PROJECT LOCATED IN THE CITY OF NORTH CHICAGO

2019 ADT = 21.000 VPD

POSTED SPEED LIMIT VARIES 30 TO 35 MPH

TRAFFIC DATA

0

0

0

03-11-2022 LETTING ITEM 135

PROJECT BEGINS
STA 1+59.20

ROADWAY OMISSIONS STA 55+03.8 TO 56+82.0, WB STA 55+06.0 TO 56+75.7, EB

# STATE OF ILLINOIS

## **DEPARTMENT OF TRANSPORTATION**

# PROPOSED HIGHWAY PLANS

FAP ROUTE 352 (IL 137 BUCKLEY RD)
W OF FRONTENAC ST TO IL 137
(BOBBY THOMPSON EXPWY)
SECTION 2018–136–RS–SW
PROJECT NHPP–XCCY(352)
DESIGNED OVERLAY, ADA IMPROVEMENTS
LAKE COUNTY

C-91-306-19



GROSS LENGTH = 9801.9 FT. = 1.856 MILE

NET LENGTH = 9632.2 FT. = 1.824 MILE

PROJECT ENGINEER: VESELIN VELICHKOV (847) 705–4432

PROJECT MANAGER: FAWAD AQUEEL

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS

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

CONTRACT NO. 62H69

1-800-892-0123 OR 811

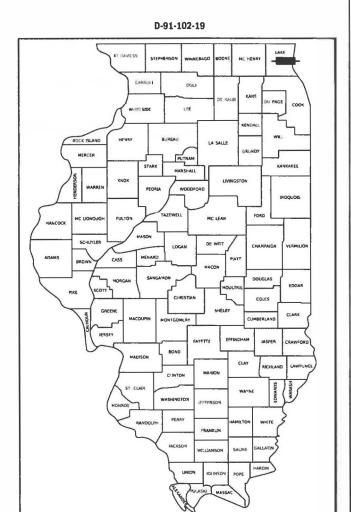
BRYAN C.
DONZE
NO. 642,076587

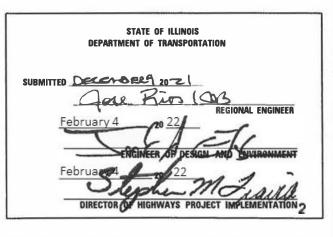
December 8, 20 21

BRYAN C. DONZE
ILLINOIS REG. PROFESSIONAL ENGINEER NO. 062-070587
EXPIRATION DATE 11-30-2023



77 South Third Street uite 280 inc. Illinois 60134 30.332.9157 phone www.kaskaskiseng.com
JCENSENO.
84.004773





LOCATION OF SECTION INDICATED THUS: - -

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

#### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS & HIGHWAY STANDARDS
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11-13	EXISTING AND PROPOSED TYPICAL SECTIONS & HMA REQUIREMENTS TABLE
14-17	ROADWAY AND PAVEMENT MARKING PLANS
18-27	ADA RAMP IMPROVEMENT PLANS
28-29	TURN LANE IMPROVEMENT PLANS
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31	DRIVEWAY DETAILS DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (BD-02)
32	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-08)
33	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT (BD-22)
34	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT (BD-24)
35	BUTT JOINT AND HMA TAPER DETAILS (BD-32)
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	DRIVEWAYS (TC-10)
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	RESISTANT) (TC-11)
38	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)
39	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
	(TC-14)
40	SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS (TC-16)
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	RAILROAD CROSSINGS (TC-23)
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	(TS-07)
45	PROJECT DETAIL FOR SINGLE PERPENDICULAR CURB RAMPS (PD-01)
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57	CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE
50.55	PREEMPTION SEQUENCE
58-66	DETECTOR LOOP REPLACEMENT PLAN

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STANDARD NO.	DESCRIPTION
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
424001-11	PERPENDICULAR CURB RAMPS FOR SIDEWALK
424006-05	DIAGONAL CURB RAMPS FOR SIDEWALK
424011-04	CORNER PARALLEL CURB RAMPS FOR SIDEWALK
424021-06	DEPRESSED CORNER FOR SIDEWALK
442201-03	CLASS C AND D PATCHES
604001-05	FRAME AND LIDS, TYPE 1
604091-05	FRAME AND GRATE, TYPE 24
606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS <= 40 MPH
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDIED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTOION LOOPS
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
878001-11	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

#### **GENERAL NOTES**

- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE UTILITY COMPANIES AND THE CITY OF NORTH CHICAGO. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOUR NOTIFICATION REQUIRED).
- THE CONTRACTOR WILL NOT BE ALLOWED TO SETUP A YARD FOR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSIONS FROM THE DEPARTMENT.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- 4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A FIELD LABORATORY FOR USE FOR ANY ON SITE TESTING BY THE ENVIRONMENTAL FIRM. NO TESTING OF ANY KIND, CONTAMINATED OR NON-CONTAMINATED FLUID OR SOLID SHALL BE PERMITTED IN THE ENGINEER'S FIELD OFFICE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION ACTIVITIES.
- 6. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 7. TEN (10) FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTERS AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND GUTTER AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
- 8. LIMITS OF RESURFACING ON SIDE STREETS THROUGHOUT THE PROJECT SHALL BE TO THE RADIUS RETURN, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER / TECHNICIAN.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- 10. ALL PAVEMENT PATCHING, CURB AND GUTTER REMOVAL AND REPLACEMENT, DRAINAGE ADJUSTMENT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 11. 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 GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING SLOPE IS A MINIMUM OF 1:3 (V:H).
- 12. BUTT JOINTS SHALL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- 13. PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES.
- 14. DOUBLE LANE MARKERS SHALL BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHEET INCLUDED IN THE PLANS.
- 15. 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.
- 16. THE RESIDENT ENGINEER SHALL CONTACT MR. WALTER CZARNY, AREA TRAFFIC FIELD ENGINEER, VIA EMAIL AT WALTER.CZARNY@ILLINOIS.GOV, A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- 17. ALL FINAL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC PAVEMENT MARKINGS (OF THE EXTRUDED TYPE).
- 18. PROPOSED SIDEWALK RAMPS SHALL CONFORM TO CURRENT ADA REQUIREMENTS, APPLICABLE STATE HIGHWAY STANDARDS, AND THESE PLANS, OR AS DETERMINED BY THE ENGINEER.
- 19. SAW CUTTING (FULL DEPTH) WILL NOT BE MEASURED SEPARATELY FOR PAYMENT BUT SHALL BE INCLUDED IN THE COST OF "PAVEMENT REMOVAL".
- 20. A MAINTENANCE OF CONSENT LETTER HAS BEEN REQUESTED AND SHALL BE PROVIDED BY THE UNION PACIFIC RAILROAD WITH FOLDER NUMBER \_\_\_\_\_\_.
- 21. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 22. 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.

SCALE:

- 23. THE THICKNESS OF THE HMA MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FORM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA MIXTURE IS PLACED.
- 24. GEOTECHNICAL FABRIC FOR GROUND STABILIZATION AND/OR AGGREGATE SUBGRADE IMPROVEMENT (CU YD) HAVE BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSTABLE AND/OR UNSUITABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ABOVE ITEM WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC OR DYNAMIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.04 OF THE SSRBC AND IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR.
- 25. ANY AGGREGATE SUBGRADE IMPROVEMENT CONTAMINATED AND/OR DAMAGED BY THE CONTRACTOR'S VEHICLES AND/OR EQUIPMENTS IS TO BE REMOVED AND REPLACED AS DIRECT BY THE ENGINEER AT CONTRACTOR EXPENSE.

#### TRAFFIC SIGNAL NOTES

- 26. BEFORE STARTING EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS, 48 HOUR NOTIFICATION IS REQUIRED.
- 27. THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA.GOV 72 HOURS IN ADVANCE OF BEGINNING WORK.
- 28. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARM LENGTHS.
- 26. ALL EXISTING R.O.W. SHOWN IS APPROXIMATE AND MAY NEED TO BE VERIFIED IN THE FIELD. ANY R.O.W. CONFLICTS SHALL BE COORDINATED WITH THE RESIDENT ENGINEER.
- 27. THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK, FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811, IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).
- 28. IF THIS CONTRACT REQUIRES THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS/HER OWN EXPENSE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES PRIOR TO PERFORMING ANY WORK. IF THIS CONTRACT DOES NOT REQUIRE THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR MAY REQUEST ONE FREE LOCATE FOR EXISTING IDOT ELECTRICAL FACILITIES FROM DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR PRIOR TO THE START OF ANY WORK, ADDITIONAL REQUESTS MAY BE AT THE EXPENSE OF THE CONTRACTOR. THE LOCATION OF UNDERGROUND TRAFFIC FACILITIES DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO REPAIR ANY FACILITY DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.
- 29. THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR UNDERGROUND AND OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE AREA ENGINEER, THE RESIDENT ENGINEER AND ANY IMPACTED UTILITY COMPANY OF THE CONFLICT, AND SHALL COORDINATE AND RESOLVE THE ISSUE PRIOR TO ORDERING MATERIALS, AND PRIOR TO POURING FOUNDATIONS.
- 30. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND IDOT.
- 31. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.
- 32. PARTIAL PAYMENT AS DESCRIBED IN ARTICLE 109.07(b) OF THE STANDARD SPECIFICATION WILL NOT BE ALLOWED FOR ITEMS INCLUDED IN THIS CONTRACT.
- 33. LOCATIONS WITH PEDESTRIAN EQUIPMENT HAVE BEEN DESIGNED TO BE ADA COMPLIANT, ANY DEVIATION FROM THE PLANS FOR TRAFFIC SIGNAL MAST ARM/POSTS THAT HAVE PEDESTRIAN EQUIPMENT WILL HAVE TO BE APPROVED BY THE ENGINEER TO INSURE ADA COMPLIANCE.

COUNTY

LAKE

66

CONTRACT NO. 62H69

17	مماحمواحنم	477 Smath Third Street Suite 280	USER NAME	= rjo
I\	Casicasicia on	Geneva, Illinois 60134 630.332.9157 phone www.kaskaskiazne.com		
A.	PROFESSIONAL REGISTRATIONS	LICENSE NO. 184.064773	PLOT SCALE	= 0.0833 ' / ir
	Hinois Professional Design Firm Professional Engineering Group	21-5181586	PLOT DATE	= 12/22/2021

Street	USER NAME = rjo	DESIGNED	-		REVISED	-
60134 ext		DRAWN	-	KKH	REVISED	=
ng.com	PLOT SCALE = 0.0833 ' / in.	CHECKED	-	BCD	REVISED	-
	PLOT DATE = 12/22/2021	DATE	-	12/10/2021	REVISED	-

							GHWAY STANDARDS	F.A.P. RTE.	SECT	TION	
IL 1							TENAC ST TO	352	2018-13	6-RS-SW	
	IL I	31	ROBI	BY	THUMP	201A	EXPWY)				
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NO.			URBAN	URBAN	URBAN	URBAN
L		*	ONDAIN	ORBAN	ORBAN	ONDAN
5						
20200100	EARTH EXCAVATION	CU YD	279	279		
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	169	169		
); 		1	1			
21101615	TORGOLI FURNICU AND DI ACE. All	50 VD	100	100		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	190	190		
25200110	SODDING, SALT TOLERANT	SQ YD	190	190		
25200200	SUPPLEMENTAL WATERING	UNIT	1	1		
7		10				
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	56	56		
7						3 1
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	675	675		
35300205	PORTLAND CEMENT CONCRETE BASE COURSE 7 1/4"	SQ YD	255	255		
		-	(C			
35300315	PORTLAND CEMENT CONCRETE BASE COURSE 8 3/4"	SQ YD	421	421		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	54,636	54,636		
7		1	E	31,030		
-						
40600370	LONGITUDINAL JOINT SEALANT	FOOT	36,998	36,998		
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	24	24		
8						
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	766	766		
3		17	E			
40602985	HOT-MIX ASPHALT BINDER COURSE, IL-19.5, N70	TON	4,878	4,878		
10002303	THE TAX TO THE PRINCIPLE COUNTY IN THE TOTAL OF THE TOTAL	1311	1,370	1,370		
SPECIALTY	I TEM					

	*	SP	EC I	AL	TY.	ΙT	E١
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Kaskaskia Engineering Group, LLC	477 South Third Street Suite 200 Geneva, Illinois 60134 630.332.9157 phone www.kaslaukinettg.com
PROPESSIONAL REGISTRATIONS	LICENSEE 100.
Illinois Professional Design Firm Professional Engineering Group	184.004773 20-5080586

USER NAME = rjo DESIGNED REVISED DRAWN NDP REVISED PLOT SCALE = 0.0833 ' / in. CHECKED -BCD REVISED PLOT DATE = 12/22/2021 12/10/2021 DATE REVISED

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40603200	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-4.75, N50	TON	1,667	1,667		
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	7,634	7,634		
42001300	PROTECTIVE COAT	SQ YD	2,186	2,186		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	6,482	6,482		
42400800	DETECTABLE WARNINGS	SQ FT	434	434		
44000100	PAVEMENT REMOVAL	SQ YD	214	214		
5						
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2-1/4"	SQ YD	39,042	39,042		
44000164	HOT-MIX ASPHALT SURFACE REMOVAL, 3 3/4"	SQ YD	42,995	42,995		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	961	961		
44000600	SIDEWALK REMOVAL	SQ FT	6,300	6,300		
44003100	MEDIAN REMOVAL	SQ FT	5,299	5,299		
44201785	CLASS D PATCHES, TYPE I, 12 INCH	SQ YD	45	45		
44201789	CLASS D PATCHES, TYPE II, 12 INCH	SQ YD	1,113	1,113		
44201794	CLASS D PATCHES, TYPE III, 12 INCH	SQ YD	326	326		
CDECIALTY					771	

			) i	(	CONSTRUCTION CO	DE
				80% FED	100% STATE	80% FED
		-	TOTAL	20% STATE		20% STATE
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1			ONDAN	URBAN	ORBAN	URBAN
44201796	CLASS D PATCHES, TYPE IV, 12 INCH	SQ YD	210	210		
5000005	DEDECTRIAN DAILING	5007				
50900805	PEDESTRIAN RAILING	FOOT	55	55	1	
56109210	WATER VALVES TO BE ADJUSTED	EACH	3	3		
60404950	FRAMES AND GRATES, TYPE 24	EACH	5	5		
00101330	Titules Auto States, Title 21	Enem		, ,		
60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	10	10		
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	414	414		
7						1
60608300	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-2.12	FOOT	586	586		
60626300	STABILIZED MEDIAN SURFACE	SQ YD	664	664	-	
3	STABLETZES MESTAV SOM ACE	30 10	004	004		1
64300260	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1		
66000200	NON-SPECIAL WASTE DISPOSAL	CU YD	279	279		
66900200	NON-SPECIAL WASTE DISPOSAL	CO 1D	279	279		
66900530	SOIL DISPOSAL ANALYSIS	EACH	3	3		
66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	1		
66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	1		
66901006	REGULATED SUBSTANCES MONITORING	CAL DA	12	12		

\* SPECIALTY ITEM



Street	USER NAME = rjo	DESIGNED		REVISED	-
60134 one		DRAWN -	NDP	REVISED	5
eng.com	PLOT SCALE = 0.0833 / in.	CHECKED	BCD	REVISED	6
	PLOT DATE = 12/22/2021	DATE -	12/10/2021	REVISED	45

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				80% FED 20% STATE	100% STATE	80% FED 20% STATE		
		1	TOTAL	ROADWAY	ROADWAY	TRAFFIC SIGNAL		
CODE	ITEM	UNIT						
NO.	1   [ 4	ONII	I '	0005	0005	0021		
1			URBAN	URBAN	URBAN	URBAN		
67100100	MOBILIZATION	L SUM	1	1				
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1				
(* )						-		
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1				
70102025	THAT THE CONTROL AND THOTEETTON, STANDARD 701000	2 3011	1	1		1		
			_	_				
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1				
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1				
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1				
91								
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	15	15				
(s 5)								
70300100	SHORT TERM PAVEMENT MARKING	FOOT	9,989	9,989				
		2						
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	372	372				
				0.12		1		
70200211	TEMPORARY RAYEMENT MARKING LETTERS AND SYMPOLS RAINT	50 57	2 255	2 255				
70300211	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS - PAINT	SQ FT	2,255	2,255		1		
70300221	TEMPORARY PAVEMENT MARKING - LINE 4" - PAINT	FOOT	24,200	24,200				
70300241	TEMPORARY PAVEMENT MARKING - LINE 6" - PAINT	FOOT	8,536	8,536				
70300251	TEMPORARY PAVEMENT MARKING - LINE 8" - PAINT	FOOT	1,896	1,896				
3		*						
70300261	TEMPORARY PAVEMENT MARKING - LINE 12" - PAINT	FOOT	456	456				
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SPECIALTY	ITEM	1	1		l			

\* SPECIALTY ITEM



DESIGNED REVISED DRAWN NDP REVISED PLOT SCALE = 0.0833 / in. CHECKED BCD REVISED PLOT DATE = 12/22/2021 12/10/2021 REVISED

				80% FED 20% STATE	100% STATE	80% FED
		1	TOTAL	ROADWAY	ROADWAY	TRAFFIC SIG
CODE	ITEM	UNIT		0005	0005	0021
NO.			URBAN	URBAN	URBAN	URBAN
703002	81 TEMPORARY PAVEMENT MARKING - LINE 24" - PAINT	FOOT	1,473	1,473		
703612	TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE III TAPE	FOOT	3,339	3,339		
737002	00 REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	1	1		
780001	00 THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	2,693	2,693		
780002	00 THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	24,200	24,200		
780004	00 THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	8,536	8,536		
780005	00 THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	1,896	1,896		
780006	00 THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	456	456		
780000	THERMOPEASTIC PAVEMENT MARKING - LINE 12	7001	430	430		
780006	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	1,473	1,473		
781001	00 RAISED REFLECTIVE PAVEMENT MARKER	EACH	836	836		
783002	00 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	836	836		
810282	00 UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	125			125
850002	00 MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	4			4
873012	15 ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,500			1,500

DESIGNED REVISED DRAWN NDP REVISED PLOT SCALE = 0.0833 / in. CHECKED BCD REVISED PLOT DATE = 12/22/2021 DATE 12/10/2021 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES - IL 137 (BUCKLEY RD) W FRONTENAC ST TO IL 137 (BOBBY THOMPSON EXPWY) SHEET 5 OF 8 SHEETS STA.

SECTION 2018-136-RS-SW

					CONSTRUCTION CO	
				80% FED 20% STATE	100% STATE	80% FED 20% STATE
CODE			TOTAL	ROADWAY	ROADWAY	TRAFFIC SIGN
NO.	ITEM	UNIT	QUANTITY	0005	0005	0021
NO.			URBAN	URBAN	URBAN	URBAN
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,050			1,050
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	120			120
87900200	DRILL EXISTING HANDHOLE	EACH	3			3
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4			4
88600600	DETECTOR LOOP REPLACEMENT	FOOT	4,643			4,643
r e		5				
89502200	MODIFY EXISTING CONTROLLER	EACH	1			1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1			1
89502376	REBUILD EXISTING HANDHOLE	EACH	4			4
X0320050	CONSTRUCTION LAYOUT (SPECIAL)	L SUM	1	1		
X0326519	STEEL RAILING REMOVAL	FOOT	55	55		
X0327890	DRIVEWAY REMOVAL AND REPLACEMENT	SQ YD	85	85		
78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	3,455	3,455		
X1400378	PEDESTRIAN SIGNAL POST, 5 FT.	EACH	3			3

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES - IL 137 (BUCKLEY RD) W FRONTENAC ST TO IL 137 (BOBBY THOMPSON EXPWY) SCALE: SHEET 6 OF 8 SHEETS STA.

SECTION 2018-136-RS-SW

			L		CONSTRUCTION CO	
				80% FED	100% STATE	80% FED
		_		20% STATE		20% STATE
CODE			TOTAL	ROADWAY	ROADWAY	TRAFFIC SIGNAL
NO.	ITEM	UNIT	QUANTITY	0005	0005	0021
NO.			URBAN	URBAN	URBAN	URBAN
			91,57,11			
X1700091	MEDIAN SURFACE REMOVAL AND REPLACEMENT	SQ FT	144,615	144,615		
X4060995	TEMPORARY RAMP, SPECIAL	SQ YD	59	59		
X4400501	COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT LESS THAN OR EQUAL TO 10 FEET	FOOT	800	800		
X5537800	STORM SEWERS TO BE CLEANED 12"	FOOT	2,000		2,000	
X3337000	STORIC SERVICES TO BE CELEVINES II	1 001	2,000		2,000	
X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	18	18		
7						
X6700407	ENGINEER'S FIELD OFFICE, TYPE A (D1)	CAL MC	12	12		
78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	19,254	19,254		
V0750200	ACCESSION S. DEDECTRAMA GARANGE	- A GU	1.0			1.6
X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	16			16
X8780012	CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER	FOOT	12			12
						, ,
XZ127900	RETAINING WALL REMOVAL	FOOT	25	25		
XZ127902	RETAINING WALL, SPECIAL	SQ FT	36	36		
7000:75						
Z0004562	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	2,670	2,670		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
3			5			
Z0018400	DRAINAGE STRUCTURES TO BE ADJUSTED	EACH	111	111		
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\* SPECIALTY ITEM



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ng.com	PLOT SCALE = 0.0833 / in.	CHECKED	BCD	REVISED	6
	PLOT DATE = 12/23/2021	DATE -	12/10/2021	REVISED	÷:

| CONTRACT NO. 62H69 REV-SEP

**Ø** 0042

CONSTRUCTION CODE

100% STATE

20% STATE

80% FED 20% STATE

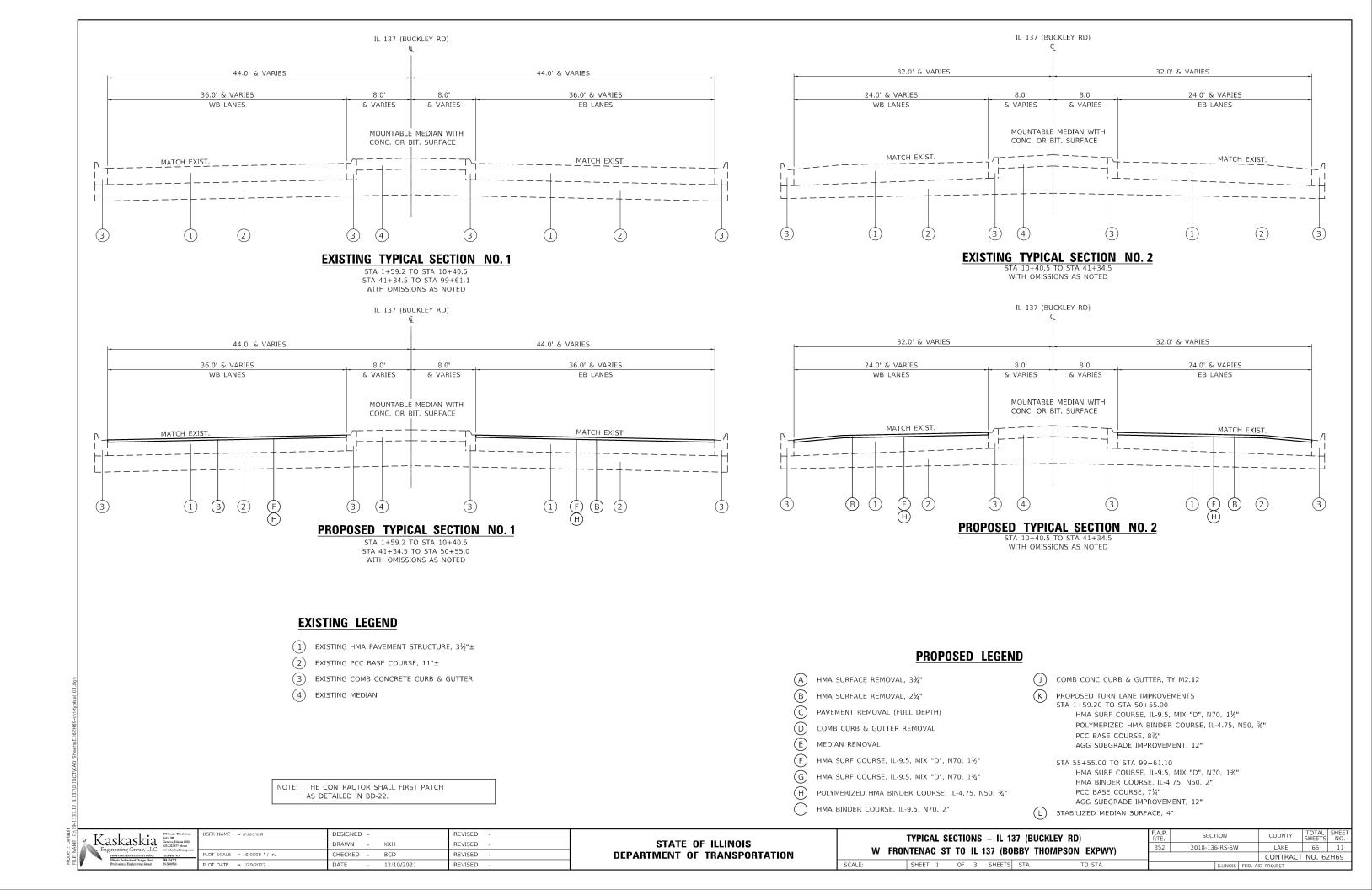
SUMMARY OF QUANTITIES - IL 137 (BUCKLEY RD) STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION DRAWN NDP REVISED 2018-136-RS-SW W FRONTENAC ST TO IL 137 (BOBBY THOMPSON EXPWY) PLOT SCALE = 0.0833 / / in. CHECKED BCD REVISED PLOT DATE = 12/23/2021 SHEET 8 OF 8 SHEETS STA. DATE 12/10/2021 REVISED -

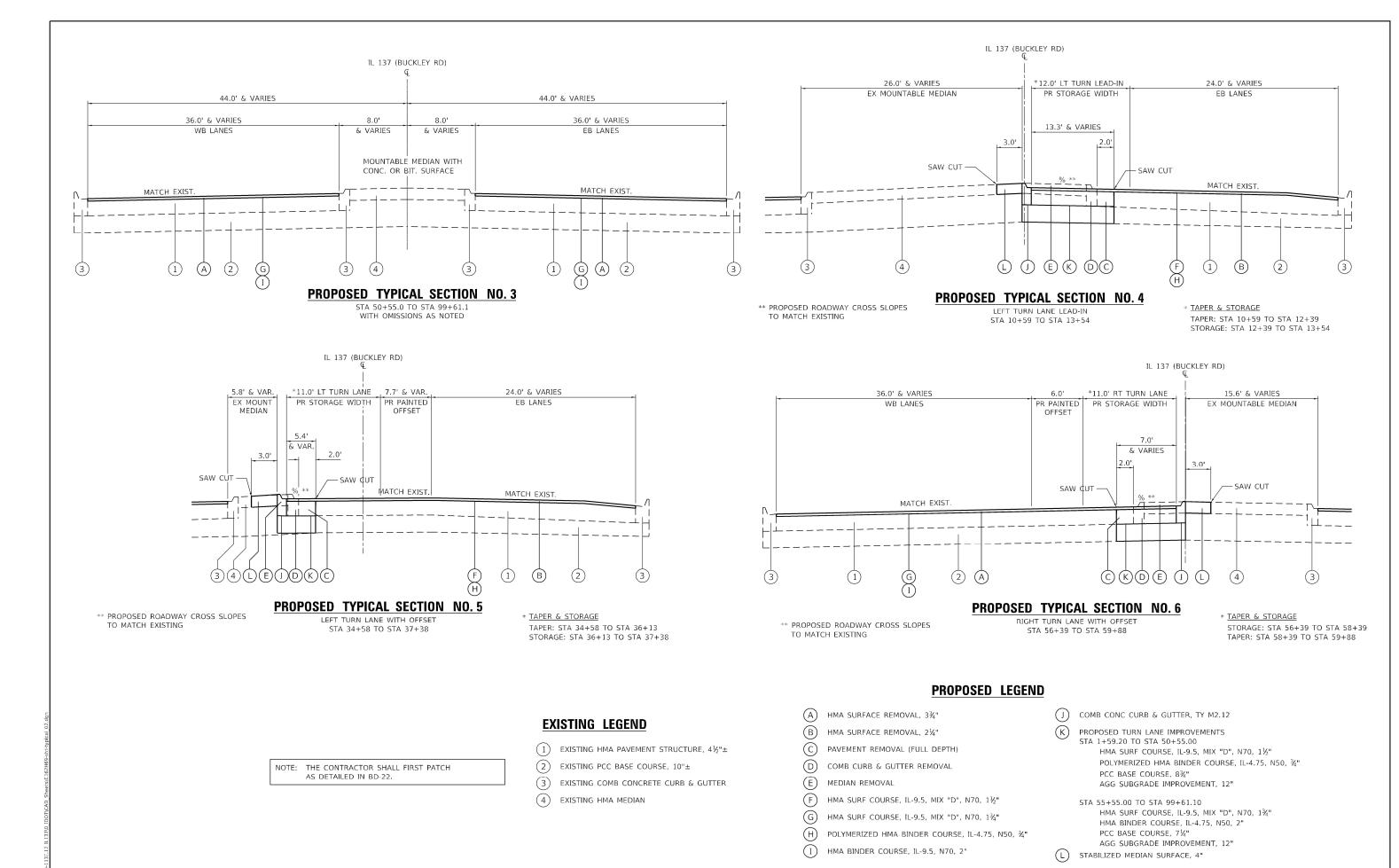
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Engineering Group, LLC

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				20% STATE	100% STATE	20% STATE
CODE	,		TOTAL	ROADWAY	ROADWAY	TRAFFIC SIGN
NO.	ITEM	UNIT	QUANTITY URBAN	0005	0005	0021
41.5			UKBAN	URBAN	URBAN	URBAN
Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	130		130	
17						
Z0018600	DRAINAGE STRUCTURES TO BE RECONSTRUCTED	EACH	10	10		
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	412	412		
Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1			
20033044	RE-OFTIMIZE TRAFFIC SIGNAL STSTEM LEVEL 1	EACH	1			1
20048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
20076600	TRAINEES	HOURS	500	500		
			i i		1	
20076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOURS	500	500		
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS - IL 137 (BUCKLEY RD)

W FRONTENAC ST TO IL 137 (BOBBY THOMPSON EXPWY)

SHEET 2 OF 3 SHEETS STA. TO STA.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS					
MIXTURE TYPE AIR VOIDS(%) @ N <sub>DES</sub>					
TEMPORARY RAMP,SPECIAL					
HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70	4% @ 70 GYR.	QC/QA			
PAVEMENT RESURFACING & TURN LANE IMPROVEMENTS					
HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70, 1½"	4% @ 70 GYR.	QCP			
HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70, 1¾"	4% @ 70 GYR.	QCP			
POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-4.75, N50, ¾"	3.5% @ 50 GYR.	QCP			
HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70, 2"	4% @ 70 GYR.	QCP			
MEDIAN SURFACE REMOVAL AND REPLACEMENT					
HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50, 2" MIN	4% @ 50 GYR.	QC/QA			
STABILIZED MEDIAN SURFACE					
HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50, 4" (IN 2 LIFTS)	4% @ 50 GYR.	QC/QA			
PAVEMENT PATCHING					
CLASS D PATCHES, (HMA BINDER IL-19.0 MM)	4% @ 70 GYR.	QC/QA			
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFOR	MANCE (QCP); PAY FOR PER	FORMANCE (PFP			

NOTE 1: THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT 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 OTHERWISE MODIFIED BY RECLAIMED MATERIAL SPECIFICATIONS.

