BORDER REV: DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AND INTERCONNECT AT THE INTERSECTION OF MD 198 (LAUREL-FORT MEADE RD) AND OLD LINE AVE./LAURELDALE DR. IN ANNE ARUNDEL COUNTY. THE RECONSTRUCTION WILL REPLACE THE EXISTING CABINET AND REPLACE EXISTING STRAIN POLES WITH MAST ARM POLES. PEDESTRIAN CROSSINGS WILL BE ADDED TO THE WEST LEG OF MD 198 AND BOTH OF THE SIDE STREETS . MD 198 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

1. THE INTERSECTION OPERATES IN A NEMA SIX (6) PHASE, FULLY-ACTUATED MODE. THERE IS AN EXCLUSIVE/PERMISSIVE LEFT TURN FOR BOTH APPROACHES OF MD 198 AND THRU MOVEMENTS OPERATE CONCURRENTLY. AN ALTERNATE PEDESTRIAN PHASE WITH ACTUATED AUDIBLE COUNTDOWN FOR CROSSING THE WEST LEG OF MD 198 AND AN ACTUATED AUDIBLE PEDESTRIAN PHASE FOR CROSSING THE SIDE STREETS WILL BE PROVIDED. OLD LINE AVE AND LAURELDALE DR APPROACHES RUN CONCURRENTLY.
2. A PROPOSED NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE MASTER CONTROLLER IN A NEMA SIZE "S" CABINET SHALL BE INSTALLED AT THIS LOCATION. VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE INSTALLED INTO THE CABINET BY SHA FORCES.

III. SPECIAL NOTES

APS FUNCTIONS AS FOLLOWS:
TO CROSS MD 198 (LAUREL-FORT MEADE ROAD)

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS LAUREL-FORT MEADE AT OLD LINE, WAIT."
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS FUNCTIONS AS FOLLOWS:
TO CROSS OLD LINE AVENUE

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS OLD LINE AT LAUREL-FORT MEADE, WAIT."
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS FUNCTIONS AS FOLLOWS:
TO CROSS LAURELDALE DRIVE

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS LAURELDALE AT FORT MEADE, WAIT."
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADIMISTRATION

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	2	EA	4 CHANNEL DETECTOR AMPLIFIER
900000	1	EA	CONTROLLER CABINET, SIZE 'S' W/ CONTROLLER, VIDEO INTERFACE EQUIP. 1-8 CAMERAS
900000	8	SF	SHEET ALUMINUM GROUND MOUNTED SIGN
			1 EA R4-7 'KEEP RIGHT' (24"x30")
			1 EA OM1-3 'OBJECT MARKER' (18"x18")
900000	67	SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN
			1 EA D-3(1) 'OLD LINE AVE/LAURELDALE DR' (VARx16") DUAL FACE
			1 EA D-3(1) 'LAURELDALE DR/OLD LINE AVE' (VARx16") DUAL FACE
			1 EA M4-5(4) 'MD 198 'Laurel-Fort Meade Rd' EAST/WEST' (78"x36")
			1 EA M1-5(4) 'MD 198 'Laurel-Fort Meade Rd' WEST/EAST' (78"x36")
			7 EA R10-3(1) 'PED SIGN' (9"x15")

