STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS**

PROPOSED

HIGHWAY PLANS

FAU 1620 / MARGARET STREET SECTION 43I-1 OVER THORN CREEK (1.5 MI. W. OF IL 394) **BRIDGE DECK OVERLAY, BRIDGE JOINT** REPAIR AND BEARING REPLACEMENT PROJECT NUMBER: M-1620(007) **COOK COUNTY**

C-91-272-10

THORNTON TOWNSHIP R 14 E 3RD PM

IMPROVEMENT LOCATION **MARGARET STREET** AT THORN CREEK STRUCTURE NUMBER: 016-0573

ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION

COLLECTOR (URBAN)

IMPROVEMENT LOCATED IN

THE VILLAGE OF THORNTON

ADT 10,000 (2006) SPEED LIMIT 30 MPH

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

PROJECT MANAGER: MR. ISAAC KWARTENG (847) 705-4230 PROJECT ENGINEER: MR. ALIX BRICE (847) 705-4552

LOCATION MAP

GROSS AND NET LENGTH OF IMPROVEMENT = 150.58 FT. = 0.029 MILE



JAMES M. HAMELKA

COLLINS **ENGINEERS**

D-91-272-10

* TRANSPORTATION DIVISION OF HIGHWAYS SUBMITTED FEBRUARY 1, 20 10

LOCATION OF SECTION INDENSITY THUS: -

Dince M. O'Kesfe Que ENGINEER

March 19, 2010 Christine M. Reed 18

GHWE'S, CHIEF ENGINEER

PRINTED B OF THE STA

AUTHORITY LINOIS

CONTRACT NO. 60J82

 $\widehat{}\cdot \bigcirc$

Mt Glenwood

(394) Wampum Lake Woods (Cook Co

HOT-MIX ASPHALT MIXTURE REQUIREMENTS						
MIXTURE TYPE	AIR VOIDS @ Ndes					
Hot-Mix Asphalt Surface Course, Mix "D", N70 (IL 9.5mm)	4% © 70 Gyr.					

The unit weight used to calculate all HMA Surface mixture quantities is 112 Lbs./Sq. Yd./ln.

INDEX OF SHEETS

Title Sheet
Index of Sheets, State Standards,
General Notes and Summary of Quantities
Maintenance of Traffic

5 14 Structure Plans S1-S10

15-16 District One Standards Highway Standards

INDEX OF HIGHWAY STANDARDS

Standárá No.	Description
000001	Standard Symbols. Abbreviations And Patterns
-001001	Areas Of Reinforcement Rebars
42000c	Pavement Joints
515001	Name Plate For Bridge
630001	Steel Plate Beam Guardrail
701301	Lane Closure, 2L, 2W, Short Time Operations
701306	Lane Closure, 2L, 2W, Slow Moving Operations, Day Only
701321	Lane Closure, 2L, 2W, Bridge Repair with Barrier
701501	Urban Lane Closure, 2L. 2W. Undivided
701502	Urban Lane Closure, 2L. 2W. Bidirectional Left Turn
701602	Urban Lane Closure, Multilane 2W, Bidirectional Left Turn
70160Ĝ	Urban Lane Closure, Multilane 2W, with Mountable Median
701901	Traffic Control Devices
70400!	Temporary Concrete Barrier
780001	Typical Pavement Markings
781001	Typical Applications Raised Reflective Pavement Markers

GENERAL NOTES

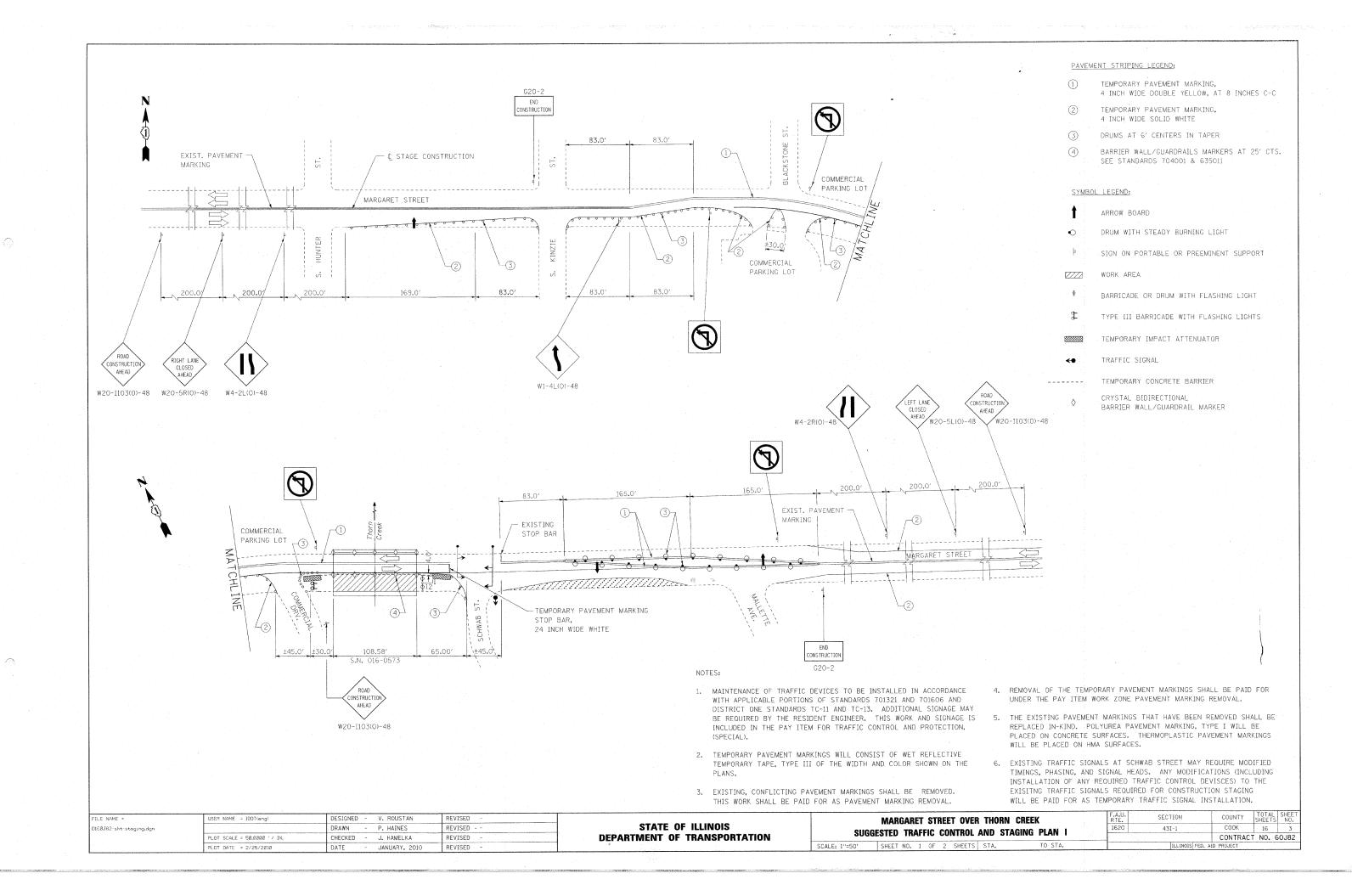
- These plans have been prepared from notes received from IDOT Field Maintenance Engineers.
- ID ft (3 m) transitions shall be used to match proposed items of work to existing items in the field, unless otherwise shown. The transitions shall be paid for at the contract unit price for the proposed item of work specified.
- Where artificial lighting is utilized in night-operations, the Contractor shall exercise
 the utmost precautions in preventing adverse visibility to the motoring public and
 adjoining residential areas.
- The engineer shall be the sole judge concerning curing time for the various not-mix aspnall lifts.
- 5. For stabilization, all Type MI barricades shall require a minimum of four (4) sandbags per barricade.
- 6. The Resident Engineer must contact the Traffic Control Supervisor at (847)705-4470 at least 72 hours prior to installation of the temporary control devices.
- 7. The Resident Engineer shall contact the Area Traffic Field Engineer at (847)715-8419 at least two (2) weeks prior to the placement of permanent pavement markings.
- 8. All pavement markings and raised reflectors affected by the bridge repairs shall be replaced. Naminal quantities have been included in the contract for this work.
- The Contractor will not be allowed to set up a yord or field office on State property without written permission from the Department.
- 10. Co not scale these plans for construction purposes.
- 11. Plun Americans and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting the construction and make necessary approved adjustments prior to construction or receiving 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 small yetually furnished based upon the unit price bid for the work.

