PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 24 (VETERANS MEMORIAL HIGHWAY) AND MD 924 (TOLLGATE ROAD/EMMORTON ROAD) DURING THE MAINTENANCE OF TRAFFIC FOR STAGE 5. THIS STAGE OF MOT INVOLVES THE INSTALLATION OF THE ULTIMATE MAST ARM TRAFFIC SIGNALS WIRED TO THE PROPOSED CONTROLLER AT THE INTERSECTION IN HARFORD COUNTY.

INTERSECTION OPERATION

A MASTER CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 4 NEMA PHASES. VIDEO DETECTION SHALL BE INSTALLED FOR ACTUATION OF LEFT TURN MOVEMENTS AT THE INTERSECTION. PRIOR TO COMPLETION OF THIS PROJECT THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT 410-398-7631 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND TELEPHONE NUMBERS.

EQUIPMENT LIST

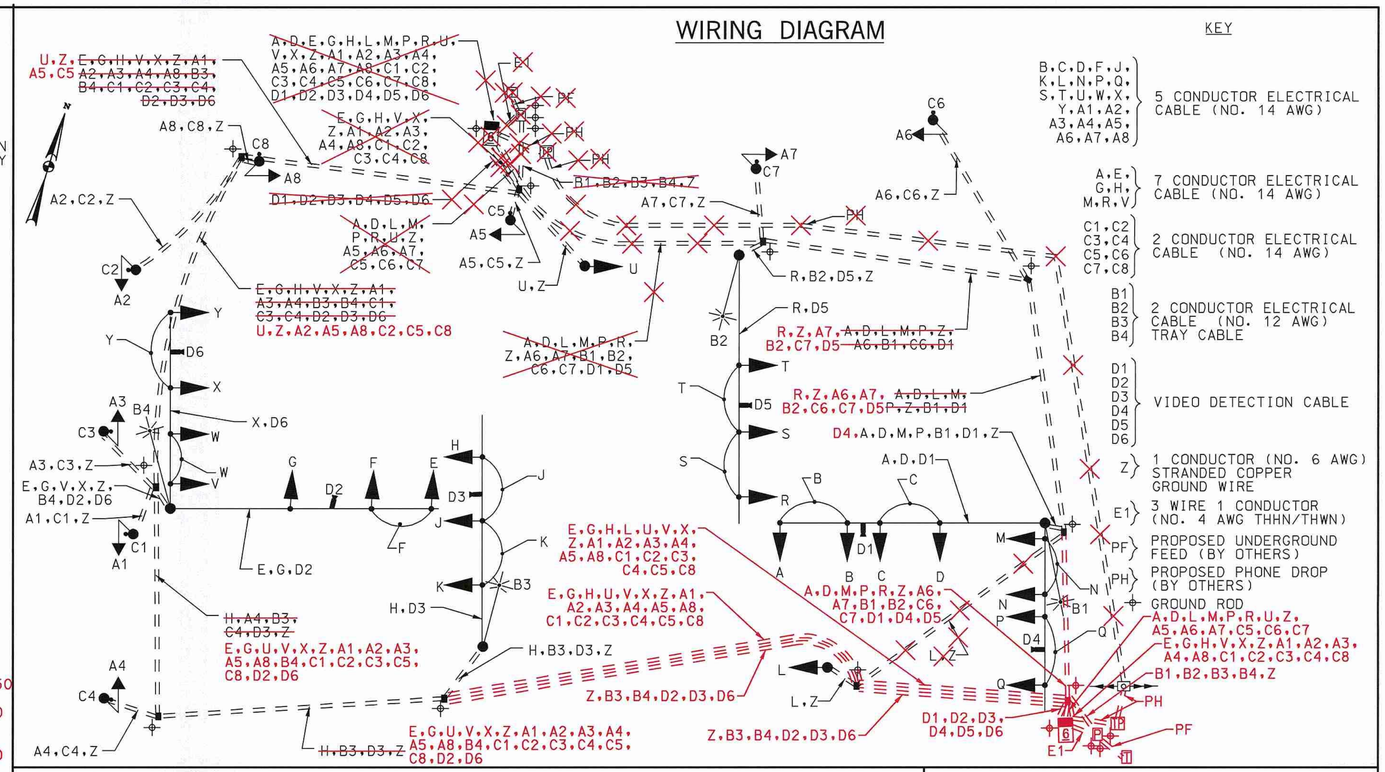
A. EQUIPMENT TO BE SUPPLIED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION		UNITS	QUANTITY
900000	BASE MOUNTED (SIZE 6) CABINET WITH MASTER AND LOCAL CONTROLLERS (MSHA SPECIFICATION) WITH VIDEO DETECTION INTERFACE EQUIPMENT FOR 1-4 CAMERAS		EA	1
900000	VIDEO DETECTION INTERFACE EQUIPMENT RACK FOR 5-8 CAMERAS		EA	1
973023	SHEET ALUMINUM SIGNS CONSISTING OF:		SF	158
	R3-6(1)(30"X54") MAST ARM MOUNT	EA 1		
	R3-5(L) (30"X36") MAST ARM MOUNT	EA 7		
	R3-5(R) (30"X36") MAST ARM MOUNT	EA 1		
	R3-5(2) (30"X54") MAST ARM MOUNT	EA 1		
	R3-1 (30"X30") MAST ARM MOUNT	EA 2		
	R3-2 (30"X30") MAST ARM MOUNT	EA 2		
	D-3(1) (VAR.X16") MAST ARM MOUNT	EA 4		
	R10-3(1) (9"X15") POLE MOUNT SIGN TO READ "PUSH BUTTON TO CROSS TOLLGATE ROAD"	EA 4		
	R10-3(1) (9"X15") POLE MOUNT SIGN TO READ "PUSH BUTTON TO CROSS RAMP"	EA 4		

