PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AND OPTICOM DETECTION AT THE INTERSECTION OF MD 30 AND WESTMINSTER ST./ YORK ST. IN CARROLL COUNTY. MD 30 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 30 APPROACHES OPERATING CONCURRENTLY AND THE WESTMINSTER ST/ YORK ST. APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING WILL BE PROVIDED FOR THE YORK STREET APPROACH.

AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE NORTH AND SOUTH LEG OF MD 30.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.00 - 104.00-12

STANDARD NO. MD-104.31-01 (FLAGGING OPERATION)

STANDARD NO. MD-104.33-01 (SHOULDER WORK)

STANDARD NO. MD-104.35-01 (LANE SHIFT)

STANDARD NO. MD-104.32-02 (INTERSECTION FLAGGING OPERATION)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8140

MR. DAVE COYNE
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 624-8105

MR. JIM BUCKALEW
DISTRICT UTILITIES ENGINEER
PHONE: (301) 624-8115

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

WIRING DIAGRAM

WIRING KEY

- A, B, C, D, E — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- F, G, H, J — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- K, L, M, N, O, P, Q, R — 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- S — 4-CONDUCTOR OPTICOM DETECTOR CABLE
- T, U — 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TC
- V, W — VIDEO DETECTION LEAD-IN CABLE
- X, Y, Z, AA — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- BB, CC — MICROLOOP PROBE LEAD-IN
- DD, EE — 2-CONDUCTOR ELECTRICAL CABLE ALUMINUM SHIELDED (NO. 14 A.W.G.)
- GG — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- HH, JJ, KK — 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- FF — EXISTING COMMUNICATION CABLE

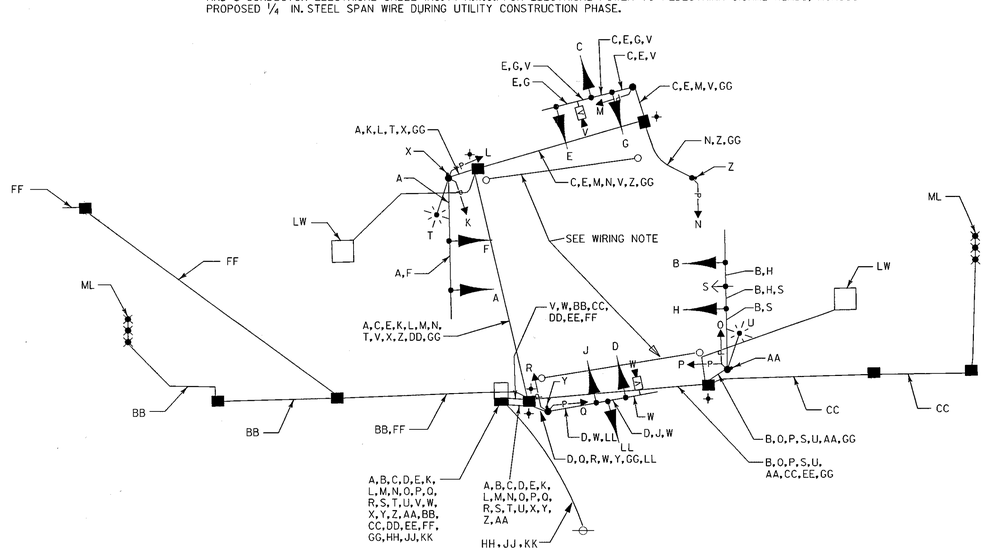
LW - LOOP WIRE (NO. 14 A.W.G.)

ML - MICROLOOP PROBE SET

⏚ - 3/4 IN. X 10 FT. GROUND ROD

WIRING NOTE

INSTALL 5-CONDUCTOR ELECTRICAL CABLES (NO.14 A.W.G) FOR ELECTRICAL POWER TO EXISTING SIGNAL HEADS, AND 3-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.) FOR ELECTRICAL POWER TO PEDESTRIAN SIGNAL HEADS, ACROSS PROPOSED 1/4 IN. STEEL SPAN WIRE DURING UTILITY CONSTRUCTION PHASE.



EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
963010	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
971017	1 EACH	EIGHT-PHASE, FULL TRAFFIC ACTUATED CONTROLLER WITH INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
900000	1 EACH	VIDEO INTERFACE EQUIPMENT
973023	145 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 1 EACH R10-12 SIGN (36 IN. x 42 IN.) - MAST ARM MOUNT
		- 4 EACH R10-11B SIGN (24 IN. x 24 IN.) - MAST ARM MOUNT
		- 4 EACH D-3(1) SIGN (VARIABLE X 32 IN.) - MAST ARM MOUNT
		- 2 EACH M95-1 SIGN (72 IN. x 24 IN.) - MAST ARM MOUNT

EQUIPMENT LIST "C"

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.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 2&6	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
2&6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	R	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
4 ALT	R	R	R	R	R	R	R	G	G	G	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR	R	R	R	R	R	R	R	G	G	G	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 8	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
8 CHANGE	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
8 ALT	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	FL DW	FL DW	FL DW	FL DW
8 CHANGE	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL Y	FL Y	FL Y	FL Y	FL R	FL R	FL R	FL R	FL R	FL R	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK

EQUIPMENT LIST "B"

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

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
120500	LUMP SUM	MAINTENANCE OF TRAFFIC
585620	370 L.F.	12 INCH WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
585624	80 L.F.	24 INCH WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
860292	2 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
860264	16 EACH	12 IN. PEDESTRIAN SIGNAL HEAD SECTION-PEDESTAL POLE MOUNT
860272	28 EACH	12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
816201	1 EACH	3M DISCRIMINATOR MODULE-4 CHANNEL, #764
816210	2 EACH	3M OPTICOM EMITTER SYSTEM 700 SERIES
816215	1 EACH	3M OPTICOM #721 DETECTOR EYE
860270	6 EACH	8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION HEAD SECTION
818030	4 EACH	STEEL POLE WITH A SINGLE 38' MAST ARM
810550	2 EACH	MICROLOOP PROBE SET WITH 500 FOOT LEAD-IN CABLE
818004	1 EACH	10 FT. BREAKAWAY PEDESTAL POLE
865001	4 EACH	PUSHBUTTON AND SIGN
801000	4 EACH	REMOVE AND DISPOSE FOUNDATION 12 IN. BELOW GRADE
873001	LUMP SUM	REMOVE AND DISPOSE EXISTING MATERIAL AND EQUIPMENT
805155	280 L.F.	4 IN. SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
860288	130 L.F.	4-CONDUCTOR OPTICOM CABLE
801004	15 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
805160	20 L.F.	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
811001	9 EACH	ELECTRICAL HANDHOLE
813015	145 S.F.	INSTALL OVERHEAD SIGN
837001	5 EACH	GROUND ROD - 3/4 INCH DIAMETER X 10' LENGTH
861104	180 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
861105	350 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG)
861106	650 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO 14AWG)
861107	380 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO 14AWG)
861108	800 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO 14AWG)
862101	420 L.F.	LOOP WIRE ENCASED IN 1/2 INCH FLEXIBLE TUBING (NO. 14 A.W.G)
862102	220 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
805125	480 L.F.	2 IN. SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
832020	230 L.F.	BARE COPPER GROUND WIRE, (NO 6AWG)
805011	15 L.F.	1 IN. ELECTRICAL CONDUIT GALVANIZED SLEEVE
816001	2 EACH	FURNISH AND INSTALL VIDEO DETECTION CAMERA
805050	2 EACH	WEATHERHEAD, 3 IN.
869101	130 L.F.	1/4 IN. STEEL SPAN WIRE
805135	140 L.F.	3 IN. SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
832017	45 L.F.	ELECTRICAL CABLE - 1 CONDUCTOR, TYPE USE, 600V
833050	30 L.F.	2 IN. DIAMETER PVC CONDUIT-SCHEDULE 80, RISER
203030	4 C.Y.	TEST PIT EXCAVATION
871117	1 EACH	INSTALL EIGHT-PHASE (FULLY ACTUATED CONTROLLER AND CABINET - BASE MOUNT
806002	2 EACH	250 WATT HPS LAMP AND LUMINAIRE, RECTANGULAR
866103	2 EACH	15 FT. LIGHTING ARM ON SIGNAL STRUCTURE
805140	30 L.F.	4 IN. SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
816005	2 EACH	CONTROL CABLE, 250 FT., VIDEO DETECTION CAMERA TO CONTROLLER

TSP-2

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION SHEET
MD 30 and WESTMINSTER ST./ YORK ST.

DRAWN BY: B. MARTINE	F.A.P. NO.		TS NO. TS-1145B	SHEET NO.
CHECKED BY: N. LEARY	S.H.A. NO.	CL8335I70		
SCALE: NONE	COUNTY:	CARROLL	T.I.M.S. NO. E935	OF
DATE: $DATE$	LOG MILE:			