PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF VIDEO DETECTION FOR ALL APPROACHES AT THE INTERSECTION OF MD 175 (PATUXENT ROAD) AND TAMAR DRIVE IN HOWARD COUNTY, DUE TO THE RESURFACING AND SAFETY IMPROVEMENTS TO MD 175. APS WILL BE INSTALLED TO CROSS ALL LEGS OF THE INTERSECTION AND 16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEADS WILL REPLACE THE EXISTING PEDESTRIAN SIGNAL HEADS. ALL EXISTING VEHICULAR TRAFFIC SIGNAL HEADS WILL REMAIN. MD 175 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA EIGHT-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH EMERGENCY VEHICLE PRE-EMPTION FOR THE NORTHBOUND DIRECTION AND EXCLUSIVE LEFT TURN PHASES FOR ALL APPROACHES. THE ALTERNATE SIDE STREET PEDESTRIAN PHASE WILL REMAIN AND A CONCURRENT PEDESTRIAN PHASE WILL BE ADDED FOR THE MAIN LINE.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CONTROLLER SHALL REMAIN. THE SHA SIGNAL SHOP WILL INSTALL A 2-WIRE CENTRAL CONTROL UNIT WITHIN THE CABINET.

APS FUNCTION

FOR PATUXENT PARKWAY:
1. WHEN A PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS PATUXENT PARKWAY".
2. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR TAMAR DRIVE:
1. WHEN A PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS TAMAR DRIVE".
2. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

Mr. John Concannon
Assistant District Engineer - Traffic
Phone: 301-624-8140

Ms. Andrea Abend
Assistant District Engineer - Utility
Phone: 301-624-8115

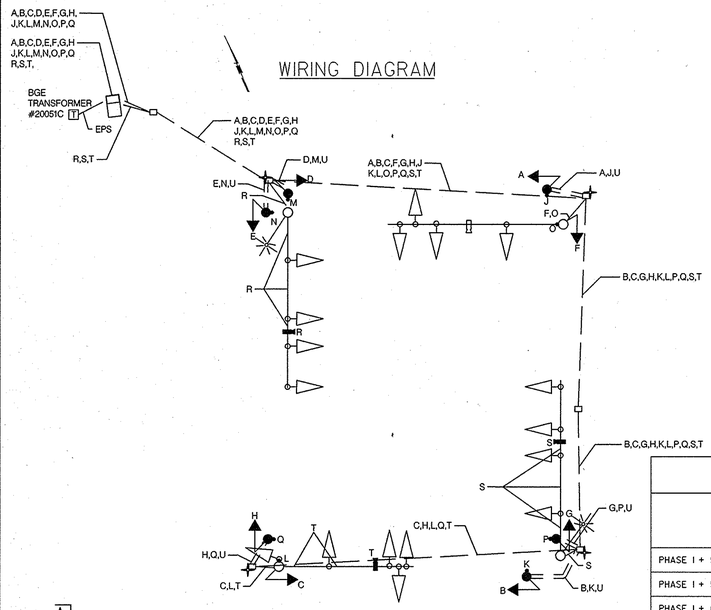
Mr. Ray Johnson
Assistant District Engineer - Maintenance
Phone: 301-624-8108

Mr. Edward Rodenhizer
Chief, SHA Traffic Signal Shop
Phone: 410-787-7650

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

The Power Company Representative is:
Baltimore Gas & Electric Company
7317 Parkway Drive South
Hanover, MD 21076
Phone: 410-859-9062

WIRING DIAGRAM



A B C D E F G H — ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

J K L M N O P Q — ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)

R — CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER

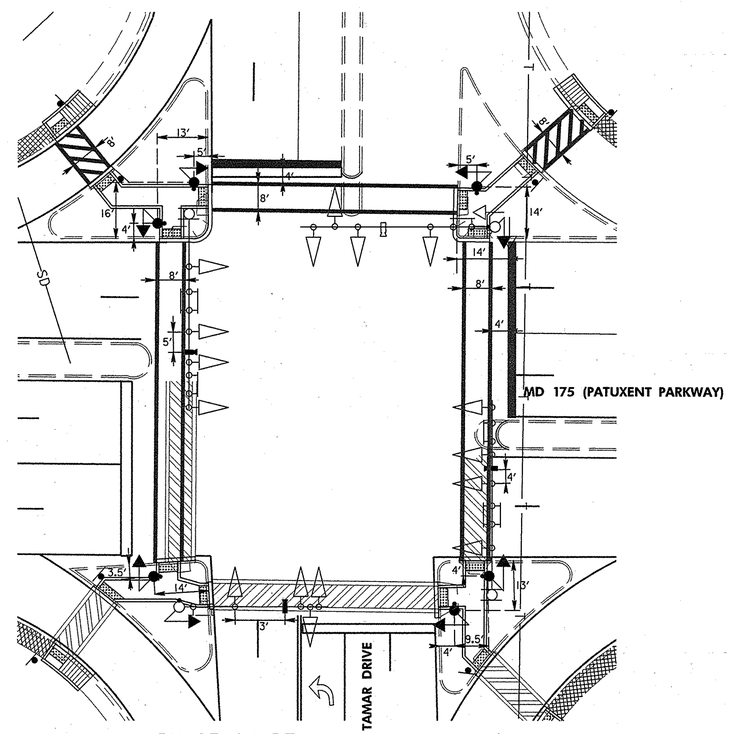
S T — CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER

U — NO. 6 AWG STRANDED BARE COPPER GROUND WIRE

EPS — EXISTING POWER SOURCE

EXISTING GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH.

