

**PROJECT DESCRIPTION**

THIS PROJECT INVOLVES THE MODIFICATION OF THE TRAFFIC SIGNAL AT US 113 (WORCESTER) AND MD 610 (WHALESVILLE) IN WORCESTER COUNTY. US 113 (WORCESTER) IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**INTERSECTION OPERATION**

**I. NORMAL OPERATION**

THE INTERSECTION WILL OPERATE IN A NEMA (6) SIX-PHASE FULLY-TRAFFIC-ACTUATED MODE WITH SOUTHBOUND AND NORTHBOUND US 113 APPROACHES OPERATING CONCURRENTLY. THE EASTBOUND AND WESTBOUND MD 610 APPROACHES WILL OPERATE CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT TURNS WILL BE PROVIDED FOR ON US 113 APPROACHES.

**CONTROLLER REQUIREMENTS:**

A FULLY - TRAFFIC - ACTUATED - EIGHT- PHASE TRAFFIC SIGNAL CONTROLLER IN A BASE - MOUNTED SYSTEM READY CABINET WITH VIDEO CAMERA DETECTION WILL BE INSTALLED AT THIS INTERSECTION.

**SPECIAL NOTE:**

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

**EQUIPMENT LIST**

**A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR:**

CATAGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
900000	900000	1 EA.	FURNISH NEMA 6 BASE MOUNTED CABINET AND CONTROLLER WITH VIDEO DETECTION INTERFACE EQUIPMENT
900000	900000	2 EA.	FURNISH FOUR CHANNEL RACK MOUNTED LOOP DETECTOR AMPLIFIER
900000	900000	228.31 S.F.	FURNISH SHEET ALUMINUM SIGNS
		- 2 EA	R10-12 SIGN 36"x42"
		- 2 EA	R3-5R SIGN 30"x36"
		- 8 EA	D3-2 SIGN 16"x96"
		- 1 EA	ASSOCIATED SHIELD ASSEMBLY "SOUTH, US 113, RIGHT ARROW" (30"x51") - GROUND MOUNT
		- 1 EA	ASSOCIATED SHIELD ASSEMBLY "NORTH, US 113, RIGHT ARROW" (30"x51") - GROUND MOUNT
		- 1 EA	ASSOCIATED SHIELD ASSEMBLY "NORTH, US 113, LEFT ARROW" (48"x75") - GROUND MOUNT
		- 1 EA	ASSOCIATED SHIELD ASSEMBLY "SOUTH, US 113, LEFT ARROW" (48"x75") - GROUND MOUNT
		- 1 EA	ASSOCIATED SHIELD ASSEMBLY "WEST, US 610, RIGHT ARROW" (30"x51") - GROUND MOUNT
		- 1 EA	ASSOCIATED SHIELD ASSEMBLY "WEST, US 610, LEFT ARROW" (48"x75") - GROUND MOUNT

**B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR:**

CATAGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
120500	104	L.S.	MAINTENANCE OF TRAFFIC
203030	205	4 C.Y.	TEST PIT
585624	SP-555	120 L.F.	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE)
800000		L.S.	REMOVE AND DISPOSE OF EXISTING EQUIPMENT.
800000		4 EA.	FURNISH AND INSTALL MICRO LOOP PROBE SET W/ 500 FT. LEAD-IN. (NON EVASIVE)
800000		2 EA.	FURNISH AND INSTALL MICRO LOOP PROBE SET W/ 1000 FT. LEAD-IN. (NON EVASIVE)
800000		1 EA.	FURNISH AND INSTALL VIDEO FOR DETECTION SYSTEM.
800000		4 EA.	FURNISH AND INSTALL VIDEO DETECTION CAMERA.
818052	818	2 EA.	FURNISH AND INSTALL 27 FT STEEL MAST ARM POLE W/ 70 FT MAST ARMS
818041	818	2 EA.	FURNISH AND INSTALL 27 FT STEEL MAST ARM POLE W/ 60 FT MAST ARM.
801004	801	21 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
802501	810	650 L.F.	FURNISH AND INSTALL STRANDARD BARE COPPER GROUND WIRE (NO. 6 AWG)
810010	810	100 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 1 WIRE NO. 4 AWG THHN/THWN

