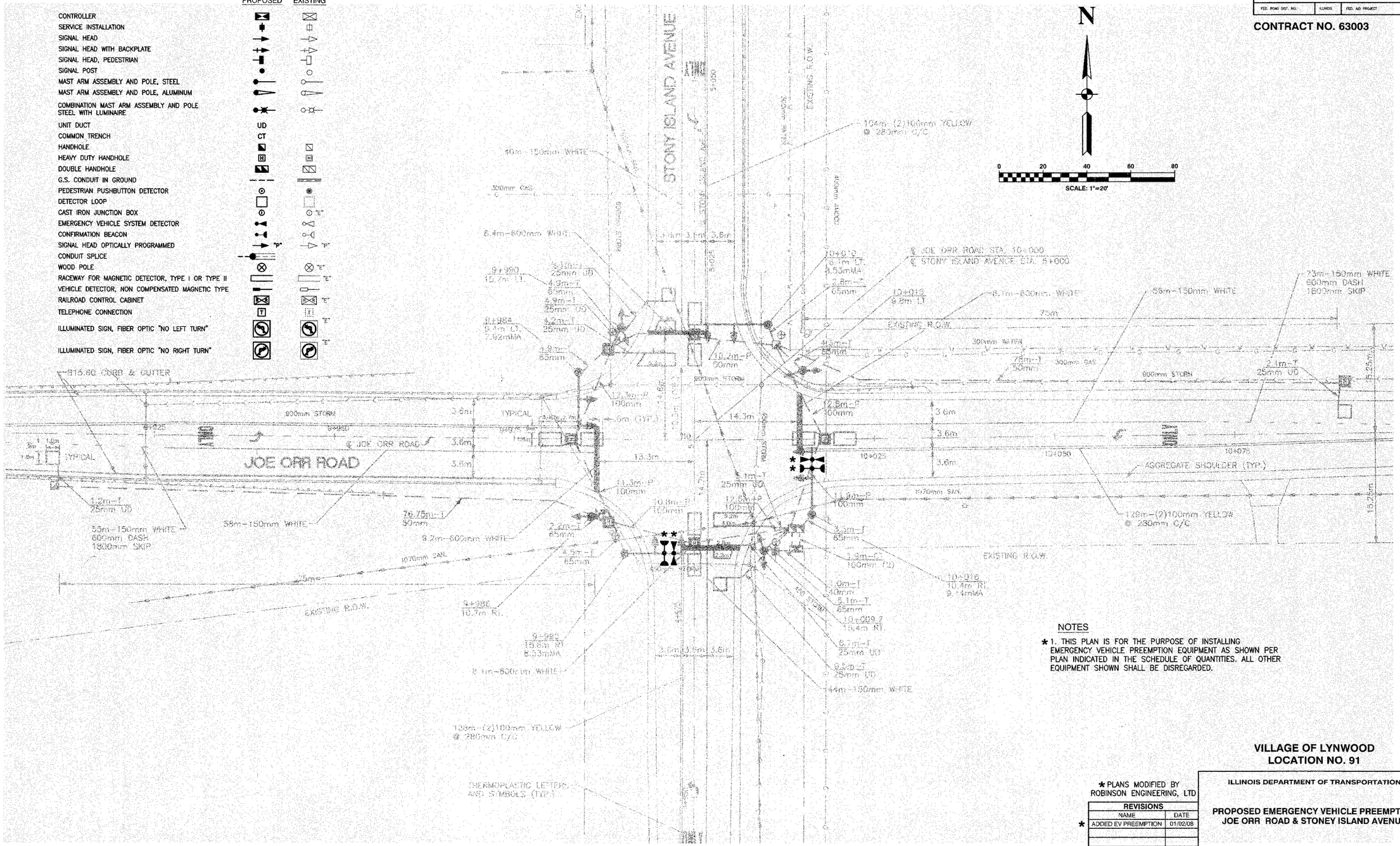
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	201
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF LYNWOOD
LOCATION NO. 91

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
JOE ORR ROAD & STONEY ISLAND AVENUE

SCALE: VERT. HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-5700 FAX (708) 331-0926
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001125.

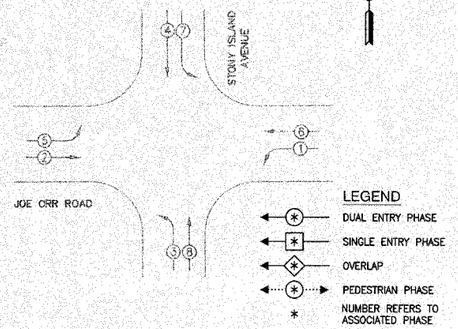
07248-53

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	202
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

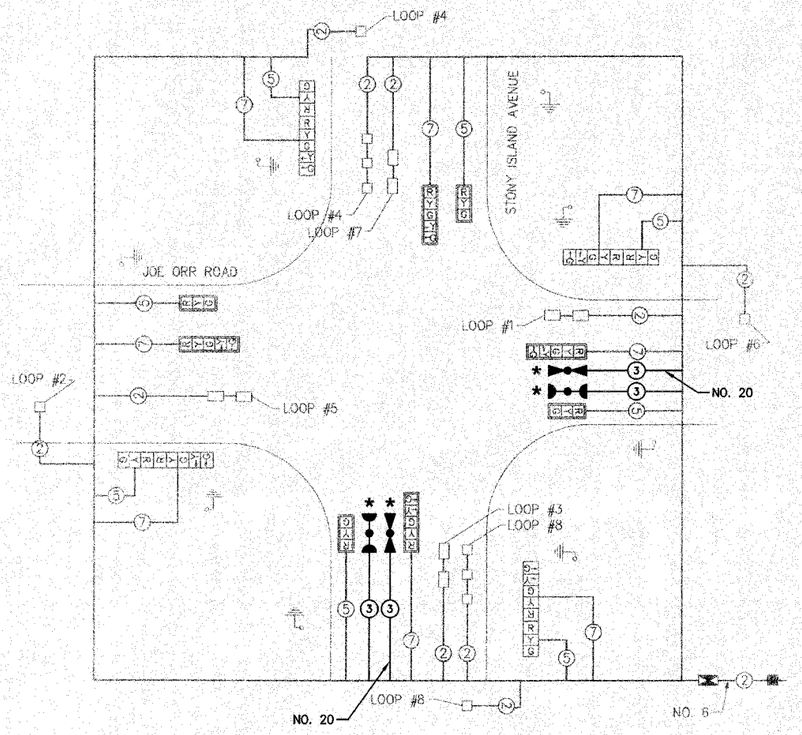
CONTRACT NO. 63003

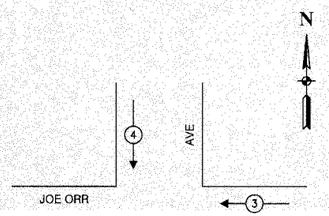
STANDARD CONTROLLER SEQUENCE

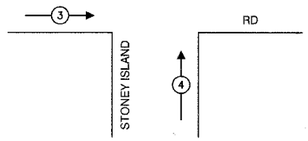
REFERRING TO IDOT STANDARD DRAWING 857001 THE VEHICULAR PHASES USED ARE DESIGNATED BELOW



PHASE DESIGNATION DIAGRAM







EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	252
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	252

NOTE

★1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF LYNWOOD
LOCATION NO. 91

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
JOE ORR ROAD & STONEY ISLAND AVENUE

SCALE: VERT. HORIZ. DRAWN BY

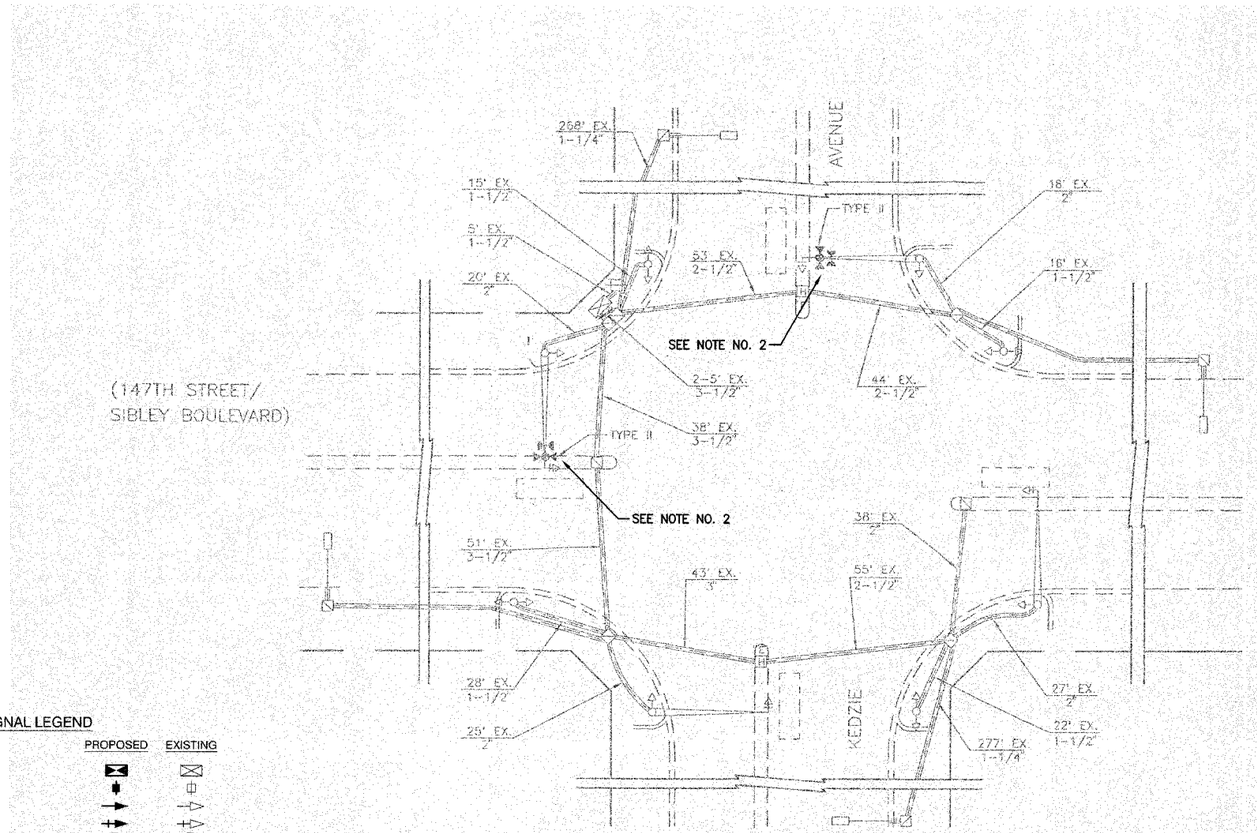
DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
17200 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-4700 FAX (708) 331-3805
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128.

07248-63

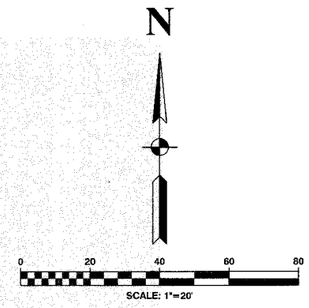
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	203
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



TRAFFIC SIGNAL PLAN

SCALE 1" = 20'



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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"C"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"

NOTES

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING EMERGENCY VEHICLE LIGHT DETECTOR, CONFIRMATION BEACON AND LIGHT DETECTOR AMPLIFIER SHALL BE REMOVED AND REPLACED WITH NEW EQUIPMENT. THE EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

VILLAGE OF MIDLOTHIAN
LOCATION NO. 92

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
* R & R EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
ILLINOIS RT 83 (147TH STREET) & KEDZIE AVENUE

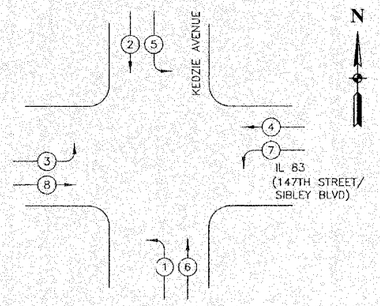
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6570 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001136

07248-64

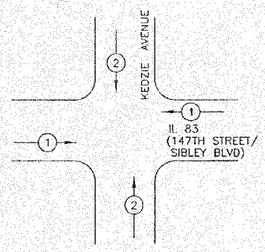
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	204
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



EMERGENCY VEHICLE PREEMPTION SEQUENCE NOTES

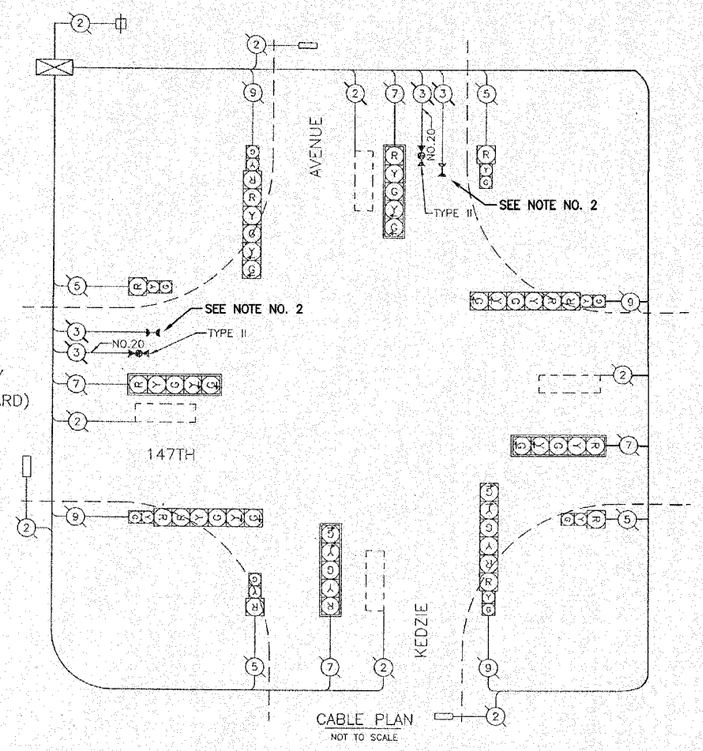
FOR DUAL ENTRY OPERATION – ALL LEGS



PROPOSED PRIORITY LANES		
PRIORITY LANE INTERVAL	1	2
MOVEMENT	← →	↑ ↓

1. ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A PHASE(S) SHALL BE IDENTICAL TO THE NORMAL SEQUENCES OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 2393.
2. CONTINUATION OR TERMINATION OF ALL RIGHT TURN OVERLAPS SHALL BE IDENTICAL TO THE NORMAL SEQUENCE OF OPERATION'S CONTINUATION OR TERMINATION OF RIGHT TURN OVERLAPS AS DESCRIBED IN THE CLEARANCE NOTES FOR RIGHT TURN OVERLAPS.
3. TERMINATION OF ALL PEDESTRIAN PHASES SHALL INCLUDE A FULL FLASHING "DON'T WALK" INTERVAL.
4. IF ALL RED CLEARANCE IS USED IN THE NORMAL SEQUENCE OF OPERATION, IT MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.

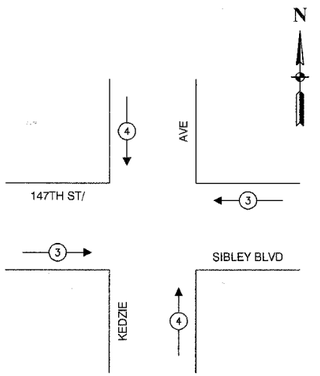
EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



CABLE PLAN
NOT TO SCALE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	305
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	305

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING EMERGENCY VEHICLE LIGHT DETECTOR, CONFIRMATION BEACON AND LIGHT DETECTOR AMPLIFIER SHALL BE REMOVED AND REPLACED WITH NEW EQUIPMENT. THE EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

VILLAGE OF MIDLOTHIAN
LOCATION NO. 92

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
* ADDED EV PREEMPTION	01/02/06

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
ILLINOIS RT 83 (147TH STREET) & KEDZIE AVENUE

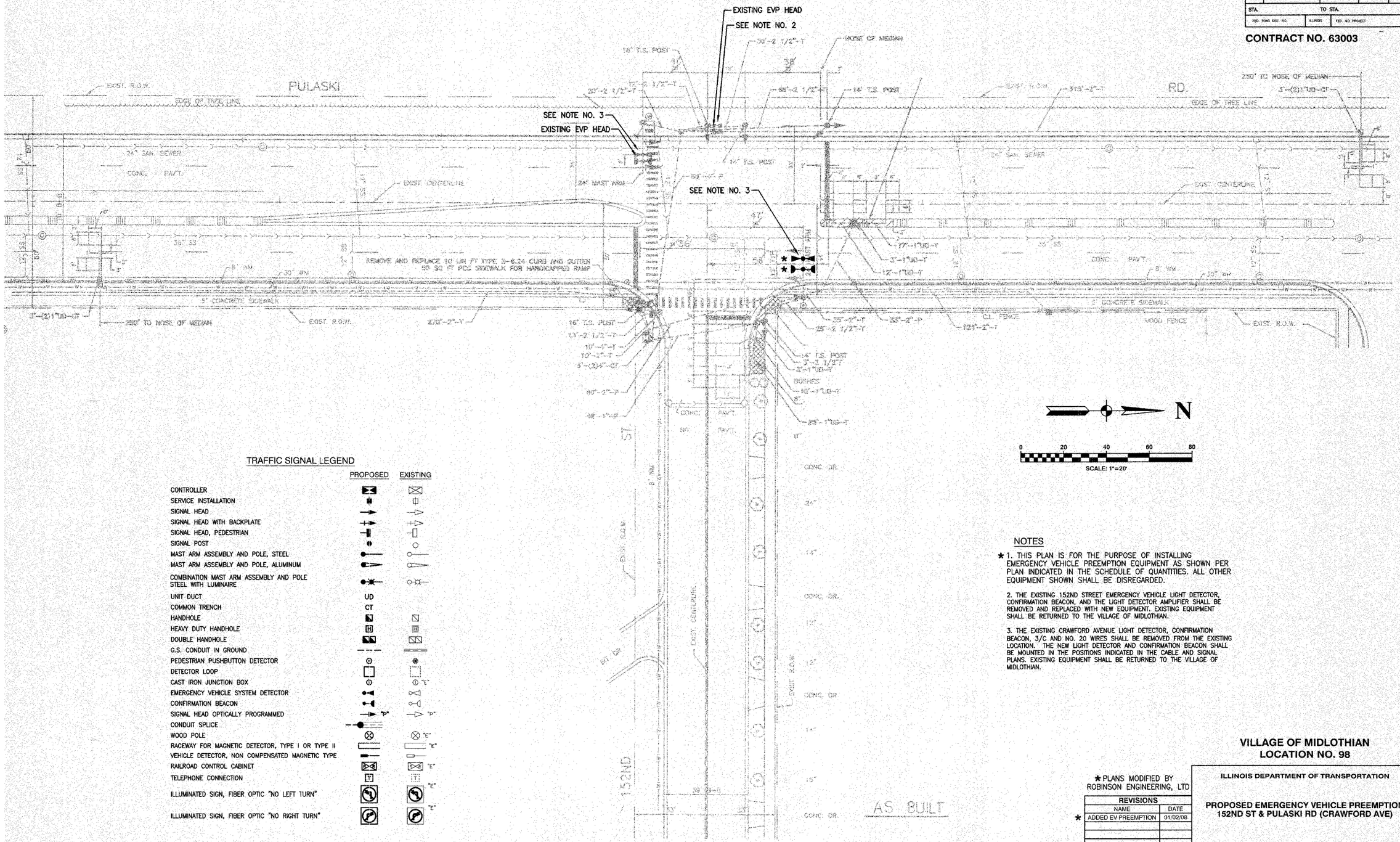
SCALE: VERT.
HORIZ.
DATE
DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
12000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3628
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128.

07248-04

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	205
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"

NOTES

★1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING 152ND STREET EMERGENCY VEHICLE LIGHT DETECTOR, CONFIRMATION BEACON, AND THE LIGHT DETECTOR AMPLIFIER SHALL BE REMOVED AND REPLACED WITH NEW EQUIPMENT. EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

3. THE EXISTING CRAWFORD AVENUE LIGHT DETECTOR, CONFIRMATION BEACON, 3/C AND NO. 20 WIRES SHALL BE REMOVED FROM THE EXISTING LOCATION. THE NEW LIGHT DETECTOR AND CONFIRMATION BEACON SHALL BE MOUNTED IN THE POSITIONS INDICATED IN THE CABLE AND SIGNAL PLANS. EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

VILLAGE OF MIDLOTHIAN
LOCATION NO. 98

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
152ND ST & PULASKI RD (CRAWFORD AVE)

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

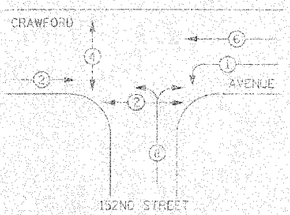
ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-0926
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-70

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	206
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

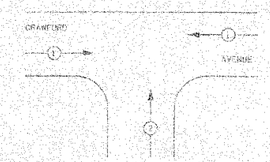
CONTRACT NO. 63003

CONTROLLER SEQUENCE

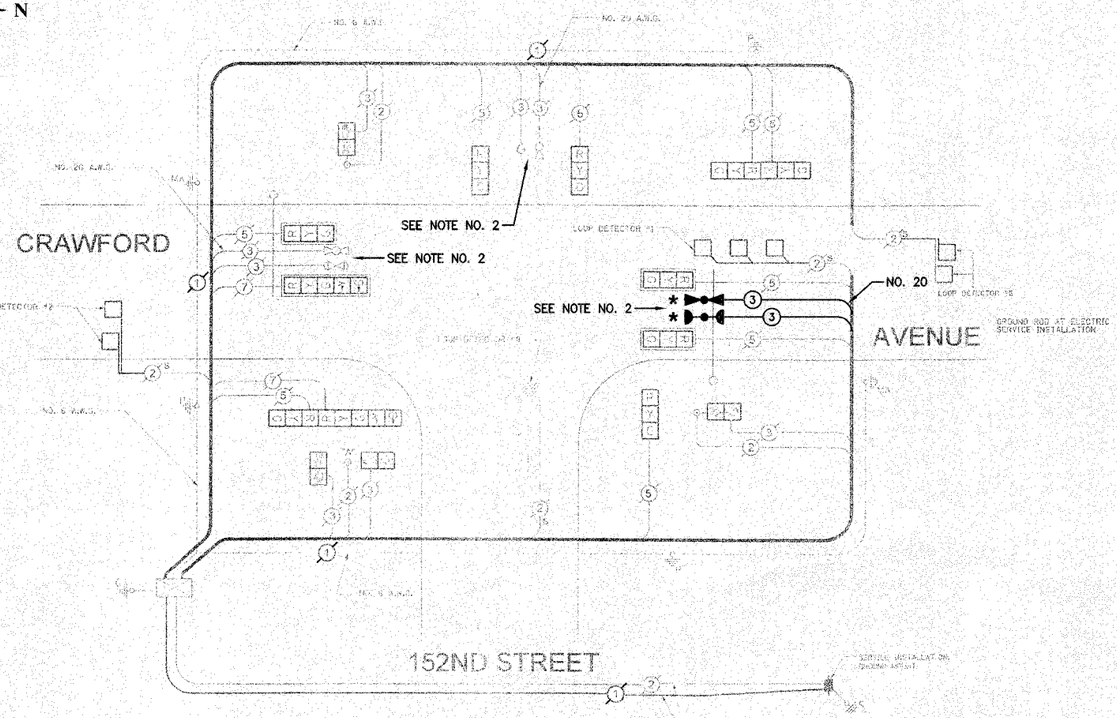


PHASE DESIGNATION DIAGRAM
DUAL ENTRY - ALL 4 LEGS
PROTECTED / PERMITTED LEFT TURN PHASING

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



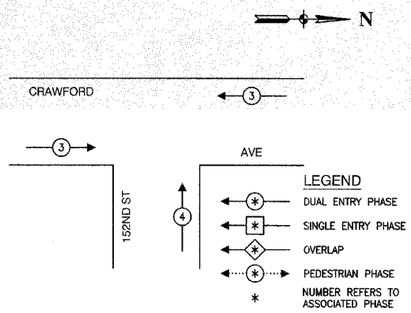
EXISTING EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTION	1	2
MOVEMENT	←	↑



CABLE PLAN
NOT TO SCALE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	141
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	141

NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING 152ND STREET EMERGENCY VEHICLE LIGHT DETECTOR, CONFIRMATION BEACON, AND THE LIGHT DETECTOR AMPLIFIER SHALL BE REMOVED AND REPLACED WITH NEW EQUIPMENT. EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

3. THE EXISTING CRAWFORD AVENUE LIGHT DETECTOR, CONFIRMATION BEACON, 3/C AND NO. 20 WIRES SHALL BE REMOVED FROM THE EXISTING LOCATION. THE NEW LIGHT DETECTOR AND CONFIRMATION BEACON SHALL BE MOUNTED IN THE POSITIONS INDICATED IN THE CABLE AND SIGNAL PLANS. EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

VILLAGE OF MIDLOTHIAN
LOCATION NO. 98

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
152ND ST & PULASKI RD (CRAWFORD AVE)

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3806
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128.

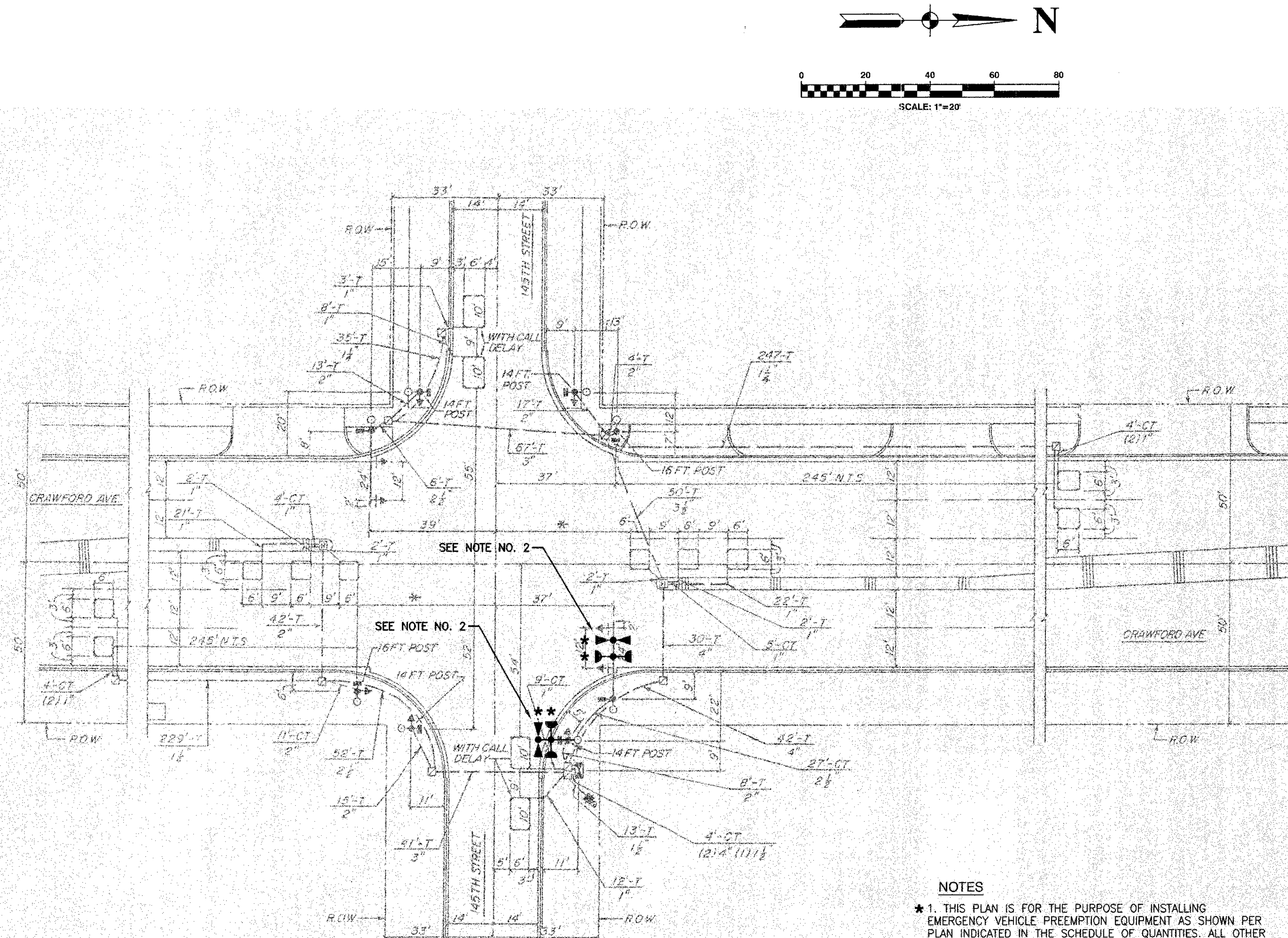
07248-70

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	207
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING EMERGENCY VEHICLE LIGHT DETECTOR, CONFIRMATION BEACON AND LIGHT DETECTOR AMPLIFIER SHALL BE REMOVED AND REPLACED WITH NEW EQUIPMENT. THE EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

VILLAGE OF MIDLOTHIAN
LOCATION NO. 99

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
145TH ST & PULASKI RD (CRAWFORD AVE)

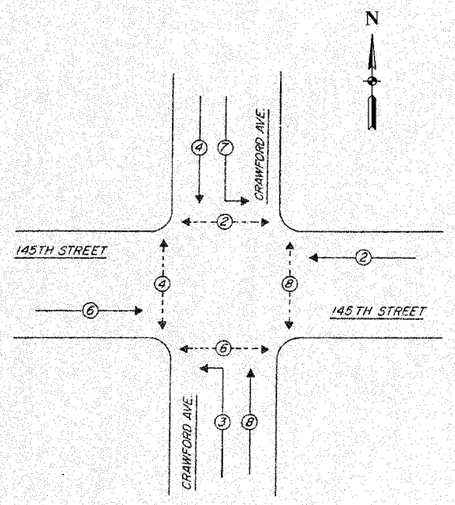
SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

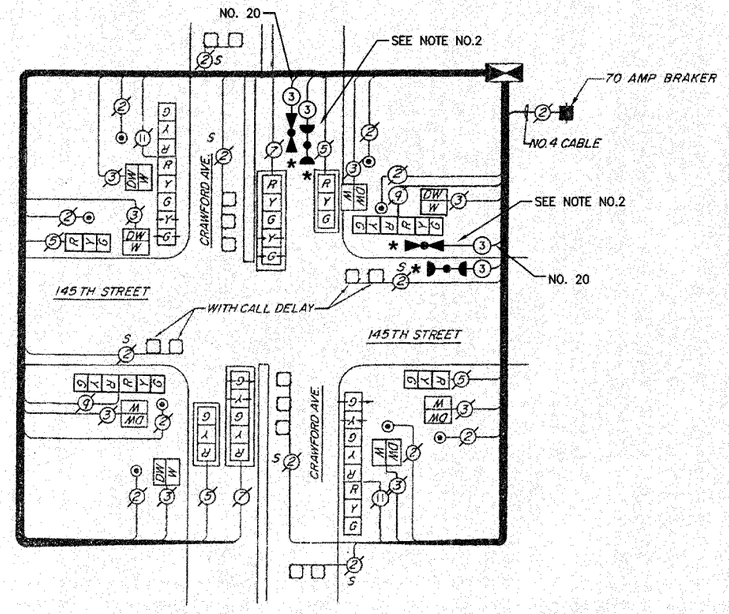
07249-71

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	208
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



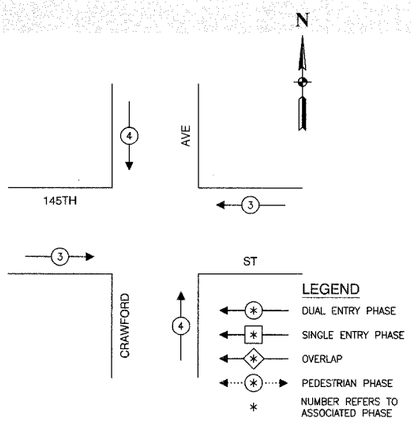
PHASE DESIGNATION DIAGRAM



CABLE PLAN
NO SCALE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING EMERGENCY VEHICLE LIGHT DETECTOR, CONFIRMATION BEACON AND LIGHT DETECTOR AMPLIFIER SHALL BE REMOVED AND REPLACED WITH NEW EQUIPMENT. THE EXISTING EQUIPMENT SHALL BE RETURNED TO THE VILLAGE OF MIDLOTHIAN.

VILLAGE OF MIDLOTHIAN
LOCATION NO. 99

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
145TH ST & PULASKI RD (CRAWFORD AVE)

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-8700 FAX (708) 331-3695
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128.

07246-71

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	209
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT M-8003 (867)		

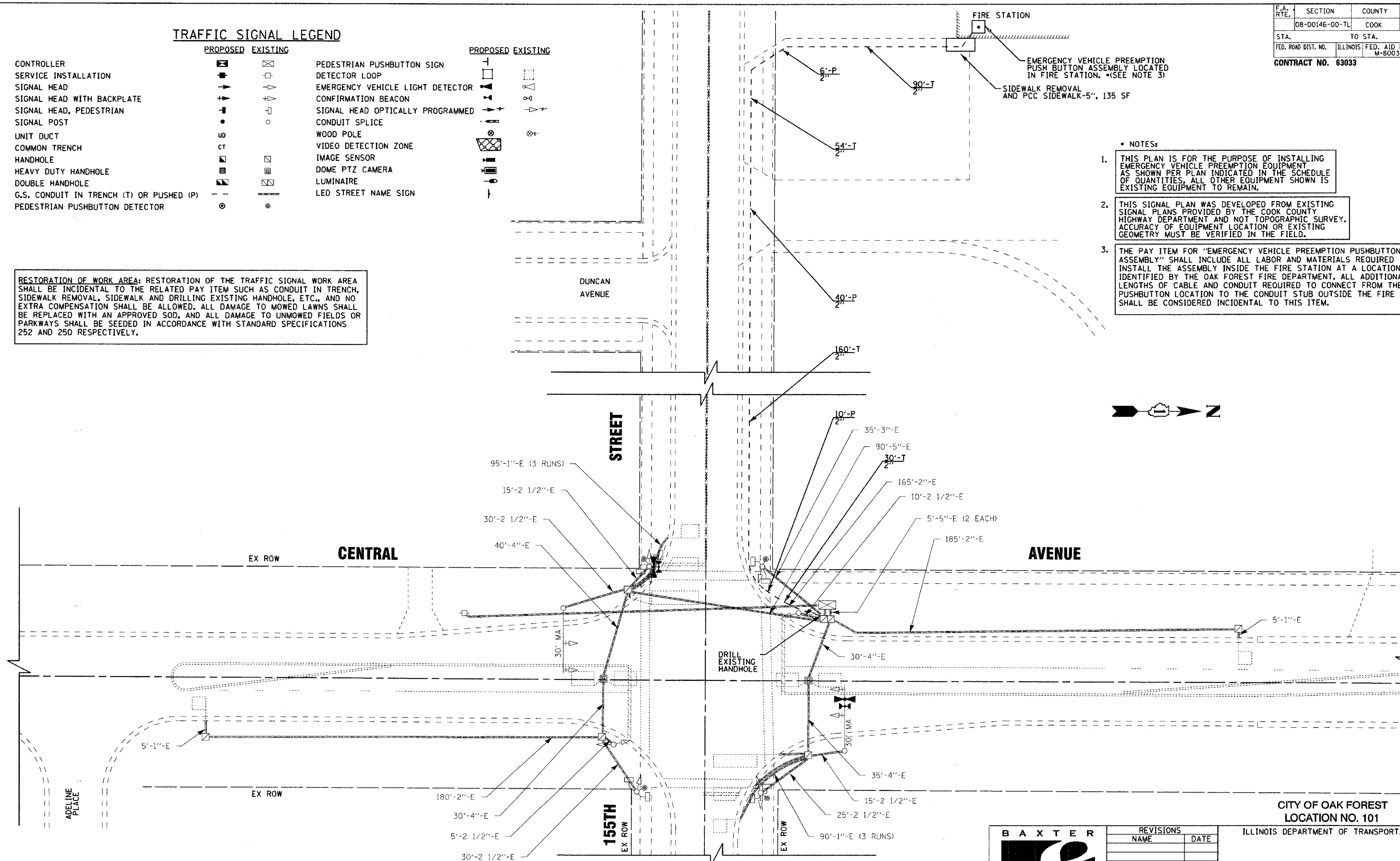
CONTRACT NO. 63033

TRAFFIC SIGNAL LEGEND

PROPOSED EXISTING

- CONTROLLER
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- UNIT DUCT — UD
- COMMON TRENCH — CT
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN PUSHBUTTON SIGN
- DETECTOR LOOP
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- SIGNAL HEAD OPTICALLY PROGRAMMED
- CONDUIT SPLICE
- WOOD POLE
- VIDEO DETECTION ZONE
- IMAGE SENSOR
- DOME PTZ CAMERA
- LUMINAIRE
- LED STREET NAME SIGN

RESTORATION OF WORK AREA: RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS CONDUIT IN TRENCH, SIDEWALK REMOVAL, SIDEWALK AND DRILLING EXISTING HANDHOLE, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS OR PARKWAYS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



• NOTES:

1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN IS EXISTING EQUIPMENT TO REMAIN.
2. THIS SIGNAL PLAN WAS DEVELOPED FROM EXISTING SIGNAL PLANS PROVIDED BY THE COOK COUNTY HIGHWAY DEPARTMENT AND NOT TOPOGRAPHIC SURVEY. ACCURACY OF EQUIPMENT LOCATION OR EXISTING GEOMETRY MUST BE VERIFIED IN THE FIELD.
3. THE PAY ITEM FOR "EMERGENCY VEHICLE PREEMPTION PUSHBUTTON ASSEMBLY" SHALL INCLUDE ALL LABOR AND MATERIALS REQUIRED TO INSTALL THE ASSEMBLY INSIDE THE FIRE STATION AT A LOCATION IDENTIFIED BY THE OAK FOREST FIRE DEPARTMENT. ALL ADDITIONAL LENGTHS OF CABLE AND CONDUIT REQUIRED TO CONNECT FROM THE PUSHBUTTON LOCATION TO THE CONDUIT STUB OUTSIDE THE FIRE STATION SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

CITY OF OAK FOREST
LOCATION NO. 101

BAXTER & WOODMAN
Consulting Engineers

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
CENTRAL AVENUE AND 155TH STREET

SCALE: 1" = 20' DRAWN BY: MAC
DATE: 01-02-08 CHECKED BY: LDH

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	210

STA. TO STA.

