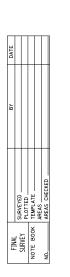
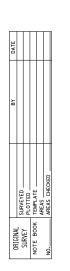


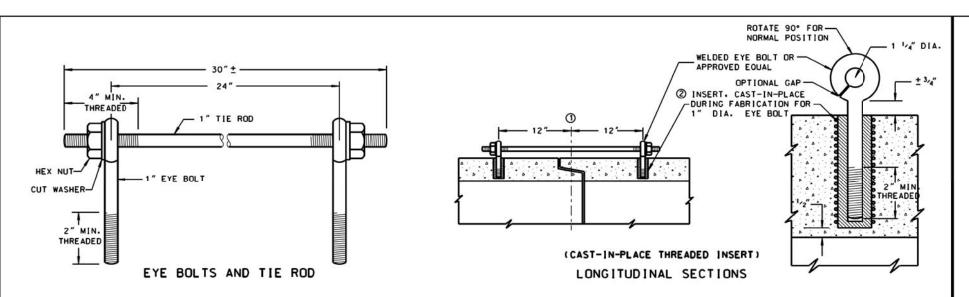
Two Pierce Place, Suite 1400 ltasca, Illinois 60143

Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION







EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS. JOINT TIES AND HARDWARE SHALL BE GALVANIZED STEEL.

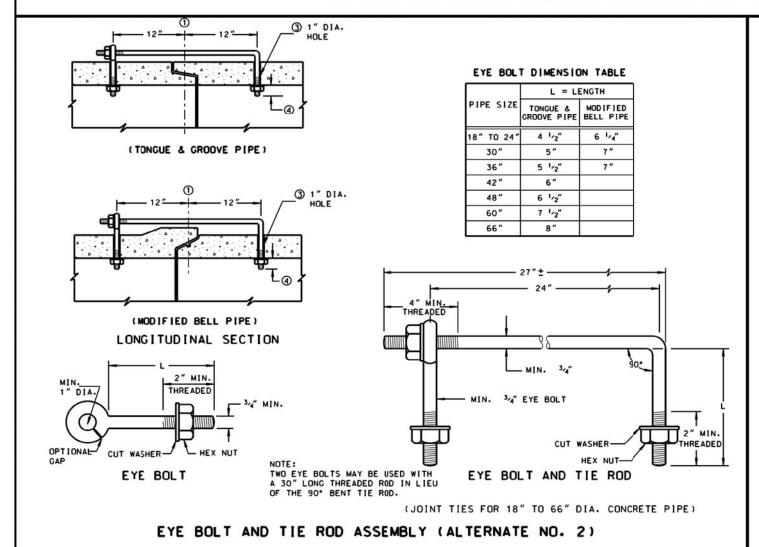
CONCRETE CULVERT PIPE AND SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT THE LAST THREE JOINTS BEFORE A FLARED END SECTION

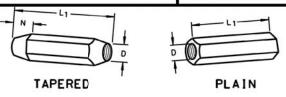
THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR CONCRETE PIPE.

UNLESS OTHERWISE STATED IN THE CONTRACT THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE CULVERT PIPE AS INDICTED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCLUDED IN THE COST OF PIPE CULVERTS OR STORM SEWERS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR GALVANIZED STEEL JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

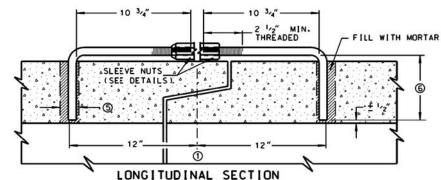
- 1 & OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- 3 HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12" FROM € OF TONGUE AND GROOVE.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2".
- (5) OPENING TO BE ROD DIAMETER + 1 INCH.
- 6 LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.





RIGHT AND LEFT THREADS

SLEEVE NUTS



(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

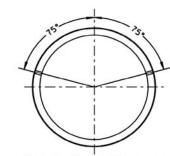
SHEET NO.

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N	
12-60	5/8	5/8	5	1/2	
66-84	3/4	3/4	5	1/2	
90-108	1	1	7	1 7/16	

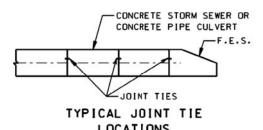
NOT TO SCALE

ADDEC



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



LOCATIONS

JOINT TIE MAT'L	DATE	NK LakeCounty	APPROVED BY: M. ZEMAITIS
D JOINT TIE MAT'L	7/8/11	LakeCounty Division of Transportation	DATE: 04/01/II

