

CLINTON COUNTY

PCC PAVEMENT - REPLACE
STP-136-1(116)--2C-23

LETTING DATE
10-17-28



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
CLINTON COUNTY
PCC PAVEMENT - REPLACE
From WCL Delmar to US 61

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL

PROJECT IDENTIFICATION NUMBER

24-23-136-020

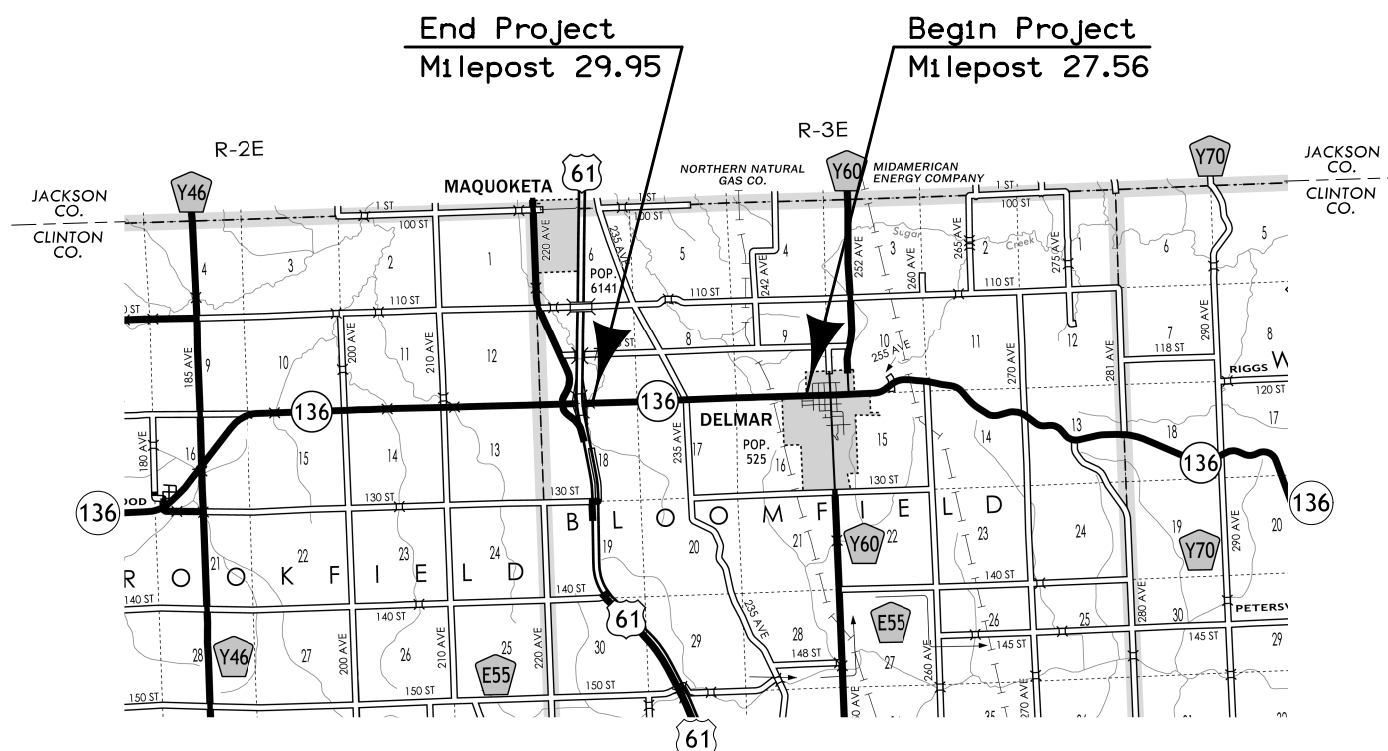
PROJECT NUMBER

STP-136-1(116)--2C-23

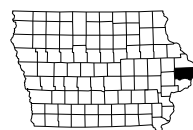
R.O.W. PROJECT NUMBER

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Location Map
A.2	Field Exam Checklist
A.3	Concept
B Sheets	Typical Cross Sections and Details
B.1 - ?	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1 - ?	Quantities and General Information
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
* J.2	Staging Notes Stage
U Sheets	Detail Sheets
U.1	Detail Sheets
	* Color Plan Sheets



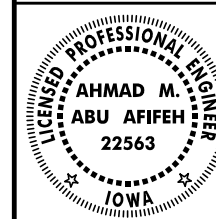
FIELD EXAM PLAN



DESIGN DATA RURAL

20	AADT	_____	V.P.D.
20	AADT	_____	V.P.D.
20	DHV	_____	V.P.H.
	TRUCKS	_____	%
	Total	_____	
	Design ESALS	_____	

ROADWAY DESIGN



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature _____ Date _____

Printed or Typed Name **Ahmad M. Abu Afifeh**

My license renewal date is December 31, 2024

Pages or sheets covered by this seal: ALL

FILE NO.

ENGLISH

DESIGN TEAM **Abu Afifeh/Storey/Holub**

CLINTON COUNTY

PROJECT NUMBER **STP-136-1(116)--2C-23**

SHEET NUMBER **A.1**

Field Exam Checklist (Revised 7-31-23)

1. Include a bid item for longitudinal subdrains?
2. Will full-depth PCC patches be doweled?
3. Include a bid item for PCC finish patches longer than 50'?
4. Include a bid item for longitudinal joint repair?
5. Include HMA wedge course for superelevation?
6. Include a bid item for leveling or strengthening?
7. Include a bid item for asphalt anti-strip?
8. Replace bridge approaches?
9. Check bridge clearances?
10. Replace traffic islands?
11. Construct extended paved fillets?
12. Include a safety edge?
13. Mill centerline rumble strips?
14. Mill shoulder rumble strips?
15. Include rumble strip panels?
16. Include a bid item for adjustment of fixtures?
17. Are there loop detectors, ATR, or RWIS?
18. Survey existing shoulder cross section?
19. Include construction of safety dikes?
20. Include culvert repairs or extensions?
21. Include flattening of driveway side slopes?
22. Replace delineators or chevrons?
23. Include a bid item for clearing and grubbing?
24. Is there Indiana Bat habitat?
25. Include a bid item for top soil?
26. Include a pollution prevention plan?
27. Include mobilization items for erosion control?
28. Deliver HMA millings to DOT or contractor keep?
29. Deliver class 13 excavation to DOT or contractor keep?
30. Deliver guardrail to DOT or contractor keep?
31. Include a bid item for deliver and stockpile?
32. Include a bid item for construction survey?
33. Include a bid item for field lab or field office?
34. Include railroad insurance provisions and specifications?
35. Include sidewalk work?
36. Include a tabulation of utilities?
37. Is a detour needed?
38. Include any work hour restrictions?
39. Include any special events?
40. Include a bid item for changeable message signs?
41. Should pavement markings be waterborne, durable, or multi-component?
42. Should pavement markings be grooved-in or surface applied?
43. Include DS for Evaluation of Longitudinal Joints in HMA?

