

F.A.P	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	08-00109-00-CH	MCHENRY	7	1
STA.		TO STA.		
FED.ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

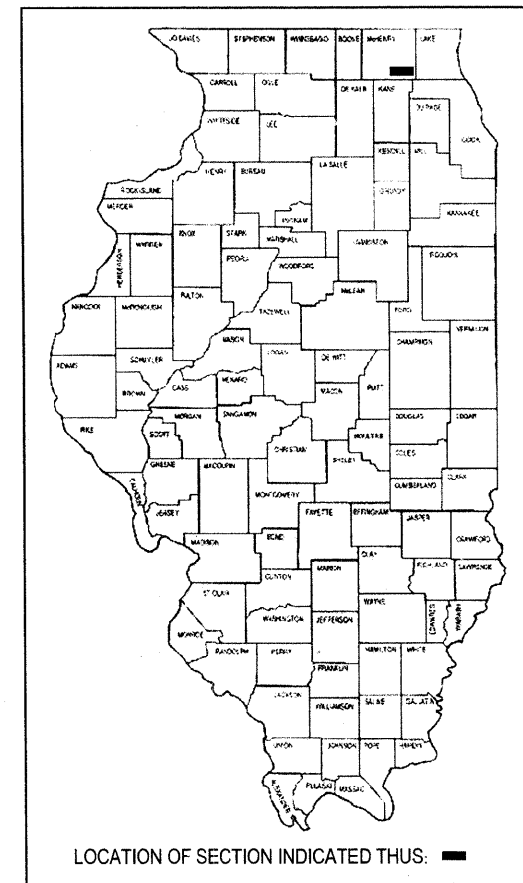
CONTRACT NO: 63067

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

**US ROUTE 14 (FAP 305)
IL 176 (FAP 335) TO WOODSTOCK STREET (FAU 0120)
SECTION NO: 08-00109-00-CH
RADIO SIGNAL INTERCONNECT
PROJECT NO: CMM-9003(048)
MCHENRY COUNTY
C-91-465-08**

INDEX OF SHEETS

- Cover Sheet
- General Notes & Summary of Quantities
- Interconnect Schematic
- US 14 @ IL 176 Existing Signal Plans
- US 14 @ IL 176 Existing Cable Plan
- US 14 @ Woodstock Street Existing Signal Plans
- US 14 @ Woodstock Street Existing Cable Plan



STATE STANDARDS

701501-04	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701801-03	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901	TRAFFIC CONTROL DEVICES

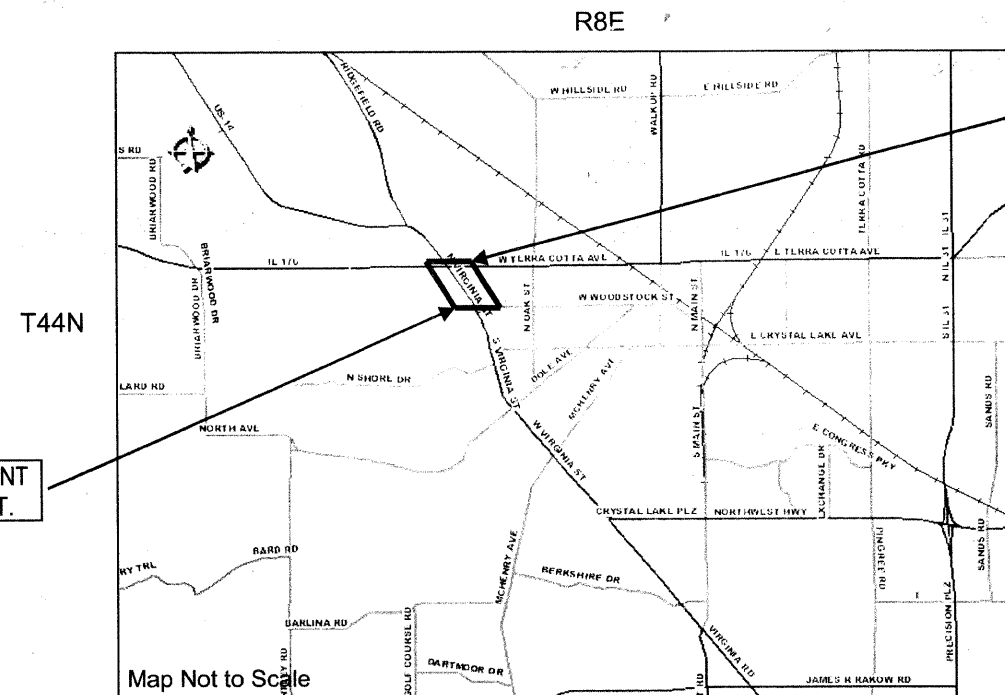
EXISTING ADT = 26,200
SPEED LIMIT = 35 MPH

