DRILL HOLES

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BORDER REV: DATE: Manen12720B07

BY: $USERNAME$

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF APS AND COUNTDOWN PEDESTRIAN SIGNALS ACROSS THE NORTH, EAST AND WEST LEGS AT THE INTERSECTION OF MD 108 (OLD ANNAPOLIS ROAD) AND PHELPS LUCK DRIVE / CENTRE PARK DRIVE IN HOWARD COUNTY. IN ADDITION, ALL EXISTING TRAFFIC SIGNALS WILL BE REPLACED WITH NEW BLACK FACED LED TRAFFIC SIGNALS. MD 108 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

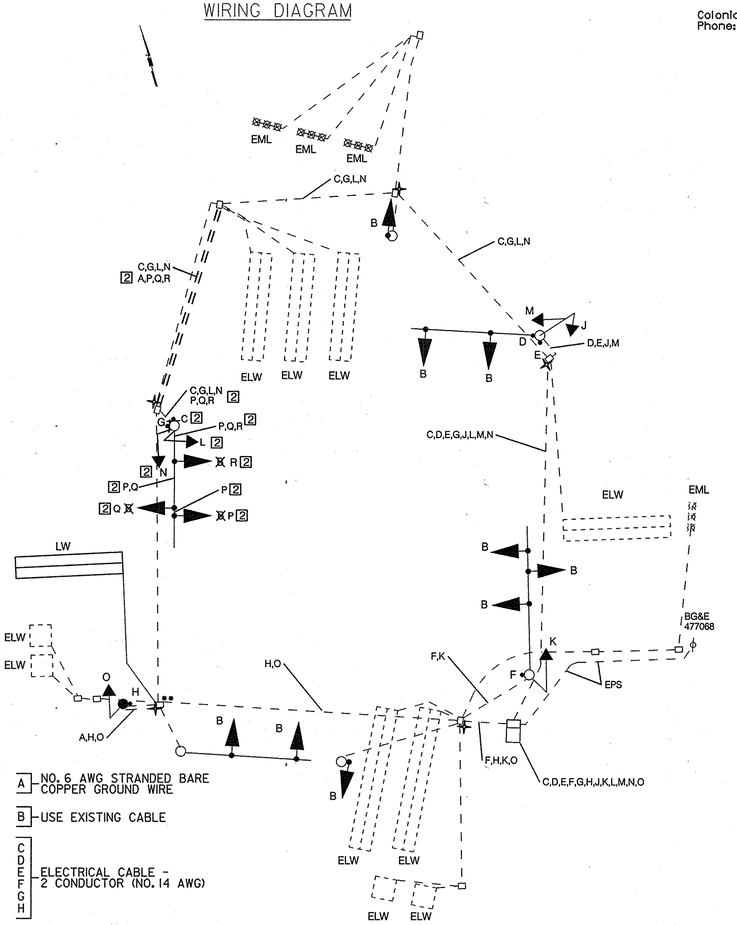
INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE/PERMISSIVE LEFT TURN PHASING FOR MD 108. THE SIDE STREET SPLIT PHASING AND RIGHT TURN OVERLAP FOR SOUTHBOUND CENTRE PARK DRIVE WILL REMAIN. THE CONCURRENT MAINLINE PEDESTRIAN PHASE ACROSS THE NORTH LEG AND THE ALTERNATE PEDESTRIAN PHASE ACROSS THE EAST LEG WILL REMAIN. AN ALTERNATE PEDESTRIAN PHASE ACROSS THE WEST LEG IS PROPOSED.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CONTROLLER, LOOP DETECTOR AMPLIFIERS, AND ASSOCIATED HARNESSES SHALL REMAIN. THE SHA SIGNAL SHOP WILL INSTALL A 2-WIRE CENTRAL CONTROL UNIT.

WIRING DIAGRAM



A — NO. 6 AWG STRANDED BARE COPPER GROUND WIRE

B — USE EXISTING CABLE

C D E F G H — ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)

J K L M N O — ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

EXISTING GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH.

