

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a Traffic Control Signal at the intersection of MD 372 (Wilkins Ave.) and Valley Road in Baltimore County. The existing street lighting is provided on the utility poles.

MD 372 (Wilkins Ave.) is assumed to run in an east-west direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA three-phase, fully-actuated mode. MD 372 (Wilkins Ave.) approaches shall run concurrently. Valley Road approach shall run alone.
- A full-traffic-actuated, eight-phase controller with two (2) four-channel, rack mount loop detector amplifiers, and detector rack power supply, with all necessary equipment and their harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES:

- Upon completion of this project, the Contractor shall notify Mr. Robert Snyder at (410) 787-7631 to arrange for the phone line installation. The Contractor is to provide Mr. Robert Snyder with the nearest street address, zip code and phone number.

A. EQUIPMENT TO BE SUPPLIED BY S.H.A. AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
9063	4 EA.	12" 0+0 gauge 30' steel strain pole, (four-anchor bolts 1/4" x 90").
9081	1 EA.	Eight-phase, full-traffic-actuated, solid state digital controller with two (2) 4-channel, rack mount loop detector amplifiers, and detector rack power supply, and all necessary equipment housed in a NEMA size "6" base-mounted cabinet.
9089	121 S.F.	Flat sheet aluminum sign consisting of : 1 EA. Associated shield assembly "EAST, MD 372, LEFT ARROW", pole mounted sign and hardware, (30" x 51"). 1 EA. Associated shield assembly "WEST, MD 372, RIGHT ARROW", pole mounted sign and hardware, (48" x 75"). 4 EA. W3-3 NEW "SIGNAL AHEAD" , (36" x 36") ground mounted sign with hardware. 3 EA. D3-2 " Valley RD" , (variable x 16") black on orange - ground mounted sign with hardware. 1 EA. D3-2 " Wilkens AVE", (variable x 18") black on orange - ground mounted sign with hardware. 1 EA. R1-2 "YIELD" , (36" x 36" x 36") ground mounted sign and hardware. 1 EA. R4-7 "KEEP RIGHT" , (24" x 30") ground mounted sign with hardware.
9090	30 S.F.	Flat sheet aluminum sign (green) consisting of: 2 EA. D3-2 " Valley RD", dual faced sign, span wire mounted (variable x 16") 1 EA. D3-2 " Wilkens AVE" sign, span wire mounted (variable x 16").

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EA.	Maintenance of traffic.
2001	5 C.Y.	Test pit excavation.
5002	180 L.F.	12" white heat applied permanent preformed thermoplastic pavement markings.
5004	185 L.F.	24" white heat applied permanent preformed thermoplastic pavement markings.
8001	13 C.Y.	Furnish and install concrete foundation.
8009	450 L.F.	Furnish and install steel span wire 3/8" diameter.
8016	1 EA.	Furnish and install microloop probe set with 500' lead-in.
8017	4 EA.	Furnish and install microloop probe set with 1000' lead-in.
8020	1 EA.	Install base-mounted cabinet and controller.
8021	145 L.F.	Furnish and install sawcut for signal loop detector.
8023	40 L.F.	Furnish and install 1" liquid tight flexible non-metallic conduit for detector sleeve.
8024	15 L.F.	Furnish and install 2" polyvinyl chloride electrical conduit (Schedule 80) trenched.
8027	650 L.F.	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) trenched.
8030	35 L.F.	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) trenched.
8032	50 L.F.	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) bored.
8033	10 EA.	Furnish and install electrical handhole.
8034	5 EA.	Furnish and install ground rod (3/4" dia. x 10' length).
8040	500 L.F.	Furnish and install loop wire encased in flexible tubing (No. 14 A.W.G.).
8041	40 L.F.	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) aluminum shielded.
8044	120 L.F.	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).
8045	1000 L.F.	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).

