PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF TRAFFIC SIGNAL INDICATIONS AT THE INTERSECTION OF MD 5 (POINT LOOKOUT ROAD) AND MD 5A (OLD GREAT MILLS ROAD) IN ST. MARY'S COUNTY. THE SIGNAL INDICATIONS WILL CONTROL THE RIGHT-TURN MOVEMENT FROM MD 5A (OLD GREAT MILLS ROAD) TO NORTHBOUND MD 5 (POINT LOOKOUT ROAD) AND WILL BE COORDINATED WITH THE TRAFFIC SIGNAL AT MD 5 AND MD 246. THE POLE MOUNTED CABINET AND CONTROLLER AT MD 5 AND MD 246 WILL ALSO BE REPLACED WITH A BASE MOUNTED CABINET AND CONTROLLER AND ALL EXISTING SIGNAL EQUIPMENT WILL BE REWIRED.
MD 5 (POINT LOOKOUT ROAD) IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FIVE-PHASE, FULL TRAFFIC-ACTUATED MODE. THE PROPOSED MD 5A APPROACH WILL HAVE SOLID RED INDICATIONS DURING PHASES 1 AND 4 IN THE EVENING PEAK PERIOD AND FLASHING RED INDICATIONS THE REMAINING TIME. THE EXCLUSIVE LEFT-TURN PHASE FOR THE SOUTHBOUND APPROACH OF MD 5 (POINT LOOKOUT ROAD) SHALL REMAIN IN OPERATION. THE PEDESTRIAN PHASE WITH PUSHBUTTON ACTUATION ACROSS THE EAST LEG OF MD 246 (GREAT MILLS ROAD) SHALL REMAIN IN OPERATION. THE MD 246 (GREAT MILLS ROAD) APPROACHES SHALL CONTINUE TO OPERATE AS A SIDE STREET SPLIT PHASE. THE SEPARATE RIGHT TURN OVERLAP PHASE FOR THE WESTBOUND APPROACH OF MD 246 (GREAT MILLS ROAD) SHALL REMAIN IN OPERATION. THE FIREHOUSE PRE-EMPTION PHASE FOR THE WESTBOUND APPROACH OF MD 246 (GREAT MILLS ROAD) SHALL REMAIN IN OPERATION.

CONTROLLER REQUIREMENTS

INSTALL A NEMA SIZE '6' BASE MOUNTED CABINET. THE SHA SIGNAL SHOP WILL SUPPLY A NEMA EIGHT-PHASE FULLY ACTUATED TRAFFIC SIGNAL CONTROLLER WITH ASSOCIATED HARNESSES, ONE (1) 4 CHANNEL DETECTOR AMPLIFIER AND ONE (1) VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS WITHIN THE CABINET.

PHONE DROP

THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE DROP LINE INSTALLATION. THE CONTRACTOR IS TO NOTIFY MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE NUMBER.

THE CONTACT PERSONS FOR DISTRICT #5 ARE AS FOLLOWS:

Ms. Kimberly Tran
Assistant District Engineer - Traffic
Phone: 410-841-1019

Mr. Mike Huber
District Utility Engineer
Phone: 410-841-1039

Mr. James Folden
Assistant District Engineer - Construction
Phone: 410-841-1031

Mr. John Mays
Assistant District Engineer - Maintenance
Phone: 410-841-1013

THE CONTACT PERSONS FOR THE OFFICE OF TRAFFIC AND SAFETY ARE AS FOLLOWS:

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

Mr. Robert Snyder
Assistant Division Chief, Traffic Operations
Phone: 410-787-7630

Mr. Edward Rodehizer
Team Leader Signal Operations
Phone: 410-787-7650

Mr. Eugene Bailey
Team Leader Sign Operations
Phone: 410-787-7670

Ms. Darlene Elde
Supply Officer IV (Signal Shop Warehouse)

The Power Company Representative is:
Southern Maryland Electrical Cooperative
P.O. Box 37
Prince Frederick, Maryland 20678-9501
Phone: 410-535-4400

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
9044	1 EA	[UPDATED] CONTROLLER CABINET, SIZE 6
9087	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS
9570	33 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN:
		4 EA - W11-2 (30 IN. x 30 IN.)
		2 EA - W16-7p(R) (24 IN. x 12 IN.)
		2 EA - W16-7p(L) (24 IN. x 12 IN.)

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO THE SHA SIGNAL SHOP TECHNICIAN.

