The STEENWYK Residence

GENERAL NOTES

1. THESE DRAWINGS AND COPIES THEREOF ARE LEGAL INSTRUMENTS OF THE DESIGNER AND ARE TO BE USED FOR THE CONSTRUCTION OF THE PROJECT ON THE DESIGNATED PROPERTY ONLY AND MAY NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITIY.
2. ALL DIMENSIONS ARE TO THE OUTSIDE FACE OF STUDS. ALL EXTERIOR WALLS SHALL BE 2x6's AT 16" ON CENTER UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS SHALL BE 2x4's AT 16" ON CENTER UNLESS NOTED OTHERWISE.
3. FIBER-CEMENT, FIBER-MAT REINFORCED CEMENTITIOUS BACKER UNITS, GLASS MAT GYPSUM BACKERS or FIBER-REINFORCED GYPSUM BACKERS SHALL BE INSTALLED in ACCORDANCE w/ MFGR's RECOMMENDATIONS at ALL TUB and SHOWER AREAS and WALL PANELS in SHOWER AREAS per IRC R702.4.2.
4. WATER RESISTANT GYPSUM BACKING BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE to WATER, or IN AREAS SUBJECT to CONTINUOUS HUMIDITY per IRC R702.3.8.1.
5. PAINT ALL EXPOSED GALVANIZED METAL. DO NOT PAINT ALUMINIUM MATERIALS.
6. PROVIDE TERMITE TREATMENT AT BUILDING AREA. APPLICATOR SHALL PROVIDE A MINUMUM FIVE YEAR GUARANTEE.
7. BUILT-UP ROOFING SHALL BE A 20-YEAR BONDABLE 4-PLY FIBERGLASS ROOF w/ SHEET. CLASS "B" ROOF.
8. ALL GLASS SHALL BE DUAL-GLAZED w/ BRONZE TINT UNLESS NOTED OTHERWISE. VERIFY COLOR OF FRAMES w/ OWNER PRIOR TO CONSTRUCTION AND INSTALLATION.
9. EACH TRADE SHALL BE RESPONSIBLE FOR THE KNOWLEDGE OF THE RELATIVE INFORMATION CONTAINED IN THESE DOCUMENTS AND THE CONDITIONS UNDER WHICH HE OR SHE WILL BE EXPECTED TO PERFORM.
10. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL CAREFULLY AND THOROUGHLY EXAMINE THE PROJET SITE, FIELD VERIFY ALL CONDITIONS, GRADES, ELEVATIONS AND DIMENSIONS OF THE VARIOUS FEATURES OF THE PROJECT SITE AND SHALL COMPARE THE DRAWINGS WITH EXISTING SITE CONDITIONS. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE DESIGNER.
11. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL REVIEW AND THOROUGHLY EXAMINE AND FAMILIARIZE THEMSELVES WITH ALL THE ELEMENTS AND CONDITIONS IN THESE DRAWINGS AND SPECIFICATIONS. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL VERIFY ALL DIMENSIONS ON THE DRAWINGS. ANY DISCREPANCIES AND/OR CONDITIONS NEEDING CLARIFICATION SHALL BE SUBMITTED TO THE DESIGNER FOR HIS RULING IN WRITING PRIOR TO BEGINNING WORK.
12. ALL CONSTRUCTION, FABRICATION AND INSTALLATIONS SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF THE IRC, AND ANY FEDERAL, STATE AND LOCAL CODES. REGULATIONS AND ORDINANCES OR THE GOVERNING AGENCY HAVING JURISDICTION OVER THE PROJECT, APPLICABLE CODES, ETC. ARE THOSE WHICH ARE IN EFFECT AT THE TIME THE PERMIT APPLICATION FOR THE PROJECT WAS REPORTED.
13. EACH SUB-CONTRACTOR IS CONSIDERED A SPECIALIST IN HIS OR HER FIELD/TRADE AND SHALL (BEFORE SUBMISSION OF BID OF PERFORMANCE OF WORK) NOTIFY THE GENERAL CONTRACTOR AND THE DESIGNER IN WRITING, OF SCOPE OF WORK CALLED OUT AS CONSTRUCTED, AS DESIGNED AND OR DETAILED.
14. DUE TO REPROGRAPHIC PROCESSES THESE PLANS MAY NOT BE TO SCALE. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE FROM PLANS, SECTIONS, ELEVATIONS AND DETAILS.
15. THE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND FIRE SPRINKLER (IF APPLICABLE) ARE SUPPLEMENTAL TO THE ARCHITECRUAL DRAWINGS. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THE VARIOUS DRAWINGS IT SHALL BE BROUGHT TO THE DESIGNER'S ATTENTION FOR CLARIFICATION.
16. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK FOR THE TRADE INVOLVED, THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY, IN WRITING, OF ANY ALTERNATIVE NON-STANDARD OR UNTESTED METHODS PROPOSED.
17. ALL EXISTING UTILITIES OR STRUCTURES ARE INDICATED ON THESE PLANS BASED ON INFORMATION OF RECORD. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS & ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS OR HER FAILURE TO LOCATE. CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.
18. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE ENFORCEMENT OF ALL REQUIREMENTS AND REGULATIONS AND SHALL PERFORM ALL WORK ON THIS PROJECT IN COMPLIANCE WITH THE STATE OF ARIZONA OCCUPATIONAL SAFETY AND HEALTH ACT.
19. CONTRACTOR AND ALL SUB-CONTRACTORS SHALL GUARANTEE ALL WORK AGAINST FAULTY INSTALLATION AND/OR MATERIALS FOR A PERIOD OF NO LESS THAN ONE YEAR.
20. ALL PARTIES USING THESE PLANS, PRINTS AND COPIES, ETC. REALIZE THAT THESE DOCUMENETS AND ANY & ALL SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND ARE & SHALL REMAIN AT ALL TIMES PROPERTY OF THE DESIGNER. NO REPRODUCTION IS PERMITTED, IN WHOLE AND PART BY ANY MEANS WHATSOEVER.
21. ALL IDEAS, ARRANGEMENT AND DESIGNS ARE THE PROPERTY OF THE DESIGNER AND ARE PROTECTED BY COPYRIGHT LAWS OF THE UNITED STATES.
22. ALL FINISH WORK IS TO BE PROTECTED FROM NEW CONSTRUCTION. DAMAGE CAUSED TO FINISH WORK BY ANY SUB-CONTRACTOR WILL BECOME THE RESPONSIBILITY OF THAT SUB-CONTRACTOR TO REPLACE AS SPECIFIED HERE-IN TO THE ACCEPTABLE STANDARDS OF THE DESIGNER AND THE ORIGINAL SUB-CONTRACTOR RESPONSIBLE FOR THE INITIAL WORK.
23. ALL DOCUMENTS ARE TO BE CONSIDERED PRELIMINARY UNTILL THE ISSUANCE OF A BUILDING/CONSTRUCTION PERMIT. DESIGNER WILL NOT BE RESPONSIBLE FOR ANY DAMAGES STEMMING FROM THE IMPROPER USE OF PRELIMINARY DOCUMENTS INCLUDING SUCH USES AS BIDDING OR PREMATURE CONSTRUCTION.
24. ALL FINISH TRADES ARE TO VERIFY CONDITION OF SURFACE TO BE ADEQUATE FOR INTENDED APPLICATION OR MAY BE MADE SUITABLE THROUGH SANDING OR FILLING AS DEEMED NECESSARY BY FINISH SUB-CONTRACTOR. SHOULD SURFACE NOT BE ADEQUATE, NOTIFY THE CONTRACTOR IN WRITING OR ASSUME ALL LIABILITY FOR FINISHING RESULTS.

ZONING INFORMATION

CURRENT ZONING: PLANNED UNIT DEVELOPMENT

CODE TABLE

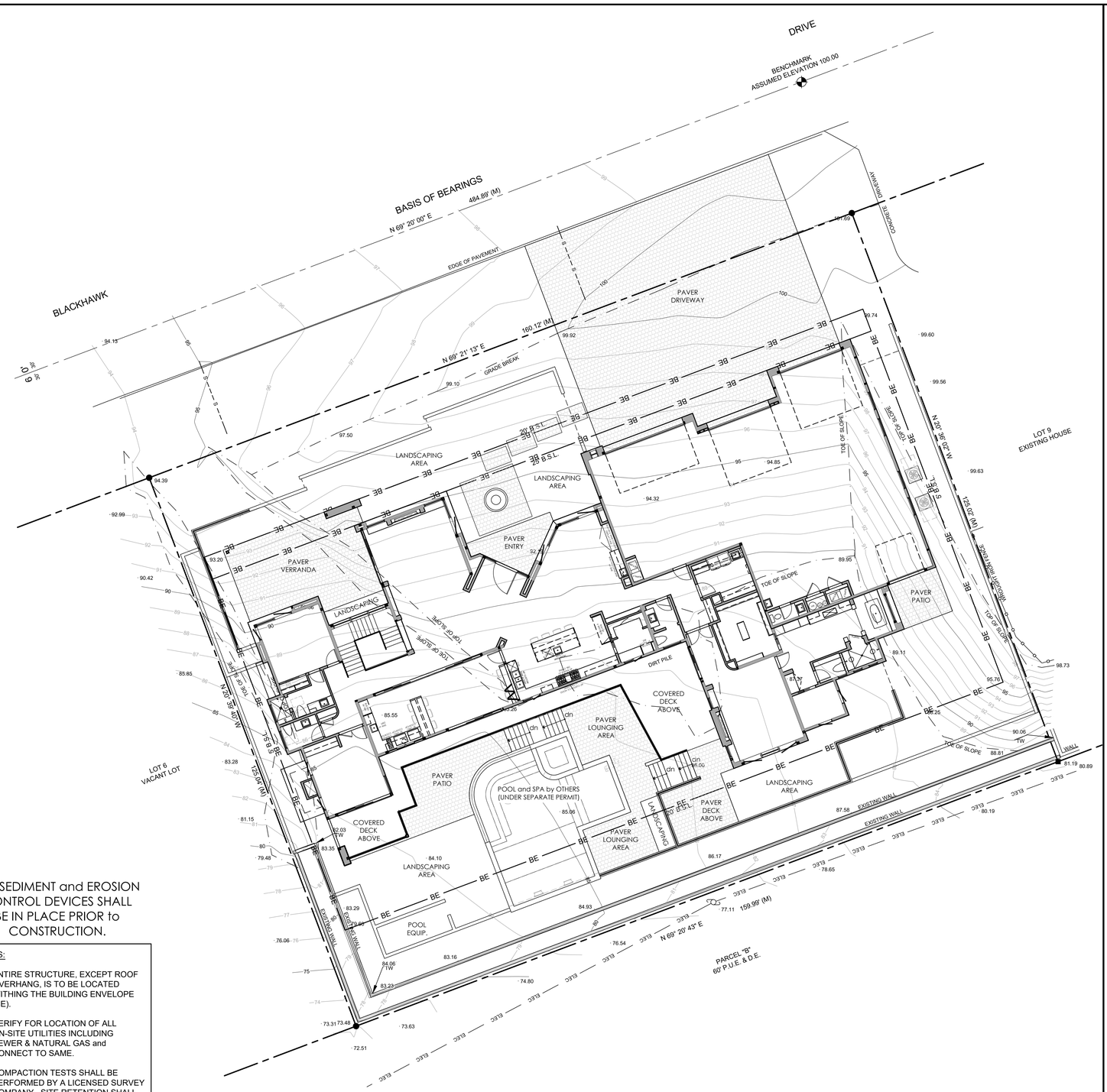
PLANS SHALL CONFORM WITH ALL CURRENT GOVERNING CODES
(INCLUDED BUT NOT LIMITED TO) -

- 2018 INTERNATIONAL BUILDING CODE
- 2018 INTERNATIONAL MECHANICAL CODE
- 2018 INTERNATIONAL PLUMBING CODE
- 2018 INTERNATIONAL FUEL GAS CODE
- 2018 INTERNATIONAL FIRE CODE
- 2018 INTERNATIONAL ENERGY CONSERVATION CODE
- 2017 NATIONAL ELECTRIC CODE
- 2010 ADA STANDARDS for ACCESSIBLE DESIGN
- 2006 NFPA 101 LIFE SAFETY CODE

PROJECT TEAM

DESIGNER:
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PH - (801) 798-0555
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office@lei-eng.com



ALL SEDIMENT and EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR to CONSTRUCTION.

NOTES:

- ENTIRE STRUCTURE, EXCEPT ROOF OVERHANG, IS TO BE LOCATED WITHING THE BUILDING ENVELOPE (BE).
- VERIFY FOR LOCATION OF ALL ON-SITE UTILITIES INCLUDING SEWER & NATURAL GAS and CONNECT TO SAME.
- COMPACTION TESTS SHALL BE PERFORMED BY A LICENSED SURVEY COMPANY. SITE RETENTION SHALL BE A 2:1 MAXIMUM SLOPE AWAY FROM THE STRUCTURE.
- ELECTRICAL METER LOCATION SHALL BE VERIFIED BY LOCAL UTILITY COMPANY.
- ZONING & BUILDING SETBACKS SHALL BE VERIFIED WITH the LOCAL PLANNING and ZONING DEPARTMENTS.
- ALL PERIMETER WALLS, POOLS, OUT BUILDINGS, RETAINING WALLS, ETC. SHALL BE CONSTRUCTED UNDER SEPARATE PERMIT.

ARCHITECTURAL SITE PLAN
SCALE: 1" = 10'-0"

NORTH

SHEET INDEX

A1.1	ARCHITECTURAL SITE PLAN, GENERAL NOTES, CODE INFORMATION and SHEET INDEX
A2.0	LOWER LEVEL FLOOR PLAN
A2.1L	MAIN LEVEL FLOOR PLAN - LEFT SIDE
A2.1R	MAIN LEVEL FLOOR PLAN - RIGHT SIDE
A2.2	INTERIOR STAIR PLAN and DETAILS
A3.1	ENLARGED FLOOR PLANS and INTERIOR ELEVATIONS
A3.2	ENLARGED FLOOR PLANS and INTERIOR ELEVATIONS
A3.3	INTERIOR ELEVATIONS
A3.4	DOOR DETAILS and NOTES
A3.5	WINDOW DETAILS and NOTES
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S4.2	BUILDING SECTIONS and FRAMING DETAILS
S4.3	BUILDING SECTIONS
S4.4	BUILDING SECTIONS and FRAMING DETAILS
S4.5	BUILDING SECTIONS and FRAMING DETAILS

NOTE:
- STRUCTURAL ELEMENTS of the FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL BUILDING CODE and ALL CURRENT GOVERNING CODES.
- ARCHITECTURAL ELEMENTS of the FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

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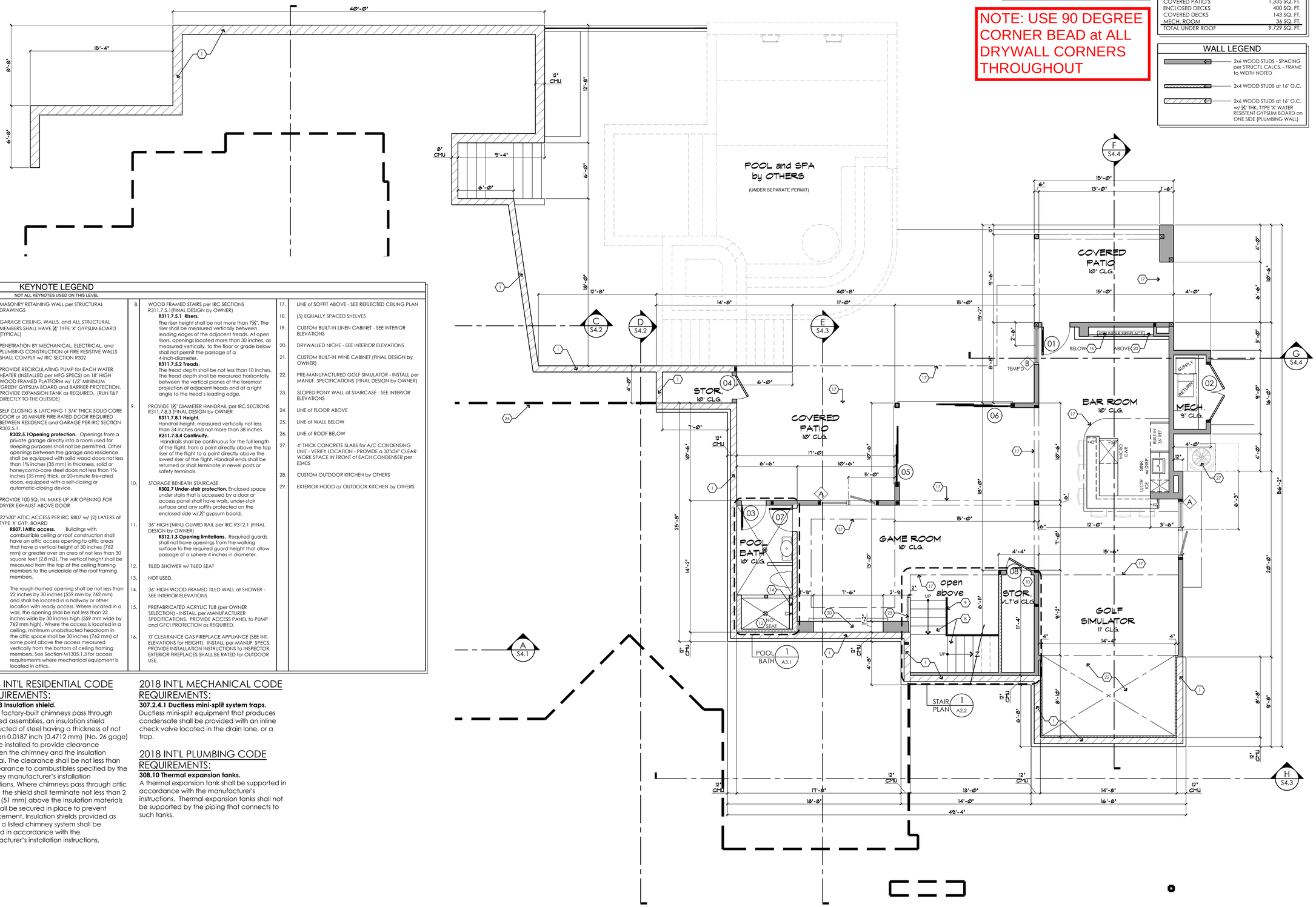
◆ ARCHITECTURAL SITE PLAN

REVISIONS:

SCALE: 1/8" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 25 JULY 2024	
SHEET: A1.1	

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KEYNOTE LEGEND

NOT ALL KEYNOTES USED ON THIS LEVEL

1. MASONRY RETAINING WALL per STRUCTURAL DRAWINGS
2. GARAGE CEILING, WALLS, and ALL STRUCTURAL MEMBERS SHALL HAVE ⅝" TYPE 'X' GYPSUM BOARD (TYPICAL)
3. PENETRATION BY MECHANICAL, ELECTRICAL, and PLUMBING CONSTRUCTION of FIRE RESISTIVE WALLS SHALL COMPLY w/ IRC SECTION R302
4. PROVIDE RECIRCULATING PUMP for EACH WATER HEATER (INSTALLED per MFG SPECS) on 18" HIGH WOOD FRAMED PLATFORM w/ 1/2" MINIMUM 'GREEN' GYPSUM BOARD and BARRIER PROTECTION. PROVIDE EXPANSION TANK as REQUIRED. (RUN T&P DIRECTLY TO THE OUTSIDE)
5. SELF CLOSING & LATCHING 1 3/4" THICK SOLID CORE DOOR or 20 MINUTE FIRE-RATED DOOR REQUIRED BETWEEN RESIDENCE and GARAGE PER IRC SECTION R302.5.1:
   R302.5.1Opening protection. 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 1⅜ inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1⅜ inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a self-closing or automatic-closing device.
6. PROVIDE 100 SQ. IN. MAKE-UP AIR OPENING FOR DRYER EXHAUST ABOVE DOOR
7. 22"x30" ATTIC ACCESS PER IRC R807 w/ (2) LAYERS of TYPE 'X' GYP. BOARD
   R807.1Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m2). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.
   The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other location with ready access. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.
8. WOOD FRAMED STAIRS per IRC SECTIONS R311.7.5.1(FINAL DESIGN by OWNER)
   R311.7.5.1 Risers.
   The riser height shall be not more than 7¾". The riser shall be measured vertically between leading edges of the adjacent treads. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter.
   R311.7.5.2 Treads.
   The tread depth shall be not less than 10 inches. 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 tread's leading edge.
9. PROVIDE 1½" DIAMETER HANDRAIL per IRC SECTIONS R311.7.8.3 (FINAL DESIGN by OWNER
   R311.7.8.1 Height.
   Handrail height, measured vertically not less than 34 inches and not more than 38 inches.
   R311.7.8.4 Continuity.
   Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
10. STORAGE BENEATH STAIRCASE
    R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side w/ ½" gypsum board.
11. 36" HIGH (MIN.) GUARD RAIL per IRC R312.1 (FINAL DESIGN by OWNER)
    R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches in diameter.
12. TILED SHOWER w/ TILED SEAT
13. NOT USED.
14. 36" HIGH WOOD FRAMED TILED WALL at SHOWER - SEE INTERIOR ELEVATIONS
15. PREFABRICATED ACRYLIC TUB (per OWNER SELECTION) - INSTALL per MANUFACTURER SPECIFICATIONS. PROVIDE ACCESS PANEL to PUMP and GFCI PROTECTION as REQUIRED.
16. '0' CLEARANCE GAS FIREPLACE APPLIANCE (SEE INT. ELEVATIONS for HEIGHT). INSTALL per MANUF. SPECS. PROVIDE INSTALLATION INSTRUCTIONS to INSPECTOR. EXTERIOR FIREPLACES SHALL BE RATED for OUTDOOR USE.
17. LINE of SOFFIT ABOVE - SEE REFLECTED CEILING PLAN
18. (5) EQUALLY SPACED SHELVES
19. CUSTOM BUILT-IN LINEN CABINET - SEE INTERIOR ELEVATIONS
20. DRYWALLED NICHE - SEE INTERIOR ELEVATIONS
21. CUSTOM BUILT-IN WINE CABINET (FINAL DESIGN by OWNER)
22. PRE-MANUFACTURED GOLF SIMULATOR - INSTALL per MANUF. SPECIFICATIONS (FINAL DESIGN by OWNER)
23. SLOPED PONY WALL at STAIRCASE - SEE INTERIOR ELEVATIONS
24. LINE of FLOOR ABOVE
25. LINE of WALL BELOW
26. LINE of ROOF BELOW
27. 4" THICK CONCRETE SLABS for A/C CONDENSING UNIT - VERIFY LOCATION - PROVIDE a 30"x36" CLEAR WORK SPACE IN FRONT of EACH CONDENSER per E3405
28. CUSTOM OUTDOOR KITCHEN by OTHERS
29. EXTERIOR HOOD o/ OUTDOOR KITCHEN by OTHERS

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R1005.8 Insulation shield.
Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L MECHANICAL CODE REQUIREMENTS:

307.2.4.1 Ductless mini-split system traps.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain lone, or a trap.

2018 INT'L PLUMBING CODE REQUIREMENTS:

308.10 Thermal expansion tanks.
A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

01 DOOR TAG
REFER to SHEET A3.4 for ADDITIONAL INFORMATION

A WINDOW TAG
REFER to SHEET A3.5 for ADDITIONAL INFORMATION

NOTE: USE 90 DEGREE CORNER BEAD at ALL DRYWALL CORNERS THROUGHOUT

SQUARE FOOTAGE

MAIN LEVEL LIVABLE	3,751 SQ. FT.1
BASEMENT LIVABLE	1,367 SQ. FT.
TOTAL LIVABLE AREA	5,118 SQ. FT.
GARAGE	2,546 SQ. FT.
COVERED ENTRY	151 SQ. FT.
COVERED PATIO'S	1,335 SQ. FT.
ENCLOSED DECKS	400 SQ. FT.
COVERED DECKS	143 SQ. FT.
MECH. ROOM	36 SQ. FT.
TOTAL UNDER ROOF	9,729 SQ. FT.

WALL LEGEND

- 2x6 WOOD STUDS - SPACING per STRUCT'L CALCS. - FRAME to WIDTH NOTED
- 2x4 WOOD STUDS at 16" O.C.
- 2x6 WOOD STUDS at 16" O.C. w/ ⅝" THK. TYPE 'X' WATER RESISTENT GYPSUM BOARD on ONE SIDE (PLUMBING WALL)

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◆ LOWER LEVEL FLOOR PLAN

REVISIONS:
1
2
3

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
SHEET: A2.0	

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LOWER LEVEL FLOOR PLAN
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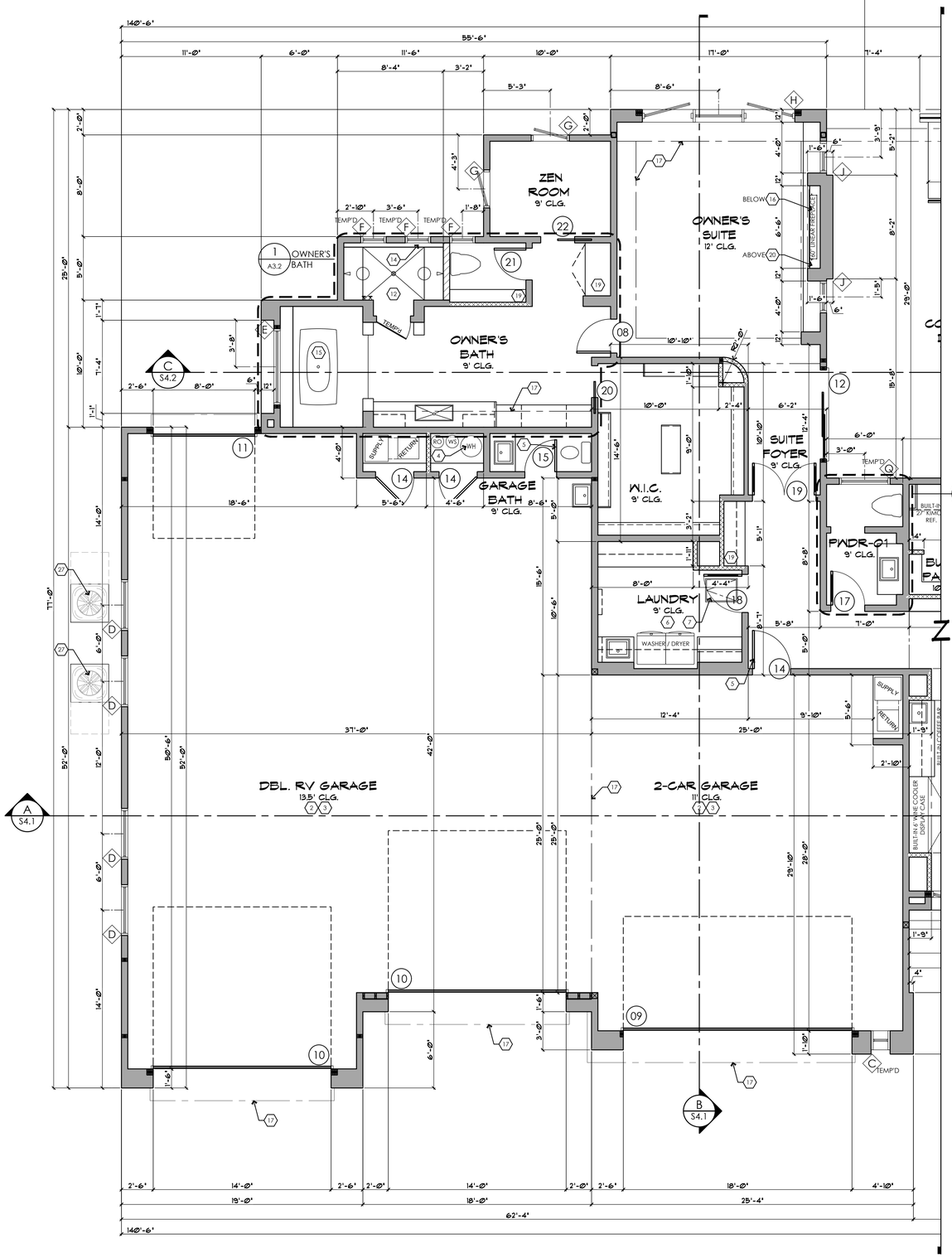
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REFER to SHEET A3.4 for ADDITIONAL INFORMATION

A WINDOW TAG
REFER to SHEET A3.5 for ADDITIONAL INFORMATION

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   R807.1Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m2). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

   The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other location with ready access. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.
8. WOOD FRAMED STAIRS per IRC SECTIONS R311.7.5.1 (FINAL DESIGN by OWNER)
   R311.7.5.1 Risers.
   The riser height shall be not more than 7¾". The riser shall be measured vertically between leading edges of the adjacent treads. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter.
   R311.7.5.2 Treads.
   The tread depth shall be not less than 10 inches. 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 tread's leading edge.
9. PROVIDE 1½" DIAMETER HANDRAIL per IRC SECTIONS R311.7.8.3 (FINAL DESIGN by OWNER
   R311.7.8.1 Height.
   Handrail height, measured vertically not less than 34 inches and not more than 38 inches.
   R311.7.8.4 Continuity.
   Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
10. STORAGE BENEATH STAIRCASE
    R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side w/ ½" gypsum board.
11. 36" HIGH (MIN.) GUARD RAIL per IRC R312.1 (FINAL DESIGN by OWNER)
    R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches in diameter.
12. TILED SHOWER w/ TILED SEAT
13. NOT USED.
14. 36" HIGH WOOD FRAMED TILED WALL at SHOWER - SEE INTERIOR ELEVATIONS
15. PREFABRICATED ACRYLIC TUB (per OWNER SELECTION) - INSTALL per MANUFACTURER SPECIFICATIONS. PROVIDE ACCESS PANEL to PUMP and GFCI PROTECTION as REQUIRED.
16. '0' CLEARANCE GAS FIREPLACE APPLIANCE (SEE INT. ELEVATIONS for HEIGHT). INSTALL per MANUF. SPECS. PROVIDE INSTALLATION INSTRUCTIONS to INSPECTOR. EXTERIOR FIREPLACES SHALL BE RATED for OUTDOOR USE.
17. LINE of SOFFIT ABOVE - SEE REFLECTED CEILING PLAN
18. (5) EQUALLY SPACED SHELVES
19. CUSTOM BUILT-IN LINEN CABINET - SEE INTERIOR ELEVATIONS
20. DRYWALLED NICHE - SEE INTERIOR ELEVATIONS
21. CUSTOM BUILT-IN WINE CABINET (FINAL DESIGN by OWNER)
22. PRE-MANUFACTURED GOLF SIMULATOR - INSTALL per MANUF. SPECIFICATIONS (FINAL DESIGN by OWNER)
23. SLOPED PONY WALL at STAIRCASE - SEE INTERIOR ELEVATIONS
24. LINE of FLOOR ABOVE
25. LINE of WALL BELOW
26. LINE of ROOF BELOW
27. 4" THICK CONCRETE SLABS for A/C CONDENSING UNIT - VERIFY LOCATION - PROVIDE a 30"x26" CLEAR WORK SPACE IN FRONT of EACH CONDENSER per E3405
28. CUSTOM OUTDOOR KITCHEN by OTHERS
29. EXTERIOR HOOD o/ OUTDOOR KITCHEN by OTHERS

FLOOR PLAN (LEFT SIDE)
SCALE: 1/4" = 1'-0"

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

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• THE CONTRACTOR ON THE JOB SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

◆MAIN LEVEL
◆FLOOR PLAN - LEFT SIDE

REVISIONS:
1.
2.
3.

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
SHEET: A2.1L	

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2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R1005.8 Insulation shield.
Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L MECHANICAL CODE REQUIREMENTS:

307.2.4.1 Ductless mini-split system traps.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain lone, or a trap.

2018 INT'L PLUMBING CODE REQUIREMENTS:

308.10 Thermal expansion tanks.
A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

NOTE: USE 90 DEGREE CORNER BEAD at ALL DRYWALL CORNERS THROUGHOUT

01 DOOR TAG
REFER to SHEET A3.4 for ADDITIONAL INFORMATION

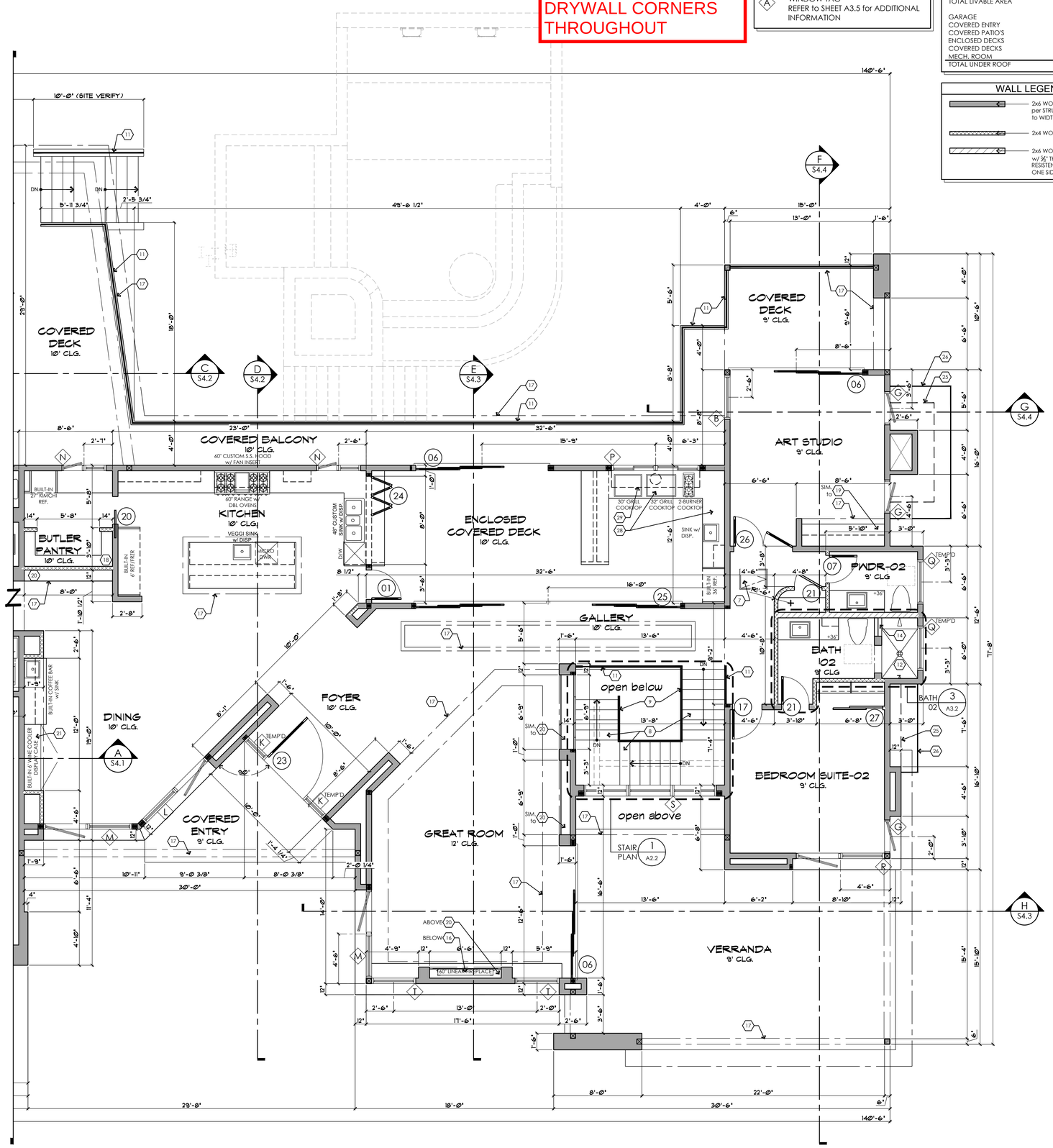
A WINDOW TAG
REFER to SHEET A3.5 for ADDITIONAL INFORMATION

SQUARE FOOTAGE

MAIN LEVEL LIVABLE	3,751 SQ. FT.1
BASEMENT LIVABLE	1,367 SQ. FT.
TOTAL LIVABLE AREA	5,118 SQ. FT.
GARAGE	2,546 SQ. FT.
COVERED ENTRY	151 SQ. FT.
COVERED PATIO'S	1,335 SQ. FT.
ENCLOSED DECKS	400 SQ. FT.
COVERED DECKS	143 SQ. FT.
MECH. ROOM	36 SQ. FT.
TOTAL UNDER ROOF	9,729 SQ. FT.

