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PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF AN EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD ROUTE 28 (DARNESTOWN ROAD) AND MUDDY BRANCH ROAD IN MONTGOMERY COUNTY. MD ROUTE 28 (DARNESTOWN ROAD) IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA, EIGHT (8) PHASE, SEMI-TRAFFIC-ACTUATED MODE. THERE WILL BE AN EXCLUSIVE-PERMISSIVE LEFT TURN PHASE FOR BOTH EASTBOUND AND WESTBOUND MD 28 MOVEMENTS. THE MD 28 THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY. A CONCURRENT NORTHBOUND RIGHT TURN PHASE WILL BE PROVIDED ALONG WITH WESTBOUND MD 28 LEFTS. THERE WILL BE AN EXCLUSIVE-PERMISSIVE LEFT TURN PHASE FOR SOUTHBOUND MUDDY BRANCH ROAD MOVEMENTS. THE MUDDY BRANCH ROAD THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY. AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE WEST LEG OF MD 28. A CONCURRENT PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE NORTH AND SOUTH LEGS OF MUDDY BRANCH ROAD.

AN EIGHT (8) PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH VIDEO TRAFFIC DETECTION SYSTEM HOUSED IN A BASE MOUNTED CABINET EXISTS AT THIS LOCATION.

III. INTERCONNECTION

THE EXISTING 50 PAIR VOICE GRADE INTERCONNECT CABLE BETWEEN THE INTERSECTIONS OF MD 28 @ MUDDY BRANCH ROAD AND MD 28 @ KEY WEST AVENUE IS TO BE MAINTAINED. THE EXISTING 50 PAIR VOICE GRADE INTERCONNECT CABLE BETWEEN MD 28 @ MUDDY BRANCH ROAD AND MUDDY BRANCH ROAD @ GREAT SENECA HIGHWAY IS TO BE REROUTED AS SHOWN THE WIRING DIAGRAM.

IV. PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT THREE ARE AS FOLLOWS:

MR. CHARLIE WATKINS
DISTRICT ENGINEER
PHONE (301) 513-7311

MR. AUGUSTINE REBISH
UTILITY ENGINEER
PHONE: (301) 513-7350

MR. MAJID SHAKIB
ASSISTANT DISTRICT
ENGINEER-TRAFFIC
PHONE: (301) 513-7358

MR. RICHARD L. DAFF, SR.
CHEIF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

THE POWER COMPANY REPRESENTATIVE IS
POTOMAC ELECTRIC POWER COMPANY
MR. JIM SLAYTON
PHONE: (202) 872-2000

THE CONTACT PERSON FOR
MONTGOMERY COUNTY DPW-T IS:
MR. ROBERT GONZALES
PHONE: (240) 777-8761

V. MAINTENANCE OF TRAFFIC

THE FOLLOWING STANDARD TRAFFIC CONTROL NUMBERS SHALL BE REFERENCED:

STANDARD NO. 104.00
STANDARDS NO. 104.37, 104.38 (LANE CLOSURE)
STANDARDS NO. 104.39, 104.40 (INTERSECTION FAR SIDE CLOSURE)
STANDARD NO. 104.43 (SHOULDER WORK)

EQUIPMENT LIST 'A'

EQUIPMENT TO BE SUPPLIED BY THE SHA.

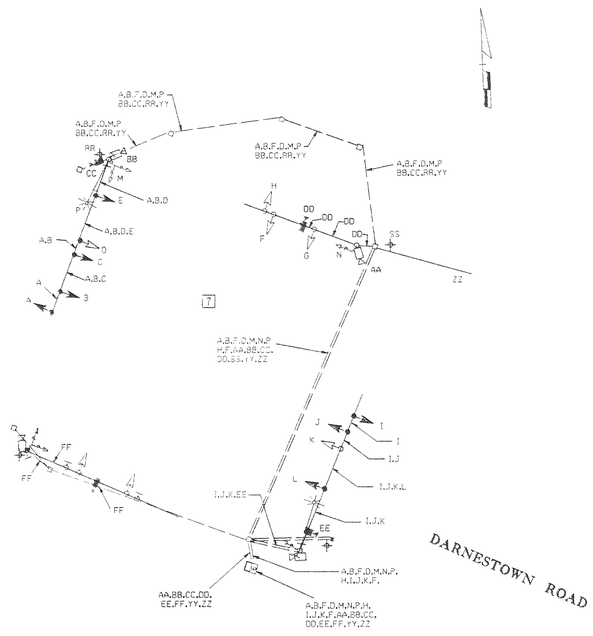
QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
2	EA	SP	FOUR-CHANNEL, TIME DELAY OUTPUT, LOOP DETECTOR AMPLIFIER
2	EA	SP	PEDESTRIAN PUSHBUTTON AND SIGN
15	SF	813	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: =2 EACH R3-6(L) (30"X36") - MAST ARM MOUNT

EQUIPMENT LIST 'B'

