PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF U.S. 1 (BELAIR ROAD) AND ROSSVILLE BOULEVARD IN BALTIMORE COUNTY, MARYLAND. U.S. 1 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE U.S. 1 APPROACHES OPERATING CONCURRENTLY AND THE ROSSVILLE BOULEVARD APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND AND SOUTHBOUND U.S. 1 APPROACHES.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR EASTBOUND AND WESTBOUND ROSSVILLE BOULEVARD APPROACHES.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE SOUTH LEG OF U.S. 1 AND AND THE EAST LEG OF ROSSVILLE BOULEVARD.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

U.S. 1 (BELAIR ROAD) AND ROSSVILLE BOULEVARD - EAST LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS BELAIR AT ROSSVILLE. CROSSWALK ANGLES RIGHT, WAIT." **

WALK: RAPID TICK

ROSSVILLE BOULEVARD AND U.S. 1 (BELAIR ROAD) - SOUTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS ROSSVILLE AT BELAIR, 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

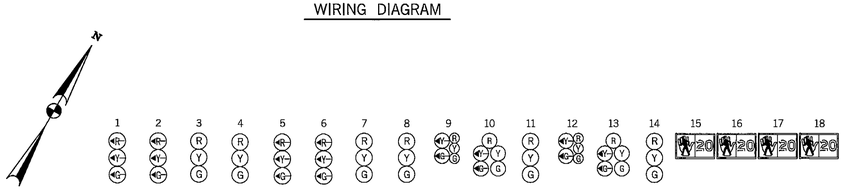
INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, SYSTEM PACKAGE, MASTER CONTROLLER WITH TELEMETRY AND VIDEO INTERFACE EQUIPMENT (5-8 CAMERAS), INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES 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-104.04-03 (LEFT LANE CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)
STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE)
STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)
STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)

WIRING DIAGRAM



PHASE 1 + 5	←G—	←G—	R	R	←G—	←G—	R	R	R	R	R	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	R	R	R	DW	DW	DW	DW
1 + 6 CHANGE	←Y—	←Y—	G	G	←R—	←R—	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 + 5	←R—	←R—	R	R	←G—	←G—	G	G	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	DW	DW	DW	DW
PHASE 2 + 6	←R—	←R—	G	G	←R—	←R—	G	G	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	←R—	←R—	G	G	←R—	←R—	G	G	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	DW	DW	DW	DW
PHASE 3 AND 7	←R—	←R—	R	R	←R—	←R—	R	R	R ←G—	R ←G—	R	R ←G—	R ←G—	R	DW	DW	DW	DW
3 AND 7 CHANGE	PHASE 3 + 7 MAY CHANGE TO PHASE 3 + 8, PHASE 4 + 7 OR PHASE 4 + 8																	
PHASE 3 AND 8	←R—	←R—	R	R	←R—	←R—	R	R	R	R	R	G ←G—	G ←G—	G	DW	DW	DW	DW
3 AND 8 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	R	R	R	G ←Y—	G ←Y—	G	DW	DW	DW	DW
PHASE 4 AND 7	←R—	←R—	R	R	←R—	←R—	R	R	G ←G—	G ←G—	G	R	R	R	DW	DW	DW	DW
4 AND 7 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	G ←Y—	G ←Y—	G	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	←R—	←R—	R	R	←R—	←R—	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 AND 8 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 AND 8 ALT.	←R—	←R—	R	R	←R—	←R—	R	R	G	G	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	←R—	←R—	R	R	←R—	←R—	R	R	G	G	G	G	G	G	DW	DW	FL/DW	FL/DW
4 + 8 ALT. CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	Y	Y	Y	Y	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	DARK	DARK	DARK	DARK

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9000	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED ASC III CONTROLLER
9000	1 EACH	NEMA SIZE "S" BASE MOUNTED CABINET WITH INTERSECTION MONITOR
9045	1 EACH	CONTROLLER, MASTER ASC 10,000 WITH TELEMETRY
9571	132 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) :
	- 4 EACH	D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
	- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (M1-5(6)) "NORTH, US 1, RIGHT ARROW" (24 IN. x 48 IN.) - POLE MOUNT
	- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (M1-5(6)) "NORTH, US 1, LEFT ARROW" (36 IN. x 72 IN.) - POLE MOUNT
	- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (M1-5(6)) "SOUTH, US 1, RIGHT ARROW" (24 IN. x 48 IN.) - POLE MOUNT
	- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (M1-5(6)) "SOUTH, US 1, 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 BELAIR ROAD"
	- 2 EACH	R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS ROSSVILLE BLVD"
	- 2 EACH	R3-5L SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT
	- 2 EACH	R3-5R SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