TO OFFICE: District 6

DATE: December 1, 2023

ATTENTION: Jim Schnoebelen

COUNTY: Clinton

PHASES: STP-136-1(116)--2C-23

FROM: Ahmad Abu Afifeh

PROJECT: 24-23-136-020

OFFICE: District 6

FOLDER: 2313602024

SUBJECT: FY 2029 3R/HSIP Project Concept - - Final (D00) Revised

PROJECT LOCATION: IA-136 from WCL Delmar (MP 27.56) to US 61 (29.95)

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

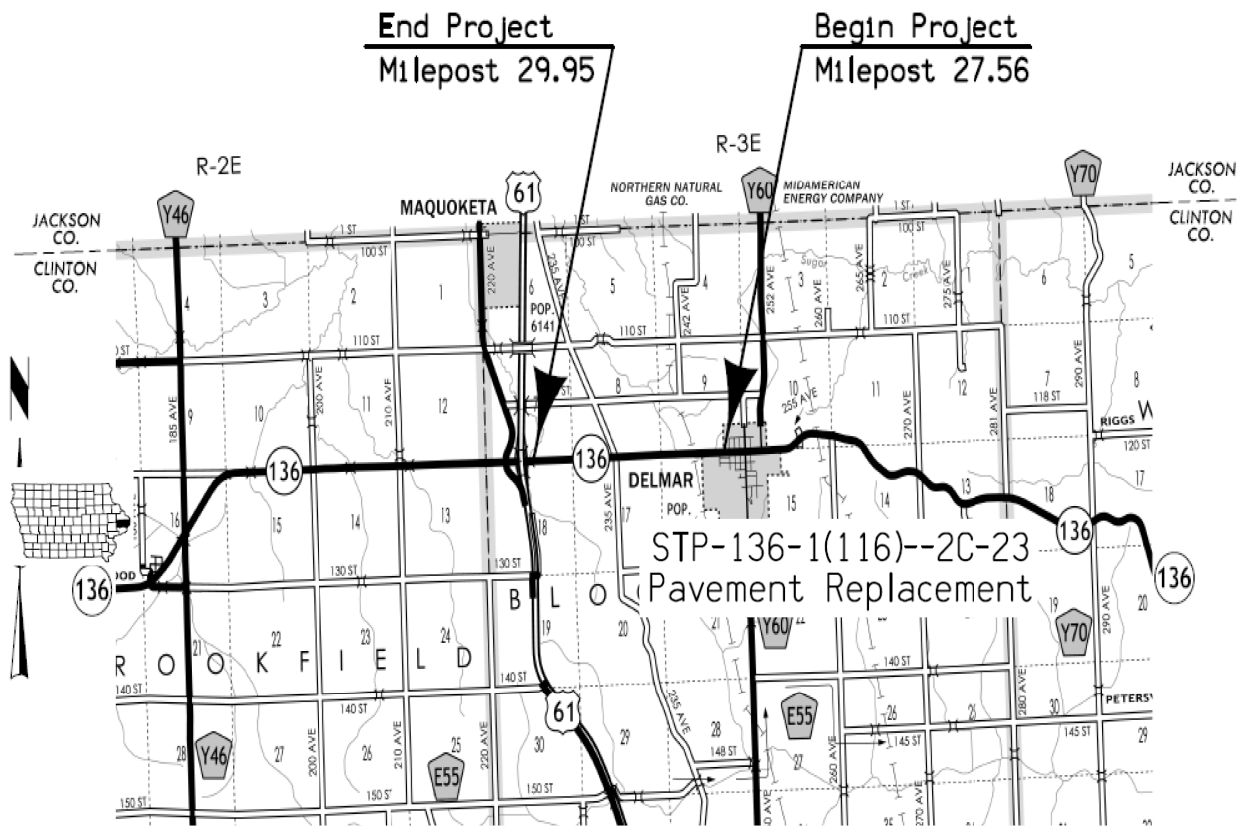
 Regulatory Speed: 50 mph

Traffic

Location	Estimated		2026	Estimated		2046
	Length	2026	Percent	2046	2046	Percent
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.



Date of Review:

Concept review meeting for Iowa 136 Pavement Replacement from the WCL of Delmar to US 61
 Wednesday, November 8, 2023 (10:00 –11:00)

Attendees – Nathan Manderscheid, Brent Roling, Cedric Wilkinson, Sheila Lee, Tom Storey, Ahmad Abu Afifeh, Jesse Tibodeau.

Project Data:

Route: IA 136

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	1locates@fbc-tele.com
(N11) Northern Natural Gas Company	Lenny Klaas	4025302806	Leonard.Klaas@nngco.com
(WINIA) Windstream Communications	Locate Desk	8002891901	locate.desk@wwindstream.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

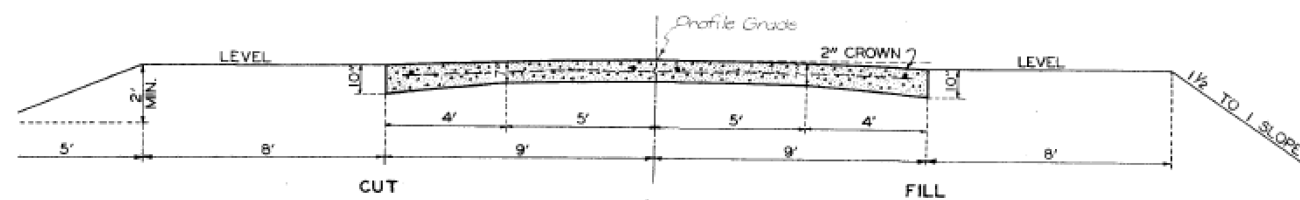
Replace the guardrail at the bridge.



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.

TYPICAL CROSS SECTIONS



The original 1929 cross section

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.



Feasible Alternatives

Pavement should be paved to a total width of 28 ft. with two 12 ft. lanes and 2 ft. wide paved shoulders.

Alternative 1: Remove and replace pavement within this section using 9-inch PCC pavement and shoulders. Add centerline and shoulder rumbles. Add safety edge to help lessen the severity of roadway departures. Add 12 inches of modified subbase. Add longitudinal 4-inch subdrain at the shoulder joints. Update the steel beam guardrail at the bridge. The estimated cost for this option is \$5.20 million.

Alternative 2: Remove and replace pavement within this section using 10-inch HMA pavement and shoulders. Add centerline and shoulder rumbles. Add safety edge to help lessen the severity of roadway departures. Add 12 inches of modified subbase. Add longitudinal 4-inch subdrain at the shoulder joints. Update the steel beam guardrail at the bridge. The estimated cost for this option is \$5.15 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.

Estimated Cost

The estimated cost of this project is \$5.15 million.

Funds Programmed

This project is not programmed. It has been identified by District 6 as a candidate for the 2029 Highway Program. This project is an FY 26 advancement candidate.

Other

Right-of-way is not required.

UAC the existing pavement in the City of Delmar.

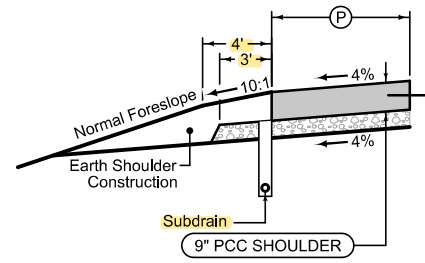
Wetland mitigation is not required.
There are no at-grade railroad crossings within the project limits.
This is not a Point 25 project.

