September 24, 2020

Ms. Emily Dolbin
Maryland Department of the Environment
Nontidal Wetlands and Waterways Division
c/o McCormick Taylor
509 South Exeter Street
Baltimore, Maryland 21202

SUBJECT: KH-3009 I-95 ETL NB Extension from MD 43 to South of MD 152
Advertisement Avoidance and Minimization Report

Dear Ms. Dolbin:

The Maryland Transportation Administration (MDTA) has submitted Advertisement-level design for Maryland Department of the Environment (MDE) review. Since the permit for I-95 ETL Section 200 Phase I was obtained, the following avoidance and minimization efforts have been incorporated into the design of KH-3009:

- The Big Gunpowder Falls bridge was redesigned to eliminate the existing pier in the stream and avoid the need to construct additional piers within the stream, therefore improving the condition of the stream and the floodplain.
- The Little Gunpowder Falls bridge was redesigned to eliminate both existing piers located within the floodplain at the edge of the stream, therefore improving the condition of the stream and the floodplain.
- Both bridges will use precast concrete girders, which are virtually maintenance-free and do not require painting. Therefore, future potential for paint fragments removed during repainting to enter the streams is eliminated.
- Retaining walls were used to maximize stormwater management treatment while limiting impacts to adjacent resources.
- MDTA minimized required excavation and therefore reduced LOD size around 8 out of 11 retaining walls by utilizing post and lagging techniques.
- Signs, Intelligent Transportation Systems (ITS), and lighting have been designed to be located within existing or proposed impervious areas wherever possible, minimizing impacts to adjacent environmental resources.
- Steeper, reinforced slopes were used throughout the project corridor to avoid need to extend culverts in all but one location, therefore limiting impacts to downstream channels.
- All storm drain outfalls were stabilized to prevent erosion to downstream resources.
- Storm drain configurations were designed to minimize impacts to adjacent resources.
- Fence replacement was initially proposed along the entire contract but has since been minimized to areas with degraded fence. Fence replacement in areas where wetlands or streams would be impacted has been avoided where possible.

- Stormwater management features have been relocated where possible away from wetlands and streams to avoid impacts to those resources.

Despite these avoidance and minimization measures, unavoidable increases in impacts occurred to several resources:

- Following permit issuance, MDTA increased the proposed number of ETL lanes from one to two. This resulted in only a minimal increase in impacts due to the avoidance and minimization efforts detailed above. Minimal temporary impacts are now proposed to WUS 2A due to erosion and sediment control measures along the edge of adjacent grading.
- The small, low quality wetland WP001, which is located immediately adjacent to the Raphel Road overpass and is fed by unmanaged roadway runoff, will be completely impacted. This wetland will cease to exist due to the installation of a stormwater management facility, due to loss of hydrology and associated grading.
- Following the permit issuance, the Big and Little Gunpowder Falls bridges were found to be structurally deficient and in need of replacement, resulting in increased impacts to WUS 6A and WUS 16A and surrounding floodplain. However, replacement of these bridges has allowed MDTA to relocate the bridge abutments as discussed above, resulting in improved conditions for the streams and their floodplains.
- Small increases in impacts to WUS 7A, WUS 15A, and WUS 19A also occurred due to refinements in SWM and E&S design that were not sufficiently anticipated when developing the conservative LOD used for the original JPA.

In addition, the proposed improvements located south of New Forge Road were initially proposed as part of the now-completed Section 100 program but were deferred to Section 200 Phase I due to budget limitations. The work south of New Forge Road was initially included in the Section 100 MDE and US Army Corps of Engineers (USACE) permits but will be incorporated into the Section 200 Phase I permits via an upcoming permit modification, per agency direction. Overall, the largest changes from the high-level design shown on the FONSI plates associated with the Section 100 permits are 1) deferral of southbound ETL extension and road widening to a future contract; 2) changes in stormwater management from large ponds to smaller but more frequent bioswales and other environmental site design elements, as mandated by current stormwater regulations; and 3) delineation of additional resources in 2017.

Broadly speaking, when comparing Advertisement design to the Section 100 permit impacts, the LOD has remained the same or been reduced due to the avoidance and minimization measures discussed above, resulting in minimization of impacts to environmental resources: impacts to BRBR-WUS1 and BRBR-WUS8 are now nearly entirely avoided; impacts to BRBR-WUS2, BRBR-WUS4, and BRBR-WUS7 have been avoided entirely; and impacts to BRBR-WET1 have decreased. However, due to the addition of bioswales to the design to meet current stormwater management regulations, impacts to wetlands located in the median did not decrease, despite the deferral of the southbound ETL extension.

The primary reason for impact increases within the Section 100 portion of KH-3009 was the identification of additional wetland and stream resources in 2017 as part of initiation of design for this contract. These delineation changes appear to be largely due to the release of the Atlantic and Gulf Coastal Plain and Piedmont Regional Supplements; these new manuals have, in general, resulted in the substantial expansion in wetland delineations due to changes such as the elevation of water-stained leaves from a secondary hydrologic indicator to a primary indicator. In addition, it appears that the 2017 delineators were more conservative about identifying and delineating ephemeral streams than the previous delineators.

Newly delineated resources which will be impacted consist of BRBR-WET22, WET F, WET H, WUS F, WUS K, WUS M, WUS O, and WUS P. These newly delineated resources are located immediately adjacent to the highway and could not be avoided due to a combination of the proposed roadway widening and the necessity for installation of numerous small bioswales to meet current stormwater management regulations.

Sincerely,

Brian Wolfe, P.E.
Director of Project Development

cc: David Greenwood, P.E., Project Manager, Project Office, MDTA
Erin Markel, PWS, Natural & Cultural Resources, JMT
Michael Rothenheber, P.E., Project Manager, JMT