

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 348: IL 43 (HARLEM AVE.)
LOC 1): OVER FAI 55 (STEVENSON EXPWY) (SN 016-0316)
LOC 2): OVER US 12/20 (95TH ST) (SN 016-0320)
 SECTION: 2009-070 BR
BEAM REPLACEMENT AND BRIDGE REPAIRS
COOK COUNTY
C-91-814-09

FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENTS LOCATED IN
THE VILLAGES OF FOREST VIEW
AND BRIDGEVIEW

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2009-070 BR	COOK	17	1
		ILLINOIS	CONTRACT NO. 60H78	

D-91-814-09



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

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

PROJECT ENGINEER: ROBERT BORO (847) 705-4178
PROJECT MANAGER: KEN ENG (847) 705-4847

CONTRACT NO. 60H78

LOCATION 2)
SN 016-0320

TRAFFIC DATA: (LOC 2)
 IL 43: 2007 ADT = 44,100
 POSTED SPEED LIMIT = 40 MPH
 US 12/20: 2007 ADT = 33,600
 POSTED SPEED LIMIT = 45 MPH



LOCATION 1)
SN 016-0316

TRAFFIC DATA: (LOC 1)
 IL 43: 2007 ADT = 47,500
 POSTED SPEED LIMIT = 40 MPH
 I-55: 2007 ADT = 135,600
 POSTED SPEED LIMIT = 55 MPH

STICKNEY AND WORTH TOWNSHIPS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED DECEMBER 15, 20 09

Diana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

January 29, 20 10
Scott E. Stitt, P.E.
Acting ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 20 10
Christine M. Reed
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	TITLE SHEET	701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
2	INDEX OF SHEETS, STATE STANDARDS, & GENERAL NOTES	701400-04	APPROACH TO LANE CLOSURE, FREEWAY/ EXPRESSWAY
3	SUMMARY OF QUANTITIES	701401-05	LANE CLOSURE, FREEWAY/ EXPRESSWAY
4-8	BRIDGE REPAIR DETAILS - SN 016-0316 (LOC 1)	701411-06	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
9-10	BRIDGE REPAIR DETAILS - SN 016-0320 (LOC 2)		
11	TRAFFIC STAGING PLANS	701426-03	LANE CLOSURE, MULTILANE, INTERMITTENT OF MOVING OPERATIONS, FOR SPEEDS ≥ 45 MP
12	PAVEMENT MARKINGS PLAN	701446-01	TWO LANE CLOSURE FREEWAY/ EXPRESSWAY
13	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS	701601-06	URBAN LANE CLOSURE MULTILANE 1W OR 2W WITH NONTRAVERSABLE MEDIAN
14	DISTRICT ONE TYPICAL PAVEMENT MARKINGS	701801-04	LANE CLOSURE, MULTILANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
15	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING	701901-01	TRAFFIC CONTROL DEVICES
16	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES	704001-06	TEMPORARY CONCRETE BARRIER
17	ARTERIAL ROAD INFORMATION SIGN		

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 & GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES

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

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.

WHEN ARTIFICIAL LIGHT IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCES, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER

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

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

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

THE "ARTERIAL ROAD INFORMATION SIGN (TC-22)" [AND THE SPECIAL PROVISION FOR "WORK ZONE TRAFFIC CONTROL (LUMP SUM PAYMENT)"] IS/ARE APPLICABLE ONLY TO ARTERIAL ROADS AND SHALL NOT BE APPLIED TO EXPRESSWAYS/TOLLWAYS.

A MINIMUM OF 10 DAYS BEFORE BEGINNING ANY WORK ON IL 43 (HARLEM AVE.), THE CONTRACTOR SHALL CONTACT THE BUREAU OF TRAFFIC SIGNALS AT (847) 705-4424. IN ADDITION, THE CONTRACTOR SHALL CONTACT THE BUREAU OF TRAFFIC SIGNALS A MINIMUM OF ONE DAY IN ADVANCE OF THE FOLLOWING THREE STAGES: THE START OF JOB, THE POURING OF CONCRETE, AND THE COMPLETION OF THE PARAPET WALL.

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

THE ENGINEER SHALL CONTACT PATRICE HARRIS, AREA TRAFFIC FIELD TECHNICIAN AT (708) 597-9800 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THE CONTRACTOR SHALL SALVAGE AND RETURN THE EXISTING STEEL CARRIER BEAM (W27X194, 94'-0") TO: DISTRICT BRIDGE OFFICE, 1101 BIESTERFIELD RD, ELK GROVE VILLAGE IL 60007. CONTACT SHAKER ASFOUR AT (847) 965-1501. THIS WORK SHALL INCLUDE REMOVING, TRANSPORTING AND UNLOADING THE EXISTING CARRIER BEAM TO THE ABOVE YARD WHICH COST IS INCLUDED IN THE COST OF "STRUCTURAL STEEL REMOVAL".

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 EXISTING DECK, DAMAGED BEAM OR CARRIER BEAM. THIS COST IS INCLUDED IN THE COST OF "STRUCTURAL STEEL REMOVAL"

FILE NAME =	USER NAME = midjja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw_work\pw1007\MIDYJA\0163067\0181449-sht-plan.dgn		DRAWN -	REVISED -		STATE STANDARDS, GENERAL NOTES			0348	2009-070 BR	COOK	17	2
		CHECKED -	REVISED -		SCALE: NONE			SHEET NO. OF SHEETS STA.		TO STA.		
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							
				CONTRACT NO. 60H78								

SUMMARY OF QUANTITIES			URBAN 100% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					SFTY-2A	SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT		LOC 1 016-0316	LOC 2 016-0320						CODE NO	ITEM		UNIT				
X5080600	MECHANICAL SPLICERS	EACH	268	268														
50102400	CONCRETE REMOVAL	CU YD	30.5	30.5														
50157300	PROTECTIVE SHIELD	SQ YD	155	155														
50300255	CONCRETE SUPERSTRUCTURE	CU YD	30.5	30.5														
50300260	BRIDGE DECK GROOVING	SQ YD	48	48														
50300300	PROTECTIVE COAT	SQ YD	104.5	104.5														
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	20620	20620														
50500505	STUD SHEAR CONNECTORS	EACH	392	392														
50501110	STRUCTURAL STEEL REMOVAL	POUND	18830	18830														
50501130	STRUCTURAL STEEL REPAIR	POUND	660		660													
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	6460	6460														
50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	74	74														
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	3	1													
67100100	MOBILIZATION	L SUM	1	0.75	0.25													
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1														
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	0.5	0.5													
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1														
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	613	613														
70400100	TEMPORARY CONCRETE BARRIER	FOOT	400	400														
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	610	610														
* 78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	85	85														
78300100	PAVEMENT MARKING REMOVAL	SQ FT	290	290														
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	102.8	77.1	25.7													
X0325702	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1														
X0325775	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 4 INCH	FOOT	2060	2060														
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1														
Z0003600	BEAM STRAIGHTENING	L SUM	1	0.75	0.25													
Z0030240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	3	3														
Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	1	1														

*Specialty Items

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

Fasteners shall be high strength bolts. Flange splice holes shall be $1\frac{5}{16}$ " ϕ for $1\frac{1}{8}$ " ϕ bolts. Web splice holes shall be $1\frac{3}{16}$ " ϕ for $3/4$ " ϕ bolts.

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

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".

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60. See Special Provisions.

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 in the cost of Furnishing and Erecting Structural Steel.

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

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

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 shall be included with Concrete Removal.

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

All construction joints shall be bonded.

The existing 2" ϕ and 4" ϕ conduits shown in Section A-A, on sheet 3 of 5, are to be removed and re-installed. Cost shall be included in the cost of Concrete Removal.

Field welding of construction accessories will not be permitted to beams.

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.

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. 2.5 YR 3/4. See Special Provision "Cleaning and Painting New Metal Structures".

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.

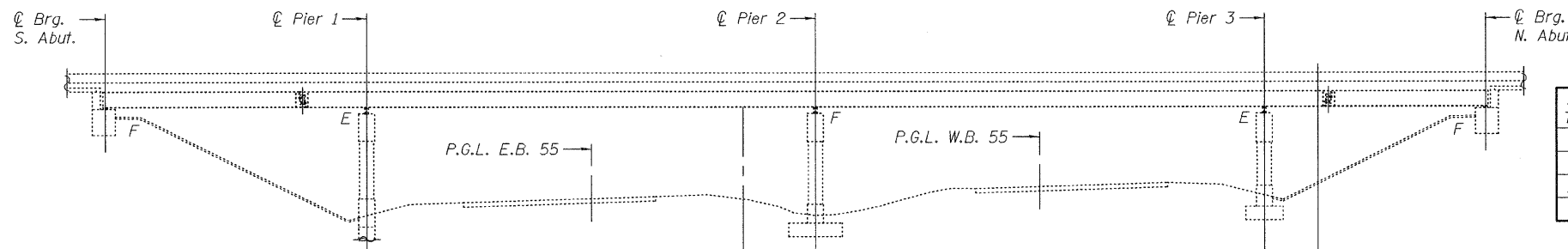
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

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.

The steel beam which is part of the temporary slab support system currently installed over Beam 24 on Span 3 is to be removed and returned to the District.

The beam should be delivered to the District Maintenance Yard at 1101 Biesterfeld Rd., Elk Grove, IL 60007 between the hours of 8 am and 2 pm.

Mr. Shaker Asfour should be notified prior to the delivery of the beam at 847-956-1501. The beam splices may be removed for transport but the beam should not be cut. The contractor shall be responsible for providing the crane to unload the beam. Cost included with Concrete Removal.

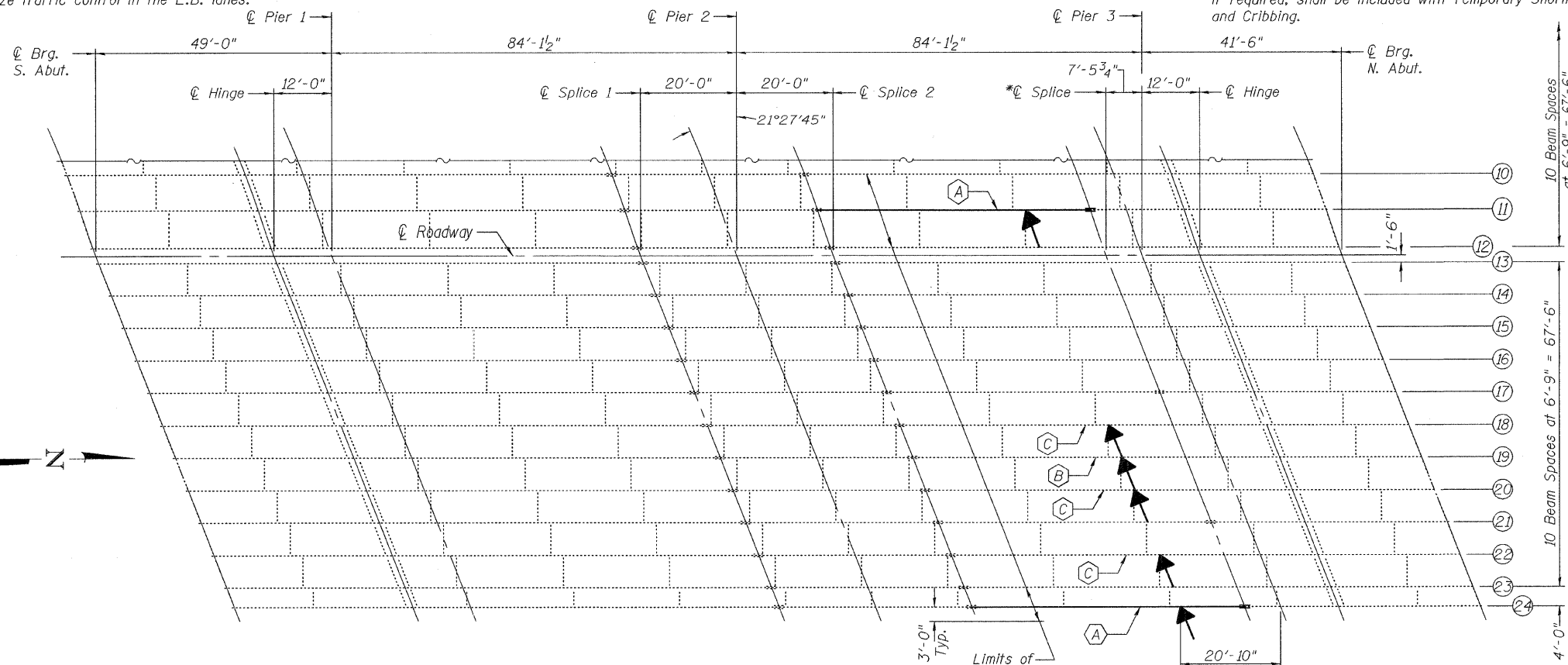


Q	(k)	21.1
L	(k)	31.1
Imp.	(k)	9.3
Total	(k)	61.5

Temporary shoring for Beams 11 and 24 may be required to facilitate alignment of existing splices. Use 12"x12" timbers or HP's. Cost shall be included in the cost of temporary shoring and cribbing. The shoring shall be removed as soon as possible after the splice has been connected to minimize traffic control in the E.B. lanes.

