

*35 + 1 = 36

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
VARIOUS LOCATIONS
SECTION 2013-044BR
BRIDGE REPAIRS (STEEL BEAM REPAIRS)
COOK AND DUPAGE COUNTY

C-91-406-13



LOCATION OF SECTION INDICATED THUS: - ■ -

FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENTS LOCATED IN THE CITIES OF CHICAGO AND ELMHURST AND THE VILLAGE OF JUSTICE.

FOR LOCATION MAPS
SEE PAGES 5-9.

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

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

PROJECT ENGINEER: J. ALAIN MIDY (847) 221-3056
PROJECT MANAGER: ISSAM RYAN (847) 705-4178

CONTRACT NO. 60W94

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 23 20 13

John F. ...
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 6 20 13
John D. Baranzelli, PE, BS
 acting ENGINEER OF DESIGN AND ENVIRONMENT

Dec 6 20 13
Omer Osman, PE, BS
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

STATE STANDARDS

GENERAL NOTES

SHEET NO.	DESCRIPTION	STANDARD NO.	DESCRIPTION
1.	COVER SHEET	635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
2.	INDEX OF SHEETS	643001-02	SAND MODULE IMPACT ATTENUATORS
3.	SUMMARY OF QUANTITIES	701101-04	OFF-RD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE
4.	SCHEDULE OF QUANTITIES	701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
5.-9.	LOCATION MAPS	701400-07	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
10.-11.	BRIDGE REPAIR DETAILS, LOCATION 1 (SN 016-0168)	701401-08	LANE CLOSURE, FREEWAY/EXPRESSWAY
12.-14.	BRIDGE REPAIR DETAILS, LOCATION 2 (SN 016-0209)	701423-07	LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS ≥ 45 MPH TO 55 MPH
15.-17.	TRAFFIC CONTROL STAGING (SN 016-0209)	701426-06	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45 MPH
18.-21.	BRIDGE REPAIR DETAILS, LOCATION 3 (SN 016-2050)	701428	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
22.-28.	BRIDGE REPAIR DETAILS, LOCATION 4 (SN 016-2068)	701446-05	TWO LANE CLOSURE FREEWAY/EXPRESSWAY
29.-30.	BRIDGE REPAIR DETAILS, LOCATION 5&6 (SN 022-0101 & SN 022-0102)	701501-06	LANE CLOSURE, 2L, 2W, UNDIVIDED
31.	FREEWAY ENTRANCE AND EXIT RAMP (TC-08)	701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
31A.	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE AND MULTI-LANE WEAVE (TC-09)	701606-04	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
32.	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)	701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
33.	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING (TC-16)	701901-03	TRAFFIC CONTROL DEVICES
34.	TRAFFIC CONTROL FOR SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES (TC-17)	704001-07	TEMPORARY CONCRETE BARRIER
35.	ARTERIAL ROAD INFORMATION SIGN (TC-22)		

GENERAL NOTES (BRIDGE)

THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT NO DEBRIS WILL ENDANGER OR INTERFERE WITH TRAFFIC ON THE ROADWAY (OR THE RAILROAD) BENEATH THE BRIDGE ACCORDING TO ARTICLE 107.09 (OR 107.12) OF THE STANDARD SPECIFICATIONS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPROPRIATE PAY ITEM INVOLVED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

CONCRETE SUPERSTRUCTURE SHALL HAVE A SEVEN DAY MINIMUM CURE.

ALL VERTICAL CLEARANCE SIGNAGE, IF EXISTING, SHALL BE RESTORED TO THE CONDITION EXISTING PRIOR TO THE START OF WORK ASSOCIATED WITH THIS CONTRACT.

WHEN REMOVING THE EXISTING DAMAGED BEAM, THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO ENSURE THAT THE DECK AND THE BEAM ARE PROPERLY SUPPORTED DURING THE ENTIRE REMOVAL OPERATION SO AS TO PROTECT THE TRAFFIC AND PAVEMENT ON AND BELOW THE BRIDGE. THE CONTRACTOR SHALL SUBMIT THE REMOVAL SEQUENCE AND PROCEDURE TO THE ENGINEER FOR APPROVAL PRIOR TO REMOVAL OF THE EXISTING DECK, DAMAGED BEAM OR CARRIER BEAM. THIS COST IS INCLUDED IN THE COST OF "STRUCTURAL STEEL REMOVAL"

SLIPFORMING OF PARAPETS IS NOT ALLOWED.

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

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "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 CHICAGO AND ELMHURST AND THE VILLAGE OF JUSTICE.

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

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 BASED AT THE UNIT PRICE BID FOR THE WORK.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 (FOR ARTERIALS) AND (847)705-4155 (FOR EXPRESSWAYS) A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM THE BUREAU OF MAINTENANCE BRIDGE INSPECTORS.

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION OF ALL EMERGENCY SERVICES, SCHOOL DISTRICTS, I.D.O.T.'S COMMUNICATIONS CENTER, SPRINGFIELD TRUCK PERMIT SECTION AND OTHER AGENCIES AFFECTED BY THE CLOSURE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR POSTING SIGNS THAT WILL INDICATE THE DATES THE CLOSURE WILL BE IN PLACE.

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/TOLLWAYS.

FOR LOCATION 4, THE CONTRACTOR SHALL COORDINATE WITH THE IDOT ELECTRIC MAINTENANCE CONTRACTOR PRIOR TO PERFORMING ANY WORK.

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 701801.

CALL IDOT EMC FOR CABLE LOCATES AT (773) 287-7600.

FOR LOCATION 1, SURVEILLANCE CONDUITS ARE ATTACHED TO THE AUGUSTA BLVD BRIDGE WEST ABUTMENT. CARE SHALL BE TAKEN NOT TO DAMAGE CONDUITS.

FOR LOCATION 3, HOMELAND SECURITY VIDEO AND FIBER INSTALLED IN THE HUBBARD ST CAVE. CARE SHALL BE TAKEN NOT TO DAMAGE CONDUITS.

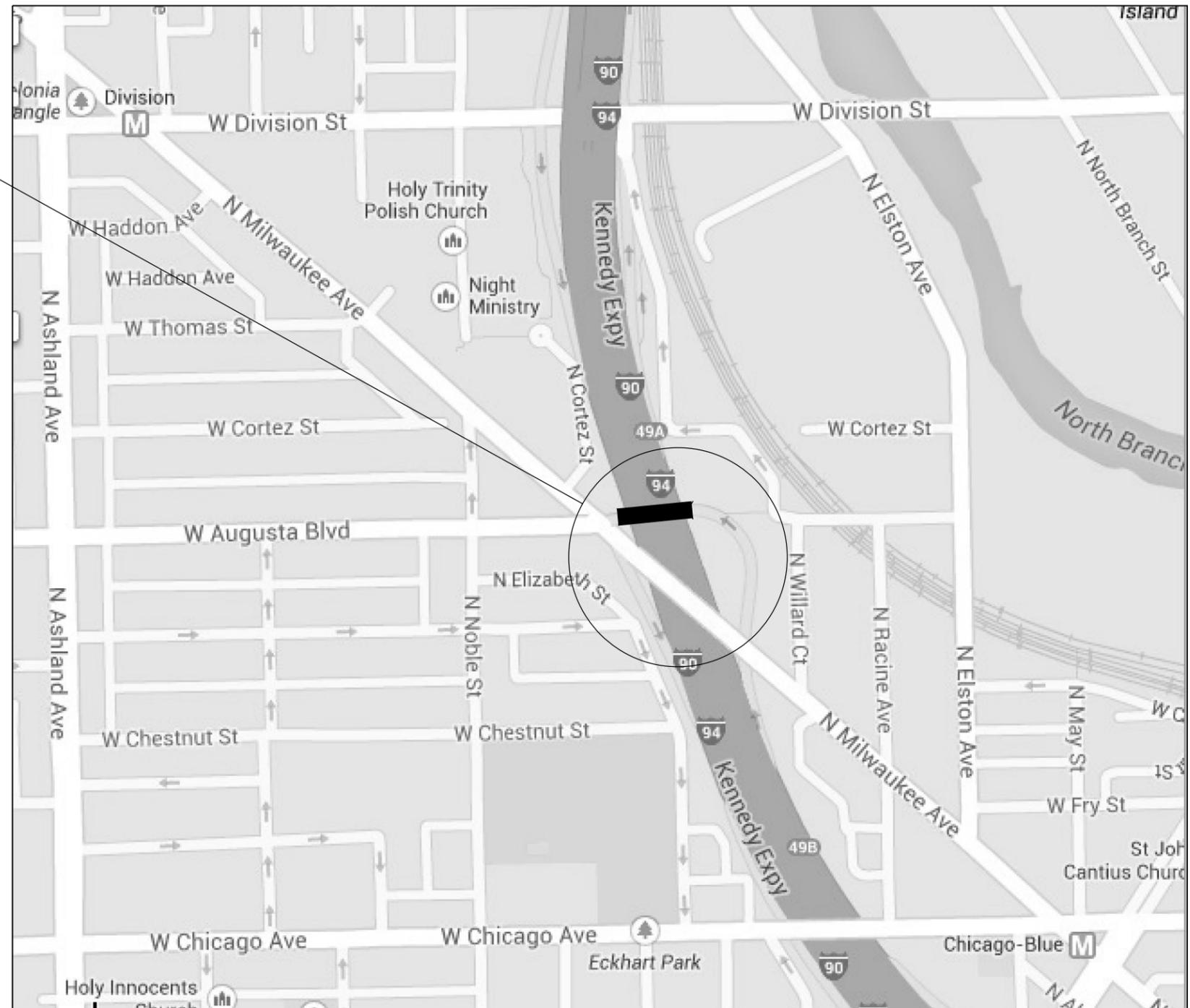
FILE NAME :	USER NAME : SEYMORECP	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	VARIOUS ROUTES INDEX OF SHEETS, STATE STANDARDS, & GENERAL NOTES				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pvidot\seymorecp\08361489\01	0813\sh-t-gennote.dgn	DRAWN -	REVISED -		VAR.	2013-044BR	COOK & OUPAGE	35	2				
Default	PLOT SCALE : 100,0000 / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.				CONTRACT NO. 60W94				
	PLOT DATE : 11/21/2013	DATE -	REVISED -						ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES	COOK COUNTY				DUPAGE COUNTY	
	LOCATION	I-90/94 AUGUSTA BLVD	IL 171 (ARCHER RD) OVER US 45	I-90/94 HUBBARD ST	I-290 KEELER AVE	I-290 EISENHOWER EXPRESSWAY OVER GRAND AVE
LOCATION & STRUCTURE NO	1	2	3	4	5	6
TEMPORARY INFORMATION SIGNING (SQ FT)	016-0168	016-0209	016-2050	016-2068	022-0101	022-0102
		77.1	51.4	51.4	25.7	25.7
TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS) (L SUM)	0.33		0.34	0.33		
TRAFFIC CONTROL AND PROTECTION, STANDARD 701501 (L SUM)				1.0		
TRAFFIC CONTROL AND PROTECTION, STANDARD 701601 (L SUM)					0.5	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701606 (L SUM)			1.0			
TRAFFIC CONTROL AND PROTECTION, STANDARD 701801 (L SUM)			0.5	0.5		
TRAFFIC CONTROL AND PROTECTION (SPECIAL) (L SUM)		1.0				
NIGHTTIME WORK ZONE LIGHTING (L SUM)	0.2	0.2	0.2	0.2	0.1	0.1
REMOVE, STORE, AND RE-ERECT SIGN PANEL (SPECIAL) (EACH)				1.0		
REMOVAL ELECTRICAL CONNECTION TO SIGN STRUCTURE (EACH)				1.0		
OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED (FT)				24.0		
REMOVE OVERHEAD SIGN STRUCTURE- BRIDGE MOUNTED (EACH)				1.0		
BEAM STRAIGHTENING (L SUM)	0.25		0.25	0.25	0.125	0.125

SCHEDULE OF QUANTITIES	COOK COUNTY				DUPAGE COUNTY	
	LOCATION	I-90/94 AUGUSTA BLVD	IL 171 (ARCHER RD) OVER US 45	I-90/94 HUBBARD ST	I-290 KEELER AVE	I-290 EISENHOWER EXPRESSWAY OVER GRAND AVE
LOCATION & STRUCTURE NO	1	2	3	4	5	6
IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 2 (EACH)	016-0168	016-0209	016-2050	016-2068	022-0101	022-0102
		1.0				
TEMPORARY CONCRETE BARRIER (FOOT)		162.5				
BARRIER WALL MARKERS, TYPE C (EACH)		14.0				

R14E

**LOCATION 1: I-90/94 (KENNEDY EXPRESSWAY) AT
AUGUSTA BLVD
SN 016-0168**



T39N



TRAFFIC DATA:

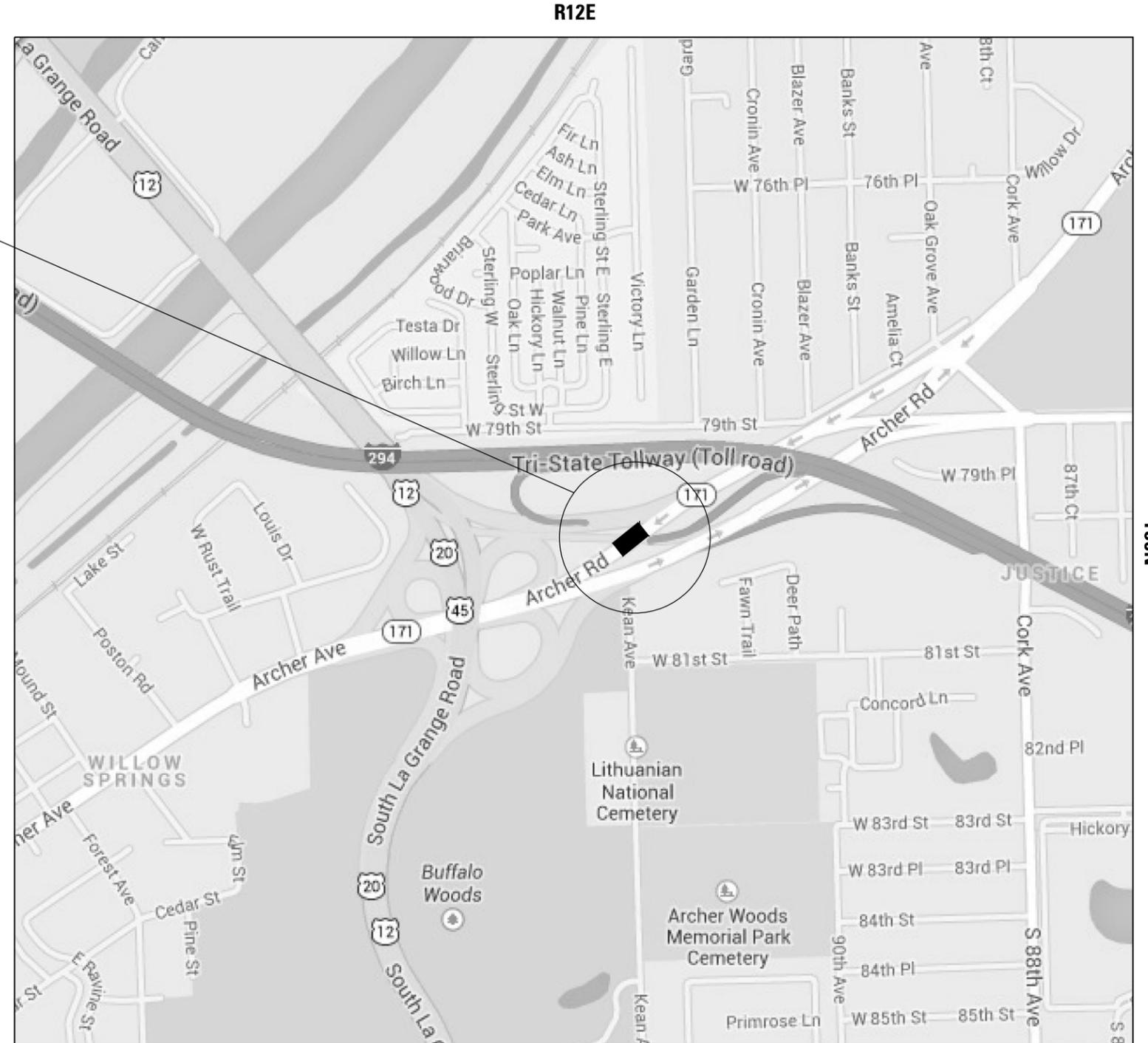
AUGUSTA- SPEED LIMIT: 25 MPH
2002 ADT: 9600

I-90/94- SPEED LIMIT: 55 MPH
2012 ADT: 292500

**CITY OF CHICAGO
WEST CHICAGO TOWNSHIP
COOK COUNTY**

FILE NAME = c:\pwork\pwork\seymorecp\d0361489\DI	USER NAME = SEYMORECP 0613-sht-details.dgn	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LOCATION MAP LOCATION 1				F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	VAR.	2013-044BR	COOK & DUPAGE	35	5
	PLOT DATE = 10/30/2013	DATE -	REVISED -		CONTRACT NO. 60W94											
												ILLINOIS FED. AID PROJECT				

**LOCATION 2: IL 171 (ARCHER ROAD), WB
OVER US 45 (LA GRANGE ROAD) SB
RAMP TO I-294 (TRI-STATE TOLLWAY)
SN 016-0209**



TRAFFIC DATA:

IL 171- SPEED LIMIT: 45 MPH
2012 ADT: 7350

US 45- SPEED LIMIT: 45 MPH
2006 ADT: 18500

**VILLAGE OF JUSTICE
LYONS TOWNSHIP
COOK COUNTY**

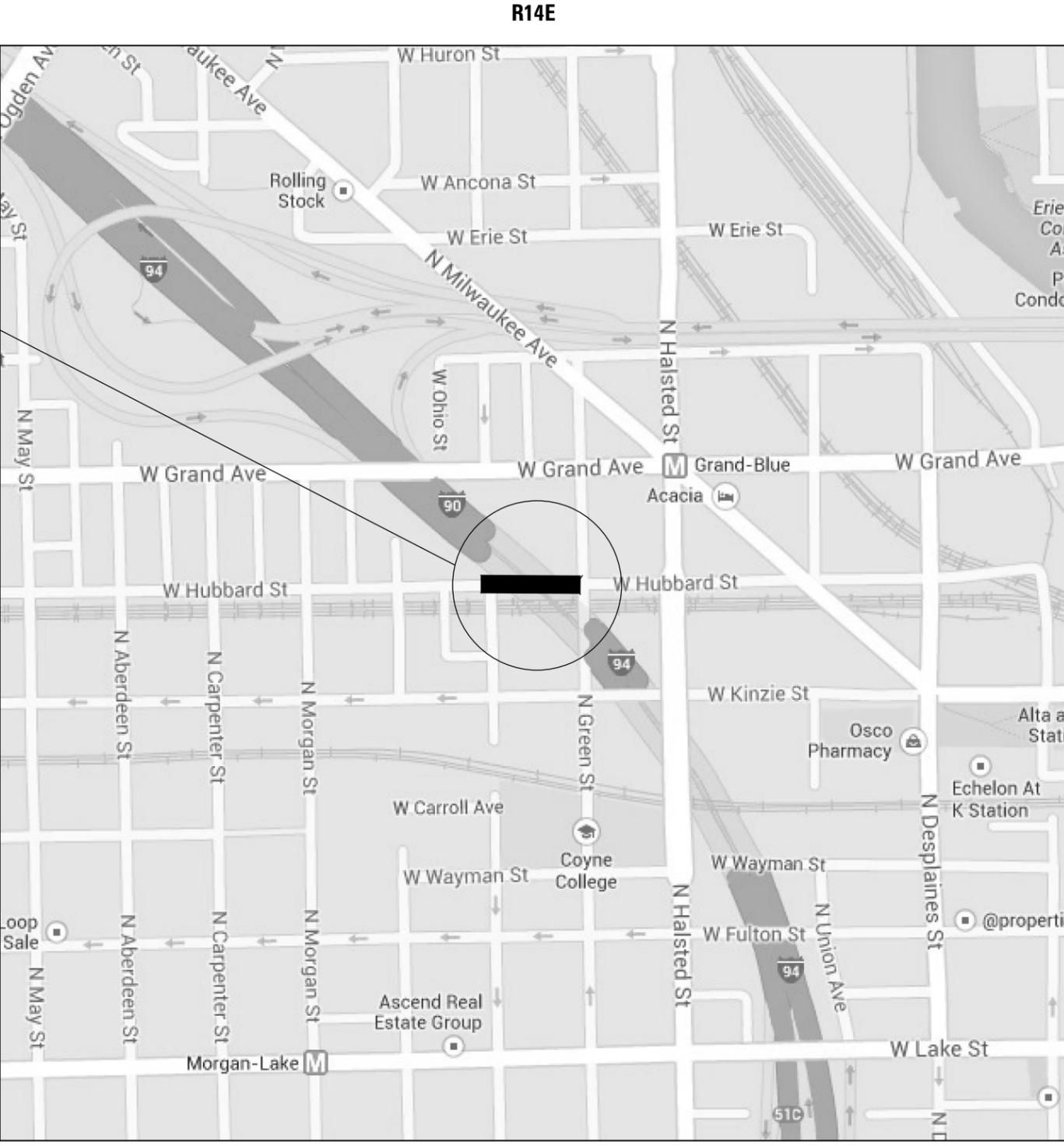
FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -
et:\pw\work\p\dot\seymorecp\d0361489\DL	0613-sht-details.dgn	DRAWN -	REVISED -
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/30/2013	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LOCATION MAP LOCATION 2			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2013-044BR	COOK & DUPAGE	35	6
CONTRACT NO. 60W94				
ILLINOIS FED. AID PROJECT				

**LOCATION 3: I-90/94 (KENNEDY EXPRESSWAY) AT HUBBARD STREET
SN 016-2050**



TRAFFIC DATA:

HUBBARD ST- SPEED LIMIT: 45 MPH
1997 ADT: 5000

I-90/94- SPEED LIMIT: 45 MPH
2012 ADT: 263000

**CITY OF CHICAGO
WEST CHICAGO TOWNSHIP
COOK COUNTY**

FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -
ct:\pw\work\p\dot\seymorecp\d0361489\DI	0613-sht-details.dgn	DRAWN -	REVISED -
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/30/2013	DATE -	REVISED -

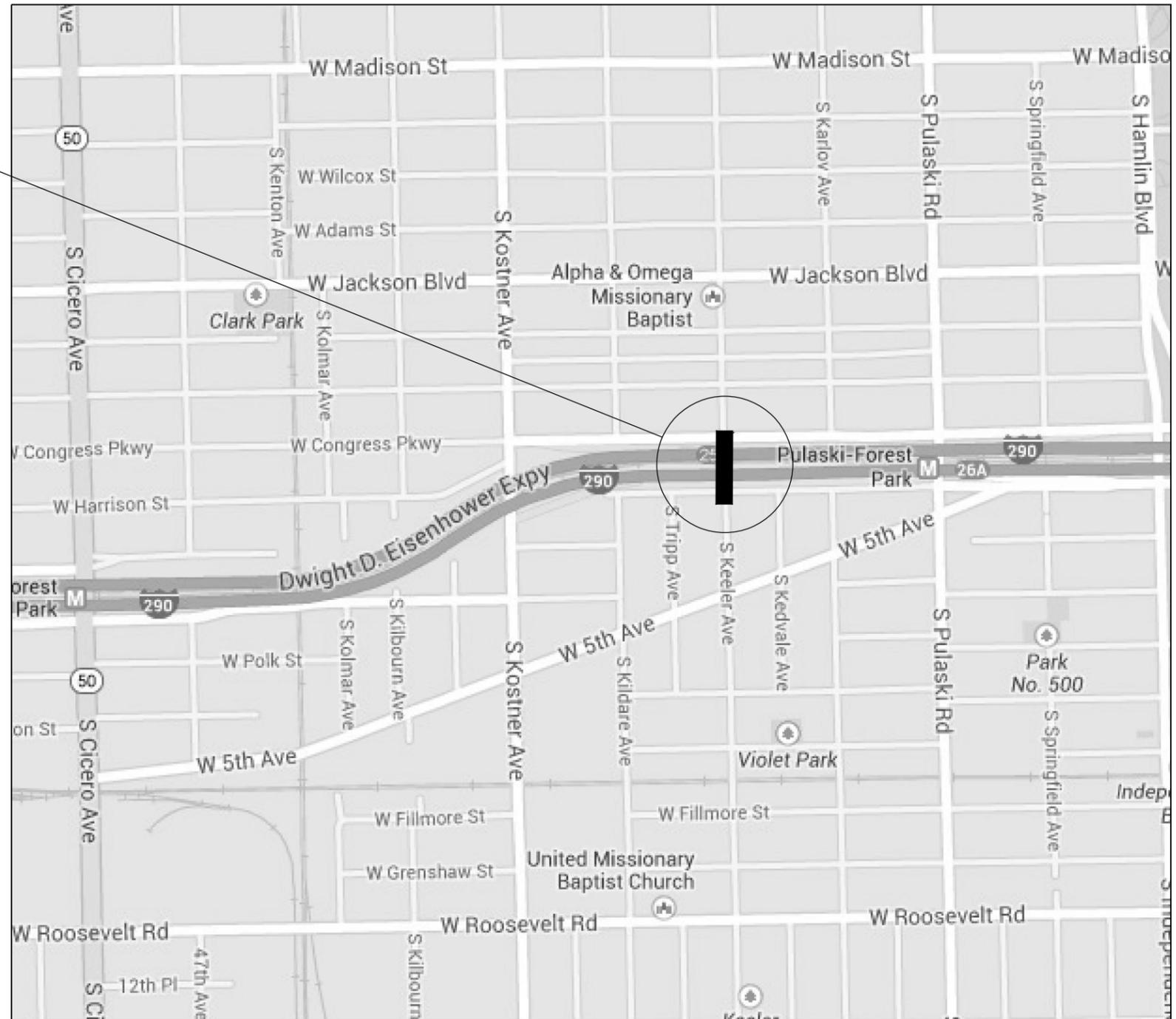
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LOCATION MAP LOCATION 3			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2013-044BR	COOK & DUPAGE	35	7
CONTRACT NO. 60W94			ILLINOIS FED. AID PROJECT	

R13E

**LOCATION 4: I-290 (EISENHOWER EXPRESSWAY) AT
KEELER AVENUE
SN 016-2068**



TRAFFIC DATA:

KEELER AVE- SPEED LIMIT: 45 MPH
1997 ADT: 5000

I-290- SPEED LIMIT: 55 MPH
2012 ADT: 210600

**CITY OF CHICAGO
WEST CHICAGO TOWNSHIP
COOK COUNTY**

FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -
ct:\pw_work\p\dot\seymorecp\d0361489\DI	0613-sht-details.dgn	DRAWN -	REVISED -
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/30/2013	DATE -	REVISED -

