PROJECT DESCRIPTION

GENERAL

THIS PROJECT CONSISTS OF THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL, WITH INTERCONNECT, AT THE INTERSECTION OF US 50 AND MD 16 IN DORCHESTER COUNTY. US 50 IS ASSUMED TO RUN IN AN EAST/WEST DIRECTION.
THE EXISTING TRAFFIC SIGNAL AT THIS LOCATION SHALL REMAIN OPERABLE AND IN USE UNTIL THE NEW SIGNAL IS RUNNING.

INTERSECTION OPERATION

AN EIGHT (8) PHASE (FULLY-ACTUATED) SYSTEM READY CONTROLLER WITH SIX (6) RACK MOUNTED LOOP DETECTOR AMPLIFIERS AND OPTICOM PRE-EMPTION EQUIPMENT HOUSED IN A SIZE SIX (6) BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION.
THE SIGNAL WILL OPERATE IN A NEMA, SIX-PHASE, FULLY-ACTUATED MODE.
EXCLUSIVE/PERMISSIVE LEFT-TURN PHASES EXIST FOR BOTH EASTBOUND AND WESTBOUND US 50.
MD 16 AND THE HYATT ENTRANCE WILL OPERATE IN A SPLIT PHASE.

PROJECT CONTACTS

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TRAFFIC OPERATIONS DIVISION
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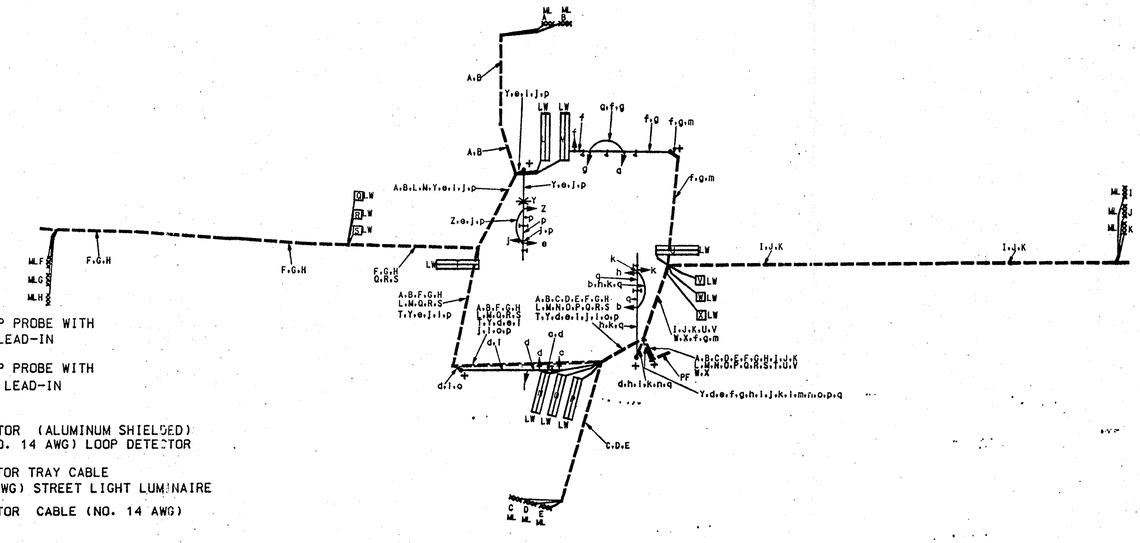
EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY THE ADMINISTRATION

