06-17-11 LETTING ITEM 287

F.A.P RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2		LAKE	43	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 60K17		

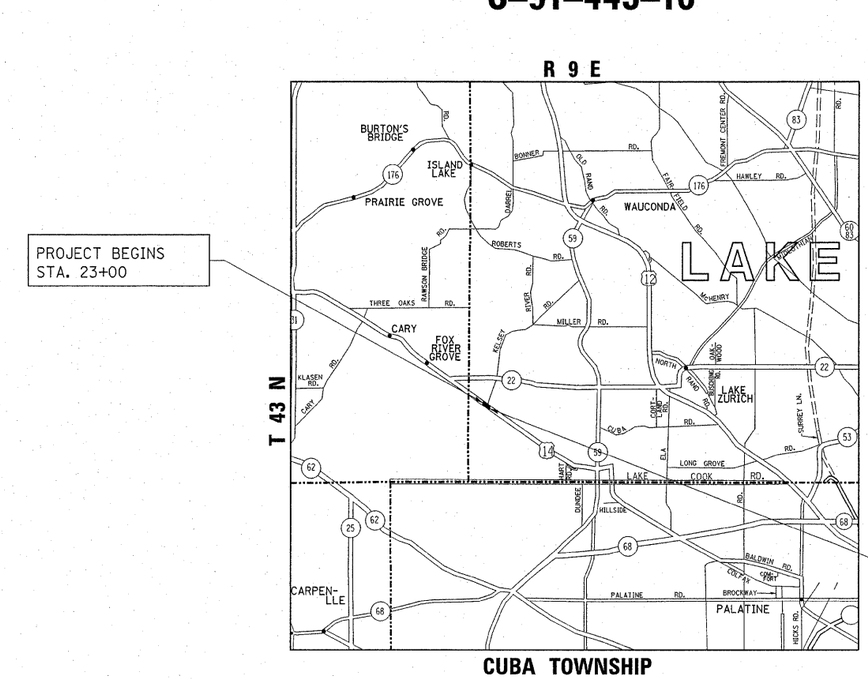
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROJECT IS LOCATED IN THE VILLAGE OF LAKE BARRINGTON

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP 305/US ROUTE 14 (NORTHWEST HIGHWAY)
AT KELSEY ROAD
SECTION: 24 R–N–2
CHANNELIZATION
PROJECT: CMF-0305(044)
LAKE COUNTY
C–91–443–10



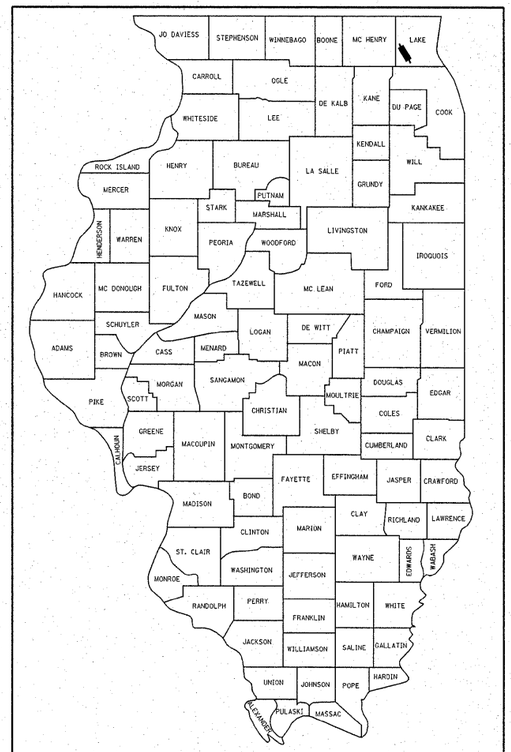
PROJECT BEGINS STA. 23+00

PROJECT ENDS STA. 31+35.76

TRAFFIC DATA

2009 ADT = 27,100
POSTED SPEED LIMIT = 50 MPH

D -91-443-10



LOCATION OF SECTION INDICATED THUS: –

100′ 200′ 300′ — 1″ = 100′
0 10′ 20′ 30′ — 1″ = 10′
0 50′ 100′ — 1″ = 50′
0 50′ 100′ — 1″ = 40′
0 50′ 100′ — 1″ = 30′
0 50′ 100′ — 1″ = 20′

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
OR 811

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED February 10, 20 11

Diane M. O'Keefe pe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 25 20 11

Scott E. Stitt, P.E. /a
acting ENGINEER OF DESIGN AND ENVIRONMENT

March 25 20 11

Christine M. Reed /a
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER KARI SMITH (847) 705–4437
PROJECT MANAGER KEN ENG (847) 705–4247

CONTRACT NO. 60K17

GROSS AND NET LENGTH OF IMPROVEMENT = 835.76 LINEAL FEET = 0.158 MILE

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

LIST OF STATE STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
353011-04	PCC BASE COURSE WITH HMA BINDER AND SURFACE COURSES
482011-03	HMA. SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
701101-02	OFF-ROAD OPERATIONS, MULTILANE, 4.5 M (15') TO 600 MM (24") FROM PAVEMENT EDGE
701422-03	LANE CLOSURE, MULTILANE, FOR SPEEDS > 45 MPH TO 55 MPH
701426-04	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER.,, FOR SPEED > 45 MPH
701601-07	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-07	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-01	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
814001-02	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
857006-01	SUPERVISED RAILROAD INTERCONNECT CIRCUIT
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877001-04	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877011-04	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-08	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATION
886006-01	TYPICAL LAYOUT FOR DETECTOR LOOPS

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF LAKE BARRINGTON

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

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES (40 MM) WHERE THE SPEED LIMIT IS 45 MPH (45 KM/H) OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (45 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER. A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

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

THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON AREA TRAFFIC FIELD ENGINEER AT (847) 438-2300 A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKING.

THE RESIDENT ENGINEER SHALL VERIFY ALL EXISTING PAVEMENT MARKINGS BEFORE MILLING

PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKING ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE, TYPE III AND ITS REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKING.

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

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

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

PRIOR TO EMBANKMENT PLACEMENT, ALL VEGETATION, LOOSE MATERIAL, AND UNSTABLE MATERIAL SHOULD BE REMOVED TO DEPTH ENCOUNTERED AND REPLACED WITH SUITABLE EMBANKMENT MATERIAL. ANY EMBANKMENT WIDENING ON EXISTING SLOPES SHOULD BE BENCHED IN ACCORDANCE WITH ARTICLE 205.04 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

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	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/14/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, LIST OF STATE STANDARDS & GENERAL NOTES
U.S. ROUTE 14 (NORTHWEST HIGHWAY) @ KELSEY RD.

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	COOK	43	2
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 10% STATE 80% FED. 10% LAKE BARRINGTON	TRAFFIC SIGNALS 0021 INTER CONNECT 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 EMERGENCY VEHICLE PREEMPTIONS 100% LAKE BARRINGTON
*	87301750	ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	482		482		
	20200100	EARTH EXCAVATION	CU YD	675	675			
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	671	671			
	20400800	FURNISHED EXCAVATION	CU YD	368	368			
	21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	2945	2945			
	25000210	SEEDING, CLASS 2A	ACRE	0.6	0.6			
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	55	55			
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	55	55			
	25100630	EROSION CONTROL BLANKET	SQ YD	2810	2810			
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	60	60			
	28000305	TEMPORARY DITCH CHECKS	FOOT	30	30			
	28000400	PERIMETER EROSION BARRIER	FOOT	670	670			
	28000500	INLET AND PIPE PROTECTION	EACH	1	1			
	31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	555	555			
	35300600	PORTLAND CEMENT CONCRETE BASE COURSE 11"	SQ YD	555	555			
	40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	4	4			
	40600300	AGGREGATE (PRIME COAT)	TON	16	16			
	40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	12	12			
	40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	40	40			
	40600895	CONSTRUCTING TEST STRIP	EACH	1	1			
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	132	132			
	40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	808	808			
	42001300	PROTECTIVE COAT	SQ YD	555	555			
	44000156	HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"	SQ YD	7696	7696			
	44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	670	670			
	48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	460	460			
	48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	52	52			
	48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	1063	1063			
	54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1	1			
	54247110	GRATING FOR CONCRETE FLARED END SECTION 18"	EACH	1	1			
	55100900	STORM SEWER REMOVAL 18"	FOOT	65	65			

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 10% STATE 80% FED. 10% LAKE BARRINGTON	TRAFFIC SIGNALS 0021 INTER CONNECT 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 EMERGENCY VEHICLE PREEMPTIONS 100% LAKE BARRINGTON
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9	9			
	67100100	MOBILIZATION	L SUM	1	1			
	70100320	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	L SUM	1	1			
	70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1			
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1			
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	10			
	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1	1			
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	3504	3504			
	70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	219	219			
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	4107	4107			
	70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	912	912			
	70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	116	116			
	70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	40	40			
	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	100	100			
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	390	390			
*	72000100	SIGN PANEL - TYPE 1	SQ FT	34		34		
*	72000200	SIGN PANEL - TYPE 2	SQ FT	55		55		
*	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	219	219			
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	4107	4107			
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	912	912			
*	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	116	116			
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	40	40			
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	100	100			
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	84	84			
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	50	50			
*	81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1185		865	320	

*SPECIALTY ITEMS

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DESIGNED - | DRAWN - | CHECKED - | DATE -

REVISED - | REVISED - | REVISED - | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	3
		CONTRACT NO. 60K17		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 10% STATE 80% FED. 10% LAKE BARRINGTON	TRAFFIC SIGNALS 0021 INTER CONNECT 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 EMERGENCY VEHICLE PREEMPTIONS 100% LAKE BARRINGTON		
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	315		315				
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	111		111				
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	30		30				
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	243		213	30			
81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	30		30				
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	495		495				
81400100	HANDHOLE	EACH	2		2				
81400200	HEAVY-DUTY HANDHOLE	EACH	11		11				
81400300	DOUBLE HANDHOLE	EACH	2		2				
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1586			1586			
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1			1			
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1		1				
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	585				585		
* 87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2718		2718				
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1122		1122				
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	4802		4802				
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	56		56				
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1		1				
87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	1		1				
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2		2				
87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1		1				
87700260	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1		1				
87700270	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1		1				
87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	1		1				
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16		16				
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4		4				

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 0004 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 10% STATE 80% FED. 10% LAKE BARRINGTON	TRAFFIC SIGNALS 0021 INTER CONNECT 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 EMERGENCY VEHICLE PREEMPTIONS 100% LAKE BARRINGTON		
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15		15				
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45		45				
87900200	DRILL EXISTING HANDHOLE	EACH	1			1			
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7		7				
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1		1				
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2		2				
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1		1				
88030230	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED	EACH	1		1				
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2		2				
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10		10				
88500100	INDUCTIVE LOOP DETECTOR	EACH	13		13				
* 88600100	DETECTOR LOOP, TYPE I	FOOT	1119		1119				
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1				1		
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1				
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	3				3		
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1022			1022			
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1				
89502380	REMOVE EXISTING HANDHOLE	EACH	14		14				
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	10		10				
X0322118	REMOVE CONCRETE FLARED END SECTIONS	EACH	1	1					
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	585				585		
85700215	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE IV CABINET SPECIAL	EACH	1		1				
X2020110	GRADING AND SHAPING SHOULDERS	UNIT	17	17					
* 80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1		1				
* 86200120	UNINTERRUPTIBLE POWER SUPPLY	EACH	1		1				
* 87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1929			1929			
* XX004913	REMOVE FIBER OPTIC CABLE FROM CONDUIT	FOOT	1034			1034			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1					

*Specialty Items

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	PLOT DATE = 2/14/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	4
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

	SUMMARY OF QUANTITIES			URBAN	CONSTRUCTION TYPE CODE					
	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 0004 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 10% STATE 80% FED. 10% LAKE BARRINGTON	TRAFFIC SIGNALS 0021 INTER CONNECT 20% STATE 80% FED.	TRAFFIC SIGNALS 0021 EMERGENCY VEHICLE PREEMPTIONS 100% LAKE BARRINGTON		
	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	77.1	77.1					
*	Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1			1			
*	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	1903			1903			
*	87301900	ELECTRIC CABLE IN CONDUIT, GROUNDING (EQUIPMENT CONDUCTOR) NO. 6 1C	FOOT	879		879				
	Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1		1				

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT							

* Specialty Items

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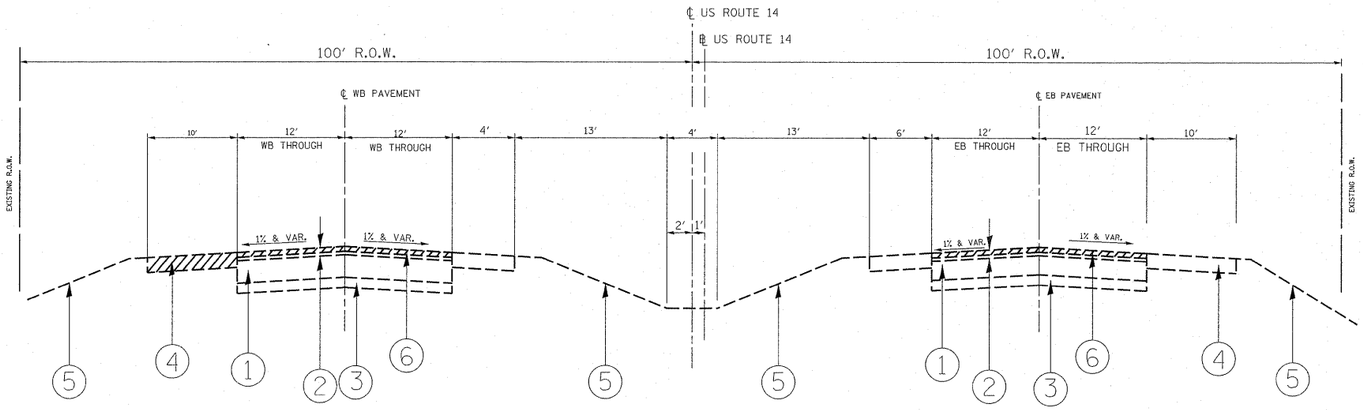
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	5
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

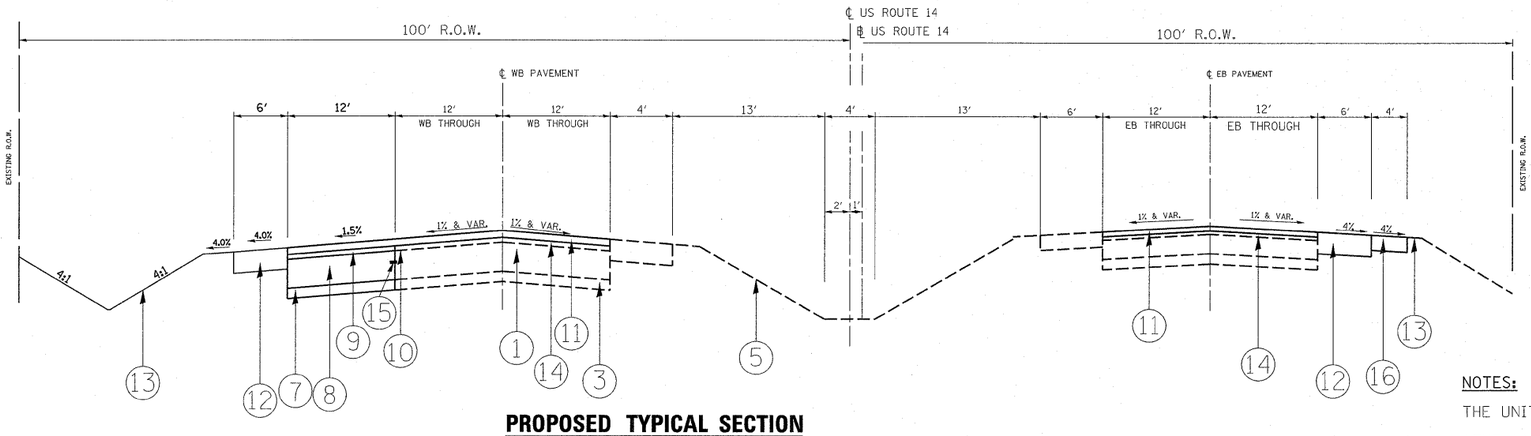


EXISTING TYPICAL SECTION

US ROUTE 14 (NORTHWEST HIGHWAY)

LEGEND

1. EXISTING PCC PAVEMENT, ± 11"
2. EXISTING HMA SURFACE, ± 3 "
3. EXISTING SUB-BASE GRANULAR MATERIAL, ± 4"
4. EXISTING AGGREGATE SHOULDER TO BE REMOVED
5. EXISTING DITCH
6. PROPOSED HMA SURFACE REMOVAL, 1 3/4"
7. PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE B, 4"
8. PROPOSED PCC BASE COURSE, 11"
9. PROPOSED LEVELING BINDER (MM), N70, 1 1/4"
10. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
11. PROPOSED POLYMERIZED HMA SURFACE COURSE, MIX "F", N90, 1 3/4"
12. PROPOSED HMA SHOULDER, 8" (IN 2 LIFTS)
13. PROPOSED FURNISHING & PLACING TOP, SOIL, 6" SODDING OR SEEDING
14. EXISTING HMA SURFACE OVERLAY, 1 3/4"
15. PROP. DRILL & GROUT # 25 (#8) EPOXY COATED DEFORMED STEEL TIE BAR, 24" LONG, 24" C-C - COST INCLUDED IN PORTLAND CEMENT CONCRETE BASE COURSE, 10"
16. PROPOSED AGGREGATE SHOULDER, TYPE B



PROPOSED TYPICAL SECTION

US ROUTE 14 (NORTHWEST HIGHWAY)

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS (%)
POLYMERIZED HMA SURFACE COURSE, MIX "F", N90 (IL 9.5 mm)	4% AT 90 GYR.
LEVELING BINDER (MM), N70 (IL 9.5 mm)	4% AT 70 GYR.
HMA SHOULDER (HMA BINDER IL-19 mm)	2% AT 30 GYR.

NOTES:

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

"THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS."
"FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS."

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) @ KELSEY RD.
EXISTING & PROPOSED TYPICAL SECTION

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	6
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			

EARTHWORK SCHEDULE

US RTE. 14	EARTH EXCAVATION (CU. YD)	UNSUITABLE MATERIAL (CU.YD.)	EXCAVATION USED AS EMBANKMENT (SHRINKAGE 15%) (CU.YD.)	EMBANKMENT (CU. YD.)	EARTH WORK BALANCE SURPLUS (+) OR SHORTAGE (-) (CU. YD.)
23+00 TO 31+35.76	675	671	574	942	-368
KELSEY RD					
5+00 TO 8+00	0	0	0	0	0
TOTAL	675	671	574	942	-368

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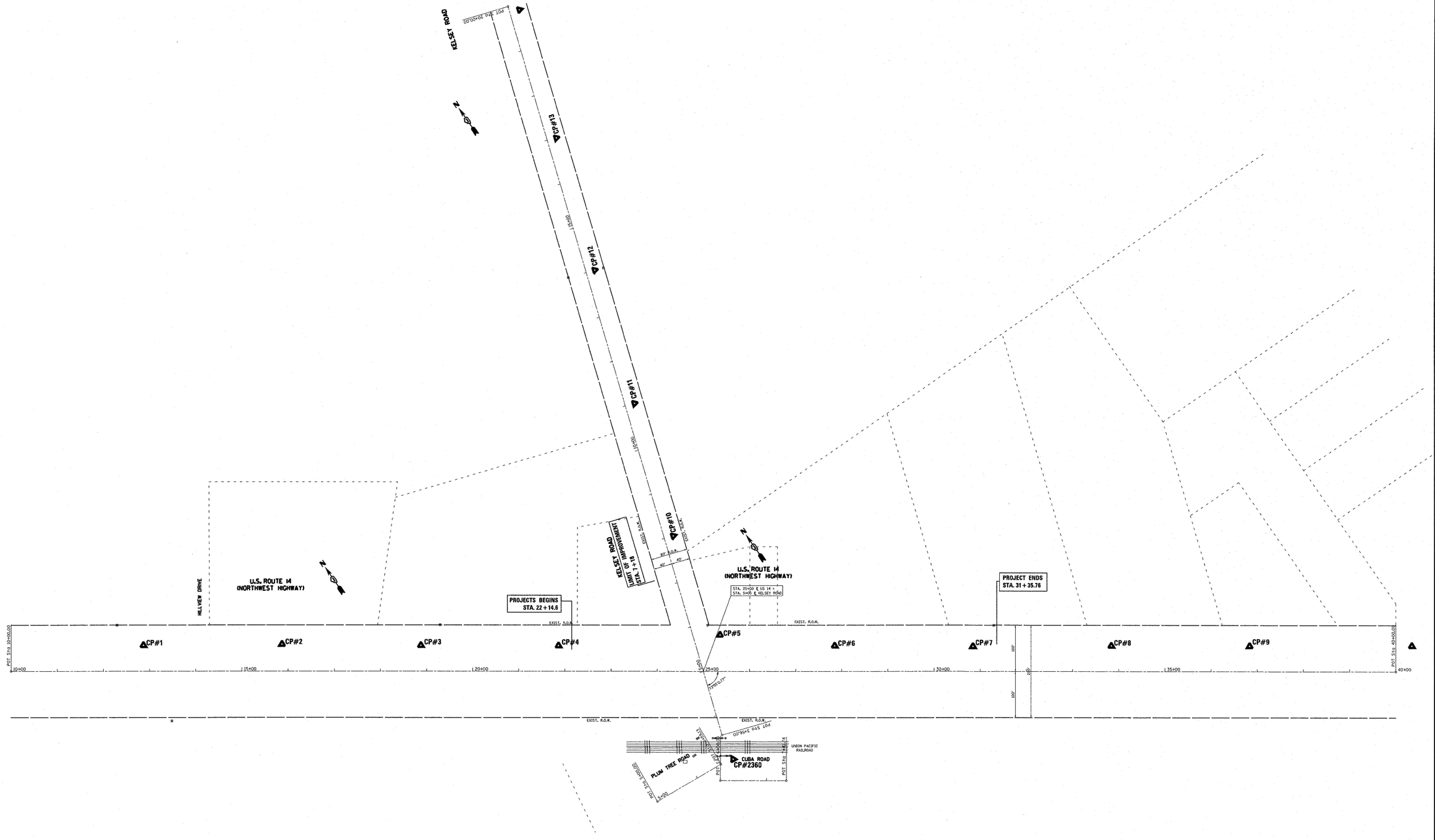
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) @ KELSEY RD.
SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	7
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			