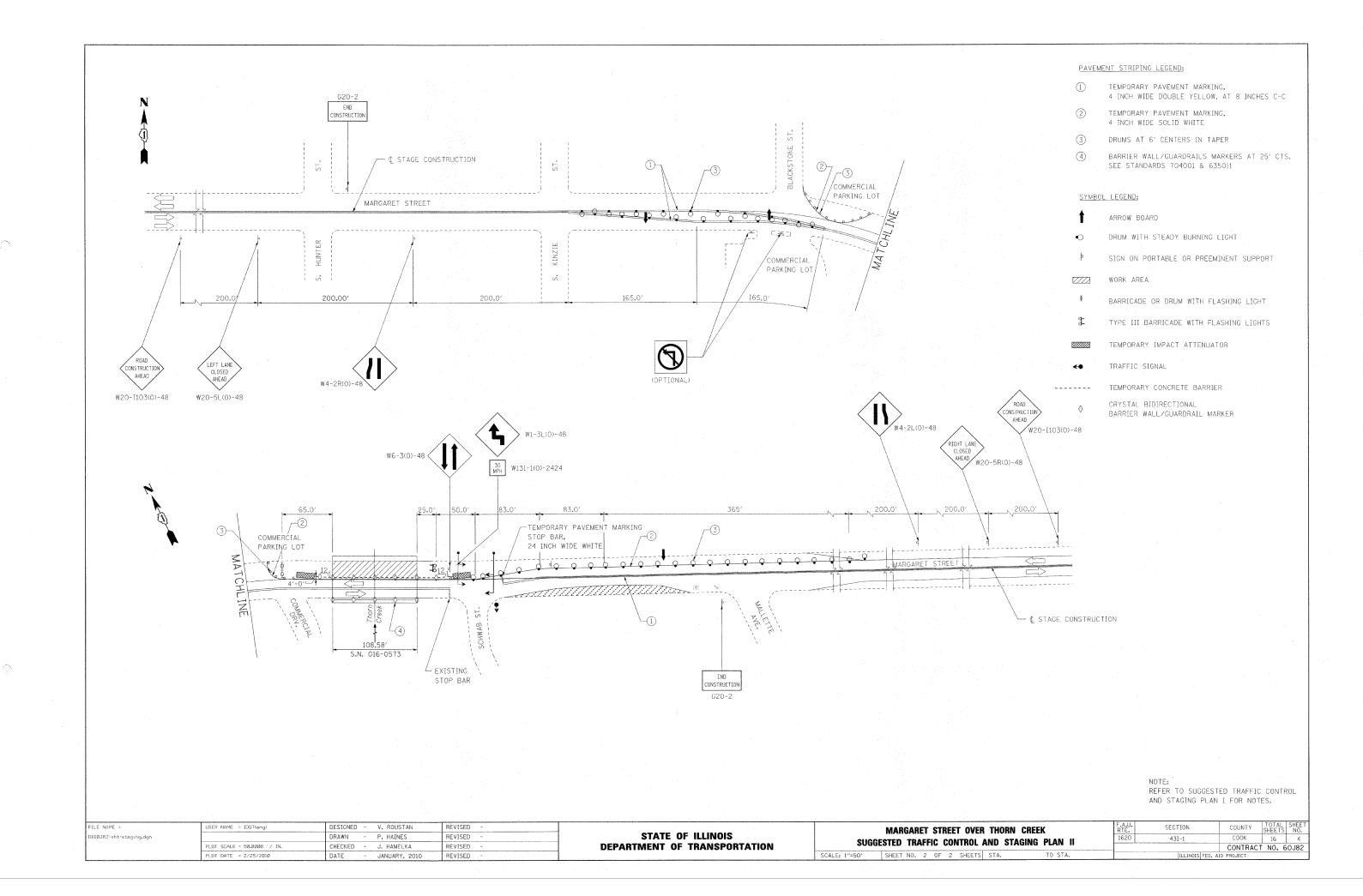
- 12. During construction operations, loose material deposits that obstruct the flow of water in draining the area shall be removed before the end of each work day. At the conclusion of construction operations, all drainage structures (new and existing) shall be free from all dirt and debris. This work will not be paid for separately but shall be considered incidental to the contract.
- 13. All Type I and Type II barricades shall have two (2) sandbags on the bottom rall.
- 14. The quantities for Hot-Mix Asphalt Surface Removal (Deck); Hot-Mix Asphalt Surface Removal, $1_2^{l_1}$ and Hot-Mix Asphalt Surface Course, Mix "D", N70 have been prepared assuming $1_2^{l_2}$ inch thick hot mix asphalt overlays. Removal and replacement of the entire thickness of existing overlay is required.
- 15. Before ordering storm sewers, catch basins, pipe culverts, pipe drains, and manholes, the contractor shall contact the engineer as to the exact length and quantity required.
- 16. All raised reflective pavement markers (bridge) shall be low profile.