ELEVATION

Temporary shoring is required for Beams 11 and 24 South of hinge. To be paid for as Temporary Shoring and Cribbing. Removal and Replacement of the slopewall, if required, shall be included with Temporary Shoring and Cribbing.

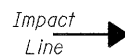


SCOPE OF WORK

- (A) Remove and replace existing beam section.
- (B) Beam Straightening.
- (C) Beam Straightening and Strengthening.

*Location of Existing Splice at Beam 24
Location of New Splice at Beam 11

PARTIAL FRAMING PLAN



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	30.5
Concrete Superstructure	Cu. Yd.	30.5
Reinforcement Bars, Epoxy Coated	Pound	6,460
Stud Shear Connectors	Each	392
Furnishing and Erecting Structural Steel	Pound	20,620
Beam Straightening	L.S.	0.75
Removing and Re-erecting Existing Railing	Foot	74
Protective Shield	Sq. Yd.	155
Temporary Shoring and Cribbing	L.S.	1
Mechanical Splicers	Each	268
Bridge Deck Grooving	Sq. Yd.	48
Protective Coat	Sq. Yd.	104.5
Structural Steel Removal	Pound	18,830

PLAN AND ELEVATION

SN 016-0316

DESIGNED: Alan J. Holloway
CHECKED: [Signature]
DRAWN: [Signature]
CHECKED: ATH [Signature]

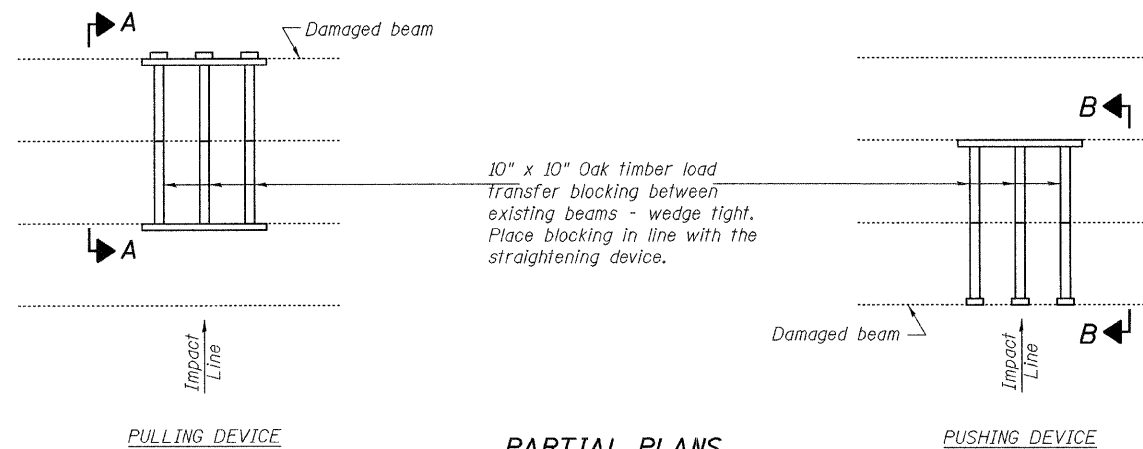
January 22, 2010
EXAMINED: [Signature]
PASSED: [Signature]
ENGINEER OF BRIDGES AND STRUCTURES



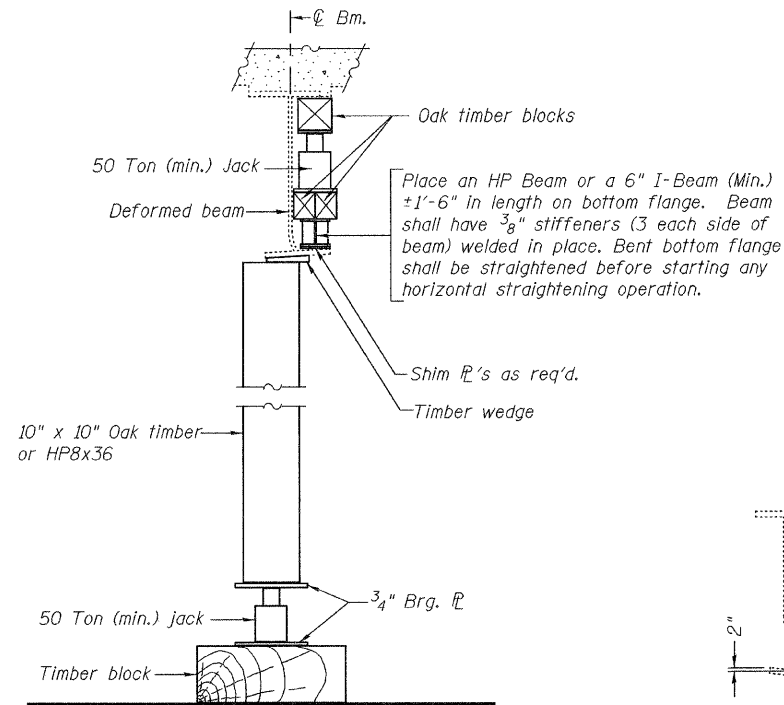
Expires: November 30, 2010

SHEET NO. 1 5 SHEETS	F.A.I. RTE. 55	SECTION 2009-070BR	COUNTY Cook	TOTAL SHEETS 17	SHEET NO. 4
	FED. ROAD DIST. NO. ILLINOIS		CONTRACT NO. 60H78		

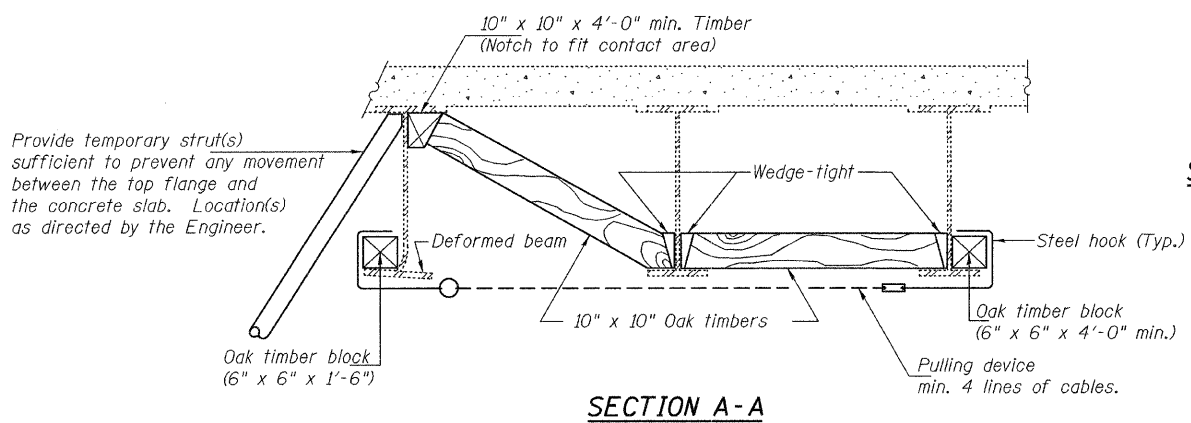
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



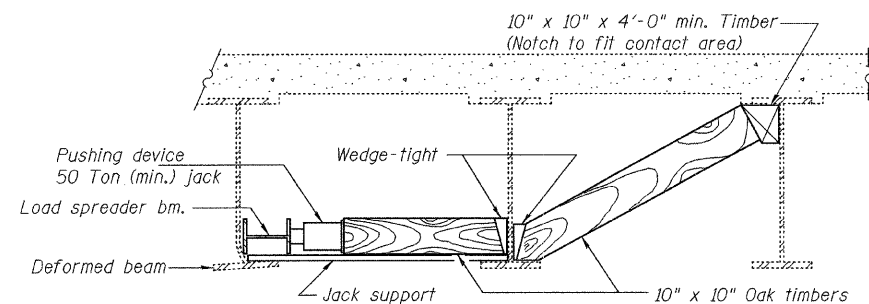
PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS
Straightening force shall be maintained on all load transfer blocking during beam straightening.



SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct flange rotation.)



SECTION A-A



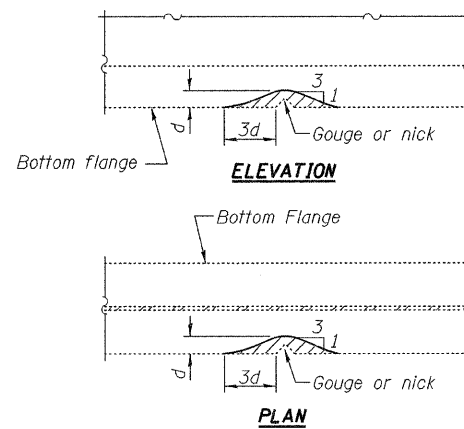
SECTION B-B

DESIGNED	A.T.H.
CHECKED	G.G.E.
DRAWN	Drew Christopher
CHECKED	A.T.H. G.G.E.

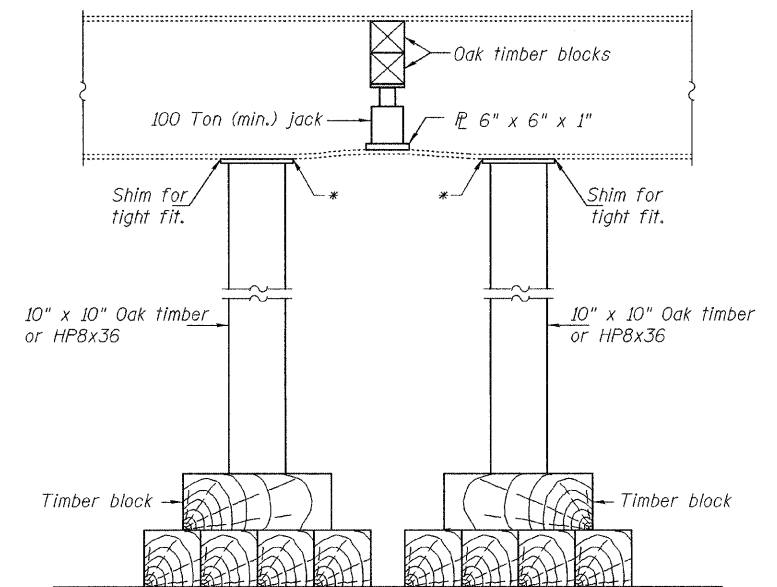
EXAMINED	January 22, 2010 <i>A. Carl Kruger</i> ENGINEER OF STRUCTURAL SERVICES
PASSED	<i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES

REP-1 1-14-2005
SLT-91-001-09

EXISTING DEFORMATION TO BE STRAIGHTENED
(Looking South)
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately 4'-0".



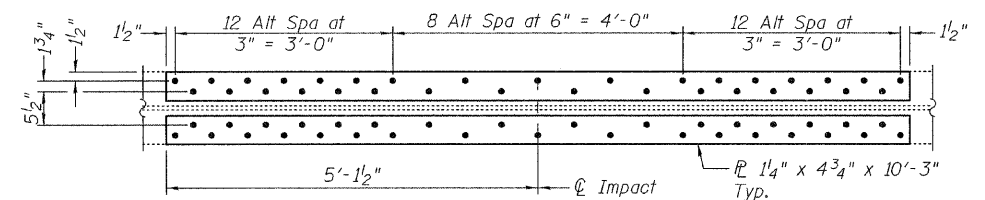
Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Grind surfaces shall be inspected for cracks using magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Grind 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.



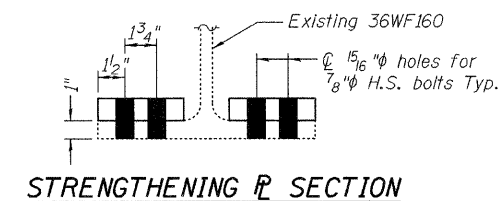
SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)

* 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.



