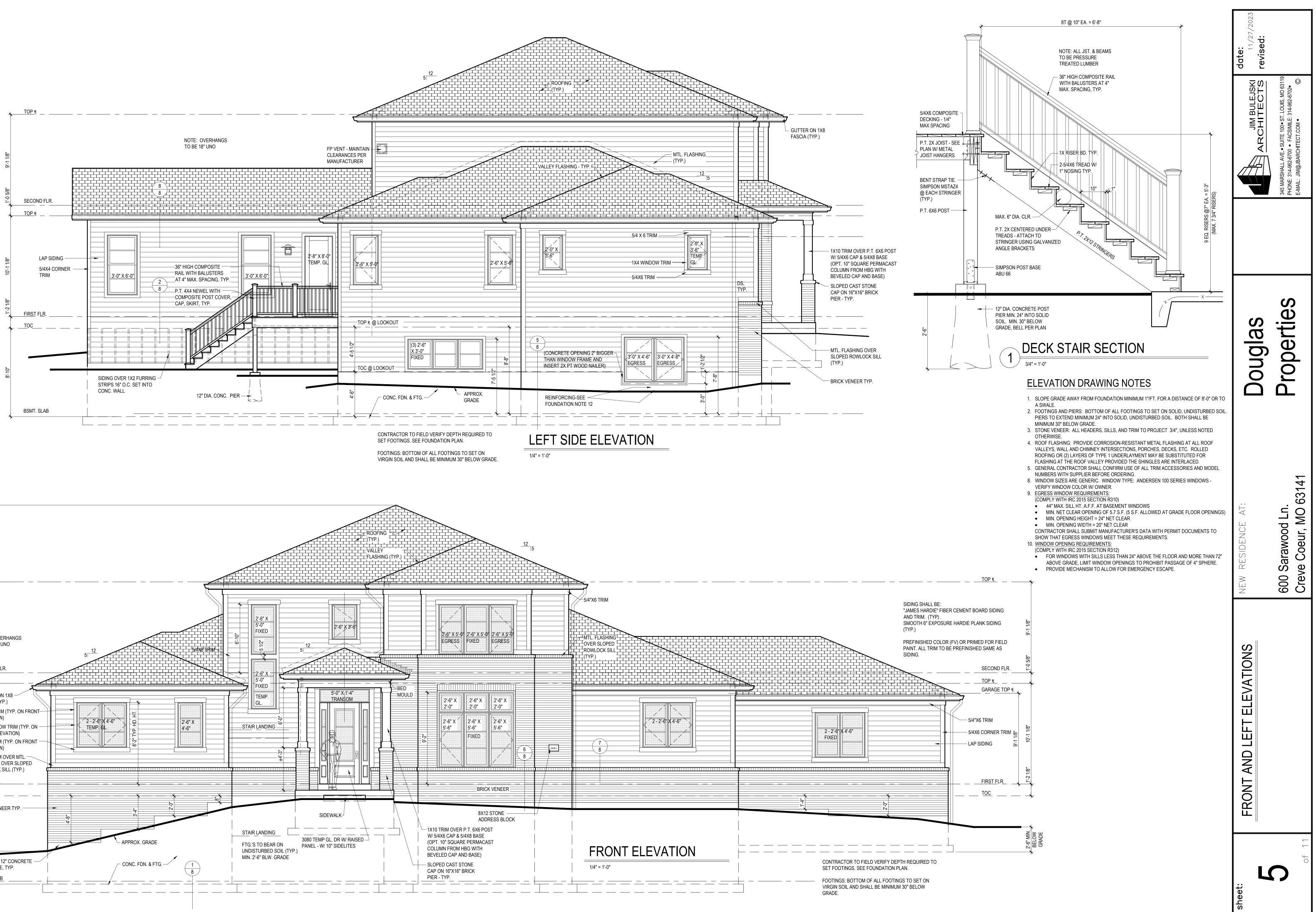
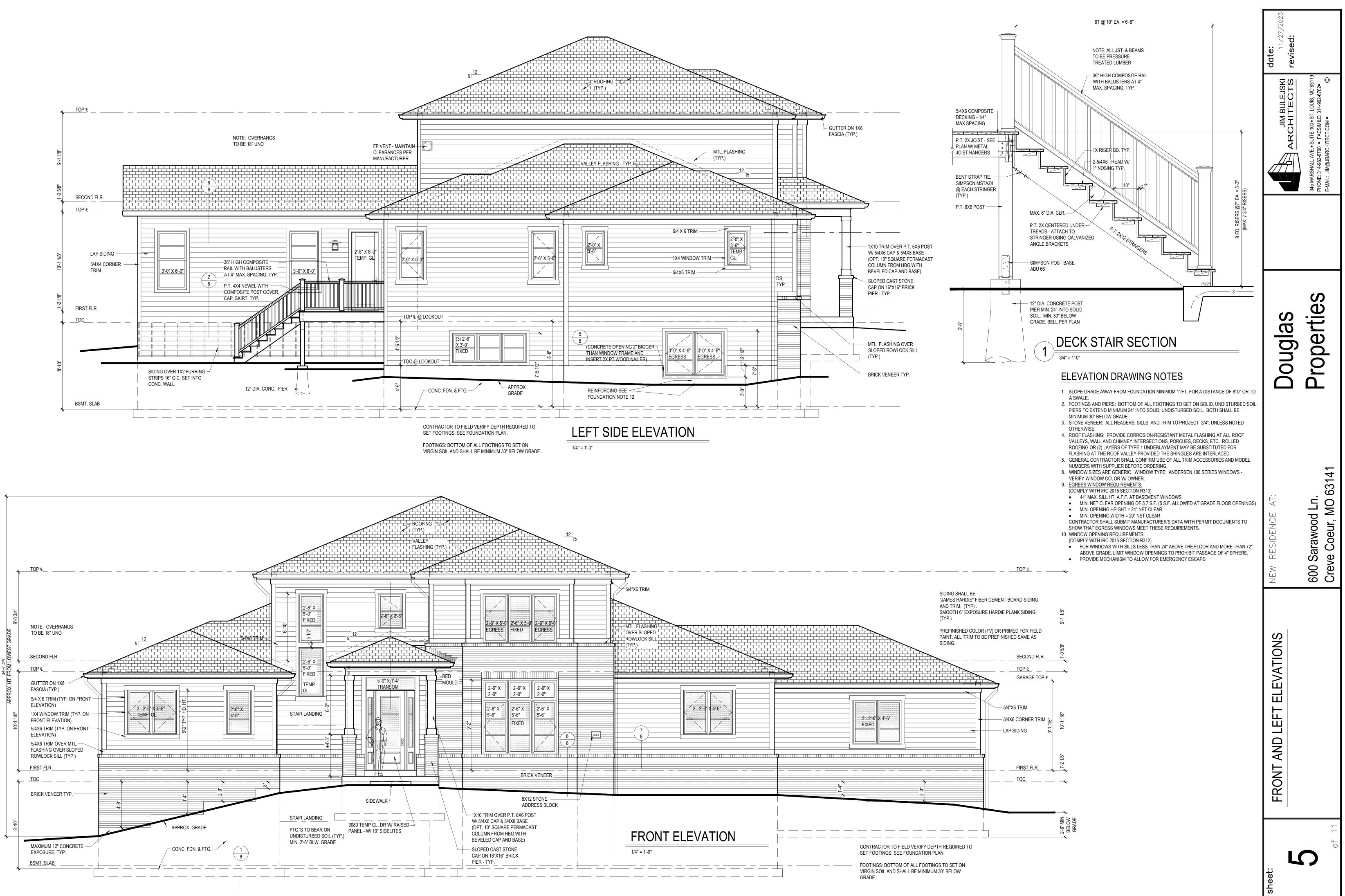
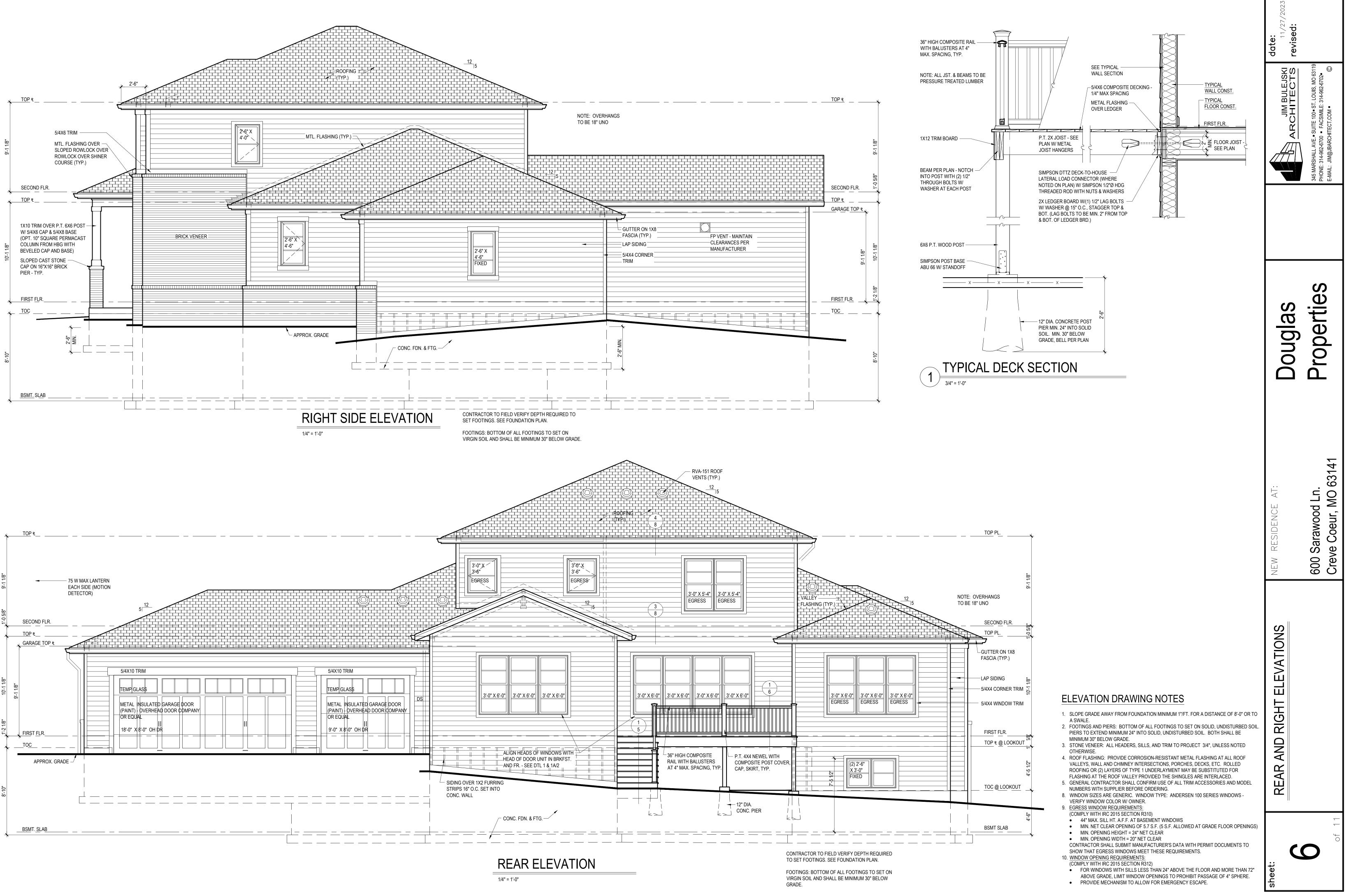
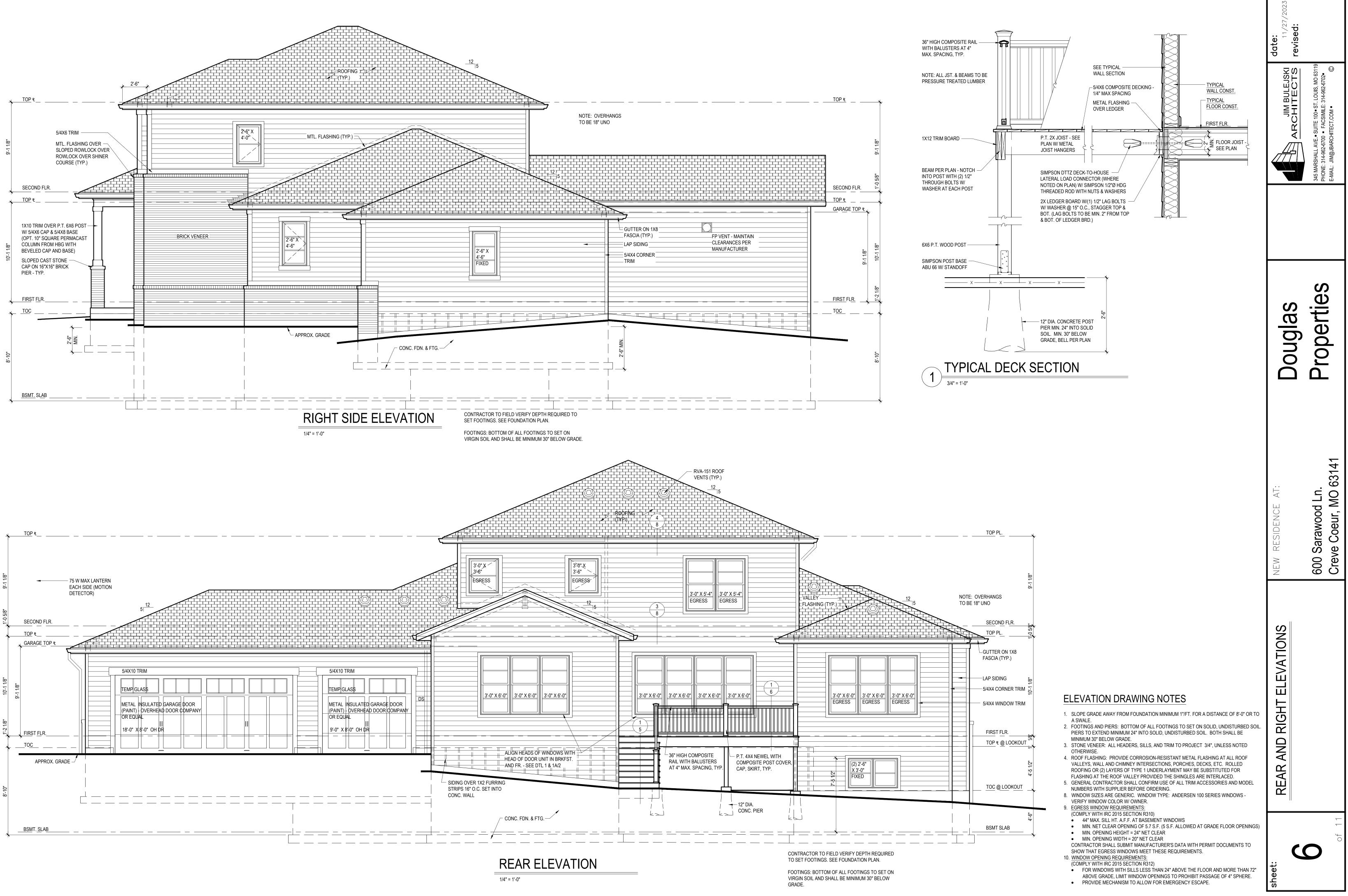


