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POWESHIEK COUNTY - DESIGN NO. 101

BRIDGE DECK OVERLAY
LETTING DATE
12-14-2002
IMN-80-5(217)184--OE-79

POWESHIEK COUNTY

CONVENTIONAL SIGNS

DIVIDED HIGHWAY
PAVED ROAD
BITUMINOUS ROAD
GRAVEL ROAD
EARTH ROAD

INTERSTATE HIGHWAY
UNITED STATES HIGHWAY
STATE HIGHWAY
COUNTY HIGHWAY

RAILROAD
PIPELINE
AIRPORT
HYDROLOGY
BRIDGE
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMIT LINE
TOWNSHIP LINE
SECTION LINE

Iowa Department of Transportation
Highway Division

PLANS OF PROPOSED IMPROVEMENTS ON THE
INTERSTATE ROAD SYSTEM
POWESHIEK COUNTY
BRIDGE DECK OVERLAY
ON I-80
OVER LOCAL ROAD

The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, series of 2001, plus current supplemental specifications and special provisions shall apply to construction work on this project.

Value Engineering Saves. Refer to General Notes on Sheet 2.

TOTAL SHEETS	26
PROJECT NUMBER	IMN-80-5(217)184--OE-79
R.O.W. PROJECT NUMBER	
PROJECT IDENTIFICATION NUMBER	99-79-020-1

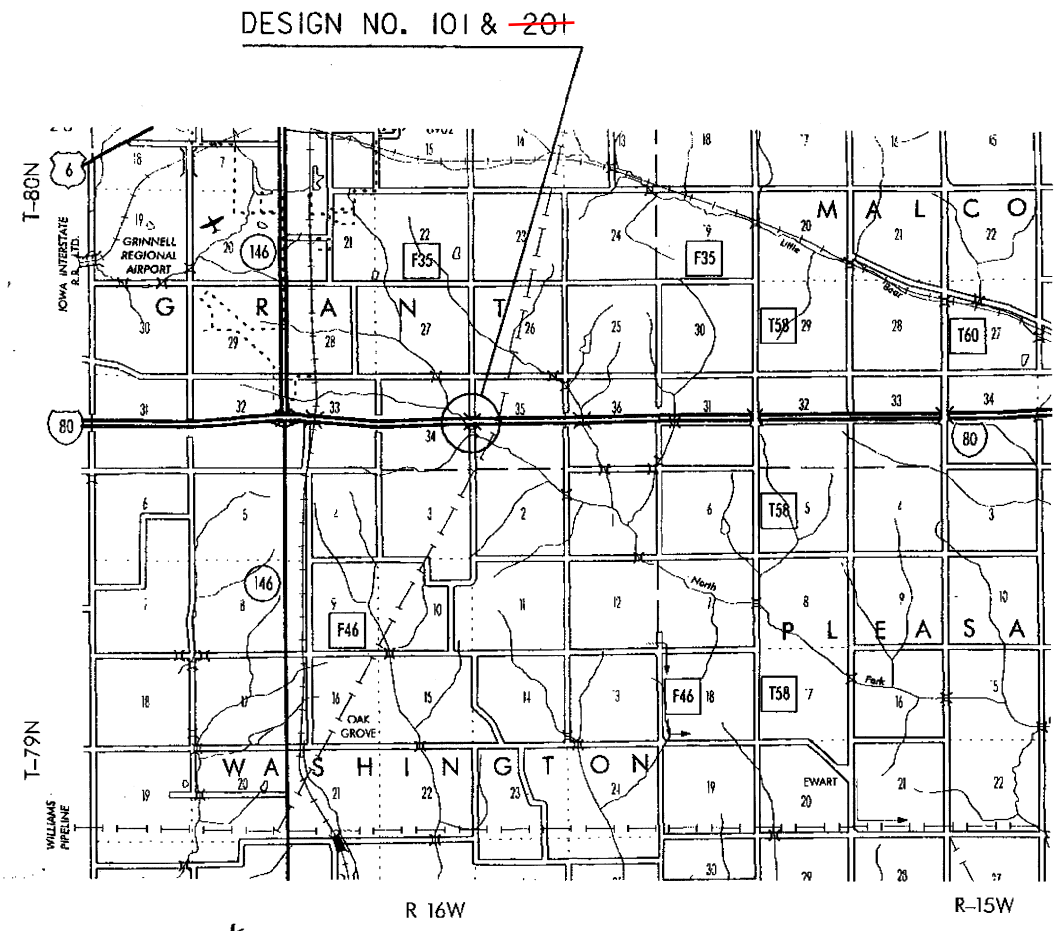
INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	BRIDGE ESTIMATE SHEET DES. NO. 101
2-6	BRIDGE DES. NO. 101
7	ROAD ESTIMATE SHEET DES. NO. 101
7-11	ROAD SHEETS DES. NO. 101
12	BRIDGE ESTIMATE SHEET DES. NO. 201
12-19	BRIDGE DES. NO. 201
20	ROAD ESTIMATE SHEET DES. 201
20-26	ROAD SHEETS DESIGN NO. 201

STANDARD ROAD PLANS

STANDARD ROAD PLANS ARE LISTED ON SHEETS 8 & 21 OF THESE PLANS.

DESIGN DATA RURAL

1999 AADT 25800 V.P.D.



Form 520003wd (11-03)

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.

Kenneth A. Yanna *Kenneth A. Yanna* 9-21-04
Project Engineer Date

My license renewal date is December 31, 2004.

2002 Cramer And Associates Douglas Ott
Year Contractor Project Inspector

DRAWING APPROVAL

ALL SHOP DRAWINGS AND FALSEWORK DRAWINGS THAT REQUIRE APPROVAL SHALL BE APPROVED BY WHKS & CO.
ADDRESS: P.O. BOX 1467
MASON CITY, IOWA 50402-1467

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
1	SURENDRA K. GUPTA	PRIMARY SIGNATURE BLOCK
7, 20	DANIEL J. COYLE	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.

