PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE FULL RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 202 (LANDOVER ROAD) AND FIREHOUSE ROAD/DODGE PARK SHOPPING CENTER ENTRANCE IN PRINCE GEORGE'S COUNTY, MARYLAND. MD 202 IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX PHASE, FULL TRAFFIC-ACTUATED MODE WITH THE MD 202 APPROACHES OPERATING CONCURRENTLY AND THE FIREHOUSE ROAD/DODGE PARK SHOPPING CENTER ENTRANCE APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING WILL BE PROVIDED FOR THE NORTHBOUND AND SOUTHBOUND MD 202 APPROACHES. A PRE-EMPTION PHASE WILL BE PROVIDED FOR NORTHBOUND MD 202. INTERCONNECT IS PROVIDED ALONG MD 202 TO PENNSY DRIVE TO THE NORTH. INTERSECTION LIGHTING WILL BE PROVIDED ON THE SOUTHEST CORNER.

NEW AUDIBLE PEDESTRIAN ACTUATED PHASES WILL BE PROVIDED ACROSS THE NORTH AND SOUTH LEGS OF MD 202, THE EAST LEG OF THE DODGE PARK SHOPPING CENTER ENTRANCE, AND THE WEST LEG OF FIREHOUSE ROAD.

APS MESSAGE FOR CROSSING MD 202 (LANDOVER ROAD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS LANDOVER AT FIREHOUSE AND SHOPPING CENTER, WAIT".
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING FIREHOUSE ROAD:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS FIREHOUSE AT LANDOVER, WAIT."
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING DODGE PARK SHOPPING CENTER ENTRANCE:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS SHOPING CENTER AT LANDOVER, WAIT."
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTROLLER REQUIREMENTS

A NEW TYPE 'S' BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT AND 2 WIRE CENTRAL CONTROL UNIT WILL BE INSTALLED.

SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL CONTACT MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

EQUIPMENT LIST "A"

A: EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM
900000	1	EA	CABINET EXTENSION BASE, SIZE "S"
900000	2	EA	4 CHANNEL DETECTOR AMPLIFIER
900000	65	SF	SHEET ALUMINUM GROUND MOUNTED SIGN
			- 1 EACH D3-2(1)L (VAR.x24") "Firehouse Rd"
			- 1 EACH D3-2(1)R (VAR.x24") "Firehouse Rd"
			- 1 EACH M1-5 (60"x48") "202"
			- 1 EACH M3-1 (48"x24")
			- 1 EACH M6-1 (42"x30")
900000	92	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
			- 1 EACH D-3(1) (VAR.x16") DUAL FACED "Firehouse RD"- MAST ARM MOUNTED
			- 2 EACH D-3(1) (VAR.x16") DUAL FACED "Landover RD"- MAST ARM MOUNTED
			- 1 EACH M1-5(6) (30"x48") "SOUTH", "202", RIGHT ARROW
			- 1 EACH M1-5(6) (30"x48") "NORTH", "202", RIGHT ARROW
			- 1 EACH M1-5(6) (48"x72") "SOUTH", "202", LEFT ARROW
			- 4 EACH R10-3(1) (9"x15") "FIREHOUSE ROAD" - POLE MOUNTED
			- 2 EACH R10-3(1) (9"x15") "LANDOVER ROAD" - POLE MOUNTED
			- 2 EACH R10-3(1) (9"x15") "SHOPPING CENTER" - POLE MOUNTED
			- 1 EACH R10-11b (24"x24") - MAST ARM MOUNTED
			- 1 EACH R10-13 (36"x24") - MAST ARM MOUNTED

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. BRIAN YOUNG
DISTRICT ENGINEER
PHONE: (301) 513-7311

MR. VENU NEMANI
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404

MR. TOM FOUNTAIN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

MR. ED RODENHIZER
SUPERVISOR - SIGNAL SHOP
PHONE: (410) 787-7650

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

MS. CORREN JOHNSON
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. ROBERT SNYDER
ASSISTANT CHIEF - TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. EUGENE BAILY
CHIEF - SIGN OPERATIONS SECTION
PHONE: (410) 787-7670

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	1	CY	CLASS 2 EXCAVATION
203030	5	CY	TEST PIT EXCAVATION
585621	550	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	150	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	700	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	10	SF	REMOVE & RESET DECORATIVE BRICK SIDEWALK
600000	185	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	60	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	830	SF	5 INCH CONCRETE SIDEWALK
655120	106	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	5	SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	3	SY	TURFGRASS SOD ESTABLISHMENT
800000	1	EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	8	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	5	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	4	EA	8 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
800000	1	EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	8	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	1	EA	CONDUIT BEND IN EXISTING FOUNDATION BASE (ANY SIZE)
800000	1300	LF	DISCONNECT, PULL-BACK & REROUTE CABLES
800000	250	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B.W.G) TYPE TC
800000	1	EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	157	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	4	EA	IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
800000	1	EA	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	2	EA	MAST ARM POLE & 70' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	6	EA	MICROLOOP PROBE WITH ANY LENGTH LEAD-IN CABLE UP TO 1000'
800000	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
800000	1	EA	TWIN MAST ARM POLE & 50'/70' MAST ARMS ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	600	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	700	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	85	LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
802501	1000	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805050	1	EA	WEATHER HEAD, 3 INCH
810022	50	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	13	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	48	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1000	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	2200	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1150	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

EQUIPMENT LIST "C"

