

**SPECIFICATIONS  
For  
RAMBLESTONE  
Lot 11, 88 Letterfern Drive  
Tynecastle Development  
Banner Elk, N.C.**

PLANS & SPECIFICATIONS-

These specifications along with the attached drawings by Nancy E. Harrison Designs describe the spacious, energy-efficient, custom designed 4 bedroom, 4 1/2 bath house being built by Tynecastle Builders, Brett Schwebke, Builder. This project is a work in progress. Changes from the plan and specifications are at the builder's discretion.

WORK & MATERIALS-

All work will meet or exceed all state and local building codes. All materials will be installed according to manufacturers' specifications.

WORK & MATERIALS NOT COVERED IN SPECIFICATIONS-

All required work & materials not specifically called for in these specifications will be included. The quality of unspecified work and materials will be consistent with overall construction and in accordance with standard construction practices.

FEES, PERMITS, AND INSURANCE-

All required permits, hook-up fees and insurance will be included. All workmen will be covered by Workman's Compensation and general liability insurance. Contractor will carry insurance on project until homeowner's policy is in effect at completion of house.

SITE WORK & DRIVEWAY-

All driveways and parking areas will be paved and the site will be extensively landscaped.

SEPTIC SYSTEM-

Septic system is sized for 4 bedrooms as required by Avery County Health Department.

WATER SYSTEM-

A private well has been drilled on the property.

TERMITE TREATMENT-

All footings, backfill, and slabs will be pre-treated to protect against termites. Contractor will provide the certificate of treatment issued by A-1 Pest Control at closing. Additional treatments will be required in the future to maintain warranties.

FOOTINGS-

24" x 12" (min.) continuous concrete (3000 PSI compressive strength @ 28 days- typical) footings with 3- #4 steel rebar continuous. Footings stepped as required by grade. All retaining walls have #4 steel rebar dowels turned-up into walls @ 16" o.c.. Dowels to project 24" (min.) above top of footing. Fireplace foundation has 12" thick concrete pad

### FOOTINGS- (Cont...)

with #4 steel rebar @ 12" each way. Fireplace pad projects 12" beyond edge of fireplace foundation. Main floor girders are supported by 16" x 16" CMU piers on 32" x 32" x 12" concrete pads and 8" x 16" piers. Footings project 6" (min.) from face of foundation and piers. Deck piers are supported by 16" x 16" CMU or poured concrete piers on 28" x 28" x 12" concrete pads unless otherwise noted.

### FOUNDATION WALLS-

All lower foundation walls are 12" CMU, poured solid with concrete, with pre-cast concrete lintels over openings as required.

### RETAINING WALLS-

Any CMU wall where the difference in grade on each side is greater than 48" is considered a retaining wall. All retaining walls are constructed with 12" CMU retaining wall block and reinforced with #4 steel rebar vertical @ 16" o.c. and 2- #4 steel rebar horizontal every third course (24" o.c.). All steel is lapped at least 24" and tied with wire. All retaining walls are poured solid with pea-gravel concrete (4000 PSI compressive strength @ 28 days).

### FOUNDATION FINISH-

The front porch columns and the face and sides of the front porch foundation will be finished with a 2" native stone. Rear foundation walls & deck columns will be finished with native stone with cultured stone corners.

### WATERPROOFING-

The exterior of all foundation walls below grade is waterproofed and insulated with the TUFF-N-DRI Waterproofing System from Koch Materials Company and professionally installed by Foothills Waterproofing, Inc.. The TUFF-N-DRI Waterproofing System is the #1 brand of waterproofing in North America and carries a 15-year limited warranty. The interior of all foundation walls is sealed with UGL Drylock masonry waterproofing.

### CRAWLSPACE-

Crawlspace finished with CleanSpace crawlspace encapsulation system and continuous venting.

### FOUNDATION DRAIN-

Includes 4" perforated drain pipe set in washed stone around perimeter of house with filter fabric over washed stone. All drain pipes are run at least 15 ft. from house.