Suren K. Gupta 9-28-01
Suren K. Gupta, P.E. Date

License Number 7329

My license renewal date is December 31, 2001

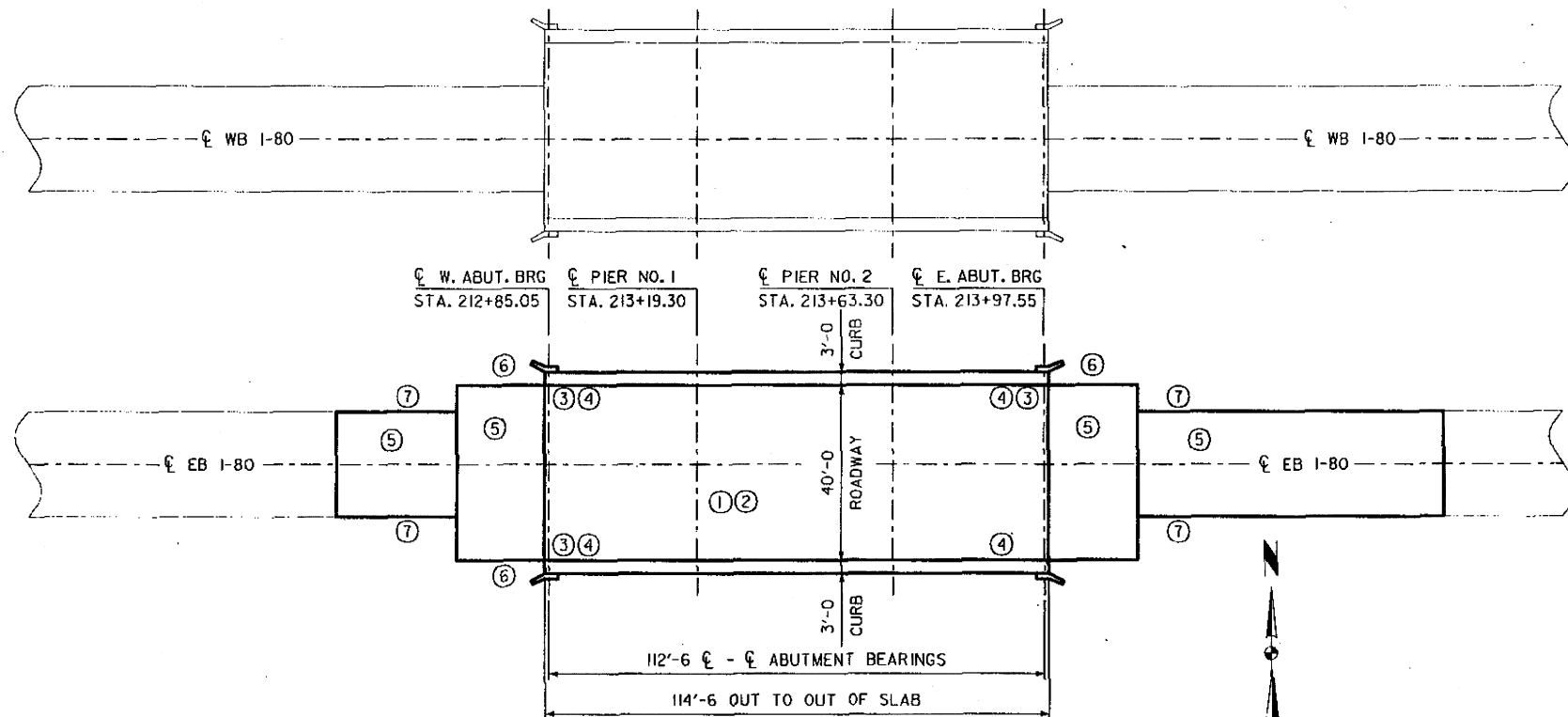
Pages or sheets covered by this seal:
SHEETS 1 thru 6 of 26 & 12 thru 19 OF 26

WHKS & CO.

ENGINEERS, ARCHITECTS, AND SURVEYORS

MASON CITY, IA DUBUQUE, IA AMES, IA ROCHESTER, MN

PROJECT DIRECTORY NAME: 7908002099



GENERAL NOTES:

THIS DESIGN IS FOR REPAIRS TO A 112'-6" X 40' CONTINUOUS CONCRETE SLAB BRIDGE ON EB I-80 OVER A LOCAL ROAD. THE BRIDGE HAS PREVIOUSLY HAD RETROFIT BARRIER RAILS INSTALLED. COPIES OF THE ORIGINAL DESIGN PLANS AND REPAIR PLANS WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT THE OFFICE OF CONTRACTS - HIGHWAY DIVISION - IOWA D.O.T. - AMES.

REPAIR SHALL CONSIST OF:

- ① BRIDGE FLOOR REPAIR, CLASS 'A'
- ② BRIDGE FLOOR OVERLAY
- ③ MODIFICATION OF BARRIER RAIL END SECTIONS
- ④ REMOVING EXISTING HANDRAILS AND ENDOSTS
- ⑤ REPLACING 47 FT. W. APPROACH & 90 FT. E. APPROACH PAVEMENT
- ⑥ REPLACING THE GUARDRAIL
- ⑦ SHOULDER STRENGTHENING

ALL DIMENSIONS AND DETAILS SHOWN ON THESE PLANS PERTINENT TO NEW CONSTRUCTION IN RELATION TO EXISTING PORTIONS OF THE STRUCTURE SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING CONSTRUCTION.

UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE BRIDGE CONTRACTOR OF THE STARTING DATE.

PLAN QUANTITY OF FLOOR REPAIR IS BASED ON TWO TIMES THE SHADED AREAS SHOWN ON THE 'DELAECT LAYOUT' IN THESE PLANS. SHADED AREAS REPRESENT CLASS A BRIDGE FLOOR REPAIR FOUND BY THE DELAECT. ACTUAL SPALLED AND HOLLOW AREAS AS DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION SHALL BE REPAIRED.

PRESENT FLOOR THICKNESS IS ABOUT 1 FEET 4 INCHES. THE CONTRACTOR SHALL EXERCISE CARE IN REMOVING CONCRETE IN ORDER TO PREVENT UNNECESSARY UNBONDING OF REINFORCING STEEL. THE ENERGY OF HAND TOOLS SHALL BE RESTRICTED NEAR THE BOTTOM OF THE DESIGNATED CLASS A REPAIR AREAS IN ORDER TO PREVENT UNBONDING OF REINFORCING. NO CONCRETE SHALL BE REMOVED BELOW THE TOP OF THE TOP LONGITUDINAL REINFORCING WITHOUT PRIOR PERMISSION FROM THE BRIDGE ENGINEER.

SITUATION PLAN

SURFACE RAISE, AS SHOWN ON THE PLANS, SHALL BE CONSIDERED A MINIMUM. IN ORDER TO LIMIT THE ADDITIONAL DEAD LOAD, SURFACE RAISE SHALL BE RESTRICTED TO A MAXIMUM OF 1/2 INCH MORE THAN SHOWN ON THE PLANS. PROFILE MAY BE ADJUSTED TO THE EXTENT POSSIBLE WITHIN THESE LIMITS.

