

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	61-3HB-1HDF	MARION	7	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 76C17		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

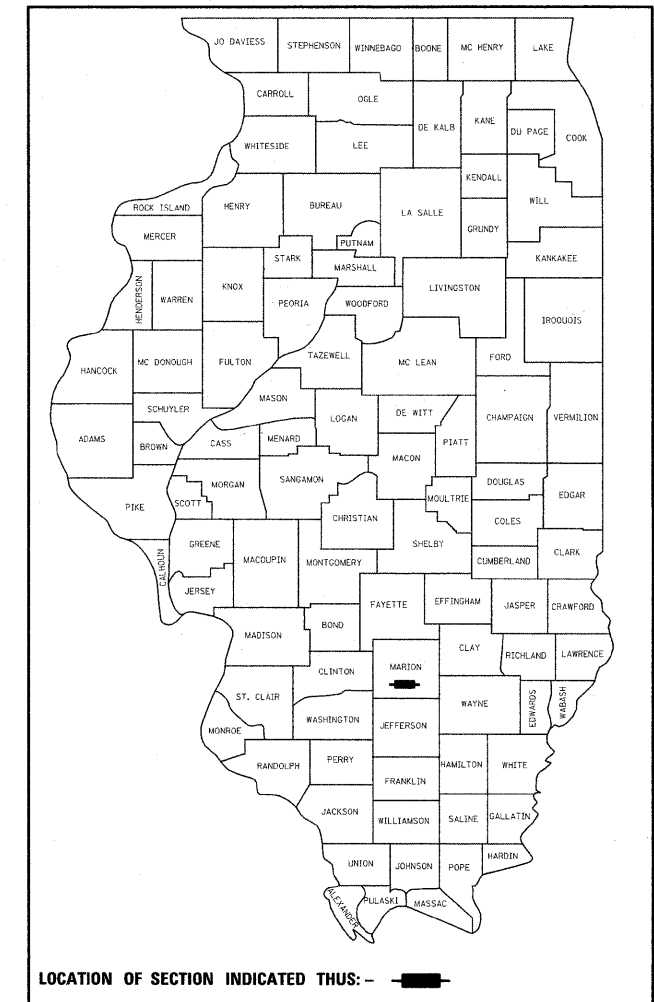
**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 57
SECTION 61-3HB-1HDF
STRUCTURE REPAIRS ON I-57 OVER US 50
MARION COUNTY

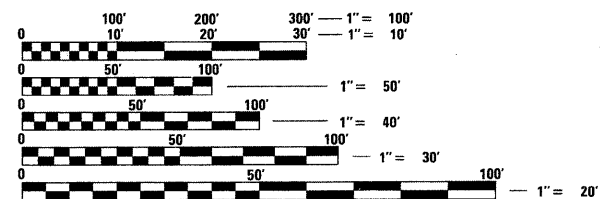
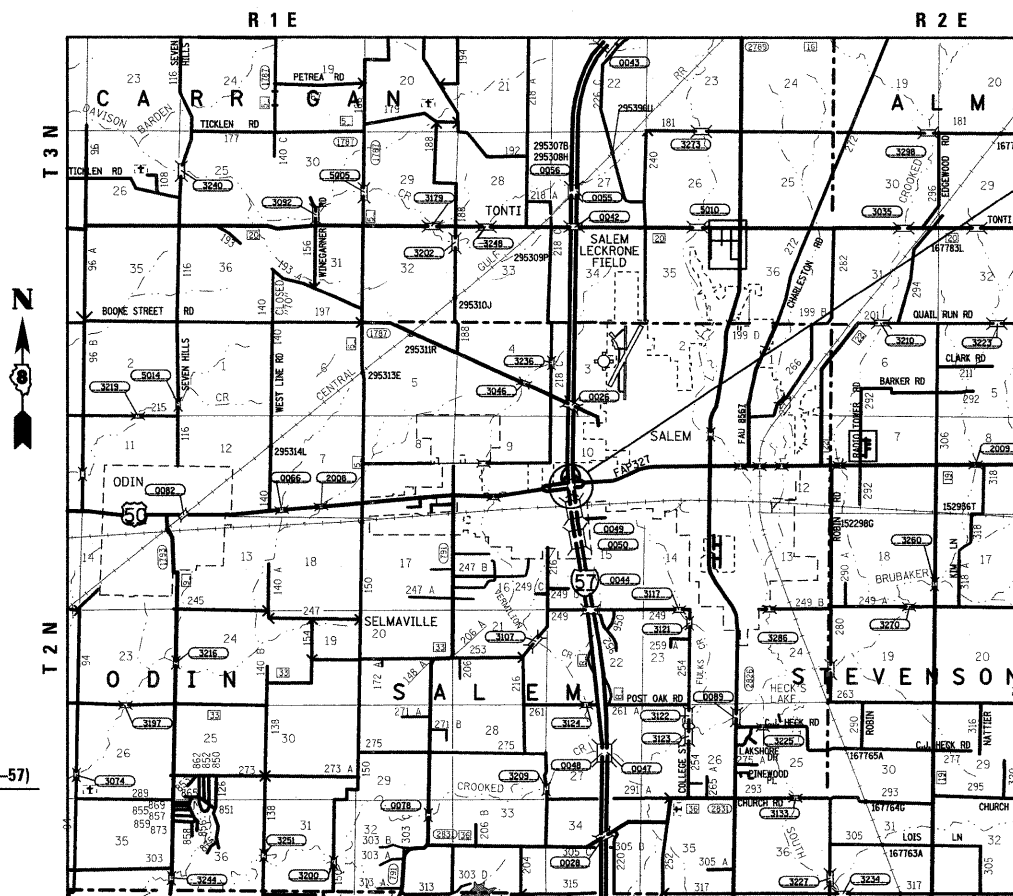
C-98-087-08