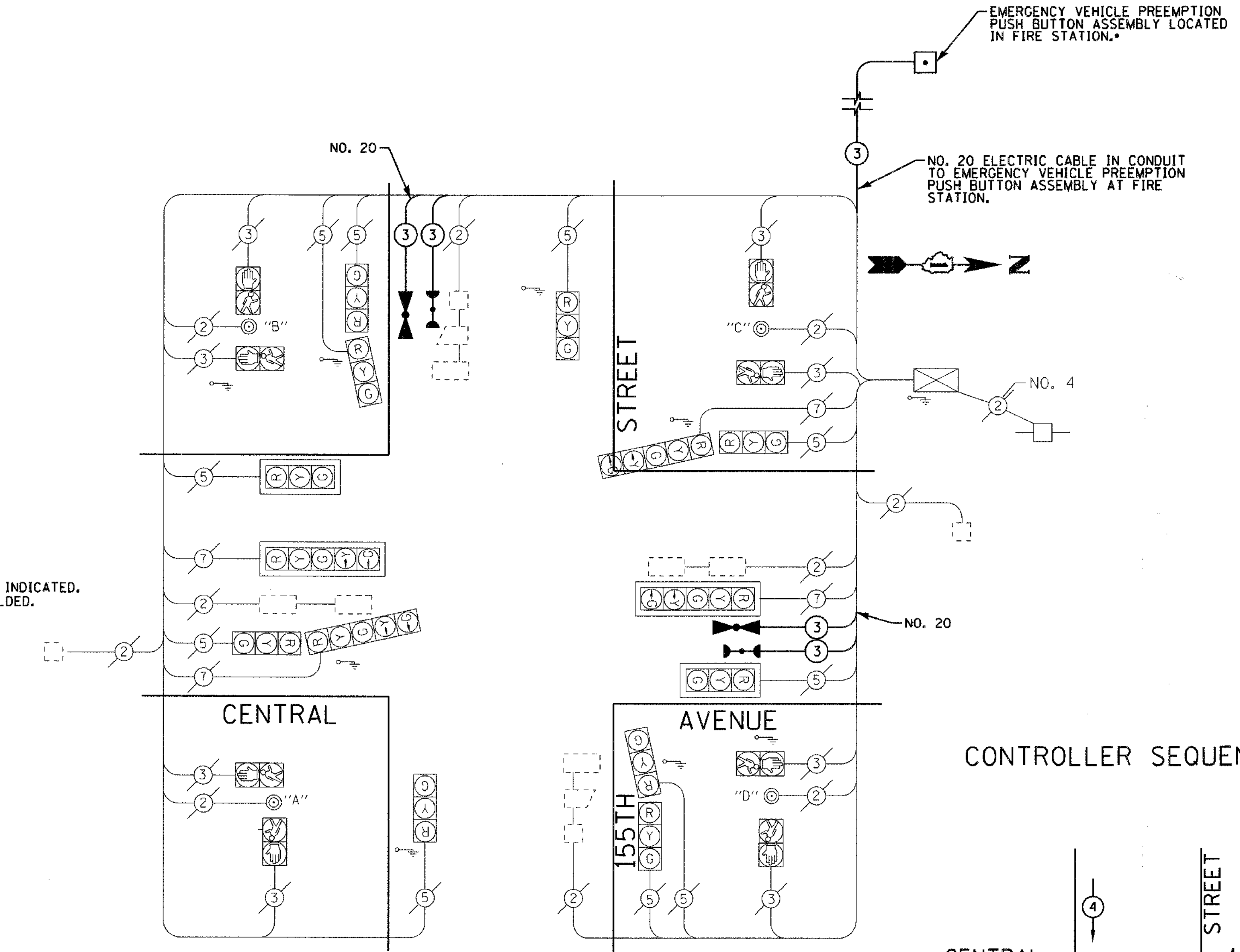
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT M-8003 (867)

CONTRACT NO. 63033

CABLE PLAN LEGEND

EXISTING / PROPOSED

- 8" (200mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- TELEPHONE CONNECTION
- VEHICLE DETECTOR, INDUCTION LOOP
- MAGNETIC DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSHBUTTON DETECTOR
- DENOTES NUMBER OF CONDUCTORS. ALL EXISTING CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
- FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F SM12F
- SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
- "E" RAILROAD CONTROL CABINET
- "E" ILLUMINATED SIGN, "NO LEFT TURN"
- "E" ILLUMINATED SIGN, "NO RIGHT TURN"
- GROUND CABLE 1C NO.6
- H/C C GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
- P P GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
- S S GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- LUMINARE

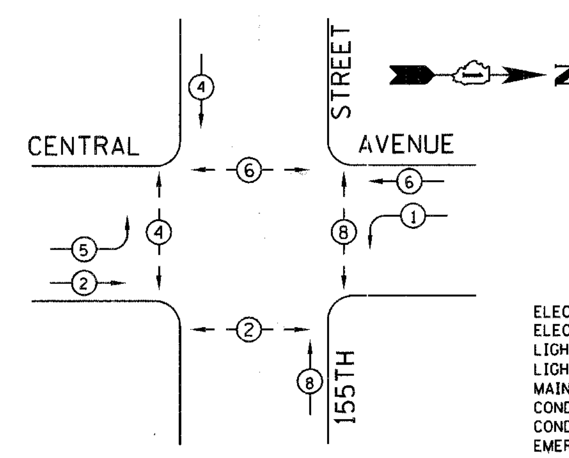


CABLE PLAN

PUSH BUTTON "A" SHALL PLACE CALLS IN PHASES 2 & 4
PUSH BUTTON "B" SHALL PLACE CALLS IN PHASES 4 & 6
PUSH BUTTON "C" SHALL PLACE CALLS IN PHASES 6 & 8
PUSH BUTTON "D" SHALL PLACE CALLS IN PHASES 2 & 8

* NOTE:
THE PAY ITEM FOR "EMERGENCY VEHICLE PREEMPTION PUSHBUTTON ASSEMBLY" SHALL INCLUDE ALL LABOR AND MATERIALS REQUIRED TO INSTALL THE ASSEMBLY INSIDE THE FIRE STATION AT A LOCATION IDENTIFIED BY THE OAK FOREST FIRE DEPARTMENT. ALL ADDITIONAL LENGTHS OF CABLE AND CONDUIT REQUIRED TO CONNECT FROM THE PUSHBUTTON LOCATION TO THE CONDUIT STUB OUTSIDE THE FIRE STATION SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

CONTROLLER SEQUENCE

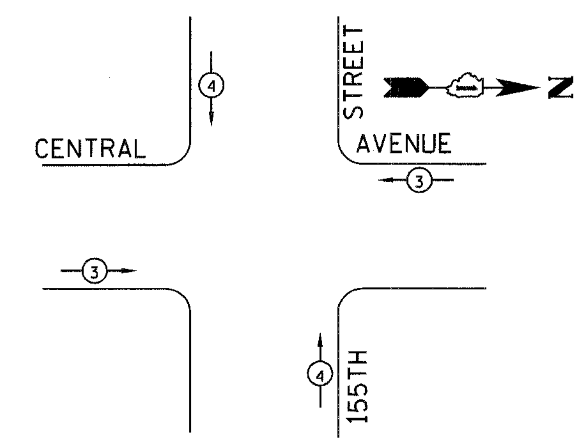


PHASE DESIGNATION DIAGRAM

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION		
EMERGENCY VEHICLE PREEMPTION	3	4
MOVEMENT	⇄	↓↑

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED SHIELDED	FOOT	747
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	329
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
CONDUIT IN TRENCH, 2" DIA. GALVANIZED STEEL	FOOT	334
CONDUIT PUSHED, 2" DIA. GALVANIZED STEEL	FOOT	56
EMERGENCY VEHICLE PREEMPTION PUSH BUTTON ASSEMBLY	EACH	1
DRILL EXISTING HANDHOLE	EACH	1
SIDEWALK REMOVAL	S.F.	135
PORTLAND CEMENT CONCRETE SIDEWALK-5"	S.F.	135

CITY OF OAK FOREST
LOCATION NO. 101

BAXTER & WOODMAN
Consulting Engineers

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN,
EMERGENCY VEHICLE PREEMPTION
SEQUENCE OF OPERATION,
PHASE DESIGNATION DIAGRAM
CENTRAL AVENUE AND 155TH STREET

SCALE: NONE DRAWN BY: MAC
DATE: 01-02-08 CHECKED BY: LDH

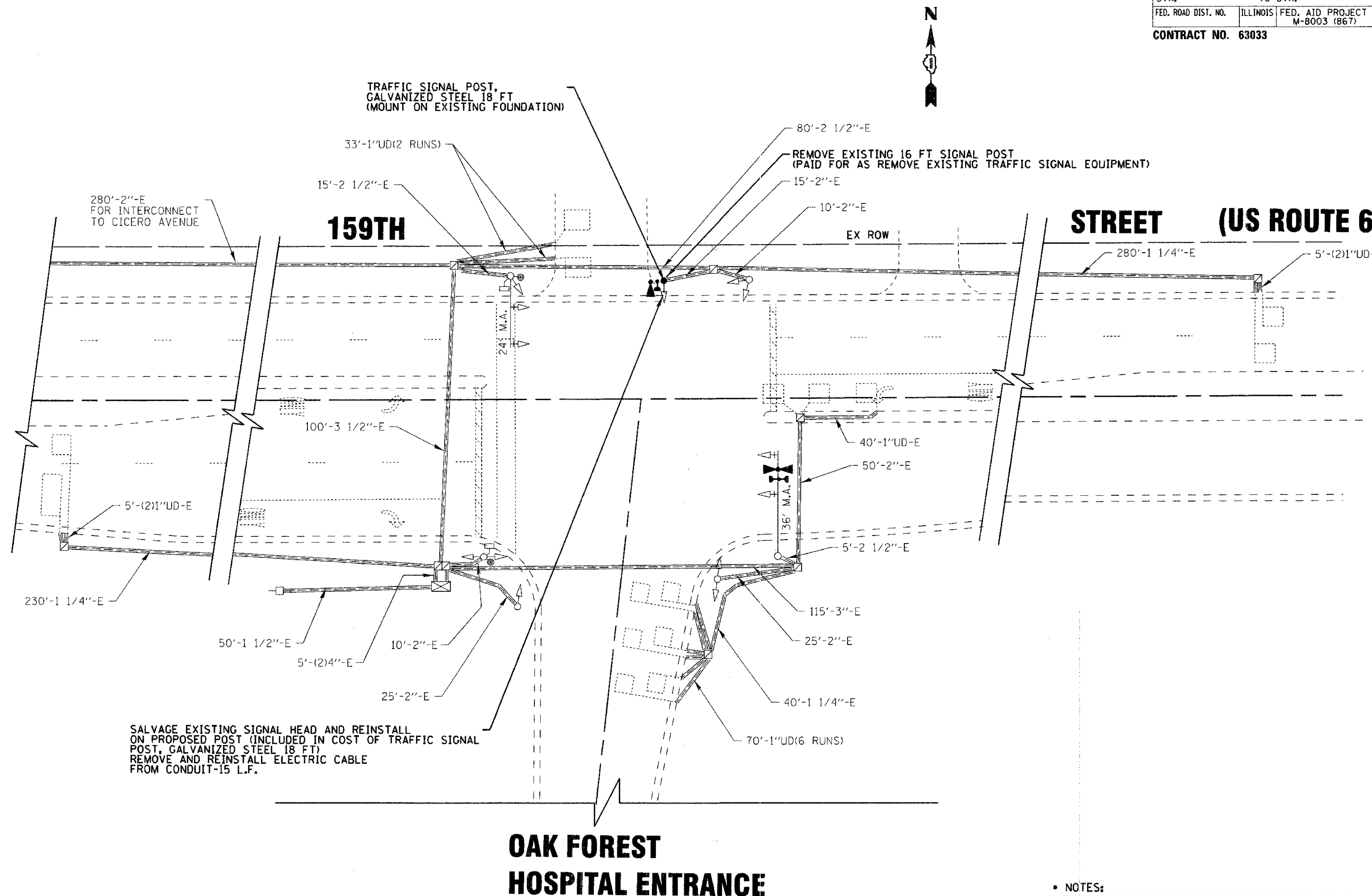
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	211
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT M-8003 (867)		

CONTRACT NO. 63033

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DELIVERED TO IDOT DISTRICT 1 SIGNAL MAINTENANCE AT A LOCATION OF THEIR CHOOSING. BOTH REMOVAL AND DELIVERY SHALL BE INCLUDED IN THE PRICE OF THIS WORK.

PAY ITEM	UNIT	QUANTITY
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT	EACH	1



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
SERVICE INSTALLATION	■	□
SIGNAL HEAD	→	▷
SIGNAL HEAD WITH BACKPLATE	+►	+▷
SIGNAL HEAD, PEDESTRIAN	▌	▯
SIGNAL POST	●	○
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◩	◩
HEAVY DUTY HANDHOLE	▣	▣
DOUBLE HANDHOLE	◩◩	◩◩
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	— —	═
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON SIGN	⊣	
DETECTOR LOOP	□	⬚
EMERGENCY VEHICLE LIGHT DETECTOR	•◀	◁
CONFIRMATION BEACON	•◀	○◁
SIGNAL HEAD OPTICALLY PROGRAMMED	→ᵖ	▷ᵖ
CONDUIT SPLICE	·▬	
WOOD POLE	⊗	⊗
VIDEO DETECTION ZONE	⊠	
IMAGE SENSOR	▪	
DOME PTZ CAMERA	▪	
LUMINAIRE	–●	
LED STREET NAME SIGN	⊦	

• NOTES:

1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN IS EXISTING EQUIPMENT TO REMAIN.

2. THIS SIGNAL PLAN WAS DEVELOPED FROM EXISTING SIGNAL PLANS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND NOT TOPOGRAPHIC SURVEY. ACCURACY OF EQUIPMENT LOCATION OR EXISTING GEOMETRY MUST BE VERIFIED IN THE FIELD.

CITY OF OAK FOREST
LOCATION NO. 102

BAXTER & WOODMAN
Consulting Engineers

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
159TH STREET (US ROUTE 6) AND
OAK FOREST HOSPITAL ENTRANCE

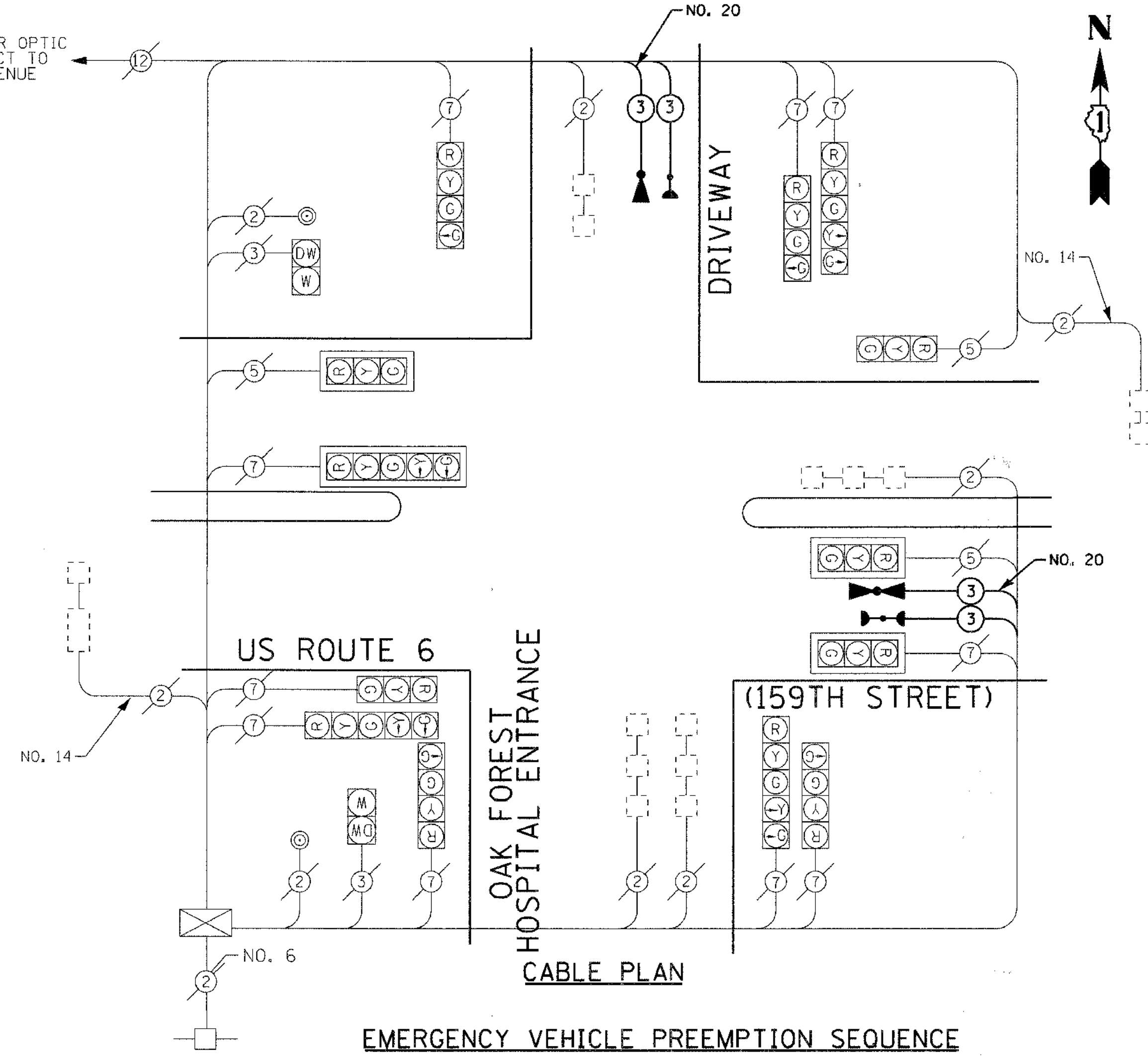
SCALE: 1" = 20' DRAWN BY: MAC
DATE: 01-02-08 CHECKED BY: LDH

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	212

STA. TO STA.
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-8003 (867)
CONTRACT NO. 63033

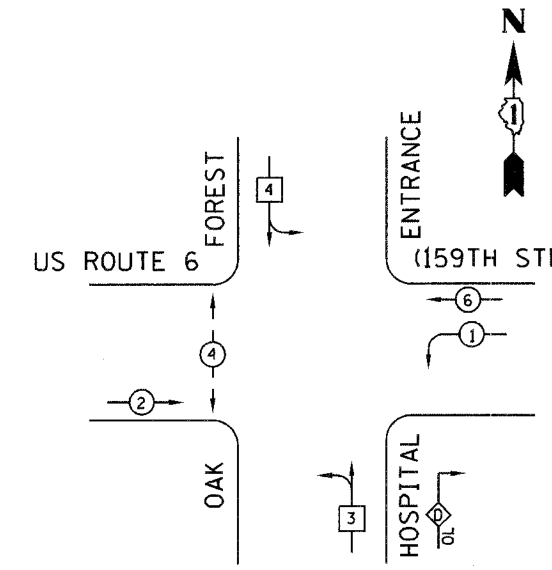
CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
2	2	DENOTES NUMBER OF CONDUCTORS. ALL EXISTING CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
1	1	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
24	24	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F SM12F
"P"	"P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, "NO LEFT TURN"
"E"		ILLUMINATED SIGN, "NO RIGHT TURN"
		GROUND CABLE 1C NO.6
H/C	C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		LUMINARE



CABLE PLAN

CONTROLLER SEQUENCE



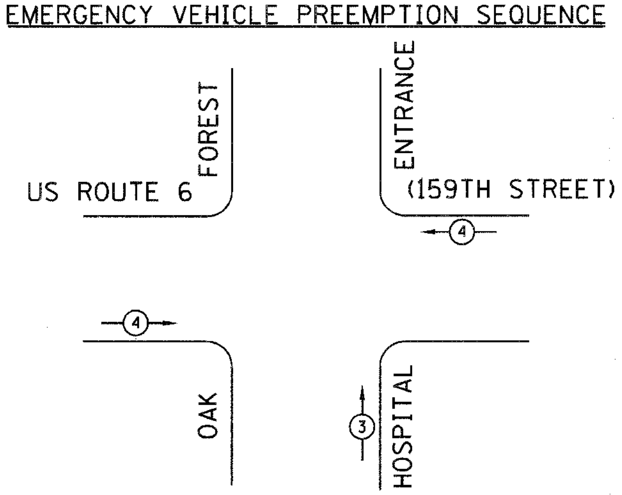
PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE		DISPLAY
D	=	8	+	1	-	1

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION		
EMERGENCY VEHICLE PREEMPTION	3	4
MOVEMENT	↑	← →

EXISTING TRAFFIC SIGNAL SEQUENCE OF OPERATIONS

MOVEMENT	6, 1, O.L.						6, 2			3					P, P, 4				FLASH
PHASE	1+6						2+6			3					4				
CHANGE TO		2+6	3		4			4,3			1+6		4 2+6				3, 1+6 2+6		
INTERVAL	1	2	3A	3B	4A	4B	5	6A	6B	7	8A	8B	9A	9B	10	11	12A	12B	
159TH STREET (US ROUTE 6) E/B NEAR RIGHT AND MID MAST ARM SIGNALS	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R
159TH STREET (US ROUTE 6) E/B FAR LEFT AND END MAST ARM SIGNALS	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R
159TH STREET (US ROUTE 6) W/B MID MAST ARM SIGNAL	G	G	Y	R	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R
159TH STREET (US ROUTE 6) W/B FAR LEFT AND END MAST ARM SIGNALS	G ←G	G ←Y	Y	R	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R
OAK FOREST HOSPITAL DRIVE N/B NEAR RIGHT AND FAR RIGHT SIGNALS	R G→	R Y→	R G→	R G→	R Y→	R	R	R	R	G	Y G→	R G→	Y	R	R	R	R	R	R
OAK FOREST HOSPITAL DRIVE N/B FAR LEFT AND FAR CENTER SIGNALS	R	R	R	R	R	R	R	R	R	G ←G	Y	R	Y	R	R	R	R	R	R
PRIVATE DRIVEWAY S/B ALL SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G ←G	G ←G	Y	R	R
PEDESTRIAN SIGNAL CROSSING-WEST LEG U.S. 6 (159TH ST)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W•	FL•• DW	DW	DW	DARK

- • TO APPEAR ONLY UPON PUSHBUTTON ACTUATION
- •• FLASHING "DONT WALK" IS TO TERMINATE AT THE COMPLETION OF PEDESTRIAN CLEARANCE INTERVAL.

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED SHIELDED	FOOT	471
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	471
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT	EACH	1
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	15

CITY OF OAK FOREST
LOCATION NO. 102

BAXTER & WOODMAN
Consulting Engineers

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CABLE PLAN,
EMERGENCY VEHICLE PREEMPTION
SEQUENCE OF OPERATION,
PHASE DESIGNATION DIAGRAM &
TRAFFIC SIGNAL SEQUENCE OF OPERATIONS
159TH STREET (US ROUTE 6) AND
OAK FOREST HOSPITAL ENTRANCE

SCALE: NONE DRAWN BY: MAC
DATE: 01-02-08 CHECKED BY: LDH

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	213

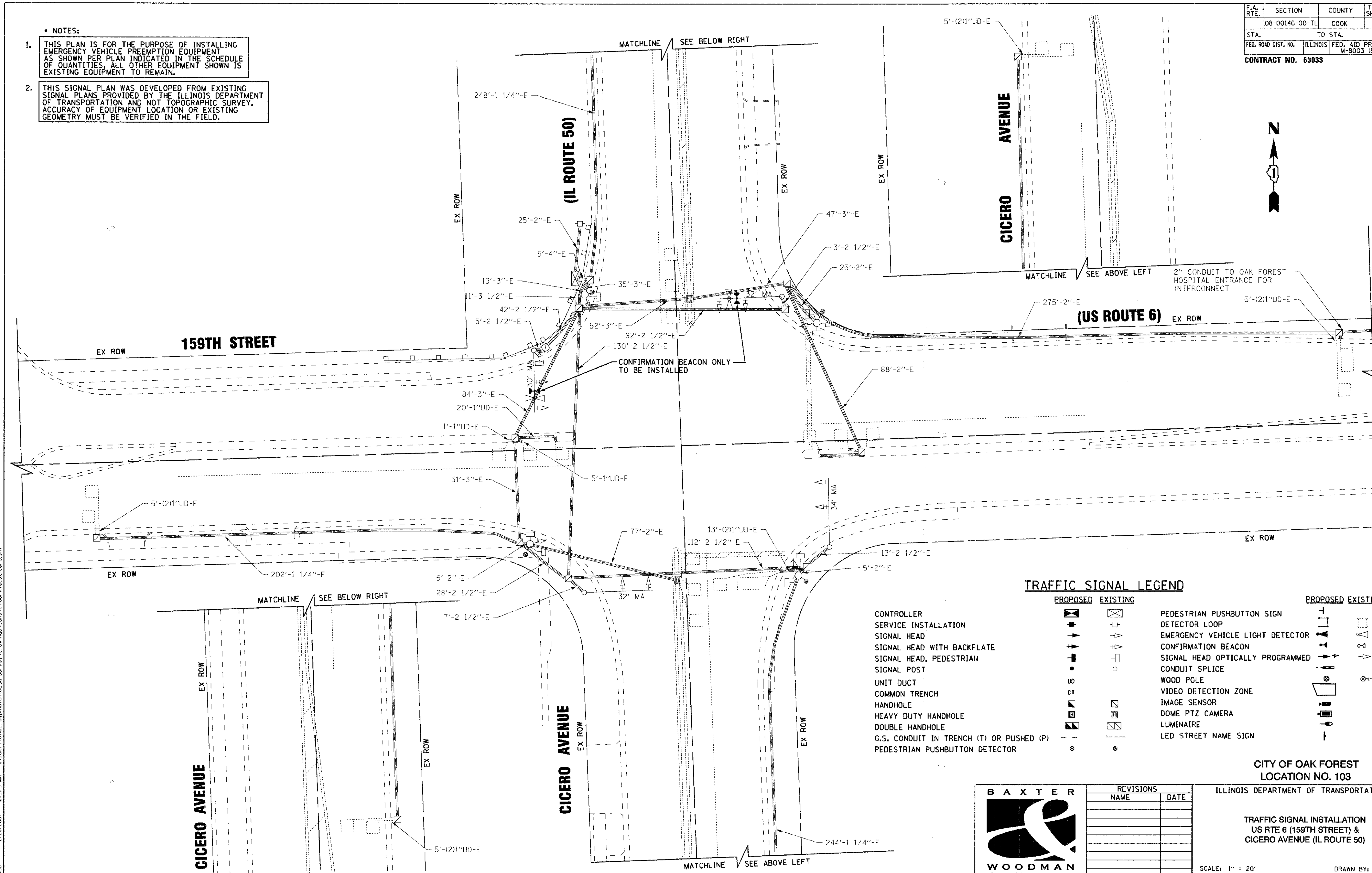
STA. TO STA.

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT M-8003 (867)

CONTRACT NO. 63033

• NOTES:

1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN IS EXISTING EQUIPMENT TO REMAIN.
2. THIS SIGNAL PLAN WAS DEVELOPED FROM EXISTING SIGNAL PLANS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND NOT TOPOGRAPHIC SURVEY. ACCURACY OF EQUIPMENT LOCATION OR EXISTING GEOMETRY MUST BE VERIFIED IN THE FIELD.



TRAFFIC SIGNAL LEGEND

PROPOSED / EXISTING

- CONTROLLER
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- UNIT DUCT (UD)
- COMMON TRENCH (CT)
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN PUSHBUTTON SIGN
- DETECTOR LOOP
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- SIGNAL HEAD OPTICALLY PROGRAMMED
- CONDUIT SPLICE
- WOOD POLE
- VIDEO DETECTION ZONE
- IMAGE SENSOR
- DOME PTZ CAMERA
- LUMINAIRE
- LED STREET NAME SIGN

CITY OF OAK FOREST
LOCATION NO. 103

BAXTER & WOODMAN
Consulting Engineers

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
US RTE 6 (159TH STREET) &
CICERO AVENUE (IL ROUTE 50)

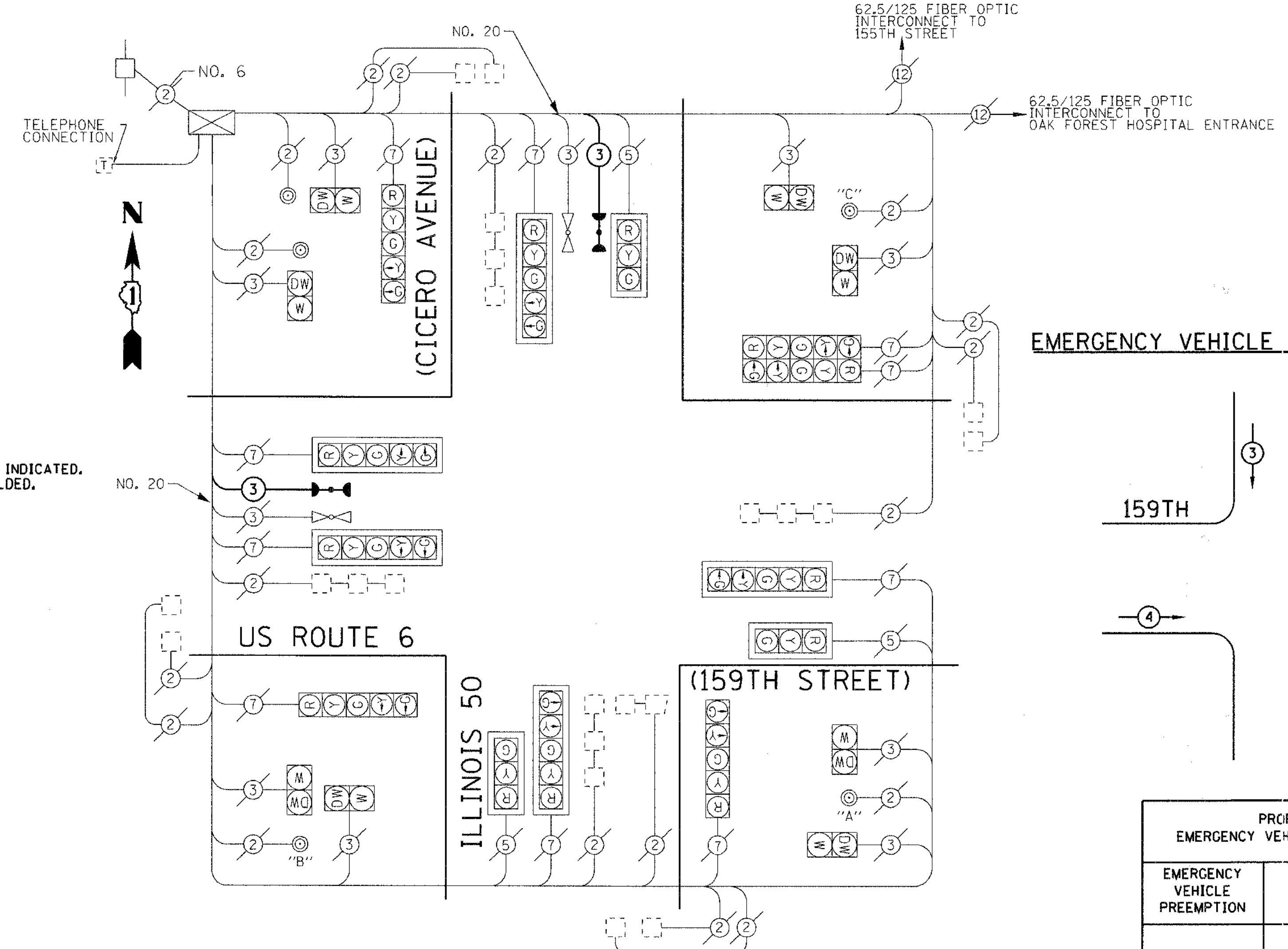
SCALE: 1" = 20' DRAWN BY: MAC
DATE: 01-02-08 CHECKED BY: LDH

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	214
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT M-8003 (867)		

CONTRACT NO. 63033

CABLE PLAN LEGEND

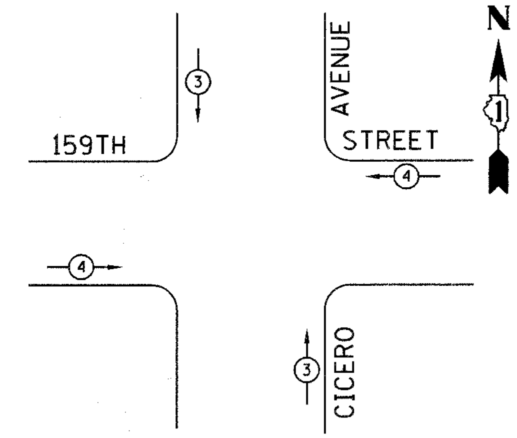
EXISTING	PROPOSED	
		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		DENOTES NUMBER OF CONDUCTORS. ALL EXISTING CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F SM12F
"P"	"P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, "NO LEFT TURN"
"E"		ILLUMINATED SIGN, "NO RIGHT TURN"
		GROUND CABLE IC NO.6
H/C	C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		LUMINARE



CABLE PLAN

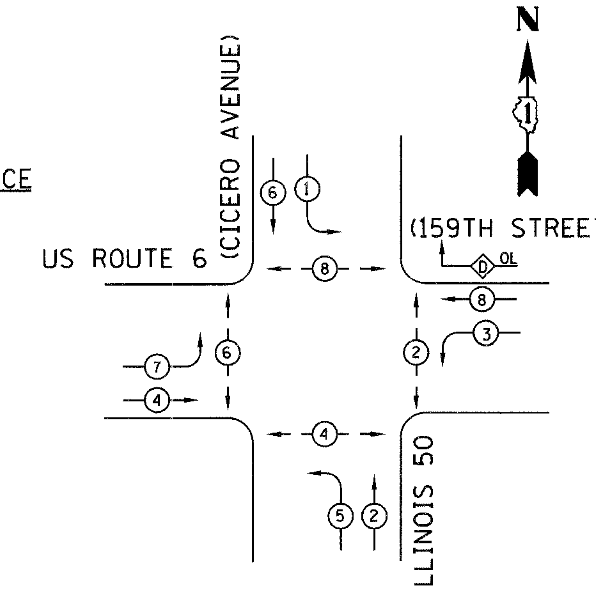
PUSH BUTTON "A" SHALL PLACE CALLS IN PHASES 2 & 4
PUSH BUTTON "B" SHALL PLACE CALLS IN PHASES 4 & 6
PUSH BUTTON "C" SHALL PLACE CALLS IN PHASES 2 & 8

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION		
EMERGENCY VEHICLE PREEMPTION	3	4
MOVEMENT	↓↑	← →

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE		DISPLAY
D	=	8	+	1	-	8

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	314
CONFIRMATION BEACON	EACH	2
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1

CITY OF OAK FOREST
LOCATION NO. 103

BAXTER & WOODMAN
Consulting Engineers

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN,
EMERGENCY VEHICLE PREEMPTION
SEQUENCE OF OPERATION,
PHASE DESIGNATION DIAGRAM &
TRAFFIC SIGNAL SEQUENCE OF OPERATIONS
US ROUTE 6 & CICERO AVENUE

SCALE: NONE   DRAWN BY: MAC
DATE: 01-02-08   CHECKED BY: LDH

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	215
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT M-8003 (867)		

CONTRACT NO. 63033

EXISTING TRAFFIC SIGNAL SEQUENCE OF OPERATIONS

MOVEMENT / PHASE (N)	1+5				1+6 (P-P)									2+5 (P-P)							2+6 (P-P)	
INTERVAL	1	2	3	4	5	6	7A	7B	8A	8B	9	10A	10B	11	12	13A	13B	14A	14B	15	16	17
CHANGE TO	/	1+6	2+5	2+6 3+7 3+8 4+7 4+8	⊖ /	⊖ /	1+5		2+5 3+8 4+8		2+6	3+7 4+7		⊖ /	⊖ /	1+5		1+6 3+7 3+8 4+7 4+8		2+6	/	/
US 6 (159TH STREET) EASTBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	Y	R	G	G	G
US 6 (159TH STREET) EASTBOUND END MAST ARM & FAR LEFT SIGNAL	R ←G	R ←Y	R ←G	R ←Y	R	R	R	R	R	R	R	R	R	G ←G	G ←G	Y ←G	R ←G	Y	R	G ←Y	G	G
US 6 (159TH STREET) WESTBOUND NEAR RIGHT AND FAR RIGHT SIGNAL	R	R	R	R	G	G	Y	R	Y	R	G	Y G→	R G→	R	R	R	R	R	R	R	G	G
US 6 (159TH STREET) WESTBOUND END MAST ARM AND FAR LEFT SIGNAL	R ←G	R ←G	R ←Y	R ←Y	G ←G	G ←G	Y ←G	R ←G	Y	R	G ←Y	Y	R	R	R	R	R	R	R	R	G	G
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON NORTH SIDE U.S. 6 (159TH STREET)	DW	DW	DW	DW	• W	•• FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	• W	•• FL DW
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON SOUTH SIDE U.S. 6 (159TH STREET)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	• W	•• FL DW	DW	DW	DW	DW	DW	• W	•• FL DW
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON EAST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON WEST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW

MOVEMENT / PHASE	2+6 (P-P)				3+7					3+8 (P)							4+7 (P)									4+8 (P)				FLASH
INTERVAL	18A	18B	19A	19B	20	21	22	23	24	25	26	27A	27B	28A	28B	29	30	31	32A	32B	33A	33B	34A	34B	35	36	37	38A	38B	
CHANGE TO	3+7 4+7		3+8 4+8		/	1+5 2+5 4+8	1+6 2+6	3+8	4+7	⊖ /	⊖ /	1+5 1+6 2+5 2+6 4+7		3+7		4+8	⊖ /	⊖ /	1+5 2+5 3+8		1+6 2+6		3+7		4+8	/	/	1+5 1+6 2+5 2+6		
US 6 (159TH STREET) EASTBOUND FAR RIGHT SIGNAL	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
US 6 (159TH STREET) EASTBOUND END MAST ARM & FAR LEFT SIGNAL	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
US 6 (159TH STREET) WESTBOUND NEAR RIGHT AND FAR RIGHT SIGNAL	Y G→	R G→	Y	R	R G→	R Y→	R G→	R Y→	R G→	R	R	R	R	R	R	R	R G→	R G→	R Y→	R	R G→	R G→	R G→	R G→	R Y→	R	R	R	R	R
US 6 (159TH STREET) WESTBOUND END MAST ARM AND FAR LEFT SIGNAL	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	G	G	Y	R	Y	R	G	R	R	R	R	R	R	R	R	R	G	G	Y	R	R
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R	R	R	R	R ←G	R ←Y	R ←Y	R ←G	R ←Y	G ←G	G ←G	Y	R	Y ←G	R ←G	G ←Y	R	R	R	R	R	R	R	R	R	G	G	Y	R	R
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	Y	R	Y	R	G	G	G	Y	R	R
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R	R	R	R	R ←G	R ←Y	R ←Y	R ←Y	R ←G	R	R	R	R	R	R	R	G ←G	G ←G	Y	R	Y	R	Y ←G	R ←G	G ←Y	G	G	Y	R	R
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON NORTH SIDE U.S. 6 (159TH STREET)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DK
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON SOUTH SIDE U.S. 6 (159TH STREET)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DK
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON EAST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	DW	DW	DW	DW	DW	DW	DW	• W	•• FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	• W	•• FL DW	DW	DW	DK
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON WEST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	• W	•• FL DW	DW	DW	DW	DW	DW	DW	DW	• W	•• FL DW	DW	DW	DK

• TO APPEAR ONLY ON PUSHBUTTON ACTIVATION.
•• FLASHING "DONT WALK" IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.
⊖ THIS "WALK" OR FLASHING "DONT WALK" MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT ARROW TIME IS NOT SUFFICIENT TO COMPLETE "WALK" OR FLASHING "DONT WALK " INTERVALS.

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	5		5			11		11			16	16		
EMERGENCY VEHICLE PREEMPTION INTERVAL	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	10
CHANGE TO	2 OR 3	1C	2	1E	1F	3	1H	2	1K	1L	3	2	1P	10	3
US 6 (159TH STREET) EASTBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	G	G	G	Y	R	G	G	Y	R
US 6 (159TH STREET) EASTBOUND END MAST ARM & FAR LEFT SIGNAL	R ←Y	R	R	R	R	R	G ←G	G ←Y	G ←G	Y	R	G	G	Y	R
US 6 (159TH STREET) WESTBOUND NEAR RIGHT AND FAR RIGHT SIGNAL	R	G	G	G	Y	R	R	R	R	R	R	G	G	Y	R
US 6 (159TH STREET) WESTBOUND END MAST ARM AND FAR LEFT SIGNAL	R ←Y	G ←G	G ←Y	G ←G	Y	R	R	R	R	R	R	G	G	Y	R
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON NORTH SIDE U.S. 6 (159TH STREET)	DW	FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	FL DW	FL DW	DW	DW
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON SOUTH SIDE U.S. 6 (159TH STREET)	DW	DW	DW	DW	DW	DW	FL DW	DW	FL DW	DW	DW	FL DW	FL DW	DW	DW
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON EAST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON WEST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	20	20	25			25		30			30		36			36	EMERGENCY VEHICLE INTERVAL		CLEAR TO NORMAL SEQUENCE
EMERGENCY VEHICLE PREEMPTION INTERVAL	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	1AA	1BB	1CC	1DD	1EE	1FF	1GG			
CHANGE TO	2	3	1U	1V	2	1X	3	1Z	1AA	2	1CC	3	1EE	1FF	2	3	2	3	
US 6 (159TH STREET) EASTBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	◇
US 6 (159TH STREET) EASTBOUND END MAST ARM & FAR LEFT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	◇
US 6 (159TH STREET) WESTBOUND NEAR RIGHT AND FAR RIGHT SIGNAL	R G→	R Y→	R	R	R	R	R	R G→	R G→	R G→	R Y→	R	R	R	R	R	G	R	◇
US 6 (159TH STREET) WESTBOUND END MAST ARM AND FAR LEFT SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	◇
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND FAR RIGHT SIGNAL	R	R	G	Y	R	G	G	R	R	R	R	R	G	Y	R	G	R	G	◇
ILLINOIS 50 (CICERO AVENUE) NORTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R ←Y	R ←Y	G ←G	Y	R	G ←G	G ←Y	R	R	R	G	G	G	Y	R	G	R	G	◇
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND FAR RIGHT SIGNAL	R	R	R	R	R	R	R	G	Y	R	G	G	G	Y	R	G	R	G	◇
ILLINOIS 50 (CICERO AVENUE) SOUTHBOUND END MAST ARM AND FAR LEFT SIGNAL	R ←Y	R ←Y	R	R	R	R	R	G ←G	Y	R	G ←Y	G	G	Y	R	G	R	G	◇
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON NORTH SIDE U.S. 6 (159TH STREET)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	◇
PEDESTRIAN SIGNAL CROSSING ILLINOIS 50 ON SOUTH SIDE U.S. 6 (159TH STREET)	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	◇
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON EAST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	FL DW	DW	DW	FL DW	DW	DW	DW	DW	DW	DW	FL DW	DW	DW	FL DW	DW	DW	◇
PEDESTRIAN SIGNAL CROSSING U.S. 6 ON WEST SIDE OF ILLINOIS 50 (CICERO AVE)	DW	DW	DW	DW	DW	DW	DW	FL DW	DW	DW	FL DW	DW	FL DW	DW	DW	FL DW	DW	DW	◇

EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATIONS OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2 OR 3 IS TERMINATED.

CITY OF OAK FOREST
LOCATION NO. 103

BAXTER & WOODMAN
Consulting Engineers

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, PHASE DESIGNATION DIAGRAM & TRAFFIC SIGNAL SEQUENCE OF OPERATIONS US ROUTE 6 & CICERO AVENUE

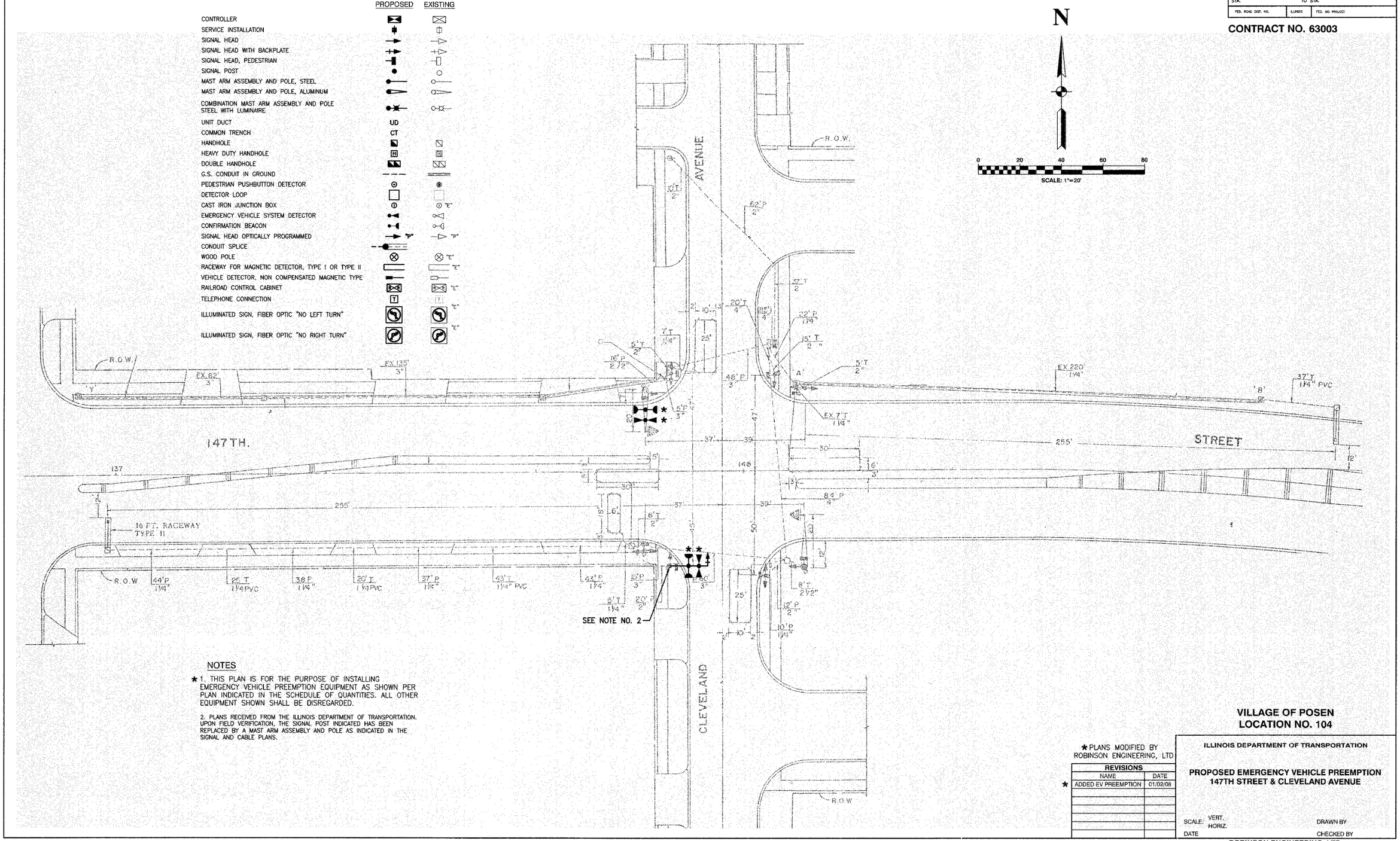
SCALE: NONE — DRAWN BY: MAC
DATE: 01-02-08 — CHECKED BY: LDH

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	216
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		"E"
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. PLANS RECEIVED FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION. UPON FIELD VERIFICATION, THE SIGNAL POST INDICATED HAS BEEN REPLACED BY A MAST ARM ASSEMBLY AND POLE AS INDICATED IN THE SIGNAL AND CABLE PLANS.

VILLAGE OF POSEN
LOCATION NO. 104

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
147TH STREET & CLEVELAND AVENUE

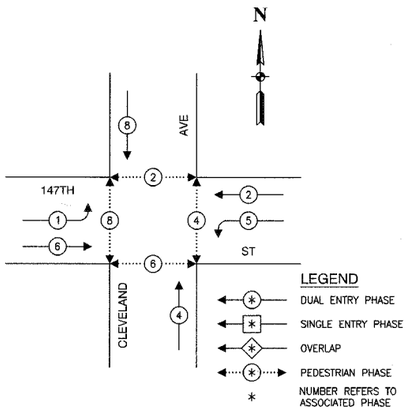
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17200 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-8700 FAX (708) 331-3926
ILLINOIS DESIGN FIRM REGISTRATION NO.: 184001126.

