STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROJECT IS LOCATED IN THE VILLAGE OF GURNEE AND CITY OF WAUKEGAN.

PROPOSED HIGHWAY PLANS

FAU ROUTE 2711: IL ROUTE 131 SHEELER AVENUE TO SUNSET AVENUE SECTION: 27 RS-9

> RESURFACING LAKE COUNTY

C-91-318-10

PROJECT ENDS **R12E STATION 98 + 19** WADSWORTH BEACH RD. TRAFFIC DATA SPEED LIMIT = 45 MPH 2007 ADT = 32,500 GRAND GLEN FLORA **WAUKEGAN TOWNSHIP** PROJECT BEGINS

GROSS AND NET LENGTH OF PROJECT = 8,571 LF = 1.62 MILES

STATION 12+48

27 RS-9 LAKE 26 ILLINOIS CONTRACT NO. 60J96

D-91-318-10



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

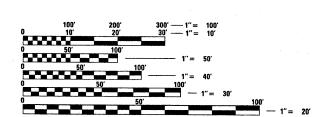
SUBMITTED VANUARY ZZ, 20 10

Dione M. O'Kesta
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER March 19, 20 10

Scott E Still PE DO OTHER OF DESIGN AND ENVIRONMENT

Christine M. Reed & DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS



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

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

PROJECT ENGINEER: DAN WILGREEN (847) 705-4240

PROJECT MANAGER: KEN ENG

CONTRACT NO. 60J96

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INDEX OF SHEETS

SHE	ET NO.	DESCRIPTION	STANDARD NO.	
Kr.	1	TITLE SHEET	000001 <i>-05</i>	TYPICAL S
	2	INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES	442201- <i>0</i> 3	CLASS C A
	3	SUMMARY OF QUANTITIES	604091- <i>0</i> 2	FRAME AND
	4-5	EXISTING AND PROPOSED TYPICAL SECTIONS	606001- <i>04</i>	CONCRETE
	6-9	ROADWAY AND PAVEMENT MARKING PLANS	701606-06	URBAN LAN
	10-12	DETECTOR LOOP REPLACEMENT PLANS	701701-00	URBAN LAN
	13	DRIVEWAY DETAILS, DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 M)	701901-01	TRAFFIC C
	14	DETAILS FOR FRAME AND LIDS ADJUSTMENT WITH MILLING	886001-01	DETECTOR
•	15	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT	886006 <i>-01</i>	TYPICAL L
	16	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT		
	17	BUTT JOINT AND HMA TAPER DETAILS		
	18	HMA TAPER AT EDGE OF PCC PAVEMENT	e e e e e e e e e e e e e e e e e e e	
	19	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS		
	20	TYPICAL APPLICATIONS: RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)		
	21	DISTRICT ONE TYPICAL PAVEMENT MARKINGS		
	22	TRAFFIC CONTROL AND PROTECTION OF TURN BAYS (TO REMAIN OPEN TO TRAFFIC)		
	23	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING		
	24	ARTERIAL INFORMATION SIGNING		
	25	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS		

STATE STANDARDS

DESCRIPTION

000001-05	TYPICAL SYMBOLS, ABBREVIATIONS AND PATTERNS
442201- <i>0</i> 3	CLASS C AND D PATCHES
604091- <i>0</i> 2	FRAME AND GRATE, TYPE 24
606001- <i>04</i>	CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER
701606-06	URBAN LANE CLOSURE, MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-00	URBAN LANE CLOSURE, MULTILANE INTERSECTION

CONTROL DEVICES

LAYOUT FOR DETECTION LOOPS

LOOP INSTALLATION

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC. TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED)

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

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF GURNEE AND CITY OF WAUKEGAN.

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT) IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS" SHEET INCLUDED IN THE PLANS UNLESS OTHERWISE

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC. THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS, AND 1 INCH WHERE THE SPEED LIMIT IS OVER 45 MPH. WITH WRITTEN APPROVAL FROM THE RESIDENT ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM OF 1:3 (V:H).

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

ALL PAVEMENT PATCHING AND DRIVEWAY PAVEMENT REMOVAL LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, 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.

DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SNOWN IN THE PLANS.

THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON, AREA TRAFFIC FIELD ENGINEER, AT (847) 438-2300 A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE INSTALLATION OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.

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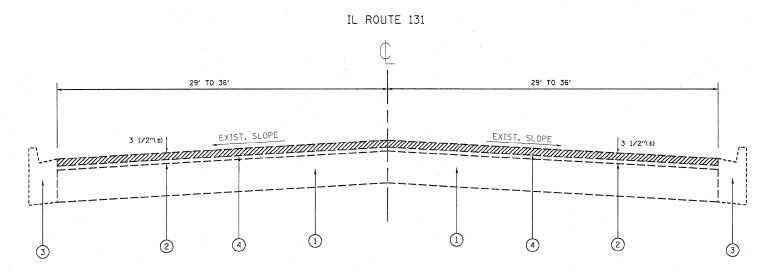
DISTRICT ONE DETECTOR LOOP INSTALLATION DETAILS FOR

ROADWAY RESURFACING

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DEPARTMENT	OF	TRANSPORTATION

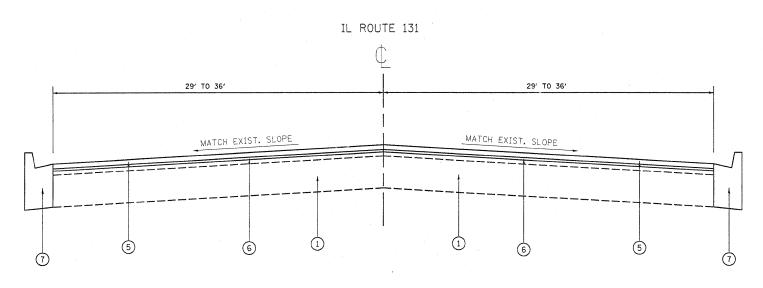
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INDEX OF SHEETS, STATE STANDARDS	AND GENERAL NOTES	2711	27 RS-9	LAKE	26	2	ı
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	SUMMARY OF QUANTITIES		URBAN		CONSTRUCTION TYPE CODE		_								
			TOTAL				SUMN	MARY OF QUANTITIES	,		URBAN	CONS	STRUCTION	TYPE CODE	
CODE NO	ITEM	UNIT	QUANTITIES			CODE NO		ITEM		TOTAL	100/STATE				
				ROADWAY IOOO		SSE NO		ITEM	UNIT	QUANTITIE	ROADWAY				
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	100	100		67000100					1000				
25200110	SODDING, SALT TOLERANT	SQ YD	100	100		67000400		FIELD OFFICE, TYPE A	CAL MO	6	6				
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	55	55		67100100			L SUM	1	1				
40600300	AGGREGATE (PRIME COAT)	TON	265			70102625	TRAFFIC CON STANDARD 70	NTROL AND PROTECTION.	L SUM	1	1				
40600400	MIXTURE FOR CRACKS, JOINTS,	TON	100	265 100		70102635	TRAFFIC CON	ITROL AND PROTECTION,	L SUM	1	1				
40600826		TON	2310	2310		70300100	STANDARD 70	PAVEMENT MARKING	FOOT	9300	9300				
	METHOD), IL-4.75, N50		2510	2310		70300210		AVEMENT MARKING	SQ FT	2000	2000				
40600895	CONSTRUCTING TEST STRIP	EACH	- 2	2			- LETTERS A	ND SYMBOLS		2000	2000				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	190	190		70300220	TEMPORARY P	AVEMENT MARKING	FOOT	22500	22500				-
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SO YD	1800	1800		70300240	TEMPORARY P	AVEMENT MARKING	FOOT	3500	3500				
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	115	115		70300250	TEMPORARY P	AVEMENT MARKING	FOOT	200	200				
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	3	3		70300260	TEMPORARY P	AVEMENT MARKING	FOOT	550	550				
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	6600	6600		70300280	TEMPORARY P	AVEMENT MARKING	FOOT	1150	1150				
42001300	PROTECTIVE COAT	SO YD	210	210		70301000		AVEMENT MARKING REMOVAL	SO FT	3100	3100		.**		
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	20	20		*78000100	THERMOPLAST - LETTERS A	IC PAVEMENT MARKING ND SYMBOLS	SO FT	2000	2000		-		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5	SQ FT	50	50		*78000200	THERMOPLAST - LINE 4"	IC PAVEMENT MARKING	FOOT	22500	22500				
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	13935	13935		*78000400	THERMOPLAST - LINE 6"	IC PAVEMENT MARKING	FOOT	3500	3500				
44000200		SQ YD	40	40		*78000500	THERMOPLAST:	IC PAVEMENT MARKING	FOOT	200	200				
44000600	SIDEWALK REMOVAL	SQ FT	50	50		*78000600	THERMOPLAST	C PAVEMENT MARKING	FOOT	550					
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	1400	1400		*78000650	- LINE 12"	C PAVEMENT MARKING		550	550				-
44002214	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 3 1/2"	SO YD	575	575			- LINE 24"		FOOT	1150	1150				
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SQ YD	1400	1400		*78100100		CTIVE PAVEMENT MARKER	EACH	560	560				
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SQ YD	250	250		78300200	RAISED REFLE REMOVAL	CTIVE PAVEMENT MARKER	EACH	560	560				
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SO YD	400	400		*88600600	DETECTOR LOO	P REPLACEMENT	FOOT	1301	1301				
55039700	STORM SEWERS TO BE CLEANED	FOOT		1		X0322256		FORMATION SIGNING			1301				
60252800	CATCH BASINS TO BE RECONSTRUCTED	EACH	3900	3900				ENT CONCRETE SURFACE	SO FT	52	52				
60257900	MANHOLES TO BE RECONSTRUCTED		2	2			REMOVAL (VAR	IABLE DEPTH)	SO YD	9400	9400	1.			
	FRAMES AND GRATES TO BE ADJUSTED	EACH	2	2		Z0004530	HOT-MIX ASPH	ALT DRIVEWAY PAVEMENT, 8"	SQ YD	20	20				
	FRAMES AND LIDS TO BE ADJUSTED	EACH	20	20		Z0018500	DRAINAGE STR	UCTURES TO BE CLEANED	EACH	130	130				
	FRAMES AND LIDS TO BE ADJUSTED	EACH	5 45	5 45											
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`	FRAMES AND GRATES, TYPE 24	EACH	20	20		*	SPECIALTY IT	EMS							
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EXISTING TYPICAL SECTION IL ROUTE 131

