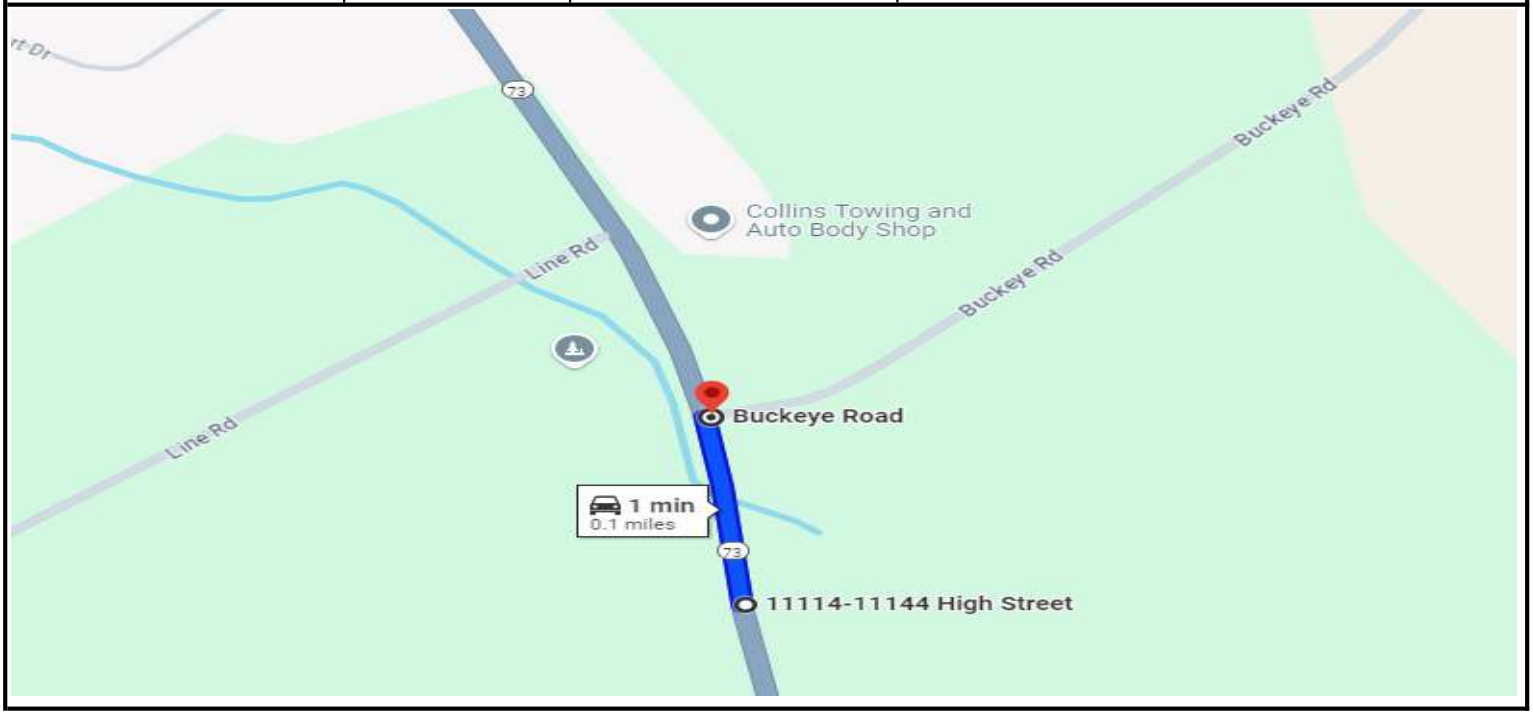
Design Exception Request

FRA-71/270-28.27/25.99A

PID: 105435; Request 09

Letting Type: ODOT-Let

Design Designation			
IR-71 NB to IR-270 EB Ramp; -			
Current ADT (2023)	162,190	Td	0
Design Year ADT (2043)	193,790	Design Speed	70
Design Hourly Volume (2043)	15,800	Legal Speed	65
Directional Distribution	52%	Design Functional Class	1 - Interstates
Trucks (24hr B&C)	20%	Functional Class Area Type	Urban
		NHS Project	No



Submitted By:

Gail H. Massie
(Engineer of Record)

Approved by:

Engineer of Record Seal

Adam Koenig Approval Date: 9/11/2024

Design Exception Request

FRA-71/270-28.27/25.99A

PID: 105435; Request 09

Controlling Criteria Identification			
Section: IR-71 NB to IR-270 EB Ramp; -			
Controlling Criteria	**Standard**	**Existing (a.)**	**Proposed**
Lane Width			
Shoulder Width			
Horizontal Curve Radius			
Maximum Grade			
SSD (Horizontal & Crest Vertical)	425'	305'	323'
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

The addition of a tall concrete barrier on the outside shoulder of Ramp Q (I-71 NB to I-270 EB) at a location with an existing deficient HSSD along the curve closest to the merge on to I-270. There is guardrail along the outside shoulder that will be replaced with 81" tall single-slope barrier. The project will provide an improvement to the existing HSSD.

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.):
To meet the required SSD of 425' a shoulder in excess of 18' would have been required. On a slope this would have caused ROW impacts unless a retaining wall was added. In addition an excessively wide shoulder is both expensive and a potential safety hazzard as drivers may decided to use it as a passing area in stopped traffic.

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