







REVISIONS NAME	DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
		RENWICK ROAD & WEBER ROAD TRAFFIC SIGNAL MODERNIZATION
		SCALE: 1"=20" DRAWN BY JJS DATE APRIL, 2011 CHECKED BY MER

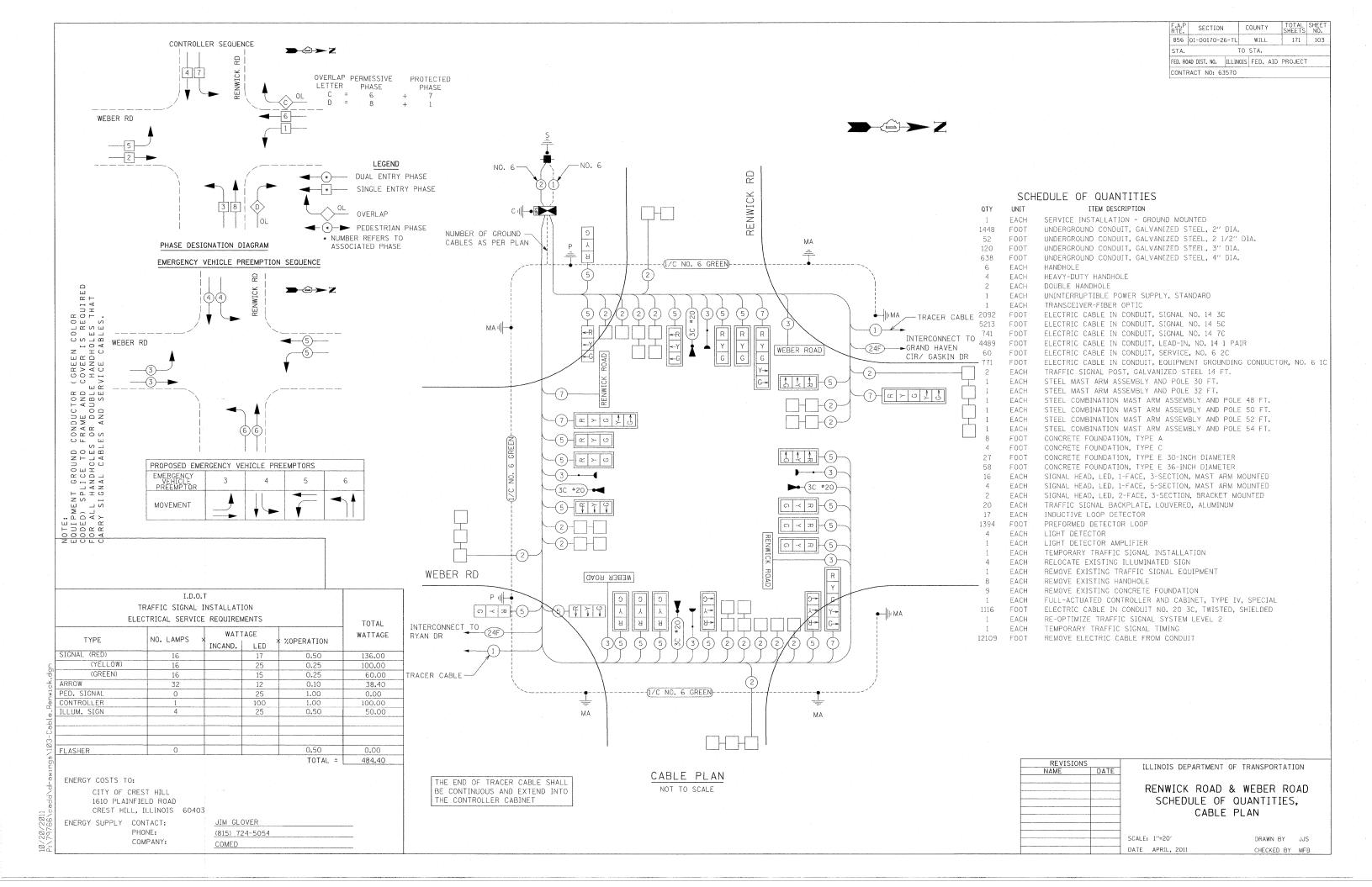
WEBER ROAD

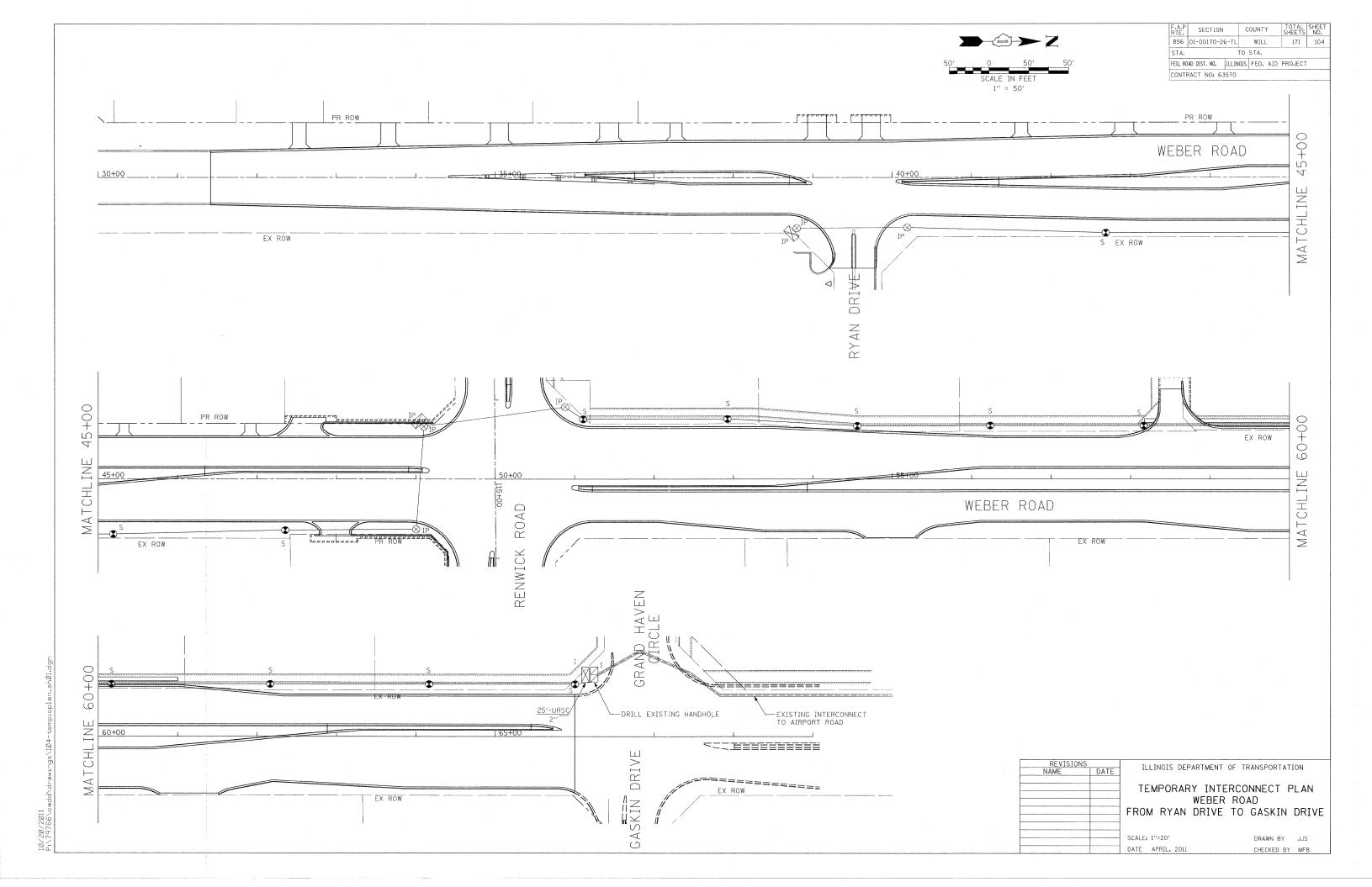
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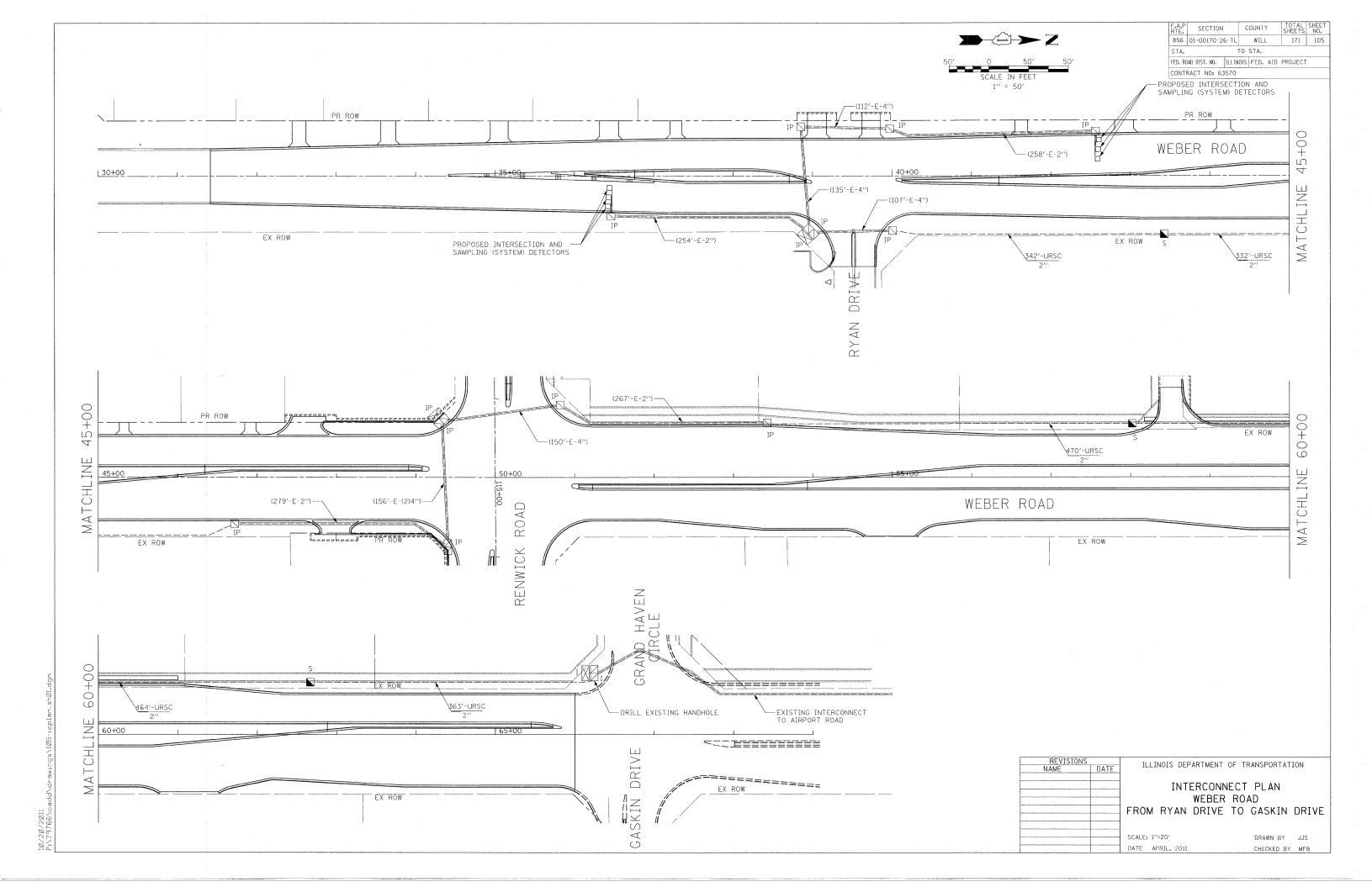
PR ROW

250' (STOP BAR TO FAR LOOPS)

EX ROW



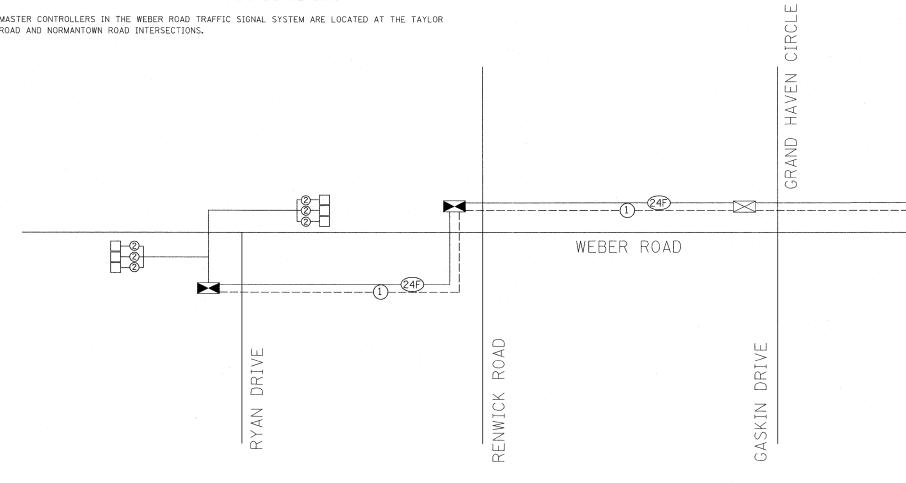




SECTION COUNTY 856 01-00170-26-TL WILL TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO: 63570

EXISTING INTERCONNECT TO AIRPORT ROAD

- 1. THE PROPOSED TRAFFIC SIGNAL CONTROLLERS AT THE RYAN DRIVE AND RENWICK ROAD INTERSECTIONS AND THE EXISTING TRAFFIC SIGNAL CONTROLLER AT THE GASKIN DRIVE/GRAND HAVEN CIRCLE INTERSECTION ARE PART OF THE WEBER ROAD FIBER OPTIC TRAFFIC SIGNAL SYSTEM THAT EXTENDS FROM DIVISION STREET IN THE SOUTH TO LILY CACHE LANE IN THE NORTH.
- 2. MASTER CONTROLLERS IN THE WEBER ROAD TRAFFIC SIGNAL SYSTEM ARE LOCATED AT THE TAYLOR ROAD AND NORMANTOWN ROAD INTERSECTIONS.



