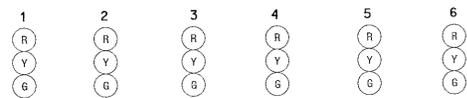


PHASE CHART



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	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	↔
OPERATION							

PROJECT DESCRIPTION

GENERAL
THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT MD 7 AND INDUSTRIAL PARK ROAD IN BALTIMORE COUNTY. MD 7 IS ASSUMED TO RUN IN A EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE SIGNAL WILL OPERATE IN A NEMA THREE-PHASE, FULL-TRAFFIC-ACTUATED MODE, WITH MD 7 APPROACHES RUNNING CONCURRENTLY AND INDUSTRIAL PARK ROAD RUNNING ALONE.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH THREE (3) FOUR-CHANNEL, TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIERS, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, HOUSED IN A NEMA SIZE 6 BASE MOUNTED CABINET.

SPECIAL NOTE:

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7631 TO ARRANGE FOR THE PHONE DROP LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE NUMBER.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #4 ARE AS FOLLOWS:
MR. DAVID MALKOWSKI DISTRICT ENGINEER
PHONE: (410) 321-2780

MR. PHILIP HUMBERTSON SPECIAL PROJECTS
PHONE: (410) 321-2851

THE POWER COMPANY REPRESENTATIVE IS:

BALTIMORE GAS ELECTRIC COMPANY
MR. JOSEPH G. BUNCH
INDUSTRIAL / COMMERCIAL SERVICES
NEW BUSINESS CONSTRUCTION
7317 PARKWAY DRIVE SOUTH
PHONE: (410) 859-9030

MR. RANDALL SCOTT ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 321-2781

MR. JOE McMAHON UTILITY ENGINEER
PHONE: (410) 321-2780

MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA

SPEC. SECTION.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
813	973023	10 S.F.	SHEET ALUMINUM SIGNS 1 EACH D3-2 SIGN (VARIABLE x 16 IN.) (ADVANCE STREET NAME PANEL) MAST ARM MOUNT
816	900000	3 EACH	FOUR CHANNEL LOOP DETECTOR AMPLIFIER (DELAY OUTPUT)
816	971017	1 EACH	EIGHT-PHASE FULLY-ACTUATED TRAFFIC SIGNAL CONTROLLER IN A NEMA SIZE 6 BASE MOUNTED CABINET

EQUIPMENT LIST "B"

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

SPEC. SECTION.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
104	120500	L.S.	MAINTENANCE OF TRAFFIC
104	114250	1 EACH	FURNISH AND INSTALL REMOVABLE PREFORMED PAVEMENT MARKING ARROW
205	203030	2 C.Y.	TEST PIT EXCAVATION
801	801004	11 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
804	837001	2 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
805	805011	70 L.F.	FURNISH AND INSTALL 1 IN. GALVANIZED ELECTRICAL CONDUIT FOR DETECTOR SLEEVE
805	805160	10 L.F.	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
805	870160	105 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	870166	60 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	870163	65 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
806	831010	1 EACH	FURNISH AND INSTALL 250 WATT H.P.S. LAMP AND LUMINAIRE WITH PHOTOCCELL
807	807205	1 EACH	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
810	800000	10 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3-CONDUCTOR (NO. 4 AWG)
810	800000	1 EACH	FURNISH AND INSTALL MICRO-LOOP PROBE SET 1,000' LEAD-IN
810	862101	1,755 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE TUBING (NO 14 AWG)
810	800000	1 EACH	FURNISH AND INSTALL LOOP DETECTOR SPLICE TO EXISTING 2-CONDUCTOR ALUMINUM SHIELDED CABLE
810	861104	1,400 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2-CONDUCTOR (ALUMINUM SHIELDED)
810	861116	460 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2-CONDUCTOR (NO 12 AWG)
810	861107	120 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5-CONDUCTOR (NO. 14 AWG)
810	861108	920 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7-CONDUCTOR (NO. 14 AWG)
810	802501	660 L.F.	FURNISH AND INSTALL NO.6 STRANDED BARE COPPER GROUND WIRE
811	811011	4 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813	813015	10 S.F.	INSTALL OVERHEAD SIGN
814	860272	6 EACH	FURNISH AND INSTALL 12 INCH BLACK FACE VEHICULAR TRAFFIC SIGNAL HEAD SECTION
815	862102	930 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
816	871117	1 EACH	INSTALL EIGHT-PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNTED
818	866104	1 EACH	FURNISH AND INSTALL 20 FT LIGHTING ARM ON SIGNAL STRUCTURE
818	818052	2 EACH	FURNISH AND INSTALL 27' STEEL POLE AND 70 FT MAST ARM
-----	800000	4 EACH	FURNISH AND INSTALL 3" WEATHER HEAD
-----	869102	450 L.F.	FURNISH AND INSTALL 3/8" SPAN WIRE

