2020-033-89

#### D-91-416-20



PRINTED BY THE AUTHORITY

FOR INDEX OF SHEETS, SEE SHEET NO. 2

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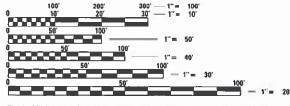
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THE PROJECT IS LOCATED IN THE VILLAGE OF ELWOOD

IL 53<sup>TRAFFIC DATA</sup>; 6,950 TL 102 2019 ADT = 14,800 POSTED SPEED LIMIT = 55 MPH



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

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

PROJECT MANAGER J. ALAIN MIDY (847) 221-3056

PROJECT BEGINS STA. 18 + 50

CONTRACT NO. 62L05

# **PROPOSED HIGHWAY PLANS**

F.A.P. ROUTE 846: IL 53 FROM HOFF ROAD TO MANHATTAN ROAD **SECTION: 2020–033–RS** 

PROJECT: NHPP-VC9Z(779) **SMART OVERLAY** HMA SHOULDER RUMBLE STRIPS

WILL COUNTY

C-91-223-20 R10 E PROJECT ENDS STA. 193 + 85 MANHATTAN RD. ARSENAL MANHATTAN ELWOOD WILL JACKSON TOWNSHIP

GROSS AND NET LENGTH = 17,535 FT. = 3.32 MILES

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SUBMITTED JOBEL 6

OF THE STATE OF ILLINOIS

**REV-SEP** 

#### **INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	COVER SHEET
2-3	INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES
4-5	SUMMARY OF QUANTITIES
6	TYPICAL SECTION.
7-13	ROADWAY AND PAVEMENT MARKING PLANS
14A-14D	DETECTOR LOOP REPLACEMENT PLANS
15	BD-22: PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
16	BD-24: CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
17	BD-32: BUTT JOINT AND HMA TAPER DETAILS
18	TC-10: TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
19	TC-11: TYPICAL APPLICATIONS: RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
20	TC-13: DISTRICT ONE TYPICAL PAVEMENT MARKINGS
21	TC-14: TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
22	TC-16: PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
23	TC-22: ARTERIAL ROAD INFORMATION SIGN
24	TS-05: DISTRICT 1 - STANDARD TRAFFIC SIGNAL DESIGN DETAILS (SHEET 2 OF 7)
25	TS-07: DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

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DESCRIPTION

STATION NO.	<u>BESCIAI HON</u>
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS.
442201-03	CLASS C AND D PATCHES.
482011-03	HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS.
642006-01	SHOULDER RUMBLE STRIPS, 8 IN.
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE.
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS . 45 MPH TO 55 MPH.
701422 <b>-</b> 10	LANE CLOSURE, MULTILANE, FOR SPEEDS >=45 MPH TO 55 MPH
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS $>=45$ MPH.
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN.
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION.
701901-08	TRAFFIC CONTROL DEVICES.

STANDARD NO.

#### **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)
- 2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, WITHIN THE VILLAGE OF ELWOOD.
- FRAMES AND GRATES ADJUSTMENT OF PRIVATE UTILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS SHALL BE DONE BY THEIR RESPECTIVE OWNERS AND ARE NOT PART OF THIS CONTRACT.
- 4. THE CONTRACTOR SHALL CONTACT DISTRICT ONE ARTERIAL TRAFFIC CONTROL SUPERVISOR AT KALPANA,KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WOOK
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT THE WRITTEN PERMISSION OF THE DEPARTMENT.
- 6. UNLESS OTHER CONDITIONS WARRANT EXTENDED LANE CLOSURE AS DETERMINED AND APPROVED IN WRITING BY THE RESIDENT 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.
- 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
- 8. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC, THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1½ 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 1V:3H.
- ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF CURB OR DRAINAGE STRUCTURES, WHICH OBSTRUCTS THE NATURAL FLOW OF WATER, SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY.
- 10. 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. THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS THAT WILL NOT BE REMOVED INCLUDING PREVIOUSLY SEEDED AREAS. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER.
- 12. LOCATIONS OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT [OR COMBINATION CURB AND GUTTER (THE TYPE SPECIFIED ON THE PLANS)], WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER / TECHNICIAN.
- 13. CATCH BASINS, MANHOLES, INLETS, DRAINAGE STRUCTURES AND VALVE VAULTS ADJUSTMENT AND/OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER / TECHNICIAN.
- 14. 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 SPECIFIED.
- 15. THE RESIDENT ENGINEER SHALL CONTACT ERIC CAMPOS, AREA TRAFFIC FIELD ENGINEER, VIA E-MAIL AT ERIC.CAMPOS@ILLINOIS.GOV, A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

#### **SEE SHEET 3 FOR CONTINUATION**

USER NAME = paraynoal	DESIGNED -	REVISED -
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PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 11/19/2020	DATE -	REVISED -

#### GENERAL NOTES (CONTINUED)

- 16. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.
- 17. ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.
- 18. THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM TO CONTINUOUSLY MONITOR FOR WORKER SAFETY AND SOIL CONTAMINATION AT SEVERAL LOCATIONS. SEE SPECIAL PROVISION AND SUPPLEMENTAL SPECIFICATIONS FOR DETAILS.
- 19. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- 20. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- 21. ALL CAST OPEN LIDS FOR FRAMES, TYPE 1, WITHIN CURB RAMPS FOR SIDEWALK, SHALL BE "ADA COMPLIANT" CAST OPEN LIDS PER HIGHWAY STANDARD 604001.
- 22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY DETECTOR LOOPS DAMAGED DURING CONSTRUCTION.
- 23. PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER / TECHNICIAN.
- 24. PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES.
- 25. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES DURING CONSTRUCTION.
- 26. GAPS BETWEEN SUCCESSIVE LANE CLOSURES SHALL NOT BE LESS THAN 2 MILES (3 KM) IN LENGTH ACCORDING TO ARTICLE 701.05 MAXIMUM LENGTH OF LANE CLOSURE
- 27. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 28. CONTACT THE IDOT ROADSIDE DEVELOPMENT UNIT 72 HOURS PRIOR TO WEED CONTROL AT (847) 705-4171.WEED CONTROL LOCATIONS WLL BE DETERMINED IN THE FIELD DURING CONSTRUCTION.

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 PLOT DATE
 = 11/19/2020
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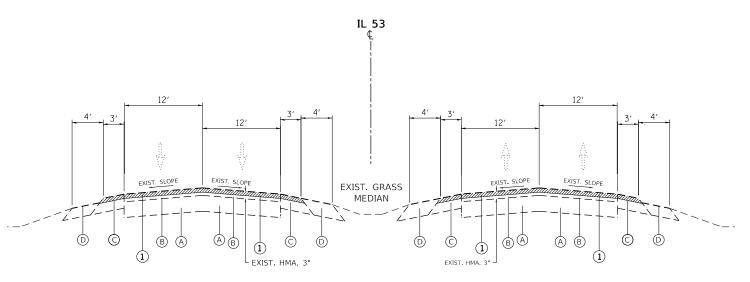
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 53 (HOFF ROAD – MANHATTAN ROAD)
INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES

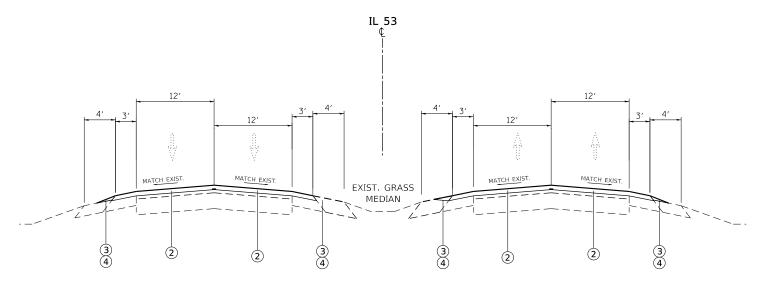
SHEET OF SHEETS STA. TO STA.

	SUMMARY OF QUANTITIES				CONSTRUCT	ION TYPE CODE			CHMMAI	RY OF QUANTITIES				CONSTRL	ICTION TYPE	CODE	
	SUMMART OF QUANTITIES			0005					SUMMAR	TT OF QUANTITIES			0005				
CODE NO	ITEM	UNIT	TOTAL QUANTITIES URBAN	80% FED 20% STATE				CODE NO		ITEM	UNIT	QUANTITIES URBAN	80% FED 20% STATE				
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	52821	52821				67000400	ENGINEER'S F	TELD OFFICE, TYPE A	CAL MO	12	12				
25000750	MOWING	ACRE	15	15													
40600400	MIXTURE FOR CRACKS, JOINTS, AND	TON	353	353				67100100	MOBILIZATION	ı	L SUM	1	1				
	FLANGEWAYS																
								70102630	TRAFFIC CONT	ROL AND PROTECTION,	L SUM	1	1				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT	SO YD	293	293					STANDARD 701	601							
	JOINT																
			1					70102632	TRAFFIC CONT	ROL AND PROTECTION.	L SUM	1	1				
40601005	HOT-MIX ASPHALT REPLACEMENT OVER	TON	1006	1006					STANDARD 701	602							
	PATCHES																
								70102635		ROL AND PROTECTION,	L SUM	1	1				
40604172	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE,	TON	11504	11504					STANDARD 701	701							
	IL-9.5, MIX "E", N70																
			1					70300100	SHORT TERM P	AVEMENT MARKING	F00T	27628	27628				
44000156	HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"	SO YD	117380	117380													
			1					70300150	SHORT TERM P	AVEMENT MARKING REMOVAL	SO FT	9210	9210				
44002212	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 3"	SQ YD	5987	5987													
			1					70300210	TEMPORARY PA	VEMENT MARKING LETTERS AND	SO FT	1004	1004				
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SO YD	1856	1856					SYMBOLS								
			1	1													
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SO YD	1587	1587				70300220	TEMPORARY PA	VEMENT MARKING - LINE 4"	F00T	39930	39930				
			1														
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	1856	1856				70300240	TEMPORARY PA	VEMENT MARKING - LINE 6"	F00T	6033	6033				
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	792	792				70300250	TEMPORARY PA	VEMENT MARKING - LINE 8"	F00T	350	350				
64200108	SHOULDER RUMBLE STRIPS, 8 INCH	F00T	35070	35070				70300260	TEMPORARY PA	VEMENT MARKING - LINE 12"	FOOT	1280	1280				
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		SUMMARY OF QUANTITIES				CONSTRUCT	ION TYPE CODE		SUMMARY OF QUANTITIES				0005		CONSTRUCTION TYPE		N TYPE C	DDE
				TOTAL	0005 80% FED				\ 				TOTAL	80% FED				
C	CODE NO	ITEM	UNIT	QUANTITIES URBAN	20% STATE					CODE NO	ITEM	UNIT	QUANTITIES URBAN	20% STATE				
7	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	505	505				+	Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	34100	34100				
	10300200	TEM CHART FAVEMENT MARKETO ETTE ET			303				-	Z0076600	TRAINEES	HOURS	500	500				
L	70700500	DAVENENT MADE INC. TARE TYPE III. 4"	БООТ	17014	17014				ŀ									
<u> </u>	70300520	PAVEMENT MARKING TAPE, TYPE III 4"	F00T	13814	13814				اِ	Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOURS	500	500				
									Ļ									
* 7	78000100	THERMOPLASTIC PAVEMENT MARKING -	SO FT	1004	1004				L									
		LETTERS AND SYMBOLS							L									
* 7	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	F00T	39930	39930													
* 7	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	6033	6033													
* 7	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	350	350													
* 7	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1280	1280													
	. 3555555	The It	. 551		.200													
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*  7	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	505	505													
* 7	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	1126	1126				L									
7	78300200	RAISED REFLECTIVE PAVEMENT MARKER	EACH	901	901													
		REMOVAL																
* 8	88600600	DETECTOR LOOP REPLACEMENT	FOOT	1753	1753													
к	к0029618	WEED CONTROL BROADLEAF IN TURF	GALLON	10	10				Ī									
×	x2020110	GRADING AND SHAPING SHOULDERS	UNIT	351	351													
,	x7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SO FT	24407	24407													
-									L									
	Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	102.8	102.8				L									
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**EXISTING TYPICAL SECTION** FROM STA. 18+50 TO 193+85



