

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-3)TS-1	BOONE	12	1

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

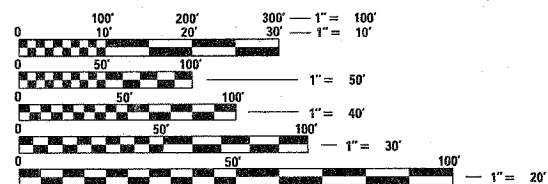
**PROPOSED  
HIGHWAY PLANS**

**FAP ROUTE 517 (US20 BUS)  
SECTION (1-3)TS-1  
PROJECT ACHS-0517(051)  
BOONE COUNTY  
C-92-109-05**

- FOR INDEX OF SHEETS**
- 1 COVER SHEET
  - INDEX OF SHEETS
  - STANDARDS
  - 2 SUMMARY OF QUANTITIES
  - 3 GENERAL NOTES
  - UTILITIES
  - 4 BORING LOGS
  - 5 SIGN DETAILS
  - LEGEND FOR SIGNALS PLANS
  - 6 SIGNAL PLANS
  - 7 CABLE PLANS
  - 8 SERVICE INSTALLATION DETAIL
  - LIGHTING CONTROLLER DETAIL
  - 9 PAVEMENT MARKING
  - 10 DISTRICT STANDARD 93.4
  - DISTIRICT STANDARD 94.2
  - 11-12 DISTRICT STANDARD 41.1

STANDARDS

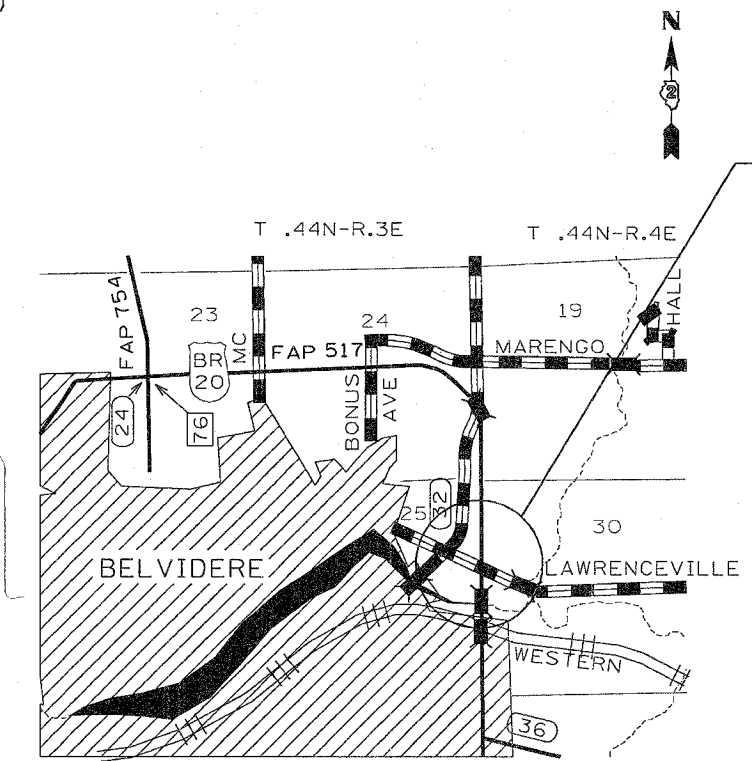
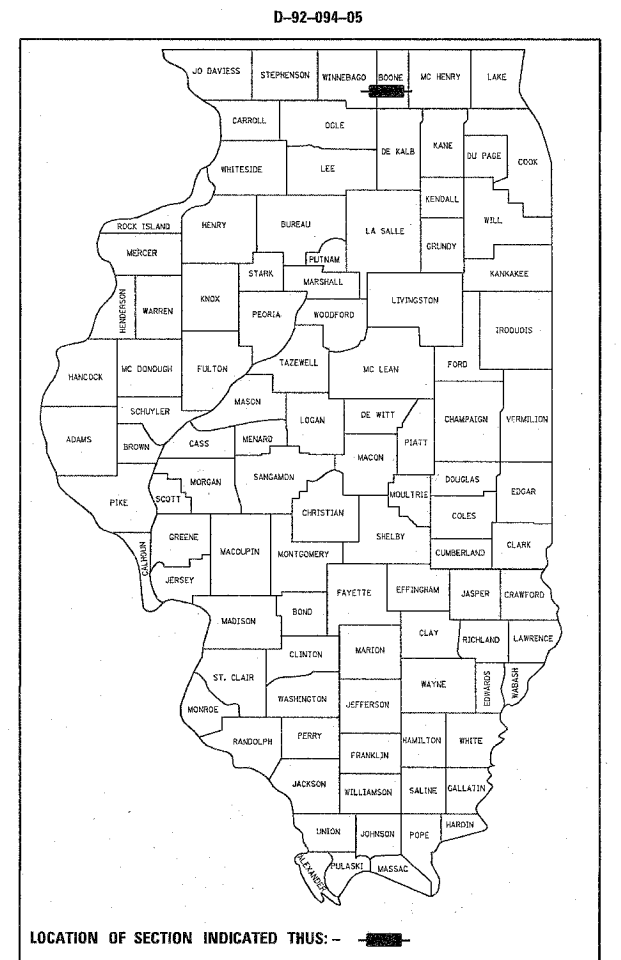
- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 001006 DECIMAL OF AN INCH AND A FOOT
- 701006-02 OFF-ROAD OPERATIONS 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701201-02 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
- 701301-02 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-02 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
- 701701-04 URBAN LANE CLOSURE MULTILANE INTERSECTION
- 720001 SIGN PANEL MOUNTING DETAILS
- 720006 SIGN PANEL ERECTION DETAILS
- 720016-01 MAST ARM MOUNTED STREET NAME SIGNS
- 780001-01 TYPICAL PAVEMENT MARKINGS
- 805001 ELECTRICAL SERVICE INSTALLATION DETAILS
- 814001 CONCRETE HANDHOLES
- 814006 DOUBLE HANDHOLES
- 857001 STANDARD DESIGNATION DIAGRAM AND PHASE SEQUENCE
- 877011-02 STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
- 878001-03 CONCRETE FOUNDATION DETAILS
- 880006 TRAFFIC SIGNAL MOUNTING DETAILS
- 886001 DETECTOR LOOP INSTALLATIONS
- 886006 TYPICAL LAYOUTS FOR DETECTION LOOPS



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123

CONTRACT NO. 64B31



PROJECT LOCATION  
INTERSECTION OF  
US BUS 20  
AT LAWRENCEVILLE RD

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED September 1, 20 05  
[Signature]  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 14, 2005  
[Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT

October 14, 20 05  
[Signature]  
DEPUTY DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

