



MEMORANDUM

January 23, 2013

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 & Stewardship Division *J Hench*
 Doug Redmond, Natural Resources Manager, Park Planning & Stewardship Division *D Redmond*

FROM: Jai Cole, Principal Natural Resources Specialist, Park Planning & Stewardship Division *J Cole*
 Matt Harper, Senior Natural Resources Specialist, Park Planning & Stewardship Division *M Harper*

PROJECT: ICC Environmental Stewardship-Compensatory Mitigation (ES-CM) Projects PB-12 and NW-4 *M Harper*

REVIEW TYPE: Mandatory Referral No. MR2013-3914 SHA ICC Environmental Stewardship

APPLICANT: Maryland State Highway Administration (SHA)

APPLYING FOR: Plan Approval

RECOMMENDATION:

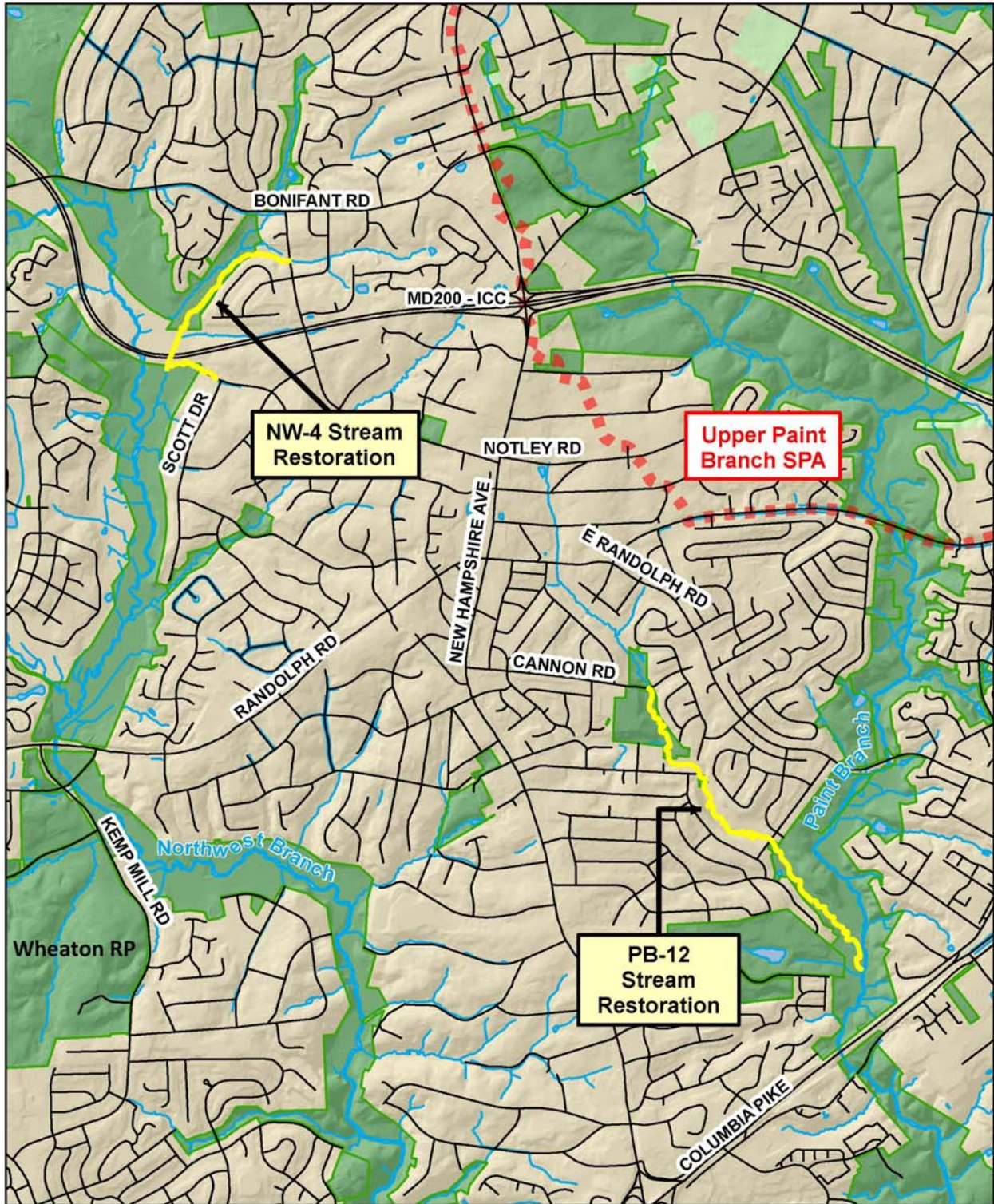
Approve the construction of Paint Branch (PB-12) and Northwest Branch (NW-4) watershed stream restoration projects located on Parkland, Montgomery County Property, Homeowner Association Property and/or Maryland SHA Right-of-way.

