STATE	FHWA Region	F.Y.	SHEET	TOTAL
IOWA	7		1	10

PROJECT NUMBER
FN-62-1(10)--21-49

R.O.W. PROJECT NUMBER

PIN NUMBER

IOWA
DEPARTMENT OF TRANSPORTATION
Highway Division

PLANS OF ~~PROPOSED~~ IMPROVEMENTS ON THE

PRIMARY ROAD SYSTEM
JACKSON COUNTY

BRIDGE DECK REPAIR

2½ MILES N.E. OF ANDREW ON IA. NO. 62

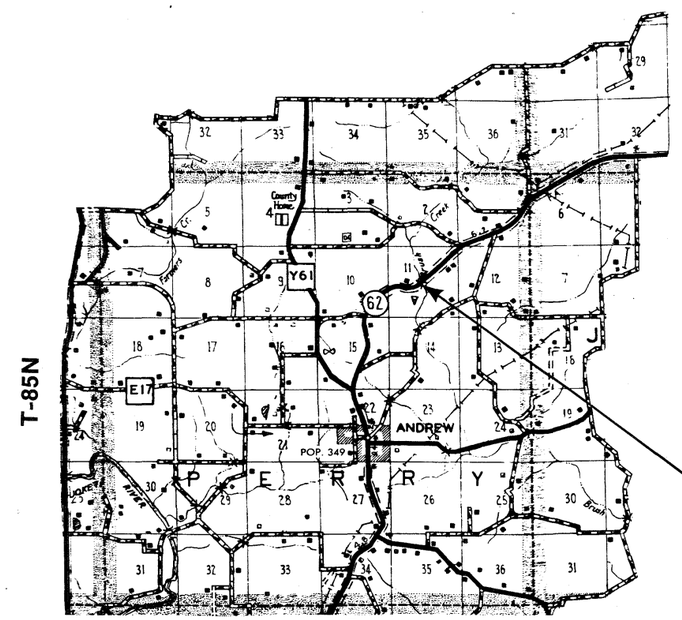
SCALES: As Noted

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)

CONVENTIONAL SIGNS

- State Line
- County Line
- Township Line
- Section Line
- Corporation Line
- Urban Boundry
- R.O.W. Lines (Exist. / Prop.)
- Survey Line (Sta. / Ref. Point)
- Section Corner
- Proposed Profile Grade
- Railroad
- Field Tile
- Underground Lines (Exist. G / Prop. T Tel.)
- Culverts
- Utility Poles (Exist. Power / Prop. Tel.)
- Fences (Barb / Mesh)
- Trees or Brush
- Stream
- Dike (Old / New)
- County Road Number
- Primary Road Number
- U.S. Road Number
- Interstate Road Number



DESIGN NO. 185

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

Plan Preparation Supervised By: Bruce Kuehl
Resident Construction Engineer

Date 11-12-86 Iowa Reg. No. 8371

REVIEWED AND FORWARDED TO AMES

District Construction Engineer — Date

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

R. C. Henely
District Engineer

AFTER MICROFILMING RETURN ORIGINAL TO DISTRICT NO. Six

THIS AS BUILT PLAN INCLUDES

YEAR	WORK	CONTRACTOR	PROJ. INSPECTOR
1986	Bridge Deck Repair	Muscatine Bridge Co. Inc	S. White

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2 - 8	BRIDGE DESIGN SHEETS - DESIGN NO. 185
9 - 10	ROAD DESIGN SHEETS - DESIGN NO. 185

STANDARD ROAD PLANS			
IDENT	DATE	IDENT	DATE
RS-2	8-20-85		
RS-3	8-20-85		

STANDARD BRIDGE PLANS		
STANDARD	ISSUED	REVISED

REVISIONS

Iowa Department of Transportation
Highway Division

AUTHORIZED FOR LETTING
10-21-85
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
Iowa Registration No. 4999 Date 10/21/85

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED

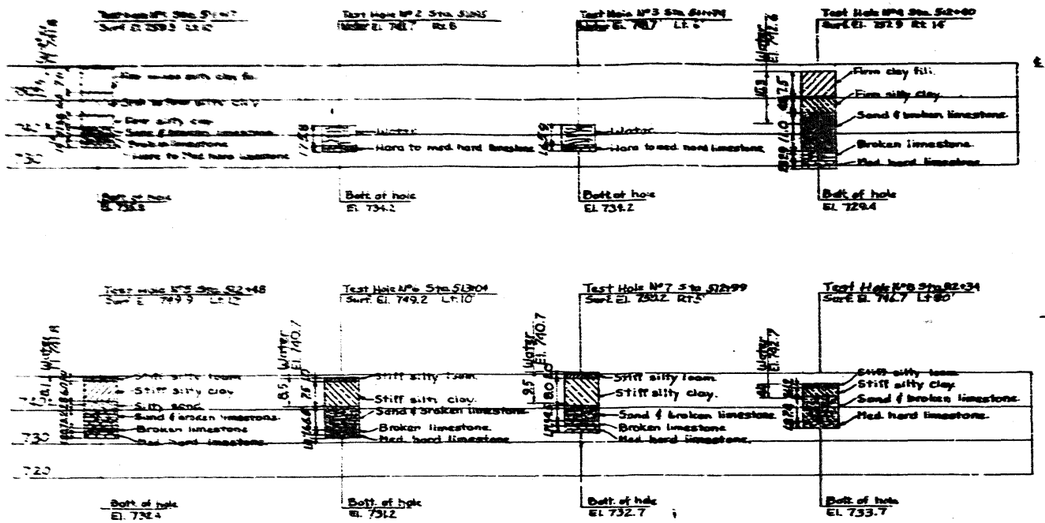
FOR THE DIVISION ADMINISTRATOR — DATE

LOCATION MAP SCALE
0 1 2 3
Miles

135

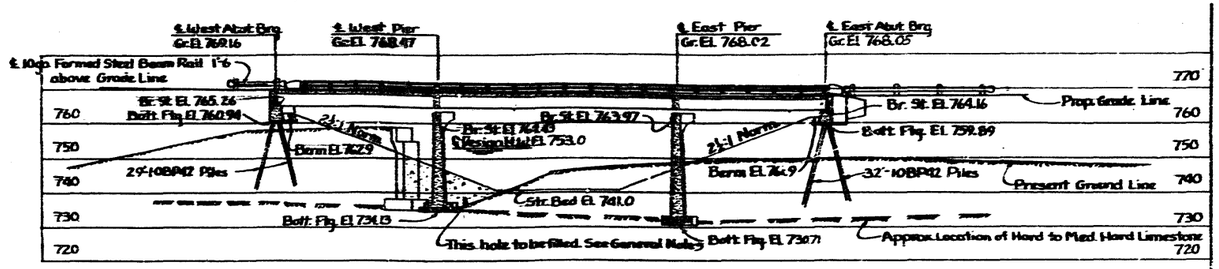
JACKSON COUNTY
BRIDGE DECK REPAIR
FN-62-1(10)--21-49

LETTING DATE **DECEMBER 17, 1985** STATE CONTROL SECTION NUMBER **49-0700** FILE NO. **28166** **JACKSON** COUNTY PROJECT NO. **FN-62-1(10)--21-49** SHEET NO. 1

