

11-21-14 LETTING ITEM 025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

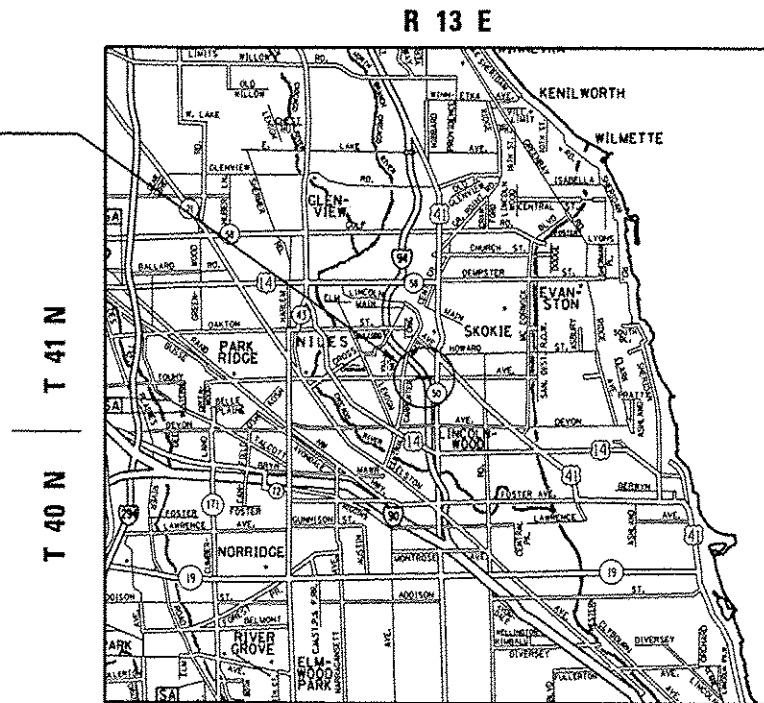
F.A.P. ROUTE 375: TOUHY AVE.
LOCATION: AT I-94 (EDENS EXPWY)
SECTION: 0304.1HB-BP
BRIDGE PAINTING
COOK COUNTY
C-91-021-15

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
375	0304.1HB-BP	COOK	10	1
ILLINOIS CONTRACT NO. 60Y77				

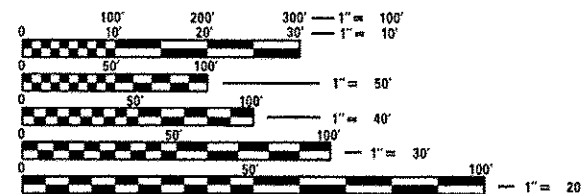
FOR INDEX OF SHEETS, SEE SHEET NO. 2

THIS IMPROVEMENT IS LOCATED IN THE VILLAGE OF NILES

IMPROVEMENT LOCATION
SN 016-0713



NILES TOWNSHIP



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

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

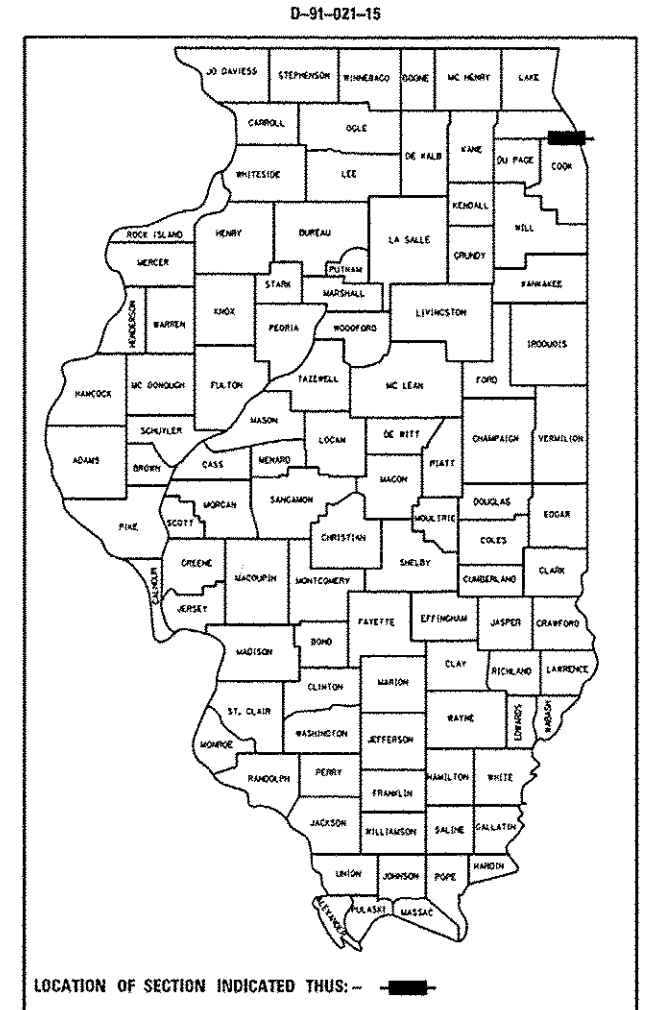
PROJECT ENGINEER - J. ALAIN MIDY (847) 221-3056
PROJECT MANAGER - ISSAM RAYYAN (847) 705-4178

CONTRACT NO. 60Y77

TRAFFIC DATA

TOUHY AVE:
2010 ADT 35,700
SPEED LIMIT = 30 MPH

I-94 (EDENS EXPY):
2013 ADT 153,100
SPEED LIMIT = 55 MPH



LOCATION OF SECTION INDICATED THIS: - [black rectangle] -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *August 1, 2014*

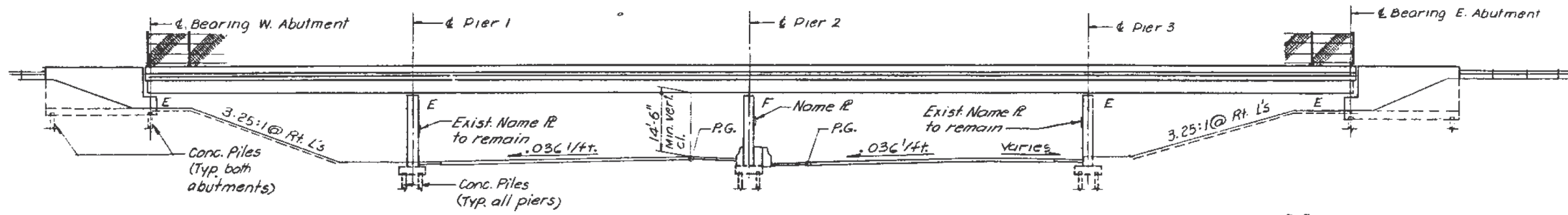
John F. [Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Oct 17 20 14
John D. Baranelli PE
ENGINEER OF DESIGN AND ENVIRONMENT