STATION: 12+48 to 27+83



PROPOSED TYPICAL SECTION IL ROUTE 131

STATION: 12+48 to 27+83

LEGEND

- 1 EXIST. PCC PAVEMENT, 10"(±)
- 2 EXIST. HOT-MIX ASPHALT SURFACE COURSE (BEFORE MILLING), 3 1/2"(±)
- 3 EXIST. CONCRETE CURB AND GUTTER, TYPE B-6.24
- 4 PROP. HOT-MIX ASPHALT SURFACE REMOVAL 2 1/2" (1"(±) OF HOT-MIX ASPHALT TO REMAIN)
- (5) PROP. POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4"
- 6 PROP. POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50, 3/4"
- 7 PROP. CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT (LOCATIONS TO BE DETERMINED BY THE RESIDENT ENGINEER)
- (8) PROP. PCC SURFACE REMOVAL, VARIABLE DEPTH

NOTES:

- 1. PAVEMENT PATCHING SHALL BE DONE PRIOR TO MILLING OF THE ROADWAY.
- 2. SEE ROADWAY AND PAVEMENT MARKING PLAN SHEETS FOR LOCATIONS OF THRU LANES, LEFT AND RIGHT TURN LANES AND PAINTED MEDIANS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

	MIXTURE TYPE	AIR VOIDS (%)
ROADWAY	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, (IL-9.5MM), 1 3/4"	4% @ 90 GYR
TOAD WAT	POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50, 3/4"	4% @ 50 GYR
PATCHES	CLASS D PATCHES, (BINDER IL-19.0 MM), 10"	4% @ 70 GYR
PAICHES	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES, (BINDER IL-19.0 MM), 3 1/2"	4% @ 70 GYR
DRIVEWAY	HOT-MIX ASPHALT BASE COURSE, (BINDER IL-19.0 MM), 8"	4% @ 50 GYR
	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, (IL-9.5MM), 2"	4% @ 50 GYR

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN

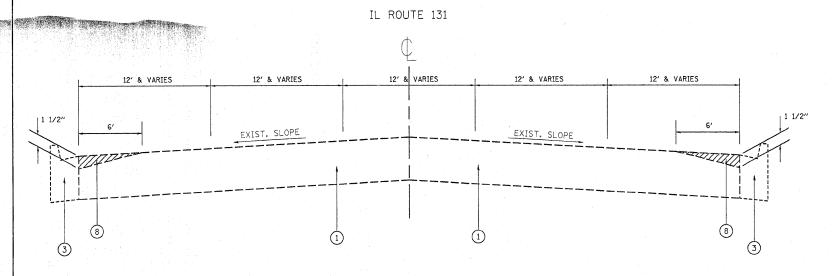
THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

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EXISTING TYPICAL SECTION IL ROUTE 131

STATION: 27+83 to 98+19

IL ROUTE 131

12' & VARIES

PROPOSED TYPICAL SECTION IL ROUTE 131

STATION: 27+83 to 98+19

LEGEND

- (1) EXIST. PCC PAVEMENT, 10"(±)
- 2 EXIST. HOT-MIX ASPHALT SURFACE COURSE (BEFORE MILLING), 3 1/2"(±)
- 3 EXIST. CONCRETE CURB AND GUTTER, TYPE B-6.24
- 4 PROP. HOT-MIX ASPHALT SURFACE REMOVAL 2 1/2" (1"(±) OF HOT-MIX ASPHALT TO REMAIN)
- (5) PROP. POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4"
- (6) PROP. POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50, 3/4"
- 7 PROP. CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT (LOCATIONS TO BE DETERMINED BY THE RESIDENT ENGINEER)
- (8) PROP. PCC SURFACE REMOVAL, VARIABLE DEPTH

NOTES:

SCALE: NONE

- 1. PAVEMENT PATCHING SHALL BE DONE PRIOR TO MILLING OF THE ROADWAY.
- 2. SEE ROADWAY AND PAVEMENT MARKING PLAN SHEETS FOR LOCATIONS OF THRU LANES, LEFT TURN LANES AND PAINTED MEDIANS.

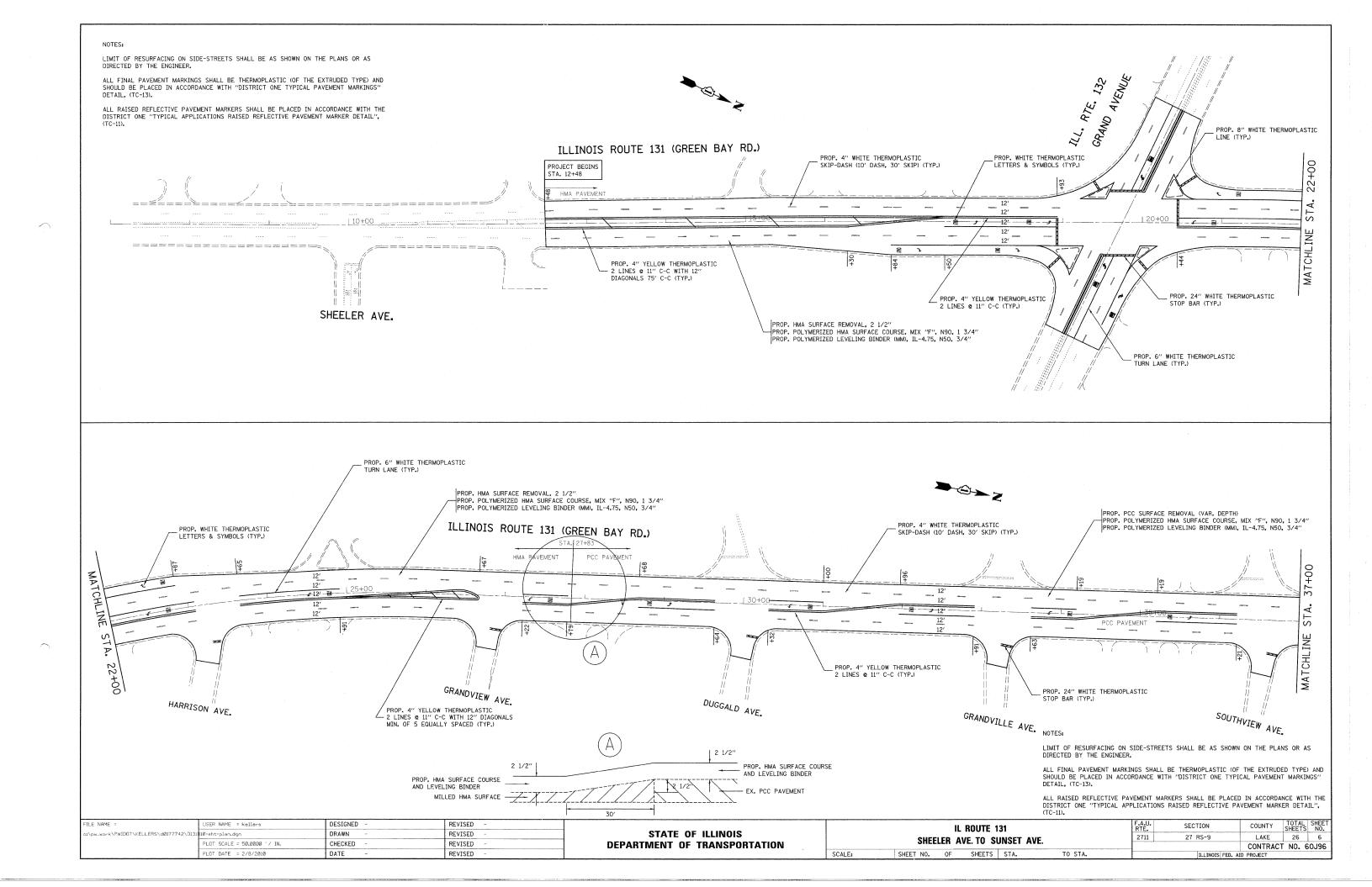
SEE SHEET 18 FOR TAPER DETAIL (BD-33). (HMA TAPER AT EDGE OF PCC PAVEMENT)

