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MEMORANDUM

TO: Rowan County Planning Board
 FROM: Shane Stewart, Assistant Planning Director
 DATE: October 17, 2019
 RE: **STA 02-19**

SUGGESTED PLANNING BOARD ACTION

Receive staff report Conduct public hearing Close hearing & discuss
 Motion to Approve / Deny / Table **STA 02-19**

BACKGROUND

At the June 3, 2019 Board of Commissioners meeting, the Rowan County Fire Marshal requested the board consider adopting Appendix D of the North Carolina Fire Code into the Subdivision Ordinance (enclosed). After hearing concerns regarding pavement width and turnaround standards from the Fire Marshal, the Commission directed planning staff to prepare an ordinance amendment for consideration by the Planning Board.

Section 7-60 (1) of the Rowan County Code of Ordinances references county adoption of the North Carolina State Building Code: Fire Code including appendix chapters B – H. However, the section further states that “if appendices conflict with local established ordinances, the local ordinances shall prevail as permitted by law”, which mirrors a similar statement at the top of Appendix D.

CURRENT SUBDIVISION STREET STANDARDS

With few exceptions, the Subdivision Ordinance specifies new streets are required to meet NCDOT right of way, pavement width, and applicable design standards to ensure the streets are eligible for future inclusion into the NCDOT secondary road maintenance system (see enclosed excerpt from 2010 NCDOT Subdivision Manual). NCDOT officials are not in favor of wider streets and cul-de-sacs as they are of the opinion current standards are sufficient and maintaining excess pavement will divert resources from the maintenance of other public roads. Wider streets and cul-de-sacs will also require dedication of additional right of

way beyond the minimums identified in the manual. However, officials indicated the enhanced road standards would not preclude their acceptance of future maintenance.

PROPOSED CHANGES

Existing text proposed for deletion appear ~~highlighted with strikethroughs~~ while new text appear as **bold red text**.

Section 22-10. Other Definitions.

NCDOT means the North Carolina Department of Transportation.

Specific Type Roads:

Cul-de-sac. A short **dead end** street having but one end open to traffic and the other end being permanently terminated and a vehicular turnaround provided.

Section 22-80. Road Standards.

Every lot shall have access to it that is sufficient to provide a means of ingress and egress for emergency vehicles as well as for all those likely to need or desire access to the property in its intended use. In situations where an original lot is provided access via a non-state standard right-of-way or easement (public or private) and is proposed to be subdivided, the subdivider shall be responsible for obtaining the necessary right-of-way and for all aspects of road construction for upgrading said access to the proposed subdivision. Road construction and right-of-way standards shall meet the requirements of Section 22-80(a) or (b) of this ordinance.

(a) *Public Roads.*

All subdivision lots shall abut on a public road except as provided in section 22-80(b) and (d) of this ordinance. All public roads shall be paved and built to all applicable standards of this ordinance and all other applicable standards of the North Carolina Department of Transportation (NCDOT). Roads which are not eligible to be put on the NCDOT system because there are too few residences shall nevertheless be dedicated for public use and shall be built in accordance with the standard necessary to be put on the NCDOT System. ~~A written agreement with provision for maintenance of the street until it is put on the State System shall be included with the final plat and recorded with Rowan County Register of Deeds office. The maintenance agreement shall provide~~ **A final plat shall contain the road maintenance disclosure statement from section 22-59 (2) notifying prospective buyers** that either the subdivider or property owners shall be responsible for the maintenance of all proposed public streets until the responsibility has been transferred to either a homeowner's association established for the owners of properties in the subdivision or has been accepted for public road maintenance by NCDOT.

(b) *Private Roads.*

Private roads shall be permitted only when the roads proposed within a subdivision will not be eligible for inclusion into the NCDOT state maintained system or by a municipality in Rowan County because of their standards for acceptance. Such roads shall meet all right-of-ways and construction standards

of NCDOT unless specifically provided otherwise. The subdivider shall provide certification from a registered professional engineer that the subject roads were built to these standards. All private roads shall be marked as such on the preliminary and final plat, **include the road maintenance disclosure statement from section 22-59 (2) on the final plat**, and **record** a maintenance agreement ~~shall be provided and recorded with the plat~~ at the Rowan County Register of Deeds office once the final plat has been approved.

Said maintenance agreement shall include, but not be limited to, the following items:

- (1) That a homeowner's association shall be established as a legal entity for the property owners within the entire subdivision.
- (2) That all property owners within the subdivision shall be members of the homeowner's association.
- (3) That the subdivider shall convey all private streets in fee simple ownerships within the subdivision to the homeowner's association.
- (4) That the responsibility for maintenance of private streets from the developer to the homeowners association shall be noted in the deed of each purchaser of property within the subdivision.

