

PROFESSIONAL CERTIFICATION
 I certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License Number #14678, Expiration Date: 6/30/2020

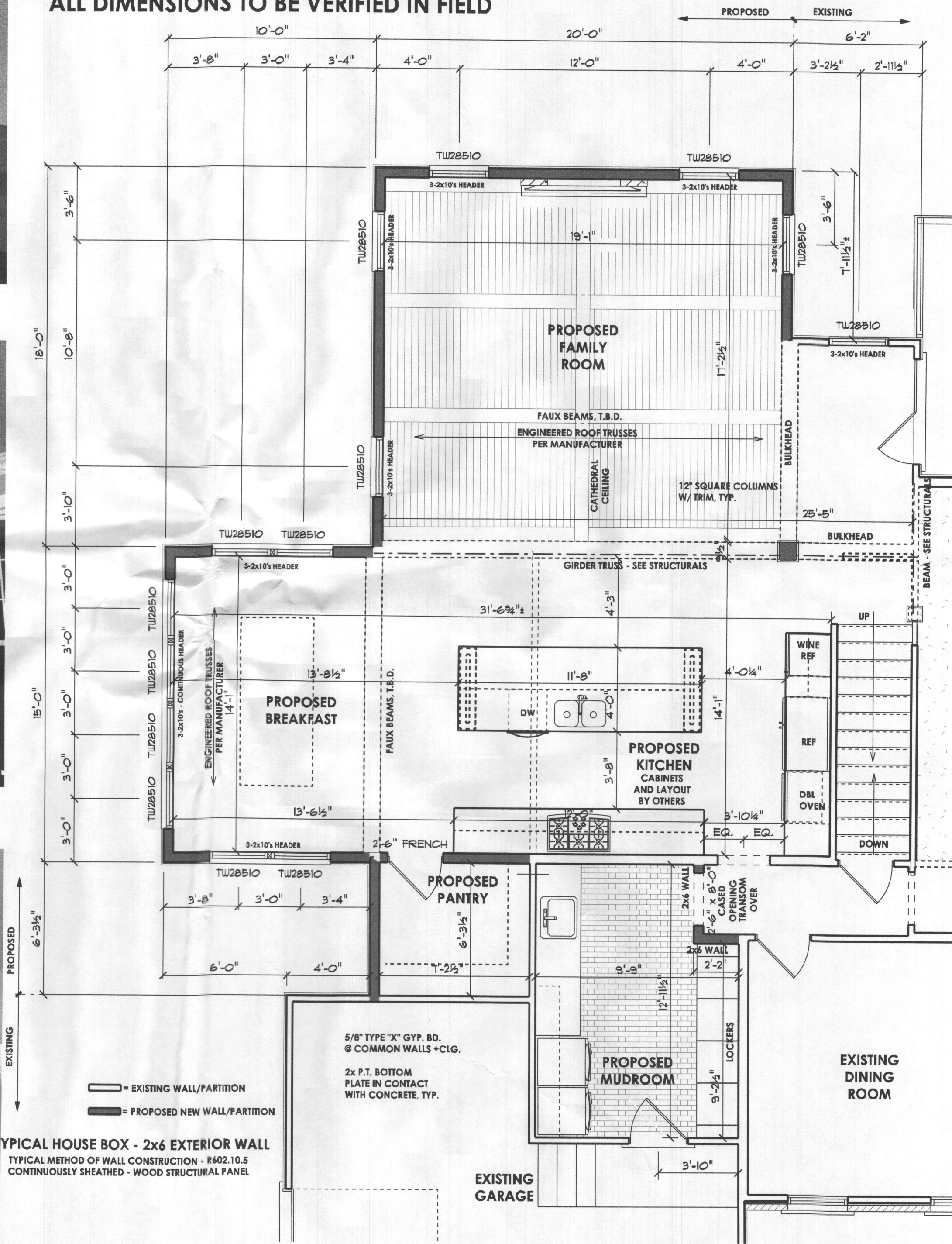
Jonathan Rivera
 License Number #14678

Gemmill Residence
 PROPOSED ADDITION
 2896 Hunt Valley Drive, Glenwood, Maryland 21738

ISSUE DATES:
 10-11-19 PERMIT REVIEW SET

SCALE: 1/4" = 1'-0"
FIRST FLOOR
3.01
 PRINT DATE:
 Saturday, October 12, 2019

ALL DIMENSIONS TO BE VERIFIED IN FIELD

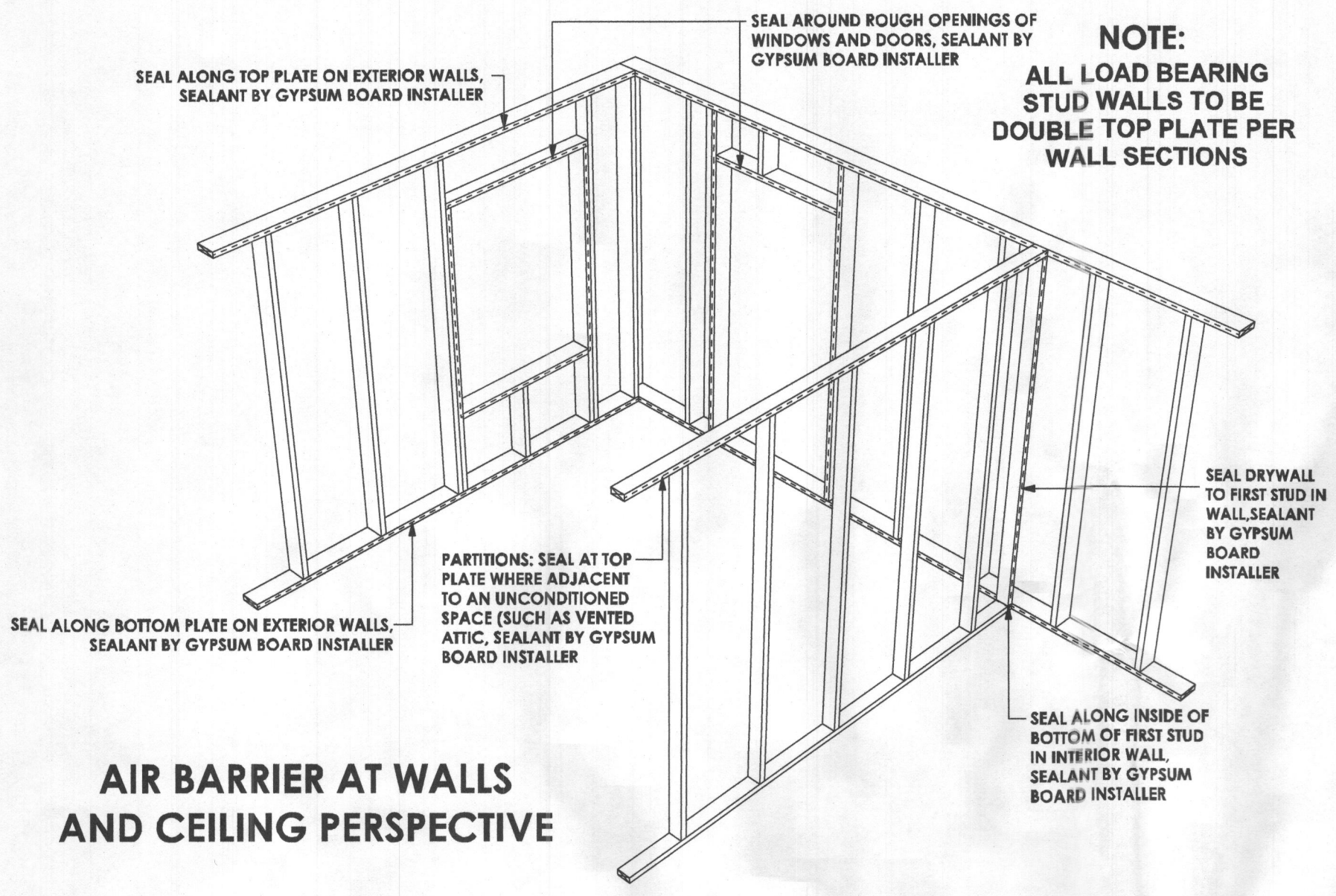


TYPICAL HOUSE BOX - 2x6 EXTERIOR WALL
 TYPICAL METHOD OF WALL CONSTRUCTION - R602.10.5
 CONTINUOUSLY SHEATHED - WOOD STRUCTURAL PANEL

