

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 90/94 & 80	2010-054 BR	COOK & WILL	13	1

FOR INDEX OF SHEETS SEE SHEET 2

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT ONE**

PROPOSED HIGHWAY PLANS

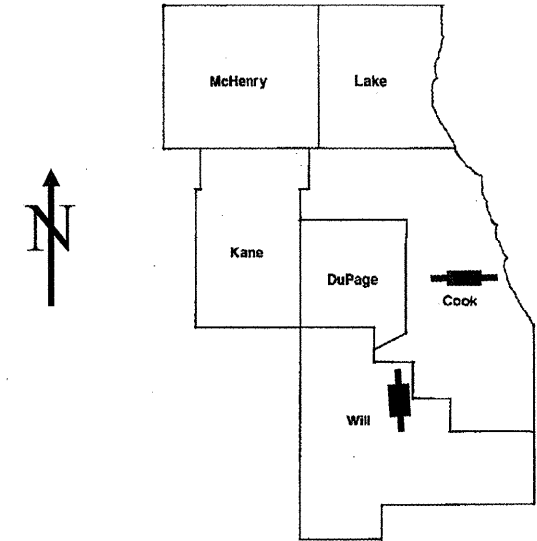
IMPROVEMENT IS LOCATED
IN THE CITIES OF
JOLIET AND CHICAGO

- 1) FAI RTE 90/94: I-90/94 (DAN RYAN EXPWY)
@ 55th ST (WB) (SN 016-1153)
 - 2) FAI RTE 80: I-80
@ WHEELER RD (SN 099-0175)
- SECTION 2010-054 BR
STRUCTURAL STEEL REPAIR
COOK & WILL COUNTIES

C-91-676-10

CONTRACT NO. 60L29

D-91-676-10



LOCATION OF IMPROVEMENT INDICATED THUS:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: Nov 4 20 10
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 10 20 10
Scott E. Stitt P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

Dec 10 20 10
Christine M. Reed
DIRECTOR, DIVISION OF HIGHWAYS

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

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

C. U. A. N.
CHICAGO UTILITY ALLERT NETWORK
1-312-744-7000

PROJECT ENGINEER **ROBERT BORO (847) 705-4178**
PROJECT MANAGER **ISSAM RAYYAN**

CONTRACT NO. 60L29

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 90/94 & 80	2010-054 BR	COOK & WILL	13	2

CONTRACT 60L29

INDEX OF SHEETS

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13	ARTERIAL ROAD INFORMATION SIGN (TC-22)

LIST OF STATE STANDARDS

<u>STANDARD NO</u>	<u>DESCRIPTION</u>
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701400-05	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-06	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-07	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >45 MPH
701446-02	TWO LANE CLOSURE, FREEWAY/EXPRESSWAY
701601-07	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-07	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN (LOC. 2)
701801-04	LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES

ILLINOIS DEPARTMENT OF
TRANSPORTATION

- 1) I-90/94 @ 55th ST (WB) (SN 016-1153)
- 2) I-80 @ WHEELER RD (SN 099-0175)

INDEX OF SHEETS, STATE STANDARDS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
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CONTRACT 60L29

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 AND C. U. A. N. (CHICAGO UTILITY ALERT NETWORK) AT (312)744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITIES OF JOLIET AND CHICAGO.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 FOR ARTERIALS AND (847)705-4151 FOR EXPRESSWAYS A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

THE "ARTERIAL ROAD INFORMATION SIGN (TC-22) IS APPLICABLE ONLY TO ARTERIAL ROADS AND SHALL NOT BE APPLIED TO EXPRESSWAYS.

USE HIGHWAY STANDARD 701606 AT LOCATION 2 (SN 099-0175) FOR LANE CLOSURES ON WHEELER RD WHEN WORKERS ARE PRESENT. BARRELS WITH STEADY BURN LIGHTS MAY BE PLACED IN THE SHOULDER AREA FOR NIGHT AND WEEKEND TRAFFIC CONTROL WHEN WORKERS ARE NOT PRESENT. A BARRICADE OR DRUM WITH FLASHING LIGHTS SHALL BE PLACED ON THE SIDEWALK ON EITHER SIDE OF TEMPORARY SLAB SUPPORT SYSTEM. COST INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701606.

ILLINOIS DEPARTMENT OF
TRANSPORTATION

1) I-90/94 @ 55th ST (WB) (SN 016-1153)
2) I-80 @ WHEELER RD (SN 099-0175)

GENERAL NOTES

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 90/94 & 80	2010-054 BR	COOK & WILL	13	4

CONTRACT NO.: 60L29

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE: 0014

100% STATE

CODE NO.	ITEMS	UNITS	URBAN TOTAL QUANTITIES	COOK CO SN 016-1153 <i>I-90/94</i>	WILL CO SN 099-0175 <i>I-80</i>
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	12800		12800
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1		1
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1	
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.5	0.5
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	0.5	0.5
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	7160		7160
Z0001905	STRUCTURAL STEEL REPAIR	POUND	1110	1110	
Z0003600	BEAM STRAIGHTENING	L SUM	1	1	
Z0026346	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	0.5	0.5
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	77.10	51.40	25.70
Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	1		1
Z0073351	TEMPORARY SLAB SUPPORT SYSTEM	L SUM	1		1

ILLINOIS DEPARTMENT OF
TRANSPORTATION

- 1) I-90/94 @ 55th ST (WB) (SN 016-1153)
- 2) I-80 @ WHEELER RD (SN 099-0175)

SUMMARY OF QUANTITIES

GENERAL NOTES

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

Fasteners shall be high strength bolts. Bolts 7/8"φ, open holes 5/16"φ, 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 nominal construction 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 at the unit price bid for the work.

Cost of removal and/or 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 in the cost of Structural Steel Repair.

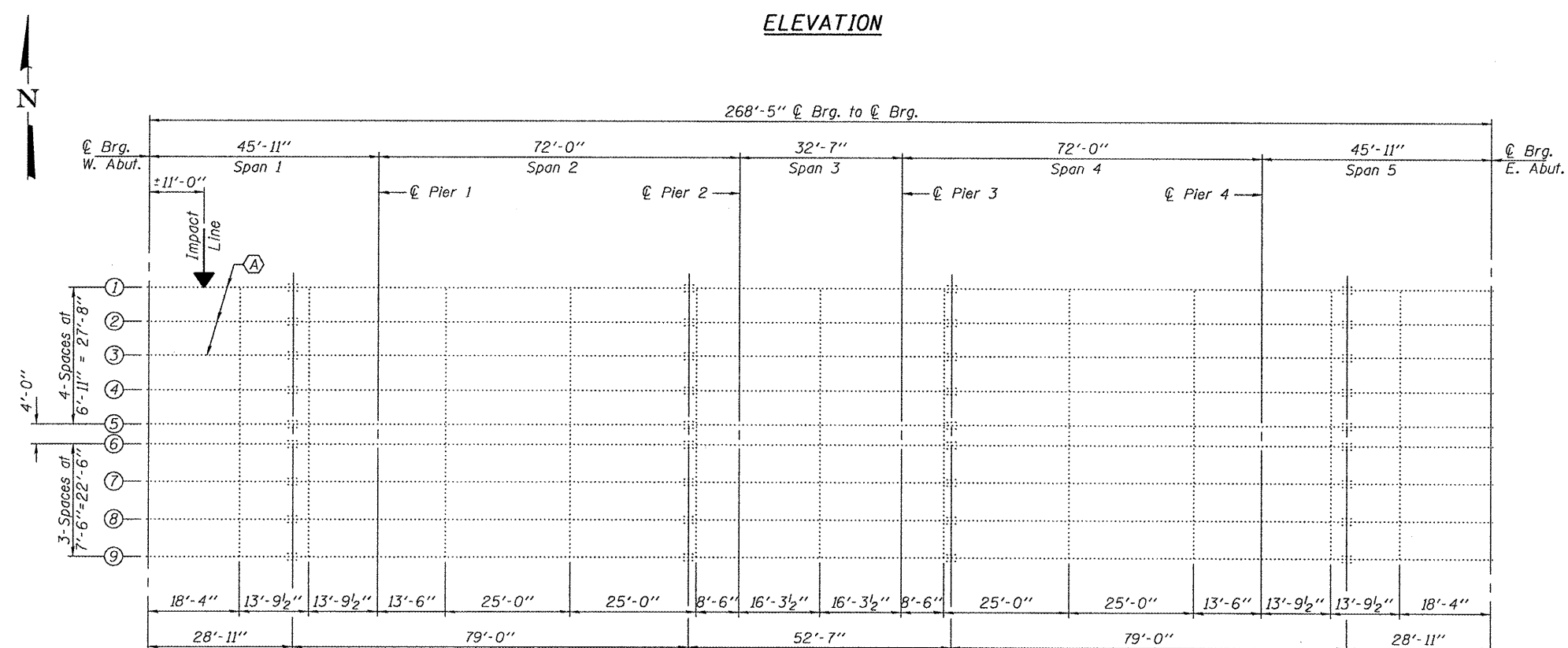
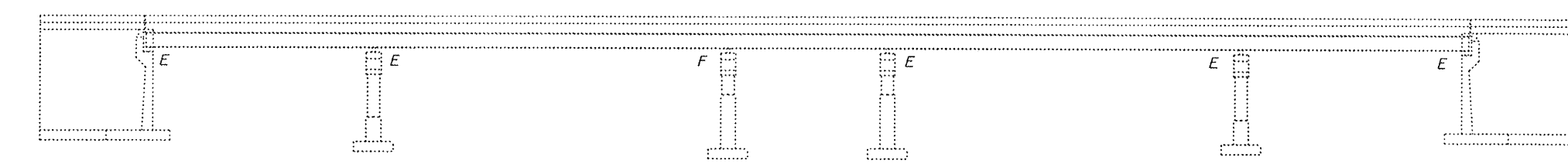
The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