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

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
114245	24 IN. WHITE REMOVABLE PREFORMED PAVEMENT LINE MARKING	LF	350
203030	TEST PIT EXCAVATION	CY	8
800000	ALTERNATE TRAFFIC SIGNAL HANDHOLE	EA	1
800000	AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON BASE UNIT	EA	1
800000	AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON STATION	EA	8
800000	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT	LS	1
800000	16 IN. LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT	EA	8
800000	CONTROL CABLE 300 FT. VIDEO DETECTION CAMERA TO CONTROLLER	EA	~~X~~ 2
800000	TELECOMMUNICATION SERVICE PEDESTAL	EA	1
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	28
801607	INSTALL SHEET ALUMINUM SIGN	SF	8
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	~~1150~~ 1650
~~805105~~	~~2 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED~~	~~LF~~	~~300~~
805118	4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED	LF	~~360~~ 470
805125	2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	~~220~~ 70
805135	3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	200
805140	4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	~~570~~ 940
807202	METERED SERVICE PEDESTAL	EA	1
811001	ELECTRICAL HANDHOLE	EA	~~X~~ 9
813015	INSTALL OVERHEAD SIGN	SF	150
816001	VIDEO DETECTION CAMERA	EA	6
816010	CONTROL CABLE 500 FT. VIDEO DETECTION CAMERA TO CONTROLLER	EA	~~X~~ 1
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	8
818010	14 FOOT BREAKAWAY PEDESTAL POLE	EA	2
818051	STEEL POLE WITH TWIN 50 FT. AND 70 FT. MAST ARMS	EA	2
818052	STEEL POLE WITH SINGLE 70 FT. MAST ARM	EA	2
821003	BREAKAWAY BASE SUPPORT SYSTEM FOR SIGNAL STRUCTURE	EA	10
831010	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE	EA	4
837001	GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH	EA	~~13~~ 14
860284	12 IN. LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	71
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	~~1590~~ 4260
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	~~3570~~ 6150
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	~~2600~~ 3000
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	~~1420~~ 1475
861117	ELECTRICAL CABLE - 3 WIRE (NO. 4 AWG)	LF	60
866103	15 FT. LIGHTING ARM ON SIGNAL STRUCTURE	EA	2
866104	20 FT. LIGHTING ARM ON SIGNAL STRUCTURE	EA	2
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1

