

PROJECT DESCRIPTION

GENERAL
 THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 231 (HALLOWING POINT ROAD) AND SKIPJACK ROAD/SIXES ROAD IN CALVERT COUNTY. MD 231 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION
 THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, FULLY TRAFFIC-ACTUATED MODE. AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE IS PROPOSED FOR THE EASTBOUND DIRECTION.

CONTROLLER REQUIREMENTS
 INSTALL NEMA SIZE "S" BASE MOUNTED CABINET WITH CONTROLLER, ONE (1) VIDEO DETECTION INTERFACE, 1-4 CAMERAS, ONE (1) 4 CHANNEL DETECTOR AMPLIFIER, AND ALL OTHER ASSOCIATED EQUIPMENT.

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

OFFICE OF TRAFFIC AND SAFETY:

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

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

Mr. Edward Rodenhizer
 Chief Signal Operations
 Phone: 410-787-7650

Mr. Eugene Bailey
 Chief Sign Operations
 410-787-7670

The Power Company Is:
 SMCO
 901 Dorcas Beach Road
 P.O. Box 37
 Prince Frederick, Maryland
 Phone: 410-535-4400

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

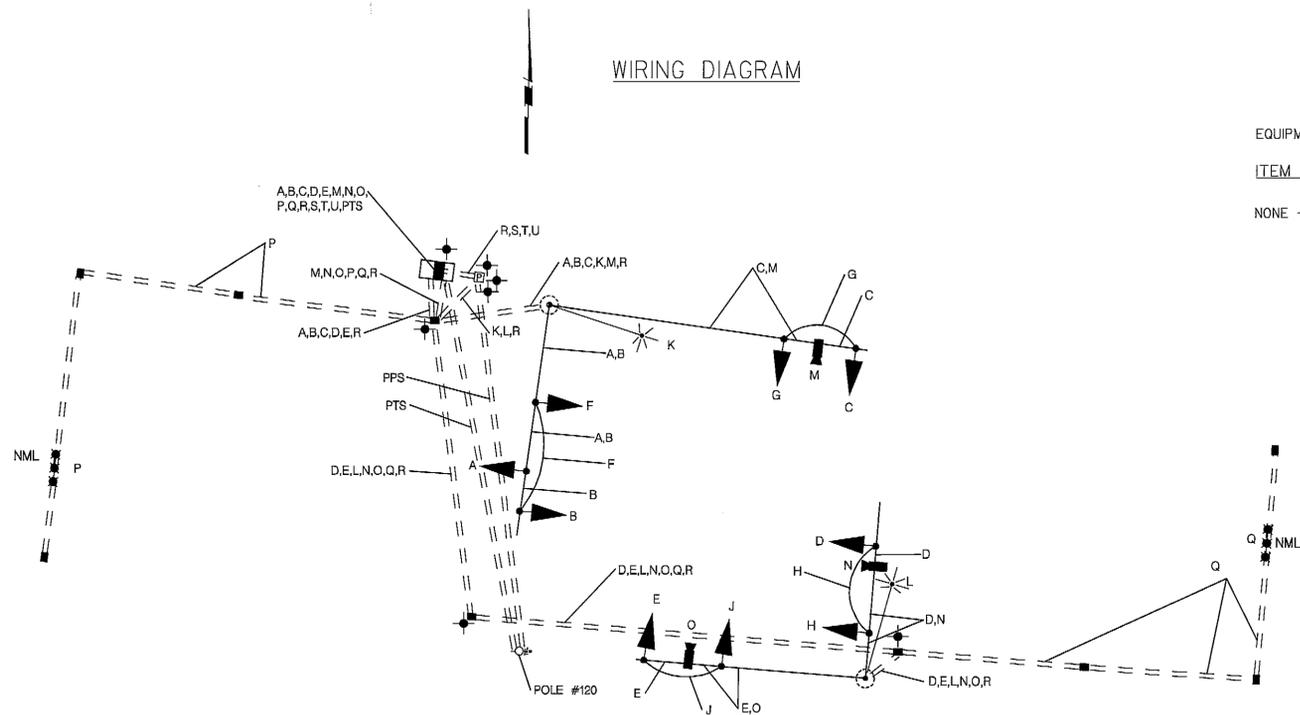
ITEM NO	QUANTITY	DESCRIPTION
9000	1 EA	CONTROLLER CABINET, SIZE "S"
9570	58 SF	SHEET ALUMINUM GROUND MOUNTED SIGN 2 EA - W3-3 FY (36 IN. X 36 IN.) 2 EA - W16-14(I) (24 IN. X 24 IN.) 2 EA - D-3(2) (72 IN. X 32 IN.) F.Y. "SKIPJACK ROAD / SIXES ROAD"
9571	119 SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN 2 EA - D-3(1) (96 IN. X 16 IN.) DUAL FACED "HALLOWING POINT RD" 1 EA - D-3(1) (96 IN. X 16 IN.) DUAL FACED "SKIPJACK RD" 1 EA - D-3(1) (96 IN. X 16 IN.) DUAL FACED "SIXES RD" 1 EA - MI-5(6) (30 IN. X 48 IN.) "EAST, MD 231, RIGHT ARROW" 1 EA - MI-5(6) (48 IN. X 72 IN.) "WEST, MD 231, LEFT ARROW" 1 EA - MI-5(6) (30 IN. X 48 IN.) "WEST, MD 231, RIGHT ARROW" 1 EA - MI-5(6) (48 IN. X 72 IN.) "EAST, MD 231, RIGHT ARROW" 1 EA - R3-5(R) (30 IN. X 36 IN.)