URBAN

90% FED  
10% STATE  
Y031-1F

CONTRACT NO. 64831

F.A. R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-3)TS-1	BOONE	12	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Summary of Quantities for US 20 with Lawrenceville Rd				
PAY CODE	ITEM	UNIT	TOTAL	
44002020	CONCRETE MEDIAN SURFACE REMOVAL	SQ FT	115	
60100070	SHOULDER REMOVAL AND REPLACEMENT	FOOT	140	
60618300	CONCRETE MEDIAN SURFACE , 4 INCH	SQ FT	115	
67100100	MOBILIZATION	L SUM	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	
* 72000100	SIGN PANEL TYPE I	SQ FT	51	
* 72000200	SIGN PANEL TYPE II	SQ FT	30	
72400310	REMOVE EXISTING SIGN PANEL, TYPE I	SQ FT	21	
80501000	SERVICE INSTALLATION, (SPECIAL)	EACH	1	
81400400	CONCRETE HANDHOLE	EACH	10	
81400600	CONCRETE DOUBLE HANDHOLE	EACH	1	
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP TYPE USE) 1/C NO. 10	FOOT	1558	
82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	4	
82500605	LIGHTING CONTROLLER PHOTOCELL RELAY	EACH	1	
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1	
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 5C	FOOT	2435	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 7C	FOOT	890	
87301515	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PR	FOOT	2843	
87301815	ELECTRIC CABLE IN CONDUIT, SERVICE, NO 6 3C	FOOT	33	
87502490	TRAFFIC SIGNAL POST GALVANIZED, 15 FT	EACH	<b>4</b>	
87702870	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT	EACH	1	
87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT	EACH	1	
87703000	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT	EACH	2	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	6	
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	3.5	
87800400	CONCRETE FOUNDATION, TYPE E, 30-INCH DIAMETER	FOOT	10	
87800415	CONCRETE FOUNDATION, TYPE E, 36-INCH DIAMETER	FOOT	41	
88200400	TRAFFIC SIGNAL BACKPLATE, FORMED PLASTIC	EACH	10	
88500100	INDUCTIVE LOOP DETECTOR	EACH	10	
88600100	DETECTOR LOOP TYPE I	FOOT	1099	
X0323153	ELECTRIC CABLE IN CONDUIT, GROUND, NO. 6 1 C (GREEN)	FOOT	695	
X0324885	CONDUIT INSTALLED, 1", NON-METALLIC	FOOT	52	
X0324886	CONDUIT INSTALLED, 1 1/4", NON-METALLIC	FOOT	740	
X0324887	CONDUIT INSTALLED, 2 1/2", NON-METALLIC	FOOT	189	
X0324888	CONDUIT INSTALLED, 4", NON-METALLIC	FOOT	349	
* X7800510	POLYUREA PAVEMENT MARKING, SPECIAL, LINE 4"	FOOT	4400	
* X7800540	POLYUREA PAVEMENT MARKING, SPECIAL, LINE 8"	FOOT	1157	
* X7800550	POLYUREA PAVEMENT MARKING, SPECIAL, LINE 12"	FOOT	527	
* X7800580	POLYUREA PAVEMENT MARKING, SPECIAL, LINE 24"	FOOT	227	
X8801300	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	
X8801310	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	8	
X8801400	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2	
X8801437	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	2	
* X7800500	POLYUREA PAVEMENT MARKING, SYMBOLS AND LETTERS, SPECIAL	SQ FT.	17.4	

\* SPECIALTY ITEMS

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
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DRAWN BY		CHECKED BY

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USER NAME = TUNA

F.A. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-3)TS-1	BOONE	12	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

1. THE MOUNTING HEIGHT FOR THE LUMINAIRES ON THE COMBINATION MASTARM ASSEMBLIES SHALL BE 35' -0" HORIZONTAL MOUNTED WITH A 12' ARM.
2. ALL TRAFFIC SIGNAL MAST ARM ASSEMBLIES (STANDARD, COMBINATION, OR DUAL) MUST BE DESIGNED FOR THE LOADING SHOWN ON THE HIGHWAY STANDARDS OR THESE SIGNAL PLANS, WHICHEVER IS GREATER.
3. THE "SIGNAL AHEAD" SIGN SHALL REPLACE THE EXISTING "INTERSECTION AHEAD" SIGN ON THE EXISTING POST LOCATION ON ALL FOUR LEGS OF THE INTERSECTION. THE CONTRACTOR SHALL CONTACT KURT GLAZIER, 815-284-5478, AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION ONE (1) WEEK PRIOR TO THE PLACEMENT AND LOCATION OF SIGNS.
4. THE DETECTOR LOOP CABLE FROM THE END OF THE SAW CUT TO THE SPLICE IN THE HANDHOLE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE DETECTOR LOOP.

UTILITIES

NAME AND ADDRESS OF UTILITY	TYPE	TELEPHONE	JULIE MEMBER#
MR CARL DONAHUE AT&T COMMUNICATIONS, INC. 866 ROCK CREEK ROAD PLANO, IL 60545	TELEPHONE	(630)-552-4677	YES 800-892-0123
MR MIKE LENOX COMMONWEALTH EDISON COMPANY 123 ENERGY AVE ROCKFORD, IL 61109	ELECTRIC	(815)-490-2869	YES 800-892-0123
MR KALIN HINSHAW VERIZON 112 WEST ELM STREET SYCAMORE, IL 60178	TELEPHONE	(815)-895-1515	YES 800-892-0123
MR SCOTT STOGSDILL NICOR GAS CO. 1844 FERRY RD NAPERVILLE, IL 60563-9600	GAS	(630)-983-8676	YES 800-892-0123

