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PROPOSED ADDITION

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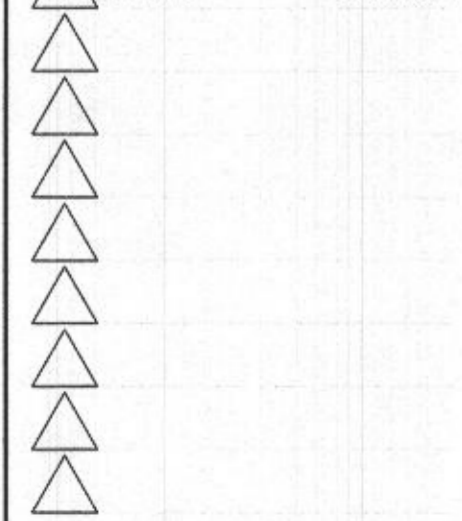
BUILDER

STRUCTURAL ENGINEER
 Mid-Atlantic Structural
 Engineering - Robert Wyatt
 Awesome PE

717-504-8407
 rwyatt@midatl-se.com

ISSUE DATE

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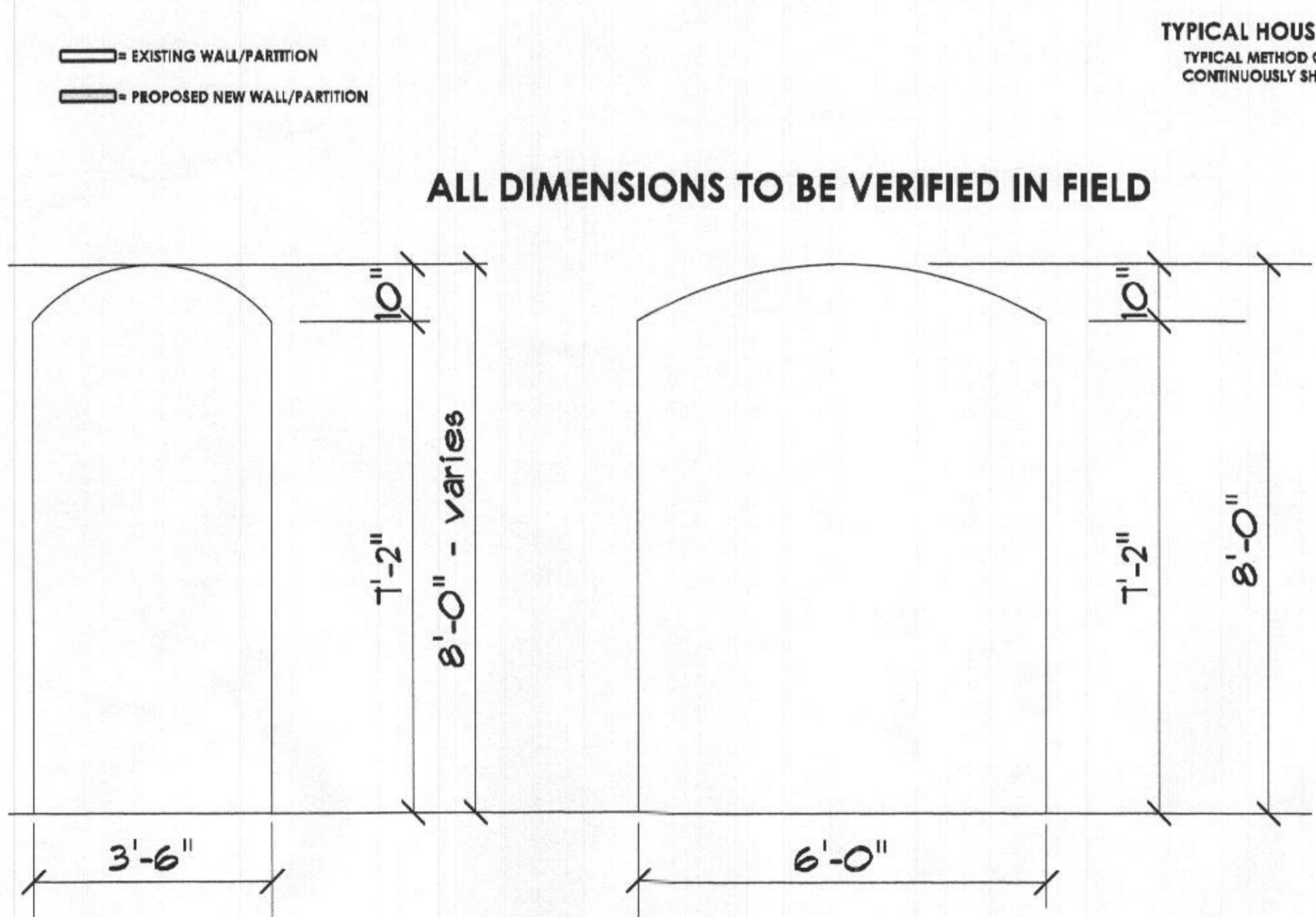
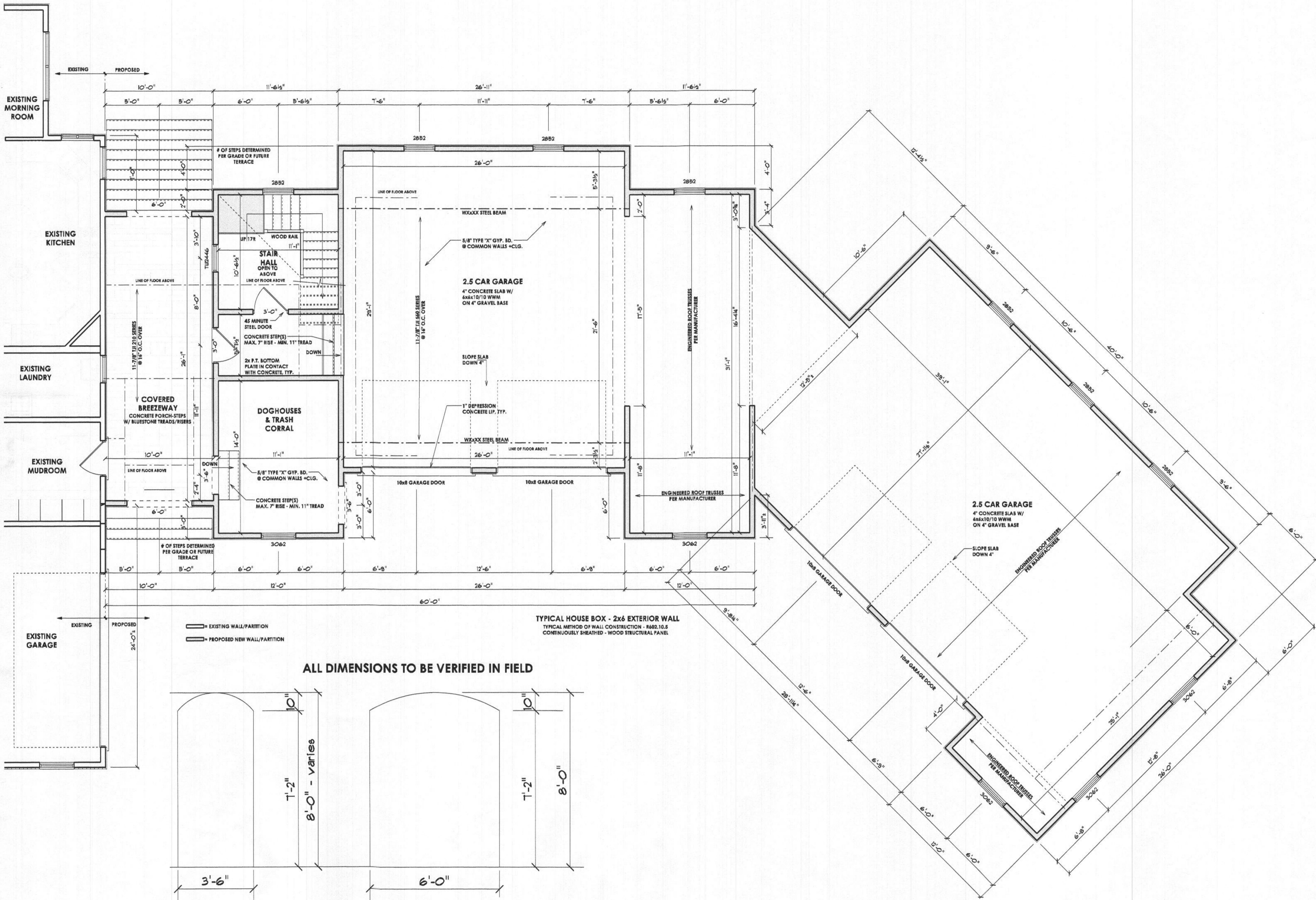


SCALE: 1/4"=1'-0"