WIRING DIAGRAM



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

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
800000	CONTROL CABLE 400 FT. VIDEO DETECTION CAMERA TO CONTROLLER	EA	1
800000	CONTROL CABLE 700 FT. VIDEO DETECTION CAMERA TO CONTROLLER	EA	2

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLY DRIVE, HANOVER, MARYLAND 21076. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	CONTROLLER AND ITS ASSOCIATED AUXILIARY EQUIPMENT	EA	1

SPECIAL NOTES

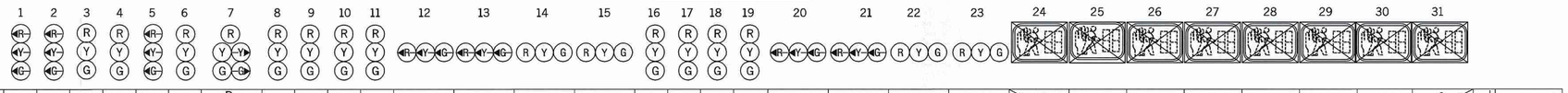
1. THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 321-2781
MR. STEVE MARCISZEWSKI, ASSISTANT
DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 321-2761
MR. MICHAEL PASQUARIELLO,
UTILITY ENGINEER
PHONE: (410) 321-2841
MR. RICHARD L. DAFF, SR.,
CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. EDWARD RODENHIZER,
SIGNAL OPERATIONS CHIEF
PHONE: (410) 787-7650
MR. EUGENE BAILEY,
SIGN OPERATIONS MANAGER
PHONE: (410) 787-7676

MS. ROXANE MUKAI, TRAFFIC MANAGER
MARYLAND TRANSPORTATION AUTHORITY
PHONE: (410) 537-7848

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
PHASE A	R	R	R	R	R	R	R G	G	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R	BAGGED						BAGGED	
CHANGE A	R	R	R	R	R	R	R Y	Y	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	R								
PHASE B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	G	G								
CHANGE B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	G	G	G	G	G								
PHASE C	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G								
CHANGE C	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y								
PHASE D	G	G	G	G	G	G	G G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R								
CHANGE D	Y	Y	Y	Y	Y	Y	Y G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	BAGGED						BAGGED	
FLASHING OPERATION	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	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R								

SABRA, WANG & ASSOCIATES, INC.
1504 JOH AVENUE
SUITE 160
BALTIMORE, MD 21227
(410) 737-6564
WWW.SABRA-WANG.COM

NOTE: THE CONTRACTOR SHALL DELIVER AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON STATION AND BASE UNIT TO THE SHA SIGNAL SHOP PRIOR TO LOCATION INSTALLATION FOR PROGRAMMING. SHA FORCES SHALL INSTALL AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON BASE UNIT IN THE CABINET.

8 REDLINE NO. 8, MAY '10

MOT STAGE:5

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

MD 24 AT MD 924 (EMMORTON ROAD)
IMPROVEMENTS TO I-95 AND MD 24 INTERCHANGE
ABINGDON, MARYLAND

GENERAL INFORMATION SHEET

SCALE N.T.S. DATE MARCH 2007 CONTRACT NO. KH-271-000-002(R2)

DESIGNED BY A.M./S.D./A.G. COUNTY HARFORD
DRAWN BY M. RAFFLE LOGMILE
CHECKED BY K. RINIKER TIMS NO. H 810
FAP NO. NONE TOD NO.

TS NO. 1948 G | DRAWING PSG OF N014 | SHEET NO. 470 OF 597

PLOTTED: Wednesday, May 19, 2010 AT 11:11 AM
FILE: R:\2003\31 MdTA 2003-01 prel_eng KCI\Task 01 MD24_I-95\Dwg\Signals\Redline No. 8\pSG-N014_MD24.dgn

BY:AGRIFFIN -