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-98-097-08



PROJECT LOCATION
I-57 OVER US 50
SN 061-0053

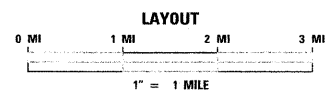


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

TRAFFIC DATA (NB I-57)

ADT: 9000 (2008)
11000 (2028)
SU = 4.2%
MU = 34.3%

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



LATITUDE: 38.62441 LONGITUDE: 88.97188

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179
PROJECT MANAGER: ART MUEHLFELD (618) 346-3209

CONTRACT NO. 76C17

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 8, 2008
Mary C. Lamic
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

August 15, 2008
Eric E. Harsh
ENGINEER OF DESIGN AND ENVIRONMENT

August 15, 2008
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

INDEX OF SHEETS

- 1. COVER SHEET
- 2. INDEX OF SHEETS, GENERAL NOTES, STANDARDS
- 3. SUMMARY OF QUANTITIES
- 4 - 5. TRAFFIC CONTROL PLAN
- 6 - 7. BRIDGE REPAIR PLANS

GENERAL NOTES

1. THE STANDARDS AND REVISION NUMBERS LISTED SHALL APPLY TO THIS PROJECT.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
3. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING BY CALLING J.U.L.I.E. AND BY NOTIFYING NON-J.U.L.I.E. MEMBERS INDIVIDUALLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
 - AMERENIP
 - AT&T ILLINOIS
 - CHARTER COMMUNICATION
 - CITY OF SALEM
 - TRI-COUNTY ELECTRIC COOPERATIVE, INC
 - US SONET

(MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY •. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.)
4. NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING, TOPOGRAPHY, ETCETERA SHOWN IS APPROXIMATE AND WAS CREATED USING MICROFILM.
5. THREE (3) CHANGEABLE MESSAGE SIGNS SHALL BE REQUIRED ON THE PROJECT. THE MESSAGE SIGNS SHALL BE PLACED ONE WEEK BEFORE ANY LANE RESTRICTION. THE MESSAGE SIGN SHALL BE PLACED ON THE NORTHBOUND OF I 57 AND ON EACH LEG OF US 50 AS DIRECTED BY THE ENGINEER.
6. "ROAD CONSTRUCTION AHEAD" SIGNS SHALL BE PLACED AT THE BEGINNING OF THE PROJECT PLUS THE INTERSECTING SIDEROADS, AND WILL BE CONSIDERED INCLUDED IN THE TRAFFIC CONTROL PAY ITEMS. ALL CONSTRUCTION SIGNS SHALL BE 48" FLUORESCENT ORANGE.
7. THE CONTRACTOR SHOULD INSURE THAT, IN AND ADJACENT TO WORK AREAS, ALL LOOSE, SPALLED AND DELAMINATED CONCRETE IS REMOVED PRIOR TO REOPENING LANES TO TRAFFIC. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE CONSIDERED INCIDENTAL TO "CONCRETE REMOVAL".

STANDARDS

000001-05
 701423-02
 701901
 704001-04

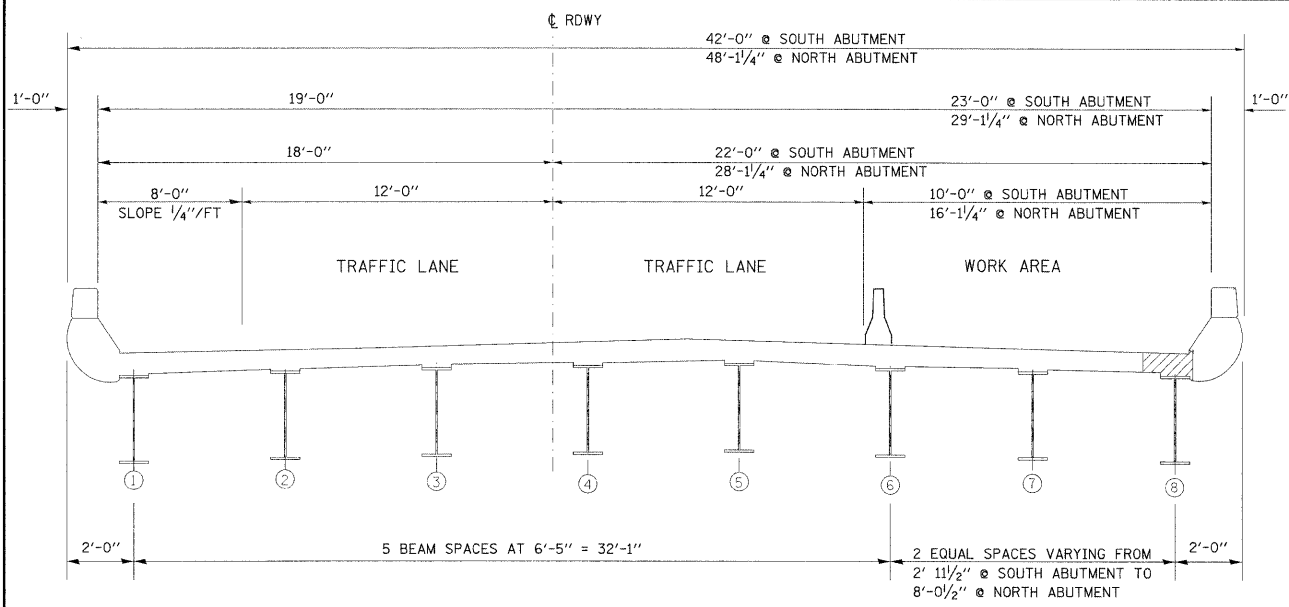
COMMITMENTS

NONE

FILE NAME =	USER NAME = gelsnh	DESIGNED - HG	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et\projects\0876c17\design\0876c17-sht-gannote.dgn	DRAWN - HG	REVISED - ---	57					61-3HB-1HDF	MARION	7	2	
PLOT SCALE = 50.0000' / IN.	CHECKED - ---	REVISED - ---	SCALE: _____ SHEET NO. 2 OF 7 SHEETS STA. _____ TO STA. _____			CONTRACT NO. 76C17						
PLOT DATE = 7/7/2008	DATE - -----	REVISED - ---	FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT									