FIRST FLOOR

3.01

PRINT DATE:
 Wednesday, July 28, 2021



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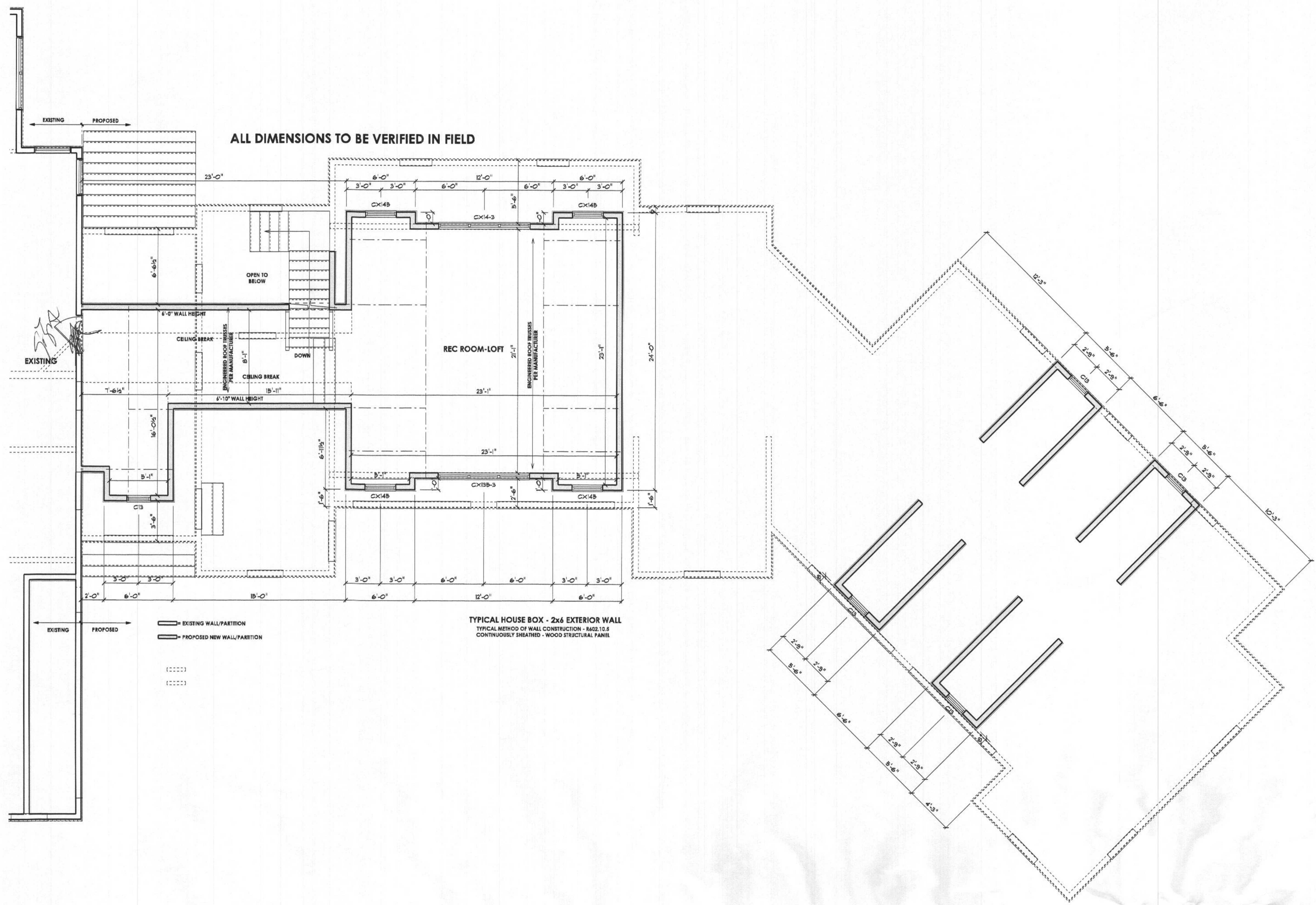
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SECOND FLOOR