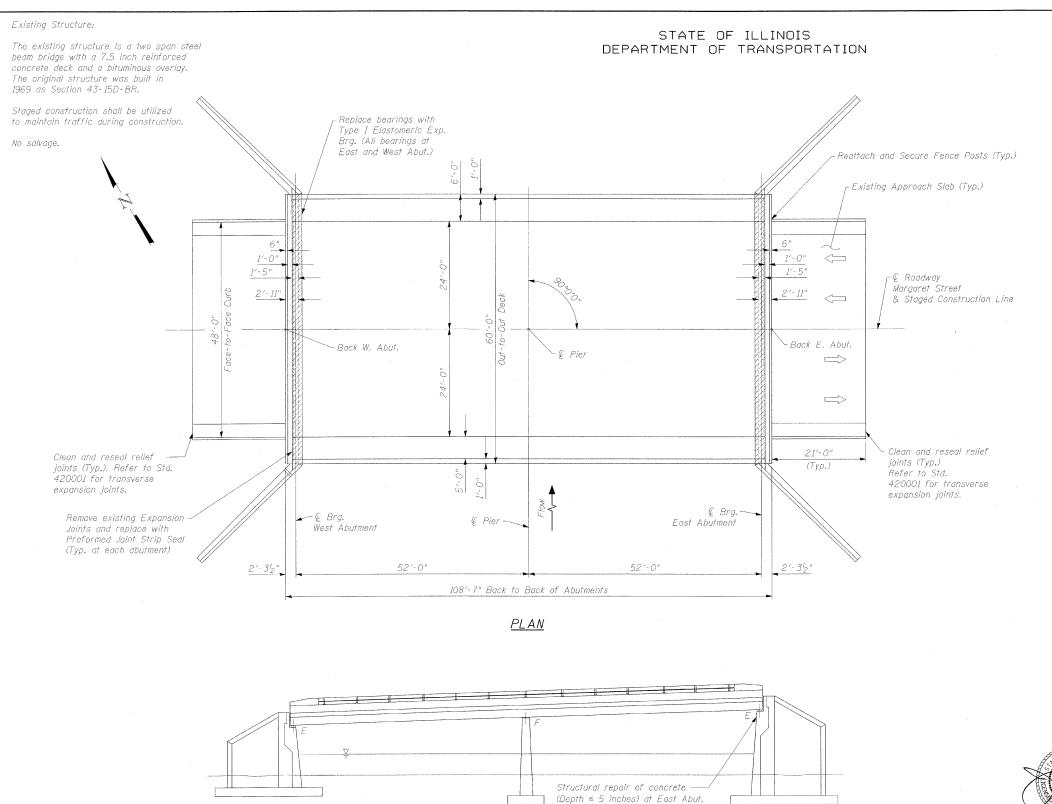
ION	ITEM DECODIDATON	j'init*	OUANTITY	STRUCTURE X281: 2A EEDERAL 80%
CODE	ITEM DESCRIPTION	UNIT	QUANTITY	STATE 20%
0600100 0603340	Bituminaus Materials (Prime Coat) Hot-Mix Asphalt Surface Course, Mix "D", N70	Gallon Ton	23 19	23 19
12001300	Protective Coat	Sq.Yd.	790	790
14000155	Hot-Mix Asphalt Surface Removal, 1 1/2"	Sq.Yd.	224	224
14000915	Hot-Mix Asphalt Surface Removal (Deck)	Sq.Yd.	580	58 0
50102400	Concrete Removal	Cu.Yd.	29.8	29 .8
50300100	Floor Drains	Each	8	8
0300255	Concrete Superstructure	Cu.Yd.	29.8	29.8
50300260	Bridge Deck Grooving	Sq.Yd.	555	555
0500405	Furnishing and Erecting Structural Steel	Pound	2,620	2,620
50500715	Jack and Remove Existing Bearings	Each	18	18
50800205	Reinforcement Bars, Epoxy Coated	Pound	2,140	2,140
50800515	Bar Splicers	Each	22	22
52000110	Preformed Joint Strip Seal	Foot	120	120
52100010	Elastomeric Bearing Assembly, Type I	Each	18	18
52100520	Anchor Bolts, 1 ⁿ	Each	36	36
		Cal.Mo.	3.3	3_
67000400	Engineer's Field Office, Type A			
67100100	Mobilization	L Sum	1	1
70101800	Traffic Control and Protection, (Special)	L Sum	1	1
70301000	Work Zone Pavement Marking Removal	Sq.Ft.	2.400	2,400
70400100	Temporary Concrete Barrier	Foot	160	160
70400200	Relocate Temporary Concrete Barrier	Foot	160	160
78000200	Thermoplastic Pavement Marking - Line 4"	Foot	2,500	2,500
78008210	Polyurea Pavement Marking, Type I - Line 4"	Foot	300	300
78100105	Raised Reflective Pavement Marker (Bridge)	Each	10	10
78100200	Temporary Raised Reflective Pavement Marker	Each	10	10
78300100	Pavement Marking Removal	Sq.Ft.	900	900
78300200	Raised Reflective Pavement Marker Removal	Each	25	25
35000300	Maintenance of Existing Traffic Signal Installation	L Sum	1	1
89000100	Temporary Traffic Signal Installation	Each	1 ,	1
X0322185	Bridge Deck Latex Concrete Overlay, 2 1/4 Inches	Sq.Yd.	580	580
(032,2256	Temporary Information Signing	Sq,Ft.	50	50
KO325305	Structural Repair of Concrete (Depth Egual To or Less Than 5 Inches)	Sq.Ft.	145	145
X0325775	Wet Reflective Temporary Tape, Type III, 4 Inch	Foot	2,400	2,400
X0325841	Wet Reflective Temporary Tope, Type III, 24 Inch	Foot	45	45
x03267 66	Clean & Reseal Relief Joint	Foot	96	96
20006204	Bridge Deck Hydro-Scarification 1/2"	Sq.Yd (,	580	580
Z0016002	Deck Slab Repair (Full Depth, Type II)	Sq. d.	24	24
70030250	Impact Attenuators, Temporary (Non-Redirective), Test Level 3	Egon	2	2
Z0030350	Impact Attenuators, Relocate (Non-Redirective), Test Level 3	Each	2	2

SUMMARY OF QUANTITIES

FILE NAME /	USER NAME = 100 (Keng)	DESIGNED ~ J.W. KOONCE	REVISED -		GENERAL	NOTES, INDEX OF SHEETS, SUMMARY OF QUANTI	TIFS F.A.	SECTION	COUNTY TOTAL SHEET
D160J82 sht gennote.dgn	1.5	DRAWN ~ V. CHAVEZ	REVISED -	STATE OF ILLINOIS		1620	43I-1	COOK 16 2	
	PLOT SCALE = 1,8000 1/2 IN.	CHECKED - J.W. KOONCE	REVISED -	DEPARTMENT OF TRANSPORTATION	FAU 1620 / MARGARET STREET AT THORN CREEK				CONTRACT NO. 60J82
	PLOT DATE = 2/5/2010	DATE - JANUARY, 2010	REVISED -		SCALE:	SHEET NO. OF SHEETS STA. TO STA.		ILLINOIS	FED. AID PROJECT







Pier 1 cap just north of Beam No. 5,

4 sq. ft.

