

PROJECT DESCRIPTION

EQUIPMENTS LIST (cont.)

I. GENERAL

This project involves the installation of a new Traffic Control Signal with street lighting and interconnect at the intersection of MD 27 and Woodfield Road Extended in Montgomery County. MD 27 is assumed to run a north-south direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA four-phase, semi-actuated mode, with the MD 27 approaches running concurrently. An Exclusive/Permissive left turn phase shall be provided for the southbound approach of MD 27. A exclusive pedestrian phase shall be provided across the east leg of woodfield road. Far-side sampling stations shall be provided on both legs of MD 27 at this intersection. The Woodfield Road approach shall also run concurrently.
- A full-traffic-actuated, eight-phase controller with one (1) four channel, rack mount loop detector amplifiers, L.A.U. and L.A.U. Panel and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Mr. Bob Gonzales at (240) 777-8761 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

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

DESCRIPTION	QUANTITY
Saw cut for signal (loop detector).	395 L.F.
1" liquid tight flexible non-metallic conduit for detector sleeve.	25 L.F.
1" galvanized steel electrical conduit (detector wire sleeve)	20 L.F.
Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched	205 L.F.
Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched	225 L.F.
4" polyvinyl chloride electrical conduit (Schedule 80) (2nd conduit within one slot or trench).	300 L.F.
Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - slotted	140 L.F.
Furnish and install electrical handhole.	8 EA
Furnish and install loop wire enclosed in flexible tubing (No. 14 AWG).	1325 L.F.
Furnish and install 3-conductor electrical cable (No. 14 A.W.G.).	245 L.F.
Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).	80 L.F.
Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).	740 L.F.
Furnish and install ground rod - 3/4" x 10'.	4 EA
Furnish and install No. 6 AWG stranded bare copper ground wire.	285 L.F.
Furnish and install tray cable - 2 conductor (No. 12 AWG)	335 L.F.
Canoga 4-conductor electrical cable (No. 14 A.W.G.) (shielded).	610 L.F.
Furnish and install 250 watt HPS Luminaire with photocell.	2 EA
Furnish and install 15' lighting bracket arm for traffic signal structure.	2 EA
Pedestrian education sign.	2 EA
Furnish and install control and distribution equipment (120/240 V. 1 phase 3 wire system).	1 EA
Furnish and install 27' steel pole pole and 30' mast arm.	1 EA
Furnish and install 27' steel pole pole and twin (40'/40') arms.	1 EA
Furnish and install 14' breakaway pedestal pole with transformer base.	1 EA

EQUIPMENTS LIST

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

DESCRIPTION	QUANTITY
12", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.	5 EA
12", one-way, five-section (R,Y,YA,G,GA) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.	2 EA
12", one-way, two-section (DW,W) symbolic pedestrian signal head with adjustable bracket for pole mounting and outway visors.	1 EA
12", one-way, two-section (DW,W) symbolic pedestrian signal head having proper post top adapter for pedestal mounting and outway visors.	1 EA
Eight-phase, full-traffic actuated, solid state digital controller with one 4-channel, rack mount loop detector amplifiers housed in a NEMA size "6" - mounted cabinet	1 EA
Test pit excavation.	4 C.Y.
Furnish and install concrete for signal foundation.	10 C.Y.
Overhead mounted sheet aluminum sign consisting of:	51 S.F.
D3-2 "Woodfield RD (arrow)/(arrow)" Woodfield RD" dual faced sign. (variable x 18")	2 EA
D3-2 "Ridge RD 27100" sign. (variable x 18")	1 EA
R3-5L "LEFT TURN ONLY" sign. (30" x 36")	1 EA
R10-12 "LEFT TURN YIELD ON GREEN (BALL)" sign. (36" x 42")	1 EA
12" white heat applied permanent preformed thermoplastic pavement marking	70 L.F.
24" white heat applied permanent preformed thermoplastic pavement marking	60 L.F.

