

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 348	3128Z-HB-I-2	COOK	9	1

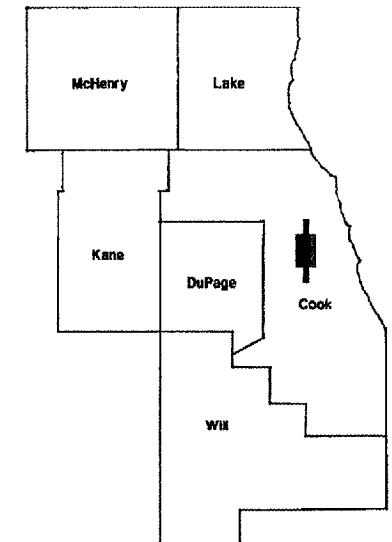
FOR INDEX OF SHEETS SEE SHEET 2

CONTRACT NO. 60B21

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DISTRICT ONE  
PROPOSED HIGHWAY PLANS**

FAP ROUTE 348: IL 43 (HARLEM AVE.)  
OVER US 12/20 (95<sup>TH</sup> St.)  
SECTION 3128Z-HB-I-2  
BRIDGE BEAM REPLACEMENT  
COOK COUNTY  
C-91-309-06  
SN 016-0320

D-91-309-06

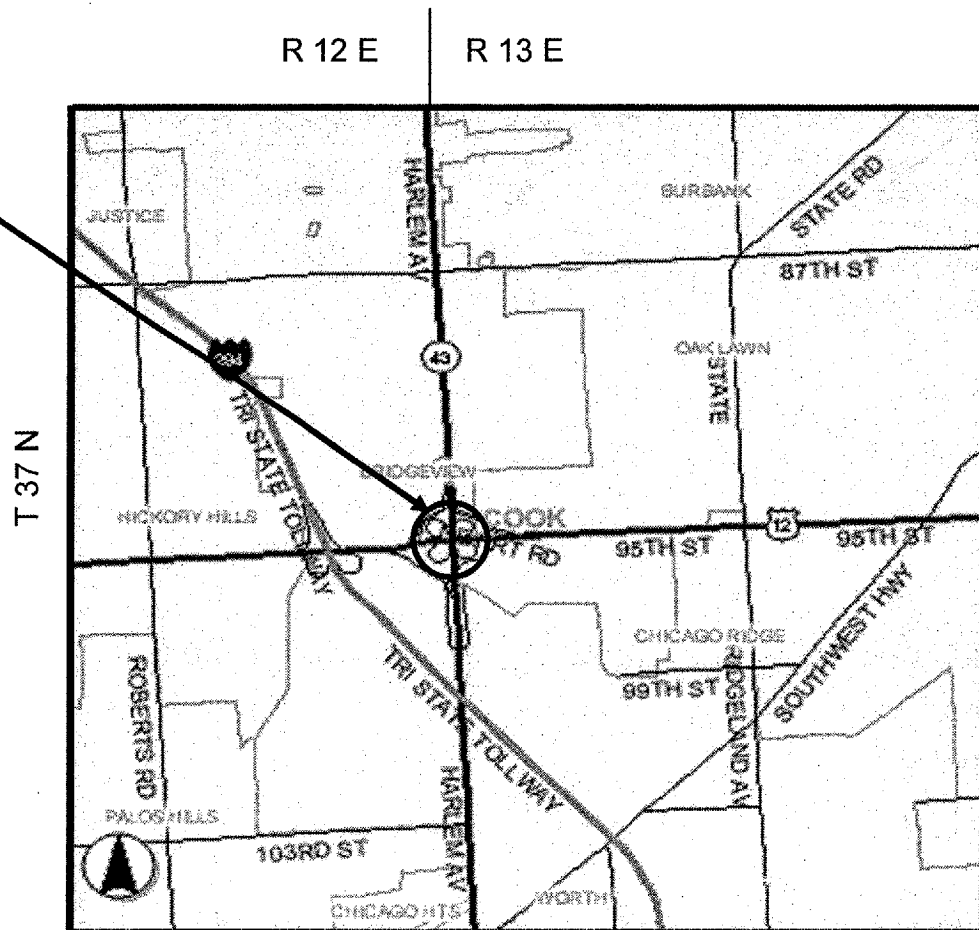


**IMPROVEMENT IS LOCATED IN THE  
VILLAGES OF BRIDGEVIEW & OAK LAWN**

LOCATION OF IMPROVEMENT INDICATED THUS:

**LOCATION OF  
IMPROVEMENT AT  
SN 016-0320**

**TRAFFIC DATA:**  
IL 43: SPEED LIMIT = 40 MPH  
2005 ADT = 49,500  
95<sup>TH</sup> ST.: SPEED LIMIT = 45 MPH  
2003 ADT = 36,700



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

SUBMITTED: July 6 2006  
Diane M. O'Keefe /   
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

August 18, 2006  
Mike Hine /   
ENGINEER OF DESIGN AND ENVIRONMENT

August 18, 2006  
Milton R. Saes, P.E. /   
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

DISTRICT ONE - DESIGN - PLAN PREPARATION ENGINEER:  
KEN ENG / ROBERT BORO (847) 705-4178

**CONTRACT NO. 60B21**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 348	3128Z-HB-I-2	COOK	9	2

**INDEX OF SHEETS**

- 1 TITLE SHEET
- 2 INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4-5 TRAFFIC STAGING
- 6-8 BRIDGE PLANS
- 9 DISTRICT ONE TRAFFIC CONTROL DETAILS FOR PARTIAL RAMP CLOSURES

**STATE STANDARDS**

- 701426-02 LANE CLOSURE , MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEED ≥ 45 MPH
- 701601-04 URBAN LANE CLOSURE, MULTI-LANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
- 702001-04 TRAFFIC CONTROL DEVICES
- 704001-02 TEMPORARY CONCRETE BARRIER

**GENERAL NOTES**

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION) AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE & GAS FACILITIES. (48 HOURS NOTIFICATION REQUIRED)

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 COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.