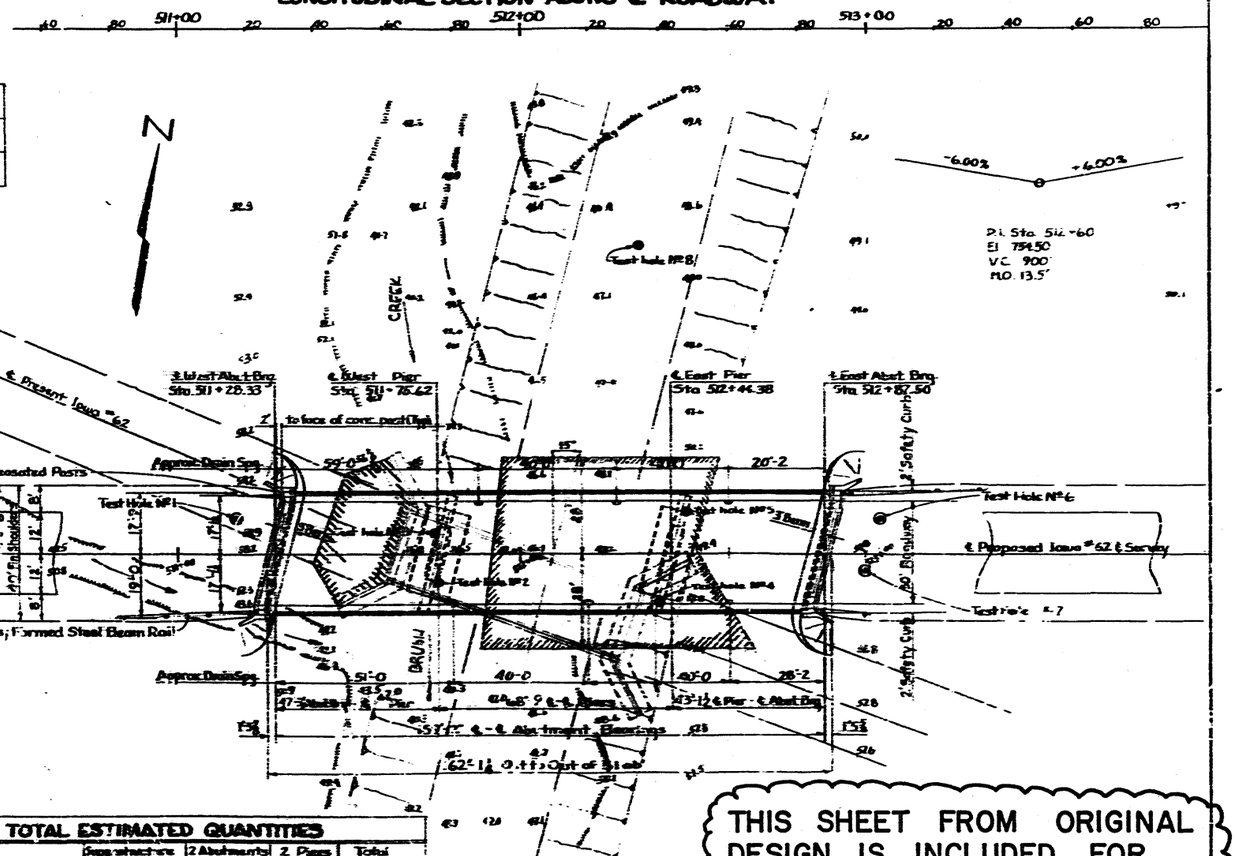


SOUNDING DATA

Scale 1" = 20'
Dated October 6, 1958

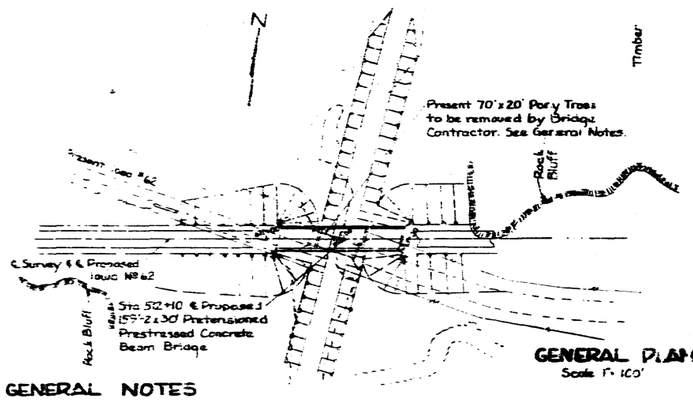


LONGITUDINAL SECTION ALONG ℄ ROADWAY



SITUATION PLAN

Scale 1" = 20'



GENERAL PLAN

Scale 1" = 100'

GENERAL NOTES

This bridge is designed for H20-S16-44 loading and an alternate loading designated in PPM 2.1-4, Section 4c of the BPR Specifications, each with 19 lbs/sq ft of roadway for future wearing surface.

The approach fills as shown are not a part of this estimate but are to be placed and compacted before abutment piles are driven. The Bridge Contractor is to level off and shape the berms to the elevations and dimensions shown.

The Formed Steel Beam Rails and Creosoted Posts at the ends of the bridge are to be furnished and placed by the Bridge Contractor. The cost of the curves and terminals and all necessary bolts is to be included in the estimate item "Formed Steel Beam Rail".

The bid item "Removal of Old Structure" is to include the following:

1) The Bridge Contractor is to remove the present 70'x20' Pony Truss with concrete floor and concrete substructure, in accordance with Section 2401 of the Standard Specifications. All salvable material is to be piled neatly within 200' of site as directed by the Engineer.

2) The Bridge Contractor is to remove all portions of both abutments which may interfere in any way with the new construction. Present abutments however are to be removed to at least one foot below finished ground line.

The Bridge Contractor is to clear the channel under bridge for a distance of 25' on either side of ℄ of the roadway as shown by the hatched areas on the "Situation Plan" and "Longitudinal Section Along ℄ Roadway".

3) The Bridge Contractor is to use the broken concrete from the old bridge slab and abutments (as well as the channel excavation under the proposed bridge) to fill hole at the west Pier as indicated on the "Longitudinal Section".

SPECIFICATIONS

Design: A.A.S.H.O. Series of 1957, except as noted.

Construction: Standard Specifications of the Iowa State Highway Commission. Series of 1956 with current special provisions.

TOTAL ESTIMATED QUANTITIES

Item		Superstructure	2 Abutments	2 Piers	Total
Concrete		167.3 c.y.	56.7	176.0	400.0 c.y.
Reinforcing Steel		30,972	5032	2,982	37,986 lbs.
Aluminum Rail (℄-℄ End Posts)		301.7			301.7 L.F.
Prestressed Concrete Beams	46'-8"	8			8 beams
	47'-6	8			8 beams
	42'-6	8			8 beams
10 BP42 Steel Piles	Furnish		9032; 9029'		549 L.F.
	Drive		9032; 9029'		549 L.F.
Formed Steel Beam Rail (10 lgs.)					100 L.F.
Creosoted Posts (8"x8"x8'-0")					12 posts
Class 20 Excavation			98		98 c.y.
Class 23 Excavation				278	278 c.y.
Class 10 Channel Excavation					650 c.y.
Removal of Old Structure					Lump Sum

THIS SHEET FROM ORIGINAL DESIGN IS INCLUDED FOR INFORMATION ONLY.

Design for 15°00 skew

159'-2 x 30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

End Spans: 43'-1½ & 47'-3½ Interior Span: 68'-9
Concrete Floor & Substructure Aluminum Rail

SITUATION PLAN

Station 512+10.00 Project FN-44

JACKSON COUNTY

Iowa State Highway Commission
February 1959 ~~Sheet of~~

~~Design Area~~ Jackson County ~~Date~~

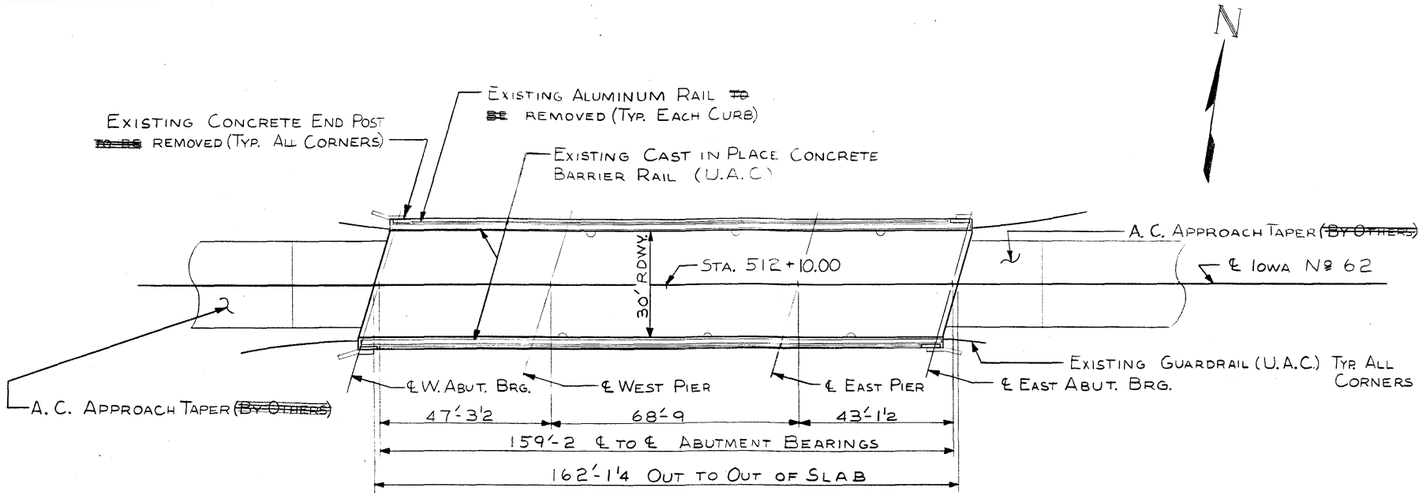
SHEET NO. 5 OF 10 14

LOCATION

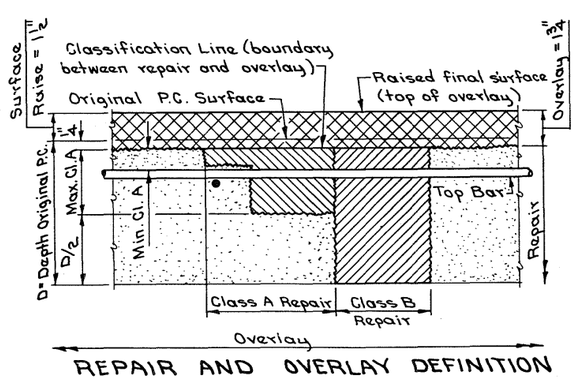
Jackson County
T-85N R-3E
Perry Twp.
Sec. 11
Over Brush Creek
On Iowa No 62

DESIGN NO. 185
FILE NO. 28166
DES. SH. NO. 4 OF 9

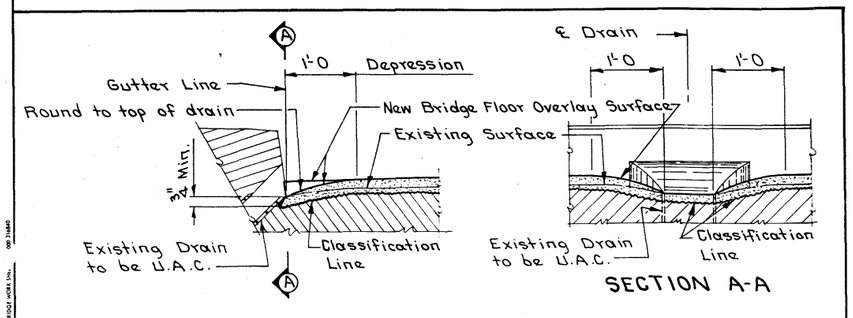
Detailed by OJF Traced by cec. Checked by JDC



SITUATION PLAN



REPAIR AND OVERLAY DEFINITION



SECTION A-A

FLOOR REPAIR DETAIL AT DRAIN

(Required @ 6 Locations)

TOTAL ~~ESTIMATED~~ BRIDGE QUANTITIES			
Item Nº	Item	Unit	Quantity
1	Class A Bridge Floor Repair	Sq. Yd.	9.268
2	Bridge Floor Overlay	Sq. Yd.	540.26
3	Temporary Floodlighting	L.S.	Lump Sum $2,000.00
4	Pavement Markings	Sta.	84.04
5	Traffic Control	L.S.	Lump Sum $3500.00
6	Temporary Barrier Rail ~ Furnish Only	L.F.	380
7	Temporary Barrier Rail ~ Place Only	L.F.	760
8	Concrete Sealer as per Plan	Sq. Ft.	648.0
9	Temporary Traffic Signals	L.S.	Lump Sum $3000.00
10	Hauling and Storing Existing Handrail	L.S.	Lump Sum $1,200.00
11	Mobilization	L.S.	$6,500.00
12	Stockpiled Materials	only	0
8001	Place A.C.C. Runouts (Permanent)	L.S.	$2250.00

Item Nº ~~ESTIMATE~~ REFERENCE INFORMATION

4 Includes 28.3 Sta. removal of pavement markings, 36.82 Sta. of yellow temporary and permanent pavement markings, and 18.92 Sta. of white temporary and permanent pavement markings.

