

BRIDGE REPAIR  
 BRFN-078-3 ( 6 )--39-51  
 LETTING DATE  
 04-05-2007  
 JEFFERSON COUNTY  
 JEFFERSON COUNTY - DESIGN NO. 207

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  
**PRIMARY ROAD SYSTEM**  
**JEFFERSON COUNTY**  
**BRIDGE REPAIR**  
**IA.78 OVER SKUNK RIVER**  
**W. OF COPPOCK**

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.

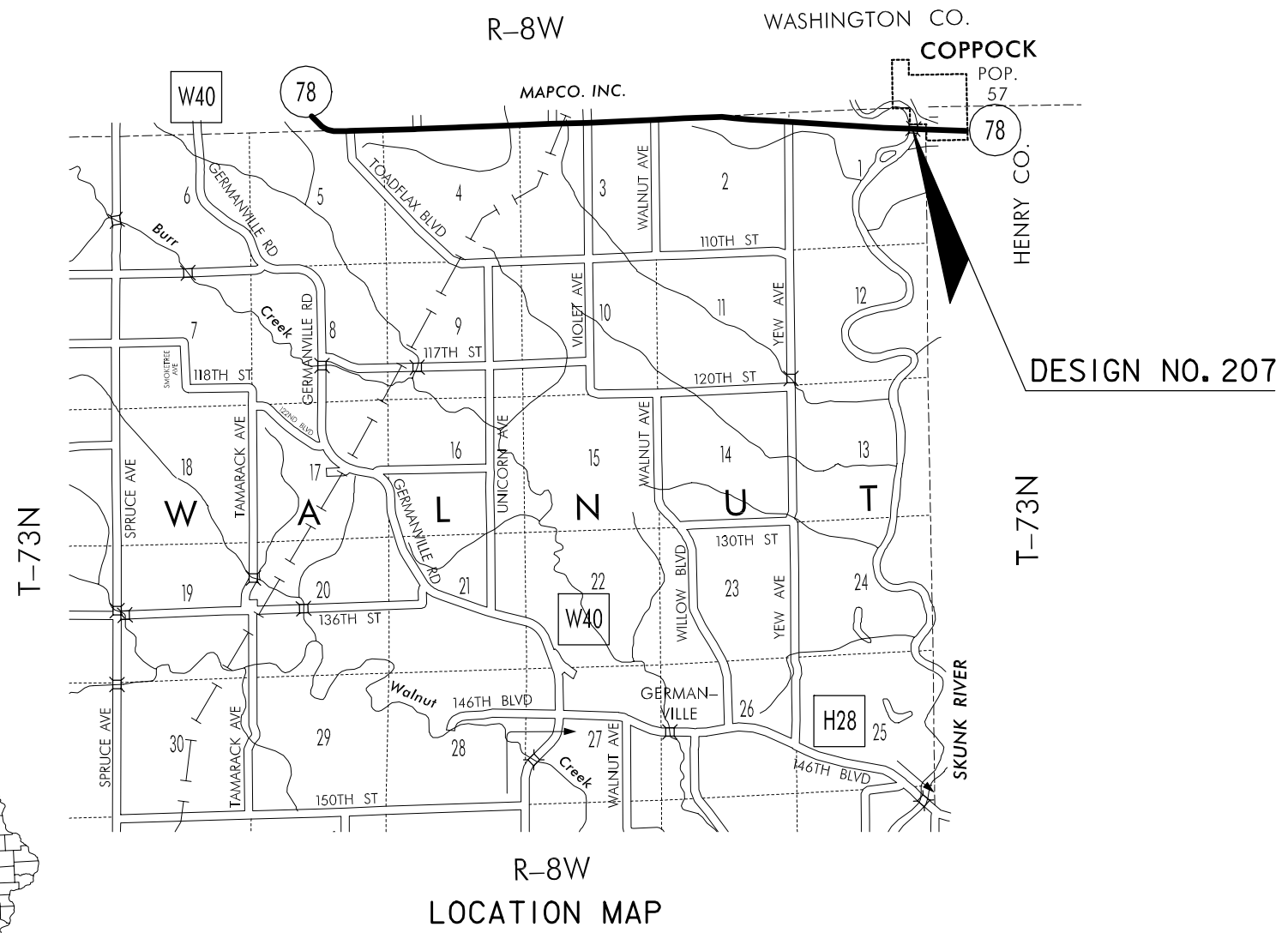
VALUE ENGINEERING SAVES. REFER TO THE GENERAL NOTES IN THESE PLANS.

ENGLISH STANDARD BRIDGE PLANS		
STANDARD	ISSUED	REVISED

	TOTAL SHEETS 8
PROJECT NUMBER BRFN-078-3 ( 6 )--39-51	
R.O.W. PROJECT NUMBER	
PROJECT IDENTIFICATION NUMBER 07-51-078-010	

INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATE SHEET - DESIGN 207
2-5	DESIGN 207
C.01	ESTIMATE SHEET FOR ROADWAY
C.01-J.01	ROADWAY SHEETS

REVISIONS



STANDARD ROAD PLANS	
STANDARD ROAD PLANS ARE LISTED ON SHEET	C.01

DESIGN DATA RURAL			
2007	AADT	700	V.P.D.
2027	AADT	1000	V.P.D.
20	DHV		V.P.H.
	TRUCKS	23	%
TOTAL DESIGN ESALS			

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
I	NORBERT A. KOTLERS	STRUCTURAL DESIGN
C.01	JAMES R. SCHOENROCK	ROADWAY DESIGN

STRUCTURAL 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. <i>Norbert A. Kotlers</i> Signature <span style="float: right;">3-27-2007</span> Date Printed or Typed Name <b>Norbert A. Kotlers</b>
My license renewal date is December 31, 2007	
Pages or sheets covered by this seal: SHEETS 1 THRU 5 OF 8	

PROJECT DIRECTORY NAME: 5107801007

W:\Projects\5107801007\BRFinal\51078006.brg 510207S000 \NTPPRTSVR2\BrgPDF

**GENERAL NOTES :**

THIS DESIGN IS FOR REPAIRS TO THE EXISTING 2 - 150'x24' HIGH TRUSS SPANS WITH 2 - 40'x 24' I BEAM APPROACH SPANS, DESIGN NO. 436. COPIES OF ORIGINAL DESIGN PLANS WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT THE OFFICE OF CONTRACTS - HIGHWAY DIVISION - IOWA D.O.T. - AMES.