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

IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO VERIFY ALL DIMENSIONS & CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION & ORDERING OF MATERIAL.

WHEN REMOVING THE EXISTING DAMAGED BEAM, THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO ENSURE THE DECK AND 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 PRIOR TO REMOVAL OF THE DAMAGED BEAM OR CARRIER BEAM. THE COST IS INCLUDED IN THE COST OF "STRUCTURAL STEEL REMOVAL".

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ILLINOIS DEPARTMENT OF  
TRANSPORTATION

INDEX OF SHEETS  
STATE STANDARDS  
GENERAL NOTES

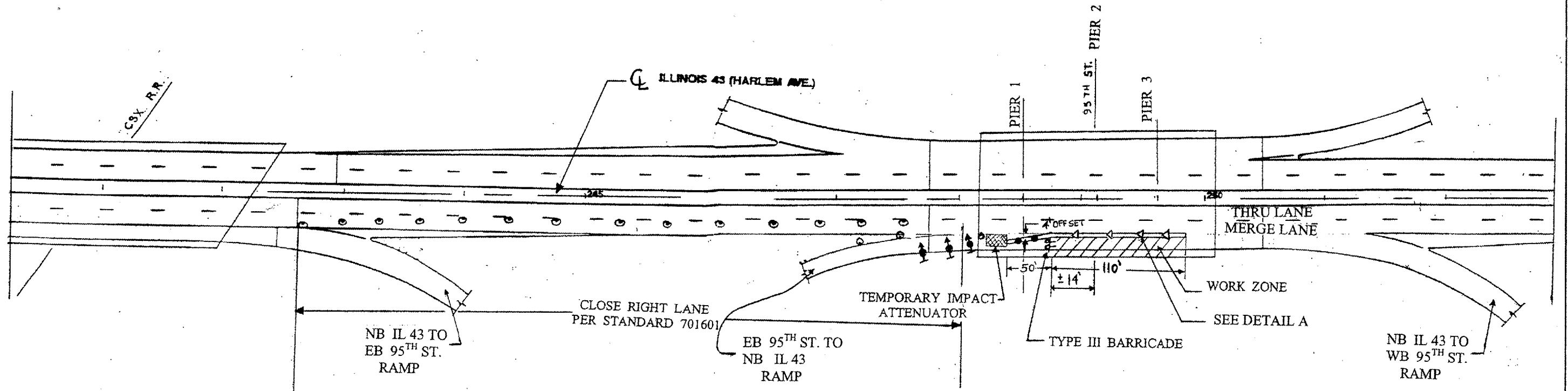
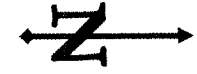
<b>ROUTE</b>	<b>SECTION</b>	<b>COUNTY</b>	<b>TOTAL SHEETS</b>	<b>SHEET NUMBER</b>
FAP 348	3128Z-HB-I-2	COOK	9	3

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE	
CODE NO.	ITEMS	UNITS		URBAN SFTY-2A 100% STATE	
50102400	CONCRETE REMOVAL	CU YD	0.8	0.8	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	0.8	0.8	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	7570	7570	
50501110	STRUCTURAL STEEL REMOVAL	POUND	7560	7560	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1	1	
67100100	MOBILIZATION	L SUM	1	1	
70102630	TRAFFIC CONTROL AND PROTECTION STANDARD 701601	L SUM	1	1	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	160	160	
X0322467	TEMPORARY INFORMATION SIGNING FOR LANE CLOSURE	SQ FT	48	48	
⊙ Z0030240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	1	1	
Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	1	1	
Z0073351	TEMPORARY SLAB SUPPORT SYSTEM	L SUM	1	1	

⊙ SFTY - 3N

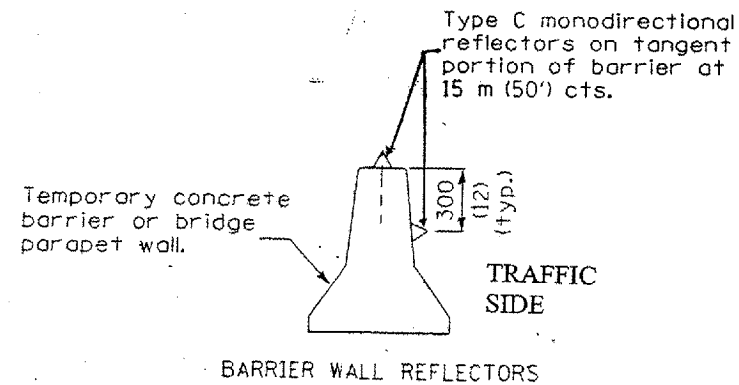
ILLINOIS DEPARTMENT OF  
TRANSPORTATION  
  
SUMMARY OF QUANTITIES

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 348	3128Z-HB-I-2	COOK	9	4



LEGEND

- VERTICAL PANELS W/ STEADY BURN MONODIRECTIONAL LIGHT @ 25' CTS
- ▣ TEMPORARY IMPACT ATTENUATOR
- ➔ TRAFFIC DIRECTION
- ⊥ TYPE III BARRICADE WITH FLASHING LIGHTS
- ▨ WORK AREA
- △ TYPE C MONODIRECTIONAL REFLECTOR
- ⊥ SIGN OR SIGN W/ STEADY BURN LIGHT AS SHOWN
- DRUMS W/ STEADY BURN MONO DIRECTIONAL LIGHT
- ▭ TEMPORARY CONCRETE BARRIER
- ⬆️ DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONO DIRECTIONAL LIGHTS