SUMMARY OF QUANTITIES

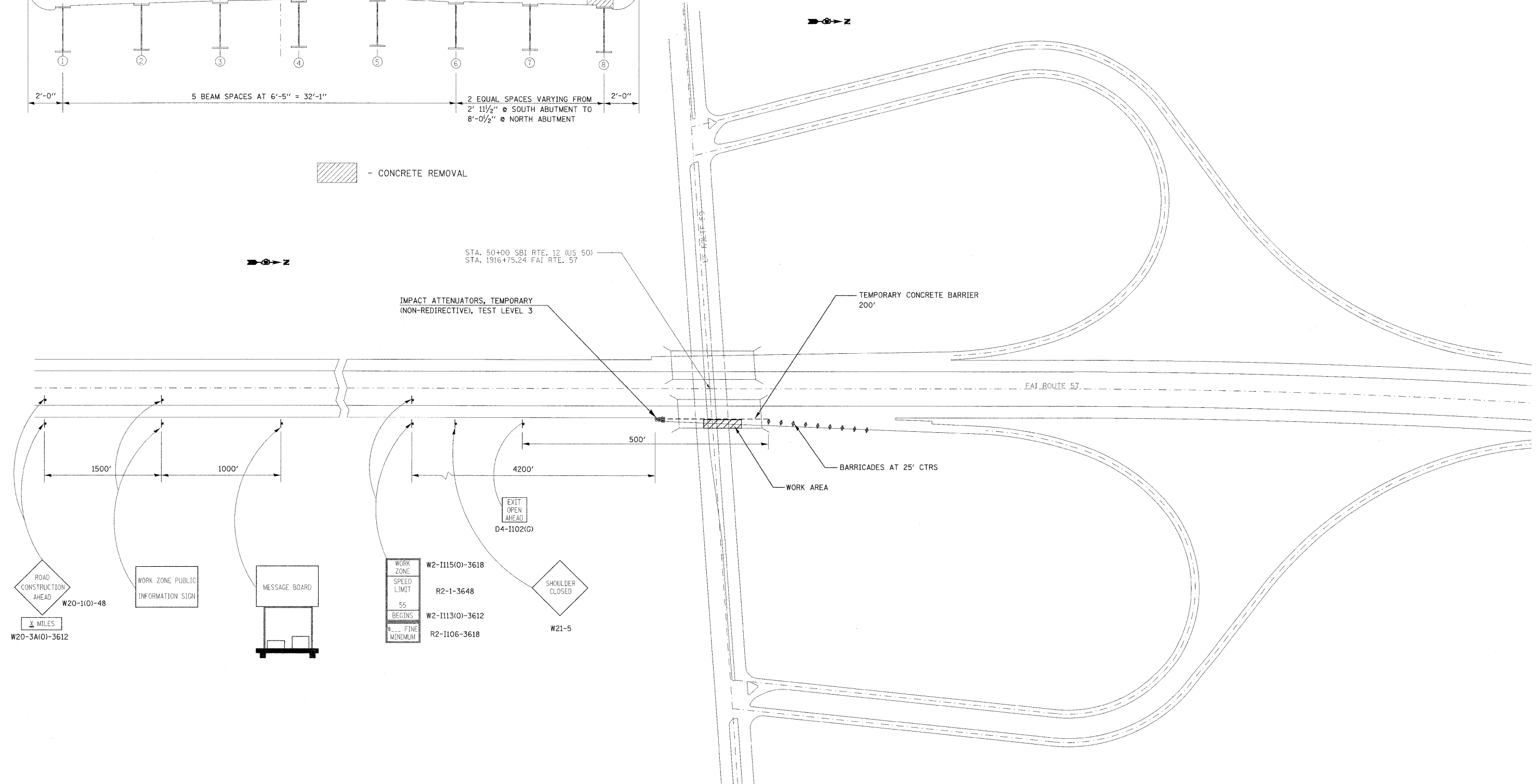
SUMMARY OF QUANTITIES			100% MCND TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		SFTY-2A		
50102400	CONCRETE REMOVAL	CU YD	0.7	0.7		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	0.7	0.7		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4720	4720		
50501110	STRUCTURAL STEEL REMOVAL	POUND	4430	4430		
67100100	MOBILIZATION	L SUM	1	1		
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	2	2		
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	3	3		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	500	500		
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	3	3		
Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	1	1		
Z0073351	TEMPORARY SLAB SUPPORT SYSTEM	L SUM	1	1		



- CONCRETE REMOVAL

NOTES

1. THE ROAD CONSTRUCTION AHEAD SIGN SHALL BE LOCATED 3 TO 5 MILES IN ADVANCE OF THE PROJECT LIMITS.
2. THE MESSAGE AND SIZE OF THE WORK ZONE PUBLIC INFORMATION SIGN SHALL BE AS SPECIFIED BY THE DEPARTMENT.
3. THE COST OF ALL TRAFFIC CONTROL DEVICES AS HEREIN SPECIFIED SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL).