6 & 7 All Temporary Barrier Rail ~~shall be~~ nominal 10' long concrete units.

9 Traffic signals ~~are to be~~ removed and are ~~to remain~~ the property of the contractor.

~~NOTE: For Roadway Quantities see Des. Sh.~~

I HEREBY CERTIFY THAT THIS PLAN WAS 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

10-17-85 DATE — LeRoy Phillips LE ROY PHILLIPS — REG. NO. 4138

DESIGN HISTORY AT THIS SITE	
DES. NO.	TYPE OF WORK
4659	Original Design
185	Bridge Floor Repair

SPECIFICATIONS:

CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION SPECIFICATION, SERIES OF 1984, 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 1983.~~

~~REINFORCING STEEL IN ACCORDANCE WITH SECTION 8, GRADE 40 AND GRADE 60.~~

~~CONCRETE IN ACCORDANCE WITH SECTION 8, f'c = 2,500 PSI~~

~~STRUCTURAL STEEL IN ACCORDANCE WITH SECTION 10. ASTM A-36,~~

LOCATION:
Maintenance Nº 4909.75062
Iowa Nº 62 over
Brush Creek
T85N R3E Section 11
Perry Township
Jackson County

Details for Repairs to a 15°00' Skew
15@2x30' PRETENSIONED, PRESTRESSED CONCRETE BEAM BRIDGE
43'-1½ and 47'-3½ End Spans 68'-9 Interior Span
REPAIR DETAILS AND QUANTITIES
Station 512+10.00 Sept., 1985
JACKSON COUNTY
Iowa Department of Transportation-Highway Division
Design Sheet No.: 1 Of 9 File No.: 28166 Design No.: 185

Designed by: LeRoy Carlberg Traced by:
Detailed by: Shawn Fautch Checked by:
Section Leader L. Phillips
JACKSON COUNTY

Project Number	State	FHWA Region	Fiscal Year	Sheet No.	Total Sheets
FN-62-1(10)--21-49	Iowa	7		2	16

BRUNING 44 131 (5/21) BRIDGE WORK Inc. 1000 3 HAND

GENERAL NOTES

THIS DESIGN IS FOR REPAIR TO THE EXISTING 159'-2x30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE, ORIGINAL DESIGN NO. 4659 JACKSON COUNTY. PLANS OF THE EXISTING STRUCTURE MAY BE OBTAINED AT THE AMES OFFICE OF THE IOWA D.O.T. HIGHWAY DIVISION. REPAIRS SHALL CONSIST OF BRIDGE FLOOR REPAIR, BRIDGE FLOOR OVERLAY AND REMOVAL OF EXISTING ALUMINUM RAIL.

PLAN QUANTITY OF FLOOR REPAIR IS BASED ON THE "SURVEY PLOT" AS SHOWN ON DESIGN SHEET 3 . HATCHED PORTIONS REPRESENT CLASS A BRIDGE FLOOR REPAIR; CROSS HATCHED PORTIONS, IF SHOWN, REPRESENT CLASS B BRIDGE FLOOR REPAIR. ACTUAL SPALLED AND HOLLOW AREAS, AS DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION, SHALL BE REPAIRED. THE ENTIRE CONCRETE SURFACE OF THE BRIDGE FLOOR, INCLUDING AREAS OVER BRIDGE FLOOR REPAIR, SHALL HAVE BRIDGE FLOOR OVERLAY.

NO PRELIMINARY FLOOR SURVEY IS SHOWN. THE PLAN QUANTITY FOR "CLASS A BRIDGE FLOOR REPAIR" IS ESTIMATED AS % OF THE TOTAL FLOOR AREA. THE ACTUAL QUANTITY WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ACTUAL SPALLED AND HOLLOW AREAS, AS DETERMINED BY THE ENGINEER, SHALL BE REPAIRED. THE ENTIRE CONCRETE SURFACE OF THE BRIDGE FLOOR, INCLUDING AREAS OVER BRIDGE FLOOR REPAIR, SHALL HAVE BRIDGE FLOOR OVERLAY.

NO PRELIMINARY FLOOR SURVEY IS SHOWN. THE PLAN QUANTITY FOR "CLASS A BRIDGE FLOOR REPAIR" IS ESTIMATED AS 50% OF THE TOTAL FLOOR AREA. THE ACTUAL QUANTITY WILL BE DETERMINED BY THE ENGINEER AFTER THE A.C. SURFACING HAS BEEN REMOVED. ACTUAL SPALLED AND HOLLOW AREAS AS DETERMINED BY THE ENGINEER SHALL BE REPAIRED. THE ENTIRE CONCRETE SURFACE OF THE BRIDGE FLOOR, INCLUDING AREAS OVER BRIDGE FLOOR REPAIR, SHALL HAVE BRIDGE FLOOR OVERLAY.

PRESENT FLOOR THICKNESS IS ABOUT 6 INCHES. THE CONTRACTOR WILL BE REQUIRED TO EXERCISE CARE IN REMOVING CONCRETE IN ORDER TO PREVENT UNNECESSARY UNBONDING OF REINFORCING STEEL.

PRESENT FLOOR THICKNESS IS ABOUT INCHES. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN ORDER TO PREVENT UNNECESSARY REMOVAL OF CONCRETE BELOW THE TOP OF THE TOP REINFORCING. 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.

PRESENT FLOOR THICKNESS IS ABOUT INCHES. FLOOR REINFORCING IS QUITE SHALLOW FOR A PORTION OF THE FLOOR AREA. IN THOSE AREAS WHERE REINFORCING IS LESS THAN 1/4" CLEAR BELOW THE ORIGINAL FINISHED SURFACE, THE BOTTOM LIMIT OF BRIDGE FLOOR OVERLAY WILL BE CONSIDERED AS THE TOP OF THE TOP REINFORCING. UNSOUND CONCRETE BELOW THE TOP OF THE TOP REINFORCING SHALL BE REPAIRED AS CLASS A BRIDGE FLOOR REPAIR. THE CONTRACTOR WILL BE REQUIRED TO CAREFULLY REGULATE SCARIFYING DEPTH AND EMPLOY HAND METHODS AS NECESSARY IN ORDER TO PREVENT DAMAGE OR UNBONDING OF REINFORCING.

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

CONSTRUCTION STAGES I & II AS DETAILED ON THESE PLANS MAY BE REVERSED AT THE CONTRACTOR'S OPTION SUBJECT TO THE ENGINEERS APPROVAL.

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" MORE THAN SHOWN ON THE PLANS. PROFILE MAY BE ADJUSTED TO THE EXTENT POSSIBLE WITHIN THESE LIMITS.

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

BEFORE PROCEEDING WITH BRIDGE FLOOR OVERLAY AND BRIDGE FLOOR REPAIR THE CONTRACTOR MAY COMPLETE ALL STAGES OF OTHER CONSTRUCTION. ANY CONSTRUCTION SHALL HAVE STAGE LIMITS, TEMPORARY BARRIER RAIL AND TRAFFIC CONTROL AS DETAILED ON THESE PLANS. TEMPORARY BARRIER RAIL AND TRAFFIC CONTROL MAY BE ADJUSTED TO FIT THE ACTUAL WORK AND STORAGE AREA. WHEN BACKWALLS AND/OR APPROACH SECTIONS ARE TO BE REBUILT TO A RAISED SURFACE, AND WHEN FLOOR OVERLAY IS NOT A PART OF THE SAME STAGE, THE CONTRACTOR SHALL PROVIDE FOR PROFILE TRANSITION WITH A.C. SURFACING. PROFILE TRANSITION SHALL BE TAPERED AT A RATE OF 25' FOR 1 1/2 INCHES OF RAISE. THE A.C. TRANSITION MATERIAL SHALL BE A COMMERCIAL GRADE HOT SURFACING MIX OR A MIX APPROVED BY THE ENGINEER. A.C. MAY BE PLACED BY HAND METHODS AND MAY BE COMPACTED BY ANY APPROVED METHOD. ALL COSTS FOR ADDITIONAL TRAFFIC CONTROL, REPOSITIONING OF BARRIER AND A.C. SURFACING SHALL BE BORNE BY THE CONTRACTOR.

FAINT LINES ON PRINTS AND ON TRACINGS INDICATE EXISTING PORTION OF THE BRIDGE.

