

WRIGHT / FRANKLIN / CERRO GORDO / WORTH CO. IM-35-7(56)186--13-17

HMA RESURFACING

LETTING DATE



PLANS OF PROPOSED IMPROVEMENTS ON THE

INTERSTATE ROAD SYSTEM

WRIGHT / FRANKLIN / CERRO GORDO / WORTH COUNTY

HMA RESURFACING

ON I-35 IN FRANKLIN COUNTY FROM MP 174.7 (SB) and MP 175.2 (NB) TO MP 177.5 (NB & SB) AND ON I-35 FROM 3 MILES NORTH OF COUNTY ROAD B-60 (MP 185.32) TO 1.1 MILES NORTH OF COUNTY ROAD B-35 (MP 192.83) IN CERRO GORDO COUNTY

SCALES: As Noted

STANDARD ROAD PLANS					
The following Standard Road Plans shall be considered applicable to construction work on this project.					
NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
RC-16A	10-27-98	RE-69A	10-29-02	RR-19	04-30-02
RC-16B	09-21-99	RE-71(1)	04-15-03	RS-1	10-27-98
RE-2B	04-03-01	RE-71(2)	04-15-03	RS-2	10-27-98
RE-7	04-15-03	RE-72	04-15-03	RS-3	12-03-96
RE-12A	10-02-01	RE-76	10-29-02	RS-5C	04-30-02
RE-12B	10-02-01	RG-2	10-02-01	RS-61	10-27-98
RE-47	04-03-01	RH-50	04-27-99	RS-62	01-12-99
RE-48A	04-03-01	RH-51	04-30-02	RS-63A	10-29-02
RE-53	10-02-01	RH-52	08-20-96	RS-63B	04-15-03
RE-65A	10-29-02	RL-12	10-03-00	RS-65A	04-30-96
RE-67	10-02-01	RL-14	01-12-99	RS-65B	09-21-99
RE-68	04-15-03	RR-17	04-30-02	RS-80	10-29-02

The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, series 2001, plus applicable general Supplemental Specifications, Developmental Specifications, Supplemental Specifications and Special Provisions, shall apply to construction work on this project.

Value Engineering Saves. Refer to Standard Notation 203-4 on Sheet C.02.

MILEAGE SUMMARY			
DIV.	LOCATION	LIN. FT.	MILES
1	Rural: Cerro Gordo County		
	Sta. 426+00.0 to Sta. 809+75.0	38375.0	7.268
	Omit Bridge Sta. 479+96.7	146.0	0.028
	Equation: Sta. 501+42.7 (Back)		
	= Sta. 505+22.6 (Ahead)		
	Shortens Line	379.9	0.072
	Omit Bridge Sta. 561+79.0	146.0	0.028
	Omit Bridge Sta. 755+24.2	154.5	0.029
	Total Cerro Gordo HMA Resurfacing Project (One Way)	37548.6	7.111
	Rural: Franklin County		
	Sta. 1026+00 to Sta. 1173+72 (SB)	14772.0	2.798
	Sta. 1052+00 to Sta. 1173+72 (NB)	12172.0	2.305
	Omit Bridge Sta. 1117+24	134.7	0.025
	Total Franklin HMA Resurfacing Project (NB & SB)	26674.6	5.053
	Total HMA Resurfacing Project	101771.8	19.275

INDEX OF SHEETS	
NO.	DESCRIPTION
A.01	Title Sheet
A.02-A.03	Location Map
A.04-A.05	Route Map - For Information Only
B.01-B.06	Typical Cross Section - Existing
C.01-C.06	Estimate of Quantities and General Information
J.01-J.03	Traffic Control Sheets
U.01	500 Series Design Sheets
V.01-V.10	Bridge Situation Plans

See Sheets A.02-A.05 for Project Location Information

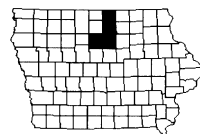
Form 520003 12-97

I hereby certify that this project was constructed in accordance with the contract documents, the "as-built" plans were prepared under my supervision, and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

