

**PROJECT DESCRIPTION**

**GENERAL**

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AND STREET LIGHTING AT THE INTERSECTION OF MD 152 AND OAKMONT ROAD IN HARFORD COUNTY. MD 152 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**INTERSECTION OPERATION**

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 152 APPROACHES OPERATING CONCURRENTLY AND THE OAKMONT ROAD APPROACH OPERATING ALONE.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING WILL BE PROVIDED FOR SOUTHBOUND MD 152.

**CONTROLLER REQUIREMENTS**

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

**PHONE DROP**

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 487-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

**MAINTENANCE OF TRAFFIC**

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

- STANDARD NO. MD-104.00 - 104.00-30
- STANDARD NO. MD-104.31-01 (FLAGGING OPERATION)
- STANDARD NO. MD-104.33-01 (SHOULDER WORK)
- STANDARD NO. MD-104.35-01 (LANE SHIFT)
- STANDARD NO. MD-104.32-01 (INTERSECTION FLAGGING OPERATION)

**PROJECT CONTACTS**

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. RANDALL SCOTT  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (410) 321-3514

MR. JOE McMAHON  
DISTRICT UTILITIES ENGINEER  
PHONE: (410) 321-3456

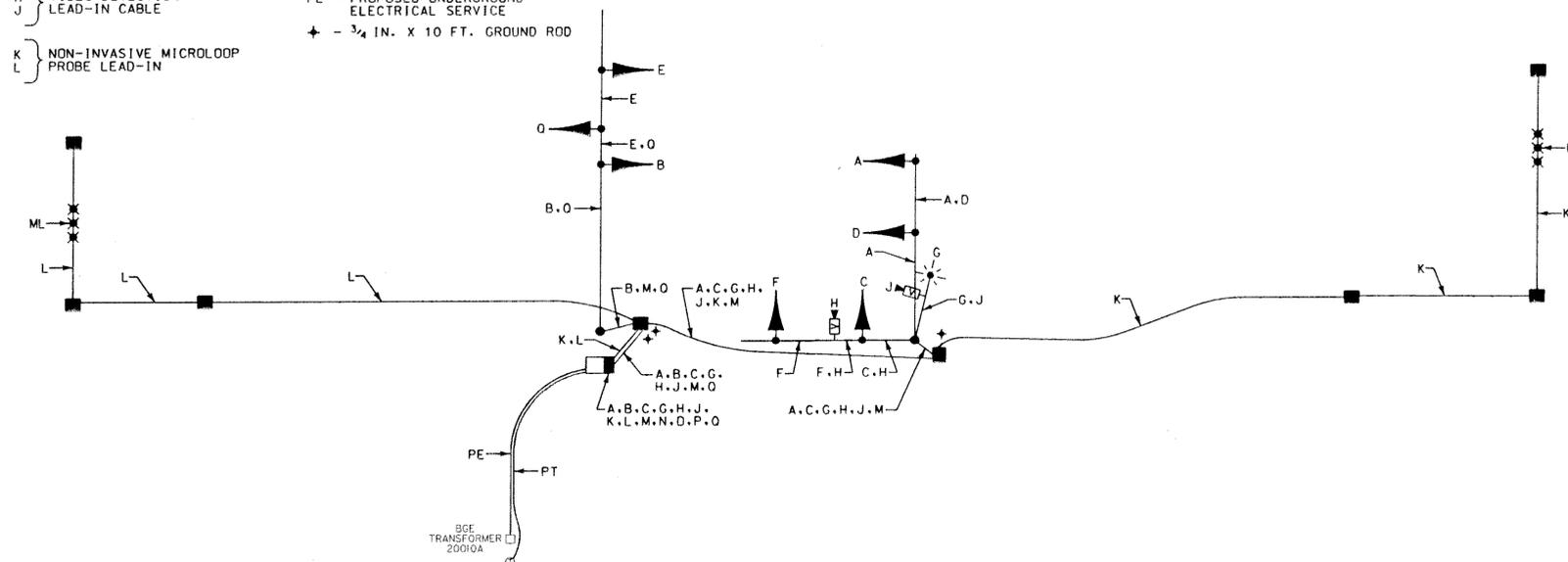
MR. DAVE RAMSEY  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (410) 321-3468