NOTE 3: THE LONGITUDINAL JOINT SEALANT SHALL BE PLACED OVER THE HMA BINDER COURSE AND POLYMERIZED HMA BINDER COURSE.

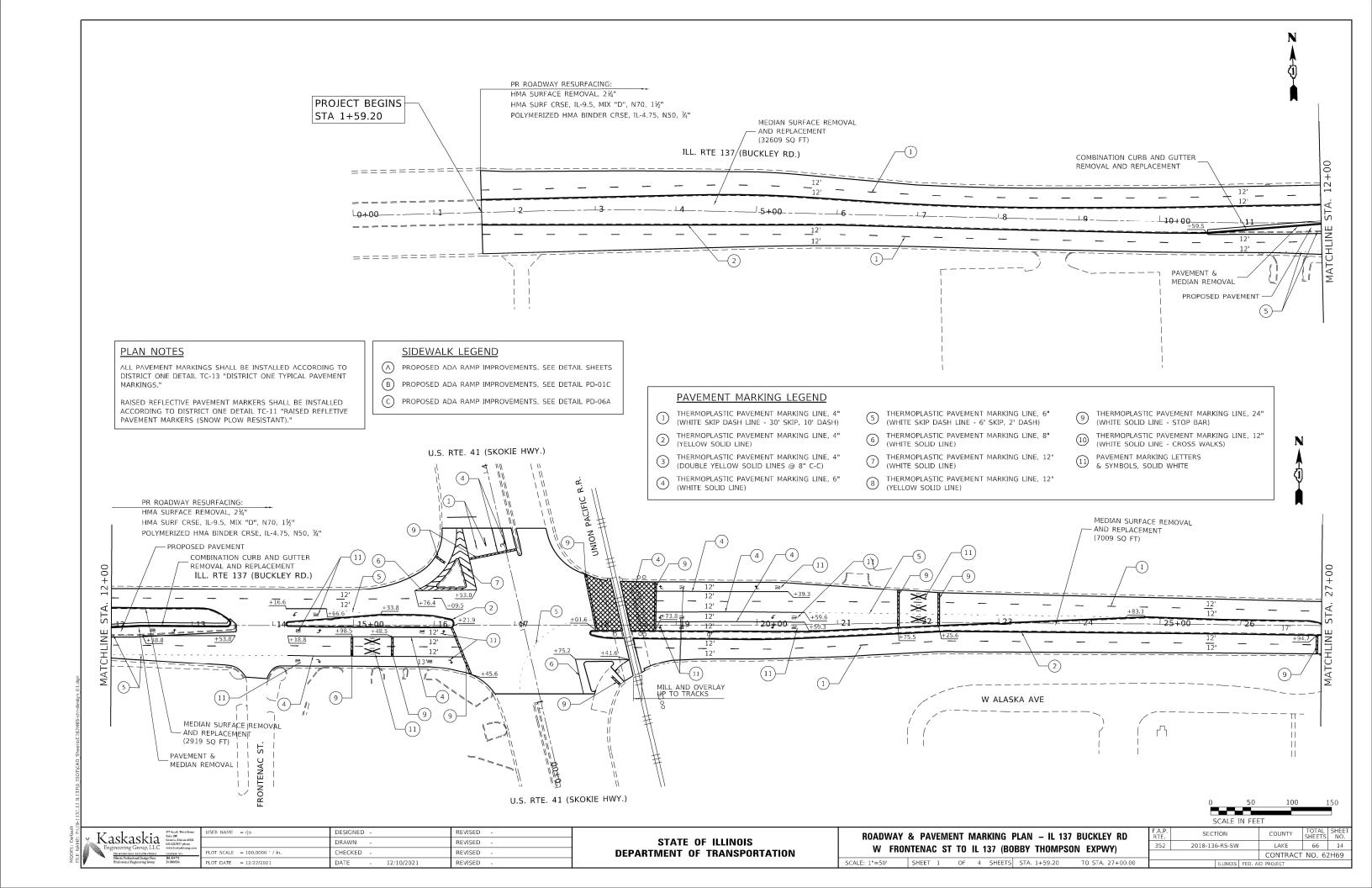
NOTE 4: TEMPORARY RAMP (SPECIAL): THE RAMPS SHALL BE CONSTRUCTED AT ALL DRIVEWAY ENTRANCES IMMEADIATELY UPON COMPLETION

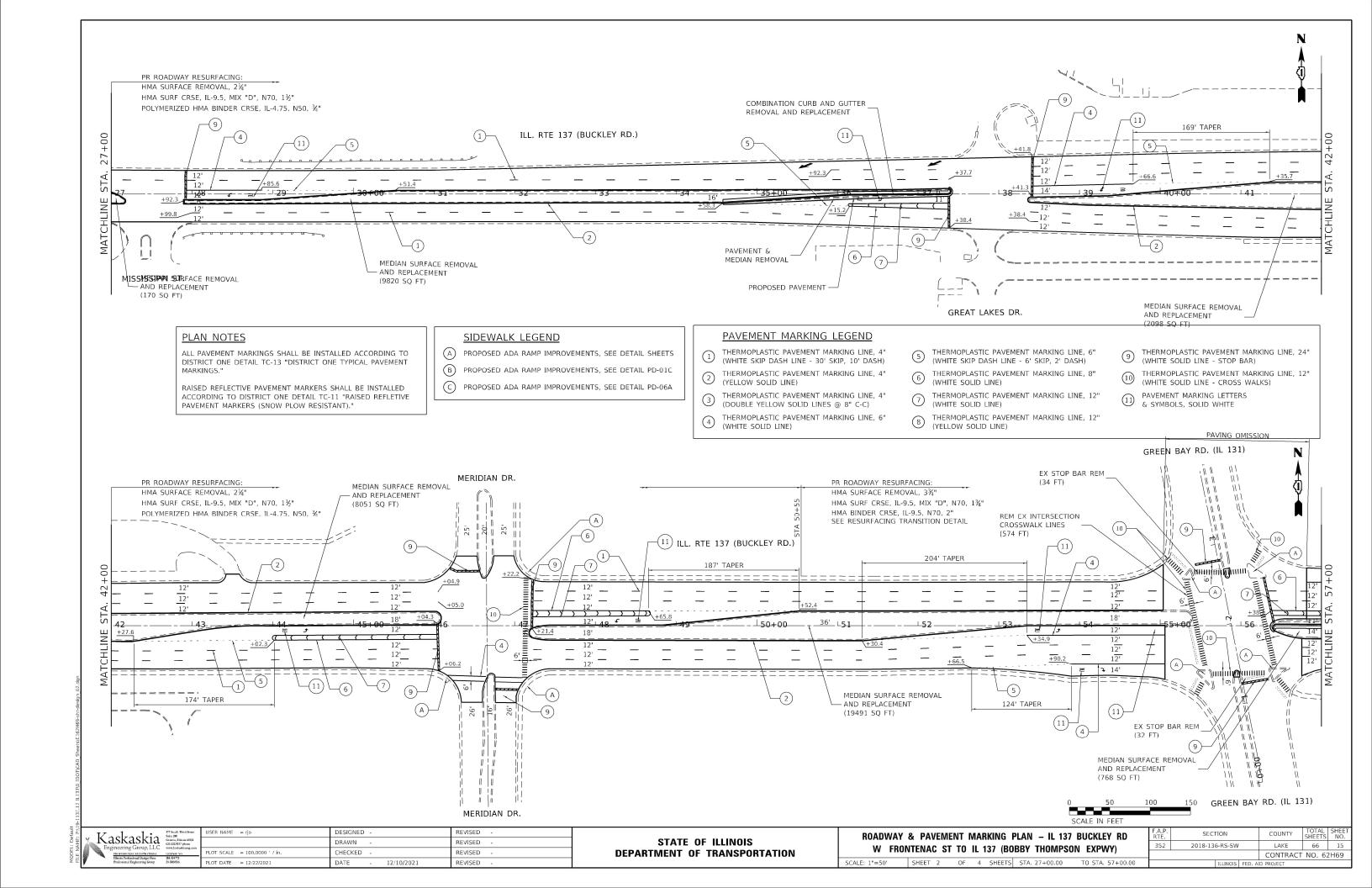
OF THE MILLING OPERATION AND WHEN THE DROP-OFF GREATER THAN 2.5".

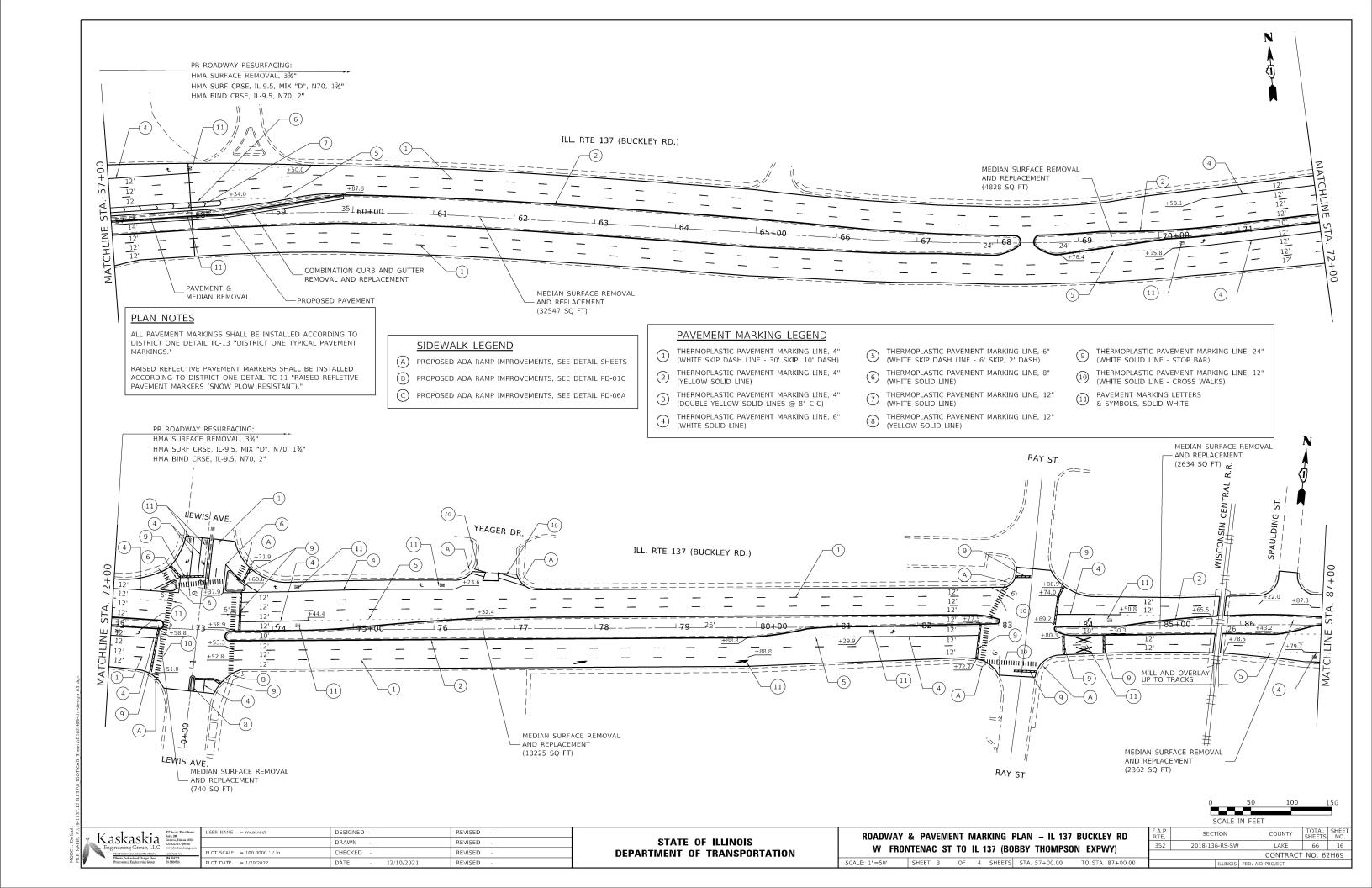
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SCALE	IN FEET		

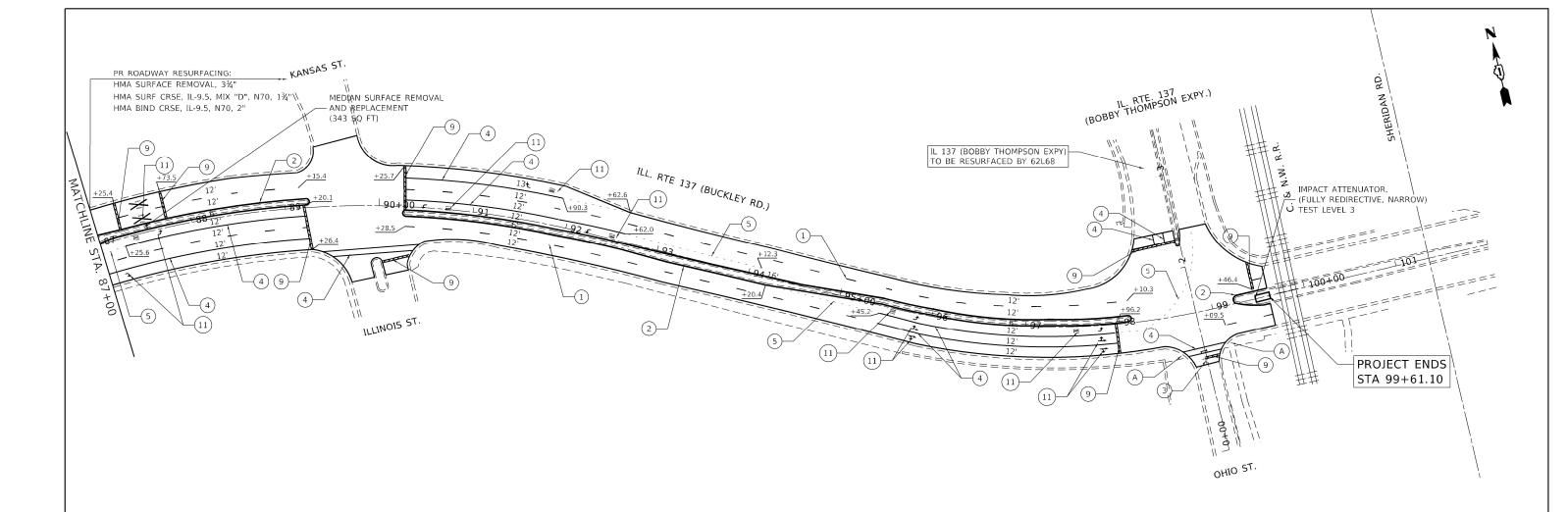
Kaskaskia Engineering Group, LLC PROFESSIONAL BEGISTRATIONS Illiois Professional Design Firm Professional Engineering Group	477 South Third Street Suite 280	USER NAME = msecrest	DESIGNED -	REVISED -	
	Geneva, Illinois 60134 630.332.9157 phone		DRAWN -	REVISED -	
	JICENSE NO. 184/04773	PLOT SCALE = 0.0833 ' / in.	CHECKED -	REVISED -	
			PLOT DATE = 1/20/2022	DATE - 12/10/2021	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  TYPICAL SECTIONS — HMA REQUIREMENTS TABLE IL 137 (BUCKLEY RD) — W FRONTENAC ST TO IL 137 (BOBBY THOMPSON EXPWY) SECTION COUNTY 2018-136-RS-SW LAKE 66 13 CONTRACT NO. 62H69 SHEET 3 OF 3 SHEETS STA.









#### PLAN NOTES

ALL PAVEMENT MARKINGS SHALL BE INSTALLED ACCORDING TO DISTRICT ONE DETAIL TC-13 "DISTRICT ONE TYPICAL PAVEMENT MARKINGS."

RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED ACCORDING TO DISTRICT ONE DETAIL TC-11 "RAISED REFLETIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)."

#### SIDEWALK LEGEND

- A PROPOSED ADA RAMP IMPROVEMENTS, SEE DETAIL SHEETS
- (B) PROPOSED ADA RAMP IMPROVEMENTS, SEE DETAIL PD-01C
- C PROPOSED ADA RAMP IMPROVEMENTS, SEE DETAIL PD-06A

#### PAVEMENT MARKING LEGEND

- THERMOPLASTIC PAVEMENT MARKING LINE, 4"
  (WHITE SKIP DASH LINE 30' SKIP, 10' DASH)
- THERMOPLASTIC PAVEMENT MARKING LINE, 4"
  (YELLOW SOLID LINE)
- THERMOPLASTIC PAVEMENT MARKING LINE, 4" (DOUBLE YELLOW SOLID LINES @ 8" C-C)
- THERMOPLASTIC PAVEMENT MARKING LINE, 6" (WHITE SOLID LINE)
- 5) THERMOPLASTIC PAVEMENT MARKING LINE, 6" (WHITE SKIP DASH LINE 6' SKIP, 2' DASH)
- 6 THERMOPLASTIC PAVEMENT MARKING LINE, 8" (WHITE SOLID LINE)
- 7 THERMOPLASTIC PAVEMENT MARKING LINE, 12" (WHITE SOLID LINE)
- THERMOPLASTIC PAVEMENT MARKING LINE, 12" (YELLOW SOLID LINE)
- 9 THERMOPLASTIC PAVEMENT MARKING LINE, 24" (WHITE SOLID LINE STOP BAR)
- THERMOPLASTIC PAVEMENT MARKING LINE, 12" (WHITE SOLID LINE CROSS WALKS)
- PAVEMENT MARKING LETTERS & SYMBOLS, SOLID WHITE

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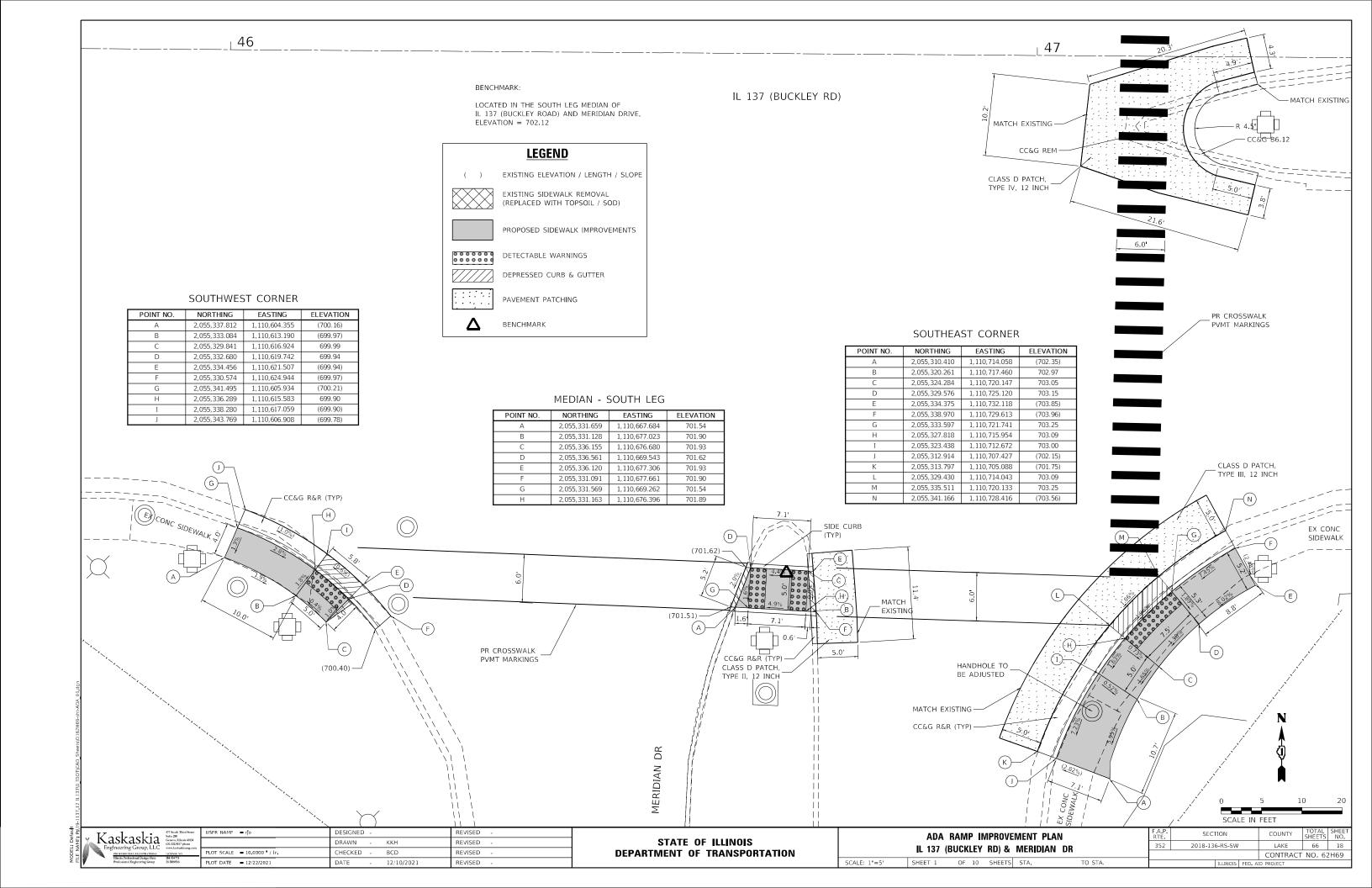
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

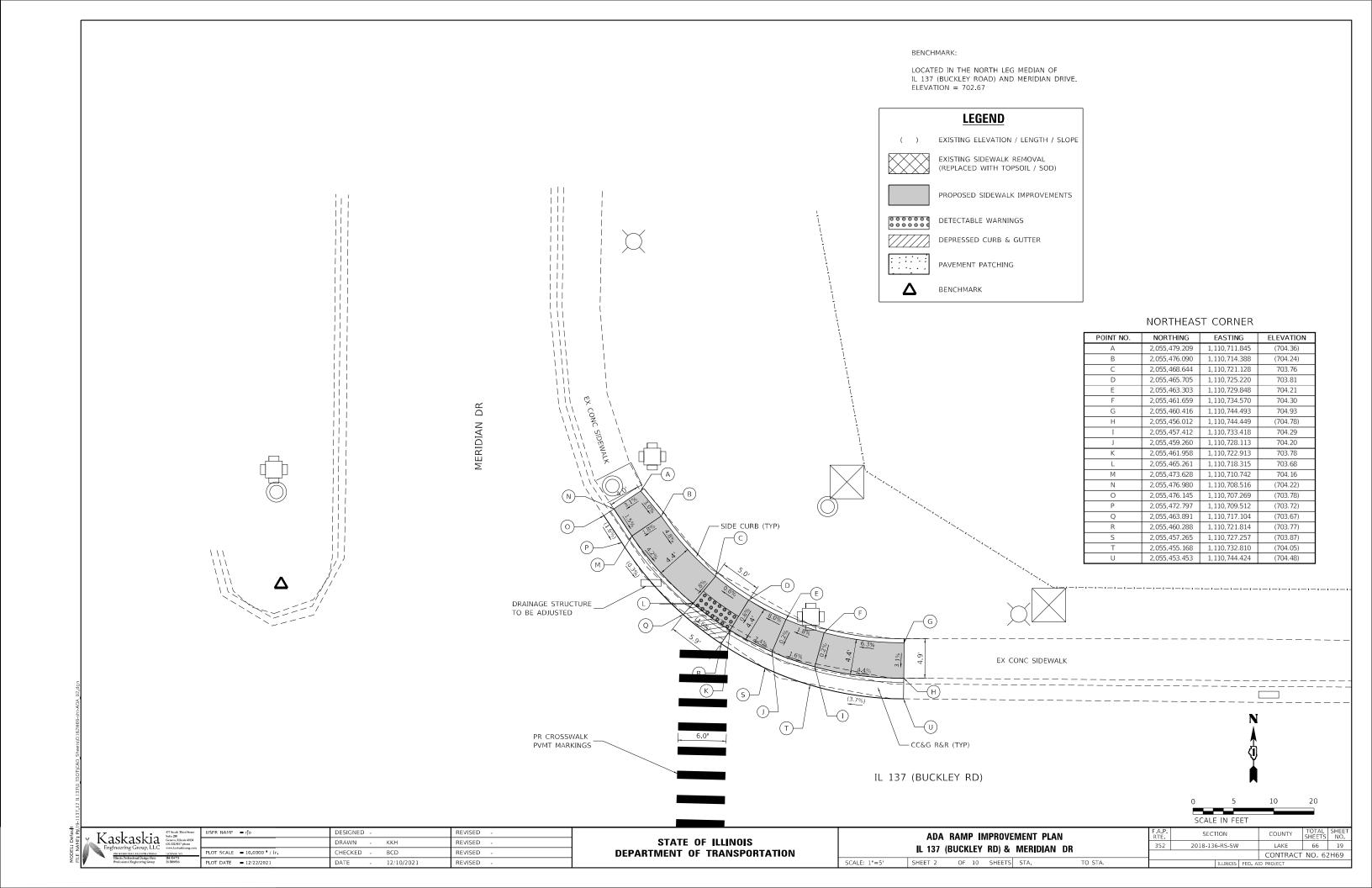
 ROADWAY & PAVEMENT MARKING PLAN – IL 137 BUCKLEY RD

