PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 500 (QUEENS CHAPEL ROAD) AND MD 410A (BELCREST ROAD)/QUEENSBURY ROAD IN PRINCE GEORGE'S COUNTY, MARYLAND. MD 500 (QUEENS CHAPEL ROAD) IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATION WILL BE CHANGED TO SPLIT PHASE ON THE MD 410A APPROACHES.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 500 (QUEENS CHAPEL ROAD) AND MD 410A (BELCREST ROAD)/QUEENSBURY ROAD - NORTH LEG

CROSSWALK ANGLES RIGHT

WAIT: "WAIT TO CROSS QUEENS CHAPEL AT BELCREST AND QUEENSBURY.*

WALK: RAPID TICK

MD 500 (QUEENS CHAPEL ROAD) AND MD 410A (BELCREST ROAD)/QUEENSBURY ROAD - SOUTH LEG

CROSSWALK ANGLES RIGHT

WAIT: "WAIT TO CROSS QUEENS CHAPEL AT BELCREST AND QUEENSBURY.*

WALK: RAPID TICK

MD 410A (BELCREST ROAD)/QUEENSBURY ROAD AND MD 500 (QUEENS CHAPEL ROAD) - WEST LEG

CROSSWALK ANGLES LEFT

WAIT: "WAIT TO CROSS BELCREST AT QUEENS CHAPEL.*

WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'
** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

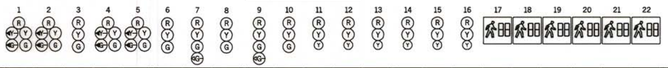
THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE VIDEO DETECTION EQUIPMENT.

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-104.04-02 (SHOULDER WORK)
STANDARD NO. MD-104.04-04 (LEFT LANE CLOSURE)
STANDARD NO. MD-104.04-06 (RIGHT LANE CLOSURE)
STANDARD NO. MD-104.04-14 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-16 (INTERSECTION LEFT LANE, TURN BAY)

PHASE 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	R ←G—	R ←G—	R	R ←G—	R ←G—	R	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6																					
PHASE 1 + 6	G ←G—	G ←G—	G	R	R	R	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
1 + 6 CHANGE	G ←Y—	G ←Y—	G	R	R	R	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	R	R	R	G ←G—	G ←G—	G	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
2 + 5 CHANGE	R	R	R	G ←Y—	G ←Y—	G	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	WK	WK	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/OW	FL/OW	DW	DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
PHASE 3	R ←R—	R ←R—	R	R ←R—	R ←R—	R	G ←G—	G	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
3 CHANGE	R ←R—	R ←R—	R	R ←R—	R ←R—	R	Y	Y	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
PHASE 3 ALT.	R ←R—	R ←R—	R	R ←R—	R ←R—	R	G ←G—	G	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	WK	DW	DW	WK
PED CLEARANCE	R ←R—	R ←R—	R	R ←R—	R ←R—	R	G ←G—	G	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	FL/OW	DW	DW	FL/OW
3 ALT. CHANGE	R ←R—	R ←R—	R	R ←R—	R ←R—	R	Y	Y	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
PHASE 4	R ←R—	R ←R—	R	R ←R—	R ←R—	R	R	R	G ←G—	G	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
4 CHANGE	R ←R—	R ←R—	R	R ←R—	R ←R—	R	R	R	Y	Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT.	R ←R—	R ←R—	R	R ←R—	R ←R—	R	R	R	G ←G—	G	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	WK	WK	DW
PED CLEARANCE	R ←R—	R ←R—	R	R ←R—	R ←R—	R	R	R	G ←G—	G	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	FL/OW	FL/OW	DW
4 ALT. CHANGE	R ←R—	R ←R—	R	R ←R—	R ←R—	R	R	R	Y	Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DW	DW	DW	DW	DW	DW
FIREHOUSE PRE-EMPTION	R	R	R	R	R	R	G	G	R	R	G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
	R	R	R	R	R	R	Y	Y	R	R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/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/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DARK	DARK	DARK	DARK	DARK	DARK

