

PROJECT DESCRIPTION

GENERAL
 THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 150 (EASTERN AVENUE) AND PEMBROOKE BOULEVARD/48TH STREET IN BALTIMORE COUNTY, MARYLAND. MD 150 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 150 APPROACHES OPERATING CONCURRENTLY AND THE PEMBROOKE BOULEVARD/48TH STREET APPROACHES OPERATING SPLIT PHASE.

A RIGHT-TURN OVERLAP WAS ADDED FOR THE 48TH STREET APPROACH.

THE PEDESTRIAN PHASE ACROSS THE EAST LEG WILL REMAIN UNCHANGED.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 150 (EASTERN AVENUE) AND 48TH STREET - EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS EASTERN AT 48TH. WAIT." *

WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'

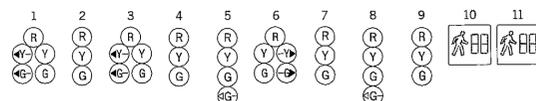
** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

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

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE VIDEO DETECTION AND APS EQUIPMENT.

PHASE CHART



PHASE 1 AND 5	R	R	R	R	R	R	R	R	R	DW	DW
PHASE 1 AND 5 CHANGE	+G-		+G-								
PHASE 1 AND 6	G	G	R	R	R	R	R	R	R	DW	DW
1 AND 6 CHANGE	+G-	G	R	R	R	R	R	R	R	DW	DW
PHASE 2 AND 5	R	R	+G-	G	R	-G+	R	R	R	DW	DW
2 AND 5 CHANGE	R	R	+G-	G	R	-G+	R	R	R	DW	DW
PHASE 2 AND 6	G	G	G	G	R	R	R	R	R	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	G	DW	DW
PHASE 3 CHANGE	R	R	R	R	R	R	R	Y	Y	DW	DW
PHASE 4	R	R	R	R	+G-	G	G	R	R	DW	DW
PHASE 4 CHANGE	R	R	R	R	+G-	G	G	R	R	DW	DW
PHASE 4 ALT	R	R	R	R	+G-	G	G	R	R	WK	WK
PED CLEARANCE	R	R	R	R	+G-	G	G	R	R	FLOW	FLWK
PHASE 4 ALT CHANGE	R	R	R	R	Y	Y	Y	R	R	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-8 CAMERAS
9571	55 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS EASTERN AVENUE" - 1 EACH D-3(1) SIGN (VAR. x 32 IN.) - 2 EACH M1-5(4) SIGN (78 IN. x 36 IN.)

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA
 ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

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-104.04-04 (LEFT LANE CLOSURE)
- STANDARD NO. MD-104.04-14 (LEFT TURN BAY CLOSURE)
- STANDARD NO. MD-104.04-06 (RIGHT LANE CLOSURE)
- STANDARD NO. MD-104.04-16 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN
 ASSISTANT DISTRICT ENGINEER - TRAFFIC
 PHONE: (410) 229-2381

