

I. GENERAL

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD7 (PHILADELPHIA RD) AND I-695 NORTHBOUND ON RAMP/GOLDEN RING ENTRANCE IN BALTIMORE COUNTY. THE EXISTING STRAIN POLES AND SPAN WIRE SHALL BE REPLACED WITH NEW MAST ARM POLES, LED SIGNAL HEADS, VIDEO DETECTION CAMERAS, COUNTDOWN PEDESTRIAN SIGNALS, AND AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTONS. MD 7 IS ASSUMED TO RUN IN THE EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

- THE INTERSECTION OPERATES IN A NEMA SIX-PHASE FULLY ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR BOTH THE EASTBOUND AND WESTBOUND MOVEMENTS OF PHILADELPHIA RD. THE EASTBOUND AND WESTBOUND THROUGH MOVEMENTS OF PHILADELPHIA RD. OPERATE CONCURRENTLY. THE NORTHBOUND AND SOUTHBOUND MOVEMENTS OF I-695 NB ON RAMP/GOLDEN RING ENTRANCE OPERATE AS A SPLIT PHASE. AN ALTERNATE PEDESTRIAN PHASE WITH COUNTDOWN PEDESTRIAN SIGNALS AND AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTONS SHALL BE INSTALLED ON THE WEST LEG OF MD 7 AND ACROSS THE I-695 NB ON RAMP.
- A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT, TELEMETRY CABLE AND ALL NECESSARY EQUIPMENT HOUSED IN A NEMA SIZE "6" BASE-MOUNTED CABINET SHALL REMAIN AT THIS INTERSECTION.

III. APS NOTES

- TO CROSS MD7:
- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON WILL ANNOUNCE "WAIT TO CROSS PHILADELPHIA AT I-695 NORTHBOUND RAMP AND THE CENTER AT GOLDEN RING ENTRANCE."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS I-695 NB RAMP:
- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON WILL ANNOUNCE "WAIT TO CROSS I-695 NORTHBOUND RAMP AT PHILADELPHIA. CROSSWALK ANGLES LEFT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

CAT CODE	QUANTITY	DESCRIPTION
900000	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS
900000	54 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN
	1 EA	SHIELD ASSEMBLY SIGN GROUND MOUNTED
	1 EA	M3-1 "NORTH" (24"x12"), M1-1 "695" (30"x24"), M6-3 "THRU ARROW" (21"x15")
	1 EA	SHIELD ASSEMBLY SIGN GROUND MOUNTED
	1 EA	M4-5a "TO" (24"x12"), M3-3 "SOUTH" (24"x12"), M1-1 "695" (30"x24"), M6-1 "LEFT ARROW" (21"x15")
	1 EA	M3-4 "WEST" (24"x12"), M1-5 "MD7" (24"x24"), M6-1 "RIGHT ARROW" (21"x15") GROUND MOUNTED
	2 EA	W11-1 "ADVANCED PEDESTRIAN CROSSING" SIGN (30"x30") AND
	1 EA	W16-7p "DIAGONAL ARROW LEFT" SIGN (24"x12")
	1 EA	R1-2 "YIELD" SIGN (36"x36")
	1 EA	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
900000	1 EA	SHIELD ASSEMBLY SIGN (36"x75") POLE MOUNTED
	1 EA	M3-2 "EAST" (30"x15"), M1-5 "MD7" (48"x36"), M6-1 "LEFT ARROW" (30"x24")
	1 EA	M1-5(4) "MD7 WEST/EAST PHILADELPHIA RD" SIGN (78"x36") MAST ARM MOUNTED
	1 EA	D3-1 "PHILADELPHIA RD" STREET SIGN MAST ARM MOUNTED (VAR"X16")
	1 EA	R3-6 "LEFT THRU ONLY" SIGN (30"x36") MAST ARM MOUNTED
	2 EA	R3-5(L) "LEFT ONLY" SIGN (30"x36") MAST ARM MOUNTED
	2 EA	R10-3(1) "PUSH BUTTON TO CROSS I-695 RAMP" SIGN (9"x15") POLE MOUNTED
	2 EA	R10-3(1) "PUSH BUTTON TO CROSS PHILADELPHIA RD" SIGN (9"x15") POLE MOUNTED
	2 EA	M1-5(4) (MOD) "I-695 NORTH ARROW RIGHT" SIGN (33.5"x24") MAST ARM MOUNTED
	2 EA	M1-5(4) (MOD) "I-695 NORTH ARROW LEFT" SIGN (53.5"x24") MAST ARM MOUNTED