John R. Abrams Feb. 2, 2006
Project Engineer Date

My license renewal date is December 31, 2006

03-04 Heartland Asphalt Larry Anderson
Year Contractor Project Inspector



Franklin County				Cerro Gordo County			
04-30-02		101-4		04-30-02		101-4	
DESIGN DATA RURAL				DESIGN DATA RURAL			
2001	AADT	<u>15,000</u>	V.P.D.	2001	AADT	<u>15,800</u>	V.P.D.
20	AADT	<u> </u>	V.P.D.	20	AADT	<u> </u>	V.P.D.
20	DHV	<u> </u>	V.P.H.	20	DHV	<u> </u>	V.P.H.
TRUCKS		<u>27</u>	%	TRUCKS		<u>26</u>	%
Total				Total			
Design ESALs		<u>17,000,000</u>		Design ESALs		<u>17,000,000</u>	

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.01	John R. Abrams	Primary Signature Block
V.01	Gordon L. Port	Structural Signature Block

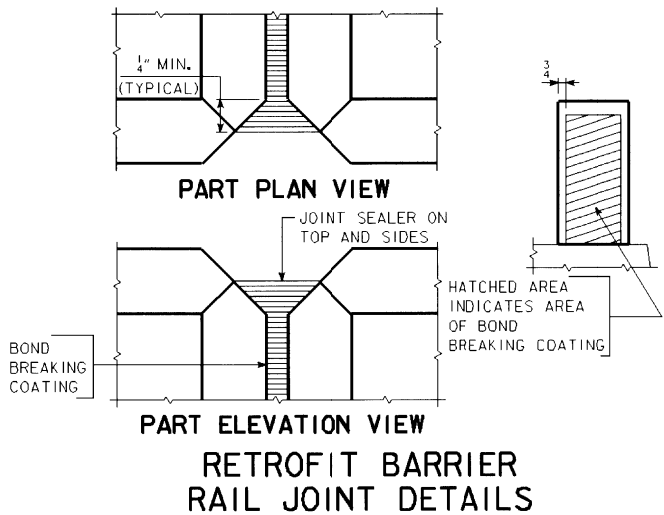
I hereby certify that this plan was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

John R. Abrams Date
Signature John R. Abrams

Printed or Typed Name

My license renewal date is December 31, 20 04

Pages or sheets covered by this seal: A.01, A.02-A.05, B.01-B.06, C.01-C.06, J.01-J.03, U.01



DOWEL SETTING NOTE :
THE 6c 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 2301.12 AND CURRENT SUPPLEMENTAL SPECIFICATIONS OF THE IOWA D.O.T.HIGHWAY DIVISION.
B. HYDRAULIC CEMENT GROUT SYSTEMS. DRILLED HOLES ARE TO BE 2½ 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.

NOTE A: (SEE SECTION A-A ON BARRIER RAIL LAYOUT SHEET).
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, HOWEVER APPROXIMATELY 10 LINEAL FEET AT EITHER END OF STANDARD RAIL SECTION SHALL BE TRANSITIONED TO 2" AT END SECTION AS SHOWN.