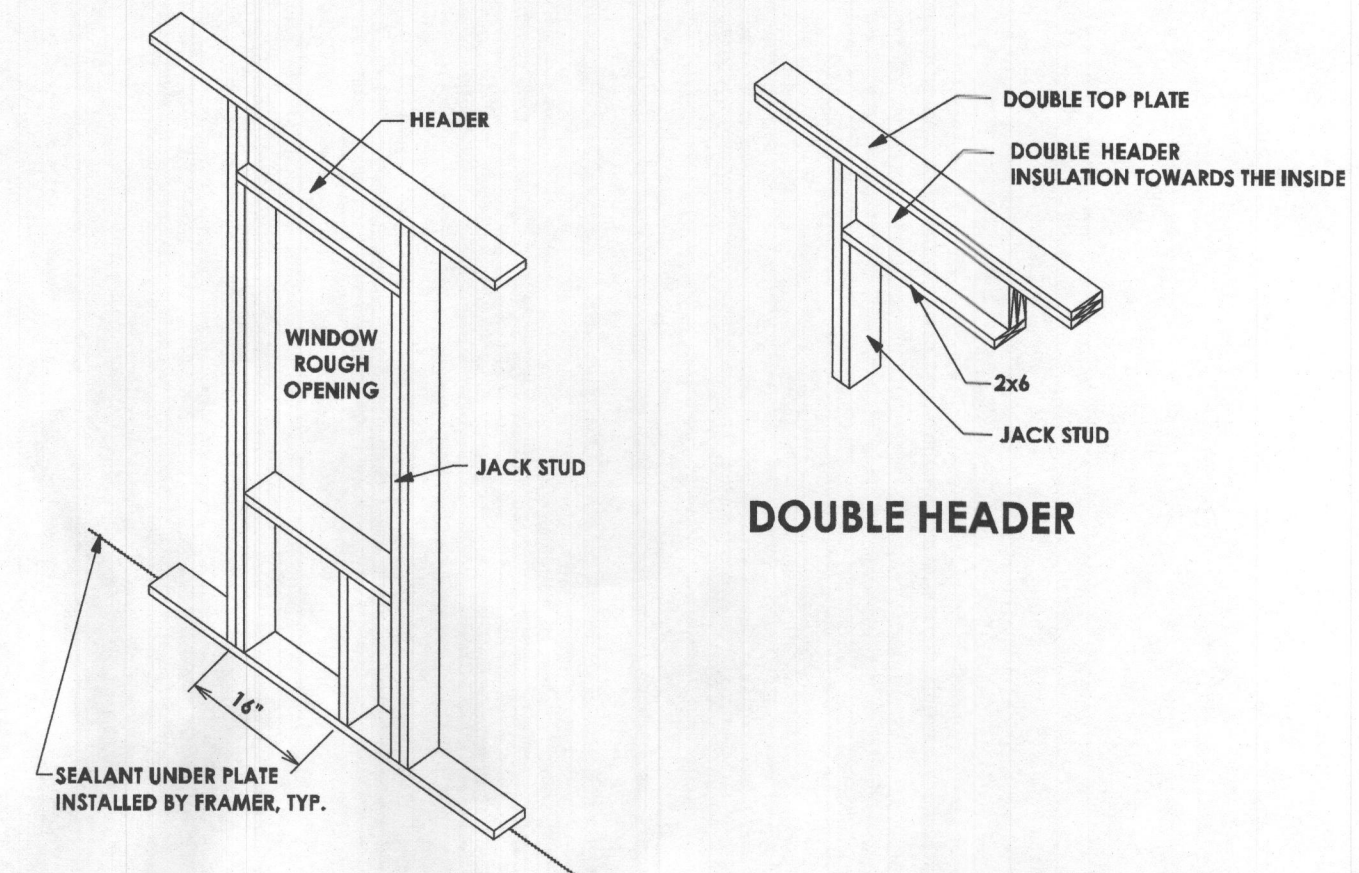


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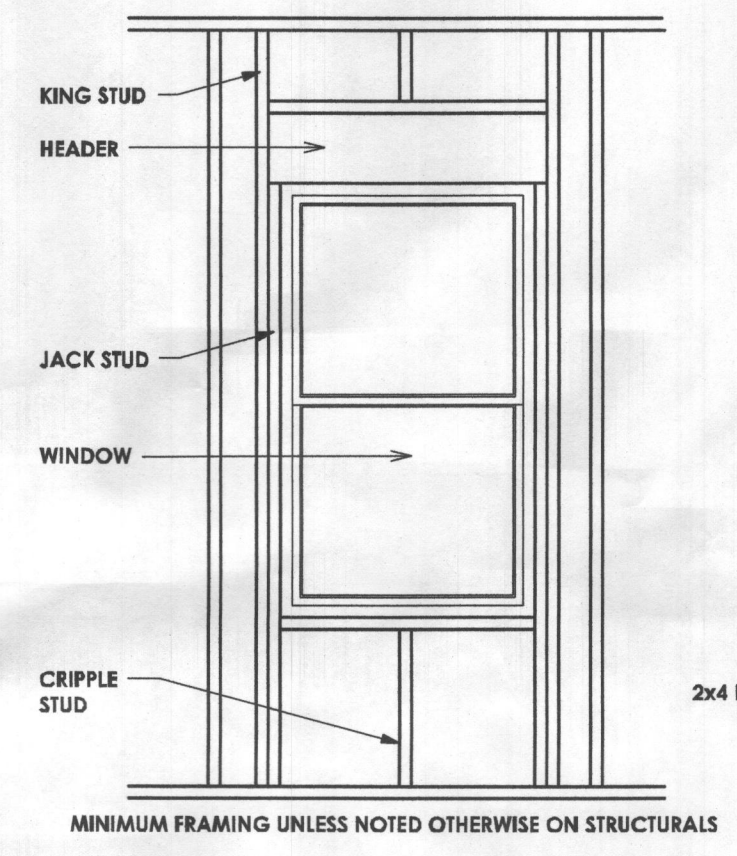


AIR BARRIER AT WALLS AND CEILING PERSPECTIVE

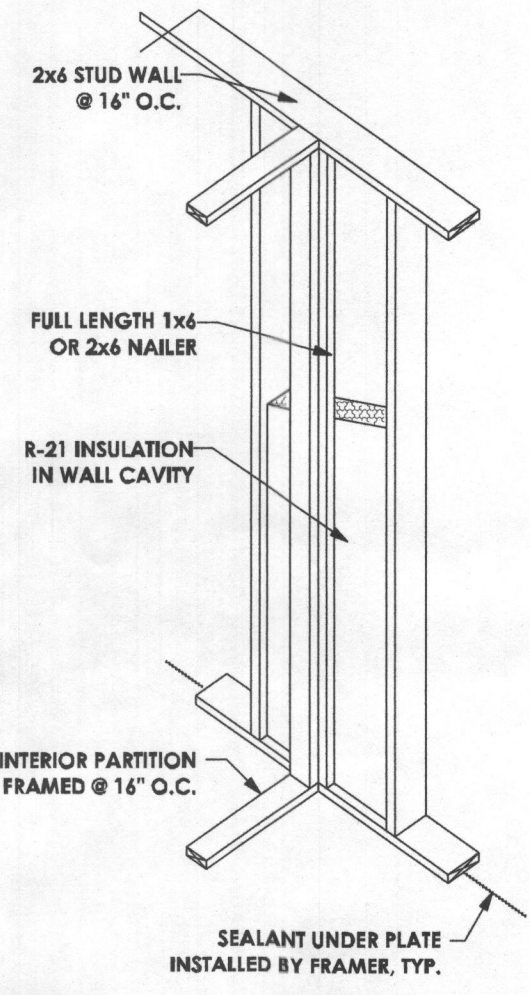


DOUBLE HEADER

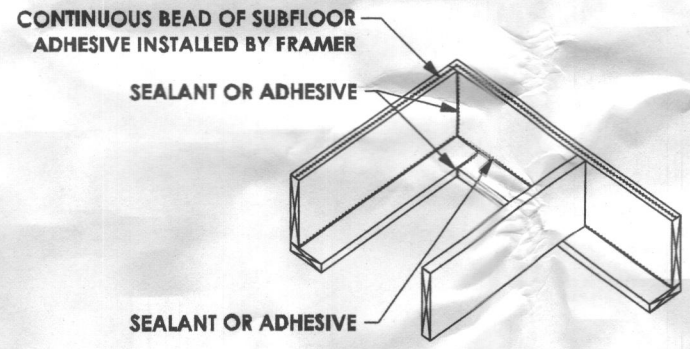
LOAD BEARING WALL OPENING



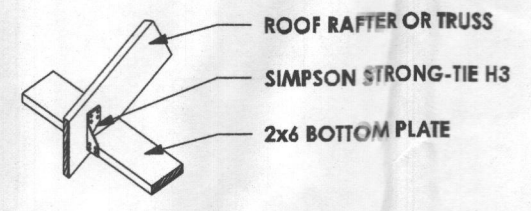
WINDOW FRAMING ELEVATION



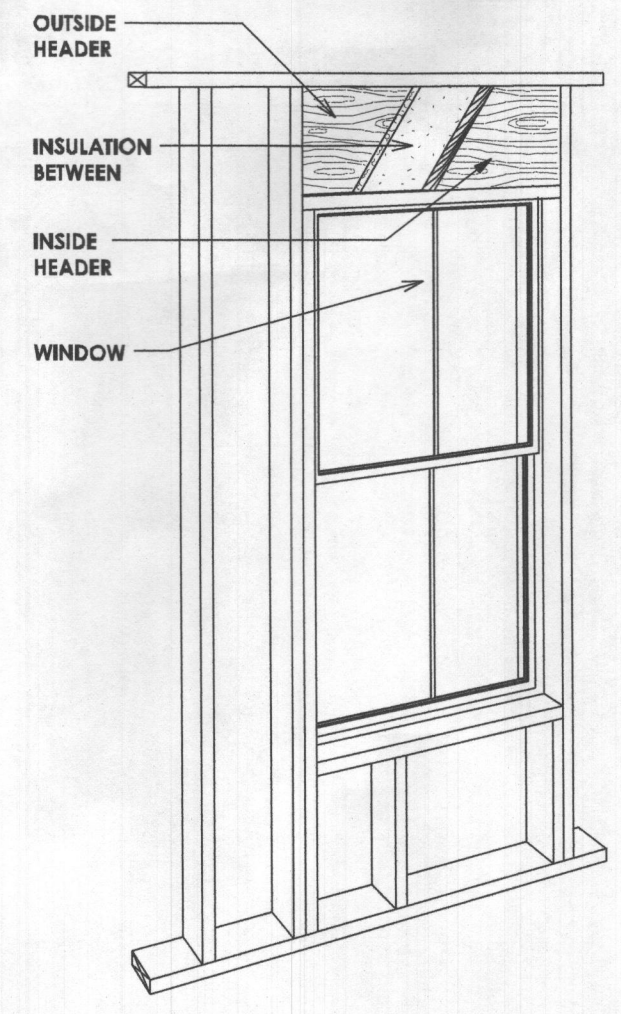
NAILER @ PARTITION



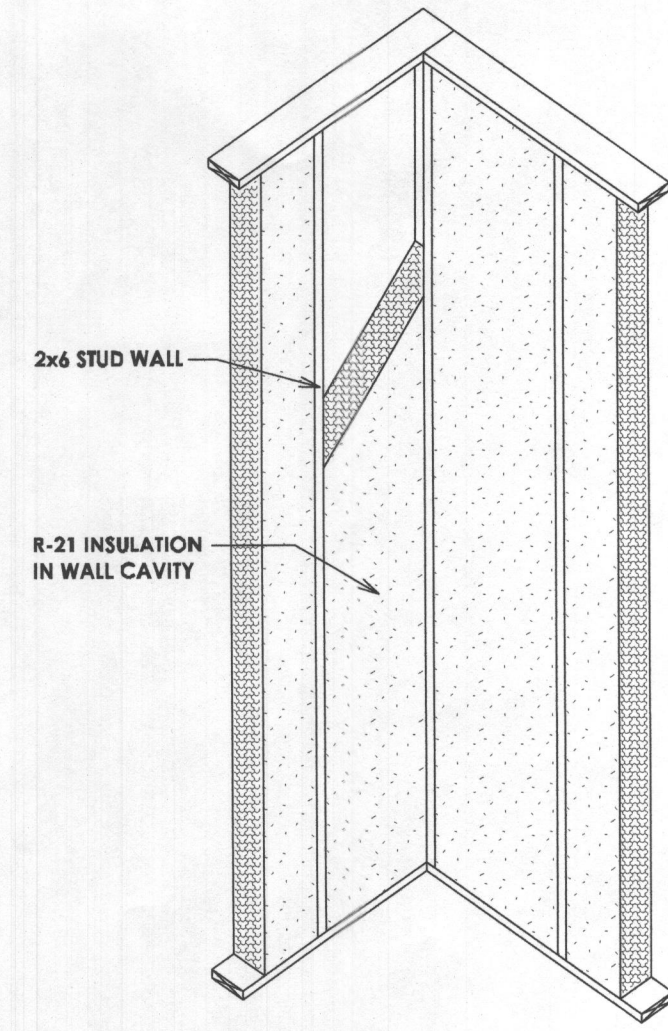
RIM JOIST AIR SEALING



ROOF WALL FRAMING CONNECTION



HEADER INSULATION BETWEEN



TWO-STUD CORNER-INSULATION

GENERAL FRAMING NOTES

- DOUBLE ALL FLOOR JOISTS UNDER WALLS ABOVE, THAT ARE FRAMED PARALLEL TO FLOOR FRAMING UNLESS NOTED OTHERWISE ON THE PLANS.
- ALL FLOOR JOISTS, CEILING JOISTS & RAFTERS ARE TO BE S.P.F.
- ALL BEAMS, GIRDERS AND HEADERS ARE TO BE DOUG. FIR LARCH #2 OR BETTER WITH A Fb RATING OF 875 AND MODULUS OF ELASTICITY OF 1,600,000 MIN. UNLESS OTHERWISE NOTED.
- ALL LAMINATED VENEER LUMBER (LVL) BEAMS, GIRDERS AND HEADERS LABELED ON THE PLANS, TO HAVE A Fb RATING OF 2,950 AND MODULUS OF ELASTICITY OF 2,000,000 MIN. UNLESS OTHERWISE NOTED. STRUCTURAL LAMINATED BEAMS TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS.
- ALL STRUCTURAL OPENINGS TO RECEIVE MIN. 3-2x10 HEADERS W/ 1/2" RIGID INSULATION FILLER & 1 JACK STUD EACH END UNLESS NOTED OTHERWISE.
- PROVIDE SOLID 2x10 BLOCKING TO BE LOCATED BETWEEN FLOOR JOISTS WHERE POSTS, FROM ABOVE, CARRYING STRUCTURAL HEADERS LAND BETWEEN FLOOR JOIST BELOW. BLOCKING TO BE BUILT UP TO THE SAME WIDTH AS POST IT IS CARRYING ABOVE.
- PROVIDE ADEQUATE CLEARANCE @ PLUMBING STACKS AS REQ.
- ALL DIMENSIONS MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES ON THE PLANS, OR SPECIFICATIONS, MUST BE REPORTED TO THE ARCHITECT OR ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- ANY VARIATION FROM THESE PLANS THAT WILL REQUIRE CHANGES TO THE STRUCTURAL MEMBERS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
- WHERE APPLICABLE, REFER TO ENGINEERED LUMBER MFR'S SPECIFICATIONS FOR MULTI-MEMBER INSTALLATION & CONNECTION REQUIREMENTS
- FASTEN MULTIPLE MEMBER JACKS TOGETHER W/ MIN. 10d NAILS @ 8" O.C. STAGGERED ALONG ENTIRE LENGTH OF MEMBERS. PROVIDE NAILING W/IN 3" OF TOP OR BOTTOM OF MEMBERS.
- FASTEN MULTIPLE MEMBER BEAMS TOGETHER W/ MIN 16d NAILS @ 12" O.C. STAGGERED ALONG ENTIRE LENGTH OF MEMBERS. TWO ROWS REQUIRED FOR DEPTHS UP TO 12". THREE ROWS REQUIRED FOR DEPTHS OF 12-18". PROVIDE NAILING W/IN 22" OF EACH END OF MEMBERS. FOR BEAMS 7" OR GREATER IN WIDTH PROVIDE BOLTED CONNECTION W/ ASTM GRADE A-307 (OR BETTER) 1/2" DIA. BOLTS IN TWO ROWS 3" FROM EACH END OF BEAM @ 24" O.C. STAGGERED.

