

**PROJECT DESCRIPTION**

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD650 AND ADELPHI RD./DILSTON RD. IN MONTGOMERY COUNTY. THE WORK WILL INCLUDE APS AND CPS AND IS NECESSITATED BY GEOMETRIC IMPROVEMENTS TO THE INTERSECTION. MD 650 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**INTERSECTION OPERATION**

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH AN EXCLUSIVE LEFT TURN PHASE FOR S.B. MD 650, CONCURRENT SIDE STREET PHASING AND AN ADELPHI RD. RIGHT TURN OVERLAP PHASE. ALTERNATE PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE EAST, WEST, AND SOUTH LEGS OF THE INTERSECTION.

**CONTROLLER REQUIREMENTS**

THE EXISTING EIGHT-PHASE, FULLY-ACTUATED CONTROLLER HOUSED IN A NEMA "6" BASE MOUNTED CABINET WILL BE USED.

**SPECIAL NOTES**

APS WILL FUNCTION AS FOLLOWS:

FOR NEW HAMPSHIRE AVENUE

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS NEW HAMPSHIRE AVENUE."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR ADELPHI ROAD

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS ADELPHI ROAD."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR DILSTON ROAD

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS DILSTON ROAD."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

**EQUIPMENT LIST "A"**

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

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
973023	147 SF	SHEET ALUMINUM SIGNS TO CONSIST OF THE FOLLOWING: 2 EA - D3-2 DUAL FACE SIGN (VAR. X 16") - MAST ARM MOUNT 1 EA - R10-11B SIGN (24" X 30") - MAST ARM MOUNT 4 EA - R3-6(L) SIGN (30" X 36") - MAST ARM MOUNT 2 EA - R3-5(R) SIGN (30" X 36") - MAST ARM MOUNT 2 EA - R3-3(2) SIGN (24" X 24") - MAST ARM MOUNT 2 EA - M95-1/D3-3(2) SIGN (72" X 40") - MAST ARM MOUNT 2 EA - S1-1 SIGN (36" X 36") AND M6-2 SIGN (21" X 15")-POLE MOUNT 1 EA "G" TYPE POLE MOUNTED CABINET

**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.

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
203030	8 CY	TEST PIT EXCAVATION
585620	1100 LF	FURNISH AND INSTALL 12 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
585624	160 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
816005	2 EA	FURNISH AND INSTALL 250 FT. VIDEO DETECTION CABLE
816010	3 EA	FURNISH AND INSTALL 500 FT. VIDEO DETECTION CABLE
800000	6 EA	FURNISH AND INSTALL 16 IN. COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	41 EA	FURNISH AND INSTALL 12 IN. L.E.D. VEHICULAR SIGNAL HEAD SECTION
866103	2 EA	FURNISH AND INSTALL 15 FT. STREET LIGHTING ARM
800000	1 EA	FURNISH AND INSTALL 250 WATT HPSV LUMINAIRE
800000	3 EA	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE
800000	6 EA	FURNISH AND INSTALL AUDIBLE-TACTILE PEDESTRIAN PUSHBUTTON AND SIGN
818036	1 EA	FURNISH AND INSTALL 27 FT. MAST ARM POLE WITH A 50 FT. MAST ARM
818052	1 EA	FURNISH AND INSTALL 27 FT. MAST ARM POLE WITH A 70 FT. MAST ARM
800000	LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
816001	5 EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
816015	1 EA	FURNISH AND INSTALL VIDEO INTERFACE EQUIPMENT
801004	18 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
802501	700 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE
805135	150 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
805155	330 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - SLOTTED
810010	200 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 A.W.G.)
811001	4 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
800000	10 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT. LENGTH
881105	1300 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (NO. 14 A.W.G.)
861107	1450 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
861108	2000 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
861116	300 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 A.W.G.) - TRAY CABLE
813015	147 SF	INSTALL OVERHEAD SIGN
805140	80 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
800000	1 EA	FURNISH AND INSTALL HANDHOLE FRAME AND COVER
800000	100 LF	FURNISH AND INSTALL 12-PAIR VOICE GRADE INTERCONNECT CABLE
800000	300 LF	REMOVE AND REROUTE EXISTING CABLE
800000	2 EA	FURNISH AND INSTALL CONDUIT BEND IN EXISTING FOUNDATION
800000	1 EA	RELOCATE EXISTING POLE MOUNTED CABINET
800000	1 EA	INSTALL "G" TYPE POLE MOUNTED CABINET
800000	3 EA	FURNISH AND INSTALL 3 IN. CONDUIT RISER
800000	1 EA	FURNISH AND INSTALL METERED SERVICE PEDESTAL
800000	220 LF	FURNISH AND INSTALL MONTGOMERY COUNTY CAMERA CABLE
800000	1 EA	FURNISH AND INSTALL 2 WIRE CENTRAL CONTROL UNIT
800000	2 EA	FURNISH AND INSTALL 16.5 FT. MAST ARM POLE WITH A 50 FT. MAST ARM

**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.

**CONTACT PERSONS FOR DISTRICT 3 ARE AS FOLLOWS:**

MR. JEFF WENTZ  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
(301) 513-7318

