PROJECT DESCRIPTION [5]

GENERAL

△ THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF A CONTROLLER AND TRAFFIC SIGNALS INCLUDING THE RELOCATION OF VIDEO TRAFFIC EQUIPMENT FOR THIS PHASE OF MAINTENANCE OF WORK AT THE INTERSECTION OF MD 450 AT HILLMEADE ROAD IN PRINCE GEORGES'S COUNTY. MD 450 IS ASSUMED TO RUN IN AN EAST/WEST DIRECTION.

INTERSECTION OPERATION

~~THE INTERSECTION WILL OPERATE IN A NEMA TWO-PHASE FULLY ACTUATED MODE.~~

[5] THE INTERSECTION WILL BE MODIFIED TO OPERATE IN A NEMA-SIX-PHASE FULLY ACTUATED MODE.

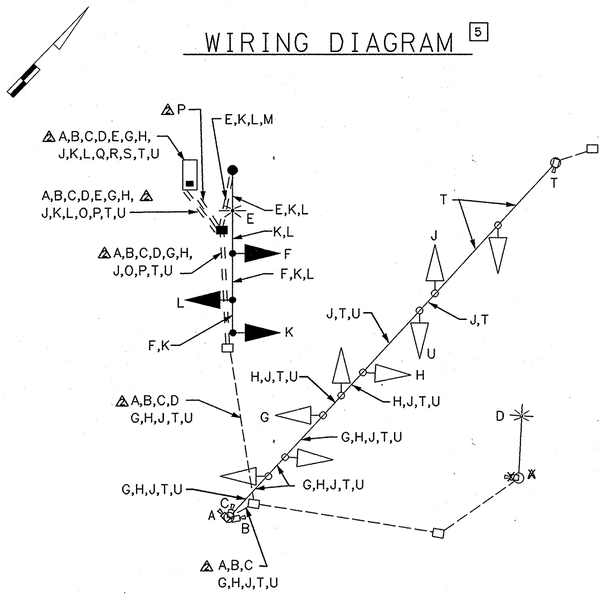
CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, SOLID STATE EIGHT PHASE CONTROLLER WITH SYSTEM PACKAGE, VIDEO DETECTOR RACK, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, TELEMETRY MODULE, ISOLATION BOARD AND SPECIAL RELAY, HOUSED IN NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTE

ALL UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE BECAUSE THESE UTILITIES MAY BE MODIFIED PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER IMMEDIATELY.

WIRING DIAGRAM [5]



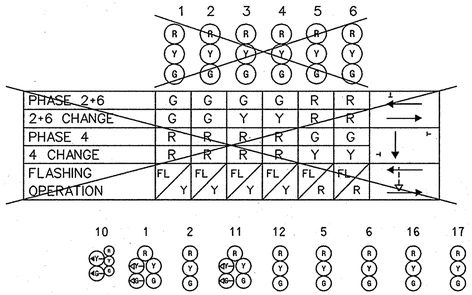
A,B,C,T	VIDEO DETETCTOR CABLE	G,H,J K,L,U	ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)
D,E	ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 AWG)	△ M,N O,P	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
F	ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)	△ Q,R,S	ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 AWG)

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CAT CODE NUMBER	SPEC. SECTION	QUANTITY	DESCRIPTION
971017	816	1 EA.	EIGHT PHASE FULL TRAFFIC ACTUATED SOLID STATE DIGITAL CONTROLLER WITH SYSTEM PACKAGE, HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
973023	813	27 S.F.	SHEET ALUMINUM SIGN TO CONSIST OF: -1 EA. R3-5R (30 IN. X 36 IN.)-MAST ARM MOUNT -1 EA. D3-2 (16 IN. X VAR.)-MAST ARM MOUNT -1 EA. ASSOCIATED SHIELD ASSEMBLY (30 IN. X 51 IN.)-POLE MOUNT

PHASE CHART [5]



