PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of one (1) new traffic control signal and the reconstruction of two (2) existing Traffic Control Signals with street lighting along US 50 in Worcester County.

- US 50 and MD 707 (new signal)
- US 50 and Golf Course Road (reconstruction)
- US 50 and MD 611 (reconstruction)
- US 50 and Keyser Rd. (install sampling loop, rewiring master)

Interconnect cable shall be installed underground from MD 707 east to Shantytown Road. US 50 is assumed to run in an east-west direction.

II. INTERSECTION OPERATION

A. US 50 AND MD 707

1. The intersection is to operate in a NEMA six-phase, fully-actuated mode, with the US 50 approaches running concurrently. Exclusive left turn phases shall be provided for both approaches of US 50. The MD 707 approaches shall also run concurrently. Farside sampling will be provided on both legs of US 50.
2. A full-traffic-actuated, eight-phase controller with ~~four (4)~~ five (5) four-channel, rack mount loop detector amplifiers and associated harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

B. US 50 AND GOLF COURSE ROAD

1. The intersection is to operate in a NEMA six-phase, fully-actuated mode, with the US 50 approaches running concurrently. An Exclusive double left turn phase shall be provided for the westbound approach of US 50 and an Exclusive single left turn phase shall be provided for the eastbound approach of US 50. The Golf Course Road approaches shall operate as a split phase. Farside sampling stations will be provided on both legs of US 50. Queing loops will be installed on eastbound US 50 east of the intersection and will be used to monitor queing traffic associated with the US 50 drawbridge.
2. A full-traffic-actuated, eight-phase controller with ~~four (4)~~ five (5) four-channel, rack mount loop detector amplifiers and associated harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

C. US 50 AND MD 611

1. The intersection is to operate in a NEMA six-phase, fully-actuated mode, with the US 50 approaches running concurrently. An Exclusive double left turn phase shall be provided for the westbound approach of US 50 and an Exclusive single left turn phase shall be provided for the eastbound approach of US 50. The MD 611 approaches shall operate as a split phase.
2. A full-traffic-actuated, eight-phase controller with four (4) four-channel, rack mount loop detector amplifiers and associated harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

1. All field wiring to the existing controller cabinet shall be terminated to the appropriate controller cabinet connectors by the Contractor and labeled. All other controller cabinet wiring will be performed by the S.H.A. Signal Shop. Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

CATEGORY CODE	QUANTITY	DESCRIPTION
960021	2 Each	8", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.
960022	20 Each	12", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.
960023	12 Each	12", one-way, three-section (RA,YA,GA) (left arrows) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.
960027	4 Each	12", one-way, four-section (R,Y,G,GA) (left arrow) traffic signal with adjustable bracket for mast arm mounting and tunnel visors.
900000	4 Each	Combination 8"-12", one-way, four-section (8"-R,Y,G) (12"-GA) (left arrow) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.
[1] 971017	~~3~~ 1 Each	Eight-phase, full-traffic-actuated, solid state digital controller with four (4) 4-channel, rack mount loop detector amplifiers and associated harnesses housed in a NEMA size "6" base-mounted cabinet.
[1] 971017	2 Each	Eight-phase, full-traffic-actuated, solid state digital controller with five (5) 4-channel, rack mount loop detector amplifiers and associated harnesses housed in a NEMA size "6" base-mounted cabinet.
973023	450 S.F.	Overhead mounted sheet aluminum signs to consist of:
	2 Each	D3-2 "Old Bridge Rd" dual-faced sign. (variable x 16") mast arm mounted.
	2 Each	D3-2 "Golf Course Rd" dual-faced sign. (variable x 16") mast arm mounted.
	2 Each	D3-2 "Stephen Decatur Rd" dual-faced sign. (variable x 16") mast arm mounted.
	6 Each	D3-2 "Ocean Gateway" dual-faced sign. (variable x 16") mast arm mounted.
	3 Each	R3-6 "LEFT TURN AND THRU" sign. (30" x 36") mast arm mounted.
	3 Each	R3-5R "RIGHT TURN ONLY" sign. (30" x 36") mast arm mounted.
	11 Each	R3-5L "LEFT TURN ONLY" sign. (30" x 36") mast arm mounted.
	10 Each	"Associated Shield Assembly" sign (48" x 75") pole mt.
	6 Each	"Associated Shield Assembly" sign (30" x 51") pole mt.
973023	73 S.F.	Ground mounted sheet aluminum signs to consist of:
	4 Each	W3-3 NEW "SIGNAL AHEAD" sign. (48" x 48") ground mounted with hardware.
	1 Each	W3-3 NEW "SIGNAL AHEAD" sign. (36" x 36") ground mounted with hardware.

