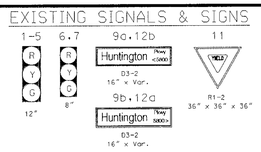
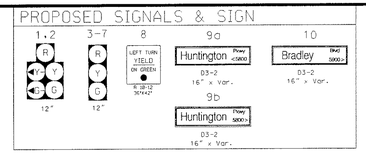
EXISTING SIGNALS & SIGNS

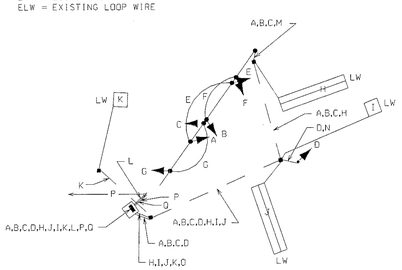


PROPOSED SIGNALS & SIGN



WIRING DIAGRAM

A-D = 7 CONDUCTOR CABLE (NO. 14 AWG)
E-C = 5 CONDUCTOR CABLE (NO. 14 AWG)
H-K = 2 CONDUCTOR (ALUMIMUM SHIELDED) CABLE (NO. 14 AWG)
L = 1 CONDUCTOR CABLE (NO. 4 AWG) - (3 TIMES) - FOR SERVICE
M-O = NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
P = EXISTING INTERCONNECT CABLE
O = TELEPHONE DROP
LW = LOOP WIRE
ELW = EXISTING LOOP WIRE