Background

As part of the ICC Environmental Stewardship and Compensatory Mitigation Program (ES/CM), the State Highway Administration (SHA) is completing a number of stream restoration, wetland creation, and stormwater management projects throughout Montgomery County. The stream restoration projects included in this memo will help to improve water quality and benefit stream ecology both within the project areas and downstream of each site. Collectively, these two projects are proposed to restore approximately 11,000 linear feet (2.1 miles) of stream channel. See **Figure 1** for the location of these projects.

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Figure 1. PB-12 & NW-4 Location Map



Map Information from M-NCPPC GIS-- intended for general planning purposes only.



PB-12

The PB-12 project is on the Hollywood Branch of Paint Branch and begins within Cannon Road Local Park, just downstream of Cannon Road (Figure 2). It continues southeast to just upstream of the confluence with Paint Branch with some gaps in work through private property. Hollywood Branch is Maryland Use III Natural Trout Waters, a stream that supports or has the potential to support a self-sustaining population of brown trout.

Figure 2. PB-12 Vicinity Map and Construction Access Location



Map information from M-NCPPC
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planning purposes only.



NW-4

The NW-4 project consists of stream restoration along the Cricket Lane Tributary of Northwest Branch and three of its tributaries (**Figure 3**). The NW-4 project area begins at the Cricket Lane Tributary crossing under Notley Road, just south of Bonifant Road, and extends south, crossing under the ICC and ending about a ¼ mile north of its confluence with Northwest Branch. A large majority of the project area is located within the Northwest Branch Stream Valley Park; however the northernmost portion of the project below Notley Road is within property owned by the *South Stonegate Homeowners Association* (HOA), a short reach of the project just upstream of the ICC crossing is within Maryland State Highway Administration (SHA) right-of-way, and at the southern end the project, the upper extent of the Mills Avenue Tributary is located within Montgomery County right-of-way.

Figure 3. NW-4 Vicinity Map and Construction Access Locations



Map Information from M-NCPPC
GIS—intended for general
planning purposes only.



Design

Baseline studies in Montgomery County began in 2005 in order to better understand the stream systems, identify concerns, and ultimately set reachable restoration goals. These studies included watershed history characterization, hydrologic and hydraulic modeling, geomorphic assessment, and habitat and biological assessments. Concept designs for areas identified for priority remediation were developed and reviewed by state and federal agencies as well as Montgomery County Department of Environmental Protection, Department of Transportation, and The M-NCPPC Department of Parks. Data collection and stakeholder input were considered to narrow the focus of the proposed restoration schemes to highly degraded portions of streams. The design aims to provide water quality enhancement while balancing the protection of adjacent natural resources.

The restoration objectives identified for the PB-12 and NW-4 stream restoration sites include:

- reconnecting the stream channel to its floodplain;
- reducing bank erosion and in-stream sedimentation;
- maintaining/enhancing the habitat for macroinvertebrates and fish communities;
- establishing native riparian plantings and controlling invasive species; and
- achieving all above restoration objectives while minimizing disturbance to trees.

It is anticipated that this approach will create stable, self-sustaining channel geometries over the long-term that can adjust to changes in physical processes with minimal human intervention.

PB-12

The Hollywood Branch watershed was largely developed prior to modern stormwater management regulations. This has resulted in decades of untreated storm flows that contribute to an incised, laterally migrating channel that has lost its connection to the floodplain and has significant stream bank erosion. The sediment input resulting from the erosion in this tributary threatens the high quality trout habitat downstream in the Paint Branch Watershed. The project is split into two reaches that were each designed using slightly different approaches. The design methodology in the upstream reach of the project between Cannon Road and Laurie Drive focuses on stabilizing the stream banks while incorporating instream protective structures to help dissipate energy and raise the stream bed.