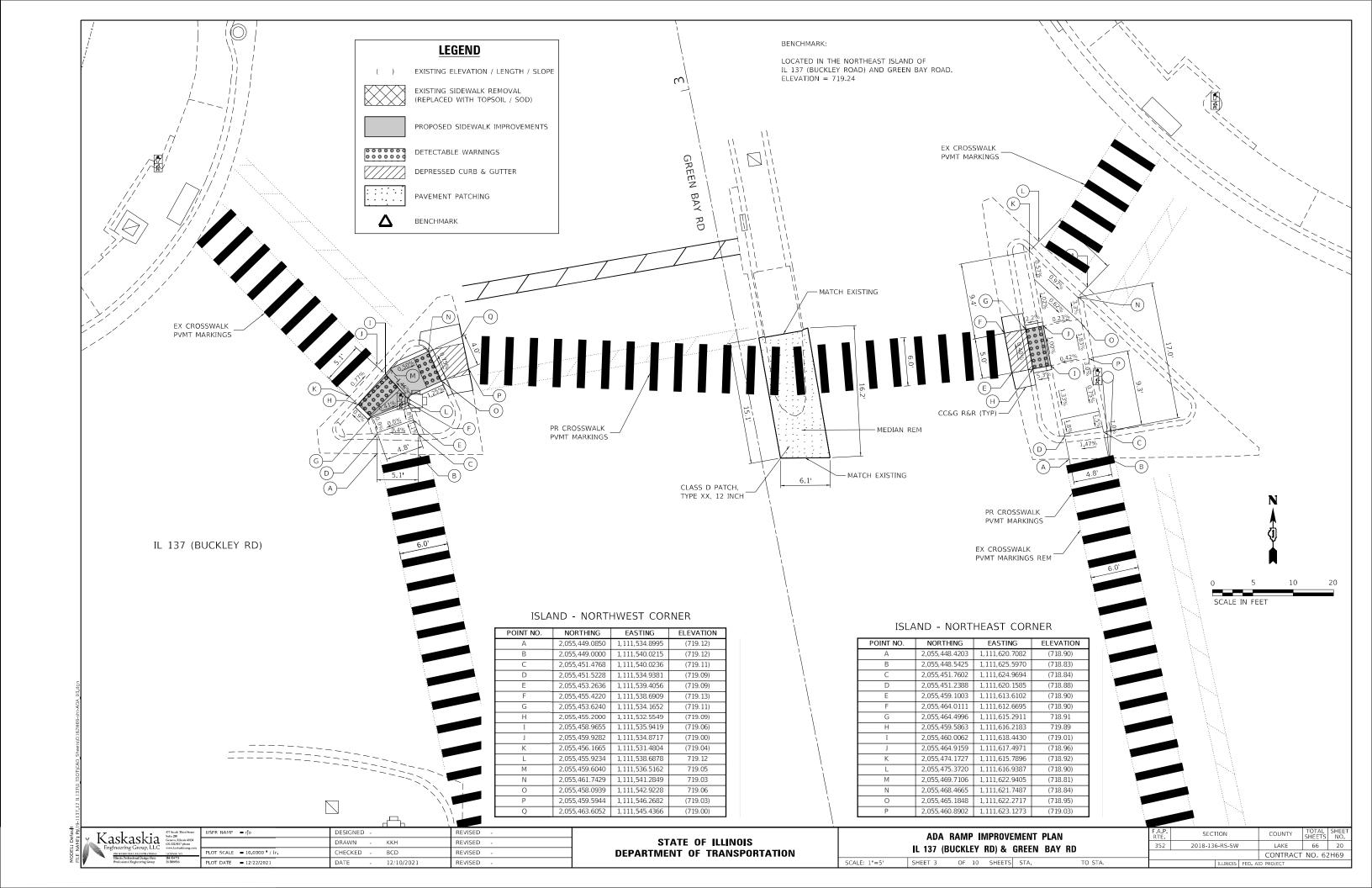
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 IL 137 (BOBBY THOMPSON EXPWY)

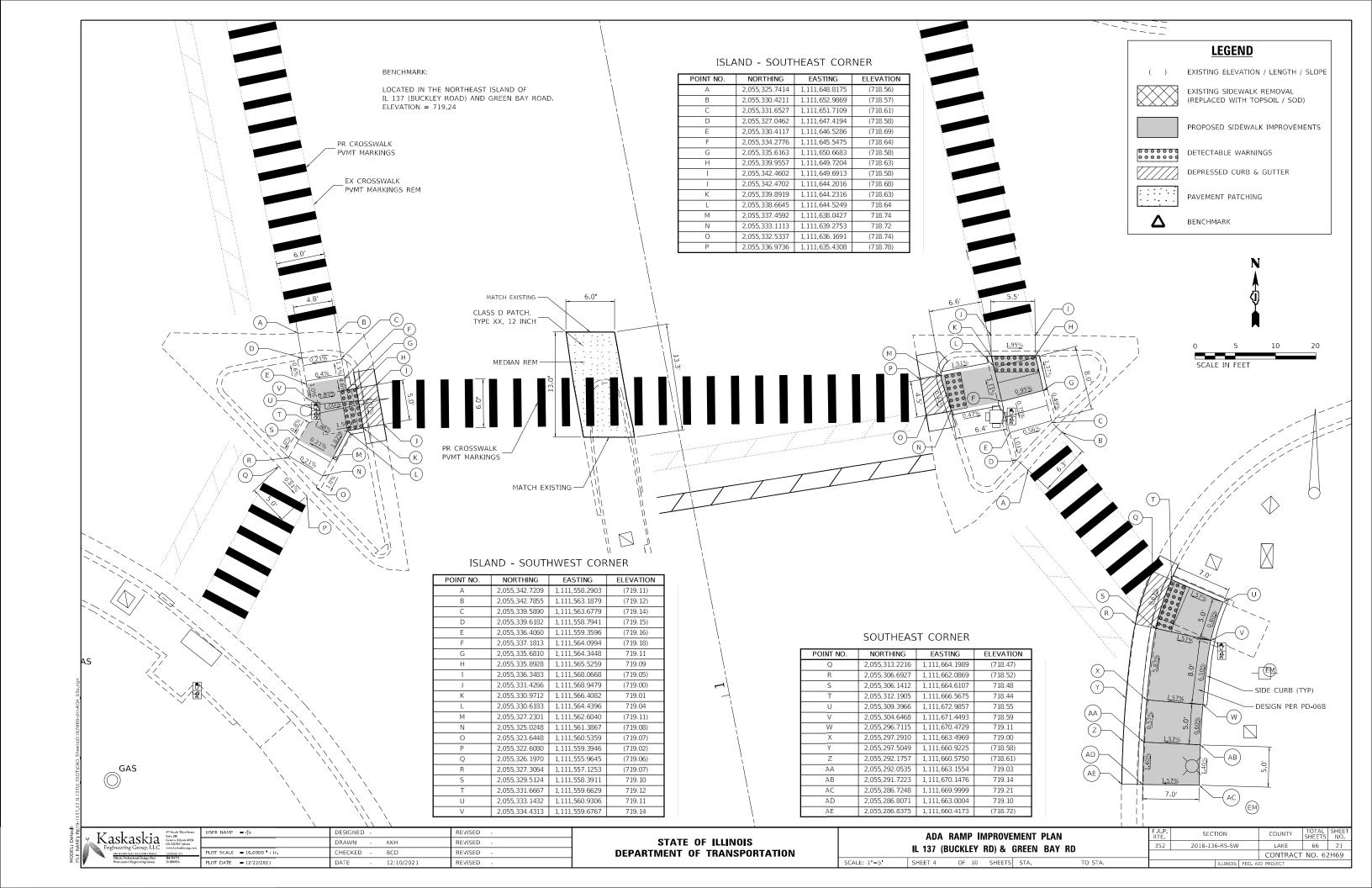
 E: 1"=50"
 SHEET 4
 OF 4 SHEETS STA. 87+00.00
 TO STA. 99+61.10

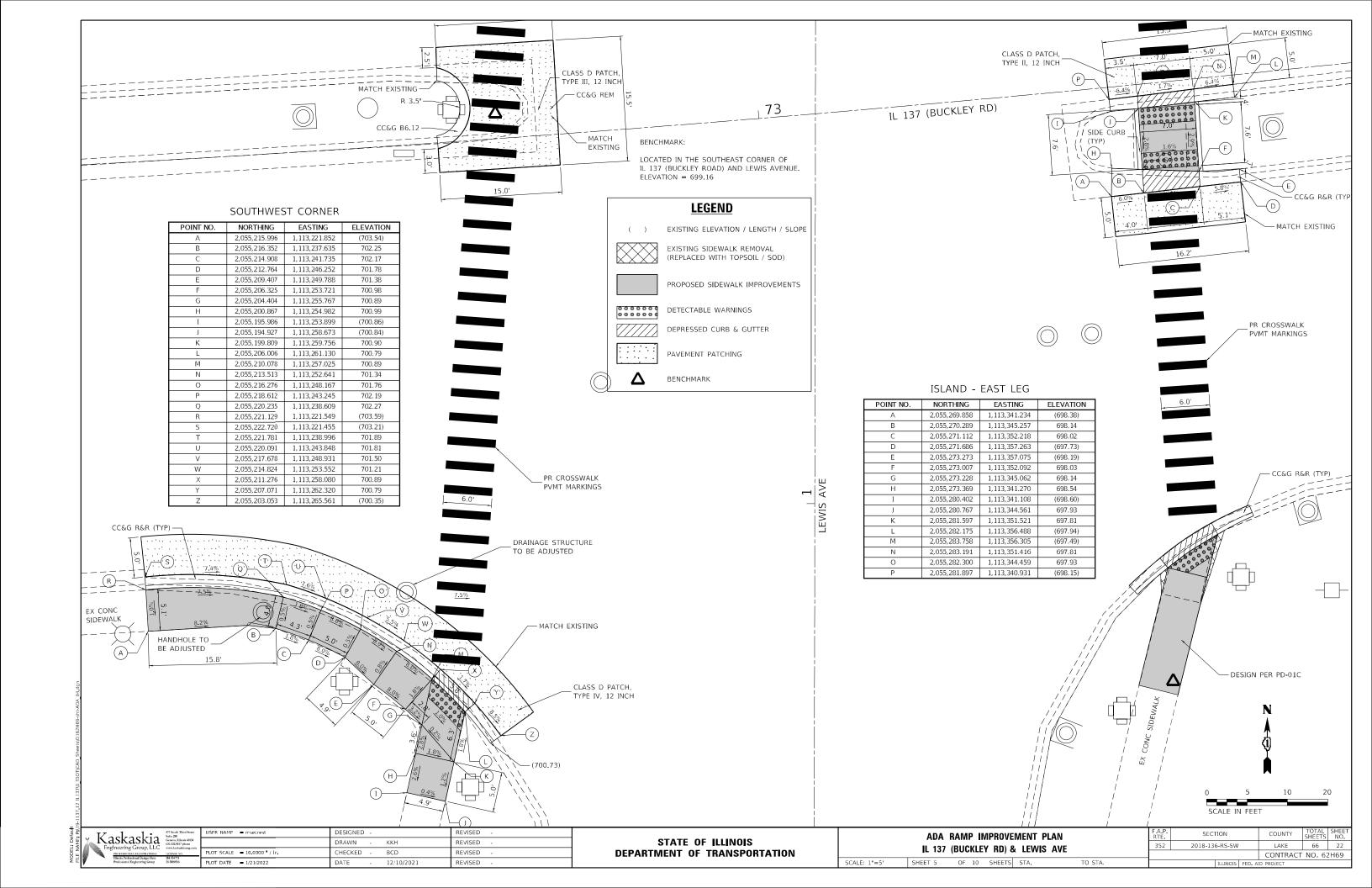
F.A.P. RTE. SECTION COUNTY TOTAL SHEET'S NO. 352 2018-136-RS-SW LAKE 66 17 CONTRACT NO. 62H69

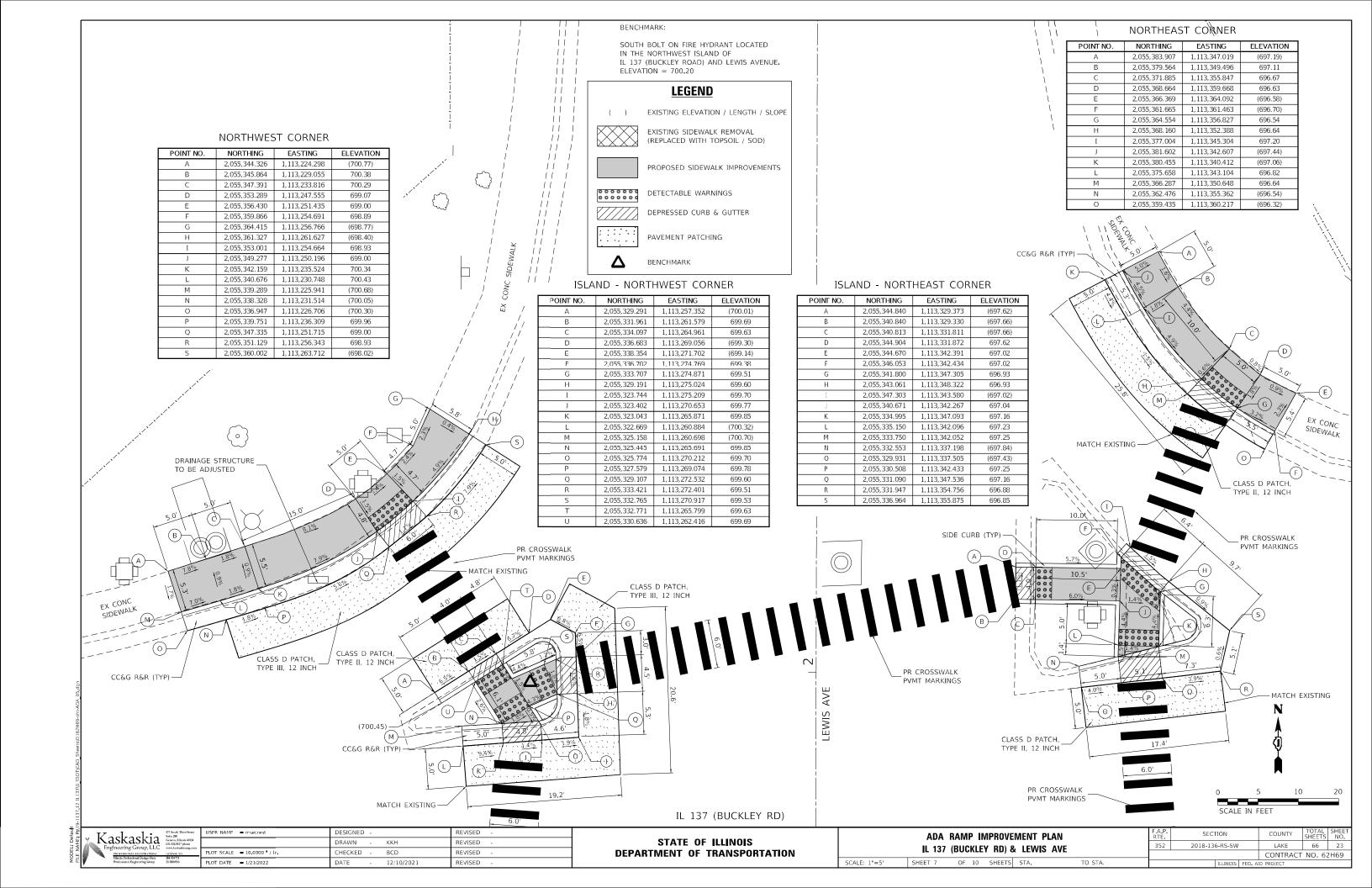


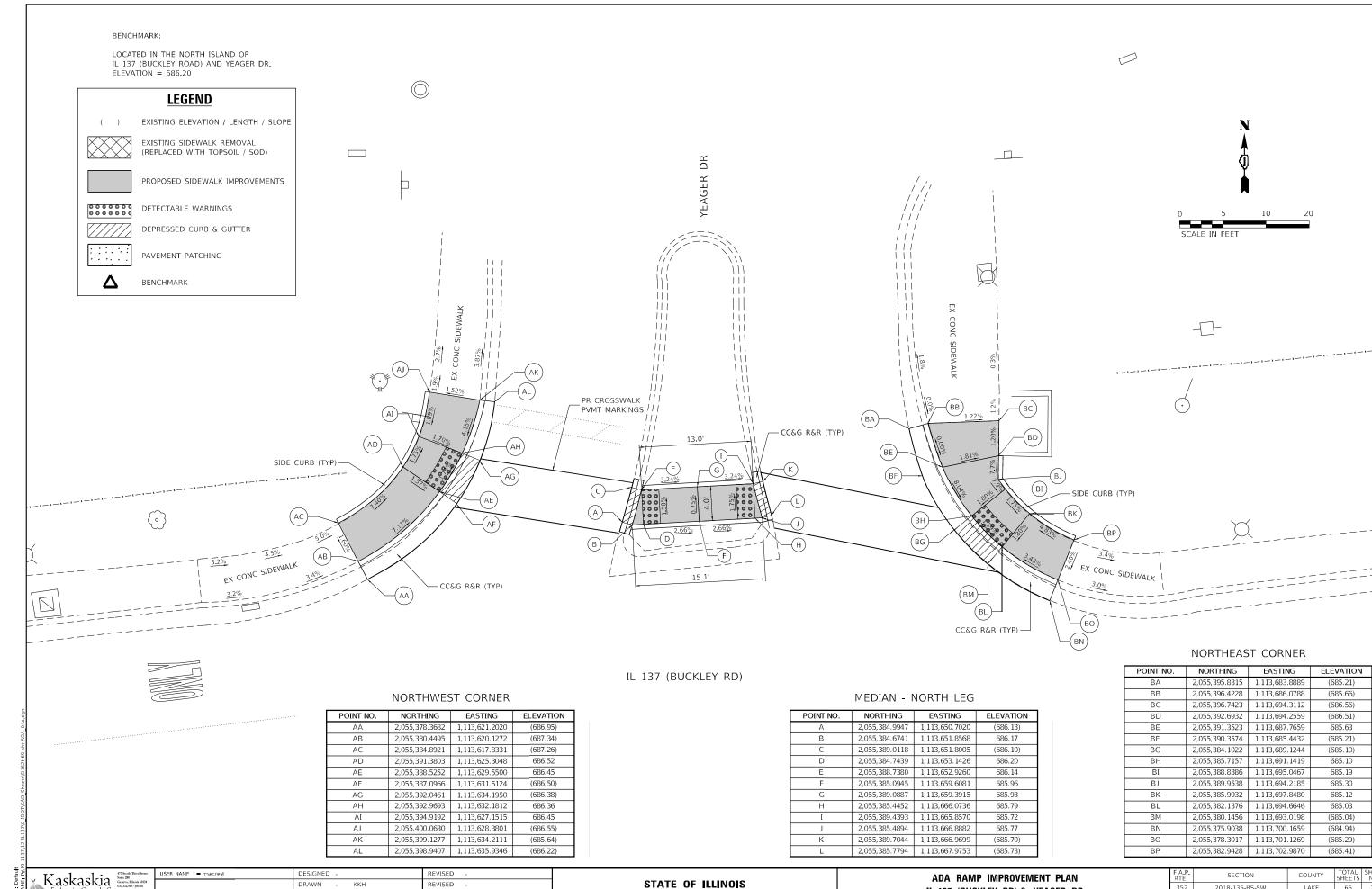












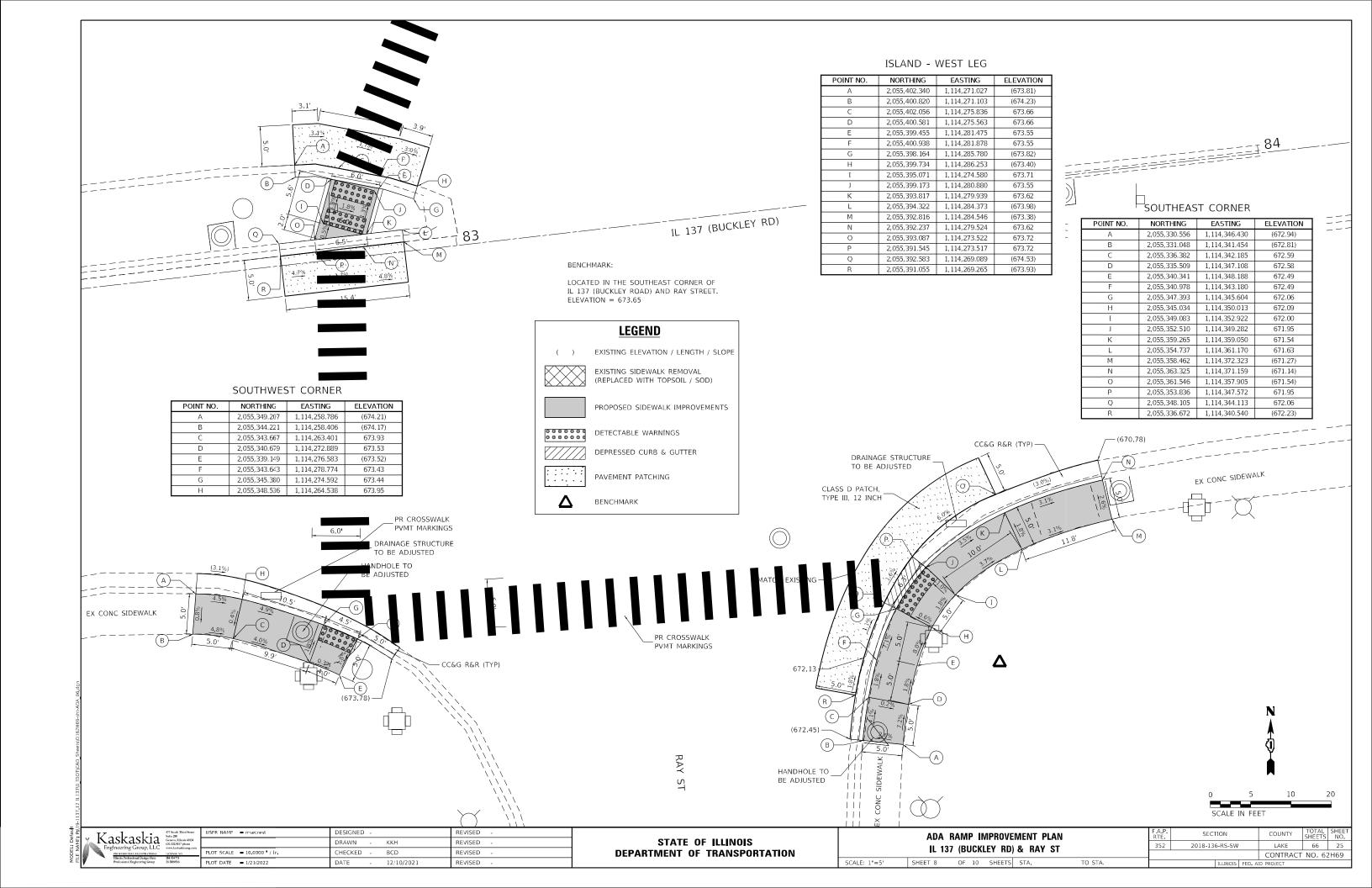
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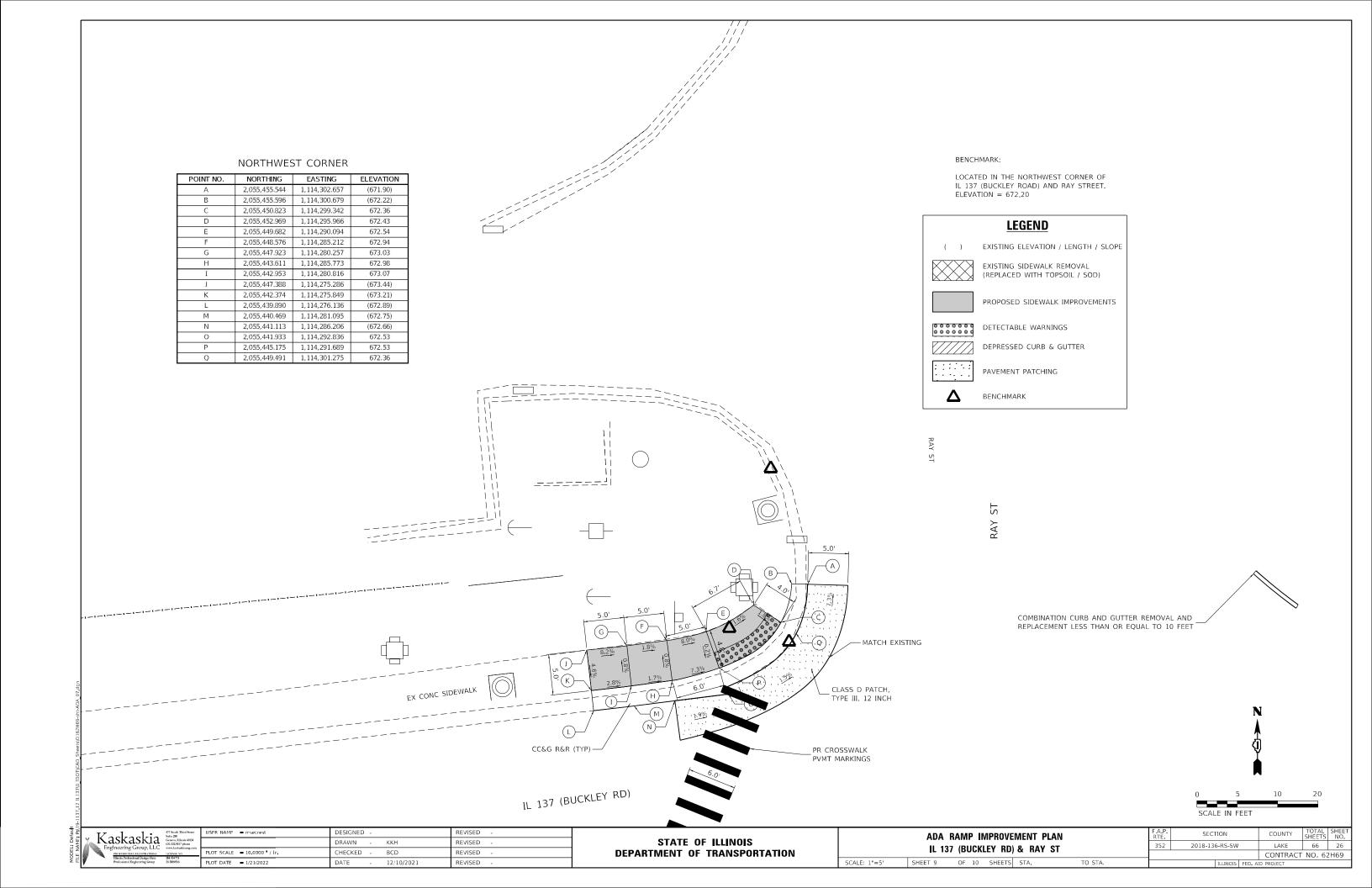
**DEPARTMENT OF TRANSPORTATION** 

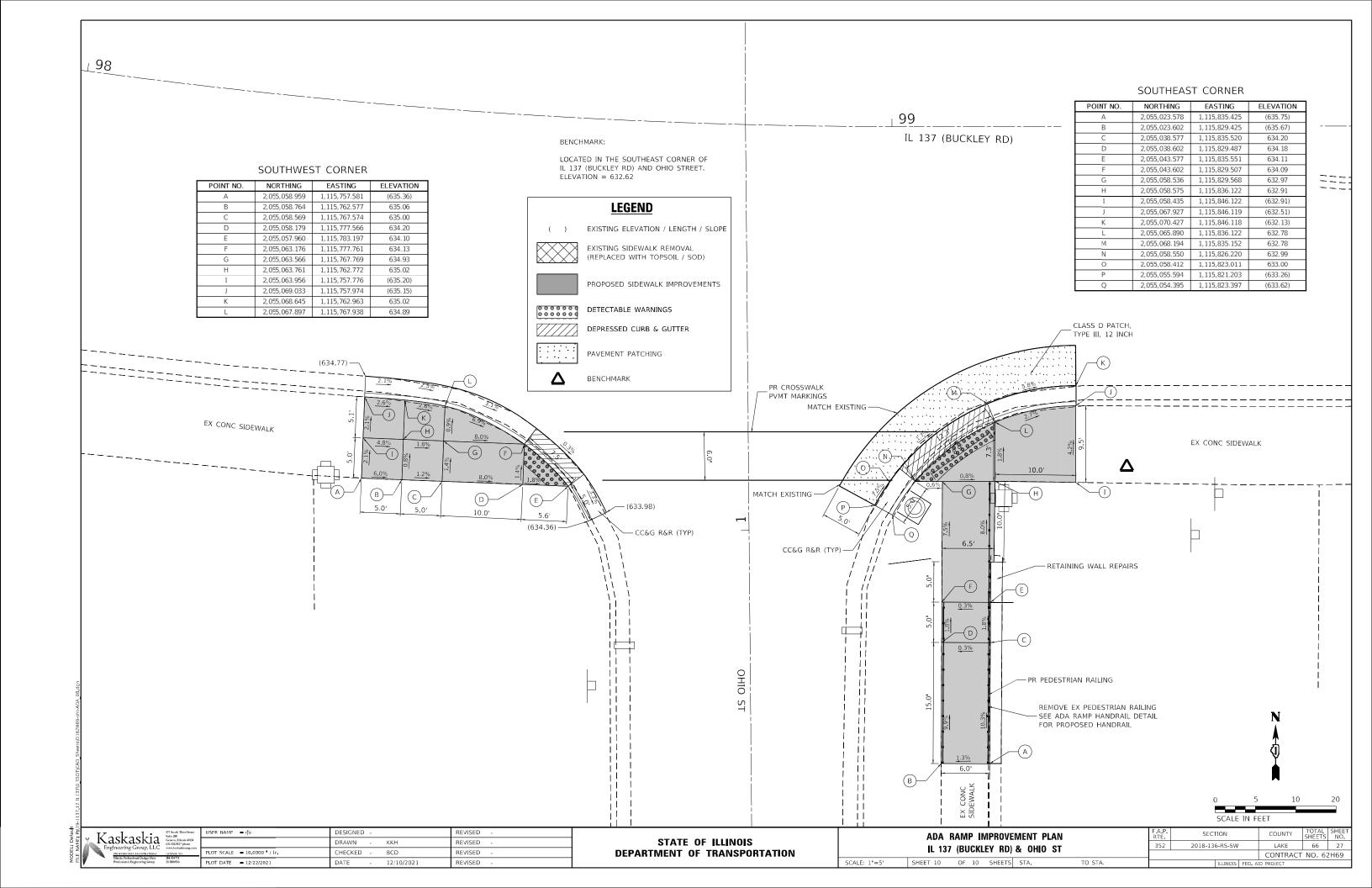
IL 137 (BUCKLEY RD) & YEAGER DR SHEET 6 OF 10 SHEETS STA.