A. EQUIPMENT TO BE FURNISHED BY THE ADMINISTRATION

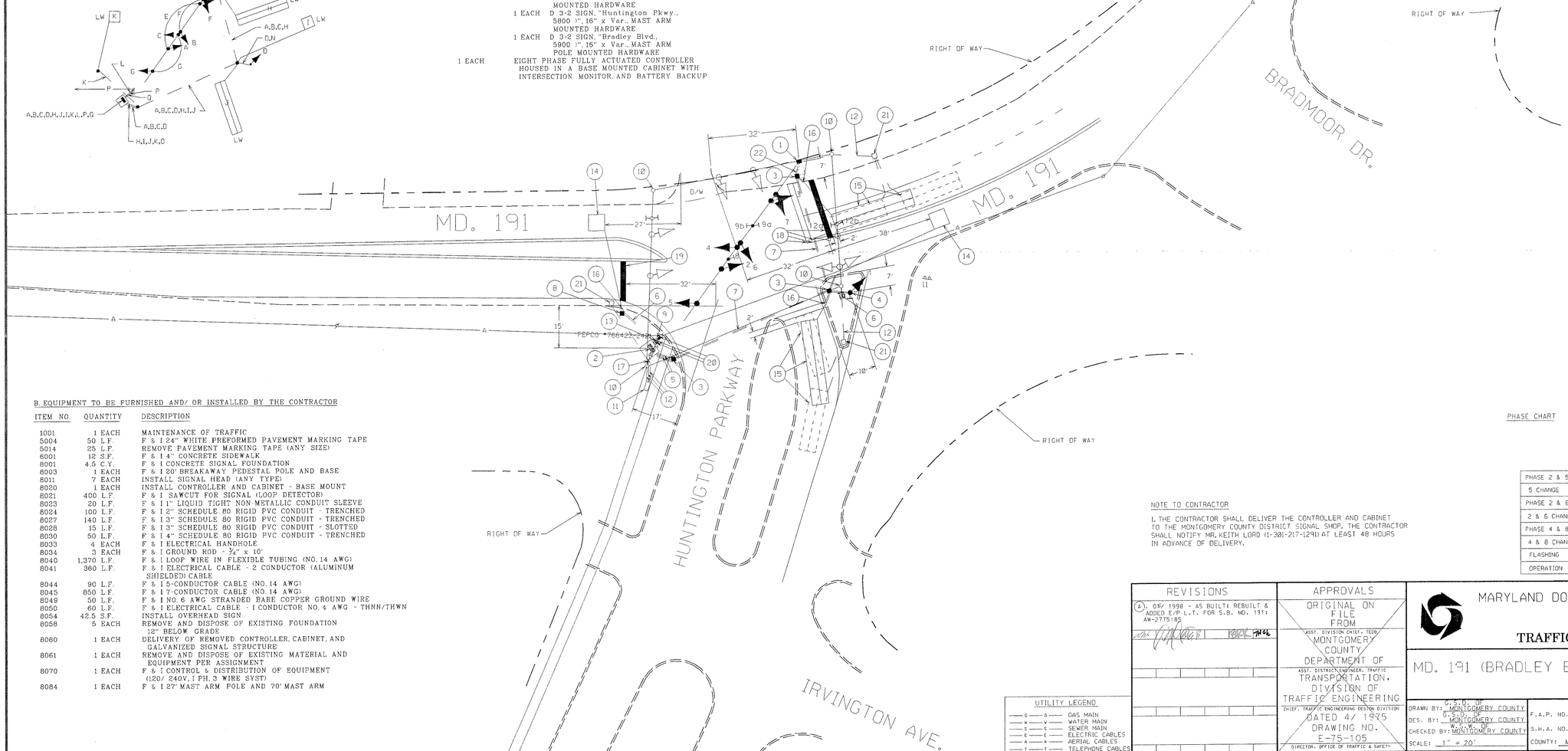
ITEM NO.	QUANTITY	DESCRIPTION
	1 EACH	12" ONE WAY, FIVE SECTION (R,Y,A,GA,Y,G) POLYCARBONITE SIGNAL HEAD WITH BACKPLATE, MAST ARM MOUNTED HARDWARE
	1 EACH	12" ONE WAY, FIVE SECTION (R,Y,A,GA,Y,G) POLYCARBONITE SIGNAL HEAD WITH BACKPLATE, POLE MOUNTED HARDWARE
	5 EACH	12" ONE WAY, THREE SECTION (R,Y,G) POLYCARBONITE SIGNAL HEAD WITH BACKPLATE, MAST ARM MOUNTED HARDWARE
	42.5 S.F.	1 EACH R 10-12 SIGN, "LEFT TURN YIELD ON GREEN (BALL)", 36" x 42", SPAN MOUNTED HARDWARE
		1 EACH D 3-2 SIGN, "Huntington Pkwy., (5800)", 16" x Var., MAST ARM MOUNTED HARDWARE
		1 EACH D 3-2 SIGN, "Huntington Pkwy., 5800)", 16" x Var., MAST ARM MOUNTED HARDWARE
		1 EACH D 3-2 SIGN, "Bradley Blvd., 5900)", 16" x Var., MAST ARM POLE MOUNTED HARDWARE
	1 EACH	EIGHT PHASE FULLY ACTUATED CONTROLLER HOUSED IN A BASE MOUNTED CABINET WITH INTERSECTION MONITOR, AND BATTERY BACKUP

