

12/05/9

DECK REPAIR AND RETROFIT RAIL

HARRISON COUNTY

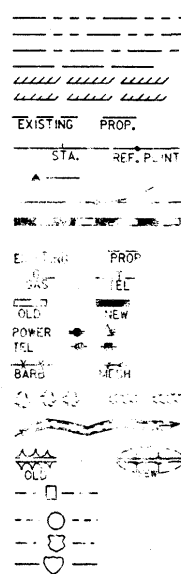
IR-29-5(59)86--12-43

43-029-40

#1840

891603
005059
005060

CONVENTIONAL SIGNS



885

STATE LINE
COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE
URBAN BOUNDARY
R.O.W. LINES
SURVEY LINES
SECTION CORNER
PROPOSED PROFILE GRADE
RAILROAD
FIELD CORNER
UNDEVELOPED LOTS
TOWNSHIP
UTAH BOUNDARY
FENCES
BUSHES OR BRUSH
STEEL
CITY
LOCAL ROAD NUMBER
PRIMARY ROAD NUMBER
U.S. ROAD NUMBER
INTERSTATE ROAD NUMBER

IOWA
DEPARTMENT OF TRANSPORTATION
Highway Division

PLANS OF PROPOSED IMPROVEMENTS ON THE
INTERSTATE ROAD SYSTEM
HARRISON COUNTY
DECK REPAIR AND RETROFIT RAIL
INTERSTATE 29 - OVER BURCHAM CREEK
2.8 MILES SOUTH OF IOWA 127

SCALE: As Noted

The standard specifications, series of 1984 of the Iowa Department of Transportation, shall apply to construction work on this project.

PLUS CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

STATE	FHWA REGION	F.Y.	SHEET	TOTAL
IOWA	7		1	16
PROJECT NUMBER				
IR-29-5(59)86--12-43				
R.O.W. PROJECT NUMBER				
PIN				
89-43-050-1				

INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATE SHEET
~~3-11~~	~~BRIDGE DESIGN NO. 989~~
12	BRIDGE DESIGN NO. 1289
13-18	ROAD SHEETS

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

Plan Preparation Supervised By: Jerry R. Ames
Resident Construction Engineer

Date: 12/27/94 Iowa Reg. No. 7232

REVIEWED AND FORWARDED TO AMES
Tony E. Jagerowicz Date 8-22-95
NWITC Construction Engineer

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

JAMES BUMP
District Engineer

AFTER MICROFILMING RETURN ORIGINAL
TO DISTRICT NO. 3

THIS AS BUILT PLAN INCLUDES

YEAR	WORK	CONTRACTOR	PROJ. INSPECTOR
1990	STRUCTURE	GRAMER ASSOC.	
1990	ACC. SHOULDERS	DELTA ASPHALT	
	FILE NO 885		LESTER DAVIS

STANDARD ROAD PLANS				STANDARD BRIDGE PLANS		
IDENT	DATE	IDENT	DATE	STANDARD	ISSUED	REVISED
RE-2A	02-17-87	RE-69	08-08-89			
RE-2B	04-04-89	RH-50	08-08-89			
RE-7	05-13-86	RH-51	08-08-89			
RE-12A	10-11-88	RH-52	08-08-89			
RE-12B	10-11-88	RK-17	02-17-87			
RE-47	11-10-87	RL-11	10-11-88			
RE-48A	08-20-85	RL-12	04-04-89			
RE-52	08-08-89	RS-62	10-11-88			
RE-53	10-11-88	RS-63A	08-08-89			
RE-65	04-04-89					
RE-67	04-04-89					
RE-68	08-08-89					

REVISIONS

Iowa Department of Transportation

AUTHORIZED FOR LETTING
Debra A. Anderson 10-4-89
DEPUTY CHIEF ENGINEER DATE

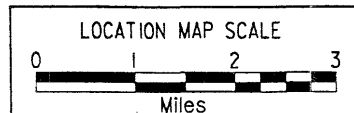
I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly Registered Professional Engineers under the laws of the State of Iowa.