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
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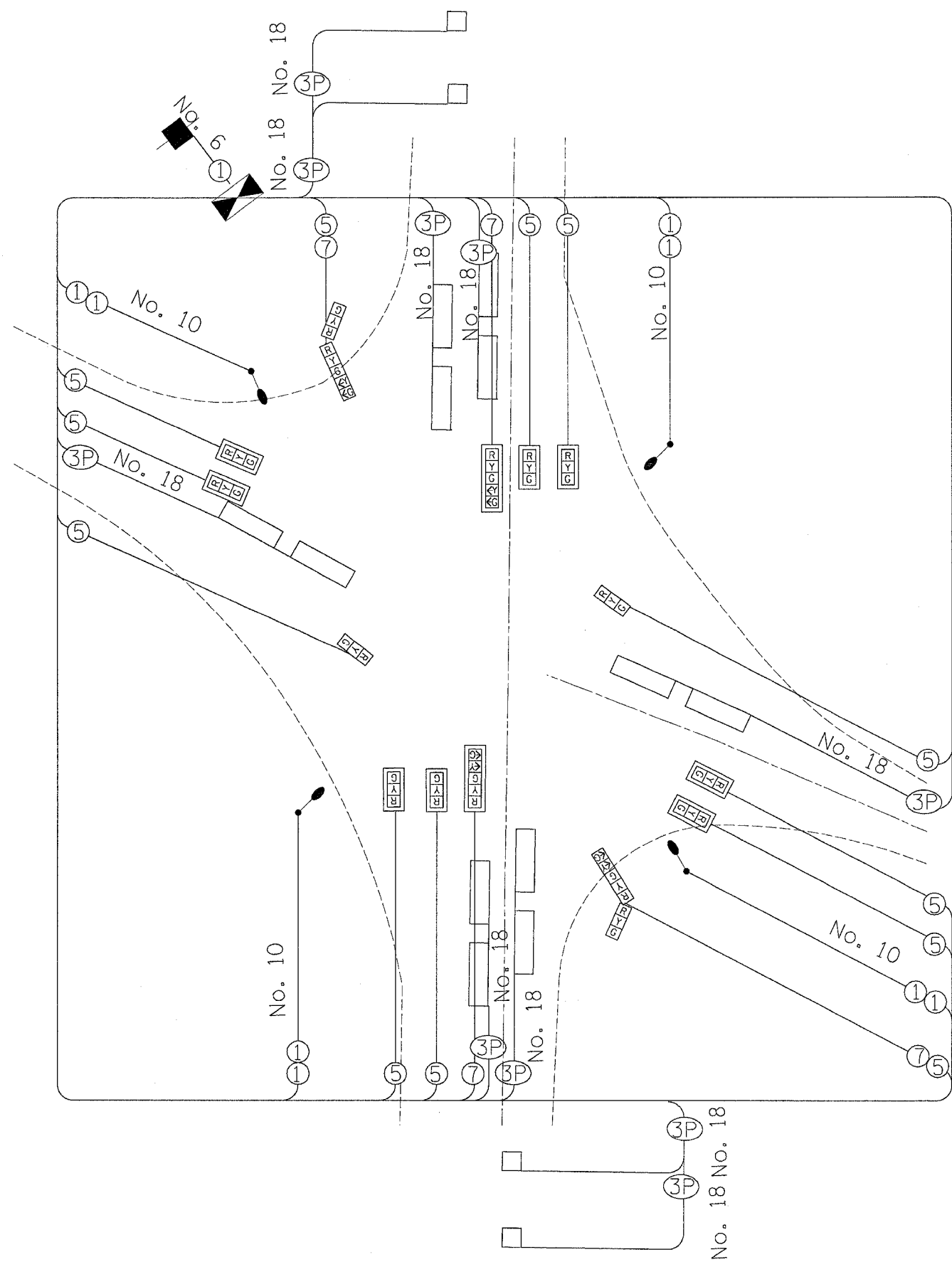
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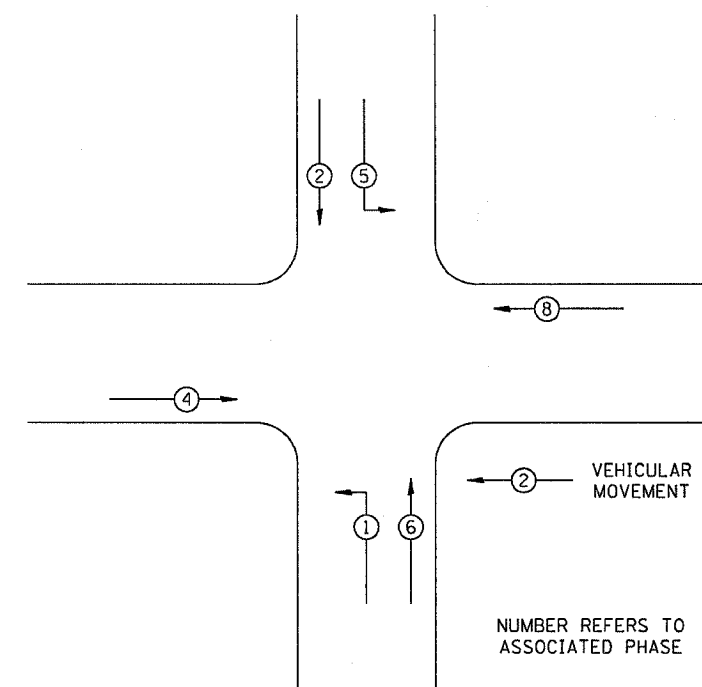




F.A. P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-3)TS-1	BOONE	12	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PHASE DESIGNATION DIAGRAM



LEGEND

- ② INDICATES NUMBER OF NEW CONDUCTORS. ALL CABLE IS NO. 14 EXCEPT AS INDICATED. "P" INDICATES PAIR CABLE
- |   |
|---|
| R |
| Y |
| G |