REPAIR & STRENGTHENING R SECTION
(Beams 18, 20 and 22)

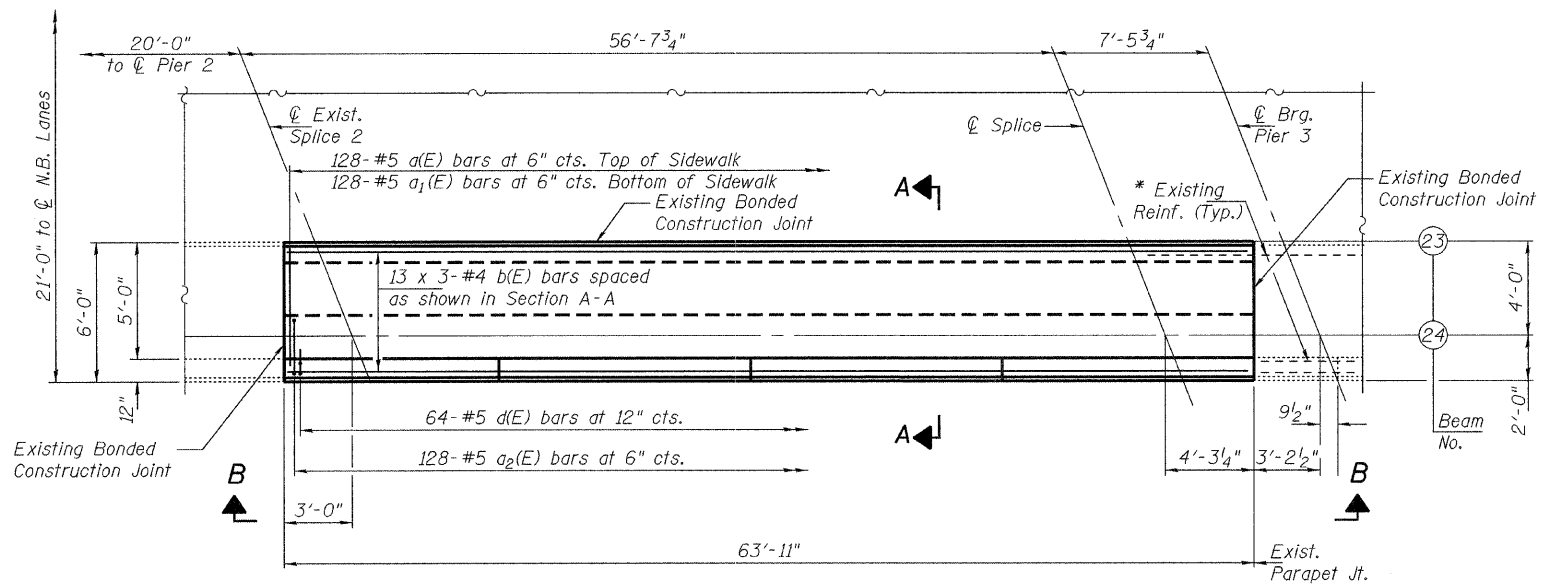


STRENGTHENING R SECTION

BEAM STRAIGHTENING AND STRENGTHENING DETAILS
SN 016-0316

SHEET NO. 2 5 SHEETS	F.A.I. RTE. 55	SECTION 2009-070BR	COUNTY Cook	TOTAL SHEETS 17	SHEET NO. 5
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60H78		

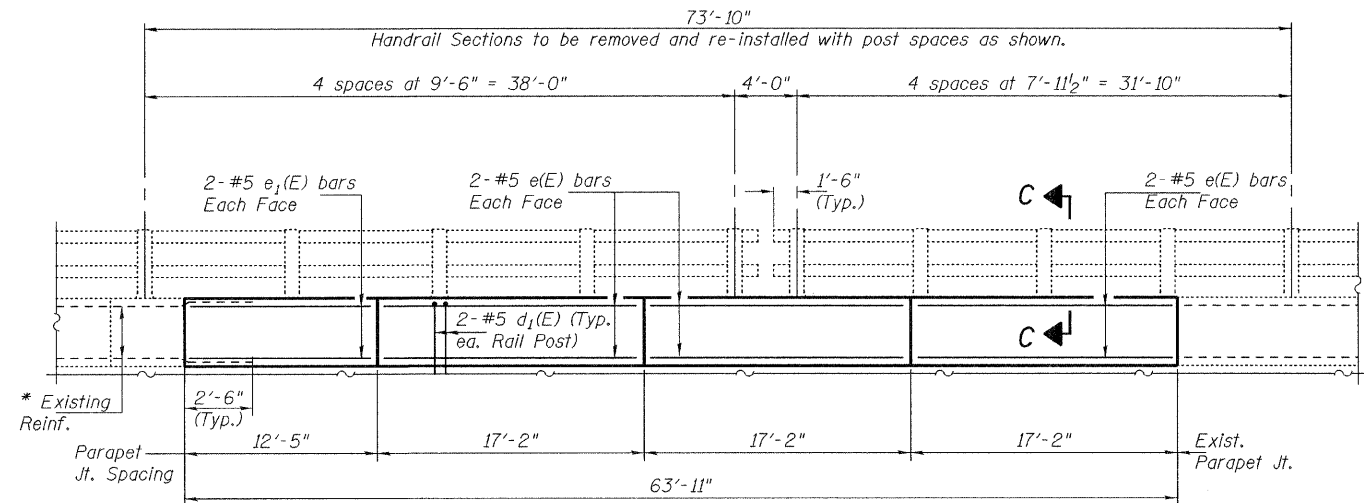
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



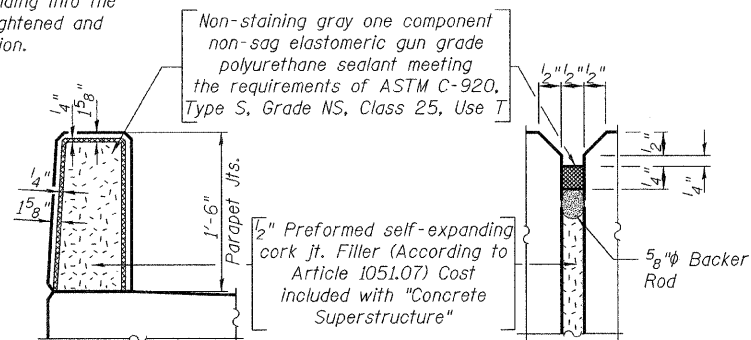
**PARTIAL PLAN
CONCRETE REMOVAL & REPLACEMENT**

Perimeters of concrete removal areas shall be saw cut $\frac{3}{4}$ " prior to the removal of concrete. Existing reinforcement shall be cut only if required for fitting bolts. Cut reinforcement shall be spliced as directed by the Engineer. Cost shall be included in the cost of "Concrete Superstructure".

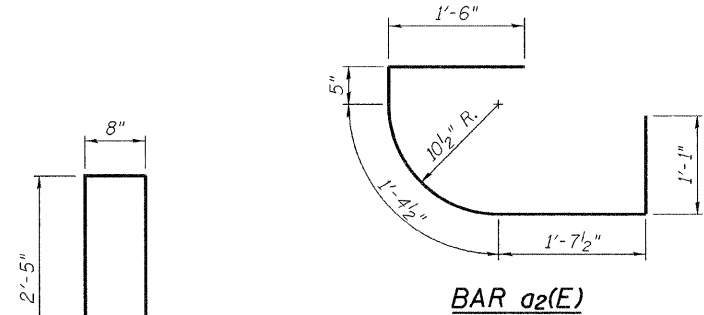
* Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction.



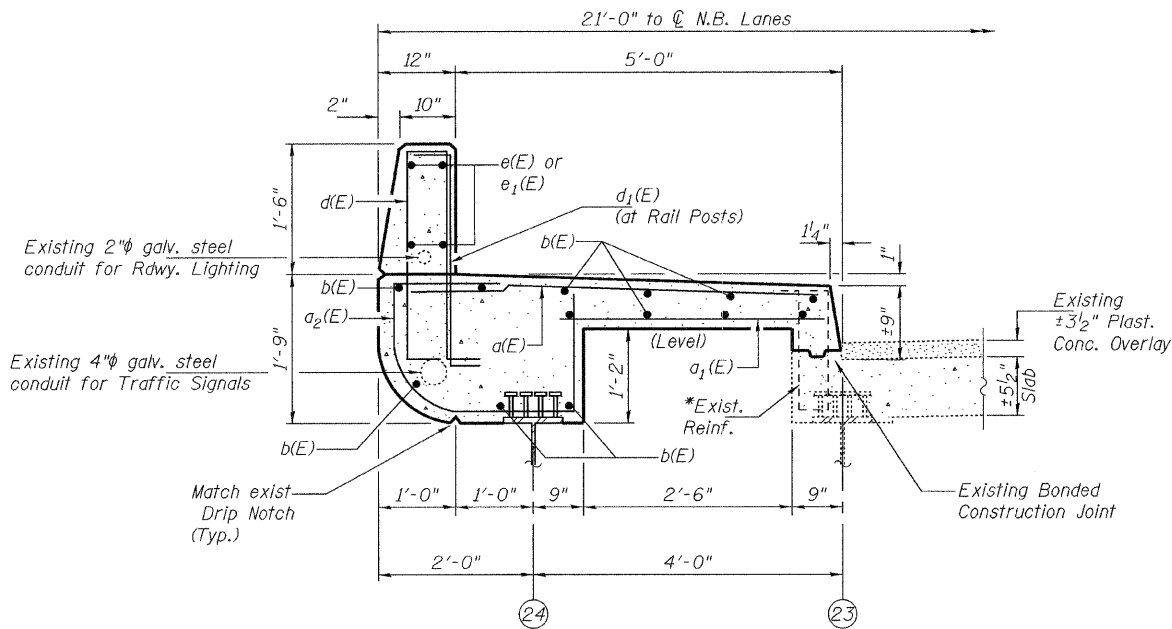
VIEW B-B



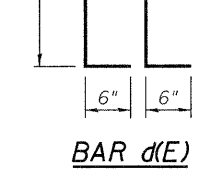
SECTION AT PARAPET



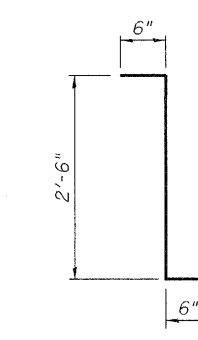
BAR a2(E)



SECTION A-A



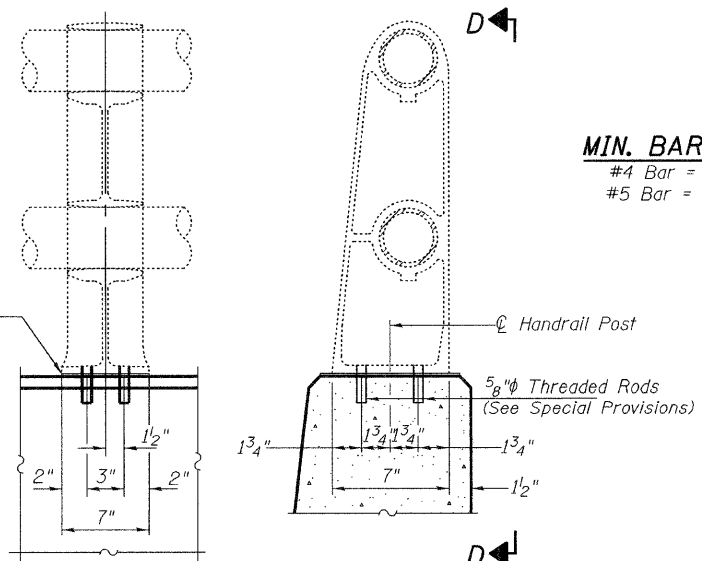
BAR d(E)



BAR d1(E)

MIN. BAR LAPS

#4 Bar = 1'-8"
#5 Bar = 2'-2"



VIEW D-D

SECTION C-C

HANDRAIL POST DETAILS

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	128	#5	5'-9"	—
a1(E)	128	#5	4'-6"	—
a2(E)	128	#5	6'-0"	U
b(E)	39	#4	22'-4"	—
d(E)	64	#5	6'-6"	—
d1(E)	16	#5	3'-6"	—
e(E)	12	#5	16'-10"	—
e1(E)	4	#5	12'-1"	—
Concrete Removal			Cu. Yd.	18.5
Concrete Superstructure			Cu. Yd.	18.5
Reinforcement Bars, Epoxy Coated			Lbs.	3,500

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 13 x 3-#4 etc. indicates 13 lines of bars with 3 lengths per line.

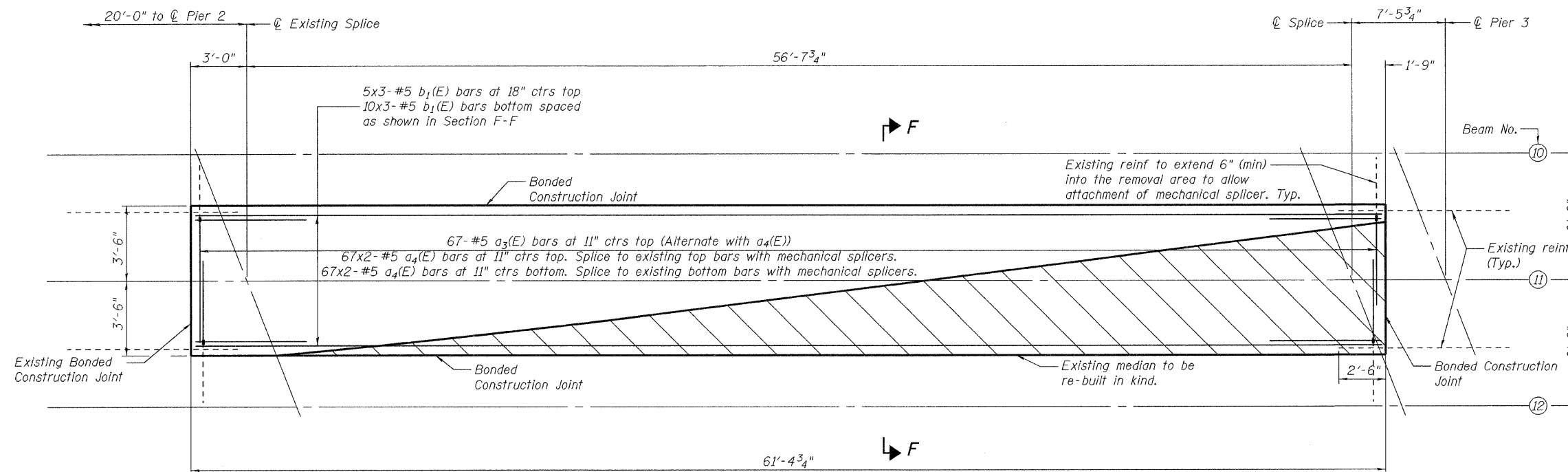
**SIDEWALK DETAILS
SN 016-0316**

DESIGNED	A.T.H.
CHECKED	G.G.E.
DRAWN	Drew Christopher
CHECKED	A.T.H. G.G.E.