Name Walter A. Anderson
Iowa Registration No. 4449 Date 10/19/89

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED

FOR THE DIVISION ADMINISTRATOR DATE

29(86)-1



* 150+

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA
DATE 10/13/89 GARY A. NOVEY REG. NO. 8704

*INCLUDES BRIDGE AND ROAD QUANTITIES

DESIGN 989 OVER BURCHAM CREEK STATION 1655+40.00
HARRISON COUNTY MAINTENANCE NO. 4386.5R029
SECTION 12 T 79 N R 45 W CLAY TOWNSHIP

DESIGN FOR REPAIRS TO NORTHBOUND LANE OF
TWIN 115'-0 X 39' CONTINUOUS
CONCRETE SLAB BRIDGE

GROUP 1

ESTIMATE OF QUANTITIES

NO.	ITEM	UNIT	TOTAL
1	CLASS A BRIDGE FLOOR REPAIR	SO. YDS.	78.74
2	BRIDGE FLOOR OVERLAY	SO. YDS.	823
3	TEMPORARY BARRIER RAIL - FURNISH ONLY	LIN. FT.	420
4	TEMPORARY BARRIER RAIL - PLACE ONLY	LIN. FT.	820
5	CONCRETE SEALER AS PER PLAN	SO. FT.	440
6	CONCRETE BARRIER RAIL - CAST IN PLACE	LIN. FT.	243.0
7	REMOVAL OF EXISTING HANDRAIL	L.S.	\$ 2,000.00
8	TRAFFIC CONTROL	L.S.	\$ 2,000.00
9	TEMPORARY FLOODLIGHTING	L.S.	\$ 2,000.00
10	REMOVE & REINSTALL STEEL BEAM GUARDRAIL	LIN. FT.	50
11	REMOVAL OF FORMED STEEL GUARDRAIL	LIN. FT.	475
12	REMOVAL OF POSTS	NO.	60
13	REMOVAL OF END ANCHORAGE	NO.	2
14	REMOVAL OF OBJECT MARKER	NO.	2
15	TYPE 3 OBJECT MARKER	NO.	2
16	FORMED STEEL BEAM GUARDRAIL	LIN. FT.	150
17	FORMED STEEL THRIE BEAM GUARDRAIL	LIN. FT.	93.75
18	BEAM GUARDRAIL POSTS	NO.	53
19	RE-69 BEAM GUARDRAIL END ANCHORAGE	NO.	3
20	RE-52 BEAM GUARDRAIL END ANCHORAGE	NO.	1
21	RE-53 BEAM GUARDRAIL END ANCHORAGE	NO.	1
22	3/4" TYPE "B" ASPHALT CEMENT CONCRETE BASE		
	CLASS 1	TONS	110.53
23	PAVEMENT MARKINGS	STA.	73.70
24	FULL DEPTH PATCH BY COUNT	NO.	0.0
25	FULL DEPTH PATCH BY AREA	SO. YDS.	0.0
26	EF JOINT ASSEMBLY	NO.	0.0
27	TRIPLE YELLOW OBJECT MARKER, AS PER PLAN	NO.	3
28	EMBANKMENT IN PLACE	CU. YDS.	15
29	MOBILIZATION	Lump Sum	\$ 3,000.00
30	FLAGGERS	DAY	0.50

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders

ITEM NO.	DESCRIPTION
1	INCLUDES 8 SO. YDS. OF CURB REPAIR.
1-2	SEE RK-17 AND RH-50 FOR DETAILS. QUANTITY ESTIMATE FOR 2-60' APPROACHES AT NORTHBOUND BRIDGE.
3-4	ALL TEMPORARY BARRIER RAIL SHALL BE NOMINAL 10' LONG CONCRETE UNITS.
6	INCLUDES 1069 L.F. OF NO. 5 BAR AND 1075 L.F. OF NO. 6 BAR OF EPOXY COATED REINFORCING STEEL, AND 15.3 CU. YDS. OF CLASS D CONCRETE.
8	FOR NORTHBOUND BRIDGE SEE TRAFFIC CONTROL LAYOUT SHEET TCP1.
9	SEE DETAIL SHEET 570-2 AND TRAFFIC CONTROL LAYOUT FOR MORE INFORMATION.
10-14	AS DIRECTED BY THE ENGINEER. SEE TAB. 110-7 FOR LOCATION AND INFORMATION. TO BE EXECUTED AS PER 204-2, 204-3 213-1 AND JRA-1.
15, 27	SEE TAB. 108-17 FOR MORE INFORMATION.
16-21	AS DIRECTED BY THE ENGINEER. SEE TAB. 108-8A, 107-23 AND 108-19. ALSO SEE 204-1 AND 251-2.
22	QUANTITY ESTIMATED FOR 4-3' X 195' X 8" ACC SHOULDER STRENGTHENING ADJACENT TO PAVEMENT. THIS STRENGTHENING WILL REMAIN IN PLACE UPON COMPLETION OF PROJECT. AC, TACK, TRENCHING, ETC. TO BE INCIDENTAL TO PRICE BID. SEE TCP-1 LAYOUT SHEET.
23	SEE TAB. 108-22 AND TCP-1 LAYOUT SHEET.
24-26	FOR REPLACEMENT OF PR JOINTS AS DIRECTED BY THE ENGINEER. SEE TAB. 102-6C.