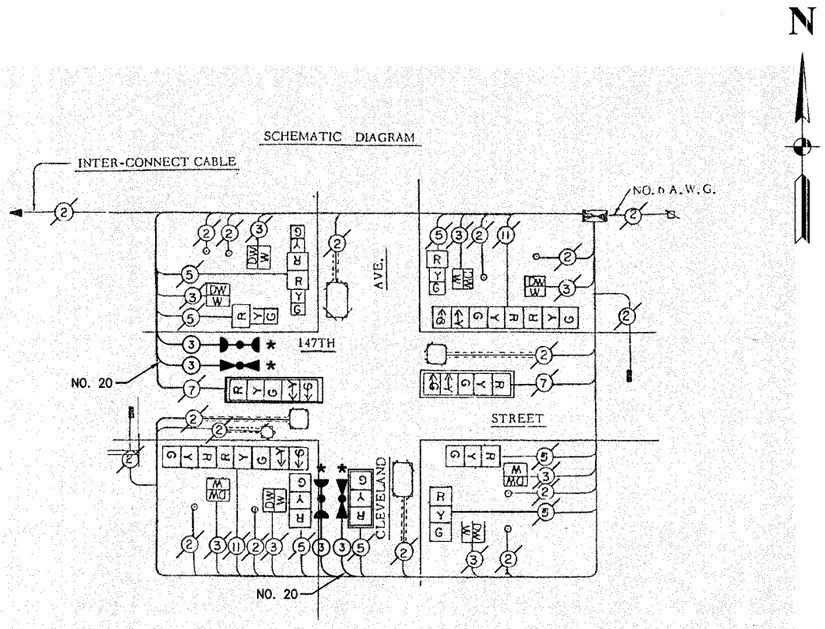
07248-100

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	217
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

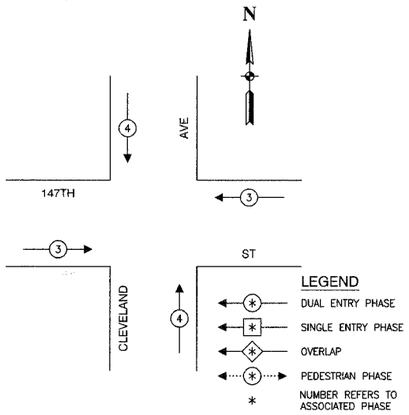
CONTRACT NO. 63003



PHASE DESIGNATION DIAGRAM



CABLE PLAN



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	413
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	413

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
DW	DW	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
R Y G "P"	R Y G "P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF POSEN
LOCATION NO. 104

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
*	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
147TH STREET & CLEVELAND AVENUE

SCALE: VERT.
HORIZ.
DATE
DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

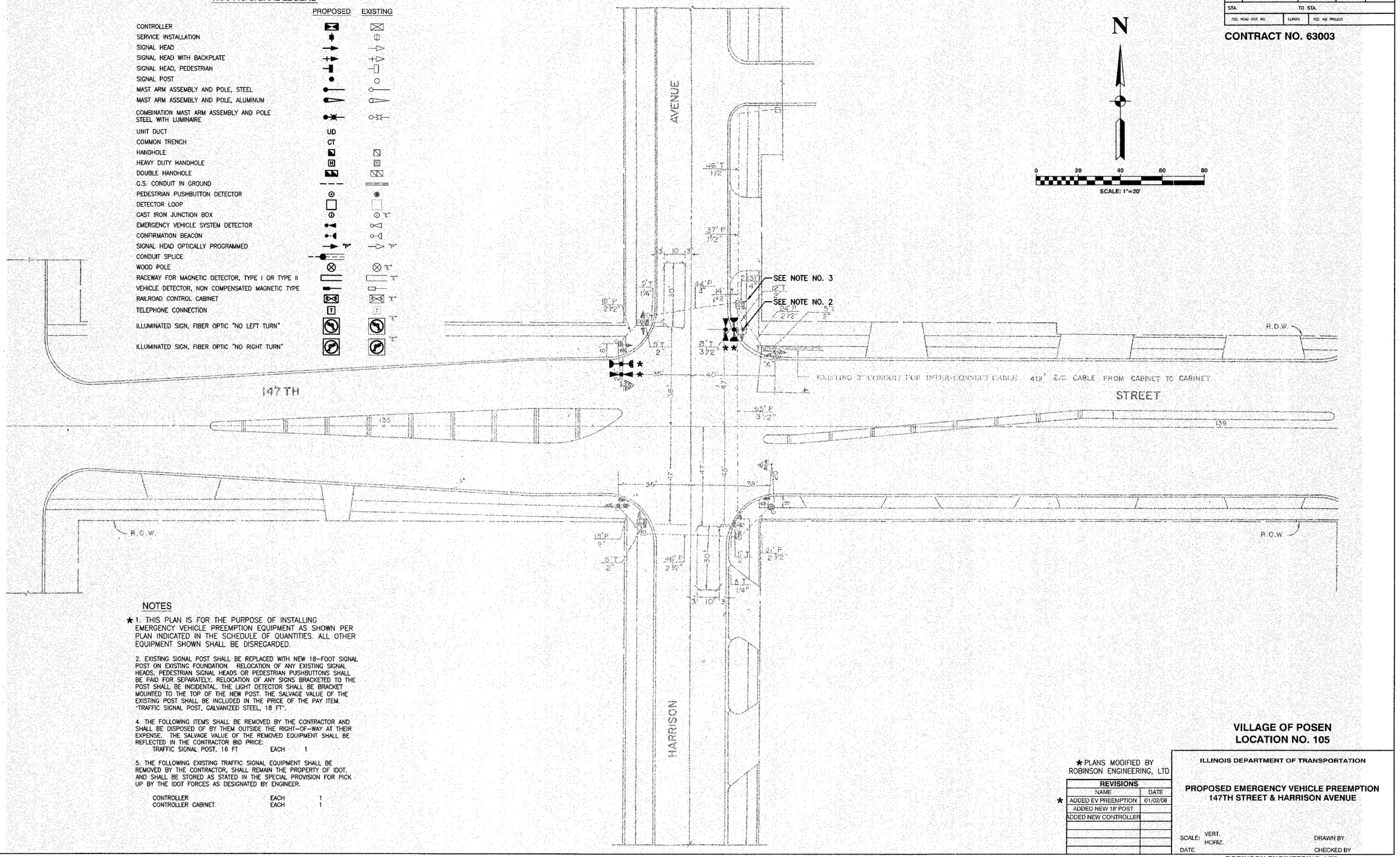
07248-100

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	218
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. EXISTING SIGNAL POST SHALL BE REPLACED WITH NEW 18-FOOT SIGNAL POST ON EXISTING FOUNDATION. RELOCATION OF ANY EXISTING SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS OR PEDESTRIAN PUSHBUTTONS SHALL BE PAID FOR SEPARATELY. RELOCATION OF ANY SIGNS BRACKETED TO THE POST SHALL BE INCIDENTAL. THE LIGHT DETECTOR SHALL BE BRACKET MOUNTED TO THE TOP OF THE NEW POST. THE SALVAGE VALUE OF THE EXISTING POST SHALL BE INCLUDED IN THE PRICE OF THE PAY ITEM. "TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT".

4. 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 CONTRACTOR BID PRICE:

TRAFFIC SIGNAL POST, 16 FT	EACH	1

5. THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF IDOT, AND SHALL BE STORED AS STATED IN THE SPECIAL PROVISION FOR PICK UP BY THE IDOT FORCES AS DESIGNATED BY ENGINEER.

CONTROLLER	EACH	1
CONTROLLER CABINET	EACH	1

VILLAGE OF POSEN
LOCATION NO. 105

★PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08
	ADDED NEW 18' POST	
	ADDED NEW CONTROLLER	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
147TH STREET & HARRISON AVENUE

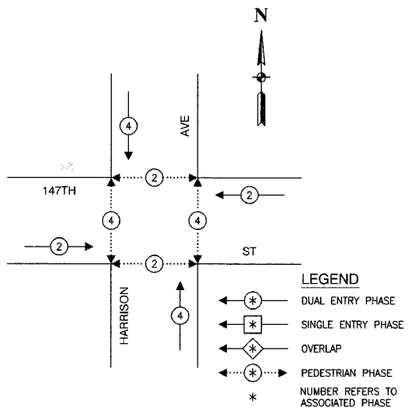
SCALE: VERT.
HORIZ.
DATE
DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6100 FAX (708) 331-0526
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-101

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	219
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

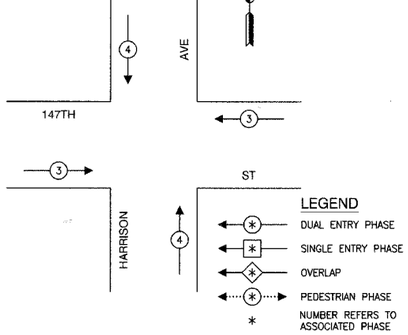


PHASE DESIGNATION DIAGRAM

THE HARRISON STREET GREEN PHASE SHALL APPEAR A PRESET TIME AFTER THE AMBER CLEARANCE APPEARS FOR 147TH STREET AT CLEVELAND AVENUE.

* PEDESTRIAN PHASES SHALL APPEAR ONLY UPON PUSH BUTTON ACTIVATION.

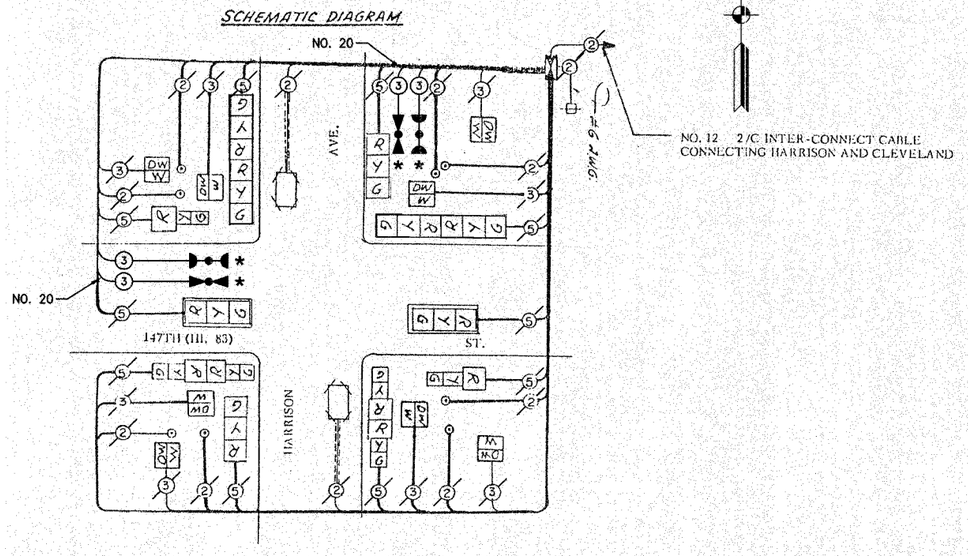
** FLASHING "DON'T WALK" SHALL TERMINATE AT THE COMPLETION OF THE PEDESTRIAN CLEARANCE INTERVAL.



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

SCHEMATIC DIAGRAM



CABLE PLAN

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	185
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	2
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	1
RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	1
RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	1
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	15
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	185
MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF POSEN
LOCATION NO. 105

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08
ADDED NEW 18' POST	
ADDED NEW CONTROLLER	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
147TH STREET & HARRISON AVENUE

SCALE: VERT. HORIZ. DRAWN BY
DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-0700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

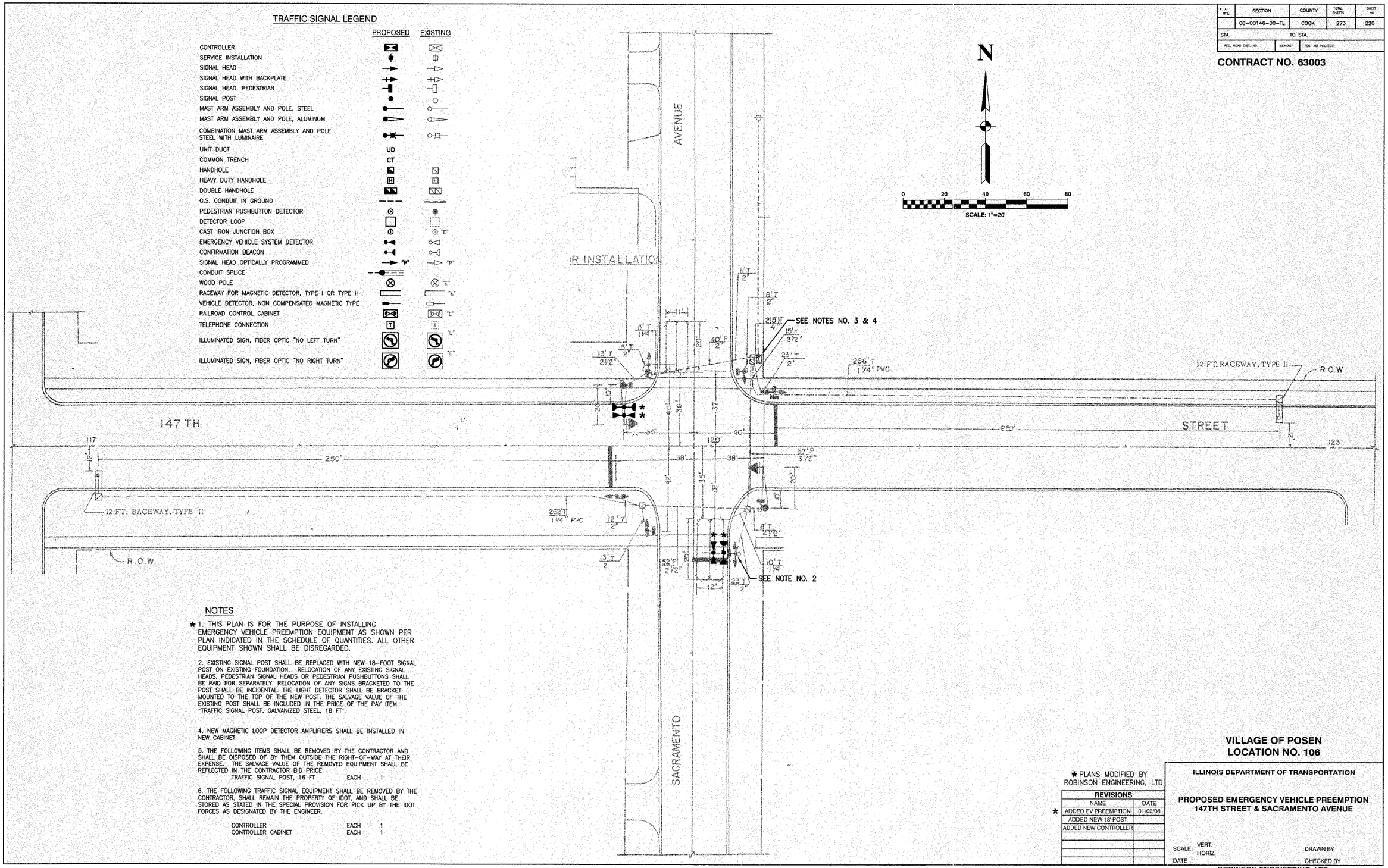
07245-101

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	220
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

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2. EXISTING SIGNAL POST SHALL BE REPLACED WITH NEW 18-FOOT SIGNAL POST ON EXISTING FOUNDATION. RELOCATION OF ANY EXISTING SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS OR PEDESTRIAN PUSHBUTTONS SHALL BE PAID FOR SEPARATELY. RELOCATION OF ANY SIGNS BRACKETED TO THE POST SHALL BE INCIDENTAL. THE LIGHT DETECTOR SHALL BE BRACKET MOUNTED TO THE TOP OF THE NEW POST. THE SALVAGE VALUE OF THE EXISTING POST SHALL BE INCLUDED IN THE PRICE OF THE PAY ITEM. "TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT".

4. NEW MAGNETIC LOOP DETECTOR AMPLIFIERS SHALL BE INSTALLED IN NEW CABINET.

5. 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 CONTRACTOR BID PRICE:

TRAFFIC SIGNAL POST, 16 FT	EACH	1

6. THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF IDOT, AND SHALL BE STORED AS STATED IN THE SPECIAL PROVISION FOR PICK UP BY THE IDOT FORCES AS DESIGNATED BY THE ENGINEER.

CONTROLLER	EACH	1
CONTROLLER CABINET	EACH	1

VILLAGE OF POSEN
LOCATION NO. 106

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08
	ADDED NEW 18' POST	
	ADDED NEW CONTROLLER	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
147TH STREET & SACRAMENTO AVENUE

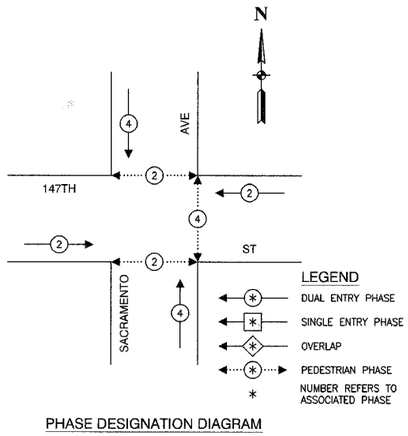
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17900 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3628
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

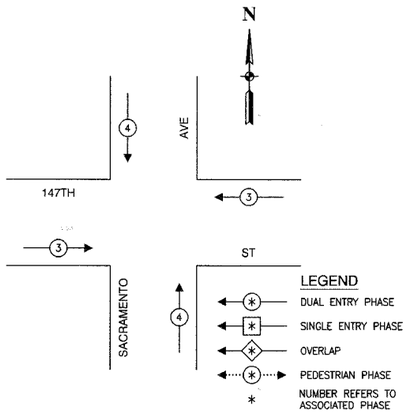
07248-102

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	221
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

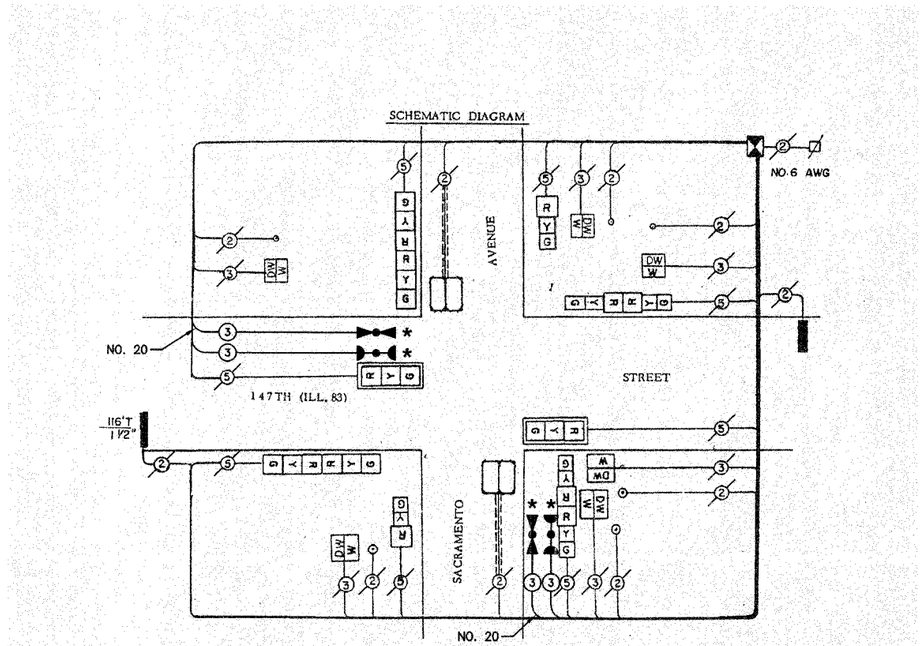


PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑



CABLE PLAN

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	280
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	2
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	2
RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	1
RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	1
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	15
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	280
MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1
MAGNETIC DETECTOR AMPLIFIER	EACH	2

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF POSEN
LOCATION NO. 106

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08
ADDED NEW 18' POST	
ADDED NEW CONTROLLER	

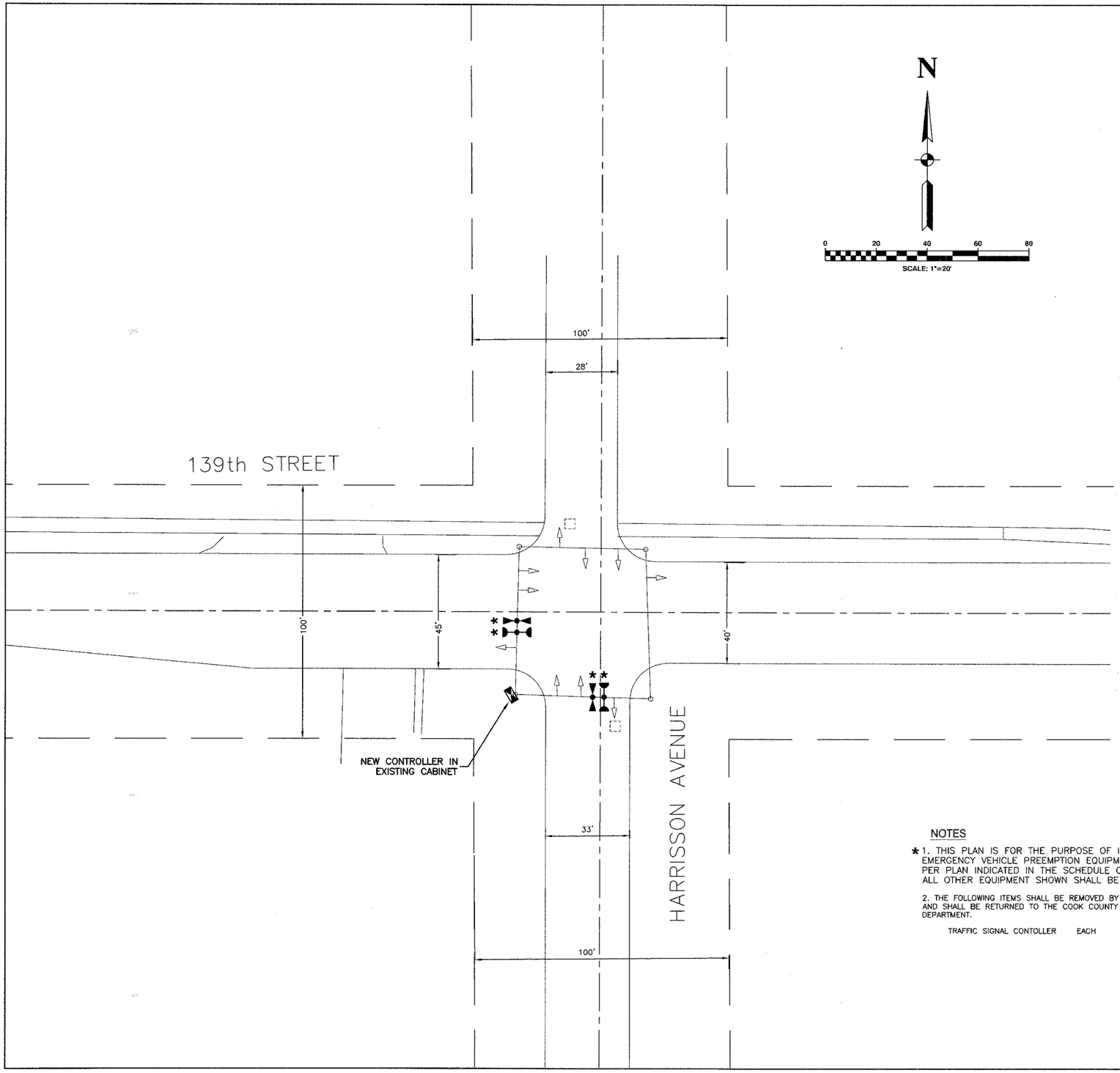
ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
147TH STREET & SACRAMENTO AVENUE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6709 FAX (708) 331-3826
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

07248-102



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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION		
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	222
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE RETURNED TO THE COOK COUNTY HIGHWAY DEPARTMENT.

TRAFFIC SIGNAL CONTOLLER EACH 1

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

VILLAGE OF POSEN
LOCATION NO. 107

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
139TH STREET AND HARRISON AVENUE

SCALE: VERT. HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3926
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128.

07248-105

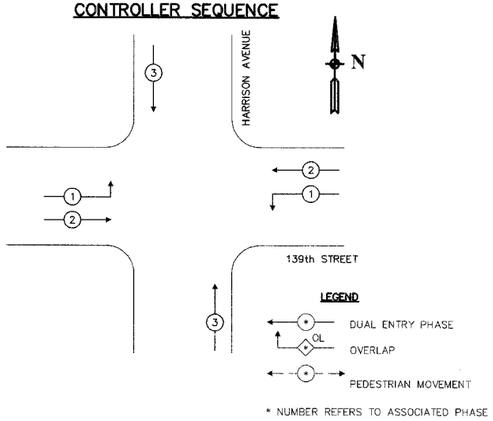
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	223
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

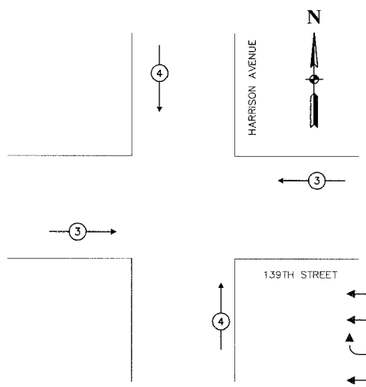
CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

CONTROLLER SEQUENCE

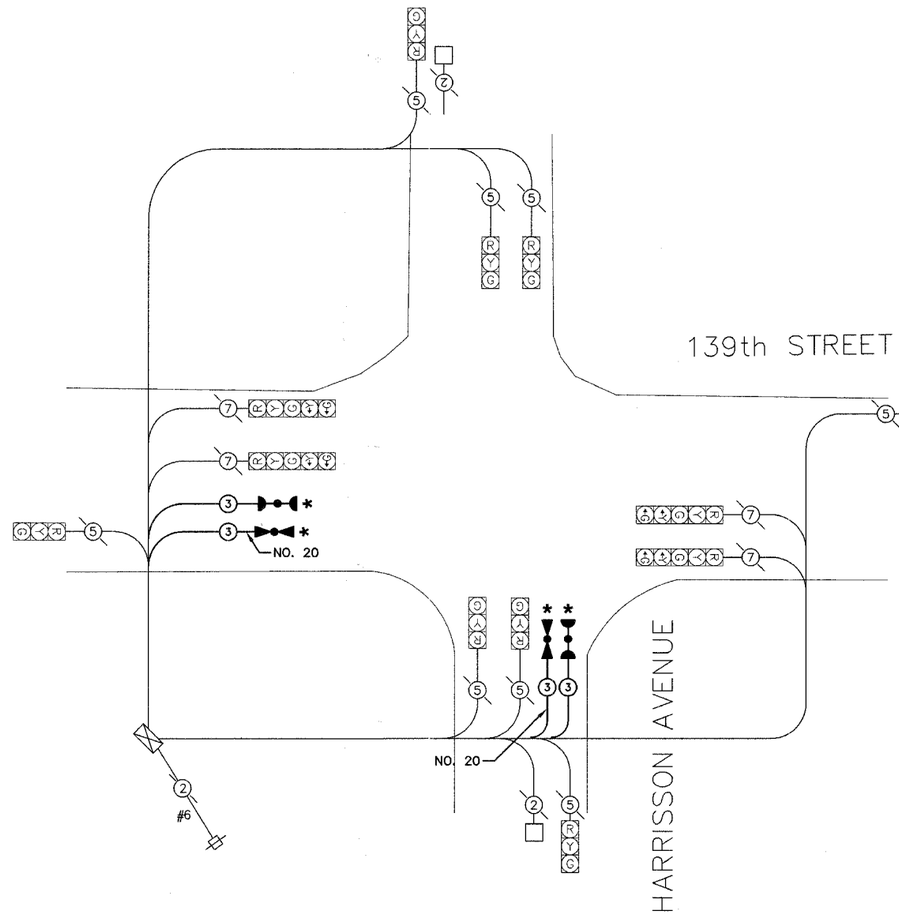


PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →



SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 3C	FOOT	194
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE AERIAL SUSPENDED NO. 20 3/C, TWISTED, SHIELDED	FOOT	194

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08
ADDED NEW 18' POST	

VILLAGE OF POSEN
LOCATION NO. 107

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
139TH STREET AND HARRISON AVENUE

SCALE: VERT.
HORIZ.
DATE
DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
10960 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3526
ILLINOIS DESIGN FIRM REGISTRATION NO. 184.001108

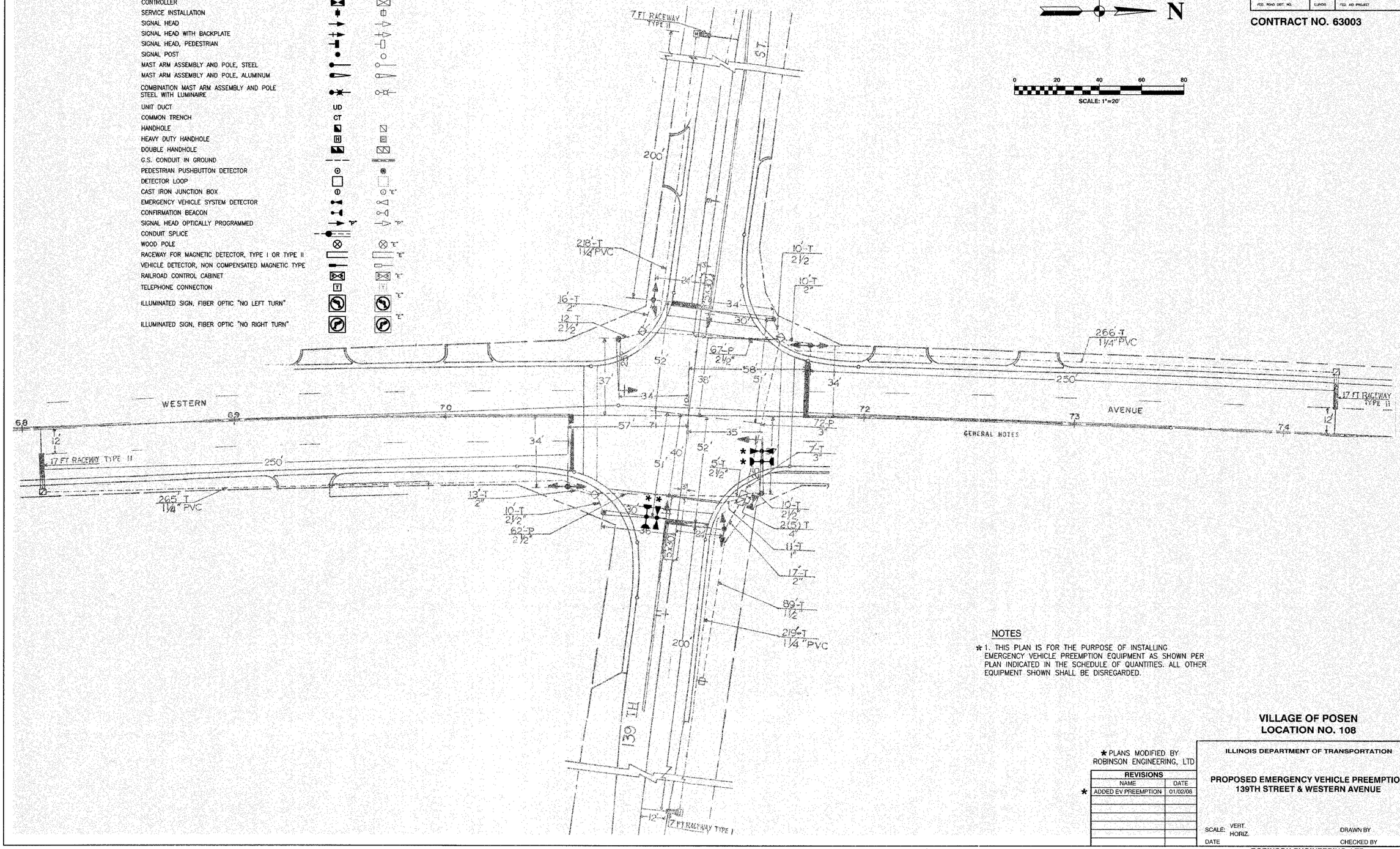
07248-105

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	224
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



GENERAL NOTES

NOTES

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF POSEN
LOCATION NO. 108

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
*	ADDED EV PREEMPTION	01/02/06

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
139TH STREET & WESTERN AVENUE

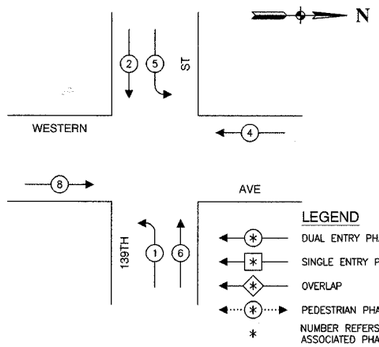
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3808
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

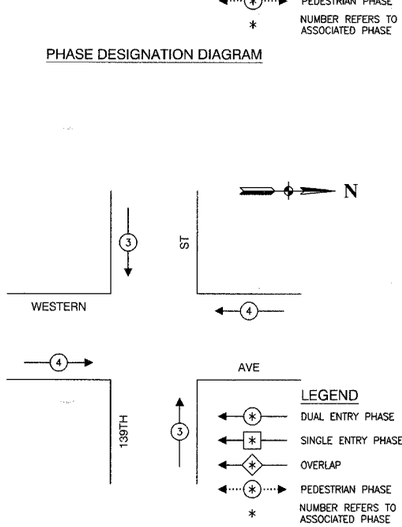
07245-104

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	225
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

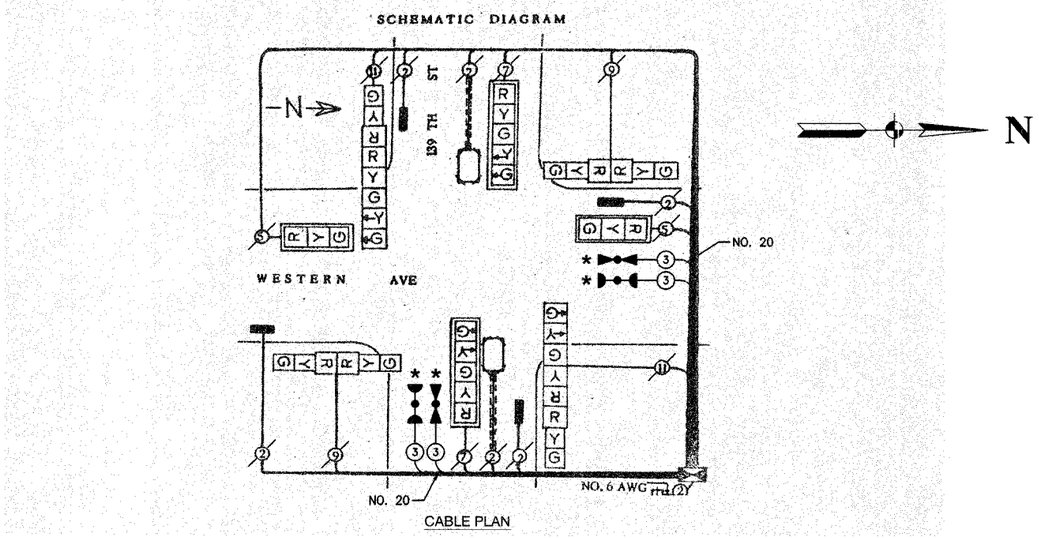


PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →



CABLE PLAN LEGEND

EXISTING	PROPOSED	
C	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	229
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	229

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF POSEN
LOCATION NO. 108

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
139TH STREET & WESTERN AVENUE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17050 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-2626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

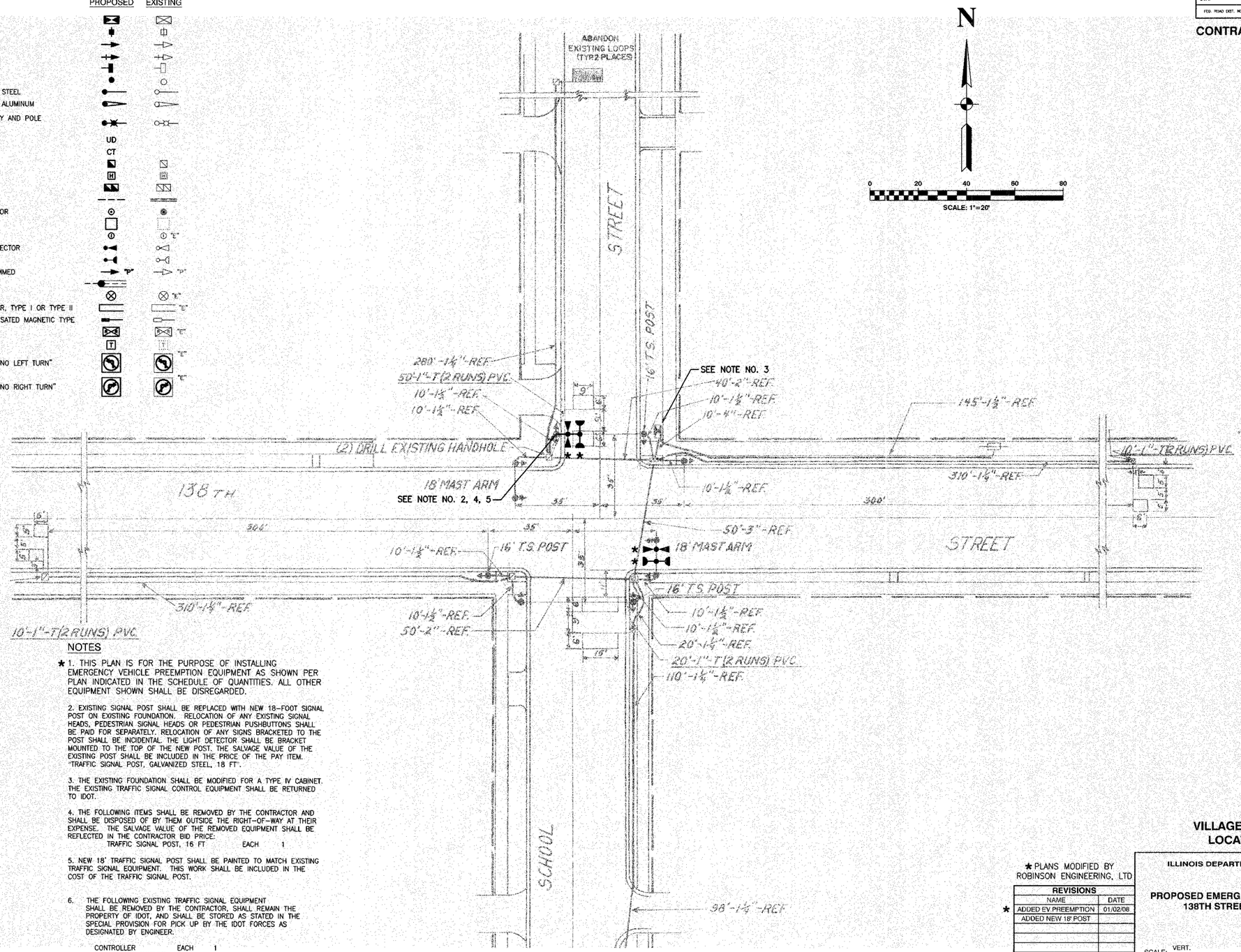
07248-104

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	226
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	"E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. EXISTING SIGNAL POST SHALL BE REPLACED WITH NEW 18-FOOT SIGNAL POST ON EXISTING FOUNDATION. RELOCATION OF ANY EXISTING SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS OR PEDESTRIAN PUSHBUTTONS SHALL BE PAID FOR SEPARATELY. RELOCATION OF ANY SIGNS BRACKETED TO THE POST SHALL BE INCIDENTAL. THE LIGHT DETECTOR SHALL BE BRACKET MOUNTED TO THE TOP OF THE NEW POST. THE SALVAGE VALUE OF THE EXISTING POST SHALL BE INCLUDED IN THE PRICE OF THE PAY ITEM. "TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT".

3. THE EXISTING FOUNDATION SHALL BE MODIFIED FOR A TYPE IV CABINET. THE EXISTING TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL BE RETURNED TO IDOT.

4. 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 CONTRACTOR BID PRICE:

TRAFFIC SIGNAL POST, 16 FT	EACH	1

5. NEW 18' TRAFFIC SIGNAL POST SHALL BE PAINTED TO MATCH EXISTING TRAFFIC SIGNAL EQUIPMENT. THIS WORK SHALL BE INCLUDED IN THE COST OF THE TRAFFIC SIGNAL POST.

6. THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF IDOT, AND SHALL BE STORED AS STATED IN THE SPECIAL PROVISION FOR PICK UP BY THE IDOT FORCES AS DESIGNATED BY ENGINEER.

CONTROLLER	EACH	1
CONTROLLER CABINET	EACH	1

VILLAGE OF RIVERDALE
LOCATION NO. 109

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV. PREEMPTION	01/02/08
ADDED NEW 18' POST	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
138TH STREET & SCHOOL STREET

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

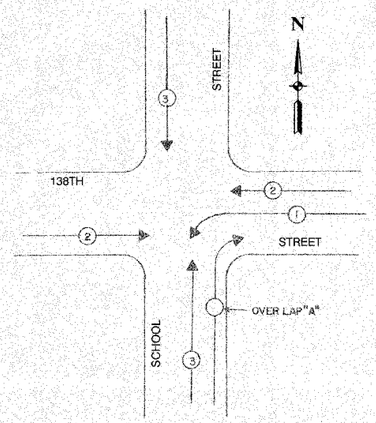
07248-78

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	227
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

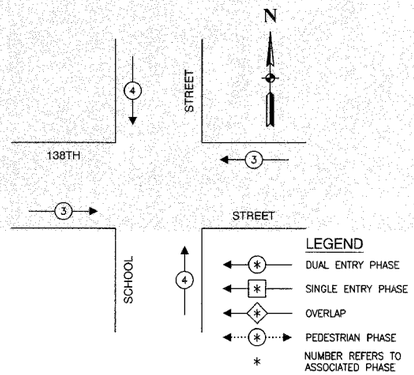
CONTRACT NO. 63003

CONTROLLER SEQUENCE

REFERRING TO STANDARD 2393, THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.