INTERCONNECT SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM	DESCRIPTION
			02.001121 12011

1971 FOOT UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.

3 EACH HANDHOLE

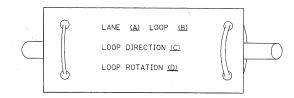
3117 FOOT FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM 12F 3068 FOOT ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C 1 EACH DRILL EXISTING HANDHOLE

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		AN	D SCH	EDULE	OF	QUANTIT	IES
***************************************				WEBER	RO.	AD	
		FROM	RYAN	DRIVE	ΤO	GASKIN	DRIVE
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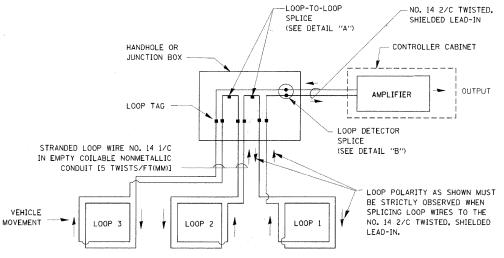
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- 1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC 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 I STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- 6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

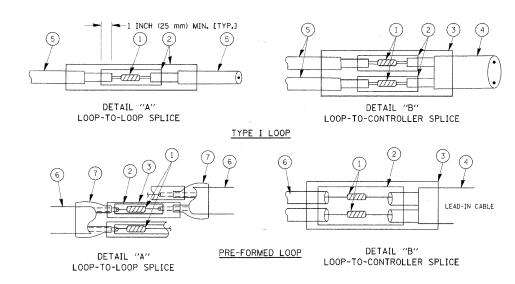


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP *1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



DETECTOR LOOP WIRING SCHEMATIC

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



LOOP DETECTOR SPLICE

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

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ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE

REVISIONS

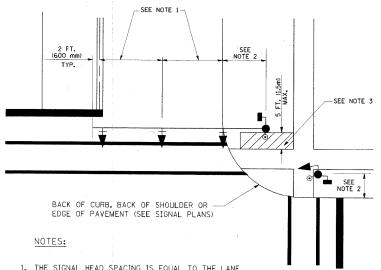
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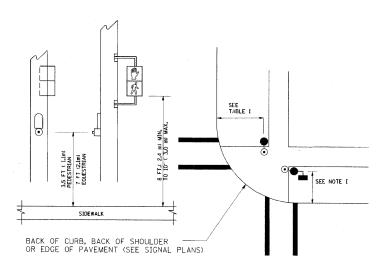
TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

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



- THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
- 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 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."

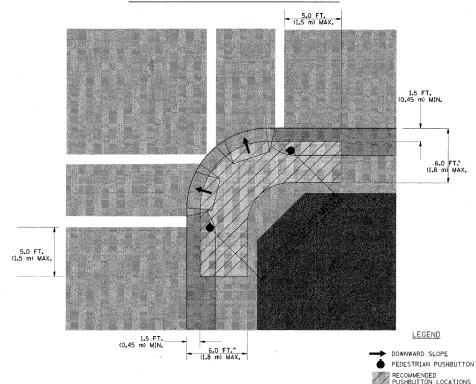
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

- 1. 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 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,"

RECOMMENDED PUSHBUTTON LOCATIONS



- 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.

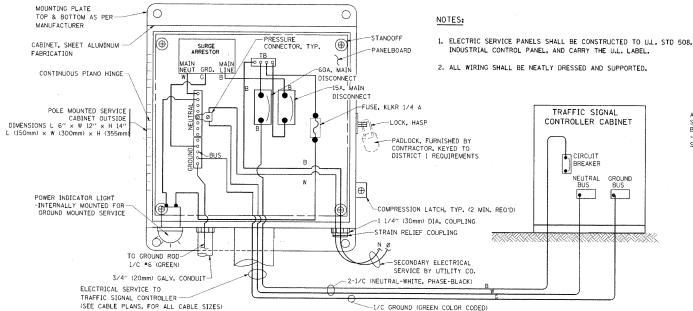
NOTE:

- 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 TO THE 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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NAME	DATE	ILLINOIS DEPARTMEN	NI OF TRANSPORTATION
BUREAU OF TRAFFIC	1-01-02		
BCK	10/28/09	DIS	TRICT 1
		STANDARD	TRAFFIC SIGNAL N DETAILS
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ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN)

13.75" (0.35 m) DOOR OPENING I.D.O.T. IDENTIFICATION DECALS SHALL BE MOUNTED TO FRONT OF DOORS OF ALL TYPES EQUIPMENT GROUNDING 1/C #6 GROUND (GREEN ELECTRIC 10' (3.0m) MAX. COLOR CODED) UTH ITY ENCLOSURE -ELECTRICAL SERVICE LOCK (ABOVE OR BELOW SEE PANEL DIAGRAM, ABOVE GROUND) -CONDUIT BUSHINGS -SEE CABINET BASE, BELOW -1" CHAMFER, CONTINUOUS SEE ELECTRICAL FINISH GRADE--24" (0.60m), - 4' (1.2m) DEPTH SQUARE FOUNDATION, TYPE A PAID FOR SEPARATELY SERVICE PANEL DIAGRAM TO TRAFFIC SIGNAL CONTROLLER 2" (50mm) GALV. CONDUIT 2" (50mm) GALV. CONDUIT **SERVICE INSTALLATION** -3/4" × 10' (20mm × 3.0m) COPPER CLAD GROUND ROD

(413 mm) 16.25"

(0.29 m) 11.50"

BOLT LOCATIONS

CABINET BASE-

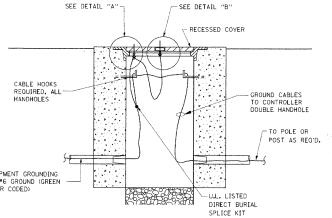
GROUND MOUNT

CABINET - BASE BOLT PATTERN

(NOT TO SCALE)

- HANDHOLF COVER HANDHOLF FRAME CAST CORNER FRAME WEB-UL LISTED GROUND COMPRESSION TERMINAL ANTI-CORROSION COMPOUND -SHALL BE APPLIED ON ALL BOLT/ CONNECTION ASSEMBLIES. -STAINLESS STEEL BOLT, NUT AND 2 STAINLESS STEEL WASHERS DETAIL "A" HANDHOLE COVER HANDI F

DETAIL "B"

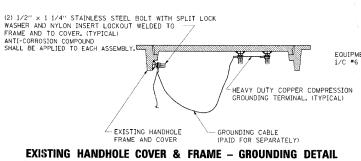


COMPRESSION TERMINAL WITH STAINLESS STEEL NU

ANTI-CORROSION COMPOUND SHALL BE APPLIED TO THE ASSEMBLY.

HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

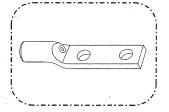


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NOTES:

GROUNDING SYSTEM

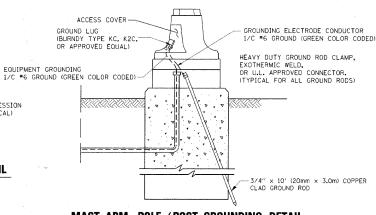
- 1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE $3/4^{\prime\prime}$ DIA. \times 10'-0" (20mm \times 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
- 2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.





HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL) 3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP

• ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED. • GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

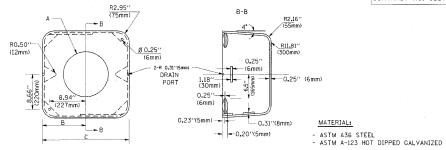


MAST ARM POLE / POST-GROUNDING DETAIL

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REVISIONS		ILLINOIS DEDARTMENT	OF TRANSPORTATION
NAME	DATE	ILLINOIS DEPARTMENT	OF TRANSPORTATION
CADD	5/30/00		
CADD	3/15/01	TZIO	RICT 1
BUREAU OF TRAFFIC	1-01-02		
BCK	10/28/09	STANDARD I	RAFFIC SIGNAL
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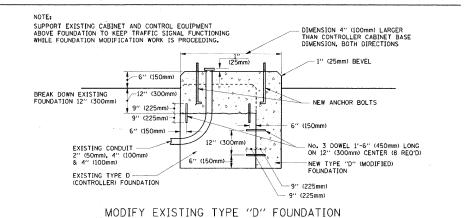


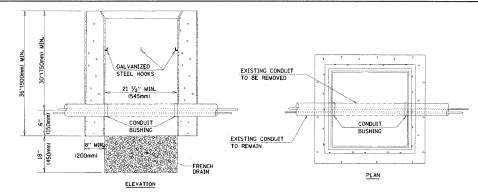


A	В	С	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57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

SHROUD

- 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.





HANDHOLE TO INTERCEPT EXISTING CONDUIT

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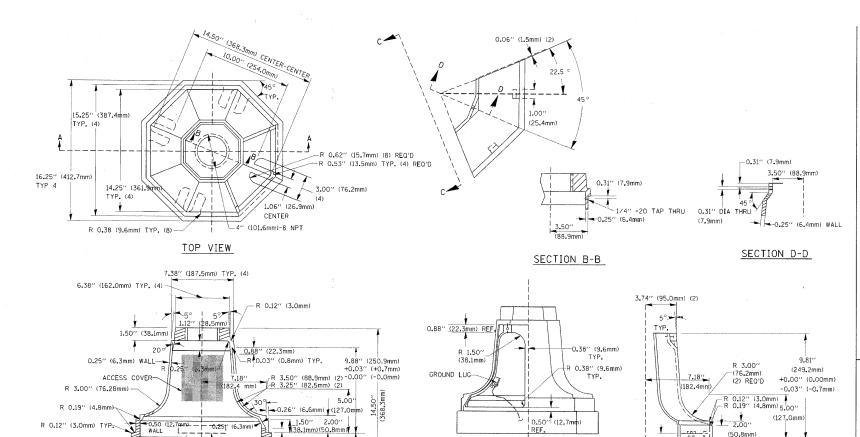
- 1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOL AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

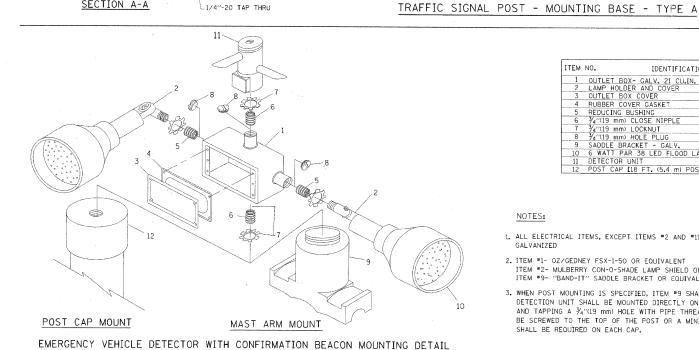
		VISIONS	,
	NAME		DATE
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-L BUREA	U OF	TRAFFIC	11/12/01
BUREA	U OF	TRAFFIC	1-01-02
BCK			10/28/09

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE





CAST IN 1/8" (3,0mm) HIGH CHARACTERS

NAME OF COUNTRY OF ORIGIN

1/4"-20 TAP THRU

0.50" (12.7mm) WALL

1.00" (25.4mm)-

SECTION A-A

ITEM NO. OUTLET BOX- GALV, 21 CU.IN. (0.000344 CU-M) LAMP HOLDER AND COVER OUTLET BOX COVER RUBBER COVER GASKET REDUCING BUSHING
%4"(19 mm) CLOSE NIPPLE
%4"(19 mm) LOCKNUT 74 '19 mm) LOCKNUT 74 '119 mm) HOLE PLUG SADDLE BRACKET - GALV. 6 WAIT PAR 38 LED FLOOD LAMP DETECTOR UNIT POST CAP [18 FT. (5.4 m) POST MIN.]