 NEW SIGNAL HEAD WITH OR WITHOUT BACKPLATE
- LUMINAIRE, 400 WATT

REVISIONS	
NAME	DATE

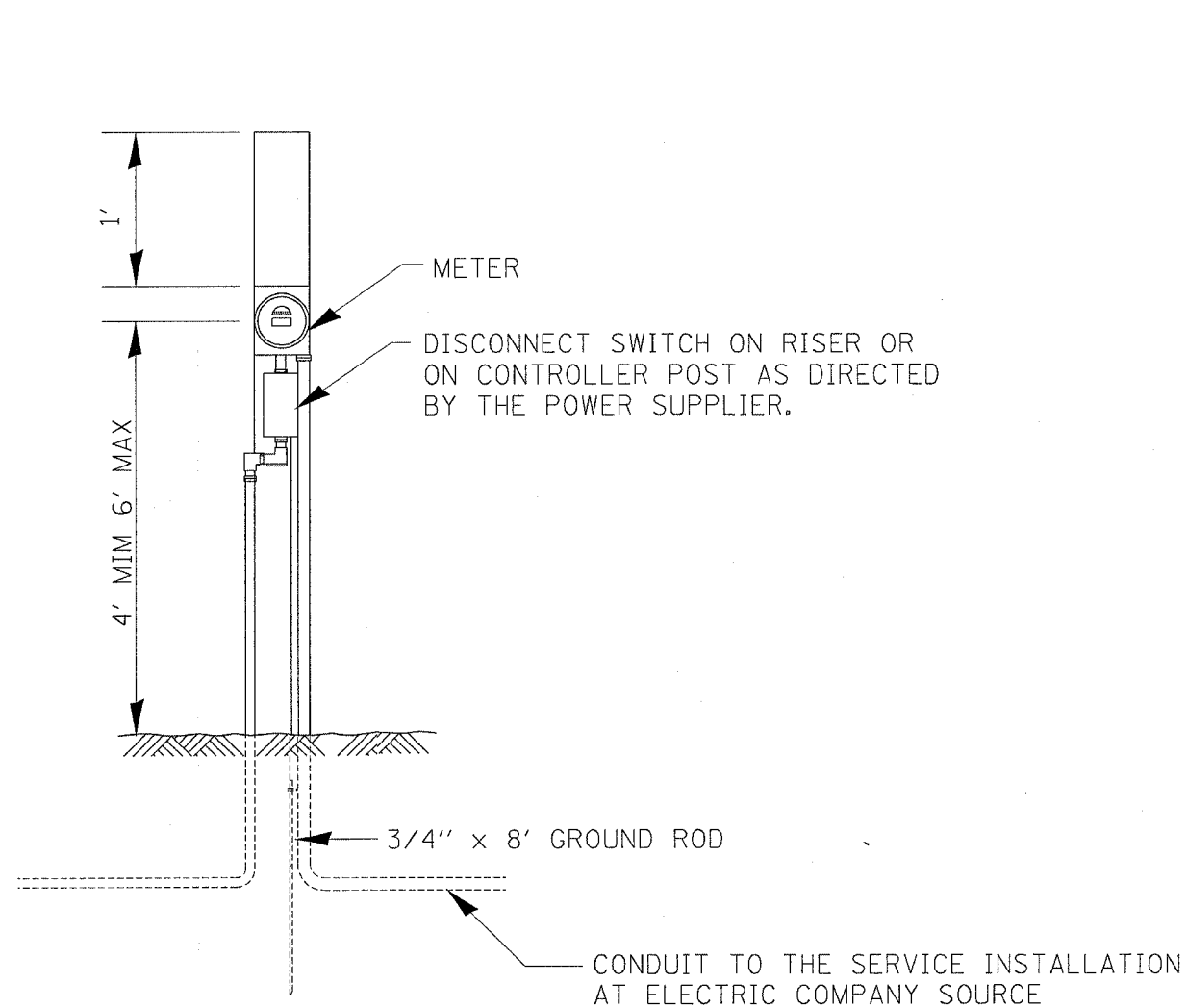
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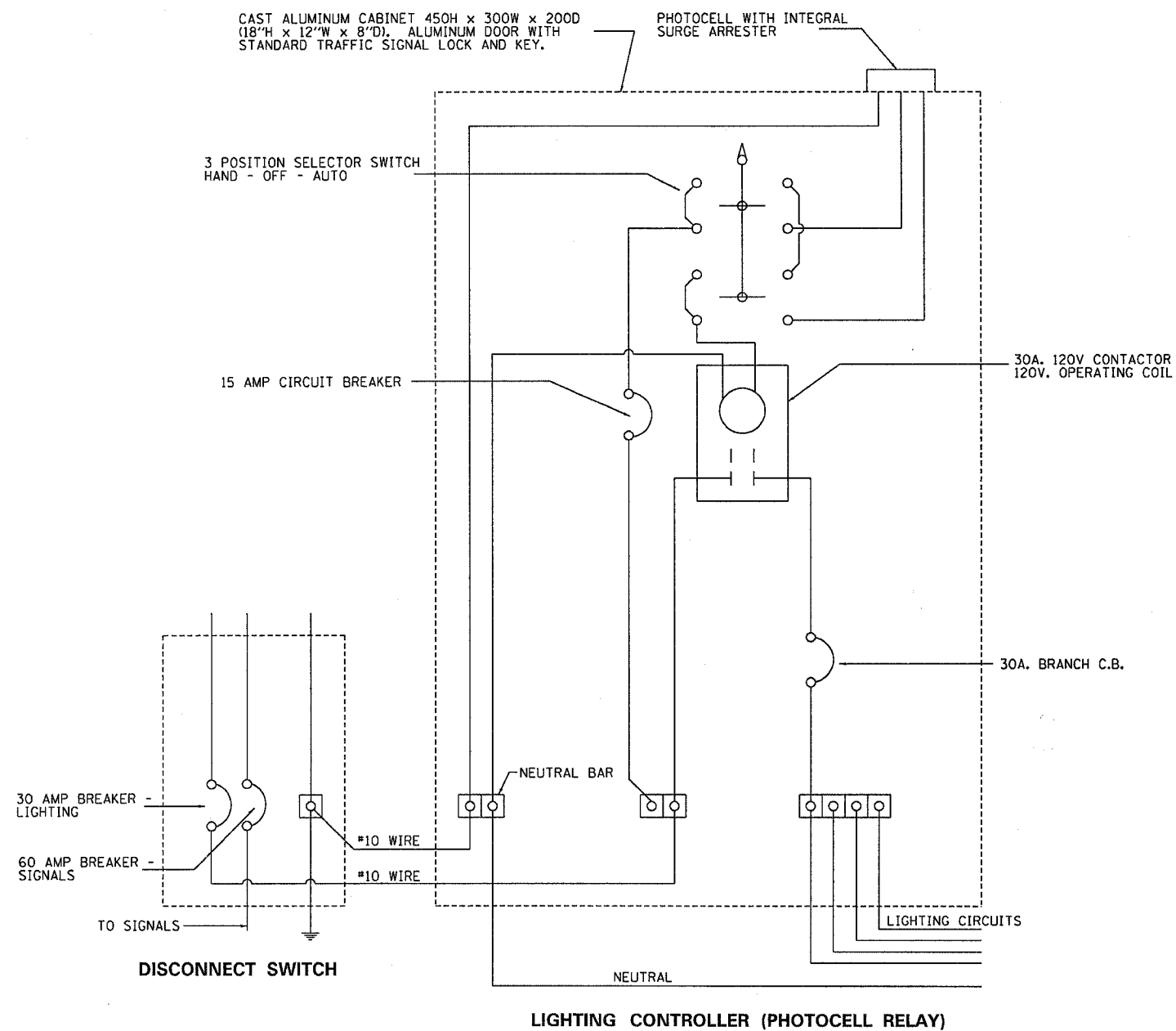
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517	(1-3)TS-1	BOONE	12	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ELECTRIC SERVICE INSTALLATION, SPECIAL  
 (SEE SPECIAL PROVISIONS)  
 (DETAIL ONLY SHOW GENERAL SERVICE WHICH VARIES BY PROVIDERS)



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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. / HORIZ.  
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-3)TS-1	BOONE	12	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

