PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES UPGRADING THE EXISTING INTERSECTION CONTROL BEACON TO A FULL ACTUATED TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 80 AND LYNN BURKE ROAD IN FREDERICK COUNTY, MARYLAND.

II. INTERSECTION OPERATIONS

THE TRAFFIC CONTROL SIGNALS WILL OPERATE IN A NEMA SIX (6) PHASE, FULL TRAFFIC ACTUATED MODE. THE MD 80 APPROACHES WILL OPERATE CONCURRENTLY. THE MD 80 EASTBOUND AND WESTBOUND LEFT TURNS WILL BE EXCLUSIVE/PERMISSIVE. THE LYNN BURKE ROAD AND SHOPPING CENTER APPROACHES WILL OPERATE CONCURRENTLY.

III. SPECIAL NOTES

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. ROBERT SNYDER WITH THE NEARST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

MR. ROBERT FISHER
DISTRICT ENGINEER
PHONE: 301-624-8101

MR.
DISTRICT UTILITY ENGINEER
PHONE: 301-624-8115

MR. JOHN CONCANNON
ASSISTANCE DISTRICT ENGINEER-TRAFFIC
PHONE: 301-624-8140

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

MR. LEON KERNS
ASSISTANCE DISTRICT ENGINEER-MAINTENANCE
PHONE: 301-624-8105

EQUIPMENT LIST

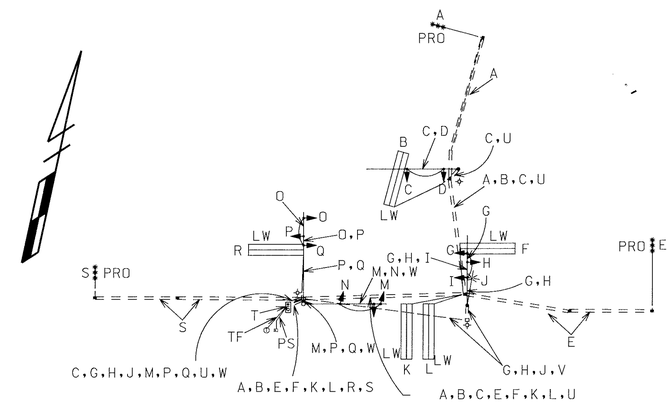
A. EQUIPMENT TO BE SUPPLIED BY SHA

CAT CODE	ITEM	QUANTITY	DESCRIPTION
900000	9002	2 EA	(CONT/CAB/ADD) DETECTOR AMPLIFIER 4-CH RACK MT
900000	9003	1 EA	(CONT/CAB/ADD) DETECTOR PANEL
900000	9004	1 EA	(CONT/CAB/ADD) DETECTOR RACK POWER SUPPLY
900000	9081	1 EA	CABINET INTERSECTION MONITOR, SIZE 6
900000	9087	1 EA	CONTROLLER ASC II W/ TELEMETRY
900000	9089	34 SF	W3-3 (SIGNAL AHEAD), (36" x 36"), (NEW), (24" x 12"), D-3(2) (LYNN BURKE RD), (72" x 12"), GROUND MT (2 EA)
900000	9089	17 SF	W3-3 (SIGNAL AHEAD), (36" x 36"), (NEW), (24" x 12"), D-3(2) (FINGERBOARD RD), (72" x 12"), GROUND MT (1 EA)
900000	9089	21 SF	R10-12 (LEFT TURN YIELD ON GREEN), (36" x 42"), MAST ARM MT (2 EA)
900000	9089	11 SF	SHIELD ASSEMBLY (EAST, MD 80, RIGHT ARROW), (30" x 51"), POLE MT (1 EA)
900000	9089	9 SF	M3-4 (WEST), (24"X12"), M1-5 (MD 80), (24"X24"), M6-1 (RIGHT ARROW), (21"X15"), GROUND MOUNT (1 EA)
900000	9089	25 SF	SHIELD ASSEMBLY (EAST, MD 80, LEFT ARROW), (48" x 75"), POLE MT (1 EA)
900000	9089	18 SF	M3-4 (WEST), (30"X15"), M1-5 (MD 80), (36"X36"), M6-1, (LEFT ARROW), (30"X24"), GROUND MOUNT (1 EA)
900000	9090	28 SF	D3-2 (FINGERBOARD RD), (16" x VAR.), DUAL-FACED, MAST ARM MT (2 EA)
900000	9105	1 EA	SINGLE MAST ARM POLE 27' & 30' ARM W/ANCHOR BOLTS