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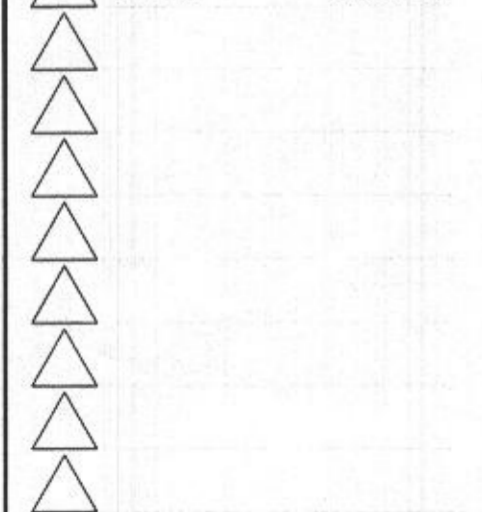
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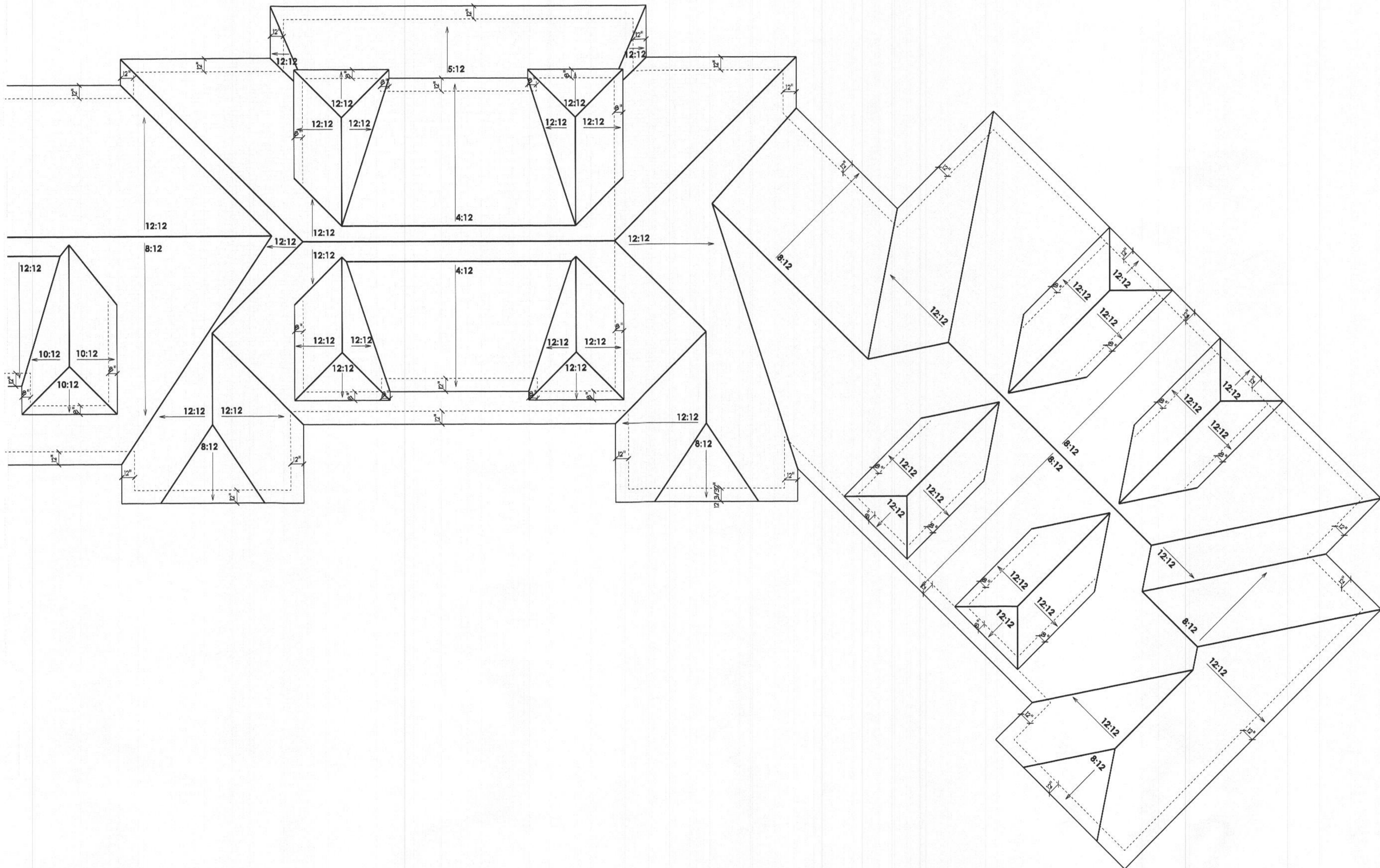


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ROOF PLAN

4.01

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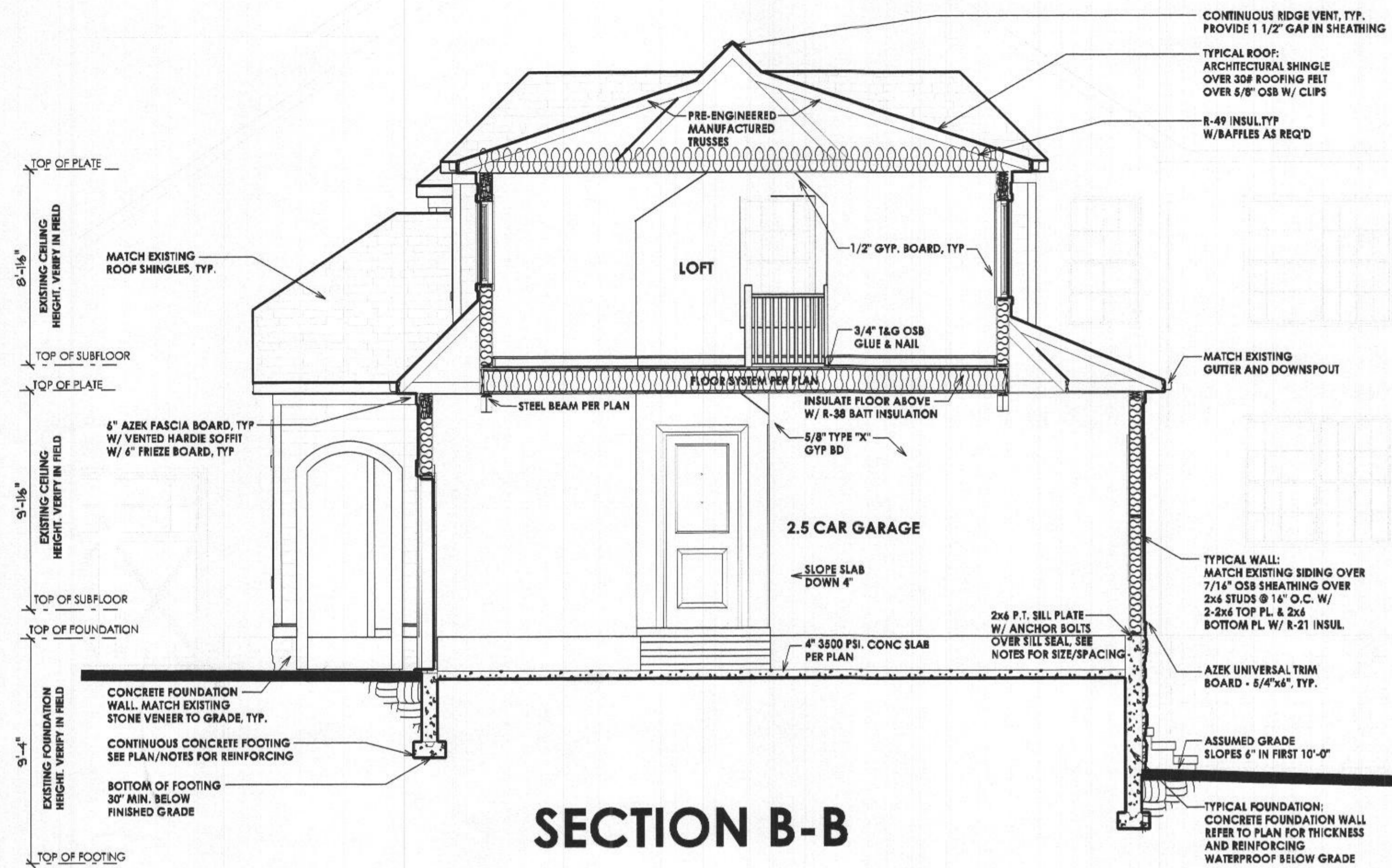
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SECTIONS

