

Design Exception Request

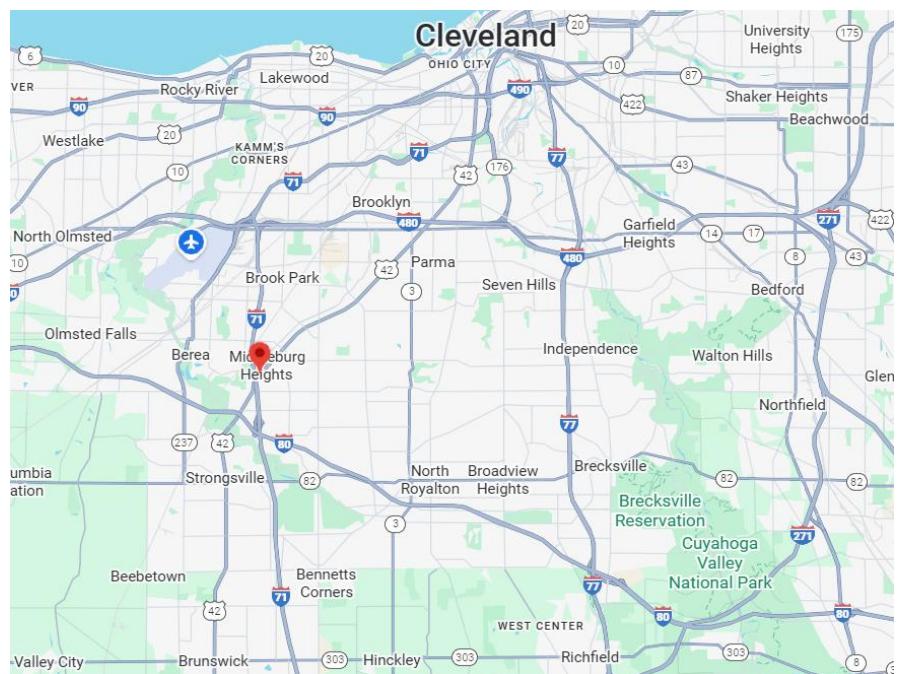
CUY-71-5.34

PID: 122099; Request 01

Letting Type: ODOT-Let

Design Designation

| | | | |
|-----------------------------|-------|----------------------------|-----------------|
| Current ADT (2025) | 6,173 | Td | 0 |
| Design Year ADT (2045) | 7,530 | Design Speed | 35 |
| Design Hourly Volume (2045) | 904 | Legal Speed | 35 |
| Directional Distribution | NA | Design Functional Class | 1 - Interstates |
| Trucks (24hr B&C) | 0.02 | Functional Class Area Type | Urban |
| | | NHS Project | No |



Submitted By:

Jon Lorincz

(Engineer of Record)

Approved by:

Adam Koenig

Approval Date: 12/15/2025

Engineer of Record Seal

Design Exception Request

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Controlling Criteria Identification

| Controlling Criteria | Standard | Existing (a.) | Proposed |
|-------------------------------------------------------------|----------|---------------|----------|
| Lane Width | | | |
| Shoulder Width | 3' | 1' | 1' |
| Horizontal Curve Radius | | | |
| Maximum Grade | | | |
| SSD (Horizontal & Crest Vertical) | | | |
| 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

Install traffic signals and modifications to the exit ramp from IR-71 north to Pearl Rd in the city of Middleburg Heights, Cuyahoga County. Work will remove the right turn slip ramp.

Section Description

IR 71 NB to US 42 exit ramp

Proposed Mitigation (if any):

none

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

The purpose of this project is to reconfigure the IR-71 NB ramp terminal with US-42 (Pearl Road) to a standard signalized T-intersection. This will be accomplished by widening the exit ramp at the US-42 intersection to provide dedicated left and right turn lanes and removing the slip ramp pavement. The proposed pavement will follow the existing alignment and grade. The remaining ramp pavement will be resurfaced and full depth pavement provided in the widened areas. This improvement is proposed to solve a safety concern at this location. A high number of crashes have occurred at this location; most likely related to limited sight distance and drivers struggling to find gaps to make turning movements to/from this ramp. The existing left shoulder width does not appear to be a contributor to the safety concern. The installation of a standard signalized T-intersection is expected to reduce the safety concern at this location. Although median reconstruction was listed in the original safety application, this work was eliminated during detailed design because: 1- The additional widening would impact Baldwin Creek and create environmental impacts; 2- Widening within the project limits to meet normal design criteria would address the shoulder condition for only a portion of the ramp. The existing 1' shoulder would remain in service for the ramp areas beyond the project work limits. The impact of widening the ramp to provide a 3' left shoulder which requires extending the project limits, is not expected to yield a safety benefit at this location.

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