### STATE OF ILLINOIS

# DEPARTMENT OF TRANSPORTATION

**DIVISION OF HIGHWAYS** 

# **PROPOSED HIGHWAY PLANS**

FAP 351 / IL ROUTE 7 (US ROUTE 6) SECTION 536T-1

OVER SPRING CREEK (0.5 MI. E. OF WILL-COOK RD.) **CULVERT REHABILITATION COOK COUNTY** C-91-086-10

ORLAND TOWNSHIP R 12 E - 3rd PM

**IMPROVEMENT LOCATION** IL ROUTE 7 (US ROUTE 6) OVER SPRING CREEK **STRUCTURE NO: 016-1210** 



FOR INDEX OF SHEETS, SEE SHEET NO. 2

**DESIGN DESIGNATION** 

SPEED LIMIT 45 MPH

ADT 16,900 (2009)

OTHER PRINCIPAL ARTERIAL

IMPROVEMENT LOCATED IN VILLAGE OF ORLAND PARK

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

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 = 18.0 FT. = 0.003 MILE





D-91-086-10

536T-1

COOK



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

SUBMITTED FEBRUARY 1, 20 10

Daine M. O'Washe DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF \*\* NOIS

CONTRACT NO. 60162

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#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

#### INDEX OF SHEETS

2 Index of Sheets, State Standards, General Notes and Summary of Quantities

3 Detour Map

4 5 Structure Plans S1-S2

6-8 District One Standards

Highway Standards

#### INDEX OF HIGHWAY STANDARDS

Standard No. Description

000001-05 Standard Symbols. Abbreviations And Patterns

00/001-02 Areas Of Reinforcement Rebars

701901 - 01 Traffic Control Devices

780001 - 02 Typical Pavement Markings

781001 - 03 Typical Applications Raised Reflective Pavement Markers

#### GENERAL NOTES

- 1. 10 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.
- 2. Where artificial lighting is utilized in night operations, the Contractor shall exercise the utmost precautions in preventing adverse visibility to the motoring public and adioining residential areas.
- 3. For stabilization, all Type III barricades shall require a minimum of four (4) sandbags per barricade.
- 4. The Resident Engineer must contact the Traffic Control Supervisor at (847)705-44() at least 72 hours prior to installation of the temporary control devices.
- The Resident Engineer shall contact the Area Traffic Field Engineer (Patrice Harris) at (708) 597-9800 at least two (2) weeks prior to the placement of permanent pavement markings.
- 6. All pavement markings and raised reflectors affected by the bridge repairs shall be replaced. Nominal quantities have been included in the contract for this work.
- 7. The Contractor will not be allowed to set up a yard or field office on State property without written permission from the Department.
- 8. Do not scale these plans for construction purposes.
- 9. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work. However, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
- The During construction operations, loose material deposits that obstruct the flow of water in draining the area shall be remissed 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.
- Ail Type I and Type II barricades shall have two (2) sandbags on the bottom rail.
- 12. All raised reflective pavement markers (bridge) shall be low profile.
- 13. Before beginning any work, the Contractor shall retain and record for future reference, all existing payement marking lines, symbols and letters (and raised reflective markers) in order that these locations can be re-established for striping. Exact locations of all pavement markings and raised reflective pavement markers shall be as directed by the Engineer.

			URBAN	
CODE	ITEM DESCRIPTION ,	· UNIT	QUANTITÝ:	100% STATE
42001300	Protective Coat	Sq.Yd.	98	98
44000915	Hot-Mix Asphalt Surface Removal (Deck)	59.Yd.	98	98
50300255	Concrete Superstructure	CUYD	26	26
50300260	Bridge Deck Grooving	sayo	89	89
50800205	Reinforcement Bars, Epoxy Coated	POVNO	7,850	7,850
67000400	Engineer's Field Office, Type A	CAL MO	1	And the state of t
67:00100	Mobilization	4 SUM	1	
70102550	Traffic Control and Protection for Temporary Detour	EACH	1	1
* 78008210	Polyurea Pavement Marking, Type I - Line 4"	FOOT	72	72
78100105	Ralsed Reflective Pavement Marker (Bridge)	EACH	2	.2.1
X0322256	Temporary Information Signing	Sq.Ft.	50	50
70106800	Changeable Message Sign	Cal.Mo.	2	2
	Maintenance of Existing Traffic Signal Installation.	L Sum		773
85000300		Annual Control of the	1	The second section of the second section of the second sec
X0325737	Temporary Traffic Signal Timing	Each	2	2
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SUMMARY OF QUANTITIES

