



MONTGOMERY COUNTY DEPARTMENT OF PARKS

THE MARYLAND - NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB Item # 10

March 31, 2011

MEMORANDUM

March 23, 2011

TO: Montgomery County Planning Board

VIA: Mary Bradford, Director of Parks *M Bradford*
 Mike Riley, Deputy Director of Parks *MR*
 John E. Hench, Ph.D., Chief, Park Planning and Stewardship Division *J Hench*
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PROJECT: ICC Environmental Stewardship-Compensatory Mitigation Projects NB-6, NB-7, NB-11 and NB-16 Stormwater Management Retrofit Projects.

REVIEW TYPE: Mandatory Referral No. 1010-SHA-1 ICC Environmental Stewardship

APPLICANT: Maryland State Highway Administration (SHA)

APPLYING FOR: Plan Approval

RECOMMENDATION: Approval of four stormwater management projects (SWM) as part of the ICC Environmental Stewardship/Compensatory Mitigation Program. Three of the projects (NB-6, NB-7, and NB-16) are on private property and one project (NB-11) is on parkland.

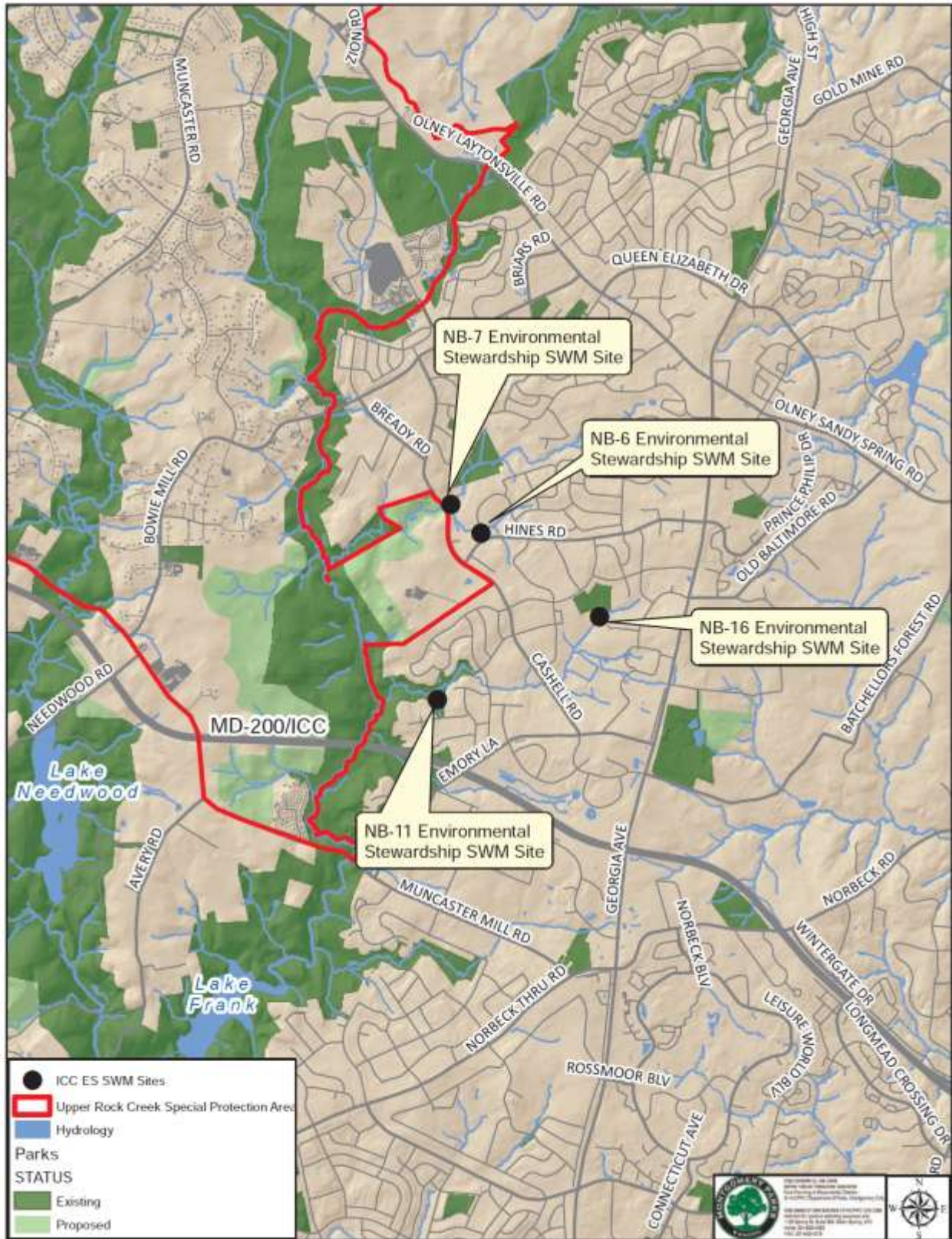
Background

As a part of the ICC Environmental Stewardship and Compensatory Mitigation Program, the State Highway Administration (SHA) is completing a number of stream restoration, wetland creation, and stormwater management projects throughout Montgomery County.

The RC-B Contract comprises four (4) stormwater retrofit sites (NB-6, NB-7, NB-11 and NB-16) located within the North Branch - a Use III tributary of Rock Creek (*Figure 1*). All four projects are part of the ICC Environmental Stewardship and Compensatory Mitigation program.

The existing facilities at each site were constructed prior to, and therefore are not in accordance with, current SWM regulations found in the Maryland Department of the Environment's 2000 Maryland Stormwater Management Design Manual Volumes I and II. The objective of these projects is to create stormwater treatment benefits within the ICC project corridor by providing water quality and channel protection volume benefits while bringing the facilities up to current day stormwater management design criteria.

Figure 1: NB-6, NB-7, NB-11, and NB-16 Site Locations



The NB-6 and NB-7 projects are located east of Macduff Avenue and Cashell Road, respectively, and owned by the local Homeowners' Association. NB-11 is located off of Cutlass Drive and is in Norbeck Meadows Neighborhood Park. NB-16 is located south of Cherry Valley Drive and is owned by the local Homeowners' Association.

Design

The proposed designs of these water quality improvement projects have been coordinated extensively with M-NCPPC and Montgomery County Department of Environmental Protection (MCDEP). The collection and analysis of design data within these watersheds has been continuous since 2005 when they were identified for restoration. In order to understand the systems, identify concerns, and ultimately set reachable restoration goals, these studies incorporated hydraulic modeling, hydrology, watershed history, geomorphic assessment, and habitat and biological assessments.