CC:

M. J. Purcell
D. L. Maifield
A. A. Welch
M. Nop
S. P. Anderson
D. L. Newell
S. J. Gent
D. E. Sprengeler
M. E. Ross
T. S. Quam
D. D. Heeren
E. C. Wright
G. Karssen
J. L. Tibodeau
S. M. Neuhaus
N. M. Abuissa
M. K. Harle
J. Lamping
H. R. Gugler
D. Coon

M. J. Kennerly
C. B. Brakke
C. C. Poole
M. A. Swenson
B. D. Hofer
B. E. Azeltine
J. W. Laaser-Webb
J. S. Bacon
M. L. Sloppy
M. Ortiz-Pagan
J. Bartholomew
M. Buttz
B. P. Struecker
M. Wood
C. L. Cutler
A. A. Afifeh
T. M. Storey
A. J. Simonson
R. H. Holub
S. R. Martin

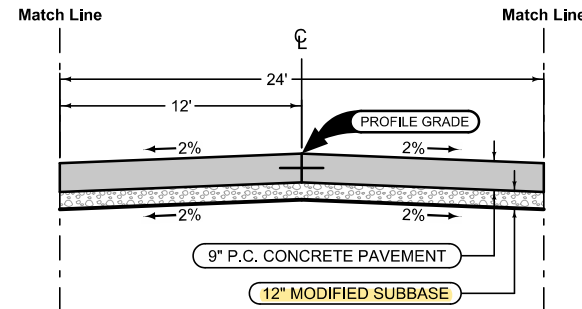
K. D. Nicholson
S. S. Nielsen
J. S. Nelson
R. A. Younie
K. Brink
W. W. Musgrove
W. A. Sorenson
T. M. Miller
K. K. Patel
K. M. Olson
N. L. Cuva
S. Cook
R. A. Harris
D. L. Alvarez
S. J. Shea
A. T. Bardgett
H. W. Holak
S. W. Flockhart
A. J. Stanley
N. Manderscheid



Full Depth PCC Shoulder

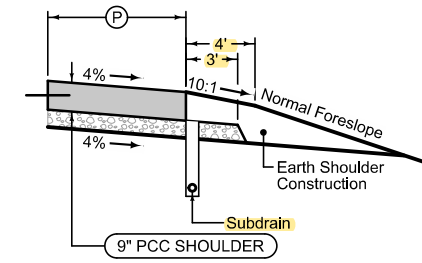
Shoulder Jointing:
 Longitudinal joint: BT-2, L-2 or KT-2
 Transverse joints: C at 17' spacing

2_P_FullPCC_04-20-21		(P)
STATION TO STATION		Feet
		3



Mainline Jointing:
 Transverse joints: CD at 17' spacing
 Longitudinal joint: L-2

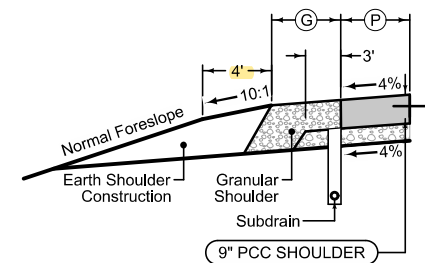
2P_04-21-20	
STATION TO STATION	



Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: BT-2, L-2 or KT-2
 Transverse joints: C at 17' spacing

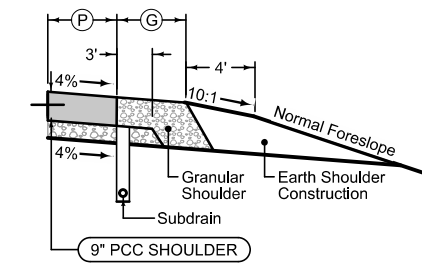
2_P_FullPCC_04-20-21		(P)
STATION TO STATION		Feet
		3



Full Depth PCC Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: BT-2, L-2 or KT-2
 Transverse joints: C at 17' spacing

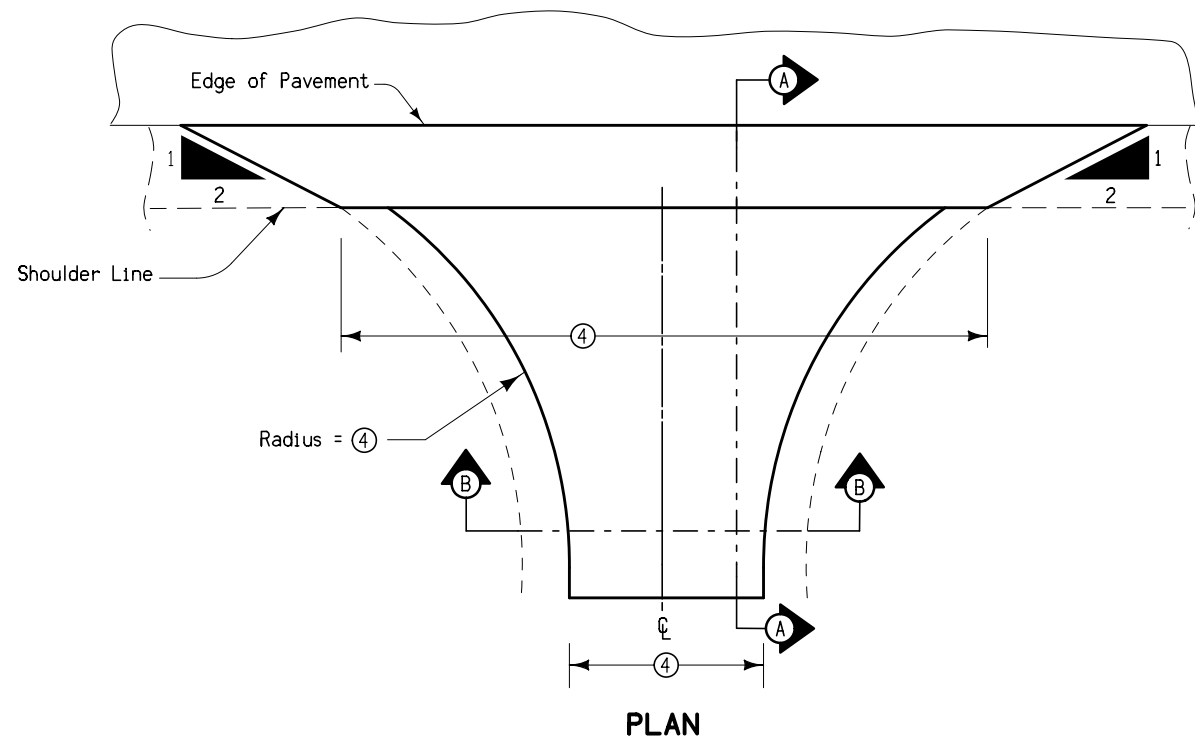
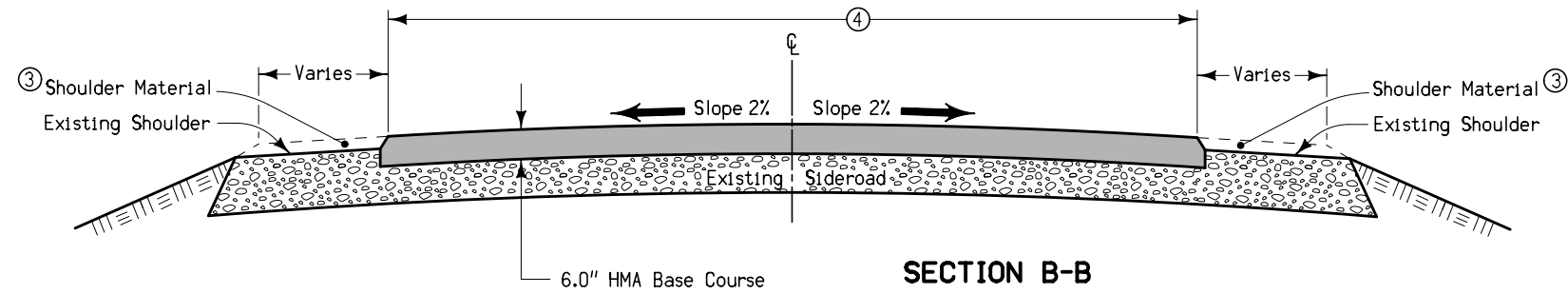
2_C_FullPCC_04-20-21		
STATION TO STATION	(P)	(G)
	Feet	Feet
	3	1