DESIGN DESIGNATION:
MAJOR ARTERIAL

PROJECT LOCATED IN THE
CITY OF CRYSTAL LAKE

PLANS ARE NOT TO SCALE

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



BEGIN IMPROVEMENT
IL ROUTE 176

END IMPROVEMENT
WOODSTOCK ST.

Map Not to Scale

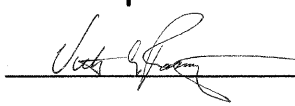
Gross & Net Length of Project = 1775 feet (0.336 mi)




PLANS PREPARED BY:
CITY OF CRYSTAL LAKE
815-356-3615

CONTRACT NO: 63067

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

APPROVED July 17 2008

 CITY ENGINEER

PASSED July 18 2008

 DISTRICT ONE ENGINEER LOCAL ROADS AND STREETS

RELEASED FOR BID
BASED ON LIMITED
REVIEW July 18 2008

Diana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

FEDERAL AID COORDINATOR: PHIL MARCYN (847) 705-4189

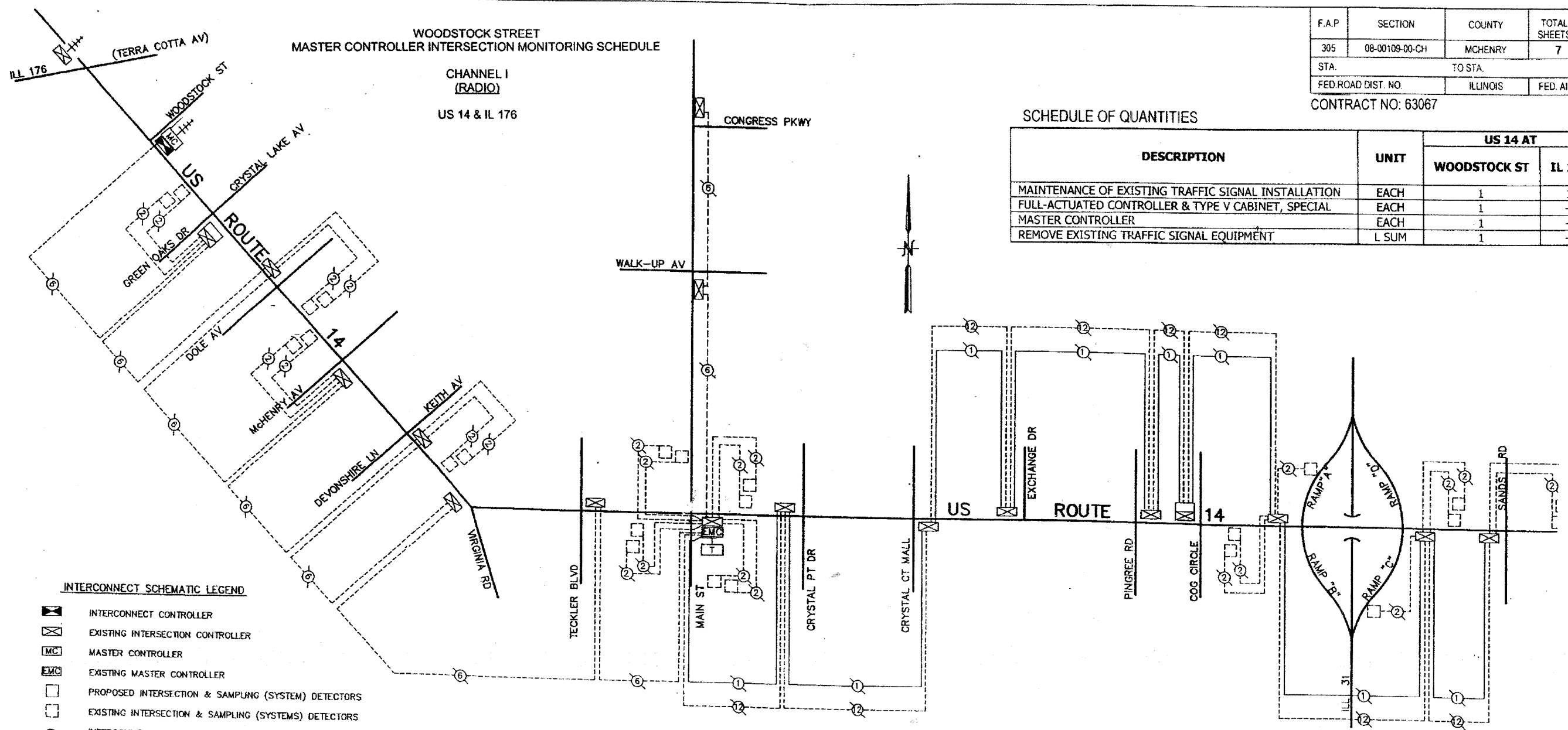
F.A.P	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	08-00109-00-CH	MCHENRY	7	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO: 63067				