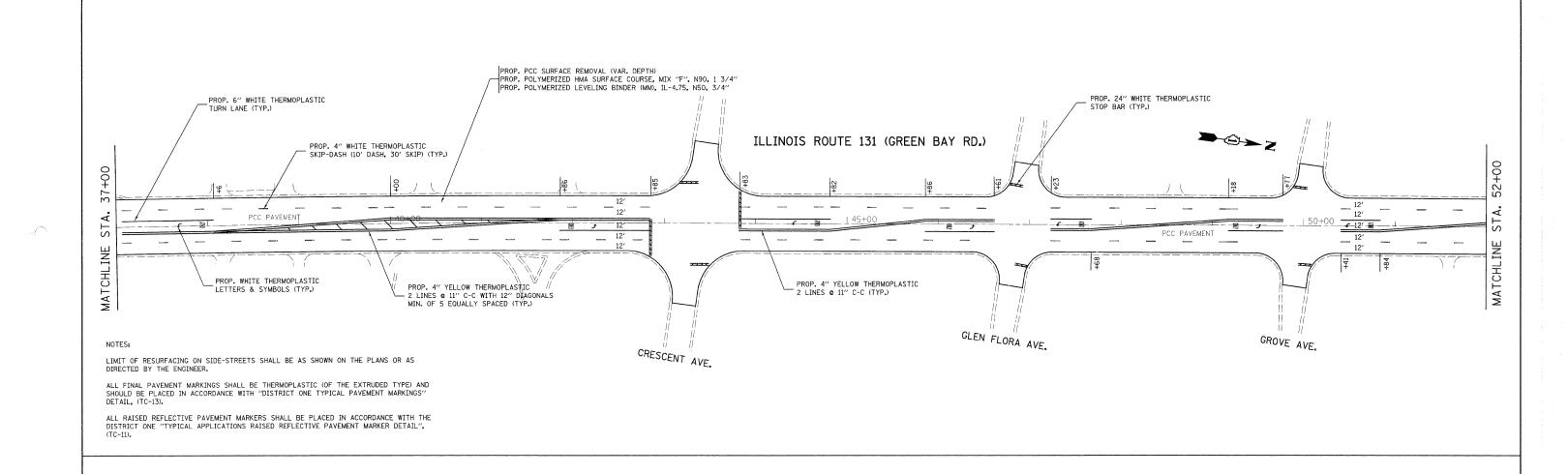
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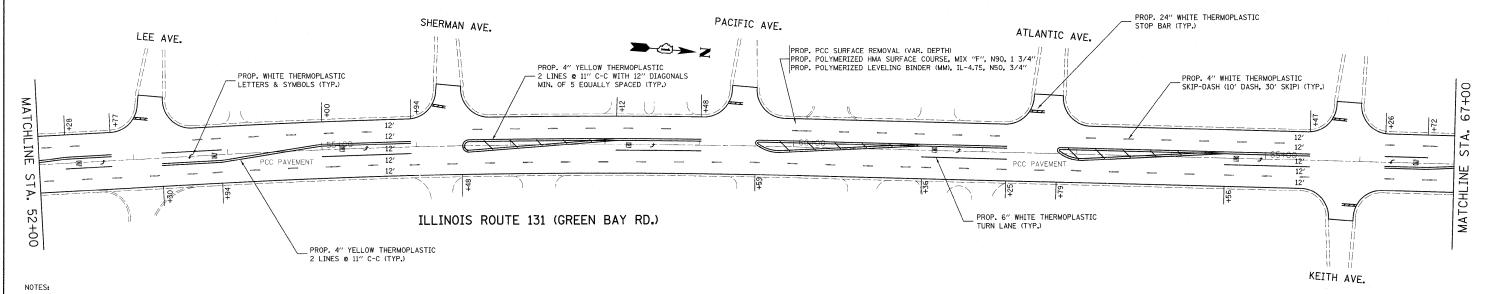
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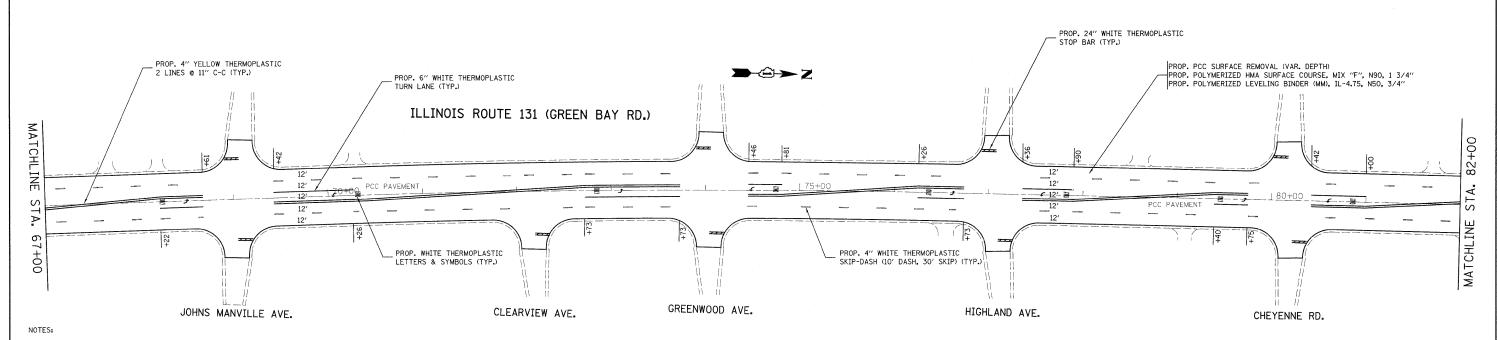


LIMIT OF RESURFACING ON SIDE-STREETS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ALL FINAL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC (OF THE EXTRUDED TYPE) AND SHOULD BE PLACED IN ACCORDANCE WITH "DISTRICT ONE TYPICAL PAVEMENT MARKINGS" DETAIL, (TC-13).

ALL RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH THE DISTRICT ONE "TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKER DETAIL", (TC-11).