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

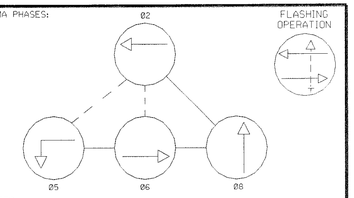
ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
5004	50 L.F.	F & I 24" WHITE PREFORMED PAVEMENT MARKING TAPE
5014	25 L.F.	REMOVE PAVEMENT MARKING TAPE (ANY SIZE)
6001	12 S.F.	F & I 4" CONCRETE SIDEWALK
8001	4.5 C.Y.	F & I CONCRETE SIGNAL FOUNDATION
8003	1 EACH	F & I 20' BREAKAWAY PEDESTAL POLE AND BASE
8011	7 EACH	INSTALL SIGNAL HEAD (ANY TYPE)
8020	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8021	400 L.F.	F & I SAWCUT FOR SIGNAL (LOOP DETECTOR)
8023	20 L.F.	F & I 1" LIQUID TIGHT NON-METALLIC CONDUIT SLEEVE
8024	100 L.F.	F & I 2" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8027	140 L.F.	F & I 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8028	15 L.F.	F & I 3" SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8030	50 L.F.	F & I 4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8033	4 EACH	F & I ELECTRICAL HANDHOLE
8034	3 EACH	F & I GROUND ROD - ¾" x 10'
8040	1,370 L.F.	F & I LOOP WIRE IN FLEXIBLE TUBING (NO. 14 AWG)
8041	360 L.F.	F & I ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED) CABLE
8044	90 L.F.	F & I 5-CONDUCTOR CABLE (NO. 14 AWG)
8045	850 L.F.	F & I 7-CONDUCTOR CABLE (NO. 14 AWG)
8049	50 L.F.	F & I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8050	60 L.F.	F & I ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 AWG - THNN/THWN
8054	42.5 S.F.	INSTALL OVERHEAD SIGN
8058	5 EACH	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12" BELOW GRADE
8060	1 EACH	DELIVERY OF REMOVED CONTROLLER, CABINET, AND GALVANIZED SIGNAL STRUCTURE
8061	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
8070	1 EACH	F & I CONTROL & DISTRIBUTION OF EQUIPMENT (120/ 240V, 1 PH, 3 WIRE SYST)
8084	1 EACH	F & I 27' MAST ARM POLE AND 70' MAST ARM

CONSTRUCTION DETAILS

1. INSTALL 27' MAST ARM POLE WITH 70' MAST ARM, PROPOSED SIGNAL HEADS (6), SIGNS (5), FOUNDATION, GROUT, AND 3" PVC SCHEDULE 80 CONDUIT BEND.
2. INSTALL THE EIGHT PHASE CONTROLLER HOUSED IN A BASE MOUNTED CABINET, TWO (2) 4" SCHEDULE 80 PVC CONDUIT BENDS, 3" PVC SCHEDULE 80 BEND, FOUNDATION, GROUT, 2" PVC SCHEDULE 80 CONDUIT BENDS, AND 3' x 4' CONCRETE PAD.
3. INSTALL THE PROPOSED HANDHOLE, AND GROUND ROD.
4. INSTALL THE PROPOSED 20' BREAKAWAY PEDESTAL POLE AND BASE, 2" PVC SCHEDULE 80 CONDUIT BEND, PROPOSED SIGNAL HEAD, AND FOUNDATION.
5. INSTALL PROPOSED 4" PVC SCHEDULE 80 CONDUIT - TRENCHED.
6. INSTALL PROPOSED 2" PVC SCHEDULE 80 CONDUIT - TRENCHED.
7. INSTALL PROPOSED 3" PVC SCHEDULE 80 CONDUIT - SLOTTED.
8. INSTALL THE PROPOSED HANDHOLE.
9. INSTALL 4" PVC SCHEDULE 80 CONDUIT - TRENCHED (FOR SERVICE), AND A 4" PVC SCHEDULE 80 CONDUIT BEND AT THE BOTTOM OF THE WOOD UTILITY POLE. LEAVE 30' OF CABLE COILED AT THE BASE OF THE UTILITY POLE.
10. REMOVE AND DISPOSE OF THE EXISTING SIGNAL POLES, AND ALL ATTACHED EQUIPMENT. REMOVE AND DISPOSE OF THE EXISTING FOUNDATIONS 12" BELOW GRADE.
11. REMOVE THE EXISTING SIGNAL CONTROLLER AND CABINET. (SEE NOTE TO CONTRACTOR.) REMOVE AND DISPOSE OF THE EXISTING FOUNDATION 12" BELOW GRADE.
12. CAP AND ABANDON THE EXISTING CONDUIT.
13. INSTALL 2" PVC SCHEDULE 80 CONDUIT - TRENCHED (FOR TELEPHONE DROP), AND A 2" PVC SCHEDULE 80 CONDUIT BEND AT THE BOTTOM OF THE WOOD UTILITY POLE.
14. INSTALL 6' x 6' LOOP DETECTOR (4 TURNS).
15. INSTALL 6' x 30' QUADRUPLOE LOOP DETECTOR (3-6-3 TURNS). DISCONNECT THE EXISTING LOOP DETECTORS.
16. INSTALL PROPOSED 1" LIQUID TIGHT NON-METALLIC CONDUIT - SLEEVE.
17. EXISTING FEED TO BE REMOVED BY PEPCO.
18. REMOVE THE EXISTING PAVEMENT MARKINGS. INSTALL 24" WHITE PAVEMENT MARKING (STOP LINE).
19. INSTALL 24" WHITE PAVEMENT MARKING (STOP LINE).
20. PULL BACK THE EXISTING INTERCONNECT CABLE TO THE TOP OF THE UTILITY POLE FROM THE EXISTING CABINET (AERIAL AND UNDERGROUND), AND INSTALL A 2" PVC RISER ON THE UTILITY POLE (PEPCO #766422-2421). 2" PVC SCHEDULE 80 TRENCHED, AND 2" PVC SCHEDULE 80 BEND AT THE BOTTOM OF THE WOOD UTILITY POLE. THE EXISTING INTERCONNECT CABLE SHALL BE INSTALLED FROM THE EXISTING WOOD UTILITY POLE, INTO THE PROPOSED CONDUIT, AND THEN TO THE PROPOSED CONTROLLER CABINET. THE CONTROLLER CABINET SHALL BE WIRED INSIDE BY THE SHA SIGNAL SHOP.
21. REMOVE THE EXISTING HANDHOLE. FILL THE HOLE WITH THE APPROPRIATE MATERIAL.
22. INSTALL PROPOSED 3" PVC SCHEDULE 80 CONDUIT - TRENCHED.

