

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 45 AND MD 138 IN BALTIMORE COUNTY. MD 45 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH AN EXCLUSIVE-PERMISSIVE LEFT TURN PHASE AND FIREHOUSE PRE-EMPTION. THIS SIGNAL WILL BE INTERCONNECTED TO THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 45 AND MD 137.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE AND ONE (1), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER AND VIDEO DETECTION INTERFACE EQUIPMENT HOUSED IN A NEMA "6" BASE MOUNTED CABINET.

SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF THE MSHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR MUST PROVIDE MR. SNYDER WITH THE NEAREST ADDRESS, ZIP CODE, AND PHONE NUMBER.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
9016	1 EA	FOUR CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER
9042	1 EA	CONTROLLER ASC II WITH TELEMETRY
9044	1 EA	BASE MOUNTED CABINET NEMA SIZE 6 WITH SYSTEM PACKAGE
9086	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT 1-4 CAMERAS
9571/9570 R.1	92 SF	SHEET ALUMINUM SIGNS
		1 EACH - D3-2 DUAL FACED SIGN (VAR. X 16") "MONKTON RD WITH ARROW" - MAST ARM MOUNT
		2 EACH - W3-3 SIGN (36" X 36"), "NEW" PANEL (24" X 24") AND FLAGS - GROUND MOUNT
		1 EACH - D3-2 SINGLE FACE SIGN (VAR. X 16"), "YORK RD" MAST ARM MOUNT
		1 EACH - R10-11 SIGN (24" X 24"), MAST ARM MOUNT
		1 EACH - R10-6 SIGN (24" X 30"), GROUND MOUNT
		2 EACH - ASSOCIATED SHIELD ASSEMBLY (30" X 51"), GROUND MOUNT

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EA	MAINTENANCE OF TRAFFIC
2002	4 CY	TEST PIT EXCAVATION
5002	300 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING - ANY WIDTH
5005	70 LF	FURNISH AND INSTALL 24 IN. HEAT APPLIED WHITE PERMANENT PERFORMED THERMOPLASTIC PAVEMENT MARKING
5001	80 LF	FURNISH AND INSTALL 5 IN. HEAT APPLIED WHITE PERMANENT PAVEMENT MARKING
8020	2 EA	FURNISH AND INSTALL MICRO-LOOP PROBE ANY LENGTH LEAD-IN CABLE UP TO 1000 FT.
8037	150 LF	FURNISH AND INSTALL WOOD SIGN SUPPORT 4 IN. X 4 IN.
8041	275 LF	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8034	220,650 LF	FURNISH AND INSTALL SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT UP TO 4 IN. -SLOTTED
8038	170,110 LF	FURNISH AND INSTALL SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT UP TO 4 IN. -BORED
8035	615,500 LF	FURNISH AND INSTALL SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT UP TO 4 IN. -TRENCHED
8045	315 80 LF	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 A.W.G. THINWALL
8021	2 EA	FURNISH AND INSTALL NON-INVASIVE MICRO-LOOP PROBE WITH 500 FT. LEAD-IN
8047	3 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8039	92 SF	INSTALL OVERHEAD AND GROUND MOUNTED SIGN
8026	2 EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
8017	1 EA	FURNISH AND INSTALL 16.5 FT. MAST ARM POLE AND 80 FT. MAST ARM (15 FT. "T" DIMENSION)
8009	2 EA	FURNISH AND INSTALL PEDESTAL POLE ANY SIZE
6 EA	6 EA	FURNISH AND INSTALL GROUND ROD- 1/4 IN. DIAMETER X 10 FT. LENGTH
8004	3 EA	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8001	42 EA	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8052	1 EA	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
8056	50 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
8057	975 LF	FURNISH AND INSTALL ELECTRICAL CABLE 3-CONDUCTOR (NO. 14 A.W.G.)
8055	600 LF	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8065	1 EA	CLASS 2 EXCAVATION
2001	5 CY	FURNISH AND INSTALL 4 IN. CONCRETE SIDEWALK
6002	200 SF	FURNISH AND INSTALL 12 PAIR COMMUNICATION, JELLY-FILLED
8029	450 LF	FURNISH AND INSTALL FIREHOUSE PRE-EMPTION PUSHBUTTONS, ASSOCIATED CONDUIT & HARDWARE
8033	1 EA	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
8022	1 EA	FURNISH AND INSTALL SERVICE PEDESTAL
8043	1 EA	FURNISH AND INSTALL SAWCUT FOR SIGNAL LOOP DETECTOR
8060	390 LF	

Revision 1, Dennis J. Dada - 8/10/2006

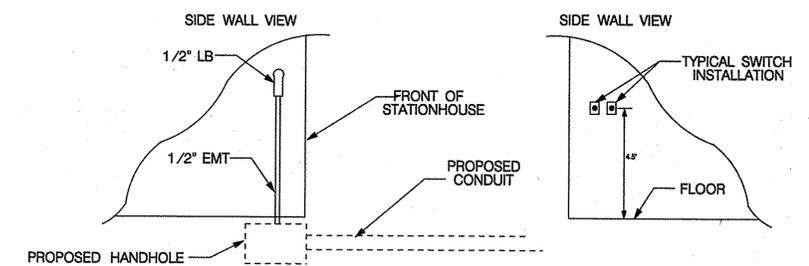
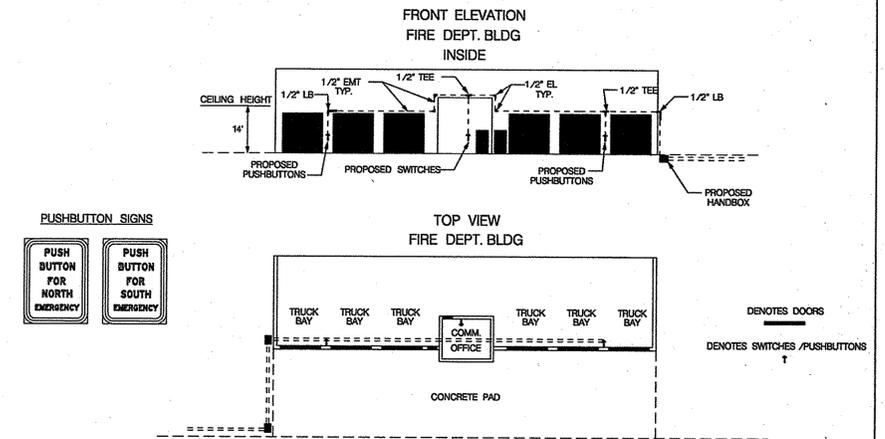
EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