#### PROPOSED TYPICAL SECTION

FROM STA. 18+50 TO 193+85

#### JSER NAME = paraynoal DESIGNED -REVISED DRAWN REVISED PLOT SCALE = 100.0000 ' / in. CHECKED REVISED PLOT DATE = 11/19/2020 REVISED DATE

#### STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SCALE:

#### LEGEND - EXISTING:

- (A) EXIST. PCC PAVEMENT, 10"
- B EXIST. HMA AFTER MILLING, 1 1/4"
- © EXIST. HMA SHOULLDER
- (D) EXIST. AGGREGATE SHOULDER

#### NOTES:

- 1.) THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING.
- 2.) LONGITUDINAL JOINT SEALANT SHALL BE PLACED OVER THE MILLED SURFACE

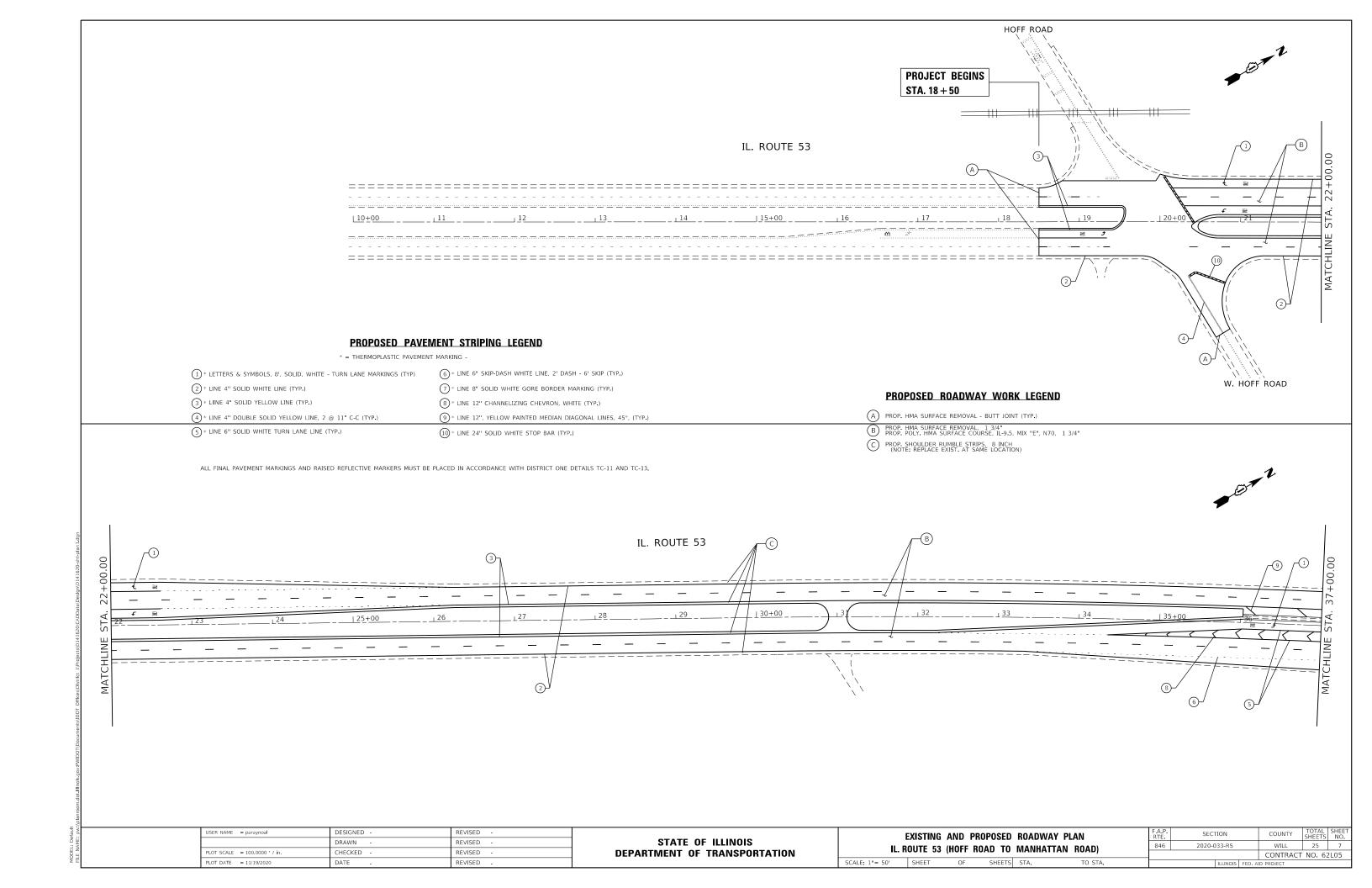
#### **LEGEND — PROPOSED**

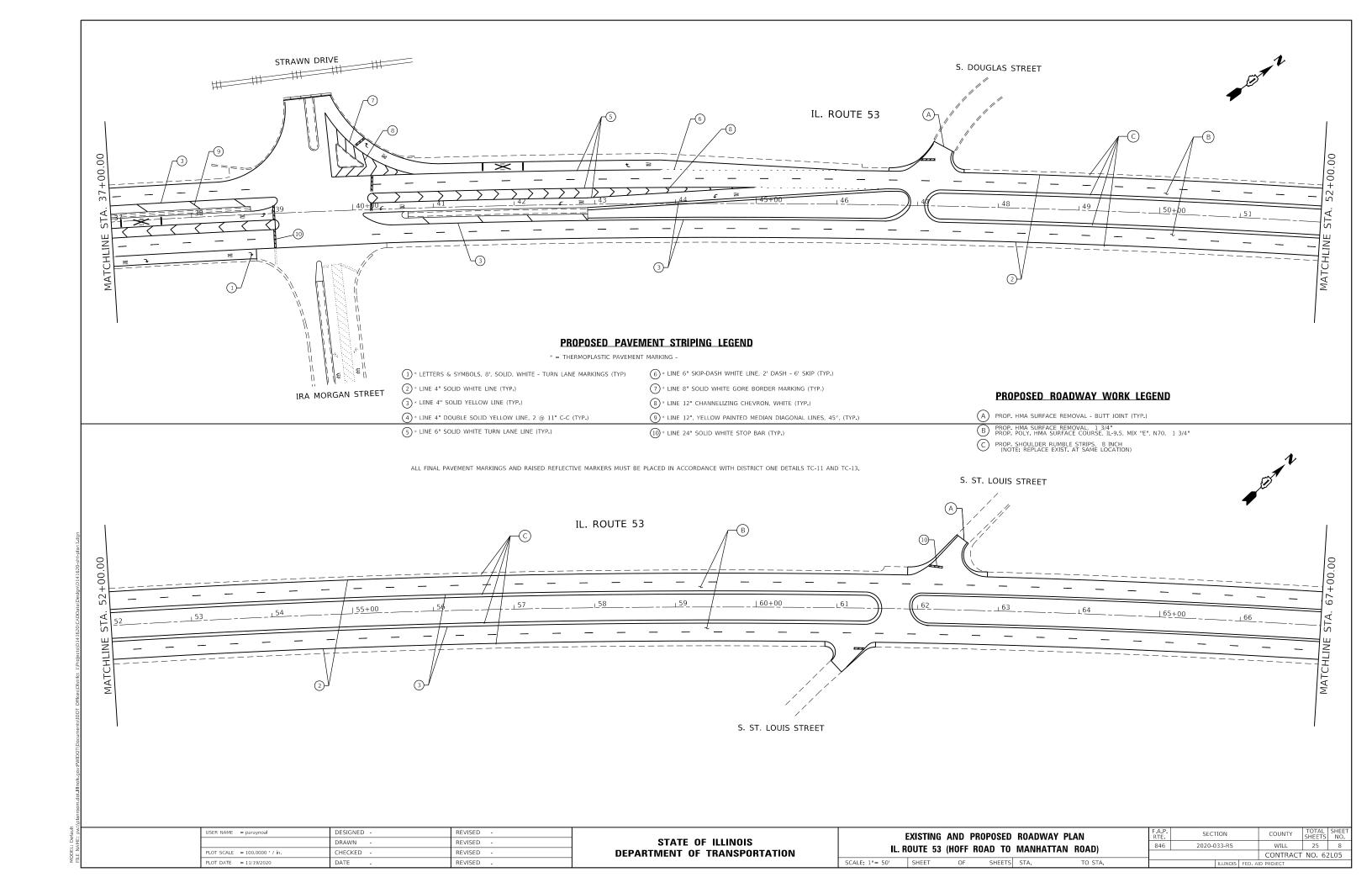
- 1 PROP. HMA SURFACE REMOVAL, 1 3/4"
- PROP. POLY. HMA SURFACE COURSE, IL-9.5, MIX "E", N70, 1 3/4"
- 3 PROP. GRADING AND SHAPING SHOULDERS
- (4) PROP. AGGREGATE WEDGE SHOULDER, TYPE B

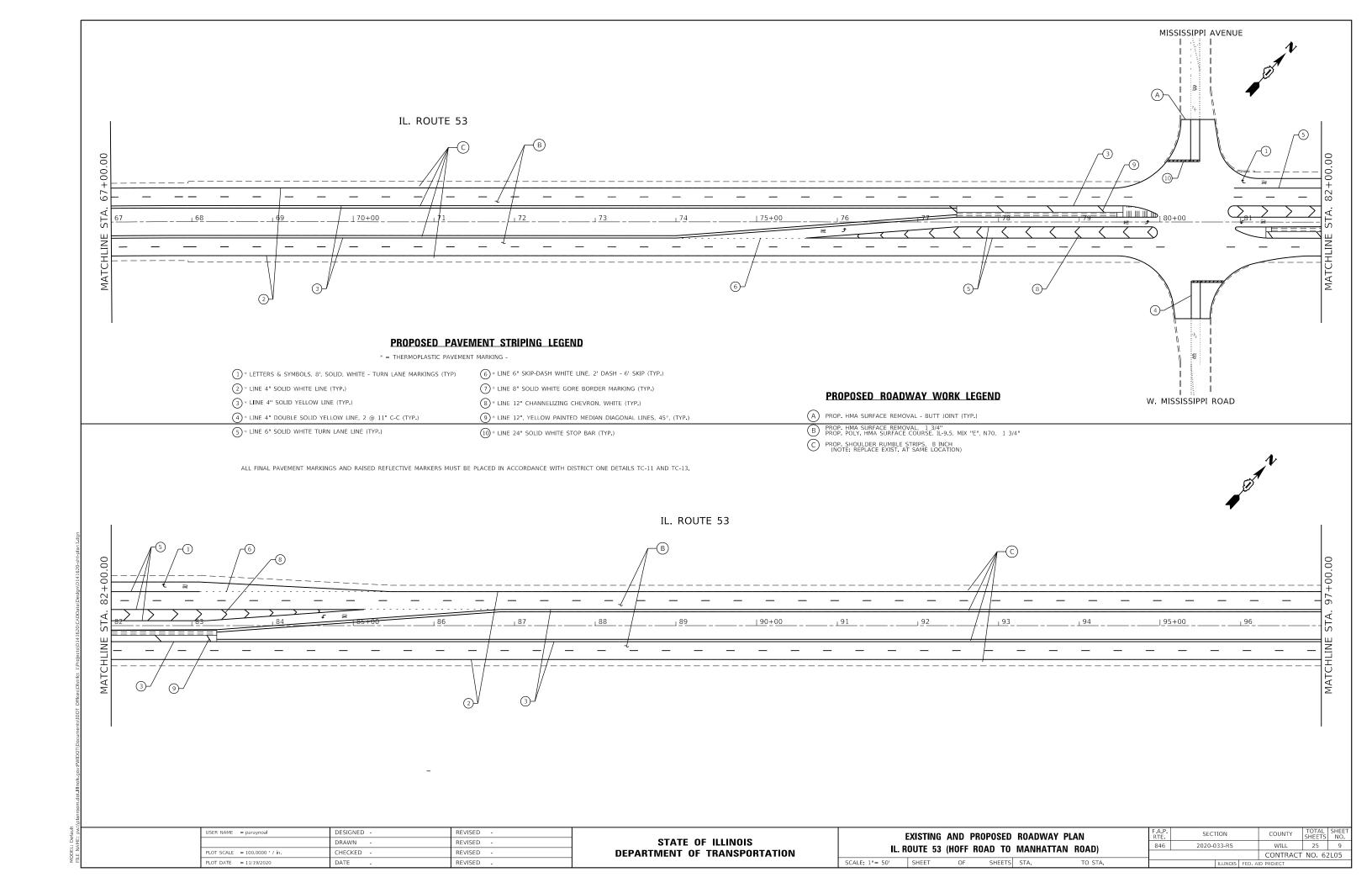
HOT-MIX ASPHALT MIXTURE REQUIREME	NTS	QUALITY MANAGEMENT
MIXTURE TYPE	AIR VOIDS @ Ndes	PROGRAM (QMP)
PAVEMENT RESURFACING		
POLY. HMA SURFACE COURSE, IL-9.5, MIX "E", N70, 1 3/4"	4.0% AT 70 GYR	PFP
PATCHING		
CLASS D PATCHES (HMA BINDER IL-19 mm), 10"	4.0% AT 70 GYR	QC/QA
HOT-MIX ASPHALT REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm), 3"	4.0% AT 70 GYR.	QC/QA
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL	L FOR PERFORMANCE (QCP)	