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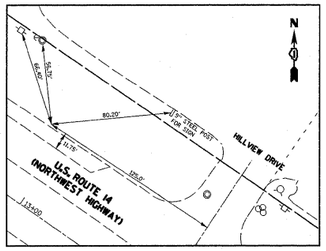
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 @ KELSEY ROAD
ALIGNMENT TIES AND BENCHMARK SHEET

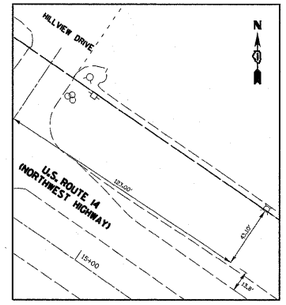
SCALE: 1"= 100' | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	8
		CONTRACT NO. 60K17		
		ILLINOIS FED. AID PROJECT		



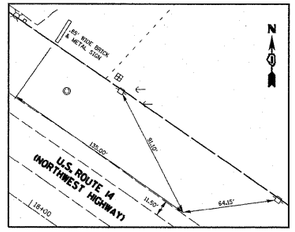
CONTROL POINT 1

IRON ROD W/PUNCH MARK
N 2010308.510
E 1021866.160
ELEV. 815.88
STA. 12+86.7/55.96 LT



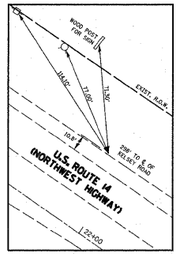
CONTROL POINT 2

IRON ROD W/PUNCH MARK
N 2010139.595
E 1022114.270
ELEV. 817.76
STA. 15+86.85/58.08 LT



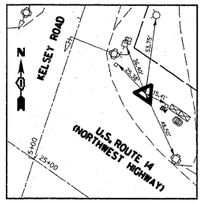
CONTROL POINT 3

IRON ROD W/PUNCH MARK
N 2009966.810
E 1022360.470
ELEV. 816.40
STA. 18+87.62/55.94' LT



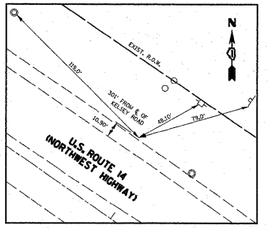
CONTROL POINT 4

IRON ROD W/PUNCH MARK
N 2009796.565
E 1022605.465
ELEV. 811.39
STA. 21+86/55.08' LT



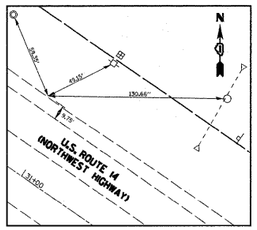
CONTROL POINT 5

IRON ROD W/PUNCH MARK
BENCH MARK ELEV.= 800.10 (NAVD 88)
N 2009616.975
E 1022907.020
ELEV. 800.56



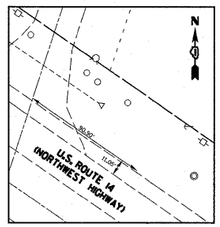
CONTROL POINT 6

IRON ROD W/PUNCH MARK
N 2009456.140
E 1023097.895
ELEV. 798.26
STA. 27+84.61/55.15' LT



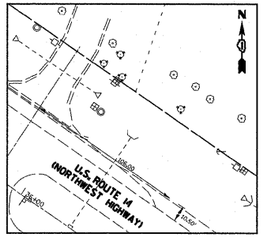
CONTROL POINT 7

IRON ROD W/PUNCH MARK
N 2009284.800
E 1023343.745
ELEV. 797.49
STA. 30+84.27/53.99' LT



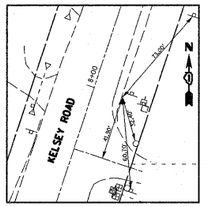
CONTROL POINT 8

IRON ROD W/PUNCH MARK
N 2009115.480
E 1023590.905
ELEV. 796.24
STA. 33+83.87/55.24' LT



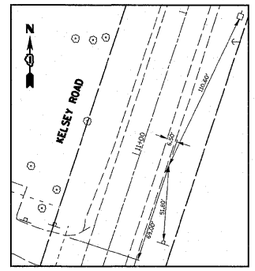
CONTROL POINT 9

IRON ROD W/PUNCH MARK
N 2008944.705
E 1023837.010
ELEV. 795.98
STA. 36+83.42/54.69' LT



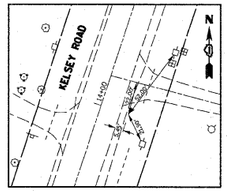
CONTROL POINT 10

IRON ROD W/PUNCH MARK
N 2009850.965
E 1022945.335
ELEV. 802.99
STA. 7+99.72/20.14' RT



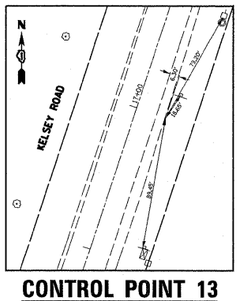
CONTROL POINT 11

IRON ROD W/PUNCH MARK
N 2010135.715
E 1023039.865
ELEV. 804.24
STA. 10+99.75/20.81' RT



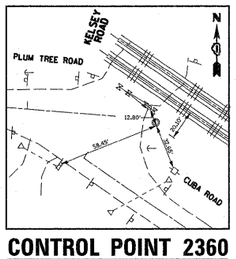
CONTROL POINT 12

IRON ROD W/PUNCH MARK
N 2010421.430
E 1023132.370
ELEV. 801.74
STA. 14+00.06/19.26' RT



CONTROL POINT 13

IRON ROD W/PUNCH MARK
N 2010705.140
E 1023227.175
ELEV. 791.52
STA. 16+99.19/20.51' RT



CONTROL POINT 2360

CROSS NOTCH SET IN CONCRETE
FOR TRAFFIC CONTROL VAULT
N 2009378.015
E 1022776.750
ELEV. 802.30

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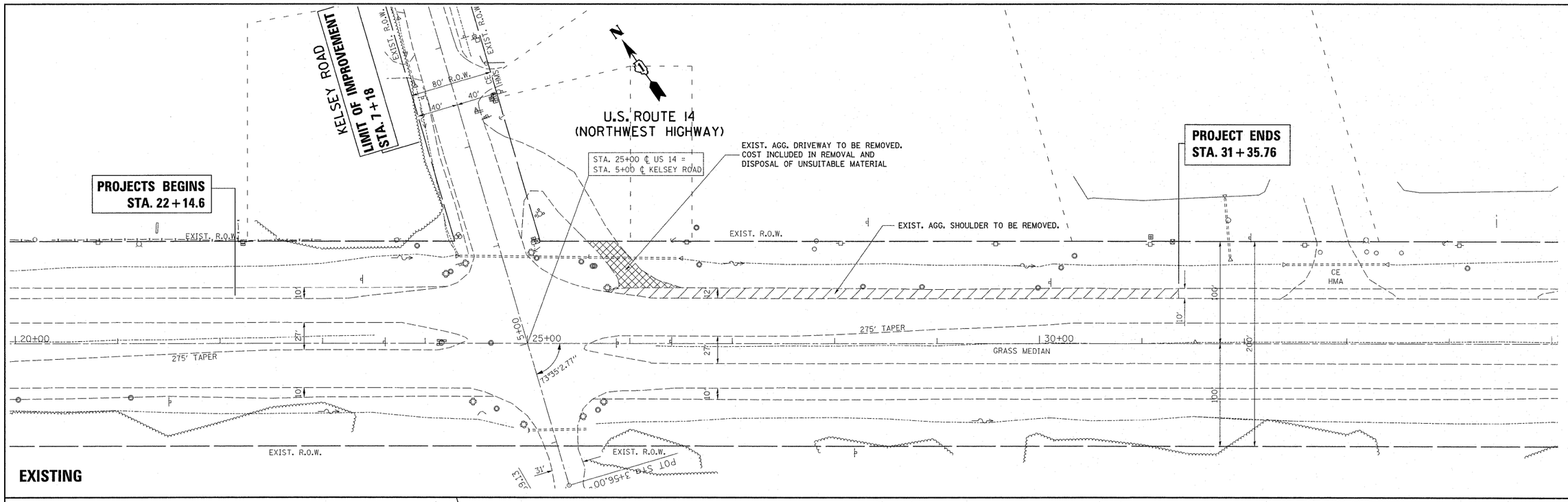
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 @ KELSEY ROAD
ALIGNMENT TIES AND BENCHMARK SHEET

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	9
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			



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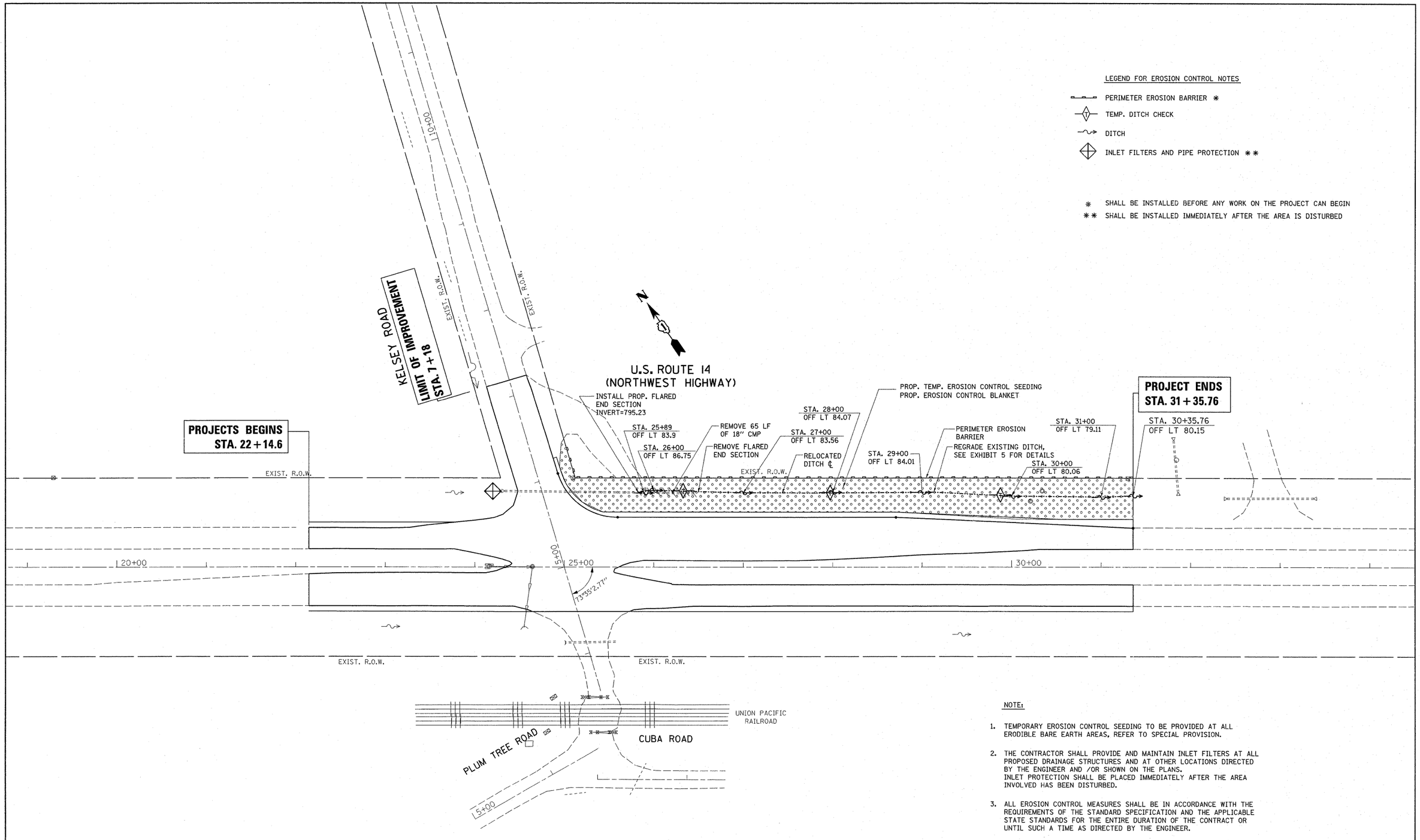
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) @ KELSEY ROAD
EXISTING & PROPOSED ROADWAY PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	10
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			



NOTE:

1. TEMPORARY EROSION CONTROL SEEDING TO BE PROVIDED AT ALL ERODIBLE BARE EARTH AREAS, REFER TO SPECIAL PROVISION.
2. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN INLET FILTERS AT ALL PROPOSED DRAINAGE STRUCTURES AND AT OTHER LOCATIONS DIRECTED BY THE ENGINEER AND /OR SHOWN ON THE PLANS. INLET PROTECTION SHALL BE PLACED IMMEDIATELY AFTER THE AREA INVOLVED HAS BEEN DISTURBED.
3. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATION AND THE APPLICABLE STATE STANDARDS FOR THE ENTIRE DURATION OF THE CONTRACT OR UNTIL SUCH A TIME AS DIRECTED BY THE ENGINEER.
4. AT ANY AREA WHERE THERE IS NO PROPOSED GRADING, THE EXISTING GROUND COVER SHALL REMAIN.

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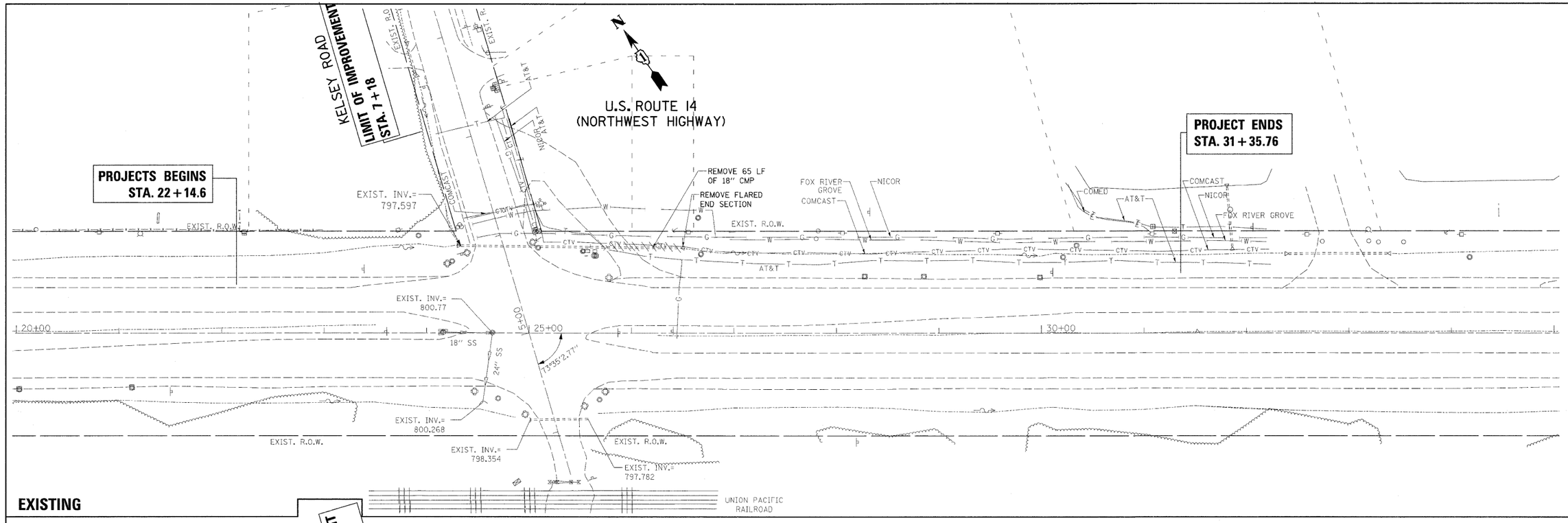
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

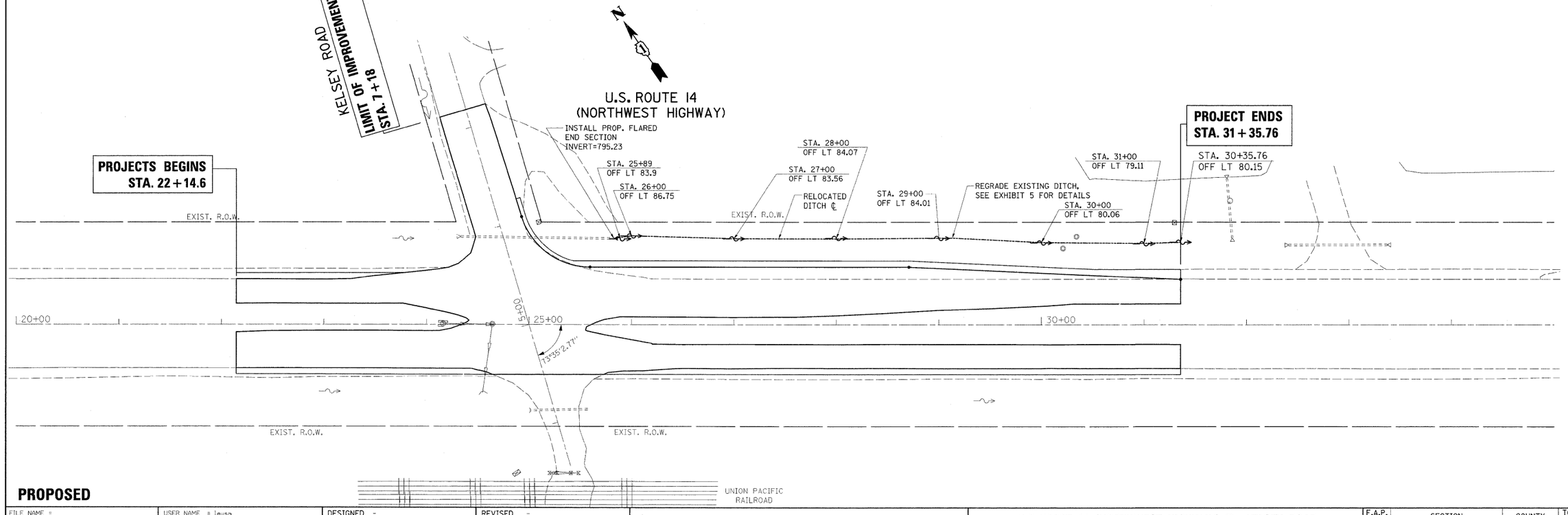
U.S. ROUTE 14 (NORTHWEST HIGHWAY) @ KELSEY ROAD
EROSION CONTROL PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	11
		CONTRACT NO. 60K17		
		ILLINOIS FED. AID PROJECT		



EXISTING



PROPOSED

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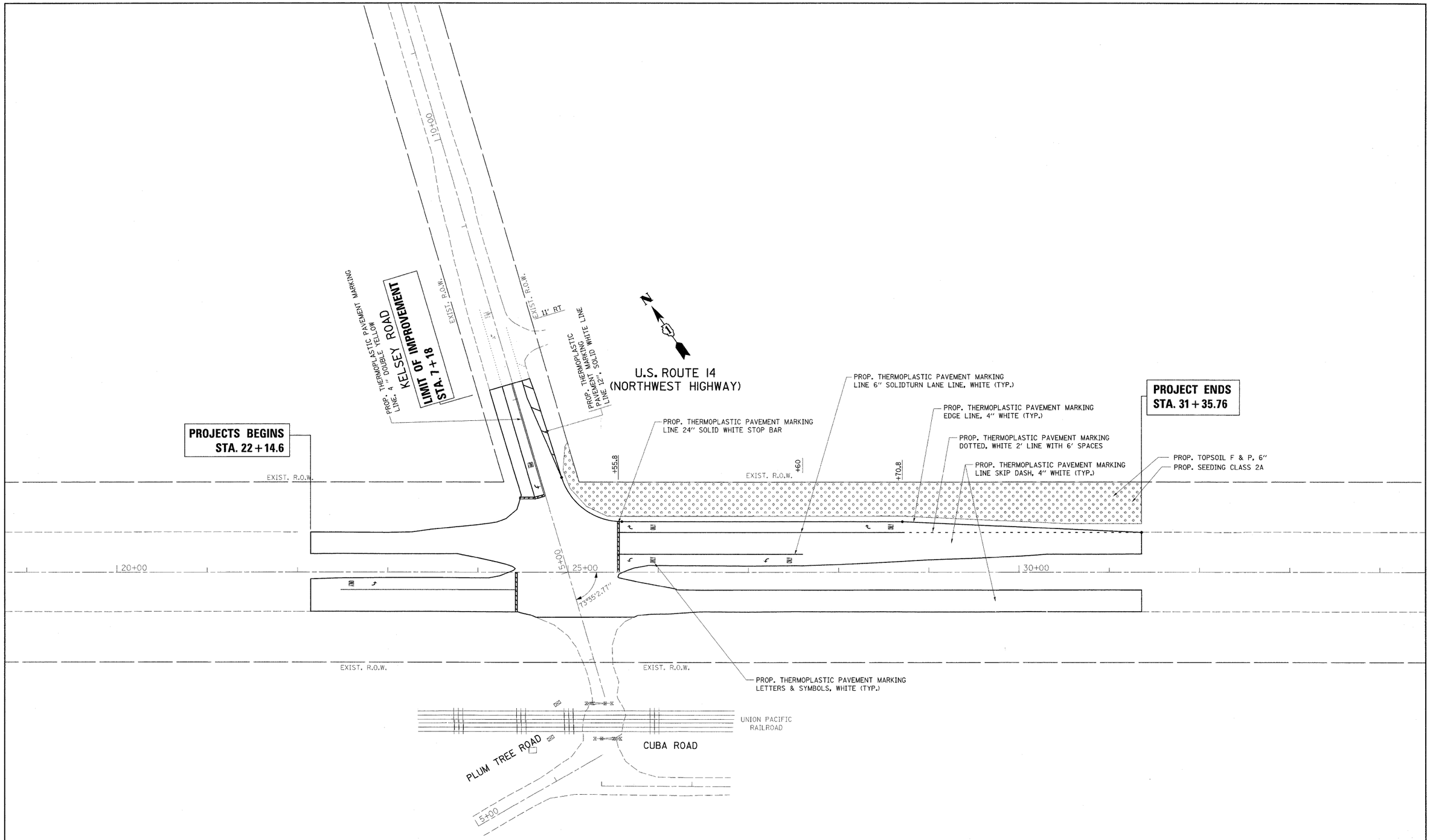
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) @ KELSEY ROAD
EXISTING & PROPOSED DRAINAGE & UTILITY PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	12
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) @ KELSEY ROAD
LANDSCAPING PLAN

SCALE: 1"= 50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	13
		CONTRACT NO. 60K17		
	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.