WALL LEGEND

- 2x6 WOOD STUDS - SPACING per STRUCTL CALCS. - FRAME to WIDTH NOTED
- 2x4 WOOD STUDS at 16" O.C.
- 2x6 WOOD STUDS at 16" O.C. w/ ⅝" THK. TYPE 'X' WATER RESISTENT GYPSUM BOARD on ONE SIDE (PLUMBING WALL)



FLOOR PLAN (RIGHT SIDE)
SCALE: 1/4" = 1'-0"

KEYNOTE LEGEND
NOT ALL KEYNOTES USED ON THIS LEVEL

1. MASONRY RETAINING WALL per STRUCTURAL DRAWINGS
2. GARAGE CEILING, WALLS, and ALL STRUCTURAL MEMBERS SHALL HAVE ⅝" TYPE 'X' GYPSUM BOARD (TYPICAL)
3. PENETRATION BY MECHANICAL, ELECTRICAL, and PLUMBING CONSTRUCTION of FIRE RESISTIVE WALLS SHALL COMPLY w/ IRC SECTION R302
4. PROVIDE RECIRCULATING PUMP for EACH WATER HEATER (INSTALLED per MFG SPECS) on 18" HIGH WOOD FRAMED PLATFORM w/ 1/2" MINIMUM 'GREEN' GYPSUM BOARD and BARRIER PROTECTION. PROVIDE EXPANSION TANK as REQUIRED. (RUN T&P DIRECTLY TO THE OUTSIDE)
5. SELF CLOSING & LATCHING 1 3/4" THICK SOLID CORE DOOR or 20 MINUTE FIRE-RATED DOOR REQUIRED BETWEEN RESIDENCE and GARAGE PER IRC SECTION R302.5.1.
   R302.5.1Opening protection. 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 1⅜ inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1⅜ inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a self-closing or automatic-closing device.
6. PROVIDE 100 SQ. IN. MAKE-UP AIR OPENING FOR DRYER EXHAUST ABOVE DOOR
7. 22"x30" ATTIC ACCESS PER IRC R807 w/ (2) LAYERS of TYPE 'X' GYP. BOARD
   R807.1Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m2). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.
   The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other location with ready access. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.
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   R311.7.5.1 Risers.
   The riser height shall be not more than 7¾". The riser shall be measured vertically between leading edges of the adjacent treads. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter.
   R311.7.5.2 Treads.
   The tread depth shall be not less than 10 inches. 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 tread's leading edge.
9. PROVIDE 1½" DIAMETER HANDRAIL per IRC SECTIONS R311.7.8.3 (FINAL DESIGN by OWNER
   R311.7.8.1 Height.
   Handrail height, measured vertically not less than 34 inches and not more than 38 inches.
   R311.7.8.4 Continuity.
   Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
10. STORAGE BENEATH STAIRCASE
    R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side w/ ⅝" gypsum board.
11. 36" HIGH (MIN.) GUARD RAIL per IRC R312.1 (FINAL DESIGN by OWNER)
    R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches in diameter.
12. TILED SHOWER w/ TILED SEAT
13. NOT USED.
14. 36" HIGH WOOD FRAMED TILED WALL at SHOWER - SEE INTERIOR ELEVATIONS
15. PREFABRICATED ACRYLIC TUB (per OWNER SELECTION) - INSTALL per MANUFACTURER SPECIFICATIONS. PROVIDE ACCESS PANEL to PUMP and GFCI PROTECTION as REQUIRED.
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17. LINE of SOFFIT ABOVE - SEE REFLECTED CEILING PLAN
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19. CUSTOM BUILT-IN LINEN CABINET - SEE INTERIOR ELEVATIONS
20. DRYWALLED NICHE - SEE INTERIOR ELEVATIONS
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24. LINE of FLOOR ABOVE
25. LINE of WALL BELOW
26. LINE of ROOF BELOW
27. 4" THICK CONCRETE SLABS for A/C CONDENSING UNIT - VERIFY LOCATION - PROVIDE a 30"x36" CLEAR WORK SPACE IN FRONT of EACH CONDENSER per E3405
28. CUSTOM OUTDOOR KITCHEN by OTHERS
29. EXTERIOR HOOD o/ OUTDOOR KITCHEN by OTHERS

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◆MAIN LEVEL
◆FLOOR PLAN - RIGHT SIDE

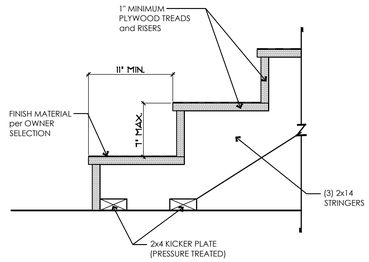
REVISIONS:

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	

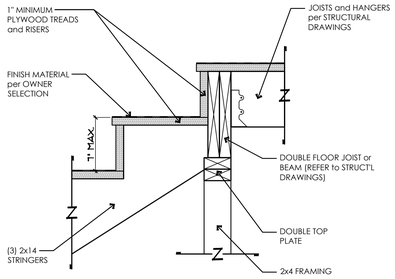
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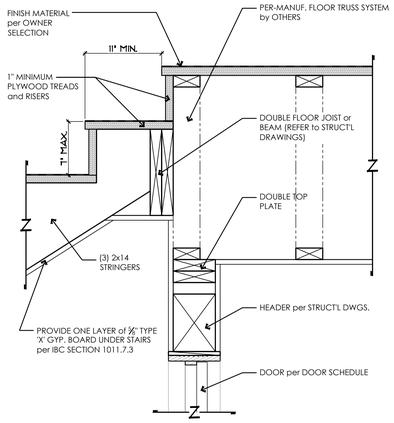
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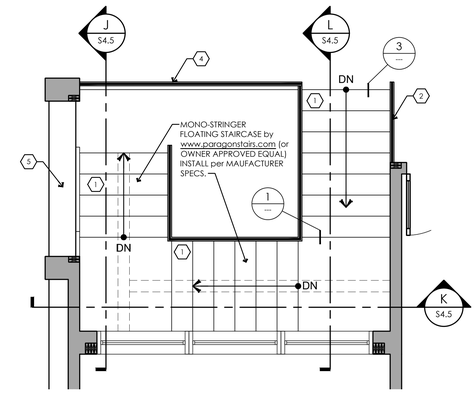
1 STAIRS at LOWER LEVEL
NOT to SCALE



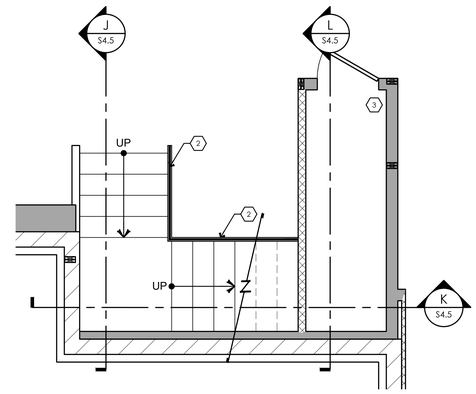
2 STAIRS at MID-LEVEL LANDING
NOT to SCALE



3 STAIRS at UPPER LEVEL LANDING
NOT to SCALE



1 MAIN LEVEL STAIR PLAN
SCALE: 3/8" = 1'-0"



2 LOWER LEVEL STAIR PLAN
SCALE: 3/8" = 1'-0"

KEYNOTE LEGEND
NOT ALL KEYNOTES USED ON THIS LEVEL

1. WOOD FRAMED STAIRS per IRC SECTIONS R311.7.5.1 (FINAL DESIGN by OWNER)
   R311.7.5.1 Risers.
   The riser height shall be not more than 7¾". The riser shall be measured vertically between leading edges of the adjacent treads. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter.
   R311.7.5.2 Treads.
   The tread depth shall be not less than 11 inches. 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 tread's leading edge.
2. PROVIDE ½" DIAMETER HANDRAIL per IRC SECTIONS R311.7.8.3 (FINAL DESIGN by OWNER
   R311.7.8.1 Height.
   Handrail height, measured vertically not less than 34 inches and not more than 38 inches.
   R311.7.8.4 Continuity.
   Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
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4. 36" HIGH (MIN.) GUARD RAIL per IRC R312.1 (FINAL DESIGN by OWNER)
   R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches in diameter.
5. DRYWALLED NICHE per BUILDING SECTION (FINAL DESIGN by OWNER)

WALL LEGEND

- 2x6 WOOD STUDS - SPACING per STRUCT'L CALCS. - FRAME to WIDTH NOTED
- 2x4 WOOD STUDS at 16" O.C.
- 2x6 WOOD STUDS at 16" O.C. w/ ⅝" THK. TYPE 'X' WATER RESISTENT GYPSUM BOARD on ONE SIDE (PLUMBING WALL)

NOTE: USE 90 DEGREE CORNER BEAD at ALL DRYWALL CORNERS THROUGHOUT

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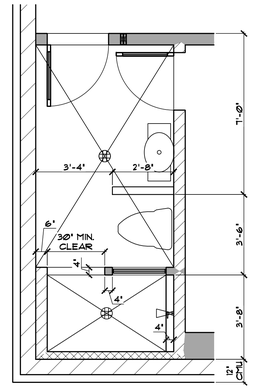
◆STAIRWAY PLANS

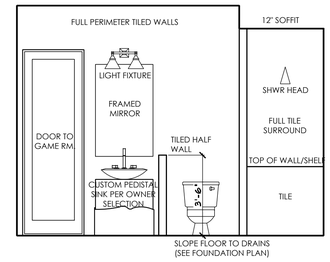
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SCALE: 3/8" = 1'-0"	JOB #: 2024-04
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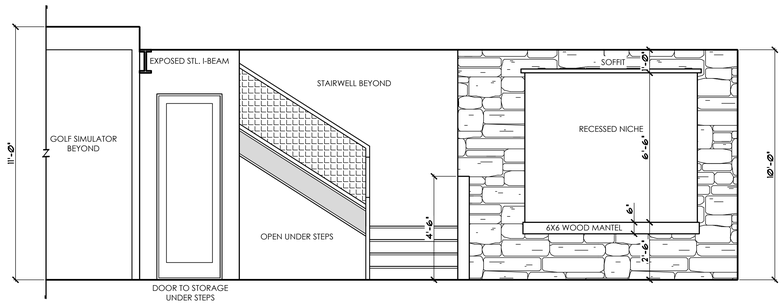
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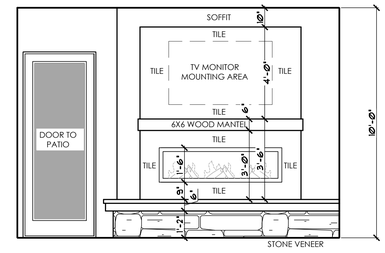


B POOL BATH

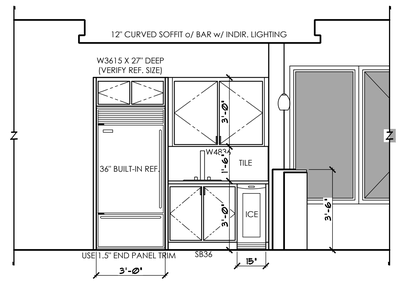
1 ENLARGED FLOOR PLAN - POOL BATH
SCALE: 3/8" = 1'-0"



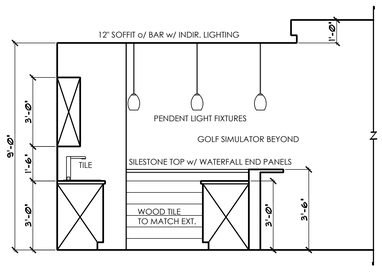
C GAME ROOM / STAIRWELL WALL



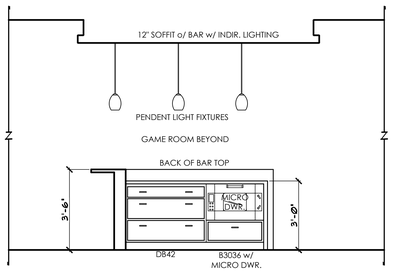
A BAR ROOM / FIREPLACE / MEDIA



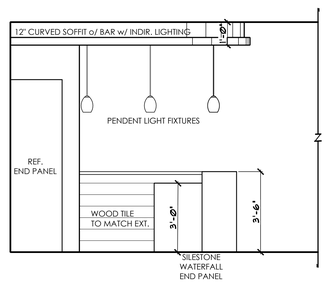
B LOWER LEVEL BAR



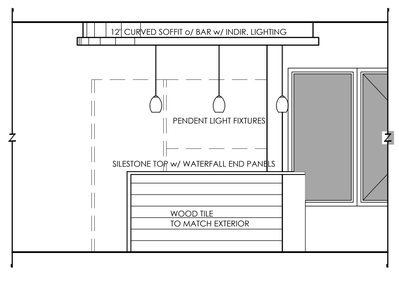
C LOWER LEVEL BAR



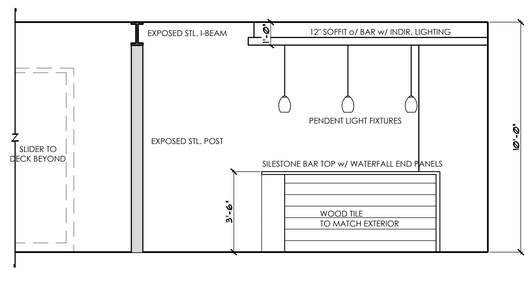
D LOWER LEVEL BAR



C LOWER LEVEL BAR



B LOWER LEVEL BAR



A LOWER LEVEL BAR

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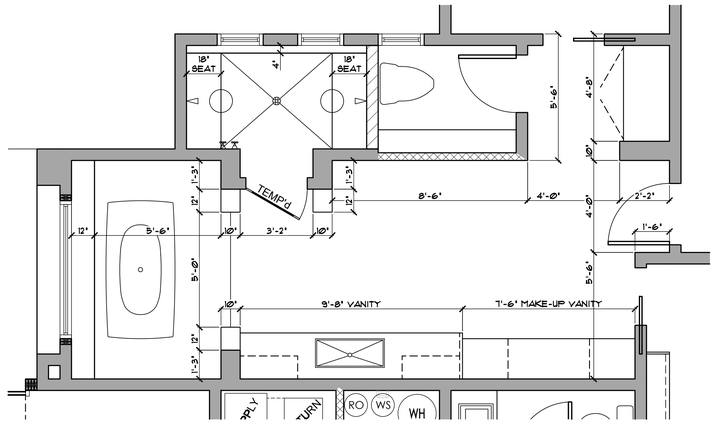
◆LOWER LEVEL ENLARGED FLOOR
◆PLANS and INTERIOR ELEVATIONS

REVISIONS:
1
2
3

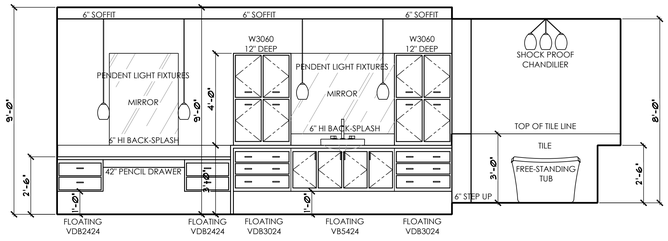
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JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.
CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024
SHEET A3.1

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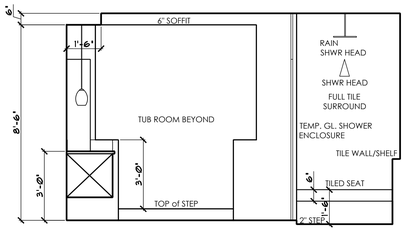
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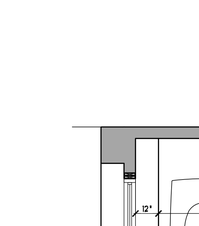
1 ENLARGED FLOOR PLAN - OWNER'S BATH
SCALE: 3/8" = 1'-0"



C OWNER'S BATH



D OWNER'S BATH

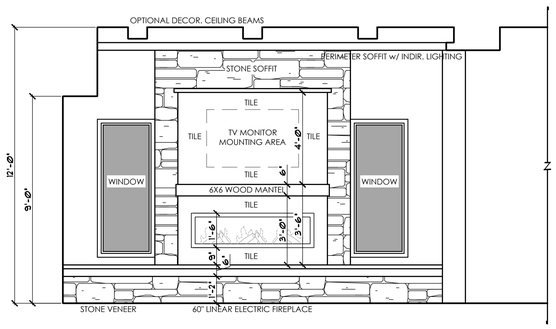


A OWNER'S BATH SHWR.

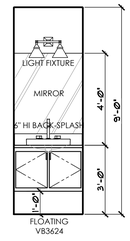
C OWNER'S BATH SHWR.

B OWNER'S BATH LINEN

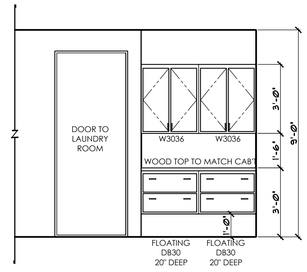
C OWNER'S TOILET



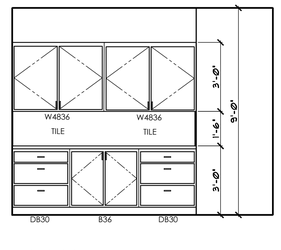
B OWNER'S SUITE



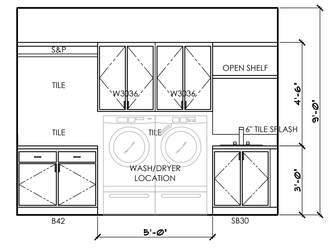
C GARAGE BATH



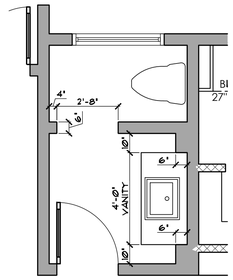
D HALL LINEN 01

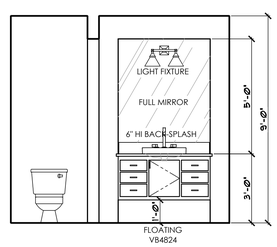


A LAUNDRY

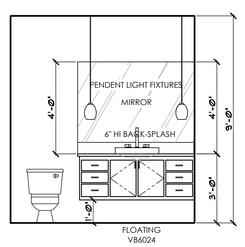


C LAUNDRY



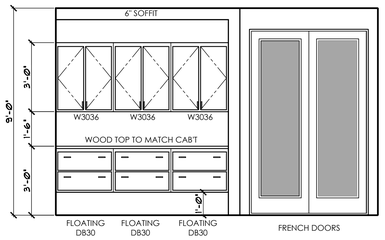


B POWDER-01

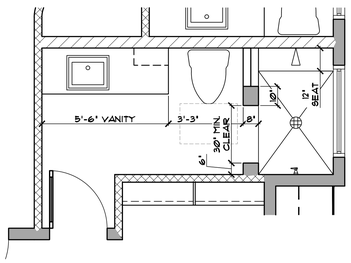


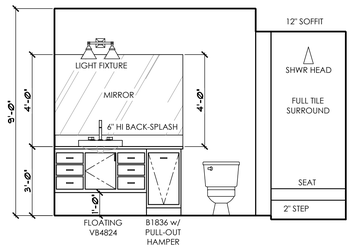
C POWDER-02

2 ENLARGED FLOOR PLAN - POWDER 01
SCALE: 3/8" = 1'-0"

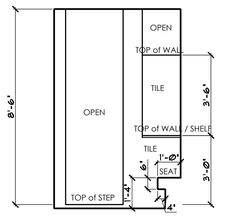


C ART STUDIO





A BATH-02



D BATH 02 SHOWER

3 ENLARGED FLOOR PLAN - BATH 02
SCALE: 3/8" = 1'-0"

NOTE: USE 90 DEGREE CORNER BEAD at ALL DRYWALL CORNERS THROUGHOUT

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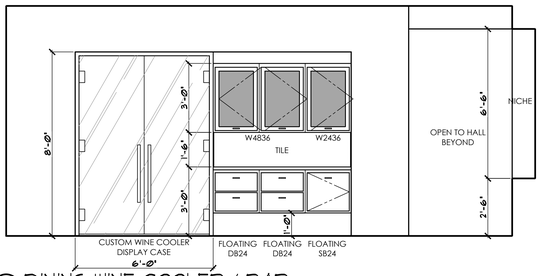
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◆MAIN LEVEL ENLARGED FLOOR
◆PLANS and INTERIOR ELEVATIONS

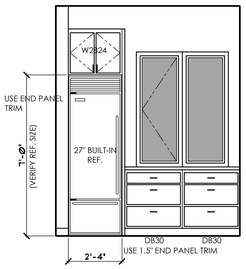
REVISIONS:
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SCALE: 3/8" = 1'-0"
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DRAWN: S.L.Z./S.I.Z.
CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024
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A3.2

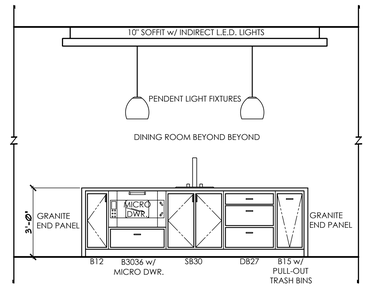
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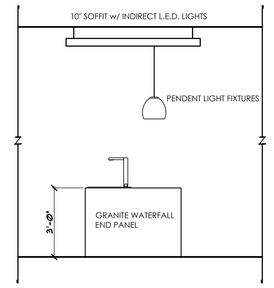
D DINING WINE COOLER / BAR



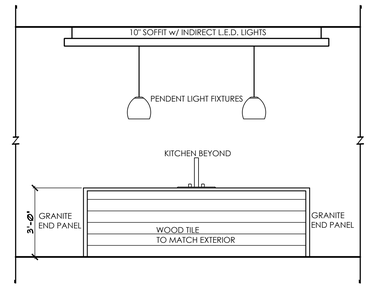
A BUTLER PANTRY



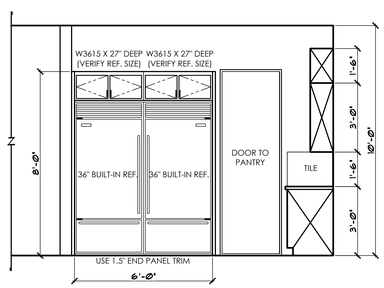
A KITCHEN ISLAND



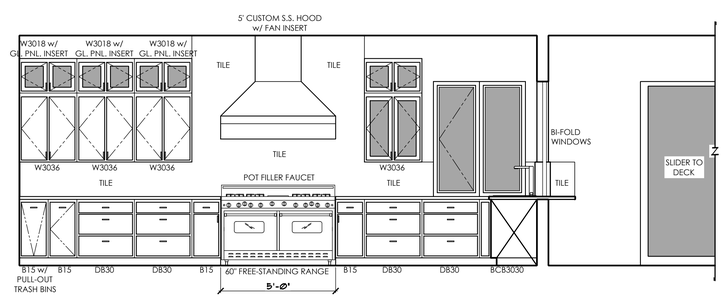
BD KITCHEN ISLAND
(OPPOSTIE END SIM.)



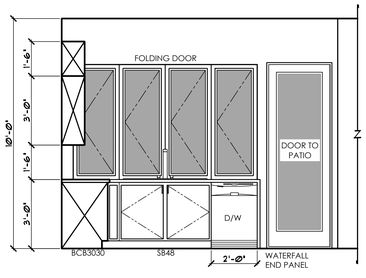
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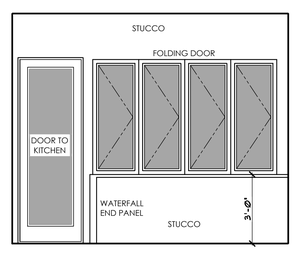
D KITCHEN



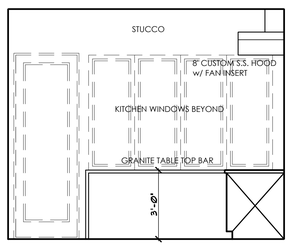
A KITCHEN



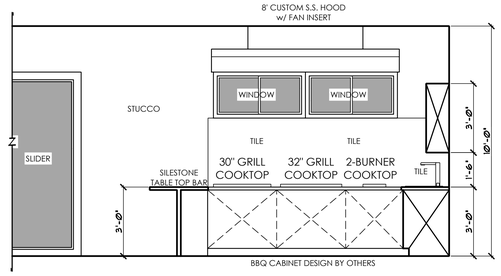
B KITCHEN



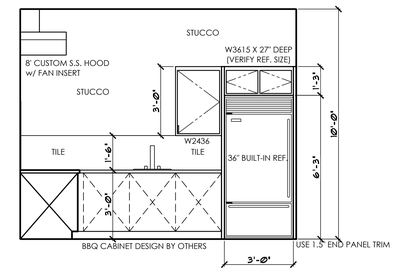
D ENCLOSED DECK



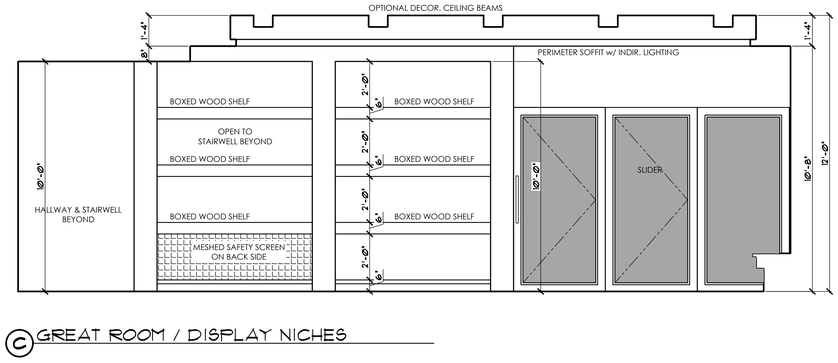
D ENCLOSED DECK KITCHEN/BBQ



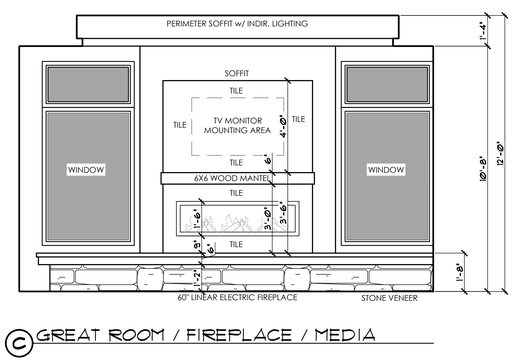
A ENCLOSED DECK KITCHEN/BBQ



B ENCLOSED DECK KITCHEN/BBQ



C GREAT ROOM / DISPLAY NICHES



C GREAT ROOM / FIREPLACE / MEDIA

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CONTRACTOR:

zettel group inc.
CUSTOM DESIGN AND PLANNING
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◆MAIN LEVEL INTERIOR ELEVATIONS

REVISIONS:
△
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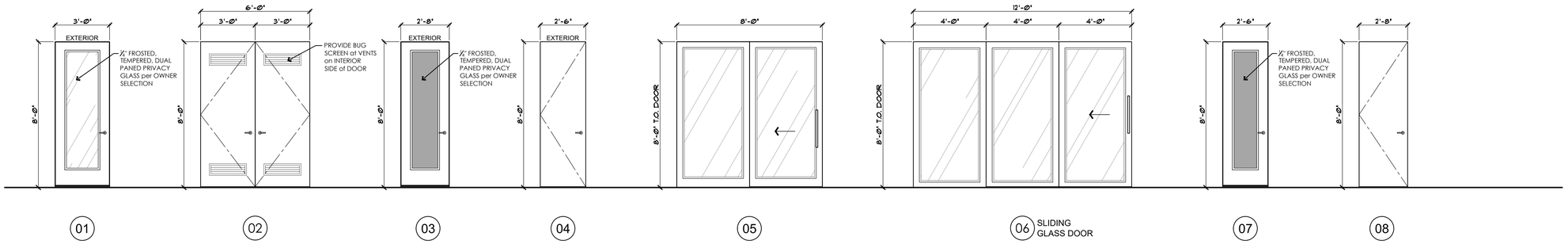
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DATE: 05 NOVEMBER 2024
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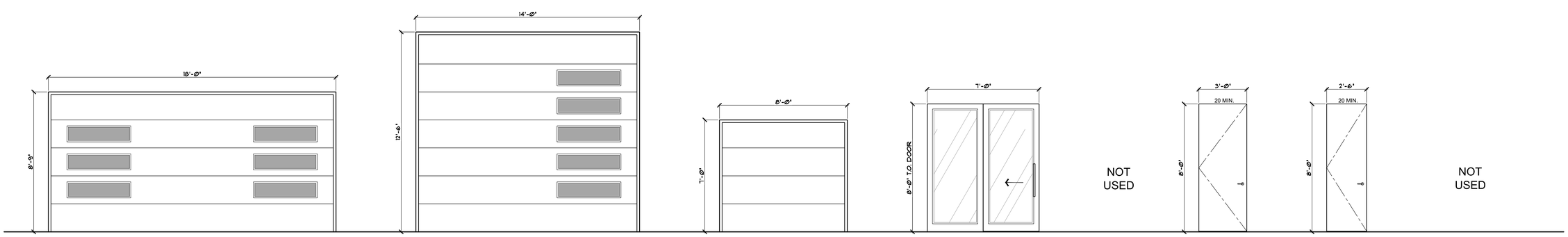
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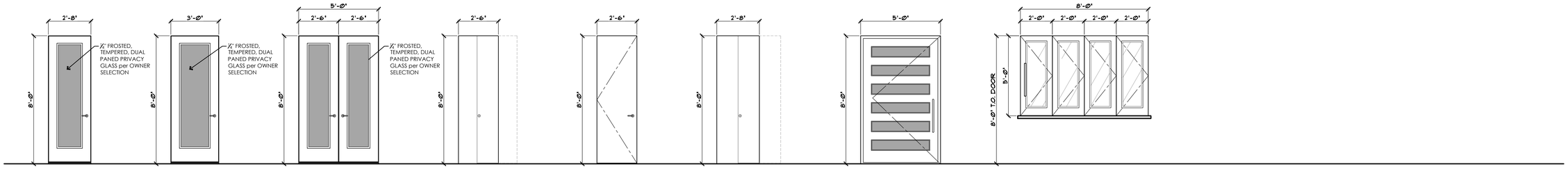
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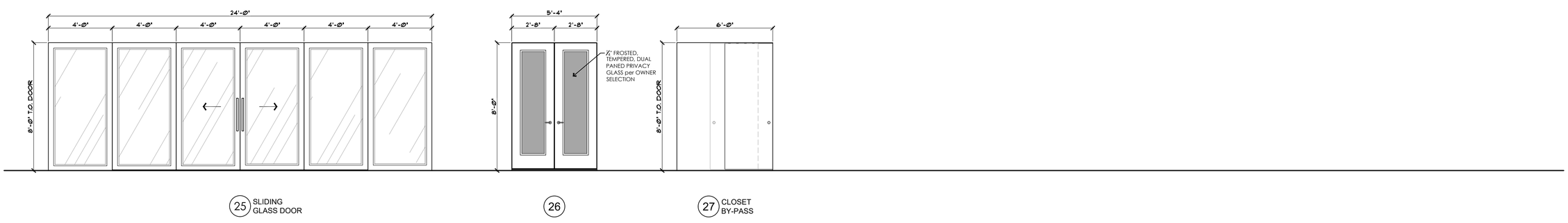
DOOR NOTES:

1. ALL INTERIOR DOORS TO BE SOLID CORE MASONITE WITH WOOD FRAMES. VERIFY FINISH WITH OWNER.
2. INTERIOR DOORS TO HAVE ADJUSTABLE ANCHORS - 3 PER JAMB. EXTERIOR DOORS SHALL HAVE 3 COUNTERSUNK HOLES PER JAMB FOR SCREW CONNECTION TO WOOD STUDS.









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DOOR DETAILS

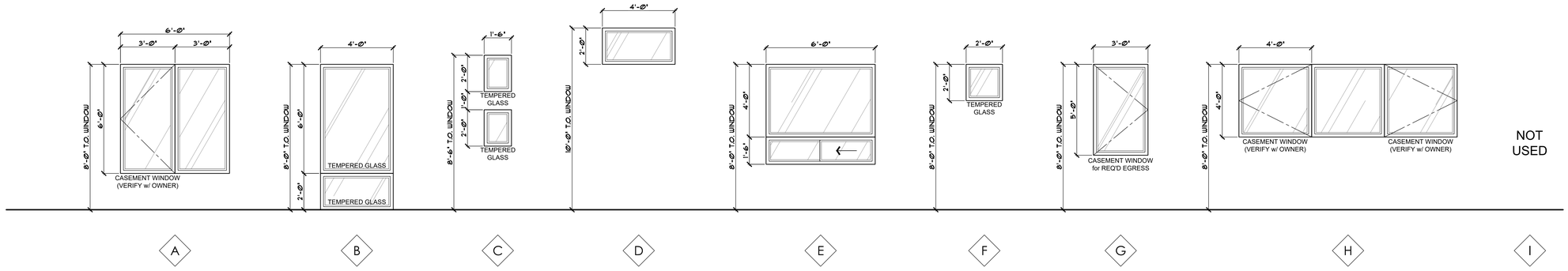
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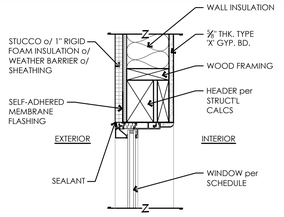
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DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 28 JANUARY 2025	
SHEET: A3.4	

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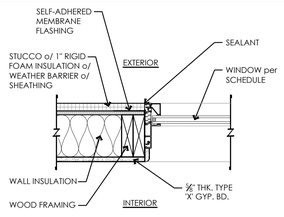
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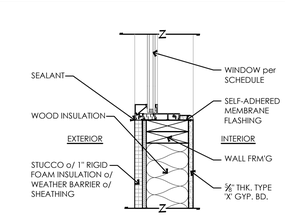




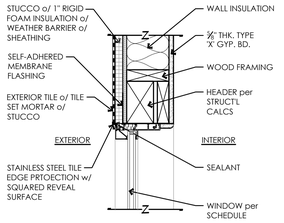
1 WINDOW HEAD - STUCCO
SCALE: 1-1/2" = 1'-Ø"



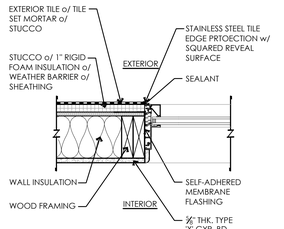
2 WINDOW JAMB - STUCCO
SCALE: 1-1/2" = 1'-Ø"



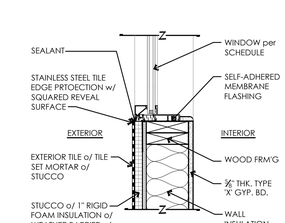
3 WINDOW SILL - STUCCO
SCALE: 1-1/2" = 1'-Ø"



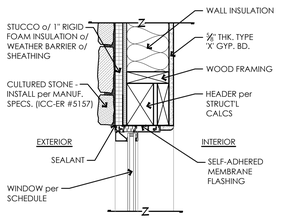
4 WINDOW HEAD - TILE
SCALE: 1-1/2" = 1'-Ø"



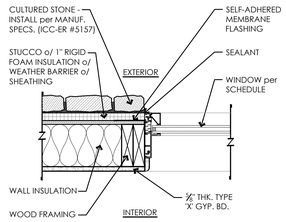
5 WINDOW JAMB - TILE
SCALE: 1-1/2" = 1'-Ø"



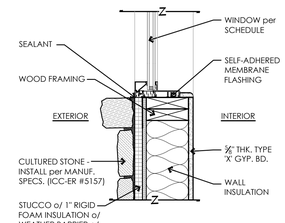
6 WINDOW SILL - TILE
SCALE: 1-1/2" = 1'-Ø"



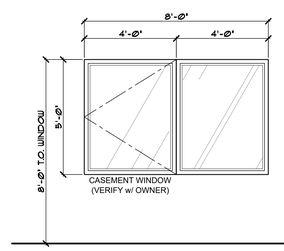
7 WINDOW HEAD - STONE
SCALE: 1-1/2" = 1'-Ø"



8 WINDOW JAMB - STONE
SCALE: 1-1/2" = 1'-Ø"



9 WINDOW SILL - STONE
SCALE: 1-1/2" = 1'-Ø"



WINDOW NOTES:

1. ALL GLASS SHALL BE DUO-GLAZED BRONZE TINT w/ ½" AIRSPACE SEPARATION on BRONZE FINISH ALUMINUM FRAMES (UNLESS NOTED OTHERWISE).
2. ALL GLASS DOORS SHALL HAVE TEMPERED SAFETY GLAZING GLASS. TYPE and THICKNESS to COMPLY w/ IRC SECTION R308.4.
3. ALL WINDOWS or GLAZING WITHIN 24" of a DOOR MUST BE TEMPERED.
4. SHOWER DOOR and GLASS ENCLOSURES MUST BE TEMPERED.
5. ALL WINDOWS WITHIN SHOWERS and TUB AREAS MUST COMPLY w/ IRC SECTION R308.4 and R308.9.
6. GLASS BLOCK SHALL BE INSTALLED per IRC R610.

NOTE:
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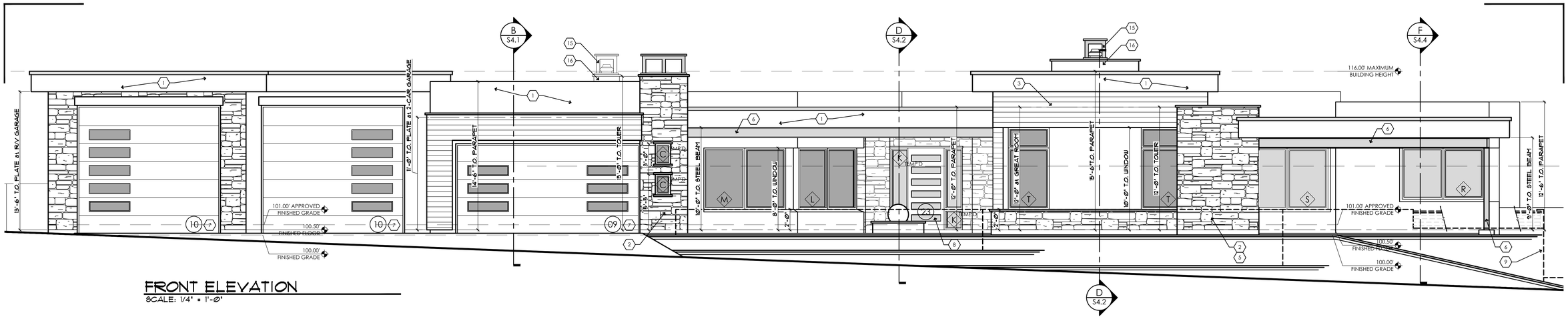
◆ WINDOW DETAILS

REVISIONS:
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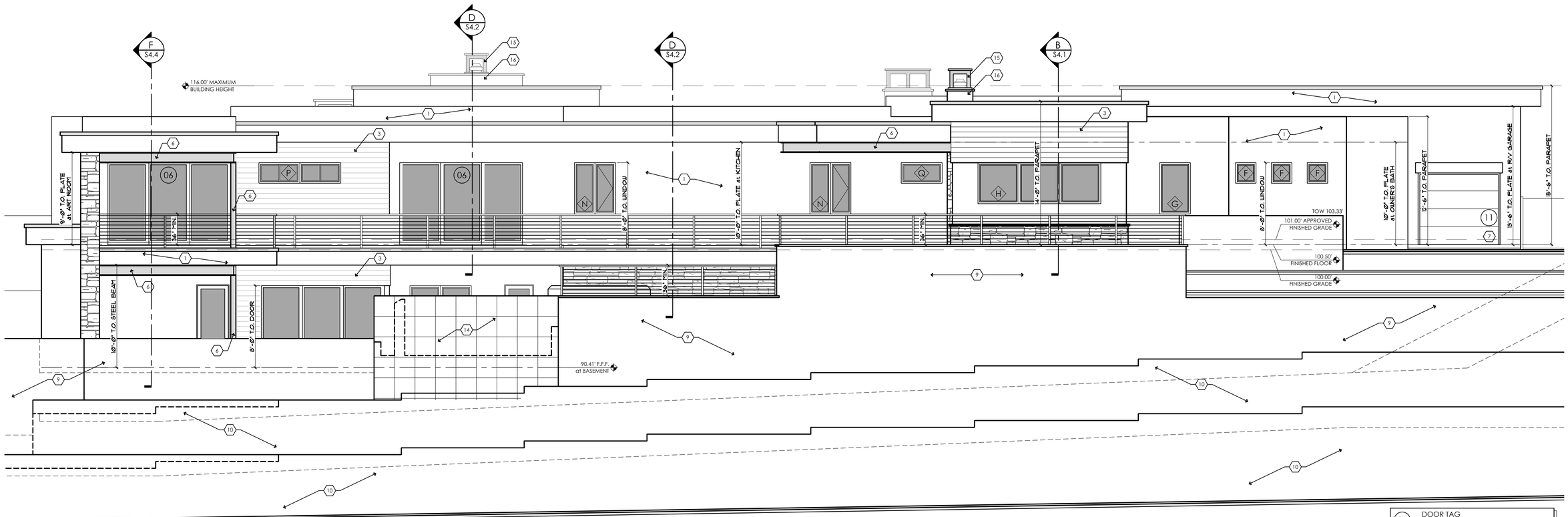
SCALE: AS NOTED	JOB #: 2024-04
DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 25 JANUARY 2024	
SHEET: A3.5	

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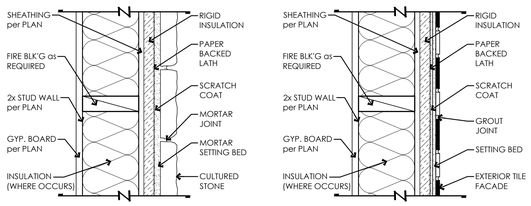
FRONT ELEVATION
SCALE: 1/4" = 1'-0"



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

01 DOOR TAG
REFER to SHEET A3.4 for ADDITIONAL INFORMATION

A WINDOW TAG
REFER to SHEET A3.5 for ADDITIONAL INFORMATION



CULTURED STONE INSTALLATION DETAIL
NOT TO SCALE

EXTERIOR TILE FACADE INSTALLATION DETAIL
NOT TO SCALE

KEYNOTE LEGEND

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5. WOOD FRAMED and STUCCO WRAPPED COLUMN
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13. NOT USED.
14. CUSTOM POOL and SPA w/ WATER FALL per POOL DESIGN and OWNER SELECTION (UNDER SEPARATE PERMIT)
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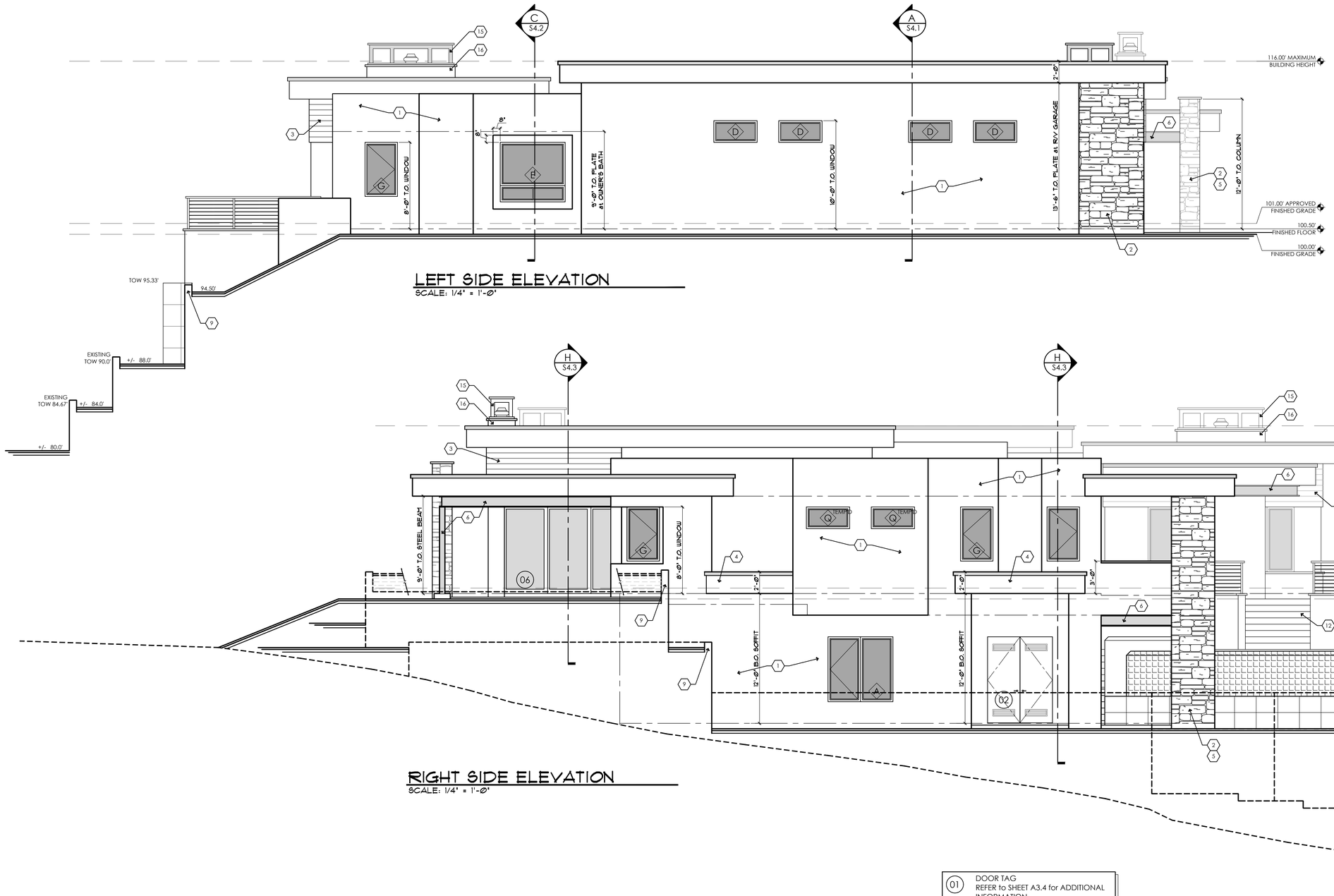
EXTERIOR ELEVATIONS

REVISIONS:
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SCALE: 1/4" = 1'-0"
JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.
CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024
SHEET: A4.1

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LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

01 DOOR TAG
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A WINDOW TAG
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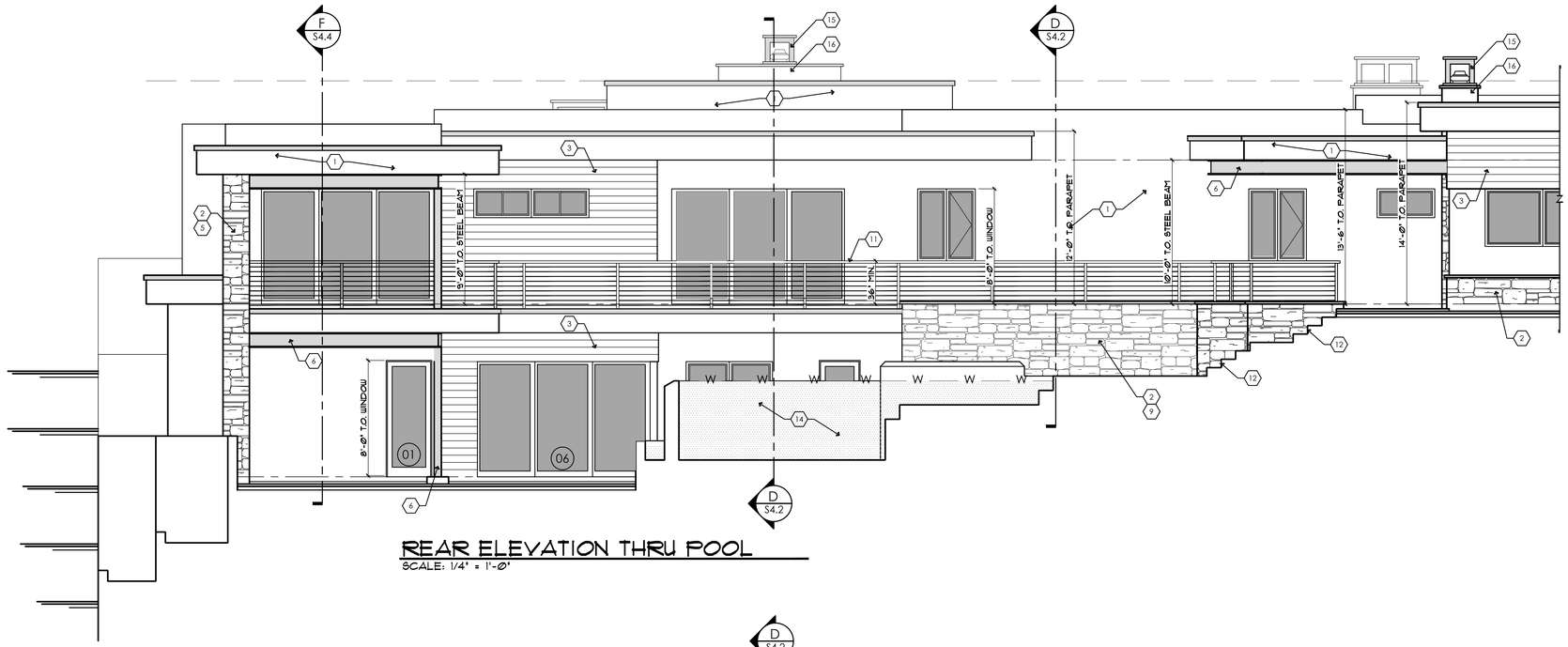
◆EXTERIOR ELEVATIONS