(GROUP) DIVISION 1		
8001 Removal of CURB	ONLY	2
8002 OFFSET BRACKETS	ONLY	2
(GROUP) DIVISION 2		
8003 Removal of CURB	ONLY	2
8004 OFFSET BRACKETS	ONLY	2

DESIGN 1289 OVER BURCHAM CREEK STATION 1655+40.00
HARRISON COUNTY MAINTENANCE NO. 4386.5L029
SECTION 12 T 79 N R 45 W CLAY TOWNSHIP

DESIGN FOR REPAIR TO SOUTHBOUND LANE OF
TWIN 115'-0 X 39' CONTINUOUS
CONCRETE SLAB BRIDGE

GROUP 2

ESTIMATE OF QUANTITIES

NO.	ITEM	UNIT	TOTAL
31	CONCRETE BARRIER RAIL - CAST IN PLACE	LIN. FT.	243
32	REMOVAL OF EXISTING HANDRAIL	L.S.	\$ 2,000.00
33	TRAFFIC CONTROL	L.S.	\$ 2,000.00
34	REMOVE & REINSTALL STEEL BEAM GUARDRAIL	LIN. FT.	25
35	REMOVAL OF FORMED STEEL GUARDRAIL	LIN. FT.	112.5
36	REMOVAL OF POSTS	NO.	61
37	REMOVAL OF END ANCHORAGE	NO.	2
38	REMOVAL OF OBJECT MARKER	NO.	2
39	TYPE 3 OBJECT MARKER	NO.	2
40	FORMED STEEL BEAM GUARDRAIL	LIN. FT.	175
41	FORMED STEEL THRIE BEAM GUARDRAIL	LIN. FT.	93.75
42	BEAM GUARDRAIL POSTS	NO.	53
43	RE-69 BEAM GUARDRAIL END ANCHORAGE	NO.	3
44	RE-52 BEAM GUARDRAIL END ANCHORAGE	NO.	1
45	RE-53 BEAM GUARDRAIL END ANCHORAGE	NO.	1
46	TRIPLE YELLOW OBJECT MARKER, AS PER PLAN	NO.	3
47	EMBANKMENT IN PLACE	CU. YDS.	15
48	MOBILIZATION	Lump Sum	\$ 1,000.00
49	FLAGGERS	DAY	0.0

ESTIMATE REFERENCE INFORMATION

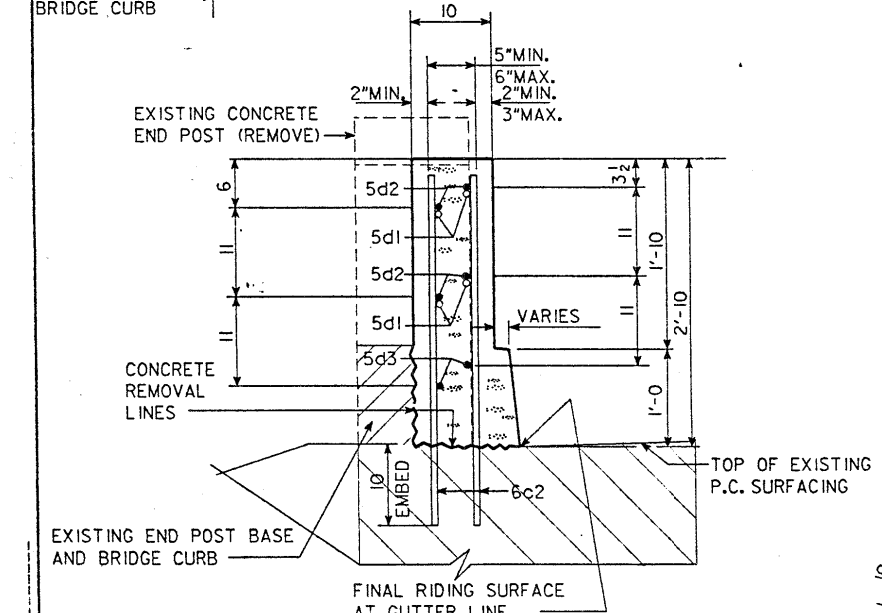
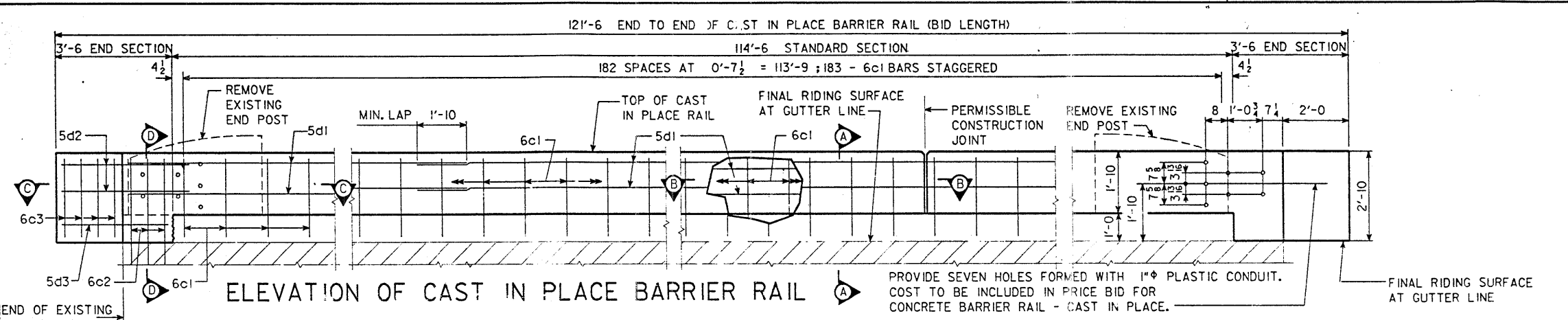
Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders

ITEM NO.	DESCRIPTION
1	INCLUDES 14.4 CU. YDS. OF CLASS D CONCRETE AND 2639 LBS. OF EPOXY COATED REINFORCING STEEL. REINFORCING STEEL COMPRISED OF 1069 L.F. OF #5 BAR & 1015 L.F. OF #6 BAR.
3	FOR SOUTHBOUND BRIDGE, USE RS-62 AND RS-63A LAYOUTS.
4-8	AS DIRECTED BY THE ENGINEER. SEE TAB. 110-7 FOR LOCATION AND INFORMATION. TO BE EXECUTED AS PER 204-2, 204-3, 213-1 AND JRA-1.
9, 16	SEE TAB. 108-17 FOR MORE INFORMATION.
10-15	AS DIRECTED BY THE ENGINEER. SEE TAB. 108-8A, 107-23 AND 108-19. ALSO SEE 204-1 AND 251-2

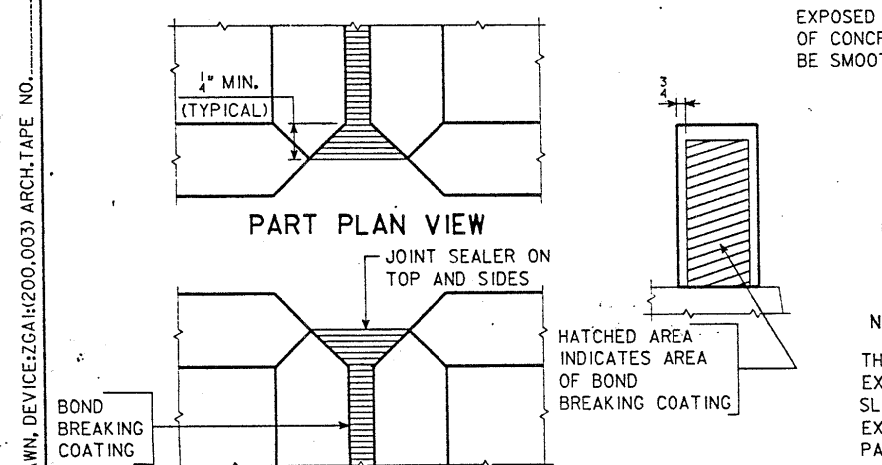
BRIDGE & ROAD