RETROFIT BARRIER RAILING 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 ¾" 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 RETROFIT BARRIER RAIL IS TO BE BID ON A LINEAL FOOT BASIS MEASURED FROM END TO END OF RAIL. THE NUMBER OF LINEAL FEET OF RETROFIT BARRIER RAIL INSTALLED WILL BE PAID FOR AT THE CONTRACT PRICE PER LINEAL FOOT BASED ON PLAN QUANTITIES. PRICE BID FOR RETROFIT CONCRETE BARRIER RAILING SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL (INCLUDING REINF. STEEL AND 1"Ø PLASTIC CONDUIT) PLUS ALL OF THE EQUIPMENT AND LABOR REQUIRED TO ERECT THE RAIL IN ACCORDANCE WITH THESE PLANS AND CURRENT SPECIFICATIONS.
ALL RETROFIT BARRIER RAIL CONCRETE IS TO BE CLASS D. ALL REINFORCING STEEL IS TO BE GRADE 60 AND EPOXY COATED. THE JOINT SEALER SHALL BE LIGHT GRAY NONSAG LATEX CAULKING SEALER MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED.
THE PRICE BID FOR "REMOVAL OF EXISTING HANDRAIL AND END POSTS" SHALL INCLUDE ALL COSTS ASSOCIATED WITH DISMANTLING THE EXISTING ALUMINUM HANDRAIL (APPROX. 622 L.F. AND 76 POSTS). THE RAILS AND POSTS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE BY THE CONTRACTOR. THE BID ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE EXISTING CONCRETE END POSTS AND THE CUTTING OFF AND PAINTING OF THE EXISTING RAIL POST ANCHOR BOLTS IF REQUIRED.
ANY REMOVALS 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 THE CONTRACTOR AT NO COST TO THE STATE.
EXISTING BRIDGE RAIL IS NOT TO BE REMOVED UNTIL AUTHORIZED BY THE ENGINEER.
THE CONTRACTOR IS ENCOURAGED TO TAKE FULL ADVANTAGE OF SPECIFICATION 1105.15 -- VALUE ENGINEERING INCENTIVE PROPOSAL. A PAMPHLET AND CONCEPTUAL PROPOSAL FORM WILL BE AVAILABLE AT THE PRECONSTRUCTION CONFERENCE.

DESIGN STRESSES :
THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 1996.
REINFORCING STEEL IN ACCORDANCE WITH SECTION 8, GRADE 60.
CONCRETE IN ACCORDANCE WITH SECTION 8, f'c = 3,500 PSI.

SPECIFICATIONS :
DESIGN : AASHTO SERIES OF 1996.
CONSTRUCTION : IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SERIES OF 2001, PLUS CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

CONCRETE PLACEMENT SUMMARY	
SECTION	TOTAL
STANDARD SECTION 618.0' AT 0.06 CU. YDS. PER LIN. FT	37.1
END SECTIONS 8 AT 0.8 CU. YDS. PER SECTION	6.4
TOTAL (CU. YDS.)	43.5

ESTIMATED QUANTITIES - FOUR BARRIER RAILS					
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUANTITY
1	2401-6745636	RMVL OF EXIST HANDRAIL + END POST	LS	1	1
2	2414-6431100	RETROFIT CONCRETE BARRIER RAIL	LF	677.3	677.3

ITEM NO.	ESTIMATE REFERENCE INFORMATION
1	INCLUDES 43.5 CU. YDS. OF CLASS D STRUCTURAL CONCRETE AND 7444 LBS. OF EPOXY COATED REINFORCING STEEL.

STRUCTURAL DESIGN

Gordon L. Port

6377

IOWA

DESIGN

PROFESSIONAL ENGINEER

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

Gordon L. Port

Date

Printed or Typed Name

My license renewal date is December 31,

Pages or sheets covered by this seal:

DESIGN SHEETS 1 AND 2 OF 2

DESIGN HISTORY AT THIS SITE

DES. NO.	TYPE OF WORK
2169	ORIGINAL DESIGN
576	OVERLAY
403	RETROFIT RAIL

LOCATION :

I-35 OVER
LOCAL ROAD B35
SECTIONS 29 & 20
T-96 N. R-21 W
LAKE TWP.
CERRO GORDO COUNTY

BRIDGE MAINTENANCE NO.
1791.7R035
1791.7L035

FHWA NO.
602340 (R)
602350 (L)

DESIGN FOR REPAIRS TO 17°08' SKEW (L.A.)

DUAL 151'-4 x 40' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

47'-5 END SPANS 56'-6 INTERIOR SPAN

RETROFIT BARRIER RAIL DETAILS

STATION : 755+24.20 (± 1-35) MARCH, 2003

CERRO GORDO COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. 29916 DESIGN NO. 403

HE1031T.S01 - 01-01 THIS SHEET ISSUED.

