

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

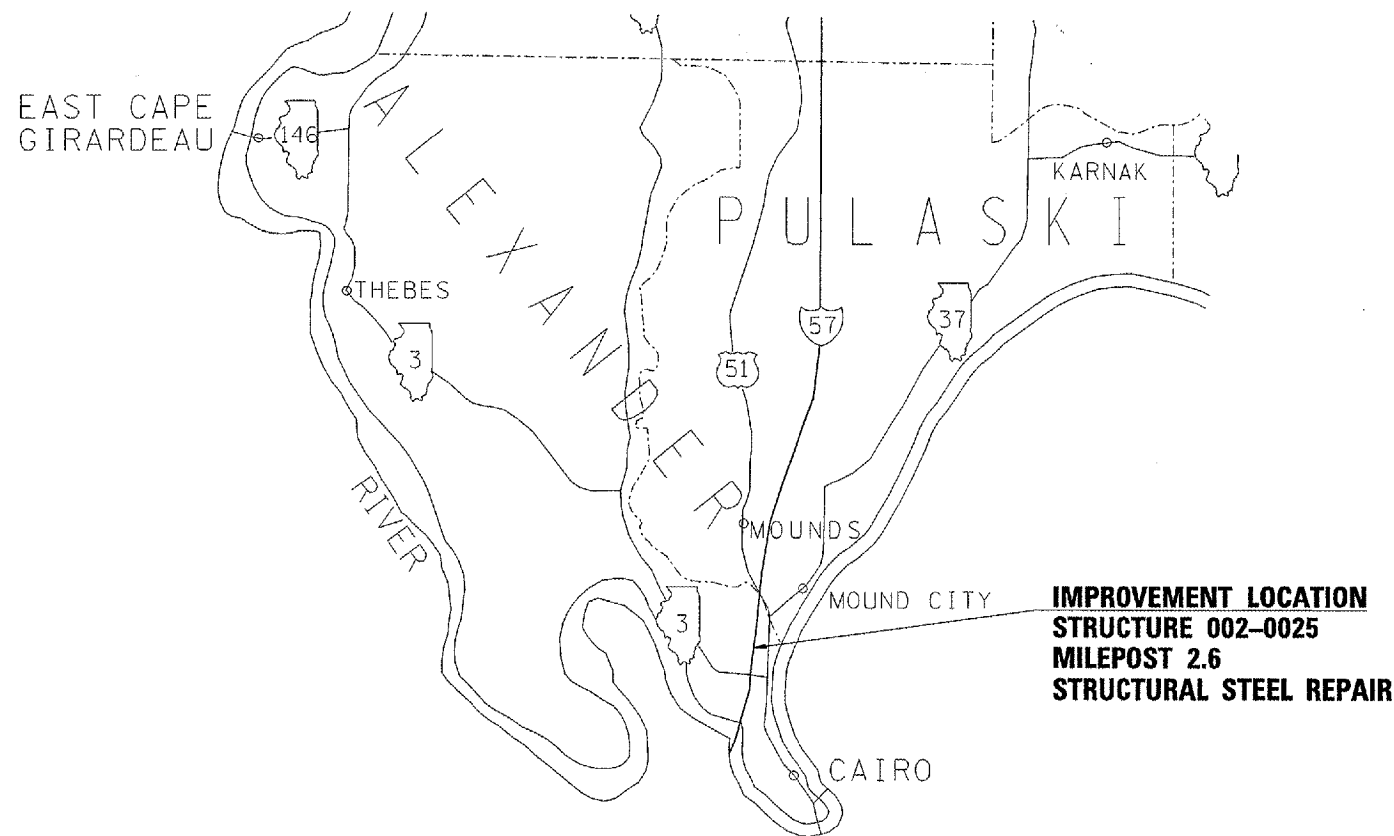
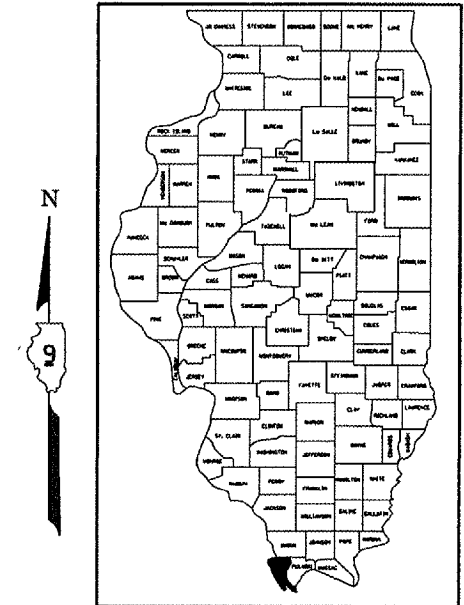
**C.N.I.C. RAILROAD OVER F.A.I. 57 (INTERSTATE 57) & F.A.P. 726 (U. S. 51)
 SECTION D-9 HOAN DETAIL REPAIR FY 07-1
 C-99-023-07
 ALEXANDER COUNTY**

FOR INDEX OF SHEETS, SEE SHEET NO. 2
 FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