ESTIMATE SHEET

DATE _____
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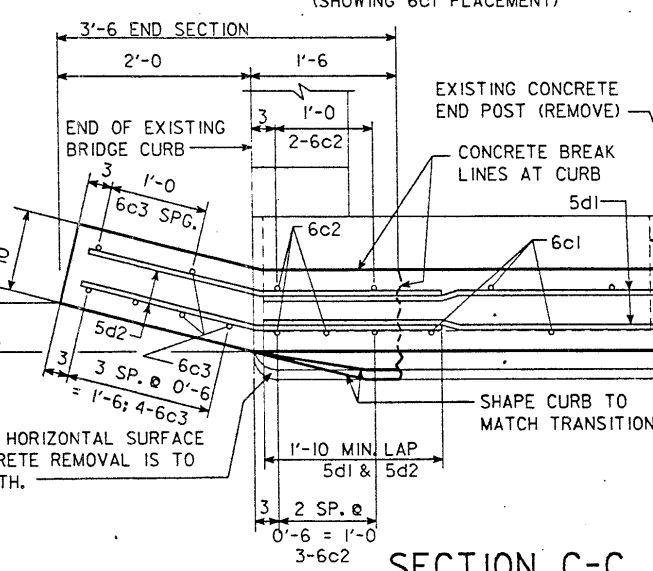
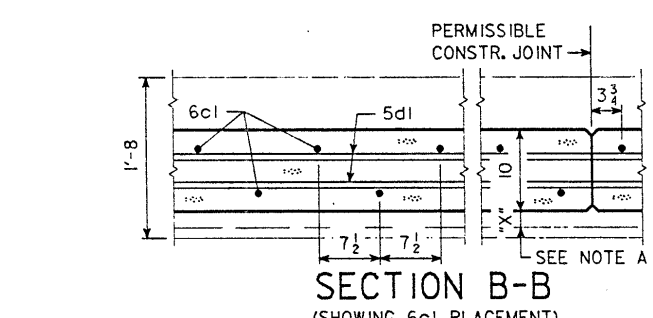
H431289, DEVICE : ZGAI:200.003 ARCH. TAPE NO. _____ DATE _____



NOTE: WHERE POSSIBLE EXISTING REINFORCING IN THE END OF CURB IS TO BE CAREFULLY EXPOSED AND INCORPORATED INTO NEW WORK.



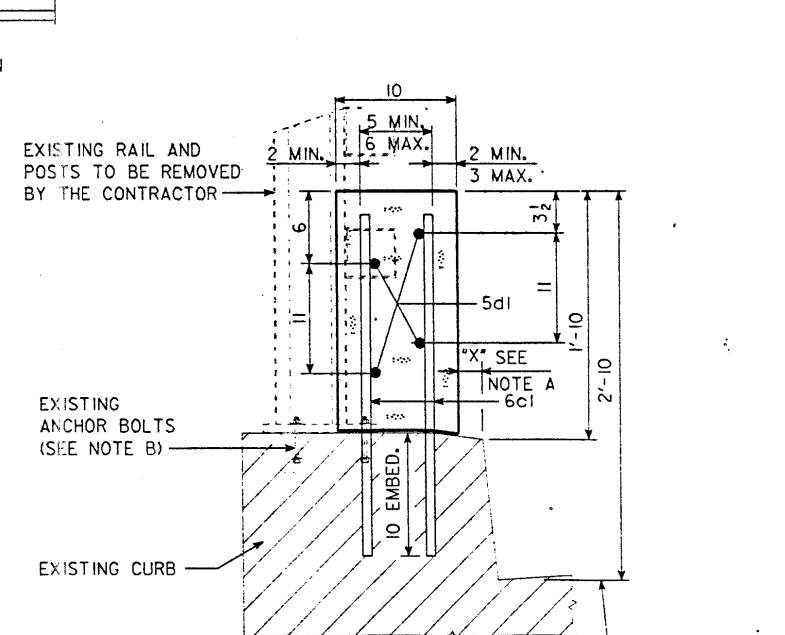
CAST IN PLACE BARRIER RAIL JOINT DETAILS



NOTE A:
ON EACH SIDE OF BRIDGE, DIMENSION "X" SHALL BE A MINIMUM OF 1" AND A MAXIMUM OF 3", BUT MUST BE CONSTANT FOR FULL LENGTH OF BRIDGE.