### GARAGE SLAB-

4" thick fiber-embedded concrete (4000 PSI @ 28 days) slab with 6 x 6 W1.4 x W1.4 welded wire fabric, #5 steel rebar @ 6" o.c. in ribs, over engineered steel I-beam system and corrugated steel decking. Concrete slab is pitched towards garage floor drains and the slab has been sealed.

### P.T. PLATES-

Includes 2 x PT plates at floor framing installed over sill sealer with 1/2" anchor bolts.

### FLOOR FRAMING-

Main and lower floor systems will be 11 7/8" International Beam engineered I-joists supported by Roseburg LVL beams and engineered steel I-beams.

### SUB-FLOORING-

Sub-floor sheathing includes 2 layers of 3/4" plywood glued and fastened to floor joists with 1/2" radiant floor heat panel throughout finished with hardwood flooring or ceramic.

### TIMBER FRAME-

Hammer beam timber frame system in Great Room, Entry, Dining Room, Kitchen, Breakfast area, and Master Bedroom is engineered with #2 and better kiln-dried, free of heart center, Douglas fir, and traditional mortise and tenon pegged joinery.

### EXTERIOR WALLS-

Main floor frame walls will be 2 x 6 x 120" studs @ 16" o.c. with 2 x 6 bottom plate and double 2 x 6 top plate. Upper floor walls and gable-ends will be 2 x 6 x 105" studs @ 16" o.c. with 2 x 6 bottom plate and double 2 x 6 top plate. All wall openings shall have double 2 x 10 box headers. Exterior wall sheathing will be 1/2" CDX plywood. The house will be wrapped with housewrap installed as manufacturer specifies. Weatherwatch sealing tape will be installed around all doors and windows with copper flashing above.

### ROOF FRAMING-

Main roof system will be 8 1/4" Insulated Structural Panels by Insulspan with 7/16" skins and 7 3/8" expanded polystyrene cores. Garage will be pre-engineered attic roof trusses @ 16" o.c.. All sub-fascias will be 2 x 8 (minimum). All trusses will be anchored with appropriate hurricane ties on each member.

### ROOFING-

Roof sheathing will be 1/2" CDX plywood. Structural insulated roof panels will be sheathed with 1/2" CDX plywood (minimum). Main roof finish will be manufactured slate shingles with 50 yr. limited, transferable warranty (minimum) and Class A fire rating installed with ring-shank stainless steel nails and 7" exposure as manufacturer specifies. All roofs include 3' wide copper flashing at all valleys and copper snow guards at roof perimeter with ice shield underlayment over entire roof.

### ROOF VENTING & FLASHING-

Roof venting system includes shingled ridge vent and 2" ventilated enameled aluminum soffit vent in all soffits perpendicular to rafters or trusses.

### GUTTERS & DOWNSPOUTS-

Includes half round copper gutters and downspouts at roof perimeter. All gutters and downspouts drain into 4" underground drain pipes which is run at least 15' from the house to remove all roof drainage from foundation area.

### SIDING & EXTERIOR TRIM-

The exterior of the house will be finished with a combination of 10" R.S. bevel-edge

### SIDING & EXTERIOR TRIM- (Cont...)

horizontal lap cedar siding (STK or better), channel rustic cedar siding, cedar shakes, poplar and walnut bark siding. Exterior trim to include 8" R.S. cedar skirt board capped with copper flashing, 6" R.S. cedar corner trim, 4" R.S. cedar window trim with copper flashing above, and 2 x 8" R.S. cedar fascia boards with a 4" R.S. cedar trim board on the rakes. All soffits are T&G pine with a v-groove. All cedar siding and trim will be installed with stainless steel, Slim Jim nails and poplar bark is installed with galvanized nails. All siding and trim finished with Log Home Oil Finish which allows the wood to breathe, resists mildew and UV rays, repels water, and enhances the natural beauty of the wood.