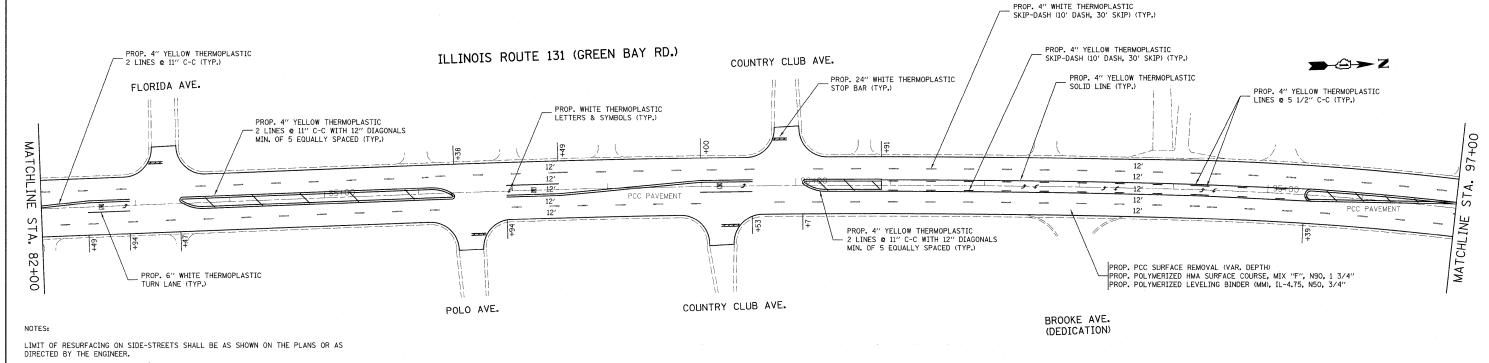
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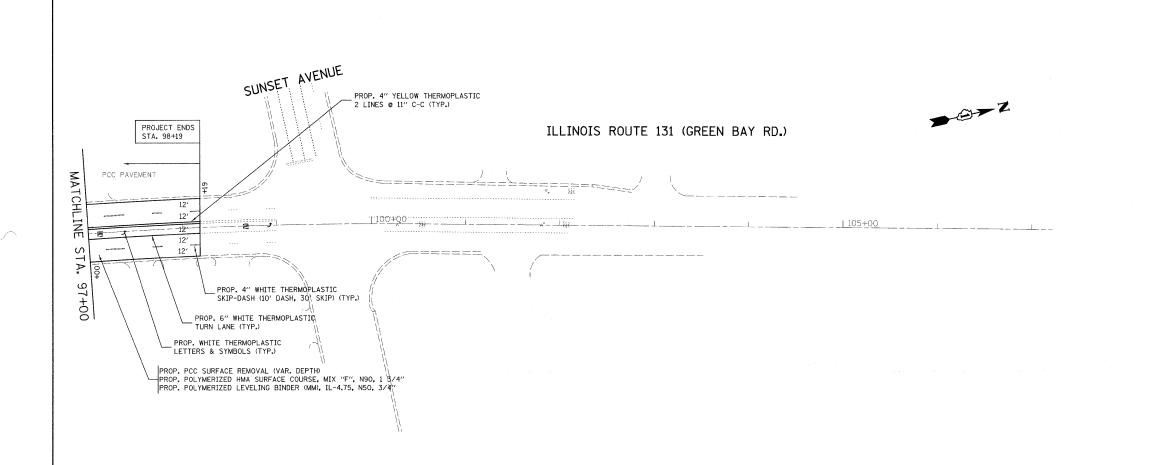
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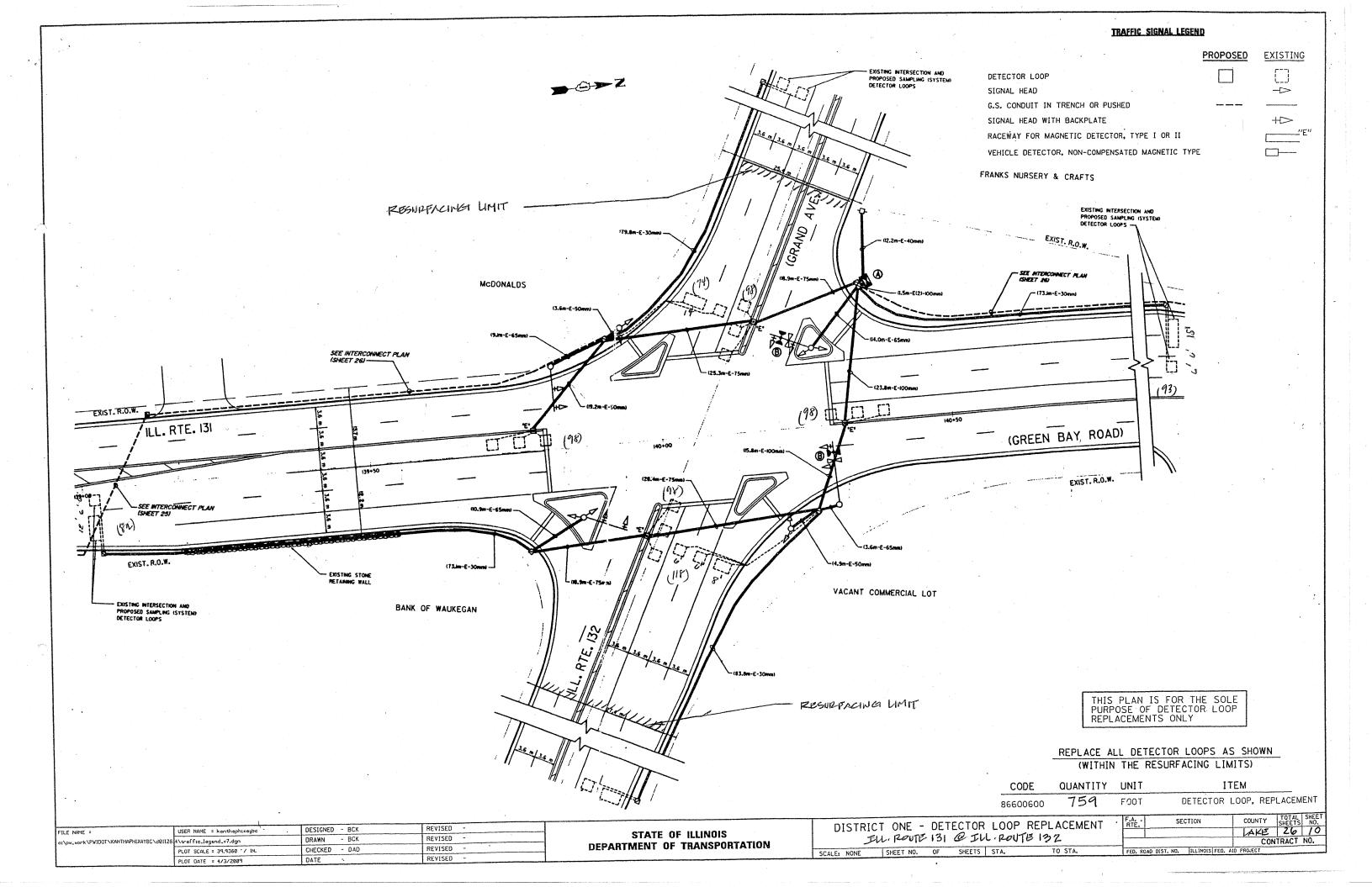
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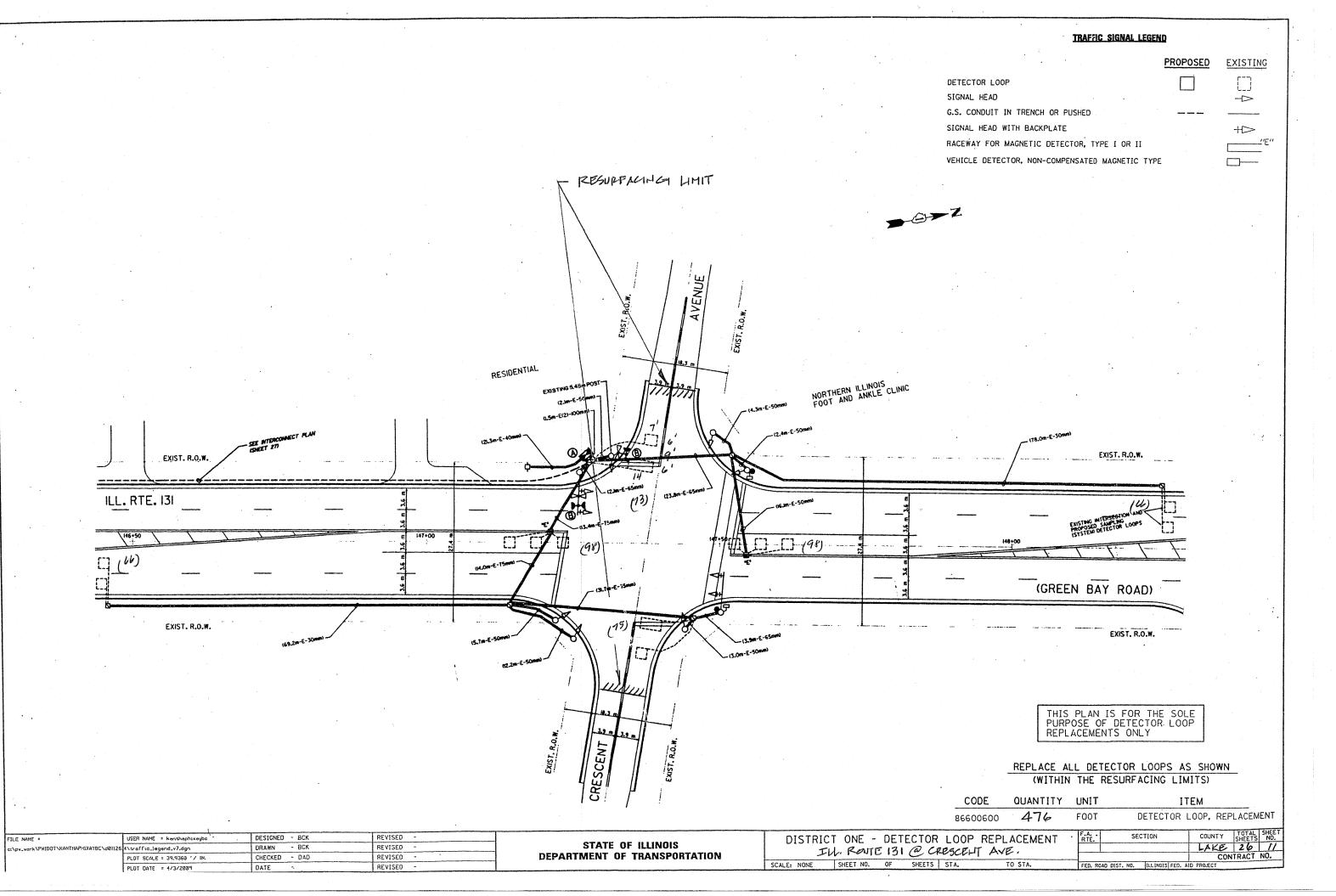
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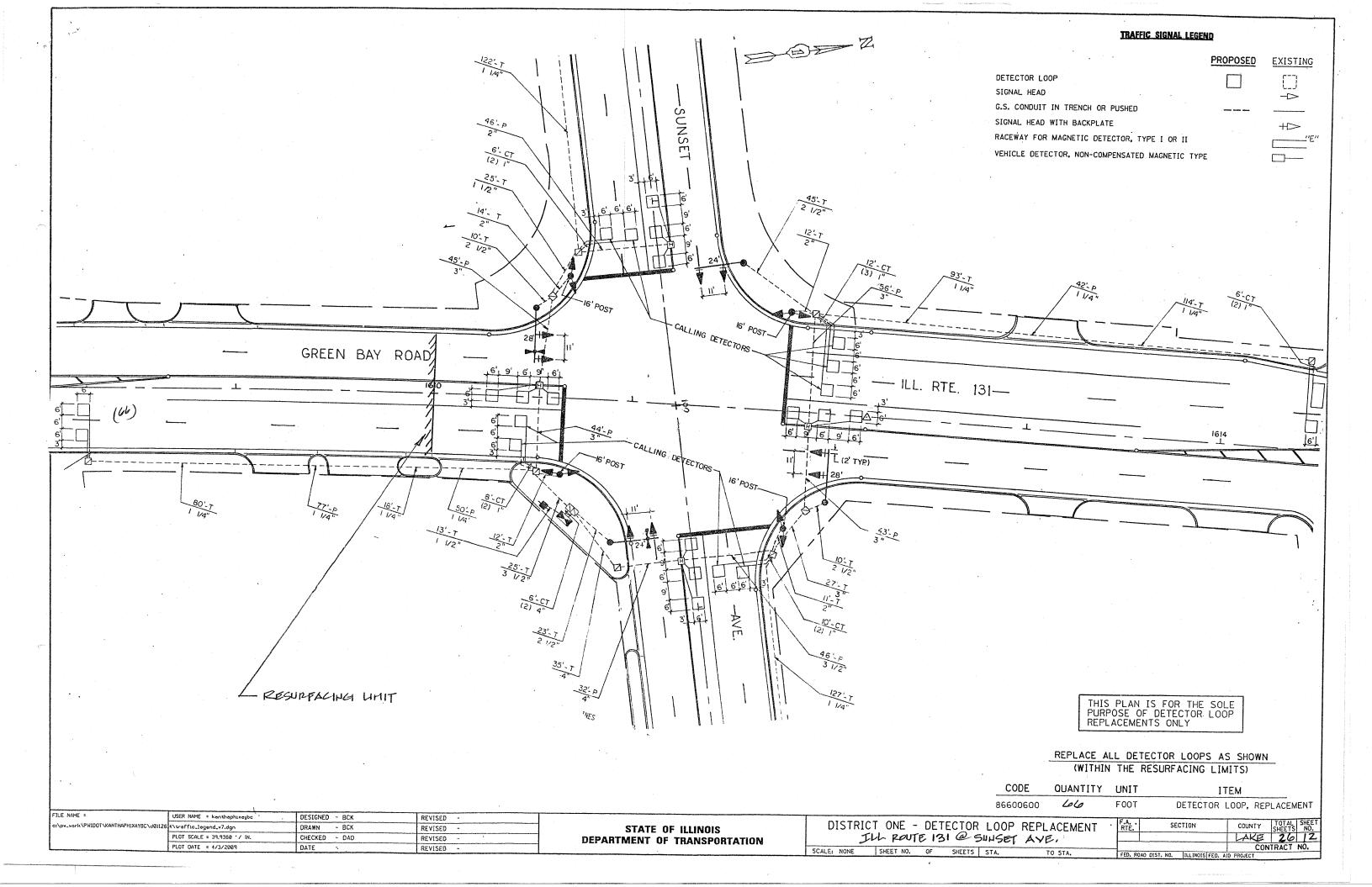
ALL FINAL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC (OF THE EXTRUDED TYPE) AND SHOULD BE PLACED IN ACCORDANCE WITH "DISTRICT ONE TYPICAL PAVEMENT MARKINGS" DETAIL, (TC-13).

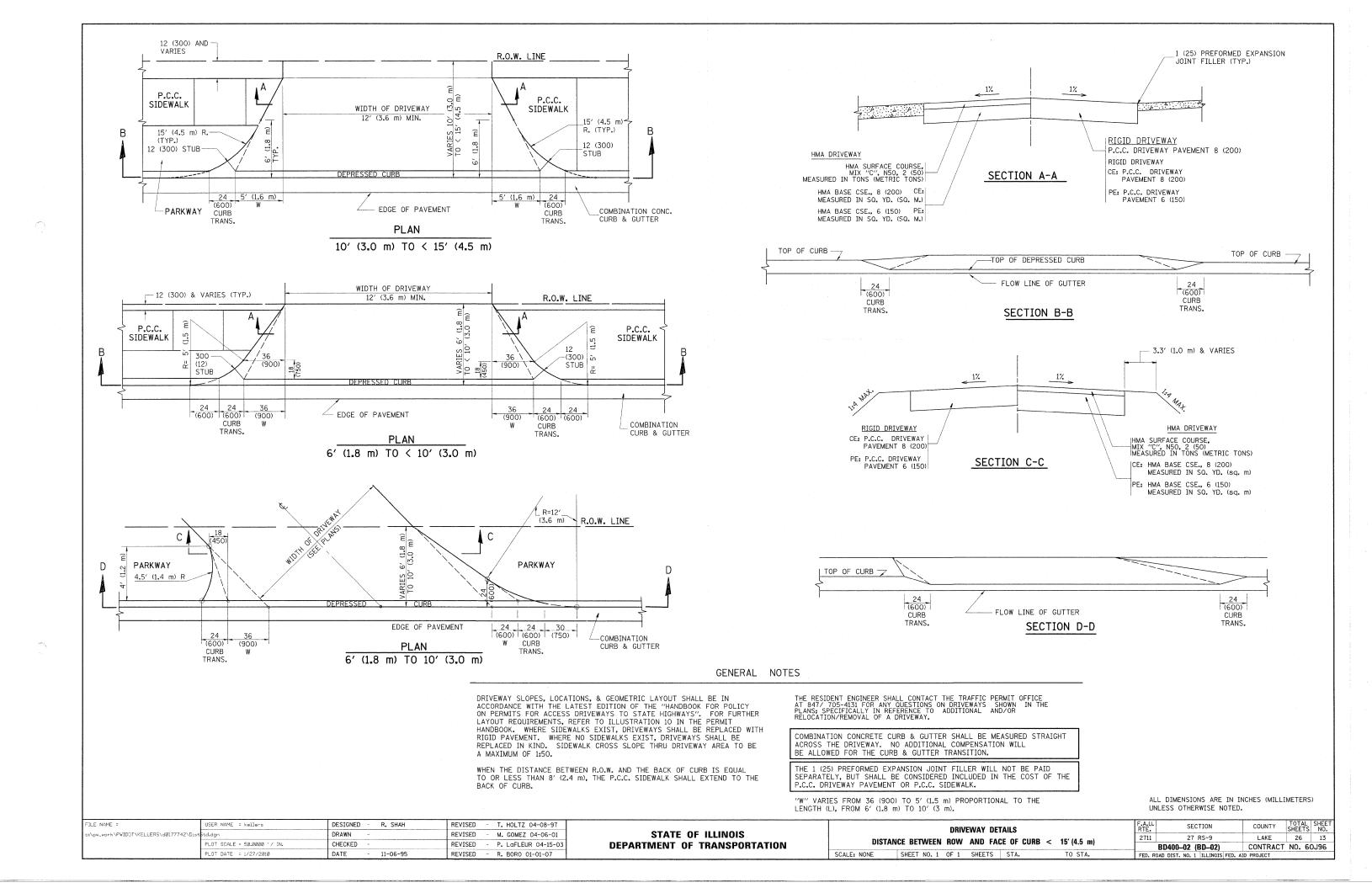
ALL RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH THE DISTRICT ONE "TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKER DETAIL", (TC-11).