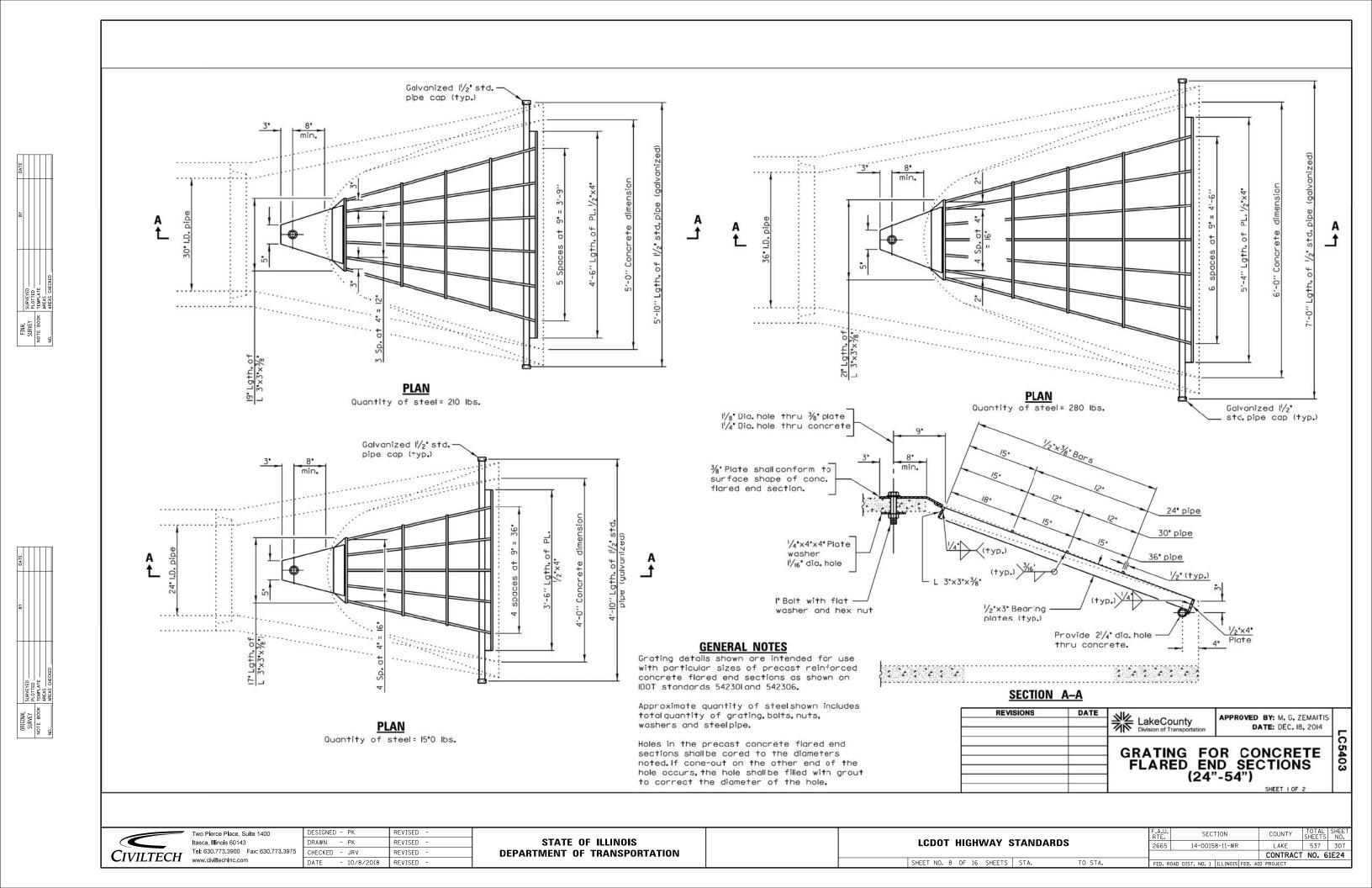
JOINT TIES FOR CONCRETE PIPE

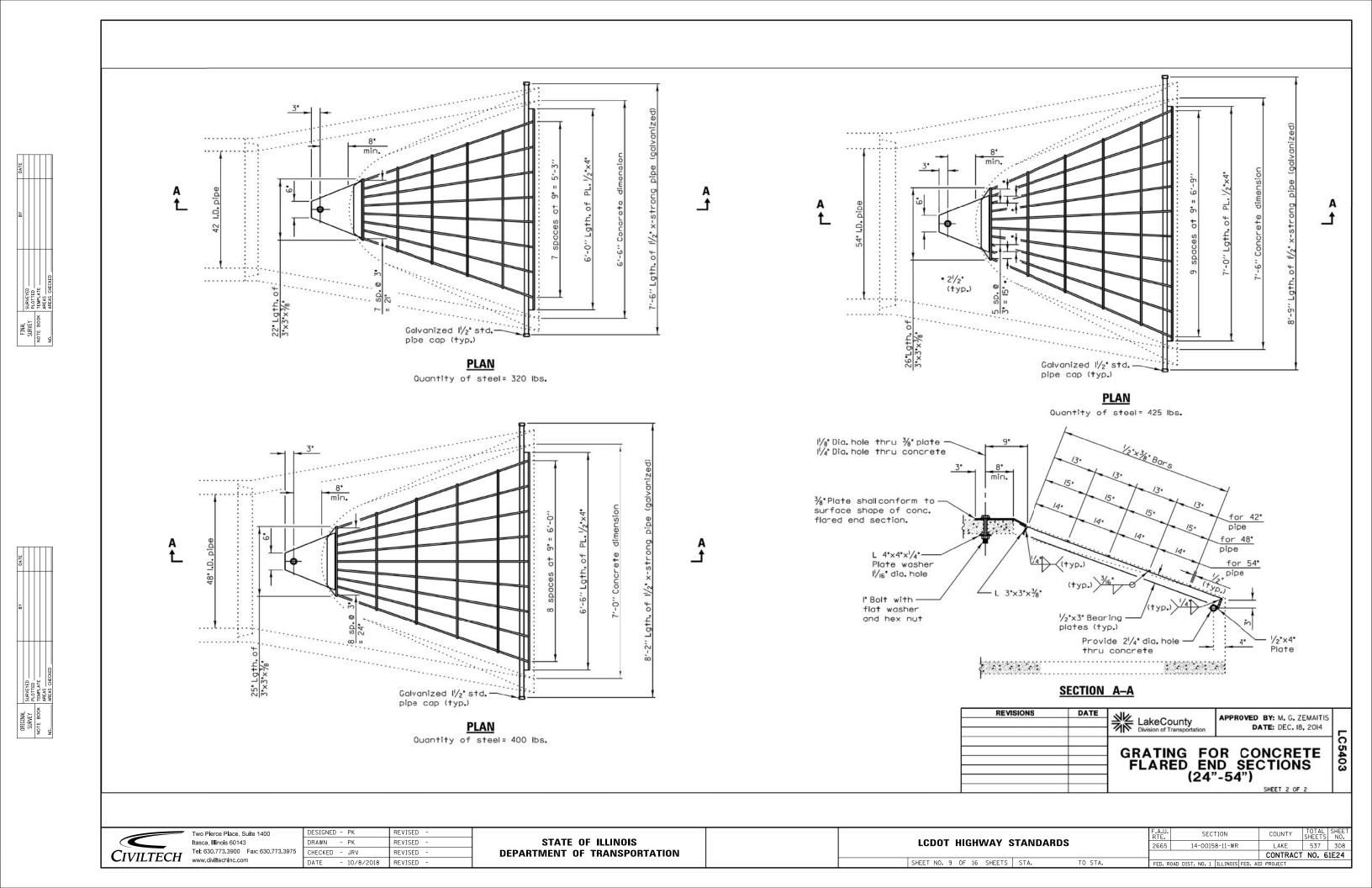
	Two Pierce Place, Suite 1400						
	Itasca, Illinois 6014	3					
CIVILTECH	Tel: 630.773.3900	Fax: 630.773.397					