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FRAMING INFO

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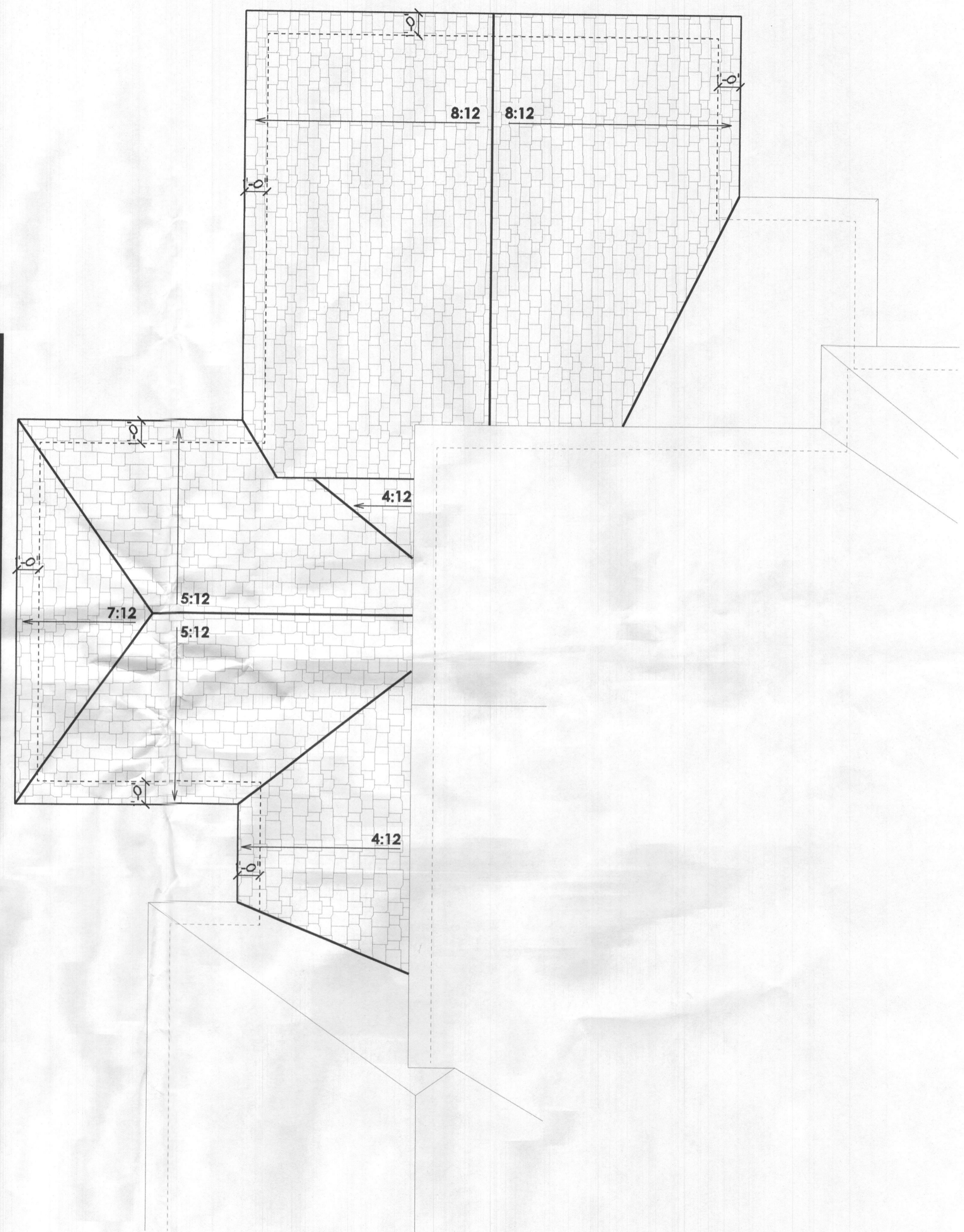
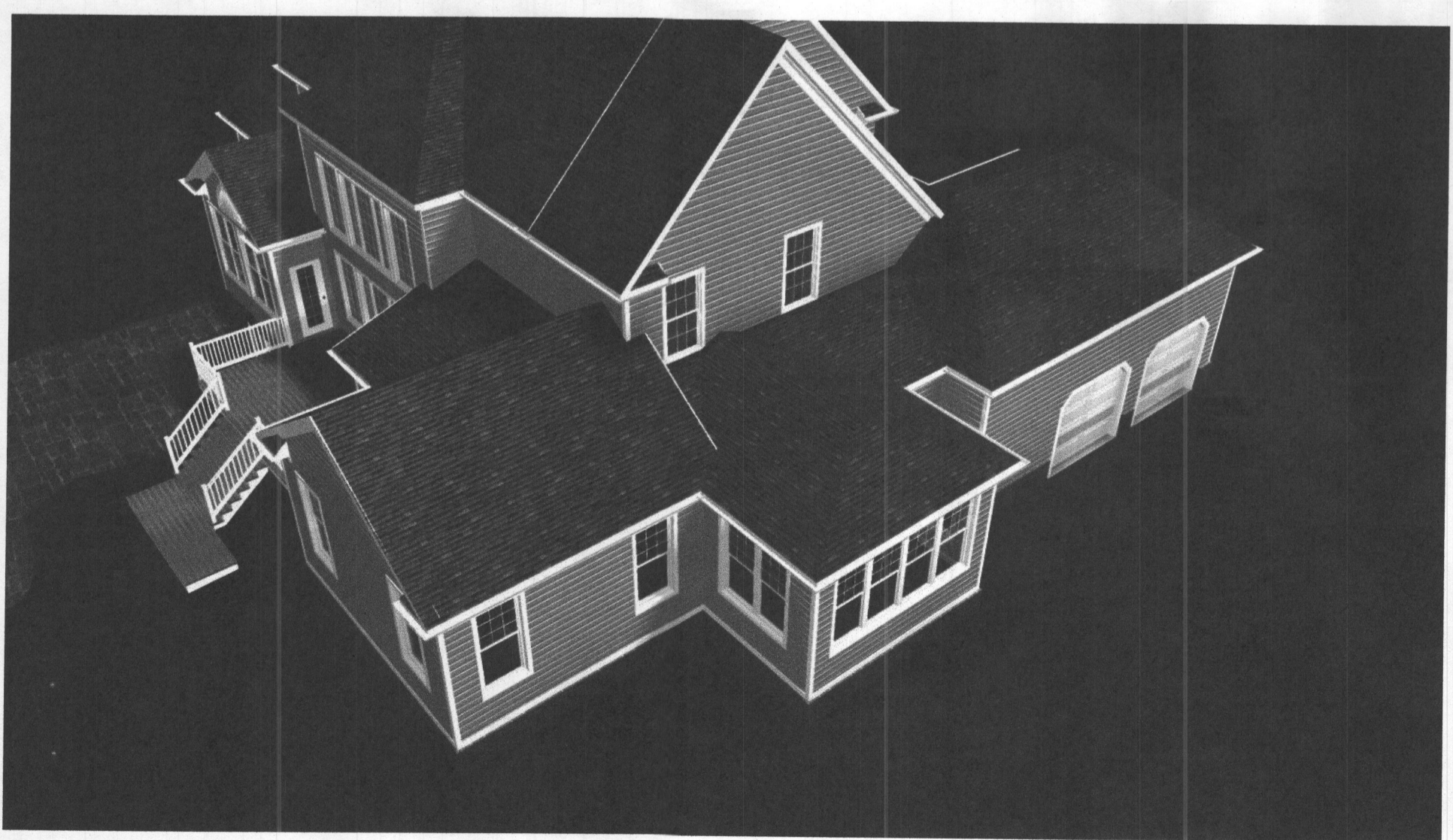
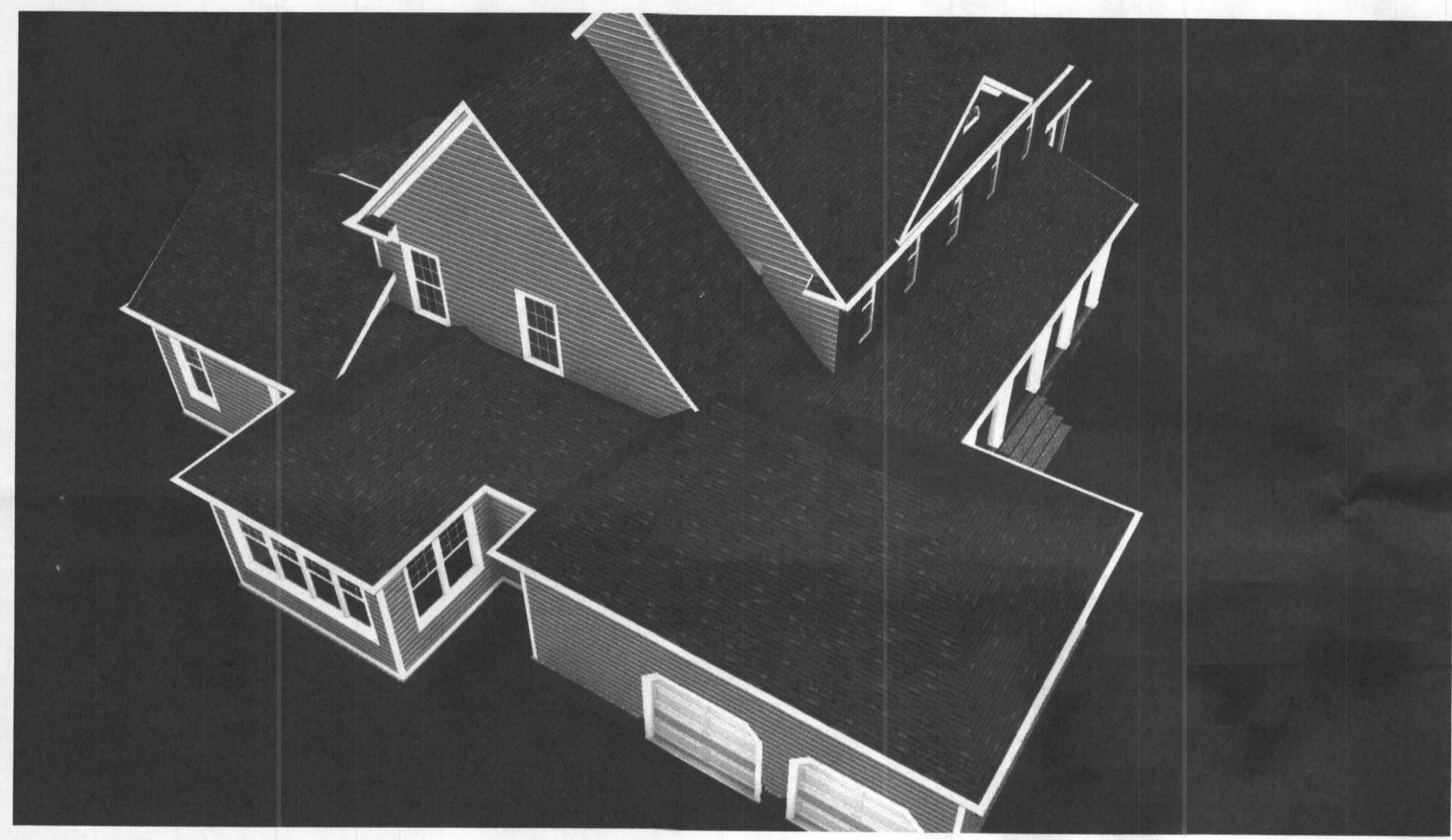
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ROOF PLAN

