PROJECT DESCRIPTION
GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 157 AT GERMAN HILL ROAD IN BALTIMORE COUNTY.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A SIZE 6 BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED SYSTEM MODE UTILIZING 6 NEMA PHASES.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR SHA DISTRICT #4 ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. RANDALL SCOTT, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 321-2781
MR. STEVE MARCISZEWSKI, ASSISTANT DISTRICT ENGINEER- MAINTENANCE
PHONE: (410) 321-2761
MR. SUE POPE, UTILITY ACCESS -ENGINEER
PHONE:(410) 321-2841
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE:(410) 787-7630

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING STANDARD PLATES FOR TRAFFIC CONTROL.
3. THE ROAD CONTRACTOR MUST NOTIFY BALTIMORE COUNTY FOR REMOVAL OF STREET LIGHT STRUCTURE AND INTERNET BOX PRIOR TO THE BEGINNING OF CONTRUCTION. NOTIFY BRENDA PAYNE, AND GREG CARSHI. (410)-887-3716
4. THE WMS NUMBER IS 1003770.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
NEG.	CABINET W/TELEMETRY (SYSTEM CAB), SIZE 6 WITH VIDEO DETECTION	EA	1
9087	CONTROLLER ASC II W/TELEMETRY AND RACK MOUNTED AMPLIFIERS	EA	1
9086	VIDEO DETECTION INTERFACE EQUIPMENT	EA	1
9571	FLAT SHEET ALUMINUM SIGNS,	SF	165
	GUIDE SHIELD ASSEMBLY (30"X51")	EA	2
	GUIDE SHIELD ASSEMBLY (48"X75")	EA	2
	R3-5(L) (30"X36")	EA	2
	R3-6(L) (30"X36")	EA	1
	D-3(2) (VAR.X16") DUAL FACE	EA	4
	R4-7 (24"X30") GROUND MOUNT	EA	2

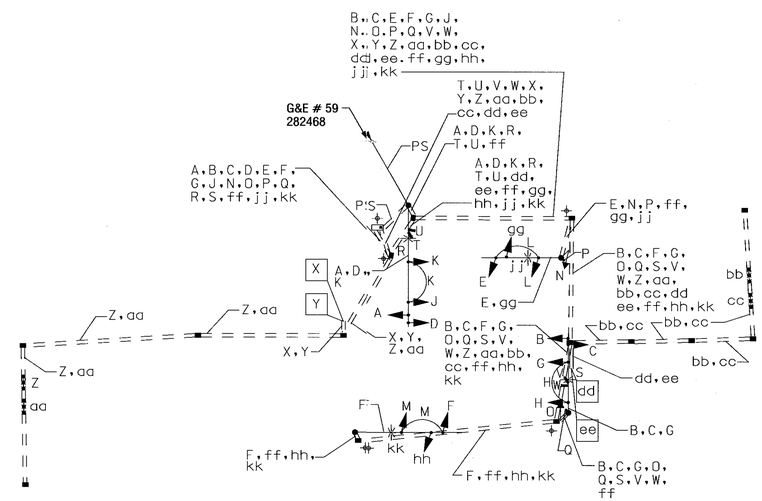
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC PER ASSIGNMENT	EA	3
2002	TEST PIT EXCAVATION	EA	5
5004	12" WHITE HEAT APPL. THERMO. PAVEMENT MARK.	LF	180
5005	24" WHITE HEAT APPL. THERMO. PAVEMENT MARK.	LF	90
6001	INSTALL DEPRESS CURB AND GUTTER.	LF	390
6004	4 INCH CONCRETE SIDEWALK	LF	325
8001	PRE-MANUFACTURED CABLE CAMERA TO CONTROLLER (250' LENGTH CABLE)	EA	2
8003	PRE-MANUFACTURED CABLE CAMERA TO CONTROLLER (500' LENGTH CABLE)	EA	2
8010	F&I 12" PEDESTRIAN SIGNAL HEAD	EA	4
8011	F&I 12" SIGNAL HEAD SECTION	EA	38
8013	F&I 15' LIGHTING ARM FOR SIGNAL STRUCTURE	EA	4
8014	250 WATT HPS LAMP & LUMINAIRE W/PHOTOCELL	EA	4
8015	F&I 3" WEATHERHEAD	EA	1
8019	F&I 8" SIGNAL HEAD SECTION	EA	6
8020	F&I CONTROL AND DISTRIBUTION EQUIPMENT FOR SIGNAL	EA	1
8022	F&I MAST ARM POLE AND 50' MAST ARM	EA	3
8023	F&I MAST ARM POLE AND 60' MAST ARM	EA	1
8032	F&I PUSHBUTTON AND SIGN	EA	2
8044	NON-INVASIVE DETECTOR 500 FT. LEAD IN CABLE	EA	4
8048	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
8049	VIDEO DETECTOR CAMERA	EA	4
8051	3" SCHED. 80 PVC CONDUIT - TRENCHED	LF	1200
8053	4" SCHED. 80 PVC CONDUIT - TRENCHED	LF	100
8055	2" SCHED. 80 PVC RISER	LF	20
8057	F&I CONCRETE FOR SIGNAL FOUNDATIONS	CY	25
8060	F&I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	450
8066	3" SCHED. 80 PVC CONDUIT - SLOTTED	LF	100
8067	4" SCHED. 80 PVC CONDUIT - SLOTTED	LF	350
8068	F&I 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT	LF	25
8070	F&I 1-COND., NO. 4 AWG ELECT. CABLE THHN/THWN	LF	100
8072	F&I ELECTRIC HANDHOLE	EA	12
8073	F&I 6" X6" WOOD POST	LF	40
8074	INSTALL GROUND MOUNTED SIGN	SF	10
8075	INSTALL OVERHEAD SIGN	SF	155
8080	F&I GROUND ROD 3/4 IN DIA X 10 FT LENGTH	EA	5
8081	2 COND., ALUMINUM SHIELDED FOR LOOP DETECTOR	LF	500
8082	F&I 2-COND., NO. 14 AWG ELECT. CABLE	LF	400
8083	F&I 3-COND., NO. 14 AWG ELECT. CABLE	LF	400
8084	F&I 5-COND., NO. 14 AWG ELECT. CABLE	LF	1705
8085	F&I 7-COND., NO. 14 AWG ELECT. CABLE	LF	545
8086	2 COND., NO. 12 AWG TRAY CABLE	LF	940
8087	F&I LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)	LF	465
8088	F&I SAW CUT FOR SIGNAL (LOOP DETECTOR)	LF	120
8091	2" SCHED. 80 PVC CONDUIT - TRENCHED	LF	100
8093	INSTALL CONTROLLER AND CABINET - BASE MT.	EA	1
8103	INSTALL CAMERA	EA	4
NEG.	3" SCHED. 80 PVC CONDUIT - HAND DIG	LF	40
NEG.	4" SCHED. 80 PVC CONDUIT - HAND DIG	LF	20