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".

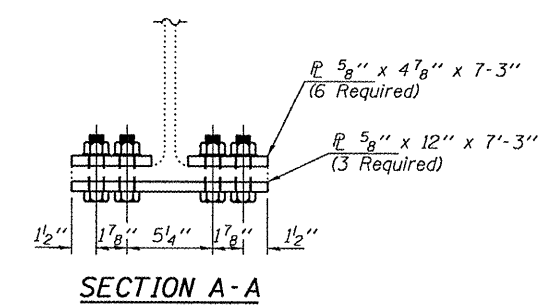
Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Grinding shall be done parallel to the longitudinal axis of the member. Ground surfaces shall be inspected for cracks using dye penetrant or magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.

The cost of all field drilling required for installation of the steel members is included with "Structural Steel Repair".

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair.

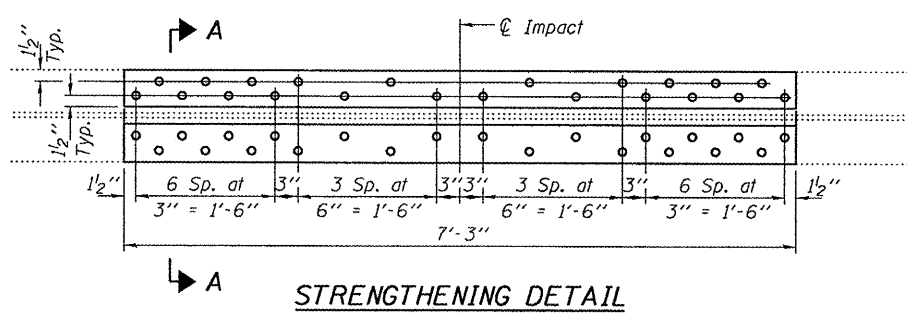


FRAMING PLAN - 016-1153 (W.B.)
 (A) - Straighten & Strengthen Existing Beam



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	1110
Beam Straightening	L.S.	1

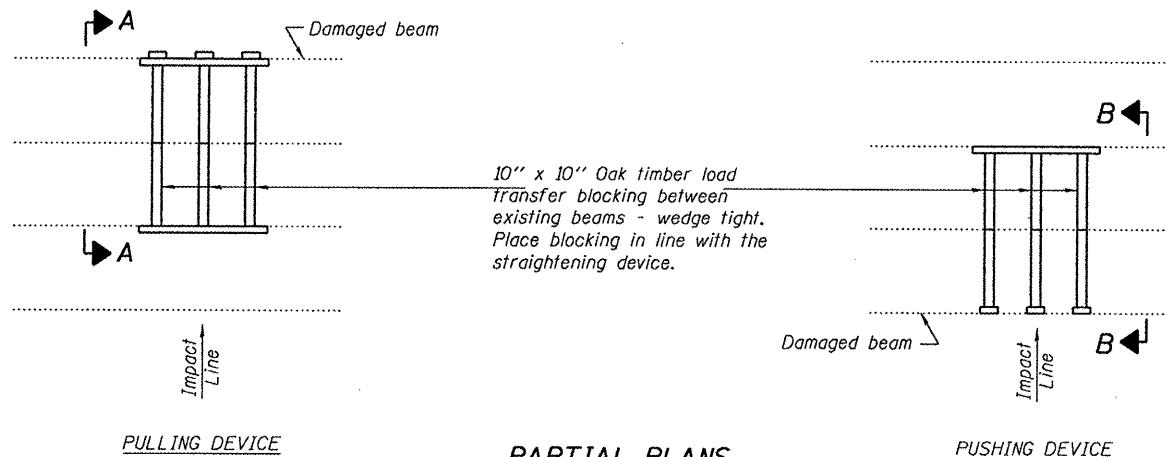


DESIGNED: <i>[Signature]</i>	EXAMINED: <i>[Signature]</i>	DATE: NOVEMBER 30, 2010
CHECKED: <i>[Signature]</i>	PASSED: <i>[Signature]</i>	
DRAWN: Kyle M. Steffen		
CHECKED: <i>[Signature]</i>		

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

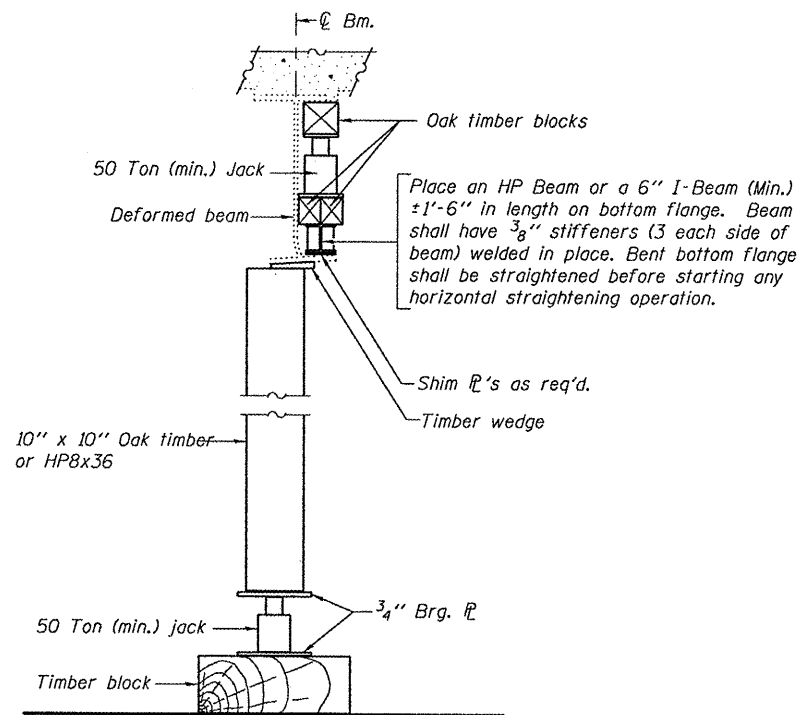
GENERAL PLAN, ELEVATION & STRENGTHENING DETAILS
 SN 016-1153 (W.B.)
 SHEET NO. 1 OF 2 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2010-054 BR	COOK	13	6
CONTRACT NO. 60L29			ILLINOIS FED. AID PROJECT	

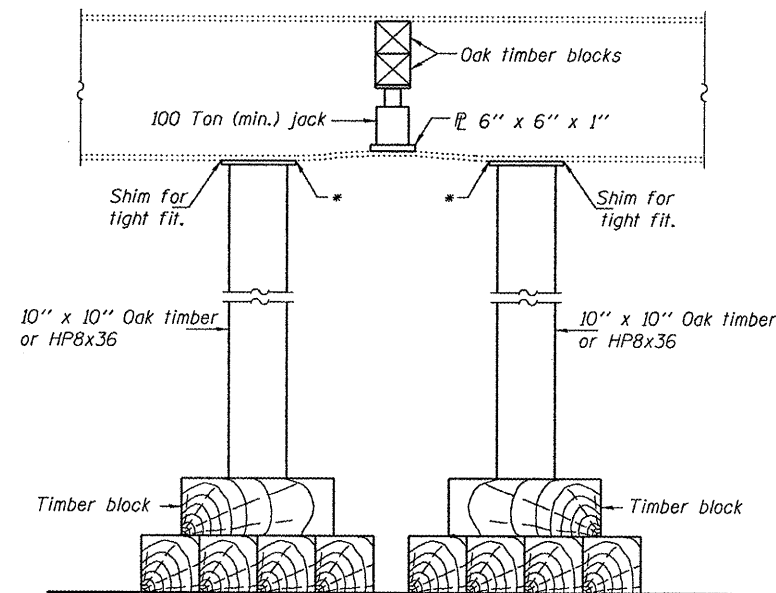


PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS

Straightening force shall be maintained on all load transfer blocking during beam straightening.



