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PROJECT INFORMATION

APPLICABLE BUILDING CODES:
INTERNATIONAL RESIDENTIAL CODE (2018)
INTERNATIONAL MECHANICAL CODE (2018)
INTERNATIONAL PLUMBING CODE (2018)
NATIONAL ELECTRIC CODE (2017)
CITY OF BRENTWOOD CODE AND ORDINANCES

CONSTRUCTION TYPE:
TYPE VB (5B) UNPROTECTED, UNSPRINKLERED

OCCUPANCY:
SINGLE FAMILY DWELLING

JURISDICTION:

SHEET TITLE INDEX

ABBREVIATIONS

ABV.	-ABOVE	DR.	-DOOR	IJS	-IN JOIST SPACE	SA	-SUPPLY AIR
A.F.F.	-ABOVE FINISHED FLOOR	D.S.	-DOWNSPOUT	INSUL.	-INSULATION	STRUCT.	-STRUCTURAL
AHU	-AIR HANDLING UNIT	DTL.	-DETAIL	I.B.	-IRONING BOARD	ST'L.	-STEEL
ALUM.	-ALUMINUM	DW	-DRYWALL	ITS	-IN TRUSS SPACE	S.D.	-SMOKE DETECTOR
ALT.	-ALTERNATE	DW. OPNG.	-DRYWALL OPENING	JST.	-JOIST	S.F.	-SQUARE FEET
ASPH.	-ASPHALT	EA.	-EACH	K.S.	-KNEE SPACE	SG-I	-TYPE I SAFETY GLAZING
BM.	-BEAM	E.I.F.S.	-EXTERIOR INSULATION FINISH	L.V.L.	-LAMINATED VENEER LUMBER	SG-II	-TYPE II SAFETY GLAZING
BP.	-BEAM POCKET	SYSTEM		LIN.	-LINEN	SH.	-SHELF/SHELVES
BRG.	-BEARING	EJ	-EXPANSION JOINT	LNDRY	-LAUNDRY	SHT.	-SHEET
BRK.	-BRICK	ELEC.	-ELECTRIC/ELECTRICAL	LT.	-LIGHT	SHWR.	-SHOWER
BRKT.	-BRACKET	ELEV.	-ELEVATION	MAS.	- MASONRY	SL.	-SLIDING
BRD.	-BOARD	EQ.	-EQUAL	MAT'L.	-MATERIAL	SPECS.	-SPECIFICATIONS
BLK.	-BLOCK	EQUIP.	-EQUIPMENT	MAX.	-MAXIMUM	SW.	-SWITCH
BOT.	-BOTTOM	ES.	-EACH SIDE	MECH.	-MECHANICAL	T.J.I.	-TRUSS JOIST INCORPORATED
CAB.	-CABINET	EXIST.	-EXISTING	MIN.	-MINIMUM	TOS	-TOP OF SLAB
C.J.	-CONTROL JOINT,CEILING JOISTS	EXT.	-EXTERIOR	MISC.	-MISCELLANEOUS	T&G	-TONGUE AND GROOVE
CLG.	-CEILING	EXH.	-EXHAUST	M.O.	-MASONRY OPENING	TEMP.	-TEMPERED
CMU	-CONCRETE MASONRY UNIT	FD	-FLOOR DRAIN	MTL.	-METAL	T.B.R.	-TO BE REMOVED
CSMU	-CALCIUM SILICATE MASONRY	F.J.	-FLOOR JOISTS	N/A	-NOT APPLICABLE	TV	-TELEVISION
UNIT		FLR.	-FLOOR	N.I.C.	-NOT IN CONTRACT	TYP.	-TYPICAL
C.O.	-CASED OPENING	FND.	-FOUNDATION	N.T.S.	-NOT TO SCALE	T.O.C.	-TOP OF CONCRETE
CONC.	-CONCRETE	F.P.	-FIREPLACE	O/	-OVER	T.O.P.	-TOP OF PLATE
CONT.	-CONTINUOUS	FPHB	-FREEZE-PROOF HOSE BIBB	O.C.	-ON CENTER	U.C.	-UNDER CABINET
CONST.	- CONSTRUCTION	FTG.	-FOOTING	OPT.	-OPTIONAL	UCR	-UNDER COUNTER
C.S.	-CORNER SET	FURN.	-FURNACE	O.H.	-OVERHEAD, OVERHANG	REFRIGERATOR	
CORR.	-CORRIDOR	F.V.	-FIELD VERIFY	PFA	-POST FROM ABOVE	U.L.	-UNDERWRITER'S LABORATORY
CPT.	-CARPET	GA.	-GAGE	PL	-PLATE	U.N.O.	-UNLESS NOTED OTHERWISE
CT	-CERAMIC TILE	GEN.	-GENERAL	PKT.	-POCKET	W	-WASHER
D	-DRYER	GFI	-GROUND FAULT INTERRUPTOR	PR.	-PAIR	W/	-WITH
D.B.	-DRAWER BASE	GL.	-GLASS	PRE-FAB	-PREFABRICATED	W.I.C.	-WALK-IN CLOSET
DBL.	-DOUBLE	G&N	-GLUE AND NAIL	P&S	-POLE AND SHELF	WD.	-WOOD
DB0	-DESIGNED BY OTHERS	GR..	-GRADE	P.S.L.	-PARALLEL STRAND LUMBER	WDW	-WINDOW
DEFS.	-DIRECT EXTERIOR FINISHING	GRAN.	-GRANULAR FILL	P.T.	-PRESSURE TREATED	W/O	-WITHOUT
SYSTEM		H.C.	-HANDICAP ACCESSIBLE	R.R.	-ROOF RAFTER	V.	-VANITY
DIFS.	-DECORATIVE INTERIOR	HDR.	-HEADER	R.H.	-RAISED HEEL	V.B.	-VAPOR BARRIER
FINISHING SYST.		HR.	-HOUR, HANDRAIL	RA	-RETURN AIR	WP	-WATERPROOF
DIM.	-DIMENSION	HRDWD.	-HARDWOOD	REF.	-REFRIGERATOR	WWF	-WELDED WIRE FABRIC
DISP.	-DISPOSAL	HT.	-HEIGHT	REQ'D.	-REQUIRED		
DN.	-DOWN	HWH	-HOT WATER HEATER	RV	-ROOF VENT		

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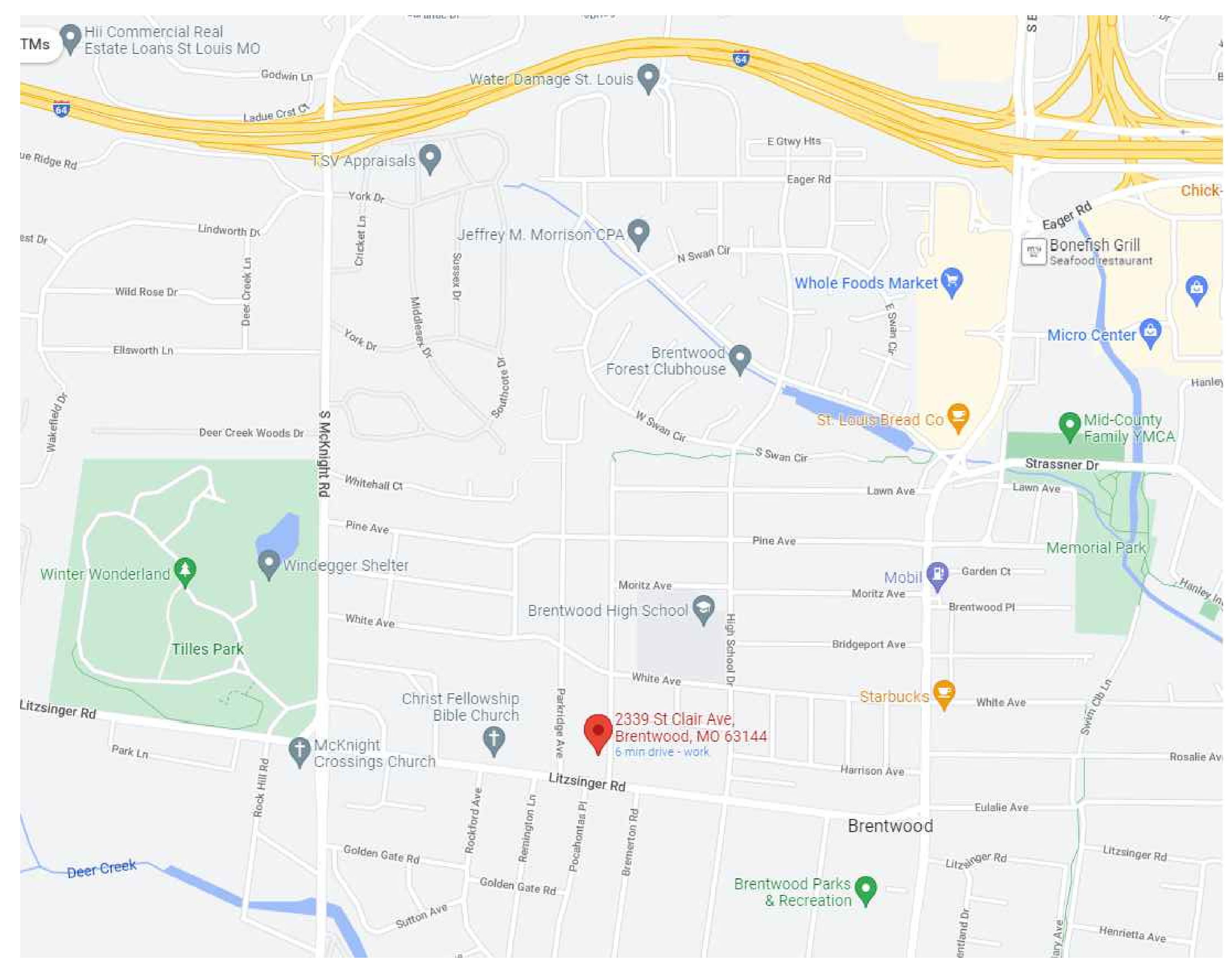
BRENTWOOD, MO 63144

THOMAS ALAN GROUP

ARCHITECTURE | DESIGN | INTERIORS

Douglas PROPERTIES



PROJECT VICINITY MAP

NO SCALE

CHRISTOPHER THOMAS PIKE
MO# 2011033866
EXPIRATION DATE: 12/31/23

No.	Description	Date
1	PERMIT SET	8/1/2022
2	ARB COMMENTS	10/24/2022

A New Residence:
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GENERAL NOTES

DIVISION 1 - GENERAL REQUIREMENTS

1.1 THE FOLLOWING DRAWINGS AND NOTES ARE BASED ON THE 2018 INTERNATIONAL RESIDENTIAL CODE. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO COMPLETE ALL WORK IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES, ORDINANCES, AND IN ACCORDANCE WITH INDUSTRY STANDARDS. COMPLIANCE WITH THESE NOTES AND DRAWINGS DOES NOT NECESSARILY COVER ALL RESTRICTIONS REQUIRED. BUILDING AND FIRE DISTRICT PERMIT APPROVAL MUST BE OBTAINED BEFORE CONSTRUCTION STARTS.

1.2 PRIOR TO BEGINNING THE WORK, PROMPTLY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR ERRORS DISCOVERED IN THESE DOCUMENTS. DO NOT SCALE DRAWINGS. FOLLOW WRITTEN DIMENSIONS ONLY. ONLY WRITTEN INTERPRETATIONS OR DOCUMENTED CHANGES FROM THE ARCHITECT ARE BINDING. ARCHITECT WILL NOT BE RESPONSIBLE FOR ORAL INSTRUCTION. CONTRACTOR SHALL VISIT THE SITE AND BE FAMILIAR WITH ALL CONDITIONS AFFECTING THE WORK.

1.3 COPYRIGHT: THESE PLANS ARE THE SOLE AND ABSOLUTE PROPERTY OF THOMAS ALAN GROUP, L.L.C. ANY USE, COPYING, OR REPRODUCING OF THESE PLANS WITHOUT THE EXPRESS WRITTEN CONSENT OF THOMAS ALAN GROUP, L.L.C. IS ILLEGAL. THE ARCHITECT TAKES NO RESPONSIBILITY FOR WORK THAT DOES NOT BEAR HIS SEAL AND SIGNATURE.

DIVISION 2 - SITEWORK

2.1 FLOOD PLAIN: BASEMENT FLOOR ELEVATION MUST BE ABOVE 100 YEAR FLOOD PLAIN. LOW SILL MUST BE MINIMUM 2 FEET ABOVE FLOOD PLAIN ELEVATION.

2.2 SOIL BEARING CAPACITY: GENERAL CONTRACTOR TO CONFIRM AND NOTIFY ARCHITECT IN WRITING IF LESS THAN 2000 PSF. BEFORE PROCEEDING WITH THE WORK.

2.3 FINISH GRADES: AT BUILDING TO BE MIN. 8" BELOW TOP OF FOUNDATION AT FRAME OR FRAME WITH MASONRY VENEER AND 6" MIN. BELOW FULL MASONRY WALLS. SLOPE GRADE AWAY FROM FOUNDATION A MINIMUM OF A 6" DROP WITHIN THE FIRST 10' OR TO A SWALE. IMPERVIOUS SURFACES WITHIN 10' OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2% AWAY FROM THE BUILDING.

2.4 BUILDING HEIGHT: PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE AWARE OF THE LOCAL BUILDING AND FIRE PROTECTION JURISDICTIONS REQUIREMENTS ON BUILDING HEIGHT AND STORIES ABOVE GRADE. DWELLINGS DESIGNED UTILIZING THE 2015 IRC MAY BE CONSTRUCTED TO 3 STORIES ABOVE THE GRADE PLANE.
NOTE: BASEMENTS ARE CONSIDERED AS A STORY ABOVE GRADE WHERE THE FINISHED SURFACE OF THE FLOOR ABOVE THE BASEMENT IS:
A) MORE THAN 6'-0" ABOVE THE GRADE PLANE OR
B) MORE THAN 6'-0" ABOVE THE FINISHED GROUND LEVEL FOR MORE THAN 50% OF THE TOTAL BUILDING PERIMETER OR
C) MORE THAN 12'-0" ABOVE THE FINISHED GROUND LEVEL AT ANY POINT.

2.5 PROVIDE CHEMICAL TERMITICIDE TREATMENT: SOIL TREATMENT AND/OR FIELD APPLIED WOOD TREATMENT SHALL BE BE INSTALLED IN SUCH A MANNER SO AS TO PREVENT TERMITE INFESTATION. CHEMICAL CONCENTRATION RATE TO BE APPLIED IN STRICT ACCORDANCE WITH THE TERMITICIDE LABEL (MANUFACTURE'S REQUIREMENTS.)

DIVISION 3 - CONCRETE

3.1 COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE MINIMUM:
A) 2500 PSI - BASEMENT SLABS, FOOTINGS, AND PIERS
B) 3000 PSI - FOUNDATION AND BASEMENT WALLS
C) 3500 PSI - PORCHES, WALKS, PATIOS, STEPS, GARAGE AND CARPORT FLOOR SLABS, AND DRIVEWAYS.
ALL CONCRETE SHALL BE AIR-ENTRAINED IN ACCORDANCE WITH TABLE R402.2 (2018 IRC).

3.2 CONCRETE FLOOR SLABS: MINIMUM THICKNESS FOR FLOOR SLABS SUPPORTED DIRECTLY ON THE GROUND IS 3 1/2". INTERIOR SLABS (INCLUDING GARAGE SLABS LOCATED BELOW THE OUTSIDE GRADE) SHALL BE PLACED OVER A MINIMUM 4" BASE COURSE OF GRAVEL OR CRUSHED STONE. A 6 MIL POLYETHYLENE BARRIER WITH JOINTS LAPPED NOT LESS THAN 6" SHALL BE PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE.
EXCEPTION: GARAGES AND EXTERIOR FLATWORK NOT LIKELY TO BE ENCLOSED AT A LATER DATE SHALL NOT REQUIRE THE POLYETHYLENE BARRIER.

3.3 ADMIXTURES USED MUST CONFORM WITH SECTION R402.2 OF THE 2015 IRC.

3.4 FOOTINGS & PIERS: SHALL EXTEND A MINIMUM OF 2'-6" BELOW FINISHED GRADE AND BEAR ON UNDISTURBED SOIL OR PREPARED FILL.

3.5 CONCRETE FOUNDATION HEIGHT LIMITS: MAX. 8' POUR HT. WITH 8" THICK WALL (SEE DETAILS).
MAX. 9 FT POUR HT. WITH 10" THICK WALL w/ 2-#4'S @ TOP, MID., & BOT. w/#4'S @ 13" O.C. VERT.
OR 12" THICK WALL w/ 2-#4'S TOP AND BOT. (SEE DETAILS).

DIVISION 4 - MASONRY

4.1 BRICK/STONE VENEER: 1" MAX. AIR SPACE BETWEEN VENEER AND SHEATHING. PROVIDE CORROSION RESISTANT CORRUGATED SHEET METAL WALL TIES, MINIMUM NO. 22 GA. BY 7/8" WIDE AT 24" VERTICALLY AND HORIZONTALLY AND ONE TIE PER 2.67 SF, FASTENED WITH 8d COMMON NAILS. IF WATER-RESISTANT SHEATHING IS NOT USED BEHIND VENEER PROVIDE MIN. 14# ASPHALT SATURATED BUILDING FELT (OR APPROVED EQUAL), FULL HEIGHT OVER SHEATHING, BEHIND VENEER. PROVIDE CORROSION RESISTIVE FLASHING AND WEEPS (3/16") AT MAX. 33" OC.:
A) AT THE TOP OF ALL EXTERIOR WINDOW AND DOOR OPENINGS
B) AT THE INTERSECTION OF MASONRY CONSTRUCTION W/ FRAME OR STUCCO WALLS
C) UNDER AND AT THE ENDS OF MASONRY, WOOD OR METAL COPINGS AND SILLS.
D) CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM
E) WHERE EXT. PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION.
F) AT WALL AND ROOF INTERSECTIONS.
E) AT BUILT IN GUTTERS.
FLASHING SHALL BE LOCATED BENEATH THE FIRST COURSE OF MASONRY ABOVE FINISHED GROUND LEVEL ABOVE THE FOUNDATION WALL OR SLAB AND PER SECTION R703.7.5 AND R703.8 OF THE 2018 IRC.

4.2 VENEER TIES AROUND WALL OPENINGS: ADDITIONAL METAL TIES SHALL BE PROVIDED AROUND ALL WALL OPENINGS GREATER THAN 16" IN EITHER DIRECTION. METAL TIES AROUND THE PERIMETER OF OPENINGS SHALL BE SPACED NOT MORE THAN 3 FT. O.C. AND WITHIN 12" OF THE WALL OPENING.

4.3 MASONRY FIREPLACES AND CHIMNEYS: SHALL BE INSTALLED PER CHAPTER 3 OF THE 2018 IRC AND DETAILS ON PLANS. FLUE SHALL BE SIZED BY THE MASONRY CONTRACTOR (BASED ON TABLE R1003.14(1) OR R1003.14(2) OF THE 2018 IRC), WHO SHALL WARRANT THAT THE FIREPLACE DRAWS PROPERLY.

4.4 MASONRY FIREPLACE WALLS TO BE MINIMUM THICKNESS OF 8" OF CONCRETE OR MASONRY INCLUDING 2" OF FIRE BRICK.

4.5 WALLS OF THE THROAT AND SMOKE CHAMBER SHALL BE A MINIMUM OF 8" OF CONCRETE OR SOLID MASONRY OR A TOTAL THICKNESS OF 6" IF LINED WITH 2" OF FIREBRICK OR LINED WITH 5/8" VITRIFIED CLAY.

4.6 AIRSPACE CLEARANCES TO COMBUSTIBLES FROM THE EXTERIOR SURFACE OF THE FIREPLACE WALLS SHALL BE MINIMUM 4" FROM THE BACK OF THE FIREPLACE, 2" FROM THE FRONT AND SIDE OF THE MASONRY FIREPLACE, AND 2" MINIMUM FOR THE SMOKE CHAMBER WALLS AND CHIMNEYS.
EXCEPTIONS:
A) EXPOSED COMBUSTIBLE TRIM, EDGES OF SHEATHING AND SIDING, AND DRYWALL MAY BE PLACED AGAINST THE MASONRY FIREPLACE SIDE WALL AND HEARTH EXTENSIONS PROVIDED THE COMBUSTIBLE EDGE IS A MINIMUM 12" FROM THE FIREBOX LINING OR FLUE LINING. ALL WOOD WALL, FLOOR, AND ROOF FRAMING MEMBERS SHALL MAINTAIN THE MINIMUM CLEARANCES.
B) COMBUSTIBLE TRIM AND MANTELS ATTACHED TO THE FIREPLACE FRONT SHALL BE A MINIMUM OF 6" FROM THE OPENING. COMBUSTIBLE MATERIALS WITHIN 12" OF THE FIREPLACE OPENING SHALL NOT PROJECT MORE THAN 1/8" FOR EACH 1" DISTANCE FROM THE OPENING.
C) CHIMNEYS LOCATED OUTSIDE THE EXTERIOR WALLS WITH 1" CLEARANCE TO COMBUSTIBLES COMPLETELY AROUND THE PERIMETER OF THE CHIMNEY, MAY HAVE A 1" CLEARANCE TO COMBUSTIBLES WHEN PASSING THROUGH THE SOFFIT OR CORNICE.

4.7 MASONRY CHIMNEYS SHALL BE CONSTRUCTED OF 4" MINIMUM SOLID MASONRY AND SHALL BE LINED WITH:
A) A 5/8" CLAY FLUE LINER MEETING THE REQUIREMENTS OF ASTM C315-07. AN AIR SPACE EQUAL TO THE THICKNESS OF THE FLUE LINER IS REQUIRED BETWEEN THE LINER AND THE FULL MASONRY CHIMNEY.
B) LISTED CHIMNEY LINING SYSTEMS COMPLYING WITH UL 1777-04
C) FACTORY-BUILT CHIMNEYS OR CHIMNEY UNITS LISTED FOR INSTALLATION WITHIN MASONRY CHIMNEYS.

4.8 EXTERIOR AIR SUPPLY REQUIRED ON ALL FACTORY BUILT OR MASONRY FIREPLACES IN ACCORDANCE WITH SECTION R1006 OF THE 2015 IRC.

DIVISION 5 - STRUCTURAL STEEL

5.1 STEEL TO BE MINIMUM A992 GRADE 60 STEEL. ALL STEEL BEAMS TO HAVE MINIMUM 4" BEARING AND BE GROUTED SOLID INTO BEAM POCKETS WITH "NON-SHRINK" GROUT. ALL STEEL BEAMS, COLUMNS, AND LINTELS TO BE SHOP PRIMED.

5.2 PROVIDE STEEL ANGLE AT ALL MASONRY OPENINGS (U.N.O.). VERIFY SIZE WITH ARCHITECT IF NOT INDICATED.

DIVISION 6 - FRAMING NOTES

6.1 FRAMING TO BE IN ACCORDANCE WITH THE "NATIONAL FOREST PRODUCTS MANUAL FOR WOOD FRAME CONSTRUCTION".

6.2 MATERIALS & DESCRIPTIONS: FLOOR JOISTS: TO BE GRADE-MARKED MINIMUM 1000 Fb (2X12'S) OR 1050 Fb (2X10'S) SINGLE MEMBER USE, UNLESS NOTED OTHERWISE. (SUBSTRUCTURE EXPOSED TO EXTERIOR - PRESSURE TREATED, USE CEDAR OR OTHER EXTERIOR GRADE WOOD FOR FINISH SURFACES).

6.3 FLOOR FRAMING SHALL BE DESIGNED TO SUPPORT THE FOLLOWING MINIMUMS:

FLOOR AREAS OTHER THAN SLEEPING ROOMS	L.L. 40 LBS. PER SQ. FT.
SLEEPING ROOMS	L.L. 30 LBS. PER SQ. FT.
BALCONY (EXTERIOR) LESS THAN 100 SQ. FT.	L.L. 60 LBS. PER SQ. FT. L.L.
DECK	L.L. 40 LBS. PER SQ. FT.

6.4 STAIRS SHALL BE DESIGNED FOR A 40 PSF LIVE LOAD OR 300 LB CONCENTRATED LOAD ON 4 SQ. INCHES AT MID SPAN OF A TREAD, WHICHEVER PRODUCES THE GREATER STRESSES.

6.5 POSTS: (2) 2X TO BE INTERPRETED AS (2) 2X "CRIPPLES" (GLUED AND NAILED) PLUS MINIMUM (1) FULL HEIGHT UNBROKEN STUD. ALL POSTS TO BE BLOCKED SOLID TO TOP OF STRUCTURE BELOW. STUDS USED AS POSTS TO BE SPRUCE-PINE-FIR. MINIMUM POST SIZE 2-2X WALL THICKNESS TYPICAL UNDER ALL BEAMS AND HEADERS U.N.O. EXCEPTION: POSTS CARRYING ROOF LOADS ONLY AND NOT EXCEEDING 8'-1" IN HEIGHT SUPPORTING HEADERS SPANNING 3'-0" OR LESS MAY CONSIST OF A SINGLE 2X CRIPPLE AND (1) FULL HT. UNBROKEN STUD UNLESS NOTED OTHERWISE.

6.6 INTERIOR PARTITIONS: MINIMUM 2X4 STUDS @ 16" O.C. U.N.O. (ALL FRAMING TO BE 16" O.C. TYPICAL, U.N.O.)

6.7 HEADERS: MINIMUM 2-2X10'S U.N.O., GLUED AND NAIL ALL MULTIPLE MEMBER BEAMS, TYPICAL AT ALL DOORS AND WINDOWS.

6.8 SUBFLOORING: APA RATED STURD-I-FLOOR SHEATHING, 48/24 SPAN RATED, 23/32 (3/4" NOM.), TONGUE AND GROOVE, EXPOSURE 1, (PLYWOOD ONLY) GLUED AND NAILED (SUGGEST RING SHANKS) TO JOISTS.

6.9 FLOORING UNDERLAYMENT: MINIMUM 1/4" OSB OR LUAN OVER SUBFLOOR, AT VINYL FLOORING

6.10 EXTERIOR WALL SHEATHING: APA RATED SHEATHING EXPOSURE 1, SPAN RATING 24/16, (7/16" OSB) OR 32/16, (15/32" PLYWOOD) 1/2" NOMINAL. HOUSE AS DETAILED PRESCRIBES TO THE "CONTINUOUS SHEATHING" (R602.10.4) CODE REQUIREMENT IN ACCORDANCE WITH METHOD CS-WSP OF SECTION R602.10.4.1 ON ALL AREAS OF THE EXTERIOR WALLS. THE HOUSE ALSO USES METHOD CS-PF FOR NARROW WALLS WHERE INDICATED ON PLANS. (SEE DETAIL) OPTIONAL BRACED WALL PANEL CONSTRUCTION METHODS ARE AVAILABLE TO THE CONTRACTOR PER SECTION R602.10.1.1. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF ALTERNATE METHODS ARE DESIRED TO BE EMPLOYED, AS ADDITIONAL CALCULATIONS AND DELINEATION ON THE CONSTRUCTION DOCUMENTS WILL BE REQUIRED. STRUCTURAL ENGINEERING BY OUTSIDE CONSULTANTS MAY BE REQUIRED. CONTRACTOR TO CONFIRM AND NOTIFY THE ARCHITECT IN WRITING OF THE SUBJECT PROPERTIES SEISMIC DESIGN CATEGORY, IF A 'D' CATEGORY, BEFORE PROCEEDING WITH THE WORK.

6.11 ROOF SHEATHING: APA RATED SHEATHING, EXPOSURE 1, MINIMUM SPAN RATING 32/16,(15/32") 1/2" NOM. W/ PLY CLIPS AND WITHOUT EDGE SUPPORT OR MINIMUM (24/0) 3/8" THICK PLYWOOD OR 24/16, 7/16" OSB WITH EDGE SUPPORT. EDGE SUPPORT SHALL BE TONGUE AND GROOVE EDGES, PANEL EDGE CLIPS (MIDPOINT OF SPAN BETWEEN EACH SUPPORT), OR 2X BLOCKING.

6.12 EXPOSED EXTERIOR MATERIALS TO BE APPROVED EXTERIOR GRADE. FASTENERS FOR PRESSURE PRESERVATIVE AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER
EXCEPTION: 1/2" DIAMETER OR GREATER STEEL BOLTS.

6.13 NAILING TO BE IN ACCORDANCE WITH TABLE R602.3(1) THROUGH R602.3(4). GYPSUM SHEATHING SHALL BE FASTENED IN ACCORDANCE WITH TABLE R602.3(1).
RAFTER/CEILING JOIST SYSTEMS SHALL BE NAILED TO THE TOP PLATE OF THE WALL IN ACCORDANCE WITH TABLE R602.3(1). TRUSSES SHALL BE NAILED TO THE TOP PLATE OF THE WALL WITH 3-16d NAILS TOE NAILED WITHOUT SPLITTING THE END OF THE TRUSS.

6.14 LAMINATED VENEER LUMBER: LVL 1.9E, fb 2600 PSI "MICROLLAM" BEAMS AS MANUFACTURED BY TRUSS JOIST CORPORATION OR APPROVED EQUAL.

6.15 PARALLEL STRAND LUMBER: PSL 2.0E, fb 2900 PSI "PARALLAM" BEAMS AS MANUFACTURED BY TRUSS JOIST CORPORATION OR APPROVED EQUAL.

6.16 FIREBLOCKING: TOP AND BOTTOM OF ALL CONVENTIONAL, DOUBLE STUD, AND STAGGERED STUD FRAME WALLS TO BE FIREBLOCKED VERTICALLY AT THE CEILING AND FLOOR LEVELS AND HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'. FIREBLOCKING REQUIRED AT ALL SOFFITS AND DROPPED CEILINGS. FIREBLOCKING REQUIRED BETWEEN STAIRWAY STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED ACCESSIBLE SPACES UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD. PROVIDE FIREBLOCKING PER SECTION R302.11 OF THE 2018 IRC.

6.17 DRAFTSTOPPING: CEILINGS SUSPENDED BELOW WOOD JOISTS OR ATTACHED DIRECTLY TO WOOD FLOOR TRUSSES SHALL BE DRAFTSTOPPED AT 1000 SQ. FT. INTERVALS AND PARALLEL TO MAIN FRAMING MEMBERS.

6.18 CRAWL SPACE ACCESS: ACCESS OPENINGS THROUGH THE FLOOR SHALL BE A MINIMUM OF 18"X24" INCHES. OPENINGS THROUGH A PERIMETER WALL SHALL BE 16"X24". OPENING SIZE SHALL BE MODIFIED PER SECTION M1305.1.4 WHERE MECHANICAL EQUIPMENT IS LOCATED UNDER FLOORS.

6.19 ATTIC ACCESS: A 22"X30" MINIMUM ACCESS OPENING REQUIRED FOR ATTIC AREAS WHICH EXCEED 30 SQ. FT. AND HAVE A CLEAR HEIGHT OF OVER 30". THE ACCESS SHALL BE INSTALLED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION. 30" MINIMUM HEADROOM IS REQUIRED AT SOME POINT VERTICALLY ABOVE THE ACCESS OPENING. OPENING SIZE SHALL BE MODIFIED PER SECTION M1305.1.3 WHERE MECHANICAL EQUIPMENT IS LOCATED IN ATTICS.

6.20 DECK DOORS: SECURELY BARRICADE DOORS UNTIL DECK IS BUILT AND APPROVED, TYPICAL.

6.21 DOUBLE FLOOR JOISTS AROUND STAIR OPENINGS, FIREPLACE HEARTHS, AT CORNERS OF CANTILEVERED BAYS AND UNDER PARALLEL PARTITIONS (TYPICAL AT ALL OPENINGS, UNO). BEARING PARTITIONS AND POST SHALL BE UNBROKEN (RUN CONTINUOUS) FROM BEARING TO STRUCTURE BELOW.