DESCRIPTION	SPECIFICATION SECTION	UNIT	QUANTITY
SHEET ALUMINUM SIGNS CONSISTING OF	813	S.F.	146
24"x51" GUIDE SHIELD ASSEMBLY (WEST, 50, RIGHT ARROW)		EA.	1
24"x51" GUIDE SHIELD ASSEMBLY (EAST, 50, RIGHT ARROW)		EA.	1
30"x75" GUIDE SHIELD ASSEMBLY (EAST, 50, LEFT ARROW)		EA.	1
30"x75" GUIDE SHIELD ASSEMBLY (WEST, 50, LEFT ARROW)		EA.	1
36"x42", R3-5(L) - MAST ARM MOUNTED		EA.	2
36"x42", R3-6 - MAST ARM MOUNTED		EA.	1
VARx16", D3-1 - MAST ARM MOUNTED		EA.	4
36"x42", R10-12 - MAST ARM MOUNTED		EA.	2
36"x42", R3-5(R) - MAST ARM MOUNTED		EA.	1
EIGHT PHASE (FULLY-ACTUATED) CONTROLLER AND CABINET - BASE MOUNT	816	EA.	1
FOUR CHANNEL RACK-MOUNTED LOOP DETECTOR AMPLIFIER (DELAY OUTPUT)	817	EA.	6

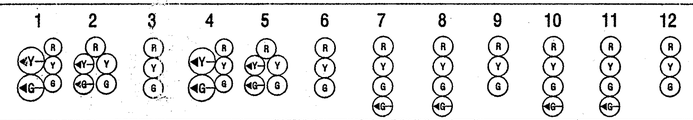
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

DESCRIPTION	SPECIFICATION SECTION	UNIT	QUANTITY
FURNISH AND INSTALL 24 IN. WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKING	556	L.F.	250
FURNISH AND INSTALL PERMANENT AND PREFORMED PAVEMENT MARKING LETTER	556	EA.	8
FURNISH AND INSTALL PERMANENT AND PREFORMED PAVEMENT MARKING ARROW	556	EA.	6
FURNISH AND INSTALL CONCRETE FOUNDATION FOR TRAFFIC SIGNAL STRUCTURE	801	C.Y.	19
FURNISH AND INSTALL GROUND ROD ¾ IN. DIAMETER X 10' LENGTH	804	EA.	5
FURNISH AND INSTALL 4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	805	L.F.	25
FURNISH AND INSTALL 4" SCHEDULE 80 RIGID PVC CONDUIT - BORED	805	L.F.	375
FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	805	L.F.	925
FURNISH AND INSTALL 1" LIQUID TIGHT FLEXIBLE CONDUIT FOR DETECTOR WIRE SLEEVE	805	L.F.	80
FURNISH AND INSTALL 1" ELECTRICAL CONDUIT - GALVANIZED SLEEVE	805	L.F.	135
FURNISH AND INSTALL 250-WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCELL	806	EA.	1
FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT	807	EA.	1
FURNISH AND INSTALL 2-CONDUCTOR - TRAY CABLE (NO. 12 AWG)	810	L.F.	350
FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG (ALUMINUM SHIELDED)	810	L.F.	2590
FURNISH AND INSTALL OPTICOM CABLE - 4 CONDUCTOR	810	L.F.	500
FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG	810	L.F.	115
FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG	810	L.F.	1730
FURNISH AND INSTALL LOOP DETECTOR WIRE ENCASED IN FLEXIBLE TUBING NO. 14 AWG	810	L.F.	4145
FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE	810	L.F.	450
FURNISH AND INSTALL ELECTRICAL HANDHOLE	811	EA.	15
INSTALL OVERHEAD SIGN	813	S.F.	146
8 IN. TRAFFIC SIGNAL HEAD SECTION	814	EA.	6
12 IN. TRAFFIC SIGNAL HEAD SECTION	814	EA.	42
FURNISH AND INSTALL SAWCUT FOR SIGNAL LOOP DETECTOR	815	L.F.	1900
FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN	815	EA.	5
FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FT. LEAD-IN	815	EA.	6
INSTALL CONTROLLER AND CABINET- BASE MOUNTED	816	EA.	1
FURNISH AND INSTALL 27' STEEL POLE WITH SINGLE 70' MAST ARMS AND ANCHOR BOLTS	818	EA.	3
FURNISH AND INSTALL 27' STEEL POLE WITH SINGLE 60' MAST ARMS AND ANCHOR BOLTS	818	EA.	1
FURNISH AND INSTALL 20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	818	EA.	1
CLEAN, CUT AND GALVANIZE STEEL MAST ARM OR POLE TOP	SP	EA.	4
FURNISH AND INSTALL 3M OPTICOM PRE-EMPTION DETECTOR EYE	SP	EA.	2
REMOVE AND SALVAGE TRAFFIC SIGNAL EQUIPMENT	SP	L.S.	L.S.
DELIVERY OF SALVAGED TRAFFIC SIGNAL EQUIPMENT	SP	L.S.	L.S.
REMOVE AND DISPOSE OF TRAFFIC SIGNAL EQUIPMENT	SP	L.S.	L.S.