**B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR:**

CATAGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
811001	811	14 EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE.
813014	813	106.95 S.F.	INSTALL GROUND MOUNTED SIGN.
813015	813	121.36 S.F.	INSTALL OVERHEAD SIGN.
831010	806	2 EA.	FURNISH AND INSTALL 250 WATT HPS LAMP AND LUMINAIRE
837001	804	5 EA.	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIA. X 10 FT. LENGTH.
838003	807	1 EA.	FURNISH AND INSTALL CONTROL AND DISTRIBUTION (120/240, 1 PHASE 3 WIRE SYSTEM).
860270	814	3 EA.	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED)
860272	814	36 EA.	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED)
861107	810	100 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	810	1600 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	810	450 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
862102	810	100 L.F.	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)
866104	806	2 EA.	FURNISH AND INSTALL 20 FT. LIGHTING ARM ON SIGNAL STRUCTURE
870160	805	50 L.F.	FURNISH AND INSTALL 2 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED
870163	805	1200 L.F.	FURNISH AND INSTALL 3 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED
870164	805	175 L.F.	FURNISH AND INSTALL 3 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - BORED
870166	805	100 L.F.	FURNISH AND INSTALL 4 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED
870167	805	400 L.F.	FURNISH AND INSTALL 4 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - BORED
871202	805	1 EA.	INSTALL CONTROLLER AND CABINET - BASE MOUNTED

C. SHA FORCES TO REMOVE CONTROLLER AND ALL AUXILIARY EQUIPMENT. CONTROLLER CABINET AND ALL OTHER EQUIPMENT THAT IS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

QUANTITY	DESCRIPTION
1 EA.	POLE MOUNTED CABINET.

**PROJECT CONTACTS**

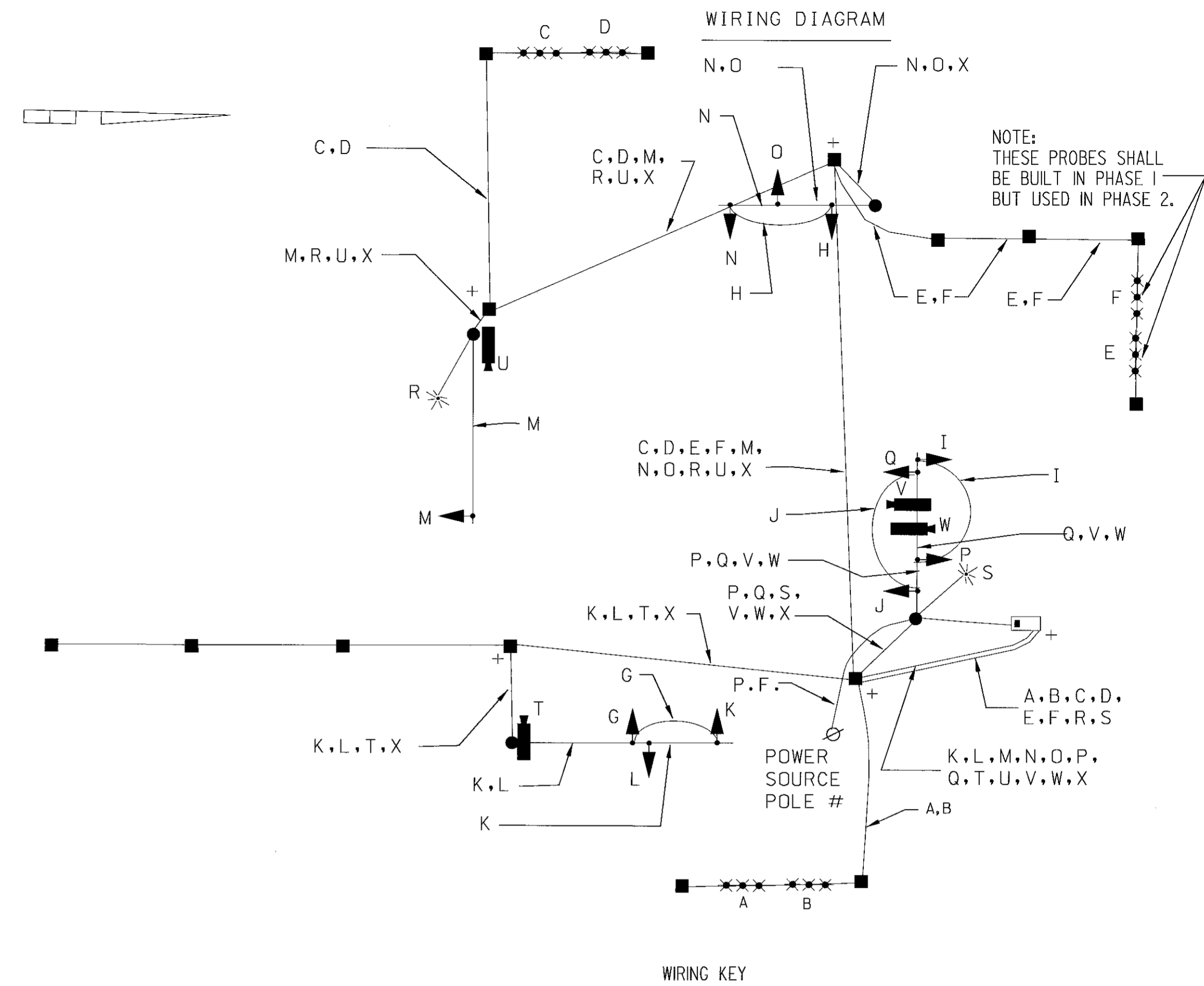
THE CONTACT PERSONS FOR DISTRICT #2 ARE AS FOLLOWS:

