

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-2014

DATE: JUNE 11, 2014

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL QUALITY, DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: TREATMENT OF ROADWAY RUNOFF ASSOCIATED WITH DEVELOPMENT PROJECTS – GREEN SIDEWALKS DESIGN GUIDELINES

Effective immediately, the City of Alexandria will allow and encourage facilities to reduce and treat storm water runoff to be located within the public right-of-way, specifically in sidewalks. The intended locations, types of stormwater best management practice (BMP) facilities and maintenance responsibilities are set out in the accompanying design guidelines: '*Green Sidewalks*'. The development of these guidelines was a multi-departmental City effort involving multiple divisions of Transportation and Environmental Services, Planning and Zoning and Recreation, Parks and Cultural Activities.

These guidelines are being published to aid the development community during design and construction of BMPs for treatment of storm water runoff from new public rights-of-way and/or portions of private property if meeting certain criteria. The primary focus is to provide a design that achieves maximum improvements in water quality and to guide the placement and aesthetics of above-grade BMPs. The guidelines are also intended for use on City right-of-way improvement projects.

A BMP is a facility for controlling the pollutants found in runoff from precipitation which, although commonly referred to as storm water, includes all rainfall which is traditionally channeled directly into storm drains.

Background

Despite 25 years of clean-up efforts the Chesapeake Bay watershed remains a challenged ecosystem. The tidal waters of the Bay continue to be enriched with excess nitrogen, phosphorus

and sediment. In response to this challenge and in accordance with the federal Clean Water Act, the EPA has directed the states contributing runoff to the Bay to develop and implement a “pollution diet”, also known as a Total Maximum Daily Load (TMDL). The keystone regulated pollutant continues to be phosphorus with nitrogen and sediment added to the required load reductions. To meet the reduction goals, Virginia developed a Watershed Implementation Plan (WIP).

As part of the WIP, the City has been working with other municipalities and the State of Virginia to determine Alexandria’s reduction requirements to meet the WIP goals. As one of the means to help achieve these reductions, a renewed emphasis on treating new roadways was promulgated with a Memo to Industry published on March 22, 2012 by the City’s Department of Transportation and Environmental Services (T&ES). An updated version of the Memo dated 04-2014 will accompany the release of the design guidelines. To help facilitate compliance with the new regulations, the guidelines specify that a minimum of the first half inch of runoff from any new public roadways created during development or redevelopment shall receive treatment from a stormwater BMP facility. The size of the facilities may need to be increased to accommodate the first inch of runoff if needed to meet the required pollution reduction targets.

Traditionally, treatment of impervious surfaces within the public right-of-way has been difficult to achieve due to their linear nature. Rights-of-way are, however, a significant portion of the impervious surface within the Chesapeake Bay watershed, particularly in highly urbanized areas such as Alexandria. Many of the recent Small Area Plans by the City have called for a ‘Green Streets’ approach which combines infrastructure and environmental improvements. The type of sidewalk BMPs advocated in these guidelines are one such example of this approach in helping the City achieve its environmental goals.

Applicability and Location

The surface-installed BMP systems outlined in these guidelines are intended to be used in areas of new development or re-development. They are envisioned in areas where significant new construction will take place (e.g. large scale buildings or facilities, or areas of large scale master plan implementation), that include either the construction of new roads and sidewalks, or significant rehabilitation of the existing right-of way facility. These guidelines lay out the framework for BMP facilities to be installed within the right-of-way. A determination as to the appropriateness of specific sites will occur during the small area plan, rezoning and design guideline process. Detailed design and application of these standards for specific sites will occur during the Development Special Use Permit (DSUP) or Development Site Plan (DSP) process.

Due to the anticipated size of surface-installed BMP facilities these guidelines are intended for the retro-fitting of existing streets only where technically feasible. Consideration should be given to the following: sufficient sidewalk space, local character and conflict with existing features and

utilities. BMPs of a more appropriate size and scale should be considered for these areas on a case by case basis.

Streetscape Design

The preferred BMP's for use in the public ROW are above-grade systems located within the sidewalk and which treat storm water runoff from adjacent roads and sidewalks

In general, a portion of these systems are visible at street level as landscape features within the sidewalk. In appearance they are very similar to a tree well or continuously planted strip, although they are depressed below sidewalk grade to allow for shallow ponding of water.

In areas with insufficient space, or other exceptional constraints, a below grade (ultra-urban) BMP system, or other BMP type shall be considered. In wider ROW settings, treatment within the median, or other locations may also be considered.

Maintenance

In all cases, the maintenance responsibilities will form part of a BMP Maintenance Agreement between the Developer/Applicant and the City. The Memo to Industry No. 04-2014 shall be the basis for agreements, although agreements for specific projects shall be made on an individual basis, either as part of the master planning or development site plan process.