FILE NAME =
 c:\projects\d876c17\design\d76c17-sh-t-17-17-17.dgn

USER NAME = galinh
 DESIGNED -
 DRAWN -
 PLOT SCALE = 50.0000' / IN.
 PLOT DATE = 7/7/2008

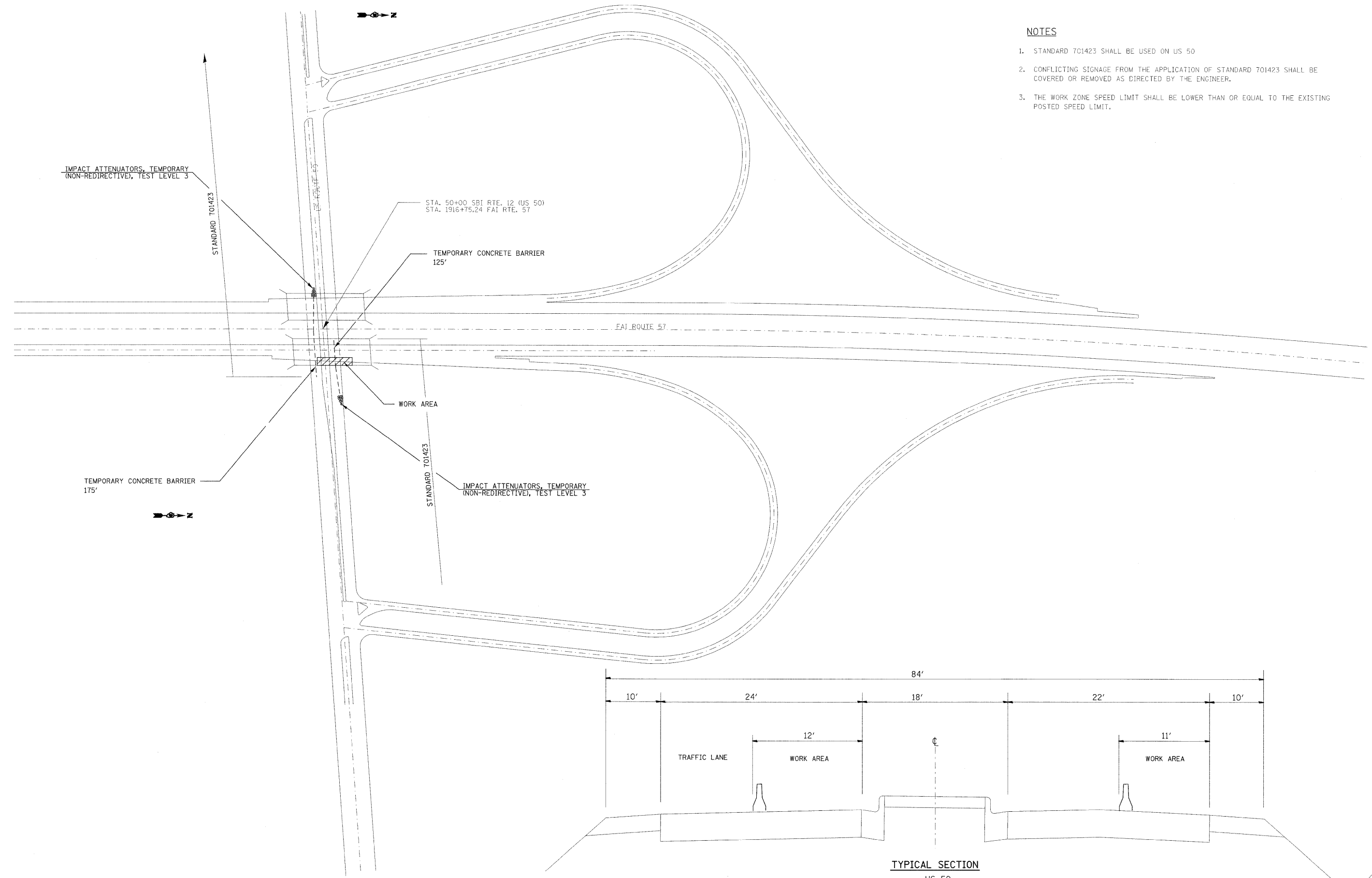
DESIGNED -
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 DATE -

REVISED -
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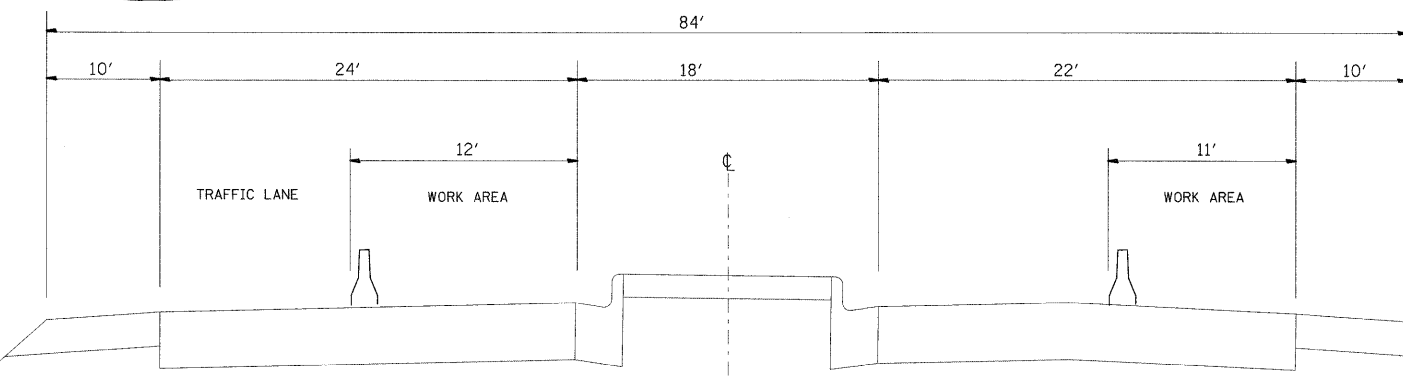
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL (I-57)
 SCALE: SHEET NO. 4 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	61-3HB-1HDF	MARION	7	4
CONTRACT NO. 76C17				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



