DRILL HOLES

BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of two existing Traffic Control Signals located in Worcester County:

1) US 13 and US 113 / MD 250
2) US 113 (BUS) AND MD 250 / OLD VIRGINIA RD

Opticom detector eyes shall be installed at both locations.

II. INTERSECTION OPERATION

US 13 and US 113 / MD 250
US 13 is assumed to run in a north-south direction.

1. The intersection shall continue to operate in a NEMA six-phase, fully-actuated mode, with the US 13 approaches running concurrently. Exclusive left turn phases continue to be provided for both approaches of US 13. A new pre emption phase shall be installed for the US 13 northbound approach. The US 113 / MD 250 approaches shall also continue to run concurrently. A new pre emption phase shall be installed for the eastbound MD 250 approach.

2. A new 4 channel rack mounted loop detector amplifier, opticom discriminator module and opticom interface card shall be installed into the existing full-traffic-actuated, eight-phase controller with housed in a NEMA size "6" base-mounted cabinet. The existing 2-channel amplifiers shall be removed.

US 113 (BUS) and MD 250 / Old Virginia Rd
US 113 is assumed to run in a north-south direction.

1. The intersection shall continue to operate in a NEMA four-phase, fully-actuated mode, with the US 113 approaches running concurrently. A new pre emption phase shall be installed for the US 113 southbound approach. The MD 250 / Old Virginia Rd approaches shall also continue to run concurrently.

2. A new 4 channel rack mounted loop detector amplifier, opticom discriminator module and opticom interface card shall be installed into the existing full-traffic-actuated, eight-phase controller with housed in a NEMA size "6" base-mounted cabinet. The existing 2-channel amplifiers shall be removed.

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.

2. All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.

3. 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.

The contact persons for District #1 are as follows:

Mr. Gene Cofiell
Assistant District Engineer - Traffic
Phone: (410) 677-4040

Mr. Jimmy Wright
Assistant District Engineer - Maintenance
Phone: (410) 543-6715

Mr. Bruce Poole
Assistant District Engineer - Utility
Phone: (410) 677-4082

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

Mr. Ed Rodenhizer
Signal Shop
410-787-7652

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

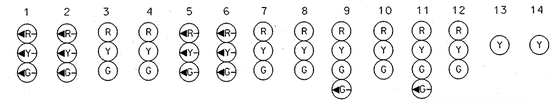
ITEM NO.	DESCRIPTION	QUANTITY
9001	Detector rack power supply (To be instaled by SHA forces)	1 EA
9016	Detector amplifier 4-channel rack mount (To be installed into the existing cabinet by S.H.A. Forces).	4 EA
9042	Controller ASC II with telemetry	1 EA
9043	Controller cabinet, size "5" w/ detector rack & two 4-channel rack mounted amplifiers.	1 EA
9046	Detector rack retrofit.	1 EA

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

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
8008	Furnish and install 3M opticom #76 discrimination module-4 channel.	2 EA
8029	Remove & reinstall pole mounted cabinet w/ 3" LB.	1 EA
8033	Furnish and install 4-conductor opticom detector cable.	720 L.F.
8066	Furnish and install 3M opticom #721 detector eye	3 EA

PHASING DIAGRAM

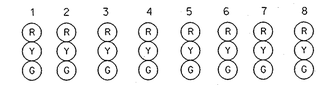
US 13 AND US 113 / MD 250



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 & 5	◄G–	◄G–	R	R	◄G–	◄G–	R	R	R	R	R	R	FL/Y	FL/Y
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6														
PHASE 1 & 6	◄G–	◄G–	G	G	◄R–	◄R–	R	R	R	R	R	R	FL/Y	FL/Y
1 & 6 CHANGE	◄Y–	◄Y–	G	G	◄R–	◄R–	R	R	R	R	R	R	FL/Y	FL/Y
PHASE 2 & 5	◄R–	◄R–	R	R	◄G–	◄G–	G	G	R	R	R	R	FL/Y	FL/Y
2 & 5 CHANGE	◄R–	◄R–	R	R	◄Y–	◄Y–	G	G	R	R	R	R	FL/Y	FL/Y
PHASE 2 & 6	◄R–	◄R–	G	G	◄R–	◄R–	G	G	R	R	R	R	FL/Y	FL/Y
2 & 6 CHANGE	◄R–	◄R–	Y	Y	◄R–	◄R–	Y	Y	R	R	R	R	FL/Y	FL/Y
PHASE 3	◄R–	◄R–	R	R	◄R–	◄R–	R	R	G / ◄G–	G	R	R	FL/Y	FL/Y
3 CHANGE	◄R–	◄R–	R	R	◄R–	◄R–	R	R	Y	Y	R	R	—	—
PHASE 4	◄R–	◄R–	R	R	◄R–	◄R–	R	R	R	R	G / ◄G	G	—	—
4 CHANGE	◄R–	◄R–	R	R	◄R–	◄R–	R	R	R	R	Y	Y	FL/Y	FL/Y
PRE EMPT 1	◄G–	◄G–	G	G	◄R–	◄R–	R	R	R	R	R	R	FL/Y	FL/Y
PRE EMPT 1 CHANGE	◄Y–	◄Y–	Y	Y	◄R–	◄R–	R	R	R	R	R	R	FL/Y	FL/Y
PRE EMPT 2	◄R–	◄R–	R	R	◄R–	◄R–	R	R	G / ◄G–	G	R	R	FL/Y	FL/Y
PRE EMPT 2 CHANGE	◄R–	◄R–	R	R	◄R–	◄R–	R	R	Y	Y	R	R	FL/Y	FL/Y
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/Y	FL/Y

