PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal with street lighting and interconnect at the intersection of MD 355 (Rockville Pike) and Tuckerman Lane (NORTH) in Montgomery County. A new mast arm Traffic Signal shall replace the existing span wire structure. MD 355 (Rockville Pike) is assumed to run a north-south direction. Video detection shall be used on all approaches.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA six-phase, semi-actuated mode, with the MD 355 (Rockville Pike) approaches continuing to run concurrently. An Exclusive left turn phase shall be provided for the northbound approach of MD 355 (Rockville Pike). The Exclusive / Permissive left turn phase for the southbound approach of MD 355 (Rockville Pike) shall remain in operation. The pedestrian phases with pushbutton actuation shall remain in operation across both legs of MD 355 (Rockville Pike). The pedestrian phases across Tuckerman Lane shall remain on recall. Farside sampling stations shall be provided on all four legs of the intersection The Tuckerman Lane approaches shall continue to operate as a split phase.

2. The existing NEMA size "6" base-mounted cabinet and controller shall be used at this intersection.

III. SPECIAL NOTES

1. The contractor shall be responsible for delivering the video interface equipment to the Montgomery County Signal Shop. County forces will complete the retrofit work in the existing cabinet.

2. The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.

3. Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Mr. Bob Gonzales at (240) 777-8761 seventy-two hours in advance of intended work.

4. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

EQUIPMENT LIST (CONT.)

A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9087	Video detection interface equipment: 5-8 cameras (To be installed in existing cabinet in the field by signal shop).	1 EA
9570	Sheet aluminum signs to consist of: (ground mount)	19 SF
	OM-1 (18"x18")	4 EA
	R4-7 "KEEP RIGHT (symbolic)" sign, (24" x 30").	2 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	90.5 SF
	D3-2 " Tuckerman Lane (Dual-Faced variable x 16") mast arm mounted	2 EA
	D3-2 "Rockville Pike" (Dual-Faced variable x 16") mast arm mounted	2 EA
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36") mast arm mounted	1 EA
	R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast arm mount.	3 EA
	R10-12 "LEFT TURN YIELD ON GREEN (BALL)" sign, (36" x 42") mast arm mount.	1 EA
	R3-6 "LEFT TURN AND THRU" sign, (30" x 36") mast arm mount.	1 EA

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

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of Traffic	3 EA
2001	Class II Excavation	13 CY
2002	Test Pit Excavation	6 CY
5001	F&I 5" White Heat Applied Therm. Pavement Markings (Doubled for 10" Marking)	450 LF

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Lee Starkloff
Assistant District Engineer - Traffic
Phone: (301) 513-7318

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

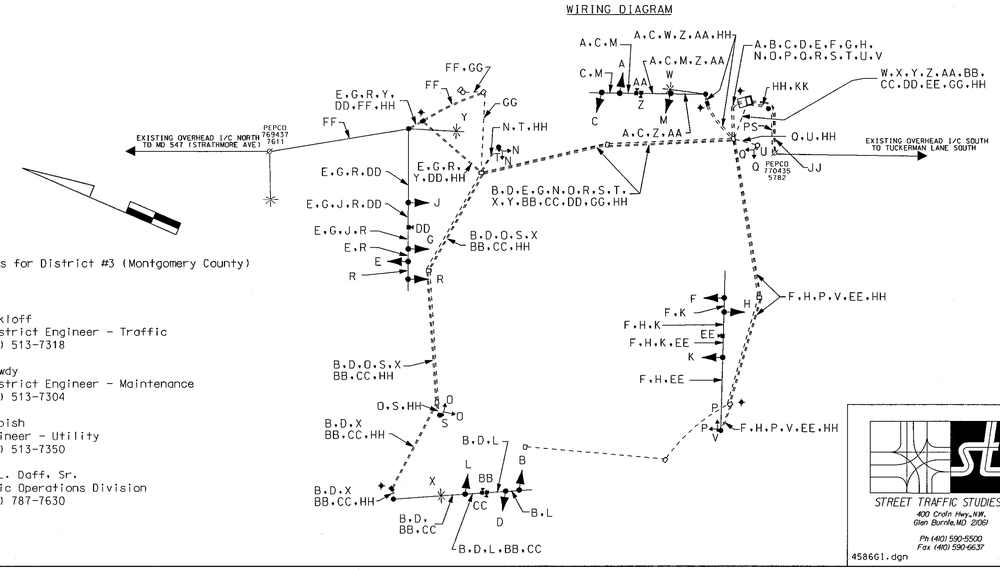
Mr. Augie Rebish
District Engineer - Utility
Phone: (301) 513-7350