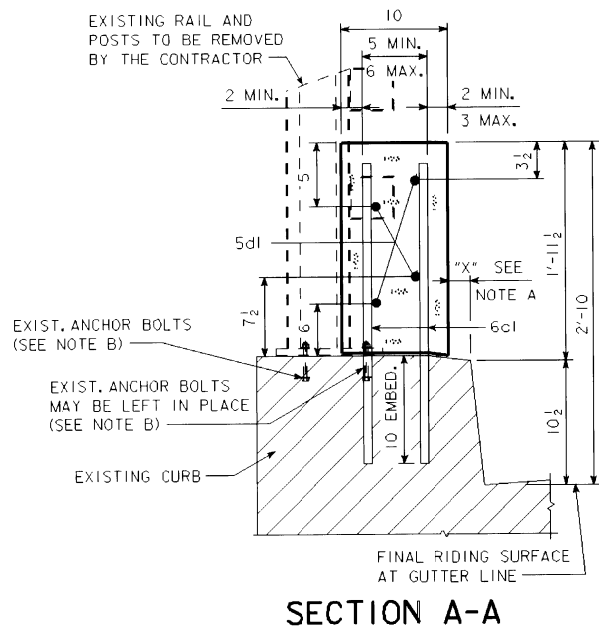
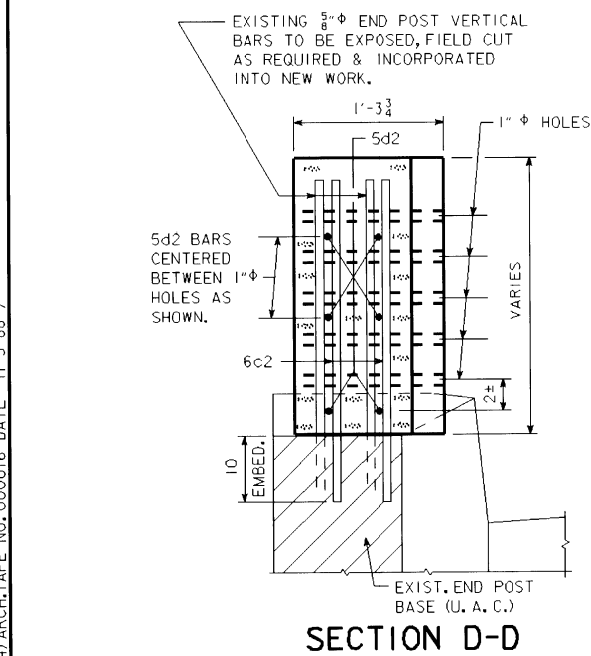
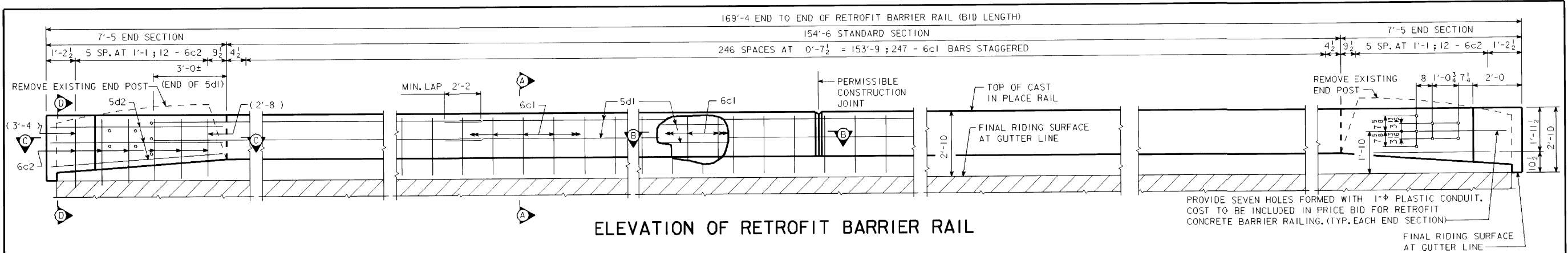
DESIGNED BY R. RYSAVY CHECKED BY R. REED
DETAILED BY CADD FILE h170403.s01

STANDARD SHEET 1031T

CERRO GORDO COUNTY

PROJECT NUMBER IM-35-7 (56) 186--13-17

SHEET NUMBER V09



NOTE A: (SEE STANDARD SHEET 1031T, DESIGN SHEET 1, IN THESE PLANS).

