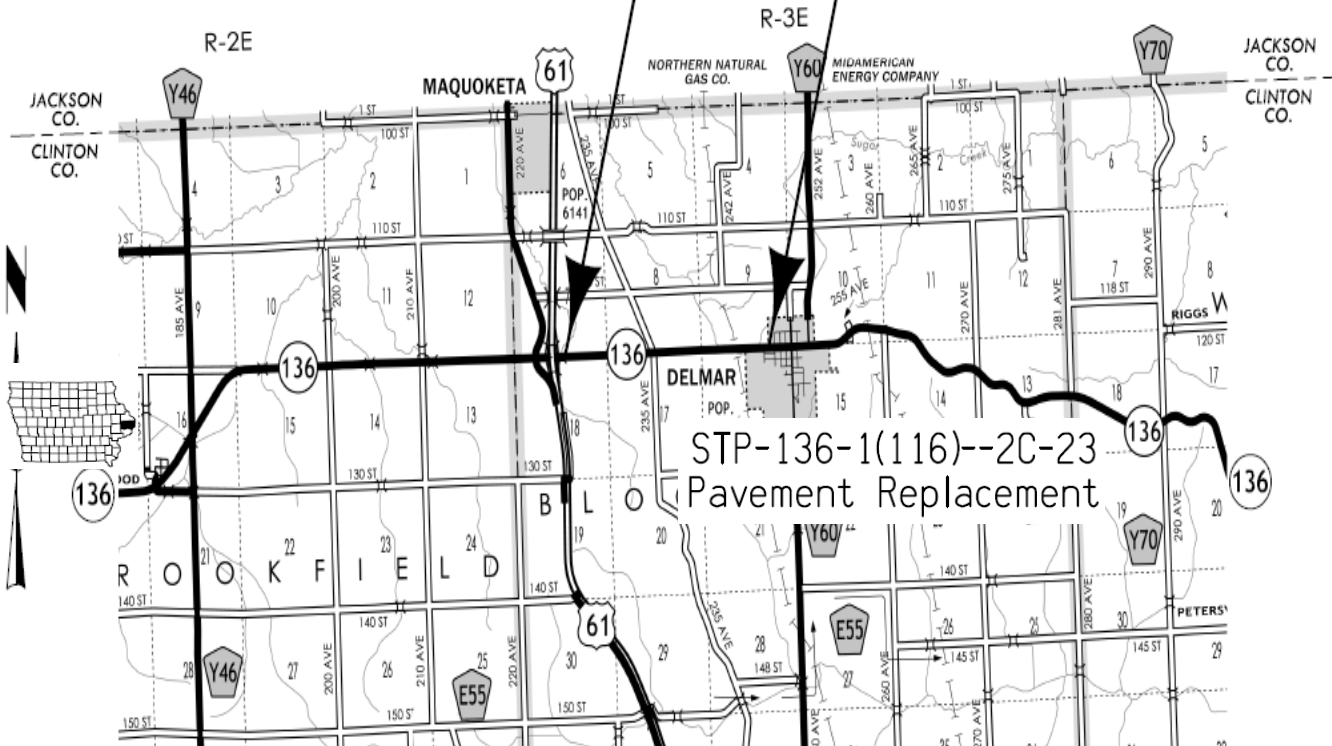


End Project
Milepost 29.95

Begin Project
Milepost 27.56



Length: 2.39 miles

Planning Classification: 4

Maintenance Service Level: C

NHS Route: No

Present Pavement: PCC with HMA overlays

- The construction Year 1929
- Resurfacing Year 1991

Regulatory Speed: 50 mph

Traffic

Location	Estimated		2026	Estimated		2046
	Section	2026	Percent	2046	2046	Percent
	Length	ADT	Trucks	ADT	DHV	Trucks
West Limits of Delmar	0.25	1082	10%	1142	118	10%
US 61 Interchange	2.27	1163	9%	1227	127	9%

Purpose and Need:

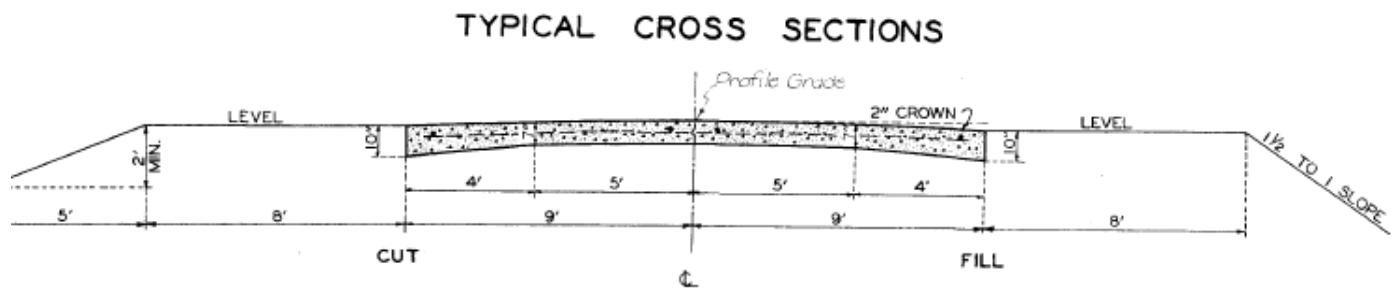
The primary purpose of this project is to replace the pavement and add paved shoulders to improve safety and ride quality within this section. The pavement need is evident from the Pavement Condition Index (PCI) and International Roughness Index (IRI) values, as well as visual observations of the pavement.





Existing Conditions

US 136 is a two-lane highway posted at 50 mph. The striped pavement is a 22 ft. wide HMA section. The existing cross-section is a rural cross-section with 11 ft. lanes and either 6 ft. or 4 ft granular shoulders. These shoulders appear to be narrower in some places. The original pavement structure consists of 10-7-10 inch PCC pavement constructed in 1929. The pavement was overlaid twice. The last overlay was in 1991. The current pavement thickness is 10 inches. The existing pavement exhibits transverse and longitudinal cracking and shoulder rutting.



Survey

The Davenport RCE office will complete a horizontal and vertical profile survey to verify if the profile can be lowered to match the original profile grade.



PMIS Data

MP to MP	Dir.	Type	Avg. Str. No.	80% Str. Rating.	IRI	Average K Rating
27.56 - 29.95	1	3	3.56	2.4	170.15	83

Bridge

Bridge FHWA Number: 021111, Bridge ID: 2329.8S136 at Mile Post 29.8.

Facility Carried: IA 136.

Features Crossed: Union Creek.

Location: 0.1 MI. S OF JCT. US 61.

The bridge has no scheduled program recommendations.

Bridges and Structures Bureau, BSB, recommends guardrail replacement and paving shoulders at this bridge.

Culvert

Maintenance mentioned a culvert (CULVERT ID: 17,618.00, MP 28.58) that needs attention on this section of the road. The culvert is a 4ft. x 4ft. culvert. Maintenance believes the bottom of this culvert is deteriorating. Further investigation will be completed prior to the D02 plans completion.

3R Design Criteria

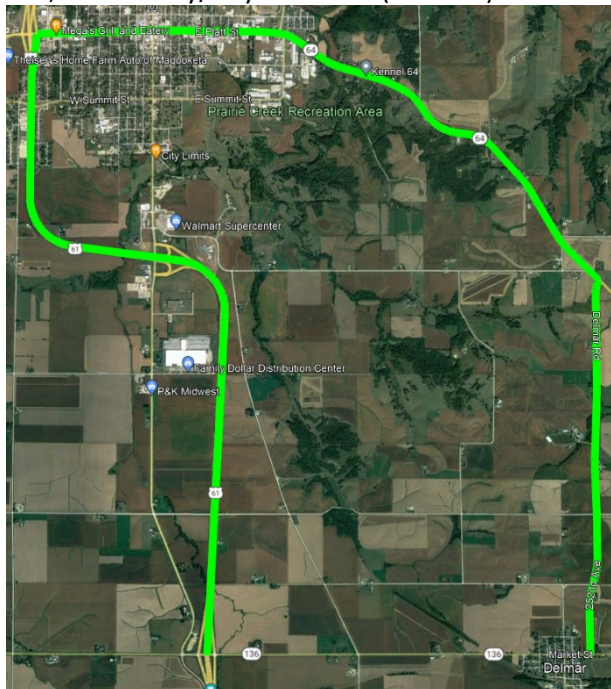
Acceptable Values for 3R Roadway Features						Project Values
DESIGN ELEMENT	FREEWAY	NON-FREEWAY				
Regulatory Speed (mph)	65/55	55	45	35	25	50
Minimum Vertical Curve (mph)	65/55	35	25	15	5	65
Maximum Horizontal Curve (degrees)	3	6	8	14	28	8/14
Maximum Gradient	3%	6%	7%	10%	13%	7% - 10%
Lane Width (feet)	12	12	11	11	11	12
Parking Lane Width (feet)	--	--	8	8	8	NA
Shoulder Width (feet)	10/6	6	4	4	2	4
Foreshores	3:1	3:1	3:1	--	--	1.5:1
Transverse Slopes	6:1	6:1	6:1	--	--	6:1
Horizontal Clearance (feet)						16
Bridge Width	Approach Lanes + Shoulder Width			Approach Lanes + Offset		
Vertical Clearance - Over NHS (feet)	16.5	16.5	16.5	16.5	16.5	16.5
Vertical Clearance - Over Local (feet)	14.5	14.5	14.5	14.5	14.5	N/A