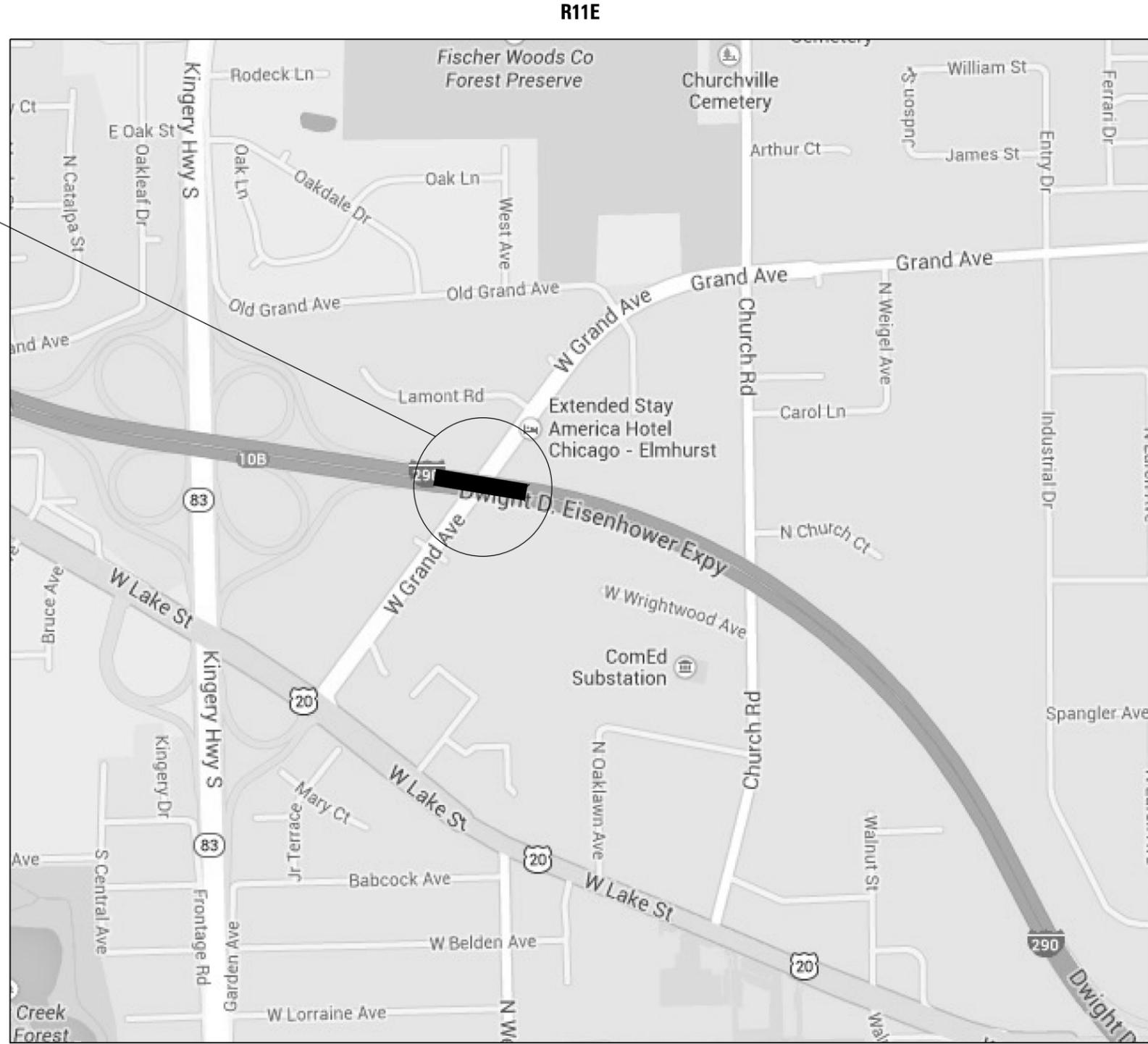
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**LOCATION MAP
LOCATION 4**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2013-044BR	COOK & DUPAGE	35	8
CONTRACT NO. 60W94			ILLINOIS FED. AID PROJECT	

**LOCATION 5&6: I-290 (EISENHOWER EXPRESSWAY)
AT GRAND AVENUE
SN 022-0101 & SN 022-0102**



TRAFFIC DATA:

I-290- SPEED LIMIT: 55 MPH
2012 ADT: 122500

GRANDE AVE.- SPEED LIMIT: 45 MPH
2012 ADT: 25000

**CITY OF ELMHURST
ADDISON TOWNSHIP
DUPAGE COUNTY**

FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -
ct:\pw\work\p\dot\seymorecp\d0361489\DI	0613-sht-details.dgn	DRAWN -	REVISED -
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/30/2013	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**LOCATION MAP
LOCATION 5 and 6**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2013-044BR	COOK & DUPAGE	35	9
CONTRACT NO. 60W94			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. Bolts 7/8"φ, open holes 15/16"φ, unless otherwise noted.

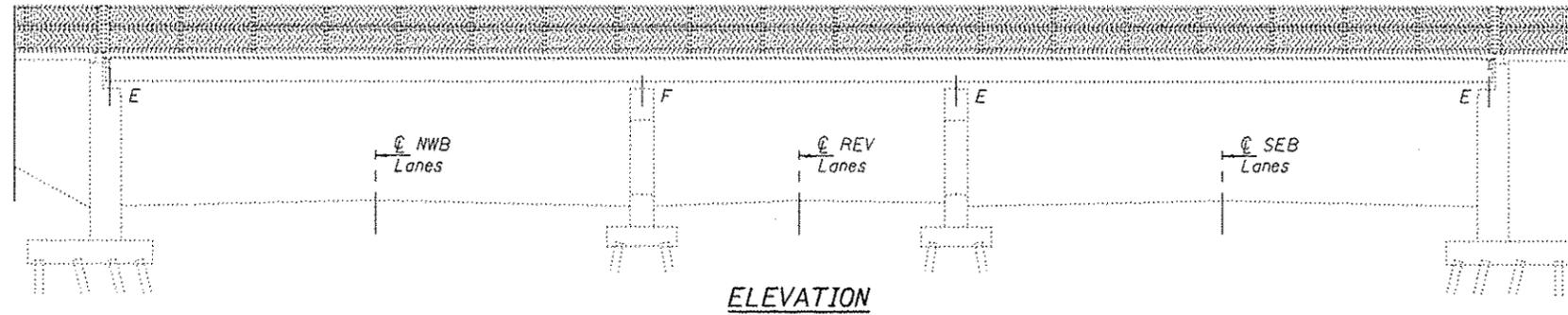
After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam.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

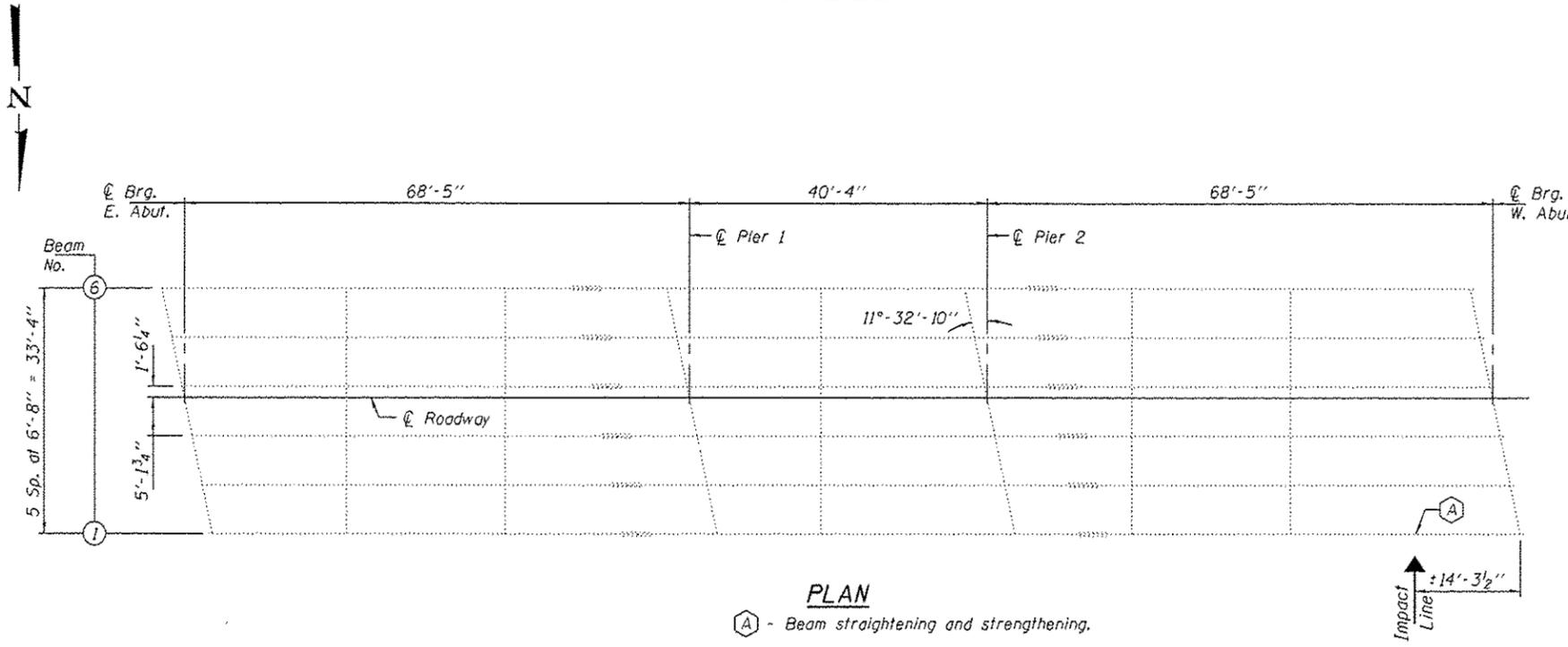
Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Structural Steel Repair.

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

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

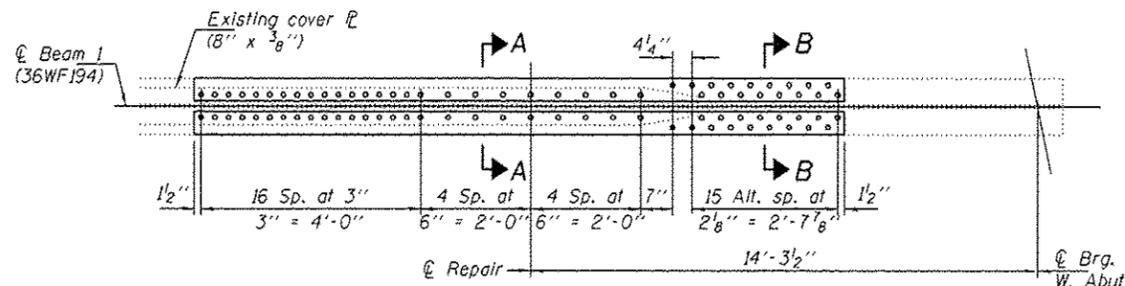


ELEVATION

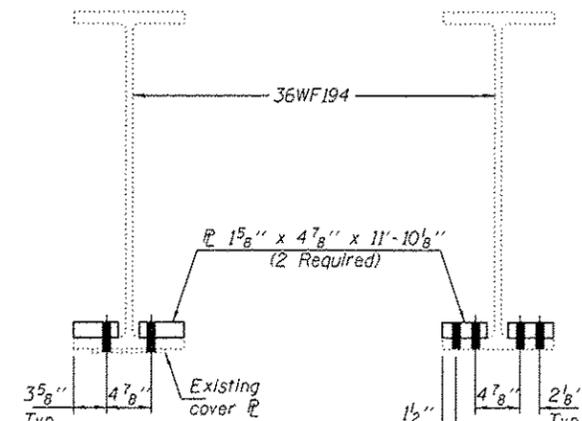


PLAN

Ⓐ - Beam straightening and strengthening.



BEAM STRENGTHENING



SECTION A-A

SECTION B-B

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Beam Straightening	L.S.	0.25
Structural Steel Repair	Pound	700



EXPIRES 11-30-2014

DESIGNED: *[Signature]*
 CHECKED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*

EXAMINED: *[Signature]*
 PASSED: *[Signature]*
 ACTING ENGINEER OF BRIDGE AND STRUCTURES

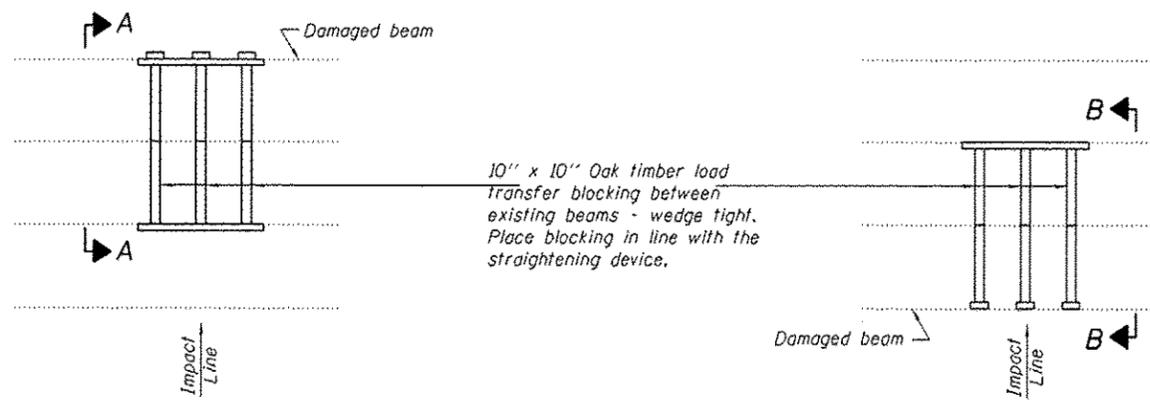
DATE: NOVEMBER 15, 2013
 REVISED: _____
 REVISED: _____

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
 AUGUSTA BOULEVARD OVER FAI 9094
 SN 016-0168

SHEET NO. 1 OF 2 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-0448R	COOK	35	10
CONTRACT NO. 60W94			ILLINOIS FED. AID PROJECT	

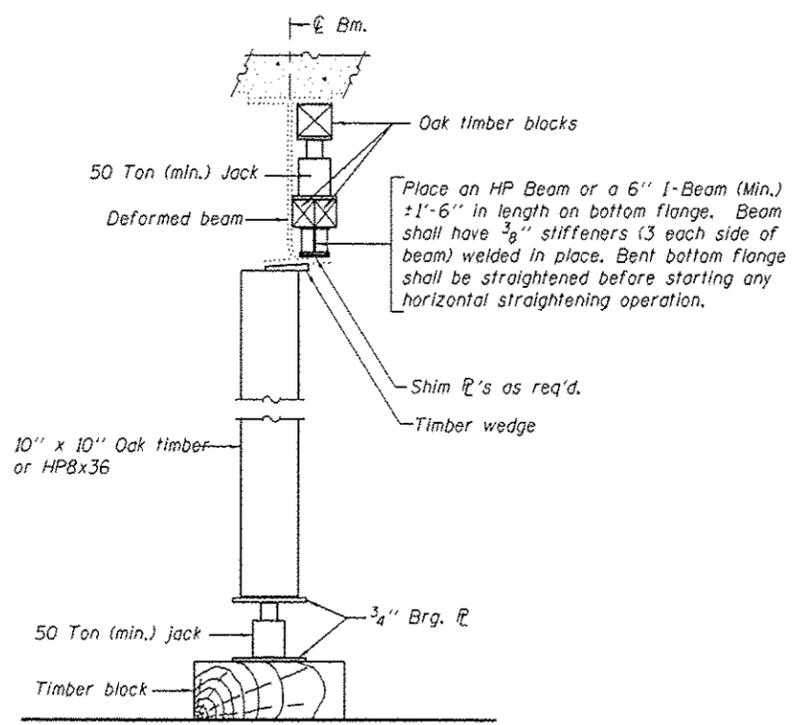


PULLING DEVICE

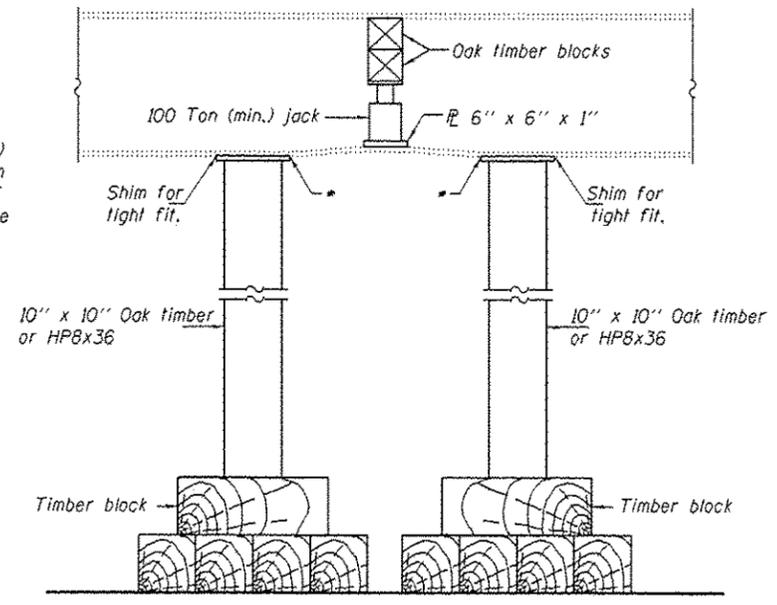
PUSHING DEVICE

PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS

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

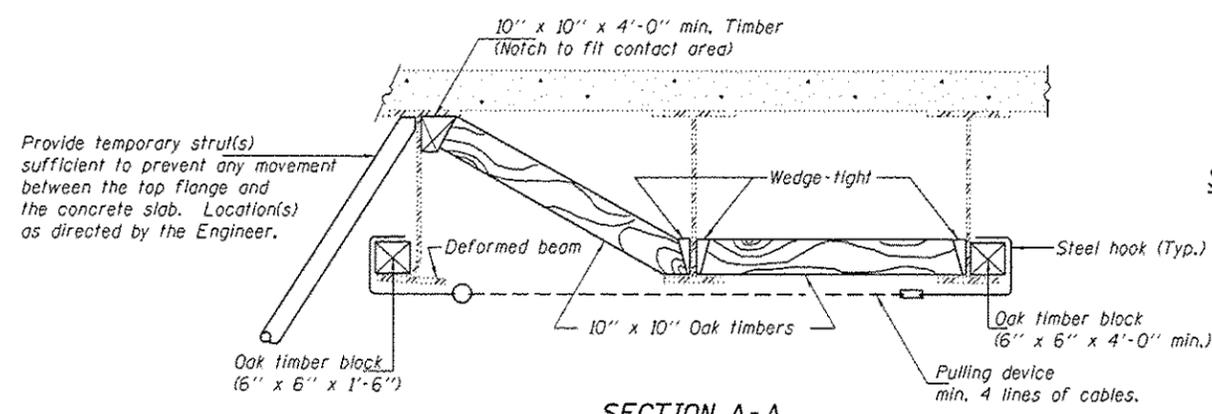


SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct flange rotation.)

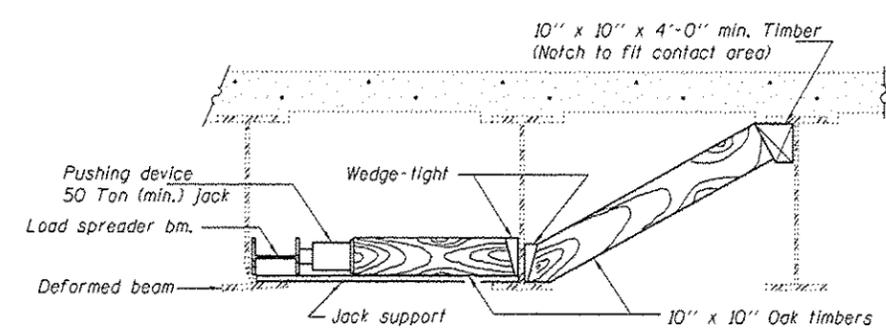


SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)

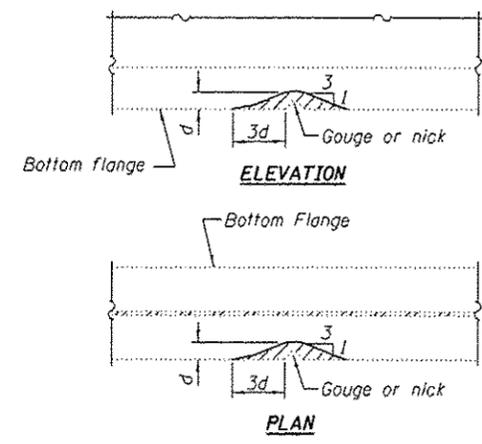
* Edge of plate shall line up with edge of deformation.
Note:
Braces and jack assembly shall be placed on same side of web.
Bent bottom flange shall be straightened before starting any horizontal straightening operations.



SECTION A-A

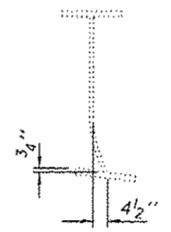


SECTION B-B



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" 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.



EXISTING DEFORMATION TO BE STRAIGHTENED
(Looking East)
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately 24'.

REP-11-14-2005

DESIGNED GGE	EXAMINED Timothy A. [Signature]	DATE NOVEMBER 15, 2013
CHECKED SMR	PASSED ACTING ENGINEER OF STRUCTURAL SERVICES	REVISED
DRAWN baliva	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED
CHECKED GGE SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 016-0168

SHEET NO. 2 OF 2 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-044BR	COOK	35	11
CONTRACT NO. 60W94			ILLINOIS FED. AID PROJECT	

GENERAL NOTES

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

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 for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4.

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

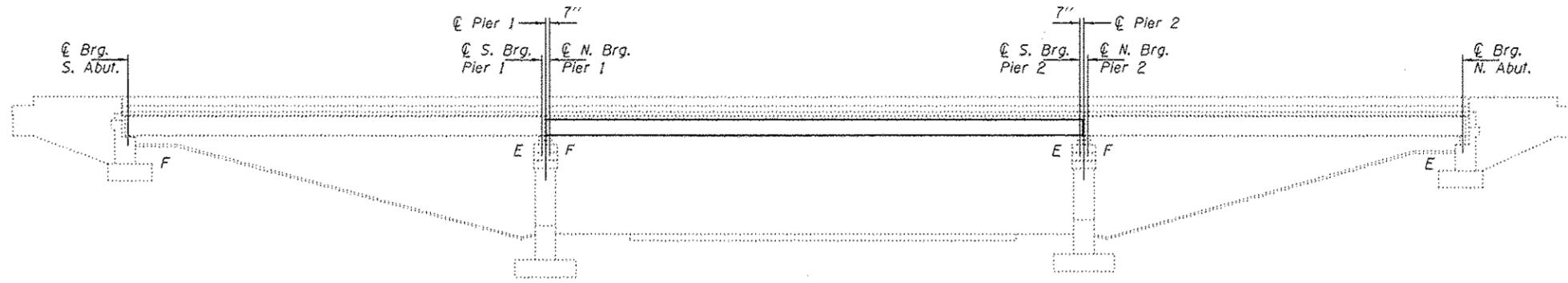
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

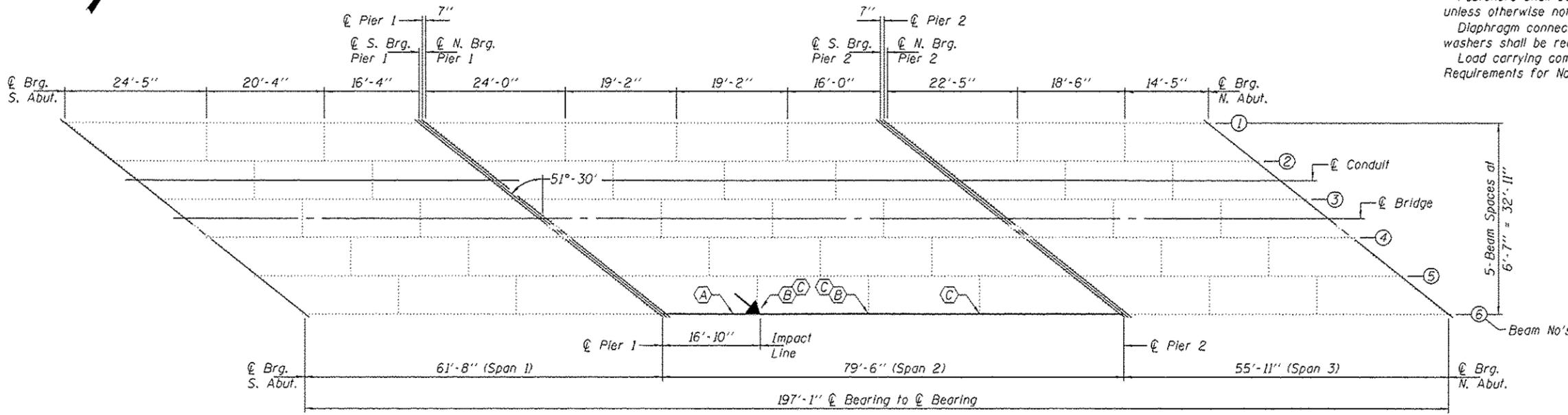
Fasteners shall be high strength bolts. Bolts 7/8"φ, open holes 15/16"φ, unless otherwise noted.

Diaphragm connection holes shall be 15/16"φ for 3/4"φ bolts. Two hardened washers shall be required at diaphragm connections.