SEQUENCE OF OPERATION SHEET

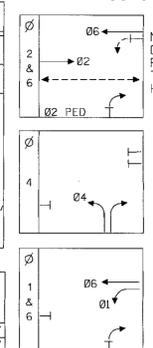
MD 27
RUNS IN A
NORTH-SOUTH
DIRECTION

DIVISION OF OPERATIONS
TRAFFIC ENGINEERING & OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

INTERSECTION: MD 27 AND WOODFIELD ROAD EXTENDED

SIGNAL NO.	SIGNAL HEAD INDICATIONS		
	1,2,5,6,7	3,4	8,9
TOTAL:	5	2	2
LEGEND	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
OPTICALLY LIMITED			
R RED			
Y YELLOW			
G GREEN			
← ARROW			
F FLASHING			

NO. PHASING

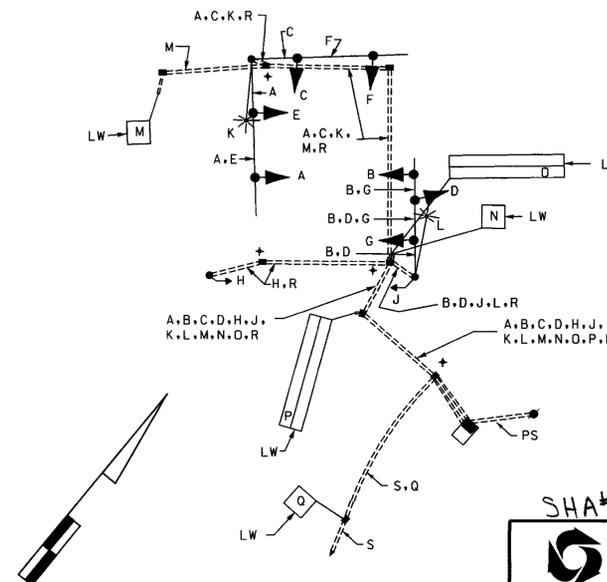


SIGNAL NO.	SEQUENCE OF OPERATION										F A S H	
	INTERVAL											
1	G	G	Y	R	R	R	R	R	R	R	R	FL/Y
2	G	G	Y	R	R	R	R	R	R	R	R	FL/Y
3	G	G	Y	R	R	R	R	R	R	R	R	FL/Y
4	G	G	Y	R	R	R	R	R	R	R	R	FL/Y
5	G	G	Y	R	R	R	R	R	R	R	R	FL/Y
6	R	R	R	R	G	Y	R	R	R	R	R	FL/R
7	R	R	R	R	G	Y	R	R	R	R	R	FL/R
8	WK	FL/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
9	WK	FL/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
PHASE	2 & 6		ALL RED		4		ALL RED		1 & 6		ALL RED	

NOTES:

SUBMITTED: _____ CHECKED: _____ APPROVED: _____
IN SERVICE BY: _____ DATE: _____ TIME: _____

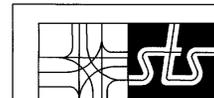
WIRING DIAGRAM



WIRING KEY

- A } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- C } 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- D } 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
- E } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- F } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- G } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- H } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- I } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- J } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- K } 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
- L } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- M } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- N } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- O } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- P } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- Q } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- R - STRANDED BARE COPPER WIRE (NO. 6 A.W.G.)
- S - 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED) (TO BE INSTALLED BY LIGHTING CONTRACTOR)
- LW - LOOP WIRE (NO. 14 A.W.G.)
- PS - PROPOSED UNDERGROUND SERVICE TO BE INSTALLED BY ALLEGHENY POWER
- + - GROUND ROD

SHA# B1N611M83



STREET TRAFFIC STUDIES, LTD.
434361.dgn

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
MD 27 AND WOODFIELD ROAD EXTENDED

DRAWN BY: R CICCHINI	F.A.P. NO. S.H.A. NO.	TS NO. 4295	SHEET NO. 2 OF 2
CHECKED BY: J ALLEN	COUNTY: MONTGOMERY	T.I.M.S. NO. F895	
SCALE: NONE	LOG MILE: 15002707.40		
DATE: 2-25-04			