

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of three Traffic Control Signals with street lighting and interconnect along MD 108 (Laytonsville RD) in Howard County. MD 108 (Laytonsville RD) is assumed to run an east-west direction.

II. INTERSECTION OPERATION

MD 108 AT TEN OAKS ROAD

1. This intersection shall be modified to operate a slave to the intersection of MD 108 and MD 32 southbound Off Ramp  
The existing traffic signal heads shall be replaced with black faced signals heads. The MD 108 approaches shall operate concurrently. Ten Oaks Road and the Exxon Driveway shall operate as a sidestreet split. The existing controller shall be removed and the pole mounted cabinet shall be used as a splice cabinet. The proposed signal cables, existing camera wire and existing loop wires shall be spliced into the proposed 20 conductor cable and run back to the base mounted cabinet and controller at MD 108 and MD 32 southbound Off Ramp.

MD 108 AT MD 32 SOUTHBOUND OFF RAMP / MD 32 EASTBOUND RAMP

2. This intersection shall operate as the master to the signal at MD 108 and Ten Oaks Road in a NEMA four (4) phase semi-activated mode. The MD 108 approaches shall operate concurrently. The westbound MD 108 Exclusive / Permissive left turn shall remain. Pedestrian phases across both ramps shall remain on recall. The pushbutton actuated Pedestrian phase crossing the east leg of MD 108 shall also remain in operation.

3. An existing full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be utilized at this intersection. Video interface equipment shall be installed into the cabinet. The existing NEMA size "5" master cabinet shall also remain.

MD 108 AT MD 32 WESTBOUND OFF RAMP / MD 32 NORTHBOUND ON RAMP

4. This intersection currently operates as a slave to the adjacent ramp signal. This project involves the replacement of the cabinet and controller and the re-wiring of the intersection. It will operate as an independent signal interconnected to the adjacent signals.  
The MD 108 approaches shall operate concurrently. The eastbound MD 108 Exclusive / Permissive left turn phase shall remain. The MD 32 westbound Off Ramp shall operate alone. The pedestrian phases across both ramps shall remain on recall. The existing pedestrian phase crossing the west leg of MD 108 shall be relocated to the east leg of the intersection and shall be pushbutton actuated.

5. A full-traffic-actuated, eight-phase controller with four (4) four channel, rack mount loop detector amplifiers, detector rack power supply, housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer (Dave Swartz) at (410) 787-7650 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility 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 will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- All signal work must be coordinated with the MSHA Signal Shop. Contact Mr. Ed Rodenhizer at (410) 787 7650 seventy-two hours in advance of intended work.

EQUIPMENT LIST

A. ITEM NO.	EQUIPMENT TO BE SUPPLIED BY S.H.A.. DESCRIPTION	QUANTITY
9001	Detector rack power supply (To be installed by SHA Forces)	1 EA
9016	Detector amplifier 4-channel rack mount.	4 EA
9042	Controller ASC II with telemetry	1 EA
9044	Controller cabinet, size "6"	1 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	15 SF
	R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast arm mounted.	1 EA
	R3-6 MD "LEFT THRU RIGHT" sign, (30" x 36") mast mounted.	1 EA
	Video interface equipment. (To be installed by SHA).	1 EA

EQUIPMENT LIST (CONT.)