Full Depth PCC Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: BT-2, L-2 or KT-2
 Transverse joints: C at 17' spacing

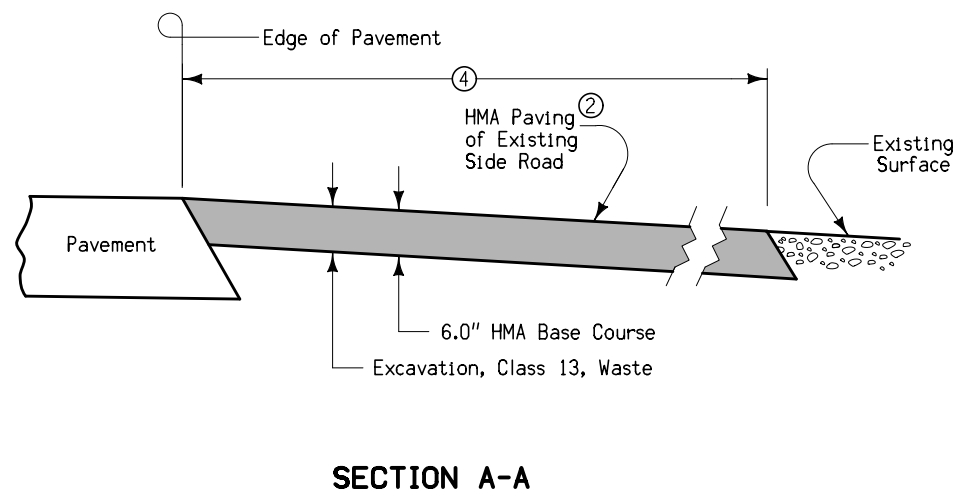
2_C_FullPCC_04-20-21		
STATION TO STATION	(P)	(G)
	Feet	Feet
	3	1



NO.	LOCATION	SIDE	EXISTING SURFACE TYPE	COMMENTS
1	235th Avenue	North	Granular	(2)
2	235th Avenue	South	Granular	(2)

NOTES:

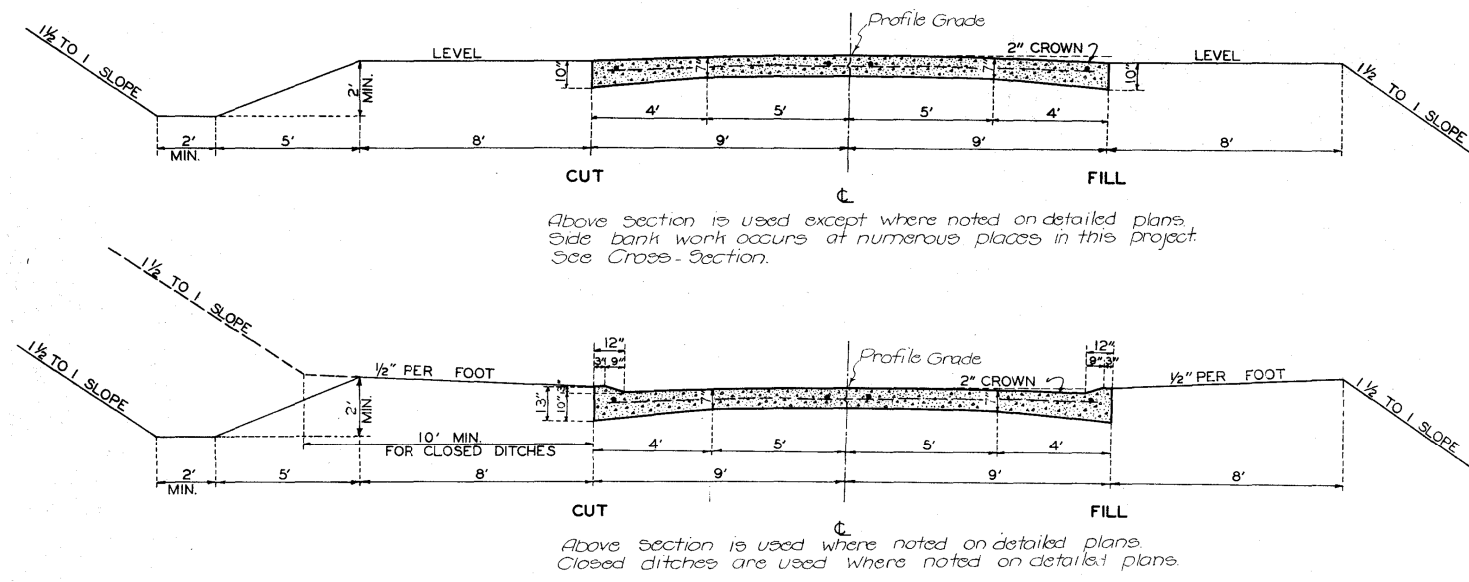
- (1) Note omitted.
- (2) Quantities in STP-136-1(116)--2C-23, Division 2.
- (3) Quantity included in bid item for Granular Shoulder, Type B.
- (4) Refer to sheets U.? - U.? for dimensions.