REVISIONS:
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SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
SHEET: A4.2	

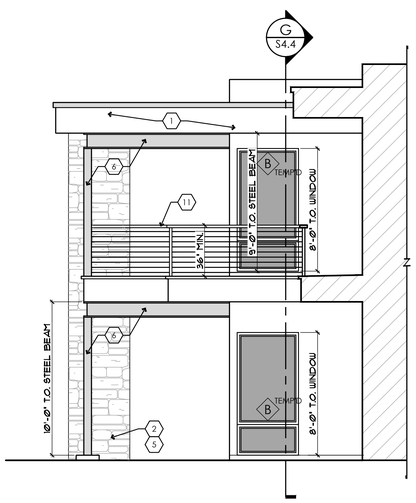
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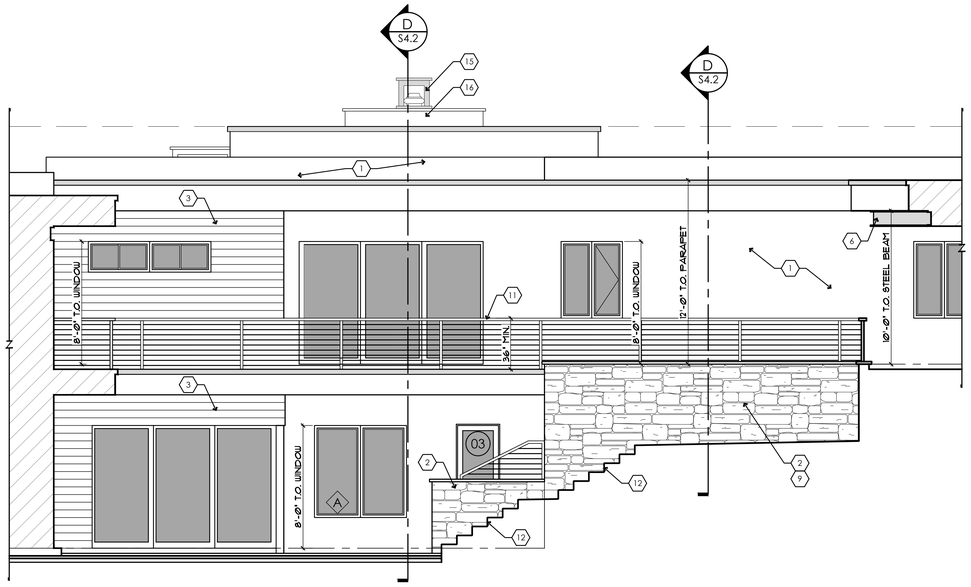
REAR ELEVATION THRU POOL

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



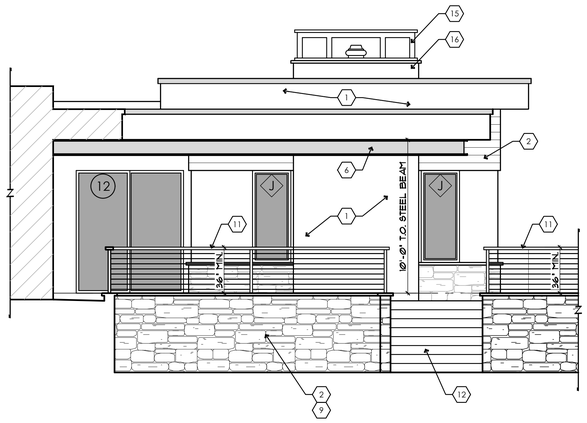
COURTYARD at LOWER LEVEL

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



REAR ELEVATION THRU STEPS

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



ELEVATION at MASTER SUITE

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

(01) DOOR TAG
REFER to SHEET A3.4 for ADDITIONAL INFORMATION

(A) WINDOW TAG
REFER to SHEET A3.5 for ADDITIONAL INFORMATION

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◆EXTERIOR ELEVATIONS◆

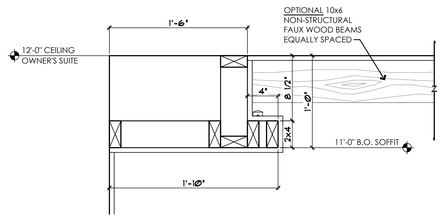
REVISIONS:

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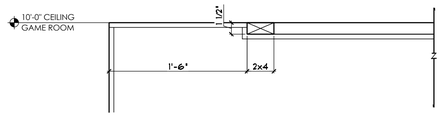
SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
SHEET: A4.3	

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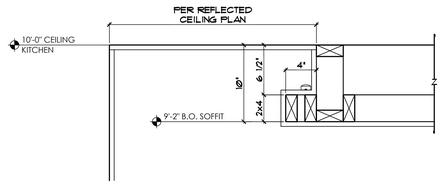
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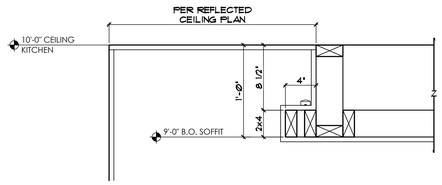
1 SOFFIT at OWNER'S SUITE
NOT to SCALE



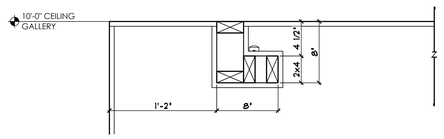
5 SOFFIT at GAME ROOM
NOT to SCALE



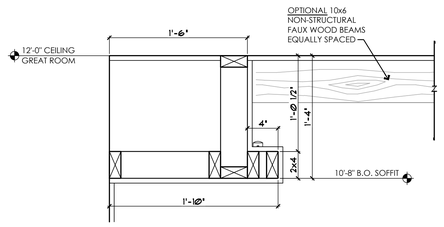
2 SOFFIT at KITCHEN ISLAND
NOT to SCALE



6 SOFFIT at BAR ROOM
NOT to SCALE



3 SOFFIT at GALLERY
NOT to SCALE



4 SOFFIT at GREAT ROOM
NOT to SCALE

NOTE: USE 90 DEGREE CORNER BEAD at ALL DRYWALL CORNERS THROUGHOUT

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

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NOTE:
REFER to SHEET A6.2 for ADDITIONAL ELECTRICAL, MECHANICAL and PLUMBING REQUIREMENTS

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

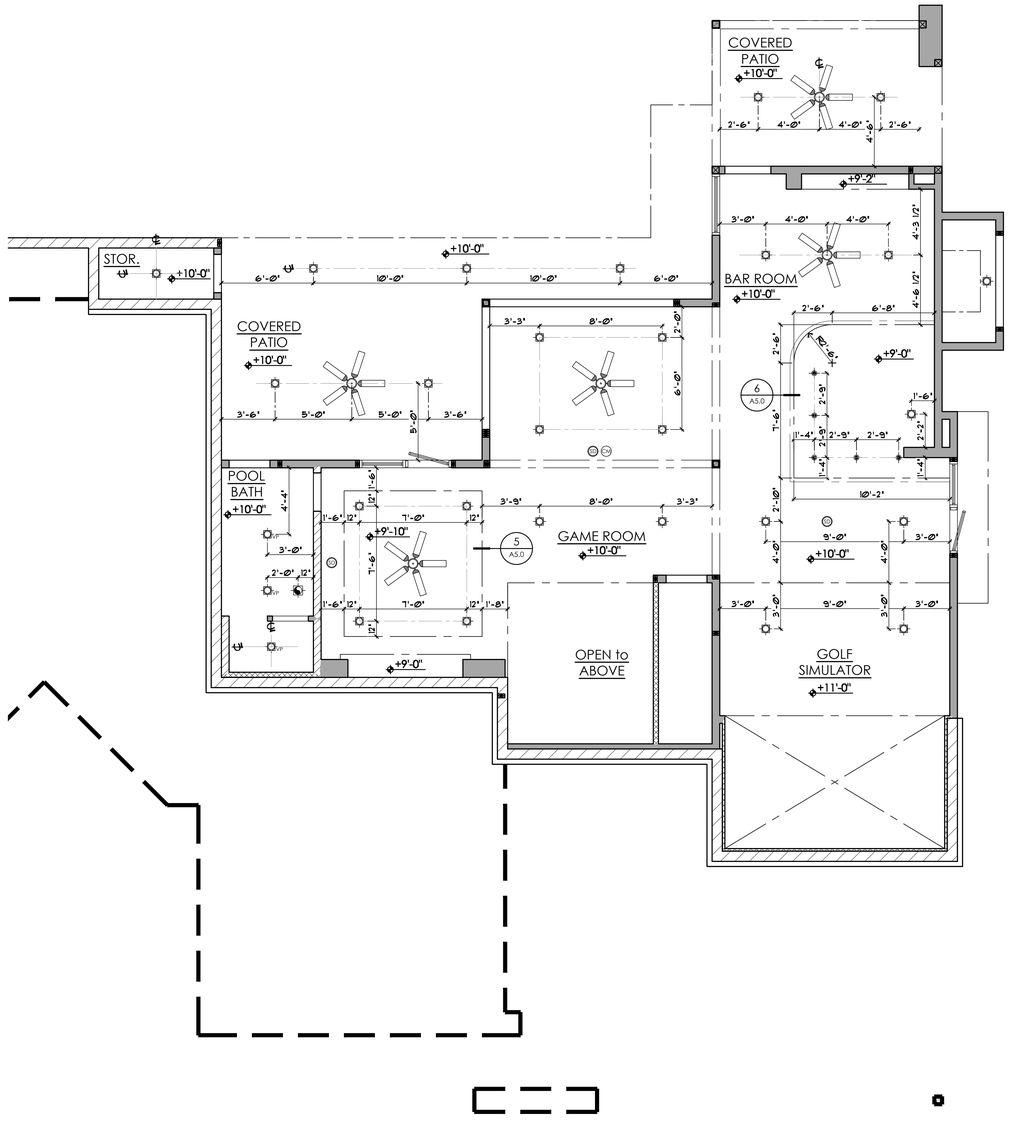
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- PENDANT LIGHT FIXTURE
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- CEILING FAN
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- CM — CARBON MONOXIDE DETECTOR



LOWER LEVEL REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

NOTE:
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CONTRACTOR:

PROJECT:
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◆LOWER LEVEL
◆REFLECTED CEILING PLAN

REVISIONS:
1
2
3

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
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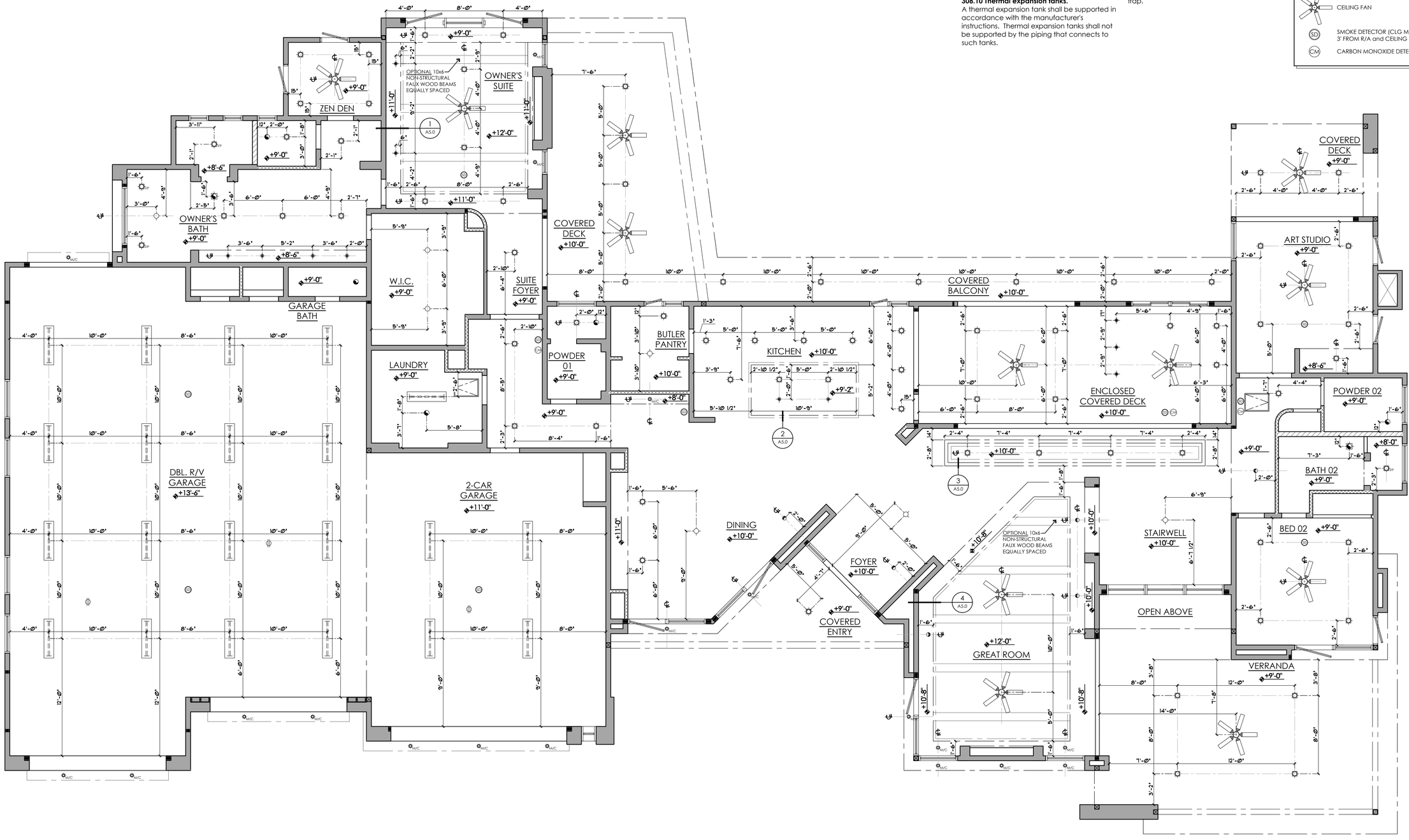
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REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

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◆MAIN LEVEL ELECTRICAL PLAN

REVISIONS:

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
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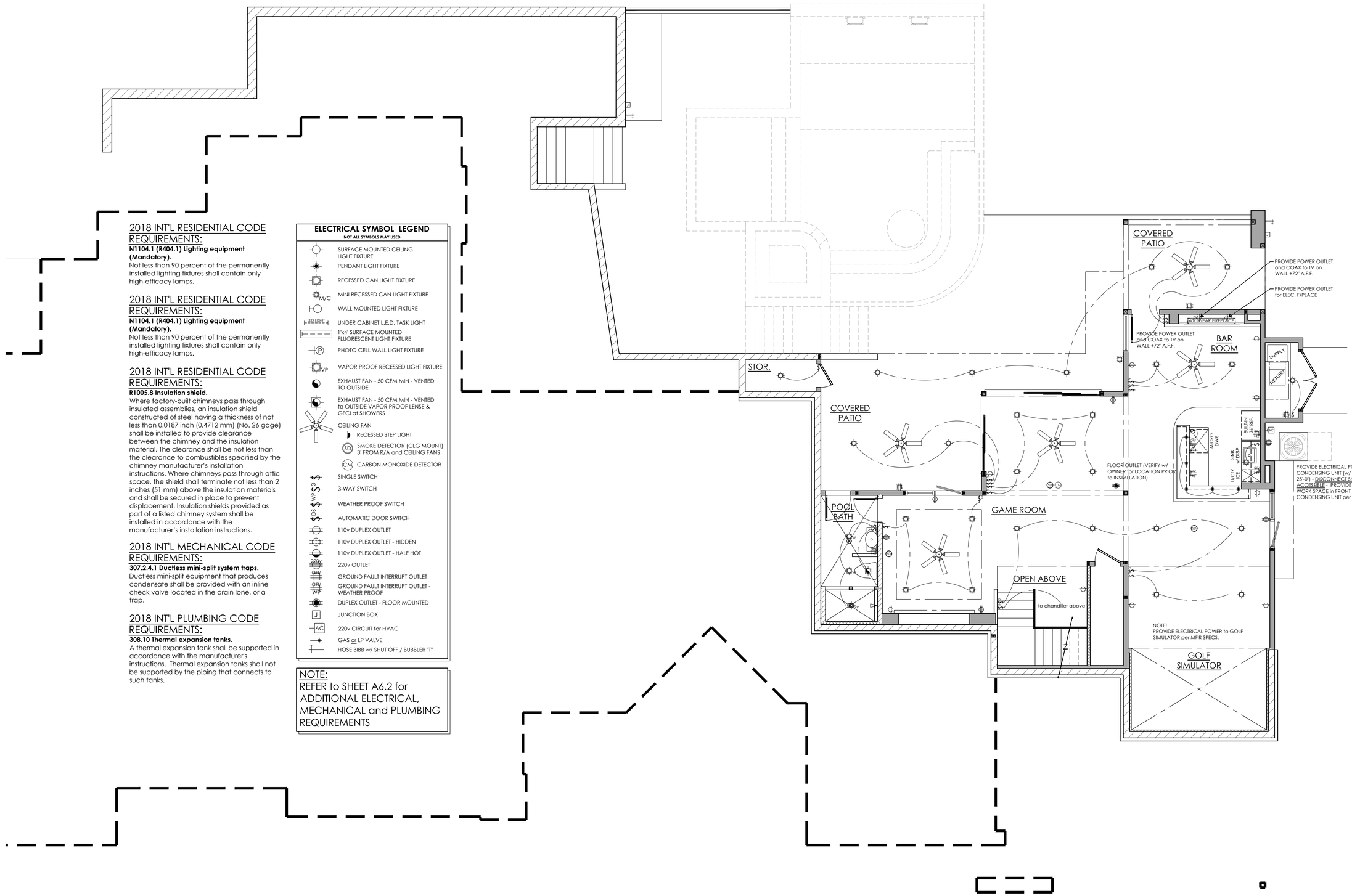
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- SINGLE SWITCH
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- WP — WEATHER PROOF SWITCH
- DS — AUTOMATIC DOOR SWITCH
- 110v DUPLEX OUTLET
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- J — JUNCTION BOX
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- GAS or LP VALVE
- HOSE BIBB w/ SHUT OFF / BUBBLER 'T'

NOTE:
REFER to SHEET A6.2 for ADDITIONAL ELECTRICAL, MECHANICAL and PLUMBING REQUIREMENTS



LOWER LEVEL ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

NOTE:
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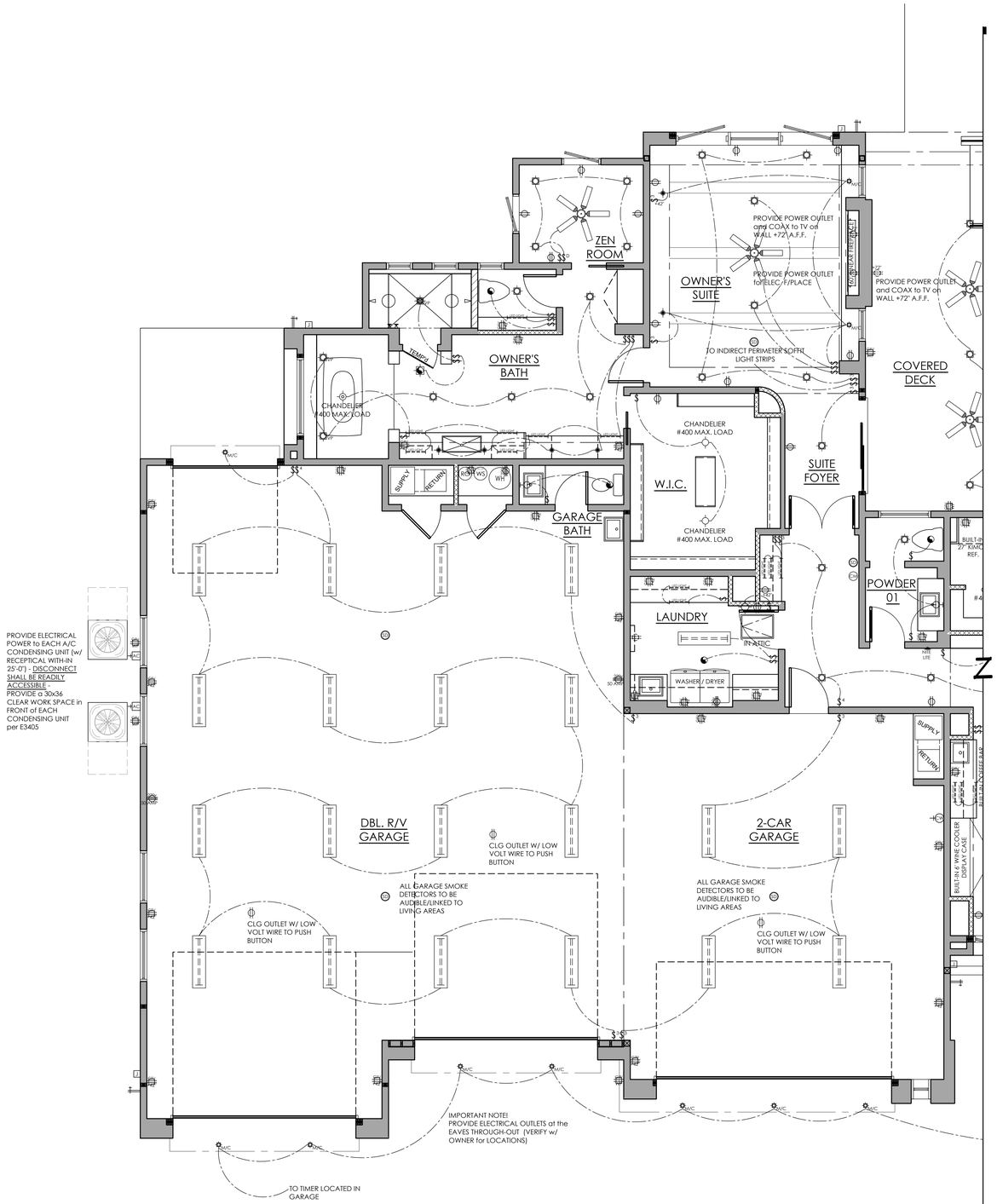
LOWER LEVEL ELECTRICAL PLAN

REVISIONS:

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
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ELECTRICAL PLAN (LEFT SIDE)

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

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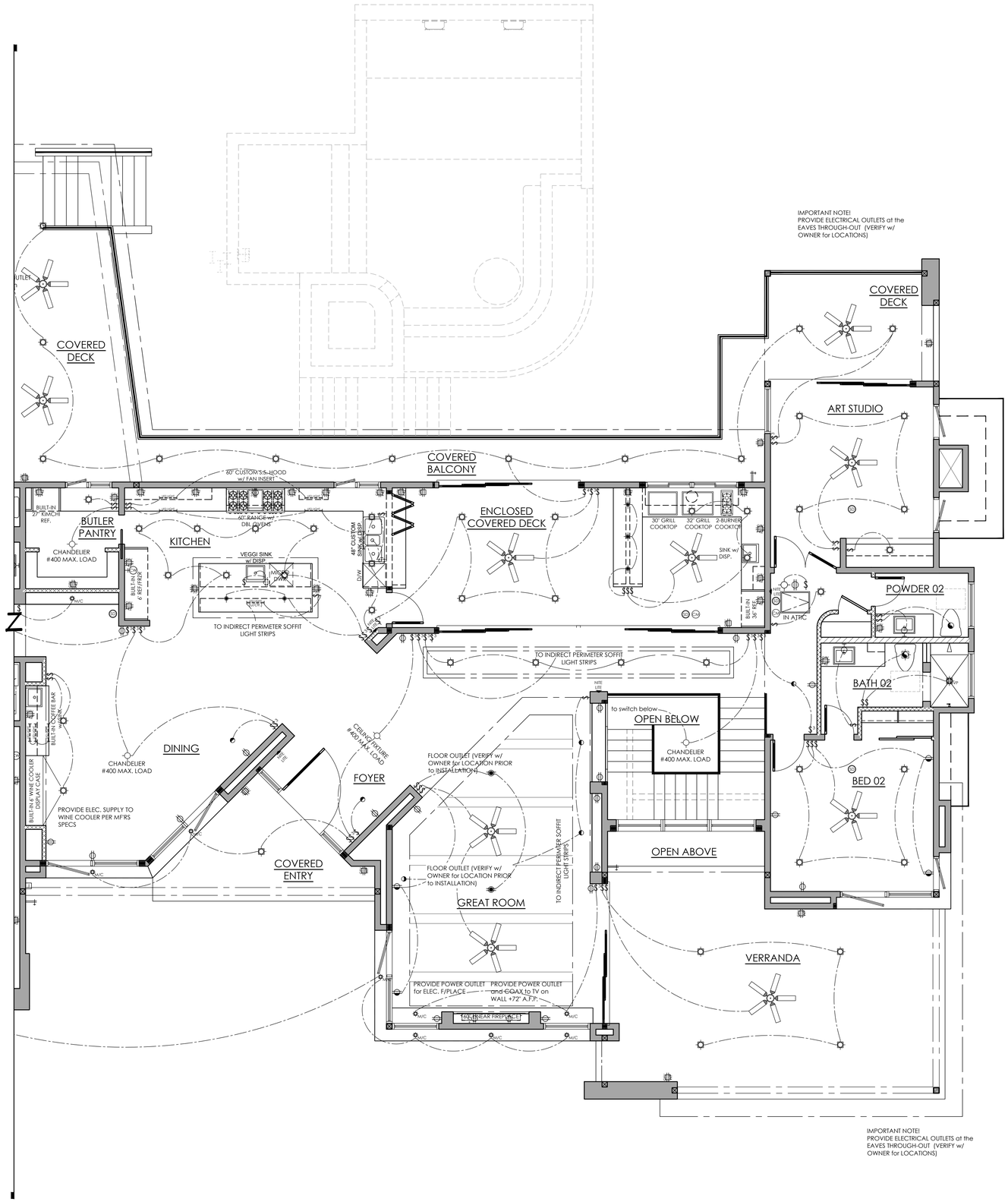
◆MAIN LEVEL
◆ELECTRICAL PLAN - LEFT SIDE

REVISIONS:
1
2
3

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
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ELECTRICAL PLAN (RIGHT SIDE)

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

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◆MAIN LEVEL
◆ELECTRICAL PLAN - RIGHT SIDE

REVISIONS:
△
△
△

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
SHEET: A6.1R	

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2018 IRC MECHANICAL REQUIREMENTS:

M1411.8 Locking access port caps.
Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent unauthorized access.

M1502.3 Duct termination.
Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. If the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet (914 mm) in any direction from openings into buildings. Exhaust duct terminations shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination.

M1502.3.1 Exhaust termination outlet and passageway size.
The passageway of dryer exhaust duct terminals shall be undiminished in size and shall provide an open area of not less than 12.5 square inches (8065 mm2).

M1502.4.2 Duct installation.
Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation. *(Note: Dryer ducts shall be no less than 4 inches in diameter; therefore, they shall be installed in a wall space greater than 4 inches in width.)*

M1502.4.6 Length identification.
Where the exhaust duct equivalent length exceeds 35 feet (10 668 mm), the equivalent length of the exhaust duct shall be identified on a permanent label or tag. The label or tag shall be located within 6 feet (1829 mm) of the exhaust duct connection. *(Note: Duct labeling is no longer required unless the equivalent duct length exceeds 35 feet as allowed by M1502.4.5.2 and M1502.4.5.3)*

M1503.6 Makeup air required.
Where one or more gas, liquid or solid fuel-burning appliance that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air barrier, each exhaust system capable of exhausting in excess of 400 cubic feet per minute (0.19 m3/s) shall be mechanically or passively provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with not fewer than one damper complying with Section M1503.6.2. *(Note: Make-up air for exhaust systems in excess 400 CFM is no longer required unless natural draft appliances are provided in the residence.)*

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2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R1005.8 Insulation shield.
Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

N1104.1 (R404.1) Lighting equipment (Mandatory).
Not less than 90 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R702.3.7 Water-resistant gypsum backing board.
Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R702.3.7.1 Limitations.
Water-resistant gypsum backing board 1shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

R702.4.2 Backer boards.
Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.

2018 IRC ELECTRICAL REQUIREMENTS:

E3703.5 Garage branch circuits.
Not less than one 120-volt, 20-ampere branch circuit shall be installed to supply receptacle outlets in attached garages and in detached garages with electric power. This circuit shall not have other outlets.
Exception: This circuit shall be permitted to supply readily accessible outdoor receptacle outlets.

E3902.8 Bathtub or shower stall receptacles.
125-volt, single phase, 15- and 20-ampere receptacles that are located within 6 feet (1829 mm) of the outside edge of a bathtub or shower stall shall have ground-fault circuit-interrupter protection for personnel. [210.8(A)(8)]

E3902.9 Laundry areas.
125-volt, single-phase, 15- and 20-ampere receptacles installed in laundry areas shall have ground-fault circuit-interrupter protection for personnel. [210.8(A)(9)]

E3902.10 Kitchen dishwasher branch circuit.
Ground-fault circuit-interrupter protection shall be provided for outlets that supply dishwashers in dwelling unit locations. [210.8(D)]

E3902.16 Arc-fault circuit-interrupter protection.
Branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreations rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by any of the following: [210.12(A)]

1. A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit. [210.12(A)(1)]

2. A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit. [210.12(A)(2)]

3. A listed supplemental arc-protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:
   3.1. The branch-circuit wiring shall be continuous from the branch-circuit over-current device to the outlet branch-circuit arc-fault circuit interrupter.
   3.2. The maximum length of the branch-circuit wiring from the branch-circuit over-current device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
   3.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit. [210.12(A)(3)]

4. A listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit over-current protective device where all of the following conditions are met:
   4.1. The branch-circuit wiring shall be continuous from the branch-circuit over-current device to the outlet branch-circuit arc-fault circuit interrupter.
   4.2. The maximum length of the branch-circuit wiring from the branch-circuit over-current device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
   4.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.
   4.4. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such. [210.12(A)(4)]

5. Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8, metal wireways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(5)]

6. Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit-type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(6)]

   Exception: AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC or Type MC meeting the requirements of Section E3908.8.

(Note: Arc-fault protection is now required for circuits in kitchens and laundry areas.)

E4001.11.1Faceplate grounding.
Snap switches, including dimmer and similar control switches, shall be connected to an equipment grounding conductor and shall provide a means to connect metal faceplates to the equipment grounding conductor, whether or not a metal faceplate is installed. Metal faceplates shall be grounded. Snap switches shall be considered to be part of an effective ground-fault current path if either of the following conditions is met:

1. The switch is mounted with metal screws to a metal box or metal cover that is connected to an equipment grounding conductor or to a nonmetallic box with integral means for connecting to an equipment grounding conductor.
2. An equipment grounding conductor or equipment bonding jumper is connected to an equipment grounding termination of the snap switch. [404.9(B)]

E4002.14 Tamper-resistant receptacles.
In areas specified in Section E3901.1, 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles shall be listed tamper-resistant receptacles. [406.12(A)]

Exception: Receptacles in the following locations shall not be required to be tamper resistant:
1. Receptacles located more than 5.5 feet (1676 mm) above the floor.
2. Receptacles that are part of a luminaire or appliance.
3. A single receptacle for a single appliance or a duplex receptacle for two appliances where such receptacles are located in spaces dedicated for the appliances served and, under conditions of normal use, the appliances are not easily moved from one place to another. The appliances shall be cord-and-plug-connected to such receptacles in accordance with Section E3909.4. [406.12(A) Exception]

GENERAL ELECTRICAL NOTES:

1. Electrical plan is strictly diagrammatic. Contractor to obtain engineering when requested by local building officials. all work must conform to the latest IBC, IRC, plumbing, mechanical and electrical codes.

2. Provide electrical service w/ 26' copper ground embedment w/ 2" concrete cover. Provide water bond near bottom of footing (MIN. 4" AWG.)

3. Provide electrical service to HVAC unit(s). Verify location w/ contractor.

4. Pre-wire all ceiling fans as shown.

5. Plumb for natural gas (if used) for water heater. Raise fixture 18" from floor and provide vehicle barrier.

6. Smoke detector to be placed 3'-0" MIN. from return air, A/C vents and ceiling fans.

7. Verify w/ owner and/or contractor for:
   7.1. Preferred locations for T.V. and phone outlets.
   7.2. Any changes to the electrical layout.

8. Verify w/ owner and/or contractor for any additional amenities.

9. Provide switched outlets along perimeter of roof line for Christmas lights.

10. Provide GFCI protection and bonding of metal parts at all vapor proof light fixtures.

R314.3 Smoke Alarm Location.
Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.

R314.3.1Installation near cooking appliances.
Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section R314.3.

1. Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking appliance.
2. Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking appliance.
3. Photoelectric smoke alarms shall not be installed less than 6 feet (1828 mm) horizontally from a permanently installed cooking appliance.

R314.5 Combination alarms.
Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms.

R315.1 General.
Carbon monoxide alarms shall comply with Section R315.

R315.1.1 Listings.
Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

R315.2 Where required.
Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2.

R315.2.1 New construction.
For new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.

1. The dwelling unit contains a fuel-fired appliance.

2. The dwelling unit has an attached garage with an opening that communicates with the dwelling unit.

R315.3 Location.
Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms.
Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

2017 NAT'L ELECTRICAL CODE REQUIREMENTS:

406.12 Tamper-resistant receptacles.
All 15- and 20-ampere, 125- and 250-volt non-locking-type receptacles in the areas specified in 406.129(1) - (7) shall be listed tamper-resistant receptacles.
1. Dwelling units in all areas specified in 210.52 and 550.13
2. Guest rooms and guest suites of hotels and motels
3. Child care facilities
4. Preschools and elementary education facilities
5. Business offices, corridors, waiting rooms, and the like in clinics, medical and dental offices and outpatient facilities.
6. Subset if assembly occupancies described in 518.2, to include places of waiting transportation, gymnasiums, skating rinks and auditoriums.
7. Dormitories

(Note: Items 4 through 7 are new requirements for tamper-resistant receptacles.)

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

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◆GENERAL MECH., ELECTRICAL ◆and PLUMBING NOTES

REVISIONS:
△
△
△

SCALE: NO SCALE
JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.
CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024
SHEET: A6.2

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OPTION:

R806.5 Unvented attic and unvented enclosed rafter assemblies. Unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members and structural roof sheathing applied directly to the top of the roof framing members/rafters, shall be permitted where all the following conditions are met:

1. The unvented attic space is completely within the building thermal envelope.

2. Interior Class I vapor retarders are not installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.

3. Where wood shingles or shakes are used, a minimum ¼-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.

4. In Climate Zones 5, 6, 7 and 8, any air-impermeable insulation shall be a Class II vapor retarder, or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.

5. Insulation shall comply with Item 5.3 and either Item 5.1 or 5.2:

   5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing

      5.1.1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.

      5.1.2. Where air-permeable insulation is installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table R806.5 for condensation control.

      5.1.3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing in accordance with Item 5.1.1 and shall be in accordance with the R-values in Table R806.5 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

      5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.

   5.2. In Climate Zones 1, 2 and 3, air-permeable insulation installed in unvented attics shall meet the following requirements:

      5.2.1. An approved vapor diffusion port shall be installed not more than 12 inches (305 mm) from the highest point of the roof, measured vertically from the highest point of the roof to the lower edge of the port.

      5.2.2. The port area shall be greater than or equal to 1:600 of the ceiling area. Where there are multiple ports in the attic, the sum of the port areas shall be greater than or equal to the area requirement.

      5.2.3. The vapor-permeable membrane in the vapor diffusion port shall have a vapor permeance rating of greater than or equal to 20 perms when tested in accordance with Procedure A of ASTM E96.

      5.2.4. The vapor diffusion port shall serve as an air barrier between the attic and the exterior of the building.

      5.2.5. The vapor diffusion port shall protect the attic against the entrance of rain and snow.

      5.2.6. Framing members and blocking shall not block the free flow of water vapor to the port. Not less than a 2-inch (51 mm) space shall be provided between any blocking and the roof sheathing. Air-permeable insulation shall be permitted within that space.

      5.2.7. The roof slope shall be greater than or equal to 3:12 (vertical/horizontal).

      5.2.8. Where only air-permeable insulation is used, it shall be installed directly below the structural roof sheathing.

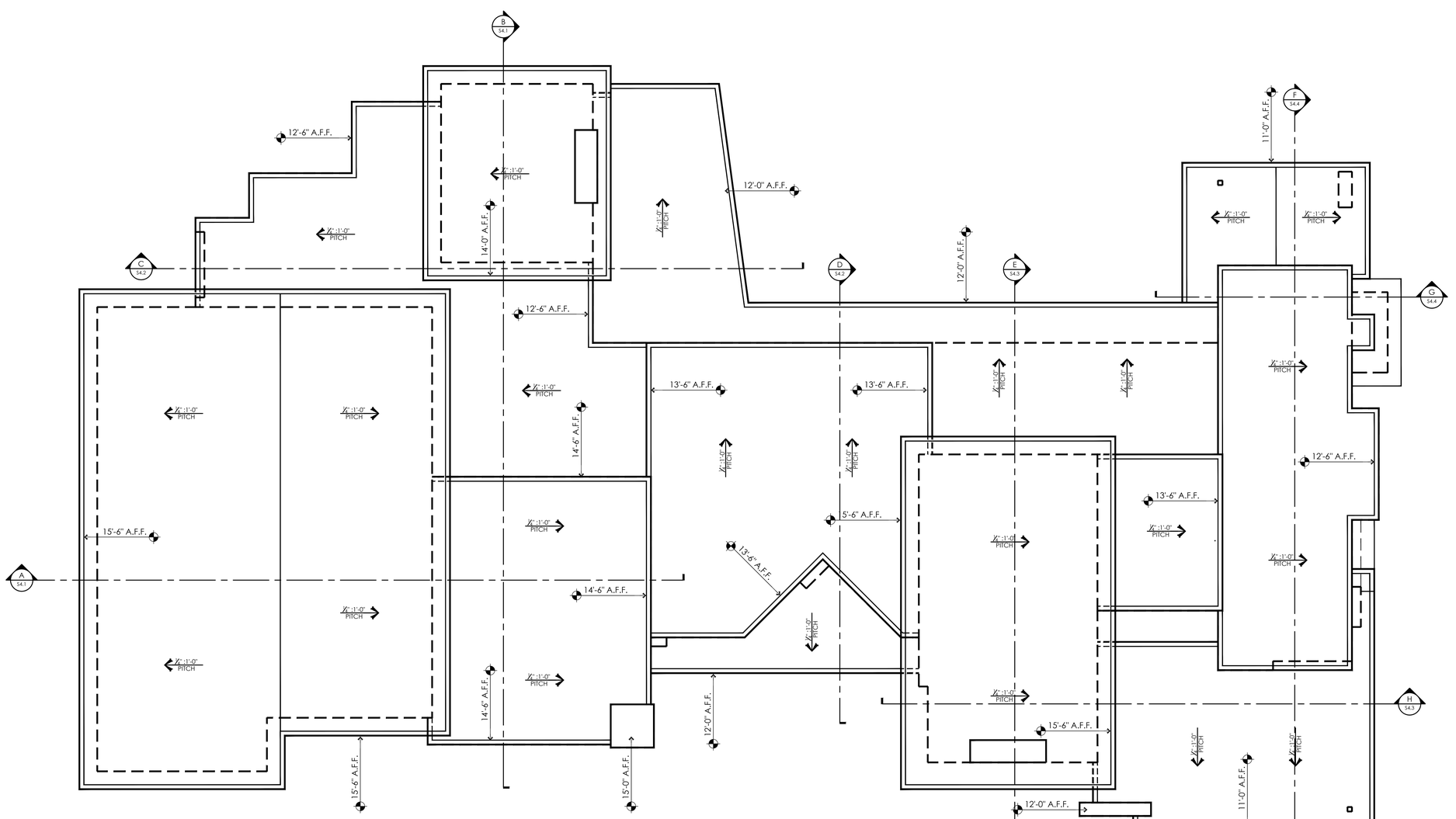
      5.2.9. Air-impermeable insulation, if any, shall be directly above or below the structural roof sheathing and is not required to meet the R-value in Table 806.5. Where directly below the structural roof sheathing, there shall be no space between the air-impermeable insulation and air-permeable insulation.

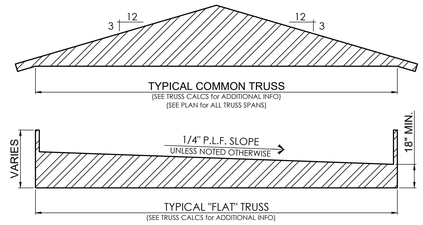
      5.2.10. The air shall be supplied at a flow rate greater than or equal to 50 CFM (23.6 L/s) per 1,000 square feet (93 m2) of ceiling. The air shall be supplied from ductwork providing supply air to the occupiable space when the conditioning system is operating. Alternatively, the air shall be supplied by a supply fan when the conditioning system is operating.

   5.3. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

TABLE R806.5 INSULATION for CONDENSATION CONTROL

CLIMATE ZONE	MINIMUM RIGID BOARD on AIR-IMPERMEABLE INSULATION R-VALUE[a]
2B and 3B tile roof only	0 (none required)
1, 2A, 2B, 3A, 3B, 3C	R-5
4C	R-10
4A, 4B	R-15
5	R-20
6	R-25
7	R-30
8	R-35





TRUSS NOTES:
- ALL TRUSSES SHALL BE DESIGNED BY a STATE REGISTERED CIVIL ENGINEER as REQ'D.
- ALL TRUSSES SHALL BE 24" O.C. MAX.
- FIELD VERIFY ALL TRUSS SPANS PRIOR to ORDERING and FABRICATION.