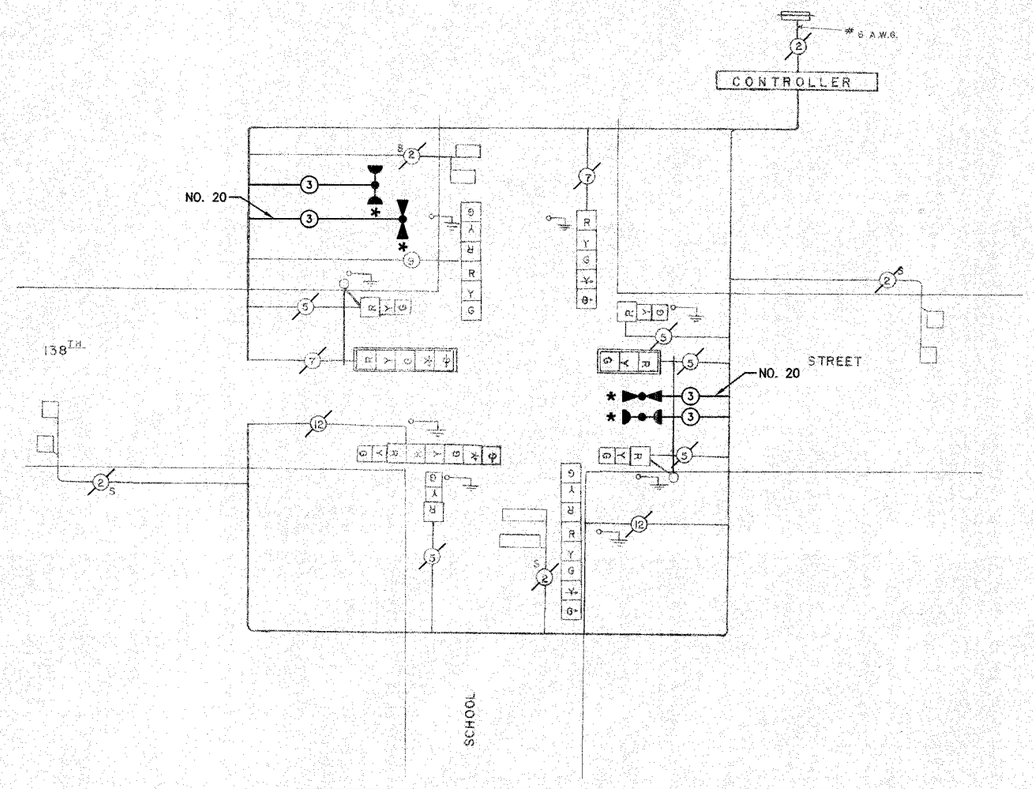


PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓



SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	234
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	4
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	2
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	15
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	EACH	234
MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1

NOTE

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CABLE PLAN LEGEND

EXISTING	PROPOSED	
C	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	R G Y G Y	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF RIVERDALE
LOCATION NO. 109

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08
	ADDED NEW 18' POST	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
138TH STREET & SCHOOL STREET

SCALE: VERT. HORIZ. DRAWN BY
DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
17200 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3828
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

07248-75

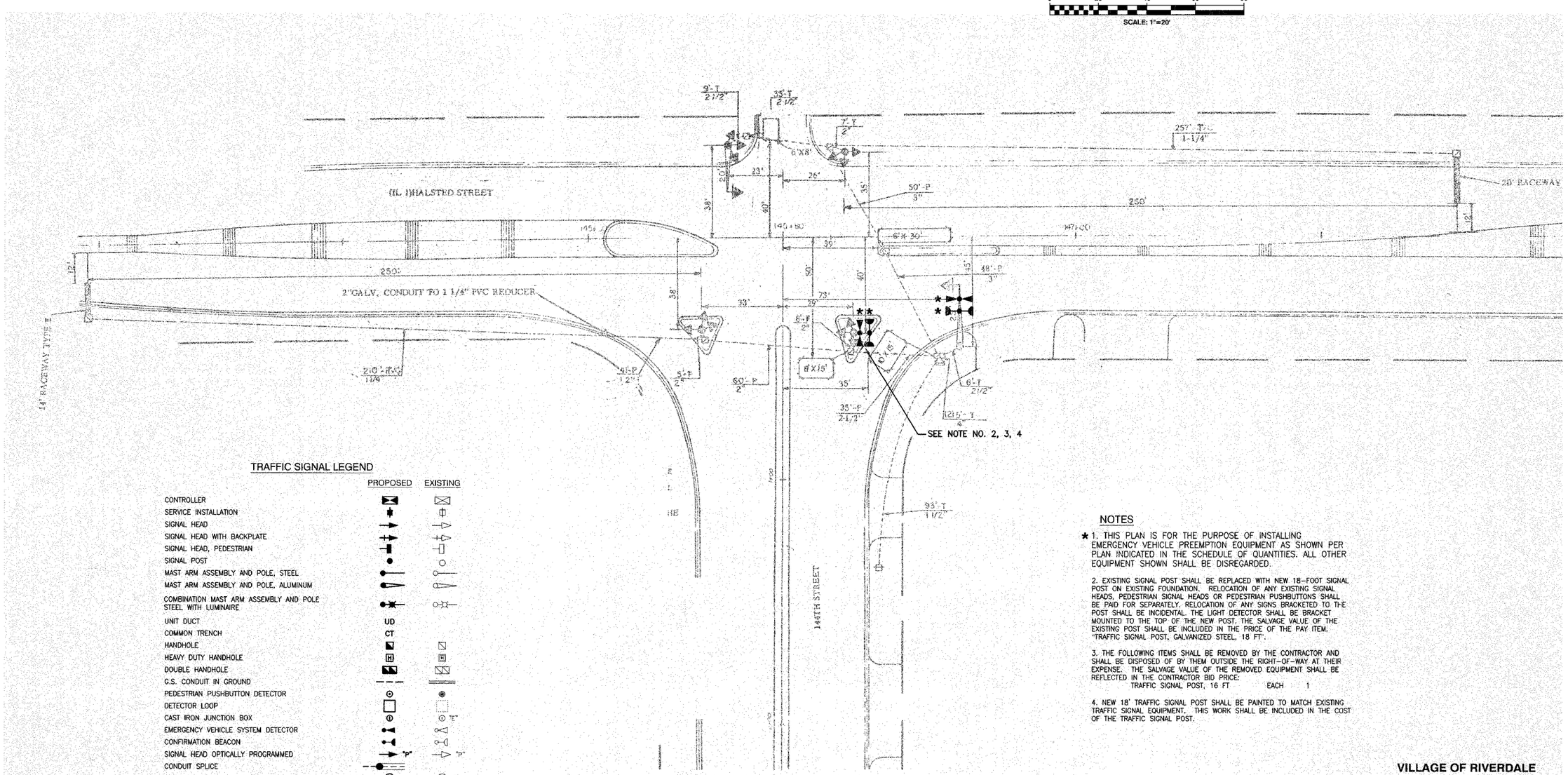
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	228
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

N

0 20 40 60 80

SCALE: 1"=20'



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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	"E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"

NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. EXISTING SIGNAL POST SHALL BE REPLACED WITH NEW 18-FOOT SIGNAL POST ON EXISTING FOUNDATION. RELOCATION OF ANY EXISTING SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS OR PEDESTRIAN PUSHBUTTONS SHALL BE PAID FOR SEPARATELY. RELOCATION OF ANY SIGNS BRACKETED TO THE POST SHALL BE INCIDENTAL. THE LIGHT DETECTOR SHALL BE BRACKET MOUNTED TO THE TOP OF THE NEW POST. THE SALVAGE VALUE OF THE EXISTING POST SHALL BE INCLUDED IN THE PRICE OF THE PAY ITEM. "TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT".

3. 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 CONTRACTOR BID PRICE:

TRAFFIC SIGNAL POST, 16 FT	EACH	1

4. NEW 18' TRAFFIC SIGNAL POST SHALL BE PAINTED TO MATCH EXISTING TRAFFIC SIGNAL EQUIPMENT. THIS WORK SHALL BE INCLUDED IN THE COST OF THE TRAFFIC SIGNAL POST.

VILLAGE OF RIVERDALE
LOCATION NO. 110

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS

	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08
	ADDED NEW 18' POST	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
144TH STREET & HALSTED STREET

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

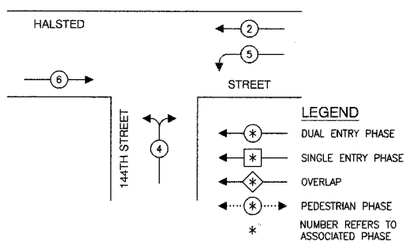
ROBINSON ENGINEERING, LTD.
17050 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3426
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-79

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	229
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

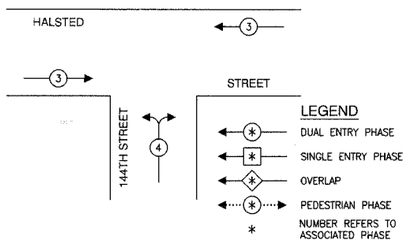
CONTRACT NO. 63003

N



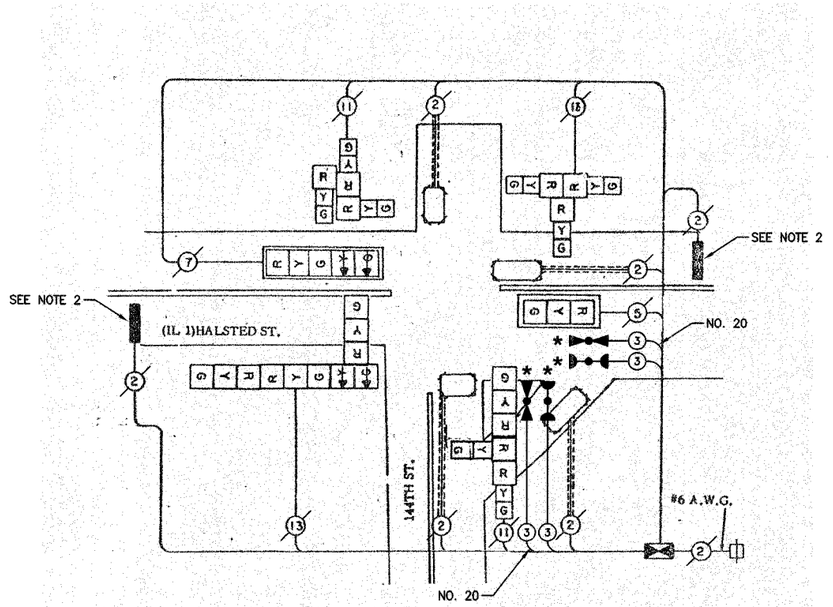
PHASE DESIGNATION DIAGRAM

N



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	← ↱



CABLE PLAN

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	164
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	3
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	15
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	EACH	164

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF RIVERDALE
LOCATION NO. 110

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08
	ADDED NEW 18' POST	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
144TH STREET & HALSTED STREET

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60478
(708) 331-6700 FAX (708) 331-3620
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

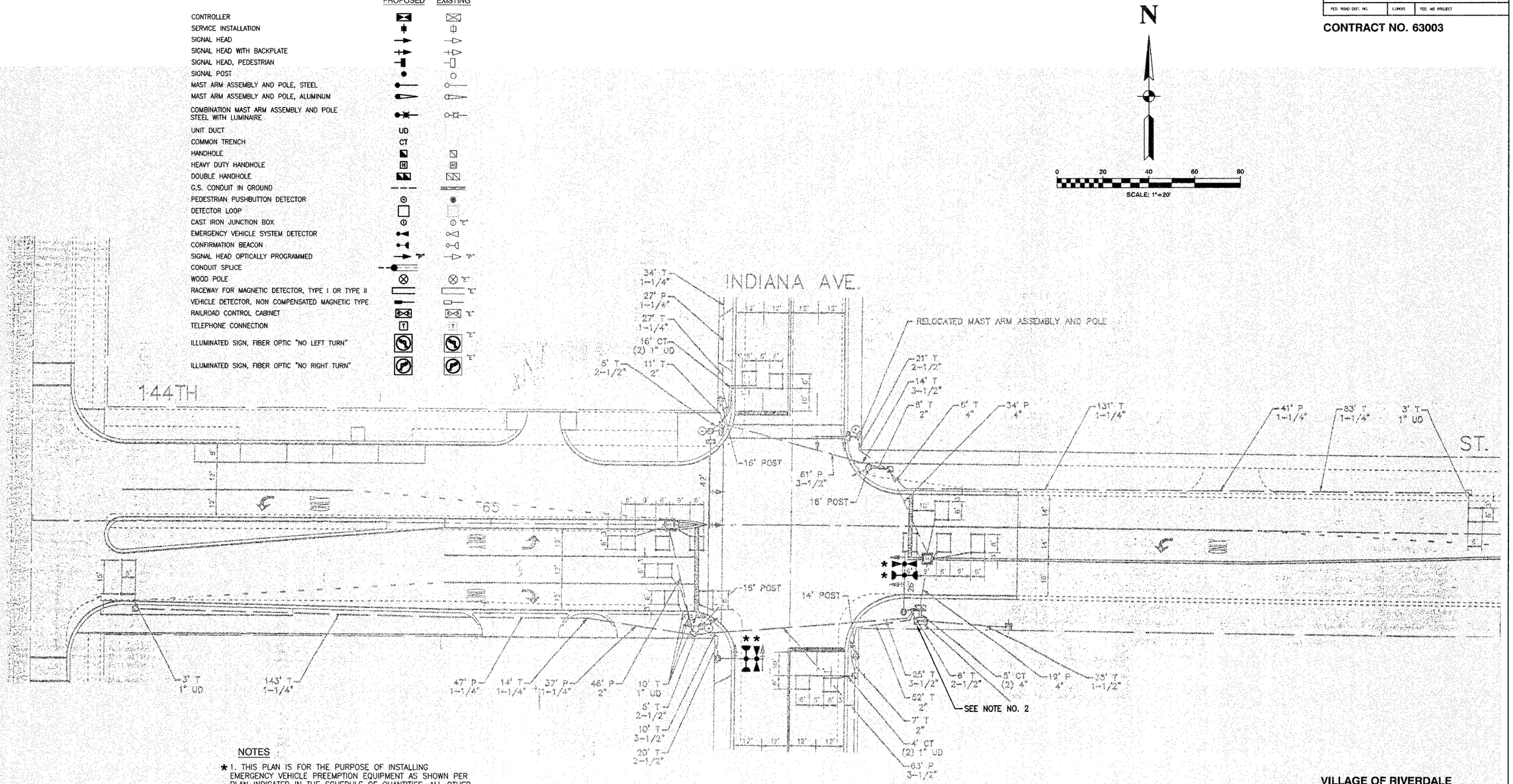
07248-79

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	230
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING TRAFFIC SIGNAL CONTROLLER AND CABINET SHALL BE REMOVED AND REPLACED ON THE EXISTING FOUNDATION.

3. THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF IDOT, AND SHALL BE STORED AS STATED IN THE SPECIAL PROVISION FOR PICK UP BY THE IDOT FORCES AS DESIGNATED BY THE ENGINEER.

CONTROLLER	EACH	1
CONTROLLER CABINET	EACH	1

VILLAGE OF RIVERDALE
LOCATION NO. 111

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08
	ADDED NEW CONTROLLER	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
144TH STREET & INDIANA AVENUE

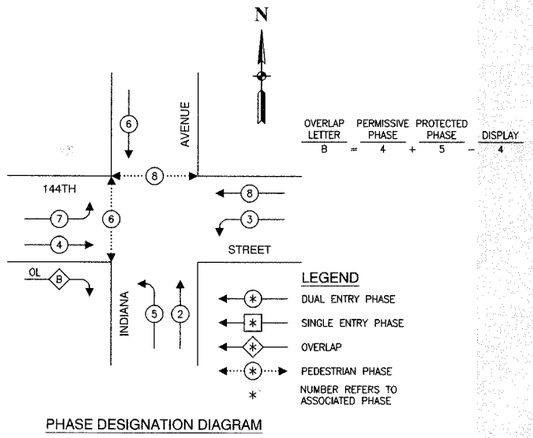
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-0628
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-90

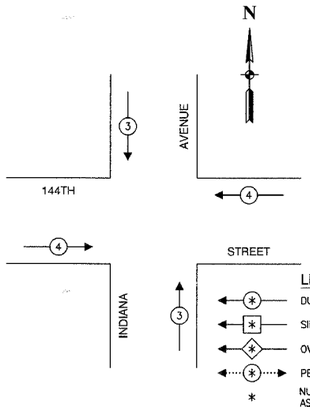
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	231
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



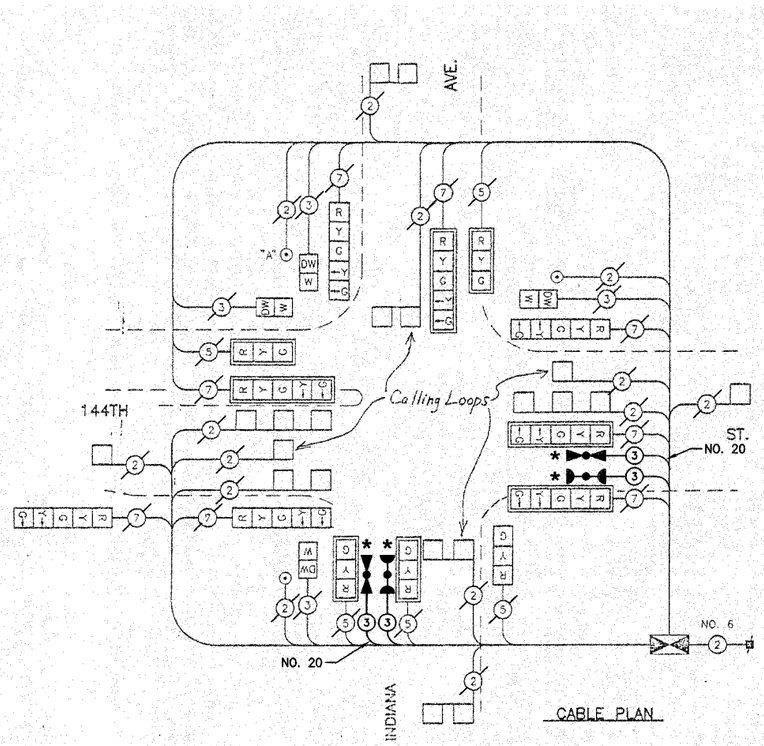
OVERLAP LETTER B = PERMISSIVE PHASE 4 + PROTECTED PHASE 5 − DISPLAY 4

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →



CABLE PLAN

NOTE:
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 6 AND 8.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"p"	"p"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	183
INDUCTIVE LOOP DETECTOR	EACH	11
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	EACH	183

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF RIVERDALE
LOCATION NO. 111

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08
ADDED NEW CONTROLLER	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
144TH STREET & INDIANA AVENUE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17060 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-8760 FAX (708) 331-3826
ILLINOIS DESIGN FIRM REGISTRATION NO. 184005125

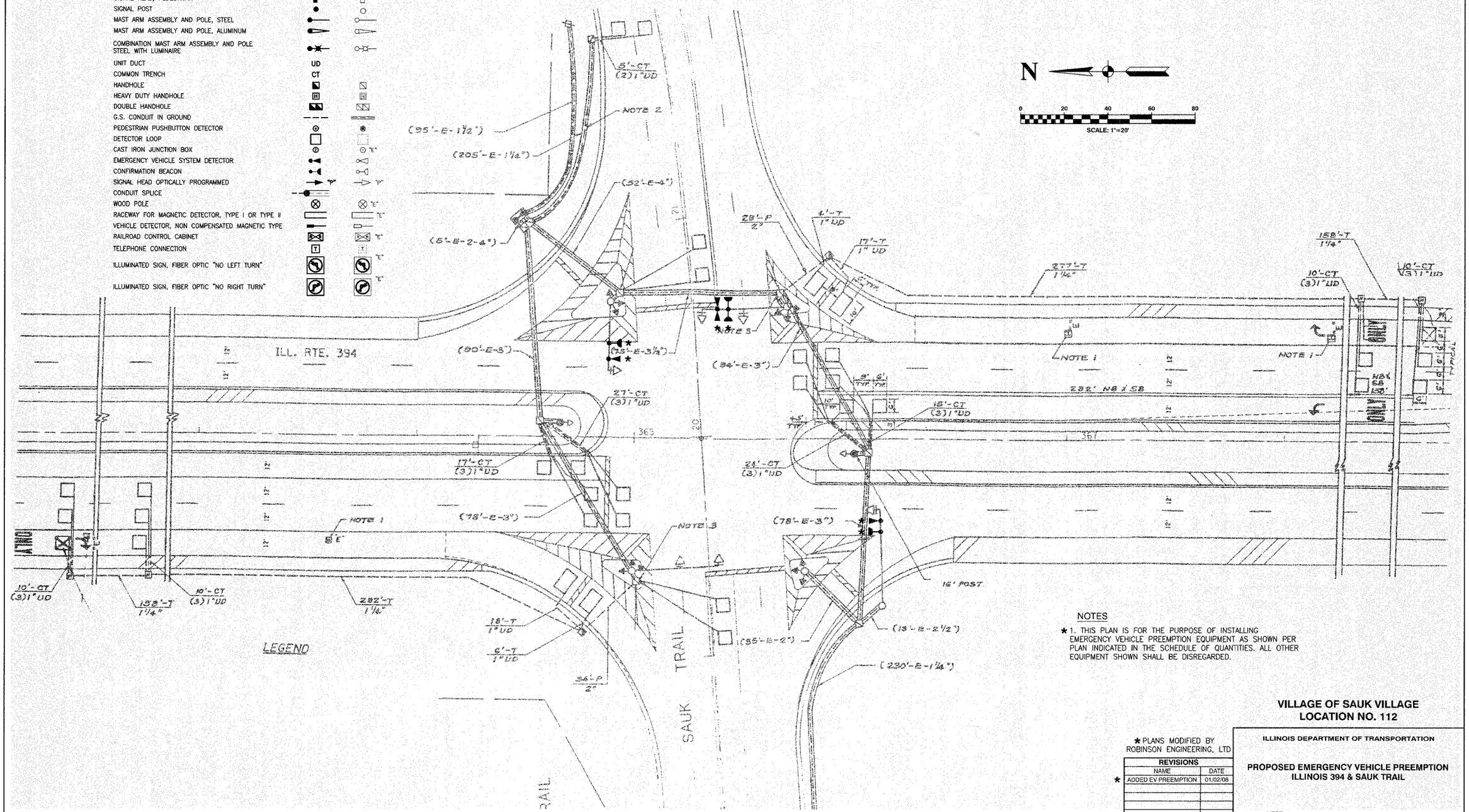
072-48-90

~~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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		"E"
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	232
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



NOTES

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VILLAGE OF SAUK VILLAGE
LOCATION NO. 112

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
ILLINOIS 394 & SAUK TRAIL

SCALE: VERT.
HORIZ.
DATE
DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
17700 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3600
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001125

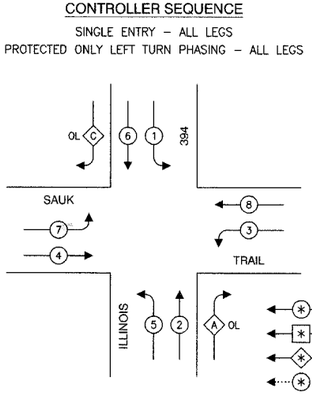
072-6-81

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	233
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

CONTROLLER SEQUENCE

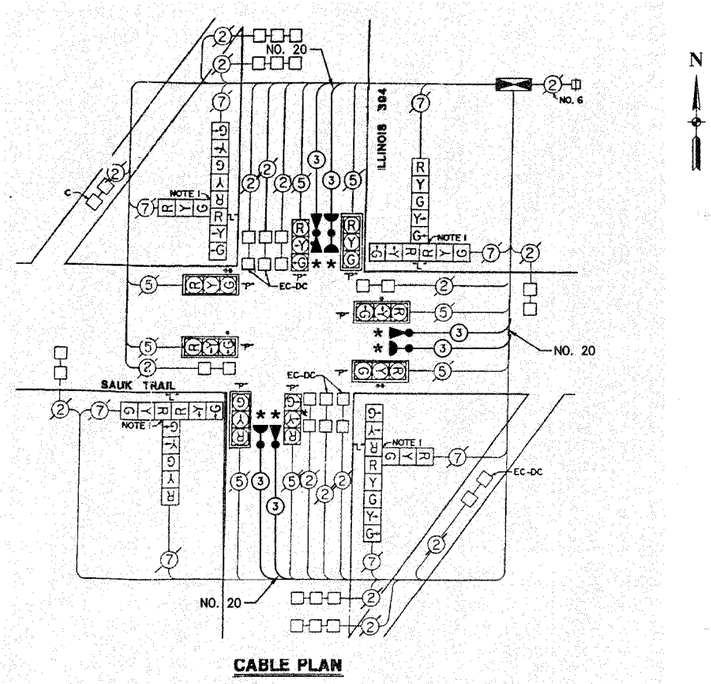
SINGLE ENTRY – ALL LEGS
PROTECTED ONLY LEFT TURN PHASING – ALL LEGS



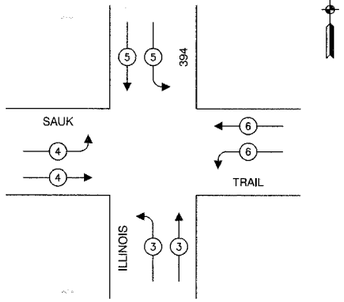
OVERLAP		PERMISSIVE		PROTECTED		DISPLAY
A	=	2	+	3	–	2
C	=	6	+	7	–	2

LEGEND
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM



CABLE PLAN



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	779
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	779

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF SAUK VILLAGE
LOCATION NO. 112

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
ILLINOIS 394 & SAUK TRAIL

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
17006 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3026
ILLINOIS DESIGN FIRM REGISTRATION NO. 184.001125

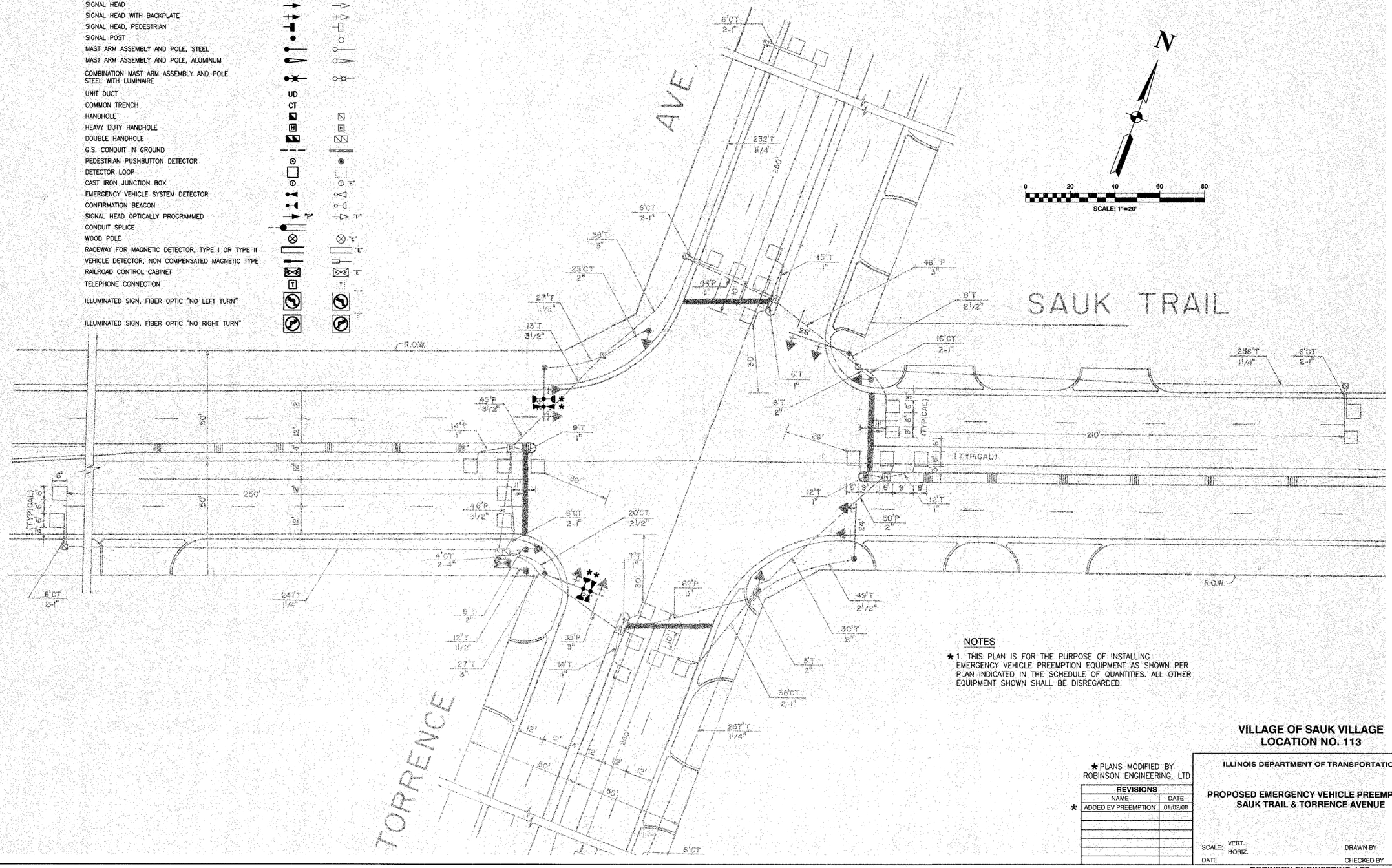
07248-81

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	234
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

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VILLAGE OF SAUK VILLAGE
LOCATION NO. 113

★PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
SAUK TRAIL & TORRENCE AVENUE

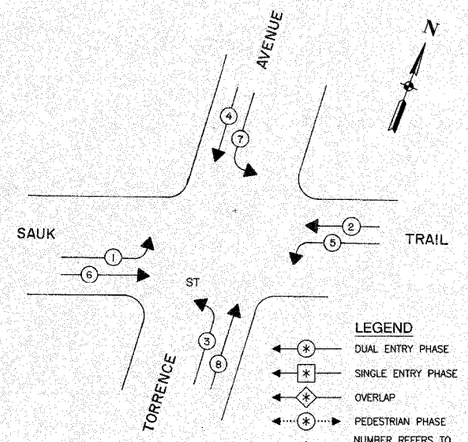
SCALE: VERT. HORIZ. DRAWN BY
DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
17200 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128.

07248-82

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	235
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

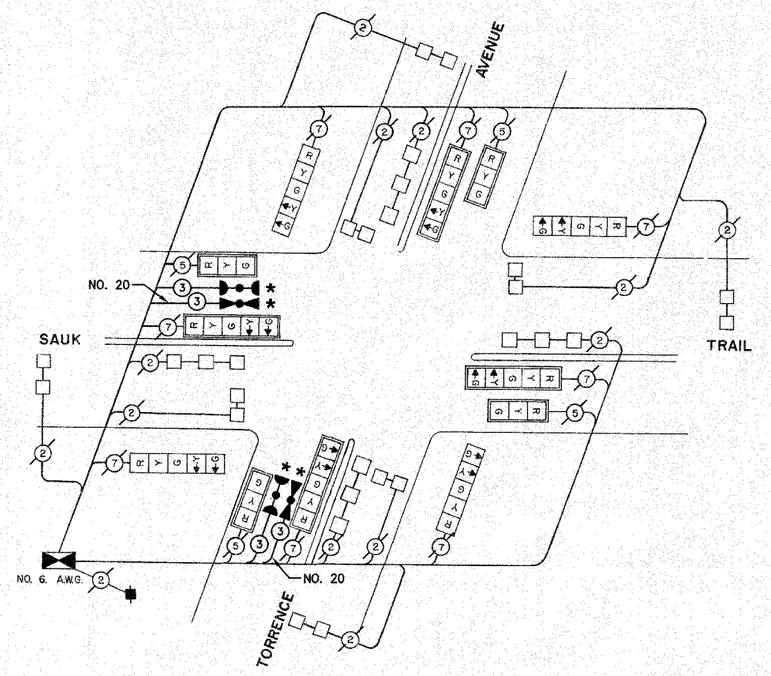
CONTRACT NO. 63003

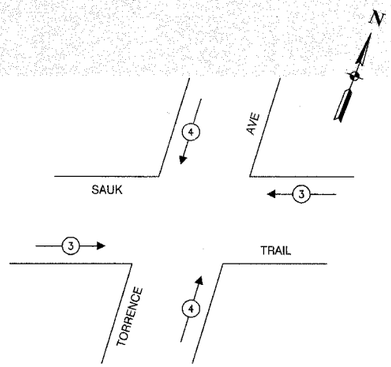


PHASE DESIGNATION DIAGRAM

CONTROLLER SEQUENCE

REFERRING TO STANDARD 2393, THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED ABOVE.





EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	297
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	297

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
C	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF SAUK VILLAGE
LOCATION NO. 113

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
SAUK TRAIL & TORRENCE AVENUE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-5700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128.

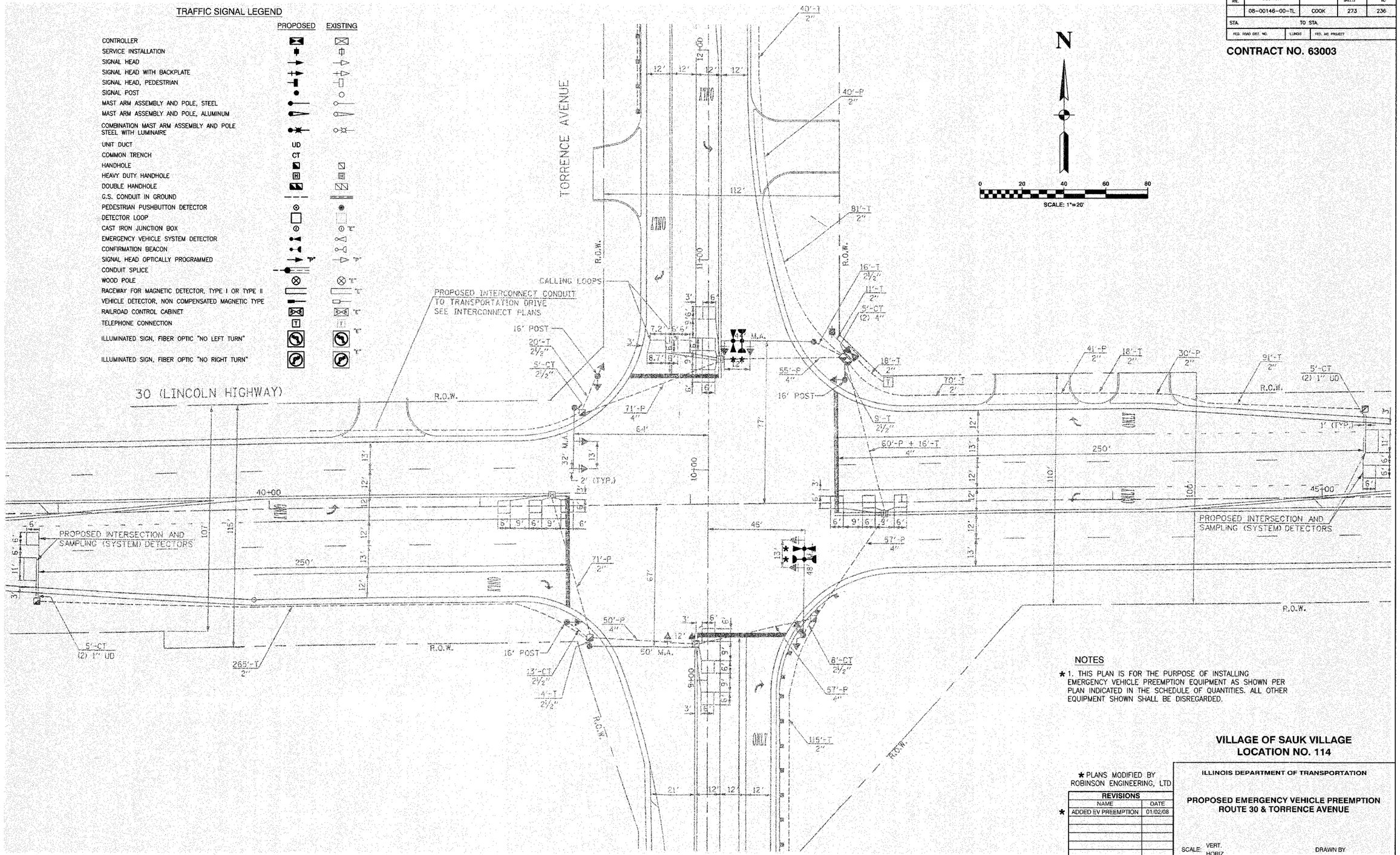
07248-82

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	236
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF SAUK VILLAGE
LOCATION NO. 114

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD.

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
ROUTE 30 & TORRENCE AVENUE

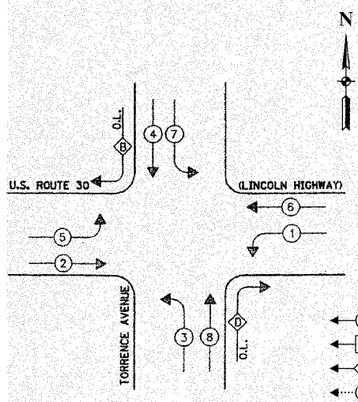
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17002 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6720 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001120

07249-83

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	237
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

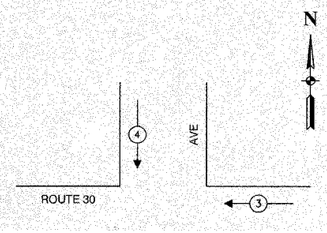


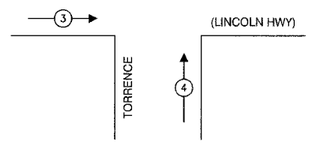
PHASE DESIGNATION DIAGRAM

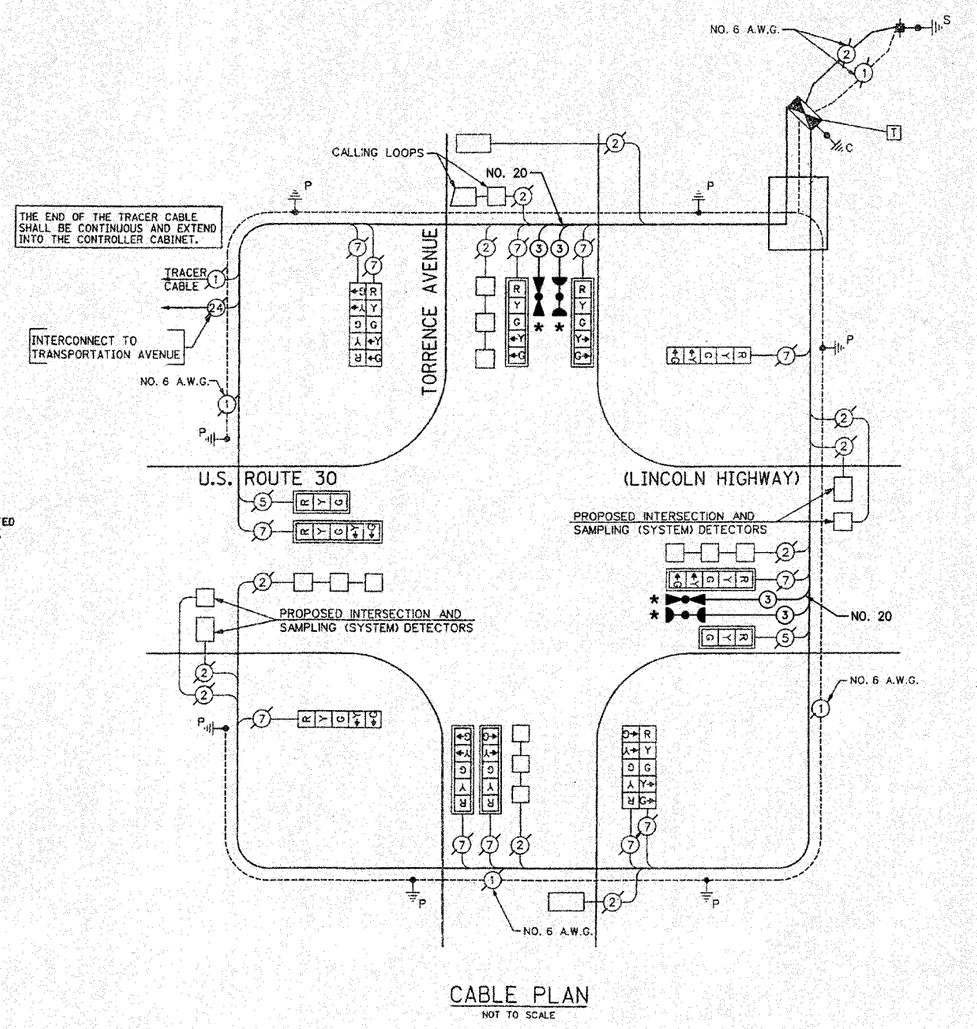
OVERLAP LETTER	PERMISSIVE PHASE		PROTECTED PHASE
B	4	+	5
D	8	+	1

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE







CABLE PLAN

NOT TO SCALE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	331
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	331

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF SAUK VILLAGE
LOCATION NO. 114

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
ROUTE 30 & TORRENCE AVENUE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-5709 FAX (708) 331-3526
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126.

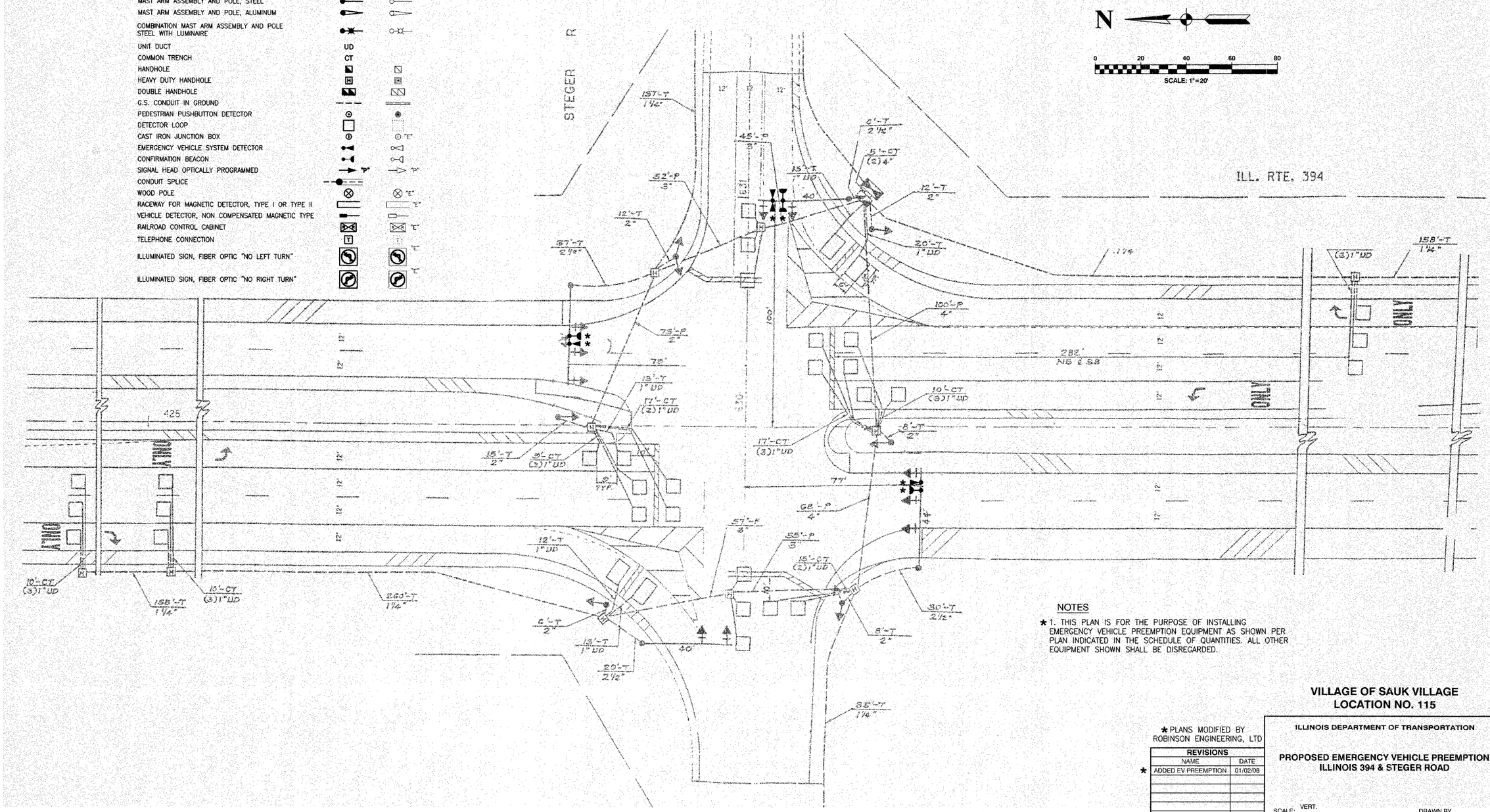
07248-83

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	238
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		"E"
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF SAUK VILLAGE
LOCATION NO. 115

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
ILLINOIS 394 & STEGER ROAD

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6363 FAX (708) 331-3028
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

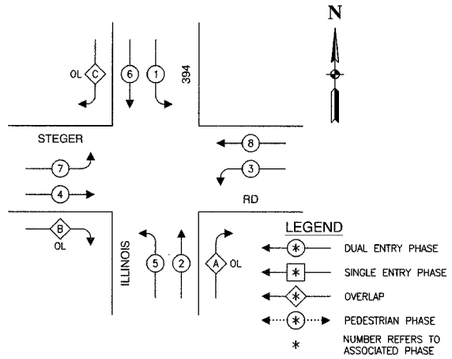
07268-84

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	239
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

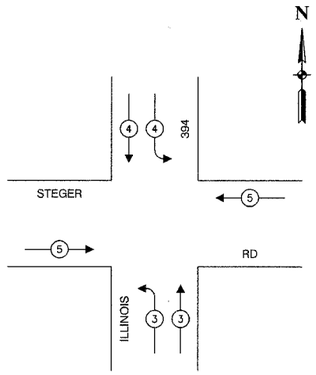
CONTROLLER SEQUENCE

SINGLE ENTRY – NORTH AND SOUTH LEGS ONLY – PROTECTED ONLY LEFT TURN PHASING
DUAL ENTRY – EAST AND WEST LEGS ONLY – PROTECTED/PERMITTED LEFT TURN PHASING



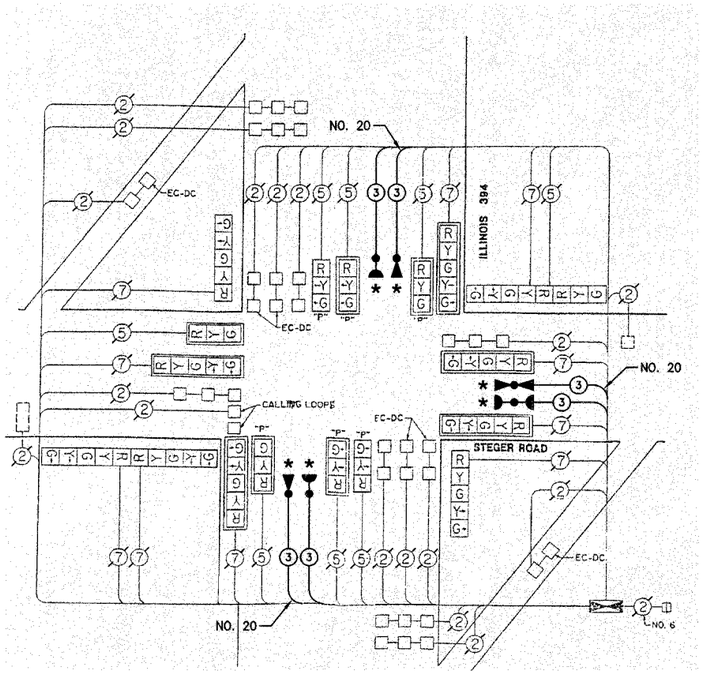
PHASE DESIGNATION DIAGRAM

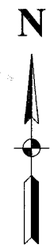
OVERLAP		PERMISSIVE		PROTECTED		DISPLAY
A	=	2	+	3	–	2
B	=	4	+	5	–	4
C	=	6	+	7	–	6



