

SPECIFICATIONS
for
111 Thistle Lane, Lot 19-A
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 built by Brett Schwebke, Builder.

WORK & MATERIALS-

All work meets or exceeds all state and local building codes. All materials are installed according to manufacturer's specifications.

WORK & MATERIALS NOT COVERED IN SPECIFICATIONS-

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

FEES, PERMITS, AND INSURANCE-

All required permits, hook-up fees and insurance are included. All workmen are 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 are paved and the site is extensively landscaped.

SEPTIC SYSTEM-

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

WATER SYSTEM-

A private well is drilled on the property.

TERMITE TREATMENT-

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

FOOTINGS-

36" 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 with #4 steel rebar @ 12" each way. Fireplace pad projects 12" beyond

FOOTINGS- (Cont...)

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 foundation and columns are finished with a 2" native stone. All exposed foundation walls and rear deck columns are finished with 2" native stone.

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.

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

FLOOR FRAMING-

Main floor system is pre-engineered floor joists with Versa-lam girder beams. Upper floor system is 2 x 10 SPF floor joists @ 16" o.c. with Versa-lam girder beams.

SUB-FLOORING-

All sub-floor sheathing is 3/4" T & G plywood glued and fastened to conventional and pre-engineered floor joists with two layers of 3/4" plywood sub-floor under all hardwood flooring. Cement tile backer board will be installed under all marble and travertine.

TIMBER FRAME-

Hammer beam timber frame system in Great Room, Loft, Entry, and Dining Room is engineered with #1 and better Douglas fir, boxed heart, and traditional mortise and tenon pegged joinery.

EXTERIOR WALLS-

Exterior perimeter and gable walls are 6 1/2" Insulated Structural Panels by Insulspan with 7/16" skins and 5 5/8" expanded polystyrene cores. The house is wrapped with housewrap installed as manufacturer specifies. Weatherwatch sealing tape is installed around all doors and windows with copper flashing above.

ROOF FRAMING-

Roof system is 8 1/4" Insulated Structural Panels by Insulspan with 7/16" skins and 7 3/8" expanded polystyrene cores at timber frame, Master Bedroom, and dormers. Bedrooms and Bonus Room are pre-engineered attic roof trusses @ 16" o.c.. Connector at garage angle and over-framing are 2x conventional framing. All sub-fascias are 2 x 6. All rafters and trusses are anchored with appropriate hurricane ties on each member.

ROOFING-

Roof sheathing is 1/2" CDX plywood at pre-engineered trusses and conventional framing. Structural insulated roof panels are sheathed with 1/2" CDX plywood (minimum). Roofing is 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. Gazebo has standing seam copper roof. 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 with "K" style copper gutters at gazebo. 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 is finished with a combination of 8" R.S. bevel-edge horizontal lap cedar siding (STK or better), channel rustic cedar siding, cedar shakes, poplar and

SIDING & EXTERIOR TRIM- (Cont...)

walnut bark siding. Exterior trim includes 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 are 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 are 6 x 6 PT posts set on Simpson post anchors concreted to piers. Deck floor systems are 2 x 10 PT deck joists @ 16" o.c. with double 2 x 12 PT bands as shown. Includes 2 x 6 PT decking perpendicular to joists, 4 x 4 PT bracing and typical PT railing with 2 x 4 PT top & bottom rails, 2 x 6 PT handrail, and 2 x 2 PT pickets as required by code. Decks are finished with a cedar tone exterior finish in a two part finishing process by Sikkens. Front Entry Porch concrete slab is finished with flagstone.

WINDOWS & EXTERIOR DOORS-

Hurd energy-efficient aluminum-clad wood casement and awning windows, and sliding patio doors included as shown in Brick Red with insulating Low-E glass, insect screens, and extension jambs. All doors and windows on main floor level, except Garage & Laundry area, are 8' high with cherry jambs. All other areas have 6'-10" doors and windows with pine jambs.

ENTRANCE DOORS-

Entry Door- Custom 3-0 x 8-0 Mahogany Panel with sidelights

Garage Area- 4- 3-0 insulated metal or fiberglass doors to exterior and to house as required by code.

Garage-1 - Custom 18-0 overhead insulated carriage style garage door with door openers in Spanish red cedar and finished with 3 coats of Sikkens in teak color.

Provide all hardware. Locksets will be Schlage.

INSULATION/ SOUNDPROOFING-

Wall insulation is integral with SIPs panels and rated at R-23.

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

Roof insulation in SIPs is rated at R-30.