ITEM NO	QUANTITY	DESCRIPTION
	5 EA	VIDEO DETECTION CAMERA

EQUIPMENT LIST 'B'

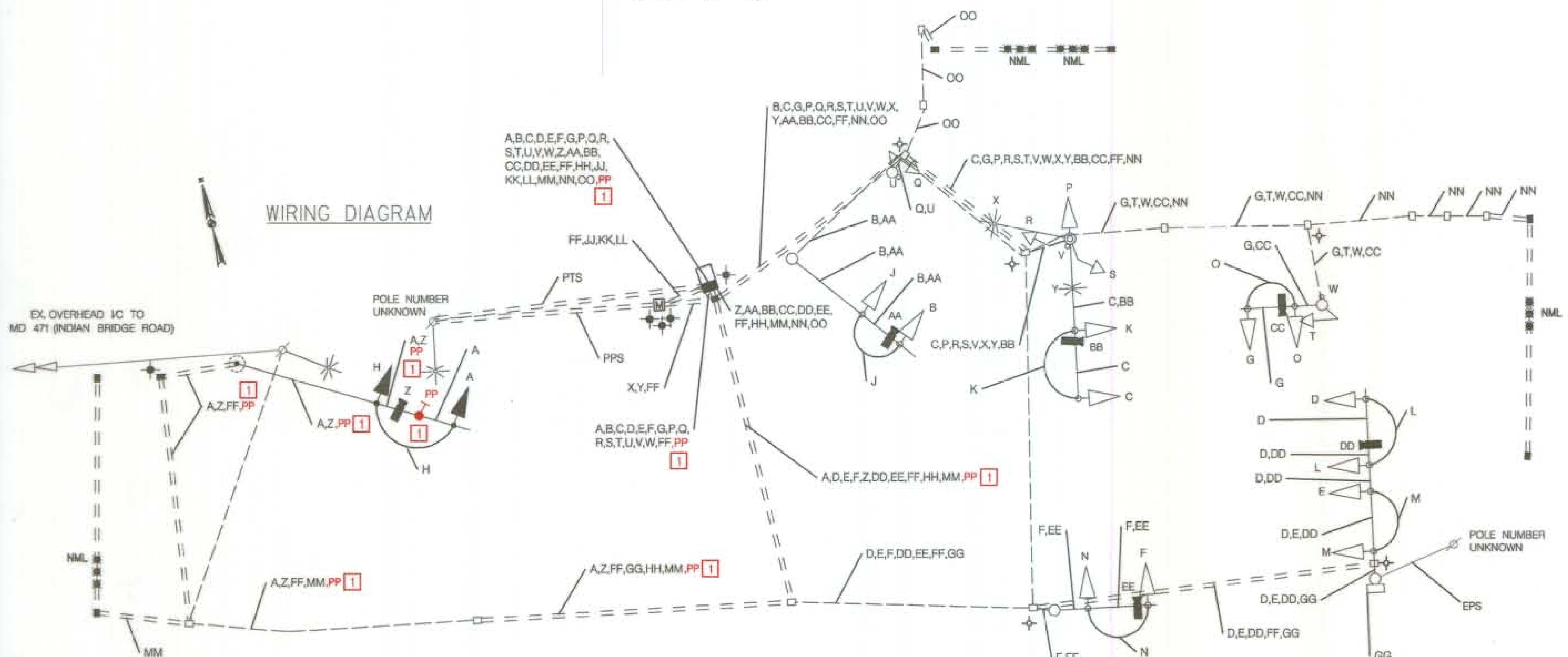
EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO	QUANTITY	DESCRIPTION
1003	2 EA	MAINTENANCE OF TRAFFIC
2002	3 CY	TEST PIT EXCAVATION
5004	55 LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	35 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	800 SF	5 INCH CONCRETE SIDEWALK
8001	4 EA	12 INCH LED SIGNAL HEAD SECTION
8012	1 EA	EMBEDDED METERED SERVICE PEDESTAL
8021	1 EA	MAST ARM POLE & 70' MAST ARM ANY 'T' DIMENSION
8023	4 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8024	1 EA	REMOVE & DISPOSE OF MATERIAL & EQUIPMENT PER ASSIGNMENT
8028	6 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8032	450 LF	DISCONNECT, PULL-BACK AND REROUTE CABLE
8035	650 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8036	400 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8037	70 LF	WOOD SIGN SUPPORTS UP TO 4 INCH x 6 INCH
8038	33 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8040	950 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8043	50 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8044	8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8049	1 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8051	475 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
1 8053	1,500 ~~900~~ LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8054	2,150 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8055	400 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
8061	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
1 8064-A	1 EA	FURNISH AND INSTALL LED SIGN 24" x 36" NO TURN ON RED AND MOUNTING HARDWARE