ROOF DRAINAGE PLAN
SCALE: 3/16" = 1'-0"

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

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• THE CONTRACTOR ON THE JOB SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

◆ROOF DRAINAGE PLAN

REVISIONS:

SCALE: 3/16" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z./S.I.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
SHEET: A7.1	

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Footing Schedule

Designation	Length	Width	Depth	Lengthwise Reinforcement				Crosswise Reinforcement				Capacity	Note
				Qty.	Size	Length	Spacing	Qty.	Size	Length	Spacing		
FT1A	Cont.	12"	20"	2	#4	Cont.	EQ.	-	-	-	-	1250 PLF	(1) top, (1) bottom
FT1B	Cont.	12"	14"	4	#4	Cont.	EQ.	-	-	-	-	1288 PLF	(1) top, (1) bottom
FT1C	Cont.	16"	20"	4	#4	Cont.	EQ.	-	-	-	-	1667 PLF	(2) top, (2) bottom
FT1D	Cont.	18"	20"	4	#4	Cont.	EQ.	-	-	-	-	1875 PLF	(2) top, (2) bottom
FT1E	Cont.	24"	14"	8	#4	Cont.	EQ.	-	-	-	-	-	(4) top, (4) bottom
FT1F	Cont.	28"	12"	4	#4	Cont.	EQ.	-	-	-	-	-	See detail 29/S1.3
FT1G	Cont.	42"	12"	5	#4	Cont.	EQ.	-	#4	36"	8" o.c.	-	See detail 28/S1.3
FT1H	Cont.	98"	16"	15	#5	Cont.	EQ.	-	#5	92"	8" o.c.	-	See detail 32/S1.3
FT2A	Cont.	12"	16"	2	#4	Cont.	EQ.	-	-	-	-	1300 PLF	(1) top, (1) bottom
FT2B	Cont.	16"	16"	4	#4	Cont.	EQ.	-	-	-	-	1733 PLF	(2) top, (2) bottom
FT3	24"	24"	12"	3	#4	18"	EQ.	3	#4	18"	EQ.	5400 LBS	
FT4	30"	30"	12"	4	#4	24"	EQ.	4	#4	24"	EQ.	8438 LBS	
FT5	36"	36"	12"	4	#4	30"	EQ.	4	#4	30"	EQ.	12150 LBS	
FT6	42"	42"	12"	5	#4	36"	EQ.	5	#4	36"	EQ.	16538 LBS	
FT7	48"	48"	12"	6	#4	42"	EQ.	6	#4	42"	EQ.	21600 LBS	
FT8	52"	52"	12"	6	#4	46"	EQ.	6	#4	46"	EQ.	25350 LBS	
FT9	60"	30"	12"	4	#4	54"	EQ.	7	#4	24"	EQ.	16875 LBS	
FT10	108"	30"	12"	5	#4	102"	EQ.	12	#4	24"	EQ.	52875 LBS	

Notes:
1. f'c= 2,500 psi, fy= 60,000 psi. No special inspection required.
2. Footings shall bear on undisturbed native soils or structural compacted fill (95% compaction), specified and tested by a registered geotechnical
3. All footings shall bear a minimum of 12" below grade or below the frost line of the locality, whichever is deeper.
4. Provide J-bars to match vertical foundation wall reinforcement with 24" minimum lap splice into foundation wall.
5. Center footing under foundation wall U.N.O.

Shear Wall Schedule[1,3]

Designation	Material	8d Nails		Capacity		1/2" Anchor Bolt Spacing	Note
		Edge	Field	Edge	Field	Wind	Seismic		
1	3/8" OSB or CDX plywood	3"/3"	12"	6"	12"	339	241	32" o.c.	
2	3/8" OSB or CDX plywood	2"/3"	12"	4"	12"	495	350	24" o.c.	
3	1/2" Gypsum or better	-	-	8"	12"	60	60	32" o.c.	
PF	Portal Frame - See details 18/S1.2, 33/S2.3, & 34/S2.3								
S1	Simpson WSWH24x12 High-Strength Wood Shear Wall - See details 19/S1.2, 21/S1.2, 35/S2.3, & 36/S2.3								

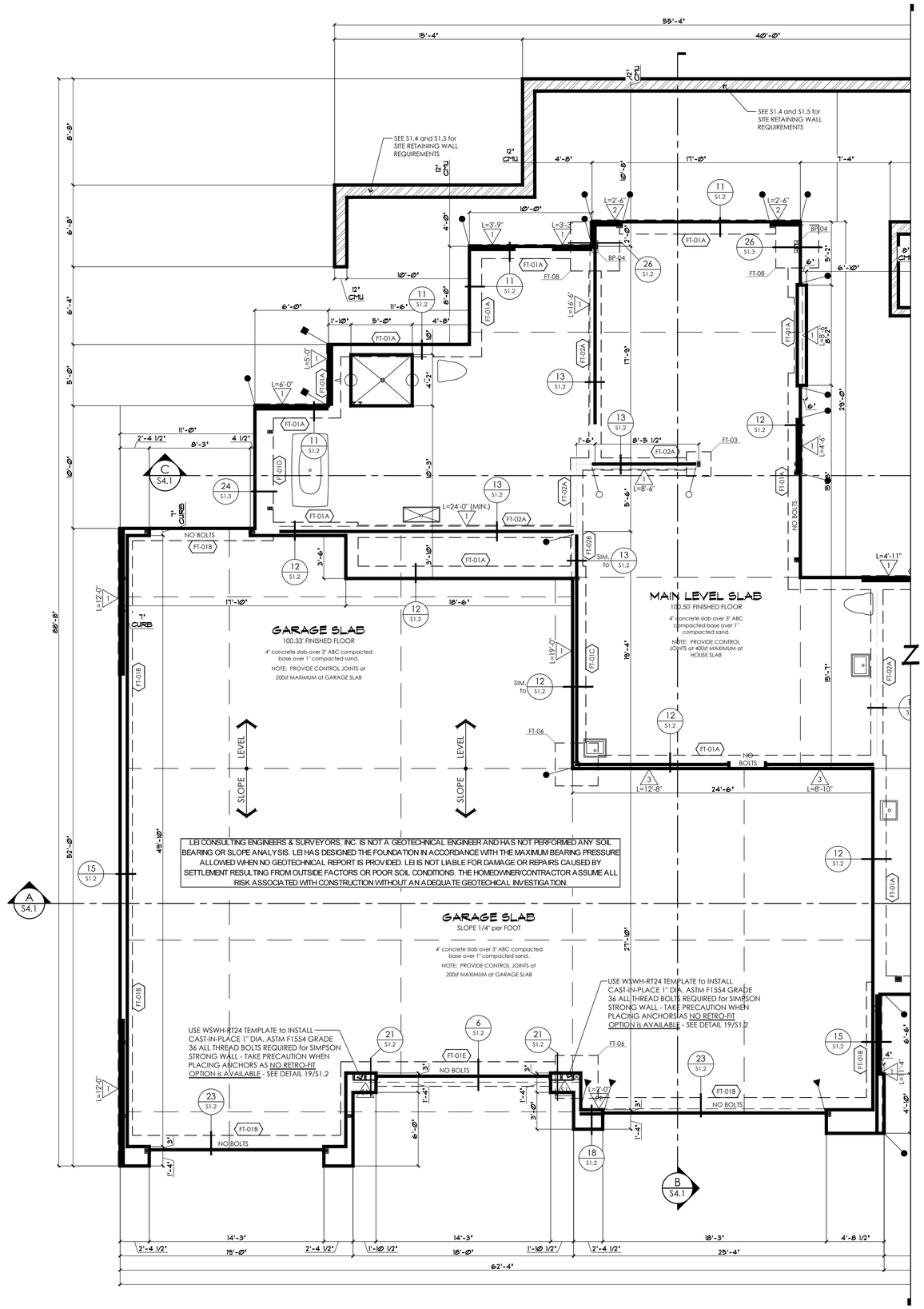
Notes:
1. Wall studs are to be spaced at 16" o.c. U.N.O.
2. Sheath above and below openings in perforated shear walls as per the adjacent shear wall designation on each side of the
3. Use (2) king studs at each end of shear panels (Shear Wall Chords) U.N.O.
4. All panel edges shall be blocked with 2x or wider framing with edge nailing at all supports and panel edges U.N.O.
5. Where panels are applied on both faces of a wall and nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members.
6. Framing at adjoining panel edges and sill plates shall be 3x or wider for edge nailing 3" o.c. or less. Nails at adjoining panel edges and into sill plates shall be staggered. (Double 2x framing stitch-nailed with staggered 16d nails with spacing equal to the shear wall edge nailing is an adequate substitute for 3x framing.)
7. Fasteners for sheet rock shear walls shall be No. 6 Type S or W dry wall screws 1-1/4" long in lieu of 8d nails.

Simpson WSWH Notes

1. Strong Wall High Strength Wood Shear Walls shall be installed as per Simpson Specifications.
2. WSWH may be field trimmed to a minimum height of 74 1/2". (Trim top of wall only - Do not trim from sides or bottom)
3. Drilling holdes in WSWH is not allow ed except as specifically allow ed by the manufacturer (Refer to Simpson Specifications)
4. Anchor bolt nuts should be finger tight plus 1/2 turn.
5. Top connection installs with a combination of SDS25600 Heavy-Duty connector screws & SWS16150 Strong Wall Screws
6. Take precaution when installing cast-in-place bolts at concrete foundation (No retrofit option is available)
7. Contact Simpson representative Gary Pugmire (801-244-7430) with questions regarding the installation of Simpson Strong Walls.

Holdown Schedule

Symbol	Holdown/Strap
	CS16 Strap w/ 14" lap onto studs See detail 25/S1.2
	MST48 Strap See detail 25/S1.2
	LSTHD8 Holdown See detail 9/S1.2
	STHD10 Holdown See detail 9/S1.2
	STHD14 Holdown See detail 9/S1.2
	HDU4-SDS2.5 holdown w/ Simpson SSTB16 cast-in-place anchor See detail 22/S1.2
	HDU8-SDS2.5 Holdown w/ Simpson SSTB28 cast-in-place anchor See detail 22/S1.2
	HDU4-SDS2.5 holdown w/ 5/8" dia. A36 threaded rod anchor embedded 7" into footing w/ Simpson ET-3G or AT-3G epoxy (Special Inspection Req'd) See detail 7/S1.2



FOUNDATION PLAN (LEFT SIDE)
SCALE: 1/4" = 1'-0"

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.**'s work does not exceed that of the accompanying structural calculations.

NOTE:
Structural components designed according to the 2018 IBC, all other aspects of the plans shall conform w/ 2018 IRC and all current governing codes

66953
ERIC B. MURRAY
Signed: 03/21/2025
RENEW: 6 - 30
STRUCTURAL ELEMENTS ONLY

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CONTRACTOR:

PROJECT:
The STEENWYK Residence
3970 Blackhawk Drive
T: 2280 B: 08 L: 7 & 8 / APN 111-20-168A

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THE CONTRACTOR, ON THE JOB SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

◆ FOUNDATION PLAN - LEFT SIDE

REVISIONS:
△
△
△

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.I.Z.	CHECKED: LEI ENG'R
DATE: 05 NOVEMBER 2024	
SHEET: S1.1L	

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Holdown Schedule

Symbol	Holdown/Strap
	CS16 Strap w/ 14" lap onto studs See detail 25/S1.2
	MST48 Strap See detail 25/S1.2
	LSTHD8 Holdown See detail 9/S1.2
	STHD10 Holdown See detail 9/S1.2
	STHD14 Holdown See detail 9/S1.2
	HDU4-SDS2.5 holdown w/ Simpson SSTB16 cast-in-place anchor See detail 22/S1.2
	HDU8-SDS2.5 Holdown w/ Simpson SSTB28 cast-in-place anchor See detail 22/S1.2
	HDU4-SDS2.5 holdown w/ 5/8" dia. A36 threaded rod anchor embedded 7" into footing w/ Simpson ET-3G or AT-3G epoxy (Special Inspection Req'd) See detail 7/S1.2

Shear Wall Schedule[1,3]

Designation	Material	8d Nails Edge	8d Nails Field	Capacity Edge	Capacity Field	Capacity Wind	Capacity Seismic	1/2" Anchor Bolt Spacing	Note
1	3/8" OSB or CDX plywood	3 1/2"	12"	6"	12"	339	241	32" o.c.	- - -
2	3/8" OSB or CDX plywood	2"-6"	12"	4"	12"	495	350	24" o.c.	- - -
3	1/2" Gypsum or better	-	-	8"	12"	60	60	32" o.c.	- - -
PF	Portal Frame - See details 18/S1.2, 33/S2.3, & 34/S2.3								
S1	Simpson WSWH24x12 High-Strength Wood Shear Wall - See details 19/S1.2, 21/S1.2, 35/S2.3, & 36/S2.3								

Notes:
1. Wall studs are to be spaced at 16" o.c. U.N.O.
2. Sheath above and below openings in perforated shear walls as per the adjacent shear wall designation on each side of the
3. Use (2) king studs at each end of shear panels (Shear Wall Chords) U.N.O.
4. All panel edges shall be blocked with 2x or wider framing with edge nailing at all supports and panel edges U.N.O.
5. Where panels are applied on both faces of a wall and nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members.
6. Framing at adjoining panel edges and sill plates shall be 3x or wider for edge nailing 3" o.c. or less. Nails at adjoining panel edges and into sill plates shall be staggered. (Double 2x framing stitch-nailed with staggered 16d nails with spacing equal to the shear wall edge nailing is an adequate substitute for 3x framing.)
7. Fasteners for sheet rock shear walls shall be No. 6 Type S or W drywall screws 1-1/4" long in lieu of 8d nails.

Simpson WSWH Notes

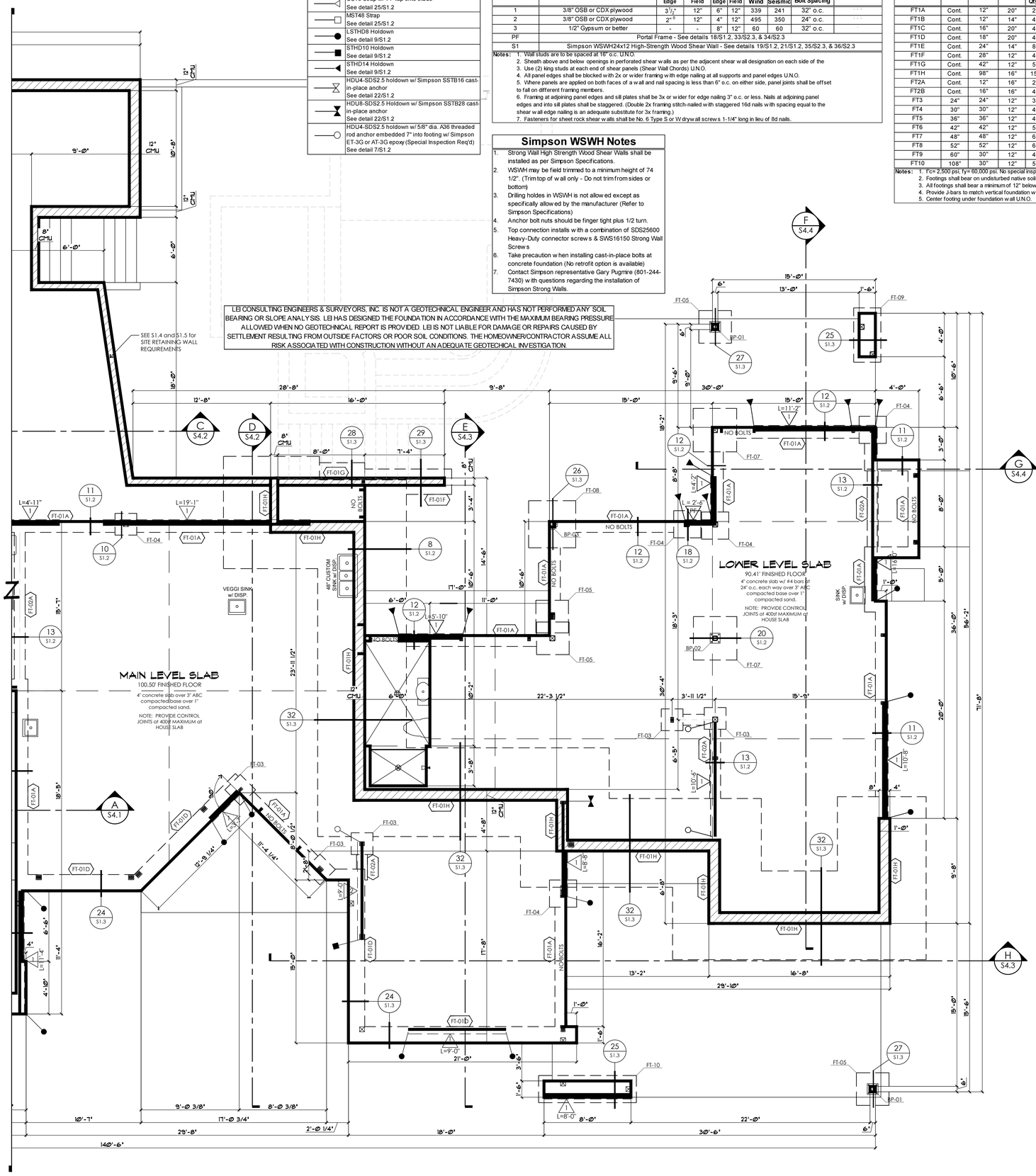
1. Strong Wall High Strength Wood Shear Walls shall be installed as per Simpson Specifications.
2. WSWH may be field trimmed to a minimum height of 74 1/2". (Trim top of wall only - Do not trim from sides or bottom)
3. Drilling holdes in WSWH is not allowed except as specifically allowed by the manufacturer (Refer to Simpson Specifications)
4. Anchor bolt nuts should be finger tight plus 1/2 turn.
5. Top connection installs with a combination of SDS25600 Heavy-Duty connector screws & SWS16150 Strong Wall Screws
6. Take precaution when installing cast-in-place bolts at concrete foundation (No retrofit option is available)
7. Contact Simpson representative Gary Pugmire (801-244-7430) with questions regarding the installation of Simpson Strong Walls.

Footing Schedule

Designation	Length	Width	Depth	Lengthwise Reinforcement Qty.	Lengthwise Reinforcement Size	Lengthwise Reinforcement Length	Lengthwise Reinforcement Spacing	Crosswise Reinforcement Qty.	Crosswise Reinforcement Size	Crosswise Reinforcement Length	Crosswise Reinforcement Spacing	Capacity	Note
FT1A	Cont.	12"	20"	2	#4	Cont.	EQ.	-	-	-	-	1250 PLF	(1) top, (1) bottom
FT1B	Cont.	12"	14"	4	#4	Cont.	EQ.	-	-	-	-	1288 PLF	(1) top, (1) bottom
FT1C	Cont.	16"	20"	4	#4	Cont.	EQ.	-	-	-	-	1667 PLF	(2) top, (2) bottom
FT1D	Cont.	18"	20"	4	#4	Cont.	EQ.	-	-	-	-	1875 PLF	(2) top, (2) bottom
FT1E	Cont.	24"	14"	8	#4	Cont.	EQ.	-	-	-	-	-	(4) top, (4) bottom
FT1F	Cont.	28"	12"	4	#4	Cont.	EQ.	-	-	-	-	-	See detail 29/S1.3
FT1G	Cont.	42"	12"	5	#4	Cont.	EQ.	-	#4	36"	8" o.c.	-	See detail 28/S1.3
FT1H	Cont.	98"	16"	15	#5	Cont.	EQ.	-	#5	92"	8" o.c.	-	See detail 32/S1.3
FT2A	Cont.	12"	16"	2	#4	Cont.	EQ.	-	-	-	-	1300 PLF	(1) top, (1) bottom
FT2B	Cont.	16"	16"	4	#4	Cont.	EQ.	-	-	-	-	1733 PLF	(2) top, (2) bottom
FT3	24"	24"	12"	3	#4	18"	EQ.	3	#4	18"	EQ.	5400 LBS	
FT4	30"	30"	12"	4	#4	24"	EQ.	4	#4	24"	EQ.	8438 LBS	
FT5	36"	36"	12"	4	#4	30"	EQ.	4	#4	30"	EQ.	12150 LBS	
FT6	42"	42"	12"	5	#4	36"	EQ.	5	#4	36"	EQ.	16538 LBS	
FT7	48"	48"	12"	6	#4	42"	EQ.	6	#4	42"	EQ.	21600 LBS	
FT8	52"	52"	12"	6	#4	46"	EQ.	6	#4	46"	EQ.	25350 LBS	
FT9	60"	30"	12"	4	#4	54"	EQ.	7	#4	24"	EQ.	16875 LBS	
FT10	108"	30"	12"	5	#4	102"	EQ.	12	#4	24"	EQ.	52875 LBS	

Notes:
1. f'c= 2,500 psi, fy= 60,000 psi. No special inspection required.
2. Footings shall bear on undisturbed native soils or structural compacted fill (95% compaction), specified and tested by a registered geotechnical
3. All footings shall bear a minimum of 12" below grade or below the frost line of the locality, whichever is deeper.
4. Provide J-bars to match vertical foundation wall reinforcement with 24" minimum lap splice into foundation wall.
5. Center footing under foundation wall U.N.O.

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FOUNDATION PLAN (RIGHT SIDE)
SCALE: 1/4" = 1'-Ø"

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.**'s work does not exceed that of the accompanying structural calculations.

NOTE:
Structural components designed according to the 2018 IBC, all other aspects of the plans shall conform w/ 2018 IRC and all current governing codes

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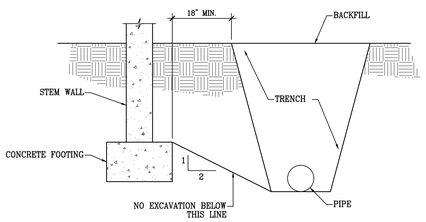
◆FOUNDATION PLAN - RIGHT SIDE

REVISIONS:

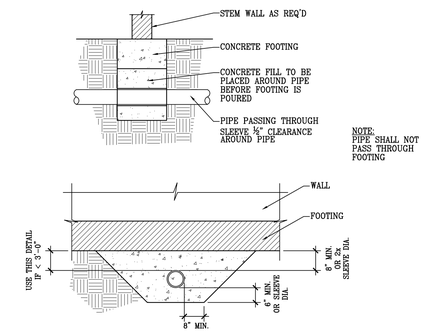
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DRAWN: s.l.z.	CHECKED: LEI ENGR
DATE: 05 NOVEMBER 2024	
SHEET: S1.1R	

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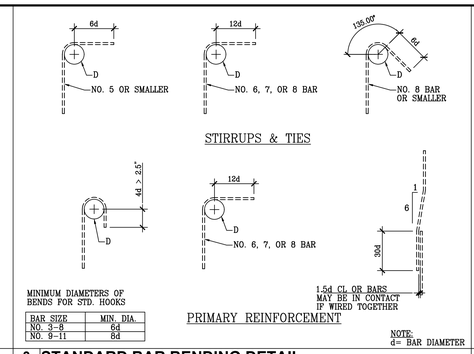
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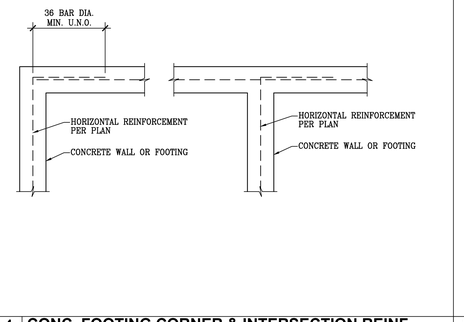
1 TRENCH ADJACENT TO CONCRETE FOOTING



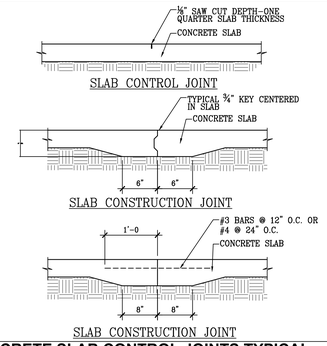
2 PIPE PASSING UNDER CONT. CONC. FOOTING TYP.



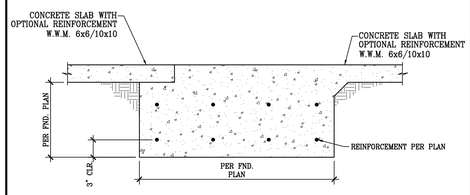
3 STANDARD BAR BENDING DETAIL



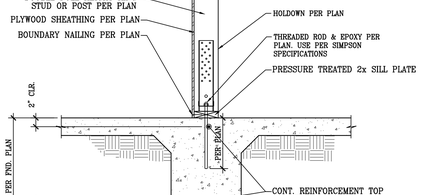
4 CONC. FOOTING CORNER & INTERSECTION REINF.



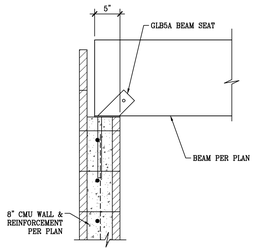
5 CONCRETE SLAB CONTROL JOINTS TYPICAL



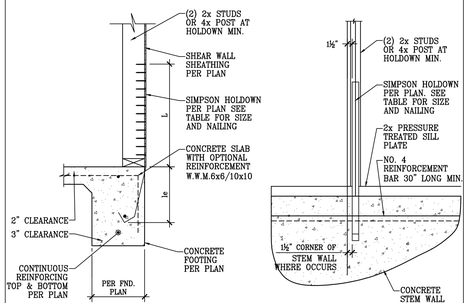
6 CONT. CONC. FOOTING @ GARAGE FRONT DOOR



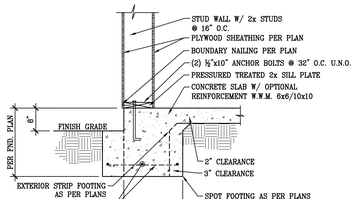
7 RETROFIT HOLDOWN



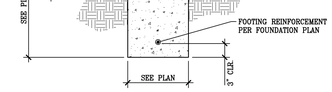
8 GLULAM BEAM TO MASONRY WALL



9 SIMPSON HOLDOWN STRAP CONNECTION TYP.



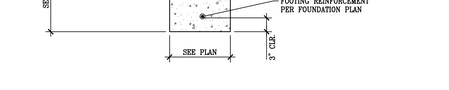
10 PIER & COLUMN



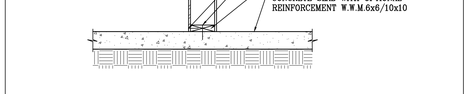
11 CONT. CONCRETE FOOTING FOR EXT. STUD WALL



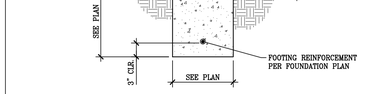
12 CONT. CONCRETE FOOTING ADJACENT TO CONC. SLAB



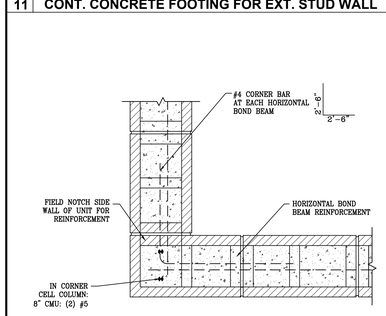
13 CONT. CONC. FOOTING FOR INT. BEARING STUD WALL



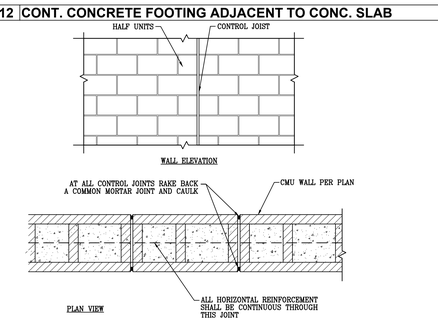
14 NON-BEARING INT. STUD WALL TO CONC. SLAB CONN.



15 6" STEM WALL

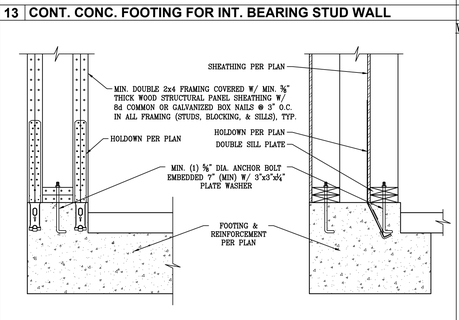


16 TYPICAL CMU CORNER BAR DETAIL



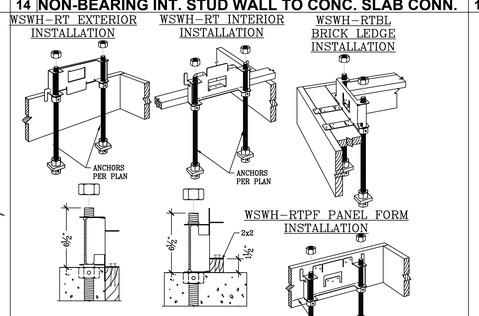
NOTE: SEE SHEET S1.0 FOR CMU CONTROL JOINT LOCATIONS.

17 TYPICAL CMU CONTROL JOINT DETAIL



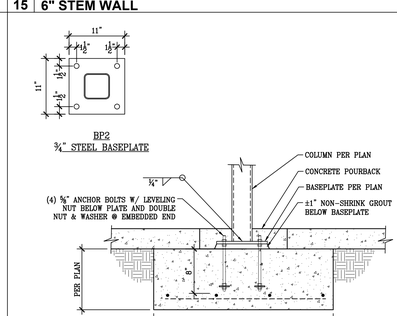
NOTE: SEE 33/S2.3 FOR PORTAL FRAME HEADER CONNECTION

18 PORTAL FRAME TO FOUNDATION

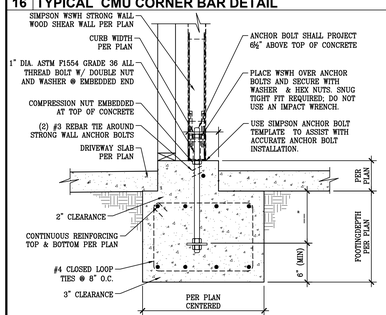


NOTES:
1. SEE DETAIL 21/S1.2 FOR ANCHORAGE REQUIREMENTS.

19 WSWH TEMPLATE

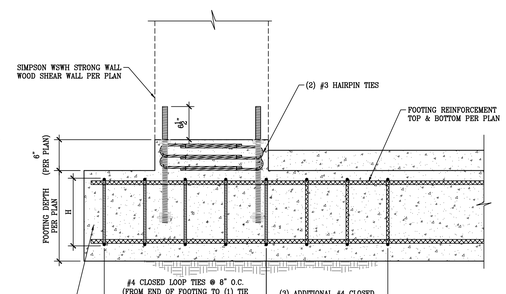


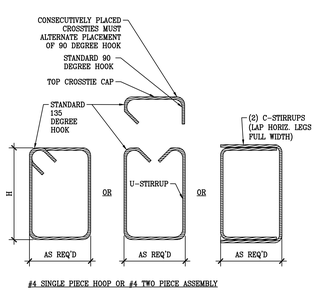
20 STEEL COLUMN @ SPOT FOOTING



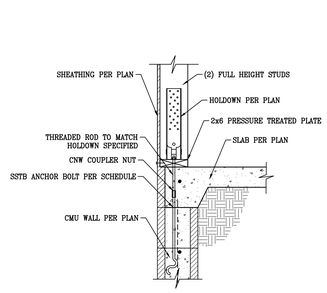
NOTE: SEE DETAIL 19/S1.2 FOR STRONG WALL ANCHOR BOLT TEMPLATE REQUIREMENTS.

21 WSWH AT CONCRETE CURB & FOOTING

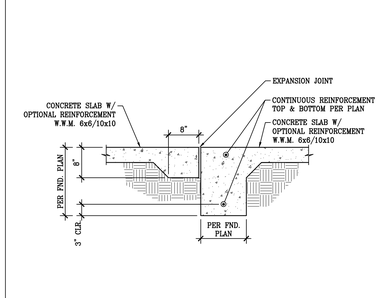




22 HDU HOLDOWN w/ SSTB BOLT AT CMU



23 CONT. CONC. FOOTING @ GARAGE FRONT DOOR



ERIC B. MURRAY
88963
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

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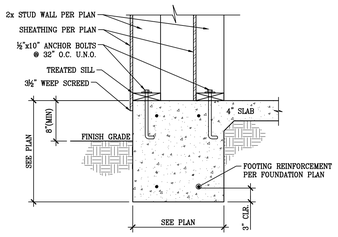
STRUCTURAL DETAILS

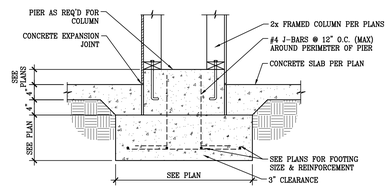
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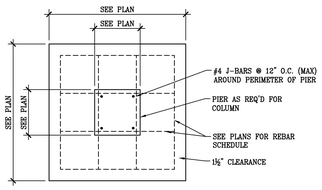
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DATE: 15 AUG 2024	

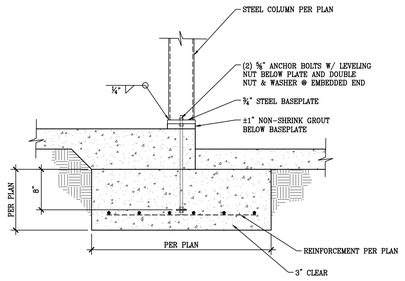
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S1.2

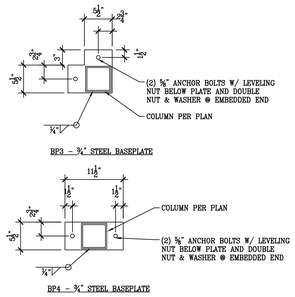
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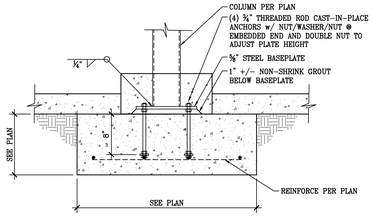




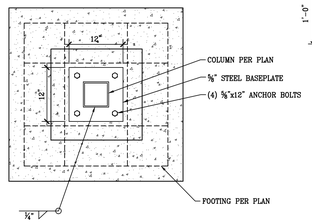


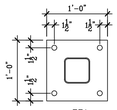


24 CONT. CONCRETE FOOTING FOR EXT. STUD WALL



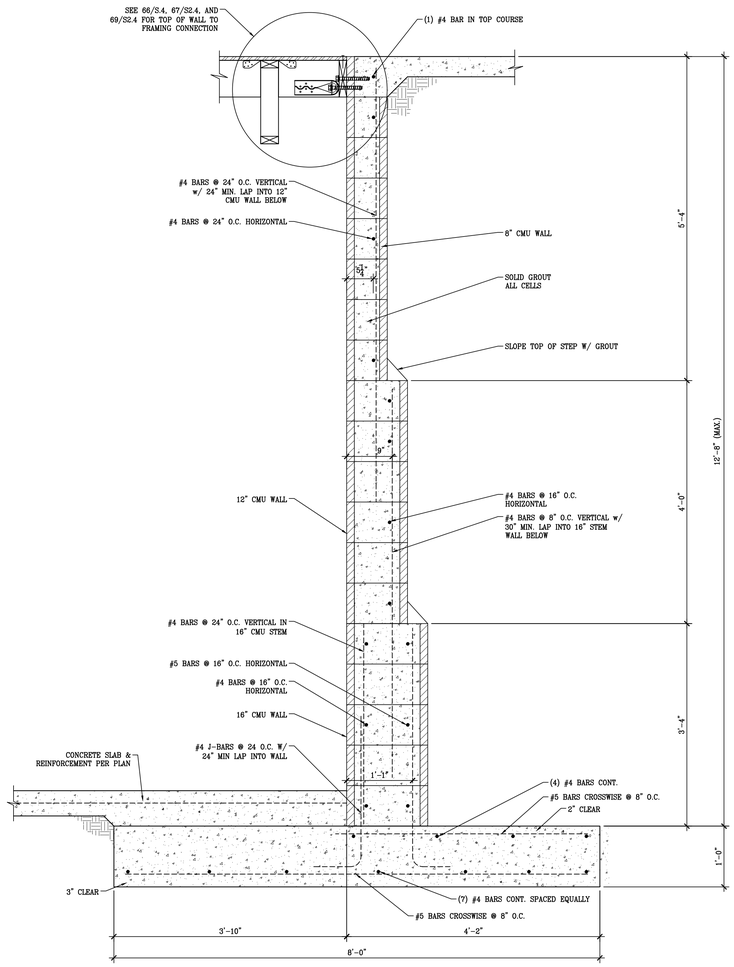
25 PIER FOOTING DETAIL



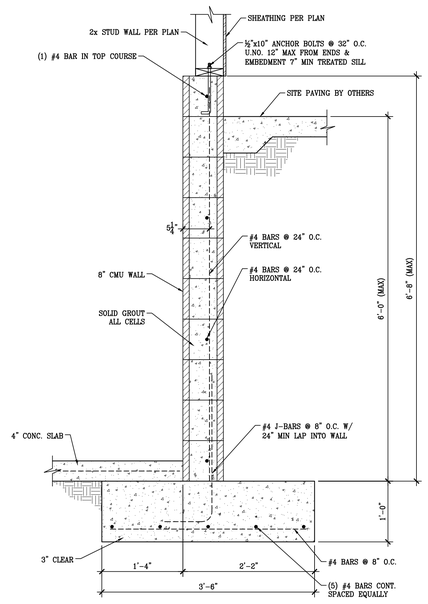


26 STEEL COLUMN @ SPOT FOOTING

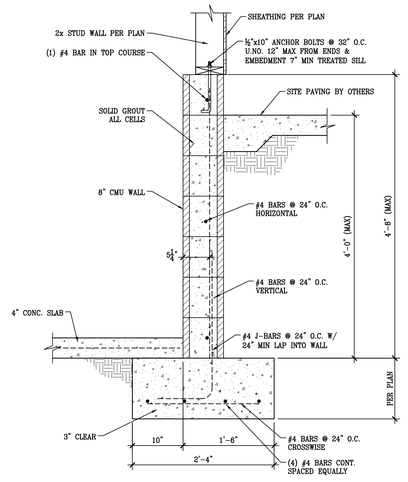
27 STEEL COLUMN @ SPOT FOOTING



28 6'-0" CMU RETAINING WALL



29 4'-0" CMU RETAINING WALL



30 NOT USED

31 NOT USED

32 12'-8" CMU WALL

33

34

35

88963
ERIC B. MURRAY
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

LEI
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PROJECT:
The STEEWYK Residence
3970 Blackhawk Drive
T: 2280 B: 08 L: 7 & 8 / APN 111-20-168A

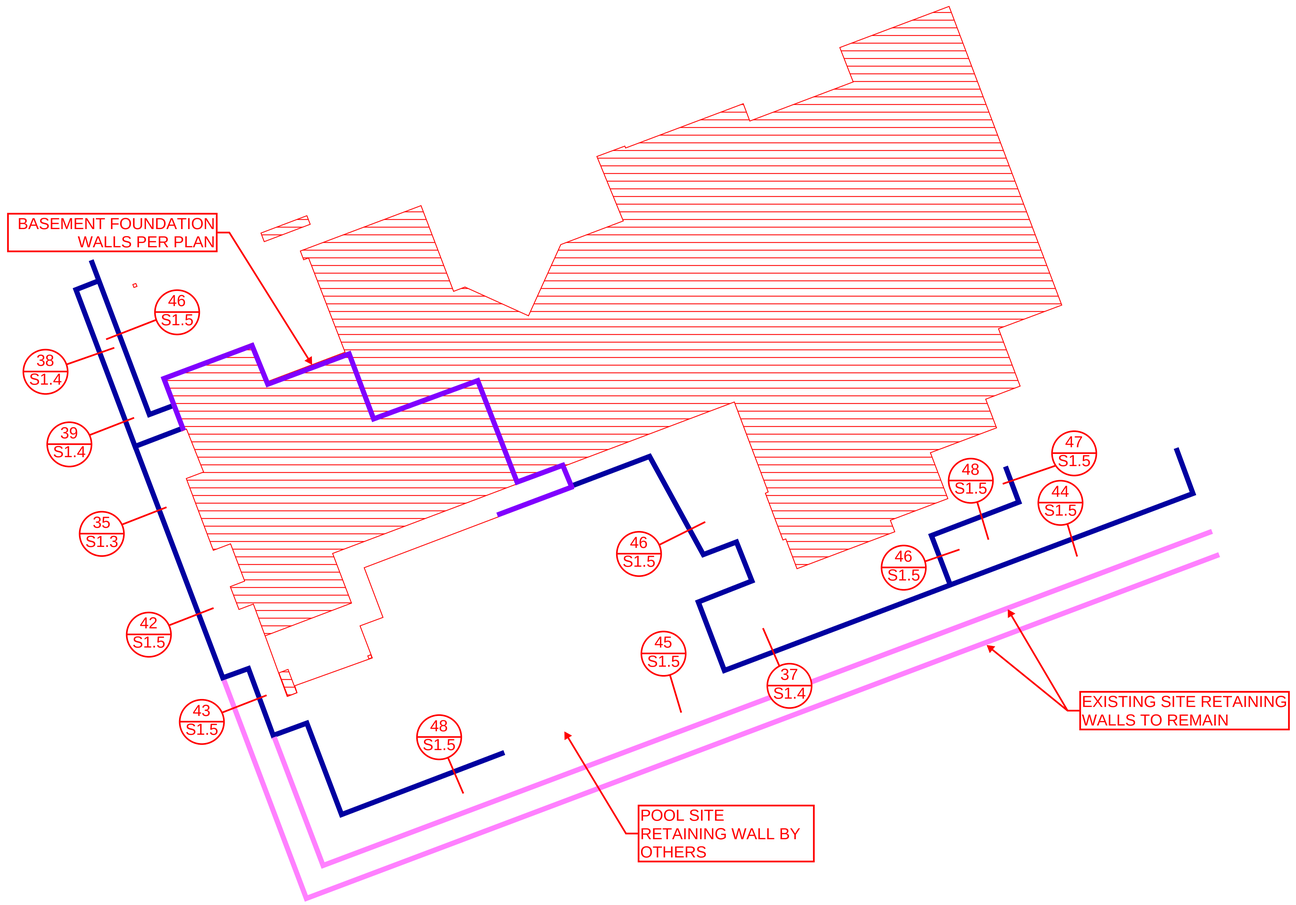
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• CONTRACTOR SHALL VERIFY ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

