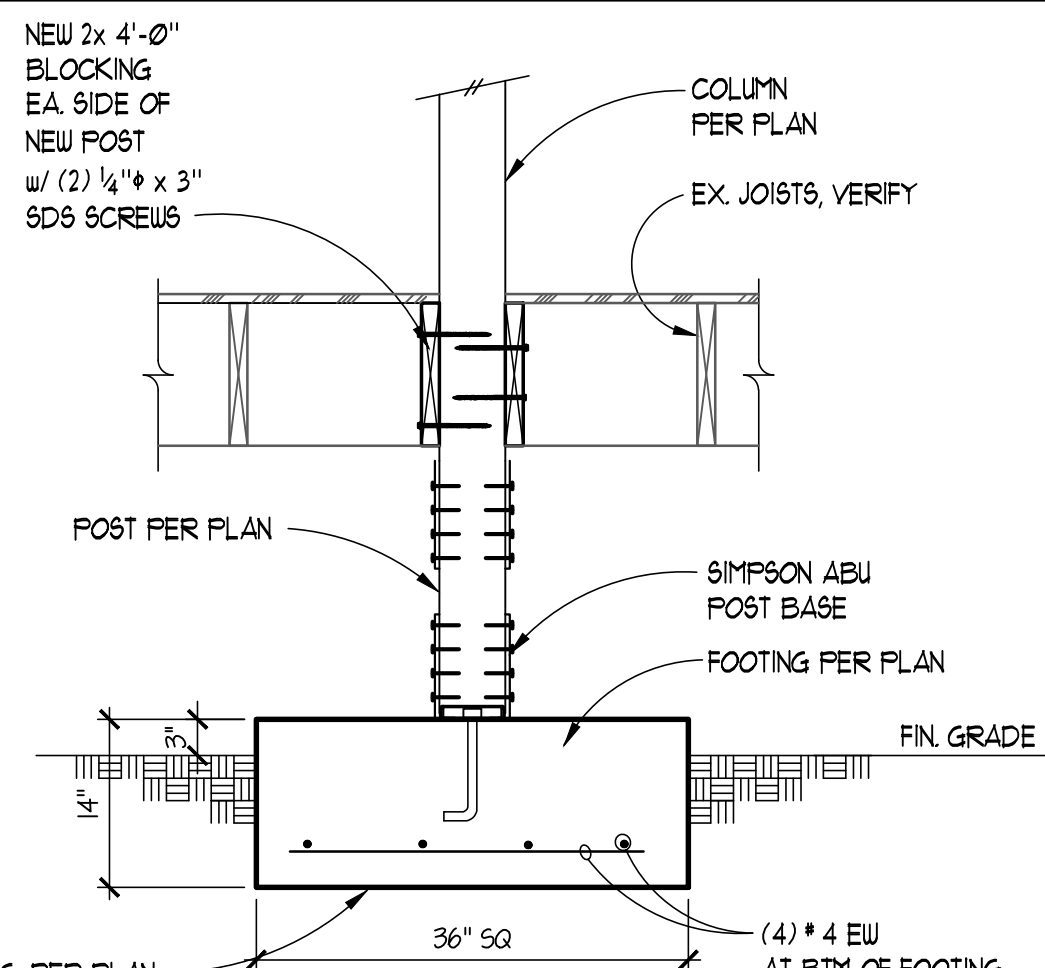
ALTERNATE HOLDOWN ANCHORS MAY BE SUBSTITUTED AT THE CONTRACTOR OR OWNER'S OPTION, PROVIDED THEY ARE APPROVED BY THE ENGINEER OF RECORD AND HAVE A CURRENT ICC REPORT STATING THEIR CAPACITY MEETS OR EXCEEDS THE DESIGN CAPACITY LISTED ABOVE.

DESIGN CAPACITIES ARE BASED ON Douglas Fir FRAMING LUMBER AS STATED IN THE GENERAL STRUCTURAL NOTES. SUBSTITUTING ALTERNATE LUMBER GRADES MAY CAUSE HOLDOWNS AND THEIR CONNECTIONS TO FAIL AT LOWER CAPACITIES THAN THOSE DESIGNED FOR.



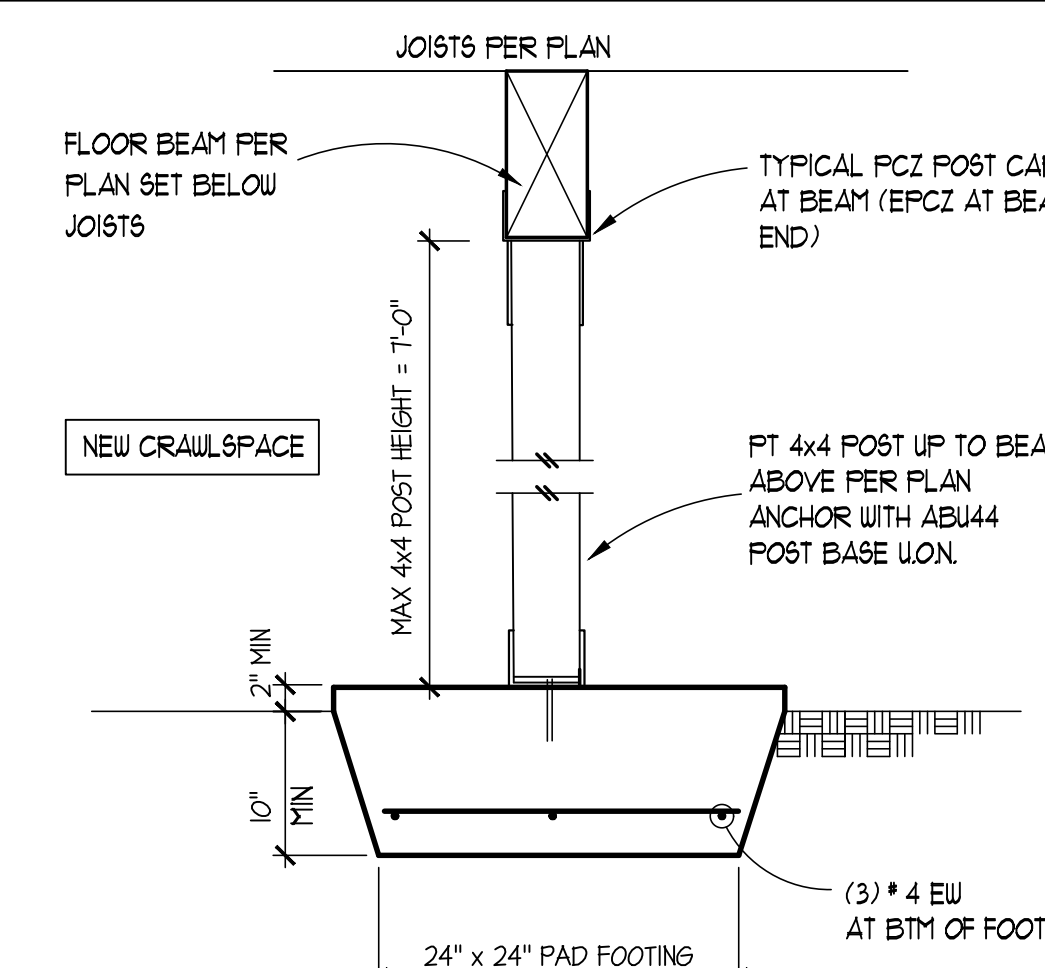
SECTION AT HOLDOWN TO FOUNDATION

17



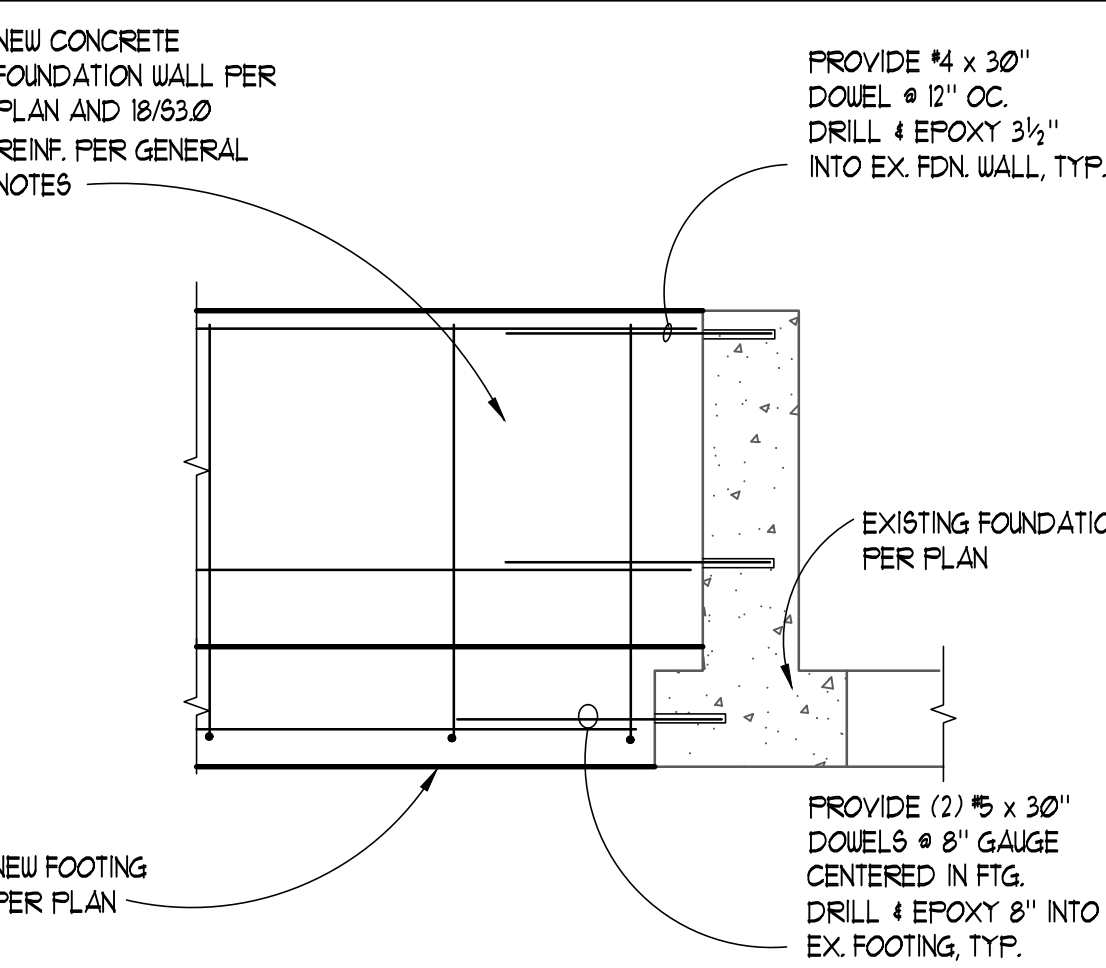
PAD FOOTING TYPE I IN CRAWL SPACE

18



PAD FOOTING TYPE I IN CRAWL SPACE

19



NEW FOUNDATION CONNECTION TO EXISTING CONCRETE

20



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MERCER ISLAND, WA 98040

REVISIONS

NO.	DATE	DESCRIPTION

TITLE

TYPICAL
CONCRETE
DETAILS

DESIGNED	AMB
DRAWN	KPH
CHECKED	MIS
DATE	12/12/2022
JOB NUMBER	

SHEET NO.

