

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AT THE INTERSECTION OF MD 177 AND MD 648/SOLLEY ROAD IN ANNE ARUNDEL COUNTY. MD 177 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SEVEN-PHASE, FULL-TRAFFIC-ACTUATED MODE, WITH THE MD 177 APPROACHES OPERATING CONCURRENTLY AND THE MD 648/SOLLEY RD. APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE-PERMISSIVE LEFT TURN PHASES WILL BE PROVIDED FOR EASTBOUND AND WESTBOUND MD 177 AND NORTHBOUND MD 648. A PRE-EMPTION PHASE FOR WESTBOUND MD 177 WILL BE PROVIDED.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH THREE (3) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS RACK MOUNT, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, NIC MODULE, RACK DETECTOR SYSTEM, AND ASSOCIATED HARNESSSES HOUSED IN A POLE MOUNTED CABINET.

SPECIAL NOTE

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

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

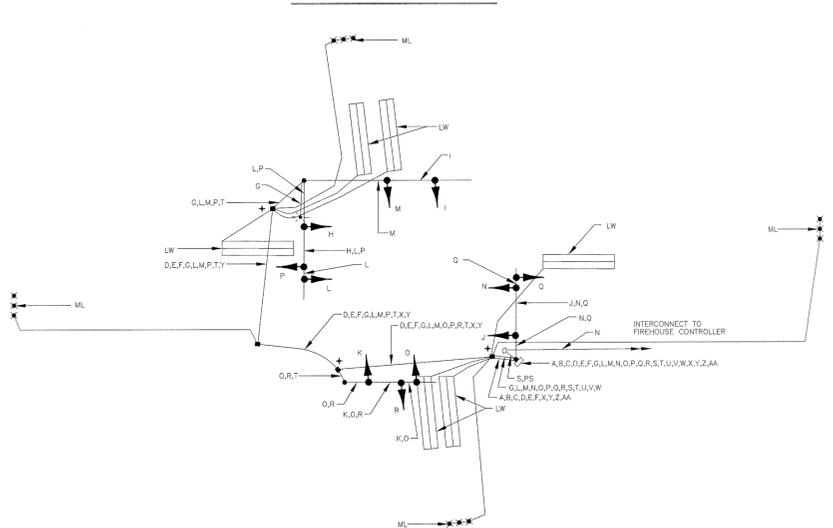
ITEM NO.	QUANTITY	DESCRIPTION
9002	3 EACH	DETECTOR AMPLIFIER, 4-CHANNEL RACK MOUNT
9004	1 EACH	DETECTOR RACK POWER SUPPLY
9014	5 EACH	12 IN., ONE-WAY, THREE-SECTION (R,Y,G.) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9016	3 EACH	12 IN., ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9019	3 EACH	8 IN./12 IN., ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9080	1 EACH	CABINET - INTERSECTION MONITOR, SIZE 5
9089	188 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 2 EACH D3-2 DUAL FACED SIGN "MOUNTAIN ROAD" (VARIABLE X 16 IN.) - MAST ARM MOUNT - 4 EACH D3-2 SIGN "SOLLEY RD/WATERFORD RD" (VARIABLE X 32 IN.) - MAST ARM MOUNT - 2 EACH R3-5L SIGN (30 IN. X 36 IN.) - MAST ARM MOUNT - 2 EACH R3-6 SIGN (30 IN. X 36 IN.) - MAST ARM MOUNT - 3 EACH R10-12 SIGN (36 IN. X 42 IN.) - MAST ARM MOUNT - 1 EACH "CAUTION ONCOMING TRAFFIC HAS EXTRA GREEN" (42 IN. X 42 IN.) - MAST ARM MOUNT
9087	1 EACH	CONTROLLER - ASC II WITH TELEMETRY MODULE
9092	1 EACH	INTERSECTION MONITOR WITH BATTERY BACK-UP