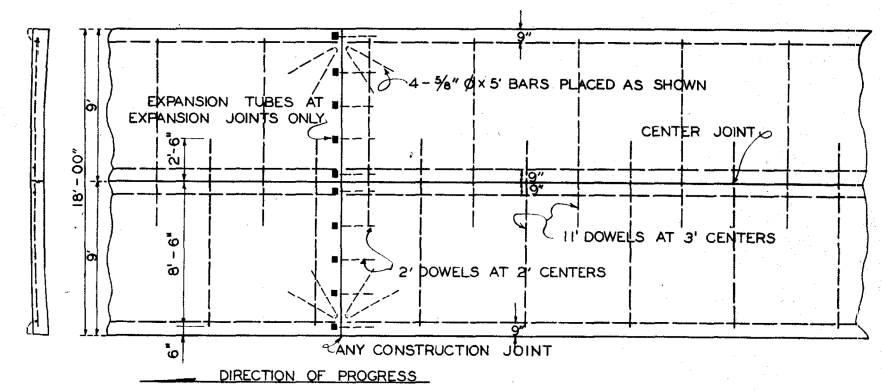
DETAIL SHEET

EXTENDED PAVED FILLETS FOR SIDEROADS

TYPICAL CROSS SECTIONS



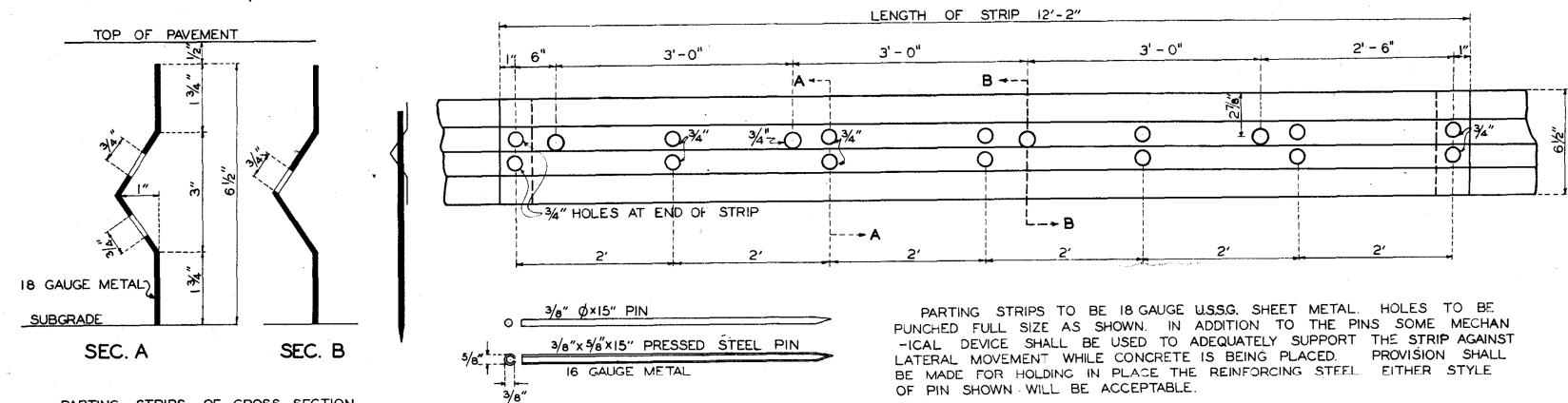
PAVEMENT REINFORCING PLAN



ALL REINFORCING STEEL TO BE PLAIN 5/8" Ø BARS. FOUR LONGITUDINAL BARS TO BE PLACED AS SHOWN, 2 1/2" BELOW TOP SURFACE, 2" LAP TO BE USED AT ALL SPLICES. ALL DOWEL BARS TO BE PLACED IN CENTER OF SECTION. DOWELS AT TRANSVERSE JOINTS TO PROJECT 6" INTO NEW WORK, AND TO BE FITTED WITH EXPANSION TUBES AT EXPANSION JOINTS. LONGITUDINAL REINFORCING STEEL TO END 2" FROM EXPANSION JOINTS.

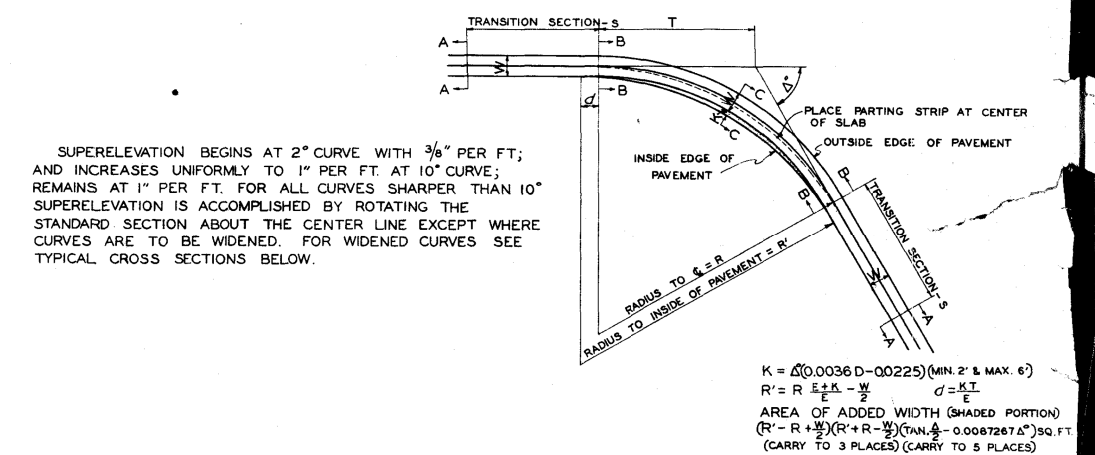
DOWEL BARS TO BE RIGIDLY HELD IN CORRECT POSITION, SUPPORTED AT 3 POINTS. OUTER END MAY BE FASTENED TO LONGITUDINAL STEEL; INNER END AND CENTER SUPPORTS TO BE OF DESIGN SATISFACTORY TO THE ENGINEER.

DETAILS FOR CENTER PARTING STRIP



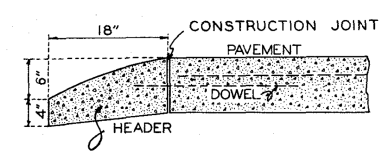
PARTING STRIPS TO BE 18 GAUGE USSG. SHEET METAL. HOLES TO BE PUNCHED FULL SIZE AS SHOWN. IN ADDITION TO THE PINS SOME MECHANICAL DEVICE SHALL BE USED TO ADEQUATELY SUPPORT THE STRIP AGAINST LATERAL MOVEMENT WHILE CONCRETE IS BEING PLACED. PROVISION SHALL BE MADE FOR HOLDING IN PLACE THE REINFORCING STEEL EITHER STYLE OF PIN SHOWN WILL BE ACCEPTABLE.

DETAILS FOR SUPERELEVATION

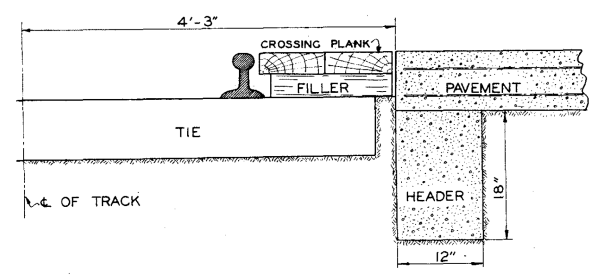


SUPERELEVATION BEGINS AT 2° CURVE WITH 3/8" PER FT.; AND INCREASES UNIFORMLY TO 1" PER FT. AT 10° CURVE; REMAINS AT 1" PER FT. FOR ALL CURVES SHARPER THAN 10°. SUPERELEVATION IS ACCOMPLISHED BY ROTATING THE STANDARD SECTION ABOUT THE CENTER LINE EXCEPT WHERE CURVES ARE TO BE WIDENED. FOR WIDENED CURVES SEE TYPICAL CROSS SECTIONS BELOW.

DETAILS OF CONCRETE HEADER



DETAILS OF RAILWAY GRADE CROSSING



NOTE: IN ADDITION TO THE USUAL TOP REINFORCING, ONE ROW OF 5/8" Ø BARS 8' LONG SPACED 1'-0" c. to c. SHALL BE PLACED 2" ABOVE THE BOTTOM OF THE SLAB. HEADER TO EXTEND FULL WIDTH OF PAVEMENT.