S3.0

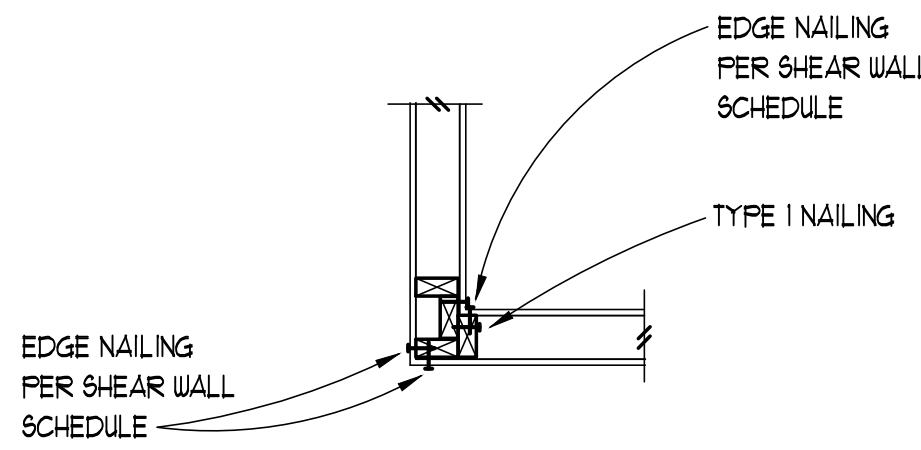
REVIEW

STUD TO STUD NAILING SCHEDULE

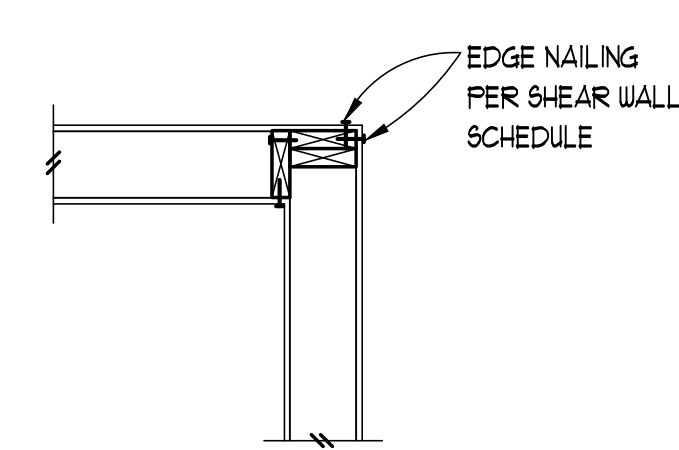
LEVEL	NAILING TYPE	
	TYPE 1	TYPE 2
SECOND	16d @ 12" o.c.	16d @ 6" o.c.
FIRST	16d @ 12" o.c.	16d @ 6" o.c.

NOTES:

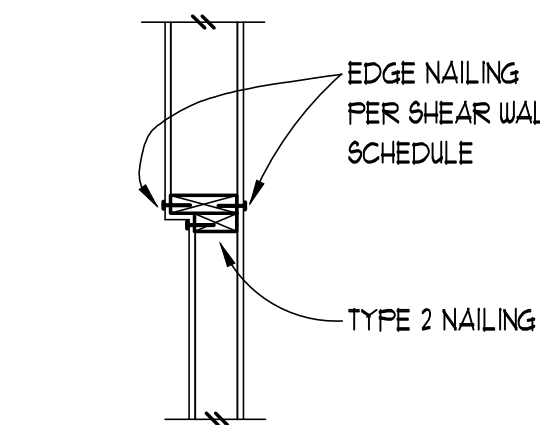
- WHERE NO STUD TO STUD NAILING IS INDICATED, NAIL STUDS TOGETHER WITH 16d @ 12" o.c.
- ADDITIONAL STUDS REQUIRED AS NAILERS, ETC. ARE NOT SHOWN.
- SEE SHEAR WALL SCHEDULE FOR SHEATHING NAILING REQUIREMENTS.
- SEE PLAN NOTES FOR STUD SIZE AND SPACING. (VERIFY WITH ARCHITECTURAL)



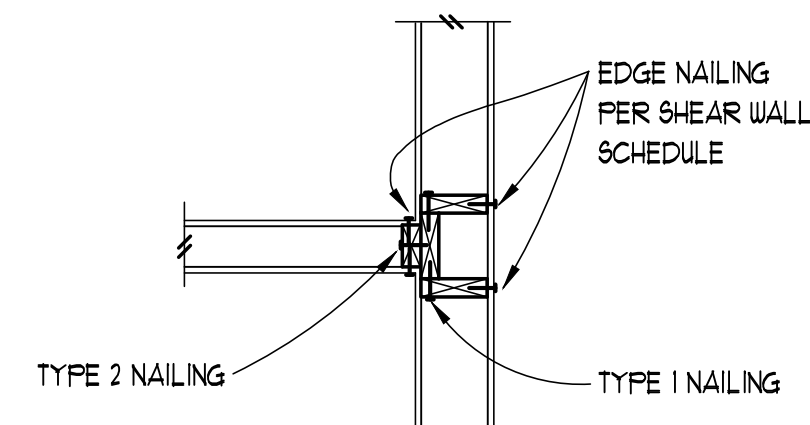
INTERIOR WALL CORNER



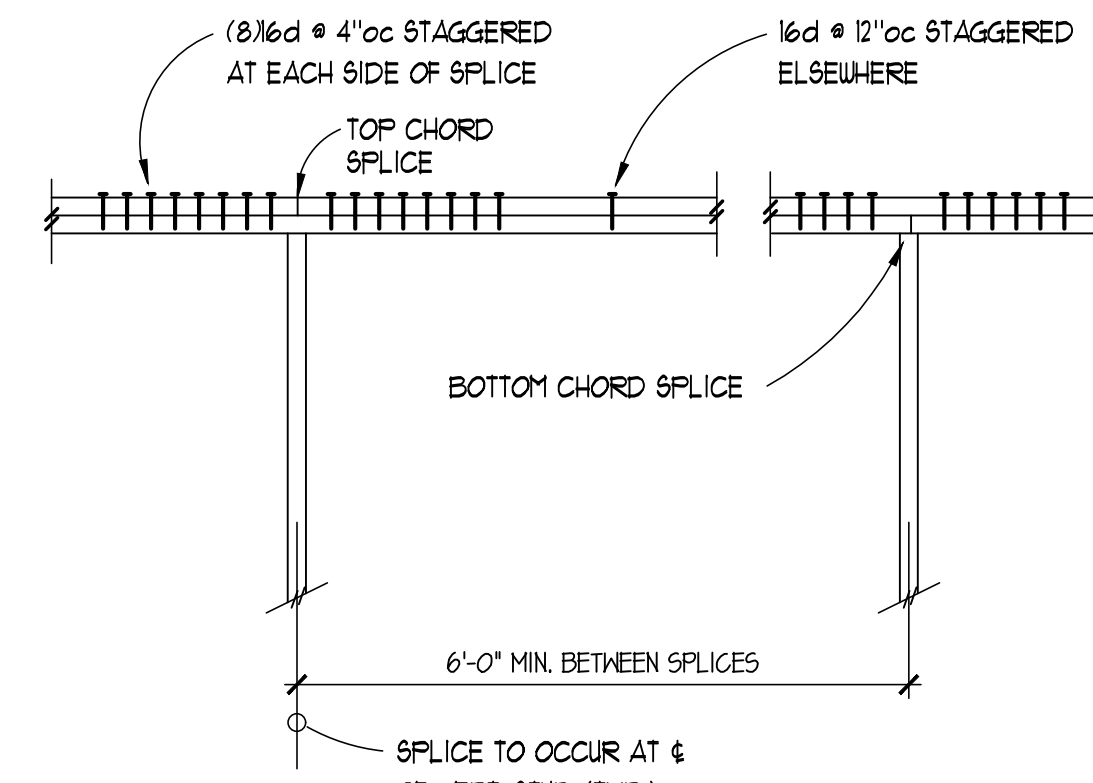
TYPICAL WALL CORNER



VARYING WALL SIZE

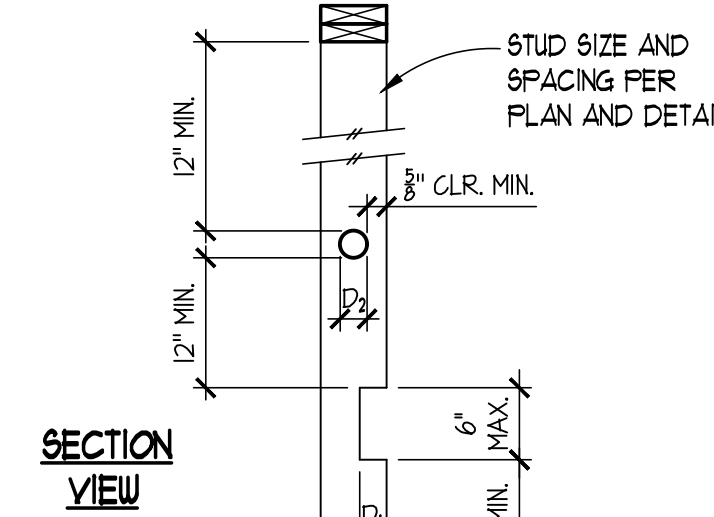


INTERIOR WALL TO EXTERIOR WALL



TYPICAL TOP PLATE SPLICE

3



SECTION VIEW

BEARING WALLS			NON-BEARING WALLS		
STUD SIZE	MAX. D ₁ (NOTCH)	MAX. D ₂ (NOTCH)	STUD SIZE	MAX. D ₁ (NOTCH)	MAX. D ₂ (NOTCH)
2x4	3/4"	1 1/4"	2x4	1 1/4"	2"
3x4	1 1/4"	2 1/4"	2x6	2 1/4"	3 1/4"
2x6	1 1/4"	2 1/4"	2x8	3"	4 1/4"

NOTE: HOLE AND NOTCH SIZE FOR NON-BEARING WALLS MAY BE USED FOR BEARING WALLS IF REQUIRED NUMBER OF STUDS ARE DOUBLED. THIS MAY ONLY BE USED AT TWO CONSECUTIVE STUDS IN ANY ONE WALL.

8

ALLOWABLE HOLES & NOTCHES IN STUDS

SHEAR WALL SCHEDULE

LABEL	APA RATED SHEATHING (1) (2) (4) (3) (14)	NAIL SIZE & SPACING @ EDGES (4) (5) (11)	STUD & BLOCKING SIZE AT ADJOINING EDGES (3) (6) (15)	RIM JOIST OR BLOCK CONNECTION TO TOP PLATE (7) (8)	2 X BOTTOM PLATE ATTACHMENT	SILL PLATE ATTACHMENT (9) (12)	PLF CAPACITY (ASD)
					NAILING TO WOOD BELOW (10)	ANCHOR BOLT TO CONCRETE BELOW (11) (16)	
W6	15/32" ONE SIDE	Ø13x2-1/2 @ 6" o.c.	2X	CLIP @ 24" o.c.	Ø148 x 3 1/4" @ 6" o.c.	5/8" @ 48" o.c.	260
W4	15/32" ONE SIDE	Ø13x2-1/2 @ 4" o.c.	3X	CLIP @ 16" o.c.	Ø148 x 3 1/4" @ 4" o.c.	5/8" @ 48" o.c.	380
W3	15/32" ONE SIDE	Ø13x2-1/2 @ 3" o.c.	3X	CLIP @ 12" o.c.	Ø148 x 3 1/4" @ 4" o.c.	5/8" @ 40" o.c.	485
W2	15/32" ONE SIDE	Ø13x2-1/2 @ 2" o.c.	3X	CLIP @ 10" o.c.	Ø148 x 3 1/4" @ 3" o.c.	5/8" @ 32" o.c.	635
2W4 (2)	15/32" TWO SIDES	Ø13x2-1/2 @ 4" o.c.	3X	CLIP @ 8" o.c.	(2) ROUS Ø148 x 3 1/4" @ 2" o.c.	5/8" @ 24" o.c.	760
2W3 (2)	15/32" TWO SIDES	Ø13x2-1/2 @ 3" o.c.	3X	CLIP @ 6" o.c.	(2) ROUS Ø148 x 3 1/4" @ 3" o.c.	5/8" @ 20" o.c.	978
2W2 (2)	15/32" TWO SIDES	Ø13x2-1/2 @ 2" o.c.	3X	A35 CLIP @ 6" o.c.	(2) ROUS Ø148 x 3 1/4" @ 3" o.c.	5/8" @ 16" o.c.	1278

NOTES:

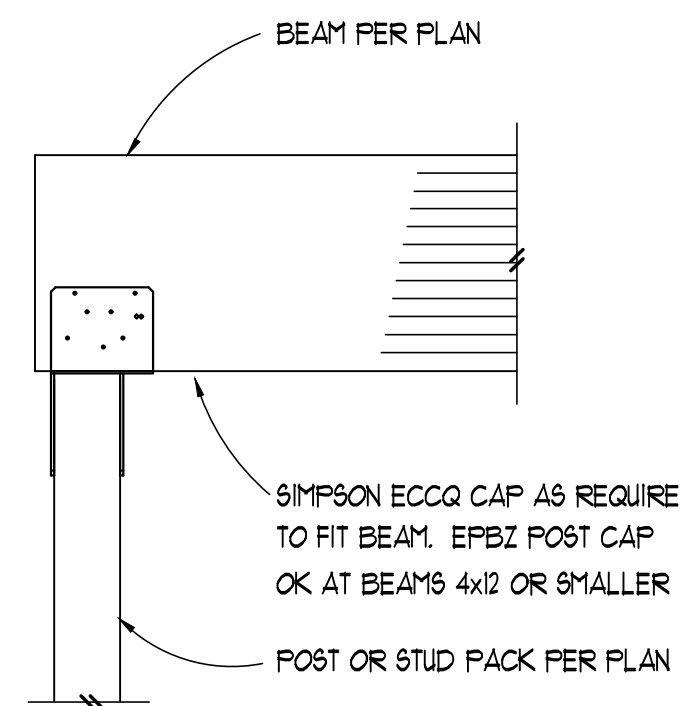
- INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY. INSTALL PANELS DIRECTLY TO WALL STUDS. WHERE EDGE NAIL SPACING IS LESS THAN 6" o.c., STAGGER ADJOINING PANEL EDGE NAILS.
- WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2X OR 3X FRAMING SHALL BE STAGGERED SO THAT JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
- BLOCKING IS REQUIRED AT ALL PANEL EDGES.
- PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY EXTERIOR OF THE BUILDING, CORRIDORS, WINDOWS, OR DOORWAYS OR AS DESIGNATED ON PLANS. SEE PLANS FOR HOLD-DOWN REQUIREMENTS.
- SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLD-DOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLD-DOWN POSTS. REFER TO THE HOLD-DOWN DETAILS FOR ADDITIONAL INFORMATION.
- INTERMEDIATE FRAMING TO BE WITH 2X MINIMUM MEMBERS. FIELD NAILING 12" O.C.
- FRAMING CLIPS: A35 OR LTP5 OR APPROVED EQUIVALENT, U.O.N. INSTALL LTP5 CLIP w/ LONG LEG HORIZONTAL.
- A35 AND LTP5 CLIPS TO BE INSTALLED WITH Ø131 x 1 1/2" LONG NAILS DIRECTLY TO FRAMING. USE Ø131 x 2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.
- SILL PLATES TO BE 3x U.O.N.
- WHERE PLATE ATTACHMENT SPECIFICS (2) ROUS OF NAILS, PROVIDE DOUBLE JOIST, RIM OR EQUAL. ATTACH PER DETAILS.
- ANCHOR BOLTS SHALL BE PROVIDED WITH STEEL PLATE WASHERS 1/4"x3"x3". EMBED ANCHOR BOLTS 1" MINIMUM INTO THE CONCRETE.
- PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS.

ALTERNATE NOTES

- 1/16" APA RATED SHEATHING (OSB) MAY BE USED IN PLACE OF 15/32" SHEATHING PROVIDED THAT ALL STUDS ARE SPACED AT 16" O.C.
- WHERE WOOD SHEATHING (W) IS APPLIED OVER GYPSUM SHEATHING (G), CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.
- AT ADJOINING PANEL EDGES, (2) 2X STUDS NAILED TOGETHER MAY BE USED IN PLACE OF A SINGLE 3X STUD. DOUBLE 2X STUDS MAY BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING.
- CONTACT THE ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST-IN-PLACE ANCHOR BOLTS. (SPECIAL INSPECTION MAY BE REQUIRED)
- MINIMUM NAIL LENGTH IS BASED ON REQUIRED PENETRATION INTO FRAMING MEMBER OF 1 1/2"

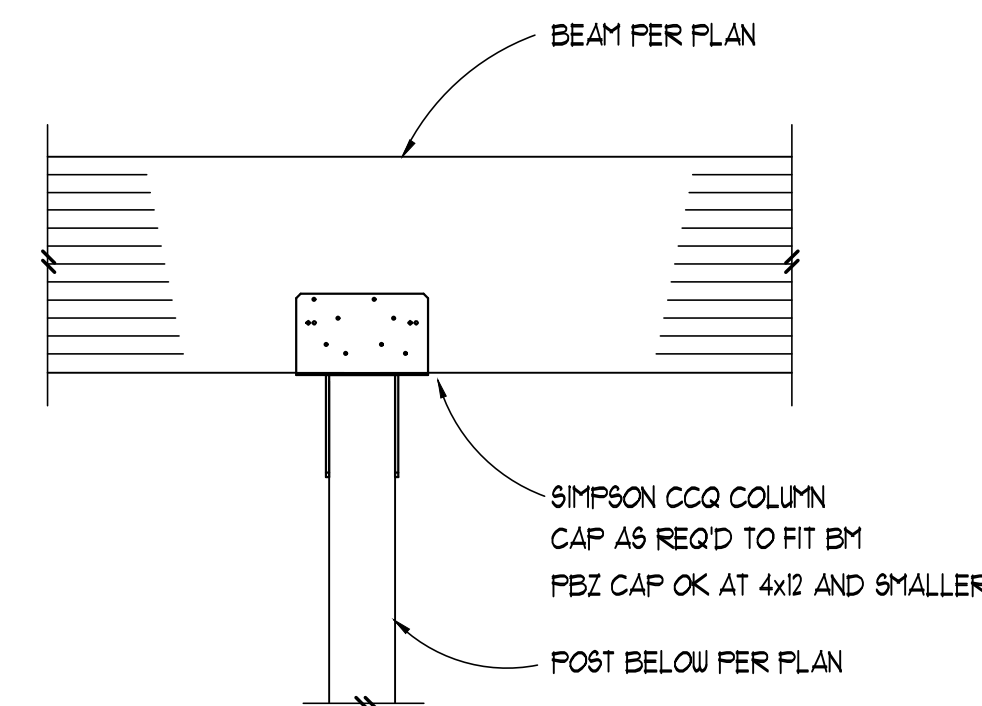
SHEAR WALL SCHEDULE

10



BEAM TO POST BELOW CONNECTION - END CONDITION

11



TYPICAL BEAM TO POST BELOW CONNECTION

12

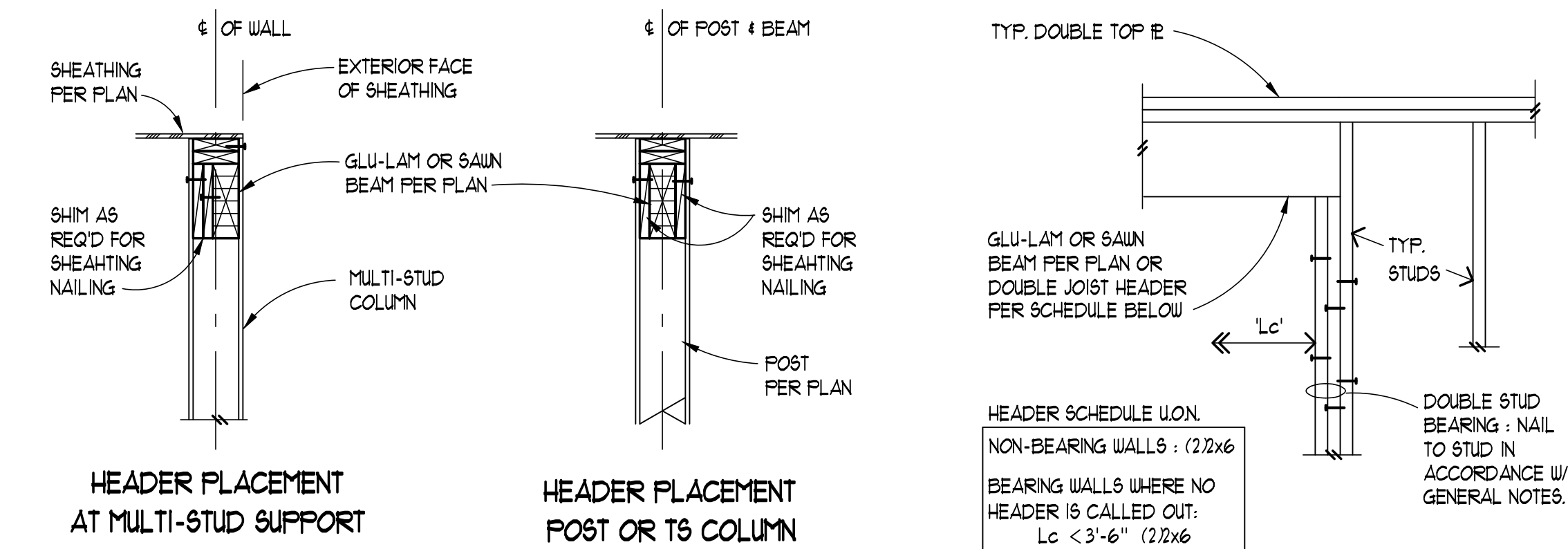
EXTERIOR WALLS
FOR 6" WALLS (MAX. 8'-6" HIGH): 2x6 STUDS @ 16" o.c., DF CONSTR. GRADE
FOR 6" WALLS (MAX. 13' HIGH): 2x6 STUDS @ 12" o.c., DF CONSTR. GRADE
FOR 6" WALLS (MAX. 20' HIGH): 2x6 LVL STUDS @ 16" o.c.
FOR 8" WALLS (MAX. 16' HIGH): 2x8 STUDS @ 16" o.c., DF CONSTR. GRADE

INTERIOR WALLS
FOR 4" WALLS (MAX. 10' HIGH): 2x4 STUDS @ 16" o.c., DF CONSTR. GRADE
FOR 4" WALLS (MAX. 13' HIGH): 2x4 STUDS @ 12" o.c., DF No 1 GRADE
FOR 6" WALLS (MAX. 13' HIGH): 2x6 STUDS @ 16" o.c., DF CONSTR. GRADE

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED DEPTH OF STUD WALLS. INDIVIDUAL STUD SIZES, GRADES AND SPACING SHOWN IN SCHEDULE ABOVE APPLY U.O.N. ALL MAXIMUM HEIGHTS ARE TO BRACING POINTS OF STUD WALL TOP PLATE, I.E. BOTTOM OF RAFTERS, ROOF TRUSSES, OR BRACING FRAMING MEMBER.

