PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing strain pole Traffic Control Signal with interconnect at the intersection of MD 355 (Frederick Rd) and MD 118 (Germantown Rd) in Montgomery County. MD 355 (Frederick Rd) is assumed to run an north-south direction.

II. INTERSECTION OPERATION

- 1. The intersection shall continue to operate in a NEMA eight-phase, semi-actuated mode, with the MD 355 (Frederick Rd) approaches running concurrently. Exclusive left turn phases shall continue to be provided for both approaches of MD 355 (Frederick Rd). The pedestrian phases with pushbutton actuation shall remain in operation across both legs of MD 355 (Frederick Rd). The pedestrian phases across MD 118 (Germantown Rd) shall remain on recall. Farside sampling stations shall remain in operation on the south, north and west legs of this intersection. Exclusive left turn phases shall now be provided for both approaches of MD 118 (Germantown Rd). The MD 118 (Germantown Rd) approaches shall continue to run concurrently.
- 2. A full-traffic-actuated, eight-phase controller with five (5) four channel, rack mount loop detector amplifiers, L.A.U. and L.A.U. Panel housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

- 1. The Contractor shall be responsible for terminating all signal cables. excluding interconnect, to the appropriate terminals and shall properly label each cable.
- 2. 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.
- 3. 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.
- 4. The re-wiring of the existing Montgomery County Surveillance camera is to be completed by Montgomery County forces. Contact Mr Bruce Mangum at (240) 777-8778 seventy-two hours in advance of intended work.

EQUIPMENT LIST

EQUIPMENT TO BE FURNISHED BY THE SHA

THERE IS NO EQUIPMENT TO BE FURNISHED BY THE SHA

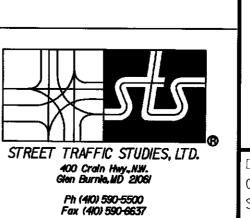
В.	EQUIPMENT TO BE FURNISHED AND/OR	INSTALLED BY THE CONTRACTOR
SPEC. NUMBER	DESCRIPTION	QUANTITY
814	12", one-way, three-section (R,Y,G) traffic signal head having proper span wire hangers, balance adjusters and tunnel visors. (Black Faced)	8 EA
814	12", one—way, three—section (RA,YA,GA) traffic signal head having proper span wire hangers, balance adjusters and tunnel visors. (Black Faced)	10 EA
814	12", one-way, two-section (DW.W) symbolic pedestrian signal head with adjustable bracket for pole mouting and cutaway visors.	2 EA
	Eight-phase, full-traffic actuated, solid state digital controller with five 4-channel, rack mount loop detector amplifiers, two detector rack power supllies housed in a NEMA size "6" - base mounted cabinet.	1 EA

EQUIPMENT LIST (LIST)