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



ELEVATION



FRAMING PLAN

- Impact Line →
- (A) - Remove & Replace Partial Beam Segment
 - (B) - Remove & Replace Bottom Clip Angles
 - (C) - Remove Top Clip Angle & Install Side Clip Angles



Expires November 30, 2014

DESIGNED - *[Signature]*
 CHECKED - *[Signature]*
 DRAWN - Kyle M. Staffen
 CHECKED - *[Signature]*

EXAMINED - *[Signature]*
 PASSED - *[Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - NOVEMBER 15 2013

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

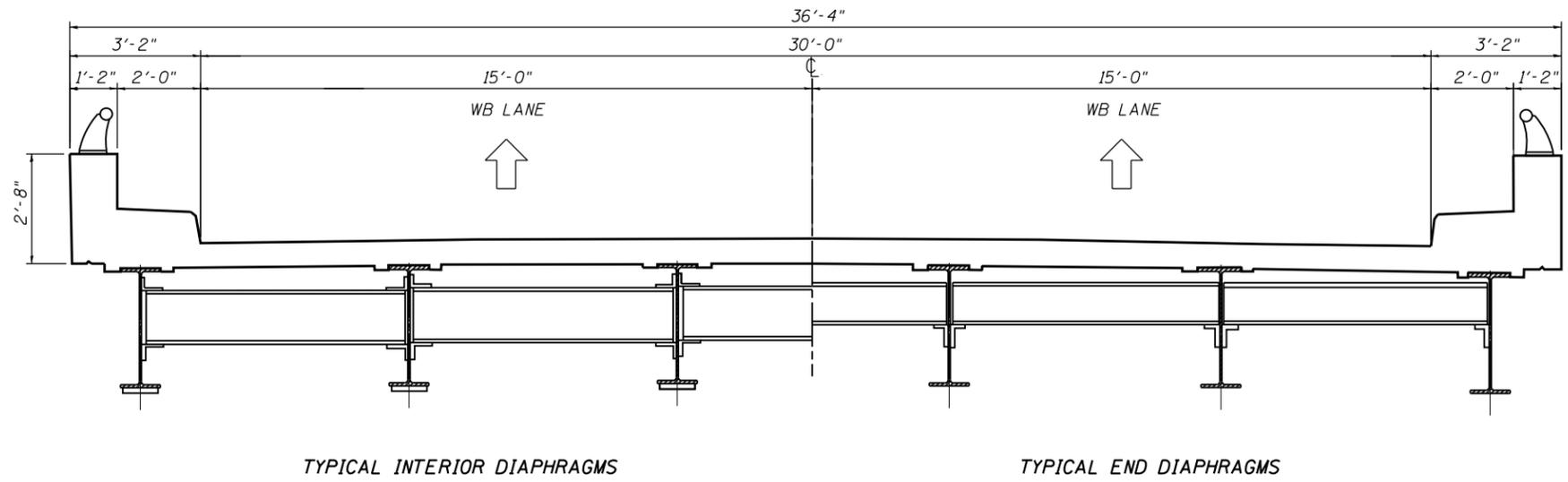
GENERAL PLAN & ELEVATION
 ILLINOIS ROUTE 171 - ARCHER AVENUE (WB) OVER RAMP A
 SN 016-0209

SHEET NO. 1 OF 3 SHEETS

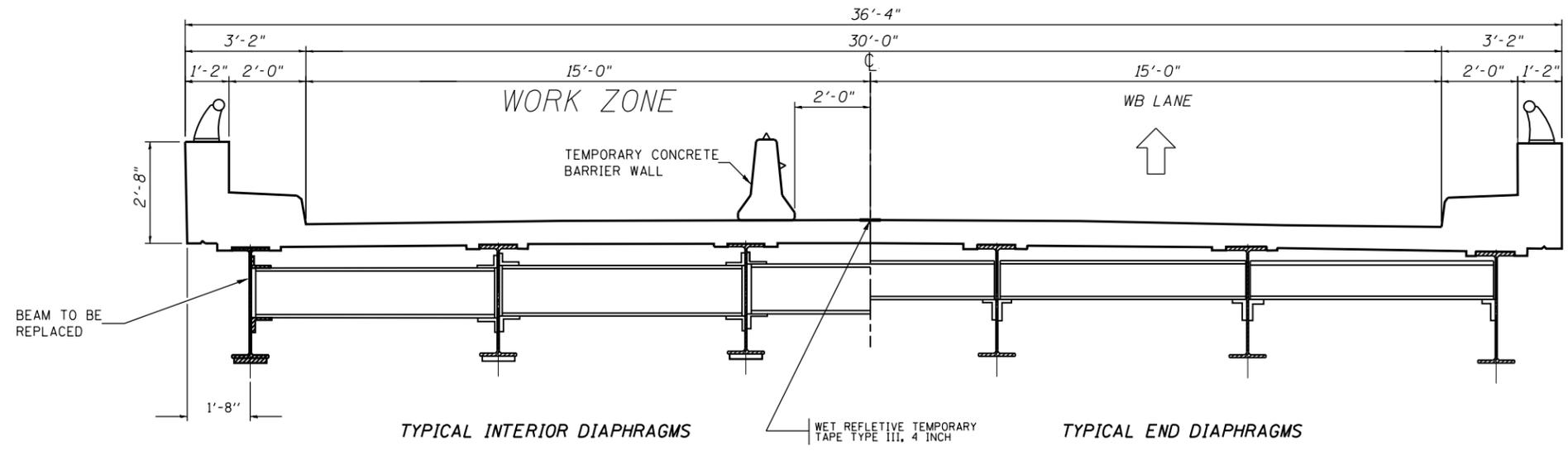
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-044BR	COOK	35	12
CONTRACT NO. 60W94			ILLINOIS FED. AID PROJECT	

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	11,700
Furnishing & Erecting Structural Steel	Pound	13,700
Temporary Slab Support System	L.S.	0.33

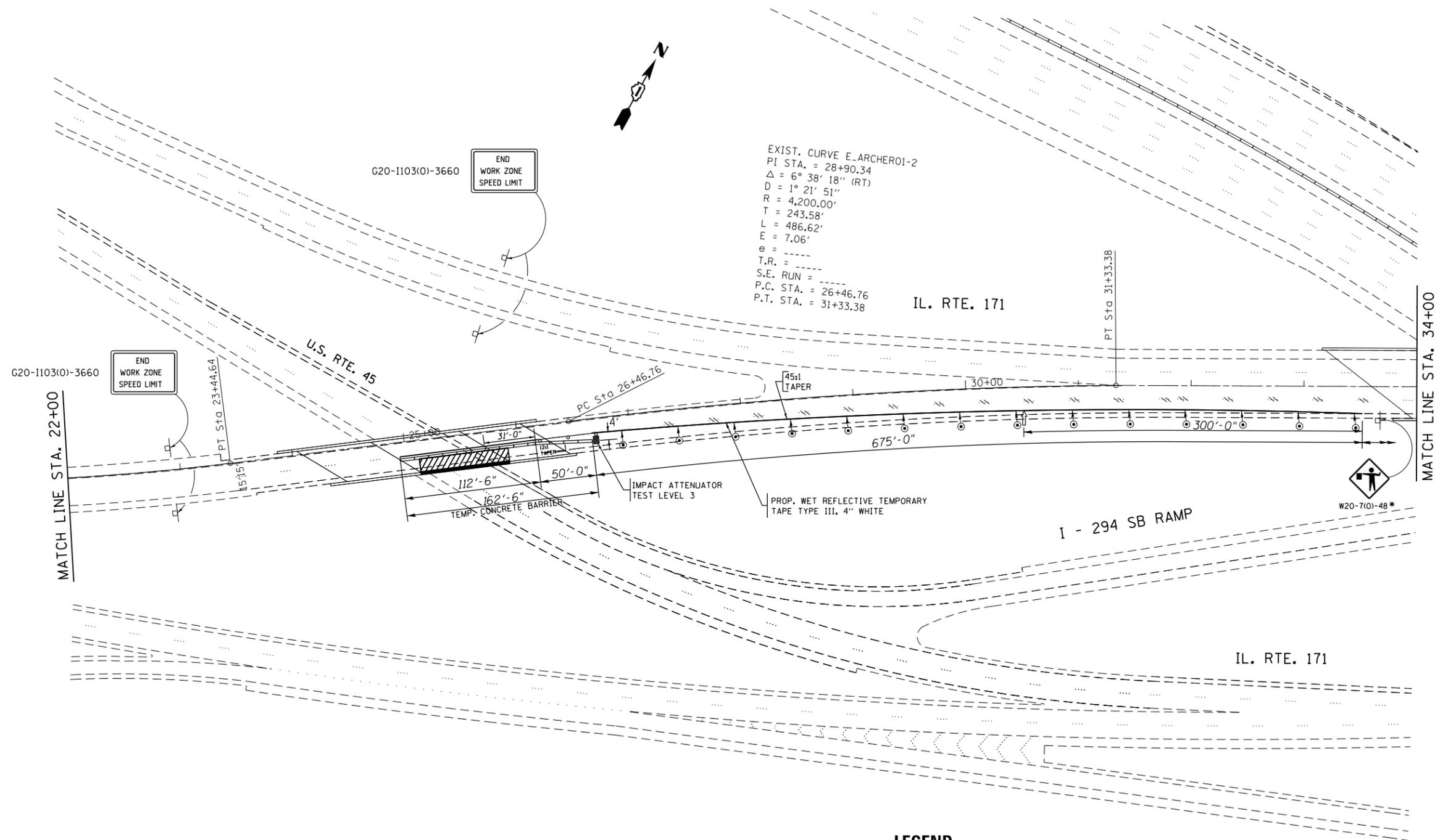


**EXISTING
CROSS SECTION**



STAGING

FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 171 (ARCHER RD) OVER US 45 (LA GRANGE RD) SN 016-0209 TRAFFIC CONTROL STAGING	F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
et:\pw\work\pwidot\seymorecp\d0361489\DI	0613-sht-typical.dgn	DRAWN -	REVISED -			VAR.	2013-044BR	COOK & DUPAGE	35	15	
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 60W94					
	PLOT DATE = 11/14/2013	DATE -	REVISED -			SCALE:	SHEET 1 OF 3 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	



EXIST. CURVE E_ARCHER01-2
 PI STA. = 28+90.34
 Δ = 6° 38' 18" (RT)
 D = 1° 21' 51"
 R = 4,200.00'
 T = 243.58'
 L = 486.62'
 E = 7.06'
 e = ---
 T.R. = ---
 S.E. RUN = ---
 P.C. STA. = 26+46.76
 P.T. STA. = 31+33.38

IL. RTE. 171

U.S. RTE. 45

1 - 294 SB RAMP

IL. RTE. 171

LEGEND

- ↑ ARROW BOARD
- DRUM OR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT @ 50' C-C
- ▨ WORK ZONE
- TEMP. CONCRETE BARRIER
- TEMP. SIGN POST
- ⋯ PAVEMENT MARKING REMOVAL **
- ↑ DIRECTION INDICATOR BARRICADES WITH STEADY BURN MONODIRECTIONAL LIGHTS @ 50' C-C

NOTES:

- * REMOVE SIGN IF FLAGGER IS NOT PRESENT FOR MORE THAN ONE HOUR.
- ** WHEN CONSTRUCTION IS OVER, ALL EXISTING PAVEMENT MARKING REMOVED SHALL BE REPLACED WITH THERMOPLASTIC PAVEMENT MARKING (OVER HMA PAVEMENT) AND POLYUREA PAVEMENT MARKING TYPE I (OVER PCC PAVEMENT).

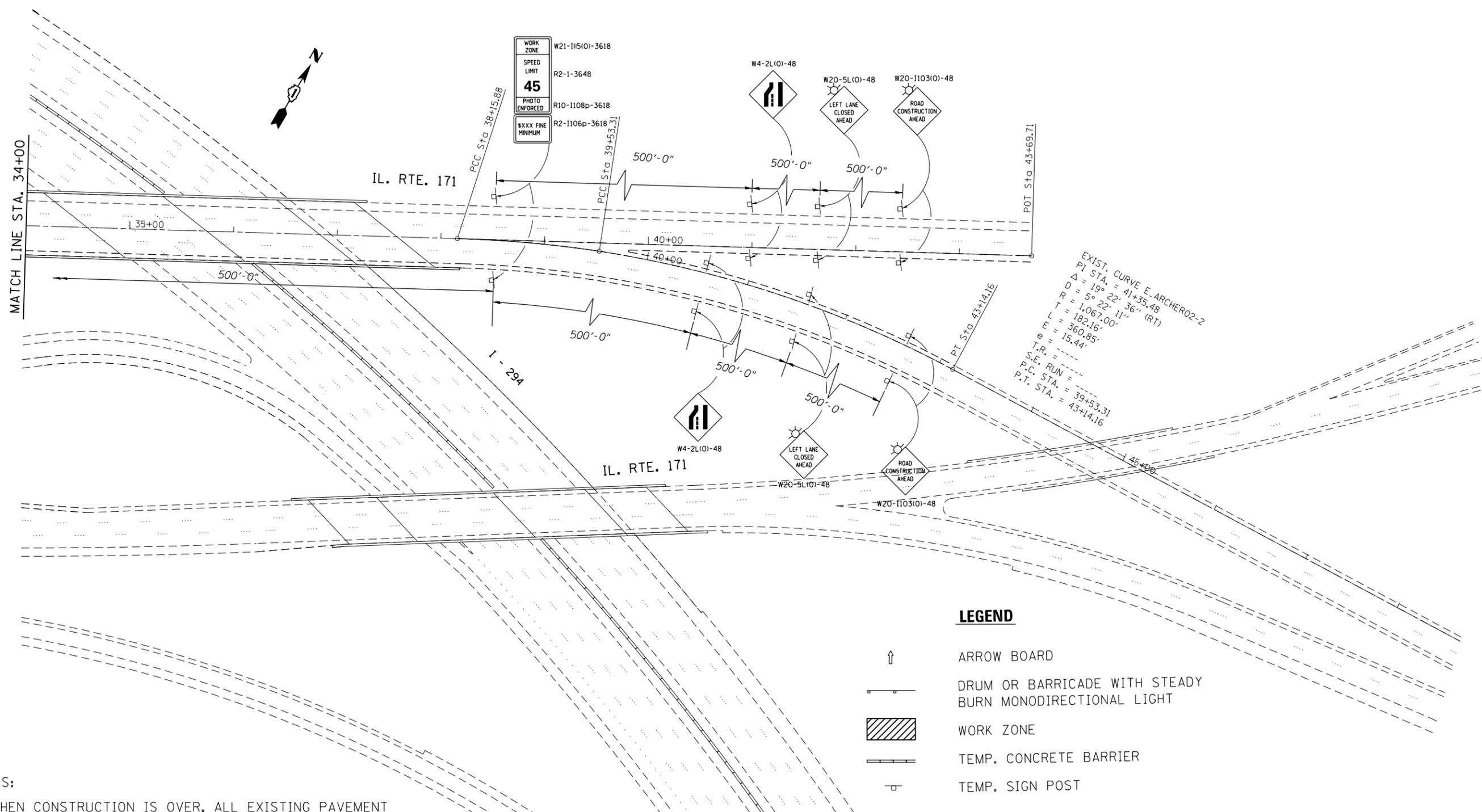
FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -
ct:\pw\work\p1dot\seymorecp\d0361489\01	0613-sht-plen.dgn	DRAWN -	REVISED -
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 11/14/2013	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL 171 (ARCHER RD) OVER US 45 (LA GRANGE RD) SN 016-0209
 TRAFFIC CONTROL STAGING**

SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2013-044BR	COOK & DUPAGE	35	16
CONTRACT NO. 60W94			ILLINOIS FED. AID PROJECT	



EXIST. CURVE E. ARCHER02-2
 PI STA. = 41+35.48
 $\Delta = 19^\circ 22' 36''$ (RT)
 $R = 5^\circ 22' 11''$
 $L = 1,067.00'$
 $T = 182.16'$
 $E = 360.85'$
 $e = 15.44'$
 T.R. = ----
 S.E. RUN = ----
 P.C. STA. = 39+53.31
 P.T. STA. = 43+14.16

LEGEND

-  ARROW BOARD
-  DRUM OR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
-  WORK ZONE
-  TEMP. CONCRETE BARRIER
-  TEMP. SIGN POST
-  PAVEMENT MARKING REMOVAL **
-  DIRECTION INDICATOR BARRICADES WITH STEADY BURN MONODIRECTIONAL LIGHTS @ 50' C-C

NOTES:
 ** WHEN CONSTRUCTION IS OVER, ALL EXISTING PAVEMENT MARKING REMOVED SHALL BE REPLACED WITH THERMOPLASTIC PAVEMENT MARKING (OVER HMA PAVEMENT) AND POLYUREA PAVEMENT MARKING TYPE I (OVER PCC PAVEMENT).

FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 171 (ARCHER RD) OVER US 45 (LA GRANGE RD) SN 016-0209 TRAFFIC CONTROL STAGING	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	0613-sht-plen.dgn	DRAWN -	REVISED -			VAR.	2013-044BR	COOK & DUPAGE	35	17	
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 60W94					
	PLOT DATE = 11/14/2013	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

GENERAL NOTES

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

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.

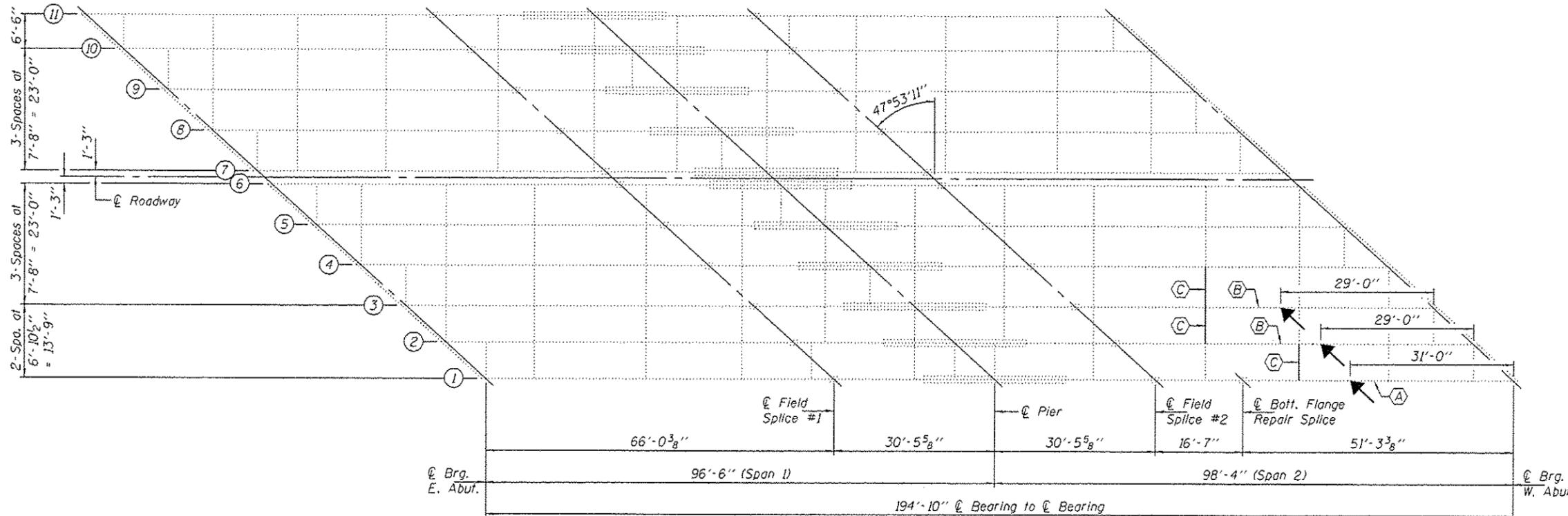
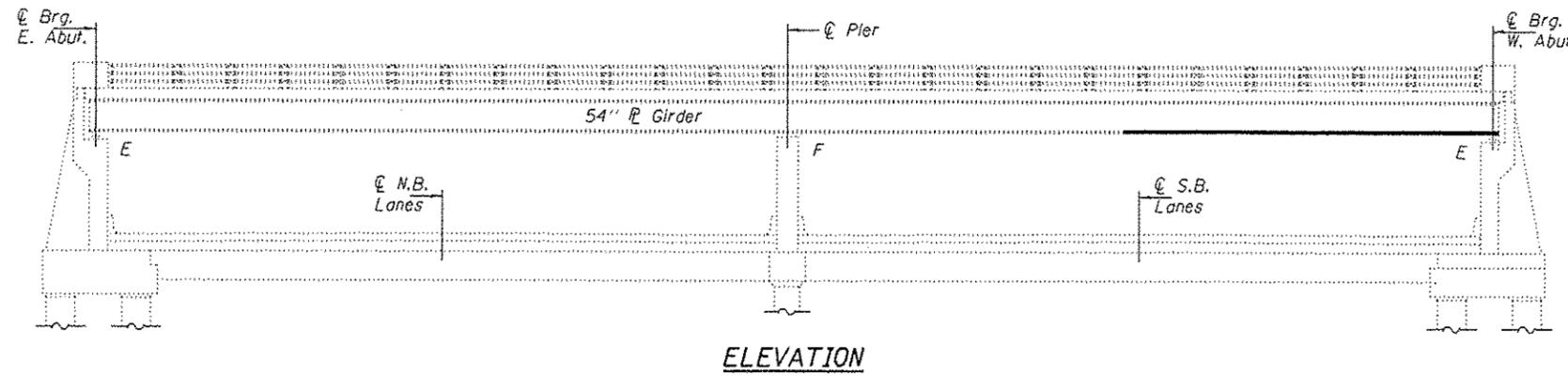
The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4.

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

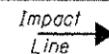
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{15}{16}$ " ϕ , unless otherwise noted.

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



FRAMING PLAN



- (A) - Remove & Replace Bottom Flange Angles.
- (B) - Straighten Existing Bottom Flange Angles.
- (C) - Remove & Replace Cross Frames.

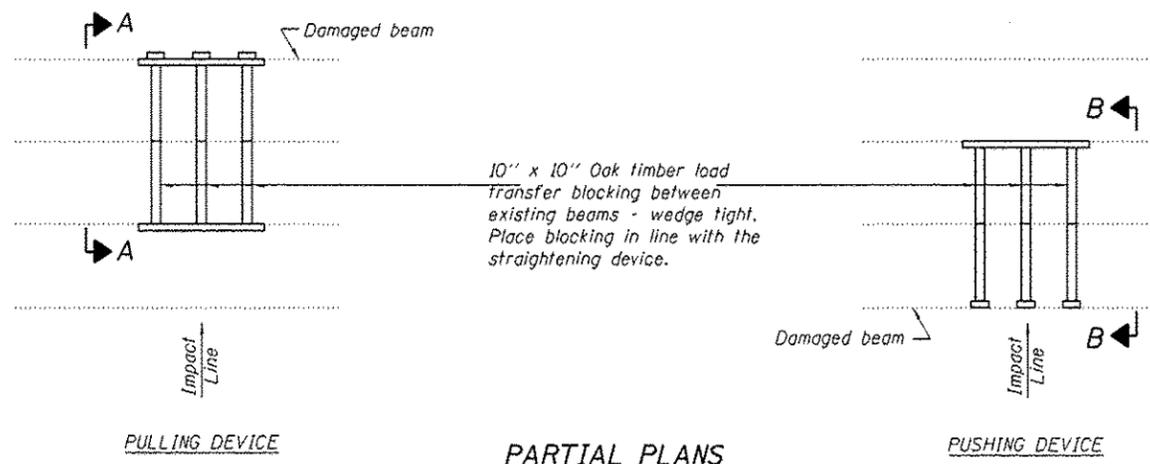
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	5170
Furnishing & Erecting Structural Steel	Pound	5360
Beam Straightening	L.S.	0.25
Temporary Slab Support System	L.S.	0.33

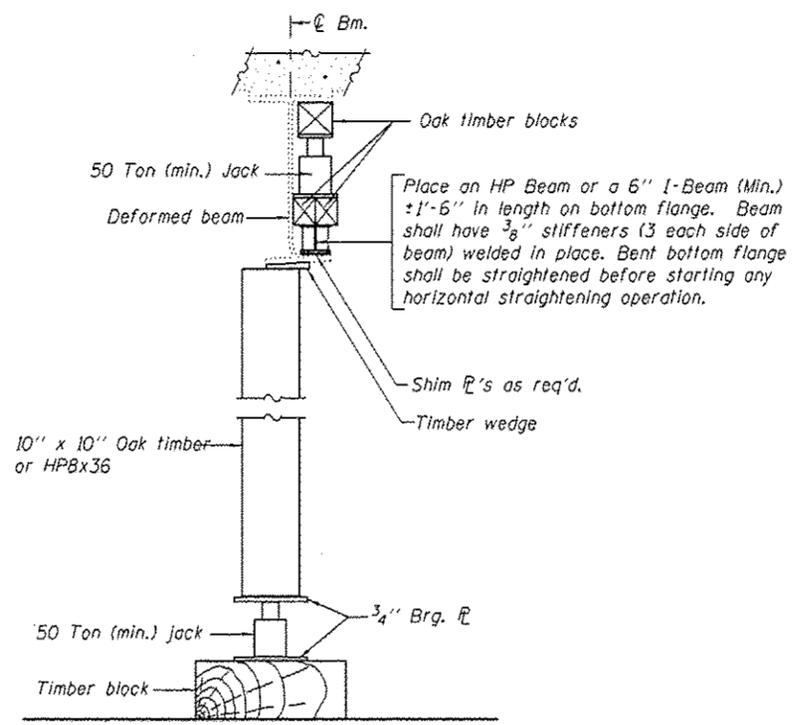


Expires: November 30, 2014

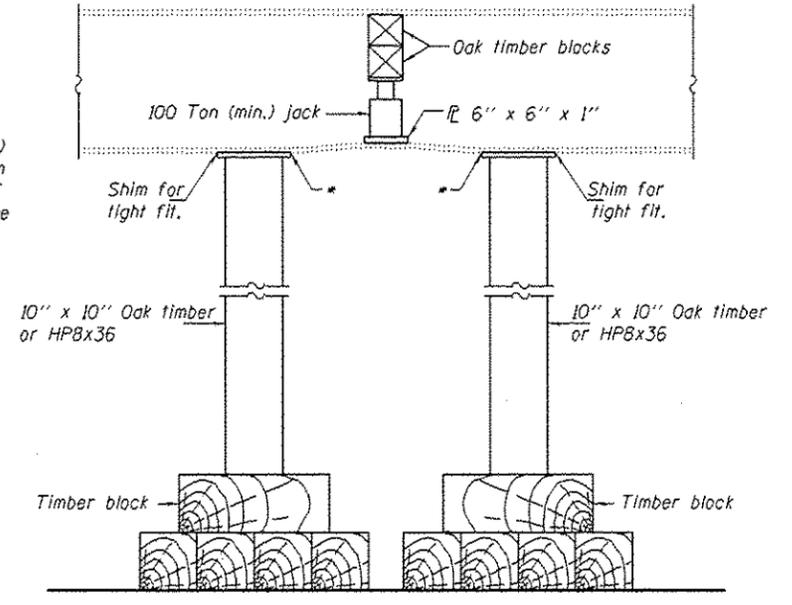
DESIGNED: <i>David Carl Puzey</i>	EXAMINED: <i>Timothy A. ASA</i>	DATE: NOVEMBER 15, 2013	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION HUBBARD STREET OVER KENNEDY EXPRESSWAY SN 016-2050		F.A. RTE. VAR	SECTION 2013-044BR	COUNTY COOK	TOTAL SHEETS 35	SHEET NO. 18	
CHECKED: <i>Kyle M. Stoffan</i>	PASSED: <i>David Carl Puzey</i>			SHEET NO. 1 OF 4 SHEETS		CONTRACT NO. 60W94		ILLINOIS FED. AID PROJECT			
DRAWN: <i>SMR</i>				ACTING ENGINEER OF BRIDGES AND STRUCTURES							
CHECKED: <i>SMR</i>											



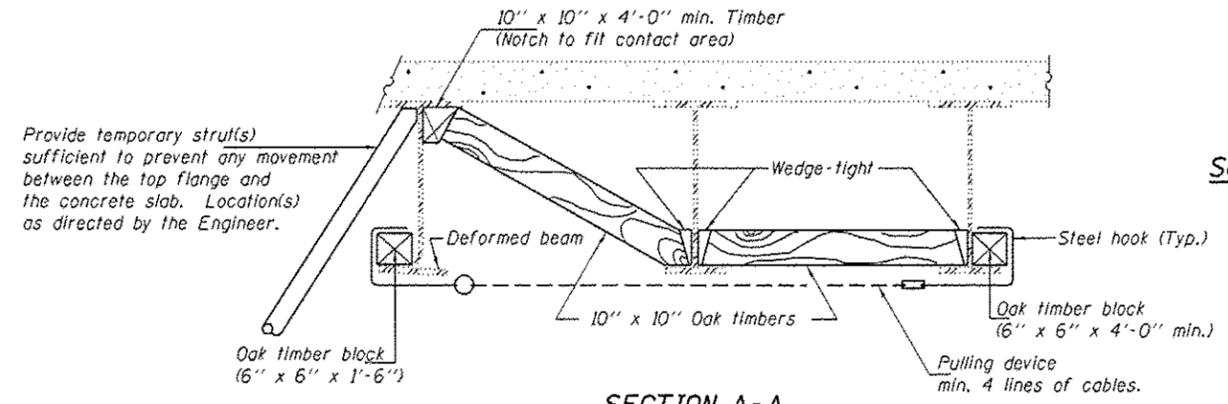
PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS
 Straightening force shall be maintained on all load transfer blocking during beam straightening.



