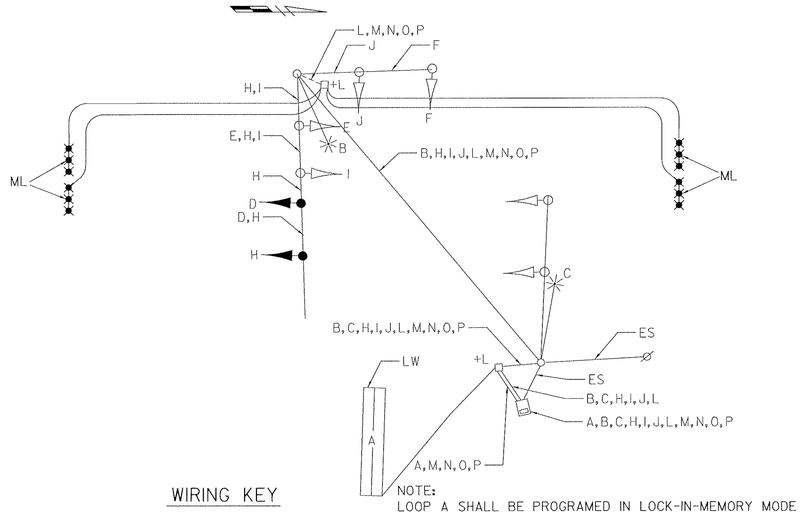
PHASE CHART

	1	2	3	4	5	6	
	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	
PHASE 2 + 6	G	G	G	G	R	R	←
2 + 6 CHANGE	Y	Y	Y	Y	R	R	→
PHASE 4	R	R	R	R	G	G	↑
4 CHANGE	R	R	R	R	Y	Y	↑
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	←→ ↑

WIRING DIAGRAM



NOTE:
LOOP A SHALL BE PROGRAMED IN LOCK-IN-MEMORY MODE

WIRING KEY

A } 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)

B,C } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)

D,E,F } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

H,I,J } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

M,N,O,P } MICRO-LOOP PROBE SETS

L } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

LW - LOOP WIRE (NO. 14 A.W.G.)

ES - EXISTING SERVICE

+ - ¾IN. x 10 FT. GROUND ROD

ML - MICRO-LOOP PROBE SETS

CONSTRUCTION DETAILS

A. RELOCATE SIGNAL HEADS AND SIGNS AS SHOWN (SIGNAL HEADS 3,4) SHOWN AS PROPOSED, AND INSTALL SIGNAL HEADS 1,2 WITH SIGN AS DIRECTED BY THE ENGINEER.

B. REMOVE HANDHOLE.

C. CAP AND ABANDON CONDUIT.

D. INSTALL 24" WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE (STOPLINE)

E. FURNISH AND INSTALL 6' X 30' LOOP DETECTOR, ENCASED IN ¼" FLEXIBLE TUBING (3-6-3 TURNS) QUADRUPOLE TYPE.

F. FURNISH AND INSTALL 1" LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).

G. FURNISH AND INSTALL 27' STEEL POLE (THE MAST ARM, SIGNALS AND SIGNS TO BE INSTALLED LATER).

H. FURNISH AND INSTALL HANDHOLE.

I. FURNISH AND INSTALL 3" SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

J. ABANDON LOOP DETECTOR.

K. FURNISH AND INSTALL 4" SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

L. CAP END OF CONDUIT.

M. FURNISH AND INSTALL ⅜" STEEL SPAN WIRE AND ELECTRICAL CABLES AS DIRECTED BY THE ENGINEER.

N. DISCONNECT SIGNAL FOR STAGE 3.

O. FURNISH AND INSTALL 1" GALVANIZED ELECTRICAL CONDUIT FOR DETECTOR SLEEVE.

P. FIRNISH AND INSTALL MICRO-LOOP PROBE SETS.

Q. DISCONNECT EXISTING LOOP DETECTOR AND SPLICE NEW LOOP DETECTOR TO 2 CONDUCTOR CABLE.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

SPEC. SECTION	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
806	960022	2 EACH	12 IN., 1-WAY, 3-SECTION (R.Y.G.) SIGNAL HEAD MAST ARM MOUNT
813	973023	7 S.F.	SHEET ALUMINUM SIGNS
			- 1 EACH R3-3 SIGN (30 IN. x 30 IN.) - "LANE USE CONTROL - NO TURNS" MAST ARM MOUNT

