

**PROJECT DESCRIPTION**

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 140 AND MD 194 IN CARROLL COUNTY. MD 140 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

**INTERSECTION OPERATION**

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULLY-ACTUATED MODE WITH ALTERNATE PEDESTRIAN PHASES ACROSS BOTH LEGS OF MD 140 AND CONCURRENT PEDESTRIAN PHASES ACROSS BOTH LEGS OF MD 194.

**CONTROLLER REQUIREMENTS**

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE, ONE (1), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER AND VIDEO DETECTION INTERFACE EQUIPMENT HOUSED IN A BASE MOUNTED CABINET.

**SPECIAL NOTE**

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF THE MSHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR MUST PROVIDE MR. SNYDER WITH THE NEAREST ADDRESS, ZIP CODE, AND PHONE NUMBER.

**EQUIPMENT LIST "A"**

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

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
971017	1 EA	BASE MOUNTED CABINET AND CONTROLLER WITH TELEMETRY
973023	176 SF	SHEET ALUMINUM SIGNS TO CONSIST OF THE FOLLOWING: 4 EA - R10-11B SIGN (24" X 24") - MAST ARM MOUNT 8 EA - M95-1/D3-2 SIGN (78" X 40") - MAST ARM MOUNT
900000	1 EA	VIDEO INTERFACE EQUIPMENT
963010	1 EA	FOUR-CHANNEL LOOP DETECTOR AMPLIFIER-RACK MOUNT

**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.

**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	9 CY	TEST PIT EXCAVATION
585820	350 LF	FURNISH AND INSTALL 12 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
585824	100 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
816005	3 EA	FURNISH AND INSTALL 250 FT. VIDEO DETECTION CABLE
860292	4 EA	CUT, CLEAN, AND CAP TRAFFIC SIGNAL STRUCTURE
800000	8 EA	FURNISH AND INSTALL 16 IN. COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	24 EA	FURNISH AND INSTALL 12 IN. L.E.D. VEHICULAR SIGNAL HEAD SECTION
866103	1 EA	FURNISH AND INSTALL 15 FT. STREET LIGHTING ARM
800000	1 EA	FURNISH AND INSTALL 250 WATT HPSV LUMINAIRE
807410	1 EA	FURNISH AND INSTALL ELECTRIC UTILITY SERVICE EQUIPMENT-120/240 VOLTS, 200 AMPS.
800000	2 EA	FURNISH AND INSTALL 16.5 FT. MAST ARM POLE AND 38 FT. MAST ARM (15 FT. "T" DIMENSION)
800000	5 EA	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE
800000	8 EA	FURNISH AND INSTALL AUDIBLE-TACTILE PEDESTRIAN PUSHBUTTON AND SIGN
818051	1 EA	FURNISH AND INSTALL 50 FT./70 FT. TWIN MAST ARMS AND POLE
810801	2 EA	FURNISH AND INSTALL NON-INVASIVE MICRO-LOOP PROBE SET WITH 500 FT. LEAD-IN
873001	1 LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
816001	3 EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
801004	18 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
802501	500 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE
805150	260 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - SLOTTED
805155	930 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - SLOTTED
810010	50 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 A.W.G.)
811001	12 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
800000	9 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT. LENGTH
861105	1100 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (NO. 14 A.W.G.)
861107	1200 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
861108	670 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
861116	80 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 A.W.G.) - TRAY CABLE
871202	1 EA	INSTALL BASE MOUNTED CABINET AND CONTROLLER
813015	656 SF	INSTALL OVERHEAD SIGN
860265	24 EA	RELOCATE EXISTING SIGNAL HEAD (DURING MAINTENANCE OF TRAFFIC)

**CONTACT PERSONS FOR DISTRICT 7 ARE AS FOLLOWS:**

MR. JOHN CONCANNON  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
(301) 624-8141

MR. RAY JOHNSON  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
(301) 624-8105