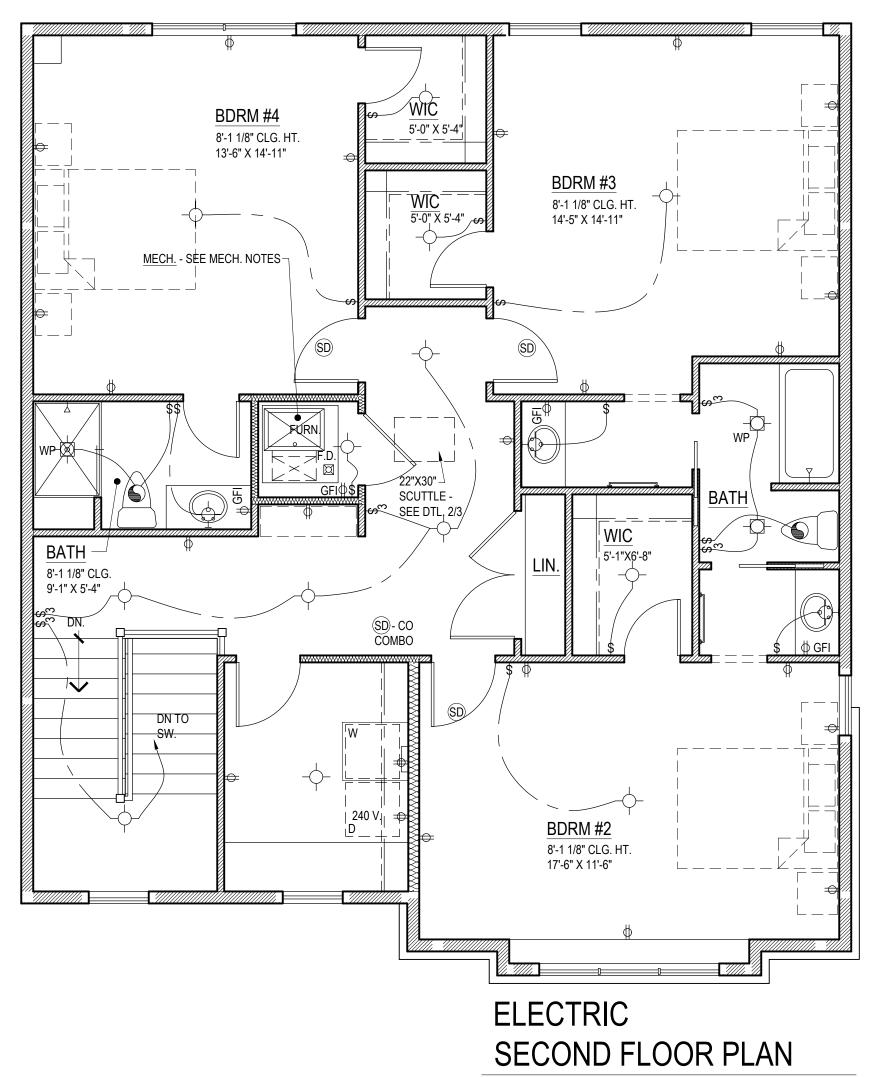
- 1. POST INDICATED SHALL BE MINIMUM 2-2X WALL THICKNESS, GLUED AND NAILED UNLESS NOTED OTHERWISE. MINIMUM HEADER SIZE 2-2X10'S GLUED AND NAIL ALL MULTIPLE
- AND SUPPORTING HEADERS SPANNING 3'-0" OR LESS MAY CONSIST OF A SINGLE 2X
- . TRUSS LAYOUT SHOWN IS FOR DIAGRAMMATIC PURPOSES ONLY. SEE MANUFACTURERS
- 4. TRUSSES TO HAVE 6" HEEL HEIGHT UNLESS NOTED OTHERWISE.



