

I. GENERAL

PROJECT DESCRIPTION

This project involves the modification of an existing traffic signal at the intersection of MD 704 (Martin Luther King Jr. Hwy) at Sheriff Road in Prince Georges County. Optically Programmable Signal heads will replace the existing heads on both approaches of Sheriff Road. New ADA ramps, Audible Pedestrian Signals (APS), and Countdown Pedestrian Signals (CPS) will be installed crossing the north, south and west legs of the intersection. An exclusive/permissive signal head shall be installed for the proposed westbound right turn overlap for westbound MD 704. MD 704 is assumed to run in an east-west direction.

11. INTERSECTION OPERATION

1. The intersection will operate in a NEMA 6-Phase, full-actuated mode with exclusive-permissive left-turn phasing for the MD 704 approaches and split phasing for the side street. An exclusive permissive right-turn overlap phase will be added to westbound MD 704.

2. The existing full-traffic-actuated, eight phase controller housed in a NEMA 6 base mounted cabinet shall be utilized at this location. SHA to install video detection interface equipment.

GENERAL NOTES

- All pavement markings shall be installed in accordance with MD MUTCD standards.
- The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly labeling each cable.
- All traffic signal foundations shall be installed at the final sidewalk or curb grade for closed sections, highest roadway profile grade for open sections, to meet clearances as specified in the appropriate 800 series Standard Plates. The contractor shall verify ultimate grades prior to the installation of all signal equipment.
- Pushbuttons are to be located so that they can be activated by a person in a wheelchair reaching less than 18" from a 60"x60" level landing area with a cross slope of less than or equal to 2%.
- Location of Accessible Pedestrian Signal pushbuttons must meet location requirements of MD MUTCD section 4E.09 and figure 4E.2, and the NCHRP publication "Accessible Pedestrian Signals: Guide to Best Practice". If not met, the contractor is to stop work on pushbutton locations until a design waiver is obtained, approved by the director of the Office of Traffic and Safety.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- The contractor shall maintain the continuous operation of all interconnect, vehicular and pedestrian detectors, and lighting devices. If any device is damaged by the contractor, it shall be repaired within 72 hours by the contractor at no cost to the Administration after notification by the Engineer.
- All unused signal cable shall be removed from conduit, hand holes and cabinet after new signal heads have been energized.
- APS will function as follows:  
To cross Martin Luther King Jr. Hwy  
A. When Pedestrian locates and presses the pushbutton for an extended time, the message will be "Wait to cross Martin Luther King Jr. at Sheriff. Wait".  
B. When Walk phase begins, the message will be a rapid tick which will last for the duration of the Walk phase.  
To cross Sheriff Road  
A. When Pedestrian locates and presses the pushbutton for an extended time, the message will be "Wait to cross Sheriff at Martin Luther King Jr. Wait".  
B. When Walk phase begins, the message will be a rapid tick which will last for the duration of the Walk phase.
- Pushbutton arrows are to be parallel to the crossing for which they are intended.
- The 10' separation between pushbuttons is to be measured from face of pushbutton to face of pushbutton, not center of pole to center of pole. Pedestrian poles shall be installed so as to maintain a minimum 5' wide clear pedestrian pathway.

CONTACTS

DISTRICT

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ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
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OFFICE OF TRAFFIC AND SAFETY

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410-787-7650

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MR. MIKE STOCKER  
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)  
410-787-7668

EQUIPMENT LIST

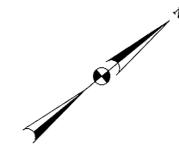
A. EQUIPMENT TO BE FURNISHED BY THE ADMINISTRATION

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9124	VIDEO DETECTION INTERFACE EQUIPMENT: 1-8 CAMERAS	EA	1
9570	SHEET ALUMINIUM GROUND MOUNTED SIGN CONSISTING OF:	SF	29, 25
	W11-2 (36"x36")	EA	2
	W16-7pR (30"x18")	EA	1
	W16-9p (30"x18")	EA	1
	W16-7pL (30"x18")	EA	1
9571	SHEET ALUMINIUM MAST ARM / POLE MOUNTED SIGN CONSISTING OF:	SF	20
	R10-11b (30"x30")	EA	2
	R3-5(R) (30"x36")	EA	1