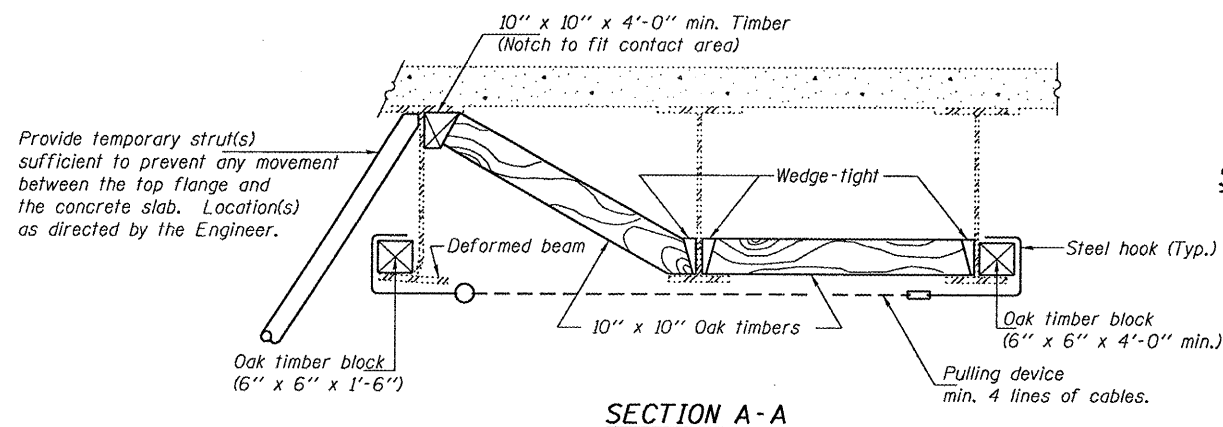
SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct flange rotation.)



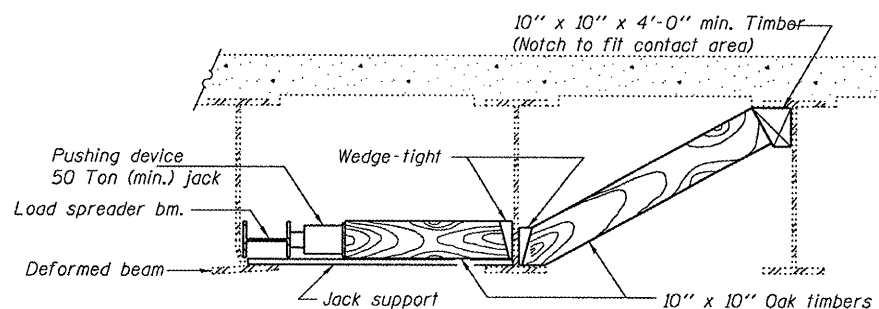
SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)

* Edge of plate shall line up with edge of deformation.

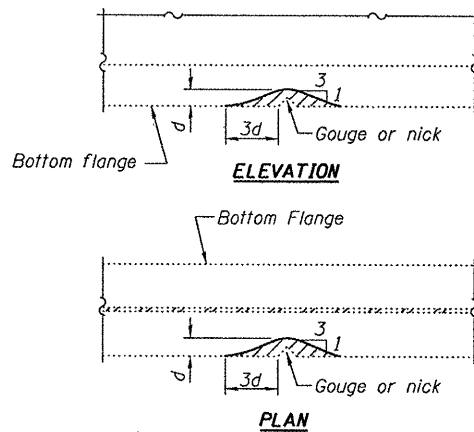
Note:
Braces and jack assembly shall be placed on same side of web.
Bent bottom flange shall be straightened before starting any horizontal straightening operations.



SECTION A-A



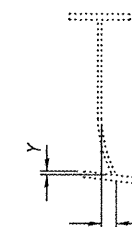
SECTION B-B



GRINDING DETAIL

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.

Beam	X	Y
#1	4 1/2"	1 1/4"
#2	3"	2 3/4"
#3	0	1"



EXISTING DEFORMATION TO BE STRAIGHTENED

(Looking East)
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately 2'-0".

DESIGNED - DAB
CHECKED - IJL
DRAWN - Kyle M. Steffen
CHECKED - DAB IJL

EXAMINED *R. Carl Rogers* ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson* ENGINEER OF BRIDGES AND STRUCTURES
DATE - NOVEMBER 30, 2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM STRAIGHTENING DETAILS
SN 016-1153 (W.B.)

SHEET NO. 2 OF 2 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2010-054 BR	COOK	13	7
CONTRACT NO. 60L29				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

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

Fasteners shall be high strength bolts. Flange splice holes shall be $\frac{15}{16}$ " ϕ for $\frac{7}{8}$ " ϕ bolts. Web splice holes shall be $\frac{13}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts.

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."

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 nominal construction 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 at 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.

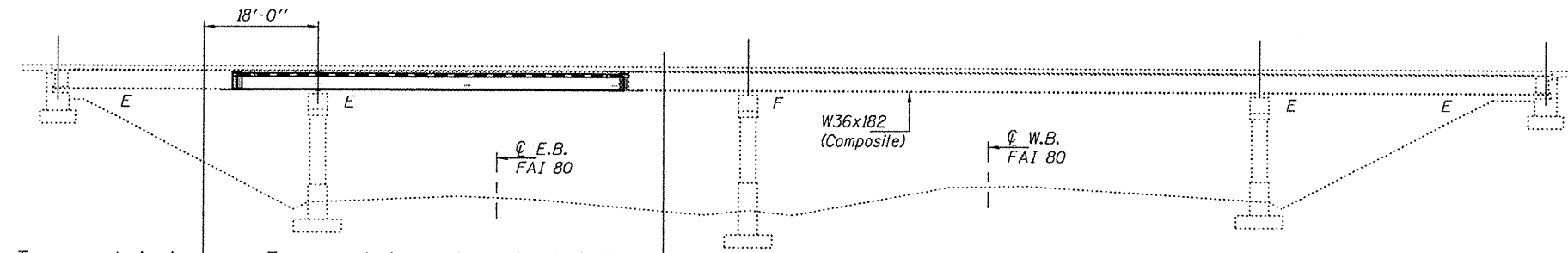
The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Reddish-Brown, Munsell No. 2.5YR 3/4. See Special Provision "Cleaning and Painting New Metal Structures".

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

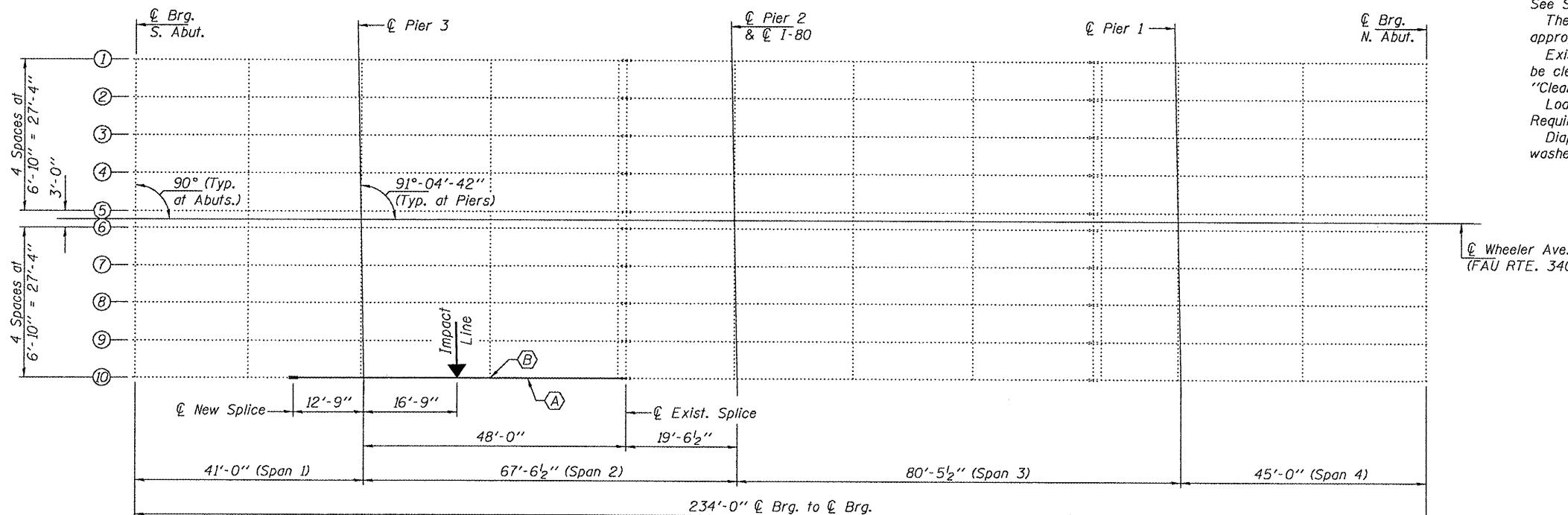
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