- NOTES**
1. STANDARD 701423 SHALL BE USED ON US 50
 2. CONFLICTING SIGNAGE FROM THE APPLICATION OF STANDARD 701423 SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.
 3. THE WORK ZONE SPEED LIMIT SHALL BE LOWER THAN OR EQUAL TO THE EXISTING POSTED SPEED LIMIT.



TYPICAL SECTION
US 50
(NTS)

FILE NAME = c:\projects\d876c17\design\d76c17-sht-57.dgn	USER NAME = gelinh	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL (US 50)			F.A.I. RTE. 57	SECTION 61-3HB-1HDF	COUNTY MARION	TOTAL SHEETS 7	SHEET NO. 5
PLOT SCALE = 50.0000' / IN.	CHECKED - ---	REVISED - ---	CONTRACT NO. 76C17									
PLOT DATE = 7/7/2008	DATE - ---	REVISED - ---	SCALE: _____ SHEET NO. 5 OF 7 SHEETS STA. _____ TO STA. _____				FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	MARION	7	6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
2 SHEETS

61-3HB-1HDF Contract Number: 76C17

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".

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.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/L. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6. See Special Provision "Cleaning and Painting New Metal Structures".

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Fasteners shall be high strength bolts. Flange and web splice holes shall be $1\frac{5}{16}$ " ϕ for $7/8$ " ϕ bolts except as noted.

Diaphragm connection holes shall be $1\frac{5}{16}$ " ϕ for $3/4$ " ϕ bolts. Two hardened washers shall be required at diaphragm connections.

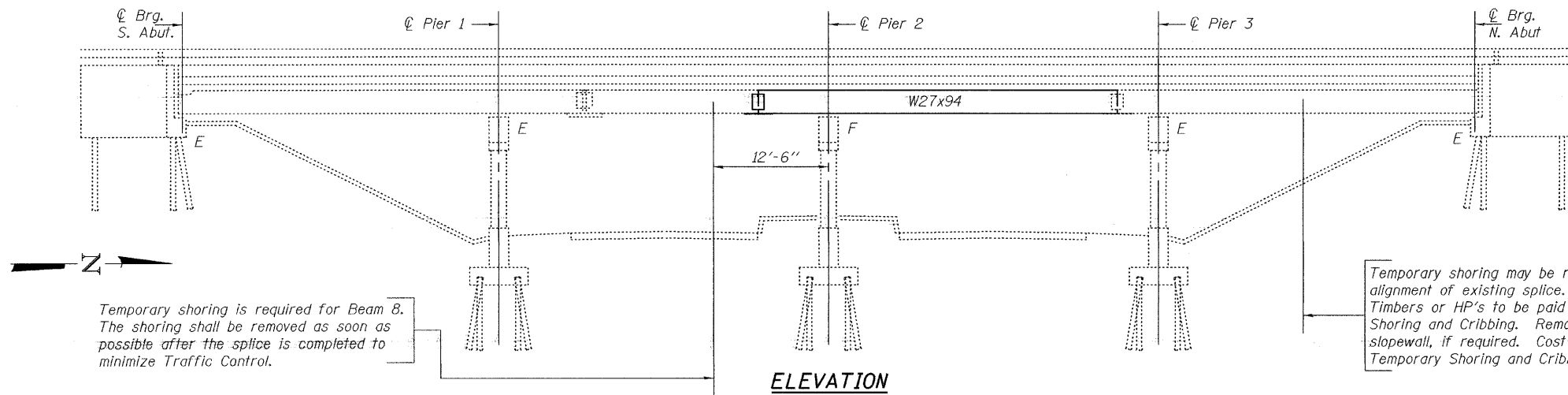
The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing" and "Temporary Slab Support System".

The Contractor shall grind all cracked welds parallel to the direction of the existing weld and not perpendicular to the weld.