CIVILIECH	www.civiltechinc.co	m					

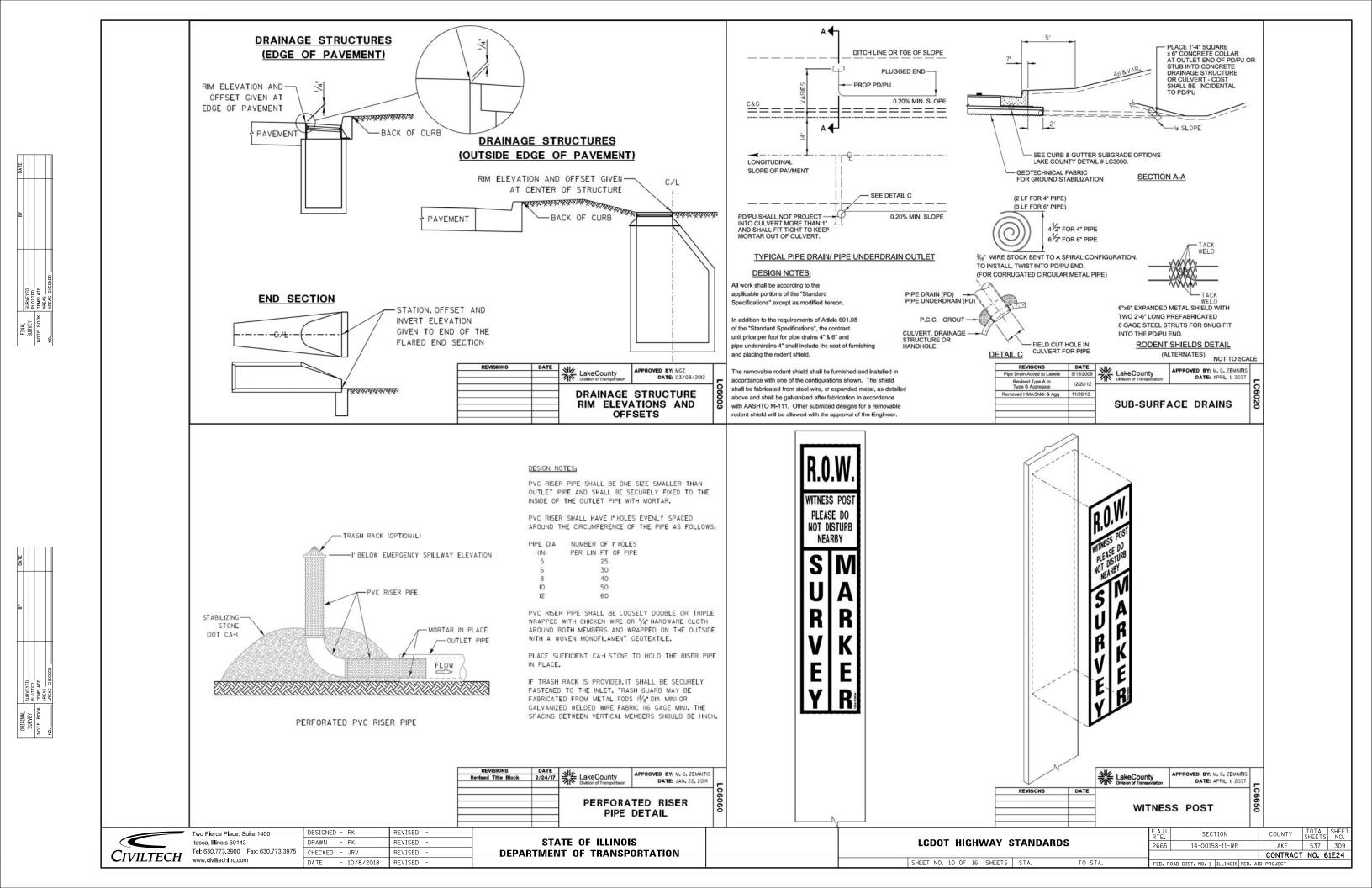
Place, Suite 1400	DESIGNED - PK	REVISED -
s 60143	DRAWN - PK	REVISED -
.3900 Fax: 630.773.3975	CHECKED - JRV	REVISED -
ninc.com	DATE - 10/8/2018	REVISED -