IT IS THE INTENT OF THIS DESIGN TO RESTORE, AS NEAR AS POSSIBLE, THE CAPACITY OF THIS BRIDGE THAT WAS LOST DUE TO COLLISION DAMAGE TO THE U3L3 VERTICAL MEMBERS ON BOTH SIDES OF THE WEST TRUSS SPAN, AND TO THE SWAY FRAME CONNECTED TO THESE TWO MEMBERS.

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

ALL DIMENSIONS REQUIRED TO FABRICATE NEW STRUCTURAL STEEL SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

FAINT LINES ON PLANS INDICATE EXISTING PORTIONS OF THE BRIDGE.

NO VEHICLES WILL BE ALLOWED ON THE DAMAGED TRUSS SPAN, SPAN NO. 3, UNTIL STRONGBACKS ARE IN PLACE AS NOTED IN THE REPAIR PROCEDURE.

HEAVY CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED ON THE BRIDGE DURING CONSTRUCTION UNLESS PRIOR WRITTEN APPROVAL OF THE ENGINEER IS OBTAINED. APPROVAL SHALL BE OBTAINED BY SUBMITTING A WRITTEN REQUEST TO THE ENGINEER. THIS REQUEST SHALL INCLUDE THE FOLLOWING:

1. A DETAILED PLAN ADEQUATELY DESCRIBING THE EQUIPMENT AND HOW IT IS PROPOSED TO BE USED. THIS PLAN SHALL CONTAIN, AS A MINIMUM, THE FOLLOWING INFORMATION.

A. THE CONFIGURATION AND WEIGHT OF THE EQUIPMENT PROPOSED TO BE PLACED ON THE BRIDGE, INCLUDING THE DEAD LOAD WEIGHT ON ALL WHEELS/AXLES.

B. THE PROPOSED LOCATION(S) OF THE EQUIPMENT ON THE BRIDGE DURING ALL LIFTING OPERATIONS.

C. THE WEIGHT OF ALL PROPOSED LIFTS TO BE MADE BY THE EQUIPMENT.

D. THE LOAD TO ALL WHEELS/AXLES/OUTRIGGERS RESULTING FROM THE PROPOSED LIFTING OPERATIONS. DURING ALL CRITICAL PHASES OF THE LIFTING OPERATIONS.

NO TORCHWORK, CUTTING, GRINDING OR DRILLING OF HOLES ON THE EXISTING STRUCTURAL STEEL OF THE BRIDGE SHALL BE PERFORMED WHEN THE AIR TEMPERATURE AND STEEL TEMPERATURE ARE BELOW 40°F.

THE BRIDGE 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.

CARE SHALL BE TAKEN TO PREVENT FURTHER DAMAGE TO THE EXISTING BRIDGE. ANY BRIDGE MEMBERS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY HIM AT NO EXTRA COST TO THE STATE.

ALL NEW STRUCTURAL STEEL SHALL CONFORM TO A-36.

ALL HOLES FOR BOLTED CONNECTIONS ARE TO BE 1/8"φ UNLESS OTHERWISE NOTED OR SHOWN.

ALL NEW BOLTS ARE TO BE 3/4"φ HIGH STRENGTH, ASTM A-325.

THREADED RODS SHALL MEET THE SAME REQUIREMENTS AS FOR BRIDGE SWEDGE ANCHOR BOLTS PER MATERIALS IM 453.08.

DAMAGED MEMBERS NEED NOT BE REMOVED UNLESS THEY APPEAR LIKELY TO INTERFERE WITH TRAFFIC AFTER BRIDGE IS REOPENED.

THE BRIDGE CONTRACTOR SHALL INFORM THE OFFICE OF BRIDGES AND STRUCTURES OF THE ANTICIPATED DATE OF COMPLETION OF THE REPAIR PROJECT APPROXIMATELY TWO DAYS PRIOR TO COMPLETION OF THE REPAIR PROJECT.

**REPAIR PROCEDURE:**

1. PLACE THE THREE LOOPS OF WIRE ROPE, MINIMUM BREAKING STRENGTH OF 45K EACH, ON THE EAST SIDE OF VERTICAL TRUSS MEMBER U3L3, AS NEAR AS PRACTICABLE TO THE ORIGINAL CENTERLINE OF THIS MEMBER. THIS IS TO BE DONE ON BOTH THE NORTH AND SOUTH SIDES OF THE BRIDGE. WIRE ROPE IS TO REMAIN IN PLACE PERMANENTLY. WIRE ROPE IS TO MEET THE REQUIREMENTS OF ASTM A-741.

2. STRONGBACK BEAMS SHALL BE PLACED ON HARDWOOD BLOCKS AND ATTACHED TO THE EXISTING FLOOR SYSTEM AS SHOWN ON DESIGN SHEET NO. 3. NO VEHICLE SHALL BE ALLOWED ON THE BRIDGE UNTIL BOTH STRONGBACKS ARE IN PLACE AND HAVE BEEN DEFLECTED AND LATERALLY SECURED AS DETAILED ON DESIGN SHEET. 3, UNLESS APPROVED BY THE ENGINEER.

3. STOCK CHANNEL MATERIAL SHALL BE CUT TO FIT AND ASSEMBLED AS SHOWN ON DESIGN SHEET NO. 4. LOCATIONS OF L8 X 8 X 1/2 X 8 ARE SHOWN ON DESIGN SHEET NO. 3. IT MAY BECOME NECESSARY TO MOVE THE LOCATION OF THE NEW SWAY BRACING IN ORDER TO AVOID INTERFERENCE WITH THE EXISTING DAMAGED SWAY BRACING. LENGTH OF THE DIAGONALS ON THE NEW SWAY FRAMES WILL HAVE TO BE ADJUSTED AS REQUIRED.

**TOTAL ESTIMATED BRIDGE QUANTITIES**

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUANTITY
1	2408-7800000	STRUCTURAL STEEL	LB	24,501	
2	2533-4980005	MOBILIZATION	LS	1	

ITEM NO. ESTIMATE REFERENCE INFORMATION  
 1 INCLUDES ALL COSTS OF EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK DETAILED IN THIS PLAN.