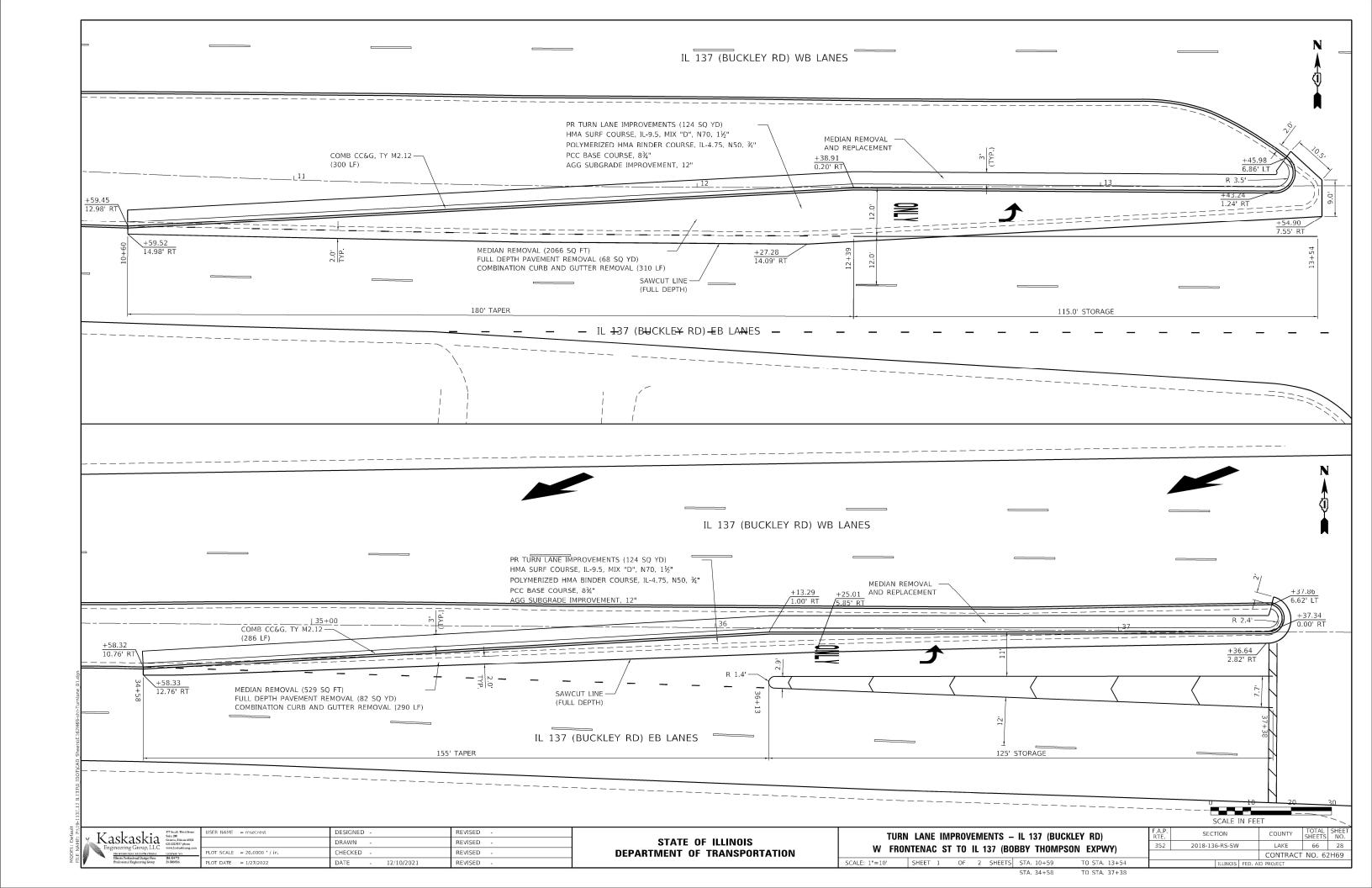
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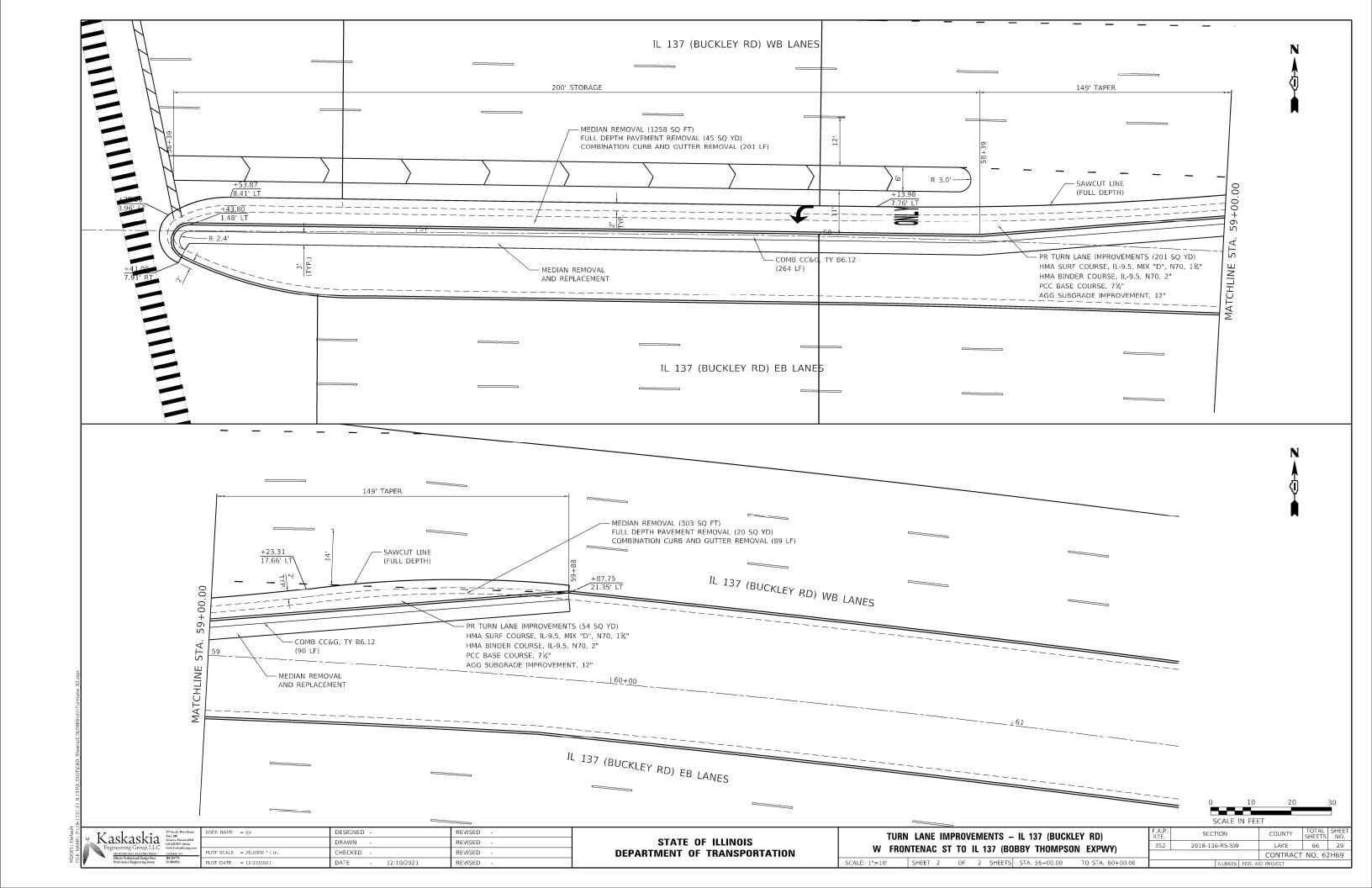
2018-136-RS-SW LAKE 66 24 CONTRACT NO. 62H69

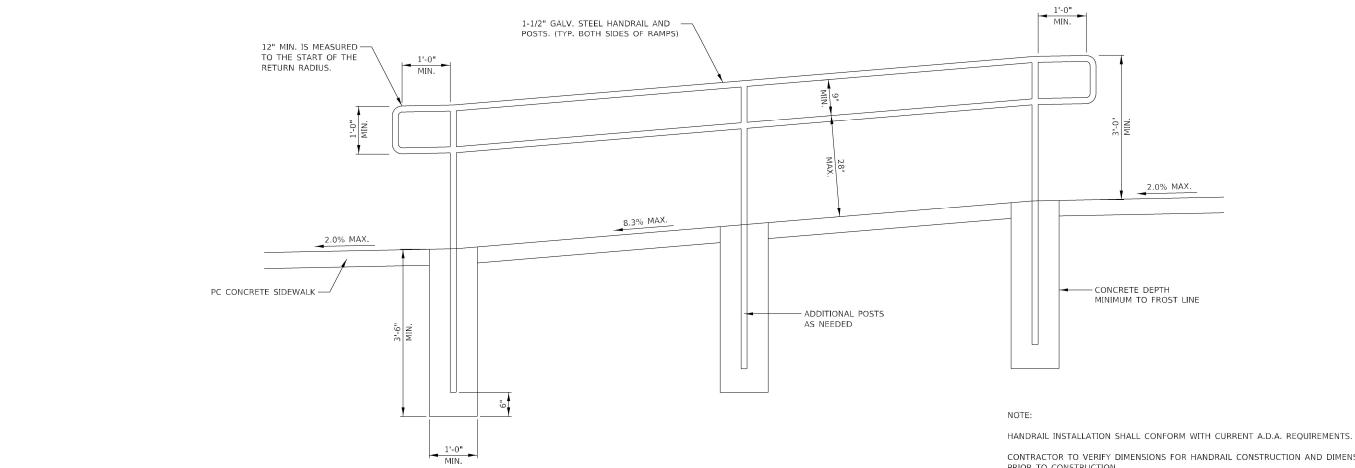






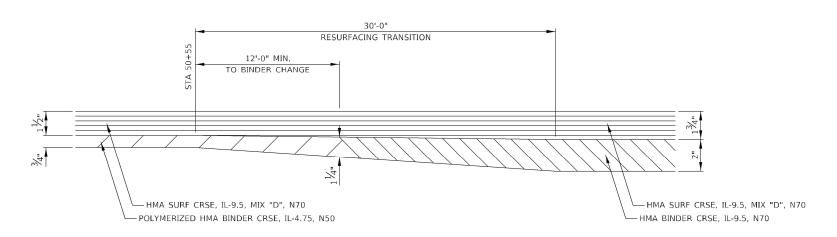






#### ADA RAMP HANDRAIL DETAIL

NOT TO SCALE



CONTRACTOR TO VERIFY DIMENSIONS FOR HANDRAIL CONSTRUCTION AND DIMENSIONS PRIOR TO CONSTRUCTION.

EXTENSIONS 12" LONG MIN. IN THE SAME DIRECTION OF THE TRAVEL ARE REQUIRED AT THE TOP AND BOTTOM OF RUNS TO PROVIDE SUPPORT BEFORE ENTERING OR

HANDRAILS MUST BE CONTINUOUS THE FULL LENGTH OF THE RUN AND TOPS AND SIDES OF GRIPPING SURFACE CANNOT BE OBSTRUCTED.

BOTTOM GRIPPING SURFACE CAN BE OBSTRUCTED UP TO 20% OF THE LENGTH.

DISTANCE BETWEEN HANDRAILS TO BE MAXIMIZED BASED ON RAMP WIDTH AND LOCATION OF FOOTINGS MINIMUM CLEARANCE 36".

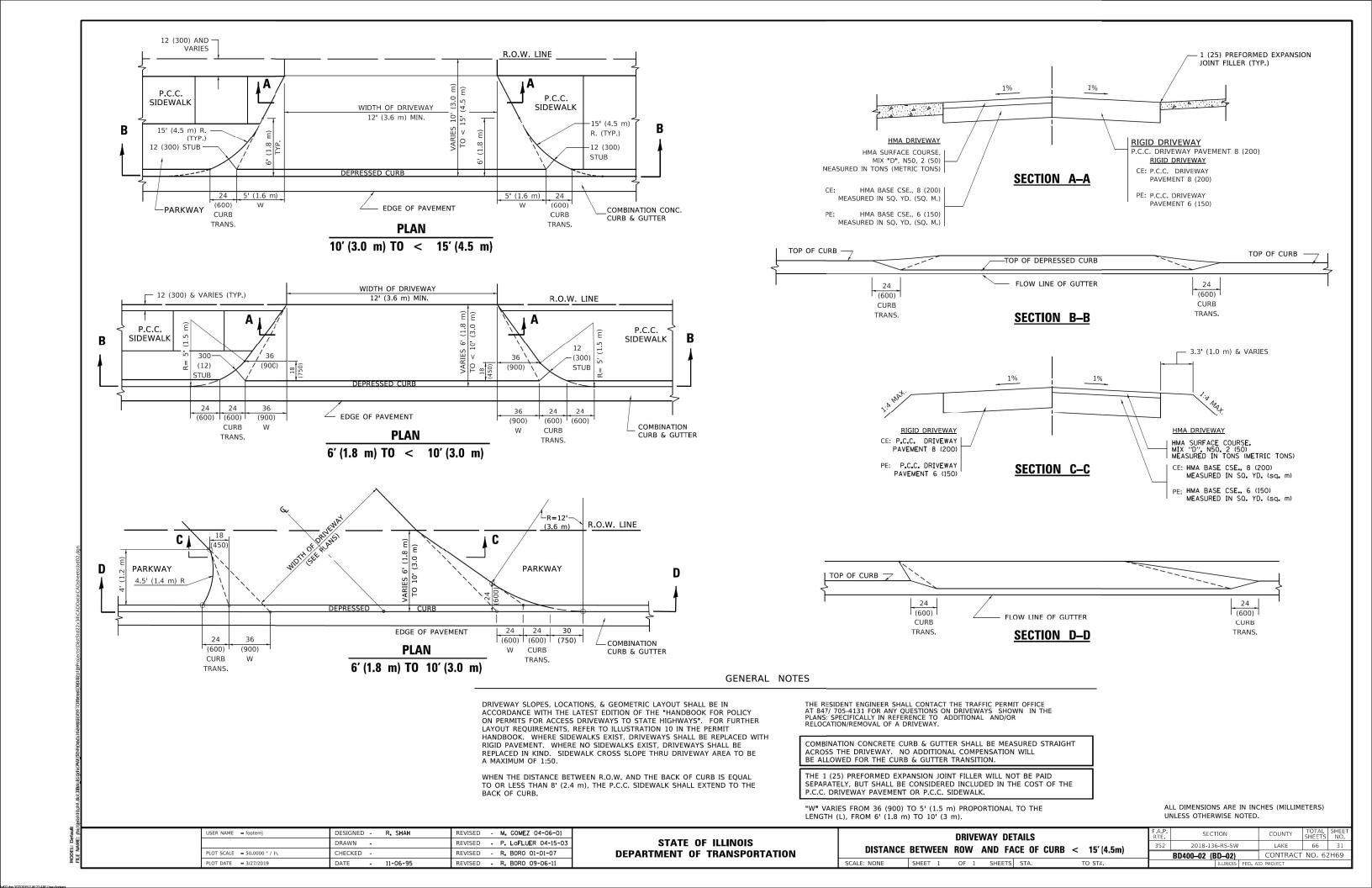
RESURFACING	TRANSITION	DETAIL
NC NC	T TO SCALE	

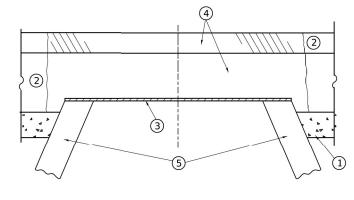
V a alza alzia	477 Smath Third Street Suite 280	USER NAME = rjo	DESIGNED -	REVISED -	
	ASKASKIA gineering Group, LLC	Geneva, Elinois 60134 630.332.9157 phone www.kaskaskiazne.com		DRAWN - KKH	REVISED -
En	PROFESSIONAL REGISTRATIONS	LICENSE NO. 184)/64773	PLOT SCALE = 2.0000 ' / in.	CHECKED - BCD	REVISED -
-	Hinois Professional Design Firm Professional Engineering Group	21-5080586	PLOT DATE = 12/22/2021	DATE - 12/10/2021	REVISED -

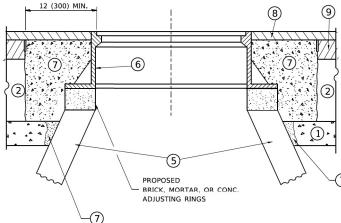
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

CON	CONSTRUCTION DETAILS – IL 137 (BUCKLEY RD) W FRONTENAC ST TO IL 137 (BOBBY THOMPSON EXPWY)						COUNTY
W FRON							LAKE
W THOMELIANO ST TO IL 137 (DOBBT THOMESON EXTWIT)							CONTRAC
SCALE: N.T.S.	SHEET OF	SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT

TOTAL SHEET NO.







#### NOTES

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

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED 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
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM  $1\frac{1}{2}$  (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 EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

#### LEGEND

1 SUB-BASE GRANULAR MATERIAL

5 EXISTING STRUCTURE

- 6 FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- (7) CLASS PP-1 \*CONCRETE
- 3 36 (900) DIAMETER METAL PLATE
- 8) PROPOSED HMA SURFACE COURSE
- PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- (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**

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

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

 USER NAME
 = footemj
 DESIGNED
 R. SHAH
 REVISED
 R. WEDEMAN 05-14-04

 DRAWN
 REVISED
 R. BORO 01-01-07

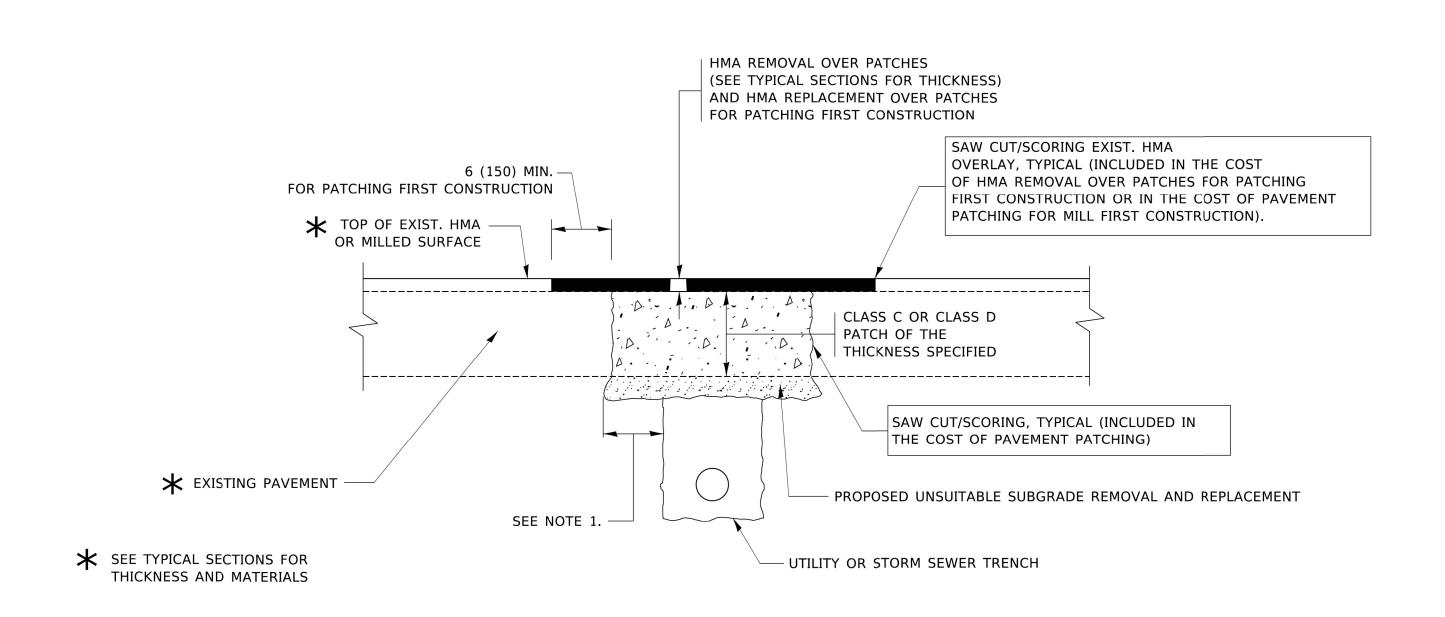
 PLOT SCALE
 = 50,0000 '/ in.
 CHECKED
 REVISED
 R. BORO 03-09-11

 PLOT DATE
 = 3/27/2019
 DATE
 10-25-94
 REVISED
 R. BORO 12-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMES AND LIDS ADJUSTMENT WITH MILLING

SHEET 1 OF 1 SHEETS STA. TO STA.



#### **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)**

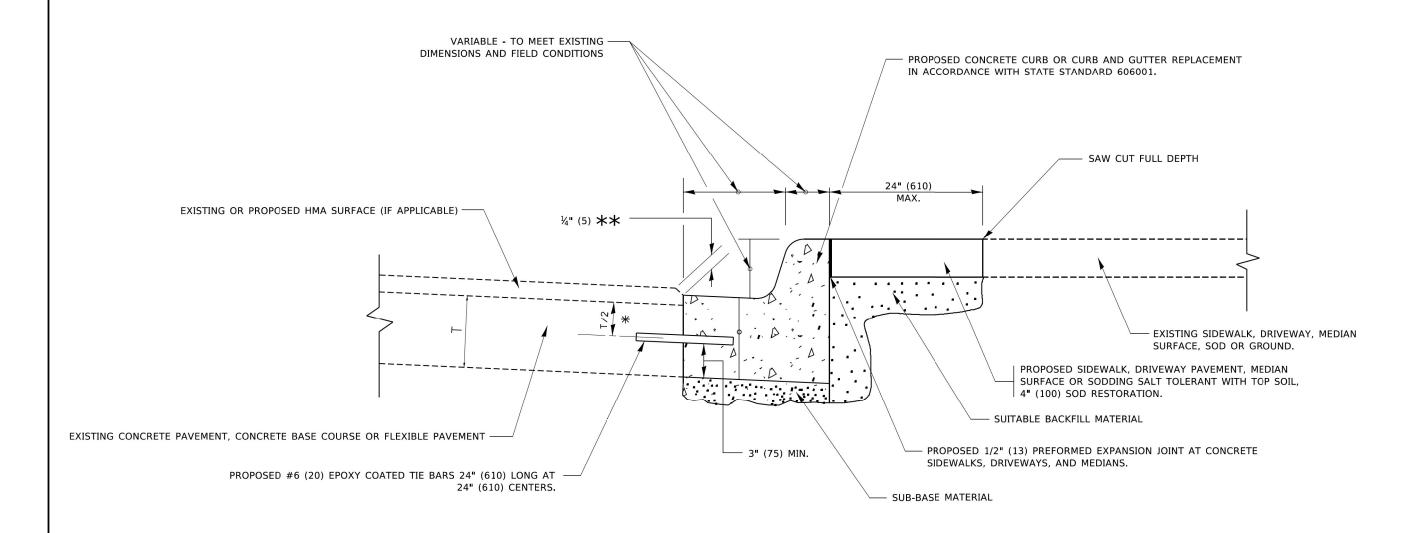
- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

### **SEQUENCE OF CONSTRUCTION (MILLING FIRST)**

- 1. MILL HMA FIRST IF THERE IS AT LEAST 4½ 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 = footemj	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98		PAVEMENT PATCHING FOR	RTF	SECTION	COUNTY	SHEETS N	10.
	DRAWN -	REVISED - R. BORO 01-01-07	STATE OF ILLINOIS	HMA SURFACED PAVEMENT	352	2018-136-RS-SW	LAKE	66 .	33
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 09-04-07	DEPARTMENT OF TRANSPORTATION	HIMA SUKFACED PAVEINENT		3D400-04 (BD-22)	CONTRAC	T NO. 62H€	59
PLOT DATE = 3/27/2019	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED. A	ID PROJECT		

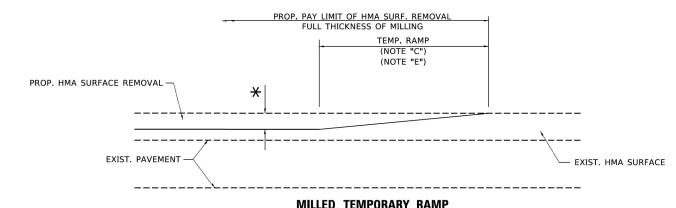


- X 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- $\star\star$  IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

