FOR INDEX OF SHEETS, SEE SHEET NO. 2

### **DESIGN DESIGNATION:**

SPEED LIMIT: 40 TO 45 M.P.H.

2009 ADT = 27,300 (WARRENVILLE RD. TO PARK BLVD.) 15,700-16,500 (PARK BLVD. TO IL RTE. 38)

PROJECT LOCATED IN THE VILLAGES OF LISLE, GLEN ELLYN, AND DOWNERS GROVE

# STATE OF ILLINOIS

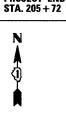
# **DEPARTMENT OF TRANSPORTATION**

**DIVISION OF HIGHWAYS** 

# **PROPOSED HIGHWAY PLANS**

**FAP 870 (IL RTE. 53)** SECTION 534X-RS-5 **FAU 1479 (WARRENVILLE RD.) TO FAP 347 (IL RTE. 38) RESURFACING (3P)** 

> **DUPAGE COUNTY** C-91-313-11

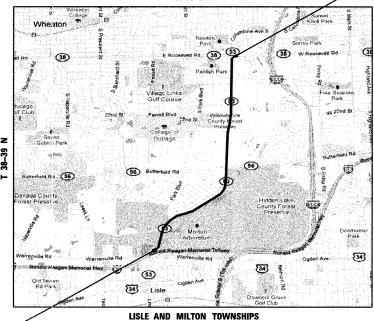


PROJECT ENDS

STA. 13+61 TO STA. 15+15 (SB) STA. 27 + 24 TO STA. 27 + 58 (SB)

STA. 27 + 32 TO STA. 27 + 66 (NB) STA. 34 + 54 TO STA. 36 + 49 (SB) STA. 34 + 83 TO STA. 36 + 83 (NB)

**OMISSIONS:** 



**PROJECT BEGINS** 

GROSS LENGTH OF PROJECT = 19,211 FT. = 3.64 MILE NET LENGTH OF PROJECT = 18,594 FT. = 3.52 MILE

DUPAGE 35 1
ILLINOIS CONTRACT NO. 60N43 534X-RS-5

### D-91-313-11



DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

SUBMITTED OCTOBER 20, 20 11

Dive M. O'Kerfe J.C.
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Scott E. Stitt P.E. &

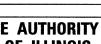
December 9 20 11

William R. Frankon Enterin DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROFESSIONAL ENGINEER'S SIGN & SEAL

Chestophy M. Idasth

EXPIRES: 11/30/2011



PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

ENG: KEN ENGINEER: PLAN ONE

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1 8

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DISTRICT

CONTRACT NO. 60N43

1-800-892-0123

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

	INDEX OF SHEETS	LIST OF ST	ATE STANDARDS
1	COVER SHEET	CTANDADD NO	DECORIDATION
2	INDEX OF SHEETS, LIST OF STATE STANDARDS, AND GENERAL NOTES	STANDARD NO.	DESCRIPTION
3	SUMMARY OF QUANTITIES	000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
4-5	TYPICAL SECTIONS	442201 <i>-03</i>	CLASS C AND D PATCHES
6-12	ROADWAY PLAN	482011 <i>-03</i>	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENI AND RESURFACING PROJECTS
13-19	PAVEMENT MARKING PLAN	606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB
20-23	DETECTOR LOOP PLAN		AND GUTYER
24	DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W. AND FACE OF CURB	606301 <i>-04</i>	PC CONCRETE ISLANDS AND MEDIANS
• .	& EDGE OF SHOULDER >= 15' (4.5 m) (BD-01)	701421- <i>0</i> 4	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY.
25	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-08)		FOR SPEEDS >= 45 MPH TO 55 MPH
26	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT (BD-22)	701422 <i>-02</i>	LANE CLOSURE, MULTILANE, FOR SPEEDS >= 45 MPH TO 55 MPH
27	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT (BD-24)	701426- <i>04</i>	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS >= 45 MPH
28	BUTT JOINT AND HMA TAPER DETAILS (BD-32)	701427	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER.
29	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS.		FOR SPEEDS <= 40 MPH
	AND DRIVEWAYS (TC-10)	701501 <i>-06</i>	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
30	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) (TC-11)	701601- <i>0</i> <b>7</b>	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
31	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)	701701 <i>-08</i>	URBAN LANE CLOSURE, MULTILANE INTERSECTION
32	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING (TC-16)	701901- <i>0</i> 2	TRAFFIC CONTROL DEVICES
33	ARTERIAL ROAD INFORMATION SIGN (TC-22)		

### GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION) AT 8-1-1 OR (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES (48 HOUR NOTIFICATION IS REQUIRED).
- 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER ITEMS OF WORK TO EXISTING CURBS AND GUTTERS AND CONDITIONS IN THE FIELD UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
- 3. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGES OF LISLE, GLEN ELLYN, AND DOWNERS GROVE.
- 4. WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS. THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- SAW CUTTING OF PAVEMENTS, SIDEWALK, CURB & GUTTER, ETC. SHALL BE TO FULL DEPTH AND SHALL RESULT IN A CLEAN STRAIGHT EDGE ON THE PORTION REMAINING. ALL SAW CUTTING SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM REMOVED.
- 7. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 8. THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 9. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC, THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1.5 INCHES (40mm) WHERE THE SPEED LIMIT IS 40 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF MILLING IS SLOPED A MINIMUM OF 1:3 (V:H).
- 10. UNLESS OTHER CONDITIONS WARRANT EXTENDED LANE CLOSURE AS DETERMINED AND APPROVED IN WRITING BY THE ENGINEER OR AS PROVIDED FOR IN THE CONTRACT SPECIFICATIONS, OVERNIGHT CLOSURES SHALL NOT BE ALLOWED FOR REHABILITATION PROJECTS INVOLVING DAYTIME MILLING AND RESURFACING OPERATIONS AND CLASS D PATCHING.
- 11. 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 MARKING SHALL BE AS DIRECTED BY THE ENGINEER.
- 12. PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKING ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE TYPE III SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKINGS.
- 13. THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.
- 14. THE RESIDENT ENGINEER SHALL CONTACT MR. DON CHIARUGI, THE AREA TRAFFIC FIELD ENGINEER, AT (847) 741-9857 AT LEAST TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAYEMENT MARKINGS.
- 15. LOCATIONS OF PAVEMENT PATCHING AND CURB & GUTTER REMOVAL & REPLACEMENT WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 16. BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE THE "BUTT JOINT AND HMA TAPER DETAILS" INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- 17. MATCH EXISTING PAVEMENT MARKINGS AT THE PROJECT LIMITS.
- 18. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
- 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO
  DETERMINE THE LOCATION OF ALL UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS IN
  ACCORDANCE WITH THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT, OR PROTECTION IS NECESSARY.
- 20. THE LOCATION OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, WATER MAINS, SANITARY SEWERS, AND ANY OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN ON THE PLANS IS APPROXIMATE AND THEIR EXACT LOCATION IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR
- 21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MIGHT NOT BE SHOWN ON THE PLANS. ANY UTILITY PROPERTY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER.
- 22. ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES, WHICH OBSTRUCTS THE NATURAL FLOW OF WATER SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. PRIOR TO ACCEPTANCE OF THE IMPROVEMENT, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT.
- 23. 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 ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

11. \$(PROJECT\_CONTACT) \$(CLIENT) 10/24/2011 2:3208 PM 86100196\_06-gen-01.dgn pdf\_pit standard-trans.tbl

ANTE PLOTTED:
11E NAME;
11.01 DRIVER;
PEN TABLE;
12.02 DRIVER;
13.04 DRIVER;
14.05 DRIVER;
15.04 DRIVER;
16.05 DRI

34

35

DISTRICT 1 STANDARD TRAFFIC SIGNAL DETAILS (TS-05)

DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING (TS-07)

INDEX OF	SHEETS, LIST	OF STA	TE STAN	IDARDS	AND	GENERAL	NOTES	F.A.P. RTE.		SEC	TION	COUNTY	TOTAL	SHEE NO.
								870		534X	-RS-5	DUPAGE	35	2
												CONTRACT	NO.	60N4
CALE: N.T.S.	SHEET NO.	1 OF	1 SHEETS	STA.		TO STA.		ECD DO	AD DICT	MO	THE THOTE EED A	ID DOO IFCT		

### SUMMARY OF QUANTITIES

·····	T		UREAN	100% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0005
21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	70	70
25200110	SODDING, SALT TOLERANT	SO YD	70	70
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SO YD	9	9
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	87	87
40600300	AGGREGATE (PRIME COAT)	TON	434	434
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	45	45
40600827	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	4,555	4,555
40600895	CONSTRUCTING TEST STRIP	EACH	2	2
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	855	855
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	130	130
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	1	1
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	10,627	10,627
42001300	PROTECTIVE COAT	SO YD	247	247
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SO YD	108,441	108,441
44000200	DRIVEWAY PAVEMENT REMOVAL	SO YD	9	9
44002209	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 2 1/4"	SO YD	1,030	1,030
44003100	MEDIAN REMOVAL	SO FT	1,185	1,185
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SO YD	292	292
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SO YD	237	237
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SO YD	261	261
44201815	CLASS D PATCHES, TYPE II, 14 INCH	SO YD	876	876
44201819	CLASS D PATCHES, TYPE III, 14 INCH	SO YD	711	711
44201821	CLASS D PATCHES, TYPE IV, 14 INCH	SO YD	782	782
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	2,415	2,415
60618208	HOT-MIX ASPHALT MEDIAN	SQ FT	1,185	1,185
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
67100100	MOBILIZATION	L SUM	1	1
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	1
70100320	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	L SUM	1	1
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	25.705	25.705
70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SO FT	965	965
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	66,030	66,030
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	4,380	4,380
70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	20	20

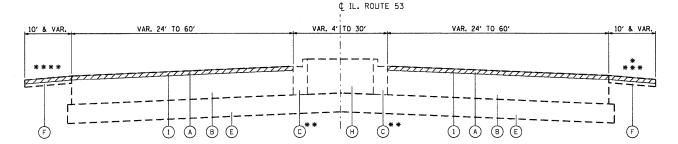
				URBAN	100%.STATE
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0005
	70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	2,880	2,880
	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	895	895
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	8,570	8,570
•	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	965	965
•	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	66,030	66,030
•	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	F00T	4,380	4,380
•	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	20	20
•	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	F00T	2,880	2,880
•	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	F00T	895	895
•	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	840	840
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	840	840
•	88600600	DETECTOR LOOP REPLACEMENT	F00T	3,580	3,580
	X2020110	GRADING AND SHAPING SHOULDERS	UNIT	220	220
	x5537800	STORM SEWERS TO BE CLEANED 12"	F00T	100	100
	x6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	15	15
	Z0004562	COMBINATION CONCRETE CURB & GUTTER REMOVAL AND REPLACEMENT	F00T	740	740
	Z0017800	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED (SPECIAL)	EACH	5	5
	Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	15	15
	Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	129	129

SPECIALTY ITEMS

USER NAME = SPernal PLOT SCALE = N.T.S. PLOT DATE = 10/25/2011

	SUMMARY OF QUANTITIES								SEC	TION	COUNTY	TOTAL SHEETS	SHEET NO.
										-RS-5	DUPAGE	35	3
1			****								CONTRACT	NO.	60N43
	SCALE: N.T.S.	SHEET NO.	1 OF	1 SHEETS	STA.	TO STA.	FED. R	OAD DIST.	NO.	ILLINOIS FED. AI	D PROJECT		

<sup>-</sup>A-NON-PARTICIPATING



EXISTING TYPICAL SECTION

STA. 13+61 TO STA. 56+40
OMISSIONS AT STA. 13+61 TO STA. 15+55 (SB)
STA. 27+24 TO STA. 27+58 (SB)
STA. 27+32 TO STA. 27+66 (NB)
STA. 34+54 TO STA. 36+49 (SB)
STA. 34+58 TO STA. 36+30 (NB)

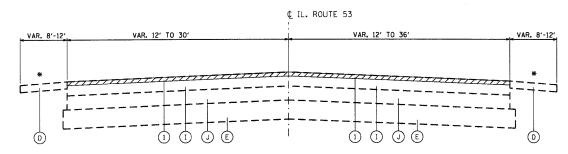
\* AGGREGATE SHOULDER STA. 46+61 TO STA. 56+40

\* CURB & GUTTER ENDS AT STA. 44+50 RT.

AND STA. 46+50 LT.

\*\*\* CURB & GUTTER: STA. 38+20 TO STA. 41+80

\*\*\* CURB & GUTTER: STA. 39+57 TO STA. 43+26



EXISTING TYPICAL SECTION STA. 58+42 TO STA. 131+21 STA. 136+20 TO STA. 158+21 STA. 168+69 TO STA. 205+72

## VAR. 2' TO 12' VARIES 0'-12' VAR. 8' TO 12' 1 1 1 1 1 ( E F 1

¢ IL. ROUTE 53

EXISTING TYPICAL SECTION STA. 131+21 TO STA. 136+20 STA. 158+21 TO STA. 168+69

### EXISTING CONDITIONS

- HMA RESURFACING, ±2 1/4"
- PCC PAVEMENT, ±10"
- COMBINATION CONCRETE CURB AND GUTTER
- AGGREGATE SHOULDERS
- AGGREGATE BASE COURSE
- HMA SHOULDERS
- CONCRETE MEDIAN / GRASS MEDIAN
- HMA RESURFACING, ±8"
- PCC PAVEMENT, ±8"

### PROPOSED IMPROVEMENTS

- 1 HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
- 2 POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4"
- 3 POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"
- COMBINATION CONCRETE CURB & GUTTER REMOVAL AND REPLACEMENT (AT LOCATIONS AS DETERMINED BY THE ENGINEER)
- AGGREGATE WEDGE SHOULDER, TYPE B (TAPER 3" TO 1" THICKNESS)

REMOVAL OF THE EXISTING HMA SURFACE COURSE 2 1/4" FROM STA. 13+61 TO STA. 56+40 SHALL BE PAID FOR AS "HMA SURFACE REMOVAL, 2 1/2"."

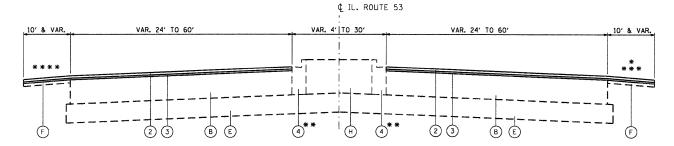
**HRGreen** 

	USER NAME = SPernel	DESIGNED	-	J. ROITBURD	REVISED -
		DRAWN	-	R. BEST	REVISED -
	PLOT SCALE = N.T.S.	CHECKED	-	T. HAMILTON	REVISED ~
1	PLOT DATE = 10/24/2011	DATE	-	10/24/11	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

COUNTY TOTAL SHEET NO.

DUPAGE 35 4 SECTION TYPICAL SECTIONS 870 534X-RS-5 CONTRACT NO. 60N43 SCALE: N.T.S. SHEET NO. 1 OF 2 SHEETS STA. TO STA.



