# 11-20-2017 LETTING ITEM 055

# STATE OF ILLINOIS

**DIVISION OF HIGHWAYS** 

DEPARTMENT OF TRANSPORTATION

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THIS PROJECT IS LOCATED IN THE CITY OF CHICAGO

# TRAFFIC DATA

**BELMONT AVENUE** = 18,000 (2014) **ORIOLE AVENUE** = 850 (2008)

SPEED LIMIT

PROJECT LIMIT

STA. 183 + 45

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

CHICAGO UTILITY ALERT NETWORK 1-312-744-7000

PROJECT ENGINEER: DAN WILGREEN (847) 705-4240 PROJECT MANAGER: FAWAD AQUEEL (847) 705-4247

# **PROPOSED** HIGHWAY PLANS

F.A.U. ROUTE 1374 (BELMONT AVENUE) AT ORIOLE AVENUE SECTION: 0406-N

PROJECT: ACM-1374(004)

TRAFFIC SIGNAL INSTALLATION, PEDESTRIAN RAMPS

**COOK COUNTY** C-91-313-12

R 12 E PROJECT LIMIT STA. 225 + 40NORRIDGE

LEYDEN TOWNSHIP

BELMONT AVENUE: GROSS LENGTH = NET LENGTH = 93.3 FT = 0.018 MILE

ORIOLE AVENUE: GROSS LENGTH = NET LENGTH = 120 FT = 0.023 MILE

NET LENGTH OF PROJECT = 213,3 FT = 0.041 MILE

LOCATION OF SECTION INDICATED THUS: -

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

0406-N

D-91-313-12

COOK

PROJECT LIMIT STA. 224 + 20

CONTRACT NO. 60T25

AND THE VILLAGE OF ELMWOOD PARK

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BELMONT AVENUE (WEST LEG) = 35 MPH BELMONT AVENUE (EAST LEG) = 30 MPH ORIOLE AVENUE = 25 MPH

PROJECT LIMIT STA. 184 + 38.3

# STANDARDS

INDEX OF SHEETS

SHEET	NO. DESCRIPTION		
1	COVER SHEET	000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERN
		280001-07	TEMPORARY EROSION CONTROL SYSTEMS
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES	424001-09	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
7.6	CUBBIARY OF QUANTITIES	424006-02	DIAGONAL CURB RAMPS FOR SIDEWALKS
3-6	SUMMARY OF QUANTITIES	424011-03	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
7	EXISTING AND PROPOSED TYPICAL SECTIONS	424021-03	DEPRESSED CORNER FOR SIDEWALKS
e.	AS SCANACAST TUTC AND DESIGNMADUC	424026-01	ENTRANCE / ALLEY PEDESTRIAN CROSSINGS
8	ALIGNMENT, TIES, AND BENCHMARKS	442101-07	CLASS B PATCHES
9	EXISTING AND PROPOSED ROADWAY PLAN	606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
10-11	RAMP (ADA) DETAILS- BELMONT AVE. TO ORIOLE AVE.	701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE
12	EXISTING AND PROPOSED DRAINAGE AND UTILITY PLAN	701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
13-16	TRAFFIC SIGNAL PLANS	701427-05	LANE CLOSRUE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS, FOR SPEEDS $\leq$ 40 MPH
17	PAVEMENT MARKING AND LANDSCAPING PLAN	701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
18	CURB AND GUTTER REMOVAL AND REPLACEMENT (BD-24)	701601-09	URBAN LANE CLOSURE, MUTILANE, 1W OR 2W WITH NON TRAVERSABLE MEDIAN
19	BITT JOINT AND HOT-MIX ASPHALT	701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
13	BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS (BD-32)	701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
20	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)	701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
21	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)	701901-06	TRAFFIC CONTROL DEVICES
22	ARTERIAL ROAD INFORMATION SIGN (TC-22)	720016-03	MAST ARM MOUNTED STREET NAME SIGNS
23-25	CITY OF CHICAGO TYPICAL PAVMENT MARKINGS (TC-24)	780001-05	TYPICAL PAVEMENT MARKINGS
26	MAST ARM MOUNTED STREET NAME SIGNS (TS-02)	781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
		814001-03	HANDHOLES
27-33	STANDARD TRAFFIC SIGNAL DESIGN DETAILS (TS-05)	814006-02	DOUBLE HANDHOLES
		862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
		873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
		877001-06	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
		877002-03	STEEL MAST ARM ASSEMBLY AND POLE 56' THROUGH 75'
		878001-10	CONCRETE FOUNDATION DETAILS
		880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
		886001-01	DETECTOR LOOP INSTALLATIONS
		886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

TEN (10) FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND GUTTER AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF CHICAGO AND VILLAGE OF ELMWOOD PARK

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

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.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

LOCATION OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT, WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

FRAMES AND GRATES ADJUSTMENT OF PRIVATE UTILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS SHALL BE DONE BY THEIR RESPECTIVE OWNERS AND ARE NOT PART OF THIS CONTRACT.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE ENGINEER SHALL CONTACT CORY JUCIUS, ARTERIAL TRAFFIC OPERATIONS ENGINEER, AT (847) 705-4411 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

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

FOR FRAMES AND LIDS ADJUSTMENT WITHOUT MILLING, REUSE EXISTING FRAME AND LID UNLESS OTHERWISE SPECIFIED IN THE PLANS.

GENERAL NOTES

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES.

WHEN THE MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM CRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES (40 mm) WHERE THE SPEED LIMIT IS 40 MPH (80 km/h) OR LESS AND 1 INCH (25 mm) WHERE THE SPEED LIMIT IS GREATER THAN 40 MPH (80 km/h), WITH WRITTEN APPROVAL OF THE ENCINCENT AVAINUM CRADE DIFFERENTIAL OF 3 INCHES (75 mm) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (Y:H) OR A NOTCHED LONGITUDINAL WEDGE IS USED.

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT) ACCORDING TO THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "C.U.A.N." (CHICAGO UTILITY ALERT NETWORK) AT (312)744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED).

THE CITY OF CHICAGO IS TO MAKE ADJUSTMENTS TO THEIR STREET LIGHTING AND/OR TRAFFIC SIGNAL FACILITIES. THE CONTRACTOR SHALL COORDINATE HIS WORK AND COOPERATE WITH THE CITY OF CHICAGO IN THESE ADJUSTMENTS. THIS COORDINATION AND COOPERATION BY THE CONTRACTOR WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE COSTS OF THE CONTRACT.

ALL CATCH BASINS IN THE CITY OF CHICAGO MUST MEET THE DEPARTMENT OF SEWERS' STANDARDS.

PERFORATED LIDS SHALL BE PLACED ON ALL MANHOLES AND CATCH BASINS.

SIDEWALK HANDICAPPED RAMPS SHALL NOT BE CONSTRUCTED DIRECTLY OVER EXISTING OR PROPOSED DRAINAGE STRUCTURES.

ALL BROKEN, CRACKED, WORN OR OTHERWISE DAMAGED OR BICYCLE UNSAFE FRAMES AND LIDS ON SEWER STRUCTURES, SHALL BE REPLACED WITH NEW DEPARTMENT OF SEWERS' STANDARD FRAMES AND LIDS.

OPEN LID DRAINAGE STRUCTURES SHALL NOT BE CLOSED, COVERED OR OTHERWISE OBSTRUCTED DURING CONSTRUCTION OF THIS ROADWAY WITHOUT THE WRITTEN PERMISSION FROM THE CITY OF CHICAGO.

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

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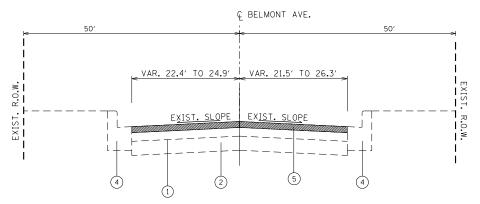
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0600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	344	344			in and work designed to the second se		-									
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14000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SO YD	763	763			A DATE OF THE PARTY OF THE PART									4.00		
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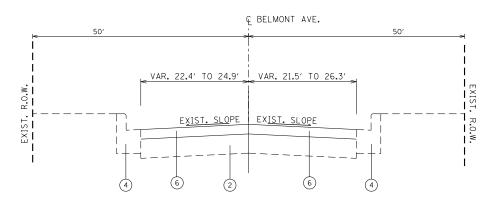
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70300100	SHORT TERM PAVEMENT MARKING	FOOT	375	375					<b>*</b> 81400100	HANDHOLE	EACH	3	- Constitution of the Cons	3				·
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70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	22	22			Water State Control of the Control o			14 20								
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70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	30	30	<u> </u>						-							
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70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	411	411			***************************************			14 3C								
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70300520	PAVMENT MARKING TAPE, TYPE III 4"	FOOT	375	375				ventional	<b>*</b> 87301245	ELECTRIC CABLE IN CONDUIT. SIGNAL NO.	FOOT	1126		1126				
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72000100	SIGN PANEL - TYPE 1	SO FT	79		79			ress	de la contraction de la contra	1								
						A-1			<b>*</b> 87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.	FOOT	809		809				
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78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	22	22					<b>*</b> 87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.	FOOT	243		243				
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* 4	37301900	ELECTRIC CABLE IN CONDUIT. EQUIPMENT	FOOT	454	AVADRAT	454			 *	88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE.	EACH	8	NONDHAT	8			
-		GROUNDING CONDUCTOR, NO. 6 1C		<del> </del>							BRACKET MOUNTED WITH COUNTDOWN TIMER		-	<del>                                     </del>				
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* [	37502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL	EACH	3	A CONTRACTOR OF THE CONTRACTOR	3		The state of the s	*	88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED,	EACH	8		8	22		
-		16 FT.	-			Anna recen					FORMED PLASTIC		**************************************				- Annual Control of Co	realization and the second sec
*	37700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT,	EACH	2	100 H A A A A A A A A A A A A A A A A A A	2		Transition of the state of the	*	88800100	PEDESTRIAN PUSH-BUTTON	EACH	8		8			
*	87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	2	***************************************	2			 *	x0327980	PAVEMENT MARKING REMOVAL - WATER	SO FT	845	845	And the second s			
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*	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16	And the second s	16				entanatura							or a company of the c	
									*	X1400081	FULL-ACTUATED CONTROLLER AND TYPE SUPER	EACH	1		1		to company and the company and	
*	87800150	CONCRETE FOUNDATION. TYPE C	FOOT	4		4		alia a interactiva proprior pr	_	er provinción en la companya de la c	P CABINET (SPECIAL)							
* 6	37800400	CONCRETE FOUNDATION, TYPE E 30-INCH	FOOT	20		20		***************************************	*	X1400150	SERVICE INSTALLATION - GROUND MOUNTED.	EACH	1		1			
_		DIAMETER		-				Antonia distributi di serie d		***************************************	METERED		**************************************					
* :	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH	FOOT	22		22			\ *	X1400156	RADAR VEHICLE DETECTION SYSTEM, SINGLE	EACH	2		2			
-		DIAMETER								Annual Control of the	APPROACH, FAR BACK							
*	88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION.	EACH	6		6				x5537800	STORM SEWERS TO BE CLEANED 12"	FOOT	48	48				
F		MAST-ARM MOUNTED																
* .	88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION,	EACH	2		2				x8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1		1			
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TYPICAL EXISTING CROSS SECTION - BELMONT AVENUE
STA. 183+45 TO STA 184+38.3



TYPICAL PROPOSED CROSS SECTION - BELMONT AVENUE
STA. 183+45 TO STA 184+38.3

нот.	-MIX ASPHALT MIXTURE REQ	UIREMENTS							
MIXTURE USES	MIXTURE TYPE	AIR VOIDS @ Ndes	QMP						
ROADWAY	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL-9.5 mm)	4% ⊚ 70 GYR	QC/QA						
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFORMANCE (QCP)									

# NOTES:

THE UNIT WEIGHT USED TO CALCULATE ALL HMA MIXTURES IS 112 LBS/SQ YD/IN.

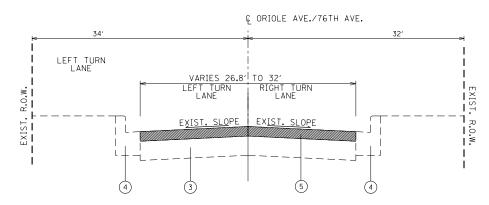
#### AC TYPE NOTE

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

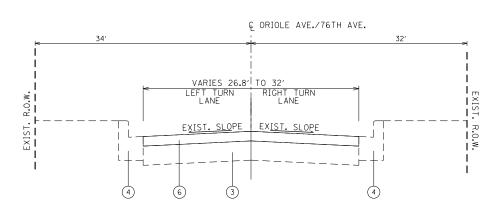
FOR USE OF RECYCLED MATERIALS SEE DISTRICT ONE SPECIAL PROVISIONS.