MR. GENE COFIELL  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (410) 677-4040

MR. BRUCE POOLE  
UTILITY ENGINEER  
PHONE: (410) 677-4082

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

THE POWER COMPANY REPRESENTATIVE IS:  
CONNECTIV POWER  
MR. CHRIS SMITH  
PHONE: (410) 860-6036



- WIRING KEY**
- A - F } PROBES
  - G - J } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
  - K - Q } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
  - R - S } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
  - T - W } VIDEO CABLE FOR CAMERA
  - X } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
  - PF - POWER FEED (NO. 4 A.W.G.)
  - + - 3/4 IN. X 10 FT. GROUND ROD

	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
PHASE 1+5 CHANGE TO PHASE 1+6 OR PHASE 2+5	G	G	G	G	G	G	G	G	G	G	G
1+6 CHANGE	R	R	R	R	R	R	R	R	R	R	R
PHASE 2+5	R	R	R	R	R	R	R	R	R	R	R
2+5 CHANGE	G	G	G	G	G	G	G	G	G	G	G
PHASE 2+6	G	G	G	G	G	G	G	G	G	G	G
2+6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PHASE 4 + 8	R	R	R	R	R	R	R	R	R	R	R
4 + 8 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

TS-2



<p>REVISIONS</p>		<p>MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic &amp; Safety TRAFFIC ENGINEERING DESIGN DIVISION TRAFFIC SIGNAL GENERAL INFORMATION US 113 (WORCESTER) AT HAMMOND RD / MD 610 (WHALESVILLE RD) TEMPORARY TRAFFIC SIGNAL PHASE 1</p>	
<p>RECONSTRUCT SIGNAL DUE TO GEOMETRICS IMPROVEMENTS W07475170 5/02</p>		<p>DRAWN BY: _____ CHECKED BY: _____ SCALE: NONE DATE: 12/03/93</p>	
<p>RECONSTRUCT SIGNAL</p>		<p>F.A.P. NO. _____ S.H.A. NO. _____ COUNTY: WORCESTER LOG MILE: 23011331.04</p>	
<p>12/03/93</p>		<p>T.S. NO. 1848 B SHEET NO. 34 OF 38</p>	