PROPOSED TYPICAL SECTION

- \* AGGREGATE SHOULDER STA. 46+61 TO STA. 58+42

  \*\* CURB & GUTTER ENDS AT STA. 44+50 RT.
  AND STA. 46+50 LT.
- \*\*\* CURB & GUTTER: STA. 38+20 TO STA. 41+80
  \*\*\*\* CURB & GUTTER: STA. 39+57 TO STA. 43+26

₡ IL. ROUTE 53 VAR. 12' TO 36' VAR. 12' TO 30' 2 3 1 J E 23 E

### PROPOSED TYPICAL SECTION

OPOSED TYPICAL SECTION

STA. 58+42 TO STA. 98+75

STA. 122+00 TO STA. 131+21

STA. 136+20 TO STA. 131+21

STA. 136+20 TO STA. 158+21

STA. 136+20 TO STA. 158+22

\* HMA SHOULDER STA. 58+42 TO STA. 63+52 LT.

HMA SHOULDER STA. 92+61 TO STA. 98+75 RT.

HMA SHOULDER STA. 147+69 TO STA. 149+23 LT.

HMA SHOULDER STA. 147-69 TO STA. 149+38 RT.

HMA SHOULDER STA. 149+15 TO STA. 149+38 RT.

HMA SHOULDER STA. 149+15 TO STA. 149+38 RT.

HMA SHOULDER STA. 132+25 TO STA. 178+53 RT.

HMA SHOULDER STA. 183+00 TO STA. 191+35 RT.

HMA SHOULDER STA. 192+89 TO STA. 191+35 RT.

HMA SHOULDER STA. 192+89 TO STA. 194+54 RT.

HMA SHOULDER STA. 192+69 TO STA. 196+43 LT.

HMA SHOULDER STA. 195+59 TO STA. 196+43 LT.

HMA SHOULDER STA. 195+59 TO STA. 196+43 LT.

HMA SHOULDER STA. 195+59 TO STA. 196+43 LT.

HMA SHOULDER STA. 195+96 TO STA. 199+63 RT.

HMA SHOULDER STA. 201+44 TO STA. 202+59 LT.

HMA MEDIAN STA. 202+59 TO STA. 202+59 LT.

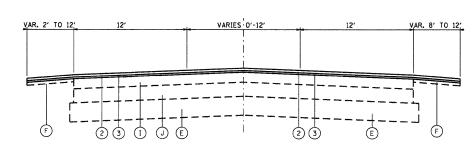
### EXISTING CONDITIONS

- HMA RESURFACING, ±2 1/4"
- PCC PAVEMENT, ±10"
- COMBINATION CONCRETE CURB AND GUTTER
- AGGREGATE SHOULDERS
- AGGREGATE BASE COURSE
- CONCRETE MEDIAN / GRASS MEDIAN
- HMA RESURFACING, ±8"
- PCC PAVEMENT, ±8"

### PROPOSED IMPROVEMENTS

- 1 HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
- 2 POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4"
- 3 POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"
- COMBINATION CONCRETE CURB & GUTTER REMOVAL AND REPLACEMENT (AT LOCATIONS AS DETERMINED BY THE ENGINEER)
- AGGREGATE WEDGE SHOULDER, TYPE B (TAPER 3" TO 1" THICKNESS)

### ₡ IL. ROUTE 53



PROPOSED TYPICAL SECTION STA. 131+21 TO STA. 136+20 STA. 158+21 TO STA. 168+69

THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING FROM APPROXIMATELY STA. 13+61 TO STA. 56+40. THE CONTRACTOR SHALL MILL BEFORE PATCHING FROM STA STA. 56+40 TO STA. 202+99. SEE DISTRICT 1 DETAIL PAVEMENT PATCHING FOR HAM SURFACED PAVEMENT.

### HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS
PAVEMENT RESURFACING	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 (IL-9.5mm)	4% @ 90 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	4% @ 50 GYR.
HMA SHOULDER RESURFACING	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F". N90 (IL-9.5mm)	4% @ 90 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	4% @ 50 GYR.
PATCHING	
CLASS D PATCHES (HMA BINDER, IL-19mm)	4% @ 70 GYR.
HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19mm)	4% @ 70 GYR.
DRIVEWAYS	
HMA SURFACE COURSE, MIX "D", N 50 (IL 9.5 mm); 2"	4% @ 50 GYR.
HMA BASE COURSE (HMA BINDER IL-19mm); PE -6", CE -8"	4% e 50 GYR.

THE UNIT WEIGHT TO CALCULATE ALL HMA SURFACE MIXTURE QUATITIES IS 112 LBS/SQ YD/IN

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

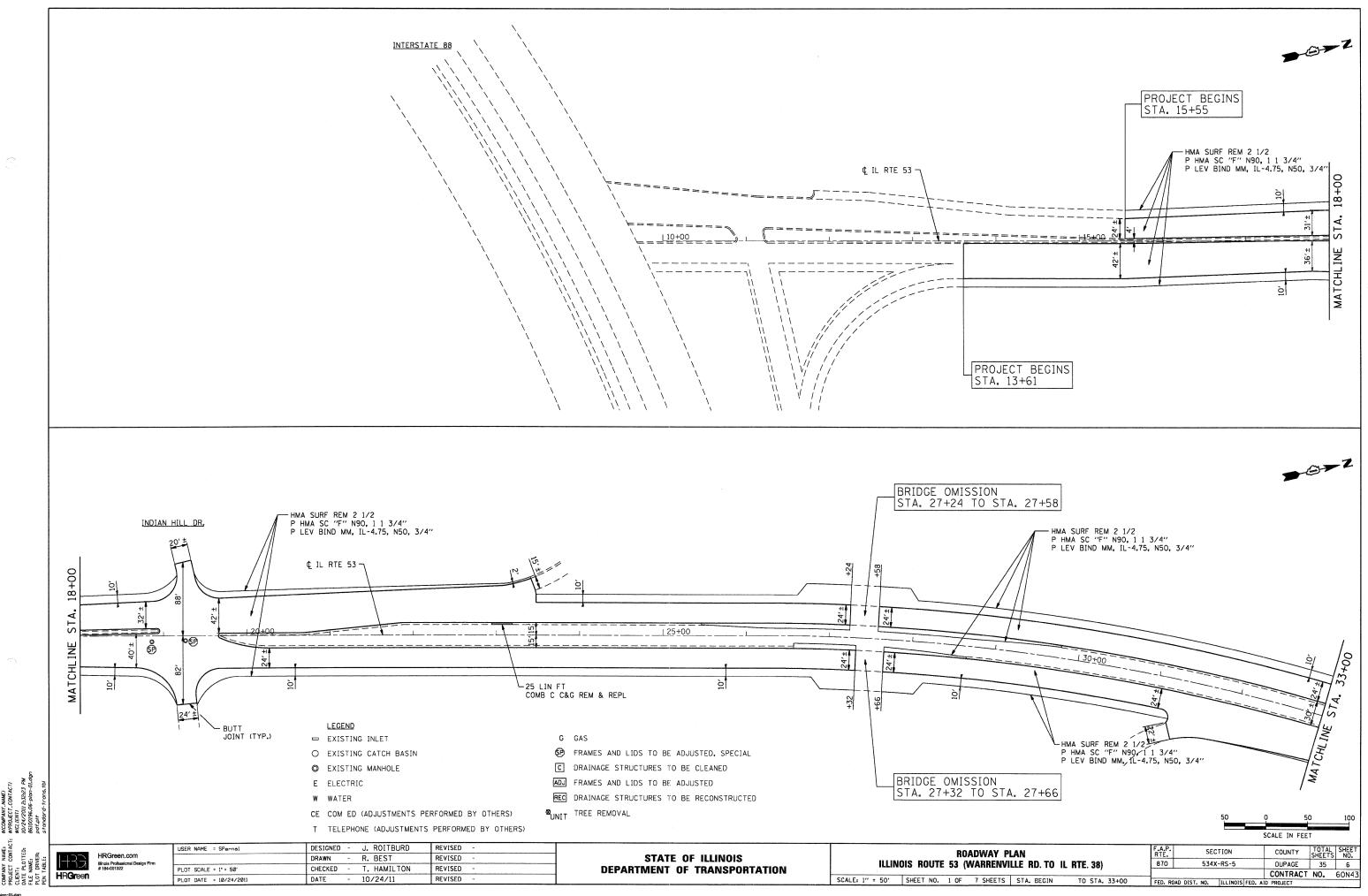
FOR "PERCENT OF RAP" SEE SPECIAL PROVISIONS.

PAY FOR PERFORMANCE SPECIFICATION SHALL ONLY APPLY TO THE POLYMERIZED HMA SURFACE COURSE, MIX "F". N90.

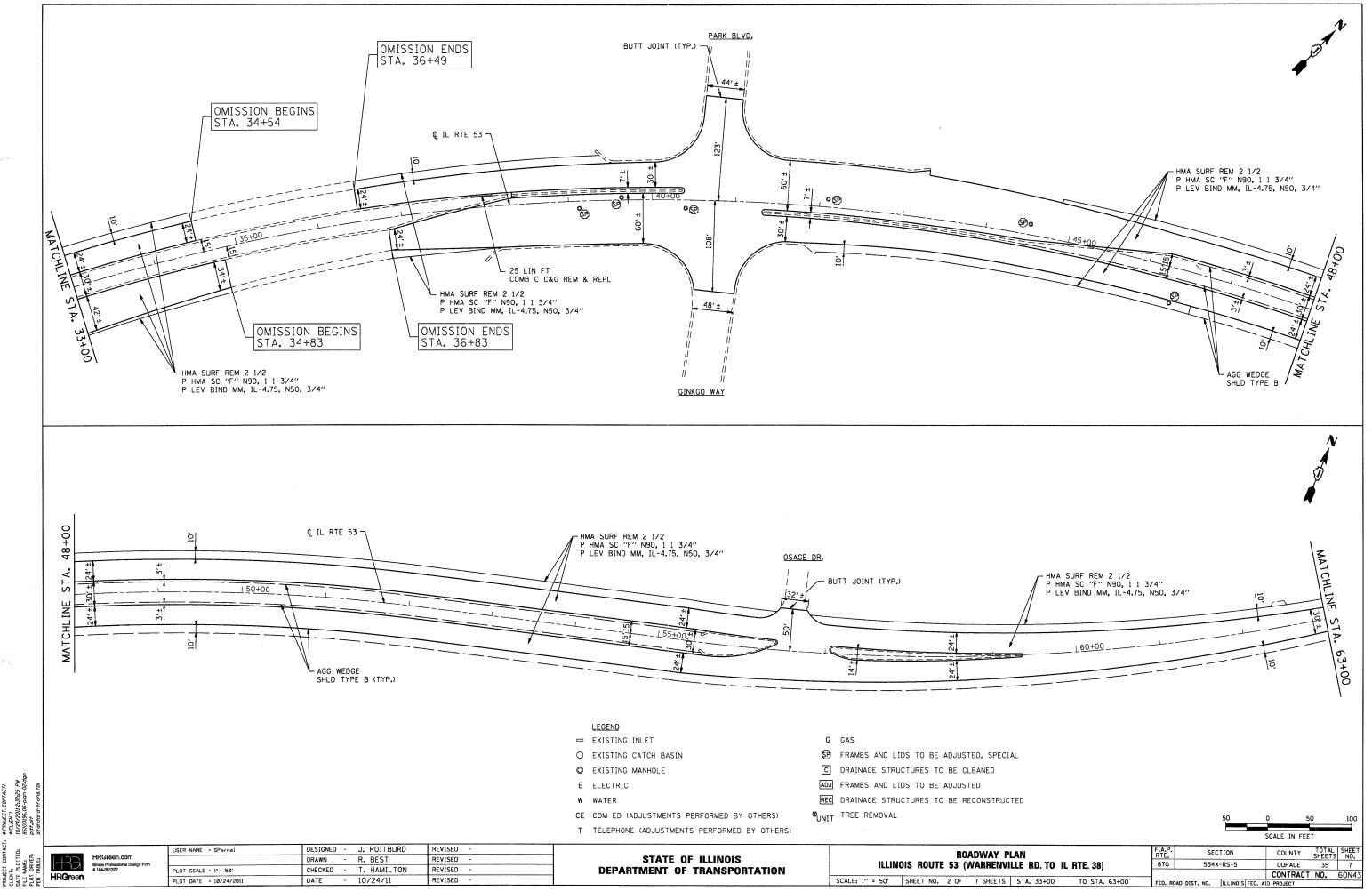
**HRGreen** 

USER NAME = SPernal	DESIGNED	-	J. ROITBURD	REVISED -
	DRAWN	-	R. BEST	REVISED -
PLOT SCALE = N.T.S.	CHECKED	-	T. HAMILTON	REVISED
PLOT DATE = 10/24/2011	DATE	-	10/24/11	REVISED -

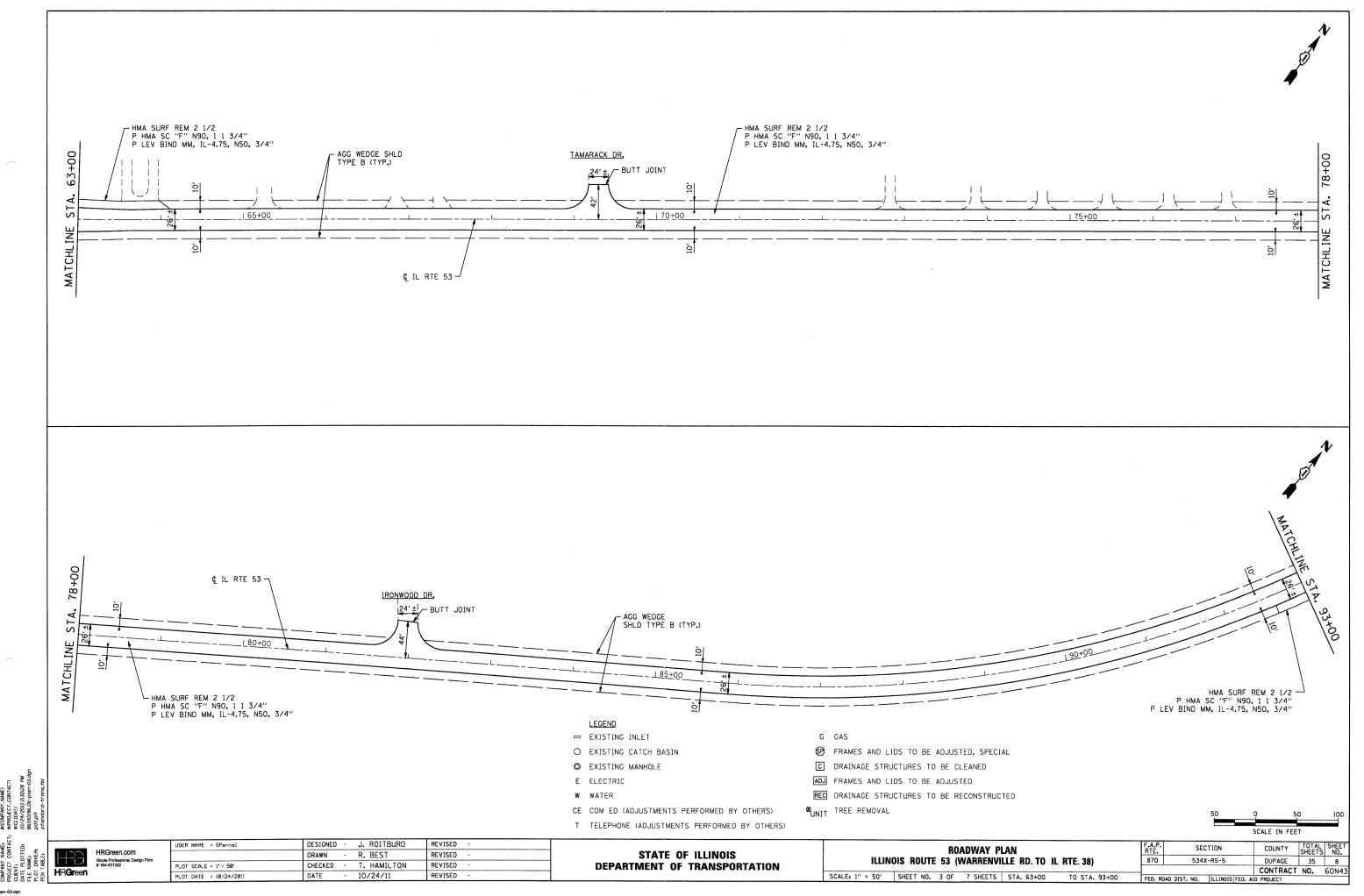
-		TYPICAL SECTI	F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.		
				·	870	534X-RS-5	DUPAGE	35	5
	SCALE: N.T.S.	SHEET NO 2 OF 2 SHEETS					CONTRACT	NO.	60N43
	SCALE: N.I.S.	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	FED. RO	DAD DIST. NO.   ILLINOIS FED. A	ID PROJECT		