TYPICAL WALL FRAMING SCHEDULE

13

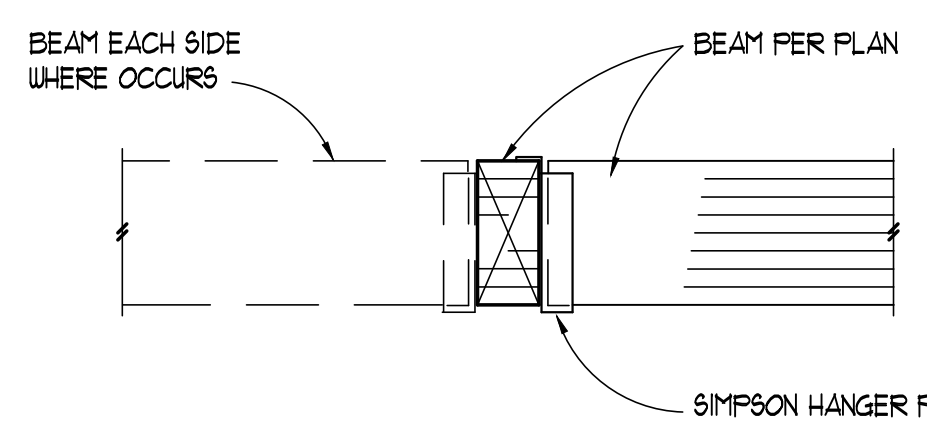


HEADER PLACEMENT AT MULTI-STUD SUPPORT

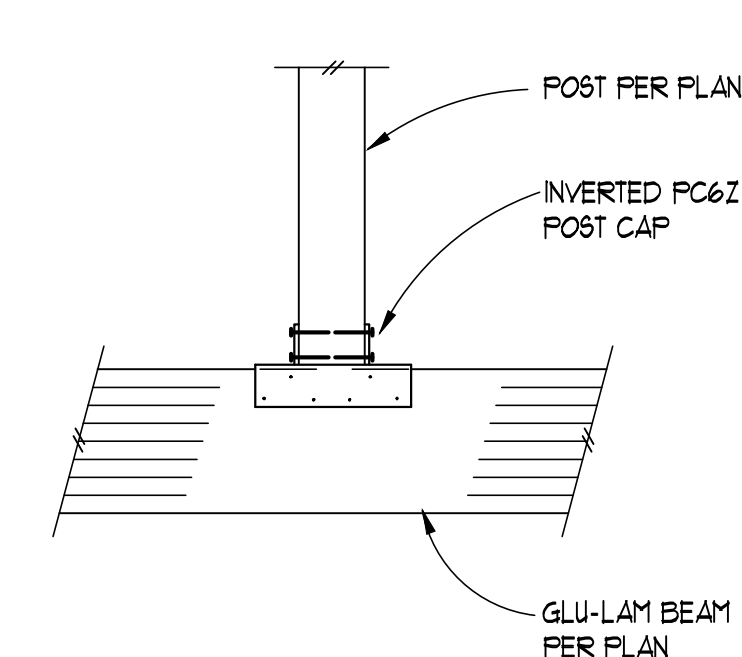
HEADER PLACEMENT POST OR TS COLUMN

TYPICAL HEADER U.O.N.

15

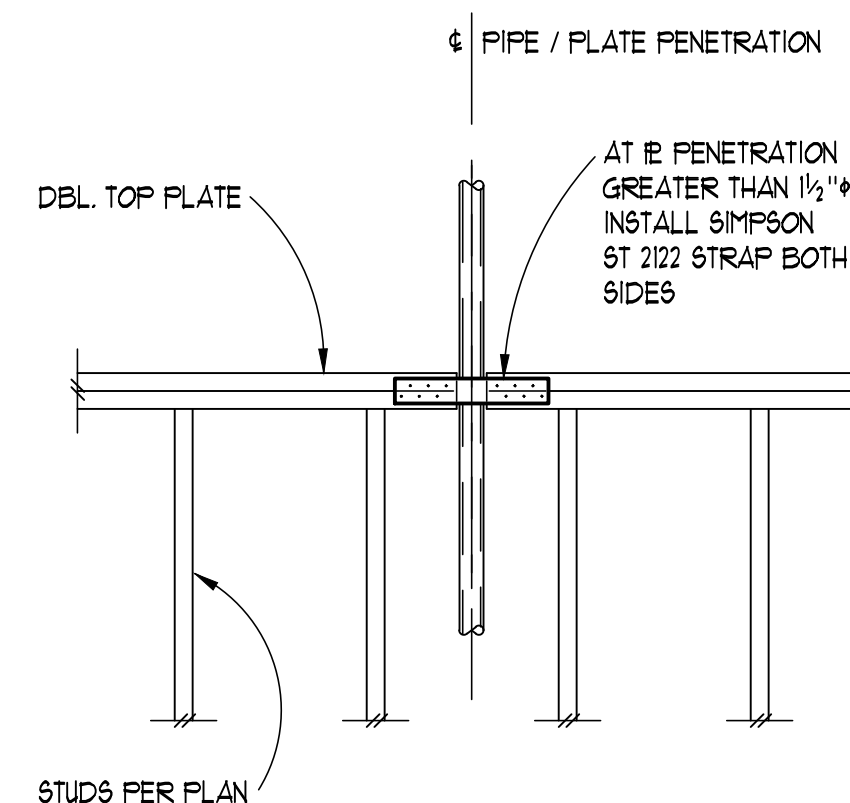


16



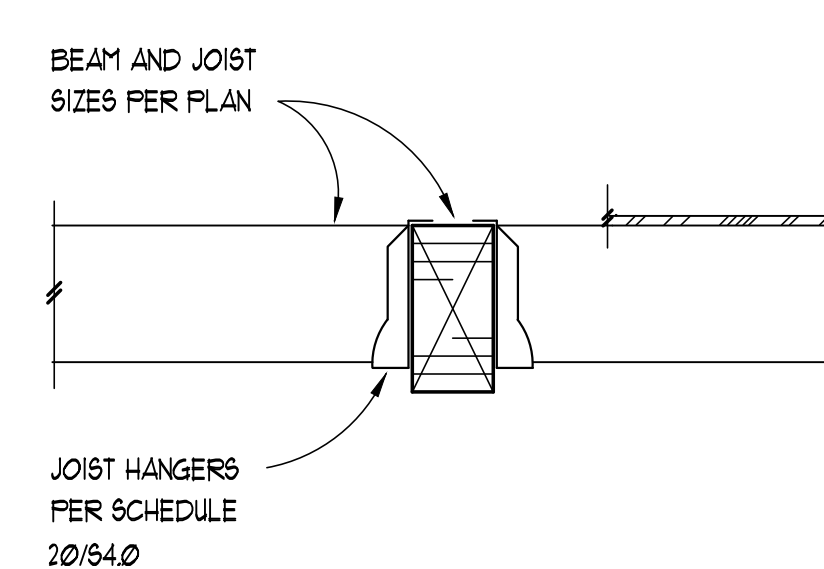
POST TO BEAM BELOW CONNECTION

17



TYPICAL TOP PLATE PENETRATION

18



TYPICAL INTERIOR BEAM SECTION

19

TYPICAL HANGER SCHEDULE

BEAM SIZE	HANGER REQUIRED	CAP. (Kips)
2x SAUN RAFTERS	LU (OR LUB) SERIES	106
(2) 2 x 10 OR LESS	LU10-2 (OR SIM)	186
(2) 2 x 12	HU12-2 (NAIL ALL HOLES)	295
3 1/2" x 11 1/8" LVL OR PSL	HUGQ42-SD5	556
5 1/4" x 11 1/8" LVL OR PSL	HGU550/12	915
5 1/8" x 12" (OR 10 1/2") GLB	GLT5	816
3 1/2" x 12" (OR 10 1/2") GLB	GLT3	816
2x10 JOISTS	U10 OR HU10TF	124
2x8 JOISTS	U8 OR HU8TF	124

HANGERS SPECIFIED IN SCHEDULE OR ON PLANS ARE MANUFACTURED BY SIMPSON STRONG TIE, INC. UNLESS OTHERWISE NOTED. CAPACITIES ARE BASED ON THE MOST RECENT CATALOGUE AND ICC REPORTS FOR THE MODELS LISTED.

ALTERNATE HANGERS MAY BE SUBSTITUTED AT THE CONTRACTOR OR OWNER'S OPTION, PROVIDED THEY ARE APPROVED BY THE ENGINEER OF RECORD AND HAVE A CURRENT ICC REPORT STATING THEIR CAPACITY MEETS OR EXCEEDS THE DESIGN CAPACITY LISTED ABOVE.

DESIGN CAPACITIES LISTED ARE BASED ON Douglas Fir FRAMING LUMBER AS STATED IN THE GENERAL STRUCTURAL NOTES AND GENERAL FLOOR LOADING.

20



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12/2022

BICKEL RESIDENCE
 2734 70th AVE SE
 MERCER ISLAND, WA 98040

REVISIONS

NO.	DATE	DESCRIPTION

TITLE

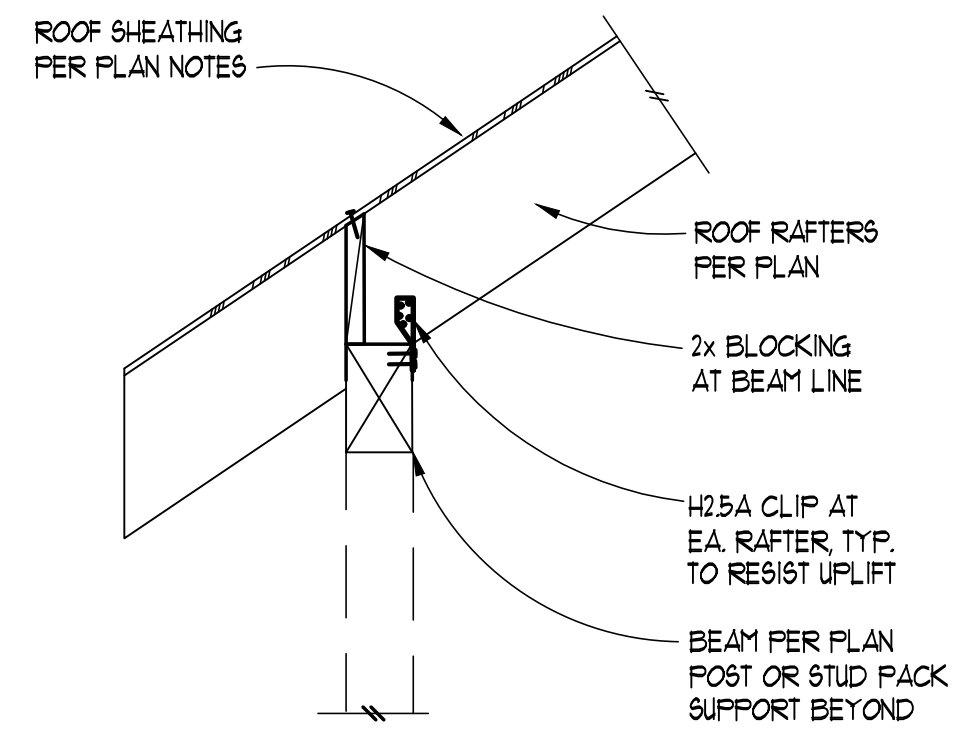
TYPICAL
WOOD
DETAILS

DESIGNED	ANB
DRAWN	KPH
CHECKED	MIS
DATE	12/12/22
JOB NUMBER	

SHEET NO.

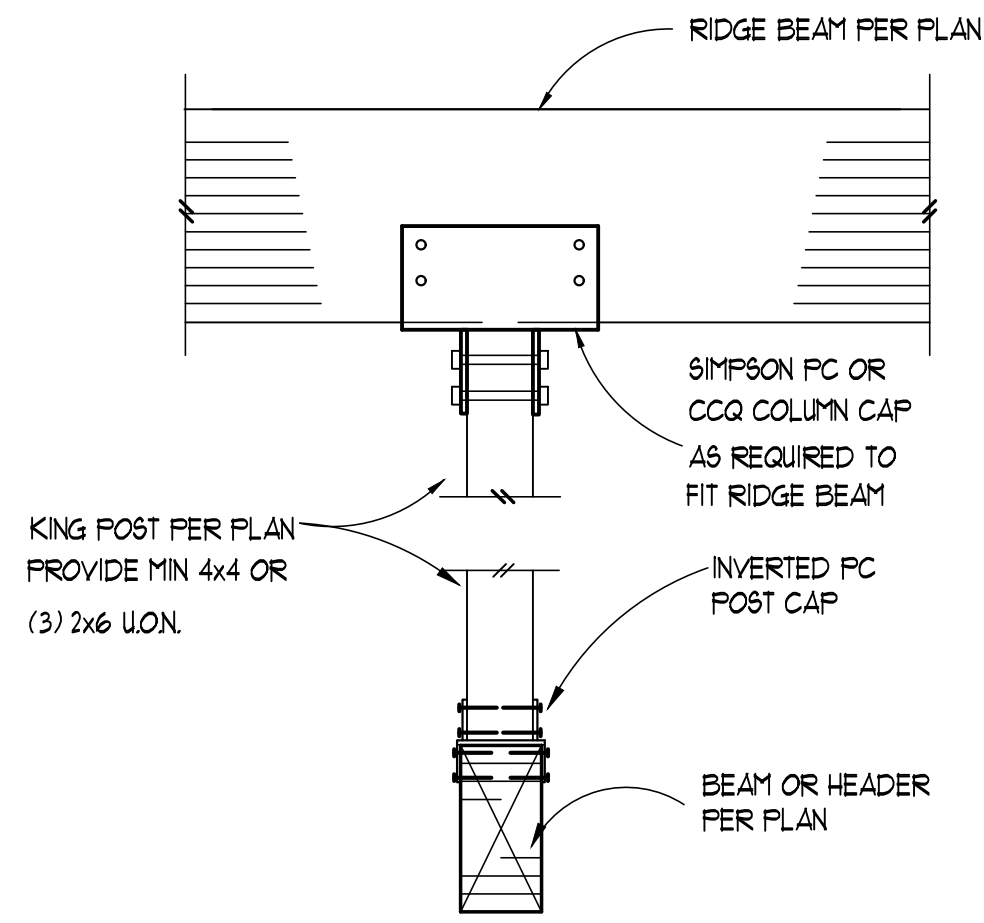
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REVIEW