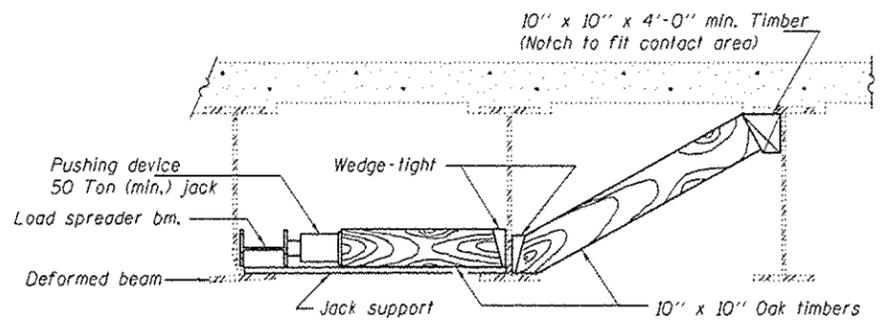
SUGGESTED VERTICAL STRAIGHTENING DETAIL
 (To correct flange rotation.)



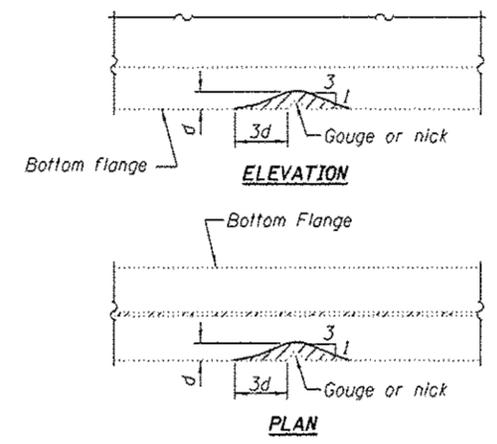
SUGGESTED VERTICAL STRAIGHTENING DETAIL
 (To correct localized vertical flange deformations.)



SECTION A-A



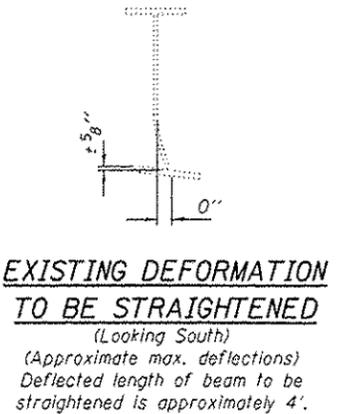
SECTION B-B



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\"/>

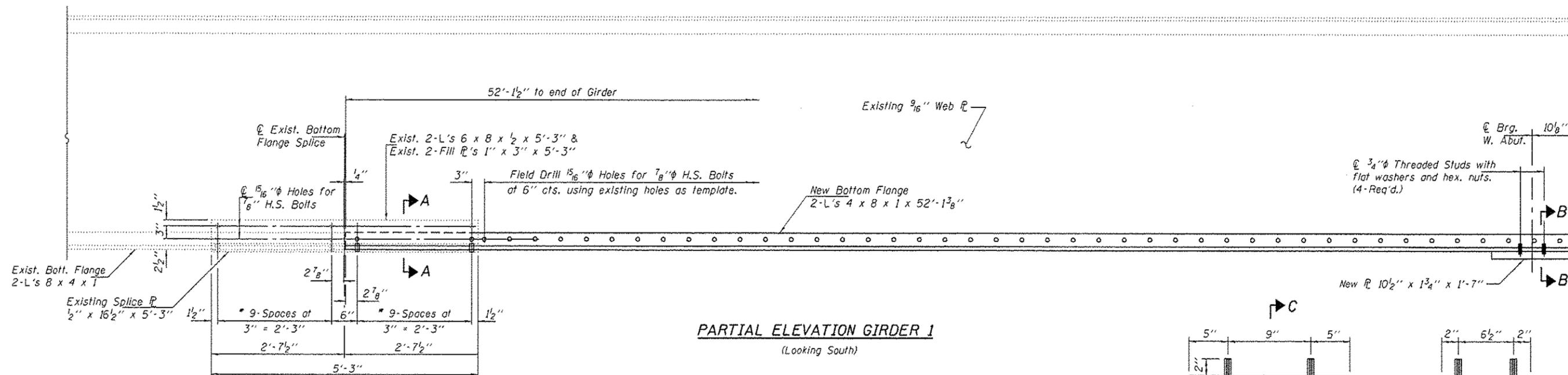
Note:
 Braces and jack assembly shall be placed on same side of web.
 Bent bottom flange shall be straightened before starting any horizontal straightening operations.



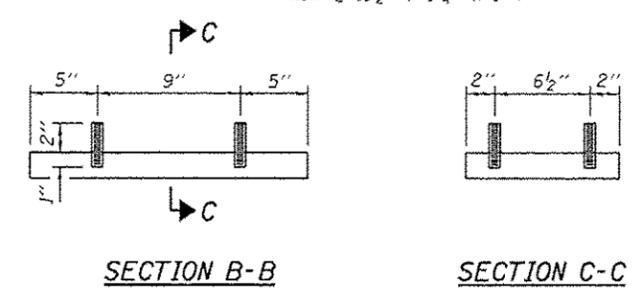
EXISTING DEFORMATION TO BE STRAIGHTENED
 (Looking South)
 (Approximate max. deflections)
 Deflected length of beam to be straightened is approximately 4'.

REP-11-14-2005

DESIGNED - DAB	EXAMINED - Timothy A. Daulton ACTING ENGINEER OF STRUCTURAL SERVICES	DATE - NOVEMBER 15, 2013	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		STRAIGHTENING DETAILS FOR GIRDERS 2 & 3 SN 016-2050		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR	PASSED - [Signature]						VAR	2013-044BR	COOK	35	19
DRAWN - Kyle M. Steffan										CONTRACT NO. 60W94	
CHECKED - DAB SMR					SHEET NO. 2 OF 4 SHEETS		ILLINOIS FED. AID PROJECT				



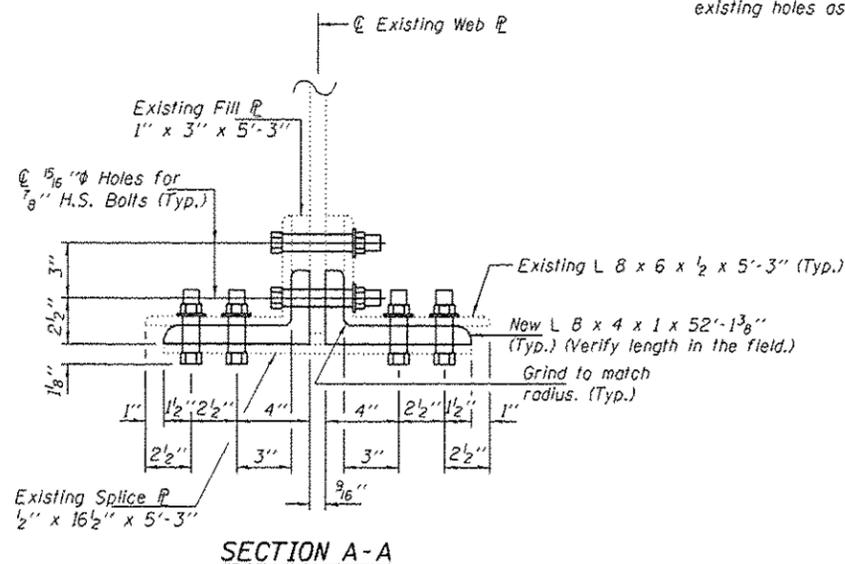
PARTIAL ELEVATION GIRDER 1
(Looking South)



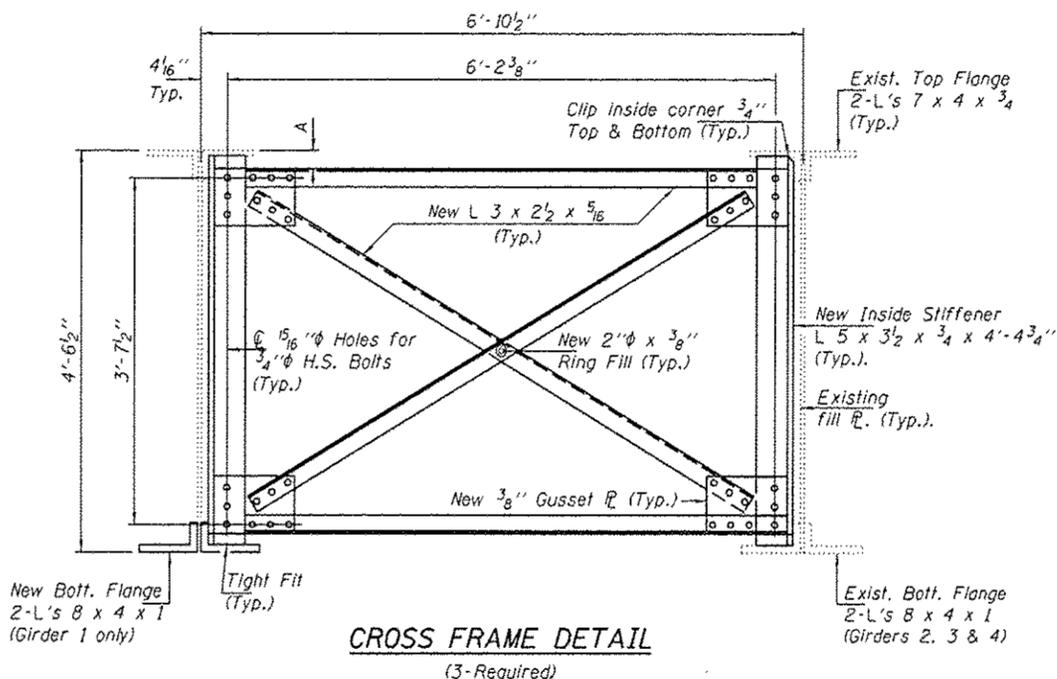
DIMENSION A

Girder	Dim. A
#1	2 1/2"
#2	2 1/2"
#3	1 1/2"

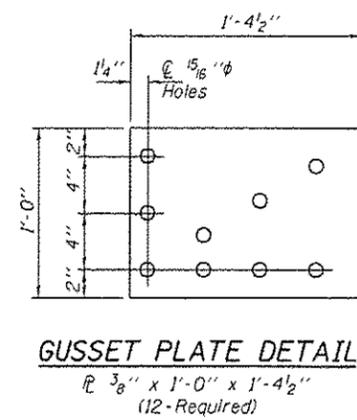
* Field Drill holes using existing holes as template.



SECTION A-A



CROSS FRAME DETAIL
(3-Required)



GUSSET PLATE DETAIL
P 3/8" x 1'-0" x 1'-4 1/2"
(12-Required)

Note:
Length of New L's, size and location of holes shall be determined or verified from existing L's.
Existing Stiffener Fill P's to be salvaged.

DESIGNED - DAB	EXAMINED - <i>Timothy A. Ball</i>
CHECKED - SMR	PASSED - <i>Timothy A. Ball</i>
DRAWN - Kyle M. Steffen	
CHECKED - DAB SMR	

DATE - NOVEMBER 15, 2013	ACTING ENGINEER OF STRUCTURAL SERVICES
	ACTING ENGINEER OF BRIDGES AND STRUCTURES

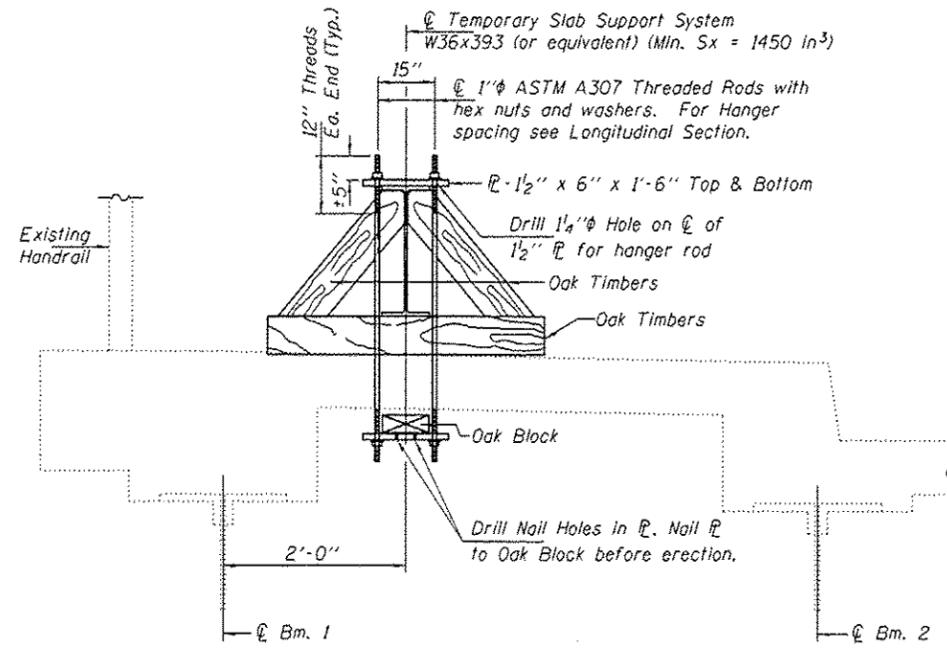
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 016-2050

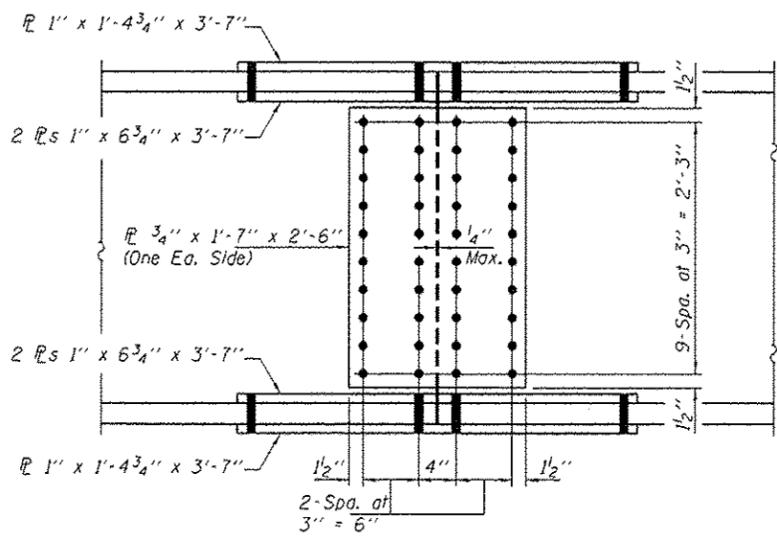
SHEET NO. 3 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-044BR	COOK	35	20
CONTRACT NO. 60W94				

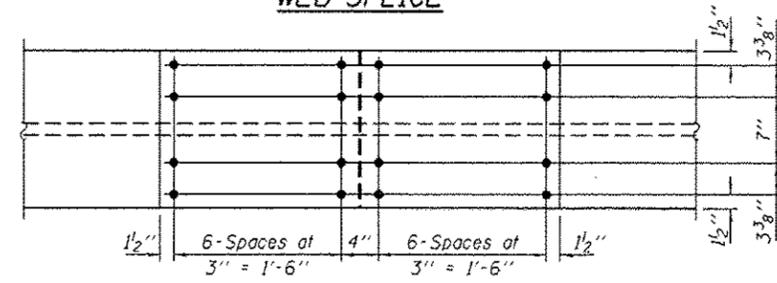
ILLINOIS FED. AID PROJECT



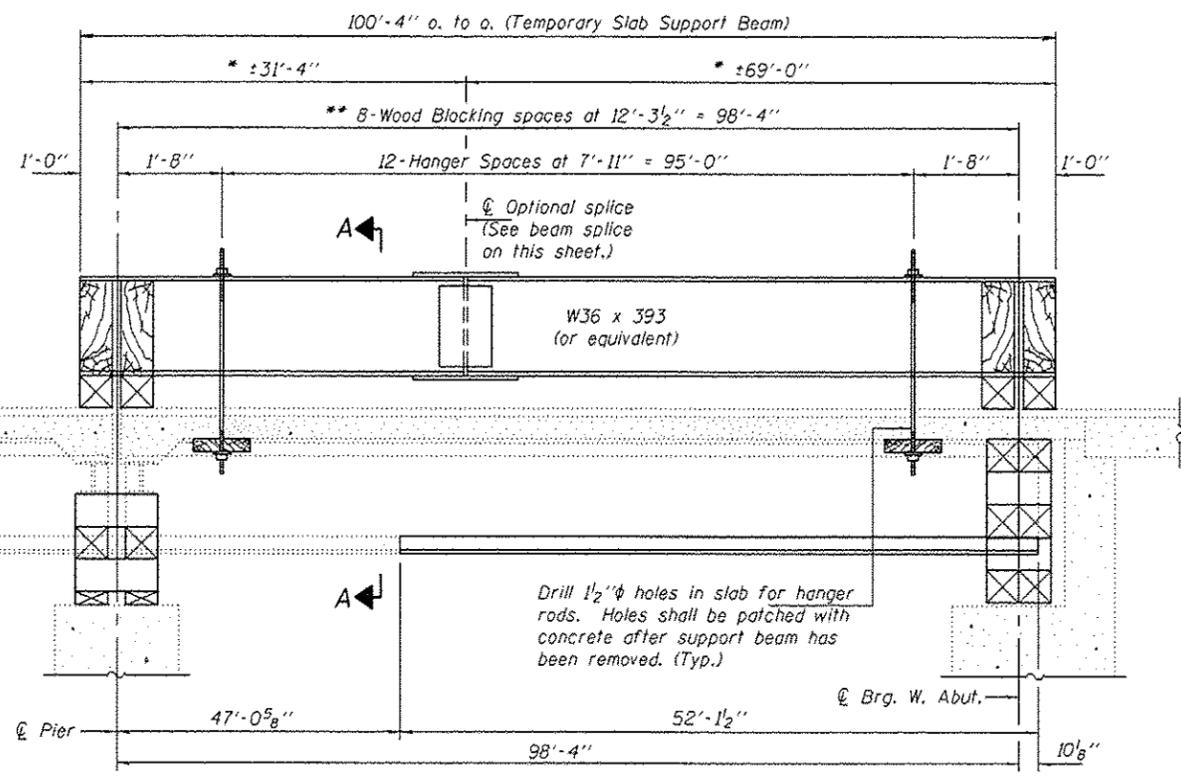
SECTION A-A



WEB SPLICE

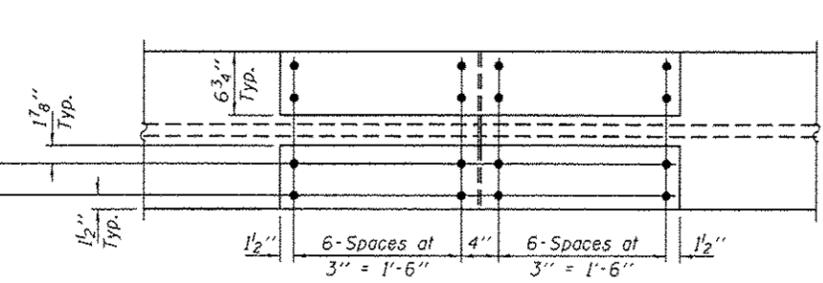


OUTSIDE FLANGE SPLICE



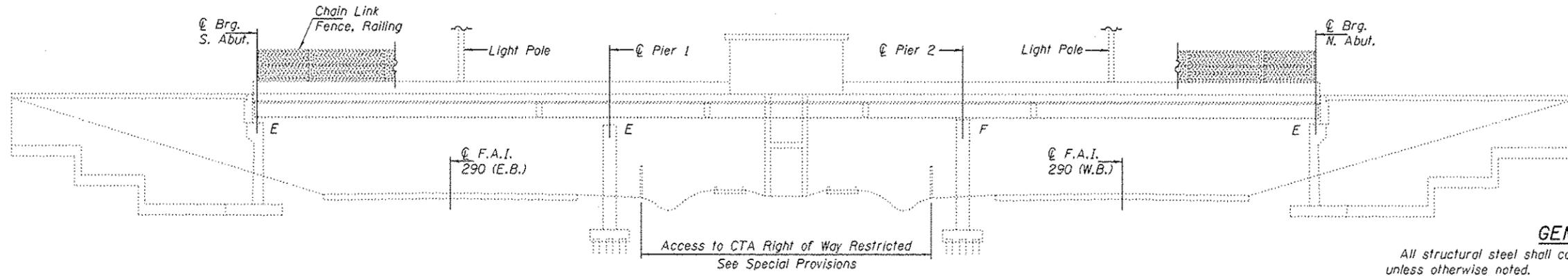
**LONGITUDINAL SECTION
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM**

* These dimensions may vary for available beams in stock.
 ** Wood Blocking between supports to be placed after support beam deflects under its own weight.

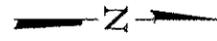


INSIDE FLANGE SPLICE

DESIGNED - DAB	EXAMINED - <i>Timothy A. Blum</i>	DATE - NOVEMBER 15, 2013	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY SLAB SUPPORT SYSTEM DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR	PASSED - <i>Carl Perry</i>			SN 016-2050			VAR	2013-044BR	COOK	35	21
DRAWN - Kyle M. Steffon				SHEET NO. 4 OF 4 SHEETS			CONTRACT NO. 60W94				
CHECKED - DAB SMR				ILLINOIS FED. AID PROJECT							



ELEVATION



GENERAL NOTES

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

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 for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4.

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

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

Fasteners shall be high strength bolts. Flange splice holes shall be 1 5/8" φ for 7/8" φ bolts.

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".

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "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.

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."

Diaphragm Spacing	25'-0"	13'-7 1/2"	13'-7 1/2"	14'-6"	17'-3 1/4"	16'-1 1/4"	16'-1 1/4"	17'-3 1/4"	14'-6"	13'-7 1/2"	13'-7 1/2"	25'-0"
Beam No's	18'-6"											
7'-0"	(C)											
7'-0"	(A)											
7'-0"	(B)											
4-Spaces at 5'-3" = 21'-0"												
3'-0"												
7'-0"												
4-Spaces at 5'-3" = 21'-0"												
3'-0"												
7'-0"												
Beam No's												
12												
11												
10												
9												
8												
7												
6												
5												
4												
3												
2												
1												
Existing Splice #1												
Existing Splice #2												
Existing Splice #3												
Existing Splice #4												
Span 1	53'-4 3/4"											
Span 2		31'-9 1/4"			29'-11"			31'-9 1/4"				
Span 3										53'-4 3/4"		
Span	66'-9" (Span 1)				66'-9" (Span 2)			66'-9" (Span 3)				
Bearing	200'-3" @ Bearing to @ Bearing											

FRAMING PLAN

- Impact Line →
- (A) - Replace Beam Segment
 - (B) - Straighten & Strengthen Existing Beam
 - (C) - Remove and replace existing Sign Structure

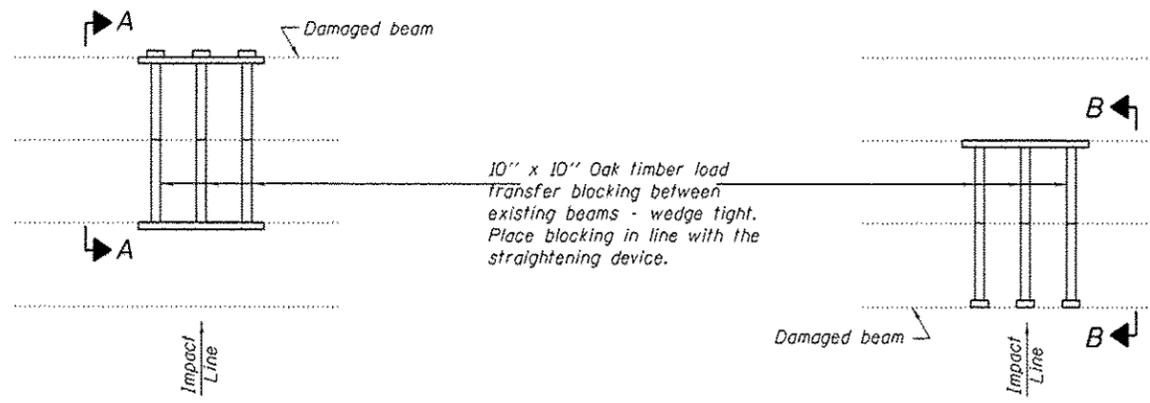


Expires: November 30, 2014

DESIGNED: <i>[Signature]</i>	EXAMINED: <i>[Signature]</i>	DATE: NOVEMBER 15, 2013	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION KEELER AVENUE OVER I-290 SN 016-2068	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED: <i>[Signature]</i>	PASSED: <i>[Signature]</i>				VAR	2013-044BR	COOK	35	22	
DRAWN: Kyle M. Steffan					CONTRACT NO. 60W94					
CHECKED: <i>[Signature]</i>					SHEET NO. 1 OF 7 SHEETS					

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	1.1
Concrete Superstructure	Cu. Yd.	1.1
Structural Steel Removal	Pound	8160
Furnishing & Erecting Structural Steel	Pound	8570
Beam Straightening	L.S.	0.25
Temporary Slab Support System	L.S.	0.33
Remove Overhead Sign Structure - Bridge Mounted	Each	1
Overhead Sign Structure - Bridge Mounted	Foot	24



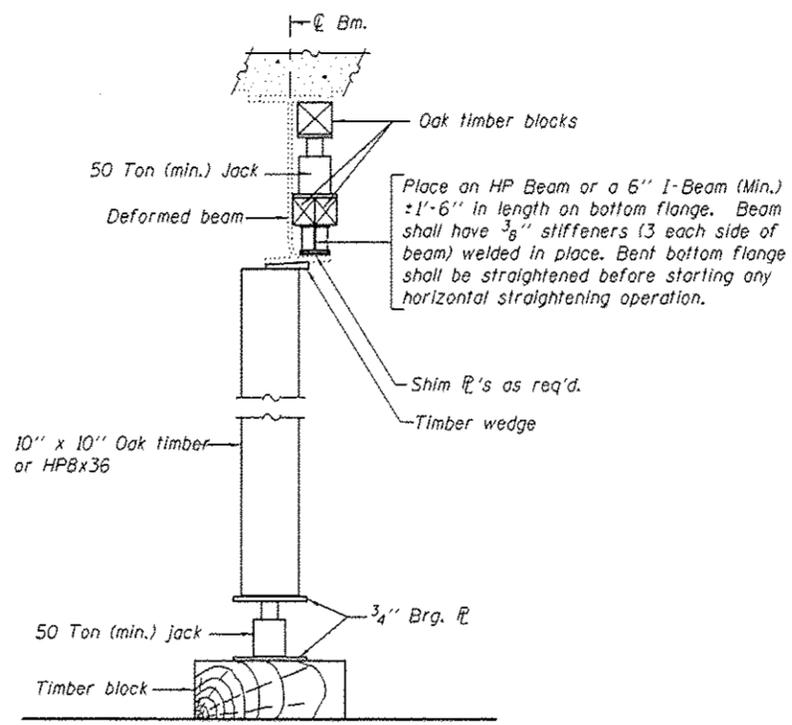
PULLING DEVICE

10" x 10" Oak timber load transfer blocking between existing beams - wedge tight. Place blocking in line with the straightening device.