FTL	USER NAME - IDDT:ang)	DESIGNED -	J.M., HAMELKA	REVISED -	
D1621ax satigenéste.dyn		DRAWN	D. REDZIC	REVISED -	
	PLOT SCALE - 1 SAMS ' / IN.	CHECKED -	J.M. HAMELKA	REVISED -	
	PLOT DATE - 1/2/010	DATE	JANUARY, 2010	REVISED -	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

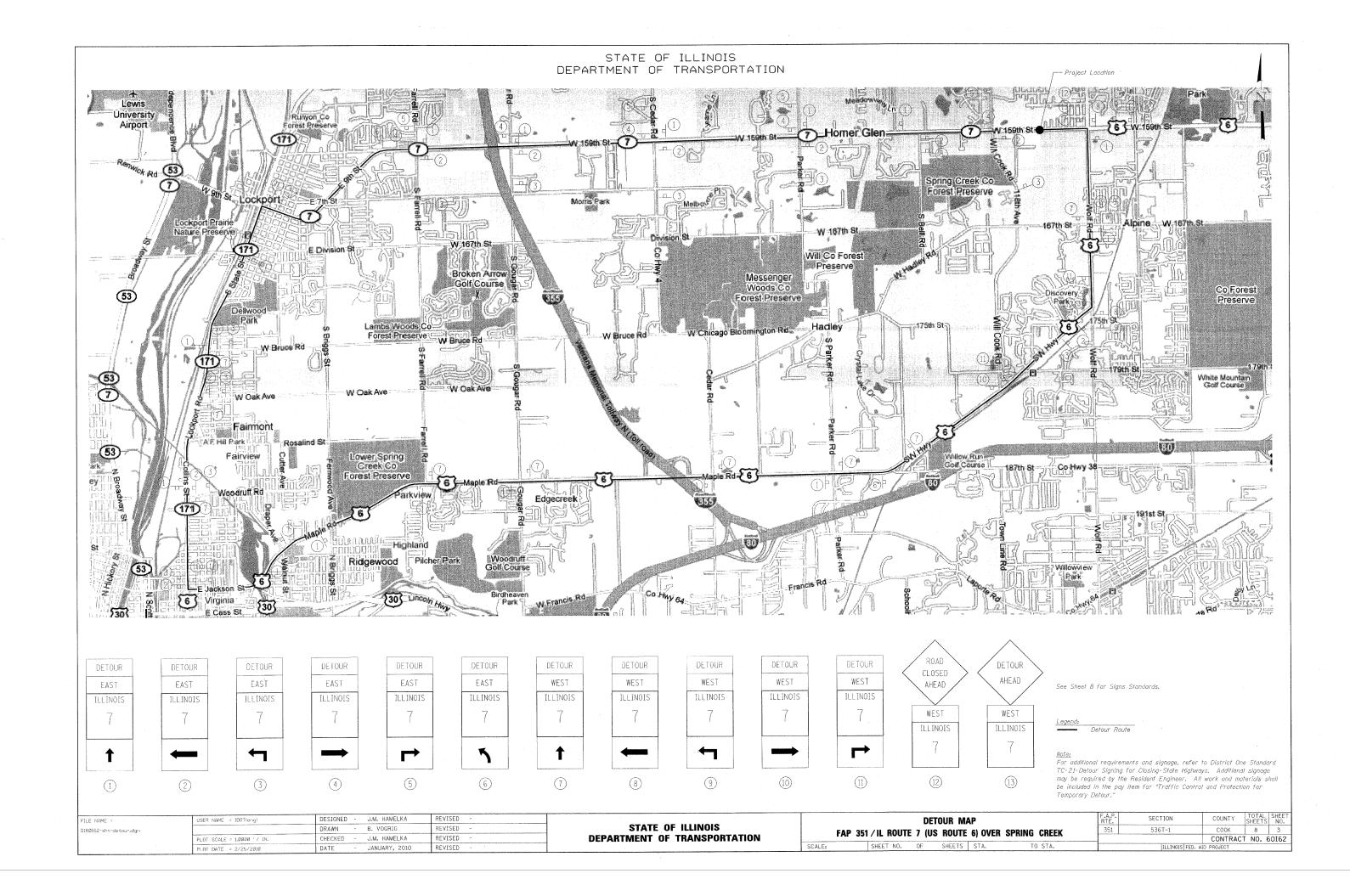
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351	536T-1	ï	K	8	2
			CONTRACT	NO. 6	0162
	ILLINOIS FED.	AID	PK: SCT		

