Design Exception Request

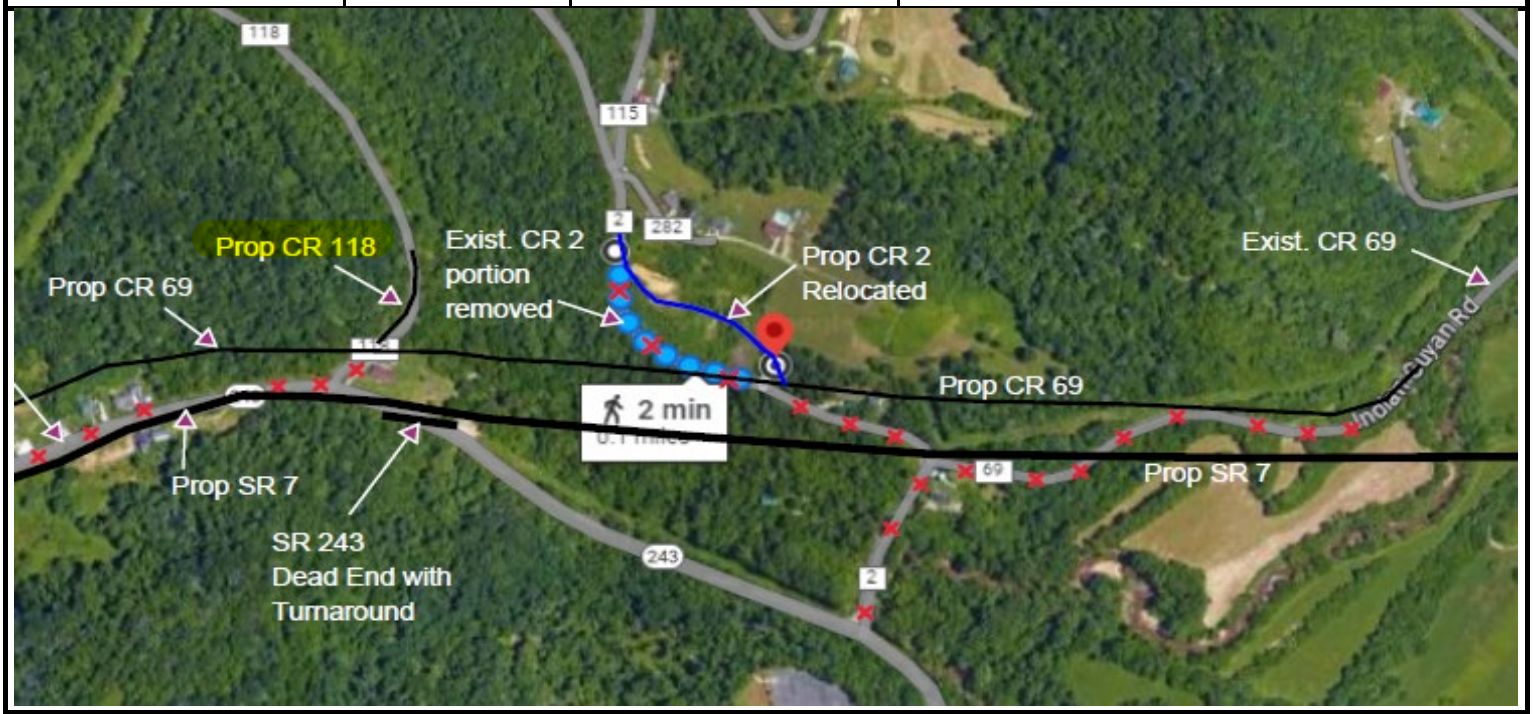
LAW-7-2.17

PID: 75923; Request 02 (for CR 118)

Letting Type: ODOT-Let

Design Designation

Current ADT (2028)	400	Td	2%
Design Year ADT (2048)	500	Design Speed	55
Design Hourly Volume (2048)	60	Legal Speed	55
Directional Distribution	60%	Design Functional Class	7 - Local Roads
Trucks (24hr B&C)	2%	Functional Class Area Type	Rural
		NHS Project	No



Submitted By:

E-SIGNED by Angie Boyce
on 2023-06-07 14:59:12 GMT

Angela Boyce
(Engineer of Record)

A.B.

