

Pertinent information to review

All permits must be pulled prior to commencement of work. There is a fee for “Working without a Permit” of \$125.00 for residential, if discovered.

Residential trades can be obtained via mail, fax or email after completion of the appropriate permit application and must be accompanied by \$51.00 fee. All residential trades are \$50.00, plus \$1.00 State surcharge. Checks should be payable to Culpeper County Building Dept. Visa, MasterCard & Discover are also accepted with a 3% fee.

Visit our web site www.culpepercounty.gov

From the County’s Home page choose Building Department under Government Offices. From the Building Home Page you can schedule an inspection on line; you can find out the result of an inspection and you can find all current applications that can be downloaded and completed prior to visiting our office or submitting your application.

In addition, you can check your next day inspection time either by visiting the web page or by calling (540) 727-3405, option 2. After 4:30 the schedule for the next day’s inspections will be posted on line and on a recorded message. We are currently offering a 2-hour time frame as follows: 7:30a-9:30a; 9:30a-11:30a; 12:30p-2:30p; and 2:30p-4:30p

Processing hours are Monday – Friday 8am to 4pm

Culpeper County Building Dept.
302 N. Main Street
Lower Level
Culpeper, VA 22701
(540) 727-3405
Building Official: Robert P. Orr, CBO

Residential Construction Inspection Sheet

Sequence of inspections

1. Erosion Control
2. Setbacks and Footings
3. Wall (poured concrete or grouted foundation wall)
4. Ground Work Plumbing
5. Slab
6. Backfill
7. Porch/Garage Slab (if applicable)
8. Close In – will include the following:
 - A. Framing, Rough Electric, Temporary or Permanent Service, Rough Mechanical, Rough Plumbing and Inside gas lines.
 - B. If applicable, the Interior Wall Bracing and Narrow Wall Bracing will be inspected at this time. For these inspections the wall must not be covered.
9. Insulation and re-inspection of close in if applicable.
10. For County Residents w/ Private well - Drain field and private well inspection by the Health Dept. [Certificate of Occupancy cannot be issued without Operation Permit from the Health Dept. on file.]
11. Mechanical 2 - outside gas & tank (if applicable). Underground tanks must be inspected before backfill.
12. Final – 911 address must be posted at time final inspection is conducted.
 - Erosion Control – Minimum 3” of grass is required. If unable to obtained 3” before final inspection, a bond must be secured with the Zoning Dept. Once the Zoning Dept. is satisfied with final E&S measures, bond will be returned.
 - County residences – Operation permit from the Health Department must be submitted to the Building Dept.
13. Certificate of Occupancy – Per §116.1, Certificate of Occupancy will be issued within 5 business days provided the building or structure meets all requirements for a certificate.

Residential Inspection Types & Descriptions

This list of inspections, while not all-inclusive, lists inspections you may have to schedule for your project. Again, this list is not all-inclusive so ask before you conceal so you can avoid any issues.

There are many types of inspections. Some are required to be performed in conjunction with other inspections. Inspections might involve looking at home construction, an accessory building, pools, retaining walls, a deck, porch, sun-room or a fence, if it exceeds six feet in height. The following inspections types are fairly generic however if in doubt please call us for clarification.

Set Back Inspection: To confirm the structure location is in compliance with local zoning regulations in relation to setback distances from the property line, right of way etc.

NOTE: A setback inspection is needed prior to moving forward with your project. The only time a footing inspection would be scheduled as a standalone inspection is if the original footing inspection had failed and it is a re-inspection or pier footings within the building footprint.

Footing Inspection: Compares the footprint of the building with the approved plan and checks to ensure the foundation will be setting on firm soil. Footing are normally excavated to a depth of eighteen inches per the frost depth in our area or it may be deeper based on an engineered plan. For the inspection no water, mud, or stone may be present. If the Inspector cannot find firm bearing soil this may mean you have a soil problem that requires an engineering evaluation.

Notes:

1. If a Concrete Encased Electrode, commonly referred as a UFER ground, is to be utilized as the method of grounding for the home a separate inspection is required to ensure proper placement and compliance with the code.
2. If your project is being constructed in an area where “**Problem Soils**” are present you may need to contact a geotechnical engineer to evaluate the soil condition and propose an engineer’s solution for your footing.
3. If a chimney footing is to be part of the home footing it needs to be called in and inspected at this time.