Diaphragm connection holes shall be $\frac{15}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts. Two hardened washers shall be required at diaphragm connections.



ELEVATION



FRAMING PLAN

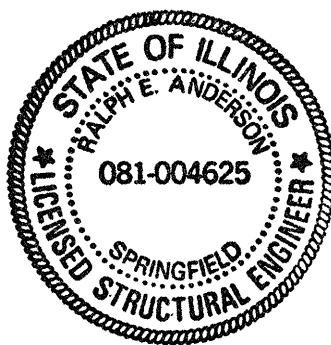
- (A) - Remove & Replace Damaged Beam Segment
- (B) - Remove & Replace Bottom Diaphragm Clip L

REACTION TABLE AT TEMPORARY SHORING

R @ (k)	9.2
R _s @ (k)	4.5
R L (k)	24.9
R Imp. (k)	7.5
R Total (k)	46.1

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	12,800
Structural Steel Removal	Pound	7,160
Temporary Slab Support System	L.S.	1
Temporary Shoring and Cribbing	L.S.	1



Expires November 30, 2012

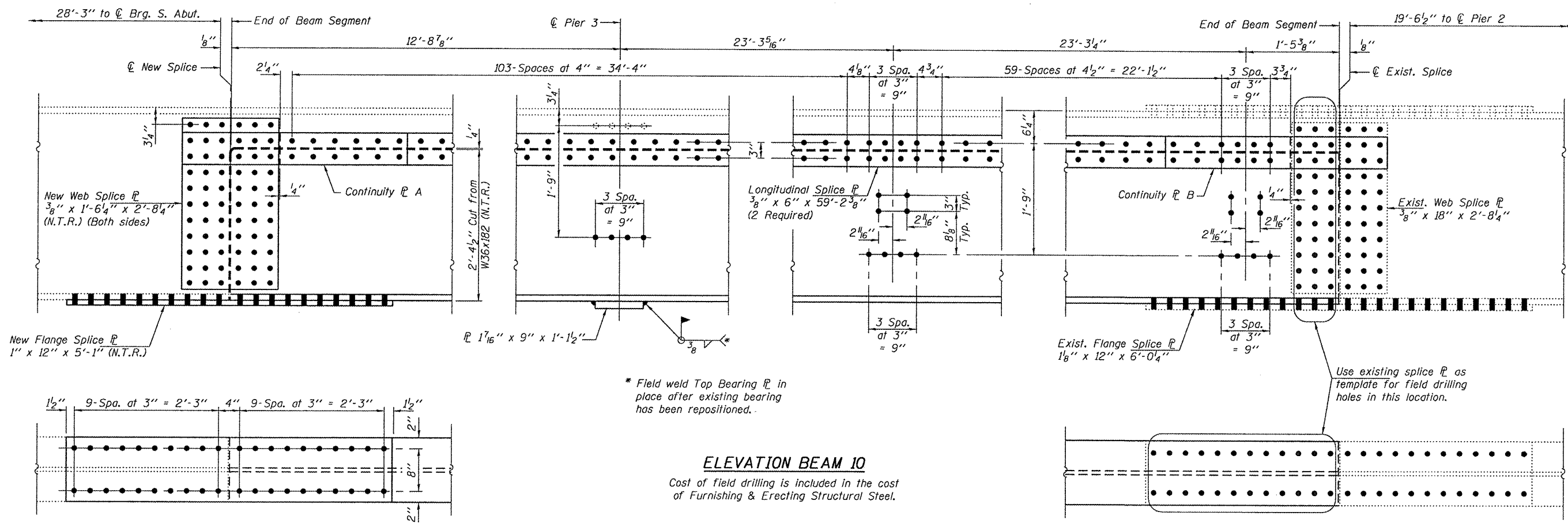
DESIGNED - <i>[Signature]</i>	EXAMINED - <i>[Signature]</i>	DATE - NOVEMBER 30, 2010
CHECKED - <i>[Signature]</i>	PASSED - <i>[Signature]</i>	
DRAWN - Kyle M. Steffen		
CHECKED - <i>[Signature]</i>		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
SN 099-0175

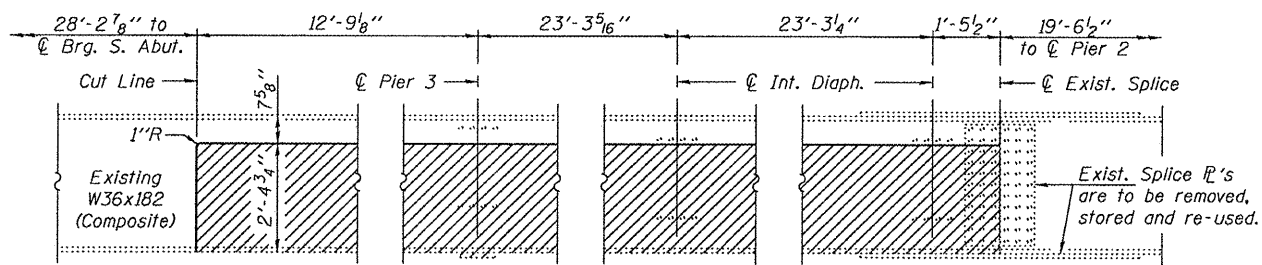
SHEET NO. 1 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2010-054 BR	WILL	13	8
			CONTRACT NO. 60L29	
ILLINOIS FED. AID PROJECT				

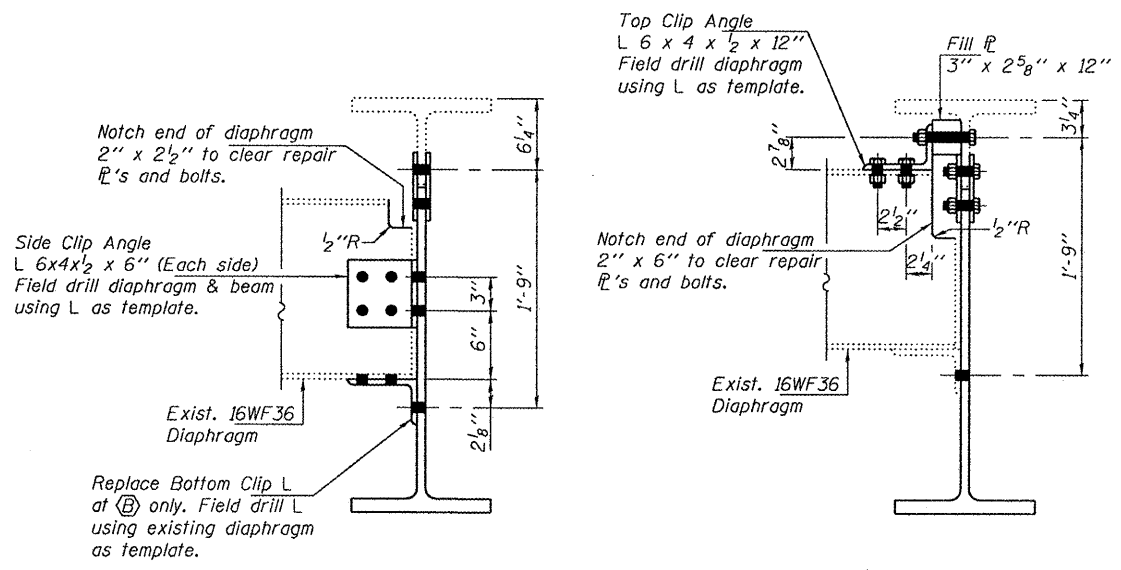


ELEVATION BEAM 10

Cost of field drilling is included in the cost of Furnishing & Erecting Structural Steel.