EQUIPMENT LIST "B"

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

SPEC. SECTION.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
-----	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIALS AND EQUIPMENT
-----	873001	L.S.	REMOVE EXISTING SIGNAL EQUIPMENT TO BE REUSED
* -----	800000	L.S.	DELIVERY OF SALVAGED MATERIALS

* NON FEDERAL AID

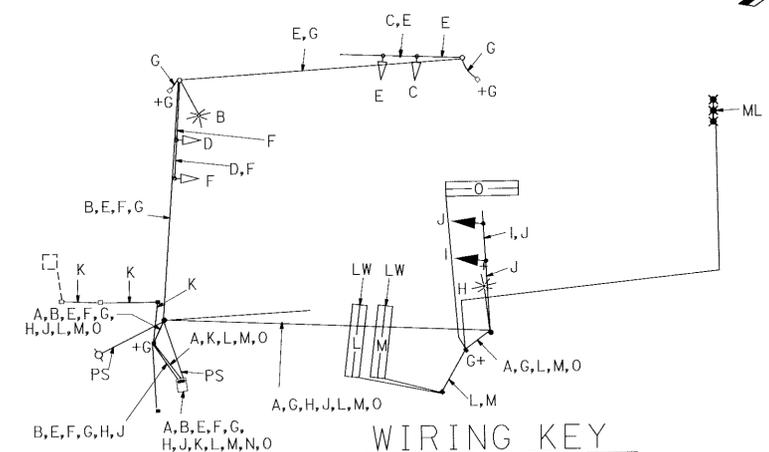
EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE HIGHWAY ADMINISTRATION, 7941 CONNELLEY DRIVE, HANOVER, MARYLAND 21076

QUANTITY	DESCRIPTION
2 EACH	STEEL POLE WITH 70' MAST ARM
1 EACH	CONTROLLER AND BASE MOUNTED CABINET

NOTE: 1. THE CONTRACTOR SHALL NOTIFY THE SHA AT 410-787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.
2. ALL EQUIPMENT TO BE REMOVED AND NOT LISTED ABOVE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

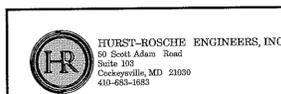
WIRING DIAGRAM



WIRING KEY

A	} - MICRO-LOOP PROBE SET WITH 1,000' LEAD IN	B, H	- 2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 14 AWG)
C, D, I	} - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	ML	- MICRO-LOOP PROBE SET
E, F, J	} - 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	PS	- PROPOSED OVERHEAD ELECTRICAL SERVICE
G	} - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)	+	- EXISTING 3/4 IN. x 1/2 IN. GROUND ROD
K, L, M, O	} - 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)		
N	} - 3-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)		

PHASE I
TEMPORARY TRAFFIC SIGNAL



GEOMETRIC LEGEND	
---	EXISTING GEOMETRICS
---	PROPOSED GEOMETRICS

UTILITY LEGEND	
---	GAS MAIN
---	WATER MAIN
---	SEWER MAIN
---	ELECTRIC CABLES
---	STORM DRAIN
---	AERIAL CABLES
---	TELEPHONE CABLES

REVISIONS	
NOVEMBER, 2000	MODIFY SIGNAL FOR NEW GEOMETRICS

APPROVALS	
ASST. TRAFFIC ENGINEERING DESIGN DIVISION	
ASST. DISTRICT ENGINEER, TRAFFIC	
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION	
DIRECTOR, TRAFFIC & SAFETY	



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(Traffic Signal Plan)

MD 7 (Philadelphia Road) at
Industrial Park Road

DRAWN BY: A.A.	F.A.P. NO. N/A	TS NO. 3561A-X1
CHECKED BY: J.A.B.	S.H.A. NO. BW813-802-412	T.I.M.S. NO. D770
SCALE: 1" = 20'	COUNTY: BALTIMORE	
DATE: 9-26-95	LOG MILE: 03000706.62	