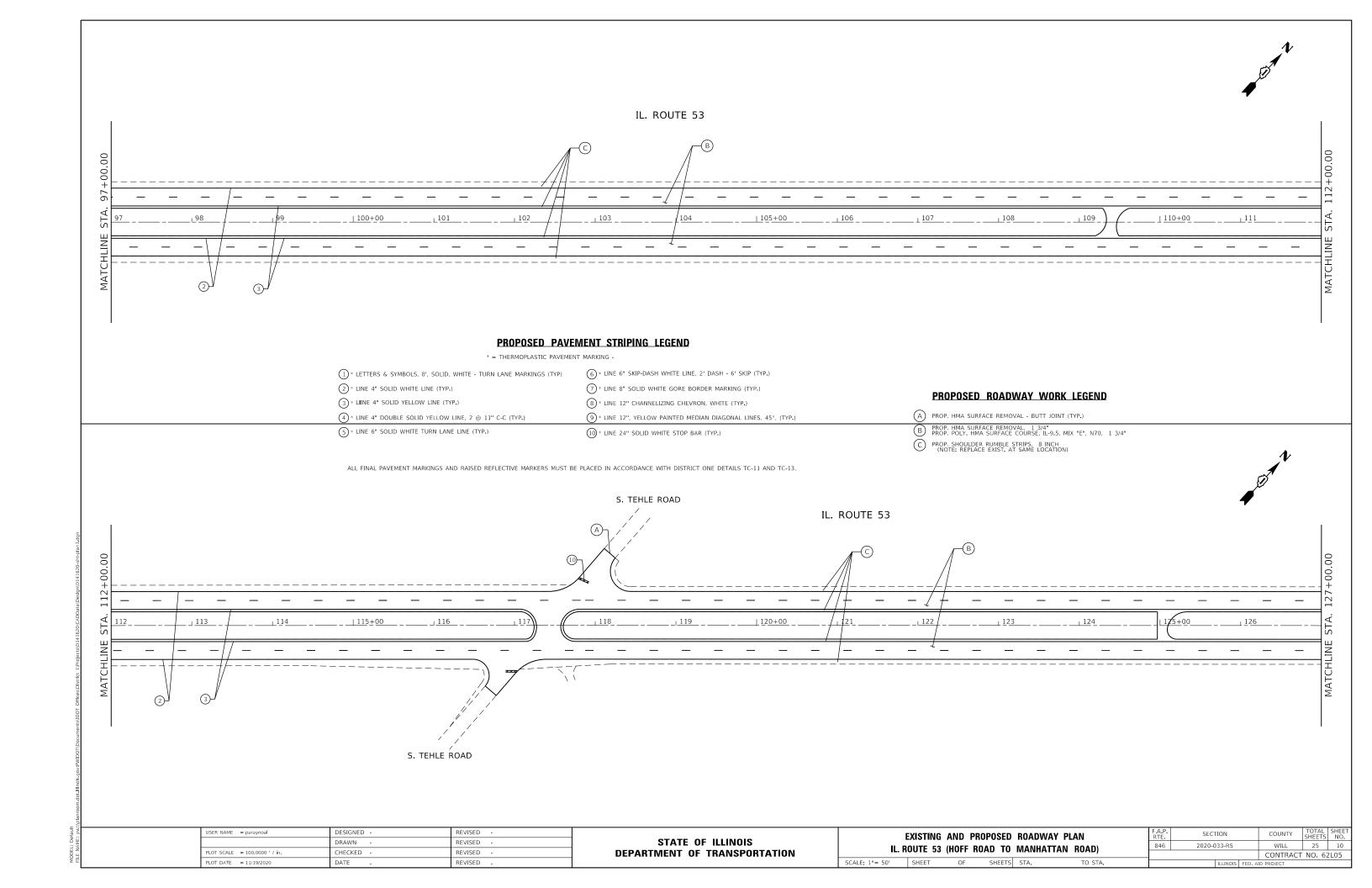
- NOTE 1: THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.
- NOTE 2: THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY SPECIAL PROVISIONS.
  - FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.
- NOTE 3: QUALITY MANAGEMENT PROGRAM (QMP) IDNTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

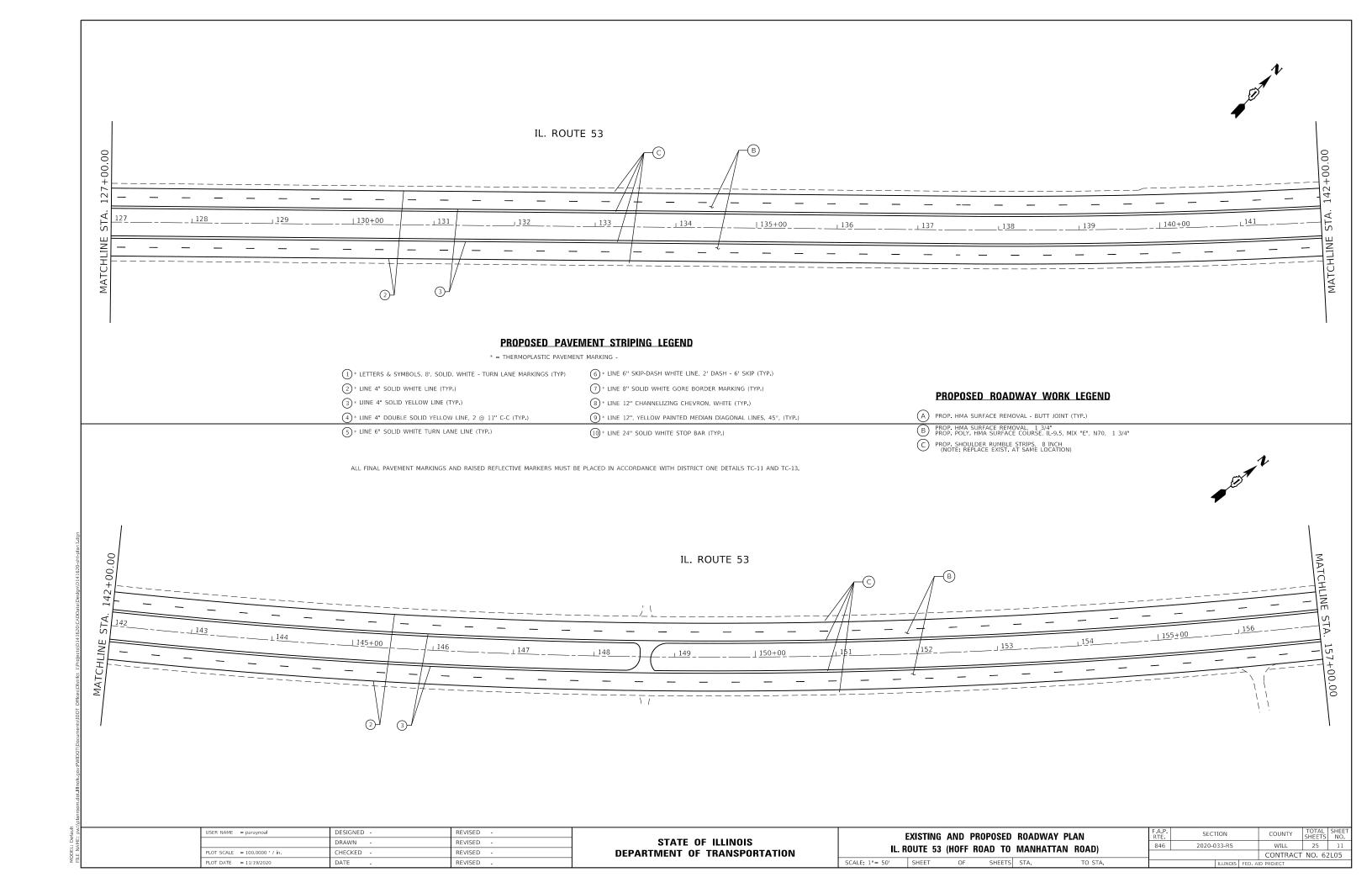
IL. R	OUTE 53	(HOFF	ROAD -	MANH	IATTAN ROAD)	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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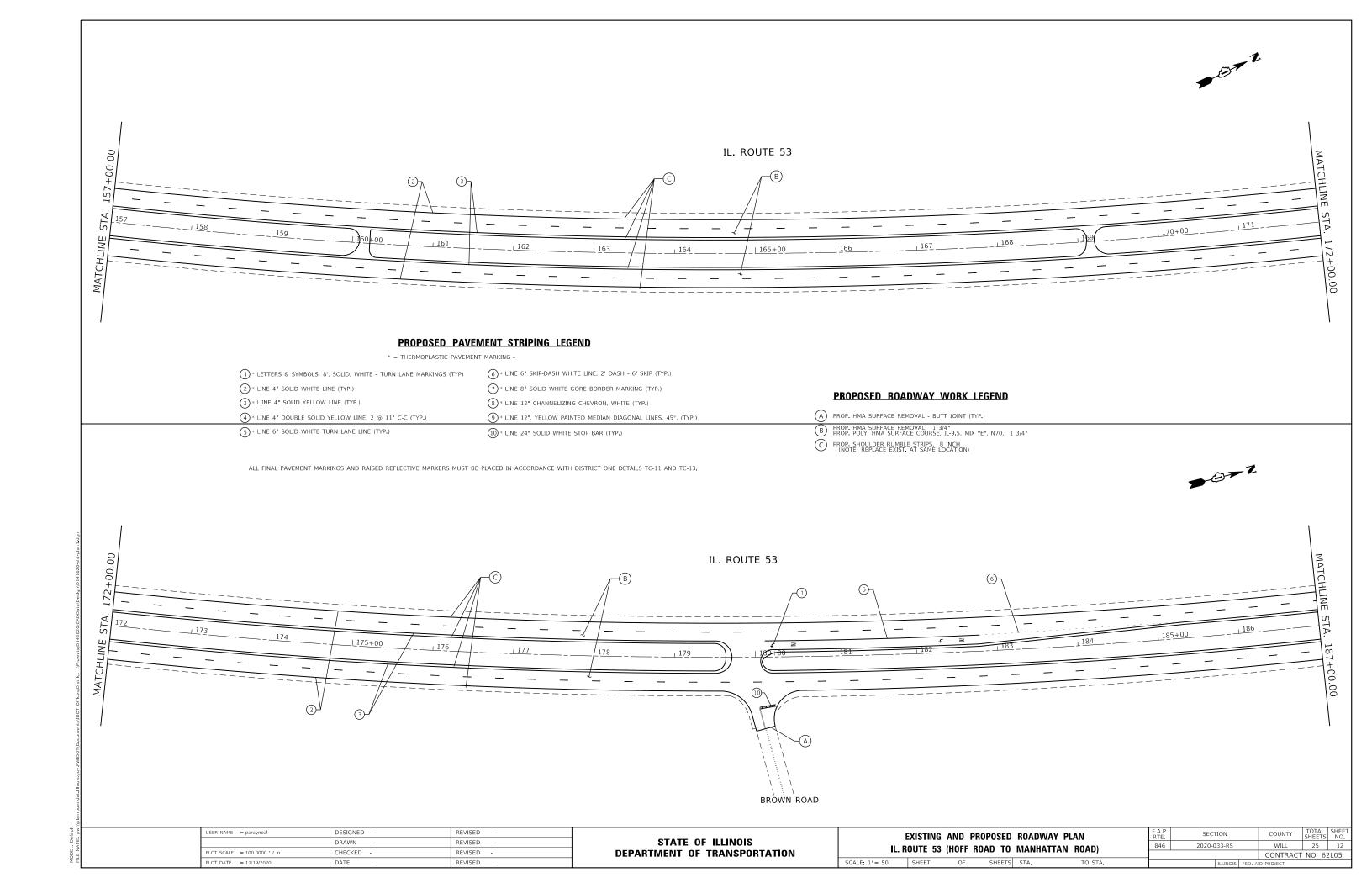