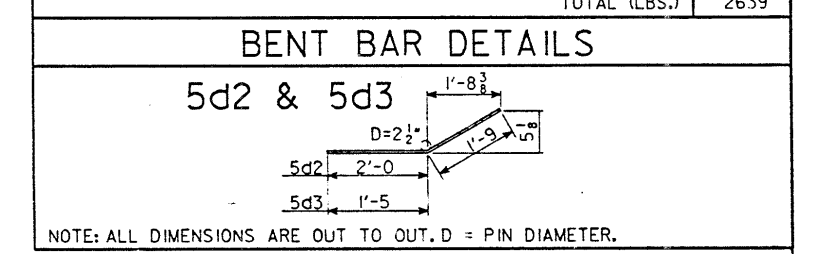
NOTE B:
EXISTING RAILS, RAIL POSTS, END POSTS AND PORTIONS OF THE END OF CURBS SHALL BE REMOVED. EXISTING BOLTS AND EXPOSED REINFORCING SHALL BE CUT OFF FLUSH WITH OR SLIGHTLY BELOW CONCRETE SURFACE AND THE REMAINING EXPOSED ENDS PAINTED WITH TWO COATS OF ZINC RICH PAINT. IF THE EXISTING ANCHOR BOLTS ARE STAINLESS STEEL, THEY MAY BE LEFT IN PLACE AT THE CONTRACTOR'S OPTION SUBJECT TO APPROVAL OF THE ENGINEER. THE COST OF REMOVAL OF EXISTING END POSTS, AND PORTIONS OF THE END OF CURBS AND CUTTING OFF AND PAINTING OF EXISTING ANCHOR BOLTS AND REINFORCING SHALL BE CONSIDERED INCIDENTAL TO THE COST OF REMOVAL OF EXISTING HANDRAIL. THE BID ITEM "REMOVAL OF EXISTING HANDRAILS" SHALL INCLUDE ALL COSTS ASSOCIATED WITH DISASSEMBLING EXISTING HANDRAIL (APPROX. 217 L.F. AND 26 POSTS).
ALL ELEMENTS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY HIM.

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.
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. ALL REINFORCING STEEL IS TO BE GRADE 60 AND EPOXY COATED. THE JOINT SEALER SHALL CONFORM TO FED. SPEC. TT-S00230 OR TT-S00227 FOR TYPE II, CLASS A OR B.
ANY REMOVALS AND DISPOSALS REQUIRED SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS. ANY DAMAGE TO OTHER PORTIONS OF THE EXISTING STRUCTURE NOT NOTED FOR REMOVAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED BY HIM AT NO COST TO THE STATE.
EXISTING BRIDGE RAIL IS NOT TO BE REMOVED UNTIL AUTHORIZED BY THE ENGINEER.



LOCATION:
MAINTENANCE NO. 4386.5L029
HARRISON COUNTY
T-79N R-45W
CLAY TWP.
SECTION 12
SOUTHBOUND I-29 OVER
BURCHAM DITCH

EPOXY REINFORCING STEEL-TWO RAILS						
BAR	LOCATION	SHAPE	NO.	LENGTH	LIN. FT.	WEIGHT
6c1	RAIL, VERTICAL		366	2'-5	885	1329
6c2	END SECTION, VERTICAL		20	3'-6	70	105
6c3	END SECTION, VERTICAL		24	2'-6	60	90
5d1	RAIL, LONGITUDINAL		32	30'-9	984	1026
5d2	END SECTION, LONGIT.		16	3'-9	60	63
5d3	END SECTION, LONGIT.		8	3'-2	25	26
TOTAL (LBS.)						2639



CONCRETE PLACEMENT SUMMARY	
SECTION	TOTAL
STANDARD SECTION 229.0' AT 0.057 CU. YDS. PER LIN. FT	13.1
END SECTIONS 4 AT 0.32 CU. YDS. PER SECTION	1.3
TOTAL (CU. YDS.)	14.4

TOTAL ESTIMATED QUANTITIES- TWO RAILS			
ITEM NO.	ITEM	UNITS	QUANTITY
1	CONCRETE BARRIER RAIL - CAST IN PLACE	LIN. FT.	243.0
2	REMOVAL OF EXISTING HANDRAIL	L.S.	LUMP SUM

ITEM NO. 1 ESTIMATE REFERENCE INFORMATION
INCLUDES 14.4 CU.YDS. OF CLASS D CONCRETE AND 2639 LBS. OF EPOXY COATED REINFORCING STEEL. REINFORCING STEEL COMPRISED OF 1069 L.F. OF #5 BAR & 1015 L.F. OF #6 BAR.