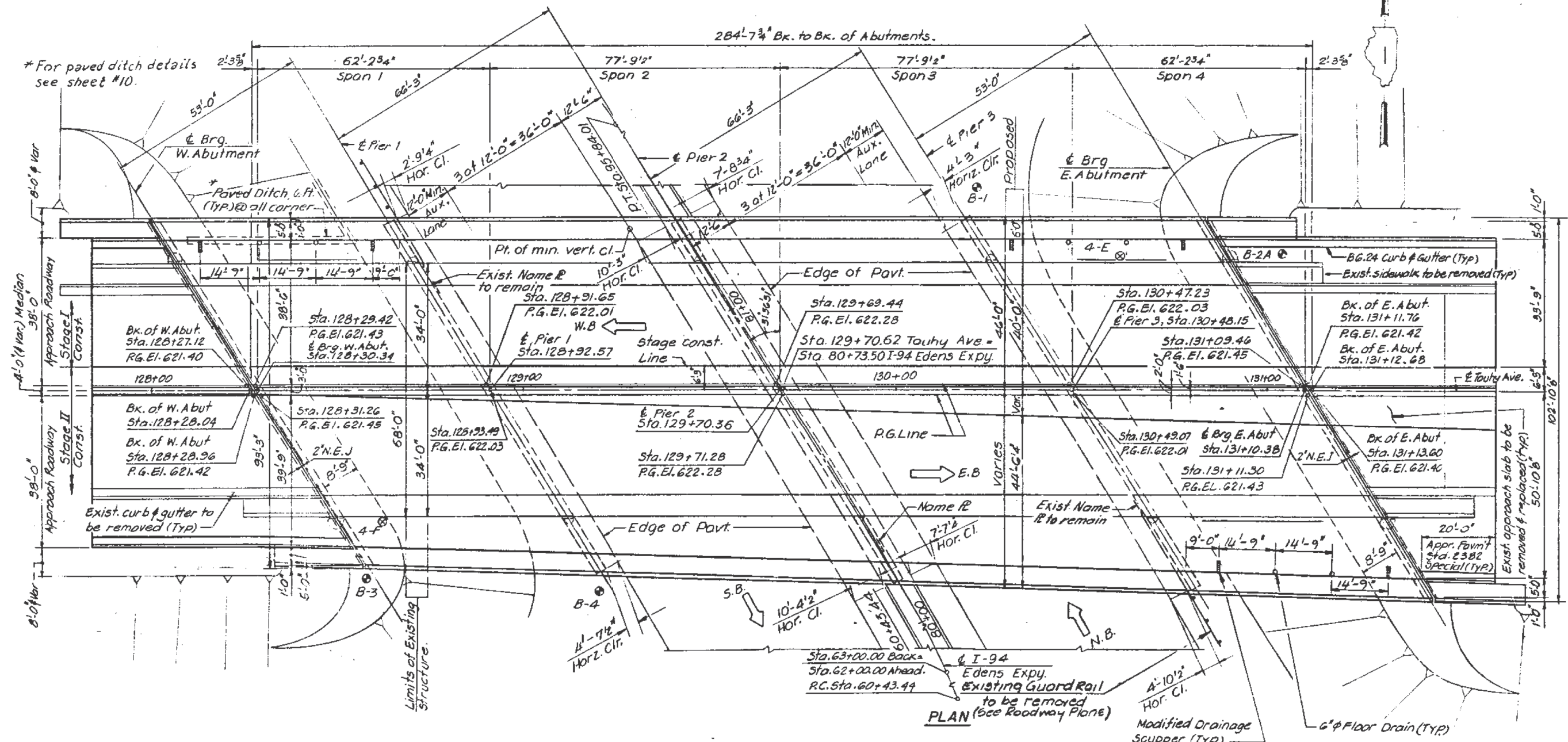
Oct 17 20 14
Omer Osman PE
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

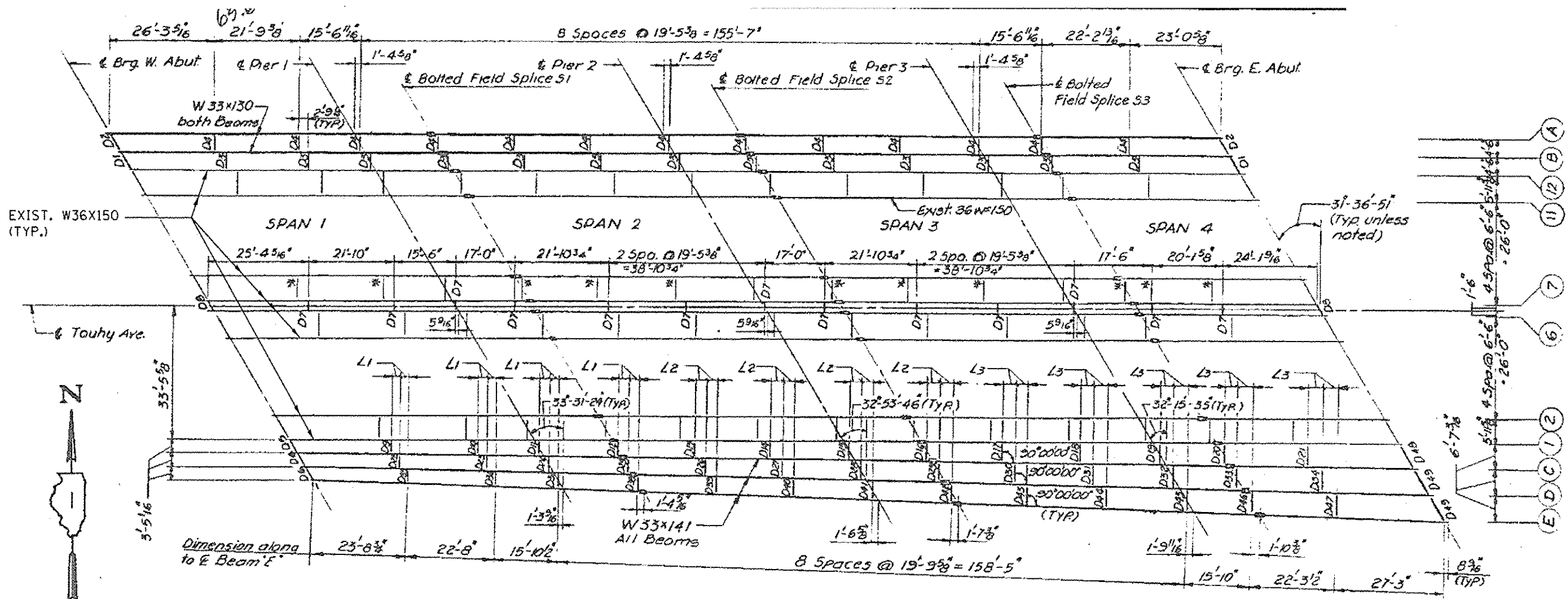
SUMMARY OF QUANTITIES			URBAN 100% STATE CONSTRUCTION TYPE CODE						SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE						
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0014					CODE NO	ITEM	UNIT	TOTAL QUANTITIES						
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4														
67100100	MOBILIZATION	L SUM	1	1														
70200100	NIGHT TIME WORK ZONE LIGHTING	L SUM	1	1														
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1														
X7010410	SPEED DISPLAY TRAILER	CAL MO	2.5	2.5														
20007112	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	1														
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1														