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 2413.09, THE VERTICAL, ROADWAY FACE AND THE TOP OF THE EXISTING CONCRETE BARRIER RAILS, INSIDE FACE OF CURB AND 1'-0" OF ROADWAY SURFACE AT GUTTERLINE SHALL HAVE AN APPLICATION OF CONCRETE SEALER IN ACCORDANCE WITH SUB-ARTICLE 2403.21(D).

THE PRICE BID FOR 'REMOVAL OF EXISTING HANDRAIL AND END POSTS' SHALL INCLUDE ALL COSTS ASSOCIATED WITH DISMANTLING THE EXISTING ALUMINUM HANDRAIL (APPROX. 208 L.F. AND 28 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 AND EXISTING VERTICAL END POST REINFORCING, 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.

ALL CONCRETE REMOVAL LINES SHALL BE INITIATED WITH A 3/8 INCH SAWCUT.

CONSTRUCTION SHALL BE DONE IN STAGES WITH AT LEAST ONE LANE TRAFFIC MAINTAINED AT ALL TIMES IN ACCORDANCE WITH 'TRAFFIC CONTROL PLAN' NOTE.

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

AS BUILT BRIDGE QUANTITIES

Prop. Line	Item Code	Item Description	Units	Quantity Placed
10	2401-6745636	RMVL OF EXIST HANDRAIL+END POST	LS	1
20	2403-0100000	STRUCT CONC (MISCELLANEOUS)	CY	3
30	2404-7775005	REINFORC STEEL, EPOXY COATED	LB	568
40	2413-0698071	BRIDGE FLOOR OVERLAY	SY	508.889
50	2413-0698072	BRIDGE FLOOR REPAIR, CL A	SY	88.556
60	2528-8400047	TEMP BARRIER RAIL	LF	1,000.00
70	2533-4980005	MOBILIZATION	LS	1.0
605	6200-7000081	PRICE ADJASSESSMENT-SMOOTHNESS-OVERL	EACH	1.0

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 COST OF REMOVING EXISTING ALUMINUM HANDRAILS, END POSTS, ENDS OF EXISTING CONCRETE BARRIER RAIL AND A PORTION OF EXISTING CURBS.
2	ALL STRUCTURAL CONCRETE IS TO BE CLASS D.
4	INCLUDES COST OF FURNISHING AND PLACING CONCRETE SEALER.
6	ALL TEMPORARY BARRIER RAIL SHALL BE NOMINAL 12'-6" LONG CONCRETE UNITS.

EXISTING REINFORCING BARS THAT ARE EXPOSED BY CONCRETE REMOVAL SHALL BE CLEANED AND CAREFULLY INCORPORATED INTO THE NEW WORK WHERE NOTED OR SHOWN. REINFORCING BARS WHICH ARE DAMAGED OR RENDERED UNSERVICEABLE BY REMOVAL OPERATIONS SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

SPECIFICATIONS:

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

DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 1996, PLUS CURRENT INTERIM SPECIFICATIONS. CONCRETE IN ACCORDANCE WITH SECTION 8, $f'_c = 3,500$ PSI. REINFORCING STEEL IN ACCORDANCE WITH SECTION 8, GRADE 60.

DESIGN HISTORY AT THIS SITE

DES. NO.	TYPE OF WORK
5861	ORIGINAL DESIGN
477	RETRO BARRIER RAIL
101	OVERLAY & REPAIR

LOCATION:

MAINTENANCE NO. 7984.7R080
ON EASTBOUND I-80
OVER LOCAL ROAD
T-80N, R-16W
SECTION 34 & 35
GRANT TOWNSHIP
POWESHIEK COUNTY
FWHA # 046100

DESIGN FOR REPAIRS TO A 0° SKEW
**DUAL 112'-6" X 40' CONTINUOUS
CONCRETE SLAB BRIDGE**
OVER LOCAL ROAD

34'-3" END SPANS 44'-0" CENTER SPAN
SITUATION PLAN & QUANTITIES
STATION: 213+41.3 JULY 2001

POWESHIEK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 5 FILE NO. 29697 DESIGN NO. 101

WHKS & CO.

ENGINEERS PLANNERS LAND SURVEYORS
MASON CITY, IA DUBUQUE, IA AMES, IA ROCHESTER, MN

NOTE:
ROADWAY QUANTITIES SHOWN
ELSEWHERE IN THESE PLANS.

TRAFFIC CONTROL PLAN:
THE ROADWAY WILL BE OPEN TO THRU TRAFFIC.
REFER TO THE TRAFFIC CONTROL PLAN SHOWN
ELSEWHERE IN THESE PLANS.

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.