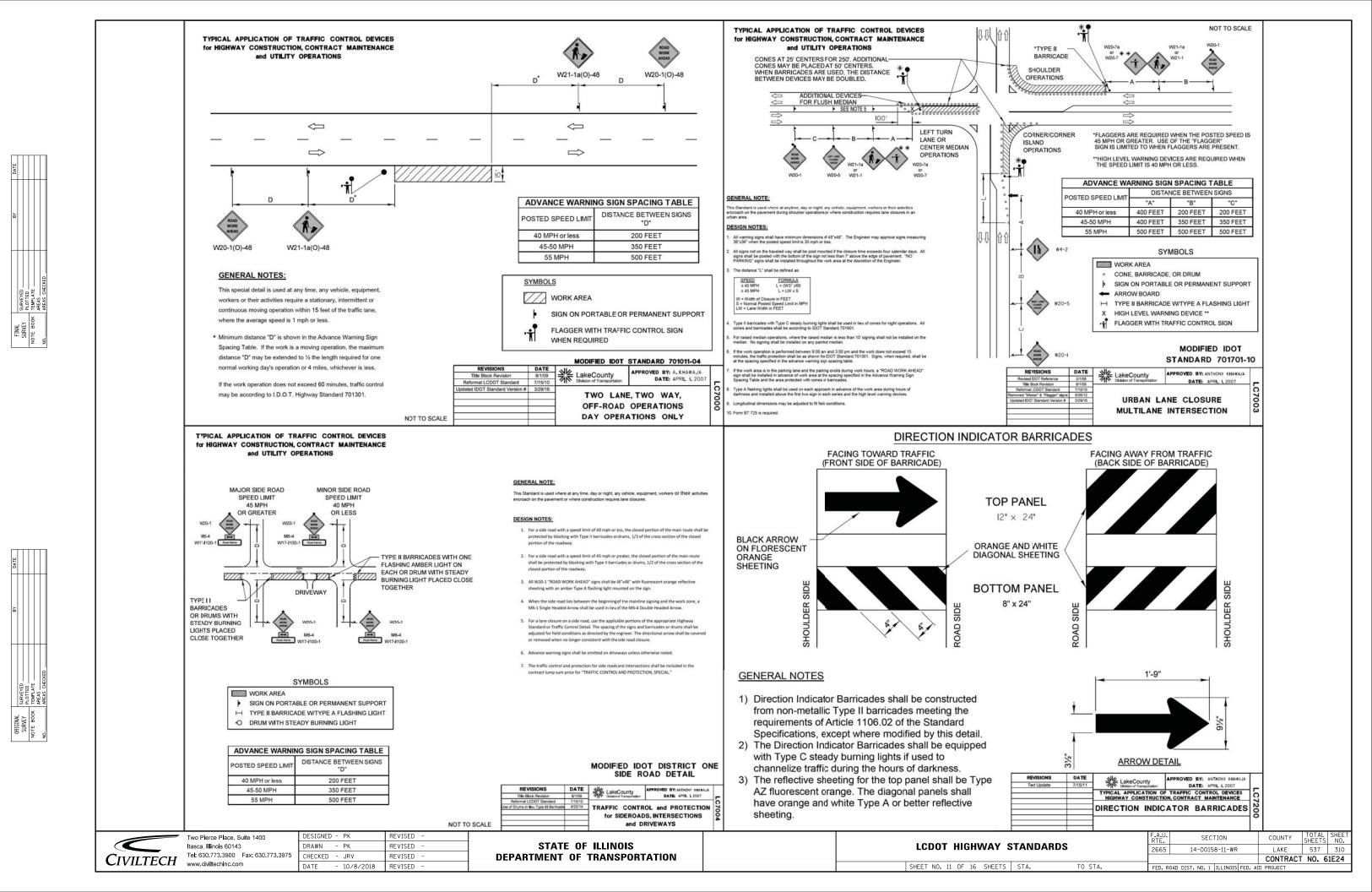
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