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

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
500	LF	556	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
200	LF	556	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
11	SF	SP	RELOCATE EXISTING OVERHEAD SIGN
2	EA	914	RELOCATE EXISTING SIGNAL
3	EA	911	FURNISH AND INSTALL ELECTRICAL HANDHOLE
40	LF	905	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
195	LF	905	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT-BORED
350	LF	910	FURNISH AND INSTALL NO. 8 AWG STRANDED BARE COPPER GROUND WIRE
350	LF	910	FURNISH AND INSTALL ELECTRICAL CABLE- 2 CONDUCTOR (NO 14 AWG)
200	LF	910	FURNISH AND INSTALL ELECTRICAL CABLE- 3 CONDUCTOR (NO 14 AWG)
2150	LF	910	FURNISH AND INSTALL ELECTRICAL CABLE- 5 CONDUCTOR (NO 14 AWG)
1350	LF	910	FURNISH AND INSTALL ELECTRICAL CABLE-
21	EA	918	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
3	EA	918	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
360	LF	910	FURNISH AND INSTALL 2-CONDUCTOR TRAY CABLE (NO 12 AWG)
1	LS	SP	RELOCATE EXISTING COMMUNICATION CABLE
1	LS	SP	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
4	EA	SP	FURNISH AND INSTALL VIDEO TRAFFIC DETECTION SYSTEM
1560	LF	SP	FURNISH AND INSTALL VIDEO TRAFFIC DETECTION CABLE
15	SF	813	INSTALL OVERHEAD SIGNS

ULTIMATE WIRING DIAGRAM



WIRING KEY

A,B,C,D - 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

E,F,G - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

AA,BB,CC, DD,EE,FF - VIDEO TRAFFIC DETECTION CABLING (NO.18 AWG)

H - 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

J - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

K - 2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 AWG)

L - STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)

YY,ZZ - 50 PAIR COMMUNICATION CABLE, JELLY FILLED

⏚ - 3/4" x 10' GROUND ROD

7 PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PHASE 1 & 5	←G	←G	R	R	←G	←G	←G	R	R	R/G→	R	R/G→	R	R	R	DW	DW	DW	DW	DW	DW
1 & 5 CHANGE	TO PHASE 1 & 6, OR PHASE 2 & 5, OR PHASE 2 & 6																				
PHASE 1 & 6	←G	←G	G	G	←R	←R	←R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 CHANGE	←Y	←Y	G	G	←R	←R	←R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 5	←R	←R	R	R	←G	←G	←G	G	G	R/G→	R	R/G→	R	R	R	DW	DW	DW	DW	DW	DW
5 CHANGE	←R	←R	R	R	←Y	←Y	←Y	G	G	R/Y→	R	R/Y→	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 6	←R	←R	G	G	←R	←R	←R	G	G	R	R	R	R	R	R	W	W	W	W	DW	DW
PED CLEAR	←R	←R	G	G	←R	←R	←R	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	←R	←R	Y	Y	←R	←R	←R	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 7	←R	←R	R	R	←R	←R	←R	R	R	R	R	R	←G/G	←G/G	G	DW	DW	DW	DW	DW	DW
4 & 7 CHANGE	←R	←R	R	R	←R	←R	←R	R	R	R	R	R	←Y/G	←Y/G	G	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	←R	←R	R	R	←R	←R	←R	R	G	G/G→	G	G/G→	G	G	G	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	←R	←R	R	R	←R	←R	←R	R	Y	G/Y→	Y	G/Y→	Y	Y	Y	DW	DW	DW	DW	DW	DW
ALT 4	←R	←R	R	R	←R	←R	←R	R	G	G/G→	G	G/G→	G	G	G	DW	DW	DW	DW	W	W
PED CLEAR	←R	←R	R	R	←R	←R	←R	R	G	G/G→	G	G/G→	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
4 CHANGE	←R	←R	R	R	←R	←R	←R	R	Y	G/Y→	Y	G/Y→	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/←R	FL/←R	FL/Y	FL/Y	FL/←R	FL/←R	FL/←R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

TSP 48

REVISIONS
© 10-00 NEW MD 28 GEOMETRICS
3 ADDENDUM NO. 3 NEW SHEET 12/19/2000
4 REDLINE NO. 4 REPLACEMENT SHEET 8/23/2001
7 REDLINE NO. 7 NEW SHEET 2/4/2002

Q.X.

APPROVALS

PROJECT MANAGER, SIGNAL DESIGN DIVISION — ORIGINAL

ASST. CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION — ON

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION — FILE

DIRECTOR, TRAFFIC & SAFETY

REVISION 'C'

KCI TECHNOLOGIES

KCI TECHNOLOGIES INC.
ENGINEERS AND PLANNERS
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HUNT VALLEY, MARYLAND
21030-1888
(410) 316-7800

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
ULTIMATE STAGE
MD 28 (DARNESTOWN RD) AND MUDDY BRANCH RD.

DRAWN BY: T.Z.	F.A.P. NO.		TS NO. 1915C-01	SHEET NO. 337JA OF 434
CHECKED BY: T.M.	S.H.A. NO.	BW-730-802-3412		
SCALE: NONE	COUNTY:	MONTGOMERY	T.I.M.S. NO. D107	
DATE: 7-30-83	LOG MILE:	15002817.77		

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