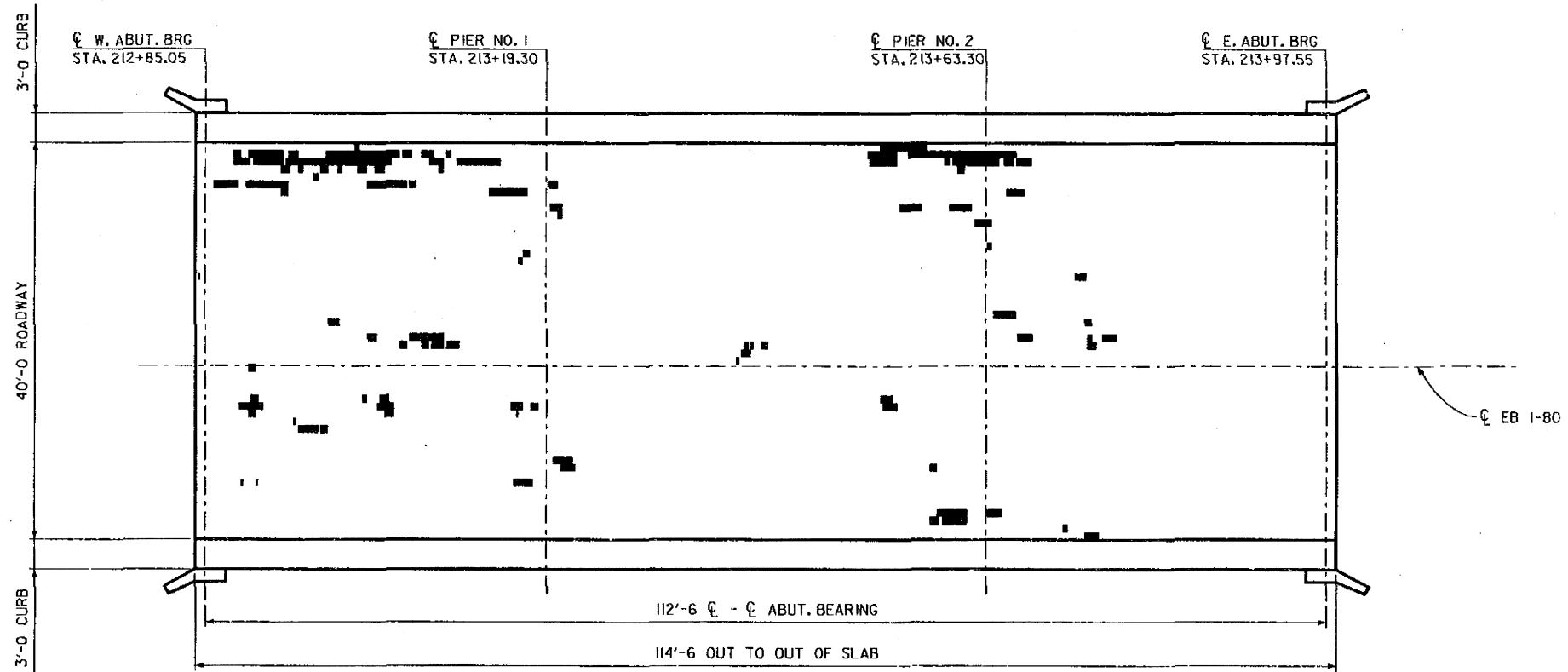
DESIGNED BY S.T.S. CHECKED BY S.K.G.
DETAILED BY M.A.F. CADD FILE H790101.S01

POWESHIEK COUNTY

PROJECT NUMBER IMN-80-5(217)184--0E-79

SHEET NUMBER 2/26

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DELAMTECT LAYOUT

SHADED AREAS = DELAMINATIONS > 400 mV = 117.9 SQ. FT. 2.66% DELAMINATED



DESIGNED BY S.T.S. CHECKED BY S.K.G.
DETAILED BY M.A.F. CADD FILE H790101.S02

POWESHIEK COUNTY

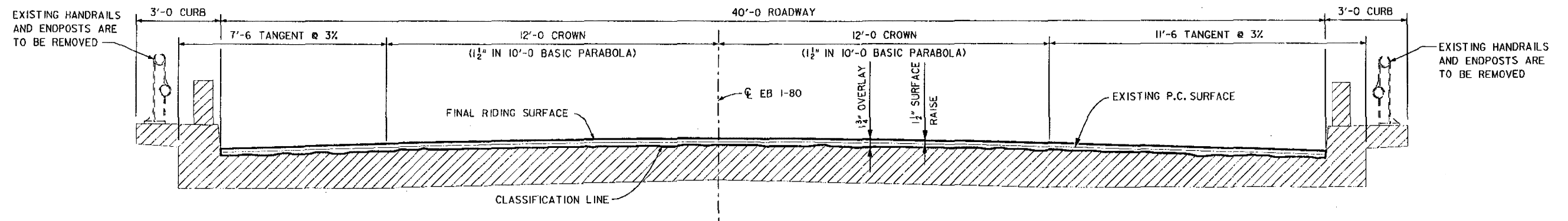
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IMN-80-5(217)184--0E-79

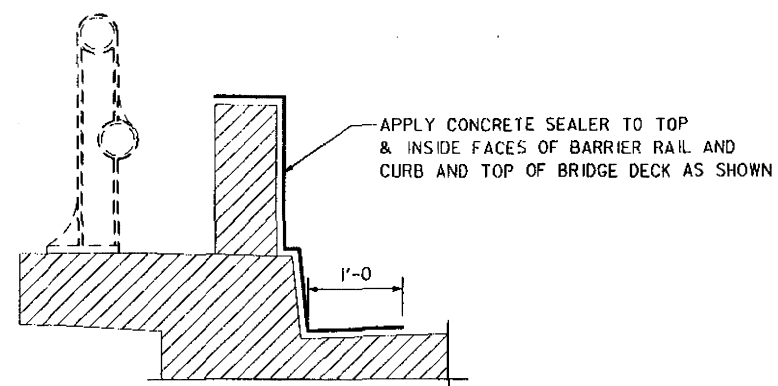
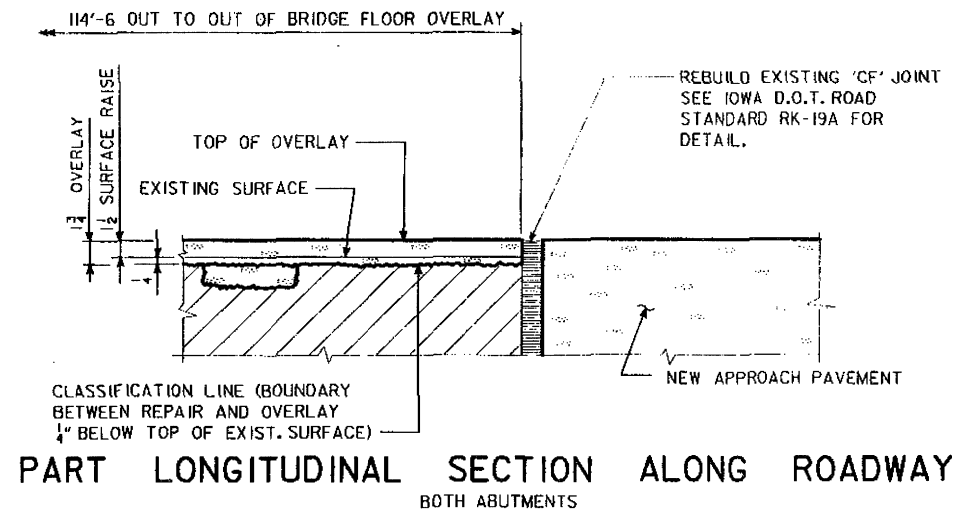
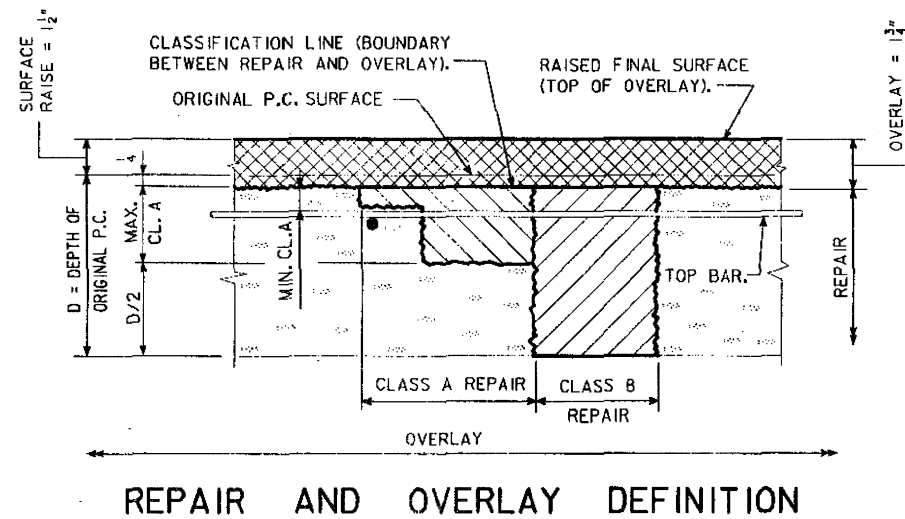
SHEET NUMBER