THE EXISTING FORMED STEEL BEAM GUARD RAIL AT BOTH ABUTMENTS SHALL BE USED AS CONSTRUCTED.

THE TOP OF ABUTMENT BACKWALLS BETWEEN GUTTER LINES AS SHOWN SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS FOR CLASS A BRIDGE FLOOR REPAIR AND BRIDGE FLOOR OVERLAY WITH THE FOLLOWING EXCEPTIONS:

1. THE LOWER LIMIT FOR CLASS A BRIDGE FLOOR REPAIR SHALL BE TO SUITABLE EXISTING CONCRETE, AS DETERMINED BY THE ENGINEER, BUT TO AT LEAST 2 INCHES BELOW THE BOTTOM LIMIT FOR BRIDGE FLOOR OVERLAY.

2. IF MACHINE FINISHING FOR THE TOP OF BACKWALL IS NOT PRACTICABLE, A MANUAL TYPE SCREED OR METAL PLATE, WITH APPROVED VIBRATORS ATTACHED, SHALL BE USED.

THE EXPOSED TOP OF BACKWALL AREAS AS SHOWN HAVE BEEN INCLUDED IN THE QUANTITIES SHOWN FOR CLASS A BRIDGE FLOOR REPAIR AND FOR BRIDGE FLOOR OVERLAY.

SCREED EXTENSION OR OVERLAY 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.

THE 1 1/2" THICK RAISE PLATES FOR THE EXPANSION DEVICE ARE TO BE BLAST CLEANED AND PAINTED AFTER FIELD WELDING TO THE EXISTING EXPANSION PLATE. THE BLAST CLEANING PREPARATION IS TO COMPLY WITH THE STEEL STRUCTURES PAINTING COUNCIL SPECIFICATIONS SSPC-SP7, BSAL. THE RAISE PLATES ARE TO BE GIVEN ONE COAT OF RUST-OLEUM PRIMER AND ONE COAT OF RUST-OLEUM FINAL COAT OR AN APPROVED EQUAL PRIMER AND FINAL COAT. THE COLOR OF THE DRY PAINT SHOULD APPROXIMATE THE COLOR OF CONCRETE.

THE BID ITEM "STRUCTURAL STEEL" SHALL INCLUDE ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING RAISE PLATES FOR EXPANSION DEVICES AS SHOWN.

THE BID ITEM "STEEL EXTRUSION JOINT WITH NEOPRENE" IS TO INCLUDE ALL COSTS FOR FURNISHING AND INSTALLING THE STEEL EXTRUSION AND GLAND, AND ALL MATERIAL NECESSARY FOR THE FABRICATION AND INSTALLATION (INCLUDING CURB PLATES AND TEMPORARY ERECTION MATERIAL) OF THE STRIP SEAL EXPANSION DEVICE AS DETAILED.

THE REINFORCEMENT SUPPLIED FOR THIS STRUCTURE MAY BE GRADE 40,50 or 60 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE DESIGN STRESSES FOR ALL GRADES ARE BASED ON GRADE 40 REINFORCEMENT.

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

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 2413.09, CONCRETE SEALER IS TO BE APPLIED TO THE TOP OF CLASS D STRUCTURAL CONCRETE AT THE END OF THE BRIDGE, FULL ROADWAY WIDTH, AS SHOWN. THE SEALER MATERIAL, SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH 2403.23(D).

QUANTITY OF "CONCRETE SEALER, AS PER PLAN" IN SQUARE FEET, TO BE PAID FOR WILL BE COMPUTED FROM MEASUREMENTS OF AREAS ACTUALLY COVERED AND ARTICLE 1109.03 SHALL NOT APPLY. PLAN QUANTITY IS BASED ON P.C. CONCRETE FLOOR OVERLAY.

REMOVALS AND DISPOSALS OF ITEMS SCHEDULED FOR REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE SPECIFICATIONS. ANY DAMAGE TO ANY STEEL OR CONCRETE NOT TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED BY HIM AT NO EXTRA COST TO THE STATE.

THE PRICE BID FOR "REMOVAL OF PAVEMENT" SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE REMOVAL AND DISPOSAL OF THE P.C. APPROACH PAVEMENT AS NOTED.

THE A.C. RUNOUT TAPER AT THE ENDS OF THE BRIDGE AS SHOWN WILL BE PLACED BY LOCAL HIGHWAY DIVISION MAINTENANCE FORCES BEFORE TRAFFIC IS SHIFTED TO NEW CONSTRUCTION. THE CONTRACTOR SHALL GIVE ADEQUATE PRIOR NOTICE SO THAT THE A.C. MAY BE PLACED DURING NORMAL WORKING HOURS AND WORKING DAYS OF MAINTENANCE.

THE CONTRACTOR SHALL CONSTRUCT NEW BRIDGE APPROACH PAVEMENT AS NOTED AND SHOWN. THE PRICE BID FOR "BRIDGE APPROACH SECTION, REINFORCED AS PER PLAN" SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING P.C. CONCRETE APPROACH PAVEMENT, INCLUDING EXCAVATION, REINFORCING STEEL AND JOINT MATERIAL REQUIRED.

BACKFILL BEHIND THE NEW ABUTMENT BACKWALL BETWEEN WINGS IS TO BE GRANULAR BACKFILL AS SHOWN. ANY REMAINING ABUTMENT EXCAVATION IS TO BE BACKFILLED WITH SOIL.

THE TOP OF THE ABUTMENT BACKWALLS AS SHOWN SHALL BE CONSTRUCTED USING STRUCTURAL CONCRETE CLASS D. IF MACHINE FINISHING FOR THE TOP OF THE BACKWALL IS NOT PRACTICAL A MANUAL TYPE SCREED OR METAL PLATE, WITH APPROVED VIBRATORS ATTACHED, SHALL BE USED.

AREAS OF CURB INDICATED ON THE "SURVEY PLOT" OR DESIGNATED BY THE ENGINEER, ARE TO BE REPAIRED AS CLASS A BRIDGE FLOOR REPAIR EXCEPT THAT THE UPPER OR OUTER LIMIT SHALL BE THE ORIGINAL SURFACE. NO OVERLAY QUANTITY WILL BE INCLUDED FOR THE CURB AREAS. THE REPAIR AREAS WITHOUT OVERLAY SHALL RECEIVE A SURFACE FINISH PER ART. 2403.23, AND THEY SHALL RECEIVE A CURE AS SPECIFIED FOR BRIDGE FLOOR OVERLAY. THE ENGINEER MAY RELAX THE SLUMP REQUIREMENTS OF STIFF MIX TO A MAXIMUM OF 2 1/2 INCHES IN FORMING THE BATTER FACE. A MANUAL TYPE SCREED OR METAL PLATE WITH APPROVED VIBRATORS ATTACHED WILL BE REQUIRED FOR HORIZONTAL CURB SURFACES.

THE CONTRACTOR SHALL PLACE PORTLAND CEMENT CONCRETE OVERLAY ON THE BRIDGE APPROACH PAVEMENT AS NOTED AND SHOWN. PAYMENT FOR THIS WORK SHALL BE AS NOTED ON THE P.C.C. OVERLAY DETAIL SHEET INCLUDED IN THESE PLANS.

ANY A.C. WORK THAT MAY BE NECESSARY TO BRING THE ROADWAY SHOULDERS UP TO THE FINAL GRADE OF THE P.C. APPROACH PAVEMENT WILL BE DONE BY THE CONTRACTOR BEFORE TRAFFIC IS SHIFTED TO NEW CONSTRUCTION. COST OF THIS WORK IS TO BE CONSIDERED INCIDENTAL TO THE COST OF THE PORTLAND CEMENT CONCRETE OVERLAY.

REMOVAL AND DISPOSAL OF EXISTING SHOULDER MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "BASE, TYPE B, CLASS 1, ASPHALT CEMENT CONCRETE".

THE PRICE BID FOR "REMOVAL OF ASPHALT CEMENT CONCRETE SURFACING" SHALL BE CONSIDERED FULL COMPENSATION FOR REMOVAL AND DISPOSAL OF THE EXISTING A.C. OVERLAY TO THE LIMITS SHOWN.

THE BID ITEM "HAULING AND STORING EXISTING HANDRAIL" SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE DISMANTLING, HAULING AND STORING OF THE EXISTING ALUMINUM HANDRAILS (APPROXIMATELY 301.7± L.F. AND 42 POSTS). THE ALUMINUM HANDRAILS AND POSTS ARE TO BE HAULED TO THE IOWA D.O.T. MAINTENANCE YARD AS DIRECTED BY THE ENGINEER. THIS BID ITEM SHALL ALSO INCLUDE ALL COSTS INVOLVED IN REMOVING THE FOUR CONCRETE END POSTS.

THE EXISTING RAILPOST ANCHOR BARS AND VERTICAL REINFORCING BARS IN CONCRETE END POSTS SHALL BE CUT OFF FLUSH WITH OR SLIGHTLY BELOW CONCRETE SURFACE AND THE REMAINING EXPOSED ENDS PAINTED WITH TWO COATS OF ZINC RICH PAINT. THE COST OF CUTTING AND PAINTING IS TO BE INCLUDED IN THE PRICE BID FOR "HAULING AND STORING EXISTING HANDRAIL".