B. EQUIPMENT LIST (CONT.).

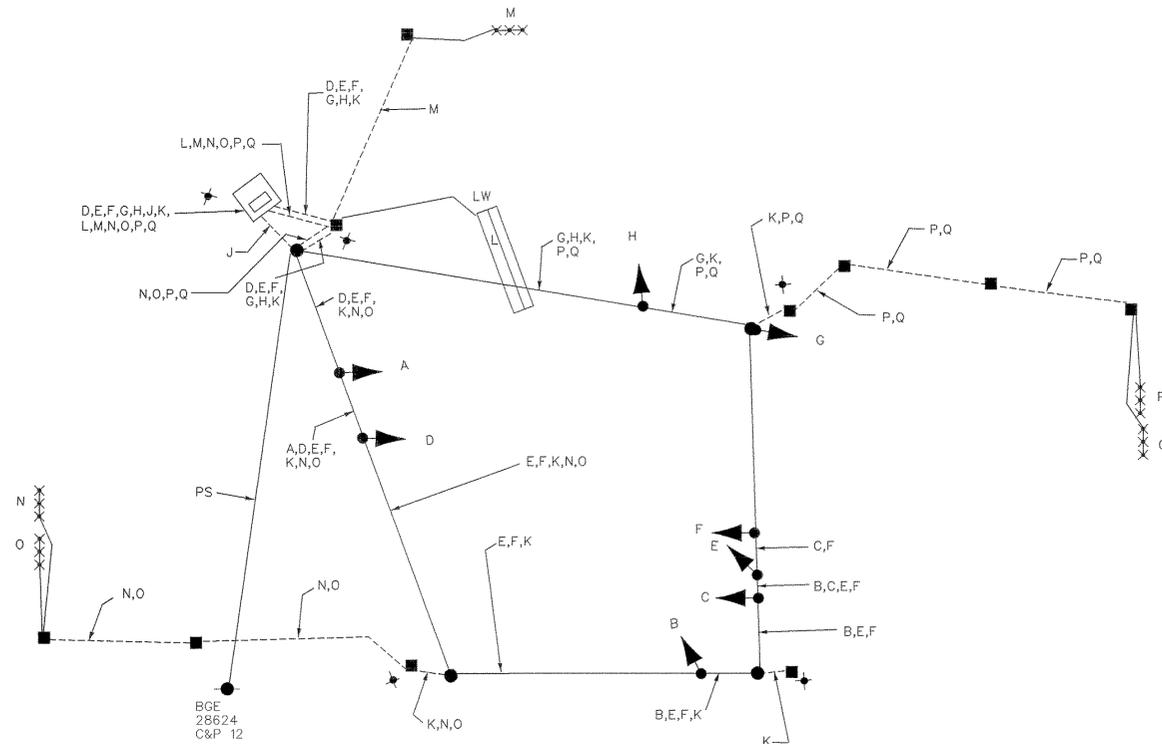
ITEM NO.	QUANTITY	DESCRIPTION
8048	100 L.F.	Furnish and install stranded bare copper ground wire (No. 6 A.W.G.).
8049	75 L.F.	Furnish and install 1-conductor electrical cable (No. 4 A.W.G.) THHN/THWN.
8050	18 L.F.	Furnish and install wood sign supports (4" x 4").
8051	72 L.F.	Furnish and install wood sign supports (4" x 6").
8052	121 S.F.	Install ground mounted sign
8053	30 S.F.	Install overhead mounted sign.
8065	30 L.F.	Install 1" rigid metal electrical galvanized- riser.
8066	1 EA.	Furnish and install control and distribution equipment.
8073	4 EA.	Install 12" x 30' steel strain pole.
8084	24 EA.	Furnish and install 12" vehicular traffic signal head section.



WIRING KEY

A	}	5- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
B		
C		
D	}	7- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
E		
F		
G		
J	-	1- CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.) THHN/THWN
K	-	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
L	-	2- CONDUCTOR (NO. 14 A.W.G.) ELECTRICAL CABLE ALUMINUM SHIELDED
M	-	MIRCOLOOP PROBE SET 500' LEAD-IN
N	}	MIRCOLOOP PROBE SET 1000' LEAD-IN
O		
P		
Q	-	GROUND ROD (3/4" DIA. X 10')
LW	-	LOOP WIRE (NO. 14 A.W.G.)
PS	-	PROPOSED OVERHEAD SERVICE INSTALLED BY BG&E

WIRING DIAGRAM



PHASE CHART

	1	2	3	4	5	6	7	8
	R	R	R	R	R	R	R	R
	Y	Y	Y	Y	Y	Y	Y	Y
	G	G	G	G	G	G	G	G
PHASE 2 & 6	G	G	G	G	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R
PHASE 4	R	R	R	R	G	G	G	G
4 CHANGE	R	R	R	R	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
Office of Traffic & Safety  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
MD 372 @ VALLEY ROAD

DRAWN BY: MILESKY	COUNTY: BALTIMORE	TS NO. 3985GI	SHEET NO. 2 OF 2
CHECK BY: RRZ	LOG MILE: 03037201.03	T.I.M.S. NO. D457	
DATE: 02/24/00	F.A.P. NO. AC-STPG-0005(688)E		
SCALE: N/A	S.H.A. NO. XX1005485		