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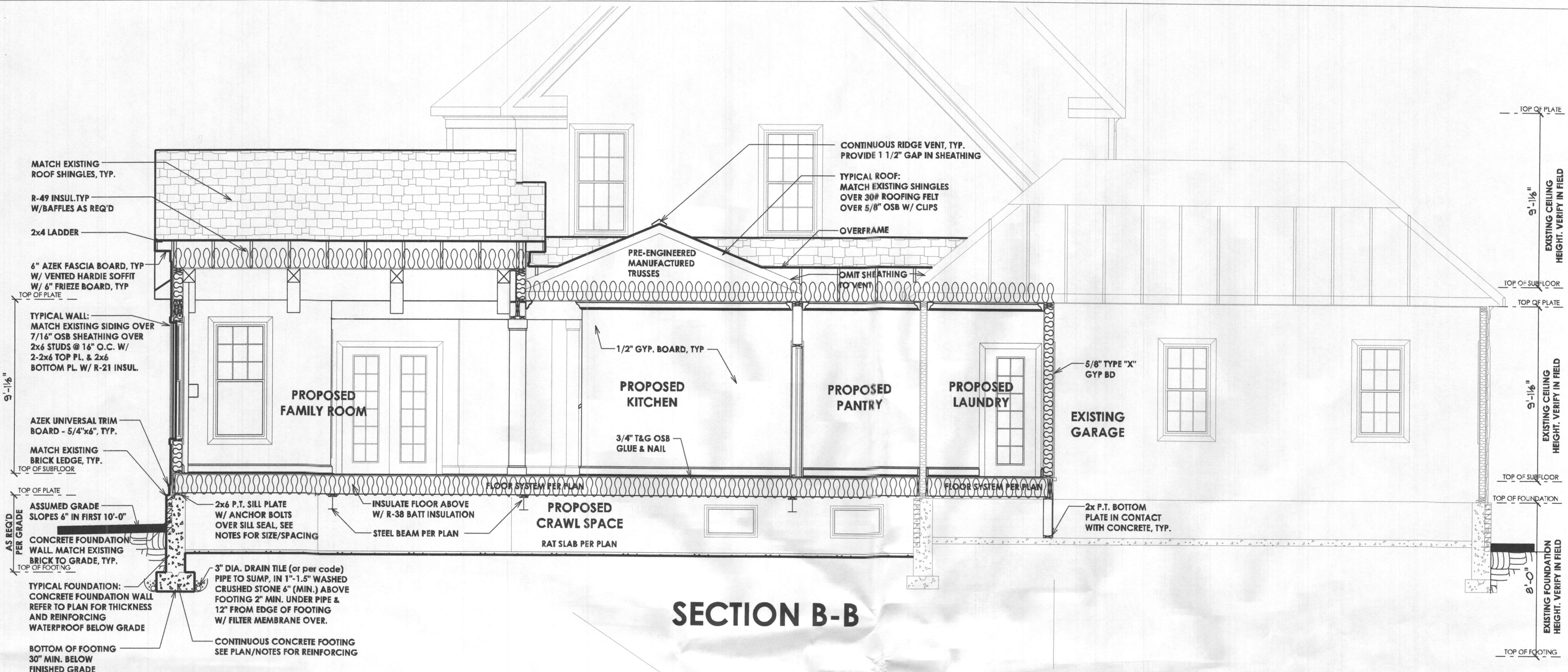
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SECTIONS

5.01

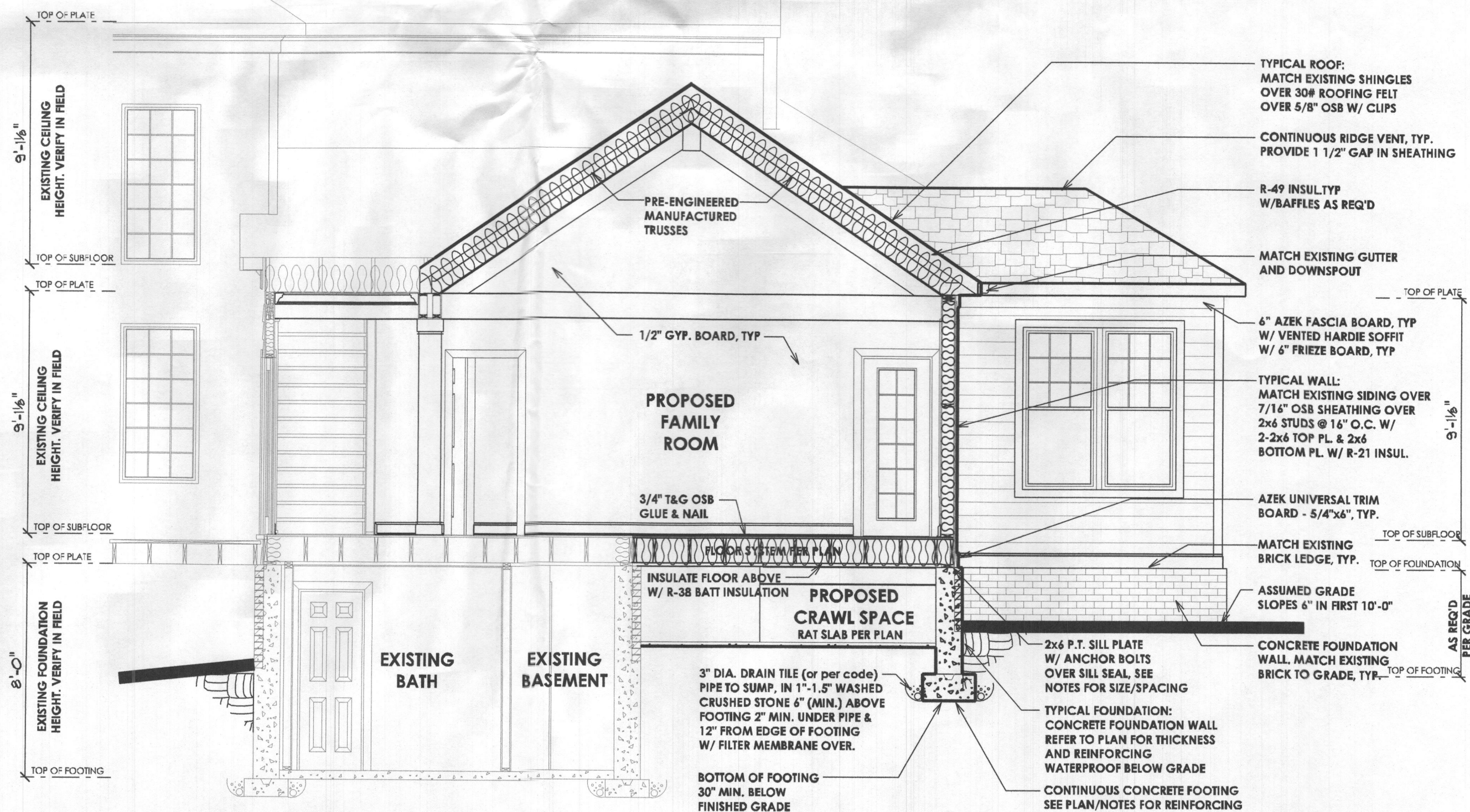
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SECTION B-B

SECTION NOTES

- 1) 2000 PSF MIN SOIL BEARING CAPACITY ASSUMED
- 2) BEAMS, JOISTS, HEADERS & RAFTERS TO BE SPF #1/#2 OR EQ. TYP THRUOUT U.N.O.
- 3) ALL LOCATIONS FOR HVAC, SUMP PUMPS, ROUGH-INS, H/W/H, A/H AND OTHER FEATURES ARE SUBJECT TO BUILDER DISCRETION ON SITE
- 4) FOUNDATION WALL MIN. THICKNESS 10" WHERE STEM WALL AT BRICK LEDGE EXCEEDS 16" HIGH
- 5) MIN. 1/2" HOOKED ANCHOR BOLTS EMBEDDED A MIN. 7" INTO CONC. SHALL BE SPACED AT 4' O.C. AND LOCATED 4" & 12" FROM EACH END OF ALL SILL PLATE PIECES.



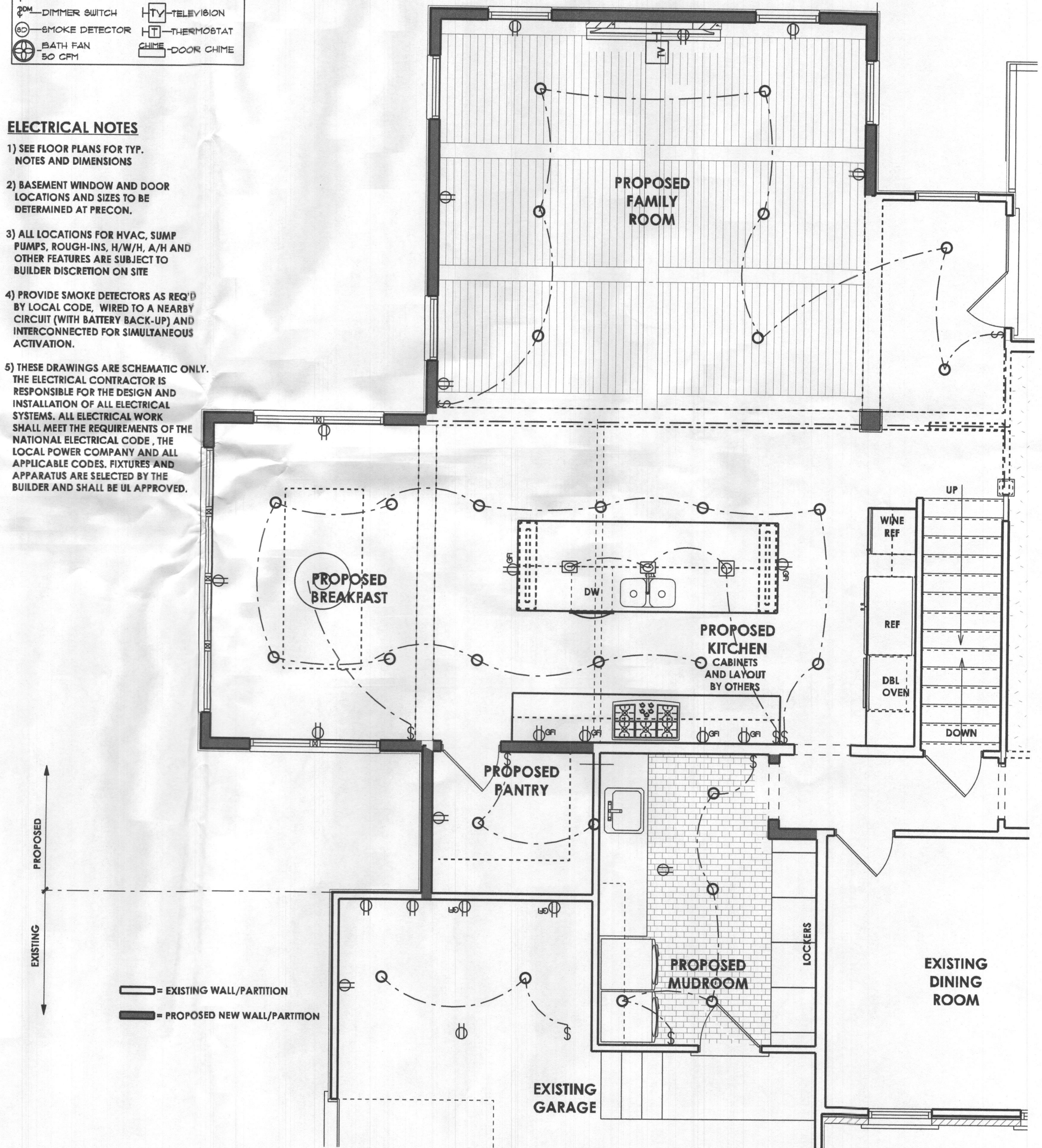
SECTION A-A

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ELECTRICAL LEGEND			
⊕	— DUPLEX RECEPT.	☉	— CEILING MOUNT LIGHT FIXTURE
⊕	— GFCI GROUND FAULT CIRCUIT INTERRUPTER	☉	— CEILING LIGHT FULL CHAIN
⊕	— DUPLEX OUTLET HALF SWITCHED	○	— RECESSED LIGHT FIXTURE
⊕	— 220 VOLT DUPLEX OUTLET	☉	— WALL MOUNTED LIGHT FIXTURE
⊕	— DUPLEX OUTLET • 42" A.F.F.	▭	— FLUORESCENT LIGHT FIXTURE
⊕	— SINGLE POLE SWITCH	☼	— CEILING FAN
⊕	— 3-WAY SWITCH	☎	— TELEPHONE
⊕	— 4-WAY SWITCH	TV	— TELEVISION
⊕	— DIMMER SWITCH	⊖	— THERMOSTAT
⊕	— SMOKE DETECTOR	🔔	— DOOR CHIME
⊕	— BATH FAN 50 CFM		

ELECTRICAL NOTES

- 1) SEE FLOOR PLANS FOR TYP. NOTES AND DIMENSIONS
- 2) BASEMENT WINDOW AND DOOR LOCATIONS AND SIZES TO BE DETERMINED AT PRECON.
- 3) ALL LOCATIONS FOR HVAC, SUMP PUMPS, ROUGH-INS, H/W/H, A/H AND OTHER FEATURES ARE SUBJECT TO BUILDER DISCRETION ON SITE
- 4) PROVIDE SMOKE DETECTORS AS REQ'D BY LOCAL CODE, WIRED TO A NEARBY CIRCUIT (WITH BATTERY BACK-UP) AND INTERCONNECTED FOR SIMULTANEOUS ACTIVATION.
- 5) THESE DRAWINGS ARE SCHEMATIC ONLY. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL ELECTRICAL SYSTEMS. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, THE LOCAL POWER COMPANY AND ALL APPLICABLE CODES. FIXTURES AND APPARATUS ARE SELECTED BY THE BUILDER AND SHALL BE UL APPROVED.