2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.

3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE L.E.D. AND 12" (300 mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.

4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.

5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE BARRINGTON-COUNTRYSIDE FIRE PROTECTION DISTRICT. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK-UP OF ALL EQUIPMENT TO BE RETURNED TO THE DISTRICT AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

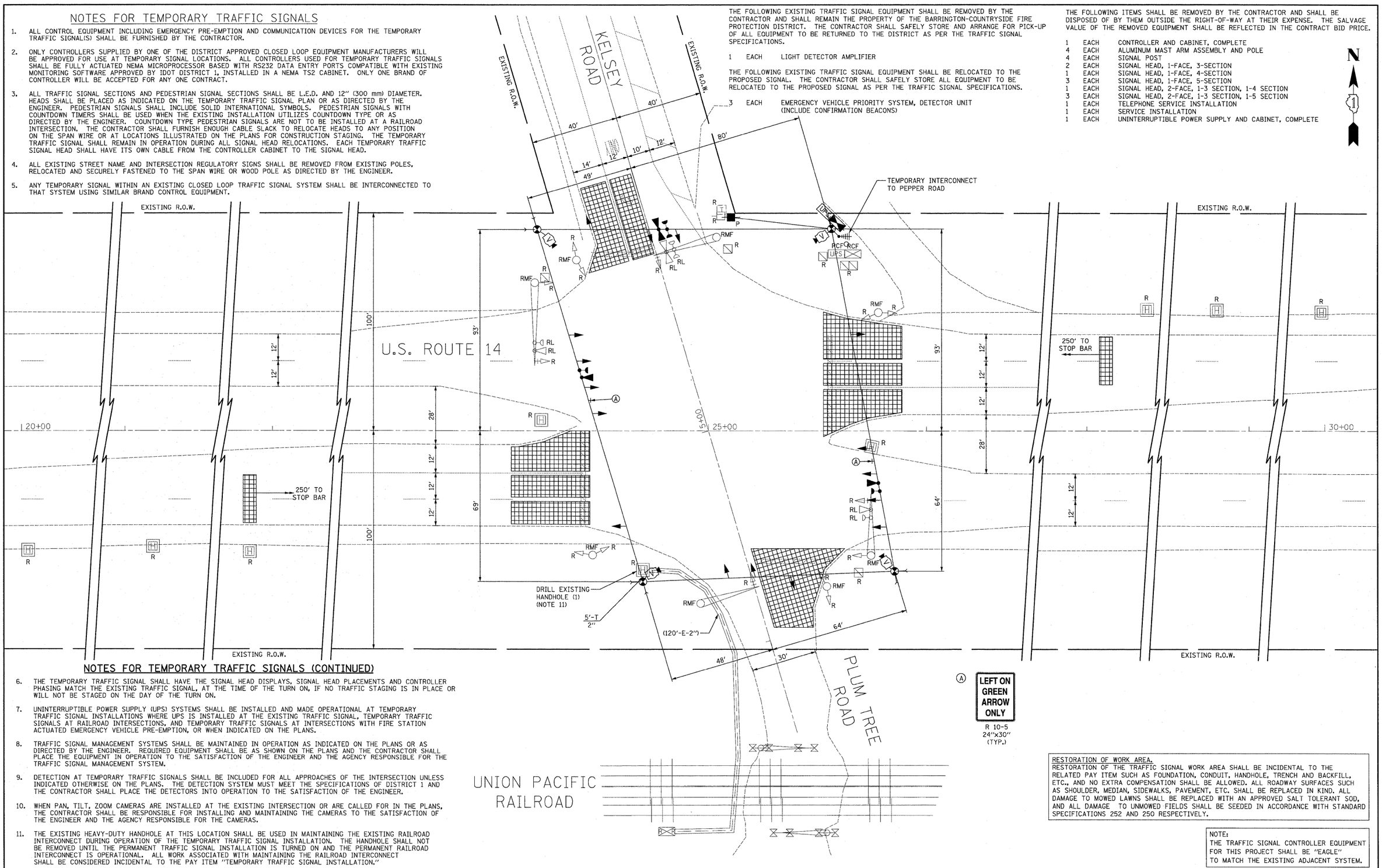
1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE RELOCATED TO THE PROPOSED SIGNAL. THE CONTRACTOR SHALL SAFELY STORE ALL EQUIPMENT TO BE RELOCATED TO THE PROPOSED SIGNAL AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

3 EACH EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT (INCLUDE CONFIRMATION BEACONS)

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET, COMPLETE
4	EACH	ALUMINUM MAST ARM ASSEMBLY AND POLE
4	EACH	SIGNAL POST
2	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
1	EACH	SIGNAL HEAD, 1-FACE, 4-SECTION
3	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION
1	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-4 SECTION
3	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
1	EACH	TELEPHONE SERVICE INSTALLATION
1	EACH	SERVICE INSTALLATION
1	EACH	UNINTERRUPTIBLE POWER SUPPLY AND CABINET, COMPLETE



NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONTINUED)

6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.

9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.

10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

11. THE EXISTING HEAVY-DUTY HANDHOLE AT THIS LOCATION SHALL BE USED IN MAINTAINING THE EXISTING RAILROAD INTERCONNECT DURING OPERATION OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE HANDHOLE SHALL NOT BE REMOVED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS TURNED ON AND THE PERMANENT RAILROAD INTERCONNECT IS OPERATIONAL. ALL WORK ASSOCIATED WITH MAINTAINING THE RAILROAD INTERCONNECT SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION."

Ⓐ **LEFT ON GREEN ARROW ONLY**
R 10-5
24"x30"
(TYP.)

RESTORATION OF WORK AREA.
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

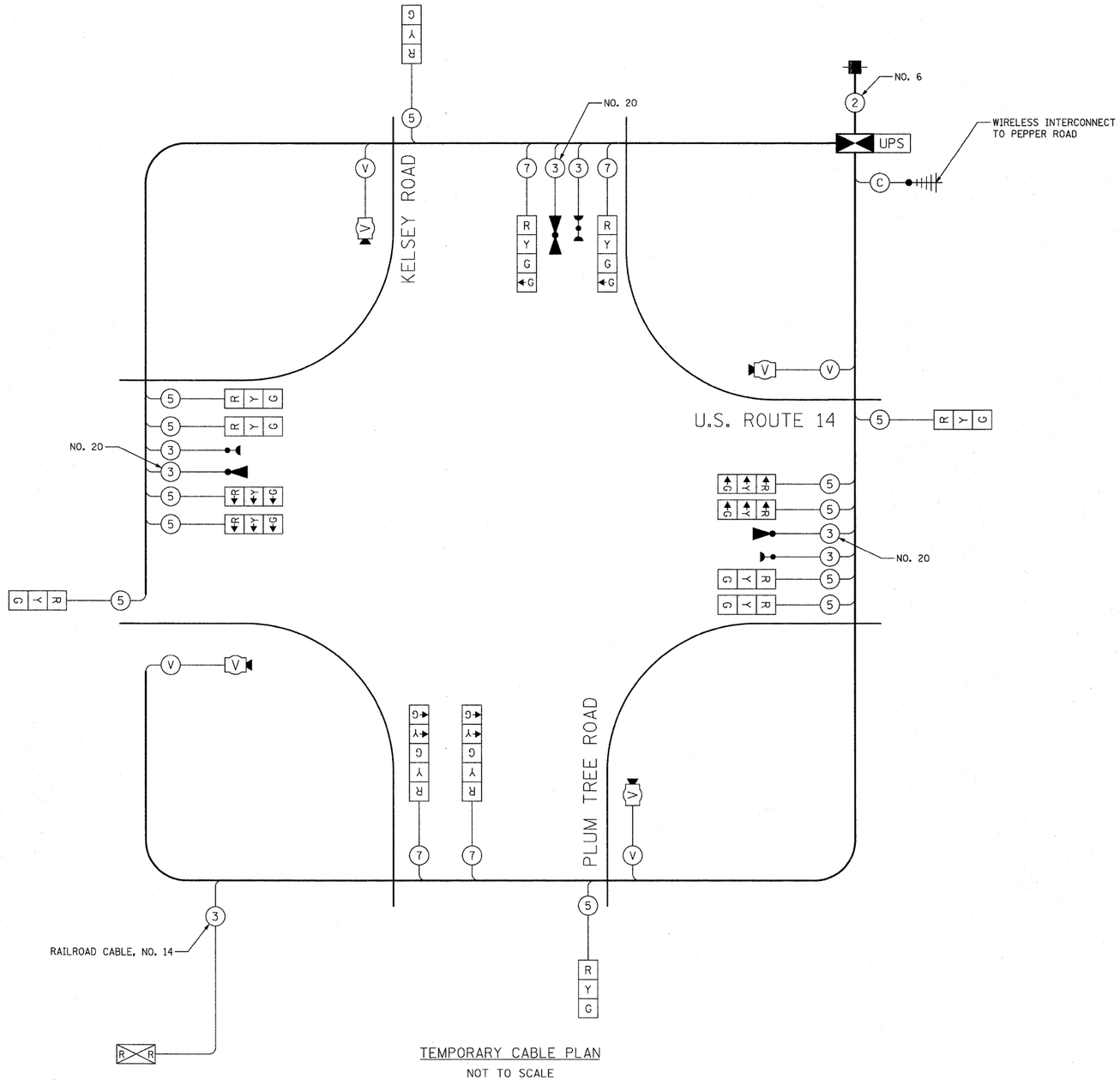
FILE NAME = ...\P141509-01_Temporary Signal Plan.dgn	USER NAME = brd	DESIGNED - BRD	REVISED -
		DRAWN - OJT	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JJE	REVISED -
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN
U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD

SCALE: 1"=20' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	14
		CONTRACT NO. 60K17		
		ILLINOIS FED. AID PROJECT		



TEMPORARY CABLE PLAN

NOT TO SCALE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	16		17	0.50	136
(YELLOW)	16		25	0.25	100
(GREEN)	16		15	0.25	60
ARROW	6		12	0.10	7
PED. SIGNAL	-		25	1.00	
CONTROLLER	1		100	1.00	100
VIDEO SYSTEM	1		150	1.00	150
FLASHER				0.50	
				TOTAL =	553

ENERGY COSTS TO: VILLAGE OF LAKE BARRINGTON
23860 N. OLD BARRINGTON ROAD
LAKE BARRINGTON, IL 60010

ENERGY SUPPLY: CONTACT: DON PESCE
PHONE: (847) 870-2057
COMPANY: COM ED

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME =	USER NAME = brd	DESIGNED - BRD	REVISED -
...\P141509-02_Temporary Cable Plan.dgn		DRAWN - OJT	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - JJE	REVISED -
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN
U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD

SCALE: NOT TO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	15

CONTRACT NO. 60K17

ILLINOIS | FED. AID PROJECT

TEMPORARY SEQUENCE OF OPERATION

MOVEMENT		N	1 — 5	1 — 6	2 — 5	2 — 6	8 3	8 — 4	FLASH
PHASE			1 + 5	1 + 6	2 + 5	2 + 6	3 + 8	4 + 8	
INTERVAL		1	2A	2B	3A	3B	4A	4B	5	6A	6B	7	8A	8B	9	10A	10B	11A	11B	12A	12B	13	14A	14B	15	16	17A	17B	
CHANGE TO			1 + 6		2 + 5		2 + 6		2 + 6		2 + 6		1 + 5 3 + 8 4 + 8		1 + 6		2 + 5		1 + 5 1 + 6 2 + 5 2 + 6	4 + 8		1 + 5 1 + 6 2 + 5 2 + 6		
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE LEFT SPAN WIRE SIGNALS	EB	←G	←G	←G	←Y	←R	←Y	←R	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE RIGHT AND NEAR SIDE SPAN WIRE SIGNALS	EB	R	R	R	R	R	R	R	G	G	G	R	R	R	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE LEFT SPAN WIRE SIGNALS	WB	←G	←Y	←R	←G	←G	←Y	←R	←R	←R	←R	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE RIGHT AND NEAR SIDE SPAN WIRE SIGNALS	WB	R	R	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	Y	R	G	G	R	R	R	R	R	R	R	R
PLUM TREE ROAD FAR SIDE SPAN WIRE SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R
PLUM TREE ROAD NEAR SIDE SPAN WIRE SIGNAL	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R
KELSEY ROAD FAR SIDE SPAN WIRE SIGNALS	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G ←G	Y	R	G ←Y	G	Y	R	R
KELSEY ROAD NEAR SIDE SPAN WIRE SIGNAL	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	G	G	Y	R	R

NOTE: PHASES 2 AND 6 SHALL BE PLACED ON RECALL.

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

																											PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	
CHANGE FROM TEMPORARY SEQUENCE OF OPERATION INTERVAL NUMBER		1		1		1		5		5	7		7		9		9		9		13		13		16	16				
TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	2	3	4	CLEAR TO NORMAL SEQUENCE
CHANGE TO TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	3	1F	4	1H	2 OR 4	3	2	1M	3 OR 4	1P	2	1R	3	1T	4	1V	2 OR 3	4	1Y	2 OR 3	4				
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE LEFT SPAN WIRE SIGNALS	EB	←Y	←R	←G	←G	←Y	←R	←Y	←R	←G	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←G	←R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE RIGHT AND NEAR SIDE SPAN WIRE SIGNALS	EB	R	R	R	R	R	R	Y	R	G	R	R	R	Y	R	G	G	Y	R	R	R	R	R	R	R	R	G	R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE LEFT SPAN WIRE SIGNALS	WB	←G	←G	←Y	←R	←Y	←R	←R	←R	←R	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←G	←R	←R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE RIGHT AND NEAR SIDE SPAN WIRE SIGNALS	WB	R	R	R	R	R	R	R	R	R	G	Y	R	G	G	Y	R	Y	R	R	R	R	R	R	R	G	R	R	◇
PLUM TREE ROAD FAR SIDE SPAN WIRE SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	G	◇
PLUM TREE ROAD NEAR SIDE SPAN WIRE SIGNAL	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	G	◇
KELSEY ROAD FAR SIDE SPAN WIRE SIGNALS	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G ←Y	Y	R	G	R	R	G	◇
KELSEY ROAD NEAR SIDE SPAN WIRE SIGNAL	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	Y	R	G	R	R	G	◇

◇ TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE TEMPORARY SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT TEMPORARY EMERGENCY VEHICLE PREEMPTION INTERVAL AFTER TEMPORARY EMERGENCY VEHICLE PREEMPTION INTERVAL 2, 3, OR 4 IS TERMINATED.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = ...\P141509-03_Temporary Sequences 1.dgn	USER NAME = brd	DESIGNED - BRD	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
		DRAWN - OJT	REVISED -	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JJE	REVISED -	
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -	

TEMPORARY SEQUENCE OF OPERATION, TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, TEMPORARY RAILROAD PREEMPTION SEQUENCE OF OPERATION U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD

SCALE: NOT TO SCALE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	16
		CONTRACT NO. 60K17		
	ILLINOIS	FED. AID PROJECT		

TEMPORARY RAILROAD PREEMPTION SEQUENCE OF OPERATION

													PREEMPTOR NUMBER 3		PREEMPTOR NUMBER 4		PREEMPTOR NUMBER 5		PREEMPTOR NUMBER 2				
CHANGE FROM TEMPORARY SEQUENCE OF OPERATION INTERVAL NUMBER		1		5		7		9		13		16											
CHANGE FROM TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE INTERVAL NUMBER													2		3		4						
TEMPORARY RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	2	3	4	5	CLEAR TO NORMAL SEQUENCE
CHANGE TO TEMPORARY RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	2	1F	2	1H	2	1K	2	1M	2	1P	2	1R	2	1T	2	3	4	5		
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE LEFT SPAN WIRE SIGNALS	EB	←Y	←R	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←Y	←R	←R	←R	←R	←R	←R	←R	△
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE RIGHT AND NEAR SIDE SPAN WIRE SIGNALS	EB	R	R	Y	R	R	R	Y	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	G	△
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE LEFT SPAN WIRE SIGNALS	WB	←Y	←R	←R	←R	←Y	←R	←R	←R	←R	←R	←R	←R	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	△
U.S. ROUTE 14 (NORTHWEST HWY.) FAR SIDE RIGHT AND NEAR SIDE SPAN WIRE SIGNALS	WB	R	R	R	R	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	G	△
PLUM TREE ROAD FAR SIDE SPAN WIRE SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	G	G	R	R	R	R	G	G	G →G	Y	R	R	△
PLUM TREE ROAD NEAR SIDE SPAN WIRE SIGNAL	NB	R	R	R	R	R	R	R	R	R	R	G	G	R	R	R	R	G	G	G	Y	R	R	△
KELSEY ROAD FAR SIDE SPAN WIRE SIGNALS	SB	R	R	R	R	R	R	R	R	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	△
KELSEY ROAD NEAR SIDE SPAN WIRE SIGNAL	SB	R	R	R	R	R	R	R	R	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	△
																							HOLD	

△ TEMPORARY RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE TEMPORARY SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A TEMPORARY EMERGENCY VEHICLE PREEMPTION INTERVAL (IF APPLICABLE) AFTER TEMPORARY RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

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		DRAWN - OJT	REVISED -
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	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

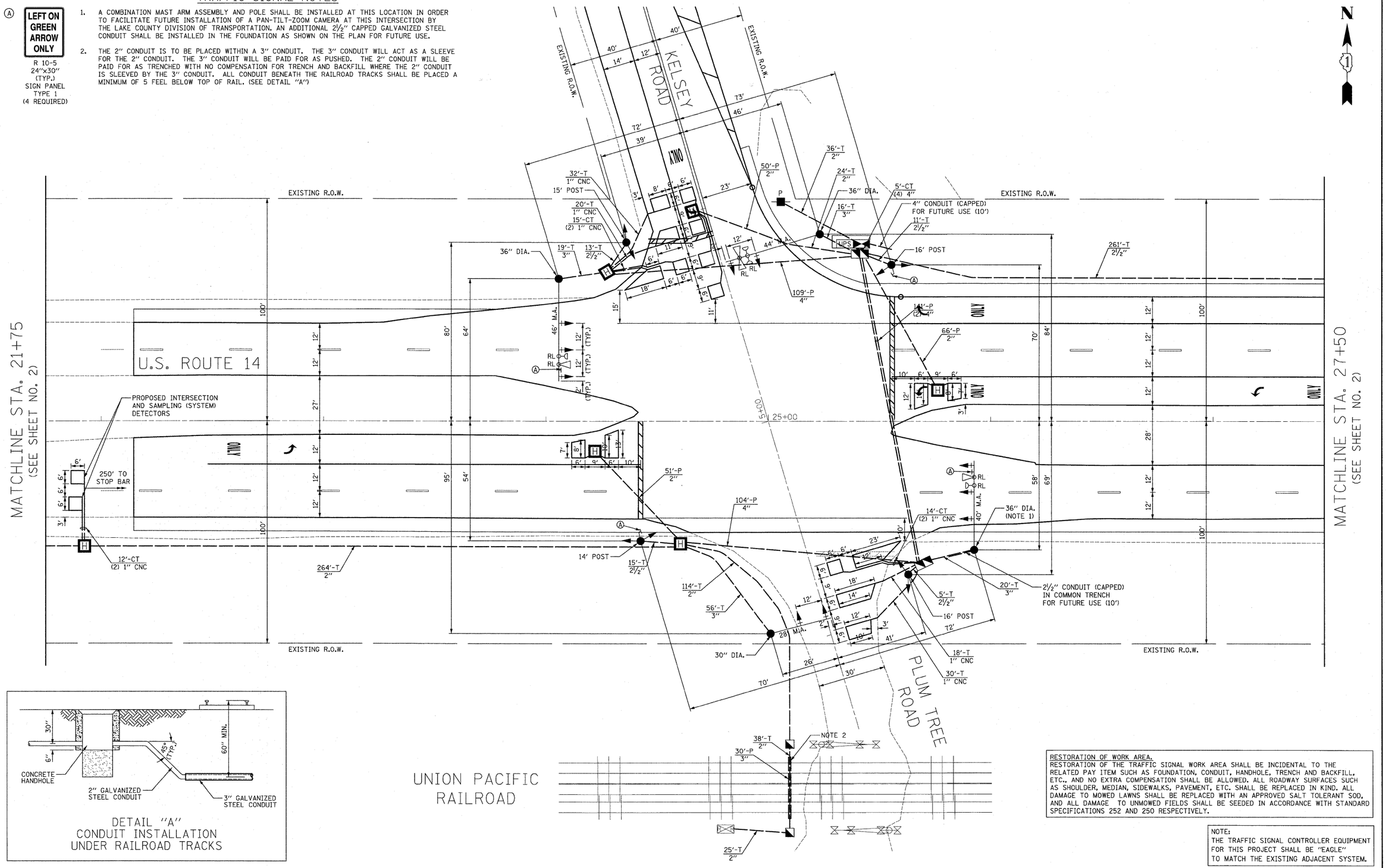
TEMPORARY SEQUENCE OF OPERATION, TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, TEMPORARY RAILROAD PREEMPTION SEQUENCE OF OPERATION
U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD
SCALE: NOT TO SCALE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	17
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			

TRAFFIC SIGNAL NOTES

Ⓐ **LEFT ON GREEN ARROW ONLY**
R 10-5
24"x30"
(TYP.)
SIGN PANEL
TYPE 1
(4 REQUIRED)