PUSHING DEVICE

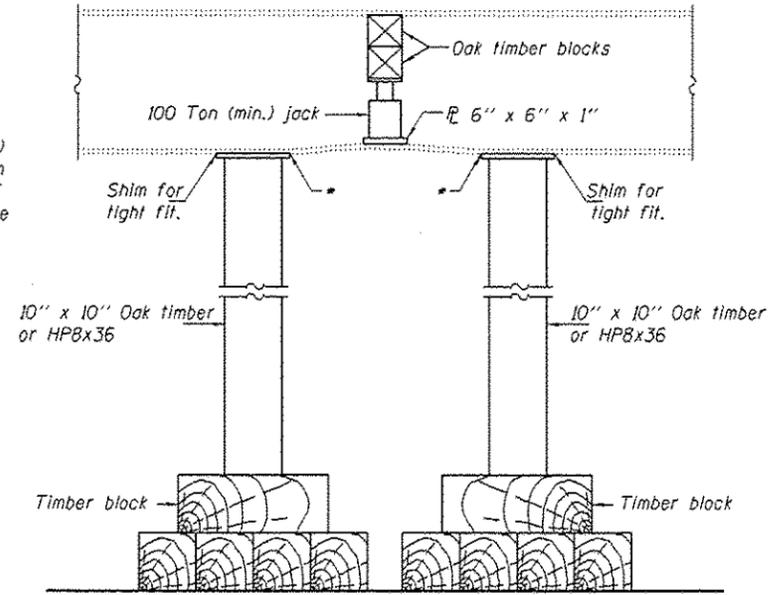
PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS

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



SUGGESTED VERTICAL STRAIGHTENING DETAIL

(To correct flange rotation.)

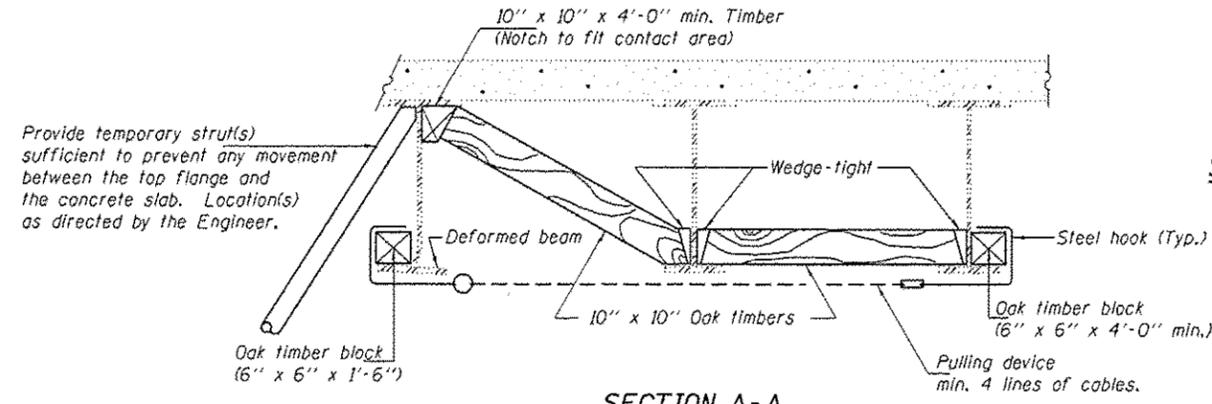


SUGGESTED VERTICAL STRAIGHTENING DETAIL

(To correct localized vertical flange deformations.)

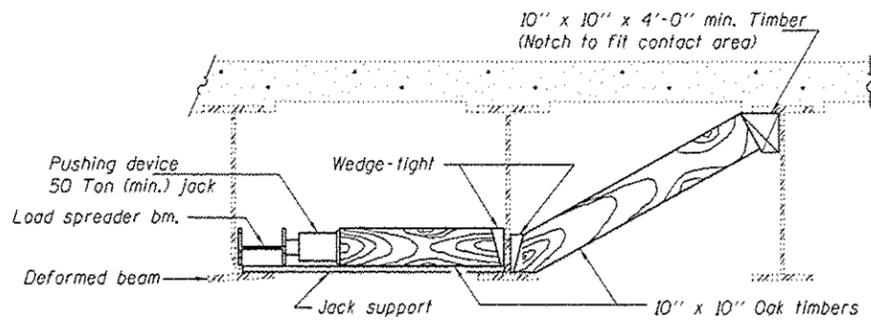
* Edge of plate shall line up with edge of deformation.

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.

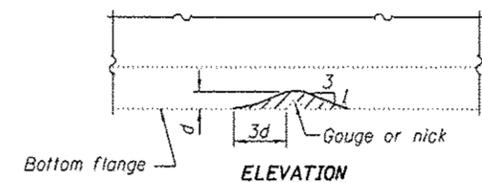


SECTION A-A

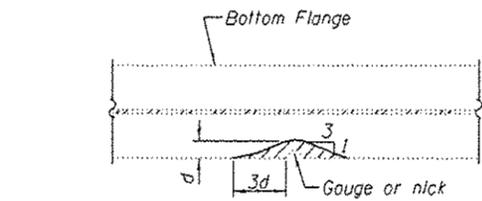
Provide temporary strutt(s) sufficient to prevent any movement between the top flange and the concrete slab. Location(s) as directed by the Engineer.



SECTION B-B



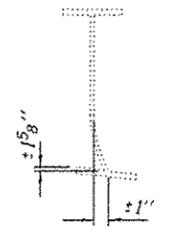
ELEVATION



PLAN

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" 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.



EXISTING DEFORMATION TO BE STRAIGHTENED

(Looking West)
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately 4'.

REP-11-14-2005

DESIGNED - DAB	EXAMINED - [Signature]
CHECKED - TLC	PASSED - [Signature]
DRAWN - Kyle M. Steffen	
CHECKED - DAB TLC	

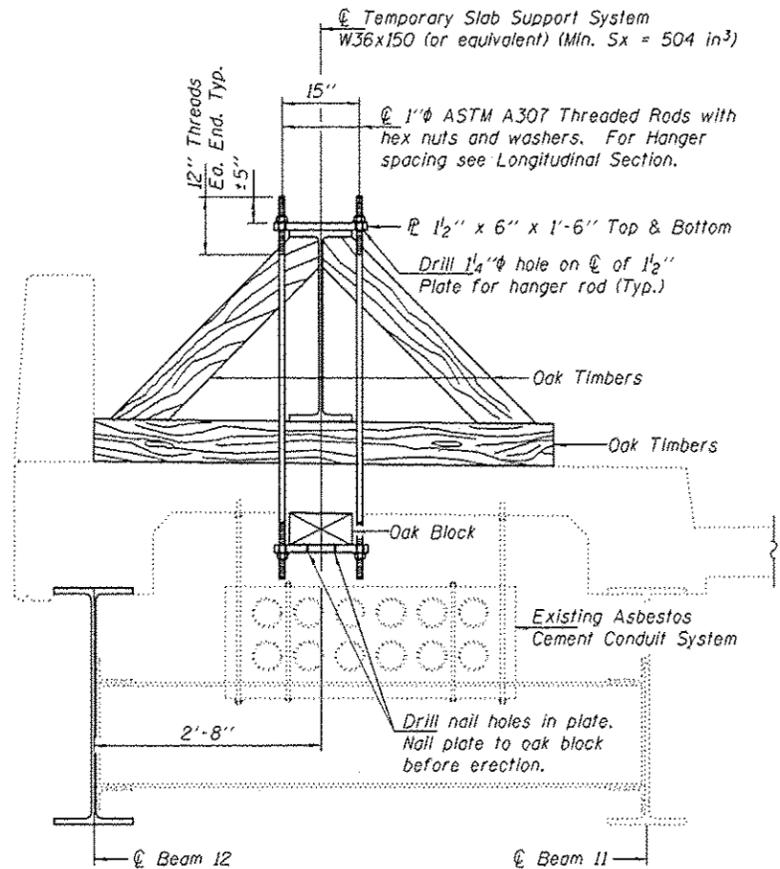
DATE - NOVEMBER 15, 2013
ACTING ENGINEER OF STRUCTURAL SERVICES
ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

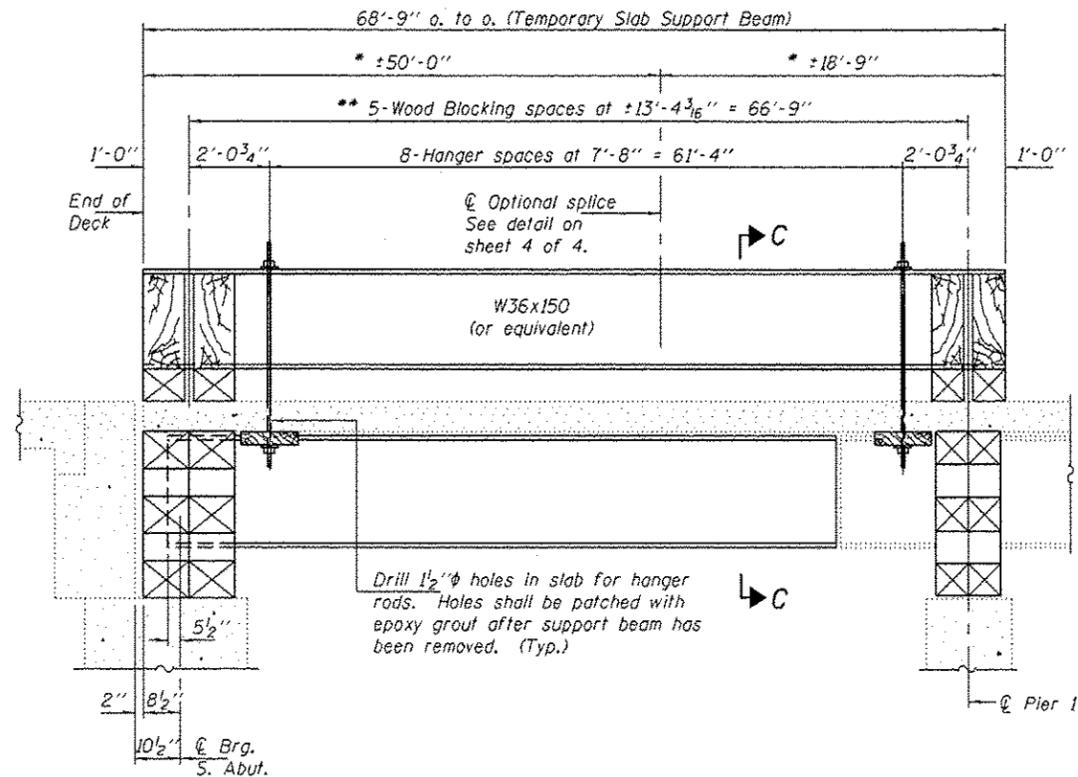
BEAM STRAIGHTENING DETAILS
SN 016-2068

SHEET NO. 2 OF 7 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-044BR	COOK	35	23
CONTRACT NO. 60W94			ILLINOIS FED. AID PROJECT	



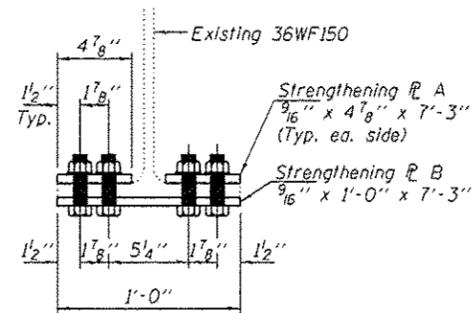
SECTION C-C
(Looking North)



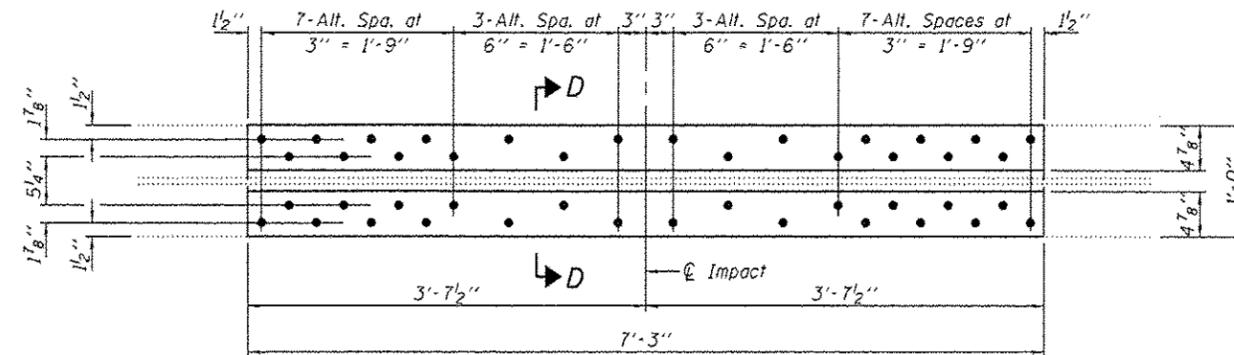
LONGITUDINAL SECTION
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM

* These dimensions may vary for available beams in stock.

** Wood Blocking between supports to be placed after support beam deflects under its own weight.



SECTION D-D



SPAN 1, BEAM 11 STRENGTHENING DETAILS

DESIGNED - DAB
CHECKED - TLC
DRAWN - Kyle M. Stoffan
CHECKED - DAB TLC

EXAMINED
PASSED
ACTING ENGINEER OF STRUCTURAL SERVICES
ACTING ENGINEER OF BRIDGES AND STRUCTURES

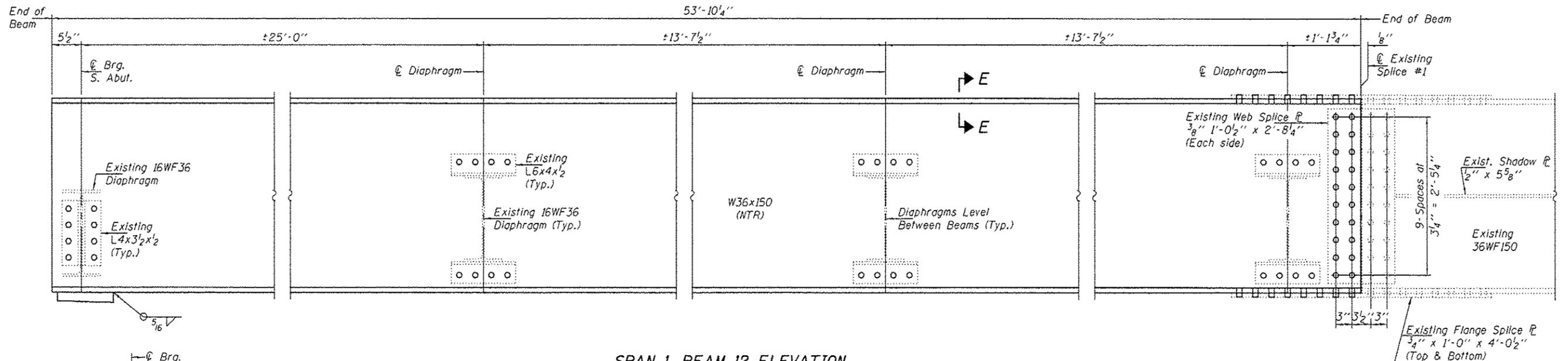
DATE - NOVEMBER 15, 2013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SLAB SUPPORT SYSTEM & STRENGTHENING DETAILS
SN 016-2068

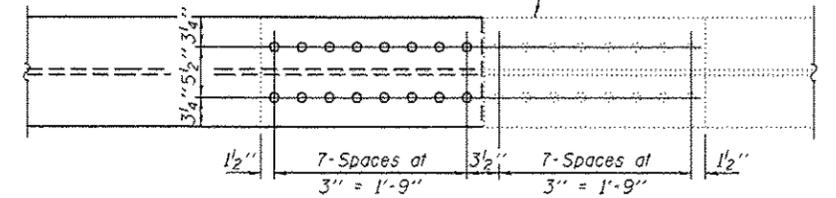
SHEET NO. 3 OF 7 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-044BR	COOK	35	24
CONTRACT NO. 60W94				
ILLINOIS FED. AID PROJECT				

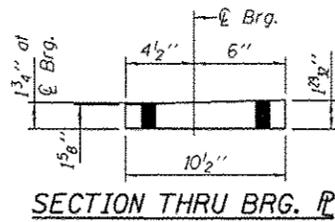


SPAN 1, BEAM 12 ELEVATION

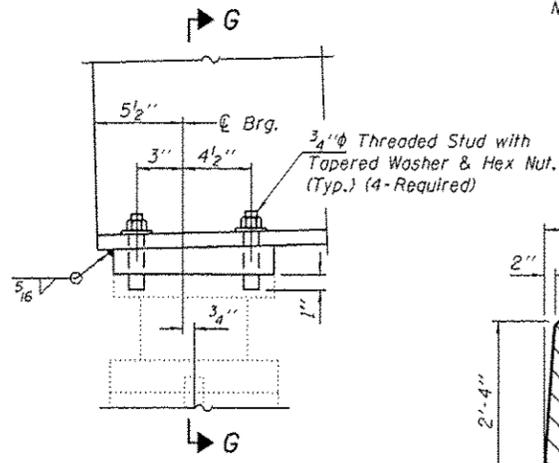
Notes:
 Natural camber of new beam shall be placed upward for fabrication.
 All holes to be field drilled using holes in existing steel as template.



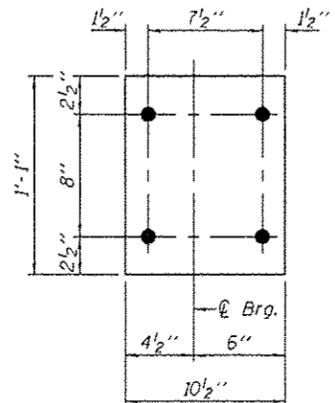
FLANGE SPLICE DETAIL



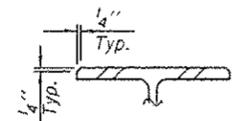
SECTION THRU BRG. P



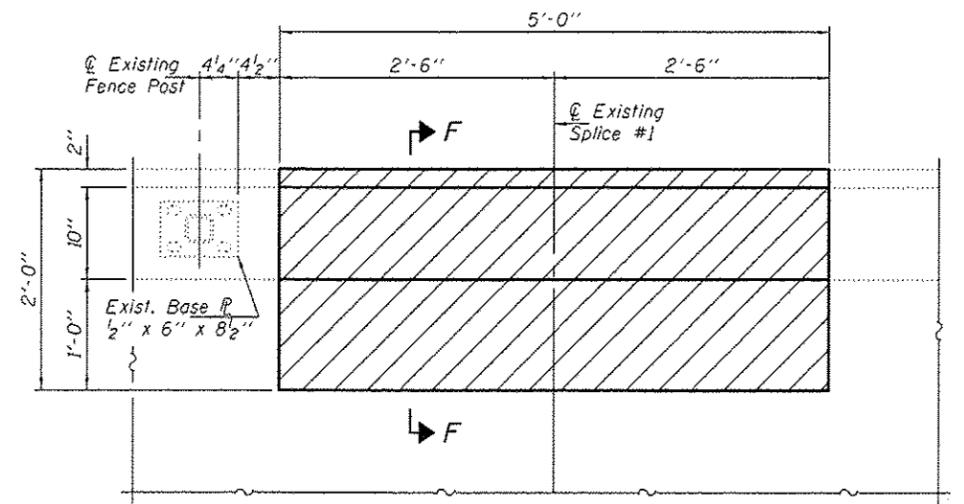
ELEVATION AT BEARING



BEARING P PLAN

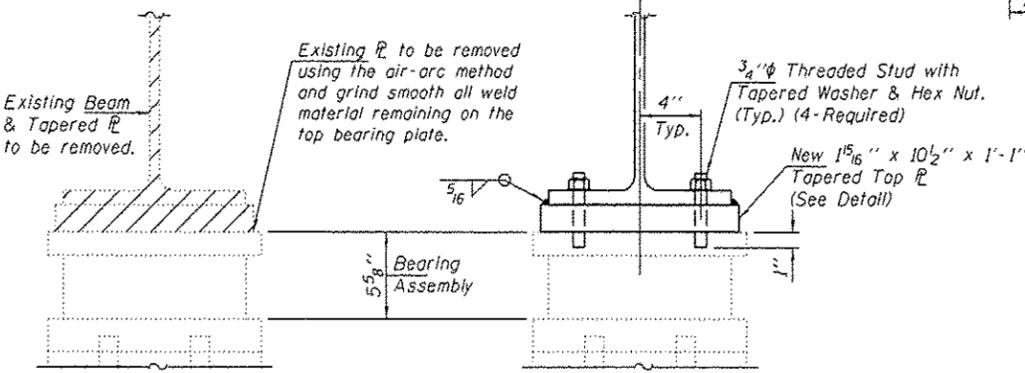


SECTION E-E



CONCRETE SURFACE REMOVAL AND REPLACEMENT

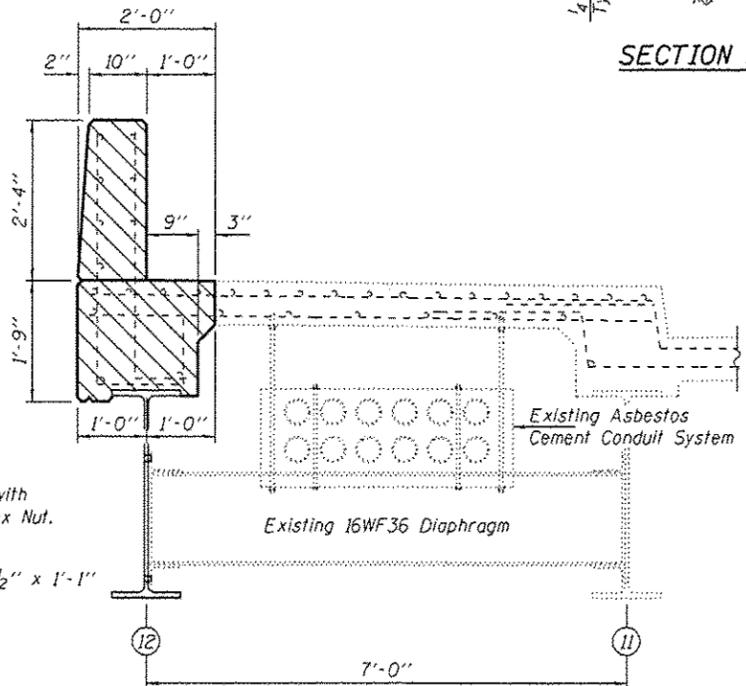
Hatched areas indicate concrete sections to be removed and replaced. Perimeters of concrete removal areas shall be saw cut 3/4" prior to the removal of concrete. Reinforcement shall be cut only if required for fitting bolts. Cut reinforcement shall be spliced as directed by the Engineer. Cost shall be included with Concrete Removal.



BEARING P REMOVAL

Hatched area indicates Structural Steel Removal.