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URBAN



#### Existing Structure:

The existing structure is a single span reinforced concrete slab bridge.

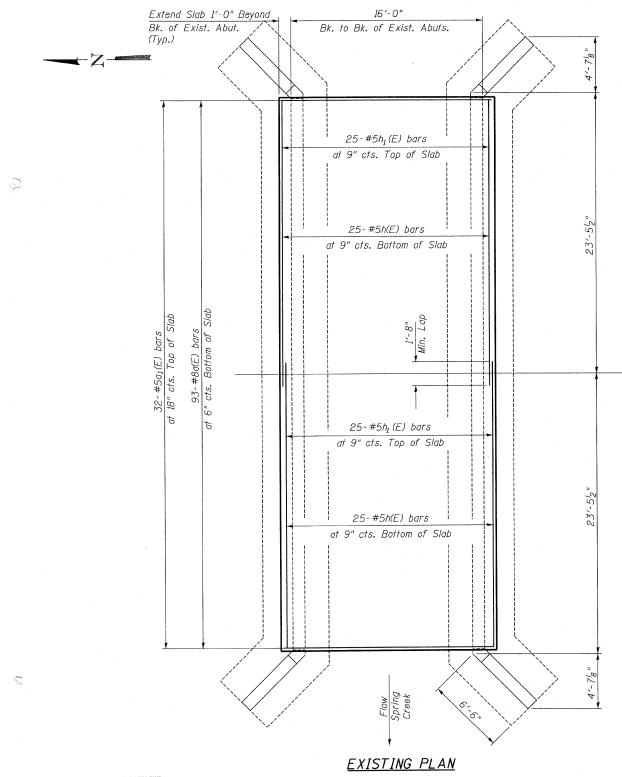
An assigned detour will be utilized to redirect traffic around the structure during construction.

No salvage.

DESIGNED JMH

CHECKED JMH

DRAWN DR CHECKED JMH

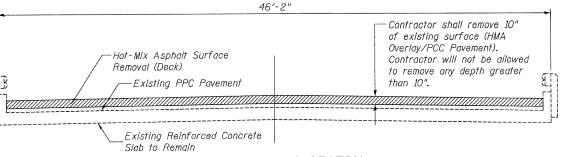


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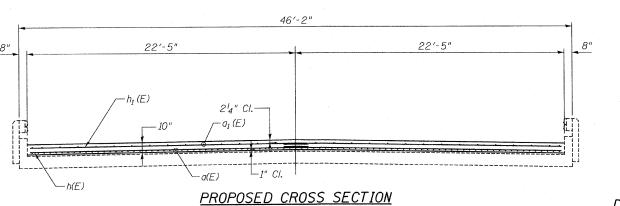
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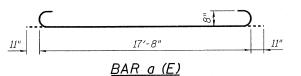
PASSED

#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



#### EXISTING CROSS SECTION





#### BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	93	#8	19'-6"	
a <sub>1</sub> (e)	32	#5	17′-8"	
h(E)	50	#5	23'-1"	
h <sub>1</sub> (E)	50	#5	23'-1"	
	ITEM		UNIT	QUANTITY
Hot Mix Aspha	ItSuface Remova	(Deck)	Sq. Yd.	9 <b>8</b>
Reinforcement Epoxy Coated	Bars,		Pound	7,850
Concrete Supe	rstructure		Cu. Yd.	26
Protective Coa	t .		Sq. Yd.	98
Bridge Deck G	rooving		Sq. Yd.	89
	· · · · · · · · · · · · · · · · · · ·			



