May 13, 2024

Mr. Harvey Johnson
US Army Corps of Engineers - Baltimore District
2 Hopkins Plaza
Room 08-B-3
Baltimore, MD 21201

Re: MDE No. 21-SF-0201
BEP Bureau of Engraving and Printing - New Currency Production Facility
Stormwater Management Concept Approval

Dear Mr. Johnson:

The Maryland Department of the Environment (MDE) has reviewed the submittals received April 5, 2024 for the above referenced project in Prince George's County. The review was in accordance with Sections 4-106, 4-205, and 5-503 of the Environment Article, Annotated Code of Maryland with regard to sediment control, stormwater management, and small ponds as well as the Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects.

The stormwater management concept is approved. This project has four (4) points of investigation. The impervious area requiring treatment (IART) is 44.67 acres, and there is a 37.97 acre increase in impervious area. Water Quality/ Environmental Site Design will be satisfied by 42 bioswales, 13 submerged gravel wetlands, 13 micro-bioretention facilities, two rainwater harvesting systems, and 9.83 acres of green roofs. 10-year and 100-year quantity management will be provided by Cisterns 1 and 2 as well as submerged gravel wetlands SGW 2-1, SGW 2-4, SGW 2-5, SGW 2-6, SGW 2-7, SGW 2-11, SGW 2-12, and SGW 3-1.

The following concerns were identified during concept review and must be addressed as part of final design. Please note that this is not a comprehensive list of final design requirements.

1. For Green Roof 2-1, the model uses both a reduced curve number (CN) and routing through the storage volume. The reduced CN method is simplified method used in lieu of routing. The presented model is therefore double counting the reduction in runoff from the practice. For green roofs, typically the reduced CN is used because the allowance is quite generous. "The reduced CN reflects the hydrologic performance of extensive green roofs over a broader spectrum of rainfall events, including events exceeding five inches of rainfall (e.g., 10-year 24-hour design storm). Accordingly, MDE recommends that these values be used when modeling the effects of green roofs for all rainfall events in excess of the one-year storm." Remove the GR 2-1 storage volume from the model. If you want to use routing in lieu of the reduce CN, please explain the reason for this decision.
2. Some of the smaller best management practices (BMPs) have been omitted from the H&H model since flow overtops the BMPs for the larger design storms. Generally, this is a conservative approach. However, consideration needs to be given to the flow path and drainage area divides. For example, is runoff being directed overland instead of to the storm drain system or maybe to a different storm drain inlet? The H&H model needs to reflect how flow will travel for each storm event. It may be necessary to have different flow paths, drainage area divides, and thereby different models for different design storms.
3. Many of the proposed BMPs have been sized larger than necessary for water quality treatment with the intent of also providing quantity management. Allowing flows from larger storm events to pass through the filtering devices/media reduces the functional life of the media as well as the overall

functionality of the BMP. Therefore, water quality treatment should be designed off-line from quantity management. As a result of the last set of design changes, proportionally more quantity management is being proposed in the water quality practices, particularly the submerged gravel wetlands. For final design, please consider providing a separate off-line cell within the footprint of the BMP for attenuating the 10-year and 100-year storms. Alternatively, a dedicated downstream structural BMP would be acceptable for quantity management.

4. Pretreatment will be required for all BMPs except the micro-scale ESD practices. Typically, this is accomplished with a forebay.
5. Adequate freeboard needs to be provided from the top of the design WSEL to the crest of the BMP. For micro-scale ESD practices, 6 inches is expected. For larger BMPs, 12 inches is expected. For small ponds, 2 feet is required unless there is an auxiliary spillway.
6. Depending on soil conditions, a liner will be needed to keep the SGWs wet. Also, if any BMPs are located entirely on fill, a liner should be provided. The proposed BMPs have been screened for "small pond" classification. Based on the preliminary grading, most of the submerged gravel wetlands will likely be categorized as excavated ponds. For SGW 2-7, the plans need to include the spillway pipe and at least 200 ft beyond LOD. It is not possible to make a small pond determination without seeing the downgrade contours. Because the embankment for SGW 2-7 is low, there is a possibility it will be exempt. In general, the spillway pipes for the SGWs will need to meet Code 378 for a distance of L=10H+20 or to the closest storm drain structure.

A portion of this project is located in a Tier II watershed, and, as such, is subject to additional requirements under NPDES General Permit for Stormwater Associated with Construction Activity. A Wetlands and Waterways permit is required for this project. This project has an earth disturbance of 1.0 acre or greater. Prior to any earth disturbance, a notice of intent (NOI) application for the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Associated with Construction Activity must be submitted to and approved by MDE.

Changing fundamental elements of this concept design will necessitate a new concept approval. This concept approval shall expire two years from the date of this letter unless renewed. Concept approval is a precursor to final stormwater management and erosion and sediment control approval. **Final design of all stormwater management practices shall meet MDE's design requirements for the respective practices.**

Review of this project will continue upon receipt of the site development/final design plans. Please contact me at ethan.bright@maryland.gov or (410) 537-3563 with any questions or comments.

Sincerely,

Ethan S. Bright
Sediment and Stormwater Plan Review Division
Water and Science Administration

ESB/DJO

cc: Amanda Sigillito, MDE Nontidal Wetlands Division
Angel Valdez, MDE Anti-degradation
Scott Miller, Sorba Engineering