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↰ ↑	↰ ↑	↓ →	← →





SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	620
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	620

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF SAUK VILLAGE
LOCATION NO. 115

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
ILLINOIS 394 & STEGER ROAD

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3826
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001129

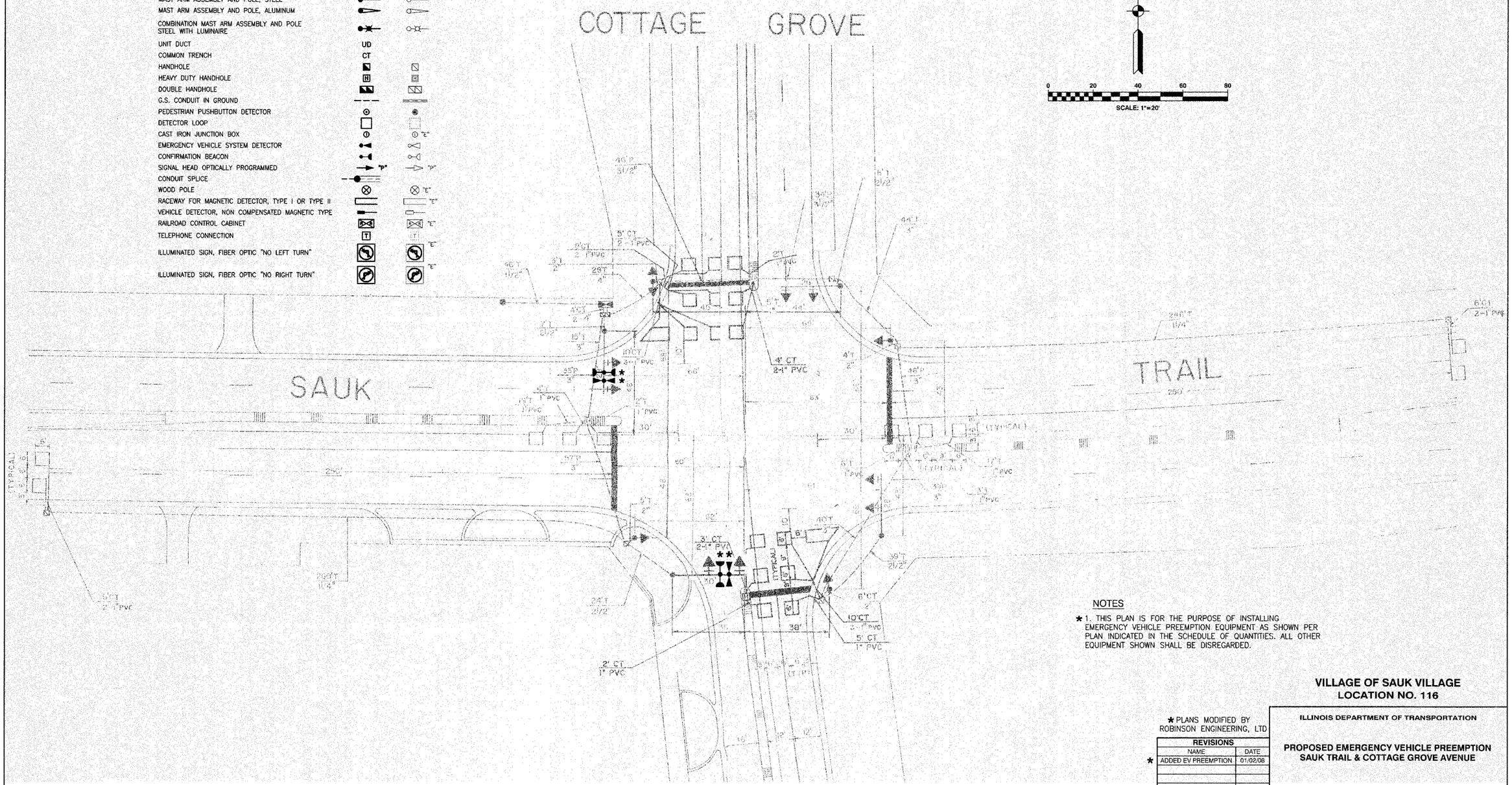
07248-84

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	240
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

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VILLAGE OF SAUK VILLAGE
LOCATION NO. 116

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION SAUK TRAIL & COTTAGE GROVE AVENUE

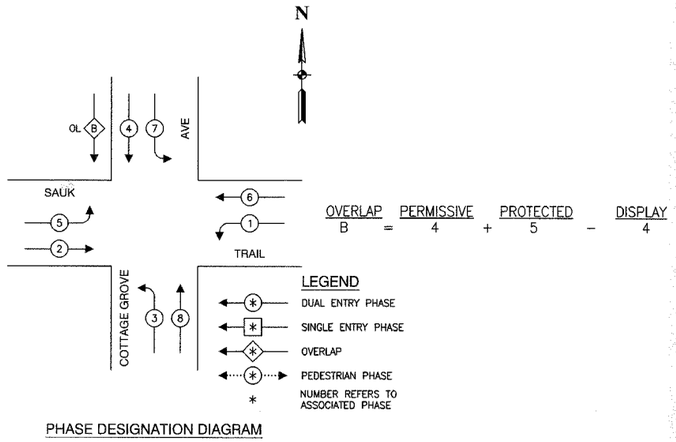
SCALE: VERT. HORIZ. DRAWN BY
DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-0828
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-65

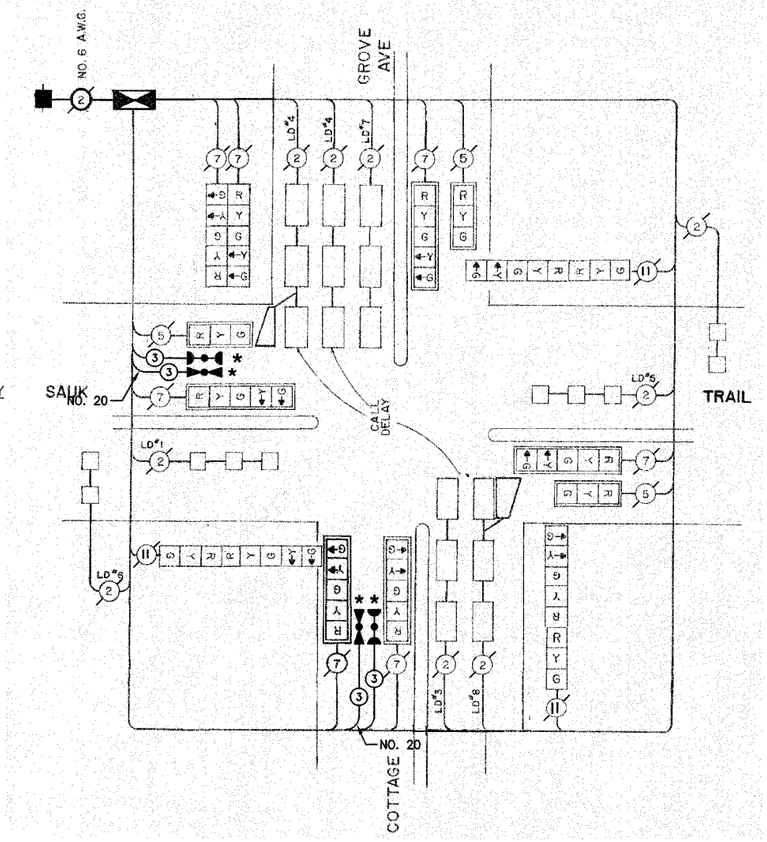
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	241
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

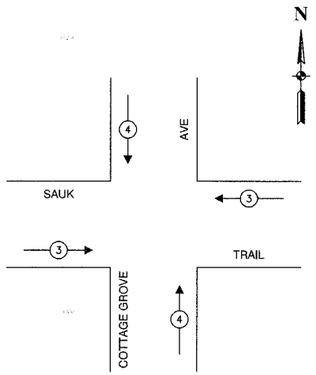
CONTRACT NO. 63003



PHASE DESIGNATION DIAGRAM

$$\text{OVERLAP } B = \text{PERMISSIVE } 4 + \text{PROTECTED } 5 - \text{DISPLAY } 4$$





EMERGENCY VEHICLE PREEMPTION SEQUENCE

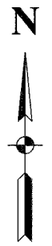
PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	290
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	290

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.



CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF SAUK VILLAGE
LOCATION NO. 116

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
SAUK TRAIL & COTTAGE GROVE AVENUE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17200 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

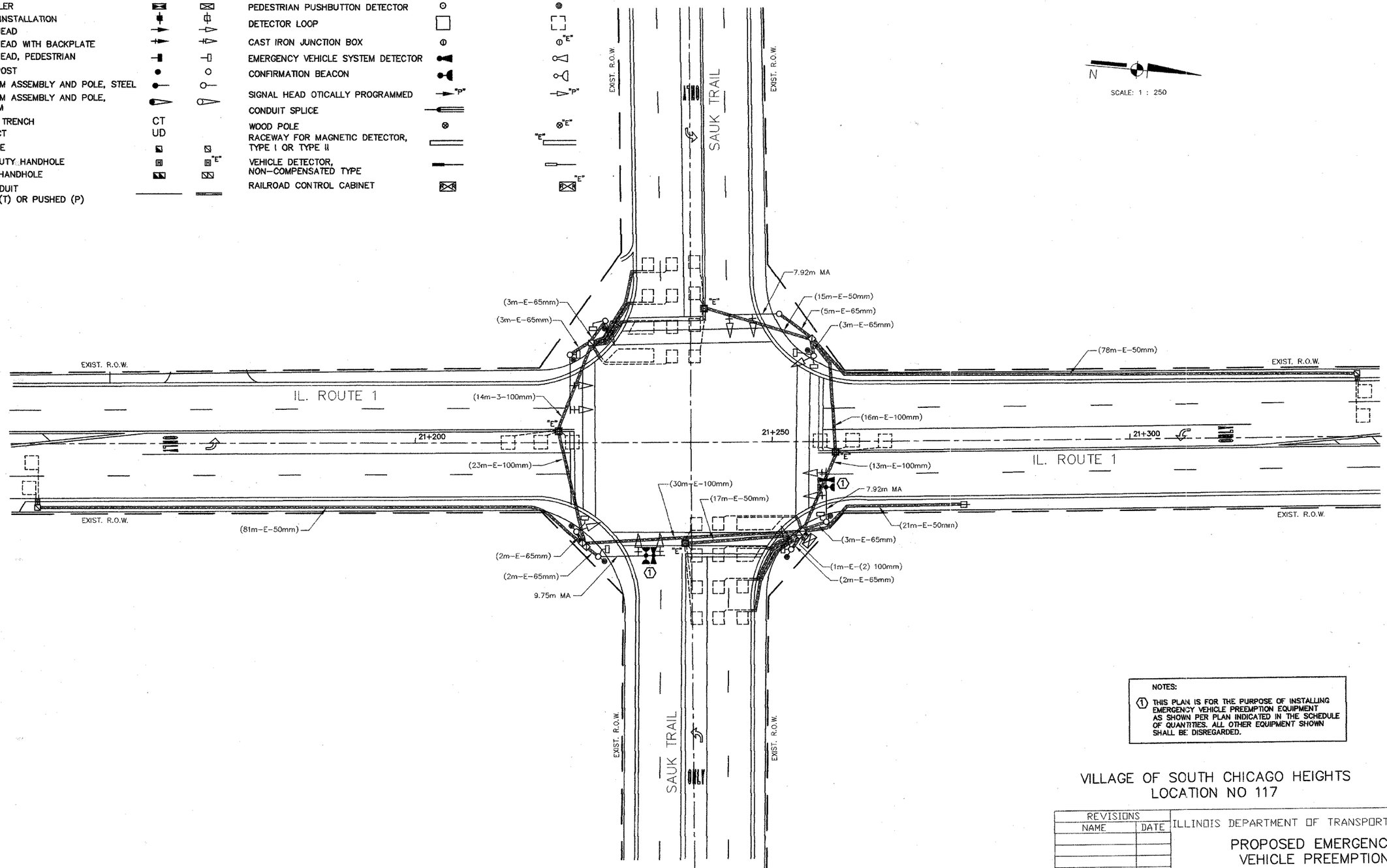
07248-85

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	242
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE		
HEAVY DUTY HANDHOLE		"E"
DOUBLE HANDHOLE		
G.S. CONDUIT TRENCH (T) OR PUSHED (P)		

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE		
RAILROAD CONTROL CABINET		"E"



NOTES:

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VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 117

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION

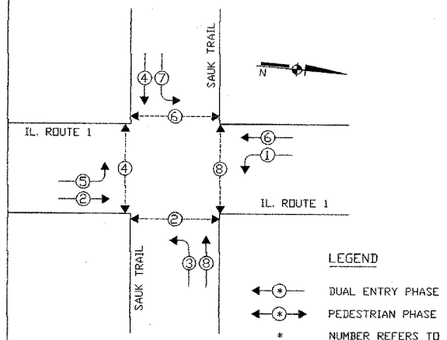
IL. ROUTE 1 AND SAUK TRAIL

SCALE: 1 : 250
DATE: 1/02/08

DRAWN BY: MJD
CHECKED BY: MJD

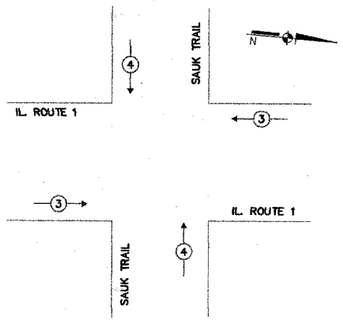
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	243
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE

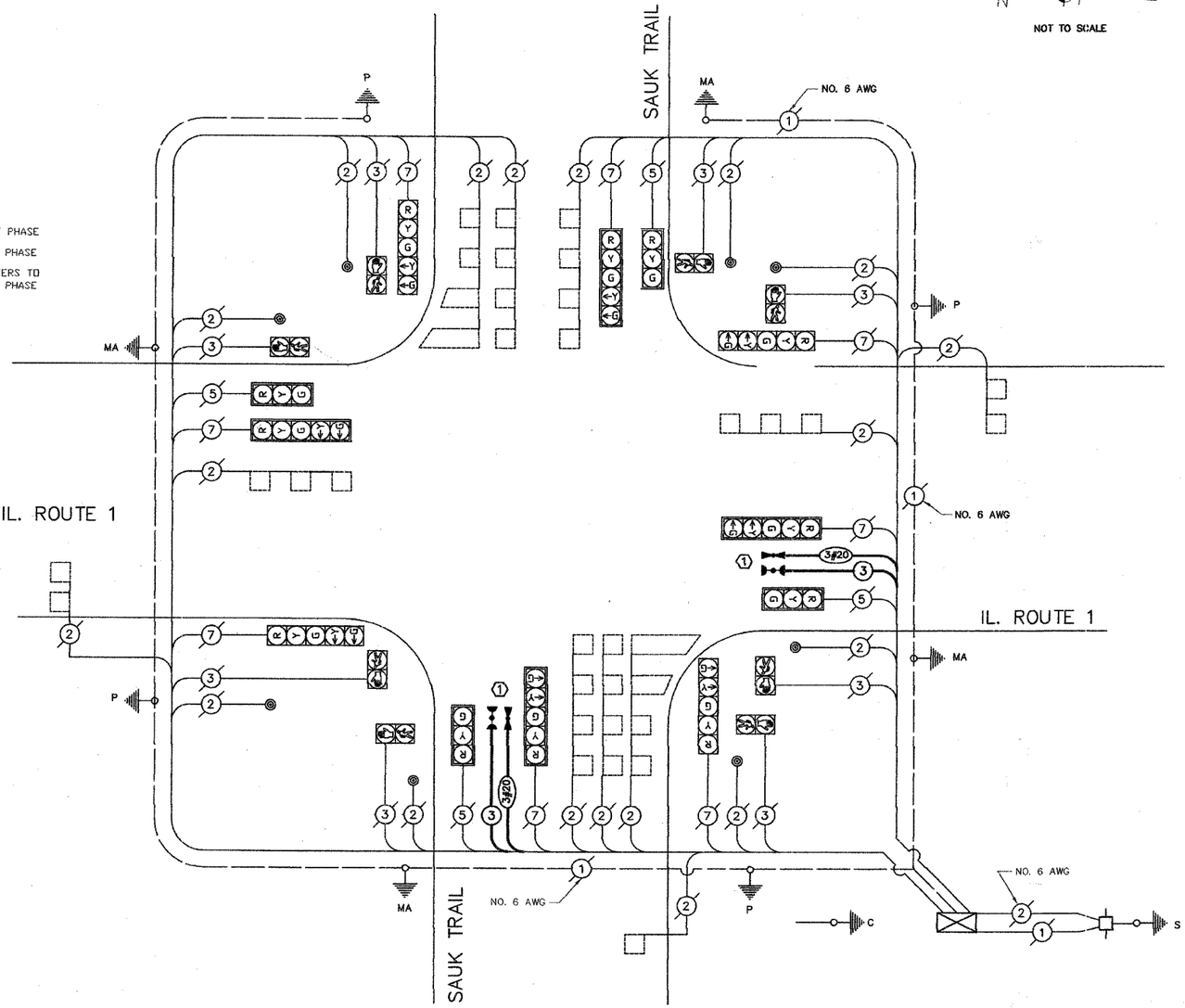


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
	R	8" TRAFFIC SIGNAL SECTION
	R	12" TRAFFIC SIGNAL SECTION
	V	12" PEDESTRIAN SIGNAL SECTION
	DW / R	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Meter	83.4
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Meter	83.4
Traffic Control and Protection Standard 701701	Each	1

NOTES:

(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 117

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION
CABLE PLAN
CONTROLLER SEQUENCE
SCHEDULE OF QUANTITIES

IL. ROUTE 1 AND SAUK TRAIL

SCALE: N.T.S. DRAWN BY: MJD

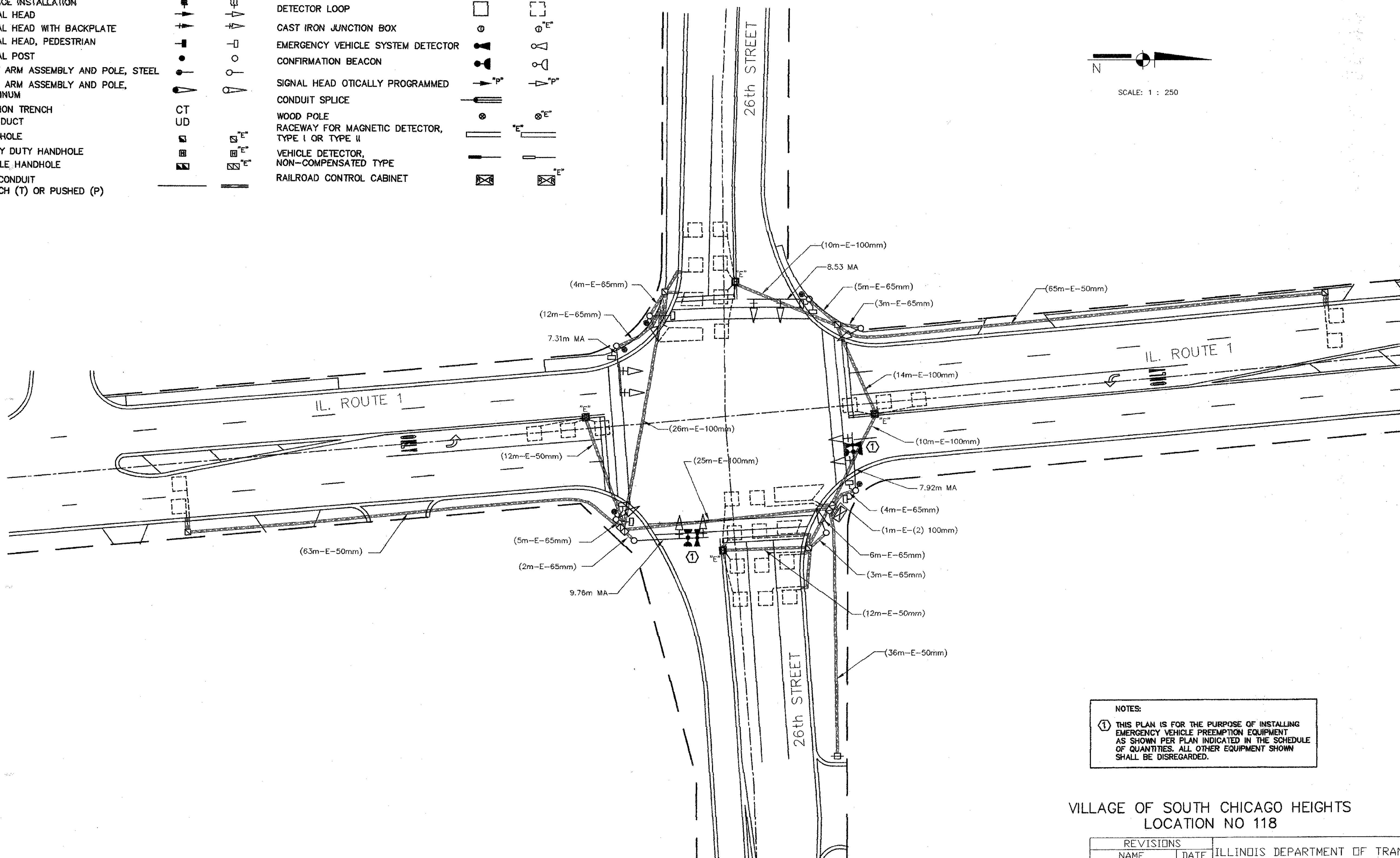
DATE: 1/02/08 CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	244
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE		"E"
HEAVY DUTY HANDHOLE		"E"
DOUBLE HANDHOLE		"E"
G.S. CONDUIT TRENCH (T) OR PUSHED (P)		

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE		
RAILROAD CONTROL CABINET		"E"



NOTES:

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VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 118

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

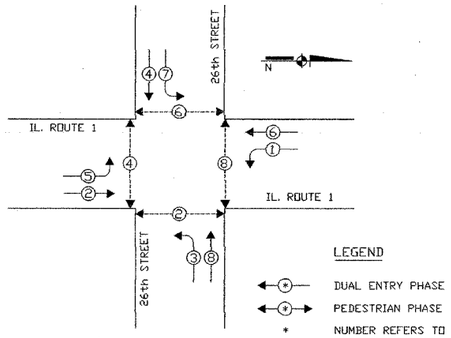
PROPOSED EMERGENCY VEHICLE PREEMPTION

IL. ROUTE 1 AND 26th STREET

SCALE: 1 : 250 DRAWN BY: MJD
DATE: 1/02/08 CHECKED BY: MJD

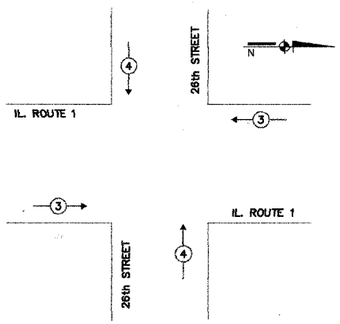
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	245
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE

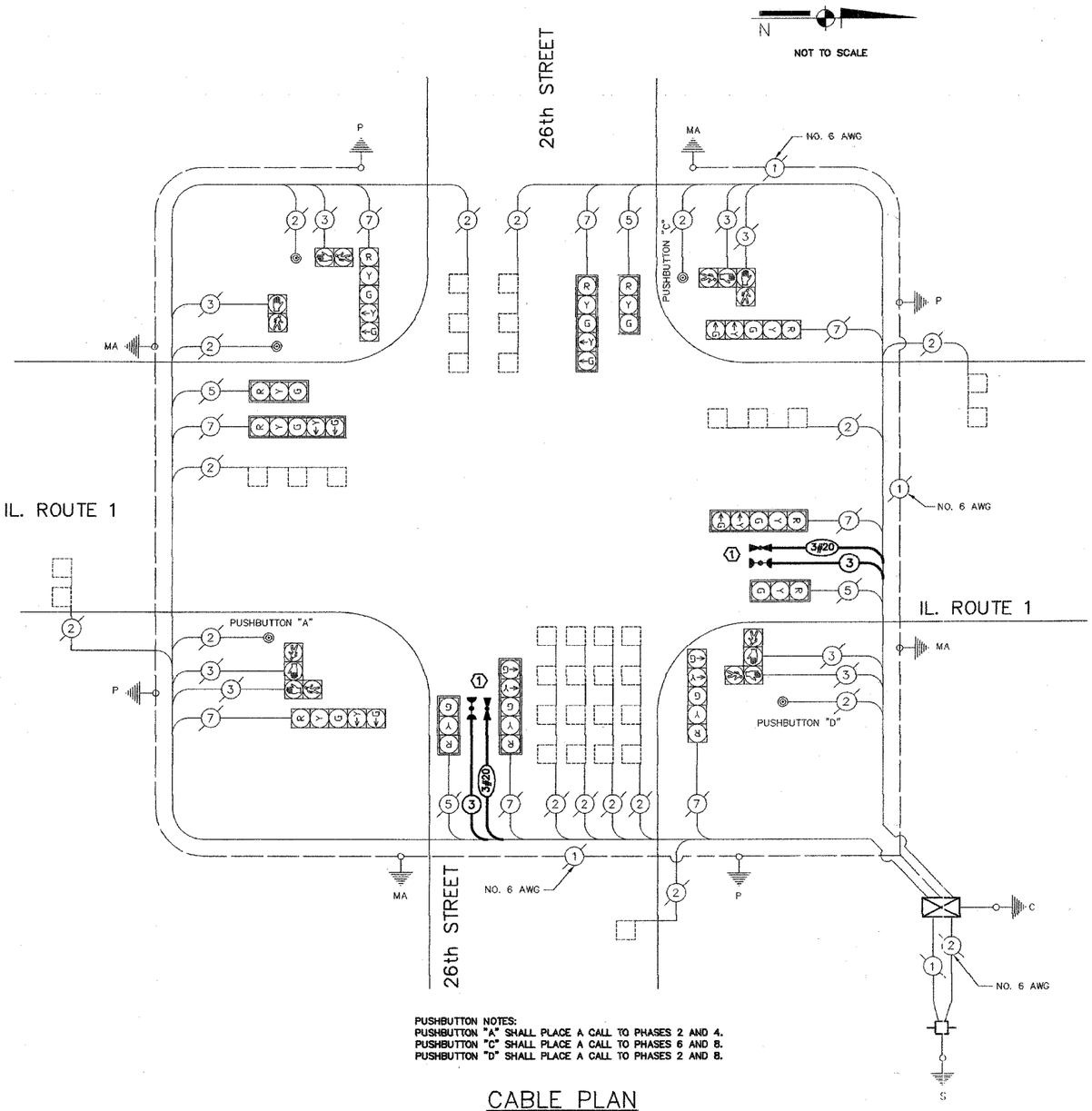


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑



PUSHBUTTON NOTES:
PUSHBUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.
PUSHBUTTON "C" SHALL PLACE A CALL TO PHASES 6 AND 8.
PUSHBUTTON "D" SHALL PLACE A CALL TO PHASES 2 AND 8.

CABLE PLAN

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

NOTES:
(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		8" TRAFFIC SIGNAL SECTION
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HH), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

SCHEDULE OF QUANTITIES

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Meter	77.7
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Meter	77.7
Traffic Control and Protection Standard 701701	Each	1

VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 118

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION
CABLE PLAN
CONTROLLER SEQUENCE
SCHEDULE OF QUANTITIES
IL. ROUTE 1 AND 26th STREET

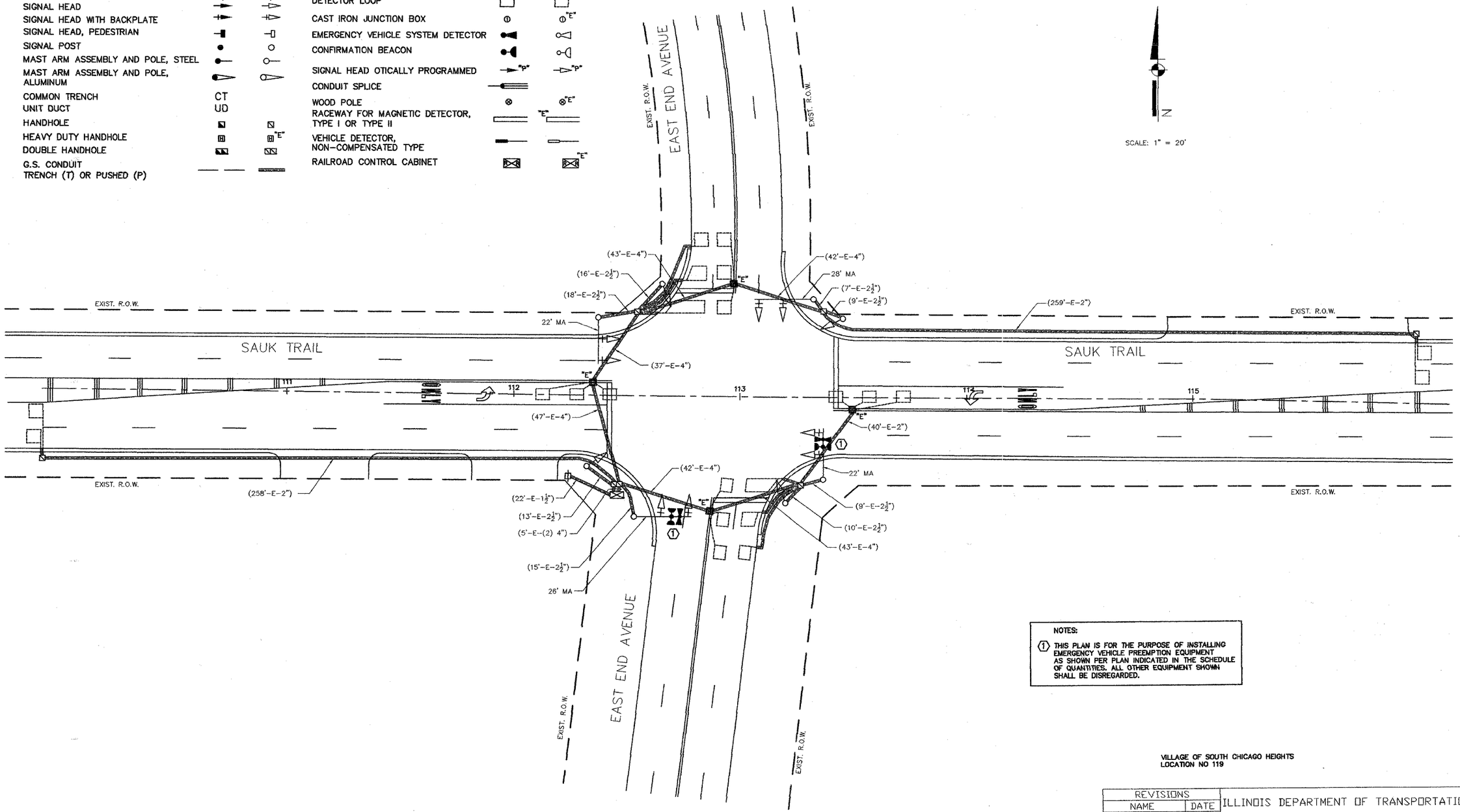
SCALE: N.T.S. DRAWN BY: MJD
DATE: 1/02/08 CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	246
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▬	▭
SERVICE INSTALLATION	▮	▯
SIGNAL HEAD	→	▷
SIGNAL HEAD WITH BACKPLATE	→	▷
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	◗	◗
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE	◧	◧
HEAVY DUTY HANDHOLE	⊞	⊞ "E"
DOUBLE HANDHOLE	◧◧	◧◧
G.S. CONDUIT TRENCH (T) OR PUSHED (P)	— — —	═══

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
DETECTOR LOOP	□	□
CAST IRON JUNCTION BOX	ⓘ	ⓘ "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	●◀	○◁
CONFIRMATION BEACON	●◀	○◁
SIGNAL HEAD OTICALLY PROGRAMMED	→"P"	→"P"
CONDUIT SPLICE	═══	
WOOD POLE	⊗	⊗"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	═══	═══ "E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE	▬	▬
RAILROAD CONTROL CABINET	▣	▣ "E"



NOTES:

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VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 119

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

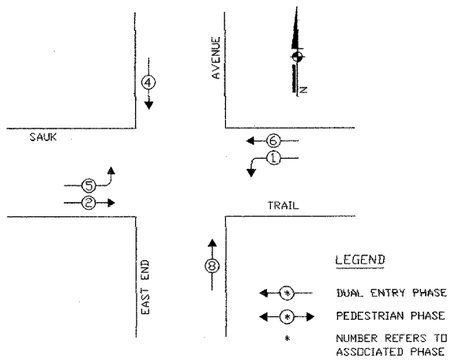
PROPOSED EMERGENCY VEHICLE PREEMPTION

SAUK TRAIL AND EAST END AVENUE

SCALE: 1" = 20'
DATE: 1/02/08
DRAWN BY: MJD
CHECKED BY: MJD

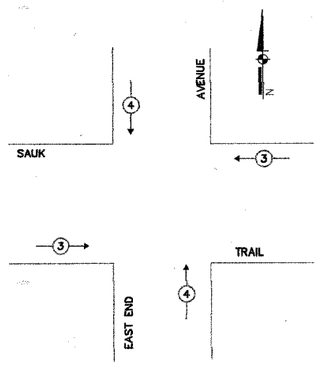
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	247
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE

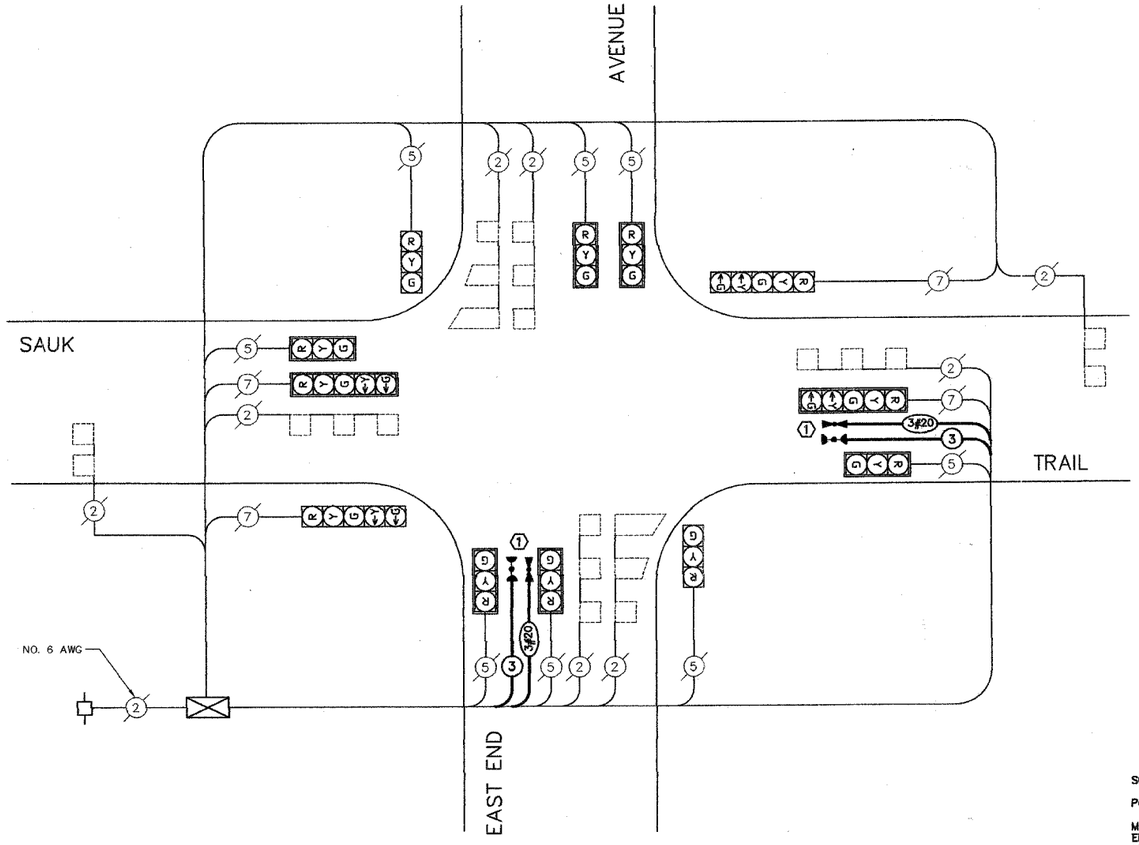


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
	R	8" TRAFFIC SIGNAL SECTION
	R	12" TRAFFIC SIGNAL SECTION
	W	12" PEDESTRIAN SIGNAL SECTION
	W DON'T WALK	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
R Y G ← "P"	R Y G ← "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Foot	250
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Foot	250
Traffic Control and Protection Standard 701701	Each	1

NOTES:

(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 119

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION
CABLE PLAN
CONTROLLER SEQUENCE
SCHEDULE OF QUANTITIES

SAUK TRAIL AND EAST END AVENUE

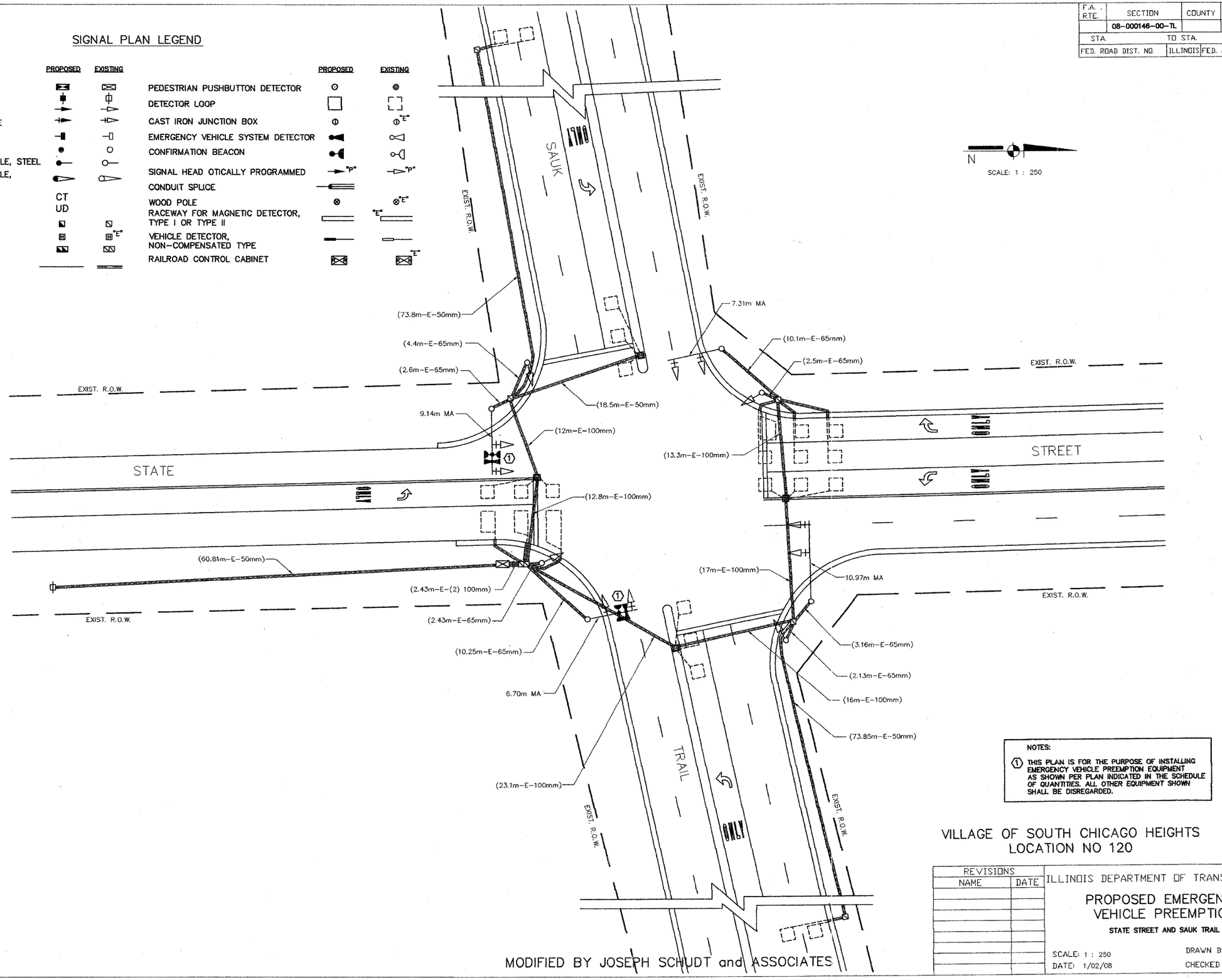
SCALE: N.T.S. DRAWN BY: MJD
DATE: 1/02/08 CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	248
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▬	⊠
SERVICE INSTALLATION	▮	⊡
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→	→
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	◗	◗
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE	▧	▧
HEAVY DUTY HANDHOLE	▦	▦ "E"
DOUBLE HANDHOLE	▧▧	▧▧
G.S. CONDUIT TRENCH (T) OR PUSHED (P)		

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
DETECTOR LOOP	□	⬚
CAST IRON JUNCTION BOX	⊕	⊕ "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	◖	◁
CONFIRMATION BEACON	◖	◁
SIGNAL HEAD OTICALLY PROGRAMMED	→ "P"	→ "P"
CONDUIT SPLICE	⊸	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE	▬	▭
RAILROAD CONTROL CABINET	⊠	⊠ "E"



NOTES:

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MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 120

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION

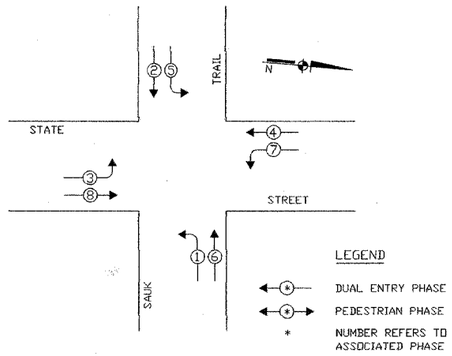
STATE STREET AND SAUK TRAIL

SCALE: 1 : 250
DATE: 1/02/08

DRAWN BY: MJD
CHECKED BY: MJD

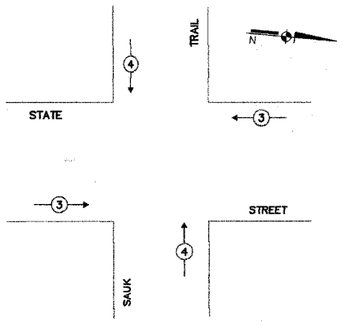
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	249
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