3/26

DESIGN FOR REPAIRS TO A 0° SKEW
**DUAL 112'-6 x 40' CONTINUOUS
CONCRETE SLAB BRIDGE**
OVER LOCAL ROAD
34'-3 END SPANS 44'-0 CENTER SPAN
DELAMTECT LAYOUT
STATION: 213+41.3 JULY 2001
POWESHIEK COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 2 OF 5 FILE NO. 29697 DESIGN NO. 101



TYPICAL CROSS SECTION
(LOOKING EAST)



CONCRETE SEALER PLACEMENT



DESIGNED BY S.T.S. CHECKED BY S.K.G.
 DETAILED BY M.A.F. CADD FILE H790101.S03

POWESHIEK COUNTY

PROJECT NUMBER

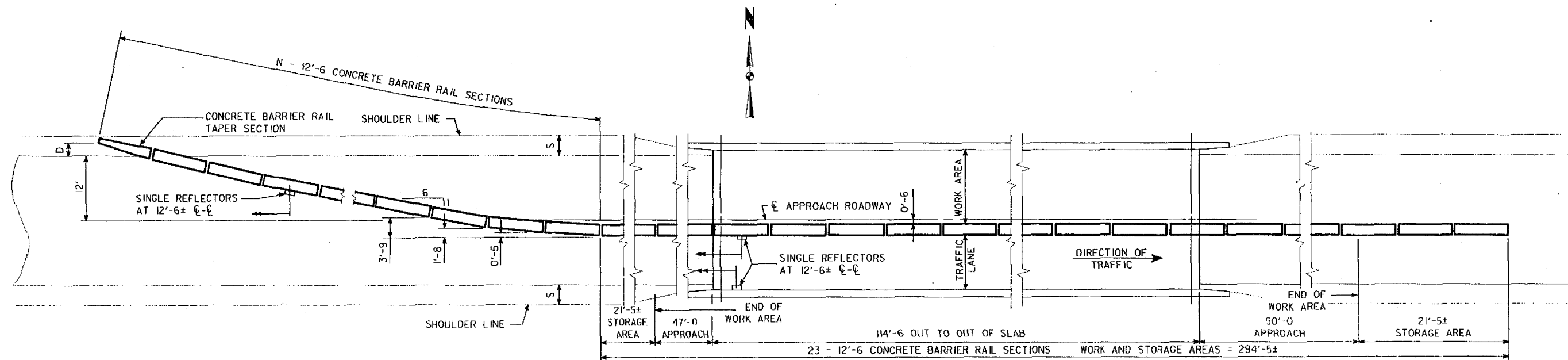
IMN-80-5(217)184--0E-79

SHEET NUMBER

4/26

DESIGN FOR REPAIRS TO A 0° SKEW
DUAL 112'-6" x 40' CONTINUOUS CONCRETE SLAB BRIDGE
 OVER LOCAL ROAD
 34'-3" END SPANS 44'-0" CENTER SPAN
DECK REPAIR DETAILS
 STATION: 213+41.3 JULY 2001
POWESHIEK COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 3 OF 5 FILE NO. 29697 DESIGN NO. 101

CHECKED BY S.K.G.
CADD FILE H790101.S04



TEMPORARY CONCRETE BARRIER RAIL LAYOUT FOR ONE WAY TRAFFIC

SHOULDER WIDTH (S)	NO. OF BARRIER RAIL SECT. (N)	D
4 FT.	11	4 FT.
6 FT.	12	5.5 FT.
8 FT.	12	7 FT.
10 FT.	13	9 FT.

SHOULDER WIDTH(S) AT THIS BRIDGE SITE ARE 10 & 6 FEET. THEREFORE 13 & 12 CONCRETE BARRIER RAIL SECTIONS ARE REQUIRED FOR THE APPROACH END OF THE BRIDGE.

CONCRETE TEMPORARY BARRIER RAIL NOTES:

CONCRETE TEMPORARY BARRIER RAIL SHALL BE CONSTRUCTED AS DETAILED AND NOTED ON THE ENGLISH RE-71(1), RE-71(2) AND RE-72 STANDARD ROAD PLANS.

A 12'-6" LANE SHALL BE AVAILABLE FOR TRAFFIC. SCREED EXTENSION OR OVERLAP BEYOND THE LONGITUDINAL CONSTRUCTION JOINT MAY BE LESS THAN THE 6 INCHES REQUIRED BY SUB-ARTICLE 2413.03C.1. THE ENGINEER MAY REQUIRE ADDITIONAL VIBRATION OR SPECIAL FINISHING PROCEDURES ADJACENT TO THE LONGITUDINAL CONSTRUCTION JOINT.

TRAFFIC REFLECTORS SHALL BE A RETRO-REFLECTIVE TYPE, APPROVED BY THE ENGINEER, AND THEY SHALL BE LOCATED AS SHOWN ON THIS SHEET. THE CONTRACTOR SHALL MAINTAIN THE REFLECTORS AND SHALL PROMPTLY REPLACE ANY MISSING OR DAMAGED UNITS. ALL COSTS FOR FURNISHING, INSTALLING AND MAINTAINING REFLECTORS SHALL BE INCLUDED IN THE PRICE BID FOR THE TEMPORARY BARRIER RAIL.

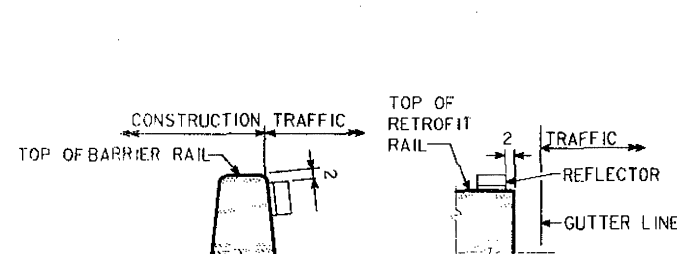
REFER TO OTHER DETAILS, NOTES, AND QUANTITY ITEMS ELSEWHERE IN THESE PLANS FOR TRAFFIC CONTROL TO BE ESTABLISHED IN CONJUNCTION WITH THE TEMPORARY BARRIER RAIL.