DESIGN HISTORY AT THIS SITE	
DES. NO.	TYPE OF WORK
1965	ORIGINAL DESIGN
1289	CAST IN PLACE BARRIER RAIL

DOWEL SETTING NOTE:
THE 6c1 & 6c2 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 FOLLOWING SYSTEMS SHALL BE USED AS A BONDING AGENT FOR THE DOWELS:
A. EPOXY GROUT SYSTEM IN ACCORDANCE WITH STANDARD SPECIFICATIONS ARTICLE 2301.15 AND CURRENT SUPPLEMENTAL SPECIFICATIONS OF THE IOWA D.O.T. HIGHWAY DIVISION.
B. HYDRAULIC CEMENT GROUT SYSTEMS. DRILLED HOLES ARE TO BE 2 1/2 TIMES THE DOWEL DIAMETER AND ARE TO BE BLOWN CLEAN WITH COMPRESSED AIR IMMEDIATELY PRIOR TO PLACING GROUT. THE HYDRAULIC CEMENT GROUT SHALL BE ONE OF THOSE APPROVED IN MATERIALS I.M. 491.13 AND SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DESIGN FOR REPAIR TO SOUTHBOUND LANE OF
TWIN 115'-0x39' CONTINUOUS CONCRETE SLAB BRIDGE
35'-0 END SPANS 45'-0 CENTER SPAN
CAST IN PLACE BARRIER RAIL DETAILS
STATION: 1655+40.00 (± 1-29) SEPTEMBER, 1989
HARRISON COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. 27886 DESIGN NO. 1289

TRAFFIC CONTROL PLAN

108-23
11-10-83

1. Through traffic will be maintained on the project at all times.
2. Traffic control on this project shall be in accordance with the RS series of Standard Road Plans found in Tab. 105-4 and appropriate Detail Sheets. For additional complementary information, refer to current supplemental specifications for traffic control.
3. Where possible, all post mounted signs shall be placed a minimum of 2 feet clear of the shoulder.
4. As directed by the engineer, the contractor shall cover existing signing that conflicts with construction zone signing.
5. All traffic control devices shall be furnished, erected, maintained and removed by the contractor.
6. The engineer may require modification of or additions to pavement marking details shown. Conflicting permanent edgelines or lanelines shall be removed and replaced with appropriate temporary lines. As applicable, permanent edgelines and lanelines shall be restored before the roadway is returned to normal traffic. Current 1984 Standard Specifications shall apply.
7. The location for storage of equipment by the contractor during non-working hours will be as approved by the engineer in charge of construction.
8. Proposed sign spacing may be modified, as approved by the engineer, to meet existing field restrictions or to prevent obstruction of the motorist's view of permanent signing.
9. Proposed changes in the traffic control plan (includes layout sheets) shall be reviewed with the Office of Construction before changes are made.
10. The bid item 'Traffic Control' shall include the cost for all traffic control measures required of the contractor except for those which are separate bid items or are incidental to other bid items.

204-1
1-20-84

The installation of each continuous piece of guardrail shall be completely functional within five consecutive working days. The following shall apply unless modified by the engineer:

Grading work, if necessary, shall be completed prior to the removal of any existing guardrail or the installation of new guardrail.

Removal of any existing guardrail and installation of new posts and beam rail, except for the approach end section, shall be completed on the same working day. Beam rail shall be fully connected to all posts and protected with a Type E terminal section plus Type II barricade with Type A warning light.

Not later than the next working day, concrete for the end anchorage (RE-52 or RE-53) shall be poured.

204-2
1-20-84

All holes resulting from operations of the contractor, including removal of guardrail posts, fence posts, utility poles, or foundation studies, shall be filled and consolidated to finished grade as directed by the engineer to prevent future settlement. The voids shall be filled as soon as practical--preferably the day created and not later than the following day. Any portion of the right-of-way or project limits (including borrow areas and operation sites) disturbed by any such operations shall be restored to an acceptable condition. This operation shall be considered incidental to other bid items in project.

JRA-1

If there is any usable guardrail (as determined by the engineer) remaining after the reinstallation is completed, it shall be hauled to and stockpiled at the local maintenance garage in an approved manner. The remaining rail and posts are to become the property of the contractor and disposed of as per 213-1. This work shall not be paid for separately, but included in the price bid for this project.

ESTIMATE REFERENCE INFORMATION

100-4
1-23-85

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
1.	For southbound bridge, use RS-62 and RS-63A layouts. For northbound bridge, see Traffic Control Layout Sheet, TCP1.
2.	See Detail Sheet 570-2 and traffic control layout for more information.
3-7.	As directed by the engineer. See Tab. 110-7 for location and information. To be executed as per 204-2, 204-3, 213-1 and JRA-1.
8,22.	See Tab. 108-17 for more information.
9-14.	As directed by the engineer. See Tab. 108-8A, 107-23 and 108-19. Also see 204-1 and 251-2.
15-16.	See RK-17 and RH-53 for details. Quantity estimate for 2-60' approaches at northbound bridge.
17.	Quantity estimated for 4-3' x 195' x 8" ACC shoulder strengthening adjacent to pavement. This strengthening will remain in place upon completion of project. AC, tack, trenching, etc. to be incidental to price bid. See TCP-1 layout sheet.
18.	See Tab. 108-22 and TCP-1 layout sheet.
19-21.	For replacement of PR Joints as directed by the engineer. See Tab. 102-6C.

