

APPANOOSE COUNTY SECONDARY ROADS

1200 HWY 2 WEST
CENTERVILLE IA 52544

641-856-6193 (P)
641-437-4665 (F)

S70 CURVE IMPROVEMENTS

Six curve locations from Iowa 2 to County J18

Appanoose County continues to improve the paved road system that serves the county, including segments serving Centerville, Lake Rathbun, and the surrounding areas. Although the focus has been on replacing aged and failing pavements, safety concerns are also a major consideration of projects chosen for improvement. Utilizing the Local Road Safety Plan (LRSP) for Appanoose County, as well as established local knowledge of accident history, the County has identified a leading priority project for safety fund consideration, the S70 Curve Improvements.

Project Location

The proposed paved shoulder widening project is located on major collector route County Road S70. The segment for this funding application includes six locations of sharp curves along S70 from the town Plano, north to the intersection of County Road J18. The combined length of the six locations is approximately 2.5 miles. This identified short corridor is listed as a high priority in the LRSP for Appanoose County.

Existing Conditions

County Road S70 is a 22-foot-wide pavement originally paved in the 1970's. The highway is currently a 6" PCC pavement with 3" or 6" of HMA top without paved shoulders or safety edge. The horizontal alignment around the curves is not acceptable to current 55 mph design speed on all curves. Most curves have less superelevation than required given the current two of six curves are posted with speed advisory warning signs. However, with the narrow width, it can be difficult to navigate at highway speeds, especially with the additional lake traffic pulling boats, trailers or campers.

All signs and other traffic control devices are currently installed according to MUTCD requirements, including warnings of the oncoming curves. Existing foreslopes throughout the curve area are generally 4:1, including the entire proposed project. Our county crew cleared all brush and obstructions from the clear zone last winter to improving the visibility and drainage throughout the corridor.

Proposed Concept

Appanoose County proposes to improve the referenced corridor utilizing TSIP funding to provide as many updates as possible to keep traffic on the road top in the project area. This is accomplished with amending the described roadway by widening the driving surface with four-foot paved shoulders and a safety edge. In addition, a granular shoulder filet will be included in this project to provide gradual transitions for traffic diverging from the driving lanes and allow traffic leaving the roadway an opportunity to safely regain control. The ideal timing of these improvements will be inclusion in an HMA overlay project with TSIP paved shoulders along Hwy J46 in 2026.

Safety Justification

At four of the six proposed curve locations, a safety concern has been mentioned from the LRSP prepared by Kimley-Horn. Of the six locations, two of the curves have risk factors between 9 and 11. These curves have had five crashes in the past five years, with a fatal crash in 2016. Over the last couple of years, the traffic has increased significantly, especially with recreational vehicles and trailers.

Standard curve signing does not appear to have been sufficient warning in the recorded crashes. Speed is a factor in many crashes, but also the winding road with narrow curves will help when people overcorrect their vehicle comes off of the pavement onto the shoulder. A paved shoulder does not appear to be necessary for the full length of the road, but essential around the curves.

The proposed four-foot paved shoulder with edge rumbles should warn the drivers of departing the roadway with enough time to restore control without over correcting. If drivers continue on to the gravel shoulder filet, the added safety edge will also help to ease back onto the paved surface without edge ruts concerns. Extending the shoulder along the curves also allows towing vehicles extra space without fear of dropping the trailer tires off of road edge

The benefit/cost ratio for this project yields a 3.20:1 result with the five-year accident history. This safety benefit/cost ratio clearly shows a justified project for the proposed curve improvements.

RESOLUTION FOR TRAFFIC SAFETY IMPROVEMENT PROGRAM

Grant Application for S70 CURVE IMPROVEMENTS

Six curve locations from Iowa 2 to County J18

APPANOOSE COUNTY RESOLUTION No. 2023-39

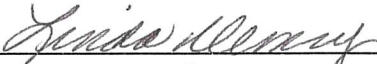
WHEREAS: The Board of Supervisors is empowered under authority of Iowa Code Section 306.4 2021 Code of Iowa to operate and manage the Secondary Road System; and

WHEREAS: The State of Iowa has available Grant funds associated with the Traffic Safety Improvement Program up to a maximum of \$500,000 per location; and

WHEREAS: The County Engineer recommends application for funding of a shoulder widening project on Appanoose County Highway S70 from the Iowa 2 to County J18.


NOW THEREFORE, BE IT RESOLVED: That we, the Board of Supervisors of Appanoose County do hereby declare support for and endorsement of the Grant Application for said widening project, currently programmed for construction in FY 2026. The Board further endorses the submittal of such application for grant funding and assures that the County will adequately maintain such improvements within the Appanoose County Secondary Roads system; and directs the County Engineer to pursue available funding for said project.

Passed and Adopted this 7th of August 2023.



Chairman Board of Supervisors
Appanoose County, Iowa

ATTEST:


Kelly Howard
Appanoose County Auditor