WOODSTOCK STREET
MASTER CONTROLLER INTERSECTION MONITORING SCHEDULE

CHANNEL I
(RADIO)
US 14 & IL 176

SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	US 14 AT	
		WOODSTOCK ST	IL 176
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1
FULL-ACTUATED CONTROLLER & TYPE V CABINET, SPECIAL	EACH	1	--
MASTER CONTROLLER	EACH	1	--
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	L SUM	1	--



TRAFFIC SIGNAL SYSTEM INTERCONNECT
SCHEMATIC

MAIN STREET
MASTER CONTROLLER INTERSECTION MONITORING SCHEDULE

CHANNEL I
(HARDWARE CABLE)
US 14 & WOODSTOCK ST
US 14 & GREEN OAKS/CRYSTAL LAKE AV
US 14 & DOLE AV
US 14 & MCHENRY AV
US 14 & DEVONSHIRE LN/KEITH AV
US 14 & VIRGINIA RD
US 14 & TECKLER BLVD
MAIN ST & WALK-UP AV

CHANNEL 2
(FIBER OPTIC CABLE)
US 14 & MAIN ST
US 14 & CRYSTAL POINT DR
US 14 & CRYSTAL COURT MALL
US 14 & EXCHANGE DR
US 14 & PINGREE RD
US 14 & COG CIRCLE
US 14 & ILL 31 WESTSIDE RAMPS
US 14 & ILL 31 EASTSIDE RAMPS
US 14 & SANDS RD

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

INTERCONNECT SCHEMATIC LEGEND

- INTERCONNECT CONTROLLER
- EXISTING INTERSECTION CONTROLLER
- MASTER CONTROLLER
- EXISTING MASTER CONTROLLER
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING INTERSECTION & SAMPLING (SYSTEMS) DETECTORS
- INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELD
- EXISTING LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- TELEPHONE CONNECTION
- PROPOSED TRACER CABLE NO. 10 1C
- EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING TELEPHONE CONNECTION
- EXISTING TRACER CABLE 1/C (AS SPECIFIED)
- RADIO ANTENNA