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CODE AND STANDARDS

THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.

- * INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLINGS (IRC), INTERNATIONAL CODE COUNCIL, INC., 2015
- * INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL CODE COUNCIL, INC., 2015
- * MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ANSI/ASCE 7-10-2010), AMERICAN SOCIETY OF CIVIL ENGINEERS.
- * BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-14, AMERICAN CONCRETE INSTITUTE.
- * CODE REQUIREMENTS FOR RESIDENTIAL CONCRETE, ACI 332-14, AMERICAN CONCRETE INSTITUTE.
- * MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN, NINTH EDITION, 1989, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (INCLUDING SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, AND AISC CODE OF STANDARD PRACTICE WITH EXCEPTION, IF ANY, AS INDICATED IN THE SPECIFICATIONS).
- * MANUAL OF STEEL CONSTRUCTION, VOLUME II CONNECTIONS, ASD 9TH EDITION/LRFD 1ST EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- * DETAILING FOR STEEL CONSTRUCTION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- * STRUCTURAL WELDING CODE ANSI/AWS D1-2011, AMERICAN WELDING SOCIETY.
- * NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AMERICAN IRON AND STEEL INSTITUTE, 2012.
- * BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-13/ASCE 5-13/TMS 402-13) & SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-13/ASCE 6-13/TMS 602-13).
- * NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION/ 2015, AMERICAN FOREST & PAPER ASSOCIATION.

DESIGN LOADS

MISC	LIVE LOADS	DEAD LOADS	TOTAL
ROOF TRUSSES	40 PSF	10 PSF (TOP & BOTTOM)	60 PSF
RAFTERS	40 PSF	12 PSF	52 PSF
ATTIC FLOORS (TYP)	30 PSF	12 PSF	42 PSF
LTD STORAGE	20 PSF	12 PSF	32 PSF
NO STORAGE	10 PSF	5 PSF	15 PSF
SLEEPING ROOMS	40 PSF	12 PSF	52 PSF
OTHER FLOORS	40 PSF	12 PSF	52 PSF
GARAGE FLOORS	50 PSF	10 PSF	60 PSF
DECKS/BALCONY	40 PSF	10 PSF	50 PSF
STAIRS	40 PSF	20 PSF	60 PSF

ROOF DESIGN = 40 PSF

WIND BASIC WIND SPEED = 115 MPH (ULTIMATE), EXPOSURE B, IMPORTANCE = 1.0

PRESCRIPTIVE DESIGN PRESSURES = 11.9 PSF (ROOF AVG.), 12.1 PSF (WALL AVG.)

TRUSS UPLIFT CONNECTION = 268 LBS/CONNECTION (TABLE R802.11)

SNOW GROUND SNOW (P_g)=40 PSF
(THERMAL FACTOR=1.1, EXPOSURE FACTOR C_e=1.0, IMPORTANCE=1.0)

DESIGN (ROOF) = 20 PSF MINIMUM = 20 PSF RAIN-ON-SNOW = 23.0 PSF
ADDITIONAL DRIFT AND SLIDING SNOW LOADS HAVE BEEN CONSIDERED WHERE APPLICABLE.

SEISMIC SEISMIC DESIGN CATEGORY A

SOIL ASSUMED ALLOWABLE SOIL BEARING CAPACITY = 1500 PSF
BACK FILL = 60 PCF EQUIVALENT FLUID WEIGHT, UNLESS OTHERWISE NOTED
IF THE LOCAL BUILDING OFFICIAL DETERMINES THAT THE SOIL CAPACITY AT THE SITE IS LESS THAN 1500 PSF, THE PARTIAL FOUNDATION MUST BE RE-EVALUATED.

MECHANICAL UNITS & OTHER EQUIPMENT SUPPORTED BY THE STRUCTURE WITH WEIGHTS IN EXCESS OF 200# SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

WEATHERING IS SEVERE, WINTER DESIGN TEMPERATURE IS -10° F, FROST LINE DEPTH IS 3'-0" BELOW FINISHED GRADE

TERMITE INFESTATION PROBABILITY IS MODERATE TO HEAVY, DECAY PROBABILITY IS MODERATE

FLOOD HAZARD IS DETERMINED BY LOCAL JURISDICTION

WOOD

MATERIAL		F _b	F _t	F _v	F _{em}	F _{dm}	E _{mod}
UNTREATED FRAMING (DESIGN VALUES ARE BASED ON SPF No.2.)	2x, 3x, OR 4x	875	450	135	425	1150	1.4
	5x5 AND LARGER (B)	600	300	125	425	425	1.0
	5x5 AND LARGER (P)	500	325	125	425	500	1.0
TREATED FRAMING (DESIGN VALUES ARE BASED ON SYP No.2.)	2x4	1500	825	175	565	1650	1.6
	2x6	1250	725	175	565	1600	1.6
	2x8	1200	650	175	565	1550	1.6
	2x10	1050	575	175	565	1500	1.6
	2x12	975	550	175	565	1450	1.6
	5x5 & LARGER	850	550	165	375	525	1.2
LSL (1.3E)	BEAM/COLUMN	1700	1075	425	710	1835	1.3
LSL (1.3E)	PLANK	1900	1075	150	375	1835	1.3
LSL (1.55E)	BEAM	2325	1070	310	400	2170	1.55
LVL (2.0E)	BEAM	2600	1555	285	750	2510	2.0
PSL	BEAM	2650	1650	285	750	3000	1.7
	COLUMN	2650	1650	285	750	3000	1.7

APPROPRIATE NOTES DESIGN VALUES ARE FOR NORMAL LOAD DURATION AND DRY SERVICE CONDITIONS. SEE NDS OR MANUFACTURER'S SPECIFICATION FOR DESIGN VALUE ADJUSTMENT FACTORS.

PREFABRICATED WOOD I-JOISTS SHALL BE MANUFACTURED BY TRUSJOIST (WEYERHAEUSER) OR APPROVED SUBSTITUTE. THE SUPPLIER SHALL PROVIDE ALL REQUIRED HANGERS, WEB STIFFENERS, SQUASH BLOCKS, BEVELED BEARING PLATES, AND OTHER SPECIAL HARDWARE. THE SUPPLIER SHALL SUBMIT ERECTION DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION. ALL PREFABRICATED WOOD I-JOISTS SHALL BE INSTALLED AND BRACED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

PLYWOOD/OSB SHALL BE APA RATED SHEATHING EXPOSURE 1, GROUP 1, MIN. 4 PLY, MIN. SPAN RATING OF 48/24. USE 3/4" NOM. THICKNESS FOR FLOORS, 1/2" FOR ROOFS, AND 7/16" FOR WALLS. FOR FLOORS, USE TONGUE-AND-GROOVE PLYWOOD GLUED AND SCREW-FASTENED. FOR ROOFS, USE PLYWOOD CLIPS AT ALL UNSUPPORTED BUTT JOINTS.

WOOD EXPOSED TO THE ELEMENTS, WOOD IN CONTACT WITH CONCRETE OR MASONRY, AND WOOD DESIGNATED "TREATED" SHALL BE #2 GRADE SOUTHERN PINE OR BETTER & PRESSURE IMPREGNATED WITH ALKALINE COPPER QUATERNARY (ACQ) IN ACCORDANCE WITH AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARD C2, WITH A MIN. RETENTION OF 0.40 LBS. PER CUBIC FOOT OF WOOD. MIN. DEPTH OF PENETRATION SHALL BE 2.5" OR 85% OF THE SAPWOOD.

WOOD FRAMING

ALL FRAMING SHALL BE CAPABLE OF CARRYING ALL LOADS AS SPECIFIED BY THE CODE (SECTION R301) & TRANSMITTING THE RESULTING LOADS TO THE SUPPORT STRUCTURE PER SECTIONS R501.2, R601.2, & R801.2.

ALL INTERIOR NON-LOAD BEARING WALLS SHALL BE 2X4 STUDS AT 24"oc (MIN) WITH A SINGLE TOP PLATE.

ALL EXTERIOR AND INTERIOR LOAD BEARING WALLS SHALL BE STUDS AT 24"oc (U.N.O.) AND SHEATHED WITH 7/16" OSB (EXTERIOR) AND 1/2" GYPSUM SHEATHING (INTERIOR). BLOCKING OF HORIZONTAL PANEL EDGES IS NOT REQUIRED EXCEPT AT SHEAR WALLS OR BRACED WALL SEGMENTS. NAIL IN ACCORDANCE WITH THE PARTIAL SHEATHING FASTENING SCHEDULE.

ALL STUDS AND TOP PLATES ARE NOT TO BE DRILLED IN EXCESS OF CODE. (SECTIONS R602.6 AND R602.7)

ALL POSTS AND MULTIPLE STUDS SHALL BE RUN CONTINUOUSLY TO SOLID BEARING ON FOUNDATION WALL OR BEAMS, PROVIDE SOLID BLOCKING AT FLOORS.

STUDS & FLOOR FRAMING (JOISTS OR FLOOR TRUSSES) SHALL ALIGN AT CANTILEVERS, ABOVE AND BELOW THE FLOOR FRAMING. COLUMNS SHALL BE ADEQUATELY ANCHORED TO PREVENT INTERNAL DISPLACEMENT.

WOOD CONNECTIONS SHALL BE IN ACCORDANCE WITH PARTIAL FASTENING SCHEDULE. PROVIDE BRIDGING AT EACH END OF THE JOIST, AND ONE ROW OF SOLID BRIDGING BELOW ALL INTERIOR BEARING PARTITIONS.

FASTENERS: JOIST HANGERS, HURRICANE ANCHORS, POST BASES AND OTHER FRAMING ANCHORS ARE TO BE AS MANUFACTURED BY SIMPSON STONG-TIE, U.S.P., OR EQUAL, AND ARE TO BE USED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS. ALL FASTENERS TO BE 16 GA. MIN. UNLESS NOTED OTHERWISE. PROVIDE GALV. FINISH UNLESS NOTED OTHERWISE. JOIST HANGERS SHALL BE MIN. 16 GA. WITH SIZE AND PROFILE TO SUIT APPLICATION (U.N.O.). PROVIDE JOIST HANGERS FOR ALL FLUSH FRAMED JOISTS. ALL FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE Z-MAX COATED, U.N.O.

THE NUMBER OF WALL STUDS AT BEARING POINTS OF 2X MEMBER BEAMS SHALL EXCEED THE NUMBER OF MEMBERS IN THE BEAM BY ONE. THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS. (UNLESS NOTED OTHERWISE ON PLAN) ALL ENGINEERED LUMBER BEAMS SHALL HAVE 3 STUDS (MIN. & EXCEED WIDTH OF BEAM). CONTINUE THESE STUDS TO THE PARTIAL FOUNDATION WITH INTERMEDIATE SUPPORTS THROUGH FLOOR, BETWEEN LOWER WALL TOP PLATE & UPPER WALL BOTTOM PLATE.

ALL EXTERIOR POSTS TO BE TREATED 6x6 (U.N.O.). NOTCH TOP OF POST FOR BEAM BRG. (3" MAX.) AND THRU BOLT BEAM TO POST WITH (2) 1/2" DIA. GALV. BOLTS. ALTERNATE: PROVIDE COLUMN CAP CONNECTION WITH #AC SERIES BY SIMPSON STONG-TIE OR EQ. PROVIDE SOLID BLOCKING BELOW ALL COLUMNS, TO TRANSFER LOAD DIRECTLY TO FRAMING/PARTIAL FOUNDATION BELOW.