NOTE :  
ROADWAY QUANTITIES SHOWN ELSEWHERE IN THESE PLANS.

TRAFFIC CONTROL NOTES  
ROAD CLOSED

**DESIGN HISTORY AT THIS SITE**

DES. NO.	TYPE OF WORK
436	ORIGINAL DESIGN
186	OVERLAY & DECK REPAIR
101	TRUSS REPAIR
207	TRUSS REPAIR

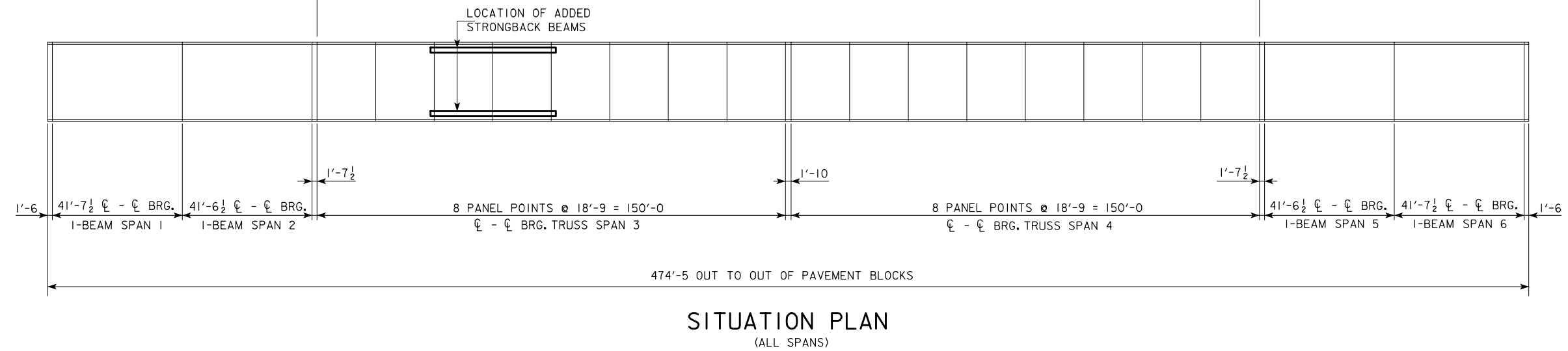
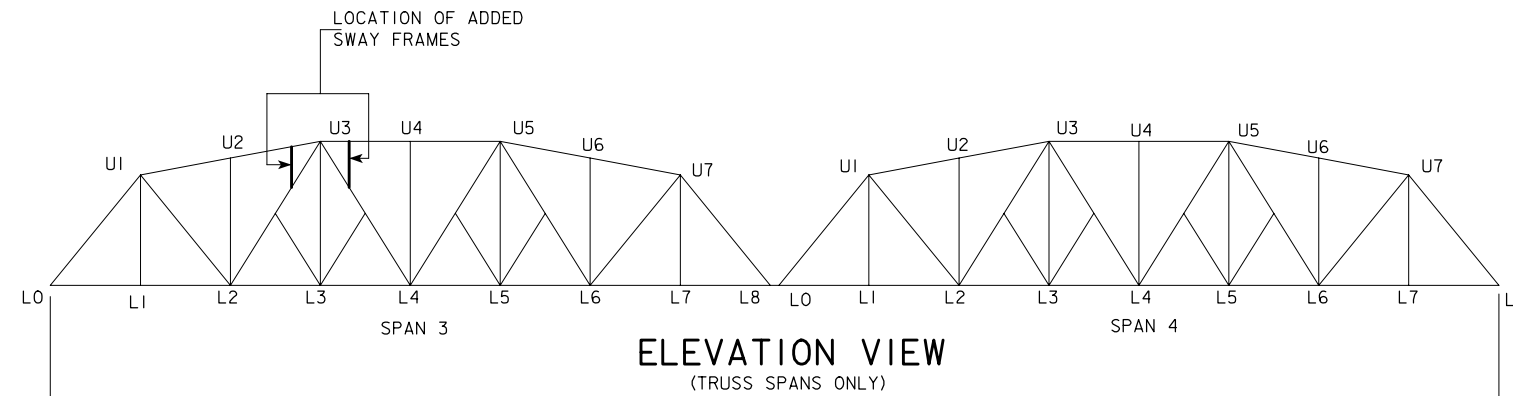
**SPECIFICATIONS :**

DESIGN : AASHTO SERIES OF 1996.  
 CONSTRUCTION : IOWA DEPARTMENT OF TRANSPORTATION SPECIFICATION, SERIES OF 1997, 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. STRUCTURAL STEEL IN ACCORDANCE WITH SECTION 10. ASTM A-36.

DESIGN FOR REPAIRS TO  
**2 - 150" x 24' HIGH TRUSS SPANS WITH 4 - 40' x 24' I-BEAM APPROACH SPANS**  
**NOTES & QUANTITIES**  
 STATION : 77+50.00 MARCH, 2007  
**JEFFERSON COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. 1 OF 4 FILE NO. 30242 DESIGN NO. 207