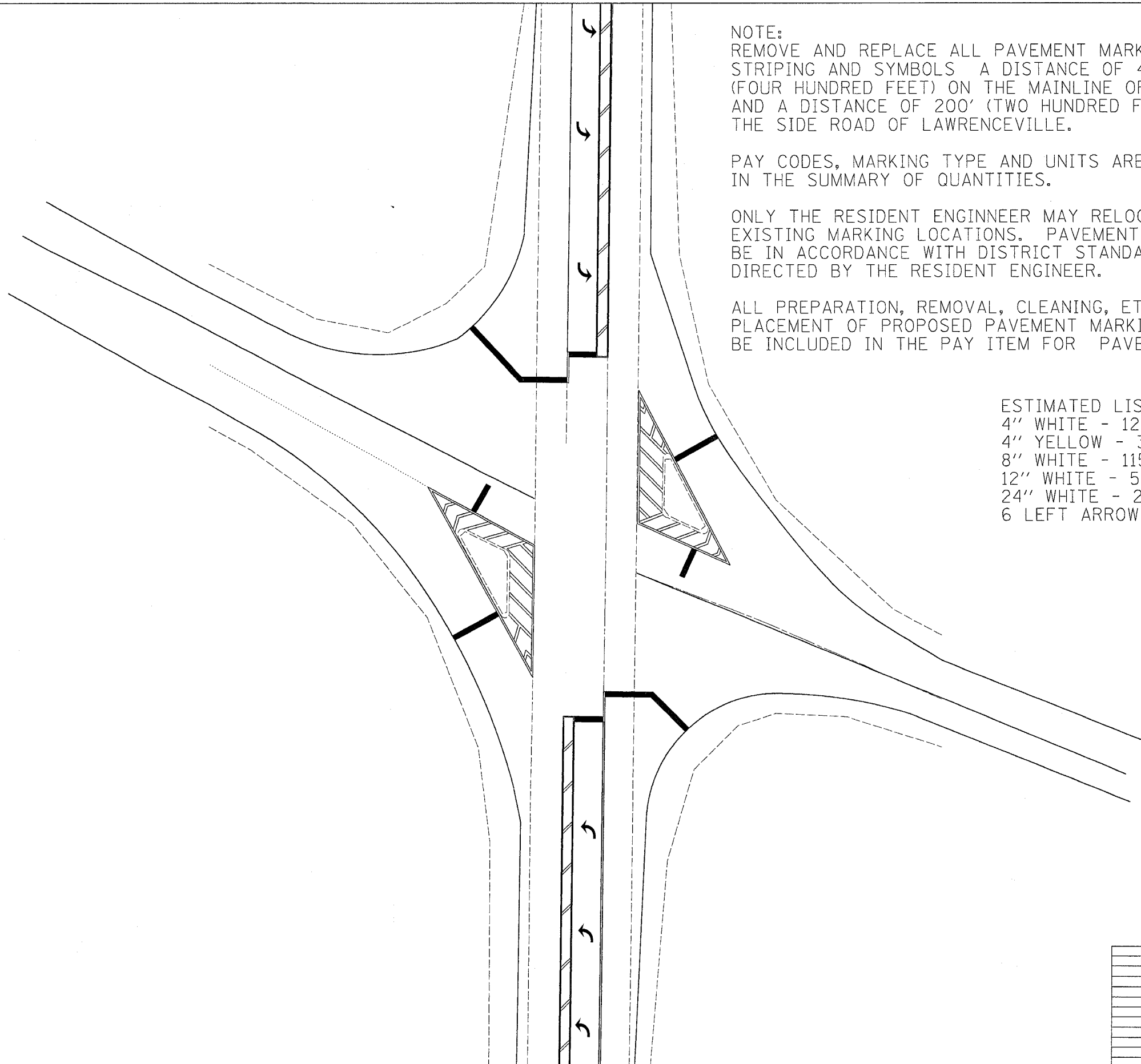
NOTE:  
 REMOVE AND REPLACE ALL PAVEMENT MARKING STRIPING AND SYMBOLS A DISTANCE OF 400' (FOUR HUNDRED FEET) ON THE MAINLINE OF US 20 AND A DISTANCE OF 200' (TWO HUNDRED FEET ) ON THE SIDE ROAD OF LAWRENCEVILLE.

PAY CODES, MARKING TYPE AND UNITS ARE REFLECTED IN THE SUMMARY OF QUANTITIES.

ONLY THE RESIDENT ENGINEER MAY RELOCATE ANY EXISTING MARKING LOCATIONS. PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH DISTRICT STANDARD 41.1 UNLESS DIRECTED BY THE RESIDENT ENGINEER.

ALL PREPARATION, REMOVAL, CLEANING, ETC., FOR PLACEMENT OF PROPOSED PAVEMENT MARKING SHALL BE INCLUDED IN THE PAY ITEM FOR PAVEMENT MARKINGS.

ESTIMATED LIST OF QUANTIITES  
 4" WHITE - 1200' - EDGELINES  
 4" YELLOW - 3200' - EDGELINES  
 8" WHITE - 1157' - ISLANDS  
 12" WHITE - 527' - DIAGONALS  
 24" WHITE - 227 - STOP BARS  
 6 LEFT ARROWS - 17.4 SQ FT

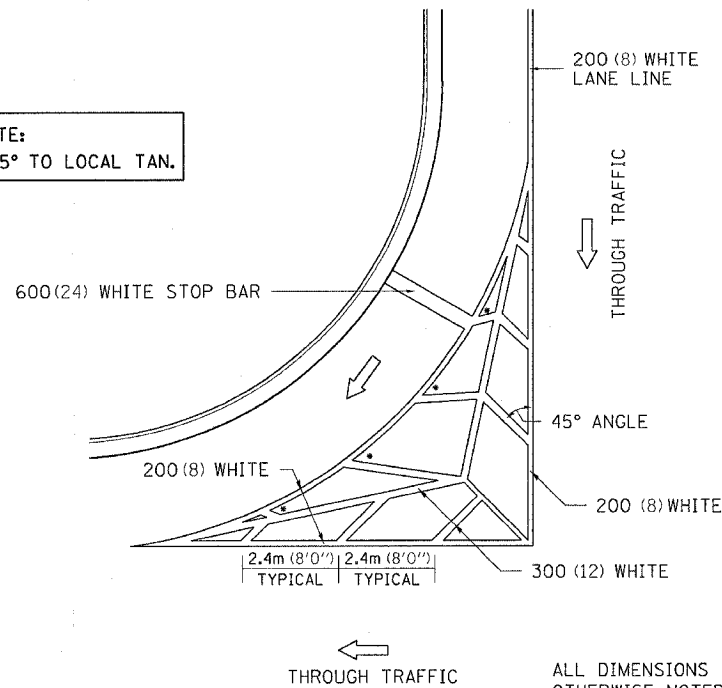


REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
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F.A. PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-3)TS-1	BOONE	12	10
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