BEAM REMOVAL DETAIL



INTERIOR DIAPHRAGM

For splice plates, clip angles and bearing plate details see sheet 3 of 3.

DIAPHRAGM AT PIER 3

DESIGNED - GGE	EXAMINED - <i>R. Carl Perry</i>	DATE - NOVEMBER 30, 2010
CHECKED - IJL	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Ralph E. Anderson</i>	
CHECKED - GGE IJL	ENGINEER OF BRIDGES AND STRUCTURES	

DESIGNED - GGE	EXAMINED - <i>R. Carl Perry</i>	DATE - NOVEMBER 30, 2010
CHECKED - IJL	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Ralph E. Anderson</i>	
CHECKED - GGE IJL	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 099-0175

SHEET NO. 2 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2010-054 BR	WILL	13	9
CONTRACT NO. 60L29			ILLINOIS FED. AID PROJECT	

Temporary Slab Support System
W36x182 (or equivalent) (Min. Sx = 623 in³)

1" ϕ ASTM A307 Threaded Rods with hex nuts and washers. For Hanger spacing see Longitudinal Section.

1/2" x 6" x 1'-6" Top & Bottom

Drill 1/4" ϕ hole on ϕ of 1/2" Plate for hanger rod

1/2" x 4" Bent \bar{L}

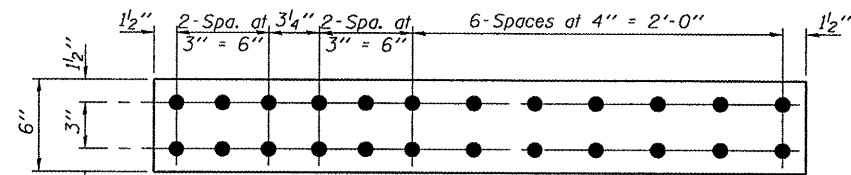
Oak Timbers

Oak Block

Drill Nail Holes in \bar{L} . Nail \bar{L} to Oak Block before erection

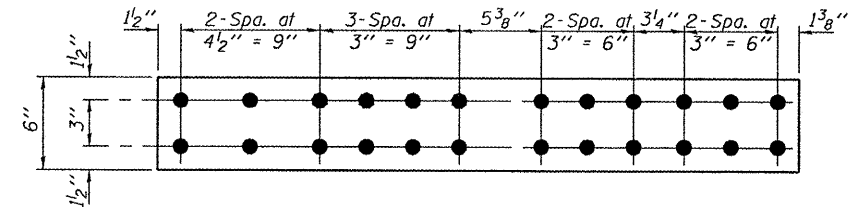
Beam 9 4'-10" 2'-0" Beam 10

SECTION A-A



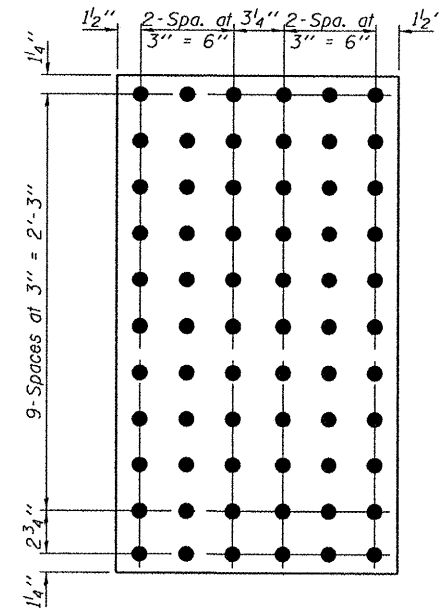
CONTINUITY PLATE "A"

1/2" x 6" x 3'-6 1/4" (2 Required)



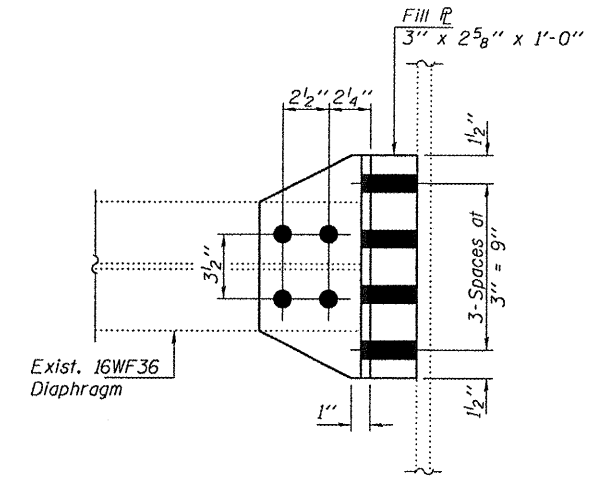
CONTINUITY PLATE "B"

1/2" x 6" x 3'-5 1/2" (2 Required)



WEB SPLICE PLATE

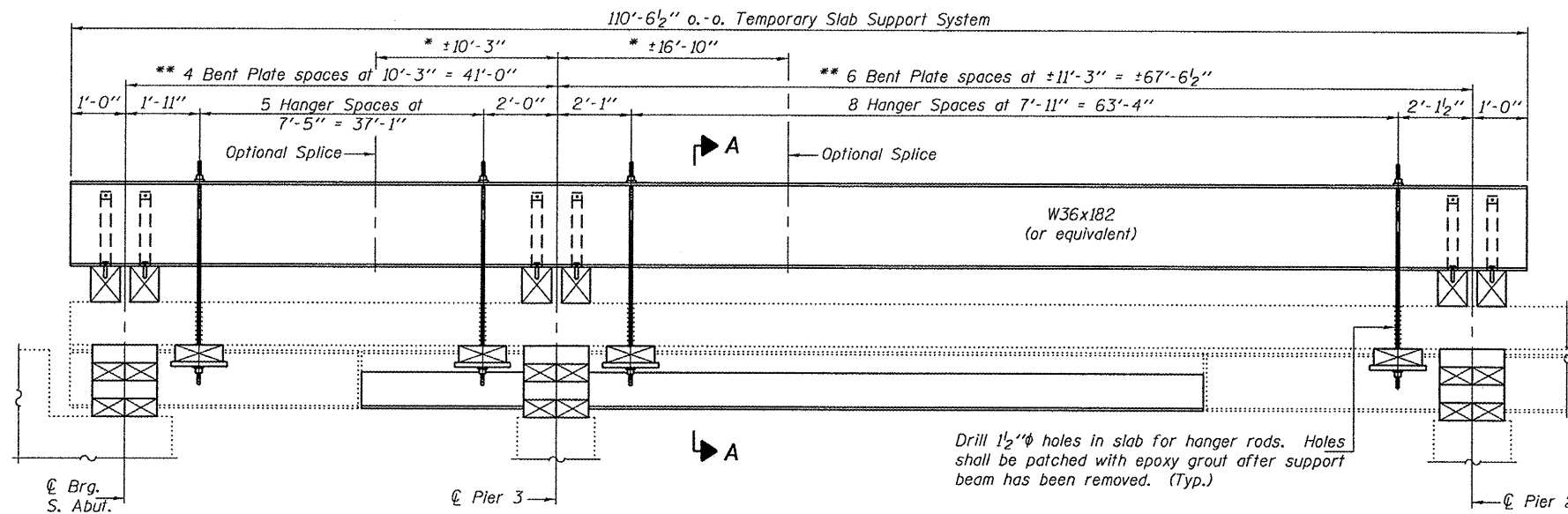
1/2" x 6" x 1'-6 1/4" x 2'-8 1/4" (N.T.R.) (2 Required)



TOP CLIP L DETAIL

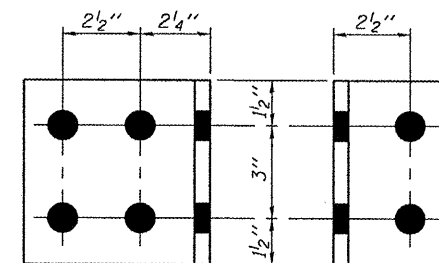
* These dimensions may vary for available beams in stock.

