



# VILLAGE OF MARVIN

10004 New Town Road | Marvin, NC | 28173 | Tel: (704) 843-1680 | Fax: (704) 843-1660 | [www.marvinnnc.org](http://www.marvinnnc.org)

**TO:** Mayor and City Council  
**FROM:** Christina Alphin, Village Administrator  
**SUBJECT:** Trail Standards Ordinance  
**DATE:** January 3, 2019

## Background

In the spring of 2018, Council adopted trail standards for all new trails that may be constructed by developers for any future development. In the Joint PRG/Council meeting, Council reaffirmed their commitment to assuring developers adhere to these standards and making all appropriate language changes for our ordinances to reflect. At the December 18<sup>th</sup> meeting, the Planning Board recommended changes to the ordinance as attached.

## Current

Attached are proposed changes and ordinance to reflect said language. These changes have already been approved by PRG, Council, and Planning Board; this is just a formal ordinance change to reflect official recording.

Per NCGS 160A-383, all changes to zoning regulations shall be adopted in accordance with a comprehensive plan and prior to approval or rejection, the board must adopt one of the following consistency or inconsistency statements in conjunction with ordinance.

### CONSISTENCY STATEMENT

The Village of Marvin Council finds the action to amend the Village's Zoning to be consistent with the adopted 2004 Land Use Plan. The 2004 Land Use Plan calls for Recreation Opportunity through a series of Planned Greenways and Parks. The proposed change will help reach intended goal of recreation opportunity therefore being reasonable and in the public interest.

### INCONSISTENCY STATEMENT

The Village of Marvin Council finds the action to amend the Village's Zoning to be inconsistent with the adopted 2004 Land Use Plan. The 2004 Land Use Plan calls for Recreation Opportunity through a series of Planned Greenways and Parks. The proposed change will not help reach intended goal of recreation opportunity therefore being reasonable and in the public interest.

## Requested Action

Consider adoption of the proposed ordinance and applicable statement as above.

§ 150.068 SIDEWALKS, PEDESTRIAN CROSSWALKS AND GREENSTRIPS.

For all major subdivisions, sidewalks and crosswalks must be ADA compliant and shall be constructed in accordance with the following requirements.

(A) Except as otherwise required herein, sidewalks shall be a minimum of five feet in width with a minimum of four inch depth concrete constructed on an adequately graded base except at driveways where six-inch depth is required for the full width of the driveway. Subgrade shall be compacted to 95% of the maximum density obtainable with the standard Proctor test. Concrete of not less than 3,500 P.S.I. shall be used and verified by the developer upon inspection by the village. The finished concrete shall be troweled and broomed. Tooled joints shall be provided at intervals of not less than five feet and expansion joints at intervals of not less than 30 feet. The sidewalk shall have a lateral slope of one-quarter inch per foot.

(B) Sidewalks are required to be placed on one side of all local subdivision streets with the exception of cul-de-sac streets that are less than 300 feet in length. As used herein, the term **LOCAL SUBDIVISION STREET** shall mean any subdivision street other than a collector or arterial street. Where a subdivision abuts an existing street a sidewalk or multi-use path shall be provided where the subdivision abuts the street.

(C) Cul-de-sac streets less than 300 feet in length shall not require sidewalks. For cul-de-sac streets that are greater than 300 feet in length, sidewalks along the "bulb" of the cul-de-sac may be waived by the Village Council.

(D) Sidewalks and multi-use paths to be constructed as shown on the most recently approved Village Parks and Greenways Map, shall be a minimum of eight feet in width and shall be constructed of asphalt according to specifications on file with the village.

(E) Nonresidential developments shall require sidewalks on both sides of the street with a minimum of five feet in width in order to safely move pedestrians throughout the site and to connect pedestrians to adjoining public streets and greenway trails. The provisions for internal sidewalks shall apply to both public and private streets and are in addition to the requirements for sidewalks along adjacent public streets.