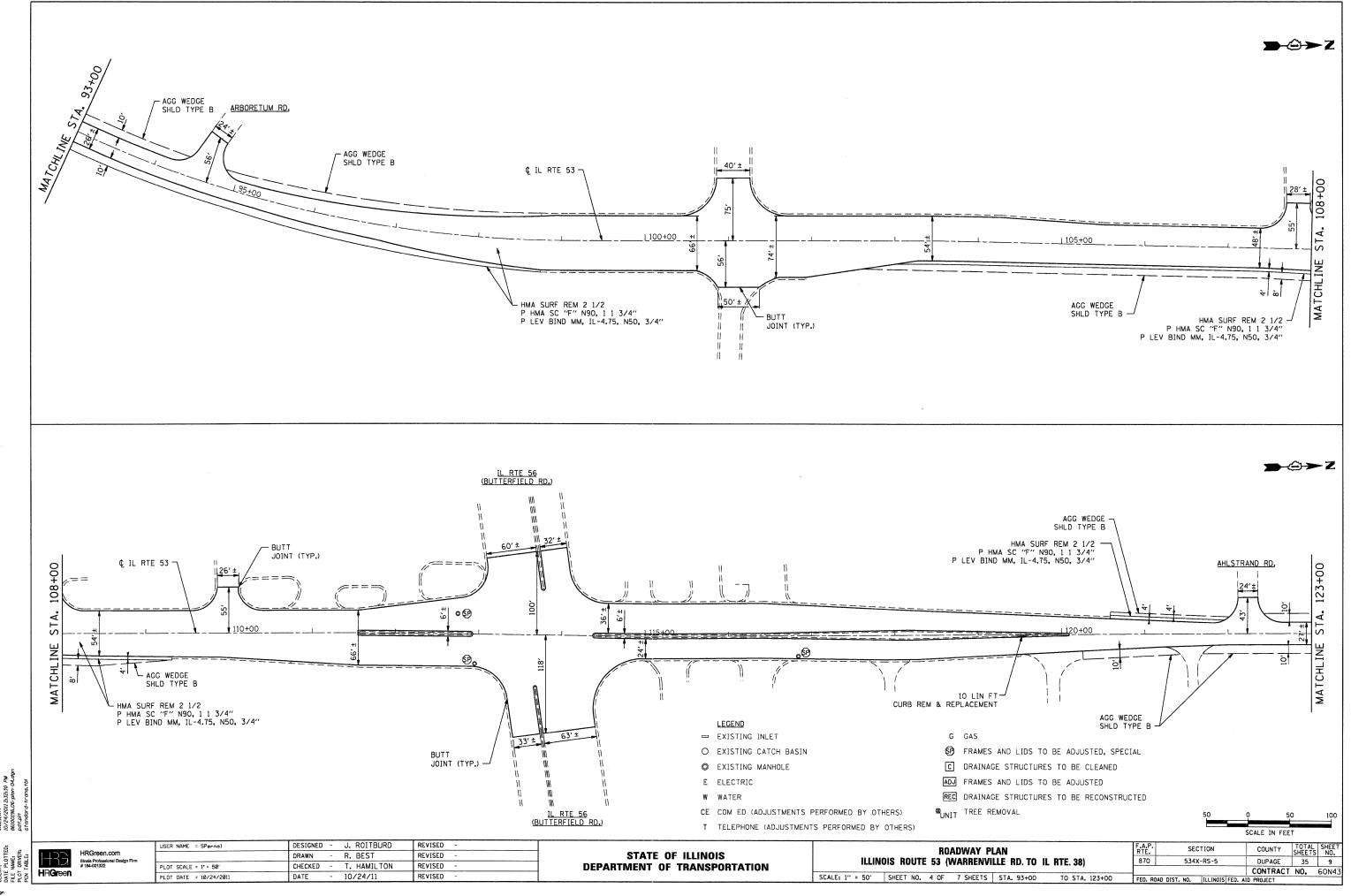
86100196.06 IL RTE 53 86100196.06-plan-01.0



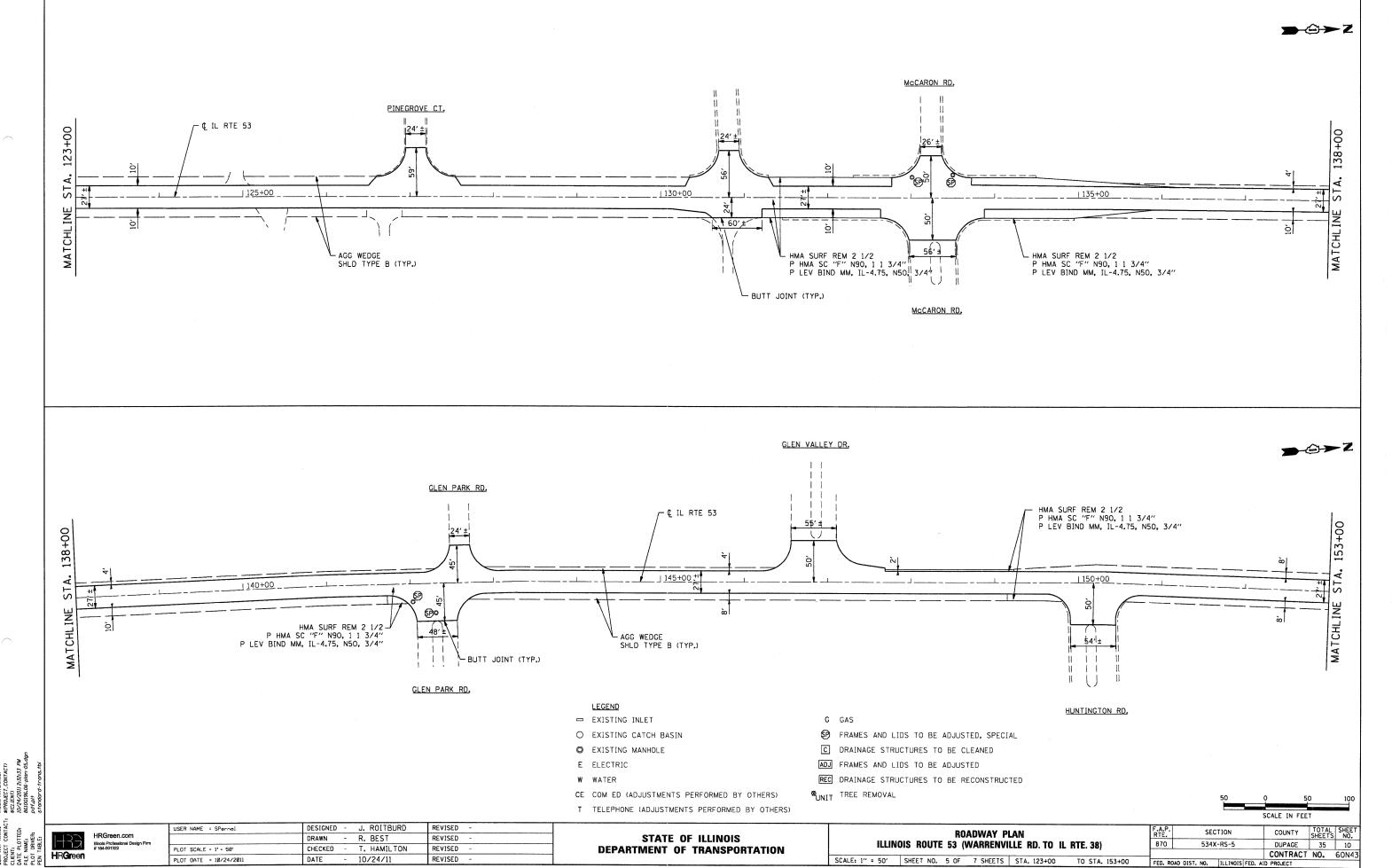
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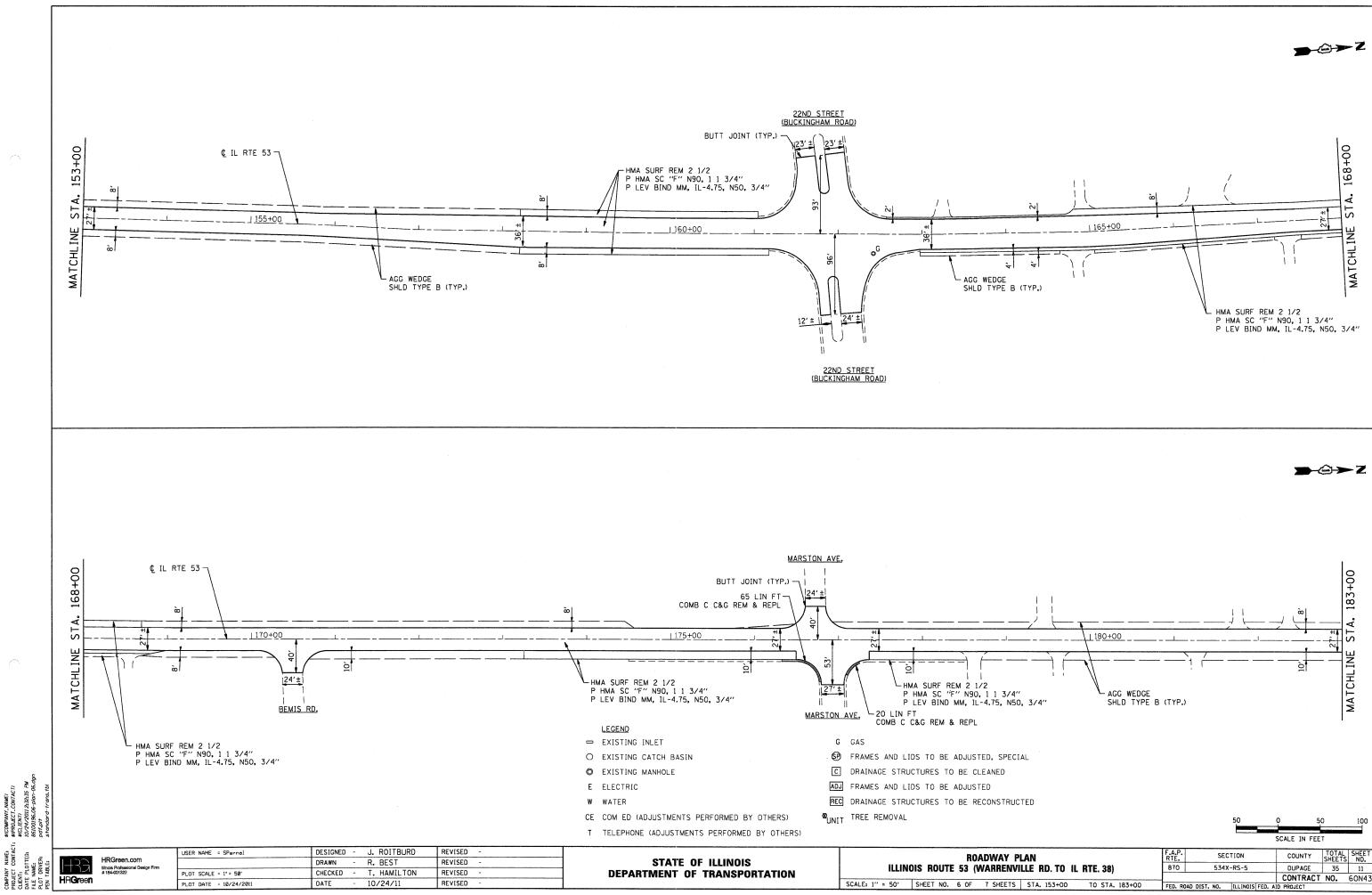
86100196.06 IL RTE 53 86100196.06-plan-03.dgn