ELEVATION

West Abutment

EXAMINED

PASSED

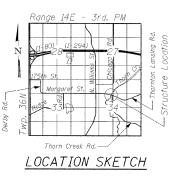
DESIGNED JMH

CHECKED LMS

DRAWN VC
CHECKED JMH

2010

East Abutment



SCOPE OF WORK

- 1. Remove and replace existing expansion bearings with elastomeric bearings.
- 2. Bridge deck and approach overlay removal.
- 3. Bridge deck hydro-scarification.
- 4. Repair bridge deck.
- 5. Reconstruct deck joints at each abulment with preformed strip seal.
- 7. Place new overlay on bridge deck and approaches.
- 8. Repair substructure and curb faces.
- 9. Clean and reseal pavement relief joints.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

f'c = 3,500 psi fy = 60,000 psi



COLLINS ENGINEERS, INC.
JAMES M. HAMELKA
NO. 81-6116
EXPIRES 11-30-2010

GENERAL PLAN & ELEVATION

MARGARET ST. AT THORN CREEK

F.A.U. 1620 SEC. 43-I-1

COOK COUNTY

STATION 21+86.29

STRUCTURE NO. 016-0573

SHEET NO. SI	F.A.U RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
OF	1620	520 43I-1		COOK	16	. 5
SIØ SHEETS				CONTRACT	NO. 6	0J82
		ILLINOIS F	ED. AI	D PROJECT		

STRUCTURAL NOTES

- 1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- 2. Reinforcement bars designated (E) shall be epoxy coated.
- 3. 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.
- 4. The existing bearings contain lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 5. Stage construction shall be utilized to maintain traffic during construction.
- 6. The Contractor shall exercise care during removal of existing joints to ensure that the slab, beams, and diaphragms' integrity will not be detrimentally impacted. The Contractor shall repair any damage(s) to the slab, beams, and diaphragms caused by his operation as directed by the Engineer at no additional cost to the Department.
- 7. Protective Coat shall be applied to the new Bridge Deck Latex Concrete Overlay and to the Bridge Sidewalks and inside faces of Parapets.
- 8. Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F
- 9. The removal and reattachment of guardrail, hand rail, steel railings, traffic barrier terminal, and etcetera required for repair work (e.g. transverse joint replacement or structural repair of concrete) shall be included in the contract unit price of the work item being performed.

10. All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural

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

INDEX OF SHEETS

- S1. General Plan & Elevation
- S2. General Notes, Bill of Material, and Index of Sheets
- S3. Stage Construction Details
- S4. Bridge Deck and Approach Repairs
- S5. Expansion Joint Repairs
- S6. Expansion Joint Details
- S7. Preformed Joint Strip Seal
- S8. Bar Splicer Assembly and Mechanical Splicer Details
- S9. Bearing Details
- S10. Floor Drains

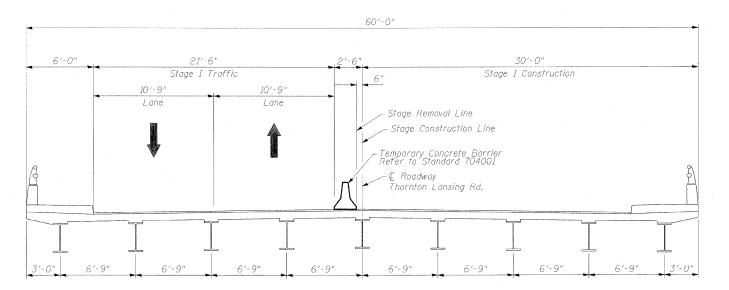
TOTAL BILL OF MATERIAL

Item Description	UNIT	QUANTITY
Hot-Mix Asphalt Surface Course, Mix "D", N70	Ton	19
Profective Coat	Sq. Yd.	790
Hot-Mix Asphalt Surface Removal, 1 1/2"	Sq. Yd.	224
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	580
Concrete Removal	Cu. Yd.	29.8
Concrete Superstructure	Cu. Yd.	29.8
Bridge Deck Grooving	Sq. Yd.	555
Jack and Remove Existing Bearings	Each	18
Reinforcement Bars, Epoxy Coated	Pound	2,140
Bar Splicers	Each	22
Preformed Joint Strip Seal	Foot.	120
Elastomeric Bearing Assembly, Type I	Each	18
Bridge Deck Latex Concrete Overlay, 2 1/4 Inches	Sq. Yd.	580
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sg. Ft.	145
Bridge Deck Hydro-Scarification 1/2"	Sq. Yd.	580
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	24
Floor Drains	Each	8
Clean and Reseal Relief Joints	Foot	96
Anchor Bolts, 1 inch	Each	36
Furnishing and Erecting Structural Steel	Pound	2,620
Bituminous Materials (Prime Coat)	Gallon	23

GENERAL NOTES, BILL OF MATERIAL AND INDEX OF SHEETS STRUCTURE NO. 016-0573

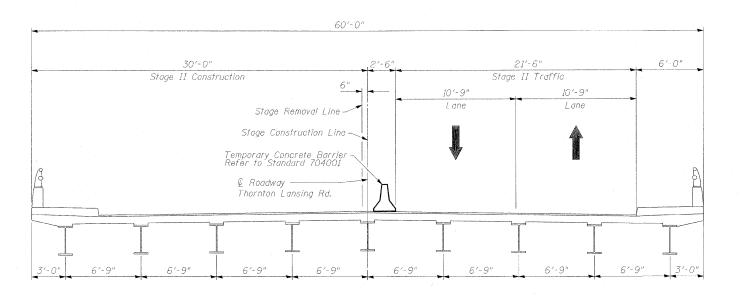
SHEET NO. S2	F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1620	43I-1	COOK	16	6
S1Ø SHEETS			CONTRACT	NO. 6	0J82
		ILLINOIS FED. A	ID PROJECT		

DESIGNED JMH	2010
CHECKED LMS	EXAMINED
DRAWN VC	ENGINEER OF STRUCTURAL SERVICE PASSED
	ENGINEER OF BRIDGES AND STRUCTUR
CHECKED JMH	



STAGE I CROSS SECTION

Looking East



<u>Note:</u> For Quantity of Temporary Concrete Barrier refer to Summary of Quantities.

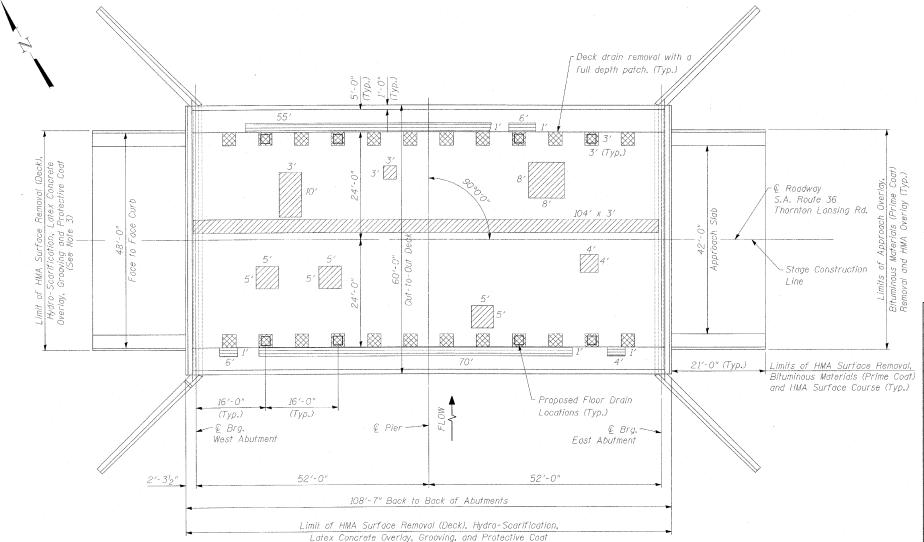
STAGE II CROSS SECTION

·Looking East

DESIGNED	JMH		2010
CHECKED	LMS	EXAMINED	-
DRAWN	VC ·	PASSED	ENGINEER OF STRUCTURAL SERVICES
CHECKED	JMH		ENGINEER OF BRIDGES AND STRUCTURES

