PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL. IT INVOLVES THE INSTALLATION OF NEW POLES, MAST ARMS, SIGNAL HEADS AND NEW DETECTORS AT THE INTERSECTION OF US 1 AND WHITAKER MILL RD/CONNOLLY RD IN HARFORD COUNTY. US 1 IS ASSUMED TO RUN IN A NORTH- SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION IS TO OPERATES IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE. THERE WILL BE AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR BOTH THE NORTH AND SOUTHBOUND MOVEMENTS OF US 1. THE SIDE STREETS SHALL OPERATE IN A SPLIT PHASE.

CONTROLLER REQUIREMENTS

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

PROJECT CONTACTS

THE CONTACT PERSON FOR SHA ARE AS FOLLOWS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT
ENGINEER - TRAFFIC
(410) 321-2781

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT
ENGINEER - MAINTENANCE
(410) 321-2761

MR. MICHAEL PASQUARIELLO
DISTRICT UTILITY ENGINEER
(410) 321-2841

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

THE POWER COMPANY REPRESENTATIVE IS :

BALTIMORE GAS ELECTRIC COMPANY
INDUSTRIAL/COMMERCIAL SERVICES
NEW BUSINESS CONSTRUCTION
7317 PARKWAY DRIVE SOUTH
HANOVER, MD 21076
(410) 859-9030

WMS#

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION

CATEGORY CODE NO.	QUANTITY	UNIT	DESCRIPTION
90000	168.8	SF	SHEET ALUMINUM SIGN MAST ARM/POLE MOUNTED TO CONSIST OF:
			2- EA W3-3 (48" X 48")
			1- EA R3-5 (R) (30" X 36")
			2- EA SHEILD ASSEMBLY (36" X 51")
			2- EA SHEILD ASSEMBLY (48" X 75")
			4-EA D-3 (VARIES X 24")
			2-EA D-3 (VARIES X 12")
90000	1	EA	4-CHANNEL TIMEDELAY OUTPUT DETECTOR AMPLIFIER
90000	1	EA	EIGHT PHASE FULL - TRAFFIC - ACTUATED CONTROLLER W/INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
90000	1	EA	VIDEO DETECTION INTERFACE EQUIPMENT; 1-4 CAMERAS

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET.
CONTACT ED RODENHIZER AT (410) 787-7650 AT LEAST 72 HOURS PRIOR TO REMOVAL OF EXISTING CONTROLLER TO ARRANGE FOR PICKUP. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

EQUIPMENT LIST "B"

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

CATEGORY CODE NO.	QUANTITY	UNIT	DESCRIPTION
203030	3	CY	TEST PIT EXCAVATION
585424	129	LF	24" PREFORMED THERMOPLASTIC PAVEMENT MARKING
800000	2	EA	27 FT STEEL POLE WITH 70 FT MAST ARM AND 50 FT MAST ARM (15 FT "T")
800000	14	EA	8" LED SIGNAL R,Y,G HEAD SECTION
800000	1	LS	REMOVE AND DISPOSE OF EQUIPMENT
801004	9.3	CY	CONCRETE FOR SIGNAL FOUNDATION
802501	187	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805115	410	LF	3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
805125	230	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805135	469	LF	3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805140	65	LF	4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805160	80	LF	1 INCH LIQUID TIGHT NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
807202	1	EA	F&I METERED SERVICE PEDESTAL
810550	1	EA	MICROLOOP PROBE - 500 FT LEAD IN CABLE
810555	1	EA	MICROLOOP PROBE - 1000 FT LEAD IN CABLE
811001	12	EA	ELECTRICAL HANDHOLE
813015	168.8	SF	INSTALL OVERHEAD SIGN
816001	1	EA	VIDEO DETECTION CAMERA
816005	2	EA	CONTROL CABLE, 250 FT. VIDEO DETECTION CAMERA TO CONTROLLER
816010	2	EA	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
831010	1	EA	250 WATT HIGH PRESS SOD LAMP & LUM W/PHOTO CELL
837001	5	EA	GROUND ROD ¾ IN. DIA. X 10 FT. LENGTH
860284	34	EA	12 INCH LED VEHICULAR TRAFF SIGNAL HEAD SECTION
861107	150	LF	ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG
861108	1615	LF	ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG
861116	330	LF	ELECTRICAL CABLE - 2 CONDUCTOR ALUMINUM SHIELDED NO. 12 AWG TRAY CABLE
861117	25	LF	ELECTRICAL CABLE - 3 WIRE (NO. 4 AWG.)
862103	75	LF	SAW CUT FOR SIGNAL
866104	1	EA	20 FT. LIGHTING ARM ON SIGNAL STRUCTURE
871117	1	EA	INSTALL 8 PHASE (FULLY ACTUATED) CONTROLLER AND CABINET-BASE MOUNTED

SPECIAL NOTE:

THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT 410-787-7650 TO ARRANGE FOR THE PHONE DROP INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET NUMBER, ZIP CODE, AND TELEPHONE.