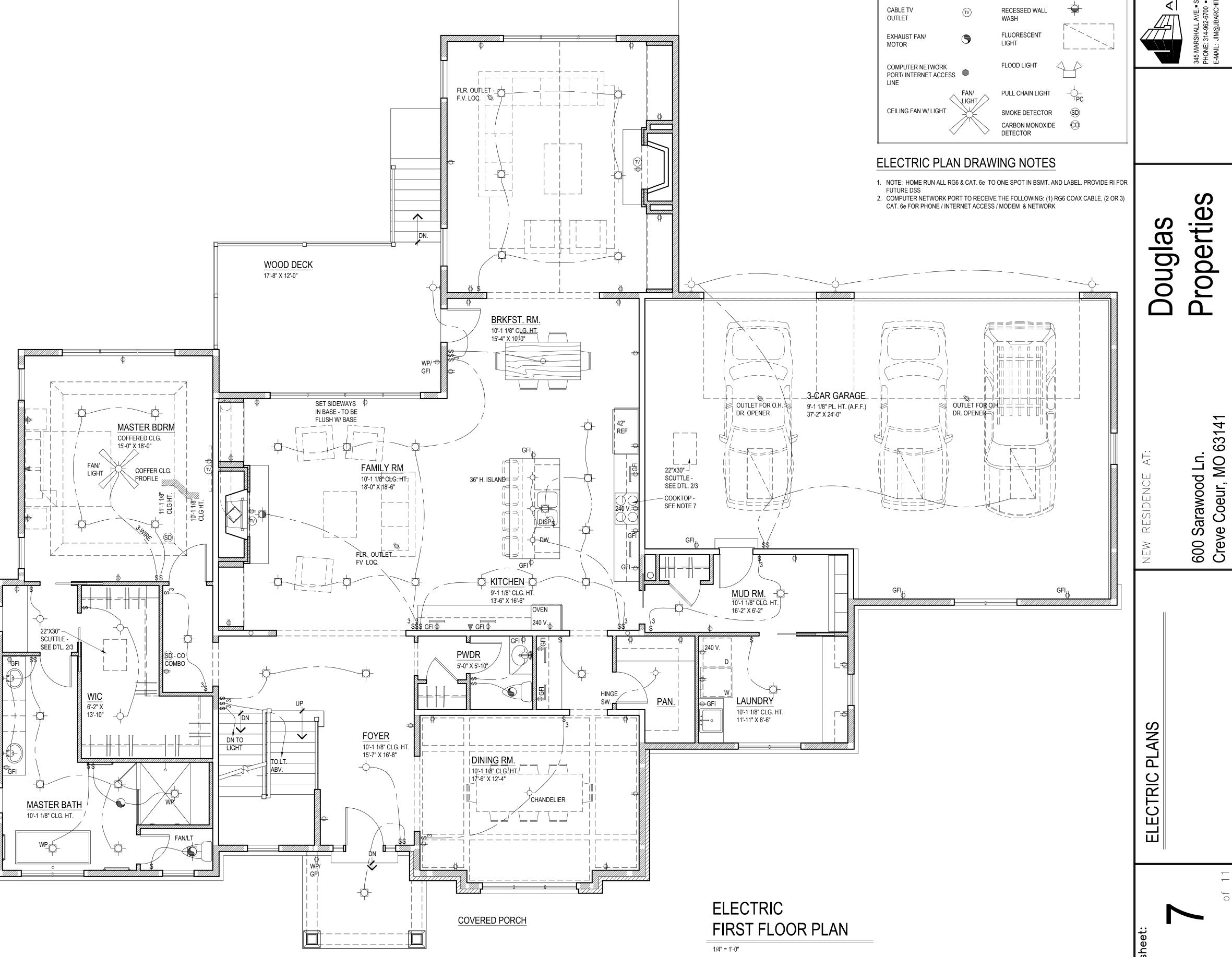


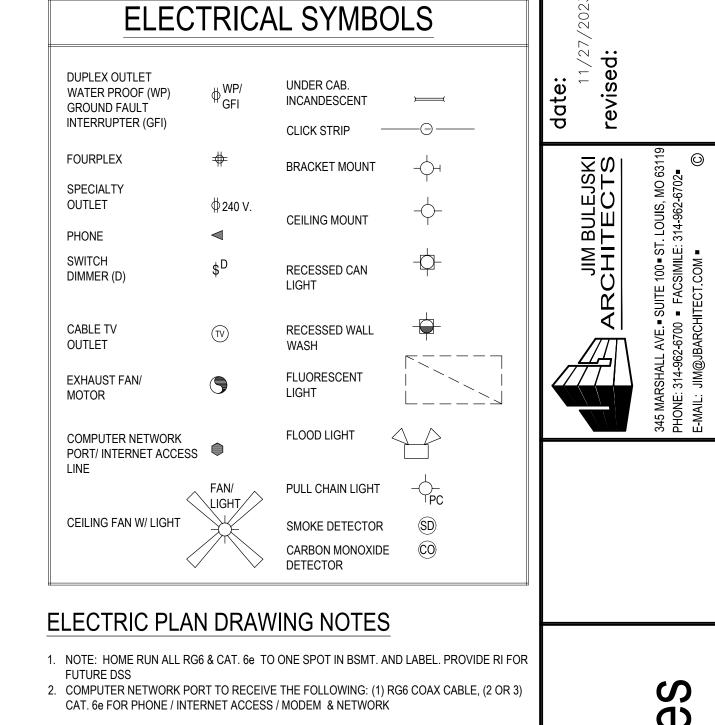


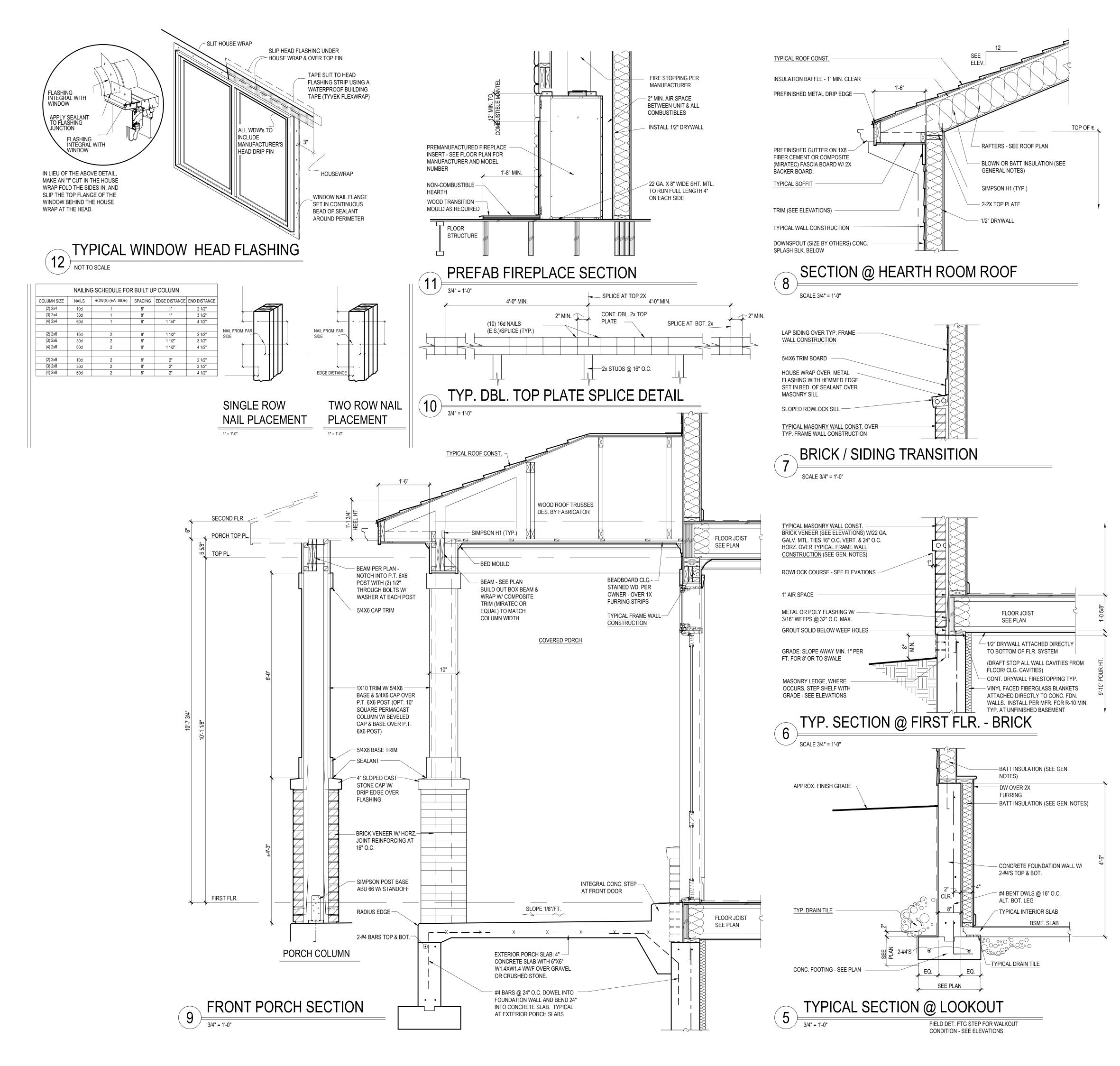


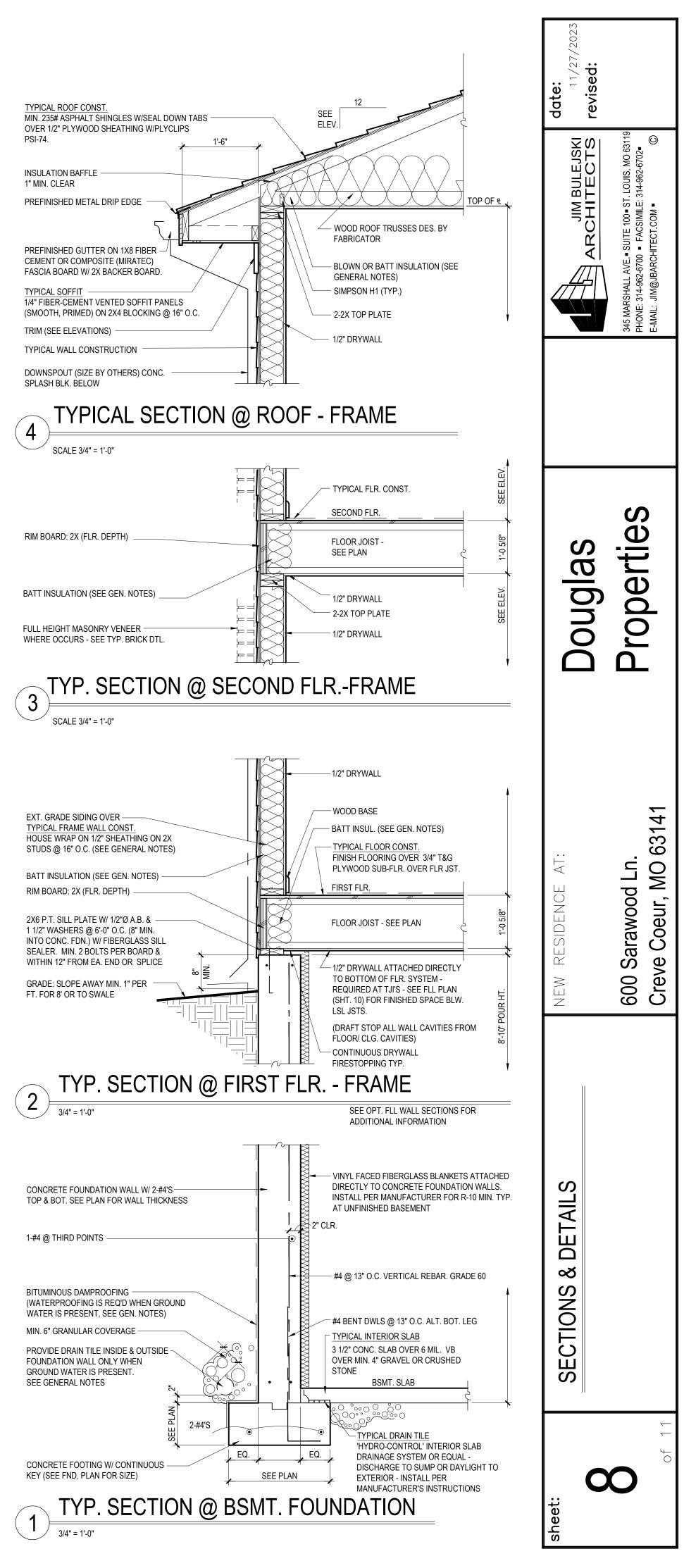


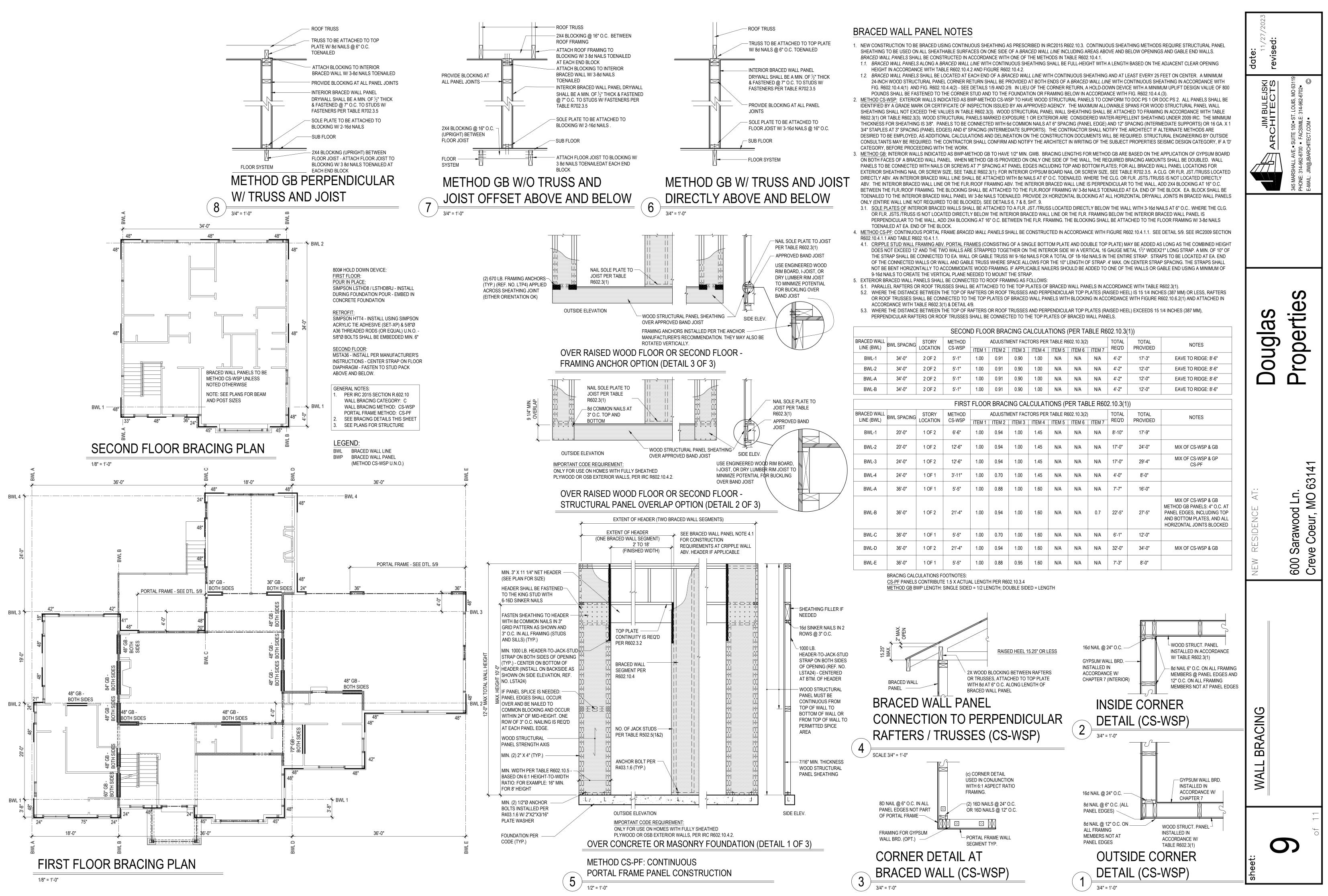
1/4" = 1'-0"