1. A COMBINATION MAST ARM ASSEMBLY AND POLE SHALL BE INSTALLED AT THIS LOCATION IN ORDER TO FACILITATE FUTURE INSTALLATION OF A PAN-TILT-ZOOM CAMERA AT THIS INTERSECTION BY THE LAKE COUNTY DIVISION OF TRANSPORTATION. AN ADDITIONAL 2½" CAPPED GALVANIZED STEEL CONDUIT SHALL BE INSTALLED IN THE FOUNDATION AS SHOWN ON THE PLAN FOR FUTURE USE.
2. THE 2" CONDUIT IS TO BE PLACED WITHIN A 3" CONDUIT. THE 3" CONDUIT WILL ACT AS A SLEEVE FOR THE 2" CONDUIT. THE 3" CONDUIT WILL BE PAID FOR AS PUSHED. THE 2" CONDUIT WILL BE PAID FOR AS TRENCHED WITH NO COMPENSATION FOR TRENCH AND BACKFILL WHERE THE 2" CONDUIT IS SLEEVED BY THE 3" CONDUIT. ALL CONDUIT BENEATH THE RAILROAD TRACKS SHALL BE PLACED A MINIMUM OF 5 FEEL BELOW TOP OF RAIL. (SEE DETAIL "A")



DETAIL "A"
CONDUIT INSTALLATION
UNDER RAILROAD TRACKS

RESTORATION OF WORK AREA.
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

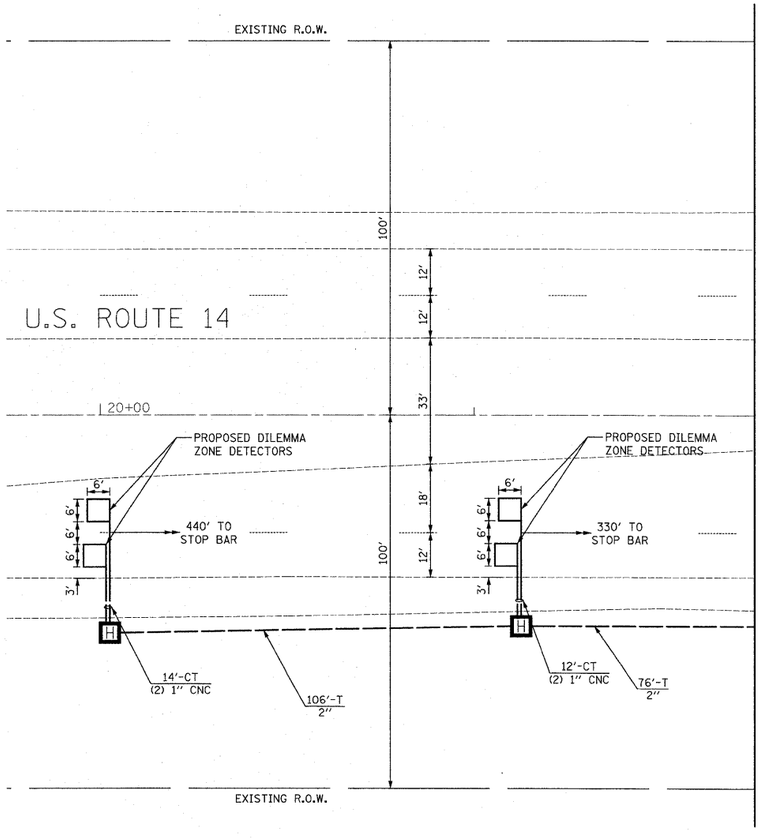
FILE NAME = ®FILES®	USER NAME = brd	DESIGNED - BRD	REVISED -
		DRAWN - OJT	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JJE	REVISED -
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

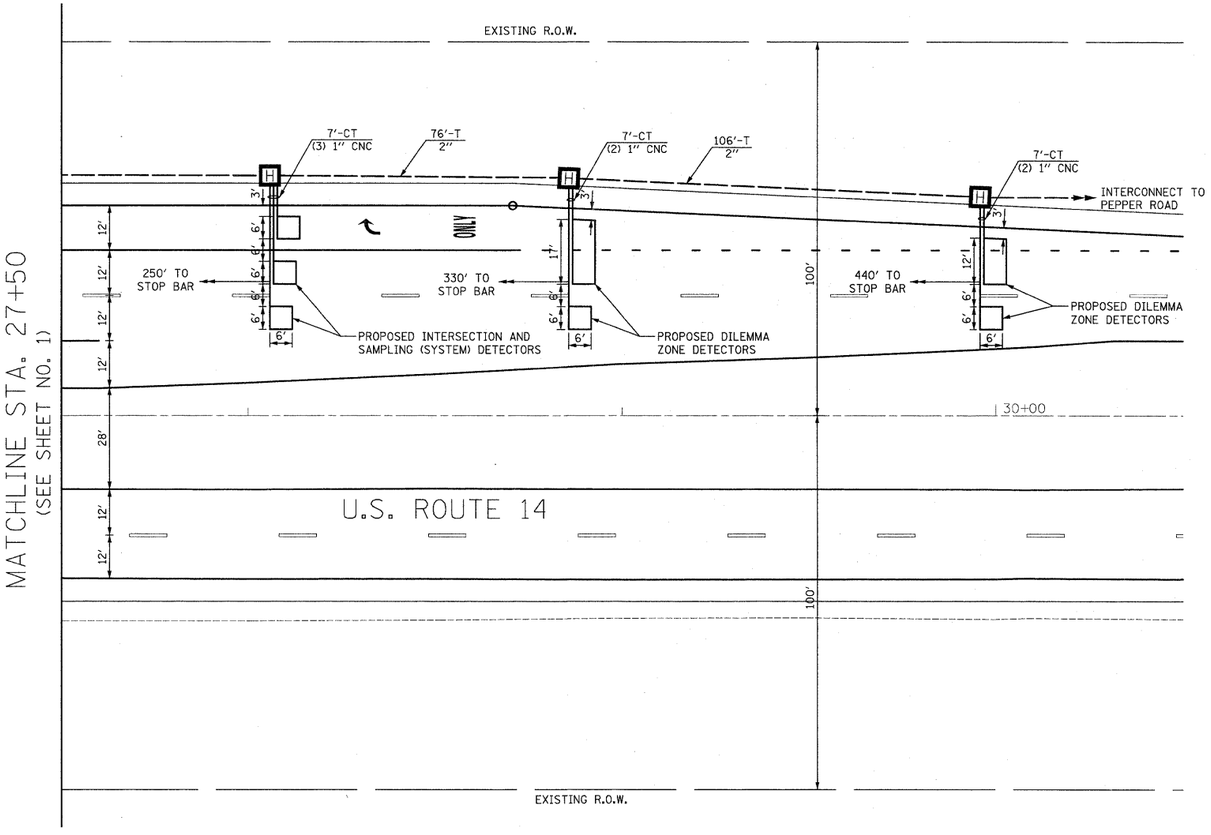
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD

SCALE: 1" = 20' | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	18
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			





RESTORATION OF WORK AREA.
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = *FILES*	USER NAME = brd	DESIGNED - BRD	REVISED -
		DRAWN - OJT	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JJE	REVISED -
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD

SCALE: 1" = 20' | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	19

CONTRACT NO. 60K17
ILLINOIS | FED. AID PROJECT

SCHEDULE OF QUANTITIES

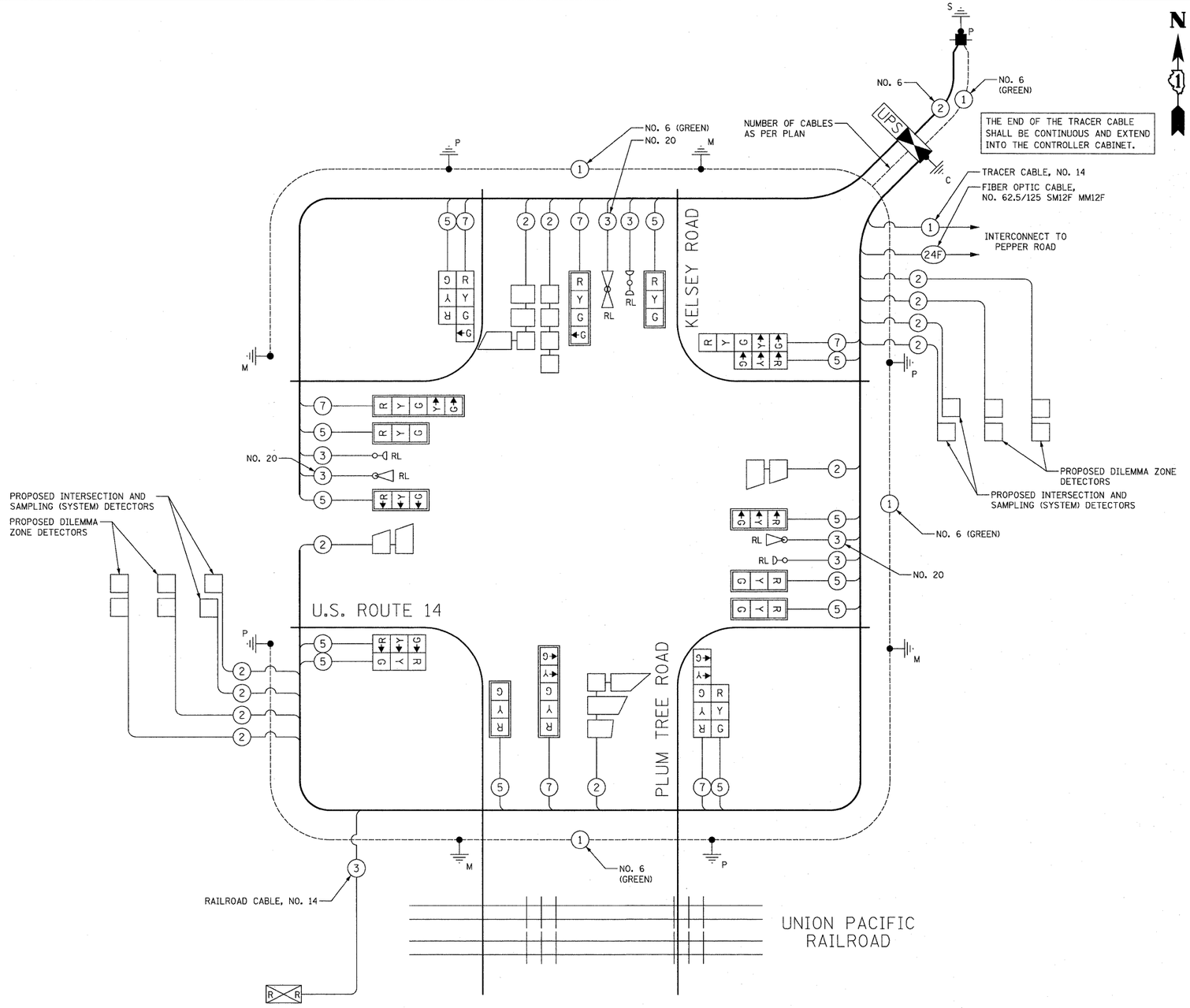
	PAY ITEM	UNIT	QNTY.
	SIGN PANEL - TYPE 1	SQ FT	34
	SIGN PANEL - TYPE 2	SQ FT	55
	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	865
	CONDUIT IN TRENCH, 2 1/2" DIA.,GALVANIZED STEEL	FOOT	315
	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	111
	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	30
	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	167
	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	30
	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	495
	HANDHOLE	EACH	2
	HEAVY-DUTY HANDHOLE	EACH	11
	DOUBLE HANDHOLE	EACH	2
	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1266
	TRANSCEIVER - FIBER OPTIC	EACH	1
*	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	585
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2718
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1122
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	4802
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	56
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	1
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
	CONCRETE FOUNDATION, TYPE A	FOOT	16
	CONCRETE FOUNDATION, TYPE C	FOOT	4
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7
	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED	EACH	1
	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
	INDUCTIVE LOOP DETECTOR	EACH	13
	DETECTOR LOOP, TYPE I	FOOT	1119
*	LIGHT DETECTOR AMPLIFIER	EACH	1
	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
*	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	3
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING HANDHOLE	EACH	14
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	10
*	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	585
	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1
	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
	UNINTERRUPTIBLE POWER SUPPLY	EACH	1
	ELECTRIC CABLE IN CONDUIT, GROUND, NO. 6 1C (GREEN)	FOOT	879
	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
	ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	482
	REMOVE FIBER OPTIC CABLE FROM CONDUIT	FOOT	1034

* 100% COST TO BARRINGTON-COUNTRYSIDE FIRE PROTECTION DISTRICT

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	18		17	0.50	153
(YELLOW)	18		25	0.25	113
(GREEN)	18		15	0.25	68
ARROW	10		12	0.10	12
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100
FLASHER				0.50	
				TOTAL =	446

ENERGY COSTS TO: VILLAGE OF LAKE BARRINGTON
23860 N. OLD BARRINGTON RD.
LAKE BARRINGTON, IL 60010

ENERGY SUPPLY: CONTACT: DON PESCE
PHONE: (847) 870-2057
COMPANY: COM ED



CABLE PLAN
NOT TO SCALE

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = ...\P141509-07_Cable Plan and SQQ.dgn	USER NAME = brd	DESIGNED - BRD	REVISED -
		DRAWN - OJT	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JJE	REVISED -
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

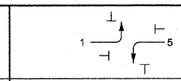
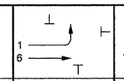
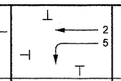
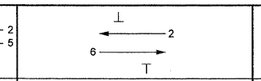
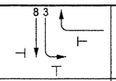
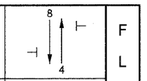
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND SCHEDULE OF QUANTITIES
U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD

SCALE: NOT TO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	20
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			

PROPOSED SEQUENCE OF OPERATION

MOVEMENT																												FLASH
PHASE		1+5						1+6			2+5			2+6						3+8				4+8			
INTERVAL		1	2A	2B	3A	3B	4A	4B	5	6A	6B	7	8A	8B	9	10A	10B	11A	11B	12A	12B	13	14A	14B	15	16	17A	17B	
CHANGE TO			1+6		2+5		2+6			2+6			2+6			1+5 3+8 4+8		1+6		2+5			1+5 1+6 2+5 2+6	4+8			1+5 1+6 2+5 2+6		
U.S. ROUTE 14 (NORTHWEST HWY.) NEAR RIGHT POST, RIGHT AND CENTER MAST ARM SIGNALS	EB	R	R	R	R	R	R	R	G	G	G	R	R	R	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	R
U.S. ROUTE 14 (NORTHWEST HWY.) END MAST ARM AND FAR LEFT SIGNALS	EB	←G	←G	←G	←Y	←R	←Y	←R	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
U.S. ROUTE 14 (NORTHWEST HWY.) NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	WB	R	R	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	Y	R	G	G	R G→	R Y→	R	R Y→	R	R	R	R
U.S. ROUTE 14 (NORTHWEST HWY.) CENTER MAST ARM SIGNAL	WB	R	R	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	Y	R	G	G	R	R	R	R	R	R	R	R
U.S. ROUTE 14 (NORTHWEST HWY.) END MAST ARM AND FAR LEFT SIGNALS	WB	←G	←Y	←R	←G	←G	←Y	←R	←R	←R	←R	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R
PLUM TREE ROAD NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R
PLUM TREE ROAD END MAST ARM AND FAR LEFT SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R
KELSEY ROAD NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	G	G	Y	R	R
KELSEY ROAD END MAST ARM AND FAR LEFT SIGNALS	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G ←G	Y	R	G ←Y	G	Y	R	R

NOTE: PHASES 2 AND 6 SHALL BE PLACED ON RECALL.

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

																									PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		1		1		1		5	5	7	7		9		9		9		13		13	16		16				
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	2	3	4	CLEAR TO NORMAL SEQUENCE
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	3	1F	4	1H	2 OR 4	3	2	1M	3 OR 4	1P	2	1R	3	1T	4	1V	2 OR 3	4	1Y	2 OR 3	4				
U.S. ROUTE 14 (NORTHWEST HWY.) NEAR RIGHT POST, RIGHT AND CENTER MAST ARM SIGNALS	EB	R	R	R	R	R	R	Y	R	G	R	R	R	Y	R	G	G	Y	R	R	R	R	R	R	R	R	G	R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) END MAST ARM AND FAR LEFT SIGNALS	EB	←Y	←R	←G	←G	←Y	←R	←Y	←R	←G	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←G	←R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	WB	R	R	R	R	R	R	R	R	R	G	Y	R	G	G	Y	R	Y	R	R Y→	R	R Y→	R	R	R	G	R	R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) CENTER MAST ARM SIGNAL	WB	R	R	R	R	R	R	R	R	R	G	Y	R	G	G	Y	R	Y	R	R	R	R	R	R	R	G	R	R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) END MAST ARM AND FAR LEFT SIGNALS	WB	←G	←G	←Y	←R	←Y	←R	←R	←R	←R	←G	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←G	←R	←R	◇
PLUM TREE ROAD NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	G	◇
PLUM TREE ROAD END MAST ARM AND FAR LEFT SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	G	◇
KELSEY ROAD NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	Y	R	G	R	R	G	◇
KELSEY ROAD END MAST ARM AND FAR LEFT SIGNALS	SB	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	G ←Y	Y	R	G	R	R	G	◇

◇ EMERGENCY VEHICLE PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE PREEMPTION INTERVAL AFTER EMERGENCY VEHICLE PREEMPTION INTERVAL 2, 3, OR 4 IS TERMINATED.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = ...\P141509-28_Sequence of Operations 1.dgn	USER NAME = brd	DESIGNED - BRD	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**	**SEQUENCE OF OPERATION, PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, PROPOSED RAILROAD PREEMPTION SEQUENCE OF OPERATION** **U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD**
	PLOT SCALE = 20.0000 ' / in.	DRAWN - OJT	REVISED -		SCALE: NOT TO SCALE | SHEET NO. 1 OF 2 SHEETS | STA. TO STA.
	PLOT DATE = 1/21/2011	CHECKED - JJE	REVISED -		
		DATE - 01/21/2011	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	21
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			

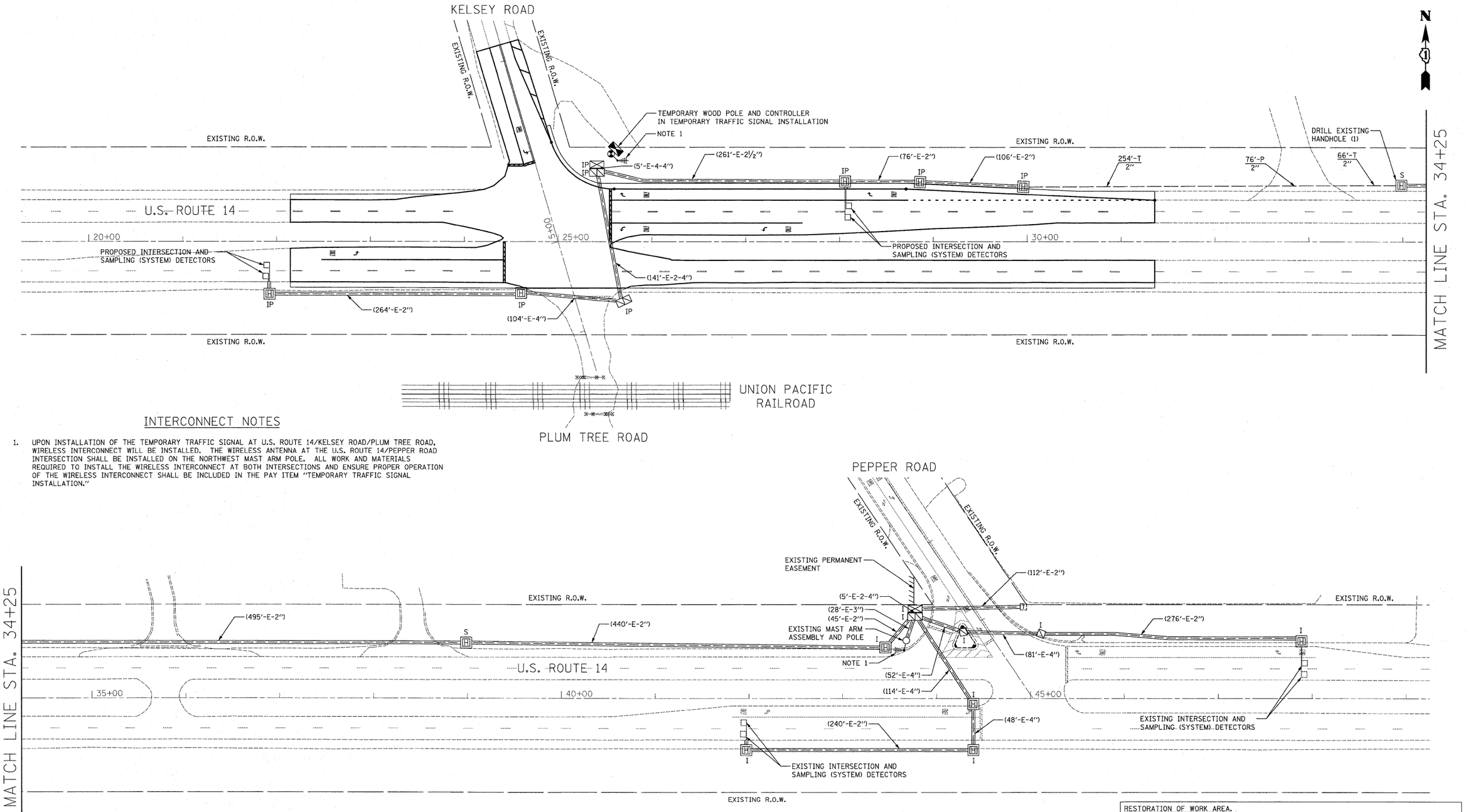
PROPOSED RAILROAD PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		1		5		7		9		13		16		PREEMPTOR NUMBER 3		PREEMPTOR NUMBER 4		PREEMPTOR NUMBER 5		PREEMPTOR NUMBER 2		
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE INTERVAL NUMBER														2		3		4				
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	2	3	4	5	CLEAR TO NORMAL SEQUENCE
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	2	1F	2	1H	2	1K	2	1M	2	1P	2	1R	2	1T	2	3	4	5		
U.S. ROUTE 14 (NORTHWEST HWY.) NEAR RIGHT POST, RIGHT AND CENTER MAST ARM SIGNALS	EB	R	R	Y	R	R	R	Y	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	G	△
U.S. ROUTE 14 (NORTHWEST HWY.) END MAST ARM AND FAR LEFT SIGNALS	EB	←Y	←R	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←R	←Y	←R	←R	←R	←R	←R	←R	←R	△
U.S. ROUTE 14 (NORTHWEST HWY.) NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	WB	R	R	R	R	Y	R	Y	R	R / Y←	R	R	R	Y	R	R	R	R	R	R	R	R	G	△
U.S. ROUTE 14 (NORTHWEST HWY.) CENTER MAST ARM SIGNAL	WB	R	R	R	R	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	G	△
U.S. ROUTE 14 (NORTHWEST HWY.) END MAST ARM AND FAR LEFT SIGNALS	WB	←Y	←R	←R	←R	←Y	←R	←R	←R	←R	←R	←R	←R	←Y	←R	←R	←R	←R	←R	←R	←R	←R	←R	△
PLUM TREE ROAD NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	G	G	R	R	R	R	G	G	G	Y	R	R	△
PLUM TREE ROAD END MAST ARM AND FAR LEFT SIGNALS	NB	R	R	R	R	R	R	R	R	R	R	G	G	R	R	R	R	G	G	G / ←G	Y	R	R	△
KELSEY ROAD NEAR RIGHT POST AND RIGHT MAST ARM SIGNALS	SB	R	R	R	R	R	R	R	R	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	△
KELSEY ROAD END MAST ARM AND FAR LEFT SIGNALS	SB	R	R	R	R	R	R	R	R	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	△
																							HOLD	

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE PREEMPTION INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = ...\P141509-09.Sequence of Operations 2.dgn	USER NAME = brd	DESIGNED - BRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SEQUENCE OF OPERATION, PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, PROPOSED RAILROAD PREEMPTION SEQUENCE OF OPERATION U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 20.2000 ' / in.	CHECKED - JJE	REVISED -		SCALE: NOT TO SCALE | SHEET NO. 2 OF 2 SHEETS | STA. TO STA.	305	24R-N-2	LAKE	43	22
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -					CONTRACT NO. 60K17		
						ILLINOIS	FED. AID PROJECT			



INTERCONNECT NOTES

1. UPON INSTALLATION OF THE TEMPORARY TRAFFIC SIGNAL AT U.S. ROUTE 14/KELSEY ROAD/PLUM TREE ROAD, WIRELESS INTERCONNECT WILL BE INSTALLED. THE WIRELESS ANTENNA AT THE U.S. ROUTE 14/PEPPER ROAD INTERSECTION SHALL BE INSTALLED ON THE NORTHWEST MAST ARM POLE. ALL WORK AND MATERIALS REQUIRED TO INSTALL THE WIRELESS INTERCONNECT AT BOTH INTERSECTIONS AND ENSURE PROPER OPERATION OF THE WIRELESS INTERCONNECT SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION."