PROVIDE DOUBLE JOIST UNDER ALL PARTITIONS PARALLEL TO JOIST SPAN AND AROUND ALL FLOOR AND ROOF OPENINGS. SPACE & BLOCK IF PARTITIONS ABOVE IS A PLUMBING WALL. PROVIDE SOLID BLOCKING AT 12"oc BETWEEN JOISTS UNDER PARTITIONS ABOVE) WHICH ARE PARALLEL TO THE JOISTS BUT NOT DIRECTLY OVER THE JOISTS. BLOCKING SHALL BE MIN 2" IN. THICKNESS & SHALL MATCH THE DEPTH OF THE JOISTS.

NO STRUCTURAL MEMBER SHALL BE OMITTED, NOTCHED, CUT, BLOCKED OUT OR RELOCATED WITHOUT PRIOR APPROVAL BY THE DESIGNER OR STRUCTURAL ENGINEER. DO NOT ALTER SIZES OF MEMBERS NOTED WITHOUT APPROVAL OF BOTH.

CUTTING OF WOOD BEAMS, JOISTS AND RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-SIXTH THE MEMBER DEPTH AND SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE SPAN. NOTCHES LOCATED CLOSER TO SUPPORTS THAN THREE TIMES THE MEMBER DEPTH SHALL NOT EXCEED ONE-FIFTH THE DEPTH. HOLES BORED OR CUT INTO JOISTS SHALL BE MIN. 2" CLEAR FROM THE TOP OR BOTTOM OF THE JOIST AND THE HOLE DIAMETER SHALL NOT EXCEED ONE-THIRD OF THE JOIST DEPTH.

FOR DIMENSIONAL LUMBER FRAMING, THERE SHALL NOT BE LESS THAN ONE LINE OF BRIDGING IN EVERY EIGHT FEET OF SPAN IN FLOOR, ATTIC AND ROOF FRAMING. THE BRIDGING SHALL CONSIST OF NOT LESS THAN ONE BY THREE INCH LUMBER DOUBLE NAILED AT EACH END OR OF EQUIVALENT METAL BRACING OF EQUAL RIGIDITY. MIDSPAN BRIDGING IS NOT REQUIRED FOR FLOOR, ATTIC OR ROOF FRAMING WHERE JOIST DEPTH DOES NOT EXCEED TWELVE INCHES NOMINAL. BLOCK ALL STUD WALLS AT MAXIMUM INTERVALS OF EIGHT FEET WITH A MINIMUM OF TWO-BY SOLID MATERIAL WITH TIGHT JOISTS.

ALL JOISTS AND GIRDERS MUST HAVE A MINIMUM BEARING OF 1 1/2" (WOOD OR STEEL) AND 3" (MASONRY OR CONCRETE) AND 3" (LAPPED JOISTS)

PROVIDE DRAFTSTOPPING AND FIREBLOCKING IN ACCORDANCE WITH SECTIONS R302.12 AND R302.11 (RESPECTIVELY)

ALL CEILING JOISTS SHOULD ATTACHED TO RAFTERS WITH (5) 10d NAILS

ALL MULTI-PLY BEAMS SHALL BE NAILED WITH 3 ROWS OF 10d NAILS AT 8"oc STAGGERED OR BOLTED WITH 1/2" DIA. BOLTS AT 16"oc STAGGERED (U.N.O.).

BALLOON FRAME ALL END WALLS WITH CATHEDRAL CEILING (U.N.O.):

FASTEN GABLE-END WALL STUDS TO CEILING DIAPHRAM BY FASTENING NAILER TO EACH STUD AND BY FASTENING CEILING TO NAILER WITH 8d NAILS AT 6"oc

WHERE DECKS FASTEN TO HOUSE FRAMING, PROVIDE CONTINUOUS TREATED LEDGER THRU-BOLTED TO FLOOR STRUCTURE WITH (2) 1/2" DIA. BOLTS AT 16"oc PROVIDE HOT-DIPPED GALV. JST. HANGER TO LEDGER.

ALL FLUSH FRAMED ENGINEERED LUMBER BEAM CONNECTIONS TO BE FASTENED WITH BEAM HANGERS AS DESIGNED AND PROVIDED BY ENGINEERED LUMBER MANUFACTURER (U.N.O.).

ROOF AND FLOOR FRAMING LAYOUTS ARE PROVIDED TO ILLUSTRATE CONDITIONS OF CONSTRUCTION AND DO NOT NECESSARILY INDICATE SPECIFIC QUANTITIES OF MATERIALS OR COMPONENTS REQUIRED FOR CONSTRUCTION.

CONSTRUCTION BRACING SHALL BE PROVIDED BY THE TRADE SUB-CONTRACTOR TO MAINTAIN THE BUILDING PLUMB AND TRUE. THIS BRACING SHALL REMAIN UNTIL THE SPECIFIED SHEARWALLS ARE TOTALLY INSTALLED.

FRAME CHIMNEYS: FRAME CHIMNEYS SHALL BE CONSTRUCTED OF MINIMUM #2 SPF STUDS, MAXIMUM 16"oc USE 2 X 4 IF CHIMNEY EXTENDS LESS THAN 8' ABOVE ROOF, OTHERWISE USE 2 X 6. SHEATH WITH 1/2" APA RATED SHEATHING CONTINUOUS ACROSS PLATES AND JOISTS, GLUE, AND NAIL WITH 8D NAILS @ 6"oc SECURE TO ROOF. STUDS MUST BE CONTINUOUS ACROSS ROOF INTERSECTION.

PROVIDE DEFORMED SHANK NAILS AS REQD. BY U.L. RATINGS.

SHOP DRAWINGS

THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS FOR APPROVAL.

THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT IF THE GENERAL CONTRACTOR FAILS TO OBTAIN APPROVAL OF THE SHOP DRAWINGS.

THE GENERAL CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER IN WRITING CONCERNING DEVIATIONS AND/OR OMISSIONS FROM THE CONTRACT DOCUMENTS AT THE TIME OF SHOP DRAWING SUBMISSION.

THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND SHALL MAKE ALL CORRECTIONS HE DEEMS NECESSARY BEFORE SUBMISSION.

THE GENERAL CONTRACTOR SHALL STATE ON THE SHOP DRAWINGS THAT CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND THAT ALL DIMENSIONS, CONDITIONS AND QUANTITIES HAVE BEEN REVIEWED AND VERIFIED AS SHOWN AND/OR CORRECTED ON THE SHOP DRAWINGS.

WOOD TRUSSES

TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THESE SPECIFICATIONS AND WHERE ANY APPLICABLE DESIGN FEATURE IS NOT SPECIFIED HEREIN, DESIGN SHALL BE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS), AMERICAN FOREST AND PAPER ASSOCIATION (AFPA), AND DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES (ANSI/TPI 1), TRUSS PLATE INSTITUTE (TPI), AND CODES OF JURISDICTION. FABRICATE, SUPPLY AND ERECT WOOD TRUSSES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. WORK SHALL INCLUDE ALL ANCHORAGE, BLOCKING, CURBING, MISCELLANEOUS FRAMING AND BRACING.

LUMBER USED FOR TRUSS MEMBERS SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION AGENCY, AND SHALL BE AS SHOWN ON DESIGN DRAWINGS. TRUSSES SHALL BE HANDLED DURING FABRICATION, DELIVERY AND AT JOBSITE SO AS NOT TO BE SUBJECTED TO EXCESSIVE BENDING. TRUSSES SHALL BE UNLOADED ON SMOOTH GROUND TO AVOID LATERAL STRAIN. TRUSSES SHALL BE PROTECTED FROM DAMAGE THAT MIGHT RESULT FROM ON-SITE ACTIVITIES AND ENVIRONMENTAL CONDITIONS. PREVENT TOPPLING WHEN BANDING IS REMOVED.

HANDLE DURING INSTALLATION IN ACCORDANCE WITH HANDLING, INSTALLING AND BRACING WOOD TRUSSES (HIB-91), TPI, AND ANSI/TPI 1-1995. INSTALLATION SHALL BE CONSISTENT WITH GOOD WORKMANSHIP AND GOOD BUILDING PRACTICES. TRUSSES SHALL BE SET AND SECURED LEVEL AND PLUMB, AND IN CORRECT LOCATION. TRUSSES SHALL BE HELD IN CORRECT ALIGNMENT UNTIL SPECIFIED PERMANENT BRACING IS INSTALLED. CUTTING AND ALTERING OF TRUSSES IS NOT PERMITTED. CONCENTRATED LOADS (FULL BUNDLES OF DECKING) SHALL NOT BE PLACED ATOP TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND DECKING IS PERMANENTLY NAILED IN PLACE. ERECTION BRACING IS ALWAYS REQUIRED. THE TRADE SUB-CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FURNISHING THE MATERIALS USED FOR INSTALLATION AND PERMANENT BRACING.

STRUCTURAL ENGINEER OF RECORD SHALL APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO BUILDING OFFICIAL. BUILDING OFFICIAL SHALL APPROVE SHOP DRAWING PRIOR TO INSTALLATION. TRUSSES SHALL BE FABRICATED FROM APPROVED SHOP DRAWINGS.

MANUFACTURER SHALL SUBMIT 3 COPIES OF TRUSS DESIGN DRAWINGS BEARING SEAL OF PROFESSIONAL ENGINEER FOR APPROVAL PRIOR TO ERECTION AND ENGINEERING FRAMING PLANS FOR ALL FLAT CHORD TRUSSES. ALL TRUSS SHOP DRAWINGS MUST BE REVIEWED AND APPROVED IN WRITING, BY GENERAL CONTRACTOR, PRIOR TO SUBMITTAL OF SHOP DRAWINGS TO STRUCTURAL ENGINEER AND MUST INCLUDE THE FOLLOWING:

1. STAMP & SIGNATURE OF ENGINEER, WHO IS REGISTERED IN THE STATE WHERE THE JOB IS TO BE CONSTRUCTED, RESPONSIBLE FOR PREPARATION OF ALL TRUSS DESIGN AND LAYOUT DRAWING.
2. ALLOWABLE LOADS IN LBS/EFFECTIVE NAIL OR PSI FOR LUMBER & PLATES USED AS ALLOWED BY IBCO, CURRENT IBCO REPORT NUMBER & BY SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL.
3. STRESS REDUCTION FACTORS USED FOR PLATES.
4. TOP AND BOTTOM CHORD DESIGN LOADS IN PLF.
5. SIZE, GAUGE, AND EXACT LOCATION BY DIMENSION OF PLATES.
6. LUMBER SPECIES AND GRADES USED.
7. NAME & TRADEMARK OF PLATE MANUFACTURER, TRUSS FABRICATOR & PROJECT NAME/LOCATION
8. CONCENTRATED LOAD REQUIREMENTS HAVE BEEN DESIGNED FOR AND SHOWN ON DOCUMENTS.
9. TRUSS CONNECTION HARDWARE REQUIREMENTS.

ALL TRUSSES MUST BE DESIGNED FOR UPLIFT LOADS. UPLIFT VALUES @ EACH TRUSS BEARING POINT MUST BE SHOWN ON TRUSS ENGINEERING SHEET.

ALL ROOF TRUSSES SHALL BE ATTACHED TO PERPENDICULAR NON-LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

ALL FLOOR TRUSSES ON THE LOWEST FLOOR W/ TRUSSES SHALL BE ATTACHED TO PREPINDICULAR NON-LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

LIVE LOAD DEFLECTION SHALL NOT EXCEED 1/8" OR L/480 FOR FLOOR TRUSSES AND 1/2" OR L/360 FOR ROOF TRUSSES.

THE MANUFACTURER SHALL SUPPLY ALL REQUIRED HANGERS, HOLD-DOWN CLIPS, AND OTHER SPECIAL HARDWARE.

STRUCTURAL STEEL

STRUCTURAL STEEL I BEAMS SHALL CONFORM TO ASTM A572 GRADE 50 (50 ksi), STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B, STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A 53 GRADE B & ALL OTHER STRUCTURAL STEEL, INCLUDING PLATES AND MISCELLANEOUS SHAPES SHALL CONFORM TO ASTM A36, 36 ksi.

