PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF ST. CHARLES PKWY. AND POST OFFICE ROAD IN CHARLES COUNTY. THE WORK IS NECESSITATED BY THE CONSTRUCTION OF A FOURTH LEG TO THE INTERSECTION. ST. CHARLES PKWY. IS ASSUMED TO RUN IN A EAST–WEST DIRECTION.

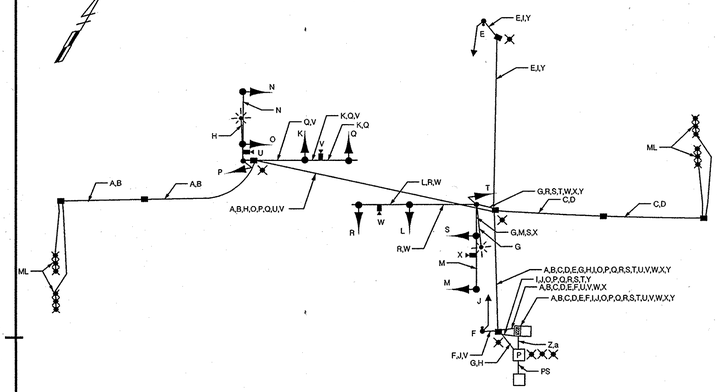
INTERSECTION OPERATION

THE INTERSECTION WILL BE UPGRADED TO OPERATE IN A NEMA SIX–PHASE, FULLY–ACTUATED MODE WITH EXCLUSIVE–PERMISSIVE LEFT TURN PHASES FOR BOTH DIRECTIONS OF ST. CHARLES PKWY. AND CONCURRENT SIDE STREET PHASING. AN ALTERNATE PEDESTRIAN PHASE FOR THE EAST LEG OF ST. CHARLES PKWY. WILL BE PROVIDED.

CONTROLLER REQUIREMENTS

A NEW EIGHT–PHASE, FULLY–ACTUATED CONTROLLER WITH ONE (1) FOUR CHANNEL, LOOP DETECTOR AMPLIFIER AND ONE (1) VIDEO DETECTION INTERFACE RACK EQUIPMENT HOUSED IN A NEMA "6" BASE MOUNTED CABINET WILL BE INSTALLED AT THE INTERSECTION.

WIRING DIAGRAM



WIRING KEY

A–D	MICRO–LOOP PROBE LEAD–IN
E–F	2–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
G–H	2–CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE
I–J	3–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
K–N	5–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
O–T	7–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
U–X	VIDEO DETECTION CABLE
Y	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
Z,a	1–CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
ML	MICRO–LOOP PROBE
PS	PROPOSED ELECTRIC SERVICE BY POWER COMPANY
✕	GROUND ROD

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
5 CY	TEST PIT EXCAVATION
220 LF	12 IN. HEAT APPLIED WHITE THERMOPLASTIC PAVEMENT MARKINGS
185 LF	24 IN. WHITE HEAT APPLIED WHITE THERMOPLASTIC PAVEMENT MARKINGS
32 EA	12 INCH LED SIGNAL HEAD SECTION
6 EA	8 INCH LED SIGNAL HEAD SECTION
2 EA	15 FT. LIGHTING ARM ON SIGNAL POLE
2 EA	AUDIBLE–TACTILE PEDESTRIAN PUSHBUTTON AND SIGN
2 EA	BREAKAWAY PEDESTAL POLE
2 EA	L.E.D. 16 IN. COUNTDOWN PEDESTRIAN SIGNAL
4 EA	MICROLOOP PROBE (ANY LENGHT) LEAD IN
LS	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT
2 EA	TWIN MAST ARM POLE & 50FT/60 FT MAST ARMS
4 EA	VIDEO DETECTION CAMERA AND CABLE
30 LF	1 IN DETECTOR SLEEVE, FLEXIBLE LIQUID–TIGHT CONDUIT
730 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 IN – TRENCHED
225 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 IN. – BORED
280 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
1 EA	METERED SERVICE PEDESTAL EMBEDDED
20 LF	ELECTRICAL CABLE 1 – CONDUCTOR NO. 4 AWG – THHN /THWN
8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
200 LF	ELECTRICAL CABLE 2 – CONDUCTOR (NO 14 AWG)
200 LF	ELECTRICAL CABLE 3 – CONDUCTOR (NO 14 AWG)
100 LF	ELECTRICAL CABLE 5 – CONDUCTOR (NO 14 AWG)
1100 LF	ELECTRICAL CABLE 7 – CONDUCTOR (NO 14 AWG)
350 LF	ELECTRICAL CABLE 2 – CONDUCTOR (NO 12 AWG)
130 LF	SAW CUT FOR SIGNAL
1 EA	CONTROLLER AND CABINET – BASE MOUNT
2 EA	250 WATT HPSV LUMINAIRE
7 EA	3/4 IN. X 10 FT. GROUND ROD
14 CY	CONCRETE FOR FOUNDATION
1 EA	R3–5L SIGN (30" X 36") – MAST ARM MOUNT
1 EA	R3–5R SIGN (30" X 36") – MAST ARM MOUNT
1 EA	D3–2 DUAL FACE SIGN VAR X 16) – MAST ARM MOUNT
2 EA	D3–2 SINGLE FACE SIGN VAR X 16) – MAST ARM MOUNT
1 EA	FOUR–CHANNEL LOOP DETECTOR AMPLIFIER
1 EA	2–WIRE CONTROL UNIT
2 EA	R4–7 SIGN (30" X 36") AND 4" X 6" SUPPORT

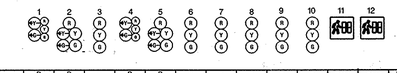
EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787–7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

ALL SIGNAL EQUIPMENT TO BE REMOVED AND NOT RETURNED TO THE SHA SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASING CHART



PHASE 1 & 5	R G	R G	R	R G	R G	R	R	R	R	R	DW	DW
5 CHANGE	PHASE 1 & 5 MAY CHANGE TO PHASE 1 & 6, 2 & 5, OR 2 & 6										DW	DW
PHASE 1 & 6	G G	G G	G	R	R	R	R	R	R	R	DW	DW
1 & 6 CHANGE	Y G	Y G	G	R	R	R	R	R	R	R	DW	DW
PHASE 2 & 5	R	R	R	G G	G G	G	R	R	R	R	DW	DW
5 CHANGE	R	R	R	Y G	Y G	G	R	R	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	WK	WK
PED CLEAR	R	R	R	R	R	R	G	G	G	G	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	DARK	DARK

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(410) 923–7101
FAX (410) 923–6473
EMAIL TRAFFIC.CONCEPTS@COMCAST.NET

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION PLAN

ST. CHARLES PKWY. AND POST OFFICE ROAD

SCALE NONE DATE 11–08–07 CONTRACT NO.

DESIGNED BY	T. ZAYDEL	COUNTY	CHARLES
DRAWN BY	T. ZAYDEL	LOGMILE	N/A
CHECKED BY	K. SCHMID	T.I.M.S. NO.	I– 693
F.A.P. NO.	N/A	TOD NO.	

DRAWING NO. TS–3633A GI

SHEET NO. 2 OF 2

DRILL HOLES

DRILL HOLES

DRILL HOLES

Inch 1 2003

Rev/Ed Rev Date