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

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

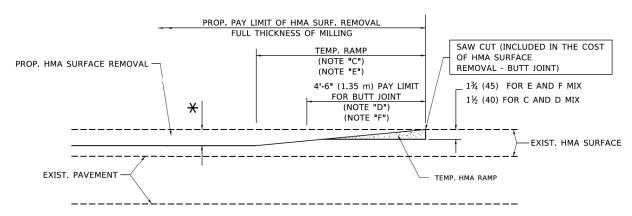
USER NAME = footemj	DESIGNED - A. HOUSEH	REVISED - A. ABBAS 03-21-97			CURB OR CURB AND GUTTER	RTE	SECTION	COUNTY	SHEETS	NO.
	DRAWN -	REVISED - M. GOMEZ 01-22-01	STATE OF ILLINOIS		REMOVAL AND REPLACEMENT	352	2018-136-RS-SW	LAKE	66	34
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 12-15-09	DEPARTMENT OF TRANSPORTATION		NEWOVAL AND NEPLAGEWENT	E	3D600-06 (BD-24)	CONTRAC	T NO. 67	2H69
PLOT DATE = 7/11/2019	DATE - 03-11-94	REVISED - K. SMITH 07-11-19		SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED.	AID PROJECT		



#### **MILLED TEMPORARY RAMP**

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

#### OPTION 1

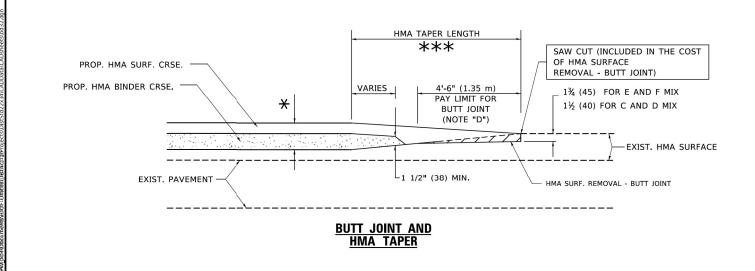


#### HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

#### OPTION 2

## TYPICAL TEMPORARY RAMP



# TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

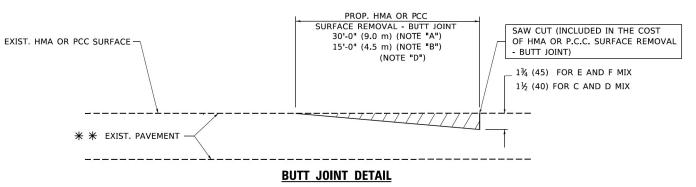
USER NAME = footemj DESIGNED - M. DE YONG DRAWN REVISED - A. ABBAS 03-21-97 PLOT SCALE = 50.0000 ' / in. CHECKED -REVISED -M. GOMEZ 04-06-01 PLOT DATE = 3/27/2019 R BORO 01-01-07 DATE REVISED -

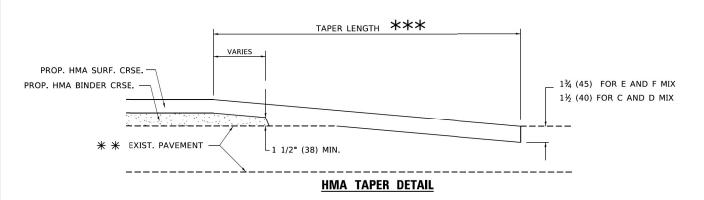
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

**BUTT JOINT AND HMA TAPER DETAILS** OF 1 SHEETS STA. SHEET 1

TO STA

2018-136-RS-SW LAKE 66 35 BD400-05 BD32 CONTRACT NO. 62H69





# TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

\*\* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

#### **NOTES**

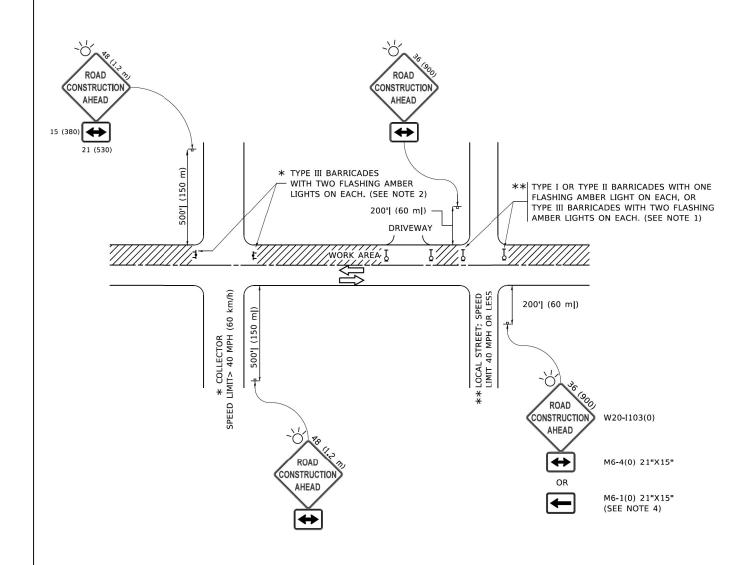
- A. MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B. MINOR SIDE ROADS.
- C. THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D. THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E. TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (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.



#### NOTES:

- 1. SIDE ROAD WITH A SPFFD 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.
- 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)
- 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).

- 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.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- 7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

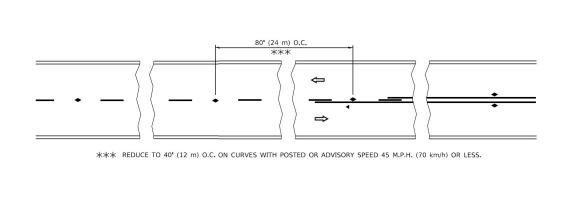
All dimensions are in inches (millimeters) unless otherwise shown.

USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
	DRAWN -	REVISED - T. RAMMACHER 01-06-00
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
PLOT DATE = 3/4/2019	DATE - 06-89	REVISED _ A. SCHUETZE 09-15-16

STATE OF ILLINOIS							
DEPARTMENT	0F	TRANSPORTATION					

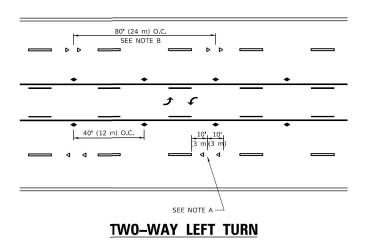
				L AND F		 	
SHEET	1	OF	1	SHEETS	STA.	TO STA	

F.A.P. RTE	SEC <sup>-</sup>	LION	COUNTY	COUNTY TOTAL SHEETS			
352	2018-13	6-RS-SW	LAKE	66	36		
	TC-10		CONTRACT	NO. 62	2H69		
		ILLINOIS	FED. A	D PROJECT			



# LANE REDUCTION TRANSITION

SEE FIGURE 3B-14 MUTCD



SYMBOLS

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

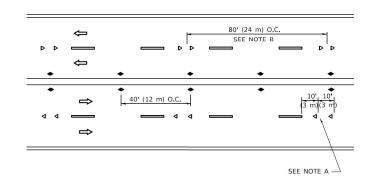
YELLOW STRIPE

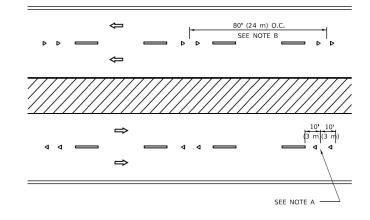
■ WHITE STRIPE

#### TWO-LANE/TWO-WAY

O.C.

40' (12 m)

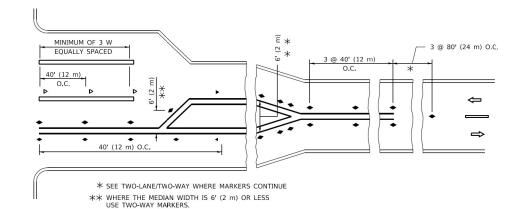




MULTI-LANE/DIVIDED

#### MULTI-LANE/UNDIVIDED

3 @ 80' (24 m) O.C.



## 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.
- 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

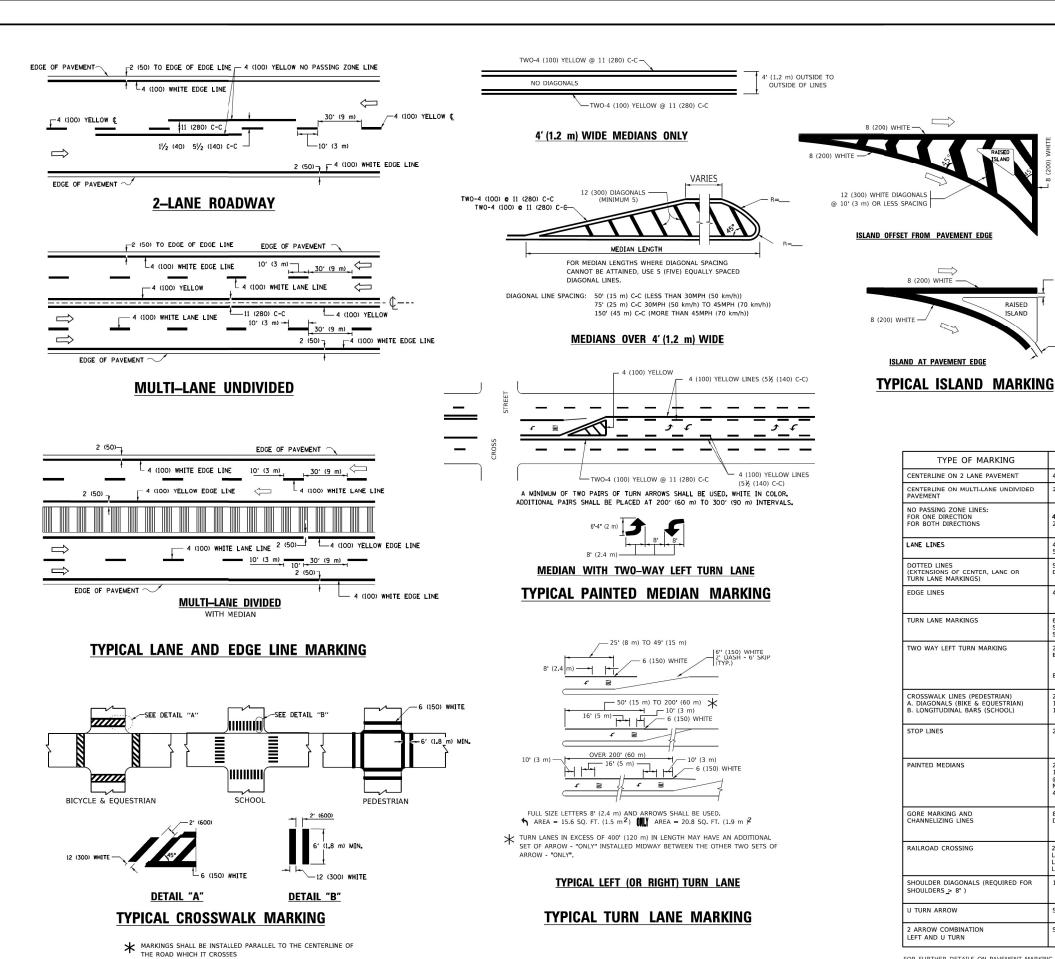
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

#### **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 RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
- MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

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

REVISED - T. RAMMACHER 03-12-99 JSER NAME = footemj DESIGNED -SECTION TYPICAL APPLICATIONS STATE OF ILLINOIS DRAWN REVISED - T. RAMMACHER 01-06-00 2018-136-RS-SW LAKE 66 37 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) PLOT SCALE = 50.0000 ' / in. CHECKED -REVISED - C. JUCIUS 09-09-09 **DEPARTMENT OF TRANSPORTATION** TC-11 CONTRACT NO. 62H69 SHEET 1 OF 1 SHEETS STA. PLOT DATE = 3/4/2019 REVISED -DATE C IUCIUS 07-01-13



D(FT) SPEED LIMIT 425 750 55 32 R (810) COMBINATION LEFT AND U-TURN 5'-4" (1620) LANE REDUCTION TRANSITION \* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

TYPE OF MARKING WIDTH OF LINE PATTERN COLOR SPACING / REMARKS CENTERLINE ON 2 LANE PAVEMENT YELLOW 10' (3 m) LINE WITH 30' (9 m) SPACE NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS 5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN 4 (100) 2 @ 4 (100) LANE LINES SKIP-DASH SKIP-DASH WHITE 10' (3 m) LINE WITH 30' (9 m) SPACE (125) ON FREEWAYS DOTTED LINES SAME AS LINE BEING EXTENDED SKIP-DASH SAME AS LINE BEING 2' (600) LINE WITH 6' (1.8 m) SPACE EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS) EDGE LINES SOLID 4 (100) YELLOW-LEFT WHITE-RIGHT OUTLINE MEDIANS IN YELLOW 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m)) TURN LANE MARKINGS SOLID SEE TYPICAL TURN LANE MARKING DETAIL TWO WAY LEFT TURN MARKING YELLOW 10' (3 m) LINE WITH 30' (9 m) SPACE FOR KIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL 8' (2.4m) LEFT ARROW CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL) NOT LESS THAN 6' (1.8 m) 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 STOP LINES 24 (600) SOLID WHITE PAINTED MEDIANS SOLID 11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING. 2 @ 4 (100) WITH 12 (300) DIAGONALS YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS GORE MARKING AND CHANNELIZING LINES 8 (200) WITH 12 (300) DIAGONALS @ 45° SOLID 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" RAILROAD CROSSING SOLID WHITE SEE STATE STANDARD 780001 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)) WHITE - RIGHT YELLOW - LEFT SHOULDER DIAGONALS (REQUIRED FOR 12 (300) @ 45° SOLID SHOULDERS > 8') U TURN ARROW SEE DETAIL SOLID WHITE 2 ARROW COMBINATION LEFT AND U TURN SOLID 30.4 SF

**U-TURN** 

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

8 (200) WHITE -

2 (50)

2 (50)

RAISED

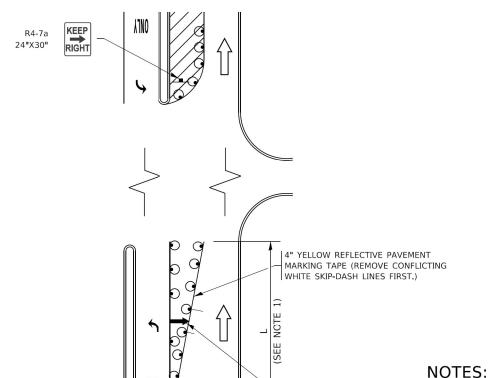
unless otherwise shown.

USER NAME = footemj	DESIGNED - EVERS	REVISED	-	C. JUCIUS 09-09-09
	DRAWN -	REVISED	-	C. JUCIUS 07-01-13
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED	-	C. JUCIUS 12-21-15
PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED	-	C. JUCIUS 04-12-16

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

	DIS.	TRICT OF	NE .		F.A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
TVDI	CAL DAY	/EN/ENIT	MARKING	e	352	2018-136-RS-SW		LAKE	66	38
 1111	GAL FAI	LIVILIAI	WANKING	<u> </u>		TC-13		CONTRACT	NO. 62	2H69
SHEET 1	OF 2	SHEETS	STA.	TO STA.		ILLINOIS	FED. AI	D PROJECT		

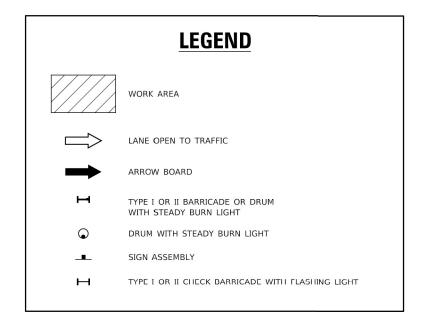
## TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

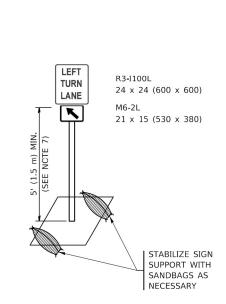


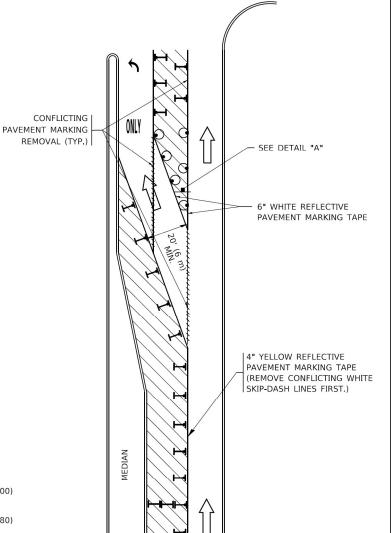
- ARROW BOARD

- 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 PREQUIREMENTS.
- 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** WITHIN A LANE CLOSURE







**DETAIL A** 

All dimensions are in inches (millimeters) unless otherwise shown

FIGURE 2

#### DESIGNED -T. RAMMACHER 09-08-94 REVISED - R. BORO 09-14-09 JSER NAME = footemi DRAWN - A. HOUSEH 11-07-95 REVISED - A. SCHUETZE 07-01-13 PLOT SCALE = 50.0000 ' / in. CHECKED - A. HOUSEH 10-12-96 REVISED - A. SCHUETZE 09-15-16 PLOT DATE = 3/4/2019 -T. RAMMACHER 01-06-00 REVISED

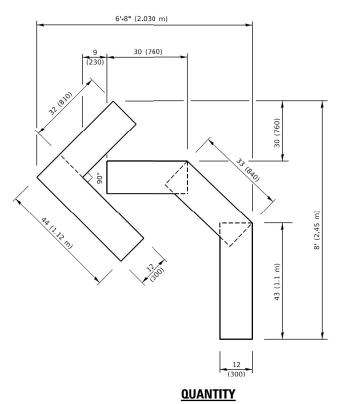
FIGURE 1

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

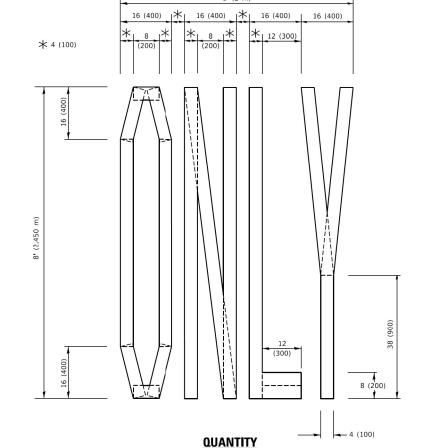
TRAFF						CTION AT	T TURN BAYS FIC)
SCALE: NONE	SHEET	1	OF	1	SHEETS	STA.	TO STA.

F.A.P. RTE	SEC <sup>-</sup>	ΓΙΟΝ		COUNTY	TOTAL SHEETS	SHEET NO.
352	2018-13	6-RS-SW		LAKE	66	39
	TC-14	ļ.		CONTRACT	NO. 62	2H69
		ILLINOIS	FED. A	D PROJECT		

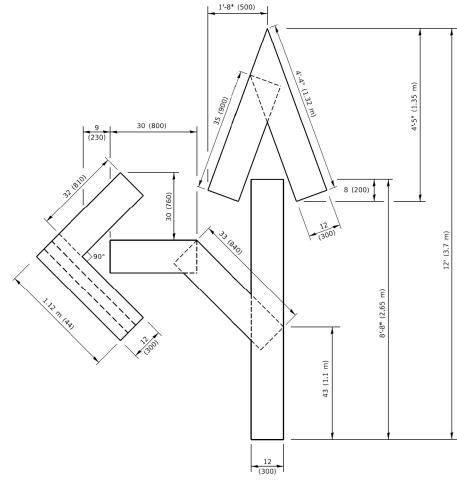
SEE DETAIL "A"



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)

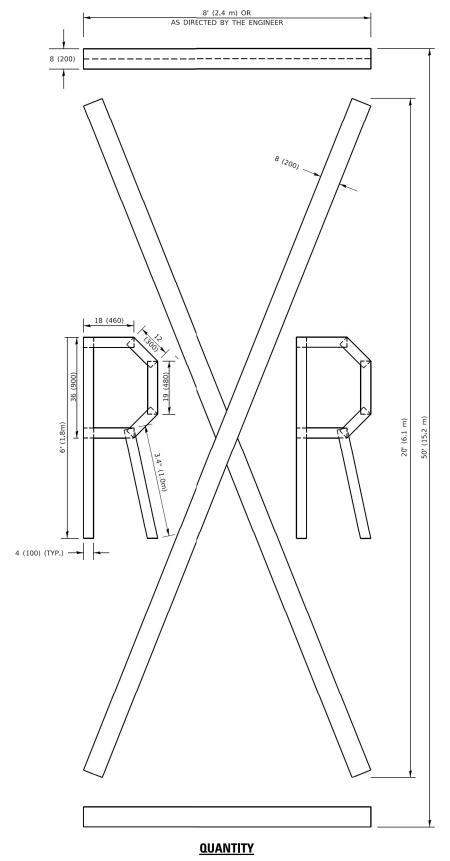


#### QUANTITY

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.

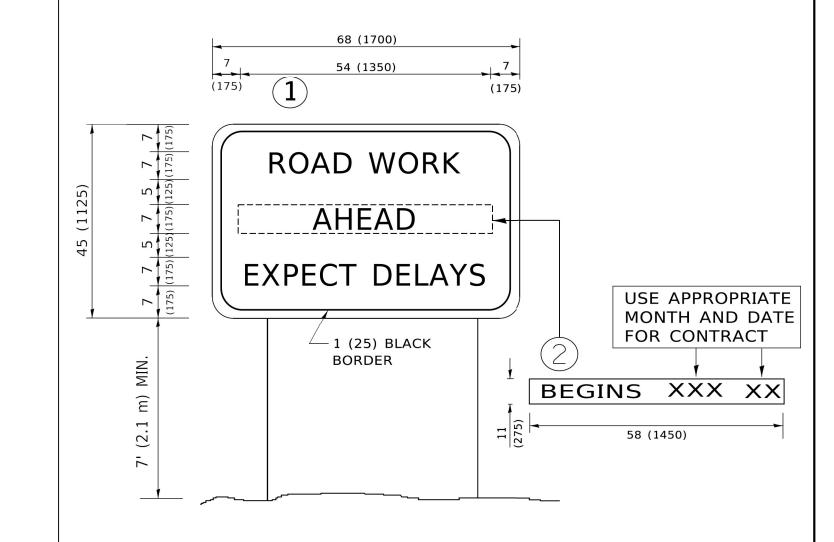


4 (100) LINE = 225.9 ft. (68.9 m) 75.3 sq. ft. (6.99 sq. m)

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

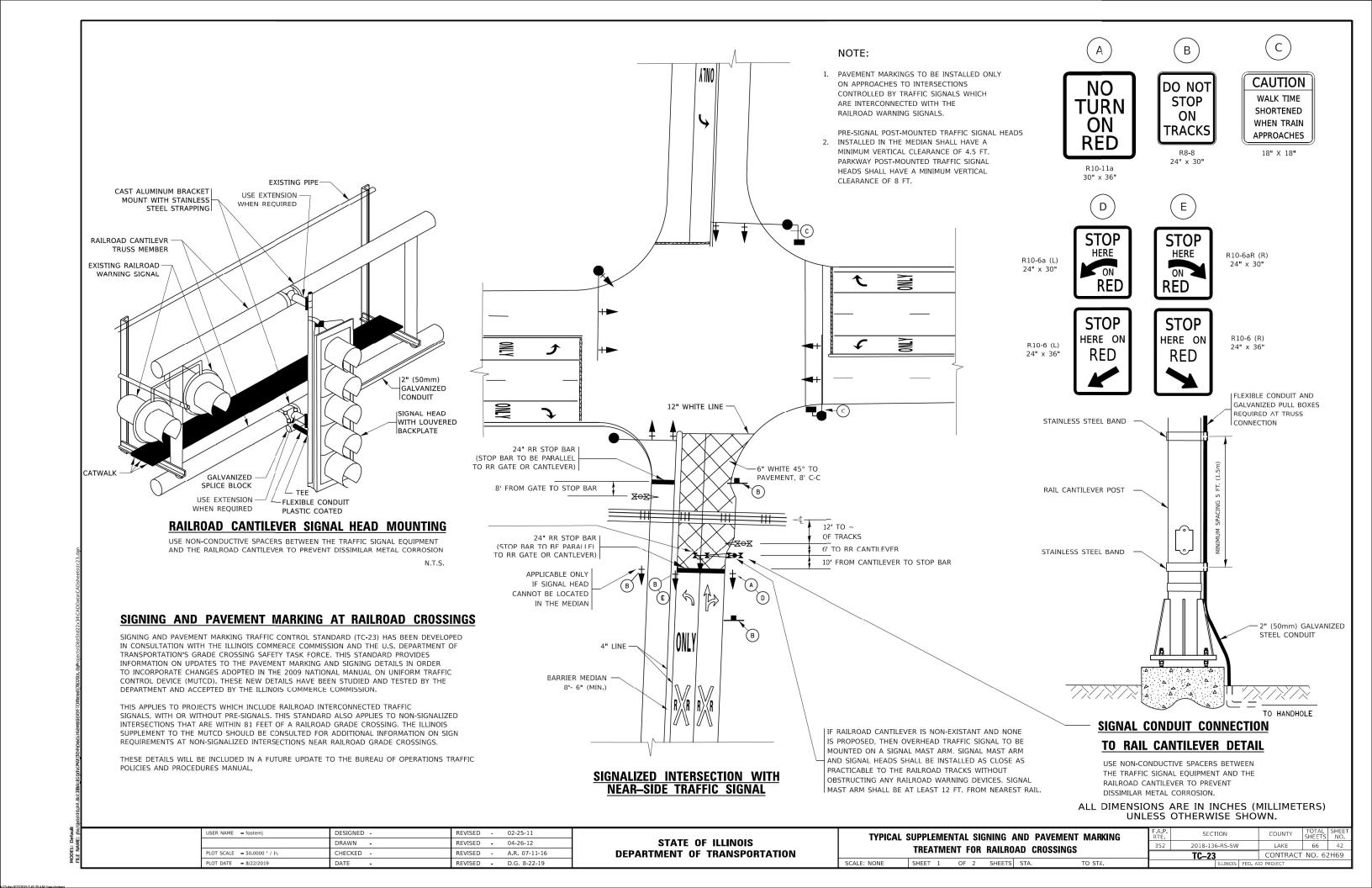


## **NOTES:**

- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN 1 WITH INSTALLED PANEL 2 ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL 2 SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
- 7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

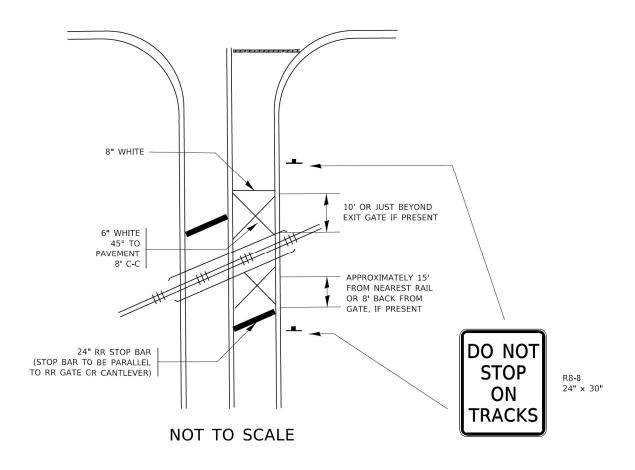
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

USER NAME = footemj	DESIGNED -	REVISED - R. MIRS 09-15-97				ARTER	RIAL RO	)AD		F.A.P. RTE	SECTION	COUNTY	TOTAL	SHEET 5 NO.	П
	DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS			INFORM				352	2018-136-RS-SW	LAKE	66	41	1
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION			INTURIVI	ATION	SIGN			TC-22	CONTRAC	T NO. 6	52H69	1
PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE	SHEET 1	OF 1	SHEETS	STA.	TO STA.		ILLINOIS FEE	AID PROJECT			7



# TYPICAL SUPPLEMENTAL SIGNING AND PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS

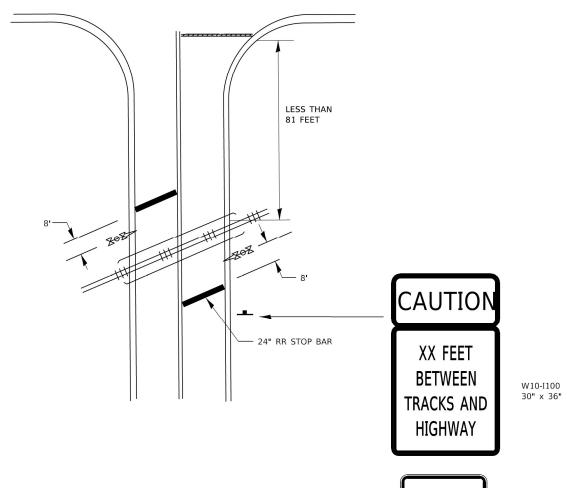
## WITH SIGNALIZED INTERSECTION



#### NOTE:

- 1. PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- 2. WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED THE PAVEMENT MARKINGS EXTEND TO THE INTERSECTION. (SEE DETAIL FOR PRE-SIGNALS).