MR. ROBERT SYNDER
 ASSISTANT CHIEF, TRAFFIC OPERATIONS DIVISION
 PHONE: (410) 787-7631

MR. ANDRE FUTRELL
 ASSISTANT DISTRICT ENGINEER - MAINTENANCE
 PHONE: (410) 229-2361

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

MR. MIKE PASOUARIELLO
 DISTRICT UTILITY ENGINEER
 PHONE: (410) 229-2341

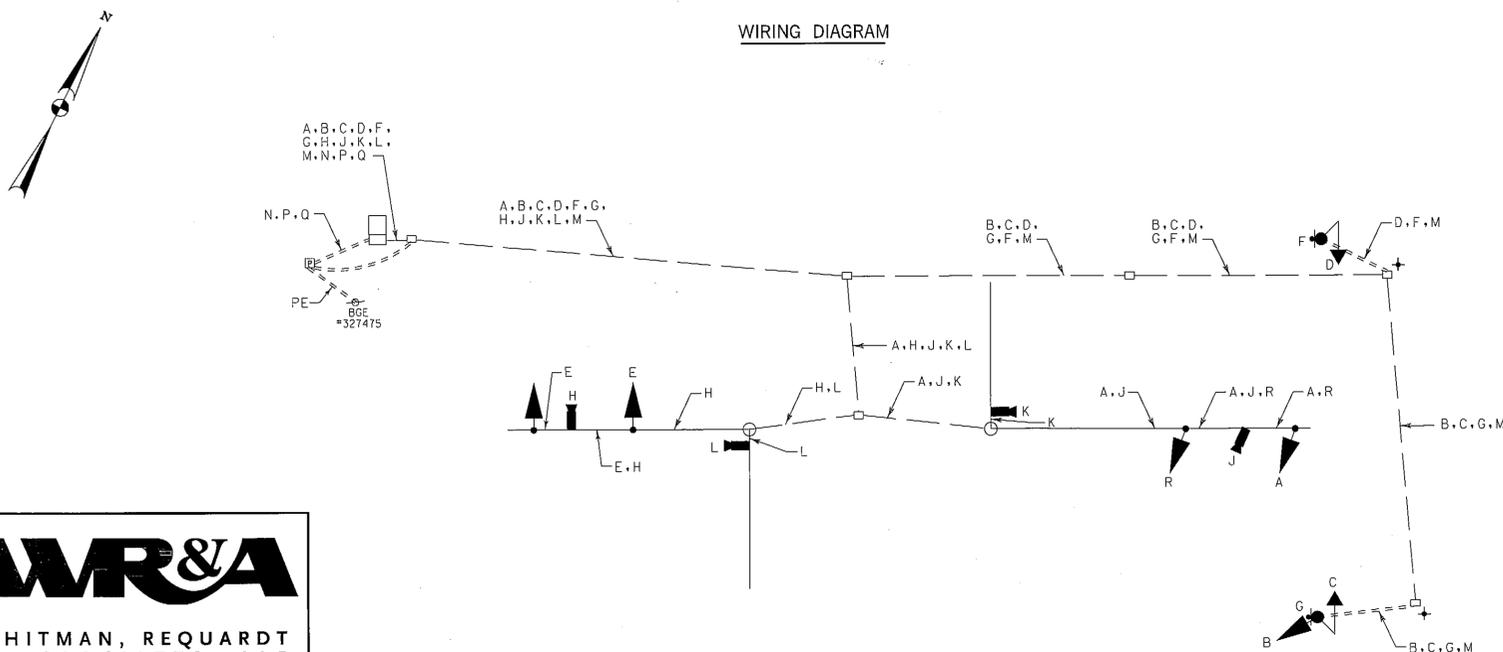
EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2002	3 C.Y.	TEST PIT EXCAVATION
5003	310 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	265 L.F.	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	35 L.F.	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	150 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1265 S.F.	5 INCH CONCRETE SIDEWALK
6003	60 S.F.	DETECTABLE WARNING SURFACE FOR CURB RAMPS (TYPE 3 BRICK PAVERS)
8001	35 EACH	12 INCH LED SIGNAL HEAD SECTION
8008	2 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	2 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8011	1 EACH	CONDUIT BEND IN EXISTING FOUNDATION BASE (ANY SIZE)
8012	1 EACH	EMBEDDED METERED SERVICE PEDESTAL
8016	2 EACH	LED SIGNAL HEAD MODULES (ANY SIZE)
8023	1 EACH	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8028	4 EACH	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8038	75 L.F.	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8040	55 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8041	10 S.F.	REMOVE & RESET DECORATIVE BRICK SIDEWALK
8042	280 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8053	635 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	1035 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	285 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

TOD NO: XX645-03
 SHA NO: BA938B53
 MD 150 @ Pembroke Blvd/48th St.

WIRING DIAGRAM



WIRING KEY

- A } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- C } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- D } VIDEO CAMERA DETECTION LEAD-IN CABLE
- E } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- F } 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G.)
- G } PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE
- H } 3/4 IN. X 10 FT. GROUND ROD

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 MD 150 (EASTERN AVENUE) AT PEMBROOKE BLVD/48TH STREET
 EASTWOOD, MARYLAND

GENERAL INFORMATION SHEET

SCALE	NONE	DATE	JUNE 1, 2011	CONTRACT NO.	XX64503B5
DESIGNED BY	L. WAESCHE	COUNTY	BALTIMORE		
DRAWN BY	L. WAESCHE	LOGMILE	03015000.16		
CHECKED BY	N. LEARY	TIMS NO.	K257		
F.A.P. NO.		TOD NO.			
TS NO.	3619-C	DRAWING	TSP-3	OF 3	SHEET NO. 3 OF 3

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