### P.T. DECK & PORCHES-

All deck posts will be 6 x 6 PT posts set on Simpson post anchors concreted to piers. Deck floor systems will be 2 x 10 PT deck joists @ 16" o.c. with double 2 x 12 PT bands as shown including 2 x 6 Eastern White Cedar decking perpendicular to joists, 4 x 4 EWC bracing and typical EWC railing with 2 x 4 EWC top & bottom rails, 2 x 6 EWC handrail, and 2 x 2 EWC pickets as required by code. Decks will be finished with a cedar tone exterior finish in a two part finishing process by Sikken's. Front Entry Porch concrete slab will be finished with flagstone.

### WINDOWS & EXTERIOR DOORS-

Hurd energy-efficient aluminum-clad wood casement and awning windows, and sliding patio doors will be as shown in Anodized Bronze with insulating Low-E glass, insect screens, and extension jambs. All main level doors and windows, except M. Bath and Garage area, are 8' high with walnut jambs. Master Bath windows will have curly maple jambs. Garage and storage areas will have pine jambs. Lower level areas will have 6'-8" doors and windows with white oak jambs.

### ENTRANCE DOORS-

Entry Door- Antique 6-0 x 8-0 Italian hardwood arch double door circa 1920

Garage Area- 2- 3-0 insulated metal or fiberglass doors to exterior and to house as required by code.

Garage- Custom 18-0 overhead insulated carriage style garage door with door openers in Spanish red cedar and finished with 3 coats of Sikken's in teak color.

ATV Garage- 8-0 x 7-0 overhead insulated metal garage door

Provide all hardware. Locksets will be Schlage.

### INSULATION/ SOUNDPROOFING-

Includes 6" faced fiberglass batts in exterior walls and floors (R-19)

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Roof insulation is integral in SIPs and rated at R-34.

Include 10" - 12" fiberglass batts with baffles to maintain 1" airspace (R-38 minimum) at roof trusses.

Contractor will insulate with expanding foam & Weatherwatch around doors and windows.

### INTERIOR PARTITION FRAMING-

Main floor interior walls will be 2 x 4 studs @ 16" o.c. with 2 x 4 bottom plate and double 2 x 4 top plates. Main upper floor interior walls will be 2 x 4 studs @ 16" o.c. with 2 x 4

### INTERIOR PARTITION FRAMING- (Cont...)

bottom plate and double 2 x 4 top plates. All wall openings to have double 2 x 10 box headers. All plumbing walls and pocket door walls will be typical 2 x 6 walls as shown. All plates on concrete are pressure treated.

### INTERIOR FINISHES-

See Attached Schedule-

### PLASTER-

Interior walls will be finished with 5/8" Type "X" fireguard plaster board in Garage and 1/2" plaster board throughout as noted on finish schedule. All plaster board will be installed with screws and finished with Woncote veneer plaster in a textured finish.

### INTERIOR DOORS-

Includes 1 3/4" walnut raised 4-panel wood, stain grade, pre-hung doors with 8-0 doors heights on main floor level and 1 3/4" Douglas fir raised 4-panel doors in 6-8 heights on lower floor level. All hardware included. Locksets will be Schlage.

### INTERIOR TRIM-

Includes 1 x 4 wood door & window casing with trim details in walnut or white oak.

Includes 1 x 5 wood baseboard with trim details in walnut or white oak.

Master Bedroom closet will have custom built-in curly maple closet system. All other closets to have ventilated wood closet systems.

Main stair railing will be custom metalwork by master craftsman, John Boyd Smith. All posts will be finished with custom routed details.

### INTERIOR PAINT & STAIN-

All interior walls will be primed and painted with Benjamin Moore latex paint in Navajo white. All wood doors and trim will be stained natural and sealed with 2 coats semi-gloss polyurethane with sanding between coats. Ceilings will be stained with one coat of natural stain and sealed with two coats of semi-gloss polyurethane. T & G spruce ceilings will receive two coats of Zar poly-stain in Honey Maple.