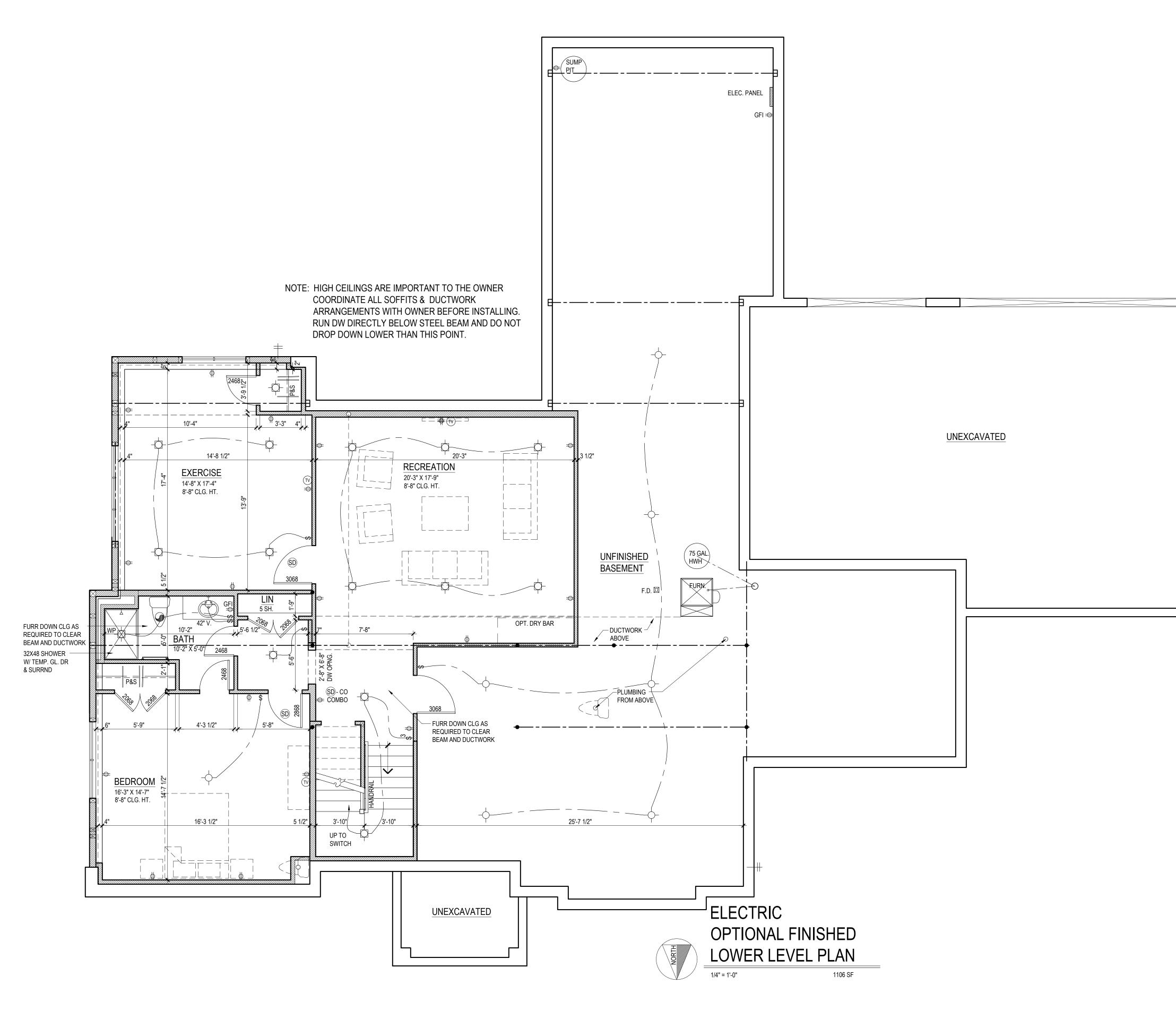


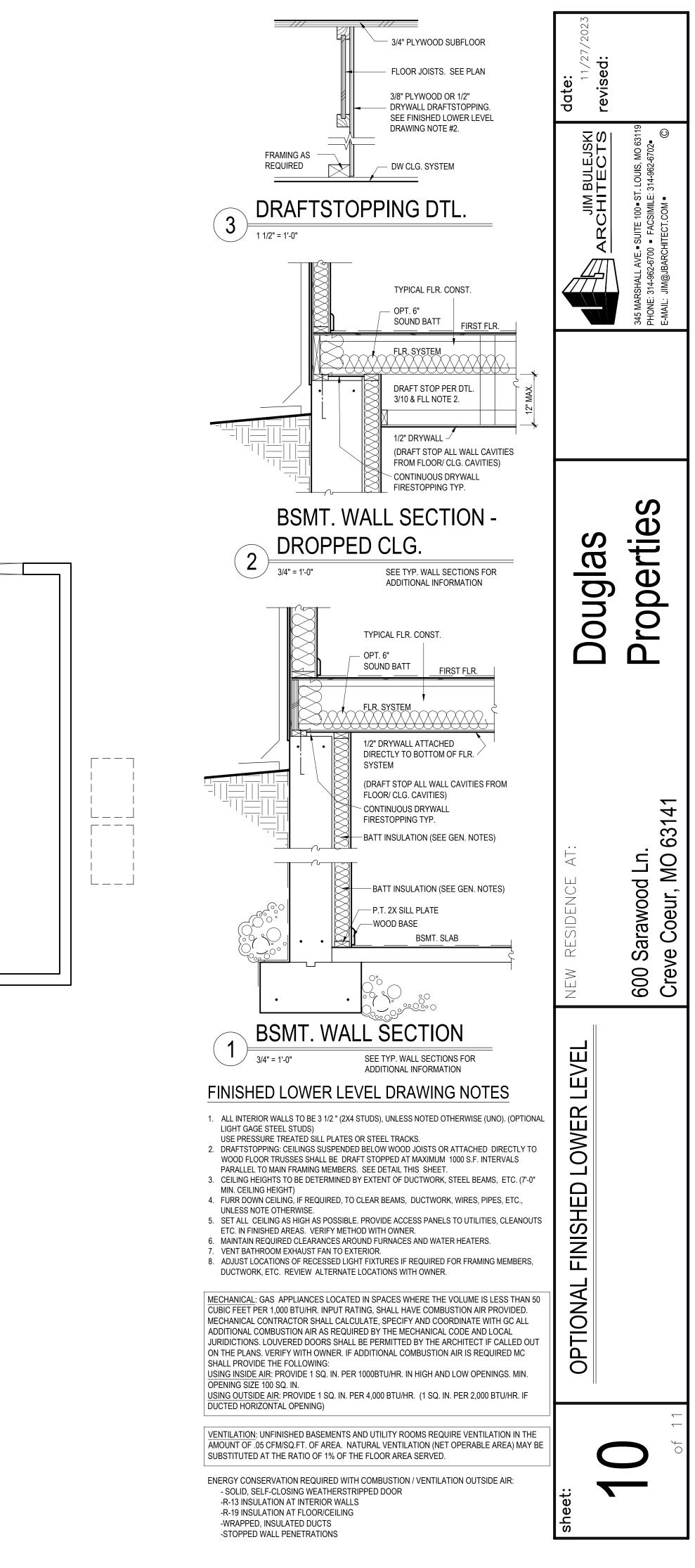




CING	STORY LOCATION	METHOD CS-WSP	ADJUSTMENT FACTORS PER TABLE R602.10.3(2)							TOTAL	TOTAL	NOTES
			ITEM 1	ITEM 2	ITEM 3	ITEM 4	ITEM 5	ITEM 6	ITEM 7	REQ'D	PROVIDED	
	2 OF 2	5'-1"	1.00	0.91	0.90	1.00	N/A	N/A	N/A	4'-2"	17'-3"	EAVE TO RIDGE: 8'-6"
	2 OF 2	5'-1"	1.00	0.91	0.90	1.00	N/A	N/A	N/A	4'-2"	12'-0"	EAVE TO RIDGE: 8'-6"
	2 OF 2	5'-1"	1.00	0.91	0.90	1.00	N/A	N/A	N/A	4'-2"	12'-0"	EAVE TO RIDGE: 8'-6"
	2 OF 2	5'-1"	1.00	0.91	0.90	1.00	N/A	N/A	N/A	4'-2"	12'-0"	EAVE TO RIDGE: 8'-6"

ING STORY METHOD LOCATION CS-WSP							TABLE R	. ,		TOTAL	NOTES	
	LUCATION	C2-W2P	ITEM 1	ITEM 2	ITEM 3	ITEM 4	ITEM 5	ITEM 6	ITEM 7	REQ'D	PROVIDED	
	1 OF 2	6'-6"	1.00	0.94	1.00	1.45	N/A	N/A	N/A	8'-10"	17'-9"	
	1 OF 2	12'-6"	1.00	0.94	1.00	1.45	N/A	N/A	N/A	17'-0"	24'-0"	MIX OF CS-WSP & GB
	1 OF 2	12'-6"	1.00	0.94	1.00	1.45	N/A	N/A	N/A	17'-0"	29'-4"	MIX OF CS-WSP & GP CS-PF
	1 OF 1	3'-11"	1.00	0.70	1.00	1.45	N/A	N/A	N/A	4'-0"	8'-0"	
	1 OF 1	5'-5"	1.00	0.88	1.00	1.60	N/A	N/A	N/A	7'-7"	16'-0"	
	1 OF 2	21'-4"	1.00	0.94	1.00	1.60	N/A	N/A	0.7	22'-5"	27'-5"	MIX OF CS-WSP & GB METHOD GB PANELS: 4" O.C. AT PANEL EDGES, INCLUDING TOP AND BOTTOM PLATES, AND ALL HORIZONTAL JOINTS BLOCKED
	1 OF 1	5'-5"	1.00	0.70	1.00	1.60	N/A	N/A	N/A	6'-1"	12'-0"	
	1 OF 2	21'-4"	1.00	0.94	1.00	1.60	N/A	N/A	N/A	32'-0"	34'-0"	MIX OF CS-WSP & GB
	1 OF 1	5'-5"	1.00	0.88	0.95	1.60	N/A	N/A	N/A	7'-3"	8'-0"	





GENERAL NOTES DIVISION 1 - GENERAL REQUIREMENT

Examination of Documents and Project Site: Contractors warrant they have carefully examined the drawings, read the specifications and visited the site (to verify, topography, site restrictions existing conditions) and that his bid includes all items necessary to perform the work. Prior to beginning the work, promptly notify the architect of any discrepancies or errors discovered in the 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.

Codes & Permits: All work shall be done in accordance with all applicable local codes, ordinances, state and federal codes. Notify architect immediately of any inconsistencies. Contractor shall bear correction cost if he knowingly performs any work contrary to the regulations. Building and fire district permit approval must be obtained before construction starts.

Copyright: These plans are the sole and absolute property of the Architects. Any use, copying or reproducing of these plans without the express written consent of Jim Bulejski Architects is illegal. The architect takes no responsibility for work that does not bear his seal and signature.

Substitutions of materials and equipment

Certain materials and equipment are specified by manufacture or trade name to establish minimum standards of quality and performance and not for the purpose of limiting competition. Material suppliers and phone numbers may be included as a convenience and purchase may be made through any competent source. Base bid shall include products specified unless the owner or architect approves the proposed substitution. Contractor suggesting substitutions shall include cost differences. Contractor shall take full responsibility and bear all cost associated with any affect these substitutions have on other trades or on construction in general. Contractor shall strictly adhere to manufacturers installation instructions.

Indemnities The Contractors shall indemnify, protect, defend and save, and hold harmless the Owner and Architect from and against any and all claims, demands, liability, and costs, including attorney's fee, arising from injury to persons during the life of this contract.

