

PROJECT DESCRIPTION

GENERAL
 THIS PROJECT INVOLVES UPGRADING THE EXISTING ICB TO A FULL TRAFFIC SIGNAL AT THE INTERSECTION OF US 40 (BALTIMORE NATIONAL PIKE) AND MD 17 (WOLFSVILLE ROAD) IN FREDERICK COUNTY, DUE TO THE ADDITION OF LEFT TURN LANES FOR BOTH APPROACHES ON US 40. NEW BLACK-FACED LED TRAFFIC SIGNALS WILL REPLACE THE EXISTING TRAFFIC SIGNAL HEADS. VIDEO DETECTION IS PROPOSED FOR SIDE STREET PRESENCE DETECTION AND NON-INVASIVE MICROLOOP PROBES FOR MAINLINE SET-BACK DETECTION. US 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION
 THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE.

CONTROLLER REQUIREMENTS
 THE EXISTING POLE MOUNTED CONTROLLER AND ASSOCIATED HARNESSSES SHALL REMAIN. THE SHA SIGNAL SHOP SHALL INSTALL ONE (1) VIDEO DETECTION INTERFACE AND ONE (1) 4 CHANNEL DETECTOR AMPLIFIER WITHIN THE EXISTING POLE MOUNTED CABINET.

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

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

- Mr. John Conannon
 Assistant District Engineer - Traffic
 Phone: 301-624-8140
- Mrs. Andrea Abend
 District Utility Engineer
 Phone: 301-624-8115
- Mr. Ray Johnson
 Assistant District Engineer - Maintenance
 Phone: 301-624-8105
- Mr. Richard L. Daff Sr.
 Chief, Traffic Operations Division
 Phone: 410-787-7630
- Mr. Edward Rodenhizer
 Chief, SHA Traffic Signal Shop
 Phone: 410-787-7650
- The Power Company Representative is:
 Allegheny Power
 10435 Downsville Pike
 Hagerstown, MD 21740-1766
 Phone: 1-800-255-3443

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
900000	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT: I-4 CAMERAS
963010	1 EA	4 CHANNEL LOOP DETECTOR AMPLIFIER - RACK MOUNT
973023	189 SF	SHEET ALUMINUM SIGNS: 4 EA - D95-25 (24 IN. X 24 IN.) 4 EA - W3-3, FY, (48 IN. X 48 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-4 *WEST*, MI-4a *US 40*, M6-1 *RIGHT ARROW* (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-2 *EAST*, MI-4a *US 40*, M6-1 *RIGHT ARROW* (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-2 *EAST*, MI-4a *US 40*, M6-1 *LEFT ARROW* (36 IN. X 75 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-4 *WEST*, MI-4a *US 40*, M6-1 *LEFT ARROW* (36 IN. X 75 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-1 *NORTH*, MI-5 *MD 17*, M6-1 *RIGHT ARROW* (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-3 *SOUTH*, MI-5 *MD 17*, M6-1 *RIGHT ARROW* (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-1 *NORTH*, MI-5 *MD 17*, M6-1 *LEFT ARROW* (36 IN. X 75 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-3 *SOUTH*, MI-5 *MD 17*, M6-1 *LEFT ARROW* (36 IN. X 75 IN.)

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

CATEGORY CODE	QUANTITY	DESCRIPTION
120500	1 LS	MAINTENANCE OF TRAFFIC
203030	2 CY	TEST PIT EXCAVATION
585625	85 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585627	30 SF	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
800000	1 EA	CONDUIT BEND IN EXISTING FOUNDATION - 4 INCH
801106	240 LF	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
801711	46 SF	REMOVE EXISTING GROUND MOUNTED SIGNS AND SUPPORTS
802501	20 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805010	30 LF	1 INCH ELECTRICAL CONDUIT - GALVANIZED RISER
805050	1 EA	WEATHER HEAD, 3 IN.
805135	885 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
805140	15 LF	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
805150	100 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED
805155	85 LF	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED
810605	2 EA	NONINVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE
811001	8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	189 SF	INSTALL GROUND MOUNTED SIGN
816001	2 EA	VIDEO DETECTION CAMERA
816005	2 EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
837001	1 EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860284	24 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861107	100 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	300 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