86100196.06 IL RTE 53 86100196.06-plan-04,dgn

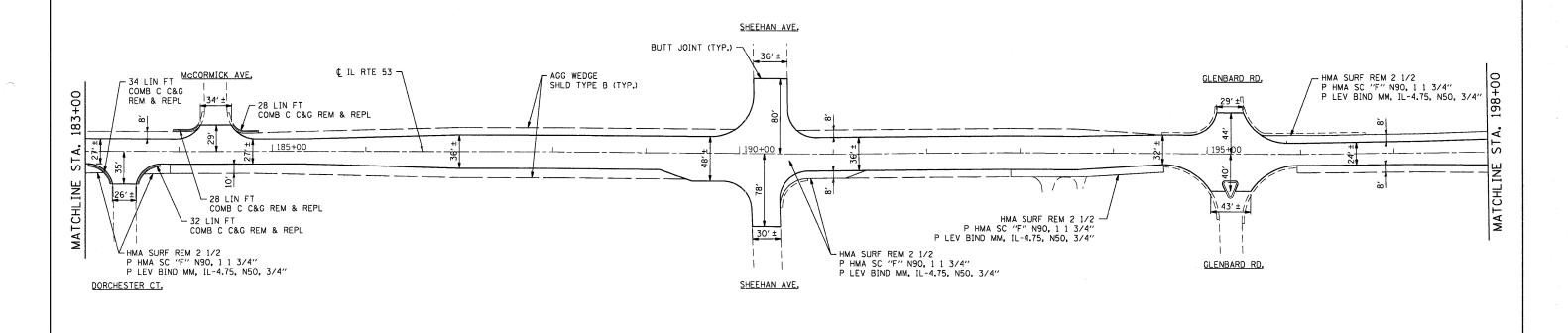


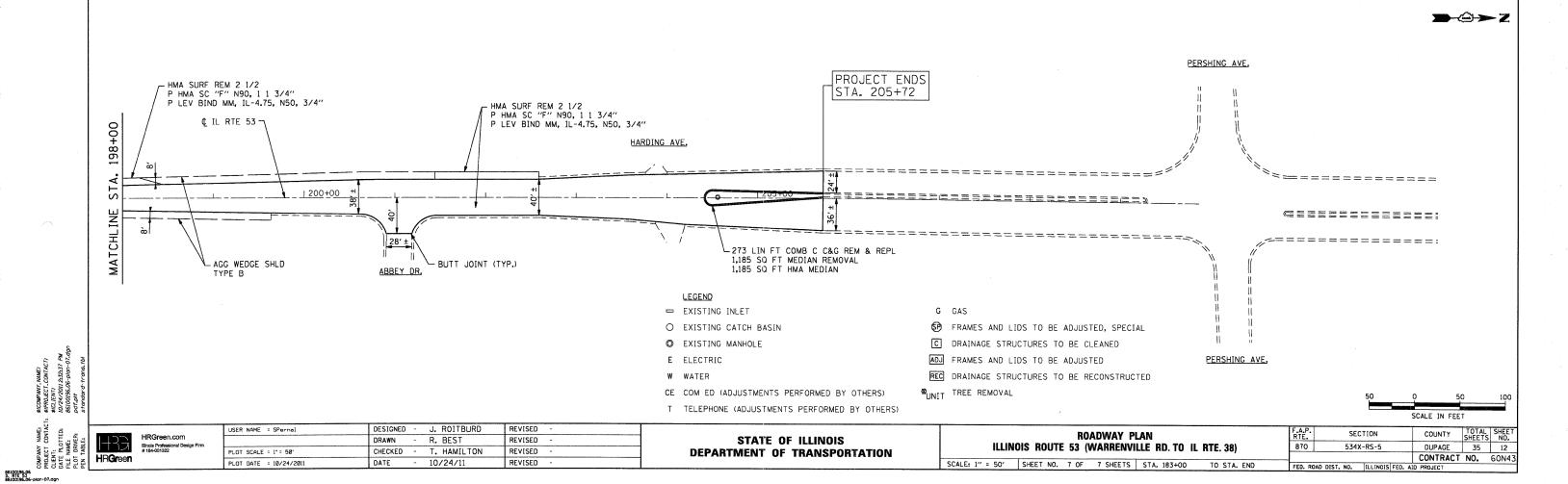
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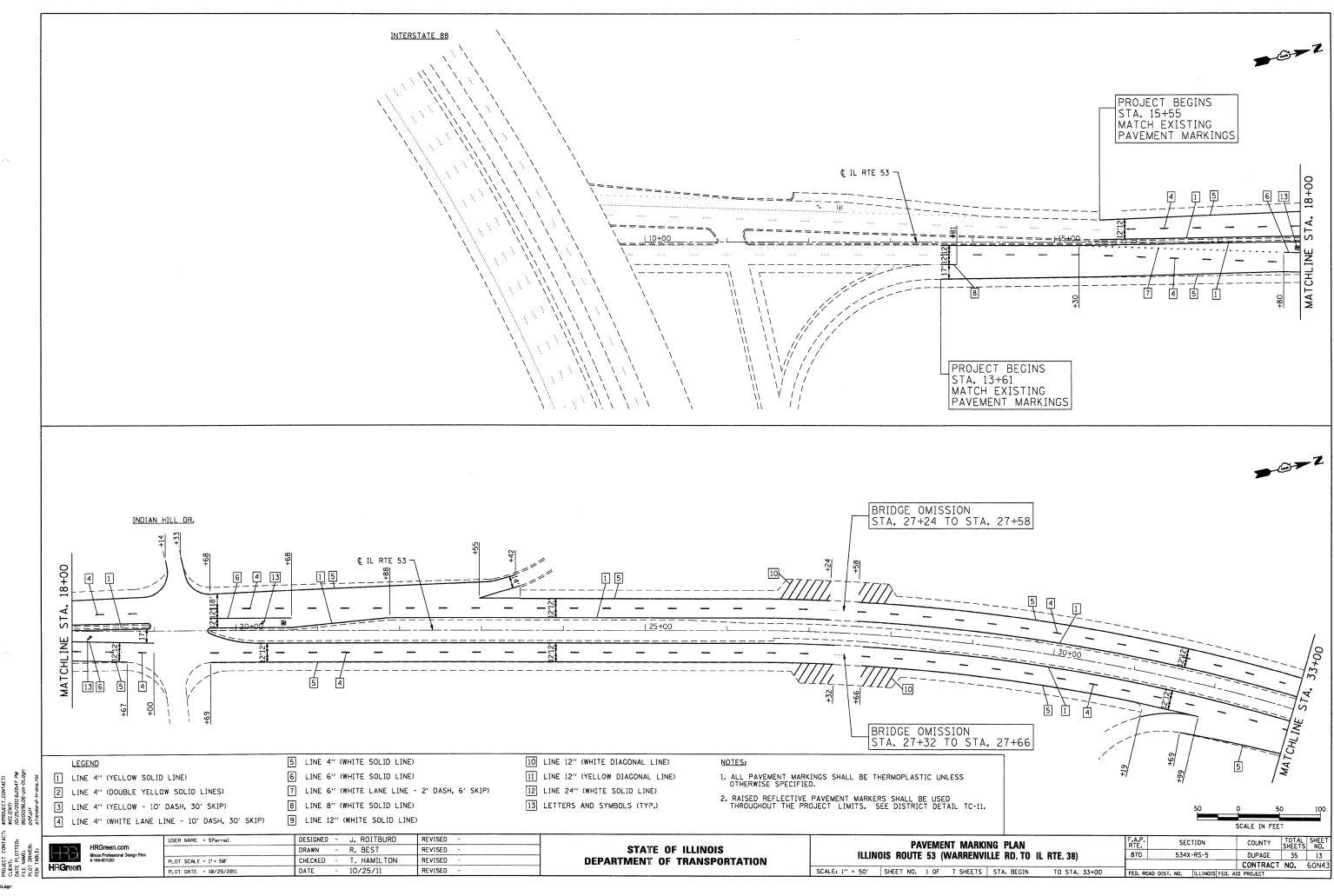