** Bent plates between supports to be placed after support beam deflects under its own weight.



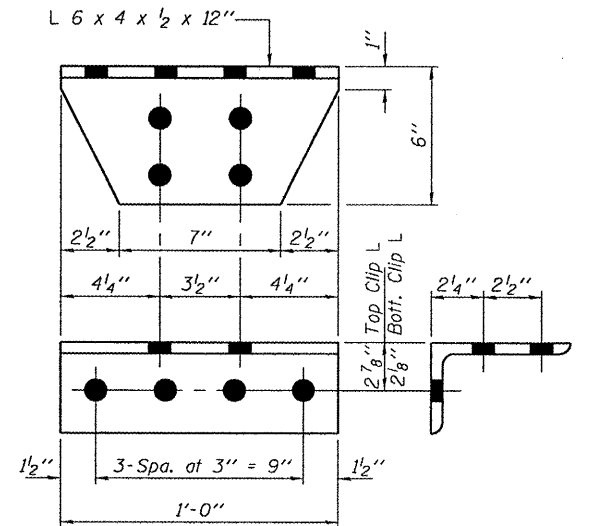
LONGITUDINAL SECTION
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM

Drill 1/2" ϕ holes in slab for hanger rods. Holes shall be patched with epoxy grout after support beam has been removed. (Typ.)



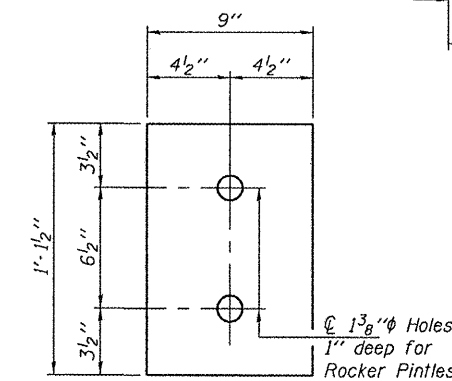
SIDE CLIP L

6" x 4" x 1/2" x 6" (4 Required)



TOP & BOTTOM CLIP ANGLES

(Top & Bottom Clip L's similar except as noted)
Top Clip L (1 Required)
Bottom Clip L (1 Required)



TOP BEARING \bar{L} AT PIER 3

1'-1 1/2" x 9" x 1'-1 1/2" (1 Required)

DESIGNED - GCE	EXAMINED - <i>R. Carl Papp</i>	DATE - NOVEMBER 30, 2010
CHECKED - IJL	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Ralph E. Anderson</i>	
CHECKED - GCE IJL	ENGINEER OF BRIDGES AND STRUCTURES	

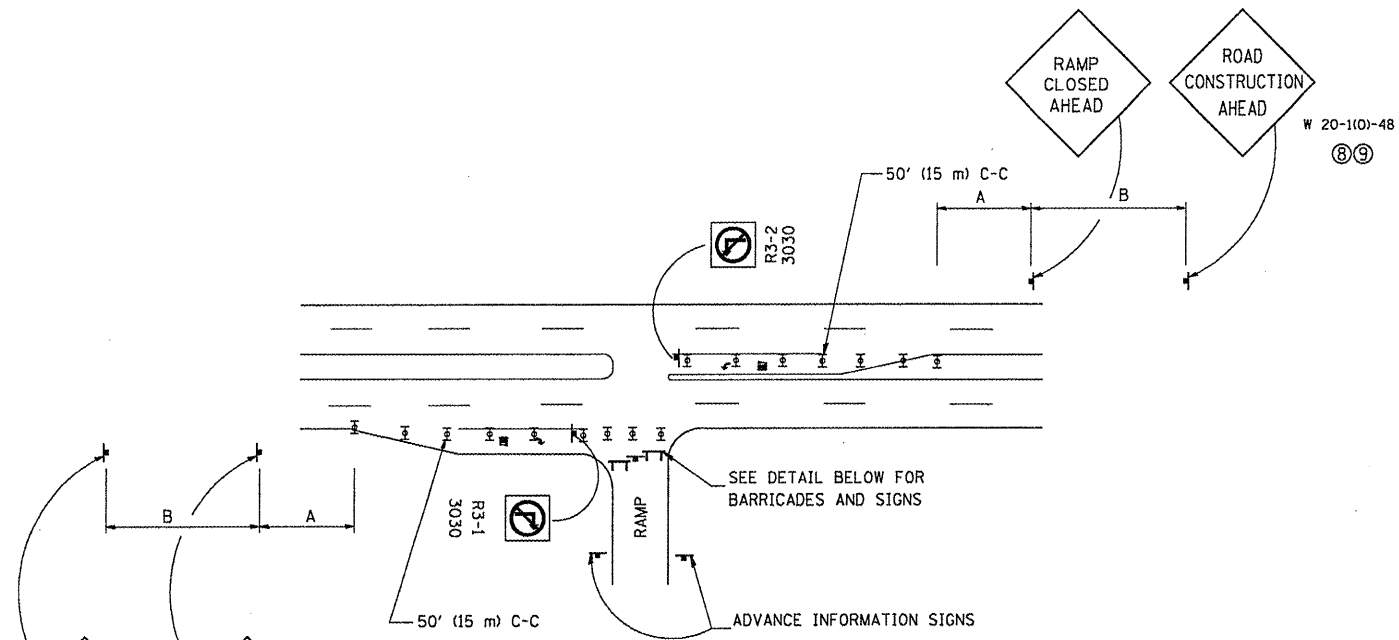
DESIGNED - GCE	EXAMINED - <i>R. Carl Papp</i>	DATE - NOVEMBER 30, 2010
CHECKED - IJL	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Ralph E. Anderson</i>	
CHECKED - GCE IJL	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 099-0175

SHEET NO. 3 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2010-054 BR	WILL	13	10
			CONTRACT NO. 60L29	
ILLINOIS FED. AID PROJECT				

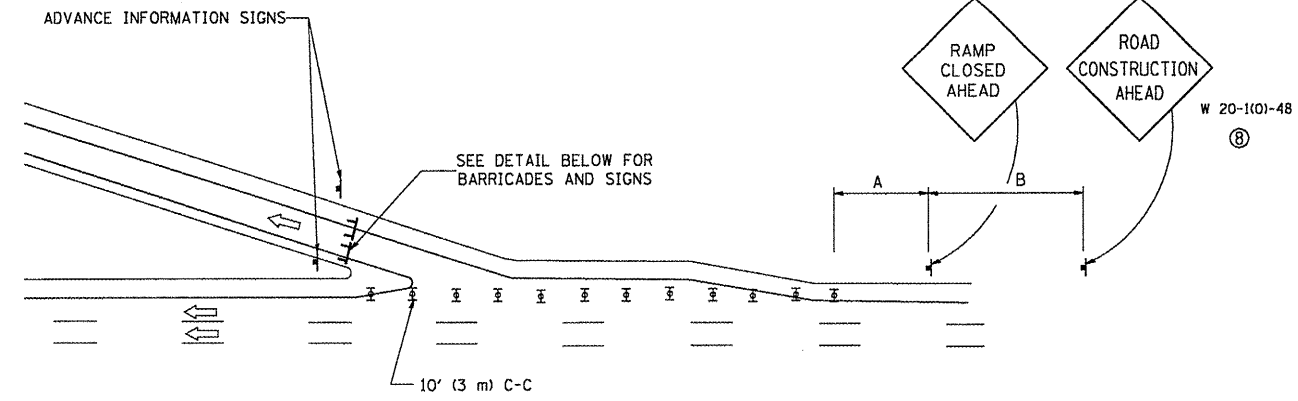
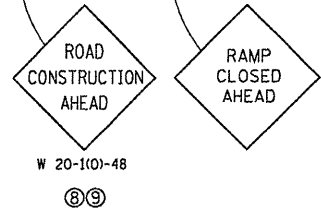


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL >45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	150' (45 m)	150' (45 m)