0.53" (13.5mm)

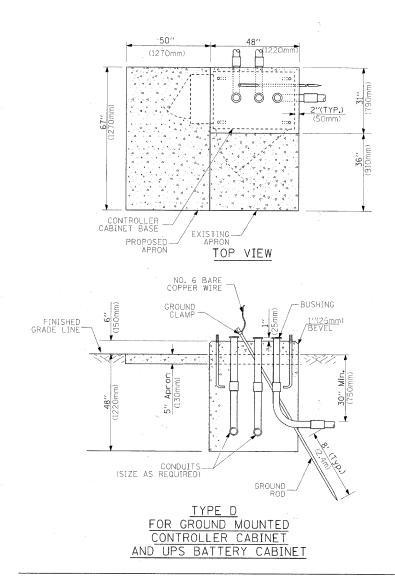
(2) REQ'D

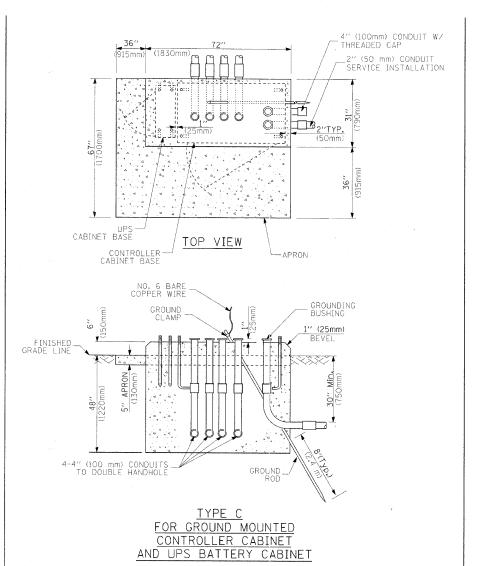
(38.1mm) 0.56" (14.2mm) (2) REQ'D

VIEW C-C

- 1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- 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 $\frac{3}{4}$ "(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.







- w	65" (SEE NOTE 4) (1651mm) 49" (SEE NOTE 3) 49" (SEE NOTE 3) 44" (245mm) (1118mm)	-SEE NOTE 5
		178 mm)
(51mm x 152mm) WOOD FRAMING (TYP.)		2." ((5.1mm))
	F====	
: : UPS—		—TRAFFIC SIGNAL CONTROLLER CABINET
CABINET		74" (19mm) TREATED PHYWOOD DECK
* I		2" x 6" (51mm x 152mm). TREATED WOOD NEW LEGS 2000
		48" MIN 12" (30)
NOTES:	VPF IV WITH DASE DIVENSIONS OF	6" x 6" (152mm x 152mm) TREATED WOOD POSTS

- BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm).
 ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 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.

Diameter

24" (600mm)

24" (600mm)

30" (750mm)

30" (750mm)

36" (900mm)

36" (900mm)

4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.

Rebars

- 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

7(22)

7(22)

7(22)

8(25)

8(25)

REVISIONS NAME

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

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

NOTES:

Mast Arm Length

Less than 30' (9.1 m)

Less than 30' (9.1 m)

Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)

Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)

Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)

Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)

Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)

- 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.

10'-0" (3.0 m)

13'-6" (4.1 m)

11'-0" (3.4 m)

13'-0" (4.0 m)

15'-0" (4.6 m)

25'-0" (7.6 m)

- 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameterfoundations.
- 4. For mast arm assemblies with dual arms refer to state standard 878001.

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

TS-05 5 OF 6

ILLINOIS	DEPARTMENT	OF	TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE

DRAWN BY BCK DESIGNED BY DAD CHECKED BY DAD

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

Foundation Diameter

30" (750mm)

30" (750mm)

36" (900mm)

36" (900mm)

42" (1060mm

42" (1060mm)

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL.	EXISTING	PROPOSED
CONTROLLER CABINET	; R			EMERGENCY VEHICLE LIGHT DETECTOR	R ≪	≈ □	~
RAILROAD CONTROL CABINET	Manager	R R	₽	CONFIRMATION BEACON	Ro-O	0-0	+4
COMMUNICATIONS CABINET	CC R	EC C	CC		R		
MASTER CONTROLLER		EMC	MC	HANDHOLE			
MASTER MASTER CONTROLLER	R	EMMC	MMC	HEAVY DUTY HANDHOLE	R	H	Ħ
UNINTERRUPTIBLE POWER SUPPLY	UPS "	EUPS	UPS	DOUBLE HANDHOLE	R	, 22	EX
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	-D-R	-DP	- P	JUNCTION BOX GALVANIZED STEEL CONDUIT	R 🔘		0
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R	· P	P	IN TRENCH (T) OR PUSHED (P)		**************************************	
STEEL MAST ARM ASSEMBLY AND POLE	R	O	•	TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	<u>R</u>		·
ALUMINUM MAST ARM ASSEMBLY AND POLE	R	0		COMMON TRENCH			СТ
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R _{O→} 	0-¤	• ×	COILABLE NONMETALLIC CONDUIT (EMPTY) SYSTEM ITEM		S	CNC
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R €TŽÍJ	Q	FTZ	INTERSECTION ITEM		1	S IP
SIGNAL POST	R _O	. 0	•	REMOVE ITEM	R		
TEMPORARY WOOD POLE (CLASS 5, OR	R⊗	.` ⊗	•	RELOCATE ITEM	RL		
BETTER) 45 FOOT (13.7m) MINIMUM	⊗ .		_	ABANDON ITEM	A	,	
GUY WIRE	> -	>	>_	12" (300mm) TRAFFIC SIGNAL SECTION		R	R
SIGNAL HEAD	$\stackrel{\perp}{\sim}$		-	12" (300mm) RED WITH 8" (200mm)		R	
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2	YELLOW AND GREEN TRAFFIC SIGNAL FACE		R	
SIGNAL HEAD WITH BACKPLATE	+ R	+	+			R	R
SIGNAL HEAD OPTICALLY PROGRAMMED	¹ R —□>′′P′′	-Dupu	→ "P"	SIGNAL FACE			G
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R ○-E>"F"	O-⊳"F"	● → "F"				∢ Y ∢ G
PEDESTRIAN SIGNAL HEAD	R -	-0	-1				
			•	SIGNAL FACE WITH BACKPLATE.		R	R
PEDESTRIAN PUSHBUTTON DETECTOR	R (6)	©	®	"P" INDICATES PROGRAMMED HEAD			G
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS		APS			4 9	◆ Y ◆ G
ILLUMINATED SIGN "NO LEFT TURN"	R S	•	lacksquare	12" (300mm) PEDESTRIAN SIGNAL HEAD		"P"	"P"
ILLUMINATED SIGN	R	8		WALK/DON'T WALK SYMBOL		(\$\display \)	
"NO RIGHT TURN" DETECTOR LOOP, TYPE I	:		®	12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
		<u></u>	<u></u>	12" (300mm) PEDESTRIAN SIGNAL HEAD			P
PREFORMED DETECTOR LOOP		ĮPĮ.	Р	INTERNATIONAL SYMBOL, SOLID		K	×
MICROWAVE VEHICLE SENSOR	R M	MD		PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		(1) C (3) D	₽ C ★ D
VIDEO DETECTION CAMERA	R _(V) ∄		(V)■	RADIO INTERCONNECT	III. ^R o	Hiro	
VIDEO DETECTION ZONE				RADIO REPEATER	R ERR	HH+O ERR	. ##
PAN, TILT, ZOOM CAMERA	R PÎZÎJ		₽ĨZ V	DENOTES NUMBER OF CONDUCTORS, ELECTRIC	[ERR]	homeomorphism	RR
WIRELESS DETECTOR SENSOR	RW	<u></u>	(W)	CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		- 5-	_5_
WIRELESS ACCESS POINT	R			GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)			1
				I			

ITEM	15 15	REMOVAL	EXISTING	PROPOSED	
ELECTRIC CABLE IN CO NO. 14 1/C, UNLESS NO					
COAXIAL CABLE			<u> </u>	— <u>c</u> —	
VENDOR CABLE FOR CA	MERA		—	—(v)—	
COPPER INTERCONNECT NO. 18 3 PAIR TWISTE			-6	-6-	
FIBER OPTIC CABLE NO. 62.5/125, MM12F			-(2F)		
FIBER OPTIC CABLE NO. 62.5/125, MM12F S	M12F			—24F)—	
FIBER OPTIC CABLE NO (NUMBER OF FIBERS & NOTED ON PLANS)			-\$	<u> </u>	
GROUND ROD AT (C) CC (H) HANDHOLE, (P) POS' OR (S) SERVICE			C	^C ∥	
CONTROLLER CABINET FOUNDATION TO BE RE		RCF			
STEEL MAST ARM POLE FOUNDATION TO BE RE		O-RMF			
ALUMINUM MAST ARM F FOUNDATION TO BE RE		RMF			
STEEL COMBINATION M AND POLE WITH LUMIN. FOUNDATION TO BE RE	AIRE AND	RMF ○ X			
SIGNAL POST AND FOU TO BE REMOVED	NDATION	RMF			
INTERSECTION & SAMP (SYSTEM) DETECTOR	LING		[IS]	IS	
SAMPLING (SYSTEM) DE	TECTOR	4		S	
EXISTING INTERSECTION PROPOSED INTERSECTION	N LOOP DETECTOR ON AND SAMPLING (SYSTEM) [DETECTOR	[P]		
	NTERSECTION LOOP DETECTO ON AND SAMPLING (SYSTEM) [PP		
PREFORMED INTERSECT: (SYSTEM) DETECTOR	ION AND SAMPLING		PIS	PIS	
PREFORMED SAMPLING	(SYSTEM) DETECTOR		[PS]	PS	

RAILROAD SYMBOLS

RAILROAD	CONTROL CABINET
RAILROAD	CANTILEVER MĄST ARM
FLASHING	SIGNAL
CROSSING	GATE
CROSSBUC	K .

EXISTING	PROPOSED
R R	₽⋖
XXXX	X ox x x
$\times \circ \times$	X-X
X-0X->	X-X-
≥√	\rightarrow
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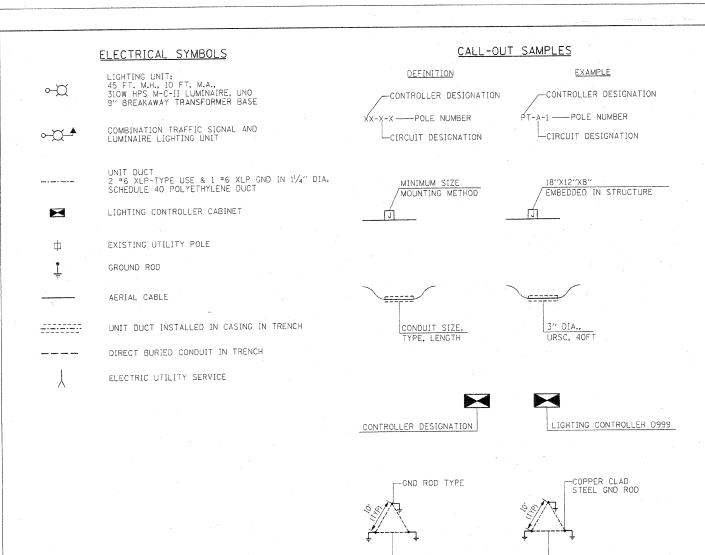
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE

DRAWN BY BCK DESIGNED BY DAD CHECKED BY DAD

79766\cadd\draw.cos\112+s@5F doo



-GND CABLE SIZE, TYPE (2/0 BARE COPPER FOR CONTROLLERS & 4/0 BARE

COPPER FOR BUILDINGS)