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

CAT CODE	QUANTITY	DESCRIPTION
201032	1	CLASS 2 EXCAVATION
203030	3	TEST PIT EXCAVATION
585462	405	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
585620	600	12 INCH HEAT APPLIED WHITE PERM.-PREF. THERMOPLASTIC PAVEMENT MARKINGS
585624	105	24 INCH HEAT APPLIED WHITE PERM.-PREF. THERMOPLASTIC PAVEMENT MARKINGS
585627	57	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS & SYMBOLS
600000	126	DETECTABLE WARNING SURFACES FOR CURB RAMPS (RED CLAY BRICK PAVERS)
634300	1	STANDARD TYPE A COMBINATION CURB AND GUTTER, 12 INCH GUTTER 8 INCH DEPTH
655105	1	5 INCH CONCRETE SIDEWALK
800000	4	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION
800000	2	ADJUST EXISTING HANDHOLE TO GRADE
800000	195	DISCONNECT, PULL BACK & REROUTE CABLE
800000	4	AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTON AND SIGN
800000	1	FURNISH & DELIVER 2 WIRE CENTRAL CONTROL UNIT
800000	485	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCH - BORED
800000	200	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCH - TRENCHED
800000	1	INSTALL OVERHEAD OR GROUND MOUNTED SIGN
800000	3	BREAKAWAY PEDESTAL POLE (ANY SIZE)
800000	2	TWIN MAST ARM POLE & 50 FOOT / 70 FOOT MAST ARMS ANY "T" DIMENSION
800000	2	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
800000	6	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
800000	5	REMOVE SIGNAL POLE FOUNDATION 12" BELOW GRADE
801104	15	WOOD SIGN SUPPORTS 4 INCH x 4 INCH
801106	83	WOOD SIGN SUPPORTS 4 INCH x 6 INCH
802501	395	NO.6 AWG STRANDED BARE COPPER GROUND WIRE
807202	1	METERED SERVICE PEDESTAL EMBEDDED
810010	60	ELECTRICAL CABLE 1-CONDUCTOR, NO.4 AWG THHN/THWN
811001	5	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813023	6	RELOCATE GROUND MOUNTED SIGN
860284	46	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860292	1	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	850	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	940	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	2010	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	420	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC

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 STATE.

CONTACTS

DISTRICT

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-321-2781

MR. DONALD SCHAEFER
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-321-2821

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-321-2761

MR. MICHAEL PASQUARIELLO
ASSISTANT DISTRICT ENGINEER - UTILITIES
410-321-2841

MR. DAVID CASTLE
BALTIMORE GAS & ELECTRIC - ELECTRICAL SERVICE
1-800-233-1854

OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
TEAM LEADER SIGNAL OPERATIONS
410-787-7630