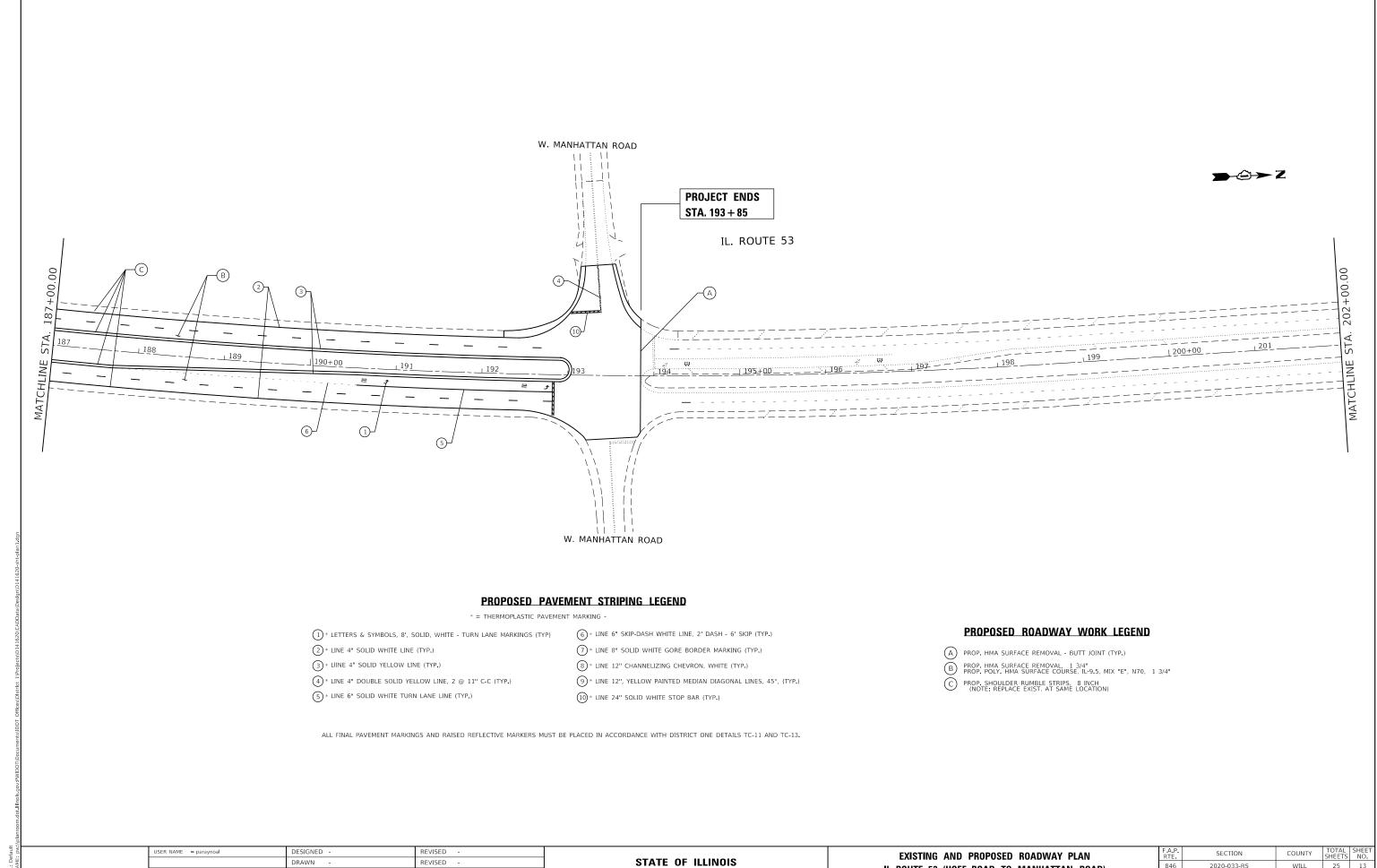












**DEPARTMENT OF TRANSPORTATION** 

2020-033-RS

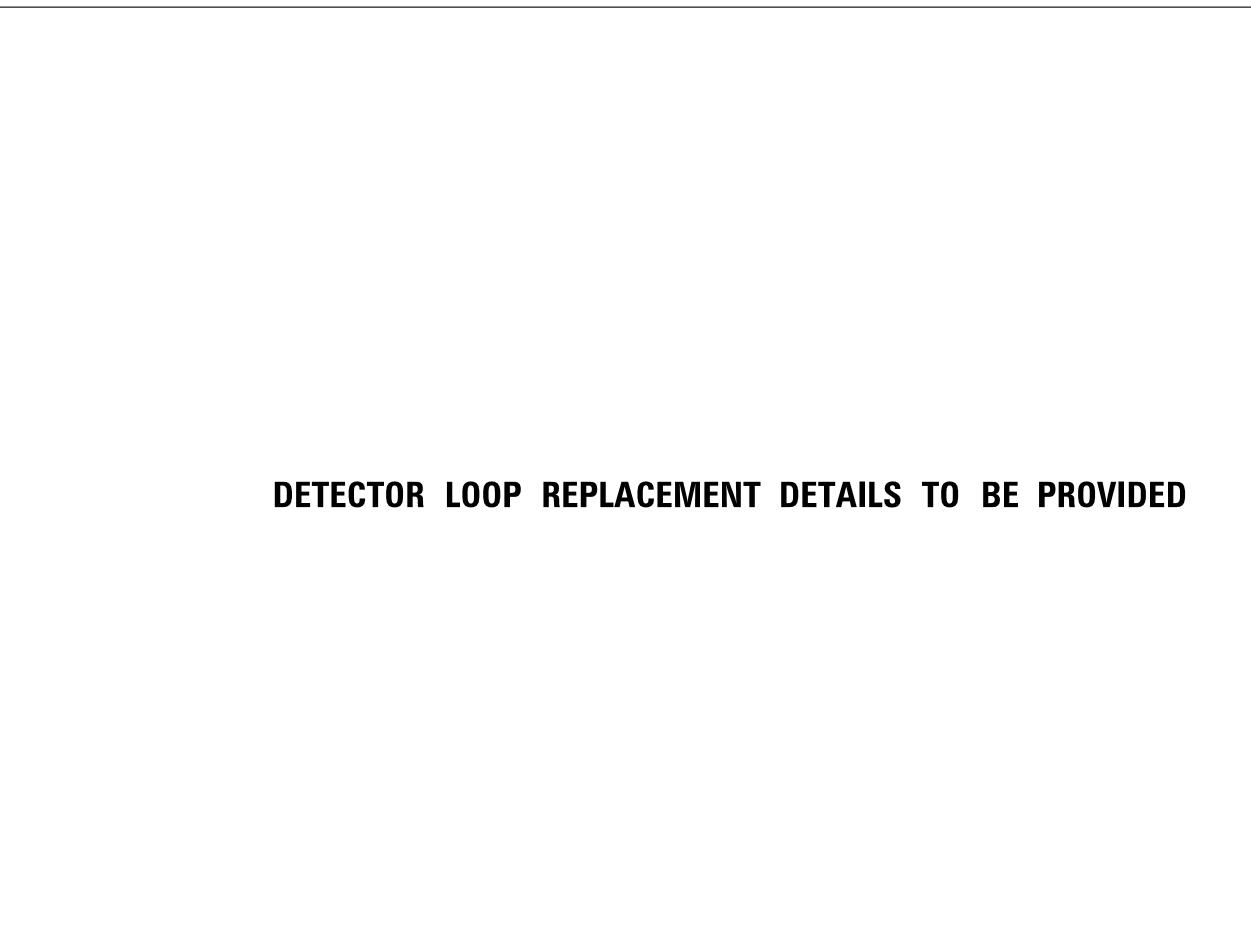
CONTRACT NO. 62L05

IL. ROUTE 53 (HOFF ROAD TO MANHATTAN ROAD)

LOT SCALE = 100.0000 ' / in.