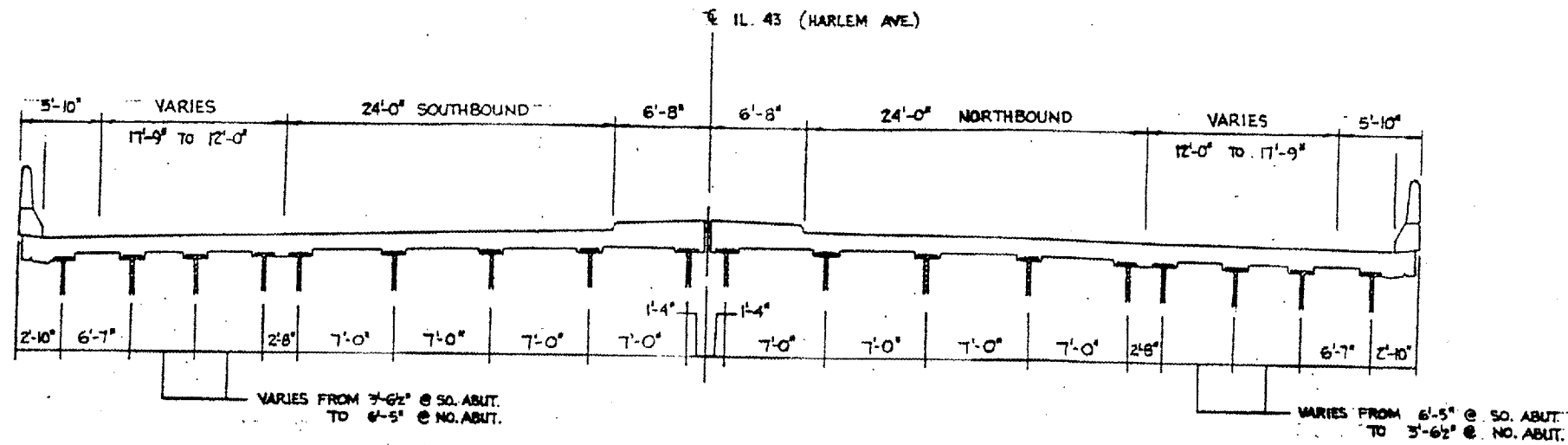


DETAIL A

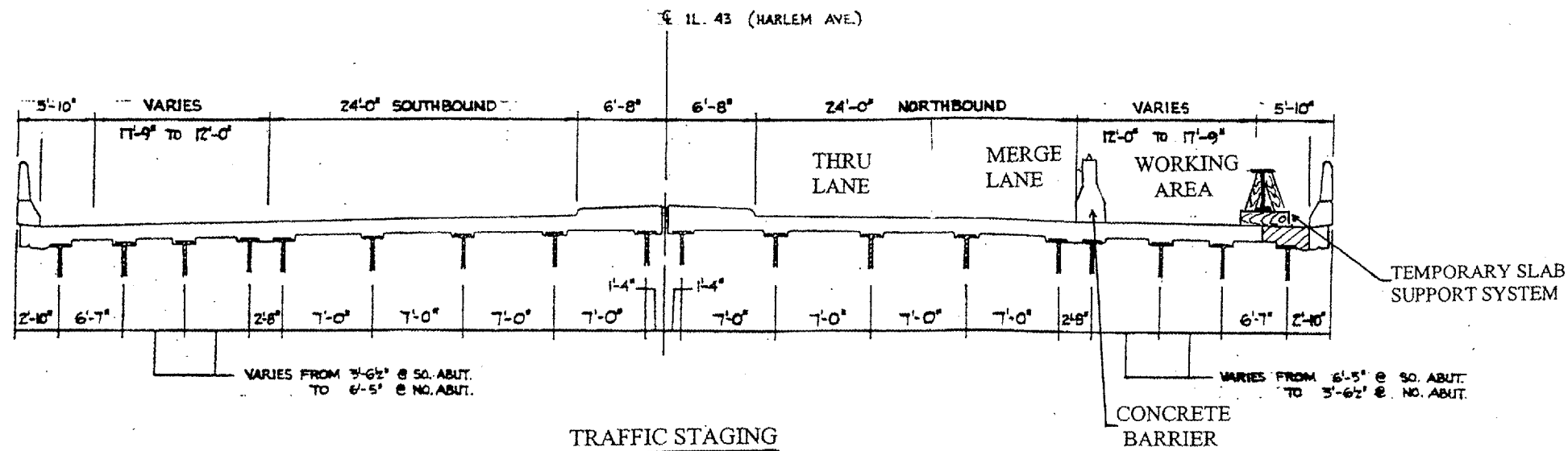
NOTE:  
 COVER CONFLICTING PAVEMENT MARKINGS WITH BLACK TYPE III TAPE. COST OF TYPE III TAPE AND ITS REMOVAL INCLUDED IN COST OF "TRAFFIC CONTROL AND PROTECTION, STANDARD 701601"  
 ADDITIONAL TRAFFIC CONTROL DEVICES SHOWN ARE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION, STANDARD 701601".

