PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AND INTERSECTION LIGHTING AT THE INTERSECTION OF BILLINGSLEY ROAD AND PINEY CHURCH ROAD IN CHARLES COUNTY. BILLINGSLEY ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE BILLINGSLEY ROAD APPROACHES OPERATING CONCURRENTLY AND THE ST. CHARLES PARKWAY APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR ALL FOUR APPROACHES.

APS NOTES

WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

1. BILLINGSLEY ROAD

   WAIT:"WAIT TO CROSS BILLINGSLEY AT PINEY CHURCH"
   WALK: THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK

2. PINEY CHURCH ROAD

   WAIT:"WAIT TO CROSS PINEY CHURCH AT BILLINGSLEY"
   WALK:THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK

*MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS * 10'
**MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE:MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

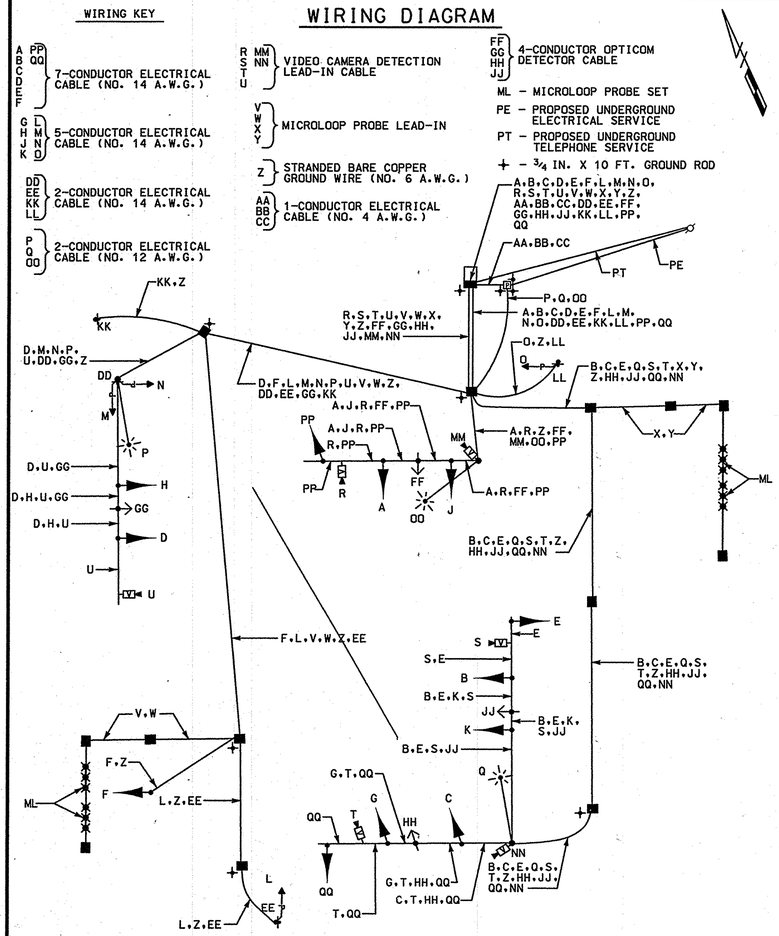
CONTROLLER REQUIREMENTS

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) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

WIRING DIAGRAM



EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

QUANTITY	DESCRIPTION
1 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
1 EACH	VIDEO INTERFACE EQUIPMENT: 4-8 CAMERAS
293 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
- 4 EACH	D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
- 6 EACH	W3-3 SIGN (48 IN. x 48 IN.) WITH "NEW" PANEL (30 IN. X 30 IN.) - GROUND MOUNT
- 4 EACH	D-3(2) "PINEY CHURCH RD" SIGN (96 IN. x 16 IN.) - GROUND MOUNT
- 2 EACH	D-3(2) "BILLINGSLEY RD" SIGN (96 IN. x 16 IN.) - GROUND MOUNT
- 6 EACH	R3-5 SIGN (30"x36") - MAST ARM MOUNT
- 4 EACH	R10-3(1) (9"x15") - MAST ARM MOUNT

EQUIPMENT LIST "C"

NO EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

MAINTENANCE OF TRAFFIC

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

STANDARD NO. MD-104.04-01 (SHOULDER WORK)

STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)

STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)

PROJECT CONTACTS

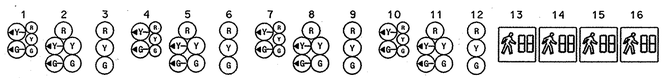
THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. KIM TRAN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 841-1013

