PROJECT DESCRIPTION

I. GENERAL:

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC SIGNAL AT MD 97 (GEORGIA AVENUE) AND EMORY LANE IN NORBECK, MONTGOMERY COUNTY. EXCLUSIVE/PERMISSIVE TURNS SHALL BE CHANGED TO EXCLUSIVE. ALSO PROVIDING COUNTDOWN PEDESTRIAN HEADS AND AUDIBLE PEDESTRIAN PUSHBUTTON SYSTEMS.

MD 97 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION:

THE INTERSECTION SHALL OPERATE IN 5 PHASES WITH EXCLUSIVE NORTHBOUND AND SOUTHBOUND LEFT TURNS THAT OPERATE CONCURRENTLY. EMORY LANE OPERATES IN A SPLIT PHASE WITH AN EASTBOUND RIGHT TURN OVERLAP THAT OPERATES WITH MD 97 EXISTING LEFT TURNS. MD 97 THROUGH MOVEMENTS OPERATE CONCURRENTLY. AUDIBLE PEDESTRIAN PUSHBUTTON MOVEMENTS ARE PROVIDED TO CROSS THE NORTH LEG OF MD 97 AND THE EAST/WEST LEGS OF EMORY LANE.

THE INTERSECTION IS EQUIPPED WITH AN EIGHT PHASE CONTROLLER HOUSED IN A BASE-MOUNTED CABINET THAT SHALL BE MODIFIED.

III. SPECIAL NOTES:

1. APS WILL FUNCTION AS FOLLOWS:

   FOR MD 97 (GEORGIA AVENUE)
   - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WALK TO CROSS GEORGIA AVENUE."
   - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

   FOR EMORY LANE
   - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WALK TO CROSS EMORY LANE."
   - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

2. THE CONTRACTOR SHALL PURCHASE AND DELIVER THE "APS" CENTRAL CONTROL UNIT FOR THE CONTROLLER TO THE SHA SIGNAL SHOP AT 7491 CONNELLEY DRIVE, HANOVER, MARYLAND, 21076. MR. EDWARD RODENHIZER AT 410 787-7652 SHALL BE CONTACTED AT LEAST THREE DAYS PRIOR TO DELIVERY.

PROJECT CONTACTS

THE CONTACT PERSONS FOR THE SHA ARE AS FOLLOWS:

WAYNE MOWDY
ASSISTANT DISTRICT ENGINEER
MAINTENANCE
PHONE: 301-513-7304

JEFFERY WENTZ
ASSISTANT DIVISION ENGINEER
TRAFFIC
PHONE: 301-513-7358

EUGENE BAILEY
TEAM LEADER
SIGN OPERATIONS
PHONE: 410-787-7676

EDWARD RODENHIZER
TEAM LEADER
SIGNAL OPERATIONS
PHONE: 410-787-7652

KEVIN NOWAK
ASSISTANT DISTRICT ENGINEER
CONSTRUCTION
PHONE: 410-513-7385

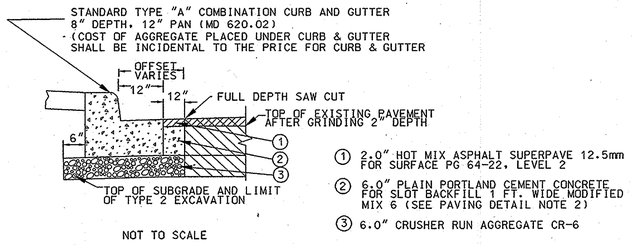
ROBERT SNYDER
ASSISTANT DIVISION CHIEF
TRAFFIC OPERATIONS
PHONE: 310-513-7358

AUGIE REBISH
ASSISTANT DISTRICT ENGINEER
UTILITIES
PHONE: 301-513-7350

EQUIPMENT LIST "C"

ALL EQUIPMENT AND OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

STANDARD TYPE "A" COMBINATION CURB AND GUTTER CONSTRUCTION DETAIL



NOT TO SCALE

EQUIPMENT LIST "A"