The goal of these projects is to raise the performance of the facilities to or as close as possible to 2000 manual guidelines while minimizing impacts to forest stands, specimen trees, the existing embankment, and outfall features (if functioning properly). The design proposed for each site offers the best balance of SWM treatment, improvement cost, and site impact.

NB-6

The proposed design at this site is to provide the maximum storage for the 1-year storm event by employing an extended detention dry pond. The site will remain a dry facility maintaining the bypass of low flow while adding extended detention (retention of stormwater runoff). The proposed design includes the installation of an access road, riser structure (Photo 1) and pipe replacement. No grading changes are proposed, and the site will look generally like it does now after construction.



Photo 1. Example of a riser structure.

NB-7

The goal of the proposed design at this site is to provide the maximum amount of storage available for the 1-year storm event while employing a shallow wetland (Photo 2) with extended detention. The site will become a shallow wetland comprised of two forebays (settling basins for excess sediment) and one wet permanent pool. The proposed permanent pool is 4' deep in the pool and between 0" and 18" deep throughout the wetland portion of the facility. Additionally, protection will be added immediately downstream of the existing spillway (where the water exits the pond when it starts to overflow) to protect the downstream channel.



Photo 2. Example of a shallow wetland stormwater management pond.

NB-11

The goal of the proposed design at this site is to modify the existing wet pond to minimize permanent pool storage and maximize extended detention by means of a shallow wetland utilizing multiple permanent pools and forebays; this will require expansion beyond the existing footprint of the pond. The NB-11 site will have two forebays and three wet permanent pools. Additionally, the existing spillway, which is deteriorating, will be reinforced.

NB-16

The goal of the proposed design at this site is to modify the existing dry pond to provide a minimal permanent pool and maximize extended detention storage by means of a shallow wetland incorporating a pool and forebay configuration. This will consist of two forebays and one shallow wetland cell and remain within the existing pond footprint. In order to grade out the permanent pool, however, some trees along the channel and eastern border of the pond must be removed. The existing riser structure will be replaced. The proposed wetland depth will vary from 6" to 18" in the high and low marshes and will be approximately 3.5' in the pool.