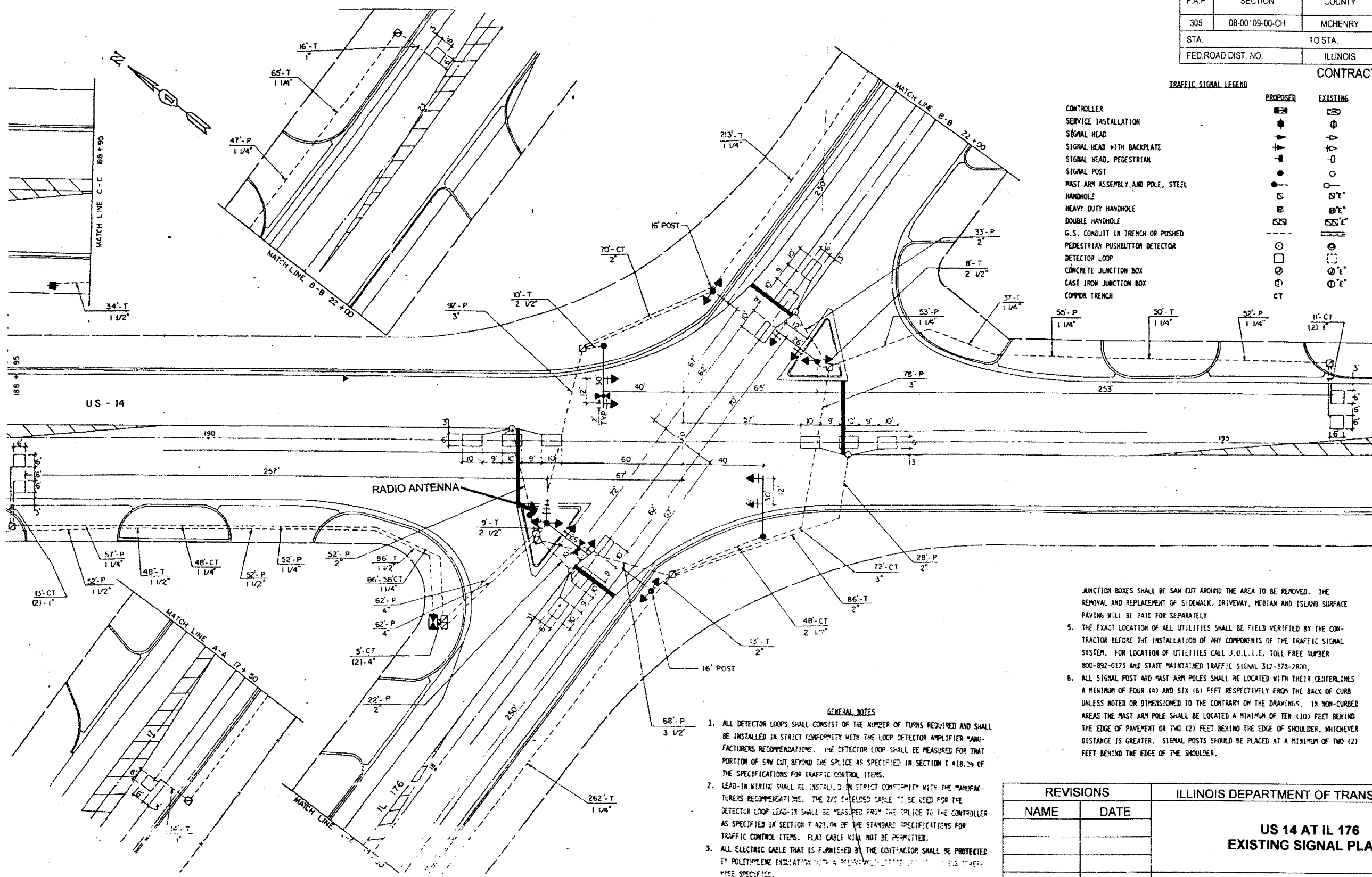
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	INTERCONNECT SCHEMATIC US ROUTE 14 (IL 176 TO SANDS ROAD)	
		SCALE:	N.T.S.
		DATE:	MAY 2008
		DRAWN BY:	N/A
		DESIGNED BY:	N/A
		CHECKED BY:	N/A

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	08-00109-00-CH	MCHENRY	7	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO: 63067

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CONCRETE JUNCTION BOX		
CAST IRON JUNCTION BOX		
COMMON TRENCH		
CT		



- GENERAL NOTES**
1. ALL DETECTOR LOOPS SHALL CONSIST OF THE NUMBER OF TURNS REQUIRED AND SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE LOOP DETECTOR AMPLIFIER MANUFACTURERS RECOMMENDATIONS. THE DETECTOR LOOP SHALL BE MEASURED FOR THAT PORTION OF SAW CUT, BEYOND THE SPLICE AS SPECIFIED IN SECTION T 418.04 OF THE SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.
 2. LEAD-IN WIRING SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE MANUFACTURERS RECOMMENDATIONS. THE 2/0 SHIELDED CABLE TO BE USED FOR THE DETECTOR LOOP LEAD-IN SHALL BE MEASURED FROM THE SPLICE TO THE CONTROLLER AS SPECIFIED IN SECTION T 421.04 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS. FLAT CABLE WILL NOT BE PERMITTED.
 3. ALL ELECTRIC CABLE THAT IS FURNISHED BY THE CONTRACTOR SHALL BE PROTECTED BY POLYETHYLENE INSULATION WITH A RESISTANCE OF AT LEAST 100 OHMS PER INCH SPECIFIED.
 4. THE REMOVAL AND REPLACEMENT OF SIDEWALK, DRIVEWAY, MEDIAN AND ISLAND SURFACE PAVING AT ROAD-DRIVES, JACKING PITS, INSPECTION OPERATIONS AND UNDESIRABLE