6.22 CUTTING, NOTCHING, AND/OR BORING HOLES IN WOOD BEAMS, JOISTS, RAFTERS OR STUDS, SHALL NOT EXCEED THE LIMITATIONS NOTED IN SECTIONS R502.8, R602, AND R802.7 OF THE 2018 INTERNATIONAL RESIDENTIAL CODE. REINFORCEMENT OF STUDS SHALL BE DONE IN ACCORDANCE WITH THE 2018 IRC.

6.23 INSTALL 1X4 EACH SIDE OF STEEL BEAM NAILED TO FLOOR JOIST, OR RAMSET 2X4 TO TOP OF BEAM AND TOE NAIL JOIST, OR BLOCK SOLID BETWEEN JOIST OVER BEAM.

6.24 CABINET SUPPLIER TO FIELD MEASURE AREA OF WORK AFTER ROUGH FRAMING TO ASSURE EXACT FIT OF CABINETS AND FREE OPERATION OF ALL DOORS AND DRAWERS. SCRIBE CABINETS TO WALL AS REQUIRED.

6.25 HANDRAILS: SHALL NOT PROJECT MORE THAN 4 1/2" INTO REQUIRED STAIRWAY WIDTH. HANDRAILS AT STRAIGHT RUN STAIRS TO BE CONTINUOUS. ALLOWABLE DIAMETER OF INTERIOR STAIRCASE HANDRAIL IS 2" MAXIMUM AND 1 1/4" MINIMUM UNLESS OTHERWISE SPECIFIED. HANDRAIL ENDS SHALL RETURN TO THE WALL OR NEWEL POST.

6.26 GUARDS: PROVIDE MIN. 36" HEIGHT GUARDS ALONG BALCONIES, AREAWAYS, AND OPEN SIDED WALKING SURFACES WHERE THE DIFFERENCE IN FLOOR LEVEL IS MORE THAN 30".

6.27 ROOF OVERFRAMING: MIN. 2 X 6'S AT 16" O.C., UNLESS NOTED OTHERWISE ON PLANS. ALL OVERFRAMING TO BEAR AT A 30 DEGREE ANGLE FROM THE PERPENDICULAR AT ALL ROOF FRAMING. (MAX. 10'-0" SPAN).

6.28 TRUSS REQUIREMENTS
A) TRUSSES TO BE DESIGNED BY OTHERS IN CONFORMANCE WITH SECTION R802.10.1 OF THE 2018 IRC, ANSI/AF&PA NDS-2001, AND ANSI/TPI 1-2002 . FABRICATOR'S RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO DESIGNING ALL CONNECTIONS AND TRUSS TO TRUSS CONNECTIONS. ALL TRUSSES MUST BE DESIGNED TO RESIST HORIZONTAL THRUST. NO HORIZONTAL THRUST SHALL BE APPLIED TO ANY WALLS. ALL TRUSSES TO BE TWO (2) POINT BEARING UNLESS NOTED OTHERWISE. TRUSSES TO BE DESIGNED TO MINIMIZE TOTAL DEFLECTION. COMPOUND DEFLECTION MUST BE TAKEN INTO ACCOUNT WHEN DESIGNING TRUSS SYSTEM. TOTAL LOAD DEFLECTION OF TRUSS SYSTEM NOT TO EXCEED L/360. SCISSOR TRUSSES WITH HORIZONTAL MOVEMENT GREATER THAN 1/2" TO BE ANCHORED WITH TC SIMPSON ANCHORS ON ONE END, OR APPROVED EQUAL.
TRUSS SUPPLIER TO PROVIDE SHOP DRAWINGS, PRODUCT DATA FOR ALL TRUSS COMPONENTS, STRESS DIAGRAMS (WHICH HAVE BEEN SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED TO PRACTICE STRUCTURAL ENGINEERING IN THE STATE THAT THE PROJECT WILL BE CONSTRUCTED) AND A TRUSS LAYOUT PLAN SHOWING ALL TRUSS LOCATIONS, HANGERS, CONNECTORS, SPACING, PITCH, GIRDERS AND CROSS BRACING. FABRICATOR SHALL COORDINATE HIS WORK WITH THE ARCHITECTURAL PLANS AND NOTIFY THE ARCHITECT OF VARIATIONS PRIOR TO FABRICATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND COORDINATING TRUSS DRAWINGS. GENERAL CONTRACTOR SHALL SUBMIT TRUSS DRAWINGS TO THE ARCHITECT FOR REVIEW FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. ALL VARIATIONS MUST BE BROUGHT TO THE ATTENTION AND APPROVED BY THE ARCHITECT.
B) MINIMUM LOADS REQUIREMENTS (TRUSSES, ROOF RAFTERS, & CEILING JOISTS):

TOP CHORD OR ROOF RAFTER:	20 LB. PER SQ FT. SNOW (LIVE) LOAD DEAD LOAD-USE ACTUAL DEAD LOAD (MUST INCLUDE 2 LAYERS OF ROOFING MEMBRANE)
BOTTOM CHORD OR CEILING JOISTS:	20 LB. PER SQ. FT. LIVE LOAD WHEN THERE IS A POSSIBILITY OF ATTIC STORAGE. ATTIC STORAGE SHALL BE ADDRESSED WHEN A 42" HIGH, 24" WIDE RECTANGLE CAN BE PLACED PERPENDICULAR TO THE RAFTER/CEILING JOISTS OR TRUSSES. 10LB PER SQ. FT. LIVE LOAD WHERE THERE IS NO ATTIC STORAGE. DEAD LOAD-USE ACTUAL DEAD LOAD
BOTTOM CHORD OF ATTIC TRUSSES:	40 LB. PER SQ FT. LIVE LOAD

TRUSS SUPPLIER TO PROVIDE SHOP DRAWINGS, PRODUCT DATA FOR ALL TRUSS COMPONENTS, STRESS DIAGRAMS (WHICH HAVE BEEN SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED TO PRACTICE STRUCTURAL ENGINEERING IN THE STATE THAT THE PROJECT WILL BE CONSTRUCTED) AND A TRUSS LAYOUT PLAN SHOWING ALL TRUSS LOCATIONS, HANGERS, CONNECTORS, SPACING, PITCH, GIRDERS AND CROSS BRACING. FABRICATOR SHALL COORDINATE HIS WORK WITH THE ARCHITECTURAL PLANS AND NOTIFY THE ARCHITECT OF VARIATIONS PRIOR TO FABRICATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND COORDINATING TRUSS DRAWINGS. GENERAL CONTRACTOR SHALL SUBMIT TRUSS DRAWINGS TO THE ARCHITECT FOR REVIEW FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. ALL VARIATIONS MUST BE BROUGHT TO THE ATTENTION AND APPROVED BY THE ARCHITECT.

NOTE: THE LIVE LOAD DESIGN ON THE BOTTOM CHORD OF A TRUSS SHALL NOT BE REQUIRED IF ALL OF THE FOLLOWING CONDITIONS ARE ADHERED TO:
A. ATTICS WITH DRYWALL CEILINGS BELOW THAT ARE ACCESSED ONLY BY A 22" x30" SCUTTLE OPENING WITHOUT A PULL-DOWN STAIRWAY.
B. WARNING SIGNS ATTACHED TO THE TRUSSES ON EACH SIDE OF THE SCUTTLE OPENING AT LEAST 36" ABOVE THE BOTTOM CHORD AND WITHIN 18" OF THE EDGE OF THE OPENING. THE SIGNS SHALL BE CONSTRUCTED OF METAL OR OTHER APPROVED DURABLE MATERIALS SUITABLE FOR THE LOCATION AND BE A MINIMUM OF 40 SQ. INCHES IN AREA WITH 3/4" MINIMUM HIGH LETTERS ON A CONTRASTING BACKGROUND THAT READS "WARNING TRUSSES NOT DESIGNED FOR ATTIC STORAGE".
C. ATTIC AREAS OVER GARAGE AREAS WITH DRYWALL CEILINGS SHALL ALSO BE PROVIDED WITH A HORIZONTAL RAILING ATTACHED TO THE TRUSSES ON EACH SIDE OF THE SCUTTLE OPENING AT LEAST 24" AND NOT MORE THAN 36" ABOVE THE BOTTOM CHORD. THE RAILING IS INTENDED TO BE AN OBSTRUCTION TO EASY ACCESS FOR STORAGE AND SHALL BE CONSTRUCTED OF EITHER 1x4'S, 2x4'S OR 3/8"x6" PLYWOOD. IT MAY BE SHOP OR FIELD APPLIED.

6.29 WHERE APPLICABLE (SEE FOUNDATION PLAN)
I-JOIST FLOOR SYSTEM: PRI (PERFORMANCE RATED I-JOIST) W/ APA EWS TRADEMARK. SEE DRAWINGS FOR SIZE AND LOCATION. USE 40#LL AND 10#DL WITH L/480 TOTAL LOAD. AT TILE & MARBLE FLOORS USE 22#DL AND L/600. COMPLY WITH MANUFACTURERS DETAILS INCLUDING BUT NOT LIMITED TO BEARING, BLOCKING, RIM BOARDS, BRACING AND METAL HANGERS ETC. GLUE & NAIL ALL MULTIPLE PLY BEAMS AND HEADERS MIN. 2 ROWS 12" O.C. AND PER MANUFACTURERS RECOMMENDATION. USE SCREW SHANK NAILS. DO NOT USE RING SHANK NAILS. GENERAL CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AT 1/4"=1'-0" FOR ARCHITECTS REVIEW FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS BEFORE ORDERING. GENERAL CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING SHOP DRAWING. ALL VARIATIONS MUST BE BROUGHT TO THE ATTENTION OF AND APPROVED BY THE ARCHITECT. ARCHITECT DOES NOT TAKE RESPONSIBILITY FOR I-JOIST SHOP DRAWING.

DIVISION 7 - THERMAL AND MOISTURE

7.1 DRAINAGE SYSTEM: AN APPROVED FILTER MEMBRANE SHALL BE PLACED OVER THE TOP OF THE JOINTS/PIPE PERFORATIONS. THE TILE/PIPE SHALL BE PLACED ON 2" MINIMUM GRAVEL OR CRUSHED STONE AND HAVE 6" MINIMUM COVER.

7.2 GROUNDWATER: AN EVALUATION OF THE SOIL FOR THE PRESENCE OR ABSENCE OF GROUND WATER IS REQUIRED PRIOR TO THE POURING OF CONCRETE.
A. NO GROUND WATER PRESENT: PROVIDE DRAIN TILE. PERFORATED PIPE, OR OTHER APPROVED FOUNDATION DRAINAGE SYSTEMS AROUND PERIMETER OF THE OUTSIDE OF THE FOUNDATION OR INSIDE THE FOUNDATION. DRAIN DISCHARGE SHALL BE BY GRAVITY TO DAYLIGHT OR BE CONNECTED TO A BASEMENT FLOOR SUMP. DAMPPROOFING: WALLS SHALL BE DAMPPROOFED WITH A BITUMINOUS MATERIAL, 3 LB. PER SQ. YD. OF ACRYLIC MODIFIED CEMENT, 1/8" COAT OF SURFACE BONDING MORTAR, OR BY ANY OF THE MATERIALS PERMITTED FOR WALL WATERPROOFING.
B. GROUNDWATER PRESENT: PROVIDE DRAIN TILE INSIDE AND OUTSIDE OF FOUNDATION AND WATERPROOF WITH AN APPROVED "WATERPROOFING" SYSTEM. JOINTS TO BE LAPPED AND SEALED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL JOINTS IN WALLS AND FLOORS TO BE WATER TIGHT.
WATERPROOFING: FOUNDATION TO BE WATERPROOFED WITH TWO PLY HOT-MOPPED FELTS, 6 MIL PVC, 40 MIL POLYMER MODIFIED ASPHALT, OR 6 MIL POLYETHYLENE. JOINTS TO BE LAPPED AND SEALED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. WATERPROOFING TO BE APPLIED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE.

7.3 ROOFING: CLASS A,B, OR C ROOFING SHALL BE REQUIRED WHERE THE EDGE OF THE ROOF IS LESS THAN 3' TO THE PROPERTY LINE

7.4 ASPHALT SHINGLES SHALL NOT BE INSTALLED ON ROOF SLOPES BELOW 2:12 OR AS STATED PER MANUFACTURER.

7.5 UNDERLAYMENT: TO BE A MINIMUM OF TYPE 1 PER ASTM D226-06 OR TYPE 1 PER ASTM D4869-05e01 (TYPE 1 IS COMMONLY CALLED NO. 15 ASPHALT FELT).
FOR ASPHALT SHINGLES:
SLOPES OF 2:12 TO LESS THAN 4:12 SHALL BE PROTECTED WITH TWO LAYERS OF UNDERLAYMENT. APPLY A 19" STRIP OF UNDERLAYMENT PARALLEL WITH AND STARTING AT THE EAVES, FASTENED SUFFICIENTLY TO HOLD INTO PLACE. STARTING AT THE EAVE, APPLY 36" WIDE SHEETS OF UNDERLAYMENT.
SUCCESSIVE 36" WIDE SHEETS OF UNDERLAYMENT SHALL OVERLAP THE PREVIOUS 36" WIDE SHEET BY 19". ALL UNDERLAYMENT SHALL BE FASTENED SUFFICIENTLY TO HOLD INTO PLACE.

SLOPES EQUALING OR EXCEEDING 4:12 SHALL BE PROTECTED WITH ONE LAYER OF UNDERLAYMENT. UNDERLAYMENT SHALL BE APPLIED SHINGLE FASHION, PARALLEL TO AND STARTING FROM THE EAVE AND LAPPED 2", FASTENED SUFFICIENTLY TO HOLD IN PLACE. END LAPS SHALL BE OFFSET BY 6'.

7.6 FLASHING: PROVIDE CORROSION-RESISTANT METAL FLASHING AT ALL WALL AND ROOF INTERSECTIONS, CHANGES IN ROOF SLOPE OR DIRECTION, AROUND ALL ROOF OPENINGS, INTERSECTIONS WITH CHIMNEYS, INTERSECTION OF EXTERIOR WALLS AND PORCHES AND DECKS, ETC. VALLEY FLASHING SHALL BE INSTALLED PER R905.2.8.2.

7.7 BUILT-UP ROOFS: MINIMUM SLOPE OF 1/4:12 ALLOWED WITH APPROVED LOW-SLOPE ROOF COVERING MATERIALS. COAL-TAR BUILT-UP MEMBRANE MAY BE INSTALLED ON 1/8:12 SLOPE. BUILT-UP ROOF COVERING MATERIAL SHALL COMPLY WITH TABLE R905.9.2 OF THE 2018 IRC.

7.8 MINERAL SURFACED ROLL ROOFING SHALL CONFORM TO D3909 OR ASTM D6380, M. IT SHALL NOT BE INSTALLED ON ROOF SLOPES BELOW 1:12.

7.9 ROOF OVERHANGS LOCATED LESS THAN 5' TO THE PROPERTY LINE SHALL BE PROTECTED ON THE UNDERSIDE OF THE PROJECTION WITH 1-HR FIRE RESISTIVE CONSTRUCTION (2 LAYERS OF 5/8" GYPSUM SHEATHING).

7.10 GUTTERING SYSTEM: ALL GUTTERS AND DOWNSPOUTS TO BE SIZED AND LOCATED BY OTHERS, AND INSTALLED PER "SMACNA" RECOMMENDATIONS. ANY DOWNSPOUT LOCATIONS INDICATED ON PLANS OR BUILDING ELEVATIONS TAKE PRECEDENCE. DOWNSPOUTS SHALL DISCHARGE TO "SPLASH BLOCKS" DIRECTED AWAY FROM FOUNDATION, OR TO DRAIN TILE, WHICH IS CONNECTED TO STORM SEWER, OR "DAYLIGHTED".

7.11 ENERGY CONSERVATION: PROJECTS CONSTRUCTED UNDER THE 2015 IRC SHALL COMPLY WITH ONE OF THE FOLLOWING:
1. SECTIONS N1101.14 THROUGH N1104 (PRESCRIPTIVE REQUIREMENTS)
2. SECTION N1105 (PERFORMANCE OPTIONS) AND THE PROVISIONS OF SECTIONS N1101.14 THROUGH N1104 LABELED "MANDATORY".
3. AN ENERGY RATING INDEX (ERI) APPROACH IN SECTION N1106.
UNDER ALL OPTIONS, THE BUILDING MUST COMPLY WITH MANDATORY REQUIREMENTS THAT ARE FOUND IN SECTIONS N1101.3, N1102.4, N1102.5, N1103.1, N1103.1.2, N1103.3.2, N1103.3.3, N1103.3.5, N1103.6, N1103.7, N1103.8, N1103.9, N1104.

CERTIFICATE: A MANDATORY PERMANENT CERTIFICATE SHALL BE POSTED IN AN APPROVED LOCATION INSIDE THE BUILDING AND SHALL LIST THE PREDOMINANT R-VALUES OF INSTALLED INSULATION IN CEILING/ROOF ASSEMBLIES, WALLS, FOUNDATIONS, (SLAB, WALLS, CRAWL SPACE WALLS AND OR FLOORS, AND DUCTS OUTSIDE CONDITIONED SPACES, U-FACTORS AND SOLAR HEAT GAIN COEFFICIENT (SHGC) OF FENESTRATION AND THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TEST. SEE 2015 IRC SECTION N1101.14.

THERMAL REQUIREMENTS: BASED ON CHAPTER 11 OF THE 2015 IRC. MINIMUM "R" VALUES OBTAINED BY INSULATION MATERIAL USED ONLY, NOT THE TOTAL SYSTEM (PROVIDE CERTIFICATE PER 2015 IRC SECTION N1101.14) CLIMATIC ZONE 4A

A. ROOF/CEILING WITH ATTIC:	MIN. R-49 - EXCEPTION: R-38 ALLOWED WHEN 100% OF THE INSULATION CAN REMAIN UNCOMPRESSED.
B. ROOF/CEILING WITHOUT ATTIC:	MIN. R-30 - FOR UP TO 500 SQ. FT. OR 20% OF THE CEILING AREA, WHICHEVER IS LESS.
C. FRAME WALL AND BAND JOINTS:	MIN. R-20 OR R-13 + R-5: FIRST VALUE IS CAVITY INSULATION AND SECOND VALUE IS CAVITY INSULATION + CONTINUOUS INSULATION.
D. FLOOR OVER UNHEATED SPACE:	MIN. R-19
E. CONCRETE/MASONRY BASEMENT FOUNDATION (50% OR MORE BELOW GRADE):	MIN. R-10 CONTINUOUS INSULATION ON THE EXTERIOR OR INTERIOR OF THE BASEMENT WALL -OR- R-13 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL
F. ABOVE GRADE CONCRETE OR MASONRY WALLS (MASS WALLS):	MIN. R-8 CONTINUOUS INSULATION - OR- R-13 CAVITY INSULATION AT THE INTERIOR OF THE MASS WALL
G. CRAWL SPACE WALLS:	MIN. R-10 CONTINUOUS INSULATION ON THE EXTERIOR OR INTERIOR OF THE CRAWL SPACE WALL -OR- R-13 CAVITY INSULATION AT THE INTERIOR OF THE CRAWL SPACE WALL.
H. SLAB-ON-GRADE FLOORS:	MIN. R-10 INSULATION -OR- MIN. R-15 INSULATION IN HEATED SLAB. 24" DEEP OR DEPTH OF FOOTING
I. MAXIMUM FENESTRATION U-FACTOR:	0.35
J. MAXIMUM GLAZED FENESTRATION SHGC:	0.40
K. MAXIMUM SKYLIGHT U-FACTOR:	0.55

7.12 CAULKING AND SEALANTS: EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, BETWEEN WALL AND PENETRATIONS FOR UTILITY SERVICE THROUGH WALLS, FLOORS AND ROOF AND ALL OTHER OPENINGS IN THE EXTERIOR ENVELOPE SHALL BE SEALED IN AN APPROVED MANNER. WEATHER STRIPPING IS REQUIRED ON ALL EXTERIOR WINDOWS AND DOORS. CORROSION RESISTANT FLASHING IS REQUIRED AT THE TOP AND SIDES OF ALL EXTERIOR DOORS AND WINDOWS AND AT THE INTERSECTION OF ALL MASONRY AND FRAME CONSTRUCTION.

LIGHT AND VENTILATION

7.13 GLASS AREA IN HABITABLE AND OCCUPIABLE ROOMS SHALL NOT BE LESS THAN 8% OF FLOOR AREA SERVED. ONE-HALF OF THIS AREA MUST BE AVAILABLE FOR UNOBSTRUCTED VENTILATION WITH SCREENS INCLUDED.

7.14 UNFINISHED BASEMENTS AND UTILITY ROOMS REQUIRE VENTILATION IN THE AMOUNT OF .05 CFM/SQ.FT. OF AREA. NATURAL VENTILATION (NET OPERABLE AREA) MAY BE SUBSTITUTED AT THE RATIO OF 1% OF THE FLOOR AREA SERVED.

7.15 ATTIC VENTILATION (NET FREE) AREA IS TO BE AT LEAST 1/150 OF THE AREAS SERVED. TWO REMOTE VENTS REQUIRED FOR EACH (MINIMUM).
EXCEPTION: REQUIRED VENTILATION AREA MAY BE REDUCED TO 1/300 WHERE A VAPOR RETARDER HAVING A TRANSMISSION RATE NOT EXCEEDING 1 PERM IS PROVIDED ON THE CONDITIONED SIDE OF THE INSULATION, OR IF THE GABLE OR RIDGE VENTS ARE LOCATED IN THE UPPER 1/3 OF THE ATTIC SPACE AND PROVIDE 50%-80% OF THE REQUIRED VENT AREA WITH THE BALANCE OF THE REQUIRED VENT AREA SUPPLIED BY EAVE OR CORNICE VENTS.

7.16 VAPOR RETARDER: IN ALL FRAMED WALLS, FLOORS, AND ROOF/CEILINGS COMPRISING ELEMENTS OF THE BUILDING THERMAL ENVELOPE, A VAPOR RETARDER SHALL BE INSTALLED ON THE WARM-IN WINTER SIDE OF THE INSULATION.
EXCEPTION:
A VAPOR RETARDER SHALL NOT BE INSTALLED UNDER WATER-RESISTANT GYPSUM BACKER BOARD IN SHOWER OR BATHTUB COMPARTMENTS.

7.17 WEATHER RESISTANT SHEATHING PAPER (ASPHALT SATURATED FELT 14# PER SQUARE OTHERWISE KNOWN AS TYPE 1 FELT, TYVEK, TYPAR OR OTHER APPROVED WEATHER RESISTANT MATERIAL) SHALL BE INSTALLED UNDER ALL SIDING AND BRICK/STONE VENEER LISTED IN TABLE R703.4

DIVISION 8 - WINDOWS AND DOORS

8.1 WINDOWS: ALL BASEMENTS, HABITABLE ATTICS, AND EACH BEDROOM MUST HAVE ONE WINDOW FOR EMERGENCY ESCAPE MEETING THE FOLLOWING MINIMUMS:

MAXIMUM HEIGHT TO BOTTOM OF CLEAR OPENING:	44"
MINIMUM CLEAR OPENING WIDTH:	20"
MINIMUM NET CLEAR OPENING HEIGHT:	24"
MINIMUM NET CLEAR OPENING AREA:	5.7 SQ. FT. (THE NET CLEAR OPENING DIMENSION

SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE WINDOW FROM THE INSIDE.)
EXCEPTION: GRADE FLOOR WINDOWS ARE PERMITTED TO HAVE A MINIMUM NET CLEAR OPENING OF 5.0 SQ. FT.

8.2 SKYLIGHTS EACH LIGHT OR LAYER SHALL CONSIST OF ANY ONE OF THE FOLLOWING MATERIALS: AND HAVE A MAX. U-FACTOR OF 0.60
A) LAMINATED GLASS WITH 0.015" POLYVINYL BUTYRAL INTERLAYER FOR GLASS PANES 16 SQ. FT. OR LESS IN AREA AND LOCATED SUCH THAT THE HIGHEST POINT OF GLASS IS NOT MORE THAN 12' ABOVE A WALKING SURFACE, OR
B) LAMINATED GLASS WITH 0.030" POLYVINYL BUTYRAL INTERLAYER FOR GLASS PANES GREATER THAN 16 SQ. FT. IN AREA OR FOR SMALLER PANES WHEN LOCATED MORE THAN 12' ABOVE A WALKING SURFACE, OR
C) WIRED GLASS, OR
D) APPROVED RIGID PLASTIC, OR
E) HEAT STRENGTHENED GLASS, OR
F) FULLY TEMPERED GLASS
SKYLIGHTS INSTALLED IN ROOFS WITH SLOPES OF LESS THAN 3:12 MUST BE MOUNTED ON CURBS AT LEAST 4" ABOVE THE ROOF SURFACE.

8.3 BASEMENT WINDOWS: WINDOWS FOR NATURAL VENTILATION OF UNFINISHED BASEMENTS MAY BE SINGLE-GLAZED.

8.4 ALL DOORS, EXCEPT OVERHEAD GARAGE DOORS, SHALL HAVE A MAXIMUM U-FACTOR OF 0.40. THE MAXIMUM U-FACTOR FOR WINDOWS SHALL BE 0.40.

8.5 SAFETY GLAZING: REQUIRED AT:
A. GLAZING IN ALL DOORS, HAND OR GUARDRAILS, SHOWER/BATHTUB ENCLOSURES.
B. GLAZING IN ANY PORTION OF A WALL ENCLOSING BATHTUBS, SHOWERS, HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, SPAS, INDOOR OR OUTDOOR POOLS WHICH IS LOCATED 60" OR LESS, MEASURED HORIZONTALLY, FROM THE WATER'S EDGE AND LESS THAN 60" VERTICALLY ABOVE A STANDING SURFACE.
C. ANY GLAZING MATERIAL ADJACENT TO A DOOR IF THE NEAREST VERTICAL EDGE OF THE GLAZING MATERIAL IN WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF A DOOR IN A CLOSED POSITION AND IF THE BOTTOM EDGE OF THE GLAZING MATERIAL IS LESS THAN 60" ABOVE THE FLOOR.
EXCEPTIONS:
1.) DECORATIVE GLASS
2.) WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING
3.) GLAZING IN WALLS ON THE LATCH SIDE OF AND PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION
4.) GLAZING ADJACENT TO A DOOR SERVING A CLOSET OR STORAGE AREA 3' OR LESS IN DEPTH
5.) GLAZING ADJACENT TO THE FIXED PANEL OF PATIO DOORS.
D. GLAZING IN FIXED OR OPERABLE PANELS MEETING ALL OF THE FOLLOWING
1) INDIVIDUAL PANE GREATER THAN 9 SQ. FT.
2) BOTTOM EDGE LESS THAN 18" ABOVE THE FLOOR
3) TOP EDGE MORE THAN 36" ABOVE FLOOR
4) WALKING SURFACE WITHIN 36" HORIZONTALLY
E. GLAZING ADJACENT TO STAIRWAYS, LANDINGS, AND RAMPS WITHIN 36" HORIZONTALLY OF THE WALKING SURFACE AND LESS THAN 60" VERTICALLY ABOVE THE PANE OF THE WALKING SURFACE.
AND
GLAZING ADJACENT TO STAIRWAYS WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE TREAD NOSING.

8.6 EXCEPTION: THE GLAZING IS PROTECTED BY A GUARDRAIL OR HANDRAIL, INCLUDING BALUSTERS AND INFILL PANELS COMPLYING WITH THE PROVISIONS OF SECTIONS R301.5 AND R312 AND THE GLAZING IS LOCATED MORE THAN 18" HORIZONTALLY FROM THIS GUARD OR HANDRAIL.

8.7 DOOR LOCKS: WITH THUMB TURNS ON INSIDE ARE PERMITTED. ALL MEANS OF EGRESS DOORS SHALL BE READILY OPERABLE FROM THE SIDE WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. INSIDE KEY OPERATION IS PERMITTED PROVIDED THE KEY CANNOT BE REMOVED FROM THE LOCK WHEN LOCKED FROM THE INSIDE.

DIVISION 9 - FINISHES

9.1 DRYWALL DRYWALL INSTALLATION MUST BE IN ACCORDANCE WITH THE GYPSUM ASSOCIATION RECOMMENDED PRACTICES FOR THICKNESS, FASTENING AND TAPING ON CORRECT STUD SPACING. FIRE RATED DRYWALL ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH APPROVED TEST ASSEMBLIES. DRYWALL TO BE FASTENED IN ACCORDANCE WITH TABLE R702.3.5. PROVIDE WATER RESISTANT GYPSUM BOARD IN BATH TUB AND SHOWER AREAS.

9.2 WATER RESISTANT GYPSUM BOARD BACKER BOARD USED AS A BASE FOR TILES OR WALL PANELS IN BATHTUB AND SHOWER AREAS MUST NOT BE APPLIED OVER A VAPOR BARRIER. WATER RESISTANT GYPSUM BACKING BOARD SHALL BE PERMITTED TO BE USED ON CEILINGS WHERE FRAMING SPACING DOES NOT EXCEED 12" O.C. FOR 1/2" THICK OR 16 INCHES FOR 5/8" THICK GYPSUM BOARD.

9.3 INTERIOR FINISH MATERIALS SHALL NOT HAVE A FLAME SPREAD RATING EXCEEDING 200. BATT INSULATION INCLUDING THE VAPOR RETARDER, SHALL NOT BE LEFT EXPOSED IN BASEMENTS UNLESS THE MATERIAL HAS A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPMENT RATING OF 450 OR LESS. FOAM PLASTIC INSULATION SHALL BE SEPARATED FROM THE INTERIOR OF THE BUILDING BY HALF INCH GYPSUM WALLBOARD.

DIVISION 13 - SPECIALTIES

13.1 PREFAB FIREPLACE UNIT INSTALLATION: NOTE THAT FRAMING CARPENTERS AND GENERAL CONTRACTORS SHALL CAREFULLY REVIEW PRE-FAB FIREPLACE UNIT INSTALLATION INSTRUCTIONS BEFORE FRAMING ENCLOSURE FOR FIREPLACE, AND BEFORE INSTALLING UNIT. COMPLY CAREFULLY WITH ALL MANUFACTURERS INSTRUCTIONS, LOCAL FIRE DEPARTMENT REQUIREMENTS AND CLEARANCES. FIREBLOCK AROUND ALL CHIMNEYS WITH NON-COMBUSTIBLE FIREBLOCKS AT ALL CEILING AND FLOOR LEVELS. FACTORY BUILT CHIMNEYS AND FIREPLACES SHALL BE FIREBLOCKED IN ACCORDANCE WITH UL 103 AND UL 127. DO NOT ALTER OR MODIFY THE FIREPLACE OR ITS COMPONENTS UNDER ANY CIRCUMSTANCE. ANY MODIFICATION OR ALTERATION OF THE FIREPLACE SYSTEM, INCLUDING, BUT NOT LIMITED TO THE FIREPLACE UNIT, CHIMNEY COMPONENTS AND ACCESSORIES, MAY VOID THE WARRANTY, LISTINGS AND APPROVALS OF THE SYSTEM AND CAN RESULT IN AN UNSAFE AND POTENTIALLY DANGEROUS INSTALLATION. PROVIDE THE UNIT WITH AN EXTERIOR AIR SUPPLY TO ASSURE PROPER FUEL COMBUSTION. COMBUSTION AIR SHALL BE PROVIDED IN ACCORDANCE WITH SECTION G2407. GAS FIREPLACES, GAS LOGS AND GAS ROOM HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH CHAPTER 24 OF THE 2018 IRC.