ILLINOIS DEPARTMENT OF  
 TRANSPORTATION  
 TRAFFIC STAGING PLAN

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 348	3128Z-HB-I-2	COOK	9	5



**EXISTING CROSS-SECTION**  
 IL 43 (HARLEM AVE.) OVER 95th ST.  
 LOOKING NORTH



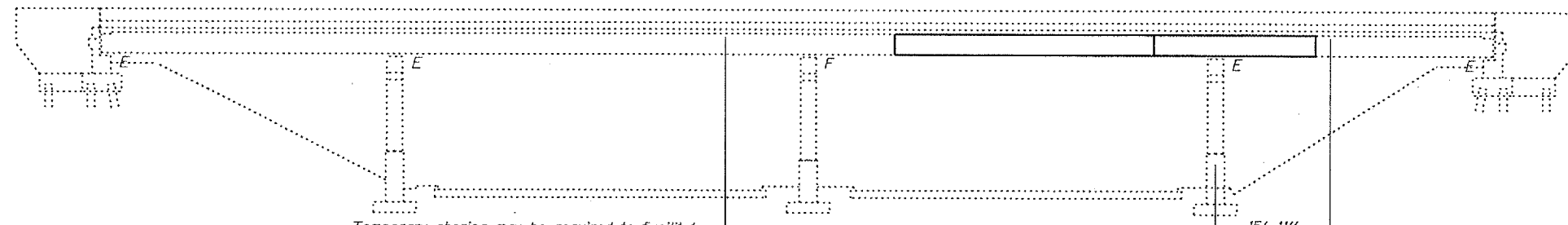
**TRAFFIC STAGING**

ILLINOIS DEPARTMENT OF  
 TRANSPORTATION  
 TRAFFIC STAGING SECTIONS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. 1 3 SHEETS
		COOK	9	6	
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract No. 60B21

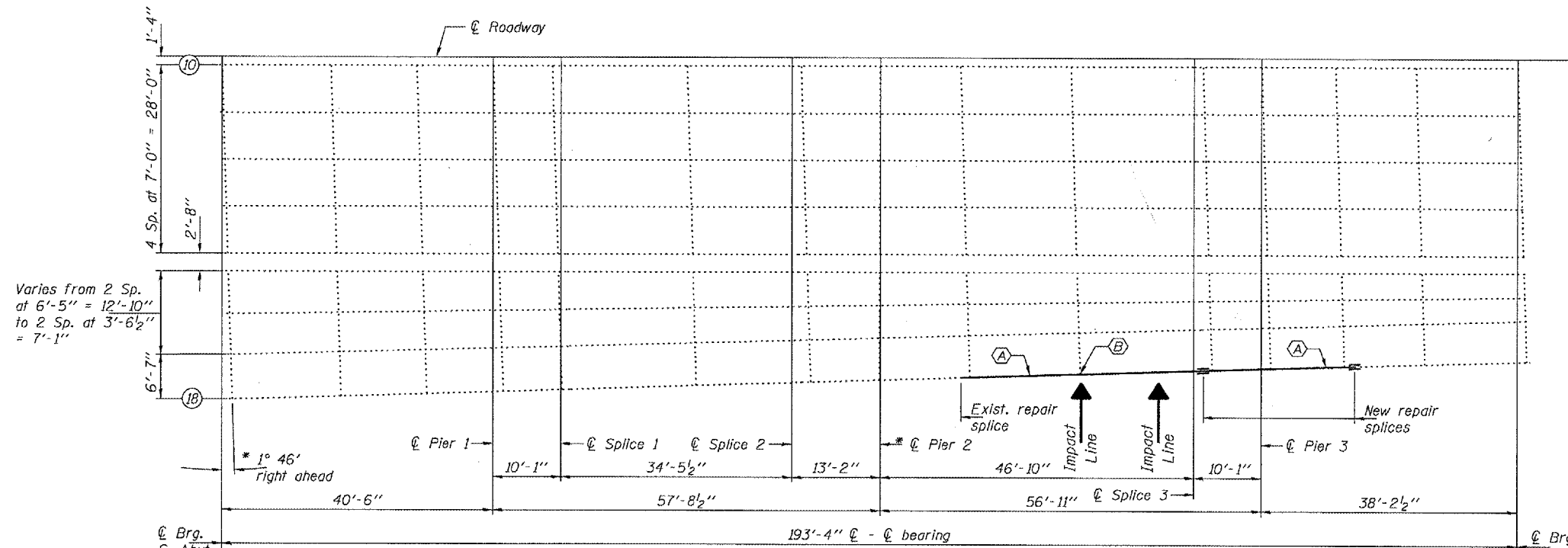


Temporary shoring may be required to facilitate alignment of existing splice. Use 12" x 12" Timbers or HP's to be paid for as Temporary Shoring and Cribbing. The shoring shall be removed as soon as possible after the splice is completed to minimize Traffic Control.

**ELEVATION**

Temporary shoring is required for Beam 18. Remove and replace slopewall, if required. Cost included with Temporary Shoring and Cribbing.