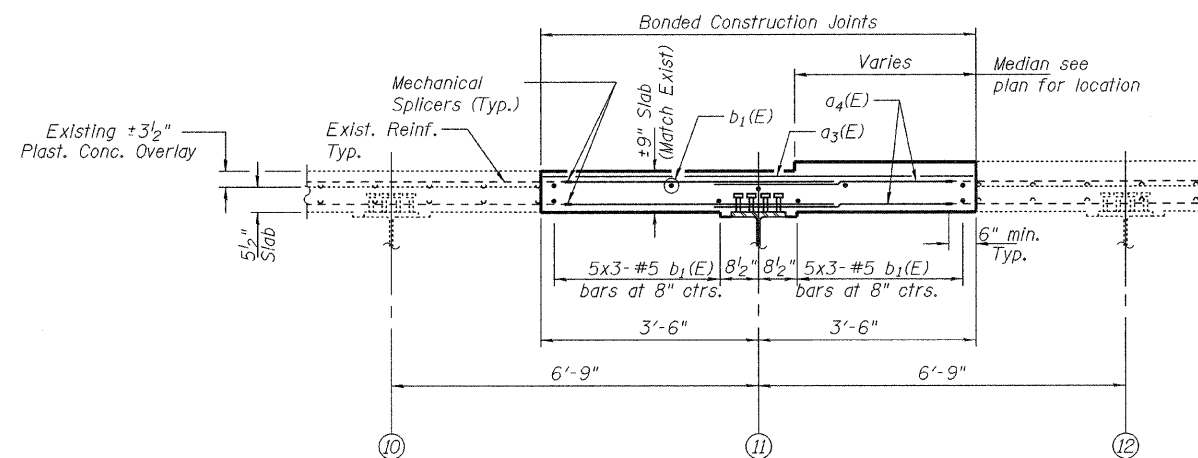
EXAMINED	January 22, 2010
PASSED	<i>Carl Krueger</i> ENGINEER OF STRUCTURAL SERVICES
	<i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 3 5 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	2009-070BR	Cook	17	6
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
			CONTRACT NO. 60H78		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Hatched area indicates existing turning lane median to be removed and replaced monolithically with deck section. Cost included with Concrete Superstructures.



SECTION F-F

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₃ (E)	67	#5	7'-7"	—
a ₄ (E)	268	#5	5'-0"	—
b ₁ (E)	45	#5	22'-0"	—
			Mechanical Splicers	Each 268
			Concrete Removal	Cu. Yd. 12.0
			Concrete Superstructure	Cu. Yd. 12.0
			Reinforcement Bars, Epoxy Coated	Lbs. 2,960

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 13 x 3-#4 etc. indicates 13 lines of bars with 3 lengths per line.

MIN. BAR LAPS

#5 Bar = 2'-2"

DECK DETAILS

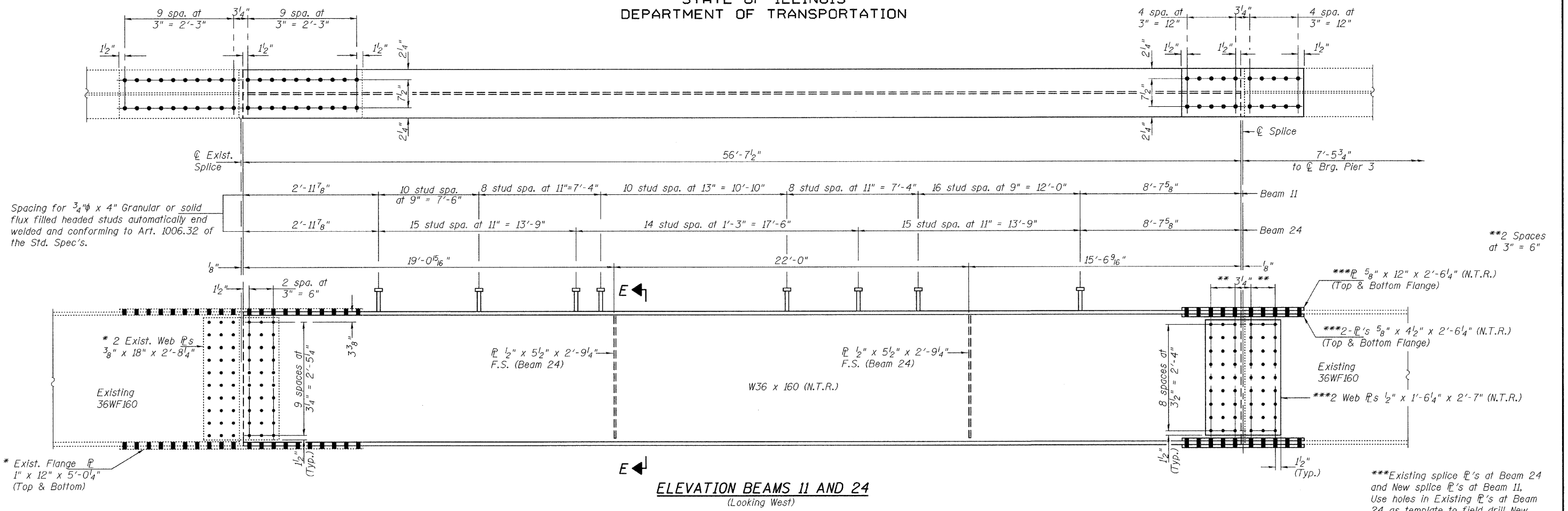
SN 016-0316

DESIGNED	A.T.H.
CHECKED	G.G.E.
DRAWN	Drew Christopher
CHECKED	A.T.H. G.G.E.

January 22, 2010
EXAMINED *Carl Perry*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 4 5 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	2009-070BR	Cook	17	7
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 60H78

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION BEAMS 11 AND 24
(Looking West)

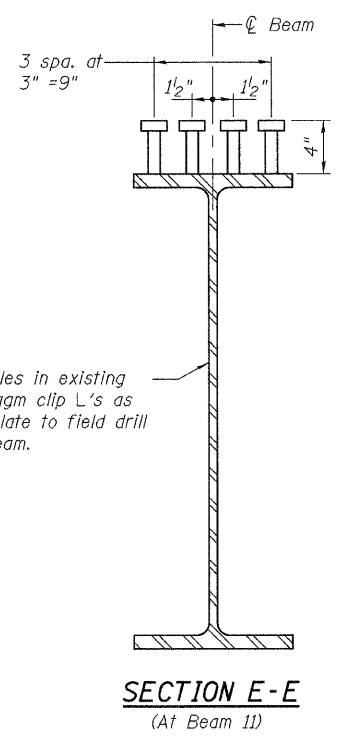
Spacing for 3/4"φ x 4" Granular or solid flux filled headed studs automatically end welded and conforming to Art. 1006.32 of the Std. Spec's.

**2 Spaces at 3" = 6"

* Exist. Flange PL 1" x 12" x 5'-0 1/4" (Top & Bottom)

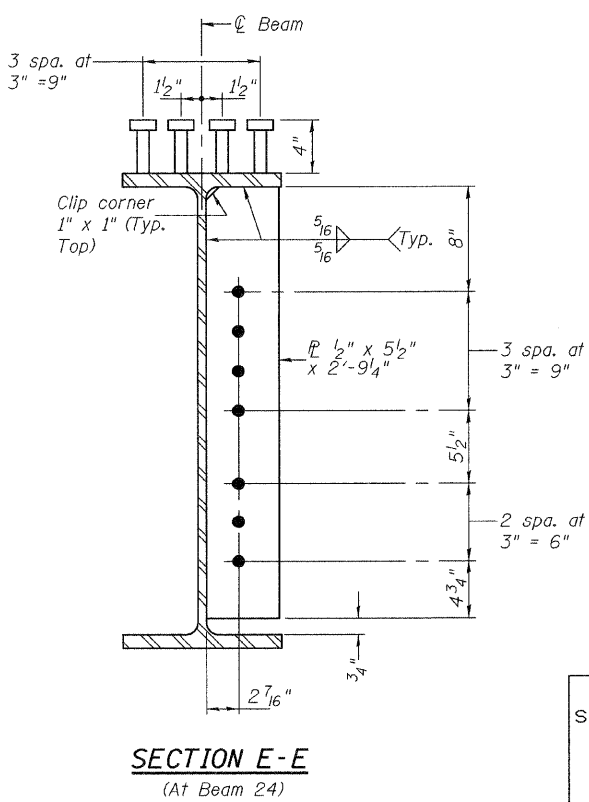
Notes:
Natural camber of new beam shall be placed upward for fabrication.
Fasteners shall be high strength bolts. Flange splice holes shall be 1 5/16"φ for 7/8"φ bolts. Web splice holes shall be 1 3/8"φ for 3/4"φ bolts.
Diaphragm connection holes shall be 1 5/16"φ for 3/4"φ bolts. Two hardened washers shall be required at diaphragm connections.

***Existing splice PL's at Beam 24 and New splice PL's at Beam 11. Use holes in Existing PL's at Beam 24 as template to field drill New Beam. Use holes in New PL's at Beam 11 as template to field drill existing beam.

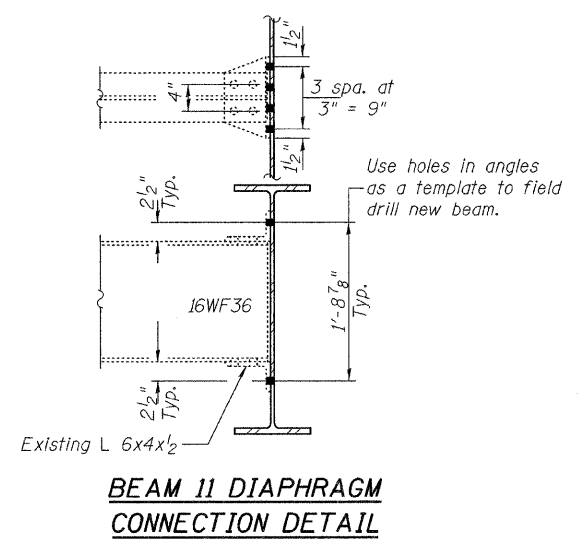


SECTION E-E
(At Beam 11)

Use holes in existing diaphragm clip L's as a template to field drill new beam.



SECTION E-E
(At Beam 24)



BEAM 11 DIAPHRAGM CONNECTION DETAIL

DESIGNED	A.T.H.
CHECKED	G.G.E.
DRAWN	Drew Christopher
CHECKED	A.T.H. G.G.E.

January 22, 2010
EXAMINED *Carl Henry*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

DETAILS
SN 016-0316

SHEET NO. 5 5 SHEETS	F.A.I. RTE. 55	SECTION 2009-070BR	COUNTY Cook	TOTAL SHEETS 17	SHEET NO. 8
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60H78		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{15}{16}$ " 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/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Structural Steel Repair.

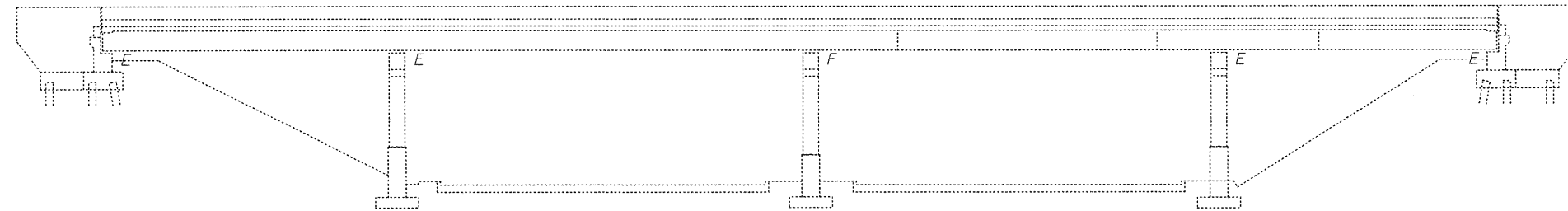
The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

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

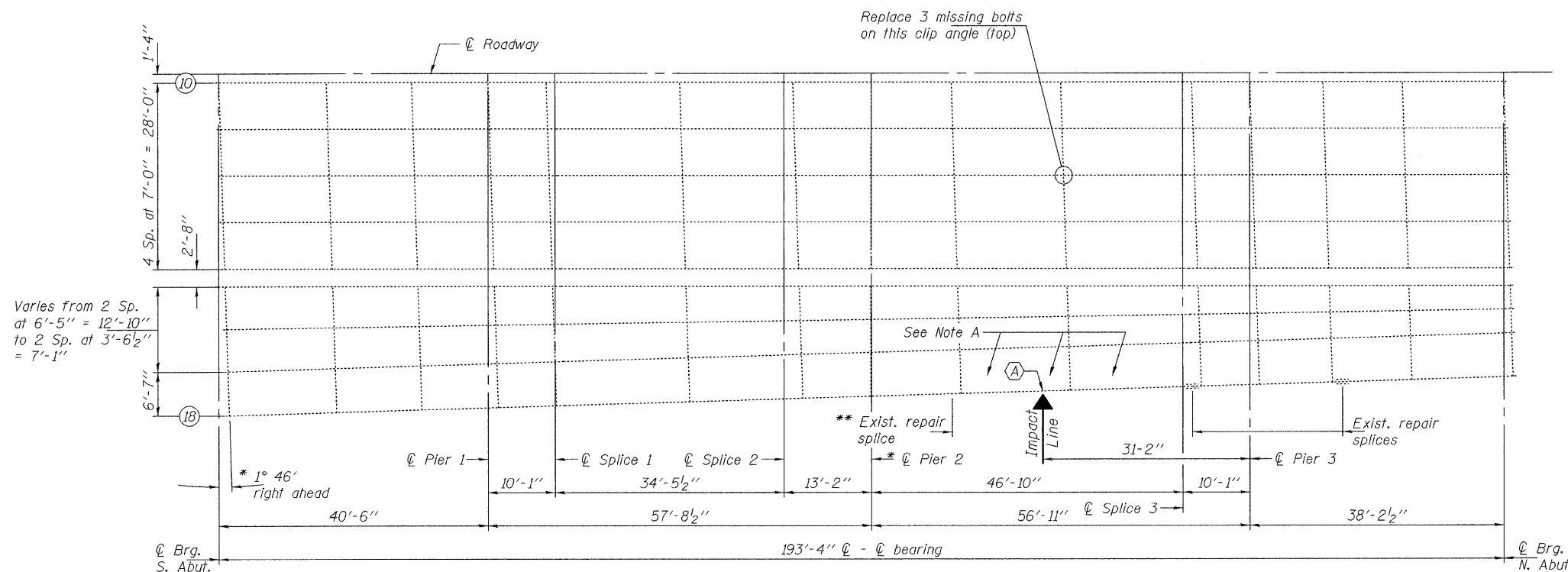
Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Grinding shall be done parallel to the longitudinal axis of the member. Ground surfaces shall be inspected for cracks using dye penetrant or magnetic particle testing prior to initiating any beam straightening operations.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

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

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/L. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".