C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.
ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME PROPERTY OF THE CONTRACTOR.

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING DIAGRAM



KEY

E F G J	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
A B C D G H J K L M gg hh	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
N O	3 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
X Y dd ee	2 CONDUCTOR ELECTRICAL CABLE ALUMINUM SHIELDED
P Q	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
R S jj kk	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
T U V W	VIDEO DETECTION CABLE
Z aa bb cc	NON-INVASIVE LOOP DETECTOR CABLE LEAD-IN
ff	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
PS	POWER SERVICE UNDERGROUND 3 WIRE 1 - CONDUCTOR # 4 AWG
+	GROUND ROD

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 AND 5	←G–	←G–	R	R	←G–	←G–	R	R	R	R	R	R	R	R	DW	DW
1 AND 5 CHANGE TO 1 AIND 6, 2 AND 5, OR 2 AND 6																
PHASE 1 AND 6	←G–	←G–	G	G	←R–	←R–	R	R	R	R	R	R	R	R	DW	DW
1 AND 6 CHANGE	←Y–	←Y–	Y	Y	←R–	←R–	R	R	R	R	R	R	R	R	DW	DW
PHASE 2 AND 5	←R–	←R–	R	R	←G–	←G–	G	G	R	R	R	R	R	R	DW	DW
2 AND 5 CHANGE	←R–	←R–	R	R	←Y–	←Y–	Y	Y	R	R	R	R	R	R	DW	DW
PHASE 2 AND 6	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	R	DW	DW
2 AND 6 CHANGE	←R–	←R–	Y	Y	←R–	←R–	Y	Y	R	R	R	R	R	R	DW	DW
PHASE 3	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	G ←G–	G ←G–	G	DW	DW
PHASE 3 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	Y	Y	Y	DW	DW
PHASE 4	←R–	←R–	R	R	←R–	←R–	R	R	G ←G–	G ←G–	G	R	R	R	DW	DW
PHASE 4 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	R	R	R	DW	DW
PHASE 4 ALT	←R–	←R–	R	R	←R–	←R–	R	R	G ←G–	G ←G–	G	R	R	R	WK	WK
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	R	R	G ←G–	G ←G–	G	R	R	R	FL/DW	FL/DW
PHASE 4 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	R	R	R	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

SABRA, WANG & ASSOCIATES, INC.
1504 JOH AVENUE
SUITE 160
BALTIMORE, MD 21227
WWW.SABRA-WANG.COM

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

MD 157 (MERRITT BOULEVARD) AT GERMAN HILL ROAD

DRAWN BY: S. SMITH	F.A.P. NO.		TS NO. 4602 F	SHEET NO.
CHECKED BY: S. RENZI	S.H.A. NO.	BALTIMASP		
SCALE: 1" = 20'	COUNTY:	BALTIMORE	T.I.M.S. NO. F270	
DATE: APRIL, 2003	LOG MILE:	03GER00.71		OF

R:\00-47\TASK 36\DWG\F270GP01.DGN