ILLINOIS TOWNSHIP: CACHE NO. 1
 2006 ADT = 22800
 TRUCKS = 46%
 POSTED SPEED = 65 MPH

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57 FAP 726	*	ALEXANDER	6	1

FED. ROAD DIST. NO. 7 NUMBER FED. AID PROJECT:
 *D-9 HOAN DETAIL REPAIR FY 07-1
 CONTRACT NO. 78002 **6+1=7**



MAP NOT TO SCALE
 LENGTH OF IMPROVEMENT: 242' - 6"

PLAN DRAWINGS ARE NOT TO SCALE.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123

CONTRACT NO. 78002

PROJECT ENGINEER: CASEY N. TECKENBROCK PHONE: (618) 549-2171
 SQUAD LEADER: RITA GAUTNEY CENTREX: 782-4554

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED *March 20 07*
Mary Lewis
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 11 20 07
Eric E. Horn
 ENGINEER OF DESIGN AND ENVIRONMENT

May 11 20 07
Milton R. Sears, P.E.
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57 FAP 726	*	ALEXANDER	6	2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
* D-9 HOAN DETAIL REPAIR FY 07-1 CONTRACT NO. 78002				

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	SIGNATURES, INDEX OF SHEETS, STANDARDS,
3	SUMMARY OF QUANTITIES
4	GENERAL NOTES, GENERAL PLAN & ELEVATION
5	FRAMING PLAN
6-6A	MODIFICATION DETAILS

STANDARDS

701101-01	Off-Road Operations, Multilane
701400-02	Approach to Lane Closure, Freeway/Expressway
701406-04	Lane Closure, Freeway/Expressway, Day Operations Only
702001-06	Traffic Control Devices

Prepared By: *Kevin Grammel*
DISTRICT OPERATIONS ENGINEER

Examined By: *James H. [Signature]*
ASSISTANT REGIONAL ENGINEER

Examined By: *James H. [Signature]*
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *Carrie Nelson*
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *Joe [Signature]*
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *[Signature]*
DISTRICT CONSTRUCTION ENGINEER

Examined By: *[Signature]*
DISTRICT MATERIALS ENGINEER

Examined By: *[Signature]*
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Approved By: *[Signature]*
DEPUTY DIRECTOR OF HIGHWAYS,
REGIONAL ENGINEER

DATE: *March* 20

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57 FAP 726	*	ALEXANDER	6	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

* D-9 HOAN DETAIL REPAIR FY 07-1
CONTRACT NO. 78002

SUMMARY OF QUANTITIES

		100% STATE	
CONSTRUCTION TYPE CODE: SFTY - 2A		RURAL	
CODE NO.	ITEM DESCRIPTION	UNIT	QUANTITY
67100100	MOBILIZATION	L. SUM	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L. SUM	1
X0322556	STIFFENER INTERSECTION MODIFICATION	EACH	96
X0325795	BRIDGE MONITORING	L SUM	1
70106800	CHANGEABLE MESSAGE SIGN	CAL. MO.	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L. SUM	1

Existing Structure: SN 002-0025 Built in 1973 as Illinois Central Railroad over FAI 57 Sec. 02-15B.
Existing Structure consists of two single spans of 2 thru-plate girders.
Holes will be drilled at selected stiffener locations to reduce possibility of brittle fracture. Vehicular and rail traffic will be maintained using appropriate traffic control.

No Salvage.

STATE OF ILLINOIS
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI Rt. 57	*	Alexander	6	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract 78002

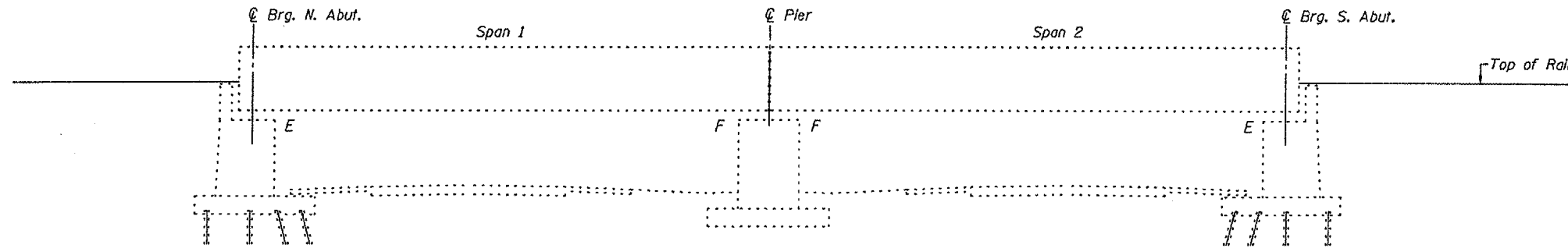
GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

No field welding is permitted except as specified in the contract documents.