**LOCATION :**

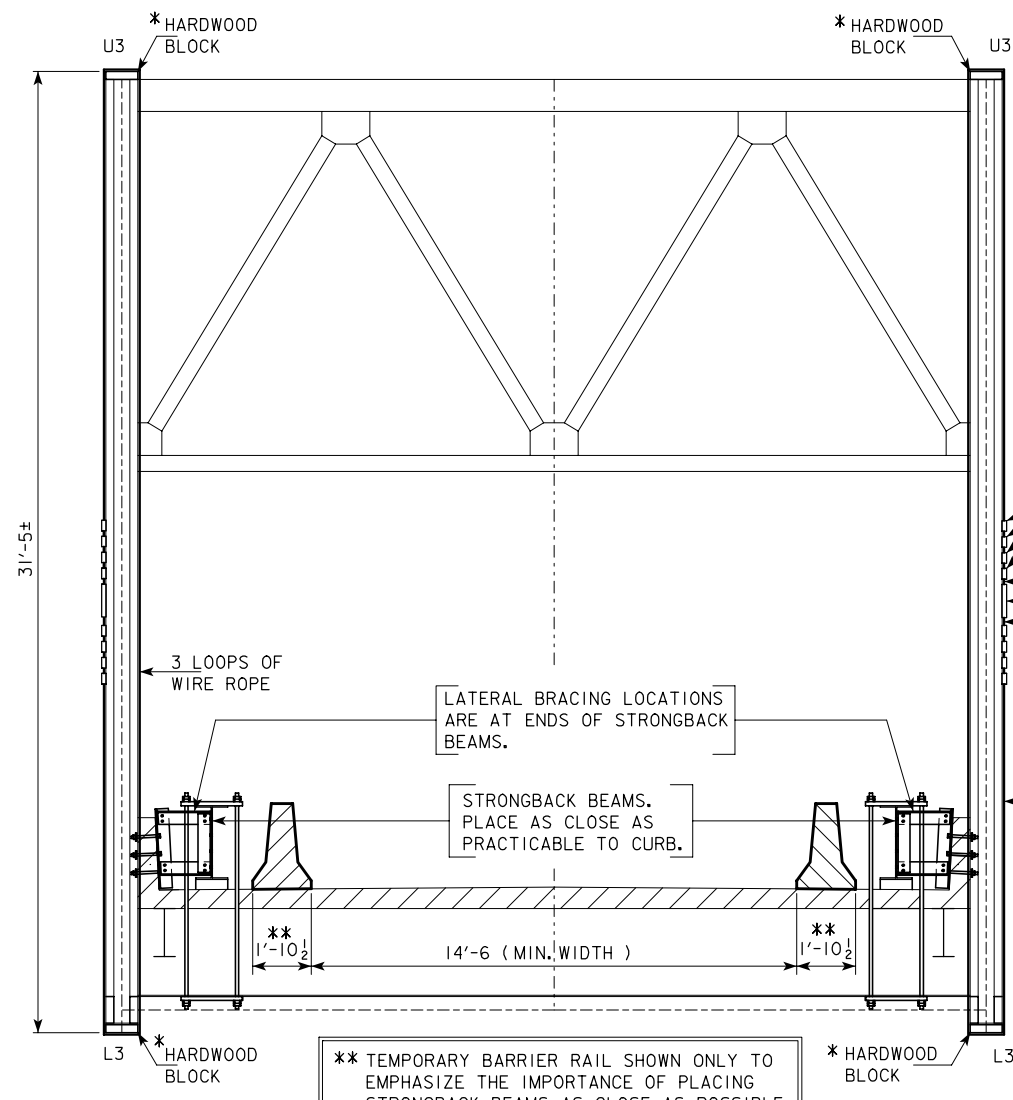
IOWA NO. 78  
OVER SKUNK RIVER  
SECTION 1  
T-73 N R-8 W  
WALNUT TWP.  
JEFFERSON COUNTY

BRIDGE MAINTENANCE NO.  
5126.5S078

FHWA NO.  
031420

DESIGN FOR REPAIRS TO  
**2 - 150" x 24' HIGH TRUSS SPANS  
WITH 4 - 40' x 24' I-BEAM  
APPROACH SPANS  
SITUATION PLAN**

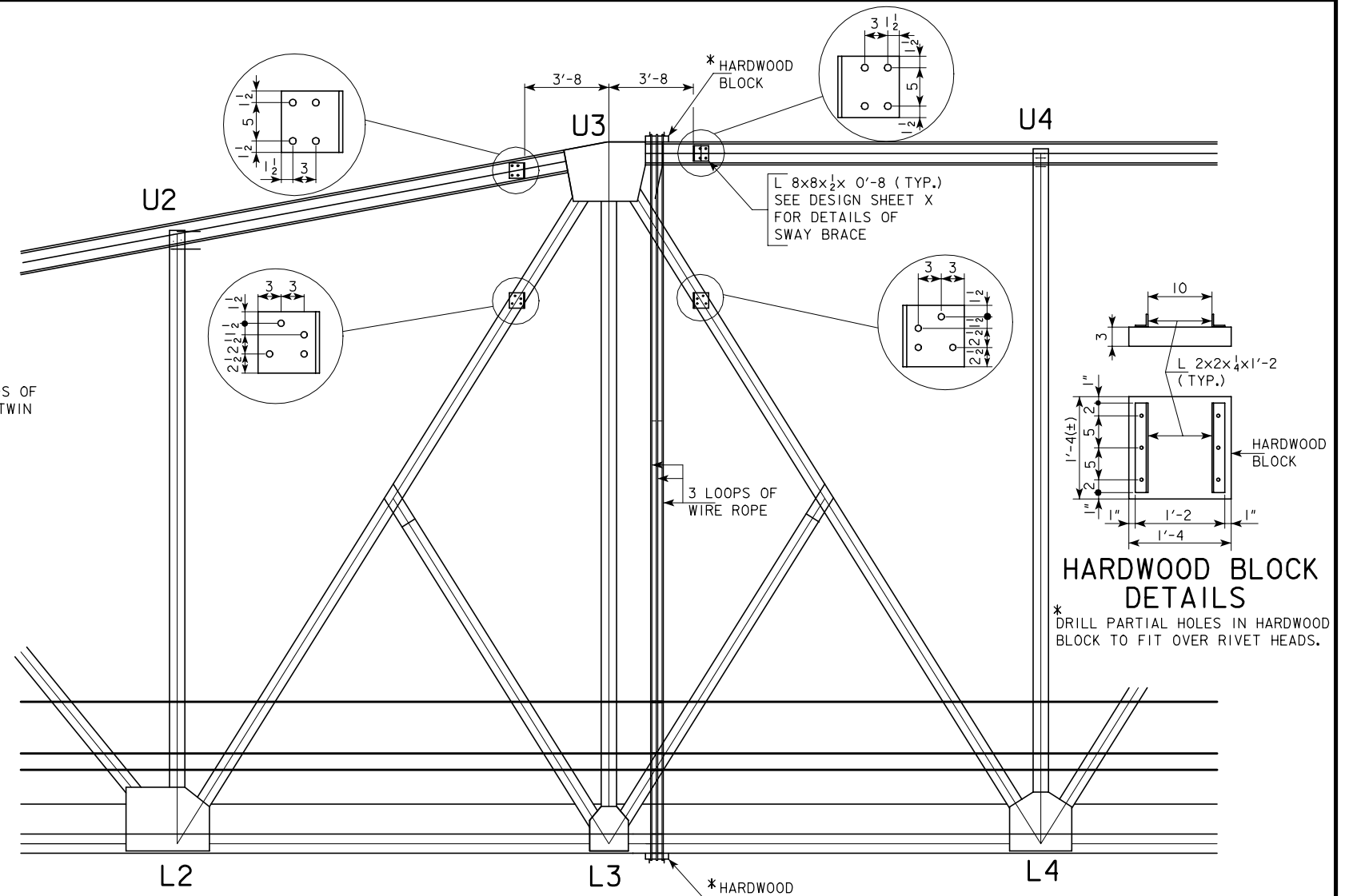
STATION : 77+50.00 MARCH, 2007  
**JEFFERSON COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO. 2 OF 4 FILE NO. 30242 DESIGN NO. 207