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

CAT CODE	ITEM	QUANTITY	DESCRIPTION
110320	1001	1 EA	MAINTENANCE OF TRAFFIC
500000	5002	300 LF	5-INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
500000	5004	80 LF	24-INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
500000	5006	4 EA	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT ARROW
585450	5007	500 LF	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
500000	5008	2 EA	REMOVE EXISTING PAVEMENT MARKING LETTER OR ARROW
801004	8001	10 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
800000	8016	3 EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT LEAD-IN
871202	8020	1 EA	INSTALL NEMA 6 CONTROLLER & CABINET - BASE MT
862102	8021	600 LF	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)
805160	8023	40 LF	FURNISH AND INSTALL 1-INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
800000	8024	860 LF	FURNISH AND INSTALL 2-INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	8027	20 LF	FURNISH AND INSTALL 3-INCH SCHEDULE 80 RIGID PVC CONDUIT - -TRENCHED
805115	8029	140 LF	FURNISH AND INSTALL 3-INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
800000	8030	20 LF	FURNISH AND INSTALL 4-INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
811001	8033	7 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
837001	8034	3 EA	FURNISH AND INSTALL GROUND ROD -3/4 INCH DIAMETER X 10 FOOT LENGTH
862101	8040	2350 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
861104	8041	540 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
861107	8044	85 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	8045	940 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
800000	8046	165 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TYPE TC
802501	8048	290 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810010	8049	30 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 1 CONDUCTOR (NO. 4 AWG)
801106	8051	188 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4" x 6"
813014	8052	93 SF	INSTALL GROUND MOUNTED SIGN
813015	8053	85 SF	INSTALL OVERHEAD SIGN
800000	8055	1 EA	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
800000	8056	1 EA	FURNISH AND INSTALL 15 FOOT LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
800000	8057	1 EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCH BELOW GRADE
800000	8058	1 EA	REMOVAL OF EXISTING CONTROLLER, CABINET & GALVANIZED SIGNAL STRUCTURE
800000	8059	1 EA	DELIVERY OF REMOVED CONTROLLER, CABINET & GALVANIZED SIGNAL STRUCTURE
800000	8060	1 EA	REMOVAL AND DISPOSE OF EXISTING EQUIPMENT PER ASSIGNMENT
838003	8066	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION (120/240 V, 1 PHASE 3 WIRE SYSTEM)
800000	8074	1 EA	INSTALL STEEL POLE AND SINGLE MAST ARM (ANY SIZE)
800000	8084	32 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
800000	8085	9 EA	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
800000	NEG	1 EA	FURNISH AND INSTALL POLE EXTENSION

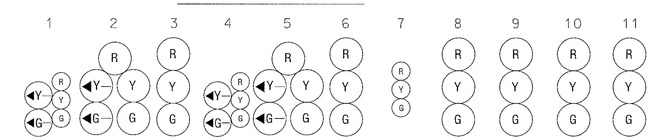
WIRING DIAGRAM



WIRING KEY

B,F,K,L,R	2 CONDUCTOR ALUMINUM SHIELDED (NO. 14 AWG)
J	2 CONDUCTOR (NO. 12 AWG) - TYPE TC
D,I,N,O	5 CONDUCTOR (NO. 14 AWG)
C,G,H,M,P,Q,W	7 CONDUCTOR (NO. 14 AWG)
T	1 CONDUCTOR (NO. 4 AWG)
A,E,S	MICRO-LOOP PROBE CABLE
U,V	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
PRO	MICRO-LOOP PROBES
PS	POWER SOURCE
TF	TELEPHONE FEED
LW	LOOP WIRE
	GROUND ROD

PHASING CHART



	1	2	3	4	5	6	7	8	9	10	11
PHASE 1 & 5	R G	R G	R	R G	R G	R	R	R	R	R	R
PHASE 1 & 5 CHANGE	PHASE 1 & 5 MAY CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5 OR PHASE 2 & 6.										
PHASE 1 & 6	G G	G G	G	R	R	R	R	R	R	R	R
PHASE 1 CHANGE	Y G	Y G	G	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	G G	G G	G	R	R	R	R	R
PHASE 5 CHANGE	R	R	R	G Y	G Y	G	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R
PHASE 2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G
PHASE 4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R

REVISIONS	APPROVALS
	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS

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

MD 80 (FINGERBOARD ROAD)
AND LYNN BURKE ROAD

DRAWN BY:	JAG (AMT)	F.A.P. NO.		TS NO. 2453	SHEET NO.
CHECKED BY:	RJM (BAI)	S.H.A. NO.	XX1005785		
SCALE:	1" = 20'	COUNTY:	FREDERICK	T.I.M.S. NO. D507	2 OF 2
DATE:	DECEMBER 1999	LOG MILE:	1000801.11		

FR360A55/B55