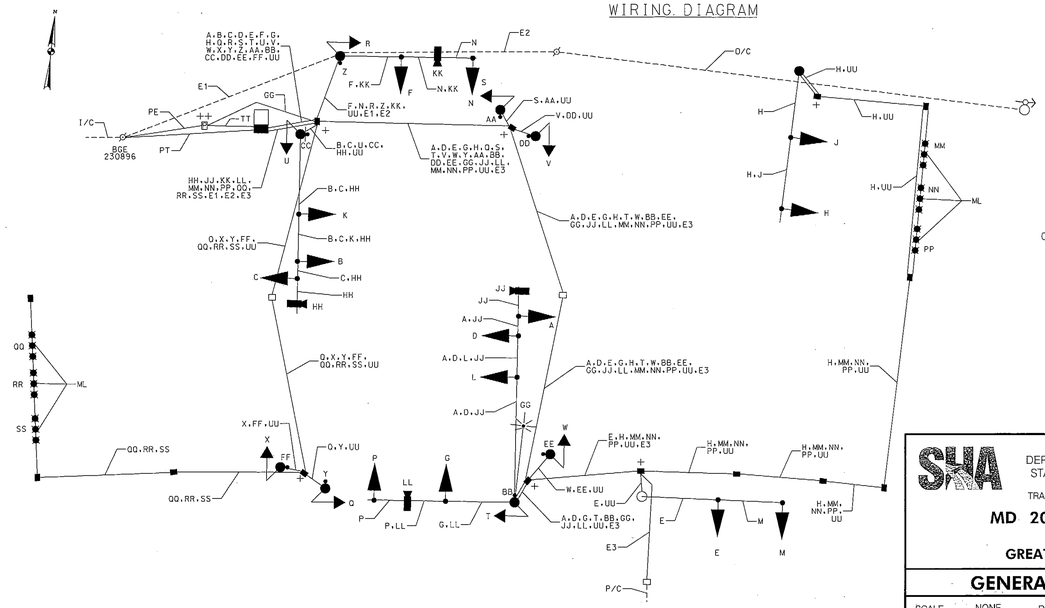
C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

EXISTING SIGNAL CONTROLLER AND ALL ASSOCIATED EQUIPMENT IN CABINET.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	R Y Y	R Y Y	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y Y	R Y Y	R Y G	R Y G	R Y G	R Y G								
PHASE 1 + 5	FL/Y	FL/Y	←G-/R	←G-/R	R	←G-/R	←G-/R	R	FL/R	FL/R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5, OR PHASE 2 + 6																					
PHASE 1 + 6	FL/Y	FL/Y	←G-/G	←G-/G	G	R	R	R	FL/R	FL/R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 + 6 CHANGE	FL/Y	FL/Y	←Y-/Y	←Y-/Y	Y	R	R	R	FL/R	FL/R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 + 5	FL/Y	FL/Y	R	R	R	←G-/G	←G-/G	G	FL/R	FL/R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 + 5 CHANGE	FL/Y	FL/Y	R	R	R	←Y-/G	←Y-/G	G	FL/R	FL/R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	FL/Y	FL/Y	G	G	G	G	G	G	FL/R	FL/R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	FL/Y	FL/Y	G	G	G	G	G	G	FL/R	FL/R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 + 6 CHANGE	FL/Y	FL/Y	Y	Y	Y	Y	Y	Y	FL/R	FL/R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	FL/Y	FL/Y	R	R	R	R	R	R	FL/R	FL/R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 + 8 CHANGE	FL/Y	FL/Y	R	R	R	R	R	R	FL/R	FL/R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT	FL/Y	FL/Y	R	R	R	R	R	R	FL/R	FL/R	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	FL/Y	FL/Y	R	R	R	R	R	R	FL/R	FL/R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 + 8 ALT CHANGE	FL/Y	FL/Y	R	R	R	R	R	R	FL/R	FL/R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION CHANGE	FL/Y	FL/Y	G	G	G	Y	Y	Y	FL/R	FL/R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION	R	R	←G-/G	←G-/G	G	R	R	R	FL/Y	FL/Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	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	DARK	DARK

WIRING DIAGRAM



PROPOSED ELECTRICAL CABLE

- A,B,C, D,E,F,G — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- H,J,K,L,M, N,P,Q,R,S, T,U,V,W,X — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- Y,Z,AA,BB, CC,DD,EE,FF — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- GG — 3-CONDUCTOR ELECTRICAL TRAY CABLE (NO. 12 AWG)
- HH,JJ, KK,LL — VIDEO DETECTION LEAD-IN CABLE
- MM,NN,PP, QQ,RR,SS — MICROLOOP LEAD-IN CABLE
- TT — 3 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG)
- UU — STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)

EXISTING ELECTRICAL CABLE

- I/C — INTERCONNECT CABLE TO REMAIN
- O/C — OPTICOM CABLE TO REMAIN
- P/C — PRE-EMPTION CABLE TO REMAIN
- E1 — PULLED BACK AND REROUTED INTERCONNECT CABLE
- E2 — PULLED BACK AND REROUTED OPTICOM CABLE
- E3 — PULLED BACK AND REROUTED PRE-EMPTION CABLE

LEGEND

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

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BY: bshanover

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

MD 202 (LANDOVER ROAD) AT FIREHOUSE ROAD
GREATER LANDOVER, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE MAY 2, 2013 CONTRACT NO. XY1515185

DESIGNED BY NJM
DRAWN BY NJM
CHECKED BY BSH
F.A.P. NO.

COUNTY PRINCE GEORGE'S
LOGMILE 16020211.35
T.I.M.S. NO. L803
T.O.D. NO.

T.S. NO. 429E-GI SG-03 OF SG-03 SHEET NO. 3 OF 3

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