-2/0 BARE COPPER

WP

XFMR

ABBREVIATIONS

AMPERE	
ALTERNATING CURRENT	
AERIAL CABLE	
ABOVE FINISHED GRADE	
CIRCUIT BREAKER.	
CIRCUIT	
COMMONWEALTH EDISON	
DIAMETER	
DISTRIBUTION PANEL	•
EXISTING LIGHTING UNIT TO REMAIN	1
EDGE OF PAVEMENT	
ETHYLENE PROPYLENE RUBBER	
FEET OR FOOT	
FUSE	
GRÓUND	
HIGH INTENSITY DISCHARGE	
HIGH PRESSURE SODIUM	
ILLINOIS DEPARTMENT OF TRANSPOR	RTATION
INCH/INCHES	
JUNCTION BOX	
KILOVOLT	
METER	
MAST ARM	
MOUNTING HEIGHT	
MINIMUM	
NUMBER	
PUSH BUTTON	
POLE	
PHASE	
PANEL .	
POLYVINYL CHLORIDE	
EXISTING LIGHTING UNIT TO BE RECOWNER SALVAGED UNLESS NOTED O	MOVED THERWISE)
RECEPTACLE	
RIGID GALVANIZED STEEL CONDUIT	
STAINLESS STEEL	
STATION	
TRAY CABLE	
TYPICAL	
UNIT DUCT	
UNLESS NOTED OTHERWISE,	_
	Τ .
VOLT	
VOLT-AMPERE	
WATT	
	ALTERNATING CURRENT AERIAL CABLE ABOVE FINISHED GRADE CIRCUIT BREAKER. CIRCUIT COMMONWEALTH EDISON DIAMETER DISTRIBUTION PANEL EXISTING LIGHTING UNIT TO REMAIN EDGE OF PAVEMENT ETHYLENE PROPYLENE RUBBER FEET OR FOOT FUSE GROUND HIGH INTENSITY DISCHARGE HIGH PRESSURE SODIUM ILLINOIS DEPARTMENT OF TRANSPOF INCH/INCHES JUNCTION BOX KILOVOLT METER MAST ARM MOUNTING HEIGHT MINIMUM NUMBER PUSH BUTTON POLE PHASE PANEL POLYVINYL CHLORIDE EXISTING LIGHTING UNIT TO BE REI (OWNER SALVAGED UNLESS NOTED O RECEPTACLE RIGID GALVANIZED STEEL CONDUIT STAINLESS STEEL STATION TRAY CABLE TYPICAL UNIT DUCT UNLESS NOTED OTHERWISE, UNDERGROUND RIGID SHEET CONDUIT VOLT VOLT-AMPERE

WEATHERPROOF

TRANSFORMER

F.A.P RTE.	SECTION		COUNT	Υ	TOTAL SHEETS	SHEET NO.
856	01-00170-2	6-TL	WIL	-	171	113
STA.		1	TO STA.			
FED. RO	AD DIST. NO.	ILLIN	OIS FED.	AID	PROJECT	-
CONT	RACT NO: 63	3570				

GENERAL NOTES

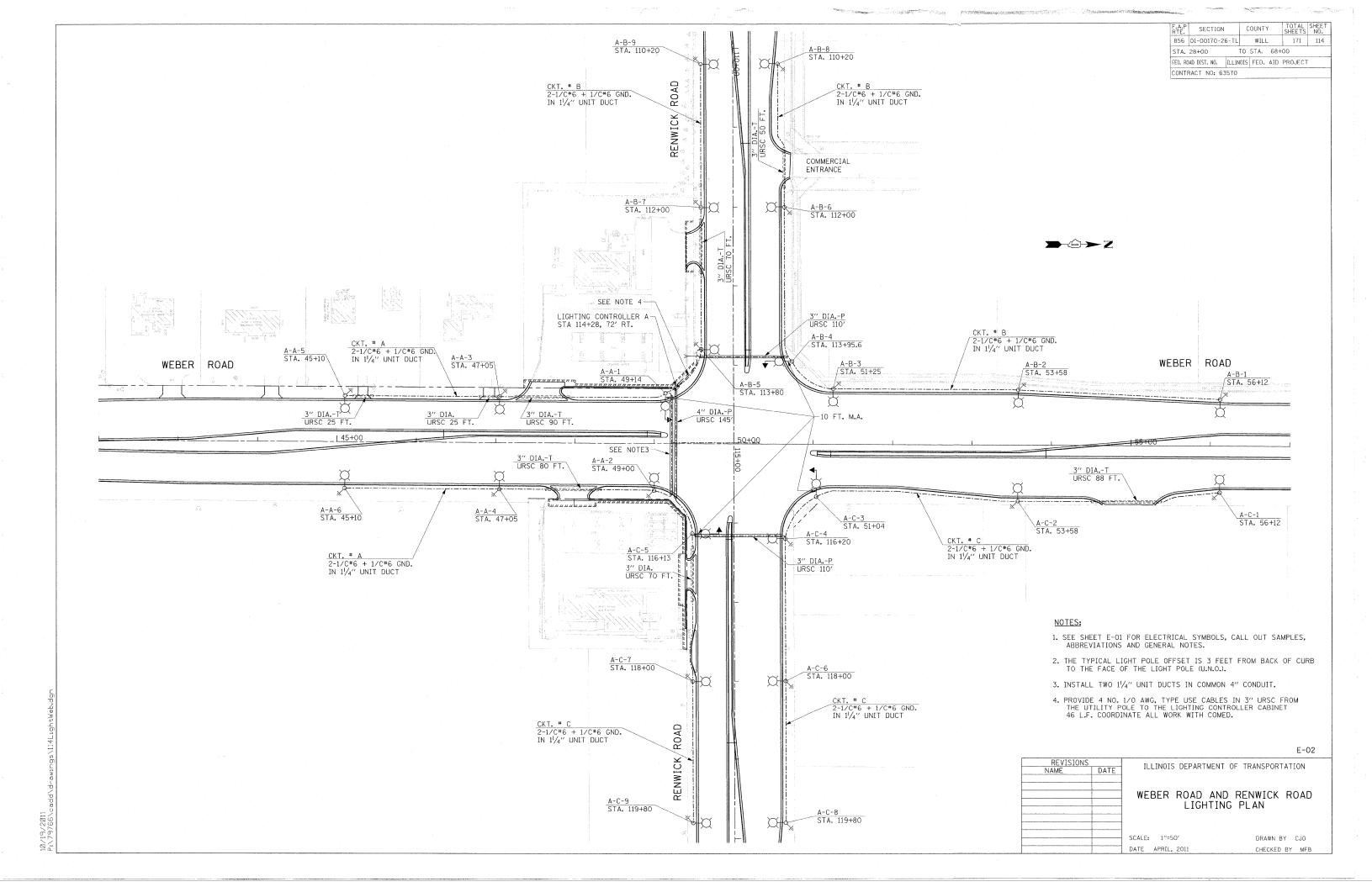
- PRIOR TO THE INSTALLATION OF NEW UNIT DUCTS, CONDUITS, HANDHOLES, JUNCTION BOXES, LIGHT STANDARD FOUNDATIONS AND APPURTENANCES, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING LIGHTING COMDUITS, CABLE AND UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL VERIFY ALL OF THE DATA SHOWN ON THE CONTRACT PLANS WHICH WOULD AFFECT HIS/HER WORK UNDER THIS CONTRACT.
- 3. ALL NEW UNIT DUCTS, CONDUITS, HANDHOLES, JUNCTION BOXES, APPURTENANCES ARE ILLUSTRATED DIAGRAMATICALLY. THE ACTUAL LOCATION IN THE FIELD SHALL BE APPROVED BY THE ENGINEER.
- 4. CONDUITS, UNIT DUCT, HANDHOLES, JUNCTION BOXES, LIGHT STANDARD FOUNDATION AND APPURTENANCES SHALL BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH DRAINS AND ALL OTHER UTILITIES. BOTH UNDERGROUND AND ABOVE GROUND.
- 5. ALL DISTURBED AREAS WHERE RESTORATION IS NOT COVERED BY APPLICABLE SECTIONS OF THE SPECIAL PROVISIONS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE CONTRACT. SEPARATE PAYMENT WILL NOT BE MADE.
- 6. THE CABLE INSTALLATION FROM THE LIGHTING CONTROL CABINET TO THE LIGHT STANDARDS SHALL BE CONTINUOUS WITHOUT UNDERGROUND SPLICES. SPLICING OF CABLES IS PERMITTED ONLY IN THE BASE OF THE LIGHT STANDARDS AND IN ABOVE GRO
- 7. ALL PITS USED FOR BORING AND PULLING CONDUITS UNDER ROADWAYS AND DRIVEWAYS SHALL BE LOCATED FIVE (5) FEET (MINIMUM) CLEAR FROM THE EDGE OF SHOULDER. LOCATIONS OF THE CONDUIT CROSSINGS SHOWN ARE APPROXIMATE AND MAY BE SHIFTED AS NECESSARY TO MEET THE MINIMUM CLEARENCE REQUIREMENTS. THE PITS SHALL BE ADEQUATELY GUARDED TO PROTECT THE MOTORIST. THE CONTRACTOR SHALL SUBMIT PLANS OF EACH PIT TO THE ENGINEER PRIOR TO EXCAVATING EACH PIT. THE PIT PLANS SHALL SHOW THE PIT SIZE, PIT LOCATION, PROTECTION TO BE INSTALLED, AND MAINTENANCE OF TRAFFIC AT PIT SITE.
- 8. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL LUMINAIRE LAMPS IN ACCORDANCE WITH THE LUMINAIRE SUPPLIER RECOMMENDATIONS. THE CONTRACTOR SHALL COORDINATE THE LAMP TYPE, VOLTAGE, AND WATTAGE WITH THE LUMINAIRE SUPPLIER.
- 9. THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY COMPANY TO COORDINATE THE ELECTRICAL SERVICE WORK.
 CONTACT: COMED
 MR. JOSEPH ISABELLI

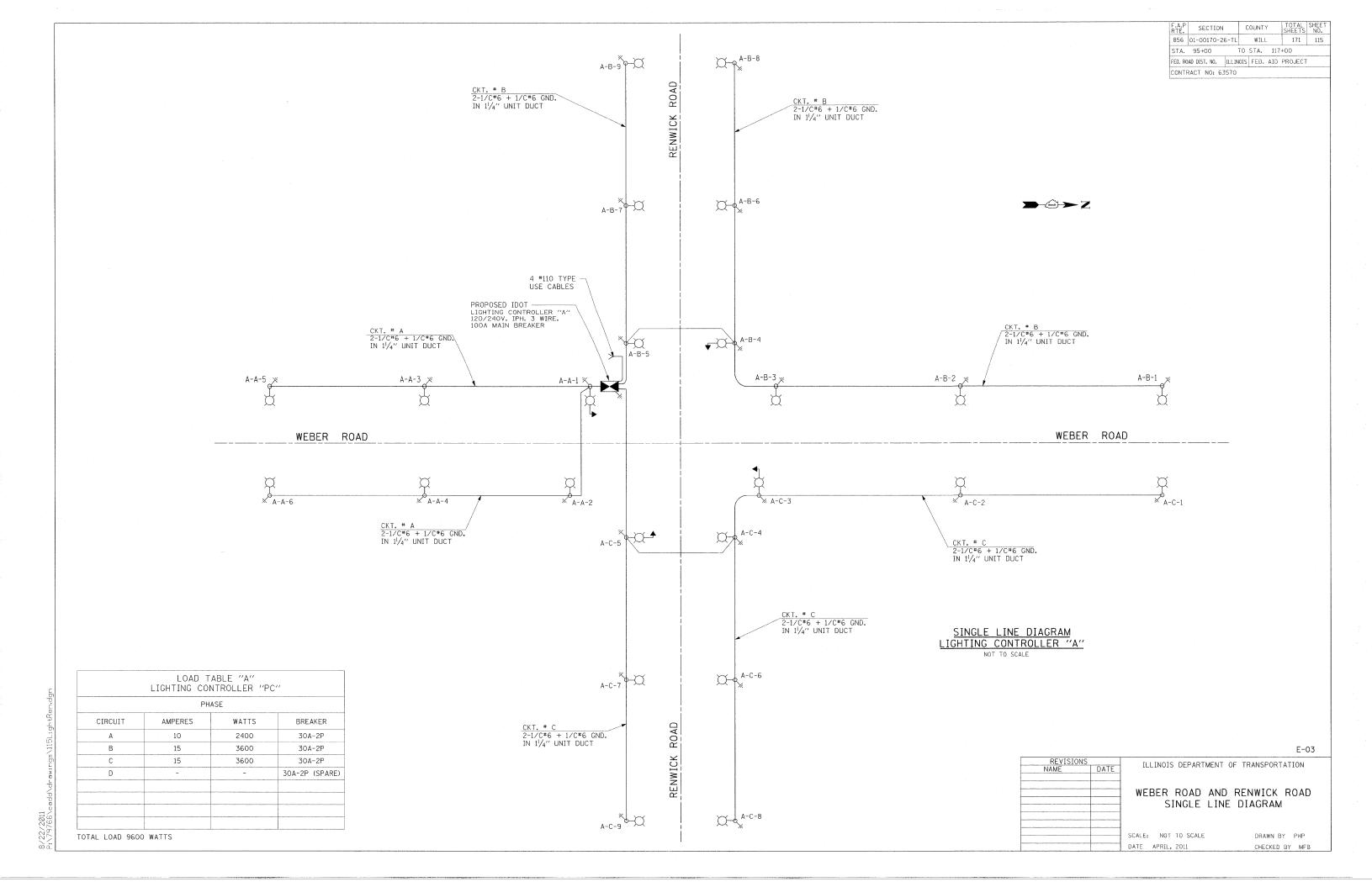
- 10. TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE LIGHT POLES,
 THE LIGHT POLES SHALL NOT BE ERECTED AND/OR LEFT TO STAND
 WITHOUT LUMINAIRES, THE LIGHT POLES WILL NOT BE PAID FOR
 UNTIL THE POLES ARE FULLY APPROVED WITH THE LUMINAIRES INSTALLED, CONNECTED, AND TESTED.
- 11. THE EQUIPMENT CROUNDING CONDUCTORS SHALL BE SPLICED AND BONDED TO EACH JUNCTION BOX AND PULL BOX THAT THE CONDUCTORS PASS THROUGH, JUNCTION BOXES AND PULL BOXES SHALL BE EQUIPPED WITH GROUND LUGS FOR THE GROUND WIRE TERMINATION. THE GROUND LUG INSTALLATION SHALL NOT DEGRADE THE JUNCTION BOX RATING.
- 12. TRENCHES FOR LIGHTING RACEWAYS SHALL HAVE A MINIMUM DEPTH
- 13. PROPOSED LIGHT POLES ARE TO BE INSTALLED WITH BREAKAWAY DEVICE.