Engineer of Record Seal

Approved by:

E-SIGNED by Adam Koenig
on 2023-06-07 15:38:11 GMT

Adam Koenig Approval Date: 5/18/2023

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Controlling Criteria Identification			
Controlling Criteria	**Standard**	**Existing (a.)**	**Proposed**
Lane Width			
Shoulder Width			
Horizontal Curve Radius	Max. 6°	36°10'08"	A 38°11'50" degree of curvature was provided at curve 1, which meets the requirements of a 25 mph design speed. Curve 2 in the proposed alignment meets the requirements of a 25 mph design speed with a 23°00' degree of curvature. Finally, curve 3 is a 7°41'27" degree curve and meets the requirements of a 45 mph design speed.
Maximum Grade			
SSD (Horizontal & Crest Vertical)			
Pavement Cross Slope			
Superelevation Rate	Curve 1 = Max rate 8% Curve 2 = Max Rate 8% Curve 3 = Max Rate 8%		Curve 1 meets the requirements of Figure 401-1 in the L&D Volume 1. However, the maximum rate for a 55 mph design speed of 8% was unable to be achieved due to its proximity to the intersection. The superelevation in the intersection area is such that it transitions from CR 69 into the superelevation required for curve 2 on CR 118. Based on L&D Volume 1, Figure 202-7 the maximum superelevation rate required for a 55 mph design speed is 8%. Due to the degree of curvature of curve 2, the proposed superelevation rate of 6.8% meets the requirements of a 25 mph design speed. Based on L&D Volume 1, Figure 202-7 the maximum superelevation rate required for a 55 mph design speed is 8%. The end maximum superelevation station on curve 3 was positioned in order to meet the existing roadway cross-slopes utilizing a "G" rate for a 25 mph design. Because of this, the maximum superelevation rate that was achieved for curve 3 was 3.98% which meets a 25 mph design speed.
Vertical Clearance			
Design Loading Structural Capacity			
(a.) "Existing" may be N/A (i.e. New alignment or new ramp)			

Project Description

THIS PROJECT IS THE THIRD PHASE OF THE LAW-7-2.17 STATE ROUTE 7 RELOCATION PROJECT. THIS PROJECT WIll CONSTRUCT 6.11 MILES OF THE EASTBOUND LANES OF STATE ROUTE 7 BETWEEN STATE ROUTE 527 AND STATE ROUTE 775. THIS PROJECT ALSO INCLUDES A PARTIAL GRADE SEPARATED INTERCHANGE AT STATE ROUTE 527 AND A FULL INTERCHANGE AT STATE ROUTE 775. ALSO INCLUDED WITH THIS PROJECT IS THE CONSTRUCTION OF A ROUNDABOUT AT THE INTERSECTION OF STATE ROUTE 7 AND STATE ROUTE 243. THIS IMPROVEMENT INCLUDES THE RELOCATION OF 1.91 MILES OF STATE ROUTES, COUNTY AND TOWNSHIP ROADS AS WELL AS THE ADDITION OF 1.25 MILES OF RAMP AND TWELVE (12) CUL-DE-SACS AND DRIVES. A TOTAL OF TEN (10) STRUCTURES WIll BE DEVELOPED WHICH INCLUDE TRAFFIC OVERPASS AND STREAM CROSSING BRIDGES. WORK Will INCLUDE NEW STORM SEWERS, CULVERTS, TRAFFIC CONTROL, PAVEMENT MARKING AND LIGHTING.

Section Description

Design exceptions for CR 118.

CR 118 is a two lane uncurbed rural local road. The existing road section is approximately 16 feet wide with no paved shoulders. The improvements on CR 118 are approximately 500 feet, from the proposed CR 69 to the north.

Proposed Mitigation

There will be no mitigative measures for the deviation to the standards included as part of this project. The entire project is proposed to help alleviate current traffic congestion and crash problems.

Support for Deviation (Benefit-cost, R/W, Environmental, Constructability, Coordination with Other Projects, Relationship between any crash patterns and proposed design exception, etc.):

The proposed project is an improvement to the existing condition. Safety of the travelling public has been increased with the addition of wider shoulders next to Bent Creek and intersection improvements. Although the proposed design does not meet current design standards for a rural highway; the rural nature of the road and the terrain make meeting design standards expensive and the local drivers are accustomed to the rural nature of the road. Additionally, the proposed alignment is approximately 500 feet long, and meeting all current design standards for a short length would not have an overall impact on the operation of the roadway.

Does the requested Design Exception location fall within a Safety Integrated Project (SIP) Map Location?

No

Does the crash analysis (GCAT and CAM Tool) show any patterns that would be adversely impacted by the proposed Design Exception?

No