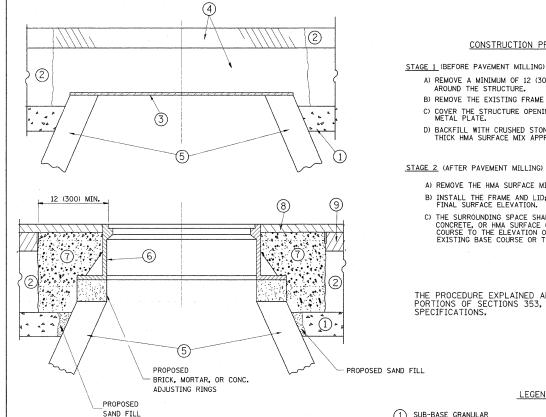
FILE NAME =	USER NAME = kellers	DESIGNED -	REVISED -	OTATE OF HANDIO	IL. ROUTE 131					F.A.U.	SECTION	COUNTY	TOTAL SHEET
c:\pw_work\PWIDOT\KELLERS\d0177742\D131	310-sht-plan.dgn	DRAWN ~	REVISED -	STATE OF ILLINOIS	SHEELER AVE. TO SUNSET AVE.		2711	27 RS-9	LAKE	26 9			
	PLOT SCALE = 50.0000 '/ IN.	CHECKED ~	REVISED -	DEPARTMENT OF TRANSPORTATION	SHEELER AVE. 10 SUNSET AVE. SCALE: SHEET NO. OF SHEETS STA. TO STA.					21 110 0	CONTRAC	CT NO. 60J96	
	PLOT DATE = 2/8/2010	DATE -	REVISED -					TO STA.		ILLINOIS FED. A	FED. AID PROJECT		











LEGEND

CONSTRUCTION PROCEDURES

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE. B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE. C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.

D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 11/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE. B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.

C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD

- 1 SUB-BASE GRANULAR MATERIAL
- (6) FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- 3 36 (900) DIAMETER METAL PLATE PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- 8 PROPOSED HMA SURFACE COURSE
- (5) EXISTING STRUCTURE
- 9 PROPOSED HMA BINDER COURSE

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL" NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

ILE NAME = DESIGNED R. SHAH REVISED - R. SHAH 03-10-95 ISER NAME = kellers \pw_work\PWIDOT\KELLERS\d0177742\D; DRAWN REVISED - A. ABBAS 03-21-97 PLOT SCALE = 50.0000 '/ IN. CHECKED REVISED - R. WIEDEMAN 05-14-04 PLOT DATE = 1/27/2010 REVISED - R. BORO 01-01-07 DATE 10-25-94

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAYEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

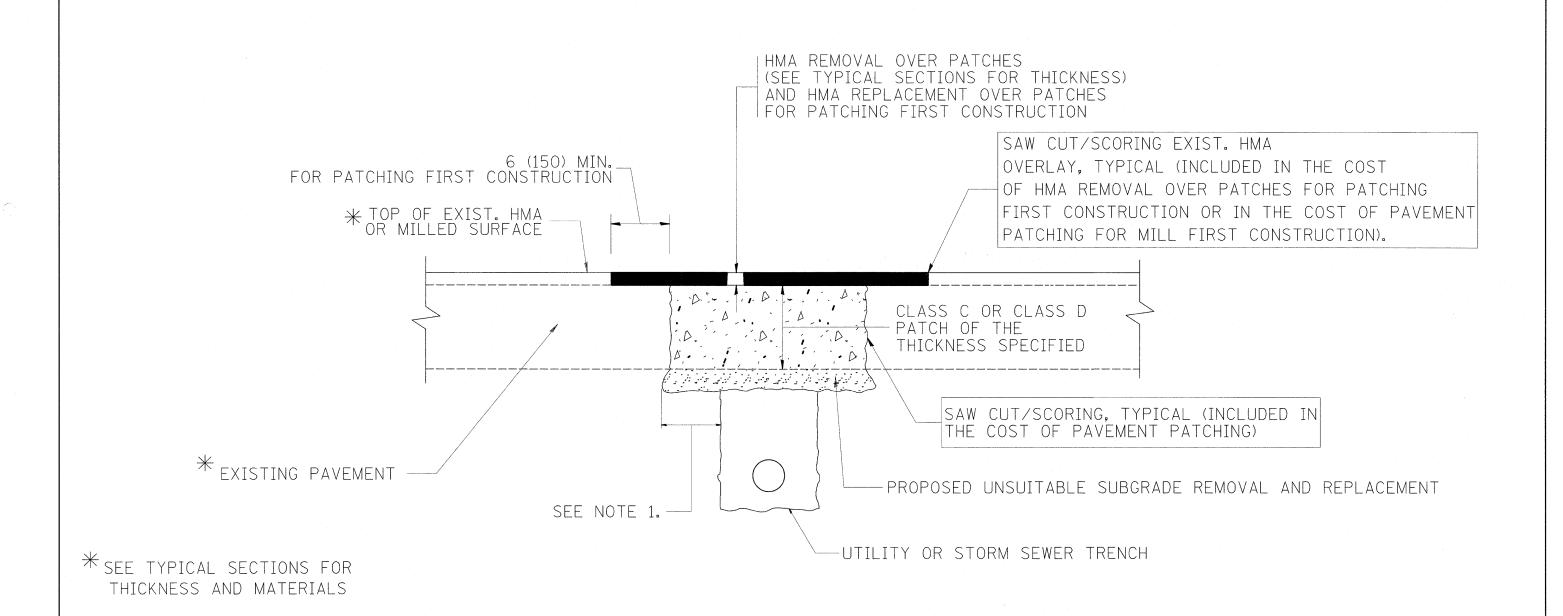
CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING SHEET NO. 1 OF 1 SHEETS STA. SCALE: NONE TO STA.

TOTAL SHEE'SHEETS NO. COUNTY 27 RS-9 LAKE 26 CONTRACT NO. 60J96 BD600-03 (BD-8) FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



NOTES:

- 1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
- 2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

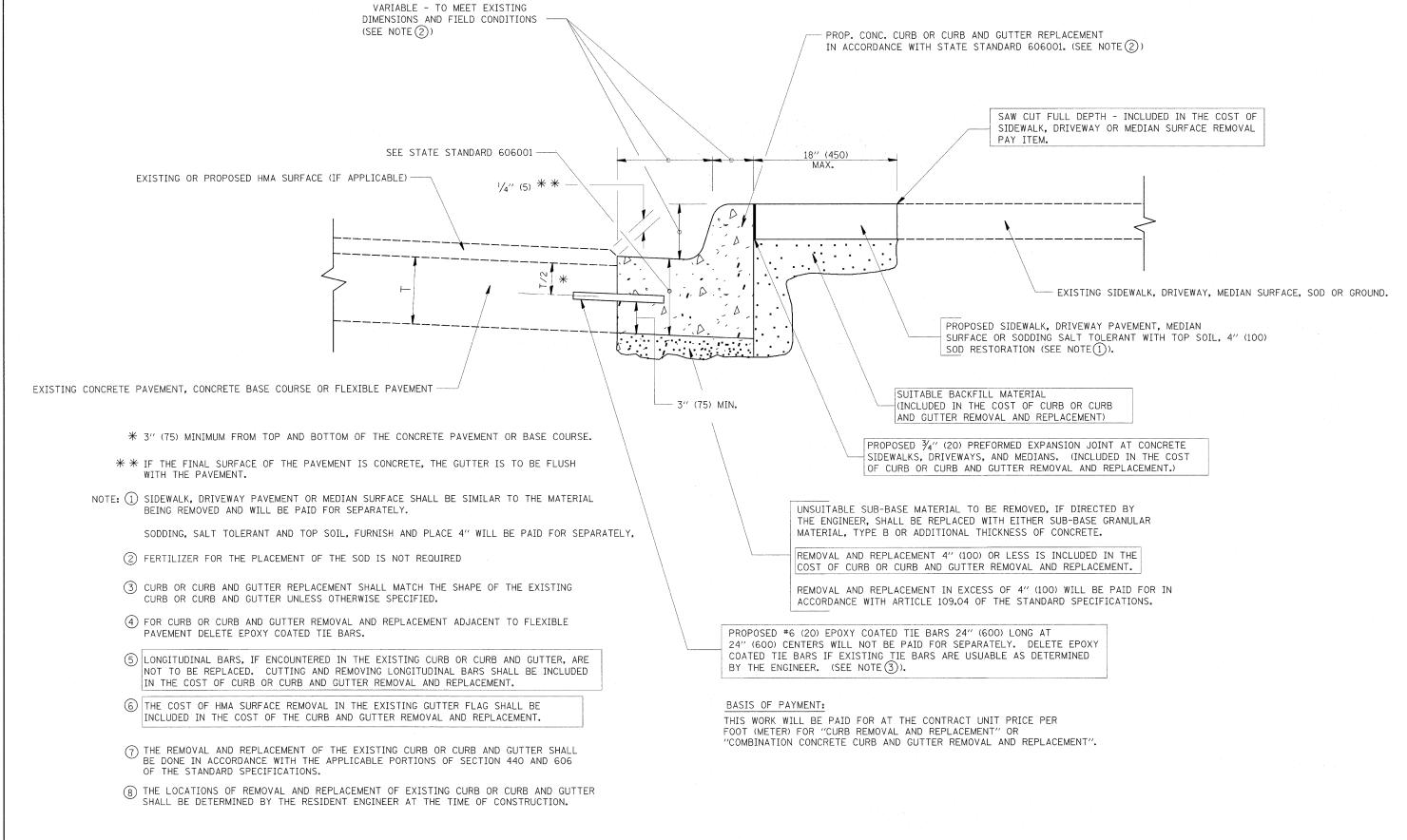
SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