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO	QUANTITY	DESCRIPTION
1001	3 EA	MAINTENANCE OF TRAFFIC
2002	5 CY	TEST PIT EXCAVATION
5003	120 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5005	115 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
8001	28 EA	12 INCH LED SIGNAL HEAD SECTION
8004	3 EA	8 INCH SIGNAL HEAD SECTION
8007	2 EA	ANY SIZE LIGHTING ARM ON SIGNAL
8012	1 EA	EMBEDDED METERED SERVICE PEDESTAL
8022	2 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD-IN CABLE UP TO 1000'
8023	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8025	1 EA	TWIN MAST ARM POLE & 50'/60' MAST ARMS ANY 'T' DIMENSION
8026	1 EA	TWIN MAST ARM POLE & 50'/70' MAST ARMS ANY 'T' DIMENSION
8028	3 EA	VIDEO DETECTION CAMERA AND CABLE
8034	330 LF	ELECTRICAL CABLE - 2-CONDUCTOR (NO.12 AWG) TYPE T/C
8036	500 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8038	850 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8039	80 LF	WOOD SIGN SUPPORTS UP TO 4' X 6"
8040	177 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	245 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	170 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8046	9 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	1 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8055	90 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO.14 AWG)
8056	950 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO.14 AWG)
8062	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT (ANY SIZE)

WIRING DIAGRAM

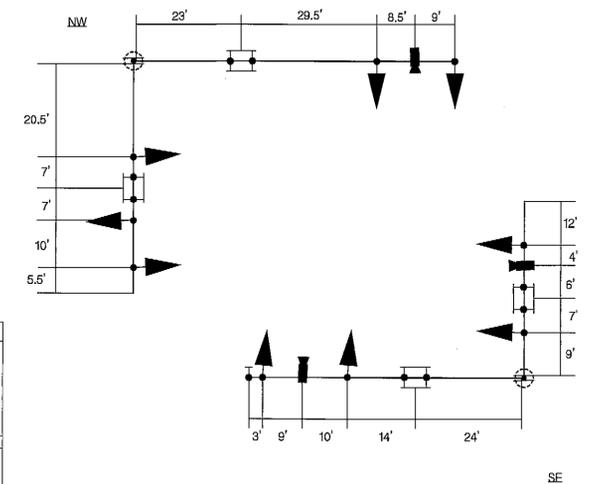


EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO	QUANTITY	DESCRIPTION
NONE		ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

PROPOSED SIGNAL EQUIPMENT DETAIL



TOD NO: XX647-12
 SHA NO: CA208B53
 MD 231 @ Skipjack Road/Sixes Road

PHASE CHART	1	2	3	4	5	6	7	8	9
	(Y) (R) (G)								
PHASE 1 AND 6	+G/G	+G/G	G	R	R	R	R	R	R
PHASE 1 CHANGE	+Y/G	+Y/G	G	R	R	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	R	R	R	R
PHASE 2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R
PHASE 4 AND 8	R	R	R	R	R	G	G	G	G
PHASE 4 AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

- A** ELECTRICAL CABLE - 7 CONDUCTOR (NO.14 AWG)
- B** NO. 6 STRANDED BARE COPPER GROUND WIRE
- C** ELECTRICAL CABLE - 5 CONDUCTOR (NO.14 AWG)
- D** ELECTRICAL CABLE - 2 CONDUCTOR (NO.12 AWG), TC
- E** CONTROL CABLE - VIDEO DETECTION CAMERA TO CONTROLLER
- F** NONINVASIVE MICRO LOOP DETECTOR LEAD-IN CABLE
- G** NO. 6 STRANDED BARE COPPER GROUND WIRE
- H** ELECTRICAL CABLE 1- CONDUCTOR NO.8 AWG-THHN/THWN
- I** PROPOSED POWER SERVICE (ELECTRICAL CABLE 1- CONDUCTOR NO. 8-THHN/THWN)
- J** PROPOSED TELEPHONE SERVICE TO BE INSTALLED BY OTHERS
- K** NONINVASIVE MICRO LOOP PROBE SET
- L** PROPOSED GROUND ROD - 3/4 IN. DIAMETER X 10 FOOT LENGTH

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

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 MD 231 (HALLOWING POINT ROAD) AT
 SKIPJACK ROAD / SIXES ROAD
 PRINCE FREDERICK, MARYLAND

GENERAL INFORMATION

SCALE: NONE ADVERTISED DATE: 11/2011 CONTRACT NO.: XX6475185

DESIGNED BY: EMP COUNTY: CALVERT
 DRAWN BY: EMP LOGMILE: 04023101.53
 CHECKED BY: MTS TMS NO.: J961
 F.A.P. NO.: TOD NO.:

TS NO. 4810-GI DRAWING SG-02 OF 02 SHEET NO. 02 OF 02