SECTION G-G



SECTION F-F

DESIGNED - DAB	EXAMINED - <i>Timothy A. Anhalt</i>	DATE - NOVEMBER 15, 2013	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BEAM 12 REPLACEMENT DETAILS SN 016-2068		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - TLC	PASSED - <i>Carl Perry</i>						VAR	2013-044BR	COOK	35	25
DRAWN - Kyle M. Steffan	ACTING ENGINEER OF BRIDGES AND STRUCTURES		SHEET NO. 4 OF 7 SHEETS		CONTRACT NO. 60W94		ILLINOIS FED. AID PROJECT				

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") ②

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D.1 Structural Welding Code (Steel) and the Standard Specifications.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

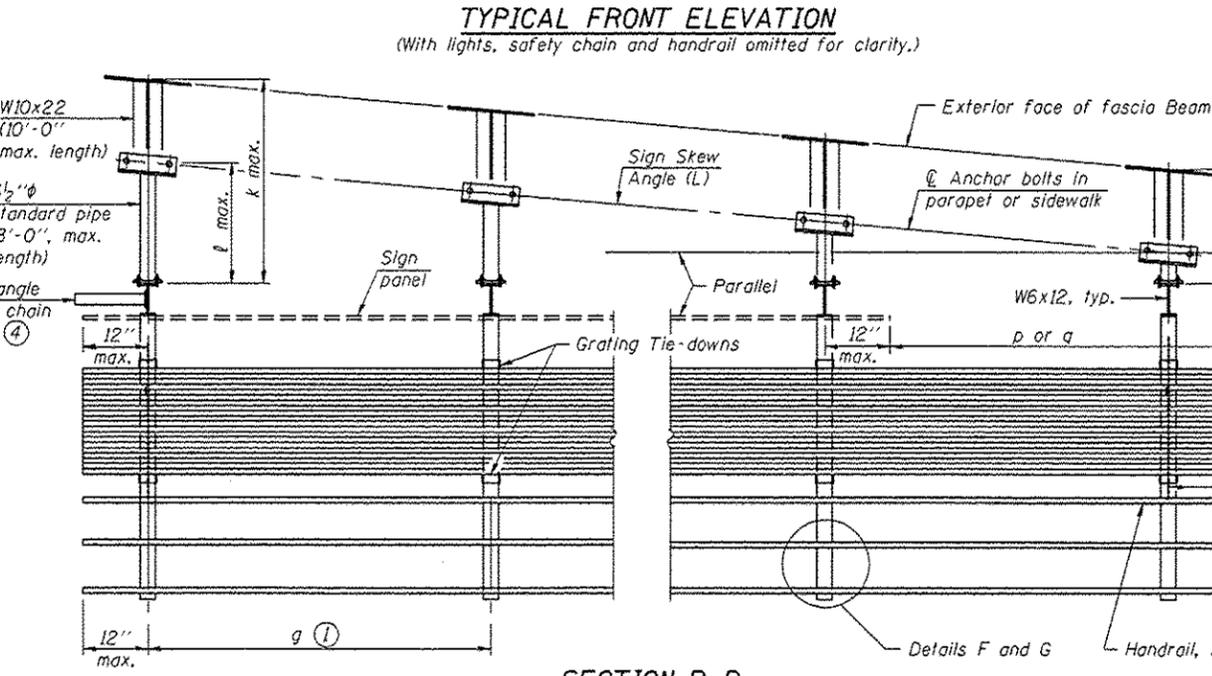
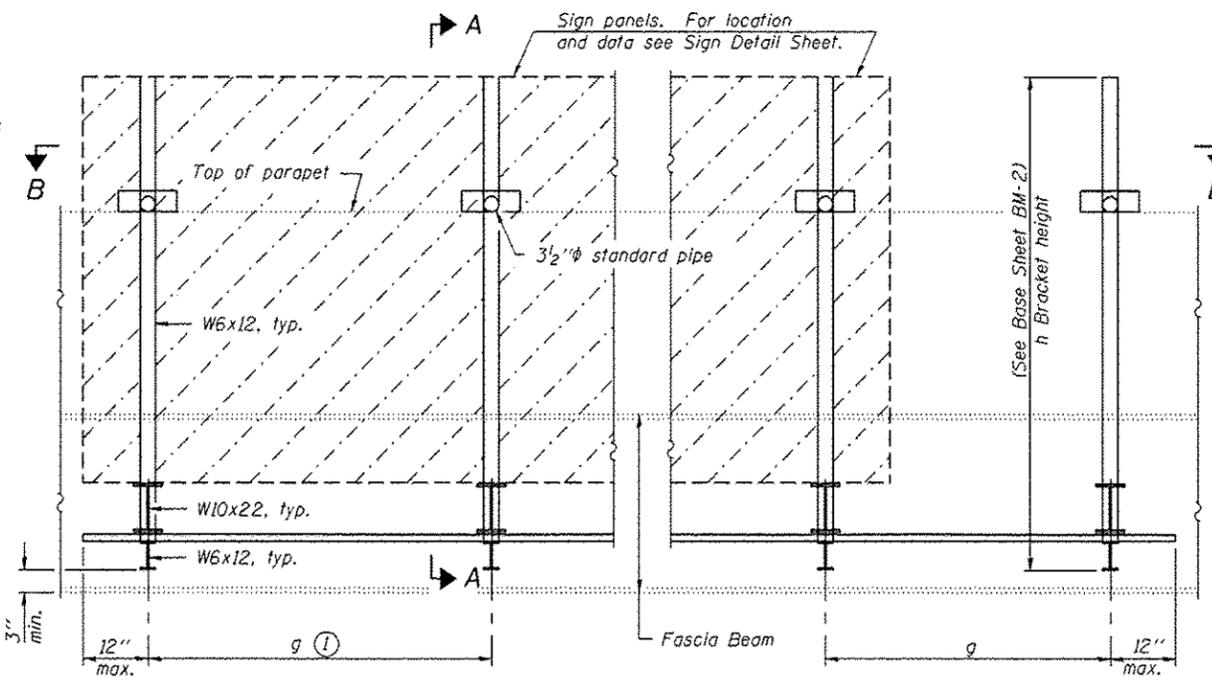
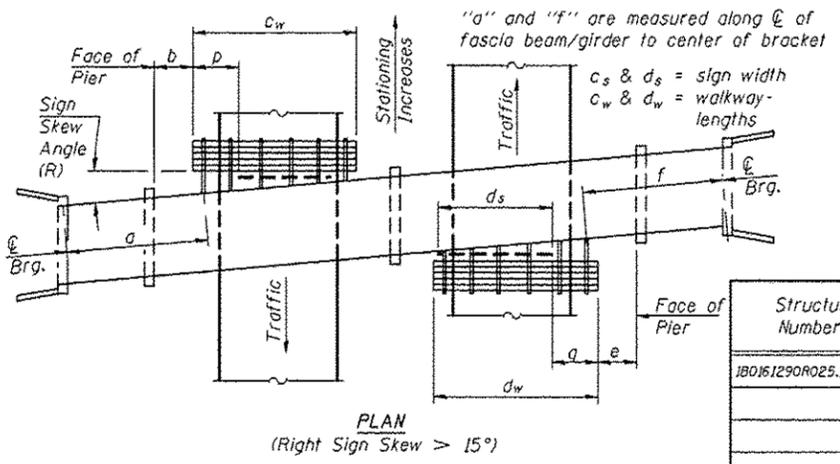
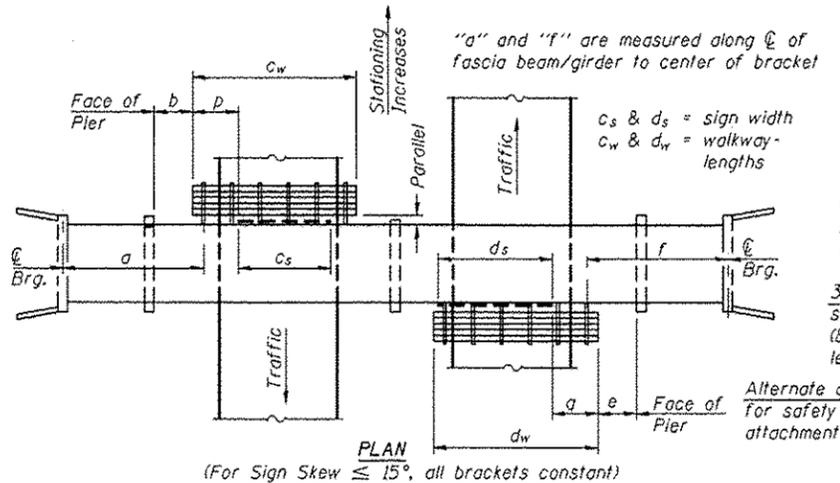
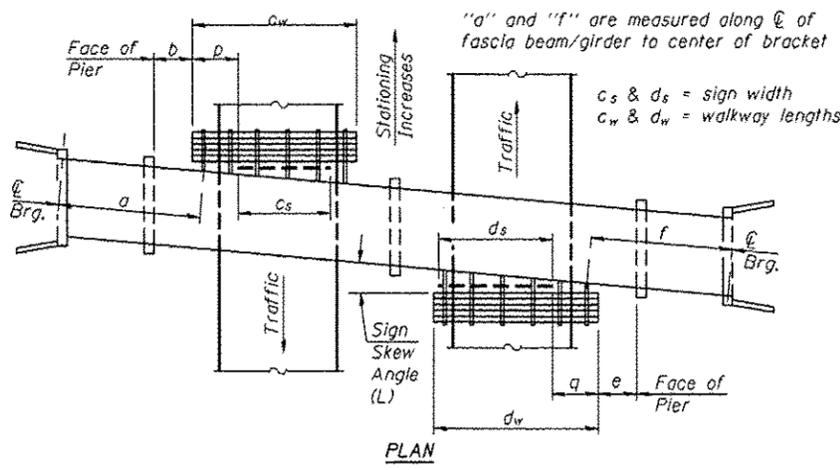
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, 3/4" x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

- ① Bracket spacing $g \leq 6'-0"$, max. Spacing shall be uniform if possible but may vary $\pm 6"$ to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.
- ② Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.
- ③ Unit price includes brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on sign panel length (c_s & d_s).
- ④ Walkway and lighting not required. Use alternate brackets without walkway supports.

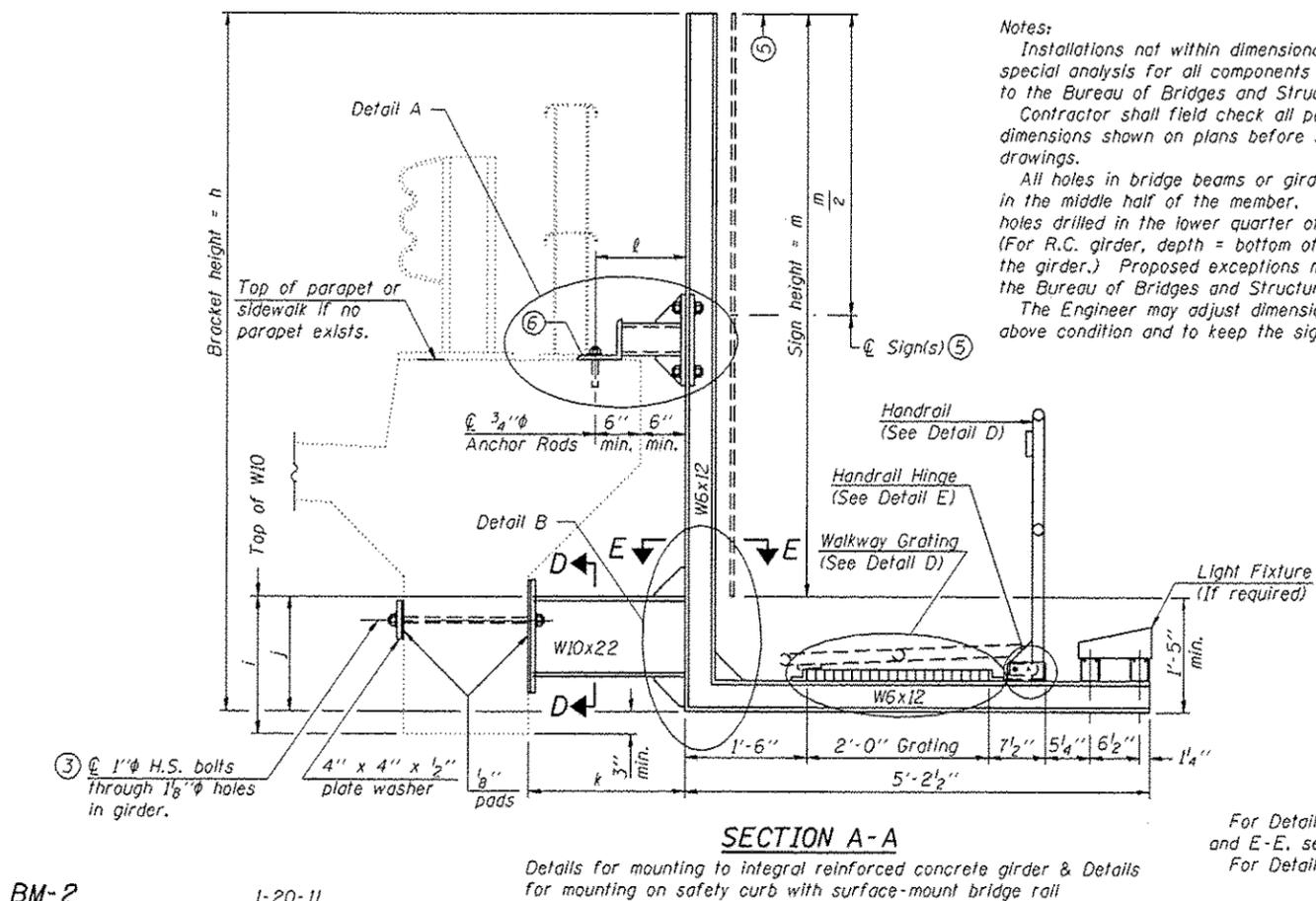
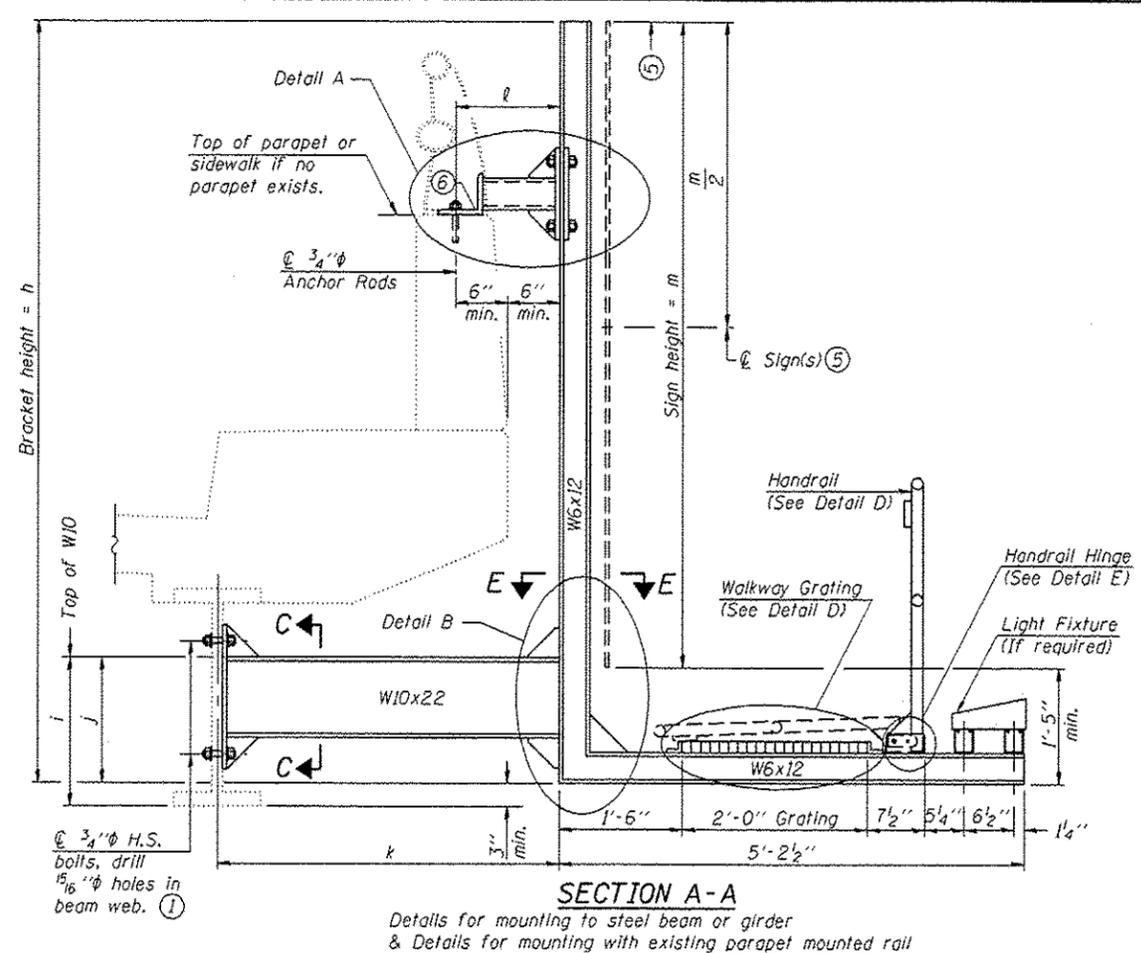
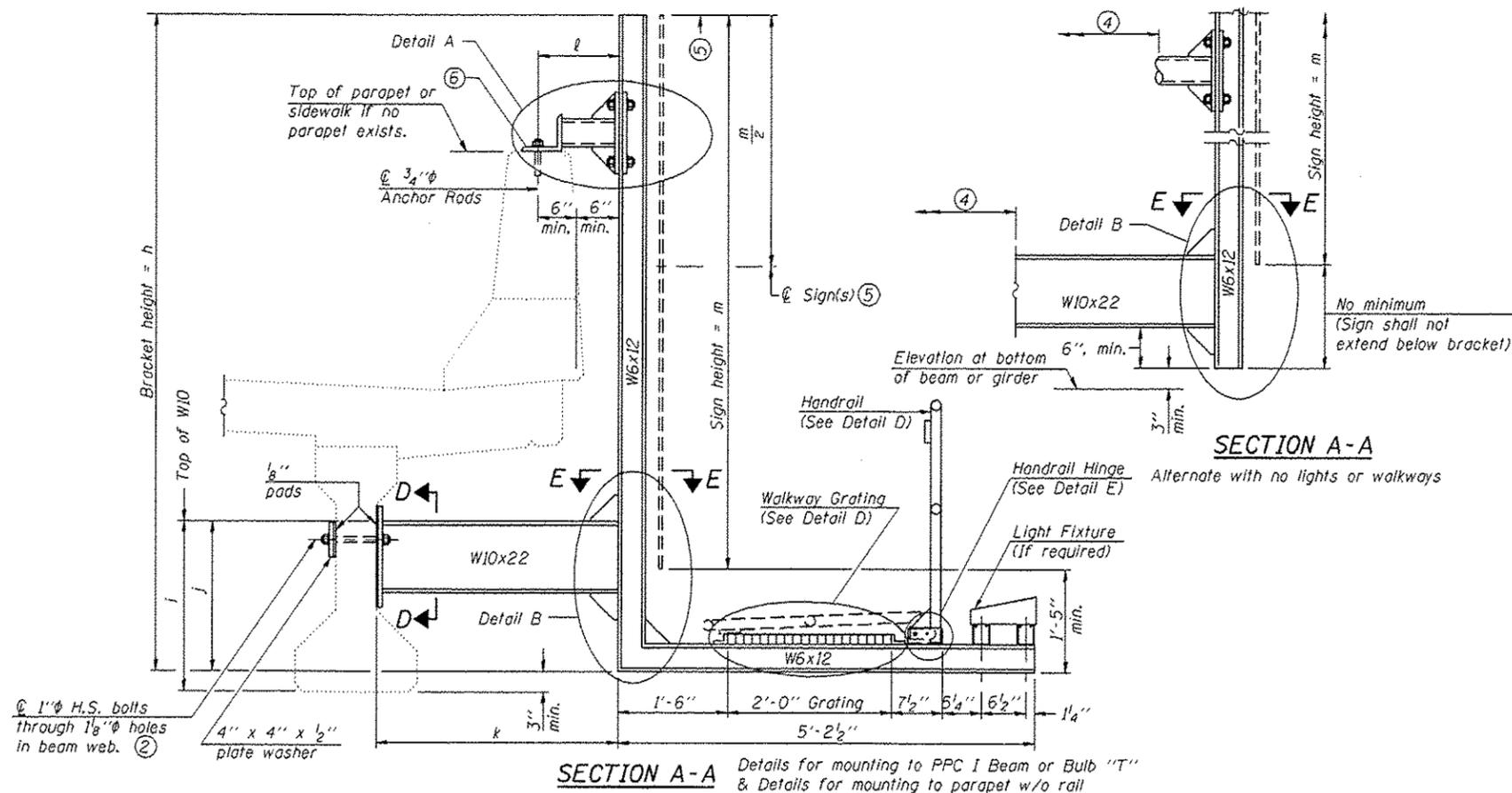


Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	c _s	c _w	d _s	d _w	e	f	g	No. of Brackets (Total)	p	q	Total Grating/Hndrl. Lengths (c _w + d _w)
180161290R025.5-000	0°	132+60.98	016-2068	FAI 290	-	-	-	-	23'-6"	-	-	9'-7"	5'-5"	4	-	-	-

Dimensions a, b, e, f & g may vary as approved by the Engineer, see ①.
When $c_w < c_s$ and/or $d_w < d_s$, use alternate brackets without walkway supports where applicable, see ③.

BILL OF MATERIAL

③ OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	Foot	24
--	------	----



Notes:
 Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval. Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.
 All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.
 The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

- ① Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.
- ② For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during field drilling of existing beams.
- ③ For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing/damage during field drilling of existing concrete. Spalls over 1/4" deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.
- ④ For attachment details of 3/2" pipe and W10x22, see other sections as applicable.
- ⑤ Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)
- ⑥ For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.

Structure Number	Station	h	i	j	k max. (10'-0" max.)	l max. (8'-0" max.)	m (15'-0" max.)
IB0161290R025.5-000	132+60.98	7'-5"	-	-	1'-6"	1'-0"	8'-0"

For Details A & B, Sections C-C, D-D and E-E, see Base Sheet BM-3.
 For Details D & E, see Base Sheet BM-4.

BM-2 1-20-11

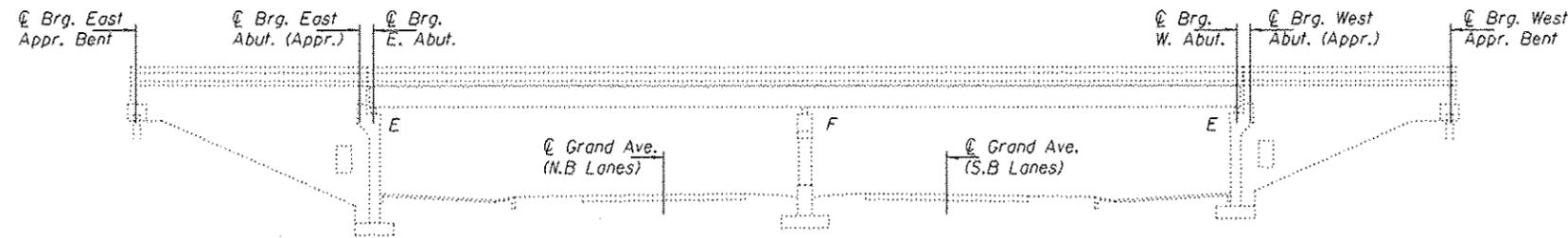
DESIGNED - DAB
 CHECKED - TLC
 DRAWN - Kyle M. Steffan
 CHECKED - DAB TLC

EXAMINED
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

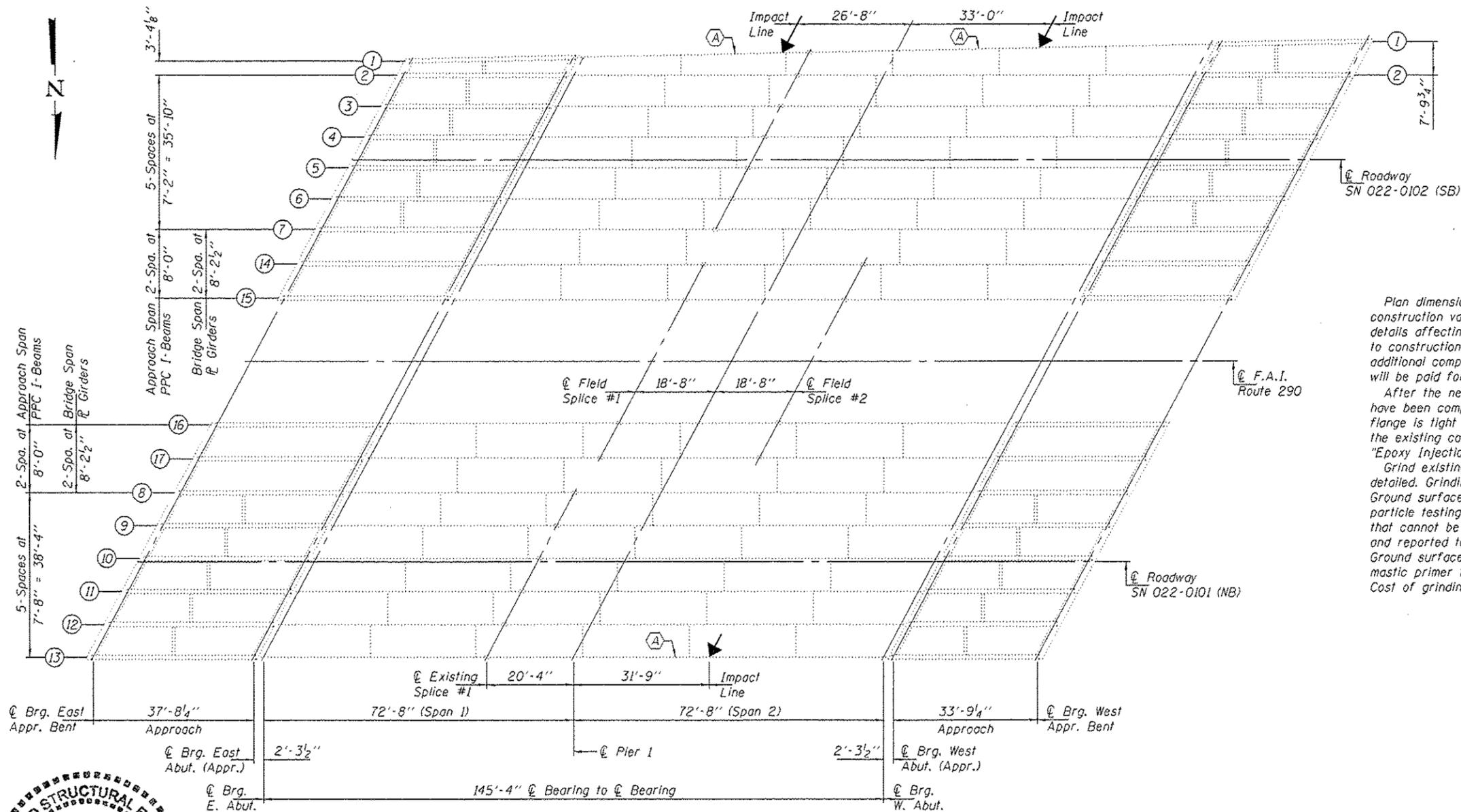
DATE - NOVEMBER 15, 2013
 STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
 WALKWAY AND CONNECTION DETAILS
 SN 016-2068
 SHEET NO. 6 OF 7 SHEETS

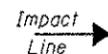
F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 VAR 2013-044BR COOK 35 27
 CONTRACT NO. 60W94
 ILLINOIS FED. AID PROJECT



ELEVATION



FRAMING PLAN



(A) - Beam Straightening

GENERAL NOTES

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.

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".