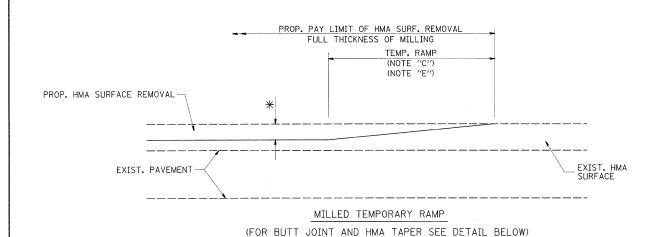
- 1. MILL HMA FIRST IF THERE IS AT LEAST 41/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
- 2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

	FILE NAME =	USER NAME = kellers	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98		PAVEMENT PATCHING FOR	F.A.U. SECTION	COUNTY TOTAL SHEET
- 1	c:\pw_work\PWIDDT\KELLERS\d0177742\Dist	itd.dgn	DRAWN -	REVISED - R. BORO 01-01-07	STATE OF ILLINOIS		2711 27 RS-9	LAKE 26 15
		PLOT SCALE = 50.00000'/ IN.	CHECKED -	REVISED - R. BORO 09-04-07	DEPARTMENT OF TRANSPORTATION	HMA SURFACED PAVEMENT	BD400-04 (BD-22)	CONTRACT NO. 60J96
L		PLOT DATE = 1/27/2010	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED.	L

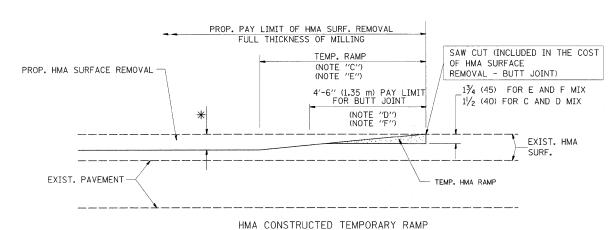


CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

FILE NAME =	USER NAME = kellers	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96		CURB OR CURB AND GUTTER	F.A.U. SECTION	COUNTY TOTAL SHEET
c:\pw_work\PWIDOT\KELLERS\dØ177742\D	ıstiftd.dgm	DRAWN -	REVISED - A. ABBAS 03-21-97	STATE OF ILLINOIS		2711 27 RS-9	LAKE 26 16
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - M. GOMEZ 01-22-01	DEPARTMENT OF TRANSPORTATION	REMOVAL AND REPLACEMENT	BD600-06 (BD-24)	CONTRACT NO. 60J96
	PLOT DATE = 1/27/2010	DATE - 03-11-94	REVISED - R. BORO 12-15-09		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED.	. AID PROJECT



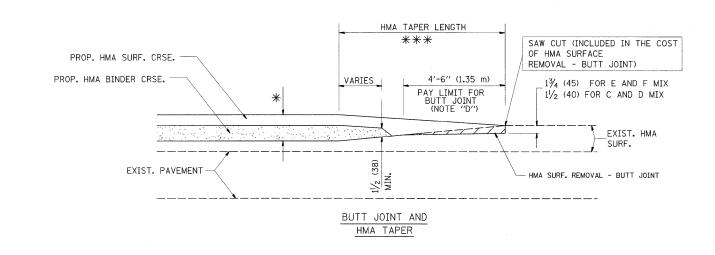
OPTION 1



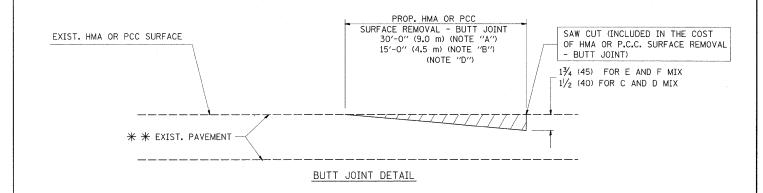
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

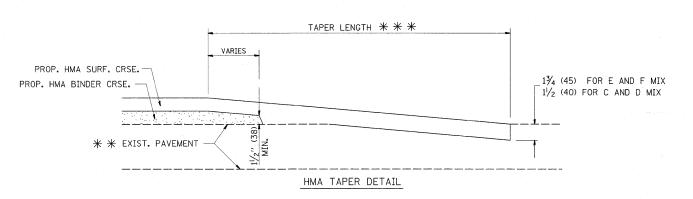
OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING





TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

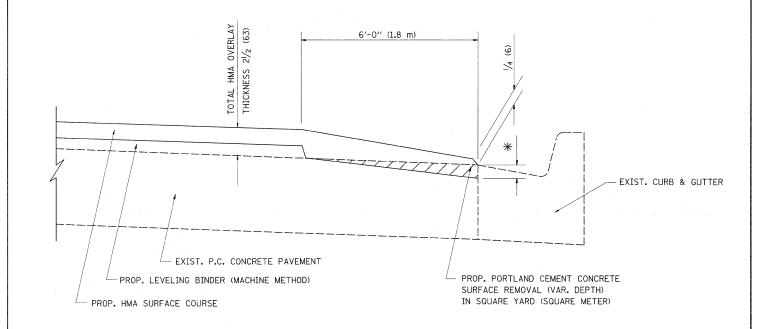
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-O" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A") 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

LE NAME =	USER NAME = keilers	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94		BUTT JOINT AND	F.A.U.	SECTION	COUNTY	TOTAL SI	HEET
pw_work\PWIDOT\KELLERS\d0177742\Dist	Std.dgn	DRAWN -	REVISED - A. ABBAS 03-21-97	STATE OF ILLINOIS		2711	27 RS-9	LAKE	26	17
	PLOT SCALE = 50.00000 '/ IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01	DEPARTMENT OF TRANSPORTATION	HMA TAPER DETAILS		BD400-05 BD32	CONTRACT	NO. 60J	J96
	PLOT DATE = 1/27/2010	DATE - 06-13-90	REVISED - R. BORO 01-01-07		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROA		ID PROJECT		



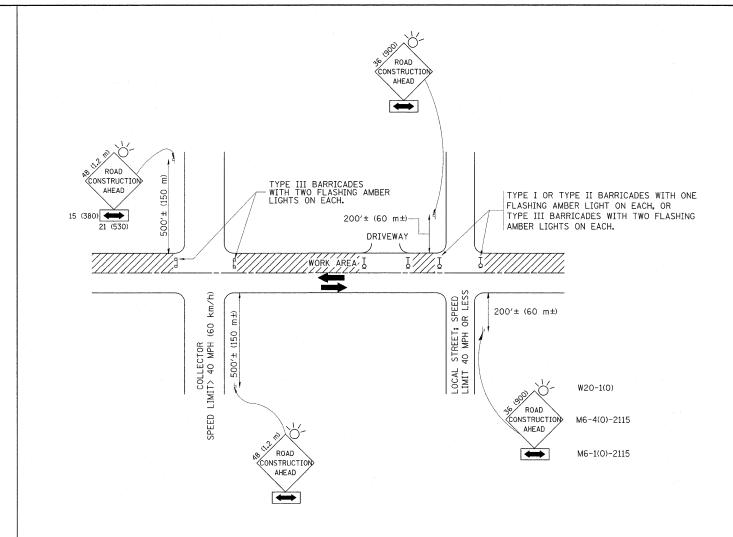
HMA TAPER AT EDGE OF P.C.C PAVEMENT

HMA SURFACE		LEVELING BINDER	
MIX	THICKNESS	THICKNESS	★ MILLING AT GUTTER FLAG
C OR D	11/2 (38)	1 (25)	11/4 (33)
F	13/4 (44)	3/4 (19)	11/2 (38)

FILE NAME =	USER NAME = kellers	DESIGNED		R. SHAH	REVISED	-	R. SHAH 10-25-94	· ·
c:\pw_work\PWIDOT\KELLERS\d0177742\D:st	td.dgn	DRAWN	-	JIS	REVISED		A. ABBAS 05-05-99	
	PLOT SCALE = 50.0000 '/ IN.	CHECKED	-	A. ABBAS	REVISED	-	E. GOMEZ 12-21-00	DEP
	PLOT DATE = 1/27/2010	DATE	-	09-10-94	REVISED		R. BORO 01-01-07	

STATI	E OF	ILLINOIS	
DEPARTMENT	OF:	TRANSPORTATION	

	HM	A TAPER	F.A.U. RTE.	SECTION	COUNTY	SHEET NO.			
	EDGE OF P.C.C. PAVEMENT						LAKE	26	18
	LDGL OI	F.U.U. FA	A PIAIPIA I		B	D400-06 (BD33)	CONTRACT	r NO. 6	0J96
SCALE: NONE	ALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.					OAD DIST. NO. 1 ILLINOIS FED. A	ID PROJECT		



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:
- 0) ONE ROAD CONSTRUCTION AHEAD SIGN $36\times36~(900\times900)$ 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:
- d) ONE ROAD CONSTRUCTION AHEAD SIGN 48 \times 48 (1.2 m \times 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.

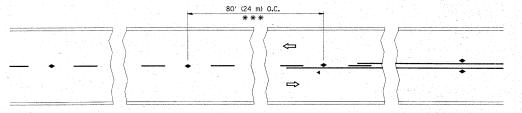
All dimensions are in millimeters (inches) unless otherwise shown.