ELEVATION



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

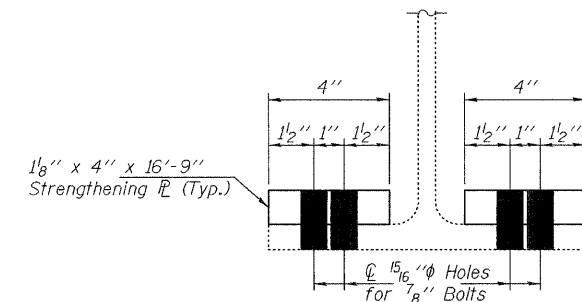
* Skew angle for ϕ Pier 2 and diaphragms at Pier 2 = 0° 7' left ahead.

** Bottom flange to be painted.

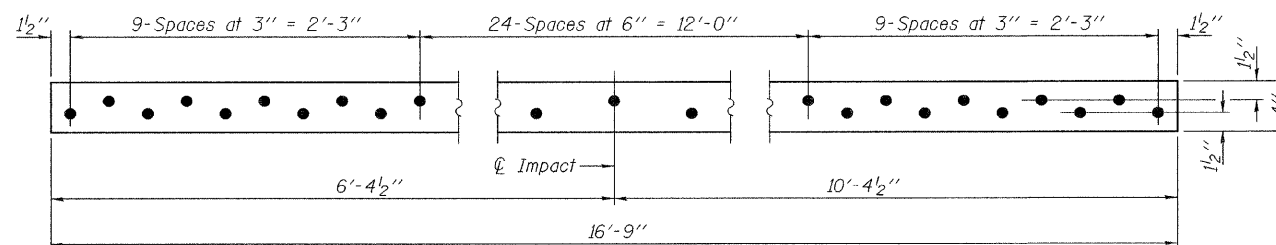
FRAMING PLAN

(A) - Straighten & Strengthen Existing Beam

Note A:
Existing Permanent Protective Shield in this area to be removed as necessary to complete beam straightening operations. Shielding to be re-installed to its original configuration. Cost included with Beam Straightening.



STRENGTHENING DETAIL



STRENGTHENING PLATE

PL $\frac{1}{8}$ " x 4" x 16'-9" (2 Req'd)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	660
Beam Straightening	L.S.	0.25

PLAN & ELEVATION
HARLEM AVENUE (IL 43)
OVER 95th STREET
SN 016-0320

DESIGNED	Victor H. Veliz
CHECKED	Jim J. Hoff
DRAWN	Kyle M. Steffen
CHECKED	VHU ISL

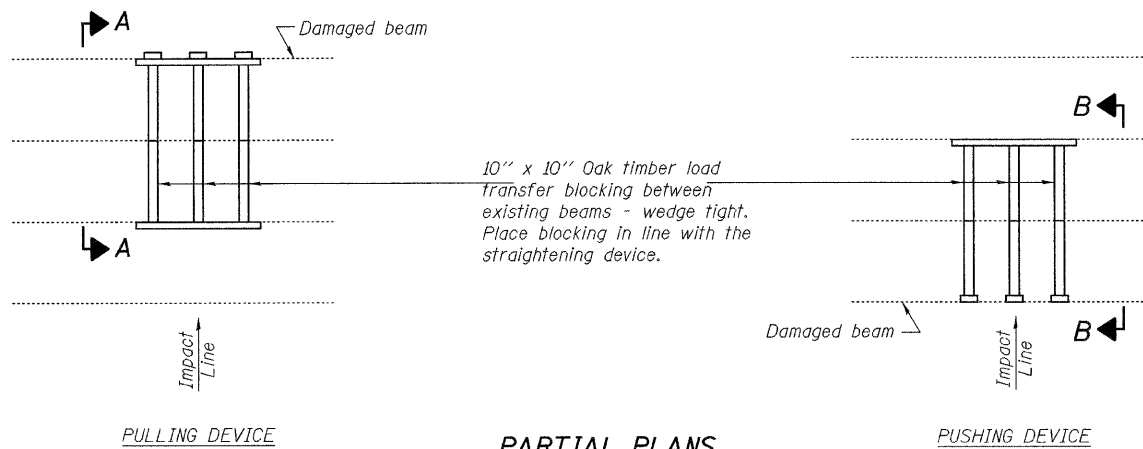
JANUARY 22, 2010
EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES



Expires: November 30, 2010

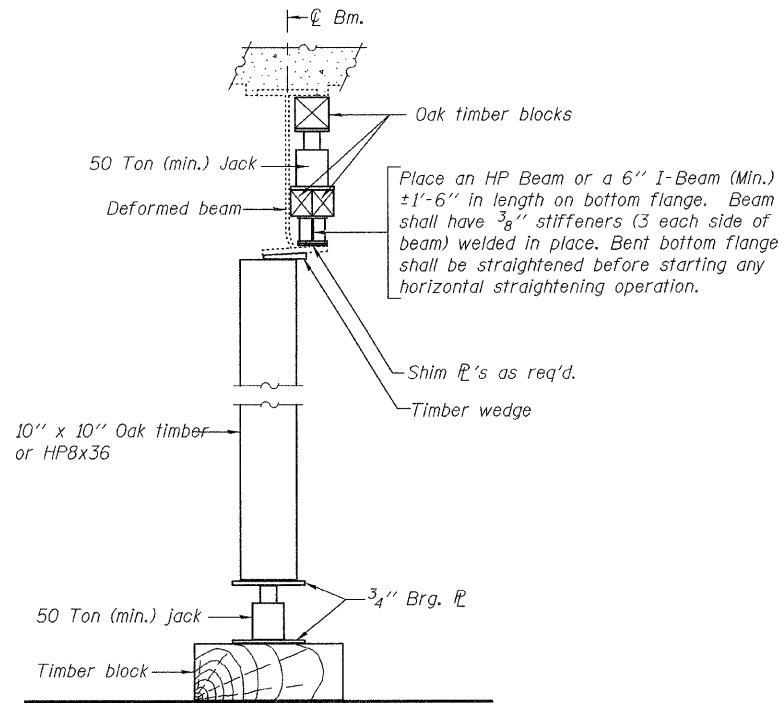
SHEET NO. 1	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	-	2009-070BR	COOK	17	9
2 SHEETS		CONTRACT NO. 60H78			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

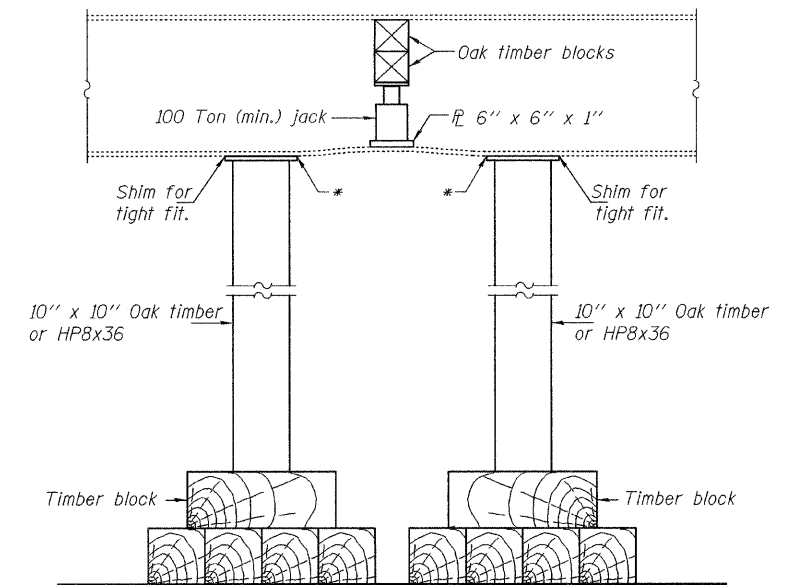


**PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS**

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



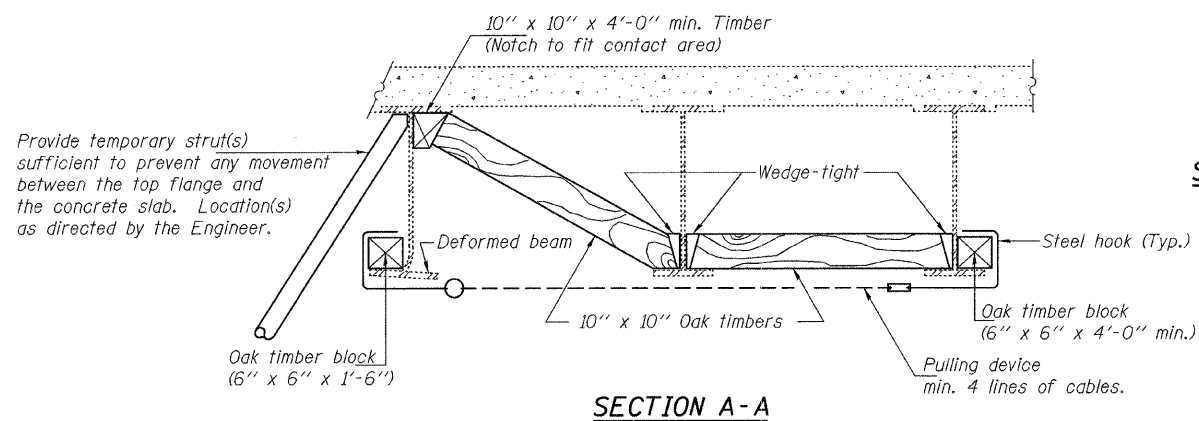
SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct flange rotation.)



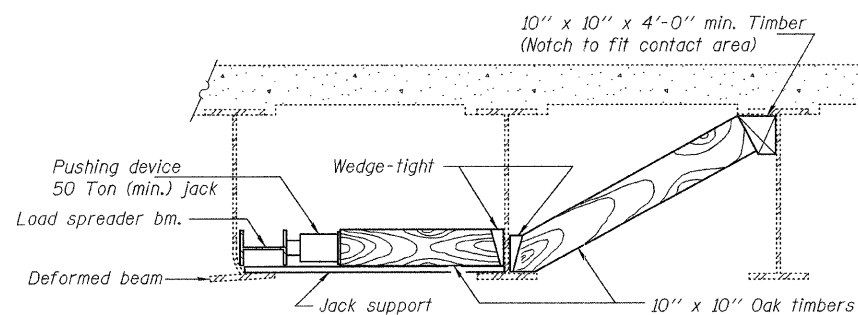
SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)

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

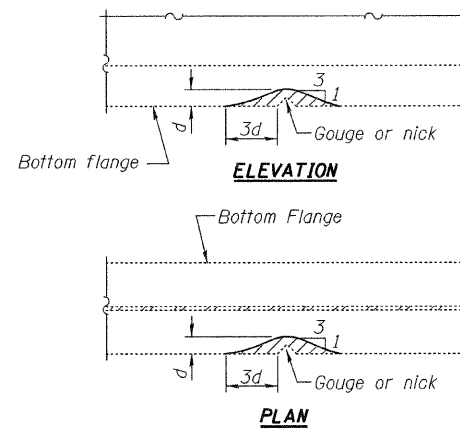
Note:
Braces and jack assembly shall be placed on same side of web.
Bent bottom flange shall be straightened before starting any horizontal straightening operations.



SECTION A-A

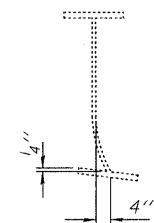


SECTION B-B



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 South)
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately 12'.