204-3
8-20-85

All formed steel beam railing and posts that are to be removed and reinstalled on this project shall meet the approval of the engineer before reinstalling. Painted steel beam railing and painted posts shall not be used on this project.

213-1

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right of way, unless specifically stated in the plans or approved by the Engineer.

221-4
1-20-84

In order to avoid any unnecessary surface breaks or premature spalling the contractor is cautioned to exercise extreme care when performing any of the necessary saw cutting operations for the proposed pavement removal.

251-2
6-22-84

The contractor is hereby notified that removal of any existing traffic markers, warning devices or guardrail barriers shall be scheduled subject to the approval of the engineer. The contractor may be required to place temporary warning devices at certain locations where replacement features are not installed the same day during which any such removals take place.

EROSION CONTROL:

Following completion of work on this project seeding, fertilizing, and mulching of all disturbed areas shall be done as directed by the engineer.

SEEDING:

3 lbs. of Fescue, Kentucky 31 per 1000 sq. ft.

FERTILIZER:

15 lbs of 15-15-15 (or equivalent) chemically combined fertilizer per 1000 sq. ft.

MULCH:

70 lbs. of dry cereal straw per 1,000 sq. ft. All mulch to be consolidated into the soil with the mulch tiller.

The preparation of the seedbed, furnishing and application of seed and fertilizer to all disturbed areas on this project shall be considered incidental to work on this project and no extra compensation will be allowed.

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-2A	02-17-87	RE-52	08-08-89	RH-51	08-08-89
RE-2B	04-04-89	RE-53	10-11-88	RH-52	08-08-89
RE-7	05-13-86	RE-65	04-04-89	RK-17	02-17-87
RE-12A	10-11-88	RE-67	04-04-89	RL-11	10-11-88
RE-12B	10-11-88	RE-68	08-08-89	RL-12	04-04-89
RE-47	11-10-87	RE-69	08-08-89	RS-62	10-11-88
RE-48A	08-20-85	RH-50	08-08-89	RS-63A	08-08-89

ESTIMATED ROAD QUANTITIES

100-0
11-10-83

NO	ITEM	UNIT	BRIDGES		TOTAL
			Des. No. 989 (NB)	Des. No. 1289 (SB)	
1	Traffic Control	Lump Sum	Lump Sum	Lump Sum	See TCP
2	Temporary Floodlighting	Lump Sum	Lump Sum		Lump Sum
3	Remove & Reinstall Steel Beam Guardrail	Lin. Ft.	50	25	75
4	Removal of Formed Steel Guardrail	Lin. Ft.	475	112.5	587.5
5	Removal of Posts	No.	60	61	121
6	Removal of End Anchorage	No.	2	2	4
7	Removal of Object Marker	No.	2	2	4
8	Type 3 Object Marker	No.	2	2	4
9	Formed Steel Beam Guardrail	Lin. Ft.	150	175	325
10	Formed Steel Thrie Beam Guardrail	Lin. Ft.	93.75	93.75	187.5
11	Beam Guardrail Posts	No.	53	53	106
12	RE-69 Beam Guardrail End Anchorage	No.	3	3	6
13	RE-52 Beam Guardrail End Anchorage	No.	1	1	2
14	RE-53 Beam Guardrail End Anchorage	No.	1	1	2
15	Bridge Floor Overlay	Sq. Yds.	320		320
16	Class "A" Bridge Floor Repair	Sq. Yds.	75		75
17	3/4" Type "B" Asphalt Cement Concrete Base				
	Class 1	Tons	110		110
18	Pavement Markings	Sta.	33.83		33.83
19	Full Depth Patch by Count	No.	4		4
20	Full Depth Patch by Area	Sq. Yds.	32		32
21	EF Joint Assembly	No.	4		4
22	Triple Yellow Object Marker, As Per Plan	No.	3	3	6
23	Embankment in place	Cu. Yds.	15	15	30
SEE SHEET 2 FOR AS BUILT QUANTITIES					

101-4

DESIGN DATA RURAL

1989 AADT 6620 V.P.D.
200 AADT V.P.D.
200 DHV V.P.H.
TRUCKS %

ROADWAY DESIGN



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.

Name John R. Abrams
Iowa Registration No. 7229 Date 8/29/89

File No 27886 Design No 989 & 1289