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

**WIRING DIAGRAM**

**WIRING KEY**

- A } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- C } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
- D } VIDEO DETECTION LEAD-IN CABLE
- E } NON-INVASIVE MICROLOOP PROBE LEAD-IN
- M } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- N } 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- O } ML - NON-INVASIVE MICROLOOP PROBE SET
- P } PT - PROPOSED UNDERGROUND TELEPHONE SERVICE
- PE } PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE
- + } 3/4 IN. X 10 FT. GROUND ROD



**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

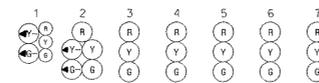
ITEM NO.	QUANTITY	DESCRIPTION
9002	1 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9085	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9089	78 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 1 EACH R10-12 SIGN (36 IN. x 42 IN.) - SPAN MOUNT - 2 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT - 1 EACH M95-1 SIGN (78 x 24 IN.) DUAL FACED - MAST ARM MOUNT - 2 EACH W3-3 SIGN (36 IN. x 36 IN.) WITH "NEW" PANEL (30 IN. X 30 IN.) AND FLAG - GROUND MOUNT
9000	1 EACH	27 FT. STEEL POLE WITH TWIN 50 FT./60 FT. MAST ARMS AND ANCHOR BOLTS
9000	1 EACH	27 FT. STEEL POLE WITH SINGLE 60 FT. MAST ARM AND ANCHOR BOLTS

**EQUIPMENT LIST "C"**

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED LIGHTING MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

**PHASE CHART**



	1	2	3	4	5	6	7
PHASE 1 + 6	G	G	C	R	R	R	R
1 + 6 CHANGE	G	G	G	R	R	R	R
PHASE 2 + 6	G	G	G	G	R	R	R
2 + 6 CHANGE	Y	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	

**EQUIPMENT LIST "B"**

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2002	3 C.Y.	TEST PIT EXCAVATION
5001	2 EACH	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW
5002	6 EACH	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LETTER
5003	6 EACH	REMOVE EXISTING PAVEMENT MARKING LETTER OR ARROW
5005	65 L.F.	24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5006	350 L.F.	5 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5008	510 L.F.	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS - ANY WIDTH
8001	2 EACH	250 FT. VIDEO CABLE TO CONTROLLER
8006	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8011	22 EACH	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8013	1 EACH	FURNISH AND INSTALL 15 FOOT LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
8014	1 EACH	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8019	3 EACH	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8020	1 EACH	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (120/240 V. 1 PHASE 3 WIRE SYSTEM)
8039	1 EACH	INSTALL STEEL POLE AND SINGLE MAST ARM
8040	1 EACH	INSTALL STEEL POLE AND TWIN MAST ARM
8044	2 EACH	FURNISH AND INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 500 FOOT LEAD-IN CABLE
8047	1 EACH	REMOVE AND DISPOSE FOUNDATION 12 IN. BELOW GRADE
8048	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT AS PER ASSIGNMENT
8049	2 EACH	VIDEO DETECTION CAMERA
8050	1 EACH	VIDEO INTERFACE EQUIPMENT
8053	200 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8057	12 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8059	38 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 IN. x 6 IN.
8060	100 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8063	80 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8064	120 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8070	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 A.W.G - THHN/THWN
8072	8 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8074	32 S.F.	INSTALL GROUND MOUNTED SIGN
8075	46 S.F.	INSTALL OVERHEAD SIGN
8080	3 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
8084	75 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G)
8085	700 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G)
8086	175 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G) TYPE TC
8091	775 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8093	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
NEG.	10 S.F.	RELOCATE EXISTING GROUND MOUNTED SIGNS AND SUPPORT

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
Office of Traffic & Safety  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
GENERAL INFORMATION SHEET  
MD 152 (MOUNTAIN RD) AND OAKMONT ROAD

**WR&A**  
Whitman, Reardon  
and Associates, LLP  
801 South Caroline Street  
Baltimore, Maryland 21231  
(410) 235-3450

DRAWN BY: S. BLOSS	F.A.P. NO.:	TS NO.:
CHECKED BY: N. LEARY	S.H.A. NO.:	TS-4163
SCALE: NONE	COUNTY: HARFORD	T.I.M.S. NO.:
DATE: 2/4/02	LOG MILE: 12015201.92	E711
		SHEET NO. 3 OF 3