86100196.06 IL RYE 53 86100196.06-plan-06.dgn

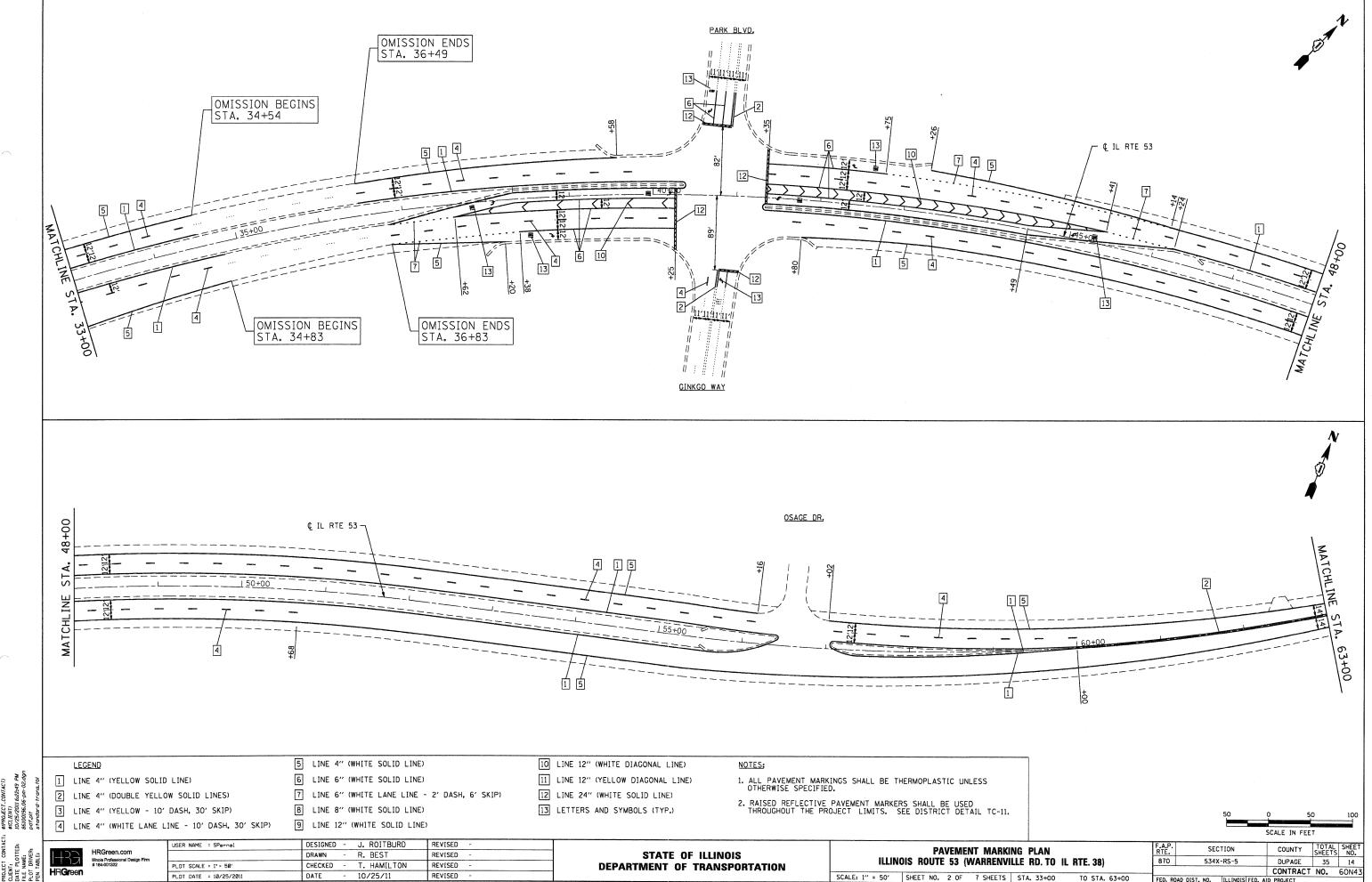




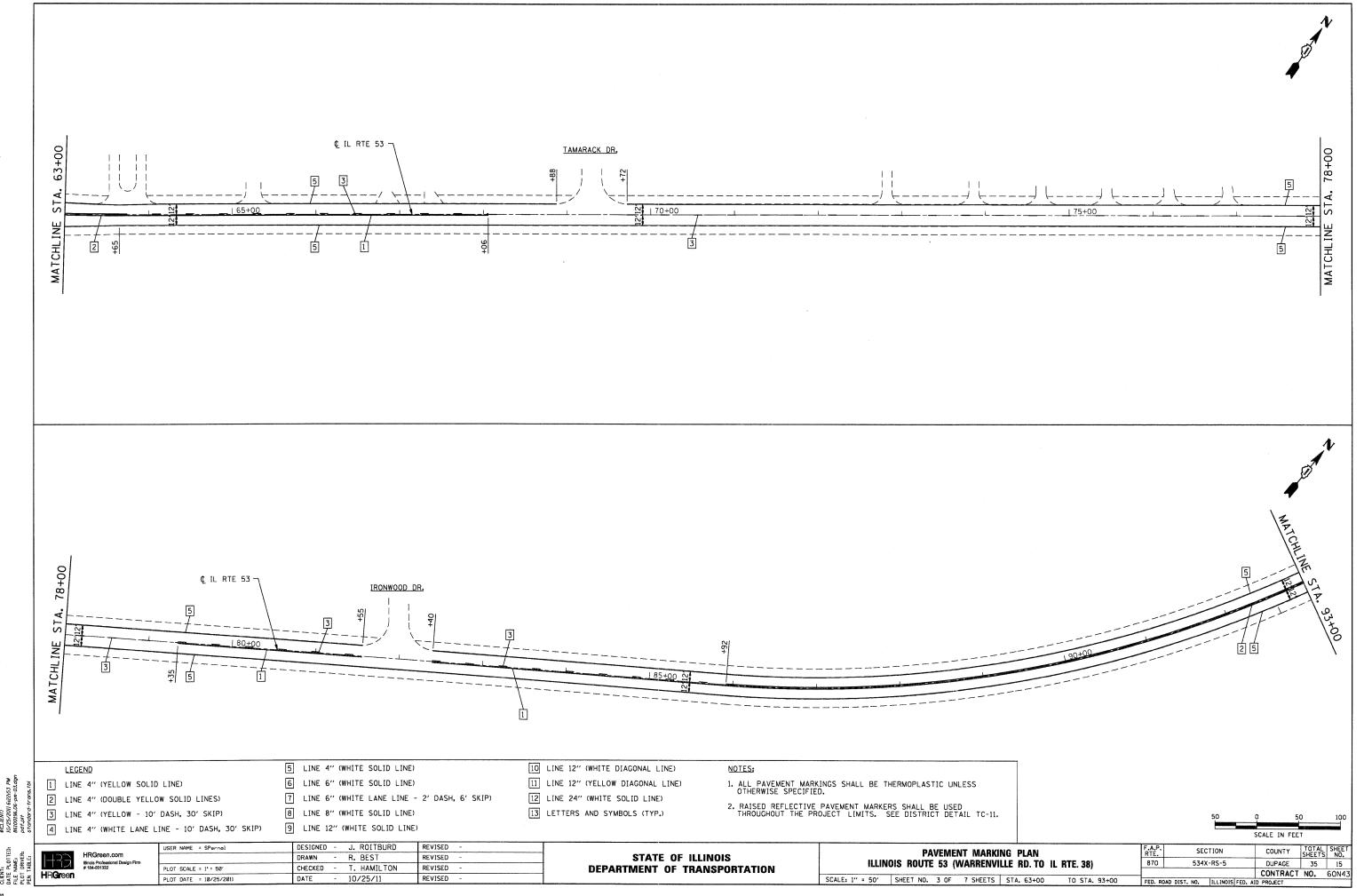




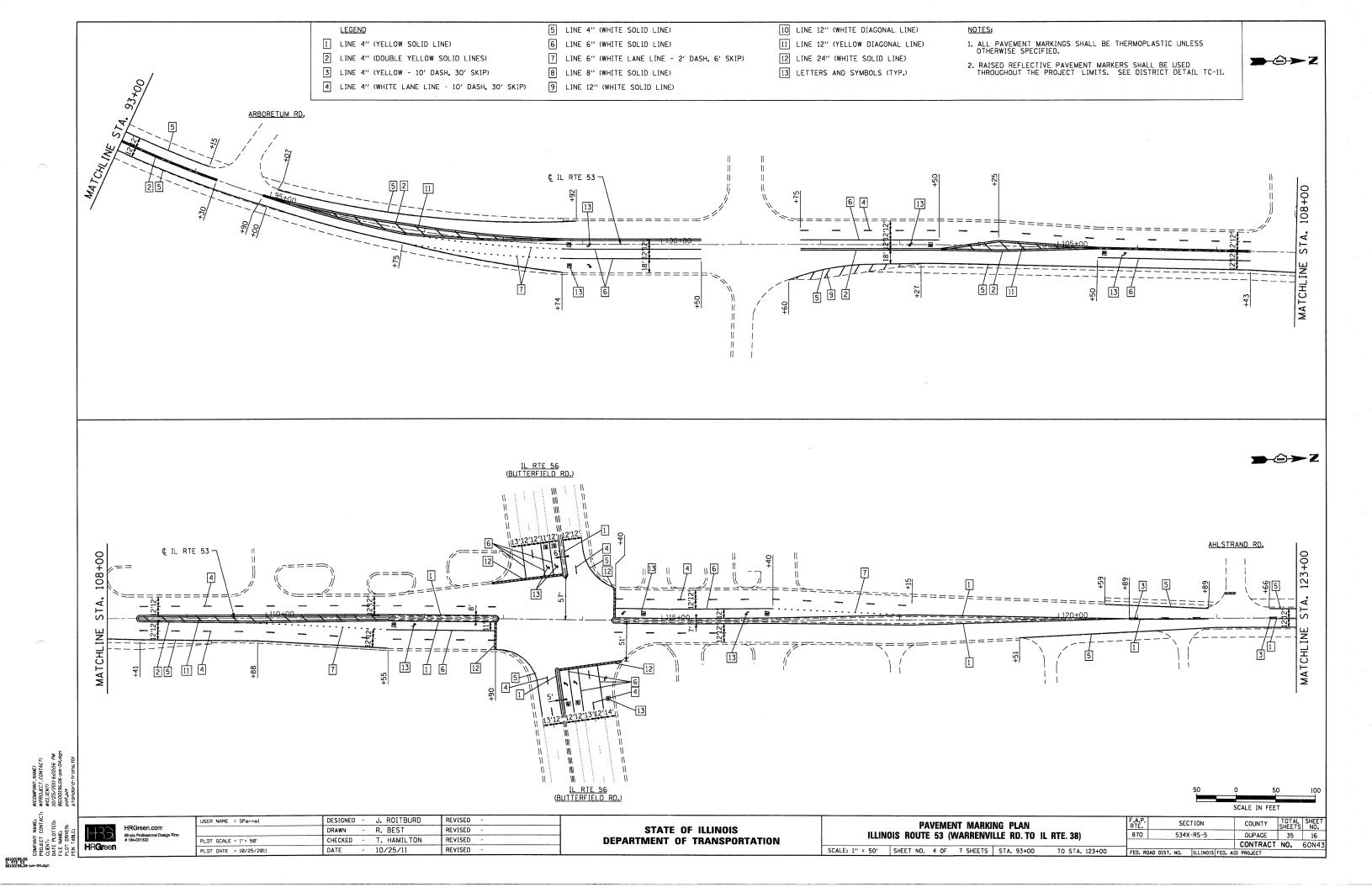
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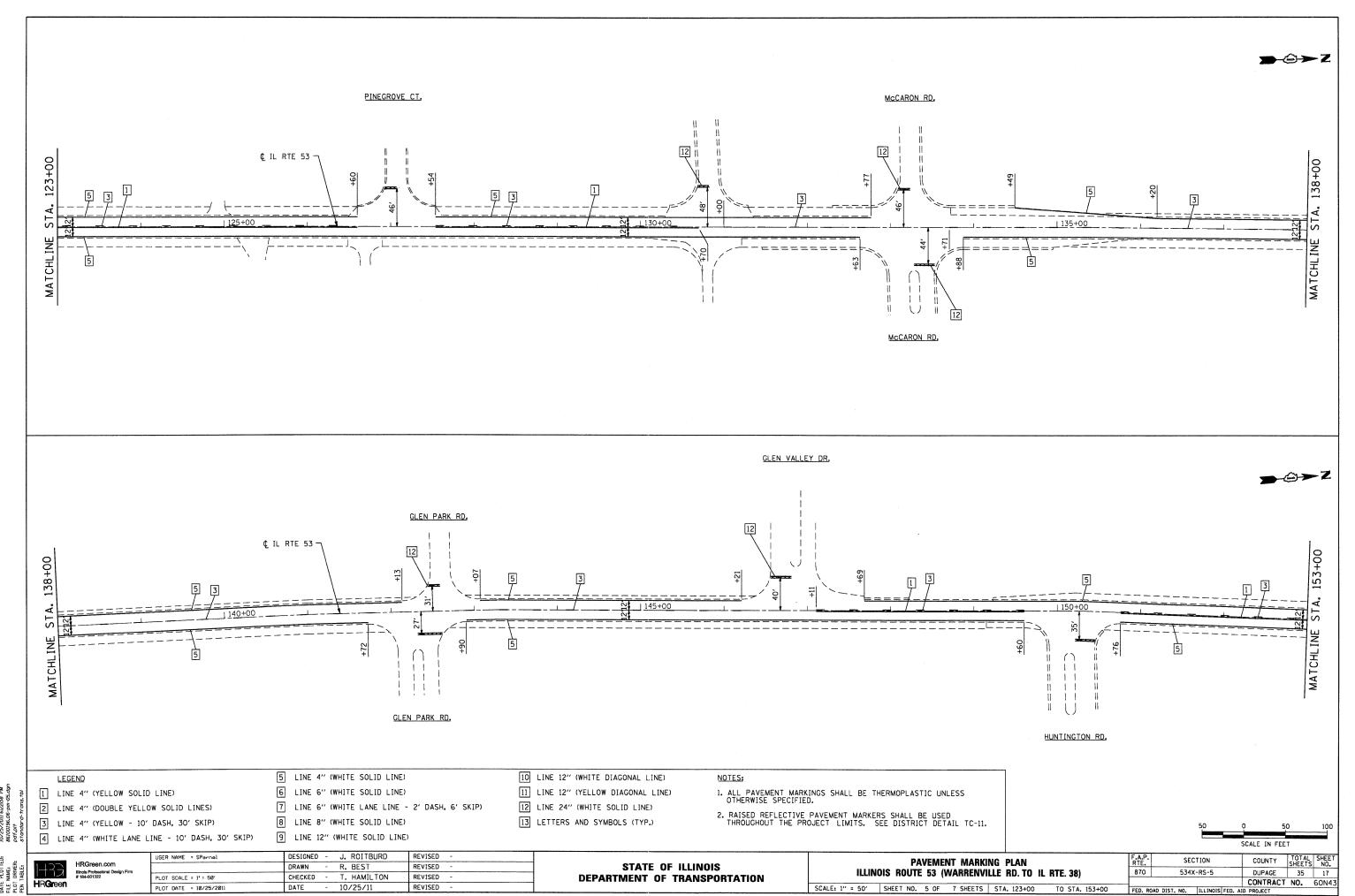


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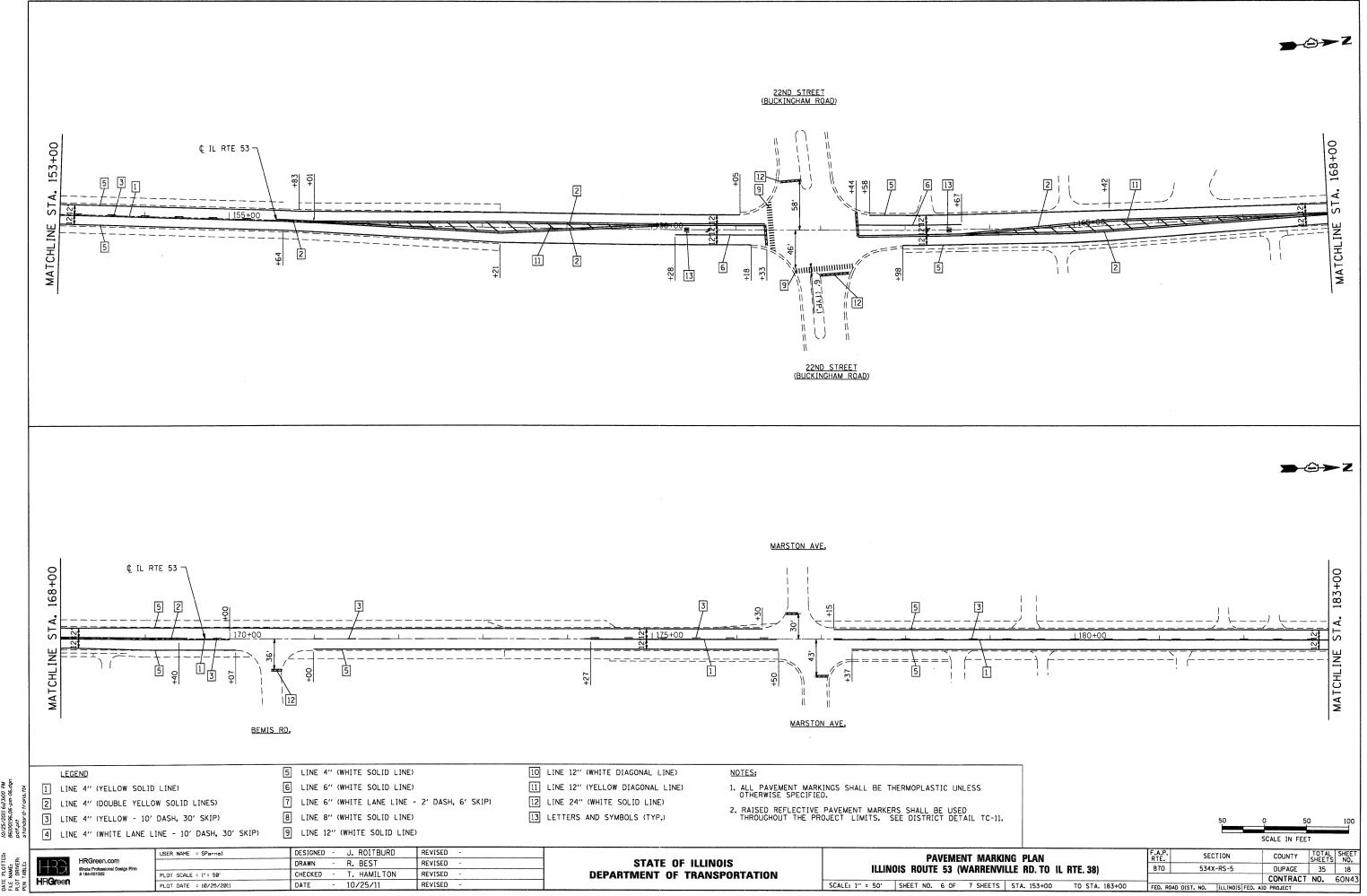


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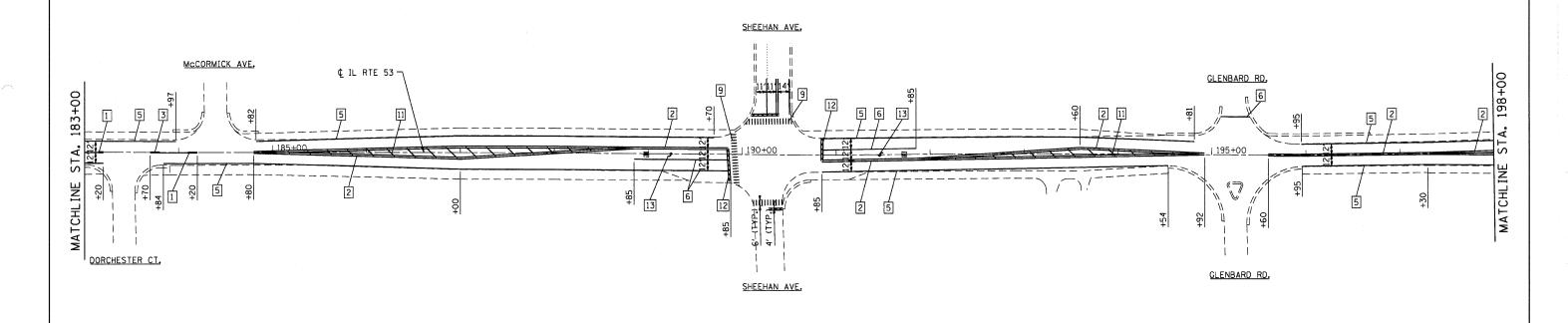


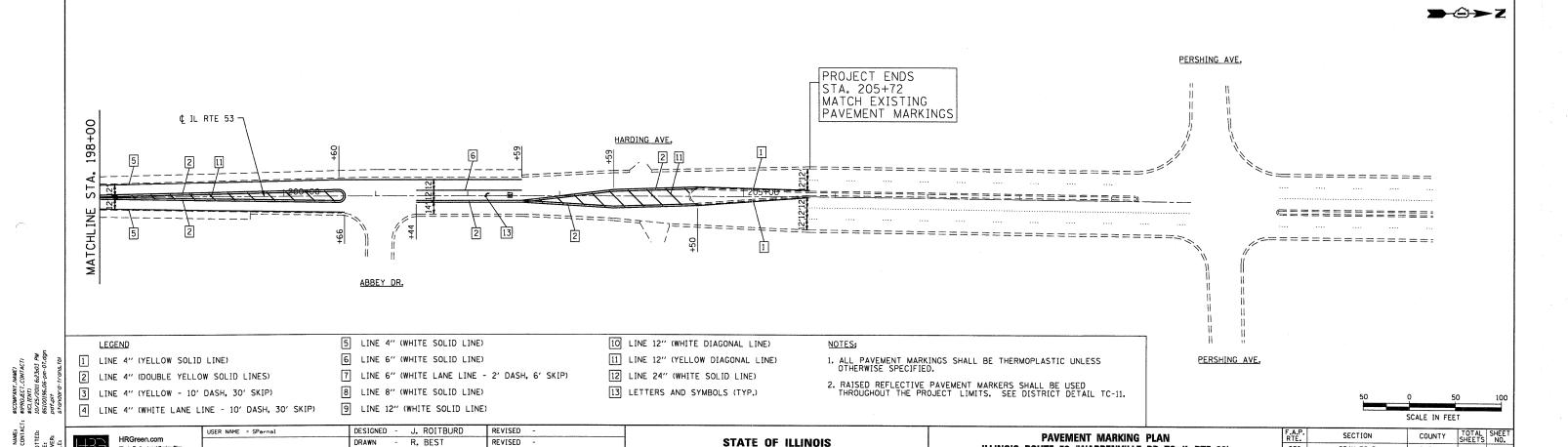
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86100196.06 IL RTE 53 86100196.06-pm-06.dgn







STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 

ILLINOIS ROUTE 53 (WARRENVILLE RD. TO IL RTE. 38)

