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## Memorandum

To	MNCPPC	Page	1
CC	Joseph Moges, MCDOT		
Subject	Zion Road Bridge Replacement Montgomery County Bridge No. M-0121 MR2023002 Tree Variance FCP F20240870		
From	Joanna Hiebler, Qualified Preparer		
Date	Updated September 15, 2025		

Replacement of the Zion Road Bridge over Hawlings River includes activities such as bridge replacement, roadway approach construction, stream restoration and stabilization, infrastructure protection, and riparian and floodplain buffer enhancements. The site is located in the community of Brookville in the Rachel Carson Conservation Park. AECOM is preparing design plans and associated permitting and construction documents for the Montgomery County Department of Transportation (MCDOT).

One specimen tree is identified within the project's Limit of Disturbance (LOD) and based on current design plans will need to be removed. This tree removal requires mitigation at a ratio of 1:4, of the total diameter at breast height (DBH) of the tree. Per county requirements, the 35" tree to be removed will be mitigated within the existing limits of the project with three 3" DBH canopy trees. The Forest Conservation Plan currently represents this replacement to include three tulip poplar trees.

FCP Tree ID	Scientific Name	Common Name	DBH	Condition
SP-149	Liriodendron tulipifera	Tulip poplar	35"	Good

The following additional specimen trees have critical root zone located within the area of LOD and will be saved:

FCP Tree ID	Scientific Name	Common Name	DBH	Condition	Comment
SP-11	Liriodendron tulipifera	Tulip poplar	52"	Poor	<25% CRZ within minor grading area surrounding culvert headwall. Tree trunk has several severe wounds/holes
SP-33	Quercus alba	White oak	44"	Good	Roadside trees in vicinity of LOD however no proposed grading or ground disturbance and <25% CRZ within LOD
SP-37	Quercus alba	White oak	34"	Good	
SP-38	Liriodendron tulipifera	Tulip poplar	34"	Good	
SP-104	Liriodendron tulipifera	Tulip poplar	32	Good	<25% CRZ near grading at far end of site

This variance request is assembled in accordance with Montgomery County Code, Sec. 22A-21 Variance:

**1. Describe the special conditions peculiar to the property or other conditions which would cause the unwarranted hardship.**

Special conditions associated with the project that indicate an unwarranted hardship would arise include property boundary site constraints, dynamic existing stream conditions, and additional environmental enhancements to be provided, beyond mitigation requirements. The project is entirely within an existing narrow road right-of-way and Rachel Carson Conservation Park, therefore a very limited area outside of forested parkland is available to feasibly complete the project. Proposed limits of work is minimized to the extent possible to construct the bridge, roadway approaches, and stream restoration activities. The area is mostly forested, and therefore forest impacts are unavoidable within these bounds, however it is expected that further minimization will be evaluated during more detailed design phase of the project. The project proposes to take advantage of the unavoidable disturbance occurring during the much needed replacement of the existing bridge, to significantly better the surrounding natural environment. If the stream restoration to the Hawlings River does not occur, the county risks that further erosion and instability of the channel will not only undermine the newly replaced bridge, but result in future impacts to the environment to address the problems. The addition of a stream restoration component to the bridge replacement project will provide a long term, cost effective, and low maintenance solution to support the sustainability of the new Zion Road bridge over the Hawlings River.

As part of the proposed project, an existing unforested area adjacent to the channel will be developed into forested wetland habitat, severe erosion within the stream channel will be addressed, and just over half an acre of riparian buffer enhancement will be completed. Although impacts to the environment are unavoidable, the ecosystem will ultimately be enhanced. Finally, the one specimen tree that will require removal from the site is a tulip poplar. This tree is situated along the existing Hawlings River and unavoidable during restoration. If restoration does not occur and the river continues to erode and become more unstable, it is plausible to assume that the root system of this tree will be compromised and it could cause further disturbance to the channel and surrounding vegetation.

**2. Describe how enforcement of this chapter will deprive the landowner of rights commonly enjoyed by others in similar areas.**

The bridge replacement project by MCDOT will provide a safe vehicular crossing of the Hawlings River and provide improvement to the stream and surrounding natural environment. The goal of the project is to minimize impacts to existing natural resources while also enhancing the environment. The MCDOT will be completing necessary roadway safety improvements while also improving the natural environment within existing parkland.

**3. Verify that the granting of the waiver will not confer on the applicant a special privilege that would be denied to other applicants.**

The granting of the waiver will not provide a special privilege to the applicant, MCDOT, for this county bridge replacement project. Impacts to natural resources have been reduced and avoided to the maximum extent practicable and further minimization of resources will be considered as design continues. The implementation of the stream restoration aims to provide increased habitat stability, improve the functions and values of aquatic resources, improve water quality, and diversify riparian habitat. At project completion, the present ecosystem will be enhanced. Project actions include stream restoration and stabilization using natural channel design principles and techniques to prevent further excess bank erosion. Design techniques will construct a stable channel that provides proper sediment transport and reduces bank erosion. At maturity, the final design will improve hydraulic, geomorphic, and biologic function in an area that has become impaired by urban development upstream. Modifications will be made to the stream's dimensions, pattern, and profile that provide stable riffle/pool complexes, equilibrate sediment transport, and increase energy dissipation. In-stream structures and reinforced bed material will provide long-term stability and reduce bed scour until riparian vegetation can mature and naturally stabilize the stream banks. The reduction of sedimentation and erosion will result in a reduction of excess nutrients draining to the Chesapeake Bay, and overall improvements to water quality. A fully reforested stream buffer will also aid in enhancing water quality and improve riparian habitat.

**4. Provide any other information appropriate to support the request.**

The project will not involve any additional development or structures within the Rachel Carson Conservation Park. All efforts proposed are in support of required bridge needs to address structural deficiencies as well as address continuing flooding problems. All equipment, stockpiling, and other construction related items will be temporarily located on site and within the project limits and within existing roadway. Tree protection measures will be implemented for specimen and significant trees adjacent to and paths within the LOD including installation of Tree Protection Fence and Tree Root Pruning. The areas noted as Riparian Enhancement will not include tree removal to install the enhancements and no earth disturbance is proposed.

At project completion the project will include creation of a forested wetland within the project limits in the area of relocated channel, replanting of the project LOD, and native seeding and enhancement of riparian forest on both the east and west side of Zion Road, within Montgomery County property and M-NCPPC property.