PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE CLEANING AND PAINTING OF THE EXISTING TRAFFIC SIGNAL POLES, MAST ARMS, AND LIGHTING ARMS AND THE UPGRADING OF PEDESTRIAN SIGNALS AND SIDEWALK RAMPS OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 5 AND NIKE DRIVE /MATTAWOMAN DRIVE IN CHARLES COUNTY, MARYLAND. MD 5 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATION WILL REMAIN THE SAME.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, SYSTEM PACKAGE, VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS), INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "S" BASE MOUNTED CABINET.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)
STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE)
STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

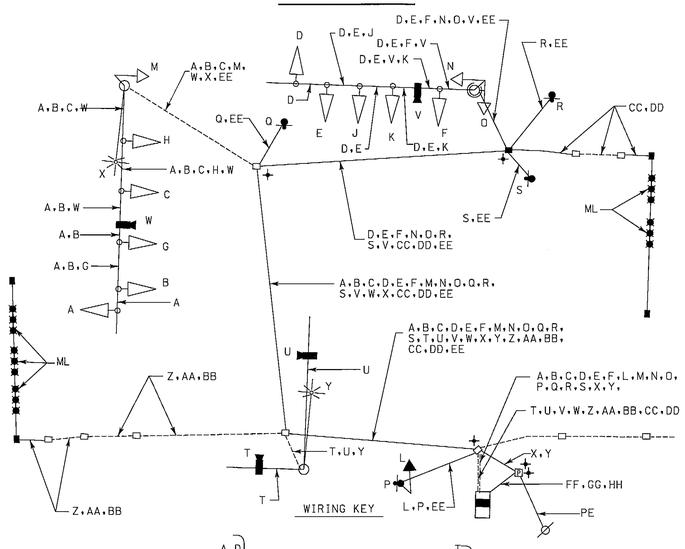
MS. KIMBERLY TRAN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 841-1019

MR. JOHN S. MAYS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 841-1013

MR. MIKE HUBER
DISTRICT UTILITY ENGINEER
PHONE: (410) 841-1039

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

WIRING DIAGRAM



WIRING KEY

A B C D E F — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

G H J K L M N O — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

P Q R S — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

X Y — 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) - TRAY CABLE

T U V W — VIDEO CAMERA DETECTION LEAD-IN CABLE

Z AA BB CC DD — MICROLOOP PROBE LEAD-IN

EE — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

FF GG HH — 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G.)

ML - MICROLOOP PROBE SET

PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE

⏚ - 3/4 IN. X 10 FT. GROUND ROD

APS ACCESIBLE PEDESTRIAN SIGNALS

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 5 (MATTAWOMAN-BEANTOWN ROAD) AND NIKE DRIVE- EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS MATTAWOMAN-BEANTOWN AT NIKE, WAIT." *

WALK: RAPID TICK

NIKE DRIVE AND MD 5 (MATTAWOMAN-BEANTOWN) - SOUTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS NIKE AT MATTAWOMAN-BEANTOWN, WAIT." *

WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'
** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9016	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9104	1 EACH	CONTROLLER CABINET SIZE "S" WITH CONTROLLER, VIDEO INTERFACE EQUIPMENT 1-8 CAMERAS
9109	1 EACH	CABINET EXTENSION BASE SIZE "S"
9570	61 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (GROUND MOUNT) :
		- 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD , RIGHT ARROW" (24 IN. x 48 IN.) - GROUND MOUNT
		- 2 EACH R4-7 SIGN (24 IN. X 30 IN.)- GROUND MOUNT
		- 2 EACH W3-3 SIGN (48 IN. X 48 IN.) - GROUND MOUNT
		- 2 EACH D-3(2) SIGN (VAR. X 16 IN.) - GROUND MOUNT
9571	56 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) :
		- 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "NORTH, MD , RIGHT ARROW" (24 IN. x 48 IN.) - POLE MOUNT
		- 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "NORTH, MD , LEFT ARROW" (36 IN. x 72 IN.) - POLE MOUNT
		- 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD , LEFT ARROW" (36 IN. x 72 IN.) - POLE MOUNT
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS MATTAWOMAN BEANTOWN ROAD"
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS NIKE DRIVE"