SCALE: 1" = 50' SHEET NO. 7 OF 7 SHEETS STA. 183+00 TO STA. END

870

534X-RS-5

DUPAGE 35 19

CONTRACT NO. 60N43

R. BEST

10/25/11

CHECKED

PLOT DATE = 10/25/2011

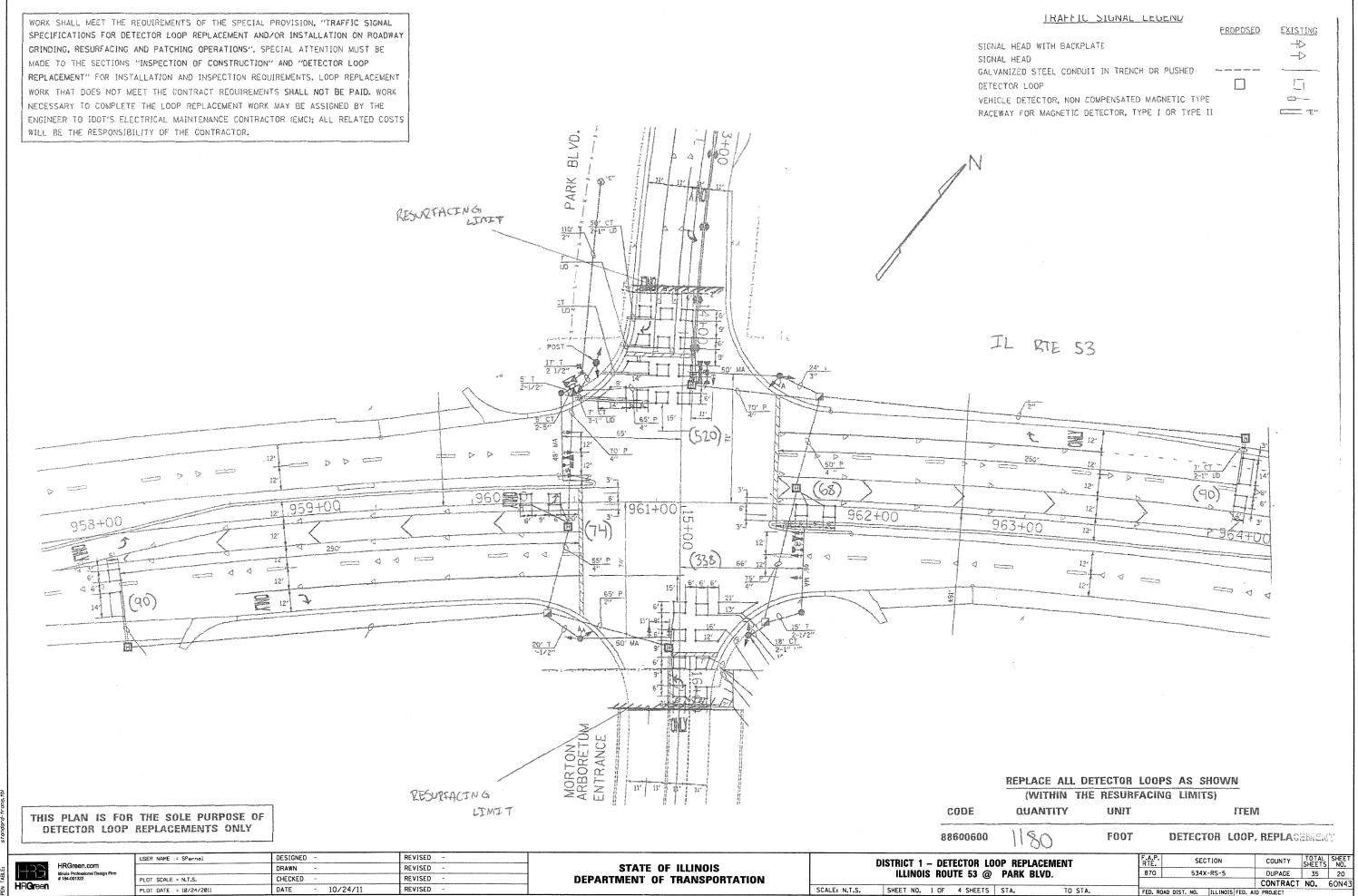
T. HAMILTON

REVISED

REVISED

REVISED

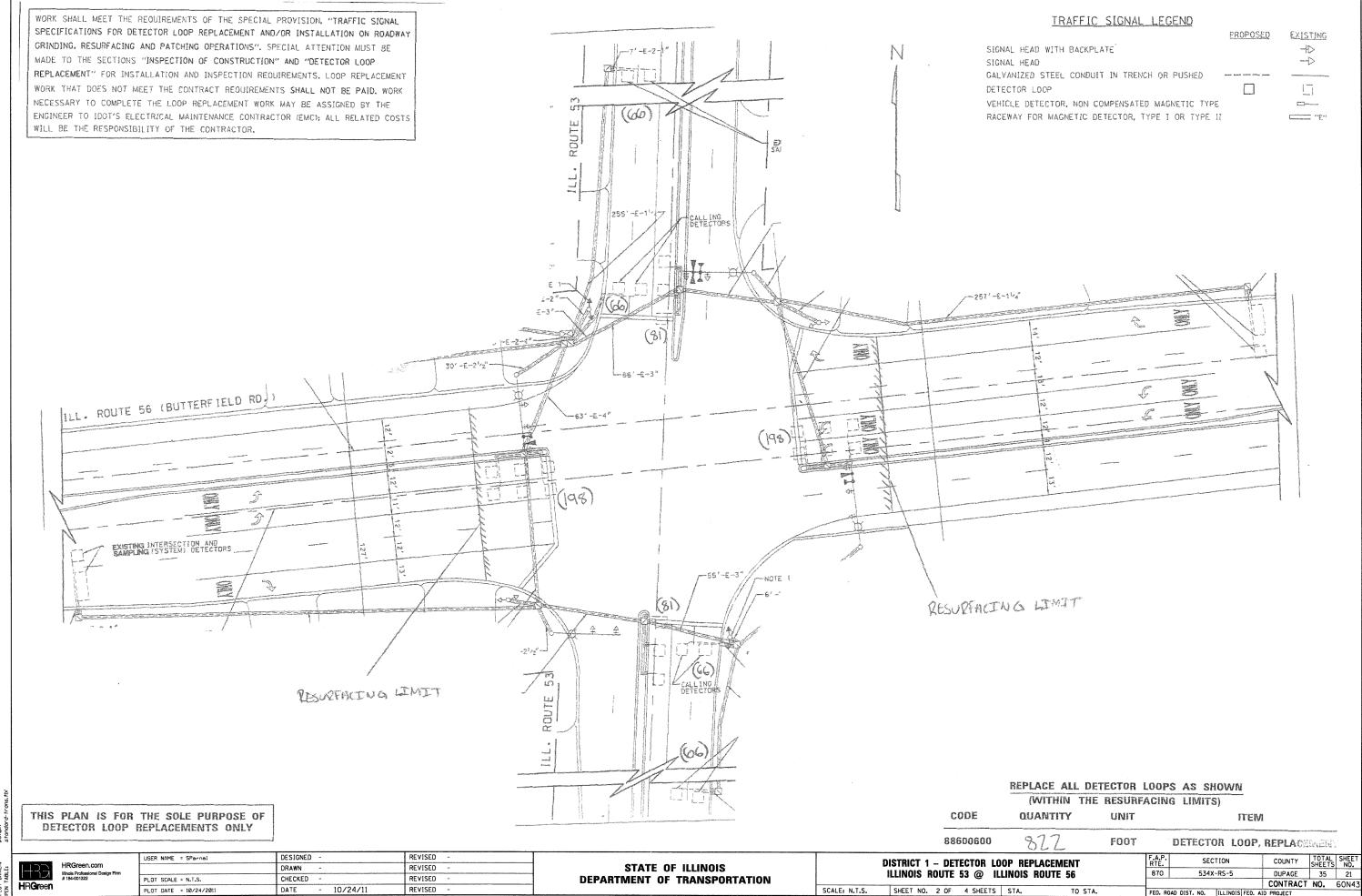
**HRGreen** 



**HRGreen** 

REVISED DATE - 10/24/11 PLOT DATE = 10/24/2011

SCALE: N.T.S. SHEET NO. 1 OF 4 SHEETS STA. TO STA.



act: stproleany. Mame)
scilen)
to 24/2012.23302 PM
8610196.06-sig-02.dgn

COMPANY NAME: \$COD PROJECT CONTACT: \$PR CLIENT: \$CL. DATE PLOTTED: 10/2 FILE NAME: \$610 PLOT DRIVER: \$450 WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS. LOOP REPLACEMENT WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

TRAFFIC SIGNAL LEGEND

PROPOSED EXISTING

SIGNAL HEAD WITH BACKPLATE

SIGNAL HEAD

GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED

DETECTOR LOOP

VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE

RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II

22NO 57 RESURFACING LIMIT RESOLFACING LIMIT

REPLACE ALL DETECTOR LOOPS AS SHOWN

(WITHIN THE RESURFACING LIMITS)

CODE

QUANTITY

UNIT

ITEM

88600600

1014

FOOT

DETECTOR LOOP, REPLACEMENT.

E: 8/COMPANY\_NAME)

TACT: \$PPROJECT\_CONTACT)

\*(CLIENT)

0: 10/24/2011.23306 PA

\$610019.66-549-03.04

\$610019.67 PA

standard-trans.tbl

HRGreen.com
Illinois Professional Design Firm
# 184-001322

THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP REPLACEMENTS ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 - DETECTOR LOOP REPLACEMENT
ILLINOIS ROUTE 53 @ 22ND ST.

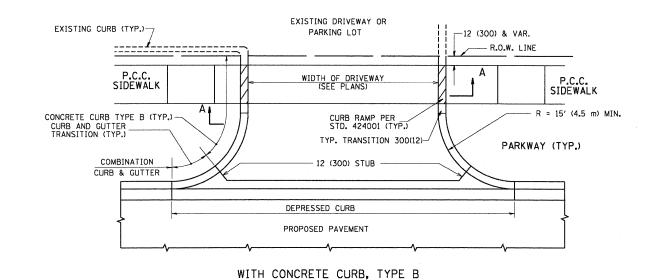
SCALE: N.T.S. SHEET NO. 3 OF 4 SHEETS STA. TO STA.

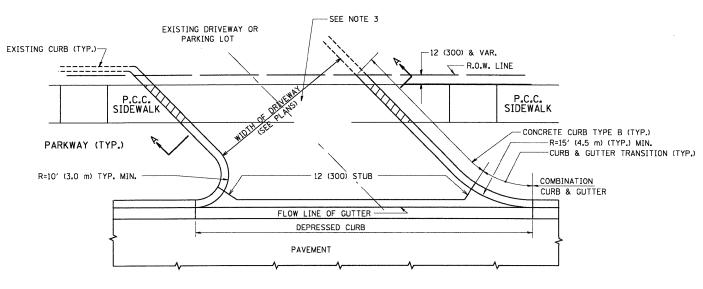
86100196.06 11. RTE 53

TRAFFIC SIGNAL LEGEND WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL PROPOSED EXISTING SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY  $\rightarrow \triangleright$ SIGNAL HEAD WITH BACKPLATE GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE  $\neg \triangleright$ SIGNAL HEAD MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS, LOOP REPLACEMENT DETECTOR LOOP WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE \_\_\_\_ NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II (-F. ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. KEDU PLACING LIMIT ILL. RTE. 53 (BRYANT AVE.) EXIST. R.OW-3 18'-T 1' UD 38' € − € (LEFT TURN LANE LOOP (06) 32' N (18) SHEETAN RESURFACTING LIMIT REPLACE ALL DETECTOR LOOPS AS SHOWN (WITHIN THE RESURFACING LIMITS) QUANTITY UNIT ITEM CODE THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP REPLACEMENTS ONLY 56H 88600600 FOOT DETECTOR LOOP, REPLACE WENT DESIGNED -REVISED COUNTY TOTAL SHEET NO.

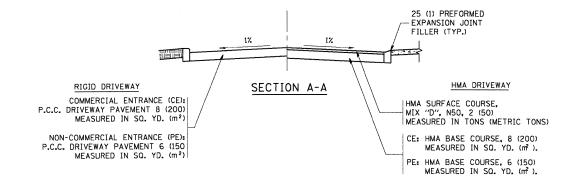
DUPAGE 35 23 USER NAME = SPernal SECTION DISTRICT 1 - DETECTOR LOOP REPLACEMENT DRAWN REVISED STATE OF ILLINOIS ILLINOIS ROUTE 53 @ SHEEHAN AVE. 870 534X-RS-5 CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** PLOT SCALE = N.T.S. CONTRACT NO. 60N43 **HRGreen** SCALE: N.T.S. SHEET NO. 4 OF 4 SHEETS STA. TO STA.

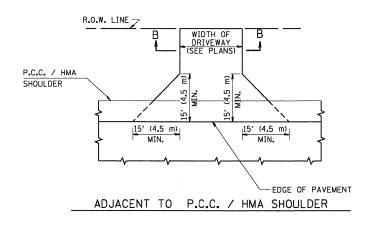
10/24/11 DATE REVISED PLOT DATE = 10/24/2011

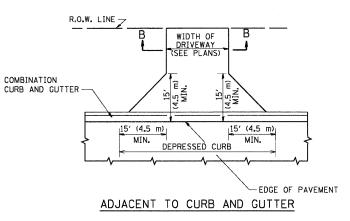


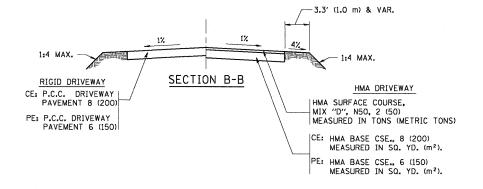












### RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "D", N50, 2 (50) MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200) MEASURED IN SQ. YD.  $(m^2)$ .

### GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS".
FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS
IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

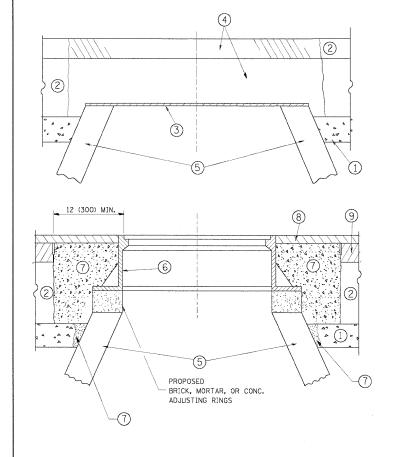
1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

**HRGreen** 

 USER NAME = leyso	DESIGNED	-	R. SHAH	REVISED	-	P. LaFL	JER 04-15-03	T
	DRAWN			REVISED	-	R. BORO	01-01-07	1
PLOT SCALE = 50.0000 '/ in.	CHECKED	-		REVISED	-	R. BORO	06-11-08	1
PLOT DATE = 9/6/2011	DATE	-	11-04-95	REVISED	-	R. BORO	09-06-11	1

DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.	F.A RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
AND FACE OF CURB & EDGE OF SHOULDER > = 15'(4.5 m)		534X-RS-5	DUPAGE	35	24
		BD015607 (BD01)	CONTRACT	NO.	60N43
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. RO	DAD DIST, NO. 1 ILLINOIS FED. A	ID PROJECT		



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 PAVEMENT 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.

### CONSTRUCTION PROCEDURES

### STAGE 1 (BEFORE PAVEMENT MILLING)

- 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.

### STAGE 2 (AFTER PAVEMENT MILLING)

- 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 PP-1\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.
- \*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

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

### LEGEND

- 1 SUB-BASE GRANULAR MATERIAL
- (6) FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- (7) CLASS PP-1\* CONCRETE
- 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.