MR. WAYNE MOWDY  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
(301) 513-7304

MR. AUGIE REBISH  
ASSISTANT DISTRICT ENGINEER - UTILITIES  
(301) 513-7350

**CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY**

MR. RICHARD DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS  
(410) 787-7630

MR. EUGENE BAILEY  
TEAM LEADER SIGN OPERATIONS  
(410) 787-7676

MR. ROBERT SNYDER  
ASSISTANT DIVISION CHIEF,  
TRAFFIC OPERATIONS  
(410) 787-7631

MS. DARLENE EIDE  
SUPPLY OFFICE  
SIGNAL SHOP WAREHOUSE  
(410) 787-7668

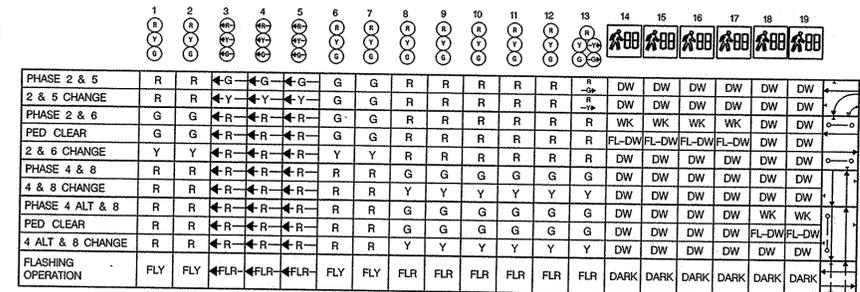
MR. ED RODENHIZER  
TEAM LEADER SIGNAL OPERATIONS  
(410) 787-7652

**CONTACTS FOR MONTGOMERY COUNTY**

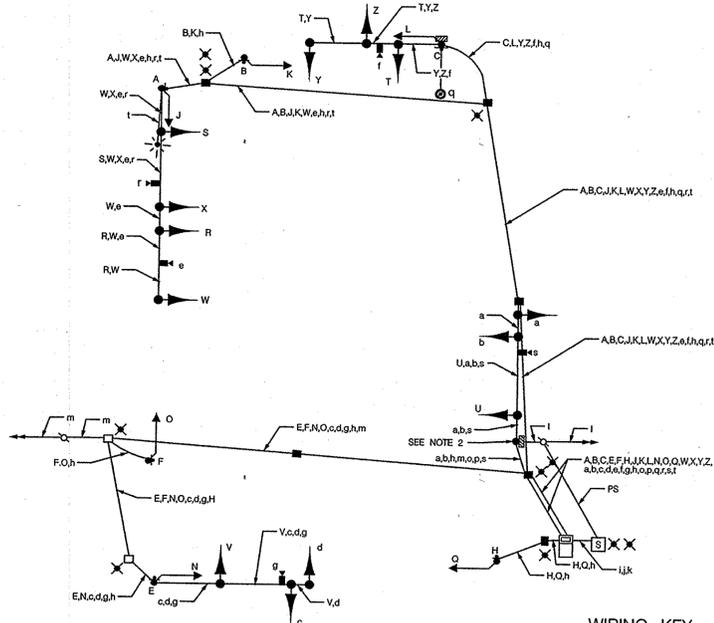
MR. KAMAL HAMUD  
TRAFFIC ENGINEERING  
(240) 777-8761

MR. MIKE KINNEY  
RED LIGHT CAMERAS  
(240) 777-8760

**PHASING CHART**



**WIRING DIAGRAM**



**WIRING KEY**

- A-H 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- J-V 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- W-d 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- e-g VIDEO DETECTION CABLE
- h STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- i-k 1-CONDUCTOR ELECTRICAL CABLE
- l,m EXISTING INTERCONNECT CABLE
- n EXISTING CAMERA CABLE
- o,p 12-PAIR VOICE GRADE INTERCONNECT CABLE
- q MONTGOMERY COUNTY CAMERA CABLE
- r,s VIDEO DETECTION CABLE
- t 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE
- PS PROPOSED ELECTRIC SERVICE GROUND ROD

(NOTE: LETTERS "I,D,G,M, AND P" ARE NOT USED)

**NOTES:**

- 1. ALL UNUSED CABLE SHALL BE REMOVED
- 2. THE EXISTING INTERCONNECT CABLES (l AND m) SHALL BE SPLICED TO THE PROPOSED INTERCONNECT CABLES (o AND p) IN THE "G" TYPE POLE MOUNTED CABINET.

ADDENDUM: 02-08-08 *WJK*

**T**RAFFIC **C**ONCEPTS INC.  
325 Gambrills Road  
Suite E  
Gambrills, MD 21054  
(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**  
MD 650 AND ADELPHI ROAD /  
DILSTON ROAD

SCALE	NONE	DATE	9-27-07	CONTRACT NO.	M-771X-375
DESIGNED BY	T. ZAYDEL	COUNTY	MONTGOMERY		
DRAWN BY	T. ZAYDEL	LOGMILE	15085000.33		
CHECKED BY	K. SCHMID	T.I.M.S. NO.	H413		
F.A.P. NO.	NA	TOD NO.			
DRAWING NO.	TS-19D GI-1	SHEET NO.		OF	