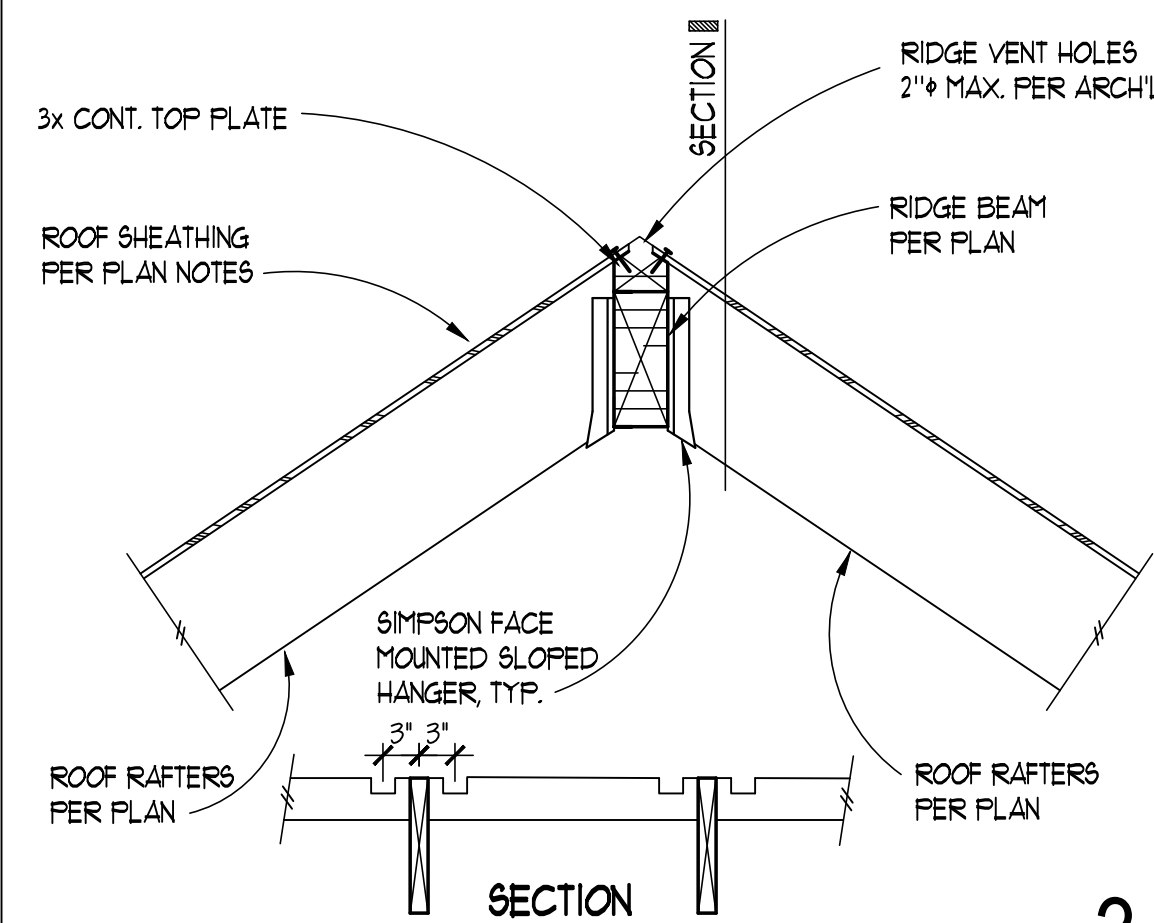
ROOF FRAMING OVER BEAM OR HEADER

1



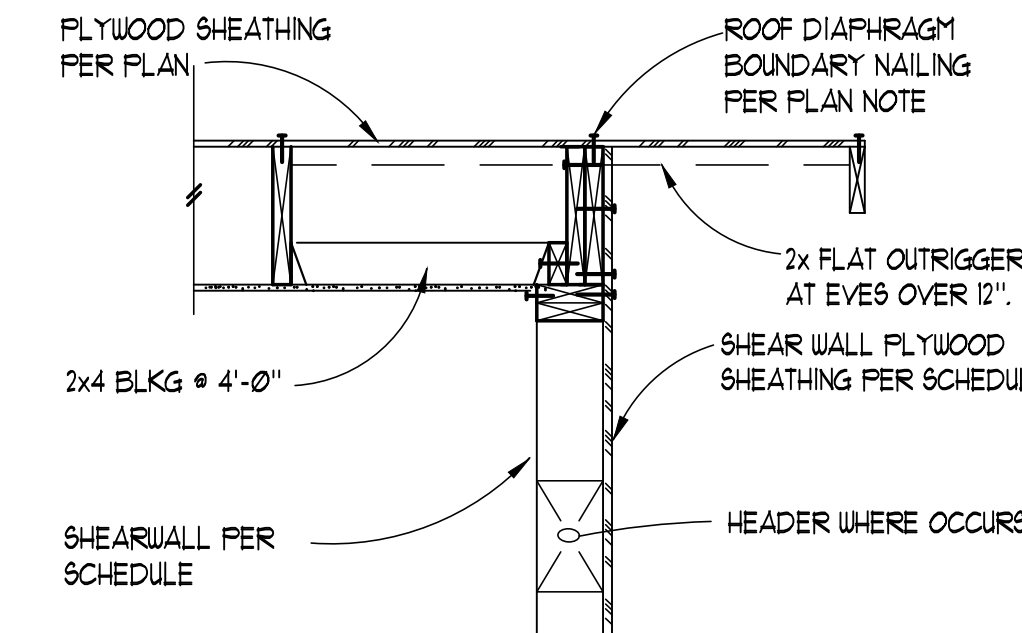
TYPICAL KING POST SECTION

2



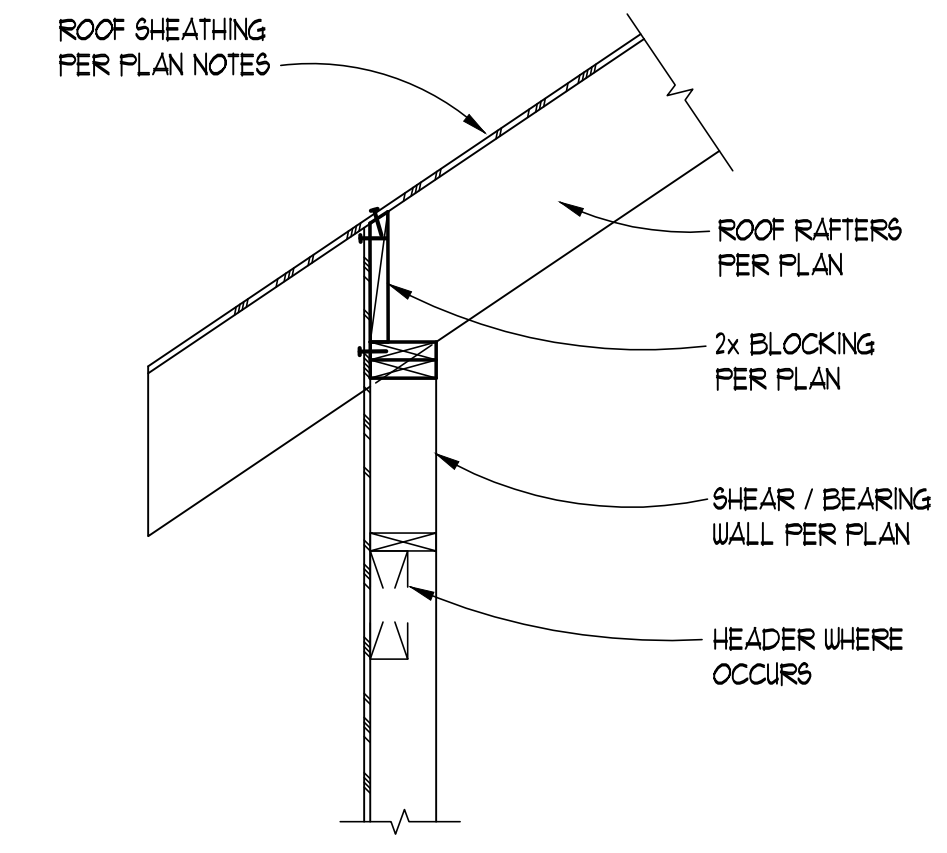
TYPICAL RIDGE BEAM FRAMING W/ VENTING

3

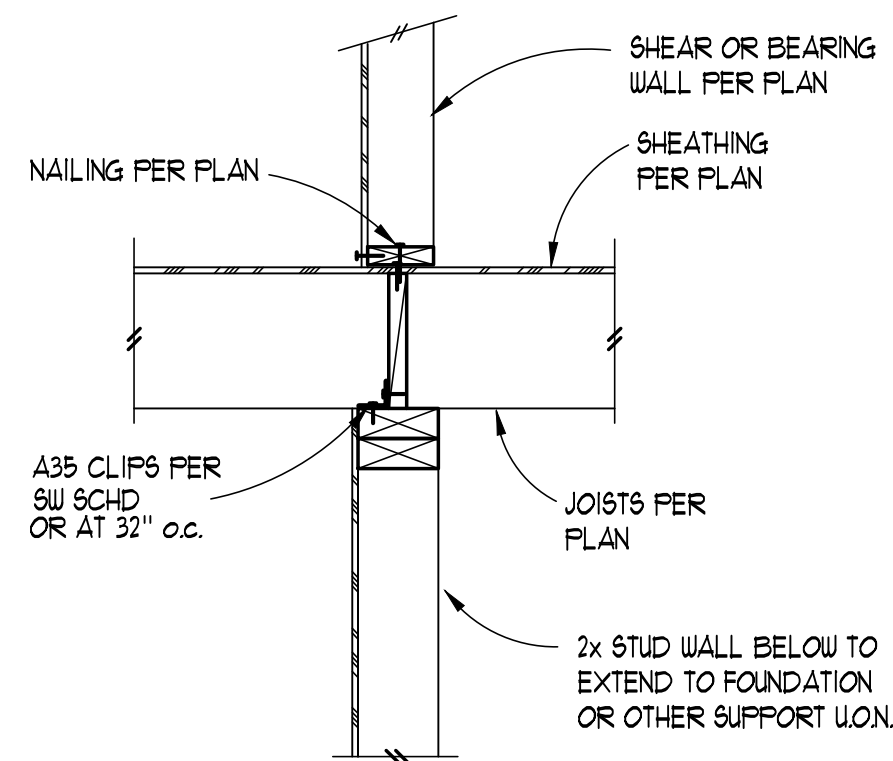