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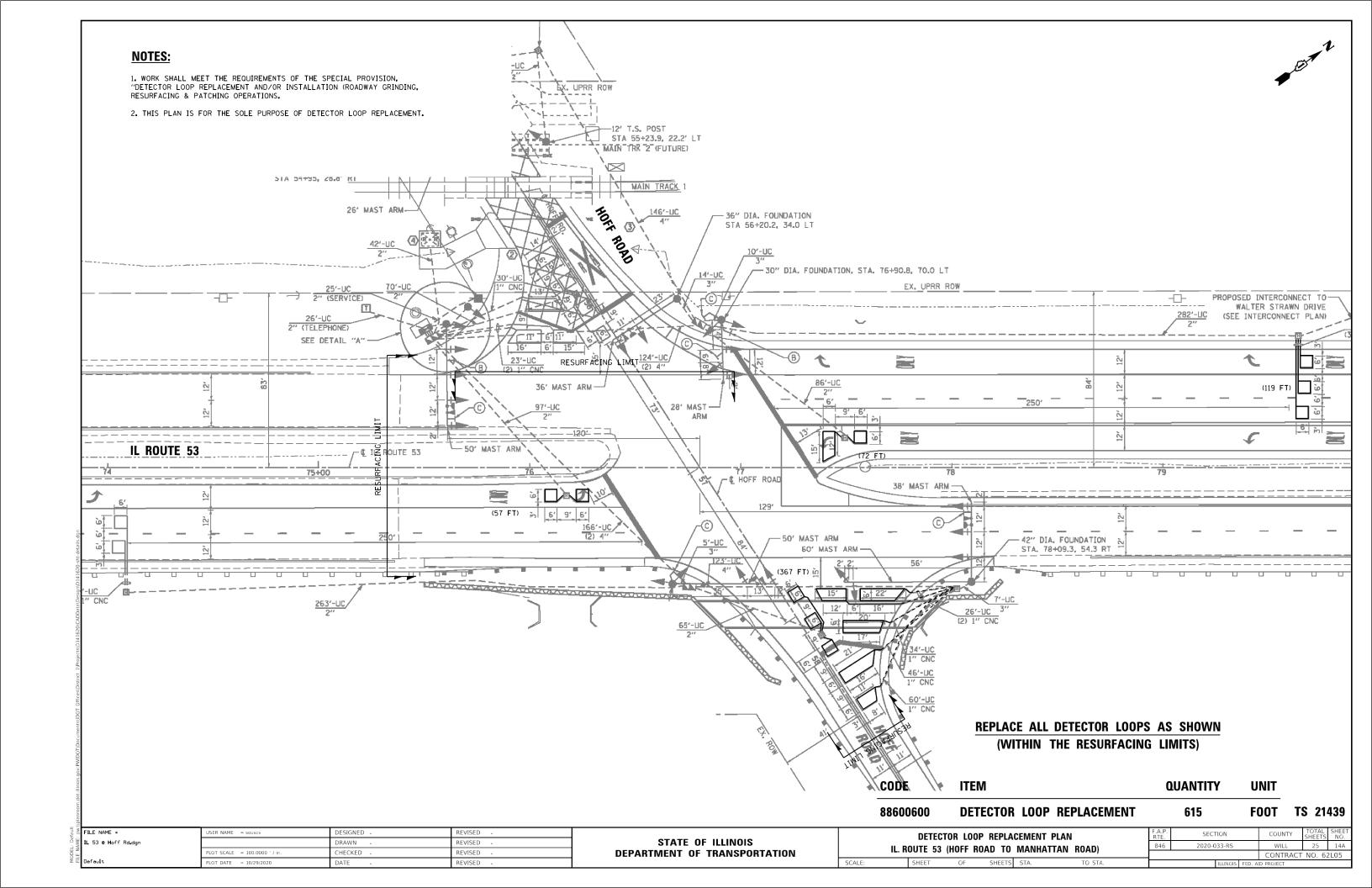
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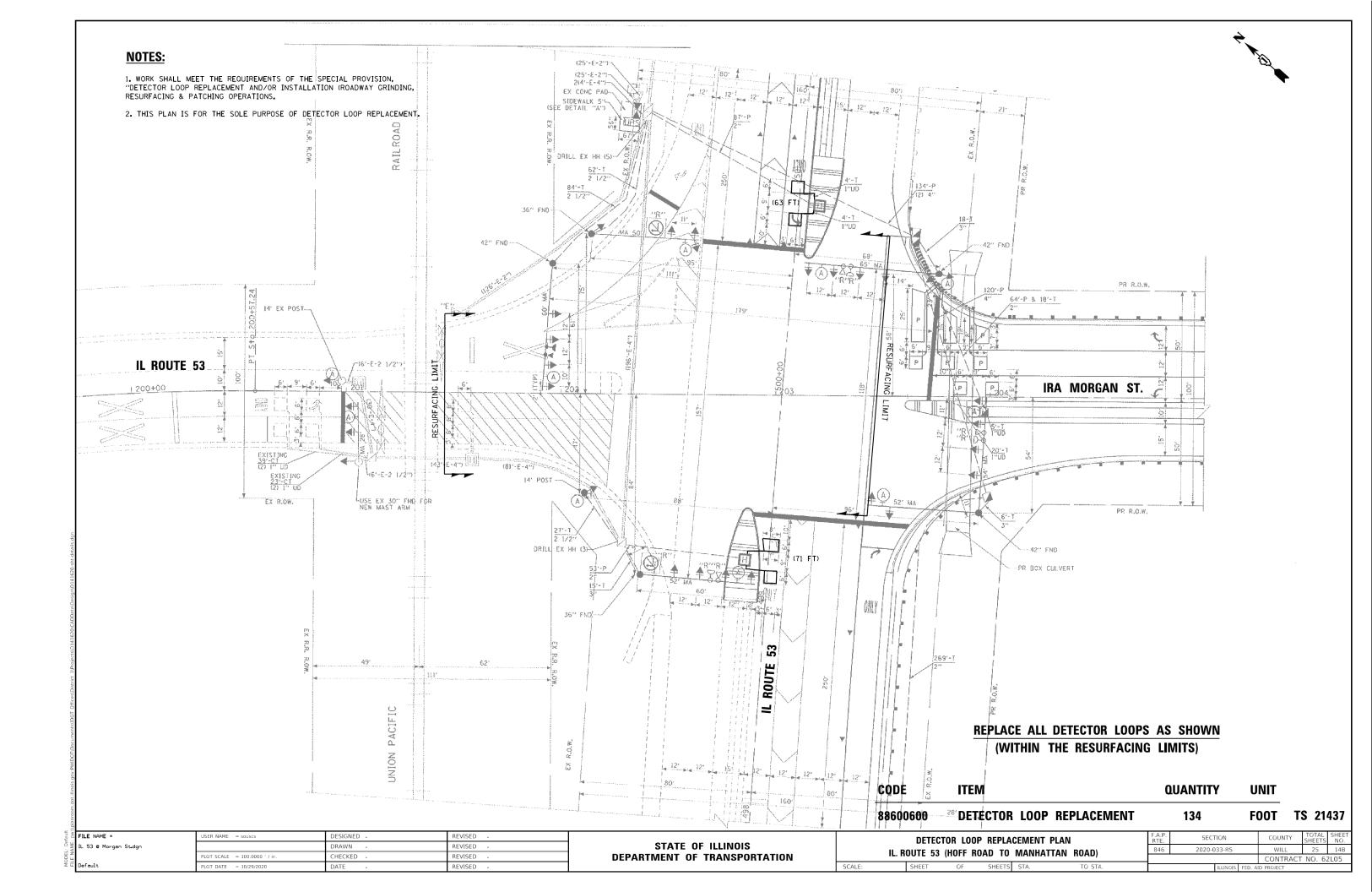
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 PLOT DATE
 = 10/16/2020
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETECTOR LOOP REPLACEMENT PLAN
IL. ROUTE 53 (HOFF ROAD TO MANHATTAN ROAD)

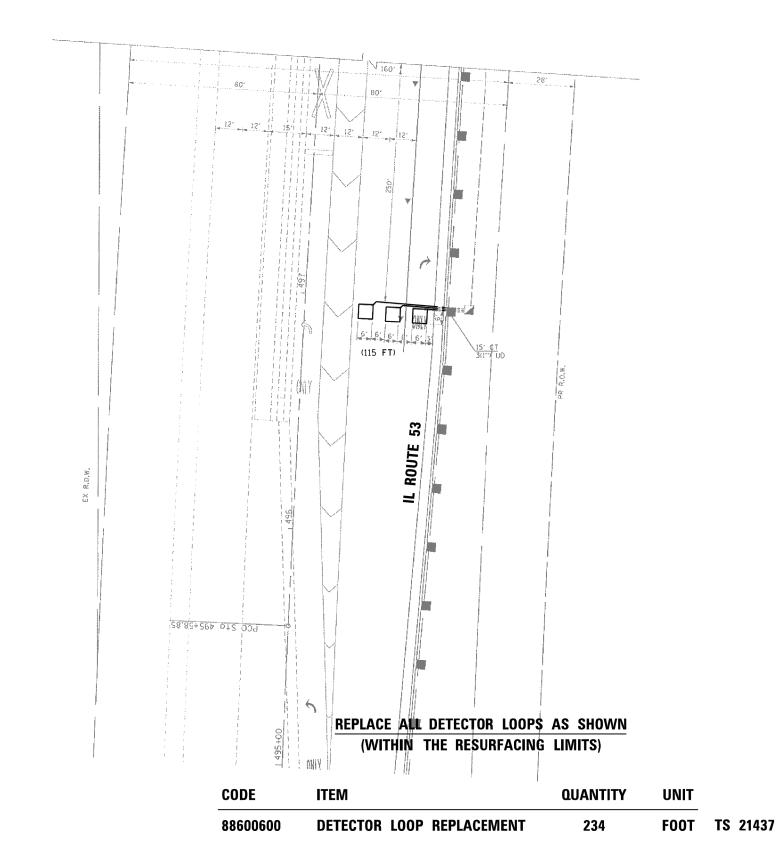




1. WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION (ROADWAY GRINDING, RESURFACING & PATCHING OPERATIONS.

2. THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP REPLACEMENT.

EXISTING



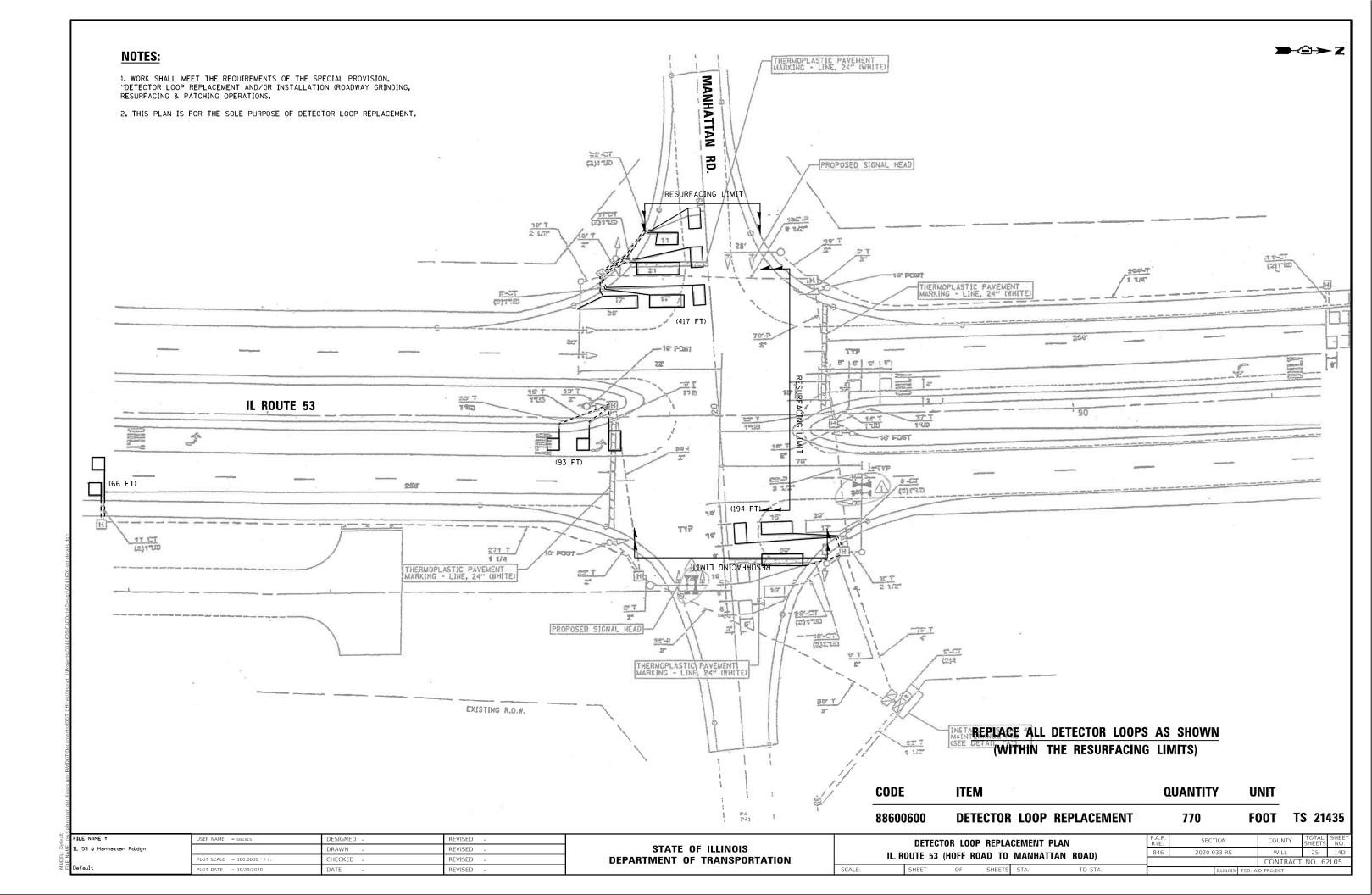
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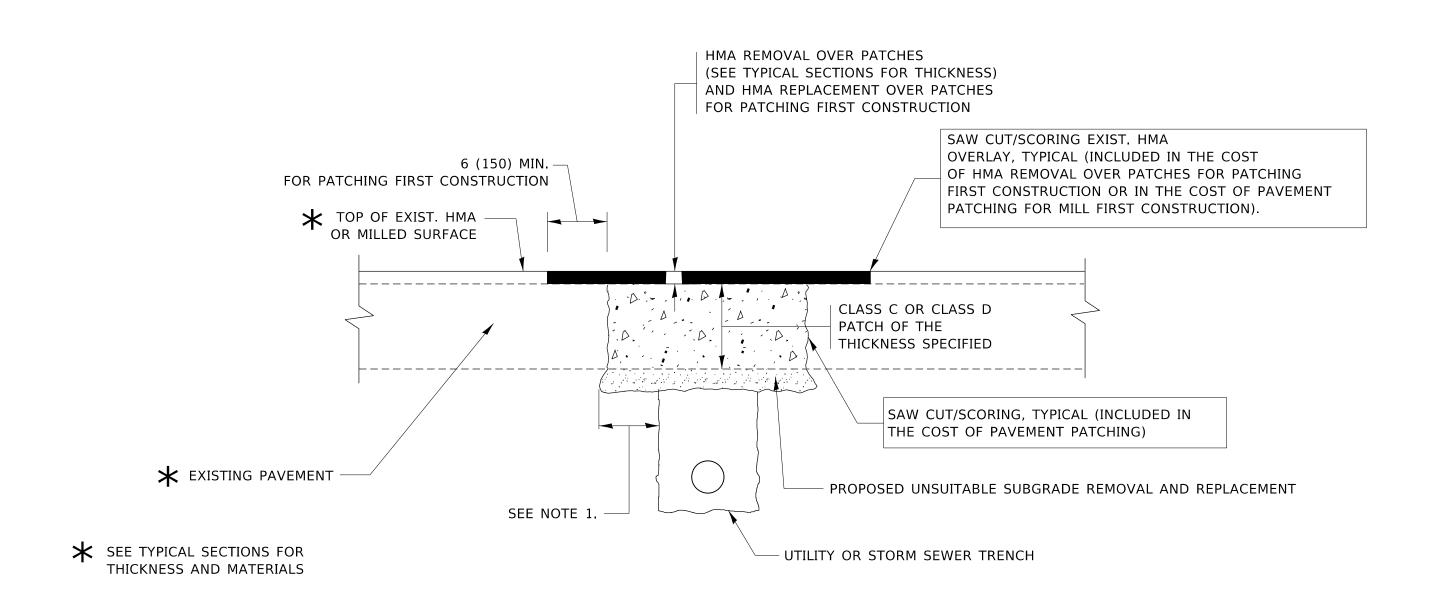
FILE NAME = DESIGNED JSER NAME = souscs REVISED IL 53 @ Morgan St.dgn DRAWN REVISED LOT SCALE = 100.0000 ' / in. CHECKED REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