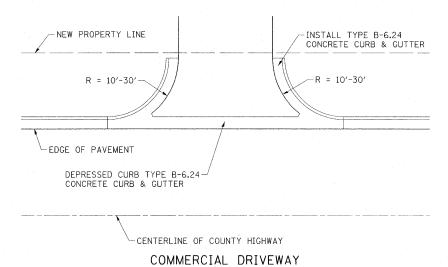
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REVISION		ILLINOIS DEPARTMEN	T OF TRANSPORTATION
NAME	DATE		
		RENWICK ROAD	& WEBER ROAD
		FLECTRICA	AL SYMBOLS.
		CALL-OUT SAMPL	ES, ABBREVIATIONS
		AND GENE	ERAL NOTES
		SCALE: NONE	DRAWN BY CJO
		DATE APPR 2011	CHECKED BY BH

20/2011 79766\c

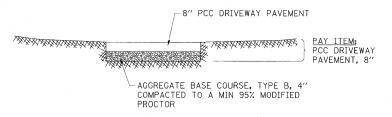




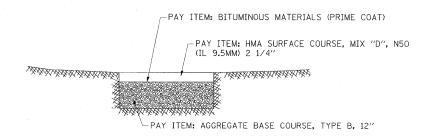


NOTES:

- 1. PREMOLDED EXPANSION JOINTS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO PCC DRIVEWAY PAVEMENT 8".
- 2. COMBINATION CONCRETE CURB & GUTTER AND CONCRETE CURB SHALL BE MEASURED STRAIGHT ASROSS THE DRIVEWAY RETURN. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB TRANSITION SECTIONS.
- 3. ALL POURS MUST BE SEPARATE, NO MONOLITHIC POURS WITH CURB & GUTTER, DRIVEWAY APPROACHES, AND SIDEWALKS.
- 4. ALL SAWCUTS ARE TO BE FULL DEPTH.
- 5. PROTECTIVE COATING SHALL BE INSTALLED ON ALL CONCRETE WORK.

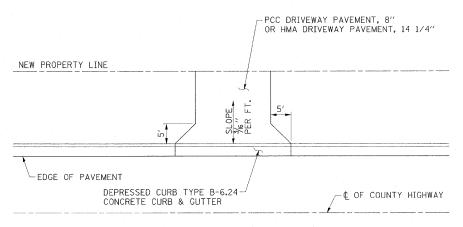


P.C.C. DRIVEWAY PAVEMENT, 8"



HMA DRIVEWAY PAVEMENT, 14 1/4"

DRIVEWAY CONSTRUCTION DETAILS



RESIDENTIAL DRIVEWAY

NOTE:

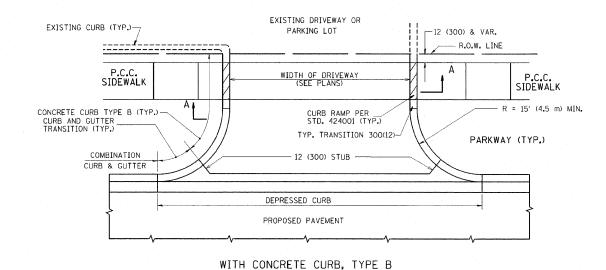
ALL CONSTRUCTION TO BE DONE ACCORDING TO STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

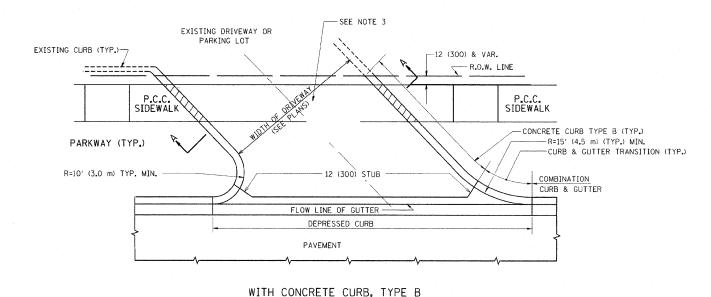
ALL GROUND AREAS DISTURBED SHALL BE RESEEDED AND MULCHED OR JUTE MATTED AS SOON AFTER CONSTRUCTION AS POSSIBLE.

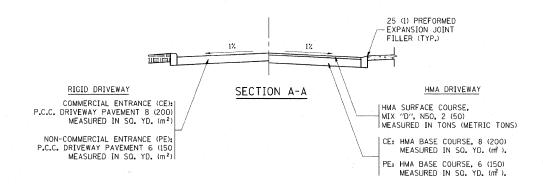
REMOVE AND REPLACE SIDEWALK AS NECESSARY TO PROVIDE ADEQUATE TRANSITION TO EXISTING GRADES.

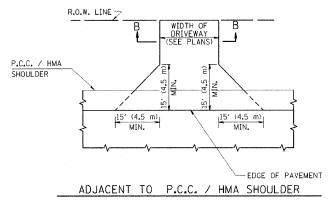
F.A.P RTE.	SECTION		COUNTY		TOTAL SHEETS	SHEET NO.
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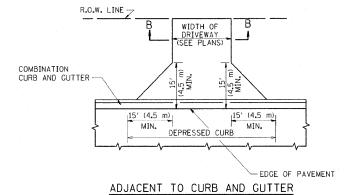
REVISIONS	ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME DATE	TELINOIS DEL ARTIMENT OF TRANSFORTATION	
	CONSTRUCTION DETAILS	
	CONSTRUCTION DETAILS	
	<u>.</u>	
	SCALE: NONE DRAWN BY PHP	
	John Committee C	
	DATE APRIL 2011 CHECKED BY MER	

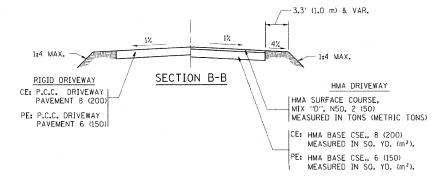












RURAL FIELD ENTRANCE (FE)

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

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

GENERAL NOTES:

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

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

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

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

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

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

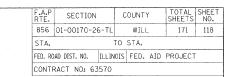
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS

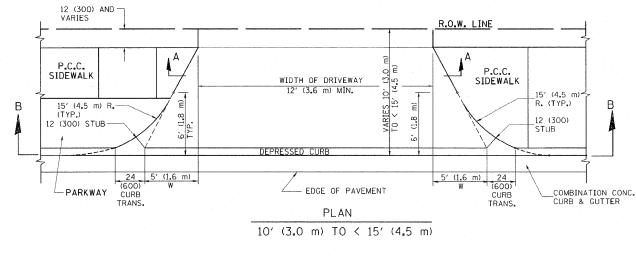
		OTHERWISE SHOWN.
REVISION		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	IEEE/NOIS BEI MICHMENT OF THOMAS SICINITION
R. SHAH	11-04-95	DRIVEWAY DETAILS
J. POLLASTRINI	08-12-96	0
J. POLLASTRINI	12-14-96	DISTANCE BETWEEN R.O.W. AND
A. ABBAS	03-21-97	FACE OF CURB & EDGE OF
T. HOLTZ	04-08-97	
M. GOMEZ	04-06-01	SHOULDER $>= 15' (4.5 M)$
P, LaFLEUR	04-15-03	
R. BORO	01-01-07	

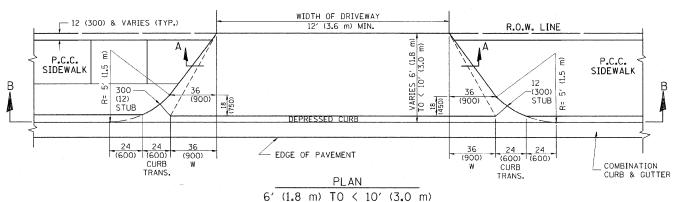
06-11-08

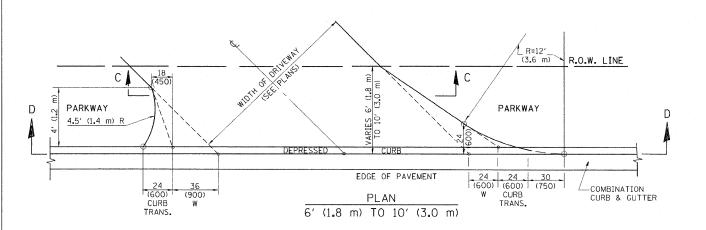
SCALE: NONE

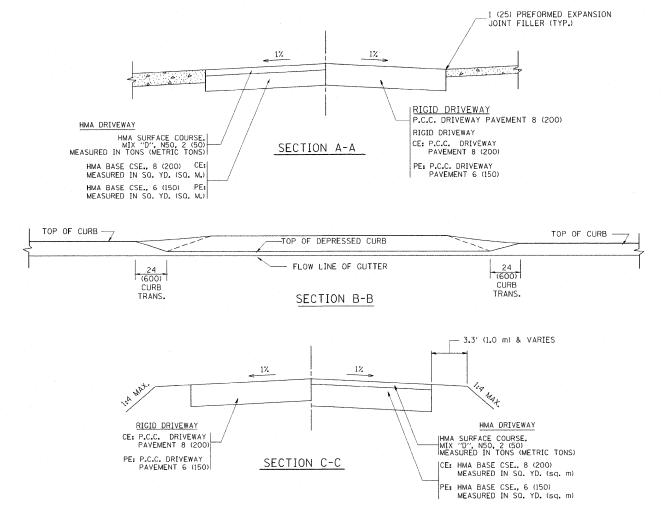
DRAWN BY CHECKED BY

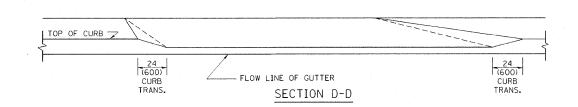












GENERAL NOTES

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE

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

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

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

''W'' VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

BD-02

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

UE 11210N2		
NAME	DATE	
R. SHAH	11-06-95	
J. POLLASTRINI	08-12-96	
J. POLLASTRINI	12~14-96	
A. ABBAS	03-21-97	
T. HOLTZ	04-08-97	
M. GOMEZ	04-06-01	
P. LaFLEUR	04-15-03	
R. BORO	01-01-07	s
R. BORO	09-06-11	3

DEVISIONS

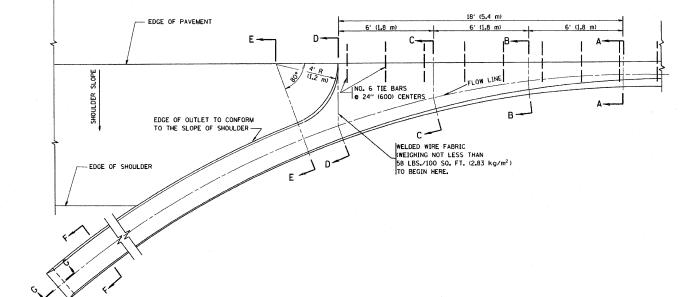
ILLINOIS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS DISTANCE BETWEEN R.O.W. AND FACE OF CURB < 15' (4.5 M)

SCALE: NONE

DRAWN BY CHECKED BY

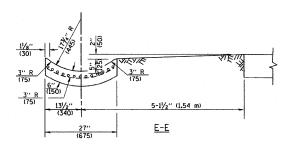
DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

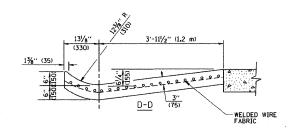


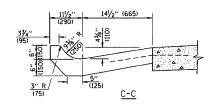


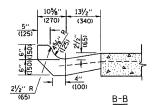
<u>A-A</u> *

* DIMENSIONS OF THE CURB & GUTTER AT SECTION A-A ARE SHOWN ON STATE STANDARD 606001. FOR DETAILS OF OUTLET FOR CONCRETE CURB & GUTTER, TYPE B-6,24 (B-15.60) SEE STATE STANDARD 606006.









