

E-5. Linear Transportation and Greenways



Image - Neuse River Greenway Trail



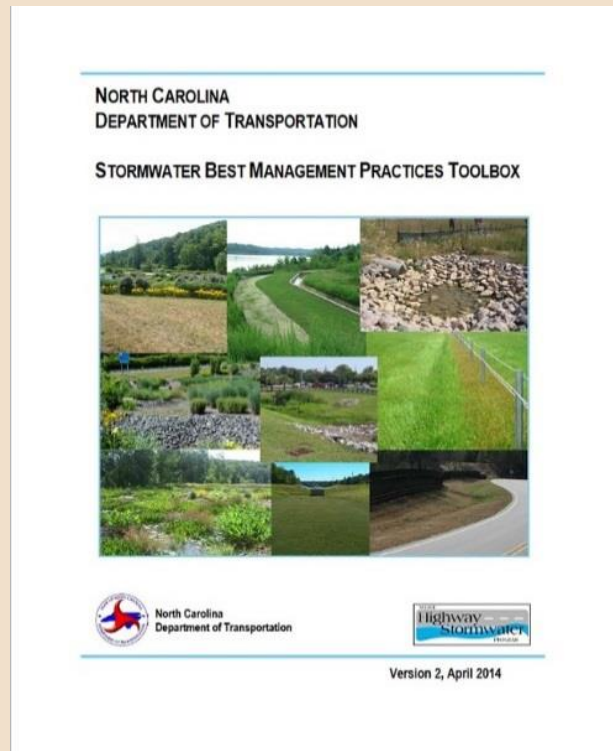
Image - NCDOT

Design Objective

Site constraints on roads, greenways, and other linear transportation projects can present unique challenges to meeting requirements for controlling stormwater. The needs and viability of the project must be balanced with the protection of our natural resources.

The EMC's stormwater regulations and NC session law distinguish between publicly-owned versus privately-owned linear transportation projects; however, in both cases, stormwater management must be addressed. Publicly-owned projects are allowed to use the NCDOT's Stormwater BMP Toolbox in lieu of the EMC's stormwater control requirements to the extent allowed by rule and session law as summarized below.

Many of the structural and non-structural best management practices described in NCDOT's Stormwater BMP Toolbox can also be applied to privately-owned linear transportation projects; however, additional measures beyond those required for publicly-owned projects may be required to meet state stormwater permitting requirements.



Regulatory Requirements

Applicability

In accordance with Rules 15A NCAC 02H .1001(1)(b) and (1)(c), the EMC's post-construction stormwater regulations are **not** applicable to the following linear transportation projects:

- (i) activities of the NCDOT that are regulated in accordance with their NPDES Permit Number NCS000250;
- (ii) linear transportation projects that are undertaken by an entity other than NCDOT when the project is constructed to NCDOT standards and in accordance with the NCDOT Stormwater Best Management Practices Toolbox; the project is not part of a larger common plan of development; AND the project will be conveyed to NCDOT or another public entity upon completion.

Privately-owned transportation projects, such as roads and sidewalks within a residential subdivision, will not typically meet the above exclusions and will therefore be subject to the EMC's post-construction stormwater regulations.

Vegetated Setback

In accordance with Rule 15A NCAC 02H .1003(4)(d), publicly-funded linear projects are allowed to be located in the vegetated setback when it is not practical to locate the built-upon area elsewhere; built-upon area is minimized; AND channelizing runoff is avoided.

Definition of "Public linear transportation project"

Rule 15A NCAC 02H .1002(39) defines "public linear transportation project" as "a project consisting of a road, bridge, sidewalk, greenway, or railway that is on a public thoroughfare plan or provides improved access for existing development and that is owned and maintained by a public entity."

Important Links

15A NCAC 2H .1001 – Post-Construction Stormwater Management: Purpose and Scope; see 2H .1001(1) Applicability

15A NCAC 2H .1002 – Definitions; see Item (39) Public linear transportation project

15A NCAC 02H .1003 – Requirements that Apply to All Projects; see 2H .1003(4)(d)

[NC Session Law 2014-1](#) – See (b1)

[NCDOT Stormwater BMP Toolbox](#)



Image - NCDOT



Image - NCDOT

RECOMMENDATION 1: USE NATURAL MATERIALS FOR TRAIL SURFACES

Using natural materials such as mulch or crushed shells instead of asphalt or concrete will help satisfy the stormwater management requirements to minimize BUA and avoid channelizing runoff. Elevated boardwalks are another option to consider to minimize BUA.

RECOMMENDATION 2: GRADE PROJECT AWAY FROM SURFACE WATERS

Constructing the road, greenway, or trail so that it slopes away from surface waters will allow increased opportunity for stormwater to infiltrate and reduce the volume of stormwater runoff reaching surface waters. If possible, grade the project so that it drains to a nearby stormwater control measure.

RECOMMENDATION 3: MITIGATE LOSS OF VEGETATED SETBACK

When impact to a vegetated setback is unavoidable, mitigate the impact at a ratio of at least one-to-one when not already required to do so by federal or state regulation or local ordinance. There are many ways to provide mitigation including preserving natural areas elsewhere within the same drainage basin, providing stormwater treatment for stormwater run-on, or paying into a state or private buffer mitigation bank.

RECOMMENDATION 4: MINIMIZE FINISHED WIDTH OF PROJECT

Limit the width of new roads, greenways, or trails to the minimum width required by safety and accessibility laws and local ordinances.

RECOMMENDATION 5: TAKE ADVANTAGE OF PUBLIC EDUCATION OPPORTUNITIES

Many types of linear transportation projects provide opportunities to promote awareness of natural resource protection. Take advantage of small areas alongside projects by posting educational signage describing the benefits of the project such as protected riparian buffers, a pocket rain garden, or the use of drought-tolerant native plant species.