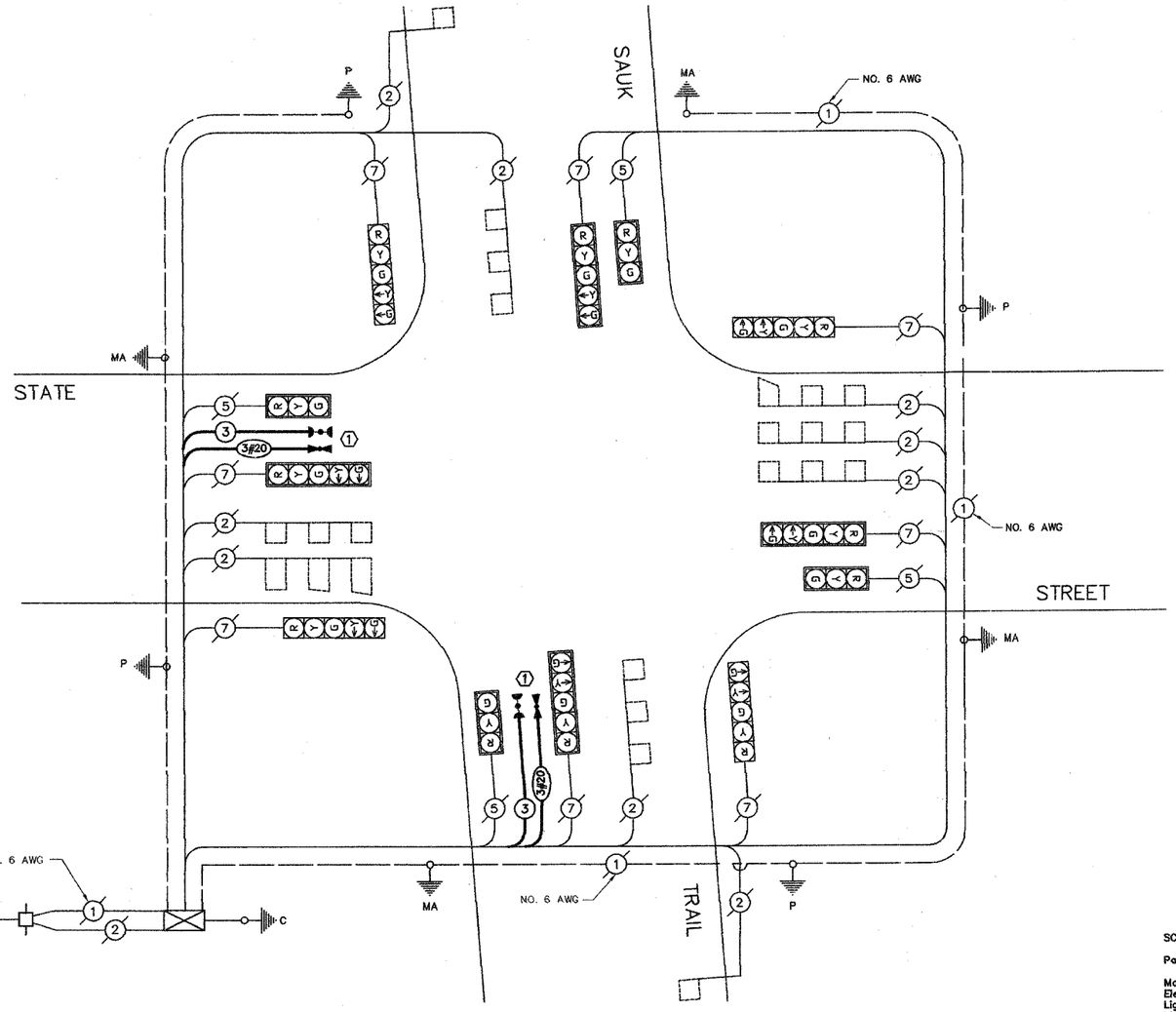
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑

N

NOT TO SCALE



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		8" TRAFFIC SIGNAL SECTION
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Meter	101.4
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Meter	101.4
Traffic Control and Protection Standard 701701	Each	1

NOTES:

(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 120

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION
CABLE PLAN
CONTROLLER SEQUENCE
SCHEDULE OF QUANTITIES

STATE STREET AND SAUK TRAIL

SCALE: N.T.S. DRAWN BY: MJD

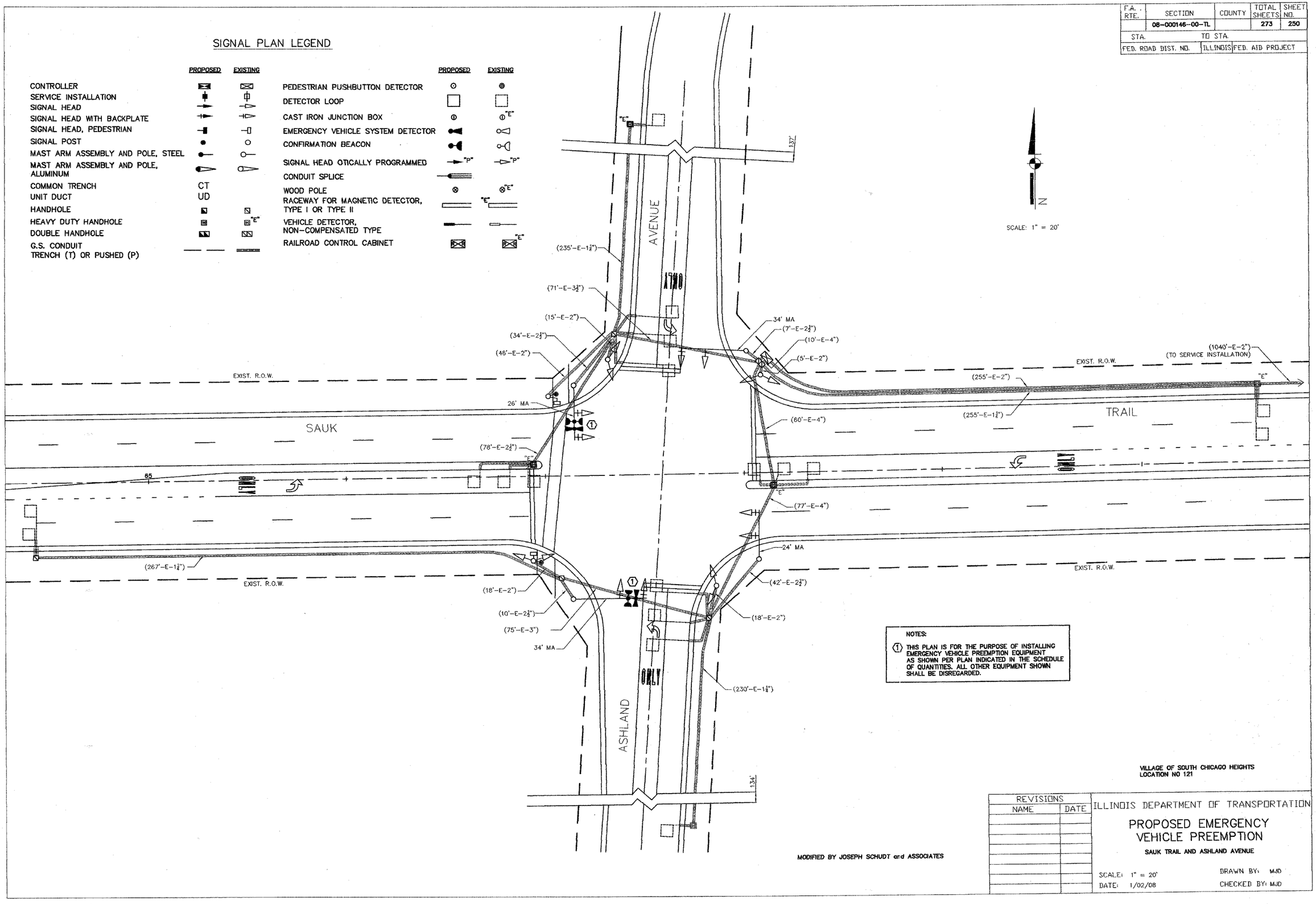
DATE: 1/02/08 CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	250
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▣	▣
SERVICE INSTALLATION	▮	▯
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→▮	→▯
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●▬	○▬
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE	▧	▧
HEAVY DUTY HANDHOLE	▦	▦"E"
DOUBLE HANDHOLE	▧▧	▧▧
G.S. CONDUIT TRENCH (T) OR PUSHED (P)	— —	— —

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
DETECTOR LOOP	□	□
CAST IRON JUNCTION BOX	ⓘ	ⓘ"E"
EMERGENCY VEHICLE SYSTEM DETECTOR	◀●	◁○
CONFIRMATION BEACON	◀●	◁○
SIGNAL HEAD OTICALLY PROGRAMMED	→"P"	→"P"
CONDUIT SPLICE	═══	
WOOD POLE	⊗	⊗"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE	▬	▭
RAILROAD CONTROL CABINET	▣	▣"E"



NOTES:

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MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 121

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

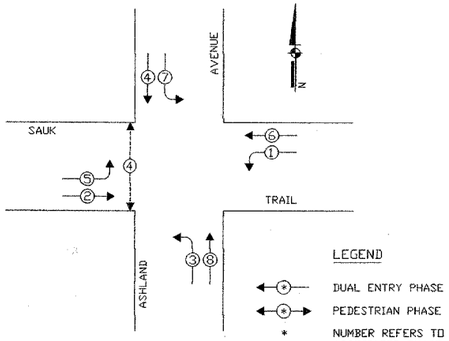
PROPOSED EMERGENCY VEHICLE PREEMPTION

SAUK TRAIL AND ASHLAND AVENUE

SCALE: 1" = 20'
DATE: 1/02/08
DRAWN BY: MJD
CHECKED BY: MJD

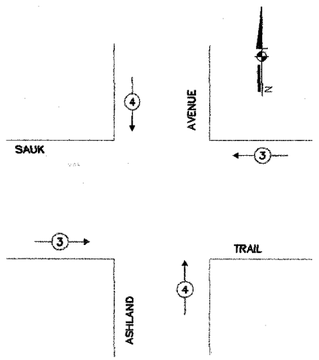
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00014B-00-TL		273	251
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE



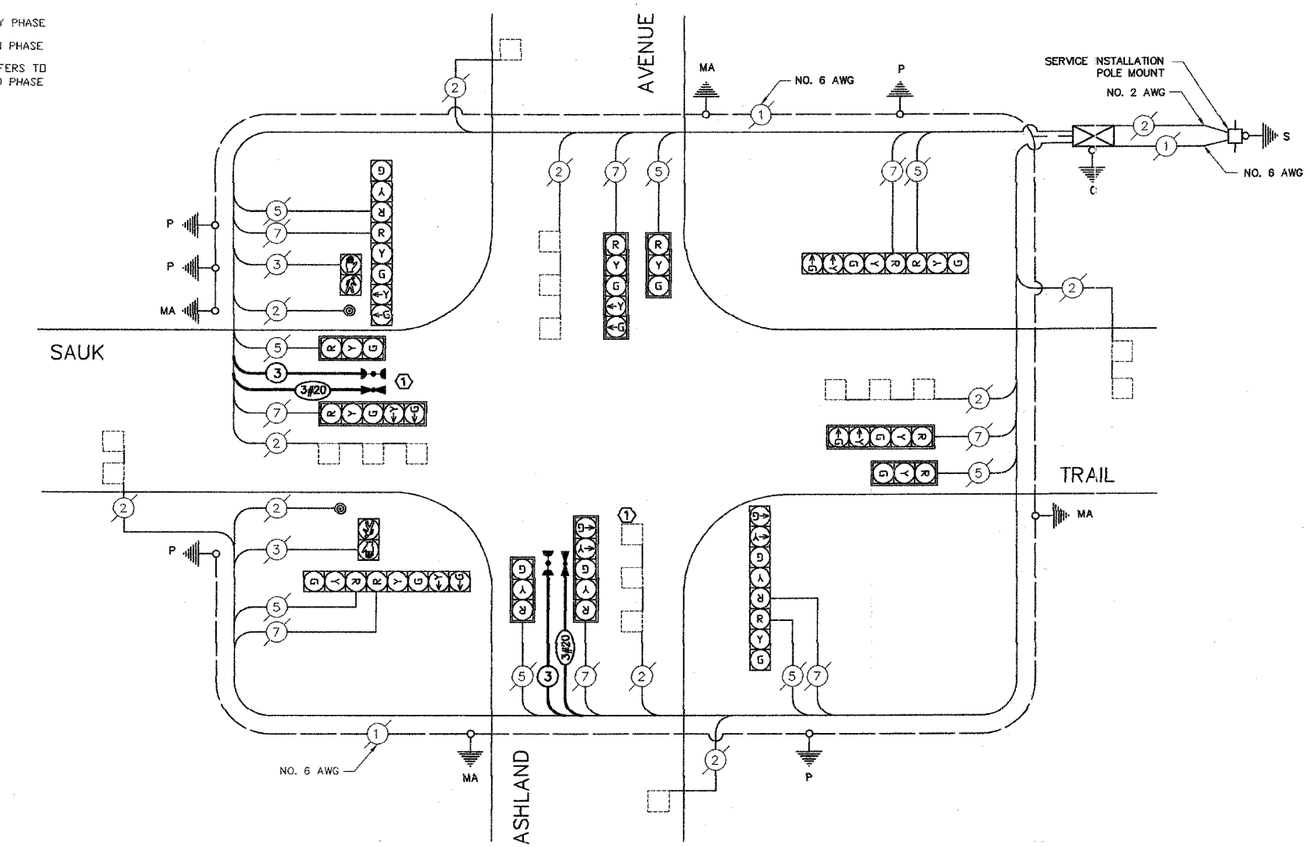
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑

NOT TO SCALE



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		8" TRAFFIC SIGNAL SECTION
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Foot	499
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Foot	499
Traffic Control and Protection Standard 701701	Each	1

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

NOTES:

(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF SOUTH CHICAGO HEIGHTS
LOCATION NO 121

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION
CABLE PLAN
CONTROLLER SEQUENCE
SCHEDULE OF QUANTITIES

SAUK TRAIL AND ASHLAND AVENUE

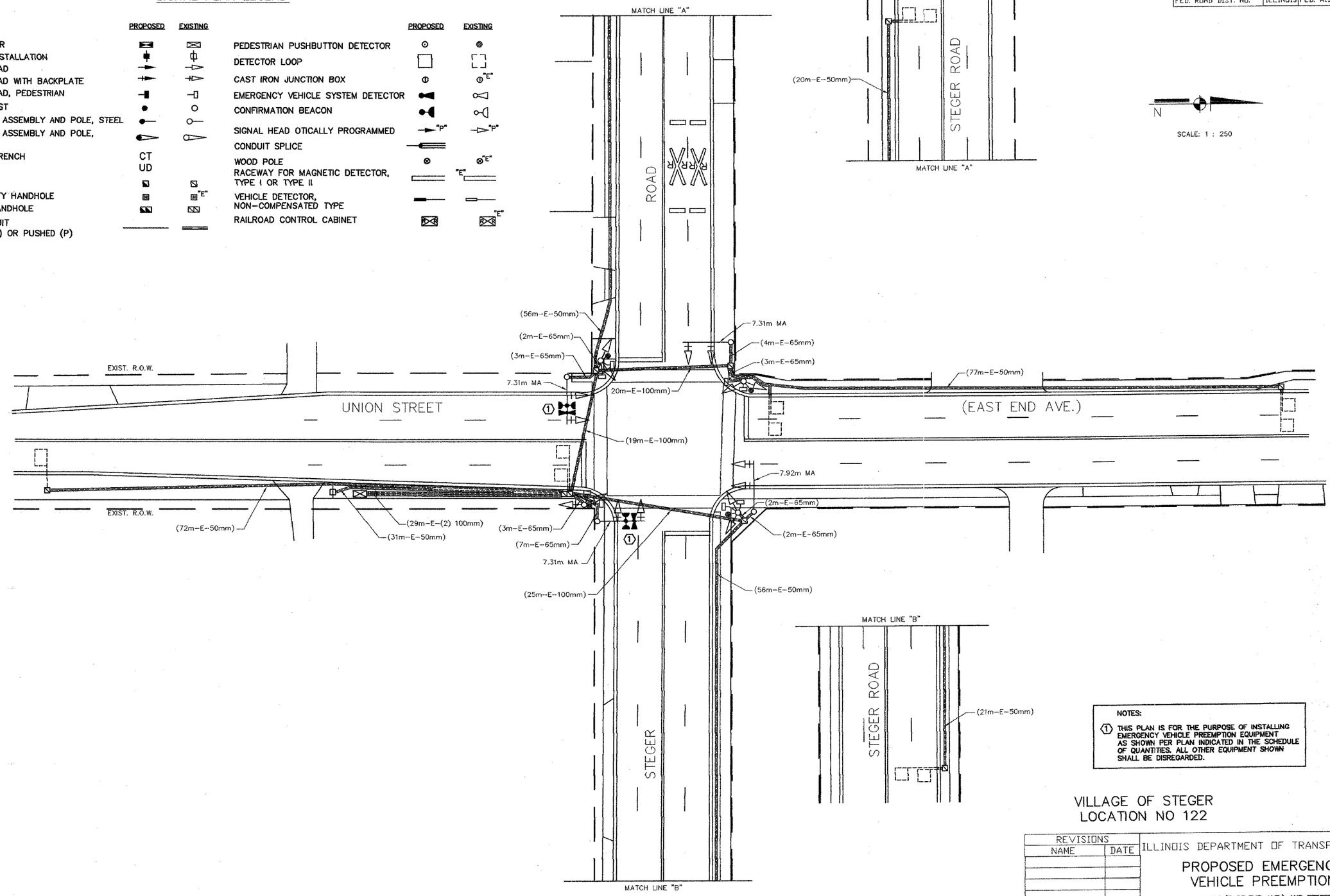
SCALE: N.T.S. DRAWN BY: MJD
DATE: 1/02/08 CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	252
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▬	▬
SERVICE INSTALLATION	■	⊢
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→▬	→▬
SIGNAL HEAD, PEDESTRIAN	■	⊣
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●	○
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE	▧	▧
HEAVY DUTY HANDHOLE	⊞	⊞ "E"
DOUBLE HANDHOLE	▧▧	▧▧
G.S. CONDUIT TRENCH (T) OR PUSHED (P)	———	———

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◎
DETECTOR LOOP	□	[ ]
CAST IRON JUNCTION BOX	ⓘ	ⓘ "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	◖	◖
CONFIRMATION BEACON	◖	◖
SIGNAL HEAD OTICALLY PROGRAMMED	→ "P"	→ "P"
CONDUIT SPLICE	——⊗——	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	═══	═══ "E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE	▬	▬
RAILROAD CONTROL CABINET	⊠	⊠ "E"



NOTES:

① THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF STEGER
LOCATION NO 122

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION

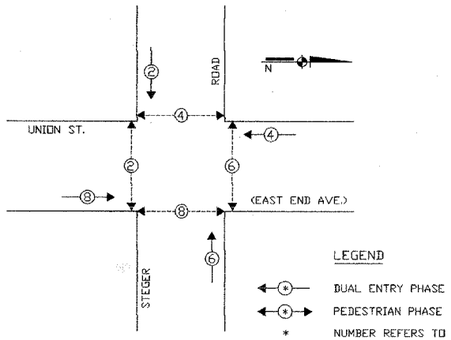
UNION STREET (EAST END AVE.) AND STEGER ROAD

SCALE: 1 : 250 DRAWN BY: MJD

DATE: 1/02/08 CHECKED BY: MJD

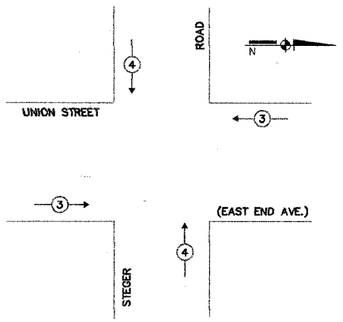
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	253
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE

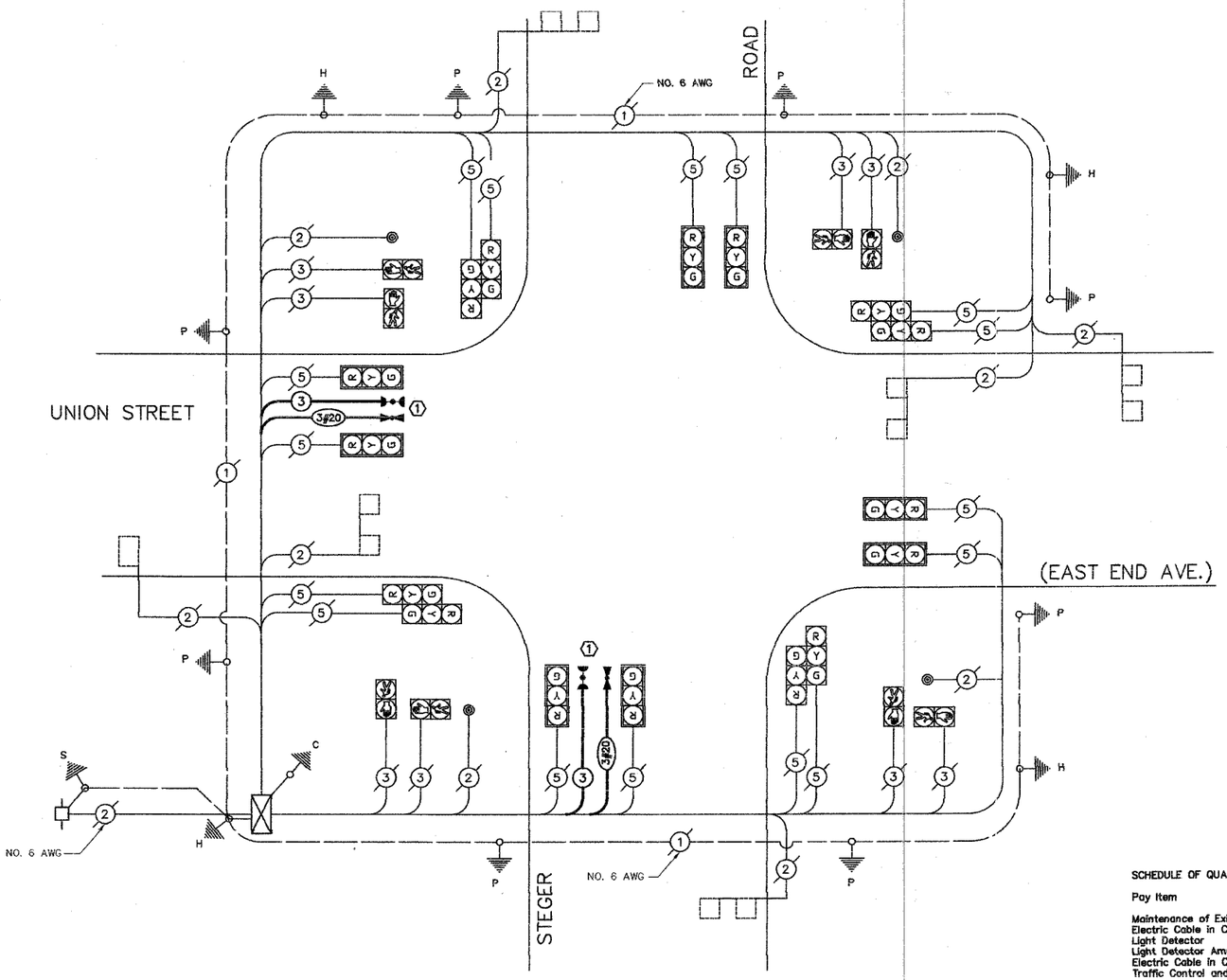


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		8" TRAFFIC SIGNAL SECTION
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HD), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Meter	127.1
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Meter	127.1
Traffic Control and Protection Standard 701701	Each	1

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

NOTES:

(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF STEGER
LOCATION NO 122

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION CABLE PLAN CONTROLLER SEQUENCE SCHEDULE OF QUANTITIES

UNION STREET (EAST END AVE.) AND STEGER ROAD

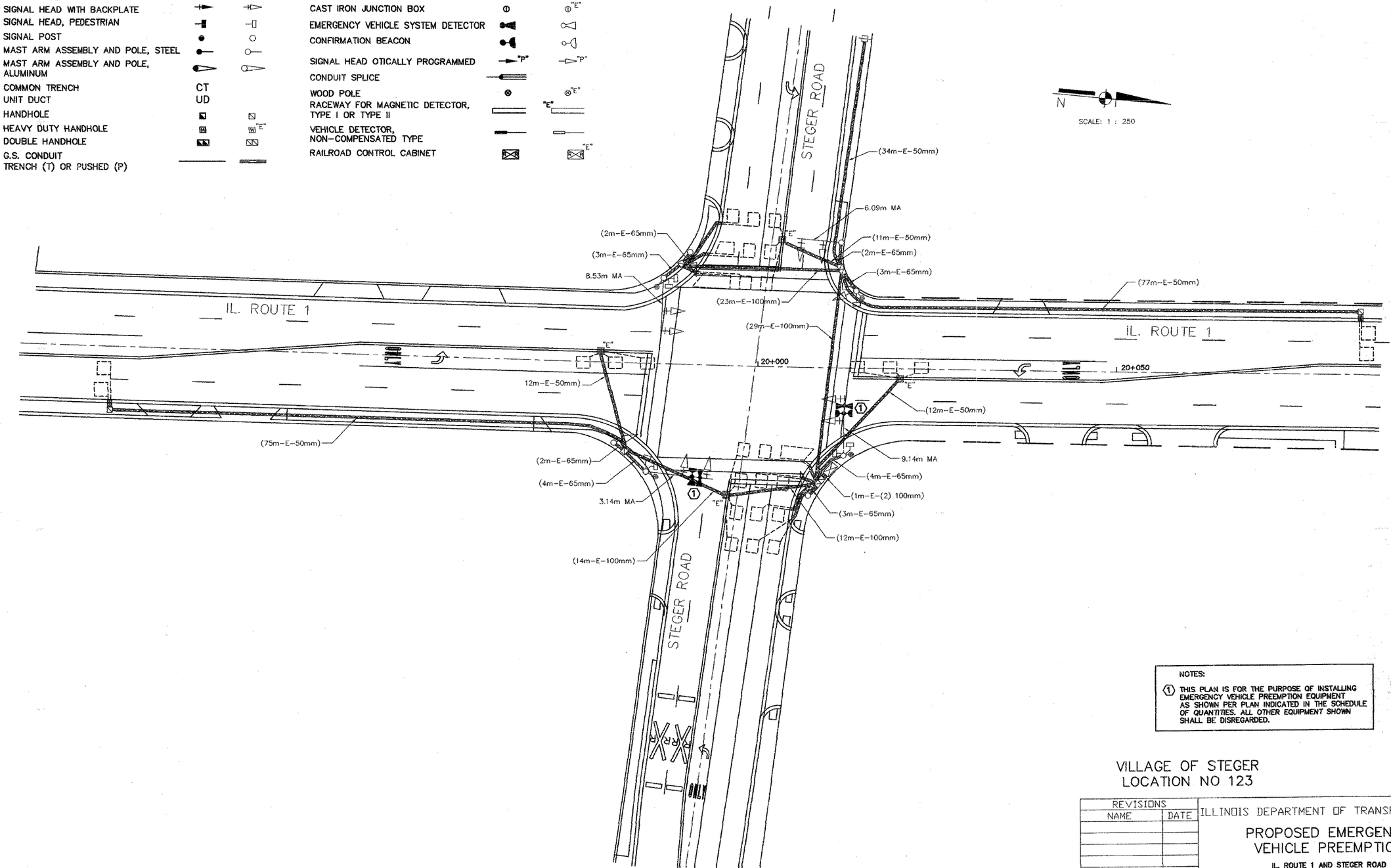
SCALE: N.T.S.
DRAWN BY: MJD
DATE: 1/02/08
CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	254
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▣	▣
SERVICE INSTALLATION	▮	⊕
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→	→
SIGNAL HEAD, PEDESTRIAN	▮→	▯→
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE	▧	▧
HEAVY DUTY HANDHOLE	▧	▧ "E"
DOUBLE HANDHOLE	▧▧	▧▧
G.S. CONDUIT TRENCH (T) OR PUSHED (P)	———	———

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◎
DETECTOR LOOP	□	⌐¬
CAST IRON JUNCTION BOX	ⓘ	ⓘ "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	◀	◁
CONFIRMATION BEACON	●◀	○◁
SIGNAL HEAD OTICALLY PROGRAMMED	→ "P"	→ "P"
CONDUIT SPLICE	———	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	———	——— "E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE	▬	▬
RAILROAD CONTROL CABINET	▣	▣ "E"



NOTES:

① THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF STEGER
LOCATION NO 123

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION

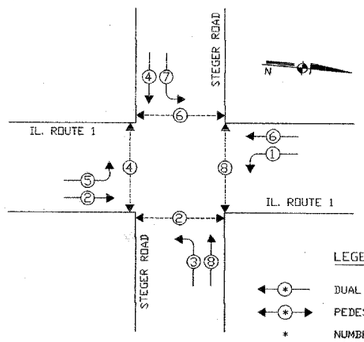
IL. ROUTE 1 AND STEGER ROAD

SCALE: 1 : 250
DATE: 1/02/08
DRAWN BY: MJD
CHECKED BY: MJD

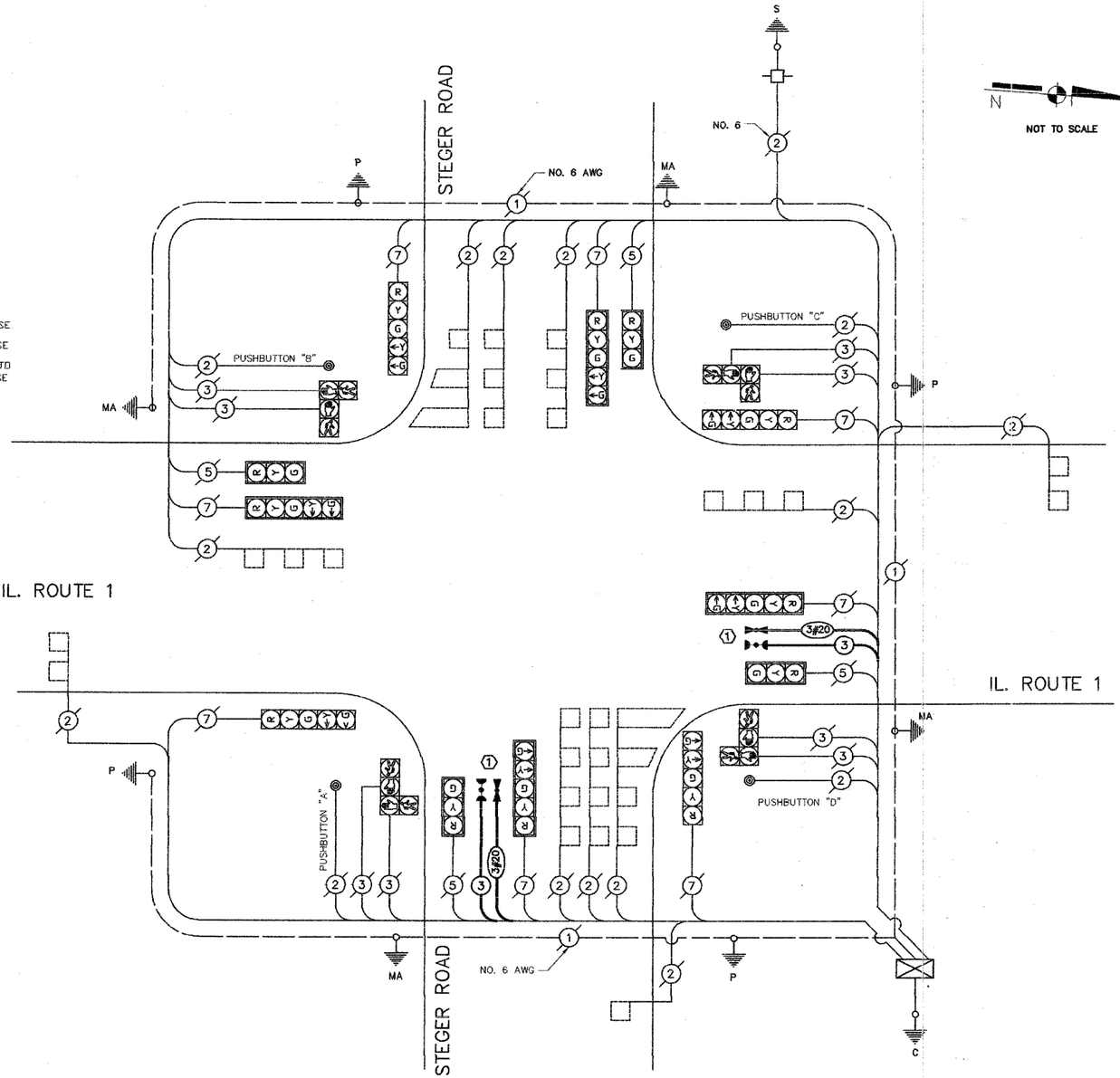
MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	255
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM



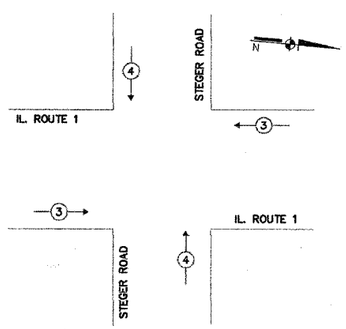
N

NOT TO SCALE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		8" TRAFFIC SIGNAL SECTION
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑

PUSHBUTTON NOTES:
PUSHBUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.
PUSHBUTTON "B" SHALL PLACE A CALL TO PHASES 4 AND 6.
PUSHBUTTON "C" SHALL PLACE A CALL TO PHASES 6 AND 8.
PUSHBUTTON "D" SHALL PLACE A CALL TO PHASES 2 AND 8.

CABLE PLAN

SCHEDULE OF QUANTITIES

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Meter	81.2
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Meter	81.2
Traffic Control and Protection Standard 701701	Each	1

VILLAGE OF STEGER
LOCATION NO 123

NOTES:
(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION
CABLE PLAN
CONTROLLER SEQUENCE
SCHEDULE OF QUANTITIES
IL. ROUTE 1 AND STEGER ROAD

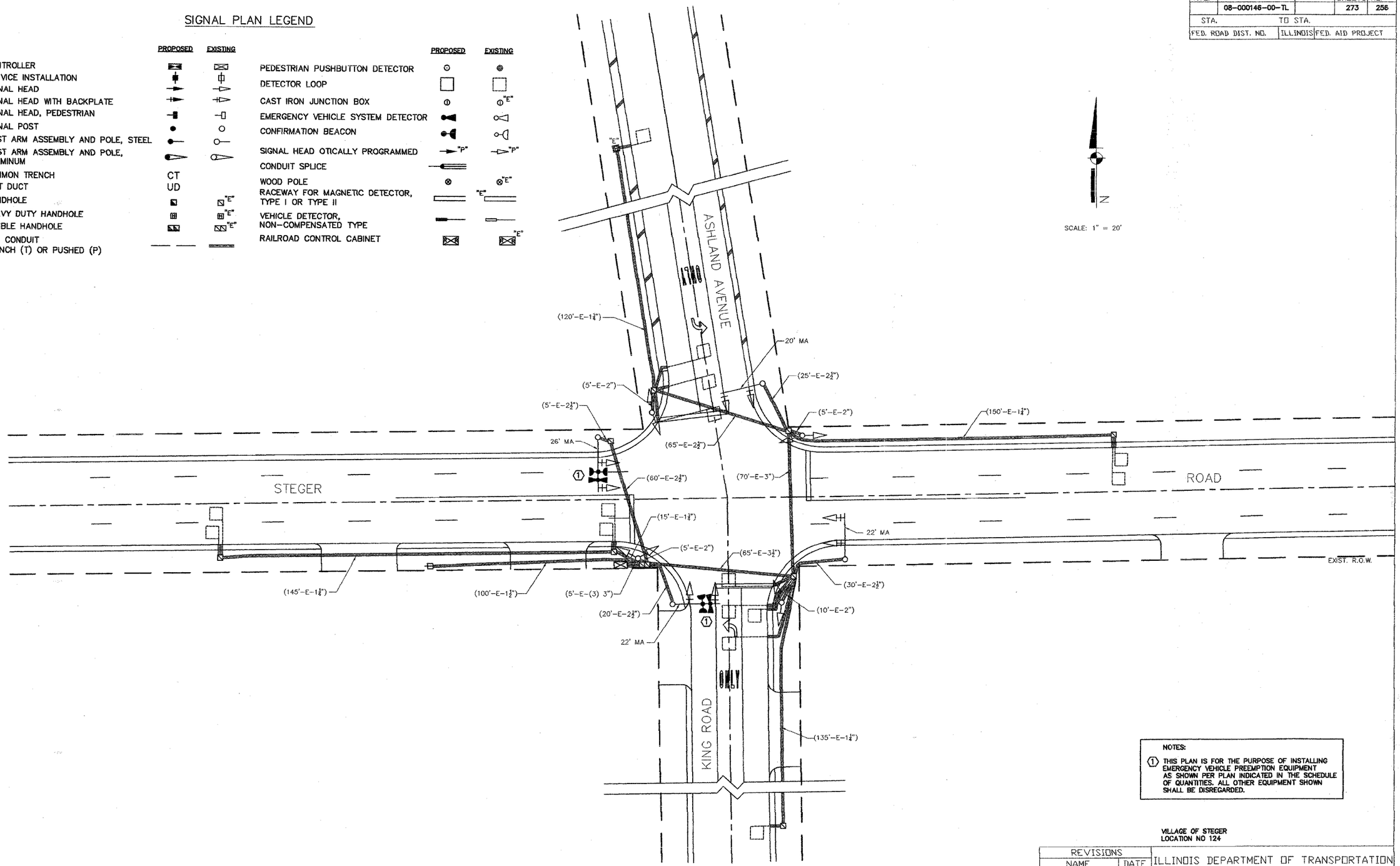
SCALE: N.T.S. DRAWN BY: MJD
DATE: 1/02/08 CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	256
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNAL PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▣	▣
SERVICE INSTALLATION	⊕	⊕
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→	→
SIGNAL HEAD, PEDESTRIAN	⊣	⊣
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	▶	▷
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE	◪	◪ "E"
HEAVY DUTY HANDHOLE	⊞	⊞ "E"
DOUBLE HANDHOLE	◪◪	◪◪ "E"
G.S. CONDUIT TRENCH (T) OR PUSHED (P)	— —	═══

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◉
DETECTOR LOOP	□	□
CAST IRON JUNCTION BOX	①	① "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	◀	◁
CONFIRMATION BEACON	◀●	◁○
SIGNAL HEAD OTICALLY PROGRAMMED	→ "P"	→ "P"
CONDUIT SPLICE	═══	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	═══	═══ "E"
VEHICLE DETECTOR, NON-COMPENSATED TYPE	▬	▭
RAILROAD CONTROL CABINET	⊠	⊠ "E"



NOTES:

① THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

VILLAGE OF STEGER
LOCATION NO 124

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

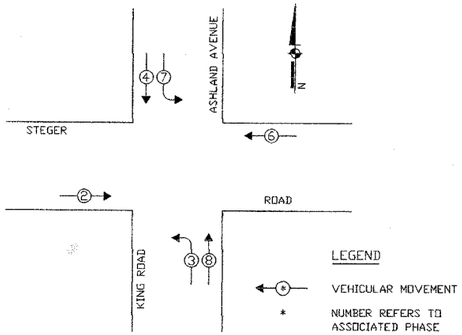
PROPOSED EMERGENCY VEHICLE PREEMPTION

STEGER ROAD AND ASHLAND AVE. / KING ROAD

SCALE: 1" = 20'
DATE: 1/02/08
DRAWN BY: MJD
CHECKED BY: MJD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-000146-00-TL		273	257
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

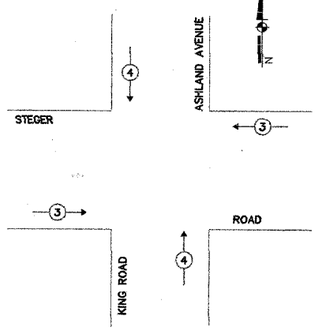
EXISTING CONTROLLER SEQUENCE



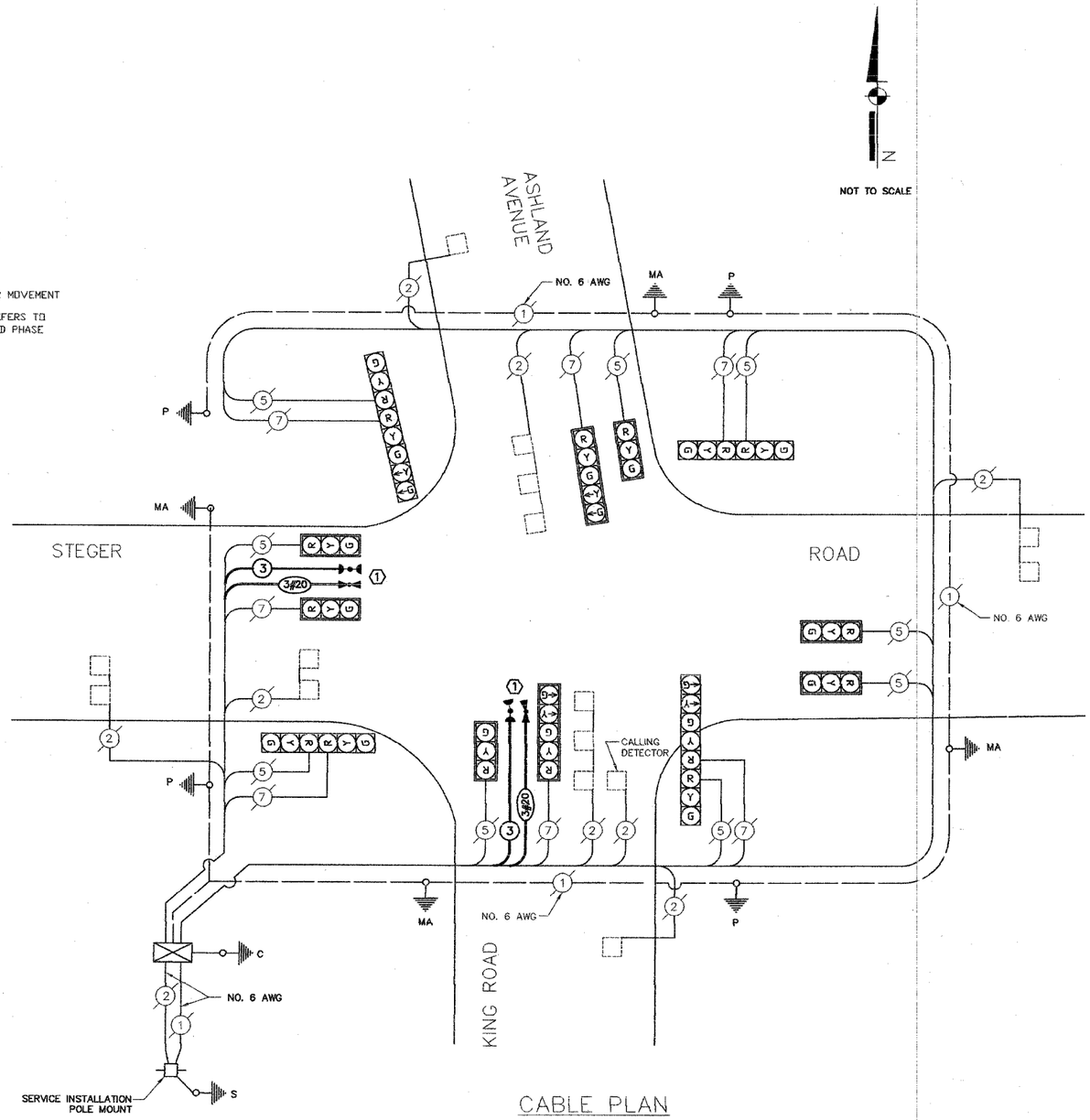
PHASE DESIGNATION DIAGRAM

DUAL ENTRY – ALL LEGS
PROTECTED / PERMITTED LEFT TURN PHASING

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	← →	↓ ↑



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		8" TRAFFIC SIGNAL SECTION
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H	H	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F

SCHEDULE OF QUANTITIES

Pay Item	Unit	Quantity
Maintenance of Existing Traffic Signal Installation	Each	1
Electric Cable in Conduit, Signal No. 14, 3c	Foot	222
Light Detector	Each	4
Light Detector Amplifier	Each	1
Electric Cable in Conduit, No. 20 3c Twisted Shielded	Foot	222
Traffic Control and Protection Standard 701701	Each	1

VILLAGE OF STEGER
LOCATION NO 124

MODIFIED BY JOSEPH SCHUDT and ASSOCIATES

NOTES:

(1) THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERGENCY VEHICLE PREEMPTION
CABLE PLAN
CONTROLLER SEQUENCE
SCHEDULE OF QUANTITIES

STEGER ROAD AND ASHLAND AVE. / KING ROAD

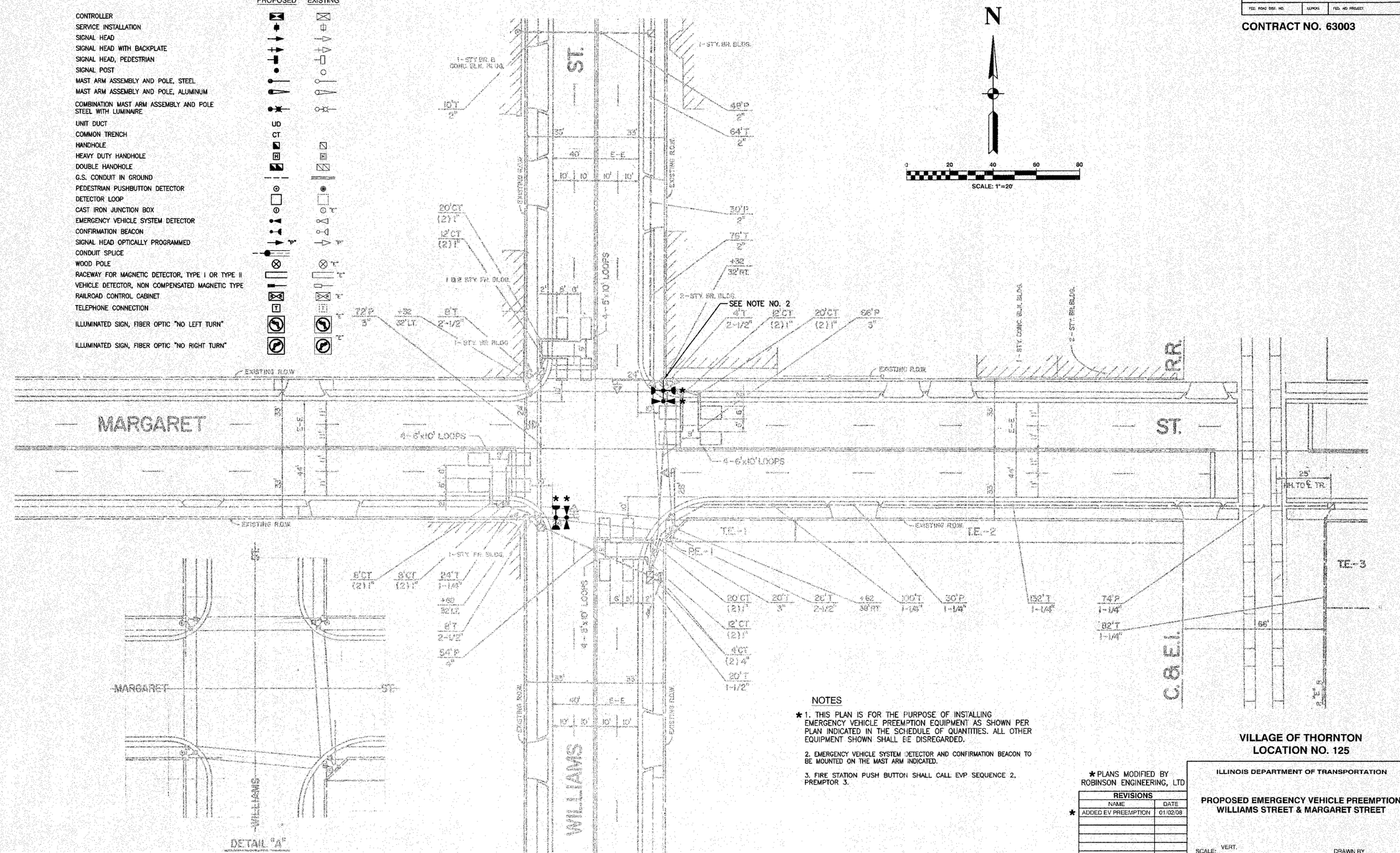
SCALE: N.T.S. DRAWN BY: MJD
DATE: 1/02/08 CHECKED BY: MJD

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	258
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. NO. PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. EMERGENCY VEHICLE SYSTEM DETECTOR AND CONFIRMATION BEACON TO BE MOUNTED ON THE MAST ARM INDICATED.

