PROJECT DESCRIPTION

GENERAL:

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING INTERSECTIONS MD 26 (LIBERTY ROAD) AND CROYDON ROAD AND MD 26 AT BUCKINGHAN ROAD IN BALTIMORE COUNTY. THE INTERSECTIONS ARE PART OF THE EXISTING MD 26 TRAFFIC SIGNAL SYSTEM.

MD 26 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION:

THE CROYDON ROAD AND BUCKINHAM ROAD INTERSECTIONS ARE COORDINATED

MD 26 AT CROYDON ROAD OPERATES A NEMA FIVE PHASE, FULL-ACTUATED MODE. MD 26 THROUGH MOVEMENT OPERATE CONCURRENTLY, WITH AN EASTBOUND EXCLUSIVE/PERMISSIVE LEFT TURN. PROVIDE VIDEO CAMERA DETECTION AND NAVIGATOR AUDIBLE PUSHBUTTON PEDESTRIAN MOVEMENTS TO CROSS ALL FOUR LEGS OF THE INTERSECTION. CROYDON ROAD MOVEMENTS OPERATE CONCURRENTLY.

MD 26 AT BUCKINGHAM ROAD OPERATES A NEMA FOUR-PHASE, FULL-ACTUATED MODE. MD 26 THROUGH MOVEMENTS OPERATE CONCURRENTLY, WITH AN EASTBOUND EXCLUSIVE/PERMISSIVE LEFT TURN. PROVIDE VIDEO CAMERA DETECTION FOR EACH LEG OF THE INTERSECTION AND NAVIGATOR AUDIBLE PUSHBUTTON PEDESTRIAN MOVEMENTS TO CROSS THE NORTH AND EAST LEGS OF THE INTERSECTION. BUCKININGHAM ROAD OPERATES INDEPENDENTLY.

CONTROLLER INFORMATION:

A NEMA EIGHT-PHASE, FULL-ACTUATED CONTROLLER WITH ALL NECESSARY EQUIPMENT HOUSED IN A BASE-MOUNTED CABINET SHALL BE INSTALLED AT CROYDON ROAD.

A TERMINAL CABINET HOUSED IN A POLE -MOUNTED CABINET SHALL BE INSTALLED AT BUCKINGHAM ROAD.

SEE THE PLAN SHEET'S GENERAL NOTES FOR INSTRUCTIONS IN REGARD TO THE NAVIGATOR CENTRAL CONTROL UNITS.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
9000	1 EA	NEMA EIGHT PHASE, FULL-TRAFFIC-ACTUATED- MASTER CONTROLLER WITH TELEMETRY, VIDEO DETECTION UNIT, CENTRAL CONTROL NAVIGATOR UNIT, 3- FOUR CHANNEL RACK MOUNTED AMPLIFIER AND ALL NECESSARY EQUIPMENT HOUSED IN A BASE MOUNTED CABINET.
9000	1 EA	TERMINAL CABINET, POLE MOUNTED WITH CENTRAL CONTROL NAVIGATOR UNIT AND 1- FOUR CHANNEL RACK MOUNTED AMPLIFIER AND ALL NECESSARY EQUIPMENT.
9071	65 SF	SHEET ALUMINUM FOR MAST ARM MOUNTING
	2 EA	M95-1(MOD) "Liberty RD./ EAST,ARROW,MD 26,WEST,ARROW" (VARIABLE x 42")
	2 EA	D3-2 "BELL SYMBOL, Croydon RD" (VARIABLE x 16") DUAL FACED
	1 EA	D3-2 "BELL SYMBOL, Buckingham RD" (VARIABLE x 16") DUAL FACED

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND SUPPLIED BY THE CONTRACTOR.