Steep, actively eroding bank along Hollywood Branch

Downstream of Laurie Drive, the design methodology integrates a series of riffle grade control structures that will help raise the stream bed elevation to promote floodplain access.



Existing pedestrian footbridge over Hollywood Branch

At the downstream end of the project, the existing pedestrian bridge along the Paint Branch Trail has been identified as an operational and safety hazard, as it is not wide enough for vehicles to cross. Its size also limits the floodplain severely, causing backwatering and excessive velocities downstream. M-NCPPC has designed and will pay for a replacement bridge to be installed in conjunction with the stream restoration project that will eliminate the operational constraints while providing an opportunity to increase sediment deposition on the floodplain and decrease channel erosion downstream.

NW-4

The Cricket Lane Tributary of Northwest Branch has also experienced severe degradation over the past several decades and is undergoing large amounts of sediment loss throughout its length. The proposed stream design will improve floodplain connection with a decrease in channel size and construction of grade control structures that will raise the stream back up to a more appropriate elevation. These techniques will allow the stream to overtop its banks more regularly, thus allowing deposition of excessive nutrients and sediment within the floodplain and a reduction in the amount of sediment entering the Northwest Branch.

The restoration approach proposed will realign the stream using stabilizing grade control structures and limit the channel size by employing bank stabilization measures that will provide a stable low flow channel with the capacity to carry storm discharges onto the vast floodplain found in this area.

Access

Access to the stream restoration projects will require specialized routes that are designed to protect forest resources while providing the minimum space required for constructing the proposed improvements. Access for these two projects has been closely coordinated with M-NCPPC staff to minimize forest impacts. All routes used by heavy equipment will be protected with mulch and hardwood mats to minimize compaction of the forest floor.

PB-12

Access to the PB-12 project will be from seven locations throughout the communities surrounding Hollywood Branch (Figure 2). Access to the upper portion of the project will be from both Cannon Road and Laurie Drive, as well as Maple Street and an existing Montgomery County drainage easement off Rosemere Avenue. Access to the lower portion of the project will be from either side of the stream at Laurie Drive and from the Paint Branch Trail originating at the east end of Jackson Road. This will require the temporary closure of approximately ¼ mile of the Paint Branch Trail for five months of the

construction period. Signage will be posted at both ends of the trail to alert users of the closure and alternate routes available.

Staging areas for construction are located in open areas within parkland, including an area along Jackson Road, down from Laurie Drive, and off of Cannon Road. Locations were selected to ensure that deliveries of materials can be made safely and with minimal impact to local traffic and driveways.

Construction entrances will be clearly marked according to the Maintenance of Traffic Plan for the safety of workers and the general public. The construction area will be fenced to prevent community access to the work areas.

NW-4

Access to the NW-4 project will be from Notley Road for the northern portion of the site and Bonifant Road for the southern reaches (Figure 3). Access off of Bonifant Road will be on a previously constructed route used for the recently completed Northwest Branch Stream Restoration Project NW-160/170. This access road will also provide stockpiling areas previously utilized for the NW-160/170 project. Locations were selected to ensure that deliveries of materials can be made safely and with minimal impact to local traffic and driveways.

Construction entrances will be clearly marked according to the Maintenance of Traffic Plan for the safety of workers and the general public. The construction area will be fenced to prevent community access to the work areas.

Traffic Control

SHA will coordinate with the appropriate staff of the Montgomery County Department of Transportation for construction. The project plans address maintenance of traffic and safety considerations for access from residential streets, parks, and county roads. In areas where communities are adjacent to work areas, blaze orange fencing and signage will be installed for safety purposes. Temporary signage for the projects has been proposed in areas that will alert the public to trail closures well in advance and allow deliveries to take place safely and with minimal impact to traffic.

Implementation

Construction for the PB-12 project is expected to begin as early as September 2013, but due to stream closure restrictions the majority of the work is likely to commence in summer 2014. Construction is expected to begin fall 2013 for the NW-4 project. Both contracts will be awarded under the normal SHA advertisement process.

Wetland and Stream Impacts

SHA and the Department of Parks have coordinated efforts to ensure that natural resources 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.