NO STATIONARY EQUIPMENT OR CONSTRUCTION MATERIAL IS TO BE PLACED IN FRONT OF THE TEMPORARY BARRIER RAIL AT ANY TIME.

TIE-DOWNS WITH CONCRETE ANCHORS ARE REQUIRED ONLY WHERE THE TEMPORARY BARRIER RAIL IS ADJACENT TO A DROP-OFF. HOLES FOR CONCRETE ANCHORS MAY BE DRILLED AFTER POSITIONING THE TEMPORARY BARRIER RAIL. IF CONCRETE ANCHORS ARE THE TYPE WHICH CAN BE SET AND REMOVED AT LEAST 1 1/2 INCHES BELOW THE CONCRETE SURFACE WITHOUT DAMAGING THE CONCRETE (PREFERRED ANCHOR TYPE), THE REMAINING HOLES, AFTER REMOVALS, SHALL BE FILLED WITH A NEAT MIXTURE OF SAND/CEMENT GROUT. OTHER ANCHOR TYPES MAY REQUIRE COMPLETE REMOVAL OF THE ANCHOR INCLUDING CONCRETE SURROUNDING THE ANCHOR. IF THIS IS NECESSARY, THE CONCRETE SHALL BE CORED OUT WITH A 2 INCH DIAMETER CORE BIT AND THE HOLE FILLED WITH NEAT MIXTURE OF SAND/CEMENT GROUT. COST FOR THE REMOVAL OF THE CONCRETE ANCHORS INCLUDING ANY CONCRETE REMOVAL NECESSARY, AND PLACEMENT OF THE SAND/CEMENT GROUT, WILL BE INCIDENTAL TO THE COST OF THE TEMPORARY BARRIER RAIL. THE CONCRETE ANCHORS ARE TO BE REMOVED ONLY AFTER THE TEMPORARY BARRIER RAIL IS NO LONGER NEEDED AT THE PARTICULAR LOCATION.

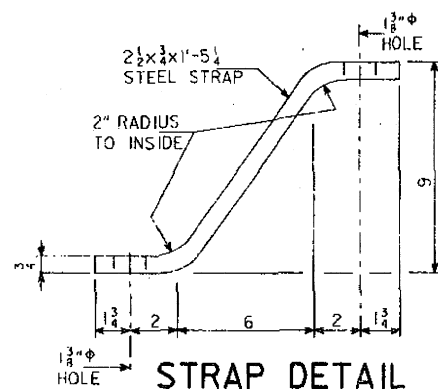
CONCRETE ANCHORS ARE TO BE A MINIMUM OF 1" DIAMETER AND AS OTHERWISE SPECIFIED IN THE CURRENT MATERIALS I.M. 453.09, WITH A PULL-OUT STRENGTH OF 22 KIPS BASED ON 4000 PSI CONCRETE.

ALL COSTS FOR TIE DOWNS SHALL BE INCLUDED IN THE PRICE BID FOR TEMPORARY BARRIER RAIL.

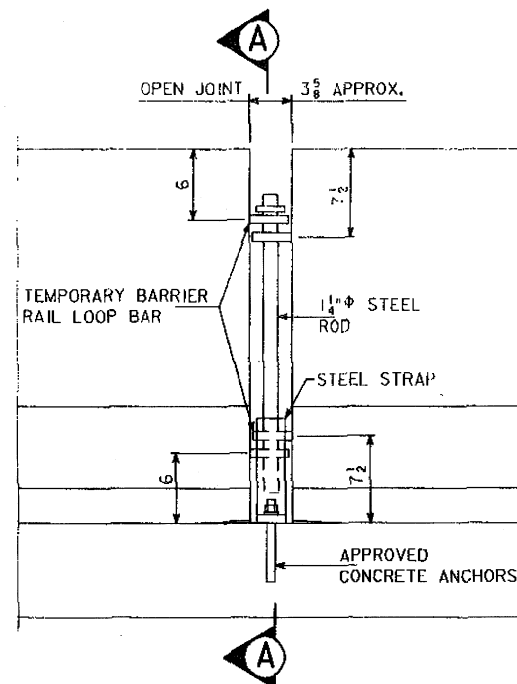


REFLECTOR DETAILS

NOTE: COLOR OF REFLECTOR SHALL BE APPROPRIATE FOR EDGE LINE.

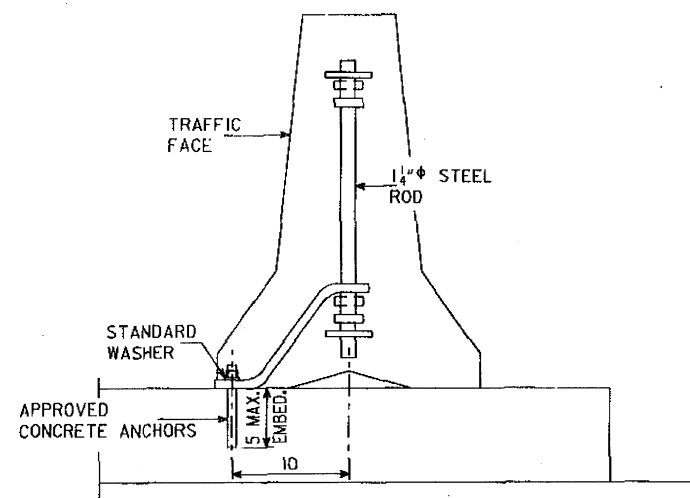


STRAP DETAIL



PART ELEVATION

TEMPORARY BARRIER RAIL TIE DOWN DETAILS



SECTION A-A

AS-BUILD QUANTITIES	
ITEM	AMOUNT
TEMPORARY BARRIER RAIL	1,000.00 LF

DESIGN FOR REPAIRS TO A 0° SKEW DUAL 112'-6" x 40' CONTINUOUS CONCRETE SLAB BRIDGE OVER LOCAL ROAD

34'-3" END SPANS 44'-0" CENTER SPAN

TEMPORARY BARRIER RAIL

STATION: 213+41.3

JULY 2001

POWESHIEK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 5 OF 5 FILE NO. 29697 DESIGN NO. 101