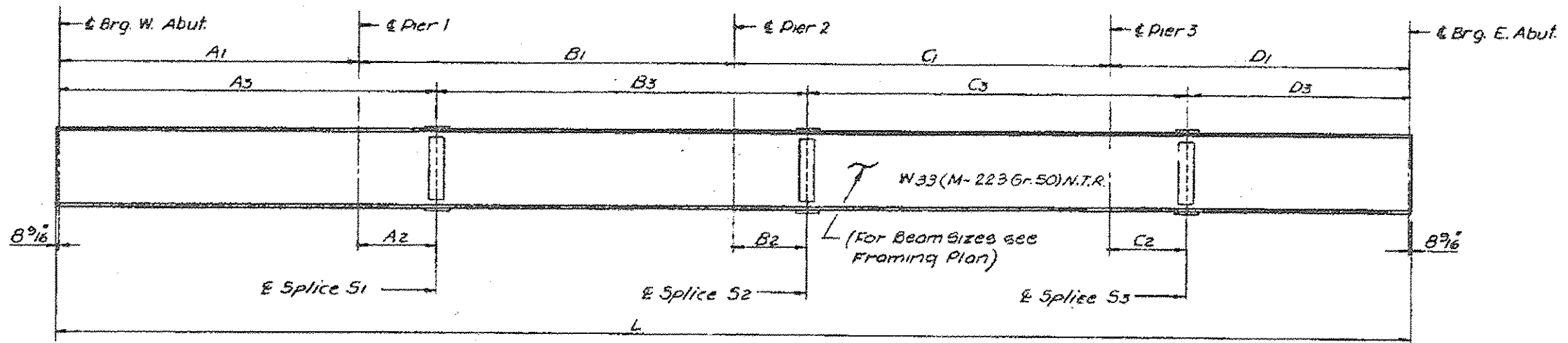
ELEVATION



FILE NAME :	USER NAME : osbornnp	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE PLANS SN 016-0713			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	c:\pwork\pwork\osbornnp\09408307\02115-sh1-plan.dgn	DRAWN -	REVISED -					375	0304.1MB-BP	COOK	10	4
	PLOT SCALE = 100.0000' / 1" =	CHECKED -	REVISED -					CONTRACT NO. 60Y77				
	PLOT DATE = 8/22/2014	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.		



FRAMING PLAN



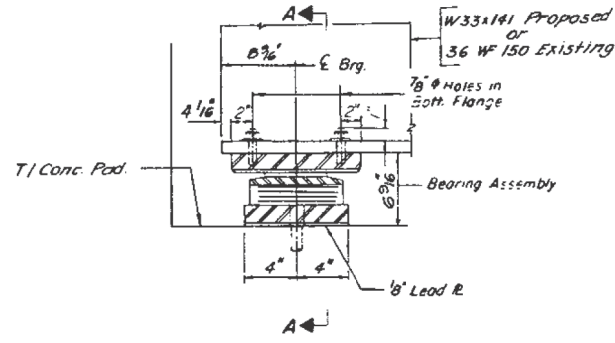
BEAM ELEVATION

EXISTING BEAMS 3, 4, 5, 8, 9, AND 10 NOT SHOWN FOR CLARITY, BUT SHALL BE CLEANED AND PAINTED ALONG WITH THE BEAMS SHOWN. THESE BEAMS ARE W36x150 WITH SIMILAR DIAPHRAGM DETAILS AND SPACING TO THOSE SHOWN.

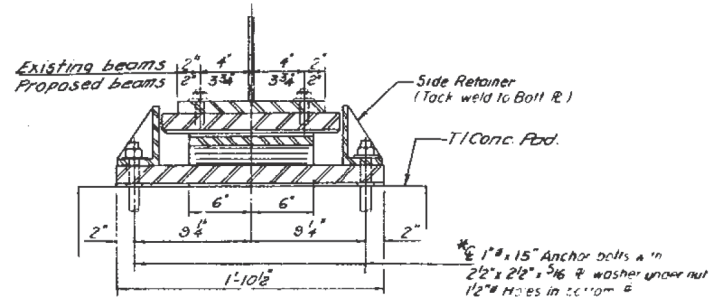
NOTE
ALL DIAPHRAGMS: W16X36

FILE NAME =	USER NAME = osbornep	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FRAMING PLAN SN 016-0713	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\p\work\p\dot\osbornep\04080307\01	2115-shr-plen.dgn	DRAWN -	REVISED -			375	0304.IHB-BP	COOK	10	5	
PLOT SCALE = 1/8"=1'-0"		CHECKED -	REVISED -			CONTRACT NO. 60Y77					
Default	PLOT DATE = 8/22/2014	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

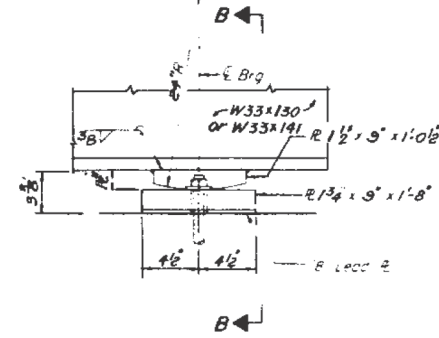
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



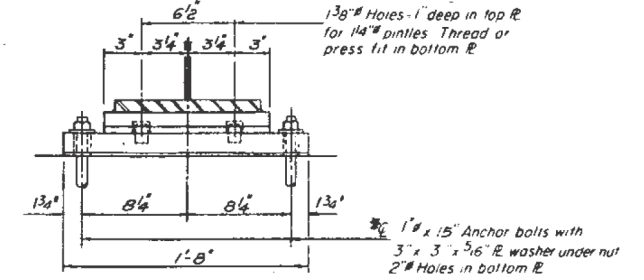
SECTION AT ABUT.



