PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECUTTING OF LOOP DETECTORS AND ADA IMPROVEMENTS TO THE EXISTING TRAFFIC SIGNAL AT MD 190 (RIVER ROAD) AND MD 189 (FALLS ROAD) IN MONTGOMERY COUNTY. MD 190 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA (6) SIX PHASE FULL-TRAFFIC-ACTUATED MODE WITH EASTBOUND AND WESTBOUND RIVER ROAD APPROACHES OPERATING IN SPLIT PHASES. PEDESTRIAN PHASING ON RIVER ROAD WILL RUN CONCURRENTLY WITH THE APPROPRIATE PHASE. THE MD 189 (FALLS ROAD) APPOACHES WILL OPERATE CONCURRENTLY. EXCLUSIVE/ PERMISIVE LEFT TURN PHASING AND PEDESTRIAN PHASING WILL BE PROVIDED ON FALLS ROAD.

CONTROLLER REQUIREMENTS

THE EXISTING FULLY-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER IN A BASE-MOUNTED (NEMA SIZE-6) CABINET WILL BE UTILIZED IN THIS PROJECT.

PROJECT CONTACTS

CONTACTS FOR DISTRICT 3:

MR. LEE STARKLOFF
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7318

MR. AUGIE REBISH
ACTING UTILITIES ENGINEER
PHONE: (301) 513-7350

MR. RALEIGH MEDLEY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

THE POWER COMPANY REPRESENTATIVE:
MS. ELIZA HEMINGWAY
POTOMAC ELECTRIC POWER COMPANY
PHONE: (301) 931-2880

CONTACT FOR MONTGOMERY COUNTY

MR. BOB GONZALES
MONTGOMERY COUNTY DPW-ATMS
PHONE: (240) 777-8761

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY:

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

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7676

MR. DAVE SCHWARTZ
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

SPEC NO.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
813	973023	72 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF:
			- 1 EACH R3-5(R) (30"x36") MAST ARM MOUNT
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY (30"x51") - WOOD SUPPORT M3-1 (24"X12") M1-5 (30"X24") M6-1(L) (21"X15")
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY (30"x51") - WOOD SUPPORT M3-1 (24"X12") M1-5 (30"X24") M6-1(R) (21"X15")
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY (30"x51") - BANDED TO STRAIN POLE M3-2 (24"X12") M1-5 (30"X24") M6-1(L) (21"X15")
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY (30"x51") - BANDED TO STRAIN POLE M3-2 (24"X12") M1-5 (30"X24") M6-1(R) (21"X15")
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY (30"x51") - BANDED TO STRAIN POLE M3-4 (24"X12") M1-5 (30"X24") M6-1(L) (21"X15")
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY (30"x51") - BANDED TO STRAIN POLE M3-4 (24"X12") M1-5 (30"X24") M6-1(R) (21"X15")

EQUIPMENT LIST "B"

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

SPEC. NO.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
104	120500	L.S.	MAINTENANCE OF TRAFFIC
205	203030	1 C.Y.	TEST PIT EXCAVATION
556	585620	530 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
556	585624	200 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
801	801004	1 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
801	801106	34 L.F.	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
810	802501	550 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
811	802145	1 EACH	ADJUST EXISTING HANDHOLE
805	805011	35 L.F.	1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE
805	805135	5 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805140	130 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805155	400 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
805	805160	40 L.F.	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
811	811001	2 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813	813014	22 S.F.	INSTALL GROUND MOUNTED SIGN
813	813015	50 S.F.	INSTALL OVERHEAD SIGN
810	818004	1 EACH	10 FOOT BREAKAWAY PEDESTAL POLE
804	837001	2 EACH	GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
814	860265	1 EACH	RELOCATE EXISTING SIGNAL HEAD
814	860278	14 EACH	12 IN. PEDESTRIAN SIGNAL HEAD SECTION - POLE MOUNT
814	860282	2 EACH	12 IN. PEDESTRIAN SIGNAL HEAD SECTION - PEDESTAL POLE MOUNT
810	861104	2,400 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
810	861105	750 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
810	861106	200 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
810	861107	650 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
810	862101	6,000 L.F.	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
815	862102	1,450 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
805	865001	1 EACH	PUSHBUTTON AND SIGN
——	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
——	800000	11 S.F.	RELOCATE EXISTING SIGN - SPAN WIRE MOUNT
	800000	3 E.A.	REMOVE AND RE-INSTALL PUSHBUTTON + SIGN

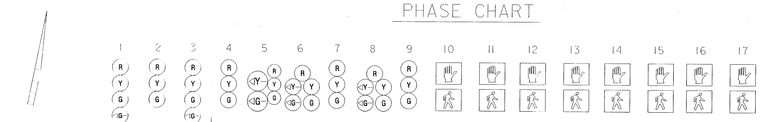
EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION 7941 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