DESIGNED BY S.T.S. CHECKED BY S.K.G.
DETAILED BY M.A.F. CADD FILE H790101.S05

TEMPORARY BARRIER RAIL-CONCRETE

STANDARD 1049

POWESHIEK COUNTY

PROJECT NUMBER

IMN-80-5(217)84--OE-79

SHEET NUMBER

6/26

c:\dotbrda\5800.12\Poweshiek79\101\highway\1079101.s51
10/22/01

AS BUILT ROADWAY QUANTITIES

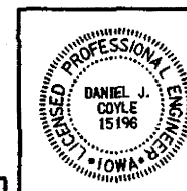
Prop. Line	Item Code	Item Description	Units	Quantity Placed
80	2102-2625000	EMBANKMENT-IN-PLACE	CY	25
90	2213-2713300	EXCAVATION, CL 13, WIDEN	CY	0
100	2301-0685100	BRIDGE APPROACH SECTION	SY	381.946
110	2505-4008100	RMV G'RAIL	LF	317
120	2505-4008200	INSTALL OF G'RAIL	LF	256.25
130	2505-4020153	G'RAIL, END ANCHOR, BEAM, RE-53	EACH	1
140	2505-4021690	G'RAIL, END ANCHOR, BEAM, RE-69B	EACH	3
150	2505-4021761	G'RAIL TERMINAL, BEAM, RE-76	EACH	1
160	2510-6745850	RMVL OF PAVT	SY	1,306.67
170	2527-9263111	PAINTED PAVT MARK, WATERBORNE	STA	50.888
180	2527-9263130	REMOVABLE TAPE MARK	STA	18
190	2527-9263180	PAVT MARK RMVD	STA	43.233
200	2528-8400157	TEMP FLOODLIGHTING LUMINAIRE	EACH	1
210	2528-8445110	TRAFFIC CONTROL	LS	1
220	2528-8445112	FLAGGER	DAY	0
230	2599-9999018	('SQUARE YARDS' ITEM) SHOULDER STRENGT	SY	0
240	2602-0000020	SILT FENCE	LF	0
250	2602-0000030	SILT FENCE-DITCH CHECKS	LF	0
565	2599-9999018	('SQUARE YARDS' ITEM) Shoulder Strengthening,	SY	939.999
575	2413-0698071	BRIDGE FLOOR OVERLAY	SY	180
595	2524-9700000	SIGN, INSTALL ONLY Advance Warning Signs	EACH	4

REFERENCE INFORMATION

100-4B
07-15-97

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

ITEM NO.	ITEM CODE	DESCRIPTION
8	2102-2625000	See Tabulation 107-23 on Sheet 9. Approved material shall be obtained by the contractor outside of the existing right-of-way. Seeding, fertilizing and mulching shall be furnished as per Standard Notation 232-11. Item includes a 118' x 20' area on the outside approach corner of the bridge.
9	2213-2713300	See Tabulation SS-1 on Sheet 10 for locations.
10	2301-0685100	See Standard Road Plans RK-19A, RK-19F, and Tabulation 112-6 on Sheet 9. Requires an estimated 98.0 tons of Modified Subbase and 466.8 Sq. Yds. Polymer Grid which shall be considered incidental to this bid item.
11	2505-4008100	See Tabulation 110-7A on Sheet 9. Stockpile existing guardrail and posts on site for pick up by IDOT Maintenance personnel. Removal of posts, nested guardrail, end anchorages, terminals, and object markers not measured for separate payment.
12	2505-4008200	See Tabulation 108-8A, 108-19 and 108-17 on Sheet 9. Installation of posts, nested guardrail, delineators, and object markers not measured for separate payment.
13	2505-4020153	
14	2505-4021690	
15	2505-4021761	
16	2510-6745850	See Tabulation 110-1 on Sheet 9. Pavement thickness may vary from that estimated. No additional payment shall be considered due to varying thicknesses. Includes 1098 L.F. of saw cut. Disposal shall be as per Standard Notes 213-1 and 213-7.
17	2527-9263111	See Tabulation 108-22 on Sheet 10.
18	2527-9263130	
19	2527-9263180	
20	2528-8400157	See Tabulation 108-27 on Sheet 10, Standard Road Plan RS-80, and Detail Sheet 570-2 for locations.
21	2528-8445110	See Tabulation 108-23 on Sheet 8 for Traffic Control Plan.
22	2528-8445112	
23	2599-9999018	See Tabulation SS-1 on Sheet 10 for locations. Refer to Section 2122.07 for method of measurement and Section 2122.08 for basis of payment.
24	2602-0000020	See Tabulation 100-17. Silt fence shall be used to protect and restore areas disturbed by necessary construction activities, as directed by the engineer. Item includes 118 linear feet (nominal) on the outside approach corner of bridge. Contractor parking and staging areas shall be restored by the contractor at no expense to the Department.
25	2602-0000030	See Tabulation 100-18. Silt fence shall be used to protect and restore areas disturbed by necessary construction activities, as directed by the engineer. Item includes 34 linear feet (nominal) to be placed in the median to the east of bridges. Contractor parking and staging areas shall be restored by the contractor at no expense to the Department.
565	2599-9999018	SEE ITEM # 23 FOR LOCATION, PRICE ADJUSTMENT FOR ITEM
575	2413-0698071	SEE ITEM # 37 ON PAGE 20 FOR LOCATION AND SPECIAL NOTES
595	2524-9700000	ADDITIONAL TRAFFIC CONTROL SIGNS FOR ADVANCED WARNING



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.

Signature: *Daniel J. Coyle* Date: *22 OCT 01*

Printed or Typed Name: Daniel J. Coyle

My license renewal date is December 31, 2001

Pages or sheets covered by this seal: 7 thru 11

DESIGN NO. 101
FILE NO. 29697

DESIGN TEAM

WHKS & CO.

IOWA DOT • OFFICE OF DESIGN

POWESHIEK

COUNTY

PROJECT NUMBER

IMN-80-5(217)184--OE-79

SHEET NUMBER

7/26

203-2

Type of Work

204-2

213-1

213-7

ens of

- NOTES**

221-

232-1

232-8

232-10

232-1

2 bu. per acre
1 bu. per acre
5 lbs. per acre
5 lbs. per acre

3 bu. per acre

3 bu. per acre
35 lbs. per acre
5 lbs. per acre
5 lbs. per acre

2 bu. per acre

2 bu. per acre
2 bu. per acre
5 lbs. per acre
5 lbs. per acre

valent chemically

crop by September
mulched. All mulch
mulch stabilizer
erosive soils may

CPA

Application of seed
project shall be
no extra com

251-

253-

262-

W-

108-26
08-30-88

ment

108-23
04-04-89

- Reviewed
e.

105-2
12-03-9

work on this project.