#### OMP NOTE

"QUALITY MANAGEMENT PROGRAM (OMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE"



TYPICAL EXISTING CROSS SECTION - ORIOLE/76TH AVENUE
STA. 224+20 TO STA 225+40



TYPICAL PROPOSED CROSS SECTION - ORIOLE/76TH AVENUE
STA. 224+20 TO STA 225+40

#### **LEGEND**

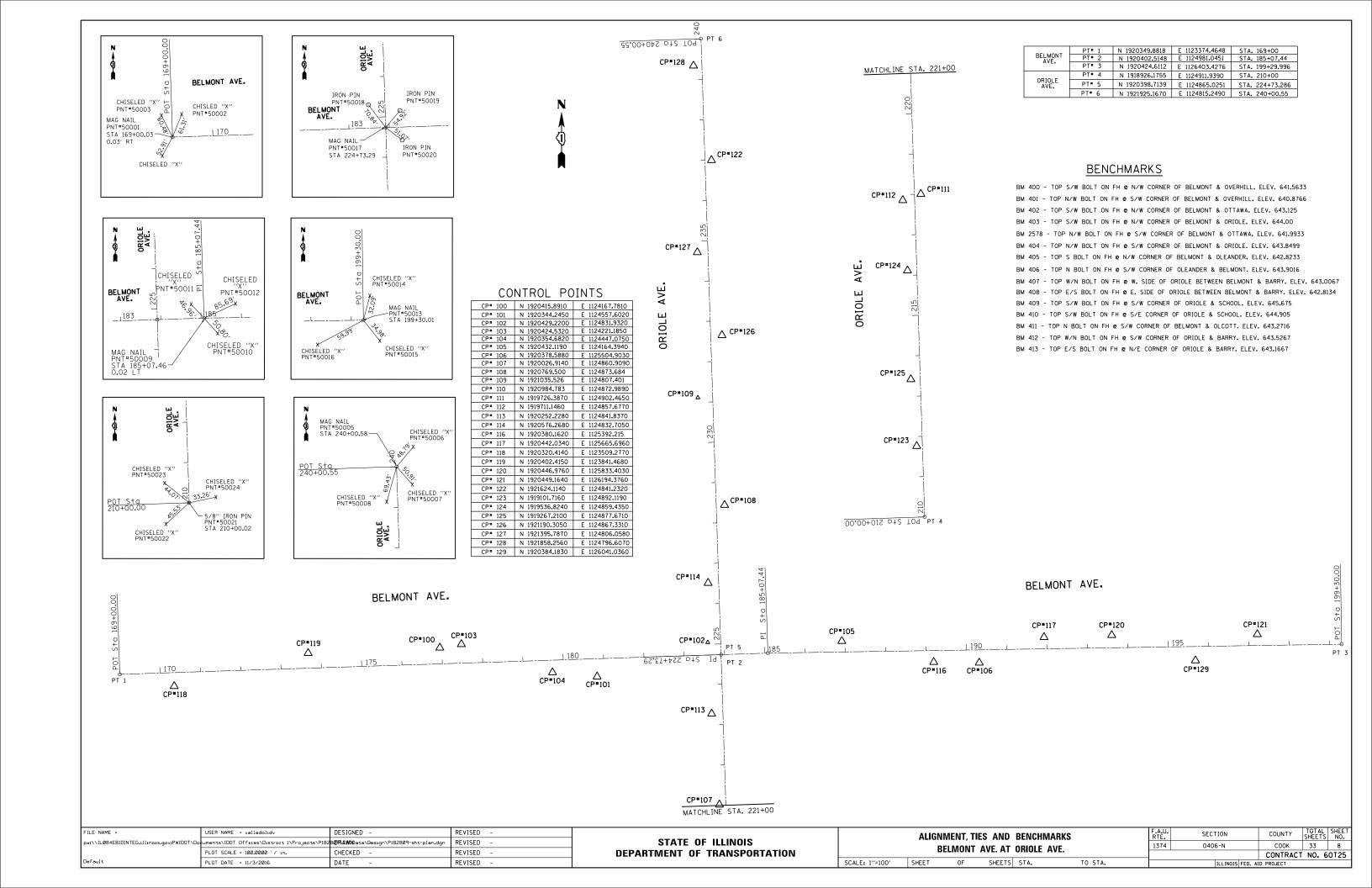
- ① EXISTING HOT-MIX ASPHALT SURFACE, 4"(±)
- ② EXISTING CONCRETE BASE COURSE, 10"(±)
- 3 EXISTING HOT-MIX ASPHALT PAVEMENT, 10"(±)
- @ EXISTING COMBINATION CONCRETE CURB & GUTTER B-6.12
- 5 PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL 2"
- 6 PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 2"

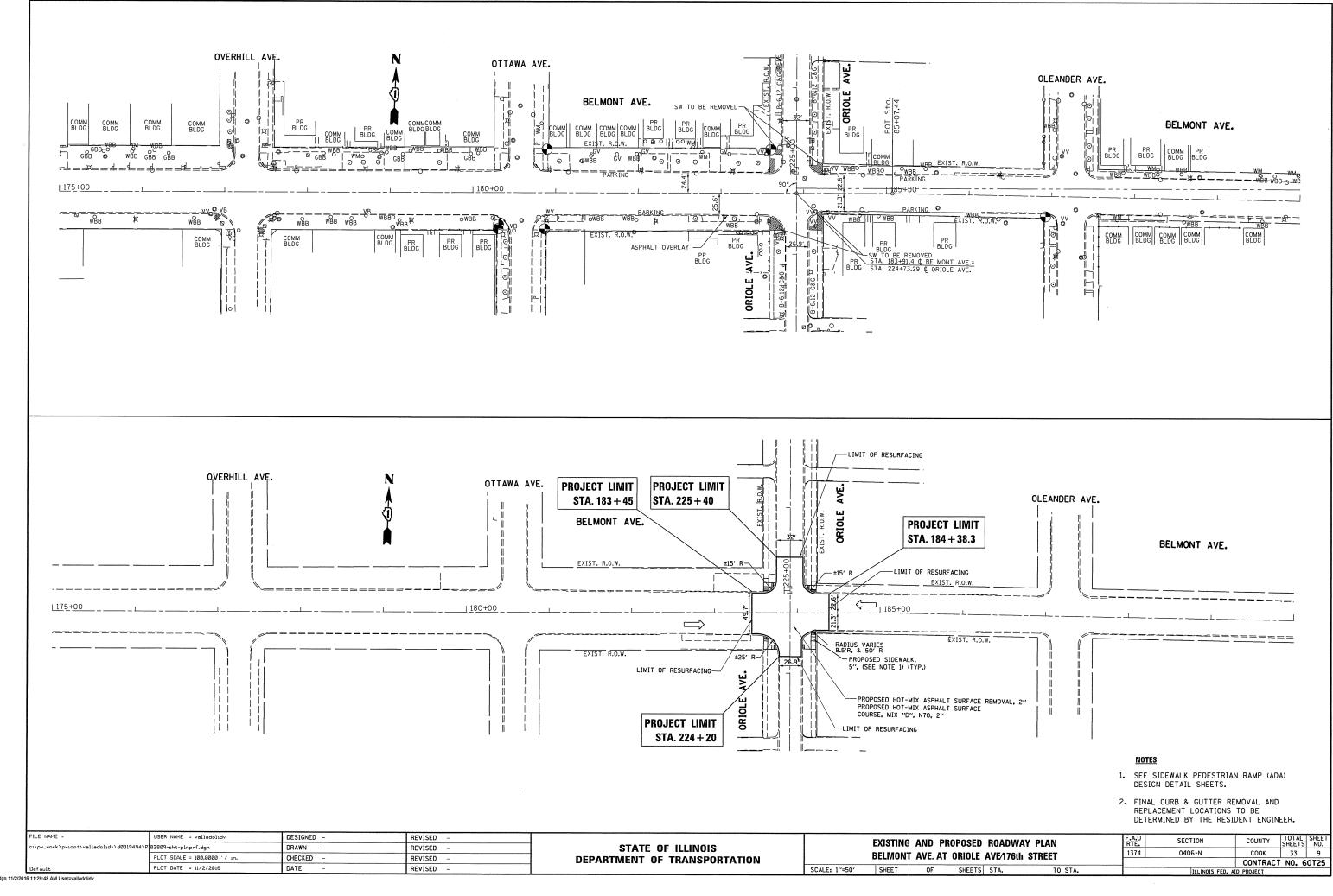
COUNTY TOTAL SHEETS NO.
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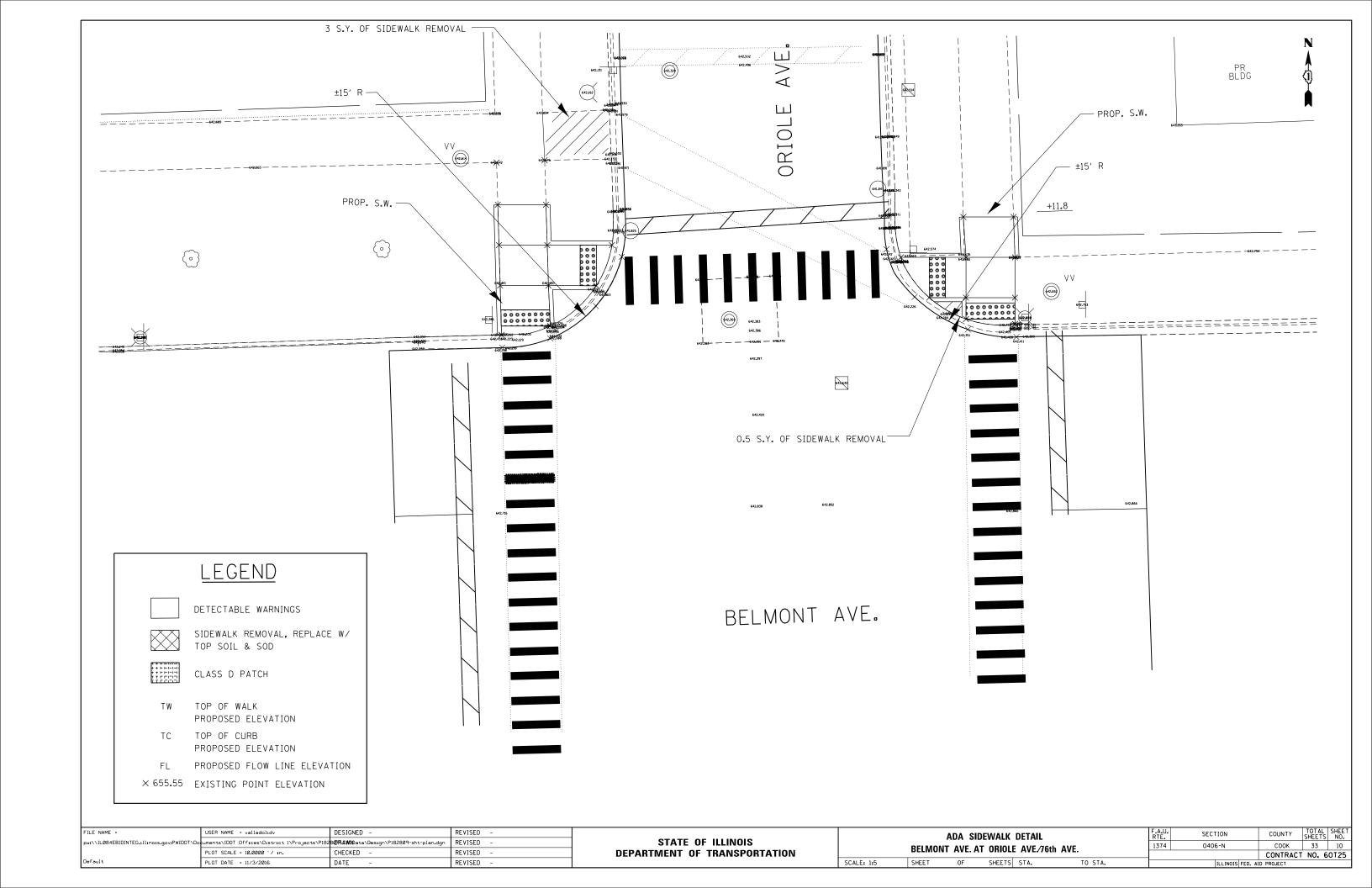
CONTRACT NO. 60T25

