PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 301 (CRAIN HIGHWAY) AT MITCHELLVILLE ROAD IN PRINCE GEORGE'S COUNTY. GEOMETRIC MODIFICATIONS ARE PROPOSED TO PROVIDE A NORTHBOUND DOUBLE LEFT TURN LANE AS WELL AS ADDITIONAL STORAGE BETWEEN THE NORTH- AND SOUTHBOUND LANES. VIDEO DETECTION IS PROPOSED FOR ALL PRESENCE DETECTION AND NON-INVASIVE MICROLOOP PROBES ARE ALSO PROPOSED FOR SETBACK DETECTION ALONG US 301. ALL EXISTING TRAFFIC SIGNAL HEADS WILL BE UPGRADED TO BLACK-FACED AND/OR LED. US 301 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC ACTUATED MODE. EXCLUSIVE LEFT-TURN PHASING WILL BE MAINTAINED ON US 301. THE EXISTING EXCLUSIVE-PERMISSIVE LEFT-TURN PHASING ALONG THE SIDE STREET WILL BE MAINTAINED.

CONTROLLER REQUIREMENTS

INSTALL A NEMA SIZE "6" BASE MOUNTED CABINET. THE SHA SIGNAL SHOP WILL INSTALL A NEW EIGHT-PHASE FULLY ACTUATED TRAFFIC CONTROLLER WITH ONE (1) 2 WIRE CENTRAL CONTROL UNIT, 1 (1) VIDEO INTERFACE EQUIPMENT, AND 4-CHANNEL LOOP DETECTOR AMPLIFIER.

THE EXISTING POLE-MOUNTED CABINET LOCATED ADJACENT TO THE BASE MOUNTED CABINET WILL BE REMOVED.

PHONE DROP

THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE INSTALLATION OF THE PHONE DROP. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE NUMBER.

THE CONTACT PERSONS FOR DISTRICT #3/OOTS ARE AS FOLLOWS:

District #3

Ms. Felecia Murphy
Assistant District Engineer - Traffic
Phone: 301-513-7404

Mr. Victor Grafton
Utilities Engineer
Phone: 301-513-7350

Mr. Vernon Stinnett, Jr.
Assistant District Engineer - Maintenance
Phone: 301-513-7304

Mr. Kevin Nowak
Assistant District Engineer - Construction
Phone: 301-513-7336

Office of Traffic & Safety

Mr. Richard L. Daff Sr.
Chief, Traffic Operations Division
Phone: 410-787-7630

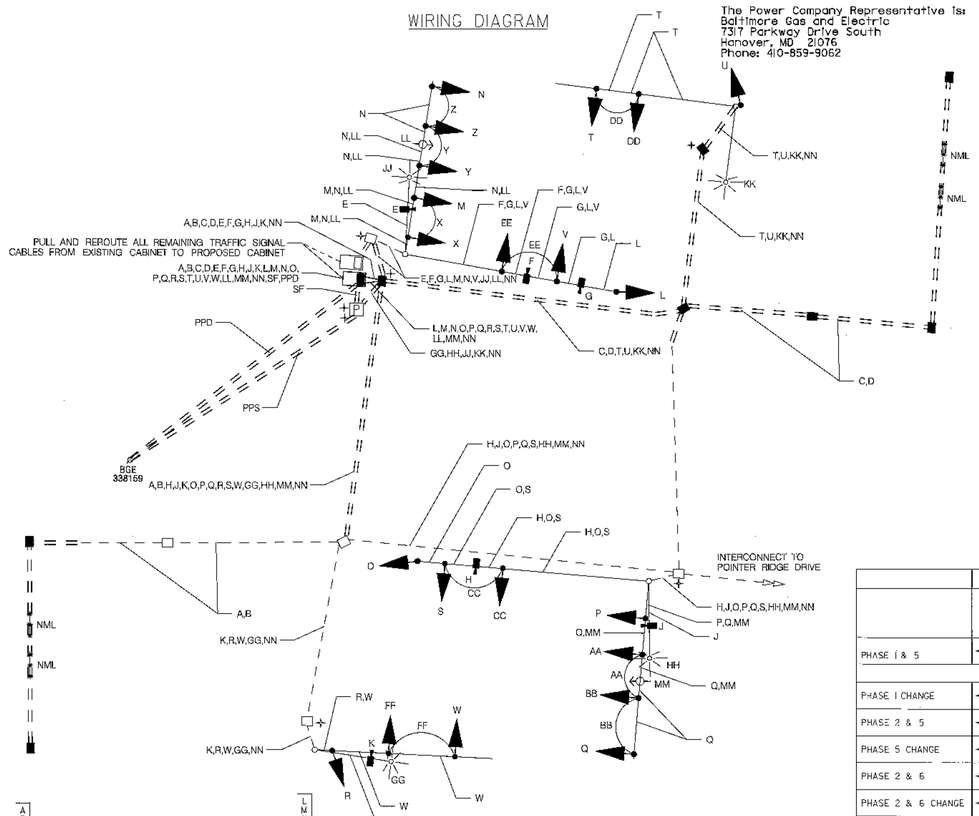
Mr. Robert Snyder
Assistant Division Chief, Traffic Operations
Phone: 410-787-7630