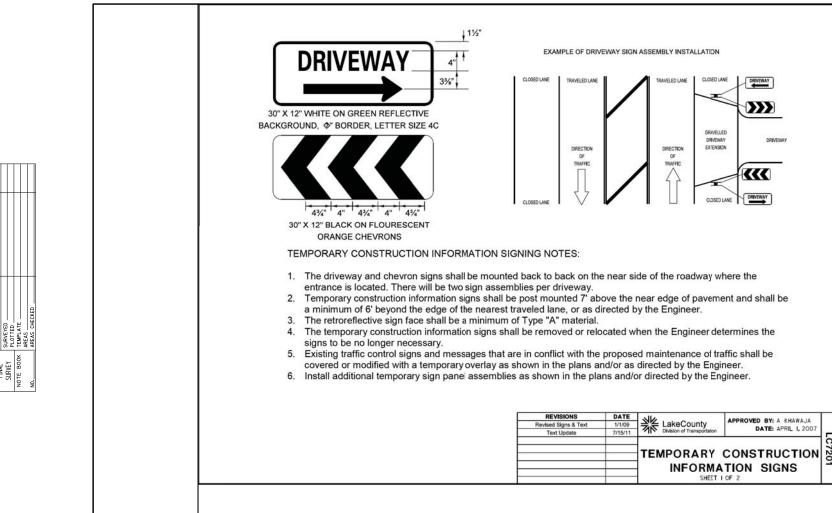
		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
LCDOT HIGHWAY STANDARDS		2665	14-00158-11-WR	LAKE	537	306
				CONTRACT	NO. 6	1E24
SHEET NO. 7 OF 16 SHEETS STA.	TO STA.	EED D	OAD DIST NO 1 THE INDIS EED A	ID DDO IECT		











DESIGNED - PK

DRAWN - PK

CHECKED - JRV

DATE

Two Pierce Place, Suite 1400

Tel: 630.773.3900 Fax: 630.773.3975

Itasca, Illinois 60143

CIVILTECH rel: 630.773.3900 F

REVISED

REVISED

REVISED

- 10/8/2018 REVISED

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION



48" X 36"
BLACK ON FLUORESCENT ORANGE
REFLECTIVE BACKGROUND
1" BORDER WITH %"NSET
LETTER SIZE 60
*LETTER SIZE 6E BOLD

LCDOT HIGHWAY STANDARDS

SHEET NO. 12 OF 16 SHEETS STA.

REVISIONS		APPROVED BY: A KHAWAJA		
Revised Signs & Text	1/1/09	≥ LakeCounty	DATE: APRIL I, 2007	l
Text Update	7/15/11	Division of Transportation	DATE: APRIL 1, 2007	۔ ا
			CONSTRUCTION TION SIGNS	C/201

SECTION

14-00158-11-WR

2665

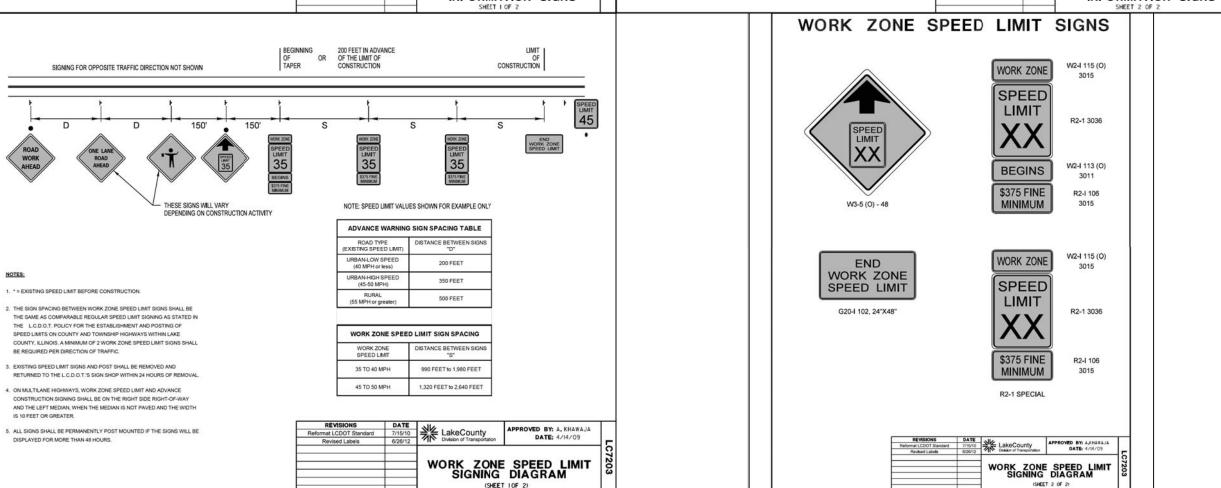
TO STA.