PROPOSED PEDESTAL POLE, APS, AND VIDEO DETECTION LAYOUT



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
PHASE 1 + 5	R	~~G~~	~~G~~	R	R	~~G~~	~~G~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 1 + 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASE 1 + 6, 2 + 5, OR 2 + 6																	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 1 + 6	G	~~G~~	~~G~~	G	G	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 1 CHANGE	G	~~Y~~	~~Y~~	G	G	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	R	~~R~~	~~R~~	R	R	~~G~~	~~G~~	G	G	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 5 CHANGE	R	~~R~~	~~R~~	R	R	~~Y~~	~~Y~~	G	G	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	G	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	W	W	W	W	DW	DW	DW	DW
PHASE 2 + 6 PED CLEARANCE	G	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 2 + 6 CHANGE	Y	~~R~~	~~R~~	Y	Y	~~R~~	~~R~~	Y	Y	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 + 7	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~G~~	~~G~~	R	R	~~G~~	~~G~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 + 7 CHANGE	THE CONTROLLER MAY SKIP TO PHASE 3 + 8, 4 + 7, OR 4 + 8																	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 + 8	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~G~~	~~G~~	G	G	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 CHANGE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~Y~~	~~Y~~	G	G	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 7	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~G~~	~~G~~	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 7 CHANGE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~Y~~	~~Y~~	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 CHANGE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	Y	Y	~~R~~	~~R~~	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT.	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	DW	DW	DW	DW	W	W	W	W
PHASE 4 + 8 ALT. PED CLEARANCE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
PHASE 4 + 8 ALT. CHANGE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	Y	Y	~~R~~	~~R~~	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPT PHASE 3 + 8	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~G~~	~~G~~	G	G	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPT PHASE 3 + 8 CHANGE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	~~Y~~	~~Y~~	Y	Y	~~R~~	~~R~~	R	R	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/RA	FL/RA	FL/Y	FL/Y	FL/RA	FL/RA	FL/Y	FL/Y	FL/RA	FL/RA	FL/R	FL/R	FL/RA	FL/RA	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

CATEGORY CODE	QUANTITY	DESCRIPTION
973023	98 SF	SHEET ALUMINUM SIGNS:
		4 EA - R10-3(I), (9 IN. X 15 IN.) POLE MOUNT, "PUSH BUTTON TO CROSS PATUXENT PARKWAY"
		4 EA - R10-3(I), (9 IN. X 15 IN.) POLE MOUNT, "PUSH BUTTON TO CROSS TAMAR DRIVE"
		8 EA - W11-2, FY (36 IN. X 36 IN.) "ADVANCED PEDESTRIAN SYMBOL"
		8 EA - M6-2 (MOD), FY (15 IN. X 21 IN.) "DIRECTIONAL ARROW - DIAGONAL"

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

CATEGORY CODE	QUANTITY	DESCRIPTION
120500	1 EA	MAINTENANCE OF TRAFFIC
120662	360 LF	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS - ANY WIDTH
203030	6 CY	TEST PIT EXCAVATION
585621	800 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	55 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
655105	100 SF	5 INCH CONCRETE SIDEWALK
800000	1 EA	2-WIRE CENTRAL CONTROL UNIT
800000	8 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	8 EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON
800000	1 LS	REMOVE AND DISPOSE OF TRAFFIC SIGNAL EQUIPMENT
801004	6 CY	CONCRETE FOR SIGNAL FOUNDATION
801106	138 LF	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
802501	90 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805135	90 LF	3 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
813014	90 SF	INSTALL GROUND MOUNTED SIGN
813015	8 SF	INSTALL OVERHEAD SIGN
816001	3 EA	VIDEO DETECTION CAMERA
816005	1 EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816010	2 EA	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
818004	6 EA	10 FOOT BREAKAWAY PEDESTAL POLE
861105	580 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	620 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO	QUANTITY	DESCRIPTION

ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 175 (PATUXENT PARKWAY) AT TAMAR DRIVE

GENERAL INFORMATION

SCALE NONE DATE 102007 CONTRACT NO. HO3715177

DESIGNED BY MCG COUNTY HOWARD
DRAWN BY MCG LOGMILE 13017505.10
CHECKED BY BAB CSW T.I.M.S. NO. H951
F.A.P. NO. TOD NO.

TS NO. 469 E-GI | DRAWING SG - 4 OF 6 | SHEET NO. OF

STV Incorporated
engineers/architects/planners/construction managers
7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

BY: THOMPSMA

PLOTTED: FRIDAY, OCTOBER 12, 2007 AT 08:58 AM
FILE: I:\PROJECTS\0312513\0312513.0029\DRAWINGS\TRA\TAMAR DRIVE\PS&E 10-07\PSG-P002_TAMAR.DGN