PROJECT DESCRIPTION
GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF MD 458 AT WEST AVE/ ENTRANCE TO GIANT FOOD IN PRINCE GEORGE'S COUNTY. THE GIANT FOOD ENTRANCE IS BEING ADDED AS A FOURTH LEG.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES. THERE IS AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR BOTH THE NORTH AND SOUTHBOUND MOVEMENTS OF MD 458. THE MD 458 THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY WITH AN ACTUATED PEDESTRIAN MOVEMENT ACROSS THE EAST AND WEST LEGS. THE WEST AVE./ GIANT FOOD ENTRANCE THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY WITH AN ACTUATED PEDESTRIAN MOVEMENT ALONG THE SOUTH LEG. OLD SILVER HILL RD WILL OPERATE IN A LAG MOVEMENT.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

Quantity	Units	Description
Lump Sum	LS	Mobilization.
Lump Sum	LS	Maintenance of traffic.
3	EA	10 ft. steel pedestal pole with break-away base.
1	EA	27 ft. steel mast arm pole with a 50 ft. mast arm
1	EA	27 ft. steel mast arm pole with a 60 ft. mast arm
2	EA	27 ft. steel mast arm pole with a 70 ft. mast arm
1	EA	Standard S.H.A. traffic signal controller, base mounted cabinet, 2 video detector interface panels, central control unit for audible pedestrian pushbuttons and telemetry interface equipment. (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).
12	EA	12 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	12 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with side pole mounting hardware and tunnel visors.
4	EA	12 in., one-way, three section L.E.D. (RA,YA,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
3	EA	16 in. one-way, one section L.E.D. (countdown indications) adjustable pedestrian signal head with post top mounting hardware and cut away visors.
3	EA	16 in. one-way, one section L.E.D. (countdown indications) adjustable pedestrian signal head with side pole mounting hardware and cut away visors.
5	EA	Video Detection Camera and cable. (2 - 200 LF, 2 - 300 LF, 1 400 LF)
2	EA	16 in. x Var. D-3(I) (dual face) sign with mast arm mounting hardware.
3	EA	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
1	EA	24 in. x 30 in. R 10-11(a) sign with mast arm mounting hardware.
1	EA	24 in. x 30 in. R 10-11(a) sign with pole mounting hardware.
4	EA	18 in. x 24 in. R 4-7 sign for ground mounting.
6	EA	9 in x 15 in. R 10-3(I) pedestrian education sign with pole mounting hardware.
2	EA	24 in. x 36 in. R 10-6 sign for ground mounting.
2	EA	72 in. x 24 in. M 95-1 sign with mast arm mounting hardware.
3	EA	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
6	EA	Audible pedestrian pushbutton assembly.
3	EA	Non-invasive micro-loop probe (set of 3) with 500 ft. lead-in.
3	EA	Non-invasive micro-loop probe (set of 3) with 1000 ft. lead-in.
1	EA	15 ft. luminaire arm.
1	EA	20 ft. luminaire arm.
2	EA	250 W H.P.S. lamp and luminaire.
5	CY	Test pit excavation.
14	EA	Handhole.
50	LF	1-conductor electrical cable (250 kcmil) for PEPCO.
420	LF	2-conductor electrical tray cable (No. 12 A.W.G.).
880	LF	2-conductor electrical cable (No. 14 A.W.G.).
1020	LF	5-conductor electrical cable (No. 14 A.W.G.).

GENERAL NOTES (CONT. FROM SHEET 1)

8. PUSH BUTTON ARE TO BE LOCATED SO THAT A PEDESTRIAN IN A WHEELCHAIR LOCATED ON THE LEVEL LANDING AREA DOES NOT HAVE TO REACH MORE THAN 18".
9. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. THE 10 FT. SEPARATION BETWEEN PUSH BUTTONS IS TO BE MEASURED FROM FACE OF PUSH BUTTON TO FACE OF PUSH BUTTON NOT CENTER TO CENTER OF POLE
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING APS EQUIPMENT FOR PROGRAMING TO MD-SHA SIGNAL SHOP.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:
MR. BRIAN YOUNG, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404
MR. DUANE BERNARD, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7336
MR. WAYNE MOWDY, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 615-7304
MR. AUGIE REBISH, UTILITY ENGINEER
PHONE: (301) 513-7350
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