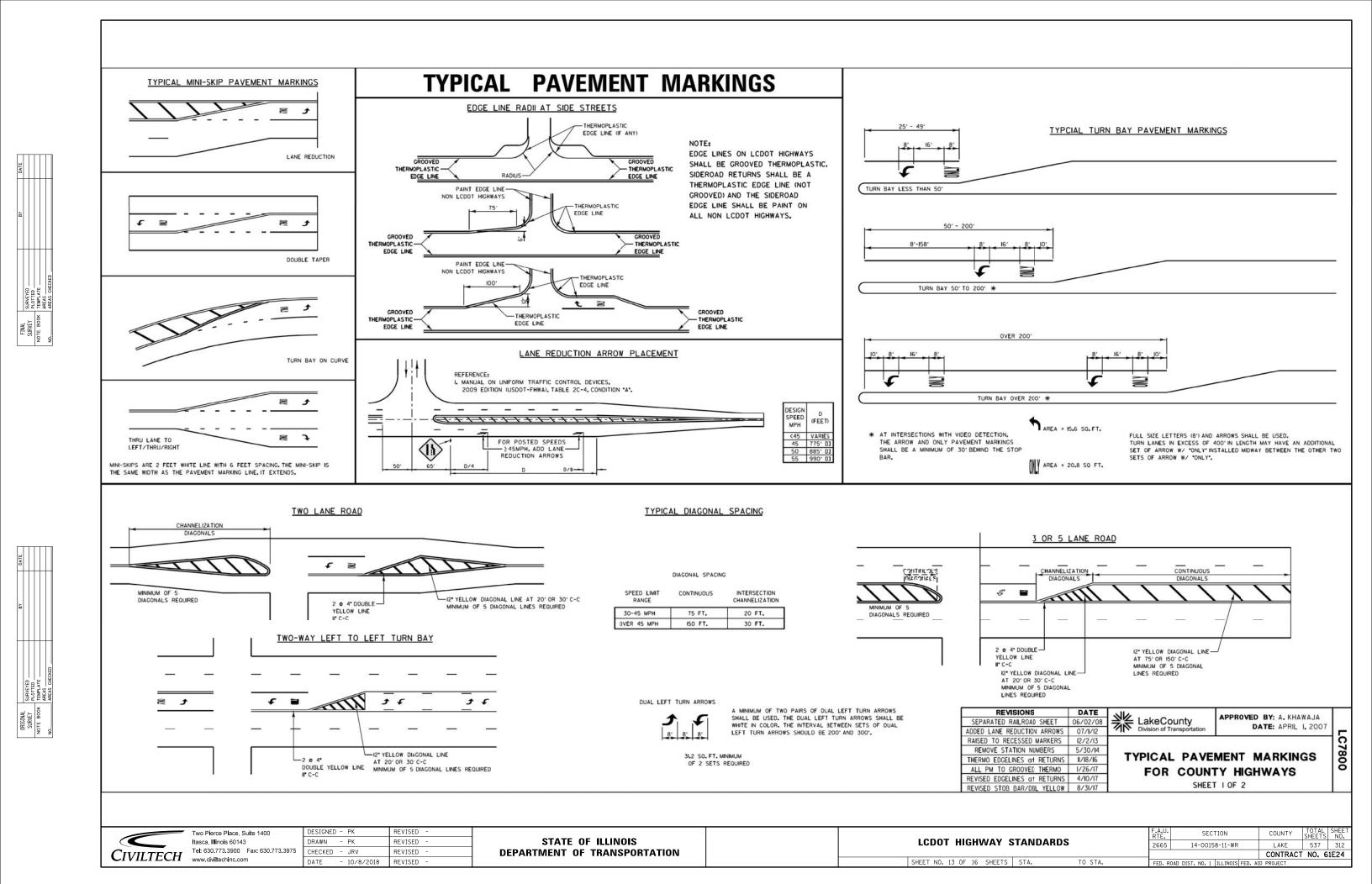
COUNTY

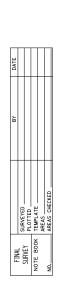
I AKE

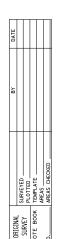
537 | 311

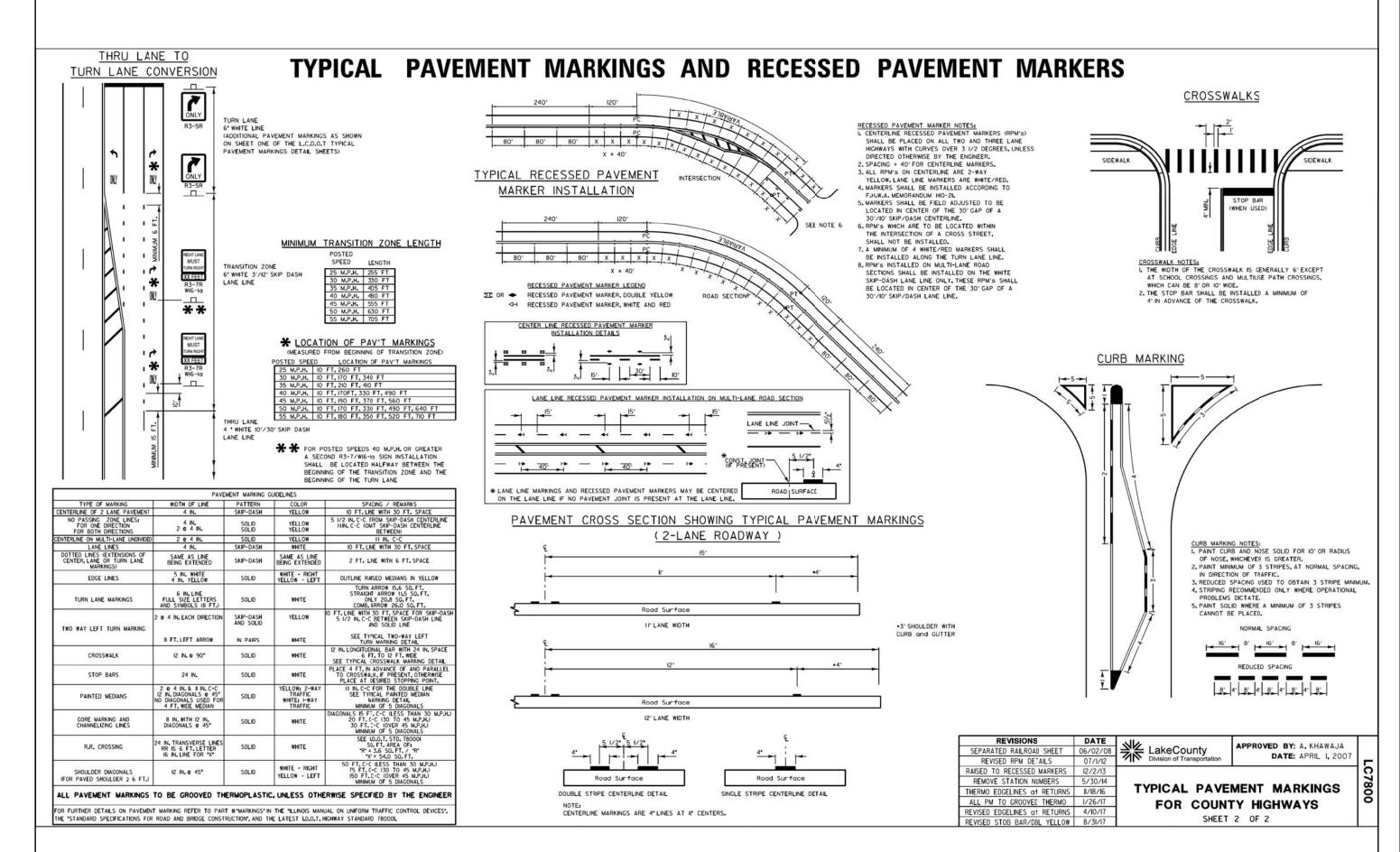
CONTRACT NO. 61E24



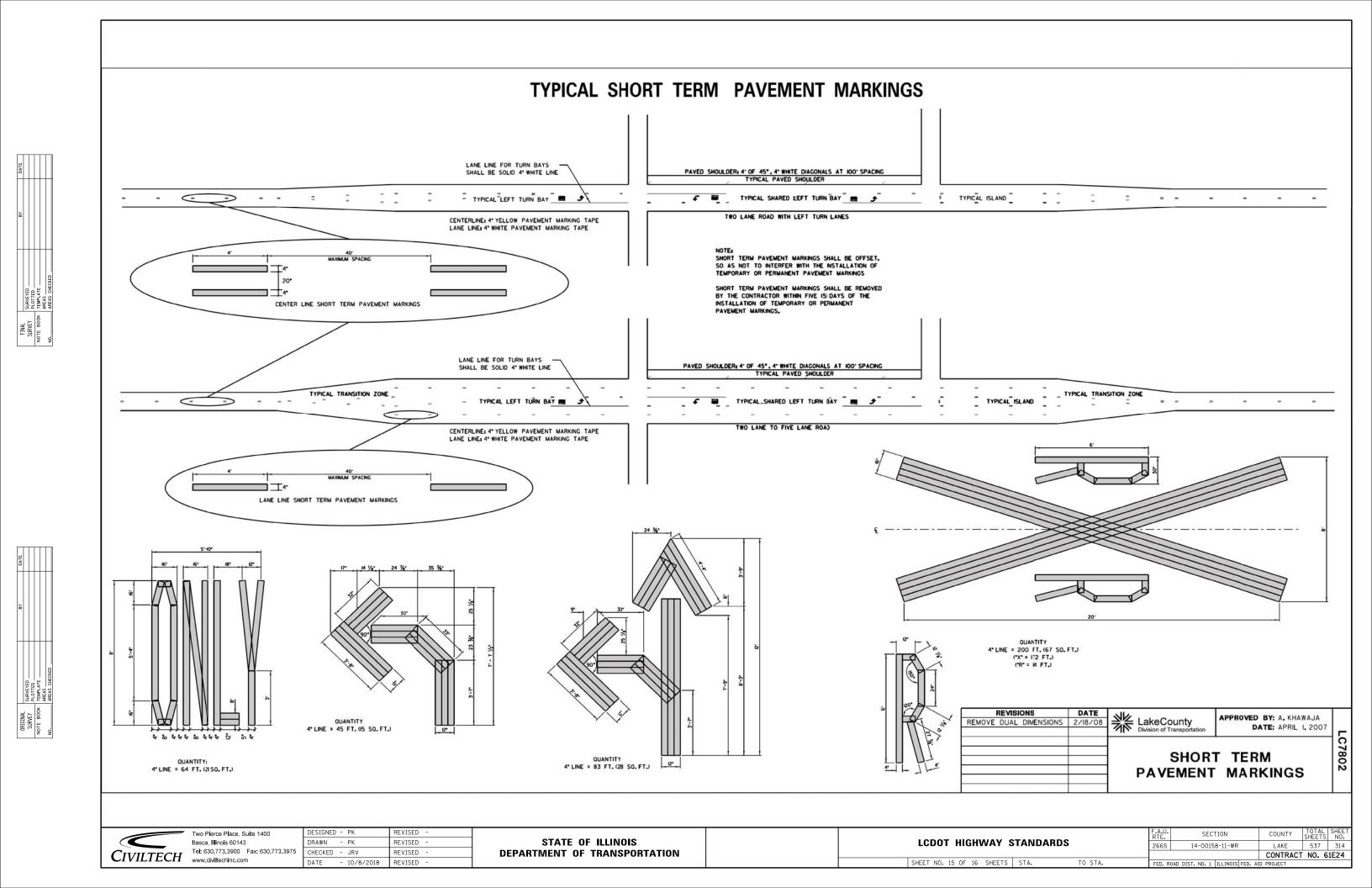


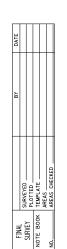


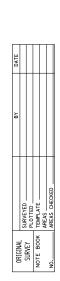


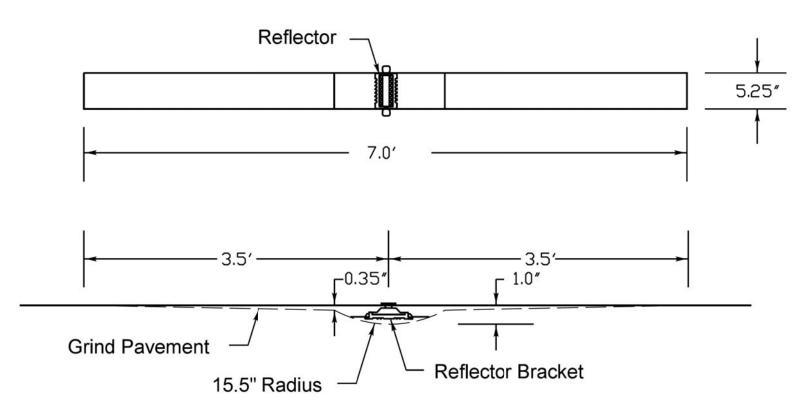


DESIGNED - PK REVISED Two Pierce Place, Suite 1400 SECTION COUNTY STATE OF ILLINOIS Itasca, Illinois 60143 DRAWN - PK REVISED **LCDOT HIGHWAY STANDARDS** 2665 14-00158-11-WR I AKE 537 313 Tel: 630.773.3900 Fax: 630.773.3975 CHECKED - JRV REVISED **DEPARTMENT OF TRANSPORTATION** CIVILTECH