DIVISION 15 - MECHANICAL

PLUMBING - (P) PLUMBING

P15.1 WORK SHALL CONSIST OF ALL SERVICES TYPICALLY KNOWN AS "DESIGN/BUILD" AND SHALL INCLUDE THE FURNISHING OF CONSTRUCTION DOCUMENTS, AS REQUIRED, MATERIALS, LABOR, EQUIPMENT AND TOOLS TO INSTALL A COMPLETE AND OPERABLE SYSTEM OF PLUMBING AND SEWERING. INSTALL PER PART VII OF THE 2018 IRC, 2018 UNIFORM PLUMBING CODE AND ALL LOCAL ORDINANCES.

P15.2 SERVICE LINES SERVING SINGLE FAMILY DWELLINGS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
A. 1" SERVICE LINE - UP TO 3 1/2 BATHS
B. 1 1/4" SERVICE LINE - UP TO 6 BATHS
C. 1 1/2" SERVICE LINE - MORE THAN 6 BATHS
THIS COUNT INCLUDES: 1-KITCHEN SINK WITH DISHWASHER, 1-CLOTHES WASHER SUPPLY AND LAUNDRY SINK, AND 2 (1/2") EXTERIOR CONTINUOUS USE HOSE BIBBS. ROUGH-IN FIXTURES SHALL BE INCLUDED IN THE COUNT.
THE MINIMUM SIZE OF THE WATER SERVICE PIPING IS 1" UP TO THE FIRST BRANCH. PLASTIC WATER SERVICE PIPING SHALL TERMINATE A MINIMUM OF 10'-0" OUTSIDE THE FOUNDATION WALL AND METALLIC PIPING BROUGHT INTO THE BUILDING UP TO THE OUTLET OF THE HOUSE VALVE OR THE PRV OUTLET, WHICHEVER IS FURTHER FROM THE POINT OF ENTRANCE TO THE BUILDING. MINIMUM WATER MAIN PRESSURE MUST BE CONSIDERED WHEN SIZING THE WATER SERVICE PIPING.

P15.3 LEAD FREE SOLDER IS REQUIRED ON ALL COPPER WATER SUPPLY PIPING

P15.4 BASEMENT AREA WAY DRAINS, FOUNDATION DRAINAGE SYSTEMS, AND DOWNSPOUTS MAY NOT BE CONNECTED TO A SANITARY SEWER. WATER SERVICE PIPE AND THE BUILDING SEWER ARE TO BE A MINIMUM 10'0" APART, HORIZONTALLY.

P15.5 HOSE BIBBS ARE TO BE FREEZE-PROOF OR SHALL INCLUDE, A MAIN SHUT OFF VALVE (WITH DRAIN) IN THE BASEMENT SPACE.

P15.6 SHOWER AND BATH TUB ENCLOSURES SHALL HAVE WALLS AND FLOORS CONSTRUCTED OF SMOOTH, NON-CORROSIVE, NONABSORBENT AND WATERPROOF MATERIALS. INSTALLATION AT WALLS SHALL NOT BE LESS THAN 6'-0" ABOVE THE ROOM FLOOR LEVEL.

P15.7 ALL BASEMENTS SHALL BE EQUIPPED WITH A FLOOR DRAIN WITHIN 15' OF HEATING/COOLING SYSTEM AND WATER HEATERS. (PER SECT. P2701- 2018 IRC.)

P15.8 WINDOW AREAWAY DRAINS LESS THAN 10 SQ. FT. IN AREA SHALL BE SERVED BY A 2" PIPE DRAINED TO DAYLIGHT OR A SUMP PIT SERVED BY AN APPROVED PUMP INSTALLATION. WINDOW AREAWAY DRAINS 10 SQ. FT. OR GREATER BUT LESS THAN 100 SQ. FT. IN AREA SHALL BE SERVED BY A 3" PIPE DRAINED IN THE SAME MANNER. AREAWAYS GREATER THAN 100 SQ. FT. REQUIRE THE DRAIN TO BE SIZED IN ACCORDANCE WITH TABLE 11-2 OF THE PLUMBING CODE. THE PRESENCE OF A COVER OVER THE AREAWAY DOES NOT NEGATE THE NEED FOR A DRAIN.

P15.9 AN EXPANSION TANK IS REQUIRED FOR WATER HEATERS MORE THAN 30 GALLONS.

P15.10 CSST PIPING ELECTRICAL BONDING JUMPER MUST BE A MINIMUM OF 6 AWG OF COPPER WIRE OR EQUIVALENT AND SHALL NOT EXCEED 75' IN LENGTH.

P15.11 DRAIN WASTE VENT SYSTEM SHALL HAVE A HEAD PRESSURE WATER TEST WITH EACH SECTION FILLED WITH WATER TO A POINT NOT LESS THAN 5 FEET ABOVE THE HIGHEST FITTING CONNECTION IN THAT SECTION OR THE HIGHEST POINT IN THE COMPLETED SECTION. WATER SHALL BE HELD IN THE SECTION UNDER TEST FOR A PERIOD OF 15 MINUTES TO PROVE LEAK FREE BY VISUAL INSPECTION.

P15.12 PIPING, OTHER THAN CAST IRON OR GALVANIZED STEEL, INSTALLED THROUGH BORED HOLES OR NOTCHES, MUST MAINTAIN A MINIMUM CLEARANCE OF 1 1/4" FROM THE EDGE OF THE FRAMING MEMBERS AND PROTECTED BY 16 GA. MIN. SHIELD PLATES, EXTENDING NOT LESS THAN 2" ABOVE SOLE PLATES AND BELOW TOP PLATES.

P15.13 DISHWASHER WASTE DISCHARGE PIPE/HOSE SHALL BE SECURELY ATTACHED TO THE BOTTOM SIDE OF THE COUNTERTOP BEFORE CONNECTING TO THE HEAD OF THE FOOD-WASTE DISPOSER OR TO A WYE FITTING IN THE SINK TAILPIECE TO REDUCE THE POTENTIAL FOR DISHWASHER WASTE MATERIAL FROM POTENTIAL BACKFLOW IN THE DISHWASHER.

P15.14 WATER HEATER RELIEF VALVE DISCHARGE PIPE MUST BE HELD ABOVE FLOOR DRAIN A MIN. OF 2x DISCHARGE PIPE DIAMETER SIZE, WITH A MAXIMUM OF 6" ABOVE.

P15.15 PURPLE PRIMER IS NOT REQUIRED WHEN THE SOLVENT CEMENT USED IS THIRD-PARTY CERTIFIED AS CONFORMING TO ASTM D2564 OR THE SOLVENT CEMENT IS USED ONLY FOR JOINING PVC DWV PIPE FITTINGS IN NON-PRESSURE APPLICATIONS IN SIZES UP TO AND INCLUDING 4" IN DIAMETER.

H.V.A.C. (M) MECHANICAL

M15.1 WORK SHALL CONSIST OF ALL SERVICES TYPICALLY KNOWN AS DESIGN/BUILD, AND SHALL INCLUDE THE FURNISHING OF CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND ALL MATERIALS, LABOR, EQUIPMENT, AND TOOLS REQUIRED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM OF HEATING, VENTILATING, AND AIR CONDITIONING. ALL "HVAC" EQUIPMENT AND DUCTWORK TO COMPLY WITH PART V OF THE 2015 INTERNATIONAL RESIDENTIAL CODE, ALL LOCAL ORDINANCES, AND TO BE INSTALLED PER SMACNA RECOMMENDATIONS. HVAC PLANS SHALL INCLUDE FURNACE LOCATION, TYPE (FAN ASSISTED INDUCED DRAFT OR NATURAL DRAFT), FLUE SIZE, DUCT LAYOUT AND DIFFUSER LOCATIONS. A SECTION DETAIL SHALL BE PROVIDED SHOWING ALL GAS APPLIANCES, FLUE SIZES, CONNECTORS, LENGTHS, HEIGHTS, AND CLEARANCE DIMENSIONS. UNDERGROUND DUCT SYSTEMS SHALL BE CONSTRUCTED OF APPROVED CONCRETE, CLAY, METAL, OR PLASTIC. UNDERGROUND METALLIC DUCTS WITHOUT APPROVED PROTECTION FROM CORROSION SHALL BE COMPLETELY ENCASED IN 2" MINIMUM OF CONCRETE.

M15.2 SUPPLY DUCTS OUTSIDE OF THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED TO A MINIMUM OF R-4.

M15.2 VIBRATION ISOLATORS SHALL BE INSTALLED BETWEEN MECHANICAL EQUIPMENT AND METAL DUCTS AND SHALL BE FABRICATED FROM APPROVED MATERIALS AND SHALL NOT EXCEED 10" IN LENGTH.

M15.3 THERMOSTATS USED FOR HEATING AND COOLING SHALL BE CAPABLE OF BEING SET FROM 55 F. TO 85 F., AND SHALL BE CAPABLE OF OPERATING THE SYSTEMS HEATING AND COOLING SEQUENCES.. (PROGRAMMABLE) AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR HVAC SYSTEM/ZONE.

M15.4 APPROVED VENT SYSTEMS FOR ALL APPLIANCES SHALL BE SIZED, INSTALLED, AND TERMINATED PER MANUFACTURERS INSTALLATION INSTRUCTIONS. ALL OPEN VENT PIPES WHICH EXTEND THROUGH A ROOF SHALL BE TERMINATED AT LEAST 12" ABOVE THE ROOF OR 4" ABOVE THE ANTICIPATED SNOW ACCUMULATION. UNVENTED APPLIANCES THAT REQUIRE AN OPEN WINDOW ARE PROHIBITED

M15.5 FLUES SHALL EXTEND ABOVE THE ROOF THAT THEY PENETRATE A MINIMUM OF 3'-0". FLUE OUTLETS SHALL BE TWO FEET HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10' HORIZONTALLY. PROVIDE 2" MINIMUM CLEARANCE TO COMBUSTIBLES AT ALL GAS FLUES.

THOMAS ALAN GROUP

CHRISTOPHER THOMAS PIKE
MO# 2011033866
EXPIRATION DATE: 12/31/23

No.	Description	Date
1	PERMIT SET	8/1/2022

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GENERAL NOTES

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A1
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GENERAL NOTES (CONT.)

DIVISION 15 -MECHANICAL HVAC (CONT)

M15.6 MECHANICAL: GAS APPLIANCES LOCATED IN SPACES WHERE THE VOLUME IS LESS THAN 50 CUBIC FEET PER 1,000 BTU/HR. INPUT RATING, SHALL HAVE COMBUSTION AND DILUTION AIR PROVIDED IN ACCORDANCE WITH THE FOLLOWING:

USING INSIDE AIR: PROVIDE 1 SQ. IN. OF FREE AREA PER 1000BTU/HR. IN EACH OPENING. OPENINGS SHALL NOT BE LESS THAN 100 SQ. INCHES OF FREE AREA. ONE OPENING SHALL BE PROVIDED WITHIN 12" OF THE CEILING AND ONE WITHIN 12" OF THE FLOOR, NO COMMON DUCTS PERMITTED. COMBUSTION AIR MAY NOT BE OBTAINED FROM BEDROOMS.

USING OUTSIDE AIR: ONE OPENING SHALL BE PROVIDED WITHIN 12" OF THE CEILING WITH A NET FREE AREA OF 1 SQ. IN/3000 BTU/HR. TOTAL INPUT RATING OF ALL APPLIANCES LOCATED IN THE ENCLOSURE.

MECHANICAL CONTRACTOR SHALL CALCULATE, SPECIFY AND COORDINATE WITH GC ALL ADDITIONAL COMBUSTION AIR AS REQUIRED BY THE MECHANICAL CODE AND LOCAL JURISDICTIONS. LOUVERED DOORS SHALL BE PERMITTED BY THE ARCHITECT IF CALLED OUT ON THE PLANS. VERIFY WITH OWNER. IF ADDITIONAL COMBUSTION AIR IS REQUIRED MC SHALL PROVIDE THE FOLLOWING:

M15.7 MINIMUM CLEARANCE FOR COMBUSTIBLES IS 18", UNLESS THE LISTED MANUFACTURER'S INSTALLATION INSTRUCTIONS ALLOW AN ALTERNATE CLEARANCE DIMENSION. 30" OF CLEARANCE IS REQUIRED AT THE FRONT OF THE APPLIANCE FOR SERVICE.

M15.8 EACH GAS APPLIANCE SHALL HAVE AN ACCESSIBLE SHUTOFF VALVE SEPARATE FROM THE APPLIANCE, IN THE SAME ROOM AND WITHIN 6' OF APPLIANCE, AND SHALL BE INSTALLED UPSTREAM FROM GROUND JOINT UNION. A SEDIMENT TRAP IS REQUIRED AT EACH APPLIANCE OR GROUP OF APPLIANCES. GAS PIPING SHALL BE IDENTIFIED AT INTERVALS OF NO MORE THAN 5 FT EXCEPT ON BLACK STEEL PIPE.

M15.9 GAS APPLIANCE PROHIBITED LOCATIONS: IN A BEDROOM, BATHROOM OR A STORAGE CLOSET.

EXCEPTIONS:

A) THE APPLIANCE IS DIRECT VENT UNIT OBTAINING COMBUSTION AIR FROM THE OUTDOORS

B) INSTALLED IN A CLOSET USED SOLELY FOR APPLIANCES, THE CLOSET DOOR IS SOLID SELF-CLOSING AND WEATHERSTRIPPED, AND COMBUSTION AIR IS PROVIDED FROM OUTDOORS.

M15.10 CLOTHES DRYER EXHAUST SHALL BE INDEPENDENT OF ALL OTHER SYSTEMS, AND EXHAUST TO THE EXTERIOR THROUGH SMOOTH, 4" MIN. DIAMETER DUCT. THE MAXIMUM DEVELOPED LENGTH OF THE DUCT SHALL BE 35' (OBTAINED BY ADDING 5' FOR EACH 90 DEGREE BEND AND 2.5' FOR EACH 45 DEGREE BEND TO THE LENGTH OF THE STRAIGHT RUNS).

EXCEPTION: THE MAXIMUM DEVELOPED LENGTH MAY BE EXTENDED TO 55' IF CLEARLY LABELED CLEANOUTS ARE PROVIDED WITHIN 12' OF THE 2ND ELBOW, AT EVERY ELBOW THEREAFTER, AND AT LEAST 15' OF DEVELOPED LENGTH THEREAFTER.

PERMANENT SIGNAGE MUST IDENTIFY EACH CLEANOUT LOCATION AND BE PROVIDED AT THE DRYER EXHAUST CONNECTION TO INFORM OCCUPANTS OF THE PERIODIC CLEANING AND INSPECTION REQUIREMENTS.

M15.11 RESIDENTIAL BATHROOMS AND TOILET ROOMS SHALL EXHAUST 50CFM MINIMUM TO THE EXTERIOR. IT IS PERMISSIBLE TO DISCHARGE EXHAUST TO AN ATTIC GABLE VENT OR VENTILATED SOFFIT

EXCEPTION:

HALF-BATHS WITHOUT A TUB OR SHOWER MAY SUBSTITUTE A MINIMUM 3 SQUARE FT. GLAZING AREA WINDOW, ONE-HALF OF WHICH MUST BE OPENABLE.

M15.12 KITCHEN EXHAUST: KITCHEN RANGES SHALL HAVE A LISTED HOOD OR DOWNDRAFT EXHAUSTED TO THE EXTERIOR WITH A 100CFM FAN (INTERMITTENT USE), OR A 20 CFM FAN (CONTINUOUS USE). ALTERNATELY A LISTED AND LABELED RECIRCULATING DUCTLESS RANGE HOOD INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS (IF EQUIPPED WITH THE FILTRATION SYSTEM FOR GREASE REMOVING AND ODOR CONTROL) IS NOT REQUIRED TO DISCHARGE OUTDOORS.

MAKEUP AIR SHALL BE PROVIDED DURING THE OPERATION OF KITCHEN EXHAUST SYSTEMS IN EXCESS OF 400 CFM EXHAUST FLOW. THE AMOUNT OF MAKEUP AIR SHALL BE APPROXIMATELY EQUAL TO THE AMOUNT OF EXHAUST AIR. MAKEUP AIR SHALL BE PROVIDED BY GRAVITY OR MECHANICAL MEANS OR BOTH. THE EXHAUST AND MAKEUP AIR SYSTEMS SHALL BE AUTOMATICALLY CONTROLLED TO ENSURE MAKEUP AIR IS PROVIDED WHENEVER THE EXHAUST SYSTEM IS IN OPERATION.

M15.13 HOUSEHOLD COOKING APPLIANCES SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. AN ANTI-TIP DEVICE SHALL BE INSTALLED IF REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

DIVISION 16 - ELECTRICAL

16.1 WORK SHALL CONSIST OF ALL SERVICES TYPICALLY KNOWN AS "DESIGN/BUILD", AND SHALL INCLUDE THE FURNISHINGS OF CONSTRUCTION DOCUMENTS AS REQUIRED, MATERIALS, LABOR, EQUIPMENT AND TOOLS, TO PROVIDE A COMPLETE AND OPERABLE SYSTEM OF ELECTRIC, POWER, AND LIGHTING.

16.2 ALL WORK TO BE INSTALLED IN ACCORDANCE WITH THE 2017 NATIONAL ELECTRIC CODE (NEC) AND WITH ALL LOCAL CODES, RULES AND ORDINANCES. ALL MATERIALS TO BE USED SHALL BE APPROVED BY (U.L.) UNDERWRITERS LABORATORIES.

16.3 ALL WIRING FROM PANEL TO HOUSE SHALL BE COPPER.

16.4 RECESSED LIGHT FIXTURES TO BE TYPE "I.C." AT INSULATED CEILING/ATTIC SPACES PER 2018 IRC N1102.4.5

16.5 ELECTRIC PANELS TO BE CIRCUIT BREAKER TYPE AND SHALL NOT BE INSTALLED IN BATHROOMS OR CLOTHES CLOSETS. LIGHTING IS REQUIRED IN THE VICINITY OF THE ELECTRICAL PANEL. A MINIMUM OF A 36" DEEP AND 30" WIDE CLEARANCE IS REQUIRED IN FRONT OF THE ELECTRICAL PANELS AND MINIMUM 6'-6" HEADROOM IS REQUIRED. COUNTERS AND CABINETS CAN NOT BE INSTALLED UNDER THE ELECTRIC PANEL.

16.6 GROUNDING: RECEPTACLE OUTLETS FOR RANGES AND CLOTHES DRYERS MUST BE A 3-POLE WITH GROUND TYPE. IF THE UNDERGROUND METAL WATERPIPE IS USED AS THE GROUNDING ELECTRODE, THE CONNECTION MUST BE MADE TO THE PIPE WITHIN 5 FEET OF THE POINT OF ENTRANCE TO THE BUILDING. A SUPPLEMENTAL GROUNDING ELECTRODE SHALL BE PROVIDED AS SPECIFIED IN NEC 250-50 OR 250-53.

16.7 SMOKE DETECTORS SHALL BE INTERCONNECTED, AC PRIMARY POWERED, WITH BATTERY BACKUP. INSTALLATION SHALL MEET NFPA-72. LOCATE AS FOLLOWS:

A) ONE AT EACH LEVEL INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS.

B) IN ALL BEDROOMS.

C) IN THE VICINITY OF EACH BEDROOM ENTRANCE. LOCATE BEDROOM HALLWAY DETECTOR UPSTREAM FROM OR NEAR RETURN AIR GRILLE.

D) IN ANY ROOM WITH A VAULTED CEILING WHERE A PERSON WOULD HAVE TO TRAVEL THROUGH THAT ROOM TO EXIT A BEDROOM. ROOMS WITH VAULTED CEILINGS SHALL HAVE SMOKE DETECTORS LOCATED WITHIN 3 FEET MEASURED HORIZONTALLY FROM THE RIDGE. SMOKE DETECTORS LOCATED IN ROOMS WITH COFFERED OR SIMILAR CEILINGS SHALL BE LOCATED AT THE HIGHEST PORTION OF THE CEILING.

16.8 A CARBON MONOXIDE ALARM IS REQUIRED OUTSIDE OF SLEEPING AREAS, IN THE IMMEDIATE VICINITY OF THE SLEEPING AREAS, IF THE DWELLING UNIT CONTAINS A FUEL FIRED APPLIANCE OR HAS AN ATTACHED OR BASEMENT GARAGE. THE CARBON MONOXIDE DETECTOR SHALL COMPLY WITH UL2034-2008

16.9 AT LEAST ONE LIGHTING DEVICE IS REQUIRED IN EACH ATTIC, CRAWLSPACE, BASEMENT, OR UTILITY ROOM THAT IS USED FOR STORAGE OR CONTAINS HEATING, AIR CONDITIONING, OR OTHER EQUIPMENT REQUIRING SERVICING. LOCATE LIGHT SWITCH AT POINT OF ENTRY.

16.10 INTERIOR STAIRWAYS TO BE PROVIDED WITH MINIMUM OF 1 FOOTCANDLE MEASURED AT EVERY TREAD NOSING. INTERIOR STAIRWAYS SHALL HAVE ILLUMINATED LIGHTING CONTROLS AT EACH FLOOR LEVEL.

16.11 EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH ARTIFICIAL LIGHT SOURCE LOCATED AT THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRS PROVIDING ACCESS TO A BASEMENT FROM THE OUTDOOR GRADE LEVEL SHALL BE PROVIDED WITH ARTIFICIAL LIGHT SOURCE AT THE BOTTOM LANDING OF THE STAIRWAY AND SHALL HAVE LIGHTING CONTROLLED BY ONE OF THE FOLLOWING METHODS:

1) CONTROLS INSIDE THE DWELLING OR

2) AUTOMATICALLY, OR

3) CONTINUOUSLY OPERATED.

16.12 GROUND FAULT CIRCUIT INTERRUPTION (GFI) PROTECTION SHALL BE PROVIDED FOR ALL 125 VOLT, SINGLE PHASE, 15 AND 20 AMPERE RECEPTACLES INSTALLED IN THE FOLLOWING LOCATIONS

1) BATHROOMS.

2) GARAGES, UNFINISHED PORTIONS OF ACCESSORY BUILDING AT OR BELOW GRADE LEVEL

EXCEPTION:

A. CEILING MOUNTED RECEPTACLE FOR GARAGE DOOR OPENER.

B. A SINGLE OR A DUPLEX RECEPTACLE FOR THE APPLIANCES LOCATED IN A DEDICATED SPACE FOR NORMAL USE.

3) OUTDOORS (INCLUDING INSIDE SCREEN ENCLOSURES)

4) UNFINISHED BASEMENT AREAS AND CRAWL SPACES EXCEPT FOR LAUNDRY CIRCUIT AND SINGLE RECEPTACLE DEDICATED TO SUMP PUMPS.

5) RECEPTACLES INTENDED TO SERVE KITCHEN COUNTER TOPS (SHALL BE SUPPLIED BY AT LEAST TWO DIFFERENT 20 AMP CIRCUITS). RECEPTACLES MAY NOT BE INSTALLED FACE-UP IN COUNTERS.

6) RECEPTACLES INTENDED TO SERVE WET BAR COUNTER TOP SURFACES LOCATED WITHIN 6'-0" OF THE OUTSIDE EDGE OF THE WET BAR SINK.

7) BALCONIES, DECKS, AND PORCHES.

8) LESS THAN 25'-0" FROM AN AIR CONDITIONING CONDENSING UNIT.

16.13 LIGHTING IN CLOTHES CLOSETS MUST HAVE ENCLOSED LAMPS AND MAINTAIN 12" MINIMUM CLEARANCE FOR INCANDESCENT FIXTURES AND 6" MINIMUM CLEARANCE AT FLUORESCENT AND RECESSED FIXTURES. PENDANT FIXTURES ARE PROHIBITED IN CLOSETS.

16.14 FIXTURES AT BATHTUBS: HANGING FIXTURES, TRACK LIGHTING, AND CEILING FANS SHALL NOT BE INSTALLED WITHIN 3 FEET HORIZONTALLY OF A BATHTUB, MEASURED FROM THE OUTSIDE EDGE OF THE TUB AND 8 FEET VERTICALLY FROM THE TOP OF THE TUB RIM. RECEPTACLES SHALL NOT BE INSTALLED WITHIN A BATHTUB OR SHOWER SPACE.

16.15 ARC-FAULT CIRCUIT-INTERRUPTION PROTECTION SHALL BE PROVIDED FOR ALL CIRCUITS SUPPLYING POWER TO 120 VOLT, 15 AND 20 AMPERE RECEPTACLE OUTLETS INSTALLED IN BEDROOMS, SUNROOMS, KITCHENS, FAMILY ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, RECREATION ROOMS AND SIMILAR ROOMS. IN CASES WHERE THE BRANCH CIRCUITS/OUTLETS LISTED ABOVE ALSO REQUIRE GFCI PROTECTION, THEY MUST BE PROTECTED BY BOTH GFCI AND ARC FAULT PROTECTION.

16.16 INSTALL CARBON MONOXIDE DETECTORS WITHIN 15' OF THE OUTSIDE OF ALL BEDROOM DOORS. CARBON MONOXIDE DETECTORS SHALL COMPLY WITH UL 2034-2008

16.17 INSTALL AT LEAST ONE COMMUNICATION OUTLET WITHIN DWELLING AND CABLED TO THE SERVICE PROVIDER DEMARCATION POINT

16.18 INTERSYSTEM BONDING TERMINAL SHALL BE PROVIDED FOR GROUNDING COMMUNICATION SYSTEMS (CABLE TV & SATELLITE DISHES)

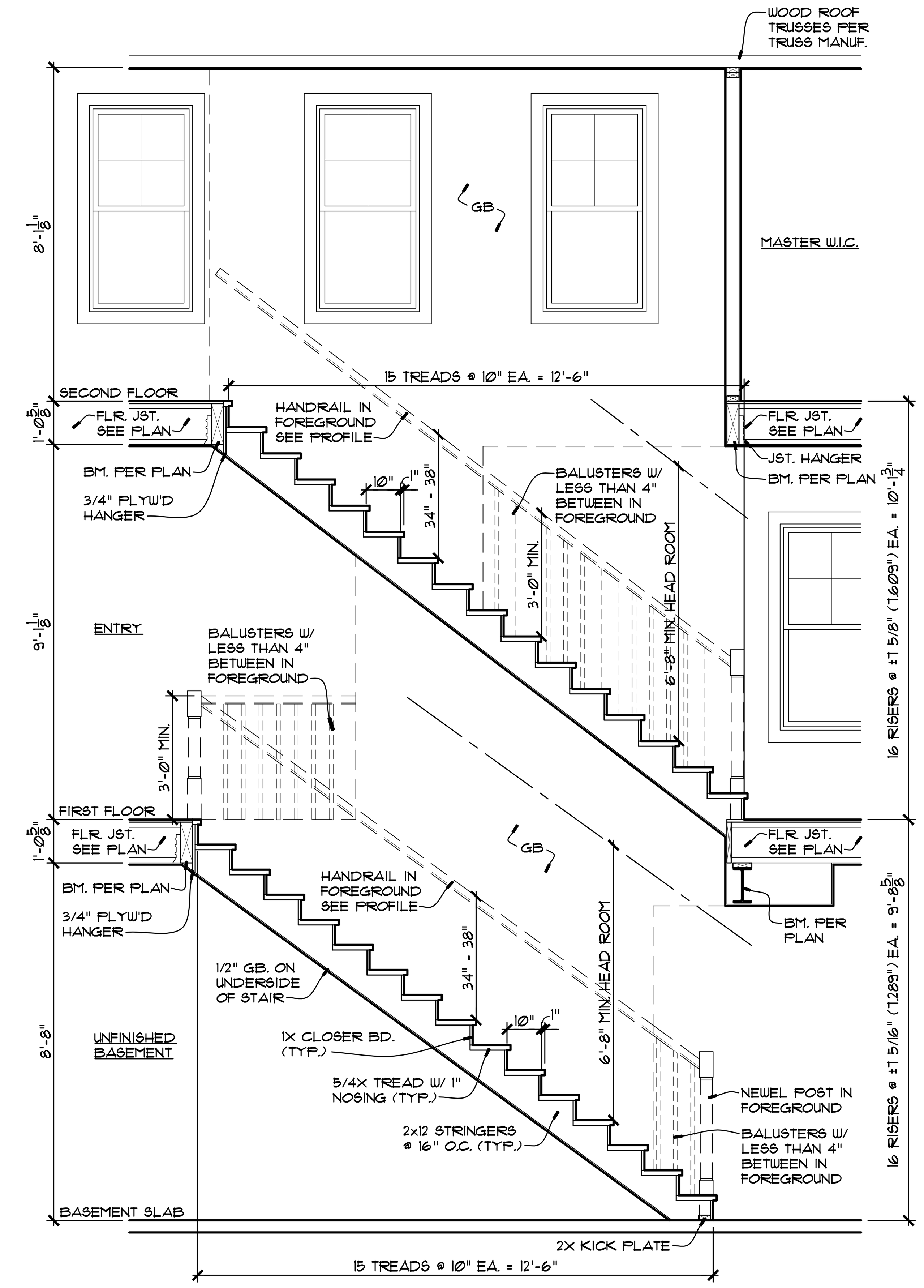
16.17 WHEN PROVIDED BY THE BUILDER, NOT LESS THAN 75% OF SUPPLIED LAMPS IN PERMANENTLY INSTALLED FIXTURES SHALL BE HIGH-EFFICIENCY LAMPS. EXCEPTION: VOLTAGE LIGHTING. PER 2015 IRC N1104.1.

16.18 GARAGE RECEPTACLES MUST BE ON A SEPARATE CIRCUIT THAT DOES NOT SUPPLY RECEPTACLES / OUTLETS OUTSIDE THE GARAGE.

16.19 PROVIDE MINIMUM 1 RECEPTACLE PER CAR SPACE IN A GARAGE.

16.20 KITCHEN AND LAUNDRY ROOM RECEPTACLES, 125 VOLT, SINGLE PHASE, 15 AND 20 AMPERE RECEPTACLE THAT SERVE COUNTERTOP SURFACES SHALL HAVE GFCI PROTECTION EXCEPT FASTENED IN-PLACE APPLIANCES OR OUTLETS DESIGNATED FOR REFRIGERATORS OR FREEZERS.

16.21 GFCI PROTECTION NOW REQUIRED ON ALL 125 VOLT, 15 AND 20 AMPERE RECEPTACLES LOCATED WITHIN 6' HORIZONTALLY OF THE OUTSIDE EDGE OF BATHTUBS OR SHOWER STALLS.

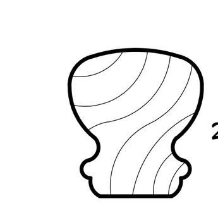


1 STAIR SECTION

3/8"=1'-0"

STAIR SECTION NOTES

1. RISERS MUST BE SOLID OR HAVE A TOE BOARD OR OTHER APPROVED GUARD METHOD WHICH LIMITS THE RISER OPENING TO LESS THAN 4". OPEN RISERS WITHOUT A TOE BOARD OR OTHER APPROVED GUARD ARE PROHIBITED.
   EXCEPTION: THE OPENING BETWEEN ADJACENT TREADS IS NOT LIMITED ON STAIRS WITH A TOTAL RISE OF 30" OR LESS.
2. OPEN GUARDS SHALL HAVE INTERMEDIATE VERTICAL BALUSTERS SPACED LESS THAN 4" APART.
   EXCEPTION: OPENINGS ON THE SIDE(S) OF A STAIR SHALL HAVE BALUSTERS SPACED LESS THAN 4⅜" APART.
3. MAXIMUM VERTICAL RISE BETWEEN LANDINGS SHALL BE NO LARGER THAN 147".