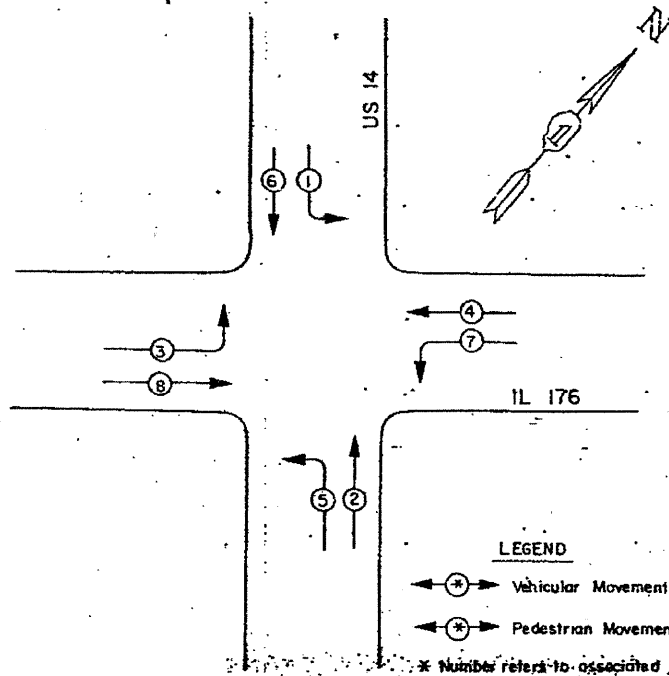
5. THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR LOCATION OF UTILITIES CALL J.U.L.I.E., TOLL FREE NUMBER 800-892-0123 AND STATE MAINTAINED TRAFFIC SIGNAL 312-378-2800.
6. ALL SIGNAL POST AND MAST ARM POLES SHALL BE LOCATED WITH THEIR CENTERLINES A MINIMUM OF FOUR (4) AND SIX (6) FEET RESPECTIVELY FROM THE BACK OF CURB UNLESS NOTED OR DIMENSIONED TO THE CONTRARY ON THE DRAWINGS. IN NON-CURBED AREAS THE MAST ARM POLE SHALL BE LOCATED A MINIMUM OF TEN (10) FEET BEHIND THE EDGE OF PAVEMENT OR TWO (2) FEET BEHIND THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. SIGNAL POSTS SHOULD BE PLACED AT A MINIMUM OF TWO (2) FEET BEHIND THE EDGE OF THE SHOULDER.

REVISIONS	
NAME	DATE

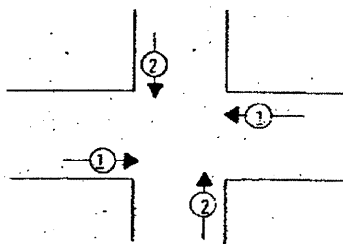
ILLINOIS DEPARTMENT OF TRANSPORTATION	
US 14 AT IL 176 EXISTING SIGNAL PLANS	
SCALE:	1" = 50'
DATE:	MAY 2008
DRAWN BY:	N/A
DESIGNED BY:	N/A
CHECKED BY:	N/A

CONTROLLER SEQUENCE TYPE IV

Referring to Standard 2393, the vehicular and pedestrian phases used are designated below.