B. ITEM NO.	EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	2 EA
2001	Class 2 Excavation.	6 C.Y.
2002	Test Pit Excavation.	1 C.Y.
5001	Heat applied thermoplastic pavement marking arrow "left".	2 EA
5001	Heat applied thermoplastic pavement marking arrow "Left, Thru, Right".	2 EA
5002	Heat applied thermoplastic pavement marking letter "ONLY".	4 EA
5003	Remove existing pavement marking letter or arrow	12 EA
5004	12" white heat applied thermoplastic pavement marking.	650 L.F.
5005	24" white heat applied thermoplastic pavement marking.	330 L.F.
5007	5" yellow heat applied thermoplastic pavement marking.	65 L.F.
5008	Remove existing pavement line markings - (includes stoplines, crosswalks, centerlines)	900 L.F.
6001	Furnish and install depressed curb and gutter.	80 L.F.
6002	Standard type A combination curb and gutter 12" gutter pan 8" depth.	80 L.F.
6004	4 in. concrete sidewalk	600 S.F.
8003	500' video cable to controller.	1 EA
8010	Furnish and install 12" ped signal head section	6 EA
8011	Furnish and install 12" signal head section	28 EA
8022	Furnish and install electrical utility service equipment 120/240 volt.	1 EA
8029	Furnish and install pedestal pole (10').	1 EA
8031	Furnish and install pushbutton and sign. (Note: Sign to read PUSHBUTTON TO CROSS MD 108").	2 EA
8051	Remove & dispose of existing material and equipment per assignment.	1 EA
8054	Furnish and install 3" polyvinyl chloride conduit - trenched	155 L.F.
8055	Furnish and install 4" polyvinyl chloride conduit - bored	80 L.F.
8063	Furnish and install concrete for signal foundation.	1 C.Y.
8066	Furnish and install No. 6 AWG stranded bare copper ground wire.	455 L.F.
8067	Furnish and install 1" electrical conduit galvanized sleeves.	55 L.F.
8076	Furnish and install electrical handhole	1 EA
8078	Install ground mounted sign	15 S.F.
8083	Furnish and install ground rod - 3/4" x 10'.	1 EA
8084	Furnish and install 2 conductor electrical cable (alum. shielded)	5285 L.F.
8085	Furnish and install 2 conductor electrical cable (No. 14 AWG)	595 L.F.
8086	Furnish and install 3 conductor electrical cable (No. 14 AWG)	565 L.F.
8087	Furnish and install 5 conductor electrical cable (No. 14 AWG)	1825 L.F.
8088	Furnish and install 7 conductor electrical cable (No. 14 AWG)	1060 L.F.

EQUIPMENT LIST (CONT.)

B. ITEM NO.	EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR DESCRIPTION	QUANTITY
8089	Furnish and install 2 conductor tray cable (No. 12 AWG)	750 L.F.
8090	Furnish and install loop wire encased in flexible tubing (No. 14 AWG)	980 L.F.
8091	Furnish and install saw cut for signal (loop detector)	235 L.F.
8096	Install controller and cabinet - base mount	1 EA
Neg.	Furnish and install electrical cable - 20 conductor (No. 14 AWG).	300 L.F.

C. EQUIPMENT TO BE REMOVED

The MSHA Signal Shop will remove the controller and all auxiliary equipment from the cabinet at MD 108 and Ten Oaks Road. All other removed material will become the property of the contractor.

The contact persons for District #7 are as follows:

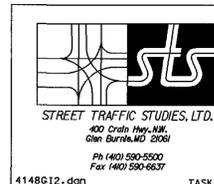
Mr. John Concannon  
Assistant District Engineer - Traffic  
Phone: (310) 624-8141

Mr. Dave Coyne  
Assistant District Engineer - Maintenance  
Phone: (310) 624-8106

Mr. Jim Buckalew  
District Engineer - Utility  
Phone: (301) 624-8110

Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone: (410) 787-7630

The power company representative is:



<b>MARYLAND DOT - STATE HIGHWAY ADMINISTRATION</b> <b>Office of Traffic &amp; Safety</b>			
<b>TRAFFIC ENGINEERING DESIGN DIVISION</b>			
MD 108 AND MD 32 W.B. OFF RAMP / MD 32 N.B. ON RAMP			
DRAWN BY:	F.A.P. NO.	TS NO.	SHEET NO. <b>4 OF 4</b>
CHECKED BY:	S.H.A. NO.		
SCALE: NONE	COUNTY: HOWARD	T.L.M.S. NO. F068	
DATE: 6/28/02	LOG MILE: 13010803.78		