

Appendix C: Maintenance

Plan for Maintenance: Maintenance practices, equipment needed, and manpower should be well thought out prior to designing any stormwater control measure (SCM). Planning for regular inspection and maintenance of a SCM is crucial to the long-term effectiveness and aesthetics of each practice. Often maintenance tasks take a back seat until it is too late and the practice is failing.

Send the Right Message: Maintenance of SCMs is especially important - when a practice performs poorly or looks bad, it sends the wrong message to municipal officials and employees, developers, and the general public. Practices left unmaintained can discourage communities from adopting these practices and pose a safety concern. Instead, these practices should encourage and inspire watershed and environmental stewardship.

Maintenance Access: Maintenance easements should be obtained prior to design of the practice and should include the SCM footprint and at least 10' surrounding the SCM. The maintenance access area may need to be larger for tasks such as sediment removal from a forebay. These activities require use of heavy equipment and a maintenance roadway.

SCM Footprint: The SCM footprint includes the SCM, side slopes, forebay or other pretreatment device, outlet, riser structure, dam embankment, and emergency spillway.

Maintenance Easement Ownership: Maintenance easements are typically owned by the entity that owns the SCM. Privately owned maintenance easements should allow for public inspection and maintenance should it be necessary. Private entities may include an individual, Home Owner's Association (HOA), or a corporation.

Maintenance Agreements: Maintenance agreements are completed to guarantee appropriate and timely maintenance of these practices.

Maintenance Agreements should include:

- Maintenance schedule including tasks, frequency, and equipment recommendations
- Responsible parties for any professional or non-professional maintenance tasks to be performed on site
- Any special maintenance concerns, constraints, or site specific information that will aid the maintenance professional
- SCM components that require inspection
- Problems specific to the SCM that may be encountered
- Recommendations for problems that may occur

Non-professional Maintenance: Basic maintenance tasks such as mowing, trash removal, or mulch replenishment can be performed by non-professionals and can be included in grounds maintenance for the overall property.

Professional Maintenance: Professional maintenance refers to tasks that require professional judgment such as inspections of riser structures, dam embankments, outlets, or plant health. Professional engineers, Certified Erosion and Sediment Control Professionals (CPESC), professional landscape architects, horticulturalists, and other specialists should be consulted for recommendations. Repairing eroded areas, grading, and any soil-disturbing activities are best left to maintenance professionals since these tasks can significantly affect SCM function.

Record Keeping: Keeping maintenance records is extremely important to identify effective maintenance strategies and to define site-specific maintenance task frequency. Records or data sheets should be kept in the same location. Maintenance task lists or checklists are most effective to ensure consistency in record keeping and inspection. Any maintenance performed or recommended as a result of the inspection should be noted. Also, maintenance repairs should be added to the inspection task list so they may be regularly evaluated for performance.

Maintenance Professional Education: Workshops or training sessions with the party responsible for maintenance are strongly recommended. Some maintenance divisions experience frequent turnover and annual trainings are helpful to introduce new maintenance procedures and to educate new employees.

Maintenance Expenses: Maintenance expenses are driven by the condition of the drainage area upstream or upslope of the SCM. High sediment loads entering the SCM will increase maintenance frequency and expense. As such, stabilization and any erosion repair upslope will reduce the maintenance cost of the SCM.

Funding Options: Funding mechanisms, such as an escrow account, can be set up to collect fees for regularly performed maintenance. For example, in a conservation subdivision with multiple SCMs, a developer may start the escrow and then transfer it to the HOA so that regular contributions fund routine maintenance or any SCM reconstruction.

Sample Access & Maintenance Easement Agreement

DEVELOPMENT REVIEW
Town of Cary
PO Box 8005, Cary, NC 27512

NORTH CAROLINA

WAKE COUNTY

STORMWATER CONTROL STRUCTURE AND ACCESS EASEMENT AND AGREEMENT (Corporate)

THIS STORMWATER CONTROL STRUCTURE AND ACCESS EASEMENT AND AGREEMENT, made this day 1 of 1, 191, (**DATE OF AGREEMENT**) by 2 (**NAME OF OWNER**), a North Carolina corporation whose principal address is 2a, (hereafter "Grantor"), with, to, and for the benefit of the Town of Cary, a municipal corporation of the State of North Carolina, whose address is P.O. Box 8005, Cary North Carolina 27512-8005 (hereinafter "Grantee" or "Town").