3. FIRE STATION PUSH BUTTON SHALL CALL EVP SEQUENCE 2, PREMPTOR 3.

VILLAGE OF THORNTON
LOCATION NO. 125

★PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
WILLIAMS STREET & MARGARET STREET

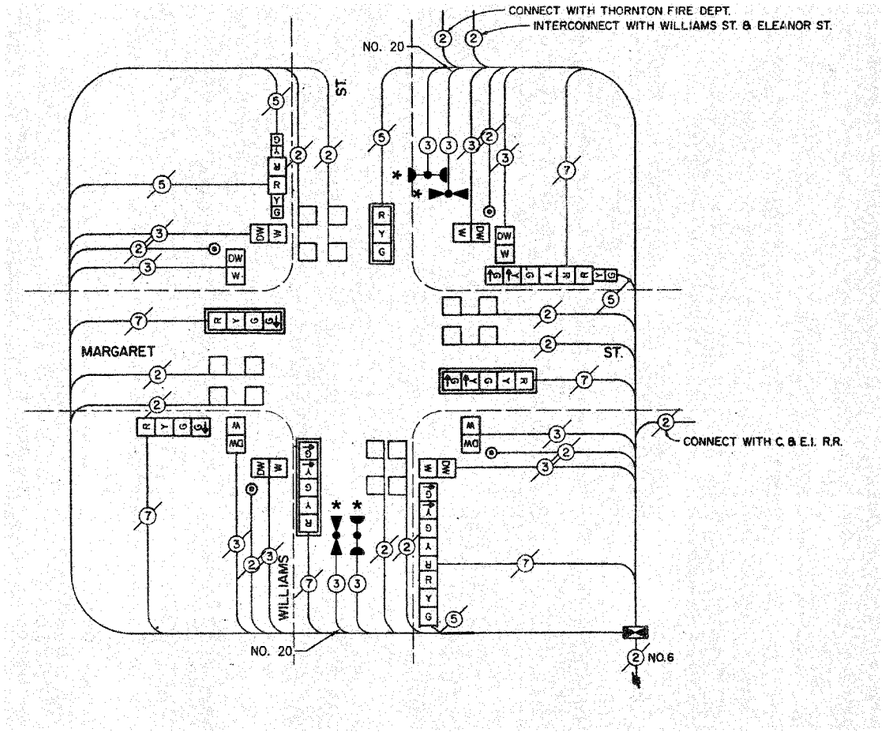
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
7309 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6252 FAX (708) 331-0609
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-MR

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	259
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	347
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	347

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. FIRE STATION PUSH BUTTON SHALL CALL EVP SEQUENCE 2, PREMPTOR 3.

VILLAGE OF THORNTON
LOCATION NO. 125

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD.

REVISIONS		
	NAME	DATE
*	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
WILLIAMS STREET & MARGARET STREET

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6720 FAX (708) 331-2826
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-44R

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	260
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

SEQUENCE OF OPERATION

MOVEMENT		6 1	6 2	7 4	8 4	FLASH
PHASE		1 + 6	2 + 6	4 + 7	4 + 8	
INTERVAL		1 2 3	4 5 6A 6B	7 8 9A 9B 10	11 12 13A 13B	
CHANGE TO		ϴ ϴ 2+6	4+7 4+8	ϴ ϴ 1+6 2+8 4+8	1+6 2+6	
WILLIAMS STREET ALL SIGNALS	N/B	R R R G G Y R	R R R R R	R R R G G Y R	R R R R	R
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	G ◄G G ◄G G ◄Y G G Y R	R R R R R	R R R G ◄G G ◄G Y R	R R R R	R
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	G G G G G Y R	R R R R R	R R R G G Y R	R R R R	R
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	E/B	R R R R R R R	G ◄G G ◄G Y R G	G G Y R G ◄Y G G Y R	R R R R	R
MARGARET STREET NEAR RIGHT SIGNAL	E/B	R R R R R R R	G G Y R G	G G Y R G G Y R	R R R R	R
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	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
MARGARET STREET NEAR RIGHT SIGNAL	W/B	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
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON EAST SIDE OF WILLIAMS ST.		DW DW DW *W **FL DW DW DW	DW DW DW DW DW	DW DW DW DW DW DW DW	DW DW DW DW	D
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON WEST SIDE OF WILLIAMS ST.		*W **FL DW DW *W **FL DW DW DW	DW DW DW DW DW	DW DW DW DW DW DW DW	DW DW DW DW	A
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF MARGARET ST.		DW DW DW DW DW DW DW	DW DW DW DW DW	DW DW DW DW DW DW DW	*W **FL DW DW DW	R
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF MARGARET ST.		DW DW DW DW DW DW DW	*W **FL DW DW DW DW DW	DW DW DW DW DW DW DW	*W **FL DW DW DW	K

* TO APPEAR ONLY UPON PUSHBUTTON ACTIVATION

** FLASHING "DON'T WALK" IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.

ϴ THIS "WALK" OR FLASHING "DON'T WALK" INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT AROW TIME IS NOT SUFFFICIENT TO COMPLETE "WALK" OR FLASHING "DON'T WALK" INTERVALS.

W = "WALK"

FL DW = FLASHING "DON'T WALK"

DW = "DON'T WALK"

PHASE 2+6 SHALL BE PLACED ON RECALL

RAILROAD PREEMPTION SEQUENCE OF OPERATION

									PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 2				
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1		4		7		11						
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER									2					
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1G	1H	2	3	5	Δ	CLEAR TO NORMAL SEQUENCE
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	2	1F	2	1H	2	1H	2	3		5	Ⓐ	G	Δ
WILLIAMS STREET ALL SIGNALS	N/B	R	R	Y	R	R	R	R	R	R	R	R	R	R	G		Δ
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B		R	Y	R	R	R	R	R		R	R	R	R	G		Δ
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	Y		Y	R	R	R		R	Y	R	R	R	R	G		Δ
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	E/B	R	R	R			R	Y	R	R	R	R	R	R	R		Δ
MARGARET STREET NEAR RIGHT SIGNAL	E/B	R	R	R			R	Y	R	R	R	R	R	R	R		Δ
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R		R	R	R	R		G	R	R	G ◄G	Y	R	R		Δ
MARGARET STREET NEAR RIGHT SIGNAL		R	R	R	R	R	R	G	G		R	G	Y	R	R		
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	FL DW	DW	DW	DW	DW	DW	DW		DW	DW	DW	DW		Δ
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW		Δ
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF MARGARET ST.		DW	DW	DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	W	DW		Δ
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF MARGARET ST.		DW	DW	DW	DW	FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW			Δ
															HOLD		

Δ 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 INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED

Ⓐ RAILROAD PREEMPTION SEQUENCE SHALL CYCLE BETWEEN PHASES 2+6 AND 4+6 UNTIL RAILROAD PREEMPTION IS TERMINATED

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF SEPERATION

											PREEMPTOR NUMBER 3		
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		1		4		7		11					
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	2	CLEAR TO NORMAL SEQUENCE
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		2	1C	1D	2	1F	1G	2	1J	1K	2		
WILLIAMS STREET ALL SIGNALS	N/B	R	G	Y	R	R	R	R	R	R	R	R	◊
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	G ◄G	G	Y	R	R	R	R	R	R	R	G ◄G	◊
WILLIAMS STREET NEAR RIGHT SIGNAL		G	G	Y	R	R	R	R	R	R	R	G	◊
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	E/B	R	R	R	R	G	Y	R	G	Y	R	R	◊
MARGARET STREET NEAR RIGHT SIGNAL	E/B	R	R	R	R	G	Y	R	G	Y	R	R	◊
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	R	G	Y	R	R	◊
MARGARET STREET NEAR RIGHT SIGNAL		R	R	R	R	R	R	R	G	Y	R	R	◊
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON EAST SIDE OF WILLIAMS ST.		DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	◊
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW		DW	◊
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF MARGARET ST.		DW	DW	DW	DW	DW	DW	FL DW	DW	DW			◊
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF MARGARET ST.		DW	DW	DW	DW	FL DW	DW	FL DW	DW	DW	DW		

◊ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION ON PROPOER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT ENERGENCY INTERVAL AFTER EMERGENCY VEHICLE 2 IS TERMINATED.

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF THORNTON
LOCATION NO. 125

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD.

REVISIONS	
NAME	DATE
* ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS WILLIAMS STREET & MARGARET STREET

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
11000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 33?-3826
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001108

07248-94R

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	261
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

RAILROAD PREEMPTION SEQUENCE OF OPERATION

									PREEMPTOR NUMBER 3		PREEMPTOR NUMBER 4		PREEMPTOR NUMBER 2				
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1		4		7		11									
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER									2		3						
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1G	1H	1J	1K	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	1H	2	1K	2	3	4	5	Ⓐ	
WILLIAMS STREET ALL SIGNALS	N/B	R	R	Y	R	R	R	R	R	Y	R	R	R	R	R	R	G	△
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	R	G	△
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	Y	R	Y	R	R	R	R	R	Y	R	R	R	R	R	R	G	△
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	E/B	R	R	R	R	Y	R	Y	R	R	R	Y	R	R	R	R	R	△
MARGARET STREET NEAR RIGHT SIGNAL	E/B	R	R	R	R	Y	R	Y	R	R	R	Y	R	R	R	R	R	△
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	G	G	R	R	G	G	G ◄G	Y	R	R	△
MARGARET STREET NEAR RIGHT SIGNAL	W/B	R	R	R	R	R	R	G	G	R	R	G	G	G	Y	R	R	△
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF MARGARET ST.		DW	DW	DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF MARGARET ST.		DW	DW	DW	DW	FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
																	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 INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED

Ⓐ RAILROAD PREEMPTION SEQUENCE SHALL CYCLE BETWEEN PHASES 2+6 AND 4+8 UNTIL RAILROAD PREEMPTION IS TERMINATED

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF SEPERATION

																					PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		1					4				7				11								
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1H	1J	1K	1L	2	3			
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	1E	3	2	1H	1J	3	1L	1M	2	3	1J	1K	2	3			CLEAR TO NORMAL SEQUENCE		
WILLIAMS STREET ALL SIGNALS	N/B	R	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	G	R	◊		
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	G ◄G	G ◄Y	G ◄G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	R	G	R	◊		
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	G	G	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	R	G	R	◊		
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	E/B	R	R	R	R	R	R	R	R	G ◄G	Y	R	G ◄Y	G	Y	R	G	R	G	◊			
MARGARET STREET NEAR RIGHT SIGNAL	E/B	R	R	R	R	R	R	R	R	G	Y	R	G	G	Y	R	G	R	G	◊			
MARGARET STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	G	R	G	◊			
MARGARET STREET NEAR RIGHT SIGNAL	W/B	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	G	R	G	◊			
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	DW	DW	DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	◊		
PEDESTRIAN SIGNALS CROSSING MARGARET ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	DW	FL DW	DW	DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	◊		
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF MARGARET ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	FL DW	DW	DW	FL DW	FL DW	DW	DW	FL DW	DW	DW	◊		
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF MARGARET ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	FL DW	DW	DW	FL DW	FL DW	DW	DW	FL DW	DW	DW	◊		

◊ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE POPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION ON PROPOER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT ENERGENCY INTERVAL AFTER EMERGENCY VEHICLE 2 IS TERMINATED.

FIRE STATION PUSH BUTTON SHALL CALL EVP SEQUENCE 2, PREMPTOR 3.

NOTE

★1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF THORNTON
LOCATION NO. 125

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS WILLIAMS STREET & MARGARET STREET

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

ROBINSON ENGINEERING, LTD.
11200 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3629
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

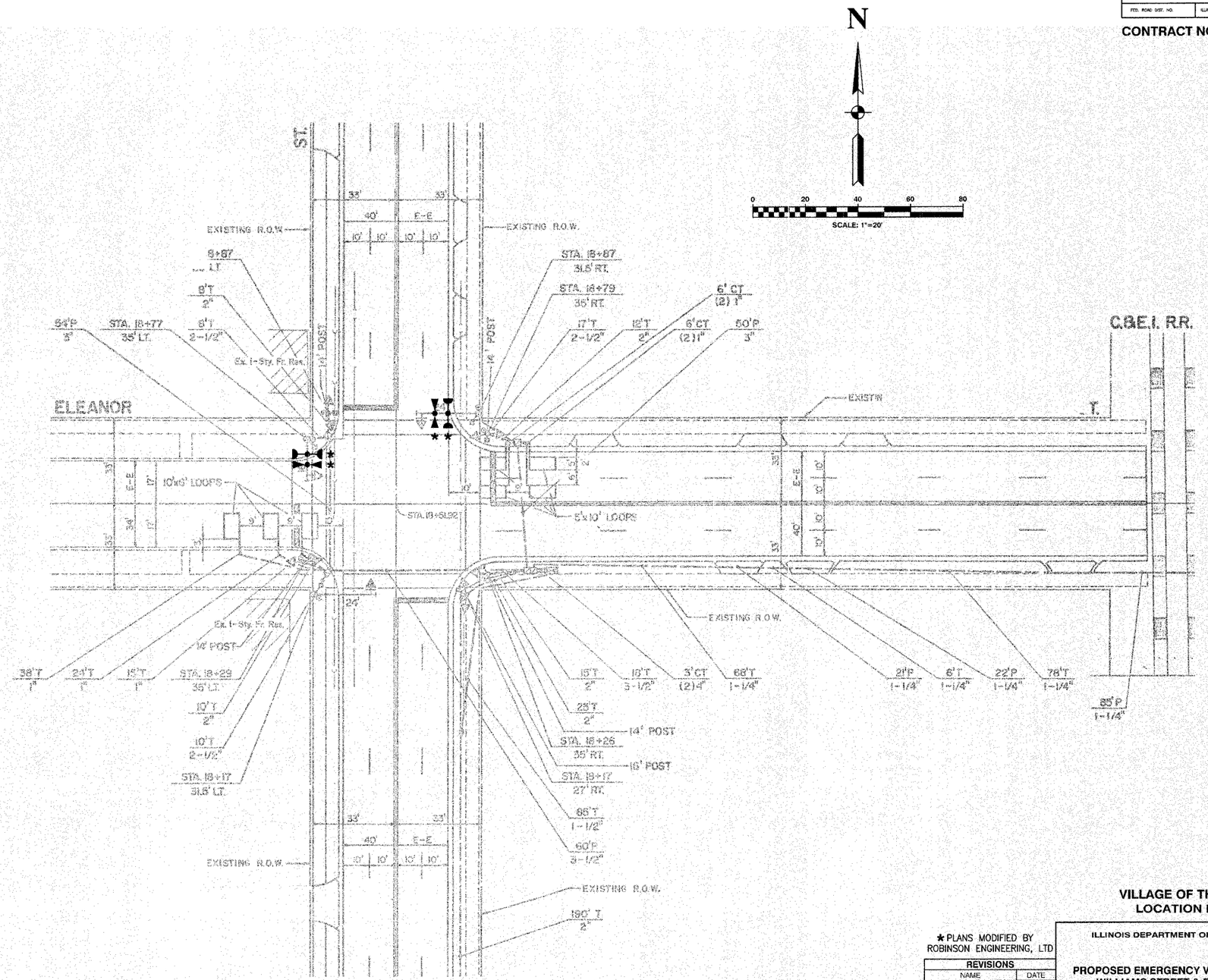
0724B-94R

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	262
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		"E"
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. FIRE STATION PUSH BUTTON SHALL CALL EVP SEQUENCE 2, PREMPTOR 3.

VILLAGE OF THORNTON
LOCATION NO. 126

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
WILLIAMS STREET & ELEANOR STREET

SCALE: VERT.
HORIZ.
DATE

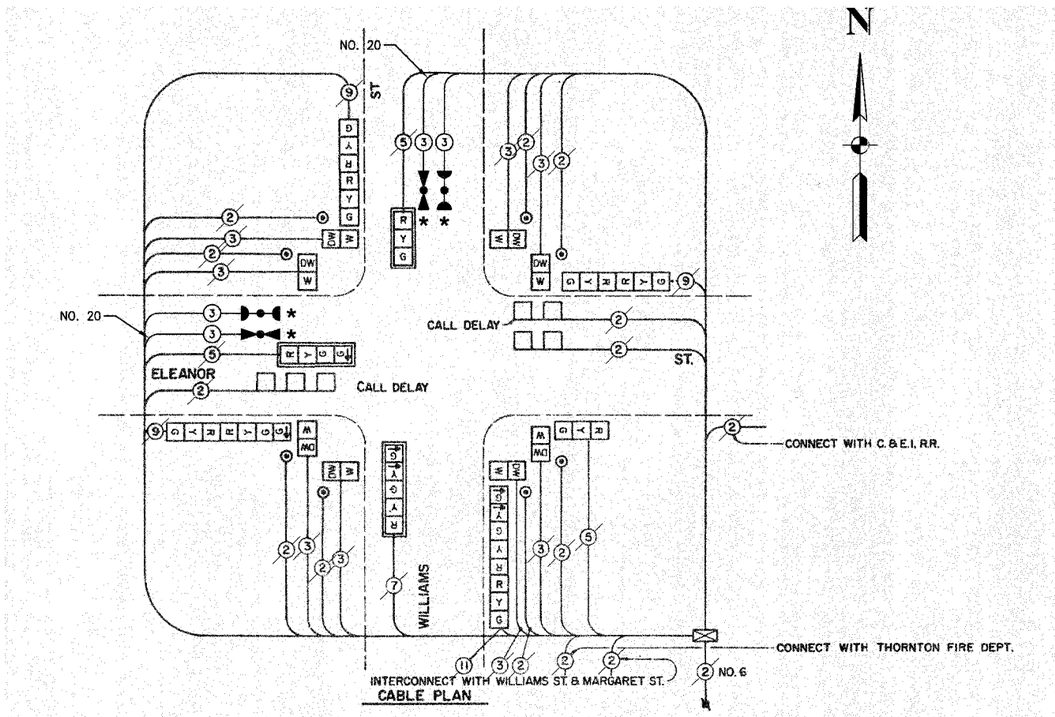
DRAWN BY
CHECKED BY

ROBINSON ENGINEERING, LTD.
17200 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3828
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-35R

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00148-00-TL	COOK	273	263
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	348
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	348

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. FIRE STATION PUSH BUTTON SHALL CALL EVP SEQUENCE 2, PREMPTOR 3.

VILLAGE OF THORNTON
LOCATION NO. 126

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
*	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
WILLIAMS STREET & ELEANOR STREET

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17009 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-2626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07248-95R

P. A. NTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	264
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

SEQUENCE OF OPERATION

MOVEMENT		6 1			6 2				8 4				FLASH
PHASE		1 + 6			2 + 6				4 + 8				
INTERVAL		1	2	3	4	5	6A	6B	7	8	9A	9B	
CHANGE TO		θ	θ	2+6			4+8				1+6 2+6		
WILLIAMS STREET ALL SIGNALS	N/B	R	R	R	G	G	Y	R	R	R	R	R	R
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	G ◄G	G ◄G	G ◄Y	G	G	Y	R	R	R	R	R	R
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	G	G	G	G	G	Y	R	R	R	R	R	R
ELEANOR STREET ALL SIGNALS	E/B	R	R	R	R	R	R	R	G	G	Y	R	R
ELEANOR STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	R	G	G	Y	R	R
ELEANOR STREET NEAR RIGHT SIGNAL	W/B	R	R	R	R	R	R	R	G	G	Y	R	R
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	DW	*W	**FL DW	DW	DW	DW	DW	DW	DW	D
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON WEST SIDE OF WILLIAMS ST.		*W	**FL DW	DW	*W	**FL DW	DW	DW	DW	DW	DW	DW	A
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	DW	DW	DW	DW	**FL DW	DW	DW	R
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	DW	DW	DW	DW	**FL DW	DW	DW	K

* TO APPEAR ONLY UPON PUSHBUTTON ACTIVATION

** FLASHING "DON'T WALK" IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.

θ THIS "WALK" OR FLASHING "DON'T WALK" INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT AROW TIME IS NOT SUFFFICIENT TO COMPLETE "WALK" OR FLASHING "DON'T WALK" INTERVALS.

W = "WALK"

FL DW = FLASHING "DON'T WALK"

DW = "DON'T WALK"

PHASE 2+6 SHALL BE PLACED ON RECALL

RAILROAD PREEMPTION SEQUENCE OF OPERATION

										PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 2			
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1		4		7								
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER										2				
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	2	3	4	5	Ⓐ NORMAL SEQUENCE
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	2	1F	2	1H	2	3	4	5	Ⓐ	
WILLIAMS STREET ALL SIGNALS	N/B	R	R	Y	R	R	R	Y	R	R	R	R	G	△
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	G ◄G	R	Y	R	R	R	R	R	R	R	R	G	△
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	Y	R	Y	R	R	R	R	R	R	R	R	G	△
ELEANOR STREET ALL SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	△
ELEANOR STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	G	G	R	R	G ◄G	Y	R	R	△
ELEANOR STREET NEAR RIGHT SIGNAL	W/B	R	R	R	R	G	G	R	R	G	Y	R	R	△
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW 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 INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED

Ⓐ RAILROAD PREEMPTION SEQUENCE SHALL CYCLE BETWEEN PHASES 2+6 AND 4+6 UNTIL RAILROAD PREEMPTION IS TERMINATED

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF SEPERATION

											PREEMPTOR NUMBER 3	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		1			4			7				
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	2	CLEAR TO NORMAL SEQUENCE
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	2	1F	2	1H	2	2		
WILLIAMS STREET ALL SIGNALS	N/B	R	R	R	G	Y	R	Y	R	R	R	◊
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	G ◄G	Y	R	G	Y	R	R	R	R	R	◊
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	G	Y	R	G	Y	R	R	R	R	R	◊
ELEANOR STREET ALL SIGNALS	E/B	R	R	R	R	R	R	G	Y	R	R	◊
ELEANOR STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	G	Y	R	R	◊
ELEANOR STREET NEAR RIGHT SIGNAL	W/B	R	R	R	R	R	R	G	Y	R	R	◊
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	◊
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	◊
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	◊
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	◊

◊ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE POPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION ON PROPOER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT ENERGENCY INTERVAL AFTER EMERGENCY VEHICLE 2 IS TERMINATED.

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF THORNTON
LOCATION NO. 126

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS WILLIAM STREET AND ELEANOR STREET

SCALE: VERT. HORIZ. DRAWN BY MRS

DATE CHECKED BY PB

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-4900 FAX (708) 331-3926
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001125

07248-99R

F. A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK	273	265
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

RAILROAD PREEMPTION SEQUENCE OF OPERATION

								PREEMPTOR NUMBER 3		PREEMPTOR NUMBER 4		PREEMPTOR NUMBER 2				
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1		4		7											
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER								2		3							
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	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	3	4	5	Ⓐ	
WILLIAMS STREET ALL SIGNALS	N/B	R	R	Y	R	R	R	Y	R	R	R	R	R	R	G	△
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	Y	R	Y	R	R	R	Y	R	R	R	R	R	R	G	△
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	Y	R	Y	R	R	R	Y	R	R	R	R	R	R	G	△
ELEANOR STREET ALL SIGNALS	E/B	R	R	R	R	Y	R	R	R	Y	R	R	R	R	R	△
ELEANOR STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	G	G	R	R	G	G	G ◄G	Y	R	R	△
ELEANOR STREET NEAR RIGHT SIGNAL	W/B	R	R	R	R	G	G	R	R	G	G	G	Y	R	R	△
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	△
															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 INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED

Ⓐ RAILROAD PREEMPTION SEQUENCE SHALL CYCLE BETWEEN PHASES 2+6 AND 4+6 UNTIL RAILROAD PREEMPTION IS TERMINATED

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF SEPERATION

																PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		1					4				7							
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	2	3		
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1B	2	1D	1E	3	2	1H	1J	3	1L	1M	2	3			CLEAR TO NORMAL SEQUENCE	
WILLIAMS STREET ALL SIGNALS	N/B	R	R	R	R	R	G	G	Y	R	R	R	R	R	G	R	◊	
WILLIAMS STREET END MAST ARM AND FAR LEFT SIGNALS	S/B	G ◄G	G ◄Y	G ◄G	Y	R	G	G	Y	R	R	R	R	R	G	R	◊	
WILLIAMS STREET NEAR RIGHT SIGNAL	S/B	G	G	G	Y	R	G	G	Y	R	R	R	R	R	G	R	◊	
ELEANOR STREET ALL SIGNALS	E/B	R	R	R	R	R	R	R	R	R	G	Y	R	G	R	G	◊	
ELEANOR STREET END MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	R	R	R	G	Y	R	G	R	G	◊	
ELEANOR STREET NEAR RIGHT SIGNAL	W/B	R	R	R	R	R	R	R	R	R	G	Y	R	G	R	G	◊	
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON EAST SIDE OF WILLIAMS ST.		DW	DW	DW	DW	DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	◊	
PEDESTRIAN SIGNALS CROSSING ELEANOR ST. ON WEST SIDE OF WILLIAMS ST.		FL DW	DW	FL DW	DW	DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	◊	
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON NORTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	FL DW	DW	DW	FL DW	DW	DW	◊	
PEDESTRIAN SIGNALS CROSSING WILLIAMS ST. ON SOUTH SIDE OF ELEANOR ST.		DW	DW	DW	DW	FL DW	DW	DW	DW	DW	FL DW	DW	DW	FL DW	DW	DW	◊	

◊ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE POPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION ON PROPOER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT ENERGENCY INTERVAL AFTER EMERGENCY VEHICLE 2 IS TERMINATED.

FIRE STATION PUSH BUTTON SHALL CALL EVP SEQUENCE 2, PREMPTOR 3.

NOTE

✱1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF THORNTON
LOCATION NO. 126

✱ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

	REVISIONS	
	NAME	DATE
✱	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS WILLIAM STREET AND ELEANOR STREET

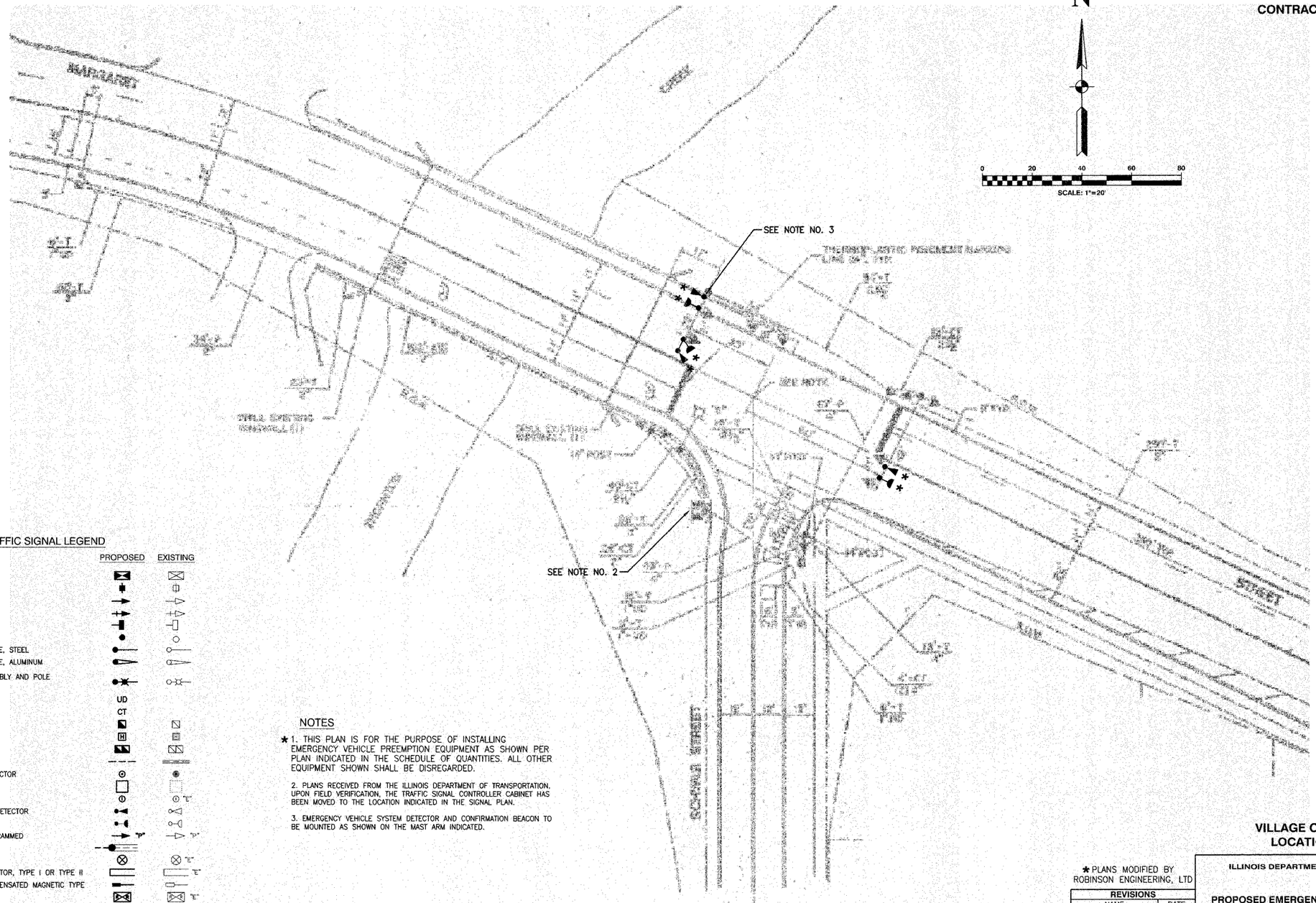
SCALE: VERT. HORIZ.
DRAWN BY MRS
DATE
CHECKED BY PB

ROBINSON ENGINEERING, LTD.
7130 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3826
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

07248-95R

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	266
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	"E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		

NOTES

★1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. PLANS RECEIVED FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION. UPON FIELD VERIFICATION, THE TRAFFIC SIGNAL CONTROLLER CABINET HAS BEEN MOVED TO THE LOCATION INDICATED IN THE SIGNAL PLAN.

3. EMERGENCY VEHICLE SYSTEM DETECTOR AND CONFIRMATION BEACON TO BE MOUNTED AS SHOWN ON THE MAST ARM INDICATED.

VILLAGE OF THORNTON
LOCATION NO. 127

★PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
MARGARET STREET & SCHWAB STREET

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

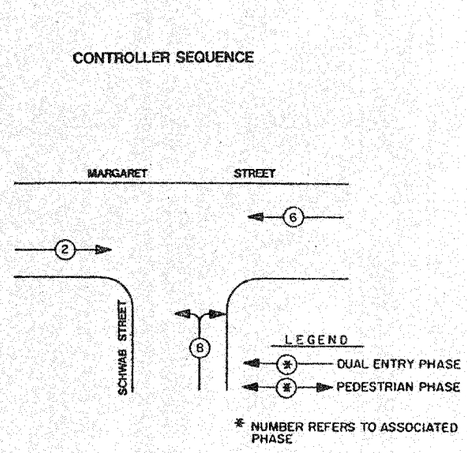
ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3620
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001126

07249-96

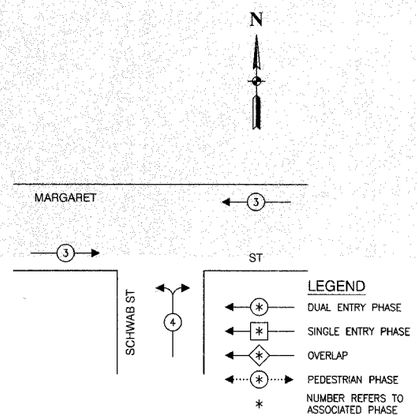
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	267
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

CONTROLLER SEQUENCE

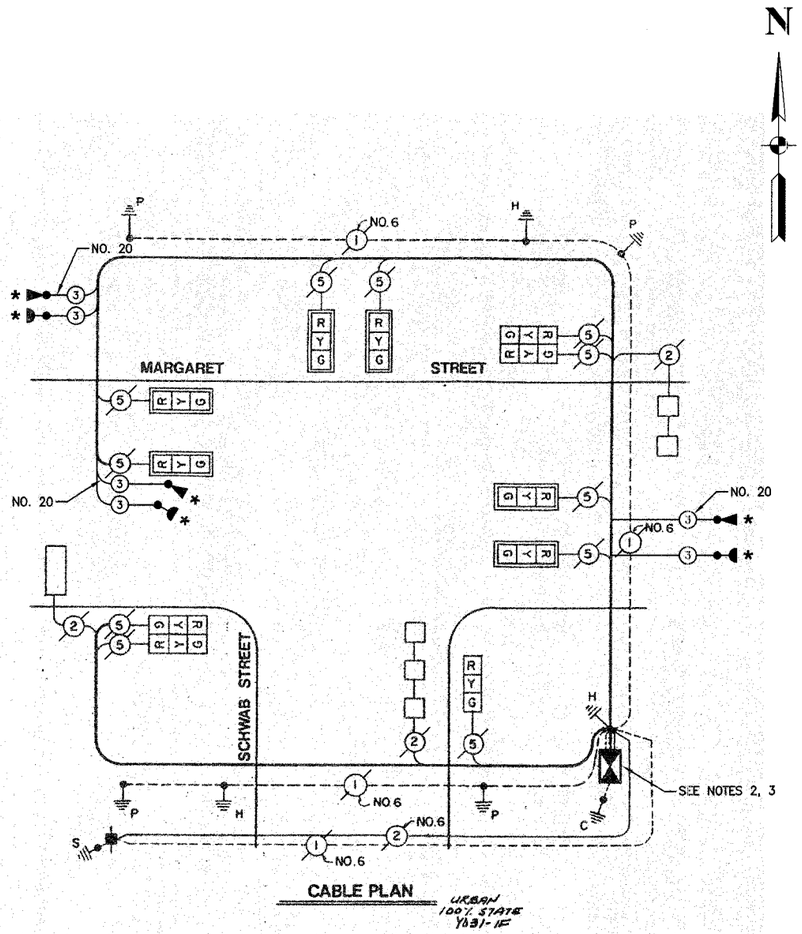


PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	← ↑



CABLE PLAN

URBAN
100% STATE
YA31-1F

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	723
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	723

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. PLANS RECEIVED FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION. UPON FIELD VERIFICATION, THE TRAFFIC SIGNAL CONTROLLER CABINET HAS BEEN MOVED TO THE LOCATION INDICATED IN THE SUPPLIED CABLE PLAN.

3. EXISTING CONDUIT ROUTING MAY HAVE CHANGED WHEN THE TRAFFIC SIGNAL CONTROLLER CABINET WAS MOVED. CONDUIT ROUTING AND SIZES TO BE VERIFIED IN FIELD.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
C	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF THORNTON
LOCATION NO. 127

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
* ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
MARGARET STREET & SCHWAB STREET

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3026
ILLINOIS DESIGN FIRM REGISTRATION NO.: 184001126

07248-96

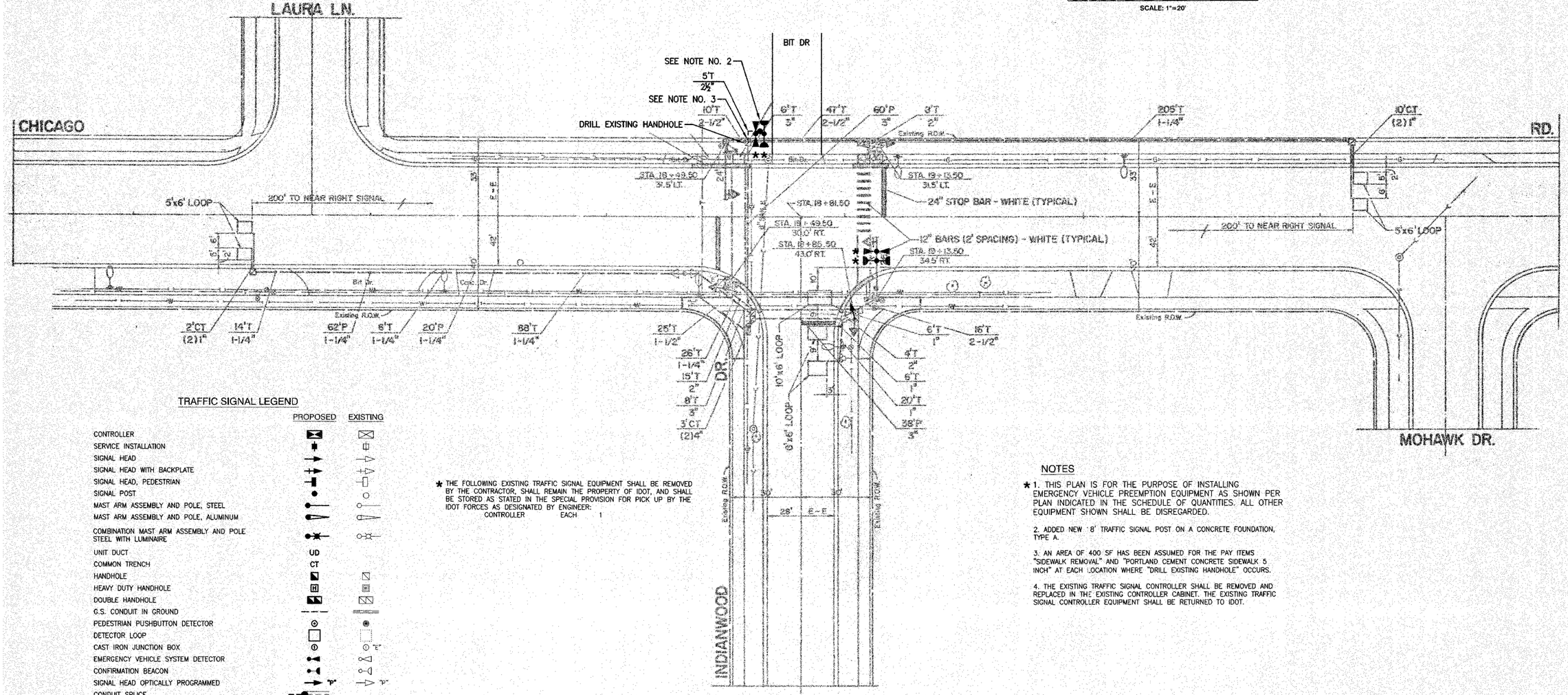
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	268
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

N

0 20 40 60 80

SCALE: 1"=20'



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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"

★ THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF IDOT, AND SHALL BE STORED AS STATED IN THE SPECIAL PROVISION FOR PICK UP BY THE IDOT FORCES AS DESIGNATED BY ENGINEER:

CONTROLLER	EACH	1

NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. ADDED NEW 18' TRAFFIC SIGNAL POST ON A CONCRETE FOUNDATION, TYPE A.

3. AN AREA OF 400 SF HAS BEEN ASSUMED FOR THE PAY ITEMS "SIDEWALK REMOVAL" AND "PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH" AT EACH LOCATION WHERE "DRILL EXISTING HANDHOLE" OCCURS.

4. THE EXISTING TRAFFIC SIGNAL CONTROLLER SHALL BE REMOVED AND REPLACED IN THE EXISTING CONTROLLER CABINET. THE EXISTING TRAFFIC SIGNAL CONTROLLER EQUIPMENT SHALL BE RETURNED TO IDOT.

VILLAGE OF THORNTON
LOCATION NO. 128

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
★ ADDED EV PREEMPTION	01/02/08
ADDED NEW 18' POST	
ADDED NEW CONTROLLER	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION
CHICAGO ROAD & INDIANWOOD DRIVE

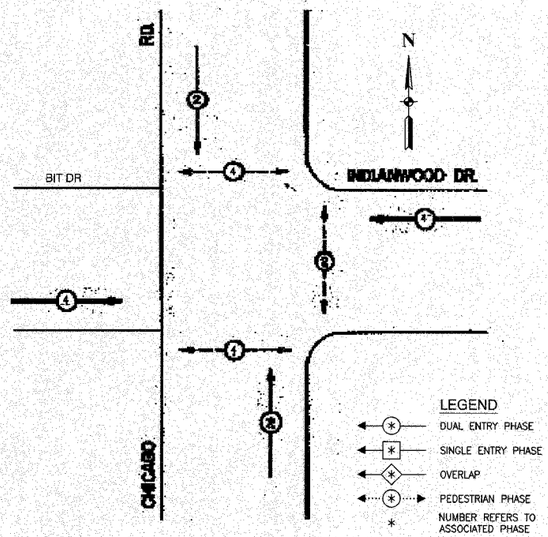
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
11000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3828
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

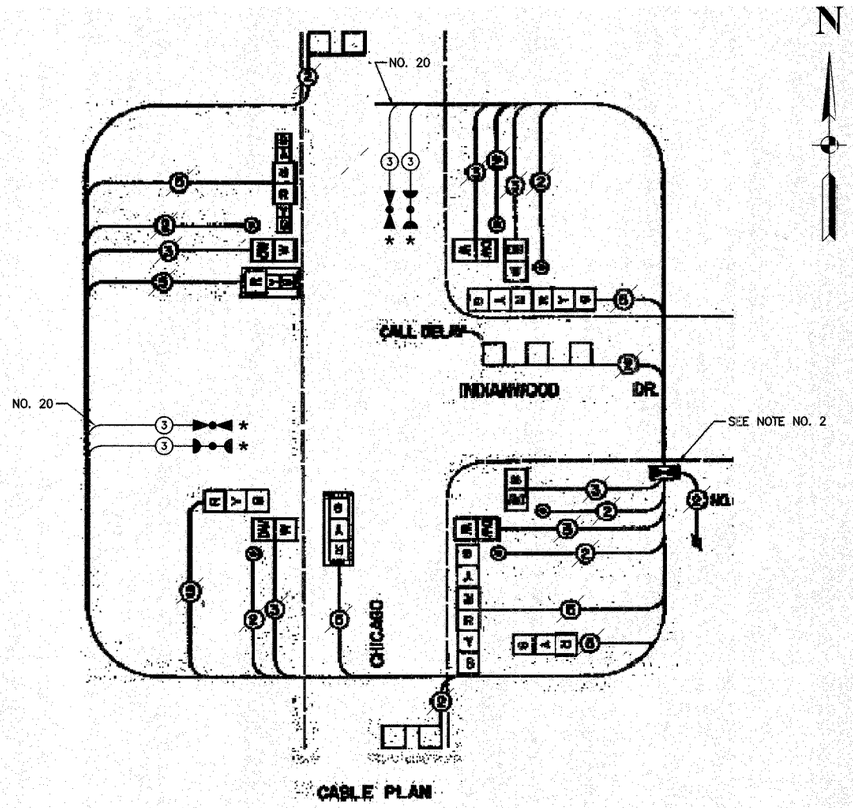
07248-07

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	269
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

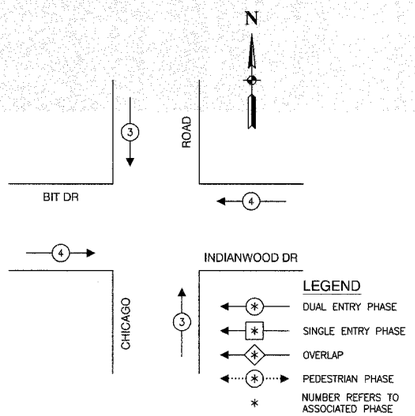
CONTRACT NO. 63003



PHASE DESIGNATION DIAGRAM



CABLE PLAN



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	400
SIDEWALK REMOVAL	SQ FT	400
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	5
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	228
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	4
DRILL EXISTING HANDHOLE	EACH	1
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	1
RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	1
RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	1
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	15
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	228

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. THE EXISTING TRAFFIC SIGNAL CONTROLLER SHALL BE REMOVED AND REPLACED IN THE EXISTING CONTROLLER CABINET. THE EXISTING TRAFFIC SIGNAL CONTROLLER EQUIPMENT SHALL BE RETURNED TO IDOT.