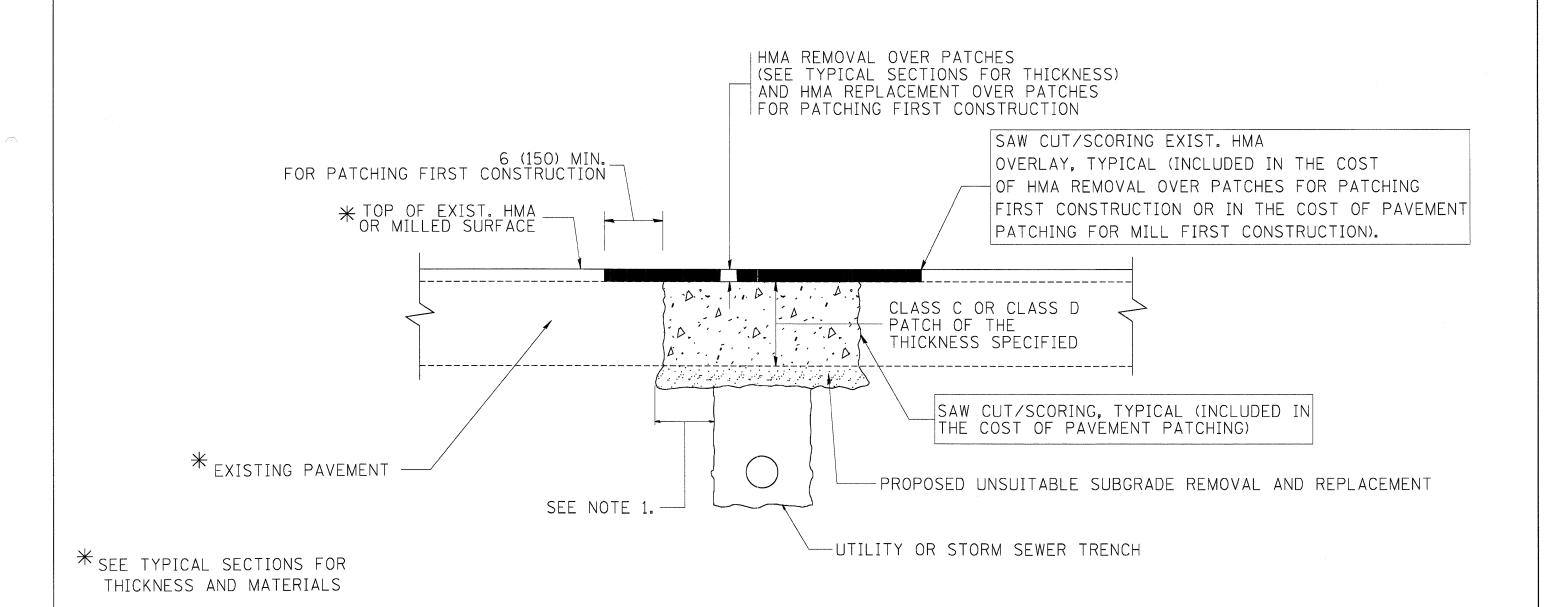
BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL" NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

### DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

**HRGreen** 

JSER NAME = leyse	DESIGNED	-	R. SHAH	REVISED		A. ABBAS 03-21-97
	DRAWN	-		REVISED	- 1	R. WIEDEMAN 05-14-04
PLOT SCALE = 49.9999 '/ IN.	CHECKED	-		REVISED	- 1	R. BORO 01-01-07
PLOT DATE = 3/18/2011	DATE	-	10-25-94	REVISED	- 1	R. BORO 03-09-11
 <u></u>						



### 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.

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

COUNTY TOTAL SHEE

DUPAGE 35 26

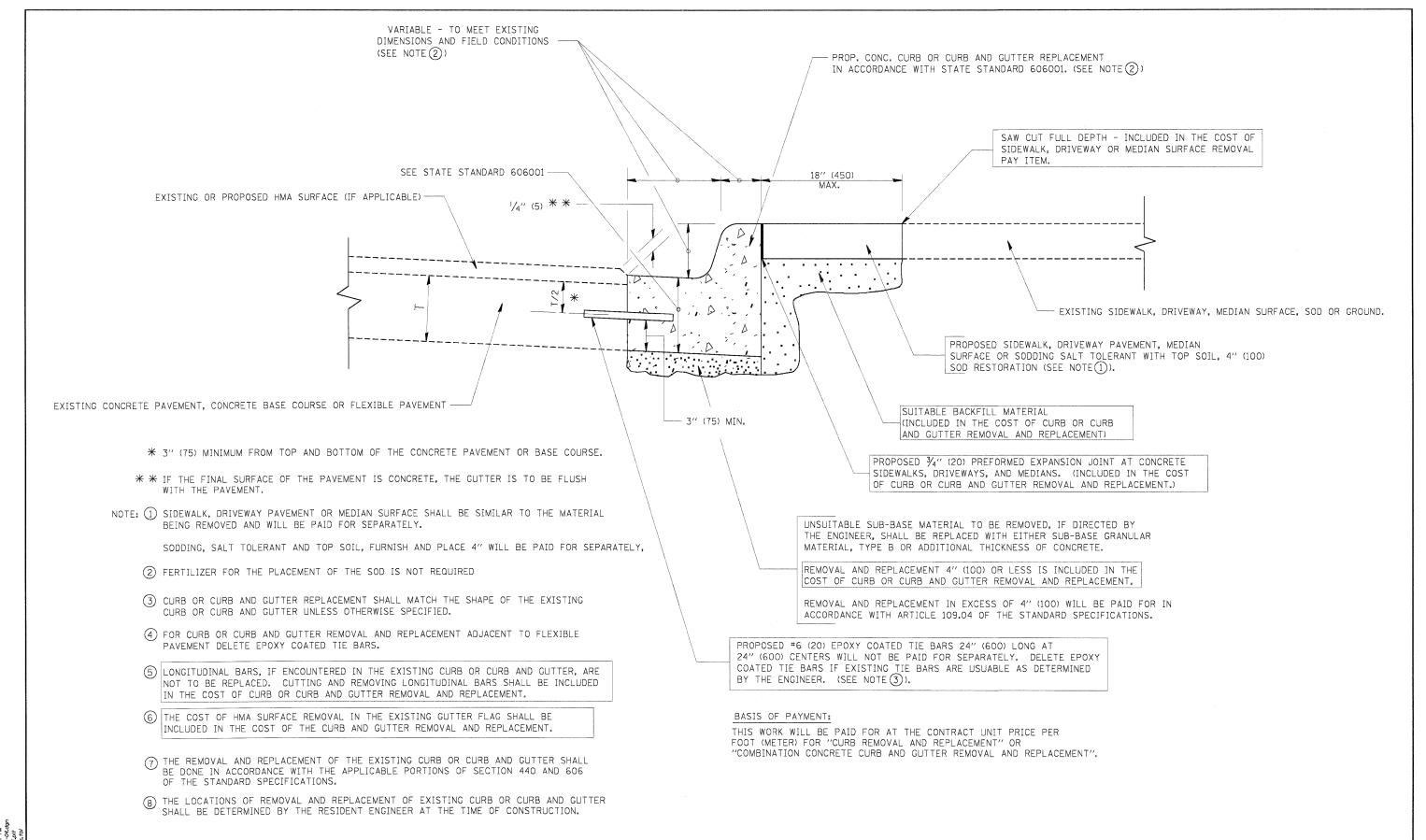
CONTRACT NO. 60N4

MIE: SICOMPANY, NAME)
NITACT: SIPROLECT, CONTACT)
SICLIENT)
ED: 10/18/2011 918-48 AI
86100196, 06-68+03.
R. poff, DE-101-11ff ph

HRGreen.com
| Binds Professional Design Fire
| HRGreen

USER NAME = beuerdl	DESIGNED - R. SHAH	REVISED	-	A. ABBAS 04-27-98
	DRAWN -	REVISED	-	R. BORO 01-01-07
PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED	-	R. BORO 09-04-07
PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED	-	K. ENG 10-27-08

PAVEMENT PATCHING FOR	RTÉ.	SE	CTIO
HMA SURFACED PAVEMENT		534	4X-RS
		BD400-04	(BD-
LE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. R	OAD DIST. NO.	



# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

VY NAME: SCOMPANY. NAME:

1. CONTACT: SPROJECT. CONTACT:

1. CONTACT: SCOTTACT:

1. CONTACT: SPROJECT. CONTACT:

1. CONTACT: SPROJECT: PATAMETER BESTON'S CO-COT PRIVER: STONGOT-STONG

**HRGreen** 

HRGreen.com Illinois Professional Design Firm # 184-001322

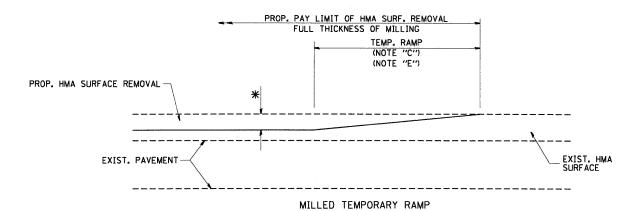
USER NAME = drivakosgm	DESIGNED	-	A. HOUSEH	REVISED	-	R.	SHAH 10-03-96
- 144 M V	DRAWN	-		REVISED	-	Α.	ABBAS 03-21-97
PLOT SCALE = 50.000 '/ IN.	CHECKED	-		REVISED	-	M.	GOMEZ 01-22-01
PLOT DATE. = 12/15/2009	DATE	-	03-11-94	REVISED	-	R.	BORO 12-15-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	(	CUF	B	OR	CURB	ANI	D	GUTTER		
	ł	REN	/IOV	ΆL	AND	REPL	.AC	EMENT		
SHEET	NO	1	O.E.	1	SHEE	TC	-	TA	 TO	CT

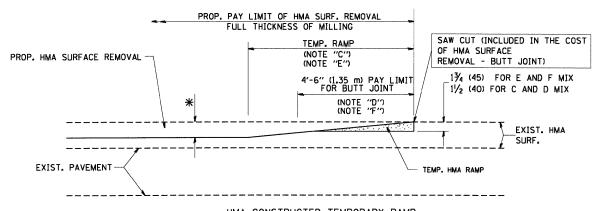
SCALE: NONE

RTE.	SE	CTION		COUNTY	SHEETS	NO.
	534	1X-RS-5		DUPAGE	35	27
	BD600-06	(BD-24)		CONTRACT	NO.	60N43
FED. R	DAD DIST. NO.	1 ILLINOIS	FED.	AID PROJECT		



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

### OPTION 1

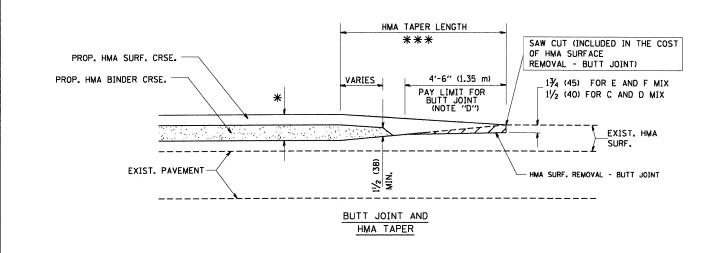


HMA CONSTRUCTED TEMPORARY RAMP

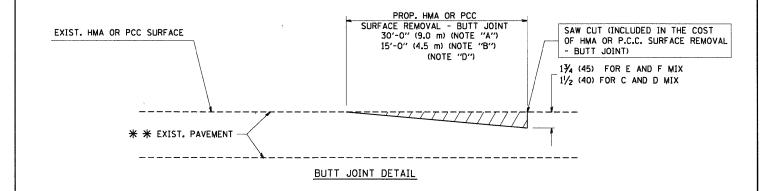
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

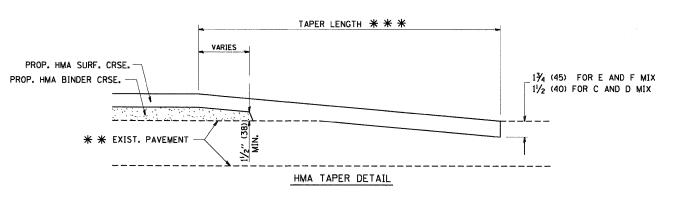
### OPTION 2

### 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:

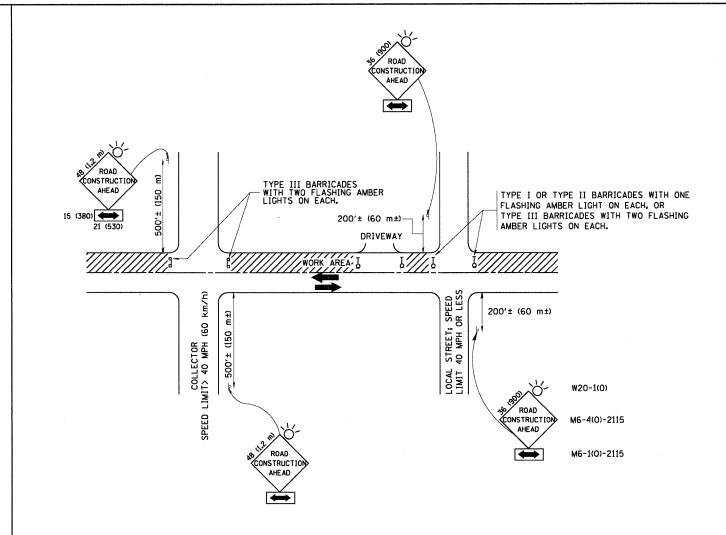
THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SOUARE YARD (SQUARE METER)
FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

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

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| lincis Professional Design Firm # 184-001322

	USER NAME = gaglianobt	DESIGNED	-	M. DE YONG	REVISED	-	R.	SHAH 10-25-94
1		DRAWN	-		REVISED	-	Α.	ABBAS 03-21-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED	-		REVISED	-	M.	GOMEZ 04-06-01
-	PLOT DATE = 1/4/2008	DATE	-	06-13-90	REVISED	-	R.	BORO 01-01-07

		BUTT JOINT AND					SECTION		TOTAL SHEETS	
ı	HMA TAPER DETAILS						534X-RS-5	DUPAGE	35	28
١	COMP NONE						BD400-05 BD32	CONTRACT	NO.	60N43
	SCALE: NONE	SHEET NO. 1 OF 1 S	HEETS	STA.	TO STA.	FED. RO	DAD DIST. NO. 1   ILLINOIS FED. A	D 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  $36\times36$  (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h)
  AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- o) 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 (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

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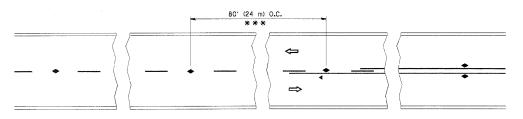
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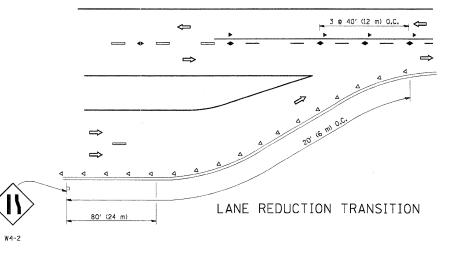
USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
	DRAWN ~	REVISED - A. HOUSEH 03-06-96
PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
PLOT DATE = 1/4/2008	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