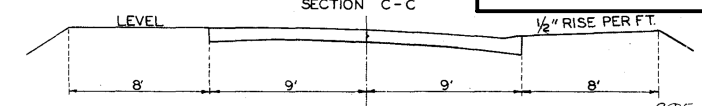
SPECIAL CROSS-SECTIONS FOR WIDENED CURVE

SECTION A-A NORMAL

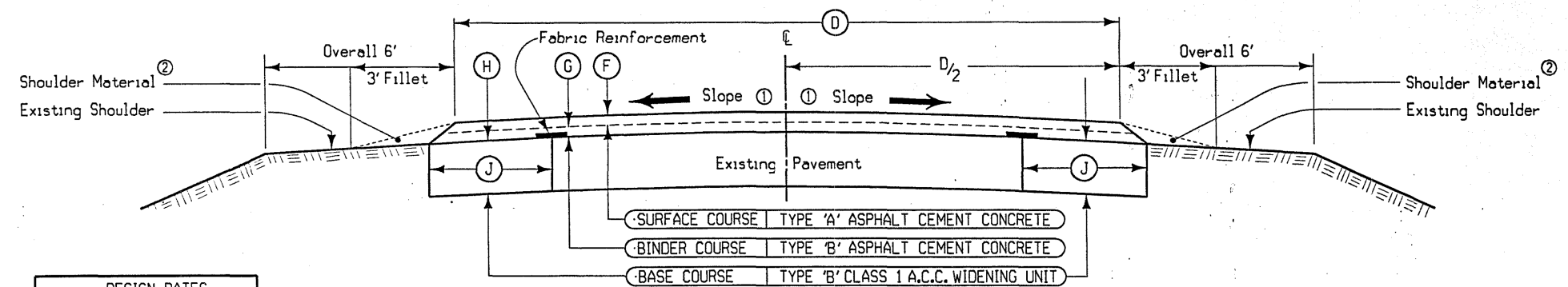
SECTION B-B

SECTION C-C

SPECIAL CROSS-SECTION FOR CURVE WITHOUT WIDENING



FOR REFERENCE ONLY NOT FOR CONSTRUCTION

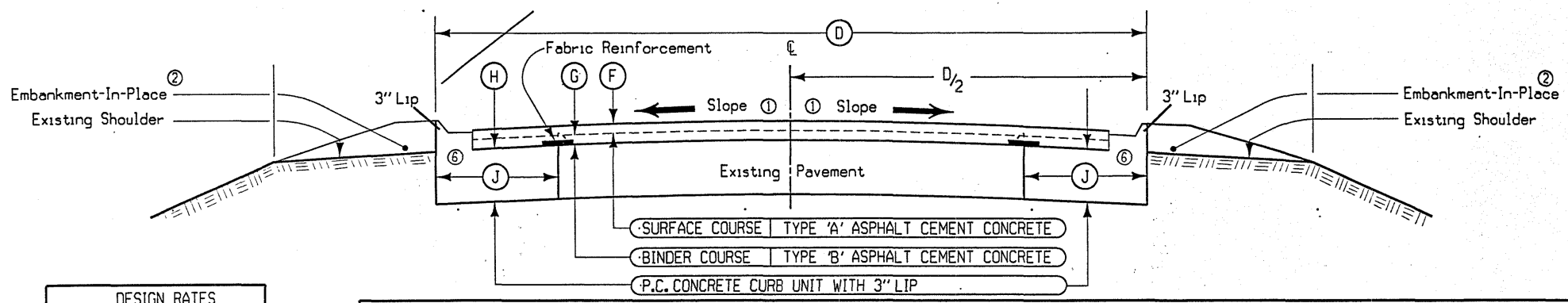


DESIGN RATES	
ITEM	RATE
Surface Course	145 lbs./cu.ft
Binder Course	145 lbs./cu.ft
Tack Coat	0.05 gal./sq.yd.
Base (Class I)	145 lbs./cu.ft

LOCATION		DIMENSIONS					Per Station					
ROAD IDENTIFICATION	STATION TO STATION	F	G	D	H	J	TRENCH EXCAVATION Cu.Yds. ⑥	PRIME AND TACK COAT Gallons ⑤	ASPHALT CEMENT Tons ⑧	ASPHALT CEMENT CONCRETE Tons		
										SURFACE ④	BINDER ⑦	BASE ④
IOWA 136	7+60 125+60	1.5"	1.5"	22'	7"	2.25'	9.72	27.50	3.78	20.06	25.08	19.03
IOWA 136	159+67 215+00	1.5"	1.5"	22'	7"	2.25'	9.72	27.50	3.78	20.06	25.08	19.03
IOWA 136	219+00 559+00	1.5"	1.5"	22'	7"	2.25'	9.72	27.50	3.78	20.06	25.08	19.03
IOWA 136	567+00 580+00	1.5"	1.5"	22'	7"	2.25'	9.72	27.50	3.78	20.06	25.08	19.03

- Notes:
- Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Section may be modified as directed by the engineer through areas of special shoping. Refer to tabulation listing of superelevated curves and Standard Road Plans for additional requirements through superelevated curves.
 - Shoulder material as specified elsewhere in these plans; refer to typical 7124 for "Type 'B' Granular Surfaced Shoulders" and typical for "Type 'A' Granular Surfaced Shoulders".
 - To be placed in one lift.
 - Quantity is for both widening units.
 - Quantity includes 2.50 Gal. for placement of both widening units.
 - Quantity is for placement of both widening units.
 - Quantity increased 4.79 Tons for Crown Correction for rural areas.
 - Includes 1.14 tons for both widening units.

TYPICAL CROSS SECTION
ASPHALT CEMENT CONCRETE RESURFACING
AND A.C.C. WIDENING UNIT



DESIGN RATES	
ITEM	RATE
Surface Course	145 lbs./cu.ft
Binder Course	145 lbs./cu.ft
Tack Coat	0.05 gal./sq.yd.
Base (Class I)	145 lbs./cu.ft

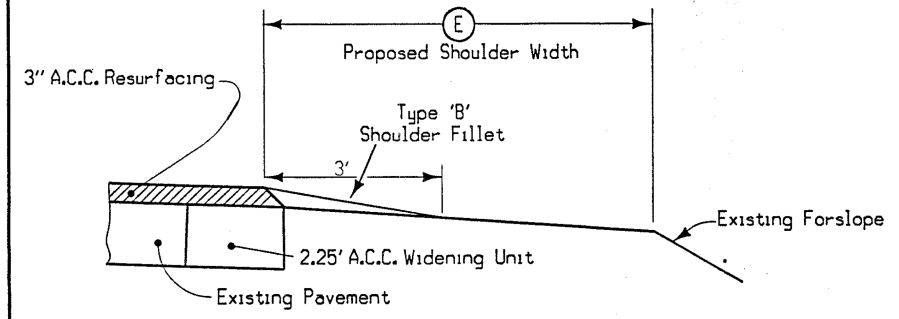
LOCATION		DIMENSIONS					Per Station					
ROAD IDENTIFICATION	STATION TO STATION	F	G	D	H	J	TRENCH EXCAVATION Cu.Yds. ⑥	PRIME AND TACK COAT Gallons	ASPHALT CEMENT Tons	ASPHALT CEMENT CONCRETE Tons		P.C.C. WIDENING UNIT Sq.Yds. ④
										SURFACE ④	BINDER ⑦	
IOWA 136	125+60 159+67	1.5"	1.5"	29'	7.5"	5.50'	75.46	28.89	3.09	23.56	29.22	122.22

- Notes:
- Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Section may be modified as directed by the engineer through areas of special shoping. Refer to tabulation listing of superelevated curves and Standard Road Plans for additional requirements through superelevated curves.
 - See cross sections. Sta. 135+20 to 138+20 place granular material.
 - To be placed in one lift.
 - All lip curbs incidental to job. See typ. KDM-7.
 -
 - Quantity is for both widening units. Includes 2' out for forms. See typ. KDM-7.
 - Quantity increased 5.66 Tons for Crown Correction.