Mr. Edward Rodenhizer
Chief, SHA Traffic Signal Shop
Phone: 410-787-7650

Mr. Eugene Bailey
Team Leader Sign Operation
410-787-7670

The Power Company Representative is:
Baltimore Gas and Electric
7317 Parkway Drive South
Hanover, MD 21076
Phone: 410-859-9062

WIRING DIAGRAM



D	MICROLOOP PROBE, 1000 FOOT LEAD-IN CABLE
E	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
F	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
L M N O P Q R S T U V W	ELECTRICAL CABLE 7 CONDUCTOR (NO. 14 AWG)
X Y Z AA BB CC DD EE FF	ELECTRICAL CABLE 5 CONDUCTOR (NO. 14 AWG)
GG HH JJ KK	ELECTRICAL CABLE 2 CONDUCTOR (NO. 12 AWG), TC
LL MM	4 CONDUCTOR OPTICOM CABLE
NN	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
+	PROPOSED GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
+	EXISTING GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
NML	PROPOSED NON-INVASIVE MICROLOOP PROBE SET
PPD	PROPOSED PHONE DROP
SF	ELECTRICAL CABLE - 1 CONDUCTOR, NO. 2 AWG, TYPE USE, 600V
P	PROPOSED METERED SERVICE PEDESTAL
PPS	PROPOSED UNDERGROUND POWER SERVICE TO BE MADE BY BGE

LENHART TRAFFIC CONSULTING
TRAFFIC ENGINEERING & TRANSPORTATION PLANNING
331 Redwood Grove Court Millersville, Maryland 21108
Tel: (410) 987-3888 Fax: (443) 782-2288

EQUIPMENT LIST 'A'

EQUIPMENT TO BE SUPPLIED BY THE SHA

CAT CODE	QUANTITY	DESCRIPTION
NONE		

EQUIPMENT LIST 'B'

APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

CAT CODE	QUANTITY	DESCRIPTION
800000	1 EA	FURNISH AND INSTALL EIGHT-PHASE FULLY-ACTUATED CONTROLLER HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET WITH ALL NECESSARY HARNESSES
800000	33 EA	LED VEHICULAR SIGNAL HEAD MODULE
800000	1 EA	VIDEO DETECTION CAMERA INTERFACE (5-8 CAMERAS)
800000	38 SF	FURNISH AND INSTALL SHEET ALUMINUM SIGNS - MAST ARM/GROUND MOUNT 3 EA - R3-5L (30"x36") 1 EA - R3-5R (30"x36") 1 EA - R3-5A (30"x36")
807202	1 EA	METERED SERVICE PEDESTAL
810605	4 EA	NON-INVASIVE MICROLOOP PROBE, 1000 FOOT LEAD-IN CABLE
816001	6 EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
816005	3 EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816010	3 EA	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
860284	18 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860288	400 LF	FURNISH AND INSTALL 4 CONDUCTOR OPTICOM CABLE