SECTION A-A



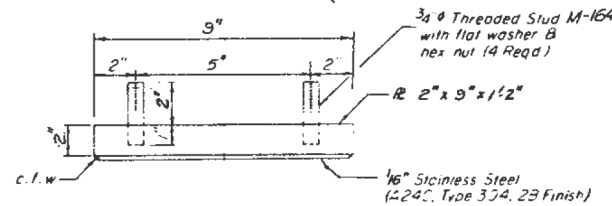
ELEVATION AT PIER # 2



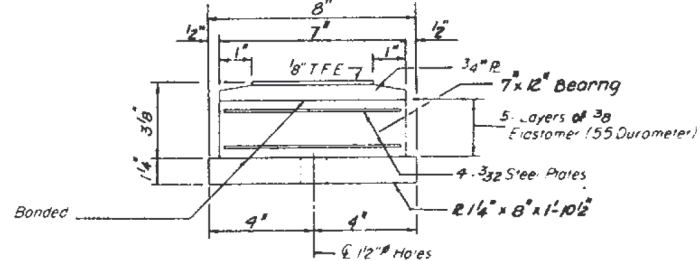
SECTION B-B

FIXED BEARING
(AT PIER 2, BEAMS A, B, C, D, & E)
(5 - Required)

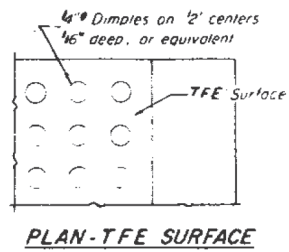
TYPE II TFE ELASTOMERIC EXP. BRG.
(West Abutment Beams 1 thru 12
East Abutment Beams 1 thru 12, C, D & E)



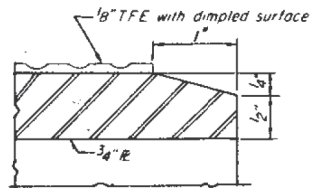
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY

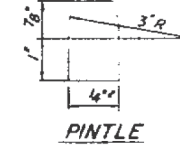


PLAN - TFE SURFACE

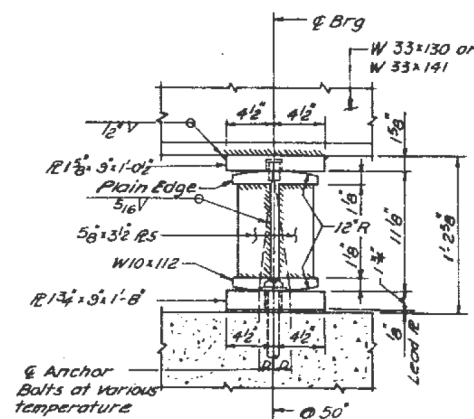


SECTION THRU TFE

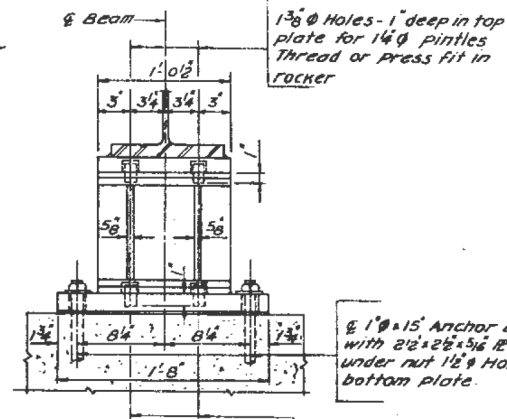
*Note: After girders have been erected
holes of expansion bearings shall be
drilled and anchor bolts grouted in place.
Anchor bolts of fixed bearings may be
built into the masonry.
For anchor bolt installation detail
see sheet # 26



PINTLE



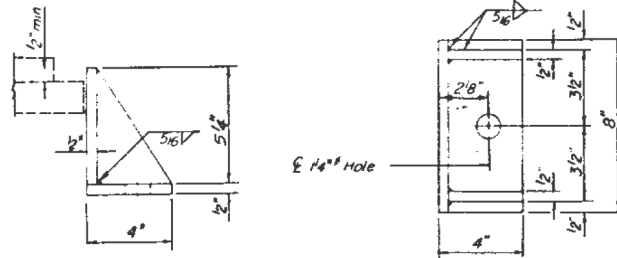
ELEVATION



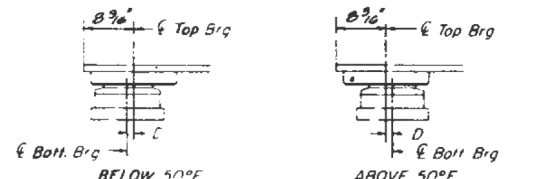
VIEW C-C

1 3/8" holes - 1" deep in rocker
for 1 1/4" pintles. Thread or
press fit in bottom fl.

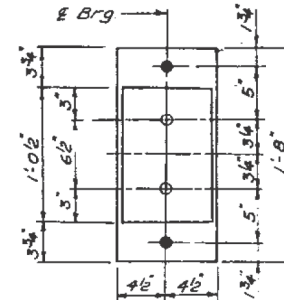
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SIDE RETAINER
(Equivalent rolled angle with stiffeners,
will be allowed in lieu of welded plates.)



SETTING ANCHOR BOLTS AT EXP. BRG.
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp of 50°F



PLAN

EXPANSION BEARING
(AT PIER '1' & '3', BEAMS A, B, C, D, & E)
(10 - Required)

Remove existing bearing of abutments including top plate welded to the beam. Grind & continuous fillet weld smooth after removing top plate. Anchor bolts to be left in place & cut flush with surface.

The contractor shall submit the jacking detail of existing stringers and the sequence of operations for an approval by the engineer.
Minimum Jacking Force = 10 T/beam.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Elastomeric Bearing Assembly, Type II	Each	27
Jack & Remove Existing Bearing	Each	24

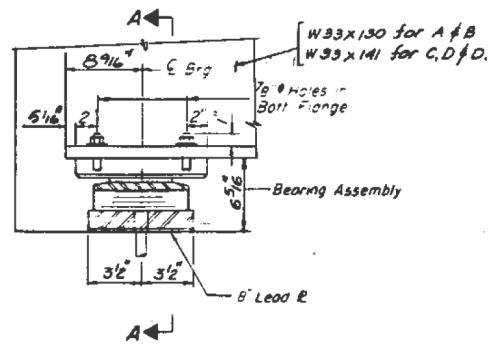
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Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

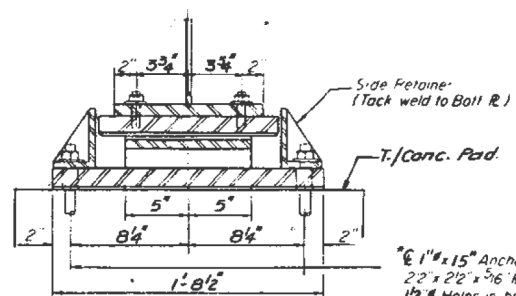
BEARING DETAILS
SN 016-0713

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
375	0304.IHB-BP	COOK	10	6
CONTRACT NO. 60Y77				
ILLINOIS FED. AID PROJECT				

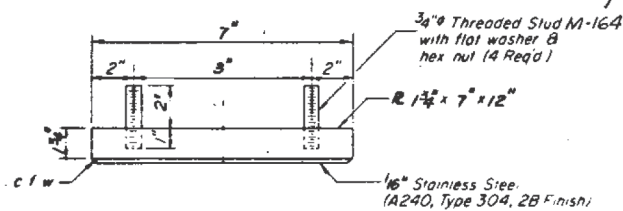


SECTION AT ABUT.