Q (k)	15.1
L (k)	34.2
Imp. (k)	10.3
Total (k)	59.6



Varies from 2 Sp. at 6'-5" = 12'-10" to 2 Sp. at 3'-6 1/2" = 7'-1"

**FRAMING PLAN**

- (A) Remove and replace existing 30W116 with new W30x116.
  - (B) Remove and replace existing top and bottom clip angles.
- \* Skew angle for Q Pier 2 and diaphragms at Pier 2 = 0° 7' left ahead.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	7570
Structural Steel Removal	Pound	7560
Temporary Slab Support System	L.S.	1
Concrete Removal	Cu. Yd.	0.8
Concrete Superstructure	Cu. Yd.	0.8
Temporary Shoring and Cribbing	L.S.	1

**BRIDGE REPAIRS**  
**IL 43 OVER US12/20**  
**COOK COUNTY**  
**SN 016-0320**

DESIGNED	<i>Paul J. Gorman</i>	EXAMINED	<i>John A. Morris</i>
CHECKED	<i>Lital Bhatt</i>	PASSED	<i>Ralph E. Anderson</i>
DRAWN	<i>baliva</i>		
CHECKED	<i>PBJ SJB</i>		

July 17, 2006  
ENGINEER OF STRUCTURAL SERVICES  
ENGINEER OF BRIDGES AND STRUCTURES



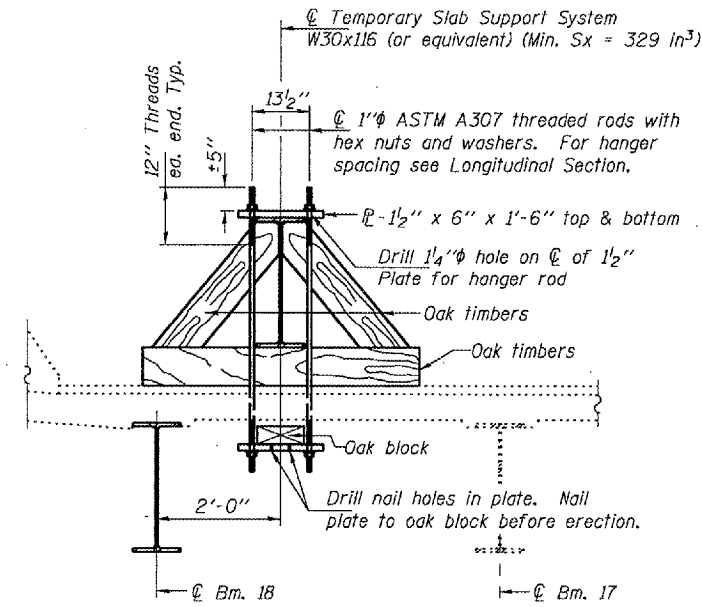
EXPIRES 11-30-2006

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

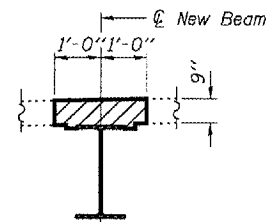
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	9	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2  
3 SHEETS