STRUCTURAL DETAILS

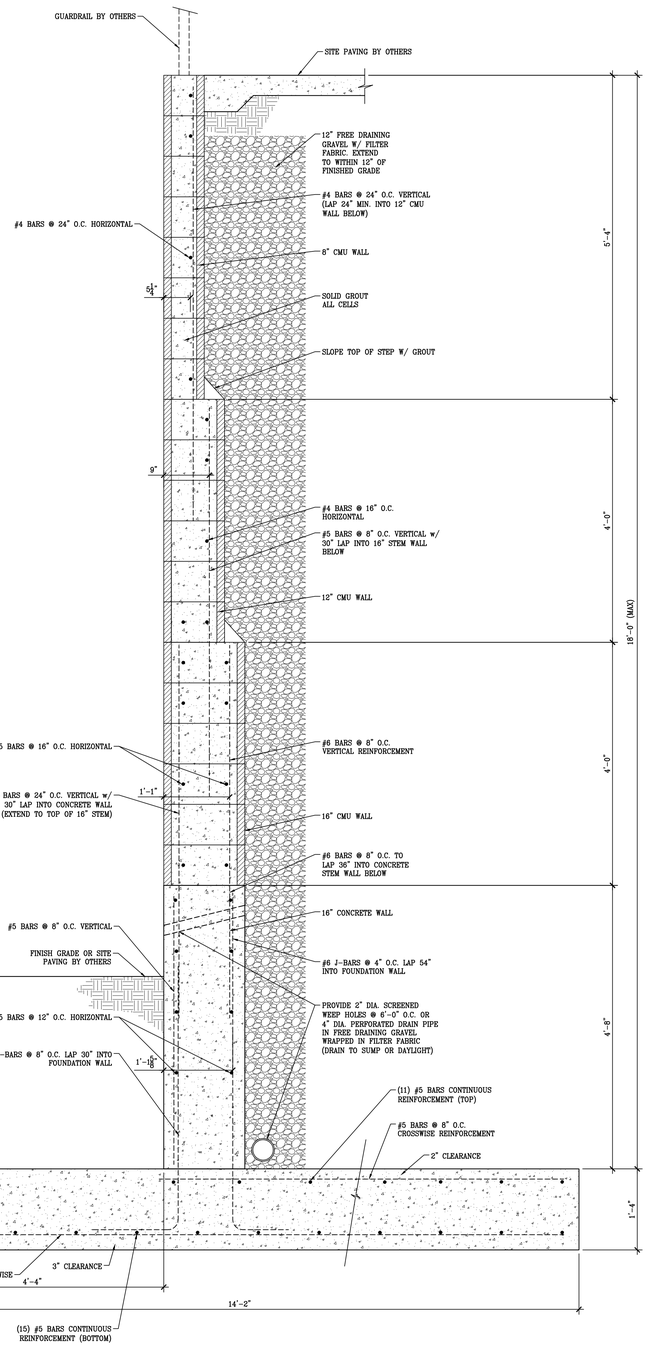
REVISIONS:

SCALE:	JOB #:
N.T.S.	2024–2301
DRAWN: MBL	CHECKED: LEI ENG'R
DATE: 15 AUG 2024	
SHEET: S1.3	

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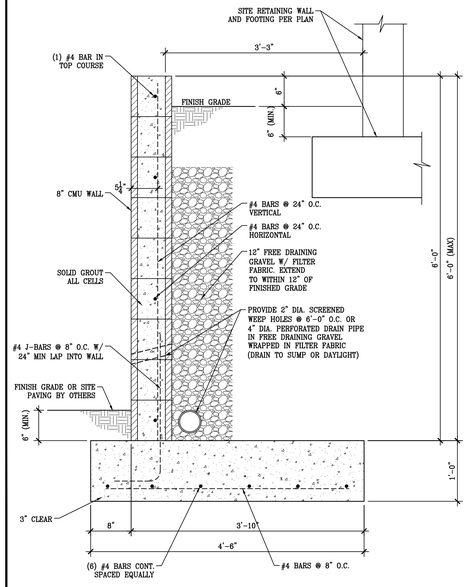


36 | SITE RETAINING WALLS PLAN

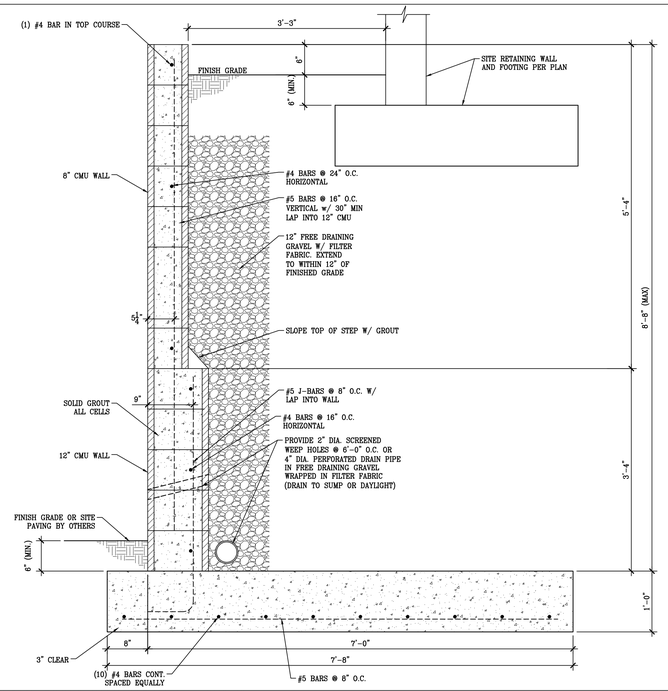


NOTES:
1. f'm=1,900 psi
2. f'c=3,000 psi
3. fy=60,000 psi
4. PLACE FOOTINGS ON NATIVE SOIL OR FIELD COMPACT TO 95%

37 | 18'-0" RETAINING WALL



38 | 6'-0" CMU SITE RETAINING WALL (TIERED)



39 | 8'-8" CMU SITE RETAINING WALL (TIERED)

40 | NOT USED

41 | NOT USED

STATE OF UTAH REGISTERED PROFESSIONAL ENGINEER CERTIFICATE
ERIC B. MURRAY
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

LEI
ENGINEERS
SURVEYORS
PLANNERS
3302 No. Main Street
Spanish Fork,UT 84660
Ph: 801-798-0555
Fax: 801-798-9393
office@lei-eng.com
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PROJECT:
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3970 Blackhawk Drive
T: 2280 B: 08 L: 7 & 8 / APN 111-20-168A

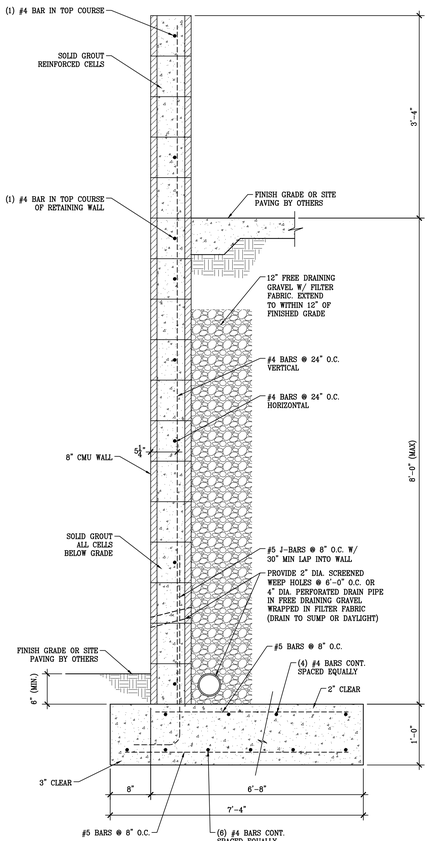
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STRUCTURAL DETAILS

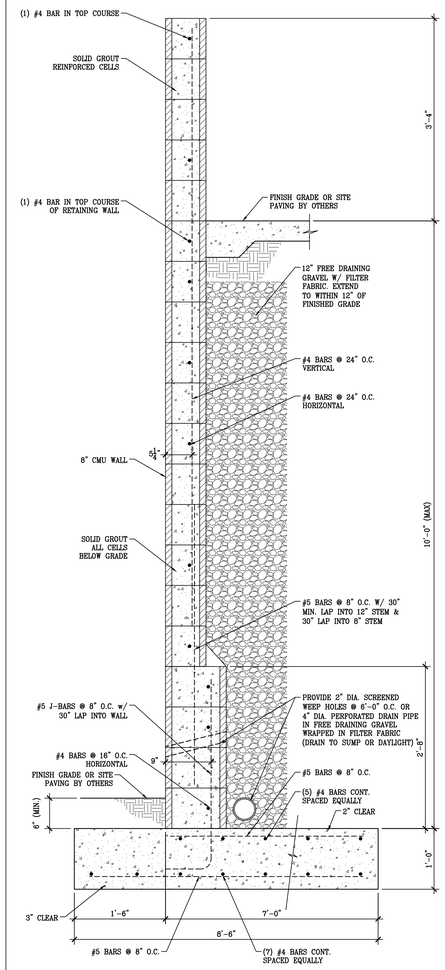
REVISIONS:

SCALE: N.T.S.	JOB #: 2024-2301
DRAWN: MBL	CHECKED: LEI ENG'R
DATE: 15 AUG 2024	
SHEET: S1.4	

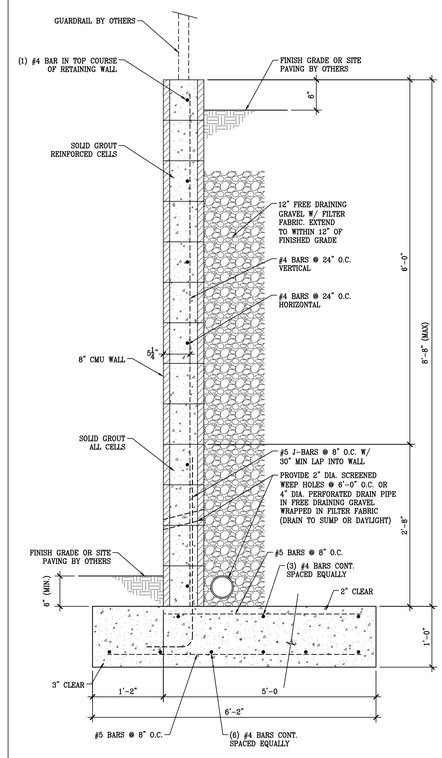
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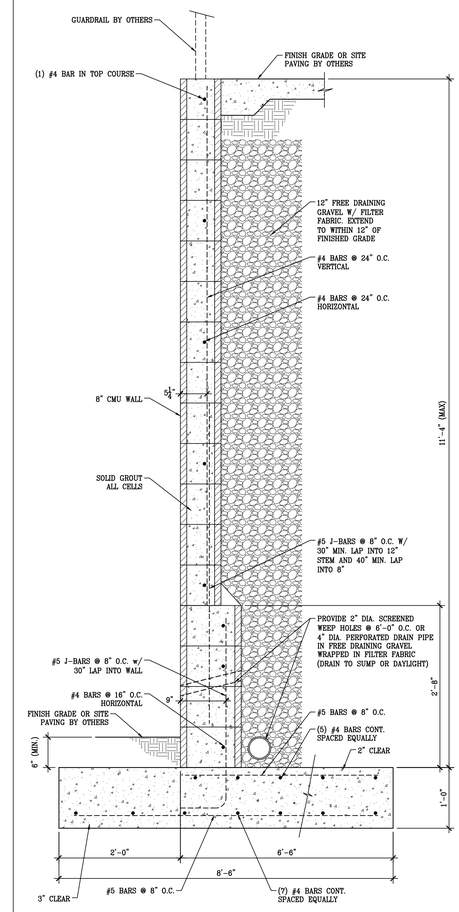
42 8'-0" CMU SITE RETAINING WALL



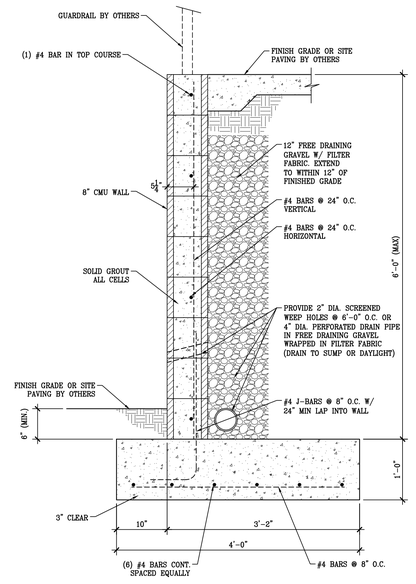
43 10'-0" CMU SITE RETAINING WALL



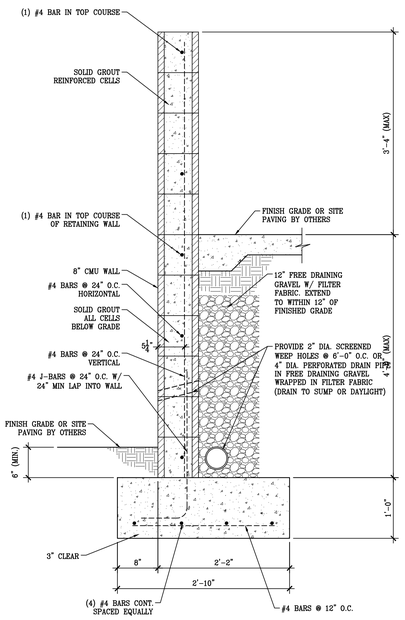
44 8'-8" CMU SITE RETAINING WALL



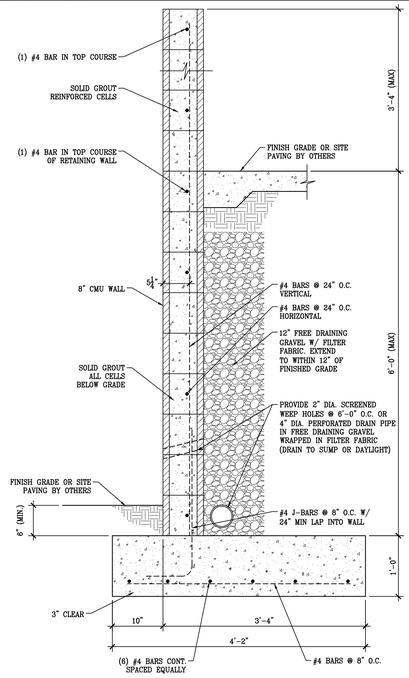
45 11'-4" CMU SITE RETAINING WALL



46 6'-0" CMU SITE RETAINING WALL



47 4'-0" CMU SITE RETAINING WALL



48 6'-0" CMU SITE RETAINING WALL

49 NOT USED

50 NOT USED

51 NOT USED

52 NOT USED

53 NOT USED

54 NOT USED

RESIDENTIAL PROFESSIONAL ENGINEER
CERTIFICATE
88963
ERIC B. MURRAY
Signed: 03/21/2025
STATE OF UTAH
STRUCTURAL ELEMENTS ONLY

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STRUCTURAL DETAILS

REVISIONS:

SCALE: N.T.S.	JOB #: 2024-2301
DRAWN: MBL	CHECKED: LEI ENG'R
DATE: 15 AUG 2024	
SHEET: S1.5	

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Framing Notes

1. Plans are not complete w ithout the structural calculations.
2. Refer to sheet S2.5 for the general structural notes.
3. Roof sheathing to be APA rated 7/16" OSB or CDX plyw ood w ith 8d nails at 6" o.c. edge, 12" o.c. field.
4. Floor sheathing to be APA rated 3/4" T&G w ith 10d nails or Simpson WSNTL2LS #8 w ood screw s at 6" o.c. edge, 12" o.c. field.
5. Exterior stud w alls to be 2x6 at 16" o.c. U.N.O.
6. Use (10) 16d nails betw een top plate splice points on all exterior and shear w alls. Provide a 4'-0" minimum lap
7. Install all Simpson hardw are per manufacturer's specifications.
8. Holdow ns shall be installed on (2) full height king studs (minimum).
9. Floor trusses by others, U.N.O.
10. Overbuild roof rafters to be 2x6 DF-L #2 at 24" o.c. U.N.O.
11. Provide 2x squash blocking at floor framing to match dimensions of post above.
12. All details shall apply in all similar situations.
13. All lumber not permanently protected from the elements shall be preservative treated or of a decay resistant species. Contact LEI Engineers and Surveyors, Inc. if a different species is to be used.

Post Schedule

Designation	Post Size
P1	(1) 2x
P2	(2) 2x
P3	(3) 2x
P4	(4) 2x
P5	(5) 2x
P6	4x4
P7	6x6
P8	3 1/2" x 5 1/4" Parallam Post
P9	5 1/4" x 5 1/4" Parallam Post
P10	HSS6x6x3/16 A500 Gr.B-46 Steel Post
P11	HSS5x5x3/16 A500 Gr.B-46 Steel Post

Notes:
1. Posts indicate number of trimmer studs w hen specified at headers. All other post designations refer to full height king studs U.N.O.
2. Install (1) trimmer stud and (1) king stud each side of each opening U.N.O.
3. Install (2) trimmer studs each side of openings greater than 6'-0" U.N.O.
4. Install (2) king studs each side of openings greater than 8'-0" U.N.O.
5. 2x built-up posts shall be the same w idth of the w all in w hich they are framed U.N.O.
6. Nail each ply of 2x built-up posts w / 16d nails @ 6" o.c. staggered U.N.O.
7. Posts that are not framed w ithin a stud w all shall be braced w ith BC or AC post cap and PB or ABA post base U.N.O.

Hanger Schedule

Design.	Hangers
H1	LUS24
H2	LTHJA26
H3	TJC37 (MAX.)
H4	NOT USED
H5	HHUS26-2
H6	MUS26
H7	HUS26
H8	LUS210
H9	HGUM5.50-SDS w/ OFFSET FLANGE TO CMU WALL
H10	LUS46
H11	LUS28
H12	EGQ5.25-SDS, H=12"
H13	HUCQ610-SDS
H14	HUC410 (MAX.)
H15	HUC46 (MAX.)
H16	NOT USED
H17	HUC610
H18	NOT USED
H19	HUCQ5.25/11-SDS
H20	SUL26
H21	SUR26

Beam Schedule

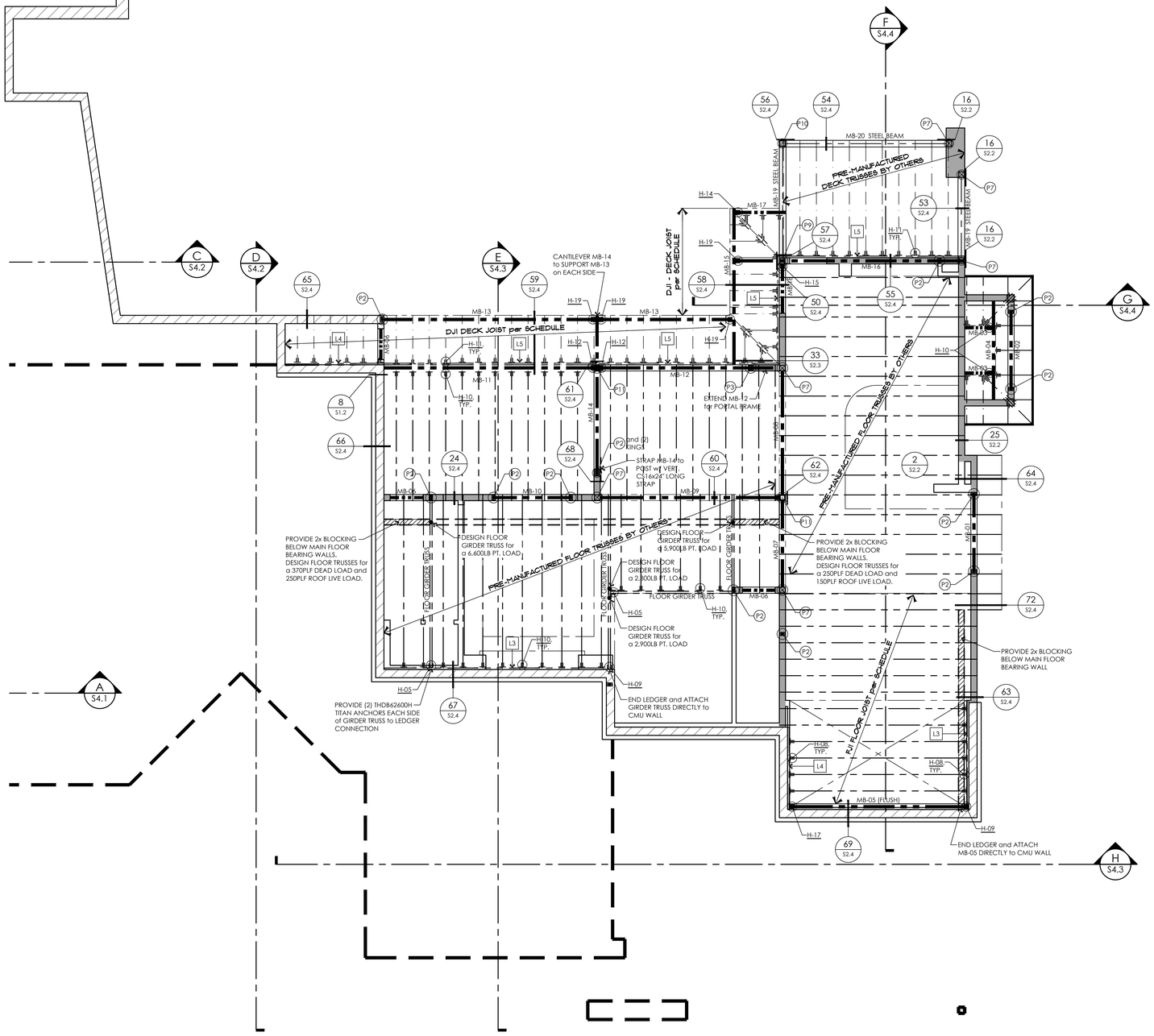
Desig.	Qty.	Size	Type
MB1	1	6 x 10	DF-L#2
MB2	1	4 x 6	DF-L#2
MB3	1	4 x 6	DF-L#2
MB4	1	4 x 6	DF-L#2
MB5	1	6 x 12	DF-L#2
MB6	1	4 x 6	DF-L#2
MB7	1	W10x22	A992-50 Steel
MB8	1	W10x22	A992-50 Steel
MB9	1	W10x22	A992-50 Steel
MB10	1	4 x 10	DF-L#2
MB11	1	5 1/8" x 24"	Glulam
MB12	1	5 1/8" x 12"	Glulam
MB13	1	5 1/8" x 12"	Glulam
MB14	1	5 1/8" x 12"	Glulam
MB15	1	5 1/8" x 12"	Glulam
MB16	1	5 1/8" x 12"	Glulam
MB17	1	4 x 10	DF-L#2
MB18	1	4 x 6	DF-L#2
MB19	1	W12x26	A992-50 Steel
MB20	1	W12x26	A992-50 Steel

Ledger Schedule

Design.	Ledger
L1	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 16" o.c. into studs
L2	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 24" o.c. into ends of trusses
L3	2x12 DF-L#2 w/ (1) THDB62600H Titen HD anchors @ 8" o.c. staggered into CMU
L4	2x8 DF-L#2 w/ (1) THDB62600H Titen HD anchors @ 16" o.c. staggered into CMU
L5	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 16" o.c. into beam/blocking

Joists Schedule

Design.	Joists
FJ1	2x12 DF-L#2 @ 16" o.c.
DJ1	2x8 DF-L#2 @ 16" o.c.



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

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NOTE:
Structural components designed according to the 2018 IBC, all other aspects of the plans shall conform w/ 2018 IRC and all current governing codes

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STATE OF UTAH LICENSED PROFESSIONAL ENGINEER
66953
ERIC B. MURRAY
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

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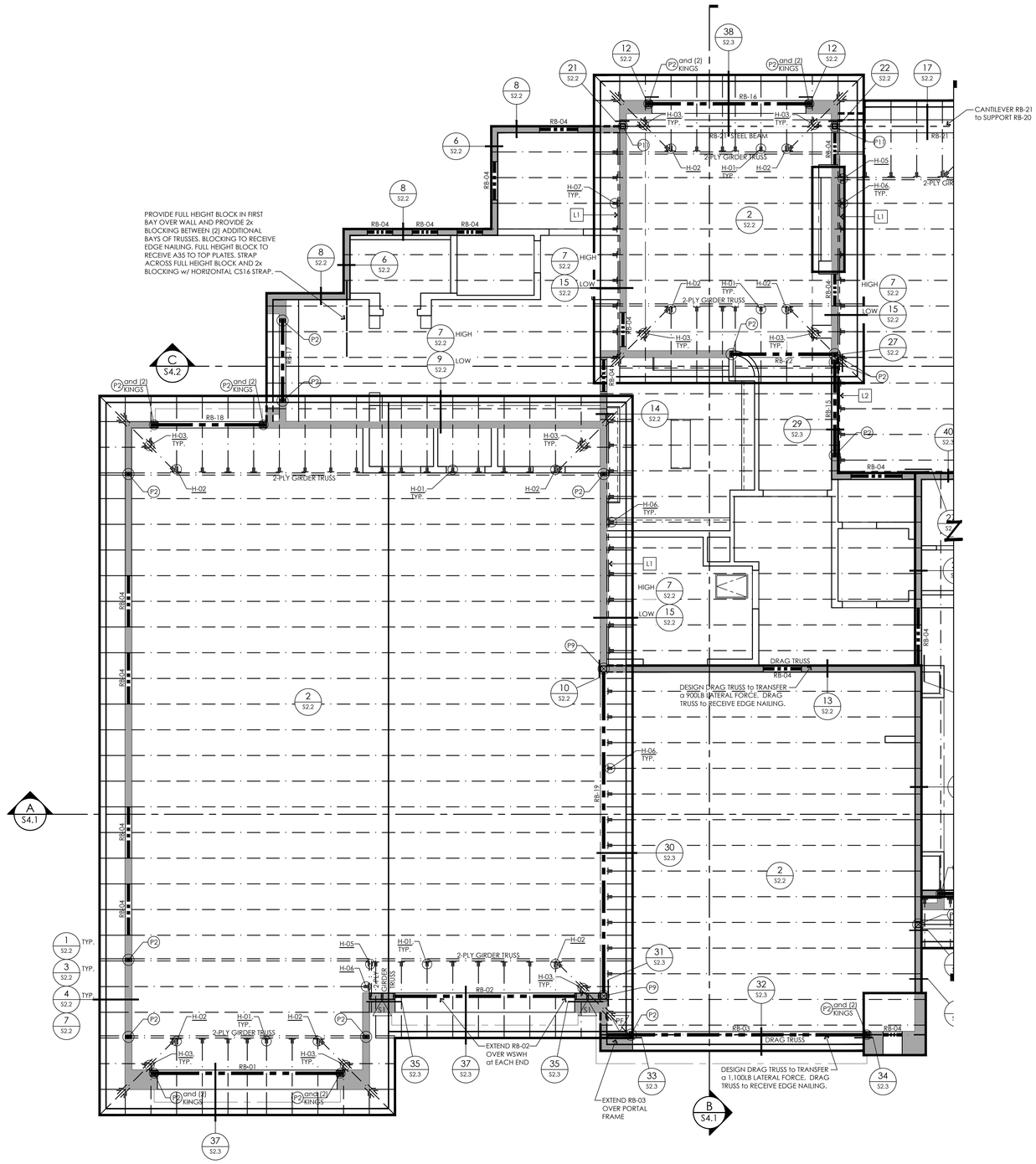
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◆FLOOR FRAMING PLAN

REVISIONS:

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: s.l.z.	CHECKED: LEI ENG'R
DATE: 05 NOVEMBER 2024	
SHEET: S2.0	

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ROOF FRAMING PLAN (LEFT SIDE)

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

Framing Notes

1. Plans are not complete without the structural calculations.
2. Refer to sheet S2.5 for the general structural notes.
3. Roof sheathing to be APA rated 7/16" OSB or CDX plywood with 8d nails at 6" o.c. edge, 12" o.c. field.
4. Floor sheathing to be APA rated 3/4" T&G with 10d nails or Simpson WSNTL2IS #8 wood screws at 6" o.c. edge, 12" o.c. field.
5. Exterior stud walls to be 2x6 at 16" o.c. U.N.O.
6. Use (10) 16d nails between top plate splice points on all exterior and shear walls. Provide a 4'-0" minimum lap
7. Install all Simpson hardware per manufacturer's specifications.
8. Holdowns shall be installed on (2) full height king studs (minimum).
9. Floor trusses by others, U.N.O.
10. Overbuild roof rafters to be 2x6 DF-L #2 at 24" o.c. U.N.O.
11. Provide 2x squash blocking at floor framing to match dimensions of post above.
12. All details shall apply in all similar situations.
13. All lumber not permanently protected from the elements shall be preservative treated or of a decay resistant species. Contact LEI Engineers and Surveyors, Inc. if a different species is to be used.

Post Schedule

Designation	Post Size
P1	(1) 2x
P2	(2) 2x
P3	(3) 2x
P4	(4) 2x
P5	(5) 2x
P6	4x4
P7	6x6
P8	3 1/2" x 5 1/4" Parallam Post
P9	5 1/4" x 5 1/4" Parallam Post
P10	HSS6x6x3/16 A500 Gr.B-46 Steel Post
P11	HSS5x5x3/16 A500 Gr.B-46 Steel Post

Notes:
1. Posts indicate number of trimmer studs when specified at headers. All other post designations refer to full height king studs U.N.O.
2. Install (1) trimmer stud and (1) king stud each side of each opening U.N.O.
3. Install (2) trimmer studs each side of openings greater than 6'-0" U.N.O.
4. Install (2) king studs each side of openings greater than 8'-0" U.N.O.
5. 2x built-up posts shall be the same width of the wall in which they are framed U.N.O.
6. Nail each ply of 2x built-up posts w/ 16d nails @ 6" o.c. staggered U.N.O.
7. Posts that are not framed within a stud wall shall be braced with BC or AC post cap and PB or ABA post base U.N.O.

Beam Schedule

Desig.	Qty.	Size	Type
RB1	1	5 1/8" x 12"	Glulam
RB2	1	5 1/8" x 12"	Glulam
RB3	1	5 1/8" x 12"	Glulam
RB4	1	4 x 6	DF-L#2
RB5	1	6 x 10	DF-L#2
RB6	1	5 1/8" x 12"	Glulam
RB7	1	6 x 10	DF-L#2
RB8	1	5 1/8" x 12"	Glulam
RB9	1	6 x 10	DF-L#2
RB10	1	4 x 10	DF-L#2
RB11	1	6 x 10	DF-L#2
RB12	1	4 x 10	DF-L#2
RB13	1	5 1/8" x 12"	Glulam
RB14	1	4 x 8	DF-L#2
RB15	1	4 x 10	DF-L#2
RB16	1	6 x 10	DF-L#2
RB17	1	4 x 8	DF-L#2
RB18	1	4 x 8	DF-L#2
RB19	1	5 1/8" x 30"	Glualm
RB20	1	W12x120	A992-50 Steel
RB21	1	W12x120	A992-50 Steel
RB22	1	6 x 8	DF-L#2
RB23	1	W12x50	A992-50 Steel
RB24	1	5 1/8" x 15"	Gluam
RB25	1	6 x 10	DF-L#2
RB26	1	6 x 8	DF-L#2
RB27	1	5 1/8" x 24"	Gluam
RB28	1	6 x 10	DF-L#2
RB29	1	W12x30	A992-50 Steel
RB30	1	W12x30	A992-50 Steel
RB31	1	W12x26	A992-50 Steel
RB32	1	W12x26	A992-50 Steel
RB33	1	W12x26	A992-50 Steel

Hanger Schedule

Design.	Hangers
H1	LUS24
H2	LTHJA26
H3	TJC37 (MAX.)
H4	NOT USED
H5	HHUS26-2
H6	MUS26
H7	HUS26
H8	LUS210
H9	HGUM5.50-SDS w/ OFFSET FLANGE TO CMU WALL
H10	LUS46
H11	LUS28
H12	EGQ5.25-SDS, H=12"
H13	HUCQ610-SDS
H14	HUC410 (MAX.)
H15	HUC46 (MAX.)
H16	NOT USED
H17	HUC610
H18	NOT USED
H19	HUCQ5.25/11-SDS
H20	SUL26
H21	SUR26

Ledger Schedule

Design.	Ledger
L1	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 16" o.c. into studs
L2	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 24" o.c. into ends of trusses
L3	2x12 DF-L#2 w/ (1) THDB62600H Titen HD anchors @ 8" o.c. staggered into CMU
L4	2x8 DF-L#2 w/ (1) THDB62600H Titen HD anchors @ 16" o.c. staggered into CMU
L5	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 16" o.c. into beam/blocking

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NOTE:
Structural components designed according to the 2018 IBC, all other aspects of the plans shall conform w/ 2018 IRC and all current governing codes

ERIC B. MURRAY
66953
Signed: 03/21/2025
RENEWAL: 9-30-26
STRUCTURAL ELEMENTS ONLY

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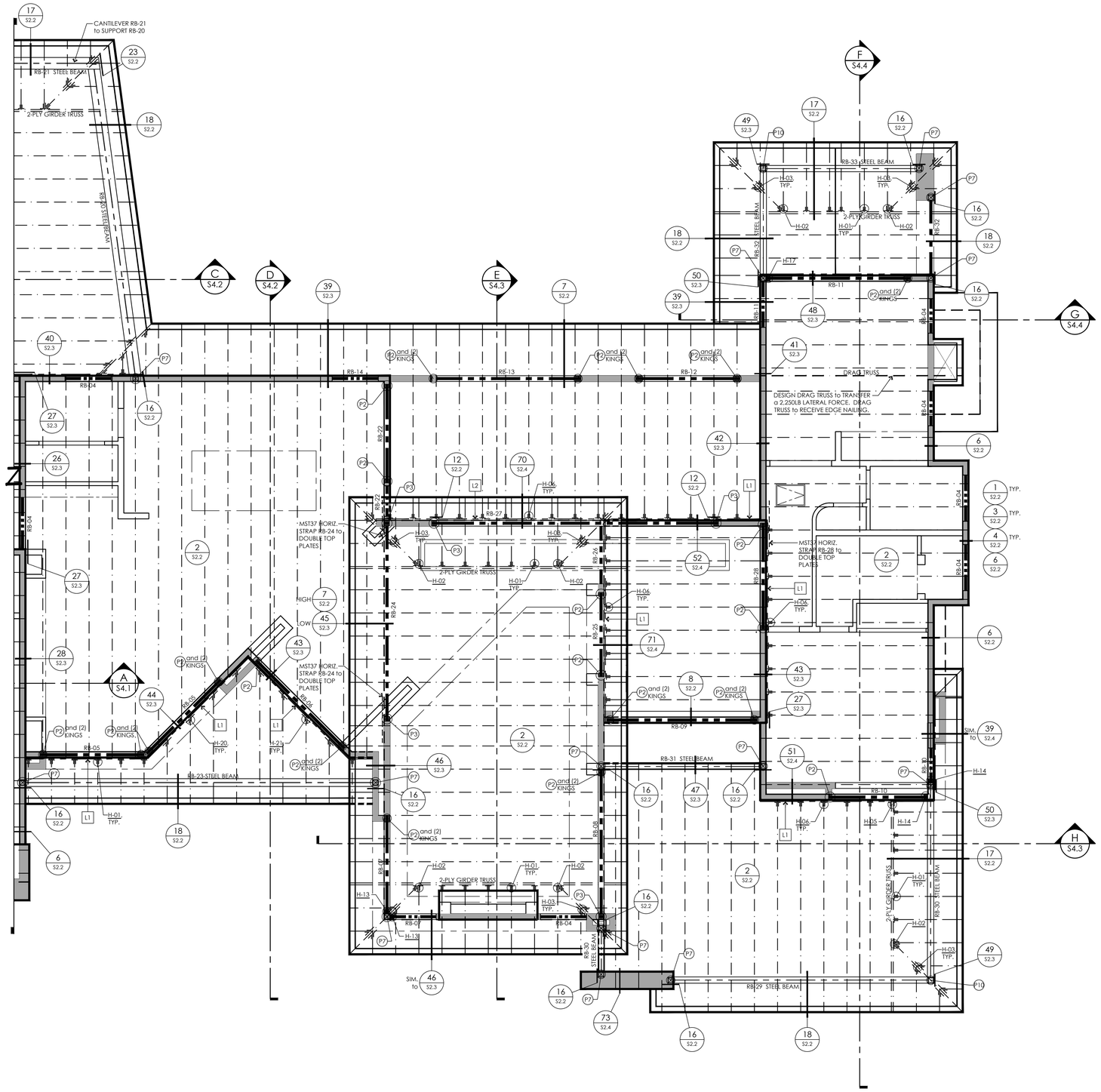
◆ ROOF FRAMING PLAN - LEFT SIDE

REVISIONS:

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.L.Z.	CHECKED: LEI ENGR
DATE: 05 NOVEMBER 2024	
SHEET: S2.1L	

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ROOF FRAMING PLAN (RIGHT SIDE)
SCALE: 1/4" = 1'-0"

Framing Notes

1. Plans are not complete without the structural calculations.
2. Refer to sheet S2.5 for the general structural notes.
3. Roof sheathing to be APA rated 7/16" OSB or CDX plywood with 8d nails at 6" o.c. edge, 12" o.c. field.
4. Floor sheathing to be APA rated 3/4" T&G with 10d nails or Simpson WSNTL2LS #8 wood screws at 6" o.c. edge, 12" o.c. field.
5. Exterior stud walls to be 2x6 at 16" o.c. U.N.O.
6. Use (10) 16d nails between top plate splice points on all exterior and shear walls. Provide a 4'-0" minimum lap
7. Install all Simpson hardware per manufacturer's specifications.
8. Holdowns shall be installed on (2) full height king studs (minimum).
9. Floor trusses by others, U.N.O.
10. Overbuild roof rafters to be 2x6 DF-L #2 at 24" o.c. U.N.O.
11. Provide 2x squash blocking at floor framing to match dimensions of post above.
12. All details shall apply in all similar situations.
13. All lumber not permanently protected from the elements shall be preservative treated or of a decay resistant species. Contact LEI Engineers and Surveyors, Inc. if a different species is to be used.

Post Schedule

Designation	Post Size
P1	(1) 2x
P2	(2) 2x
P3	(3) 2x
P4	(4) 2x
P5	(5) 2x
P6	4x4
P7	6x6
P8	3 1/2" x 5 1/4" Parallam Post
P9	5 1/4" x 5 1/4" Parallam Post
P10	HSS6x6x3/16 A500 Gr.B-46 Steel Post
P11	HSS5x5x3/16 A500 Gr.B-46 Steel Post

Notes:
1. Posts indicate number of trimmer studs when specified at headers. All other post designations refer to full height king studs U.N.O.
2. Install (1) trimmer stud and (1) king stud each side of each opening U.N.O.
3. Install (2) trimmer studs each side of openings greater than 6'-0" U.N.O.
4. Install (2) king studs each side of openings greater than 8'-0" U.N.O.
5. 2x built-up posts shall be the same width of the wall in which they are framed U.N.O.
6. Nail each ply of 2x built-up posts w/ 16d nails @ 6" o.c. staggered U.N.O.
7. Posts that are not framed within a stud wall shall be braced with BC or AC post cap and PB or ABA post base U.N.O.

Beam Schedule

Desig.	Qty.	Size	Type
RB1	1	5 1/8" x 12"	Glulam
RB2	1	5 1/8" x 12"	Glulam
RB3	1	5 1/8" x 12"	Glulam
RB4	1	4 x 6	DF-L#2
RB5	1	6 x 10	DF-L#2
RB6	1	5 1/8" x 12"	Glulam
RB7	1	6 x 10	DF-L#2
RB8	1	5 1/8" x 12"	Glulam
RB9	1	6 x 10	DF-L#2
RB10	1	4 x 10	DF-L#2
RB11	1	6 x 10	DF-L#2
RB12	1	4 x 10	DF-L#2
RB13	1	5 1/8" x 12"	Glulam
RB14	1	4 x 8	DF-L#2
RB15	1	4 x 10	DF-L#2
RB16	1	6 x 10	DF-L#2
RB17	1	4 x 8	DF-L#2
RB18	1	4 x 8	DF-L#2
RB19	1	5 1/8" x 30"	Glulam
RB20	1	W12x120	A992-50 Steel
RB21	1	W12x120	A992-50 Steel
RB22	1	6 x 8	DF-L#2
RB23	1	W12x50	A992-50 Steel
RB24	1	5 1/8" x 15"	Glulam
RB25	1	6 x 10	DF-L#2
RB26	1	6 x 8	DF-L#2
RB27	1	5 1/8" x 24"	Glulam
RB28	1	6 x 10	DF-L#2
RB29	1	W12x30	A992-50 Steel
RB30	1	W12x30	A992-50 Steel
RB31	1	W12x26	A992-50 Steel
RB32	1	W12x26	A992-50 Steel
RB33	1	W12x26	A992-50 Steel

Hanger Schedule

Design.	Hangers
H1	LUS24
H2	LTHJA26
H3	TJC37 (MAX.)
H4	NOT USED
H5	HHUS26-2
H6	MUS26
H7	HUS26
H8	LUS210
H9	HGUM5.50-SDS w/ OFFSET FLANGE TO CMU WALL
H10	LUS46
H11	LUS28
H12	EGQ5.25-SDS, H=12"
H13	HUCQ610-SDS
H14	HUC410 (MAX.)
H15	HUC46 (MAX.)
H16	NOT USED
H17	HUC610
H18	NOT USED
H19	HUCQ5.25/11-SDS
H20	SUL26
H21	SUR26

Ledger Schedule

Design.	Ledger
L1	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 16" o.c. into studs
L2	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 24" o.c. into ends of trusses
L3	2x12 DF-L#2 w/ (1) THDB62600H Titen HD anchors @ 8" o.c. staggered into CMU
L4	2x8 DF-L#2 w/ (1) THDB62600H Titen HD anchors @ 16" o.c. staggered into CMU
L5	2x8 DF-L#2 w/ (2) SDWS22500DB wood screws @ 16" o.c. into beam/blocking

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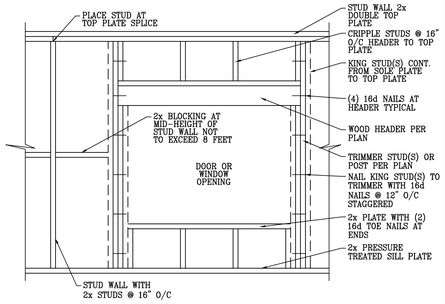
◆ ROOF FRAMING PLAN - RIGHT SIDE

REVISIONS:

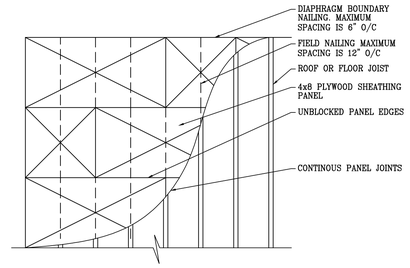
SCALE: 1/4" = 1'-0"	JOB #: 2024-04
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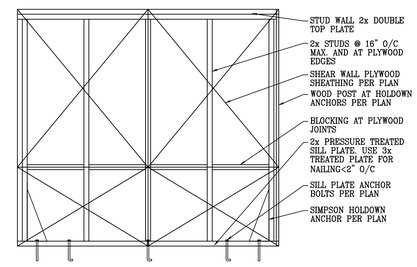
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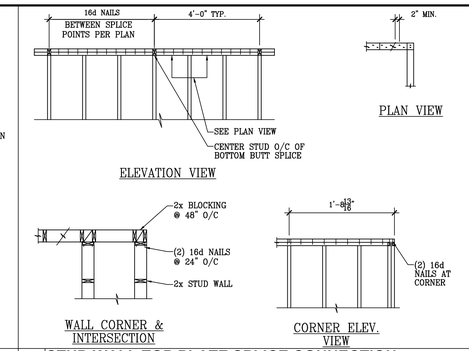
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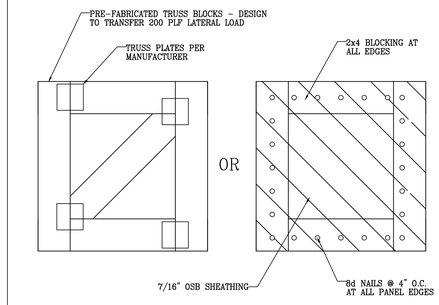
2 UNBLOCKED HORIZONTAL DIAPHRAGM



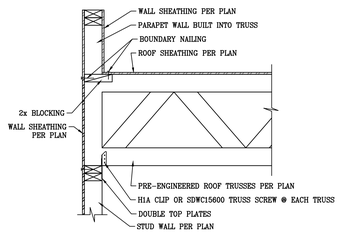
3 TYPICAL SHEAR WALL FRAMING & CONNECTION



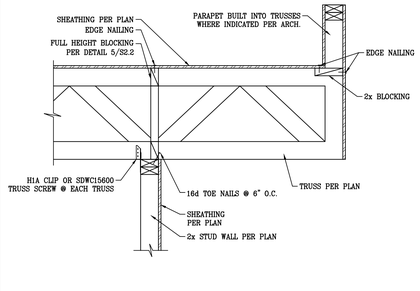
4 STUD WALL TOP PLATE SPLICE CONNECTION



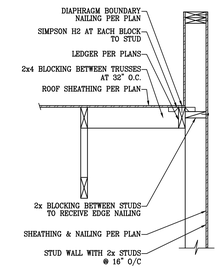
5 TRUSS BLOCKING



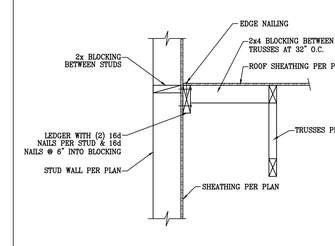
6 ROOF TRUSSES PERPENDICULAR TO STUD WALL



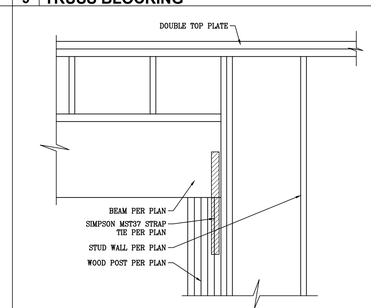
7 CANTILEVER ROOF TRUSSES



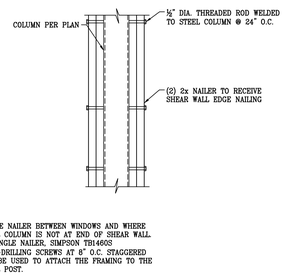
8 PARAPET WALL WITH PARALLEL TRUSS DETAIL



9 LOW ROOF AT BALLOON FRAMED STUD WALL

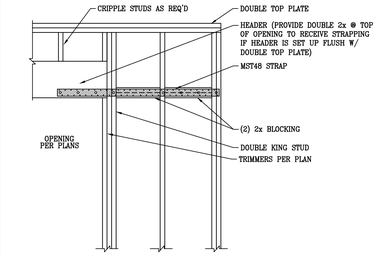


10 BEAM PARALLEL TO STUD WALL CONNECTION



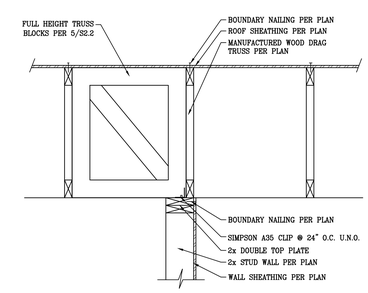
NOTES:
1. SINGLE NAILER BETWEEN WINDOWS AND WHERE STEEL COLUMN IS NOT AT END OF SHEAR WALL.
2. AT SINGLE NAILER, SIMPSON TEN16SS SELF-DRILLING SCREWS AT 8" O.C. STAGGERED MAY BE USED TO ATTACH THE FRAMING TO THE STEEL POST.