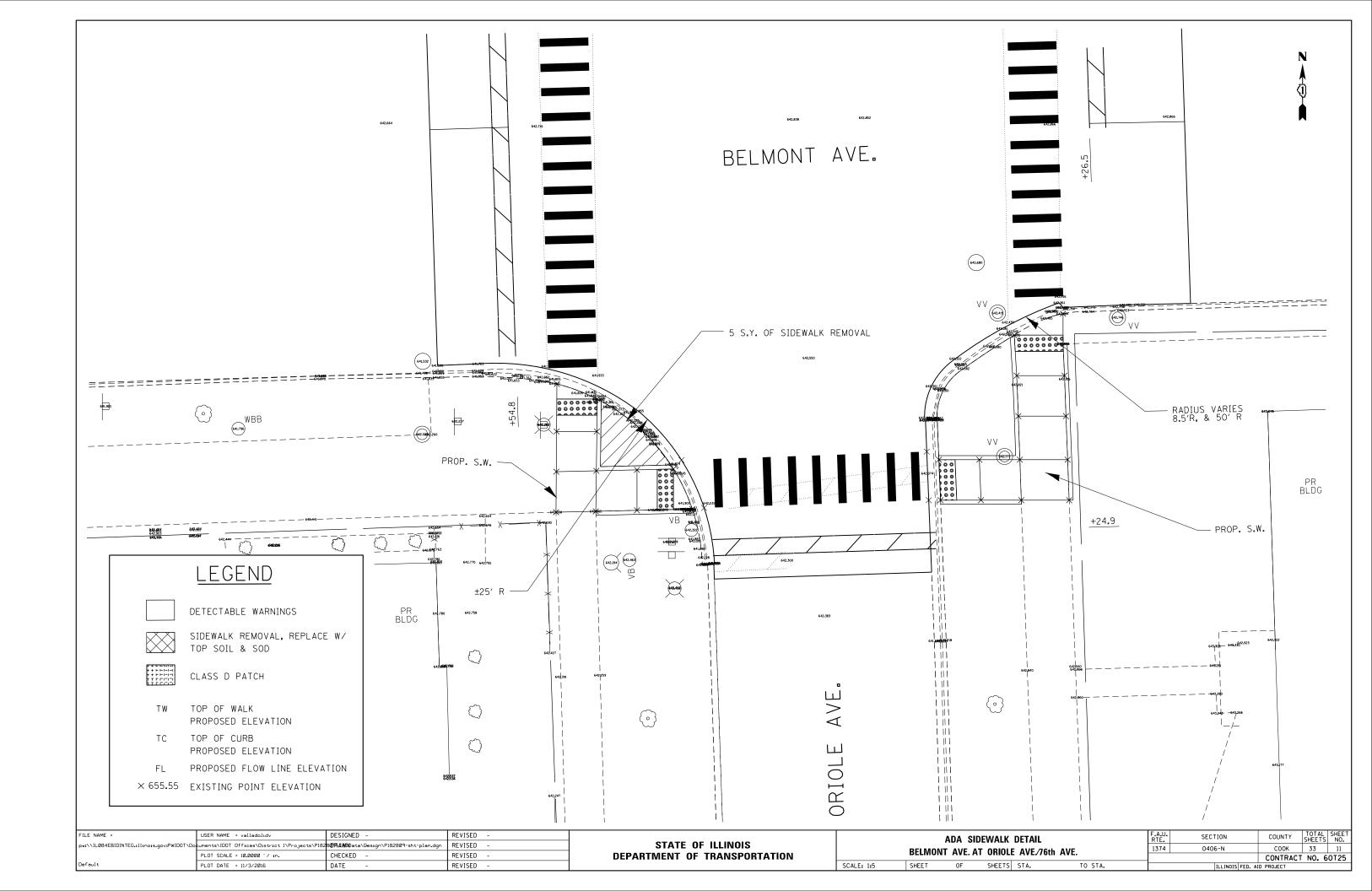
SECTION 0406-N

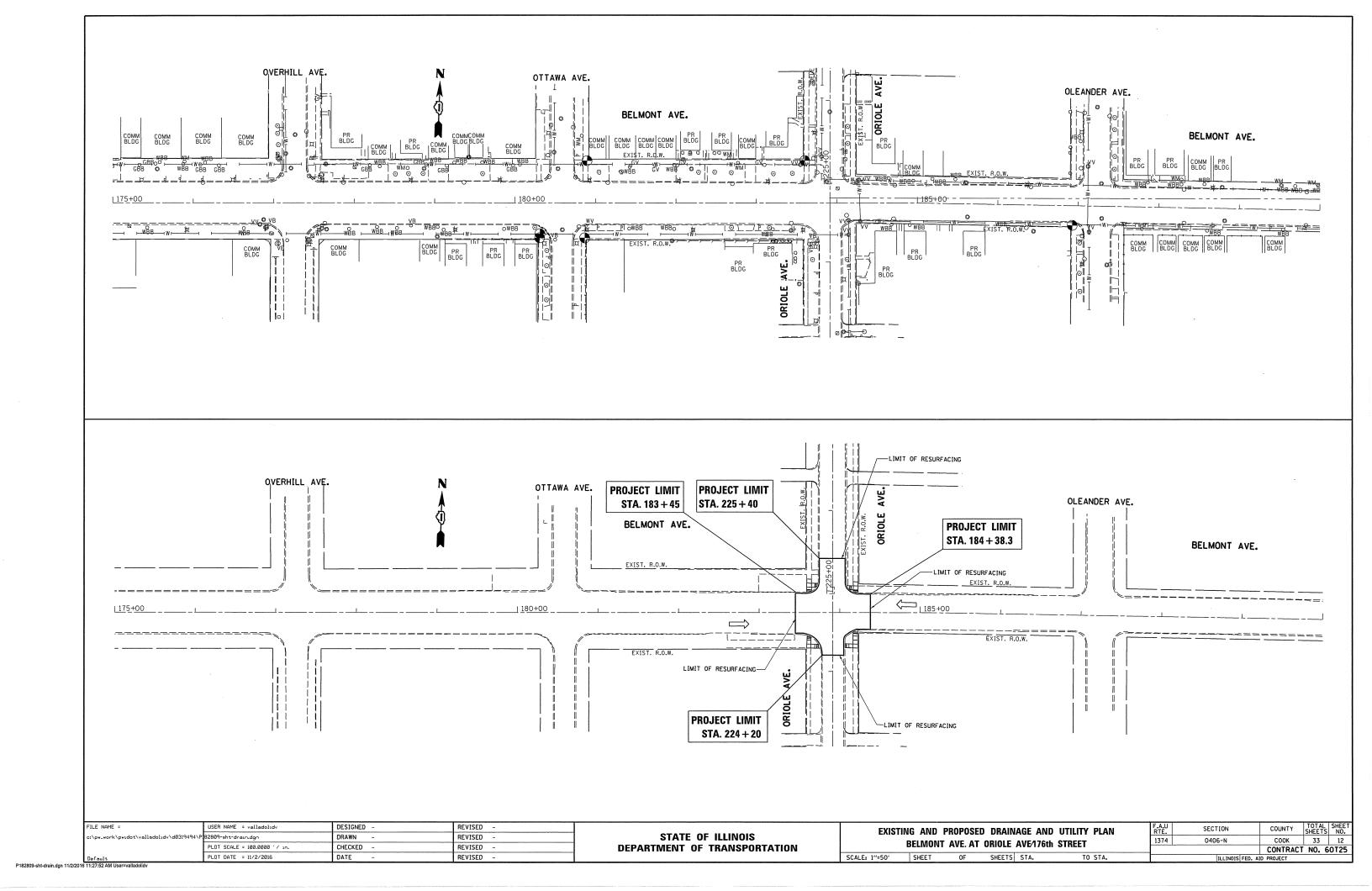
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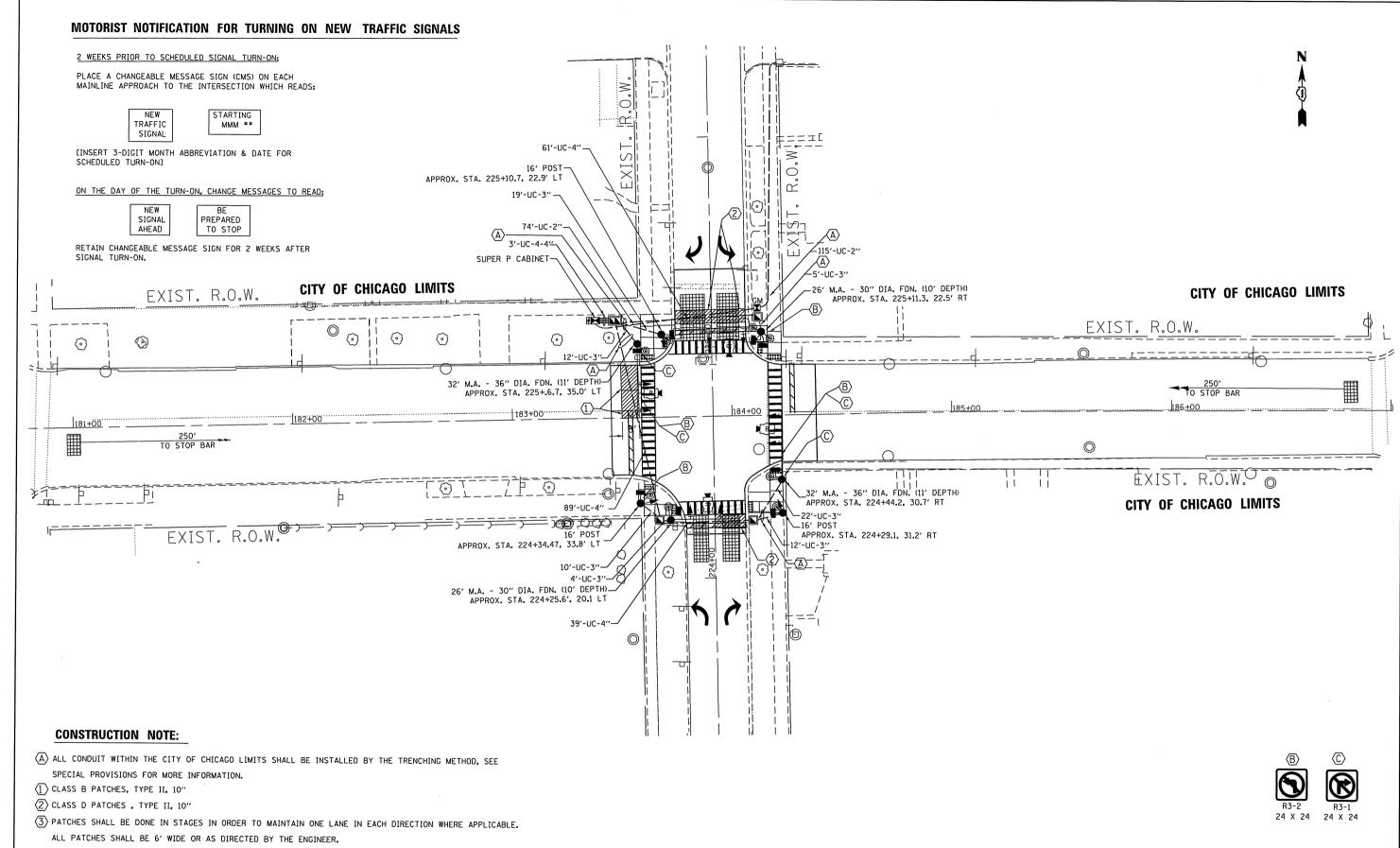








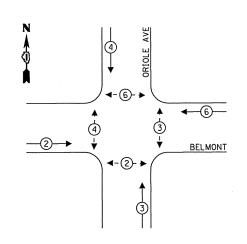




TS 11074

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Default	PLOT DATE = 10/20/2016	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILL INDIS FED.	CONTRACT NO. 60T25

# PROPOSED CONTROLLER SEQUENCE



# **LEGEND:**

**◆** PROTECTED PHASE

← -(\*)- - PROTECTED/PERMITTED PHASE

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PEDESTRIAN PHASE

Output

Description

PEDESTRIAN

PHASE

Output

Description

PEDESTRIAN

PHASE

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# TRAFFIC SIGNAL **ELECTRICAL SERVICE REQUIREMENTS**

LLLOIIIIOA	L OLIII	HOL HE	CONTENTE	¥ 1 O
TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66
(YELLOW)	12	20	5	13
(GREEN)	16	12	45	87
PERMISSIVE ARROW	-	10	10	-
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	_	-
			TOTAL =	451

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION 201 CENTER COURT SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: JOE LEUNG
PHONE: (773) 509-3288

COMPANY: COMMONWEALTH EDISON

ACCOUNT NUMBER: 139-5097-089

FILE NAME = USER NAME = curryJa DESIGNED -REVISED -STATE OF ILLINOIS w:\\ILØ84EBIDINTEG.:111 ments\IDDT Offices\District 1\Projects\P1828@RANDato\Traffic\P182809-sht-ts.dgn REVISED -PLOT SCALE = 40.0000 '/ in. CHECKED -**DEPARTMENT OF TRANSPORTATION** REVISED -REVISED -

CABLE PLAN AND PHASE DESIGNATION DIAGRAM **BELMONT AVE AND ORIOLE AVE** OF SHEETS STA.

SCALE:

COUNTY TOTAL SHEET NO.

COOK 33 14

CONTRACT NO. 60125 F.A.**U.** RTE. 1374 SECTION 0406-N ILLINOIS FED. AID PROJECT

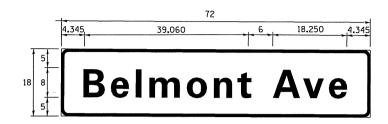
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# **CABLE PLAN**

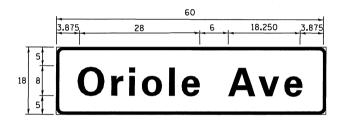
TS 11074

# SIGN PANEL - TYPE 1 OR TYPE 2

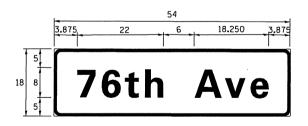
ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN	AREA	SIGN PANEL	SHEETING	OTY.
SERIES	(SQ FT)	TYPE	TYPE	REQUIRED
D	9.0	1	ZZ	



DESIGN	AREA	SIGN PANEL	SHEETING	OTY.
SERIES	(SQ FT)	TYPE	TYPE	REQUIRED
D	7.5	1	ZZ	2



DESIGN	AREA	SIGN PANEL	SHEETING	OTY.
SERIES	(SO FT)	TYPE	TYPE	REQUIRED
D	6.75	l	ZZ	

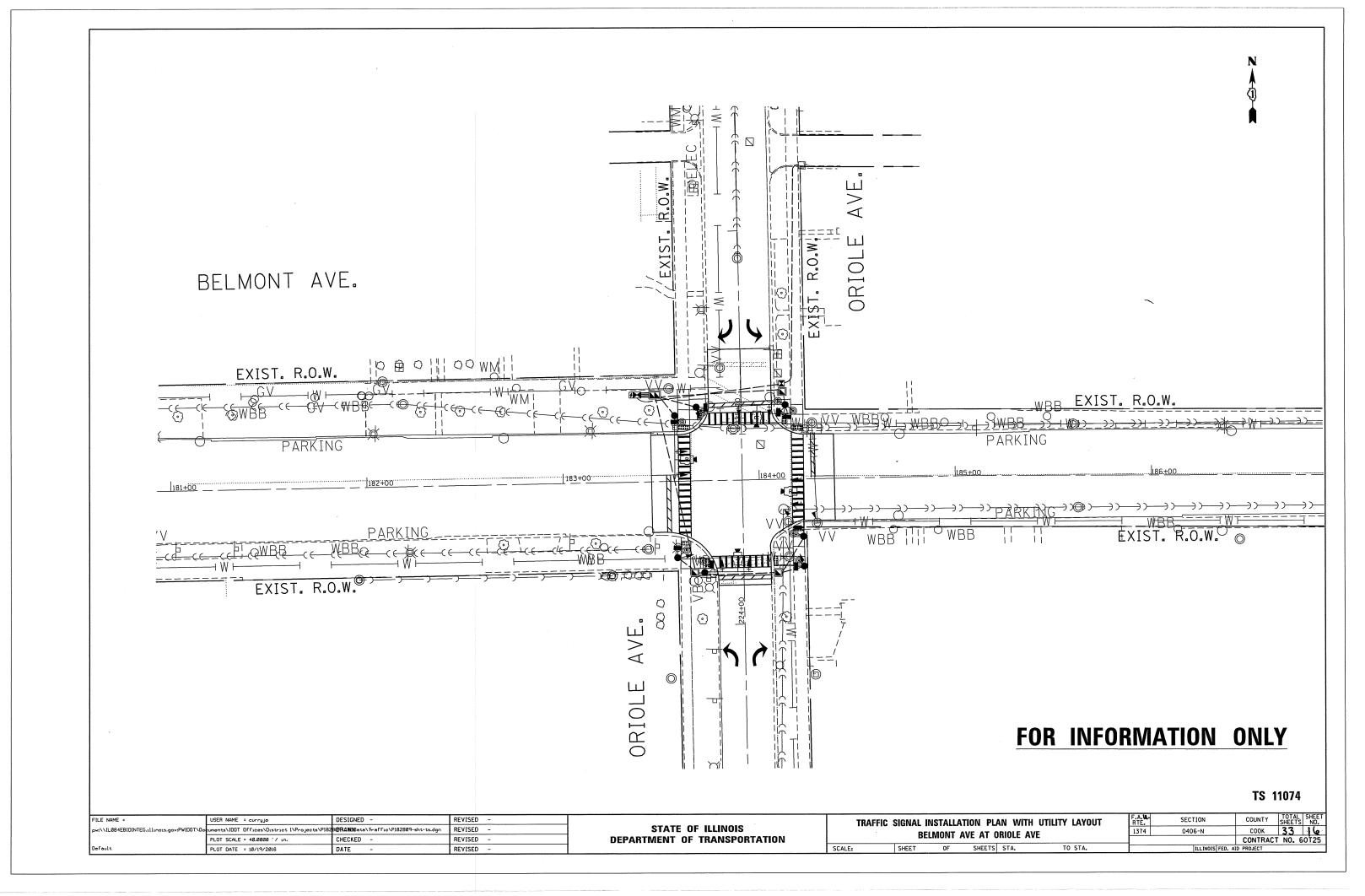
NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

