

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL WITH ~~AUTOSCOPE~~ CAMERA DETECTION AT THE NEW INTERSECTION OF THE I-270 Y RAMP AND WESTLAKE TERRACE IN MONTGOMERY COUNTY. THE I-270 Y HOV RAMP IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION. THIS PROJECT ALSO CONSISTS OF THE REMOVAL AND RELOCATION OF THE EXISTING CLOSED CIRCUIT TELEVISION CAMERA ON THE I-270 SPUR TO JUST NORTH OF WESTLAKE TERRACE.

INTERSECTION OPERATION

NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA TWO-PHASE, FULLY ACTUATED MODE. THE MOVEMENTS ON THE I-270 Y RAMP WILL OPERATE CONCURRENTLY AND THE WESTLAKE TERRACE APPROACHES WILL OPERATE CONCURRENTLY. INTERSECTION CONTROLLER WILL INTERCONNECT WITH EXISTING CONTROLLER AT THE INTERSECTIONS OF WESTLAKE TERRACE AT MOTOR CITY DRIVE AND WESTLAKE TERRACE AT ROCKLEDGE DRIVE.

CONTROLLER REQUIREMENTS

INSTALL AN EIGHT-PHASE, FULLY-TRAFFIC ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH A RACK MOUNTED MACHINE VISION PROCESSOR, SYSTEM PACKAGE AND TELEMETRY MODULE, WITH ALL THE NECESSARY HARNESSSES, TO BE HOUSED IN A NEMA SIZE '6' POLE-MOUNTED CABINET.

SPECIAL NOTE

ALL UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE BECAUSE THESE UTILITIES MAY BE MODIFIED PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES 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 EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

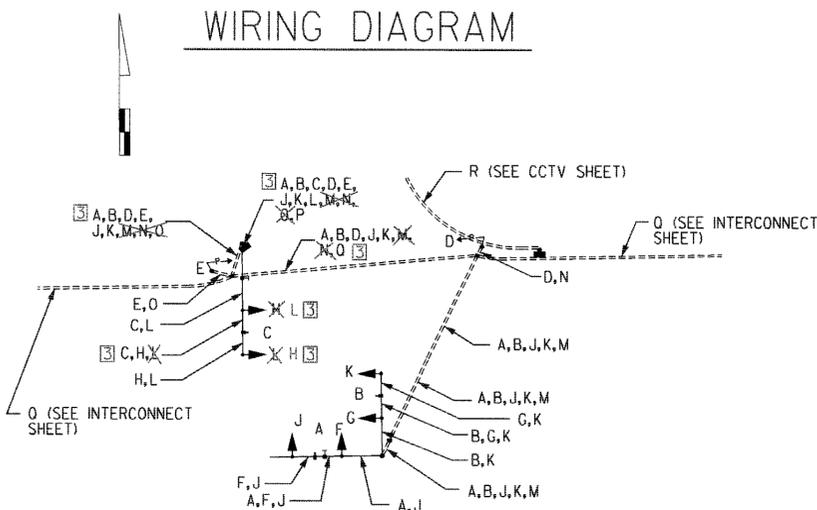
CAT. CODE NUMBER	SPEC. SECTION	QUANTITY	DESCRIPTION
960048	814	2 EA.	12 IN., ONE-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD WITH PEDESTAL MOUNTING HARDWARE AND TUNNEL VISORS
965001	817	2 EA.	PUSHBUTTON AND SIGN
971016	816	1 EA.	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH SYSTEM PACKAGE, HOUSED IN A NEMA SIZE '6' POLE MOUNTED CABINET
973023	813	104 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF: -4 EA. W 3-3 SIGN (48 IN. X 48 IN.) - GROUND MOUNT -4 EA. 'NEW' PANEL (30 IN. X 30 IN.) AND FLAGS - GROUND MOUNT -1 EA. D 3-2 SIGN (VAR. X 12 IN.) -1 EA. R 3-5R SIGN (30 IN. X 36 IN.)