RESTORATION OF WORK AREA.
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = $FILES$	USER NAME = brd	DESIGNED - BRD	REVISED -
		DRAWN - OJT	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - JJE	REVISED -
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

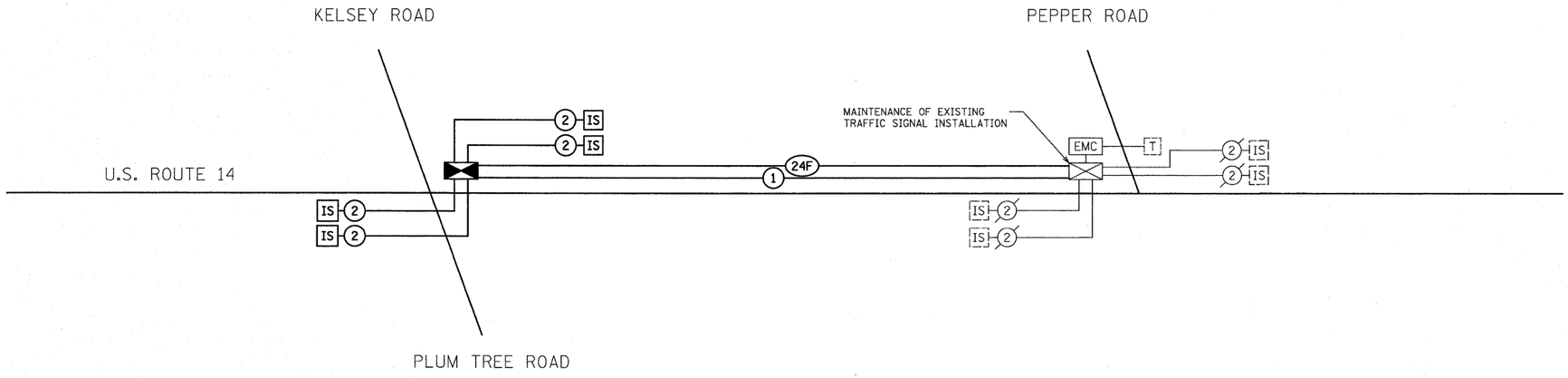
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
U.S. ROUTE 14 FROM KELSEY ROAD/PLUM TREE ROAD TO PEPPER ROAD

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	23

CONTRACT NO. 60K17
ILLINOIS FED. AID PROJECT



INTERCONNECT SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	320
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	76
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	320
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
DRILL EXISTING HANDHOLE	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1022
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1929
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1
TRACER CABLE	FOOT	1903
REMOVE FIBER OPTIC CABLE FROM CONDUIT	FOOT	1034

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = ...\P141509-11_Interconnect Schematic.dgn	USER NAME = brd	DESIGNED - BRD	REVISED -
		DRAWN - OJT	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - JJE	REVISED -
	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

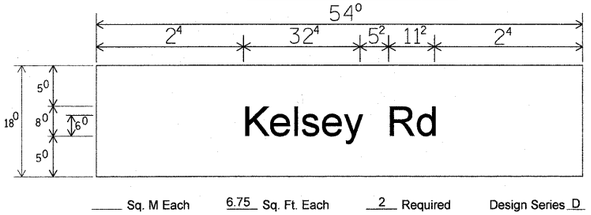
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 FROM KELSEY ROAD/PLUM TREE ROAD TO PEPPER ROAD
INTERCONNECT SCHEMATIC

SCALE: NOT TO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

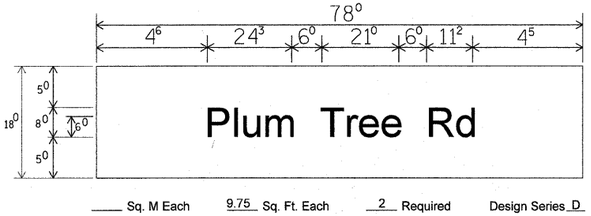
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	24
		CONTRACT NO. 60K17		
		ILLINOIS FED. AID PROJECT		

PANEL SIGN DESIGN TYPE 1

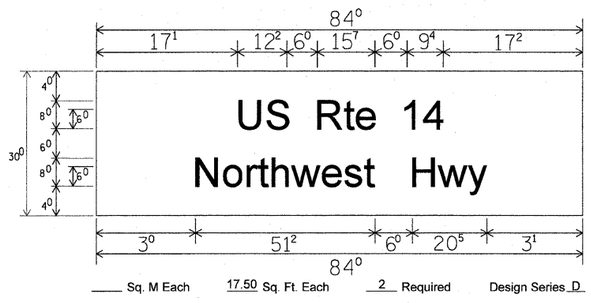


____ Sq. M Each 6.75 Sq. Ft. Each 2 Required Design Series D

PANEL SIGN DESIGN TYPE 2

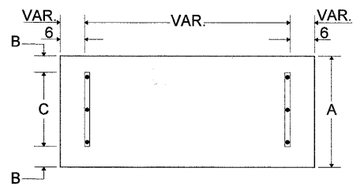


____ Sq. M Each 9.75 Sq. Ft. Each 2 Required Design Series D

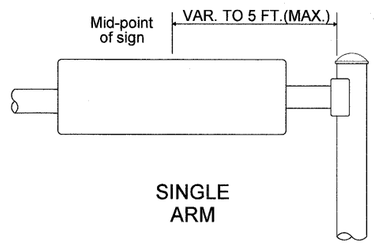


____ Sq. M Each 17.50 Sq. Ft. Each 2 Required Design Series D

SUPPORTING CHANNELS

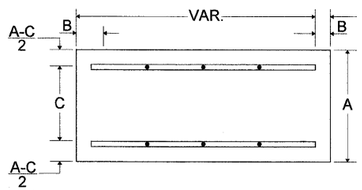


A	B	C
18"	2"	14"

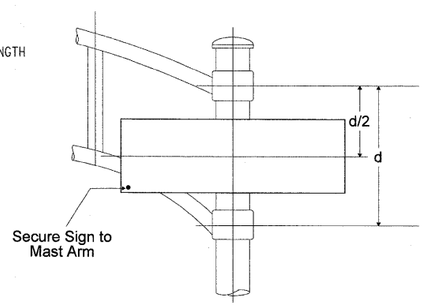


SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM shall be used. See Note #5.

SUPPORTING CHANNELS



A	B	C
18"	2"	12"
30"	2"	22"



NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS.

GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011, 877012, AS APPLICABLE. PLUS TWO (2) SIGN PANELS 2'-6" X 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR THE STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITIES.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVER ALL LENGTH SHALL NOT EXCEED 8'0".
4. ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:

*J.O. HERBERT CO.
MIDLOTHIAN, VA

* WESTERN REMAC INC.
WOODRIDGE, IL

PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	1/4 " x 14 x 1" H.W.H #3
	SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL)
	CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

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

EXAMPLE, $2^{(3)}$ DENOTES 3/8"

UPPER TO LOWER CASE
SPACING CHART 8-6 INCH SERIES "C & D"

	SECOND LETTER															
	a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1^2	1^4	1^4	1^5	1^2	1^4	0^6	1^0	1^1	1^4	0^6	1^0	1^1	1^2	1^2	1^4
B	1^4	1^5	2^0	2^1	1^4	1^5	1^1	1^2	1^4	1^5	1^2	1^4	1^2	1^4	1^6	1^7
C E G	1^4	1^5	2^0	2^1	1^2	1^4	0^6	1^0	1^2	1^4	1^2	1^4	1^4	1^5	1^4	1^5
D O Q R	1^4	1^5	2^0	2^1	1^4	1^5	0^6	1^0	1^2	1^4	1^2	1^4	1^4	1^5	1^4	1^5
F	0^5	0^6	1^4	1^5	0^6	1^0	0^5	0^6	0^6	1^0	0^6	1^0	0^6	1^0	1^1	1^2
H I M N	2^0	2^1	2^2	2^4	2^0	2^1	1^4	1^5	1^6	1^7	1^6	1^7	2^0	2^1	2^0	2^1
J U	2^0	2^1	2^0	2^1	1^6	1^7	1^4	1^5	1^6	1^7	1^6	1^7	1^6	1^7	2^0	2^1
K L	1^1	1^2	1^6	1^7	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4
P	1^2	1^4	1^4	1^5	1^2	1^4	0^5	0^6	1^1	1^2	1^1	1^2	1^2	1^4	1^2	1^4
S	1^2	1^4	1^6	1^7	1^2	1^4	0^6	1^0	1^2	1^4	1^2	1^4	1^2	1^4	1^2	1^4
T	1^1	1^2	1^6	1^7	0^6	1^0	0^6	1^0	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4
V	0^6	1^0	1^4	1^5	1^1	1^2	0^6	1^0	1^2	1^4	1^2	1^4	1^2	1^4	1^2	1^4
Y	0^5	0^6	1^4	1^5	0^6	1^0	0^5	0^6	0^5	0^7	0^5	0^6	0^6	1^0	1^1	1^2
Z	1^6	1^7	2^2	2^4	1^6	1^7	1^2	1^4	1^6	1^7	1^6	1^7	1^6	1^7	2^0	2^1

LOWER CASE TO LOWER CASE
SPACING CHART 6 INCH SERIES "C" & "D"

FIRST LETTER	SECOND LETTER															
	a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d g h i j l m n q u	1^6	1^7	2^2	2^4	1^6	1^7	1^2	1^4	1^4	1^5	1^4	1^5	1^6	1^7	1^6	1^7
b f k o p s	1^2	1^4	1^6	1^7	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^2	1^4	1^2	1^4
c e	1^2	1^4	1^6	1^7	1^2	1^4	0^6	1^0	1^2	1^4	1^2	1^4	1^2	1^4	1^2	1^4
r	0^6	1^0	1^2	1^4	0^6	1^0	0^3	0^3	0^5	0^6	0^5	0^6	0^6	1^0	0^6	1^0
t z	1^2	1^4	1^6	1^7	1^2	1^4	0^6	1^0	1^1	1^2	1^1	1^2	1^2	1^4	1^2	1^4
v y	1^1	1^2	1^4	1^5	1^1	1^2	0^5	0^6	0^6	1^0	0^6	1^0	1^1	1^2	1^1	1^2
w	1^1	1^2	1^4	1^5	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4
x	1^2	1^4	1^6	1^7	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4

NUMBER TO NUMBER
SPACING CHART 8 INCH SERIES "C" & "D"

FIRST NUMBER	SECOND NUMBER																			
	0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1^6	1^7	1^6	1^7	1^4	1^5	1^2	1^4	1^4	1^5	1^4	1^5	1^6	1^7	1^2	1^4	1^6	1^7	1^6	1^7
1	2^0	2^1	2^0	2^1	2^0	2^1	1^6	1^7	1^4	1^5	2^0	2^1	2^0	2^1	1^4	1^5	2^0	2^1	2^0	2^1
2 3 4	1^4	1^5	1^4	1^5	1^4	1^5	1^2	1^4	1^2	1^4	1^4	1^5	1^4	1^5	1^1	1^2	1^6	1^7	1^4	1^5
5	1^4	1^5	1^4	1^5	1^4	1^5	1^1	1^2	1^1	1^2	1^4	1^5	1^4	1^5	1^1	1^2	1^4	1^5	1^4	1^5
6	1^6	1^7	1^4	1^5	1^4	1^5	1^2	1^5	1^2	1^4	1^4	1^5	1^4	1^5	1^1	1^2	1^4	1^5	1^4	1^5
7	1^2	1^4	1^2	1^4	1^4	1^5	1^2	1^5	0^5	0^6	1^2	1^4	1^4	1^5	1^1	1^2	1^4	1^5	1^2	1^4
8	1^6	1^7	1^6	1^7	1^4	1^5	1^2	1^5	1^2	1^4	1^4	1^5	1^6	1^7	1^2	1^4	1^6	1^7	1^4	1^5

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS SERIES C	6 INCH UPPER CASE LETTERS SERIES D	8 INCH UPPER CASE LETTERS SERIES C	8 INCH UPPER CASE LETTERS SERIES D	LETTERS	6 INCH LOWER CASE LETTERS SERIES C	6 INCH LOWER CASE LETTERS SERIES D
A	3^6	5^0	5^0	6^5	a	3^5	4^2
B	3^2	4^0	4^3	5^3	b	3^5	4^2
C	3^2	4^0	4^3	5^3	c	3^5	4^1
D	3^2	4^0	4^3	5^3	d	3^5	4^2
E	3^0	3^6	4^0	4^7	e	3^5	4^2
F	3^0	3^5	4^0	4^7	f	2^3	2^6
G	3^2	4^0	4^3	5^3	g	3^5	4^2
H	3^2	4^0	4^3	5^3	h	3^5	4^2
I	0^7	0^7	1^1	1^2	i	1^1	1^1
J	3^0	3^6	4^0	5^0	j	2^0	2^2
K	3^2	4^1	4^3	5^4	k	3^5	4^2
L	3^0	3^5	4^0	4^7	l	1^1	1^1
M	3^7	4^5	5^1	6^1	m	6^0	7^0
N	3^2	4^0	4^3	5^3	n	3^5	4^2
O	3^4	4^2	4^5	5^5	o	3^6	4^3
P	3^2	4^0	4^3	5^3	p	3^5	4^2
Q	3^4	4^2	4^5	5^5	q	3^5	4^2
R	3^2	4^0	4^3	5^3	r	2^6	3^2
S	3^2	4^0	4^3	5^3	s	3^6	4^2
T	3^0	3^5	4^0	4^7	t	2^7	3^2
U	3^2	4^0	4^3	5^3	u	3^5	4^2
V	3^5	4^4	4^7	6^0	v	4^2	4^7
W	4^4	5^2	6^0	7^0	w	5^5	6^4
X	3^4	4^0	4^5	5^3	x	4^4	5^1
Y	3^6	5^0	5^0	6^6	y	4^6	5^3
Z	3^2	4^0	4^3	5^3	z	3^6	4^3

NUMBER	6 INCH SERIES C	6 INCH SERIES D	8 INCH SERIES C	8 INCH SERIES D
1	1^2	1^4	1^5	2^0
2	3^2	4^0	4^3	5^3
3	3^2	4^0	4^3	5^3
4	3^5	4^0	4^7	5^7
5	3^2	4^0	4^3	5^3
6	3^2	4^0	4^3	5^3
7	3^2	4^0	4^3	5^3
8	3^2	4^0	4^3	5^3
9	3^2	4^0	4^3	5^3
0	3^4	4^2	4^5	5^5

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	PLOT DATE = 1/21/2011	DATE - 01/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 AND KELSEY ROAD/PLUM TREE ROAD
MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NOT TO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	25
		CONTRACT NO. 60K17		
	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

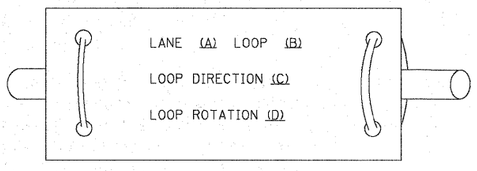
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

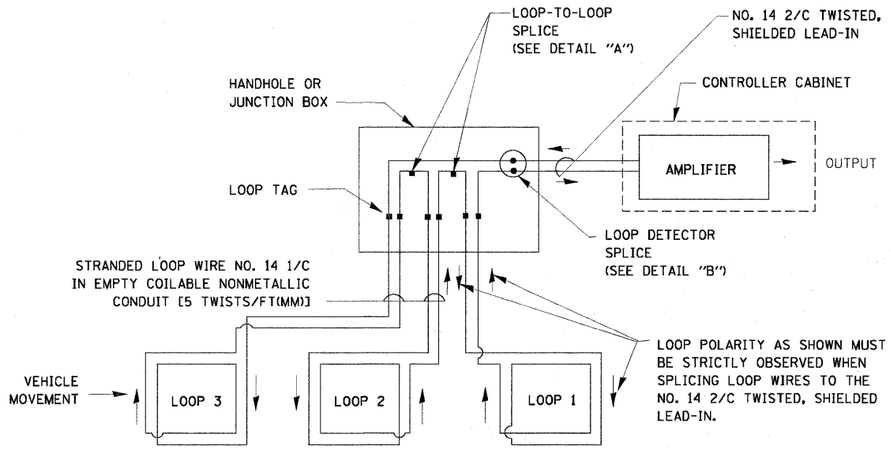


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

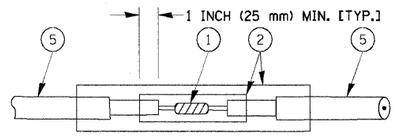
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

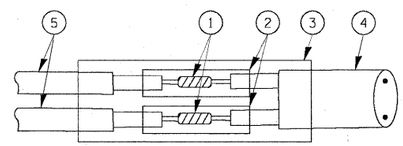


DETECTOR LOOP WIRING SCHEMATIC

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

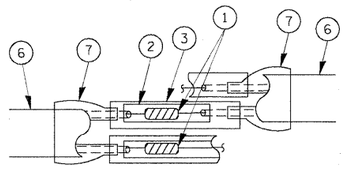


DETAIL "A"
LOOP-TO-LOOP SPLICE



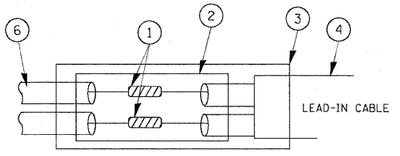
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) 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

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME = c:\pw_work\PWIDOT\KANTHAPHIXAYBC\d0112634\traffic_legend_v7.dgn	USER NAME = kanthaphixaybc	DESIGNED - DAD	REVISED -
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	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

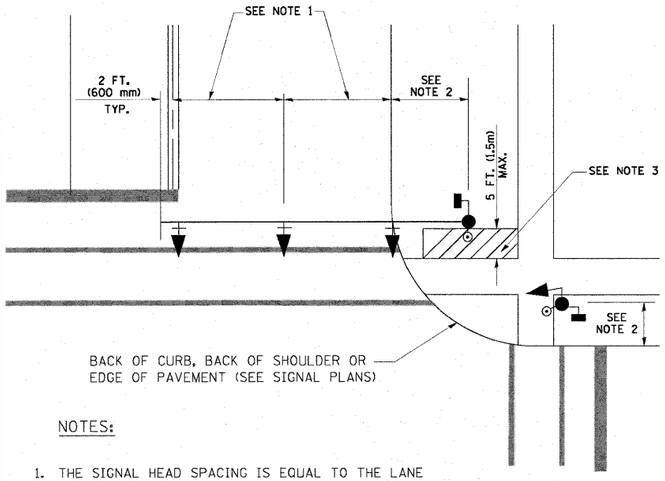
SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	26
		CONTRACT NO. 60K17		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

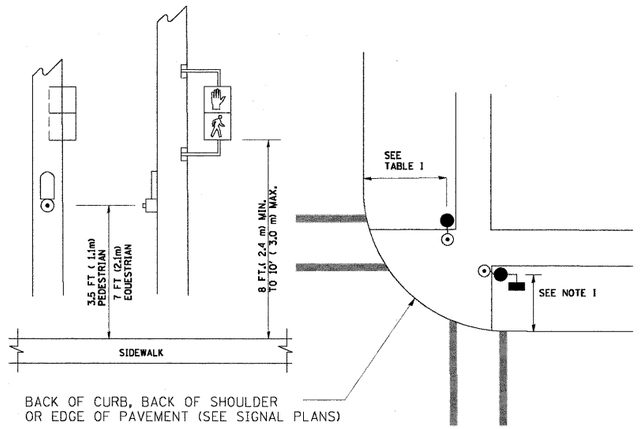
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. 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."