Traffic Control

- IA136 will be closed during construction.

Detour

A detour utilizing US-61, IA-64, and County/City Road Y60 (252 Ave) will be implemented.



Crash Analysis

There are negligible crashes along the entire route.

Utilities

Attached is the Iowa One Call design request for the list of utilities within the project limits.

District	Contact Name	Contact Phone	Contact Email
(ASE)Alliant Energy	Alliant Energy Field Engineer	8002554268	locate_IPL@alliantenergy.com
(DMC) City of Delmar	LeAnn McAvan	5636744256	delmar@cis.net
(EC3) Iowa Department of Transportation	David Coon	5633495231	david.coon@iowadot.us
(ELP)Eastern Iowa Light & Power	Mark Elder	5637327360	mark.elder@eastemiowa.com
(FBM)F & B Communications	Ken Laursen	5633741236	1ocates@fbc-tele.com
(N11) Northern Natural Gas Company	Lenny Klaas	4025302806	Leonard.Klaas@nngco.com
(WINIA) Windstream Communications	Locate Desk	8002891901	locate.desk@wvwindstream.com

Inquiry Results (this is not a valid dig ticket)

The designer should review all existing visible utility features that may be impacted by the proposed project.

Preconstruction Agreement

A preconstruction agreement with Clinton County to include paved fillets at the intersections of 235th Street and IA 136, both north and south entrances, is required.

A detour agreement with Clinton and Jackson Counties to utilize Y10 (252 Ave), from US 64 to IA 136 within the county limits, is required.

A preconstruction agreement with the City of Delmar to include paved fillets at the intersections of Western Ave. and IA 136 is required.

A detour agreement with the City of Delmar to utilize Y10 (252 Ave), from US 64 to IA 136 within the City of Delmar limits, is required.

Permit

This project will need a 404 Permit (Maintenance Permit). The 404 Permit can be automatically authorized through the Location and Environment Bureau. No mitigation will be required.

3R Design Criteria

Replace the guardrail at the bridge.



Feasible Alternatives

If lowering the profile is feasible, the pavement should be widened to 12 ft. lanes and 4 ft. wide paved shoulders. If lowering the profile is not feasible without an extensive amount of adjustment to manholes and other facilities within the area, the pavement should be widened to 12 ft. lanes and 3 ft. wide paved shoulders, as feasible, without re-grading the area.

Alternative 1: Remove and replace pavement within this section using 9-inch PCC pavement. Add 12 inches of modified subbase. Add 7-inch PCC Paved Shoulder. Add longitudinal 4-inch subdrain at the shoulder joints. Update the steel beam guardrail at the bridge. The estimated cost for this option is \$5.80 million.

Alternative 2: Remove and replace pavement within this section using 10-inch HMA pavement. Add 12 inches of modified subbase. Add 6-inch HMA Paved Shoulder. Add longitudinal 4-inch subdrain at the shoulder joints. Update the steel beam guardrail at the bridge. The estimated cost for this option is \$5.5 million. Binder is estimated at \$800 per Ton.

Preferred Alternative.

Both alternatives are viable. The pavement replacement committee in Ames will decide on the type of pavement preferred for this section.

Funds Programmed

This project is not programmed. It has been identified by District 6 as a candidate for the 2029 Highway Program.

Other

Right-of-way is not required.

UAC the existing pavement in the City of Delmar.

Wetland mitigation is not required.

There are no at-grade railroad crossings within the project limits.

This is not a Point 25 project.

cc:

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M. Nop
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