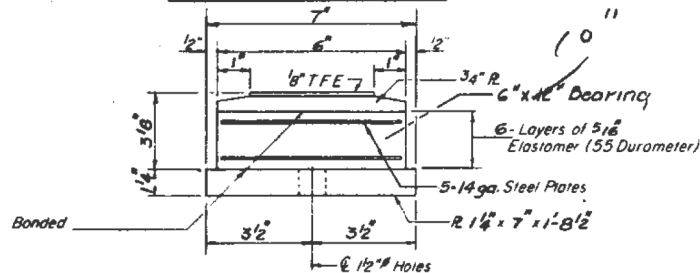


SECTION A-A

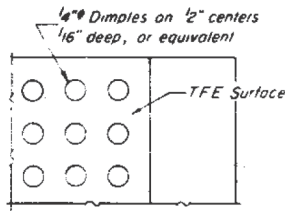
TYPE II TFE ELASTOMERIC EXP. BRG.
(West Abutment Beams A, B, C, D & E
East Abutment Beams A & B)



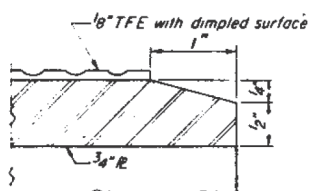
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY



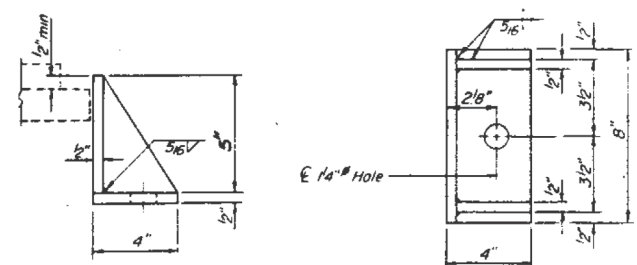
PLAN-TFE SURFACE



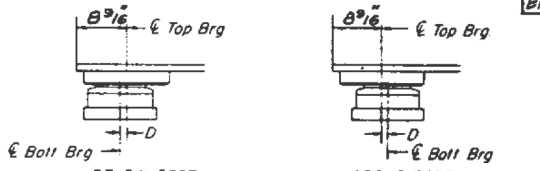
SECTION THRU TFE

*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. For anchor bolt installation detail see sheet # 26.

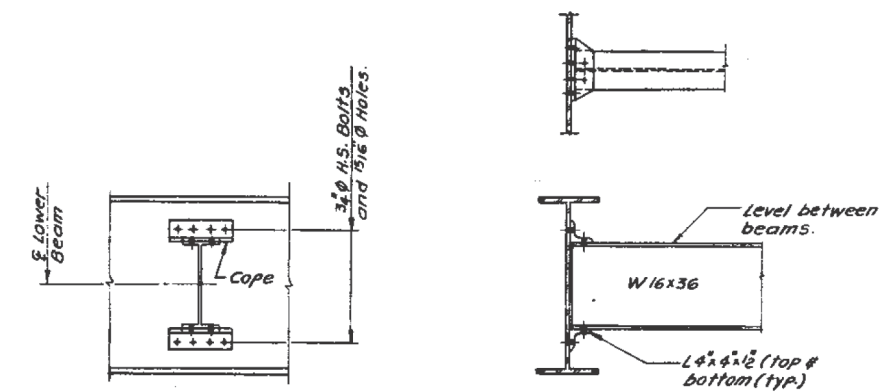
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SIDE RETAINER
(Equivalent rolled angle with stiffeners shall be allowed in lieu of welded plates.)

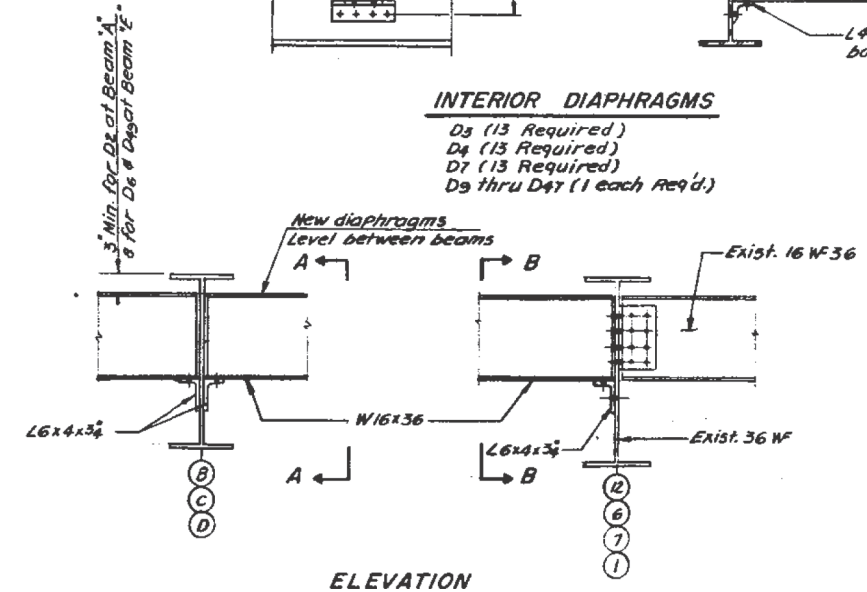


SETTING ANCHOR BOLTS AT EXP. BRG.
D = 1/8" per each 10° of expansion for every 15° temp change from the normal temp of 50°F

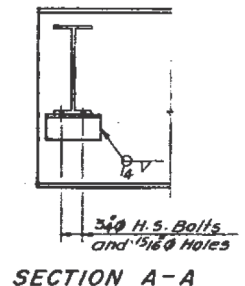


INTERIOR DIAPHRAGMS

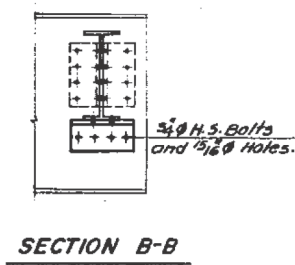
D5 (13 Required)
D4 (15 Required)
D7 (13 Required)
D9 thru D47 (1 each Req'd.)