SECTION NEAR U3L3

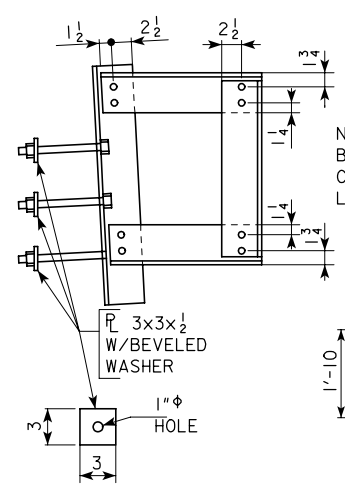
\*\* TEMPORARY BARRIER RAIL SHOWN ONLY TO EMPHASIZE THE IMPORTANCE OF PLACING STRONGBACK BEAMS AS CLOSE AS POSSIBLE TO CURB.

CONNECT LOOSE ENDS OF WIRE ROPE WITH 4 TWIN BASE CLIPS. (TYP.)  
 WIRE ROPE THIMBLES  
 EYE AND EYE TURNBUCKLES W/LOCK NUTS MINIMUM 18" TAKEUP  
 THREE LOOPS OF WIRE ROPE. MINIMUM BREAKING STRENGTH OF 45 k EACH. TIGHTEN SNUGLY.



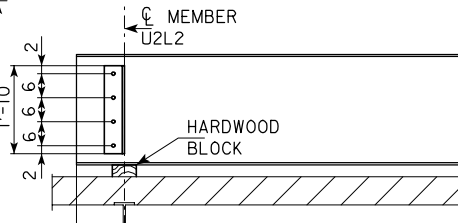
ELEVATION NEAR U3L3

**HARDWOOD BLOCK DETAILS**  
 \* DRILL PARTIAL HOLES IN HARDWOOD BLOCK TO FIT OVER RIVET HEADS.

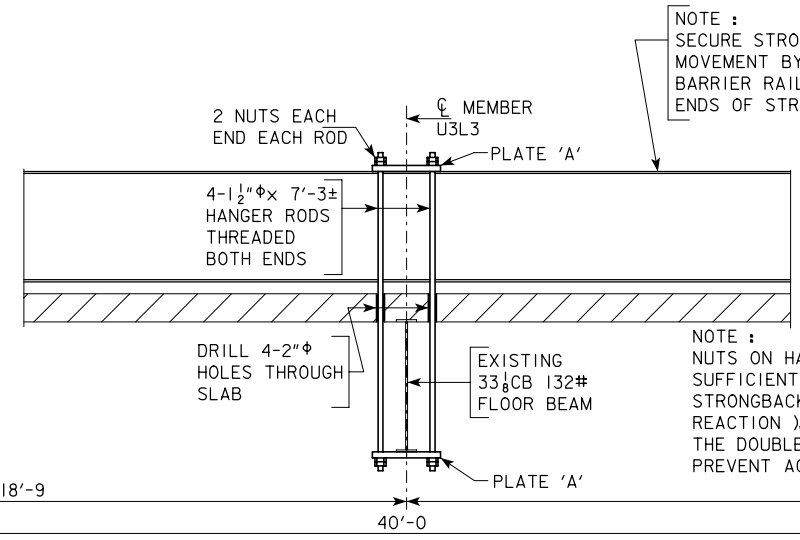


LATERAL BRACING DETAILS

NOTE : BRACING MATERIALS CONSIST OF L's 5x5x1/2



NOTE : HARDWOOD BLOCK MUST BE TAPERED TO FIT CROWN TO KEEP STRONGBACK BEAM WEB VERTICAL.



LONGITUDINAL SECTION NEAR STRONGBACK BEAM

NOTE : SECURE STRONGBACK BEAM TO PREVENT LATERAL MOVEMENT BY CONNECTING BEAM TO EXISTING BARRIER RAIL AS SHOWN. TYPICAL FOR BOTH ENDS OF STRONGBACK BEAM.

NOTE : NUTS ON HANGER RODS TO BE TIGHTENED SUFFICIENTLY TO DEFLECT THE W27x235 STRONGBACK BEAM 5/16" ± 1/32 (APPROX. 45 kip REACTION). THE DOUBLE NUTS SHALL BE PROVIDED TO PREVENT ACCIDENTAL LOOSENING.

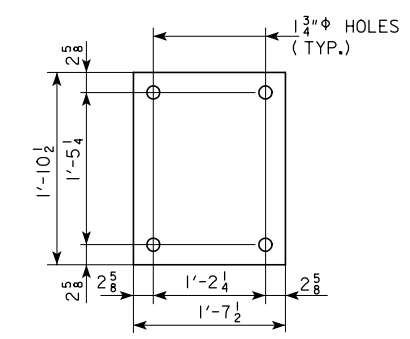
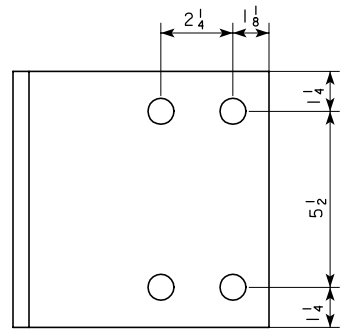


PLATE 'A'  
 (22 1/2 x 2 x 1'-7 1/2)

DESIGN FOR REPAIRS TO  
**2 - 150" x 24' HIGH TRUSS SPANS**  
**WITH 4 - 40' x 24' I-BEAM**  
**APPROACH SPANS**  
**REPAIR DETAILS**  
 STATION : 77+50.00 MARCH, 2007  
**JEFFERSON COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. 3 OF 4 FILE NO. 30242 DESIGN NO. 207



DETAIL 'A'

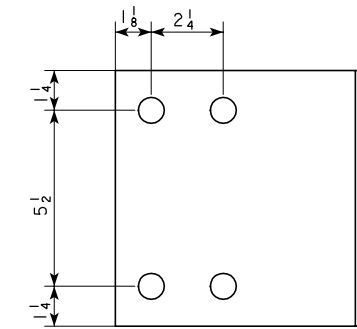
**NOTES :**

BOTTOM AND TOP CHORDS ARE C12x20.7. DIAGONALS ARE C8x13.75.