COLLINS ENGINEERS, INC. STAN-LEE KADERBEK NO. 081-004620 EXPIRES 11-30-2010

LOCATION SKETCH

#### DESIGN SPECIFICATIONS

#### LOADING HS-20

AASHTO Standard Specifications for Highway Bridges, 17th Edition

#### DESIGN STRESSES

 $f_c' = 3,500 \ psi$ fy = 60,000 psi

#### SCOPE OF WORK

- 1. Remove 10" Thickness of Existing Overlay/PCC Pavement.
- 2. Place New Structural Reinforced Concrete Overlay.
- 3. The Protective Coat shall be placed on the inside and top face of the Headwalls.

GENERAL PLAN & SECTION F.A.P. ROUTE 351 SEC. 536T-1 COOK COUNTY STATION 453+72 STRUCTURE NO. 016-1210

SHEET NO.S1	F.A.P. RTE.	SECTION	COUNTY TOTAL SHEETS		SHEET NO.		
OF OF	351	536T-1	COOK	8	4		
S2 SHEETS	-		CONTRACT	NO. 60	162		
	ILLINOIS FED. AID PROJECT						

## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

#### INDEX OF SHEETS

- S1. General Plan and Section
- S2. General Notes, Bill of Materials and Index of Sheets

### **GENERAL NOTES:**

- 1. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 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. An assigned detour shall be utilized to maintain traffic during construction.
- 5. Hot-Mix Asphalt Surface Removal (Deck) will include any PCC Pavement Removal required to achieve 10 inches of surface removal on the areas shown on the Plans. Hot-Mix Asphalt Surface Removal (Deck) shall include removal areas on Approaches.

#### TOTAL BILL OF MATERIAL

ITEM DESCRIPTION	UNIT	SUPER	SUB	TOTAL
Hot-Mix Asphalt Suface Removal (Deck)	Sq. Yd.	98		98
Reinforcement Bars, Epoxy Coated	Pound	7,850		7,850
Concrete Superstructure	Cu. Yd.	26		26
Protective Coat	Sq. Yd.	93		. 93
Bridge Deck Grooving	Sq. Yd.	89		89

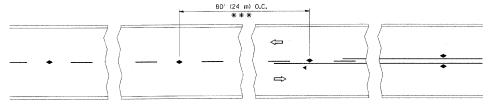
GENERAL NOTES, BILL OF MATERIALS

AND INDEX OF SHEETS

STRUCTURE NO. 016-1210

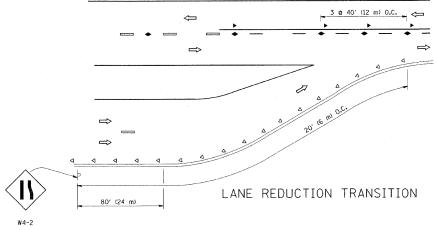
SHEET NO. S2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
OF	351	COOK	8	5	
S2 SHEETS			CONTRACT	NO. 60	162
		ILLINOIS FED. A	ID PROJECT		

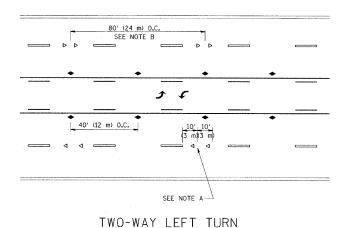
	-			
DESIGNED	JMH			2010
CHECKED	JMH	EXAMINED		
DRAWN	DR	PASSED	ENGINEER OF S	TRUCTURAL SERVICES
CHECKED			ENGINEER OF BRID	GES AND STRUCTURE

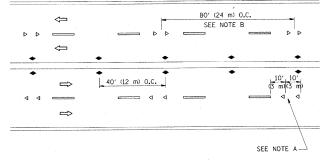


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

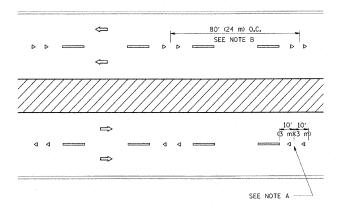
TWO-LANE/TWO-WAY







MULTI-LANE/UNDIVIDED



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.
- 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

