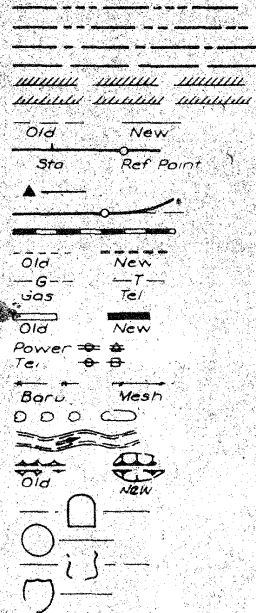


April 1, 1980

LETTING DATE

CONVENTIONAL SIGNS

State Line
Co. Line
Twp. Line
Sec. Line
Corp. Line
Urban Bdry
R.O.W. Lines
Survey Line
Sec. Corner
Profile Grade
Railroad
Field Tile
Underground Lines
Culverts
Utility Poles
Fence
Trees or Orchards
Street
Dike
County Road N
Primary Road No
U. S. Road No
Interstate Road No

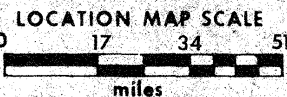
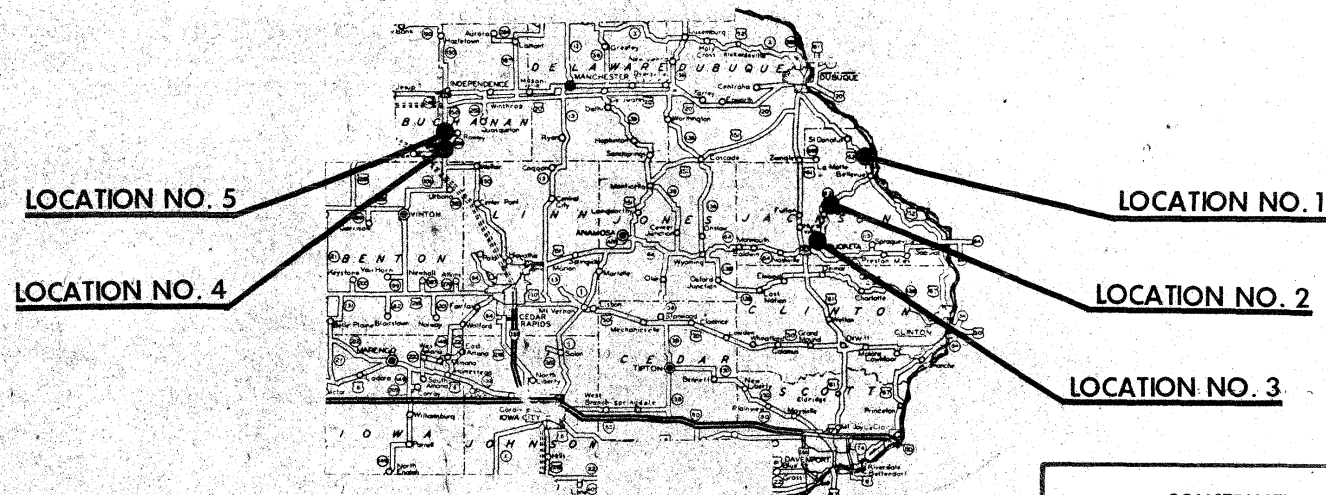


IOWA
DEPARTMENT OF TRANSPORTATION
Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
SAFETY ENHANCEMENT
DISTRICT 6
AT VARIOUS LOCATIONS

SCALES: AS NOTED

THE STANDARD SPECIFICATIONS, SERIES OF 1977,
OF THE IOWA DEPARTMENT OF TRANSPORTATION,
SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT



YEAR	WORK	CONTRACTOR	PROJ. INSPECTOR
1979	SAFETY ENHANCEMENT	K.L. ALBERT	CENTURY FENCE

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

Plan Preparation Supervised By: William J. Smith
Date: Dec 19 1979 Iowa Reg. No. 4125

REVIEWED AND FORWARDED TO AMES

District Construction Engineer
One 50% Reduced and Two Full-Size Prints To Be Made and Returned To

