

**PROJECT DESCRIPTION
GENERAL**

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF US 1 AT MD 430 (GREENBELT ROAD/METZEROTT ROAD IN PRINCE GEORGE'S COUNTY).

INTERSECTION OPERATION

A NEMA 6 CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A SEMI-ACTUATED MODE USING 5 NEMA PHASES. THERE WILL BE AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR THE SOUTHBOUND MOVEMENT OF US 1, WITH A RIGHT TURN OVERLAP FOR MD 430 (GREENBELT RD.) THE US 1 THROUGH MOVEMENT WILL OPERATE CONCURRENTLY WITH A CONCURRENT PEDESTRIAN MOVEMENT ACROSS THE EAST LEG OF THE INTERSECTION. GREENBELT ROAD WILL OPERATE ALONE WITH A SIGNALIZED RIGHT TURN FOR MD 430 (GREENBELT RD.) AND AN ACTUATED PEDESTRIAN MOVEMENT ACROSS THE NORTH LEG OF THE INTERSECTION. AN EXCLUSIVE BICYCLIST-ACTIVATED PHASE IS PROVIDED ACROSS THE SOUTH LEG OF US 1.

SPECIAL NOTES

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

PROJECT CONTACTS:

MR. BRIAN YOUNG, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7358
MR. DUANE BERNARD, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7336
MR. WAYNE MONDY, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 615-7304
MR. AUGIE REBISH, UTILITY ENGINEER
PHONE: (301) 513-7350
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. EDWARD ROSENWITZ, SUPERVISOR, SIGNAL OPERATIONS
PHONE: (410) 787-7652

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00-30, 104.12-01, 104.13-01, 104.31-01, 104.32-01, 104.8-02

3. APS WILL FUNCTION AS FOLLOWS:

- TO CROSS US 1 (BALTIMORE AVENUE)
 - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE MESSAGE WILL BE "WAIT TO CROSS BALTIMORE AT GREENBELT, CROSSWALK ANGLES RIGHT".
 - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS GREENBELT ROAD
 - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE MESSAGE WILL BE "WAIT TO CROSS GREENBELT AT BALTIMORE".
 - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS RIGHT TURN RAMP
 - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE MESSAGE WILL BE "WAIT TO CROSS RAMP AT GREENBELT".
 - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

