

I. GENERAL
 This project involves the construction of a Part-Time traffic signal at the intersection of MD 223 (Piscataway Road) at Garden Drive in Prince George's County. New LED traffic signal head sections and audible/tactile pushbutton stations shall be installed at the intersection. New sidewalk ramp openings shall be installed following ADA standard guidelines for all three legs of the intersection. The traffic signal shall operate during school activities. Two 6 ft. x 20 ft. queue loop detectors shall be installed 130 feet from the stopline on Garden Drive. The queue loop detects a traffic queue and activates the signal, the signal shall operate in full-color mode for a duration of 30 minutes before returning to flashing mode.

II. INTERSECTION OPERATION
 1. During normal operation, the intersection will operate in a flashing mode with the MD 223 (Piscataway Road) alternate indications flashing Yellow and Garden Drive indications flashing Red. The intersection will operate in a NEMA Three-Phase, Semi-Actuated Mode with the MD 223 east and west approaches operating concurrently and the Garden Drive approach operating alone.

2. The contractor shall deliver the control unit and audible pushbuttons to SHA Signal Shop for testing and programming prior to being installed at the intersection. Contact Mr. Ed Rodenhizer at (410)-787-7650.

III. SPECIAL NOTES

- All pavement markings shall be installed in accordance with Administration standards.
- The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly label each cable.
- All traffic signal foundations shall be installed at the final sidewalk or curb grade for closed sections, highest roadway profile grade for open sections, to meet clearances as specified in the appropriate 800 series Standard Plates. The contractor shall verify ultimate grades prior to the installation of all signal equipment.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved. Utility lines that are in conflict shall be relocated prior to any signal modification by others to resolve the conflict.
- The contractor shall maintain the continuous operation of all interconnect, vehicular, pedestrian detectors, and lighting devices. If any device is damaged by the contractor, it shall be repaired within 72 hours by the contractor at no cost to the Administration after notification by the Engineer.
- APS will function as follows:
 FOR PISCATAWAY ROAD
 a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Piscataway at Garden."
 b. When Walk phase begins, the message will be a rapid tick which will last for the duration of the Walk phase.
 FOR GARDEN DRIVE
 a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Garden at Piscataway."
 b. When Walk phase begins, the message will be a rapid tick which will last for the duration of the Walk phase.

CONTACTS

DISTRICT
 MR. DARRELL B. MOBLEY
 DISTRICT ENGINEER
 301-513-7311

OFFICE OF TRAFFIC AND SAFETY
 MR. RICHARD DAFF SR.
 CHIEF, TRAFFIC OPERATIONS
 410-787-7630

MR. BRIAN YOUNG
 ASSISTANT DISTRICT ENGINEER - TRAFFIC
 301-513-7409

MR. ED RODENHIZER
 CHIEF SIGNAL OPERATIONS
 410-787-7650

MR. AUGIE REBISH
 ASSISTANT DISTRICT ENGINEER - UTILITIES
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 CHIEF SIGN OPERATIONS
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MR. KEVIN NOWAK & MR. DUANE BERNARD
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 301-513-7336

MS. DARLENE EIDE
 CHIEF SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
 410-787-7668