DETECTOR LOOP REPLACEMENT PLAN IL. ROUTE 53 (HOFF ROAD TO MANHATTAN ROAD)

WILL 25 14C CONTRACT NO. 62L05





- 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  $4\frac{1}{2}$  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.

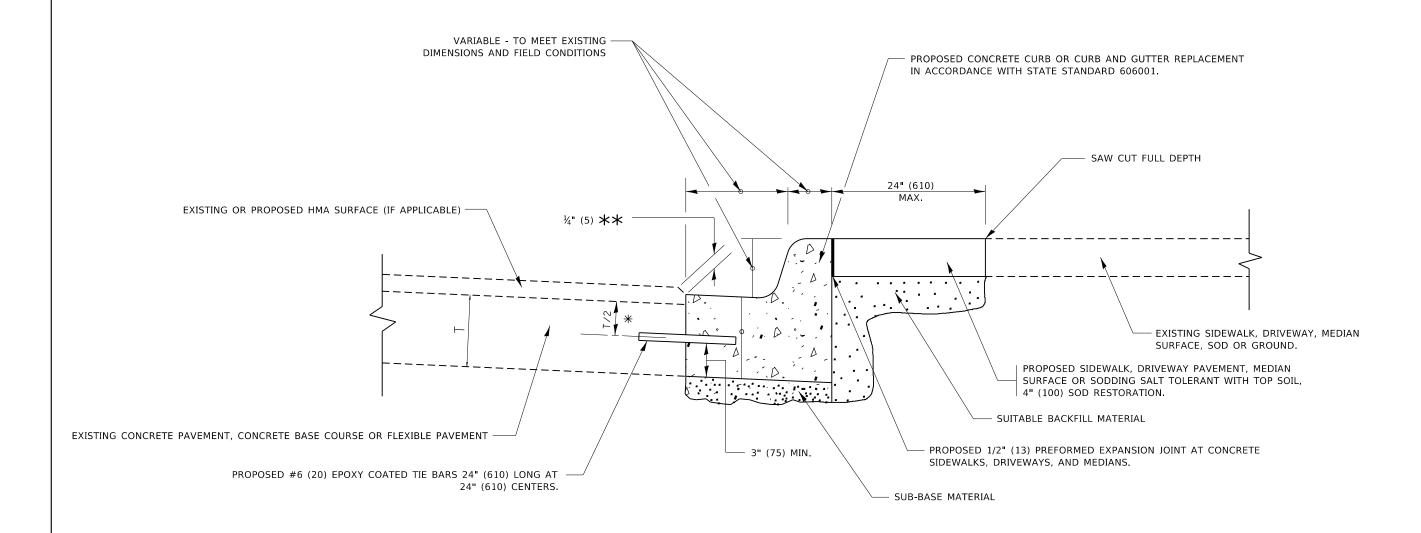
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

USER NAME = SOUSES	DESIGNED - R. SHARI	KENIZED -	A. ADDAS 04-27-90
	DRAWN -	REVISED -	R. BORO 01-01-07
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -	R. BORO 09-04-07
PLOT DATE = 10/16/2020	DATE - 10-25-94	REVISED -	K. ENG 10-27-08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NONE

	PAVEMENT PATCHING FOR						R	F.A.P. RTE	SECTIO	ОИ		COUNTY	TOTAL SHEETS	SHEE NO.
HMA SURFACED PAVEMENT						846	2020-033	3-RS		WILL	25	15		
HIMA SUNFACED PAVEINIENI						BD400-04 (BD-	<b>–22</b> )		CONTRACT	NO. 62	2L05			
5	SHEET	1	OF	1	SHEETS	STA.	TO STA.		IL	LLINOIS	FED. AI	ID PROJECT		



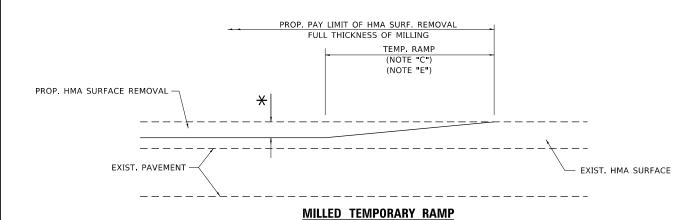
- 💥 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- $\star\star$  IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

# **CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT**

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

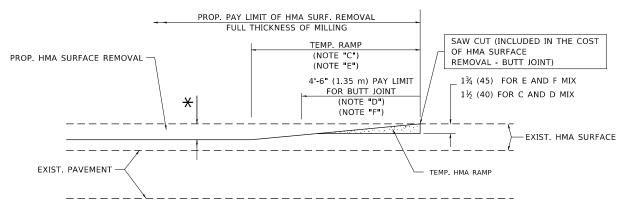
USER NAME = souscs	DESIGNED -	A. HOUSEH	REVISED	-	A. ABBAS 03-21-97
	DRAWN -		REVISED	-	M. GOMEZ 01-22-01
PLOT SCALE = 100.0000 / in.	CHECKED -		REVISED	-	R. BORO 12-15-09
PLOT DATE = 10/16/2020	DATE -	03-11-94	REVISED	-	K. SMITH 07-11-19

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

#### OPTION 1

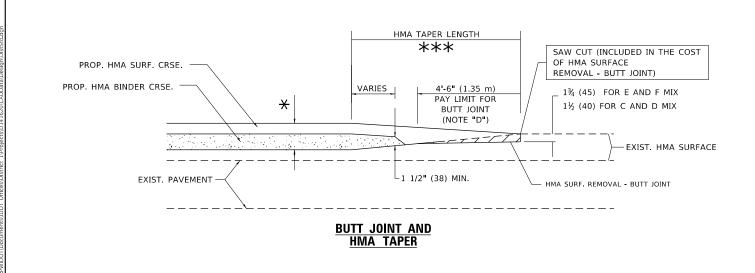


#### HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

#### OPTION 2

## TYPICAL TEMPORARY RAMP



# TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

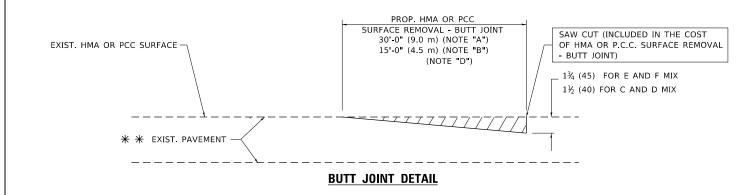
 USER NAME
 = souscs
 DESIGNED
 M. DE YONG
 REVISED
 R. SHAH 10-25-94

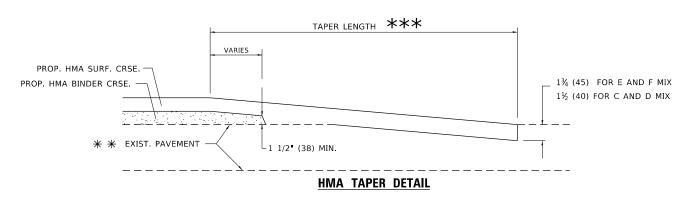
 DRAWN
 REVISED
 A. ABBAS 03-21-97

 PLOT SCALE
 = 100,0000 ' / in.
 CHECKED
 REVISED
 M. GOMEZ 04-06-01

 PLOT DATE
 = 10/16/2020
 DATE
 06-13-90
 REVISED
 R.BORO 01-01-07

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION





# 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'-0" (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.

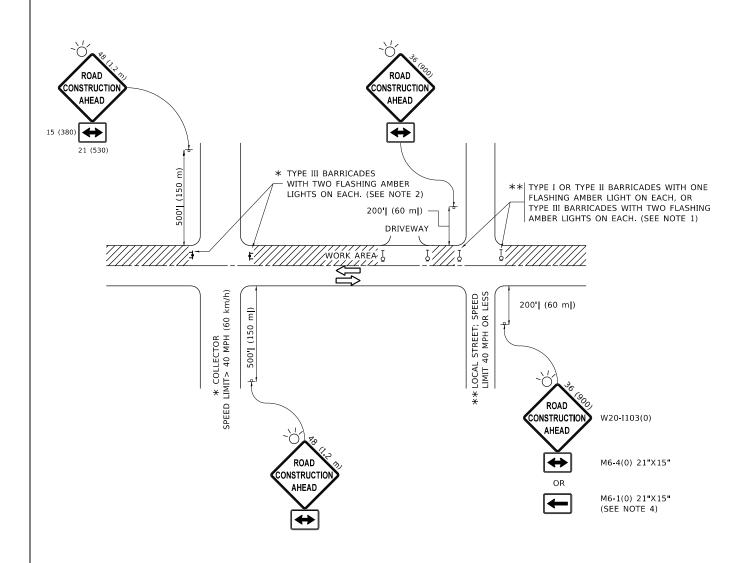
  \*\* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- G. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A") 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

#### **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".

SCALE: NONE

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



- 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:
- a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER 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:
- a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
- THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY
  b) BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION
  OF THE CLOSED PORTION.
- 3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710)

  IN HEIGHT
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE
  4. SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL
  BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

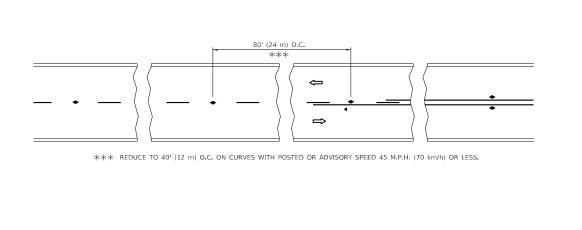
- 5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- 6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

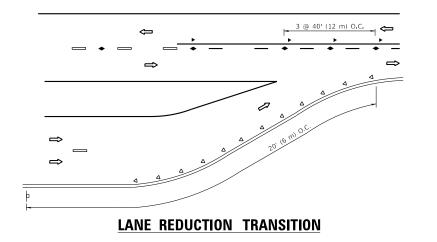
All dimensions are in inches (millimeters) unless otherwise shown.