STAGE CONSTRUCTION DETAILS STRUCTURE 016-0573

SHEET NO. S3	F.A.U RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
OF	1620	43I-1		COOK	16	. 7
S10 SHEETS				CONTRACT	NO. 6	0J82
		ILLINOIS F	ED. AI	D PROJECT		



Notes:

- Deck repair areas are estimated based on visual inspection completed on October 2009. Actual repair areas and locations shall be determined by the Engineer and shown on As-Built plans.
- Deck drain removal and disposal shall not be paid for separately and shall be included in the pay item for Deck Slab Repair (Full Depth, Type II).
- 3. The protective coat shall also be applied to the Bridge Sidewalks and inside fades of the Parapets.

BILL OF MATERIAL

SYMBOL	Item Description	UNIT	QUANTITY
	Hot-Mix Asphalt Surface Course, Mix "D", N/O	Ton	19
	Protective Coat	Sq. Yd.	790
	Hot-Mix Asphalt Surface Removal, 1 1/2"	Sq. Yd.	224
	Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	580
	Bridge Deck Grooving	Sq. Yd.	555
	Bridge Deck Latex Concrete Overlay, 2 1/4 Inches	Sq. Yd.	580
	Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	145
	Bridge Deck Hydro-Scarification 1/2"	Sq. Yd.	580
	Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	24
	Deck Slab Repair (Partial) Д	Sq. Yd.	56.2
	Floor Drains	Each	8
	Bituminous Materials (Prime Coat)	Gallon	23

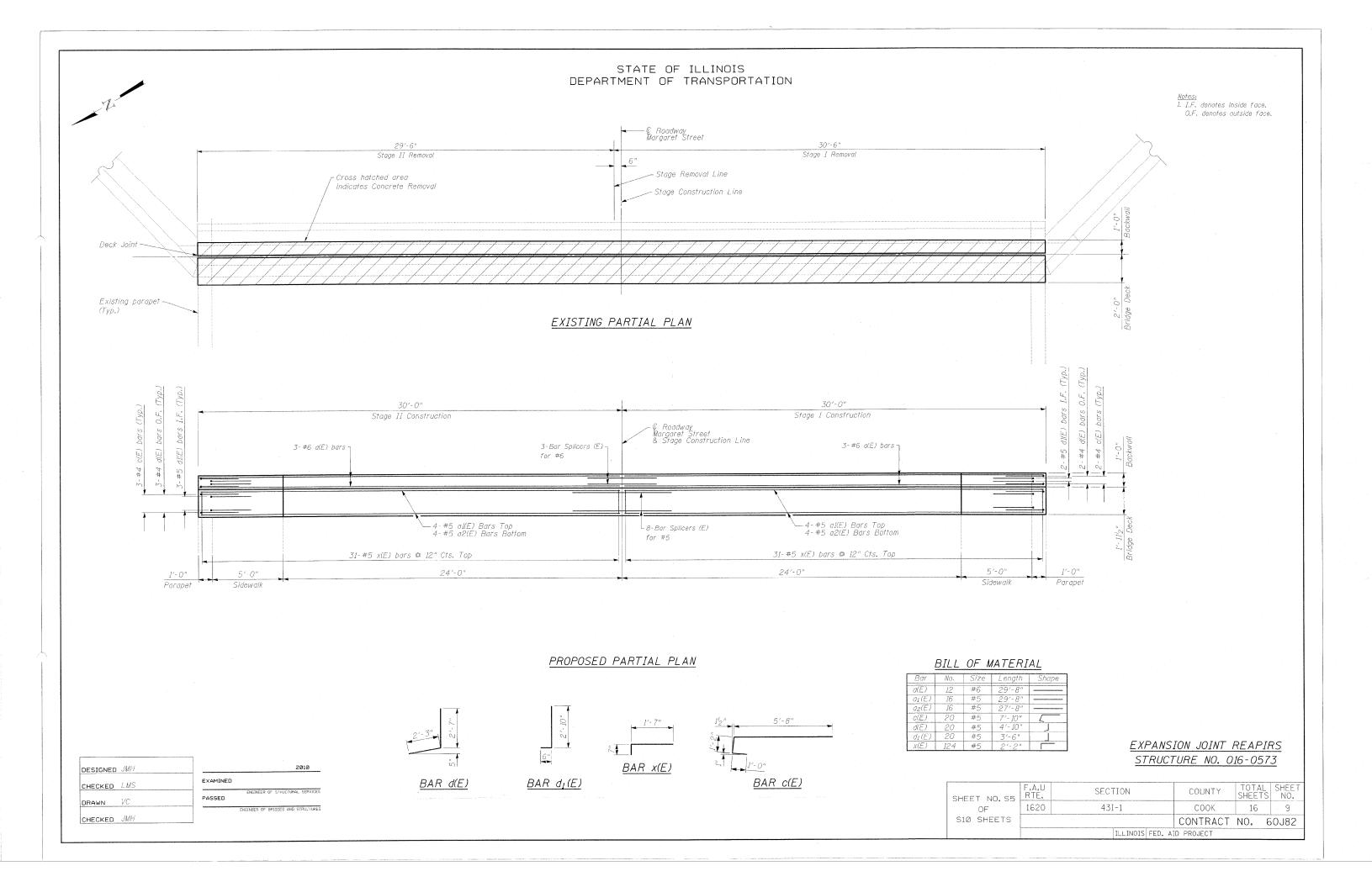
Δ For information only to assist the contractor in bidding. See Special Provision for "Bridge Deck Latex Concrete Overlay,"

BRIDGE DECK AND APPROACH REPAIRS STRUCTURE 016-0573

SHEET NO. S4	F.A.U RTE.	SECTION	COUNTY	TOTAL	SHEET NO.	
OF	1620	43I-1	COOK	16	8	
S10 SHEETS			CONTRACT	NO. 6	60J82	
	ILLINOIS FED. AID PROJECT					

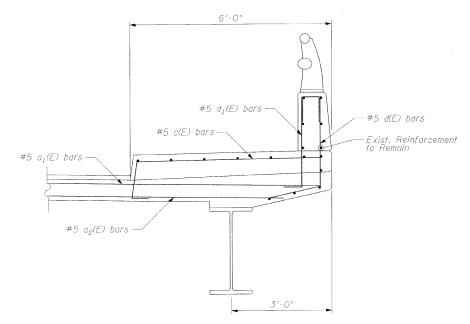
PLAN

DESIGNED JMH	2010
CHECKED LMS	EXAMINED
DRAWN VC	ENGINEER OF STRUCTURAL SERVICE PASSED
CHECKED JMH	ENGINEER OF BRIDGES AND STRUCTUR