PHASE DESIGNATION DIAGRAM



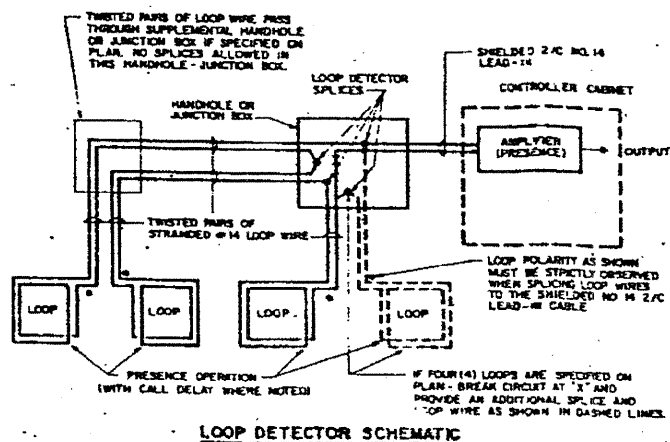
PRIORITY SEQUENCE FOR CONTROLLER SEQUENCE IV

PROPOSED PRIORITY LANES		
PRIORITY LANE INTERVAL	1	2
MOVEMENT	→	↑

NOTES:

1. TERMINATION OF PHASES 1+5 OR 3+7 SHALL BE WITH A YELLOW ARROW DISPLAYED TOGETHER WITH A CIRCULAR RED.
2. TERMINATION OF PHASES 1, 3, 5, OR 7 ALONE IN PHASES 1+5, 3+3, 2+5, OR 4+7 SHALL BE WITH A YELLOW ARROW DISPLAYED TOGETHER WITH A CIRCULAR GREEN WHEN FOLLOWED BY A PRIORITY LANE INTERVAL WHICH DISPLAYS THE CIRCULAR GREEN.
3. TERMINATION OF PHASES 1+5, 3+3, 2+5 OR 4+7 SHALL BE WITH A CIRCULAR YELLOW DISPLAY WHEN FOLLOWED BY A PRIORITY LANE INTERVAL WHICH DISPLAYS A CIRCULAR RED.
4. TERMINATION OF PHASES 2+6 OR 4+8 SHALL BE WITH A CIRCULAR YELLOW WHEN FOLLOWED BY A PRIORITY LANE INTERVAL WHICH DISPLAYS A CIRCULAR RED, WHEN PHASES 2+6 OR 4+8 CIRCULAR GREEN IS TO BE DISPLAYED IN THE PRIORITY LANE INTERVAL, IT SHALL REMAIN GREEN.
5. TERMINATION OF ALL PEDESTRIAN INTERVALS SHALL INCLUDE A FULL FLASHING "DON'T WALK" CLEARANCE INTERVAL.
6. TERMINATION OF ALL PRIORITY INTERVALS SHALL BE WITH A CIRCULAR YELLOW EXCEPT WHEN THE GREEN DISPLAYED DURING THE PRIORITY INTERVAL IS TO REMAIN GREEN WHEN THE NORMAL SEQUENCE OF OPERATIONS RESUMES CONTROL OF THE INTERSECTION.
7. IF ALL RED CLEARANCE IS USED IN THE NORMAL SEQUENCE OF OPERATIONS, IT MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN LEAVING THE PRIORITY SEQUENCE.

1. EACH LOOP LEAD-IN SHALL BE PLACED IN A SEPARATE CONDUIT FROM EDGE OF PAVEMENT TO HANDHOLE, SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6".
2. EACH LOOP DETECTOR SPICE SHALL BE AN INDIVIDUAL TYPE X OR TYPE III SPICE.
3. LOOP TURNS AS RECOMMENDED BY THE MANUFACTURER.