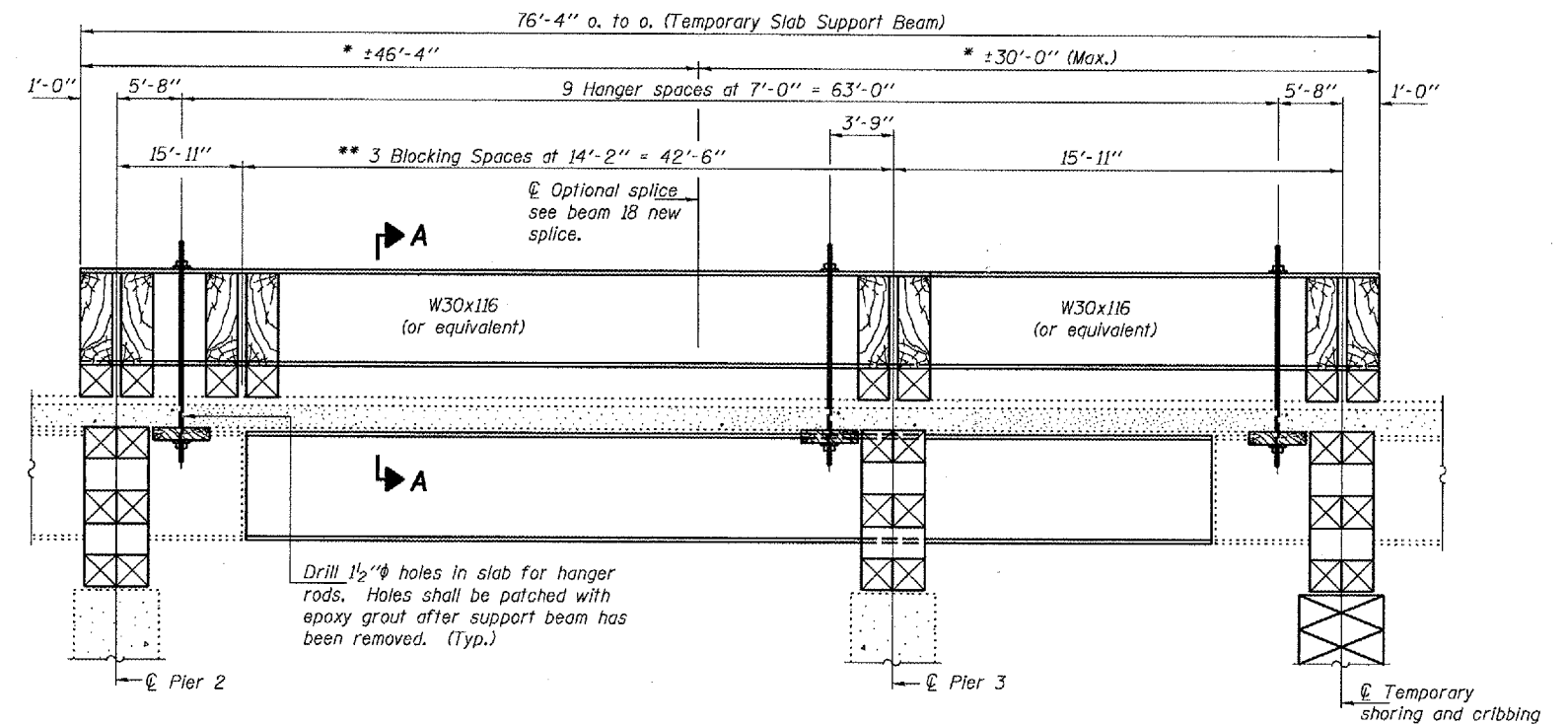
Contract No. 60B21



SECTION A-A



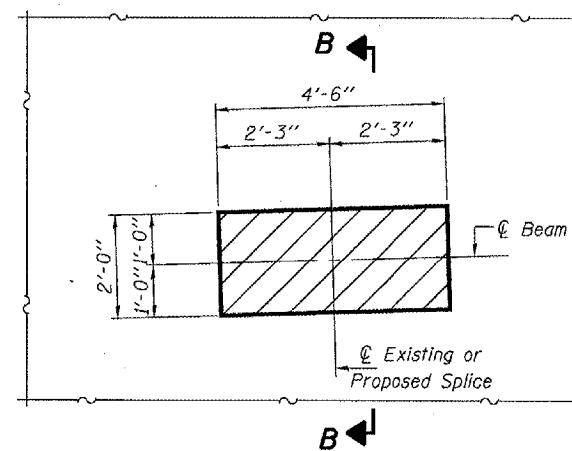
SECTION B-B



LONGITUDINAL SECTION BEAM 18  
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM  
(Dimensions are along center beam 18)

\* These dimensions may vary for available beams in stock.

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



TYPICAL CONCRETE 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.

SLAB SUPPORT DETAILS  
IL 43 OVER US12/20  
COOK COUNTY  
SN 016-0320

DESIGNED	PSJ
CHECKED	SJB
DRAWN	baliva
CHECKED	PSJ SJB

JULY 17, 2006

EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

REP-2 1-27-2000

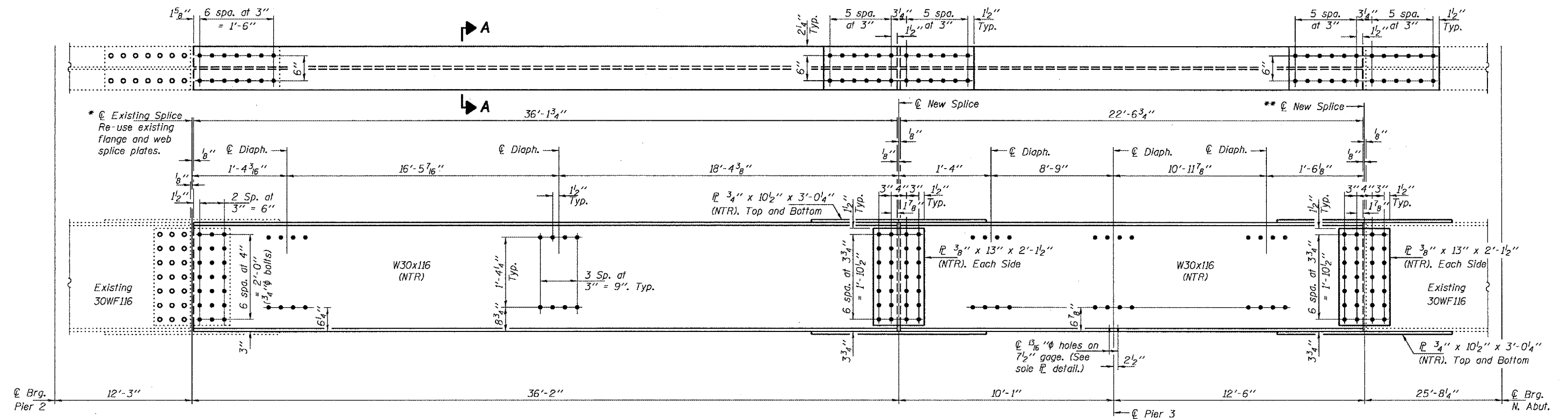
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	9	8
FED. ROAD DIST. NO. 7		STATE AID PROJECT		

SHEET NO. 3

3 SHEETS

Contract No. 60B21



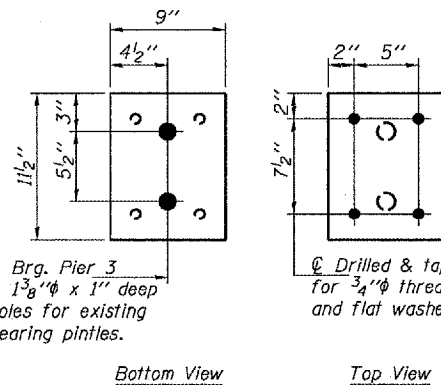
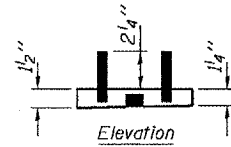
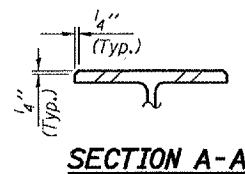
\* @ Existing Splice  
Re-use existing  
flange and web  
splice plates.