# TYPICAL MARKING FOR PAINTED ISLANDS

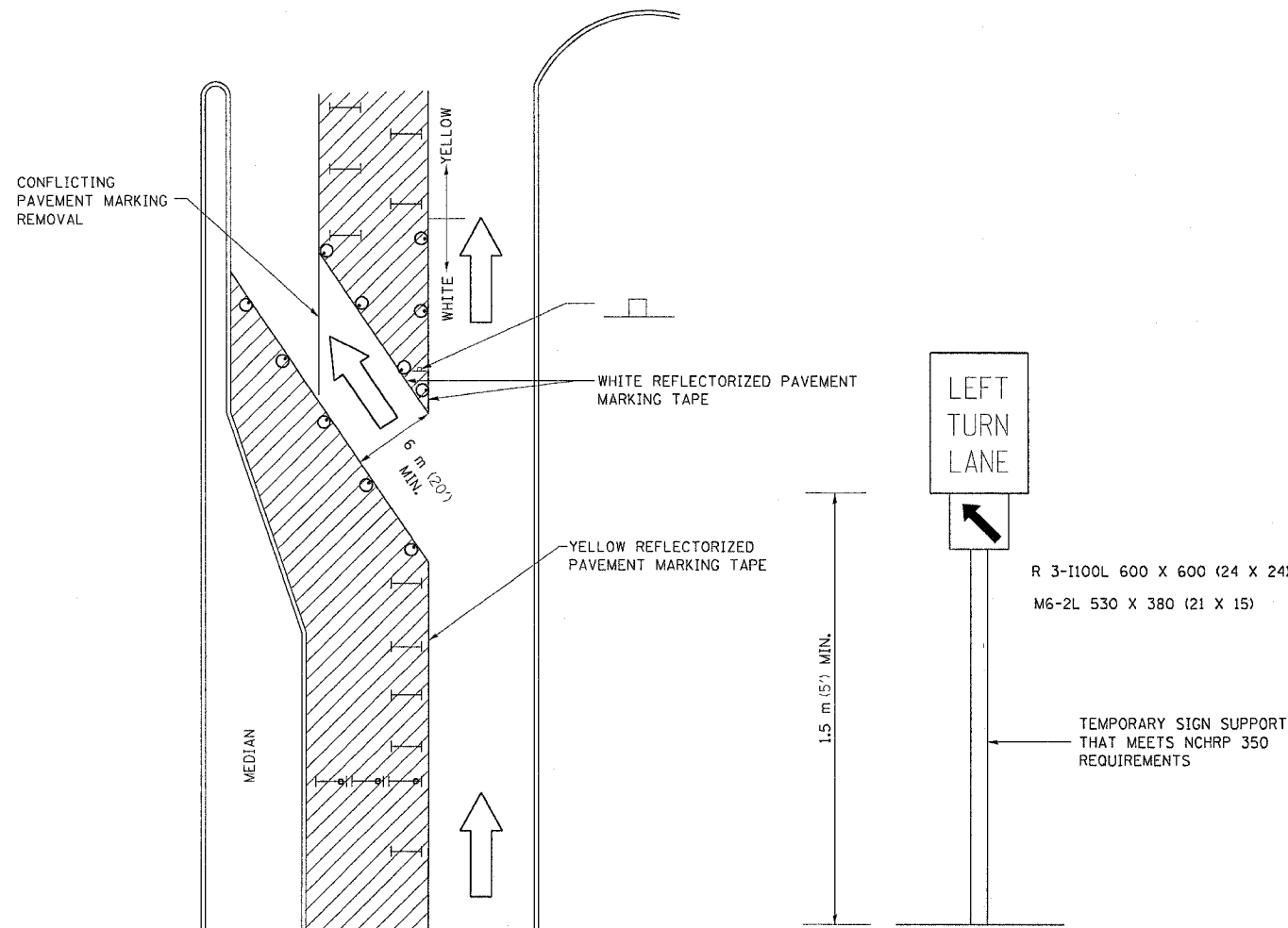
NOTE:  
\* 45° TO LOCAL TAN.



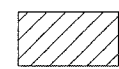
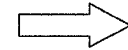
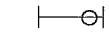



**TYPICAL MARKING FOR PAINTED ISLANDS 93.4**

REVISED 2-7-05

# TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)



### LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE OR DRUM WITH FLASHING BURNING LIGHT
-  DRUM OR BARRICADE WITH STEADY BURN LIGHT
-  SIGN (SEE DETAIL)
-  TYPE I OR II CHECK BARRICADE WITH STEADY LIGHT BURN

### GENERAL NOTES

- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 710 (28) IN HEIGHT.
- STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS WILL BE MONODIRECTIONAL.
- REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
- THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 600 x 600 (24 X 24) AND M6-2R 530 X 380 (21 X 15) SHALL BE USED.
- THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
- TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.
- ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

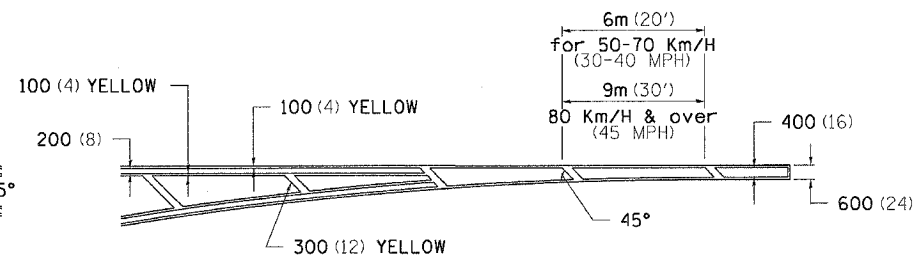
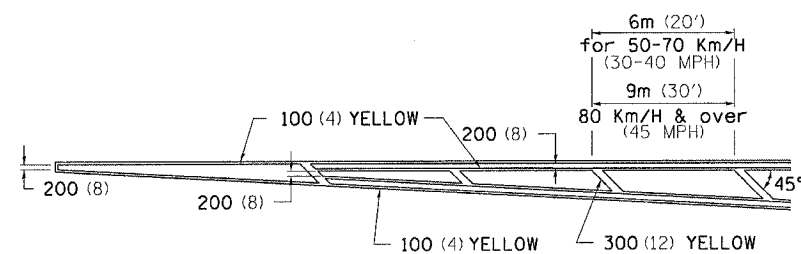
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REVISED 10-15-04

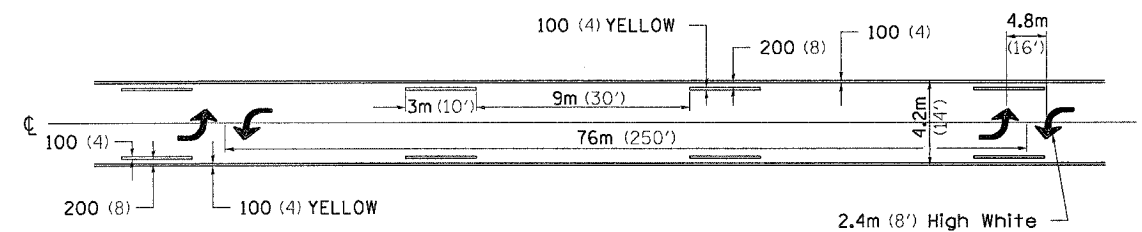
F.A. P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-3)TS-1	BOONE	12	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