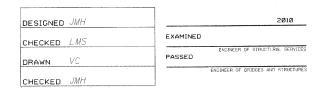


3'-0"

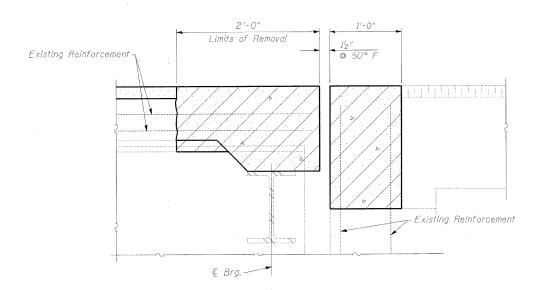
EXISTING PARAPET SECTION



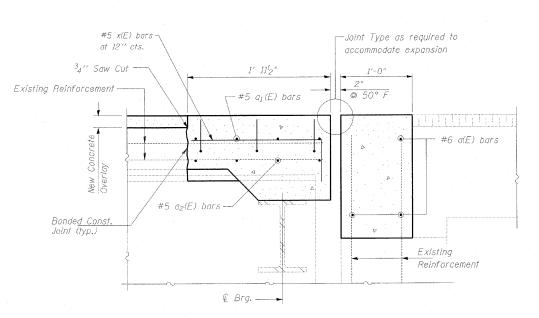
PROPOSED PARAPET SECTION



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



EXISTING SECTION THRU WEST AND EAST ABUTMENTS



PROPOSED SECTION THRU WEST AND EAST ABUTMENTS

Notes.

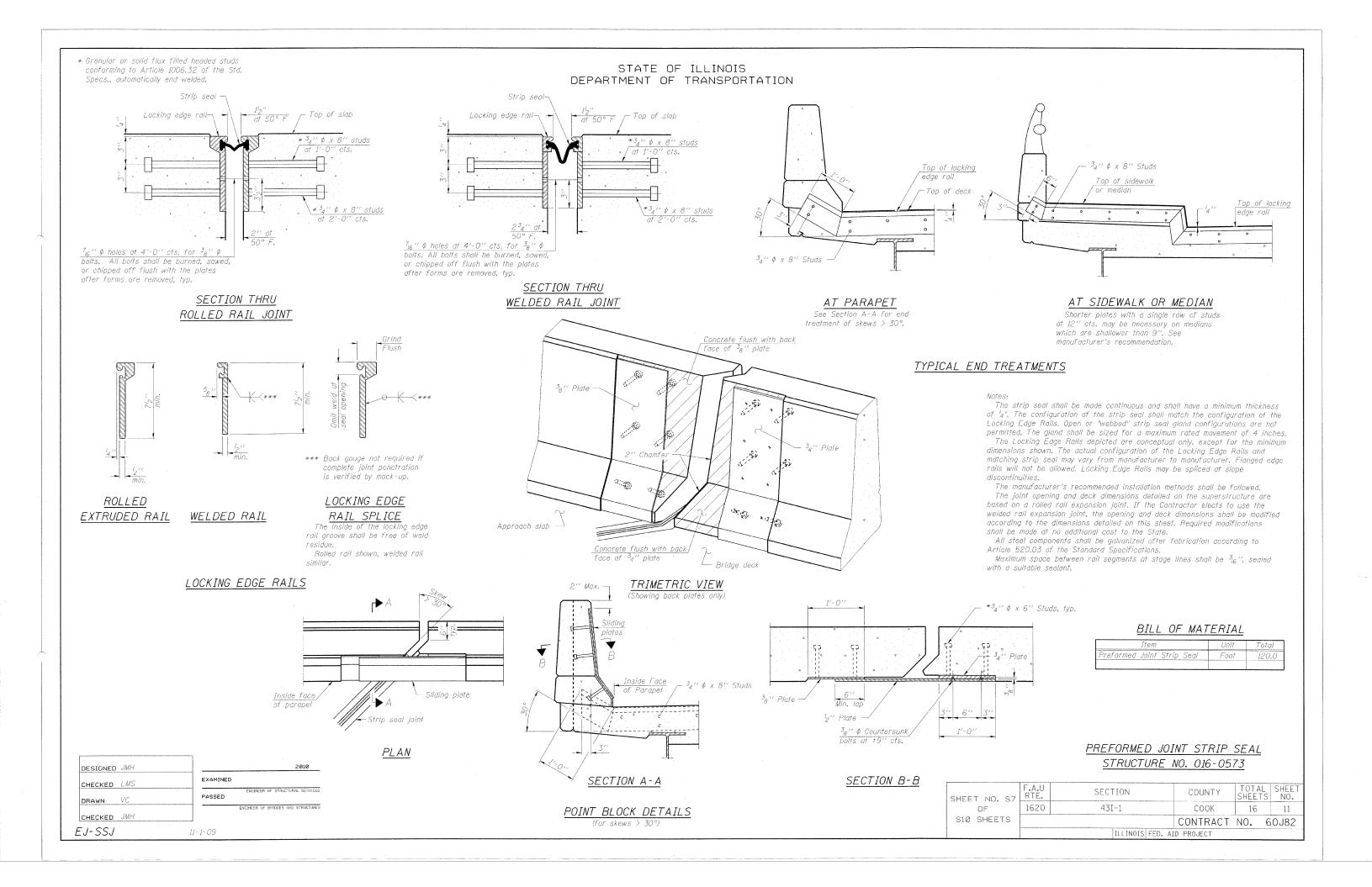
- Existing reinforcement bars extending into the concrete removal area shall be cleaned straightened and incorporated into the new construction. Any reinforcement bars damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- 2. Existing reinforcement bars in the concrete removal area parallel to the expansion joints shall be removed.
- 3. Removal and disposal of the existing expansion joints will not be paid for separately, but shall be included with the cost of Concrete Removal.
- 4. If existing name plate falls within the limits of Concrete Removal, it shall be removed and reinstalled in its original location in accordance with IDOT Std. 515001. Cost included with Concrete Superstructure.
- 5. The Contractor shall exercise extreme care with the existing conduits in sections of the parapet to be removed and to protect and support the conduit. The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.
- 6. Work this sheet with Expansion Joint Repairs sheet.