FILE NAME =	USER NAME = kellers	DESIGNED - LHA	REVISED - J. OBERLE 10-18	3-95
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	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - A. HOUSEH 10-15	5-96
	PLOT DATE = 1/27/2010	DATE - 06-89	REVISED -T. RAMMACHER 01-	-06-00

STATE	OF	ILLINOIS
DEPARTMENT	OF 1	TRANSPORTATION

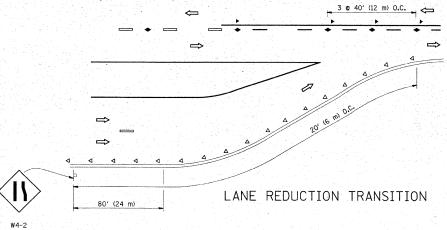
	TRAFFIC CONTROL AND PROTECTION FOR
	SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
E: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO S

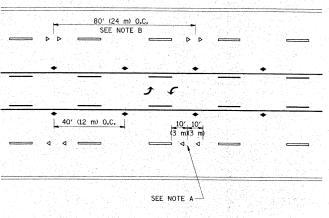
F.A.U. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.		
2711	27 RS-9		LAKE	26	19		
	TC-10		CONTRACT	NO. 6	0J96		
FED. R	OAD DIST, NO. 1 ILLINOIS FE	. AID	PROJECT				



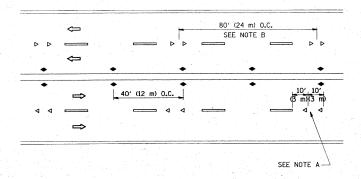
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

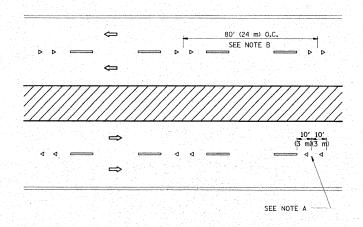




TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

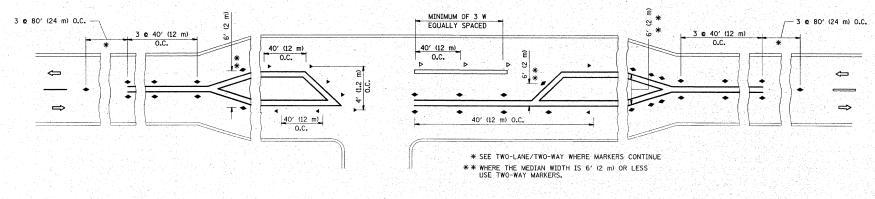
- 1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- 3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE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

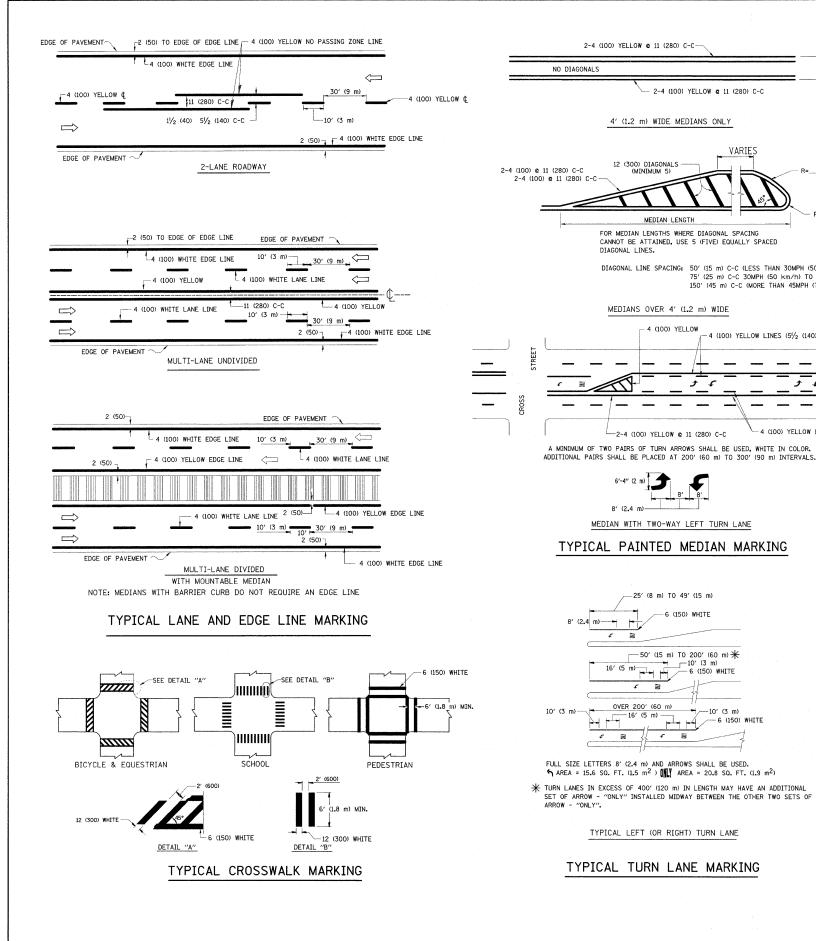
- ---- YELLOW STRIPE
- WHITE STRIPE
- ◆ ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

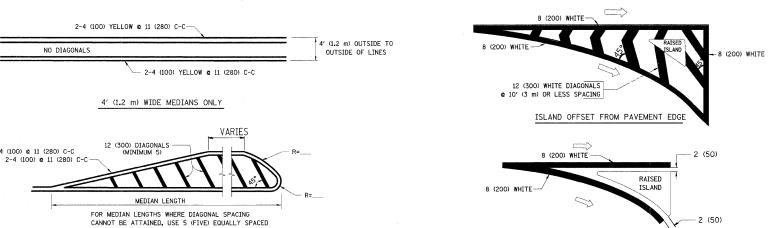


LEFT TURN

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

FILE NAME = USER NAME = kellers DESIGNED - REVISED - T. RAMMACHER 09-19-94 TYPICAL APPLICATIONS FILE TYPICAL APPLICATIONS FILE SECTION	COUNTY	TOTAL SHEET
I HE TO SEE THE PROPERTY OF TH		
1 CNOW, WORK IN WILLIAM STATE OF THE RAMMACHER 03-12-991 CONTRACT TO RAMMACHER 03-12-991 CONTR	CODIVIT S	HEETS NO.
PLOT SCALE = 50.0000 // IN. CHECKED REVISED -T. RAMMACHER 01-06-00 DEPARTMENT OF TRANSPORTATION RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	LAKE	26 20
PLOT DATE = 1/27/2010 DATE - REVISED - C. JUCIUS 09-09-09 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. FFD. ROAD DIST. NO. 1 LI LINOU	CONTRACT N	NO. 60J96





TYPICAL ISLAND MARKING

ISLAND AT PAVEMENT EDGE

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 5' (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	SOLID	YELLOW: TWO WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE
	e 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 (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 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
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.

TYPICAL TURN LANE MARKING

TYPICAL LEFT (OR RIGHT) TURN LANE

DIAGONAL LINES.

MEDIANS OVER 4' (1.2 m) WIDE

- 4 (100) YELLOW

---2-4 (100) YELLOW @ 11 (280) C-C

MEDIAN WITH TWO-WAY LEFT TURN LANE

-25' (8 m) TO 49' (15 m)

──50' (15 m) TO 200' (60 m) ★ 10' (3 m) 6 (150) WHITE

16' (5 m) 10' (3 m) 6 (150) WHITE

──10′ (3 m)

8' (2.4 m)-

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))

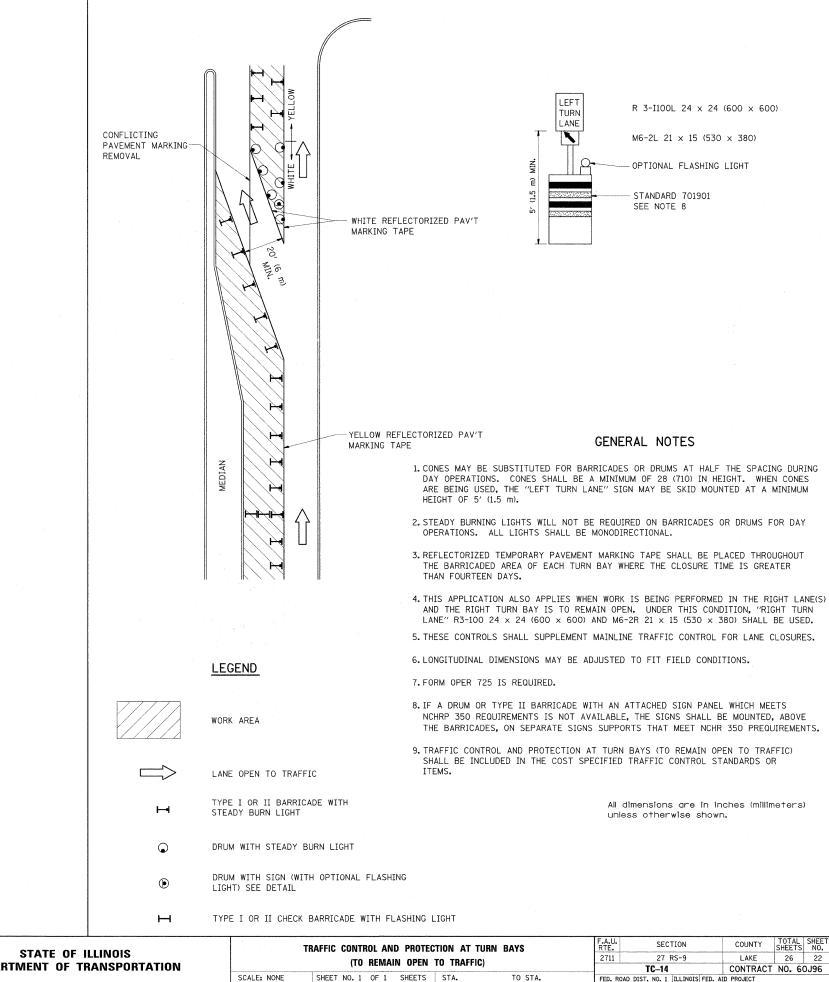
4 (100) YELLOW LINES (51/2 (140) C-C)

-4 (100) YELLOW LINES (51/2 (140) C-C)

- 1								
	FILE NAME =	USER NAME = kollors	DESIGNED	~	EVERS	REVISED	-T. RAMMACHER	10-27-94
	c:\pw_work\PWIDOT\KELLERS\d0177742\Dist	Std.dgn	DRAWN	-		REVISED	-C. JUCIUS	09-09-09
		PLOT SCALE = 50.0000 '/ IN.	CHECKED	-		REVISED	-	
i		PLOT DATE = 1/27/2010	DATE	-	03-19-90	REVISED		