## WITH NON-SIGNALIZED INTERSECTION 81' OR LESS TO CLOSEST RAIL



#### NOTE:

- 1. DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET FROM THE RAIL CLOSEST TO THE INTERSECTION OR FROM THE CLOSEST POINT ALONG THE EXIT GATE IF PRESENT OVER THE ROADWAY WHEN IN THE LOWERED POSITION TO THE STOP BAR OR CROSSWALK, WHICHEVER IS CLOSEST, ROUNDED DOWN TO THE NEAREST 5 FEET. WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.
- 2. THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6 FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKING EXTEND TO THE INTERSECTION.

DO NOT STOP ON TRACKS

R8-8 24" x 30"

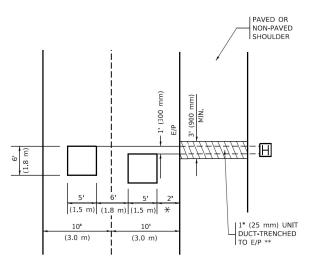
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

USER NAME = footemj	DESIGNED -	REVISED -		TYPICAL SUPPLEMENTAL SIGNING AND PAVEMENT MARKING	F.A.P. RTF	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
	DRAWN -	REVISED -	STATE OF ILLINOIS		352	2018-136-RS-SW	LAKE	66 43
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	TREATMENT FOR RAILROAD CROSSINGS		TC-23	CONTRACT	NO. 62H69
PLOT DATE = 3/4/2019	DATE -	REVISED -		SCALE: NONE SHEET 2 OF 2 SHEETS STA. TO STA.		ILLINOIS FED. AI	D PROJECT	

MODEL: Default

#### LOOPS NEXT TO SHOULDERS

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



 $\star$   $\star$  Unit duct is to be shown on plan sheets BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS

JSER NAME = footem

PLOT DATE = 3/4/2019

PLOT SCALE = 50.0000 / in.

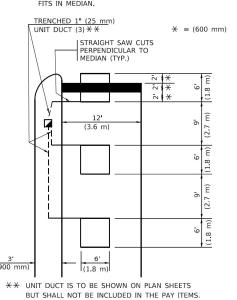
\* = (600 mm)

#### **LEFT TURN LANES WITH MEDIANS**

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

(PROTECTED / PERMITTED LEFT TURN PHASING)

HANDHOLF 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



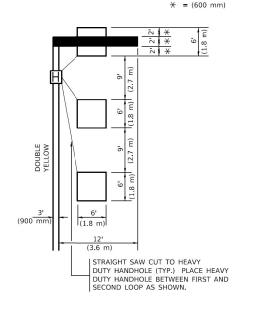
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

#### **LEFT TURN LANES WITHOUT MEDIANS**

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

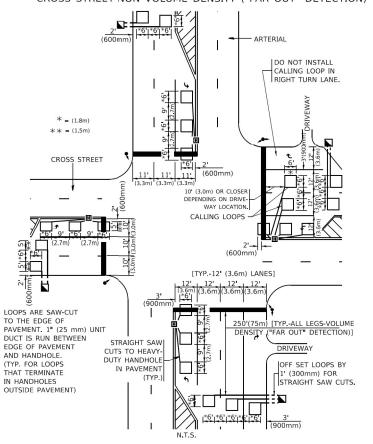
(PROTECTED / PERMITTED LEFT TURN PHASING)



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

SCALE: NONE

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



**DETAIL 1** 

N.T.S.

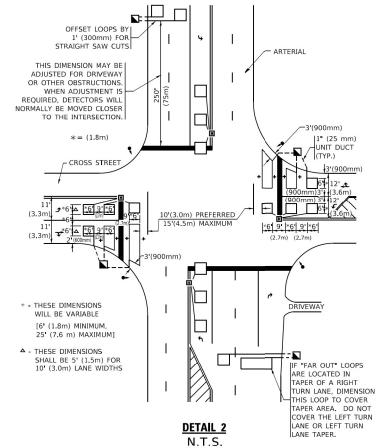
DESIGNED -

CHECKED -

R.K.F.

DRAWN

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



#### NOTES:

#### VEHICLES LOOP DETECTORS

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED,
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE
- \* 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 ALL DETECTOR LOOPS SHALL BE SIX FEET
- \* 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.
- st When non-locking, presence detection is used, <u>more</u> THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- st 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.

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

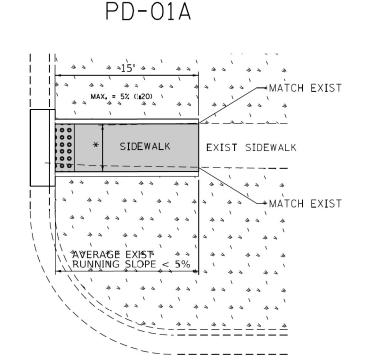
DISTRICT 1 - DETECTOR LOOP INSTALLATION **DETAILS FOR ROADWAY RESURFACING** SHEET 1 OF 1 SHEETS STA

SECTION COUNTY 352 2018-136-RS-SW LAKE 66 44 TS-07 CONTRACT NO. 62H69

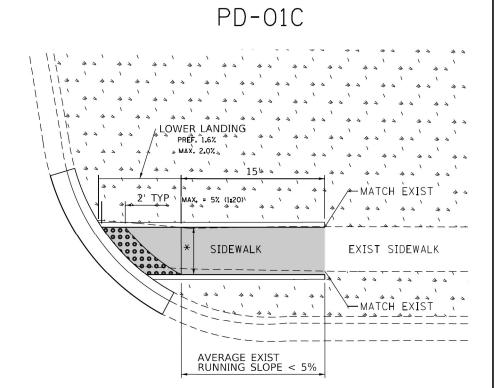
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# ADA DETAIL FOR SINGLE PERPENDICULAR CURB RAMPS W/ EXIST. 5% OR LESS RUN. SLOPE



# PD-01B LOWER LANDING \ MAX. = 5% (1:20) SIDEWALK EXIST SIDEWALK MATCH EXIST " AVERAGE EXIST RUNNING SLOPE < 5%



- ALL CROSS SLOPES ARE PREFERRED 1.6% (1:64), MAXIMUM 2% (1:50).
- SIDEWALK REALIGNMENT WILL REQUIRE DETAILED DESIGN.
- AREAS SURROUNDED BY PCC/ASPHALT, BUILDINGS, OR ARE NEAR TO DRIVEWAYS, REALIGNED SIDEWALK, UTILITY AND SIGNAL POLES, OR WHEN PRIVATE SIDEWALK TIES IN. WILL REQUIRE DETAILED SURVEY AND DESIGN.
- ALL BRICK CORNERS WILL REQUIRE SUPERVISOR APPROVAL BEFORE USING PROJECT DETAILS

LEGEND

PROPOSED SIDE CURB

EXIST. GRASS

PROPOSED SIDEWALK

DETECTABLE WARNINGS

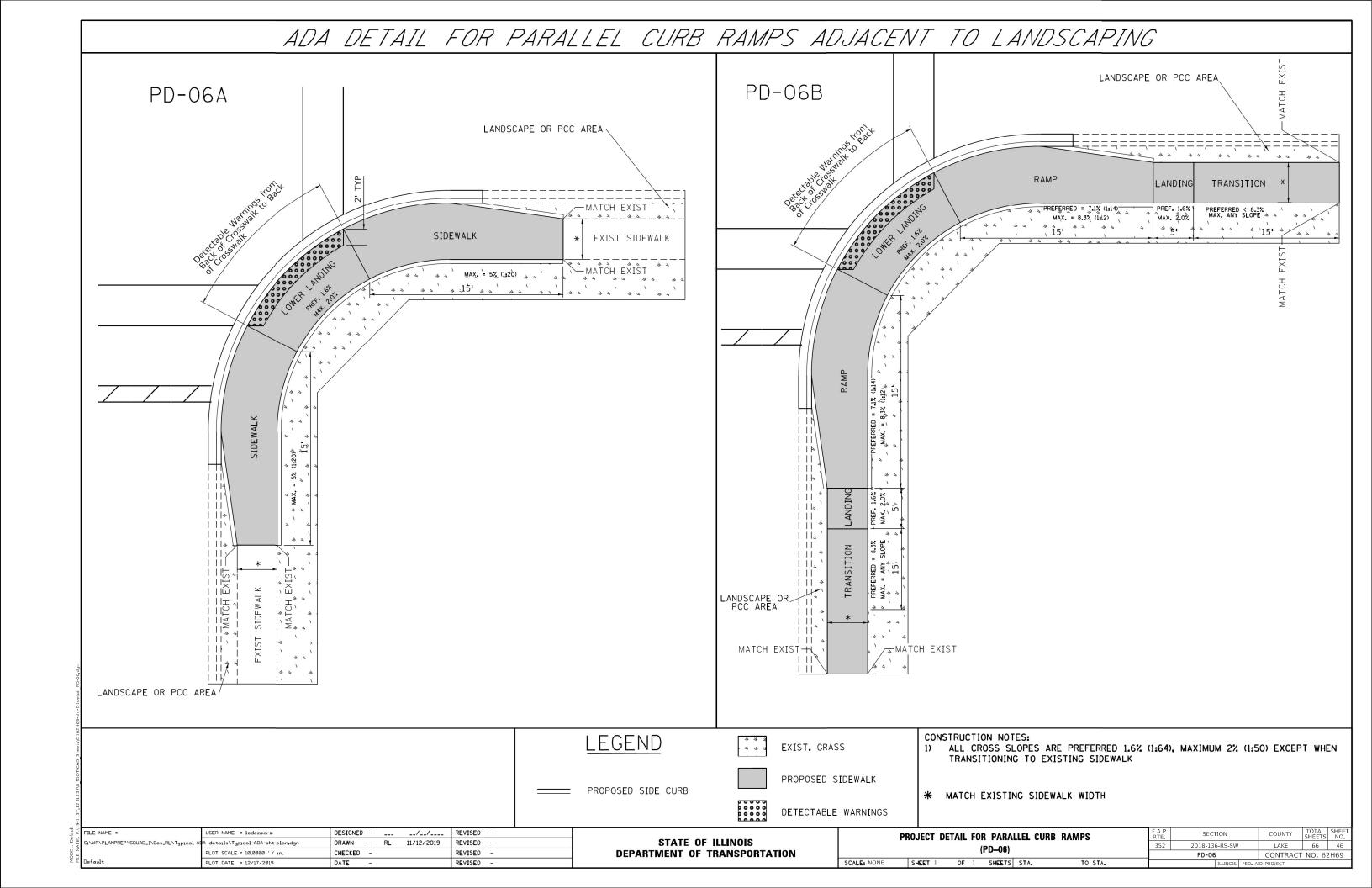
CONSTRUCTION NOTES:

- ALL CROSS SLOPES ARE PREFERRED 1.6% (1:64), MAXIMUM 2% (1:50) EXCEPT WHEN TRANSITIONING TO EXISTING SIDEWALK
- \* MATCH EXISTING SIDEWALK WIDTH

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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  PROJECT DETAIL FOR SINGLE PERPENDICULAR CURB RAMPS 352 SHEET 1 OF 1 SHEETS STA.

2018-136-RS-SW LAKE 66 45 PD-01 CONTRACT NO. 62H69



# TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

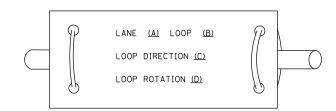
COMMUNICATION CABINET  COMMUNICATION CABINET  ECC  MASTER CONTROLLER  MASTER MASTER CONTROLLER  UNINTERRUPTABLE POWER SUPPLY  SERVICE INSTALLATION -(P) POLE MOUNTED -(GM) GROUND MOUNTED -(GM) GROUND MOUNTED  TELEPHONE CONNECTION  STEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD  SIGNAL HEAD OPTICALLY PROGRAMMED	CCC MC MMM MMM  P  F  S  G  M  G  M  F  B  M  F  A  A  A  B  A  B  A  B  A  A  B  A  A	HANDHOLE -SQUARE -ROUND  HEAVY DUTY HANDHOLE -SQUARE -ROUND  DOUBLE HANDHOLE  JUNCTION BOX  RAILROAD CANTILEVER MAST ARM  RAILROAD FLASHING SIGNAL  RAILROAD CROSSING GATE  RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM  ABANDON ITEM		THE TO SP IP R	SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD  SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE  PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,		R Y G + Y G + Y G P RB
MASTER CONTROLLER  MASTER MASTER CONTROLLER  UNINTERRUPTABLE POWER SUPPLY  SERVICE INSTALLATION -(P) POLE MOUNTED  SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED TELEPHONE CONNECTION  STEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD  SIGNAL HEAD  P P	MC  MMC  MMC  MMC	HEAVY DUTY HANDHOLE -SQUARE -ROUND  DOUBLE HANDHOLE  JUNCTION BOX  RAILROAD CANTILEVER MAST ARM  RAILROAD FLASHING SIGNAL  RAILROAD CROSSING GATE  RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM		IN O I I I I I I I I I I I I I I I I I I	-(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE  PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	P RESCRIPTION PROPERTY OF THE	P  R Y G Y G Y G Y G Y G Y G Y G Y G Y G
MASTER MASTER CONTROLLER  JUNINTERRUPTABLE POWER SUPPLY  SERVICE INSTALLATION (P) POLE MOUNTED SERVICE INSTALLATION (G) GROUND MOUNTED (GM) GROUND MOUNTED FELEPHONE CONNECTION  STEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD  P P	MMC	-SQUARE -ROUND  DOUBLE HANDHOLE  JUNCTION BOX  RAILROAD CANTILEVER MAST ARM  RAILROAD FLASHING SIGNAL  RAILROAD CROSSING GATE  RAILROAD CROSSBUCK  RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM		IN O I I I I I I I I I I I I I I I I I I	-(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE  PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	P RESCRIPTION PROPERTY OF THE	P  R Y G Y G Y G Y G Y G Y G Y G Y G Y G
JUNINTERRUPTABLE POWER SUPPLY  SERVICE INSTALLATION (P) POLE MOUNTED SERVICE INSTALLATION (G) GROUND MOUNTED (GM) GROUND MOUNTED FELEPHONE CONNECTION  STEEL MAST ARM ASSEMBLY AND POLE ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD  FERDAL MOUNTED - TEMPORARY  P P P	P  GM  T  BM  BM	JUNCTION BOX  RAILROAD CANTILEVER MAST ARM  RAILROAD FLASHING SIGNAL  RAILROAD CROSSING GATE  RAILROAD CROSSBUCK  RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM		▼	-(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE  PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	P RB	Y C C P RB
SERVICE INSTALLATION (P) POLE MOUNTED  SERVICE INSTALLATION (G) GROUND MOUNTED (GM) GROUND MOUNTED METERED  FELEPHONE CONNECTION  STEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD  P P	F G M GM  ▼  ■  ■  ■  ■  ■  ■  ■  ■  ■  ■  ■  ■	RAILROAD CANTILEVER MAST ARM RAILROAD FLASHING SIGNAL RAILROAD CROSSING GATE RAILROAD CROSSBUCK RAILROAD CONTROLLER CABINET UNDERGROUND CONDUIT (UC), GALVANIZED STEEL TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE SYSTEM ITEM INTERSECTION ITEM REMOVE ITEM RELOCATE ITEM		XOX XOX XOX SP	-(RB) RETROREFLECTIVE BACKPLATE  PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	P RB	Y C C P RB
SERVICE INSTALLATION  (G) GROUND MOUNTED  (EMM) GROUND MOUNTED METERED  TELEPHONE CONNECTION  ET  STEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST  (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD  P  P	• • BM	RAILROAD FLASHING SIGNAL  RAILROAD CROSSING GATE  RAILROAD CROSSBUCK  RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM	X0X	<b>X</b> ◆ <b>X X</b> ◆ <b>X X</b> ◆ <b>X X X X</b>	AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	P RB	P RB
GERVICE INSTALLATION  (G) GROUND MOUNTED  (GM) GROUND MOUNTED METERED  TELEPHONE CONNECTION  GTEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  GSTEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  GIGNAL POST  (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  GIGNAL HEAD  GIGNAL HEAD  FOR POLE  FOR POLE  GOVERNMENT OF THE POLE  FOR POLE  FOR POLE  GOVERNMENT OF THE POLE  FOR POLE	• • BM	RAILROAD CROSSING GATE  RAILROAD CROSSBUCK  RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM	XOX	<b>▼ ▼ SP</b>	AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	P RB	P RB
TELEPHONE CONNECTION  STEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST  (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD  P P	• • BM	RAILROAD CROSSBUCK  RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM		→	AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	© C D D D D D D D D D D D D D D D D D D	
TELEPHONE CONNECTION  ET  STEEL MAST ARM ASSEMBLY AND POLE  ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  GUY WIRE  SIGNAL HEAD	<ul> <li>→ ★</li> <li>• BM</li> <li>• BM</li> </ul>	RAILROAD CONTROLLER CABINET  UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM	<u></u>		AT RAILROAD INTERSECTIONS  PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	© C D D D D D D D D D D D D D D D D D D	
ALUMINUM MAST ARM ASSEMBLY AND POLE  STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  SUMMER  SIGNAL HEAD  D  P  P  P  P  P  P  P  P  P  P  P  P	● <del>)</del>	UNDERGROUND CONDUIT (UC), GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM		  SP	WITH COUNTDOWN TIMER  ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	——————————————————————————————————————	
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  SUY WIRE  SIGNAL HEAD  SIGNAL HEAD WITH BACKPLATE  P. P.	<ul><li>● BM</li><li>❸</li></ul>	GALVANIZED STEEL  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE  SYSTEM ITEM  INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM	S 1		ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	——————————————————————————————————————	
ASSEMBLY AND POLE WITH LUMINAIRE  SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY  WOOD POLE  SUY WIRE  SIGNAL HEAD	<ul><li>● BM</li><li>❸</li></ul>	TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE SYSTEM ITEM INTERSECTION ITEM REMOVE ITEM RELOCATE ITEM	S I		"NO LEFT TURN"/"NO RIGHT TURN"  NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,		
WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD WITH BACKPLATE	0	INTERSECTION ITEM  REMOVE ITEM  RELOCATE ITEM	S I		CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED GROUND CABLE IN CONDUIT,	,	
WOOD POLE  GUY WIRE  SIGNAL HEAD  SIGNAL HEAD WITH BACKPLATE  P. P.	-	REMOVE ITEM RELOCATE ITEM	I	IP R	ALL DETECTOR LOOP CABLE TO BE SHIELDED  GROUND CABLE IN CONDUIT,	,	
GUY WIRE >  SIGNAL HEAD  -  SIGNAL HEAD WITH BACKPLATE +  P. P.	-	RELOCATE ITEM		R		$\sim$	
SIGNAL HEAD —> SIGNAL HEAD WITH BACKPLATE ++>	<i>&gt;</i>				NO, 6 SOLID COPPER (GREEN)		<del></del>
SIGNAL HEAD WITH BACKPLATE +t>	+►	ABANDON ITEM		RL	ELECTRIC CABLE IN CONDUIT, TRACER		
P P	T			А	NO. 14 1/C	,	
SIGNAL HEAD OPTICALLY PROGRAMMED -> +>	→ P + P	CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF	COAXIAL CABLE	<u> </u>	<u> </u>
FLASHER INSTALLATION F 0 F 5		MAST ARM POLE AND		RMF	VENDOR CABLE		
FLASHER INSTALLATION  -(FS) SOLAR POWERED  -FS  -FS	+→ <sup>F</sup> +→ <sup>FS</sup> +→ <sup>F</sup> +→ <sup>FS</sup>	FOUNDATION TO BE REMOVED  SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF	COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	<u>(6#18)</u>	<del>(6#18)</del>
PEDESTRIAN SIGNAL HEAD	-1	DETECTOR LOOP, TYPE I			FIBER OPTIC CABLE -NO. 62,5/125, MM12F	—	—(12F)—
PEDESTRIAN PUSH BUTTON © APS	_ ⊚ ⊚ APS				-NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		245
-(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	_	PREFORMED DETECTOR LOOP	P P	P P	1101 0213/123/ 111121 311211	—(24F)—	
RADAR DETECTION SENSOR	R	SAMPLING (SYSTEM) DETECTOR	S S	S S			—(36F)—
VIDEO DETECTION CAMERA	V	INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS (IS)	IS (IS)	GROUND ROD	C M D C	C M D C
RADAR/VIDEO DETECTION ZONE		QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS QS	QS QS	-(C) CONTROLLER -(M) MAST ARM	$\frac{\underline{\dot{\Box}}^{C}}{\overline{\dot{\Box}}} \frac{\underline{\dot{\Box}}^{M}}{\overline{\dot{\Box}}} \frac{\underline{\dot{\Box}}^{P}}{\overline{\dot{\Box}}} \frac{\underline{\dot{\Box}}^{S}}{\overline{\dot{\Box}}}$	
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	WIRELESS DETECTOR SENSOR	<b>®</b>	<b>®</b>	-(P) POST -(S) SERVICE		
EMERGENCY VEHICLE LIGHT DETECTOR $\qquad \qquad \qquad$	<b>~</b>	WIRELESS ACCESS POINT					
CONFIMATION BEACON —(	•-1						
WIRELESS INTERCONNECT 0++	•++   -						
WIRELESS INTERCONNECT RADIO REPEATER ERR	RR						

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DEPARTMENT	<b>OF</b>	<b>TRANSPORTATION</b>

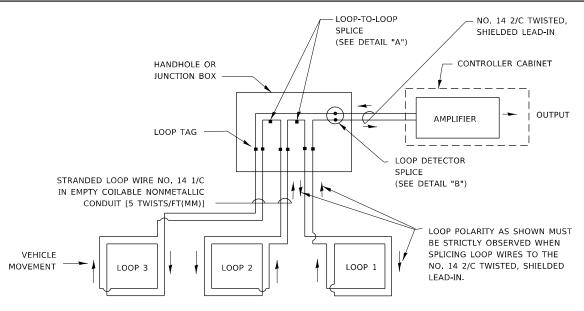
		DIST	RICT ONE			F.A.P. RTE	SEC <sup>-</sup>	ΠΟN		COUNT
91	LVNUVBU	TRAFFIC	SIGNAL	DEGIGN	DETAILS	352	2018-13	6-RS-SW	,	LAKE
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- 1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE 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

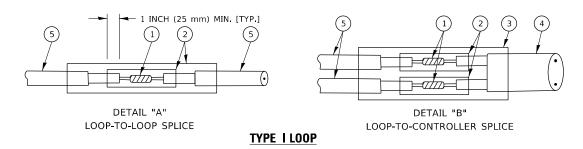


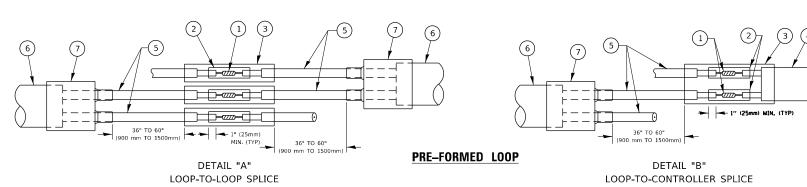
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



#### **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

- (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

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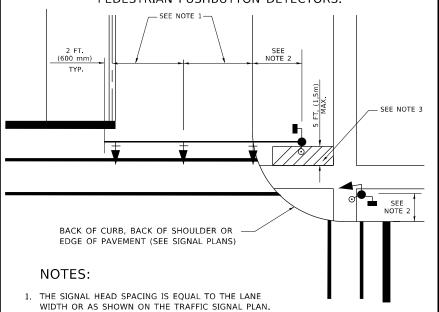
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

DISTRICT ONE 2018-136-RS-SW STANDARD TRAFFIC SIGNAL DESIGN DETAILS

#### TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

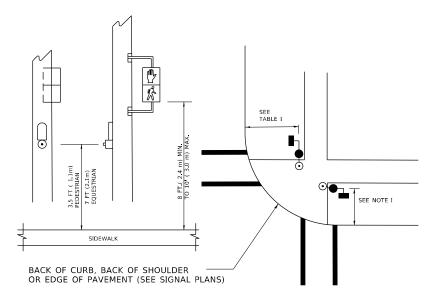
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND

PEDESTRIAN PUSHBUTTON DETECTORS.



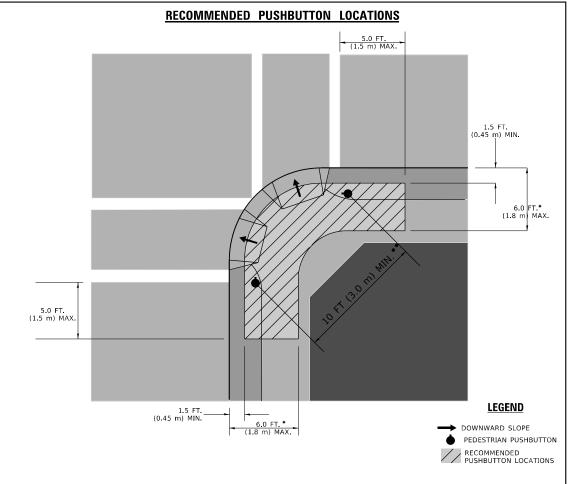
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

## PEDESTRIAN SIGNAL POST PEDESTRIAN PUSH BUTTON POST



#### NOTES:

- 1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
- 3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR



- \* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1,5 FT (0,45 m) AND 6 FT ( 1,8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS. THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

#### NOTES:

- 1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK,
- 2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
- 3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
- 4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
- 5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

#### TRAFFIC SIGNAL EQUIPMENT OFFSET

·						
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)				
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1,8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)				
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)				
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)				
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)				
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)				
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.				
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.				

