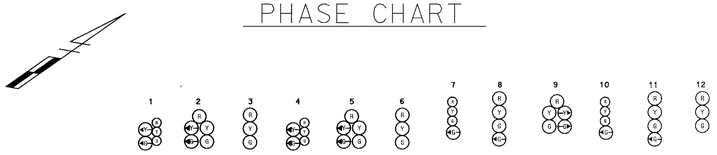
PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 + 5	R ◄G–	R ◄G–	R	R ◄G–	R ◄G–	R	R	R	R –G►	R	R	R
1 + 5 CHANGE	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 –G►	R	R	R
1 + 6 CHANGE	G ◄Y–	G ◄Y–	Y	R	R	R	R	R	R –Y►	R	R	R
PHASE 2 + 5	R	R	R	G ◄G–	G ◄G–	G	R	R	R	R	R	R
2 + 5 CHANGE	R	R	R	G ◄Y–	G ◄Y–	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	G ◄Y–	G ◄Y–	G	R	R	R
3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R
PHASE 4	R	R	R	R	R	R	R	R	R	G ◄G–	G ◄G–	G
4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y
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

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC SIGNAL AT MD 7 AND CAMPBELL BLVD. IN BALTIMORE COUNTY. MD 7 IS ASSUMED TO RUN IN A EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE SIGNAL WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH MD 7 APPROACHES RUNNING CONCURRENTLY AND CAMPBELL BLVD. APPROACHES RUNNING SPLIT PHASE WITH A RIGHT TURN OVERLAP FROM CAMPBELL BLVD. TO MD 7 WB. EXCLUSIVE PERMISSIVE LEFT TURN PHASING WILL BE PROVEDED FOR BOTH APPROACHES OF MD ROUTE 7.

WIRING KEY

A – E } – MICRO-LOOP PROBE SET WITH 500' LEAD-IN

D,E } – MICRO-LOOP PROBE SET WITH 1000' LEAD-IN

F } – 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG)

G,H } – 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

I,J,K,L } – 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

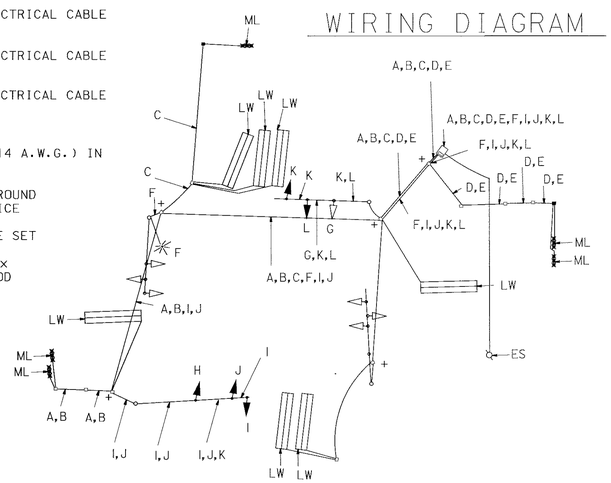
LW – LOOP WIRE (NO. 14 A.W.G.) IN FLEXIBLE TUBING

ES – EXISTING UNDERGROUND ELECTRICAL SERVICE

ML – MICRO-LOOP PROBE SET

\+ – EXISTING 3/4 IN. x 10 FT. GROUND ROD

WIRING DIAGRAM



EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA

SPEC. SECTION.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
813	973023	66.7 S.F.	SHEET ALUMINUM SIGNS

1 EACH W9-2(4) SIGN (30 IN. x 42 IN.)
LANE ENDS MERGE LEFT
MAST ARM MOUNT

1 EACH R3-6(L) SIGN (30 IN. x 36 IN.)
LANE USE CONTROL - LEFT THRU
MAST ARM MOUNT

1 EACH R3-5(R) SIGN (30 IN. x 36 IN.)
LANE USE CONTROL - RIGHT ARROW
MAST ARM MOUNT

1 EACH R3-5(L) SIGN (30 IN. x 36 IN.)
LANE USE CONTROL - LEFT ARROW
MAST ARM MOUNT

1 EACH R3-8 MODIFIED SIGN (48 IN. x 30 IN.)
LANE USE CONTROL - LEFT / COMBINATION LEFT AND THRU / RIGHT ARROW
GROUND MOUNTED