Interior Piers: There could be different applications that involve interior piers. They may be a home on a crawl space or a mobile home. Specific spacing along a particular line designated on the plans that includes heights of the piers to include if they are required to be grouted or not. The pier base requires a footing to ensure the pier is supported properly.

Backfill: This inspection involves several areas we have to look at. First a damp proofing and drain tile inspection is required. You may only backfill up to four feet on the foundation wall if your first floor framing is not in place. You could however obtain a proven engineering design or an actual engineer's drawing with a seal that depicts the bracing requirements for backfilling with no first floor framing in place which would allow you to backfill to the specified height. The Building Official must approve the method if using an engineered method prior to placement of any fill. If the first floor framing is in place you may backfill up to the height referenced in the plans.

Wall- (Block or Poured Concrete): This inspection looks at steel reinforcement (rebar) placement, if any, prior to the placement of concrete and the wall placement in relation to the footing to ensure proper projection. In the case of a block wall, rebar and block placement on the footing are also looked at. In the case of the block wall an inspection is required if the hollow blocks are required to be grouted.

Brick Ledge: This involves the inspection of the width transition of the CMU's (concrete masonry units) for placement of the brick or stone facade . It must be grouted solid. Poured walls have the brick ledge incorporated so there is no need for grouting.

Slab: This involves checking the gravel base for proper depth, 4" minimum, placement of depth markers for slab thickness, 3.5 inches minimum, placement of the vapor barrier to include lapping requirements and proper thickness of the barrier, any reinforcement be it wire mesh or rebar prior to concrete placement.

Note: If you will have 24 inches or more of backfill under your slab then an engineered slab will have to be installed. Obtain an engineer's plan with a seal that addresses your particular situation.

Monolithic Slab: Same type inspection as a regular slab except the footing and the slab become one unit when poured.

Mobile Home Tie-Downs: This inspection involves an inspection of the actual tie-downs for correct type, I.E. if embedded in rock or plain earth, the location and proper attachment to the mobile home structure and the actual tie-down. The plans or the manufactures instructions will lay out the specific spacing for the tie-downs.

Marriage Wall: This inspection is performed on “Modular” type homes and involves the inspection of how the units are secured together. The manufactures instruction booklet or the plans should detail the specific hardware required to secure the two units to include the length, type and bolting pattern for the bolts. Additionally there are fire-blocking requirements that have to be followed once the walls are joined. This inspection is performed at two locations, in the crawl space or basement and the attic area. Depending on the size of the modular it could involve multiple sections that have to be joined.

Framing:

Note: In conjunction with scheduling the framing inspection all trades must be ready for inspection. An asterisk by any of the trades indicates it will be looked at during the framing inspection.

This inspection could involve many different components of the structure from roof systems, floor components, walls, bearing points, and exterior decks. Both structural and non-structure framing members will be looked at. Detailed approved plans reflecting all aspects of the construction must be available. If using an **engineered roof or floor** structure the Engineer sealed plans to include the “master layout” must be on site for the inspector to review. Fire blocking/stopping will also be looked at under this inspection. This is a critical aspect of your inspection. If metal studs are utilized they will be inspected per the approved plan in relation to gauge, placement, attachment hardware etc.

Rated Wall Inspection: This type inspection is performed when the house location in relation to the property line requires rated assemblies. This involved looking at single to multiple layers of drywall whose attachment has been tested under a United Laboratory, UL testing standard. The testing standard used must be on the approved plans and the inspector will be looking at the fasteners utilized, attachment of field and edge fasteners, application may vary dependant on a vertical or horizontal application of the wall board. The inspector also looks at the type drywall specified for the application.

This inspection may involve a block wall and any internal fill material required. Again the UL testing standard must be on the plans and additionally the testing standard will call out a specific rated block for the application. This block comes with a certification certificate and must be present for the inspector to review.

Deck: Normally on decks there are three inspections. An inspection for compliance with the proper setback and footing, and then the final inspection which include framing, stairs, lighting etc. will be looked at.