(F) Sidewalks and/or pedestrian crosswalks shall be required when the Village Council deems that a street is a strategic pedestrian route to an existing or planned pedestrian destination, such as a school, park, recreational or cultural facility, greenway trail (or similar amenity), retail commercial/mixed use site, business or office development, or when other pedestrian safety, access or circulation needs are identified.

(G) Greenstrips of not less than four feet in width shall be required to be placed inward between the edge of the curb and the sidewalk. Greenstrips adjacent to the sidewalk shall be graded to one-fourth inch per foot (minimum) up to one and one-fourth inch per foot (maximum) towards the curb and gutter or drainage swale. The Village Council shall have the authority to waive or modify the greenstrip requirements on a case by case basis where it is determined that excessive natural grades make this requirement impractical, the placement of a greenstrip would serve no public purpose and/or the greenstrip would not be in keeping with adjacent developed areas along the same street. Examples where these requirements may be waived or modified include:

(1) The site is on a street where other adjacent or nearby developed lots do not contain greenstrips;

(2) There are unique topographic and physical characteristics associated with the site that would severely restrict placement of the greenstrips; and

(3) The presence of public utilities (either above or below ground) would affect the long-term maintenance and upkeep of the greenstrip.

(H) The Zoning Administrator may require a pedestrian crosswalk at least ten feet in width to provide convenient public access to a public area such as a park, greenway or school. The placement of the crosswalk may require the construction of additional sidewalk spurs to connect with existing sidewalks located across the street. Crosswalks and sidewalks must comply with applicable standards of NCDOT.

(I) The developer shall be responsible for construction of trails within a trail easement or land dedicated to the Village of Marvin. All trails shall be constructed ~~of mulch, asphalt, concrete or other materials~~ in accordance with trail standards as approved and amended within the with the Park and Greenway Master Plan and as determined and recommended by the Parks, Recreation and Greenway Board, the Planning Board and approved by the Village Council. (Ord. OR-2013-06-06, passed 6-10-2013)

# Village of Marvin

## Trail Standards

The Village of Marvin, in attempt to provide quality trails for it's citizens, shall require builders of trails, whether independent, or in conjunction with neighborhood builders, to build greenways and trails that match the following definitions and meet the following standards

### **Natural Trails**

The National Park Service definition of a sustainable Natural trail is: a trail that supports current and future use with minimal impact to the area's natural systems, produces negligible soil loss or movement while allowing vegetation to inhabit the area, recognizes that pruning or removal of certain plants may be necessary for proper trail construction and maintenance, does not adversely affect the area's wildlife, accommodates existing use while allowing only appropriate future use, and requires little rerouting and minimal trail maintenance.

### **Paved Trails**

These trails, typically composed of asphalt or concrete, should be designed to withstand the loading requirements of occasional maintenance and emergency vehicles. Paved multi-use trails should be based upon the specific loading and soil conditions for each project. Two-directional trails of 8'-10' widths are satisfactory. In areas prone to frequent flooding, it is recommended that concrete be used because of its excellent durability. Asphalt is a hard surface material that is popular for a variety of rural, suburban and urban trails. While the removal of certain trees may be necessary for proper trail construction, tree removal shall be kept to a minimum.