5.01

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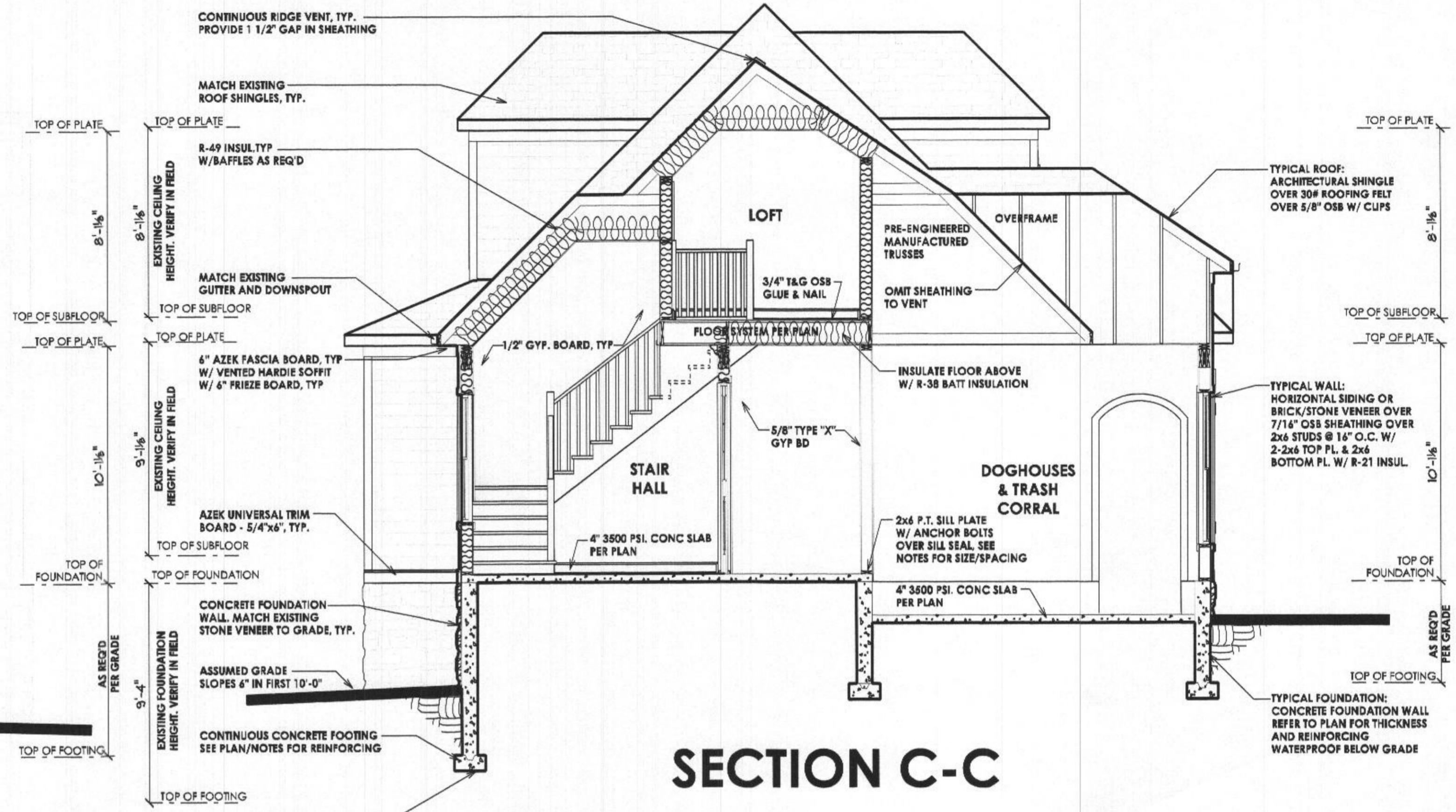