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

SPEC. SECTION	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
104	120500	L.S.	MAINTENANCE OF TRAFFIC
205	203030	2 C.Y.	TEST PIT EXCAVATION
801	801004	5 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
804	837001	1 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER x 10 FT. LENGTH
805	800000	30 L.F.	FURNISH AND INSTALL 4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805011	25 L.F.	FURNISH AND INSTALL 1 IN. GALVANIZED ELECTRICAL CONDUIT FOR DETECTOR SLEEVE
810	861107	120 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
810	861108	750 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
810	862101	520 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
811	811001	5 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
814	860265	2 EACH	RELOCATE EXISTING SIGNAL HEAD
815	862102	1710 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
———	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
———	800000	7 S.F.	INSTALL OVERHEAD SIGN
———	869102	170 L.F.	FURNISH AND INSTALL ⅜" SPAN WIRE
805	800000	350 L.F.	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.
———	800000	2 EACH	INSTALL SIGNAL HEADS - ANY TYPE
810	860265	1 EACH	FURNISH AND INSTALL LOOP DETECTOR SPICE TO EXISTING 2 CONDUCTOR ALUMINUM SHIELDED CABLE.
———	800000	10 S.F.	RELOCATE EXISTING SIGN
810	802501	250 L.F.	FURNISH AND INSTALL (NO. 6 AWG) STRANDED BARE COPPER WIRE.
———	114245	90 L.F.	FURNISH AND INSTALL 24" WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE (STOP LINE).
805	805160	16 L.F.	FURNISH AND INSTALL 1" LIQUID-TIGHT FLEXABLE NON-MATALIC ELECTRICAL CONDUIT FOR DETECTOR WIRE SLEEVE.
810	800000	4 EACH	FURNISH AND INSTALL MICRO-LOOP PROPE SET WITH 1000' LEAD-IN.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

MR. CHARLIE WATKINS
DISTRICT ENGINEER
PHONE: (301) 513-7311

MR. MAJID SHAKIB
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7358

MR. JOE GECKLE
UTILITY ENGINEER
PHONE: (301) 513-7350

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

THE POWER COMPANY REPRESENTATIVE IS:
BALTIMORE GAS AND ELECTRIC COMPANY
MR. JOSEPH G. BUNCH
SUPERVISOR
INDUSTRIAL/COMMERCIAL SERVICES
NEW BUSINESS CONSTRUCTION
PHONE: (410) 859-9030

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE TRAFFIC SIGNAL AT MD 197 AND B/W PARKWAY SOUTHBOUND RAMP A IN PRINCE GEORGE'S COUNTY. MD 197 IS ASSUMED TO RUN IN A NORTH SOUTH DIRECTION.

INTERSECTION OPERATION

1. NORMAL OPERATION

DURING TRAFFIC CONTROL STAGE 3 THE INTERSECTION WILL OPERATE IN A NEMA (3) THREE-PHASE FULL-TRAFFIC-ACTUATED MODE WITH SOUTHBOUND AND NORTHBOUND MARYLAND 197 APPROACHES OPERATING CONCURRENTLY. THE RAMP FROM B/W PARKWAY APPROACH WILL OPERATE ALONE.

MAINTENANCE OF TRAFFIC

THE TRAFFIC CONTROL NUMBERS SHALL BE REFERENCED FOR THE PROJECT

STANDARD NO. MD-105.00
STANDARD NO. MD-105.01
STANDARD NO. MD-105.02
STANDARD NO. MD-105.101 (FLAGGING OPERATION)
STANDARD NO. MD-105.103 (INTERSECTION FLAGGING OPERATION)
STANDARD NO. MD-105.105 (SHOULDER WORK)
STANDARD NO. MD-105.107 (LANE SHIFT)
STANDARD NO. MD-105.109 (LANE SHIFT)
NOTE: STANDARDS TO BE MODIFIED BY REPLACING W21-5 SIGN WITH A W29-1 SIGN (ROAD WORK AHEAD).

ADDENDUM

STAGE 3
TEMPORARY TRAFFIC SIGNALS

SS-30

RUMMEL, KLEPPER & KAHL, LLP
CONSULTING ENGINEERS
81 MOSHER STREET
BALTIMORE, MARYLAND 21217
TEL: (410) 728-2900 FAX: (410) 383-3270

REVISIONS:

(E) February, 1999 Reconstruct Due To New Geometrics. SHA No.: N/A

APPROVALS:

CHIEF SIGNAL DESIGN SECTION
ASST. DISTRICT ENGINEER TRAFFIC
CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
DIRECTOR OFFICE OF TRAFFIC & SAFETY

ORIGINAL ON FILE

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION LOG MILE # 1601971 2.28

DRAWN BY: SMH
DES. BY: SMH/DLA
CHK. BY: BJH

MD 197 AT B/W PARKWAY/RAMP A
SIGNAL PLAN
COUNTY: PRINCE GEORGE'S

DATE: FEBRUARY, 1999 F.A.P. NO. SEE TITLE SHEET
SCALE: 1"=20' S.H.A. NO. N/A

TS/STD. NO.: 1615E-X3A-GI1

SHEET NO. 128A OF 367

02/22/99 08:3:54