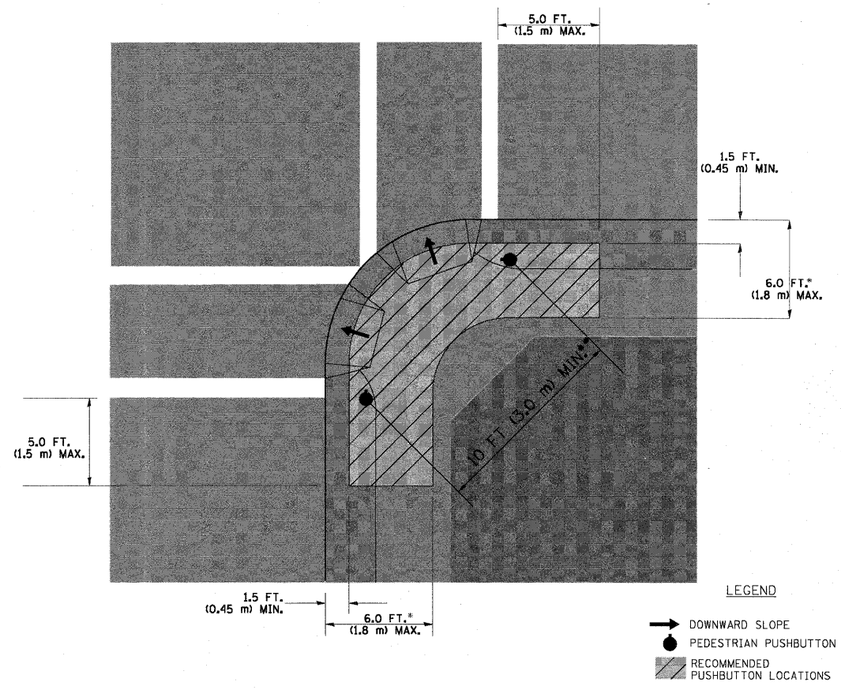
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

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.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT 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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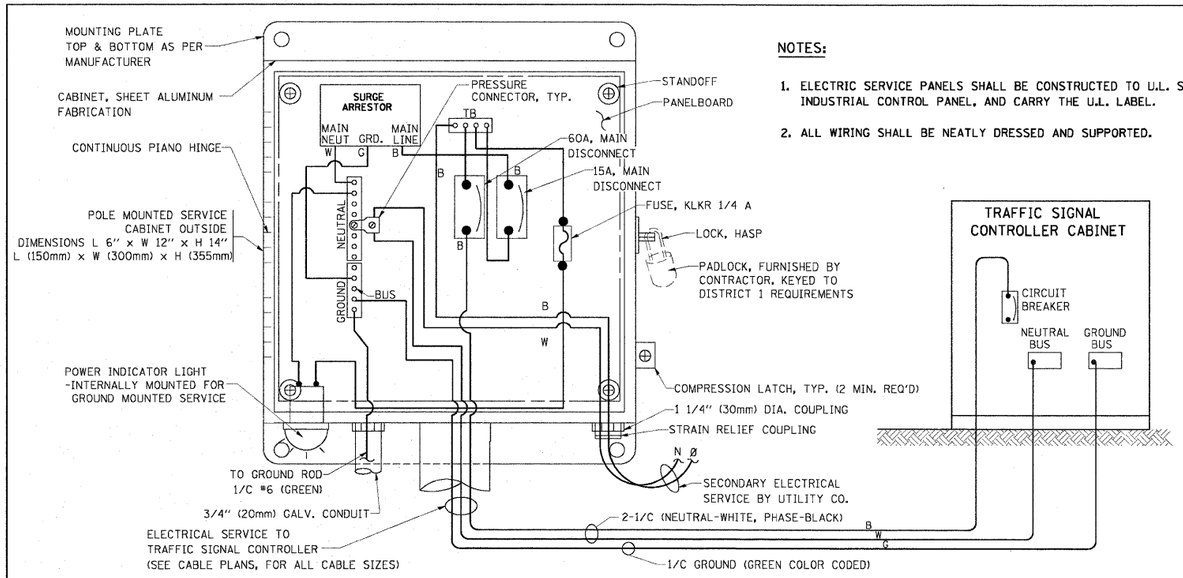
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	27
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



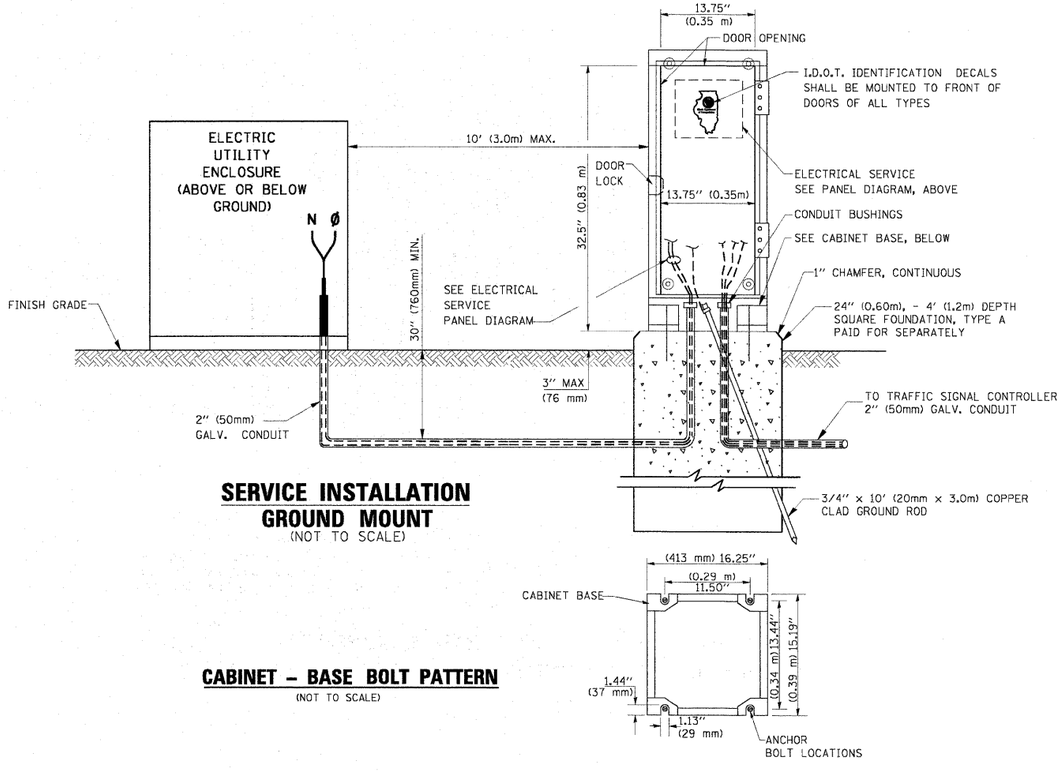
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

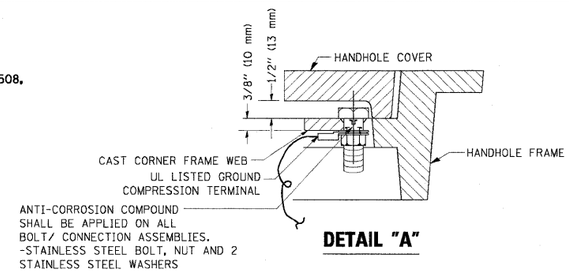


SERVICE INSTALLATION GROUND MOUNT

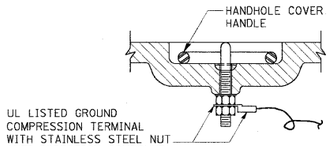
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



DETAIL "A"

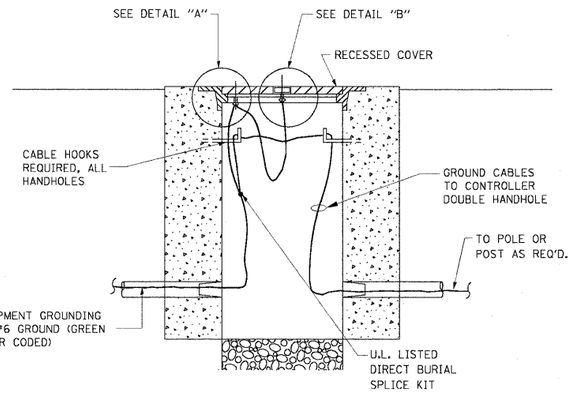


DETAIL "B"

NOTES:

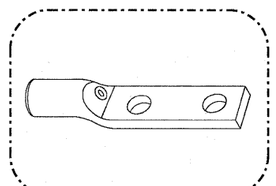
GROUNDING SYSTEM

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" DIA. x 10'-0" (20mm x 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.

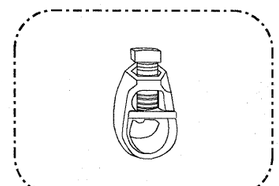


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



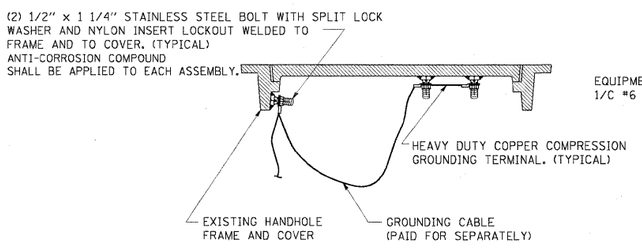
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

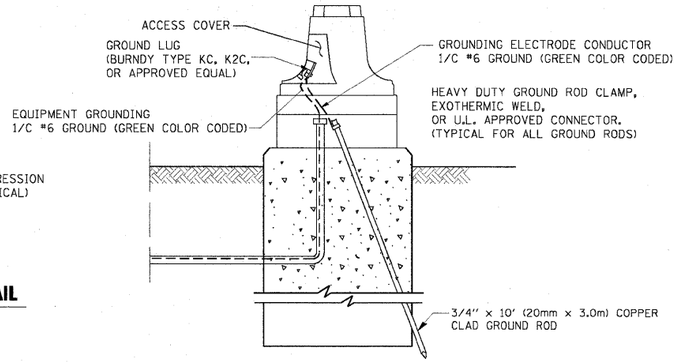
NOTES:

- 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.



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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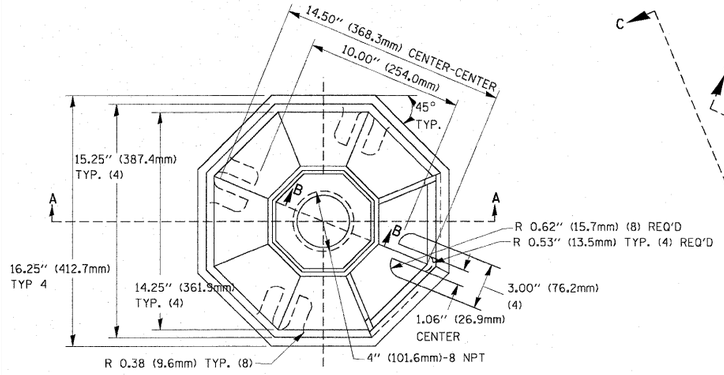
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

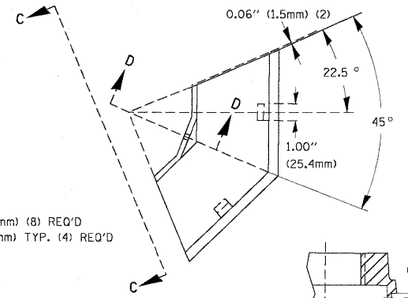
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

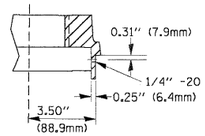
SCALE: | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	28
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

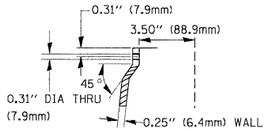


TOP VIEW

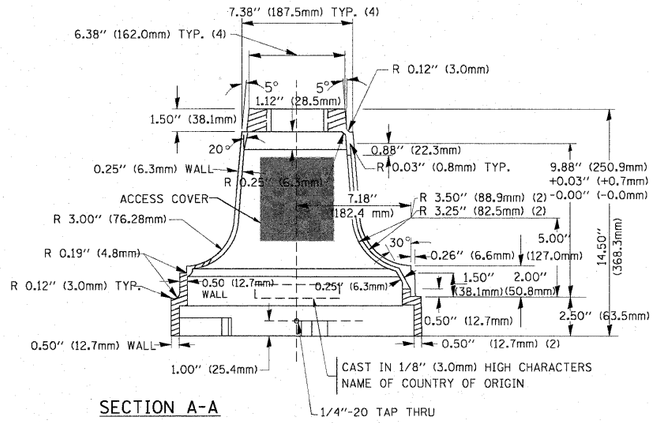




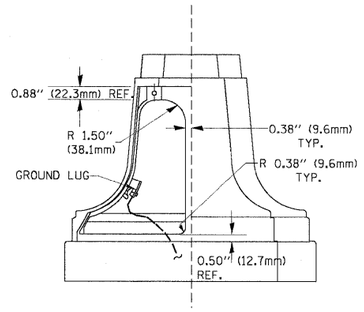
SECTION B-B



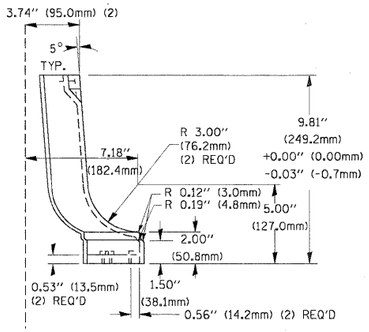
SECTION D-D



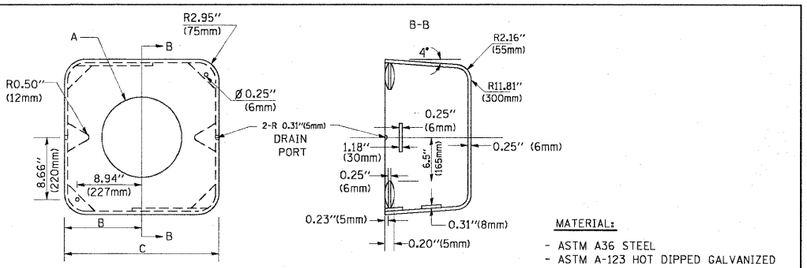
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

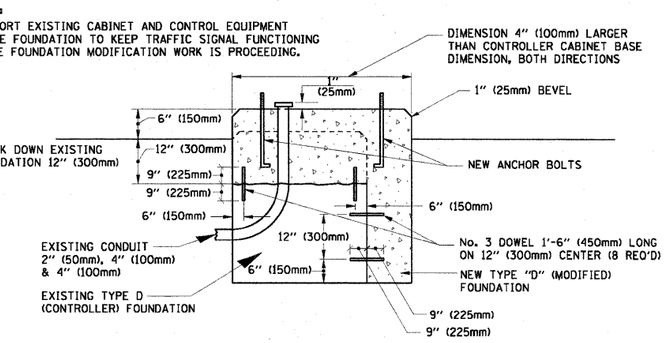
A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57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

SHROUD

NOTES:

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

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

POST CAP MOUNT

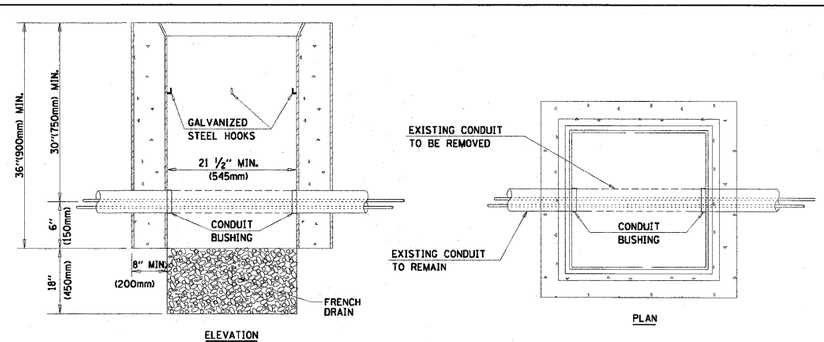
MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR 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 ¾"(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.



NOTES:

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

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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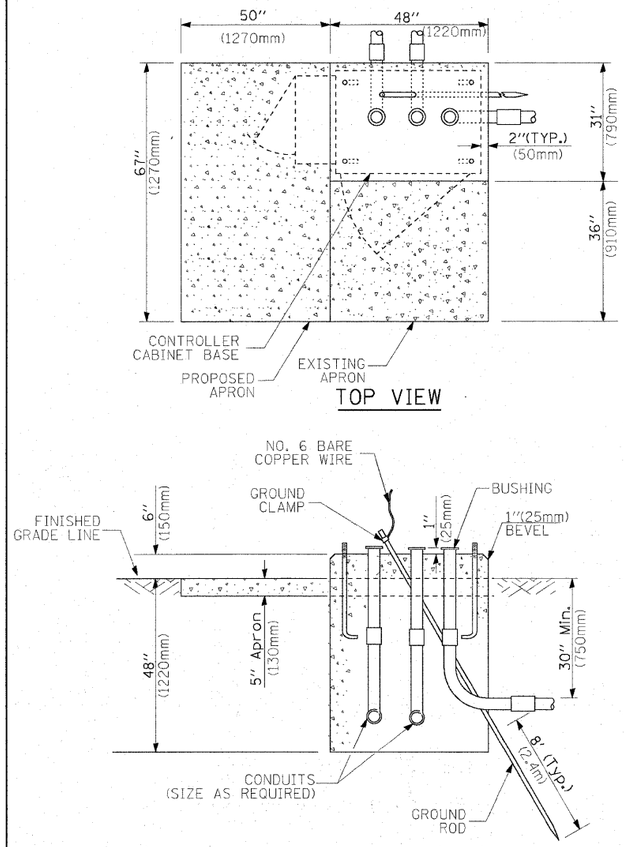
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

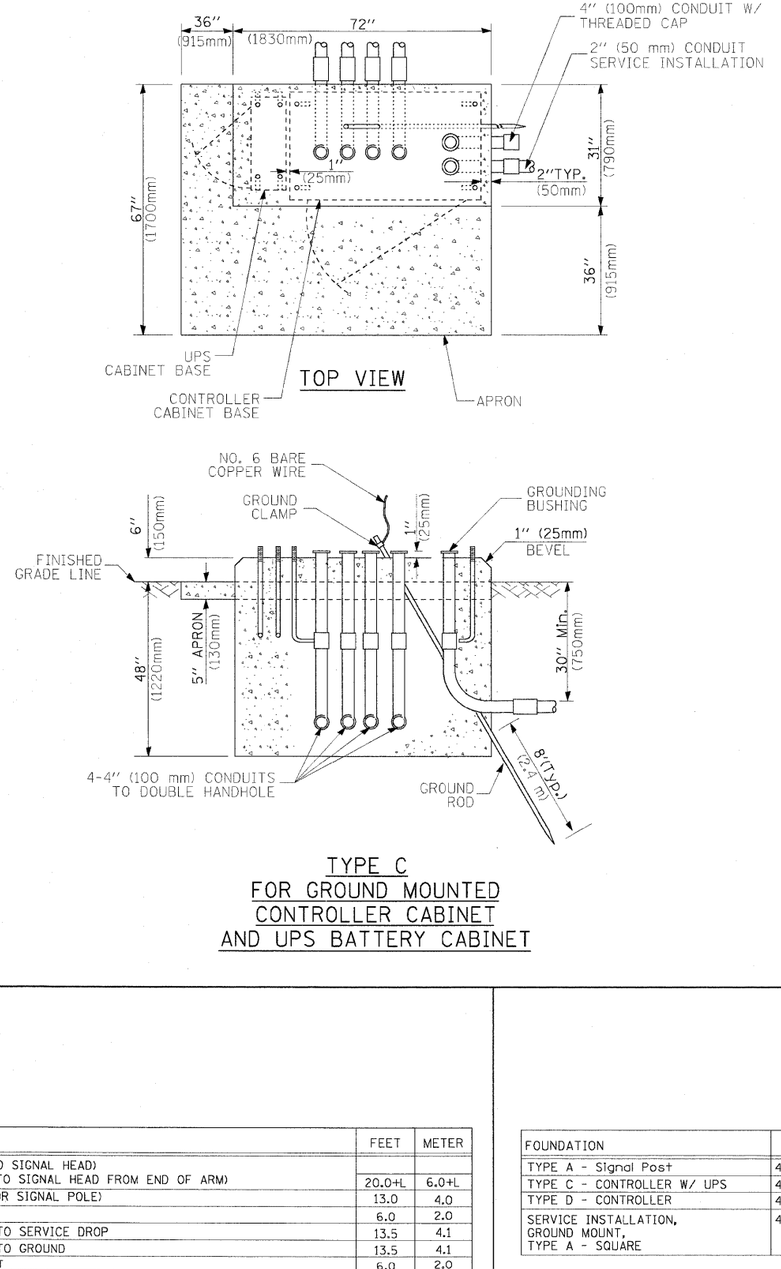
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

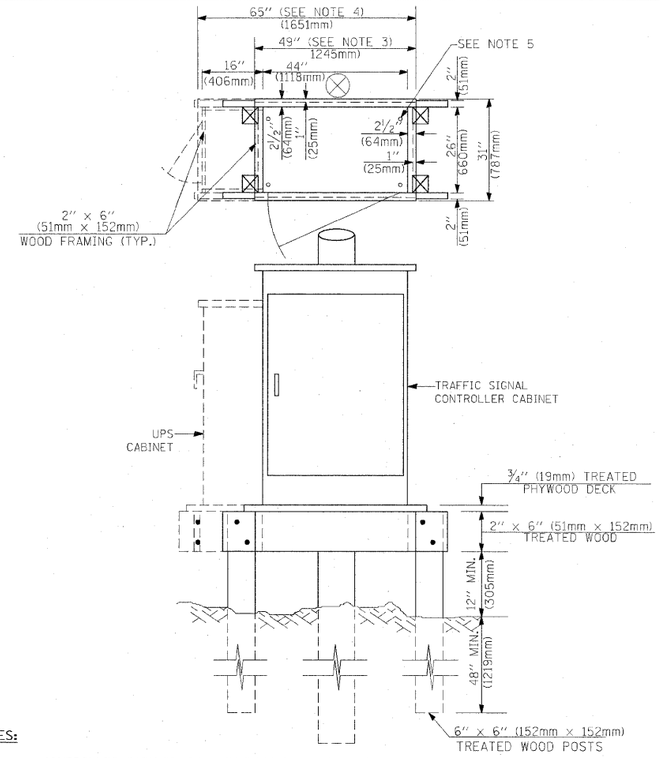
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	29
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