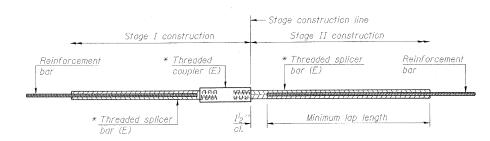
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	29.8
Reinforcement Bars (Epoxy Coated)	Pound	2,140
Concrete Superstructure	Cu. Yd.	29.8

EXPANSION JOINT DETAILS STRUCTURE NO. 016-0573

SHEET NO. S6	F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
OF	1620	43I-1	COOK	16	10		
S1Ø SHEETS			CONTRACT	NO. 6	0J82		
	ILLINOIS FED. AID PROJECT						





STANDARD BAR SPLICER ASSEMBLY

Minimum Lap Lengths										
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4						
3, 4	1'-5''	1'-11''	2'-1"	2'-4"						
5	1'-9''	2'-5''	2'-7"	2'-11''						
6	2'-1''	2'-11''	3'-1''	3′-6′′						
7	2'-9''	3'-10''	4'-2"	4'-8''						
8	3'-8''	5'-1''	5'-5''	6'-2''						
9	4'-7''	6'-5''	6'-10''	7'-9''						

Table 1: Black bar, 0.8 Class C

Table 2: Black bar, Top bar lap, 0.8 Class C

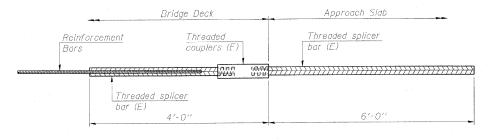
Table 3: Epoxy bar, 0.8 Class C

Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + I_2^{l} " + thread length

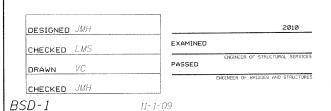
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	16	. 3
Backwall	#6	6	3

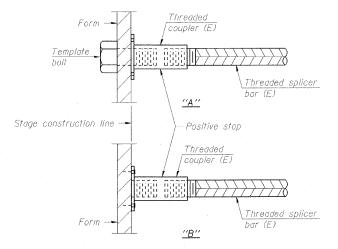


BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



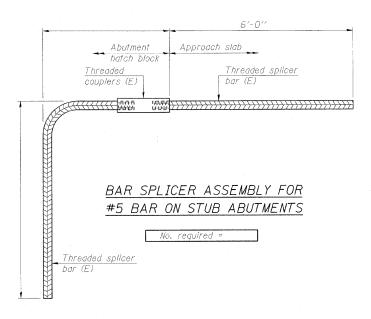
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

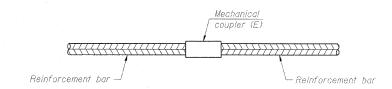


INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template boll.
"B": Set bar splicer assembly by nalling to wood forms or cementing to steel forms.

(E): Indicates epoxy coating.





STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

<u>NOTES</u>

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications. See special provision for Mechanical Splicers.

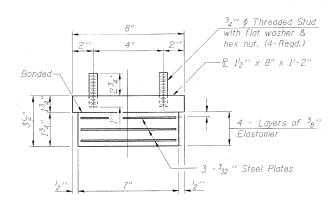
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 016-0573

SHEET NO. S8	F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
OF	1620	43I-1	COOK	16	12	
S10 SHEETS			CONTRACT	NO. 6	0J82	
		ILL:INOIS	FED. A	ID PROJECT		

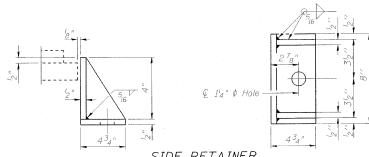
$A \blacktriangleleft 1$ 5½" € Brg. $-\frac{7}{8}$ " ϕ Hole in Bott. Flange -Bearing Assembly £ 1" \$\phi x 12" Anchor bolts (ASTM F1554 Grade 36) with $A \blacktriangleleft$ SECTION A-A ELEVATION AT ABUT. 214 x 214 x 516" P washer

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

. Shim plates shall not be placed under Bearing Assembly.



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

DESIGNED	JMH	2010
CHECKED	LMS	EXAMINED
DRAWN	VC	ENGINEER OF STRUCTURAL SERVICES PASSED
		ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	JMH	

Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

installed in holes drilled before or after members are in

to Article 521.06 of the Standard Specifications. Side retainers and other steel members required for

the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Anchor bolts shall be ASTM F1554 all-thread (or an

Side Retainer, typ.

Anchor bolts for side retainers may be cast in place or

Drilled and set anchor bolts shall be installed according

Existing Plate to be removed using the air-arc method

and grind smooth all weld material remaining on the bollom flange.

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

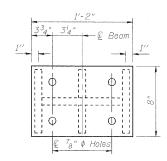
Existing Bearings''.

EXISTING STEEL ROCKER BEARING REMOVAL

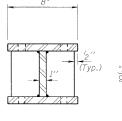
Cost is incidental to "Jack and Remove

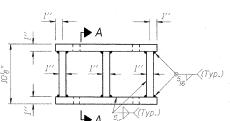
DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS



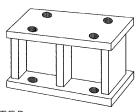
PLAN STEEL EXTENSION





SECTION A-A

ELEVATION STEEL EXTENSION



Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

FABRICATED STEEL EXTENSION

FABRICATED STEEL EXTENSION

BILL OF MATERIAL

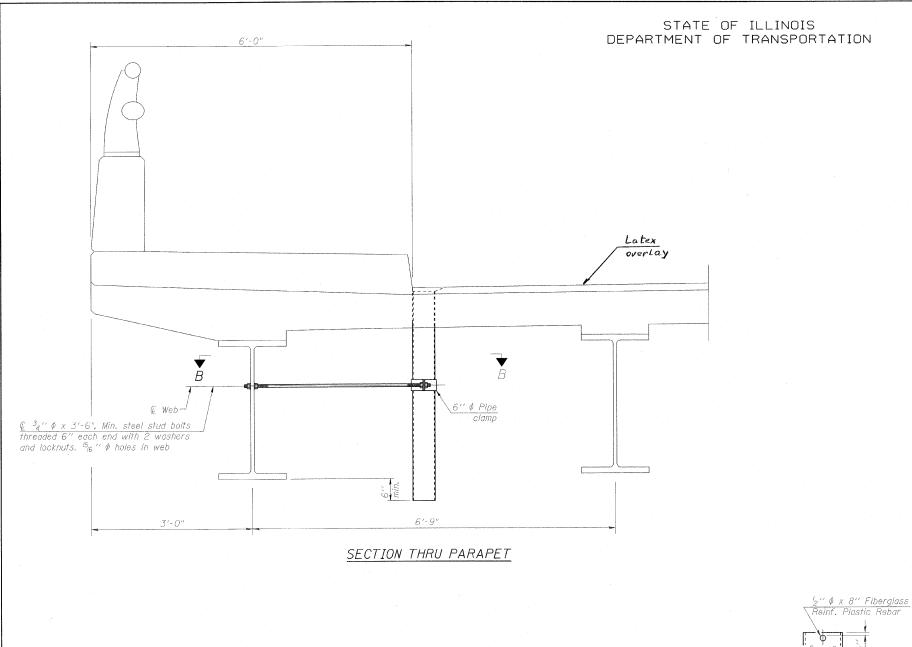
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	18
Jack and Remove Existing Bearings	Each	18
Anchor Bolts, 1"	Each	36
Furnishing and Erecting Structural Steel	Pound	2,620

INTERIOR GIRDER REACTION TABLE Abutment

Minimum Jack Size = .29 ToNS

BEARING DETAILS STRUCTURE NO. 016-0573

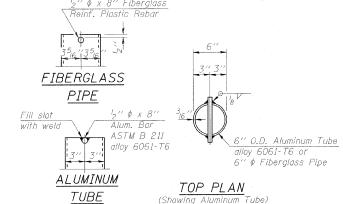
SHEET NO. S9	F.A.U RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
OF OF	1620	43I-1	COOK	16	- 13	
S1Ø SHEETS			CONTRACT	NO. 6	0J82	
		ILLINOIS	ID PROJECT			