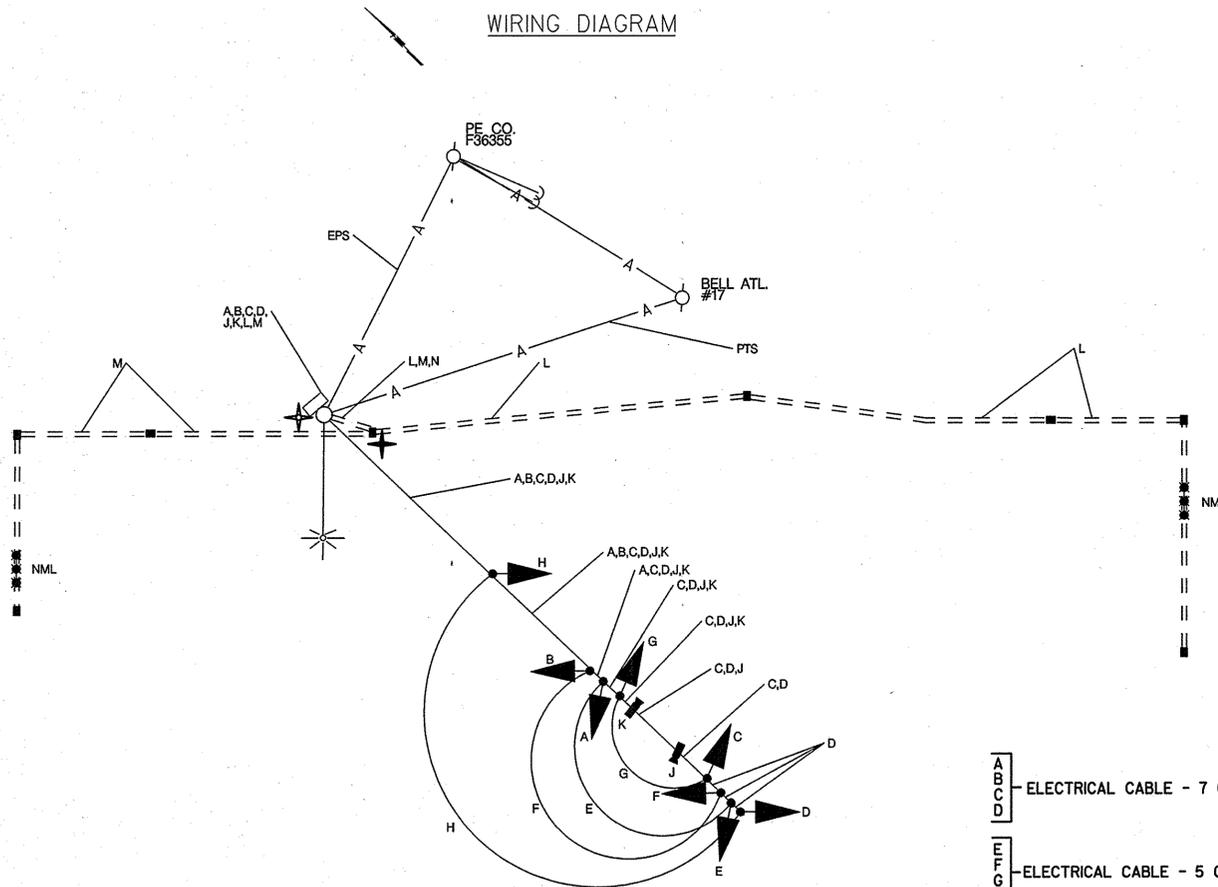
EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO QUANTITY DESCRIPTION

NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

WIRING DIAGRAM



- A B C D - ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
- E F G H - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
- J - CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
- K - NON-INVASIVE MICROLOOP PROBE
- L - LEAD-IN CABLE, 500 FOOT
- N - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- NML - NON-INVASIVE MICROLOOP PROBE
- PTS - PROPOSED OVERHEAD TELEPHONE SERVICE TO BE INSTALLED BY OTHERS
- EPS - EXISTING OVERHEAD POWER SOURCE
- ⊕ - EXISTING GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
- ⊕ - PROPOSED GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH

PHASE CHART

	1	2	3	4	5	6	7	8	
PHASE 2 & 6	G	G	G	G	R	R	R	R	←
PHASE 2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R	
PHASE 4 & 8	R	R	R	R	G	G	G	G	↑
PHASE 4 & 8 CHANGE	R	R	R	R	Y	Y	Y	Y	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	↑

BY: GUILIAMC

STV Incorporated
 engineers/architects/planners/construction managers
 7125 Ambassador Road, Baltimore, MD 21244-2722 (410) 944-9112

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 US 40 (BALTIMORE NATIONAL PIKE) AT
 MD 17 (WOLFSVILLE ROAD)

GENERAL INFORMATION

SCALE NONE DATE 7/2007 CONTRACT NO. FR4875176

DESIGNED BY MCG COUNTY FREDERICK
 DRAWN BY MCG LOGMILE 10004003.11
 CHECKED BY BAB CSW T.I.M.S. NO. H901
 F.A.P. NO. TOD NO.

DRAWING NO. TS-4531A - GI SHEET NO. 13 OF 13