ALL SIGNAL EQUIPMENT TO BE REMOVED AND NOT RETURNED TO THE SHA SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

FIREHOUSE PUSHBUTTON INSTALLATION DETAIL



FIRE DEPT. CONTACT
 MARK GARDNER ASST. CHIEF CELL PHONE 443-791-2289
 FIRE CHIEF CHUCK BOLLINGER
 FIREHOUSE PHONES
 410-887-1934 410-357-4443

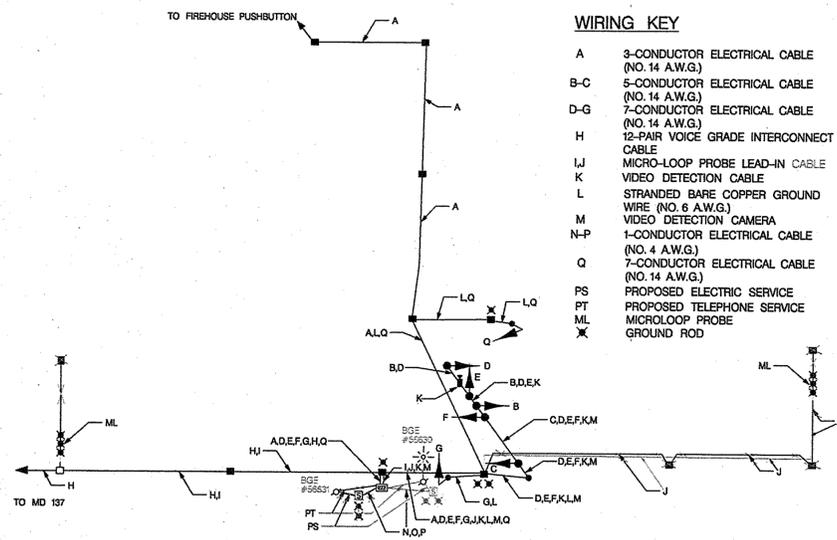
CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MR. RANDALL SCOTT
 ASSISTANT DISTRICT ENGINEER - TRAFFIC (410) 321-2781
 MR. STEVE MARCISZEWSKI
 ASSISTANT DISTRICT ENGINEER - MAINTENANCE (410) 321-2761
 MIKE PASQUARIELLO
 ASSISTANT DISTRICT ENGINEER - UTILITIES (410) 321-2843

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR.
 CHIEF, TRAFFIC OPERATIONS (410) 787-7630
 MR. EUGENE BAILEY
 TEAM LEADER SIGN OPERATIONS (410) 787-7676
 MR. ROBERT SNYDER
 ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS (410) 787-7631
 MS. DARLENE EIDE
 SUPPLY OFFICE
 SIGNAL SHOP WAREHOUSE (410) 787-7668
 MR. ED RODENHIZER
 TEAM LEADER SIGNAL OPERATIONS (410) 787-7652

WIRING DIAGRAM



WIRING KEY

A	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
B-C	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
D-G	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
H	12-PAIR VOICE GRADE INTERCONNECT CABLE
I, J	MICRO-LOOP PROBE LEAD-IN CABLE
K	VIDEO DETECTION CABLE
L	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
M	VIDEO DETECTION CAMERA
N-P	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
Q	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
PS	PROPOSED ELECTRIC SERVICE
PT	PROPOSED TELEPHONE SERVICE
ML	MICROLOOP PROBE
X	GROUND ROD

PHASING CHART

	1	2	3	4	5	6	7
PHASE 1 & 6	R	R	G	G	G	R	R
1 & 6 CHANGE	R	R	G	G	G	R	R
PHASE 2 & 6	G	G	G	G	G	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R
PHASE 4	R	R	R	R	R	G	G
4 CHANGE	R	R	R	R	R	Y	Y
PRE-EMPTION	R	R	R	R	R	G	G
CHANGE	R	R	R	R	R	Y	Y
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLR	FLR

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

GENERAL INFORMATION PLAN
 MD 45 (YORK RD.) AND
 MD 138 (MONKTON RD.)

SCALE NONE DATE 6-18-06 CONTRACT NO. AT9155185

DESIGNED BY T. ZAYDEL COUNTY BALTIMORE
 DRAWN BY T. ZAYDEL LOGMILE 03045016.06
 CHECKED BY K. SCHMID T.I.M.S. NO. H 148
 F.A.P. NO. NA TOD NO.

DRAWING NO. TS-4480 GI SHEET NO. 3 OF 3

Revision 2
 CHANGE BGE POLE FOR ELECTRIC SERVICE.
 REPLACE NON-INVASIVE WITH REGULAR
 LOOP PROBES.
 S.H.A. NO. AT9155185 11/5/2006
 Revision 1, Dennis J. Dada - 8/10/2006
 Correct Item Numbers and Quantities