11 TYPICAL WALL FRAMING TO STEEL POST

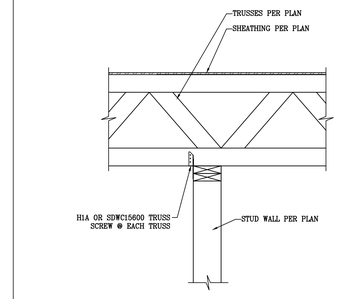


NOTE:
1. NAIL WALL SHEATHING INTO HEADER & ADJACENT 2x BLOCKING W/ 8d NAILS @ 4" O.C.
2. USE CMSTC16 STRAP AT ADJACENT OPENINGS AND LAP 16" MINIMUM ONTO HEADER.

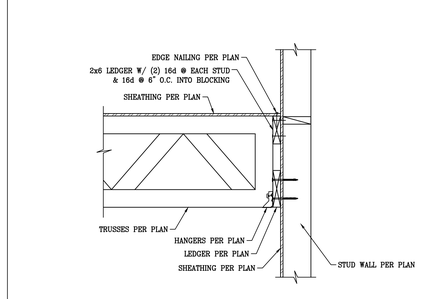
12 HEADER BLOCKING DETAIL - PER PLANS



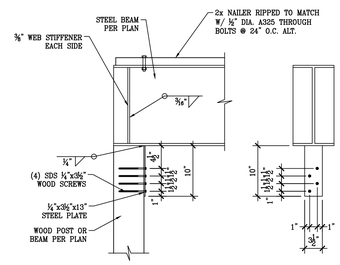
13 SHEAR WALL PARALLEL TO ROOF TRUSS CONN.



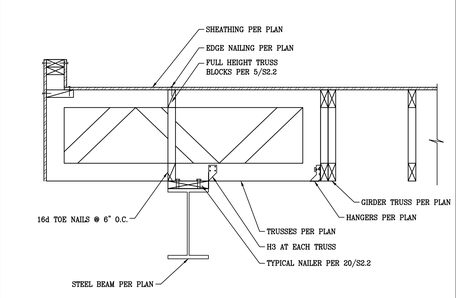
14 TRUSSES TO INTERIOR BEARING WALL



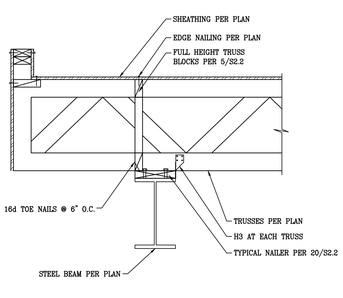
15 TRUSSES AND LEDGER AT WALL



16 STEEL BEAM TO WOOD POST

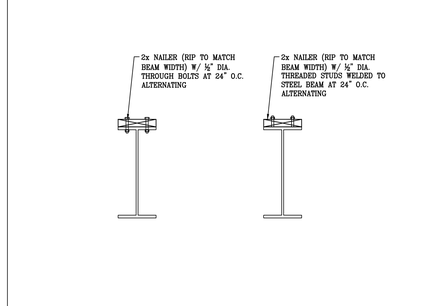


17 OUTLOOKER TRUSSES AT STEEL BEAM

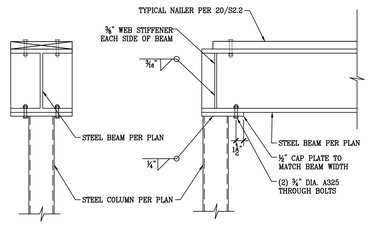


18 TRUSSES AT STEEL BEAM

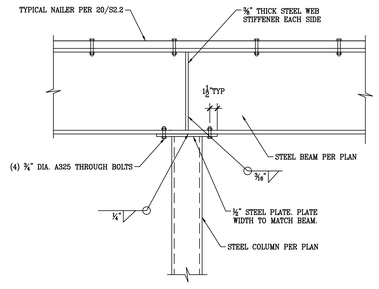
19 NOT USED



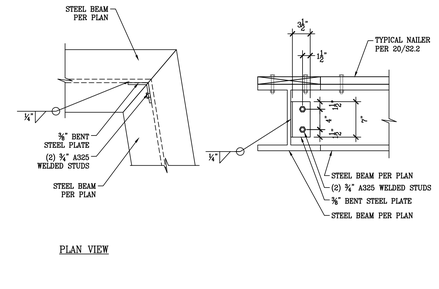
20 TYPICAL NAILER TO STEEL BEAM



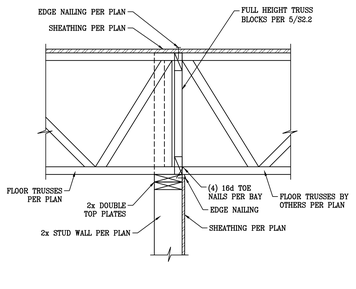
21 STEEL BEAM TO STEEL COLUMN



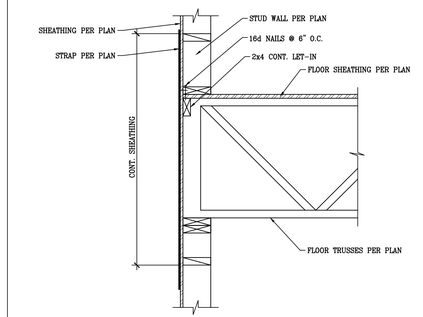
22 STEEL BEAM TO STEEL POST



23 STEEL BEAM TO STEEL BEAM



24 FLOOR TRUSSES AT SHARED WALL



25 FLOOR TRUSSES AT STUD WALL

STRUCTURAL ELEMENTS ONLY
68053
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Signed: 03/31/2025
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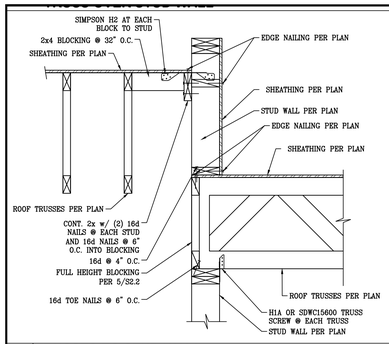
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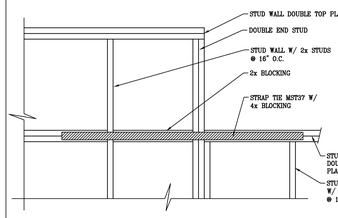
◆ STRUCTURAL DETAILS ◆

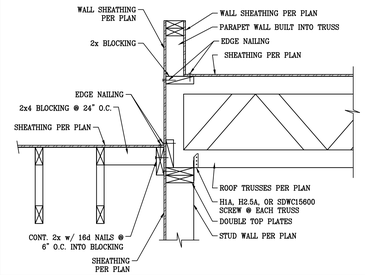
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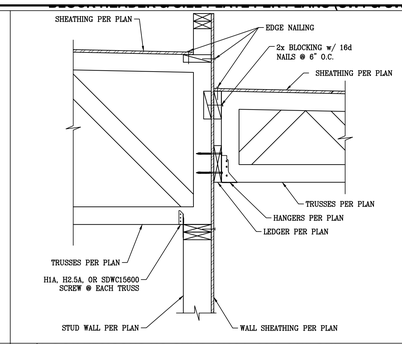
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DATE:	
15 AUG 2024	
SHEET	
S2.2	

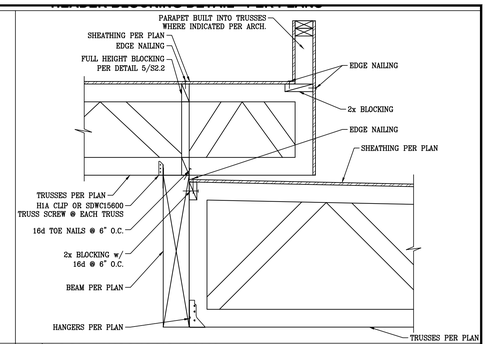
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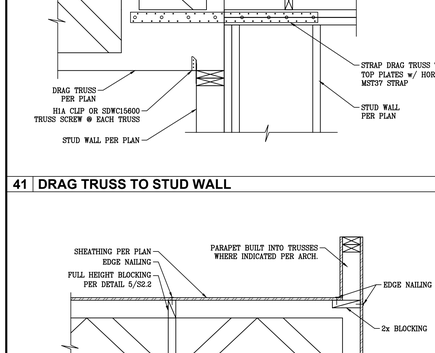




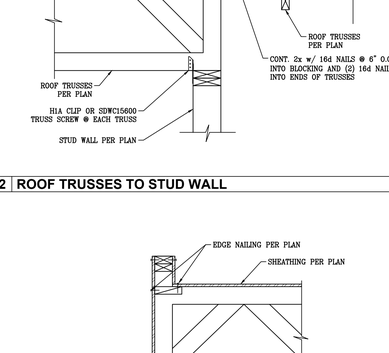




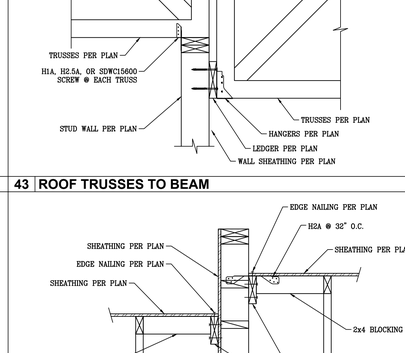
26 TRUSSES TO STUD WALL



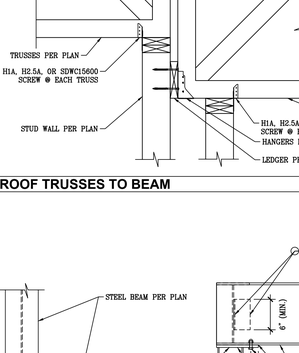
27 STUD WALL STEP-DOWN CONNECTION



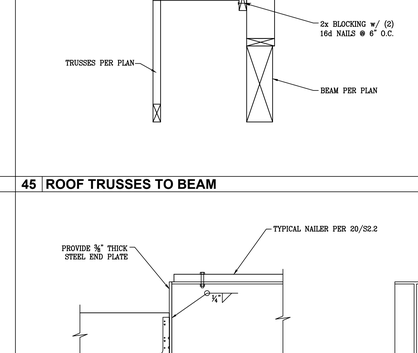
28 ROOF TRUSSES PERPENDICULAR TO STUD WALL



29 ROOF TRUSSES TO STUD WALL AND LEDGER



30 ROOF TRUSSES TO BEAM



31 BEAM PARALLEL TO STUD WALL CONNECTION

32 DRAG TRUSS TO BEAM AT ROOF TRUSSES

33 PORTAL FRAME

34 BEAM TO WALL OPPOSITE PORTAL FRAME

35 WOOD HEADER OVER WSWH-PK

36 WSWH TRIM ZONE & ALLOWABLE HOLES

37 CANTILEVER ROOF TRUSSES

38 SHEAR TRANSFER AT STEEL BEAM

39 CANTILEVER ROOF TRUSSES

40 ROOF TRUSSES PERPENDICULAR TO STUD WALL

41 DRAG TRUSS TO STUD WALL

42 ROOF TRUSSES TO STUD WALL

43 ROOF TRUSSES TO BEAM

44 ROOF TRUSSES TO BEAM

45 ROOF TRUSSES TO BEAM

46 CANTILEVER ROOF TRUSSES

47 TRUSSES AT STEEL BEAM

48 ROOF TRUSSES TO STUD WALL

49 STEEL BEAM TO STEEL COLUMN

50 STEEL BEAM TO WOOD POST

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STATE OF UTAH · LICENSED · PROFESSIONAL ENGINEER
ERIC B. MURRAY
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

PROJECT:
The STEEWYK Residence
3970 Blackhawk Drive
T: 22S0 B: 08 L: 7 & 8 / APN 111-20-168A

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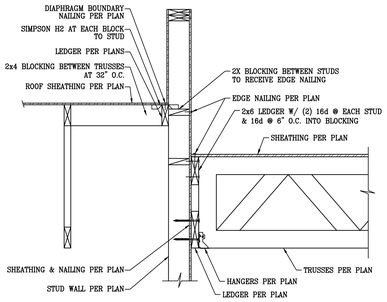
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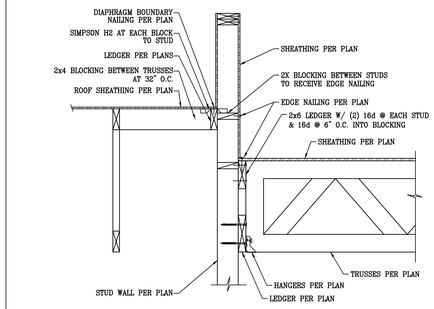
SCALE:	JOB #:
N.T.S.	2024-2301
DRAWN:	CHECKED:
MBL	LEI ENG'R
DATE:	
15 AUG 2024	

SHEET:
S2.3

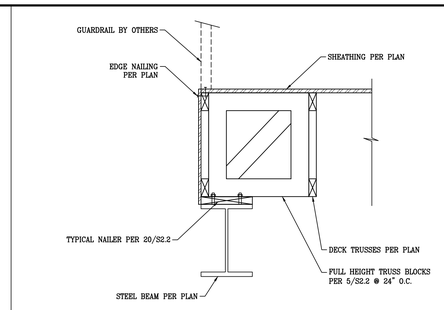
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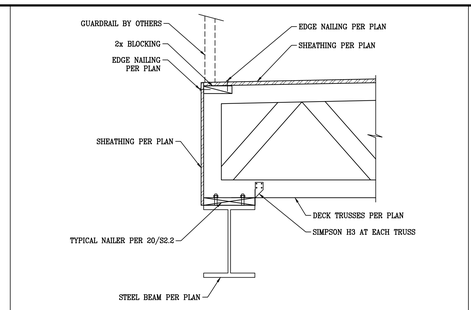
51 PARAPET WALL WITH PARALLEL TRUSS DETAIL



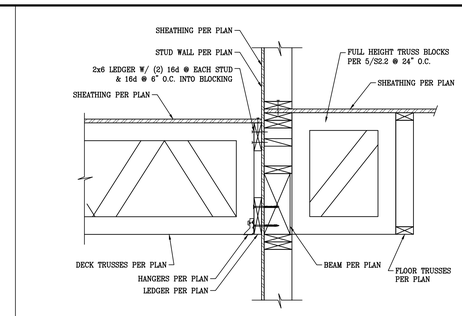
52 PARAPET WALL WITH PARALLEL TRUSS DETAIL



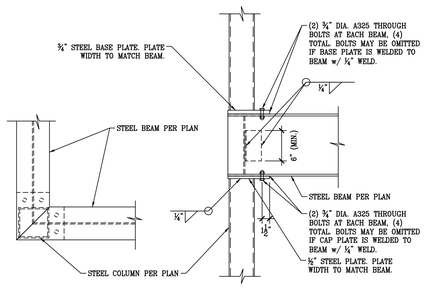
53 DECK TRUSSES AT STEEL BEAM



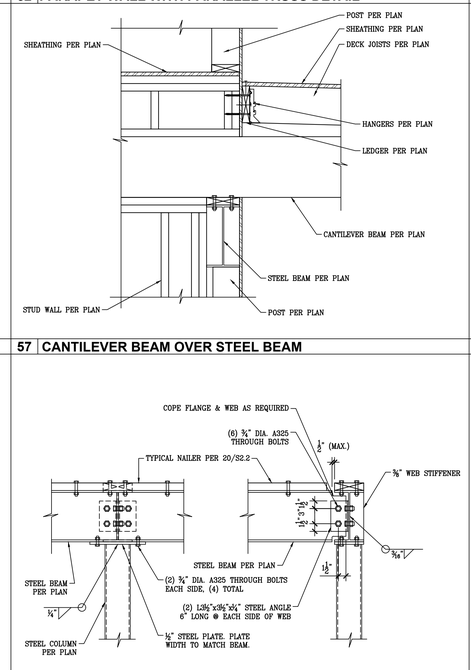
54 DECK TRUSSES AT STEEL BEAM



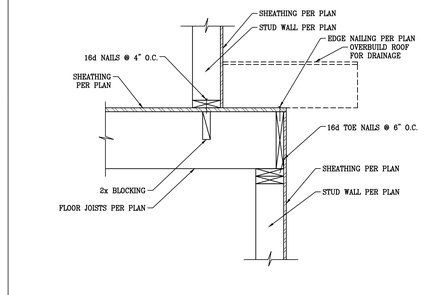
55 TRUSSES AT FLOOR BEAM



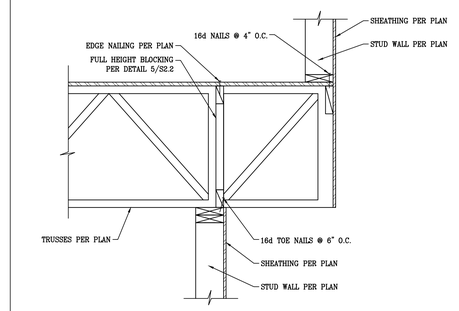
56 STEEL BEAM TO STEEL COLUMN



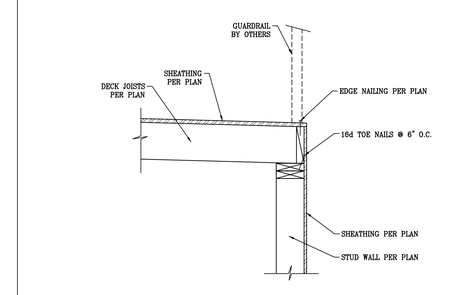
57 CANTILEVER BEAM OVER STEEL BEAM



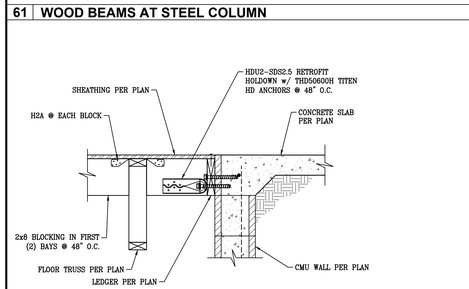
58 DECK JOISTS AND FLOOR TRUSSES TO STUD WALL



59 DECK JOISTS AND FLOOR TRUSSES TO STUD WALL

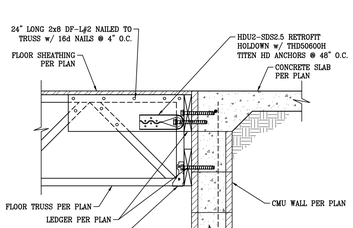


60 FLOOR TRUSSES AT SHARED WALL

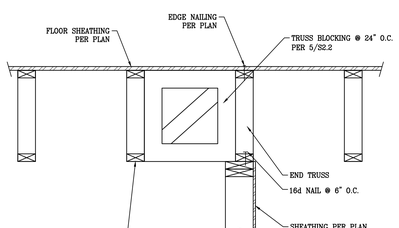


61 WOOD BEAMS AT STEEL COLUMN

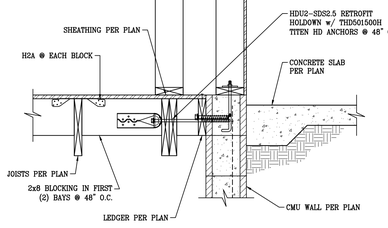
62 STEEL BEAM TO STEEL BEAM AT STEEL COLUMN



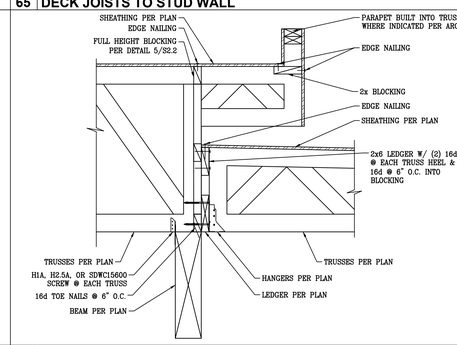
63 FLOOR JOISTS TO STUD WALL



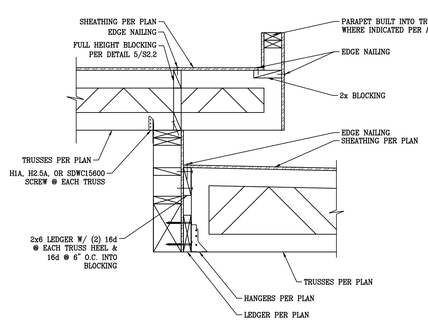
64 CANTILEVER FLOOR TRUSSES AT STUD WALL



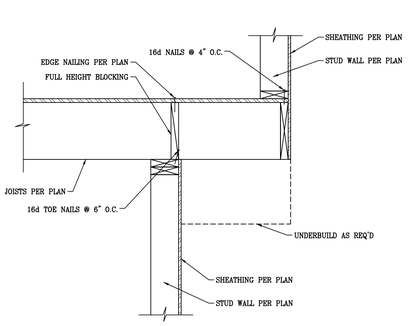
65 DECK JOISTS TO STUD WALL



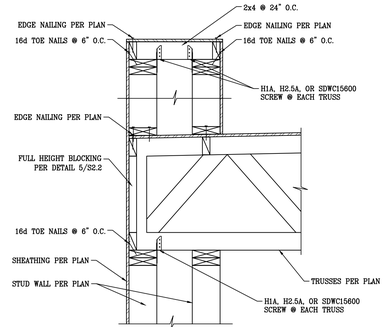
66 TRUSSES TO LEDGER AT CMU WALL



67 TRUSSES TO LEDGERS AT CMU WALL



68 FLOOR TRUSSES PARALLEL TO WALL



69 TRUSSES TO LEDGER AT CMU WALL

70 TRUSSES TO BEAM

71 TRUSSES TO STUD WALL

72 CANTILEVER JOISTS AT STUD WALL

73 ROOF TRUSSES TO STUD WALL

74 NOT USED

75 NOT USED

68953
ERIC B. MURRAY
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

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T: 2280 B: 08 L: 7 & 8 / APN 111-20-168A

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• CONTRACTORS ARE TO READ THESE PLANS, CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

STRUCTURAL DETAILS

REVISIONS:

SCALE: N.T.S.	JOB #: 2024-2301
DRAWN: MBL	CHECKED: LEI ENG'R
DATE: 15 AUG 2024	
SHEET: S2.4	

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BASIS OF DESIGN

1. GOVERNING BUILDING CODE ..... 2018 IBC

2. GRAVITY DESIGN:
   - ROOF DEAD LOAD (TILE) ..... 25 PSF
   - ROOF DEAD LOAD (SHINGLES, METAL, MEMBRANE) ..... 20 PSF
   - FLOOR DEAD LOAD ..... 25 PSF
   - FLOOR LIVE LOAD ..... 40 PSF
   - DECK LIVE LOAD ..... 40 PSF
   - ROOF LIVE LOAD ..... 20 PSF

3. SEISMIC DESIGN:
   - LATERAL SYSTEM ..... SHEAR WALL
   - ZONE C
   - I 1.0
   - S_s=0.183 S_1=0.110 S_{DS}=0.195 S_{D1}=0.175 R=6.5
   - SITE CLASS (ASSUMED) ..... D
   - RISK CATEGORY II

4. WIND DESIGN:
   - BASIC WIND SPEED ..... 99 MPH
   - EXPOSURE C

5. SOILS:
   - SOIL BEARING PRESSURE (ASSUMED PER 2018 IBC 1806.2) ..... 1500 PSF

GENERAL

1. THE GENERAL CONTRACTOR SHALL:

   A. BECOME FAMILIAR WITH ALL PORTIONS OF THE CONTRACT DOCUMENTS AND ENSURE THAT ALL SUBCONTRACTORS ARE FAMILIAR WITH THOSE PORTIONS PERTAINING TO THEIR AREA OF WORK. NO DEVIATIONS WILL BE ALLOWED UNLESS AGREED UPON BY ALL PARTIES IN WRITING PRIOR TO CONSTRUCTION OR FABRICATION.

   B. VERIFY ALL DIMENSIONS AND ELEVATIONS. COORDINATE ALL DOORS, WINDOWS, NON-BEARING INTERIOR AND EXTERIOR WALLS, ELEVATIONS, SLOPES, STAIRS, CURBS, DRAINS, RECESSES, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES, CHAMFERS, KEEPS, ETC.

   C. FIELD VERIFY ALL SITE CONDITIONS AND IMMEDIATELY NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER REGARDING ACTUAL CONDITIONS AT THE SITE WHICH ARE NOT PER THE DRAWINGS.

   D. COORDINATE ALL WORK BETWEEN THE VARIOUS TRADES AND SUBCONTRACTORS. REPORT ANY MODIFICATIONS TO THE STRUCTURAL PORTION OF THE BUILDING BY OTHER TRADES TO THE ARCHITECT AND STRUCTURAL ENGINEER.

   E. BE RESPONSIBLE FOR SAFETY AND PROTECTION IN AND AROUND THE JOB SITE AND/OR ADJACENT PROPERTIES.

2. CONTRACT DOCUMENTS:

   A. REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE DRAWINGS.

   B. DETAILS, SECTIONS AND NOTES SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS ELSEWHERE, UNLESS NOTED OR SHOWN OTHERWISE.

   C. THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER SHOP DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.

   D. INFORMATION ON DRAWINGS INDICATING EXISTING CONDITIONS IS BASED ON BEST PRESENT KNOWLEDGE, BUT MAY NOT BE ENTIRELY ACCURATE AND MUST BE FIELD VERIFIED.

3. BUILDING CODE COMPLIANCE:

   A. INSPECTION, TESTING, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND STANDARDS. ASTM AND IBC DESIGNATIONS SHALL BE AS AMENDED TO LATEST DATE UNLESS NOTED OTHERWISE.

4. COORDINATION:

   A. COORDINATE AND VERIFY ROOF, FLOOR, AND WALL OPENINGS REQUIRED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND/OR OTHER DRAWINGS PRIOR TO CONSTRUCTION. REPORT OPENINGS REQUIRED WHICH ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.

   B. COORDINATE ANY CONSTRUCTION SITUATION NOT COVERED BY THESE PLANS, GENERAL NOTES, OR SPECIFICATIONS WITH THE ARCHITECT AND STRUCTURAL ENGINEER.

5. CONSTRUCTION SEQUENCE, SHORING, AND BRACING REQUIREMENTS:

   A. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE METHOD, MEANS, AND SEQUENCE OF ALL STRUCTURAL ERECTION EXCEPT WHEN SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. HE SHALL PROVIDE TEMPORARY SHORING AND BRACING AS HIS METHOD OF ERECTION REQUIRES TO PROVIDE ADEQUATE VERTICAL AND LATERAL SUPPORT DURING ERECTION. THIS SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT MEMBERS ARE PLACED AND ALL FINAL CONNECTIONS ARE COMPLETED, INCLUDING ALL ROOF AND FLOOR ATTACHMENTS.

   B. SHORING AND SUPPORTING FORM WORK FOR SUSPENDED CONCRETE OR MASONRY MATERIAL SHALL REMAIN IN PLACE AND SHALL NOT BE REMOVED UNTIL THE STRUCTURAL MEMBERS HAVE ACQUIRED SUFFICIENT STRENGTH TO SAFELY SUPPORT THEIR OWN WEIGHT AND ANY ADDITIONAL CONSTRUCTION, STORAGE, AND/OR OTHER LOADS TO WHICH THEY MAY BE SUBJECTED. IN NO CASE SHALL THEY BE REMOVED PRIOR TO 7 DAYS. RE-SHORING SHALL BE IMMEDIATELY INSTALLED UPON REMOVAL OF SUCH FORMS AND SHALL REMAIN IN PLACE UNTIL 28 DAYS AFTER PLACING OF MATERIAL OR UNTIL MATERIAL HAS REACHED ITS 28 DAY DESIGN STRENGTH, WHICHEVER IS LONGER. DO NOT REMOVE LARGE AREAS OF SHORING BEFORE STARTING RE-SHORING PROCEDURES.

   C. NON-BEARING INTERIOR WALLS SHALL BE ADEQUATELY BRACED TO THE STRUCTURE ABOVE WITH ALLOWANCE FOR DEFLECTION OF THE STRUCTURE ABOVE AND/OR BELOW.

   D. BUILDING WALLS WHICH RETAIN EARTH MUST BE BRACED AT THE TOP. DO NOT BACKFILL UNLESS BRACING IS PROVIDED OR UNTIL THE COMPLETE FLOOR OR ROOF SYSTEM IS IN PLACE, TYPICAL, UNLESS NOTED OTHERWISE.

6. OMISSIONS AND/OR CONFLICTS:

   A. OMISSIONS IN AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER AND SHALL BE RESOLVED BY THE SAME BEFORE PROCEEDING WITH ANY WORK INVOLVED.

   B. IN CASE OF CONFLICTS IN THE STRUCTURAL WORK, THE MOST STRINGENT REQUIREMENTS, AS DIRECTED BY THE ARCHITECT AND STRUCTURAL ENGINEER, SHALL BE IMPLEMENTED AT NO ADDITIONAL COST TO THE OWNER.

7. MISCELLANEOUS:

   A. DURING AND AFTER CONSTRUCTION, THE CONTRACTOR AND/OR OWNER SHALL KEEP THE LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN.

   B. OBSERVATION VISITS TO THE SITE BY REPRESENTATIVES OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHALL NOT BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.

8. SUBMITTALS:

   A. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION, ERECTION, INSTALLATION, OR OTHERWISE BEING INCORPORATED INTO THE WORK.
      - REINFORCING STEEL SHOP DRAWINGS.
      - STRUCTURAL STEEL SHOP DRAWINGS.
      - ENGINEERED TRUSS DRAWINGS.

   * THESE SUBMITTALS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF LICENSURE OF THE ENGINEER OF RECORD.

   B. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE REVIEW OF ALL SUBMITTALS BY THE ARCHITECT AND STRUCTURAL ENGINEER.

   C. REQUESTS FOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER IN WRITING. REASON(S) FOR THE REQUEST AND COST DIFFERENTIALS SHALL BE INCLUDED IN THE REQUESTS. SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED IN WRITING BY THE ARCHITECT AND STRUCTURAL ENGINEER.

SITE PREPARATION

1. REQUIREMENTS

   A. DO NOT PLACE FOOTINGS OR FOUNDATIONS ON DISTURBED SOILS, UNDOCUMENTED FILL, DEBRIS, FROZEN SOIL, OR IN PONDED WATER.

   B. ALL UNSUITABLE SOILS AND VEGETATION, SUCH AS TOPSOIL, ORGANIC SOILS, UNDOCUMENTED FILL, DISTURBED NATIVE SOILS, AND OTHER DELETERIOUS MATERIALS, SHALL BE REMOVED FROM BELOW FOOTINGS, FOUNDATIONS, AND FLOOR SLABS.

CONCRETE

1. CODES AND STANDARDS:

   A. CONCRETE WORK SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI) EDITIONS OF:

      I. ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

      II. ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

      III. ACI 347, "RECOMMENDED PRACTICE FOR CONCRETE FORM WORK".

2. MATERIALS:

   A. CEMENT SHALL CONFORM TO ASTM C150, TYPE II, PORTLAND CEMENT.

   B. HARD ROCK AGGREGATES SHALL CONFORM TO ASTM C33. LIGHTWEIGHT AGGREGATES SHALL CONFORM TO ASTM C330.

   C. WATER SHALL BE POTABLE.

   D. AIR ENTRAINMENT SHALL CONFORM TO ASTM C260.

   E. FLY ASH SHALL CONFORM TO ASTM C618.

   F. CALCIUM CHLORIDE SHALL NOT BE USED.

3. MIX DESIGNS:

   A. ONLY ONE TYPE OF CONCRETE SHALL BE PLACED AT THE SITE AT ANY GIVEN TIME.

   B. A MIX DESIGN THAT PRODUCES THE LOWEST SLUMP COMPATIBLE WITH PROPER PLACEMENT SHALL BE USED, 4" MAXIMUM.

   C. CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING:

TYPE OF CONCRETE MEMBER	MINIMUM STRENGTH AT 28 DAYS (PSI)	MAX. W/C (RATIO)	DRY WEIGHT (PCF)	MAX AGGREGATE SIZE (INCHES)	AIR ENTRAIN-MENT (%)	MIN. CEMENT PER YARD (LBS)
FOOTINGS:	2500	0.50	145	0'-0 3/4"	3 ±-1	517
FOUNDATION WALLS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564
SLAB ON GRADE:						
INTERIOR	2500	0.45	145	0'-0 3/4"	3 ±-1	564
EXTERIOR	2500	0.45	145	0'-0 3/4"	6 ±-1	564
SLABS ON DECK:						
LT. WT.*	2500	0.53	110	0'-0 3/4"	6 ±-1	564
COLUMNS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564
BEAMS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564

   * LT. WT. CONCRETE SHALL HAVE A MIN. SPLITTING TENSILE STRENGTH OF 450 PSI.

   D. LIMIT FLY ASH TO 15% OF THE TOTAL CEMENTITIOUS MATERIAL.

   E. PEA GRAVEL AGGREGATE AND/OR PLASTICIZER MAY BE USED IN CONGESTED AREAS WHEN REQUIRED TO PROPERLY FILL ALL VOIDS AND/OR FOR WORKABILITY. (CONTRACTOR'S OPTION).

4. CONSTRUCTION:

   A. CONCRETE SHALL BE PROPERLY VIBRATED DURING PLACEMENT.

   B. PRIOR TO PLACING CONCRETE, CHECK WITH ALL TRADES TO ENSURE PROPER PLACEMENT OF OPENINGS, BLOCK OUTS, SLEEVES, CURBS CONDUITS, BOLTS, INSERTS, EMBEDS, DOWELS, ETC. ANCHOR BOLTS AND DOWELS SHALL BE PLACED PRIOR TO CASTING CONCRETE.

   C. CONSTRUCTION JOINTS AND BULKHEADS SHALL BE FORMED WITH A KEY WAY. ALL CONTACT SURFACES, NEW OR EXISTING, AT CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED PRIOR TO CASTING ADJACENT POUR.

   D. OPENINGS IN FLOORS AND/OR WALLS SHALL HAVE ADDITIONAL REINFORCING AROUND ALL SIDES OF THE OPENING EQUIVALENT TO THE BARS CUT BY THE OPENING WITH HALF ON EACH SIDE OF THE OPENING OR 2-#5 BARS, WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE. BARS PARALLEL TO THE PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF THE SPAN. BARS IN THE OTHER DIRECTION SHALL RUN 24 INCHES BEYOND THE EDGE OF THE OPENING OR END WITH A STANDARD HOOK. ALSO PROVIDE 2-#5 x 4'-0" DIAGONAL BARS AT EACH CORNER OF EACH OPENING.

   E. NO PENETRATION SHALL BE ALLOWED THROUGH ANY CONCRETE BEAM, JOIST, COLUMN, PIER, OR JAMB WITHOUT THE ARCHITECT'S AND STRUCTURAL ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.

5. FOOTINGS:

   A. FOOTINGS SHALL BEAR ON PROPERLY PREPARED MATERIAL. SEE THE SITE PREPARATION NOTES.

   B. FOOTINGS SHALL BE CENTERED BELOW THE WALL AND/OR COLUMN ABOVE, TYPICAL UNLESS NOTED OTHERWISE.

   C. EXTERIOR FOOTINGS SHALL BEAR BELOW THE EFFECTS OF FROST.

   D. PROVIDE 2x4 BEVELED KEY WAYS IN ALL CONTINUOUS WALL FOOTINGS.

   E. STAGGER FOOTING CONSTRUCTION JOINTS FROM WALL CONSTRUCTION JOINTS ABOVE BY AT LEAST 6 FEET.

   F. REINFORCING IN CONTINUOUS FOOTINGS SHALL BE CONTINUOUS AT CORNERS AND/OR INTERSECTIONS BY PROVIDING PROPER LAP LENGTHS AND/OR CORNER BARS.

   G. NO PENETRATIONS SHALL BE ALLOWED THROUGH ANY CONCRETE FOOTING. WHEN CONFLICTS ARISE BETWEEN UNDERGROUND PLUMBING, UTILITIES, ETC., THE FOOTING SHALL BE STEPPED DOWN BELOW THE CONFLICT AND A CONCRETE WALL, PIER, COLUMN, ETC., SHALL BE EXTENDED TO THE FOOTING AS REQUIRED.

   H. BEARING SURFACES FOR FOOTINGS WHICH ARE, OR BECOME, UNDERMINED DURING CONSTRUCTION SHALL BE BACKFILLED WITH A LEAN-MIX CONCRETE (1000 PSI MIN.).

6. SLABS ON GRADE:

   A. INTERIOR SLABS ON GRADE SHALL BE A MINIMUM OF 4 INCHES THICK, SHALL BEAR ON A 4 INCH MINIMUM LAYER OF FREE-DRAINING GRAVEL, AND SHALL BE REINFORCED WITH #4 BARS AT 24" O.C. BOTH WAYS, TYPICAL UNLESS NOTED OTHERWISE. PROVIDE CHAIRS WITH SAND PLATES FOR PROPER PLACEMENT.

   B. LARGE AREAS OF INTERIOR SLABS ON GRADE SHALL BE PLACED IN STRIPS NOT TO EXCEED 100 FEET IN LENGTH NOR 30 FEET IN WIDTH WHICH ARE SUBDIVIDED BY CONSTRUCTION AND/OR CONTRACTION (CONTROL) JOINTS INTO ROUGHLY SQUARES WHOSE SIDES SHALL NOT EXCEED 15 FEET IN EITHER DIRECTION.

   C. SEE ARCHITECTURAL FOR EXTERIOR SLABS ON GRADE, TYPICAL, UNLESS NOTED OTHERWISE.

MASONRY VENEER ANCHOR TIES

1. PRODUCTS:

   A. MASONRY VENEER ANCHOR TIES SHALL BE ONE OF THE FOLLOWING:

      I. DOVETAIL ANCHORS.

      II. DX-10 SEISMIC CLIP INTERLOCK SYSTEM BY HOHMANN & BARNARD.

      III. ARCHITECT AND STRUCTURAL ENGINEER APPROVED TWO PIECE ADJUSTABLE HOT-DIPPED GALVANIZED TIES.

2. INSTALLATION:

   A. MAXIMUM SPACING SHALL BE 16" O.C. HORIZONTAL AND VERTICAL.

   B. PROVIDE CONTINUOUS HORIZONTAL GALVANIZED #9 WIRE IN CENTER THIRD OF MORTAR JOINTS AT 16" O.C. ENGAGE #9 WIRE WITH ALL ANCHOR TIES.

   C. CONSTRUCTION JOINTS IN MASONRY VENEER WALLS SHALL BE PROVIDED AS PER THE ARCHITECTURAL DRAWINGS, AND SHALL BE SPACED AT A MAXIMUM OF 15'-0" O.C. FOR MASONRY BLOCK VENEER.

REINFORCING STEEL

1. CODES AND STANDARDS:

   A. REINFORCING STEEL SHALL COMPLY WITH:

      I. AMERICAN CONCRETE INSTITUTE BUILDING CODE & COMMENTARY ACI 318.

      II. AMERICAN CONCRETE INSTITUTE "DETAILING MANUAL", ACI 315 (OR SP-66).

2. MATERIALS:

   A. REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS AND SHALL CONFORM TO ASTM A615, GRADE 60, WITH A DESIGN YIELD STRENGTH OF 60,000 PSI, EXCEPT AS NOTED BELOW.