WIRING KEY

A,B,C,D,E	MICROLOOP PROBE WITH 500 FT. LEAD-IN
F,G,H,I J,K	MICROLOOP PROBE WITH 1000 FT. LEAD-IN
L,M,N,O P,Q,R,S T,U,V,W,X	2 CONDUCTOR (ALUMINUM SHIELDED) CABLE (NO. 14 AWG) LOOP DETECTOR
Y	2 CONDUCTOR TRAY CABLE (NO. 12 AWG) STREET LIGHT LUMINAIRE
Z,a,b,c	5 CONDUCTOR CABLE (NO. 14 AWG)
d,e,f,g h,i,j,k	7 CONDUCTOR CABLE (NO. 14 AWG)
l,m,n,o	1 CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
p,q	4 CONDUCTOR OPTICOM CABLE
ML	MICROLOOP PROBE SET
LW	LOOP DETECTOR WIRE
PF	PROPOSED ELECTRICAL FEED
✦	GROUND ROD



	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 & 5	◀G-R	◀G-R	R	◀G-R	◀G-R	R	R	R	R	R	R	R
1 & 5 CHANGE	CONTROLLER MAY CHANGE TO 1 & 6, 2 & 5, OR 2 & 6											
PHASE 1 & 6	◀G-G	◀G-G	G	R	R	R	R	R	R	R	R	R
1 CHANGE	◀Y-G	◀Y-G	G	R	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	◀G-G	◀G-G	G	R	R	R	R	R	R
5 CHANGE	R	R	R	◀Y-G	◀Y-G	G	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	R	R	R	◀G-G	◀G-G	G
3 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y
PHASE 4	R	R	R	R	R	R	◀G-G	◀G-G	G	R	R	R
4 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

FIREHOUSE PRE-EMPTION PHASING

PRE-EMPTION PHASE 2 & 5	R	R	R	◀G-G	◀G-G	G	R	R	R	R	R	R
PRE-EMPTION CLEARANCE	R	R	R	◀Y-Y	◀Y-Y	Y	R	R	R	R	R	R
PHASE 2 & 6 NORMAL	G	G	G	G	G	G	R	R	R	R	R	R
PRE-EMPTION PHASE 1 & 6	◀G-G	◀G-G	G	R	R	R	R	R	R	R	R	R
PRE-EMPTION CLEARANCE	◀Y-Y	◀Y-Y	Y	R	R	R	R	R	R	R	R	R
PHASE 2 & 6 NORMAL	G	G	G	G	G	G	R	R	R	R	R	R

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
U.S. 50 SIX-LANE RECONSTRUCTION
FROM WOODS ROAD TO BUCKTOWN ROAD

DRAWN BY: W.J.H.	F.A.P. NO. SEE TITLE SHEET	TS NO. 1609E	SHEET NO. 28 OF 47
CHECKED BY: W.J.H.	S.H.A. NO. D057851/70		
SCALE: NONE	COUNTY: DORCHESTER	T.I.M.S. NO.	
DATE: FEBRUARY, 2000	LOG MILE:		