VILLAGE OF THORNTON
LOCATION NO. 128

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS	
NAME	DATE
* ADDED EV PREEMPTION	01/02/08
ADDED NEW 18' POST	
ADDED NEW CONTROLLER	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
CHICAGO ROAD & INDIANWOOD DRIVE

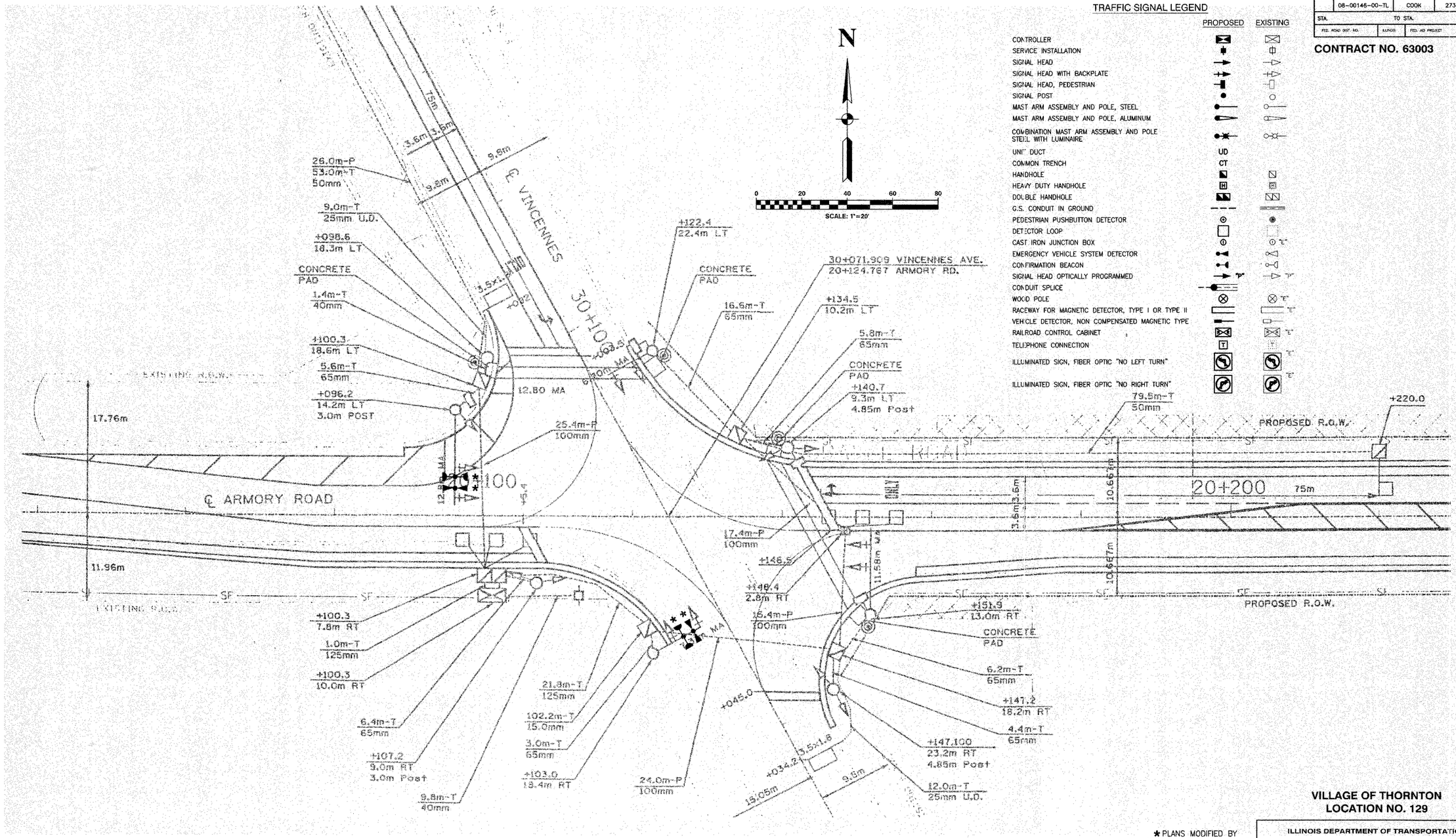
SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17005 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3825
ILLINOIS DESIGN FIRM REGISTRATION NO.: 184001128

07246-97

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	270
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



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	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE	●—✶	○—✶
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◥	◹
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◥◤	◹◿
G.S. CONDUIT IN GROUND	— —	═══
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◉
DETECTOR LOOP	□	⬚
CAST IRON JUNCTION BOX	ⓘ	⊙ "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	◀●	◁●
CONFIRMATION BEACON	●◀	●◁
SIGNAL HEAD OPTICALLY PROGRAMMED	→ "P"	⊣▷ "P"
CONDUIT SPLICE	—●—	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	═══	═══ "E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	▬	▭
RAILROAD CONTROL CABINET	⋈	⋈ "E"
TELEPHONE CONNECTION	T	T "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"	↰	↰ "E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"	↱	↱ "E"

VILLAGE OF THORNTON
LOCATION NO. 129

NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION VINCENNES ROAD & ARMORY (170TH STREET) DRIVE

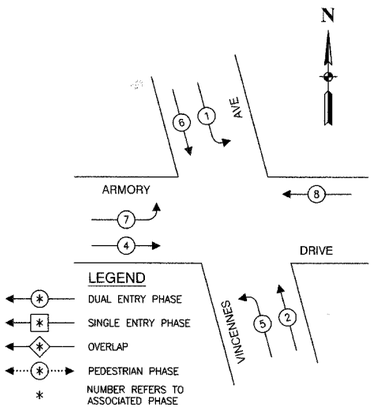
SCALE: VERT. HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

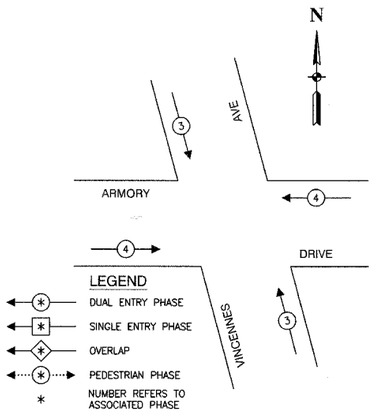
07248-98

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	271
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

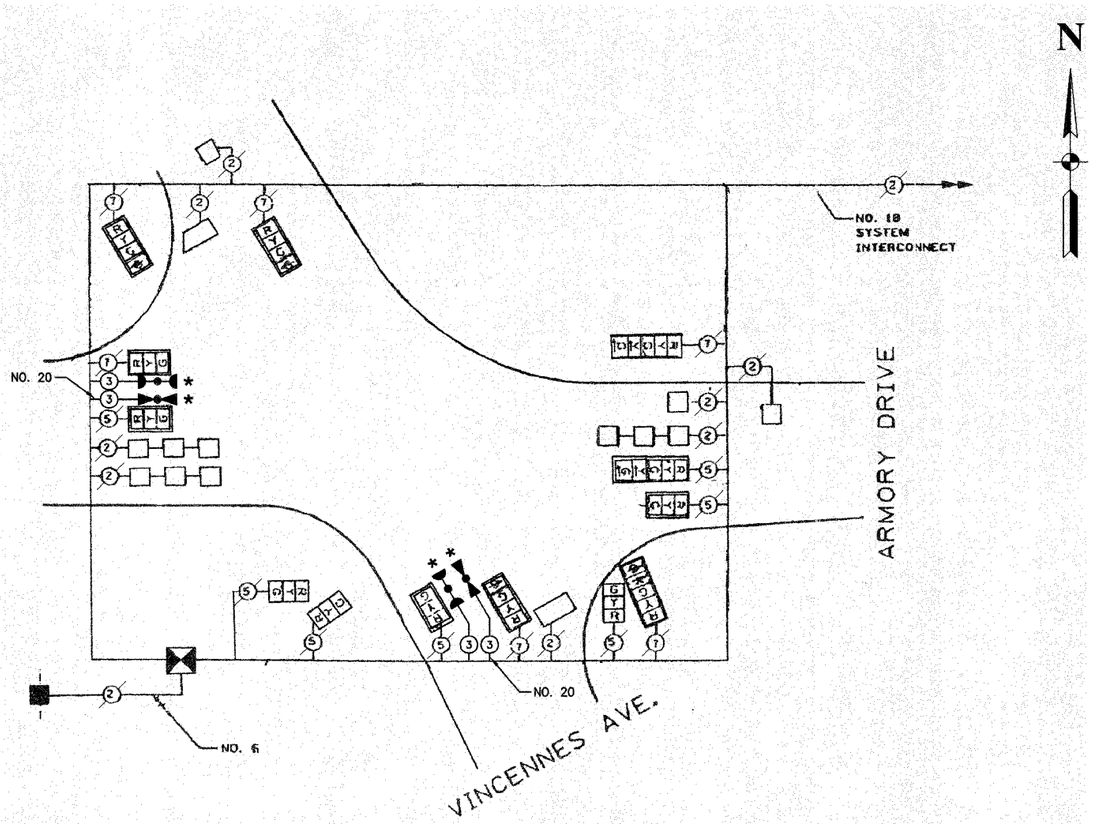


PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	343
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	343

NOTE

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

VILLAGE OF THORNTON
LOCATION NO. 129

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
★	ADDED EV PREEMPTION	01/02/06

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
VINCENNES ROAD & ARMORY (170TH STREET) DRIVE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17300 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-4700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

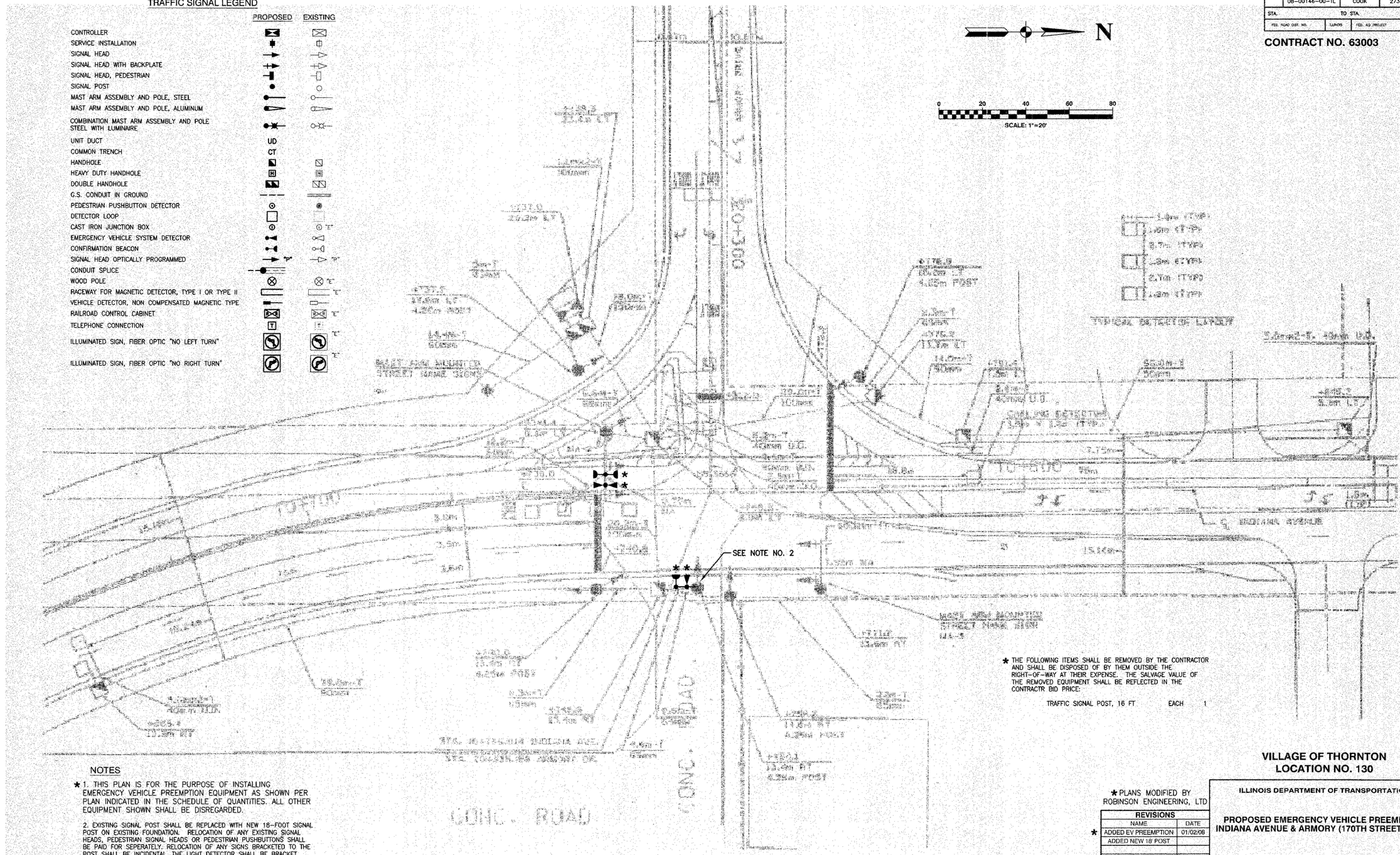
07248-06

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	272
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

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		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION	T	
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"



★ 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 CONTRACTR BID PRICE:

TRAFFIC SIGNAL POST, 16 FT EACH 1

NOTES

★ 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

2. EXISTING SIGNAL POST SHALL BE REPLACED WITH NEW 18-FOOT SIGNAL POST ON EXISTING FOUNDATION. RELOCATION OF ANY EXISTING SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS OR PEDESTRIAN PUSHBUTTONS SHALL BE PAID FOR SEPERATELY. RELOCATION OF ANY SIGNS BRACKETED TO THE POST SHALL BE INCIDENTAL. THE LIGHT DETECTOR SHALL BE BRACKET MOUNTED TO THE TOP OF THE NEW POST. THE SALVAGE VALUE OF THE EXISTING POST SHALL BE INCLUDED IN THE PRICE OF THE PAY ITEM. "TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT".

VILLAGE OF THORNTON
LOCATION NO. 130

★ PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS

	NAME	DATE
★	ADDED EV PREEMPTION	01/02/06
	ADDED NEW 18' POST	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION INDIANA AVENUE & ARMORY (170TH STREET) DRIVE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

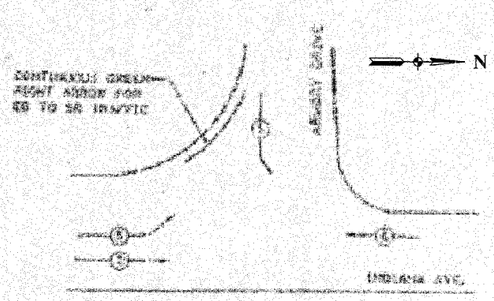
ROBINSON ENGINEERING, LTD.
11030 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-1000 FAX (708) 331-3628
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001125

07248-99

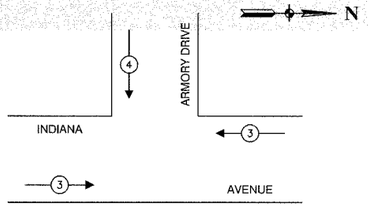
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK	273	273
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

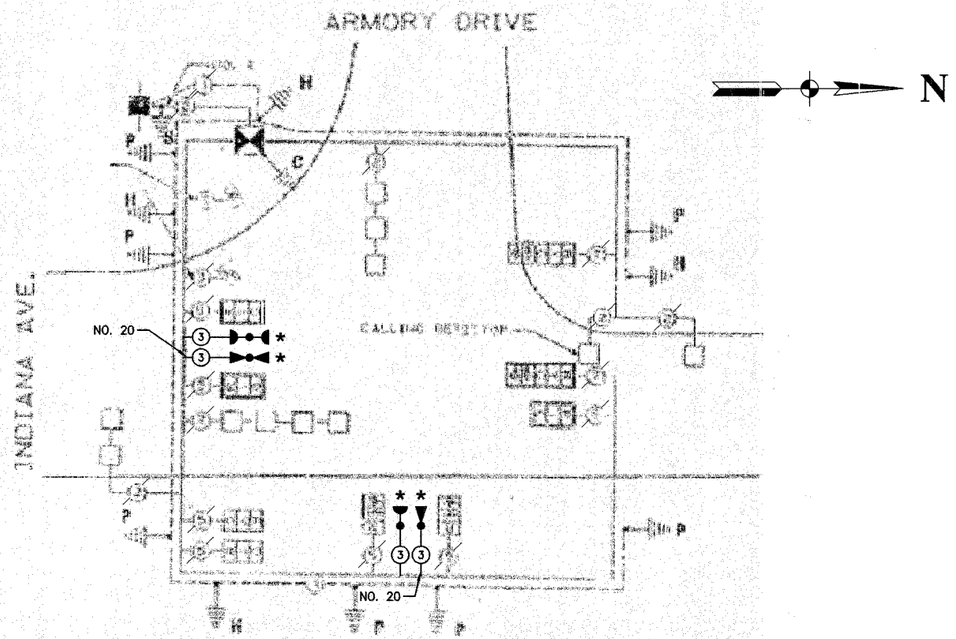


LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓



CABLE PLAN

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	348
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	1
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	15
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	348

NOTE

* 1. THIS PLAN IS FOR THE PURPOSE OF INSTALLING EMERGENCY VEHICLE PREEMPTION EQUIPMENT AS SHOWN PER PLAN INDICATED IN THE SCHEDULE OF QUANTITIES. ALL OTHER EQUIPMENT SHOWN SHALL BE DISREGARDED.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
"P"	"P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBOR OPTRIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

VILLAGE OF THORNTON
LOCATION NO. 130

* PLANS MODIFIED BY ROBINSON ENGINEERING, LTD

REVISIONS		
	NAME	DATE
*	ADDED EV PREEMPTION	01/02/08
	ADDED NEW 18' POST	

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED EMERGENCY VEHICLE PREEMPTION CABLE PLAN, PHASE DESIGNATION DIAGRAM & SCHEDULE OF QUANTITIES
INDIANA AVENUE & ARMORY (170TH STREET) DRIVE

SCALE: VERT.
HORIZ.
DRAWN BY
DATE
CHECKED BY

ROBINSON ENGINEERING, LTD.
17069 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3626
ILLINOIS DESIGN FIRM REGISTRATION NO.: 184001126

07249-99

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK		274

STA. TO STA.

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

CONTRACT NO. 63003

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT 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.

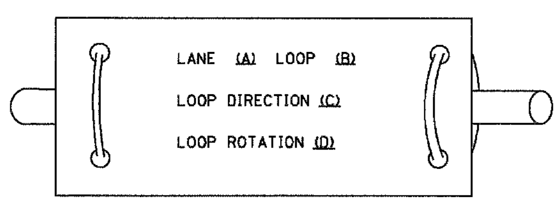
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

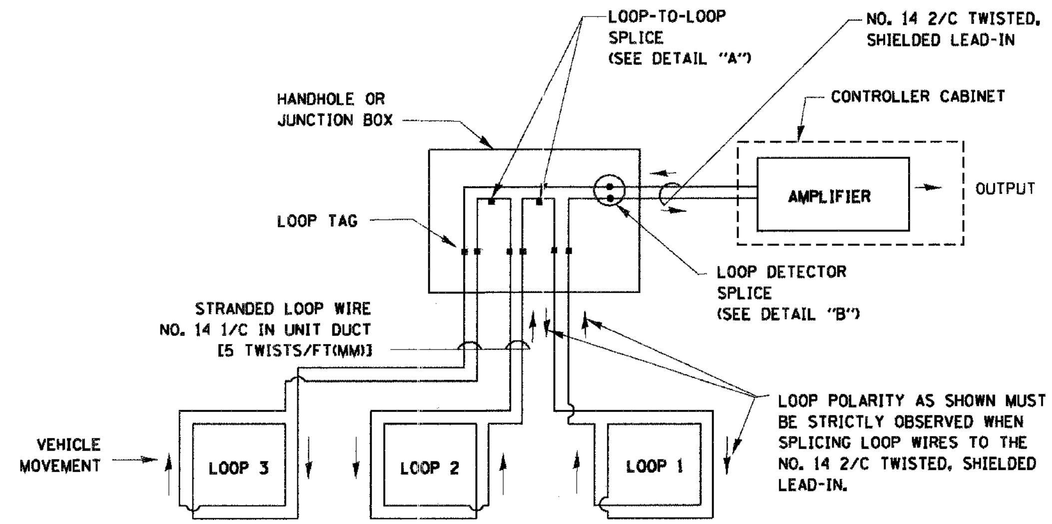


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

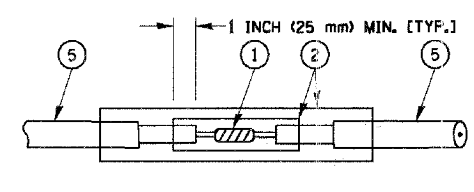
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

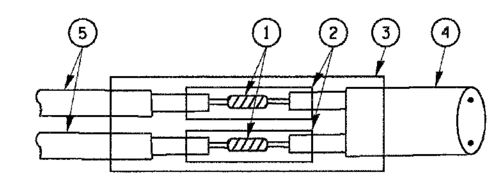


DETECTOR LOOP WIRING SCHEMATIC

- 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

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.

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: NONE

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

TS05

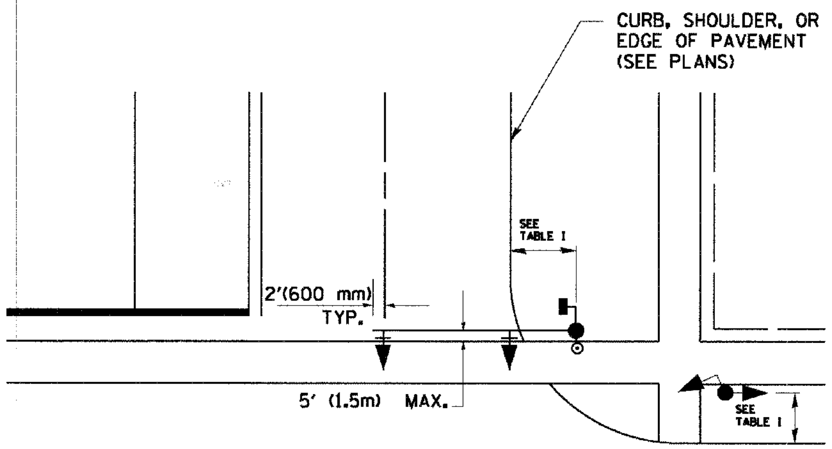
PLOT DATE = 3/7/2007
FILE NAME = K:\diststd\ts05.dgn
PLOT SCALE = 50.0000 ' / IN.
USER NAME = bauerdl

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK		275
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

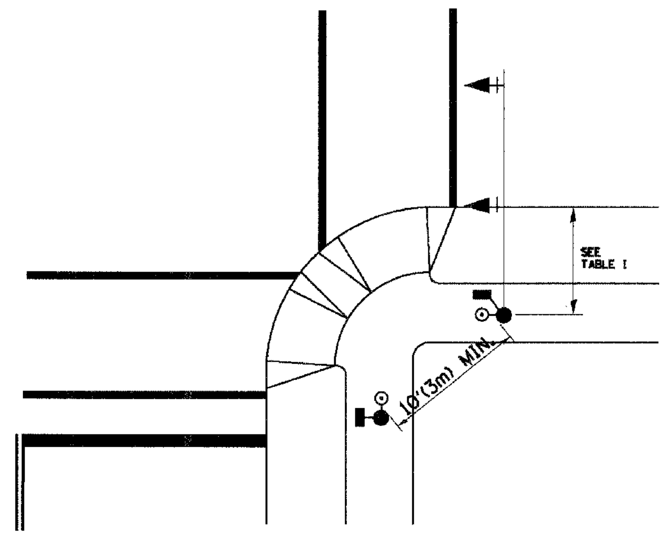
CONTRACT NO. 63003

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

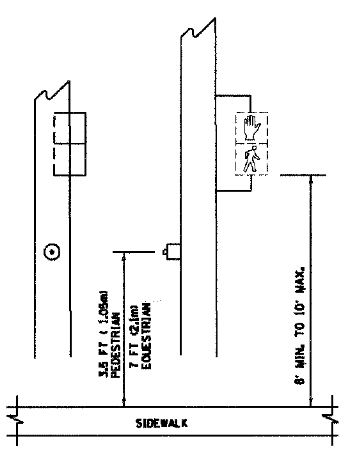
2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION



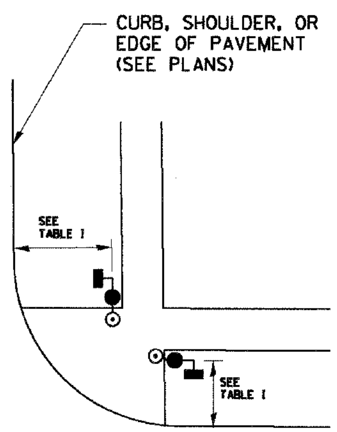


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

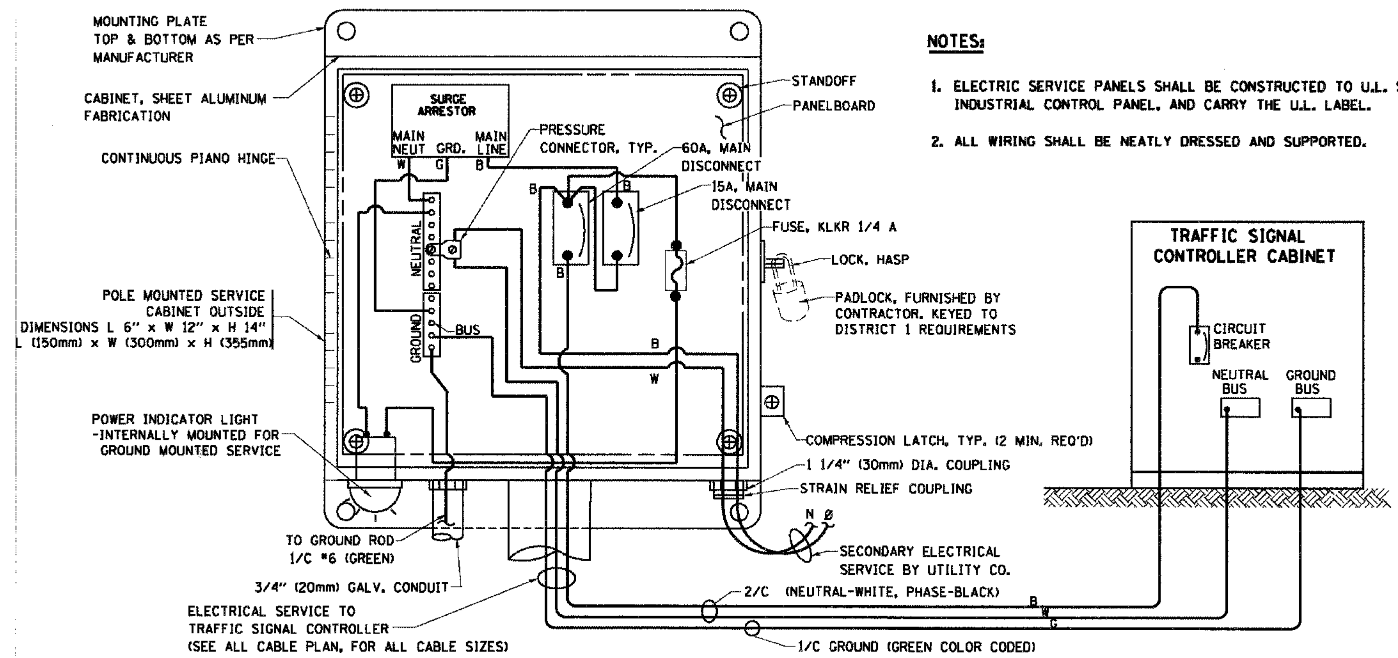
SCALE: NONE

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4
TS05

PLOT DATE = 3/7/2007
FILE NAME = K:\diststd\ts05.dgn
PLOT SCALE = 50.0000 ' / IN.
USER NAME = bauerdl

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00146-00-TL	COOK		76
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 63003



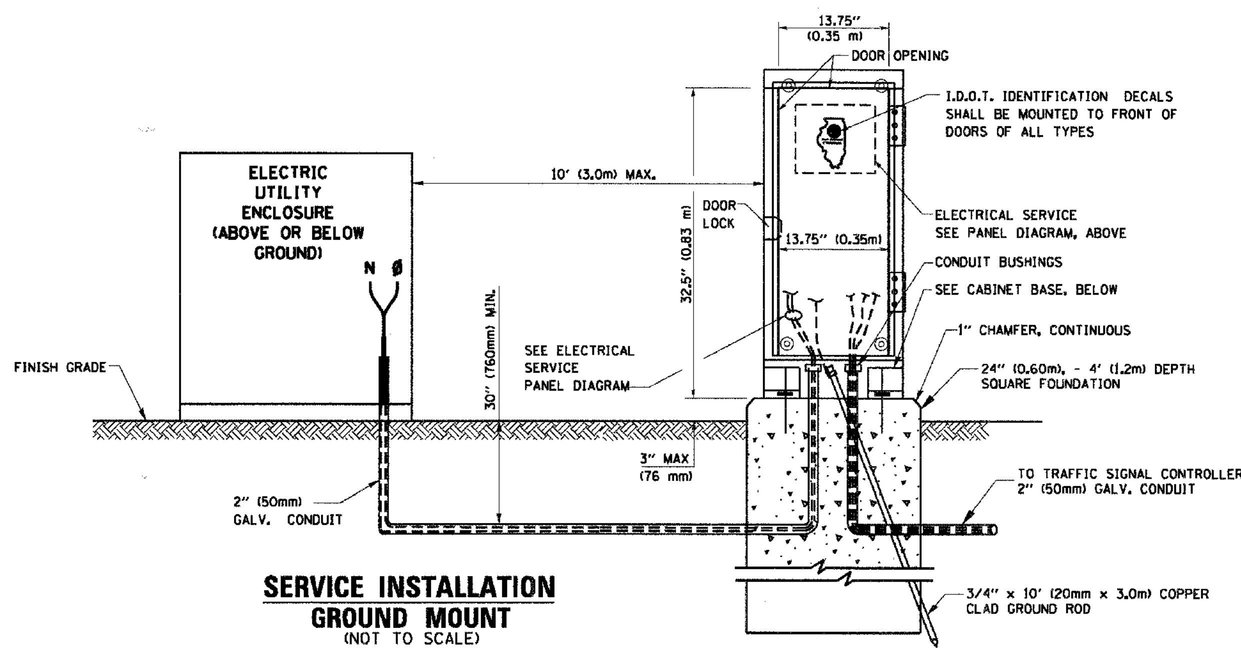
NOTES:

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)

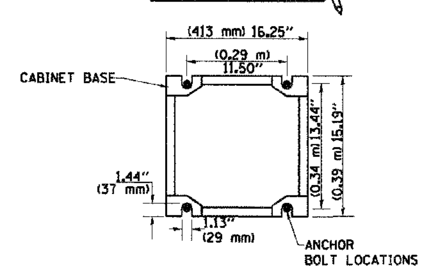
SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



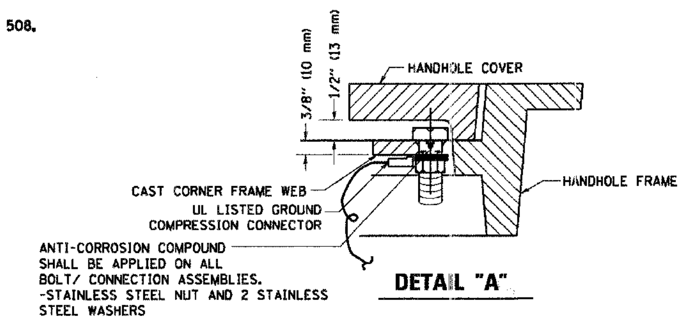
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

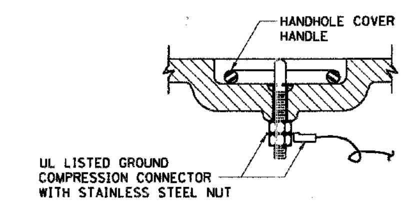


CABINET – BASE BOLT PATTERN

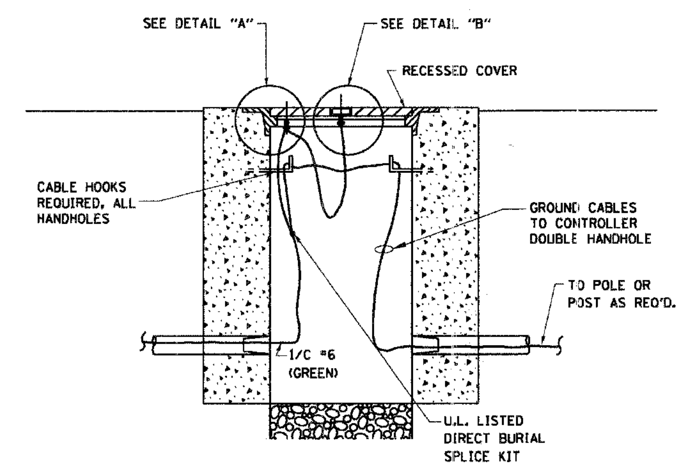
(NOT TO SCALE)



DETAIL "A"

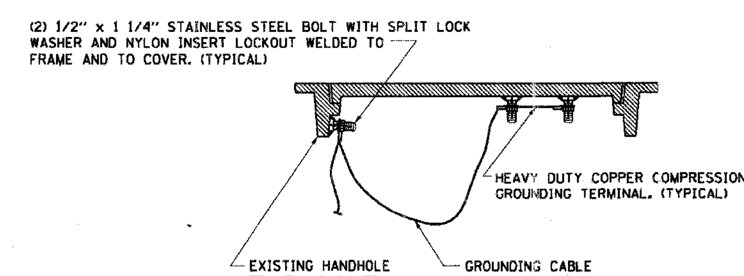


DETAIL "B"



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



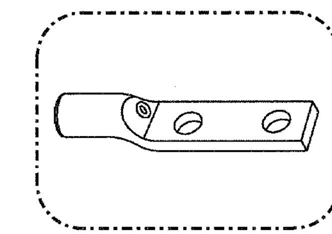
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

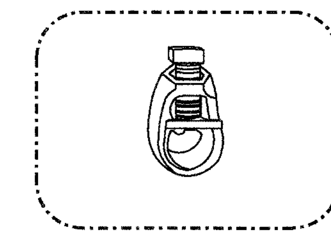
NOTES:

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.



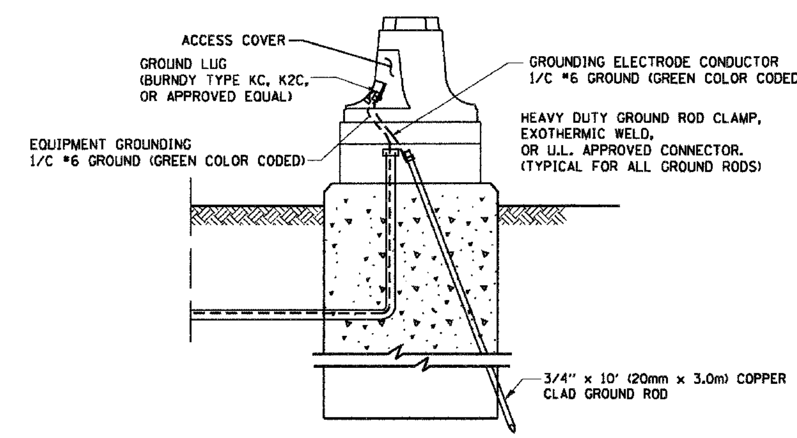
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

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.



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

REVISIONS	
NAME	DATE
CADD	5/30/00
CADD	3/15/01
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: NONE

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

TS05

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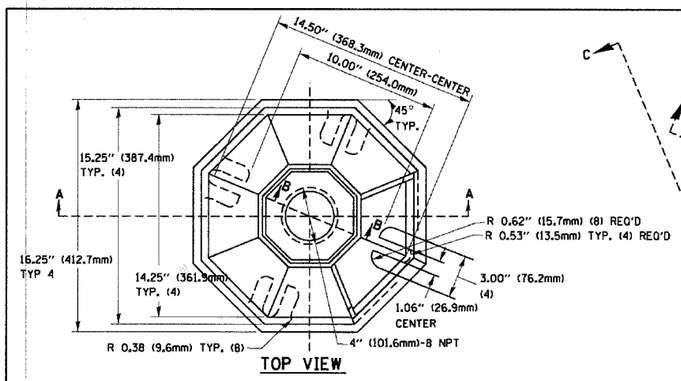
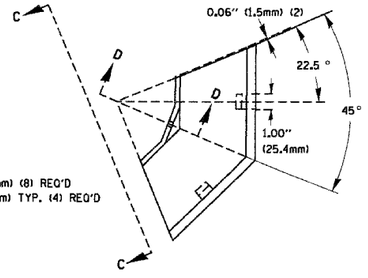
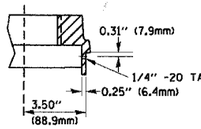
USER NAME = bauerdl

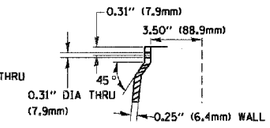


TOP VIEW

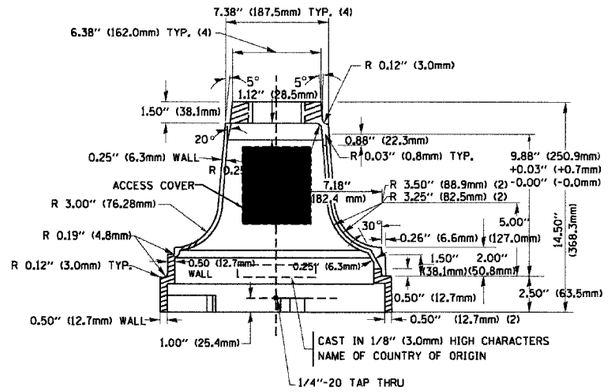




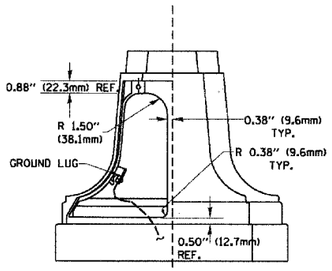
SECTION B-B



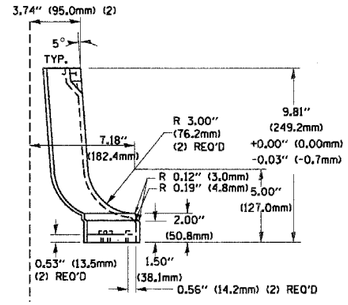
SECTION D-D



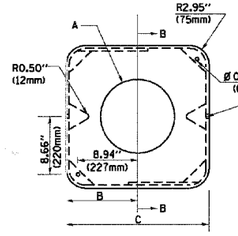
SECTION A-A

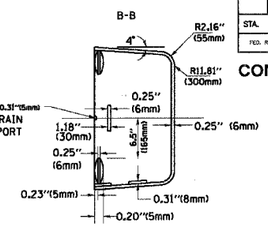


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A





F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	08-00146-00-TL	COOK		277
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

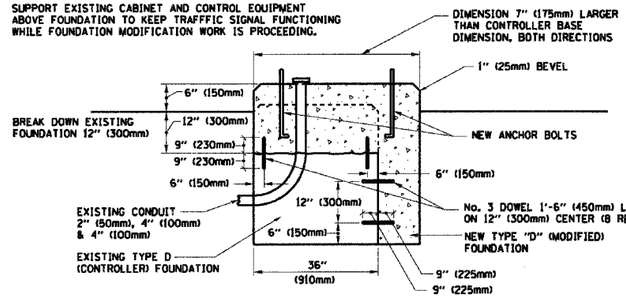
CONTRACT NO. 63003

MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	Ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

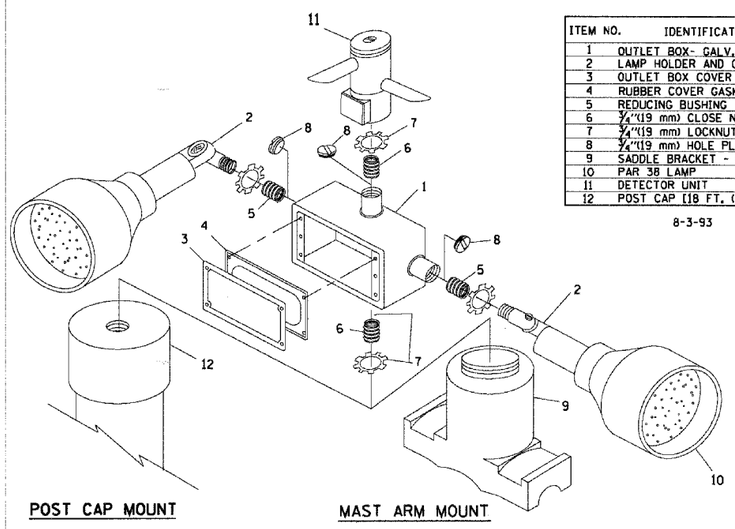
SHROUD DETAIL

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



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



POST CAP MOUNT

MAST ARM MOUNT

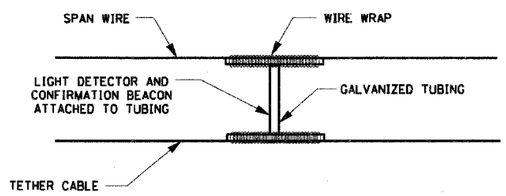
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

NOTES:

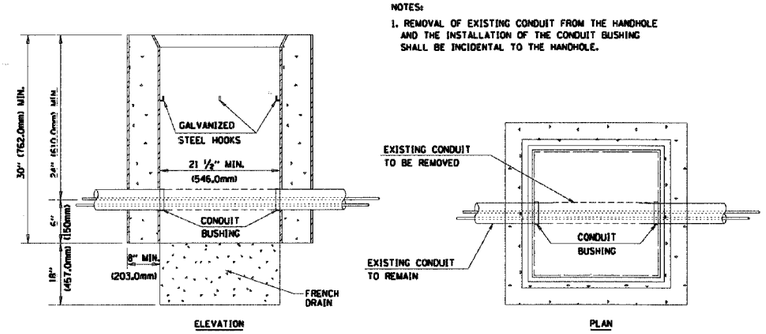
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. 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.



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 4 OF 4

TS05

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