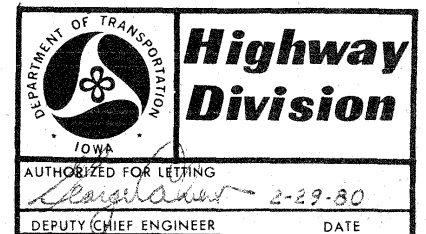
AFTER MICROFILMING RETURN ORIGINAL
TO DISTRICT NO. _____

REVISED:

SEE FOLLOWING SHEET 1A

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED
UNDER MY SUPERVISION AND THAT ENGINEERING
DECISIONS WITH REGARD TO THE DESIGN WERE
MADE BY ME OR BY OTHER DULY REGISTERED
PROFESSIONAL ENGINEERS UNDER THE LAWS OF
THE STATE OF IOWA.

John W. Walker
4989 FEB 15 1980
IOWA REGISTRATION NUMBER DATE



U.S. DEPT. TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER DATE

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		1	
PROJECT NUMBER				
R.O.W. PROJECT NUMBER				

INDEX OF SHEETS		105-3
NO.	DESCRIPTION	
1.	TITLE SHEET	
1A.	TABULATION OF REVISIONS	
2.	FINAL QUANTITIES AND GENERAL INFORMATION	
3.	TABULATION OF WORK ITEMS	
4.	DETAILS OF CONSTRUCTION	
5.	CAST IN PLACE BARRIER RAIL	
6.	DETAILS OF PARTIAL COVER ON CULVERT HEADWALL	

MICROFILMED
DATE

RECEIVED

MAR 18 1981

RESIDENT MAINT. OFF
DUBUQUE, IOWA

STANDARD ROAD PLANS

105-4
6-17-77

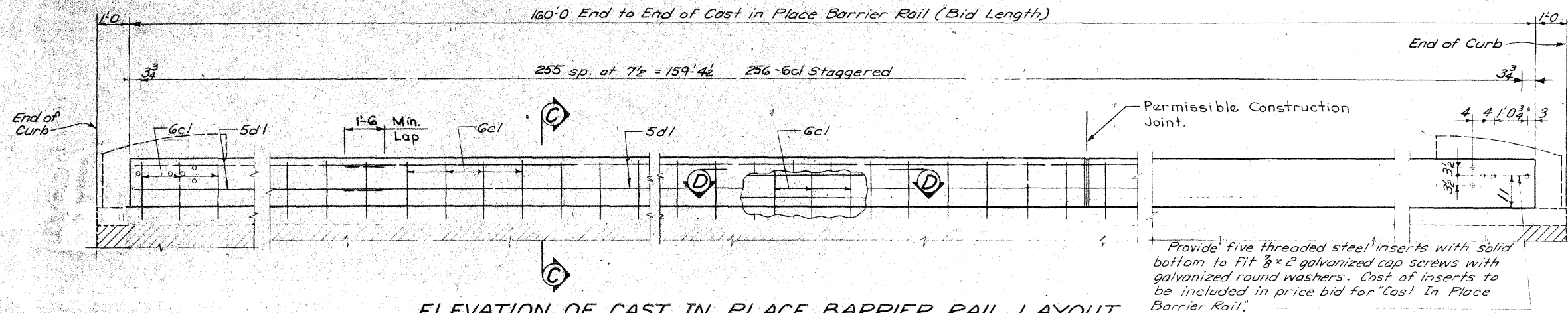
The following Standard Road Plans shall be considered applicable to
construction work on this project.

IDENT	DATE	IDENT	DATE	IDENT	DATE
RE-2	8-16-74	RE-28	6-21-74	RE-52	8-24-79
RE-7	5-16-75	RE-47	8-24-79	RE-57	6-8-79
RE-12	4-20-79	RE-48A	9-22-78	RE-59	6-8-79
RE-27	12-15-78				