EQUIPMENT LIST 'C'

EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

CAT CODE	QUANTITY	DESCRIPTION
120500	1 LS	MAINTENANCE OF TRAFFIC
585424	195 LF	24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
585462	195 LF	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS - ANY WIDTH
800000	500 LF	PULL AND RE-ROUTE EXISTING ELECTRICAL CABLE
800000	1 LS	REMOVE AND DISPOSE OF TRAFFIC SIGNAL EQUIPMENT
801106	44 LF	WOOD SIGN SUPPORTS, 4 INCH X 6 INCH
802501	500 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805118	180 LF	4 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - BORED
805125	135 LF	2 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
805135	465 LF	3 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
805140	450 LF	4 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
805150	130 LF	3 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED
811011	7 EA	ELECTRICAL HANDHOLE
813006	22 SF	RELOCATE SIGNS FROM EXISTING OVERHEAD STRUCTURE
822500	1 EA	AS BUILT FOR SHA ON CADD
832018	25 LF	1 CONDUCTOR, NO. 2 AWG, TYPE USE, 600V
837001	4 EA	GROUND ROD - 3/4 INCH DIAMETER BY 10 FOOT LENGTH
860265	2 EA	RELOCATE EXISTING SIGNAL HEAD
861107	200 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	3100 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	1100 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC

EQUIPMENT LIST 'D'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

CAT CODE	QUANTITY	DESCRIPTION
800000	1 EA	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT

THE CONTRACTOR SHALL CONTACT THE SIGNAL SHOP TO SALVAGE THE EXISTING BASE MOUNTED CABINET AND ALL ASSOCIATED EQUIPMENT.

ALL OTHER REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PHASE 1 & 5	R	R	R	R	R	R	G	G	G	G	G	R	R	R	G	G	R	R	R	R	R
	PHASE 1 & 5 MAY CHANGE TO PHASE 2 & 5 OR PHASE 2 & 6																				
PHASE 1 CHANGE	R	R	R	R	R	R	Y	Y	G	G	G	R	R	R	Y	Y	R	R	R	R	R
PHASE 2 & 5	R	R	R	G	G	G	R	R	G	G	G	R	R	R	R	R	R	R	R	R	R
PHASE 5 CHANGE	R	R	R	G	G	G	R	R	Y	Y	Y	R	R	R	R	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G
PHASE 2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y
PHASE 4 & 8	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	G	G	G	G
PHASE 4 & 8 CHANGE	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/RA	FL/RA	FL/RA	FL/Y	FL/Y	FL/Y	FL/RA	FL/RA	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R
PRE-EMPT 1	R	R	R	R	R	R	G	G	G	G	G	R	R	R	G	G	R	R	R	R	R
PRE-EMPT 1 CHANGE	R	R	R	R	R	R	Y	Y	G	G	G	R	R	R	Y	Y	R	R	R	R	R
PRE-EMPT 2	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G
PRE-EMPT 2 CHANGE	Y	Y	Y	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y

NOTE:

THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF ONE (1) YEAR. SHOULD CONSTRUCTION NOT BEGIN WITHIN THIS TIME FRAME, THESE PLANS SHALL BE NULL AND VOID WITH A RE-REVIEW REQUIRED FROM THE TRAFFIC ENGINEERING DESIGN DIVISION.

EAPD PERMIT NO. _____

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

US 301 (CRAIN HIGHWAY) AT MITCHELLVILLE ROAD/QUEEN ANNE BRIDGE ROAD

GENERAL INFORMATION

SCALE NONE DATE NOVEMBER 2010 CONTRACT NO. BW996M82

DESIGNED BY MML
DRAWN BY MML
CHECKED BY MML
F.A.P. NO. N/A
COUNTY PRINCE GEORGE'S
LOGMILE 16030121.31
T.I.M.S. NO. J181
TOD NO.

DRAWING NO. TS-3524-C-GI OF SHEET NO. OF