MR. VERNON STINNETT
 ASSISTANT DISTRICT ENGINEER - MAINTENANCE
 301-513-7304

EQUIPMENT LIST

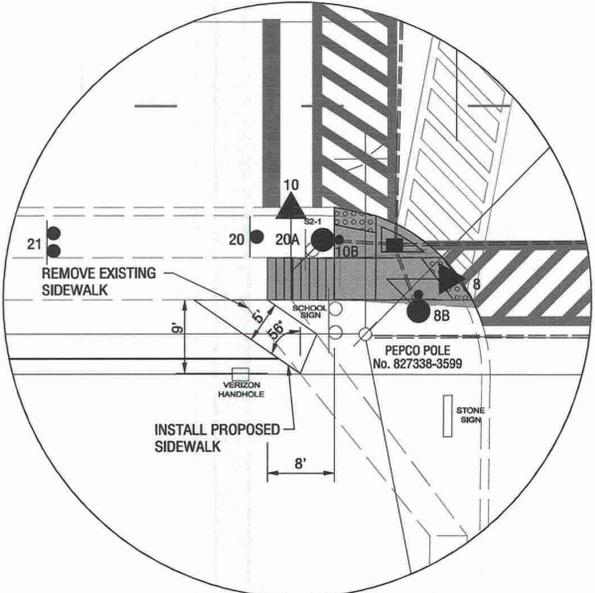
A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION		
ITEM NO.	QUANTITY	DESCRIPTION
9016	1 EA	4 CHANNEL DETECTOR AMPLIFIER
9042	1 EA	CONTROLLER ASC II WITH TELEMETRY
9044	1 EA	CONTROLLER CABINET, SIZE 6
9086	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	69 SF	SHEET ALUMINUM GROUND MOUNTED SIGN
	2 EA	W16-14(24"x24")
	1 EA	D1-1(1)(18"x6")
	1 EA	R4-9(1)(24"x30")
	2 EA	S1-1(36"x36")
	2 EA	W3-3(36"x36")
	1 EA	W4-2(2)(36"x36")
	1 EA	W4-2(3)(36"x18")
	1 EA	W8-13(MOD.) (30"x30")
	2 EA	W16-7P(L)&(R) (24"x12")
9571	80 SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN
	4 EA	R10-3(1)(15"x9")
	1 EA	M1-5(4) (78"x40")
	2 EA	S1-1(1)(96"x36")
	1 EA	R3-5(R)(30" X 36")
	1 EA	R3-5(L)(30" X 36")
	1 EA	W9-2(4)(30"x42")
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR		
ITEM NO.	QUANTITY	DESCRIPTION
1003	1 EA	MAINTENANCE OF TRAFFIC
2001	750 CY	CLASS 2 EXCAVATION
2002	3 CY	TEST PIT EXCAVATION
5004	400 LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	75 LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5006	240 LF	5 INCH HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT LINE MARKINGS
5007	425 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
6002	670 SF	5 INCH CONCRETE SIDEWALK
8001	1 EA	2 WIRE CENTRAL CONTROL UNIT
8007	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8008	3 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8011	3 EA	INSTALL BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	2 EA	INSTALL STEEL STRAIN OR MAST ARM POLE WITH SINGLE OR TWIN MAST ARM
8013	4 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8015	1 EA	MAST ARM POLE & 38 FT. MAST ARM ANY "T" DIMENSION
8021	1 EA	REMOVE & DISPOSE MATERIALS & EQUIPMENT PER ASSIGN

EQUIPMENT LIST (CONT.)

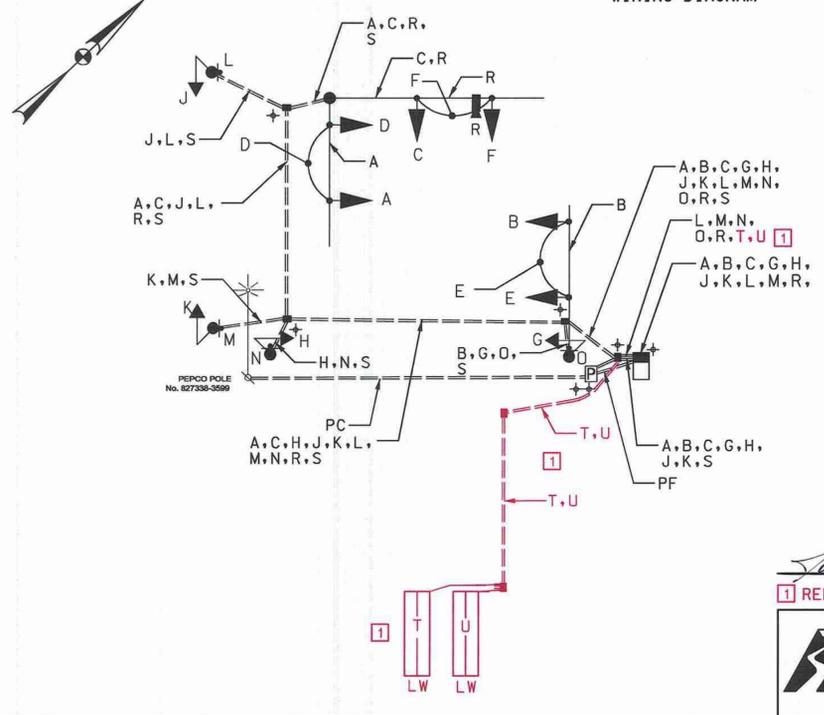
8023	1 EA	TWIN MAST ARM POLE & 50 FT./50 FT. MAST ARMS ANY "T" DIMENSION
8025	1 EA	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT.
8026	6 LF	1 INCH DETECTOR SLEEVE FLEXIBLE LIQUID TIGHT
8030	300 LF	CABLE- 1 CONDUCTOR, 250 KCML, CU, USE
8033	130 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8034	105 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8035	170 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8036	360 LF	WOOD SIGN SUPPORTS UP TO 4 IN. X 6 IN.
8037	32 SF	DETECTABLE WARNING SURFACES
8038	149 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8040	250 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8042	1 EA	METER SERVICE PEDESTAL EMBEDDED
8044	60 LF	ELECTRICAL CABLE 1 -CONDUCTOR NO. 4 AWG-THHN/THWN
8046	6 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8050	18 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8053	360 LF	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8054	410 LF	ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG
8056	500 LF	ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG
8057	575 LF	ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG
8059	640 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8060	165 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8065	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNTED

PHASE CHART

	1	2	3	4	5	6	7	8	9	10
NORMAL OPERATION	(R)									
PHASE 2 AND 6	(G)	(G)	(G)	(G)	(R)	(R)	(W)	(W)	(D)	(D)
2 AND 6 CHANGE	(Y)	(Y)	(Y)	(Y)	(R)	(R)	(D)	(D)	(D)	(D)
PHASE 4	(R)	(R)	(R)	(R)	(G)	(G)	(D)	(D)	(D)	(D)
4 CHANGE	(R)	(R)	(R)	(R)	(Y)	(Y)	(D)	(D)	(D)	(D)
PHASE 4 ALT	(R)	(R)	(R)	(R)	(G)	(G)	(D)	(D)	(W)	(W)
PED CLEARANCE	(R)	(R)	(R)	(R)	(G)	(G)	(D)	(D)	(D)	(D)
4 ALT CHANGE	(R)	(R)	(R)	(R)	(Y)	(Y)	(D)	(D)	(D)	(D)



SIDEWALK RAMP DETAIL
 NOT TO SCALE



- KEY**
- A, B, C, D, E, F, G, H, J, K, L, M, N, O } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - I, J, K, L, M, N, O } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - P, Q, R, S, T, U } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - V, W, X, Y, Z } 2 CONDUCTOR CABLE ALUMINUM SHIELDED (NO. 14 AWG) FOR LOOP WIRE
 - AA } VIDEO DETECTION CAMERA CABLE
 - AB } LOOP WIRE ENCASED IN FLEX TUBING (NO. 14 AWG)
 - AC } No. 6 AWG STRANDED BARE COPPER GROUND WIRE
 - AD } ELECTRICAL CABLE (3 WIRES) 1-CONDUCTOR NO. 4 AWG THHN/THWN
 - AE } CABLE-1 CONDUCTOR 250 KCML, CU, USE
 - AF } GROUND ROD

REDLINE REVISION NO. 1 4/20/2010

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SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
MD 223 (PISCATAWAY ROAD) & GARDEN DRIVE
 CLINTON, MARYLAND

GENERAL INFORMATION PLAN

SCALE: N.T.S. DATE: DECEMBER, 2009 CONTRACT NO.: X04445185

DESIGNED BY: S. SMITH COUNTY: PRINCE GEORGE'S
 DRAWN BY: S. SMITH LOGMILE: 16022306.40
 CHECKED BY: J. WEAVER T.I.M.S. NO.: J889
 F.A.P. NO.: TOD NO.:

TS NO. 4722 DRAWING 2 OF 3 SHEET NO. OF