1. AT THE TIME OF SIGNAL TURN ON, THE EXISTING VIDEO DETECTION CAMERAS AND INTERFACE EQUIPMENT SHALL BECOME PROPERTY OF SHA.
2. ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

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

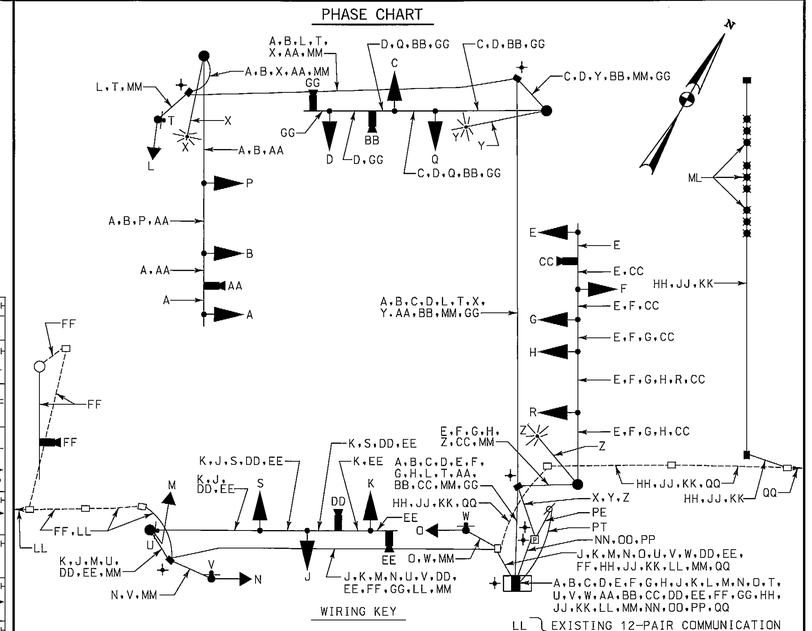
MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 229-2361

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

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

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

PHASE CHART



WIRING KEY

A B C D E F G H J K } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
L M N O P Q R S } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
T U V W } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
X Y Z } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) - TRAY CABLE
AA BB CC DD EE FF GG } VIDEO CAMERA DETECTION LEAD-IN CABLE
HH JJ KK } MICROLOOP PROBE LEAD-IN
LL QQ } EXISTING 12-PAIR COMMUNICATION CABLE (JELLY-FILLED)
MM } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
NN OO PP } 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G.)
ML - MICROLOOP PROBE SET
PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE
PT - PROPOSED UNDERGROUND TELEPHONE SERVICE
⏚ - 3/4 IN. X 10 FT. GROUND ROD

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EACH	MAINTENANCE OF TRAFFIC
2001	2 C.Y.	CLASS 2 EXCAVATION
2002	8 C.Y.	TEST PIT EXCAVATION
5003	400 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5004	355 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	60 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	335 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6003	90 S.F.	DETECTABLE WARNING SURFACES
6002	1235 S.F.	5 INCH CONCRETE SIDEWALK
8001	44 EACH	12 INCH LED SIGNAL HEAD SECTION
8002	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8004	6 EACH	8 INCH LED SIGNAL HEAD SECTION
8005	2 EACH	ADJ EXISTING HANDHOLE TO GRADE INCLUDING COLLAR
8007	3 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
8008	4 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8009	3 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EACH	EMBEDDED METERED SERVICE PEDESTAL
8015	4 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8019	1 EACH	MAST ARM POLE & 60 FT MAST ARM ANY 'T' DIMENSION
8020	3 EACH	MAST ARM POLE & 70 FT MAST ARM ANY 'T' DIMENSION
8022	3 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8023	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8028	7 EACH	VIDEO DETECTION CAMERA & CABLE ANY LENGTH
8033	360 L.F.	DISCONNECT, PULL-BACK & REROUTE CABLES
8034	650 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC
8036	100 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8037	270 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8038	265 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8040	148 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	505 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	100 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG - THHN/THWN
8046	4 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8053	675 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	805 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	2250 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8062	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT (ANY SIZE)

TOD NO: XX645-15
SHA NO: BA938B5C
US 1 @ Rossville Boulevard

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

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

US 1 and Rossville Boulevard

Parkville, Maryland

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE 10/02/2011 CONTRACT NO. XX6455185

DESIGNED BY S. Bloss
DRAWN BY S. Bloss
CHECKED BY N. Leary
F.A.P. NO.
COUNTY Baltimore
LOGMILE 03000117.41
TIMS NO. K691
TOD NO.

TS NO. 2325 | DRAWING TSP-3 OF 3 | SHEET NO. 3 OF 3

PLOTTED: October 17, 2011
FILE: N:\31669-139\CADD\pSG-N003_K691.dgn

BY: sbloss