PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INITIAL MODIFICATION AND INSTALLATION OF A NEW CONTROLLER WITH VIDEO DETECTION AND SIGNALS FOR THIS PHASE OF MAINTENANCE OF WORK AT THE INTERSECTION OF MD 450 AT HIGHBRIDGE ROAD. MD 450 IS ASSUMED TO RUN IN AN EAST/WEST DIRECTION.

INTERSECTION OPERATION

△ THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA-THREE-PHASE FULLY ACTUATED MODE. THE EXISTING INTERCONNECT WILL BE TAKEN OUT OF SERVICE DURING THIS PORTION OF THE PROJECT.

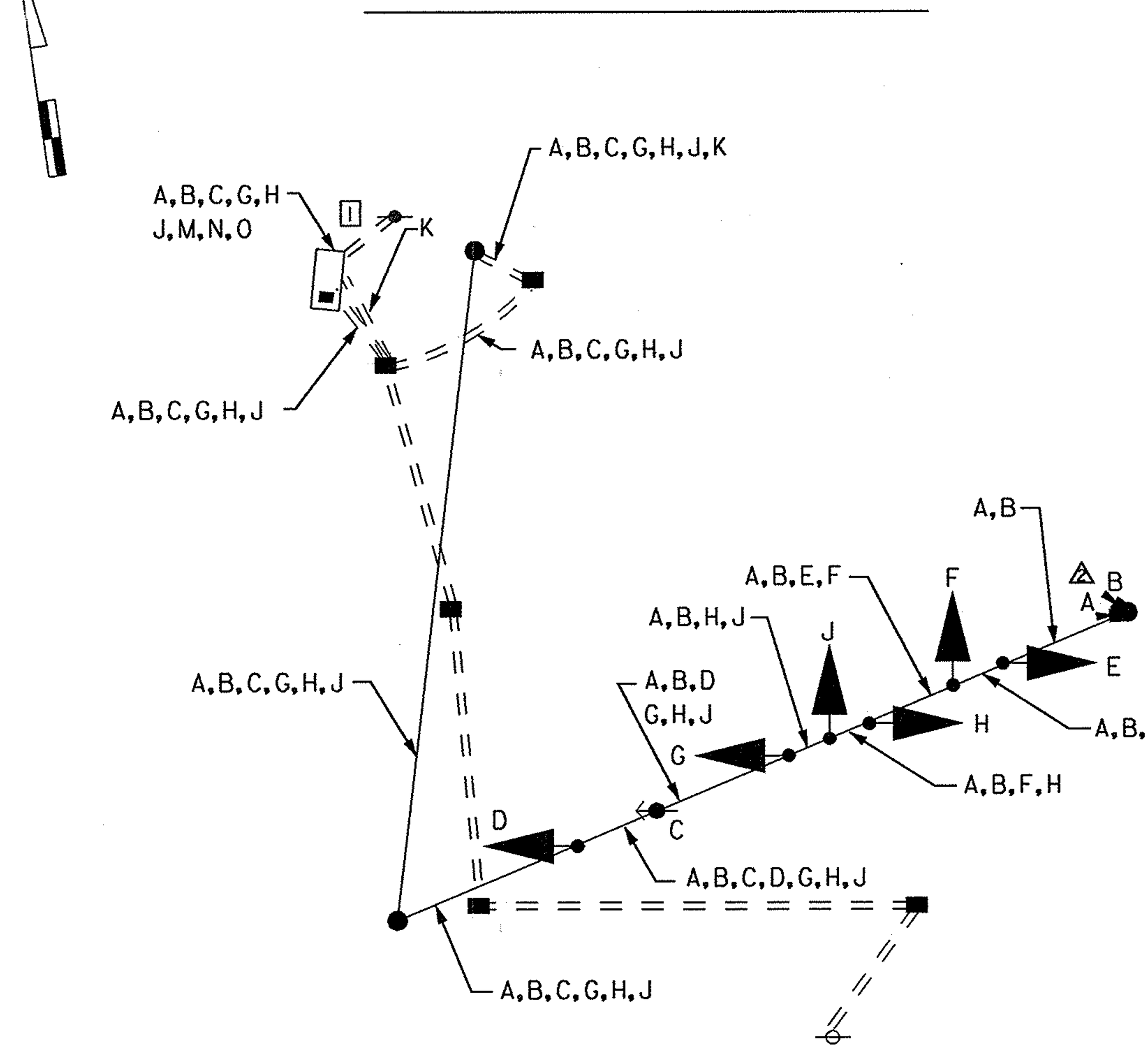
CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, SOLID STATE EIGHT PHASE CONTROLLER WITH SYSTEM PACKAGE, VIDEO DETECTOR RACK, 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