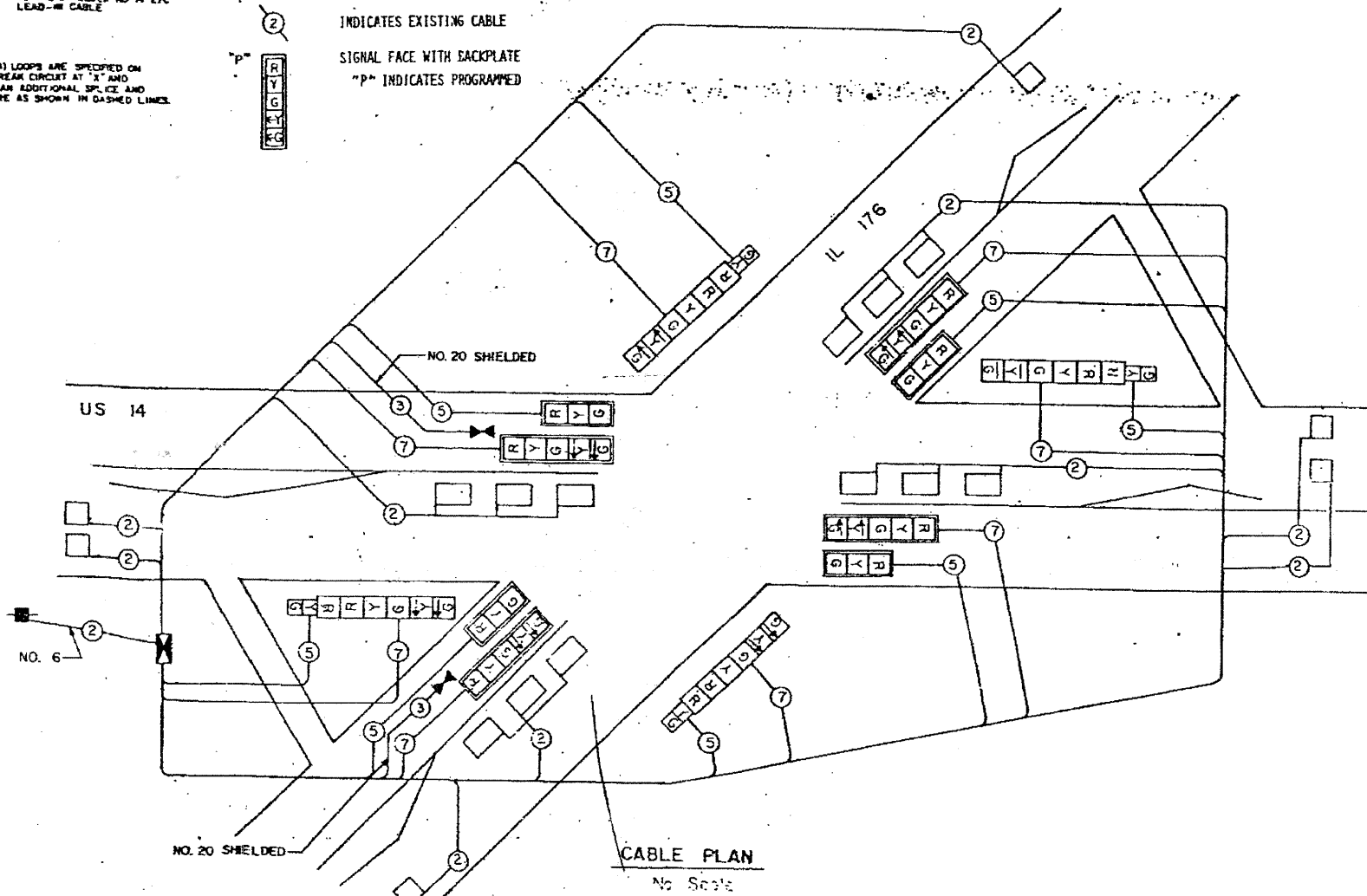
LOOP DETECTOR SCHEMATIC

CABLE PLAN LEGEND

- 8" TRAFFIC SIGNAL SECTION
- 12" TRAFFIC SIGNAL SECTION
- 12" PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- VEHICLE DETECTOR, INDUCTION LOOP
- PUSHBUTTON DETECTOR
- DEMOTES NUMBER OF CONDUCTORS (NEW). ALL LOOP DETECTOR CABLE TO BE SHIELDED. ALL CABLE NO. 14 EXCEPT AS INDICATED.
- INDICATES EXISTING CABLE
- SIGNAL FACE WITH BACKPLATE
- "P" INDICATES PROGRAMMED

SCHEDULE OF SIGNAL HEADS

- 4 EACH SIGNAL HEAD, ALUMINUM, 1-FACE, 3-SECTION WITH 12" LENSES, EAST ARM MOUNTED
- 4 EACH SIGNAL HEAD, ALUMINUM, 1-FACE, 5-SECTION WITH 12" LENSES, EAST ARM MOUNTED
- 4 EACH SIGNAL HEAD, ALUMINUM, 2-FACE, 1-3 SECTION WITH 12" RED LENS, 1-5 SECTION WITH 12" LENSES, BRACKET MOUNTED



CABLE PLAN

No Scale

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	US 14 AT IL 176 EXISTING CABLE PLANS	
		DATE: MAY 2008	DESIGNED BY: N/A
			CHECKED BY: N/A

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	08-00109-00-CH	MCHENRY	7	5
STA.		TO STA.		
FED.ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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