ALL SURFACES (INSIDE AND OUTSIDE) OF STEEL COLUMNS SHALL BE SHOP COATED WITH RUST-INHIBITIVE PAINT

BOLTS FOR CONNECTING STRUCTURAL STEEL SHAPES SHALL BE ASTM A325-N, 3/4", U.N.O. ON THE DRAWINGS OR IN THE PROJECT SPECIFICATIONS.

ANCHOR BOLTS SHALL CONFORM TO ASTM A307.

FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

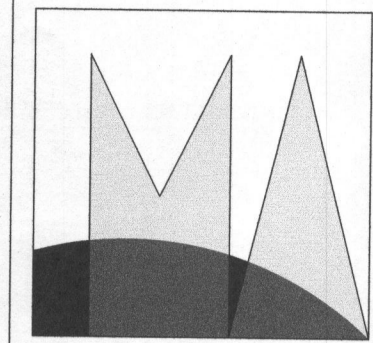
PROVIDE WELDED CONNECTIONS TYPICALLY UNLESS OTHERWISE NOTED. WELDING ELECTRODES SHALL BE E70 SERIES.

WELDS SHALL BE MADE ONLY BY WELDERS WHO HAVE BEEN PREQUALIFIED BY TESTS OF THE AMERICAN WELDING SOCIETY, PRESCRIBED IN THE STRUCTURAL WELDING CODE,® AWS D1.1 (LATEST EDITION).

ANY CONNECTION NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL STEEL FABRICATOR. SEE THE TYPICAL BEAM CONNECTION DETAILS ON THE DRAWINGS.

MILL BOTTOM OF ALL COLUMNS AND FINISH TOP OF ALL BASE PLATES IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS. BASE PLATES SHALL BE WELDED TO BOTTOM OF COLUMNS.

CONNECTIONS SHALL BE AISC STANDARD.



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PROFESSIONAL CERTIFICATION
I certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License Number #31466
Expiration Date: 2/14/2021

Gemmill Residence

P R O P O S E D A D D I T I O N

2896 Hunt Valley Drive, Glenwood, Maryland 21738

REVISIONS

5-6-19 REVIEW SET

SCALE:

STRUCTURAL NOTES

SN.1

PRINT DATE:
Thursday, September 26, 2019

MISCELLANEOUS

THE TRADE SUB-CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT AND FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.

THE TRADE SUB-CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE TRADE SUB-CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE TRADE SUB-CONTRACTOR.

THE TRADE SUB-CONTRACTOR IS TO VERIFY ALL OPENING SIZES AND LOCATIONS WITH THE REQUIREMENTS OF OTHER TRADES PRIOR TO FABRICATION AND ERECTION.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, AND THE TRADE SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH STRUCTURAL WORK.

EARTH RETAINING WALLS, OTHER THAN CANTILEVERED TYPE WALLS, SHALL BE ADEQUATELY BRACED UNTIL CONCRETE FOR SUPPORTING SLABS HAS BEEN PLACED AND ALL CONCRETE HAS CURED.

THE TRADE SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, ERECTING AND REMOVING ANY TEMPORARY SHORING AND BRACING DURING CONSTRUCTION

THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED AT THE PROPER TIME WHEN ALL ITEMS ARE READY FOR OBSERVATION. SUFFICIENT NOTICE SHALL BE GIVEN BY THE TRADE SUB-CONTRACTOR TO ALLOW FOR SCHEDULING OF OBSERVATIONS.

SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED BY THE TRADE SUB-CONTRACTOR OR SUBCONTRACTOR DURING ALL TIMES OF WORK ON THIS PROJECT. THE ARCHITECT OR ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR ACTS OF OMISSIONS OF THE TRADE SUB-CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

ALL SPECIALTY BOLTS, INCLUDING EXPANSION TYPE AND EPOXY TYPE ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

THE TRADE SUB-CONTRACTOR SHALL PROTECT FROM DAMAGES EXISTING BUILDING(S), OWNER EQUIPMENT, ROADS, WALKS AND UTILITIES. THE TRADE SUB-CONTRACTOR SHALL MAINTAIN THESE DURING THE COURSE OF THE WORK, AND SHALL REPAIR ALL DAMAGES AT NO ADDITIONAL EXPENSE TO THE OWNER.

IN AREAS WHERE THE DRAWINGS DO NOT ADDRESS METHODOLOGY, THE TRADE SUB-CONTRACTOR SHALL BE BOUND TO PERFORM IN STRICT COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE.

THE GENERAL NOTES AND TYPICAL DETAILS APPLY THROUGHOUT THE JOB UNLESS OTHERWISE NOTED OR SHOWN.

THE TRADE SUB-CONTRACTOR SHALL COMPARE AND COORDINATE ALL DRAWINGS. IF A DISCREPANCY EXISTS, HE SHALL PROMPTLY REPORT IT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.

IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED.

THESE PLANS ARE SUBJECT TO MODIFICATIONS AS NECESSARY TO MEET CODE REQUIREMENTS OR TO FACILITATE MECHANICAL, PLUMBING INSTALLATIONS OR TO INCORPORATE DESIGN IMPROVEMENTS.

DO NOT BUILD OVER GAS LINES OR ENCLOSE THE METER. CONSULT THE LOCAL GAS COMPANY PRIOR TO CONSTRUCTION.

CHIMNEY SHALL EXTEND AT LEAST 2 FEET HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10 FEET, BUT SHALL NOT BE LESS THAN 3 FEET ABOVE THE POINT WHERE IT PASSES THROUGH THE ROOF.

DECKS ARE NOT APPROVED FOR FUTURE HOT TUB INSTALLATION.

NO OPENING NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. STRUCTURAL ENGINEER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS. INCONSISTENCIES ON THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER CONTRACT, SHOP, FABRICATION, OR OTHER DRAWINGS OR INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH AFFECTED WORK.

THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDANT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE TRADE SUB-CONTRACTOR. THE TRADE SUB-CONTRACTOR SHALL SUPPLY ANY NECESSARY SHORING, BRACING, GUYS, ETC., TO PROPERLY BRACE THE STRUCTURE AGAINST WIND, DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS.

CONTRACTOR SHALL NOT PLACE BACK FILL AGAINST BASEMENT WALLS UNTIL THE FLOOR SYSTEM IS COMPLETELY INSTALLED OR CONTRACTOR HAS PROVIDED ADEQUATE SHORING AND BRACING. ANY QUESTIONS REGARDING TEMPORARY SHORING REQUIREMENTS SHOULD BE FORWARDED TO THE STRUCTURAL ENGINEER FOR REVIEW.

MASONRY

ALL MASONRY WORK SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF BIA AND NCMA "SPECIFICATIONS FOR MASONRY STRUCTURE (ACI 530.1)" PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE.

HOLLOW CMU	NORMAL WEIGHT: ASTM C90, GRADE N, Fm= 1,500 psi
FACE BRICK	ASTM C216, SEVERE WEATHER BRICK, TYPE FBX, Fm=2,000 psi
STONE VENEER	OWNER APPROVED
MORTAR:	
VENEER	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE I PORTLAND CEMENT, TYPE N HYDRATED LIME AND APPROVED AGGREGATE, w/750 psi MIN. COMPRESSIVE STRENGTH OF 2' CUBES AT 28-DAYS.
AVERAGE	

ANCHORED VENEER WALLS TO HAVE NON-CORROSIVE METAL TIES AT 16"oc VERTICALLY AND HORIZONTALLY AND EMBEDDED IN MORTAR A MINIMUM 1-1/2" WITH AT LEAST 5/8" COVER (OUTSIDE FACE). VENEER TIES SHALL BE No. 22 U.S. GAGE x 7/8" CORRUGATED SHEET METAL OR No.9 U.S. GAGE WIRE WITH A HOOK.

ADHERED MASONRY VENEER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS ON WATER RESISTANT BARRIER.

PROVIDE WEEP HOLES AT 24"oc AT BASE FLASHING.

A36 STEEL LINTEL SIZES FOR OPENINGS PER 4" THICKNESS OF MASONRY WALL AS FOLLOWS:
 4'-0" SPAN OR LESS L3"x 3" 1/2"x 5/16" 7'-6" SPAN OR LESS L5"x 3 1/2"x 5/16"
 5'-6" SPAN OR LESS L4"x 3 1/2"x 5/16" 9'-0" SPAN OR LESS L6"x 3 1/2"x 5/16"
 PROVIDE MIN. 6" BEARING, EACH END # BRICK TIES, 16"oc @ 1st COURSE ABOVE LINTEL. LINTEL SHALL BE SHOP COATED WITH A RUST-INHIBITIVE PAINT.

MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION.

PARTIAL FOUNDATION

PRIOR TO THE START OF ANY CONSTRUCTION, ALL VEGETATION, TOPSOIL, ORGANIC SOILS, SOILS MIXED WITH EXCESSIVE AMOUNTS OF ROOTS, STUMPS, ASPHALT OR OTHER DELETERIOUS MATERIALS SUCH AS BUILDING DEBRIS, EXISTING UTILITY LINES AND BACKFILL SHALL BE REMOVED FROM ALL BUILDING AND PAVEMENT AREAS INCLUDING AT LEAST 5 FT. OFFSETS OUTSIDE ALL BUILDING AND PAVEMENT LINES. SOFT, VERY WET AND LOOSE SOIL SHALL ALSO BE REMOVED FROM BUILDING AREAS. THE CLEARED AREAS SHALL ALSO BE PROOF ROLLED PRIOR TO THE PLACEMENT OF FILL. IF PUMPING OR RUTTING IS OBSERVED, THE SOFT OR WET MATERIAL SHALL BE REMOVED DOWN TO FIRM SUBGRADE AND REPLACED WITH SUITABLE FILL. ANY POTENTIALLY EXPANSIVE CLAY (CL-CH) SOILS BELOW FOOTINGS AND FOR AT LEAST 2 FEET BELOW SLABS AND PAVEMENTS SHALL BE REMOVED AND REPLACED WITH SUITABLE FILL MATERIALS.

TRADE SUB-CONTRACTOR IS TO PROVIDE A DE-WATERING SYSTEM (IF REQUIRED) TO PREVENT SOFTENING OF SUBGRADE, FACILITATE CONTROL OF GROUND WATER AND ALLOW CONSTRUCTION TO PROCEED IN DRY CONDITIONS. NO EXCAVATION SHALL EXTEND CLOSER THAN 2 FT. TO GROUNDWATER LEVEL. IF THE SOIL AT THE SUBGRADE BECOMES WET, THEN CONSTRUCTION SHOULD STOP AND DE-WATERING MUST BE PERFORMED TO LOWER THE WATER LEVEL. RESUME EXCAVATION ONLY AFTER THE GEOTECHNICAL ENGINEER HAS EXAMINED THE CONDITION AND HAS APPROVED THE RESTART OF ANY EXCAVATION WORKS.

SOILS, FOOTINGS, PARTIAL FOUNDATION WALLS AND SLABS SHALL NOT BE PLACED ON OR IN MARINE CLAY, PEAT OR OTHER ORGANIC MATERIALS. PLACE FOOTINGS ON FIRM, DRY, NON-FROZEN SUBGRADE. REMOVE SOFT SOILS ENCOUNTERED DURING EXCAVATION. BACKFILL EXCAVATIONS AND AREAS REQUIRING STRUCTURAL FILL WITH CLEAN, MOIST, GRANULAR SELECT BORROW (TYPE "G", GRADE V OR BETTER IN ACCORDANCE WITH DELDOT STD. SPECS). ALL BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8-INCHES IN LOOSE THICKNESS. PROPER EQUIPMENT SHALL BE SELECTED AND USED FOR COMPACTION ACCORDING TO THE TYPE A BACKFILL MATERIAL USED. COMPACTION RATIO SHALL BE 95% MINIMUM.

WHERE REQUIRED, STEP FOOTINGS IN A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.

FOOTING EXCAVATION SHALL BE INSPECTED BY THE BUILDING OFFICIAL PRIOR TO POURING CONCRETE. NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 2 HORIZONTAL TO 1 VERTICAL TO A FOOTING.

DESIGN IS BASED ON WATER TABLE=2'-0"(MIN) BELOW BOTTOM OF ALL CONCRETE SLABS # FOOTINGS.

FOOTINGS ADJACENT TO SLOPES GREATER THAN 33% MUST COMPLY WITH SECTIONS R403.1.7.1 - R 403.1.7.4

FOOTINGS SHALL BE PLACED ON THE SAME DAY THAT THE EXCAVATIONS ARE MADE TO THE FINAL GRADE.