USER NAME = souscs	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
	DRAWN -	REVISED - T. RAMMACHER 01-06-00
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
PLOT DATE = 10/16/2020	DATE - 06-89	REVISED A SCHUETZE 09-15-16

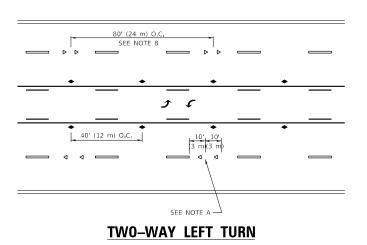
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

;							TION FOR DRIVEWAYS
SCALE: NONE	SHEET	1	OF	1	SHEETS	STA.	TO STA.

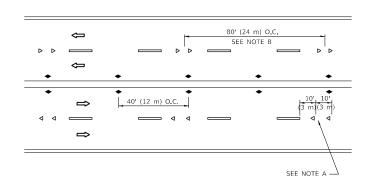


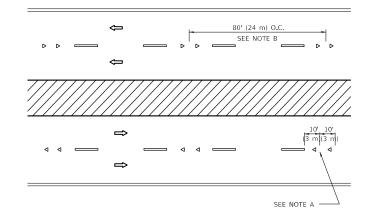


SEE FIGURE 3B-14 MUTCD



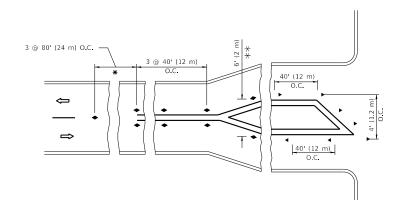
#### TW0-LANE/TW0-WAY

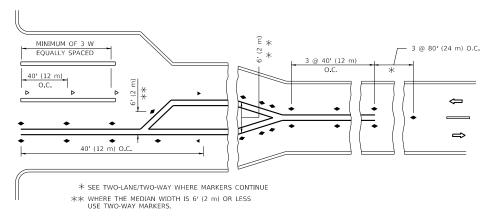




#### MULTI-LANE/UNDIVIDED







#### **TURN LANES**

#### **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.
- 4. MARKERS ARE TO BE USED ADJACENT TO BOTH SOLID WHITE LINES IN DUAL LEFT TURN LANES

#### 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.

#### **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
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN
- 4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY INVOLVED.

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

JSER NAME = souscs DESIGNED -REVISED - T. RAMMACHER 03-12-99 REVISED -T. RAMMACHER 01-06-00 DRAWN LOT SCALE = 100.0000 ' / in. HECKED REVISED -C. JUCIUS 09-09-09 C. JUCIUS 07-01-13 PLOT DATE = 10/16/2020 DATE REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) SHEET 1 OF 1 SHEETS STA.

SECTION 2020-033-RS WILL 25 19 TC-11 CONTRACT NO. 62L05

**SYMBOLS** 

ONE-WAY AMBER MARKER

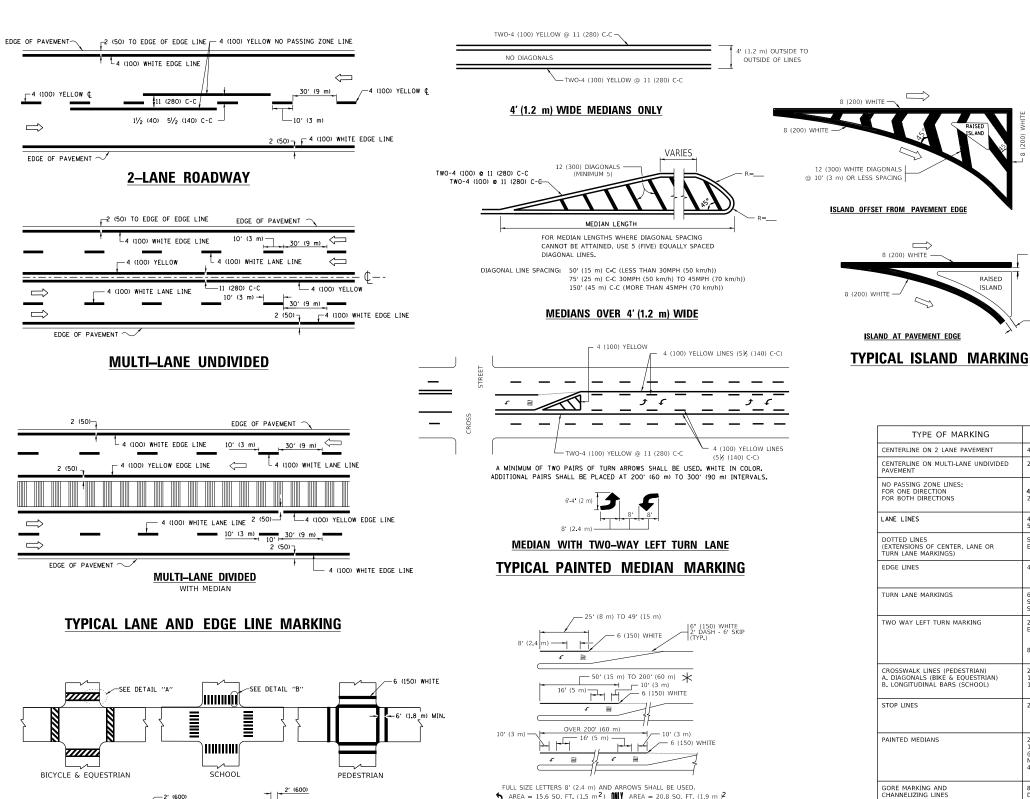
TWO-WAY AMBER MARKER

ONE-WAY CRYSTAL MARKER (W/O)

- YELLOW STRIPE

■ WHITE STRIPE

- RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\fine 1010 \ \text{AREA} = 15.6 \ \text{SQ. FT. } (1.5 \ \text{m}^2) \ \text{MLY} \ \text{AREA} = 20.8 \ \text{SQ. FT. } (1.9 \ \text{m} \ )^2$ 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

D(FT) SPEED LIMIT 665 50 55 COMBINATION LEFT AND U-TURN 32 R (810) 2 (50) LANE REDUCTION TRANSITION \* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

WIDTH OF LINE PATTERN SPACING / REMARKS TYPE OF MARKING COLOR ENTERLINE ON 2 LANE PAVEMENT SKIP-DASH YELLOW 10' (3 m) LINE WITH 30' (9 m) SPACE SOLID YELLOW 11 (280) C-C NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS 5½ (140) C-C FROM SKIP-DASH CENTERLINE l1 (280) C-C **4 (100)** 2 @ 4 (100) YELLOW YELLOW OMIT SKIP-DASH CENTERLINE BETWEEN LANE LINES SKIP-DASH SKIP-DASH 10' (3 m) LINE WITH 30' (9 m) SPACE 4 (100) 5 (125) ON FREEWAYS 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 SOLID OUTLINE MEDIANS IN YELLOW 4 (100) YELLOW-LEFT WHITE-RIGHT 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m) URN LANE MARKINGS SEE TYPICAL TURN LANE MARKING DETAIL 10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL TWO WAY LEFT TURN MARKING 2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW 2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90° CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) NOT LESS THAN 6 (1.8 m) APART 2 (600) APART LONGITUDINAL BARS (SCHOOL) SOLID (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS. 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 POSCEID IE STOP LINES 24 (600) SOLID WHITE 11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING. 2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° PAINTED MEDIANS SOLID YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC @ 45° NO DIAGONALS USED FO 4' (1.2 m) WIDE MEDIAN! 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)) 24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X" SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m 2 EACH "X"=54.0 SQ. FT. (5.0 m 2 RAILROAD CROSSING SOLID WHITE 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)) SHOULDER DIAGONALS (REQUIRED FOR 12 (300) @ 45° SOLID WHITE - RIGHT YELLOW - LEFT SHOULDERS > 8') U TURN ARROW SEE DETAIL SOLID WHITE 2 ARROW COMBINATION SEE DETAIL SOLID WHITE 30.4 SF

**U\_TURN** 

— 2 (50)

RAISED

ISLAND

8 (200) WHITE -

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

SCALE: NONE

All dimensions are in inches (millimeters unless otherwise shown.

USER NAME = souscs	DESIGNED - EVERS	REVISED	-	C. JUCIUS 09-09-09
	DRAWN -	REVISED	-	C. JUCIUS 07-01-13
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED	-	C. JUCIUS 12-21-15
PLOT DATE = 10/16/2020	DATE - 03-19-90	REVISED	-	C. JUCIUS 04-12-16

-12 (300) WHITE

DETAIL "B"

-6 (150) WHITE

TYPICAL CROSSWALK MARKING

\* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF

DETAIL "A"

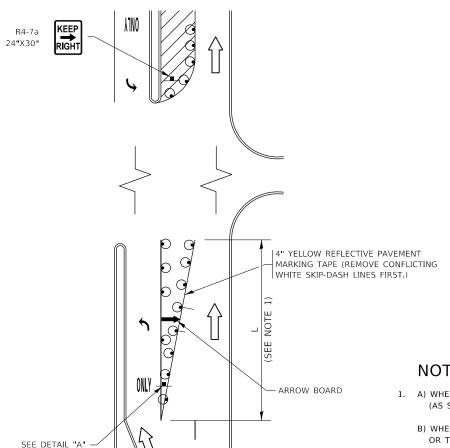
THE ROAD WHICH IT CROSSES

STATE OF ILLINOIS

DISTRICT O	F.A.P. SECTION RTE. SECTION 846 2020-033-RS		COUNTY	TOTAL SHEETS 25	SHEET NO. 20			
TYPICAL PAVEMENT	TC-13 CONTRACT NO. 62							
SHEET 1 OF 2 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT			D PROJECT		

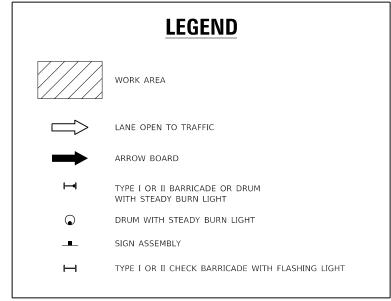
**DEPARTMENT OF TRANSPORTATION** 

# TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER



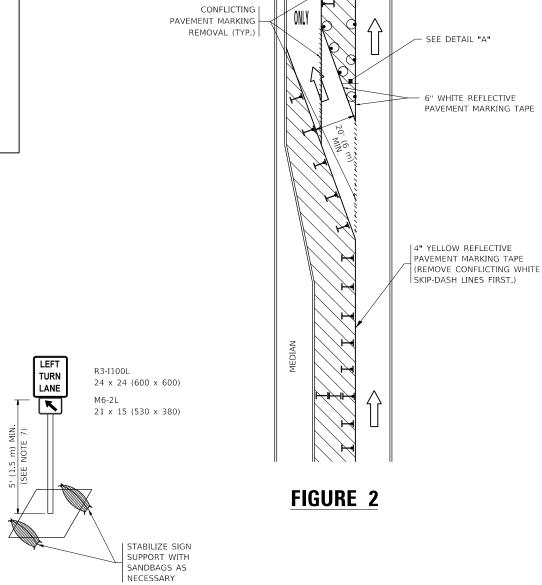
## FIGURE 1

# WITHIN A LANE CLOSURE



#### NOTES:

- 1. A) WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.
  - B) WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
- 2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
- 3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
- 4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
- 5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-I100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
- 6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
- 7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PREOUIREMENTS.
- 8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