ROOF FRAMING PARALLEL TO WALL

4

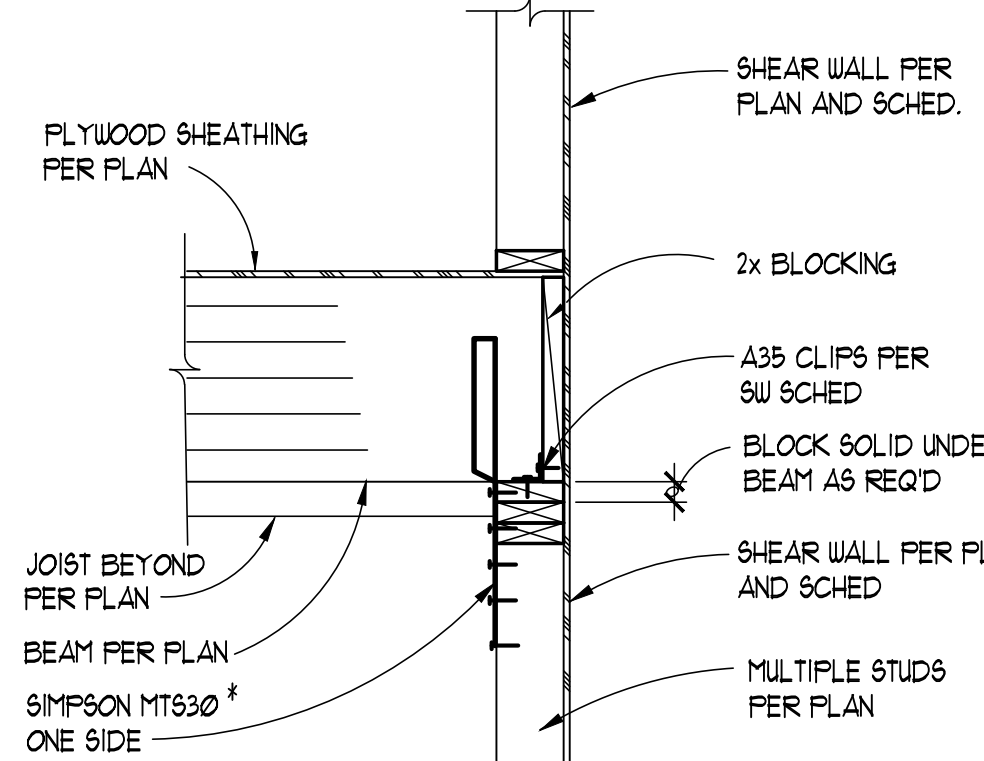


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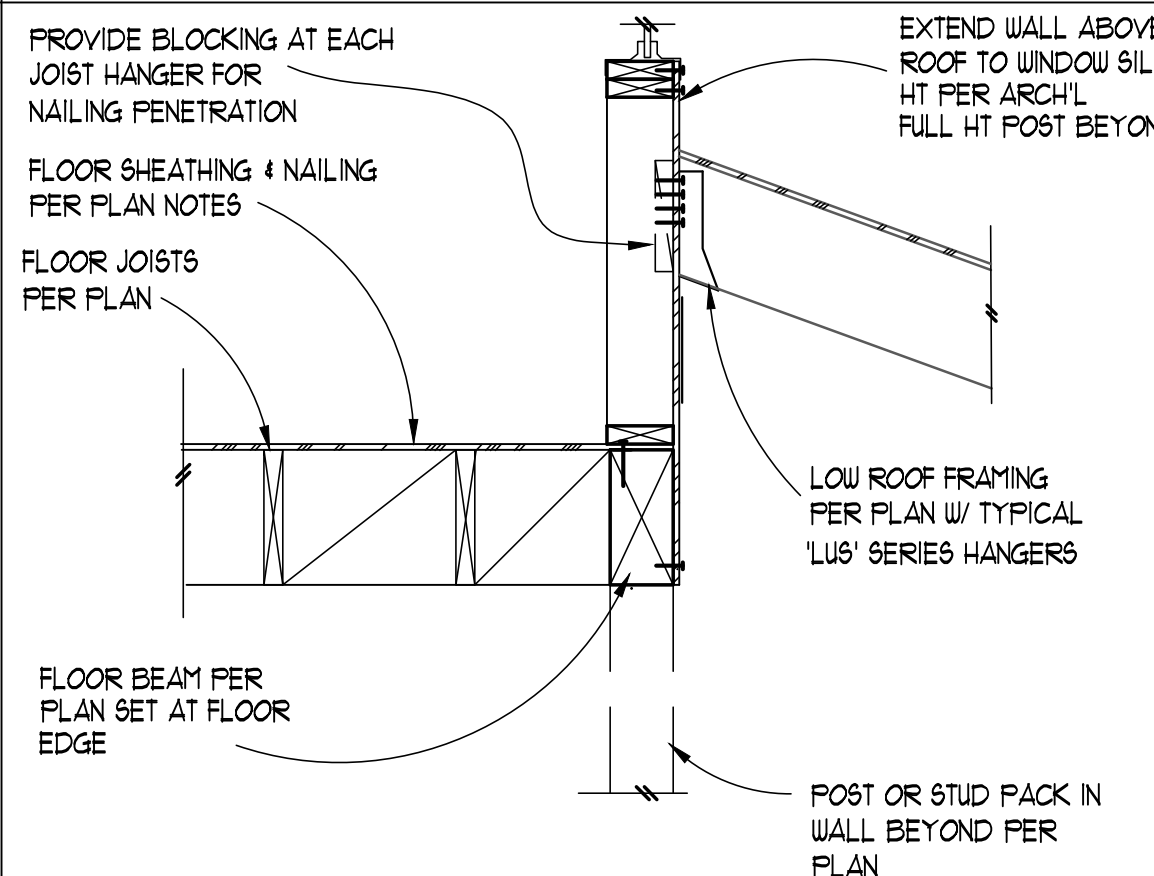
WOOD FRAMING TO STUD WALL BELOW

6



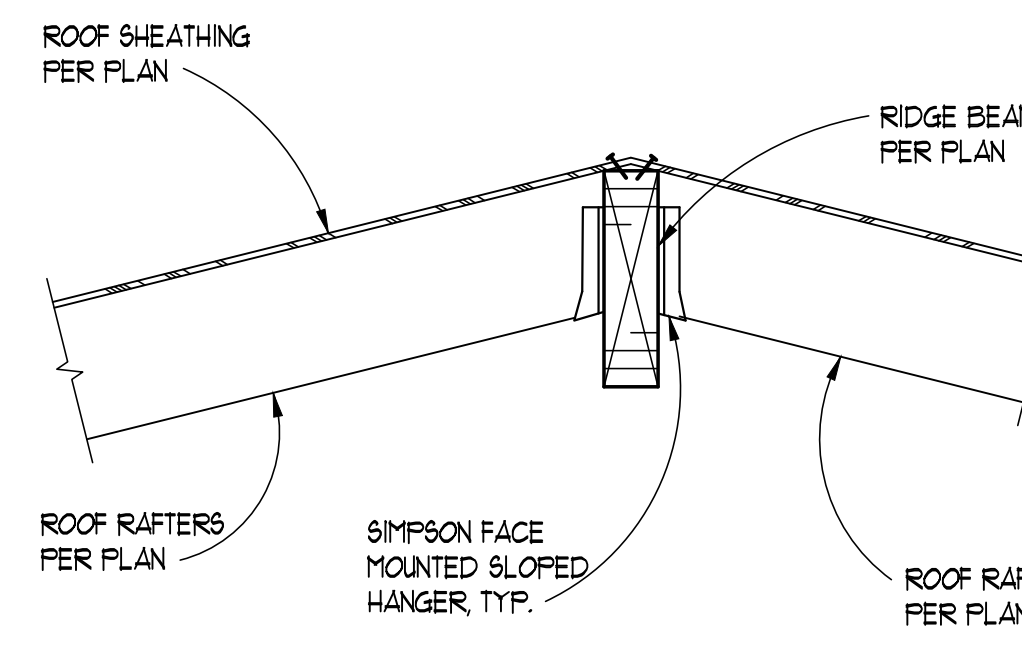
TYPICAL BEAM TO MULTIPLE STUD CONNECTION