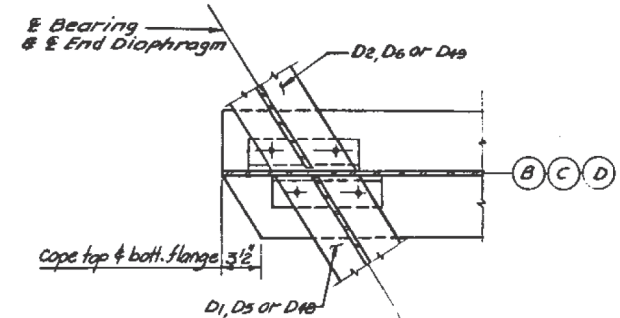
ELEVATION



SECTION A-A



SECTION B-B



PLAN
END DIAPHRAGMS

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Blastomeric Bearing Assembly, Type II	Each	7

D1 (2, Req'd.), D2 (2, Req'd.)
D5 (1, Req'd.)
D6 (2, Req'd.), D8 (2, Req'd.)
D48 (1 Req'd.), D49 (2, Req'd.)

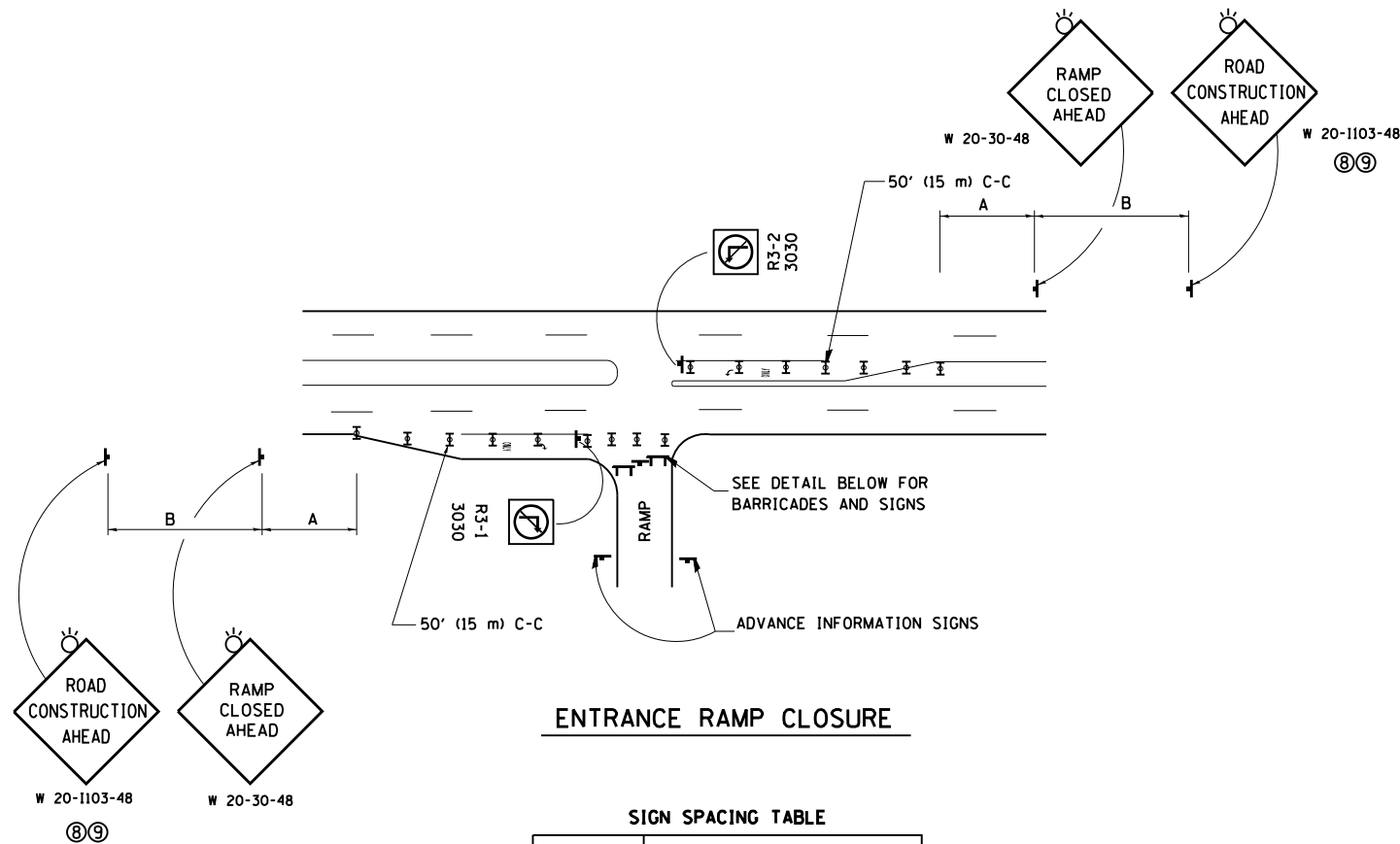
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Default	PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -
	PLOT DATE = 8/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
SN 016-0713

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
375	0304.IHB-BP	COOK	10	7
CONTRACT NO. 60Y77				
ILLINOIS FED. AID PROJECT				