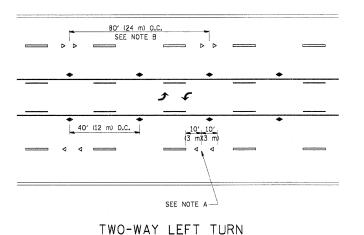
TRAFFIC CONTROL AND PROTECTION FOR	F.A RTÉ.
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS	5
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED, ROAD DIST, N



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

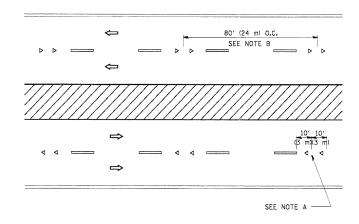
TWO-LANE/TWO-WAY





SEE NOTE B 40' (12 m) O.C. ⇔  $\Rightarrow$ SEE NOTE A-

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

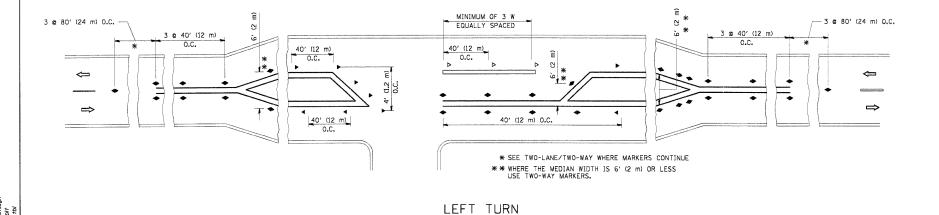
---- YELLOW STRIPE

WHITE STRIPE

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

### 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
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN
- 4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



	USER NAME = dr:vakosgn	DESIGNED -	REVISED -T. RAMMACHER 09-19-9
IRGreen.com Inois Professional Design Firm		DRAWN -	REVISED -T. RAMMACHER 03-12-9
184-001322	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 01-06-0
	PLOT DATE = 9/9/2009	DATE -	REVISED - C. JUCIUS 09-09-0

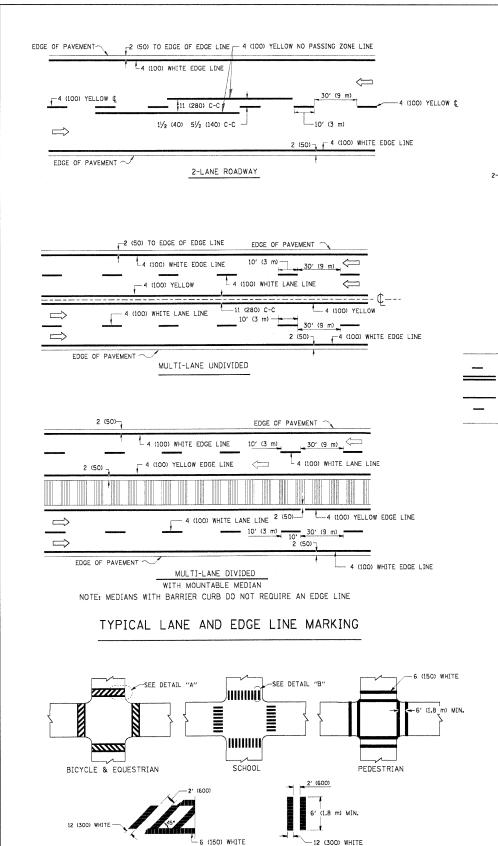
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

TYPICAL APPLICATIONS								
RAISED F	REFLECTIVE	PAVEMENT	MARKERS (	SNOW-PLOW	RESISTANT)			
SCALE: NONE	SHEET NO.	1 OF 1	SHEETS ST	Α.	TO STA.			

	ensions are in inches otherwise shown.	(millimeters	)	
F.A RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	534X-RS-5	DUPAGE	35	30

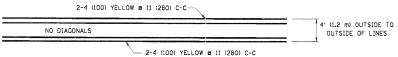
CONTRACT NO. 60N43

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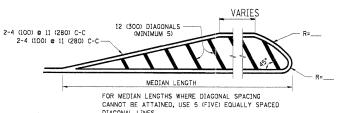


TYPICAL CROSSWALK MARKING

DETAIL "A"

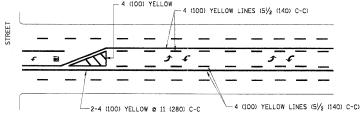


### 4' (1.2 m) WIDE MEDIANS ONLY

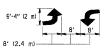


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

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

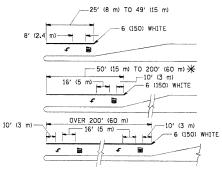


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

### TYPICAL PAINTED MEDIAN MARKING

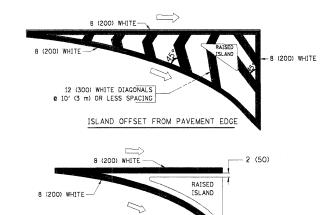


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\P$  AREA = 15.6 SQ. FT. (1.5 m² ) 0 AREA = 20.8 SQ. FT. (1.9 m²)

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

TYPICAL LEFT (OR RIGHT) TURN LANE

### TYPICAL TURN LANE MARKING



### TYPICAL ISLAND MARKING

ISLAND AT PAVEMENT EDGE

2 (50)

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 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' (I.8 m) APART 2' (GOD) APART 2' (GOD) APART 5' (GOD) 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 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 (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 SO, FT. (0.33 m²) EACH "X"=54.0 SO, 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))

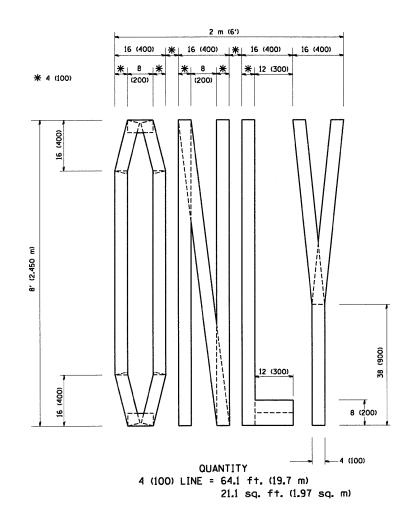
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

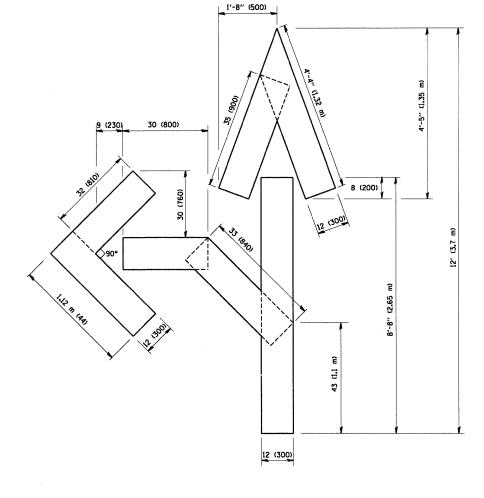
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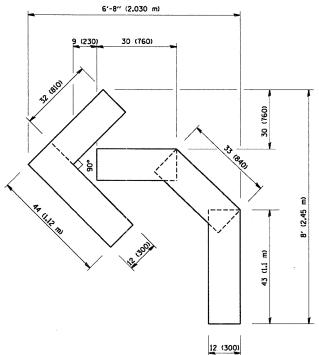
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	TYP	ICAL P	AVEMENT		534X-RS-5	DUPAGE	35	31		
				TC-13		CONTRACT	NO.	60N43		
SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	FED, R	OAD DIST, NO. 1 ILLINOIS FED. A	D PROJECT		-





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



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

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

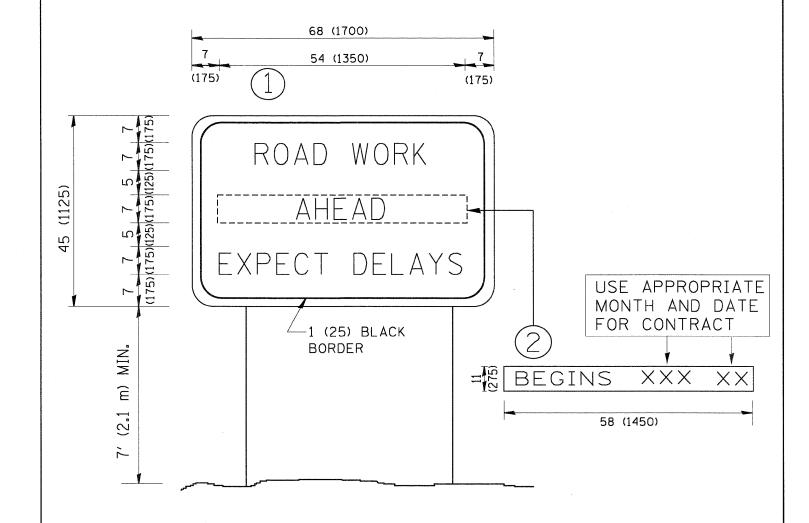
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7	USER NAME = geglienobt	DESIGNED -	REVISED -T. RAMMACHER	06-05-96
		DRAWN -	REVISED -T. RAMMACHER	11-04-97
1	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER	03-02-98
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED - E. GOMEZ 08-2	28-00

STATI	E OF	ILLINOIS
DEPARTMENT	0F	TRANSPORTATION

	PAVEMENT MARK	ING LETTEI	RS AND	SYMBOLS	F.A RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FOR 3	RAFFIC ST	AGING			534X-RS-5	DUPAGE	35	32
					TC-16 CONTRACT				60N43
SCALE: NONE	SHEET NO. 1 OF 1	SHEETS	STA.	TO STA.	FED. RC	DAD DIST. NO. 1   ILLINOIS FED. AI	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 () WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL 2 SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
- 7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

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<b>\</b>	HRGreen.com
1	Illinois Professional Design Firm # 184-001322
n	

	USER NAME = geglienobt	DESIGNED ~	REVISED	-	R. MIRS 09-15-97
Firm	_	DRAWN -	REVISED	-	R. MIRS 12-11-97
riin	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED	~ T.	RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED	-	C. JUCIUS 01-31-07

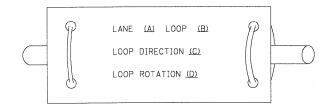
STATE	: OF	: ILLINOIS
DEPARTMENT	OF	TRANSPORTATION

		F.A RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
		INFO	RMATION	SIGN			534X-RS-5	DUPAGE	35	33
COLLE MONE				·			TC-22	CONTRACT	NO.	60N43
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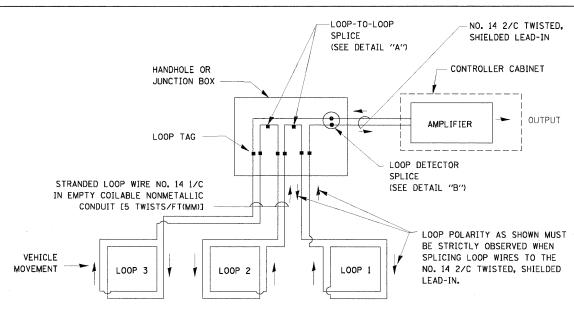
### LOOP DETECTOR NOTES

- 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

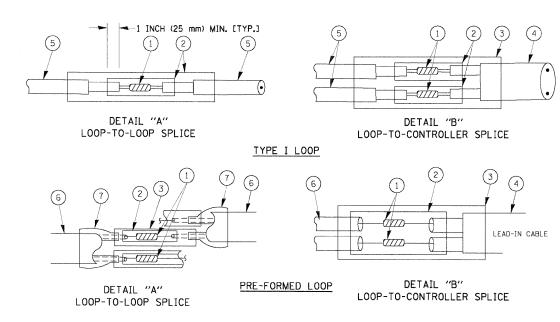


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



### 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

- $\hfill \hfill \hfill$
- (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

DISTRICT ONE						F.A RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
STANDARD TRAFFIC SIGNAL DESIGN DETAILS					PETAILS		534X-RS-5	DUPAGE	35	34
							TS-05		NO.	60N43
SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	FED. ROAD	DIST. NO. 1   ILLINOIS FED.	AID PROJECT		

# PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER. PAVED OR NON-PAVED SHOULDER \* = (600 mm) \*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

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
FITS IN MEDIAN.

TRENCHED 1" (25 mm)
UNIT DUCT (3)\*\*

\*\* WEDIAN (TYP.)

12'
(3.6 m)

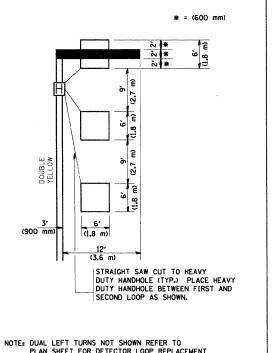
\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS
BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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

(PROTECTED / PERMITTED LEFT TURN PHASING)



TURN LANE, DIMENSION THIS LOOP TO COVER TAPER AREA. DO NOT COVER THE LEFT TURN

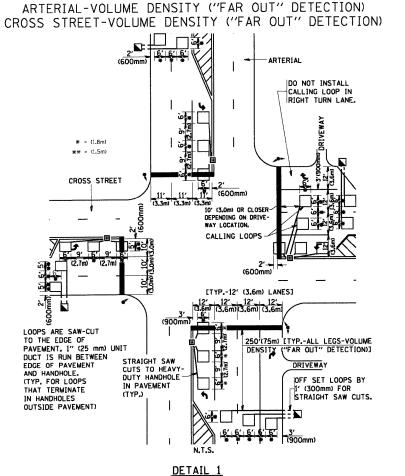
LANE OR LEFT TURN

LANE TAPER

SCALE: NONE

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)

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



OFFSET LOOPS BY STRAIGHT SAW CUTS - ARTERIAL THIS DIMENSION MAY BE ADJUSTED FOR DRIVEWAY OR OTHER OBSTRUCTIONS. WHEN ADJUSTMENT IS REQUIRED, DETECTORS WILL NORMALLY BE MOVED CLOSER TO THE INTERSECTION. \* = (1.8m UNIT DUCT -CROSS STREET 3'(900mm 10'(3.0m) PREFERRED | 6. | <u>a. | 6. | a. | 6. |</u> 15'(4.5m) MAXIMUM + - THESE DIMENSIONS RIVEWAY WILL BE VARIABLE [6' (1.8m) MINIMUM. 25' (7.6 m) MAXIMUMT A - THESE DIMENSIONS SHALL BE 5' (1.5m) FOR 10' (3.0m) LANE WIDTHS ARE LOCATED IN TAPER OF A RIGHT

> DETAIL 2 N.T.S.

NOTES:

VEHICLES LOOP DETECTORS

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* 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

TO STA.

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.

NAME: 86700 DRIVER: pdf\_1

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 - DETECTOR LOOP INSTALLATION

DETAILS FOR ROADWAY RESURFACING

SHEET NO. 1 OF 1 SHEETS STA.