7

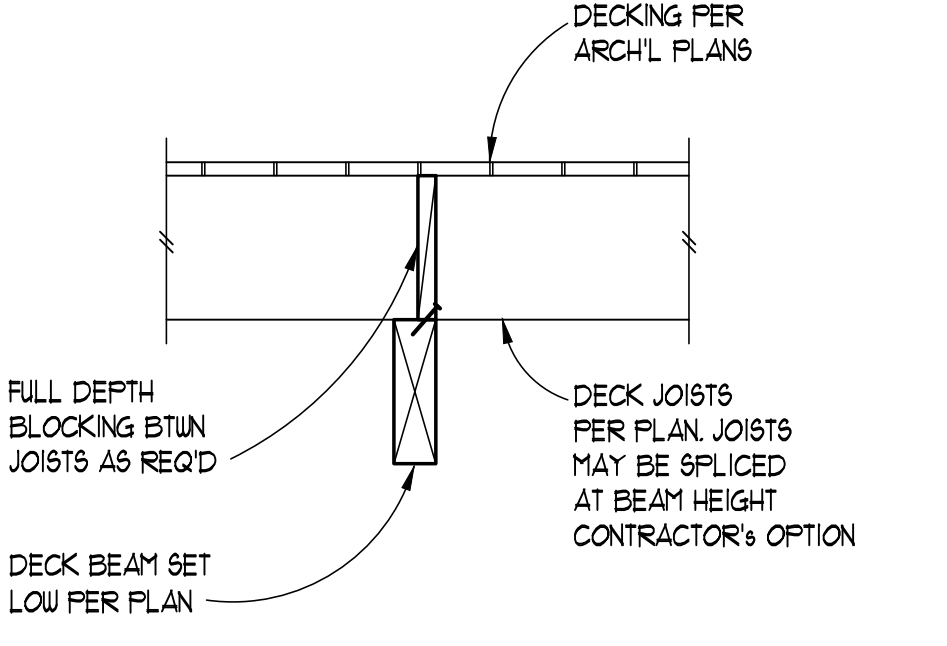


LOW ROOF TO UPPER FLOOR

8

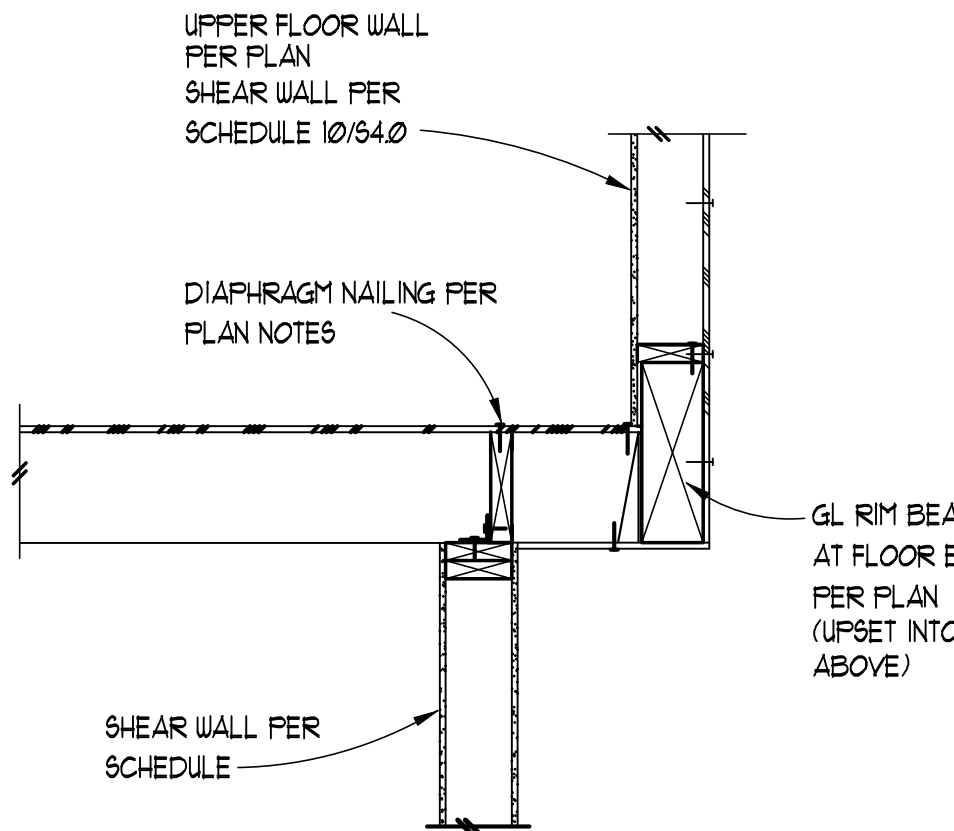


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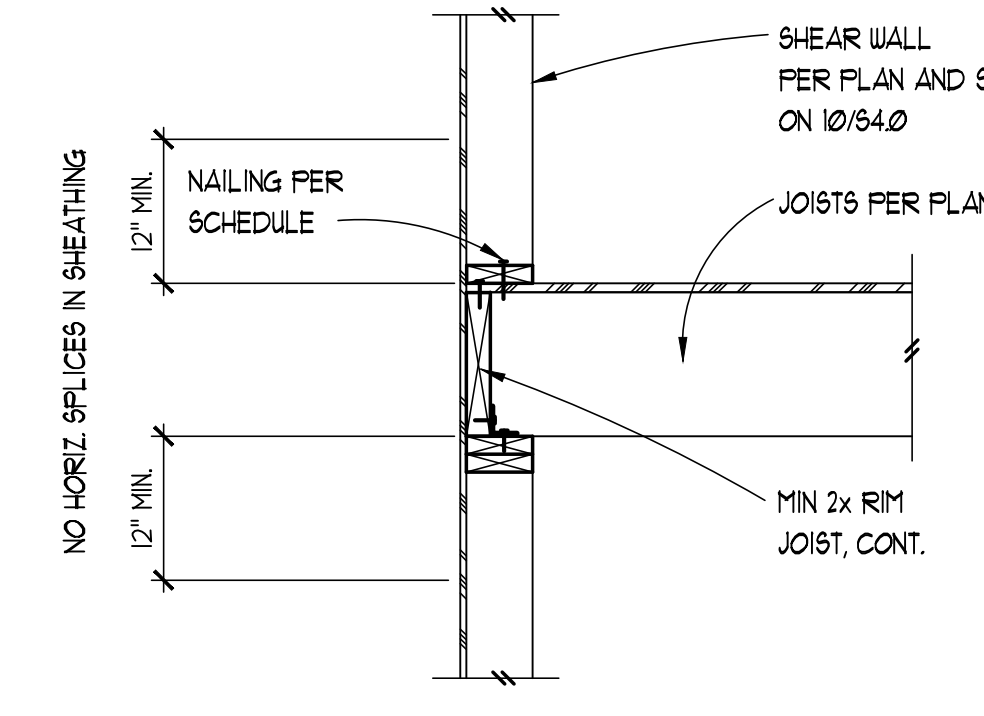
LOW SUPPORT BEAM AT DECK

10



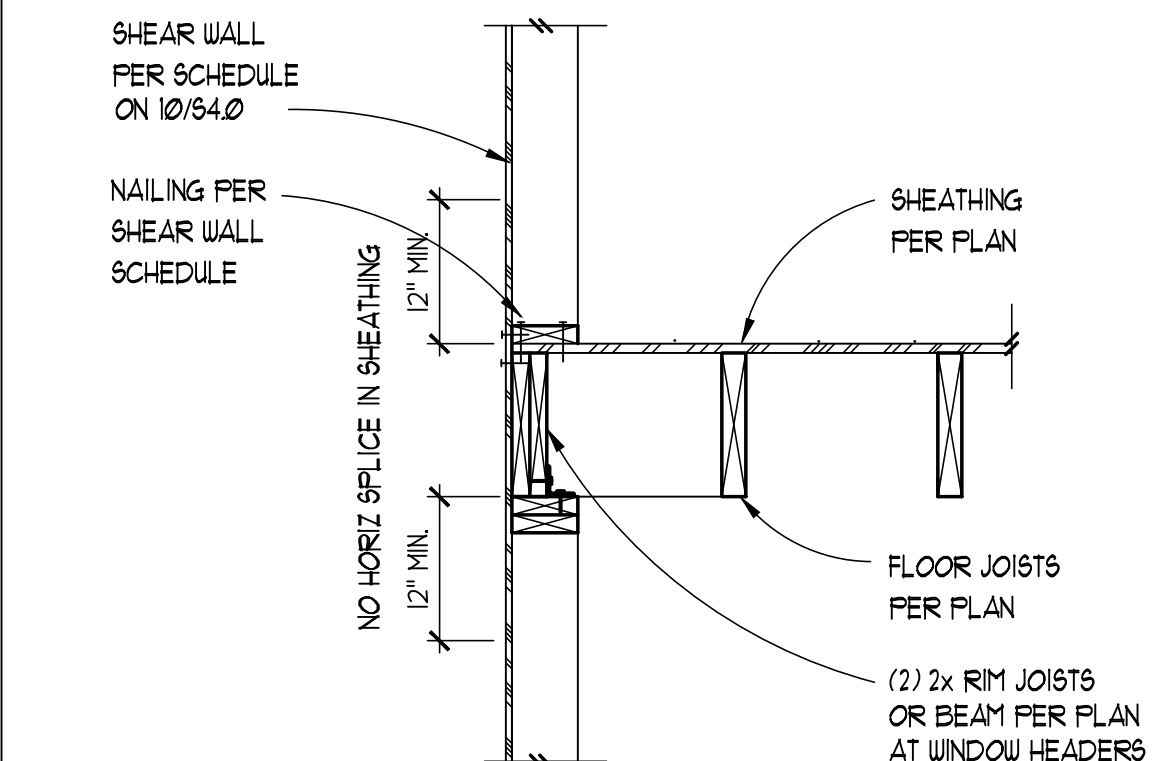
CANTILEVERED FLOOR BAY FRAMING

11



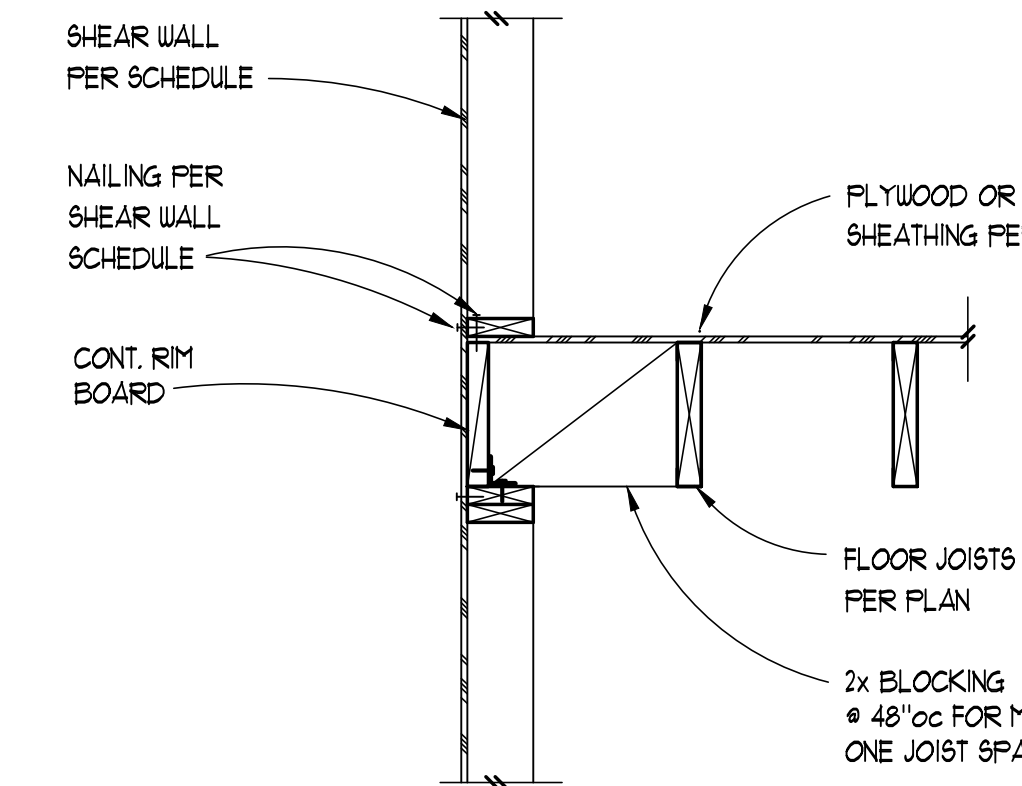
TYPICAL PERPENDICULAR SHEAR WALL FRAMING