Notification in Event of Liability or Damage

In the event of the happening of anything, liability for which is herein assumed by either the contractor or the owner or the architect, the contractors agree to notify the architect and owner in writing which notice shall forthwith give the details as to the happening.

General contractor shall provide owner with post construction walk through at approximately eleven months after construction is complete to review the work performed in this contract. The contractor shall, include in this contract, provisions to correct "within reason" any defects (settlement, shrinkage, door or window adjustments needed) in the work which may appear within twelve months after the date of Final Payment to the contractor or within such longer period of time as may be prescribed by law. The contractor shall not be responsible for general maintenance or to compensate for homeowners neglect. The contractor and his subcontractor's warrant that all materials and equipment shall be new, unless otherwise specified, and that work shall be of good quality and free of defects. In addition, the contractor shall assume full responsibility for any damage to the building and its contents caused by defects or improper installation of equipment or materials. Provide owner with receipts and warranty information on all items that carry a manufacturer's warranty.

Acceptance of Previous Work

Commencement of work by any trade indicates acceptance of previous work by others to be suitable for proper application of a subcontractor's work unless the owner is given a written notice of damage or defective workmanship and the possible effects upon the succeeding work. It is the responsibility of each subcontractor to notify the general contractor and architect of any problem before beginning construction.

Hazardous Materials

The architect and the architect's employees and consultants shall have no responsibility for the discovery, presence, handling, removal, or disposal of, or exposure of persons to hazardous materials in any form at the project site, including, but not limited to asbestos, asbestos products, polychlorinated biphenyl (PCB) or other toxic substances.

General contractors responsibility includes and is not limited to the following:

Verify and coordinate all openings & inserts for mechanical, plumbing and electrical work as required for their installation and per drawings. Provide all necessary temporary bracing, shoring, guying, or other means to avoid excessive stresses and to hold structural elements in place. Shall be responsible for damage to owner's or other's property done by him or individuals in the contractor's employ, or through negligence.

DIVISION 2 - SITE WORK

- 2.1 <u>Flood plain</u>: Basement floor elevation must be above 100 year flood plain. low sill must be minimum 2 feet above flood plain elevation. 2.2 <u>Soil bearing capacity:</u> General Contractor to hire a soils engineer licensed in the state of Missouri for soil testing, the owner shall be required to pick up the cost of these services. The architect shall be informed of the engineer's written recommendations and shall review prior to the work proceeding. If less than 1500 psf. soil bearing capacity, redesign may be required. All footings and column pads shall bear on virgin soil. The architect and owner shall be notified during excavation if additional excavation is required.
- 2.3 <u>Finish Grading</u>: Finished grades at the bldg. to be a min. of 6" below top of foundation for wood frame and 4" below for wood frame with brick veneer. All wood framing members that rest on top of the foundation located less than 8 inches above the exposed ground and all other wood less than 6 inches from the ground shall be pressure treated. Grade shall slope away from foundation a minimum of a 6" drop within the first 10' or to a swale. 2.5 <u>Existing Topsoil</u>: Carefully scrape up in areas of new construction only. Stockpile topsoil on site in area that does not disturb any existing trees, and
- redistribute on site during finish grading.
- 2.7 <u>Backfill and fill:</u> Backfill shall be free of all tree roots, large rocks construction debris. 2.11 <u>Termite Treatment:</u> "Termidor". Treat below all slabs, entry pads, porches, and on the outside face of all foundation walls to include dirt just outside foundations. Furnish written warranty for 5-year period from treatment date signed by applicator.
- 2.12 Drain tile: 4" (Agricultural drain tile) Black corrugated performed with filter fabric drain tile. Install drain tile all around house, see details on plans. Provide owner with an optional price to connect downspouts to a separate under ground drainage system.
- 2.13 <u>Concrete Driveway:</u> 4" thick concrete with 10/10 wire mesh using 6 sack meramec gravel concrete over 3" to 4" of 1"minus crushed compacted rock. Wood or carpet float finish and broom finish at steep driveways exceeding 5%. Round all edges 1/4" radius. Provide 1/4" per foot crown slope UNO. No
- ponding on driveway will be accepted. 2.14 <u>Concrete Patio or Walkway:</u> 4" concrete walk with 6" x 6" W1.4 x @ 1.4 WWF over minimum 4" crushed stone. Slope to drain water.
- 2.14 Exposed Aggregate Patio or Walkway: 4" concrete walk with 6" x 6" W1.4 x @ 1.4 WWF over minimum 4" crushed stone. Finish shall be exposed aggregate using Meramec River gravel. Verify selection of exposed aggregate finish with owner. Round all edges 1/4" radius. Slope to drain water. 2.15 <u>Concrete Expansion/Control Joints</u>: At drives and walks 1/2' expansion joints with premolded filler at maximum 15 ft OC. and at building junctures. Control joints to be 1/4" wide at least 1" deep at maximum 6 feet OC.

DIVISION 3 - CONCRETE

- 3.1 Compressive strength of concrete at 28 days shall be minimum:
- a. 2500 psi basement slabs.
- b. 3000 psi foundation, basement walls, footings, and piers.
- c. 3500 psi porches, walks, patios, steps, garage slabs, and driveways. 3.2 All concrete shall be air-entrained in accordance with IRC
- 3.3 <u>Admixtures</u> used must conform with IRC and be approved by the architect.
- 3.4 <u>Footings & piers</u>: must be a minimum of 2'-6" below finished grade and bear on undisturbed soil or prepared fill.
- Exterior footings & piers shall extend a minimum of 12" into undisturbed soil and at least 30" below finished grade.
- 3.5 <u>Vertical Reinforcing</u>: for foundation walls to be derived from 2015 IRC table 404.1.2(8). 3.6 <u>Horizontal Reinforcing</u>: per 2015 IRC table 404.1.2(1).
- 3.7 Basement walls and floors shall be treated to provide resistance to the infiltration of water and properly reinforced to withstand water pressure as
- necessary per R406.2
- 3.8 Provide construction, isolation, and control joints as indicated or required. Locate joints so as to not impair strength or appearance of structure. 3.9 Protect concrete from weather extremes during mixing, placing and curing. In cold weather comply with ACI 306; in hot weather comply with ACI 305. 3.10 Interior concrete: Finish surface by troweling to a uniform texture and appearance.

DIVISION 4 - MASONRY

Includes masonry fireplaces and masonry on exterior of house.

- 4.1 General Masonry: Construct a sample panel at the job site for owner's approval before ordering. Mortar: ASTM C 270.
- Provide flashing and weepholes at least 3/16" in diameter spaced less than 24" apart over all wall openings and at foundations, typical. Provide ASPHALT COATED COPPER FLASHING OR PEEL AND STICK FLASHING (min. 16" wide sheets) and weeps (min. 3/16") at max. 24" OC. over all wall openings and at foundations typical. Provide Tyvek House Wrap over sheathing, behind veneer.
- 4.2 <u>Cultured Stone</u>: As Manufactured by "Stone Products Corporation" (800) 255- 1727. Confirm stone type with owner/ general contractor before ordering. Install per details in these documents and manufactures recommendations. Install minimum 4" above grade. Use type n mortar. Manufacture to provide thirty year limited warranty.
- DIVISION 5 STRUCTURAL STEEL

5.1 Steel to be minimum A36 grade steel. All steel beams minimum 3" bearing to be grouted solid into beam pockets with "non-shrink" grout. All steel beams, columns, and lintels to be shop primed. Use steel Shims, Typ.

- 5.2 Provide steel angle at all masonry openings (U.N.O.). Verify size with architect if not indicated. Minimum 8" bearing onto masonry 5.3 Minimum column size shall be 3" diameter schedule 40 columns. (See plans for each size.) All reinforcing steel shall be grade 60. Bolts A03
- 5.4 All steel beams terminating at steel post shall run completely (full bearing) over top of steel post.

DIVISION 6 - WOOD FRAMING

- 6.1 Materials & Descriptions: Floor joists: to be grade-marked minimum 1000/1150 fb (2x12's) or 1050/1208 fb (2x10's) single member use / repetitive, unless noted otherwise.
- (substructure exposed to exterior pressure treated, use cedar or other exterior grade wood for finish surfaces).
- Sill plates: 2x6 Pressure Treated installed over fiberglass sill sealer. Grout level as required. 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
- stress and deflections. Stair winders must have 9" minimum tread depth at a point not more than 12" from the narrow end and be at least 6" in depth at the narrow end.
- 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 uno. Exception: posts caring minimal loads, less than 8'-0" 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.
- Interior partitions; Minimum 2x4 studs at 16" OC., UNO. All framing to be 16" OC. typical UNO. Headers: minimum 2-2x10's glued and nailed unless noted otherwise.Typical at all doors and windows. Glue and nail all beams together. Subfloor: APA Rated Sturd-I-Floor or Avantec, 24"OC (23/32") ¾" nom., Exposure 1, (Plywood only) glued and nailed. (using ring shanks) to joists. Do not use ring shanks on I joist.
- Exterior Wall Sheathing: APA rated sheathing exposure 1, span rating 24/16, (7/16" OSB) or 32/16, (15/32" plywood) 1/2" nominal. Use plywood under EIFS not OSB! Bracing shall comply with IRC.
- Roof Sheathing; APA Rated Sheathing, Exposure 1, span rating 32/16, (15/32" plywood) ½" nom. w/ plyclips. Laminated Strand Lumber: LSL 1.55E, 2250 psi "Timberstrand" beams as manufactured by Truss Joist Corporation or approved equal.
- Laminated Veneer Lumber: LVL 1.9E, fb 2600 psi "Micro-lam" beams as manufactured by Truss Joist Corporation or approved equal.
- Parallel Strand Lumber: PSL 2.0E, fb 2900 psi "Parallam" beams as manufactured by Truss Joist Corporation or approved equal. <u>T & G Wood Bead Board Ceiling</u>: Standard available 1x6 (23/32) Tongue & Grove with "V" groove at each joint on each side, surfaced one
- side in cedar or pine. Typical where noted on plans (Back prime before installation at exterior use) Nailing: Nailing and Fastening of floor, wall, and roof assemblies shall be fastened in accordance with tables 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. All fasteners (nails, bolts, hangers, flashing, etc.) that come into direct contact with ACQ Preservative Treated Wood to be hot dipped galvanized or stainless steel
- Interior Millwork: As detailed on plans -Match existing. Provide base shoe mold at all wood or tile floors. Flat jambs shall be 🕺 " thick min., wall caps, bookcase shelving, and window sills shall be minimum 5/4" thick, UNO. Install trim with minimum number of joints. Cope inside corners and returns. Miter and glue corners. Scarf end-to-end joints.
- Shelving: Closet shelving in pantries shall be solid White Melamine Shelves. Clothes closets shall be vinyl coated wire pole and shelf system indicated as P&S) UNO. Linen closets shall be 5 vinyl wire shelves, typical. <u>Shelving</u>: Closet shelving "Custom Closets" shall be by allowance.
- Exposed Exterior Materials to be approved exterior grade. Typical. Exterior metal connectors shall be galvanized. 6.3 <u>Fireblocking</u>: Top and bottom of all conventional, double stud, furred spaces, and staggered stud frame walls are 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. Mid-span wall blocking shall be required on all exterior and interior walls. Fireblocking required between stairway stringers at the top and bottom of the run. Enclosed accessible spaces under stairs shall have walls and clg. clad with ½ " dw. Fireblocking required around vent, pipe, and duct penetrations of ceilings and floors. All spaces between the chimney and the floors and ceilings shall be fireblocked (1" depth of batt or blanket of mineral wool or glass fiber supported by strips of metal or metal lath). 6.4 <u>Draftstopping</u>: 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.
- equivalent to surrounding surfaces 6.6 <u>Deck Doors;</u> Securely barricade doors until deck is built and approved, typical.
- Bearing partitions and post shall be unbroken (run continuous) from bearing to structure below.
- be properly sealed with fire caulking or other methods as approved by the Code Official. substantial areas of bearing walls.
- cabinets to wall as required.
- 6.9 newel post.
- the over framing where possible. cut openings in sheathing to vent to attic. 6.12 <u>Truss Requirements</u>:
- 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 missouri) 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/structural 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. All roof framing shall be designed to support the following minimums: 0 lb. per sq. ft., approx. 10 lb. per sq ft. dead load