GENERAL NOTES

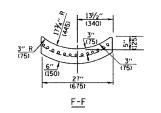
GUTTER OUTLET SHALL BE TIED TO THE PAVEMENT IN ACCORDANCE WITH DETAILS FOR LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001.

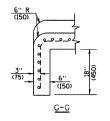
TIE BARS SHALL BE NO. 20 (NO.6) AT 24" (600) CENTERS UNLESS OTHERWISE SHOWN.

IF THE AVERAGE GRADE OF PAVEMENT FOR THE DISTANCE FROM SECTION A-A TO D-D EXCEEDS 2%, THIS DISTANCE SHALL BE INCREASED 6' (1,8 m) FOR EACH 1% INCREASE IN GRADE.

QUANTITIES

FOR SECTION A-A TO E-E AND CURTAIN WALL=
1.25 CU. YDS. (0.96 m³) CLASS SI CONCRETE (OUTLET) FOR 9" (225) PAV'T.
1.27 CU. YDS. (0.96 m³) CLASS SI CONCRETE (OUTLET) FOR 10" (250) PAV'T.
FOR SECTION F-F=
0.045 CU. YDS. (0.03 m³) CLASS SI CONCRETE PER f+. (m).

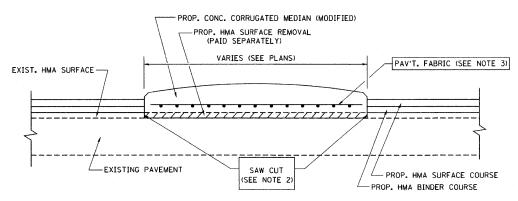




BD-03

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

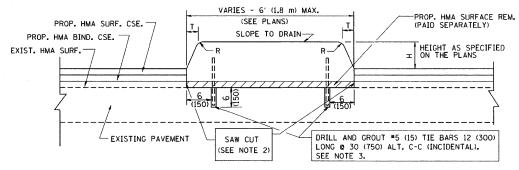
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	TEETHOIS DELANTMENT OF THANSFORTATION
M. DE YONG	08-04-86	
R. SHAH	09-09-94	
R. SHAH	10-25-94	OUTLET FOR CONCRETE
E. GOMEZ	12-21-00	CURB AND GUTTER
		COND AND GOTTEN
		SCALE: NONE DRAWN BY
		CHECKED BY



- NOTES: 1. CORRUGATED MEDIAN (MODIFIED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE PORTIONS OF STATE STANDARD 606306.
 - 2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED. SAW CUT WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)
 - 3. PAVEMENT FABRIC WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)

DETAILS FOR CORRUGATED MEDIAN (MODIFIED)

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SOUARE FOOT (SOUARE METER) FOR "CORRUGATED MEDIAN (MODIFIED)"



Н	R	Т
6(150)	1(25)	1(25)
9(225)	1(25)	2(50)

- NOTES: 1. CONCRETE MEDIAN TYPE SB (DOWELLED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STATE STANDARD 606301 AND SECTION 606 OF THE STANDARD SPECIFICATIONS.
 - 2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR
 MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE
 OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED.
 SAW CUT WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"
 - 3. FOR MEDIAN WIDTH LESS THAN 4' (1.2 m) USE
 ONE ROW OF #5 (15) BARS @ 30 (750) C-C ALONG THE MEDIAN CENTERLINE.
 TIE BARS WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"

DETAILS FOR CONCRETE MEDIAN

TYPE SB (DOWELLED)

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SOUARE FOOT (SOUARE METER) FOR "CONCRETE MEDIAN TYPE SB (DOWELLED)"

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

SCALE: NONE

R. SHAH

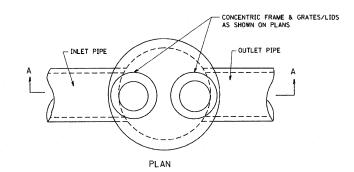
. GOME 7

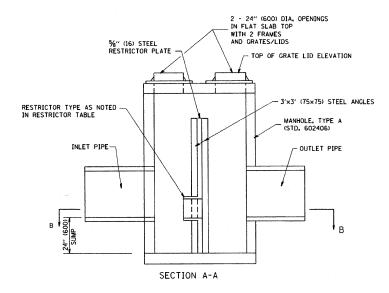
08-28-00

DRAWN BY CHECKED BY

8/22/2011

F.A.P RTE.	SECTION	4	COUNT	Y	TOTAL SHEETS	SHEET NO.
856	01-00170-2	6-TL	WILL	_	171	121
STA.		T	O STA.			
FED. RO	AD DIST. NO.	ILLIN	OIS FED.	AID	PROJECT	
CONTRACT NO: 63570						





RESTRICTOR

DIAMETER

18

15

21

16

15

10

12

12

12

(INCHES)

ROADWAY

WEBER

WEBER

RESTRICTOR TOP OF PLATE

ELEVATION

636.30

642.02

638.00

631.00

635.40

640.92

641.80

646.90

645.90

INVERT

631.00

637.15

634.92

628.70

632.60

637.39

638.38

644.56

643.29

100-YR

HWL

636.45

642.02

638.25

631.25

635.60

640.92

641.80

647.15

646.15

RIM

ELEVATION

638.32

644.78

640.05

633.11

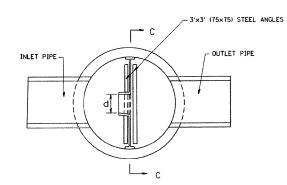
637.46

645.05

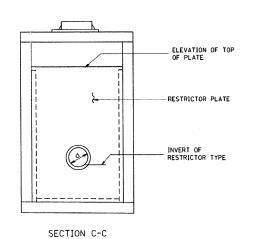
645.05

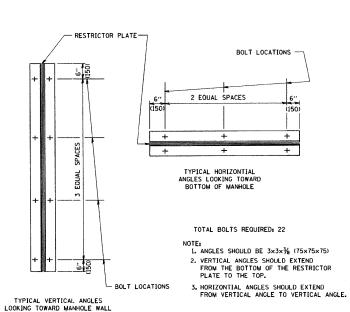
648.91

647.94

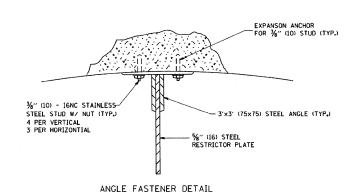


SECTION B-B





STEEL ANGLE BOLTING DETAILS

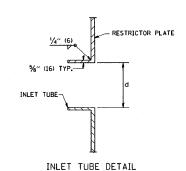


NOTES:

1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.

2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.

3. BASIS OF PAYMENT: "MANHOLES TYPE A, 6 FT. (1.8 m)-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE" EACH



	RESTRICTOR TYPE							
1	2	3	4	5	6			
RE-ENTRANT TUBE	SHARP EDGED	SOUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED			
LENGTH, ½ TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.				
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98			
·								

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

BD-12 ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

	REVISIONS		TI I THOTO	DEDADTUENT OF	TD ANCDODE A TION
	NAME	DATE	ILLIN015	DEPARIMENT OF	TRANSPORTATION
R.	SHAH	09-09-94			
R.	SHAH	10-25-94			
Ε.	GOMEZ	08-28-00		MANHOLE	. WITH
M.	. GOMEZ	01-08-01		RESTRICTO	R PLATE
				MEDIMICIO	IN FEATE
-			SCALE: NONE		DRAWN BY
					CHECKED BY

STR.

NO.

S 104

S 128A

S 182

S 183

S 197A

S 225A

S 231A

S 303

S 309

STATION

31+50

42+65

66+05

89+28

91+85

105+15

105+10

134+50

134+35

OFFSET

27.00' RT

61.40' RT

62.00' LT WEBER

33.00' LT RENWICK

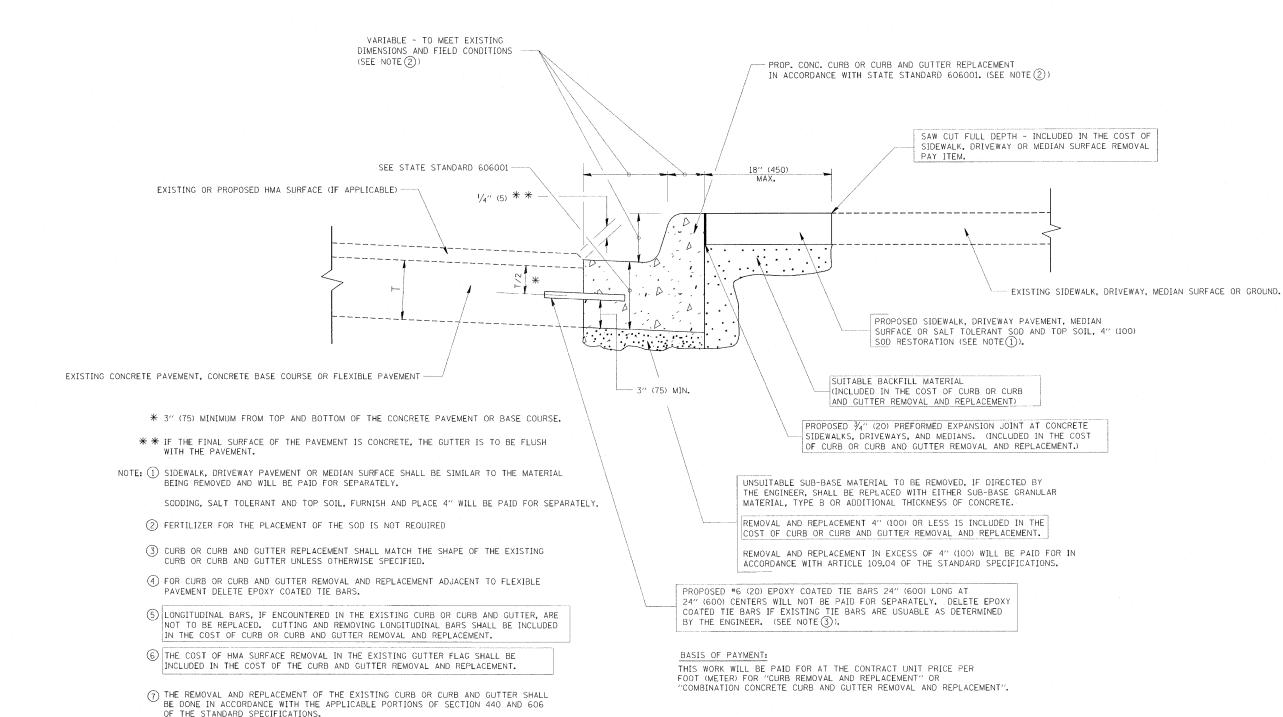
34.00' RT RENWICK

58.00' LT RENWICK

40.50' RT RENWICK

27.00' LT RENWICK

49.50' RT RENWICK



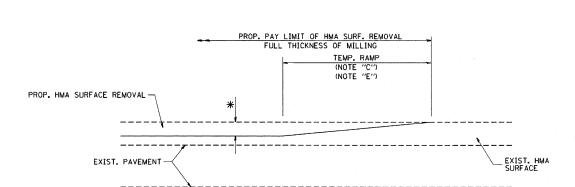
(8) THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

 $$\operatorname{\textsc{BD-24}}$$ all dimensions are in inches (millimeters) unless otherwise shown.