DELMAR
TYPICAL CROSS SECTION
ASPHALT CEMENT CONCRETE RESURFACING
AND P.C. CONCRETE CURB UNIT

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

7124
MODIFIED



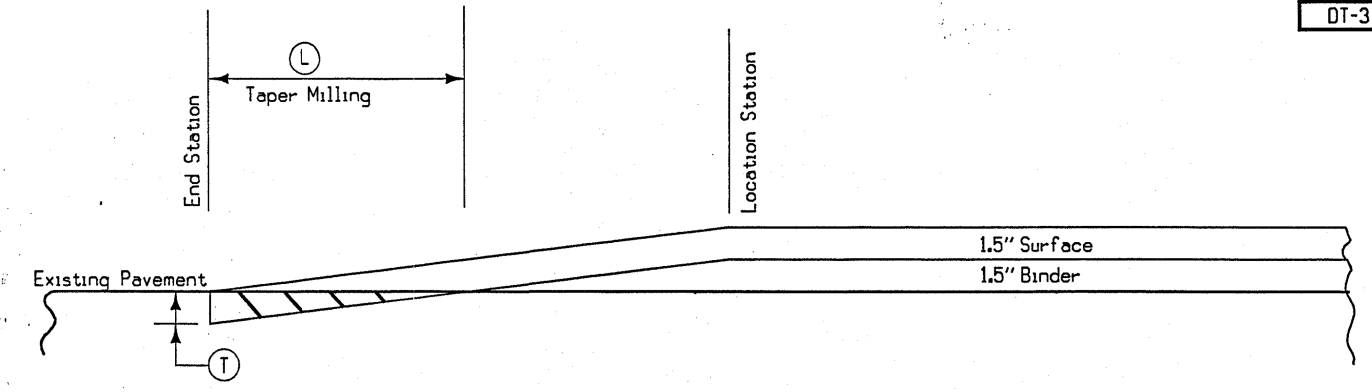
Notes:
Quantities have been determined on the basis of a design weight of 145 lbs. per cubic foot.
① Tons per station.

NOTE: Shoulder fillet to taper from 3" to 0".

ROAD IDENT.	STATION TO STATION	SIDE	TONS ①	②
IOWA 136	7+60 125+60	B	5.66	6'
IOWA 136	159+67 215+00	B	5.66	6'
IOWA 136	219+00 559+00	B	5.66	6'
IOWA 136	567+00 580+00	B	5.66	6'

TYPICAL SECTION
FOR GRANULAR SHOULDER FILLET
ADJACENT TO ASPHALT CEMENT CONCRETE RESURFACING

DT-3

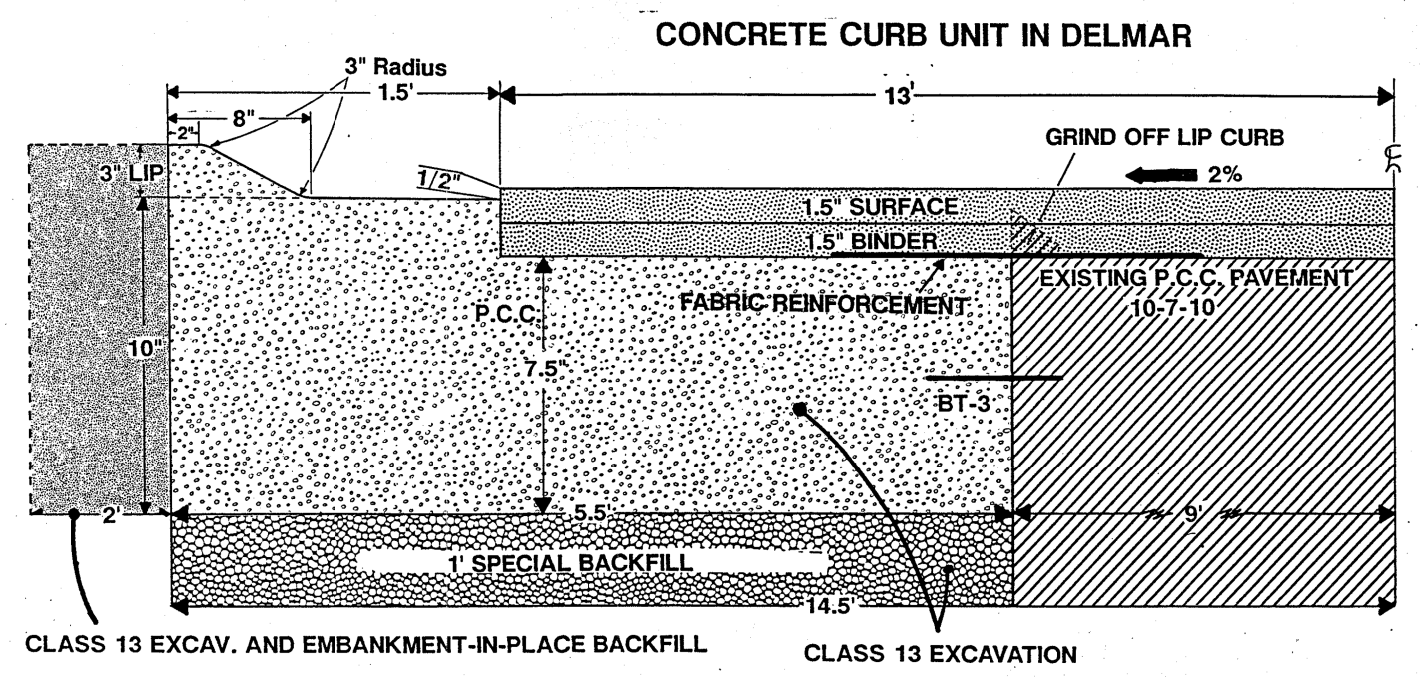


LOCATION STATION	END STATION	②	③	REMARKS
9±10	7±60	75'	1.5"	EAST END BRIDGE APPROACH
213+50	215+00	75'	1.5"	
220+50	219+00	75'	1.5"	
557+50	559+00	75'	1.5"	
568+50	567+00	75'	1.5"	
578+50	580+00	75'	1.5"	

Notes: Notch-in Surface Course.

DETAILS
OF
TAPER MILLING

KDM-7



FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

ROAD DESIGN • CADD • PRODUCED

STATE OF IOWA

FHWA REGION 7

FISCAL YEAR

CLINTON

COUNTY

PROJECT NUMBER

FN-136-1(34)--21-23

SHEET NUMBER 2B

FILE NO.