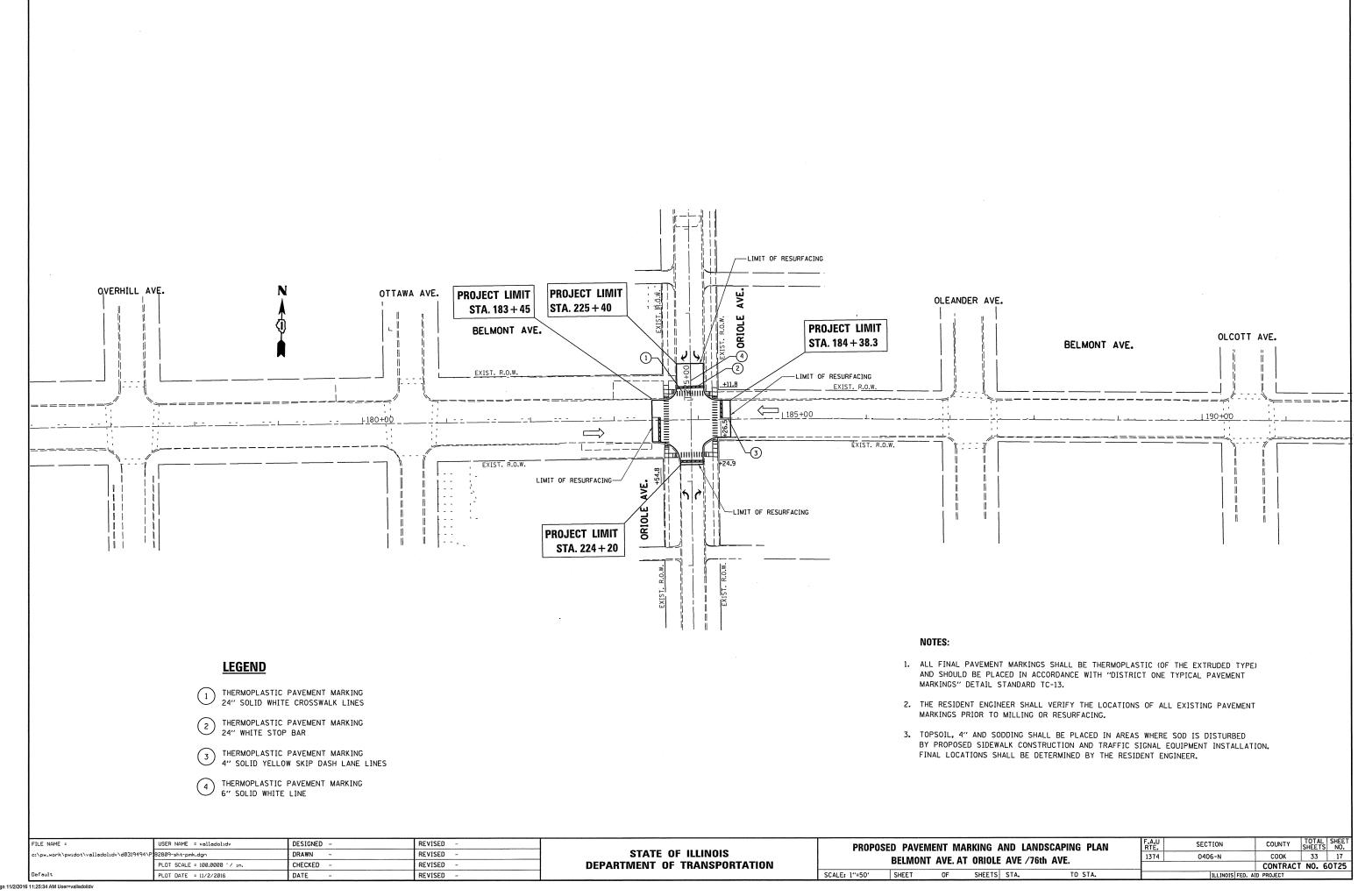
# SCHEDULE OF QUANTITIES

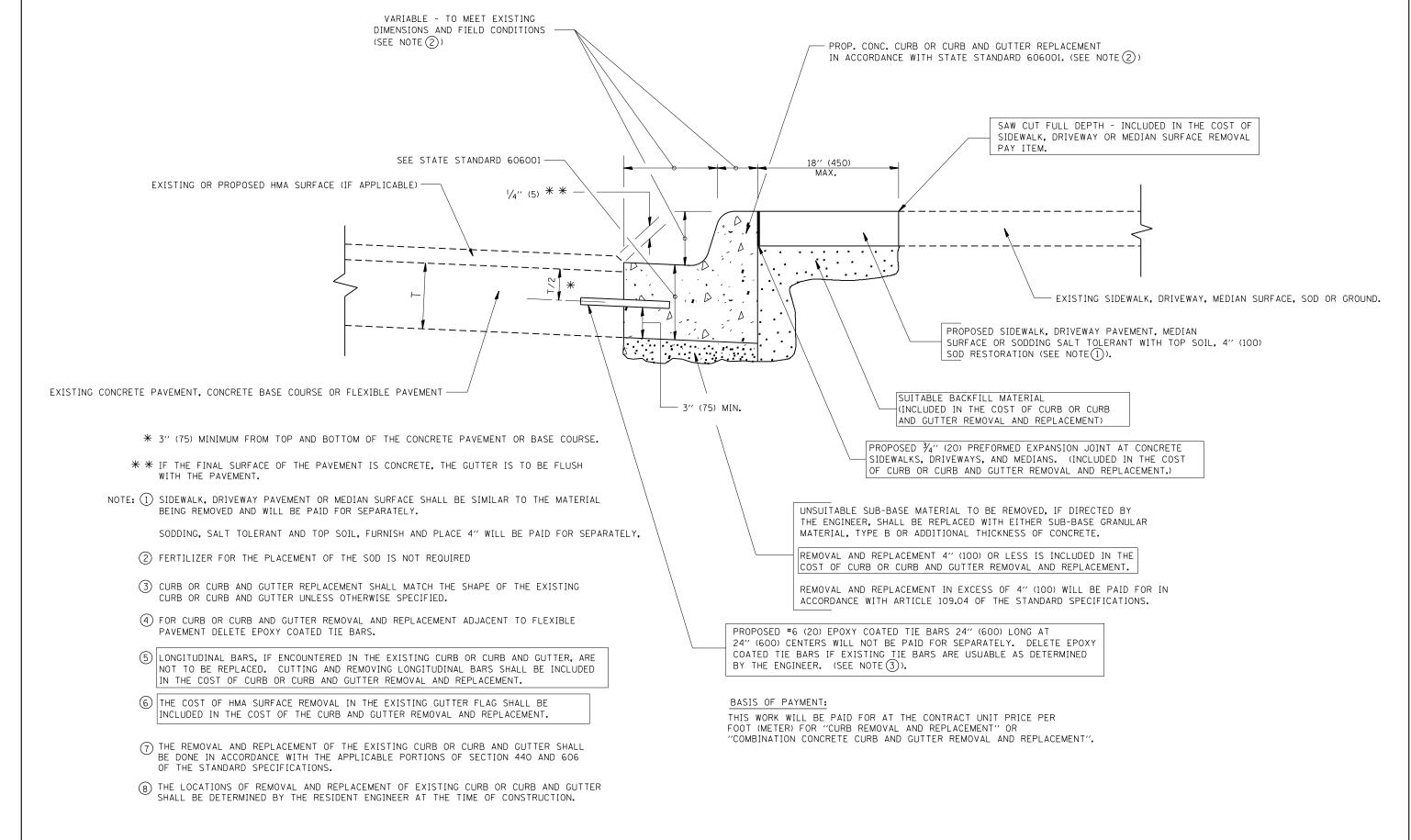
ITEM DESCRIPTION	UNITS	TOTAL OTY.
CLASS B PATCHES, TYPE II, 10 INCH	SQ YD	21.4
CLASS D PATCHES,TYPE II , 10 INCH	SQ YD	30
SAW CUTS	FOOT	245
DOWEL BARS, 1 1/2 INCH	EACH	40
SIGN PANEL - TYPE 1	SO FT	78.5
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	177
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	84
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	201
HANDHOLE	EACH	3
DOUBLE HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	952
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,008
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,126
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	809
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	243
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR,NO.6 1C	FOOT	454
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	2
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	20
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	22
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
PEDESTRIAN PUSH-BUTTON	EACH	8
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION - GROUND MOUNTED, METERED	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH EACH	2
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, FAR BACK	EACH	2
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR	EACH	
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TS 11074

FILE NAME =	USER NAME = curryja	DESIGNED -	REVISED -		TRAFFIC SIGNAL INSTALLATION PLAN		N	F.A.W.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
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	PLOT SCALE = 40.0000 '/ in.	CHECKED -	REVISED	DEPARTMENT OF TRANSPORTATION	BELMONT AVE AT ORIOLE AVE					CONTRAC	CT NO. 60T25
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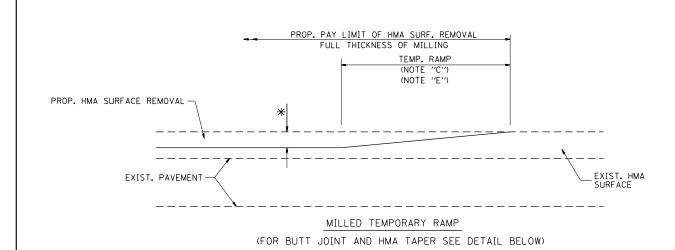




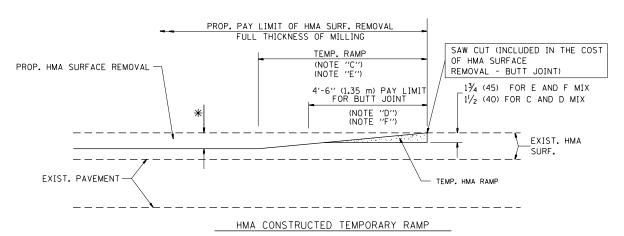
# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

	TEO-   SECTION	COUNTY SHEETS
PHINITEGRATION SOCIAL PROJECT STATE OF ILLINOIS  CURB OR CURB AND GUTTER  RTI  PHINITEGRATION SOCIAL PROJECT STATE OF ILLINOIS  STATE OF ILLINOIS  STATE OF ILLINOIS	74 0406-N	COOK 33
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PLOT DATE = 11/3/2016 DATE - 03-11-94 REVISED - R. BORO 12-15-09 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. FEE	D. ROAD DIST. NO. 1   ILLINOIS FED. AIL	

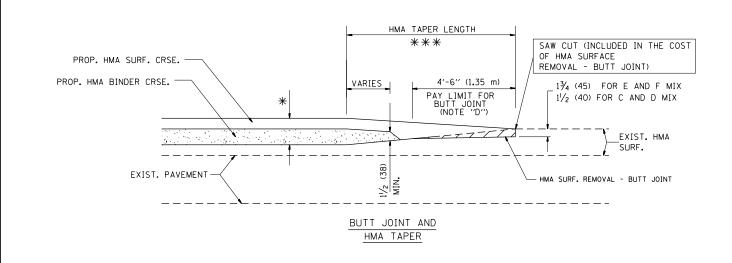


# OPTION 1



# (FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW) OPTION 2

# TYPICAL TEMPORARY RAMP

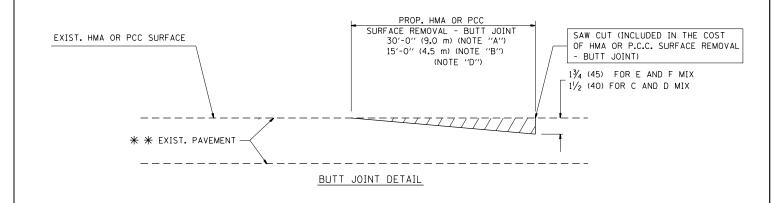


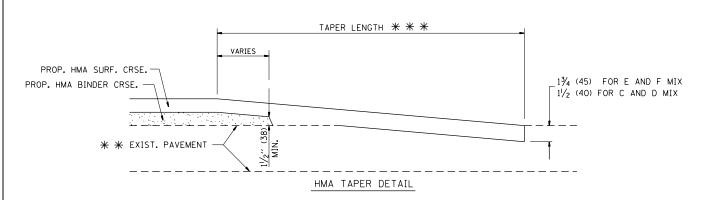
# TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS

OTHERWISE SHOWN.





# TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

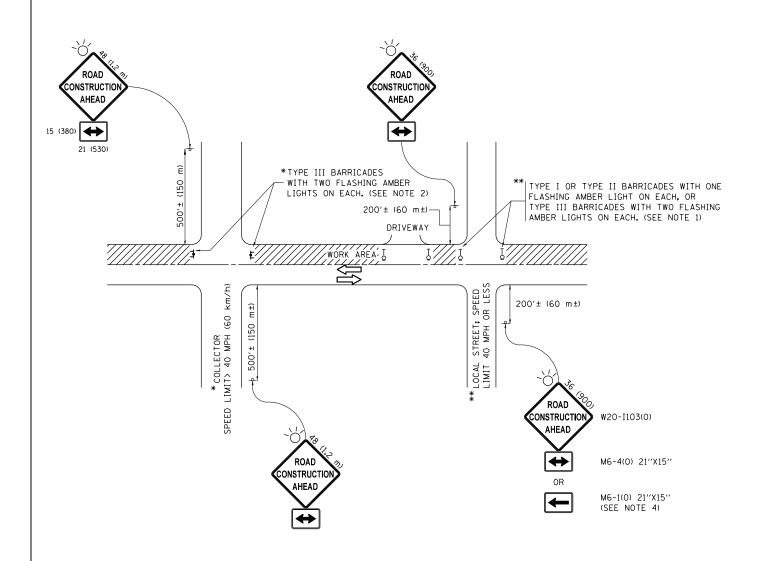
\* \* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

# NOTES

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

# BASIS OF PAYMENT:

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



# **NOTES:**

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200" (60 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48  $\times$  48 (1.2 m  $\times$  1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500" (150 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEICHT
- 4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