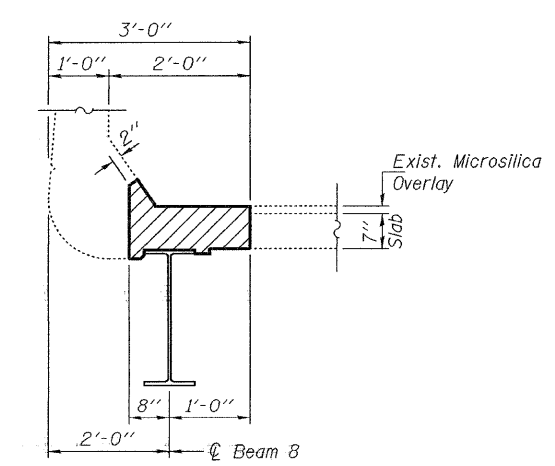
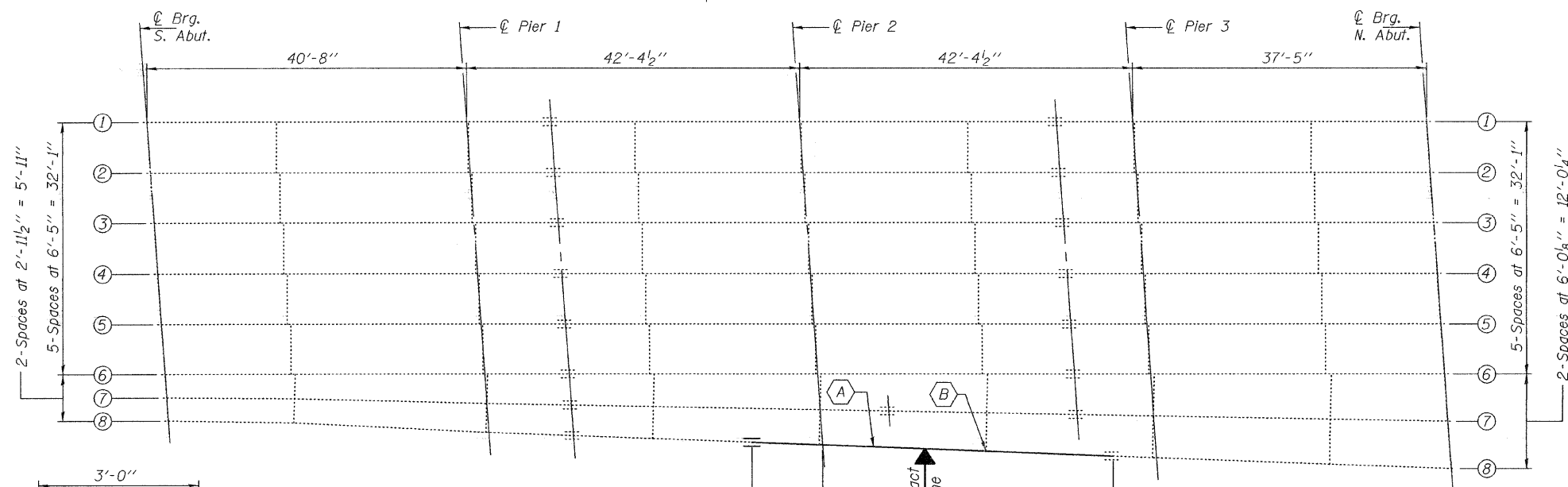
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

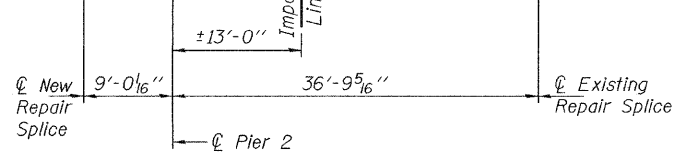
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



ELEVATION



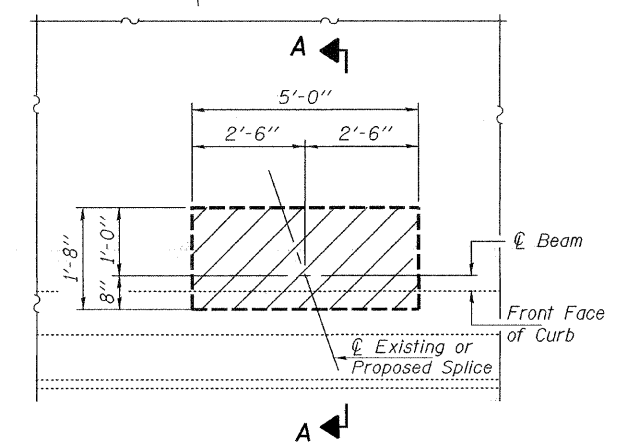
SECTION A-A



PLAN

- A - Remove and Replace Beam
- B - Bottom Clip Angle to be replaced.

EXISTING BEAM REACTION TABLE	
	∅ New Splice
R _∅	(k) 35
R _L	(k) 39
Imp.	(k) 12
R (Total)	(k) 86



TYPICAL CONCRETE SURFACE REMOVAL AND REPLACEMENT

Hatched areas indicate concrete sections to be removed and replaced. Perimeters of concrete removal areas shall be saw cut $3/4$ " prior to the removal of concrete.

Reinforcement shall be cut only if required for fitting bolts. Cut reinforcement shall be spliced as directed by the Engineer. Cost shall be included with Concrete Removal.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	0.7
Concrete Superstructure	Cu. Yd.	0.7
Furnishing and Erecting Structural Steel	Pound	4720
Temporary Slab Support System	L.S.	1
Temporary Shoring and Cribbing	L.S.	1
Structural Steel Removal	Pound	4430

PLAN & ELEVATION
FAI RT. 57
MARION COUNTY
SN 061-0053

DESIGNED Victor H. Veliz
CHECKED SITAL BHARTA VHV
DRAWN Steffen
CHECKED VHV SJB

EXAMINED [Signature]
PASSED [Signature]