**BEAM STRAIGHTENING DETAILS
HARLEM AVENUE (IL 43) OVER 95th STREET
SN 016-0320**

DESIGNED	VHV
CHECKED	IJL
DRAWN	Kyle M. Steffen
CHECKED	VHV IJL

JANUARY 22, 2010
EXAMINED *Carl P...*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

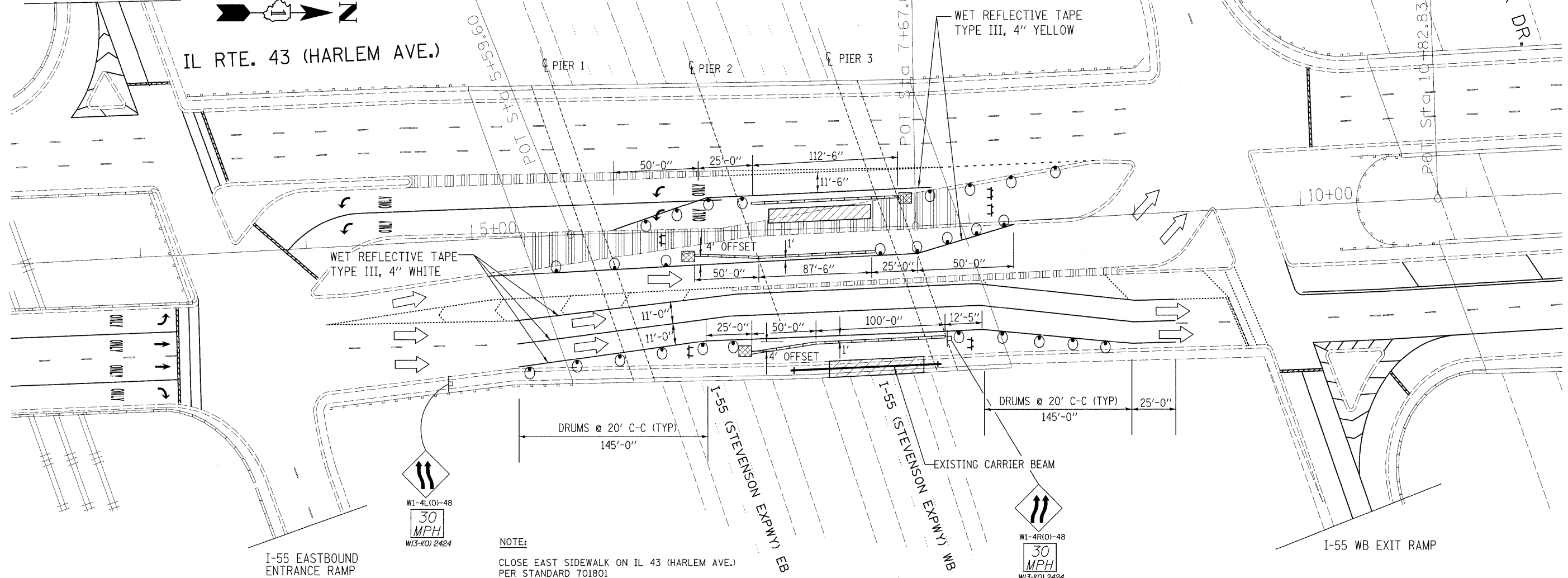
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	-	2009-070BR	COOK	17	10
2 SHEETS			CONTRACT NO. 60H78		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

I-55 EB ENTRANCE RAMP

IL RTE. 43 (HARLEM AVE.)

I-55 WB ENTRANCE RAMP

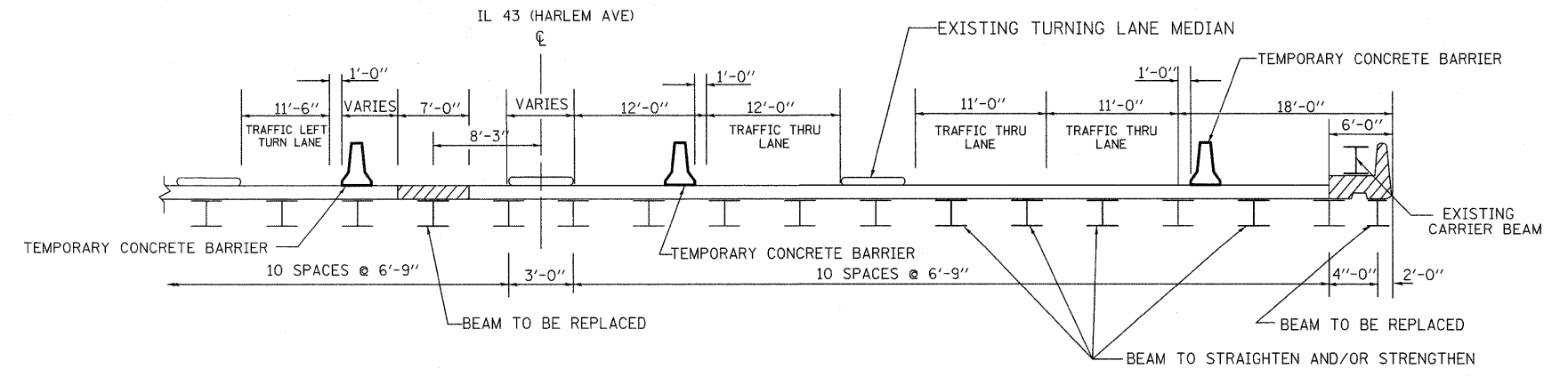
CANAL BANK DR.



NOTE:
CLOSE EAST SIDEWALK ON IL 43 (HARLEM AVE.) PER STANDARD 701801
COST OF TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET ARE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION SPECIAL".

LEGEND

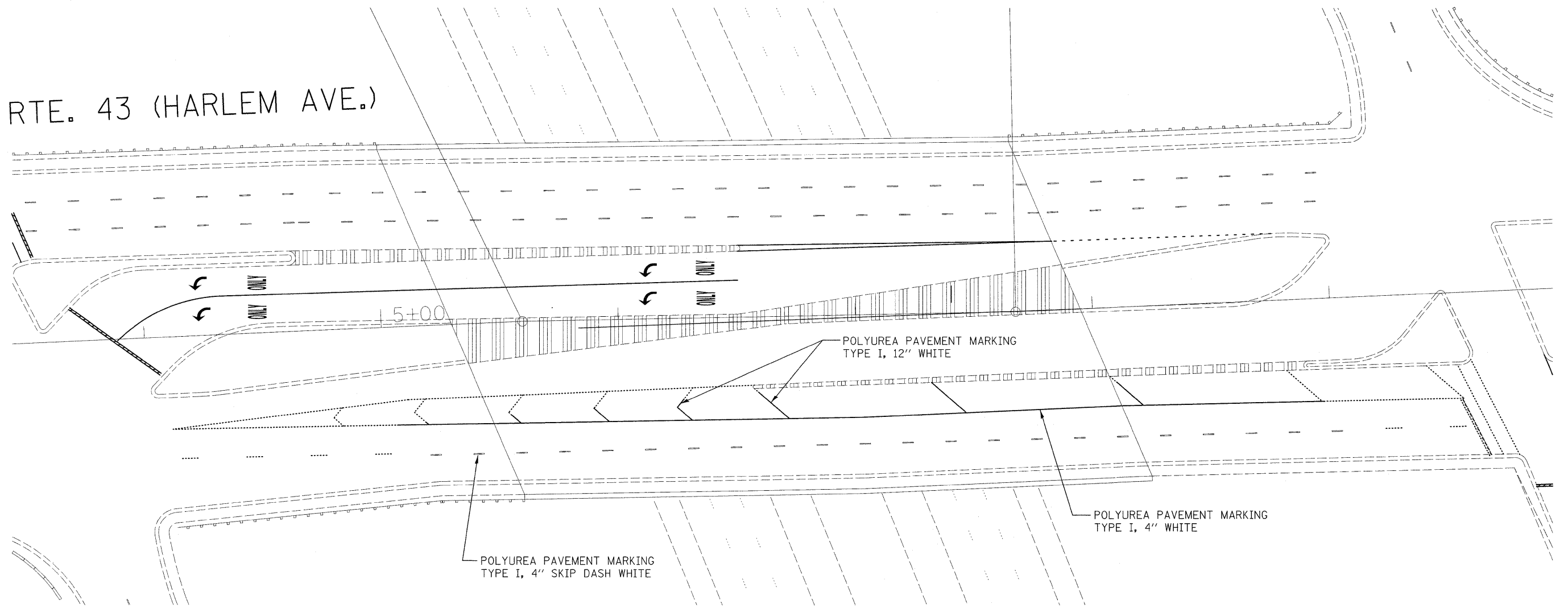
- TEMPORARY IMPACT ATTENUATOR
- TRAFFIC DIRECTION
- WORK AREA
- TYPE III BARRICADE WITH FLASHING LIGHTS
- SIGN OR SIGN W/ STEADY BURN LIGHT AS SHOWN
- DRUMS W/ STEADY BURN MONO DIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONO DIRECTIONAL LIGHTS



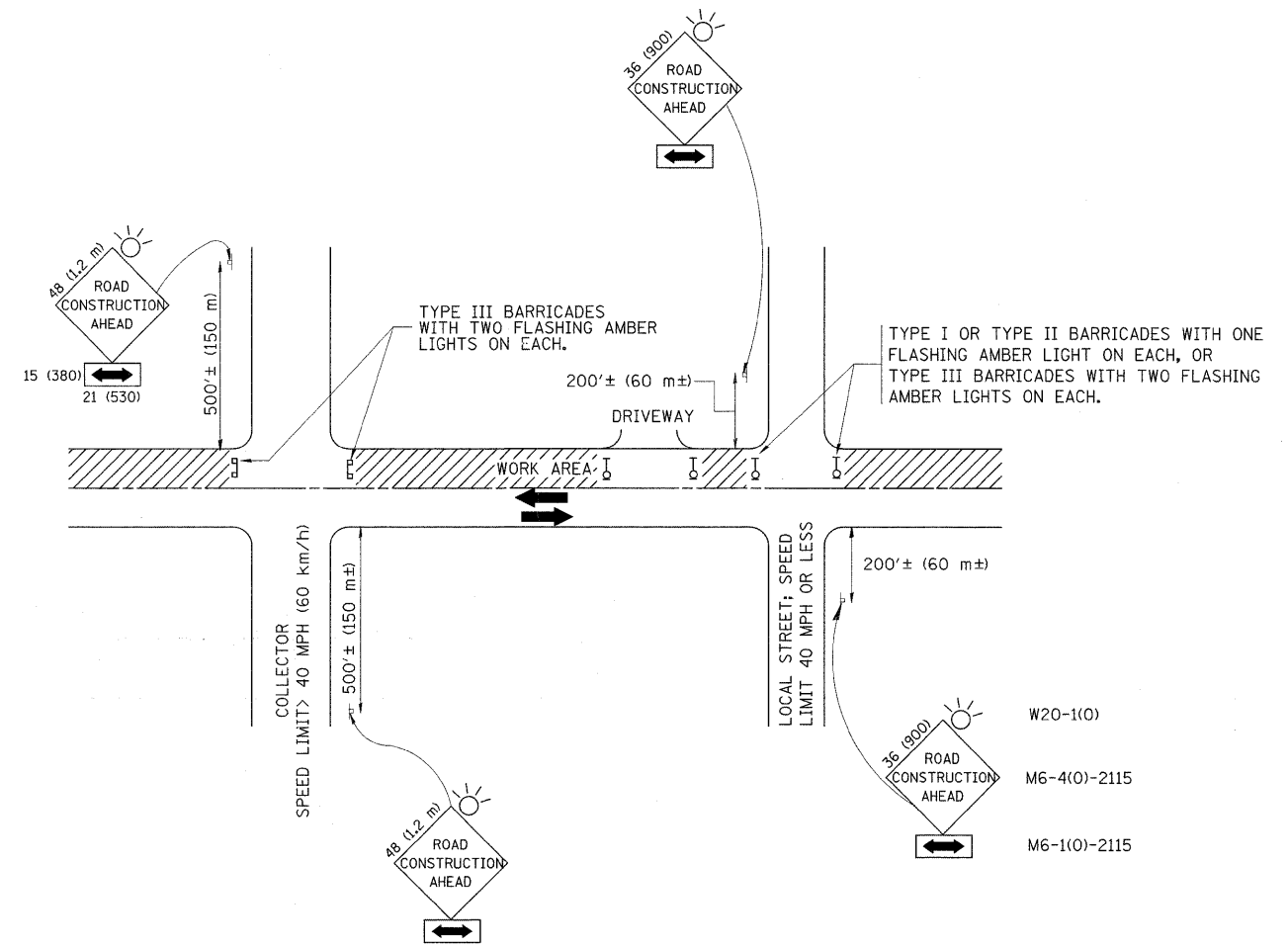
TRAFFIC STAGING
LOOKING NORTH

FILE NAME =	USER NAME = mcdjja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL PLAN IL 43 (HARLEM AVE.) OVER I-55			F.A.P. RTE. 348	SECTION 2009-070 BR	COUNTY COOK	TOTAL SHEETS 17	SHEET NO. 11
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	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -							ILLINOIS FED. AID PROJECT		
	PLOT DATE = 12/16/2009	DATE -	REVISED -							CONTRACT NO. 60H78		

IL RTE. 43 (HARLEM AVE.)