REV
* 35 *

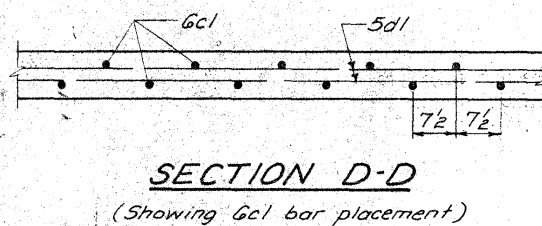
7 Sheets

50% FEB 17 1981
PRINTED
100%



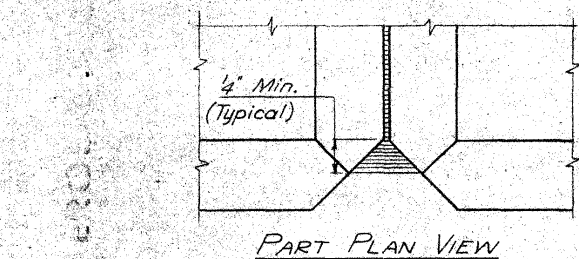
ELEVATION OF CAST IN PLACE BARRIER RAIL LAYOUT

EPOXY REINFORCING STEEL-ONE RAIL						
Bar	Location	Shape	Nº	Length	Weight	
6c1	Vertical	—	256	2'-4"	897	
5d1	Longitudinal	—	20	33'-2"	692	
Total (Lbs.)					1589	

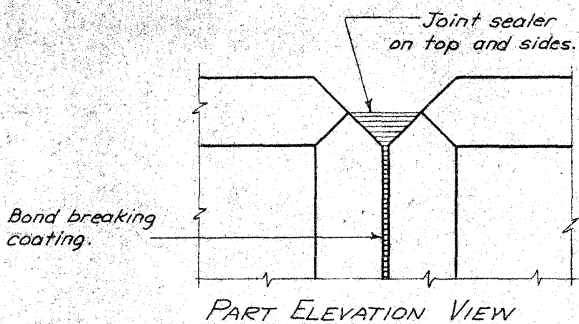


SECTION D-D

(Showing 6c1 bar placement)



PART PLAN VIEW



PART ELEVATION VIEW

CAST IN PLACE BARRIER RAIL JOINT DETAILS

CAST IN PLACE BARRIER RAIL NOTES:

- Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.
- All exposed corners 90° or sharper are to be filleted with a 3/4" dressed and beveled strip.
- Top of the cast in place barrier rail is to be parallel to the theoretical G grade.
- The permissible construction joints are to be placed between vertical bars at a minimum spacing of 20 feet. Construction joint contact surfaces are to be coated with an approved bond breaker.
- Cost of joint sealer and bond breaker shall be considered incidental to other construction.

The cast in place barrier rail is to be bid on a lineal foot basis measured from end to end of rail. The number of lineal feet of cast in place barrier rail installed will be paid for at the contract price per lineal foot based on plan quantities. Price bid for cast in place barrier rail shall be full compensation for furnishing all material, including reinforcing steel, and all of the equipment and labor required to erect the rail in accordance with these plans and current specifications.

All cast in place barrier rail concrete is to be Class D.

The joint sealer shall conform to Fed. Spec. TT-S00230 or TT-S00227 for type II, Class A or B.

All reinforcing is to be epoxy coated. The epoxy coating shall be in accordance with Article 415.03 B of the Standard Specifications.

DOWEL SETTING NOTE

The 6c1 bars shall be set as dowels in drilled holes. Holes are to be 10" deep. The dowels shall be installed in accordance with the manufacturer's recommendations. One of the two following systems shall be used as a bonding agent for the dowels:

- 1) Epoxy system. Drilled holes are to be 7/8"Ø. The epoxy grout shall be one of those approved in the I. D. O. T. Materials I. M. 491.11.
- 2) Grout system. Drilled holes are to be 2"Ø. The grout shall be Five Star Grout or an approved equal.

Cap screws shall conform to requirements of ASTM A-307 and shall be galvanized in compliance with ASTM A-153. Cap screws shall be installed in threaded steel inserts held in proper position by use of an assembly set in the concrete and allowing a minimum embedment of 2" for the cap screws. The components and procedure shall be subject to the approval of the Engineer.