Tool fraining shake be designed to	Support the to
Top chord of trusses	snow load 20
or roof rafter:	use actual de
Ceiling joists or	use a live loa
Bottom chord of trusses:	use 10 lb per

DIVISION 7 - THERMAL AND MOISTURE

Construction shall comply with "International Energy Conservation Code" & the IRC (Prescriptive Method). Per N1101.14, Builder to provide a permanent certificate to be posted on or in the electric panel (not to obstruct other labeling). Certificate to include: predominant R-values in ceiling/roof, walls, foundation and ducts; U-factors for fenestration; solar heat gain coefficient of fenestration; types & efficiencies of heating, cooling and service water

heating equipment Dampproofing / Waterproofing: Walls that retain earth and enclose interior spaces shall be waterproofed or dampproofed depending on the presence or non-presence of groundwater. An evaluation of the soil for the presence or absence of ground water is required prior to pouring concrete. No Groundwater Present

of the materials permitted for wall waterproofing qualifies for the manufacturers warranty. (Verify final color selections with owner.) Roofing shall be: Match existing asphalt shingles the edge of the roof is less than 3' to the property line. Asphalt Roll Roofing: installed on roofs of less than 3:12 slope, apply parallel to the eaves. It shall not be installed on roof slopes below 1:12. minimum roof slope 1/4:12 with approved low-slope roof covering materials. slope is less than 4:12 and greater than or equal to 2:12. R905.2.8.2

Metal flashing shall be 26 gauge-galvanized steel. Upgrade to min 16 oz. copper flashing where noted on drawings. Rolled roofing or two (2) layers of Type 1 underlayment may be substituted for flashing at the roof valley provided the shingles are interlaced. Underlayment substituted for valley flashing shall be installed to extend at least 18" beyond a roof valley or hip from either direction. Flashing at these locations is required.

- Ridge Vents OmniRidge By Lomanco
- one for every 300 sq. ft. throughout the attic.

roof/ceiling wood frame walls & band joists/boards floor over over unheated crawl space or garage finished concrete basement FDN. walls unfinished concrete basement FDN. walls

concrete slab crawl space wall

- exterior walls. P15.9 <u>Icemaker Water Lines</u>: Provide at Refrigerator in kitchen. 7.5 Sound batts: 3 1/2", Certainteed sound control batts or approved equal. Install around all upper level bathroom drain lines where they pass through Install proper sound attenuation around soil pipes and as required. Plumbing subcontractor shall do trenching. Provide dialectic unions where copp finished areas of the house. are connected to steel. Piping shall be free of waterhammer. mechanical shock arrestors. Test all soil, waste, vent piping, and water lines. 7.6 <u>Caulking and Sealants</u>: Exterior joints around windows and door frames, between wall and penetrations for utility service through walls, floors and roof <u>Vent Stacks:</u> shall run to rear slope of 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. Flashing: Pipes passing through the roof shall be flashed with four-pound sheet lead. Flashing shall extend twelve (12) inches from the pipe 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 underneath roofing material in all directions and shall have a lead collar extending from flashing up and around outside of, carried over and turn
- construction. Sill seal is required at foundation Sealant used shall be <u>Vulkem 116</u> as manufactured by Tremco. 7.7 <u>Sheet Metal and Flashing (other than roof flashing)</u>: shall be: minimum 26-gauge aluminum with baked on enamel finish where exposed.
- Comply with "Architectural Sheet Metal Manual" by SMACNA. 7.8 <u>Waterproof Membrane</u>: Manufacture; Pasco (or approved equal) installed per manufacturers recommendations with preformed corners. Showers or steam room w/ tile; 40 mil (red) shower pan liner
- 7.9 <u>Vapor Retarder</u>: is required on the warm side of the insulation of all exterior frame elements. Vapor retarder shall be integral with Kraft faced batts meeting ASTM-96. (polyethylene vapor barriers should not be used in ceiling or walls.) Install 6-mil poly vapor barrier under concrete slab. Use large sheets of material, thus eliminating most joints. A vapor retarder shall not be installed under water-resistant gypsum backer board in shower or bathtub compartments
- 7.10 <u>Weather- Resistant Sheathing Paper</u> (asphalt saturated felt 14# per square otherwise known as type I felt, Tyvek, Typar, or other approved weather resistant material) shall be installed under siding and brick/stone veneer listed in table R703.4. 7.15 <u>Attic Ventilation</u>: (net free) area is to be at least 1/150 of the area served. Two remote vents required for each attic/space (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 or enclosed rafter space and provide 50% to 80% of the required vent area with the balance of the required vent area is supplied by eave or cornice vents. Enclosed attic, rafter and crawl space areas may be ventilated by a mechanical exhaust and supply air system of .02 CFM/sq. ft. of horizontal area. The ventilation systems shall operate continuously Unfinished Basement Ventilation: and utility rooms require natural ventilation (net openable area) at the ratio of 1% of the square footage floor area
- served. Mechanical ventilation with outdoor air (not recirculated air) in accordance with the mechanical code may be substituted at a rate of .05 CFM/sq. ft. of area. 7.16 <u>Air Leakage</u>: The building thermal envelope shall be durably sealed to limit infiltration. The following shall be caulked, gasketed, weatherstripped or

6.5 Access Openings: a 22" x 30" min. access opening required for attic areas which exceed 30 sf and have a clear height over 30". Install in a hallway or other accessible location with 30" minimum headroom above the opening. A 16" x 24" minimum wall access opening is required for crawl spaces. Coordinate opening size required when an appliance is located in attic or crawl space. Access panels to be weatherstripped and insulated to be

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 all local codes and ordinances, and to be installed per SMACNA recommendations

M15.2 <u>Equipment:</u> 90% efficiency (10 SEER VS. 13 SEER) air handling units as required w/ fresh air intake from exterior.

M15.3 Approved vent systems for appliances shall be sized, installed and terminated per manufacturer's installation instructions.

are the responsibility of this contractor.

protective coating shall be encased in 2" minimum of concrete.

Double Floor Joists around stair openings, fireplace hearths, at corners of cantilevered bays and under parallel partitions (typical at all openings, uno). Cutting, Notching, and/or Boring holes on wood beams, joists, rafters, or studs shall not exceed the limitations noted in sections R502.8, R602, and R802.7. Reinforcement of studs shall be done in accordance with IRC. Notches and holes in top plates, bottom plates and mid-span fireblocking shall

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. NOTE: Framing crew shall review HVAC layout drawings provided by heating contractor and thicken walls where required for ductwork. Do not cut out

6.9 <u>Cabinet supplier</u> to field measure area of work after rough framing to assure exact fit of cabinets and free operation of all doors and drawers. Scribe

Handrails: shall not project more than 4 1/2" into required stairway width. Handrails at straight run stairs to be continuous. Handrail shall have circular cross section with minimum diameter of 1 1/4" but not more than 2", or other approved shapes having a maximum allowable horizontal width of 2 1/4", maximum graspable perimeter dimension of 6 1/4", and a minimum 4" graspable perimeter dimension. Handrail ends shall return to the wall or

6.10 <u>Guards</u>: along open-sided stairs with a total rise more than 30" shall be a minimum of 34" in height above the leading edge of the tread and minimum of 8.10 36" in height at the stair landings. Minimum 36" high guards shall be provided along balconies, areaways, mezzanines and open-sided walking surfaces where the difference in floor levels is more than 30". Open guards shall have intermediate vertical balusters spaced less than 4" apart. 6.11 Roof Over Framing: Minimum 2x6 at 16"oc (max. 10'-0" span) UNO, with 2x sill plate anchored through roof sheathing into solid blocking -- or -- truss

Trusses to be designed by others and shall comply with 2009 IRC, ANSI/AF&PA NDS-2001, and ANSI / TPI 1-2002 as the design standards. Fabricator's <u>Responsibilities</u> 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. <u>Total Load Deflection</u> of truss system not to exceed 1/360. Scissor Trusses with horizontal movement greater than 1/2" to be anchored with TC simpson anchors on one end, or

ead load. (note: dead load must include 2 layers of roofing)

- ad of 20 lb. per sq. ft when there is attic storage.
- sq. ft. live load where there is no attic storage.

dead load-use actual dead load

Provide perforated drain pipe inside or outside of foundation. Drainage system shall discharge by gravity to daylight or be connected to an approved

sump. 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 Groundwater Present - Provide perforated drain pipe both inside and outside of foundation. Drainage system shall discharge by gravity to daylight or be connected to an approved sump. Foundation to be "waterproofed" with approved system per manufacturer's instruction in accordance with R406.2.

waterproofing to be applied from the top of the footing to the finished grade. All joints in walls and floors to be water tight. ROOFING: Provide and install the roofing shown on the drawings and everything required to complete a good weather tight roof installation that

General Roofing: Asphalt shingles shall not be installed on roof slopes below (2:12). (verify with manuf.) Class A, B, or C roofing shall be required where

Felt Underlayment: Minimum type I Per ASTM D226-97A or type I Per ASTM D4869-88(1993)E (commonly called 15# asphalt felt). Slopes of 2:12 to less than 4:12 shall be protected with two layers of underlayment. Apply a 19" strip of underlayment felt 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'.

lce and Water Shield: is required under shingles/roofing of 2 layers of type 1 underlayment cemented together or an approved waterproofing membrane extending from the edge of the eave to at least 24" (measured horiz.) inside the exterior wall line where the roof slope is greater than or equal to 4:12 and the eave overhang is less than 12" (measured horizontally) from the sheathing to the outside face of the gutter board, or where the roof

Roof Flashing: provide corrosion-resistant 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. Installed per SMACNA. Valley flashing shall be installed per

7.3 <u>GUTTERS & DOWNSPOUTS</u>: All gutters and downspouts to be sized and located by others, and be installed per "SMACNA" recommendations. Verify all downspout locations with owner. Gutters shall be seamless minimum 5" prefinished aluminum gutters (with leaf screens), well sealed and watertight, with oversized downspouts. Verify color with owner. Install downspouts as indicated on plans if shown with at least 1 downspout per 25' gutter run. Downspouts shall discharge to "splash blocks" directed away from foundation. Provide owner with optional price to connect downspouts to, separate 4" dia. Non-perforated underground drainage system, which is connected to storm sewer if allowed by municipality (verify), or "day lighted". Install

screened end caps where drain tile discharges to daylight. Gutters and downspouts required on roof overhangs less than 36". Insulation to have an R-value identification mark or installer to provide certification. Certification to include: insulation type, manufacturer, R-value of insulation in each element of the building thermal envelope. For blown or sprayed insulation (fiberglass or cellulose), certification to include: initial

installed thickness, settled thickness, settled R-value, installed density, coverage area and number of bags installed. At blown or sprayed roof/ceiling insulation, the thickness of insulation shall be written in inches on markers, affixed to the trusses facing the attic opening, that are installed at least <u>Thermal Requirements</u>: (R-Values indicated must be obtained by only the insulation material used, not by the total system).

min. R-49 Blown (R-38 if 100% of ceiling satisfies, uncompressed R-38 over top pl. @ eaves)

- min. R-20 (2x6) R-22 BATT COMPRESSED TO 5 1/2" / BIB (BLOWN IN BLANKET) min. R-19 Min.
- min. R–13 (full height)
- min. R-10
- min. R-10

- min. R–10 (min. 2' depth)