PHASING DIAGRAM

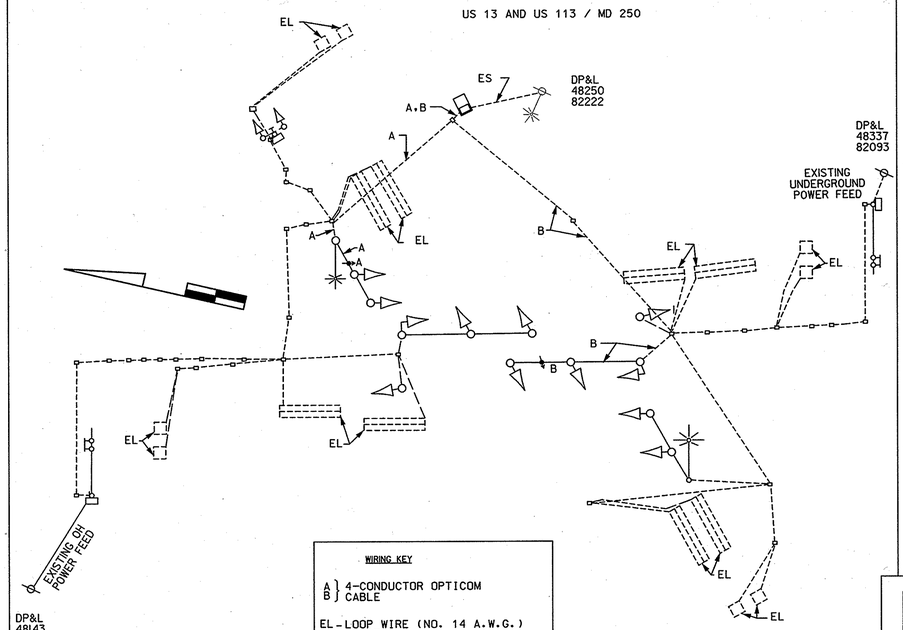
US 113 (BUS) AND MD 250 / OLD VIRGINIA RD



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

WIRING DIAGRAM

US 13 AND US 113 / MD 250



WIRING KEY

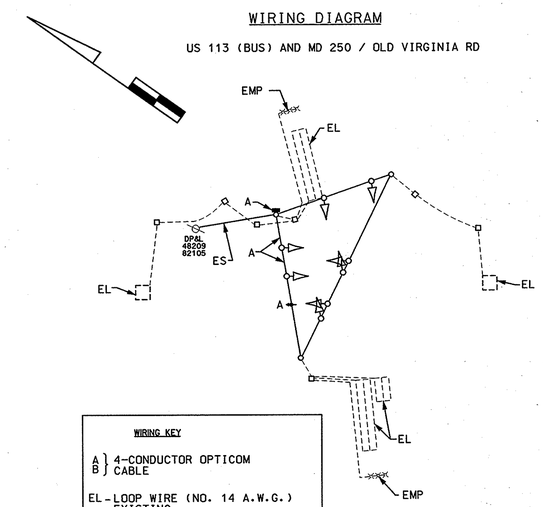
A } 4-CONDUCTOR OPTICOM
B } CABLE

EL - LOOP WIRE (NO. 14 A.W.G.) EXISTING

ES - EXISTING UNDERGROUND SERVICE TO BE MAINTAINED CONECTIV

WIRING DIAGRAM

US 113 (BUS) AND MD 250 / OLD VIRGINIA RD



WIRING KEY

A } 4-CONDUCTOR OPTICOM
B } CABLE

EL - LOOP WIRE (NO. 14 A.W.G.) EXISTING

EMP - EXISTING MICRO PROBE

ES - EXISTING UNDERGROUND SERVICE TO BE MAINTAINED CONECTIV

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

US 13 @ US 113/MD 250
US 113 AND US 113 / MD 250

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy.,N.W.
Glen Burnie,MD 21061
Ph (410) 590-5500
Fax (410) 590-6637

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SCALE NONE	DATE 8/15/05	CONTRACT NO. AT7825185	
DESIGNED BY J.A.		COUNTY WORCESTER	
DRAWN BY R.C.		LOGMILE 23001304.55 23801300.50	
CHECKED BY		TIMS NO. G905	
F.A.P. NO.		TOD NO.	
TS NO. 1441	DRAWING NO. OF	SHEET NO. 3 OF 3	

PLOTTED: #DATETIME#
FILE: #FILE#

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