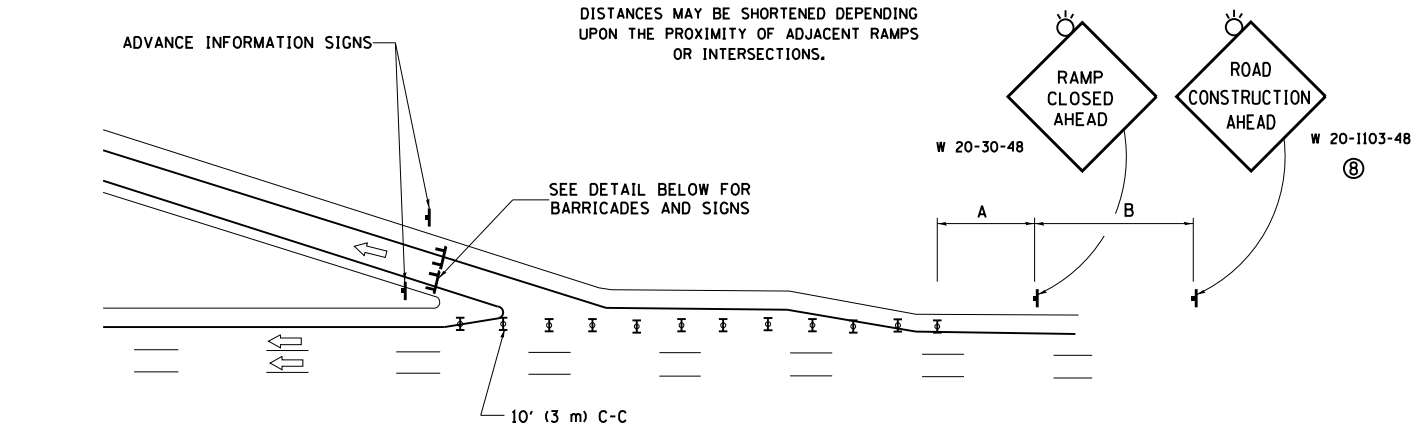


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

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

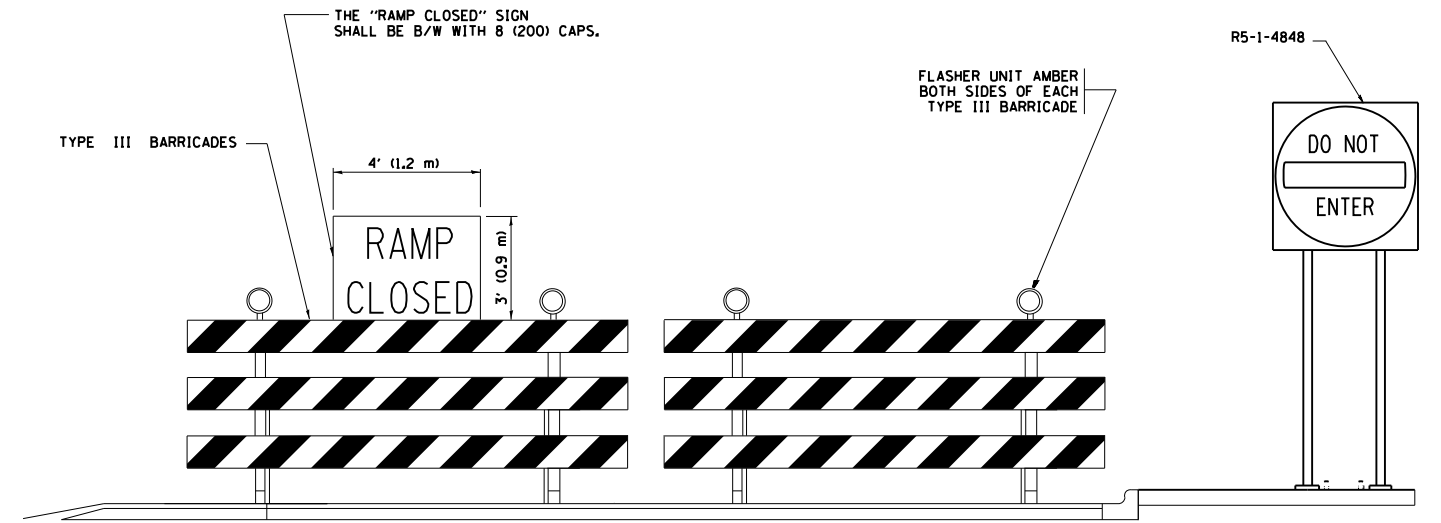
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

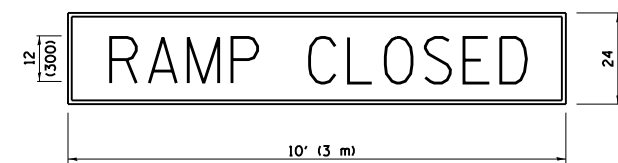
SYMBOLS

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



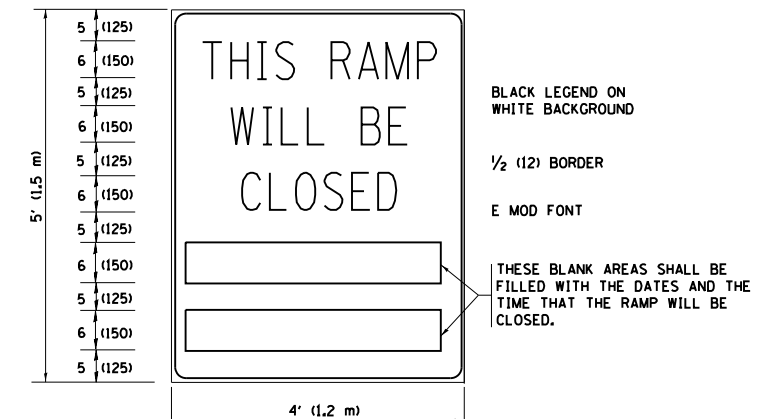
DETAIL FOR REQUIRED BARRICADES & SIGNS

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



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.

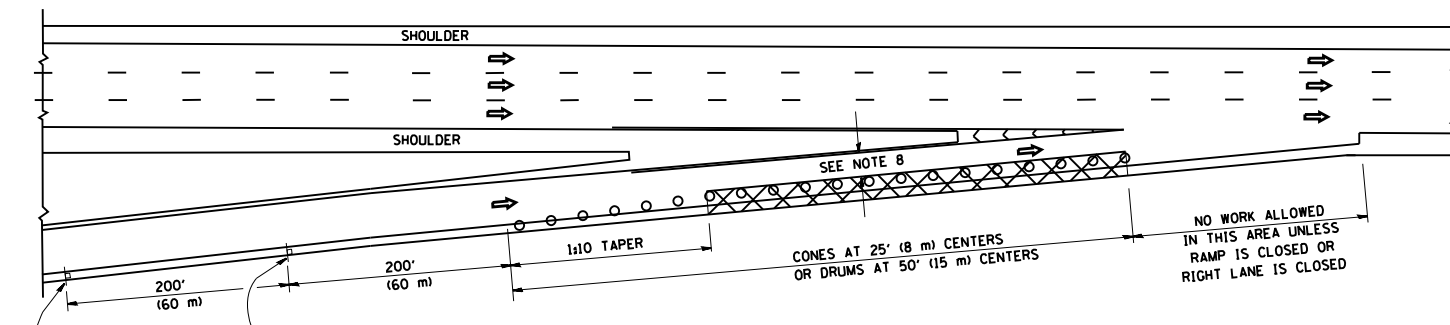
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	PLOT DATE = 8/22/2014	DATE - 02-83	REVISED - MD 06-13

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

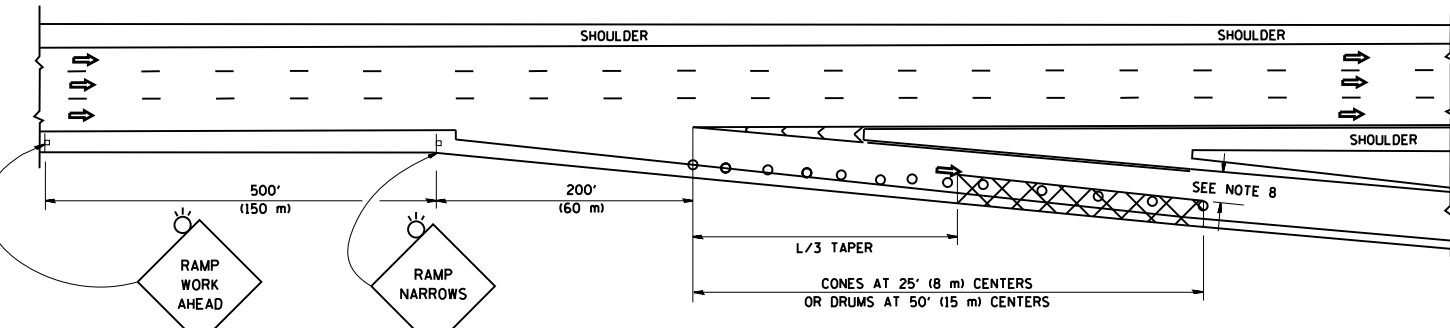
ENTRANCE AND EXIT RAMP CLOSURE DETAILS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
375	0304.IHB-BP	COOK	10	8
TC-08		CONTRACT NO. 60Y77		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