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

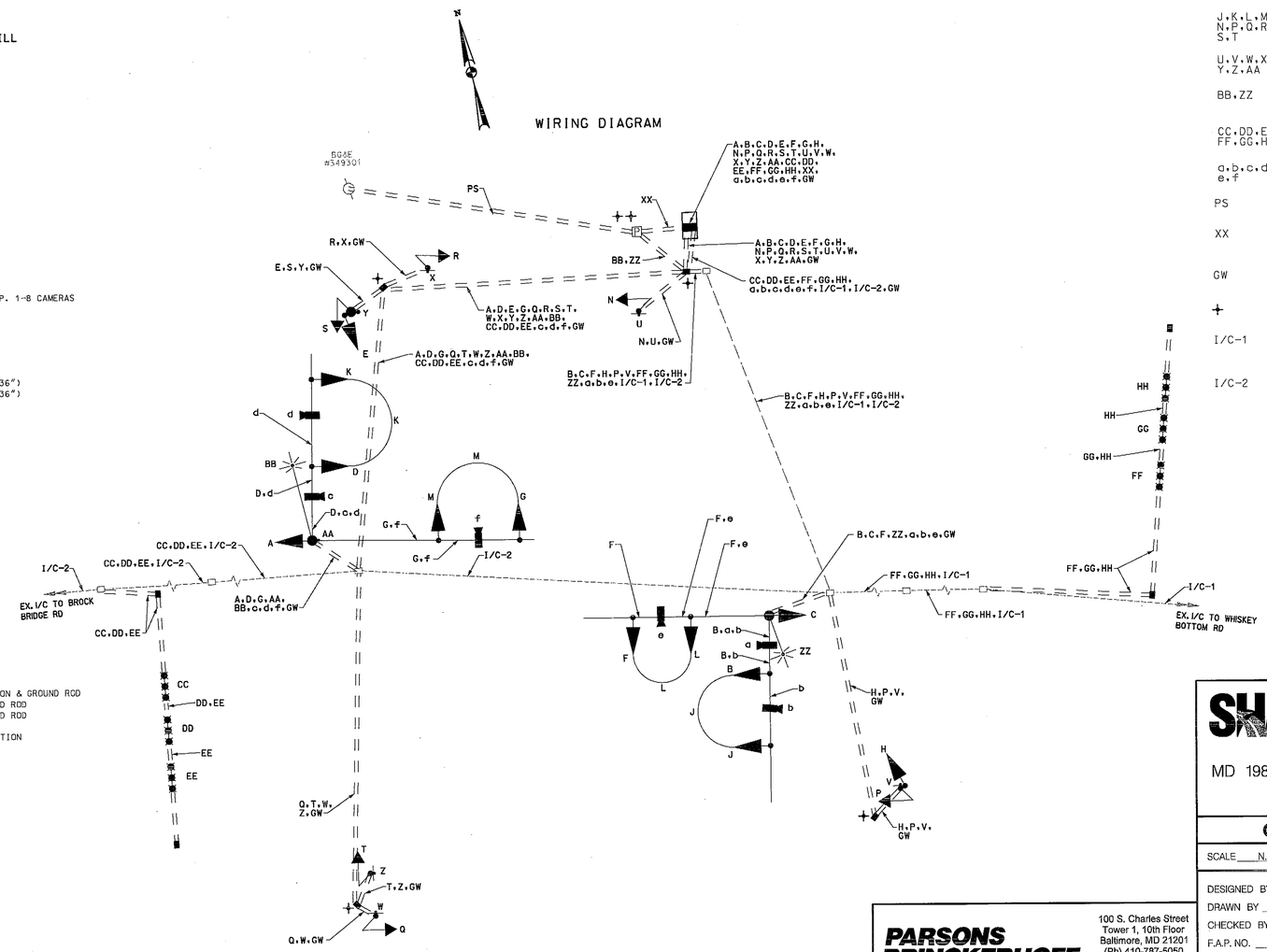
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
203030	7	CY	TEST PIT EXCAVATION
585621	520	LF	12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	175	LF	24" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	175	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	155	LF	TYPE A COMBINATION CURB & GUTTER ANY HEIGHT OR DEPTH
600000	115	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	935	SF	5" CONCRETE SIDEWALK
655120	90	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	1	EA	2 WIRE APS CENTRAL CONTROL UNIT
800000	7	EA	AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTON STATION & SIGN
800000	4	EA	5' OR 10' PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	6	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	2	EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE W/ LED ROADWAY LUMINAIRE
800000	1	EA	REMOVE & DISPOSE MATERIAL AND EXISTING EQUIPMENT PER ASSIGNMENT
800000	6	EA	IP-BASED VIDEO DETECTION CAMERA AND ANY LENGTH LEAD-IN CABLE
800000	50	LF	DISCONNECT, PULL-BACK & REROUTE CABLES
800000	1	EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND ROD
800000	2	EA	PEDISTAL POLE (ANY SIZE LARGER THAN 10') WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1	EA	TWIN MAST ARM POLE & 50'/50' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	1	EA	TWIN MAST ARM POLE & 50'/60' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	2	EA	ADJUST HANDHOLE TO GRADE AND REPLACE FRAME AND COVER
800000	1	EA	INSTALL CONTROLLER & CABINET BASE MOUNTED (ANY SIZE) INCLUDING F & I FOUNDATION AND GROUND ROD
800000	750	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	165	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	75	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	415	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B.W.G) TYPE TC
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
800000	6	EA	NONINVASIVE DETECTOR WITH ANY LENGTH LEAD-IN CABLE UP TO 1000'
800000	25	LF	WOOD SIGN SUPPORTS UP TO 4 INCH x 6 INCH
802501	510	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	60	LF	ELECTRICAL CABLE - 1 CONDUCTOR NO. 8 AWG - THHN/THWN
811001	8	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	44	EA	12" LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1350	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1480	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1715	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

C. IF THE CABINET IS TO BE REMOVED 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.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 & 5	←G/R—	←G/R—	R	←G/R—	←G/R—	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 & 5 CHANGE	1 & 5 MAY CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5																	
PHASE 2 & 5	R	R	R	←G/G—	←G/G—	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
5 CHANGE	R	R	R	←Y/G—	←Y/G—	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 1 & 6	←G/G—	←G/G—	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 CHANGE	←Y/G—	←Y/G—	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED. CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK
PED. CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A,B,C,D, E,F,G,H,	- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
J,K,L,M, N,P,Q,R, S,T	- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
U,V,W,X, Y,Z,AA	- 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
BB,ZZ	- 3-CONDUCTOR (B,W,G) TYPE TC CABLE (NO. 12 A.W.G.)
CC,DD,EE, FF,GG,HH	- MICROLOOP PROBE LEAD-IN CABLE
a,b,c,d, e,f	- VIDEO DETECTION LEAD-IN CABLE
PS	- PROPOSED POWER SERVICE (BY OTHERS)
XX	- 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G. THHN/THWN)
GW	- NO.6 A.W.G STRANDED BARE COPPER GROUND WIRE
+	- PROPOSED 3/4 IN. X 10 FT. GROUND ROD
I/C-1	- REROUTED EXISTING INTERCONNECT TO WHISKEY BOTTOM RD
I/C-2	- REROUTED EXISTING INTERCONNECT TO BROCK BRIDGE RD

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

MD 198 (LAUREL-FORT MEADE RD) & OLD LINE AVE /LAURELDALE DR
LAUREL, MD

GENERAL INFORMATION SHEET

SCALE N.T.S. DATE 03-31-13 CONTRACT NO. XY1515185

DESIGNED BY MAW
DRAWN BY MAW
CHECKED BY KMP
F.A.P. NO. SEE TITLE SHEET
COUNTY ANNE ARUNDEL
LOGMILE 02019600.83
TIMS NO. L826
TOD NO.

TS NO. 916E-GI | DRAWING SG-03 OF 03 | SHEET NO. 3 OF 3

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BY: WagnerM