REVISIO	NS	ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	TEETHOLS DELIANTIMENT OF TRANSPORTATION
A. HOUSEH	03-11-94	
R. SHAH	02-24-95	CURB OR
R. SHAH	03-02-95	
R. SHAH	08-19-96	CURB AND GUTTER
R. SHAH	09-12-96	REMOVAL AND REPLACEMENT
R. SHAH	09-19-96	NEMOTILE THE INC. ENGEMENT
R, SHAH	10-03-96	
A. ABBAS	03-21-97	SCALE: NONE DRAWN BY
M. GOMEZ	01-22-01	JOALL: NONE DRAWN BI
n nono	110 15 00	CHECKED BY

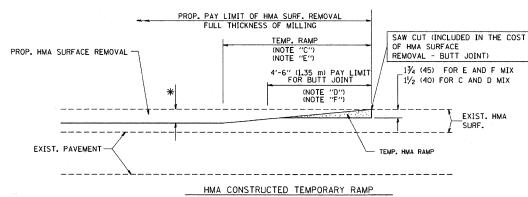
8/22/2011 P:\79766\cadd\drawincs\122B



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

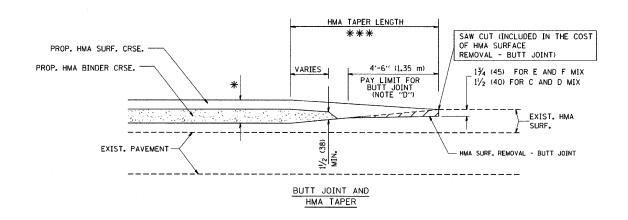
OPTION 1

MILLED TEMPORARY RAMP

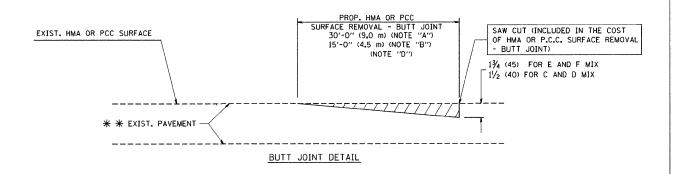


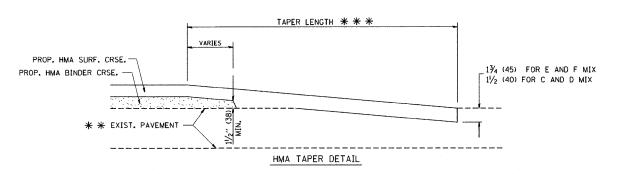
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2 TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING





TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

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

NOTES

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

BD-32
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS
NAME DATE
M. DE YONG 06-13-90
M. DE YONG 07-03-90
M. DE YONG 03-27-92
R. SHAH 09-09-94
R. SHAH 10-25-94
A. ABBAS 03-21-97
M. DE YONG 04-06-01

01-01-07

R. BORO

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AMD HMA TAPER DETAILS

SCALE: NONE

DRAWN BY CHECKED BY

8/22/2011 P:\79766\cadd\drawıngs\123



GENERAL NOTES

ALTERNATE MATERIAL FOR THE WALLS MAY BE CONCRETE MASONRY UNITS, PRECAST REINFORCED CONCRETE SECTIONS OR CAST-IN-PLACE CONCRETE. THE CAST IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN MAY BE USED WHEN APPROVED BY THE ENGINEER.

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14 OF THE STANDARD SPECIFICATIONS.

STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF THREE (3) INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.

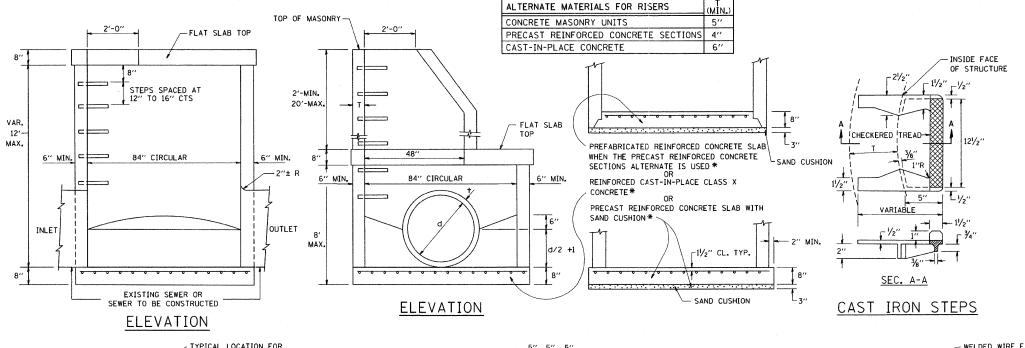
STEPS SHALL BE OMITTED FOR WORK IN COOK COUNTY WHEN THE DEPTH OF THE MANHOLE IS TEN (10') OR LESS.

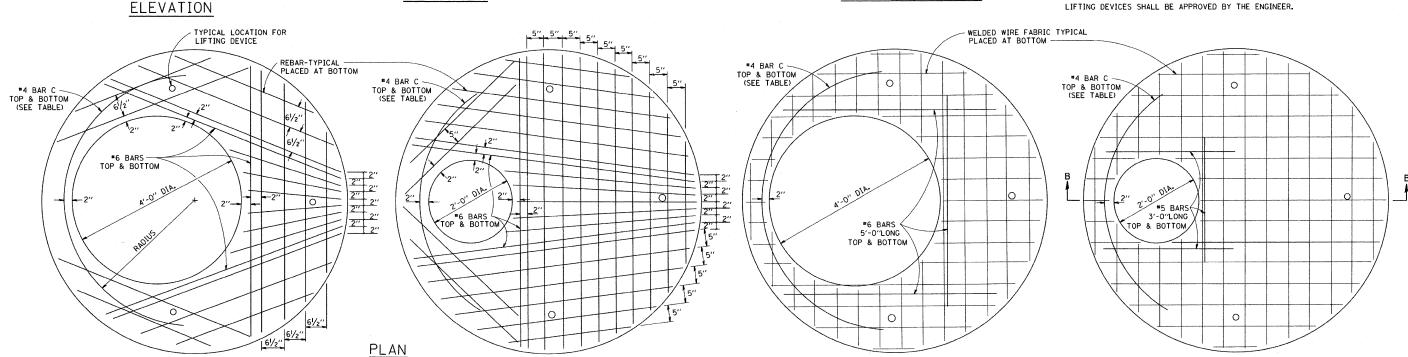
IN ADDITION TO THE REQUIREMENTS OF ARTICLE 612.13 OF THE STANDARD SPECIFICATIONS, THE CONTRACT UNIT PRICE FOR MANHOLES, TYPE A, 7'-DIAMETER SHALL INCLUDE THE SAND CUSHION WHEN REQUIRED, FURNISHING AND INSTALLING STEPS WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL, AND FURNISHING AND INSTALLING FLAT SLAB TOP.

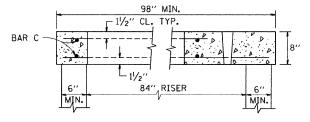
PRECAST FLAT SLAB TOP SHALL CONFORM TO ARTICLES 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS. REINFORCEMENT BARS AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 1006.10. ONLY GRADE 60 REINFORCEMENT BARS WILL BE PERMITTED.

BOTTOM SLAB SHALL BE REINFORCED BY EITHER REINFORCEMENT BARS OR WELDED WIRE FABRIC. THE MINIMUM REINFORCEMENT SHALL BE 0.46 SQUARE INCH PER LINEAR FOOT IN BOTH DIRECTIONS.

JOINT CONFIGURATION AND DIMENSIONS OF FLAT SLAB TOP SHALL MATCH AND FIT THE RISER JOINT DETAIL.







SHOWING REBAR REINFORCEMENT

SECTION B-B

TABLE

PLAN
SHOWING WELDED WIRE FABRIC REINFORCEMENT

man burns								
DIAMETER	REINFORCEMENT	R BAR	BAR BAR C					
OF OPENING	EACH DIRECTION	SIZE	SIZE	LENGTH	RADIUS			
2′-0′′	1.06 SO.IN./LIN.FT.	#6	#4	6′-0′′	38"			
4′-0′′	0.82 SQ.IN./LIN.FT.	#6	#4	9′-0′′	38''			

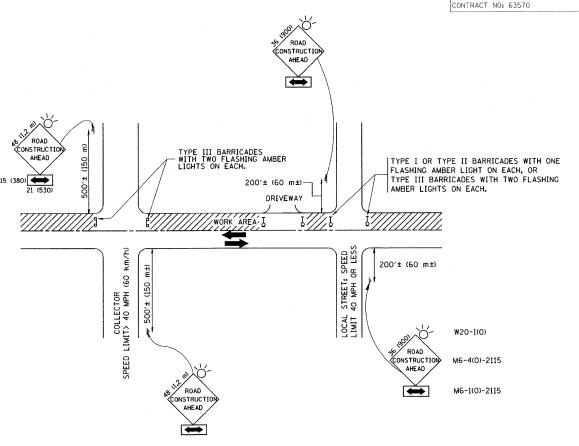
NOTE: THIS STRUCTURE SHOULD BE USED WITH PIPES SIZE 54" DIA. OR SMALLER.

 $$\operatorname{BD}\text{-}37$$ all dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS		THITMOTS	DEPARTMENT OF TRANSPORTATION
NAME	DATE	ILLINOIS	DEFAITIMENT OF TRANSFORTATION
			MANHOLE TYPE A 7 FOOT DIAMETER
		SCALE: NONE	DRAWN BY
			CHECKED BY

2:\79766\cadd\drawings\124BD37.d

 F.A.P RTE.	SECTION		COUN	ΓΥ	TOTAL SHEETS	SHEET NO.
856	01-00170-2	6-TL	WI	_L	171	125
STA.		T	STA.			
FED. RO	AD DIST. NO.	ILLINO	IS FED	. AID	PROJECT	
CONTE	NACT NO. CT	25.70				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- O) ONE ROAD CONSTRUCTION AHEAD SIGN 36 \times 36 (900 \times 900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- Q) 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.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINCLE HEADED ARROW (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

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

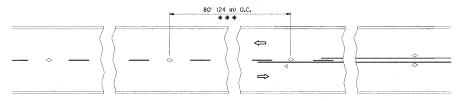
TC-10
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

CHECKED BY

REVISIONS
NAME
DATE
LHA
06-89
T. RAMMACHER
09-08-94
J. OBERLE
10-18-95
A. HOUSEH
03-06-96
A. HOUSEH
10-15-96
T. RAMMACHER
01-06-00
DRIVEWAYS

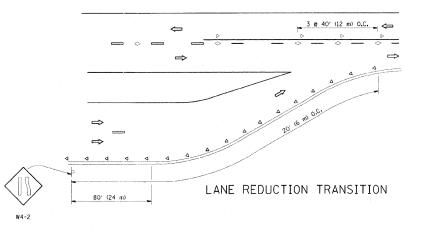
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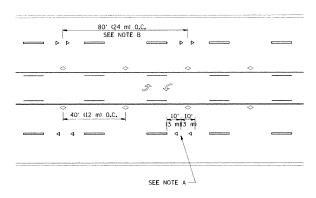
ILLINOIS DEPARTMENT OF TRANSPORTATION
TRANSPOR



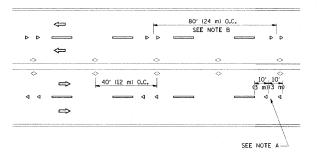
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

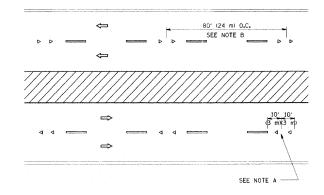




TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

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

LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE
10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

---- YELLOW STRIPE

WHITE STRIPE

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

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.