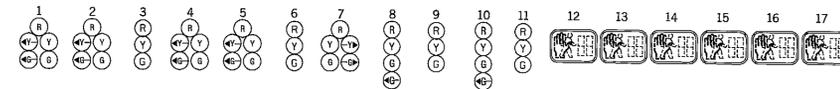
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	1
2001	CLASS 2 EXCAVATION	CY	3
2002	TEST PIT EXCAVATION	LF	55
5002	5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS	LF	450
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS	LF	725
5004	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	225
5005	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	550
6001	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	SF	1600
6002	5 INCH CONCRETE SIDEWALK	SF	170
6003	DETECTABLE WARNING SURFACE FOR CURB RAMPS	EA	5
8001	12 INCH LED SIGNAL HEAD SECTION	EA	1
8002	2-WIRE CENTRAL CONTROL UNIT	EA	6
8008	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	EA	5
8009	BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	6
8016	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	26
8017	LED SIGNAL HEAD MODULES (ANY SIZE)	EA	1
8024	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)	EA	350
8028	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH	LF	130
8033	DISCONNECT, PULL-BACK & REROUTE CABLE	LF	150
8036	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	35
8038	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	SF	20
8039	WOOD SIGN SUPPORTS UP TO 4' X 6'	EA	1
8040	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	EA	1500
8042	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	EA	1
8046	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	1
8053	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	EA	1500
8055	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	EA	1500
8056	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	EA	250
8070	12 IN. OPTICALLY PROGRAMMABLE SIGNAL HEAD SECTION	EA	14
8071	TURFGRASS SOD ESTABLISHMENT	EA	85