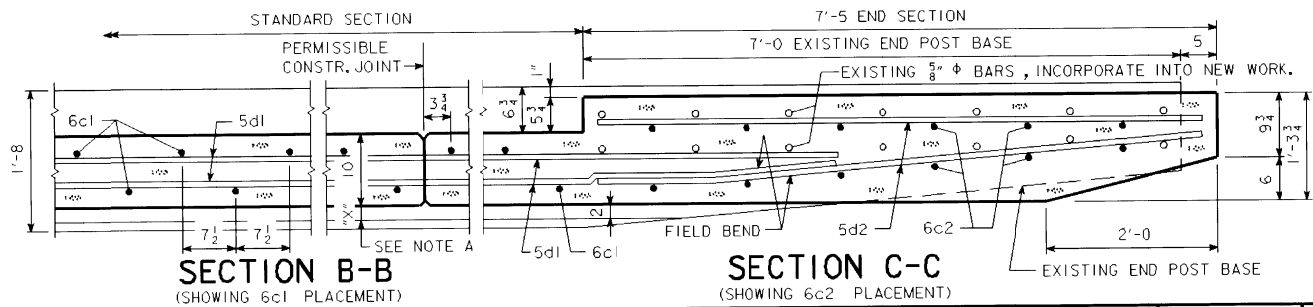
NOTE B:

EXISTING RAIL IS TO BE REMOVED. ANY ANCHOR BOLTS THAT WILL HAVE AT LEAST 2" OF CONCRETE COVER WHEN ENCOMPASSED BY THE NEW BARRIER RAIL MAY BE LEFT IN PLACE AT THE CONTRACTOR'S OPTION SUBJECT TO THE APPROVAL OF THE ENGINEER. ANY ANCHOR BOLTS NOT HAVING THE 2" MIN. COVER SHALL BE CUT OFF FLUSH WITH OR SLIGHTLY BELOW THE TOP OF CURB AND ENDS OF NON STAINLESS STEEL BOLTS PAINTED WITH TWO COATS OF ZINC RICH PAINT.

STAINLESS STEEL ANCHOR BOLTS OUTSIDE THE AREA OF NEW BARRIER RAIL MAY BE LEFT IN PLACE AT CONTRACTOR'S OPTION SUBJECT TO APPROVAL OF THE ENGINEER. STAINLESS STEEL BOLTS NEED NOT BE PAINTED.

NON STAINLESS STEEL ANCHOR BOLTS OUTSIDE THE AREA OF NEW BARRIER RAIL SHALL BE CUT OFF FLUSH WITH OR SLIGHTLY BELOW TOP OF CURB SURFACE AND THE REMAINING EXPOSED ENDS PAINTED WITH TWO COATS OF ZINC RICH PAINT.

EPOXY REINFORCING STEEL-FOUR RAILS					
BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
6c1	STANDARD RAIL, VERT.	—	988	2'-7	3833
6c2	END SECTION, VERTICAL	—	96	SHOWN	433
5d1	STANDARD RAIL, LONGIT.	—	80	33'-10	2823
5d2	END SECTION, LONGIT.	—	48	7'-1	355
TOTAL (LBS.)					7444



SEE STANDARD SHEET 1031T (DES. SHT 1) IN THESE PLANS FOR:

- RAIL JOINT DETAILS
- DOWEL SETTING NOTE
- RETROFIT BARRIER RAIL NOTES
- CONCRETE PLACEMENT SUMMARY
- ESTIMATED QUANTITIES BOX

DESIGN FOR REPAIRS TO 17°08' SKEW (L.A.)

DUAL 151'-4 x 40' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

47'-5 END SPANS 56'-6 INTERIOR SPAN

RETROFIT BARRIER RAIL DETAILS

STATION : 755+24.20 (CL 1-35) MARCH, 2003

CERRO GORDO COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. 29916 DESIGN NO. 403

REVISED 01-01 - CONC. PLACEMENT, QUANTITY, JOINT DETAILS AND NOTES MOVED TO STD. 1031T; HEI031T.C.S01 (HSTD1031.C.S01--LEP; THIS SHEET REDRAWN DEVICZHAQ(2004004) ARCH. TAPE NO. 000016 DATE 11-3-88)