3 @ 80' (24 m) 0.C. — Ê	MINIMUM OF 3 W EQUALLY SPACED	E *
3 e 40' (12 m) * 40' (12 m) O.C. * 40' (12 m) O.C. 40' (12 m) O.C. 40' (12 m) O.C.	# SEE TWO-LANE/TWO-WAY WHERE MA ** WHERE THE MEDIAN WIDTH IS 6' (2) USE TWO-WAY MARKERS.	O.C. * DOC O.C. *

LEFT TURN

TC-11

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

REVISIONS
NAME DATE
T. RAMMACHER 09-19-94
T. RAMMACHER 03-12-99
T. RAMMACHER 01-06-00
C. JUCIUS 09-09-09

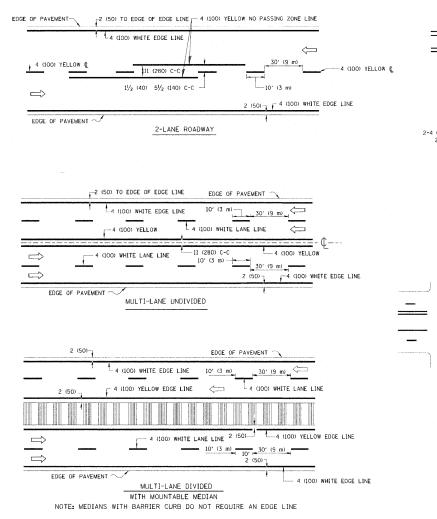
ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT
MARKERS (SNOW-PLOW RESISTANT)

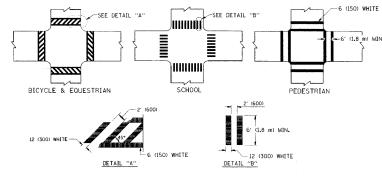
SCALE: NONE

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8/22/2011 P:\79766\cadd\drawings\126



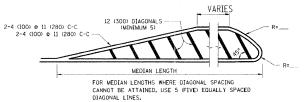
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

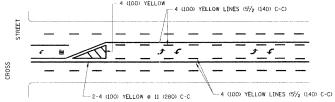
2-4 (100) YELLOW @ 11 (280) C-C 4' (1,2 m) OUTSIDE TO OUTSIDE OF LINES 2-4 (100) YELLOW @ 11 (280) C-C

4' (1.2 m) WIDE MEDIANS ONLY

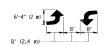


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

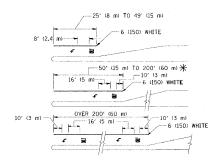


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

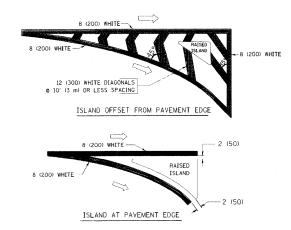


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. \P AREA = 15.6 SO. FT. (1.5 m²) \P AREA = 20.8 SO. FT. (1.9 m²)

* 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



TYPICAL ISLAND MARKING

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 II (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2,4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2,4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (500) 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. 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) DIACONALS @ 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"33.6 SO. FT. (0,33 m²) EACH "X"=54.0 SO. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) & 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) T0 45MPH (70 km/h) 150' (45 m) C-C (0VER 45MPH (70 km/h))

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

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

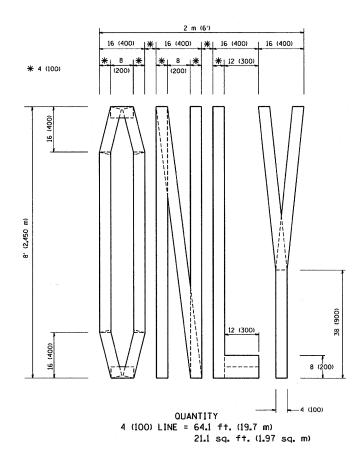
TC-13

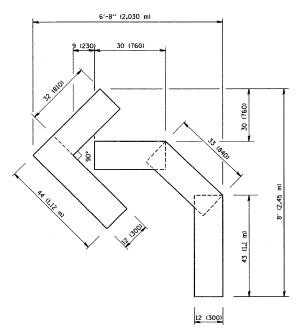
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION
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DISTRICT ONE
TYPICAL PAVEMENT
MARKINGS
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SCALE: NONE DRAWN BY
CHECKED BY

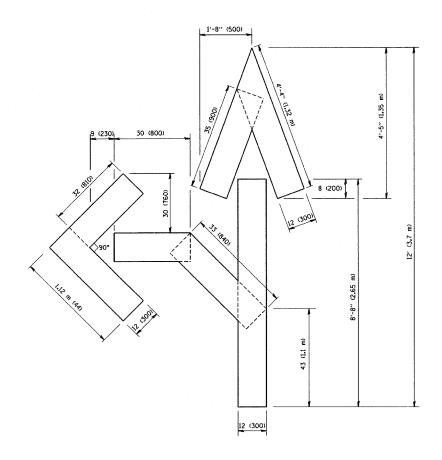
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F.A.P RTE.	F.A.P SECTION		COUNTY		TOTAL SHEETS	SHEET NO.	
856	856 01-00170-26-TL			WILL	-	171	128
STA.		Т	0	STA.			
FED. R	DAD DIST. NO.	ILLING	DIS	FED.	AID	PROJECT	
CONT	CONTRACT NO: 63570						





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



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

TC-16
INCHES (MILLIMETERS) UNLESS

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

09-18-94 06-01-96 06-05-96
06-05-96
1-04-97
03-02-98
08-28-00

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

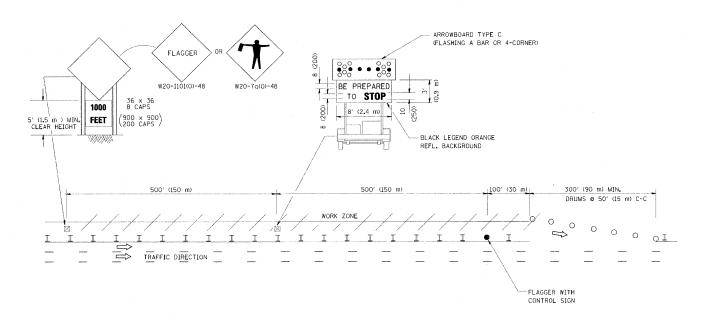
SCALE: NONE

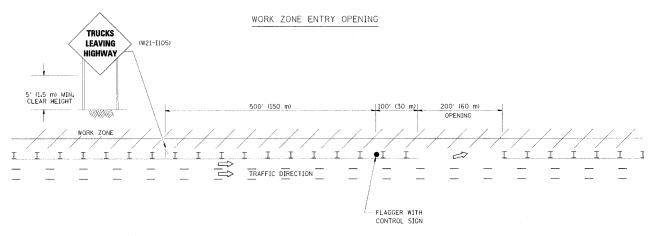
DRAWN BY CHECKED BY

F.A.P RTE.	.A.P SECTION COUNTY TOTAL SHEET SHEETS NO.					
856	01-00170-26-TL WILL 171 129					
STA. TO STA.						
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						
CONTI	CONTRACT NO: 63570					

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING





- 1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
- 2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
- 3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
- 4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

TC-18 ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

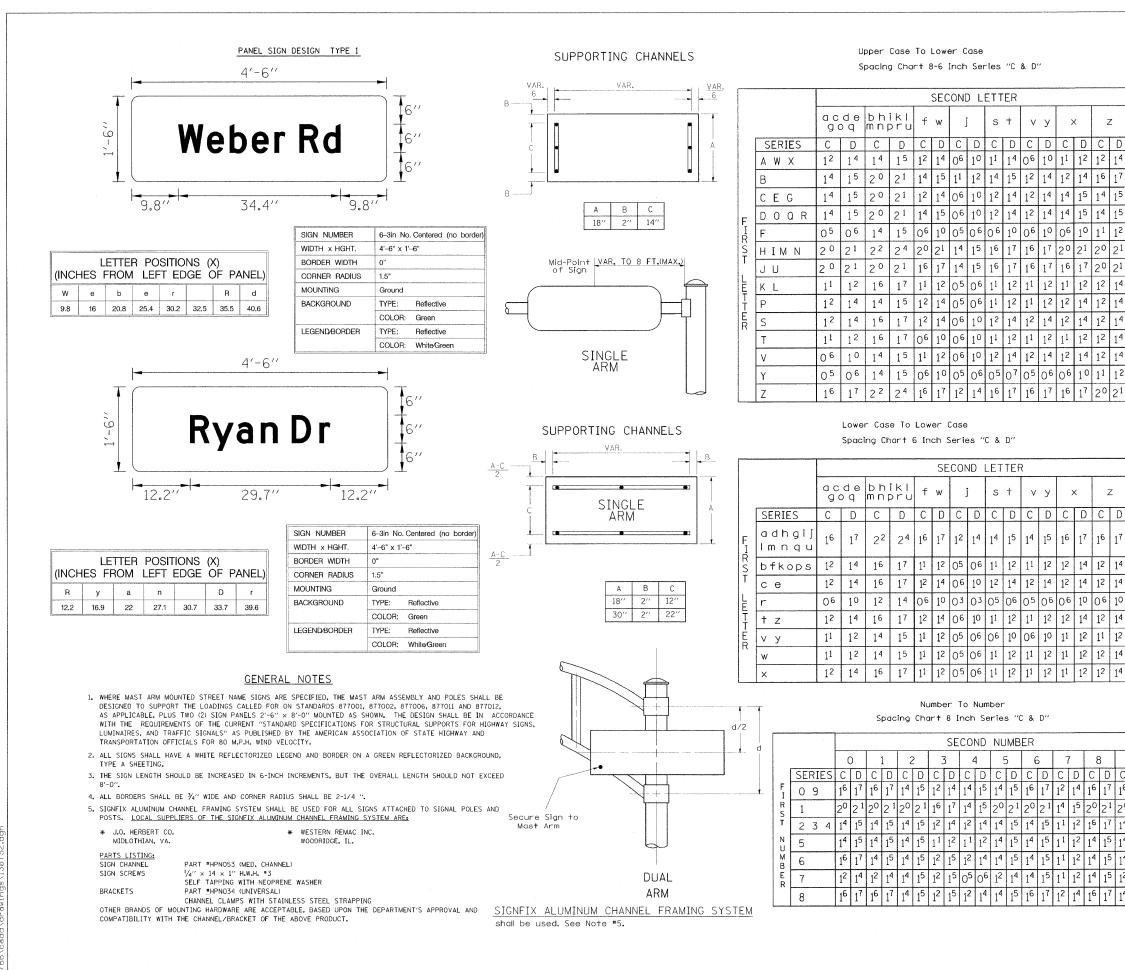
ILLINOIS DEPARTMENT OF TRANSPORTATION DATE SPB

SIGNING FOR FLAGGING OPERATIONS

AT WORK ZONE OPENINGS

SCALE: NONE

DRAWN BY CHECKED BY



EXAMPLE, 2^{3} DENOTES $\frac{3}{8}$

UPPER AND LOWER CASE LETTER WIDTHS

E T T E R S		UPPER ETTERS		UPPER LETTERS	L E T		LOWER ETTERS
T E	SER	IES	SE	RIES	T E	SERIES	
R S	С	D	С	D	E T E R S	С	D
А	36	50	5 ⁰	6 ⁵	a	35	42
В	3 ²	40	43	5 3	ь	3 ⁵	42
С	3 ²	40	43	5 3	O	3 ⁵	41
D	32	40	4 3	53	d	35	42
E	30	35	40	4 7	е	35	42
F	3 0	3 ⁵	40	4 7	f	2 3	26
O	32	40	43	5 3	g	3 ⁵	42
Ξ	32	40	43	53	Ţ	3 ⁵	42
I	0 7	0 ⁷	11	12	ī	1 ¹	1 1
J	30	36	4 ⁰	50	j	20	22
К	32	41	43	5 4	k	35	42
Г	3 ⁰	35	40	4 7	1	11.	1 ¹
М	37	45	51	61	· m	60	70
N	32	40	43	53	n	3 ⁵	42
0	34	42	4 ⁵	5 ⁵	0	3 ⁶	43
Р	3 ²	40	4 3	5 ³	p	3 ⁵	42
۵	3 4	4 ²	4 ⁵	5 ⁵	Q	35	42
R	3 ²	40	43	5 ³	r	26	3 ²
S	3 ²	4 ⁰	43	53	s	36	42
Т	30	35	40	4 7	+	2 7	3 ²
U	3 ²	4 0	4 3	53	u	3 ⁵	42
V	35	4 4	4 7	6°	٧	4 ²	47
w	4 4	52	60	70	w	55	64
X	3 4	40	45	53	×	4 4	51
Y	36	50	5 0	66	У	46	53
Z	3 ²	40	43	5 ³	z	36	43

N _U	6 INCH SERIES		6 INCH SERIES 8 INCH	
N _U MBER	С	а	С	D
1	12	14	1 ⁵	20
2	3 ²	40	43	5 3
3	3 ²	40	43	5 ³
4	35	4 3	4 7	5 ⁷
5	32	40	43	53
6	3 ²	40	4 ³	5 ³
7	3 ²	40	43	5 ³
8	32	40	4 ³	5 3
9	3 ²	40	4 ³	5 3
0	3 4	42	45	55

TS-02

REVISIONS	
NAME	DATE
CREATED	2/79
D.A.Z./ D.A.G.	11/90
	6/98
CADD	10/01/00
D.A.G.	10/28/09

DISTRICT 1
MAST ARM MOUNTED
STREET NAME SIGNS

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: NONE

DRAWN BY BCK
CHECKED BY DAG/DAD