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-8 CAMERAS
9570	36 S.F.	SHEET ALUMINUM GROUND MOUNTED SIGNS TO CONSIST OF:
		- 1 EACH R4-7 (24" x 30") - GROUND MOUNTED
		- 1 EACH R7-1 (12" x 18") - GROUND MOUNTED
		- 1 EACH W4-3(1) (30" x 30") - GROUND MOUNTED
		- 1 EACH W11-2 (36" x 36") - GROUND MOUNTED
		- 1 EACH W13-4(1) (36" x 24") - GROUND MOUNTED
		- 2 EACH W16-7pL (24" x 12") - GROUND MOUNTED
		- 2 EACH W16-7pR (24" x 12") - GROUND MOUNTED
9571	[1] ~~49~~ ~~48~~ S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 3 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
		- 1 EACH R10-11b (24 IN. x 24 IN.) - MAST ARM MOUNT
		- 1 EACH R3-5(L) (30 IN. x 36 IN.) - MAST ARM MOUNT
		[1] - 1 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS BELCREST ROAD" - POLE MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. FELECIA MURPHY
ASSISTANT DISTRICT ENGINEER -
TRAFFIC (PRINCE GEORGE'S)
PHONE: (301) 513-7409

MR. VERNON STINNETT
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

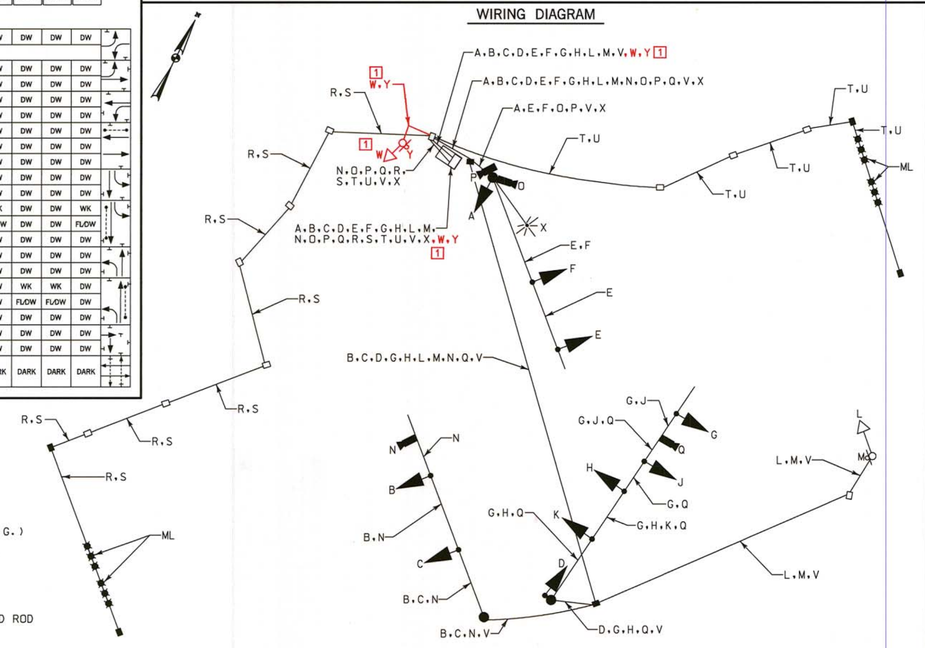
MR. VICTOR GRAFTON
ASSISTANT UTILITY ENGINEER
PHONE: (301) 513-7350

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

MR. ED RODENHIZER
OOTS/SIGNAL SHOP
PHONE: (410) 787-7652

MR. MICHAEL A. STOCKER
OOTS/SIGNAL WHAREHOUSE (FINANCIAL MGMT. UNIT)
PHONE: (410) 787-7696

WIRING DIAGRAM



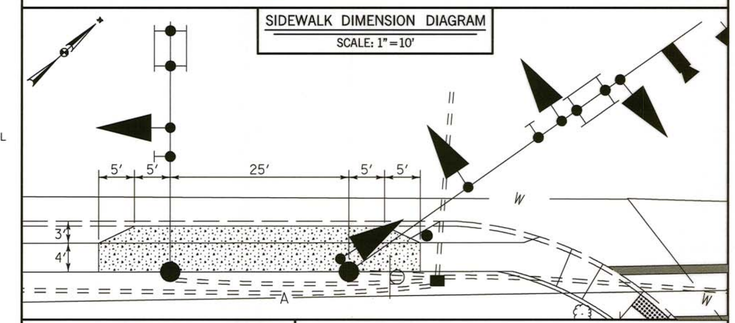
EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1003	1 EACH	MAINTENANCE OF TRAFFIC
2001	5 C.Y.	CLASS 2 EXCAVATION
2002	3 C.Y.	TEST PIT EXCAVATION
5002	70 L.F.	5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS
5003	150 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	670 L.F.	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	20 L.F.	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6002	275 S.F.	5 INCH CONCRETE SIDEWALK
8001	40 EACH	12 INCH LED SIGNAL HEAD SECTION
8007	1 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE
8020	1 EACH	MAST ARM POLE & 60' MAST ARM ANY 'T' DIMENSION
8021	2 EACH	MAST ARM POLE & 70' MAST ARM ANY 'T' DIMENSION