- General: OPTION TO PROVIDE AN AIR SEAL PACKAGE. Voids in corners, headers, and all exterior wall framing, shall be filled completely. Insulation above ceilings shall not clog space designed for ventilation (Min. 1"). Insulation to be installed following installation of Owens Corning EnergyComplete
- Sealant System. EnergyComplete to be installed in following locations: top & bottom of each wall cavity where exterior sheathing meets framing & at vertical framing where there is a joint in sheathing; interior face of top plate on all exterior walls & interior walls with attic above; bottom plate and
- subfloor on exterior walls; around electrical wires & boxes, plumbing pipes, ductwork or any other penetrations between floors; around windows and doors; all rim joists, including between foundation wall and sill plate, rim joist and sill plate, and rim joist and subfloor; any other penetrations on

	otherwise sealed with an air barrier material, suitable film or solid material: all joints, seams and penetrations; site-built windows, doors and skylights; openings between window and door assemblies and their respective jambs and framing; utility penetrations; dropped ceilings or chases adjacent to the thermal envelope; knee walls; walls and ceiling separating the garage from conditioned spaces; behind tubs and showers on exterior walls; attic access openings; rim joists junction; other sources of infiltration. A blower door test is required to prove building tightness.(NOT IN CLAYTON)		Combustion Air for Gas Appliances located in rooms or spaces whose volume is less than 50 cubic feet/1000 btu/hr. input rating shall have combustion and ventilation air provided in accordance with the following: Using inside air: 1 sq. in. of free area shall be provided/1000 btu/hr. 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	
8.1	DIVISION 8 - WINDOWS AND DOORS All fenestration (windows, doors, and skylights) U-factors shall be in accordance with NRFC 100 and labeled and certified by the manufacturer. <u>Windows</u> : all windows shall have a maximum U value of .35.	M15.6	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. Appliances shall not be installed in a bedroom, bathroom or a storage closet. <u>Exceptions:</u> The appliance is a direct vent unit obtaining all combustion air directly from outdoors, or; 2. The appliance is installed in a closet is	
8.3	<u>Window Wells</u> : serving a basement emergency escape and rescue shall be a minimum of 9 square feet in horizontal area with a minimum horizontal projection width of 36". The well shall also be large enough to allow the window to be fully opened. Wells with a vertical depth greater than 44 inches shall have a permanent ladder or steps. The ladder, if applicable, shall be at least 12" wide, project a minimum of 3" from the wall and have rungs	M15.7	used solely for appliances, the closet door is self-closing, solid and weather stripped, and combustion air is provided from outdoors. Minimum appliance clearance from combustibles is 18 inches, unless the <u>listed</u> manufacturer's installation instructions allow an alternate clearance dimension. A minimum of 30 inches of clearance is required at the front of the appliance for service.	MO 63119 -6702= ©
8.5	spaced not more than 18" on center vertically. Structural calculations not required on window wells that have an ICC-ES research report addressing the structural adequacy of the walls. <u>Glazing</u> installed in the following locations shall be tested and labeled in accordance with CPSC 16 CFR part 1201 Standard as a Type I or II category.			JIS, MO (962-6702
	 Glazing in doors and any portion of a building wall enclosing bathtubs, showers, 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. Any glazing material adjacent to a door if the nearest vertical edge of the glazing material is within a 24" arc of either vertical edge of the 			■ ST. LOUIS, ILE: 314-962- A ■
	door in a closed position and if the bottom edge of the glazing material is less than 60" above the floor. <u>Exceptions</u> : Where there is an intervening wall or barrier to prevent a person from striking the glazing while approaching the door., Glazing adjacent to a door serving a closet or storage area 3' or less in depth., Decorative glass		run on the plans. The maximum developed length of the duct shall be 25' (obtained by deducting 5' for each 90° bend and 2.5' for each 45° bend to the	SUITE 100 - FACSIMIL ITECT.COM
	 Safety Glazing is required for fixed or operable panels that meet all of the following: a.) individual pane greater than 9 sq. ft. and; 	M15.11	every 15' of developed length thereafter.	4VE.= SL 6700 = ARCHITE
	 b.) bottom edge less than 18" above floor and; c.) top edge more than 36" above floor and; d.) walking surface within 36" horizontally 		Bathrooms shall exhaust 50 cfm minimum to the exterior. It is <u>not</u> permissible to discharge exhaust to the attic. Exception: 1. half-baths without a tub or shower may exhaust to the attic. 2. half-baths without a tub or shower may substitute a window w/ openable area of at least 4% of the floor area for an exhaust system.	(SHALL <i>F</i> 314-962- JIM@JB
8.10	4. All doors <u>Exception</u> : decorative glass <u>Door Locks</u> : with thumb turns on the 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		Kitchen ranges shall have a listed hood or downdraft exhausted to the exterior with a 100 cfm fan (intermittent use), or a 25 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	345 MARSHALL AVE. ■ 3 PHONE: 314-962-6700 • E-MAIL: JIM@JBARCHI
	locked from the inside. DIVISION 9 – FINISHES		kitchen exhaust systems in excess of 400 cfm (St. Louis County allows 600 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.	
9.1	<u>Drywall</u> : 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 of the IRC. Use water resistant gypsum backer board in damp areas of bath rooms next to sinks and around toilets. Do not apply over a vapor barrier.		<u>Duct Insulation and Sealing</u> : Supply and return ducts in attics shall be insulated to min. R-8, all other ducts min. R-6 (exception: ducts completely inside the building thermal envelope). All ducts, air handlers, and filter boxes to be sealed to comply with mechanical code. Ducts shall be pressure tested per code. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.	
	Underlayment at Tile Walls and other Tile surfaces shall be 1/2" cementitious board such as "Durock" or "Wonderboard" underlayment on all walls to receive tile finish in shower and tub conpartments within 2 ft of fixture. (Follow manufacturer's recommendations carefully.)	16.1	DIVISION 16 - ELECTRICAL Work shall consist of all services typically known as " <u>Design/Build</u> ", 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.	
	All drywall shall all be 1/2" thick with smooth finish and screw applied UNO. Edit Use 5/8" thick drywall on ceiling framing/trusses spaced 24" OC. Screw and glue to ceiling. This installer shall not damage vapor barrier. Appropriate drywall corner beads shall protect exposed drywall corners. Use USG Sheetrock Brand paperfaced metal drywall bead and trim or equal to resist edge cracking.	16.2	All work to be installed in accordance with the all local codes, rules and ordinances. All materials to be used shall be approved by (U.L.) Underwriters Laboratories.	
9.2	<u>Ceiling shall be smooth, no texture unless noted otherwise, see finish schedule</u> . <u>Underlayment at Tile Walls</u> : and other Tile surfaces shall be 1/2" cementitious board such as "Durock" or "Wonderboard" underlayment on all walls to receive tile finish in shower and tub conpartments within 2 ft of fixture. (Follow manufacturer's recommendations carefully.)	16.4	All wiring from panel to house shall be copper. <u>Panel Board</u> to be circuit breaker type electrical panels. Panels shall not be installed in bathrooms or clothes closets. Lighting is required in the vicinity of the electrical panel. Electrical panels in new construction shall not be installed in areas with less than 6'-6" headroom. A minimum clearance	
9.4	<u>Interior Finish Materials</u> shall not have a flame spread rating exceeding 200 or a smoke development index exceeding 450. 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.		of 3'-0" deep and 30" wide is required in front of electrical panels. Counters and cabinets cannot be installed under the electrical panel. Electrical contractor to verify size required during bidding. Final electrical panel shall be sized by electrical contractor and included in electrical base	S
	All foam plastic insulation shall be separated from the interior of the building by a thermal barrier of ½" gypsum wallboard. <u>Exceptions:</u> 1. Foam plastic having a maximum thickness of ½" when used as siding backer board may be separated from the interior of the building by not less than 2" of mineral fiber insulation instead of the thermal barrier.	16.5		ě
	 Foam plastic within an attic or crawl space may be protected by 1 1/2-inch thick mineral fiber insulation, 1/4-inch-thick wood structural panel, 3/8-inch thick particleboard or hardboard, 3/8-inch gypsum wallboard, or corrosion-resistant steel having a base metal thickness of 0.016 inch 	16.6	for ranges and clothes dryers must be a 3-pole with ground type. Smoke Detectors: U.L. listed smoke detectors shall be located on each floor level in the vicinity of all bedroom entrance doors (bedroom hallway) and	ビ
9.5	each instead of the thermal barrier. All foam plastics shall have a flame spread rating of 75 or less and a smoke development rating of 450 or less. <u>PAINTING:</u> shall be done using highest quality Porter Paints, Benjamin Moore, or equal paint approved by the owner. Owner will pick a variety of interior			be
	colors. Verify all color selections with owner. Painting shall include finishing all built-in custom millwork cabinets that are not pre-finished. <u>Painted interior woodwork and doors</u> shall be painted with minimum one prime coat and two finish coats of oil based semi-gloss enamel. All woodwork and doors shall be sanded smooth before painting or staining.		alarms throughout the dwelling unit. The smoke detectors shall be ac powered and have battery backup. The installation shall also meet NFPA 72-96 07. Carbon Monoxide Detectors: U.L. listed carbon monoxide detectors shall be located outside of sleeping areas, in the immediate vicinity of the sleeping	Ö
	<u>Interior drywall</u> shall be sprayed or rolled with acrylic latex. Use Porter Paints #426 Drywall sealer, and two coats minimum of "Vinyl Suede" or equal. If drywall is sprayed, then the second spraying shall be back rolled. <u>Exterior doors and garage doors</u> shall be painted with two coats an acrylic semi gloss. Any exposed wood on the exterior of the house shall be primed	16.7	areas, if the dwelling unit contains a fuel-fired appliance or has an attached or basement garage. At least one <u>Lighting Device</u> is required in each attic, crawl space, 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. All wires leading to electrical outlets and switches on walls	ר ר
	and backprimed before installation; then painted with two coats of acrylic semi-gloss paint. Painting contractor shall spray paint black the inside of the areas where return air grills are mounted on stud spaces so that studs are not visible. Paint all steel beams and columns. External Painting/Caulk: Paint all woodwork, painted metals, shutters, painted louvers and equipment boxes. Do not paint prefinished materials.	16.8	in unfinished areas shall be in conduit. Ground Fault Circuit-Interruption protection shall be provided for all 125 volt, single phase, 15 and 20 ampere receptacles installed in bathrooms, garages (except ceiling receptacle for door opener), outdoors (including inside screened enclosures), unfinished basement areas and crawl spaces except	
9.7	<u>Flooring:</u> (Carpet, hardwood, and tile) shall be selected by owner from allowance for labor and materials. Install per manufacturer recommendations. Tile floors shall include control joints at doorways and as required. Install wood floor grilles in wood floors to match. Coordinate with Mechanical contractor. See also division 6 for vinyl floor underlayment specification. Tile flooring underlayment shall be by flooring contractor.		for laundry circuit and single receptacle dedicated to sump pumps. Receptacles intended to serve kitchen counter top surfaces, receptacles intended to serve the counter top surfaces of a wet bar that are located within 6'-0" of the outside edge of the wet bar sink. Kitchen and dining area counter top receptacles shall be supplied by at least 2 different 20 amp circuits. receptacles installed face-up in counter	
9.8	Underlayment at Tile or Stone Floor: 1/2" "Durock" or "Wonderboard" underlayment (over subfloor) on all floors to receive tile floor finish. Include 3/4" cement board underlayment below tile floors with tiles larger than 12". (Follow manufacturer's recommendations carefully for floor finish.) NON-COMBUSTIBLE FIREPLACE HEARTH & SURROUND: shall be selected by owner from allowance for labor and materials. Install per manufacturers		work-surface are prohibited, at least one receptacle shall be installed to serve each island or peninsula counter space that is 24" x 12" or greater, at least 1 receptacle in laundry area supplied by a dedicated 20 ampere branch circuit. Interior Stairways are to be provided with a minimum of 10 footcandles of light measured at every tread nosing. All exterior stairways serving the	
5.0	recommendations.		dwelling to have a minimum of 1 footcandle measured on the tread runs. Interior stairways shall have lighting controls at each floor level. Switches must be operable from the top and bottom of the stairway without traversing any step of the stairway. All <u>exterior stairways</u> serving the dwelling shall have lighting controlled by controls inside the dwelling or	
10.1 10.3	<u>Medicine cabinets, grab bars towel bars, and bath accessories:</u> shall be selected by owners based on an allowance, and installed by contractor. <u>Shower Doors and Glass Surrounds and Mirrors</u> : shall be selected by the owner based on a labor and materials allowance.	16.11	automatically. <u>Unfinished Storage Lighting</u> : At least 1 lighting outlet and one receptacle are required in each attic, crawl space, basement or utility room that is used	41
12.1	DIVISION 12 -FURNISHINGS <u>Kitchen cabinets and vanities:</u> shall be selected by owner based on allowance, and shall be installed by contractor. Cabinet and countertop suppliers	16.12	for storage or contains heating, air-conditioning or other equipment requiring servicing. The light switch shall be located at the point of entry. <u>Lighting in Clothes Closets</u> : Fixtures must have enclosed lamps, incandescent fixtures require 12" minimum clearances to storage and fluorescent fixtures require 6" minimum clearance.	631
12.2	shall field measure for all cabinets before ordering, and coordinate all appliance selections with cabinet sizes. <u>Counter Tops:</u> shall be selected by owner based on allowance. Contractor shall provide for installation of cultured marble and plastic laminate countertops. Allowance for stone, tile and solid surface tops shall include both labor and materials.		shower space.	Ч. Г
13.1	DIVISION 13-SPECIALTIES <u>Pre-fab Fireplace Unit</u> : Note that framing carpenters and general contractor shall carefully review pre-fab fireplace unit installation instructions before	·		ood ur, N
	framing enclosure for fireplace, and before installing unit. Comply carefully with all manufacturers instructions, fire stopping requirements (including local fire stopping requirements) and clearances. Fire stop all chases with non-combustible fire stops wherever chases exceed 8'-0" in height. Do not alter or modify the fireplace or its components under any circumstances. Any modification or alteration of the fireplace system, including but not		Install wiring for special items as shown on plans, including but not limited to wiring for whirlpool tub, central vacuum system and all appliances and fixtures. Light fixtures: Recessed light fixtures to be type "I.C." Recessed lights and to be sealed with a gasket or caulk between the housing and the interior	av 0e
	limited to the fireplace, chimney components and accessories, may void the warranty, listings and approvals of this system and could result in an unsafe and potentially dangerous installation. Fireplace units shall be equipped with an exterior air supply to assure proper fuel combustion. The air duct serving the exterior air intake and the interior air outlet shall be listed and installed in accordance with the manufacturer's installation instructions.			ve C
	The cross sectional area of the passageway shall be a minimum of 6 sq. in. but not more than 55 sq. in. unless otherwise noted in the installation instructions. The exterior air intake (covered with a corrosion resistant screen of 1/4" mesh) may draw air from a naturally ventilated crawl space or attic. The interior air outlet may be located in the back or sides of the fireplace chamber or within 24 in. of the firebox opening on or near the floor.	16.18	Electrician and Owner to walk though project prior to installation and confirm location of all electrical devices including but not limited to switches (confirm dimmers), light fixtures, outlets and telephones.	600 Crev
	The interior air outlet shall be closable and designed to prevent burning material from dropping into a concealed combustible space. Exterior air intakes shall be installed below the level of the base of the firebox when the interior air inlet is installed inside the fireplace chamber.	16.20	runs shall be home run to basement. <u>Cable TV</u> : Rough in Cable TV as indicated on drawings. Cable used shall consist of: (1 cat.6e's, and 1 RG6 wires, quad shield). Terminate in 4" electric box. All runs shall be home run to basement. Provide outlet at cable entrance for power booster if required.	
	DIVISION 15 - MECHANICAL <u>Plumbing</u> - (P)		CLIMATIC AND GEOGRAPHICAL DESIGN CRITERIA	
	Work shall consist of all services typically known as " <u>design/build</u> " 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 all local codes and ordinances. <u>Lead-Free Solder</u> is required on all copper water supply piping.	GROUN	WIND DESIGN SUBJECT TO DAMAGE FROM	
P15.3	Supply piping shall be type M hard copper above ground with lead free solder. Sewer, soil, and vent piping shall be schedule 40 PVC or other locally approved. All joints in PVC drains shall have primer and PVC solvent cement as per county code. Maintain minimum 1/4" per foot slope on all drains. All fixtures shall be properly trapped and vented. Install individual shutoffs on all plumbing fixtures. Pressure test all plumbing lines before closing in walls. Install steel protection plates in front of plumbing supply lines so that drywall nails or screws cannot puncture lines.	SNOW	SPEED GRAPHICAL DESIGN ING LINE DESIGN UNDER- HAZARDS FREEZING ANNUAL ZONE (MPH) EFFECTS CAT. DEPTH TEMP. LAYMENT INDEX TEMP. INDEX TEMP. MOD. TO MOD. TO OF OLIVETTE OF OLIVETTE INDEX TEMP. INDEX TEMP.	
P15.6	Separately valve each riser; locate at an accessible place. Install air chambers as required by Local Code. Block all lines and risers as necessary to prevent noise or vibration when water is turned on or off. Water service pipe and the building sewer are to be minimum 10'-O" apart, horizontally. <u>Basement Areaway Drains</u> and foundation drain tiles are <u>not</u> to be connected to a sanitary sewer. Downspouts are not to be connected to a sanitary	20	90 NO C SEVERE 30" HEAVY 2°F YES CODE 1500 DAYS 54°F 4A	
P15.7	sewer. Note that the water service pipe and the building sewer are to be a minimum of 10'-0" apart horizontally. May be connected to the storm water server if permitted by municipality (verify). <u>Window Areaway Drains</u> less than 10 square feet in area shall be served by a 2" pipe drained to daylight or a sump pit served by an approved pump	A.	L ABBRE VIA TIONS DNDOWN HDWD -HARDWOOD REF -REFRIGERATOR	
	installation. Window areaway drains 10 square feet or greater but less than 100 square feet in area shall be served by a 3" pipe drained in the same manor. Areaways greater than 100 square feet 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.	AHU	-ABOVE FINISHED FLOOR DR. -DOOR HT -HEIGHT REQ'D. -REQUIRED -AIR HANDLING UNIT D.S. -DOWNSPOUT HWH -HOT WATER HEATER RV -ROOF VENT -ALUMINUM DTL. -DETAIL IJS -IN JOIST SPACE SA -SUPPLY AIR	
	Hose Bibbs are to be freeze-proof or shall include, a main shut off valve (with drain) in the basement space. (protected from back flow in accordance with P2902 of IRC 2015 Icemaker Water Lines: Provide at Refrigerator in kitchen.		-ASPHALT DW. OPNG DRYWALL OPENING ITS -IN TRUSS SPACE ST'LSTEEL -BEAM EA -EACH JSTJOIST S.DSMOKE DETECTOR	
ערי, 7.7	Install proper sound attenuation around soil pipes and as required. Plumbing subcontractor shall do trenching. Provide dialectic unions where copper lines are connected to steel. Piping shall be free of waterhammer. mechanical shock arrestors. Test all soil, waste, vent piping, and water lines. Vent Stacks: shall run to rear slope of roof.	BP. BRG.	-BEAM POCKET EJ -EXPANSION JOINT LVL -LAMINATED VENEER LUMBER S.F. -SQUARE FEET Image: Section of the section	
	<u>Flashing:</u> Pipes passing through the roof shall be flashed with four-pound sheet lead. Flashing shall extend twelve (12) inches from the pipe underneath roofing material in all directions and shall have a lead collar extending from flashing up and around outside of, carried over and turned	BRKT. BRD.	-BRACKET EQEQUAL LTLIGHT SPECSPECIFICATIONS -BOARD EQUIP -EQUIPMENT MASMASONRY SWSWITCH	
P15.15	down into top of pipe. <u>Plumbing Fixtures</u> : Plumbing fixtures shall be by allowance. (includes sinks, tubs, toilets, faucets, drains, shower heads, controls and valves in baths. Fittings and accessories shall be included in the plumber's bid. Provide shutoff valves at all supply lines. Verify all final plumbing selections with owner	BOT. CAB.		
	before ordering. Verify the heights of all showerheads in showers with owner before installing. Floor drains shall be cast iron with filter grate. Contractor shall construct a cement board tub deck at all drop in tub configurations and provide access panel for whirlpool equipment as required. Hot water pipes shall be insulated to min. R-3.	ę_ CLG.	-CENTERLINE FD -FLOOR DRAIN MISC. -MISCELLANEOUS T.B.R. -TO BE REMOVED -CEILING F.J. -FLOOR JOISTS M.O. -MASONRY OPENING TV -TELEVISION	
M15.1	<u>H.V.A.C.</u> (M) MECHANICAL Work shall consist of all services typically known as " <u>Design/Build</u> ", 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 beating, ventilating, and air conditioning. All "HVAC"	C.O. CONC.	-CONCRETE MASONRY UNIT FLR. -FLOOR MTL. -METAL TYP. -TYPICAL -CASED OPENING FDN. -FOUNDATION N/A -NOT APPLICABLE T.O.C. -TOP OF CONCRETE -CONCRETE F.P. -FIREPLACE N.I.C. -NOT IN CONTRACT T.O.P. -TOP OF PLATE -CONTINUOUS FPHB -FREEZE-PROOF HOSE BIBB N.T.S. -NOT TO SCALE U.C. -UNDER CABINET	