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT. CODE NUMBER	SPEC. SECTION	QUANTITY	DESCRIPTION
585443	555	180 L.F.	12 IN. WHITE PERMANENT PREFORMED PAVEMENT MARKING
585445	555	110 L.F.	24 IN. WHITE PERMANENT PREFORMED PAVEMENT MARKING
801106	812	81 L.F.	WOOD SIGN SUPPORTS 4 IN. X 6 IN.
802501	810	150 370 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810010	810	45 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG
811001	811	6 EA.	ELECTRICAL HANDHOLE
813010	813	4 EA.	BAND SIGN TO SIGN SUPPORT
813014	813	89 S.F.	INSTALL GROUND MOUNTED SIGN
818010	818	2 EA.	14 FOOT BREAKAWAY PEDESTAL
822002	810	1530 L.F.	12-PAIR COMMUNICATION CABLE, JELLYFILLED
838003	807	1 EA.	CONTROL AND DISTRIBUTION EQUIPMENT (120/240 V, 1 PHASE, 3 WIRE SYSTEM)
860048	860282	4 2 EA.	INSTALL 12 INCH I-WAY-2 SECTION PEDESTRIAN SIGNAL HEAD SECTION -PEDESTAL MOUNT
860272	814	18 EA.	12 INCH VEHICULAR TRAFFIC HEAD SECTION
861106	810	230 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	810	70 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	810	750 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
871201	816	1 EA.	INSTALL CONTROLLER AND CABINET - POLE MOUNT
800000	805	120 L.F.	3 IN. SCHEDULE 80 RIGID PVC CONDUIT-ON BRIDGE
800000	805	370 370 L.F.	4 IN. SCHEDULE 80 RIGID PVC CONDUIT-ON BRIDGE
800000	810	720 L.F.	VIDEO TRAFFIC DETECTOR CABLE
865201	817	2 EA.	INSTALL PEDESTRIAN PUSHBUTTON
800000	818036	1 EA.	27 FT. STEEL POLE WITH A 50 FT. MAST ARM
800000	818	1 EA.	27 FT. STEEL POLE WITH TWIN 30 FT. AND 30 FT. MAST ARMS
800000	827	3 EA.	VIDEO TRAFFIC DETECTION SYSTEM
870166	805	600 L.F.	4 IN. SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED

WIRING DIAGRAM



PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

CHARLIE WATKINS
DISTRICT ENGINEER
PHONE: 301-513-7300

~~RANDY BROWN~~ RALEIGH MEDLEY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: 301-513-7304

AUGIE REBISH
ACTING DISTRICT UTILITIES ENGINEER
PHONE: 301-513-7350

MAJID SHAKIB
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: 301-513-7358

PHASE CHART

	1	2	3	4	5	6	7	8	
PHASE 2 + 6	R	R	G	G	G	G	W	W	
PED CLEAR	R	R	G	G	G	G	FL/DW	FL/DW	↕
2 + 6 CHANGE	R	R	Y	Y	Y	Y	DW	DW	↔
PHASE 4	G	G	R	R	R	R	DW	DW	↕
4 CHANGE	Y	Y	R	R	R	R	DW	DW	↔
FLASHING OPERATION	FL R	FL R	FL Y	FL Y	FL Y	FL Y	DARK	DARK	↕

~~REDLINE NO. 3 09/19/2001~~

~~ADDENDUM NO. 4 03/08/2001 REPLACE OLD SHEET 243~~

- A VIDEO TRAFFIC DETECTION CABLE
- B VIDEO TRAFFIC DETECTION CABLE
- C VIDEO TRAFFIC DETECTION CABLE
- D 3-CONDUCTOR CABLE (NO. 14 A.W.G.)
- E 3-CONDUCTOR CABLE (NO. 14 A.W.G.)
- F 5-CONDUCTOR CABLE (NO. 14 A.W.G.)
- G 5-CONDUCTOR CABLE (NO. 14 A.W.G.)
- H 5-CONDUCTOR CABLE (NO. 14 A.W.G.)
- J 7-CONDUCTOR CABLE (NO. 14 A.W.G.)
- K 7-CONDUCTOR CABLE (NO. 14 A.W.G.)
- L 7-CONDUCTOR CABLE (NO. 14 A.W.G.)

- M, N, O - BARE COPPER STRANDED GROUND WIRE (NO. 6 A.W.G.)
- P - 1-WIRE #4 A.W.G. FOR TRAFFIC SIGNAL ELECTRICAL SERVICE
- Q - 12 PAIR INTERCONNECT CABLE, JELLYFILLED (NO. 19 A.W.G.)
- R - 48 FIBER SINGLE MODE FIBEROPTIC CABLE, TWO 1-CONDUCTOR #2 AWG CABLES FOR POWER AND 1-CONDUCTOR #6 AWG STRANDED BARE COPPER GROUND
- PF - PROPOSED ELECTRICAL SERVICE BY PEPCO

REVISIONS	APPROVALS
	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

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

I-270 WEST SPUR AT DEMOCRACY BOULEVARD
AND WESTLAKE TERRACE
I-270 Y HOV RAMP AT WESTLAKE TERRACE

DRAWN BY: STB	F.A.P. NO. SEE TITLE SHEET	TS NO. 4053-2	SHEET NO. 243 OF 296
CHECKED BY: PDU	S.H.A. NO. MO 9025172		
SCALE: NONE	COUNTY: MONTGOMERY	T.I.M.S. NO. D 968	
DATE: MARCH, 2001	LOG MILE: 1.14		

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