ENGLISH

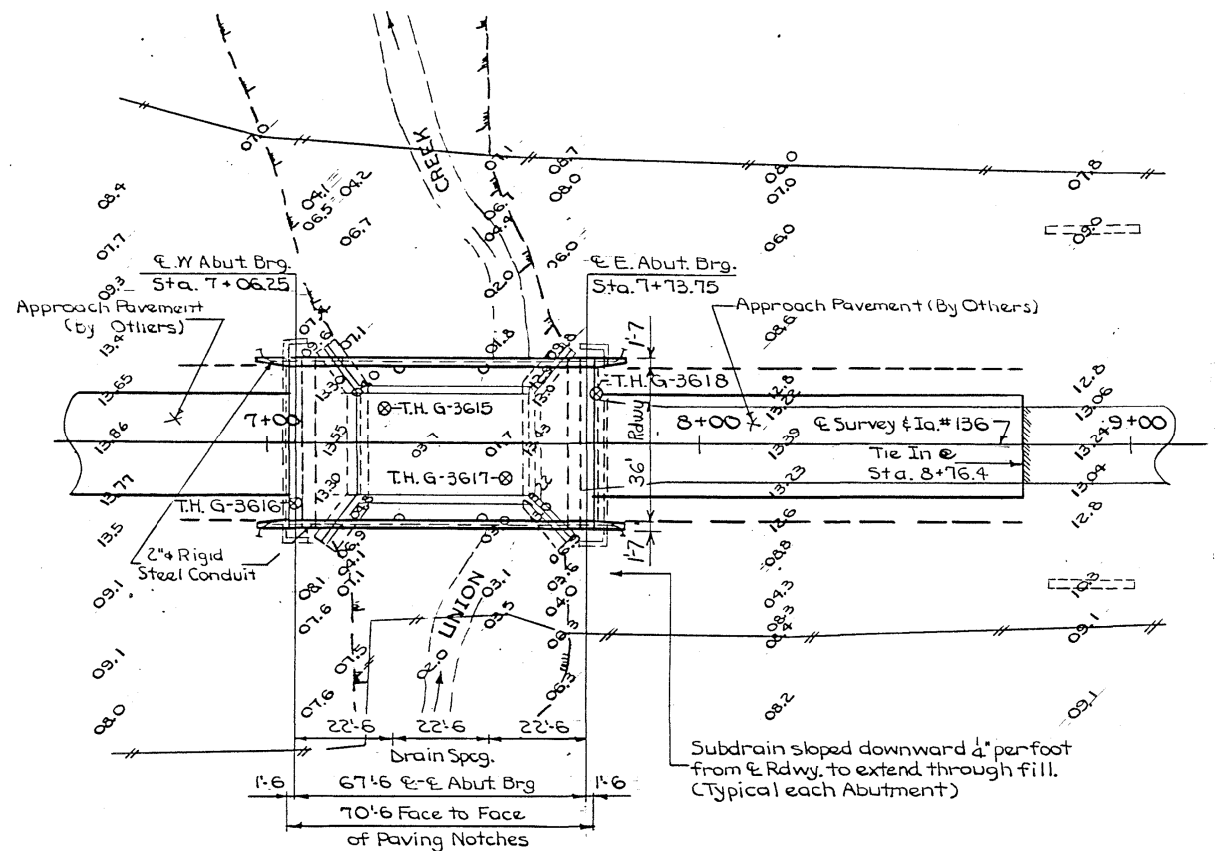
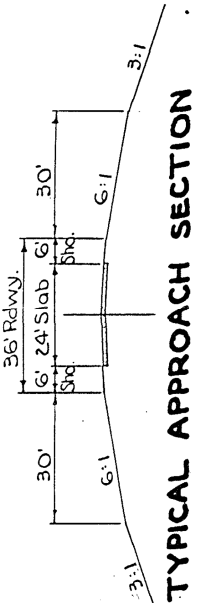
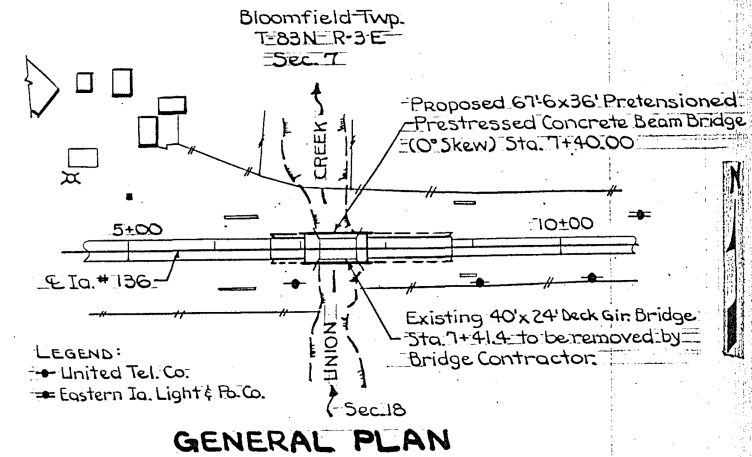
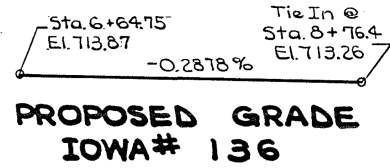
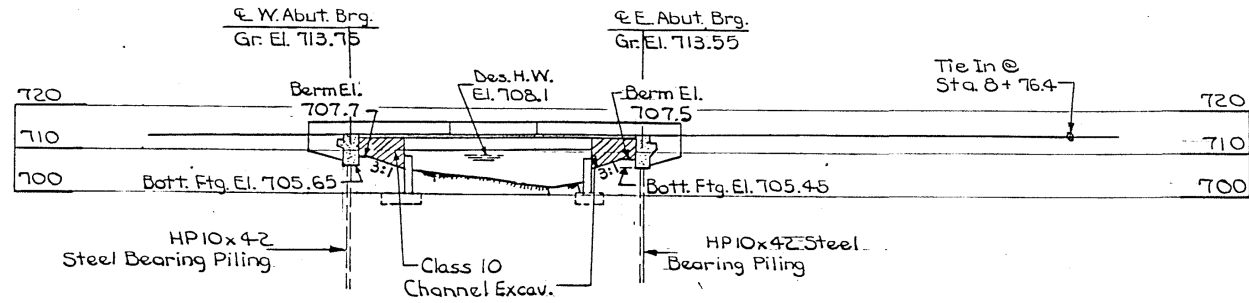
DESIGN TEAM Abu Afifeh/Storey/Holub

CLINTON COUNTY

PROJECT NUMBER STP-136-1(116)--2C-23

SHEET NUMBER U.4

Bench Mark No. 2, Sta. 7+41.4 ~ 13.2' R.L. Found 'X' in Center South End of Bridge --- Elev. 716.11
 2A, STA. 13108+77 ~ 18.6' AT, I.D.O.T. B.M. on S.W. Corner of Barrier Rail --- Elev. 716.09



HYDRAULIC DATA:

Drainage Area	2.3 Sq. Mi. H-F
Reach Slope	12.6 Ft. per Mi.
Q50	1200 c.f.s.
Q50 H.W. El.	708.1
Q100	1500 c.f.s.
Q100 H.W. El.	708.7
Q500	2400 c.f.s.
Q500 H.W. El.	709.8
Extr. H.W. El.	712.2
Date	Spring 1965

TRAFFIC COUNT:

A.D.T. = 1675 V.P.D. (2008)
A.D.T. = 1400 U.P.D. (1988)

LOCATION:
 On Iowa # 136
 over Union Creek
 T-83N R-3E
 Section 7 & 18
 Bloomfield Twp.
 Clinton County

Design for a Single Span.
67'-6" x 36' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

**FOR REFERENCE ONLY
 NOT FOR CONSTRUCTION**

SITUATION
 Station: 7+40
CLINTON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
 Design Sheet No.: 2 Of 10 File No.: 27445 Design No.: 894

DESIGNED BY: R. Gustafson TRACED BY: HM
 DETAILED BY: HM CHECKED BY: Carl Schumann

CLINTON COUNTY

PROJECT NUMBER	STATE	FRWA	FISCAL	SHEET	TOTAL
	IOWA	7	YEAR	NO.	SHEETS
				3	12A