PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AND STREET LIGHTING AT THE INTERSECTION OF ACTON LANE AND WESTERN PARKWAY IN CHARLES COUNTY, MARYLAND. WESTERN PARKWAY IS ASSUMED TO RUN IN A NORTH–SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT–PHASE, FULLY–TRAFFIC–ACTUATED MODE WITH THE WESTERN PARKWAY APPROACHES OPERATING CONCURRENTLY AND THE ACTON LANE APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT–TURN PHASING IS PROVIDED FOR ALL FOUR APPROACHES.

PEDESTRIAN PHASE CROSSING FOR WESTERN PARKWAY SHALL UTILIZE ALTERNATE PEDESTRIAN PHASING AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS ACTON LANE .

CONTROLLER REQUIREMENTS

INSTALL A FULL–TRAFFIC–ACTUATED, EIGHT PHASE CONTROLLER WITH ONE (3) FOUR–CHANNEL, TIME–DELAY–OUTPUT LOOP DETECTOR AMPLIFIER, INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP, VIDEO DETECTION EQUIPMENT, AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET. INCLUDE A 2–WIRE CENTRAL CONTROL UNIT TO ACCOMODATE THE USE OF AUDIBLE TACTICAL PEDESTRIAN PUSHBUTTONS.

PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787–7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. KIM TRAN
ASSISTANT DISTRICT ENGINEER–TRAFFIC
(410) 841–1003

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER–MAINTENANCE
(410) 841–1002

MR. JOHN MAYS
ASSISTANT DISTRICT ENGINEER–UTILITIES
(410) 841–1005

MR. RICHARD DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
(410) 787–7630

EQUIPMENT LIST "B"

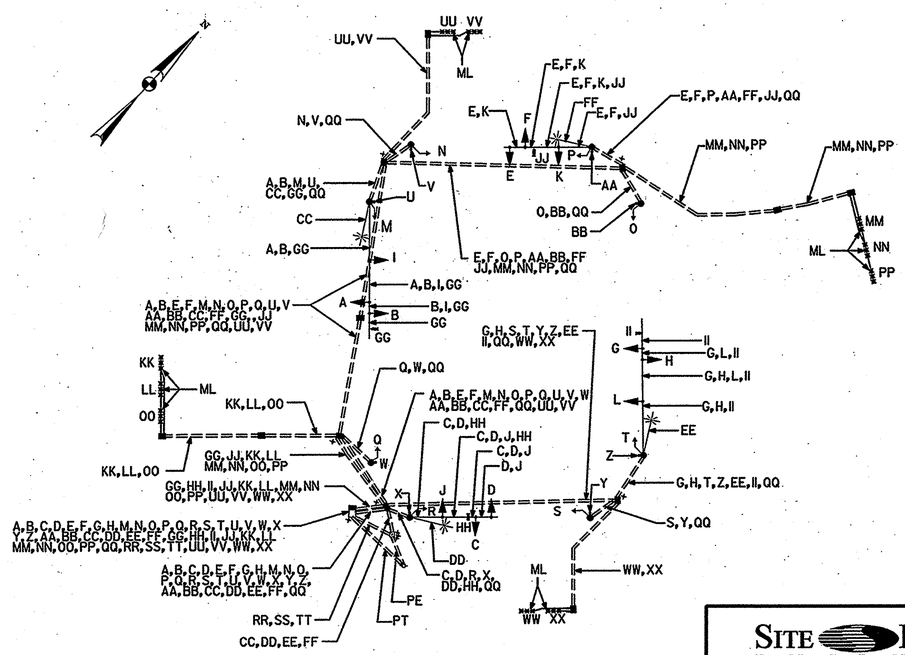
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
120500	1 EACH	MAINTENANCE OF TRAFFIC
203030	5 CY	TEST PIT EXCAVATION
585462	500 LF	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS–ANY WIDTH
585620	700 LF	12 IN. HEAT APPLIED WHITE PERM. PREFORMED THERMOPLASTIC PAVEMENT MARKING
585624	200 LF	24 IN. HEAT APPLIED WHITE PERM. PREFORMED THERMOPLASTIC PAVEMENT MARKING
801004	20 CY	CONCRETE FOR SIGNAL FOUNDATION
801106	60 LF	WOOD SIGN SUPPORTS 4 IN. X 6 IN.
801711	40 SF	REMOVE EXISTING GROUND MOUNTED SIGNS AND SUPPORTS
802501	1000 LF	NO. 6. AWG STRANDED BARE COPPER GROUND WIRE
805125	20 LF	2 IN. SCHEDULE 80 RIGID PVC CONDUIT–TRENCHED
805135	1100 LF	3 IN. SCHEDULE 80 RIGID PVC CONDUIT–TRENCHED
805140	300 LF	4 IN. SCHEDULE 80 RIGID PVC CONDUIT–TRENCHED
805155	350 LF	4 IN. SCHEDULE 80 RIGID PVC CONDUIT–SLOTTED
805160	50 LF	1 IN. LIQUID–TIGHT FLEXIBLE NON–METALLIC CONDUIT FOR DETECTOR SLEEVE
805011	20 LF	1 IN. GALVANIZED ELECTRICAL CONDUIT FOR DETECTOR SLEEVE
807202	1 EACH	METERED SERVICE PEDESTAL (120/240 VAC 200AMP MAIN)
807405	1 EACH	ELECTRICAL UTILITY SERVICE EQUIPMENT (120/240V, 1 PHASE 3 WIRE SYSTEM)
810010	30 LF	ELECTRICAL CABLE 1–CONDUCTOR NO. 4 AWG– THHN/THWN
810555	10 EACH	MICROLOOP PROBE SET, 1000 FT. LEAD–IN CABLE
811001	12 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
816001	4 EACH	VIDEO DETECTION CAMERA
816005	1 EACH	CONTROL CABLE, 250 FT., VIDEO DETECTION CAMERA TO CONTROLLER
816010	3 EACH	CONTROL CABLE, 500 FT., VIDEO DETECTION CAMERA TO CONTROLLER
816015	1 EACH	VIDEO INTERFACE EQUIPMENT
818004	4 EACH	10 FT. BREAKAWAY PEDESTAL POLE
818036	2 EACH	STEEL POLE WITH A SINGLE 50 FT. MAST ARM
818041	2 EACH	STEEL POLE WITH A SINGLE 60 FT. MAST ARM
831010	4 EACH	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTO CELL
837001	9 EACH	GROUND ROD–3/4 IN. DIAMETER X 10 FOOT LENGTH
860270	12 EACH	8 IN. LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860284	40 EACH	12 IN. LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1700 LF	ELECTRICAL CABLE– 2 CONDUCTOR (NO. 14 AWG)
861107	1900 LF	ELECTRICAL CABLE– 5 CONDUCTOR (NO. 14 AWG)
861108	2400 LF	ELECTRICAL CABLE– 7 CONDUCTOR (NO. 14 AWG)
861116	1600 LF	ELECTRICAL CABLE– 2 CONDUCTOR (NO. 12 AWG)
862102	180 LF	SAW CUT FOR SIGNAL
865001	8 EACH	AUDIBLE TACTICAL PEDESTRIAN PUSHBUTTON AND SIGN ASSEMBLY
866103	4 EACH	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
871117	1 EACH	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET – BASE MOUNTED
800000	8 EACH	16 IN. LED PEDESTRIAN COUNTDOWN SIGNAL HEAD SECTION
963010	3 EACH	FOUR–CHANNEL, TIME–DELAY–OUTPUT, LOOP DETECTOR AMPLIFIER.
973023	90 SF	SHEET ALUMINUM SIGNS