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

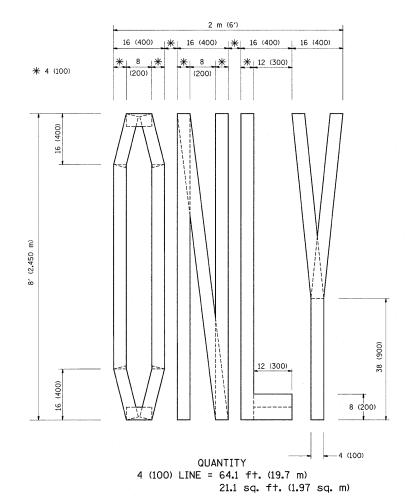
DISTRICT ONE TYPICAL PAVEMENT MARKINGS					SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
					27 RS-9	LAKE	26	21
	TIFICAL PAVEINENT		TC-13	CONTRACT	NO. 60	JJ96		
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD	DIST. NO. 1 ILLINOIS FED. A	ID PROJECT		

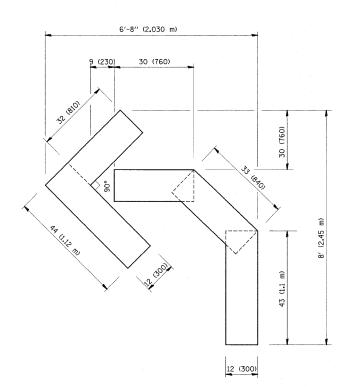


REVISED -T. RAMMACHER 09-08-94 REVISED - R. BORO 09-14-09 \pw_work\PWIDOT\KELLERS\d0177742\Dis REVISED - A. HOUSEH 11-07-95 REVISED PLOT SCALE = 50.0000 '/ IN. REVISED - A. HOUSEH 10-12-96 REVISED PLOT DATE = 1/27/2010 REVISED -T. RAMMACHER 01-06-00 REVISED

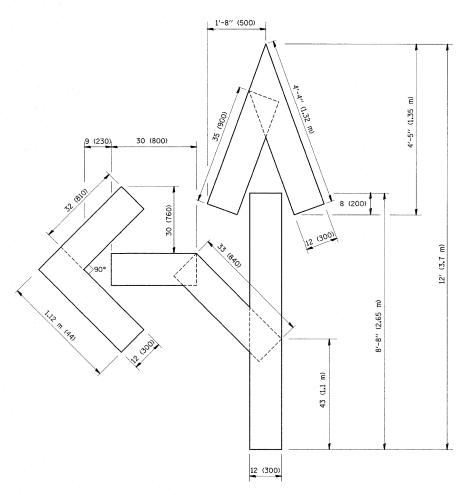
DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT





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



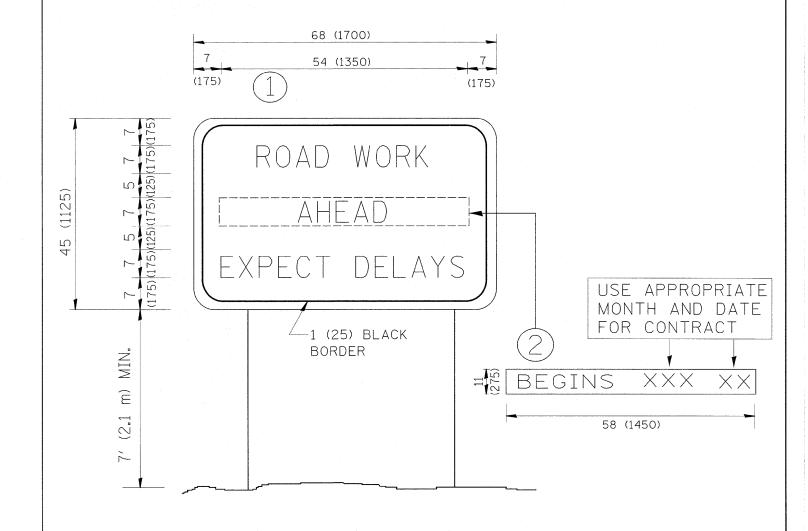
QUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

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

FILE NAME =	USER NAME = kellers	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
c:\pw_work\PWIDOT\KELLERS\dØ177742\Dist	itd.dgn	DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 1/27/2010	DATE - 09-18-94	REVISED - E. GOMEZ 08-28-00

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

	PAVEMENT MARKING LETTERS AND SYMBOLS						SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		FOR T	RAFFIC ST	2711	27 RS-9	LAKE	26	23		
		TOR I	narrio 31	Adiivo			TC-16	CONTRACT	NO. 6	JJ96
SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	FED. R	OAD DIST. NO. 1 ILLINOIS FED. A	D PROJECT		



NOTES:

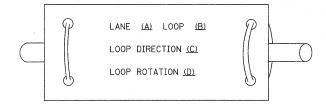
- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL (2) SOON AFTER THE START 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.

Ī	FILE NAME =	USER NAME = kellers	DESIGNED -	REVISED - R. MIRS 09-15-97			ARTERIAL ROAD		F.A.U.	SECTION	COUNTY	TOTAL SHEET
	c:\pwlwork\PWIDOT\KELLERS\d0177742\Dist	itd.dgn	DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS	INFORMATION SIGN				27 RS-9	LAKE	26 24
		PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION	INTO INTALION COLL				TC-22	CONTRACT	T NO. 60J96
		PLOT DATE = 1/27/2010	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.		FED. ROAD D	DIST. NO. 1 ILLINOIS FED. A	ID PROJECT	

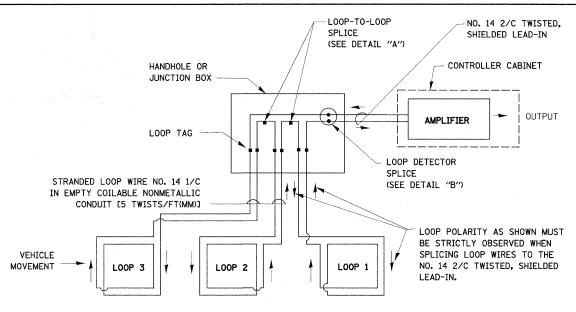
LOOP DETECTOR NOTES

- 1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- 3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- 6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

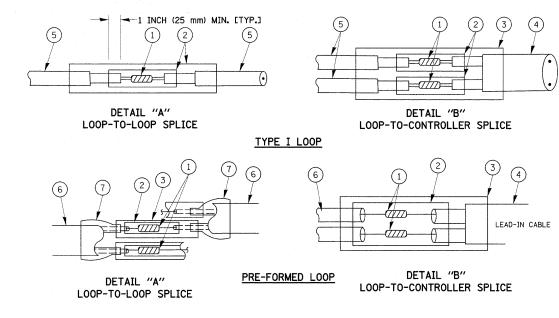


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



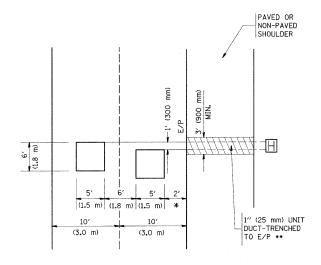
LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.
- 4) NO. 14 2/C TWISTED, SHIELDED CABLE.
- (5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- (6) PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = kellers	DESIGNED ~	DAD	REVISED -			DISTRICT ONE		SECTION	COUNTY	TOTAL
c:\pw_work\PWIDDT\KELLERS\dØ177742\Dist	PLOT SCALE = 50.0000 '/ IN.	DRAWN	DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STANDARD TRAFFIC SIGNAL DESIGN DETAILS			27 RS-9	LAKE	26
F	PLOT DATE = 1/27/2010	DATE -	10-28-09	REVISED -	DEPARTMENT OF TRANSPORTATION	SCALE; NONE SHEET NO. 1 OF 6 SHEETS STA. TO STA.			TS-05 IST. NO. 1 ILLINOIS F	CONTRACT FED. AID PROJECT	L NO. 6

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

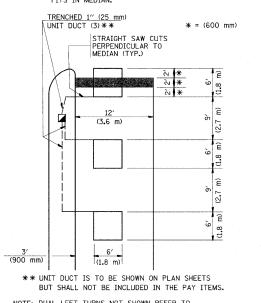
* * LINIT DUCT IS TO BE SHOWN ON PLAN SHEETS

* = (600 mm)

LEFT TURN LANES WITH MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

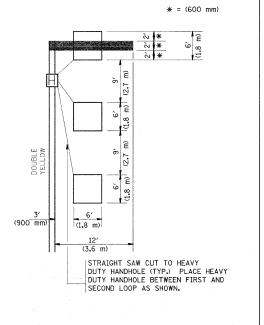
HANDHOLE LOCATION MAY
VARY DEPENDING ON GEOMETRICS
AND DESIGN OF TRAFFIC SIGNALS.
HEAVY-DUTY HANDHOLES TO BE
USED WHEN THE MEDIAN IS
MOUNTABLE. REFER TO STANDARD
814001 TO ENSURE THAT HANDHOLE



PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

LEFT TURN LANES WITHOUT MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

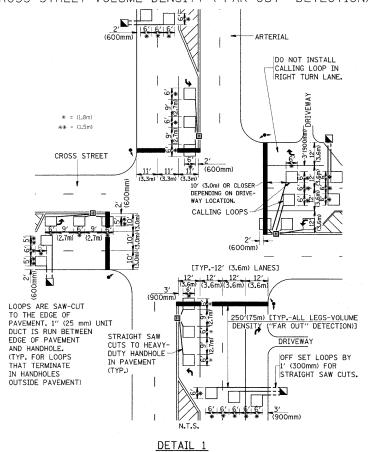
(PROTECTED / PERMITTED LEFT TURN PHASING)



NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)



N.T.S.

PLOT SCALE = 50.0000 '/ IN.

PLOT DATE = 1/27/2010

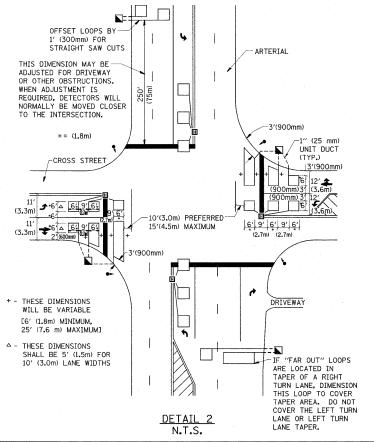
DESIGNED

CHECKED

R.K.F.

RAWN

DATE



NOTES:

VEHICLES LOOP DETECTORS

- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIFLDED.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- * ONE DIMENSION OF <u>ALL</u> DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES, ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1
TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

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STATE OF ILLINOIS
EPARTMENT OF TRANSPORTATION

DISTRICT 1 - DETECTOR LOOP INSTALLATION										
	DE	TA	ILS	FOF	ROADW	AY RESURFA	CING			
 SHEET	NO.	1	OF	1	SHEETS	STA.	TO:	STA.		