HANDRAIL PROFILE

NOTE: THIS SHAPE OR OTHER APPROVED SHAPES TO HAVE 2 1/4" MAX. HORIZ. WIDTH 4" MIN. & 6 1/4" MAX. GRASPABLE PERIMETER DIMENSION. A GRASPABLE PERIMETER EXCEEDING 6¼" SHALL COMPLY WITH SECTION R311.7.7.3

THOMAS ALAN GROUP

CHRISTOPHER THOMAS PIKE
MO# 2011033866
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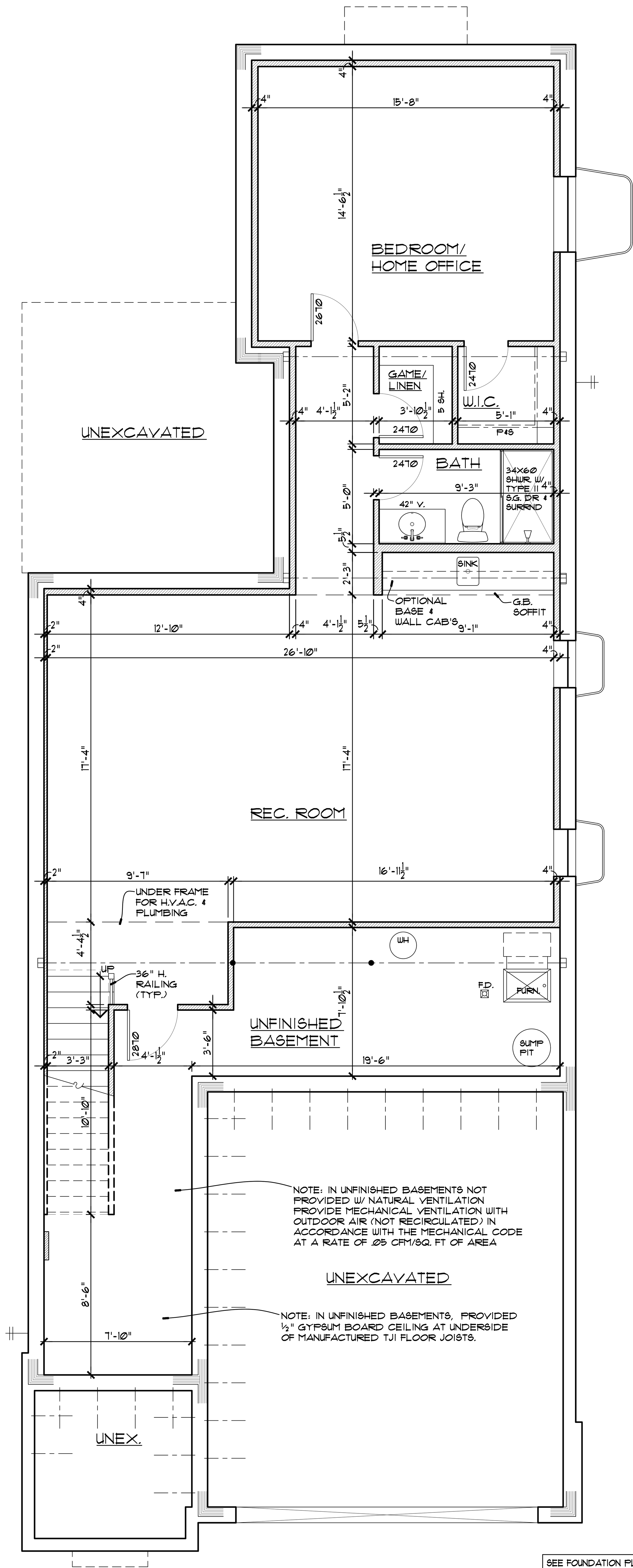
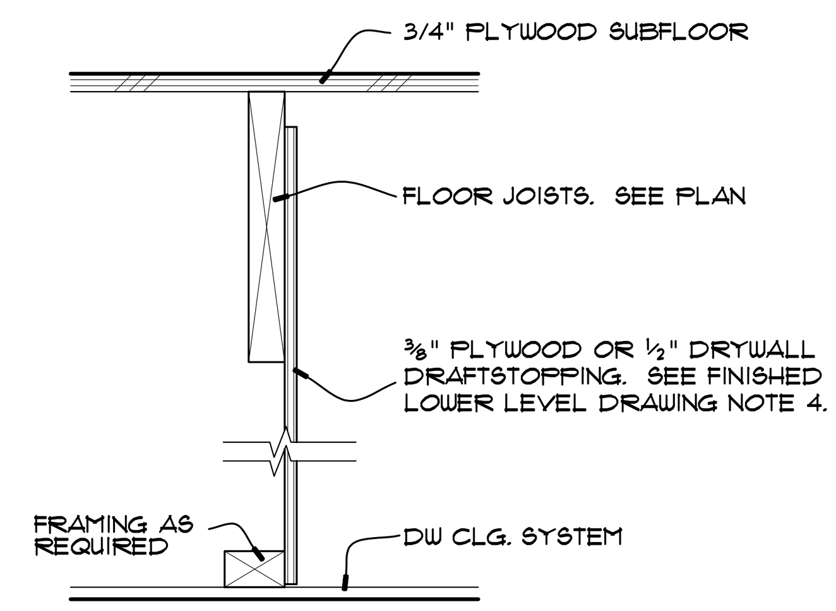
GENERAL NOTES CONTINUED AND STAIR SECTION


UNEXCAVATED
BEDROOM/
HOME OFFICE
GAME/
LINEN
W.I.C.
P&S
BATH
34X60
SHWR. W/
TYPE II
S.G. DR &
SURRND
42" V.
SINK
OPTIONAL
BASE &
WALL CAB'S
G.B.
SOFFIT
REC. ROOM
UNDER FRAME
FOR H.V.A.C. &
PLUMBING
UP
36" H.
RAILING
(TYP.)
WH
F.D.
FURN.
UNFINISHED
BASEMENT
SUMP
PIT
NOTE: IN UNFINISHED BASEMENTS NOT PROVIDED W/ NATURAL VENTILATION PROVIDE MECHANICAL VENTILATION WITH OUTDOOR AIR (NOT RECIRCULATED) IN ACCORDANCE WITH THE MECHANICAL CODE AT A RATE OF .05 CFM/SQ. FT OF AREA
UNEXCAVATED
NOTE: IN UNFINISHED BASEMENTS, PROVIDED ½" GYPSUM BOARD CEILING AT UNDERSIDE OF MANUFACTURED TJI FLOOR JOISTS.
UNEX.

SEE FOUNDATION PLAN FOR ADDITIONAL INFORMATION

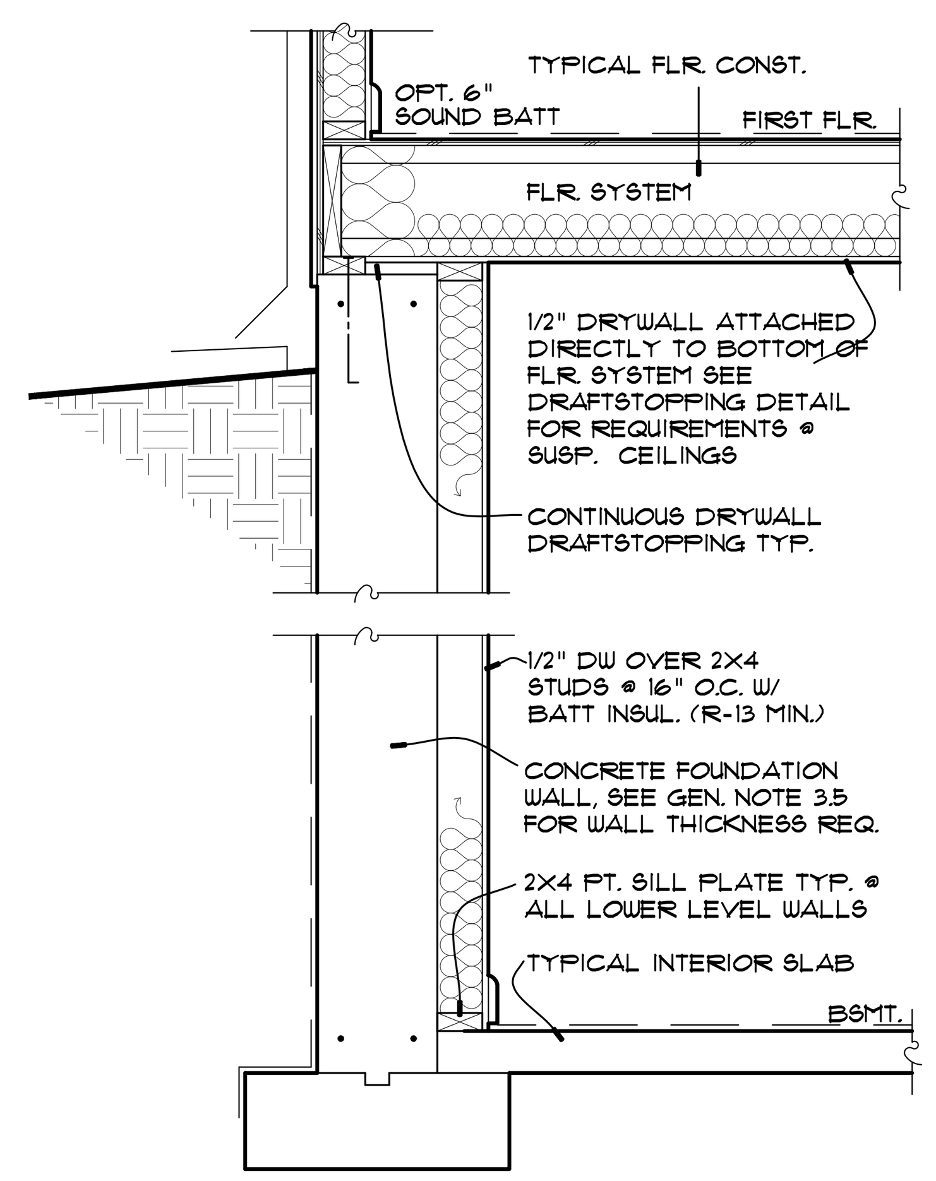
FINISHED LOWER LEVEL

1/4" = 1'-0" 960 SQ. FT.



2 DRAFTSTOPPING DTL.

1½" = 1'-0"


TYPICAL FLR. CONST.
OPT. 6" SOUND BATT
FIRST FLR.
FLR. SYSTEM
1/2" DRYWALL ATTACHED DIRECTLY TO BOTTOM OF FLR. SYSTEM SEE DRAFTSTOPPING DETAIL FOR REQUIREMENTS @ SUSP. CEILINGS
CONTINUOUS DRYWALL DRAFTSTOPPING TYP.
1/2" DW OVER 2X4 STUDS @ 16" O.C. W/ BATT INSUL. (R-13 MIN.)
CONCRETE FOUNDATION WALL, SEE GEN. NOTE 3.5 FOR WALL THICKNESS REQ.
2X4 PT. SILL PLATE TYP. @ ALL LOWER LEVEL WALLS
TYPICAL INTERIOR SLAB
BSMT.

1 BSMT. WALL SECTION

3/4" = 1'-0" SEE TYP. WALL SECTIONS FOR ADDITIONAL INFORMATION

FOUNDATION DRAWING NOTES

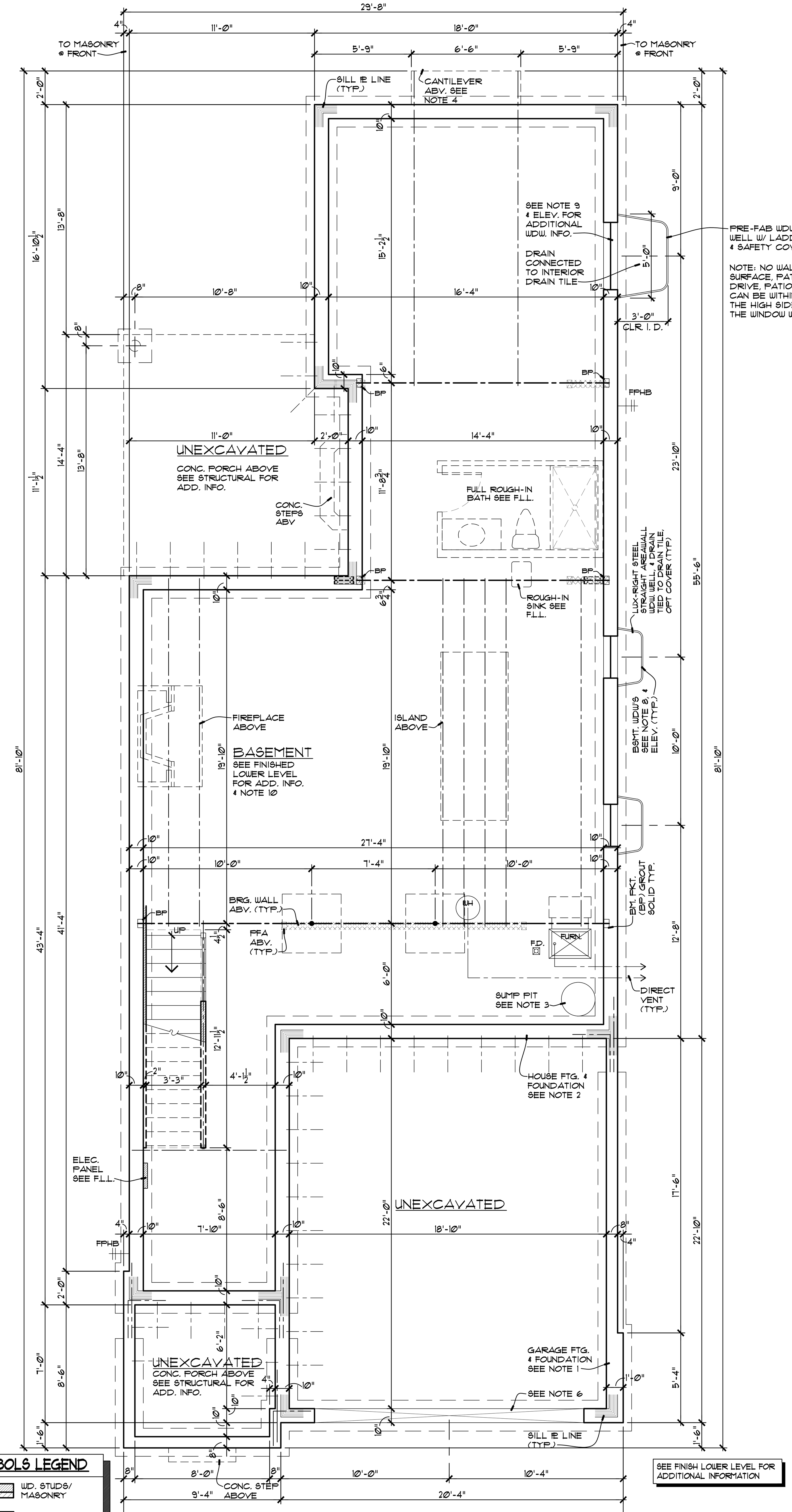
1. GARAGE FOUNDATION: 8" THICK CONCRETE FOUNDATION WALL (SEE STRUCTURAL SHEETS FOR ADD. INFO. & FOOTING SIZE). TYPICAL, UNLESS NOTED OTHERWISE.
2. HOUSE FOUNDATION AND FTG.: 10" THICK CONCRETE FOUNDATION WALL (SEE STRUCTURAL SHEETS FOR ADD. INFO. & FOOTING SIZE). TYPICAL, UNLESS NOTED OTHERWISE.
3. PROVIDE 24" DIAMETER X 24" DEEP SUMP HOLE WITH FITTED COVER IF FOUNDATION DRAIN PIPE CANNOT BE DAYLIGHTED. PROVIDE PUMP IF BASEMENT IS FINISHED OR GROUNDWATER IS PRESENT. DISCHARGING TO OR WITHIN 10' OF A SIDEWALK, DRIVEWAY, STREET, PROPERTY LINE OR TO CREATE A NUISANCE TO ADJOINING PROPERTIES IS PROHIBITED.
4. CANTILEVERS: EXTERIOR GRADE SOFFIT. INSULATE BETWEEN JOIST TO MIN. R-19 AND VENT THE JOIST CAVITY.
5. CLASS "B" UL APPROVED HVAC FLUE (SIZED BY HVAC CONTRACTOR) @ GAS FURNACE AND HWH. PROVIDE MINIMUM 2" CLEARANCE.
6. HOLD DOWN TOP OF FOUNDATION WALL @ DOOR TO RECEIVE CONCRETE SLAB.
7. FRAME WALL WALKOUT AT BASEMENT: USE 2X6 STUDS @ 16" O.C. TYPICAL ON 1½" & 2 STORY HOUSES (2 FLOORS & ROOF LOAD). USE 2X4 STUDS @ 16" O.C. TYPICAL ON 1 STORY HOUSES (1 FLOOR & ROOF LOAD). MAINTAIN CONTINUITY OF ALL POSTS FROM ABOVE CONTINUOUS TO CONCRETE FOUNDATION BELOW. COORDINATE OTHER SPECIAL CONDITIONS WITH ARCHITECT BEFORE PROCEEDING.
8. BASEMENT WINDOWS (HOPPER TYPE). HOLD TO TOP OF FND. UNLESS A CANTILEVER OCCURS ABV. IN WHICH CASE THE WDW. IS TO BE DROPPED 8" FROM T.O.C. DELETE TWO (2) WDW.'S AT WALKOUT BASEMENT WHEN SLIDING GLASS PATIO DOOR IS USED. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
9. "PRECISE FORMS INC." MAJESTIC DOUBLE GLAZED 48"X48" SLIDER WINDOW (SEE GENERAL NOTES SECTION 8.1-WINDOWS, FOR EMERGENCY ESCAPE WINDOW MINIMUM SIZE REQUIREMENTS). BOTTOM OF THE WINDOW CLEAR OPENING SHALL BE 44" MAX. ABOVE FINISHED FLOOR (6' MAX. WELL HEIGHT). INSTALL PER MFRG'S SPECS. (SEE GENERAL CONTRACTOR FOR WINDOW WELL DRAINAGE INFORMATION) PRECISE FORMS INC. (1-800-537-0706) PRIOR TO CONSTRUCTION CONTRACTOR TO VERIFY WITH LOCAL FIRE DEPT./DISTRICT AND BUILDING DEPARTMENTS WHAT REQUIREMENTS THEY HAVE REGARDING THE BASEMENT EMERGENCY EGRESS WINDOW INSTALLATION. DELETE WINDOW WITH WALKOUT BASEMENT WITH SLIDING GLASS PATIO DOOR. SEE STRUCTURAL PLANS AND NOTES FOR ADDITIONAL INFORMATION.
10. PROVIDE ½" GYPSUM BOARD, ⅝" WOOD STRUCTURAL PANEL OR EQUIVALENT ON THE UNDERSIDE OF FLOOR FRAMING MEMBERS LESS THAN 1 1/2" (2X) THICKNESS @ UNFINISHED AREAS.

FINISHED LOWER LEVEL DRAWING NOTES

1. ALL INTERIOR WALLS TO BE 3½" (2X4 STUDS), UNLESS NOTED OTHERWISE (UNO).
2. SEE FOUNDATION PLAN FOR ADDITIONAL INFORMATION.
3. WINDOWS DESIGNATIONS ARE THOSE OF "GENERIC"
4. DRAFTSTOPPING: CEILINGS SUSPENDED BELOW WOOD JOISTS OR ATTACHED DIRECTLY TO WOOD FLOOR TRUSSES SHALL BE DRAFT STOPPED AT MAXIMUM 1000 S.F. INTERVALS PARALLEL TO MAIN FRAMING MEMBERS. SEE DETAIL THIS SHEET.
5. CEILING HEIGHTS TO BE DETERMINED BY EXTENT OF DUCTWORK, STEEL BEAMS, ETC. (7'-0" MIN. CEILING HEIGHT)
   EXCEPTIONS:
   A. BEAMS AND GIRDERS (DECORATIVE OR STRUCTURAL) SPACED NOT LESS THAN 4 FEET ON CENTER MAY PROJECT A MAXIMUM OF 6" BELOW THE 7'-0" REQUIRED CEILING HEIGHT.
   B. CEILINGS IN BASEMENTS WITHOUT HABITABLE SPACES MAY PROJECT TO WITHIN 6'-8" OF THE FINISHED FLOOR, AND BEAMS, GIRDERS, DUCTS OR OTHER OBSTRUCTIONS MAY PROJECT WITHIN 6'-4" OF THE FINISHED FLOOR.
6. FIREBLOCKING REQUIRED AROUND VENT, PIPE AND DUCT PENETRATIONS OF CEILING AND FLOORS AND AT HORIZONTAL INTERVALS (NOT EXCEEDING 10'-0") WHEN A FRAMED WALL IS SET AWAY FROM THE FOUNDATION WALL.
7. PROVIDE ACCESS PANELS TO UTILITIES IN FINISHED AREAS.
8. ADJUST LOCATIONS OF RECESSED LIGHT FIXTURES IF REQUIRED FOR FRAMING MEMBERS, DUCTWORK, ETC. REVIEW ALTERNATE LOCATIONS WITH OWNER/BUILDER.

SYMBOLS LEGEND

▨	WD. STUDS/ MASONRY
▨	PLANT LEDGE
☒	MTL. STUDS
- - - -	SOUND BATT INSULATION


TO MASONRY @ FRONT
SILL PL LINE (TYP.)
CANTILEVER ABV. SEE NOTE 4
SEE NOTE 9 & ELEV. FOR ADDITIONAL WDW. INFO.
DRAIN CONNECTED TO INTERIOR DRAIN TILE
PRE-FAB WDW. WELL W/ LADDER & SAFETY COVER
NOTE: NO WALKING SURFACE, PATH, DRIVE, PATIO, ETC., CAN BE WITHIN 2' OF THE HIGH SIDE OF THE WINDOW WELL
CLR. I. D.
FPHB
UNEXCAVATED
CONC. PORCH ABOVE SEE STRUCTURAL FOR ADD. INFO.
CONC. STEPS ABV
FULL ROUGH-IN BATH SEE F.L.L.
ROUGH-IN SINK SEE F.L.L.
LUX-RIGHT STEEL STRAIGHT AREAWALL WDW. WELL, & DRAIN TIED TO DRAIN TILE, OPT COVER (TYP)
FIREPLACE ABOVE
BASEMENT
SEE FINISHED LOWER LEVEL FOR ADD. INFO. & NOTE 10
ISLAND ABOVE
BSMT. WDW'S SEE NOTE 8, & ELEV. (TYP.)
BRG. WALL ABV. (TYP.)
PFA ABV. (TYP.)
BM. PKT. (BP) GROUT SOLID TYP.
F.D.
FURN.
WH
UP
SUMP PIT SEE NOTE 3
DIRECT VENT (TYP.)
HOUSE FTG. & FOUNDATION SEE NOTE 2
ELEC. PANEL SEE F.L.L.
UNEXCAVATED
GARAGE FTG. & FOUNDATION SEE NOTE 1
SEE NOTE 6
SILL PL LINE (TYP.)
CONC. STEP ABOVE

SEE FINISH LOWER LEVEL FOR ADDITIONAL INFORMATION

FOUNDATION PLAN

1/4" = 1'-0"

THOMAS ALAN GROUP

CHRISTOPHER THOMAS PIKE
MO# 2011033866
EXPIRATION DATE: 12/31/23

No.	Description	Date
1	PERMIT SET	8/1/2022

A New Residence for:
Douglas PROPERTIES
2343 ST. CLAIR AVE.
BRENTWOOD, MO 63144

THOMAS ALAN GROUP
ARCHITECTURE | DESIGN | INTERIORS
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(314) 301-9975
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FOUNDATION PLAN AND FINISHED LOWER LEVEL

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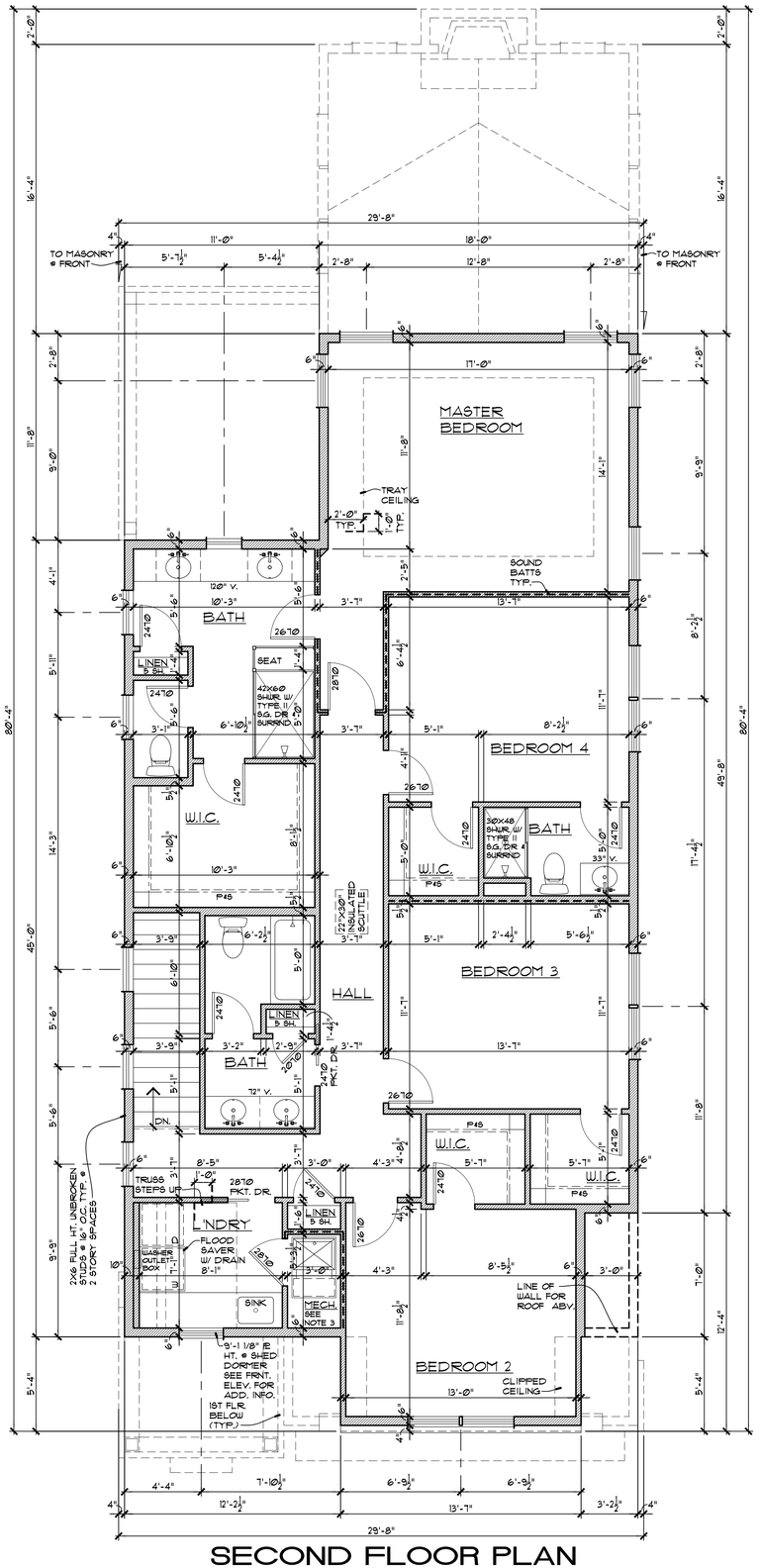
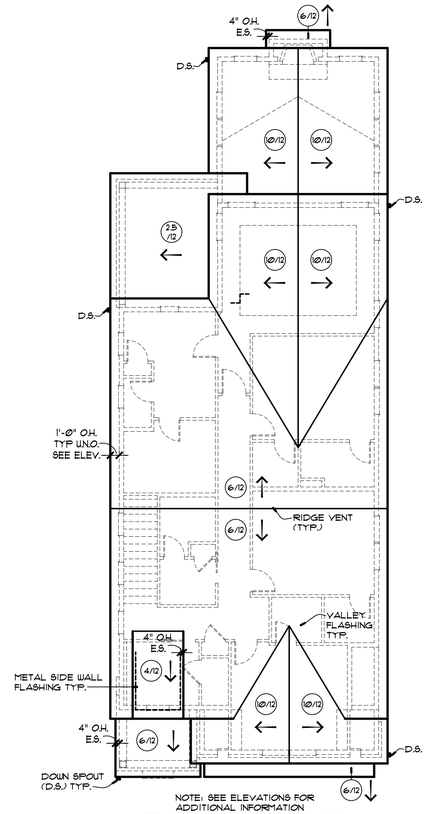


SECOND FLOOR PLAN

1/4" = 1'-Ø" F.F. 1,512 SQ. FT.



ROOF PLAN

1/8" = 1'-Ø"

FIRST FLOOR DRAWING NOTES

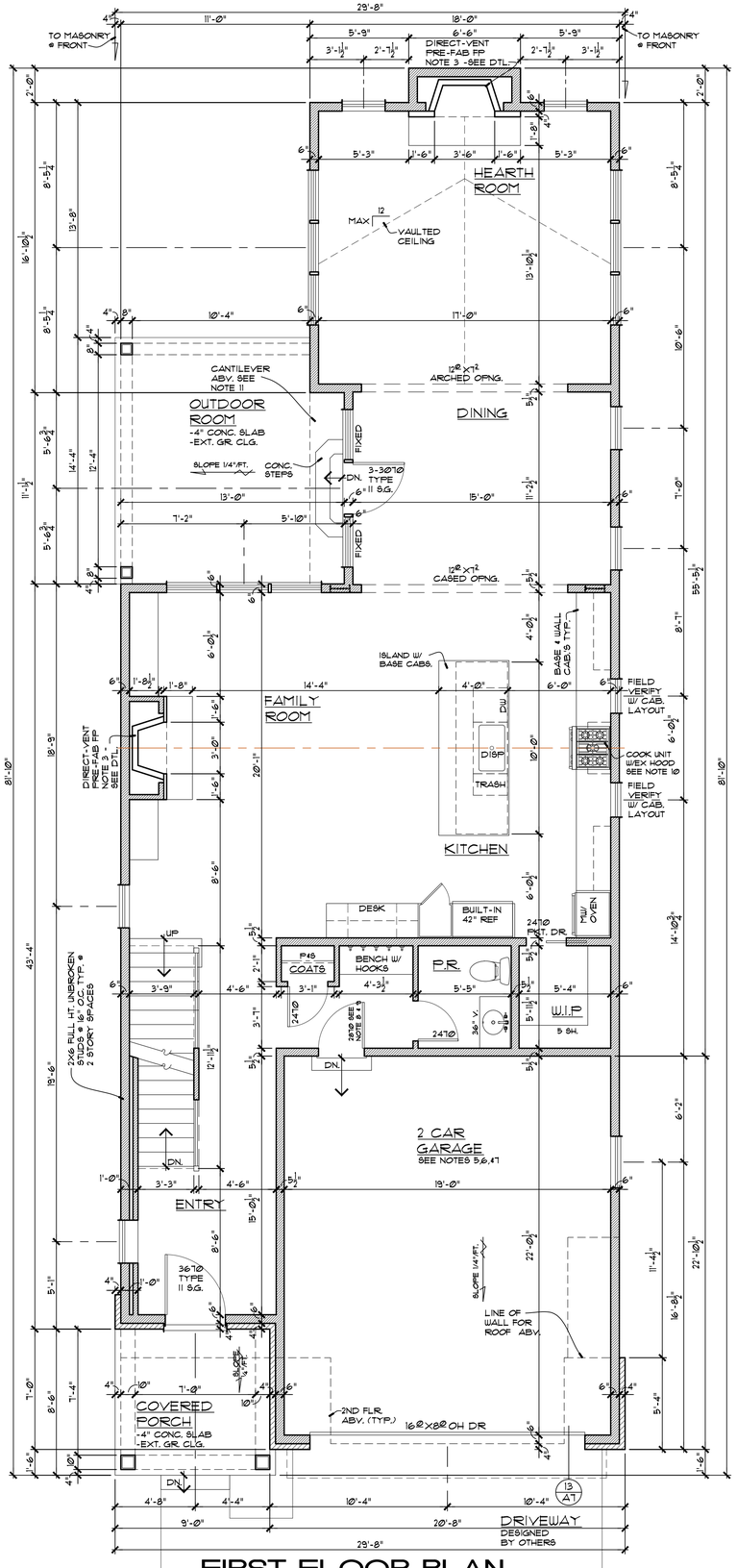
1. ALL INTERIOR WALLS TO BE 3½" (2X4 STUDS), UNLESS NOTED OTHERWISE (UNO).
2. SEE OTHER PLANS/ELEVATIONS, DETAIL SHEET, AND GENERAL NOTES FOR ADDITIONAL INFORMATION.
3. PREFAB ZERO CLEARANCE FIREPLACE: MODEL: CD4236. MANUF.: HEATILATOR OR APPROVED EQUAL. PROVIDE OUTSIDE AIR KIT.
4. PROVIDE 2" MINIMUM CLEARANCE TO COMBUSTIBLES AT ALL GAS FLUES, TYPICAL.
5. GARAGE/HOUSE SEPARATION WALL TO BE INSULATED MINIMUM R-20.
6. GARAGE WITH STORY ABOVE: GARAGE/HOUSE SEPARATION WALLS SHALL BE FACED WITH NOT LESS THAN 2-LAYERS OF 5/8" TYPE "X" GYPSUM BRD. APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 2-LAYERS ⅝" TYPE 'X' GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 2-LAYERS OF 5/8" TYPE "X" GYPSUM BOARD OR EQUIVALENT.
7. GARAGE-STORY ABOVE WITH EXTERIOR BEARING WALLS CARRYING 1 HOUR RATED FLOOR/CEILING ASSEMBLYS REQUIRE ⅝" TYPE X FIRE RESISTANT RATED DRYWALL ON INSIDE FACE WITH 7/16" PLYWOOD OR OSB SHEATHING ON EXTERIOR FACE. (1 HOUR EXTERIOR BEARING WALL UL DESIGN NO. U356.). RATED DRYWALL SHALL RUN CONTINUOUS UNDER GARAGE DOOR HEADER.
8. GARAGE/RESIDENCE SEPARATION DOOR SHALL NOT BE LESS THAN A 90-MINUTE FIRE RATED DOOR AND FRAME.
9. PRIOR TO CONSTRUCTION CONTRACTOR TO VERIFY WITH LOCAL FIRE DEPT./DISTRICT IF THEY HAVE MORE RESTRICTIVE SEPARATION REQUIREMENTS THAN THOSE LISTED IN NOTES 6,7,&8 ABOVE.
10. 30" RANGE W/ OVEN & EXHAUST HOOD, MECH. CONTRACTOR TO VERIFY CFM FOR ADEQUATE AIR INTAKE. ALSO SEE GENERAL NOTES.
11. CANTILEVERS: EXTERIOR GRADE SOFFIT. INSULATE BETWEEN JOIST TO MIN. R-19 AND VENT THE JOIST CAVITY.

