



MEMORANDUM

DATE: September 30, 2010

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*
 Doug Redmond, Natural Resources Manager, Park Planning and Stewardship Division *D. Redmond*

FROM: Jai Cole, Principal Natural Resources Specialist, Park Planning and Stewardship Division *J. Cole*

PROJECT: ICC Environmental Stewardship Projects NW-35, NW-47 - Northwest Branch SWM Retrofit Sites *J. Cole*

REVIEW TYPE: Mandatory Referral No. 10003-SHA-1: ICC Environmental Stewardship

APPLICANT: Maryland State Highway Administration (SHA)

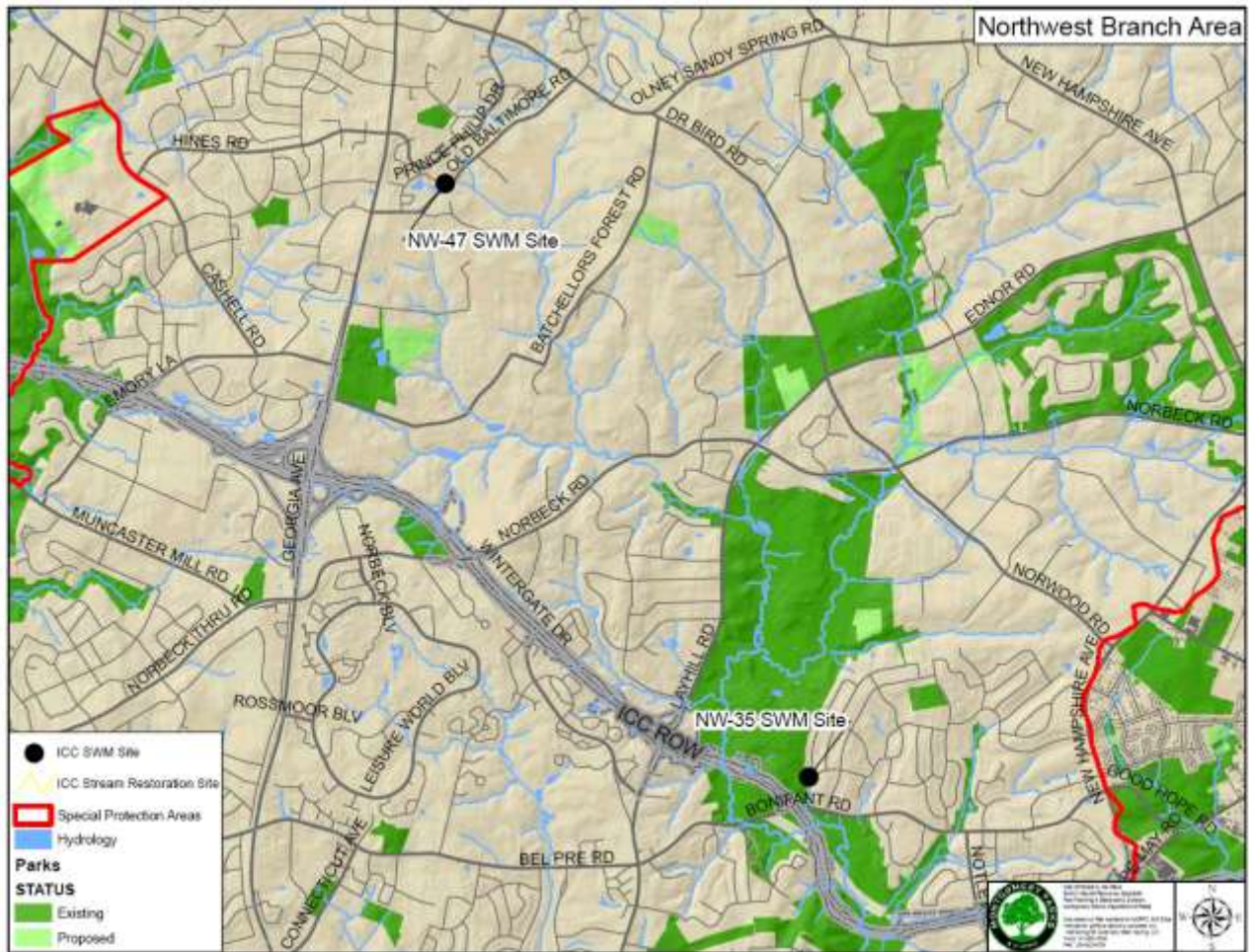
APPLYING FOR: Plan Approval

RECOMMENDATION: Approve the construction of two stormwater management retrofit projects (NW-35 and NW-47) located within property owned by Naples Manor homeowners association (HOA) and Hallowell HOA, respectively.

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. This contract is comprised of two (2) stormwater management retrofit projects in the Northwest Branch watershed (Figure 1.). Both sites are a part of the ICC Project’s Environmental Stewardship – Compensatory Mitigation program and were identified during the planning studies and included in the ICC Record of Decision (ROD).