NOTES:

1. 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.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

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

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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		DRAWN - BCK	REVISED -
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	PLOT DATE = 12/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	30
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET		RR	RR
COMMUNICATIONS CABINET	R CC	ECC	CC
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTIBLE POWER SUPPLY	R UPS	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G ◄Y ◄G	R Y G ◄Y ◄G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD		R Y G ◄Y ◄G "P"	R Y G ◄Y ◄G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		1	1

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		1	1
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RMF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		P	
EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PP	
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET	RR	RR
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

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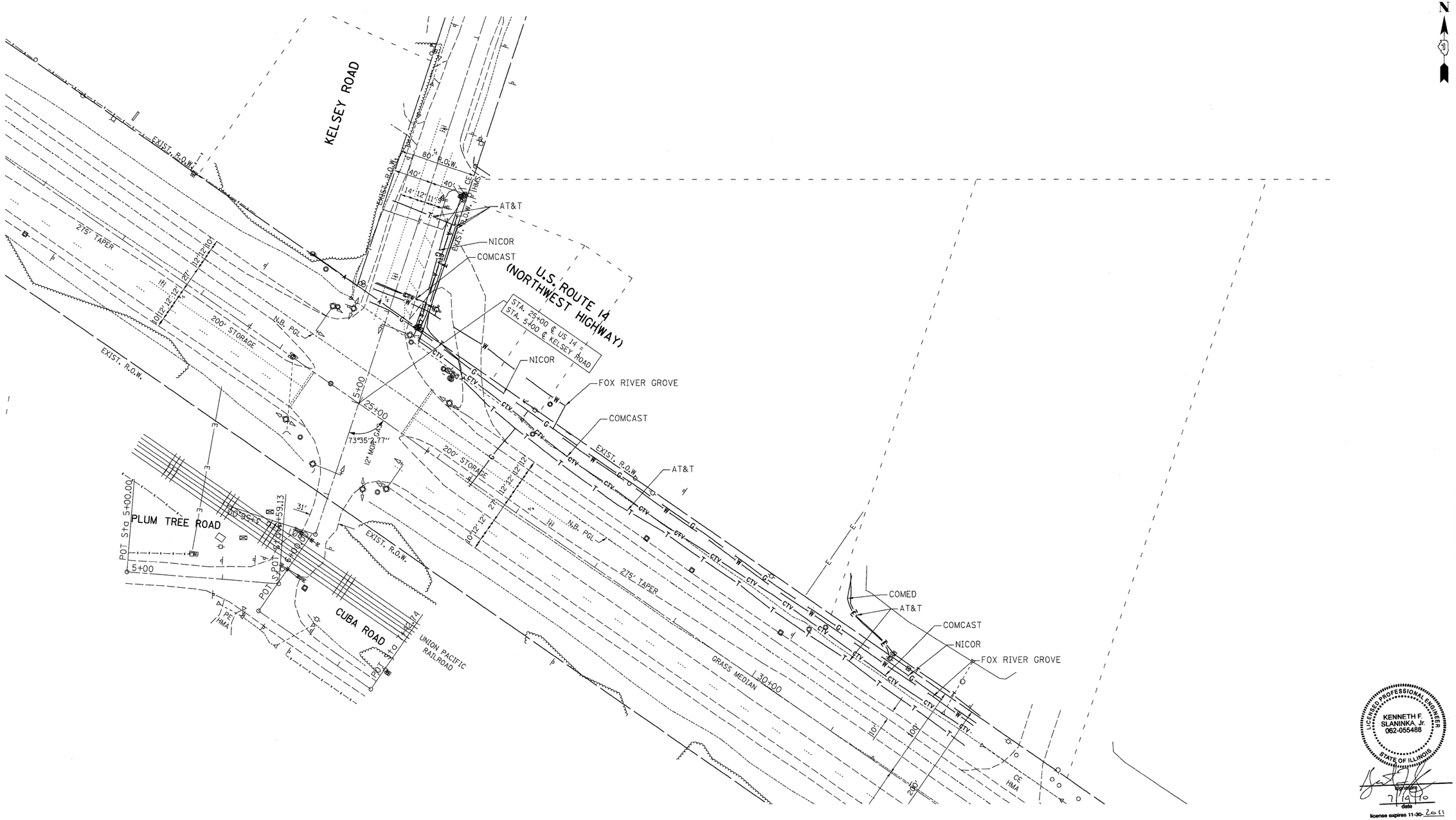
		DRAWN - BCK	REVISED -	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - DAD	REVISED -	
	PLOT DATE = 1/21/2011	DATE - 10/28/09	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24R-N-2	LAKE	43	31
		CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



UNKNOWN	
CABLE TV	
TELEPHONE	
GAS	
ELECTRIC	
WATER	
FIBER OPTIC	
AERIAL UTILITY	
TBE TEST HOLE	

Utilities shown in color on these plans as depicted in the legend have been investigated by Cardno TBE in accordance with SUE Industry Standards. All other information shown has been provided to Cardno TBE by others. Cardno TBE's Quality Level "B" SUE field investigation was finished on 6/18/10. Changes to utilities after 6/18/10 may have been made and therefore may result in variances from this plan. Consideration should be given to updating this plan if deemed advisable prior to final design and construction.

ALL UTILITIES SHOWN QUALITY LEVEL "B" UNLESS NOTED OTHERWISE.

Utility Quality Level "A" : Test Hole
Utility Quality Level "B" : Designating
Utility Quality Level "C" : Research with Survey
Utility Quality Level "D" : Records Research

KENNETH F. SLANINKA, Jr. 062-055488 LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS
signature
7/19/10
date
license expires 11-30-2011

TBE GROUP

TBE GROUP, INC.
CIVIL ENGINEERING • TRANSPORTATION • ENVIRONMENTAL • PLANNING • UTILITY ENGINEERING/LOCATING

20 0 METERS 20 40
50 0 FEET 50 100

TBE Job No. IL09510406
SUE Plan Page: 1 of 1

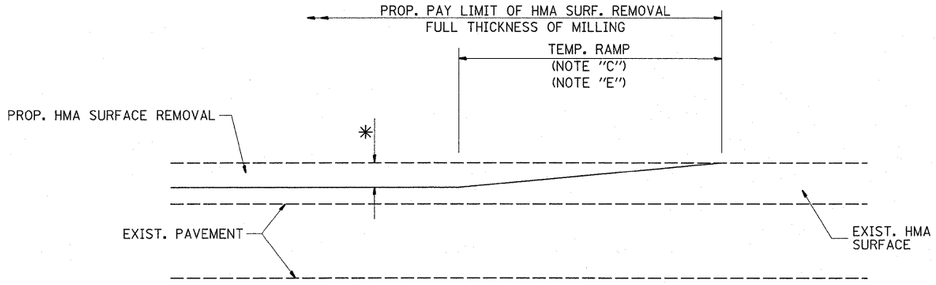
DESIGNED	EG	REVISED	
DRAWN	KLC	REVISED	
CHECKED	KFS	REVISED	
DATE	7/08/10	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US RT. 14 (Northwest Highway) at Kelsey Road in Barrington

SCALE: SHEET NO.

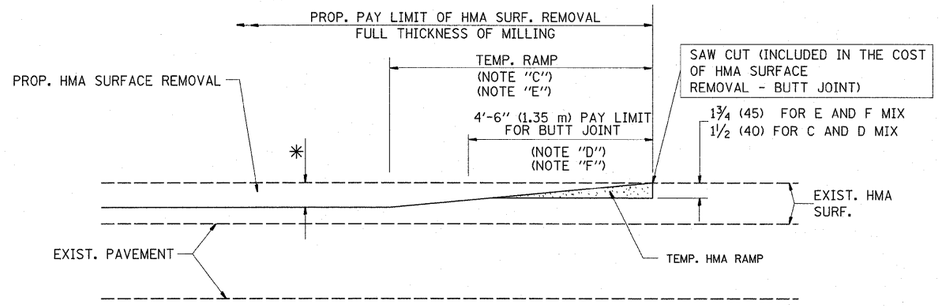
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	24R-N-2	LAKE	43	32
		Contract No. 60K17		
FED. ROAD DIST. NO.	ILLINOIS			



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

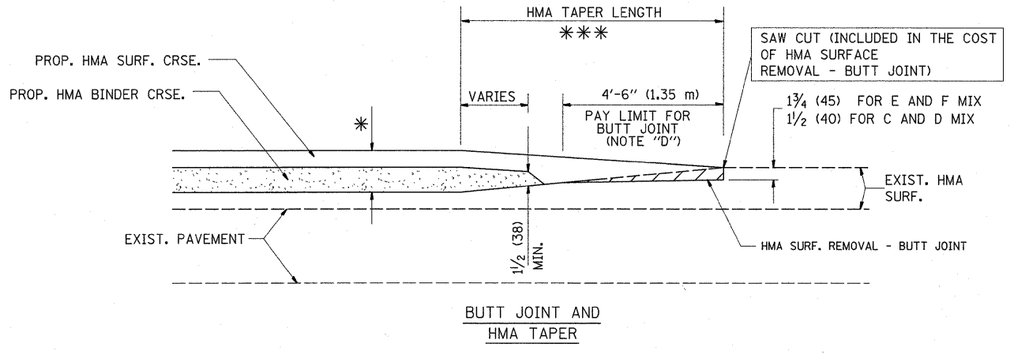


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

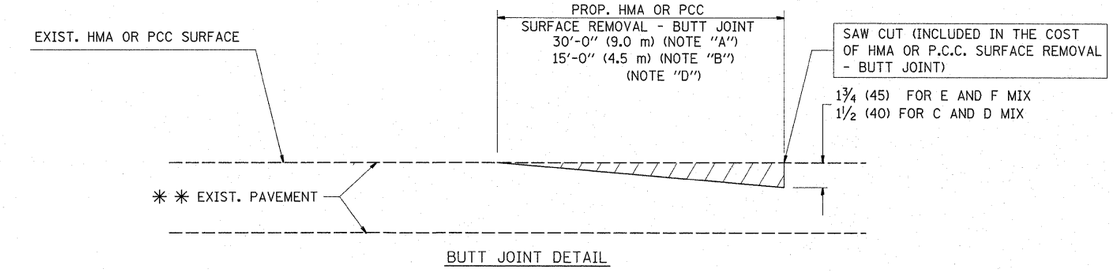
OPTION 2

TYPICAL TEMPORARY RAMP

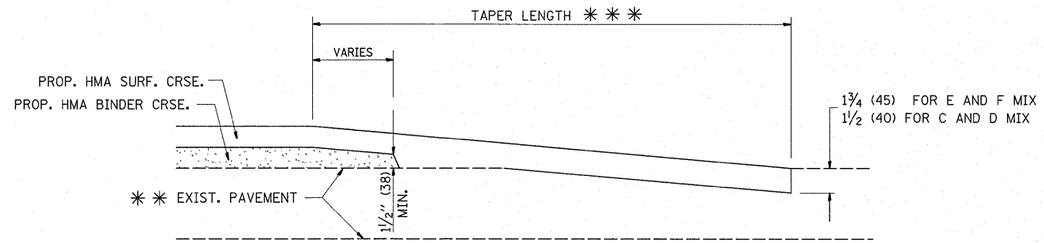


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

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")

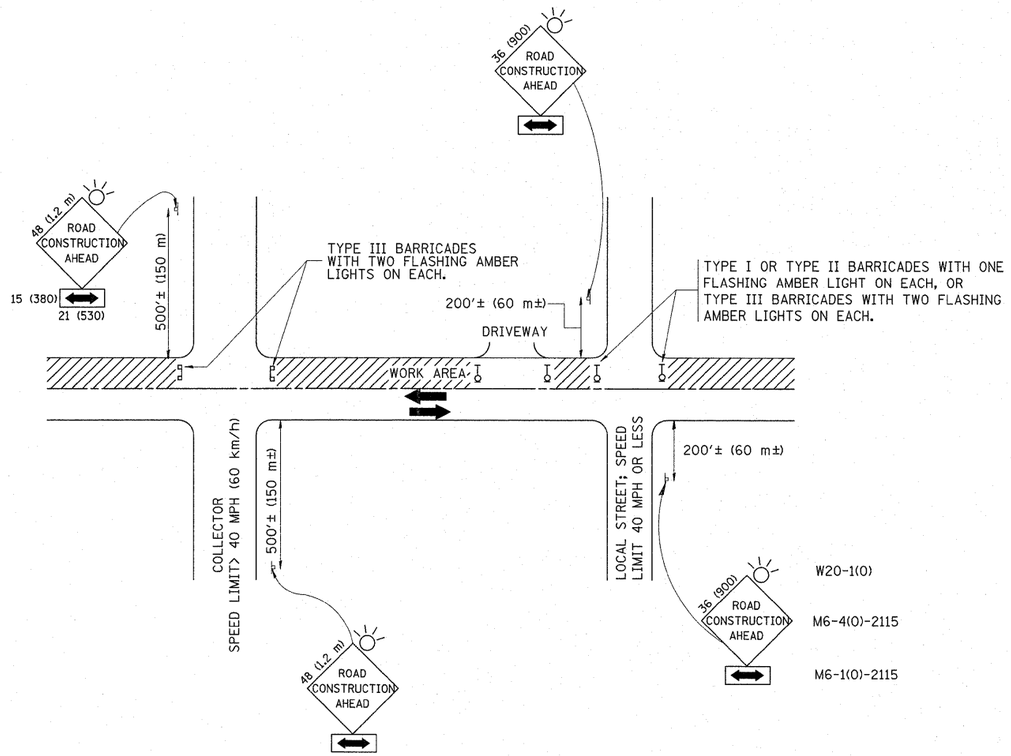
BASIS OF PAYMENT:

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".

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

FILE NAME = c:\pw_work\pwidot\guillaumefp\d0156198\P141509-Design.dgn	USER NAME = guillaumefp	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**BUTT JOINT AND HMA TAPER DETAILS**
		DRAWN -	REVISED - A. ABBAS 03-21-97		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01		
	PLOT DATE = 2/5/2011	DATE - 06-13-90	REVISED - R. BORO 01-01-07		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	33
	BD400-05 BD32	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) 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:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

   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 SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

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.

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

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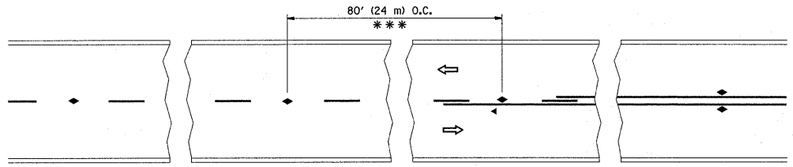
		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 2/5/2011	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

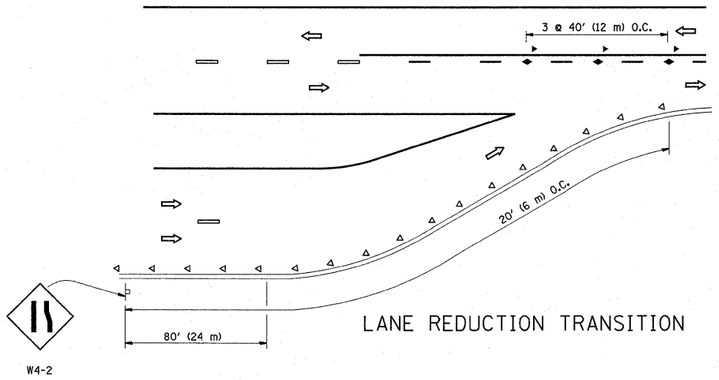
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	34
	TC-10	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

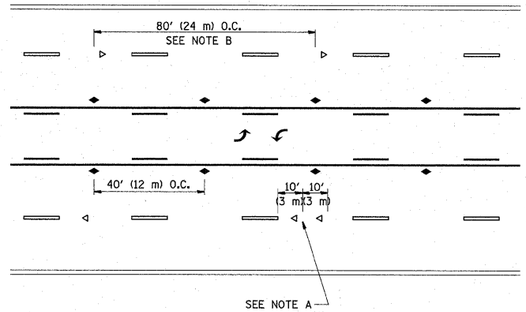


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

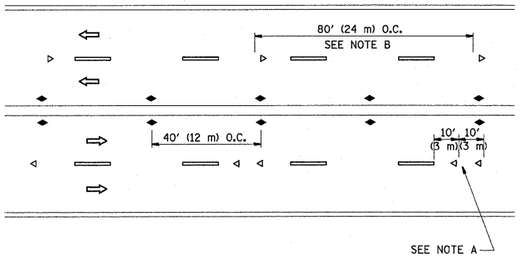
TWO-LANE/TWO-WAY



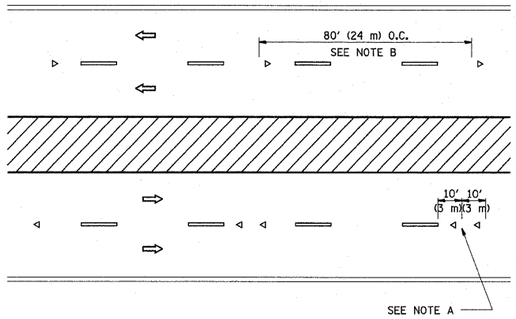
LANE REDUCTION TRANSITION



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.

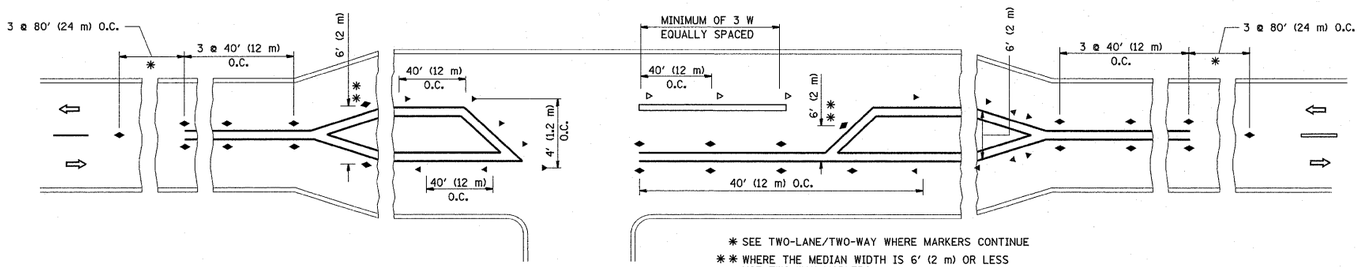
SYMBOLS

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

LANE MARKER NOTES

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.

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.



* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

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

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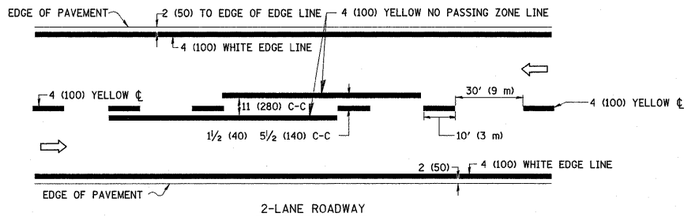
		DRAWN -	REVISED - T. RAMMACHER 03-12-99
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
	PLOT DATE = 2/5/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

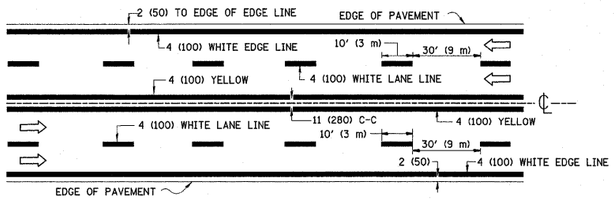
TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

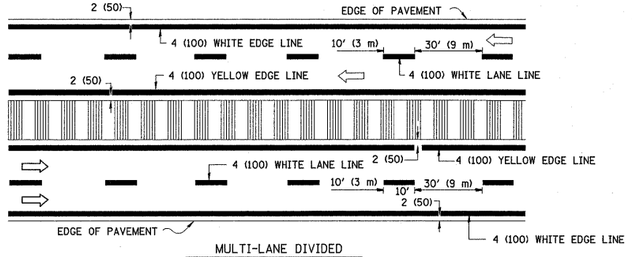
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	35
	TC-11	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



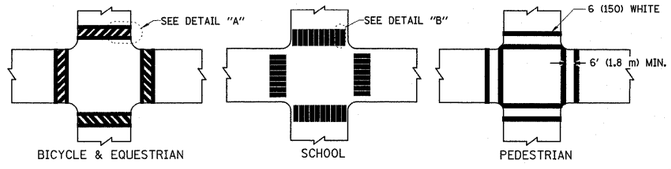
MULTI-LANE UNDIVIDED

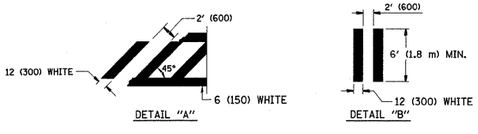


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

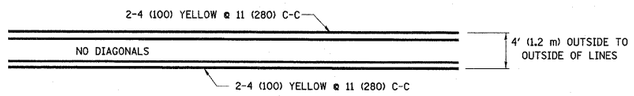
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

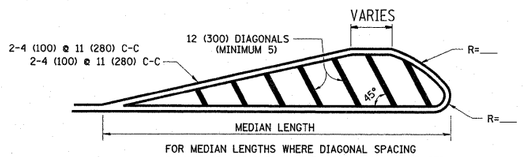




TYPICAL CROSSWALK MARKING



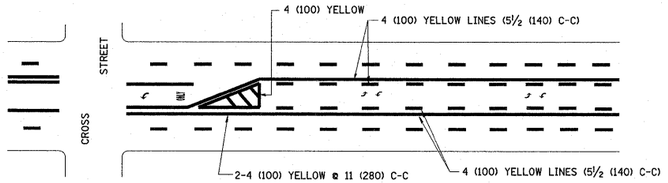
4' (1.2 m) WIDE MEDIANS ONLY



FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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))

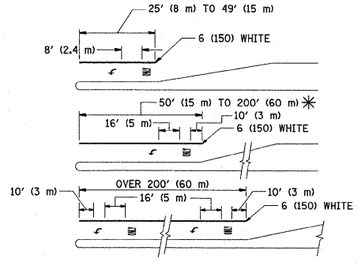
MEDIANS OVER 4' (1.2 m) WIDE



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

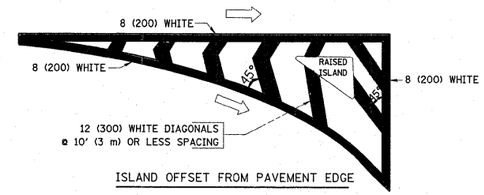


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

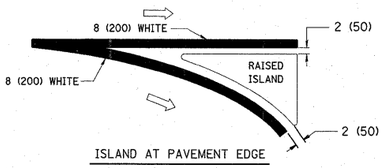
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

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 UNDIVEDED PAVEMENT	2 ⧈ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ⧈ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE 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 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & 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' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 ⧈ 4 (100) WITH 12 (300) DIAGONALS ⧈ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS ⧈ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
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) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 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.

