DRILL HOLES

DRILL HOLES

DRILL HOLES

EQUIPMENT LIST

B. Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	MD-SHA Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
2	EA	818	27 ft. steel mast arm pole with a 70 ft. mast arm.
1	EA	818	27 ft. steel twin mast arm pole with 50 ft. and 70 ft. mast arms.
1	EA	818	4 ft. steel pedestal pole on break-away base.
1	EA	818	10 ft. steel pedestal pole on break-away base.
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet with video detection, and one (1) four-channel loop detector amplifier [Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
6	EA	---	Video detector for mast arm mounting with necessary cable. (1 - 400 LF of cable) (2 - 300 LF of cable) (3 - 200 LF of cable)
4	EA	814	12 in., one-way, three section (R,Y,G) adjustable black faced LED traffic signal head with mast arm mounting hardware and tunnel visors.
4	EA	814	12 in., one-way, four section (R,Y,G,GA) adjustable black faced LED traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable black faced LED traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in./8 in., one-way, five section (12 in. YA, GA/ 8 in. R,Y,G) adjustable black faced LED traffic signal head with mast arm mounting hardware and tunnel visors.
3	EA	814	16 in. one-way, one section adjustable LED countdown pedestrian signal head with pole mounting hardware. and cut-away visors.
1	EA	814	16 in. one-way, one section adjustable LED countdown pedestrian signal head with post top mounting hardware and cut-away visors.
1	EA	817	Central control unit for audible pedestrian pushbutton.
4	EA	813	30 in. x 36 in. R3-5(L) sign with mast arm mounting hardware.
3	EA	813	30 in. x 36 in. R3-5(R) sign with mast arm mounting hardware.
1	EA	813	30 in. x 36 in. R3-6(L) sign with mast arm mounting hardware.
4	EA	813	9 in. x 15 in. R10-3(1) sign with pole mounting hardware.
3	EA	813	48 in. x 75 in. shield assem. sign with pole mounting hardware.
1	EA	813	48 in. x 75 in. shield assem. sign with ground mounting hardware.
2	EA	813	30 in. x 51 in. shield assem. sign with pole mounting hardware.
1	EA	---	Non-invasive probe (set of 3) with 500 ft. lead-in cable.
1	EA	---	Non-invasive probe (set of 3) with 1000 ft. lead-in cable.
5	CY	205	Test pit excavation.
9	EA	811	Handhole.
45	LF	810	I-conductor electrical cable (No. 4 A.W.G.).
650	LF	810	2-conductor electrical cable (No. 14 A..G.).
770	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
1575	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
300	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
80	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
225	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
250	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
50	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
45	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
215	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
14.5	CY	801	Concrete foundation for traffic signal equipment.
7	EA	804	Ground rod -3/4 in. diameter x 10 ft. length.
34	EA	812	4 in. x 6 in. wood sign supports.
1	EA	807	Electrical utility service equipment (120/240 V, one phase, three wire system) for an underground electrical service per MD-SHA Typical 807.05-01.
120	LF	549	24 in. wide HAPPTPM - white for stop line.
315	LF	549	12 in. wide HAPPTPM - whit for crosswalk.
3	EA	812	Remove and dispose of existing concrete foundation 12 inches below grade.
4	EA	817	APS audible pedestrian signal pushbutton assembly with sign.
Lump Sum	LS	---	Remove and replace existing concrete.
Lump Sum	LS	---	Removal and disposable of existing signal equipment.

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.

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal at the intersection of MD 765 and MD 760 in Calvert County, Maryland.
MD 765 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to be modified to operate in a NEMA six (6) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for both the north and southbound movements of MD 765. The MD 765 through movements will operate concurrently with a concurrent pedestrian crossing across the west leg of the intersection. The MD 760 movements will operate in a side street split phase mode with an actuated pedestrian crossing across the north leg of the intersection.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, video detection equipment, and one (1) four-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

III. SPECIAL NOTE:

The Contractor shall notify Mr. Robert Snyder of SHA at 410-787-7635 to arrange for the phone drop installation.

The Contractor is to provide Mr. Snyder with the nearest street number, zip code, and telephone number.

CONTACT LIST

The contact persons for District •5 are as follows:

Ms. Kim Tran
Assistant District Engineer - Traffic
410-841-1019

Mr. John Mays
Assistant District Engineer - Utility
410-841-1039

Mr. Andre Futrell
Assistant District Engineer - Maintenance
410-841-1013

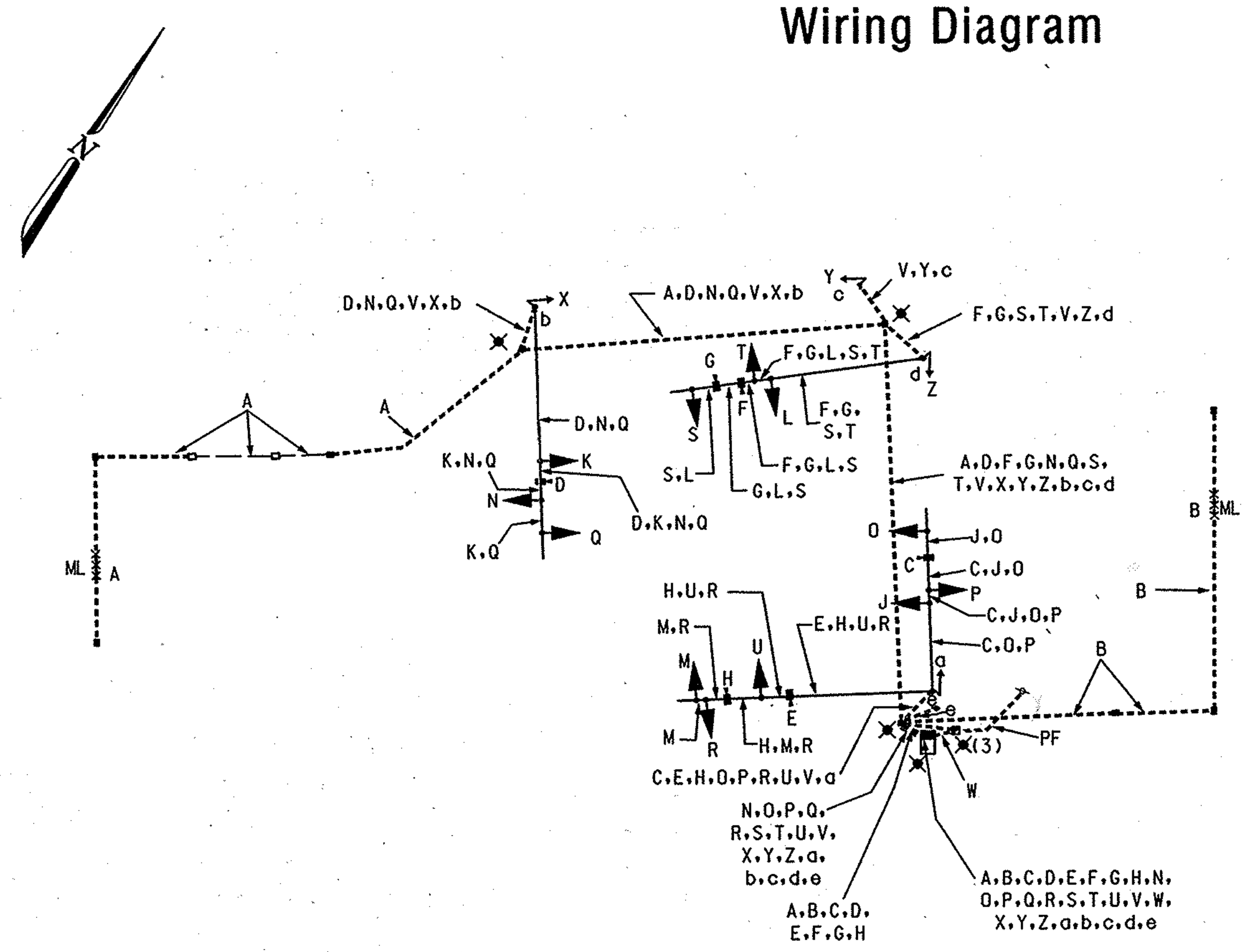
Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:
SMECO
Mr. Bob Trott
4415 Crain Highway
White Plains, Maryland 20695
301-855-1011

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13,14	15,16
Phase 1 & 5	R ←G—	R ←G—	R	R ←G—	R ←G—	R	R	R	R	R	R	R	DW	DW
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6														
Phase 1 & 6	G ←G—	G ←G—	G	R	R	R	R	R	R	R	R	R	DW	DW
1 Change	G ←Y—	G ←Y—	G	R	R	R	R	R	R	R	R	R	DW	DW
Phase 2 & 5	R	R	R	G ←G—	G ←G—	G	R	R	R	R	R	R	DW	DW
5 Change	R	R	R	G ←Y—	G ←Y—	G	R	R	R	R	R	R	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	DW
Ped Clearance	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW
Phase 3	R	R	R	R	R	R	G ←G—	G ←G—	G	R	R	R	DW	WK
3 Change	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW
Phase Alt 3	R	R	R	R	R	R	G ←G—	G ←G—	R	R	R	G	DW	WK
Ped Clearance	R	R	R	R	R	R	G ←G—	G ←G—	R	R	R	G	DW	FL/DW
Alt 3 Change	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW
Phase 4	R	R	R	R	R	R	R	R	R	G ←G—	G ←G—	G	DW	DW
4 Change	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

Wiring Diagram



A, B — Non-Invasive Micro-loop Detector Lead-in Cable

C, D, E, F, G, H — Video Detector Cable

b, c, d, e — 2-Conductor Electrical Cable (No. 14 A.W.G.)

J, K, L, M, X, Y, Z, a — 5-Conductor Electrical Cable (No. 14 A.W.G.)

N, O, P, Q, R, S, T, U — 7-Conductor Electrical Cable (No. 14 A.W.G.)

V — Bare Copper Ground Wire (No. 6 A.W.G.)

W — 1-Conductor (No. 4 A.W.G.) (3 pieces) for Traffic Signal Electrical Service

ML — Micro-loop Detector (Non-Invasive)

PF — Proposed Underground Electrical Service By SMECO

✱ — Proposed Grounding Rod

NOTES

These plans are approved for construction for a period of 1 year from the date of approval. Should construction not begin within this time frame these plans shall be null and void without a re-view from the Traffic Engineering Design Division.

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 765 at MD 760

GENERAL INFORMATION PLAN

SCALE N/A   DATE March 9, 2007   CONTRACT NO. BW996M82

DESIGNED BY J. Dirndorfer   COUNTY Calvert
DRAWN BY J. Dirndorfer   LOGMILE 04076501.96
CHECKED BY [initials] 3/07   T.I.M.S. NO. I- 084
F.A.P. NO. N/A   TOD NO. GI-2643-E

DRAWING NO. TS -GI- 2643- E   SHEET NO. 2 OF 2

o:\Jobs\2002\2002-0108a\Des-new\MD 765 gi.dgn 3/12/2007