## Appendix A

### Requirements for Developers to meet when building a Natural Surface trail

1. Trails constructed from native soil and crushed concrete mixed together to form and harden into a sustainable tread.
2. Trail tread to be approx 4 feet wide.
3. Excavation of full bench trail tread, backslope, shaping, outsloping, and drainage features.
4. Any stumps or roots (other organic material too) that exist will be mechanically compacted with vibratory roller and the natural area around the trail will be restored to natural look
5. Woody material greater than 1/2" diameter shall be removed from the trail tread (i.e. stumps, logs, brush).
6. Should be designed and constructed at grades less than 8% grade to promote accessible use. Trail tread grades of up to 10% for short distances are allowed.
7. The rock source is crushed into irregular angular particles that interlock and bind into a firm matrix.
8. The material has particles ranging from dust to a specified maximum particle size (3 inch) in order to mechanically bind the matrix.
9. The material must retain all of its original binders in order to be re-compacted to a firm surface after shaping, wetting and vibratory compaction.
10. Align trails using the natural topography of the land with a rolling contoured design (within easements)
11. Rolling grade dips should be the standard water drainage feature to ensure that water exits the trail tread often.
12. Trail grades should be checked with a clinometer.
13. Back slopes should be constructed between a 1:1 and 2:1 ratio
14. Trail tread outslopes should be 3-6% and should be checked with a digital level
15. Corridor clearing shall be confined to within 2' of trail on each side and backslope edges, and an 8' overhead canopy.
16. Lop and scatter all cut tree limbs and brush to a maximum height of 18". No debris may be left within 20' of trail.
17. Maximum size of loose rock material to be left in trail shall not exceed 3". All rocks greater than 3" shall be placed on the down slope side of the trail.
18. Finish hand raking and grading of trail tread, backslopes, down slope spoils, and water diversion structures.
19. Any other current best practices for methods and substrate

**Appendix B**

**Requirements for Developers to meet when building a paved Asphalt trail**

1. Compacted Subgrade Base: Prior to construction, vegetation should be cleared and stumps and roots removed along the trail. A soils investigation should be performed to determine the sub-grade strength, load support capabilities, ground water conditions, and swell potential of the native soils.
2. Aggregate Subbase: promotes proper drainage, additionally, trails should be constructed to match the existing topography as closely as possible, however, longitudinal slopes should not exceed five percent and a cross slope of two percent is desirable.
3. Binder Course (2.5 inches) Installation of a geotextile fabric beneath a layer of aggregate base course (ABC) can help to maintain the edge of a trail. It is important to provide up to a graded shoulder to prevent trail edges from crumbling
4. Wearing Course (1.5 inches): The hot mix asphalt specified should provide adequate strength and durability to support wheel loads from vehicles that will have access to them.

In general, it is recommended a minimum 3" of hot mix asphalt be used to provide adequate stability to resist distortion and displacement. As soil conditions deteriorate and loading increases, the pavement thickness should be increased.

**\*\*Concrete Trail cross Section to be similar in Compacted Subgrade, with top layers consisting of an aggregate base course and a 4 inch concrete top.**



OR-2019-01-01

**AN ORDINANCE OF THE VILLAGE OF MARVIN, NORTH CAROLINA**

AN ORDINANCE AMENDING CHAPTER 150 §150.068 SIDEWALKS, PEDESTRIAN CROSSWALKS, AND GREENSTRIPS TO REFLECT DEVELOPER'S RESPONSIBILITY TO ADHERE TO TRAIL STANDARDS SET FORTH IN PARKS AND GREENWAYS MASTER PLAN IN THE VILLAGE OF MARVIN, NORTH CAROLINA

**WHEREAS**, the Village Council for the Village of Marvin will consider an ordinance amending responsibility of developers to adhere to trail standards set forth in the approved Parks and Greenways Master Plan in the Village of Marvin, North Carolina; and

**NOW, THEREFORE, BE IT ORDAINED** by the Village Council for the Village of Marvin, North Carolina that Title XV: Chapter 150.068, be rewritten and amended as follows in the Greenways Master Plan:

**SECTION I.** The developer shall be responsible for construction of trails within a trail easement or land dedicated to the Village of Marvin. All trails shall be constructed in accordance with trail standards as approved and amended within the Park and Greenway Master Plan and as determined and recommended by the Parks, Recreation and Greenway Board, the Planning Board and approved by the Village Council.

This ordinance shall be effective upon adoption and ordered published as provided by law.

*Adopted this 31<sup>st</sup> day of January 2019*

---

*Joseph E. Pollino, Mayor  
Village of Marvin*

*Attest:*

---

*Barbara R. Blackwell, NCCMC  
Clerk, Village of Marvin*