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

ITEM NO.	QUANTITY	DESCRIPTION
9570	8 SF	SHEET ALUMINIUM GROUND MOUNTED SIGNS 2 EA R4-7(2) (18" x 30")
9571	66 SF	SHEET ALUMINIUM SIGNS POLE MOUNTED 4 EA R10-4(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS EMORY LANE" (9"x 15") 4 EA R10-4(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS GEORGIA AVENUE" (9"x 15") 1 EA ASSOCIATED SHIELD ASSEMBLY SIGN, " NORTH, MD 97, (RIGHT ARROW)" 51" X 30", POLE MOUNTED HARDWARE 1 EA ASSOCIATED SHIELD ASSEMBLY SIGN, " NORTH, MD 97, (LEFT ARROW)" 75" X 36", POLE MOUNTED HARDWARE 1 EA ASSOCIATED SHIELD ASSEMBLY SIGN, " SOUTH, MD 97, (RIGHT ARROW)" 51" X 30", POLE MOUNTED HARDWARE 1 EA ASSOCIATED SHIELD ASSEMBLY SIGN, " SOUTH, MD 97, (LEFT ARROW)" 75" X 36", POLE MOUNTED HARDWARE
9572	10 SF	SHEET ALUMINIUM SIGNS SPAN WIRE MOUNTED 2 EA R10-10(L) (24" x 30")

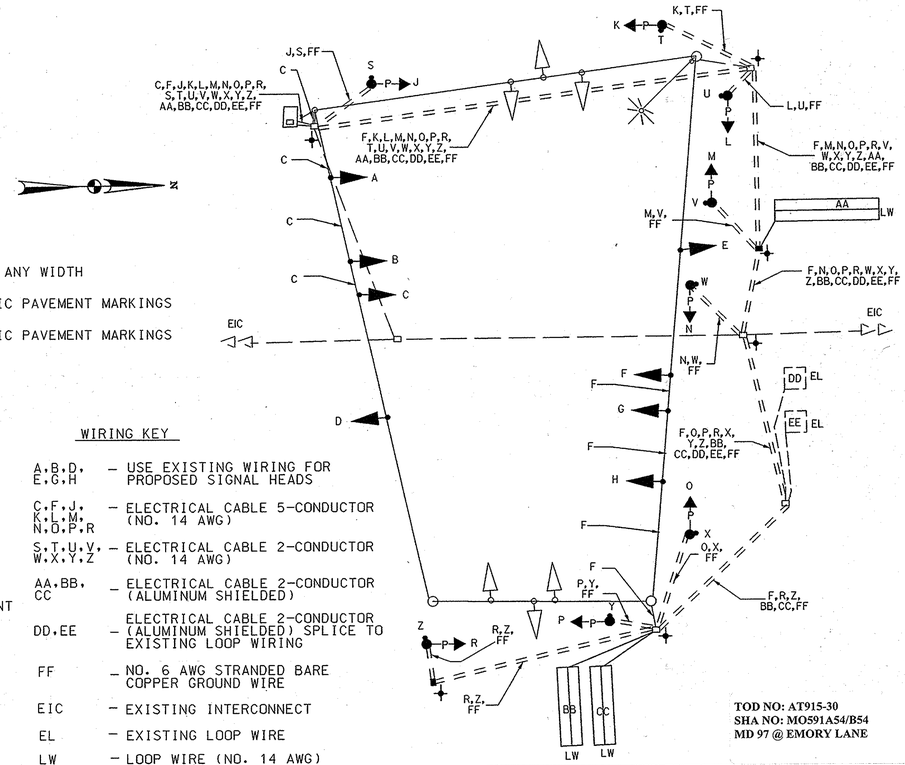
EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2002	5 CY	TEST PIT EXCAVATION
5002	800 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5004	460 LF	12" WHITE HEAT APPLIED PERMANENT PERFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	70 LF	24" WHITE HEAT APPLIED PERMANENT PERFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	95 LF	STANDARD TYPE 'A' COMBINATION CURB AND GUTTER 12" GUTTER PAN/8" DEPTH
6002	910 SF	5" CONCRETE SIDEWALK
8001	24 EA	12" LED SIGNAL HEAD SECTION
8002	1 EA	2 WIRE CENTRAL CONTROL UNIT
8008	8 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGN
8009	8 EA	BREAKAWAY PEDESTAL POLE - ANY SIZE
8014	8 EA	LED 16" COUNTDOWN PEDESTRIAN SIGNAL HEAD
8022	1 EA	REMOVE AND DISPOSE OF EXISTING EQUIPMENT- PER ASSIGNMENT
8027	30 LF	1" DETECTOR SLEEVE GALVANIZED OR 1/4" FLEX TUBING
8034	320 LF	UP TO 4" SCHEDULE 80 RIDIG PVC CONDUIT - SLOTTED
8035	215 LF	UP TO 4" SCHEDULE 80 RIDIG PVC CONDUIT - TRENCHED
8038	80 SF	DETECTABLE WARNING SURFACE
8039	84 SF	INSTALL OVERHEAD MOUNTED SIGN
8041	165 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	2 EA	ELECTRICAL HANDHOLE
8053	940 LF	ELECTRICAL CABLE - 2 CONDUCTOR NO 14 AWG (ALUMINUM SHIELDED)
8054	3150 LF	ELECTRICAL CABLE - 2 CONDUCTOR NO 14 AWG
8056	2900 LF	ELECTRICAL CABLE - 5 CONDUCTOR NO 14 AWG
8059	732 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8060	276 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)