Access

Construction access to the NB-6 site will be off of MacDuff Avenue (north of Hines Road), and construction access to the NB-7 project site will take place from the eastern side of Cashell Road (*Figure 2*). The north side of Cutlass Drive will serve as the construction access for the NB-11 project site (*Figure 3*). Access to the NB-16 project site is proposed from the north end of the site through Cherrywood Local Park (*Figure 4*). In Cherrywood Local Park, the contractor will be required to stage within the proposed limits of disturbance and park amenities (such as the playground and soccer fields) will remain open to the public. A portion of the bottom of the last parking bay will be available for contractor use during the day, but all parking spaces will be available for public use after 5pm and on weekends.

Wetland and Stream Impacts

Limited areas of impacts will occur in the stream channel upstream or downstream of the stormwater pond at NB-6, NB-7 and NB-16 due to access and construction of the proposed improvements. Additionally, wetlands and wetland buffers will be impacted during the retrofits of these ponds; particularly in areas where wetlands exist in the current configurations of the ponds. These impacts have been minimized as much as possible but are necessary for the improvements to the ponds.

SHA and the Department of Parks have coordinated efforts to ensure that natural resource impacts are avoided or minimized to every extent possible while still meeting the goals of the restoration. Numerous field reviews have taken place to ensure that access, construction work, and landscaping do not unduly impact natural resources. Wetland and stream impacts are being coordinated and permitted as required with the Maryland Department of the Environment and the U.S. Army Corps of Engineers. Where applicable, access areas will be protected with mulch and hardwood mats to minimize compaction of the forest floor.

Figure 2: Construction access to NB-6 and NB-7



Figure 3: Construction access to NB-11



Figure 4: Construction access to NB-16



Maryland Historical Trust

Cultural or Historic Architectural Resources: The completed ICC Cultural Resource Studies have not identified any historic properties within the general vicinity of these projects. As such, no impacts to National Historic eligible properties or to cultural resources significant to Montgomery County are anticipated.

Forest Impacts and Conservation

Disturbance to the forest floor has been minimized and well coordinated with the Department of Parks and MCDEP. An extensive reforestation/planting plan has been developed as part of the ICC Environmental Stewardship-Compensatory Mitigation projects and impacts are being coordinated with the Maryland Department of Natural Resources as required in accordance with the Maryland Forest Conservation Act.

SHA and the Department of Parks have coordinated efforts to ensure that natural resource impacts are avoided or minimized to every extent possible while still meeting the goals of the restoration. Numerous field reviews have taken place to ensure that access, stream work, and landscaping do not unduly impact natural resources. Strategies for protecting trees adjacent to and within some work areas would include root pruning, avoidance of critical root zones, and tree protection fencing. Disturbed and impacted areas would be stabilized and replanted once construction is complete.

Air and Noise

As proposed, the project is not expected to have any significant affect on traffic within the adjacent communities. Therefore, an environmental traffic noise analysis and assessment was not conducted. The construction phase of the project has the potential to temporarily affect the local ambient air quality by generating dust through activities such as vehicle traffic, excavation, and materials handling. SHA has addressed this possibility by establishing "*Standard Specifications for Construction and Materials*" that specifies procedures to be followed by contractors involved in site work.

Traffic Control

SHA will coordinate with the appropriate staff of the Montgomery County Department of Transportation for construction access. The project plans and specifications address maintenance of traffic and safety considerations for access from residential streets and county roads. Access is inherently limited in order to protect trees and shrubs while providing the minimum space required for constructing the proposed improvements. In areas where communities are adjacent to work areas, blaze orange fencing and signage will be installed for safety purposes.

Public Meetings

A public meeting for all the RC-B contract sites was held on September 15, 2010 at the Olney RE/MAX Realty Centre. An additional meeting regarding the NB-16 site was held on January 7, 2010 at Cashell Elementary School with the Cherrywood Homeowners Association.

Funding

The proposed environmental projects are being funded by the Maryland State Highway Administration.

Implementation

Construction is expected to begin October 2011 following the award of the contract under the normal SHA advertisement process.

Maintenance

Following construction, the initial period of maintenance and monitoring of the site would be conducted by SHA until projects are accepted by the County. MCDEP is responsible for structural maintenance of all four of these ponds. M-NCPPC is responsible for all non-structural maintenance (i.e. landscaping, mowing, and trash/debris removal) for NB-11, while the local homeowners' association will be responsible for non-structural maintenance for their respective ponds.

PC:

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