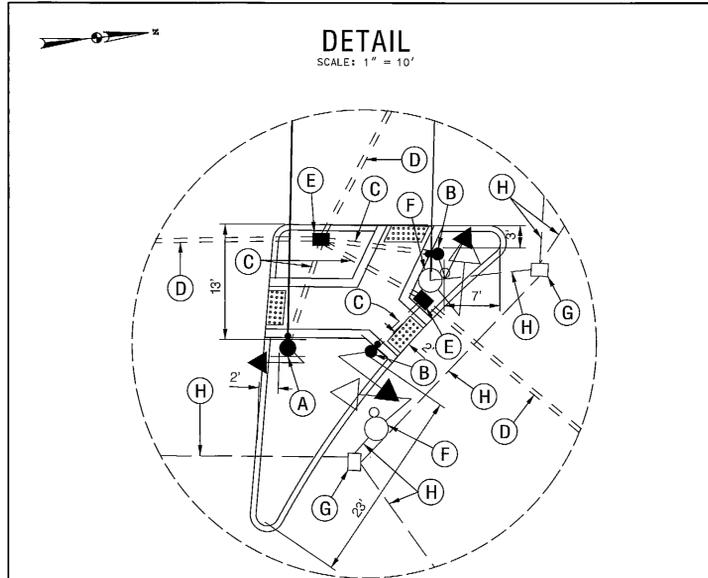
EQUIPMENT LIST

- A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.
 - NONE.
- B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNITS	DESCRIPTION
LUMP SUM	LS	MOBILIZATION.
LUMP SUM	LS	MAINTENANCE OF TRAFFIC.
1	EA	16 FT. STEEL MOMOCURVE MAST ARM POLE WITH A 30 FT. MAST ARM.
1	EA	27 FT. STEEL MAST ARM POLE WITH A 50 FT. MAST ARM.
1	EA	27 FT. STEEL MAST ARM POLE WITH A 60 FT. MAST ARM.
1	EA	14 FT. STEEL PEDESTAL POLE WITH BREAK AWAY TRANSFORMER BASE.
4	EA	10 FT. STEEL PEDESTAL POLE WITH BREAK AWAY TRANSFORMER BASE.
1	EA	20 FT. LUMINARIES ARM
1	EA	250W HPS LAMP AND LUMINARIES
1	EA	STANDARD S.H.A. TRAFFIC SIGNAL CONTROLLER, BASE MOUNTED NEMA 6 CABINET, VIDEO DETECTION INTERFACE, TELEMETRY INTERFACE EQUIPMENT, AND FOUR-CHANNEL LOOP DETECTOR AMPLIFIERS (NOTE: CONTROLLER AND CABINET SHALL BE PURCHASED FROM ECONOLITE AND DELIVERED TO THE S.H.A. SIGNAL SHOP FOR WIRING AND TESTING. CONTACT MR. ED ROSENWITZ (410) 787-7650)
1	EA	12 IN., ONE-WAY, THREE SECTION L.E.D. (R,Y,G) ADJUSTABLE BLACK FACED TRAFFIC SIGNAL HEAD WITH POLE MOUNTING HARDWARE AND TUNNEL VISORS.
6	EA	12 IN., ONE-WAY, THREE SECTION L.E.D. (R,Y,G) ADJUSTABLE BLACK FACED TRAFFIC SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS.
1	EA	12 IN., ONE-WAY, FOUR SECTION L.E.D. (R,R,G,Y) ADJUSTABLE BLACK FACED TRAFFIC SIGNAL HEAD WITH POST TOP MOUNTING HARDWARE AND TUNNEL VISORS. (INSTALL LOUVERS ON SIGNAL HEAD SECTION.)
1	EA	12 IN., ONE-WAY, FIVE SECTION L.E.D. (R,Y,YA,G,GA) ADJUSTABLE BLACK FACED TRAFFIC SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS.
4	EA	16 IN., ONE-WAY, ONE SECTION L.E.D. (COUNTDOWN INDICATIONS) ADJUSTABLE PEDESTRIAN SIGNAL HEAD WITH POST TOP MOUNTING HARDWARE AND CUT-AWAY VISORS.
2	EA	16 IN., ONE-WAY, ONE SECTION L.E.D. (COUNTDOWN INDICATIONS) ADJUSTABLE PEDESTRIAN SIGNAL HEAD WITH POLE MOUNTING HARDWARE AND CUT-AWAY VISORS.
3	EA	VIDEO DETECTION CAMERA AND CABLE. (2 - 200 LF., 1 - 300 LF.)
1	EA	16 IN. x VAR. D-3(1) SIGN (DUAL-FACED) WITH MAST ARM MOUNTING HARDWARE.
2	EA	30 IN. x 36 IN. R 3-5(L) SIGN WITH MAST ARM MOUNTING HARDWARE.
3	EA	24 IN. x 24 IN. R10-11B SIGN WITH MAST ARM MOUNTING HARDWARE.
6	EA	9 IN. x 15 IN. R10-3(1) SIGN FOR POLE MOUNTING.
1	EA	30 IN. x 51 IN. SHIELD ASSEMBLY SIGN WITH POLE MOUNTING HARDWARE.
1	EA	48 IN. x 75 IN. SHIELD ASSEMBLY SIGN WITH POLE MOUNTING HARDWARE.
1	EA	48 IN. x 75 IN. SHIELD ASSEMBLY SIGN FOR GROUND MOUNTING.
34	LF	4 IN. x 6 IN. WOOD SIGN SUPPORTS
1	EA	CENTRAL CONTROL UNIT FOR AUDIBLE PEDESTRIAN PUSHBUTTON.
6	EA	AUDIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH PUSHBUTTON SIGN.
4	EA	NON-INVASIVE PROBE (SET OF 3) WITH 500 FT. LEAD-IN CABLE.

EQUIPMENT LIST CONTINUED

QUANTITY	UNITS	DESCRIPTION
9	CY	TEST PIT EXCAVATION.
7	EA	HANDHOLE.
60	LF	250 KC MIL CABLE.
45	LF	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.).
250	LF	2-CONDUCTOR TRAY CABLE (NO.12 AWG)
780	LF	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.).
1160	LF	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.).
780	LF	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.).
400	LF	BARE COPPER STRANDED GROUND WIRE (NO. 6 A.W.G.).
25	LF	2 IN. POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - TRENCHED.
150	LF	3 IN. POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - TRENCHED.
85	LF	3 IN. POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - BORED.
30	LF	3 IN. RISER.
1	EA	3 IN WEATHERHEAD.
40	LF	4 IN. POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - TRENCHED.
285	LF	4 IN. POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - BORED.
17.5	CY	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT.
9	EA	GROUND ROD - 3/4 IN. DIAMETER x 10 FT. LENGTH.
1	EA	CONTROL & DISTRIBUTION EQUIPMENT FOR ELECTRICAL SERVICE.
300	LF	12 IN. WIDE HAPPTPM - WHITE FOR CROSSWALK.
100	LF	24 IN. WIDE HAPPTPM - WHITE FOR STOP LINE.
1	EA	CUT, CLEAN AND CAP MAST ARM POLE.
LUMP SUM	LS	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT.