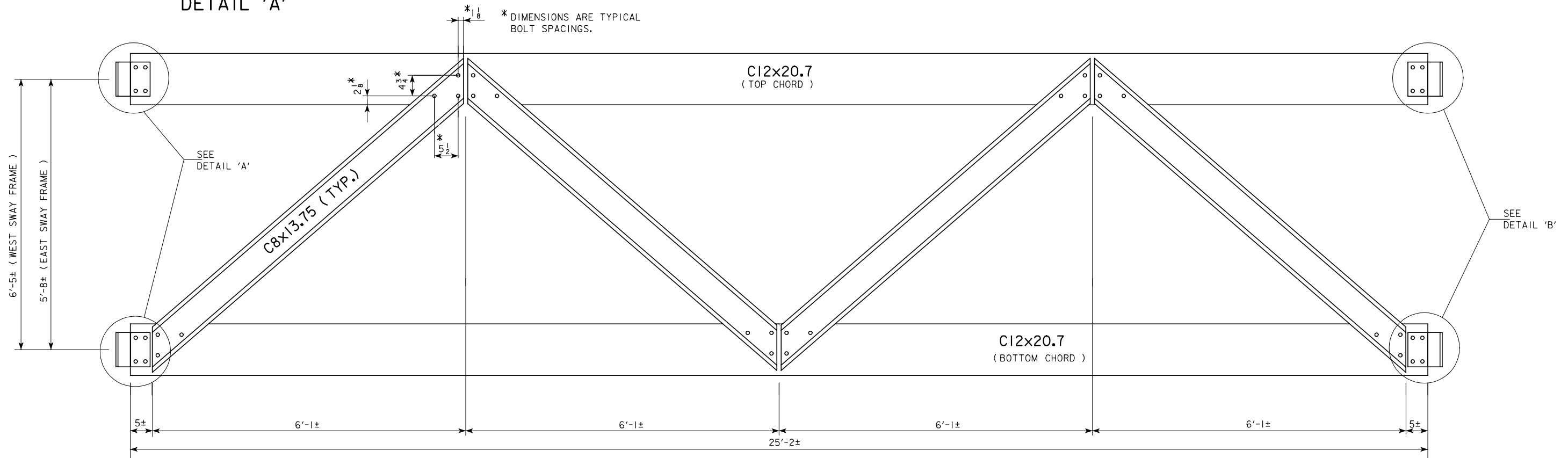
ALL DIMENSIONS REQUIRED TO FIELD FABRICATE THE CHORDS AND DIAGONALS FOR THE NEW SWAY FRAMES SHALL BE VERIFIED IN THE FIELD.

THE MATERIAL USED TO FABRICATE THE NEW SWAY FRAMES IS TO BE ASTM A-36 STEEL.

3/4"  $\phi$  A-325 HIGH STRENGTH BOLTS ARE REQUIRED FOR 1 3/16"  $\phi$  HOLES.



DETAIL 'B'



ELEVATION OF SWAY FRAME

SEE DESIGN SHEETS 2 & 3 FOR LOCATIONS OF SWAY FRAMES.

DESIGN FOR REPAIRS TO  
**2 - 150" x 24' HIGH TRUSS SPANS**  
**WITH 4 - 40' x 24' I-BEAM**  
**APPROACH SPANS**  
**SWAY FRAME DETAILS**  
 STATION : 77+50.00 MARCH, 2007  
**JEFFERSON COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. 4 OF 4 FILE NO. 30242 DESIGN NO. 207

STANDARD ROAD PLANS					
105-4 12-03-96					
The following Standard Road Plans shall be considered applicable to construction work on this project.					
Number	Date	Number	Date	Number	Date
RE-71	4-17-07				


ESTIMATED ROADWAY QUANTITIES					
100-0A 10-28-97					
Item No.	Item Code	Item	Unit	Total	As Built Quan.
1	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	41.84	
2	2527-9263180	PAVEMENT MARKING REMOVED	STA	4.74	
3	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	1188.84	
4	2528-8400157	TEMPORARY FLOODLIGHTING LUMINAIRE	EACH	4	
5	2528-8400256	TEMPORARY TRAFFIC SIGNALS	EACH	1	
6	2528-8445110	TRAFFIC CONTROL	LS	1	
7	2599-9999005	MAINTENANCE OF TRAFFIC CONTROL	EACH	3	

TRAFFIC CONTROL PLAN	
108-23 04-04-89	
<p>1. All traffic control devices shall be furnished, erected, and maintained by the BRFN-78-3(6)--39-51 contractor until such time as the BRFN-78-3(3)--38-51 contractor has closed IA 78 to through traffic. Upon closure of IA 78 by the BRFN-78-3(3)--38-51 contractor all traffic control devices shall be removed by the BRFN-78-3(6)--39-51 contractor. The BRFN-78-3(6)--39-51 contractor shall coordinate this traffic control device removal with the BRFN-78-3(3)--38-51 contractor.</p> <p>2. The Iowa Department of Transportation will monitor all traffic control devices for damage that may occur and advise the contractor. The contractor will have 24 hours from the time of notification in order to make complete and satisfactory repairs to any traffic control device having been damaged.</p> <p>3. Traffic control for this project shall be in accordance with Modified Standard Road Plan TC-217. For additional complementary information refer to Part 6 of the Manual on Uniform Traffic Control Devices and the current Supplemental Specifications for traffic control.</p>	