CONTRACT NO. 61E24 www.civiltechinc.com SHEET NO. 14 OF 16 SHEETS STA. DATE - 10/8/2018 REVISED



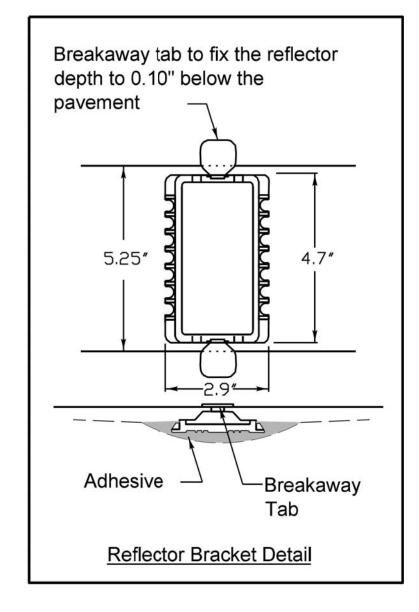






Notes

- 1. The reflective pavement marker lens shall be a 3M 190 series pavement marker or an approved equal.
- 2. The reflector bracket shall be made of a polycarbonate and shall be a MarkerOne Series R100 or an approved equal.
- The adhesive used shall meet the requirements of AASHTO M237 specification for adhesives to be used in cementing asphalt surfaces.
- Markers shall be placed at 40' intervals on lane lines and painted 4. medians and 40' intervals on curves and approaching intersections as shown on LCDOT standard LC7800.



LC7805

REVISIONS	DATE	LakeCounty Division of Transportation APPROVED BY: JN DATE: 12/02/13
		RECESSED REFLECTIVE
		PAVEMENT MARKER

					32 (0)								
	Two Pierce Place, Suite 1400	DESIGNED - PK	REVISED -						F.A.U.	SECTION	COUNTY	TOTAL	L SHEET
	Itasca, Illinois 60143	DRAWN - PK	REVISED -	STATE OF ILLINOIS		LC	DOT HIGHWAY STANDARD	S	2665	14-00158-11-WR	LAKE	537	315
CIVILTECH	Tel: 630.773.3900 Fax: 630.773.3975	CHECKED - JRV	REVISED -	DEPARTMENT OF TRANSPORTATION							CONTRA	ACT NO.	61E24
CIVILIECH www.civittechinc.com	DATE - 10/8/2018	REVISED -			SHEET	T NO. 16 OF 16 SHEETS STA.	TO STA.	FED. ROAD	D DIST. NO. 1 ILLINOIS F	. AID PROJECT			