-6'' Ø Pipe Clamp

Edge of Curb -

TOP PLAN



DESIGNED JMH CHECKED LMS EXAMINED ENGINEER OF STRUCTURAL SERVICES PASSED ENGINEER OF BRIDGES AND STRUCTURES ENGINEER OF BRIDGES AND STRUCTURES

<u>SECTION B-B</u>
*Dimension as required

by Pipe Clamp

S-I-D 11-1-09

FLOOR DRAINS STRUCTURE NO. 016-0573

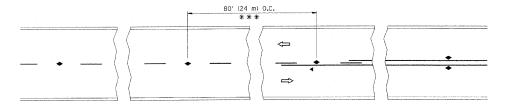
SHEET NO. S1Ø OF		F.A.U SECTION				COUNTY	TOTAL SHEETS	SHEET NO.		
		1620	43I		COOK	16	14			
S1Ø 9	SHEETS				CONTRACT	NO. 6	50J82			
		ILLINOIS FED. AID PROJECT								

The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to

Society of Protective Coatings Spec. SSPC-SPI prior to painting.

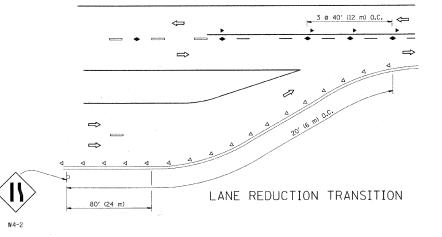
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

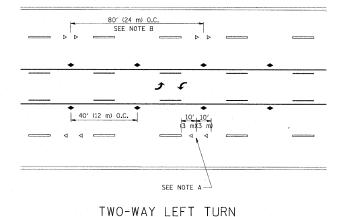
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

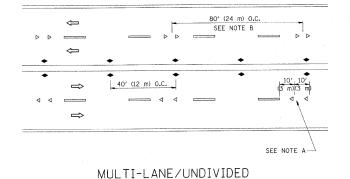


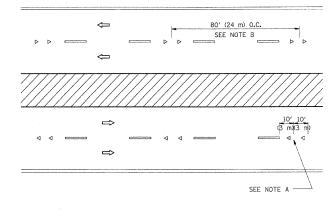
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY









MULTI-LANE/DIVIDED

GENERAL NOTES

- MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- 3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

- ---- YELLOW STRIPE
- WHITE STRIPE
- ◆ ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (₩/O)
- TWO-WAY AMBER MARKER

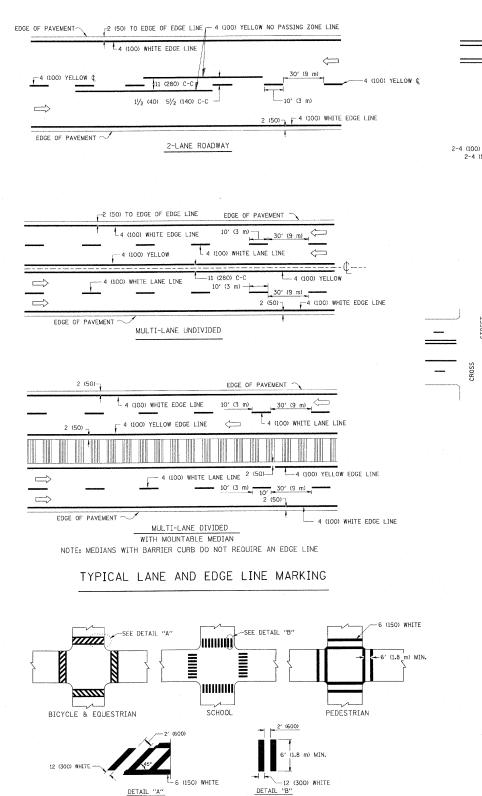
DESIGN NOTES

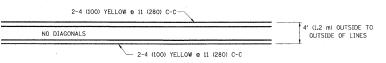
- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- 2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
- 4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

LEFT TURN

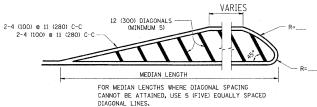
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED -	T. RAMMACHER 09-19-94			TVPIC	AL APPLICAT	PIADI	F.A.U.	SECTION	COUNTY	TOTAL SHE	ET
c:\pw_work\pwidot\drivakosgn\dØ108315\tc	1.dgn	DRAWN -	REVISED -	T. RAMMACHER 03-12-99	STATE OF ILLINOIS	DAIGE				1620	431-1	COOK	16 1	5
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -1	T. RAMMACHER 01-06-00	DEPARTMENT OF TRANSPORTATION	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)				TC-11	CONTRACT	NO. 60J82	2	
	PLOT DATE = 9/9/2009	DATE -	REVISED -	C. JUCIUS 09-09-09		SCALE: NONE	SHEET NO. 1 OF 1	SHEETS	STA. TO STA.	FED. ROAD		ID PROJECT		



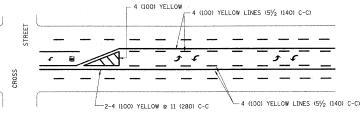


4' (1.2 m) WIDE MEDIANS ONLY

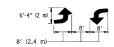


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

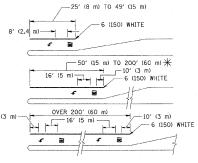


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

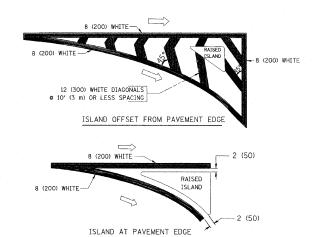


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. \P AREA = 15.6 SO. FT. (1.5 m²) \P AREA = 20.8 SQ. FT. (1.9 m²)

** 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) TÜRN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS	
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE	
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 & 4 (100)	SOLID	YELLOW	11 (280) C-C	
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN	
ANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE	
OOTTED LINES EXTENSIONS OF CENTER, LANE OR FURN 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	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 51/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE	
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE .	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL	
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	ONALS (BIKE & EQUESTRIAN) 12 (300) @ 45°		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 CROSSMALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE	
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS	SOLID	YELLOW: TWO WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE	
	0 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS		WHITE: ONE WAY TRAFFIC	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 (TO km/h)) 30' (9 m) C-C (OVER 45MPH (TO 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: "78"-3.6 SO. FT. (0.33 m ²) EACH "X"-54.0 SO. 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 (0VER 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.

FILE NAME =	USER NAME = drivakosgn	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-
		DRAWN -	REVISED -C. JUCIUS 09-09-
c:\pw_work\pwidot\drivakosgn\d010	18315\tc 3,dgn	DRAWN "	KEVISED -C. JUCIUS 09-09-
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED ~
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

TYPICAL CROSSWALK MARKING

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

		DISTRICT ONE						SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TYPICAL PAVEMENT MARKINGS						1620	431-1	COOK	16	16
							TC-13		CONTRACT NO. 60J82		
	SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				