SECOND FLOOR DRAWING NOTES

1. ALL INTERIOR WALLS TO BE 3½" (2X4 STUDS), UNLESS NOTED OTHERWISE (UNO).
2. SEE OTHER PLANS/ELEVATIONS, DETAIL SHEET, AND GENERAL NOTES FOR ADDITIONAL INFORMATION.
3. SECOND FLR. FURNACE SHALL BE SET IN OVERFLOW DRAIN PAN. PROVIDE SOUND BATTS AROUND MECH. RM. INSTALL 1/2" HOMISOTE SOUND BRD. UNDER DW AND WEATHER STRIP DR FOR SOUND CONTROL. MECH. CONTR. TO SUPPLY COMBUSTION AIR (NO LOUVER)
4. PROVIDE 2" MINIMUM CLEARANCE TO COMBUSTIBLES AT ALL GAS FLUES, TYPICAL.

SYMBOLS LEGEND

- WD. STUDS/ MASONRY
- PLANT LEDGE
- MTL. STUDS
- SOUND BATT INSULATION



FIRST FLOOR PLAN

1/4" = 1'-Ø" F.F. 1,442 SQ. FT.

THOMAS ALAN GROUP

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CHRISTOPHER THOMAS PIKE
MO# 2011033866
EXPIRATION DATE: 12/31/23

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FIRST FLOOR PLAN, SECOND FLOOR PLAN AND ROOF PLAN

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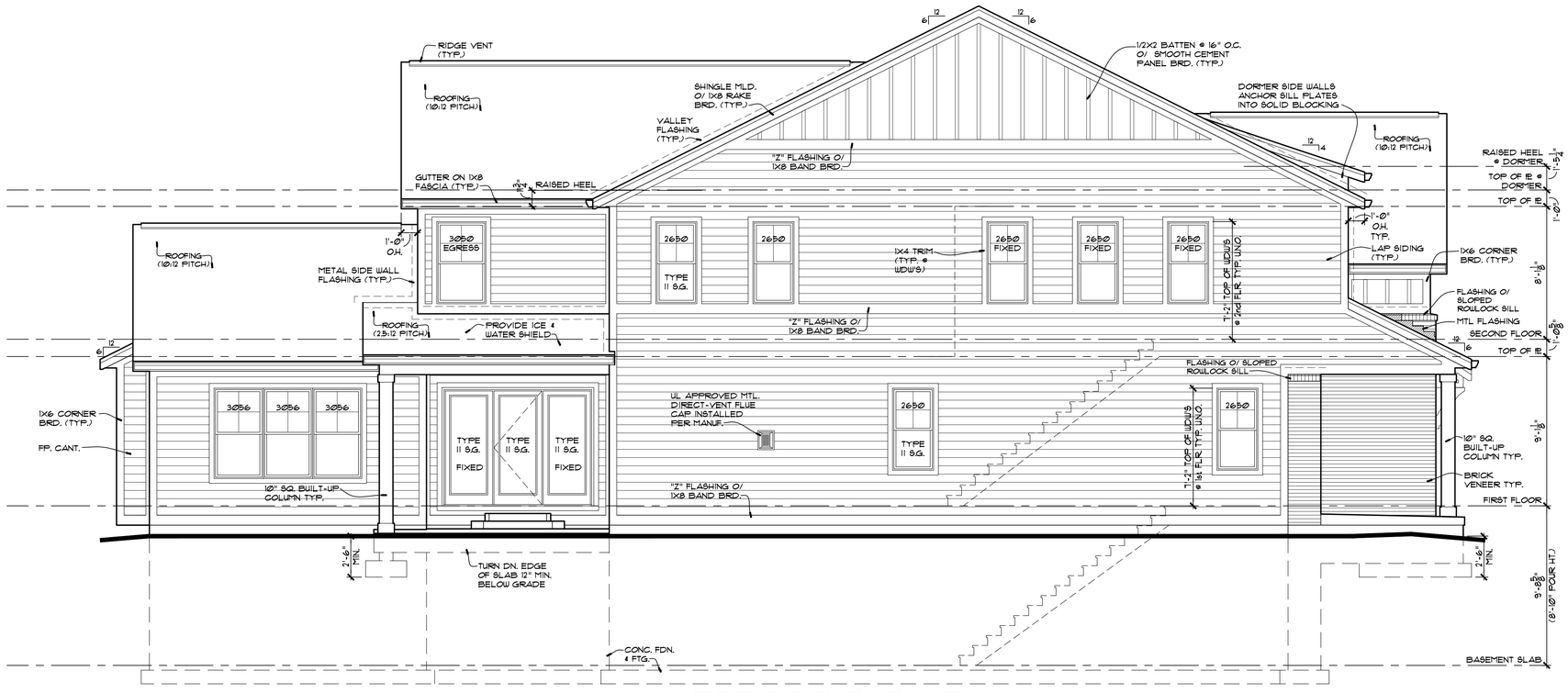
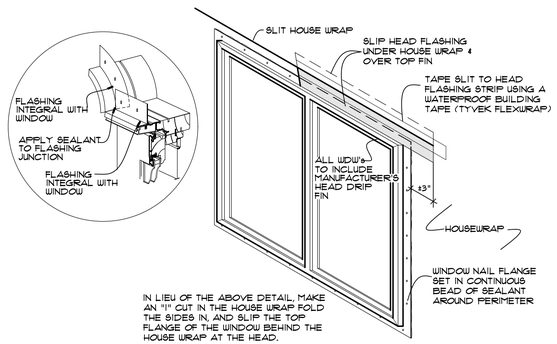


LEFT SIDE ELEVATION

1/4" = 1'-0"

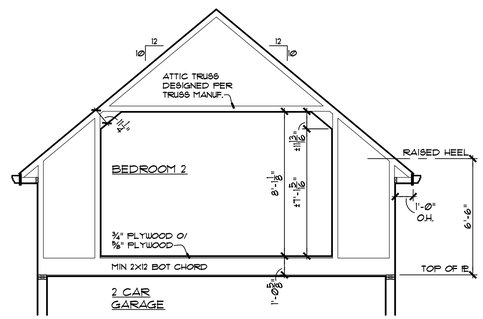
ELEVATION DRAWING NOTES

1. NOT USED.
2. SEE PLANS, DETAIL SHEET, AND GENERAL NOTES FOR ADDITIONAL INFORMATION.
3. GRADE: SLOPE AWAY FROM FOUNDATION A MINIMUM OF 6" DROP WITHIN THE FIRST 10' OR TO A SWALE.
4. FOOTINGS & PIERS: SHALL EXTEND A MINIMUM OF 2'-6" BELOW FINISHED GRADE AND BEAR ON UNDISTURBED SOIL OR PREPARED FILL.
5. MASONRY VENEER: ALL SOLDIER AND ROWLOCK HEADERS, SILLS AND TRIM TO PROJECT ¾", UNLESS NOTED OTHERWISE.
6. CHIMNEY HEIGHT: SHALL EXTEND ABOVE ROOF MIN. 3'-0" AT POINT OF PENETRATION AND 2'-0" HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10' HORIZONTALLY.
7. DECK DOORS: PROVIDE GUARDRAIL ASSEMBLY OUTSIDE (2X4 TOP & BOTTOM RAIL W/ 2X2 BALUSTERS SPACED LESS THAN 4" APART; 36" MIN. HEIGHT ABV. FINISH FLR.) UNTIL DECK IS BUILT AND APPROVED.
8. ROOF FLASHING: PROVIDE CORROSION-RESISTANT METAL FLASHING AT ALL ROOF VALLEYS, WALL AND CHIMNEY INTERSECTIONS, PORCHES, DECKS, ETC.
   OPEN VALLEYS: LINING TO BE CORROSION RESISTANT METAL FLASHING A MIN. OF 24" WIDE.
   CLOSED VALLEYS: MIN. ONE PLY OF SMOOTH ROLL ROOFING (TYPE II OR III) A MINIMUM OF 36" WIDE.
9. CANTILEVERS: PROVIDE EXTERIOR GRADE SOFFIT (SEAL ALL JOINTS) INSULATION BETWEEN FLOOR JOIST TO MINIMUM R-19 AND VENT JOIST CAVITIES.
10. BASEMENT HAVING CONC. FOUNDATION WALLS WITH MORE THAN 20% EXPOSURE ABOVE FINISHED GRADE SHALL BE INSULATED. SEE GENERAL NOTES.
11. GENERAL CONTRACTOR SHALL CONFIRM USE OF ALL TRIM ACCESSORIES AND MODEL NUMBERS WITH SUPPLIER BEFORE ORDERING.
12. WINDOW DESIGNATIONS ARE THOSE OF: "GENERIC"
13. WINDOWSILLS, WHERE THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW IS LESS THAN 24" ABOVE THE FINISHED FLOOR AND WHERE THE WINDOW IS LOCATED MORE THAN 72" ABOVE THE FINISHED GRADE OR OUTSIDE SURFACE BELOW. THE WINDOW SHOULD BE PROVIDED WITH A WINDOW OPENING CONTROL DEVICE PER SECTION R612.4.2 OF THE 2015 IRC
14. ADDRESS NUMBERS: PROVIDE APPROVED ADDRESS NUMBERS, BUILDING NUMBERS, OR APPROVED BUILDING IDENTIFICATION PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY PER SECTION R319.1



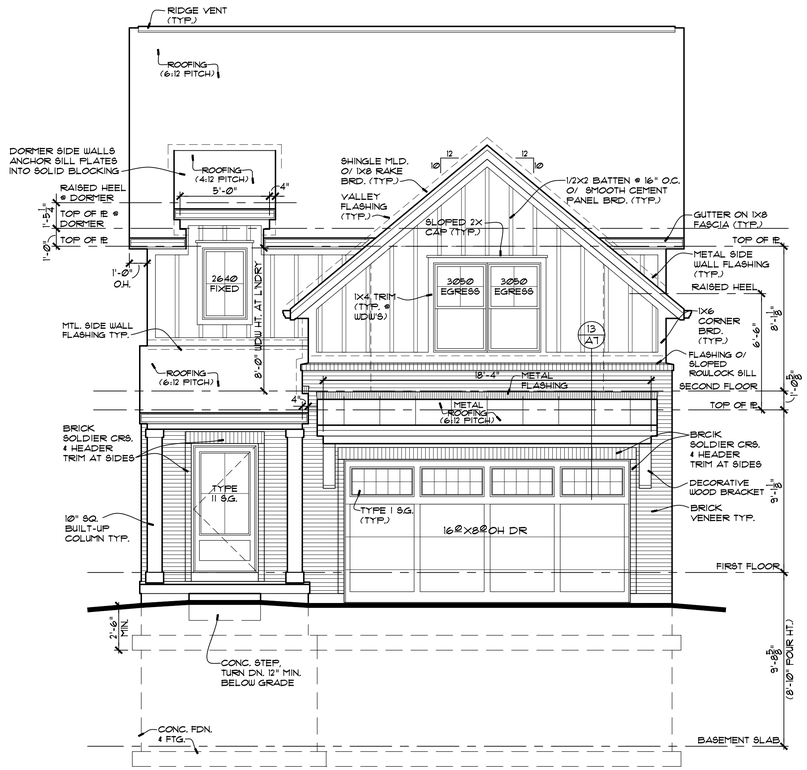
2 TYP. WDW. HEAD FLASHING

NOT TO SCALE



1 ATTIC TRUSS PROFILE

1/4" = 1'-0" DESIGN BY MANUFACTURE



FRONT ELEVATION

1/4" = 1'-0"

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FRONT ELEVATION AND LEFT SIDE ELEVATION

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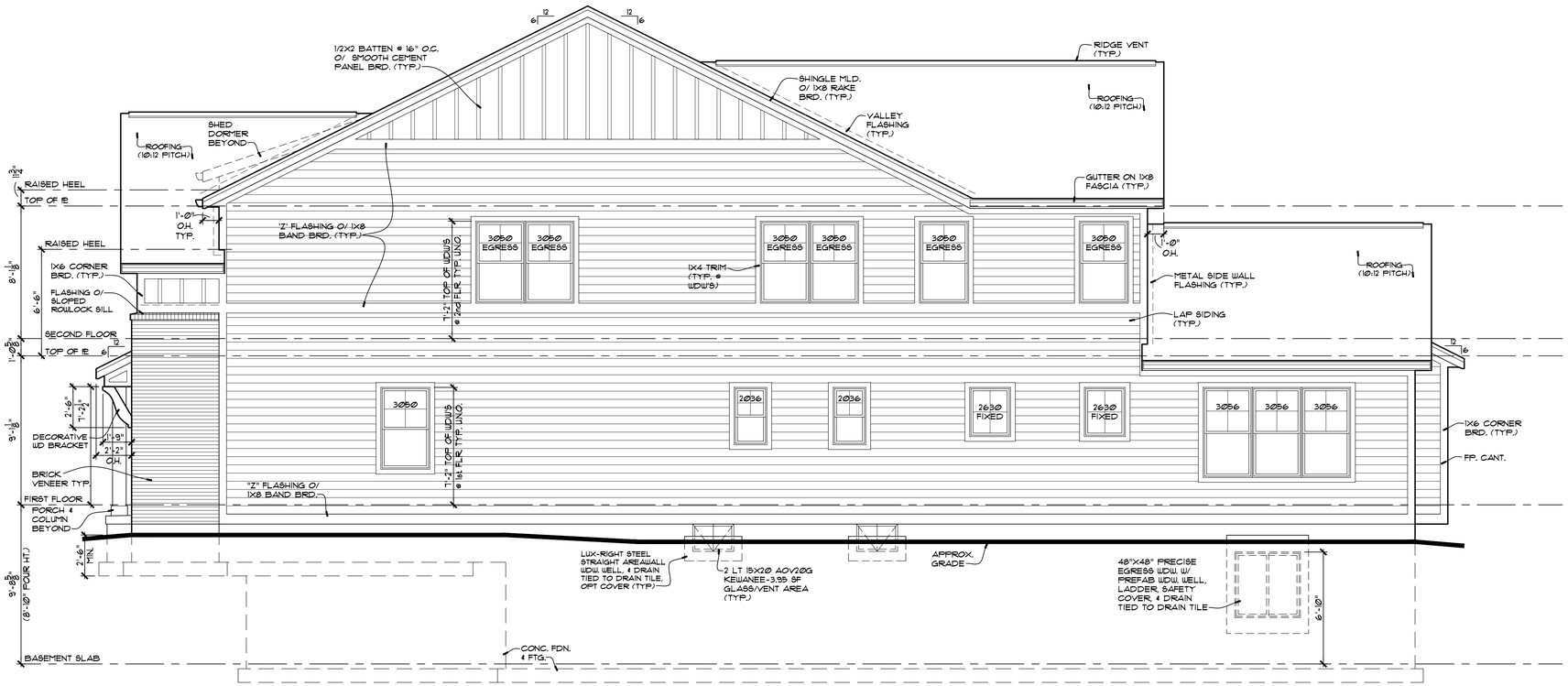

RIGHT SIDE ELEVATION

1/4" = 1'-0"

ELEVATION DRAWING NOTES

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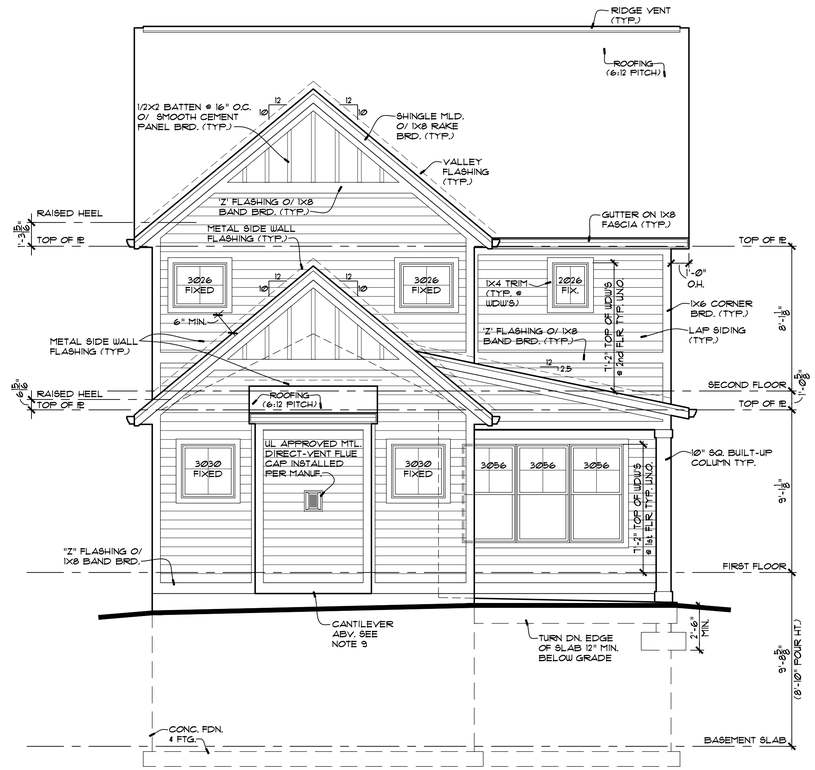

REAR ELEVATION

1/4" = 1'-0"

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REAR ELEVATION AND RIGHT SIDE ELEVATION

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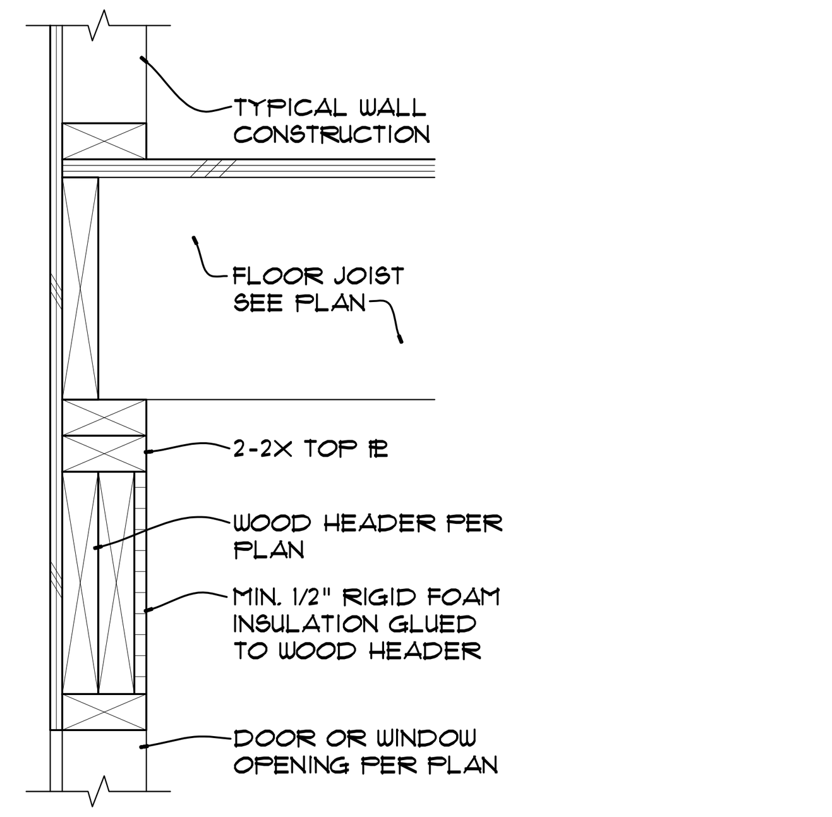
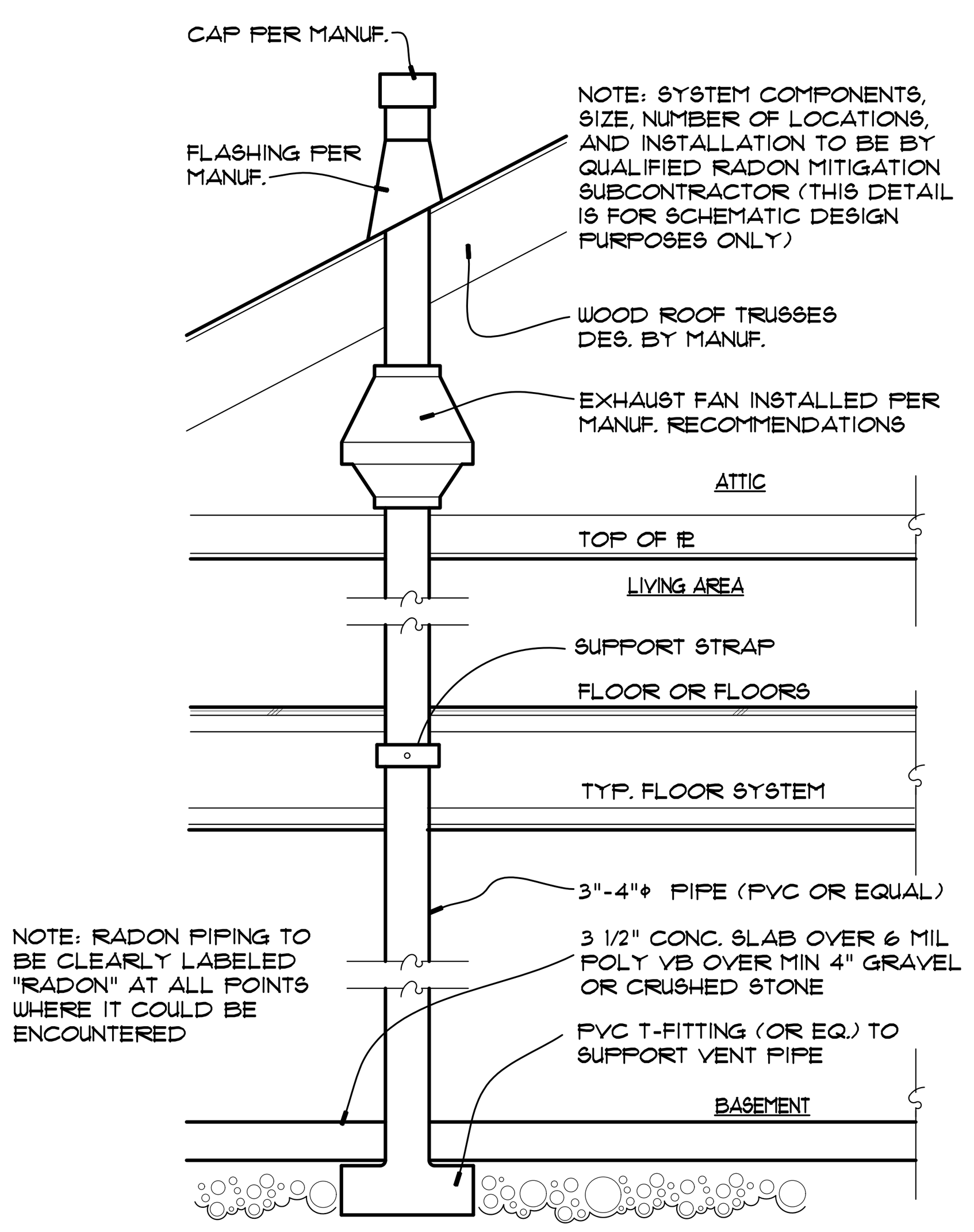
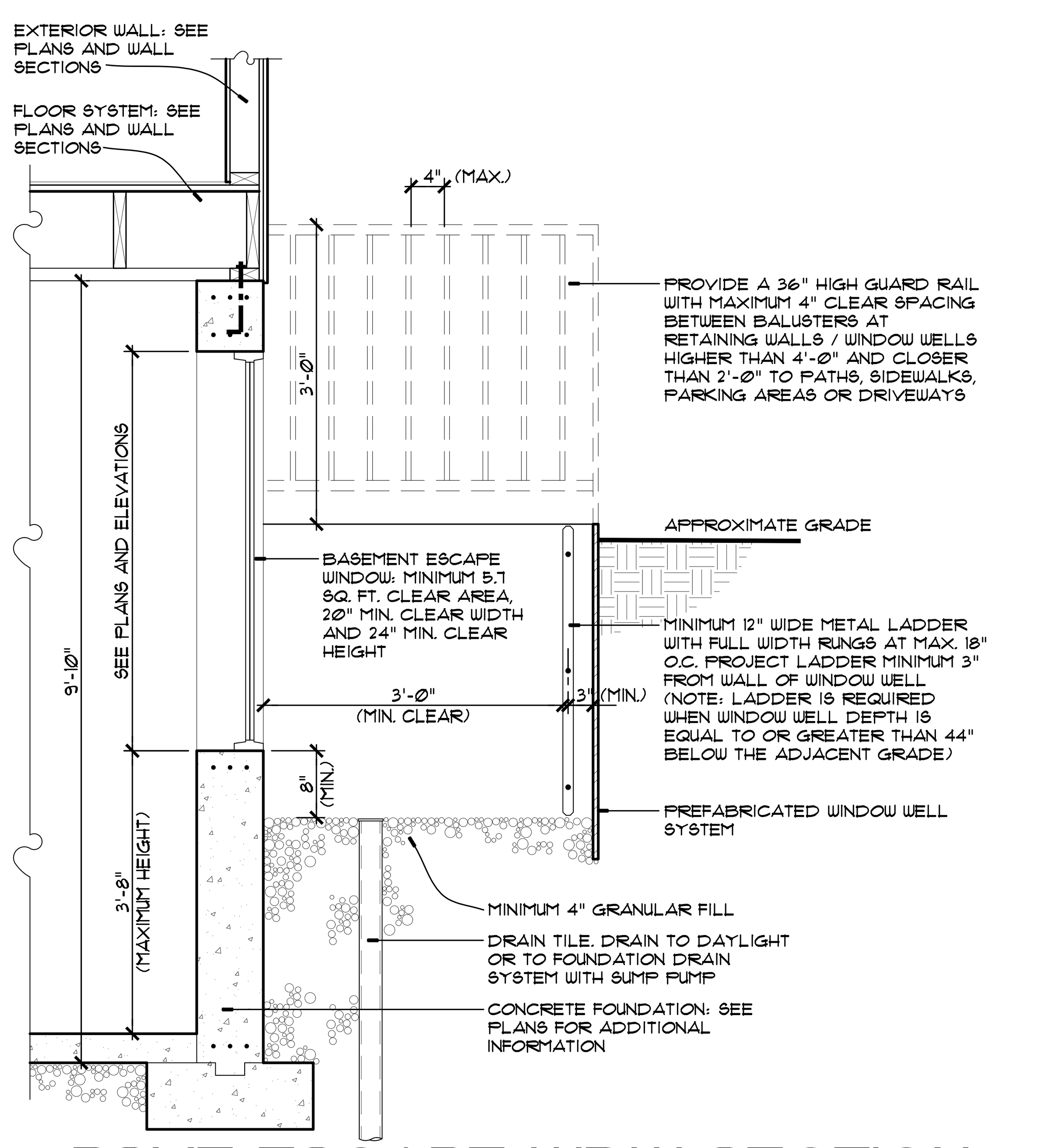


