PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE UPGRADE OF AN EXISTING INTERSECTION CONTROL BEACON TO A NEW FULL-TRAFFIC-ACTUATED SIGNAL AT THE INTERSECTION OF MD 175 AND OCEANO AVENUE/ JESSUP PARK ENTRANCE IN HOWARD COUNTY, MARYLAND. MD 175 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 175 APPROACHES OPERATING CONCURRENTLY AND THE OCEANO AVENUE/ JESSUP PARK ENTRANCE APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR THE WESTBOUND MD 175 APPROACH.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, SYSTEM PACKAGE, VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS), HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PHONE DROP

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. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)
STANDARD NO. MD-104.02-03 (LANE SHIFT RIGHT OR LEFT)
STANDARD NO. MD-104.02-09 (FLAGGER OPERATION)
STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8140/8141

MR. RAY JOHNSON
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 624-8105/8106

MR. ANDREA ABEND
DISTRICT UTILITY ENGINEER
PHONE: (301) 624-8115/8116

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

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9016	1 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
9571	166 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 4 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
		- 2 EACH D3-3 SIGN (72" x 24") - GROUND MOUNT
		- 1 EACH R3-6 SIGN (30" x 36") - MAST ARM MOUNT
		- 1 EACH R3-5(R) SIGN (30" x 36") - MAST ARM MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY "WEST, MD , RIGHT ARROW" (24 IN. x 51 IN.) - POLE MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY "WEST, MD , LEFT ARROW" (36 IN. x 75 IN.) - POLE MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY "EAST, MD , RIGHT ARROW" (24 IN. x 51 IN.) - GROUND MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY "EAST, MD , LEFT ARROW" (36 IN. x 75 IN.) - GROUND MOUNT
		- 2 EACH W3-3 SIGN (36 IN. x 36 IN.) WITH "NEW" PANEL (24 IN. x 24 IN.) AND FLAG - GROUND MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

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.

EQUIPMENT LIST "B"

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

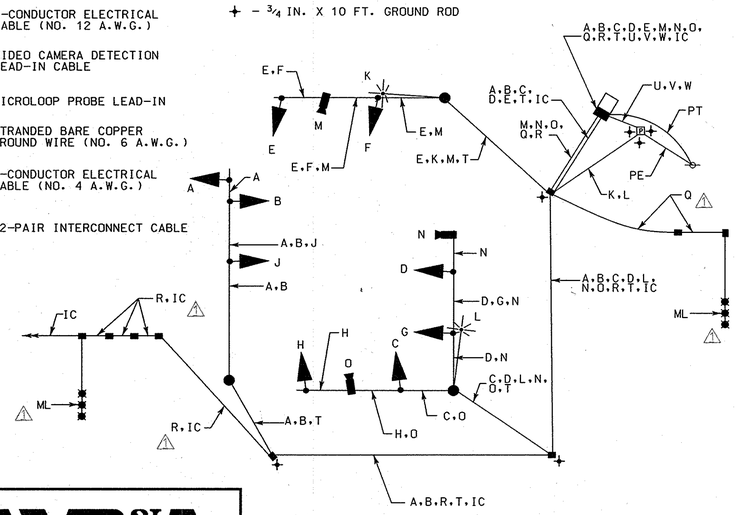
ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EACH	MAINTENANCE OF TRAFFIC
2001	3 C.Y.	TEST PIT EXCAVATION
5001	300 L.F.	5 INCH HEAT APPLIED WHT OR YEL PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5002	575 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5005	150 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
8001	28 EACH	12 INCH LED SIGNAL HEAD SECTION
8004	3 EACH	8 INCH LED SIGNAL HEAD SECTION
8007	2 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
8017	1 EACH	MAST ARM POLE & 60 FT MAST ARM ANY 'T' DIMENSION
8019	1 EACH	MAST ARM POLE& 50 FT MAST ARM ANY 'T' DIMENSION
△1 8020	2 EACH	MICROLOOP PROBE (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT.
△1 ~~8021~~	~~2 EACH~~	~~NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT.~~
8022	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8025	1 EACH	TWIN MAST ARM POLE & 50 FT/50 FT MAST ARMS ANY 'T' DIMENSION
△1 8028	15 L.F.	1 INCH DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID-TIGHT
8027	3 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
△1 8030	2160 ~~6300~~ L.F.	12 - PAIR COMMUNICATION CABLE, SELF-SUPPORTING OR JELLYFILLED
△1 8035	240 ~~90~~ L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
△1 8036	1230 ~~4635~~ L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
△1 8037	415 ~~535~~ L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8038	140 L.F.	WOOD SIGN SUPPORTS UP TO 4 X 6
8040	166 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	95 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8044	1 EACH	METERED SERVICE PEDESTAL EMBEDDED
8046	95 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
△1 8048	17 ~~32~~ EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8057	70 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8058	1050 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8059	305 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC
△1 8061	75 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8065	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

WIRING KEY

- A B C D E — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- F G H J — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- K L — 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
- M N O — VIDEO CAMERA DETECTION LEAD-IN CABLE
- Q R — MICROLOOP PROBE LEAD-IN
- T — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- U V W — 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- IC — 12-PAIR INTERCONNECT CABLE △1

WIRING DIAGRAM

ML - MICROLOOP PROBE SET
PT - PROPOSED UNDERGROUND TELEPHONE SERVICE
PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE
⏚ - 3/4 IN. X 10 FT. GROUND ROD



PHASE CHART

	1	2	3	4	5	6	7	8	9
PHASE 1 AND 6	G ←G-	G ←G-	G	R	R	R	R	R	R
1 AND 6 CHANGE	G ←Y-	G ←Y-	G	R	R	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	R	R	R	R
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R
PHASE 4 AND 8	R	R	R	R	R	G	G	G	G
4 AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

△1 GREENLINE REVISION NO. 1
CONDUIT RUNS MODIFIED
OCTOBER 29, 2008

11/18/2008

WR&A
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Engineers, Architects and Planners
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410-235-3450

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

MD 175 AND Oceano Ave/Entr. to Jessup Park

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE _____ CONTRACT NO. _____

DESIGNED BY B. DONOWAY
DRAWN BY B. DONOWAY
CHECKED BY N. Leary
F.A.P. NO. _____
COUNTY HOWARD
LOGMILE _____
TIMS NO. I484
TOD NO. _____

TS NO. 4001C | DRAWING TSP-2 OF 2 | SHEET NO. 6 OF 6

PLOTTED: 11-14-2008
FILE: n:\31556-140\CADD\Greenline Revisions\pSG-N006_I484GL.dgn

BY: bdonoway