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 LAYOUTS CONTAINED IN THE PLANS. FOR ADDITIONAL COMPLEMENTARY INFORMATION, REFER TO CURRENT SUPPLEMENTAL SPECIFICATION FOR TRAFFIC CONTROLS.
3. WHEN SPECIAL TRAFFIC CONTROL SHEET ENTITLED, "TRAFFIC CONTROL LAYOUT ONE-LANE TRAFFIC ON BRIDGES" IS NOT USED, STANDARD ROAD PLAN RS-2 SHALL BE USED FOR UNFINISHED WORK OR WORK WITHIN 12 FEET OF THE TRAVELED WAY, AND STANDARD ROAD PLAN RS-3 FOR WORK IN PROGRESS THAT ENCROACHES ON THE TRAVELED WAY.
4. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR.
5. WHERE POSSIBLE, ALL POST MOUNTED SIGNS SHALL BE PLACED A MINIMUM OF TWO FEET CLEAR OF THE SHOULDER.
6. THE LOCATION FOR STORAGE OF EQUIPMENT BY THE CONTRACTOR DURING NON-WORKING HOURS WILL BE AS APPROVED BY THE ENGINEER IN CHARGE OF CONSTRUCTION.
7. THE ENGINEER MAY REQUIRE MODIFICATION OF, OR ADDITIONS TO, PAVEMENT MARKING DETAILS SHOWN. CONFLICTING PERMANENT EDGELINES OR CENTERLINES SHALL BE REMOVED AND REPLACED WITH APPROPRIATE TEMPORARY LINES. AS APPLICABLE, PERMANENT EDGELINES AND CENTERLINES SHALL BE RESTORED BEFORE THE ROADWAY IS RETURNED TO NORMAL TRAFFIC.
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 SHEET) SHALL BE REVIEWED WITH THE OFFICE OF CONSTRUCTION BEFORE CHANGES ARE MADE.
10. THE BID ITEM "TRAFFIC CONTROL" SHALL INCLUDE THE COST OF ALL TRAFFIC CONTROL MEASURES REQUIRED OF THE CONTRACTOR EXCEPT THOSE WHICH ARE SEPARATE BID ITEMS OR ARE INCIDENTAL TO OTHER BID ITEMS.

DETAILS FOR REPAIRS TO A 15°00' SKEW
159'-2x30' PRETENSIONED, PRESTRESSED
CONCRETE BEAM BRIDGE
43'-1½ AND 47'-3½ END SPANS 68'-9 INTERIOR SPAN
NOTES
STATION 512+10.00 Sept., 1985
JACKSON COUNTY
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
Design Sheet No.: 2 Of 9 File No.: 28166 Design No.: 185

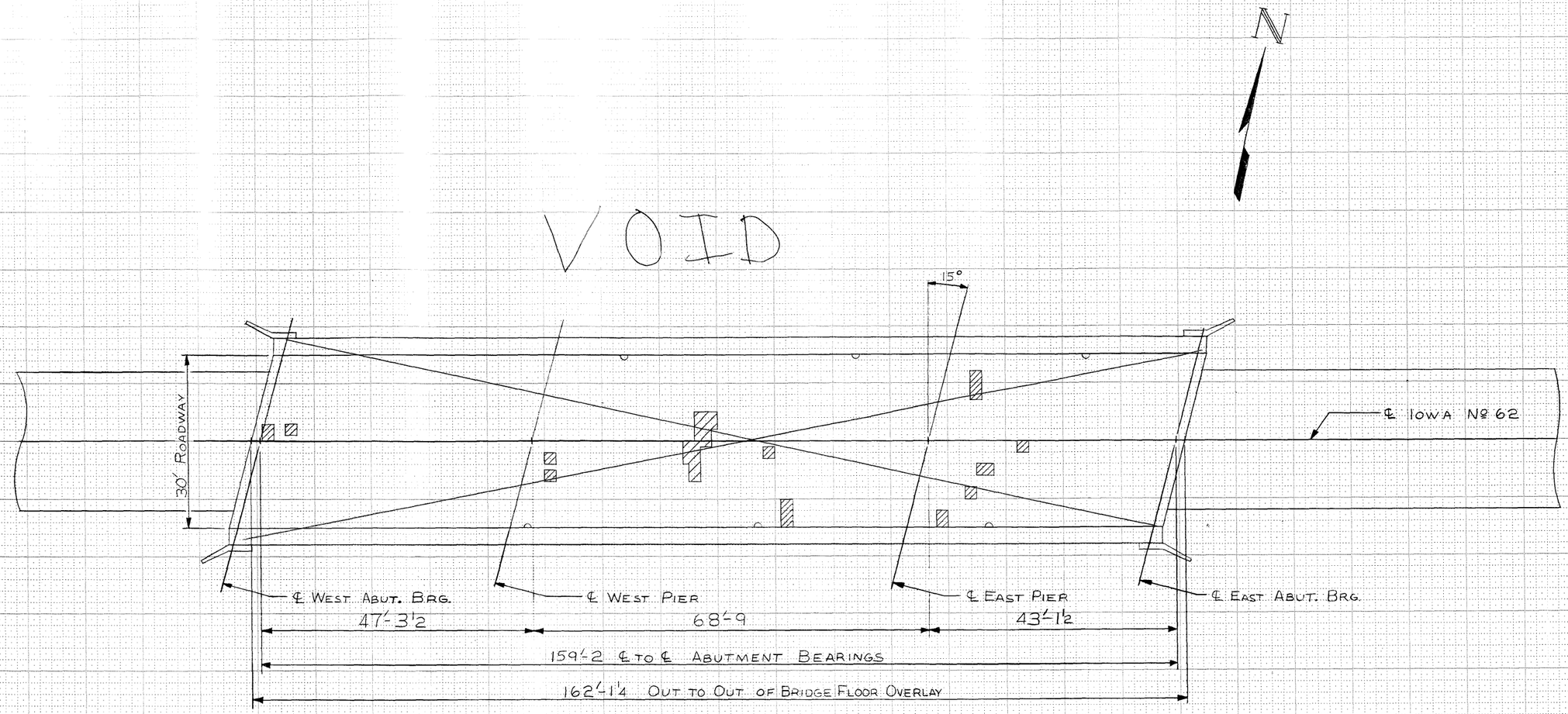
DESIGNED BY LeRoy Ornberg CHECKED BY
DETAILED BY Shawn Foutch CHECKED BY

JACKSON COUNTY

PROJECT NUMBER	STATE	FHWA Region	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	7		3	10

BRUNING 44-131 652-19 BASIC WORK SHEET

VOID



SURVEY PLOT

DATED 8-26-85

VOID

DETAILS FOR REPAIRS TO A 15°00' SKEW

159'-2×30' PRETENSIONED, PRESTRESSED CONCRETE BEAM BRIDGE

43'-1½ AND 47'-3½ END SPANS 68'-9 INTERIOR SPAN

SURVEY PLOT

STATION 512+10.00 Sept., 1985

JACKSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

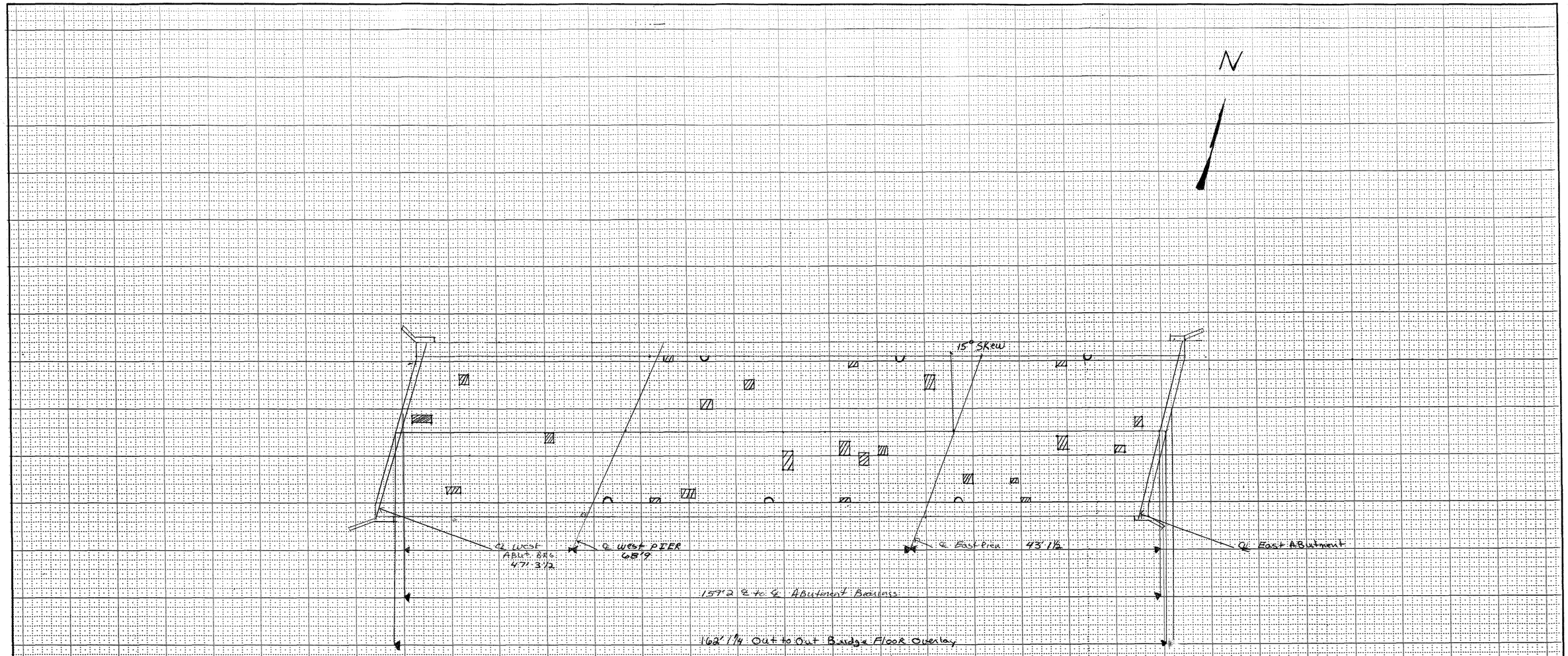
DESIGN SHEET 3 OF 9 FILE 28166 DESIGN 185