8023	4 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8024	1 EACH	REMOVE AND DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8028	4 EACH	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8034	290 L.F.	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8035	110 L.F.	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8036	240 L.F.	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8037	50 L.F.	WOOD SIGN SUPPORTS UP TO 4" x 6"
8038	[1] ~~85~~ ~~84~~ S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN
8040	350 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8044	6 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	[1] 370 ~~325~~ L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8053	[1] 400 ~~350~~ L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8054	1700 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8055	175 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
[1] 8009	[1] 1 EACH	[1] BREAKAWAY PEDESTAL POLE (ANY SIZE)
[1] NEG	[1] 1 EACH	[1] RELOCATE EXISTING SIGNAL HEAD
[1] NEG	[1] 1 EACH	[1] RELOCATE EXISTING AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON

SIDEWALK DIMENSION DIAGRAM

SCALE: 1" = 10'



WIRING KEY

A B C D E F G H } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

W J K L [1] } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

[1] M Y } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

N O P Q } VIDEO CAMERA DETECTION LEAD-IN CABLE

R S T U } MICROLOOP PROBE LEAD-IN

V } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

X } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE

ML - MICROLOOP PROBE SET

⏚ - 3/4 IN. X 10 FT. GROUND ROD

WR&A
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 500 (QUEENS CHAPEL RD)
AND MD 410A (BELCREST RD)QUEENSBURY RD
(HYATTSVILLE, MARYLAND)

REVISIONS

[1] REDLINE NO. 1
RELOCATED EX. PED SIGNAL
CONTRACT SHA NO. XX3545168R 10/18/2011

GENERAL INFORMATION SHEET

SCALE NONE DATE FEBRUARY 23, 2011 CONTRACT NO. XX3545168R

DESIGNED BY J. RASMUSSEN COUNTY PRINCE GEORGE'S
DRAWN BY J. RASMUSSEN LOGMILE 16050002.08
CHECKED BY N. LEARY TIMS NO. K052
F.A.P. NO. M-5187(1)F TOD NO.

TS NO. 589-F | DRAWING TSP-03 OF 3 | SHEET NO. 3 OF 3

PLOTTED: Monday, October 17, 2011 AT 04:54 PM
FILE: N:\31669-105\CADD\Redline 1\RL1_cSG-N003_K052.dgn

BY: jrasmussen