ELW — EXISTING LOOP WIRE

EPS — EXISTING POWER SOURCE

EML — EXISTING MICROLOOP PROBE

P Q R — DISCONNECT, PULL BACK, [2] AND REROUTE CABLE

LW — LOOP WIRE

SPLICE PROPOSED LOOP WIRE TO EXISTING 2-CONDUCTOR ALUMINUM SHIELDED WIRE IN EXISTING HANDHOLE

STV Incorporated

engineers /architects /planners /construction managers

7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

Mr. John Concannon
Assistant District Engineer - Traffic
Phone: 301-624-8140

Ms. Andrea Abend
Assistant District Engineer - Utility
Phone: 301-624-8115

Mr. Ray Johnson
Assistant District Engineer - Maintenance
Phone: 301-624-8105

Mr. Richard L. Daff Sr.
Chief, Traffic Operations Division
Phone: 410-787-7630

Mr. Edward Rodenhizer
Chief, SHA Signal Shop
Phone: 410-787-7652

The Power Company Representative is:
Baltimore Gas and Electric Company
7317 Parkway Drive South
Hanover, MD 21076
Phone: 410-859-9062

Colonial Pipeline Company
Phone: 1-800-926-2728

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
9570	33 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGNS:
		4 EA - S1-1 (36 IN. x 36 IN.)
		4 EA - W16-7p FYG (21 IN. x 15 IN.)
9571	52 SF	[UPDATED] SHEET ALUMINUM MAST ARM/ POLE MOUNTED SIGNS:
		4 EA - R10-4(I)MOD, (9 IN. X 15 IN.) POLE MOUNT, "PUSH BUTTON TO CROSS OLD ANNAPOLIS RD."
		2 EA - R10-4(I)MOD, (9 IN. X 15 IN.) POLE MOUNT, "PUSH BUTTON TO CROSS CENTRE PARK DR."
		1 EA - ASSOCIATED SHIELD ASSEMBLY "WEST, MD 108, LEFT ARROW" (48 IN. X 75 IN.)
		1 EA - ASSOCIATED SHIELD ASSEMBLY "WEST, MD 108, RIGHT ARROW" (30 IN. X 51 IN.)
		1 EA - ASSOCIATED SHIELD ASSEMBLY "EAST, MD 108, LEFT ARROW" (30 IN. X 51 IN.)

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO	QUANTITY	DESCRIPTION
NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR		

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

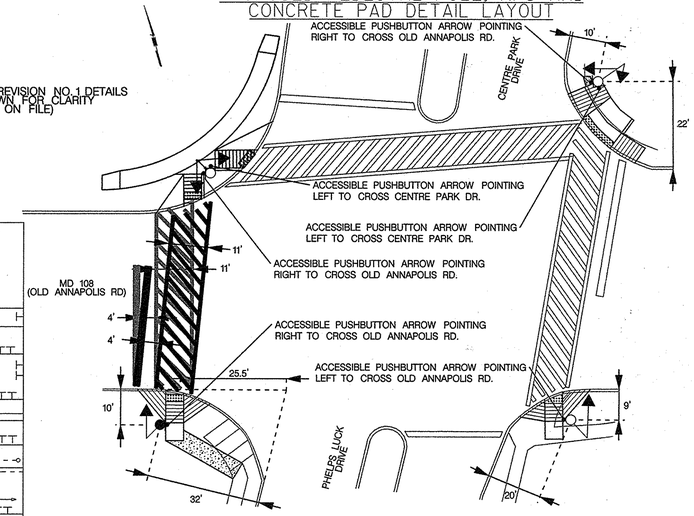
	ITEM NO	QUANTITY	DESCRIPTION
	1001	1 EA	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
	2001	[2] 1 CY ~~3 CY~~	TEST PIT EXCAVATION
	5003	250 LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
	5004	40 LF	24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
	5005	150 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
	6002	1700 SF ~~1200~~ SF [1]	4 INCH CONCRETE SIDEWALK
[1]	8000	[2] 1 EA ~~3 EA~~ [1]	[1] PAINT PROPOSED TRAFFIC SIGNAL STRUCTURE
	8001	38 EA	12 INCH (R,Y,G) LED SIGNAL HEAD SECTION
	8003	1 EA	2 WIRE CENTRAL CONTROL UNIT
	8007	12 EA	8 INCH LED SIGNAL (R,Y,G) HEAD SECTION
	8009	2 EA ~~1 EA~~ [1]	ADJUST HANDHOLE TO GRADE
	8010	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGN
	8011	[2] 1 EA ~~3 EA~~	BREAKAWAY PEDESTAL POLE (ANY SIZE)
	8014	6 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
	8017	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
[2]	8022	180 LF	DISCONNECT, PULLBACK, AND RE-ROUTE CABLE
	8026	[2] 15 LF ~~50 LF~~	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
	8027	60 SF	DETECTABLE WARNING SURFACES
	8030	[2] 1 CY ~~3 CY~~	CONCRETE FOR SIGNAL FOUNDATION
	8031	34 LF	WOOD SIGN SUPPORTS 4 INCH X 4 INCH
	8033	[2] 75 LF ~~50 LF~~	NO. 6 STRANDED BARE COPPER GROUND WIRE
	8034	25 LF	1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE
	8045	33 SF	INSTALL GROUND MOUNTED SIGN
	8046	52 SF	INSTALL OVERHEAD SIGN
	8058	1000 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
	8060	1150 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
	8062	430 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
	8063	130 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
[2]	8082-A	70 LF	FURNISH AND INSTALL 3 INCH GALVANIZED CONDUIT - HAND TRENCHED

