

## Response to Deficiency

1.

Please provide an alternative location for the rip rap apron at the stormwater outlet in the SE quadrant as at oriented at 90 degrees to the discharge flow. The GP and E plan states that it is an R-4 rock apron but the mitigation plan states it will be a level spreader. Please provide details of this outlet.

Insufficient right-of-way is present in the SE quadrant to provide a rock apron which is parallel to the outlet pipe. The outlet pipe location was selected so water could discharge in the same approximate location as the runoff path from an existing 18" pipe which will be removed during construction. The pipe must remain perpendicular to the face of the wall. If it is angled, it cuts off too large an area of the primary reinforcement in the wall and impacts the structural integrity of the wall. This needs to be limited as much as possible by keeping the pipe 90 degrees to the wall face. For these reasons, an alternative location for the rip rap apron is not provided.

The apron as shown provides side slopes to contain and direct runoff west towards Tincum Creek. Attempts to design the apron as a ditch show that the 10 year flow (1.1 cfs) will be conveyed entirely through the void spaces of the 18" thick layer of R-4. Runoff from this apron will discharge to the R-8 scour protection for the Eastern Abutment prior to entering Tincum Creek.

Documents attached to the permit (Mitigation Plan, Antidegradation Analysis and Environmental Assessment) have been revised to indicate an R-4 rock apron will be constructed in the SE quadrant of the project area (not a level spreader). All references to "Level Spreader" have been removed from the documents. Details of the rock apron have been added to the Site Plans (p. 10) and E&S Details (sheet 5 of 11). A cross section of the 18" pipe is included on p. 11 of the Site Plans.

2.

Please provide a location within the application for the discussion of pier removal and depth of removal proposed for this project. Indicate on the plans the type of fill to be placed within the footprint of the removed pier adjacent east abutment.

The discussion of pier removal, depth and fill material has been revised and is included in the "Proposed Project" section of the Project Description (p. 2, 2<sup>nd</sup> to last paragraph). The pier that will be removed adjacent to Abutment 2 will be cut to 2 feet below the streambed and the footprint will be backfilled with natural streambed material. The abutment rock scour protection will also be choked with natural streambed material. Details on the pier removal, depth and fill material are also included in the Demolition Plan (see Notes), which has been added to the Site Plans (p. 12).

3.

PennDOT is subject to 100-year floodplain review. Please include any impacts that may result of construction within the 100-year floodplain. Quantities may included within the narrative and includes, but not limited to grade changes, riprap, etc. Floodplain language is required to be included within the final permit.

Impacts to the 100-year floodplain have been added to the revised Project Impact Plan and are summarized in the revised Project Description. Floodplain language and a request for a 106 permit has been added to the revised Project Description.

4.

E&S plans indicate a proposed 14-inch by 23-inch outfall with riprap discharging to the SW quadrant of the bridge along the approach. It is unclear whether it is a full replacement of 24-inch RCP pipe. If its not a full replacement and considered new, the 14-inch by 23-inch outfall and riprap that is within the 100-year floodplain should be included permanent impact to the floodplain. Also should be included within the project narrative under any floodplain impacts.

The 24" RCP pipe will be removed and a 14"x 23" pipe will be installed, which will outlet at the existing location and elevation as the removed 24" RCP. Subfacility SF11 (Zone Q on the Project Impact Plan) was added to include floodplain impacts from the 14"x23" pipe outfall and riprap. These impacts have been included on the revised Project Impact Plan table and in the revised Project Description under Floodplain Impacts. A cross section of the 14"x23" pipe is included on p. 11 of the Site Plans.

**5.**

If the 18-inch outfall in the SE quadrant is a new proposed outfall (not a replacement), please include as a sub-facility.

Subfacility SF12 (Zone R on the Project Impact Plan) was added for the 18-inch pipe outfall and riprap. These impacts have been included on the revised Project Impact Plan table the revised Project Description and the revised ARIT.

**6.**

Plans included within the H&H report includes an 18-inch pipe run with outfall on the western approach to abutment, but cannot be located on other plan sets provided within the application. Please ensure that all plans are consistent.

The plans have been revised and are consistent throughout the permit package.

**7.**

Please provide an any updated correspondance/clearance from National Parks Service, following the May 21, 2020 email, on the project's complaince with the Wild and Scenic River Act.

NPS provided an email response on July 20, 2020 indicating that the final Section 7 determination letter will be prepared once these PADEP comments have been addressed (refer to the "Other Documents" attachment section in KEES). A summary of NPS coordination that has occurred during this project has also been uploaded to the "Other Documents" attachment section. The final Section 7 determination letter will be uploaded to the KEES system once it is received.

**8.**

Permanent impact on the ARIT is defined as areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water. Please include the bridge itself over Tincum Creek as a permanent watercourse impact and revise all necessary documents.

The new bridge deck is listed as Subfacility SF10 in the ARIT, Project Impact Plan and the Facilities section of KEES as a permanent watercourse impact.

Sincerely,

Jennifer Waters