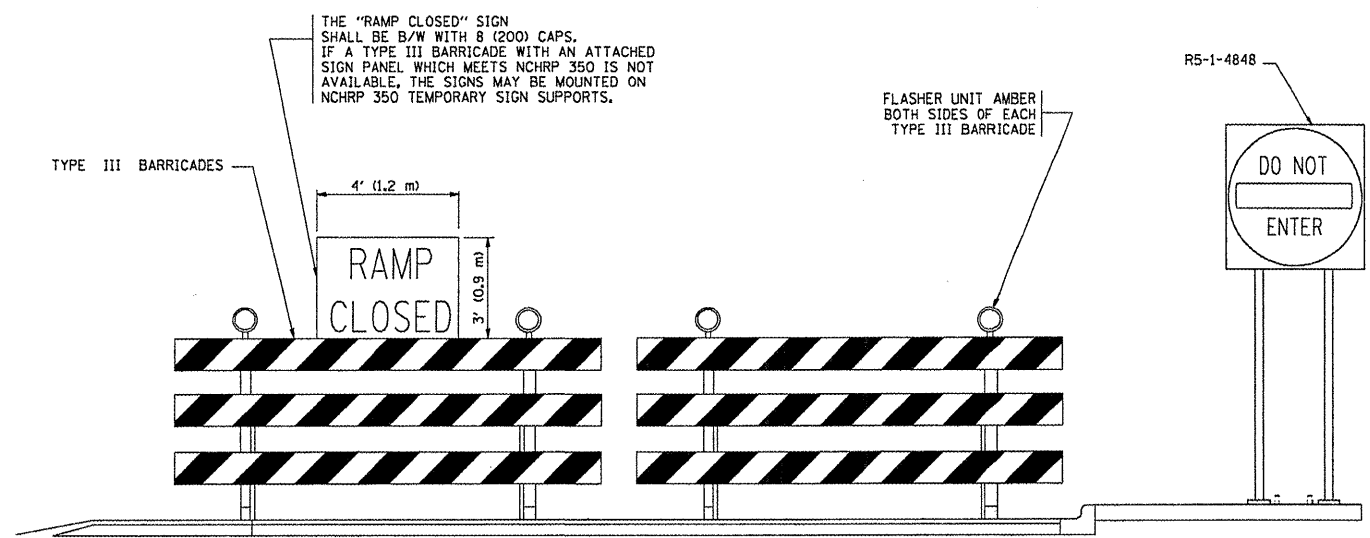
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

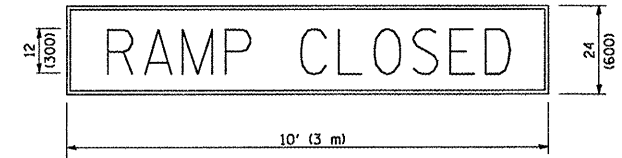
SYMBOLS

- ⊞ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ⊞ TYPE III BARRICADE WITH FLASHING LIGHT



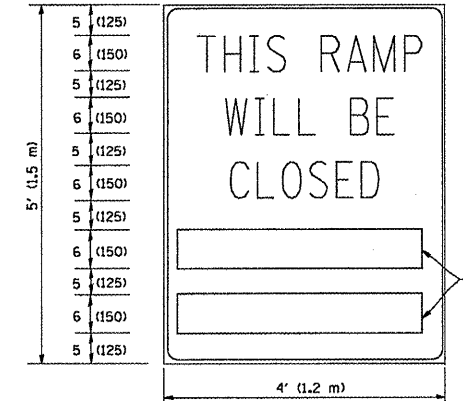
DETAIL FOR REQUIRED BARRICADES & SIGNS

RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE REFLECTORIZED BACKGROUND
1 (25) BORDER
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR THE CLOSED EXIT RAMPS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE REFLECTORIZED BACKGROUND
1/2 (12) BORDER

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY-FOUR (24) HOURS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED ON CLOSURES LESS THAN 24 HOURS IN DURATION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = lsgpa	DESIGNED - DWS	REVISED - DWS/JAF 12-02
M:\dststd\22x34\to08.dgn		DRAWN -	REVISED - JAF 02-06
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - SPB 01-07
	PLOT DATE = 1/26/2010	DATE - 02-83	REVISED - SPB 12-09

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

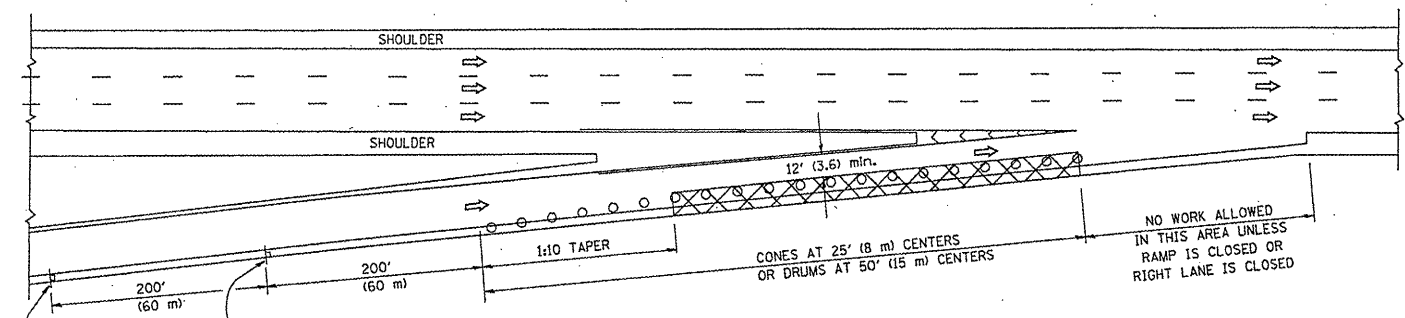
**FREWAY ENTRANCE AND EXIST RAMP
CLOSURE DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

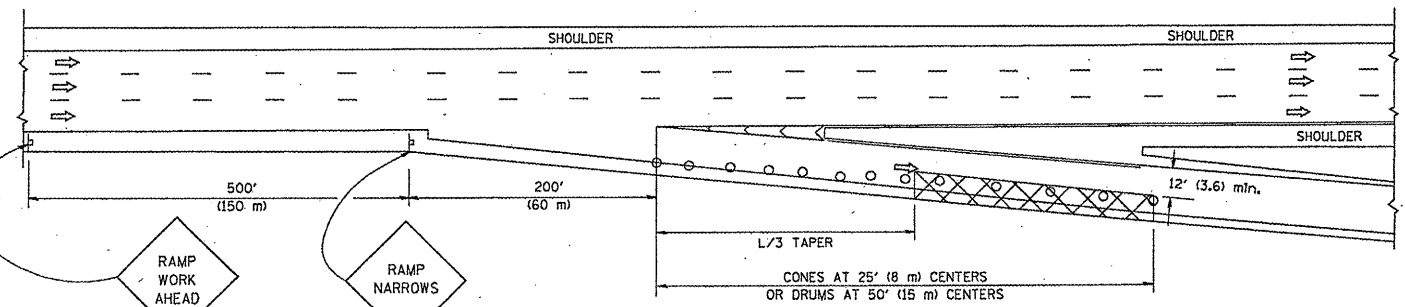
F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2010-054BR		13	11
	TC-08		CONTRACT NO. 60109	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