      I. DOWELS TO BE BENT IN THE FIELD DURING CONSTRUCTION SHALL BE ASTM A615, GRADE 40 OR ASTM A706, GRADE 60, "LOW ALLOY STEEL".

      II. REINFORCING TO BE WELDED SHALL BE ASTM A706, GRADE 60, "LOW-ALLOY STEEL".

   B. MASONRY JOINT REINFORCING SHALL BE MANUFACTURED FROM WIRE WHICH CONFORMS TO ASTM A82.

3. CONSTRUCTION:

   A. REINFORCING SHALL BE DETAILED, BOLSTERED, AND SUPPORTED PER ACI 315.

   B. REINFORCING STEEL SHALL BE FREE OF LOOSE, FLAKY RUST, SCALE, GREASE, OIL, DIRT, AND OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.

   C. REINFORCING SHALL BE CONTINUOUS IN WALLS, BEAMS, COLUMNS, SLABS, FOOTINGS, ETC.

   D. SPLICES IN CONTINUOUS REINFORCING SHALL BE MADE IN AREAS OF COMPRESSION AND/OR AT POINTS OF MINIMUM STRESS, TYPICAL UNLESS NOTED OTHERWISE. LAP SPLICES SHALL BE 40 BAR DIAMETERS LONG IN CONCRETE AND 48 BAR DIAMETERS LONG IN MASONRY. MINIMUM LAP SHALL BE 24 INCHES LONG. DOWELS SHALL HAVE A MINIMUM OF 90 BAR DIAMETERS EMBEDMENT. TENSION SPLICES SHALL BE USED IN CONCRETE WHEN SPECIFICALLY NOTED, USE A CLASS B SPLICE. SPLICES IN TOP BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT MID SPAN. SPLICES IN BOTTOM BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT SUPPORTS.

   E. BENDS SHALL BE MADE COLD. DO NOT USE HEAT. BENDS SHALL BE DONE IN THE FABRICATOR'S SHOP UNLESS SPECIFICALLY NOTED FOR THE FIELD. DO NOT UN-BEND OR RE-BEND A PREVIOUSLY BENT BAR.

   F. REINFORCING STEEL IN CONCRETE SHALL BE SECURELY ANCHORED AND TIED IN PLACE PRIOR TO PLACING CONCRETE AND SHALL BE POSITIONED WITH THE FOLLOWING MINIMUM CONCRETE COVER:

      CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ..... 3"

      CONCRETE EXPOSED TO EARTH OR WEATHER:

      #6 AND LARGER ..... 2"

      #5 AND SMALLER ..... 1 1/2"

      CONCRETE NOT EXPOSED TO EARTH OR WEATHER:

      SLABS AND WALLS, #11 AND SMALLER ..... 3/4"

      BEAMS AND COLUMNS, MAIN REINFORCING OR TIES ..... 1 1/2"

      SLABS ON GRADE ..... CENTER OF SLAB

   G. REINFORCING STEEL IN MASONRY SHALL BE PLACED PRIOR TO GROUTING AND SHALL BE PLACED, POSITIONED, AND LOCATED ACCORDING TO THE STRUCTURAL DRAWINGS. IT SHALL BE SECURED AGAINST DISPLACEMENT AT INTERVALS NOT TO EXCEED 200 BAR DIAMETERS OR TEN FEET.

   H. NO REINFORCING STEEL SHALL BE WELDED UNLESS SPECIFICALLY NOTED AS SUCH. USE E80XX ELECTRODES AND ASTM A706 REINFORCING. COMPLY WITH AWS REQUIREMENTS.

   I. EPOXY COATED REINFORCING BARS SHALL BE USED WHEN SPECIFICALLY NOTED. INCREASE LAP SPLICE LENGTHS AS REQUIRED BY THE IBC.

STRUCTURAL STEEL

1. CODES AND STANDARDS:

   A. STRUCTURAL STEEL WORK SHALL COMPLY WITH:

      I. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH COMMENTARY.

      II. AISC "CODE OF STANDARD PRACTICE" EXCLUDING SECTIONS 1.51, 3.3 (1ST SENTENCE), 4.2, 7.5.4, AND 7.11.5.

      III. AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE", EXCLUDING ITEMS CONFLICTING WITH AISC REQUIREMENTS.

2. MATERIALS:

   A. STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A572 GRADE 50 ENHANCED STEEL. STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A36.

   B. STRUCTURAL TUBE STEEL SHALL CONFORM TO ASTM A500, GRADE B, WITH A MINIMUM YIELD STRENGTH Fy=46 KSI.

   C. STRUCTURAL PIPE SHALL CONFORM TO ASTM A53, WITH A MINIMUM YIELD STRENGTH Fy=36 KSI.

   D. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325. ALL OTHER BOLTS SHALL CONFORM TO ASTM A307 OR BETTER.

   E. WELDED ANCHOR STUDS AND DEFORMED BAR ANCHORS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.

3. CONSTRUCTION:

   A. FABRICATION SHALL BE DONE IN AN APPROVED FABRICATOR'S SHOP.

   B. CAMBER IN BEAMS SHALL BE AS INDICATED ON PLANS.

   C. PROVIDE A SHOP COAT OF PAINT ON ALL STEEL ITEMS, EXCEPT AT AREAS OF WELDING AND/OR BOLTING.

   D. USE HIGH STRENGTH (8000 PSI MINIMUM AT 28 DAYS), NON-SHRINK, LIQUID EPOXY GROUT BENEATH ALL STEEL BASE PLATES AND BEARING PLATES. MIX GROUT WITH SAND OR PEA GRAVEL AS RECOMMENDED BY THE MANUFACTURER. PLACE GROUT AS SOON AS STEEL MEMBER HAS BEEN PROPERLY POSITIONED AND ALIGNED.

   E. WHERE STRUCTURAL STEEL WIDE FLANGE, PIPE, OR TUBE SECTIONS ARE EMBEDDED IN CONCRETE OR MASONRY AND REINFORCING BARS BUTT UP TO IT, DEFORMED BAR ANCHORS OR REINFORCING BARS WITH THE SAME SIZE AND SPACING AS THE ADJACENT REINFORCING BARS, 48 BAR DIAMETERS LONG, SHALL BE WELDED TO THE STRUCTURAL STEEL. THE MANUFACTURER'S WELDING PROCEDURES SHALL BE ADHERED TO.

4. BOLTED CONNECTIONS:

   A. BOLTS SHALL BE 3/4" DIAMETER, UNLESS NOTED OTHERWISE.

   B. BOLT SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE.

   C. STEEL TO STEEL BOLTED CONNECTIONS SHALL BE MADE WITH ASTM A325 HIGH STRENGTH BOLTS AND NUTS, UNLESS NOTED OTHERWISE. BOLTS SHALL CARRY THE IDENTIFYING MARK OF THREE (3) RADIAL LINES.

   D. ALL OTHER BOLTED CONNECTIONS SHALL BE MADE WITH BOLTS AND NUTS CONFORMING TO ASTM A307 UNLESS NOTED OTHERWISE, INCLUDING ANCHOR BOLTS.

   E. BOLTED CONNECTIONS SHALL BE TIGHTENED AND SHALL HAVE WASHERS AS REQUIRED BY AISC UNLESS NOTED OTHERWISE.

   F. ENLARGING OF HOLES SHALL BE ACCOMPLISHED BY MEANS OF REAMING. DO NOT USE A TORCH ON ANY BOLT HOLES.

5. WELDED CONNECTIONS:

   A. WELDED CONNECTIONS SHALL BE MADE USING LOW HYDROGEN MATCHING FILLER MATERIAL ELECTRODES, UNLESS NOTED OTHERWISE.

   B. WELDERS SHALL BE CURRENTLY CERTIFIED ACCORDING TO AWS WITHIN THE LAST 12 MONTHS. ALL WELDING PROCEDURES SHALL BE PRE-QUALIFIED. WELDERS SHALL FOLLOW WELDING PROCEDURES.

   C. WELDING AND GAS CUTTING SHALL BE DONE PER AWS.

   D. WELDS SHALL HAVE THE SLAG REMOVED.

GENERAL FRAMING NOTES

1. ALL JOISTS, RAFTERS, POSTS AND HEADERS SHALL BE DOUGLAS FIR LARCH NO.2 OR EQUAL U.N.O. IF TJI'S OR EQUAL ARE USED, THEY MUST BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. ALSO PROVIDE BRIDGING @ 8' O.C. FOR FLOOR JOISTS.

2. ALL JOISTS AND RAFTERS SHALL HAVE SOLID BLOCKING AT THEIR BEARING POINTS. ROOF JOISTS TO HAVE HURRICANE CLIPS AT 24" O.C. MIN.

3. ALL WOOD/LUMBER PLACED ONTO CONCRETE SHALL BE PRESSURE TREATED OR REDWOOD.

4. ALL WOOD CONNECTIONS MUST CARRY THE CAPACITY OF THE MEMBER, CONTRACTOR IS RESPONSIBLE FOR CONNECTIONS. IF OTHER THAN STANDARD CONNECTIONS ARE REQUIRED, SEE PROJECT ENGINEER FOR ADDITIONAL ASSISTANCE. USE SIMPSON OR EQUAL CONNECTIONS FOR WOOD TO WOOD.

5. ALL COLUMNS SHALL EXTEND DOWN THROUGH THE STRUCTURE TO THE FOUNDATION. ALL COLUMNS SHALL BE BRACED AT ALL FLOOR LEVELS. COLUMNS SHALL BE AS WIDE AS THE MEMBER THEY SUPPORT.

6. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 3/8" THICK EXP 1 SHEATHING OR EQUAL WITH 8d NAILS @ 6" O.C. EDGES AND @ 12" O.C. IN THE FIELD - BLOCKED, UNLESS OTHERWISE NOTED.

7. ALL FLOOR SHEATHING TO BE 3/4" THICK T&G SHEATHING GLUED AND NAILED WITH 10d COMMON NAILS OR EQUAL @ 6" O.C. EDGES AND @ 10" O.C. IN THE FIELD.

8. VERIFY ALL BEAM SIZES WITH ENGINEERING SPECIFICATIONS.

9. ALL BEAMS AND HEADERS OVER 48" SHALL BE SUPPORTED BY DOUBLE TRIMMERS UNLESS NOTED OTHERWISE.

10. TRUSS MANUFACTURER SHALL PROVIDE ENGINEERING SPECS. FOR ALL TRUSSES.

11. USE 7/16" O.S.B. OR CDX PLYWOOD SHEATHING WITH
    - 8d NAILS @ 6" O.C. AT EDGES OF ROOF
    - 10d NAILS @ 4" O.C. AT GABLE ENDS
    - SPACE NAILS 12" O.C. ON INTERMEDIATE MEMBERS
    - STAGGER SHEATHING JOINTS
    - PLYWOOD PERP. TO RAFTERS AND TRUSSES

12. SOLID BLOCK BETWEEN TRUSSES. HOLD DOWN EVERY 3RD BLOCK FOR ATTIC VENTILATION.

13. ALL OVER FRAME AREAS TO HAVE FULL ROOF SHEATHING BELOW.

14. PROVIDE SQUASH BLOCKING AT RIM JOIST BELOW ALL POSTS FROM ROOF, HEADER OR BEAM POINT LOADS.

15. PROVIDE DOUBLE FLOOR JOISTS BELOW ALL PARALLEL BEARING WALLS

16. ALL FRAMING LUMBER SHALL BE HEM FIR OR BETTER UNLESS A HIGHER GRADE IS NOTED OTHERWISE.

17. GLULAM BEAMS SHALL BE 24F-V4 DF/DF FOR SINGLE SPANS AND 24F-V8 DF/DF FOR MULTIPLE SPANS, AND CANTILEVERED SPANS.

18. ALL RAFTERS AND JOISTS OVER THREE FEET LONG SHALL BE HANGERED IF NOT SUPPORTED BY BOTTOM BEARING. ALL HANGERS AND OTHER WOOD CONNECTIONS MUST BE DESIGNED TO CARRY THE CAPACITY OF THE MEMBER THAT THEY ARE SUPPORTING.

19. FRAMING CONNECTIONS NOTED ON THE DRAWINGS ARE SIMPSON STRONGTIE OR EQUAL. INSTALL WITH THE CATALOG DESIGNATED CONNECTOR IN EACH HOLE.

20. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED OR APPROVED BY ENGINEER.

21. LAG SCREWS SHALL BE INSERTED IN A DRILLED PILOT HOLE 60%-75% OF THE SHANK DIAMETER BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. ALL NUTS, BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH AN OVERSIZED WASHER.

22. NAILS TO BE COMMON WIRE UNLESS OTHERWISE NOTED

23. ALL BOLT HOLES SHALL BE DRILLED WITH A BIT 1/32" TO 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER.

24. ALL JOINTS IN WALL SHEATHING SHALL OCCUR IN THE MIDDLE OF A PLATE OR BLOCK AND NAILED ON EACH SIDE OF THE JOINT WITH EDGE NAILING PER SHEARWALL SCHEDULE.

25. ALL OVER BUILT ROOF RAFTERS SHALL BE BRACED VERTICALLY TO THE TRUSSES BELOW AT 6'-0" O.C. MAXIMUM IN ORDER TO SPREAD THE LOAD EVENLY OVER THE TRUSSES.

26. PROVIDE 1/2" MINIMUM CLEARANCE BETWEEN TOP PLATE OF INTERIOR PARTITIONS AND BOTTOM CHORD OF TRUSSES (TO ENSURE THAT LOADING WILL BE AS DESIGNED).

27. DOUBLE TOP PLATE WITH MINIMUM 48" LAP SPLICE.

28. COLUMNS AND POSTS LOCATED ON CONCRETE OR MASONRY FLOORS OR DECKS EXPOSED TO THE WEATHER OR TO WATER SPLASH OR IN BASEMENTS, AND WHICH SUPPORT PERMANENT STRUCTURES, SHALL BE SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTING ABOVE FLOORS UNLESS APPROVED WOOD OF NATURAL RESISTANCE SO DECAY OR TREATED WOOD IS USED. THE PEDESTALS SHALL PROJECT AT LEAST 6" ABOVE EXPOSED EARTH AND AT LEAST 1" ABOVE SUCH FLOORS.

29. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE IBC, AND LOCAL ORDINANCES.

30. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION.

WOOD TRUSS NOTES

1. BOTTOM CHORDS OF TRUSSES, ACTING AS CEILING MEMBERS MUST BE ABLE TO SUPPORT A 10 PSF LIVE LOAD PER IBC REQUIREMENTS.

2. THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF THE PRE-ENGINEERED TRUSSES, AND SHALL DESIGN THE TRUSSES PER ATTACHED ENGINEERING SPECS.

3. THE TRUSSES SHALL BE DESIGNED TO CARRY ANY ADDITIONAL LOADS DUE TO MECHANICAL UNITS, OVERHEAD DOORS, ROOF OVERSOULDS, ETC.

4. THE TRUSSES SHALL ALSO BE DESIGNED PER THE IBC, AND LOCAL ORDINANCES.

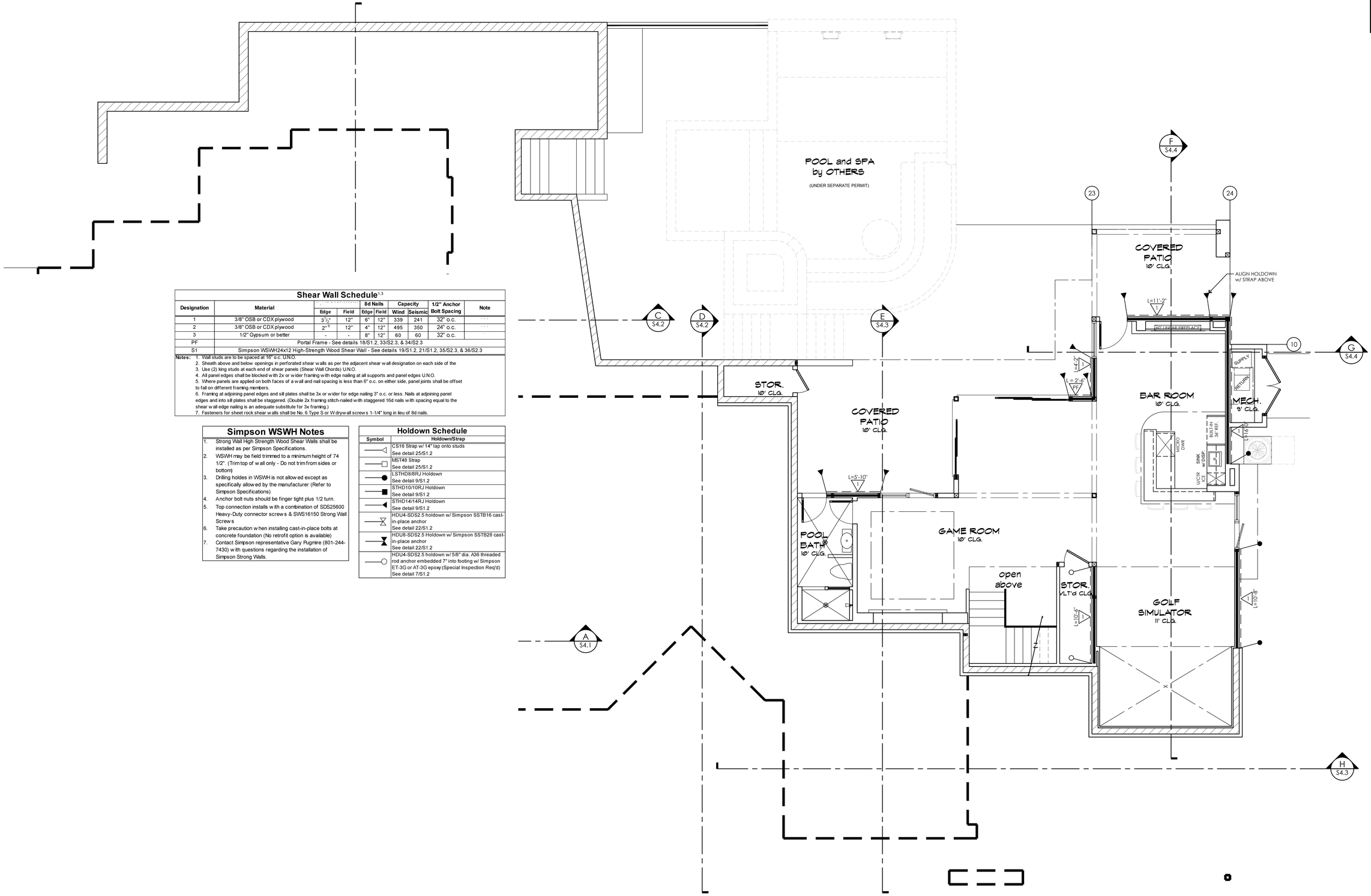
5. ALL MEMBERS SHALL BE DESIGNED FOR COMBINED STRESSES, BASED ON THE WORST LOADING CONDITION.

6. THE TRUSS MANUFACTURER SHALL INDICATE PROPER BRACING OF COMPRESSION CHORD MEMBERS @ 8'-0" LONG (OR LONGER), AS WELL AS BRACING FOR TRUSS ERECTION.

7. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE TRUSSES PER THE TRUSS MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. NO WEB OR CHORD MEMBERS SHALL BE MODIFIED IN THE FIELD.

9. THE PROJECT ENGINEER, OR ENGINEER OF RECORD, IS NOT RESPONSIBLE FOR THE PRE-ENGINEERED TRUSSES, NOR FOR THE INSTALLATION ETC. OF THE TRUSSES. TRUSS PLANT SHALL PROVIDE LICENSED ENGINEERED PLAN (CONTRACTOR TO VERIFY TRUSS LAYOUT IS CONSISTENT WITH THESE PLANS. ENGINEER SHOULD BE NOT



Shear Wall Schedule[1,3]

Designation	Material	Edge	Field	8d Nails Edge	8d Nails Field	Capacity Wind	Capacity Seismic	1/2" Anchor Bolt Spacing	Note
1	3/8" OSB or CDX plywood	3 1/2"	12"	6"	12"	339	241	32" o.c.	- - -
2	3/8" OSB or CDX plywood	2"	12"	4"	12"	495	350	24" o.c.	- - -
3	1/2" Gypsum or better	-	-	8"	12"	60	60	32" o.c.	
PF	Portal Frame - See details 18/S1.2, 33/S2.3, & 34/S2.3								
S1	Simpson WSWH24x12 High-Strength Wood Shear Wall - See details 19/S1.2, 21/S1.2, 35/S2.3, & 36/S2.3								

Notes:
1. Wall studs are to be spaced at 16" o.c. U.N.O.
2. Sheath above and below openings in perforated shear walls as per the adjacent shear wall designation on each side of the
3. Use (2) king studs at each end of shear panels (Shear Wall Chords) U.N.O.
4. All panel edges shall be blocked with 2x or wider framing with edge nailing at all supports and panel edges U.N.O.
5. Where panels are applied on both faces of a wall and nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members.
6. Framing at adjoining panel edges and sill plates shall be 3x or wider for edge nailing 3" o.c. or less. Nails at adjoining panel edges and into sill plates shall be staggered. (Double 2x framing stitch-nailed with staggered 16d nails with spacing equal to the shear wall edge nailing is an adequate substitute for 3x framing.)
7. Fasteners for sheet rock shear walls shall be No. 6 Type S or W drywall screws 1-1/4" long in lieu of 8d nails.

Simpson WSWH Notes

1. Strong Wall High Strength Wood Shear Walls shall be installed as per Simpson Specifications.
2. WSWH may be field trimmed to a minimum height of 74 1/2". (Trim top of wall only - Do not trim from sides or bottom)
3. Drilling holdes in WSWH is not allowed except as specifically allowed by the manufacturer (Refer to Simpson Specifications)
4. Anchor bolt nuts should be finger tight plus 1/2 turn.
5. Top connection installs with a combination of SDS25600 Heavy-Duty connector screws & SWS16150 Strong Wall Screws
6. Take precaution when installing cast-in-place bolts at concrete foundation (No retrofit option is available)
7. Contact Simpson representative Gary Pugmire (801-244-7430) with questions regarding the installation of Simpson Strong Walls.

Holdown Schedule

Symbol	Holdown/Strap
	CS16 Strap w/ 14" lap onto studs See detail 25/S1.2
	MST48 Strap See detail 25/S1.2
	LSTHD8/8RJ Holdown See detail 9/S1.2
	STHD10/10RJ Holdown See detail 9/S1.2
	STHD14/14RJ Holdown See detail 9/S1.2
	HDU4-SDS2.5 holdown w/ Simpson SSTB16 cast-in-place anchor See detail 22/S1.2
	HDU8-SDS2.5 Holdown w/ Simpson SSTB28 cast-in-place anchor See detail 22/S1.2
	HDU4-SDS2.5 holdown w/ 5/8" dia. A36 threaded rod anchor embedded 7" into footing w/ Simpson ET-3G or AT-3G epoxy (Special Inspection Req'd) See detail 7/S1.2

LOWER LEVEL SHEAR WALL PLAN

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

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.**'s work does not exceed that of the accompanying structural calculations.

NOTE:
Structural components designed according to the 2018 IBC, all other aspects of the plans shall conform w/ 2018 IRC and all current governing codes

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66953
ERIC B. MURRAY
Signed: 03/21/2025
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- THE CONTRACTOR ON THE JOB SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

◆ LOWER LEVEL
◆ SHEAR WALL PLAN

REVISIONS:
1
2
3

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: S.I.Z.	CHECKED: LEI ENG'R
DATE: 05 NOVEMBER 2024	

SHEET
S3.0

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Shear Wall Schedule[1,3]

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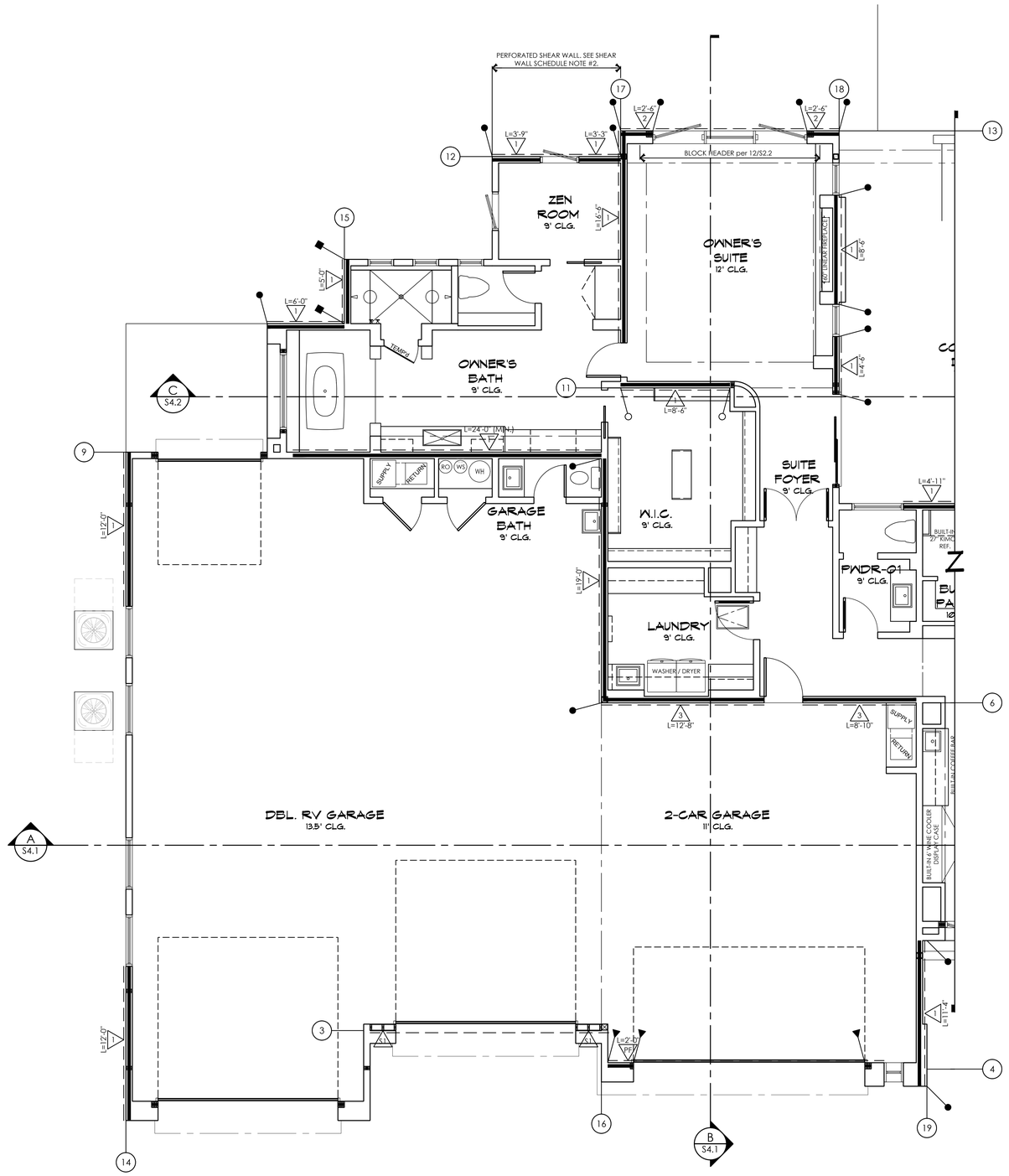
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7. Contact Simpson representative Gary Pugmire (801-244-7430) with questions regarding the installation of Simpson Strong Walls.

Holdown Schedule

Symbol	Holdown/Strap
	CS16 Strap w/ 14" lap onto studs See detail 25/S1.2
	MST48 Strap See detail 25/S1.2
	LSTHD8 Holdown See detail 9/S1.2
	STHD10 Holdown See detail 9/S1.2
	STHD14 Holdown See detail 9/S1.2
	HDU4-SDS2.5 holdown w/ Simpson SSTB16 cast-in-place anchor See detail 22/S1.2
	HDU8-SDS2.5 Holdown w/ Simpson SSTB28 cast-in-place anchor See detail 22/S1.2
	HDU4-SDS2.5 holdown w/ 5/8" dia. A36 threaded rod anchor embedded 7" into footing w/ Simpson ET-3G or AT-3G epoxy (Special Inspection Req'd) See detail 7/S1.2



SHEAR WALL PLAN (LEFT SIDE)
SCALE: 1/4" = 1'-0"

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NOTE:
Structural components designed according to the 2018 IBC, all other aspects of the plans shall conform w/ 2018 IRC and all current governing codes

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STATE OF UTAH 10 I CA T E
66953
ERIC B. MURRAY
Signed: 03/21/2025
RENEWAL: 9-30-26
STRUCTURAL ELEMENTS ONLY

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PROJECT:
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- THE CONTRACTOR ON THE JOB SHALL CHECK ALL DIMENSIONS.

◆MAIN LEVEL
◆SHEAR WALL PLAN - LEFT SIDE

REVISIONS:
1
2
3

SCALE: 1/4" = 1'-0"	JOB #: 2024-04
DRAWN: e.l.z.	CHECKED: LEI ENGR
DATE: 05 NOVEMBER 2024	
SHEET: S3.1L	

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Shear Wall Schedule[1,3]

Designation	Material	8d Nails Edge	8d Nails Field	Capacity Wind	Capacity Seismic	1/2" Anchor Bolt Spacing	Note
1	3/8" OSB or CDX plywood	3"	12"	6"	12"	339	241	32" o.c.	
2	3/8" OSB or CDX plywood	2"	12"	4"	12"	495	350	24" o.c.	
3	1/2" Gypsum or better	-	-	8"	12"	60	60	32" o.c.	
PF	Portal Frame - See details 18/S1.2, 33/S2.3, & 34/S2.3								
S1	Simpson WSWH24x12 High-Strength Wood Shear Wall - See details 19/S1.2, 21/S1.2, 35/S2.3, & 36/S2.3								

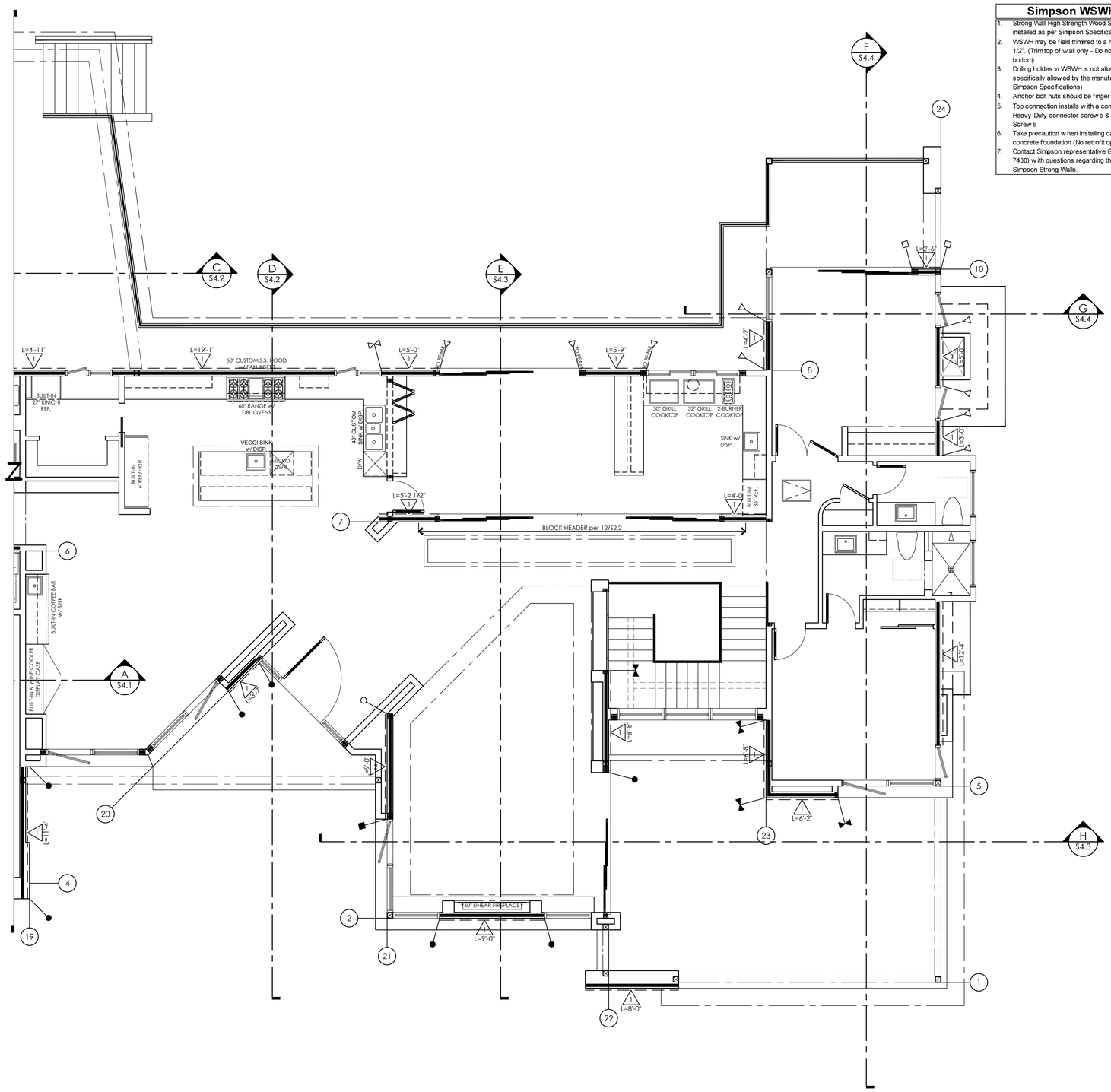
Notes:
1. Wall studs are to be spaced at 16" o.c. U.N.O.
2. Sheath above and below openings in perforated shear walls as per the adjacent shear wall designation on each side of the
3. Use (2) king studs at each end of shear panels (Shear Wall Chords) U.N.O.
4. All panel edges shall be blocked with 2x or wider framing with edge nailing at all supports and panel edges U.N.O.
5. Where panels are applied on both faces of a wall and nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members.
6. Framing at adjoining panel edges and sill plates shall be 3x or wider for edge nailing 3" o.c. or less. Nails at adjoining panel edges and into sill plates shall be staggered. (Double 2x framing stitch-nailed with staggered 16d nails with spacing equal to the shear wall edge nailing is an adequate substitute for 3x framing.)
7. Fasteners for sheet rock shear walls shall be No. 6 Type S or W drywall screws 1-1/4" long in lieu of 8d nails.

Simpson WSWH Notes

1. Strong Wall High Strength Wood Shear Walls shall be installed as per Simpson Specifications.
2. WSWH may be field trimmed to a minimum height of 74 1/2". (Trim top of wall only - Do not trim from sides or bottom)
3. Drilling holes in WSWH is not allowed except as specifically allowed by the manufacturer (Refer to Simpson Specifications)
4. Anchor bolt nuts should be finger tight plus 1/2 turn.
5. Top connection installs with a combination of SDS25600 Heavy-Duty connector screws & SWS16150 Strong Wall Screws
6. Take precaution when installing cast-in-place bolts at concrete foundation (No retrofit option is available)
7. Contact Simpson representative Gary Pugmire (801-244-7430) with questions regarding the installation of Simpson Strong Walls.

Holdown Schedule

Symbol	Holdown/Strap
	CS16 Strap w/ 14" lap onto studs See detail 25/S1.2
	MST48 Strap See detail 25/S1.2
	LSTHD8 Holdown See detail 9/S1.2
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	HDU4-SDS2.5 holdown w/ 5/8" dia. A36 threaded rod anchor embedded 7" into footing w/ Simpson ET-3G or AT-3G epoxy (Special Inspection Req'd) See detail 7/S1.2



SHEAR WALL PLAN (RIGHT SIDE)

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

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NOTE:
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UTAH LICENSED ARCHITECT
ERIC B. MURRAY
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Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

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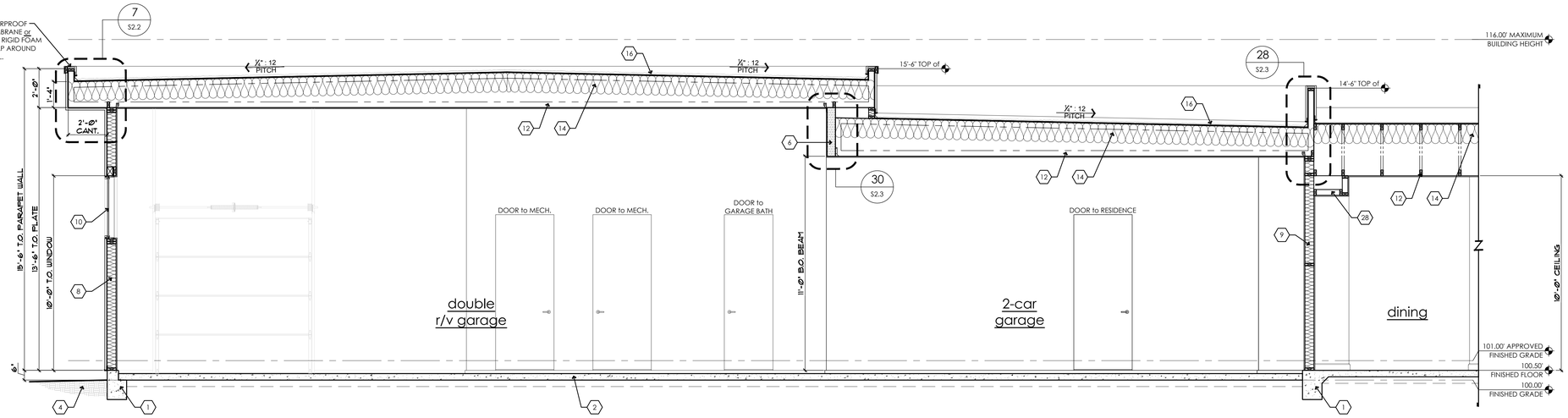
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◆MAIN LEVEL
◆SHEAR WALL PLAN - RIGHT SIDE

REVISIONS:

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A BUILDING SECTION
SCALE: 3/8" = 1'-0"

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R702.3.7 Water-resistant gypsum backing board.
Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R702.3.7.1 Limitations.
Water-resistant gypsum backing board 1shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

R702.4.2 Backer boards.
Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.

KEYNOTE LEGEND

NOTE: NOT ALL KEYNOTES USED ON THIS SHEET

FOUNDATION:
1. CONCRETE FOOTING per STRUCTL DRAWINGS
2. CONCRETE SLAB OVER APPROVED COMPACTED SOIL per STRUCTURAL DRAWINGS
3. MASONRY RETAINING WALL per STRUCTURAL DRAWINGS
4. FINISH GRADE - SLOPE AWAY FROM STRUCTURE
5. CONCRETE FLATWORK or CONCRETE PAVERS per OWNER SELECTION - SLOPE AWAY FROM STRUCTURE

WALL CONSTRUCTION:
6. BEAM/HEADER per STRUCTURAL CALCS
7. LEDGER STRIP per STRUCTURAL CALCS
8. R20 MINIMUM EXTERIOR WALL INSULATION
9. R11 MINIMUM SOUND BATTS at ALL INTERIOR WALLS, TYPICAL
10. DUAL GLAZE WINDOW per WINDOW SCHEDULE
11. DOOR per DOOR SCHEDULE

FLOOR / ROOF CONSTRUCTION:
12. PREFABRICATED ROOF TRUSSES - INSTALL per STRUCTURAL CALCS, SPACING per PLANS
13. NOT USED.
14. R38 MINIMUM ROOF INSULATION
15. DRAINAGE CRICKET per PLAN w/ FLASHING as REQUIRED, TYPICAL WHERE SHOWN
16. DURO-LAST (or APPROVED EQUAL) ROOFING o/ 2-LAYERS of 30 LB FELT o/ SHEATHING o/ PRE-MFG'd ROOF TRUSSES at 24" ON CENTER
17. "LIFE DECK" (or APPROVED EQUAL) WATERPROOF DECKING (ER-5416) o/ METAL LATH o/ 1½" T&G PLYWOOD FLOOR SHEATHING (GLUED and SCREWED) o/ PRE-FABRICATED TAPERED FLOOR TRUSSES at 16" ON CENTER
18. SELF-LEVELING UNDERLAYMENT o/ 1¼" T&G PLYWOOD (GLUED and SCREWED) o/ PRE-FABRICATED FLOOR TRUSSES at 19.2" ON CENTER per STRUCTURAL DRAWINGS. (DEPTH per TRUSS CALCULATIONS)
19. R-13 MINIMUM FLOOR INSULATION
20. METAL/WOOD FRAMED STAIRS per IRC SECTIONS R311.7.5.1 (FINAL DESIGN by OWNER)
R311.7.5.1 Risers. The riser height shall be not more than 7¾". The riser shall be measured vertically between leading edges of the adjacent treads. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter.
R311.7.5.2 Treads. The tread depth shall be not less than 10 inches. 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 tread's leading edge.
21. PROVIDE 1½" DIAMETER HANDRAIL per IRC SECTIONS R311.7.8.3 (FINAL DESIGN by OWNER)
R311.7.8.1 Height. Handrail height, measured vertically not less than 34 inches and not more than 38 inches.
R311.7.8.4 Continuity. Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
22. 36" HIGH (MIN.) GUARD RAIL per IRC R312.1 (FINAL DESIGN by OWNER)
R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches in diameter.
23. STORAGE BENEATH STAIRCASE
R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side w/ ½" gypsum board.