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. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR 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
	VR, VY, VG	VR, VY, VG	R, Y, G	R, Y, G	VR, VY, VG	VR, VY, VG	R, Y, G	R, Y, G	R, O, RG	R, Y, G, RG	R, Y, G	SR, SY, SG	FR, FY, FG	R, O, RG	R, Y, G, RG	R, Y, G	Walk, W	Walk, W	Walk, W	Walk, W
PHASE 1 + 5	←G—	←G—	R	R	←G—	←G—	R	R	R	R	R	—G→	—G→	R	R	R	DW	DW	DW	DW
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6																			
PHASE 1 + 6	←G—	←G—	G	G	←R—	←R—	R	R	R	R	R	—G→	—G→	R	R	R	DW	DW	DW	DW
1 + 6 CHANGE	←Y—	←Y—	G	G	←R—	←R—	R	R	R	R	R	—Y→	—Y→	R	R	R	DW	DW	DW	DW
PHASE 2 + 5	←R—	←R—	R	R	←G—	←G—	G	G	R	R	R	—R→	—R→	R	R	R	DW	DW	DW	DW
2 + 5 CHANGE	←R—	←R—	R	R	←Y—	←Y—	G	G	R	R	R	—R→	—R→	R	R	R	DW	DW	DW	DW
PHASE 2 + 6	←R—	←R—	G	G	←R—	←R—	G	G	R	R	R	—R→	—R→	R	R	R	W	W	DW	DW
PED CLEARANCE	←R—	←R—	G	G	←R—	←R—	G	G	R	R	R	—R→	—R→	R	R	R	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	←R—	←R—	Y	Y	←R—	←R—	Y	Y	R	R	R	—R→	—R→	R	R	R	DW	DW	DW	DW
PHASE 3	←R—	←R—	R	R	←R—	←R—	R	R	R	R	R	—R→	—R→	G, ←G—	G, ←G—	G	DW	DW	DW	DW
3 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	R	R	R	—R→	—R→	Y	Y	Y	DW	DW	DW	DW
PHASE 4	←R—	←R—	R	R	←R—	←R—	R	R	G, ←G—	G, ←G—	G	—G→	—G→	R	R	R	DW	DW	DW	DW
4 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	Y	—Y→	—Y→	R	R	R	DW	DW	DW	DW
PHASE 4 ALT	←R—	←R—	R	R	←R—	←R—	R	R	G, ←G—	G, ←G—	G	—R→	—R→	R	R	R	DW	DW	WK	WK
PED CLEARANCE	←R—	←R—	R	R	←R—	←R—	R	R	G, ←G—	G, ←G—	G	—R→	—R→	R	R	R	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	Y	—R→	—R→	R	R	R	DW	DW	DW	DW
FLASHING OPERATION	←FL/R—	←FL/R—	FL/Y	FL/Y	←FL/R—	←FL/R—	FL/Y	FL/Y	FL/R	FL/R	FL/R	—FL/R→	—FL/R→	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2001	2 C.Y.	CLASS 2 EXCAVATION
2002	2 C.Y.	TEST PIT EXCAVATION
5003	470 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5004	410 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	65 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	220 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	890 S.F.	5 INCH CONCRETE SIDEWALK
6003	60 S.F.	DETECTABLE WARNING SURFACE
8002	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8008	4 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8011	1 EACH	CONDUIT BEND IN EXISTING FOUNDATION - ANY SIZE
8012	1 EACH	EMBEDDED METERED SERVICE PEDESTAL
8016	1 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8023	5 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8024	1 EACH	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT PER ASSIGNMENT
8028	4 L.F.	VIDEO DETECTION CAMERA AND CABLE UP TO 500 FT
8036	430 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8038	390 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8039	64 L.F.	WOOD SIGN SUPPORTS UP TO 4" X 6"
8040	117 L.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	400 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	80 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8046	5 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8053	1120 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	1400 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	2345 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8057	490 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC
8063	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8065-A	1 LS	CLEAN AND REPAINT PREVIOUSLY PAINTED TWO EXISTING SIGNAL POLES WITH SINGLE ARM AND SIGNAL POLE WITH TWIN ARM FOR MD 5 AT NIKE DRIVE SIGNAL
8067-A	1 EACH	FURNISH AND INSTALL BROWN PAINTED 14' PEDESTAL POLE

TOD NO: XY224-13
SHA NO: CH229B52
MD 5 @ Nike Drive/Msttawoman Drive

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

MD 5 at Nike Drive /Mattawoman Drive
Waldorf, Maryland

WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE 5-29-2012 CONTRACT NO. XY2245185

DESIGNED BY B. Donoway
DRAWN BY B. Donoway
CHECKED BY N. Leary
F.A.P. NO.
COUNTY Charles
LOGMILE 08000513.37
TIMS NO. L334
TOD NO.

TS NO. 3558 C | DRAWING TSP-3 OF 3 | SHEET NO. 3 OF 3

PLOTTED: June 22, 2012
FILE: N:\31669-222\CADD\pSG-N003_L334.dgn

BY: bdonoway