65300 BRUNING

DESIGNED BY: LeRoy Ortgerg
DETAILED BY: Shawn Fouts
TRACED BY:
CHECKED BY:

JACKSON COUNTY

PROJECT NUMBER	STATE	FHWA Region	FSCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	7		4	-



Actual Repair Areas

DETAILS OF REPAIRS TO A 15°00' SKEW
159'-2x30' PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGE
43'-1½ AND 47' 3½ END SPANS 68'-9 INTERIOR SPAN

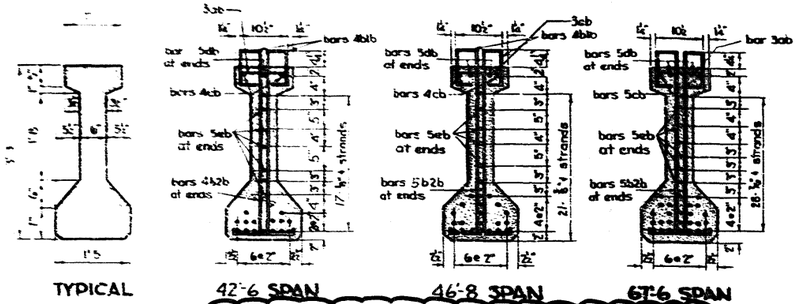
STATION 512+10
JACKSON COUNTY

BRUNING 85300

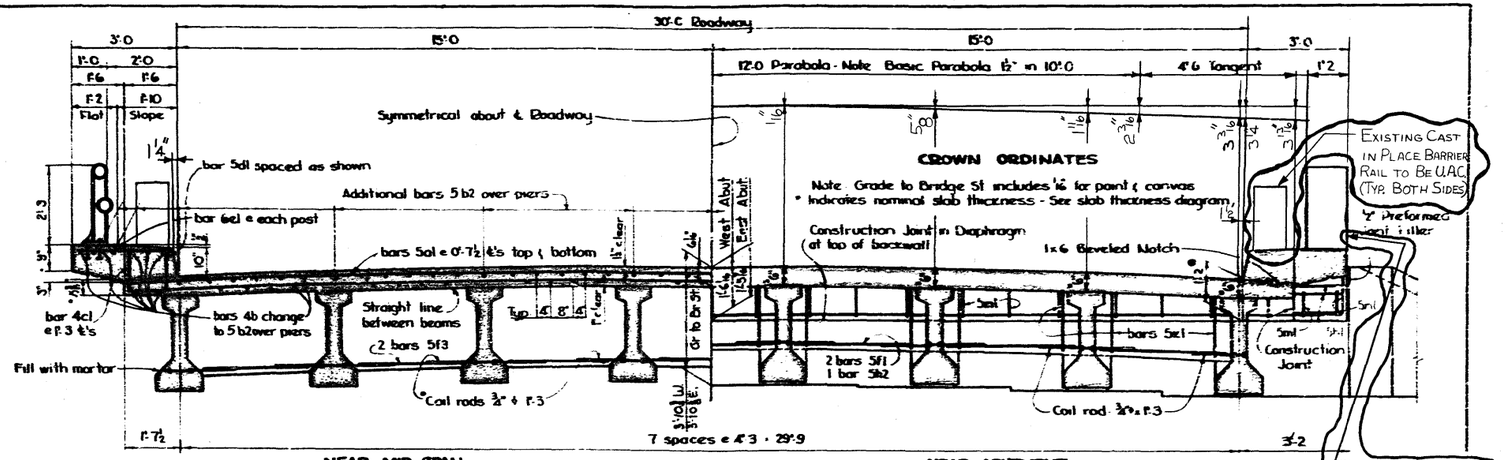
DESIGNED BY: _____ TRACED BY: _____
DETAILED BY: _____ CHECKED BY: _____

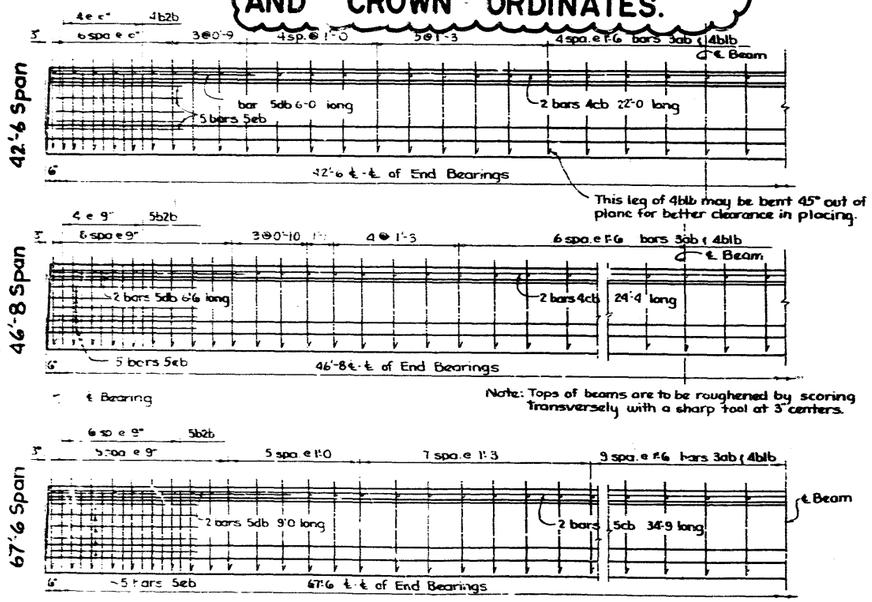
Jackson COUNTY

PROJECT NUMBER	STATE	FHWA Region	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	7			

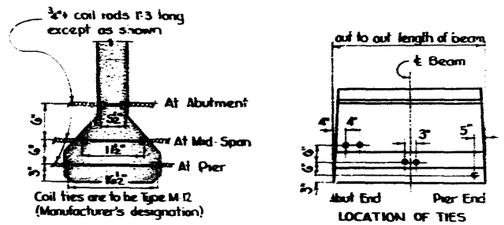


THIS SHEET FROM ORIGINAL DESIGN PLANS TO SHOW EXISTING ROADWAY CROSS SECTION, SLAB THICKNESS AND CROWN ORDINATES.



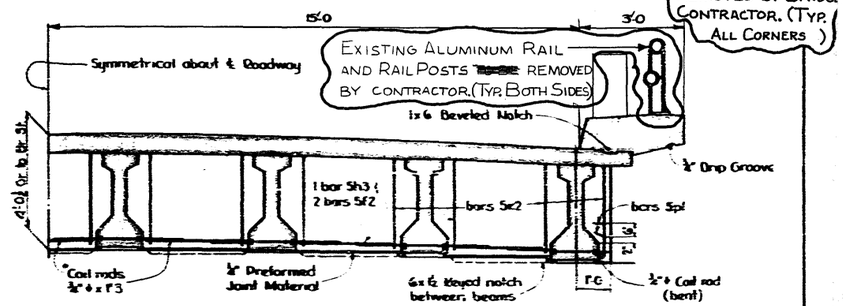


DETAILS OF BEAMS
Scale: ⅜" = 1'-0

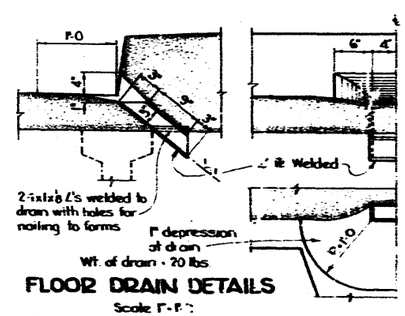


COIL TIE DETAILS

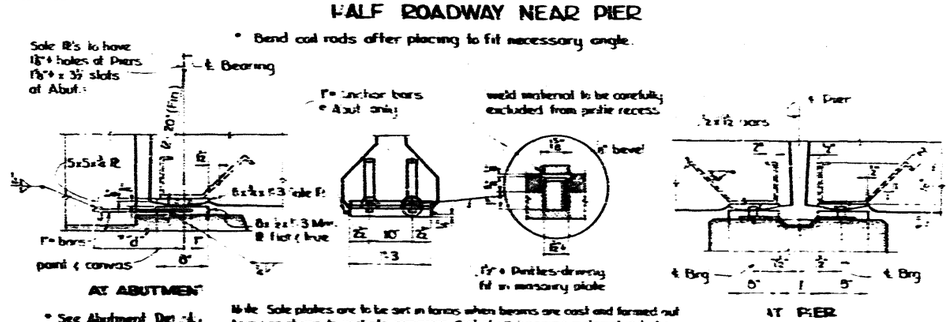
Coil rods shown shall be similar to and equal to those manufactured by the Superior Concrete Accessories Co Inc. of Chicago, Ill and the Richmond Screw Anchor Co of St Joseph, Mo.
Coil ties are to be held in place in forms by slotted coil setting studs projecting thru forms. Studs are to be left in place until beams are erected when they are to be replaced with coil rods. Cost of coil ties and rods is to be included in price bid for beams.



HALF ROADWAY NEAR PIER



FLOOR DRAIN DETAILS
Scale 1" = 1'-0
Note: For number of drains & location see "Situation Plan"



Note: Sole plates are to be set in forms when beams are cast and formed out to row as shown to exclude concrete. Cost of all bearing material is to be included in the price bid for the beam. Many Pl's & Sole Pl's are similar for Piers & Abuts except as shown.