\* Use holes in existing splice PL  
as template for drilling holes  
in new beam section.

**ELEVATION BEAM 18**

(Dimensions are along @ Beam 18)

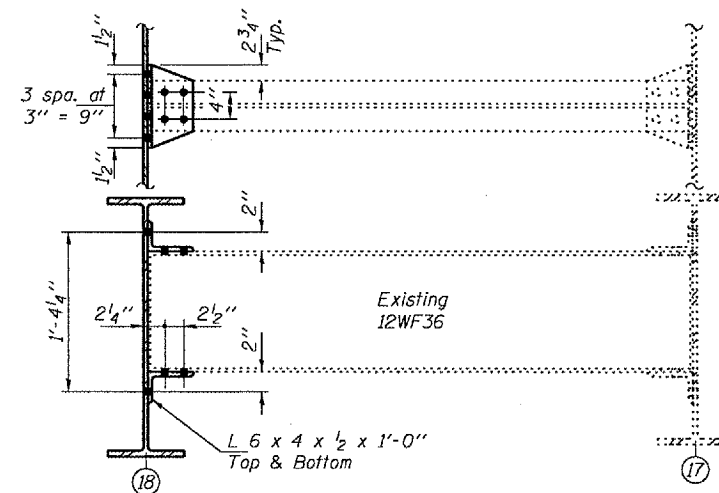
\*\* Use holes in new splice PL  
as template for drilling holes  
in existing beam section.



@ Brg. Pier 3  
& 1 3/8" @ x 1" deep  
holes for existing  
bearing pintles.

@ Drilled & tapped holes, 1" deep  
for 3/4" @ threaded studs with nut  
and flat washer.

**SOLE PLATE 1 1/2" x 9" x 1 1/2"**



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

**DIAPHRAGM REPLACEMENT DETAIL**

Use holes in existing diaphragm as  
template for drilling holes in new angles.

**STEEL REPAIR DETAILS**

**IL 43 OVER US12/20**

**COOK COUNTY**

**SN 016-0320**

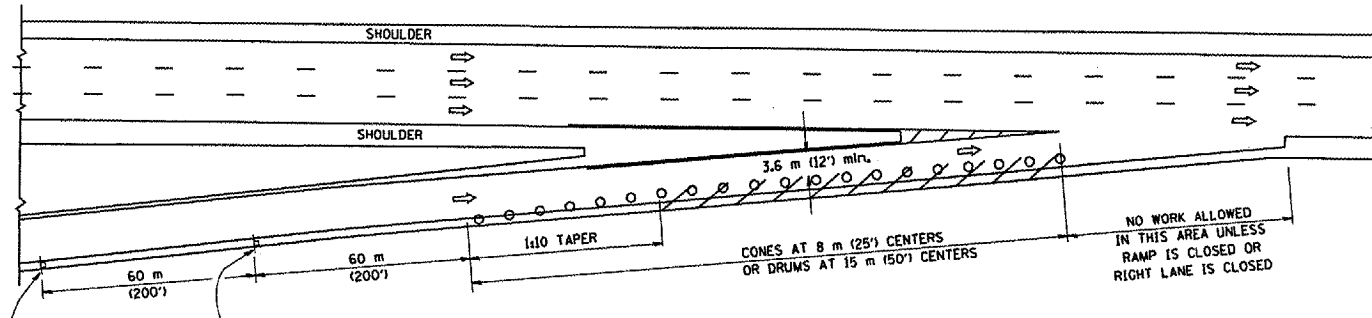
DESIGNED	PSJ	DATE	JULY 17, 2006
CHECKED	SJB	EXAMINED	John A. Morris
DRAWN	baliva	ENGINEER OF STRUCTURAL SERVICES	
CHECKED	PSJ SJB	PASSED	Ralph E. Anderson
		ENGINEER OF BRIDGES AND STRUCTURES	