	1	2	3	4	5	6
~~PHASE 2+6~~	G	G	G	G	R	R
~~2+6 CHANGE~~	G	G	Y	Y	R	R
~~PHASE 4~~	R	R	R	R	G	G
~~4 CHANGE~~	R	R	R	R	Y	Y
~~FLASHING OPERATION~~	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R

	10	1	2	11	12	5	6	16	17
Phase 1 & 5	R ←G—	R ←G—	R	R ←G—	R	R	R	R	R
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6									
Phase 1 & 6	G ←G—	G ←G—	G	R	R	R	R	R	R
1 Change	G ←Y—	G ←Y—	G	R	R	R	R	R	R
Phase 2 & 5	R	R	R	G ←G—	G	R	R	R	R
5 Change	R	R	R	G ←Y—	G	R	R	R	R
Phase 2 & 6	G	G	G	G	G	R	R	R	R
2 & 6 Change	Y	Y	Y	Y	Y	R	R	R	R
Phase 4 & 8	R	R	R	R	R	G	G	G	G
4 & 8 Change	R	R	R	R	R	Y	Y	Y	Y
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT CODE NUMBER	SPEC. SECTION	QUANTITY	DESCRIPTION
203030	205	△ 2 C.Y.	TEST PIT EXCAVATION
585624	556	60 L.F.	24 IN. HEAT APPLIED THERMOPLASTIC WHITE PAVEMENT MARKING
801004	801	△ 6 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
802501	805	△ 165 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810010	810	45 L.F.	ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 AWG)
811001	811	1 EA.	ELECTRICAL HANDHOLE
813015	813	△ 27 S.F.	INSTALL OVERHEAD SIGN
818052	818	1 EA.	27 FT. STEEL POLE WITH 70 FT. MAST ARM
831010	806	1 EA.	250 WATT HPS LUMINAIRE WITH PHOTOCELL
837001	804	△ 2 EA.	GROUND ROD ¾ IN. X 10 FT. LENGTH
838003	807	1 EA.	CONTROL AND DISTRIBUTION EQUIPMENT (120/240V 1 PHASE, 3 WIRE SYSTEM)
860270	814	3 EA.	8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860272	814	[5] 10 ~~8~~ EA.	12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861107	810	35 L.F.	ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)
861108	810	[5] 600 ~~△ 300~~ L.F.	ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)
861116	810	△ 120 L.F.	ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 AWG)
866104	818	1 EA.	20 FT. LIGHTING ARM ON SIGNAL STRUCTURE
870163	805	△ 22 L.F.	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
870166	805	△ 40 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
870167	805	△ 47 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELETRICAL CONDUIT-BORED
871117	816	[1] 1 ~~56~~ EA.	INSTALL CONTROLLER AND CABINET-BASE MOUNT
800000	805	[1] 1 ~~LS~~ EA.	REROUTE EXISTING CABLE
△ 800000	XXX	1 L.S.	REMOVE AND DISPOSE OF EXISTING MATERIAL

EQUIPMENT LIST "C"

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CABINET. CABINET AND ALL OTHER MATERIALS SHALL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.

Redline Revision

[5] REDLINE REVISION 5 DATE 10/8/03

[1] REDLINE NO. 1

△2 ADDENDUM #2 10/11/2001

The Traffic Group
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THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION SHEET
MD 450 FROM MD 193 TO STONYBROOK DRIVE
MD 450 AT HILLMEADE ROAD - PHASE II

DRAWN BY: MB	F.A.P. NO. SEE TITLE SHEET	TS NO. TS-1618B-2PH2A	SHEET NO.
CHECKED BY: STB	S.H.A. NO. PG9005571		
SCALE: NONE	COUNTY: PRINCE GEORGE'S	T.I.M.S. NO. D 538	406 OF 545
DATE: OCTOBER 2001	LOG MILE: 9.75		

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8/12/2003