Exception: On decks that are 24 inches or less off of grade, there is a framing inspection required prior to placement of any deck walking surface boards to ensure proper attachment to the structure to include flashing etc.

Pool: This is for pools that exceed any one of the three requirements for permitting in accordance with the Virginia Uniform Statewide Building Code which are:

- Swimming pools that have a surface area not greater than 150 square feet (13.95 m²) do not exceed 5,000 gallons (19 000 L) and are less than 24 inches (610 mm) deep.
- There are additional inspections related to pools that will fall under the electrical, plumbing or mechanical inspection criteria.

Insulation Inspection: If you can insulate your home with the method outlined in the IRC then you are using what we call the “prescriptive method.” If you have to deviate from it you have to use the International Energy Code, which will require a “RES-CHECK” to ensure the insulation you are using meets the minimal thermal envelope requirements. This must be available to show the inspector the correct “R” value insulation is being utilized in all wall cavities, ceilings, basement walls and floors. Additionally if “blown” insulation is utilized a certificate must be posted identifying the blown depth, settling depth, R-value chart identifying a correlation between depth and the R-value. All locations with the exception of the attic are looked at during the insulation inspection. The attic will be looked at during the final inspection. Installation techniques will also be looked at.

PLUMBING:

Ground Works Plumbing: This inspection involves the drain/waste/vent (DWV) lines that are installed under the concrete slab prior to pouring the concrete. We look to insure the correct type PVC is utilized, conforming to the ASTM requirements of the code. Additionally an air test with 5psi or water test with 10 foot of head is used to test the integrity of the DWV system. Proper bedding and the required slope have to be achieved for a passing grade.

Water Lateral: This inspection involves the water supply pipe used in relation to the required ASTM designation, proper burial depth, and to ensure that it has a water or air test on the system to ensure system integrity. Lines passing through foundation walls or footings must be

properly sleeved and the annular distance between the supply line and the sleeve must be filled or tightly caulked. This inspection looks at the line between the meter to the structure. We also look at the placement of the water pipe in relation to any DWV system lines being in close proximity. Additionally the proper bedding of all piping is part of the inspection.

Sewer Lateral (when connected to a public utility) This inspection involves the section of piping outside the building perimeter and runs to the connection at the public utility sewer line. The pipe shall be tested by insertion of a test plug at the point of connection with the public sewer and filling the building sewer with water, testing with not less than a 10-foot head of water and be able to maintain such pressure for 15 minutes. **Water is the only means** by which this test can be performed. Proper burial depth is also looked at. For sewer lines connected to a private system proper burial depth would be the only consideration.

NOTE: For homes served by public water utility where the basement supplied fixtures will be below the level of the sewer tap a “Backwater” valve is required for all DWV plumbing in the basement area.

Hydronic Piping: This inspection looks at all in slab piping used to provide heat for the home.

***DRAIN/WASTE/VENT DWV:** This involves the inspection of all piping internal to the structure that conveys waste to the sewer main. Proper cleaning and gluing techniques must be utilized, **no purple-no pass**. The system test may be by water or air.

***Supply Rough In:** This inspection looks at all domestic hot and cold water lines prior to concealment behind drywall. Air tests of 50 psi are allowed for piping systems, **other than plastic**. Systems comprised of plastic will be tested with water only to 50 psi or working pressure. The application of hangers, to include proper vertical and horizontal spacing will be inspected. For homes services by a public utility for your water supply, a Pressure Reducing Valve, PRV, is required.

ELECTRICAL:

***Temporary Service:** This inspection checks the panel to ensure it is properly grounded. A Ground Fault Circuit Interrupter, GFCI, must be in close proximity to the panel tied to a 20 amp breaker.

***Electrical Rough In:** This inspection involves looking at all electrical boxes to ensure boxes are not overfilled, proper wire length, ground wires properly joined and bonding wires if metal boxes are used. Wiring installed needs to be secured properly, staples rated for the total number of electrical conductors, and that wires are not bundled in excess of code requirements. No devices or cover plates should be in place.

Note: Mobile Homes and Modular homes are inspected by an independent certifying agency under the Virginia Uniform Statewide Building Code and based on that, we perform no inspection inside the structure itself. However, we do look at the main power panel for proper tie-in of all feeders and that all grounding and GFCI requirements are met.