FILE NAME =	USER NAME = mcljja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING PLAN IL 43 (HARLEM AVE.) OVER I-55			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -		CONTRACT NO. 60H78			ILLINOIS FED. AID PROJECT				
PLOT DATE = 12/16/2009		DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 - 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
 - USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

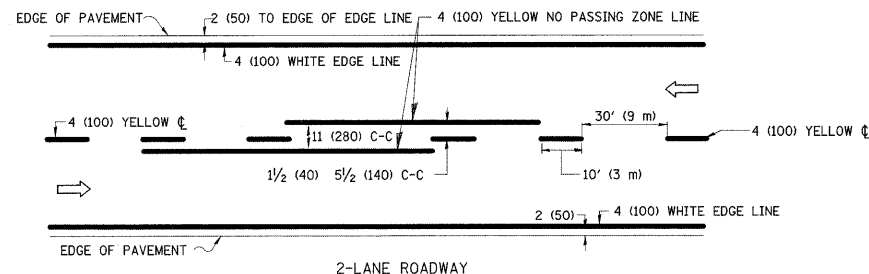
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	PLOT DATE = 12/16/2009	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

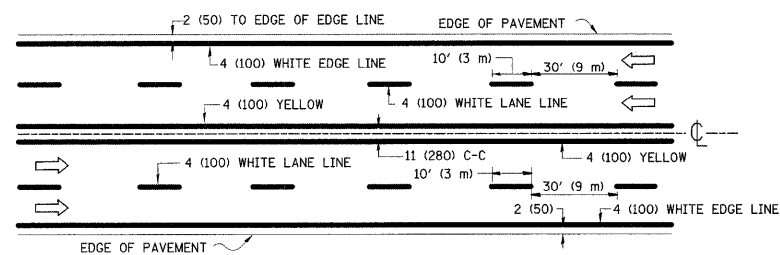
TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2009-070 BR	COOK	17	13
TC-10			CONTRACT NO. 60H78	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

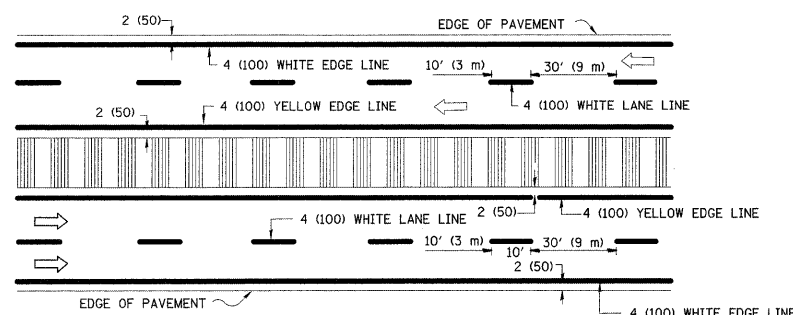
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2-LANE ROADWAY



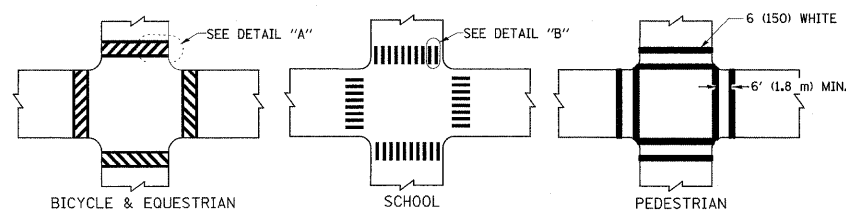
MULTI-LANE UNDIVIDED



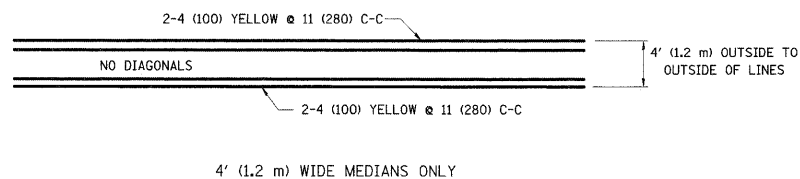
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

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

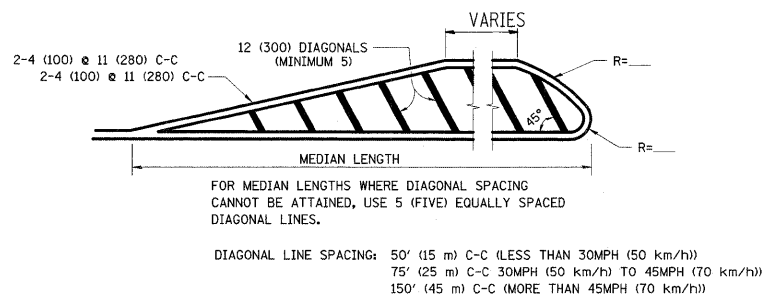
TYPICAL LANE AND EDGE LINE MARKING



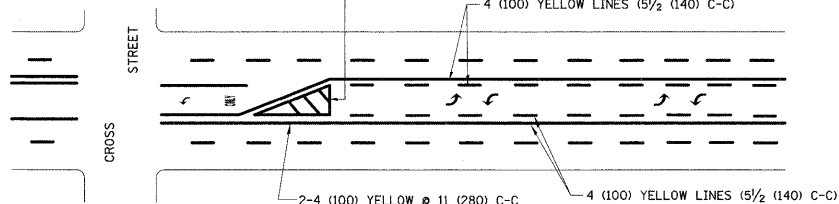
TYPICAL CROSSWALK MARKING



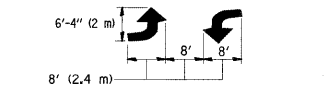
4' (1.2 m) WIDE MEDIANS ONLY



MEDIANS OVER 4' (1.2 m) WIDE

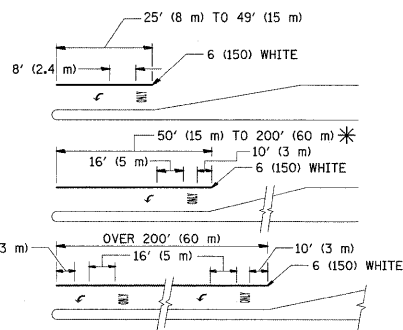


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

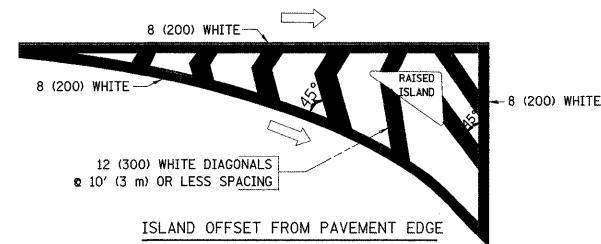


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

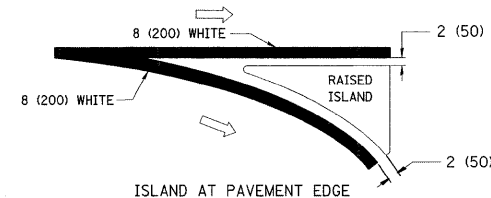
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



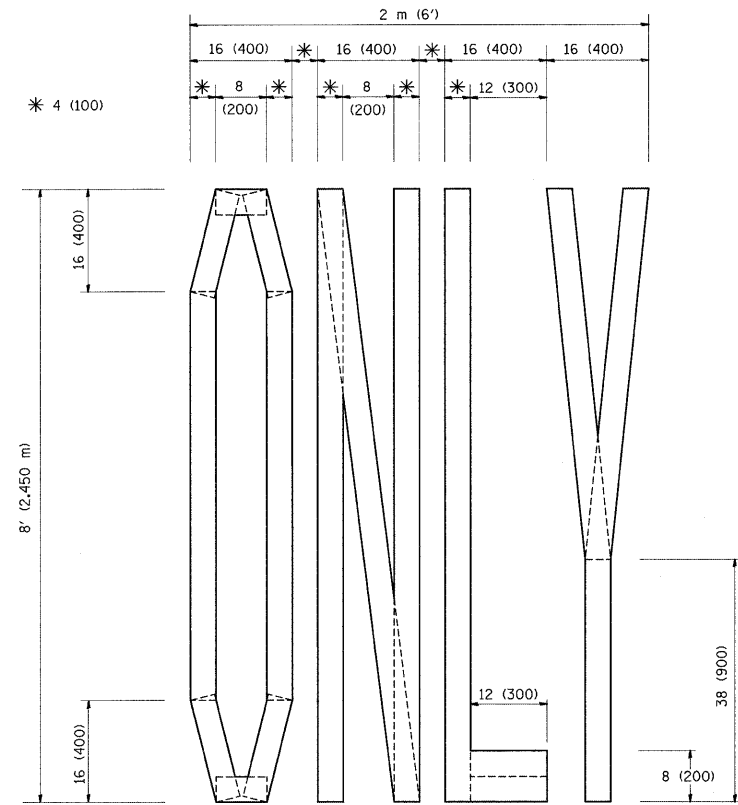
ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

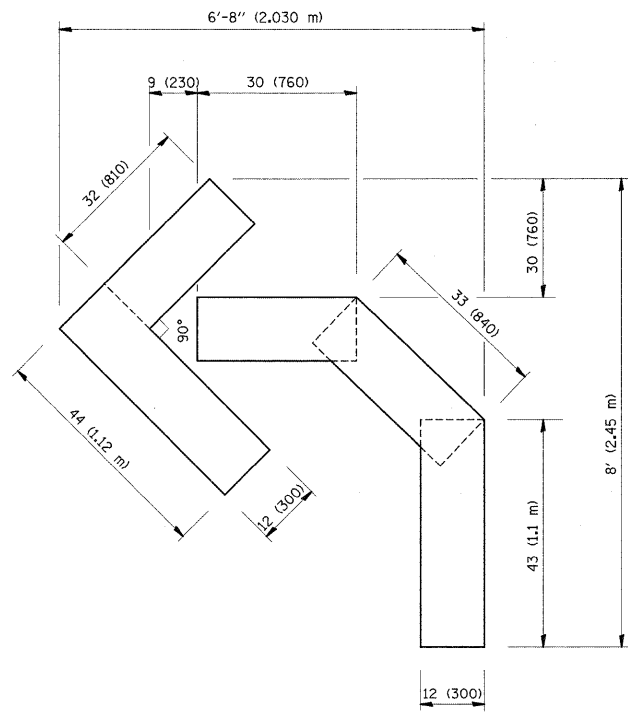
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 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" IS 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)
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.

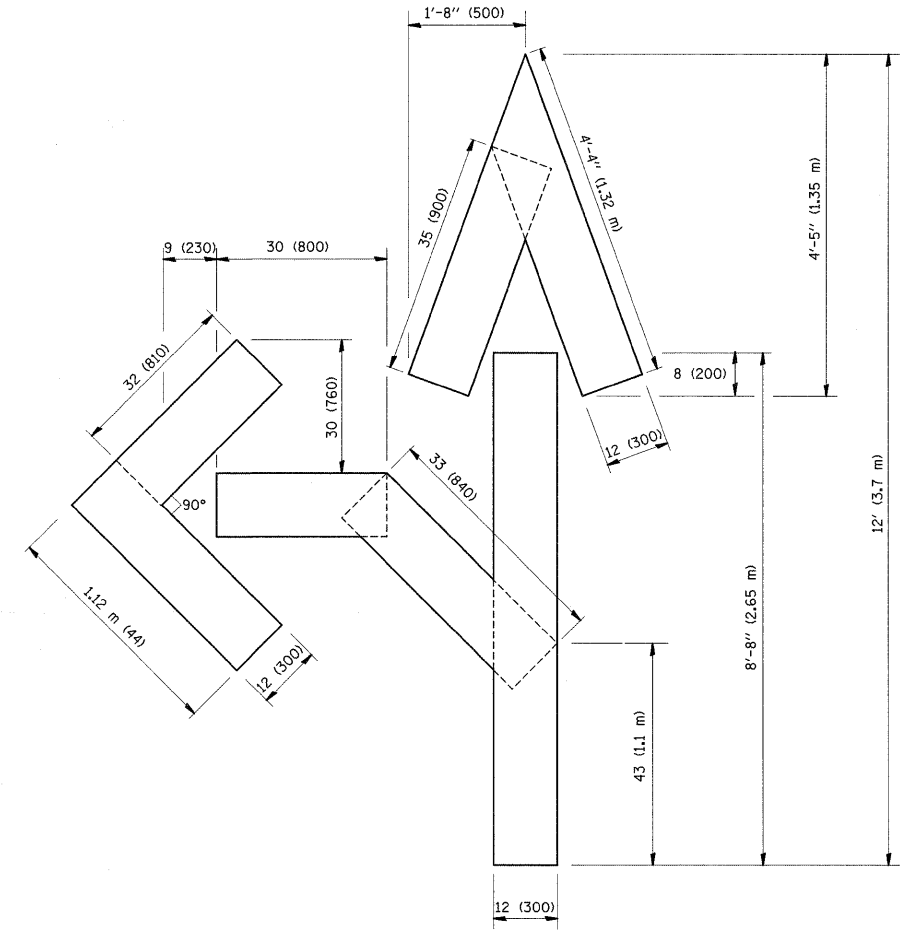
All dimensions are in inches (millimeters) unless otherwise shown.