SECTION B-B

NOTE:
 STAIRS WITH 2 OR MORE RISERS SHALL BE PROVIDED WITH HANDRAILS. HANDRAILS SHALL BE A MINIMUM OF 34" IN HEIGHT AND NOT MORE THAN 38" IN HEIGHT. RAILS ARE TO BE MEASURED VERTICALLY FROM THE NOSING OF THE TREADS.

PORCHES, DECKS, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDS A MINIMUM OF 36" HIGH.

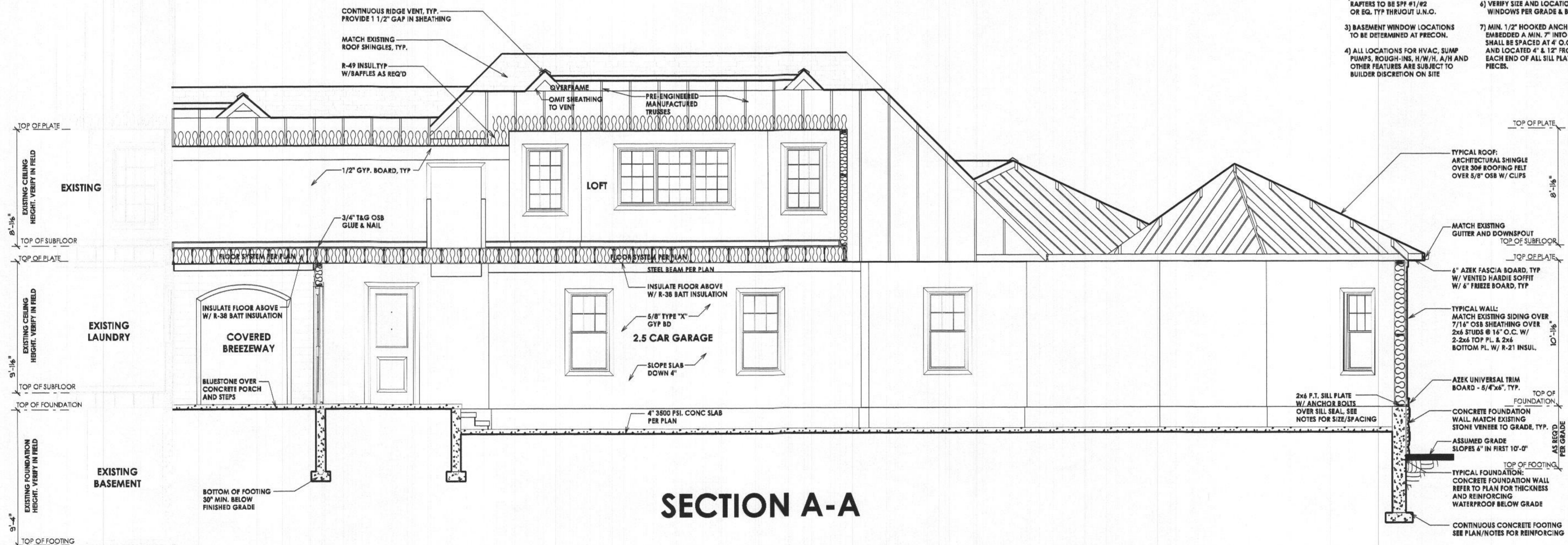
RISERS ARE TO BE CLOSED SUCH THAT THE OPENING BETWEEN THE TREADS DOES NOT PERMIT THE PASSAGE OF A 4" DIA SPHERE.