**TURN BAY ENTRANCE** 

**DETAIL A** 

SCALE: NONE

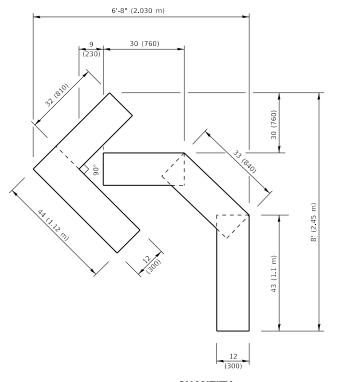
All dimensions are in inches (millimeters) unless otherwise shown

JSER NAME = souscs DESIGNED -T. RAMMACHER 09-08-94 REVISED - R. BORO 09-14-09 DRAWN - A. HOUSEH 11-07-95 REVISED - A. SCHUETZE 07-01-13 A. HOUSEH 10-12-96 REVISED - A. SCHUETZE 09-15-16 DATE -T. RAMMACHER 01-06-00 REVISED PLOT DATE = 10/16/2020

STATE OF ILLINOIS

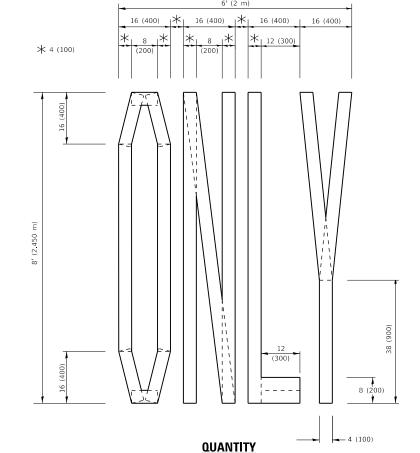
SECTION TRAFFIC CONTROL AND PROTECTION AT TURN BAYS 846 2020-033-RS WILL 25 21 (TO REMAIN OPEN TO TRAFFIC) TC-14 CONTRACT NO. 62L05 SHEET 1 OF 1 SHEETS STA.

**DEPARTMENT OF TRANSPORTATION** 

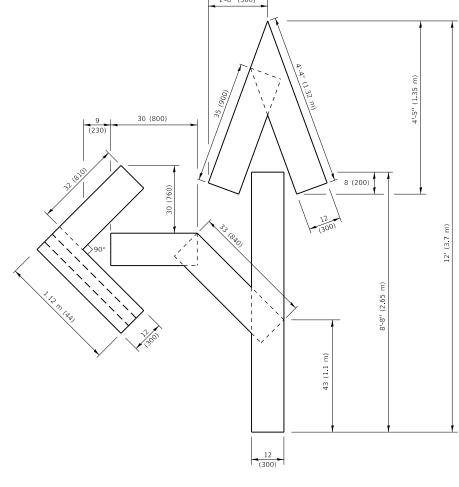


#### QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m) 15.2 sq. ft. (1.41 sq. m)



4 (100) LINE = 64.1 ft. (19.5 m) 21.4 sq. ft. (1.99 sq. m)

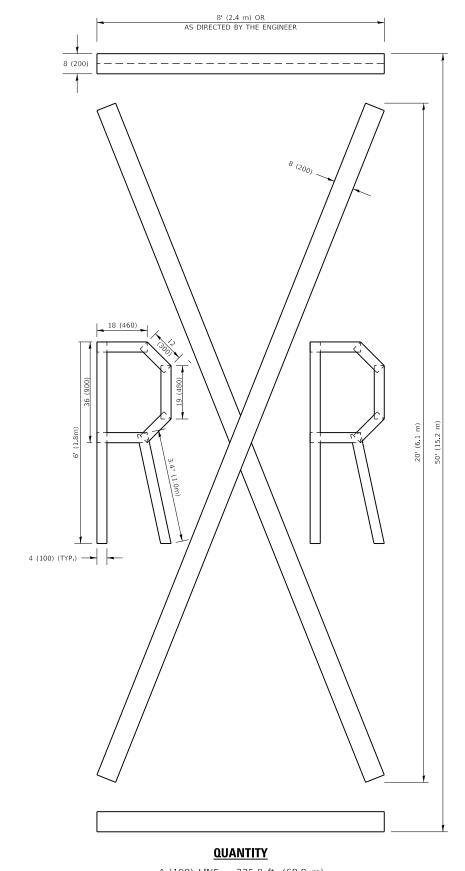


#### QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m) 27.5 sq. ft. (2.53 sq. m)

#### NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



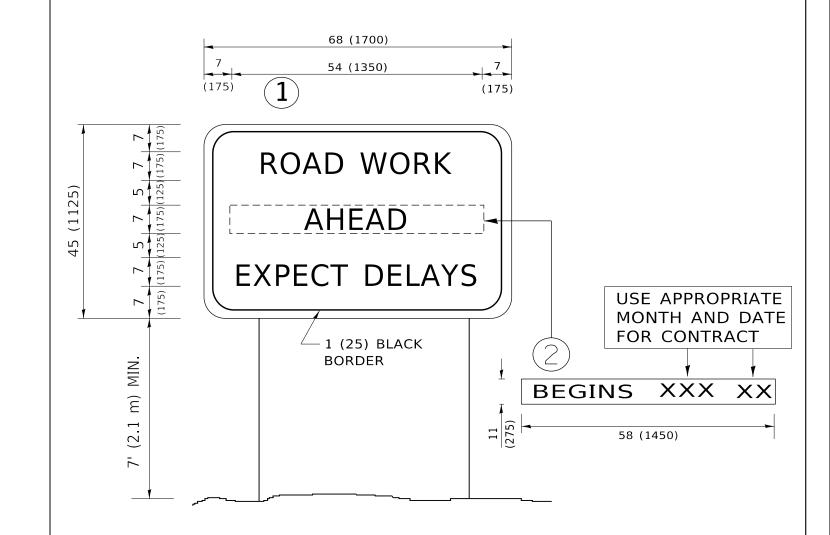
4 (100) LINE = 225.9 ft. (68.9 m) 75.3 sq. ft. (6.99 sq. m)

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.



- 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.)

SCALE: NONE

7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

USER NAME = souscs	DESIGNED -	REVISED	- R. MIRS 09-15-97
	DRAWN -	REVISED	- R. MIRS 12-11-97
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED	-T. RAMMACHER 02-02-99
PLOT DATE = 10/16/2020	DATE -	REVISED	- C. JUCIUS 01-31-07

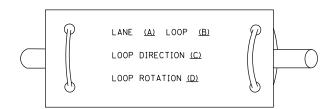
STATE OF	ILLINOIS
DEPARTMENT OF 1	<b>TRANSPORTATION</b>

	ARTE	F.A.P. RTE	SECTION				
	INFORM	//ATION	SIGN		846	2020-0	)33-RS
	iivi Oni	MATION	SIGN			TC-22	
1	OF 1	SHEETS	STA.	TO STA.			ILLINOIS

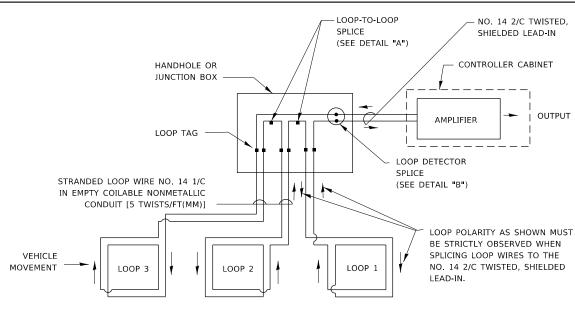
#### **LOOP DETECTOR NOTES**

- 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.
- 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

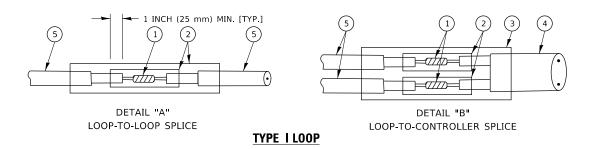


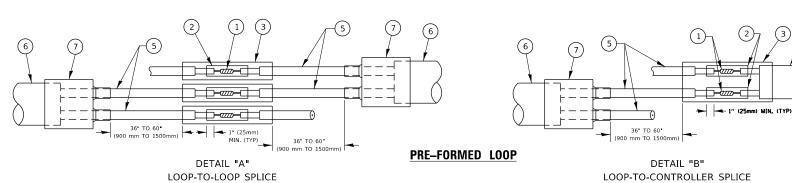
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



#### **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

- 1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- (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. PRE-FORMED LOOP
- 6 XL POLYOLEFIN 2 CONDUCTOR
- (7) BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

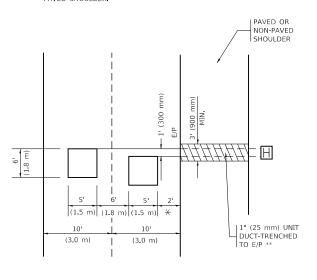
USER NAME = SOUSCS	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/16/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

#### LOOPS NEXT TO SHOULDERS

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

\* = (600 mm)



\* \* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS

SER NAME = souscs

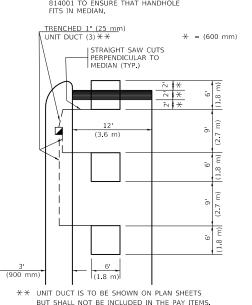
PLOT DATE = 10/16/2020

# 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



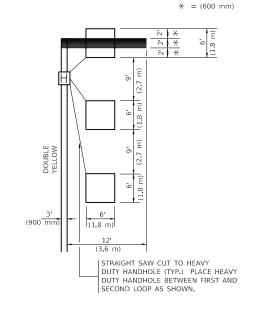
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

#### LEFT TURN LANES WITHOUT MEDIANS

VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

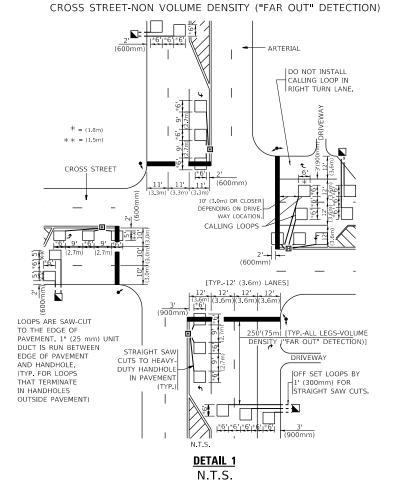


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

SCALE: NONE

# BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS. ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)

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



DESIGNED

HECKED

R.K.F.

DRAWN

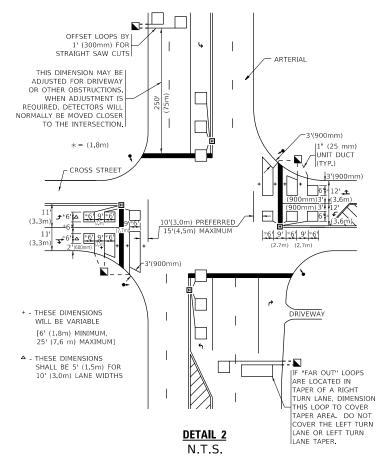
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#### NOTES

#### 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  $\underline{ALL}$  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.

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 - DETECTOR LOOP INSTALLATION					F.A.P. SECTION		COUNTY	TOTAL SHEETS	SHEET NO.				
	DETAILS FOR ROADWAY RESURFACING					846	2020-033-RS		WILL	25	25		
DETAILS FOR HUADWAY RESUM ACING					TS-07 CONTRACT NO. 6				NO. 62	2L05			
	SHEET 1	OF	1	SHEETS	STA.	TO STA.				ILLINOIS FED. A	ID PROJECT		