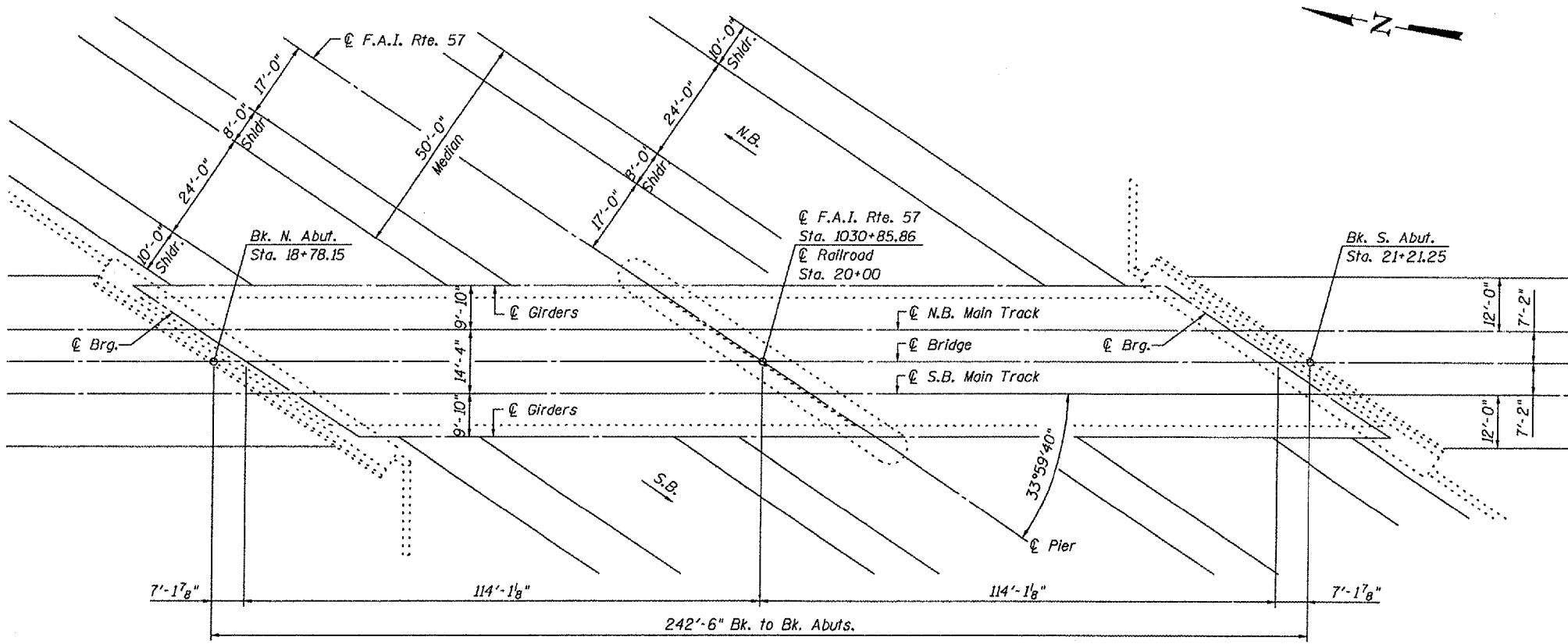
Existing plans will be available for viewing at the IDOT District 9 Headquarters.



ELEVATION

INDEX OF SHEETS

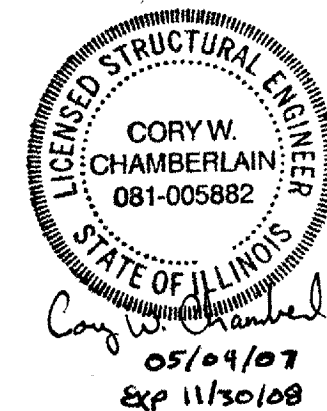
1. General Plan and Elevation
2. Repair Location Plan
3. Modifications Details
4. Modifications Details



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stiffener Intersection Modification	Each	96		96
Bridge Monitoring	L.S.	1		1
Railroad Protective Liability Insurance	L.S.		1	1



LOADING COOPER E-80

Cooper E80 with Steam Impact

DESIGN SPECIFICATIONS

1970 AREMA Specifications for Steel Bridges (Original)
2006 AREMA Specifications for Railway Engineering

DESIGN STRESSES

EXISTING FIELD UNITS

$f_t = 3,500$ psi
 $f_s = 20,000$ psi (A36 structural steel)

GENERAL PLAN & ELEVATION
CNIC RAILROAD OVER INTERSTATE 57
ALEXANDER COUNTY
S.N. 002-0025

DESIGNED	C.W.C.
CHECKED	S.D.S.
DRAWN	D.L.H.
CHECKED	C.W.C.

WHKS & CO.