2. APS WILL FUNCTION AS FOLLOWS:

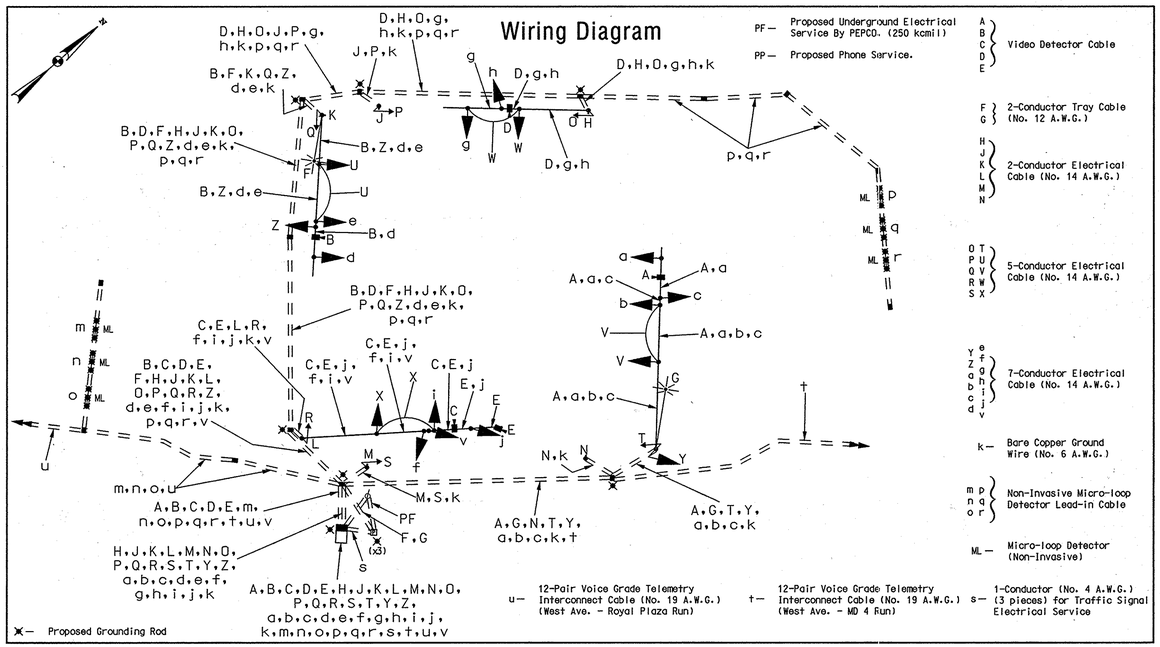
WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE:
- FOR THE SOUTH LEG "WAIT TO CROSS SILVER HILL RD AT WEST AVE".
- FOR THE EAST LEG "WAIT TO CROSS WEST AVE. AT SILVER HILL RD. CROSSWALK ANGLES SLIGHTLY LEFT.
- FOR THE WEST LEG "WAIT TO CROSS GIANT FOOD ENTRANCE AT SILVER HILL ROAD"

WHEN THE WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST (Cont.)

2815	LF	7-conductor electrical cable (No. 14 A.W.G.).
460	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
25	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
725	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
195	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
45	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
320	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
18.65	CY	Concrete foundation for traffic signal equipment.
10	EA	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	Electrical utility service equipment (120/240 V, one phase, three wire system) for an underground electrical power service as per MD-SHA Typical No. 807.05-01 (200 amp. electrical pedestal).
470	LF	12 in. wide HAPPTPM - white for crosswalk.
160	LF	24 in. wide HAPPTPM - white for stop line.
90	LF	4 in. x 4 in. wood sign support.
90	LF	4 in. x 6 in. wood sign support.
2	EA	Remove ground mounted sign.
2	EA	Cut, clean, and cap mast arm pole.
10	LF	U-Guard channel riser.

Wiring Diagram



Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	49	17-20	21,22	
	←R— ←Y— ←G—	←R— ←Y— ←G—	R Y G	R Y G	←R— ←Y— ←G—	←R— ←Y— ←G—	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	🚶 ✋	🚶 ✋	
PHASE 1 AND 5	←G—	←G—	R	R	←G—	←G—	R	R	R	R	R	R	R	R	R	R	R	DW	DW	
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																				
PHASE 1 AND 6	←G—	←G—	G	G	←R—	←R—	R	R	R	R	R	R	R	R	R	R	R	DW	DW	
1 AND 6 CHANGE	←Y—	←Y—	Y	Y	←R—	←R—	R	R	R	R	R	R	R	R	R	R	R	DW	DW	
PHASE 2 AND 5	←R—	←R—	R	R	←G—	←G—	G	G	R	R	R	R	R	R	R	R	R	DW	DW	
2 AND 5 CHANGE	←R—	←R—	R	R	←Y—	←Y—	Y	Y	R	R	R	R	R	R	R	R	R	DW	DW	
PHASE 2 AND 6	←R—	←R—	G	G	←R—	←R—	G	G	R	R	R	R	R	R	R	R	R	WK	DW	
PED CLEARANCE	←R—	←R—	G	G	←R—	←R—	G	G	R	R	R	R	R	R	R	R	R	FL/DW	DW	
2 AND 6 CHANGE	←R—	←R—	Y	Y	←R—	←R—	Y	Y	R	R	R	R	R	R	R	R	R	DW	DW	
PHASE 4 AND 8	←R—	←R—	R	R	←R—	←R—	R	R	G	G	G	G	G	G	R	R	R	DW	DW	
4 AND 8 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	Y	Y	Y	Y	R	R	R	DW	DW	
PHASE 4 AND 8 ALT	←R—	←R—	R	R	←R—	←R—	R	R	G	G	G	G	G	G	R	R	R	DW	WK	
PED CLEARANCE	←R—	←R—	R	R	←R—	←R—	R	R	G	G	G	G	G	G	R	R	R	DW	FL/DW	
4 AND 8 ALT CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	Y	Y	Y	Y	R	R	R	DW	DW	
PHASE 7 (LAG)	←R—	←R—	R	R	←R—	←R—	R	R	R	R	R	R	R	R	G	G	G	DW	DW	
7 (LAG) CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	LAG
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

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BY: JStorck

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 458 (SILVER HILL RD) AT WEST AVE/
ENTRANCE TO GIANT FOOD

GENERAL INFORMATION PLAN

SCALE 1" = 20' ADVERTISED DATE Jan. 30, 2008 CONTRACT NO. BW99GM82

DESIGNED BY J. STORCK
DRAWN BY J. STORCK
CHECKED BY
F.A.P. NO.

COUNTY PRINCE GEORGE'S
LOGMILE 16045802.18
TIMS NO. 1373
TOD NO.

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