15A NCAC 18E .1404 PLANS AND SPECIFICATIONS FOR RISERS, EFFLUENT FILTERS, AND PIPE PENETRATION BOOTS

(a) All plastic or fiberglass risers, effluent filters, and pipe penetration boots proposed for use in a wastewater system shall be approved by the Department prior to being offered for sale or use in North Carolina.

(b) Three copies of the plans and specifications for the initial design of each plastic or fiberglass riser, effluent filter, or pipe penetration boot shall be submitted to the Department. Plans for plastic or fiberglass risers, effluent filters, and pipe penetration boots shall be approved by the Department and an approval letter issued when the design is found to comply with this Section. All changes or modifications to plastic or fiberglass risers, effluent filters, or pipe penetration boots shall be approved by the Department when the changes or modifications comply with the requirements of this Rule.

(c) Plastic or fiberglass risers and riser lids shall be able to withstand a minimum uniform live loading of 300 pounds per square foot or a minimum 1,500 pound load applied in a 10 inch by 10 inch area centered on the lid, in addition to all loads to which a riser is normally subjected, such as dead weight of the material and soil cover and active soil pressure on riser walls.

(d) Plastic or fiberglass riser plans and specifications submitted to the Department for review and approval shall show the design of the riser and include the following information:

(1) manufacturer's name, mailing address, phone and fax numbers, email address, and name of manufacturer's point of contact;
(2) physical dimensions of the riser and riser cover, including wall thickness, internal diameter, proposed casting or installation details and methods, and pipe penetrations;
(3) material type and strength, including reinforcement material and location as required;
(4) documentation from a third-party showing that the riser meets the load requirements specified in Paragraph (c) of this Rule;
(5) plans for septic tank risers of a secondary lid, concrete plug, or other safety device that shall be provided inside the riser for security and to prevent accidental entry;
(6) plans for pump tank risers of primary and secondary safety mechanisms that shall be provided with the riser. The primary safety mechanism shall be a locking riser lid, ring and lock, or other riser lid locking or tamper-resistant mechanism. The secondary safety mechanism shall be a secondary lid, concrete plug, or other safety device to be provided inside the pump tank riser; and
(7) specifications for application, installation, operation, and maintenance for both new and retrofit applications for single and multiple riser sections.

(e) Effluent filter plans and specifications submitted to the Department for review and approval shall show the design of the effluent filter and include the following information:

(1) manufacturer's name, address, phone and fax numbers, and contact name;
(2) documentation and a written statement from the manufacturer that the effluent filter is designed, constructed, and performs in compliance with G.S. 130A-335.1(a);
(3) capacity and wastewater strength for all models of proposed filters to be approved; and
(4) specifications for application, installation, operation, and maintenance.

(f) Pipe penetration boot plans and specifications submitted to the Department for review and approval shall show the design of the pipe penetration boot and include the following information:

(1) manufacturer's name, address, phone and fax numbers, and contact name;
(2) design specifications and materials used in the manufacture of pipe penetration boot components;
(3) applicable testing results from third-party verification showing pull and flexibility testing;
(4) documentation of a watertight seal around the piping and any component or device needed to ensure the seal, such as non-corrodible adjustable bands;
(5) documentation that the pipe penetration boot meets the requirements of ASTM C1644 for precast concrete tanks or ASTM C1644, C923, or C564 for thermoplastic or glass-fiber-reinforced polyester tanks; and
(6) specifications for application, installation, operation, and maintenance of the pipe penetration boot.

(g) Plans for plastic or fiberglass risers, effluent filters, and pipe penetration boots, other than those approved for general use and issued an approval letter under this Rule, shall be considered for approval on a case-by-case basis. The plastic or fiberglass riser, effluent filter, or pipe penetration boot shall be approved if it is determined that it meets the requirements of this Rule based on information provided by the manufacturer to the Department.

(h) Concrete risers and riser lids shall be able to withstand a minimum uniform live loading of 300 pounds per square foot or a minimum 1,500 pound load applied in a 10 inch by 10 inch area centered on the lid, in addition to

all loads to which a riser is normally subjected, such as dead weight of the material, soil cover, and active soil pressure on riser walls. Concrete risers shall meet the following requirements:

(1) septic tank risers shall have a secondary lid, concrete plug, or other safety device that shall be provided inside the riser for security and to prevent accidental entry; and

(2) pump tank risers shall have a secondary safety mechanism that shall be provided with the riser. The secondary safety mechanism shall be a secondary lid, concrete plug, or other safety device to be provided inside the pump tank riser.

History Note: *Authority G.S. 130A-335(e), (f), and (f1); 130A-335.1; S.L. 2024-49, s.4.45;*
Eff. January 1, 2024;
Amended Eff. June 1, 2026.