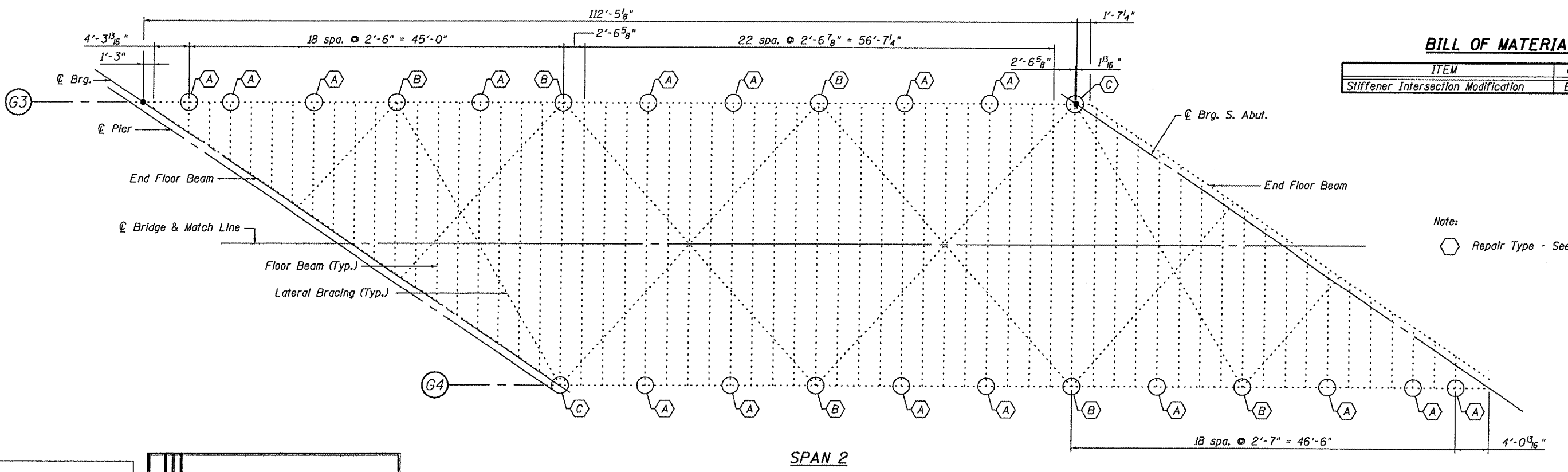
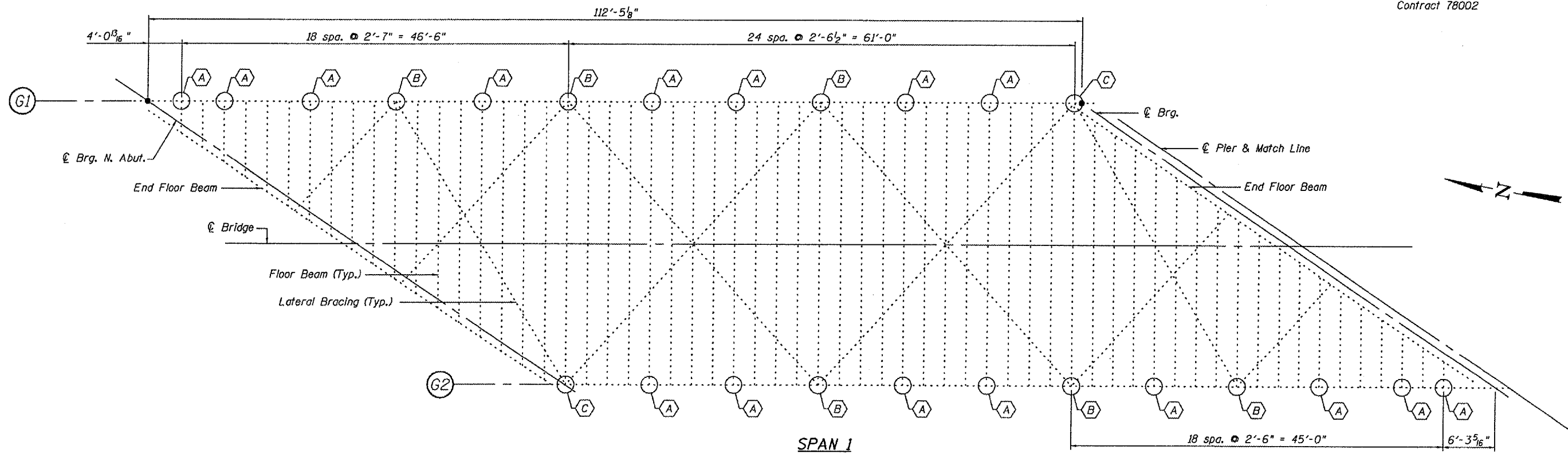
ENGINEERS PLANNERS LAND SURVEYORS

MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAI Rt. 57	"	Alexander	5	2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract 78002



BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stiffener Intersection Modification	Each	96

Note:
 Repair Type - See Sheet 3 of 3.

DESIGNED C.W.C.
 CHECKED S.D.S.
 DRAWN D.L.H.
 CHECKED C.W.C.