WITNESSETH:

WHEREAS, Grantor is the owner in fee simple of certain real property, situated in the Town of Cary, County of Wake, North Carolina and more particularly described as follows:

3 (LEGAL DESCRIPTION OF PROPERTY)

It being the same land conveyed to the Grantor by deed recorded in Book 3a at page 3a in the Office of the Register of Deeds for Wake County (hereafter referred to as "Property"); and

WHEREAS, the property is located within the planning jurisdiction of the Town of Cary, and is subject to certain requirements set forth in the Land Development Ordinance of the Town, (hereafter "Cary LDO"), as such may be amended from time to time; and

WHEREAS, one of the conditions for development of Property is the granting or dedication of a Stormwater Control Structure easement, which includes the implementation of certain stormwater practices such as, but not limited to, the construction, operation and maintenance of engineered stormwater control structure(s) as provided in Cary LDO; the dedication of an access easement for inspection and

maintenance of the Stormwater Control Structure easement area and engineered structures; and the assumption by Grantor of certain specified maintenance and repair responsibilities; and

WHEREAS, this Easement and Agreement has been procured in accordance with the requirements of N.C. G.S. Sec 143-211 *et. seq.* and Chapter 4, Part 4.6 of the Cary LDO.

NOW, THEREFORE, for a valuable consideration, including the benefits Grantor may derive therefrom, the receipt of which is hereby acknowledged, Grantor has dedicated, bargained and conveyed and by these presents does hereby dedicate bargain, sell, grant and convey unto the Grantee, its successors and assigns, a perpetual, and irrevocable right and easement in, on, over, under, through and across Property (1) for a STORMWATER CONTROL STRUCTURE easement (“hereafter SCS Easement”) of the nature and character and to the extent hereinafter set forth, more particularly shown and described on Attachment 4 (**NAME OF AS BUILT DRAWING**) which is attached hereto and incorporated herein by reference; upon which Grantor shall construct, maintain, repair and reconstruct stormwater control structure(s), including detention pond(s), pipes and water control structures, berms and dikes, and shall establish and maintain vegetative filters and groundcovers; and (2) an access easement more particularly shown and described on Attachment 4a (**ATTACHMENT NUMBER 1 OR 2**), , for the purpose of permitting Town inspection and, if necessary, maintenance and repair of the SCS Easement and engineered structure(s) as more fully set forth herein and in Cary LDO.

The terms, conditions, and restrictions of the Stormwater Control Structure Easement and Access Easement are:

1. The requirements pertaining to the SCS Easement are more fully set forth in Chapter Chapter 4, Part 4.6 of Cary LDO and the “Operation and Maintenance Manual for 5 (hereafter “Operations and Maintenance Manual”), Cary, NC, prepared by 5a, and dated 5b a copy of which is on file in the Town of Cary Engineering Department. Grantor further agrees Grantor shall perform the following, all at its sole cost and expense:

- I. Monthly or after every runoff producing rainfall, whichever comes first:
 - a. Remove debris from trash rack.
 - b. Check and clear orifice of any obstructions.
 - c. Check pond side slopes; remove trash, repair eroded areas before next rainfall.

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WHEREAS, this Easement and Agreement has been procured in accordance with the requirements of N.C. G.S. Sec 143-211 *et. seq.* and Chapter 4, Part 4.6 of the Cary LDO.

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replacements to the engineered stormwater control structure(s) and appurtenances and conditions as may be necessary or convenient thereto in the event Grantor defaults in its obligations and to recover from Grantor the cost thereof, and in addition to other rights and remedies available to it, to enforce by proceedings at law or in equity the rights, covenants, duties, and other obligations herein imposed.

The Grantor shall in all other respects remain the fee owner of Property and area subject to these easements, and may make all lawful uses of Property not inconsistent with these easements.

The Grantee does not waive or forfeit the right to take action to ensure compliance with the terms, conditions and purposes of this Easement and Agreement by a prior failure to act.

The Grantor agrees that the terms, conditions and restrictions of this easement will be inserted by Grantor in any subsequent deed or other legal instrument by which he divests himself of either the fee simple title to or possessory interests in the subject property. The designation Grantor and Grantee shall include the parties, their heirs, successors and assigns.

TO HAVE AND TO HOLD the aforesaid rights, privileges, and easements herein granted to the Grantee, its successors and assigns forever and the same Grantor does covenant and that Grantor is seized of said premises in fee and has the right to convey the same, that except as set forth below the same are free from encumbrances and that Grantor will warrant and defend the said title to the same against claims of all persons whosoever.

The covenants agreed hereto and the conditions imposed herein shall be binding upon the Grantor and its agents, personal representatives, heirs and assigns and all other successors to Grantor in interest and shall continue as a servitude running in perpetuity with the above described land.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

7
(Grantor)

7a
7b President

7c

Secretary (Corporate Seal)

NORTH CAROLINA
WAKE COUNTY

I, the undersigned Notary Public, do hereby certify and State aforesaid, do hereby certify that _____
_____ personally appeared before me this day and acknowledged the execution of the
going instrument.
In witness my hand and official seal this ___ day of _____, 19____.

My commission expires: _____

Notary Public

[Official Seal]

Instrument&Deed/Corporate.doc

References

North Carolina Department of the Environment and Natural Resources. 2007. Chapter 7: BMP Inspection and Maintenance.