15 TYP. SECTION @ HEADERS
NOT TO SCALE INSULATION



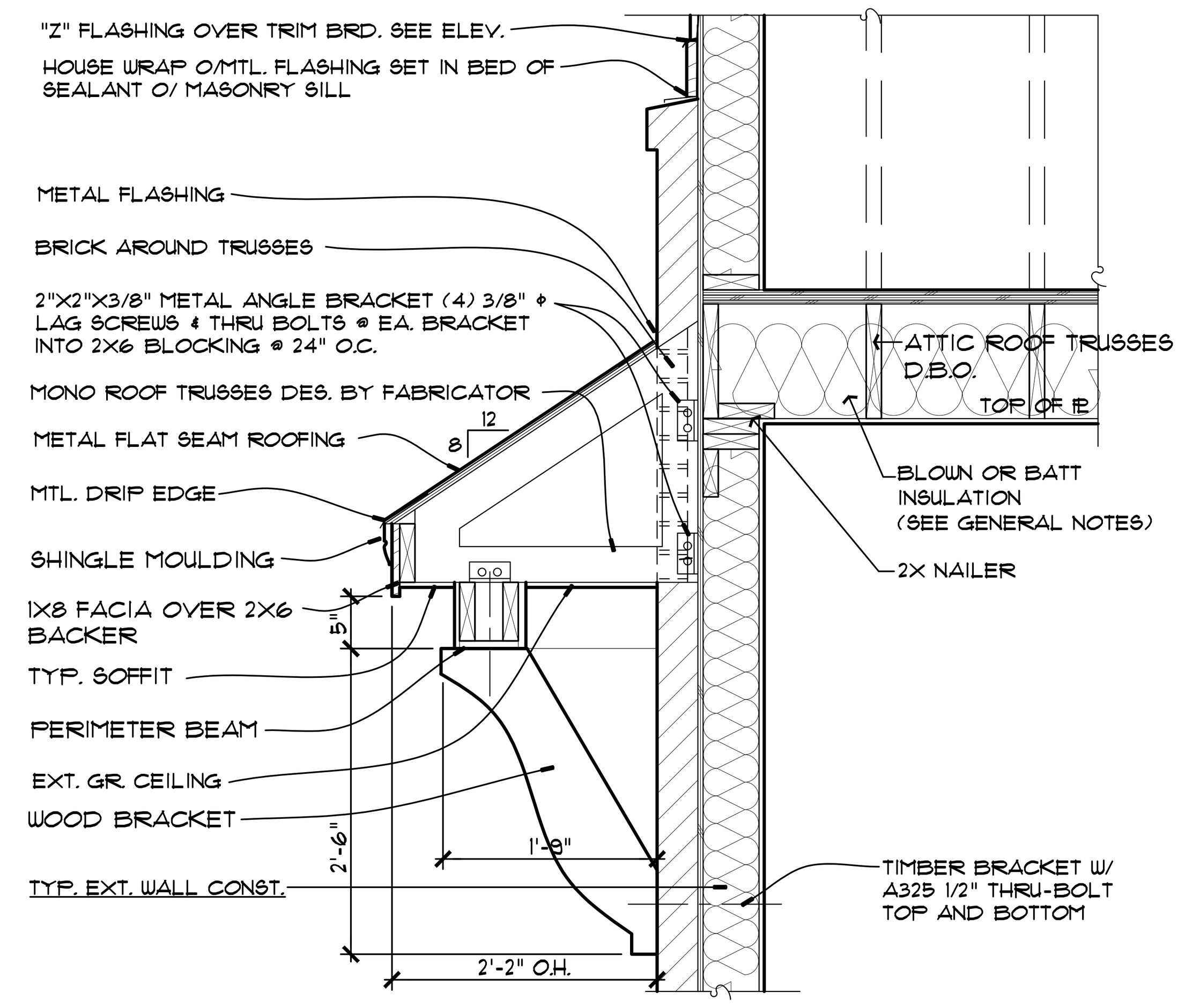
LOCATED BY CONTRACTOR

14 RADON VENT PIPE
SCALE 3/4" = 1'-0"

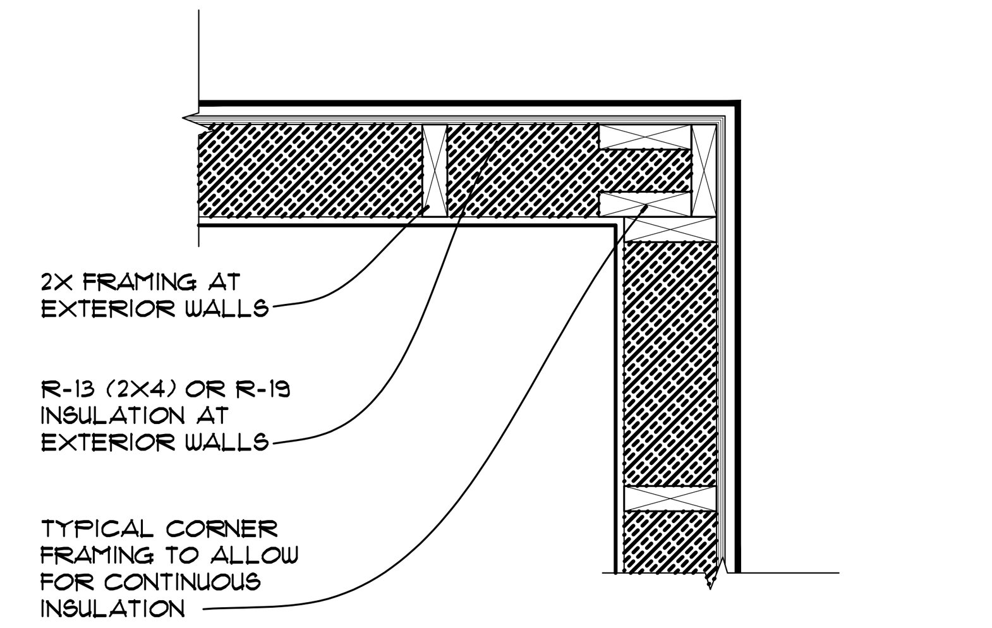


13 BSMT ESCAPE WDW SECTION
3/4" = 1'-0"

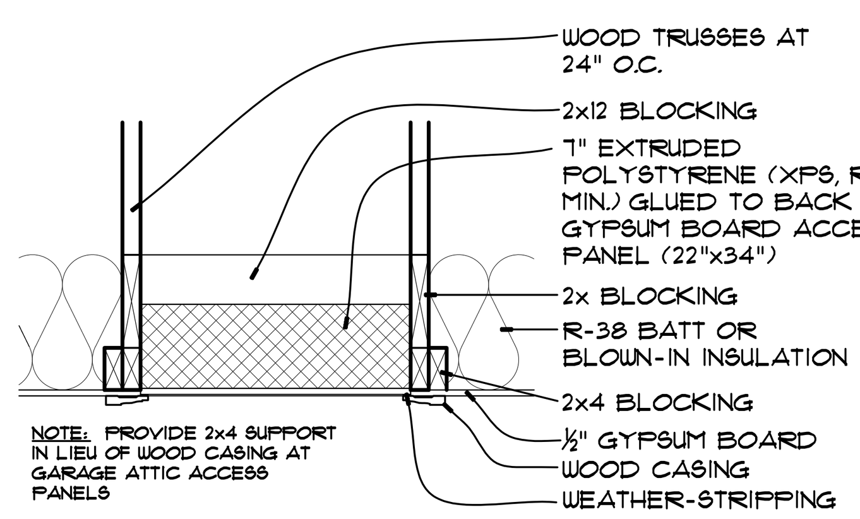
SEE PLANS AND WALL SECTIONS FOR ALL ADDITIONAL INFORMATION AND LOCATION



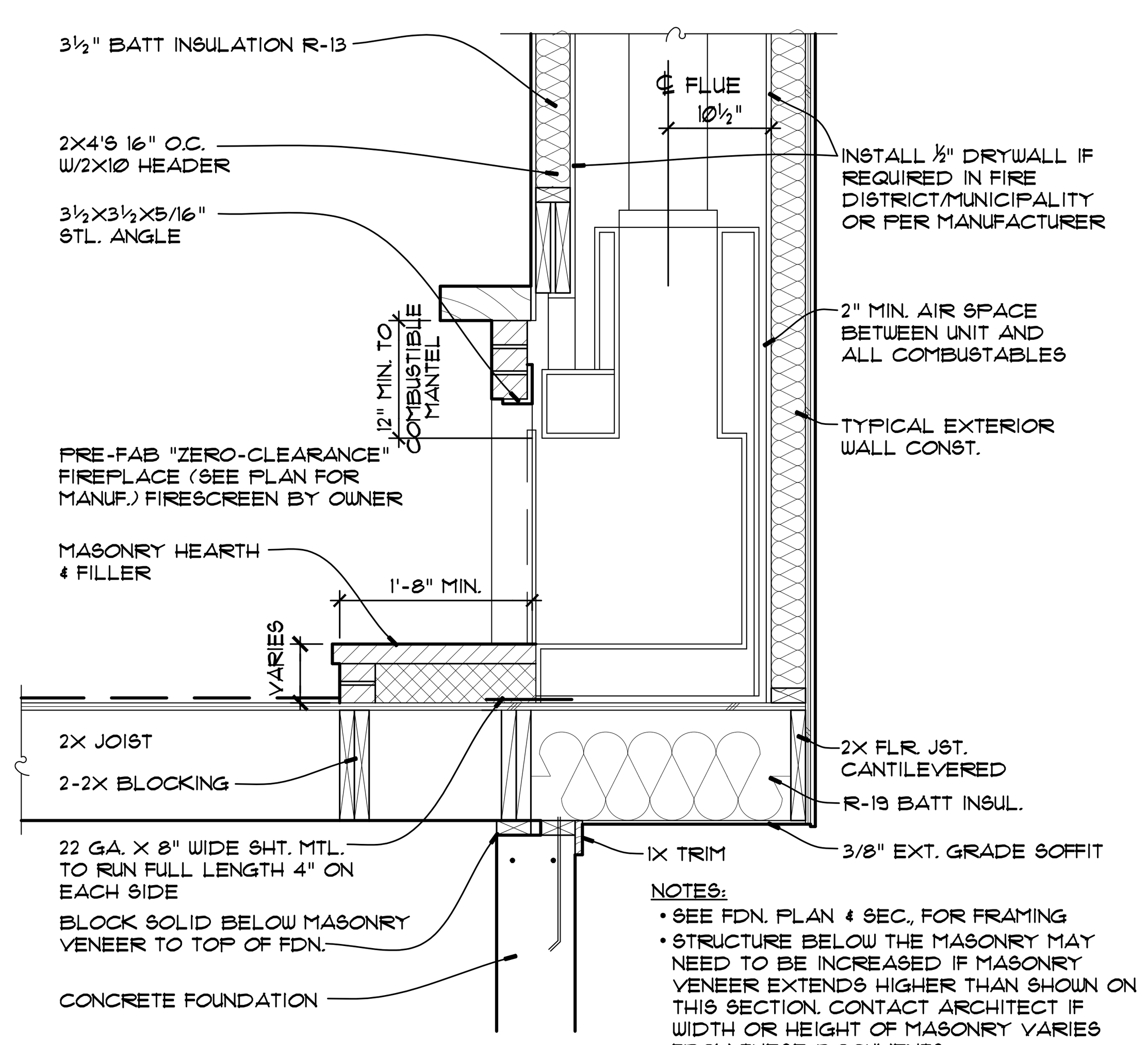
13 SECTION @ SHED ROOF
3/4" = 1'-0" @ GARAGE FRONT



12 TYP. CORNER FRAMING DTL.
NOT TO SCALE INSULATION

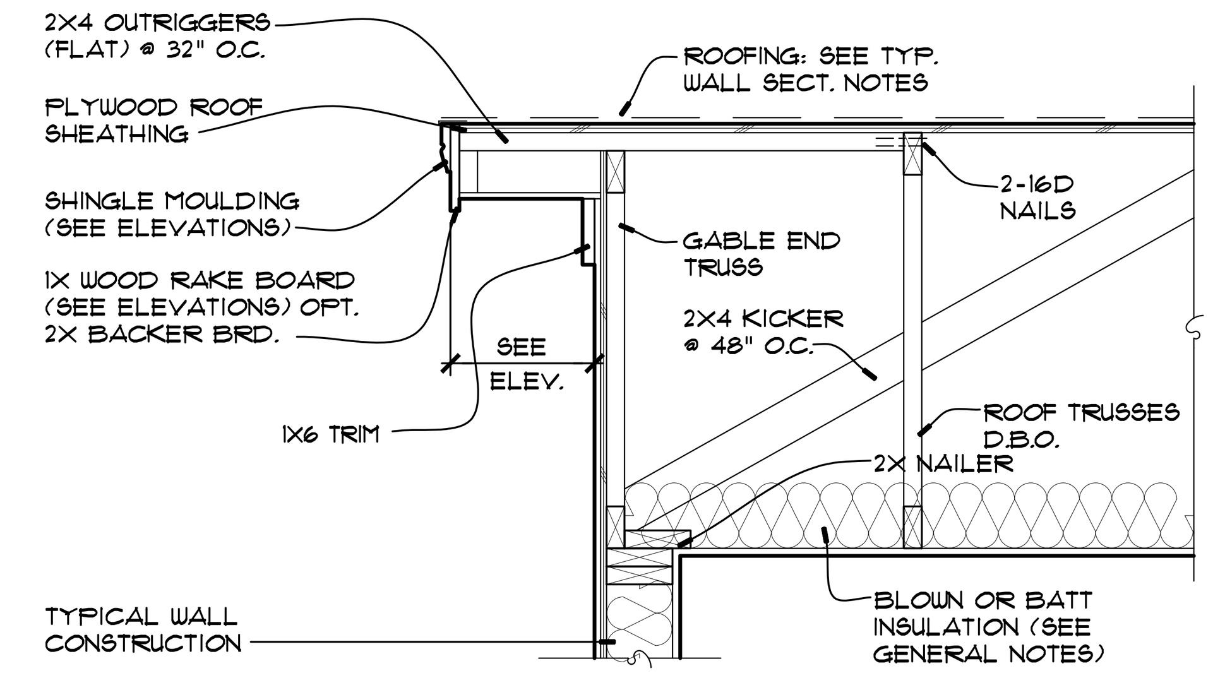


11 ATTIC ACCESS PANEL
3/4" = 1'-0"

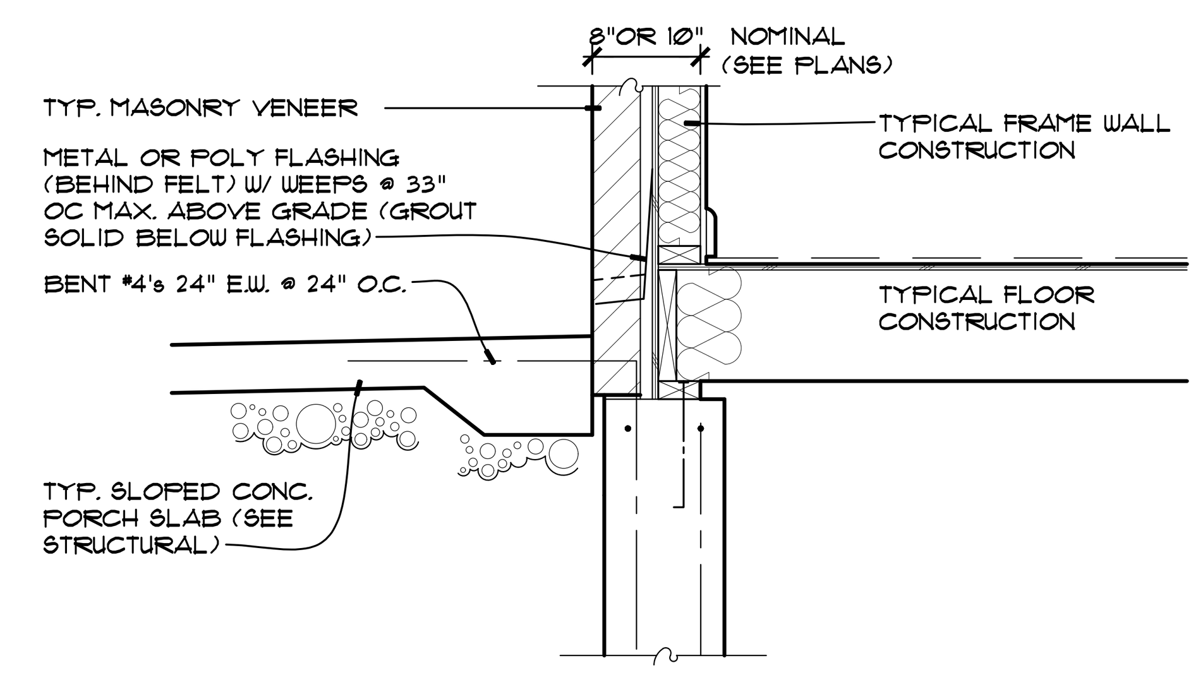


10 PRE-FAB FIREPLACE SECTION
SCALE 3/4" = 1'-0"

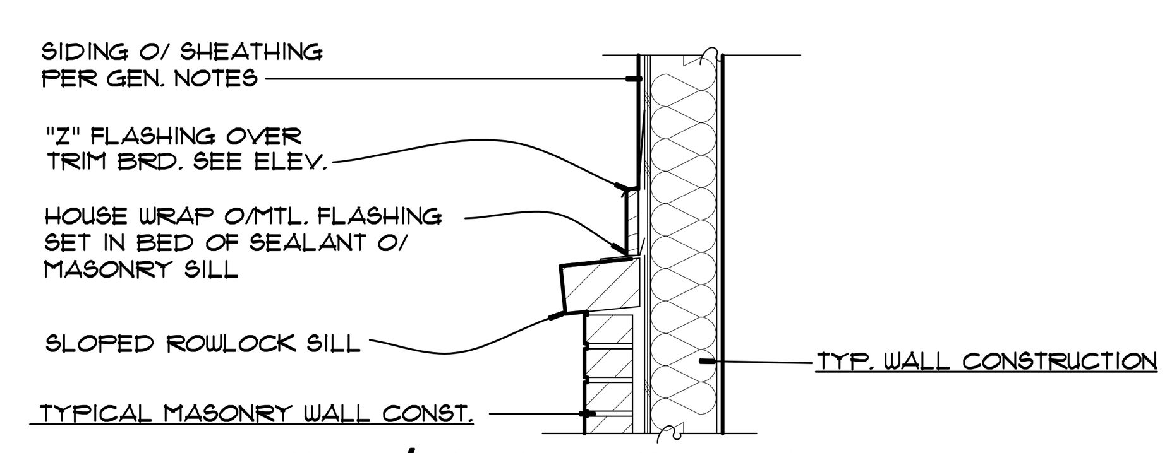
EXTERIOR AIR SUPPLY REQUIRED ON ALL FACTORY BUILT FIREPLACES IN ACCORDANCE WITH SECTION R1005 OF THE 2018 IRC.



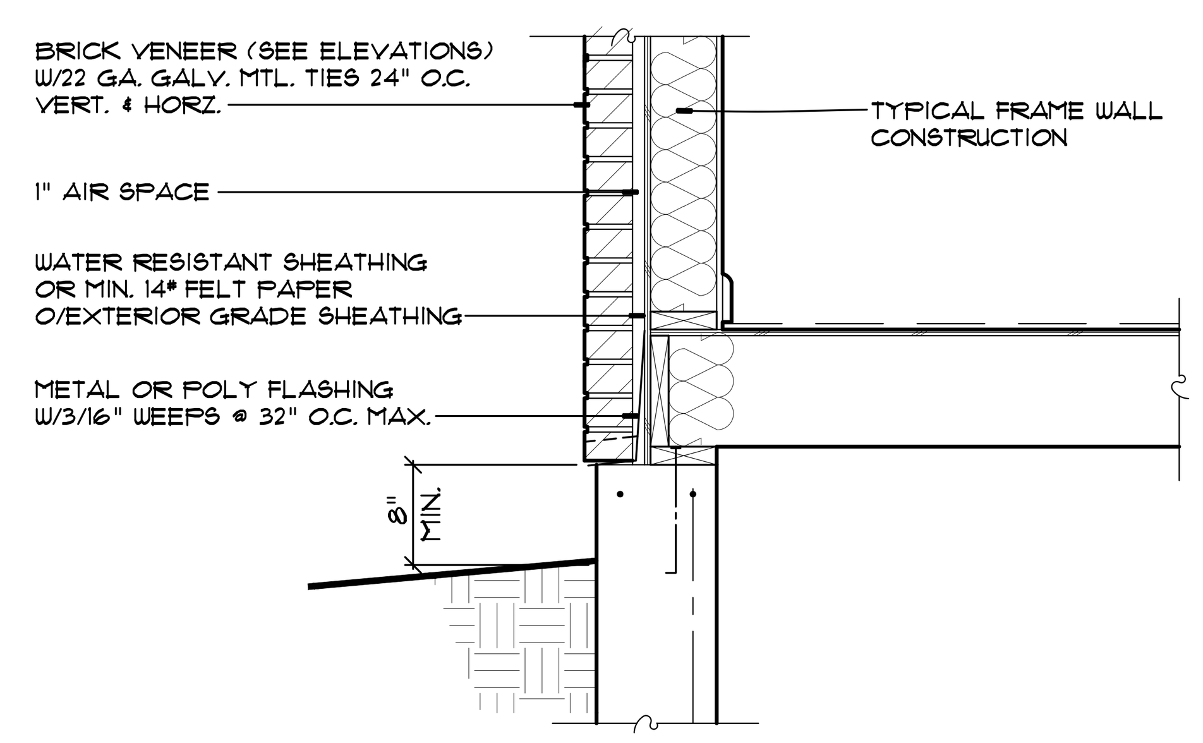
9 SECTION @ GABLE END
SCALE 3/4" = 1'-0"



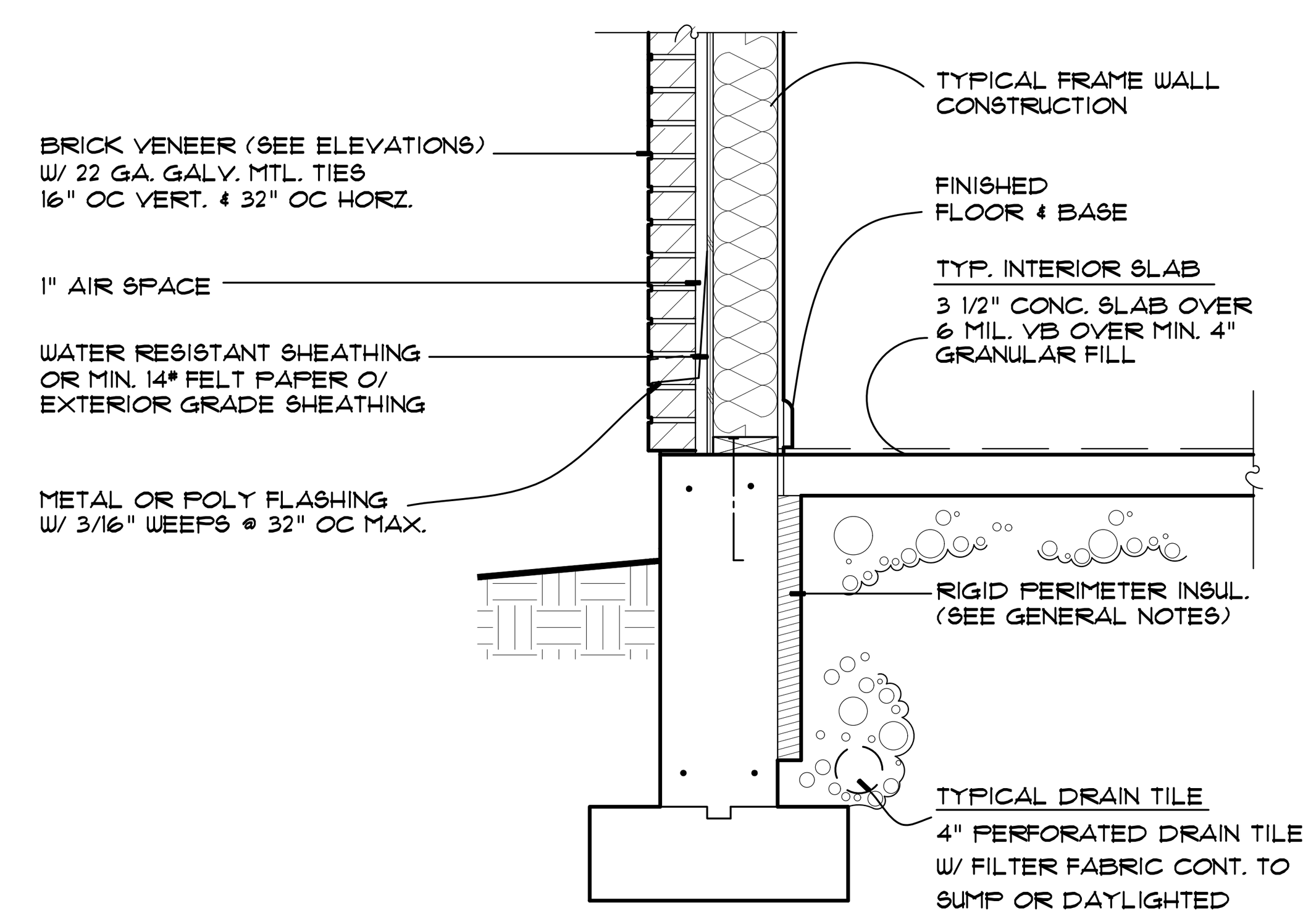
8 SECTION @ COVERED PORCH
SCALE 3/4" = 1'-0"



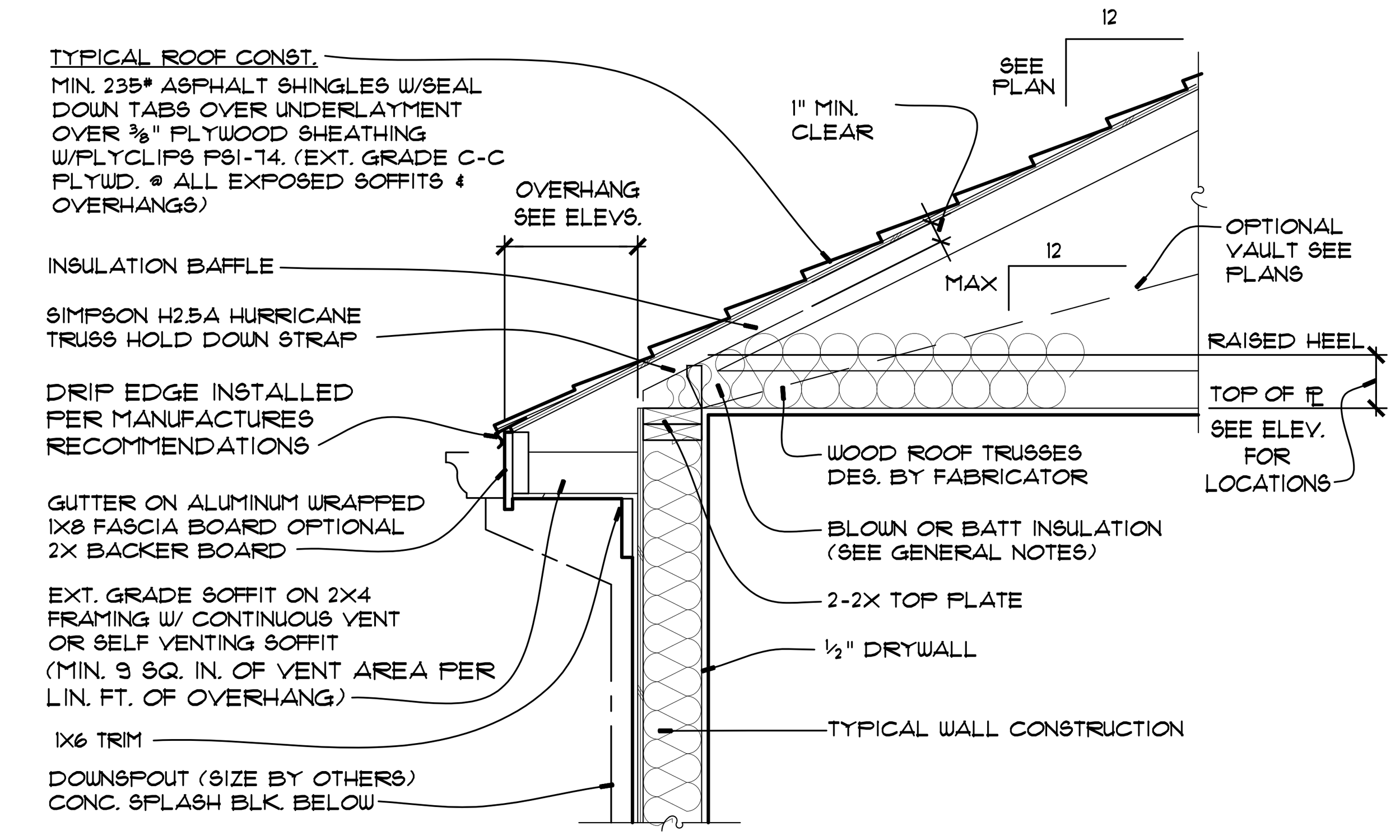
7 BRICK/SIDING TRANS.
3/4" = 1'-0"



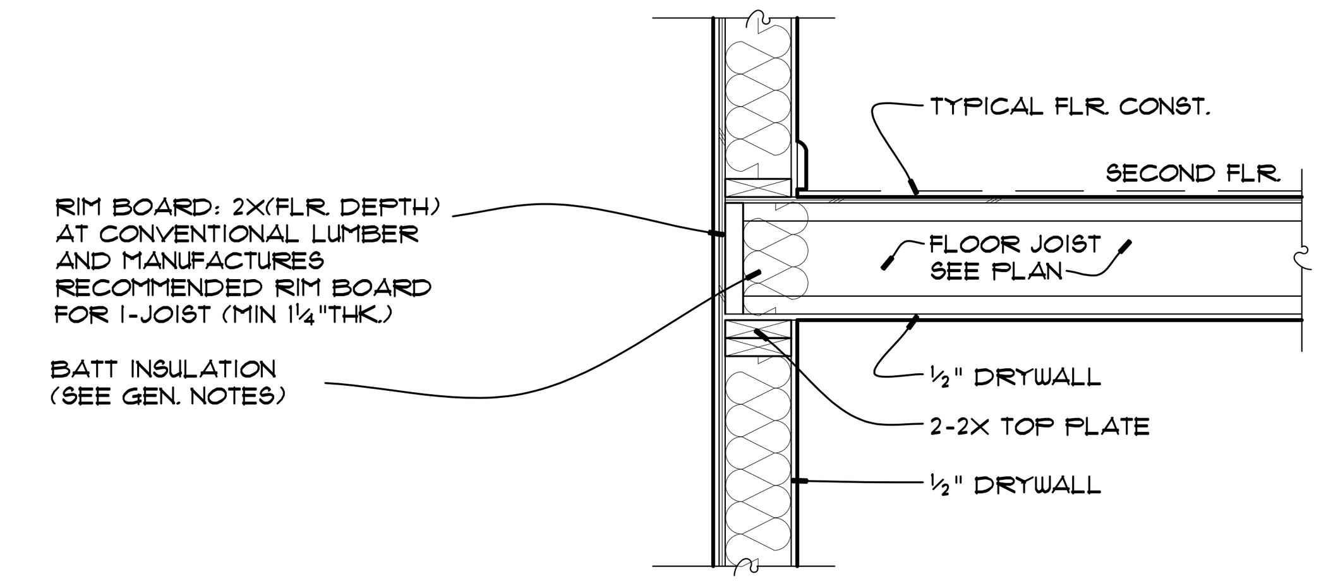
6 SECTION @ FIRST FLR. - BRICK
SCALE 3/4" = 1'-0"