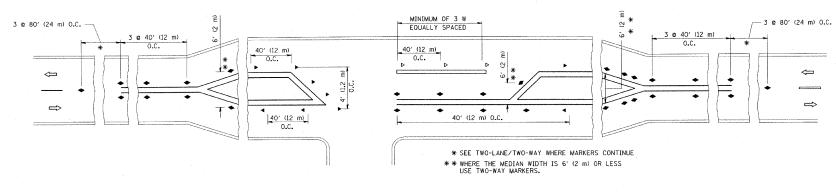
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

#### SYMBOLS

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

#### DESIGN NOTES

- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- 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.
- MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

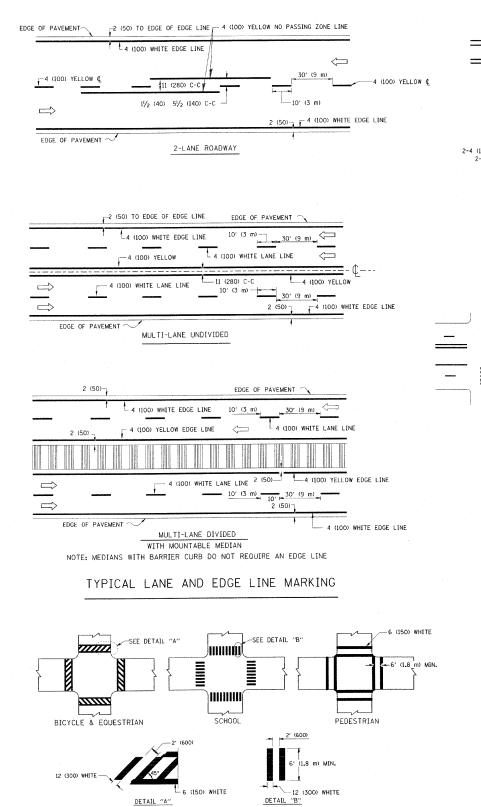


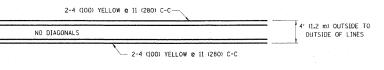
LEFT TURN

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

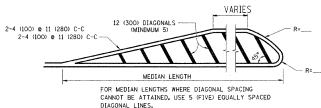
COUNTY SHEETS NO.

COOK 8 6 DESIGNED REVISED -T. RAMMACHER 09-19-94 SECTION FILE NAME = USER NAME = drivakosan TYPICAL APPLICATIONS STATE OF ILLINOIS DRAWN REVISED - T. RAMMACHER 03-12-99 351 536T-1 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) **DEPARTMENT OF TRANSPORTATION** REVISED -T. RAMMACHER 01-06-00 CHECKED PLOT SCALE = 50.000 '/ IN. TC-11 CONTRACT NO. 60162 SHEET NO. 1 OF 1 SHEETS STA. REVISED - C. JUCIUS 09-09-09 DATE



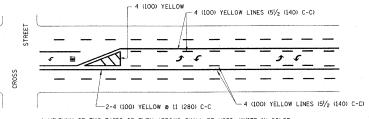


#### 4' (1.2 m) WIDE MEDIANS ONLY

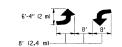


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

#### MEDIANS OVER 4' (1.2 m) WIDE

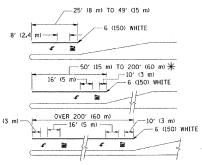


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

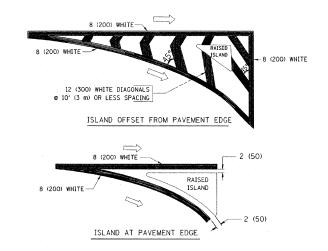
#### TYPICAL PAINTED MEDIAN MARKING



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

TYPICAL LEFT (OR RIGHT) TURN LANE

#### TYPICAL TURN LANE MARKING



#### TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (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	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (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)	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 (0VER 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 SO. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SO. FT. (5.0 m <sup>2</sup> )
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) T0 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	10-27-9
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	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	SHEET NO.
		TYPICAL PAVEMENT MARKINGS						536T-1	COOK	8	7
		1171	ML FAI	CIVICIAI	INIMININGS			TC-13	CONTRACT	NO. 60	162
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. FED. ROAD DIST, NO. 1 ILLINOIS FED.							ID PROJECT				