BEARING DETAILS

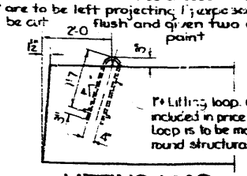
* One abutment & one pier end
* Two pier ends

BEAM DATA							CAMBER	
Span	Concrete	Reinf St	Struct St	Strands	Initial Pre-Stress		As Erected	Slab in Place
[illegible]	[illegible]	508 lbs.	[illegible]	17-[illegible]	244k		[illegible]	[illegible]
[illegible]	[illegible]	553 lbs.	[illegible]	21-[illegible]	309k		[illegible]	[illegible]
67'-6	6.74 cu	803 lbs.	[illegible]	28-[illegible]	556k		1⅜"	[illegible]

BEAM REINFORCING - ONE BEAM

Shape	42'-6 Span				46'-8 Span				67'-6 Span			
	Bar	Nº	Lgth	Wt	Bar	Nº	Lgth	Wt	Bar	Nº	Lgth	Wt
—	3ab	45	1'-2	20	3ab	45	1'-2	20	3ab	61	1'-2	27
F	4b1b	90	5'-5	326	4b1b	90	5'-5	326	4b1b	122	5'-5	442
C	4b2b	20	3'-3	43	5b2b	20	3'-3	68	5b2b	28	3'-3	95
—	4cb	4	22'-0	59	4cb	4	24'-4	67	5cb	4	34'-9	144
—	5db	2	6'-0	13	5db	4	6'-6	27	5db	4	9'-0	38
—	5eb	10	4'-6	47	5eb	10	4'-6	47	5eb	10	5'-6	57
	Total			508	Total			553	Total			803

Initial prestress includes 5% for temperature loss in curing and is assumed to take place before transfer. Unless otherwise specified, allowance is to be made for shortening equal to 0.005% for shrinkage and elastic change. At the ends of beams, strands which will be encased in concrete diaphrams are to be left projecting. Exposed strands are to be cut flush and given two coats of shop paint.



LIFTING LOOP
Scale ½" = 1'-0

SUPERSTRUCTURE NOTES:

This bridge is designed for H20-S16-44, plus 19 lbs per sq ft of roadway for future wearing surface and alternate loading designated in P.D.M. 20-4, Section 4-C.
Concrete in slab is to have a 28 day crushing strength of 3500 p.s.i. and is to contain no Class "A" aggregate. It is to be placed as dry as practicable to reduce shrinkage to a minimum and special precaution is to be taken to secure complete bond between beams and slab. All exposed corners of 90° or sharper are to be filleted ¾". Clear distance from face of concrete to near reinforcing bar shall be ½" unless otherwise noted or shown. All reinforcing is to be securely wired in place and adequately supported on metal bar chairs before pouring concrete.
Beams are to be cast with Sole Pl's and set on Masonry Pl's of abutments and piers.
Cost of all preformed joint filler is to be included in price bid for concrete.
Slab as shown includes ½" wearing surface.
Forms for slab and curbs are to be supported by the beams.
Superstructure details are adopted from I.H.C. Standard P.C.P. and P.C.P. (a).
Construction of prestressed units to be in accordance with Section 2406A of the special provisions with the added provision - When stress is released it is to be done gradually by means of jacks.
Cost of floor drains is to be included in the price bid for concrete. 4"x8" outside dimension rolled tube with ⅜" wall thickness may be substituted for the welded floor drains shown.

SPECIFICATIONS:

Design: A.A.S.H.O. Series of 1957 and U.S. Bureau of Public Roads Design Criteria for Prestressed Concrete Bridges, Series of 1955
Construction: Standard Specifications of I.S.H.C., Series of 1956, plus current special provisions

Design for 15'-00" Screw

159'-2 x 30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

43'-1½" & 47'-3" End Spans — Concrete Floor & Substructure
68'-9" Interior Span — Aluminum Rail

SUPERSTRUCTURE DETAILS

Station 572+10.30 — Project F-144

DESIGN NO.	185
FILE NO.	28166
DES. SH. NO.	5 OF 9

JACKSON COUNTY

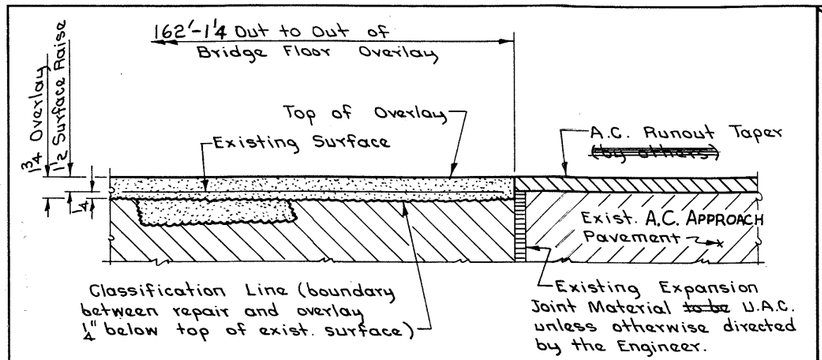
Iowa State Highway Commission

February 1959

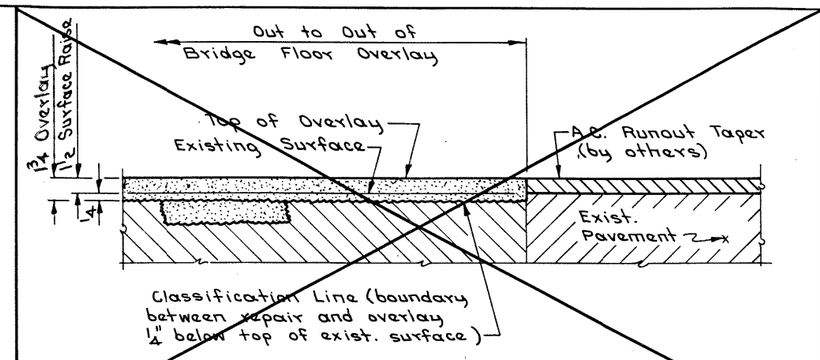
Jackson County

SHEET NO. 6 OF 10

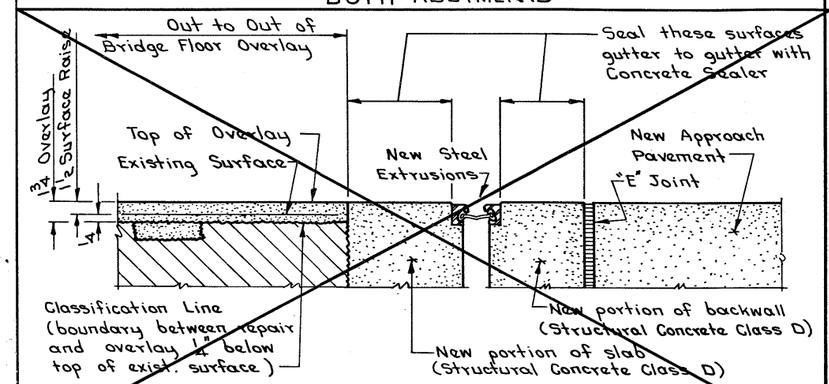
Detailed by: Traced by: CEC Checked by: GDO



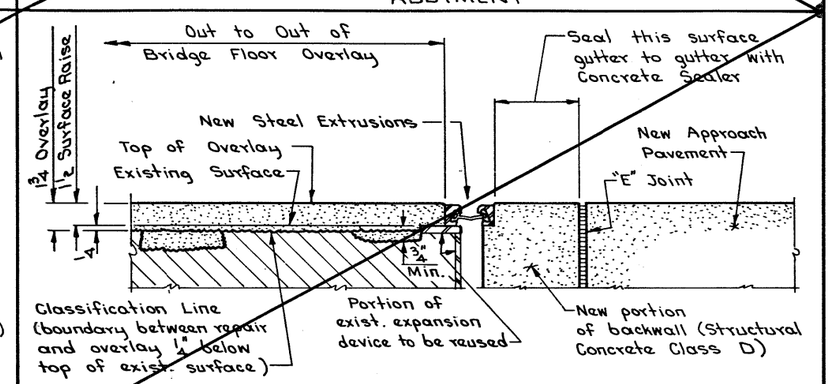
PART LONGITUDINAL SECTION ALONG ROADWAY
BOTH ABUTMENTS



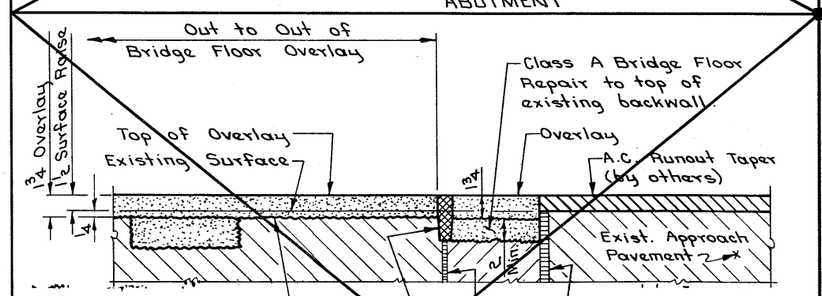
PART LONGITUDINAL SECTION ALONG ROADWAY
ABUTMENT



PART LONGITUDINAL SECTION ALONG ROADWAY
ABUTMENT

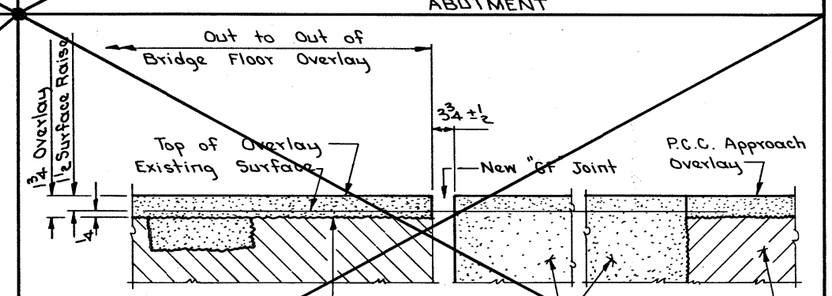


PART LONGITUDINAL SECTION ALONG ROADWAY
ABUTMENT



Top portion of existing joint filler (2"±) is to be removed. After the new surface has been placed, the joint is to be cleaned and sealed with hot poured joint sealer as specified in Article 4136.02A of the Standard Specifications. The cost of cleaning and sealing the joint is considered incidental to the cost of other construction and no separate payment will be made.