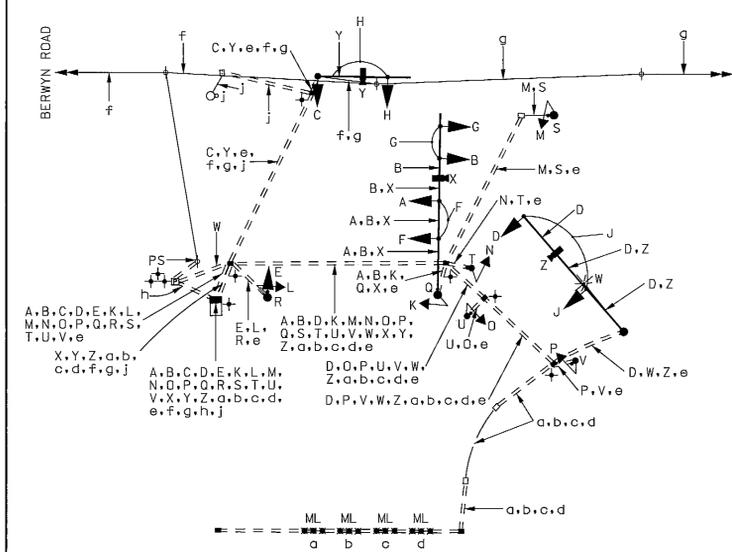
CONSTRUCTION DETAILS

- A. INSTALL A 27 FT. STEEL POLE WITH A 60 FT. MAST ARM WITH SIGNAL HEADS, SIGNS, AND OVERHEAD VIDEO DETECTION CAMERA, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE PEDESTRIAN PUSHBUTTON, AND PEDESTRIAN INSTRUCTIONAL SIGN. (NOTE: ONE 3 IN. PVC SCHEDULE 80 CONDUIT BEND).
- B. INSTALL 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE PEDESTRIAN PUSHBUTTON AND PEDESTRIAN INSTRUCTIONAL SIGN. (NOTE: ONE 3 IN. PVC SCHEDULE 80 CONDUIT BEND)
- C. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- D. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
- E. INSTALL HANDHOLE.
- F. REMOVE EXISTING STEEL POLE AND ALL ATTACHED EQUIPMENT.
- G. REMOVE EXISTING HANDHOLE.
- H. CAP AND ABANDON EXISTING CONDUIT.

Phase Chart

	1	2	3	4	5	6	7	8	9	10-11	12-13	14-15
	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)
PHASE 2 AND 5	R	R	G	G	R	R	R	G	G	DW	DW	DW
5 CHANGE	R	R	G	G	R	R	R	Y	Y	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	R	R	R	R	R	DW	WK	WK
PED CLEARANCE	G	G	G	G	R	R	R	R	R	DW	FL/DW	FL/DW
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW
PHASE 3	R	R	R	R	G	R	R	R	R	DW	DW	DW
3 CHANGE	R	R	R	R	Y	R	R	R	R	DW	DW	DW
PHASE 4	R	R	R	R	R	G	G	G	G	DW	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	G	G	G	G	WK	DW	DW
PED CLEARANCE	R	R	R	R	R	G	G	G	G	FL/DW	DW	DW
4 ALT AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/RR	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK

Wiring Diagram



- KEY**
- A, B, C, D, E } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - F, L, G, M, H, N, O, P, Q, R, S, J, K } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - U, V, W, X, Y, Z } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - W } 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
 - X, Y, Z } VIDEO DETECTION CABLE
 - a, b, c } Non-Invasive Micro-loop Detector Lead-In Cable
 - e } BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
 - f } 12 PAIR INTERCONNECT CABLE (MD 430 - BERWYN RD. RUN)
 - g } 12-PAIR INTERCONNECT CABLE (MD 430 - CHEROKEE ST. RUN)
 - h } 1-CONDUCTOR (NO. 4 A.W.G.) (3 PIECES) FOR TRAFFIC SIGNAL ELECTRICAL SERVICE
 - PS } POWER SERVICE BY PEPCO
 - ML } MICRO-LOOP DETECTOR (NON-INVASIVE)
 - + } GROUND ROD

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MAZZA COMMONS
US 1 (BALTIMORE AVENUE) AND MD 430 (GREENBELT RD.)/METZEROTT RD.

GENERAL INFORMATION PLAN

SCALE: N/A SUBMITTAL DATE: MAY 8, 2009 CONTRACT NO.: BW996M82

DESIGNED BY: F. BROWNLEY COUNTY: PRINCE GEORGE'S
DRAWN BY: F. BROWNLEY LOGMILE: 16000105.03
CHECKED BY: _____ TMS NO.: G832
F.A.P. NO.: N/A TOD NO.: _____

TS NO.1094G-GI DRAWING **SG-02** OF 3 SHEET NO. 2 OF 3

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601

BY: F. Brownley