QUANTITY	DESCRIPTION
	NONE

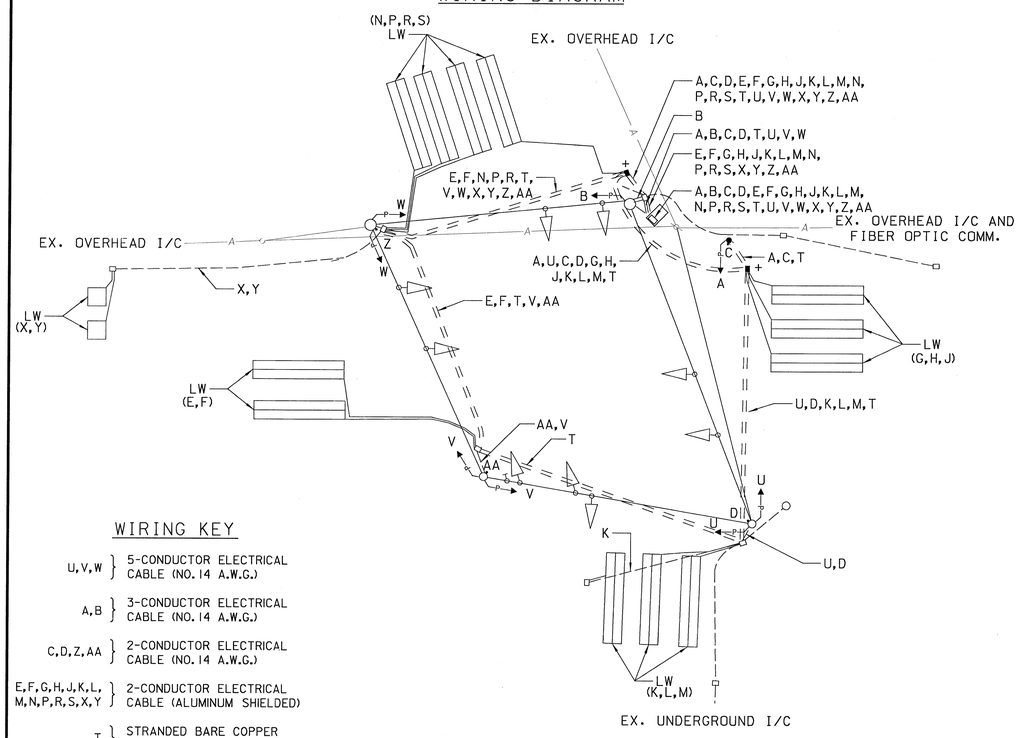
ALL MATERIAL TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PHASE 1	R	R	G/<1G	G	R	R	R	R	R	WALK	DW	DW	WALK	DW	DW	DW	DW
PED CLEAR	R	R	G/<1G	G	R	R	R	R	R	FL/DW	DW	DW	FL/DW	DW	DW	DW	DW
1 CHANGE	R	R	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2	G/<1G	G	R	R	R	R	R	R	R	DW	WALK	WALK	DW	DW	DW	DW	DW
PED CLEAR	G/<1G	G	R	R	R	R	R	R	R	DW	FL/DW	FL/DW	DW	DW	DW	DW	DW
2 CHANGE	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3+7	R	R	R	R	R/<1G	R/<1G	R	R/<1G	R	DW	DW	DW	DW	DW	DW	DW	DW
3+7 CHANGE	CHANGE TO PHASE 3+8, 4+7, 4+8 OR 4+8 ALT.																
PHASE 3+8	R	R	R	R	R	R	R	G/<1G	G	DW	DW	DW	DW	DW	DW	DW	DW
3+8 CHANGE	CHANGE TO PHASE 4+7, 4+8 OR 4+8 ALT.																
PHASE 4+7	R	R	R	R	G/<1G	G/<1G	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4+7 CHANGE	R	R	R	R	G/<1Y	G/<1Y	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4+8	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4+8 CHANGE	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4+8 ALT	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	WALK	WALK	WALK	WALK
PED CLEAR	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
ALT CHANGE	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

U,V,W	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
A,B	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
C,D,Z,AA	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
E,F,G,H,J,K,L,M,N,P,R,S,X,Y	2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
T	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

LW - LOOP WIRE IN 1/4" FLEXIBLE TUBING (NO. 14 A.W.G.)

+ - 3/4 IN. x 10 FT. GROUND ROD

RUMMEL, KLEPPER & KAHL, LLP
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BALTIMORE, MARYLAND 21217
TEL: (410) 728-2900 FAX: (410) 383-3270

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
MD 189 (FALLS ROAD) AT MD 190 (RIVER ROAD)
POTOMAC, MARYLAND
GENERAL INFORMATION SHEET

DRAWN BY: SMH	F.A.P. NO. M08715177	TS NO. TS-2022D	SHEET NO.
CHECKED BY: BLB	S.H.A. NO.		
SCALE: NONE	COUNTY: MONTGOMERY	T.I.M.S. NO. F637	19 OF 19
DATE: APRIL 16, 2003	LOG MILE: ~~150~~ 89.61.87		

150 89.01.87