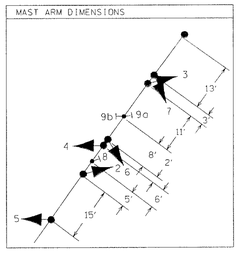


NEMA PHASES:

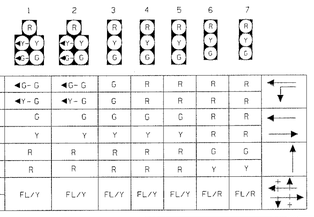


NEMA NOTES:
1. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

MAST ARM DIMENSIONS



PHASE CHART



NOTE TO CONTRACTOR

1. THE CONTRACTOR SHALL DELIVER THE CONTROLLER AND CABINET TO THE MONTGOMERY COUNTY DISTRICT SIGNAL SHOP. THE CONTRACTOR SHALL NOTIFY MR. KEITH LORD (1-301-217-1291) AT LEAST 48 HOURS IN ADVANCE OF DELIVERY.

UTILITY LEGEND

—G—G—	GAS MAIN
—W—W—	WATER MAIN
—S—S—	SEWER MAIN
—E—E—	ELECTRIC CABLES
—A—A—	AERIAL CABLES
—T—T—	TELEPHONE CABLES

REVISIONS

(A). 05/ 1998 - AS BUILT: REBUILT & ADDED E/P L.T. FOR S.B. NO. 191: AW-2775185

APPROVALS

ORIGINAL ON FILE FROM MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, DIVISION OF TRAFFIC ENGINEERING DATED 4/ 1975 DRAWING NO. E-75-105

ASST. DIVISION CHIEF, TEDD
ASST. DIVISION CHIEF, TRAFFIC
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
DIRECTOR, OFFICE OF TRAFFIC & SAFETY

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

MD. 191 (BRADLEY BLVD.) & HUNTINGTON PARKWAY

DRAWN BY: G.S.D. OF MONTGOMERY COUNTY
DES. BY: G.S.D. OF MONTGOMERY COUNTY
CHECKED BY: W.S.W. OF MONTGOMERY COUNTY
SCALE: 1" = 20'
F.A.P. NO.:
S.H.A. NO.:
COUNTY: MONTGOMERY
PLAN SHEET NO. TS-3757 (A)
SHEET NO. 1 OF 1

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