PART LONGITUDINAL SECTION ALONG ROADWAY
ABUTMENT



PART LONGITUDINAL SECTION ALONG ROADWAY
ABUTMENT

DETAILS FOR REPAIRS TO A 15°00' SKEW
159'-2 x 30' PRETENSIONED, PRESTRESSED
CONCRETE BEAM BRIDGE
43'-1½ AND 47'-3½ END SPANS 68'-9 INTERIOR SPAN
REPAIR DETAILS
STATION 512+10.00 Sept., 1985
JACKSON COUNTY
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
Design Sheet No.: 6 Of 9 File No.: 28166 Design No.: 185

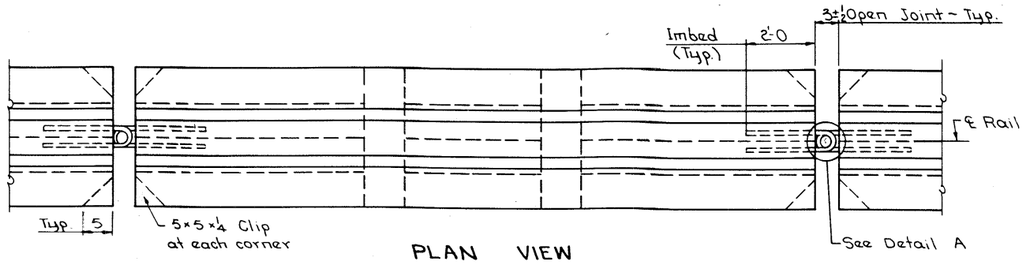
DESIGNED BY: LeRoy Ornberg
DETAILED BY: Shawn Foutch
TRACED BY:
CHECKED BY:

JACKSON COUNTY

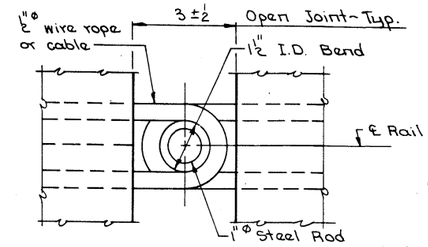
PROJECT NUMBER	STATE	FHWA Region	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	7		7	10

BRUNING 44-131 (25219 BRIDGE WORK SHEET) 200 31AMO

Revised 08-21-84: Changed to cover with 1984 Specs.
Revised 01-05-83: Note and dimensions for Storage Length deleted.
Revised 10-15-80: Reflector requirement changed. Bridge End B Details changed for variable shoulder.
Revised 7-17-81: Reflector requirement changed. Bridge End B Details changed for variable shoulder.
Reworked 09-05-79



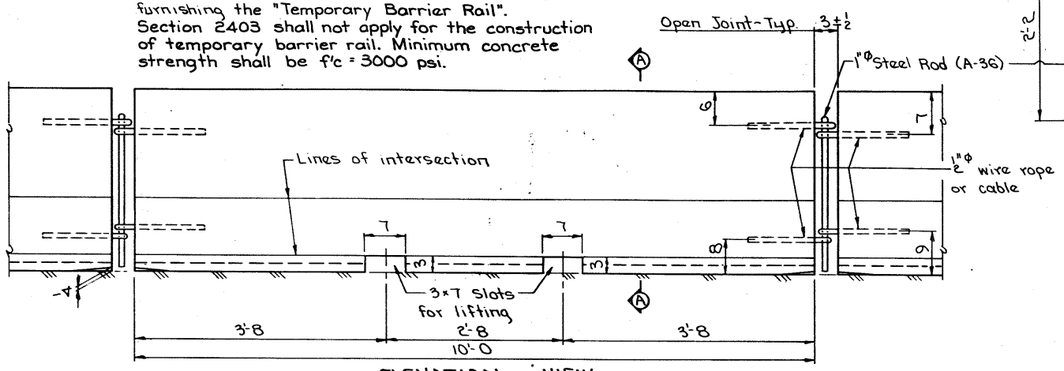
PLAN VIEW



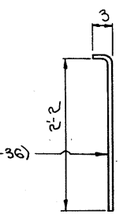
DETAIL A

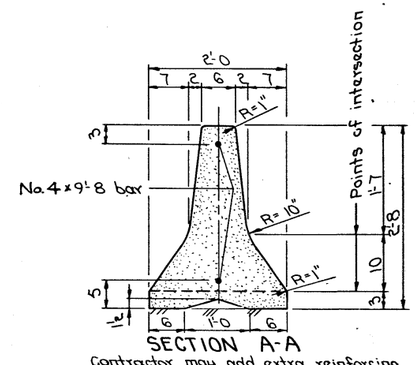
½"Φ Wire rope or cable to be ½"Φ, with a minimum breaking strength of 20,000 pounds.

NOTE:
Cost of 1"Φ steel rods and ½"Φ wire rope or cable to be considered incidental to furnishing the "Temporary Barrier Rail". Section 2403 shall not apply for the construction of temporary barrier rail. Minimum concrete strength shall be f'c = 3000 psi.



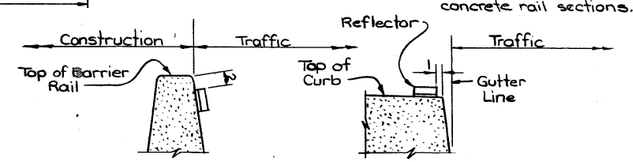
ELEVATION VIEW





SECTION A-A

Contractor may add extra reinforcing bars to increase the service life of concrete rail sections.



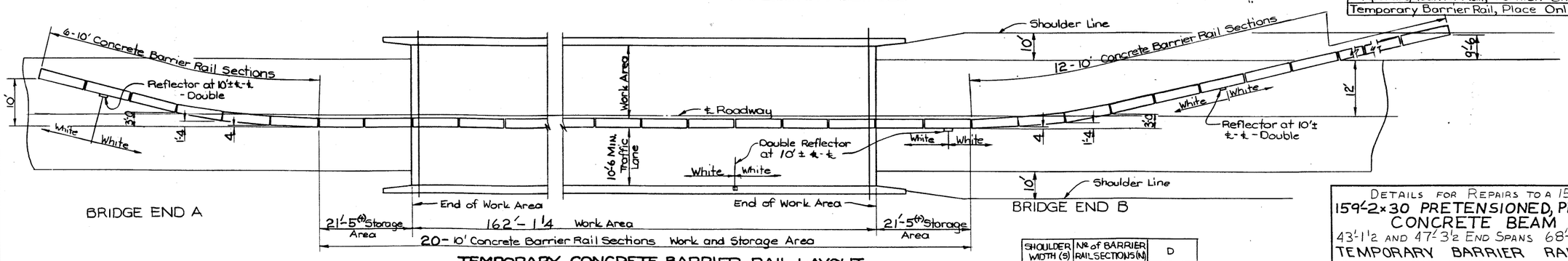
REFLECTOR DETAILS

NOTE:
Barrier is to become the property of the contractor at the completion of work and removed from the site by him.
No stationary equipment or construction material is to be placed in front of the temporary barrier at any time.

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 "Temporary Barrier Rail, Place Only".
Refer to other details, notes and quantity items, elsewhere on these plans, for traffic control to be established in conjunction with the temporary barrier rail.
Shoulder width at this bridge site is 10 feet, therefore 12 concrete barrier rail sections are required for bridge end "B".

Item Reference:
All Temporary Barrier Rail shall be nominal 10' long concrete units.

ESTIMATED QUANTITIES	
Item	Amount
Temporary Barrier Rail, Furnish Only	380 L.F.
Temporary Barrier Rail, Place Only	760 L.F.



TEMPORARY CONCRETE BARRIER RAIL LAYOUT FOR TWO WAY TRAFFIC

Note: The layout shown is for one stage of construction and would be the same for the other stage by rotating 180°.

SHOULDER WIDTH (S)	Nº of BARRIER RAIL SECTIONS (N)	D
~~4 ft.~~	~~9~~	~~2.5 ft.~~
~~6 ft.~~	~~10~~	~~5 ft.~~
~~8 ft.~~	~~11~~	~~7 ft.~~
10 ft.	12	9.5 ft.

DETAILS FOR REPAIRS TO A 15°00' SKEW
159'-2×30 PRETENSIONED, PRESTRESSED CONCRETE BEAM BRIDGE
43'-1½ AND 47'-3½ END SPANS 68'-9 INTERIOR SPAN
TEMPORARY BARRIER RAIL - CONCRETE
STATION 512+10.00 Sept., 1985
JACKSON COUNTY
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
Design Sheet No.: 7 Of 9 File No.: 28166 Design No.: 185

DESIGNED BY LeRoy Ornberg
DETAILED BY Shawn Foutch
TRACED BY
CHECKED BY

TEMPORARY BARRIER RAIL - CONCRETE	STANDARD 1033	JACKSON COUNTY	PROJECT NUMBER

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		8	10