Temporary Service, (on a pole): This inspection involved the same issues as a normal temporary service, grounding, GFCI outlet provided and proper placement and burial depth of ground rods.

Ceiling Grid Electrical Inspection: If using a dropped ceiling or tile ceiling, the area between the ceiling and the floor or roof above needs a concealment inspection. Inspections can be performed separately but the concealment with tiles cannot be done prior to the successful passing of both the mechanical and electrical concealment inspection. For residential structures areas above the ceiling that equal or exceed 1000sqft must be draft-stopped

Service Upgrade: This inspection is performed normally when the homeowner wants to increase the size of their service to accommodate additional electrical requirements. You would normally see this in older homes where 100 Amp service was initially provide and they want to increase their service to 200Amps. Again we look for proper tie-ins and that it meets code required grounding specifications etc.

Trench: Some homeowners like to install lighting or run service to new or existing accessory buildings. The inspection looks at the type of wire used and if it is rated for direct burial, or if conduit is used that it is of the required specification per code. Burial depth is also another key element to include the condition of the trench you are placing it in. It should be free of rocks and debris that may puncture the wire of conduit.

Pool Bonding & Electrical: This inspection may involve numerous elements of your pool dependent on the type pool you are having installing. The following list details specifically what has to be bonded:

1. Fences
2. Handrails & Ladders
3. Pool cover motors and metal parts.
4. Forming shells (light enclosures)
5. Pump Motors,
6. Diving structures
7. Metal Drains
8. Rope Hooks,
9. Heaters
10. The reinforcing steel & tie wires

There are specific requirements for luminaries (lighting fixtures), lighting outlets, and ceiling-suspended (paddle) fans. This may or may not be unique to an indoor pool only.

Additionally there are specific requirements for underwater luminaries and junction boxes for permanently installed pools. Lastly there are specific requirements for electrical equipment and feeders in relation to distances for service receptacles and convenience receptacles to include equipment associated with the pool.

MECHANICAL:

***Mechanical Rough In:** This inspection involves looking at the HVAC system and all supply, return, and lines. This includes your heating and cooling, bathroom exhaust, kitchen range hood or downdraft systems. Specific clearance for working platforms in attics or crawl space, service electrical outlets, distance to combustibles etc will be looked at. If the HVAC ducting is to be insulated, it cannot be applied to the hard duct piping until the inspector can look at all joints to ensure the proper sealing system was utilized. Regardless of the type-joining system you utilize all sealing and mechanical joints have to meet the listed Underwrites Laboratory, UL, 181 "A" or "B" standards. Mastics, tapes and connectors must be listed under this standard.

***Gas Rough-in:** This inspection has an external and internal inspection that looks at system integrity. This includes direct burial gas tanks, above ground tanks and all associated piping. An air test must be present and all pipe sizes will be looked at to ensure compliance with the code for proper sizing. Normally the inside gal line inspections are performed under the plumbing permit however there are some licensed Mechanical Contractors who perform gas line installation.

Chimney: Several types of inspection are required under this heading, they are;

- **Thimble**, this inspection looks at the thimble itself and requires the first flue liner to be installed. The surface area in and around the thimble needs to be smooth to cut down on buildup of creosote. Clearance to combustibles is also looked at.
- **Hearth**, checks the frame, depth of the pour and that non-combustible framing is used and re-enforcement is per plan.
- **Throat**, this involves an inspection of the smoke chamber to ensure you have a minimum of 8" from the top of the opening to the throat, distances to combustibles etc. Chapter 10 of the International Residential Code lists the code requirements.

Ceiling Grid Inspection: If using a dropped ceiling or tile ceiling, the area between the ceiling and the floor or roof above needs a concealment inspection. Inspections can be performed separately but the concealment with tiles cannot be done prior to the successful passing of both the mechanical and electrical concealment inspection. For residential structures areas above the ceiling that equal or exceed 1000sqft must be draft-stopped.

FINAL INSPECTIONS:

Note: Prior to any final inspection being scheduled for a home utilizing a private well and sewage system a Culpeper County Health Department Operational Permit must be on file at our office. A bond must be in place if required by the Planning & Zoning Dept.