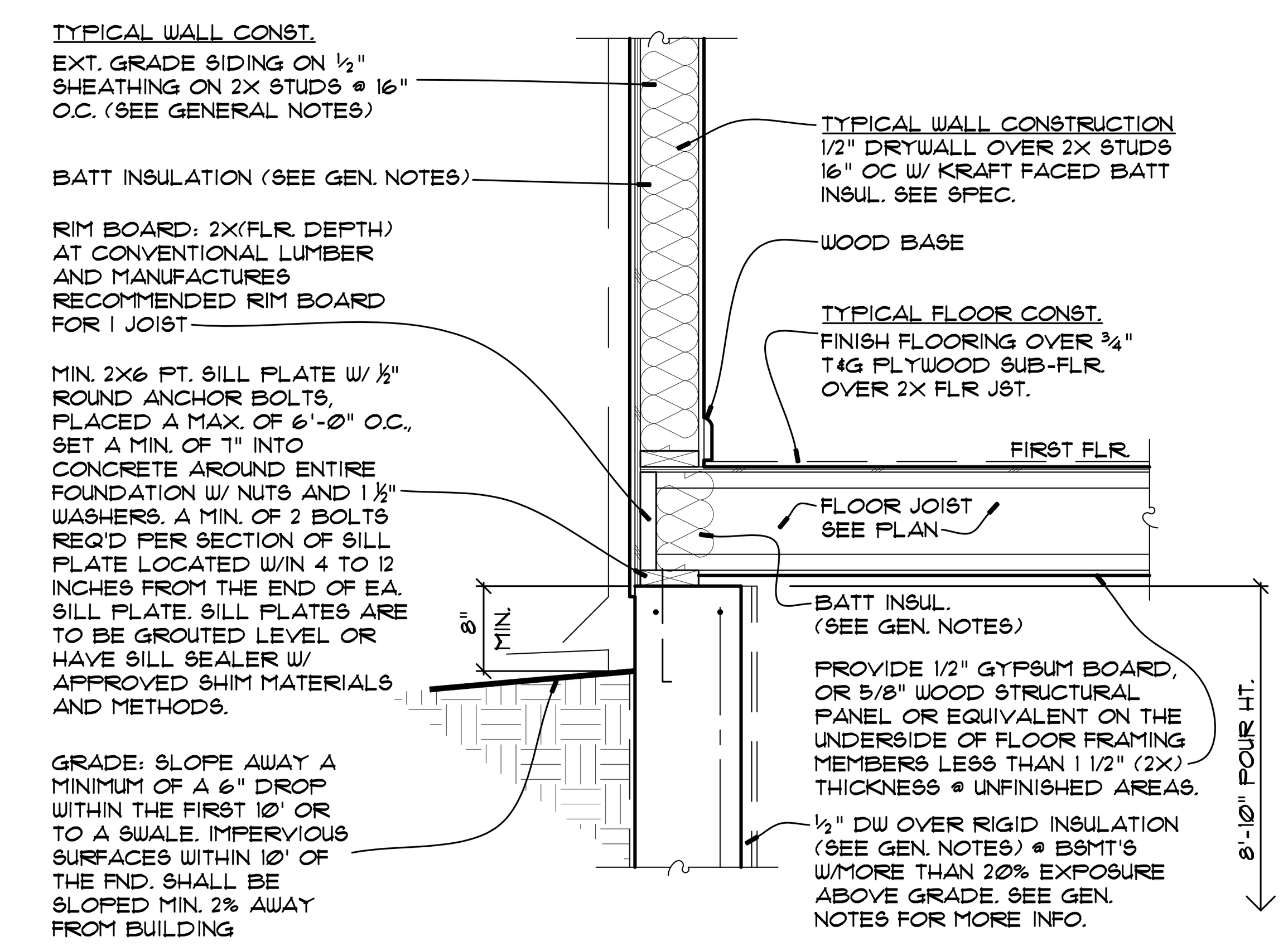
5 TYP. SLAB ON GRADE - BRICK
SCALE 3/4" = 1'-0"



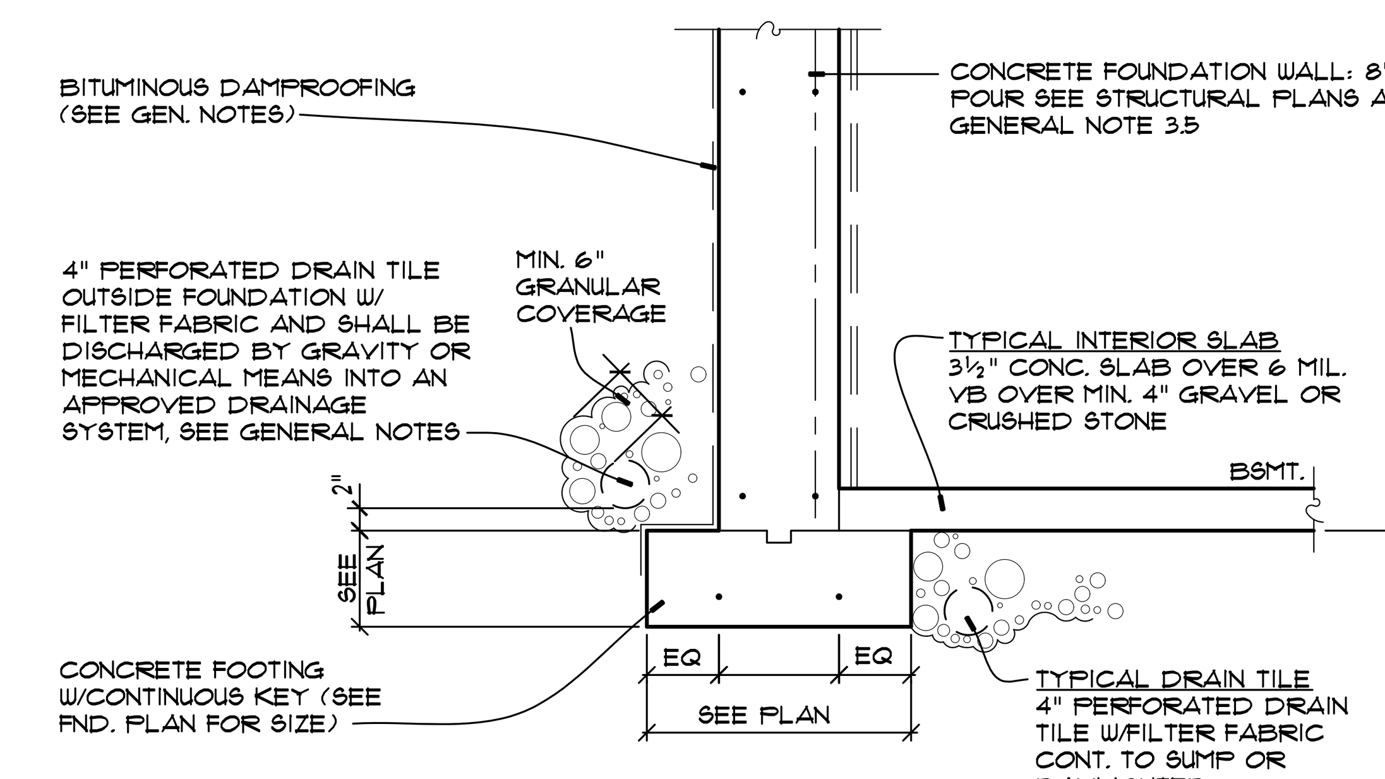
4 TYPICAL SECTION @ ROOF
SCALE 3/4" = 1'-0"



3 TYP. SECTION @ SECOND FLR.
SCALE 3/4" = 1'-0"



2 TYP. SECTION @ FIRST FLR. - FRAME
SCALE 3/4" = 1'-0"



1 TYP. SECTION @ BSMT. FOUNDATION
SCALE 3/4" = 1'-0"

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SECTIONS AND DETAILS

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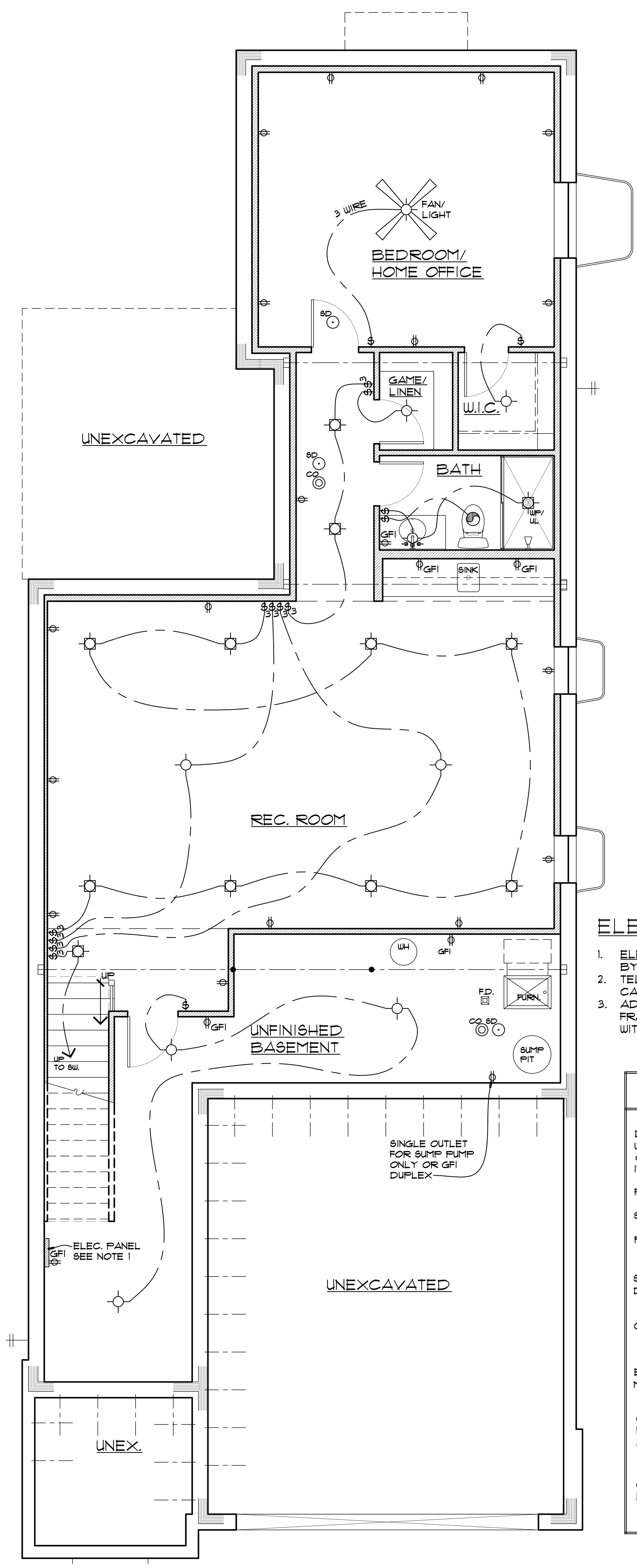
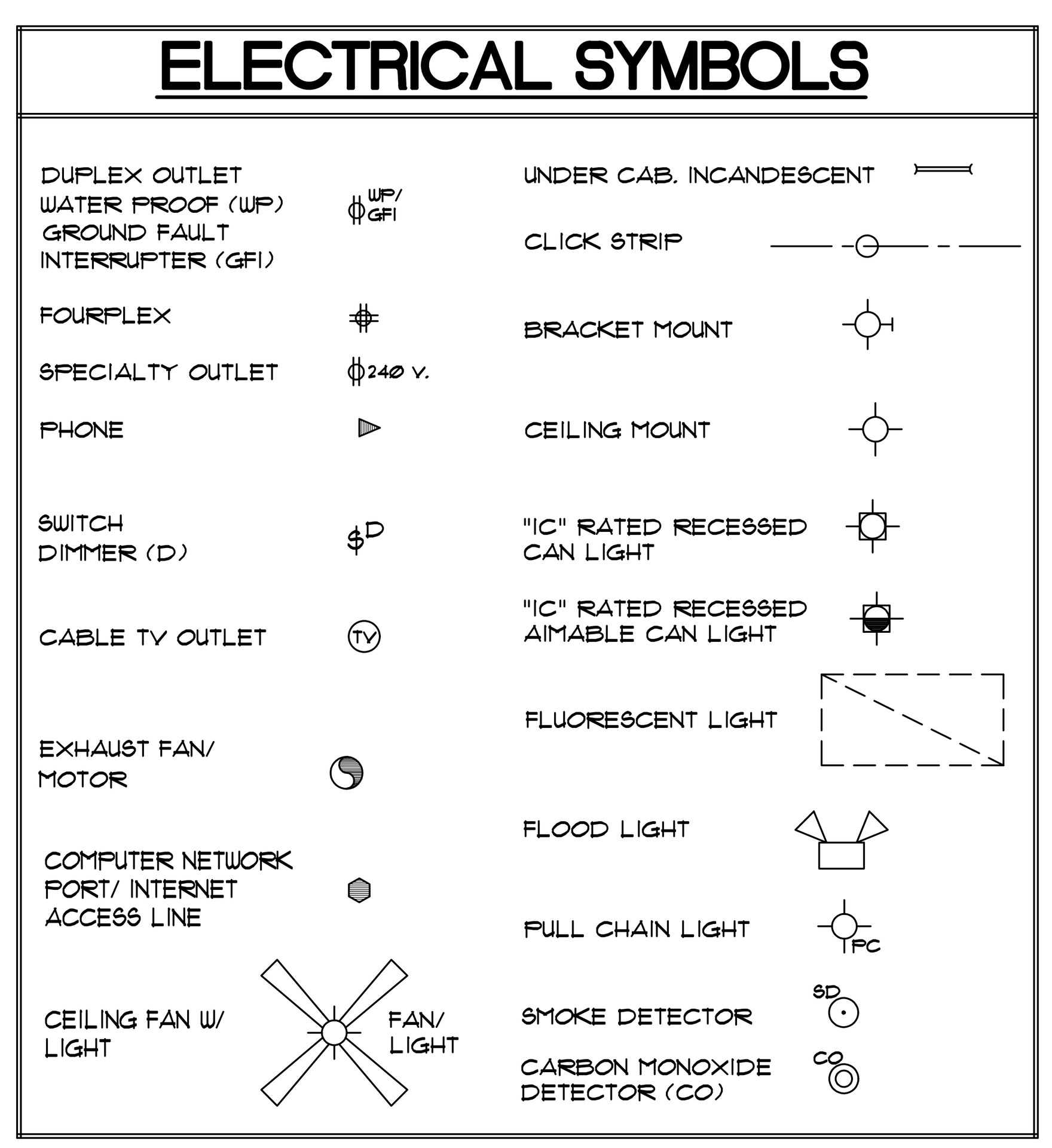


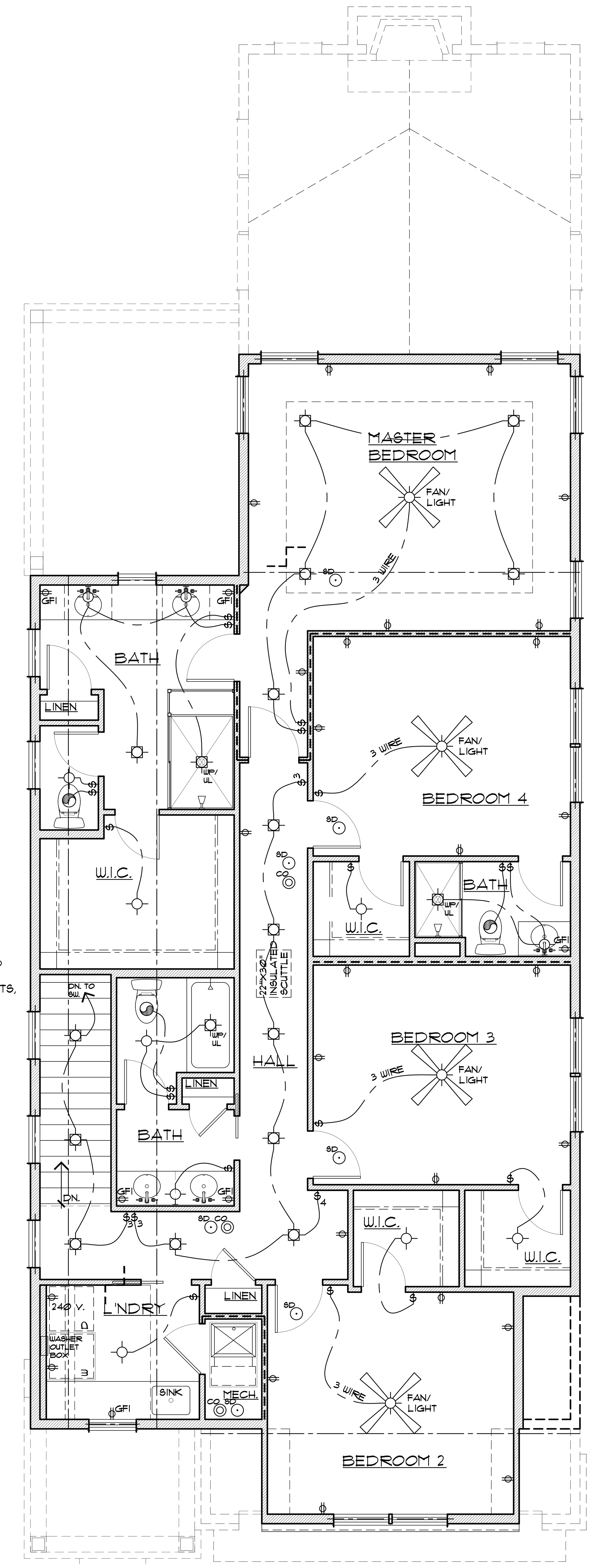
FINISHED LOWER LEVEL ELECTRIC

1/4" = 1'-0"   960 SQ. FT.

ELECTRICAL NOTES

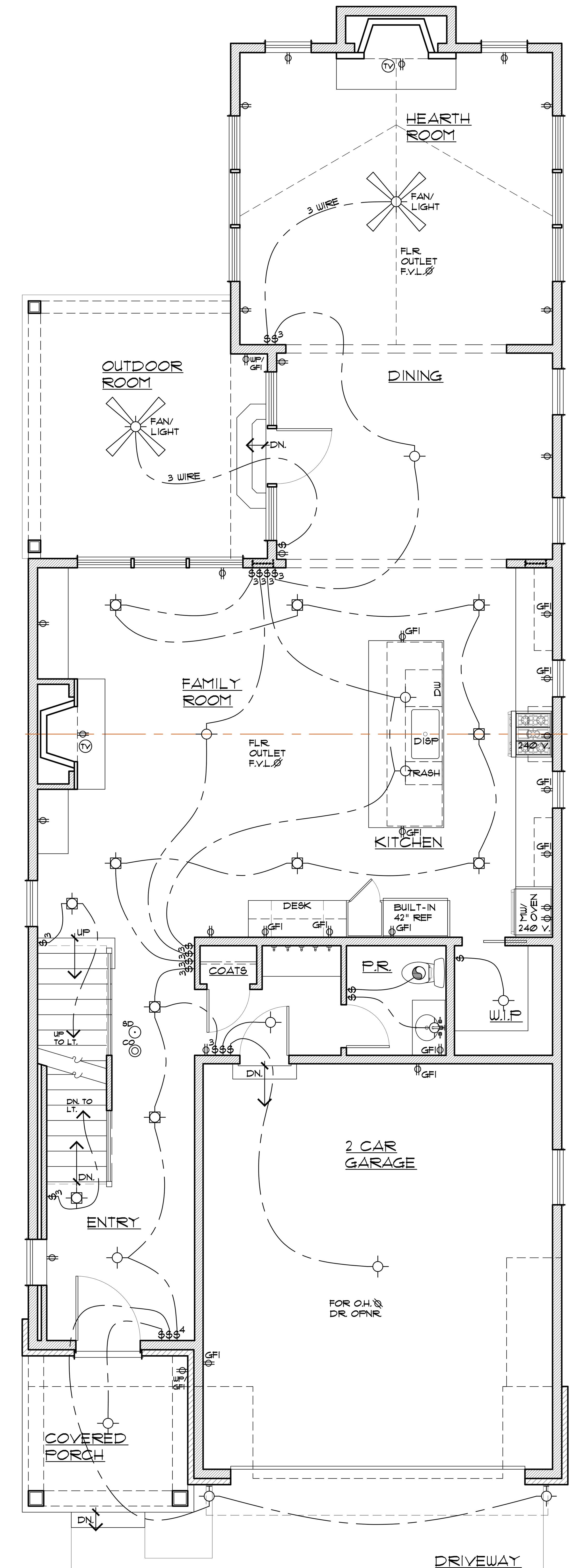
1. ELECTRICAL PANEL: (200 AMP. MINIMUM) TO BE SIZED AND LOCATED BY ELECTRICAL CONTRACTOR.
2. TELEPHONE, INTERCOM SYSTEMS, DOORBELLS, SATELLITE, DATA PORTS, CABLING, AND ETC. TO BE LOCATED AND SPECIFIED BY OWNER.
3. ADJUST LOCATIONS OF RECESSED LIGHT FIXTURES IF REQUIRED FOR FRAMING MEMBERS, DUCTWORK, ETC. REVIEW ALTERNATE LOCATIONS WITH OWNER/BUILDER.





SECOND FLOOR PLAN ELECTRIC

1/4" = 1'-0"



FIRST FLOOR PLAN ELECTRIC

1/4" = 1'-0"

THOMAS ALAN GROUP

CHRISTOPHER THOMAS PIKE
MO# 2011033866
EXPIRATION DATE: 12/31/23

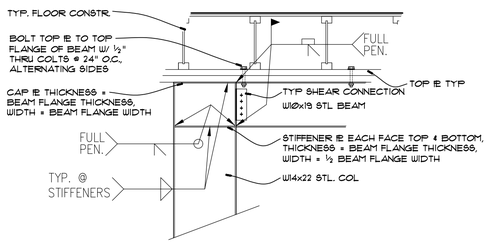
No.	Description	Date
1	PERMIT SET	8/1/2022

A New Residence for:
Douglas PROPERTIES
2343 ST. CLAIR AVE.
BRENTWOOD, MO 63144

THOMAS ALAN GROUP
ARCHITECTURE | DESIGN | INTERIORS
23 N. Gore ave., Suite 303
Webster Groves, MO 63119
(314) 301-9975
ThomasAlanGroup.com

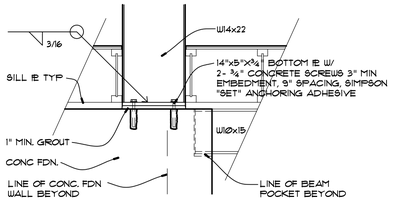
ELECTRICAL FLOOR PLANS

Sheet Number:
A8
of 17



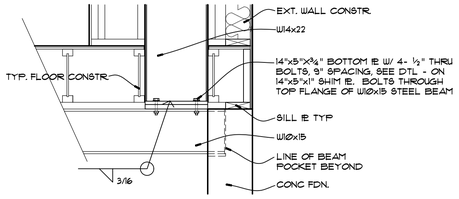
MOMENT FRAME CONECTION DTL

6 3/4" = 1'-0"



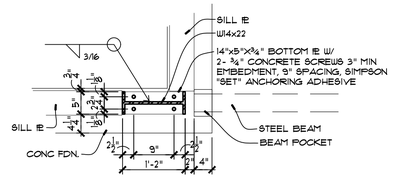
MOMENT FRAME BASE PLATE "A" DTL

5 3/4" = 1'-0"



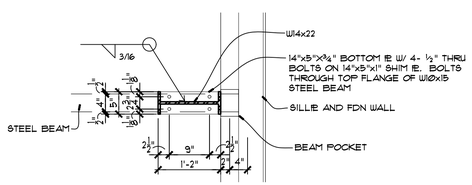
MOMENT FRAME BASE PLATE "B" DTL

3 3/4" = 1'-0"



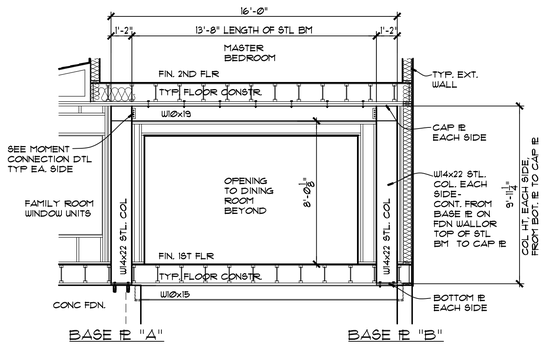
BASE PLATE "A" PLAN @ MOMENT FRAME

4 SCALE 3/4" = 1'-0" FND. PLAN DTL.



BASE PLATE "B" PLAN @ MOMENT FRAME

2 SCALE 3/4" = 1'-0" FND. PLAN DTL.



MOMENT FRAME ELEVATION

1 ¼" = 1'-0" FROM KITCHEN

COLUMN PAD SCHEDULE

	SIZE	REINFORCING
F1	30"X30"X12"D.	#4 BARS @ 8" O.C. EA. WAY
F2	36"X36"X12"D	#4 BARS @ 8" O.C. EA. WAY
F3	42"X42"X12"D	#4 BARS @ 8" O.C. EA. WAY
F4	48"X48"X12"D	#4 BARS @ 8" O.C. EA. WAY
F5	54"X54"X12"D	#4 BARS @ 8" O.C. EA. WAY
F6	60"X60"X12"D	#4 BARS @ 8" O.C. EA. WAY

STEEL COLUMN SCHEDULE

	SIZE & TYPE	CAP IE	BASE IE
C1	3"@X7.58#/FT, ADJ. PIPE	INTEGRAL	INTEGRAL
C2	3.5"@X9.11#/FT, ADJ. PIPE	1/2"	9"X9"X3/4"
C3	HSS 5X5X1/4	3/4"	12"X12"X3/4"

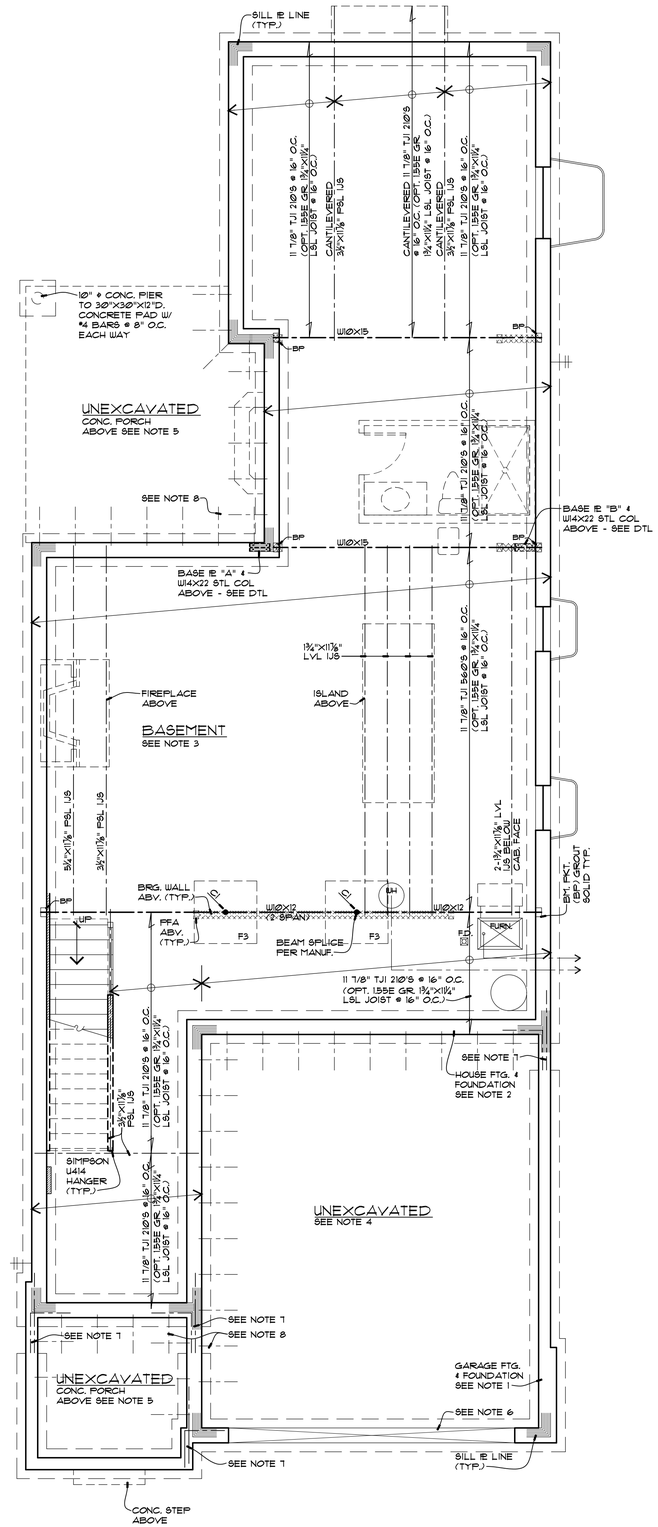
STRUCTURAL GRAPHICS LEGEND

- BEAM OR HEADER
- POST
- BEARING WALL
- METAL HANGER
- POST FROM ABOVE (PFA)
- BEARING WALL ABOVE
- METAL STUD WALL
- BRACED WALL SEGMENT
- PORTAL FRAME (SEE PLAN FOR TYPE)
- SHEAR WALL
- SIMPSON STEEL STRONG-WALL
- HOLD DOWN DEVICE
- MOMENT FRAME
- SIMPSON STRONG-FRAME

STRUCTURAL FOUNDATION NOTES

1. GARAGE FOUNDATION: 8" THICK CONCRETE FOUNDATION WALL AND 18" X 8" CONCRETE FOOTING. TYPICAL, UNLESS NOTED OTHERWISE.
2. HOUSE FOUNDATION: 10" THICK CONCRETE FOUNDATION WALL AND 24" X 10" CONCRETE FOOTING. TYPICAL, UNLESS NOTED OTHERWISE.
3. BASEMENT SLAB: 3½" CONCRETE SLAB OVER 6 MIL POLYETHYLENE BARRIER (LAP JOINTS MIN. 6") OVER MIN. 4" GRAVEL OR CRUSHED STONE. (SLOPE TO FLOOR DRAIN.)
4. GARAGE SLAB: 4" CONCRETE SLAB WITH 6"X6" W1.4XW1.4 WWF OVER 6 MIL POLYETHYLENE BARRIER (LAP JOINTS MIN. 6") OVER MIN. 4" GRAVEL OR CRUSHED STONE. (SLOPE TO GARAGE DOOR MINIMUM 4" UNO.)
5. EXTERIOR PORCH SLABS: 4" CONCRETE SLAB OVER MIN. 4" GRAVEL OR CRUSHED STONE. SLOPE AWAY FROM FOUNDATION WITH EDGES TURNED DOWN BELOW GRADE MINIMUM 12" OR TO TOP OF FOUNDATION WALL.
6. HOLD DOWN TOP OF FOUNDATION WALL @ DOOR TO RECEIVE CONCRETE SLAB.
7. (2) #4 BARS TOP AND BOTTOM, 24" EW. TYPICAL AT ALL INTERSECTING WALLS.
8. #4 BARS @ 24" O.C. DOWEL INTO FOUNDATION WALL AND 24" INTO CONCRETE SLAB. TYPICAL AT EXTERIOR PORCH SLABS AND GARAGE SLAB (ADJACENT TO BASEMENT FOUNDATION WALL).
9. FOOTINGS @ PIERS: SHALL EXTEND A MINIMUM OF 2'-6" BELOW FINISHED GRADE AND BEAR ON UNDISTURBED SOIL OR PREPARED FILL.
10. DOUBLE FLOOR JOISTS AROUND STAIR OPENINGS, FIREPLACE HEARTH, AT CORNERS OF CANTILEVERED BAYS AND UNDER PARALLEL PARTITIONS U.N.O. IF THE PARTITION RUNS FOR LESS THAN 1/2 THE SPAN OF THE JOIST, DOUBLE JOISTS ARE NOT REQUIRED UNLESS NOTED ON PLAN (TYPICAL).
11. STEEL COLUMNS (FIXED AND ADJUSTABLE) SHALL BE SCHEDULE-40 SIZED PER PLAN. ALL COLUMNS SHALL HAVE A CAP AND BASE.
12. FRAME WALL WALKOUT AT BASEMENT: USE 2X6 STUDS @ 16" O.C. TYPICAL ON 1½" @ 2 STORY HOUSES (2 FLOORS @ ROOF LOAD). USE 2X4 STUDS @ 16" O.C. TYPICAL ON 1 STORY HOUSES (1 FLOOR @ ROOF LOAD). MAINTAIN CONTINUITY OF ALL POSTS FROM ABOVE CONTINUOUS TO CONCRETE FOUNDATION BELOW. COORDINATE OTHER SPECIAL CONDITIONS WITH ARCHITECT BEFORE PROCEEDING.
13. MINIMUM OF (2)-#5 REINFORCING BARS AROUND ALL WINDOW AND DOOR OPENINGS IN PLAIN CONCRETE FOUNDATION AND BASEMENT WALLS. BARS SHALL EXTEND A MINIMUM OF 24" BEYOND THE CORNERS OF THE OPENINGS.
14. CONTRACTOR SHALL NOT BACKFILL UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF 7 DAYS.
15. I-JOIST FLOOR SYSTEM DESIGNATIONS ARE THOSE OF: TJI TRUSS JOIST. COMPLY WITH MANUFACTURERS DETAILS INCLUDING BUT NOT LIMITED TO BEARING, BLOCKING, RIM BOARDS, BRACING AND METAL HANGERS ETC. INCLUDING BLOCKING BETWEEN JOIST AT BEARING WALLS OVER STEEL BEAMS PER MANUFACTURE.