JULY 28, 2008

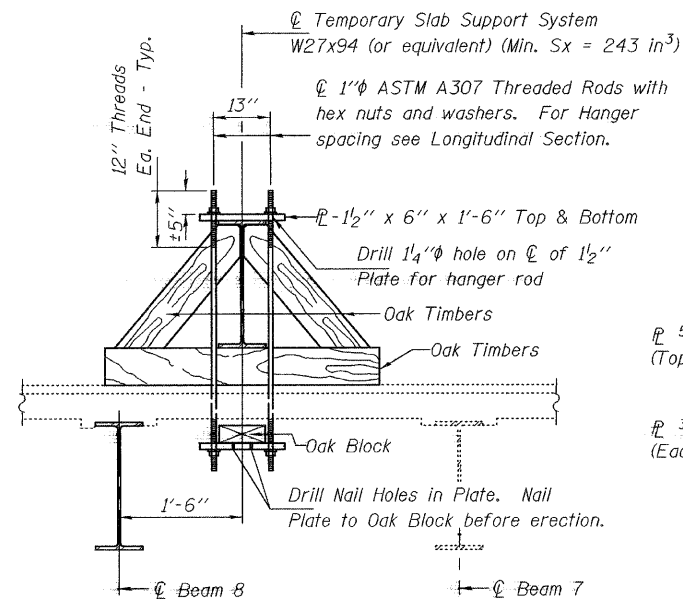


EXPIRES 11-30-2008

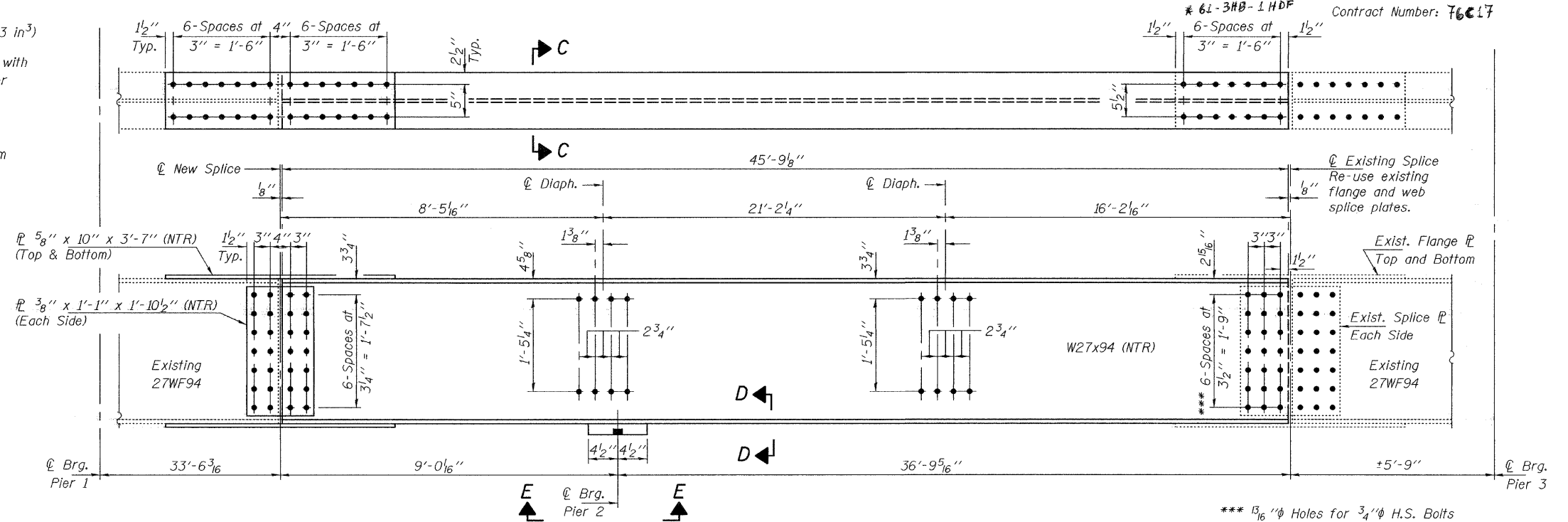
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
FAI 57	*	MARION	7	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