1. **Building Final Inspection:** This inspection involves looking at the building envelope as a whole. All penetrations sealed properly, 911 addresses posted; all drywall is properly sealed, all home systems operable. We will look at the final grade to ensure you have proper fall per the code away from the dwelling and that the area has been seeded & straw placed over the seed or sod laid down.
2. **Electrical Inspection:** This inspection involves looking at all systems to include all battery, diesel, propane or natural gas emergency back-up systems. All normal lighting, kitchen appliance, wall outlets and devices receiving electrical power will also be looked at. The power panel will be looked at to ensure appliances like the AC condenser is fused correctly and that the correct size wire was used. All Arc-fault and GFCI circuits will be tested.
3. **HVAC Final Inspection:** This inspection involves the receipt of a final balance report and looking at all supply and return grills to ensure the specified size is used. The system/s will be tested to ensure heating and cooling capabilities are working. All interlocks that shut down the system in the event of a fire must be working properly.

4. **Plumbing Final Inspection:** All areas where plumbing appliances, i.e. lavatories, commodes, showers, deep sinks etc. have been installed will be tested to ensure a hot water supply, temperature limiting devices if required, are installed and working etc.
5. **Gas Final Inspection:** All units will be tested to ensure they properly light. All exposed piping will be looked at to ensure it is protected and any marking, if required, is applied. Gas pipe exposed to the weather must have a protective finish like paint.

Obtaining your Certificate of Occupancy: Once your final inspection is complete the inspector will input his inspection results to the computer system. Per §116.1, Certificate of Occupancy will be issued within 5 business days provided the building or structure meets all requirements for a certificate. Our Permit Technicians will complete the Certificate of Occupancy & will route to the appropriate departments for sign off before issuance.

Temporary Certificates of Occupancy: Providing there are no life safety issues involved the Inspector may recommend that a Temporary Occupancy Permit be issued. This type permit will allow you a reasonable time to make the additional corrections for minor issues to meet code. Again, a Temporary CO will not be issued if there are any life safety issues.

Note: A builder's representative must be on site for the final inspection.

EMERGENCY INSPECTIONS: An emergency inspection may involve any one of the trades due to a particular occurrence that caused some type of damage. The Building Department does not have an "on call" inspector. Contact the Building Department at the beginning of the next workday.

FIRE OR VEHICLE RELATED DAMAGE: When a situation exists where a call is placed to the Emergency 911 center and a Fire Company responds to a home fire or an accident involving a vehicle and a home, business or structure, there is an Inspector that responds to evaluate and evaluate if the structure is capable of being occupied or identified as an unsafe structure until repair can be made.

RESIDENTIAL GENERATOR PERMIT INSPECTION TYPES

Inspections required:

1. **Generator Rough-In**: Provides an inspection for the change out of the service entrance cable from the main panel to the transfer switch. Once this inspection is performed the power company will be notified that they can provide power.
 - a. All lugs are verified with a torque wrench or the torque certification has to be on hand.
 - b. Use the check-list to ensure all requirements of the code are met for the install at this point. The inspector should inform the installer that based on the manufactures requirements that control wiring and power conductors need to be in separate conduits.
 - c. Along with this inspection all aspects of generator placement will be evaluated against the manufactures installation instructions for proper clearance from combustibles, windows, doors, ignition sources etc.
2. **Mechanical Rough-In** (Propane Fired Generator): This inspection looks at the fuel lines for a propane supplied generator to ensure that the fuel supply lines have been run properly, properly sized, and a pressure test placed on the piping system.
3. **Generator final**: This inspections looks at the entire generator system to include:
 - a. Automatic Transfer Switch, ATS, or ta Manual Transfer switch.
 - i. Note: The ATS may be an automatic with load sheading capabilities.
 - b. All connections from the generator to the transfer switch to the panel.
 - c. Use the inspection check-list to verify all components of the system are installed per code. Pay attention to labeling.
 - d. Utility power is dropped to ensure the generator go to a run condition and assumes the designated loads.
4. **Mechanical Final**: This inspection looks at all piping to ensure it is properly protected i.e. painted, and all connections made.