NOTE:
ON IN-FILL LOTS WHERE PROPOSED FOOTING OR CONC. PAD'S ARE BEARING ON FILL, ENGINEERED FILL SHALL BE DESIGNED TO MIN. 2000#/FT. BEARING CAPACITY AND BE CERTIFIED IN WRITING BY REGISTERED AND LICENSED GEOTECHNICAL ENGINEERING PROFESSIONAL TO OWNER AND ARCHITECT. OR CONTRACTOR CAN EXTEND FOOTING DEPTH TO VIRGIN SOIL



STRUCTURAL FOUNDATION PLAN

1/4" = 1'-0"

STATE OF MISSOURI
MARC BACCHETTI
NUMBER E-25399
REGISTERED PROFESSIONAL ENGINEER

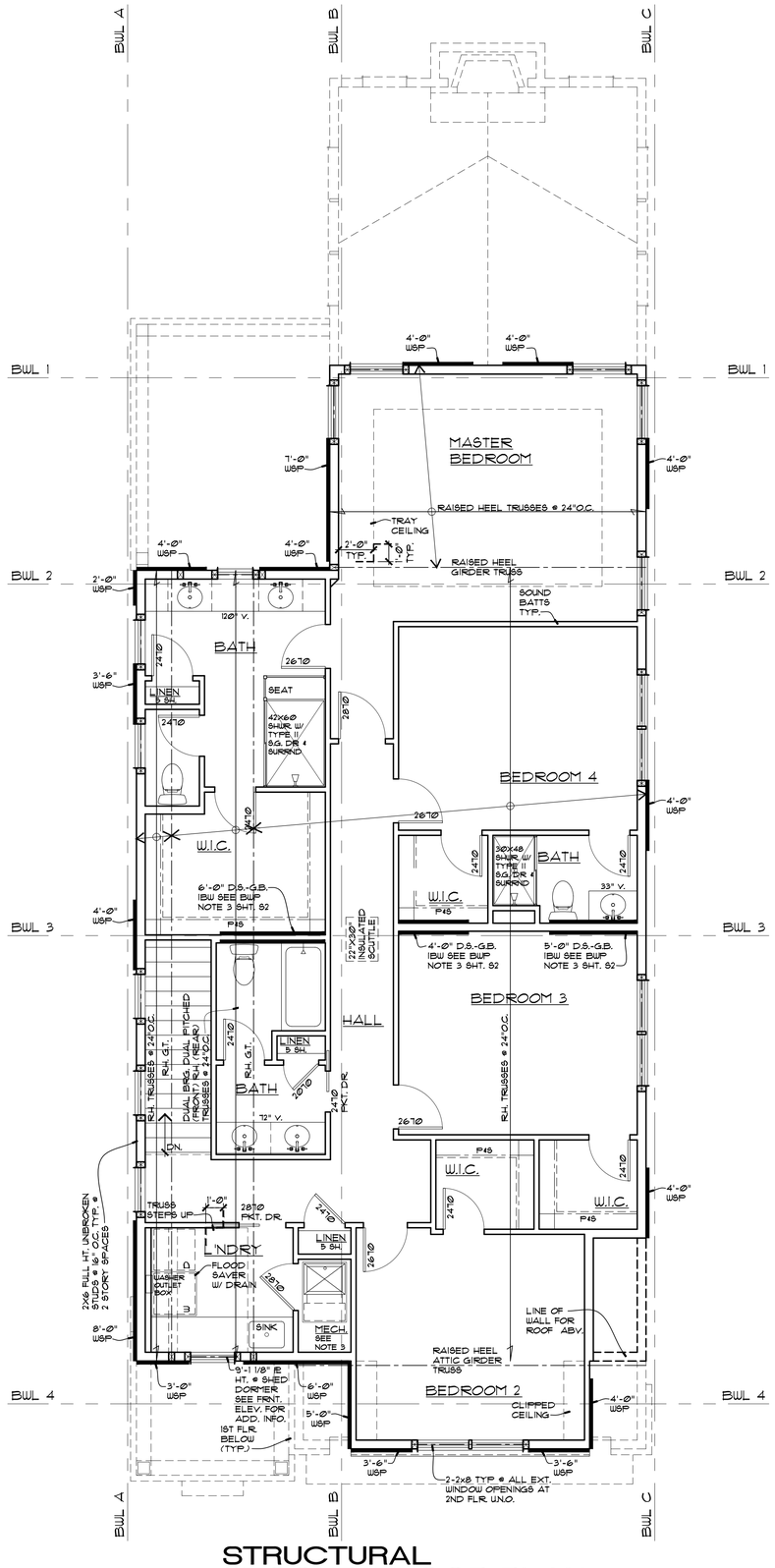
No.	Description	Date
1	PERMIT SET	8/1/2022

A New Residence for:
Douglas PROPERTIES
2343 ST. CLAIR AVE.
BRENTWOOD, MO 63144

DreamRunners Ltd.
43 Camrose Green
Maryville, IL 62062
Phone: 618-550-9417
Fax: 618-288-3782

STRUCTURAL FOUNDATION PLAN

Sheet Number: S1 of 17



STRUCTURAL SECOND FLOOR PLAN

1/4" = 1'-0" F.F. 1,512 SQ. FT.

NOTE: ROOF TRUSSES TO BE BRACED IN ACCORDANCE WITH BCSI 1-03. WEB BRACING & LATERAL PER TRUSS MANUFACTURE. STRUCTURAL ROOF SHEATHING ON TOP CHORD PLANE OF TRUSSES AND GYPSUM BOARD ATTACHED TO BOTTOM CHORD PLANE TO FORM PERMANENT TRUSS BRACING IN ACCORDANCE WITH R502.11.2

STRUCTURAL GRAPHICS LEGEND

- BEAM OR HEADER
- POST
- BEARING WALL
- METAL HANGER
- POST FROM ABOVE (PFA)
- BEARING WALL ABOVE
- METAL STUD WALL
- BRACED WALL SEGMENT
- PORTAL FRAME (SEE PLAN FOR TYPE)
- SHEAR WALL
- SIMPSON STEEL STRONG-WALL
- HOLD DOWN DEVICE
- MOMENT FRAME
- SIMPSON STRONG-FRAME

STRUCTURAL FIRST FLOOR PLAN NOTES

1. ALL INTERIOR WALLS TO BE 3½" (2X4 STUDS), UNLESS NOTED OTHERWISE (UNO).
2. POST INDICATED SHALL BE MINIMUM 2-2X WALL THICKNESS, GLUED AND NAILED UNLESS NOTED OTHERWISE. MINIMUM HEADER SIZE 2-2X10'S GLUED AND NAILED.
   EXCEPTIONS:
   A. POSTS CARRYING ROOF LOADS ONLY AND NOT EXCEEDING 8'-1" IN HEIGHT AND SUPPORTING HEADERS SPANNING 3'-0" OR LESS MAY CONSIST OF A SINGLE 2X CRIPPLE AND (1) FULL HT. UNBROKEN STUD UNLESS NOTED OTHERWISE.
   B. WOOD POSTS SUPPORTING BEAMS ARE TO MATCH THE WIDTH OF THE FLANGE BEING SUPPORTED UNLESS NOTED OTHERWISE.
3. DOUBLE FLOOR JOISTS AROUND STAIR OPENINGS, FIREPLACE HEARTH, AT CORNERS OF CANTILEVERED BAYS AND UNDER PARALLEL PARTITIONS U.N.O. IF THE PARTITION RUNS FOR LESS THAN 1/2 THE SPAN OF THE JOIST, DOUBLE JOISTS ARE NOT REQUIRED UNLESS NOTED ON PLAN (TYPICAL).
4. INSTALL METAL POST ANCHOR SET INTO TOP OF CONCRETE W/NON-SHRINK GROUT AT ALL CONCRETE PORCH POST, TYP.

STRUCTURAL SECOND FLOOR PLAN NOTES

1. ALL INTERIOR WALLS TO BE 3½" (2X4 STUDS), UNLESS NOTED OTHERWISE (UNO).
2. POST INDICATED SHALL BE MINIMUM 2-2X WALL THICKNESS, GLUED AND NAILED UNLESS NOTED OTHERWISE. MINIMUM HEADER SIZE 2-2X10'S GLUED AND NAILED.

   EXCEPTIONS:
   A. POSTS CARRYING ROOF LOADS ONLY AND NOT EXCEEDING 8'-1" IN HEIGHT AND SUPPORTING HEADERS SPANNING 3'-0" OR LESS MAY CONSIST OF A SINGLE 2X CRIPPLE AND (1) FULL HT. UNBROKEN STUD UNLESS NOTED OTHERWISE.
   B. WOOD POSTS SUPPORTING BEAMS ARE TO MATCH THE WIDTH OF THE FLANGE BEING SUPPORTED UNLESS NOTED OTHERWISE.

BRACED WALL PANEL NOTES

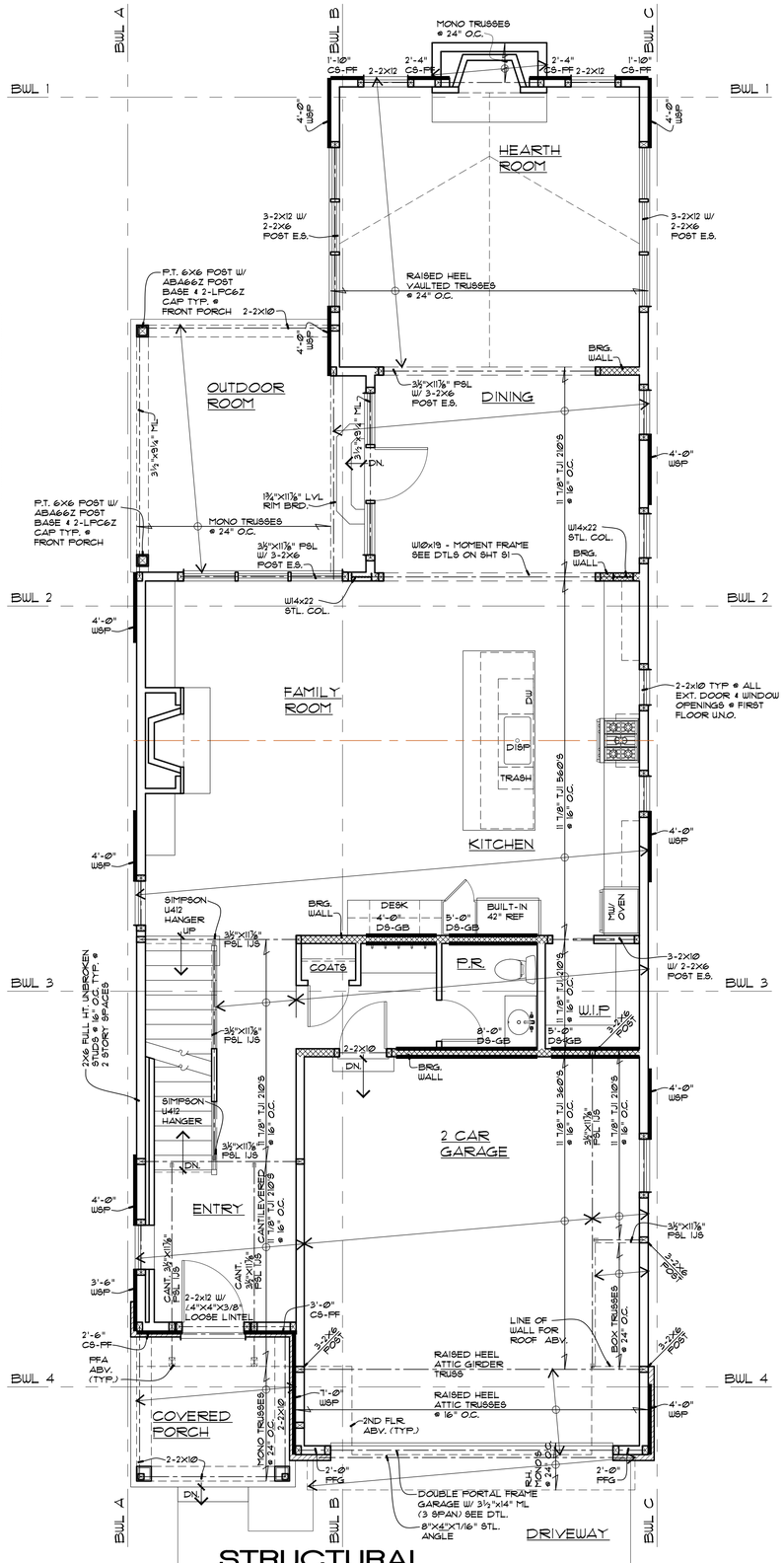
1. EXTERIOR WALL SHEATHING: APA RATED SHEATHING EXPOSURE 1, SPAN RATING 24/16, (7/16" OSB) OR 32/16, (15/32" PLYWOOD) ½" NOMINAL. HOUSE AS DETAILED PRESCRIBES TO THE "CONTINUOUS SHEATHING" (R602.10.4) CODE REQUIREMENT IN ACCORDANCE WITH METHOD CS-WSP OF SECTION R602.10.4.1 ON ALL AREAS OF THE EXTERIOR WALLS. THE HOUSE ALSO USES METHOD CS-PFF FOR NARROW WALLS WHERE INDICATED ON PLANS. (SEE DETAILS) OPTIONAL BRACED WALL PANEL CONSTRUCTION METHODS ARE AVAILABLE TO THE CONTRACTOR PER SECTION R602.10.1.1. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF ALTERNATE METHODS ARE DESIRED TO BE EMPLOYED, AS ADDITIONAL CALCULATIONS AND DELINEATION ON THE CONSTRUCTION DOCUMENTS WILL BE REQUIRED. STRUCTURAL ENGINEERING BY OUTSIDE CONSULTANTS MAY BE REQUIRED. CONTRACTOR TO CONFIRM AND NOTIFY THE ARCHITECT IN WRITING OF THE SUBJECT PROPERTIES SEISMIC DESIGN CATEGORY, IF A 'D' CATEGORY, BEFORE PROCEEDING WITH THE WORK.

2. NAILING TO BE IN ACCORDANCE WITH TABLE R602.3(1) THROUGH R602.3(4). GYPSUM SHEATHING SHALL BE FASTENED IN ACCORDANCE WITH TABLE R602.3(1). RAFTER/CEILING JOIST SYSTEMS SHALL BE NAILED TO THE TOP PLATE OF THE WALL IN ACCORDANCE WITH TABLE R602.3(1). TRUSSES SHALL BE NAILED TO THE TOP PLATE OF THE WALL WITH 3-16d NAILS TOE NAILED WITHOUT SPLITTING THE END OF THE TRUSS.

3. INTERIOR BRACED WALLS: A CLG. OR FLR. JST./TRUSS LOCATED DIRECTLY ABV. AN INTERIOR BRACED WALL LINE SHALL BE ATTACHED WITH 8d NAILS AT 6" O.C. TOENAILED, WHERE THE CLG. OR FLR. JST'S/TRUSS IS NOT LOCATED DIRECTLY ABV. THE INTERIOR BRACED WALL LINE OR THE FLR/ROOF FRAMING ABV. THE INTERIOR BRACED WALL LINE IS PERPENDICULAR TO THE WALL, ADD 2X4 BLOCKING AT 16" O.C. BETWEEN THE FLR/ROOF FRAMING. THE BLOCKING SHALL BE ATTACHED TO THE FLR/ROOF FRAMING W/ 3-8d NAILS TOENAILED AT EA. END OF THE BLOCK. EA. BLOCK SHALL BE TOENAILED TO THE INTERIOR BRACED WALL PANEL W/ 3-8d NAILS TOENAILED. PROVIDE 2X HORIZONTAL BLOCKING AT ALL HORIZONTAL DRYWALL JOINTS IN BRACED WALL PANELS ONLY (ENTIRE WALL LINE NOT REQUIRED TO BE BLOCKED).

   SOLE PLATES OF INTERIOR BRACED WALLS SHALL BE ATTACHED TO A FLR. JST./TRUSS LOCATED DIRECTLY BELOW THE WALL WITH 3-16d NAILS AT 6" O.C. WHERE THE CLG. OR FLR. JSTS./TRUSS IS NOT LOCATED DIRECTLY BELOW THE INTERIOR BRACED WALL LINE OR THE FLR. FRAMING BELOW THE INTERIOR BRACED WALL PANEL IS PERPENDICULAR TO THE WALL, ADD 2X4 BLOCKING AT 16" O.C. BETWEEN THE FLR. FRAMING. THE BLOCKING SHALL BE ATTACHED TO THE FLOOR FRAMING W/ 3-8d NAILS TOENAILED AT EA. END OF THE BLOCK.

4. CRIPPLE STUD WALL FRAMING ABV. PORTAL FRAMES (CONSISTING OF A SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE) MAY BE ADDED AS LONG AS THE COMBINED HEIGHT DOES NOT EXCEED 12' AND THE TWO WALLS ARE STRAPPED TOGETHER ON THE INTERIOR SIDE W/ A VERTICAL 16 GAUGE METAL 1½" WIDEX21" LONG STRAP. A MIN. OF 10" OF THE STRAP SHALL BE CONNECTED TO EA. WALL OR GABLE TRUSS W/ 9-16d NAILS FOR A TOTAL OF 18-16d NAILS IN THE ENTIRE STRAP. STRAPS TO BE LOCATED AT EA. END OF THE CONNECTED WALLS OR WALL AND GABLE TRUSS WHERE SPACE ALLOWS FOR THE 10" LENGTH OF STRAP, 4' MAX. ON CENTER STRAP SPACING. THE STRAPS SHALL NOT BE BENT HORIZONTALLY TO ACCOMMODATE WOOD FRAMING. IF APPLICABLE NAILERS SHOULD BE ADDED TO ONE OF THE WALLS OR GABLE END USING A MINIMUM OF 9-16d NAILS TO CREATE THE VERTICAL PLANE NEEDED TO MOUNT THE STRAP.



STRUCTURAL FIRST FLOOR PLAN

1/4" = 1'-0"

STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER
MARC BACCHETTI
NUMBER E-25399

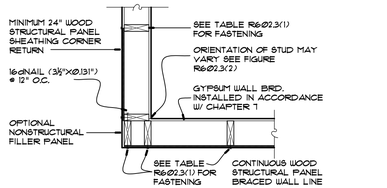
No.	Description	Date
1	PERMIT SET	8/1/2022

A New Residence for:
Douglas PROPERTIES
2343 ST. CLAIR AVE.
BRENTWOOD, MO 63144

DreamRunners Ltd.
43 Camrose Green
Maryville, IL 62062
Phone: 618-550-9417
Fax: 618-288-3782

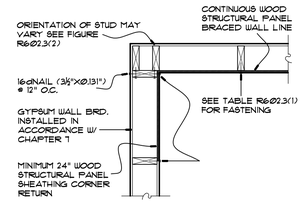
STRUCTURAL FIRST FLOOR PLAN AND STRUCTURAL SECOND FL'R PLAN

Sheet Number: S2 of 17



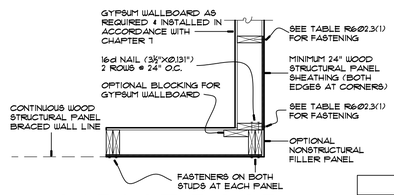
16 OUTSIDE CORNER DTL.

3/4" = 1'-0"



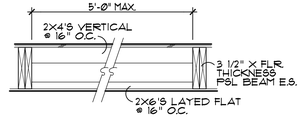
15 INSIDE CORNER DTL.

3/4" = 1'-0"



GARAGE DOOR CORNER DETAIL

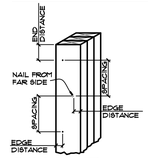
14 3/4" = 1'-0"



12 PLUMBING CHASE

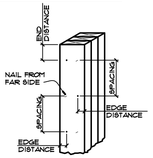
SCALE 3/4" = 1'-0"

NAILING SCHEDULE FOR BUILT UP COLUMN					
COLUMN SIZE	NAILS	ROW(S) (EA. SIDE)	SPACING	EDGE DISTANCE	END DISTANCE
(2) 2x4	10d	1	8"	1"	2 1/2"
(3) 2x4	30d	1	8"	1"	3 1/2"
(4) 2x4	60d	1	8"	1 1/4"	4 1/2"
(2) 2x6	10d	2	8"	1 1/2"	2 1/2"
(3) 2x6	30d	2	8"	1 1/2"	3 1/2"
(4) 2x6	60d	2	8"	1 1/2"	4 1/2"
(2) 2x8	10d	2	8"	2"	2 1/2"
(3) 2x8	30d	2	8"	2"	3 1/2"
(4) 2x8	60d	2	8"	2"	4 1/2"



SINGLE ROW NAIL PLACEMENT

1" = 1'-0"

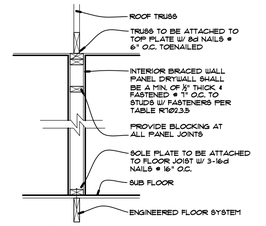


TWO ROW NAIL PLACEMENT

1" = 1'-0"

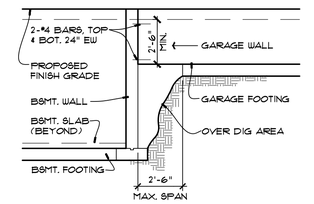
STRUCTURAL BUILT-UP WOOD COLUMN

11 3/4" = 1'-0"



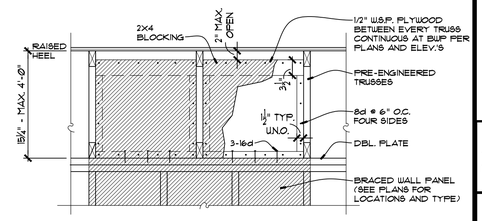
IBW W/TRUSS and JOIST DIRECTLY ABOVE and BELOW

8 3/4" = 1'-0"



GARAGE FOOTING IN RELATION TO A BASEMENT FOOTING

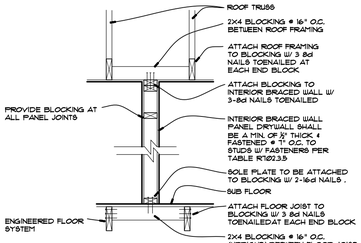
5 SCALE 1/4" = 1'-0"



BRACED WALL PANEL TO TRUSS CONNECTION @ RAISED HEEL COND.

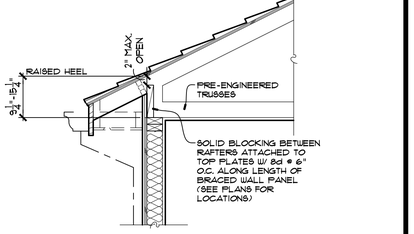
4 SCALE 3/4" = 1'-0"

IN ACCORDANCE W/ 2003 IRC SECTION R602.10.6.2



IBW PERPENDICULAR W/TRUSS and JOIST

7 3/4" = 1'-0"



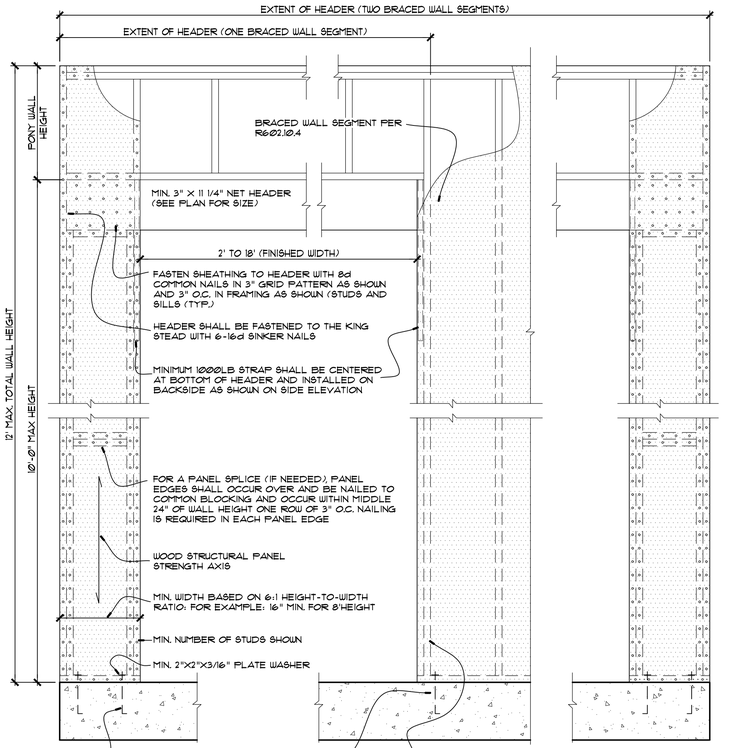
BRACED WALL PANEL TO TRUSS CONNECTION @ RAISED HEEL COND.

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

IN ACCORDANCE W/ 2003 IRC SECTION R602.10.6.2

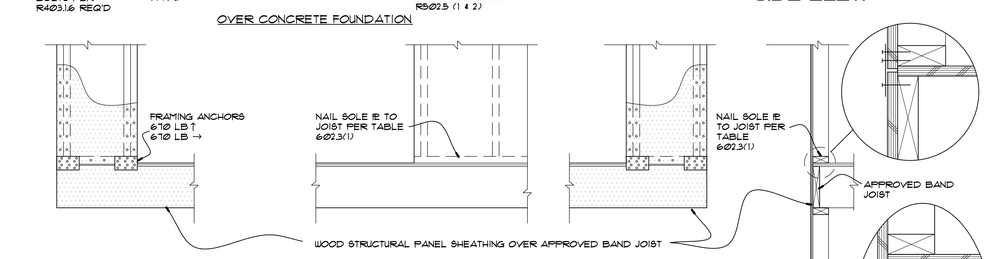
IBW W/O TRUSS and JOIST DIRECTLY ABOVE and BELOW

6 3/4" = 1'-0"

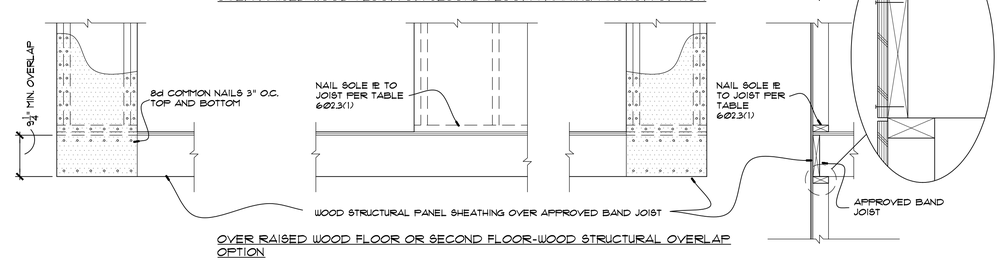


SIDE ELEV.

OVER CONCRETE FOUNDATION



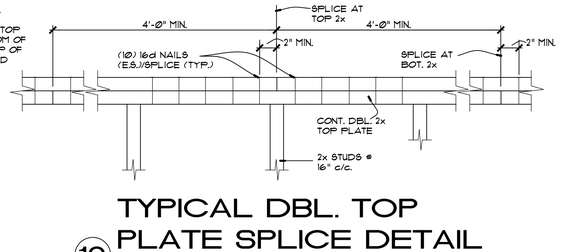
OVER RAISED WOOD FLOOR OR SECOND FLOOR-FRAMING ANCHOR OPTION



OVER RAISED WOOD FLOOR OR SECOND FLOOR-WOOD STRUCTURAL OVERLAP OPTION

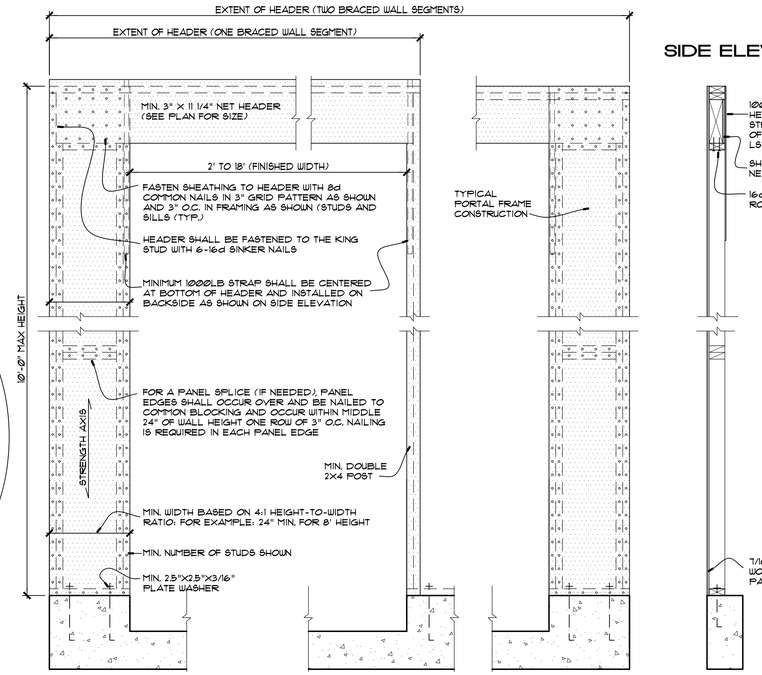
METHOD CS-PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION

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

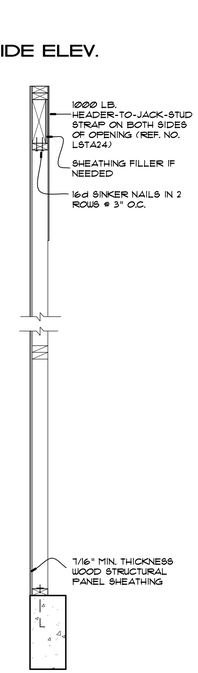


TYPICAL DBL. TOP PLATE SPLICE DETAIL

10 NOT TO SCALE

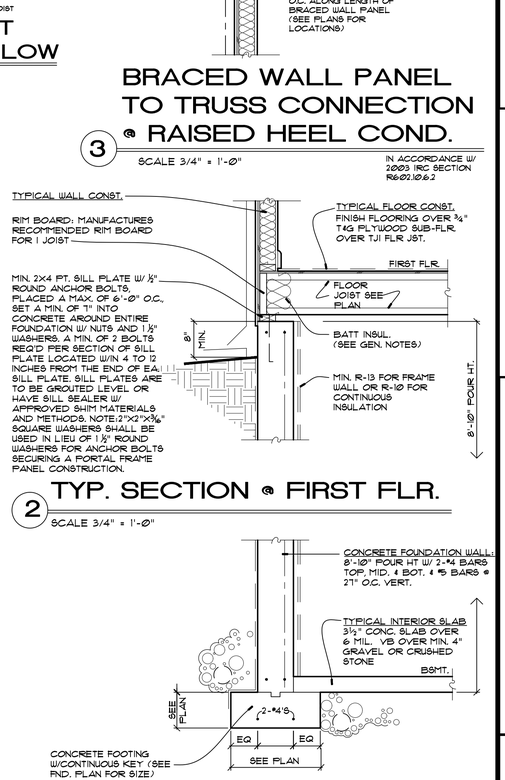


SIDE ELEV.



METHOD PFG: PORTAL FRAME AT GARAGE

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



TYP. SECTION @ FIRST FLR.

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

TYP. SECTION @ BSMT. FDN

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

STATE OF MISSOURI
MARC BACCHETTI NUMBER E-25399
REGISTERED PROFESSIONAL ENGINEER

No.	Description	Date
1	PERMIT SET	8/1/2022

A New Residence for:
Douglas PROPERTIES
2343 ST. CLAIR AVE.
BRENTWOOD, MO 63144

DreamRunners Ltd.
43 Camrose Green
Maryville, IL 62062
Phone: 618-530-9417
Fax: 618-288-3782

STRUCTURAL SECTIONS AND DETAILS

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