At the time of the preparation of the sales agreement the developer shall include a disclosure statement to the prospective buyer as herein outlined. The developer and seller shall include in the disclosure statement an explanation of the consequences and responsibility about the maintenance of a private street, and shall fully and accurately disclose to the party or parties upon whom responsibility for construction and maintenance of such street or streets shall rest.

Private roads for a family subdivision, as defined in section 22-9, shall not be required to meet construction standards of NCDOT, instead the lot(s) created shall be provided ingress and egress via a twenty-foot easement or right-of-way (new or existing) in continuity to a publically maintained road, which shall be shown on the final plat. Furthermore, family subdivisions may also occur in situations where prior minor subdivision approval was granted but not within a major subdivision. In addition, the street frontage requirements of section 22-79(a) "Lot Dimensions" shall not apply to these lots. For the purposes of determining other required setbacks, "street" and "street right-of-way" shall be interpreted to mean the twenty-foot exclusive easement. The establishment or extension of a new easement or right-of-way shall not be prevented by the required setback of an existing structure if the Subdivision Administrator determines no other feasible options are available.

Any family subdivision that cannot comply with the provisions of this subsection shall not be approved as a family subdivision and shall be approved and comply with the provisions of a minor or major subdivision.

(e) *Street Design Standards.*

The design of all streets and roads within the jurisdiction of this ordinance shall be in accordance with the accepted policies and standards of the North Carolina Department of Transportation, Division of Highways. The most recent edition of

the North Carolina Department of Transportation, Division of Highway's Subdivision Roads Minimum Construction Standards, shall apply for any items not included in this ordinance or where stricter than this ordinance.

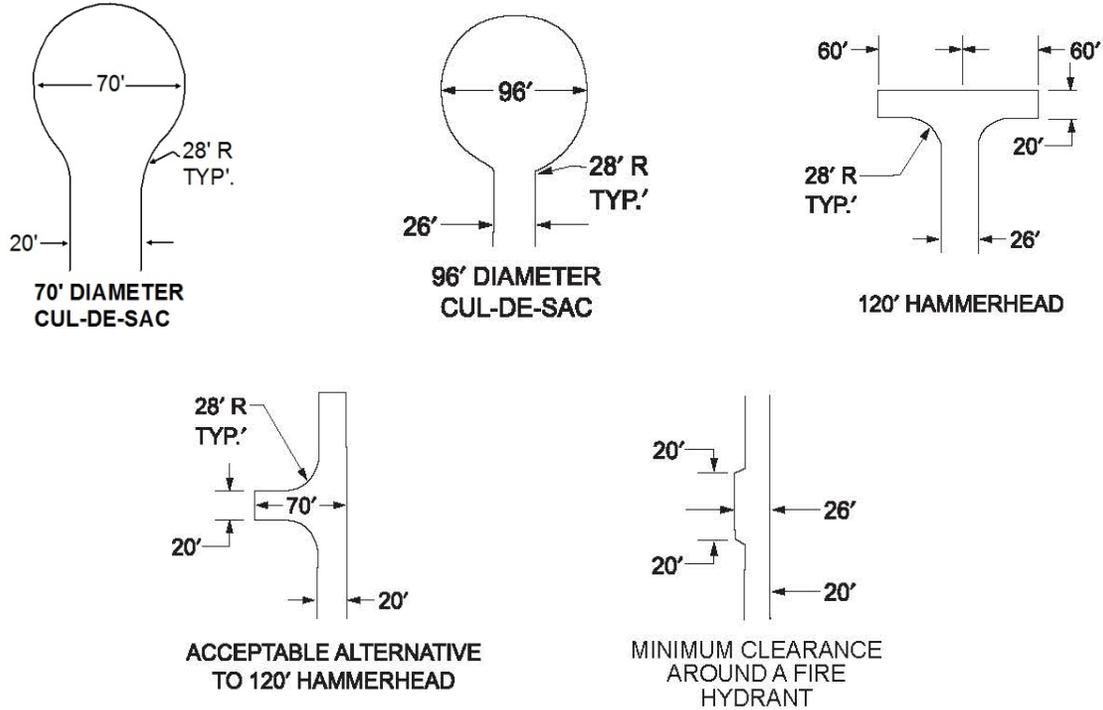
The following design standards shall apply to all streets proposed in subdivisions:

- (1) Street jogs with centerline offsets of less than one hundred fifty (150) feet are not permitted.
- (2) Street intersections shall not include more than four (4) street approaches.
- (3) Streets shall be laid out to intersect as nearly as possible at right angles. No street shall intersect another at less than sixty (60) degrees, other arrangements for smooth merging of traffic shall be permitted where the total effect on the intersection is to reduce traffic hazards and provide for smooth traffic flow at the intersection as a whole. As an example, where a one-way street leaves or enters a street divided by a median strip or otherwise controlled to prevent left turns, the angle of departure or entry might be less than sixty (60) degrees. All angles of street intersections shall meet current NCDOT standards.

