

Purpose and Need

Project Name:	Pleasant Dale - NW 56 th St.		
Project No.:	NH-80-8(103)		
Control No.:	12591		
Initial Draft:	Date: 8/18/2021	Written By: Kyle Keller	

Updates/Reviews

Date	Update/Review By (name)	Items Updated	Plan Level (PIH, etc.)
9/16/21	Doug Pillard	Beginning and ending locations	PIH

Purpose: The purpose of this project is to increase traffic capacity while supporting and maintaining safe and efficient vehicular travel within the Pleasant Dale to NW 56th St, Nebraska Interstate 80 (I-80) corridor. No improvements have been made in the area of the proposed project to improve traffic capacity since the facility was originally constructed.

I-80 is a major transportation corridor providing for east/west travel through Nebraska, serving as an important link to the transcontinental Interstate system. The proposed project involves a portion of the I-80 corridor from approximately 0.6 miles west of NW 154th Street to the grade separation at NW 56th St. The proposed project starts in Seward County and ends in Lancaster County, a distance of approximately 7.6 miles.

Need: The need for this project is based on information from the NDOT's Pavement Management System, Materials & Research Pavement Design section and District 1. These entities have determined that the pavement distresses present on this section of I-80 are significant enough to warrant rehabilitation. The existing pavement structure (concrete plus the asphalt overlay) is expected to reach its design life and will have reached the optimum replacement timeframe in order to avoid failure of the pavement.

In addition, this segment has a large volume of traffic and heavy trucks and is forecasted to grow by 30% within the next 20 years. The corridor is currently operating at a Level of Service (LOS) "C" and projected to be at a LOC "D" within the next five years. Special provisions must consider impacts to traffic operations for routine maintenance and asset preservation activities. Implementing the most current maintenance of traffic strategies while conducting this work still reduces operational performance on the existing two-lane directional section. The aging facility and continued traffic growth increase the potential risk to loss of function on the interstate.

The need for bridge work on this project is based on information from the NDOT's Bridge Inventory Rating System, Bridge Division, and District 1. These entities have determined that the distresses present on Structures S080 38814, S080 39012, S080 39112, S080 39165 L&R, S080 39213, S080 39294 L&R, and S080 39312 are significant enough to warrant rehabilitation or replacement. The most recent biennial inspection conducted in January 2021, indicated cracking in the concrete deck overlays and spalling, cracking and areas of patching in Project Development Division Roadway Design Division

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the bridge approaches. The deck on structures S080 39012 and S080 39312 are in poor condition and have a bridge rating of structurally deficient.