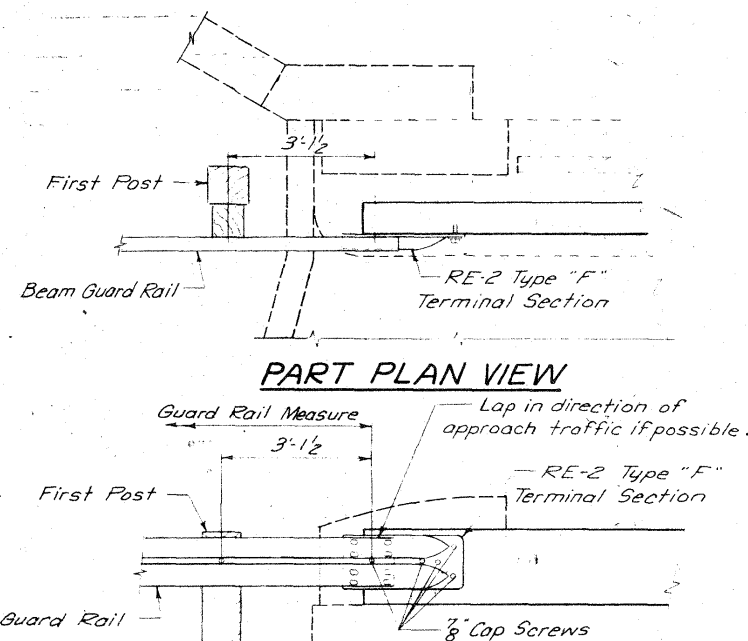
The cost of the RE-2 Type F terminal section, and cap screws shall be included in the price bid for "Cast in Place Barrier Rail".

DESIGN STRESSES:

Design stresses for the following materials are in accordance with the AASHTO Standard Specifications for Highway Bridges, Series of 1977.

Reinforcing Steel in accordance with Section 1.5.26 (B). Grade 40 fs = 20,000 psi.

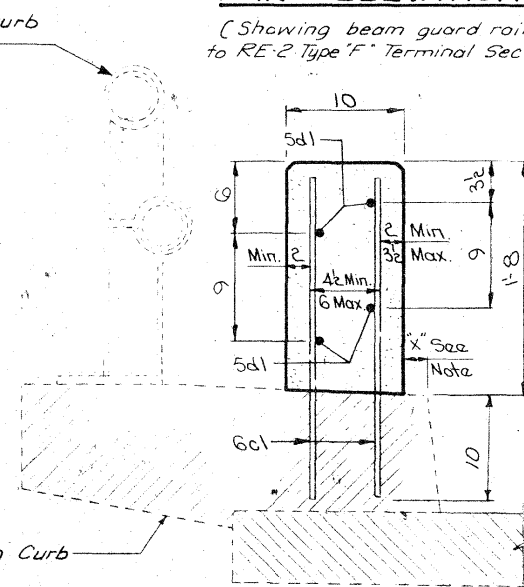
Concrete in accordance with Section 1.5.26 (A), f'c = 3,500 psi.



PART PLAN VIEW

PART ELEVATION VIEW

(Showing beam guard rail attachment to RE-2 Type 'F' Terminal Section)



PART SECTION C-C

CONCRETE PLACEMENT SUMMARY

Concrete	Total
320.0 @ 0.05 cy. per L.F.	16.0

CAST IN PLACE BARRIER RAIL QUANTITIES

Item	Unit	Quantity
Cast in place barrier rail	Lin. Ft.	320.0

LOCATION:

Jackson County
T-85N R-3E
Perry Twp.
Section 11
Iowa N° 62 over
Brush Creek
Maint. N° 4909.75062

Design For Bridge Repair To
159'-2 x 30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

43'-1/2' & 47'-3/2' End Spans 68'-9' Interior Span

CAST IN PLACE BARRIER RAIL DETAILS

Station: 512+10.00 (Iowa N° 62) Feb, 1980

JACKSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

Design Sheet No.: Of File No.: 26390 Design No.: 280

DESIGNED BY: C. Cole
CHECKED BY: M.C. Eyer

CAST IN PLACE BARRIER RAIL

STANDARD SHEET 1031

JACKSON COUNTY

PROJECT NUMBER: HES-ROS-0005(57)--20-D6
STATE: IOWA
FED. ROAD DIST. NO.: 5
FISCAL YEAR: 8
SHEET NO.: 5
TOTAL SHEETS: 6