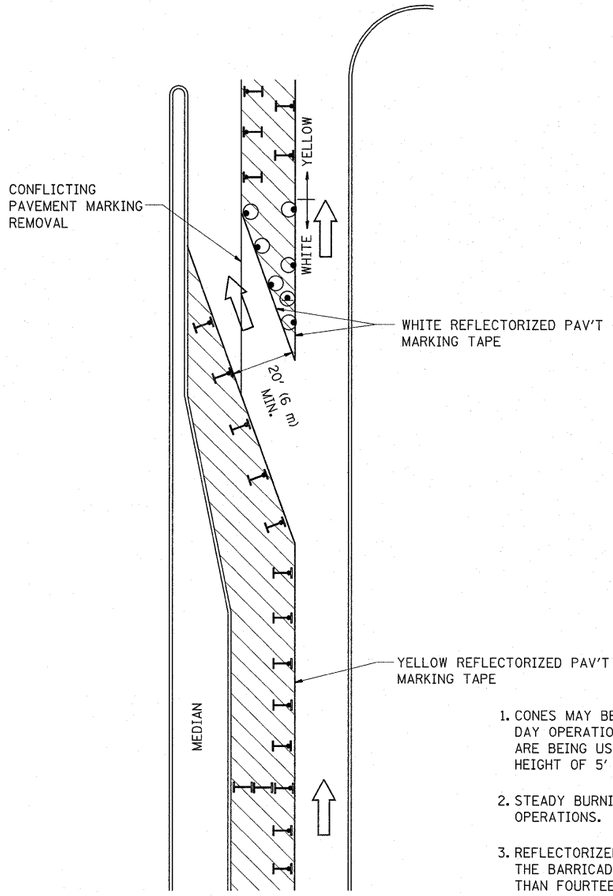
FILE NAME = c:\pw_work\pwidot\guillaumefp\d0156198\PI41509-Design.dgn	USER NAME = guillaumefp	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
		DRAWN -	REVISED -A. HOUSEH 10-09-96
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -A. HOUSEH 10-17-96
	PLOT DATE = 2/5/2011	DATE - 03-19-90	REVISED -T. RAMMACHER 01-06-00

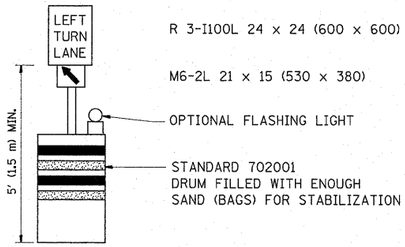
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	36
	TC-13	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. 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 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM BT 725 IS REQUIRED.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

LEGEND

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

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

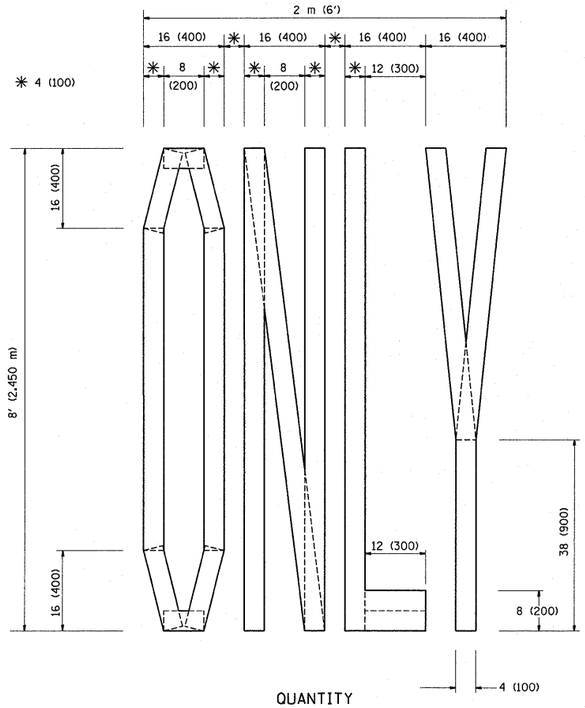
FILE NAME = c:\pw_work\pwidot\guillaumefp\d0156198\P41509-Design.dgn	USER NAME = guillaumefp	DESIGNED -	REVISED -T. RAMMACHER 09-08-94
		DRAWN -	REVISED - A. HOUSEH 11-07-95
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-12-96
	PLOT DATE = 2/5/2011	DATE -	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

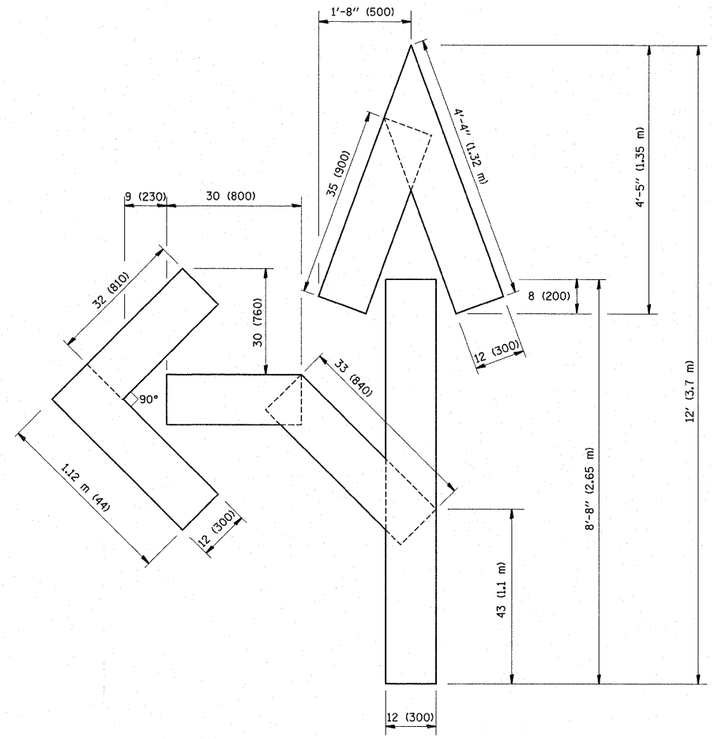
TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

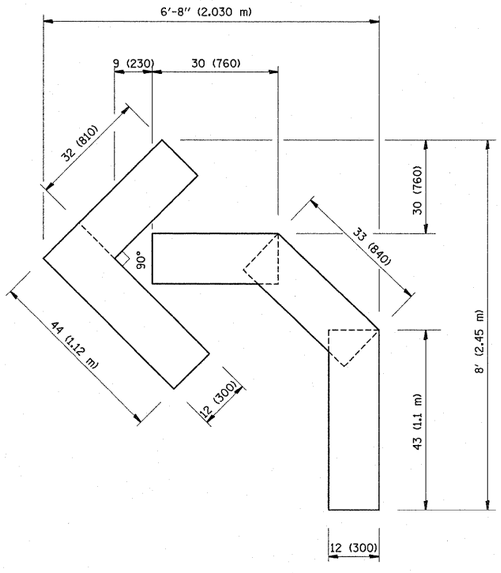
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	37
	TC-14	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)



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



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

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

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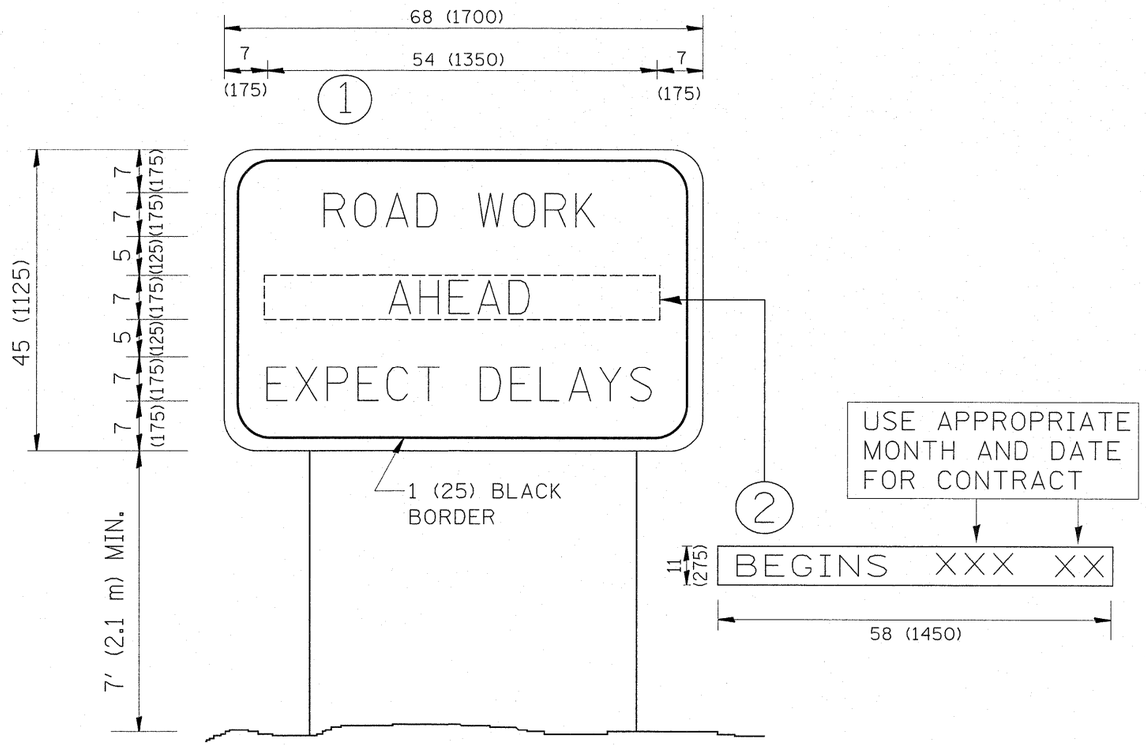
		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 2/5/2011	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	38
	TC-16	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

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

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

FILE NAME = c:\pw_work\pwidot\guillaumefp\d0156198\P41509-Design.dgn	USER NAME = guillaumefp	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99
	PLOT DATE = 2/5/2011	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

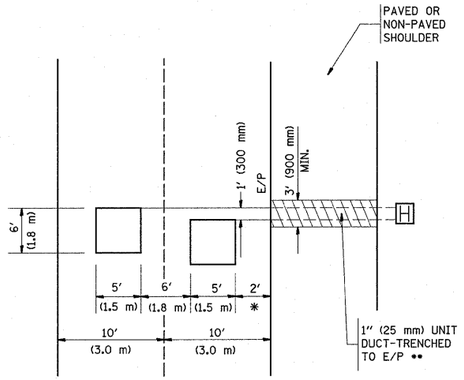
ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	39
	TC-22	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOPS NEXT TO SHOULDERS

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

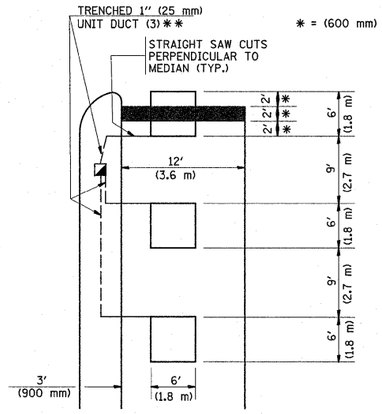


* = (600 mm)

** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

LEFT TURN LANES WITH MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)

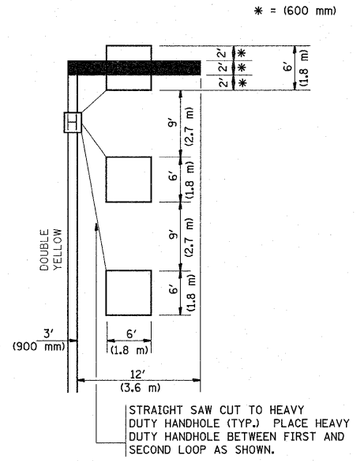
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

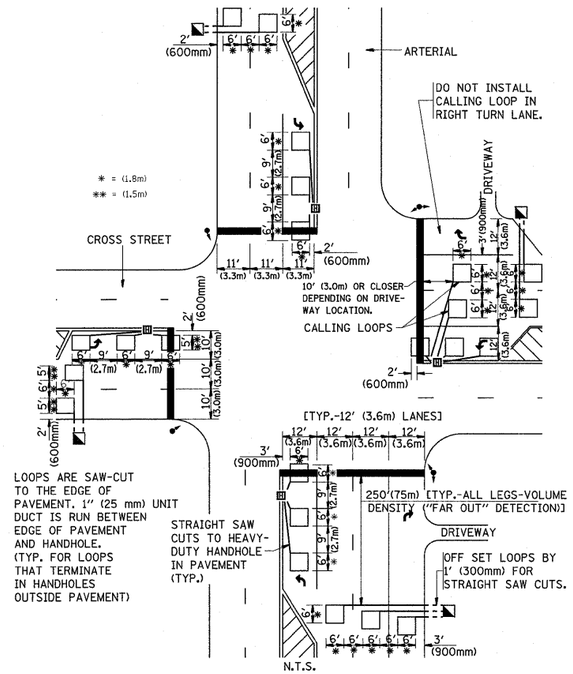
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)



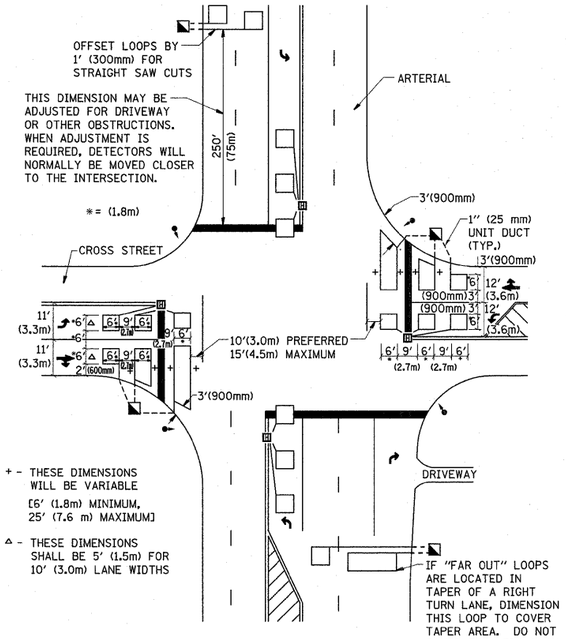
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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



DETAIL 1
N.T.S.

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



DETAIL 2
N.T.S.

NOTES:

VEHICLES LOOP DETECTORS

* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
* ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
* EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
* WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
* WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

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		DRAWN -	REVISED -
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	PLOT DATE = 2/5/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 – DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	40
	TS-07	CONTRACT NO. 60K17		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

810 805 800

U.S. ROUTE 14

R.O.W.

800.59 800.71 801.07 801.18 801.22 801.37 801.24 800.98

3.44Rt 3.53Lt

795.23

UNSUIT= 29.61
CUT= 71.39
FILL= 5.3

25 + 89.00

U.S. ROUTE 14

R.O.W.

800.86 801.36 801.42 803.32

UNSUIT= 27.72
CUT= 6.25
FILL= 0.00

25 + 00.00

U.S. ROUTE 14

R.O.W.

805.69 805.83 805.52 806.25 806.01 805.77

UNSUIT= 8.09
CUT= 5.24
FILL= 7.95

24 + 00.00

U.S. ROUTE 14

R.O.W.

808.83 809.07 809.31 808.36 809.17 808.93 808.69

UNSUIT= 6.74
CUT= 3.89
FILL= 7.41

23 + 00.00

U.S. ROUTE 14

R.O.W.

810.29

22 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

FILE NAME = c:\pw_work\pwidot\guillaumefp\d0156198\P141509-sht-xssht-us14.dgn	USER NAME = guillaumefp	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/7/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

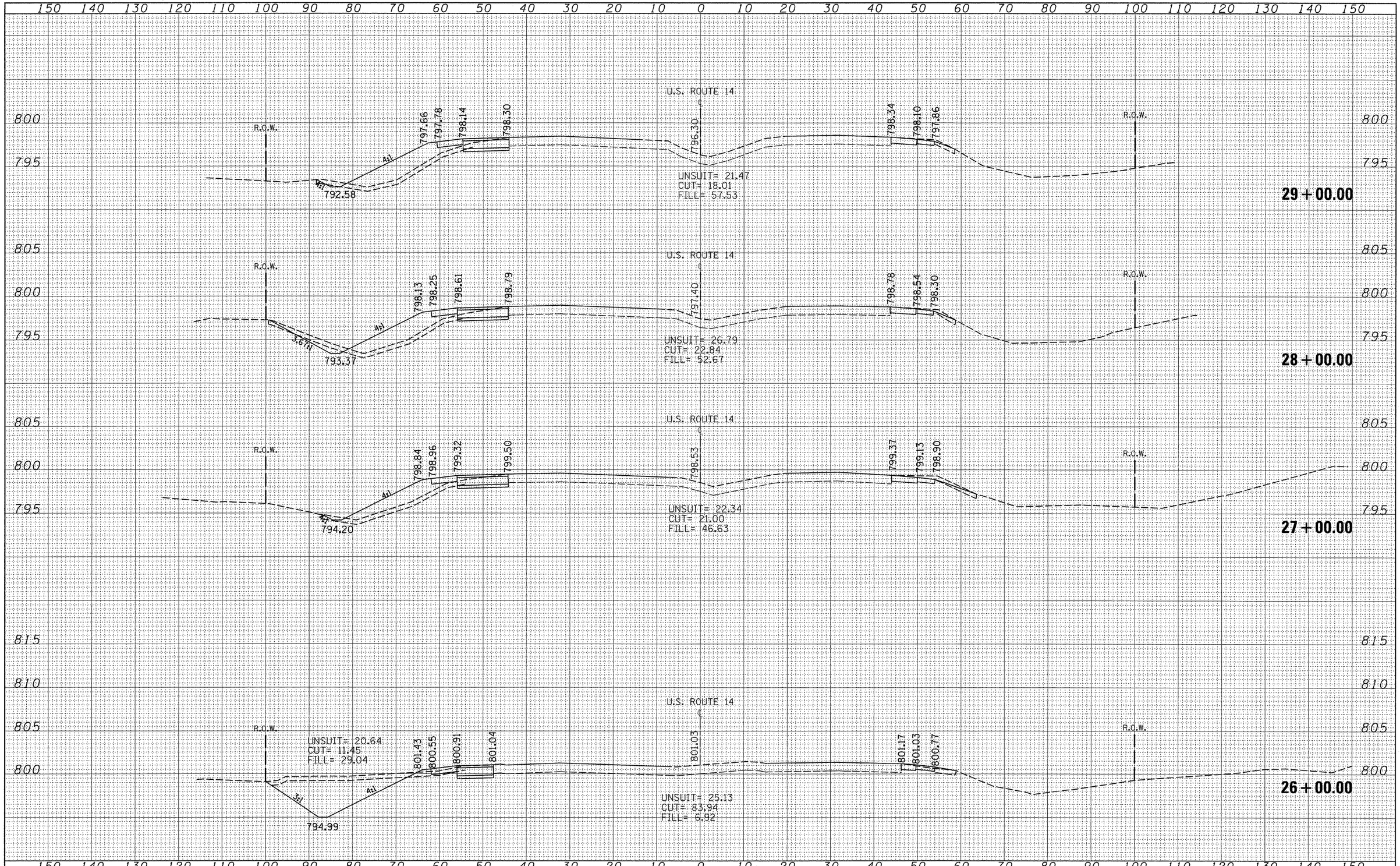
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 22+00.00 TO STA. 25+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	41
		CONTRACT NO. 60K17		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TEMPLATE —		
NO.	AREAS —		
	AREAS CHECKED		



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		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/7/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 26+00.00 | TO STA. 29+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	42
		CONTRACT NO. 60K17		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
NO.	AREAS CHECKED	

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

800
795

R.O.W.

U.S. ROUTE 14

794.87

R.O.W.

32 + 00.00

800
795

R.O.W.

U.S. ROUTE 14

797.26
797.38
797.95
795.10
797.85
797.61
797.37

R.O.W.

4:1
4:1
791.43

UNSUIT= 26.11
CUT= 12.55
FILL= 39.34

31 + 35.76

800
795

R.O.W.

U.S. ROUTE 14

797.35
797.47
797.95
797.97
795.00
797.97
797.73
797.49

R.O.W.

4:1
4:1
791.75

UNSUIT= 29.20
CUT= 12.31
FILL= 37.44

31 + 00.00

800
795

R.O.W.

U.S. ROUTE 14

797.60
797.72
798.08
798.17
795.34
798.19
797.95
797.71

R.O.W.

4:1
4:1
792.37

UNSUIT= 19.74
CUT= 14.37
FILL= 46.84

30 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FILE NAME = c:\pw_work\pwidot\guillaumefp\d0156198\P141529-sht-xssht-us14.dgn	USER NAME = guillaumefp	DESIGNED -	REVISED -
		DRAWN -	REVISED -
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	PLOT DATE = 2/7/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 30+00.00 | TO STA. 32+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	24 R-N-2	LAKE	43	43
		CONTRACT NO. 60K17		
	ILLINOIS FED. AID PROJECT			