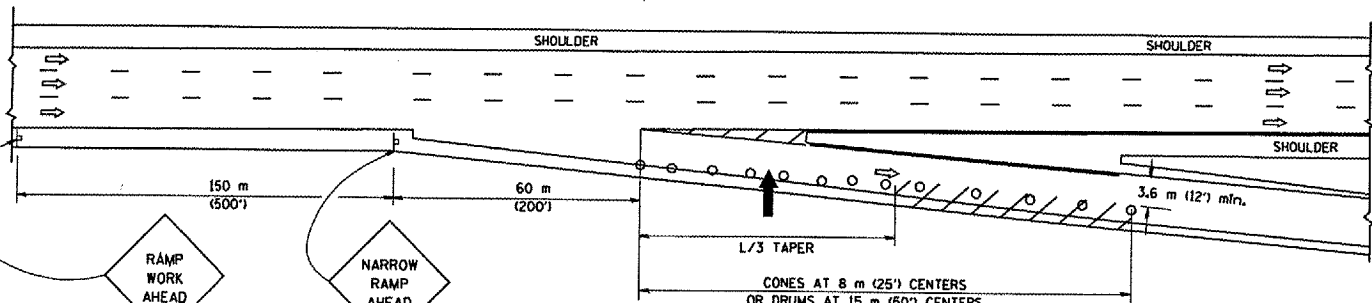
PARTIAL RAMP CLOSURE DETAILS

SHOULDER CLOSURE DETAILS

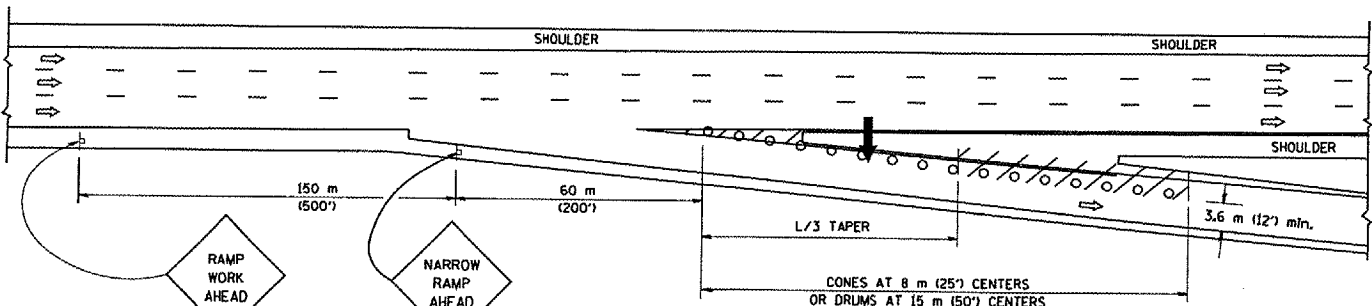
F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	31257-HR-72	COOK	9	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

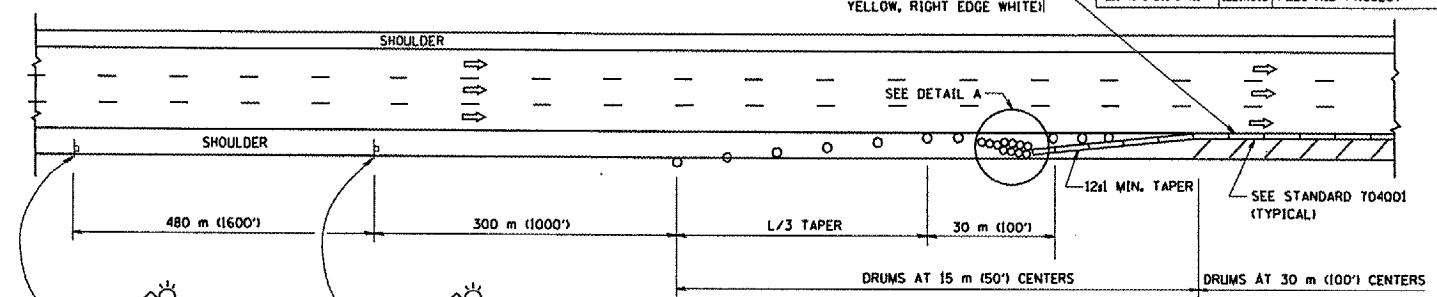
- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- CONES - 700 (28) IN HEIGHT

GENERAL NOTES

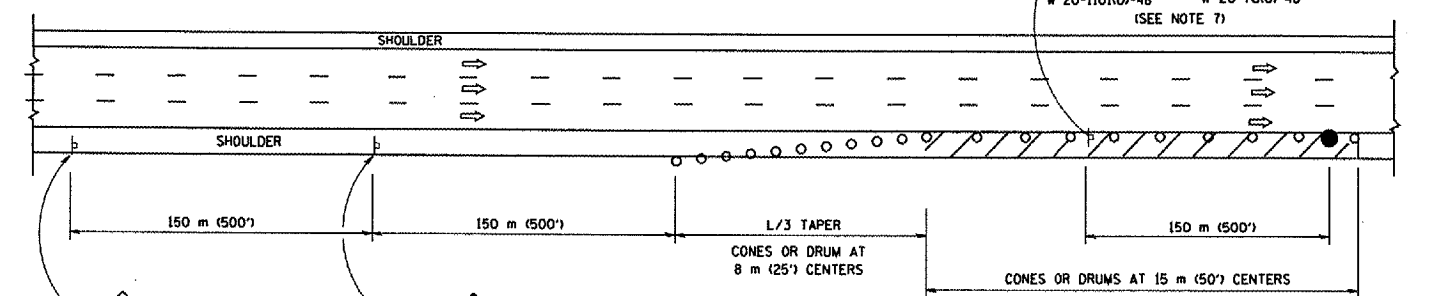
- THE "L" DISTANCE EQUALS:  

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

W = WIDTH OF OFFSET IN METERS (FEET)  
 S = NORMAL POSTED SPEED KM/H (MPH)
- PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.



PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

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

ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT FOR POSTED SPEED.

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

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

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03
JAF	2/06

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL DETAILS  
 FOR FREEWAY  
 SHOULDER CLOSURES  
 PARTIAL RAMP CLOSURES  
 DESIGNED BY: DWS  
 DRAWN BY:  
 CHECKED BY:  
 SCALE: NONE  
 DATE: 3/1/2006

PLT DATE: 3/1/2006  
 FILE NAME: K:\nchrap\31257\31257.dgn  
 USER NAME: jaf