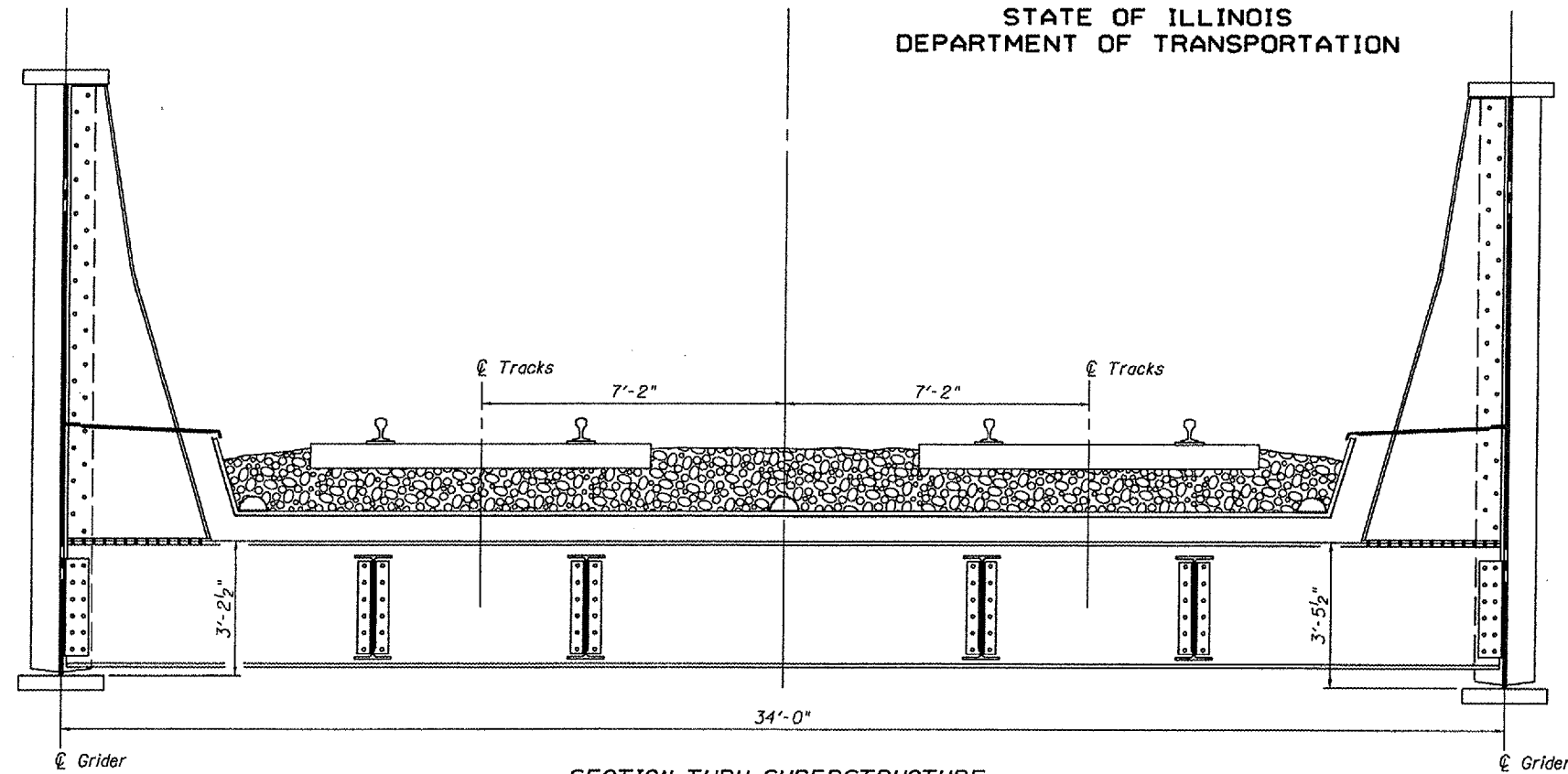
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REPAIR LOCATION PLAN
CNIC RAILROAD OVER INTERSTATE 57
ALEXANDER COUNTY
S.N. 002-0025

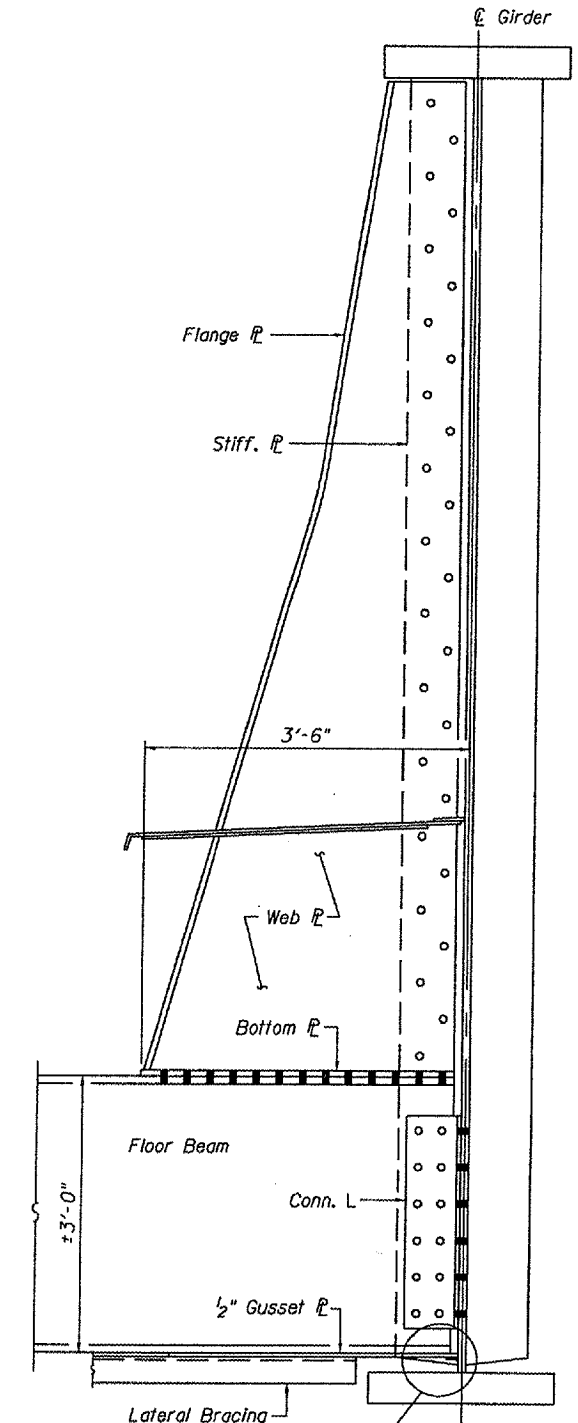
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAI Rt. 57	SECTION "	COUNTY Alexander	DISTRICT "	SHEET NO. 3
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	OF 4 SHEETS