SECTION C-C

SECTION NOTES

- 1) 2000 PSF MIN. SOIL BEARING CAPACITY ASSUMED
- 2) BEAMS, JOISTS, HEADERS & BATTENS TO BE SPP #1/ #2 OR EQ. TYP THROUGH U.N.C.
- 3) BASEMENT WINDOW LOCATIONS TO BE DETERMINED AT PRECON.
- 4) ALL LOCATIONS FOR HVAC, SUMP PUMPS, ROUGH-INS, H/W/H, A/H AND OTHER FEATURES ARE SUBJECT TO BUILDER DISCRETION ON SITE
- 5) FOUNDATION WALL MIN. THICKNESS 10" WHERE STEM WALL AT BRICK LEDGE EXCEEDS 16" HIGH
- 6) VERIFY SIZE AND LOCATION OF WINDOWS PER GRADE & BUILDER
- 7) MIN. 1/2" HOOKED ANCHOR BOLTS SHEEDED 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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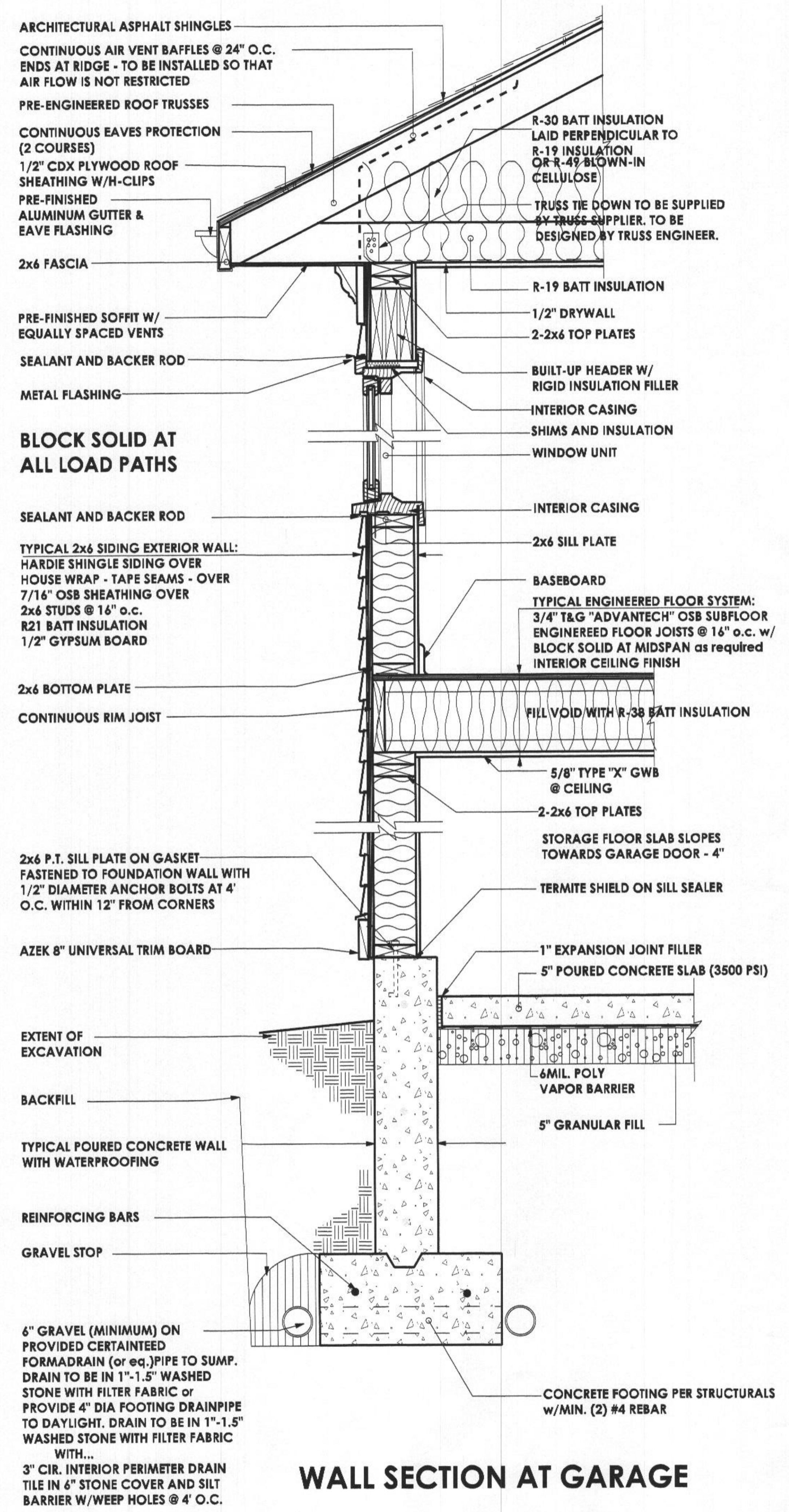
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SECTIONS

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WALL SECTION AT GARAGE

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 302-14, 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 1 CONNECTIONS, ASD 9TH EDITION/LRFD 1ST EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- DETAILING FOR STEEL CONSTRUCTION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- STRUCTURAL WELDING CODE ANS/AWS D-201, 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 530-1B/ASCE 6-13/TMS 402-1B) & SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530-1B/ASCE 6-13/TMS 402-1B).
- NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION/ 2015, AMERICAN FOREST & PAPER ASSOCIATION.