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Phase 1 & 5	◄G–R	◄G–R	R	◄G–R	◄G–R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 & 5 Change	THE CONTROLLER MAY CHANGE TO PHASES 1 & 6 OR 2 & 5 OR 2 & 6																			
Phase 1 & 6	◄G–G	◄G–G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 Change	◄Y–G	◄Y–G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
Phase 2 & 5	R	R	R	◄G–G	◄G–G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
5 Change	R	R	R	◄Y–G	◄Y–G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
Ped. Clear	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
Phase 3 & 7	R	R	R	R	R	R	◄G–R	◄G–R	R	◄G–R	◄G–R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 & 7 Change	THE CONTROLLER MAY CHANGE TO PHASES 3 & 8 OR 4 & 7 OR 4 & 8																			
Phase 3 & 8	R	R	R	R	R	R	R	R	R	◄G–G	◄G–G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 Change	R	R	R	R	R	R	R	R	R	◄Y–G	◄Y–G	G	DW	DW	DW	DW	DW	DW	DW	DW
Phase 4 & 7	R	R	R	R	R	R	◄G–G	◄G–G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
7 Change	R	R	R	R	R	R	◄Y–G	◄Y–G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 Alt.	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
Ped. Clear	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A B C D E F G H	7–CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
I J K L M N O P Q R S T	5–CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
U V W X Y Z AA BB	2–CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
CC DD EE FF	2–CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG)
GG HH II JJ	VIDEO DETECTION LEAD–IN CABLE
KK LL MM NN OO PP UU VV WW XX	MICROLOOP PROBE LEAD–IN
QQ	STRANDED BARE COPPER GROUND WIRE (NO.6 AWG)
RR SS TT	1–CONDUCTOR ELECTRICAL CABLE (NO.4 AWG)
ML	MICROLOOP PROBE SET
PE	PROPOSED UNDERGROUND ELECTRICAL SERVICE
PT	PROPOSED PHONE SERVICE
⊕	3/4 IN. X 10FT. GROUND ROD

SITE BLAUVELT ENGINEERS
a TRC company
16000 Commerce Parkway, Suite B
Mount Laurel, NJ 08054

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY

TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET

WESTERN PARKWAY AND ACTON LANE, WALDORF, MD

SCALE N.T.S. DATE 01/19/07 CONTRACT NO.

DESIGNED BY FZ
DRAWN BY ZD
CHECKED BY JAM
F.A.P. NO. N/A
COUNTY CHARLES
LOGMILE 08CWES00.31
T.I.M.S. NO. H816
TOD NO.

DRAWING NO. 4551_GI OF SHEET NO. 50 OF 84