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

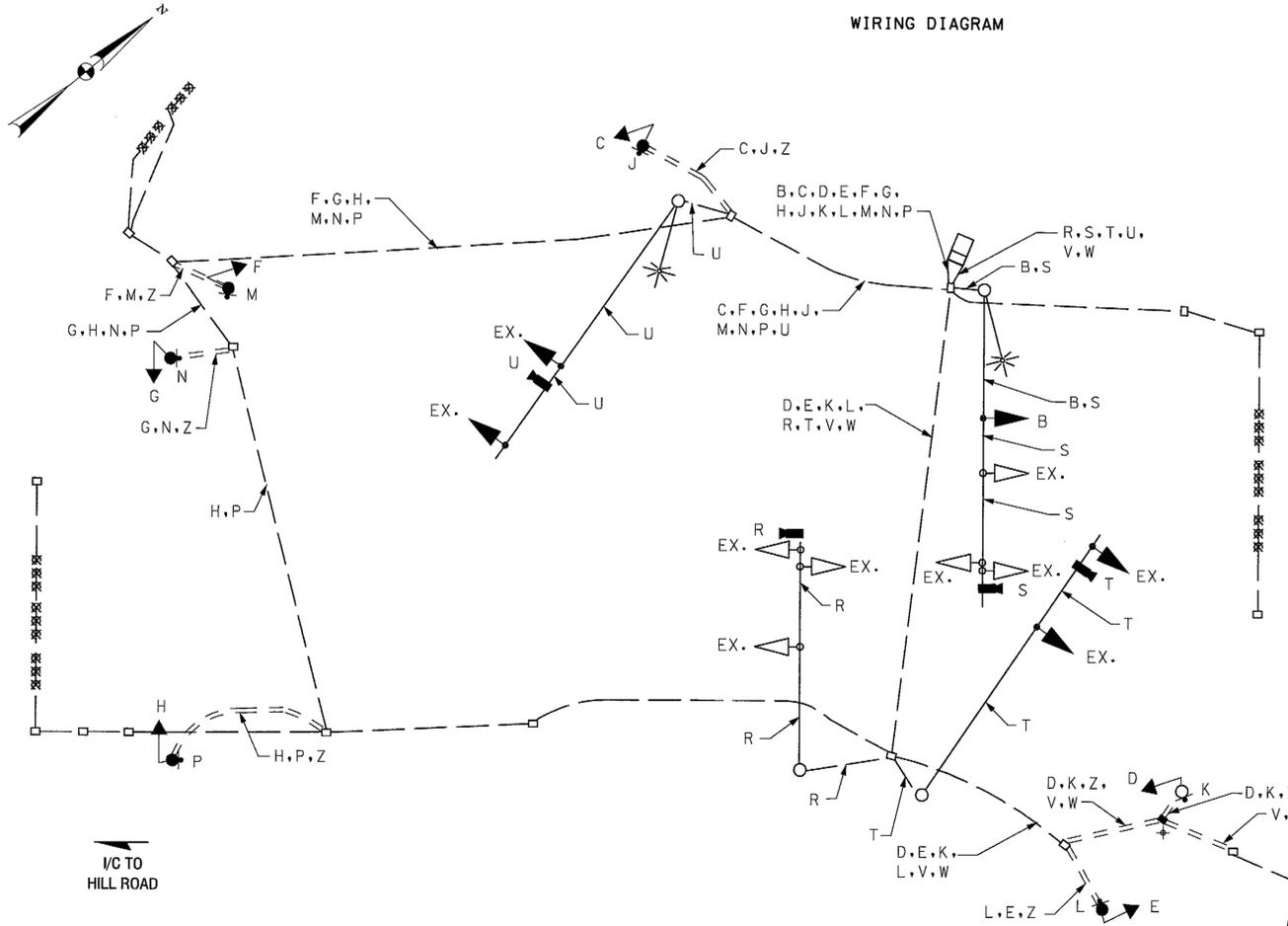


PHASE CHART



PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PHASE 1 AND 5	+G/R	+G/R	R	+G/R	+G/R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																	
PHASE 1 AND 6	+G/G	+G/G	G	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
1 CHANGE	+Y/G	+Y/G	G	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
PHASE 2 AND 5	R	R	R	+G/G	+G/G	G	G	R	R	R	R	WK	DW	DW	WK	DW	DW
2 CHANGE	R	R	R	+Y/G	+Y/G	G	G	R	R	R	R	WK	DW	DW	WK	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	G	G	G	R	R	R	R	FLDW	FLDW	FLDW	FLDW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R/G	R	R	+G/G	G	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	R/Y	R	R	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	R	R	R	R	R	R	R/G	R	R	+G/G	G	DW	DW	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	R	R	R/G	R	R	+G/G	G	DW	DW	DW	DW	FLDW	FLDW
3 ALT CHANGE	R	R	R	R	R	R	R/Y	R	R	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	+G/G	G	R	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK						

WIRING DIAGRAM



KEY

- EX. } EXISTING WIRES TO BE REUSED BY THE CONTRACTOR
  - B } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
  - C } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
  - D } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
  - E } 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
  - F } VIDEO DETECTION CABLE
  - G } REROUTED PORTION OF PROBE LEAD-IN CABLE
  - H } GROUND ROD
- NOTE: "A" NOT USED.

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

**MD 704 (MARTIN LUTHER KING JR HWY) AT SHERIFF ROAD**  
LANDOVER, MARYLAND

GENERAL INFORMATION SHEET

SCALE	N.T.S.	ADVERTISED DATE	JUNE, 2012	CONTRACT NO.	XY2245185
DESIGNED BY	C. PECKER	COUNTY	PRINCE GEORGE'S		
DRAWN BY	C. PECKER	LOGMILE	16070401.51		
CHECKED BY	A. GRIFFIN	TMS NO.	J059		
F.A.P. NO.		TOD NO.			
TS NO. 96 C	DRAWING	2 OF 3	SHEET NO.	OF	

**SABRA, WANG & ASSOCIATES, INC.**  
7055 SAMUEL MORSE DRIVE  
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TOD NO: XY224-15  
SHA NO: PG821A55/B55  
MD 704 @ Sheriff Road

BY: agriffin