DESIGN LOADS

| MISC | LIVE LOADS | DEAD LOADS | TOTAL |
|--------------------|------------|-----------------------|---------|
| ROOF TRUSSES | 30 PSF | 10 PSF (TOP & BOTTOM) | 50 PSF |
| RAFTERS | 30 PSF | 12 PSF | 42 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 | 42 PSF |
| OTHER FLOORS | 40 PSF | 12 PSF | 52 PSF |
| BATHROOM FLOORS | 40 PSF | 25 PSF | 65 PSF |
| ENTIRE FIRST FLOOR | 40 PSF | 25 PSF | 65 PSF |
| GARAGE FLOORS | 50 PSF | 50 PSF | 100 PSF |
| DECK/BALCONY | 40 PSF | 10 PSF | 50 PSF |
| STAIRS | 40 PSF | 20 PSF | 60 PSF |

ROOF DESIGN = 30 PSF

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

PRESCRIPTIVE DESIGN PRESSURES = 14 PSF (ROOF AVG.), 15 PSF (HALL AVG.)

TRUSS UPLIFT CONNECTION = 307 LBS/CONNECTION (TABLE R602.11)

SNOW GROUND SNOW (P_s)=30 PSF (THERMAL FACTOR=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 B

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# MUST BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

WEATHERING IS SEVERE

TERMITE INFESTATION PROBABILITY IS MODERATE TO HEAVY

DECAY PROBABILITY IS MODERATE

WINTER DESIGN TEMPERATURE IS 10° F

FROST LINE DEPTH IS 2'-6" BELOW FINISHED GRADE

FLOOD HAZARD IS DETERMINED BY LOCAL JURISDICTION

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 THE DEEM 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.

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, AND D-11 (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.

WOOD

| MATERIAL | F _s | F _v | F _p | F _{allow} | F _{allow} | E _{min} |
|--|---|-------------------------------------|--------------------------|--------------------------|--------------------------|---------------------------------|
| UNTREATED FRAMING (DESIGN VALUES ARE BASED ON SPF No.2.) | 2x, 3x, OR 4x 5/5 AND LARGER (B) 5/5 AND LARGER (P) | 875 600 | 450 305 | 155 125 | 425 425 | 1.4 1.0 |
| TREATED FRAMING (DESIGN VALUES ARE BASED ON SYP No.2.) | 2x4 2x6 2x10 2x12 5x5 & LARGER | 1500 1250 1200 1050 975 | 825 725 575 575 | 175 175 175 175 | 565 565 565 565 | 1.6 1.6 1.6 1.6 1.2 |
| LSL (1.3E) | BEAM/COLUMN | 1700 | 1075 | 425 | 710 | 1.3 |
| LSL (1.3E) | PLANK | 1900 | 1075 | 150 | 375 | 1.3 |
| LSL (1.55E) | BEAM | 2925 | 1070 | 310 | 400 | 1.70 |
| LVL (2.0E) | BEAM | 2650 | 1555 | 285 | 750 | 2.0 |
| PSL | BEAM | 2650 | 1650 | 285 | 750 | 3.00 |
| | COLUMN | 2650 | 1650 | 285 | 750 | 3.00 |

NOTE: DESIGN VALUES ARE FOR NORMAL LOAD DURATION AND DRY SERVICE CONDITIONS. SEE NDS OR MANUFACTURER SPECIFICATION FOR APPROPRIATE 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, SLOASH BLOCKS, BEVELD 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/SOSB SHALL BE APA RATED SHEATHING EXPOSURE I, GROUP I, MIN. 4 PLY, MIN. SPAN RATING OF 4B/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 & PRESURE IMPREGATED 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 95% 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 R601.2, R601.2, & R601.2.

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 BOARD (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 R602.4 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 STRONG-TIE, U.S.P., OR EQUAL, AND ARE TO BE USED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS. ALL FASTENERS TO BE 1/4" DIA. MIN. UNLESS NOTED OTHERWISE. PROVIDE GALV. FINISH UNLESS NOTED OTHERWISE. JOIST HANGERS SHALL BE MIN. 1/4" DIA. WITH SIZE AND PROFILE TO SUIT APPLICATION (U.N.O.). PROVIDE JOIST HANGERS FOR ALL FLUSH FRAMED JOISTS. ALL FASTENERS IN CONTACT WITH PRESURE TREATED WOOD SHALL BE 2-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. 4 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 #4C SERIES BY SIMPSON STRONG-TIE OR 60 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 4" 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-FIFTH 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. NOTCHES 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 1/8" (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.

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 & 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 1-1996. 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 AND 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 GNB 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 PERPENDICULAR NON-LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GNB 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 1/8" OR L/360 FOR ROOF TRUSSES.

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

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-OH) SOILS UNDER 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 INTERIOR OF GROUND WATER AND ALLOW CONSTRUCTION TO PROCEED IN DRY CONDITIONS. NO EXCAVATION SHALL EXCEED 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 6-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 TILE, PROPOSED DRAINAGE SYSTEMS MAY BE USED (EX. J-DRAIN). INSTALL PROPRIETARY DRAINAGE SYSTEMS PER MANUFACTURER'S 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 SUBGRADE 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 SUBGRADE 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 GROUND 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 |
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| BASEMENT WALLS & FDN NOT EXPOSED TO WEATHER | 3,000 psi (1) | 4" +/- 1" |
| BASEMENT SLABS AND INTERIOR WALLS 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" |