SPEC. NUMBER DESCRIPTION QUANTITY	В.	EQUIPMENT TO BE FURNISHED AND/OR I	NSTALLED BY	THE CONTRACTO
Remove concrete sidewalk median section. 810		DESCRIPTION	QUAN	TITY
section. 610 4" concrete sidewalk median section. 30 S.F. 801 Furnish and install concrete for signal foundation. 813 Overhead span wire mounted sheet aluminum sign consisting of: R3-5L "LEFT TURN ONLY" 3 EA Sign. (30" x 36") 3 EA 556 12" white heat applied permanent preformed thermoplastic pavement marking For example of the preformed thermoplastic pavement marking Remove existing pavement 950 L.F. 805 24" white heat applied permanent preformed thermoplastic pavement marking Remove existing pavement 950 L.F. 805 1" liquid fight flexible 30 L.F. 605 1" liquid fight flexible 30 L.F. 806 Furnish and install 2" schedule 30 rigid polyvinyl chloride trenched 807 Furnish and install 3" schedule 30 rigid polyvinyl chloride conduit - trenched 808 Furnish and install 4" schedule 30 rigid polyvinyl chloride conduit - trenched 809 Furnish and install 4" schedule 30 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 30 rigid polyvinyl chloride conduit - trenched 806 Furnish and install 4" schedule 30 rigid polyvinyl chloride conduit - trenched 807 Furnish and install 4" schedule 30 rigid polyvinyl chloride conduit - trenched 808 Furnish and install 4" schedule 30 rigid polyvinyl chloride conduit - trenched 809 Furnish and install 250 watt HPS Luminaire with photocell. 800 Furnish and install 20' lighting 1 EA 801 Furnish and install 20' lighting 1 EA 802 Furnish and install 20' lighting 1 EA 803 Furnish and install 20' lighting 1 EA 804 Furnish and install bectrical 2 EA 805 Furnish and install bectrical 30 L.F. 806 Furnish and install bectrical 30 L.F. 807 Furnish and install 1 conductor electrical 30 L.F. 808 Furnish and install 2-conductor electrical 4050 L.F.	205	Test pit excavation.	2	C.Y.
801 Furnish and install concrete for signal foundation. 813 Overhead spam wire mounted sheet aluminum sign consisting of: R3-5L "LEFT TURN ONLY" sign. (30" x 36") 556 12" white heat applied permanent preformed thermoplastic pavement morking Remove existing pavement morkings 815 Saw cut for signal (loop detector). 805 1" liquid tight flexible non-metallic conduit for detector sleeve. 805 Furnish and install 2" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 806 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 807 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 808 Furnish and install 250 watt HPS Luminaire with photocell. 809 Furnish and install 250 watt HPS Luminaire with photocell. 800 Furnish and install 20' lighting bracket arm for traffic signal structure. 811 Furnish and install electrical 812 Furnish and install loop wire encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical 811 Furnish and install 2-conductor electrical 812 Furnish and install 2-conductor electrical 813 Furnish and install 2-conductor electrical 814 Furnish and install 2-conductor electrical 815 Furnish and install 2-conductor electrical 816 Furnish and install 3-conductor electrical 817 Furnish and install 3-conductor electrical 818 Furnish and install 3-conductor electrical 819 Furnish and install 3-conductor electrical 810 Furnish and install 3-conductor electrical 811 Furnish and install 3-conductor electrical 812 Furnish and install 3-conductor electrical	206		30	S.F.
for signal foundation. 813 Overhead span wire mounted sheet aluminum sign consisting of: R3-5L "LEFT TURN ONLY" sign. (30" x 36") 556 12" white heat applied permanent preformed thermoplastic pavement marking 556 24" white heat applied permanent preformed thermoplastic pavement marking Remove existing pavement 950 L.F. 815 Saw cut for signal 310 L.F. (loop detector). 805 1" liquid tight flexible non-metallic conduit for detector sleeve. 805 Furnish and install 2" schedule 80 rigid polyvinyl chloride tonduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 806 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 807 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 808 Furnish and install 250 watt 1 EA HPS Luminaire with photocell. 809 Furnish and install 20' lighting 1 EA bracket arm for traffic signal structure. 810 Furnish and install loop wire encased in flexible tubing (No. 14 AWG). 811 Furnish and install 20-conductor electrical 930 L.F. cabele (No. 14 AWG).	610	4" concrete sidewalk median section.	30	S.F.
Aluminum sign consisting of: R3-5L "LEFT TURN ONLY" 3 EA sign. (30" x 36") 556 12" white heat applied permanent preformed thermoplastic pavement marking 556 24" white heat applied permanent preformed thermoplastic pavement marking Remove existing pavement 950 L.F. 615 Saw cut for signal (loop detector). 805 1" liquid tight flexible non-metallic conduit for detector sleeve. 805 Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched 805 Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 806 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 807 Furnish and install 20 watt #R5 Luminaire with photocell. 808 Furnish and install 20' lighting 1 EA 809 Furnish and install 20' lighting 1 EA 800 Furnish and install 20' lighting 1 EA 801 Furnish and install electrical 2 EA 802 Furnish and install electrical 2 EA 803 Furnish and install loop wire encased in flexible tubing (No. 14 AkD). 806 Furnish and install 2-conductor electrical 930 L.F. 807 Furnish and install 2-conductor electrical 930 L.F.	801		5	C.Y.
sign, (30" x 36") 556	813		22.5	S.F.
preformed thermoplastic pavement marking 556 24" white heat applied permanent preformed thermoplastic pavement marking Remove existing pavement 950 L.F. 815 Saw cut for signal 310 L.F. (loop detector). 805 1" liquid tight flexible 30 L.F. non-metallic conduit for detector sleeve. 805 Furnish and install 2" schedule 80 rigid polyvinyl chloride tended 120 L.F. 805 Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched 120 L.F. 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 120 L.F. 806 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 140 L.F. 807 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 140 L.F. 808 Furnish and install 250 watt 150 conduit - bored. 150 watt 150			3	EA
preformed thermoplastic pavement marking Remove existing pavement 950 L.F.	556	preformed thermoplastic pavement	525	L.F.
815 Saw cut for signal (loop detector). 805 I" liquid tight flexible non-metallic conduit for detector sleeve. 805 Furnish and install 2" schedule 20 L.F. 80 rigid polyvinyl chloride — trenched 805 Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit — trenched 806 Furnish and install 4" schedule 25 L.F. 80 rigid polyvinyl chloride conduit — trenched 807 Furnish and install 4" schedule 25 L.F. 80 rigid polyvinyl chloride conduit — trenched 808 Furnish and install 4" schedule 140 L.F. 80 rigid polyvinyl chloride conduit — bored. 809 Furnish and install 250 watt 1 EA 150 watt 150	556	preformed thermoplastic pavement	155	L.F.
(loop detector). 805		• .	950	L.F.
non-metallic conduit for detector sleeve. 805 Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched 805 Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 806 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 807 Furnish and install 4" schedule 140 L.F. 80 rigid polyvinyl chloride conduit - bored. 808 Furnish and install 250 watt 1 EA HPS Luminaire with photocell. 809 Furnish and install 20' lighting 1 EA bracket arm for traffic signal structure. 810 Furnish and install electrical 2 EA handhole. 811 Furnish and install loop wire 1245 L.F. encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical 930 L.F. cable (No. 14 A.W.G.).	815		310	L.F.
80 rigid polyvinyl chloride — trenched 805 Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit — trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit — trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit — bored. 806 Furnish and install 250 watt HPS Luminaire with photocell. 808 Furnish and install 20' lighting bracket arm for traffic signal structure. 811 Furnish and install electrical 810 Furnish and install loop wire encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical 930 L.F. 810 Furnish and install 5-conductor electrical 930 L.F.	805	non-metallic conduit for	30	L.F.
80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 806 Furnish and install 250 watt 1 EA HPS Luminaire with photocell. 808 Furnish and install 20' lighting 1 EA bracket arm for traffic signal structure. 810 Furnish and install electrical 2 EA handhole. 810 Furnish and install loop wire 91245 L.F. 9136 9136 9136 9136 Purnish and install 2-conductor electrical 930 L.F. 9136 9136 9136 9136 Purnish and install 2-conductor electrical 930 L.F. 9136 9136 9136 9136 9136 Purnish and install 5-conductor electrical 4050 L.F.	805	80 rigid polyvinyl chloride -	20	L.F.
80 rigid polyvinyl chloride conduit - trenched 805 Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored. 806 Furnish and install 250 watt HPS Luminaire with photocell. 808 Furnish and install 20' lighting bracket arm for traffic signal structure. 811 Furnish and install electrical structure. 810 Furnish and install loop wire encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical cable (No. 14 A.W.G.). 810 Furnish and install 5-conductor electrical 930 L.F.	805	80 rigid polyvinyl chloride	120	L.F.
80 rigid polyvinyl chloride conduit - bored. 806 Furnish and install 250 watt	805	80 rigid polyvinyl chloride	25	L.F.
HPS Luminaire with photocell. 808 Furnish and install 20' lighting 1 EA bracket arm for traffic signal structure. 811 Furnish and install electrical 2 EA handhole. 810 Furnish and install loop wire 1245 L.F. encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical 930 L.F. cable (No. 14 A.W.G.).	805	80 rigid polyvinyl chloride	140	L.F.
bracket arm for traffic signal structure. 811 Furnish and install electrical 2 EA handhole. 810 Furnish and install loop wire 1245 L.F. encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical 930 L.F. cable (No. 14 A.W.G.). 810 Furnish and install 5-conductor electrical 4050 L.F.	806		1	EA
handhole. 810 Furnish and install loop wire 1245 L.F. encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical 930 L.F. cable (No. 14 A.W.G.). 810 Furnish and install 5-conductor electrical 4050 L.F.	808	bracket arm for traffic signal	1	EA
encased in flexible tubing (No. 14 AWG). 810 Furnish and install 2-conductor electrical 930 L.F. cable (No. 14 A.W.G.). 810 Furnish and install 5-conductor electrical 4050 L.F.	811		2	EA
cable (No. 14 A.W.G.). 810 Furnish and install 5-conductor electrical 4050 L.F.	810	encased in flexible tubing	1245	L.F.
	810		11 930	L.F.
	810		11 4050	L.F.