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

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

INTERIOR PARTITION FRAMING-

Main floor interior walls are 2 x 4 x 120" studs @ 16" o.c. with 2 x 4 bottom plate and double 2 x 4 top plates. Main upper floor interior walls to be 2 x 4 x 105" studs @ 16" o.c. with 2 x 4 bottom plate and double 2 x 4 top plates. All wall openings have double 2 x 10 box headers. All plumbing walls and pocket door walls are typical 2 x 6 walls as shown. All plates on concrete are pressure treated.

INTERIOR PARTITION FRAMING- (Cont...)

Note: Ceiling heights vary from 8' in Bonus Room and 9' on upper level to 10'-3" on main level.

INTERIOR FINISHES-

See Attached Schedule-

All oak floors & cherry used for cabinetry, trim, and ceilings has been reclaimed from previous building sites at Tynecastle.

Hardwood floors to be 3", 4", and 5" random width oak stained and sealed with 2 coats urethane.

Wood ceilings are T & G spruce or Tynecastle cherry.

PLASTER-

Interior walls 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" cherry raised 4-panel wood, stain grade, pre-hung doors with 8-0 doors heights on main floor level with 6-8 height in Garage, Mud Room, and Laundry and 1 3/4" Douglas fir raised 4-panel doors in 6-8 heights on upper floor level. All hardware included. Locksets will be Schlage.

INTERIOR TRIM-

Includes 1 x 4 wood door & window casing with trim details in Tynecastle cherry.

Includes 1 x 5 wood baseboard with trim details in Tynecastle cherry.

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

Main stair and loft railing to have Douglas fir posts, D. fir top & bottom rails and square D. fir pickets. All posts to 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. Cherry 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 are custom mahogany built by local craftsman with solid wood face frames and doors and laminated wood partitions - no particle board is used. Kitchen cabinets are open above with no dropped soffits and have recessed Xenon lighting and receptacles. Kitchen counter tops are 3cm Lapidus Gold granite. Master Bath and Laundry room cabinetry is Tynecastle cherry. Other bathroom_vanities will be maple stained cherry. Master Bath vanity tops are Rojo Alacante marble. Bathroom vanities and Laundry room cabinets have granite tops.

BATH KITS-

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

APPLIANCES-

Stainless steel appliances include Sub-Zero refrigerator with ice maker, Wolf stainless steel gas cook top, Wolf double wall ovens, Wolf warming drawer, and Wolf 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 has ceiling fans in Den, bedrooms and Loft, florescent lights in Garage, recessed cans throughout, and sconces as accents in locations determined by the builder. All fixtures are either custom made by Lightcrafters or Ponderosa or purchased from Kalco, World Imports, or Hubbardton Forge.

STAIRS-

Main stairs have open oak treads, glued and fastened, with a custom detailed Douglas fir railing. Back stairs are oak risers and treads with nosing. Stairs include all handrails as required by code.

FIREPLACES-

Residence includes 3 masonry fireplaces in the Living Room, Master Bedroom, and at the Gazebo. Fireplaces will have a raised native stone hearths and facings to ceiling with 8" native stone in Living Room, 6" native stone in Master Bedroom, and 2" native stone in the Gazebo. Living Room has custom Tynecastle cherry mantel and Master Bedroom has Tynecastle maple mantel from the building site. Fireplaces 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 have Toto elongated toilets and Delta Select, Hans Grohe, or Sigma faucets. Fixtures in the Master bath include a Bain Ultra free-standing tub (Style: Balneo, Model: Naos) with Thermo Masseur, 1 - Rojo Alacante marble steam shower with 3 separate showerheads with Temp-Sensor valves (one standard, one 7" rainhead, and one handheld), and Rojo Alacante marble vanity top with double self-rimming drop-in lavatories. Other baths include cast iron tub/ shower units with single bowl sink granite vanity tops with travertine surrounds in Bath #2 and Bath #3 and pedestal sink in Bath #4. Powder room have Rojo Alacante marble vessel sink on custom mahogany pedestal with vessel spout. The Kitchen has a copper, farm-style sink with a hand-held spray faucet and disposal and pasta spout/ pot filler at cook top. The Laundry Room has a built-in porcelain farm-style laundry sink. The high-efficiency water heating system includes 2- 75 gal. gas insulated water heaters with a hot water re-circulating system to assure continuous hot water throughout the house and insulated water pipes throughout.

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 and intercom 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-

Heating system includes 3 separate 1 1/2ton high-efficiency Carrier heat pump units with air conditioning upstairs and 2 high-efficiency Carrier Weathermaker forced-air, natural gas furnaces and air conditioning units for the main level with complete supply and return air ducts. All systems include an air filter. Master Bath, Laundry, Mud Room, Powder room and all bathroom floors will have Delta-Therm electric radiant heat.

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 have received a final grading and are hydro-seeded with lawn seed. A variety of native evergreens, including hemlock, rhododendron, and mountain laurel will be planted around the house.