### CABINETS-

Includes quality custom hardwood base and wall cabinets in Kitchen and Laundry, and custom hardwood vanities in all bathrooms. Kitchen cabinets will be custom wormy chestnut built by local craftsman with solid wood face frames and doors and laminated wood partitions - no particle board will be used. Kitchen cabinets will be open above with no dropped soffits and have recessed Xenon lighting and receptacles. Kitchen counter tops will be granite. Master Bath, Laundry room, and all bath cabinetry will be custom hardwood cabinets. Master Bath vanity tops will be marble. Bathroom vanities and Laundry room cabinets will have granite or marble tops.

### BATH KITS-

Each bath will be complete with towel rods, toilet paper holders, mirrors, glass shower doors with two heated towel rods in Master Bath.

### APPLIANCES-

Appliances will include stainless steel Sub-Zero refrigerator with ice maker, Viking black enamel cooktop and oven, warming drawer, and microwave in cabinetry, two single Fisher & Paykel dishwashing drawers with integrated cabinet panels, disposal, and E.G. Titanium front loading clothes washer and dryer. Grill on back porch is Viking built-in gas grill.

### LIGHTING FIXTURES & CEILING FANS-

House will have ceiling fans in bedrooms, Family Room, and Office, florescent lights in Garage, recessed cans throughout, and sconces as accents in locations determined by the builder. All fixtures will be either custom made by Lightcrafters or Ponderosa or purchased from Kalco, World Imports, or Hubbardton Forge.

### FIREPLACES-

Residence will include 5 masonry fireplaces in the Living Room, Master Bedroom, Family Room, and on the upper and lower back porches. Fireplaces will have a raised native stone hearths and facings to ceiling and custom mantels from the building site. Fireplaces will be wood-burning but equipped with gas log starters.

### PLUMBING-

Includes complete plumbing system to code with simple drain-down and 3 frost-proof hose bibbs as follows: 1- hot & cold @ Garage and one cold water @ upper deck and front porch. All bathrooms will have Toto elongated toilets and Delta Select, Hans Grohe, or Sigma faucets. Fixtures in the Master bath will include a Bain Ultra free-standing tub (Style: Balneo, Model: Naos) with Thermo Masseur, 1- marble steam shower with 3 separate showerheads with Temp-Sensor valves (one standard, one 7" rainhead, and one handheld), and marble vanity top with double self-rimming drop-in lavatories. Other baths will have cast iron tub/ shower units with single bowl sink granite vanity tops with travertine surrounds in Bath #2 and Bath #3. Powder room will have marble vessel sink on custom pedestal with vessel spout. The kitchen will have a granite, farm-style sink with a hand-held spray faucet and disposal and pasta spout/ pot filler at cook top. Laundry Room will have a built-in porcelain farm-style laundry sink. The high-efficiency water heating system will include continuous hot water with insulated water pipes throughout the house.

### ELECTRICAL-

Includes complete electrical system with 400 amp electrical service. House is pre-wired for multiple telephone lines and TV outlets. House includes smoke alarms, carbon monoxide alarms, and complete security systems. Exterior system includes waterproof receptacles @ decks and porch, wall mounted lights at each exterior door and garage doors, recessed can lights at rear porch, and dropped fixture at the front porch.

### HEATING & COOLING SYSTEMS-

System includes state-of-the art, energy-efficient hydronic radiant floor heat and hot water throughout the house with natural gas boiler, geothermal heat pump, and solar panels and high pressure Unico air conditioning system. Also includes snow melt system at front porch and Garage apron.

### NATURAL GAS SYSTEM-

Includes a complete natural gas system with supply lines as required for furnaces, water heaters, gas starters, and gas line for grill on rear deck.

### LANDSCAPING-

All areas around the house, which have been disturbed by construction will receive a final grading and will be hydro-seeded with lawn seed. A variety of native evergreens, including hemlock, rhododendron, and mountain laurel will be planted around the house.