EQUIPMENT LIST (LIST)

В.	EQUIPMENT TO BE FURNISHED AND/OR	INSTALLED BY	THE CONTRACTOR
SPEC. NUMBER	DESCRIPTION	QUANT	·ITY
810	Furnish and install ground rod $-\frac{3}{4}$ " x 10'.	2	EA
810	Furnish and install No. 6 AWG stranded bare copper ground wire.	30	L.F.
	Canoga 4-conductor electrical cable (No. 14 A.W.G.) (shielded).	4180	L.F.
810	Furnish and install tray cable – 2 conductor (No. 12 AWG)	75	L.F.
	Relocate existing overhead sign	2	EA
	Remove existing handhole	3	EA
818	Furnish and install 32' steel strain pole.	1	EA
	Furnish and install down guy.	2	EA
819	Furnish and install $1/4$ " tether wire.	375	L.F.
819	Furnish and install steel span wire, 3/8" diameter.	375	L.F.
	Reroute existing interconnect cable.	1305	L.F.
817	Furnish and install pushbutton and pedestrian education sign R10-4(1).	1	EA
	Remove and dispose of existing foundation 12" below grade.	2	EA
807	Furnish and install control and distribution equipment (120/240 V, 1 phase 3 wire system).	1	EA
	Remove and dispose of existing signal equipment.	LUMP	SUM
	Relocate pole mounted splice cabinet.	1	EA
	Furnish and install 36" flex post.	82	EA
	Remove guy wire.	2	EA



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

MD 118 (GERMANTOWN RD) AND MD 355 (FREDERICK RD)

SHEET NO.

3 of 3

DRAWN BY: _____R.__C._ CHECKED BY: R. Z. NONE SCALE: 7-16-04

2475A S.H.A. NO. <u>BW-427-802-312</u> MONTGOMERY COUNTY: T.I.M.S. NO. LOG MILE: 15011807.39