PROPOSED PHASED CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
PHASE 1 AND 5	←G–	←G–	R	R	←G–	←G–	R	R	R	R	R/G→	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE	←Y–	←Y–	R	R	←Y–	←Y–	R	R	R	R	R/Y→	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR COUNTDOWN	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 AND 6 CHANGE	←R–	←R–	Y	Y	←R–	←R–	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	←GG	←GG	G	DW	DW	DW	DW	DW	DW	DW	DW
3 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	←GG	←GG	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR COUNTDOWN	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	←GG	←GG	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
3 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	←R–	←R–	R	R	←R–	←R–	R	R	←GG	←GG	GG→	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y/Y→	R	R	R	DW	DW	DW	DW	DW	DW	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	DARK	DARK	DARK	DARK	DARK	DARK



TOD NO: AT915-30
SHA NO: MO591A54/B54
MD 97 @ EMORY LANE

WIRING KEY

A,B,D, E,G,H	– USE EXISTING WIRING FOR PROPOSED SIGNAL HEADS
C,F,J, K,L,M, N,O,P,R	– ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)
S,T,U,V, W,X,Y,Z	– ELECTRICAL CABLE 2-CONDUCTOR (NO. 14 AWG)
AA,BB, CC	– ELECTRICAL CABLE 2-CONDUCTOR (ALUMINUM SHIELDED)
DD,EE	– ELECTRICAL CABLE 2-CONDUCTOR (ALUMINUM SHIELDED) SPLICE TO EXISTING LOOP WIRING
FF	– NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
EIC	– EXISTING INTERCONNECT
EL	– EXISTING LOOP WIRE
LW	– LOOP WIRE (NO. 14 AWG)
⏚	– GROUND ROD 3/4" DIA x 10' LENGTH

NOTES: THE EXISTING SIGNAL CABLES NOT IDENTIFIED SHALL BE MAINTAINED.

EXISTING SIGNAL CABLES INDENTIFIED ARE NOT SHOWN TRAVELING BACK TO THE CONTROLLER.

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031

REVISION 'J'

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 97 (GEORGIA AVENUE) AT EMORY LANE IN NORBECK, MD

GENERAL INFORMATION SHEET

SCALE NONE DATE 8-17-2007 CONTRACT NO. AT9155185

DESIGNED BY ENB
DRAWN BY ENB
CHECKED BY
F.A.P. NO.
COUNTY MONTGOMERY
LOGMILE 15009709.99
T.I.M.S. NO. I 342
TOD NO.

DRAWING NO. TS-2106J
SHEET NO. 2 OF 2

BY: BOSTIC

PLOTTED: THURSDAY, SEPTEMBER 06, 2007 AT 11:03 AM
FILE: O:\TRANSDWG\25003\25003.70 MD 97 @ EMORY LANE\DRAWINGS\PSG-N000_MD97_EMORY.DGN