(4) To ensure streets are appropriately designed to support the efficient and safe movement of emergency service vehicles and the general public, pavement width and pavement diameter for dead end cul-de-sac streets may exceed NCDOT minimum design standards. Unless an alternative design is accepted by the Rowan County Fire Marshal, minimum pavement dimensions shall be as follows:

(a) Streets shall be a minimum of twenty (20) feet in width and, if include a dead end segment, must provide a cul-de-sac with a diameter of seventy (70) feet. Required street width and cul-de-sac diameter may be increased based on the length of dead end streets in accordance with the following:

Length (feet)	Width (feet)	Turnarounds Required
0 - 150	20	70 foot diameter cul-de-sac in accordance with the below figure.
151 - 500	20	96 foot diameter cul-de-sac or 120 foot hammerhead in accordance with the below figures.
501 - 750	26	96 foot diameter cul-de-sac or 120 foot hammerhead in accordance with the below figures.



Source: Appendix D of 2018 North Carolina Fire Code (less 70' Diameter cul-de-sac). Not to scale.

For the purpose of this section, the length of a dead end street is measured from the centerline of the adjacent public street to the center of the cul-de-sac diameter. Unless recognized by NCDOT as a design eligible for inclusion into their secondary road maintenance system, dead end turnarounds must be designed as a cul-de-sac. Additional right of way may be necessary to accommodate width and turnarounds which exceed NCDOT minimum standards.

- (b) Street widths adjacent to a dry or municipal hydrant must provide the minimum clearance in accordance with section 22-80 (e)(4)(a).**
- (c) Subdividers may request the Board of Commissioners consider granting a waiver from the width and turnaround standards required in subsection (a) when an alternative design is considered equally sufficient to facilitate the efficient and safe movement of emergency vehicles.**

(g) All-Weather Access Road for Water Point Sources

In situations where the water point source cannot be directly accessed by a

mobile water supply apparatus via the proposed subdivision street; or, an existing state maintained road; or a linkage of hoses not to exceed twenty (20) feet, then the subdivider shall be responsible for construction of an access road in fire districts with a PPC rating of 8 or lower. In districts with a PPC rating of 9 or 9S, the fire department having jurisdiction shall participate equally with the subdivider in sharing the costs for access road construction.

This access road shall be maintained in accordance with the following NFPA 1142 Chapter 7 guidelines to which it was built. These standards are intended to serve as the maximum requirements that may be imposed, subject to (11) below.

- (1) Roadways shall have a minimum clear width of twelve (12) feet (3.7 m) for each lane of travel.
- (2) Turns shall be constructed with a minimum radius of one hundred (100) feet (30.5 m) to the centerline.
- (3) The maximum sustained grade shall not exceed eight (8) percent.
- (4) All cut-and-fill slopes shall be stable for the soil involved.
- (5) Bridges, culverts, or grade dips shall be provided at all drainageway crossings; roadside ditches shall be deep enough to provide drainage with special drainage facilities (tile, etc.) at all seep areas and high water table areas.
- (6) The surface shall be treated as required for year-round travel.
- (7) Erosion control measures shall be used as needed to protect road ditches, cross drains, and cut-and-fill slopes.
- (8) Where turnarounds are utilized during firefighting operations, they shall be designed with a diameter of one hundred twenty (120) feet (36.5 m) or larger, as required, to accommodate the equipment of the responding fire department.
- (9) Load-carrying capacity shall be adequate to **support the imposed load of fire apparatus weighing at least 75,000 pounds** ~~carry the maximum vehicle load expected.~~
- (10) The road shall be suitable for all-weather use.
- (11) Upon determination from the SRC that lesser standards are adequate and comply with the intent of this article, deviations may be permitted on an individual basis.

COMMITTEE A MEETING

On September 17, 2019, Fire Marshal Deborah Horne and Fire Inspector Darrell Nichols presented the need for adopting Appendix D. After much discussion, Committee A unanimously voted (4-0) to direct staff to prepare draft language to incorporate Table D 103.4 and Figure D 103.1 into the Subdivision Ordinance and forward to the committee to determine if another meeting would be necessary prior to Planning Board consideration. A majority of the committee agreed the text should be forward to the Planning Board for a courtesy hearing.

STAFF COMMENTS

Planning Staff spoke with our five (5) neighboring counties and a few others that responded via the UNC School of Government's planning on-line forum regarding experience with their community's interest in the incorporation of Appendix D (see enclosed responses). Only Cabarrus County has adopted standards similar to those proposed herein. Most all of the communities contacted expressed concern exceeding NCDOT standards being the department responsible for coordinating these efforts.

At this time, it does not appear these additional standards will present a problem with either the continued task of NCDOT performing road construction plan review for new subdivision streets in our jurisdiction or the future acceptance of maintenance.