[illegible]

9. 101
29697

TABULATION OF STEEL BEAM GUARDRAIL AT BRIDGE END POST, CONCRETE BARRIER AND RAILROAD SIGNALS

Refer to Standard Road Plans RE-63, RE-65A and RE-65B

108-8A
10-02-01

LOCATION				STANDARD ROAD PLAN	CASE	L2	LAYOUT LENGTHS				MATERIALS REQUIRED					BID ITEMS					REMARKS			
No.	Direction of Traffic	End	Side				Station	STS	VT	VF	ET	STS		VT+VF+ET	Posts ④	Posts ⑤	CRT Posts	Installation of Guardrail	Anchorage and Terminal Systems					
												Thrie Beam	Transition Section						③	RE-33B		RE-69A	RE-69B	RE-76
												①	A=Approach T=Trailing						O = Outside M = Median					
				F or S	Feet	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	No.	No.	No.	Lin. Ft.	No.	No.	No.	No.				
1	EB	A	O	213+41.3	RE-65A	F		18.75	---	---	37.5	25.0	6.25	37.5	7	2	5	56.25	---	---	1	1		

- ① Lane(s) to which the obstacle is adjacent.
- ② Applies to Standard Road Plan RE-63 only.
- ③ Includes (2) special 12.5' sections of 'V' Beam, see Standard Road Plan RE-76.
- ④ (6) 6"x 8"x 7' posts required when Standard Road Plan RE-63 is specified.
- ⑤ The last two posts of the RE-76 Terminal section are included as part of that bid item.

TABULATION OF STEEL BEAM GUARDRAIL FOR STANDARD ROAD PLAN RE-67

108-19
10-02-01

LOCATION			(A) APPROACH SIDE LAYOUT LENGTHS				(T) TRAILING SIDE LAYOUT LENGTHS					MATERIALS REQUIRED								BID ITEMS				<div>① Lane(s) to which the obstacle is adjacent. ② Excess rail has been supplied for field adjustment at this point. This section will be divisible by 6.25'. ③ Includes (1) 12.5' long 5' radius section.</div>
No.	Direction of Traffic	STATION	(STS) (18.75) Lin. Ft.	Section for Skewed Bridge Lin. Ft.	Curve # 1 Lin. Ft.	RE-53 Section (12.5) Lin. Ft.	Tangent Section Lin. Ft.	Curve # 2 Lin. Ft.	Section for Skewed Bridge Lin. Ft.	Adjustment Section Lin. Ft.	(STS) (18.75) Lin. Ft.	STS		'W' Beam	Posts				Installation of Guardrail (A) + (T) Lin. Ft.	Anchorage and Terminal Systems				
												Thrie Beam (50.0') Lin. Ft.	Transition Section (2) + (6.25') Lin. Ft.	(A) + (T) -37.5' Lin. Ft.	6"x 8"x 7' with 6"x 8" Spacer Blocks (14) No.	6"x 8"x 6' with 6"x 8" Spacer Blocks (2) No.	6"x 8"x 6' without Spacer Blocks (1) No.	6"x 8"x 6' without Spacer Blocks (1) No.		RE-53 No.	RE-69A No.	RE-69B No.		
1	EB	213+41.3	18.75	---	75	12.5	12.5	43.75	---	18.75	18.75	50	12.5	162.5	14	28	2	1	200	1	---	2	West side of dual bridges	

- ① Lane(s) to which the obstacle is adjacent.
- ② Excess rail has been supplied for field adjustment at this point. This section will be divisible by 6.25'.
- ③ Includes (1) 12.5' long 5' radius section.

REMOVE BEAM GUARDRAIL

110-7A
10-02-01

① Lane(s) to which the installation is adjacent.

10-02-01

LOCATION				STEEL BEAM GUARDRAIL	POSTS	END ANCHORAGE		REMARKS
No.	① Direction of Traffic	Station	Side	Remove	Remove	Remove	Type	
				Lin. Ft.	No.	No.		
1	EB	213+41.3	A-0	62.5	13	1	RE-52	
2	EB		M	192.00	35			
3	EB		T-0	62.5	13	1	RE-52	

TABULATION OF GRADING FOR GUARDRAIL INSTALLATIONS

107-23
04-27-99

① Lane(s) to which the installation is adjacent.											② Refer to Standard Road Plans RL-12, RL-14, and Typicals 4303 or 4308.					04-27-99
LOCATION POINT				TYPE	DIMENSIONS ②				CLASS 10 EXCAV.	EMBANK. IN PLACE	PIPE			REMARKS		
No.	① Direction of Traffic	Station	SIDE		③ BY		④				Size	Type	Length			
					Feet		Feet									
					A	T	A	T							Lin. Ft.	
1	EB	213+41.3	0	1	9		49.86			25						

TABULATION OF BRIDGE APPROACH SECTION

Refer to Standard Road Plans RE-19E, RE-19, RE-19A, RE-19B, RE-19C, RE-19D, RE-19E, RE-19F, RE-19G, RE-19H, or RE-19J

① Not a bid item

112-6
10-03-00

LOCATION		APPROACH PAVEMENT				Fixed or Movable Abutment F or M	SUBDRAIN				APPROACH SUBGRADE		REMARKS	
Bridge Station	End	Ⓣ Thickness Inches	Pay Length Feet	Non-Reinf. Pavement Area Sq. Yds.	Reinforced Pavement Area Sq. Yds.		Perforated Subdrain ① 4" Lin. Ft.	Subdrain Outlet ①		Porous ① Backfill Cu. Yds.	Class 'A' Crushed Stone ① Backfill Cu. Yds.	Modified Subbase ① Tons		Polymer Grid ① Sq. Yds.
								Station	Side					
213+41.3	West	12	47	184.723 (66.5x25)		F						36.5	173.7	
213+41.3	East	12	90	197.223 (71x25)		F						61.6	293.1	

TABULATION OF DELINEATORS AND OBJECT MARKERS

Refer to Standard Plans RE-48A-B and RE-29C

108-17
04-28-98

LOCATION		DELINEATOR	OBJECT MARKER			REMARKS
Station	Type#	Single White D-W	Type 2 DM-3YV	Type 3		
		Number		DM-3L	DM-3R	
		Number	Number	Number		
213+41.3	3				1	
	4				1	

REMOVAL OF PAVEMENT

* Not a bid item.

110-1
04-27-99

STATION TO STATION		PAVEMENT TYPE	AREA Sq. Yds.	SAW CUT Lin. Ft.*	REMARKS
213+41.3		◇	177.334		West Bridge Approach
		◇	187.334		East Bridge Approach
		◇	282.121	253	Outside Approach Shoulder
		◇	264.444	296	Outside Trailing Shoulder
		◇	200.000	253	Median Approach Shoulder
		◇	193.333	296	Median Trailing Shoulder
		TOTAL	1306.67		

◇ Plans indicate that pavement thickness is 14" PCC Thickness may vary.

DESIGN NO. 101
FILE NO. 29697

DESIGN TEAM

WHKS & CO.

IOWA DOT • OFFICE OF DESIGN

POWESHIEK

COUNTY

PROJECT NUMBER

IMN-80-5(217)184--0E-79

SHEET NUMBER

9/26