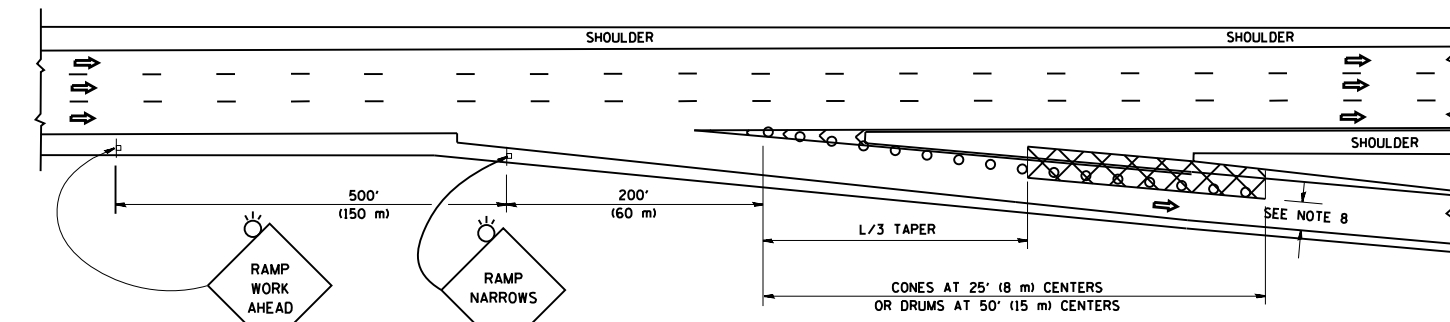
PARTIAL RAMP CLOSURE DETAILS



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

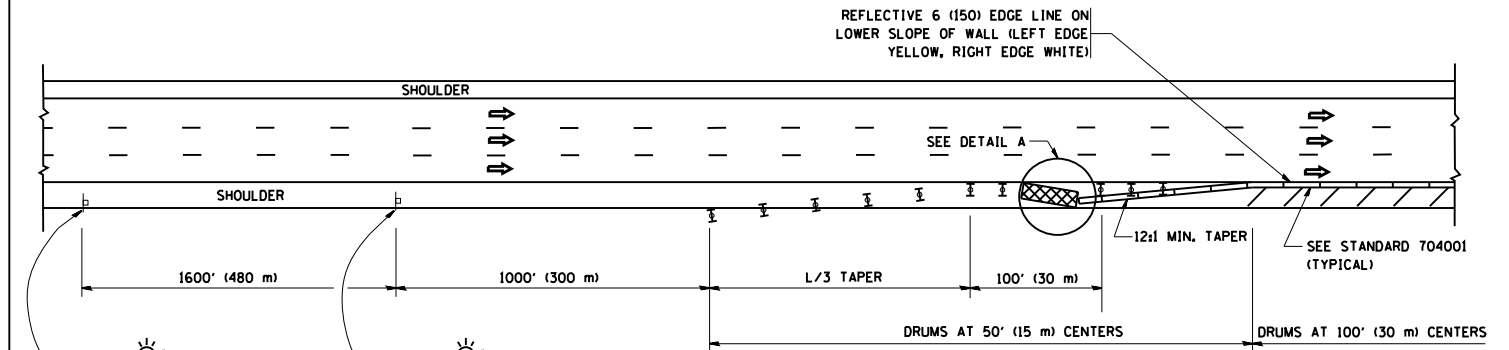
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

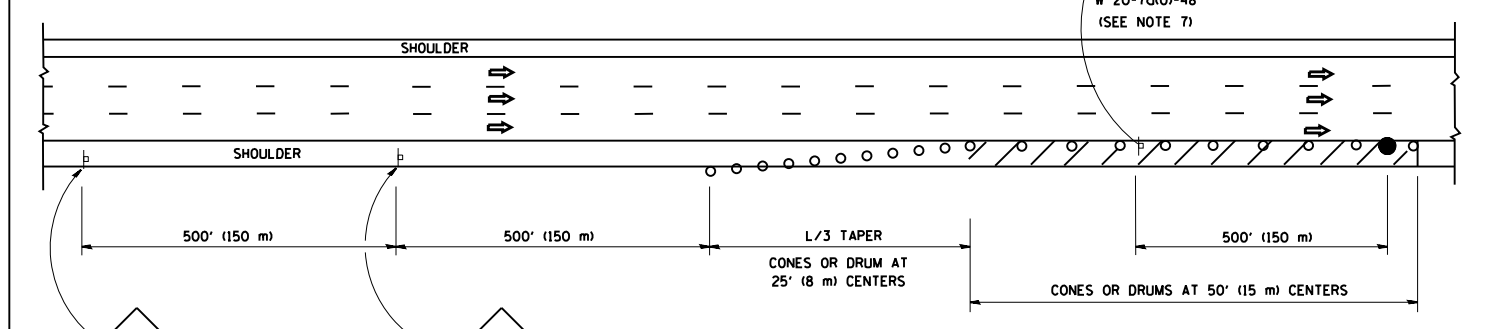
SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH
	$L=0.65(WXS)$ $L=(WXS)$

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

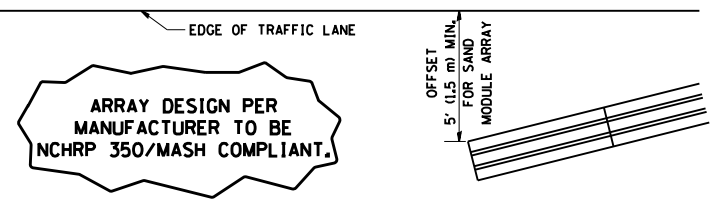


PERMANENT SHOULDER CLOSURE



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 = osbornnp	DESIGNED -	REVISED - J.A.F. 12-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw_work\p\dot\osbornnp\d0408307\Di\std.dgn		DRAWN - D.W.S.	REVISED - S.P.B. 01-07		375	0304.IHB-BP	COOK	10	10			
PLOT SCALE = 100.0000' / 1in.		CHECKED -	REVISED - S.P.B. 12-09		TC-17			CONTRACT NO. 60Y77				
PLOT DATE = 8/22/2014		DATE - 11-96	REVISED - M.D. 06-13		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				