#### NOTES:

- 1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
- 3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
- 4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

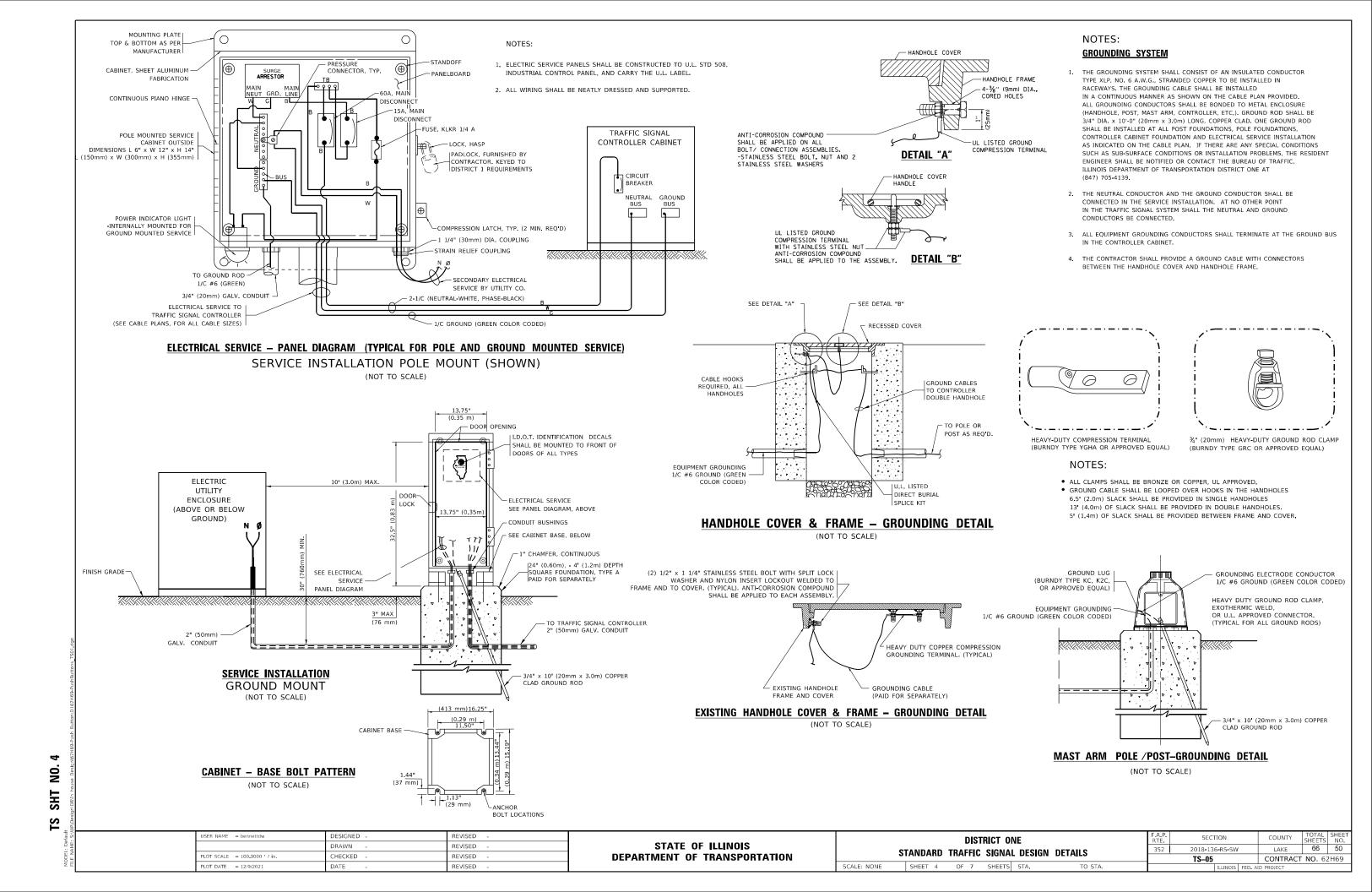
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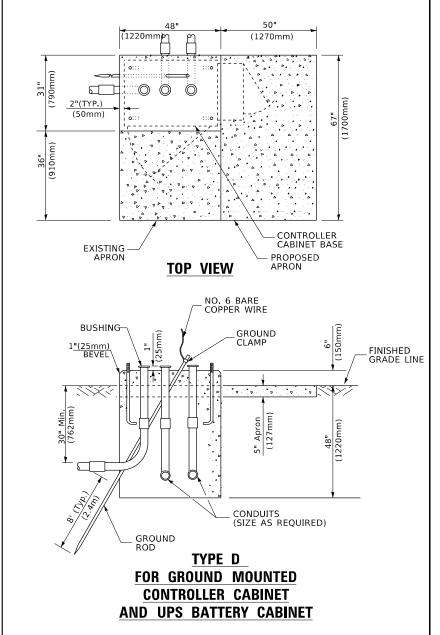
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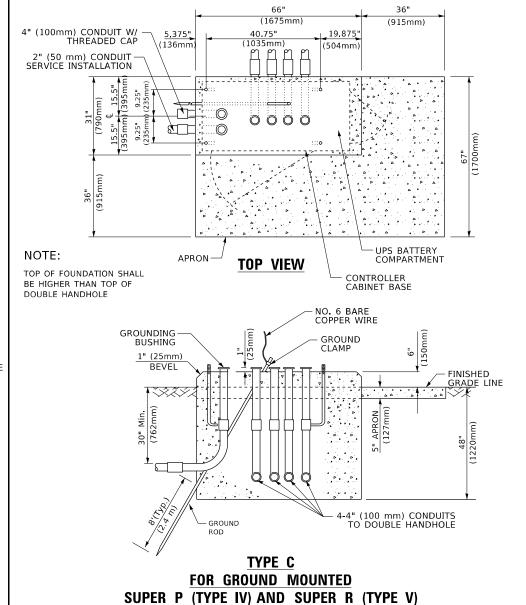
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

DISTRICT ONE	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	
STANDARD TRAFFIC SIGNAL DESIGN DETAILS	352	2018-136-RS-SW	LAKE	66	49
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		TS-05	CONTRACT	NO. 62	2H69
SHEET 3 OF 7 SHEETS STA. TO STA.		TILLIMOIS FED A	ID PROJECT		

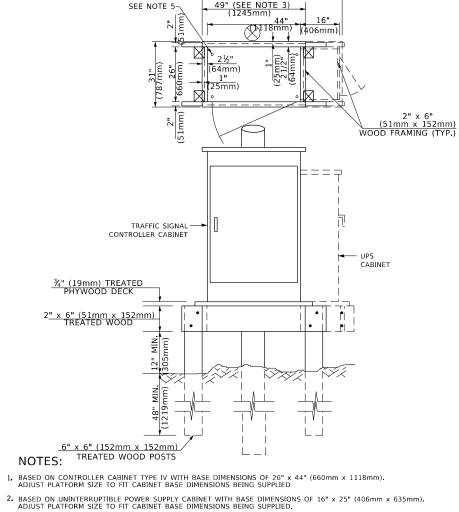
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**CONTROLLER CABINETS** 



65" (SEE NOTE 4) (1651mm)

- 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- 5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
- 6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

# TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

**CABLE SLACK** 

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE ( MAST ARM MOUNTED SIGNAL HEAD)		
(L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL	CABLE	LENGTH
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FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

#### **DEPTH OF FOUNDATION**

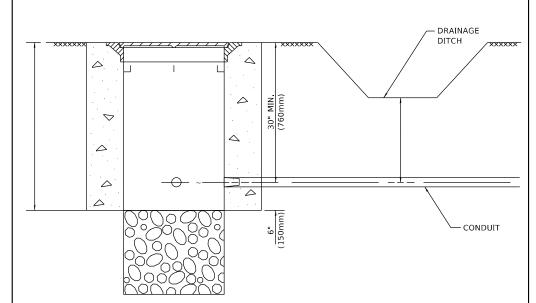
Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30′ (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0'' (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0'' (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0'' (4.6 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0'' (6.4 m)	42'' (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0'' (7.6 m)	42'' (1060mm)	36" (900mm)	16	8(25)

#### NOTES:

- 1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (0u) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
- 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
- 4. For most arm assemblies with dual arms refer to state standard 878001..

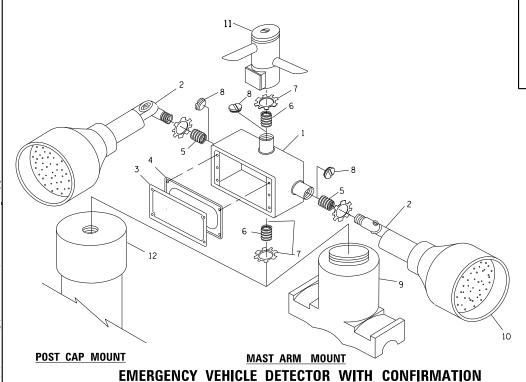
#### DEPTH OF MAST ARM FOUNDATIONS, TYPE E

USER NAME = bennettdw	DESIGNED -	REVISED -	·		DISTRICT ONE		F.A.P. RTF	SECTION	COUNTY	TOTAL	. SHE	ET				
	DRAWN -	REVISED -	STATE OF ILLINOIS		CTANDARD					N DETAILS	352	2018-136-RS-SW	LAKE	66	51	$\exists$
PLOT SCALE = 100.0000 / in	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		STANDARD	IKAF	ric s	SIGNAL	r nesidi	N DETAILS		TS-05	CONTRAC	T NO. 6	52H69	,
PLOT DATE = 12/9/2021	DATE -	REVISED -		SCALE: NONE	SHEET 5	OF	7 9	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT			



- 1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
- 2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
- 3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

## HANDHOLE WITH MINIMUM CONDUIT DEPTH

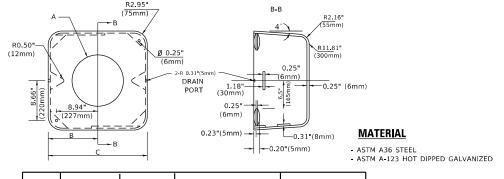


**BEACON MOUNTING DETAIL** 

(1675mm) (915mm) 19.875" (1035mm) 0 CONTROLLER CABINET BASE PROPOSED-**TOP VIEW** APRON -NO. 3 DOWEL 18" (450mm NO. 6 BARE COPPER WIRE LONG (8 REQ.) BUSHING-\_GROUND CLAMP EXISTING-ANCHOR BOLTS FINISHED GRADE LINE 1"(25mm) BEVEL (300 mm)(300 mm)12" (300mm) (225mm) -EXISTING CONDUITS EXISTING GROUND ROD MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION (NOT TO SCALE)

#### IDENTIFICATION 1 OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M) 2 LAMP HOLDER AND COVER 3 OUTLET BOX COVER 4 RUBBER COVER GASKET 5 REDUCING BUSHING 6 ¾"(19 mm) CLOSE NIPPLE 7 ¾"(19 mm) LOCKNUT 8 ¾"(19 mm) HOLE PLUG 9 SADDLE BRACKET - GALV. 10 6 WATT PAR 38 LED FLOOD LAMP 11 DETECTOR UNIT 12 POST CAP [18 FT. (5.4 m) POST MIN.]

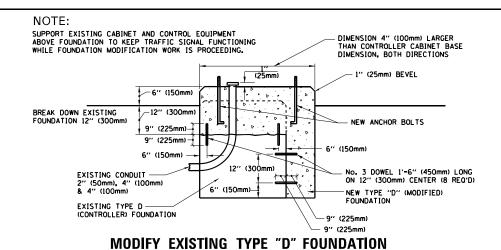
- 1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR
- 2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- 3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

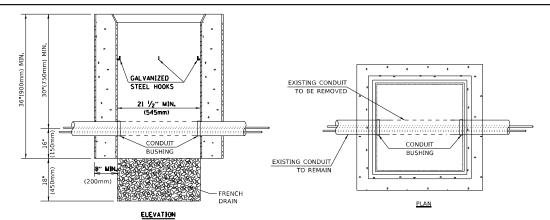


Α	В	С	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 <b>l</b> bs (57 kg)

#### SHROUD

- 1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- 2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- 3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.





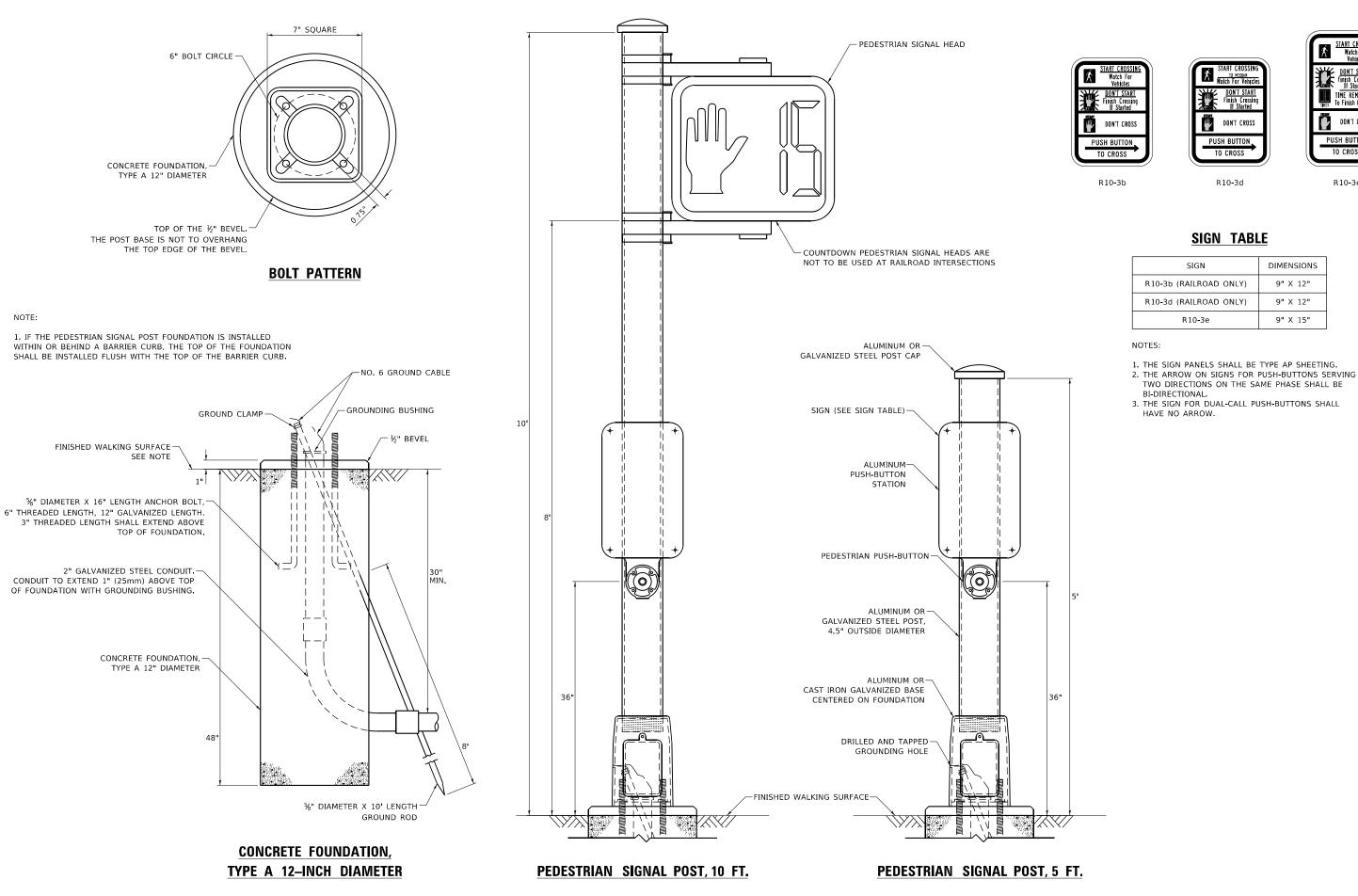
- 1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- 2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

#### HANDHOLE TO INTERCEPT EXISTING CONDUIT

REVISED DRAWN REVISED HECKED REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

DISTRICT ONE 352 2018-136-RS-SW LAKE 66 52 STANDARD TRAFFIC SIGNAL DESIGN DETAILS CONTRACT NO. 62H69 SHEET 6 OF 7 SHEETS STA.



DESIGNED -

DRAWN

10/15/2020 REVISED DISTRICT ONE STATE OF ILLINOIS REVISED 2018-136-RS-SW LAKE 66 53 STANDARD TRAFFIC SIGNAL DESIGN DETAILS REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. SHEET NO. 7 OF 7 SHEETS STA.

TIME REMAINING To Finish Crossing

DON'T CROSS

PUSH BUTTON

R10-3e

DON'T CROSS

PUSH BUTTON

TO CROSS

R10-3d

SIGN TABLE

SIGN

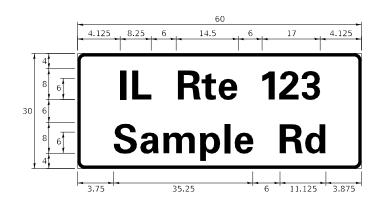
DIMENSIONS

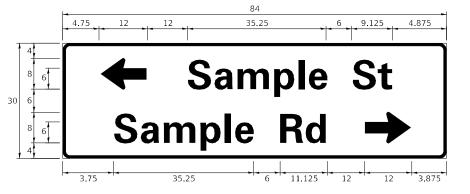
9" X 12"

9" X 12" 9" X 15"

#### SIGN PANEL – TYPE 1 OR TYPE 2

# 35.25 11.125 3.875 Sample Rd





DESIGN	AREA	SIGN PANEL	SHEETING	OTY.
SERIES	(SQ FT)	TYPE	TYPE	REQUIRED
D OR C	-	1 OR 2	ZZ	

## **COMMON STREET NAME ABBREVIATIONS** AND WIDTHS

NAME	ABBREVATION	WIDTH	(INCH)
NAME	ADDREVATION	SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8. 250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	ΙL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23. 375	27. 375
PLACE	PΙ	7. 125	7. 750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7. 750	9.125
UNITED STATES	US	10.375	12.250

#### **GENERAL NOTES**

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- 2. ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ
- 3. THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
- 4. A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8"-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8"-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
- 5. LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
- 6. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS: PARTS LISTING:

- I.O. HERBERT COMPANY, INC. PART #HPN053 (MED. CHANNEL) SIGN CHANNEL MIDLOTHIAN, VA SIGN SCREWS

SELF TAPPING WITH NEOPRENE WASHER - WESTERN REMAC, INC. BRACKETS PART #HPN034 (UNIVERSAL) WOODRIDGE, IL

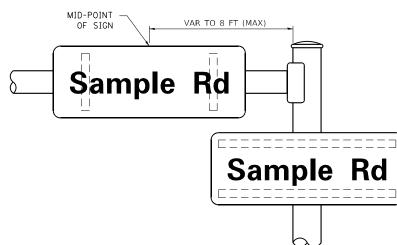
1/4" x 14 x 1" H.W.H. #3

CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

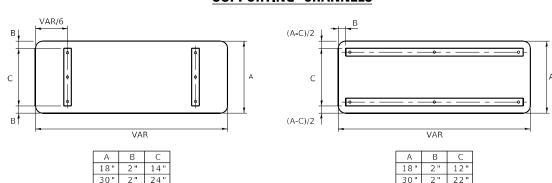
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

#### **MOUNTING LOCATION**

ARM OR POLE MOUNTED



#### **SUPPORTING CHANNELS**



#### STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE

	FHWA SEF	RIES "C"		FHWA SERIES "D"						
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)			
Α	0.240	5.122	0.240	A	0.240	6.804	0.240			
В	0.880	4.482	0.480	В	0. 240	5.446	0.400			
С	0.720	4. 482	0.720	c	0.800	5.446	0.800			
D	0.880	4.482	0.720	D	0.960	5.446	0.800			
E	0.880	4.082	0.480	E	0.960	4.962	0.400			
F	0.880	4.082	0.240	F	0.960	4.962	0.240			
G	0.720	4.482	0.720	G	0.800	5.446	0.800			
Н	0.880	4. 482	0.880	Н	0.960	5.446	0.960			
I	0.880	1.120	0.880	I	0.960	1.280	0.960			
J	0.240	4.082	0.880	J	0.240	5.122	0.960			
K	0.880	4.482	0.480	К	0.960	5.604	0.400			
L	0.880	4.082	0.240	L	0.960	4.962	0.240			
М	0.880	5.284	0.880	М	0.960	6.244	0.960			
N	0.880	4.482	0.880	N	0.960	5.446	0.960			
0	0.720	4.722	0.720	0	0.800	5.684	0.800			
P	0.880	4.482	0.720	Р	0.960	5.446	0.240			
Q	0.720	4. 722	0.720	Q	0.800	5.684	0.800			
R	0.880	4.482	0.480	Ř	0.960	5.446	0.400			
S	0.480	4.482	0.480	S	0.400	5.446	0.400			
T	0.240	4.082	0.240	Т	0.240	4.962	0.240			
U	0.880	4.482	0.880	U	0.960	5.446	0.960			
٧	0.240	4.962	0.240	V	0.240	6.084	0.240			
W	0.240	6.084	0.240	W	0.240	7.124	0.240			
Χ	0.240	4.722	0.240	Х	0.400	5.446	0.400			
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240			
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400			
а	0.320	3.842	0.640	a	0.400	4.562	0.720			
Ь	0.720	4.082	0.480	b	0.800	4.802	0.480			
С	0.480	4.002	0.240	С	0.480	4.722	0.240			
d	0.480	4.082	0.720	d	0.480	4.802	0.800			
е	0.480	4.082	0.320	е	0.480	4.722	0.320			
f	0.320	2.480	0.160	f	0.320	2.882	0.160			
g	0.480	4.082	0.720	g	0.480	4.802	0.800			
h	0.720	4.082	0.640	h	0.800	4.722	0.720			
i	0.720	1.120	0.720	i	0.800	1.280	0.800			
j	0.000	2.320	0.720	j	0.000	2.642	0.800			
k	0.720	4.322	0.160	k	0.800	5.122	0.160			
ı	0.720	1.120	0.720	I	0.800	1.280	0.800			
m	0.720	6.724	0.640	m	0.800	7. 926	0.720			
n	0.720	4.082	0.640	n	0.800	4.722	0.720			
0	0.480	4.082	0.480	0	0.480	4.882	0.480			
Р	0.720	4.082	0.480	р	0.800	4.802	0.480			
q	0.480	4.082	0.720	q	0.480	4.802	0.800			
r	0.720	2.642	0.160	r	0.800	3.042	0.160			
S	0.320	3.362	0.240	S	0.320	3.762	0.240			
+	0.080	2.882	0.080	t	0.080	3. 202	0.080			
U	0.640	4.082	0.720	u	0.720	4.722	0.800			
٧	0.160	4.722	0.160	٧	0.160	5.684	0.160			
w	0.160	7.524	0.160	w	0.160	9.046	0.160			
×	0.000	5.202	0.000	х	0.000	6.244	0.000			
У	0.160	4.962	0.160	у	0.160	6.004	0.160			
Z	0.240	3. 362	0.240	z	0.240	4.002	0.240			
1	0.720	1.680	0.880	1	0.800	2.000	0.960			
2	0.480	4.482	0.480	2	0.800	5.446	0.800			
3	0.480	4.482	0.480	3	1.440	5.446	0.800			
4	0.240	4.962	0.720	4	0.160	6.004	0.960			
5	0.480	4.482	0.480	5	0.800	5.446	0.800			
6	0.720	4.482	0.720	6	0.800	5.446	0.800			
7	0.240	4.482	0.720	7	0.560	5.446	0.560			
8	0.480	4.482	0.480	8	0.800	5.446	0.800			
9	0.480	4.482	0.480	9	0.800	5.446	0.800			
0	0.720	4.722	0.720	0	0.800	5.684	0.800			
-	0.240	2.802	0.240	-	0.240	2.802	0.240			

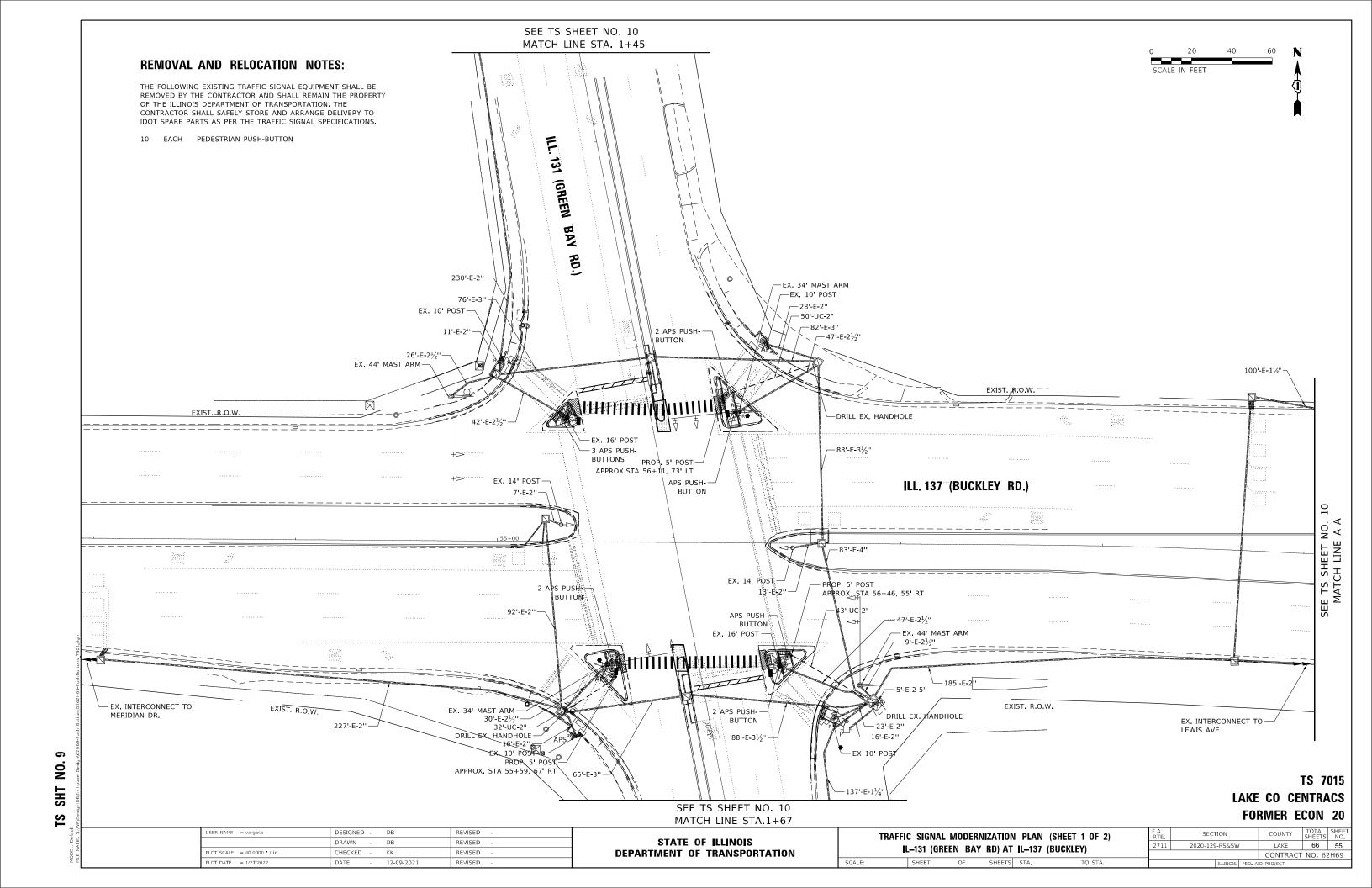
LAKE 66 54

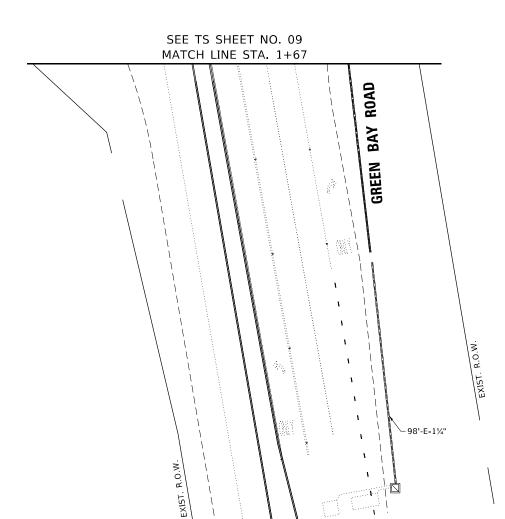
CONTRACT NO. 62H69

TS LP 07/01/2015 DESIGNED -REVISED DRAWN LP REVISED HECKED REVISED PLOT DATE = 12/9/2021 10/01/2014 DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SECTION DISTRICT ONE 352 2018-136-RS-SW MAST ARM MOUNTED STREET NAME SIGNS TS-02 SHEETS STA.