[1] REDLINE REVISION NO. 1 DETAILS NOT SHOWN FOR CLARITY (ORIGINAL ON FILE)

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 ~~G~~	DW	DW	DW	DW	DW	DW
PHASE 1 & 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASE 1 & 6 OR 2 & 5 OR 2 & 6																	
PHASE 1 & 6	~~G~~ G	~~G~~ G	G	R	R	R	R	R	R	R	R	R ~~G~~	DW	DW	DW	DW	DW	DW
PHASE 1 CHANGE	~~Y~~ C	~~Y~~ G	G	R	R	R	R	R	R	R	R	R ~~Y~~	DW	DW	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	~~G~~ G	~~G~~ G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 5 CHANGE	R	R	R	~~Y~~ G	~~Y~~ G	G	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	W	W	DW	DW	DW	DW
PHASE 2 & 6 PED. CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	~~G~~ G	~~G~~ G	G	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 ALT.	R	R	R	R	R	R	~~G~~ G	~~G~~ G	G	R	R	R	DW	DW	DW	W	W	DW
PHASE 3 ALT. PED. CLEARANCE	R	R	R	R	R	R	~~G~~ G	~~G~~ G	G	R	R	R	DW	DW	DW	FL/DW	FL/DW	DW
PHASE 3 ALT. CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	R	~~G~~ G	~~G~~ G	G	DW	DW	DW	DW	DW	DW
PHASE 4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT.	R	R	R	R	R	R	R	R	R	~~G~~ G	~~G~~ G	G	DW	DW	W	DW	DW	W
PHASE 4 ALT. PED. CLEARANCE	R	R	R	R	R	R	R	R	R	~~G~~ G	~~G~~ G	G	DW	DW	FL/DW	DW	DW	FL/DW
PHASE 4 ALT. CHANGE	R	R	R	R	R	R	R	R	R	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

PROPOSED PEDESTAL POLE, APS AND CONCRETE PAD DETAIL LAYOUT



TEDD APPROVAL: 8/14/08

[2] REDLINE REVISION 8-14-2008

[1] REDLINE REVISION 8-31-2007 (ORIGINAL ON FILE)

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 108 (OLD ANNAPOLIS ROAD) AND PHELPS LUCK DRIVE/ CENTRE PARK DRIVE

GENERAL INFORMATION

SCALE NONE ADVERTISED DATE 02/2007 CONTRACT NO. AT9255185

DESIGNED BY MCG
DRAWN BY MCG
CHECKED BY BAB
F.A.P. NO.

COUNTY HOWARD
LOGMILE 13010811.79
TIMS NO. ~~G-378A~~ 1454 [1]
TOD NO.

TS NO. 17951-GI | DRAWING - OF | SHEET NO. 2 OF 2

PLOTTED: $DATETIME$
FILE: I:\PROJECTS\03125131\03125131_00331\Drawings\TRA\1454_MD 108 at Phelps Luck Road\gSG-NRL2_MD108.dgn