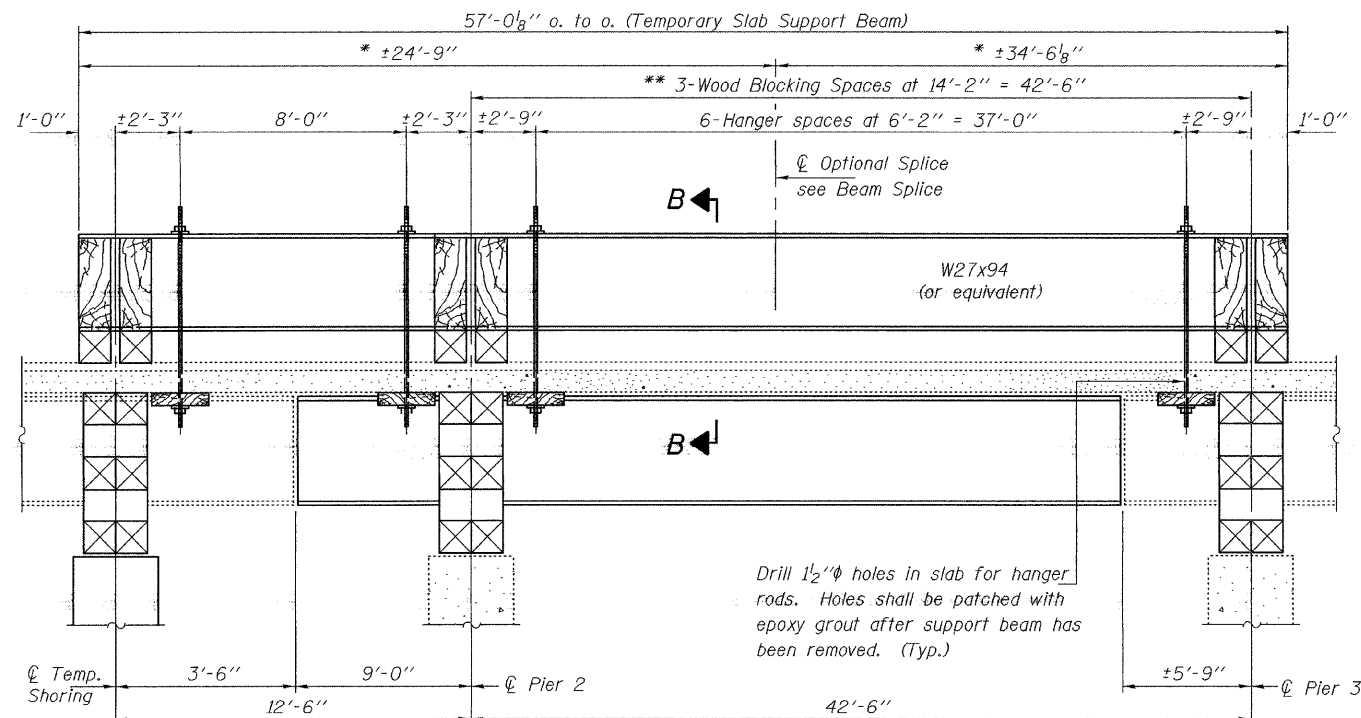
SHEET NO. 2
2 SHEETS



SECTION B-B

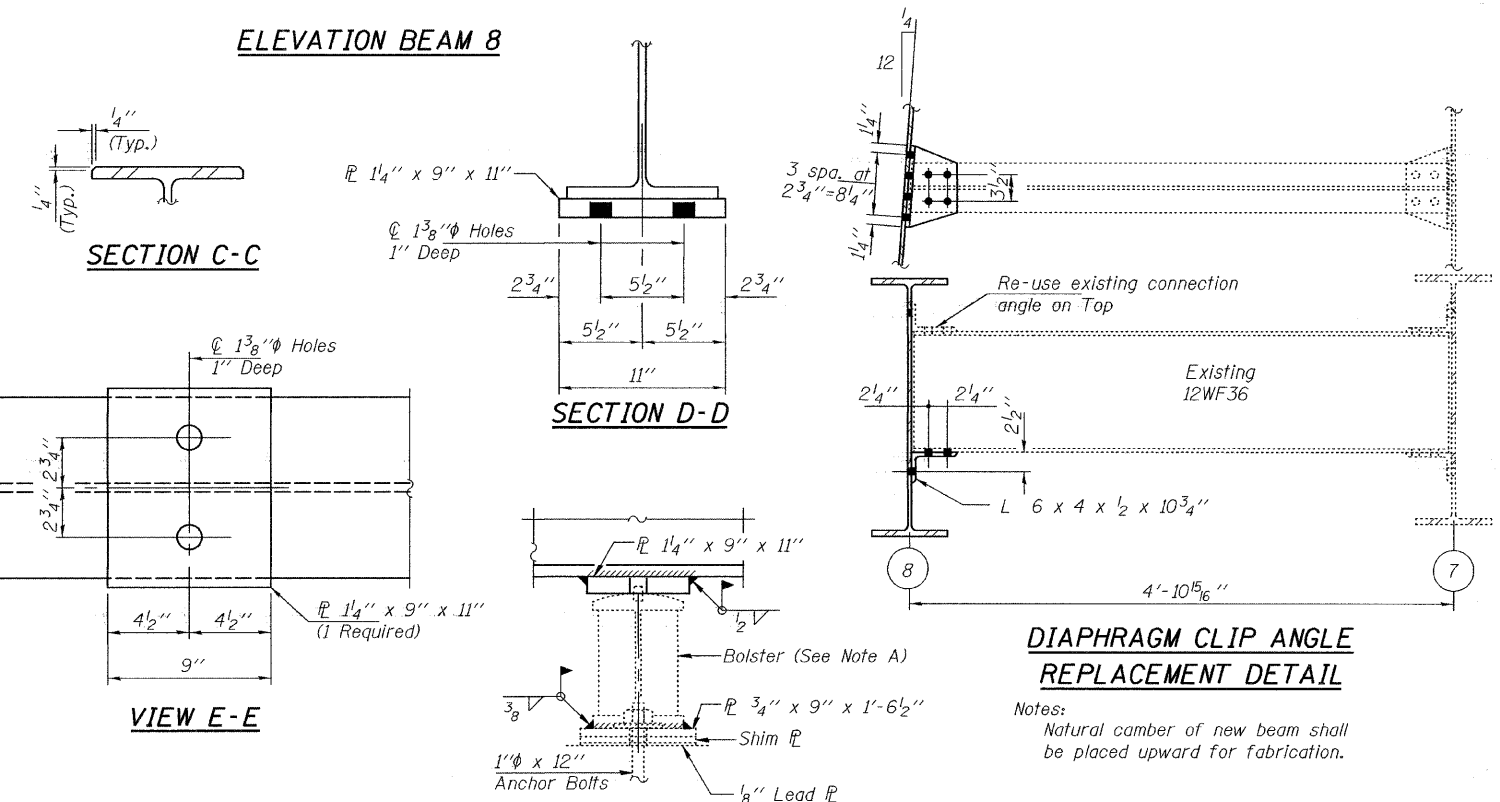


ELEVATION BEAM 8



LONGITUDINAL SECTION

SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM



PIER 2 BEARING DETAILS

DIAPHRAGM CLIP ANGLE
REPLACEMENT DETAIL

Notes:
Natural camber of new beam shall be placed upward for fabrication.

NOTE A:
Remove weld connecting bolster to Bottom Bearing \bar{r} using Air-Arc Method and grind smooth all weld material remaining on Bolster and Bottom Bearing \bar{r} .
After new beam is in place, install Bolster and Top \bar{r} and field weld Top \bar{r} and Bolster as shown.

REPAIR DETAILS
FAI RT. 57
MARION COUNTY
SN 061-0053

DESIGNED	VHV
CHECKED	SJB
DRAWN	Steffen
CHECKED	VHV SJB

JULY 28, 2008
EXAMINED *Carl Pruey*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

* These dimensions may vary for available beams in stock.
** Wood Blocking between Piers to be placed after Support Beam deflects under its own weight.