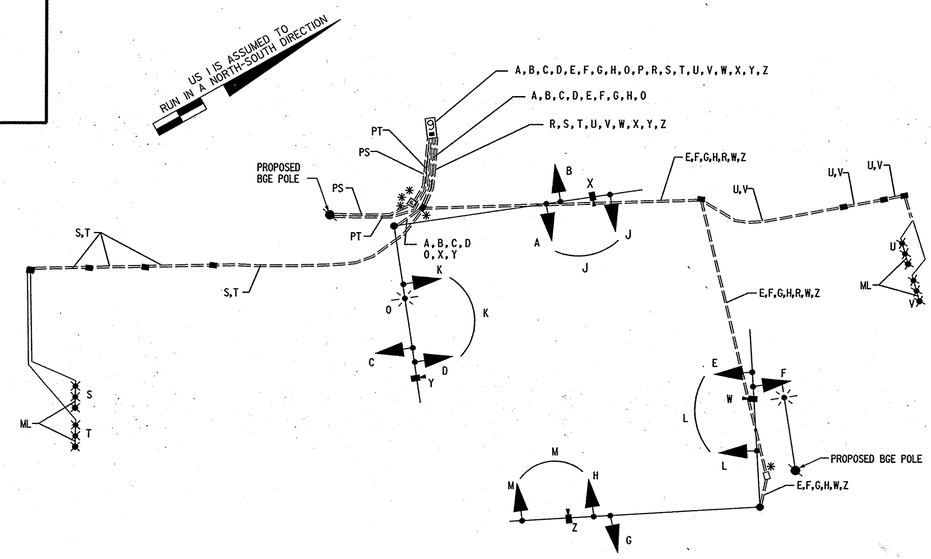
WIRING KEY

A,B,C,D,E, F,H,G	- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J,K,L,M	- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
O	- 2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 AWG)
P	- 3-CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)
R	- STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
S,T,U,V	- MICRO-LOOP PROBE LEAD-IN
W,X,Y,Z	- VIDEO CAMERA CABLE
ML	- MICRO-LOOP PROBE SET WITH 1000 FT LEAD-IN
PS	- PROPOSED ELECTRICAL SERVICE
PT	- PROPOSED TELEPHONE SERVICE
*	- 3/4 IN. X 10 FT. GROUND ROD

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	FL/Y	FL/Y	FL/Y	FL/Y	R/→G	R/→G	R	R	R	R	R	R	R
1 & 5 CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5 OR PHASE 2 & 6																
PHASE 1 & 6	→G/G	→G/G	G	FL/Y	FL/Y	FL/Y	FL/Y	R	R	R	R	R	R	R	R	R
1 CHANGE	→Y/G	→Y/G	G	FL/Y	FL/Y	FL/Y	FL/Y	R	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	→G/G	→G/G	G	R	R	R	R	R	R
5 CHANGE	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	→Y/G	→Y/G	G	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	FL/Y	FL/Y	FL/Y	FL/Y	G	G	G	R	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	FL/Y	FL/Y	FL/Y	FL/Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	R	R	R	R	R	R	→G/G	→G/G	G
3 CHANGE	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	R	R	R	R	R	R	Y	Y	Y
PHASE 4	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	R	R	R	→G/G	→G/G	G	R	R	R
4 CHANGE	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	R	R	R	Y	Y	Y	R	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

WIRING DIAGRAM



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

TRAFFIC SIGNAL PLAN
US 1 (BELAIR RD) AND
WHITAKER MILL RD/ CONNOLLY RD

SCALE NA DATE 03/07 CONTRACT NO. HA2525176

DESIGNED BY KJS
DRAWN BY DH
CHECKED BY TAR
F.A.P. NO. N/A

COUNTY HARFORD
LOGMILE 12000102.35
T.I.M.S. NO. E926
TOD NO.

PREPARED BY URS
HUNT VALLEY, MARYLAND

TS NO. 3190 D | DRAWING NO. | SHEET NO. 46 OF 48

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