FINISH CONSTRUCTION:
24. 1" DEEP x 1 " WIDE (or OWNER APPROVED SIZE) STUCCO REVEAL at EDGE of SOFFIT - COLOR to MATCH STUCCO
25. CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS
26. EXTERIOR TILE VENEER (per OWNER SELECTION) o/ STUCCO - INSTALL per MANUF. SPECS (ICC-ER #5157]
27. '0' CLEARANCE ELECTRIC FIREPLACE APPLIANCE (SEE INT. ELEVATIONS for HEIGHT). INSTALL per MANUF. SPECS. PROVIDE INSTALLATION INSTRUCTIONS to INSPECTOR. EXTERIOR FIREPLACES SHALL BE RATED for OUTDOOR USE.
28. WOOD FRAMED and ⅝" TYPE 'X' DRYWALL WRAPPED INTERIOR SOFFIT - SEE INTERIOR ELEVATIONS
29. WOOD FRAMED and STUCCO WRAPPED EXTERIOR SOFFIT - SEE EXTERIOR ELEVATIONS
30. 4" PERFORATED DRAIN PIPE w/ FILTER FABRIC - DRAIN to DAYLIGHT or SUMP
31. 2'x2' SECTION of DRAIN ROCK w/ FILTER FABRIC

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

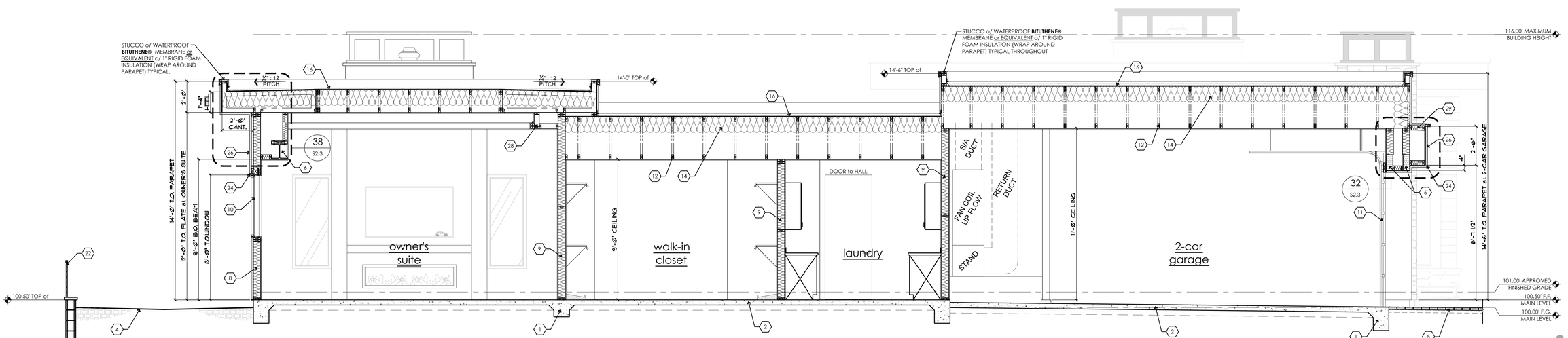
R1005.8 Insulation shield.
Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L MECHANICAL CODE REQUIREMENTS:

307.2.4.1 Ductless mini-split system traps.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain lone, or a trap.

2018 INT'L PLUMBING CODE REQUIREMENTS:

308.10 Thermal expansion tanks.
A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.



B BUILDING SECTION
SCALE: 3/8" = 1'-0"

NOTE:
REFER to SHEET A6.2 for ADDITIONAL ELECTRICAL, MECHANICAL and PLUMBING REQUIREMENTS

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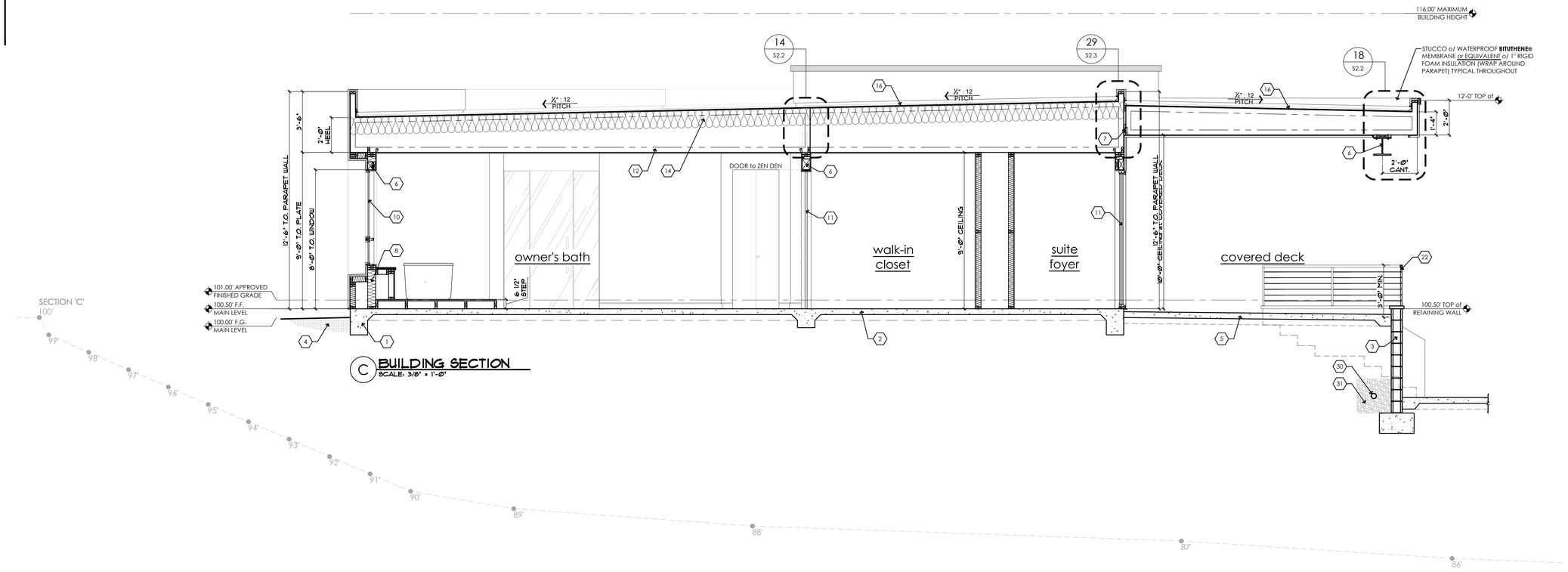
◆ BUILDING SECTIONS

REVISIONS:

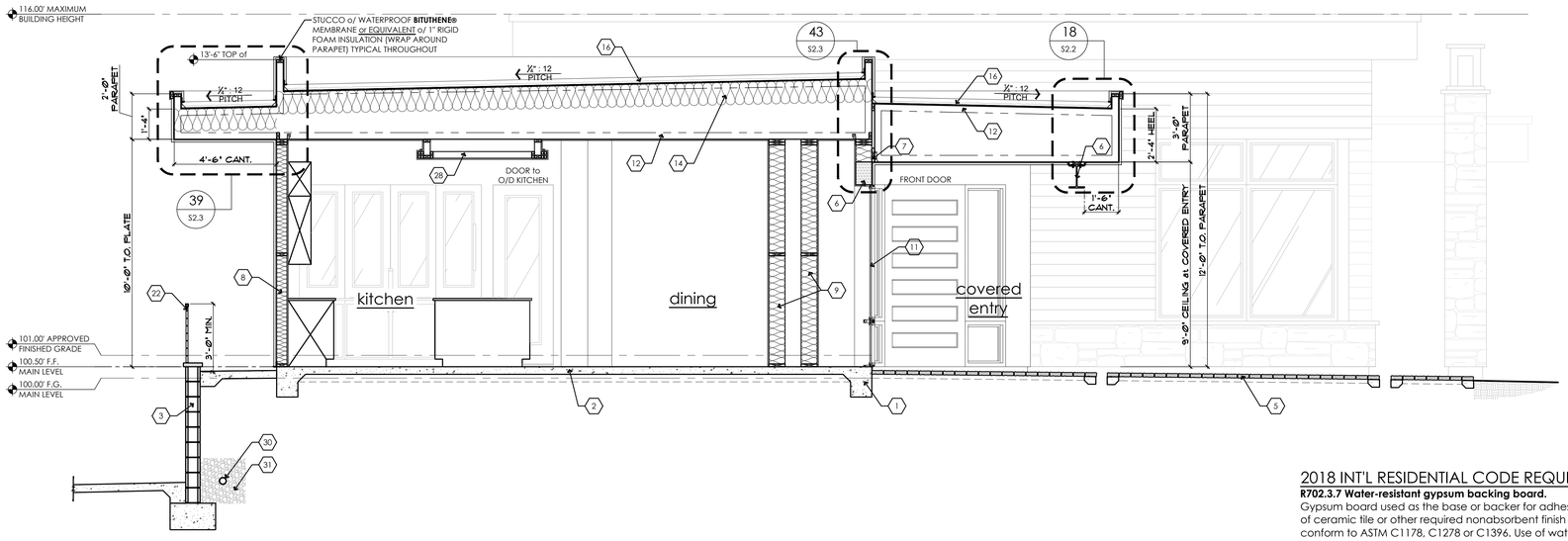
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C **BUILDING SECTION**
SCALE: 3/8" = 1'-0"



D **BUILDING SECTION**
SCALE: 3/8" = 1'-0"

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R702.3.7 Water-resistant gypsum backing board.
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2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R1005.8 Insulation shield.
Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L MECHANICAL CODE REQUIREMENTS:

307.2.4.1 Ductless mini-split system traps.
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2018 INT'L PLUMBING CODE REQUIREMENTS:

308.10 Thermal expansion tanks.
A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

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STATE OF UTAH LICENSED ENGINEER
ERIC B. MURRAY
6693
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

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◆ BUILDING SECTIONS

REVISIONS:

SCALE: 3/8" = 1'-0"	JOB #: 2024-04
DRAWN: s.i.z.	CHECKED: LEI ENG'R
DATE: 05 NOVEMBER 2024	

SHEET
S4.2

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2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

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Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L MECHANICAL CODE REQUIREMENTS:

307.2.4.1 Ductless mini-split system traps.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain lone, or a trap.

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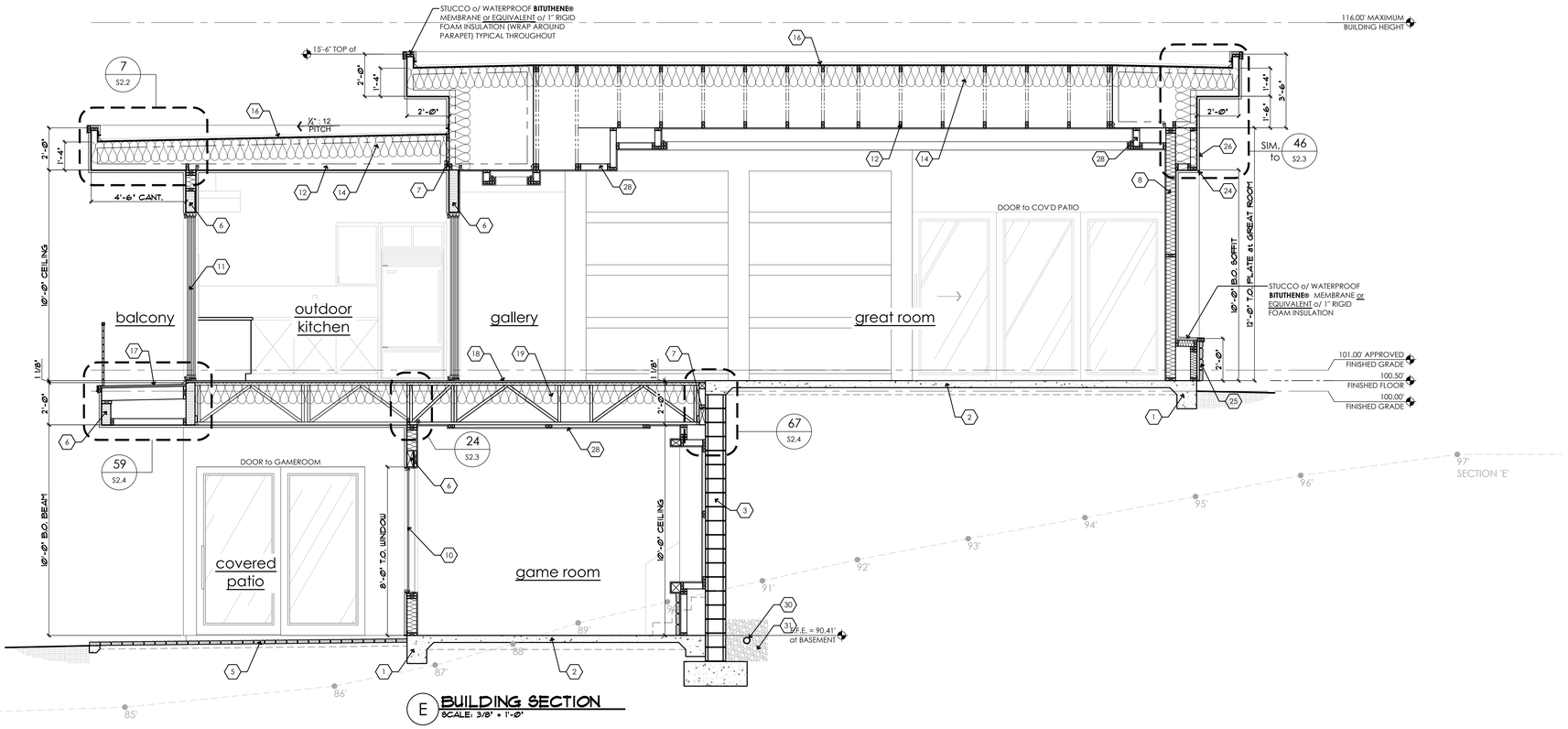
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A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

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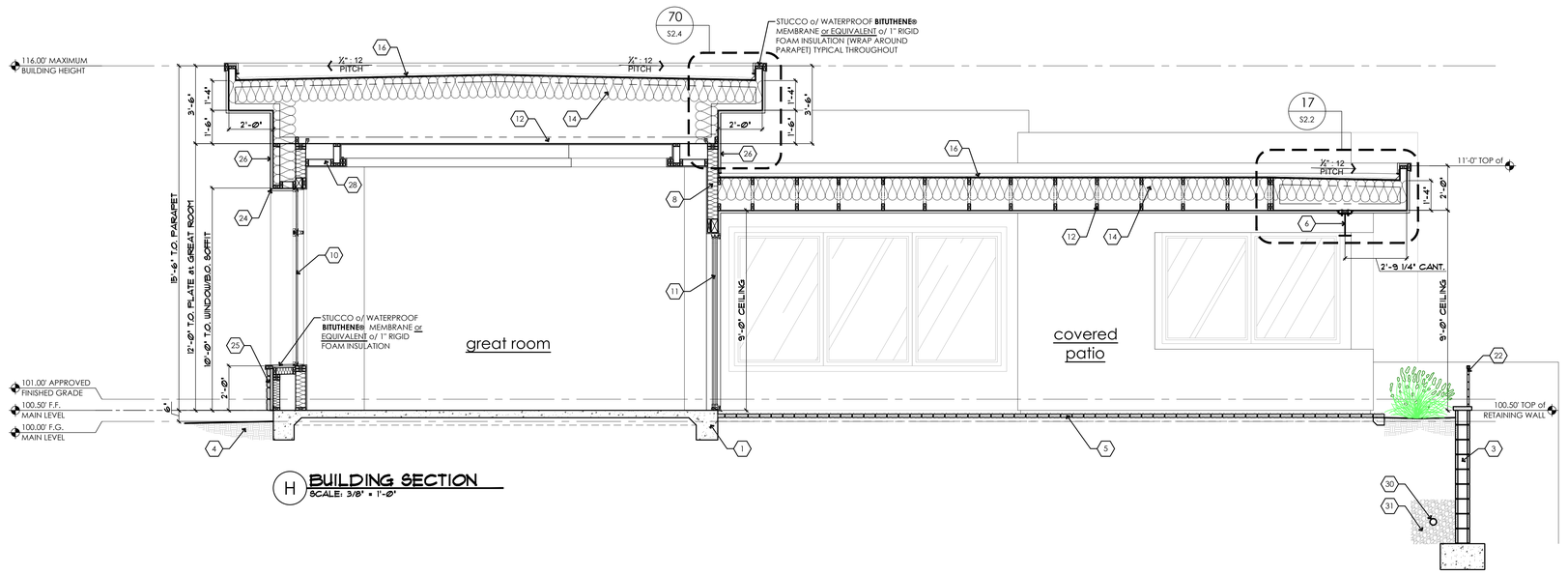
R702.3.7 Water-resistant gypsum backing board.
Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

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R702.4.2 Backer boards.
Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.



E **BUILDING SECTION**
SCALE: 3/8" = 1'-Ø"



H **BUILDING SECTION**
SCALE: 3/8" = 1'-Ø"

KEYNOTE LEGEND

NOTE: NOT ALL KEYNOTES USED ON THIS SHEET

FOUNDATION:

1. CONCRETE FOOTING per STRUCTL DRAWINGS
2. CONCRETE SLAB OVER APPROVED COMPACTED SOIL per STRUCTURAL DRAWINGS
3. MASONRY RETAINING WALL per STRUCTURAL DRAWINGS
4. FINISH GRADE - SLOPE AWAY FROM STRUCTURE
5. CONCRETE FLATWORK or CONCRETE PAVERS per OWNER SELECTION - SLOPE AWAY FROM STRUCTURE

WALL CONSTRUCTION:

6. BEAM/HEADER per STRUCTURAL CALCS
7. LEDGER STRIP per STRUCTURAL CALCS
8. R20 MINIMUM EXTERIOR WALL INSULATION
9. R11 MINIMUM SOUND BATTS at ALL INTERIOR WALLS, TYPICAL
10. DUAL GLAZE WINDOW per WINDOW SCHEDULE
11. DOOR per DOOR SCHEDULE

FLOOR / ROOF CONSTRUCTION:

12. PREFABRICATED ROOF TRUSSES - INSTALL per STRUCTURAL CALCS, SPACING per PLANS
13. NOT USED.
14. R38 MINIMUM ROOF INSULATION
15. DRAINAGE CRICKET per PLAN w/ FLASHING as REQUIRED, TYPICAL WHERE SHOWN
16. DURO-LAST (or APPROVED EQUAL) ROOFING o/ 2-LAYERS of 30 LB FELT o/ SHEATHING o/ PRE-MFG'd ROOF TRUSSES at 24" ON CENTER
17. "LIFE DECK" (or APPROVED EQUAL) WATERPROOF DECKING (ER-5416) o/ METAL LATH o/ ½" T&G PLYWOOD FLOOR SHEATHING (GLUED and SCREWED) o/ PRE-FABRICATED TAPERED FLOOR TRUSSES at 16" ON CENTER
18. SELF-LEVELING UNDERLAYMENT o/ ½" T&G PLYWOOD (GLUED and SCREWED) o/ PRE-FABRICATED FLOOR TRUSSES at 19.2" ON CENTER per STRUCTURAL DRAWINGS. (DEPTH per TRUSS CALCULATIONS)
19. R-13 MINIMUM FLOOR INSULATION
20. METAL/WOOD FRAMED STAIRS per IRC SECTIONS R311.7.5.1 (FINAL DESIGN by OWNER)
    R311.7.5.1 Risers. The riser height shall be not more than 7¾". The riser shall be measured vertically between leading edges of the adjacent treads. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter.
    R311.7.5.2 Treads. The tread depth shall be not less than 10 inches. 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 tread's leading edge.
21. PROVIDE 1½" DIAMETER HANDRAIL per IRC SECTIONS R311.7.8.3 (FINAL DESIGN by OWNER)
    R311.7.8.1 Height. Handrail height, measured vertically not less than 34 inches and not more than 38 inches.
    R311.7.8.4 Continuity. Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
22. 36" HIGH (MIN.) GUARD RAIL per IRC R312.1 (FINAL DESIGN by OWNER)
    R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches in diameter.
23. STORAGE BENEATH STAIRCASE
    R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side w/ ½" gypsum board.

FINISH CONSTRUCTION:

24. 1" DEEP x 1 " WIDE (or OWNER APPROVED SIZE) STUCCO REVEAL at EDGE of SOFFIT - COLOR to MATCH STUCCO
25. CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS
26. EXTERIOR TILE VENEER (per OWNER SELECTION) o/ STUCCO - INSTALL per MANUF. SPECS (ICC-ER #5157)
27. 'D' CLEARANCE ELECTRIC FIREPLACE APPLIANCE (SEE INT. ELEVATIONS for HEIGHT). INSTALL per MANUF. SPECS. PROVIDE INSTALLATION INSTRUCTIONS to INSPECTOR. EXTERIOR FIREPLACES SHALL BE RATED for OUTDOOR USE.
28. WOOD FRAMED and ⅝" TYPE 'X' DRYWALL WRAPPED INTERIOR SOFFIT - SEE INTERIOR ELEVATIONS
29. WOOD FRAMED and STUCCO WRAPPED EXTERIOR SOFFIT - SEE EXTERIOR ELEVATIONS
30. 4" PERFORATED DRAIN PIPE w/ FILTER FABRIC - DRAIN to DAYLIGHT or SUMP
31. 2'x2' SECTION of DRAIN ROCK w/ FILTER FABRIC

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.**'s work does not exceed that of the accompanying structural calculations.

NOTE:
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- ARCHITECTURAL ELEMENTS of the FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

ERIC B. MURRAY 6695153 STATE OF UTAH LICENSED PROFESSIONAL ENGINEER
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

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PROJECT:
The STEENWYK Residence
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T: 2280 B: 08 L: 7 & 8 / APN 111-20-168A

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◆ BUILDING SECTIONS

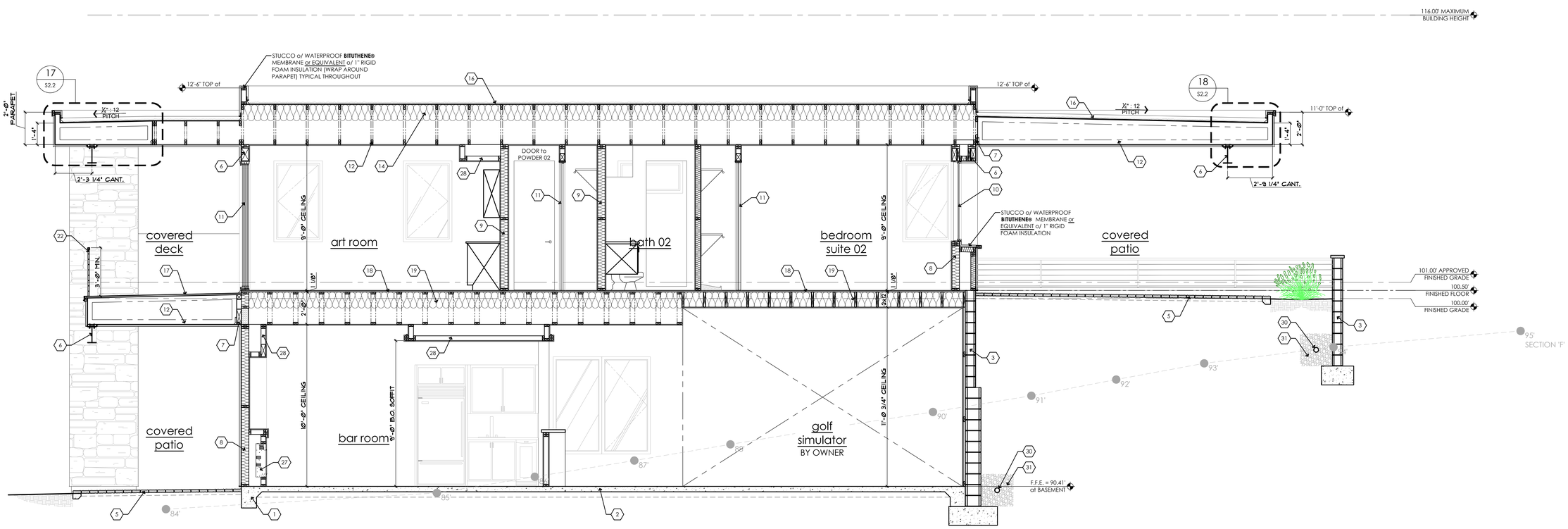
REVISIONS:
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SCALE: 3/8" = 1'-0"	JOB #: 2024-04
DRAWN: B.I.Z.	CHECKED: LEI ENG'R
DATE: 05 NOVEMBER 2024	

SHEET
S4.3

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F BUILDING SECTION
SCALE: 3/8" = 1'-0"

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Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

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KEYNOTE LEGEND

NOTE: NOT ALL KEYNOTES USED ON THIS SHEET

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WALL CONSTRUCTION:

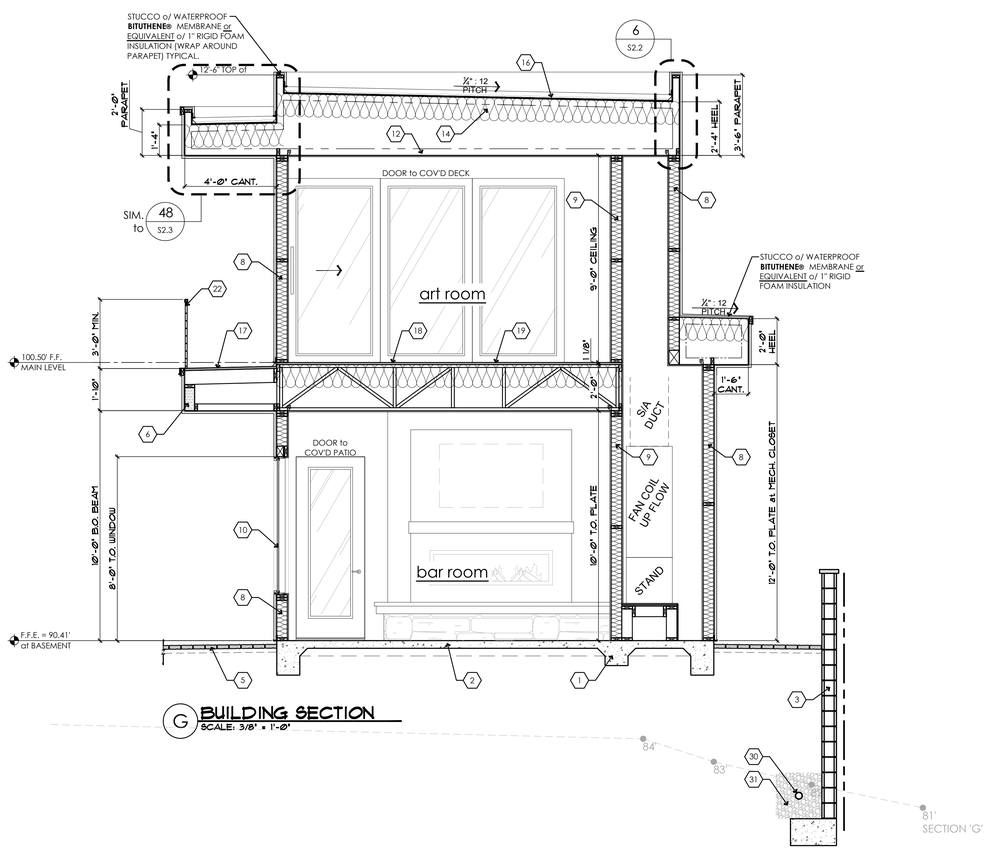
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G BUILDING SECTION
SCALE: 3/8" = 1'-0"

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STATE OF UTAH — LICENSED — 6953 — ERIC B. MURRAY — Signed: 03/21/2025 — STRUCTURAL ELEMENTS ONLY

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CONTRACTOR:

PROJECT:
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SCALE: 3/8" = 1'-0"	JOB #: 2024-04
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SHEET: S4.4	

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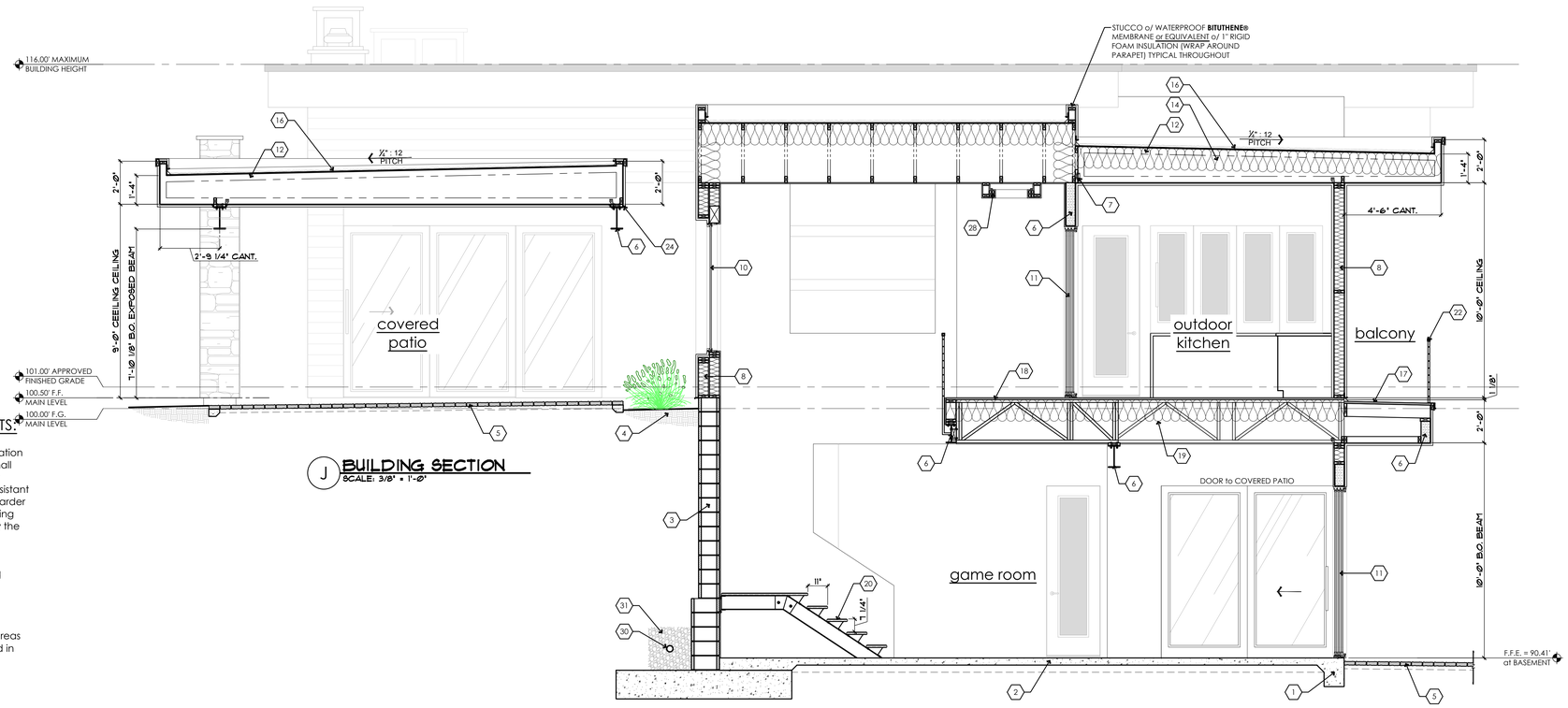
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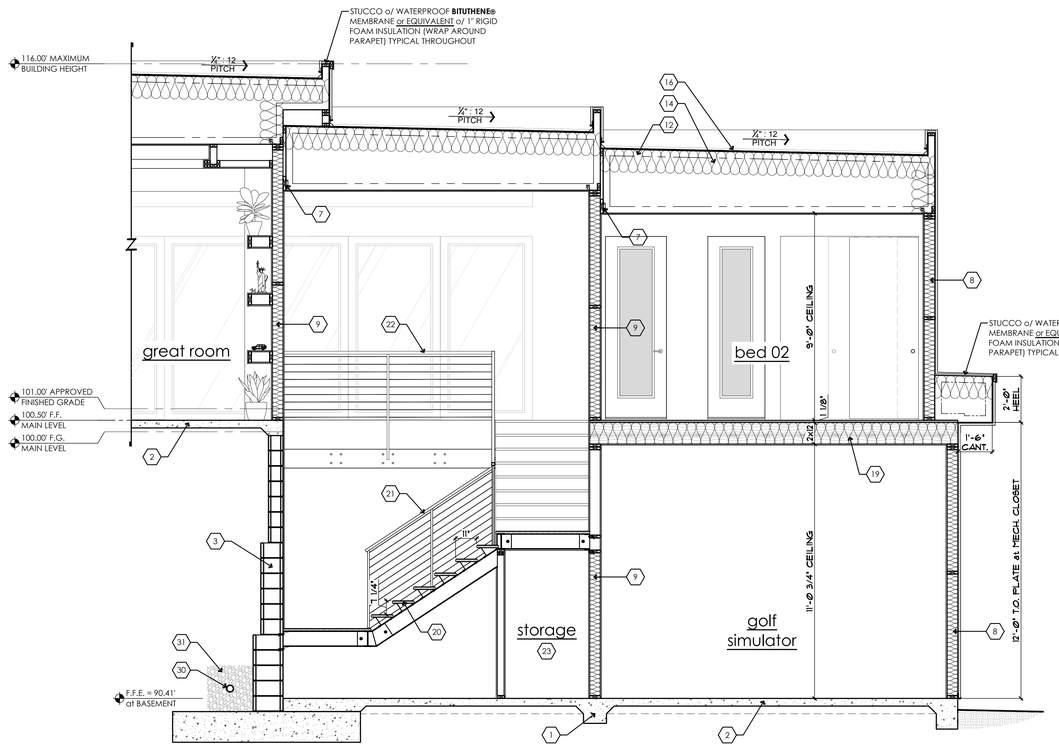
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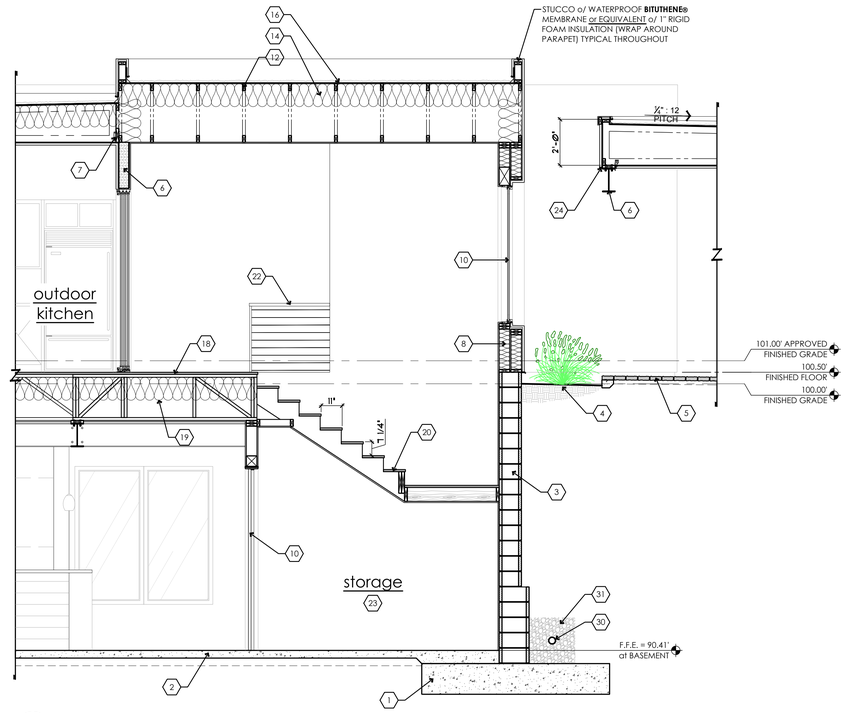
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SCALE: 3/8" = 1'-0"



K BUILDING SECTION
SCALE: 3/8" = 1'-0"



L BUILDING SECTION
SCALE: 3/8" = 1'-0"

KEYNOTE LEGEND

NOTE: NOT ALL KEYNOTES USED ON THIS SHEET

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27. '0' CLEARANCE ELECTRIC FIREPLACE APPLIANCE (SEE INT. ELEVATIONS for HEIGHT). INSTALL per MANUF. SPECS. PROVIDE INSTALLATION INSTRUCTIONS to INSPECTOR. EXTERIOR FIREPLACES SHALL BE RATED for OUTDOOR USE.
28. WOOD FRAMED and ⅝" TYPE 'X' DRYWALL WRAPPED INTERIOR SOFFIT - SEE INTERIOR ELEVATIONS
29. WOOD FRAMED and STUCCO WRAPPED EXTERIOR SOFFIT - SEE EXTERIOR ELEVATIONS
30. 4" PERFORATED DRAIN PIPE w/ FILTER FABRIC - DRAIN to DAYLIGHT or SUMP
31. 2x2' SECTION of DRAIN ROCK w/ FILTER FABRIC

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66953
ERIC B. MURRAY
Signed: 03/21/2025
RENEWAL: 8 . 31 . 26
STRUCTURAL ELEMENTS ONLY

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BUILDING SECTIONS

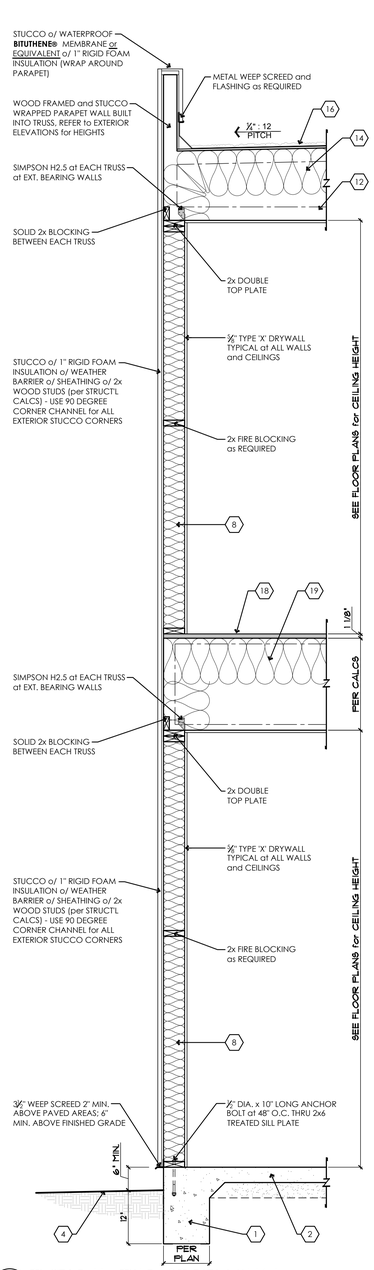
REVISIONS:

SCALE: 3/8" = 1'-0"	JOB #: 2024-04
DRAWN: e.l.z.	CHECKED: LEI ENG'R
DATE: 05 NOVEMBER 2024	

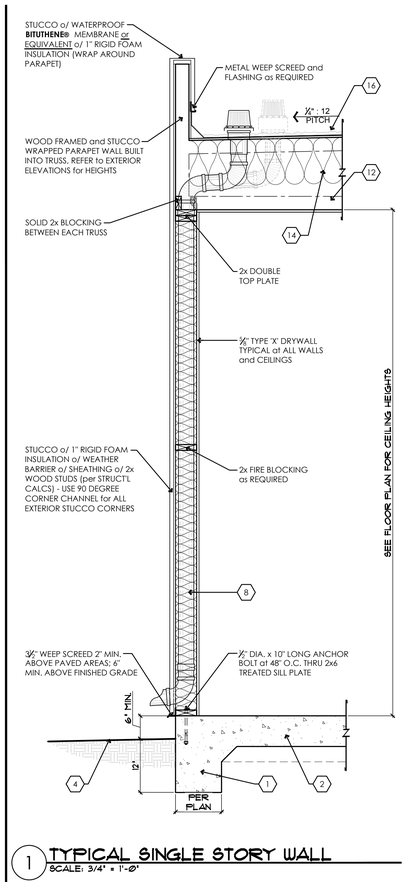
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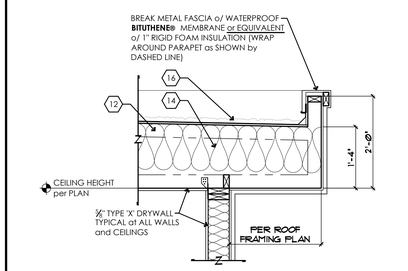
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3 TYPICAL TWO-STORY WALL
SCALE: 3/4" = 1'-0"



1 TYPICAL SINGLE STORY WALL
SCALE: 3/4" = 1'-0"



2 DETAIL at TYP. ROOF CANTILEVER
SCALE: 3/4" = 1'-0"

KEYNOTE LEGEND

NOTE: NOT ALL KEYNOTES USED ON THIS SHEET

FOUNDATION:

1. CONCRETE FOOTING per STRUCTL DRAWINGS
2. CONCRETE SLAB OVER APPROVED COMPACTED SOIL per STRUCTURAL DRAWINGS
3. MASONRY RETAINING WALL per STRUCTURAL DRAWINGS
4. FINISH GRADE - SLOPE AWAY FROM STRUCTURE
5. CONCRETE FLATWORK or CONCRETE PAVERS per OWNER SELECTION - SLOPE AWAY FROM STRUCTURE

WALL CONSTRUCTION:

6. BEAM/HEADER per STRUCTURAL CALCS
7. LEDGER STRIP per STRUCTURAL CALCS
8. R20 MINIMUM EXTERIOR WALL INSULATION
9. R11 MINIMUM SOUND BATTS at ALL INTERIOR WALLS, TYPICAL
10. DUAL GLAZE WINDOW per WINDOW SCHEDULE
11. DOOR per DOOR SCHEDULE

FLOOR / ROOF CONSTRUCTION:

12. PREFABRICATED ROOF TRUSSES - INSTALL per STRUCTURAL CALCS, SPACING per PLANS
13. NOT USED.
14. R38 MINIMUM ROOF INSULATION
15. DRAINAGE CRICKET per PLAN w/ FLASHING as REQUIRED, TYPICAL WHERE SHOWN
16. DURO-LAST (or APPROVED EQUAL) ROOFING o/ 2-LAYERS of 30 LB FELT o/ SHEATHING o/ PRE-MFG'd ROOF TRUSSES at 24" ON CENTER
17. "LIFE DECK" (or APPROVED EQUAL) WATERPROOF DECKING (ER-5416) o/ METAL LATH o/ ⅛" T&G PLYWOOD FLOOR SHEATHING (GLUED and SCREWED) o/ PRE-FABRICATED TAPERED FLOOR TRUSSES at 16" ON CENTER
18. SELF-LEVELING UNDERLAYMENT o/ ⅛" T&G PLYWOOD (GLUED and SCREWED) o/ PRE-FABRICATED FLOOR TRUSSES at 19.2" ON CENTER per STRUCTURAL DRAWINGS. (DEPTH per TRUSS CALCULATIONS)
19. R-13 MINIMUM FLOOR INSULATION
20. METAL/WOOD FRAMED STAIRS per IRC SECTIONS R311.7.5.1 (FINAL DESIGN by OWNER)
    R311.7.5.1 Risers. The riser height shall be not more than 7¾". The riser shall be measured vertically between leading edges of the adjacent treads. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter.
    R311.7.5.2 Treads. The tread depth shall be not less than 10 inches. 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 tread's leading edge.
21. PROVIDE 1½" DIAMETER HANDRAIL per IRC SECTIONS R311.7.8.3 (FINAL DESIGN by OWNER)
    R311.7.8.1 Height. Handrail height, measured vertically not less than 34 inches and not more than 38 inches.
    R311.7.8.4 Continuity. Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
22. 36" HIGH (MIN.) GUARD RAIL per IRC R312.1 (FINAL DESIGN by OWNER)
    R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches in diameter.
23. STORAGE BENEATH STAIRCASE
    R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side w/ ½" gypsum board.

FINISH CONSTRUCTION:

24. 1" DEEP x 1 " WIDE (or OWNER APPROVED SIZE) STUCCO REVEAL at EDGE of SOFFIT - COLOR to MATCH STUCCO
25. CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS
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PROFESSIONAL ENGINEER — STATE of UTAH
66953
ERIC B. MURRAY
Signed: 03/21/2025
STRUCTURAL ELEMENTS ONLY

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◆ TYPICAL DETAILS

REVISIONS:
1.
2.
3.

SCALE: AS NOTED
JOB #: 2024-04
DRAWN: s.l.z.
CHECKED: LEI ENG'R
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