A,B	VIDEO TRAFFIC DETECTOR CABLE	G,H,J	ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)
C	ELECTRICAL CABLE 4-CONDUCTOR (NO. 20 AWG)	K,L	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
D,E,F	ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)	M,N,O	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	△ 52 S.F.	SHEET ALUMINUM SIGN TO CONSIST OF: -2 EA. D3-2 (16 IN. X VAR.)-SPAN MOUNT -1 EA. ASSOCIATED SHIELD ASSEMBLY (30 IN. X 51 IN.)-POLE MOUNT -1 EA. ASSOCIATED SHIELD ASSEMBLY (48 IN. X 75 IN.)-POLE MOUNT
△ 900000	807	1 EA.	OPTICOM DISCRIMINATOR MODULE

PHASE CHART

	△ 1	2	3	4	5	6	
△ PHASE 1+6	G ◄G–	G	R	R	R	R	
△ 1+6 CHANGE	G ◄Y–	G	R	R	R	R	
PHASE 2+6	G	G	G	G	R	R	
2+6 CHANGE	Y	Y	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	

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT CODE NUMBER	SPEC. SECTION	QUANTITY	DESCRIPTION
203030	205	1 C.Y.	TEST PIT EXCAVATION
585624	556	△ 150 L.F.	24 IN. HEAT APPLIED THERMOPLASTIC WHITE PAVEMENT MARKING
801004	801	2 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
802501	805	80 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810010	810	△ 45 L.F.	ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 AWG)
811001	811	5 EA.	ELECTRICAL HANDHOLE
813015	813	△ 52 S.F.	INSTALL OVERHEAD SIGN
833062	805	△ 40 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-RISER
837001	804	1 EA.	GROUND ROD 3/4 IN. X 10 FT. LENGTH
838003	807	1 EA.	CONTROL AND DISTRIBUTION EQUIPMENT (120/240V 1 PHASE, 3 WIRE SYSTEM)
860272	814	△ 20 EA.	12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861107	810	△ 140 L.F.	ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)
861108	810	△ 1195 L.F.	ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)
869101	819	330 L.F.	1/4 IN. STEEL TETHER WIRE
869102	819	330 L.F.	3/8 IN. STEEL SPAN WIRE
△ 870166	805	90 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
870167	805	△ 150 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-BORED
870168	805	△ 61 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-SLOTED
871117	816	1 EA.	INSTALL CONTROLLER AND CABINET-BASE MOUNT
800000	805	1 EA.	VIDEO DETECTION SYSTEM
800000	805	△ 2 EA.	VIDEO DETECTOR 500 FT. CABLE
△ 800000	807	1 EA.	OPTICOM DETECTOR EYE
△ 800000	810	360 L.F.	ELECTRICAL CABLE 4-CONDUCTOR (NO. 20 AWG)
800000	818	3 EA.	40 FT. CLASS II WOOD STRAIN POLE WITH TWO BACK GUYS
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 BECOME THE PROPERTY OF THE CONTRACTOR.

[1] REDLINE NO. 1 5/6/02

△2 ADDENDUM #2 10/11/2001

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

GENERAL INFORMATION SHEET
MD 450 - MD 193 TO STONYBROOK DRIVE
MD 450 AT HIGHBRIDGE ROAD - PHASE I

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

DRAWN BY:	MB	F.A.P. NO.	SEE TITLE SHEET	TS NO. △ TS-3193C-2PHIA	SHEET NO.
CHECKED BY:	STB	S.H.A. NO.	PG9005571		
SCALE:	NONE	COUNTY:	PRINCE GEORGE'S	T.I.M.S. NO. D 538	410 OF 545
DATE:	OCTOBER 2001	LOG MILE:	10.44		