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
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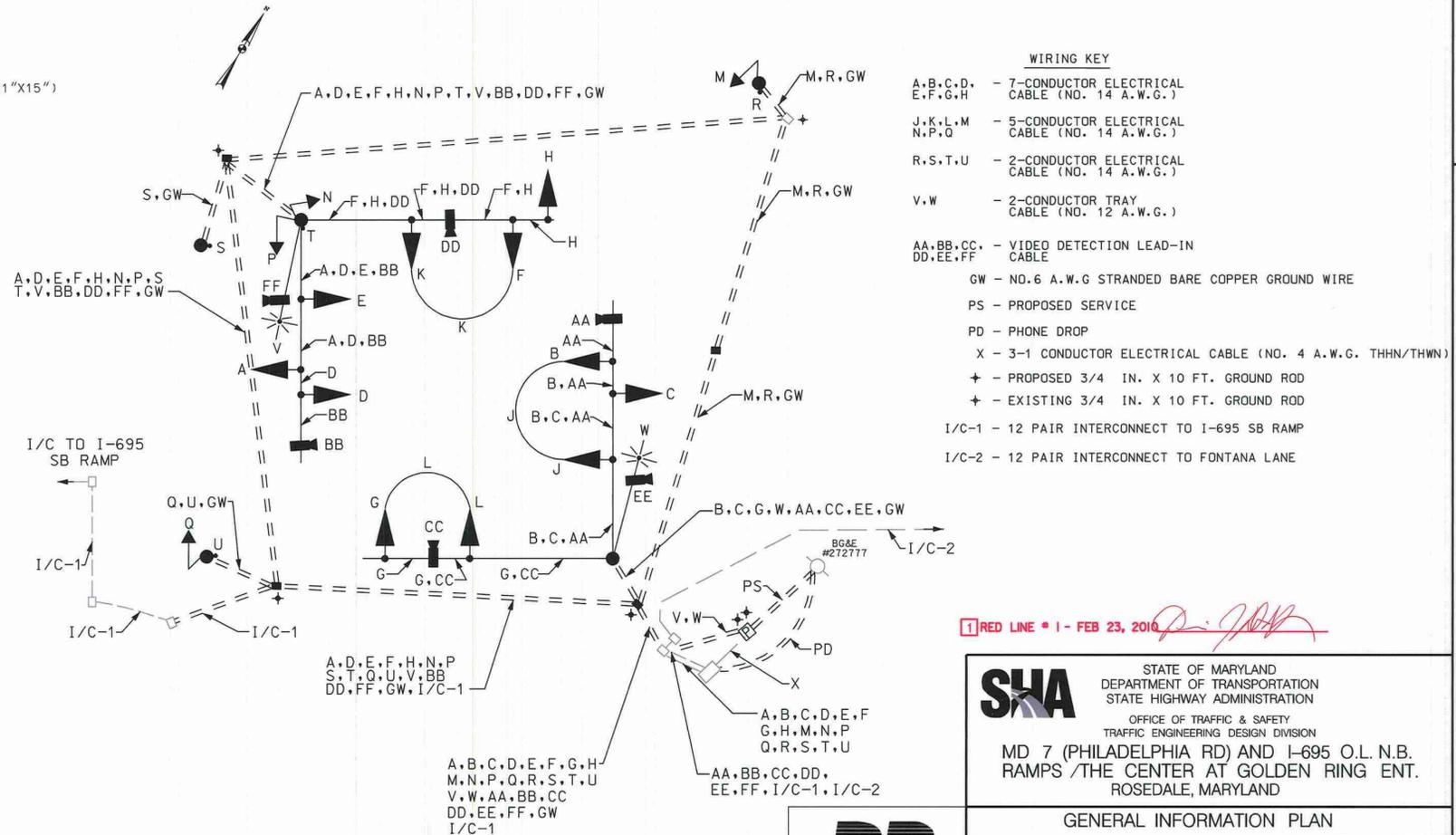
MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7670

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

PHASE CHART

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PHASE 1 + 5	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 + 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASES 1 + 6 OR 2 + 5 OR 2 + 6														
PHASE 1 + 6	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 CHANGE	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 + 5	R	R	R	R	R	R	R	R	R	R	R	WK	WK	DW	DW
5 CHANGE	R	R	R	R	R	R	R	R	R	R	R	WK	WK	DW	DW
PHASE 2 + 6	R	R	R	R	R	R	R	R	R	R	R	WK	WK	DW	DW
PHASE 2+6 PED CLEAR	G	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	R	R	R	R	R	DW	DW	WK	WK
PHASE 4 PED CLEAR	R	R	R	R	R	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
4 ALT CHANGE	R	R	R	R	R	R	R	Y	Y	Y	Y	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	DARK	DARK	DARK	DARK

WIRING DIAGRAM



RED LINE # 1 - FEB 23, 2010

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 7 (PHILADELPHIA RD) AND I-695 O.L. N.B.
RAMPS /THE CENTER AT GOLDEN RING ENT.
ROSEDALE, MARYLAND

GENERAL INFORMATION PLAN

SCALE 1"=20' DATE 6.1/09 CONTRACT NO. BA1195168

DESIGNED BY K. PERMISOHN COUNTY BALTIMORE
DRAWN BY M. WAGNER LOGMILE 0300000702.63
CHECKED BY D. MACLEAN TMS NO. J639
FAP NO. TOD NO.

TS NO. 1187-1G1 DRAWING SP-18 OF 37 SHEET NO. 2 OF 2