PHASE CHART	1	2	3	4	5	6	7	8	9	10	11	12	13	14 (PM PEAK ONLY)	15 (PM PEAK ONLY)	16	17	18	19	56	
	R Y G	R Y G	◁R ◁Y ◁G	◁R ◁Y ◁G	R Y G	R Y G	R Y G ◁G	R Y G	R Y G ◁G	R Y G	R▷ Y▷ G▷	R▷ Y▷ G▷	R▷ Y▷ G▷	R R	R R					NO TURN ON RED	
PHASE 2 AND 5	R	R	◁G–	◁G–	G	G	R	R	R	R	–G▷	–G▷	–G▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	MD 5A
PHASE 5 CHANGE	R	R	◁Y–	◁Y–	G	G	R	R	R	R	–Y▷	–Y▷	–Y▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	
PHASE 2 AND 6	G	G	◁R–	◁R–	G	G	R	R	R	R	–R▷	–R▷	–R▷	DARK FL/R	DARK FL/R	DW	DW	DW	DW	DARK	MD 5A
PHASE 2 AND 6 CHANGE	Y	Y	◁R–	◁R–	Y	Y	R	R	R	R	–R▷	–R▷	–R▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	
PHASE 2 AND 6 ALT.	G	G	◁R–	◁R–	G	G	R	R	R	R	–R▷	–R▷	–R▷	DARK FL/R	DARK FL/R	WK	WK	WK	WK	DARK	MD 5A
PED CLEAR	G	G	◁R–	◁R–	G	G	R	R	R	R	–R▷	–R▷	–R▷	DARK FL/R	DARK FL/R	FL/DW	FL/DW	FL/DW	FL/DW	DARK	
2 AND 6 ALT. CHANGE	Y	Y	◁R–	◁R–	Y	Y	R	R	R	R	–R▷	–R▷	–R▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	
PHASE 3	R	R	◁R–	◁R–	R	R	G/◁G–	G	R	R	–R▷	–R▷	–R▷	DARK FL/R	DARK FL/R	DW	DW	DW	DW	DARK	MD 5A
PHASE 3 CHANGE	R	R	◁R–	◁R–	R	R	Y	Y	R	R	–R▷	–R▷	–R▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	
PHASE 4	R	R	◁R–	◁R–	R	R	R	R	G/◁G–	G	–G▷	–G▷	–G▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	MD 5A
PHASE 4 CHANGE	R	R	◁R–	◁R–	R	R	R	R	Y	Y	–Y▷	–Y▷	–Y▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	
PRE-EMPT 1	R	R	◁R–	◁R–	R	R	R	R	G/◁G–	G	–G▷	–G▷	–G▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	MD 5A
PRE-EMPT 1 CHANGE	R	R	◁R–	◁R–	R	R	R	R	Y	Y	–Y▷	–Y▷	–Y▷	R DARK	R DARK	DW	DW	DW	DW	NO TURN ON RED	
FLASHING OPERATION	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▷	DARK FL/R	DARK FL/R	DARK	DARK	DARK	DARK	DARK	MD 5A

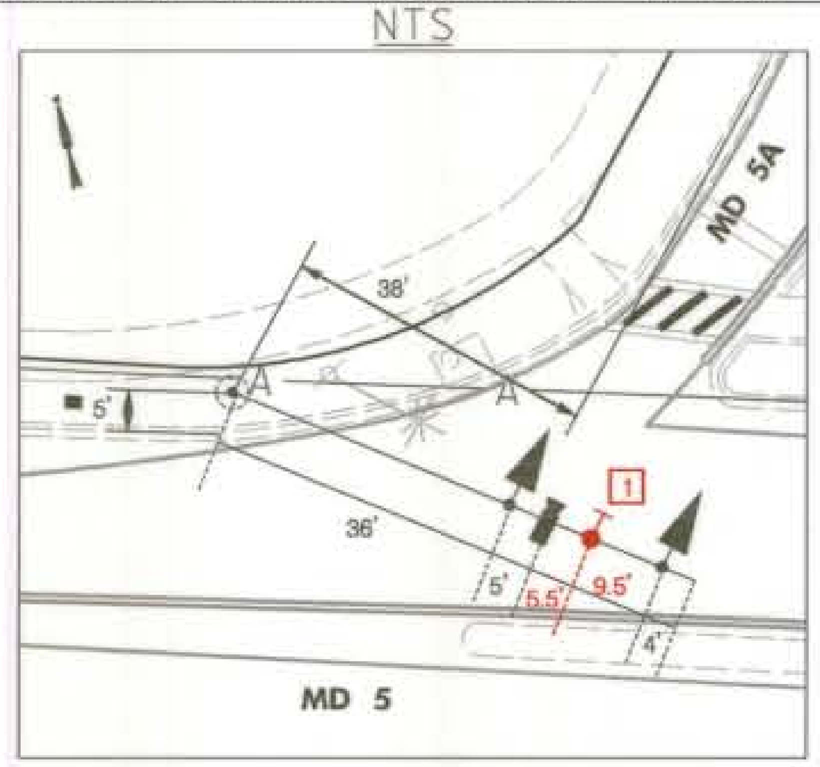
NOTE: SIGNAL HEADS 14 & 15 FLASH RED DURING NON PM PEAK PERIOD.