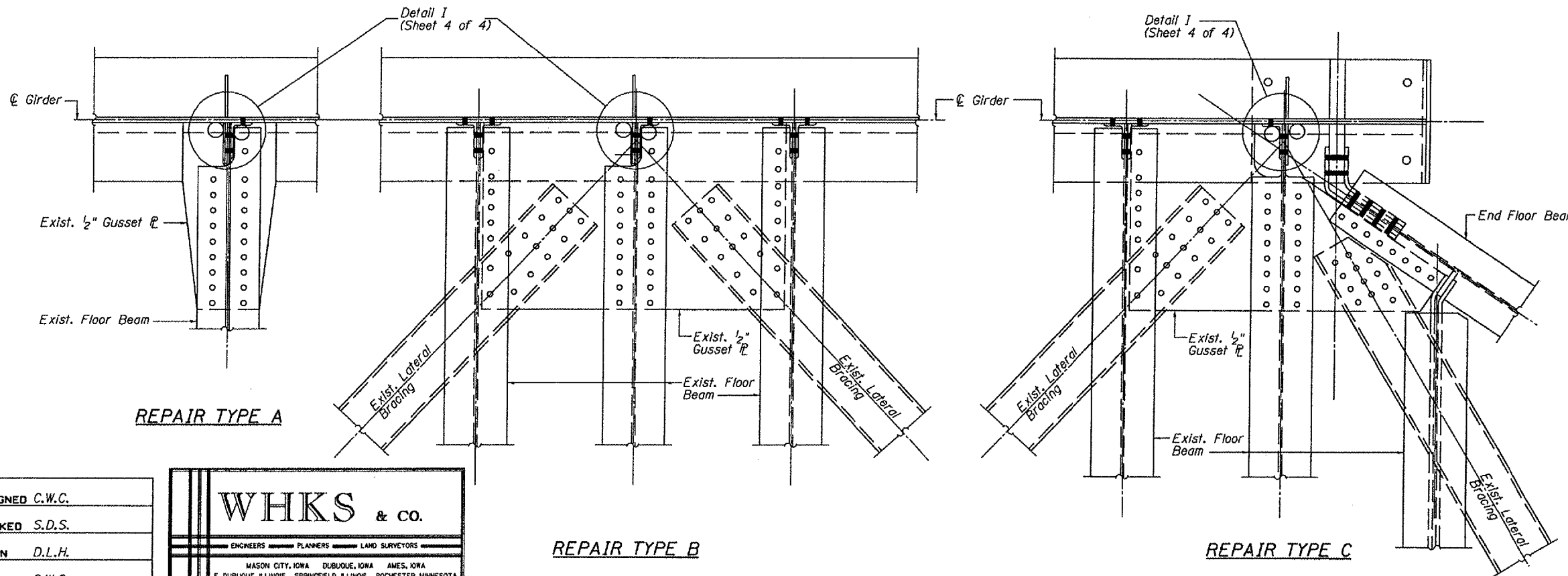
Contract 78002



SECTION THRU SUPERSTRUCTURE
(Lateral Bracing not shown for clarity)



DETAIL II
(Sheet 4 of 4)
SECTION THRU GIRDER



REPAIR TYPE A

REPAIR TYPE B

REPAIR TYPE C

DESIGNED C.W.C.
CHECKED S.D.S.
DRAWN D.L.H.
CHECKED C.W.C.