SCALE: NONE

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

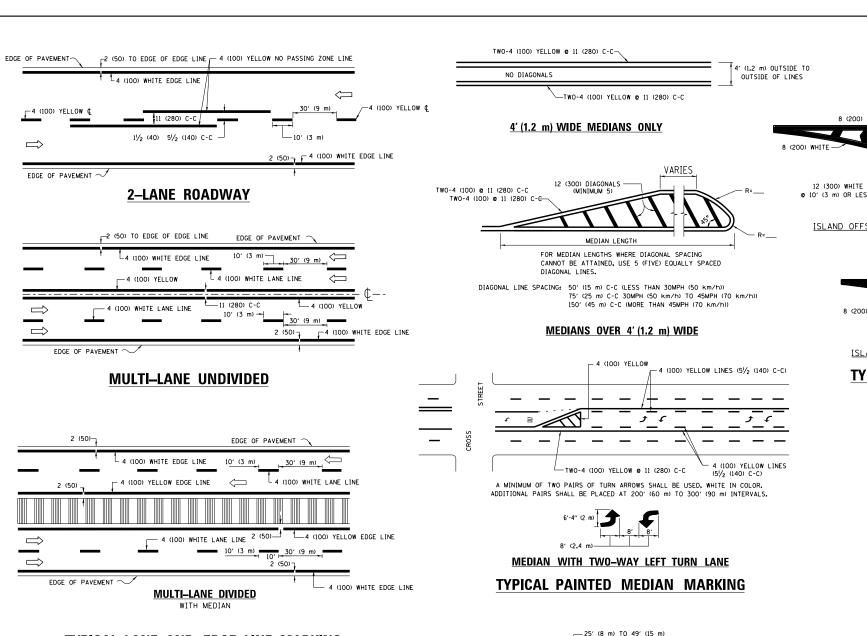
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = valladolidv	DESIGNED - L.H.A.	REVISED	- A. HOUSEH 10-15-96
pw:\\ILØ84EBIDINTEG.:ll:no:s.gov:PWIDOT\Do	cuments\IDOT Offices\District 1\Projects\P182	8 <b>0RAWN</b> Data\Besign\DistStd.dgn	REVISED	-T. RAMMACHER 01-06-00
	PLOT SCALE = 100.0000 '/ in.	CHECKED -	REVISED	- A. SCHUETZE 07-01-13
Default	PLOT DATE = 11/3/2016	DATE - 06-89	REVISED	- A. SCHUETZE 09-15-16

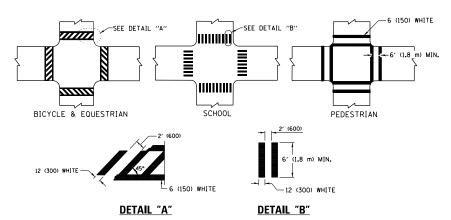
STATE OF ILLINOIS	
<b>DEPARTMENT OF TRANSPORTATION</b>	

	TRAFFIC C	CTION FOR	F.A.U. RTE.	SECTION					
СI	SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS						4 0406-N		
SIDE RUADS, INTERSECTIONS, AND DRIVEWATS					TC-10				
	SHEET 1	OF 1	SHEETS	STA.	TO STA.		ILLINOIS		

RTE.	SEC.		COUNTY	SHEETS	NO.				
1374 0406-N					COOK	33	20		
TC-10					CONTRACT	NO. 6	OT25		
ILLINOIS FED. AID					PROJECT				



# TYPICAL LANE AND EDGE LINE MARKING



# TYPICAL CROSSWALK MARKING

\* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

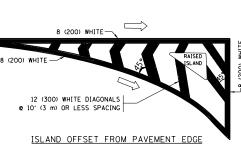
# −50′ (15 m) TO 200′ (60 m) <del>||</del> 10' (3 m) 6 (150) WHITE OVER 200' (60 m) \_\_\_\_ 6 (150) WHITE

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SO. FT. (1.5 m2 ) ONLY AREA = 20.8 SO. FT. (1.9 m2)

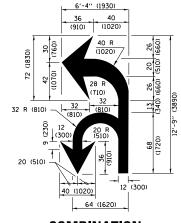
\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

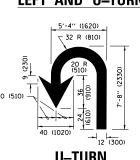
TYPICAL TURN LANE MARKING

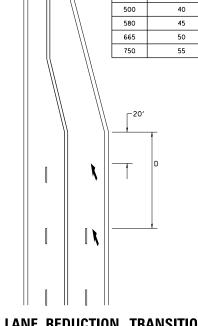






# COMBINATION LEFT AND U-TURN





D(FT)

345

425

SPEED LIMIT

# 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	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH, 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EOUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1,8 m) APART 2' (600) APART 2' (600) APART 5EE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSMALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4,5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SO. FT. (0.33 m²) EACH "X"=54.0 SO. FT. (5.0 m²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8')	12 (300) <b>©</b> 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

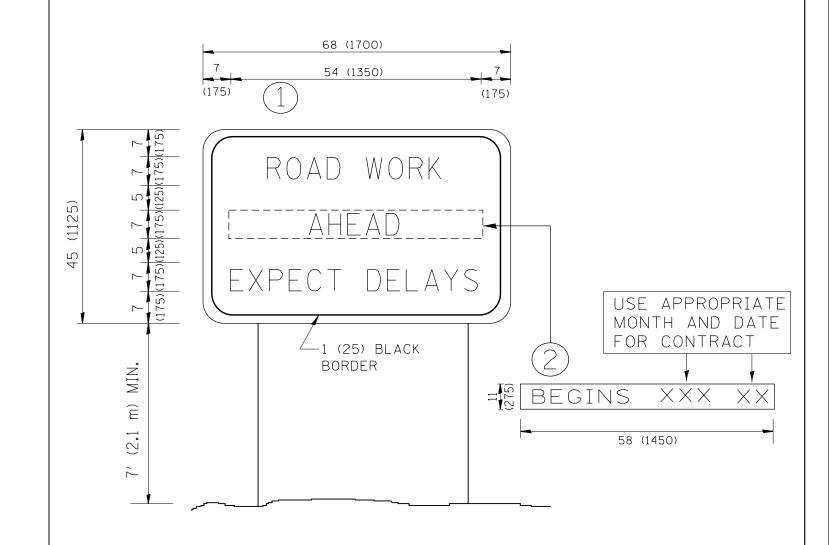
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

FILE NAME = DESIGNED - EVERS USER NAME = valladolidv REVISED - C. JUCIUS 09-09-09 ow:\\ILØ84EBIDINTEG.:ll:no: ments\IDOT Offices\District 1\Projects\P1828@RAMDData\Besign\DistStd.dgr REVISED -C. JUCIUS 07-01-13 CHECKED REVISED C. JUCIUS 12-21-15 PLOT DATE = 11/3/2016 DATE 03-19-90 REVISED -C. JUCIUS 04-12-16

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

	DISTRICT ONE	F.A.U. RTE.	SECTION	COUNTY TOTAL SH		
ı	TYPICAL PAVEMENT MARKINGS	1374	0406-N	COOK	33	21
ı			TC-13	CONTRACT	NO. 6	OT25
	SCALE: NONE   SHEET 1 OF 1 SHEETS   STA. TO STA.		ILLINOIS FED. AI	D PROJECT		

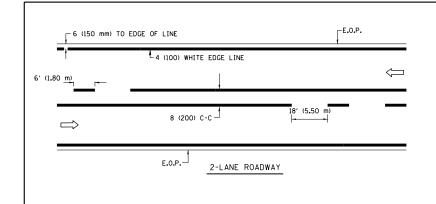


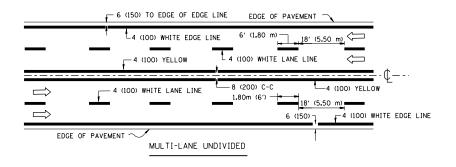
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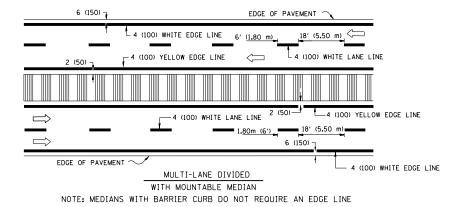
- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL (2) SOON AFTER THE START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

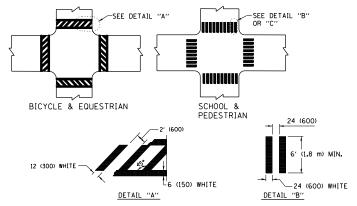
FILE NAME =		USER NAME = valladolidv	DESIGNED -	REVISED -	R. MIRS 09-15-97	<u> </u>		ARTERIAL ROAD		F.A.U. RTF.	SECTION	COUNTY	TOTAL SHEET
pw:\\ILØ84EBIDINT	NTEG.:111:nois.gov:PWIDOT\Do	•		REVISED -	R. MIRS 12-11-97	STATE OF ILLINOIS		INFORMATION SIGN		1374	0406-N	соок	33 22
		PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION				TC-22	CONTRACT	T NO. 60T25	
		PLOT DATE = 11/3/2016	DATE -	REVISED -	C. JUCIUS 01-31-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. RO	DAD DIST. NO. 1   ILLINOIS FED. A	ID PROJECT	

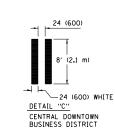






# TYPICAL LANE AND EDGE LINE MARKING

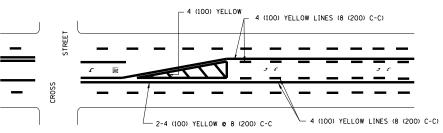




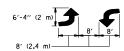
# 2-4 (100) © 8 (200) C-C (MINIMUM 5)

- \*FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
- \* DIAGONAL LINE SPACING: 20' (6.1 m) C-C

#### PAINTED MEDIANS

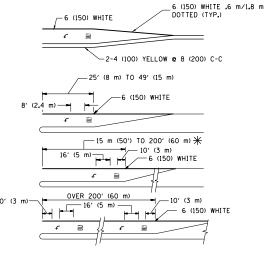


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS



MEDIAN WITH TWO-WAY LEFT TURN LANE

# TYPICAL PAINTED MEDIAN MARKING

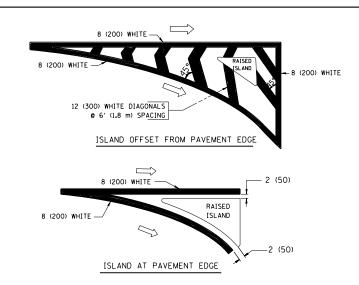


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\P$  AREA = 15.8 SO. FT. (1.47 m²)  $\P$  AREA = 22.9 SO. FT. (2.13 m²)

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

TYPICAL LEFT (OR RIGHT) TURN LANE

# TYPICAL TURN LANE MARKING



# TYPICAL ISLAND MARKING

TURE OF HARMING				CD LOVID / DELLIBUS
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	8 (200) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 <b>@</b> 4 (100)	SOLID SOLID	YELLOW YELLOW	8 (200) C-C
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW: EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	6' (1.8 m) LINE WITH 18' (5.50 m) SPACE FOR SKIP-DASH: 8 (200) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4 m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL & PEDESTRIAN)	12 (300) <b>©</b> 45° 24 (600) <b>©</b> 90°	SOLID SOLID	WHITE WHITE	2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSMALK, IF PRESENT, OTHERNISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	8 (200) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 20' (6.1 m) (LESS THAN 30 MPH (50 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R":3.6 SO. FT. (0.33m²) EACH "X":54.0 SO. FT. (5.0 m²)

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STREET MARKING STANDARDS. PRINTED BY CITY OF CHICAGO. DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC

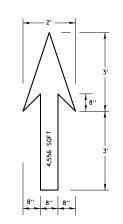
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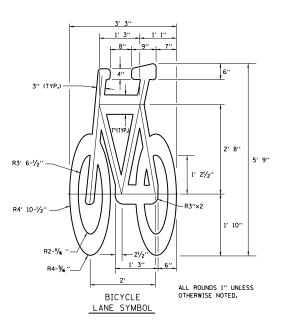
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	pw:\\IL084EBIDINTEG.:ll:nois.gov:PWIDOT\Do	cuments\IDOT Offices\District 1\Projects\P182	8 <b>@RAWD</b> oto\Design\DistStd.dgn	REVISED	- K. ENG	02-28-12
		PLOT SCALE = 100.0000 '/ in.	CHECKED -	REVISED	-	
		PLOT DATE = 11/3/2016	DATE -	REVISED	-	

TYPICAL CROSSWALK MARKING

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO				RTE.	SECTION	COUNTY	SHEETS	NO.
TYPICAL PAVEMENT MARKINGS			1374	0406-N	соок	33	23	
ITFICAL FAVEWEIN WARKINGS					TC-24	CONTRACT	NO. 6	OT25
SCALE: NONE	SHEET NO. 1 OF 3 SHEETS	STA.	TO STA.	FED. RO	DAD DIST. NO. 1   ILLINOIS FED. A	ID PROJECT		





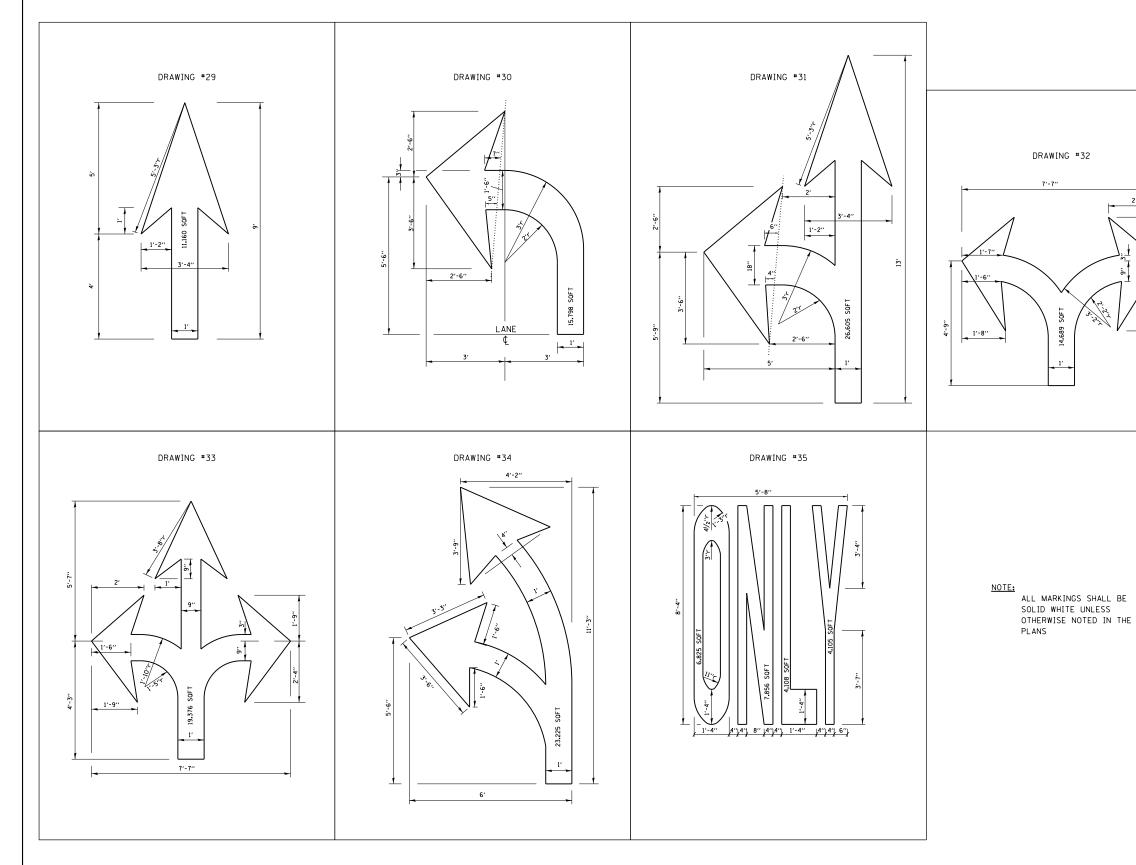
- NOTE:

  1.) FOR BIKE LANE SYMBOLS ONLY,

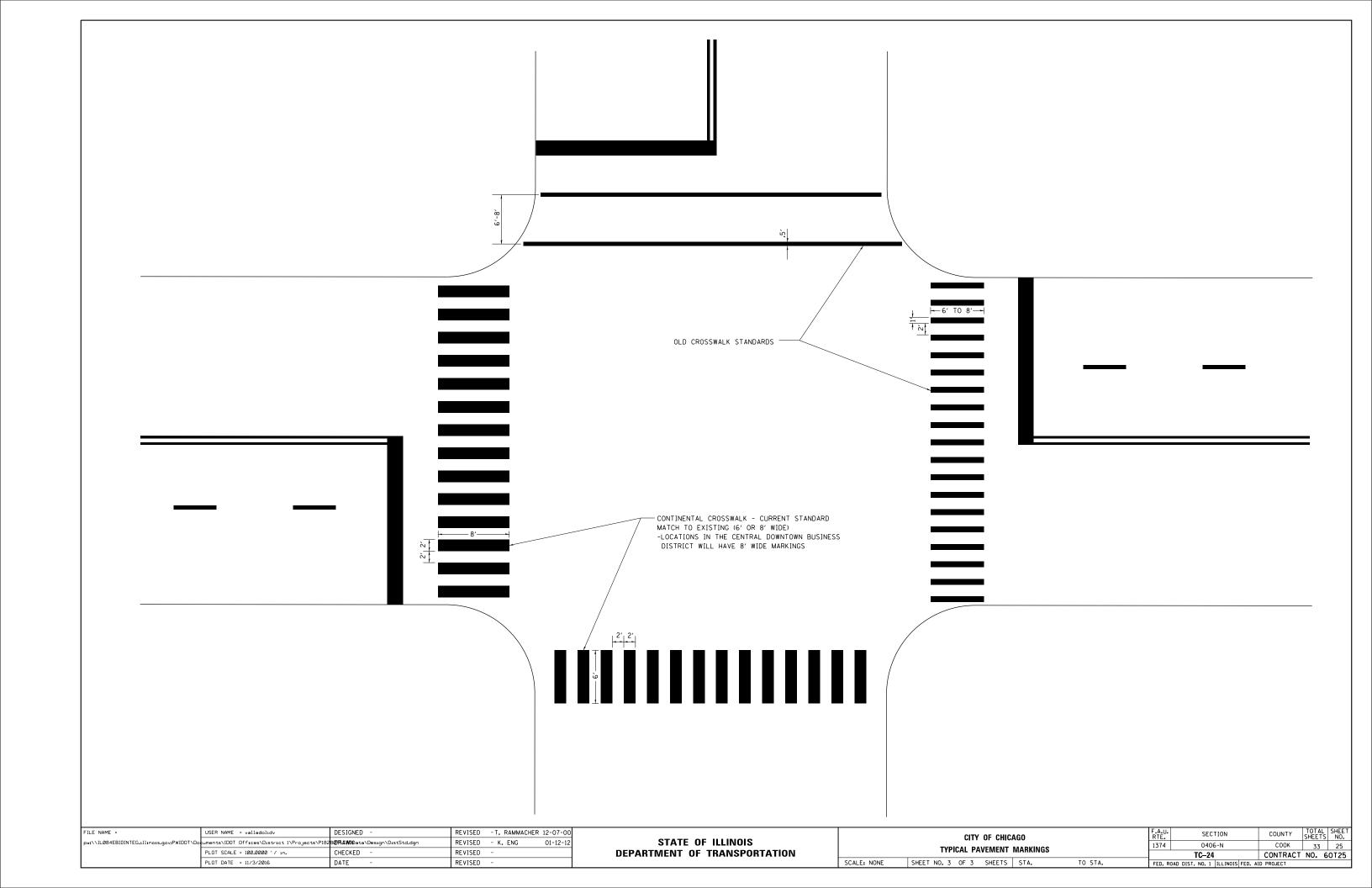
  USE PRE-FORMED THERMOPLASTIC

  WITH A MINIMUM THICKNESS OF 90 MILS, MINIMUM SKID RESISTANCE VALUE OF 60 BPN, & A MINIMUM INDEX OF REFRACTION OF 1.50.
- 2.) THE RESIDENT ENGINEER SHALL CONTACT MR. BEN GOMBERG AT 312-744-8093 AT LEAST ONE CALENDAR WEEK PRIOR TO INSTALLING BIKE LANE SYMBOLS.

TYPICAL BIKE LANE SYMBOLS DRAWING #28

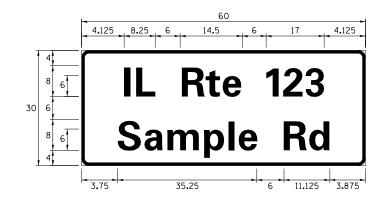


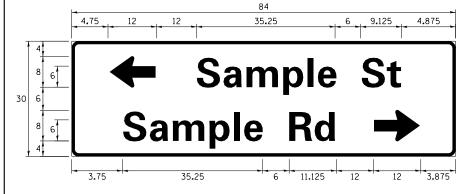
FILE NAME =	USER NAME = valladolidv	DESIGNED -	REVISED -T. RAMMACHER 12-07-00			CITY OF CHICAGO	RTF.	SECTION	COUNTY	SHEETS NO.
pw:\\IL084EBIDINTEG.:111:no:s.gov:PWIDOT\Do	:uments\IDOT Offices\District 1\Projects\P182	8 <b>0RAMD</b> Data\Design\DistStd.dgn	REVISED - K. ENG 01-12-12	STATE OF ILLINOIS			1374	0406-N	COOK	33 24
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		TYPICAL PAVEMENT MARKINGS		TC-24	CONTRACT	T NO. 60T25
	PLOT DATE = 11/3/2016	DATE -	REVISED -		SCALE: NONE	SHEET NO. 2 OF 3 SHEETS STA. TO STA.	FED. RO.		DIS FED. AID PROJECT	1101 00125



# SIGN PANEL – TYPE 1 OR TYPE 2

# 3.75 11.125 3.875 Sample Rd





DESIGN SERIES	AREA	SIGN PANEL	SHEETING TYPF	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

ALL DIMENSIONS ARE IN INCHES EXCEPT NOTED OTHERWISE

# **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	C†	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	S†	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**

- 1. 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'-O". ALL BORDERS SHALL BE 34" WIDE. CORNER RADIUS SHALL BE 1-7/8". THE SPACING BETWEEN THE WORDS SHOULD BE 6". 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'-O" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8"-O" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-O" 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

LOCAL SUPPLIERS: PARTS LISTING:

WOODRIDGE, IL

- J.O. HERBERT COMPANY, INC SIGN CHANNEL PART #HPN053 (MED. CHANNEL) MIDLOTHIAN, VA SIGN SCREWS 1/4" × 14 × 1" H<sub>•</sub>W<sub>•</sub>H<sub>•</sub> #3 - WESTERN REMAC, INC. BRACKETS

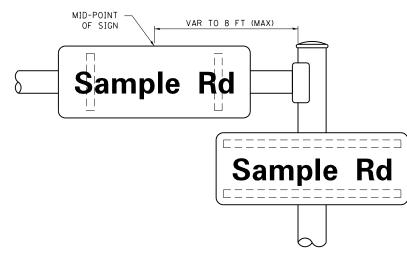
SELF TAPPING WITH NEOPRENE WASHER PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

SCALE:

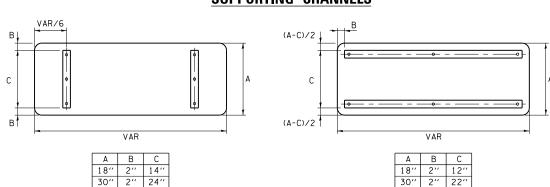
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