MR. JOE HORTY
DISTRICT UTILITY ENGINEER
PHONE: (410) 841-1039

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

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 + 5	R G	R G	R	R G	R G	R	R	R	R	R	R	R	DW	DW	DW	DW
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6															
PHASE 1 + 6	G G	G G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 + 6 CHANGE	G Y	G Y	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 + 5	R	R	R	G G	G G	G	R	R	R	R	R	R	WK	WK	DW	DW
2 + 5 CHANGE	R	R	R	G Y	G Y	G	R	R	R	R	R	R	WK	WK	DW	DW
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 3 + 7	R	R	R	R	R	R	R G	R G	R	R G	R G	R	DW	DW	DW	DW
3 + 7 CHANGE	PHASE 3 + 7 MAY CHANGE TO PHASE 3 + 8, PHASE 4 + 7 OR PHASE 4 + 8															
PHASE 3 + 8	R	R	R	R	R	R	G G	G G	G	R	R	R	DW	DW	DW	DW
3 + 8 CHANGE	R	R	R	R	R	R	G Y	G Y	G	R	R	R	DW	DW	DW	DW
PHASE 4 + 7	R	R	R	R	R	R	R	R	R	G G	G G	G	DW	DW	DW	DW
4 + 7 CHANGE	R	R	R	R	R	R	R	R	R	G Y	G Y	G	DW	DW	DW	DW
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 + 8 ALT	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	W	W
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	FL/DW	FL/DW
4 + 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
EMERGENCY PRE EMPTION #1	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
EMERGENCY PRE EMPTION #2	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

EQUIPMENT LIST "B"

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

QUANTITY	DESCRIPTION
LUMP SUM	MAINTENANCE OF TRAFFIC
6 C.Y.	TEST PIT EXCAVATION
220 L.F.	24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
580 L.F.	12 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
12 EACH	FURNISH AND INSTALL 8 IN. LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
40 EACH	FURNISH AND INSTALL 12 IN. LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
3 EACH	FURNISH AND INSTALL 15 FOOT LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
3 EACH	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
4 EACH	FURNISH AND INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 1,000 FOOT LEAD-IN CABLE
1 EACH	FURNISH AND INSTALL MAST ARM POLE AND 50 FT. MAST ARM
1 EACH	FURNISH AND INSTALL MAST ARM POLE AND 70 FT. MAST ARM
1 EACH	FURNISH AND INSTALL MAST ARM POLE AND 50/70 FT. TWIN MAST ARM
1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
135 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
1155 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
160 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
355 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
20 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
260 L.F.	FURNISH AND INSTALL STEEL U-CHANNEL SIGN SUPPORTS
13 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
200 S.F.	INSTALL GROUND MOUNTED SIGN
93 S.F.	INSTALL OVERHEAD SIGN
9 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
700 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
75 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 A.W.G - THHN/THWN
710 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G)
2400 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G)
625 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G)
800 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G) TYPE TC
925 L.F.	FURNISH AND INSTALL 4-CONDUCTOR OPTICOM CABLE
1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
6 EACH	VIDEO DETECTION CAMERA
3 EACH	CONTROL CABLE, 250 FT. VIDEO DETECTION CAMERA TO CONTROLLER
3 EACH	CONTROL CABLE 500 FT. VIDEO DETECTION CAMERA TO CONTROLLER
1 EACH	DISCRIMINATOR MODULE, 4 CHANNEL, NO. 764
4 EACH	FURNISH AND INSTALL 3M OPTICOM #721 DETECTOR EYE
3 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
4 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
105 S.F.	DETECTABLE WARNING SURFACES
1 EACH	METERED SERVICE PEDESTAL EMBEDDED
1 EACH	2 WIRE CENTRAL CONTROL UNIT
4 EACH	AUDIBLE/ TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
1050 S.F.	4 INCH CONCRETE SIDEWALK
75 L.F.	DEPRESSED CURB AND GUTTER
1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE

SHA NO:BW635M84
BILLINGSLEY RD@ PINEY CHURCH RD
TRAF. CTL. SIGN.

WR&A
Whitman, Requardt and Associates, LLP
Engineers, Architects and Planners
801 South Caroline Street
Baltimore, Maryland 21231
410-235-3450

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
BILLINGSLEY ROAD AT PINEY CHURCH ROAD

DRAWN BY: B. DONOWAY	F.A.P. NO.		TS NO. 4677	SHEET NO.
CHECKED BY: N. LEARY	S.H.A. NO.			
SCALE: 1" = 20'	COUNTY:	CHARLES	T.I.M.S. NO. J043	2 OF 2
DATE: 9.3.08	LOG MILE:			

$DGNNAME$