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2001	3 C.Y.	TEST PIT EXCAVATION
8001	11 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8011	11 EACH	INSTALL SIGNAL HEAD
8016	4 EACH	FURNISH AND INSTALL MICRO-LOOP PROBE SET WITH 500 FT. LEAD-IN
8019	1 EACH	INSTALL CONTROLLER AND CABINET - POLE MOUNT
8021	1520 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8023	70 L.F.	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	10 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8025	20 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8027	60 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8028	130 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	4 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	3 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
8040	2780 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8041	650 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 2 CONDUCTOR ALUMINUM SHIELDED (NO. 14 A.W.G.)
8044	100 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 5 CONDUCTOR (NO. 14 A.W.G.)
8045	1280 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 7 CONDUCTOR (NO. 14 A.W.G.)
8046	280 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 2 CONDUCTOR (NO. 12 A.W.G.)
8049	220 L.F.	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
8050	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 1 CONDUCTOR (NO. 4 A.W.G.) THNN/THWN
8054	188 S.F.	INSTALL OVERHEAD SIGNS
8056	1 EACH	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCCELL
8057	1 EACH	FURNISH AND INSTALL LIGHTING BRACKET FOR TRAFFIC SIGNAL STRUCTURE -1 EACH - 15 FT. LENGTH
8058	2 EACH	REMOVE AND DISPOSE OF EXISTING FOUNDATION
8061	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
8069	30 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED RISER FOR PHONE DROP
8070	1 EACH	CONTROL AND DISTRIBUTION EQUIPMENT
8081	2 EACH	FURNISH AND INSTALL MAST ARM POLE AND 38 FT MAST ARM
8086	1 EACH	FURNISH AND INSTALL MAST ARM POLE AND TWIN 50 FT/70 FT MAST ARMS
NEG.	20 L.F.	REMOVE AND RE-INSTALL EXISTING INTERCONNECT CABLE

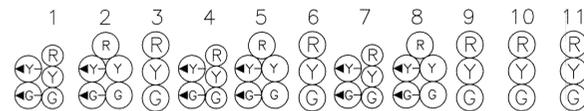
WIRING DIAGRAM



WIRING KEY

- 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED) NO. 14 A.W.G.
- 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE
- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 12-PAIR VOICE GRADE INTERCONNECT CABLE
- STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- MICRO-LOOP PROBE LEAD-IN (NO. 14 A.W.G.)
- LOOP WIRE (NO. 14 A.W.G.)
- PROPOSED OVERHEAD ELECTRIC SERVICE BY BG&E
- 3/4 IN. X 10 FT. GROUND ROD

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	
PHASE 1 + 5	R	R	R	R	R	R	R	R	R	R	R	
1 + 5 CHANGE	Y											
PHASE 1 + 6	G	G	G	R	R	R	R	R	R	R	R	
1 + 6 CHANGE	Y	Y	Y									
PHASE 2 + 5	R	R	R	G	G	G	R	R	R	R	R	
2 + 5 CHANGE	R	R	R	Y	Y	Y						
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	
PHASE 3 + 8	R	R	R	R	R	R	G	G	G	R	R	
3 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G	G	
4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	
PRE-EMPTION	R	R	R	G	G	G	R	R	R	R	R	
CHANGE	R	R	R	Y	Y	Y	R	R	R	R	R	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	

TRAFFIC CONCEPTS, INC.

Brightview Business Center
8258 Veterans Highway
Suite 19B
Millersville, MD 21108
(410) 987-0427

REVISIONS	APPROVALS	REVISIONS
	ASSISTANT DIVISION CHIEF	
	ASST. DISTRICT ENGINEER, TRAFFIC	
	CHEF, TRAFFIC ENGINEERING DESIGN DIV.	
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY	



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

GENERAL INFORMATION SHEET
MD 177 AND MD 648 / SOLLEY RD.

DATE: 10-9-97	DRAWN BY: T. ZAYDEL	F.A.P. NO.	PLAN SHEET NO.:	SHEET NO.
SCALE: NONE	DESIGNED BY: T. ZAYDEL	S.H.A. NO. AW 279A52/B52		
APPROVED BY:	CHECKED BY: K. SCHMID	COUNTY ANNE ARUNDEL		2 OF 2