# **MOUNTING LOCATION**

ARM OR POLE MOUNTED



# **SUPPORTING CHANNELS**



# STANDARD ALPHABETS SPACING CHART

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

CHARACTER S  A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	LEFT SPACING (INCH) 0. 240 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 240 0. 880 0. 240 0. 880 0. 240 0. 880 0. 720 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 240 0. 240 0. 240 0. 240	WIDTH (INCH)  5. 122 4. 482 4. 482 4. 082 4. 482 4. 482 4. 082 4. 482 4. 082 4. 482 4. 482 4. 482 4. 482 4. 482 4. 722 4. 482 4. 482 4. 722 4. 482 4. 482 4. 962	RIGHT SPACING (INCH) 0. 240 0. 480 0. 720 0. 480 0. 240 0. 720 0. 880 0. 880 0. 240 0. 240 0. 240 0. 720 0. 880 0. 480 0. 720 0. 720 0. 720 0. 720 0. 720	CHARACTER  A B C D E F G H I J K L M N O P Q R	LEFT SPACING (INCH) 0.240 0.960 0.800 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960 0.960	WIDTH (INCH) 6. 804 5. 446 5. 446 4. 962 4. 962 5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	RIGHT SPACING (INCH) 0. 240 0. 400 0. 800 0. 400 0. 240 0. 960 0. 960 0. 960 0. 240 0. 960 0. 960 0. 960 0. 960 0. 960 0. 960
A B C D E E F G G H I J J K L M N O P P O R R S T U V W W X Y Z Z	SPACING (INCH) 0. 240 0. 880 0. 720 0. 880 0. 880 0. 720 0. 880 0. 240 0. 880 0. 240 0. 880 0. 720 0. 720 0	(INCH)  5.122 4.482 4.482 4.082 4.082 4.482 4.082 4.482 1.120 4.082 4.482 4.082 5.284 4.482 4.722 4.482 4.722 4.482 4.722 4.482 4.722 4.482 4.082 4.082	SPACING (INCH)  0. 240 0. 480 0. 720 0. 480 0. 720 0. 880 0. 880 0. 240 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 480 0. 720 0. 720 0. 720 0. 720 0. 720 0. 720 0. 480 0. 240	A B C D E F G H I J K L M N O P P O R	SPACING (INCH) 0. 240 0. 960 0. 800 0. 960 0. 960	( INCH)  6. 804 5. 446 5. 446 5. 446 4. 962 4. 962 5. 446 5. 128 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	SPACING (INCH) 0.240 0.400 0.800 0.800 0.400 0.240 0.800 0.960 0.960 0.400 0.240 0.960 0.960 0.960 0.240 0.800 0.240
B C D E F F G H I J J K L M N O P P O Q R S T U V W W X Y Y Z	0. 880 0. 720 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 240 0. 880 0. 880 0. 720 0. 740 0. 740	4. 482 4. 482 4. 082 4. 082 4. 482 1. 120 4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 482 4. 724 4. 482 4. 482	0. 480 0. 720 0. 720 0. 480 0. 240 0. 720 0. 880 0. 880 0. 480 0. 240 0. 720 0. 720 0. 720 0. 720 0. 480 0. 480 0. 480 0. 480	B C D E F G H I J K L M N O P P O R	0. 960 0. 800 0. 960 0. 960 0. 960 0. 960 0. 960 0. 240 0. 960 0. 960 0. 960 0. 960 0. 960 0. 800 0. 800	5. 446 5. 446 5. 446 4. 962 4. 962 5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0. 400 0. 800 0. 800 0. 400 0. 240 0. 960 0. 960 0. 400 0. 240 0. 960 0. 960 0. 960 0. 960 0. 960 0. 960 0. 960
C D E F G H I J J K L M N O O R R S T U V V X Y Y Z	0. 720 0. 880 0. 880 0. 720 0. 880 0. 240 0. 880 0. 240 0. 880 0. 720 0. 720 0. 720 0. 720 0. 720 0. 720 0. 740 0. 740	4. 482 4. 482 4. 082 4. 482 4. 482 1. 120 4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 482 4. 482 4. 482 4. 482 4. 482 4. 482 4. 482 4. 482	0. 720 0. 720 0. 480 0. 240 0. 720 0. 880 0. 880 0. 880 0. 240 0. 880 0. 720 0. 720 0. 720 0. 720 0. 480 0. 480 0. 480 0. 240	C D E F G H I J K L M N O P C R	0.800 0.960 0.960 0.960 0.800 0.960 0.960 0.960 0.960 0.960 0.960 0.800 0.800	5. 446 5. 446 4. 962 4. 962 5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0.800 0.800 0.400 0.240 0.960 0.960 0.400 0.240 0.960 0.960 0.960 0.800 0.240
D E F G H I J J K L M N O O P O R S T U V W X X Y Z Z	0. 880 0. 880 0. 720 0. 880 0. 240 0. 880 0. 880 0. 880 0. 880 0. 720 0. 740 0. 740	4. 482 4. 082 4. 482 4. 482 1. 120 4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 482 4. 482 4. 482	0. 720 0. 480 0. 240 0. 720 0. 880 0. 880 0. 880 0. 240 0. 880 0. 240 0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	D E F G H H I J K L M N O O P O R	0. 960 0. 960 0. 960 0. 800 0. 960 0. 240 0. 960 0. 960 0. 960 0. 960 0. 800 0. 800	5. 446 4. 962 4. 962 5. 446 5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0.800 0.400 0.240 0.800 0.960 0.960 0.400 0.240 0.960 0.960 0.960 0.800
E	0. 880 0. 880 0. 720 0. 880 0. 240 0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 240 0. 240 0. 240 0. 240 0. 240 0. 240	4. 082 4. 082 4. 482 1. 120 4. 082 4. 482 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 482 4. 082 4. 482	0. 480 0. 240 0. 720 0. 880 0. 880 0. 480 0. 240 0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	E F G H I J K L M N O P P O R	0. 960 0. 960 0. 800 0. 960 0. 960 0. 960 0. 960 0. 960 0. 960 0. 800 0. 800	4. 962 4. 962 5. 446 5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0. 400 0. 240 0. 800 0. 960 0. 960 0. 400 0. 240 0. 960 0. 960 0. 800 0. 240 0. 800
F G H I J J K L M N O P P O R S T U V V W X X Y Z Z	0. 880 0. 720 0. 880 0. 240 0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 240 0. 240 0. 240 0. 240 0. 240	4. 082 4. 482 4. 482 1. 120 4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 482 4. 482 4. 482 4. 082 4. 482	0. 240 0. 720 0. 880 0. 880 0. 480 0. 240 0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	F G H I J K L M N O O P P O R	0. 960 0. 800 0. 960 0. 960 0. 240 0. 960 0. 960 0. 960 0. 960 0. 800 0. 800	4. 962 5. 446 5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0. 240 0. 800 0. 960 0. 960 0. 400 0. 240 0. 960 0. 960 0. 800 0. 240 0. 800
G H I J J K L M N O P P O R R S T U V W W X Y Z Z	0. 720 0. 880 0. 880 0. 240 0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 240 0. 240 0. 240 0. 240	4. 482 4. 482 1. 120 4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 482 4. 082 4. 482	0. 720 0. 880 0. 880 0. 880 0. 240 0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	G H I J K L M N O P R	0.800 0.960 0.960 0.240 0.960 0.960 0.960 0.960 0.800 0.960	5. 446 5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0.800 0.960 0.960 0.400 0.240 0.960 0.960 0.800 0.240 0.800
H I J J K L L M N O P P O C R S T U V W W X X Y Z Z	0. 880 0. 240 0. 880 0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 720 0. 880 0. 240 0. 240 0. 240 0. 240	4. 482 1. 120 4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0.880 0.880 0.880 0.480 0.240 0.880 0.720 0.720 0.720 0.720 0.480 0.480	H I J K L M N O P O R	0. 960 0. 960 0. 240 0. 960 0. 960 0. 960 0. 800 0. 960 0. 800	5. 446 1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0. 960 0. 960 0. 960 0. 400 0. 240 0. 960 0. 960 0. 800 0. 240 0. 800
I J K L M N O P O R S T U V W X Y Y Z	0. 880 0. 240 0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 480 0. 240 0. 240 0. 240 0. 240	1. 120 4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0.880 0.480 0.240 0.880 0.720 0.720 0.720 0.720 0.480 0.480	I J K L M N O P Q R	0. 960 0. 240 0. 960 0. 960 0. 960 0. 960 0. 800 0. 960 0. 800	1. 280 5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0. 960 0. 960 0. 400 0. 240 0. 960 0. 960 0. 800 0. 240 0. 800
J K L M N O O P Q R S T U V W X Y	0. 240 0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 480 0. 240 0. 880 0. 240 0. 240 0. 240	4. 082 4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0.880 0.480 0.240 0.880 0.720 0.720 0.720 0.720 0.480 0.480	K L M N O P	0. 240 0. 960 0. 960 0. 960 0. 960 0. 800 0. 960 0. 800	5. 122 5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0. 960 0. 400 0. 240 0. 960 0. 960 0. 800 0. 240 0. 800
K L M N O O P O R S T U V V W X Y Y Z	0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 480 0. 240 0. 880 0. 240 0. 240 0. 240	4. 482 4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0. 480 0. 240 0. 880 0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	K L M N O P	0. 960 0. 960 0. 960 0. 960 0. 800 0. 960 0. 800	5. 604 4. 962 6. 244 5. 446 5. 684 5. 684	0. 400 0. 240 0. 960 0. 960 0. 800 0. 240 0. 800
L M N O P P O R S T U V W W X Y Y Z	0. 880 0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 480 0. 240 0. 240 0. 240 0. 240 0. 240	4. 082 5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0. 240 0. 880 0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	L M N O P Q R	0. 960 0. 960 0. 960 0. 800 0. 960 0. 800	4. 962 6. 244 5. 446 5. 684 5. 684	0. 240 0. 960 0. 960 0. 800 0. 240 0. 800
M N O P O R S T U V W X X Y Z	0. 880 0. 880 0. 720 0. 880 0. 720 0. 880 0. 480 0. 240 0. 240 0. 240 0. 240 0. 240	5. 284 4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0. 880 0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	M N O P O R	0.960 0.960 0.800 0.960 0.800	6. 244 5. 446 5. 684 5. 446 5. 684	0.960 0.960 0.800 0.240 0.800
N 0 P 0 R S T U V W X Y Y Z	0. 880 0. 720 0. 880 0. 720 0. 880 0. 480 0. 240 0. 880 0. 240 0. 240 0. 240	4. 482 4. 722 4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0. 880 0. 720 0. 720 0. 720 0. 480 0. 480 0. 240	N O P Q R	0.960 0.800 0.960 0.800	5. 446 5. 684 5. 446 5. 684	0.960 0.800 0.240 0.800
P	0. 880 0. 720 0. 880 0. 480 0. 240 0. 880 0. 240 0. 240 0. 240	4. 482 4. 722 4. 482 4. 482 4. 082 4. 482	0. 720 0. 720 0. 480 0. 480 0. 240	P Q R	0.960 0.800	5.446 5.684	0.240 0.800
0 R S T U W X X Y Z	0. 720 0. 880 0. 480 0. 240 0. 880 0. 240 0. 240 0. 240	4. 722 4. 482 4. 482 4. 082 4. 482	0.720 0.480 0.480 0.240	Q R	0.800	5.684	0.800
R S T U V W X Y Z	0. 880 0. 480 0. 240 0. 880 0. 240 0. 240 0. 240	4. 482 4. 482 4. 082 4. 482	0.480 0.480 0.240	R			
S T U V W X Y Z	0.480 0.240 0.880 0.240 0.240 0.240	4.482 4.082 4.482	0.480 0.240		0 0 0 0 1		
T U V W X Y Z	0. 240 0. 880 0. 240 0. 240 0. 240	4.082 4.482	0.240		0.960	5.446	0.400
U V W X Y Z	0.880 0.240 0.240 0.240	4.482		S	0.400	5.446	0.400
V W X Y Z	0.240 0.240 0.240			Т	0.240	4.962	0.240
W X Y Z	0.240 0.240	4.962	0.880	U	0.960	5.446	0.960
X Y Z	0.240	C 004	0.240	V	0.240	6.084	0.240
Y Z		6.084 4.722	0.240	W	0.240	7. 124 5. 446	0.240
Z	0.240	5. 122	0.240	X	0.400 0.240	6.884	0.240
	0.480	4.482	0.480	Z	0.400	5.446	0.400
a l	0.320	3.842	0.640	a	0.400	4.562	0.720
ь	0.720	4. 082	0.480	ь	0.800	4.802	0.480
С	0.480	4.002	0.240	c	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
ī	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
1	0.720	1.120	0.720	1	0.800	1.280	0.800
m	0.720 0.720	6. 724 4. 082	0.640	m	0.800 0.800	7. 926 4. 722	0.720
n 0	0. 120	4.082	0.480	n 0	0.480	4. 882	0.120
P	0.720	4.082	0.480	P	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
t	0.080	2.882	0.080	+	0.080	3. 202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
V	0.160	4.722	0.160	V	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	×	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
3	0.480	4.482 4.482	0.480	3	0.800 1.440	5. 446 5. 446	0.800
4	0.480	4.482	0.480 0.720	4	0.160	6.004	0.800
5	0. 480	4. 482	0. 120	5	0.160	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0. 720	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

#### FILE NAME = DESIGNED - LP/IP REVISED - LP 07/01/2015 USER NAME = valladolidv ow:\\IL084EBIDINTEG.:ll:nois.gov:PWIDOT\[ ments\IDOT Offices\District 1\Projects\P1828@RAMDData\Besign\[PstStd.dgr REVISED CHECKED -REVISED PLOT DATE = 11/3/2016 10/01/2014 REVISED DATE

STATE OF	FILLINOIS
DEPARTMENT OF	TRANSPORTATION

		DI	STRICT O	NE		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
M	IAST ARM	МОШ	NTED STE	EFT NA	ME SIGNS	1374	0406-N	соок	33	26
	IASI AIIW	IVIOU	WILD 311	ILLI IVAI			TS-02	CONTRACT	NO. 6	0T25
	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		

# TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

				(1101 10 001111)				
ITEM	EXISTING	<u>PROPOSED</u>	ITEM	EXISTING	<u>PROPOSED</u>	ITEM	EXISTING	<u>PROPOSED</u>
CONTROLLER CABINET	$\boxtimes$		HANDHOLE -SQUARE			SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	R R Y Y	RR
COMMUNICATION CABINET	ECC	СС	-ROUND					R
MASTER CONTROLLER	EMC	MC	HEAVY DUTY HANDHOLE -SQUARE -ROUND	H	<b>H (4)</b>			<b>4</b> G <b>4</b> G <b>₽</b>
MASTER MASTER CONTROLLER	ЕММС	ммс	DOUBLE HANDHOLE			STANKE WELD WITH DIGKOLLTE	'	
ININTERRUPTABLE POWER SUPPLY	<b>3</b>	<b>9</b>	JUNCTION BOX		•	SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		R R Y
SERVICE INSTALLATION	- <u>-</u> -	- <b>■</b> -P	RAILROAD CANTILEVER MAST ARM	X <del>OX X</del>	X <del>eX X</del>			Y
(P) POLE MOUNTED  ERVICE INSTALLATION	_	_	RAILROAD FLASHING SIGNAL	$X \rightarrow X$	X⊕X		P RB	P RB
(G) GROUND MOUNTED (GM) GROUND MOUNTED METERED	$\boxtimes^{G} \boxtimes^{GM}$	<b>⊠</b> <sup>G</sup> <b>⊠</b> <sup>GM</sup>	RAILROAD CROSSING GATE	X <del>0</del> X>	<del>***</del>	PEDESTRIAN SIGNAL HEAD		<b>P</b>
ELEPHONE CONNECTION	ET	T	RAILROAD CROSSBUCK	<b></b> 一	<b>*</b>	AT RAILROAD INTERSECTIONS	<b>F</b>	
TEEL MAST ARM ASSEMBLY AND POLE	O	•——	RAILROAD CONTROLLER CABINET		<b>&gt;</b> ∢	PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	<b>●</b> C <b>★</b> D	<b>₩</b> C ★ D
LUMINUM MAST ARM ASSEMBLY AND POLE	0		UNDERGROUND CONDUIT (UC), GALVANIZED STEEL	<del>===</del>		ILLUMINATED SIGN		
TEEL COMBINATION MAST ARM SSEMBLY AND POLE WITH LUMINAIRE	0 <del>-</del> X	• <del>×</del>	TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			"NO LEFT TURN"/"NO RIGHT TURN"		
SIGNAL POST (BM) BARREL MOUNTED - TEMPORARY	0	<ul> <li>● BM</li> </ul>	SYSTEM ITEM	S	SP	NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE.		
	⊗	9	INTERSECTION ITEM	I	IP	ALL DETECTOR LOOP CABLE TO BE SHIELDED	$\sim$	
OOD POLE  UY WIRE	<b>⊗</b> <b>≻</b>	€ .	REMOVE ITEM		R	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	<del>- 1*6 -</del> -	— <del>- 1*6</del> — -
IGNAL HEAD	<i>→</i>	<i>&gt;</i> -	RELOCATE ITEM		RL	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C		
IGNAL HEAD WITH BACKPLATE	+1>>	+-	ABANDON ITEM  CONTROLLER CABINET AND		А	COAXIAL CABLE	<u> </u>	<u> </u>
IGNAL HEAD OPTICALLY PROGRAMMED	P +P	→ P + P	FOUNDATION TO BE REMOVED		RCF			
LASHER INSTALLATION	od F od FS	•► <sup>F</sup> •► <sup>FS</sup>	MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF	VENDOR CABLE	—	
(FS) SOLAR POWERED	r rs	<b>₽</b> ►FS	SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF	COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	<u>6*18</u>	<del></del>
EDESTRIAN SIGNAL HEAD	-0	-1	DETECTOR LOOP, TYPE I			FIBER OPTIC CABLE -NO. 62.5/125, MM12F	—	— (12F)—
EDESTRIAN PUSH BUTTON (APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	<pre></pre>	<pre></pre>	PREFORMED DETECTOR LOOP	[P] (P)	P P	-NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		<u> 24F</u>
ADAR DETECTION SENSOR	R	R	SAMPLING (SYSTEM) DETECTOR	$[\underline{s}]$ $(\underline{s})$	s s		— <u>36F</u> —	——————————————————————————————————————
IDEO DETECTION CAMERA	(V)	V	INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		IS (S)		, ,	
ADAR/VIDEO DETECTION ZONE			QUEUE AND SAMPLING	[05] (0\$)	os os	GROUND ROD -(C) CONTROLLER -(M) MAST ARM	<u>i</u> C <u>i</u> M <u>i</u> P <u>i</u> S	$\stackrel{\underline{\dot{=}}}{\stackrel{\frown}{I}}^{C}  \stackrel{\underline{\dot{=}}}{\stackrel{\frown}{I}}^{M}  \stackrel{\underline{\dot{=}}}{\stackrel{\frown}{I}}^{P}  \stackrel{\underline{\dot{=}}}{\stackrel{\frown}{I}}^{S}$
AN, TILT, ZOOM (PTZ) CAMERA	PTZ[]	PTZ¶	(SYSTEM) DETECTOR WIRELESS DETECTOR SENSOR	"" \-/ ®	<b>⊚</b>	-(M) MAST ARM -(P) POST -(S) SERVICE		
MERGENCY VEHICLE LIGHT DETECTOR	$\bowtie$	<b>.</b>	WIRELESS ACCESS POINT		_	(3) SERVICE		
ONFIMATION BEACON	o-()	•-	WINEFESS MODESS LOTINI					
VIRELESS INTERCONNECT	0 <del>-1   </del>	•-+ <del>   </del>						
VIRELESS INTERCONNECT RADIO REPEATER	ERR	RR						
NAME = USER NAME = velledolidv itd.dgn		IP REVISED -		ATE OF ILLINOIS	STA	DISTRICT ONE ANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.U. RTE. SECTIO 1374 0406-N	JIILL 13

TS-05

OS CONTRACT NO. 60T25

SHEET 1 OF 7 SHEETS STA.