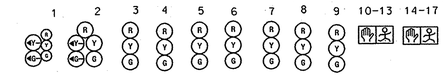
CATEGORY CODE	QUANTITY	DESCRIPTION
120662	1070 LF	REMOVAL OF EXISTING PAINTED STRIP MARKING-ANY WIDTH
201032	1 CY	CLASS 2 EXCAVATION
203030	10 CY	TEST PIT EXCAVATION
585620	650 LF	12" WHITE HEAT APPLIED THERMOPLASTIC PERMANENT PREFORMED PAVEMENT MARKING
585624	230 LF	24" WHITE HEAT APPLIED THERMOPLASTIC PERMANENT PREFORMED PAVEMENT MARKING
600000	72 SF	BRICK PAVERS
634300	230 LF	STANDARD TYPE A COMBINATION CURB ANG GUTTER (12" GUTTER PAN-8" DEPTH)
655105	1305 SF	5" CONCRETE SIDEWALK
801004	57 CY	CONCRETE FOR SIGNAL FOUNDATION
802501	645 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805010	30 LF	FURNISH AND INSTALL 1" ELECTRICAL CONDUIT GALVANIZED RISER
805118	20 LF	4" SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - BORED
805125	85 LF	2" SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
805135	375 LF	3" SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
805140	479 LF	4" SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
805145	75 LF	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
805155	320 LF	FURNISH AND INSTALL 4" SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
807202	2 EA	SERVICE METERED PEDESTAL
811001	16 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813015	65 SF	INSTALL OVERHEAD SIGN
818010	1 EA	FURNISH AND INSTALL 14' BREAKAWAY PEDESTAL POLE
821003	10 EA	FURNISH AND INSTALL BREAKAWAY BASE SUPPORT SYSTEM FOR TRAFFIC SIGNAL STRUCTURE
837001	16 EA	GROUND ROD ¾"DIA. X 10' LENGTH
800000	50 EA	FURNISH AND INSTALL 12" LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
871202	1 EA	INSTALL CONTROLLER CABINET BASE- MOUNTED
800000	2 EA	2 WIRE NAVIGATOR CENTRAL CONTROL UNIT
800000	280 LF	PULL BACK AND INSTALL EXISTING ELECTRICAL CABLE
861105	1650 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG
865001	12 EA	FURNISH AND INSTALL PUSHBUTTON AND SIGN
818050	2 EA	FURNISH AND INSTALL STEEL POLE WITH TWIN 60' x 50' MAST ARM
818052	1 EA	FURNISH AND INSTALL STEEL POLE WITH SINGLE 70' MAST ARM
800000	24 EA	16" LED CLAM SHELL COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION
810550	4 EA	MICRO LOOP PROBE WITH 500' LEAD -IN CABLE
816001	7 EA	VIDEO DETECTOR CAMERA
816005	2 EA	250' VIDEO CAMERA LEAD- IN CABLE TO CONTROLLER
816010	2 EA	500' VIDEO CAMERA LEAD- IN CABLE TO CONTROLLER
800000	3 EA	600' VIDEO CAMERA LEAD- IN CABLE TO CONTROLLER
805050	1 EA	3" WEATHER HEAD
810010	360 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1- CONDUCTOR NO.4 AWG- THHN/THWN
860270	2 EA	FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
860292	6 EA	FURNISH AND INSTALL 8" LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
831010	4 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861107	1835 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5- CONDUCTOR NO. 14 AWG
861108	1900 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7- CONDUCTOR NO. 14 AWG
861116	309 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2- CONDUCTOR NO. 12 AWG TRAY CABLE
866103	2 EA	FURNISH AND INSTALL 15' LIGHTING ARM ON SIGNAL STRUCTURE
805160	20 LF	FURNISH AND INSTALL 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
818004	9 EA	10' BREAKAWAY PEDESTAL POLE
871201	1 EA	INSTALL CONTROLLER CABINET POLE-MOUNTED

NOTE: THE QUANTY FOR THE 12 PAIR COMMUNICATION CABLE SHALL BE ON THE GENERAL INFORMATION SHEET FOR MD 26 AT KELOX RD (SHEET 24 OF 28).

EQUIPMENT LIST "C"

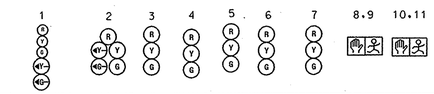
SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR

CROYDON RD. PHASE CHART



Phase 1	G R	G R	R	R	R	R	R	R	R	DW	DW
1 Change	THE CONTROLLER MAY SKIP TO PHASES 1&6 OR 2&6									DW	DW
Phase 1 & 6	G G	G G	G	R	R	R	R	R	R	DW	DW
1 Change	Y G	Y G	G	R	R	R	R	R	R	DW	DW
Phase 2 & 6	G	G	G	G	G	R	R	R	R	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
Phase 2 & 6 ALT.	G	G	G	G	G	R	R	R	R	WK	DW
Ped. Clear Countdown	G	G	G	G	G	R	R	R	R	FL/DW	DW
2 & 6 ALT. Change	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
Phase 4 & 8	R	R	R	R	R	G	G	G	G	DW	DW
4 & 8 Change	R	R	R	R	R	Y	Y	Y	Y	DW	DW
Phase 4 & 8 ALT.	R	R	R	R	R	G	G	G	G	DW	WK
Ped. Clear Countdown	R	R	R	R	R	G	G	G	G	DW	FL/DW
4 & 8 ALT. Change	R	R	R	R	R	Y	Y	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

BUCKINGHAM RD. PHASE CHART



Phase 1	G R	G R	R	R	R	R	R	DW	DW
1 Change	THE CONTROLLER MAY SKIP TO PHASES 1&6 OR 2&6							DW	DW
Phase 1 & 6	G G	G G	G	R	R	R	R	DW	DW
1 Change	G Y	G Y	G	R	R	R	R	DW	DW
Phase 2 & 6	G	G	G	G	G	R	R	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	R	R	DW	DW
Phase 2 & 6 ALT.	G	G	G	G	G	R	R	DW	WK
Ped. Clear Countdown	G	G	G	G	G	R	R	DW	FL/DW
2 & 6 ALT. Change	Y	Y	Y	Y	Y	R	R	DW	DW
Phase 4	R	R	R	R	R	G	G	DW	DW
4 Change	R	R	R	R	R	Y	Y	DW	DW
Phase 4 ALT.	R	R	R	R	R	G	G	WK	DW
Ped. Clear Countdown	R	R	R	R	R	G	G	FL/DW	DW
4 ALT. Change	R	R	R	R	R	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK

TS 3 OF 10

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS - PLANNERS
32 WEST ROAD
TOWSON, MARYLAND 21204
410-823-8070

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET NO. 1
MD 26 AT CROYDON ROAD AND
MD 26 AT BUCKINGHAM ROAD

DRAWN BY:	EMM	F.A.P. NO.		TS NO. ?E	SHEET NO.
CHECKED BY:	TH	S.H.A. NO.	BA 4845176		
SCALE:	NONE	COUNTY:	BALTIMORE	T.I.M.S. NO. 6503	17 OF 28
DATE:	6/27/05	LOG MILE:	03002608.50		

o:*TRANSDWG*23024.12*FINAL DESIGN*G503 GIMD26 CROYDON.dgn 6/27/2005