1 EACH ONE PIECE SHIELD ASSEMBLY ON A BLACK BACKGROUND - (24". x 51") POLE MOUNT:
M3-4 SIGN (24" x 12") "WEST" (FOR INDEPENDENT USE)
M1-6 SIGN(24" x 24") "MARYLAND 7" (FOR INDEPENDENT USE)
M6-1 SIGN (21" x 15") "DIRECTIONAL - ARROW - HORIZONAL"

1 EACH ONE PIECE SHIELD ASSEMBLY ON A BLACK BACKGROUND - (36". x 75") POLE MOUNT:
M3-2 SIGN (30" x 15") "EAST" (FOR INDEPENDENT USE)
M1-6 SIGN(36" x 36") "MARYLAND 7" (FOR INDEPENDENT USE)
M6-1 SIGN (30" x 24") "DIRECTIONAL - ARROW - HORIZONAL"

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
555	585448	2 EACH	FURNISH & INSTALL WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW
556	585624	155 L.F.	FURNISH & INSTALL 24" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE)
805	805160	44 L.F.	FURNISH & INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
805	805011	50 L.F.	FURNISH & INSTALL 1 IN. GALVANIZED ELECTRICAL CONDUIT FOR DETECTOR SLEEVE
805	870160	150 L.F.	FURNISH & INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
806	831010	1 EACH	FURNISH AND INSTALL 250 WATT H.P.S. LAMP AND LUMINAIRE WITH PHOTOCELL
810	810011	8 EACH	FURNISH AND INSTALL LOOP DETECTOR SPLICE TO EXISTING 2-CONDUCTOR (ALUMINUM SHIELDED) CABLE.
810	861116	260 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2-CONDUCTOR (NO 12 AWG)
810	861108	1585 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7-CONDUCTOR (NO 14 AWG)
810	862101	3805 L.F.	FURNISH & INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE TUBING (NO. 14 AWG)
810	800000	3 EACH	FURNISH & INSTALL MICRO-LOOP PROBE SET WITH 500' LEAD-IN.
810	800000	2 EACH	FURNISH & INSTALL MICRO-LOOP PROBE SET WITH 1,000' LEAD-IN.
811	811001	2 EACH	FURNISH & INSTALL ELECTRICAL HANDHOLE
812	801106	18 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORT 4" x 6"
813	813014	8.2 S.F.	INSTALL GROUND MOUNTED SIGN
813	813015	58.5 S.F.	INSTALL OVERHEAD SIGN
814	860265	2 EACH.	RELOCATE EXISTING SIGNAL HEAD
814	800000	15 EACH	FURNISH AND INSTALL 12" BLACK FACE VEHICULAR TRAFFIC SIGNAL HEAD SECTIONS
814	800000	6 EACH	FURNISH AND INSTALL 8" BLACK FACE VEHICULAR TRAFFIC SIGNAL HEAD SECTIONS
814	800000	1 EACH	RELOCATE EXISTING SIGN ON MAST ARM
815	862102	1140 L.F.	FURNISH & INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
818	800000	1 EACH	FURNISH & INSTALL 15' LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
------	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
----	800000	3 EACH	ADJUST HANDHOLE TO GRADE
----	800000	1 EACH	UNCOVER EXISTING SIGN
----	800000	2 EACH	UNCOVER EXISTING SIGNAL HEAD
----	800000	1 EACH	REMOVE 40' CLASS 2 WOOD POLE WITH BACK GUYS

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #4 ARE AS FOLLOWS:

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

MR. DAVID MALKOWSKI
DISTRICT ENGINEER
PHONE: (410) 321-2780

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

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

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

GEOMETRIC LEGEND
EXISTING GEOMETRICS
PROPOSED GEOMETRICS

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

HURST-ROSCHE ENGINEERS, INC.
50 Scott Adam Road
Suite 103
Cockeysville, MD 21030
410-683-3883

REVISIONS

© NOVEMBER, 2000
MODIFY SIGNAL FOR NEW GEOMETRICS
S.H.A. No.BA2135176
DLA GCK

Ⓑ Febuary 10, 1999
ASBUILT
S.H.A. No.BW996M82
FJH

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

FINAL SIGNAL PLAN SS-6

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

MD 7 (Philadelphia Road) at Campbell Blvd./CARMAX

DRAWN BY: A. A.	F.A.P. NO. N/A	TS NO. 3517C-GI1	SHEET NO.
CHECKED BY: J. A. B.	S.H.A. NO. BW789-802-412		
SCALE: 1" = 20'	COUNTY: BALTIMORE	T.I.M.S. NO. D770	202 OF 237
DATE: February 23, 1995	LOG MILE: 03000706.01		