THE TOP OF ALL EXTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 2'-0" BELOW FINISH GRADE (BEARING BELOW FROST LINE DEPTH). THE TOP OF INTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 0'-8" BELOW FINISH FLOOR.

A STRUCTURAL SLAB SHALL BE USED WHEN UNCOMPACTED FILL EXCEEDS 8".

ALL FRAMING SHALL BE A MINIMUM OF 8" ABOVE GRADE AND ALL WOOD SIDING SHALL BE 6" ABOVE GRADE.

ANCHOR BOLTS SHALL BE A MAXIMUM OF 12" FROM PLATE ENDS, SPACED AT 6'-0" O.C. (MAX.), AND HAVE A MINIMUM OF (2) PER PLATE SECTION. IN LIEU OF ANCHOR BOLTS, THE TRADE SUB-CONTRACTOR MAY USE ANCHOR STRAPS ,INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

PROVIDE 4" MIN. DRAIN TILE AT BOTTOM OF ALL EXTERIOR FOOTINGS AT BASEMENT WALLS. TILE TO BE SET ON 2" GRAVEL BED WITH 6-8" GRAVEL COVER AND SHOULD DRAIN TO DAYLIGHT OR SUMP PUMP. PROVIDE 2" DRAIN TILE AT INTERIOR OF FOOTING AND BLEEDER PIPES THROUGH FOOTING AS REQUIRED BY GEOTECHNICAL ENGINEER TO DRAIN WATER UNDER SLAB. IN-LIEU OF DRAIN TILE, PROPRIETARY DRAINAGE SYSTEMS MAY BE USED (EX, J-DRAIN). INSTALL PROPRIETARY DRAINAGE SYSTEMS PER MANUFACTURERS RECOMMENDATIONS.

PROVIDE FREE DRAINING, GRANULAR BACKFILL (SOIL CLASS CL OR BETTER) WITH A MAXIMUM EQUIVALENT FLUID PRESSURE - 60 PSF PER FOOT OF DEPTH AGAINST BASEMENT AND RETAINING WALLS. IF BACKFILL PRESSURE EXCEEDS 60 PSF, THEN WALL MUST BE DESIGNED FOR ACTUAL PRESSURES BY STRUCTURAL ENGINEER.

PARTIAL FOUNDATION DRAINS SHALL BE INSTALLED BY CONCRETE SUBTRADE SUB-CONTRACTOR, BUT LOCATED AT BUILDER'S DISCRETION ACCORDING TO LOCAL SITE CONDITIONS.

DRAIN DISCHARGE TO CONFORM WITH APPROVED SITE PLAN. SUMP CROCK TO BE INSTALLED BY CONCRETE SUBTRADE SUB-CONTRACTOR, LOCATED BY BUILDER. NO AREAWAY DRAINS OR CONDENSATE DRAINS SHALL BE TIED INTO THE SANITARY SEWER SYSTEM.

1/2" WATERPROOF PARGING IS TO BE APPLIED TO MASONRY PARTIAL FOUNDATIONS, BITUMINOUS WATERPROOFING WITH POURED IN PLACE CONCRETE.

POURED IN PLACE CONCRETE PARTIAL FOUNDATION WALLS SHALL BE BRICK-FORM FACED.

THE SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING SHALL BE PROVIDED WITH A MINIMUM NET AREA OF VENTILATION OPENINGS OF NOT LESS THAN ONE SQUARE FOOT FOR EACH 150 SQUARE FEET OF CRAWL SPACE AREA. ONE SUCH VENTILATING OPENING SHALL BE WITHIN 3' OF EACH CORNER OF THE BUILDING.

CAST-IN-PLACE CONCRETE

ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH DESIGN MIXES WHICH ARE TO BE APPROVED BY THE ARCHITECT OR ENGINEER PRIOR TO CASTING ANY CONCRETE. MIXES SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTION ACI 318. ALL PLAIN CONCRETE TO CONFORM TO ACI 318.1 AND ACI 332 GUIDE TO RESIDENTIAL CAST IN PLACE CONCRETE CONSTRUCTION. MIXES SHALL HAVE A MINIMUM CEMENT CONTENT OF 520 LB. PER CUBIC YD., MAXIMUM WATER/CEMENT RATIO OF 0.53 FOR INTERIOR CONCRETE PROTECTED FROM FREEZING AND 0.45 FOR ALL EXTERIOR EXPOSED CONCRETE.

LOCATION	COMP. STRENGTH	SLUMP
BASEMENT WALLS # FDN NOT EXPOSED TO WEATHER	3,000 psi (1)	4" +/- 1"
BASEMENT WALLS AND INTERIOR SLABS ON GRADE	3,000 psi (1)	4" +/- 1"
BASEMENT WALLS, FDNS, EXTERIOR WALLS # OTHER CONCRETE EXPOSED TO WEATHER	3,000 psi (2)	4" +/- 1"
DRIVEWAYS, CURBS, WALKS, PATIOS, STEPS AND UNHEATED GARAGE FLOORS EXPOSED TO WEATHER	3,500 psi (2)	4" +/- 1"

NOTES: 1. EXTERIOR, WEATHER-EXPOSED CONCRETE # CONCRETE SUBJECTED TO FREEZE AND THAW CONDITIONS DURING CONSTRUCTION SHALL BE AIR-ENTRAINED, 6% +/-1%. TABLE R402.2- SEVERE
 2. CONCRETE SHALL BE AIR-ENTRAINED, 6% +/-1%. TABLE R402.2 - SEVERE

CONCRETE MATERIALS SHALL CONFORM TO ASTM C150, TYPE I FOR PORTLAND CEMENT AND ASTM C33 FOR AGGREGATES. WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, TYPE A (FREE OF CALCIUM CHLORIDES), AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260, AND HIGH-RANGE WATER REDUCERS (SUPER-PLASTICIZERS) SHALL CONFORM TO ASTM C494, TYPE F. FLY ASH SHALL COMPLY WITH ASTM C619 FOR CLASS F AND SHALL NOT BE PROPORTIONED IN MIXES WITH MORE THAN 20% CEMENT BY WEIGHT. LIQUID-MEMBRANE CURING COMPOUNDS SHALL BE HIGH-SOLIDS, WATER AND ACRYLIC-BASED, COMPLYING WITH ASTM C309 AS TESTED UNDER ASTM C156. SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 4-INCHES AND A MAXIMUM OF 6-INCHES. SEE THE PROJECT SPECIFICATIONS. THE COMPRESSIVE STRENGTH IS BASED 28-DAY COMPRESSIVE STRENGTH.

REBAR SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60 (60,000 psi) - DEFORMED WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-15

REINFORCING PROTECTION SHALL BE AS FOLLOWS:	
FOOTINGS AND OTHER CONCRETE PLACED AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH	2"
FORMED CONCRETE NOT EXPOSED TO EARTH	1 1/2"
SLABS ON GROUND, UNLESS NOTED OTHERWISE	MID-DEPTH OF SLAB

SLAB ISOLATION JOINTS: PROVIDE PRE-MOLDED JOINT FILLER AROUND ALL PIPING, PIERS # PARTIAL FOUNDATION WALLS.

ALL CONCRETE TO BE PLACED IN THE CELLS OF CONCRETE MASONRY UNITS (CMU BLOCK FILL), OR IN THE VOIDS OF BRICK MASONRY CONSTRUCTION, SHALL CONTAIN PEA GRAVEL (3/8"φ STONE) IN LIEU OF COARSE AGGREGATE. THE CONCRETE MIX SHALL CONTAIN A HIGH-RANGE WATER REDUCER (SUPERPLASTICIZER). SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 6" AND A MAXIMUM OF 9". SEE THE PROJECT SPECIFICATIONS.

ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED, 6% +/-1%. USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED. DO NOT USE HIGH-RANGE WATER REDUCING ADMIXTURES IN AIR-ENTRAINED CONCRETE. CONFORM TO ASTM C260.

ADDITION OF WATER TO THE CONCRETE AT THE JOB SITE FOR THE PURPOSE OF INCREASING THE SLUMP OR FOR RETEMPERING THE CONCRETE WHICH HAS BEGUN TO SET IS STRICTLY PROHIBITED. SEE THE PROJECT SPECIFICATIONS FOR REQUIREMENTS OF WATER ADDITION TO CONCRETE AT THE JOBSITE.

SLABS ON GRADE SHALL BE 4" THICK CONCRETE AND REINFORCED w/6x6 W1.4xw1.4 WWF (FLAT SHEETS). WELDED WIRE FABRIC SHALL BE SUPPORTED ON HIGH CHAIRS SO THAT THE FABRIC IS POSITIONED AT MID-DEPTH OF THE SLAB THICKNESS. LAP ONE FULL MESH PLUS 2" AT SPLICES IN EACH DIRECTION. PLACE CONCRETE OVER 10 MIL. POLYETHYLENE VAPOR BARRIER AND 4" MINIMUM ASTM C33 No.4 OR No.6 - 40% VOID. THE AGGREGATE LAYER SHALL BE PLACED OVER FIRM NATURAL SUBGRADE OR ON COMPACTED AND CONTROLLED FILL. FILL UNDER SLABS SHALL BE COMPACTED IN 8 INCH LAYERS TO 95% MAX. DENSITY. USE AIR-ENTRAINED AT ALL EXTERIOR SLABS.

CONCRETE FOR SLABS-ON-GRADE SHALL BE PLACED IN A SEQUENCE AND MANNER THAT IS CONSISTENT WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE. LOCATE CONSTRUCTION AND CONTROL JOINTS IN SUCH A WAY TO MINIMIZE THE EFFECTS OF SHRINKAGE OF THE CONCRETE SLAB SECTIONS. SUBMIT TO THE ARCHITECT/ENGINEER THE SEQUENCE AND METHOD OF CASTING CONCRETE SLABS-ON-GRADE PRIOR TO PLACING THESE ELEMENTS. POUR SLABS IN ALTERNATE PANELS WITH A MAXIMUM OF 600 SF AND PROVIDE CONTROL AND CONSTRUCTION JOINTS AT 15'-0" MAXIMUM OR AS REQUIRED TO PREVENT UNCONTROLLED CRACKING.

SLAB CONTROL JOINTS: SAW CUT OR FORM TO 1/3 SLAB DEPTH. SPACE NO MORE THAN 15 FEET APART. DISCONTINUE WELDED WIRE FABRIC AT CONTROL JOINTS. PROVIDE JOINTS ON GROUND SUPPORTED SLABS IN RECTANGULAR CONFIGURATION, WITH THE LONGER SIDE NO MORE THAN ONE-AND-ONE-HALF TIMES THE LENGTH OF THE SHORTER SIDE.

THE TRADE SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING CONCRETE.

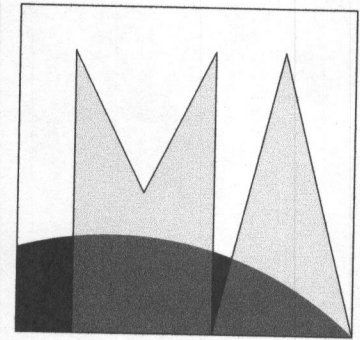
ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, (ACI-315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 318, ACI 315, AND CRSI STANDARDS.

ALL REINFORCING STEEL (INCLUDING WELDED WIRE FABRIC) SHALL BE SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE LACING OPERATION.

REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT, GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT THE BOND BETWEEN THE STEEL AND CONCRETE.

AT CORNERS, ALL HORIZONTAL REINFORCEMENT SHALL EXTEND AROUND CORNER AND LAP REINFORCEMENT SHALL BE A MINIMUM OF 30 BAR DIAMETERS (#4=15", #5= 19"). PROVIDE DOWELS BETWEEN ALL FOOTINGS, WALLS AND PIERS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

DRY PACK SHALL CONSIST OF SIKA GROUT 212 OR APPROVED SUBSTITUTE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.



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PROFESSIONAL CERTIFICATION
I certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License Number #31466
Expiration Date: 2/14/2021

Gemmell Residence
P R O P O S E D A D D I T I O N
2896 Hunt Valley Drive, Glenwood, Maryland 21738

REVISIONS

5-6-19	REVIEW SET
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SCALE:

STRUCTURAL NOTES

SN.2

PRINT DATE:
Thursday, September 26, 2019