WIRING DIAGRAM

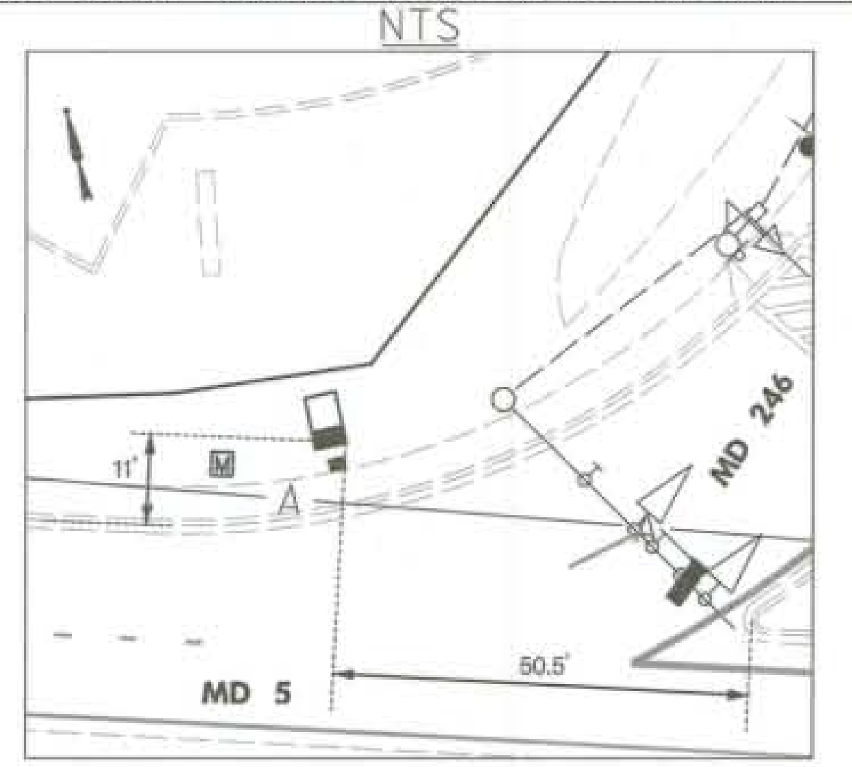


A B C D E F G	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
H J K L M N O P Q R S T PP 1	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
U V W	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
X Y	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC
Z AA BB CC DD EE	VIDEO DETECTION CAMERA CONTROL CABLE
FF	NO. 6 STRANDED BARE COPPER GROUND WIRE
GG	PULL BACK EXISTING INTERCONNECT FROM EXISTING POLE MOUNTED CABINET
HH	RE-ROUTE EXISTING INTERCONNECT TO PROPOSED BASE MOUNTED CABINET
JJ KK LL	ELECTRICAL CABLE - 1 CONDUCTOR, NO. 8 AWG THHN, THWN
MM NN OO	NON-INVASIVE MICROLOOP PROBE LEAD IN CABLE - 1000 FOOT
PPS	PROPOSED UNDERGROUND ELECTRICAL 1-CONDUCTOR #2/0 AWG THHN, THWN (ALUMINUM)
PTS	PROPOSED UNDERGROUND TELEPHONE SERVICE TO BE INSTALLED BY OTHERS
EPS	EXISTING OVERHEAD POWER SERVICE
NML	NON-INVASIVE MICROLOOP PROBE SET
(symbol)	EXISTING GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
(symbol)	PROPOSED GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
M	PROPOSED METERED SERVICE PEDESTAL

PROPOSED SIGNAL EQUIPMENT DETAIL 'A'
NTS



PROPOSED SIGNAL EQUIPMENT DETAIL 'B'
NTS



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

MD 5 (POINT LOOKOUT ROAD) AND MD 246 (GREAT MILLS ROAD)
GREAT MILLS, MD

GENERAL INFORMATION

SCALE NONE ADVERTISED DATE 12/2010 CONTRACT NO. XX3535168

DESIGNED BY	KXT	COUNTY	ST. MARY'S
DRAWN BY	KXT	LOGMILE	18000517.20
CHECKED BY	MTS	TIMS NO.	K391
F.A.P. NO.		TOD NO.	

TS NO. 2071H DRAWING SG-02 OF 02 SHEET NO. 2 OF 2

STV Incorporated
7125 Ambassador Road, Suite 200
Baltimore, MD 21244
www.stvinc.com

BY: tarnovk -

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