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

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

ITEM NO.	DESCRIPTION	QUANTITY
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	990 LF
5005	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	1350 LF
6001	DEPRESS CURB & GUTTER	70 LF
6002	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	100 LF
6004	4 INCH CONCRETE SIDEWALK	840 SF
8001	CONCRETE FOUNDATION	21 CY
8002	12 IN PED SIG HEAD SECTION	16 EA
8004	ADJ EXISTING HANDHOLE TO GRADE	2 EA
8006	CONDUIT BEND IN EXISTING FOUNDATION	2 EA
8008	CONTROL CABLE, 200 FOOT, VIDEO DETECTION	2 EA
8009	CONTROL CABLE, 300 FOOT, VIDEO DETECTION	2 EA
8010	CONTROL CABLE, 400 FOOT, VIDEO DETECTION	2 EA
8018	PED POLE (ANY SIZE)	2 EA
8019	REM & DISPOSE MAT & EQUIP PER ASSIGN	1 EA
8024	DISCONNECT, PULL-BACK & REROUTE CABLE	270 LF
8026	DETECTABLE WARNING SYSTEM (TRUNCATED DOMES)	6 EA
8028	WOOD SIGN SUPPORTS 4 INCH X 4 INCH	180 LF
8030	NO. 6 AWG STANDARD BARE COPPER GROUND WIRE	1250 LF
8033	3 INCH ELECTRICAL CONDUIT - GALVANIZED RISER	35 LF
8034	WEATHER HEAD, 3 INCH	2 EA
8038	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	30 LF
8039	3 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED	150 LF
8040	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	100 LF
8043	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	450 LF
8045	METERED SERVICE PEDESTAL	1 EA
8047	ELECTRICAL CABLE 1- CONDUCTOR NO. 4 AWG-THHN/THWN	40 LF
8053	FURNISH AND INSTALL ELECTRICAL HANDHOLE	3 EA
8055	INSTALL GROUND MOUNTED SIGN	19 SF
8056	INSTALL OVERHEAD SIGN	90.5 SF
8057	VIDEO DETECTION CAMERA	6 EA
8064	STEEL POLE WITH A SINGLE 60 FOOT MAST ARM	2 EA
8067	STEEL POLE WITH SINGLE 70 FOOT MAST ARM	2 EA
8069	12 - PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)	350 LF
8070	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE	3 EA
8074	GROUND ROD -3/4 INCH DIAMETER X 10 FOOT LENGTH	6 EA
8076	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	47 EA
8079	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	1 EA
8082	ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG	700 LF
8084	ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG	1500 LF
8085	ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG	1950 LF
8086	ELECTRICAL CABLE- 2 CONDUCTOR NO. 12 AWG TC	660 LF
8089	PUSHBUTTON AND SIGN (Note: Sign to read "PUSH BUTTON TO CROSS ROCKVILLE PIKE)	3 EA
8090	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	3 EA
8096	REMOVE CONCRETE FOUNDATION 12 INCHES	8 EA

WIRING DIAGRAM



WIRING KEY

A B C D E F G H — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)	BB, CC — PRE-MANUFACTURED CAMERA TO CONTROLLER (400' LENGTH) CABLE
	DD, EE — PRE-MANUFACTURED CAMERA TO CONTROLLER (300' LENGTH) CABLE
J K L M N O P Q R — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)	FF - REROUTED INTERCONNECT CABLE (SELF SUPPORTING) FROM MD 547
	GG - 12-PAIR INTERCONNECT CABLE (JELLY FILLED)
	HH - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
S T U V — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)	JJ - REROUTED INTERCONNECT CABLE (SELF SUPPORTING) FROM TUCKERMAN LA (SOUTH)
W X Y — 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G)	KK - 3 - 1 CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)
Z AA — PRE-MANUFACTURED CAMERA TO CONTROLLER (200' LENGTH) CABLE	PS - PROPOSED UNDERGROUND SERVICE TO BE INSTALLED BY PEPCO
	✦ - GROUND ROD

SEQUENCE OF OPERATION SHEET

TRAFFIC OPERATIONS SECTION
DIVISION OF TRAFFIC ENGINEERING
MONTGOMERY COUNTY, MARYLAND

MD 355 RUNS IN AN NORTH - SOUTH DIRECTION

INTERSECTION: MD 355 (ROCKVILLE PIKE) AND TUCKERMAN LANE

NO.

SIGNAL HEAD INDICATIONS

SIGNAL NO.	3,4,7, 10,13	1,2	5,6		8,9, 11,12		14-21
TOTAL:	5	2	2		4		8
	R, Y, G	R, G	R, Y, G	R, Y, G	R, Y, G	R, Y, G	X
	12"	12"	12"	8", 8", 8", 12"	12"	12"/8"	9" or 12"

LEGEND
OPTICALLY LIMITED
R RED
Y YELLOW
G GREEN
ARROW
F FLASHING

SEQUENCE OF OPERATION

SIGNAL NO.	INTERVAL 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	FLASH
1	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FL R
2	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FL R
3	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	R	R	R	FL Y
4	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	R	R	R	FL Y
5	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	G/R	Y/R	R	R	R	R	G/G	Y/G	G	FL Y
6	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	G/R	Y/R	R	R	R	R	G/G	Y/G	G	FL Y
7	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	FL Y
8	R	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	FL R
9	R	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	FL R
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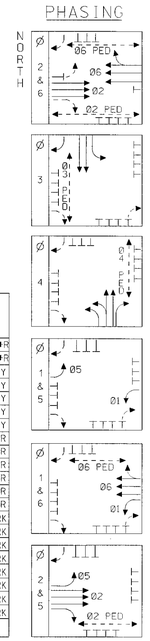
13	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FL R
14	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	DARK
15	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	DW	DW	DW	DARK
16	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	DW	DW	DW	DARK
17	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	DARK
18	DW	DW	DW	DW	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
19	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
20	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
21	DW	DW	DW	DW	WK	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
PHASE	2 & 6		ALL RED	3				ALL RED	4					ALL RED	1 & 5		ALL RED	1 & 6		ALL RED	2 & 5		ALL RED	

NOTES:

PHASING



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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE)
AND TUCKERMAN LANE (NORTH)

DRAWN BY: D.A.NIES	F.A.P. NO.		TS NO. 4276B GI	SHEET NO.	
CHECKED BY: RRZ	S.H.A. NO.	AT3565185			
SCALE: NONE	COUNTY:	Montgomery	T.I.M.S. NO. G313	2 OF 2	
DATE: 7-13-04	LOG MILE:	15035504.96			