ESTIMATE REFERENCE INFORMATION		
100-4A 10-29-02		
Item No.	Item Code	Description
1	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT BASED
2	2527-9263180	PAVEMENT MARKING REMOVED See Modified Standard Road Plan TC-217, Sheet J.01, for details and locations. See Tab 108-22, Sheet C.02
3	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE See Tab. 108-33, Sheet C.02, Modified Standard Road Plan TC-217, Sheet J.01, for locations, details, and requirements.
4	2528-8400157	TEMPORARY FLOODLIGHTING LUMINAIRE See Tab. 108-27, Sheet C.02, Modified Standard Road Plan TC-217, Sheet J.01, for locations and details.
5	2828-8400256	TEMPORARY TRAFFIC SIGNALS See Tab. 108-28, Sheet C.02, Modified Standard Road Plan TC-217, Sheet J.01, for locations and details.
6	2528-8445110	TRAFFIC CONTROL Refer to Tab. 108-23, Sheet C.01, for details.
7	2599-9999005	MAINTENANCE OF TRAFFIC CONTROL Once the bridge has been re-opened to traffic, the Iowa Department of Transportation will monitor all traffic control devices for damage that may occur and advise the contractor. The contractor will have 24 hours from the time of notification in order to make complete and satisfactory repair to any traffic control device having been damaged. The contractor shall be paid the contract unit price for "Maintenance of Traffic Control" for each time they return to the project site and repair the traffic control. The unit bid price for "Maintenance of Traffic Control" includes labor and materials necessary to restore the traffic control to comply with Iowa Department of Transportation specifications. For any individual notification, the contractor will be compensated by extra work order for the additional cost of materials in excess of \$2000. The contractor shall provide the Iowa Department of Transportation with the names and phone numbers of the primary contact person and a back-up contact person responsible for initiating repairs.

04-30-02		101-4	
DESIGN DATA RURAL			
2007 AADT	700	V.P.D.	
2027 AADT	1000	V.P.D.	
20 DHV		V.P.H.	
TRUCKS	23	%	
Total			
Design ESALS			

Design No. 207  
File No. 30242

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.	
<i>James Schoenrock</i> Signature	3-26-07 Date
My license renewal date is December 31, 20 07	
Pages or sheets covered by this seal: C.01, C.02, J.01	

**TABULATION OF PAVEMENT MARKINGS**

108-22  
10-19-04

- |                               |                                 |                           |                           |                              |                          |               |                               |
|-------------------------------|---------------------------------|---------------------------|---------------------------|------------------------------|--------------------------|---------------|-------------------------------|
| ② Broken Center Line (Yellow) | ⑤ No-Passing Zone Line (Yellow) | ⑦ Edge Line Right (White) | ⑨ Dotted Line (White)     | ⑪ Channelizing Line (White)  | ⑬ Stop Line (White)      | ⑮ Yellow Curb | ⑰ Yield Line (White)          |
| ③ Double Center Line (Yellow) | ⑥ Broken Lane Line (White)      | ⑧ Edge Line Left (Yellow) | ⑩ Solid Lane Line (White) | ⑫ Channelizing Line (Yellow) | ⑭ Crosswalk Line (White) | ⑯ White Curb  | ⑱ Double Dotted Line (Yellow) |

Location			Length (In Stations)																	Remarks		
Road Identification	Station to Station	Side		②	③	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮A	⑮B	⑯A	⑯B		⑰	⑱
		L	R																			
IA 78	2230' West of West End of Bridge - 1730' West of West End of Bridge	X		5																		
	1730' West of West End of Bridge - 230' West of West End of Bridge	X				15																
	230' West of West End of Bridge - 230' East of East End of Bridge	X	X					9.34														
	230' East of East End of Bridge - 1730' East of East End of Bridge	X				15																
	1730' East of East End of Bridge - 2230' East of East End of Bridge	X		5																		
<b>Length Subtotals</b>				10		30		9.34														
<b>Quantity Factors</b>				.25	2	1	.25	1	1	.33	1	2	2	6	1.5	3	3.5	3	3.5	1.71	.66	
<b>Totals</b>				2.5		30		9.34														
* Refer to Modified Standard Road Plan TC-217																						

**TABULATION OF TEMPORARY FLOODLIGHTING LUMINAIRES**

108-27  
04-30-96

NO.	LOCATION STATION	TYPE	NUMBER LUMIN.	REMARKS
1	60' West of West End of Bridge	CONV	1	North Side Bridge
2	73' East of East End of Bridge	CONV	1	South Side Bridge
3	73' East of East End of Bridge	OFFSET	1	North Side Bridge
4	60' West of West End of Bridge	OFFSET	1	South Side Bridge
* Refer to Modified Standard Road Plan TC-217				

**TEMPORARY BARRIER RAIL**

108-33  
04-17-07

① Place an "X" if required.  
Refer to Standard Road Plan RE-71. \* Not a bid item

No.	Station To Station	Length Lin. Ft.	Anchored*	Remarks
1	60' W of West End of Bridge - 60' E of East End of Bridge	594.42		North Side Bridge
2	60' W of West End of Bridge - 60' E of East End of Bridge	594.42		South Side Bridge
* Refer to Modified Standard Road Plan TC-217				

**TEMPORARY TRAFFIC SIGNALS**

108-28  
04-18-06

No.	Location Station	Type			Remarks
		One Lane Traffic	Haul Road	Intersection	
1	100' West From West End of Bridge	X			South Side of Bridge
2	100' East From East End of Bridge	X			North Side of Bridge
* Refer To Modified Standard Road Plan TC-217					

10-22-93 201-1  
Lighting Contractor shall check for locations of utilities, drainage structures or other facilities in the construction area. Any damage to such facilities due to the contractor's carelessness shall be corrected at the contractor's expense.

06-22-84 251-2  
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.

04-03-01 251-5  
On all new or reconstructed pavements, the location of "NO PASSING" zone lines shall be located in the field. The locations of the proposed "NO PASSING" lines shown on the pavement marking tabulation is for estimating quantities only.

04-17-07 213-1  
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. These areas shall not impact cultural resources, wetlands or "Waters of the U.S.". U.S. Army Corps of Engineers' (COE) regulations prohibit placement of material on stream banks below the "ordinary high water mark" without an approved COE 404 Permit.

04-03-01 203-2  
During construction of this project, the contractor will be required to coordinate his operations with those of other contractors working within the same area. Other work in progress during the same period of the time will include construction of the following projects:

Project	Type of Work
BRFN-078-3(6)--39-51	Emergency Bridge Repair
BRFN-078-3(3)--38-51	Bridge Replacement

06-22-84 213-3  
All borrow areas, stockpile areas, haul roads and areas used for equipment on this project will require subsoil tillage to an average depth of 16 inches to 20 inches prior to placement of topsoil and/or stabilizing crop seeding. Such tillage shall be accomplished on maximum of three foot centers and at right angles to the finished slope of the borrow.