MS. ANDREA ABEND  
ASSISTANT DISTRICT ENGINEER - UTILITIES  
(301) 624-8110

**CONTACT PERSONS 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

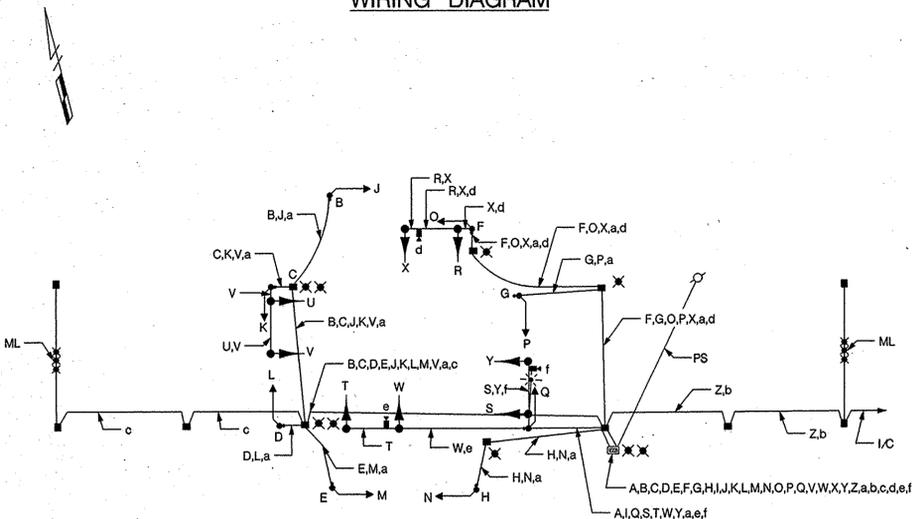
MS. DARLENE EIDE  
SUPPLY OFFICE  
SIGNAL SHOP WAREHOUSE  
(410) 787-7668

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

**CONTACT FOR THE POWER COMPANY**

ALLEGHENY POWER  
P.O. BOX 1392  
FAIRMONT, WV, 26554  
(304) 367-3370

**WIRING DIAGRAM**



NOTE: ADEQUATE WIRE SHALL BE PROVIDED TO ALLOW SIGNAL HEAD RELOCATION DURING MAINTENANCE OF TRAFFIC.

**WIRING KEY**

A	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE
B	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
J-U	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
V-Y	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
Z	12-PAIR VOICE GRADE INTERCONNECT CABLE CABLE
a	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
b-c	MICRO-LOOP PROBE LEAD-IN
d-f	VIDEO DETECTION CABLE
PS	PROPOSED ELECTRIC SERVICE
X	GROUND ROD
ML	MICRO-LOOP PROBE

**PHASING CHART**

	1	2	3	4	5	6	7	8	9-12	13-16
PHASE 2 & 6	G	G	G	G	R	R	R	R	WK	DW
PED CLEAR	Y	Y	Y	Y	R	R	R	R	FL-DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	R	R	DW	WK
PED CLEAR	R	R	R	R	G	G	G	G	DW	FL-DW
4 ALT CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	DARK	DARK

**TRAFFIC CONCEPTS, INC.**  
325 Gambrills Road  
Suite E  
Gambrills, MD 21054  
(410) 923-7101  
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**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
**GENERAL INFORMATION PLAN**  
MD 140 AND MD 194  
TANEYTOWN, MARYLAND

SCALE	NONE	DATE	11-03-06	CONTRACT NO.	CL 6955184
DESIGNED BY	T. ZAYDEL	COUNTY	CARROLL		
DRAWN BY	T. ZAYDEL	LOGMILE	06014021.48		
CHECKED BY	K. SCHMID	T.I.M.S. NO.	H545		
F.A.P. NO.	NA	TOD NO.			
DRAWING NO.	TS - 732D GI	SHEET NO.		OF	