PARTIAL RAMP CLOSURE DETAILS

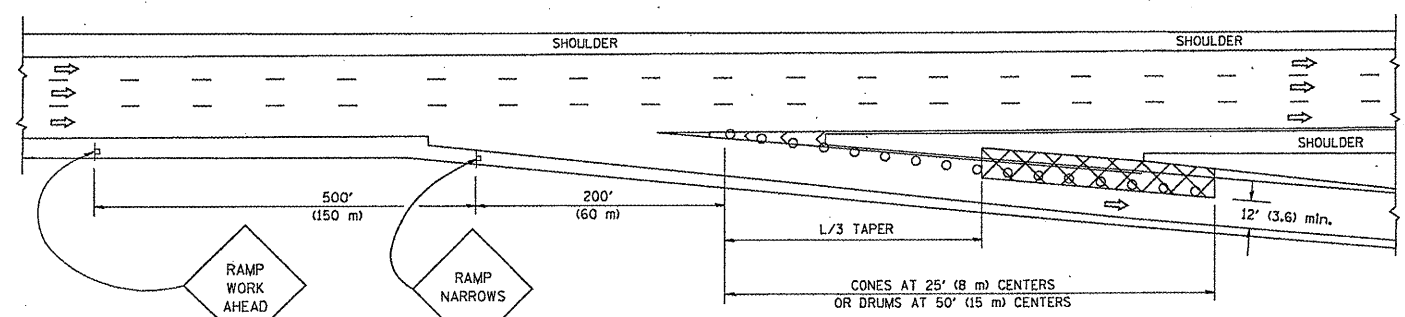
SHOULDER CLOSURE DETAILS



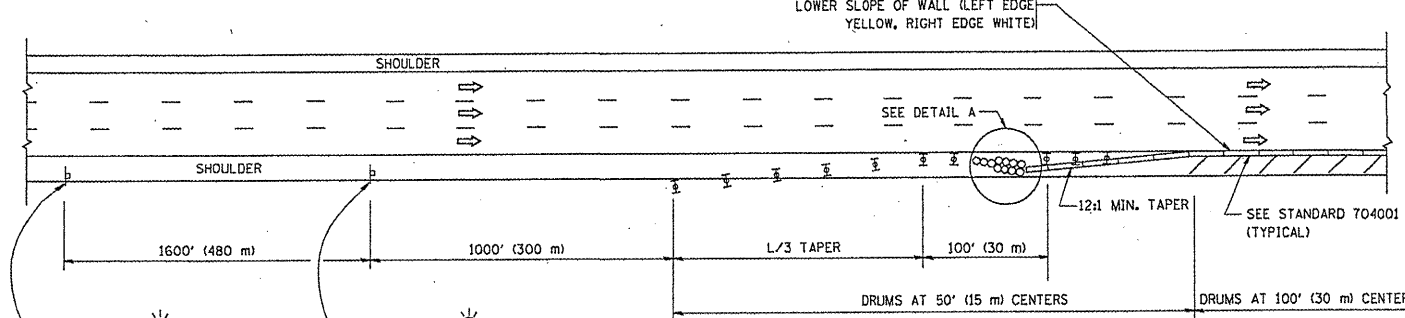
TYPICAL ENTRANCE RAMP



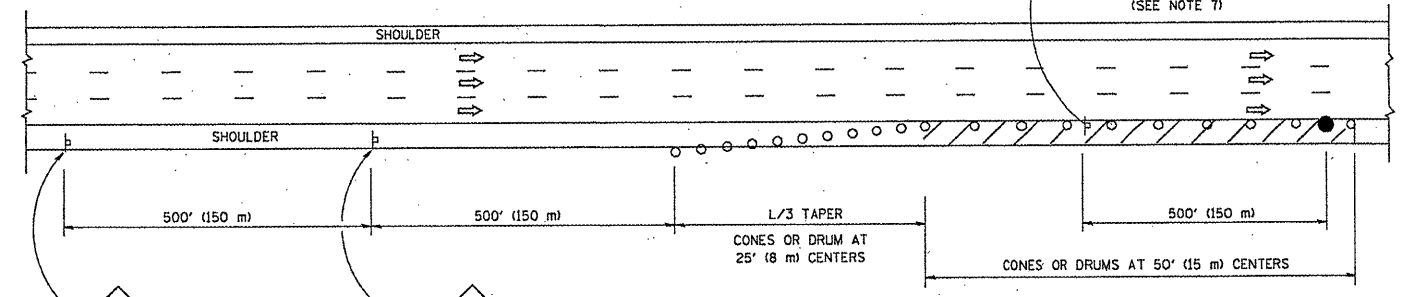
TYPICAL EXIT RAMP



TYPICAL EXIT RAMP



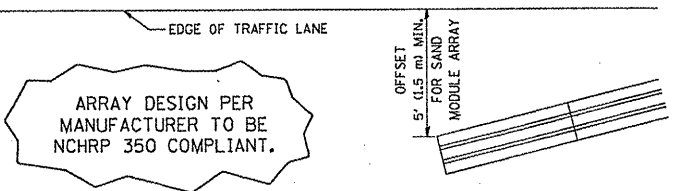
PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

OR WHEN SPECIFIED INSTALL TEMPORARY CONCRETE BARRIER WALL WITH BARRIER WALL REFLECTORS PER TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)

THIS DETAIL IS USED WHERE:
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRANCH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"
 IMPACT ATTENUATOR, TEMPORARY
 (SEE NOTE 5)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

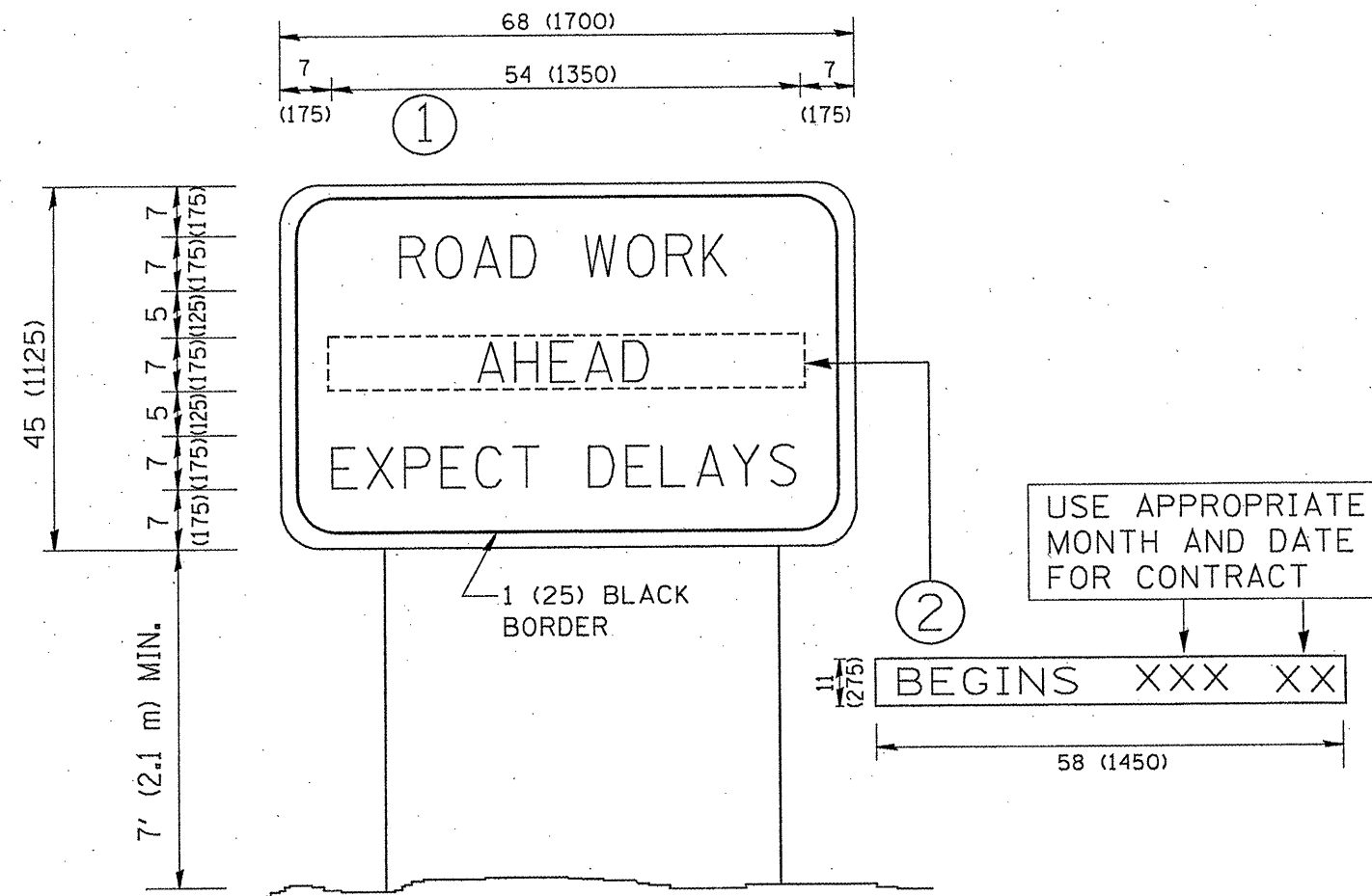
1. THE "L" DISTANCE EQUALS:
 SPEED LIMIT FORMULAS
 45 mph (80 km/h) METRIC ENGLISH
 OR GREATER: L=0.65(W/S) L=(W/S)
 W = WIDTH OF OFFSET IN FEET (METERS)
 S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 b. THE WORK AVTIVITY REQUIRES FREQUENT ENCRANCHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

FILE NAME = W:\distrs\22x34\tcl7.dgn	USER NAME = luyso	DESIGNED -	REVISED - 04-03
		DRAWN - D.W.S.	REVISED - J.A.F. 12-06
		CHECKED -	REVISED - S.P.B. 01-07
		DATE - 11-96	REVISED - S.P.B. 12-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY			
SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2010-0548R		13	12
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L09	



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\distatd\22x34\te22.dgn	USER NAME = goglienoht	DESIGNED -	REVISED - R. MJRS 09-15-97
		DRAWN -	REVISED - R. MJRS 12-11-97
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD
INFORMATION SIGN

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2010-054BR		13	13
TC-22			CONTRACT NO. 60L29	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				