SCALE: NONE

DATE - 9/29/2016

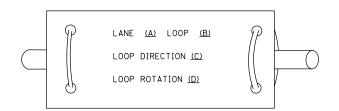
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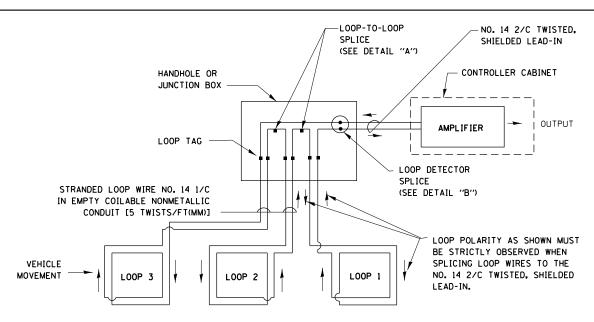
#### LOOP DETECTOR NOTES

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

# LOOP LEAD-IN CABLE TAG

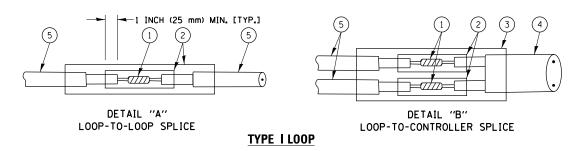


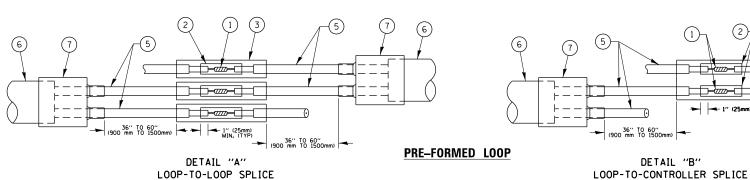
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP \*1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



# **DETECTOR LOOP WIRING SCHEMATIC**

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





### LOOP DETECTOR SPLICE

- (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.

SCALE: NONE

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PRE-FORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR 7 BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

→ 1" (25mm) MIN, (TYP)

COUNTY

СООК

SHEETS NO.

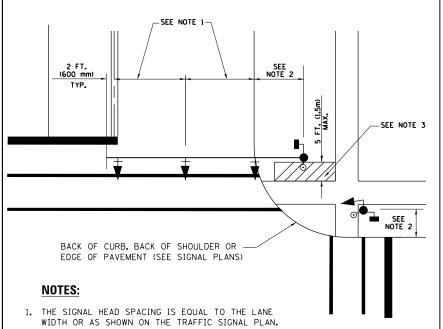
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DEPARTMENT OF TRANSPORTATION

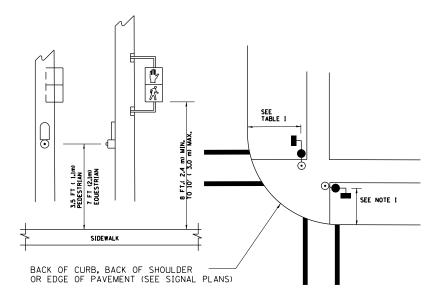
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STANDARD TRAFFIC SIGNAL DESIGN DETAILS	1374	0406-N
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# TRAFFIC SIGNAL MAST ARM AND SIGNAL POST MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALKBICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



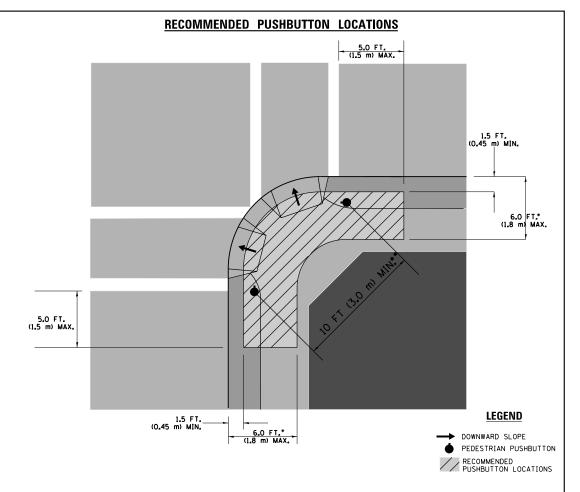
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE 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."

# <u>PEDESTRIAN SIGNAL POST</u> <u>AND</u> 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 BUILDINGS AND FACILITIES."



- 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:

- 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.
- 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.

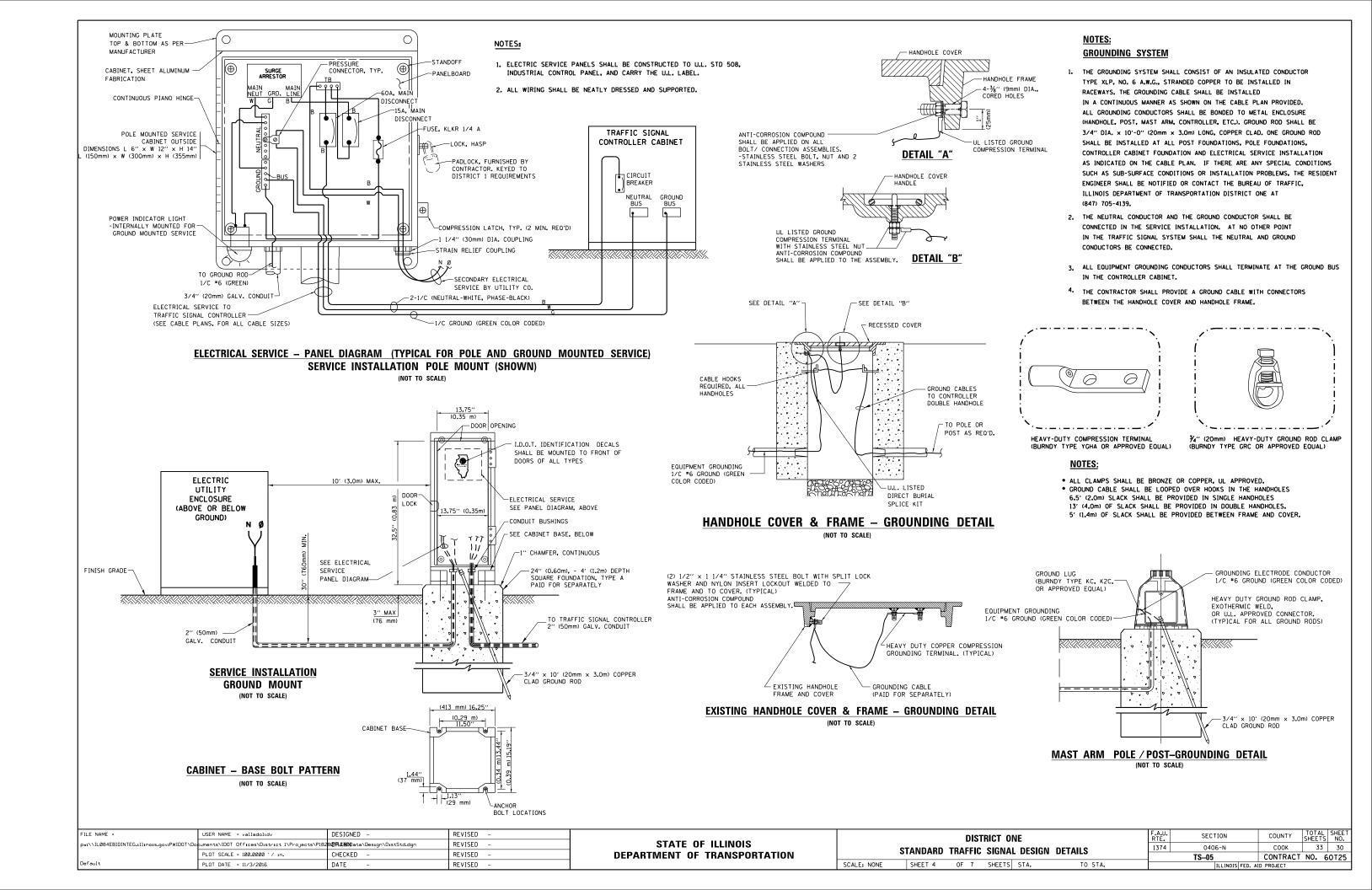
# TRAFFIC SIGNAL EQUIPMENT OFFSET

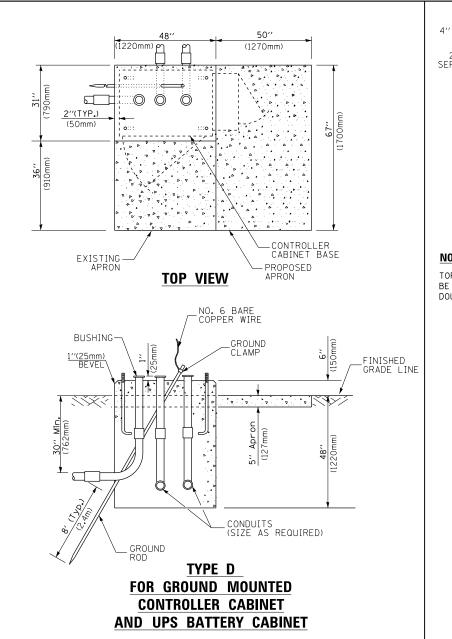
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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.

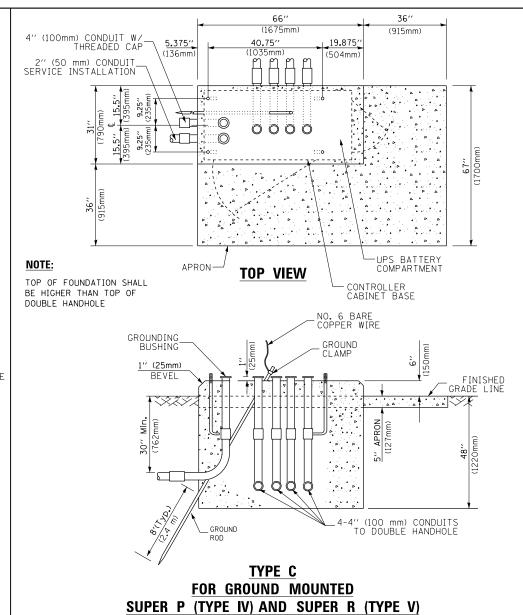
## NOTES:

- 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.

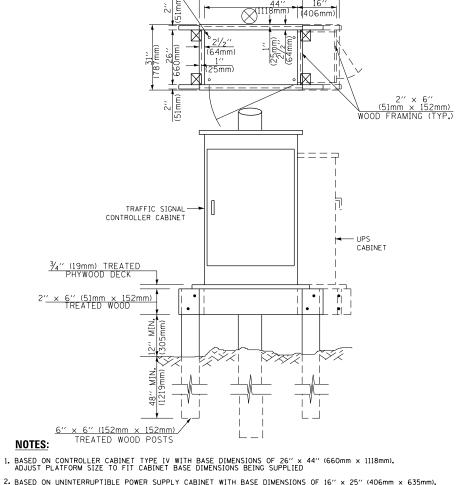
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**CONTROLLER CABINETS** 



SEE NOTE 5-

- 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 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 - SOUARE	4'-0'' (1.2m)

# **DEPTH OF FOUNDATION**

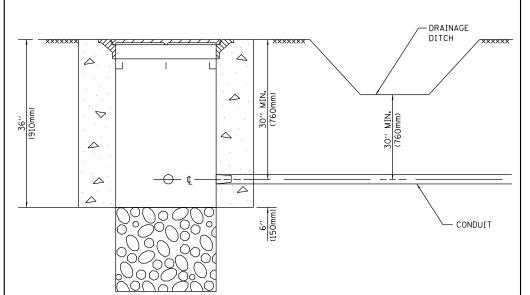
Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30′ (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0'' (3.4 m)	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 (Ou) > 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

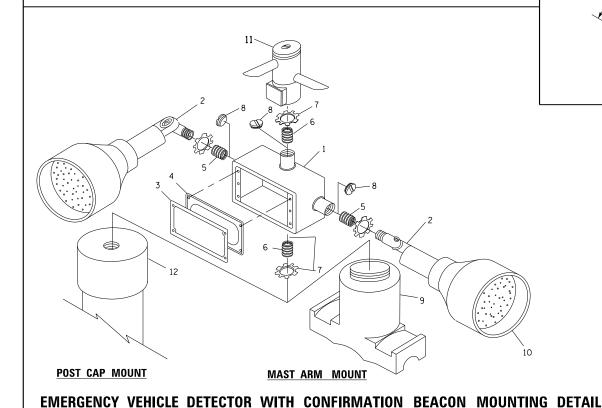
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#### NOTES:

- 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



# (1675mm) (915mm) 19.875" 5.375" 40.75" (136mm) (1035mm) (504mm $\bigcirc$ PROPOSED -APRON -CONTROLLER CABINET BASE **TOP VIEW** NO. 3 DOWEL 18" (450mm) LONG (8 REQ.) BUSHING -\_GROUND CLAMP / EXISTING ANCHOR BOLTS 1''(25mm) BEVEL GRADE LINE (300mm)

# MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

-EXISTING CONDUITS

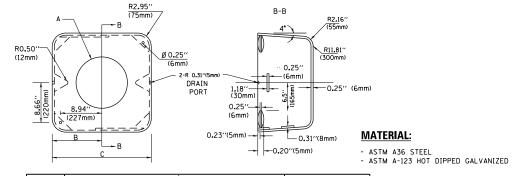
EXISTING GROUND ROD

(NOT TO SCALE

# ITEM NO. 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.]

## NOTES:

- 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.

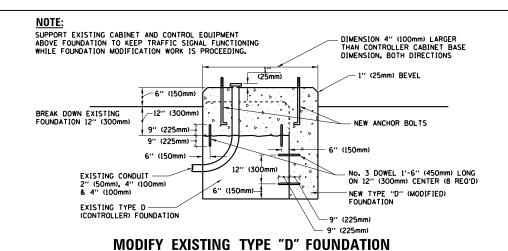


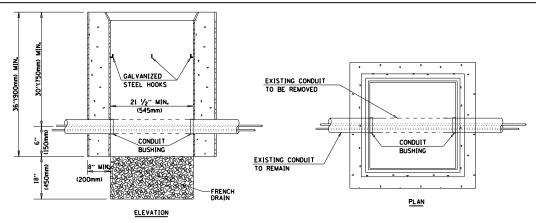
Α	В	С	HEIGHT	WEIGHT
VARIES	9.5''(241mm)	19''(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5′′(470mm)	37''(940mm)	7" (178mm) - 12" (300mm)	126 lbs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

# **SHROUD**

#### NOTES:

- 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.





#### NOTES:

- 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

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# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
				DETAILS	1374	0406-N	СООК	33	32		
					TS-05	CONTRACT	NO. 6	0T25			
	SHEET 6	OF	7	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