12



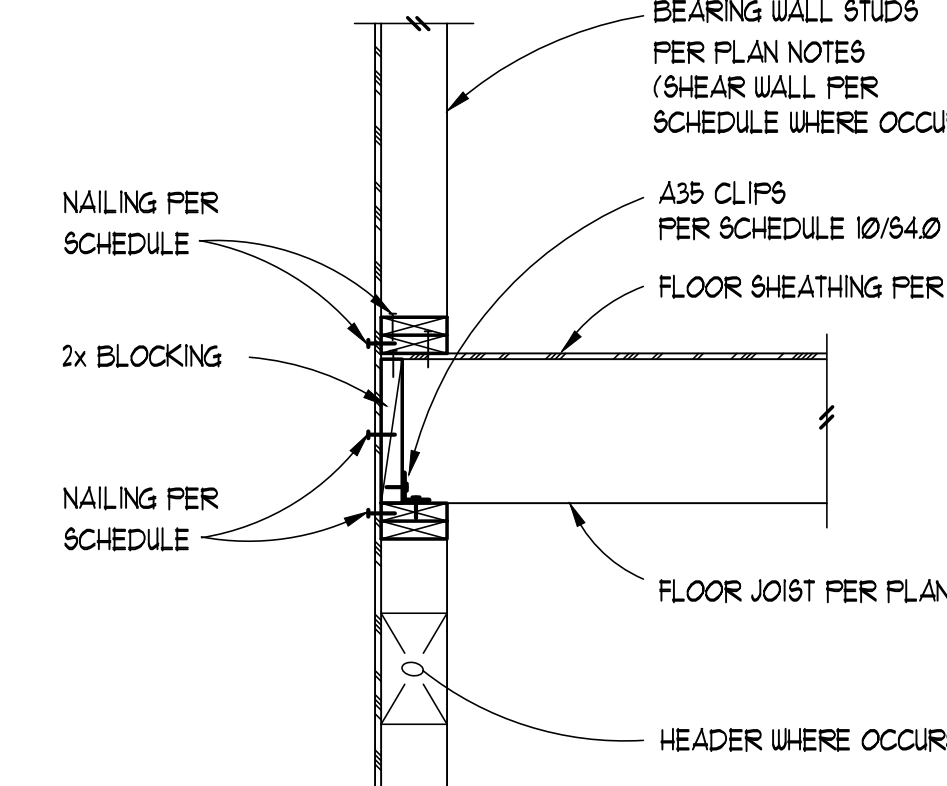
TYPICAL PARALLEL SHEAR WALL FRAMING

13



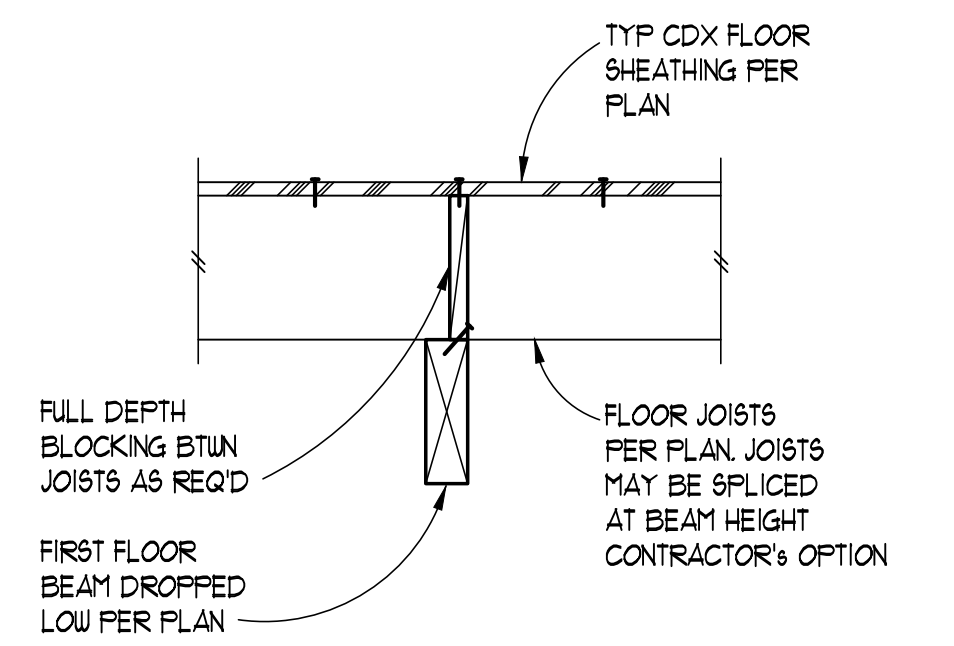
TYPICAL PARALLEL BEARING WALL FRAMING

14



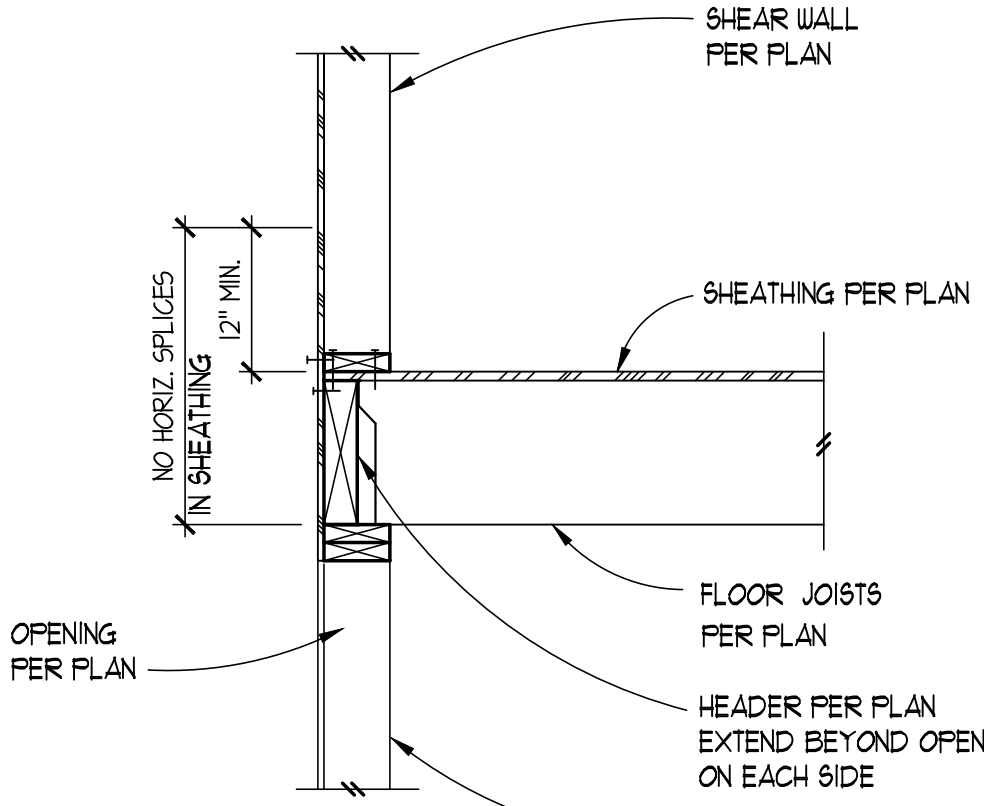
TYPICAL PERPENDICULAR JOIST FRAMING AT BEARING WALL

15



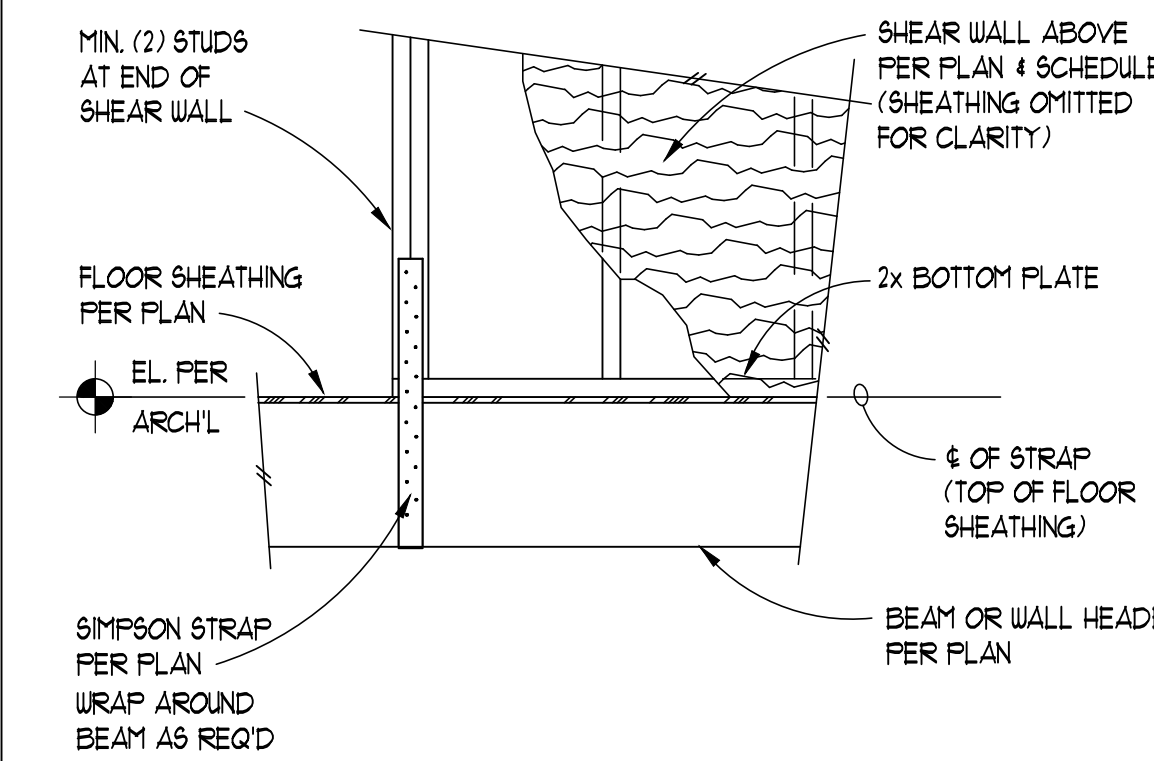
LOW FLOOR SUPPORT BEAM

16



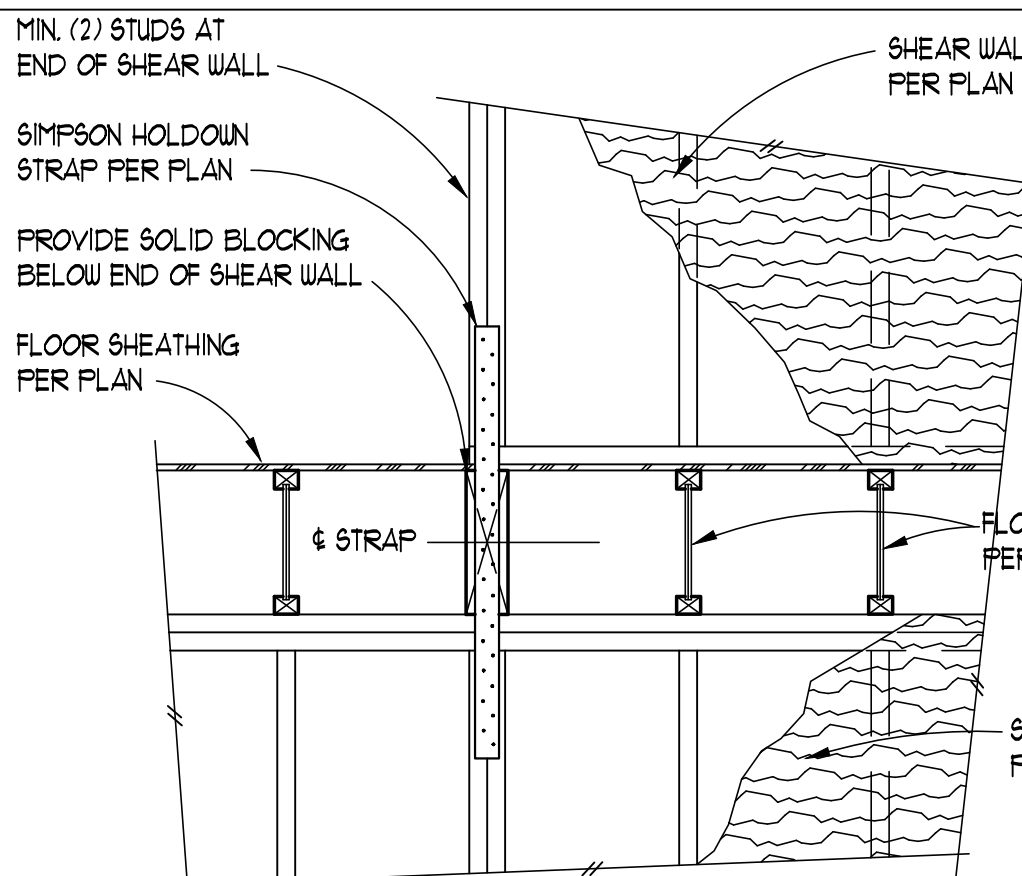
SHEAR WALL OVER HEADER

17



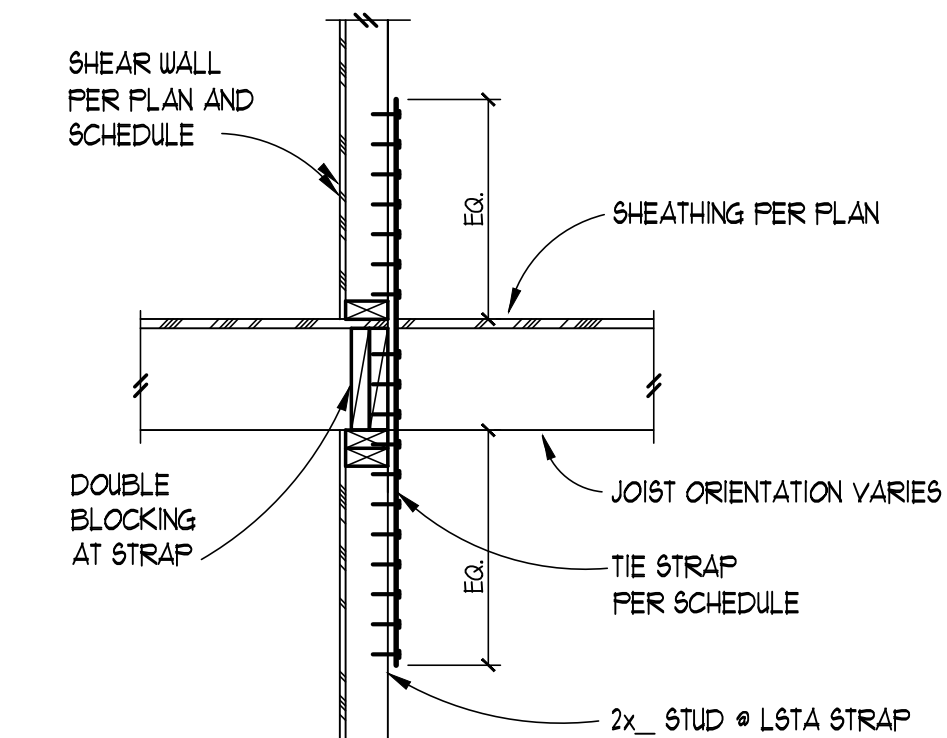
TYPICAL HOLDOWN STRAP CONNECTION AT BEAM / HEADER

18



TYPICAL HOLDOWN STRAP AT FLOOR

19



TYPICAL STRAP TIE - WALL ABOVE AND BELOW

20

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 MERCER ISLAND, WA 98040

REVISIONS

NO.	DATE	DESCRIPTION

TITLE
TYPICAL WOOD FRAMING SECTIONS

DESIGNED	ANB
DRAWN	KMH
CHECKED	MTS
DATE	12/12/2022
JOB NUMBER	

SHEET NO.

S4.1

REVIEW