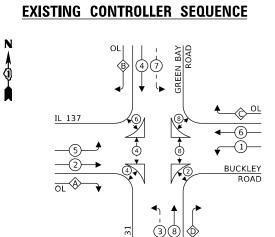




SEE TS SHEET NO. 09 MATCH LINE STA. 4+45 IL RTE 137
BUCKLEY ROAD

TS 7015 LAKE CO CENTRACS FORMER ECON 20

USER NAME = bennettdw	DESIGNED - DB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN (SHEET 2 OF 2)					F.A.P. RTF	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	DRAWN - DB	REVISED -	STATE OF ILLINOIS					•	•	352	2018-136-RS-SW	LAKE	66	56
PLOT SCALE = 40.0000 / in.	CHECKED - KK	REVISED -	DEPARTMENT OF TRANSPORTATION	<u> </u>	L-ISI (GKE	EIN BA	Y KU) A	Γ IL–137 (B	SUGKLEY)			CONTRAC	T NO. 6	б2H69
PLOT DATE = 12/14/2021	DATE - 12-09-2021	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		

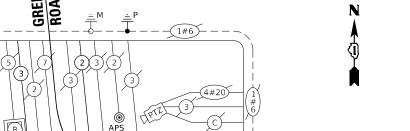


PROPOSED CONTROLLER SEQUENCE

## **RIGHT TURN OVERLAP** PHASE DESIGNATION.

VERLAP LETTER         PERMISSIVE PHASE         PROTECTED PHASE           A         =         2         +         3           B         =         4         +         5           C         =         6         +         7           D         =         8         +         1           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I         I         I           I         I	<u>'HA5</u>		DE 21 GINA	Ш	UN:	١
B = 4 + 5 C = 6 + 7 D = 8 + 1		-				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Α	=	2	+	3	-
D = 8 + 1	В	=	4	+	5	L
	C	=	6	+	7	4
	D	=	8	+	1	

**IL RTE 173** 



2

#### **LEGEND:**

**◆ \***PROTECTED PHASE

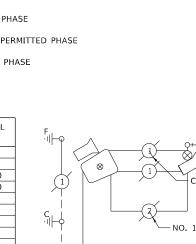
PROTECTED/PERMITTED PHASE

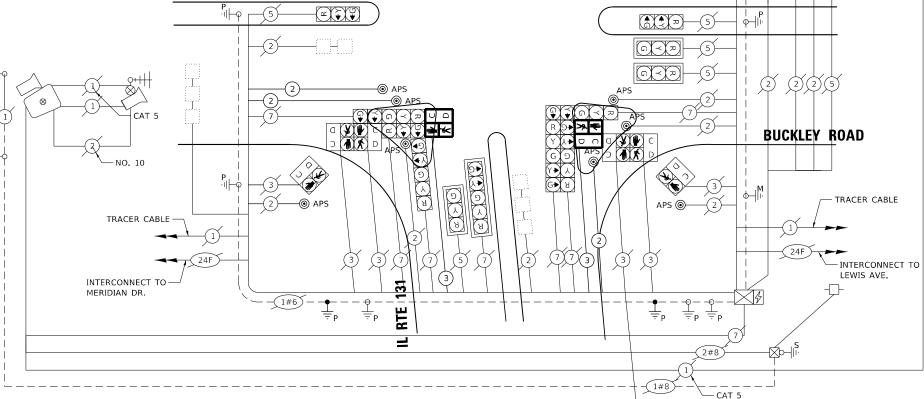
PEDESTRIAN PHASE

♦ OL OVERLAP

#### SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	125
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1500
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1050
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	145
DRILL EXISTING HANDHOLE	EACH	3
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN SIGNAL POST, 5 FT.	FOOT	3
ACCESSIBLE PEDESTRIAN SIGNALS	EACH	16
CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER	FOOT	12
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1





**CABLE PLAN** 

## TRAFFIC SIGNAL **ELECTRICAL SERVICE REQUIREMENTS**

TYPE		NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE	
SIGNAL	(RED)	22	11	50	121.0	
	(YELLOW)	22	20	5	22.0	
	(GREEN)	22	12	45	118.8	
PERMISSI	VE ARROW	24	10	10	24.0	
PED. SIGN	NAL	16	20	100	320.0	
CONTROL	LER	1	100	100	100.0	
UPS		1	25	100	25.0	
VIDEO SY	STEM	1	150	100	150.0	
BLANK-OL	JT SIGN	-	25	5	-	
FLASHER		-	-	50	-	
STREET NAME SIGN		-	120	50	-	
LUMINAIRE		-	-	-	-	
	-	-		TOTAL =	880.8	

ENERGY COSTS TO:

#### ILLINOIS DEPARTMENT OF TRANSPORTATION

201 WEST CENTRAL COURT SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY: CONTACT: TERRI BLECK

PHONE: 847-816-5239 COMPANY: COMMONWEALTH EDISON

ACCOUNT NUMBER:

DESIGNED -DRAWN DB REVISED PLOT SCALE = 40.0000 '/ in. HECKED KK REVISED PLOT DATE = 12/14/2021

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE IL—131 (GREEN BAY RD) AT IL—137 (BUCKLEY)

**FORMER ECON 20** LAKE 66 57 2018-136-RS-SW CONTRACT NO. 62H69

SECTION

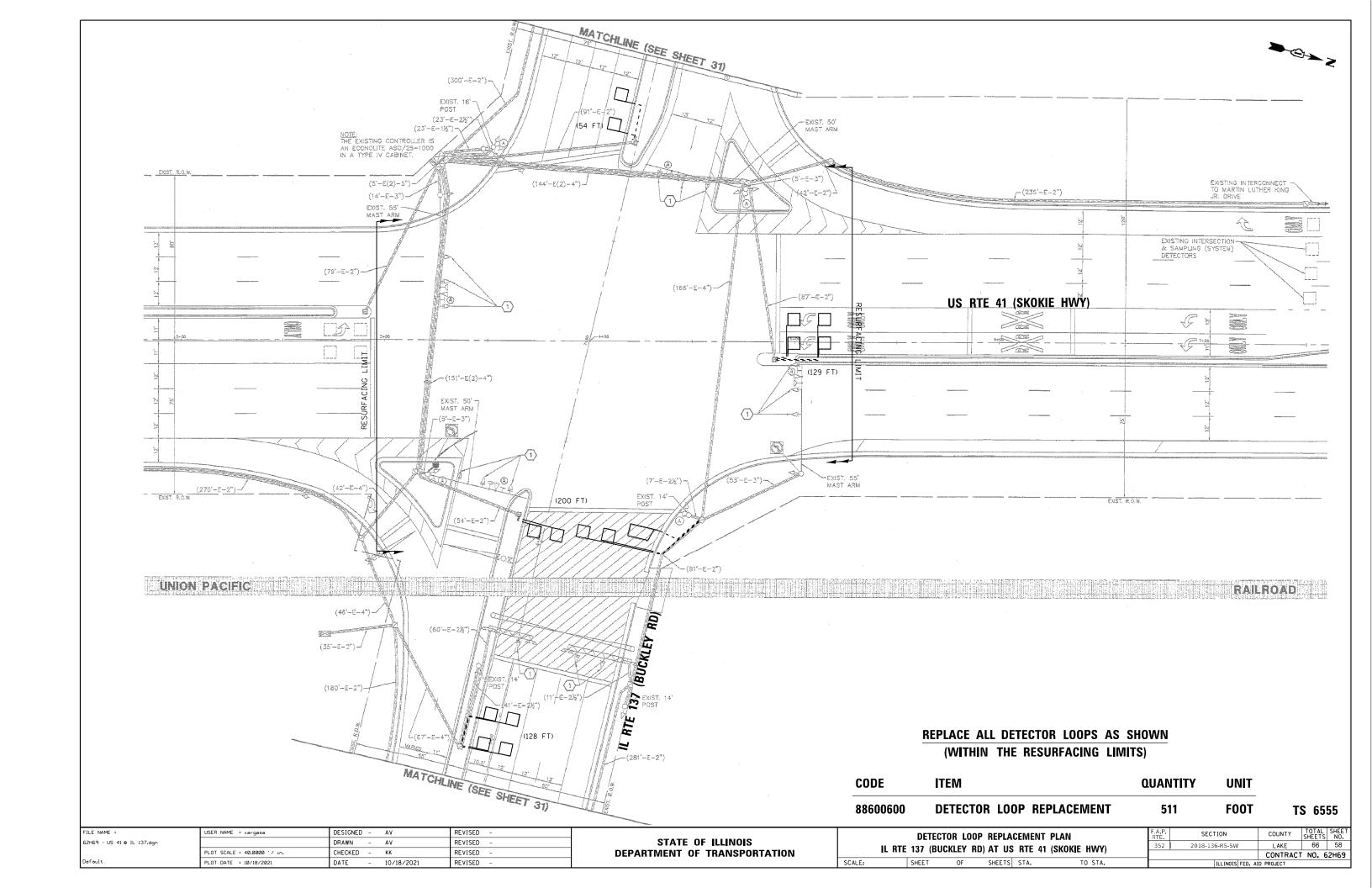
352

LAKE CO CENTRACS

TS 7015

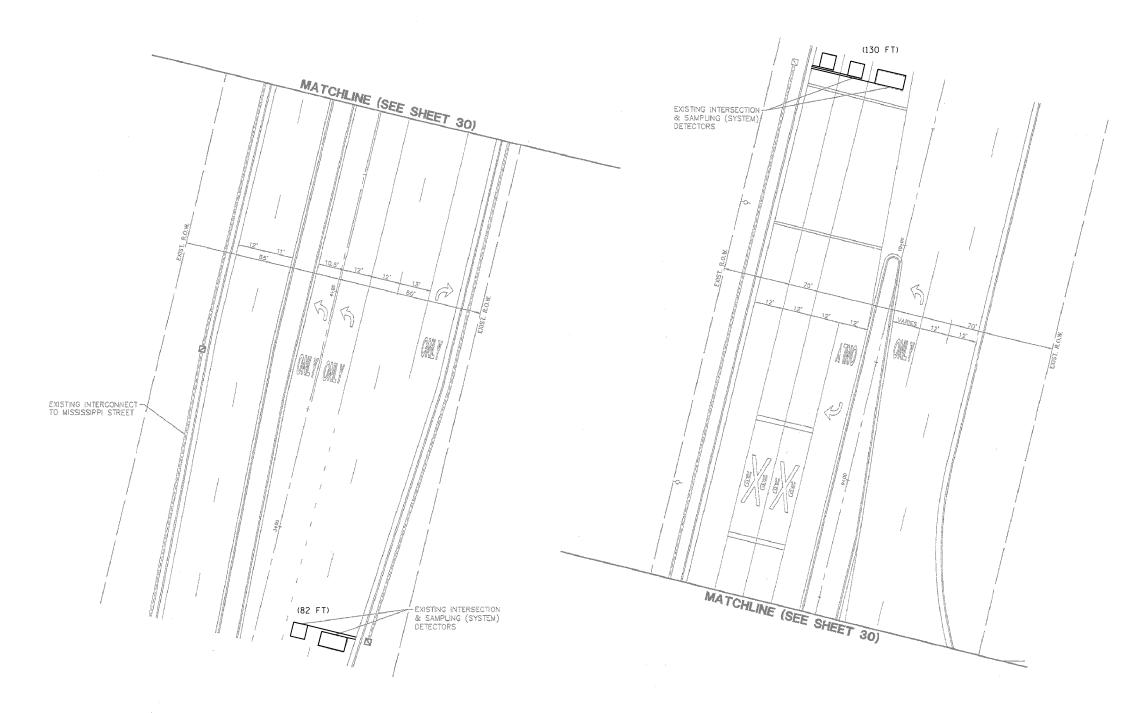
ET

NO. 11 SHT





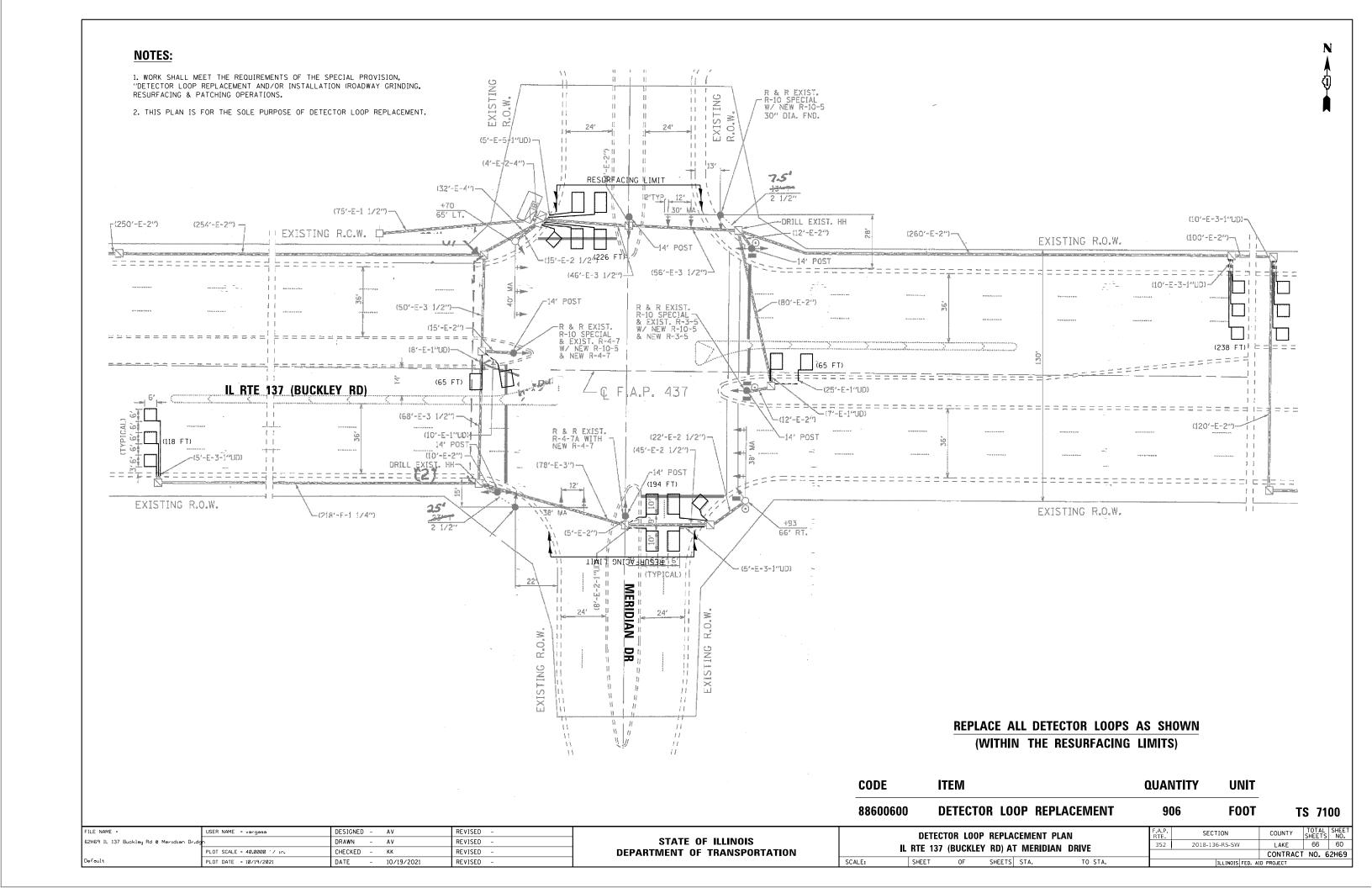
TS 6555

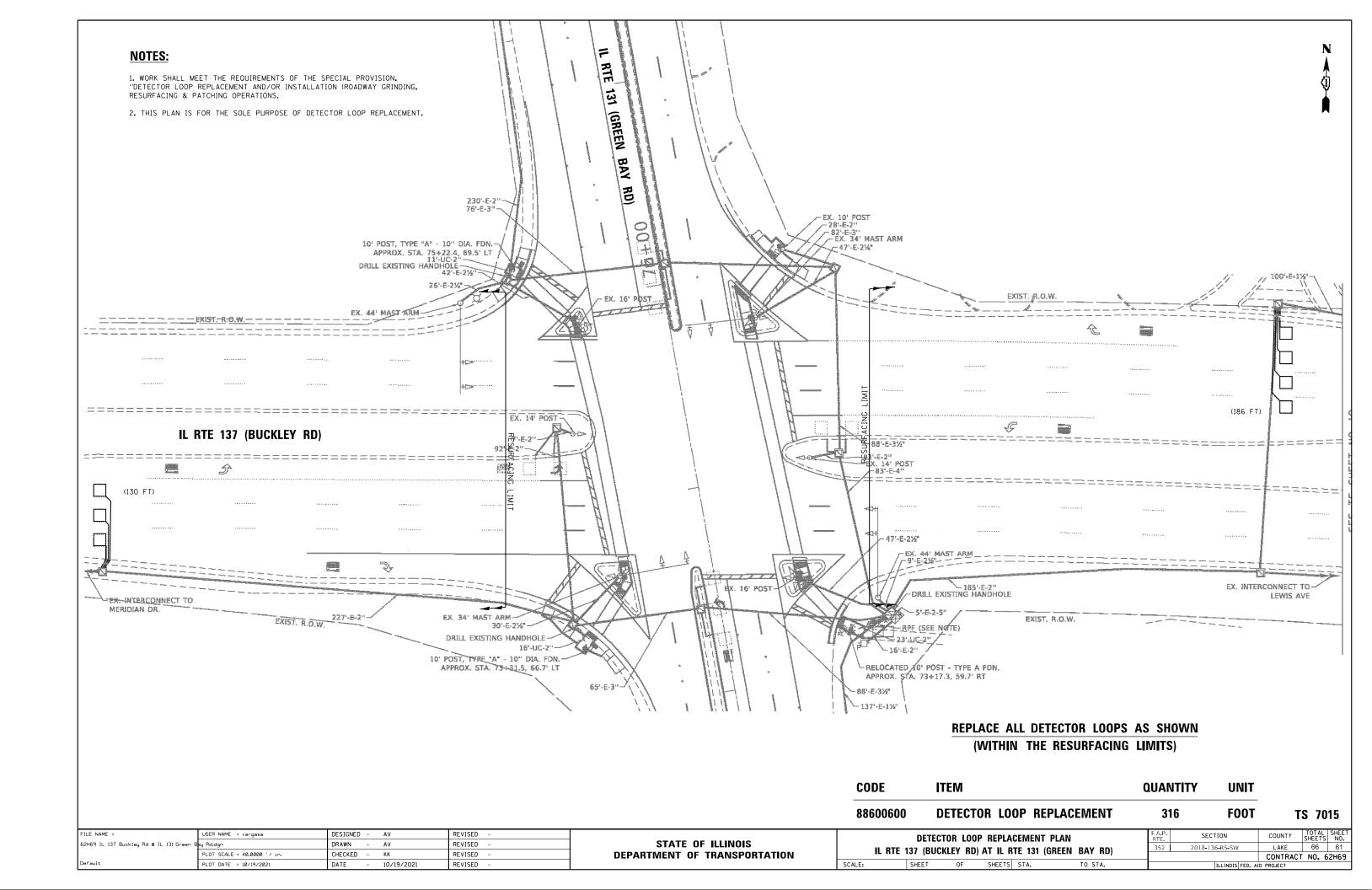


# REPLACE ALL DETECTOR LOOPS AS SHOWN (WITHIN THE RESURFACING LIMITS)

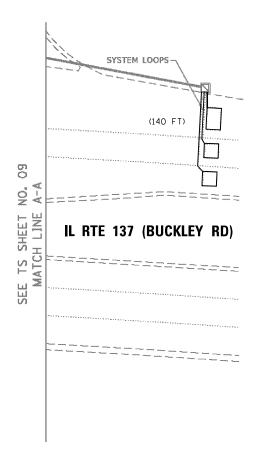
CODE	ITEM	QUANTITY	UNIT
88600600	DETECTOR LOOP REPLACEMENT	212	FOOT

CCTION	COUNTY	SHEETS	NO.
136-RS-SW	LAKE	66	59
CONTRACT NO. 62H69			
ILLINOIS FED. AID PROJECT		FILE NAME = USER NAME = vargasa DESIGNED - AV REVISED F.A.P. RTE 352 SECTION DETECTOR LOOP REPLACEMENT PLAN STATE OF ILLINOIS 62H69 - US 41 @ IL 137.dgn DRAWN REVISED 2018-136-RS-SW OAKTON ST AT WAUKEGAN RD **DEPARTMENT OF TRANSPORTATION** PLOT SCALE = 40.0000 '/ 10. CHECKED - KK REVISED REVISED SCALE: OF SHEETS STA. TO STA. PLOT DATE = 10/18/2021 DATE - 10/18/2021	





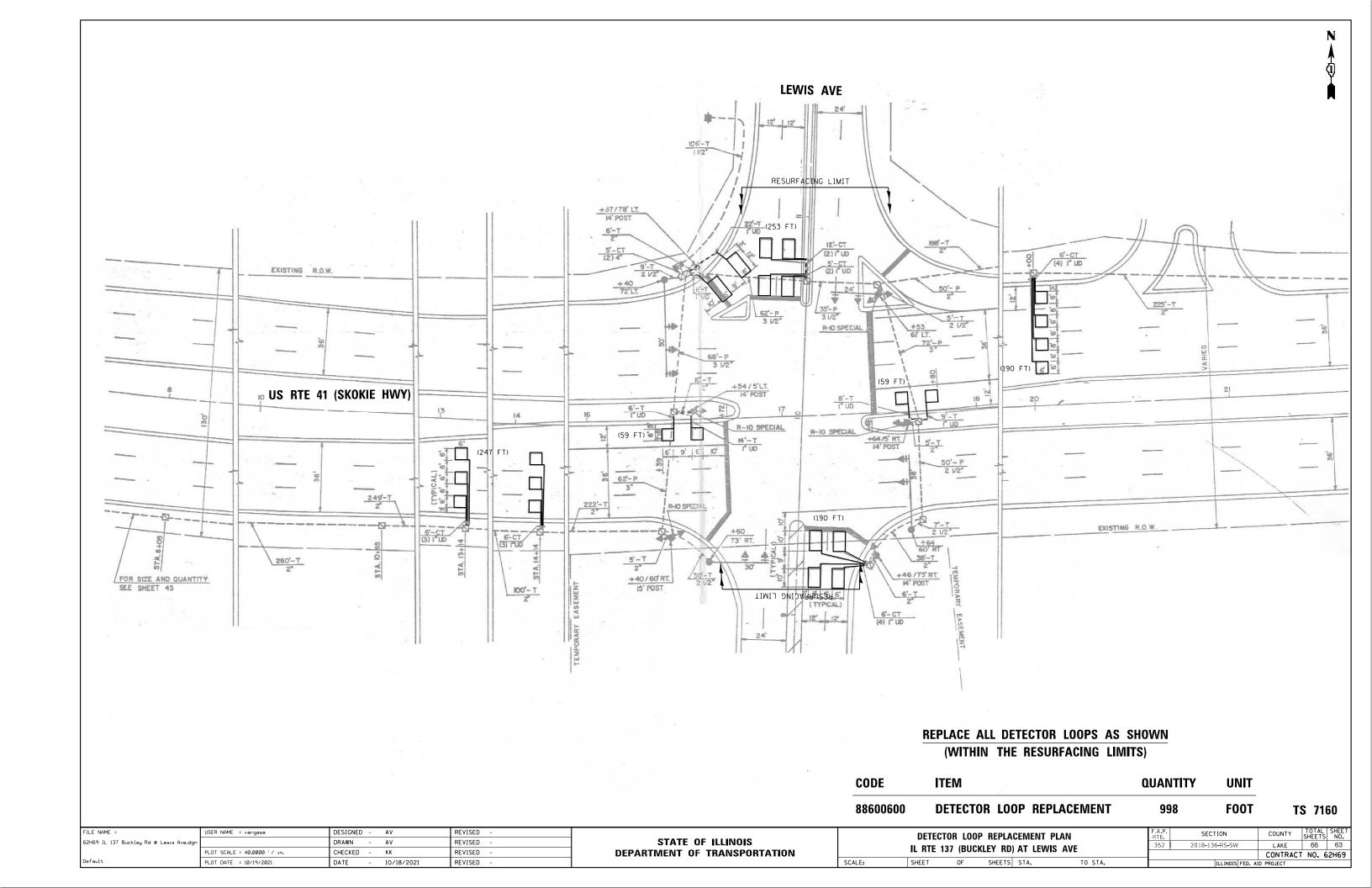




# REPLACE ALL DETECTOR LOOPS AS SHOWN (WITHIN THE RESURFACING LIMITS)

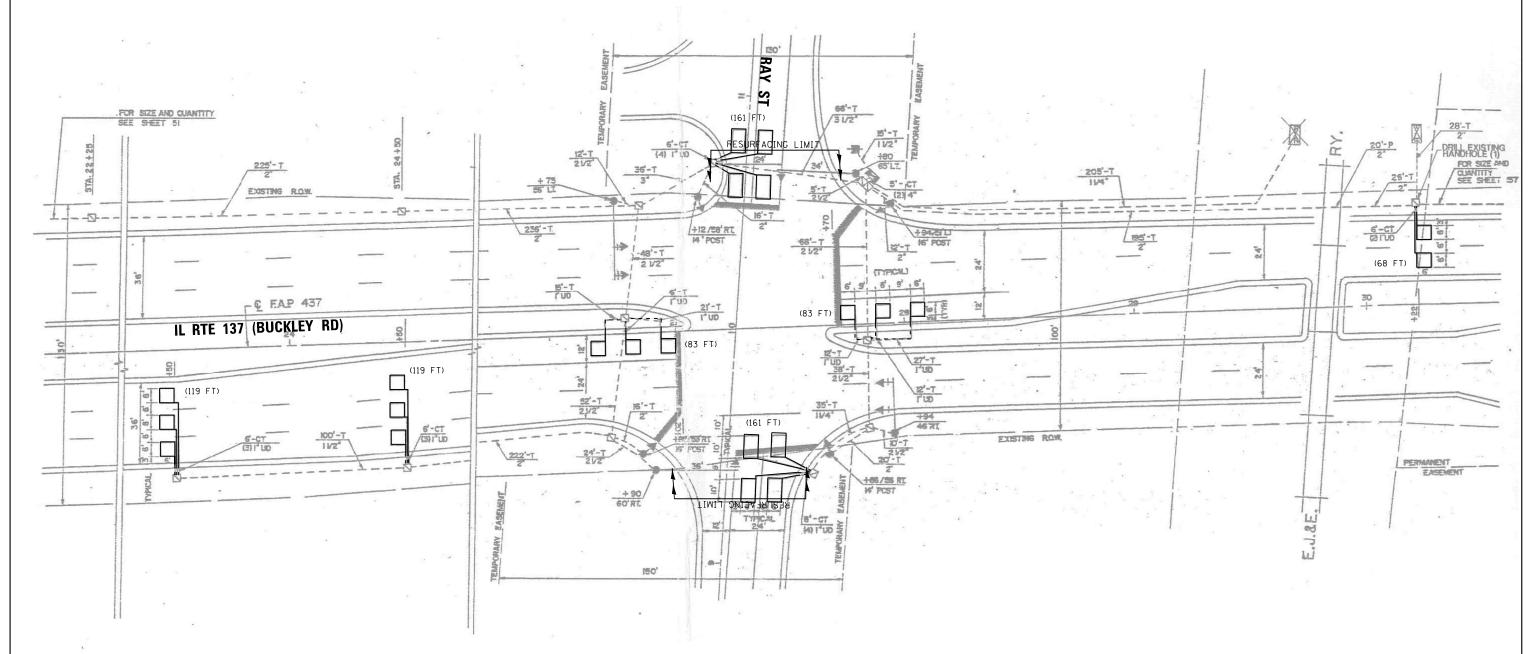
CODE	ITEM	QUANTITY	UNIT	
88600600	DETECTOR LOOP REPLACEMENT	140	FOOT	TS 7015

FILE NAME =	USER NAME = vargasa	DESIGNED - AV	REVISED -		DETECTOR LOOP REPLACEMENT PLAN	F.A.P.	SECTION	COUNTY	TOTAL SHEET
62H69 IL 137 Buckley Rd @ IL 131 Green B	ey Rd.dgn	DRAWN - AV	REVISED -	STATE OF ILLINOIS		352	2018-136-RS-SW	LAKE	66 62
	PLOT SCALE = 40.0000 ' / in.	CHECKED - KK	REVISED -	DEPARTMENT OF TRANSPORTATION	IL RTE 137 (BUCKLEY RD) AT IL RTE 131 (GREEN BAY RD)			CONTRAC	T NO. 62H69
Default	PLOT DATE = 10/19/2021	DATE - 10/19/2021	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AI		



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.



# REPLACE ALL DETECTOR LOOPS AS SHOWN (WITHIN THE RESURFACING LIMITS)

CODE	ITEM	QUANTITY	UNIT	
88600600	DETECTOR LOOP REPLACEMENT	794	FOOT	TS 7175

FILE NAME =	USER NAME = vargasa	DESIGNED - AV	REVISED -			DETEC	TOR LOO	P REPLACEMENT	PIΔN	F.A.P.	SECTION	COUNTY	TOTAL SHEET
62H69 IL 137 Buckley Rd @ Ray St.dgn		DRAWN - AV	REVISED -	STATE OF ILLINOIS						352	2018-136-RS-SW	LAKE	66 64
	PLOT SCALE = 40.0000 ' / in.	CHECKED - KK	REVISED -	DEPARTMENT OF TRANSPORTATION	IL RTE 137 (BUCKLEY RD) AT RAY STREET					CONTRAC	T NO. 62H69		
Default	PLOT DATE = 10/20/2021	DATE - 10/19/2021	REVISED -	1	SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED. AI	D PROJECT	