CONST. -CONSTRUCTION M15.2 Heating and Air-Conditioning Plans shall indicate furnace location, type (fan assisted induced draft or natural draft), source of combustion air (if -CORNER SET applicable), flue sizes, duct layout and diffuser locations. A section detail shall be provided showing all gas appliances, flue sizes, connectors, lengths, CORR. -CORRIDOR heights, and clearance dimensions. Underground ductwork shall be rated for underground use. Underground metallic ducts without an approved -CARPET -CERAMIC TILE

CONT. -CONTINUOUS

-DRYER

-DOUBLE

-DIMENSION

-DISPOSAL

-DRAWER BASE

-DESIGNED BY OTHERS

GFI -GROUND FAULT INTERRUPTER PKT. -POCKET

FTG. -FOOTING

FURN. -FURNACE

GA. –GAGE

GEN. –GENERAL

GL. –GLASS

GR. –GRADE

HDR -HEADER

G&N –GLUE AND NAIL

GRAN. -GRANULAR FILL

HR -HOUR, HANDRAIL

F.V. -FIELD VERIFY

O.C. –ON CENTER

OPT. -OPTIONAL

PLATE

0.H. – OVERHEAD, OVERHANG

PEA -POST FROM ABOVE

P&S -POLE AND SHELF

R.R. -ROOF RAFTER

R.H. -RAISED HEEL

RA -RETURN AIR

P.T. –PRESSURE TREATED

P.S.L. - PARALLEL STRAND LUMBER

-WASHER

-WITH

-W00D

WDW -WINDOW

W/O -WITHOUT

W.I.C. –WALK–IN CLOSET

-VANITY V.

-WATERPROOF

WWF -WELDED WIRE FABRIC

VB -VAPOR BARRIER

-UNDERWRITER'S LABORATORY

U.N.O. -UNLESS NOTED OTHERWISE

UL

W

W/

WD

Verify location of A.C. unit's outdoors with owner, and place on concrete pads. Review locations of all thermostats with owner before installing, thermostats shall be programmable. Provide and install all registers, operable dampers, thermostats, relays, filters, dampers, access panels as required, condensate piping and sound control. Coordinate wood floor grilles with wood floor manufacture. Balance and adjust system. All floor registers shall have operable dampers. This contractor must guarantee his own work, so furnace and air conditioner sizes, heat loss and gain calculations, and details

DB0

DISP.