

Design Exception Request

FRA-71/270-28.27/25.99A

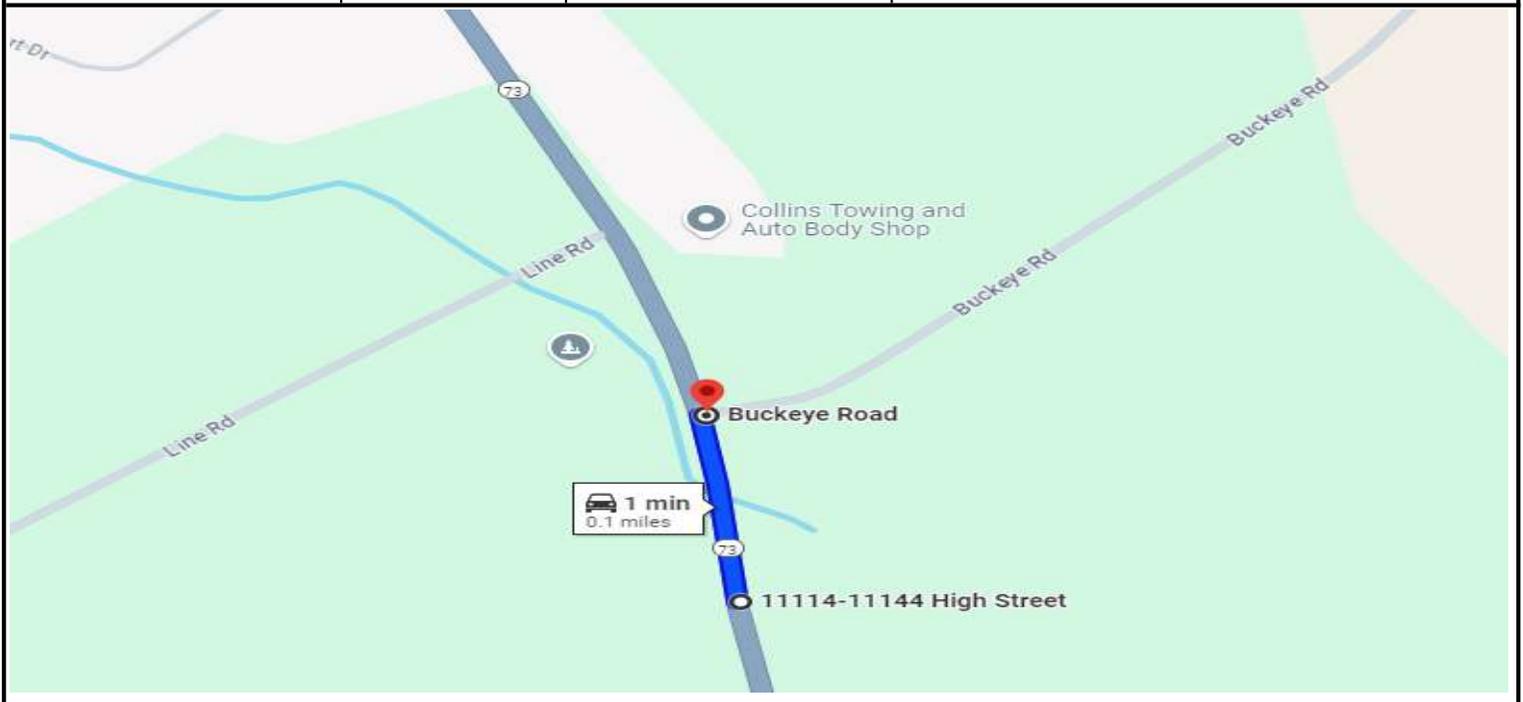
PID: 105435; Request 06

Letting Type: ODOT-Let

Design Designation

IR-270; -

Current ADT (2023)	179,980	Td	0
Design Year ADT (2043)	210,980	Design Speed	70
Design Hourly Volume (2043)	20,790	Legal Speed	65
Directional Distribution	50%	Design Functional Class	1 - Interstates
Trucks (24hr B&C)	20%	Functional Class Area Type	Urban
		NHS Project	Yes



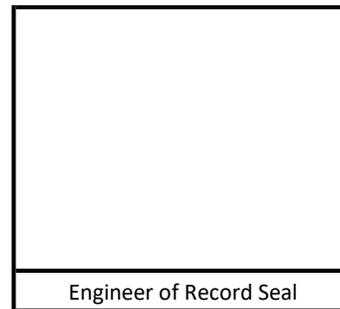
Submitted By:

Gail H. Massie
(Engineer of Record)

Approved by:

Adam Koenig

Approval Date: 9/4/2024



Engineer of Record Seal

Design Exception Request

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Controlling Criteria Identification

Section: IR-270; -

Controlling Criteria	Standard	Existing (a.)	Proposed
Lane Width			
Shoulder Width			
Horizontal Curve Radius			
Maximum Grade			
SSD (Horizontal & Crest Vertical)	425'	360' (for single lane)	258-270' (for inside of 2 lane ramp)
Pavement Cross Slope			
Superelevation Rate			
Vertical Clearance			
Design Loading Structural Capacity			

(a.) "Existing" may be N/A (i.e. New alignment or new ramp)

Project Description

Widening of the IR-270 EB Exit ramp to include a second dedicated lane to NB IR-71. Reconstruction of bridges Ramp K over IR-71 and Ramp O over IR-71 and Ramp K over Ramp O. Work includes widening IR-71 from I-270 NB to the Polaris Parkway Exit Lanes.

Section Description

Ramp P (I-270 EB to I-71 NB) is being widened from a single lane ramp to a two lane ramp. The Horizontal Stopping Sight Distance will therefore be reduced as the bridge is not being widened with this project. In advance of the bridge, the guardrail is 2' off the edge of shoulder and the proposed HSSD meets 35 mph and on the bridge itself the HSSD meets 37 mph. A 17' shoulder would be required to meet a 50 mph HSSD in this area.

Proposed Mitigation

None.

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

In order to meet the HSSD requirements for a 50 mph design speed, the bridge over I-71 would have to be widening on the low side of superelevation by 18+ feet. This would be very expensive and potentially cause vertical clearance issues over I-71. If that were the case then the entire bridge would need to be raised or replaced higher. This could cause additional profile issues getting the profile low enough to meet I-71 under the existing I-270 EB/WB bridges.

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

Yes, Red Location

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

No