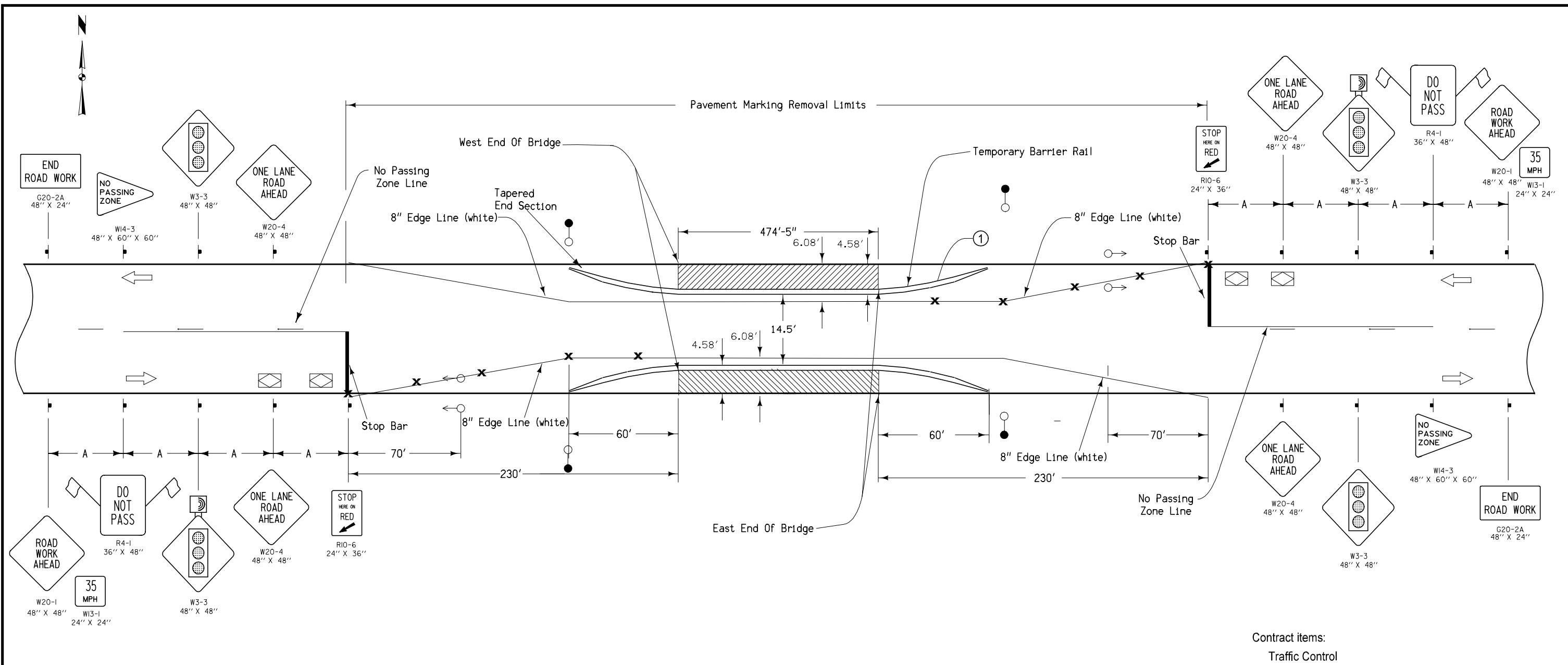
Equipment used to accomplish the tillage shall be equipped with an arrowhead-type shoe so as to provide lateral displacement and limit the movement of the subsoil to the surface. It shall be approved by the engineer for the use intended. This work will be considered incidental to other work on the project and no payment will be allowed.

It is intended that following subsoil tillage, the area remains in a "loosened" condition. Additional compaction or the operation of heavy equipment, other than required for topsoil placement and shaping shall not be allowed on areas which have received subsoil tillage.

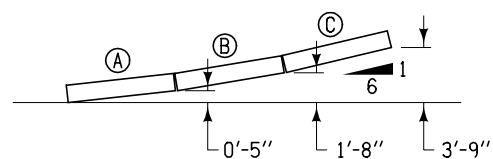
It is recommended that the contractor contact the Office of the State Archaeologist and State Historic Preservation Office to request an historic site search and recommendation of suitability for the purpose intended. The contractor is to provide a copy of OSA's and SHPO's response to the contracting authority and the Office of Location and Environment.

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.

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① BARRIER OFFSETS FOR FLARE SECTIONS



LEGEND

- △ Concrete Barrier Marker
- ◇ Vehicle Detection Area
- ← Direction of Traffic
- † Traffic Sign
- × Drum (20' C/C)
- Temporary Floodlighting
- ⦿ Type 'B' High-Intensity Flashing Warning Light
- ▨ Work Area
- Temporary Traffic Signal

SPEED LIMIT (mph)	A
35 or less	250'
40 - 50	350'
55	500'

TIMING FOR ACTUATED SIGNALS	Distance Between Stop Lines	All Red (secs.)*
Recommended Settings, secs.		
Initial = 12.0	850'	17-30
Extension = 2.5	750'	15-27
Maximum Green = 45.0	650'	14-23
Yellow = 3.0	550'	12-20
All Red = (see table)	450'	10-17

\* Range of values are based on operating speeds between 20 and 35 mph

- Contract items:
- Traffic Control
  - Temporary Floodlighting
  - Temporary Traffic Signals
  - Temporary Barrier Rail
  - Painted Pavement Markings
  - Pavement Markings Removed

Tabulations: 108-22, 108-27, 108-28, 108-33

Temporary Traffic Signals shall be span-wire mounted.

<b>MODIFIED STANDARD ROAD PLAN</b>	REVISION	
	NEW	10-17-06
	<b>TC-217</b>	
SHEET 1 of 1		

MODIFICATIONS: An Additional Side Of TBR Was Added, To Accomodate The Need For A Central Lane. Also The Temporary Crash Cushions Were Removed And Replaced With An Additional Tapered End Section Of TBR.

**LANE CLOSURE WITH  
SIGNALS AND TBR**

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