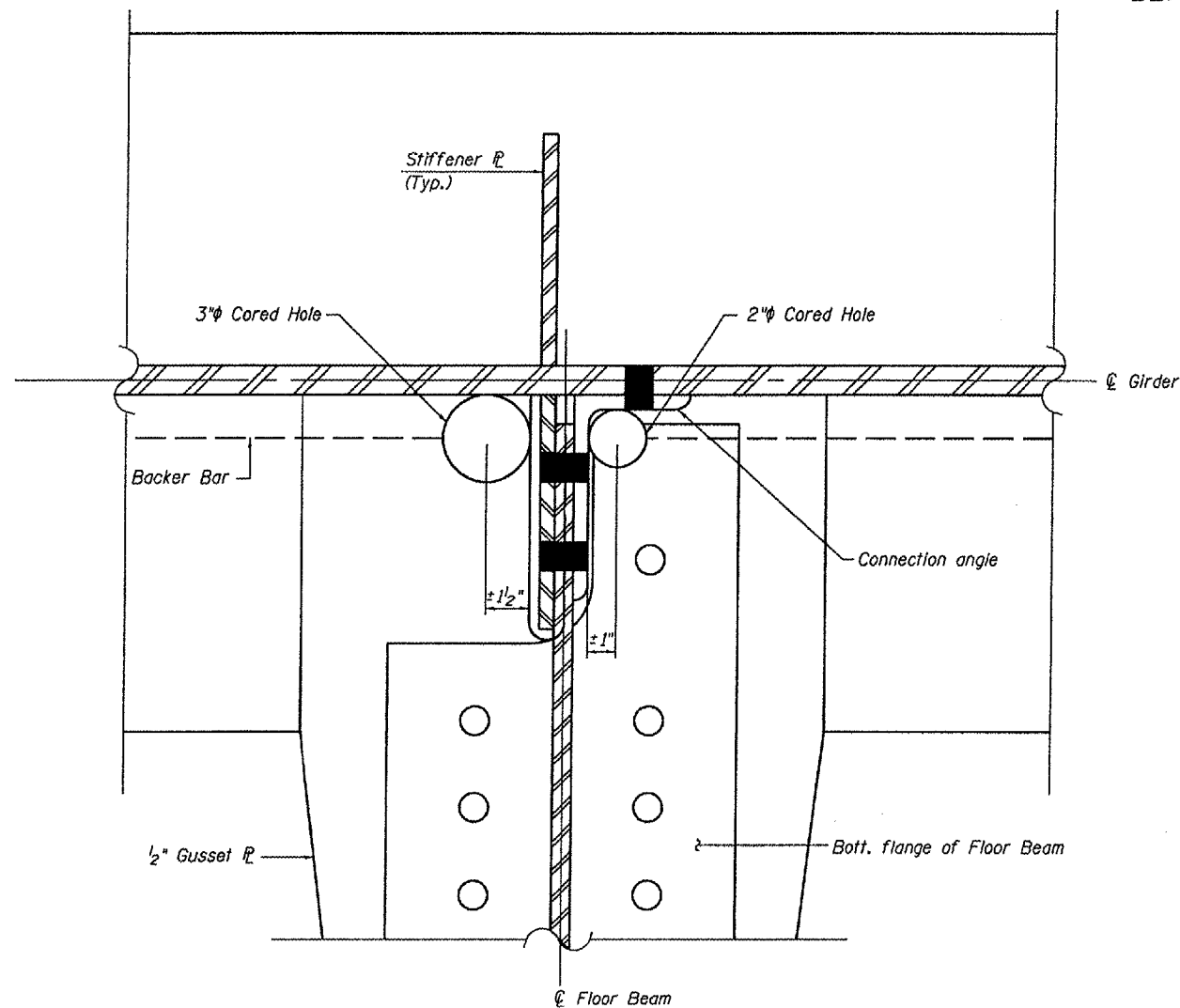
WHKS & CO.
ENGINEERS PLANNERS LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

MODIFICATION DETAILS
CNIC RAILROAD OVER INTERSTATE 57
ALEXANDER COUNTY
S.N. 002-0025

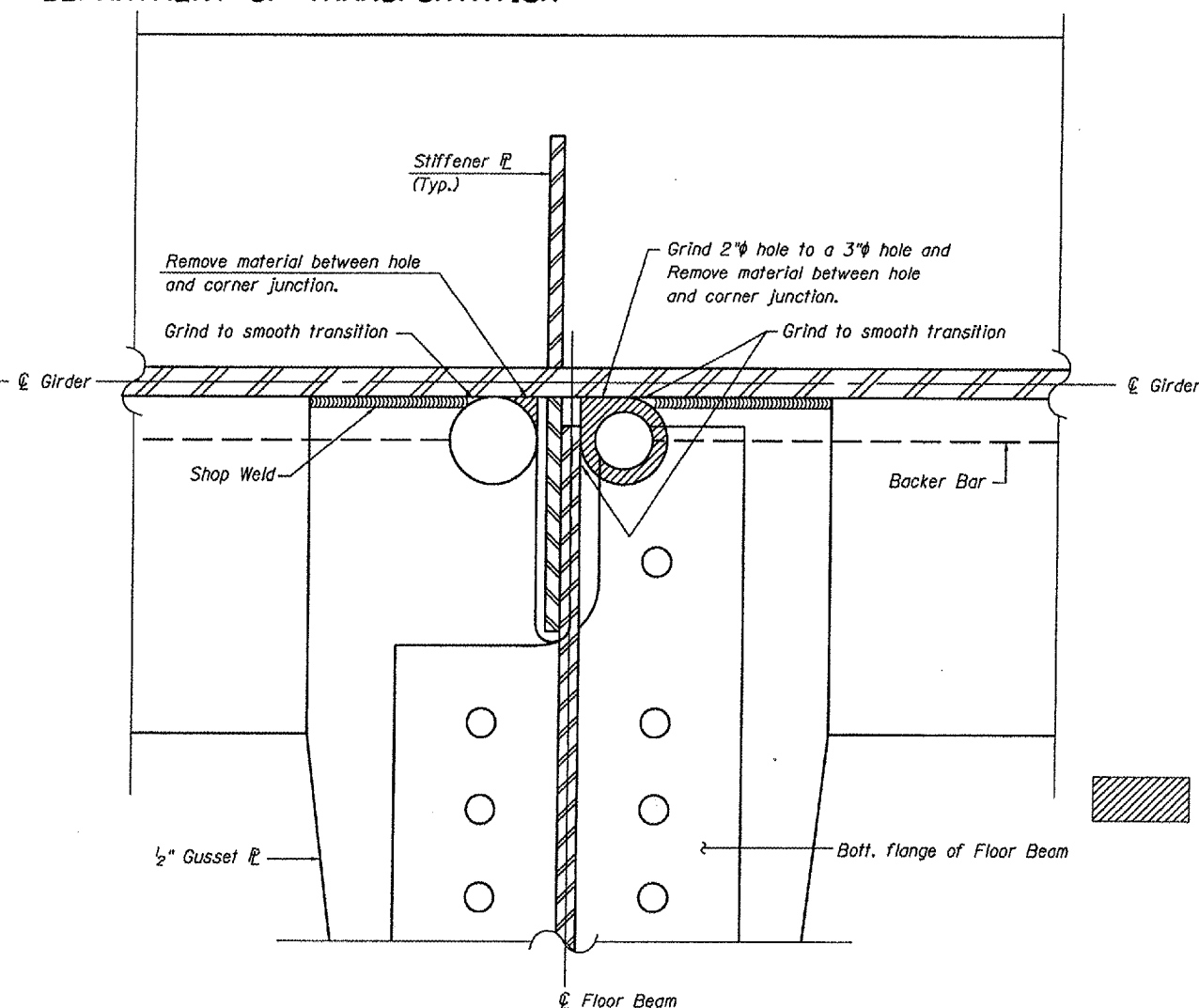
STATE OF ILLINOIS
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ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
FAI Rt. 57		Alexander	6	6A	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			OF 4 SHEETS