Figure 1 – Stormwater Management Retrofit Sites



Design

The following describes the two (2) proposed projects:

1. NW-35: This project involves the retrofit of an existing wet pond at Jaystone Drive to include a shallow wetland to promote water quality improvement. The existing SWM facility is located on private property and is maintained by both the HOA and Montgomery County Department of Environmental Protection (DEP).

SWM Pond Retrofit: The proposed stormwater management retrofit will reduce peak discharge for the 1-year storm. A twelve-hour detention time for the channel protection volume is provided. Small reductions in the 10-year and the 100-year peak discharges are also provided. The water quality volume in the existing pond (1.6 acre feet) is greater than what is required by MDE standards (0.70 acre feet). To accommodate the channel protection volume, the water surface elevation is reduced to 0.71 acre feet of wet storage volume. The new design incorporates deep pools at the forebay and the micropool as well as wetland areas for aquatic plants to take root which will increase biological uptake of nutrients.

Other Design Features: The proposed wetland exceeds the minimum 1:100 surface area to drainage area ratio, provides 30% of its water quality volume in deep water zones of four feet or more. The minimum surface area requirements are met:

- 35% of the total surface area must be less than 6 inches deep (40% provided)
- 65% of the total surface area must be less than 18 inches deep (68% provided)
- The existing embankment provides access to the riser, an additional access road is provided to the forebay.

2. NW-47: This project is a water quality best management practice (BMP) concept design within an existing dry pond at Old Baltimore Rd. that receives runoff from a residential subdivision. The proposed concept design includes a shallow extended detention pond with a low-marsh and micro-pool complex to enhance quantitative and qualitative treatment objectives. The existing SWM facility is located on private property and is maintained by the HOA and Montgomery County DEP.

SWM Pond Retrofit: The stormwater wetland retrofit will reduce peak discharge for the 1-year storm to less than 1 cubic foot per second. The detention time for the channel protection volume is approximately 13 hours. The 10-year peak discharge is maintained to match existing conditions. The stormwater wetland replaces the existing dry basin. In order to maintain the existing pond footprint, only approximately 37% of the required water quality volume can be provided by this facility.

Other Design Features: The wetland design provides a diversion berm to lengthen the flow path from the forebay to the micropool and allow the low flows to traverse the wetland areas. The shallow permanent pool will allow for biological uptake of nutrients from the stormwater discharge. Only 19% of the water quality volume can be provided in the deepwater zones feasibly while maintaining the wetland surface area requirements:

- 35% of the total surface area must be less than 6 inches deep (26% provided)
- 65% of the total surface area must be less than 18 inches deep (71% provided)

Access to the proposed riser structure, forebay, and emergency spillway are provided with minimal tree impacts. A significant length of concrete lining and riprap can be removed from the outfall channel, allowing for more filtration and infiltration of stormwater discharges.

Wetland and Stream Impacts

No jurisdictional wetlands or waters are present at the NW-35 and NW-47 project areas, therefore no impacts are anticipated.

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 the projects. Coordination with MHT is ongoing.

Natural Resource Inventory and Forest Stand Delineation (NRI/FSD)

No forest stands exist within the project areas, therefore no impacts are anticipated as a result of this contract. An exemption from the Forest Conservation Act will be coordinated with the Maryland Department of Natural Resources as required in accordance with the Forest Conservation Act. Strategies for protecting individual trees will be included in the design plans including root pruning, avoidance of critical root zones, and tree protection fencing.

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 and materials transport.

Public Meetings

For NW-35 and NW-47, a meeting was held June 9, 2010 to provide the communities an opportunity to review and comment on preliminary plans for the project. Residents from the Naples HOA attended the meeting and expressed overall support for NW-35, but also had concerns with issues relating to site design, construction, and maintenance. Additionally, e-mail messages from a local resident, who was unable to attend the public meeting, were sent. These comments will be taken into account during the final design. No residents from the Hallowell HOA attended the public meeting.

Funding

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

Implementation

Construction is expected to begin spring of 2011 following the award of the contract under the normal SHA bid process normally used for similar environmental contracts.

Maintenance

For NW-35 and NW-47, the County will perform scheduled structural maintenance and respective HOAs will continue to provide for lawn care and trash removal from the facilities. The County will coordinate with both HOAs regarding site access for maintenance.

PC:

Gene Giddens, Deputy Director, Department of Parks

Mike Horrigan, Chief, Northern Region, Department of Parks

Jeff Humerick, Operations Manager, Northern Region, Department of Parks

Mike Little, Park Manager, Olney Manor, Department of Parks

Mitra Pedoeem, Chief, Park Development, Department of Parks

Mark Pfefferle, Chief, Environmental Planning, Department of Planning

John Carter, Chief, Community Based Planning

Andy Frank, Environmental Engineering Section Leader, Park Development, Department of Parks