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



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



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

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

FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
et\pw_work\PMIDOT\MIDYJA\2163867\01.st5	d.dgn	DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 "/td> <td>CHECKED -</td> <td>REVISED -T. RAMMACHER 03-02-98</td>	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 12/15/2009	DATE = 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

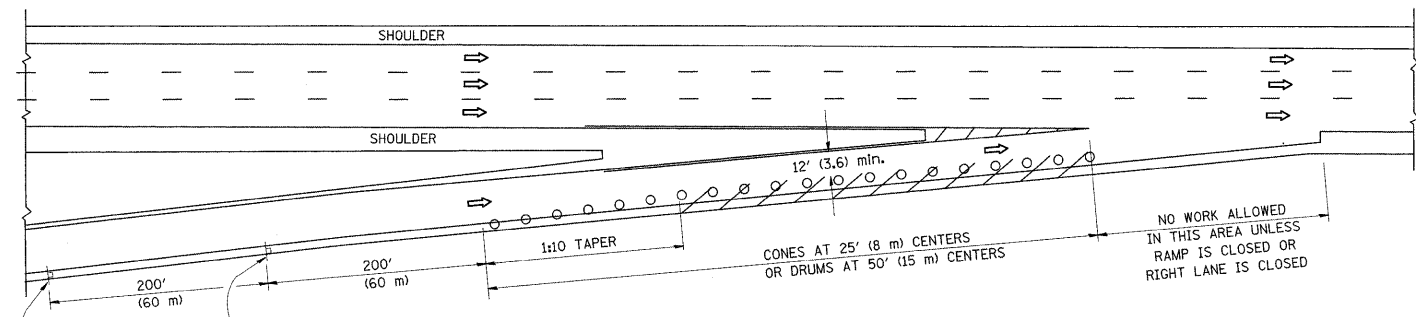
PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

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

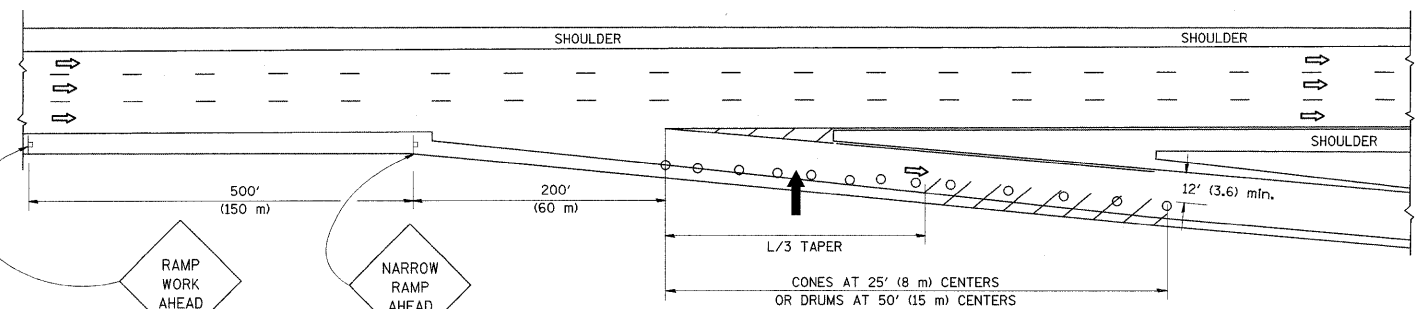
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2009-070 BR	COOK	17	15
TC-16			CONTRACT NO. 60H78	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

PARTIAL RAMP CLOSURE DETAILS

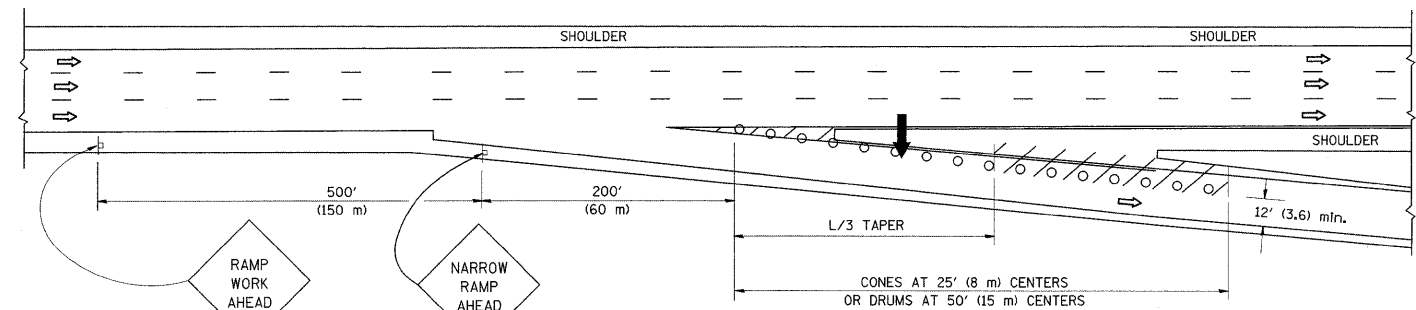
SHOULDER CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

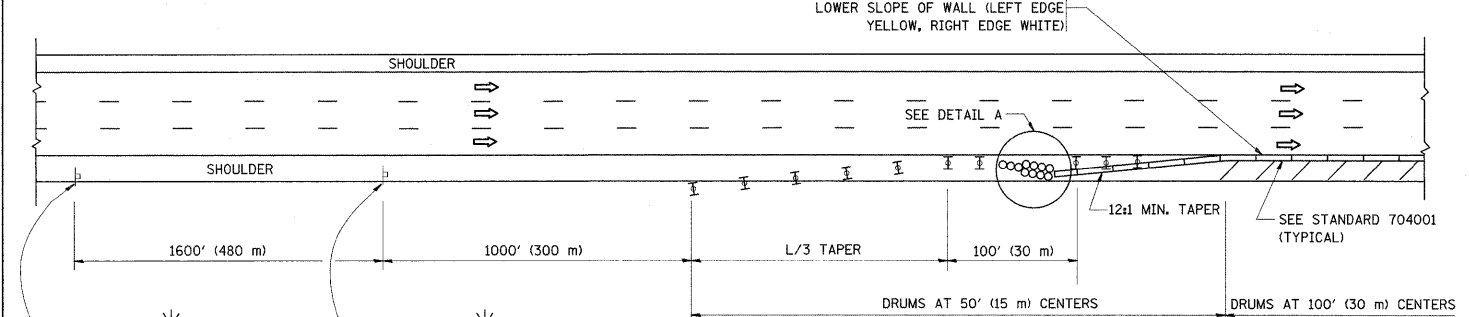
- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

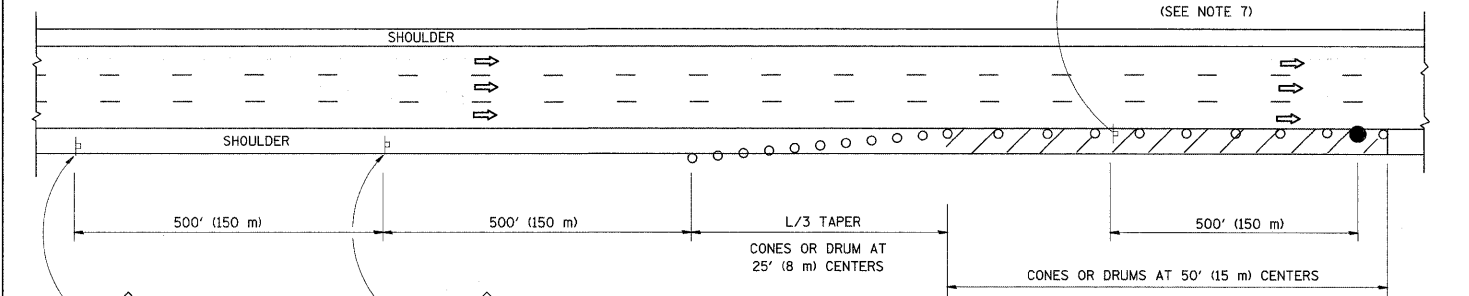
1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) 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 NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.



PERMANENT SHOULDER CLOSURE

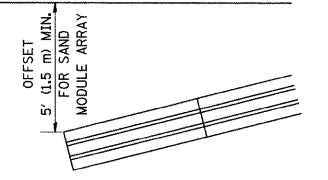


DAYTIME SHOULDER CLOSURE

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.

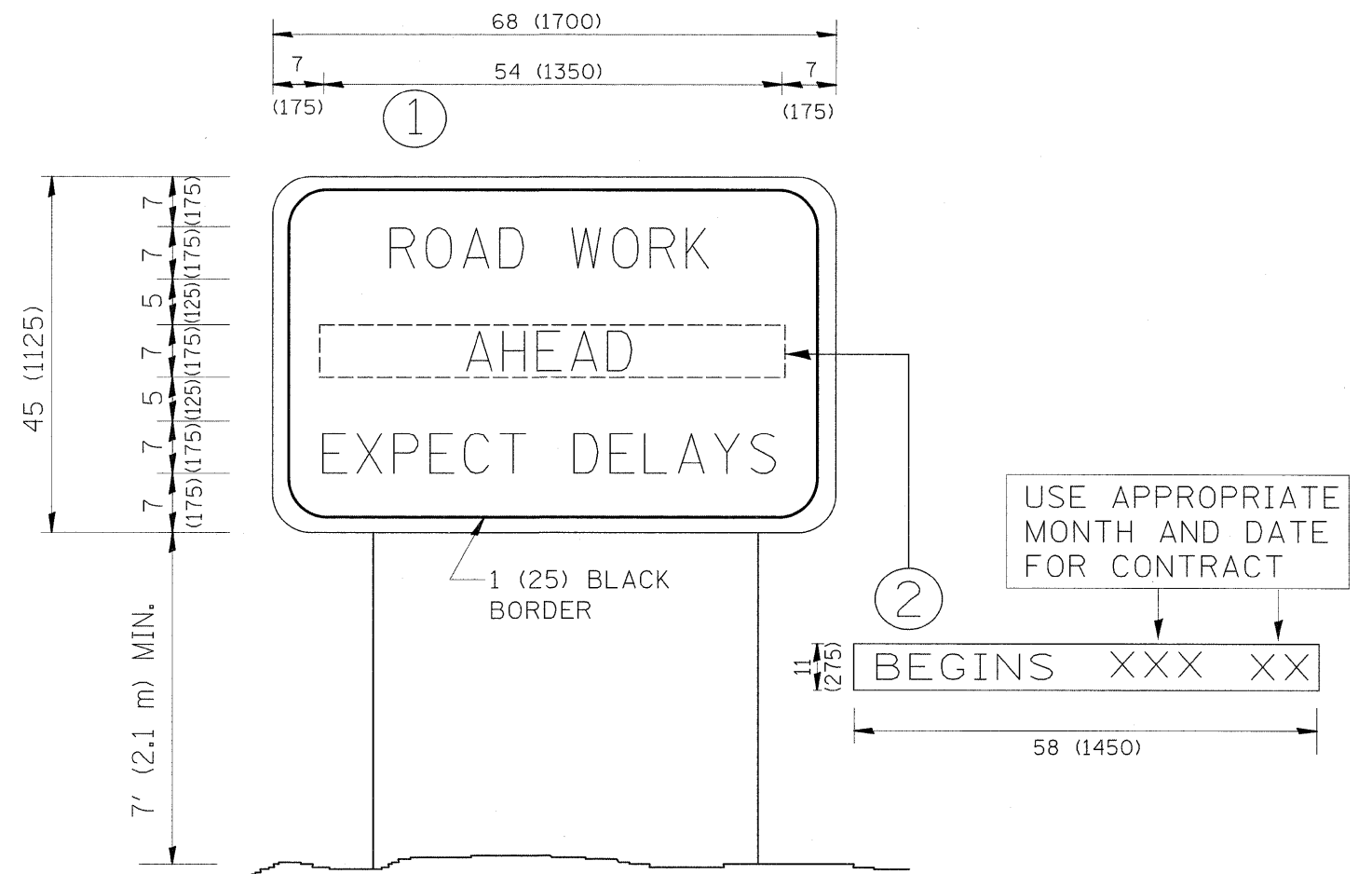
ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT FOR POSTED SPEED.



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

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

FILE NAME =	USER NAME = mudyja	DESIGNED -	REVISED - J.A.F. 12-02	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.	
ci:\pw_work\VPWIDOT\MIDYJA\d163867\DistS	d.dgn	DRAWN - D.W.S.	REVISED - 04-03		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	348	2009-070 BR	COOK	17	16
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - J.A.F. 12-06		STA.	TO STA.	TC-17		CONTRACT NO. 60H78		
	PLOT DATE = 12/16/2009	DATE - 11-96	REVISED - S.P.B. 01-07				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 = m.dj.je	DESIGNED -	REVISED - R. MIRS 09-15-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
est\pw_work\PWIDOT\MIDYJA\163067\DistS	d.dgn	DRAWN -	REVISED - R. MIRS 12-11-97			348	2009-070 BR	COOK	17	17	
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED - T. RAMMACHER 02-02-99			TC-22		CONTRACT NO. 60H78			
PLOT DATE = 12/16/2009		DATE -	REVISED - C. JUCIUS 01-31-07			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	