Temporary impacts will occur in the stream channels due to access and construction of the proposed stabilization structures. In-stream construction will cause temporary impacts to the streambed, which is expected to naturally re-stabilize over time. Disturbed stream banks will be regraded, stabilized, and planted. The approximate amount of temporary stream impacts is 6,066 linear feet (lf) of perennial stream and 325 lf of ephemeral stream for PB-12 and 5,104 lf of perennial stream and 158 lf of

ephemeral stream for NW-4.

Temporary wetland impacts will occur in order to gain access to stream work areas. These impacts have been minimized to the greatest extent practicable during field reviews. All temporary access paths where construction equipment will traverse wetlands will require the placement of mulch paths and protective wood mats. These mats will distribute the weight of the equipment to protect the integrity of the wetland. When access through these areas is no longer needed, the wood mats will be removed and the area re-stabilized with vegetation as necessary. Large trees adjacent to wetlands were avoided whenever possible. At PB-12 the temporary wetland impacts are approximately 0.1 acre and temporary wetland buffer impacts are approximately 0.5 acre. At NW-4 the temporary wetland impacts are 1.4 acres, wetland buffer impacts are 0.6 acre, and 100 year floodplain impacts are 5.3 acres.

Wetland and stream impacts are being coordinated as required with the Maryland Department of Environment and the U. S. Army Corps of Engineers.

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. As such, no impacts to National Historic eligible properties or to cultural resources significant to Montgomery County are anticipated. Coordination with MHT is ongoing.

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

Disturbance to the forest floor and the impact and subsequent removal of trees within the immediate riparian buffer and along the stream banks will be unavoidable due to construction access and stream restoration work. An extensive reforestation/planting plan has been developed as part of this project and impacts are being coordinated with the Maryland Department of Natural Resources as required in accordance with the 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 restorations. Strategies for protecting trees adjacent to and within some work areas will include root pruning, avoidance of critical root zones, and tree protection fencing. Numerous field reviews have taken place to ensure that access, stream work, and landscaping do not unduly impact natural resources. Wherever possible, access will be coordinated along access routes for municipal utilities. Disturbed and impacted areas will be stabilized and replanted once construction is complete. The approximate amount of forest impacts is 6.2 acres for PB-12 and 5.4 acres for NW-4.

Air and Noise

As proposed, the project is not expected to have any significant effect 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,*" which specifies procedures to be followed by contractors that minimize these polluting factors.

SHA will abide by the Montgomery County Noise Ordinance. If it becomes necessary to deviate from that ordinance, SHA will notify the M-NCPPC, Montgomery County, and the public of the proposed new work schedule prior to making any changes.

Public Meetings

Representatives from the Department of Parks and SHA met with local residents in both project areas for public meetings. PB-12 meetings were held on July 29, 2010, September 21, 2010, and October 19, 2011 to provide the communities an opportunity to review and comment on plans for the project. No major concerns were expressed at these forums.

A public meeting was held for the NW-4 project on May 19, 2011 at the James H. Blake High School. Invited parties included adjacent property owners and the South Stonegate Homeowners Association, as well as special interest groups and government agencies. No major comments were received.

A meeting for the Three Meadows subdivision was held on November 8, 2011 at Stonegate Elementary School. Prior to the meeting, and at the meeting, numerous requests were made by homeowners and the homeowners association to remove access to the site via Cricket Lane/Old Stone Road. SHA agreed to investigate alternate access and hold another public meeting once the access was finalized.

As a follow up to the November 8th meeting, an NW-4 open house was conducted on September 19, 2012 at the Pilgrim Hills Recreation Center. Residents were informed that construction access via Cricket Lane/Old Stone Road had been eliminated and replaced with the existing access off of Bonifant Road, previously used for the NW-160/170 stream restoration project. No formal written comments were received at the meeting. However, at the meeting there were questions about when construction would begin and whether any of the activity would be during the evening. It was expressed that construction is anticipated to begin during the summer of 2013, from 8:00AM - 5:00PM on any given workday.

Funding

The proposed environmental stewardship projects are being funded by the Maryland State Highway Administration. The Paint Branch Trail bridge replacement over Hollywood Branch is being funded by M-NCPPC via reimbursement, as to be outlined in an addendum to the Master Memorandum of Understanding.

Maintenance

Following construction, the maintenance and monitoring of all projects will be conducted by SHA for up to five years, or as long as deemed necessary by the permitting agencies. The PB-12 and NW-4 stream stabilization and restoration techniques proposed are designed to be self-sustaining, so long-term maintenance

PC:

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