# TYPICAL PAVEMENT MARKINGS

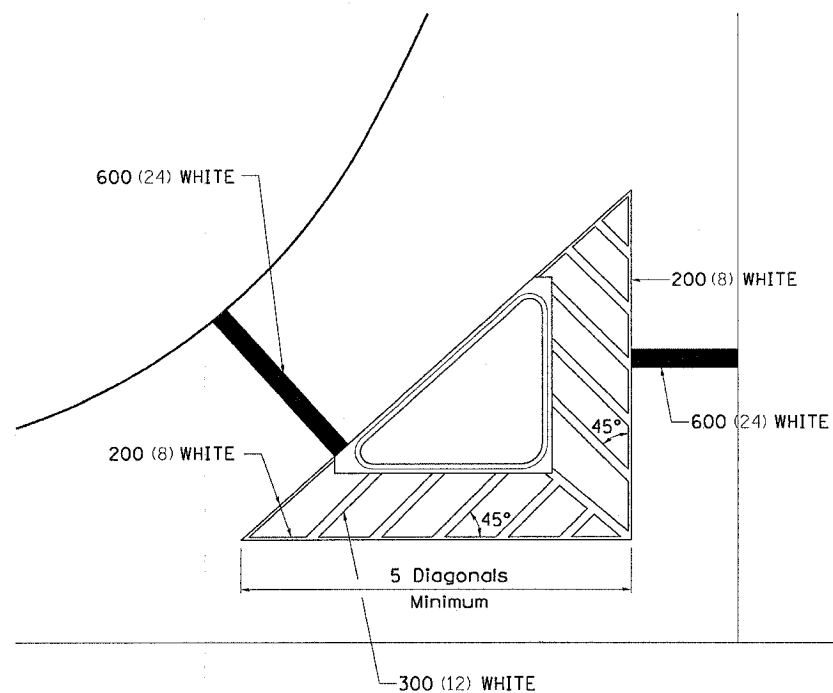
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



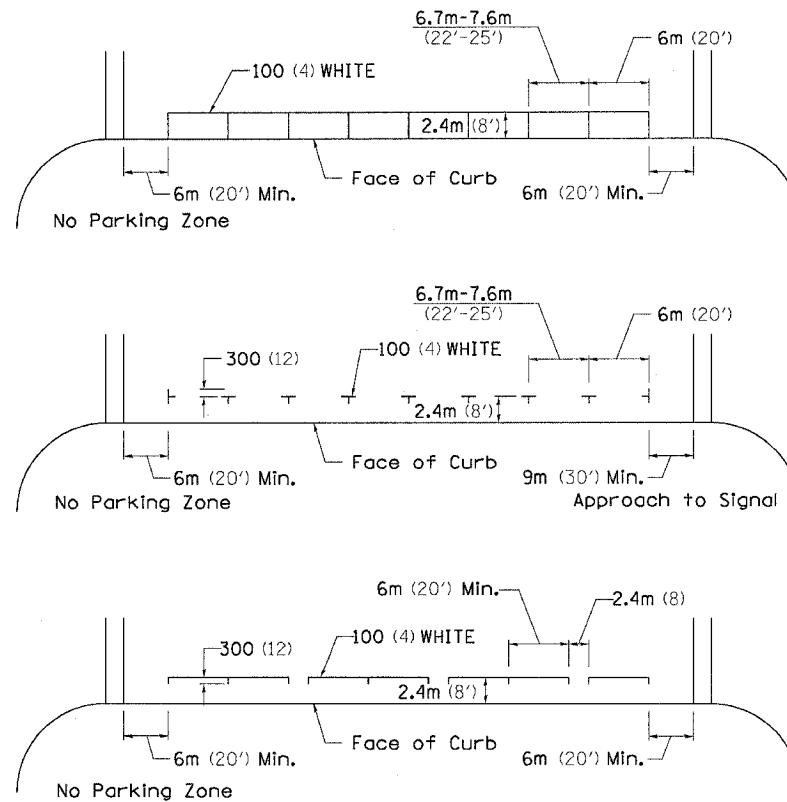
MEDIAN PAVEMENT MARKING



TYPICAL ISLAND OFFSET SHOULDER WIDTH



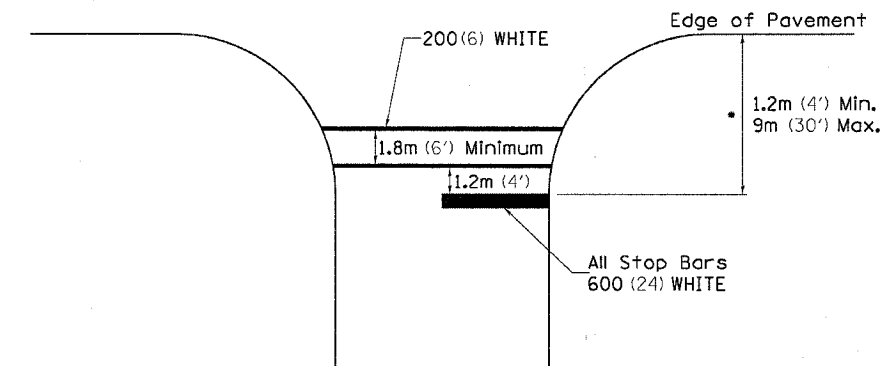
TYPICAL PARKING SPACING



•• ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STANDARD CROSSWALK MARKING

See Schedules for Locations



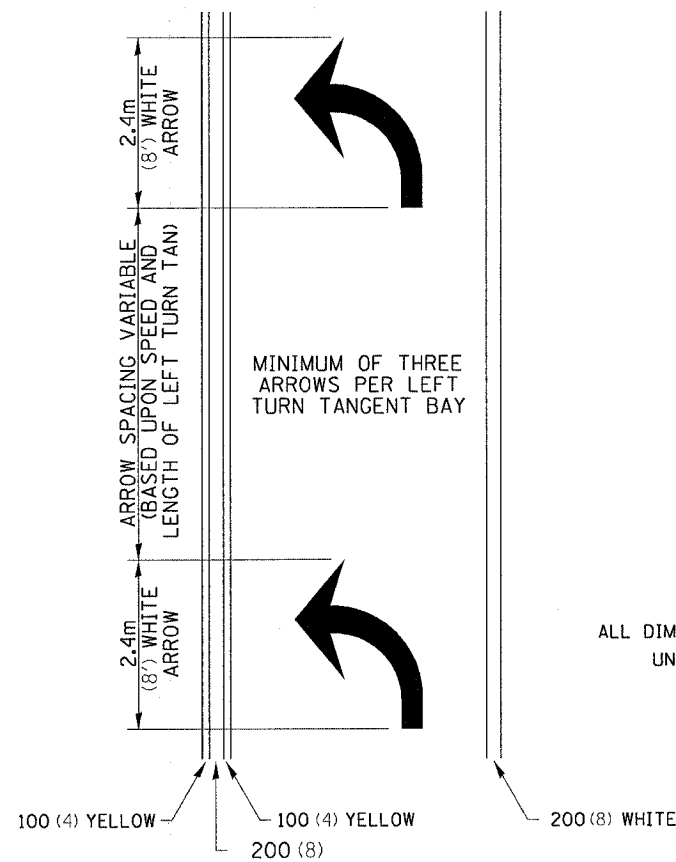
• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