Contract 78002



DETAIL IA

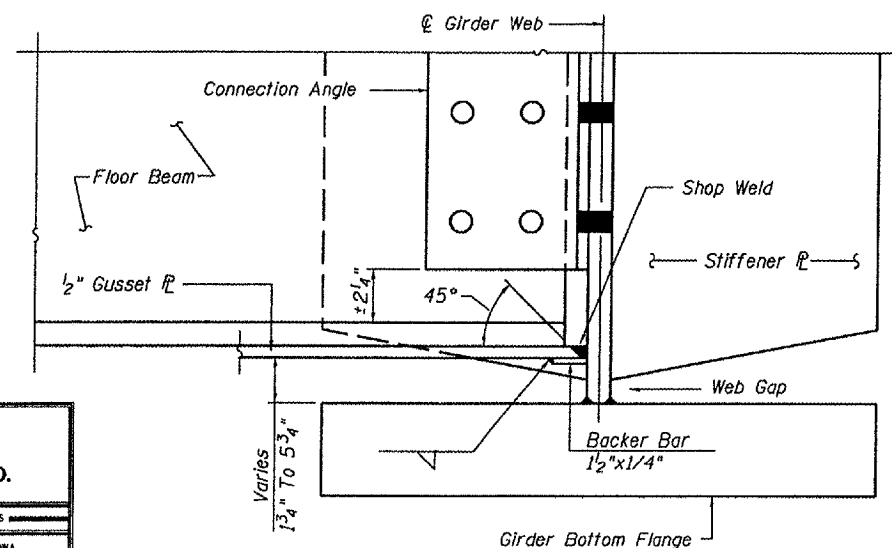


DETAIL IB

Connection angle not shown
for clarity.

Indicates hand grinding of structural steel.

DETAIL I STIFFENER INTERSECTION MODIFICATION



DETAIL II

Procedure:

1. Core 2" or 3" holes, positioned close to corner junction as shown in Detail IA. Core 2" hole thru Bott. Flange, Gusset, and Backer Bar. Core 3" hole thru Gusset, and Backer Bar.
2. Enlarge diameter of 2" hole to 3" by symmetrically grinding around hole as shown in Detail IB.
3. Remove material between core and intersection junction by grinding with carbide tools and die grinder. Remove all burrs from cut edge and check for irregularities as shown in Detail IB.
4. Web plate surface shall have a roughness average (Ra) of 250µ-in. or less. Cored surfaces shall have an Ra to 250µ-in. or less. Check for symmetry on each side of stiffener. Repeat step 2 and 3 if necessary for symmetry.
5. After burr removal, the web area shall be inspected for cracks using magnetic particle (MT) or Dye Penetrant methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.
6. The exposed steel surfaces shall be cleaned and painted using an aluminum epoxy mastic primer.

Note:

See Special Provisions for further details and payment information.

Cleaning & Painting shall be according to Cleaning and Painting Contact Surface Areas of Existing Steel Structures and shall be included in the cost of "Stiffener Intersection Modification".

MODIFICATION DETAILS
CNIC RAILROAD OVER INTERSTATE 57
ALEXANDER COUNTY
S.N. 002-0025

DESIGNED	C.W.C.
CHECKED	S.D.S.
DRAWN	D.L.H.
CHECKED	C.W.C.

WHKS & CO.
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MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
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