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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Beam Straightening	L.S.	0.25

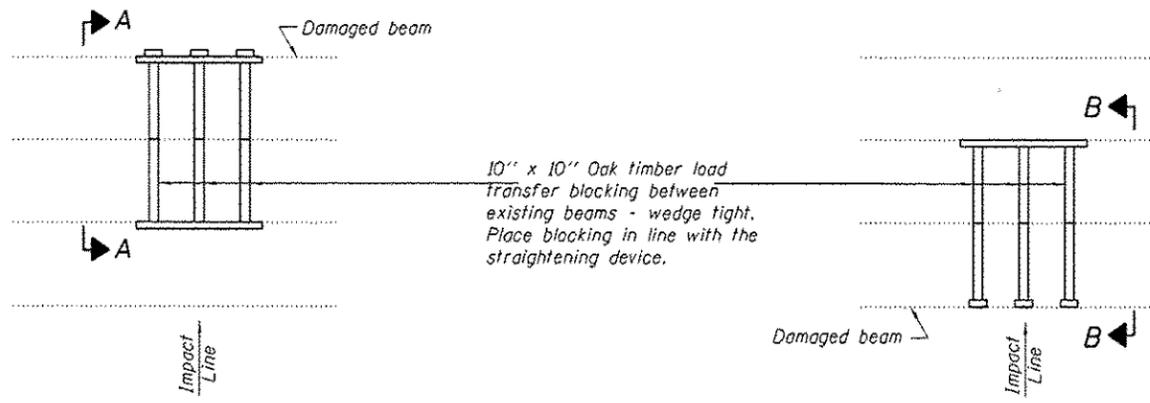


DESIGNED - <i>David A. Puzey</i>	EXAMINED - <i>Thom A. [Signature]</i>	DATE - NOVEMBER 15, 2013
CHECKED - <i>Kyle M. Steffeh</i>	PASSED - <i>David Carl Puzey</i>	
DRAWN - <i>Kyle M. Steffeh</i>		
CHECKED - <i>VHV</i>		

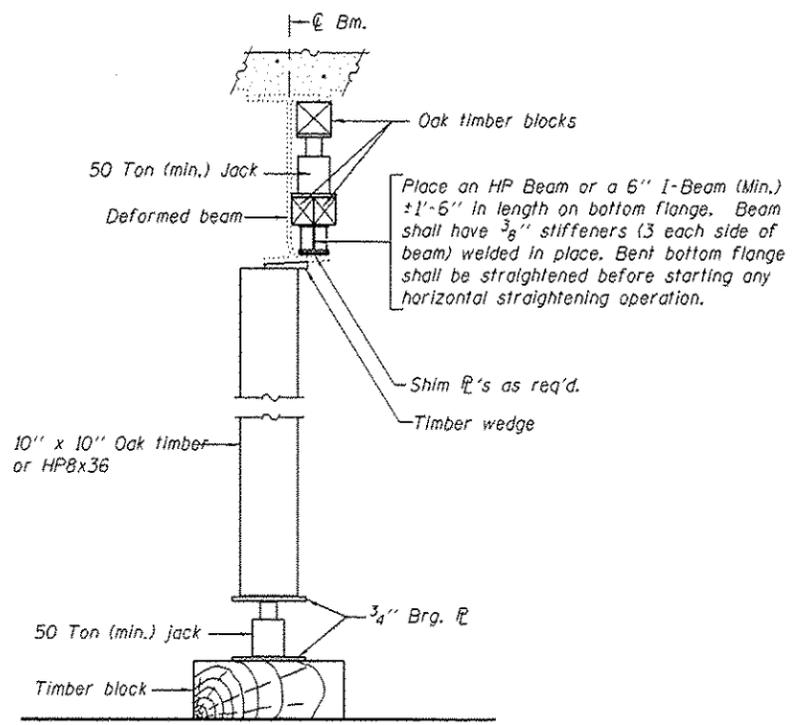
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
F.A.I. ROUTE 290 OVER GRAND AVENUE
SN 022-0101 (NB) & -0102 (SB)
SHEET NO. 1 OF 2 SHEETS

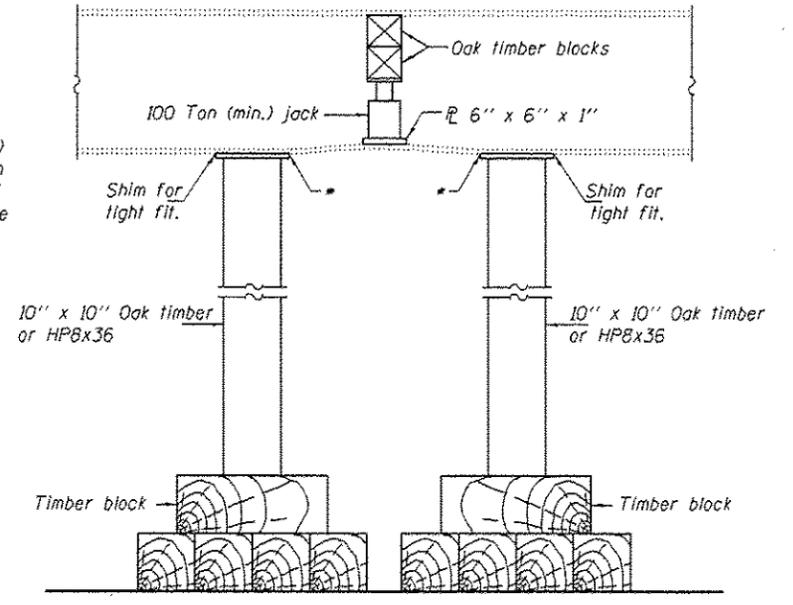
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-044BR	DUPAGE	35	29
CONTRACT NO. 60W94			[ILLINOIS] FED. AID PROJECT	



PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS
 Straightening force shall be maintained on all load transfer blocking during beam straightening.



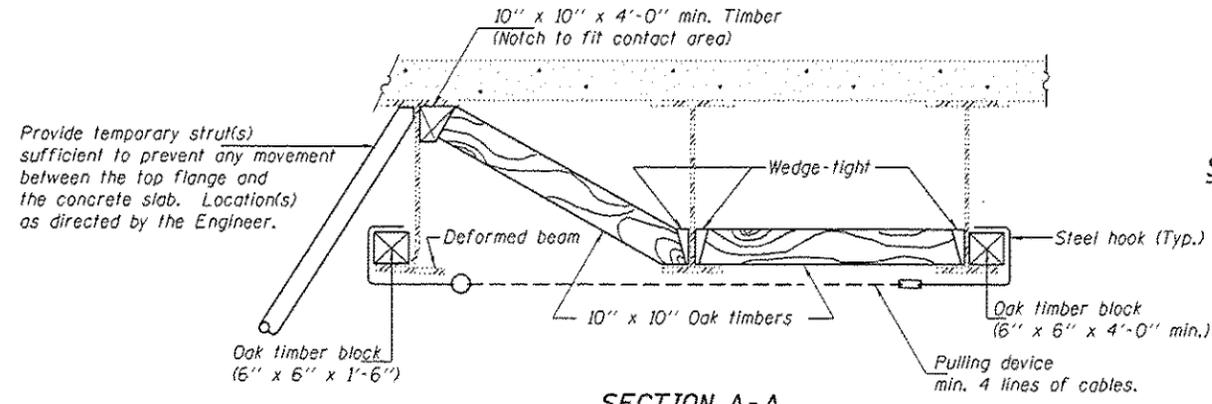
SUGGESTED VERTICAL STRAIGHTENING DETAIL
 (To correct flange rotation.)



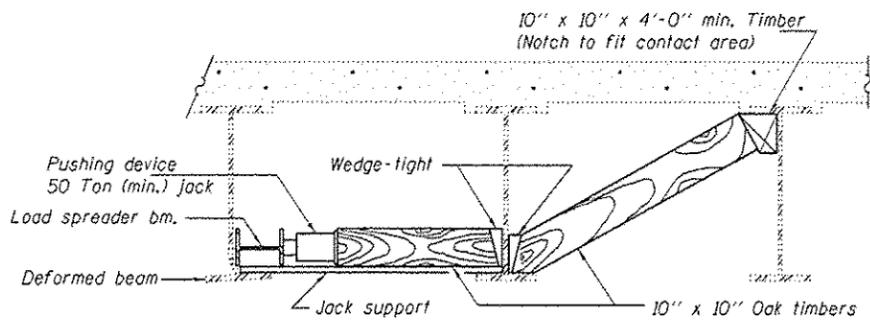
SUGGESTED VERTICAL STRAIGHTENING DETAIL
 (To correct localized vertical flange deformations.)

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

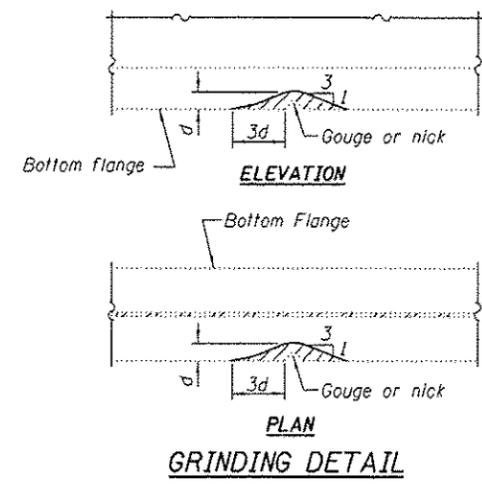
Note:
 Braces and jack assembly shall be placed on same side of web.
 Bent bottom flange shall be straightened before starting any horizontal straightening operations.



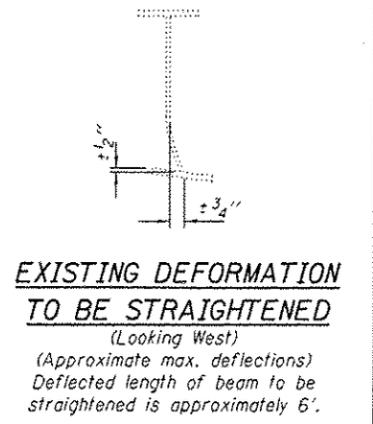
SECTION A-A



SECTION B-B



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" 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.



REP-11-14-2005

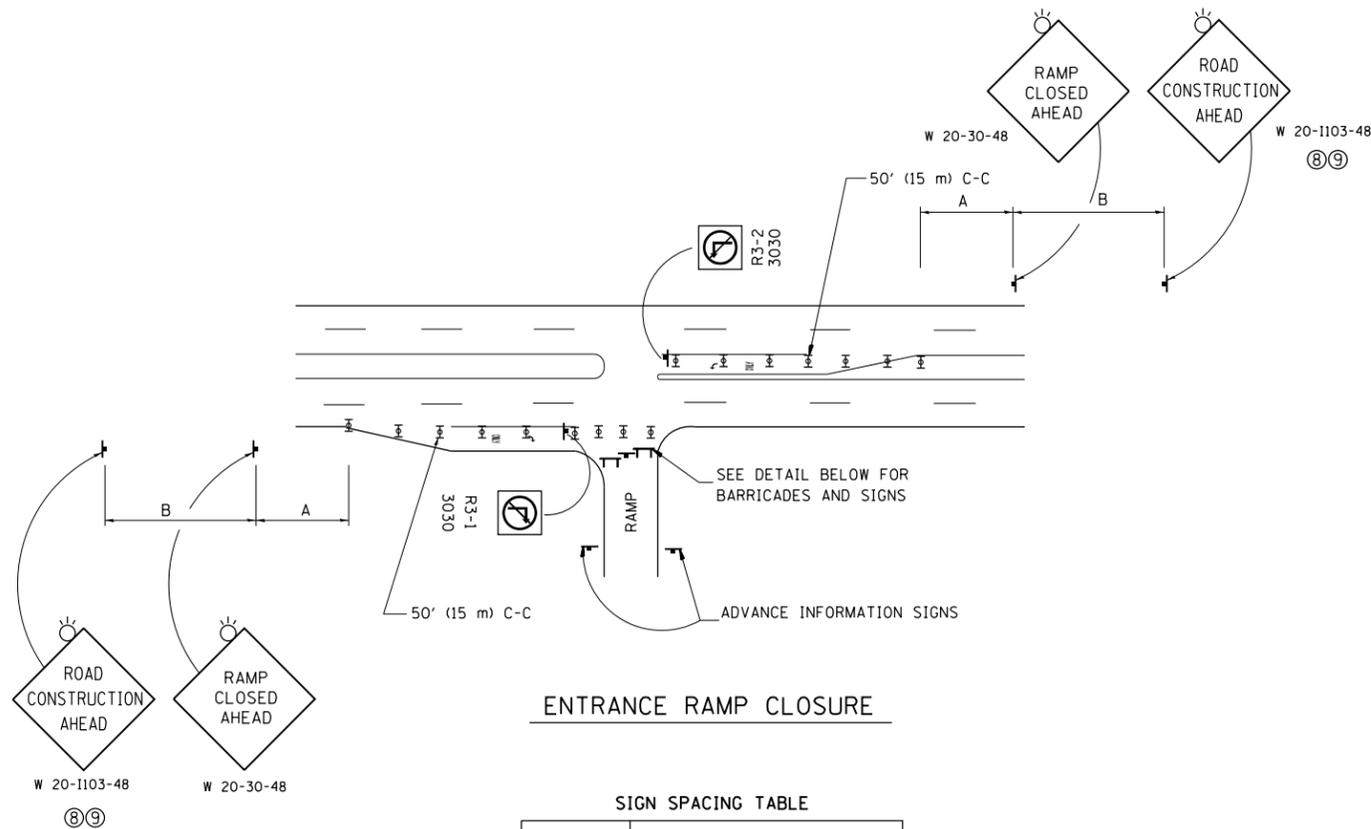
DESIGNED - VHV	EXAMINED - <i>Timothy A. ...</i>	DATE - NOVEMBER 15, 2013
CHECKED - DAB	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyla M. Steffon	PASSED - <i>Carl ...</i>	
CHECKED - VHV DAB	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BEAM STRAIGHTENING DETAILS
 SN 022-0101 (NB) & -0102 (SB)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2013-044BR	DUPAGE	35	30
CONTRACT NO. 60W94				
ILLINOIS FED. AID PROJECT				

SHEET NO. 2 OF 2 SHEETS

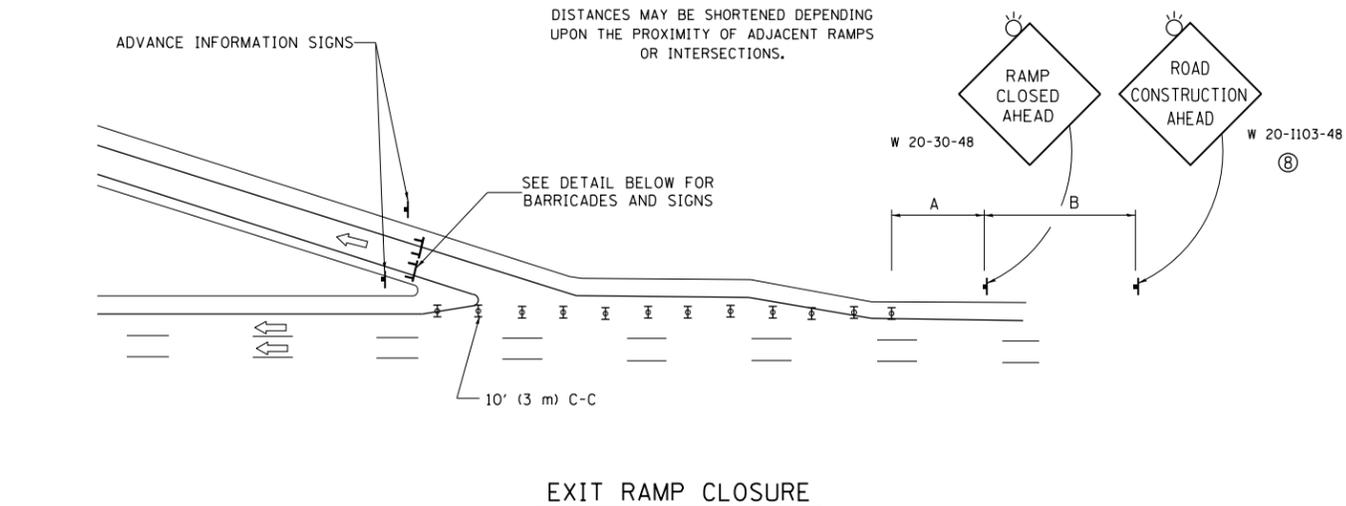


ENTRANCE RAMP CLOSURE

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 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

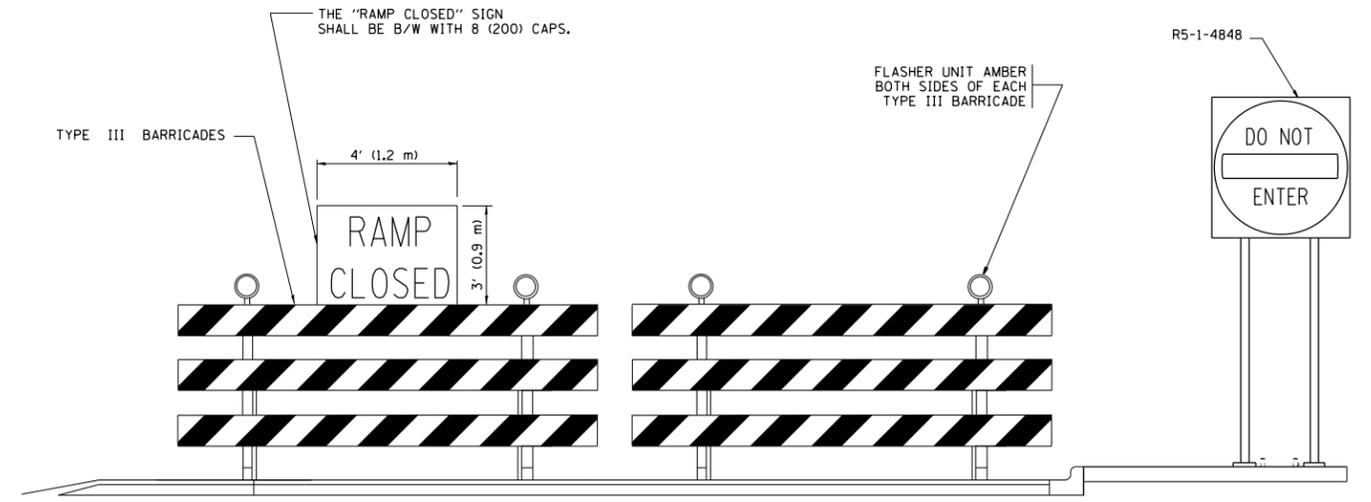
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

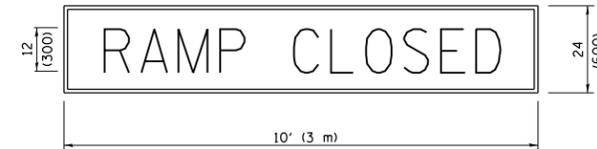
SYMBOLS

- ⊥ TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ⊓ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

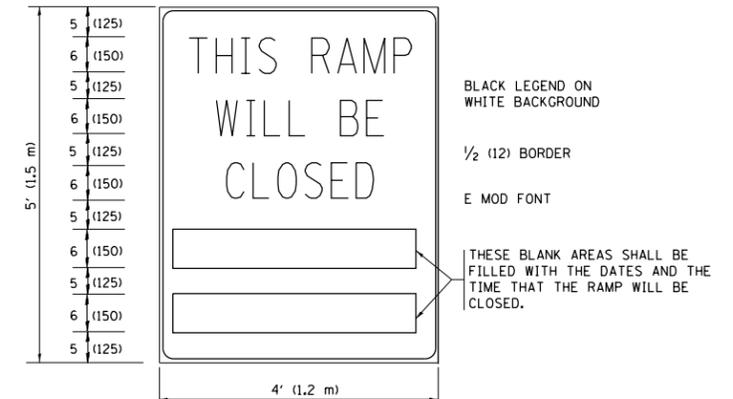
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND
1/2 (12) BORDER
E MOD FONT

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.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

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, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- 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 FOUR (4) DAYS 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 SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

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

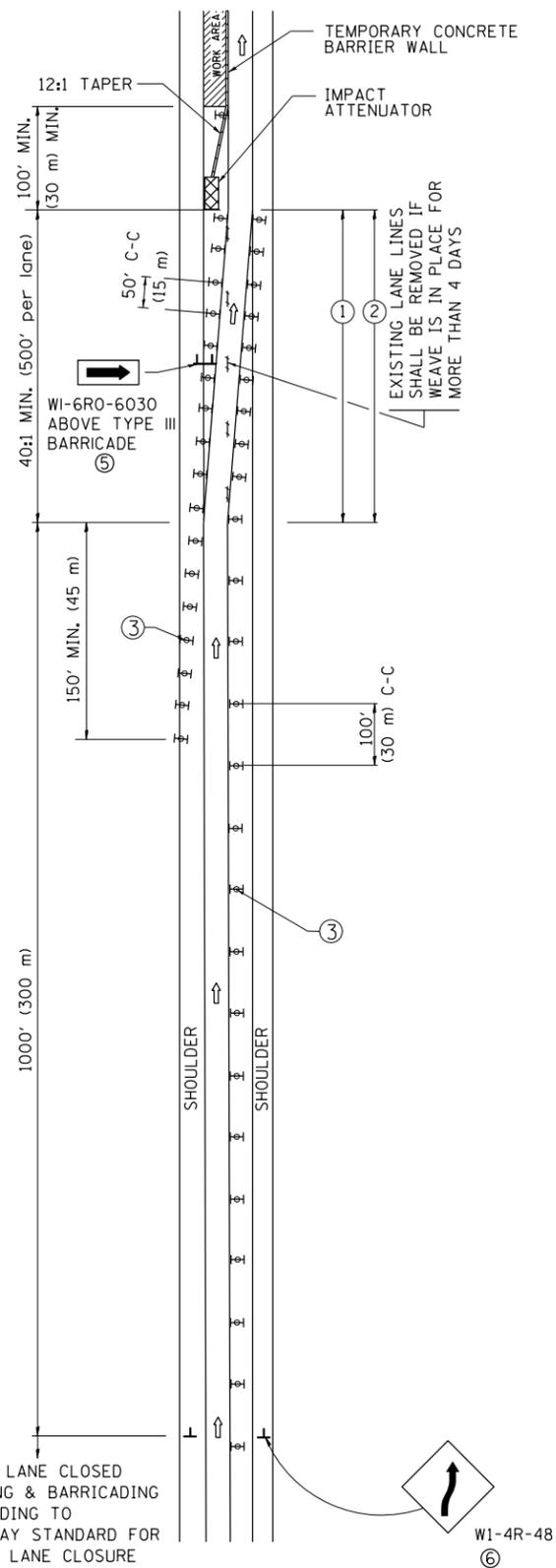
FILE NAME =	USER NAME = SEYMORECP	DESIGNED - DWS	REVISED - JAF 02-06
et:\pw\work\p\dot\seymorecp\d0361489\dot\Std.dgn		DRAWN -	REVISED - SPB 01-07
	PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED - SPB 12-09
	PLOT DATE = 10/30/2013	DATE - 02-83	REVISED - MD 06-13

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

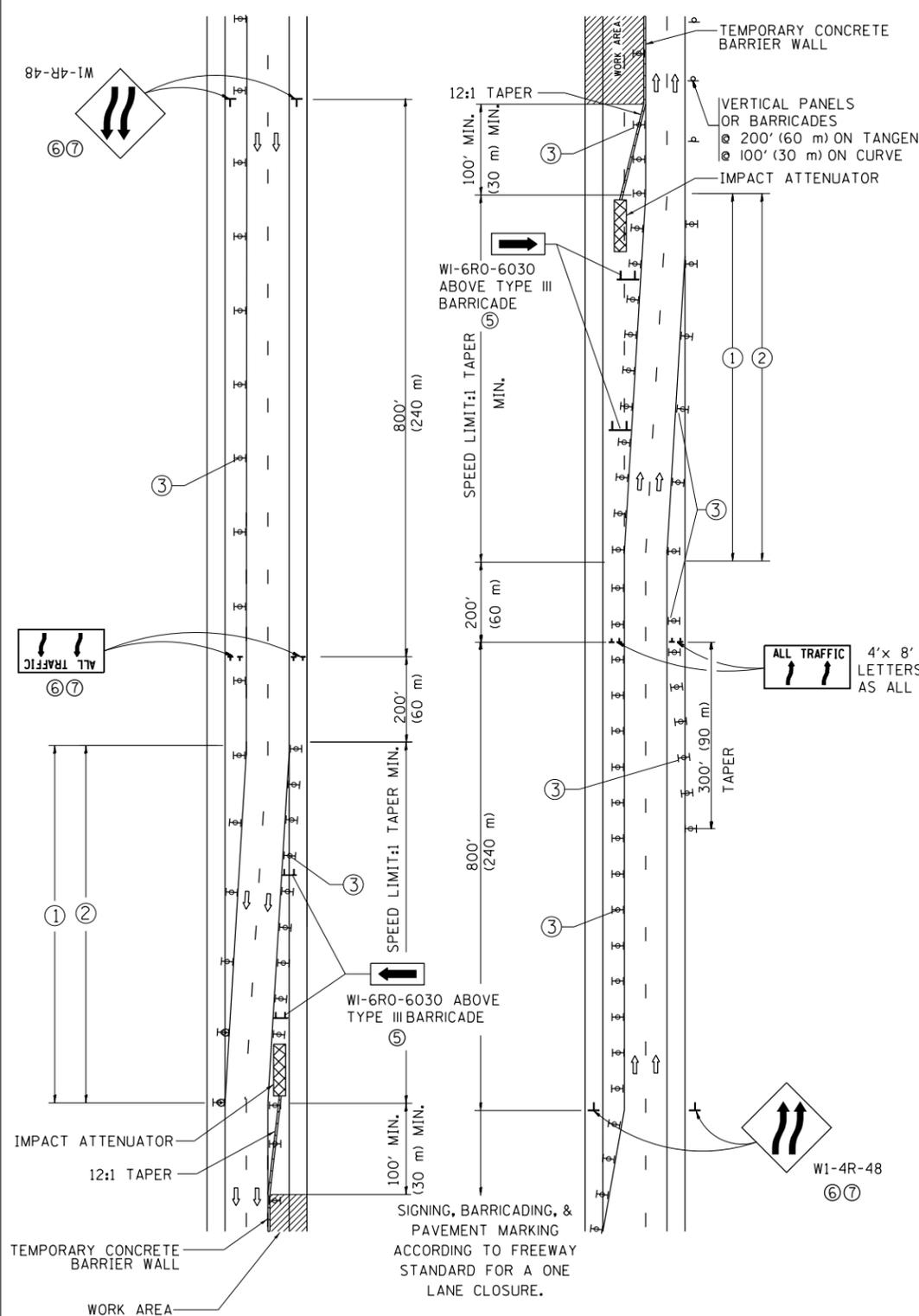
ENTRANCE AND EXIT RAMP CLOSURE DETAILS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2013-044BR	COOK & DUPAGE	35	31
TC-08		CONTRACT NO. 60W94		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES

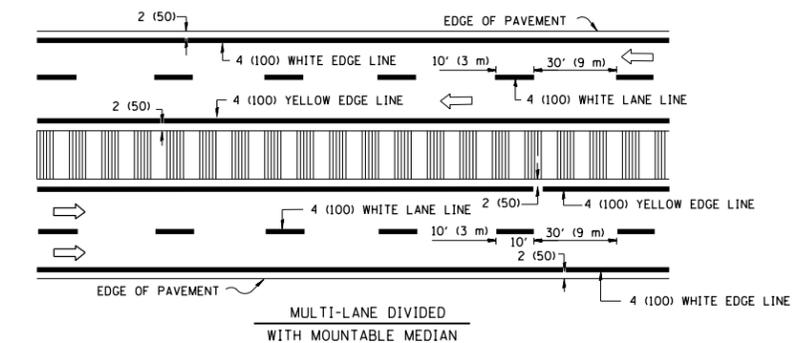
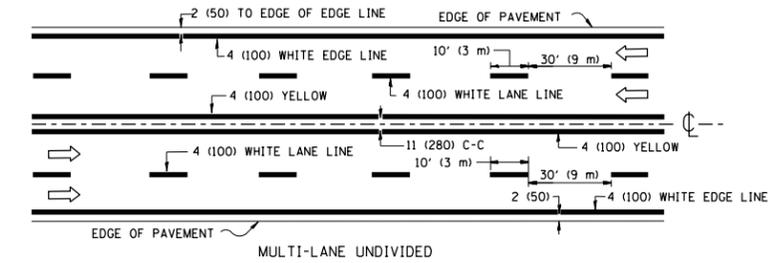
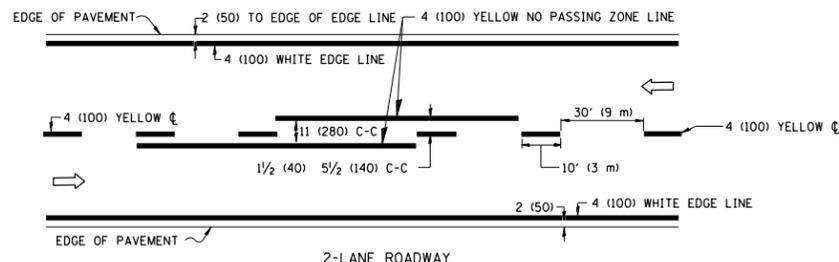
- EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.
- CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- IMPACT ATTENUATOR
- W1-4R-48
- W24-1-48

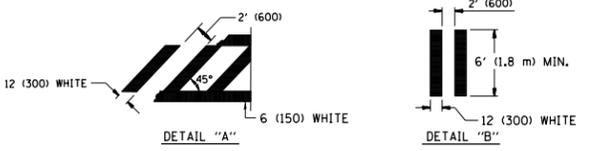
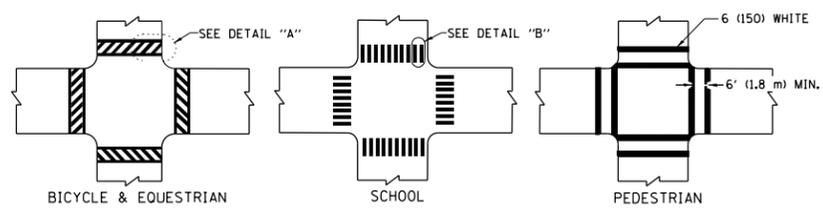
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = SEYMORECP	DESIGNED - DWS	REVISED - JAF 02-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\p\dot\seymorecp\d0361489\DotStd.dgn	DRAWN -	REVISED - SPB 01-07	VAR.			2013-044BR	COOK & DUPAGE	35	31A	
PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED - SPB 12-09	TC-09			CONTRACT NO. 60W94				
PLOT DATE = 11/5/2013	DATE - 02-87	REVISED - MD 06-13	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

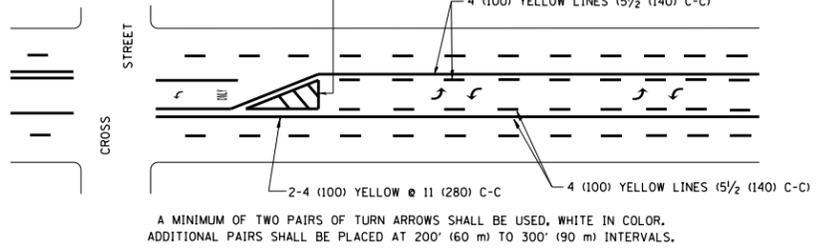
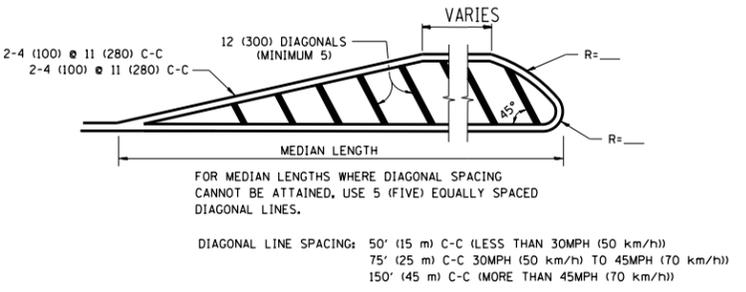
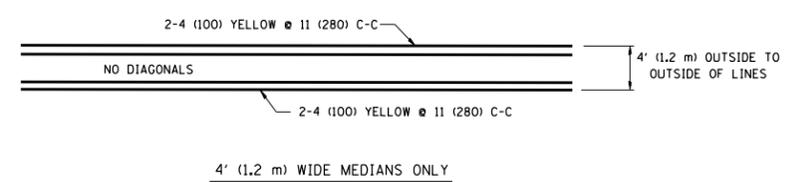


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

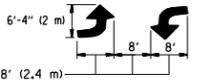
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

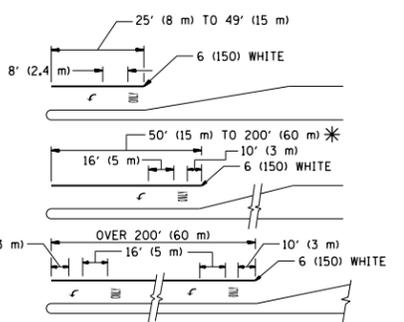


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

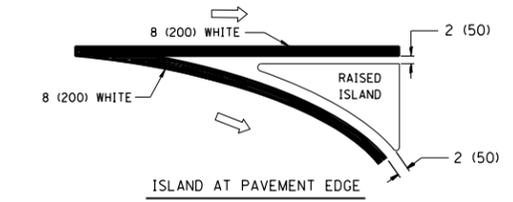
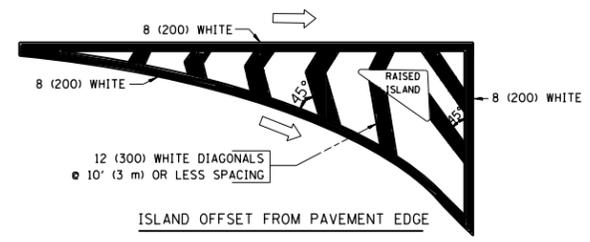
TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²) * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

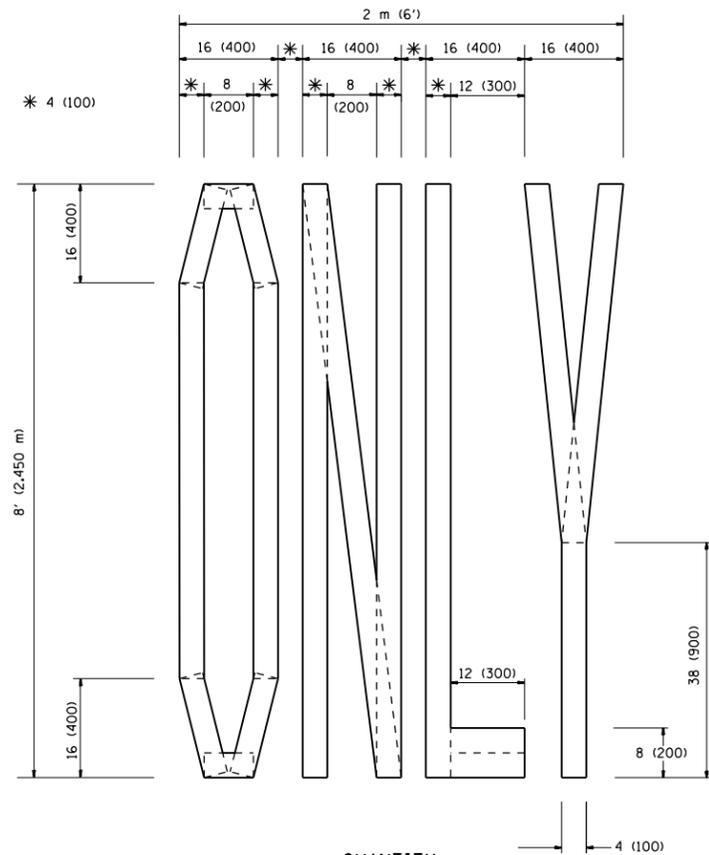


TYPICAL ISLAND MARKING

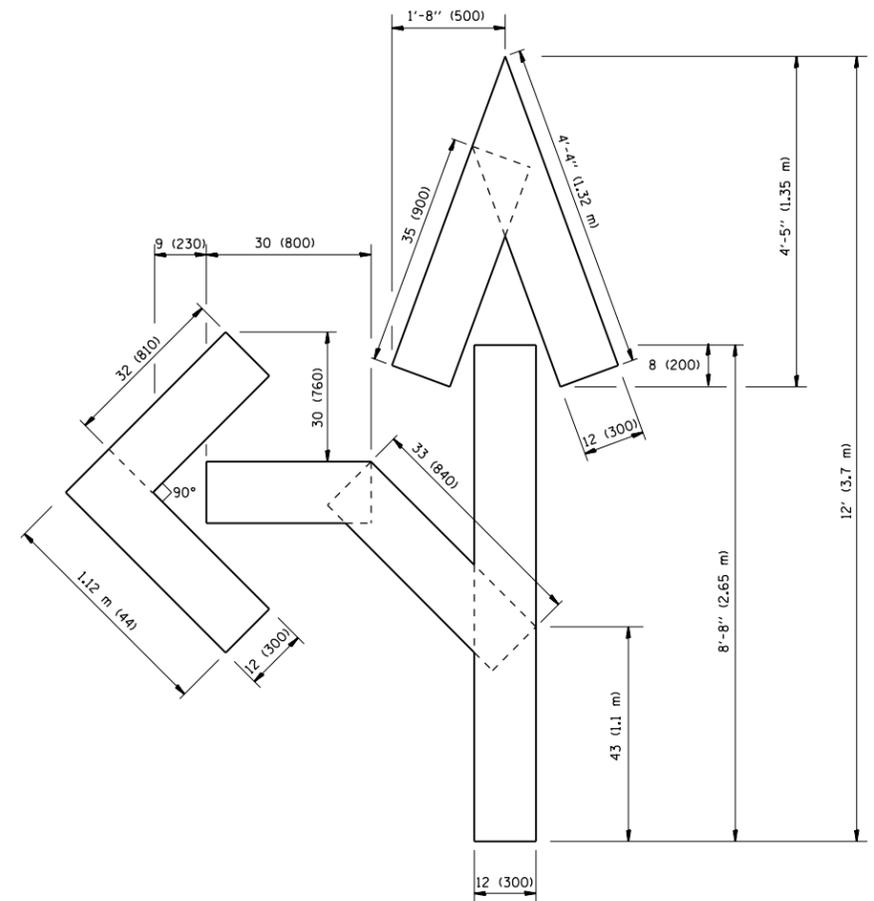
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE. SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE. SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R": 3.6 SQ. FT. (0.33 m ²) EACH "X": 54.0 SQ. FT. (5.0 m ²) EACH
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

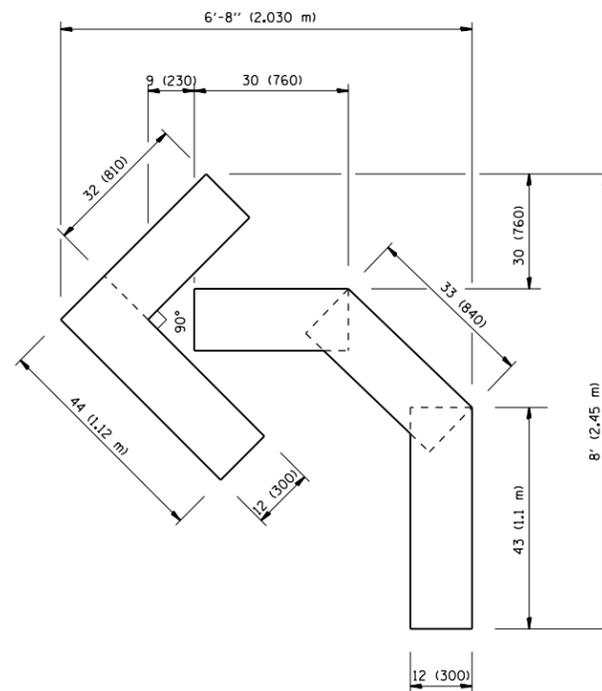
All dimensions are in inches (millimeters) unless otherwise shown.



QUANTITY
 4 (100) LINE = 64.1 ft. (19.7 m)
 21.1 sq. ft. (1.97 sq. m)



QUANTITY
 4 (100) LINE = 82.5 ft. (25.3 m)
 27.5 sq. ft. (2.53 sq. m)



QUANTITY
 4 (100) LINE = 45.5 ft. (13.9 m)
 15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
et:\pw\work\p\dot\seymorecp\d0361489\Dot	tStd.dgn	DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 10/30/2013	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

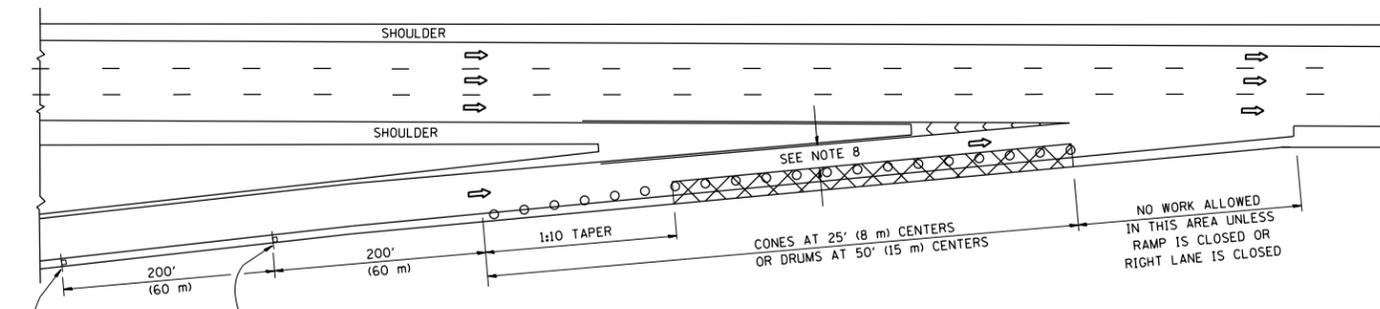
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

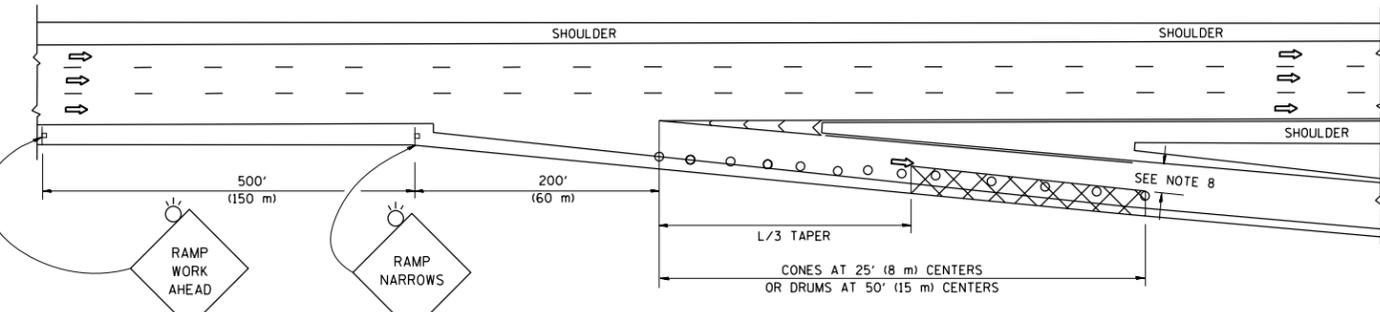
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2013-044BR	COOK & DUPAGE	35	33
	TC-16		CONTRACT NO. 60W94	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

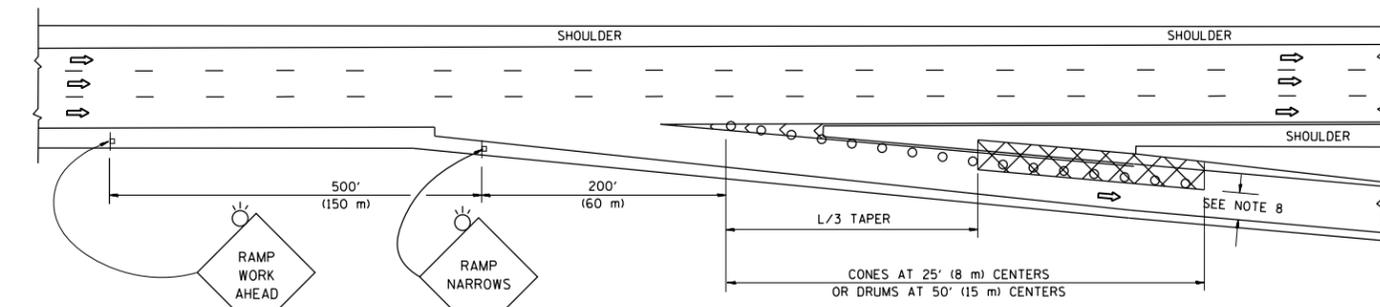
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

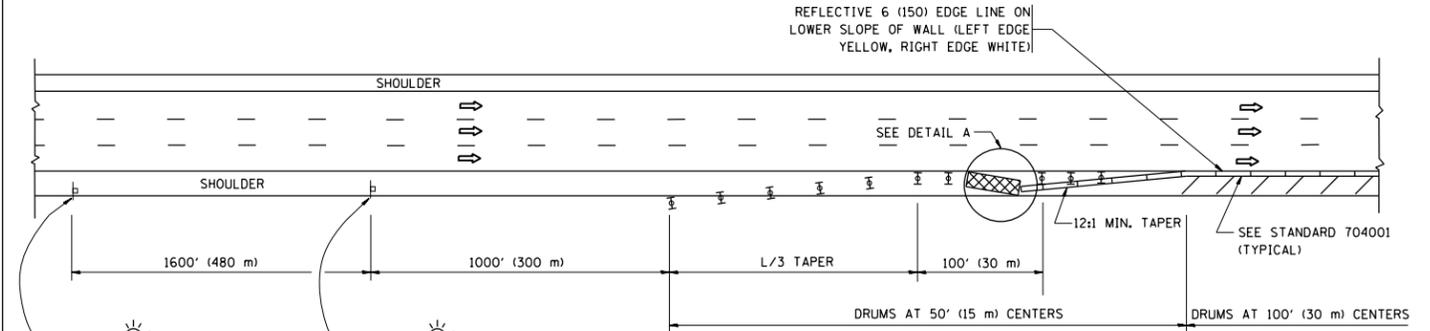
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

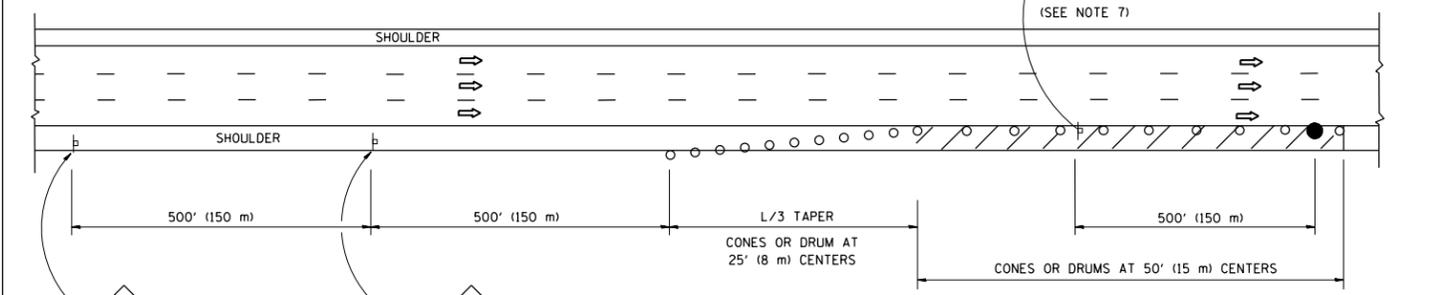
SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH
	$L=0.65(W)(S)$ $L=(W)(S)$

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 NIGHTIME 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.

SHOULDER CLOSURE DETAILS

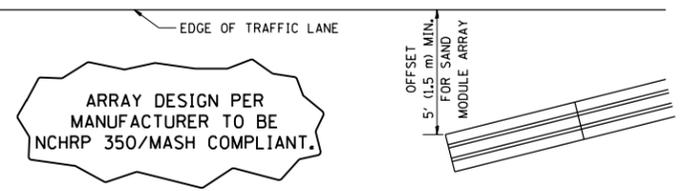


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH 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)

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/MASH.
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 ENCR OACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12" MIN. WIDTH TANGENT SECTION
16" MIN. WIDTH CURVE SECTION.

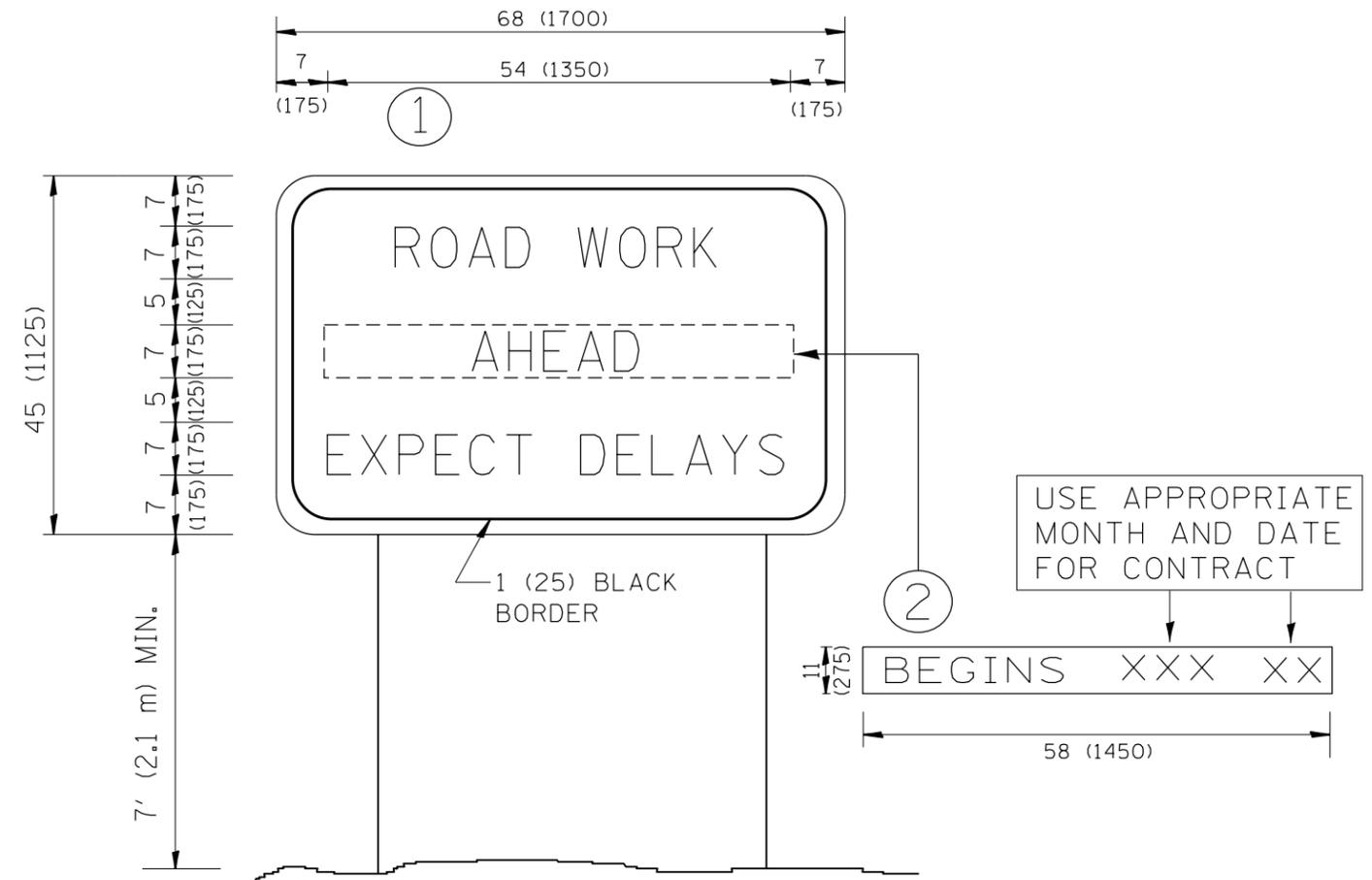
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = SEYMORECP	DESIGNED -	REVISED - J.A.F. 12-06
et:\pw\work\p\dot\seymorecp\d0361489\DotStd.dgn		DRAWN - D.W.S.	REVISED - S.P.B. 01-07
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - S.P.B. 12-09
	PLOT DATE = 10/30/2013	DATE - 11-96	REVISED - M.D. 06-13

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.
VAR.	2013-0448R	COOK & DUPAGE	35	34
TC-17		CONTRACT NO. 60W94		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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 =	USER NAME = SEYMORECP	DESIGNED -	REVISED - R. MIRS 09-15-97
et:\pw_work\pwidot\seymorecp\d0361489\Dat	tStd.dgn	DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 10/30/2013	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.
VAR.	2013-044BR	COOK & DUPAGE	35	35
TC-22		CONTRACT NO. 60W94		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				