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F.A. PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	11-31TS-1	BOONE	12	12
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

# TYPICAL PAVEMENT MARKINGS

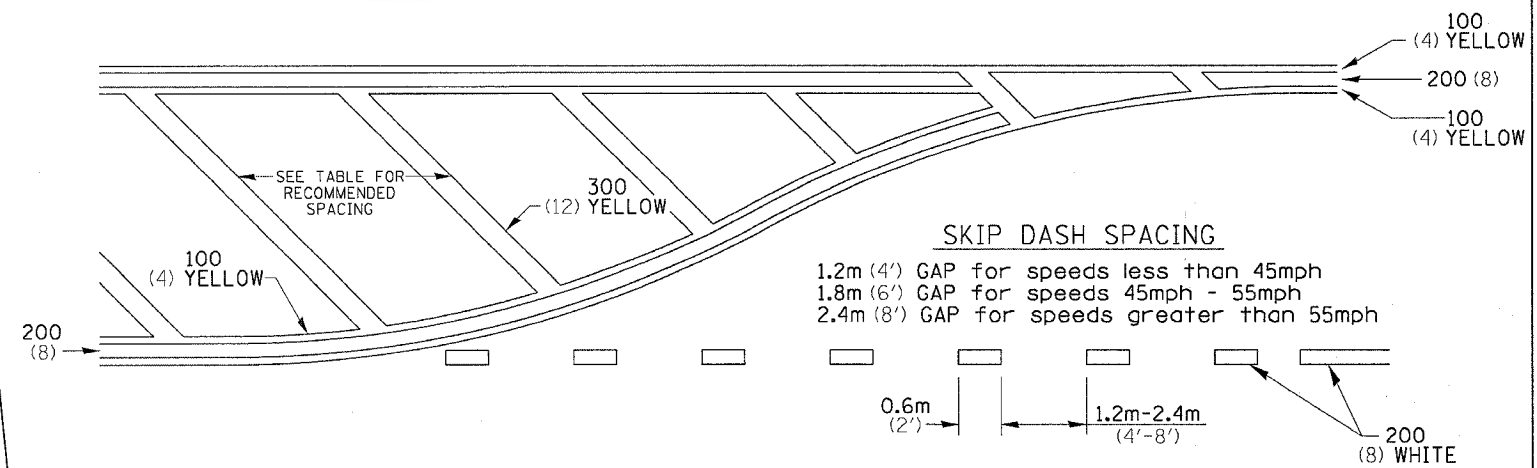
## ARROW LAYOUT



- ▲ ONE-WAY AMBER MARKER
- △ ONE-WAY CRYSTAL MARKER
- ◆ TWO-WAY AMBER MARKER

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

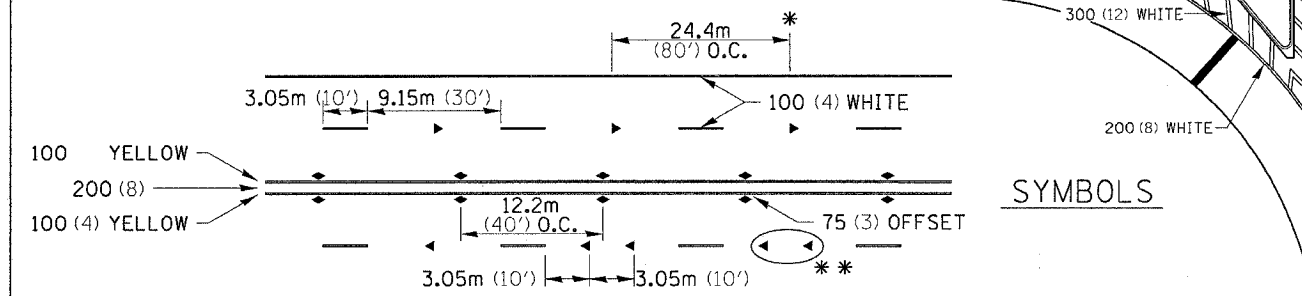
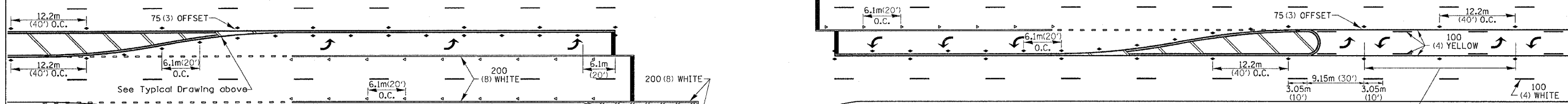
## TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



### RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 50Km/H (30MPH)	15.3m (50')	4.53m (15')	3.05m (10')
50-60Km/H (30-40MPH)	22.9m (75')	6.1m (20')	4.53m (15')
70Km/H (45MPH) & over	22.9m (75')	9.05m (30')	6.1m (20')

NOTE: If the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



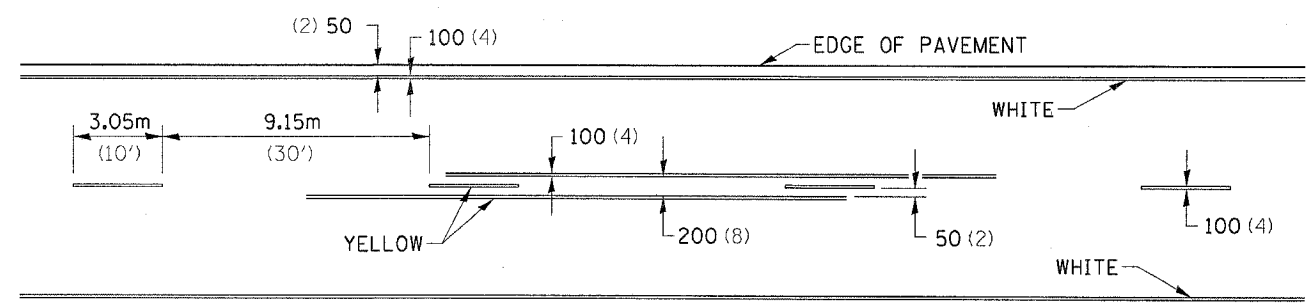
- \* REDUCE TO 12.2m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15Km/H (10MPH) LOWER THAN POSTED SPEEDS.
- \*\* USE DOUBLE MARKERS WHEN ADT ≥ 25,000

## MULTI-LANE / UNDIVIDED

## SYMBOLS

See Typical Drawing above  
12.2m  
6 at (40') O.C.  
APPROACH SIDE ONLY

## TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES



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