EQUIPMENT LISTS (CON'T.)

A. EQUIPMENT TO BE SUPPLIED BY S.H.A. (CON'T.).

CATEGORY CODE	QUANTITY	DESCRIPTION
974019	2 Each	27' steel pole with a 40' mast arm. (Note: 4 anchor bolts will be 1¾" x 90".)
974024	1 Each	27' steel pole with a 50' mast arm. (Note: 4 anchor bolts will be 1¾" x 90".)
974029	1 Each	27' steel pole with a 60' mast arm. (Note: 4 anchor bolts will be 1¾" x 90".)
900000	2 Each	27' steel pole with a 70' mast arm. (Note: 4 anchor bolts will be 1¾" x 90".)
900000	2 Each	27' steel pole with twin 50'-50' mast arms. (Note: 4 anchor bolts will be 2" x 90".)
900000	1 Each	27' steel pole with twin 50'-70' mast arms. (Note: 4 anchor bolts will be 2" x 90".)

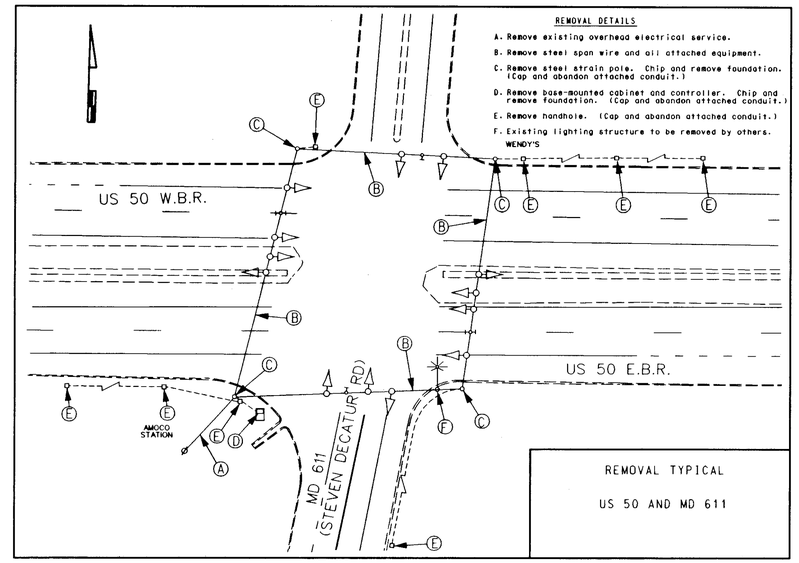
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE	QUANTITY	DESCRIPTION
130850	Lump Sum	Mobilization
120500	Lump Sum	Maintenance of traffic.
120620	450 S.F.	Temporary traffic sign.
120610	45 U.D.	Flashing arrow panels.
203030	9 C.Y.	Test pit excavation.
585445	490 L.F.	Furnish and install preformed pavement marking tape, white (24" width for stoplines).
585446	14 Each	Furnish and install permanent preformed pavement marking, letter.
585448	6 Each	Furnish and install permanent preformed pavement marking, arrow.
801004	45 C.Y.	Furnish and install concrete foundation.
837001	12 Each	Furnish and install ground rod, ¾" diameter x 10' length.
866201	6 Each	Install steel pole with a single mast arm.
866202	3 Each	Install steel pole with twin mast arms.
860220	34 Each	Install one-way, three-section traffic signal head, mast arm mount.
860027	8 Each	Install one-way, four-section traffic signal head, mast arm mount.
871202	3 Each	Install base-mounted cabinet and contoller.
813015	450 S.F.	Install overhead mounted sheet aluminum signs.
[1] 862102	~~3470~~ 4015 L.F.	Furnish and install sawcut.
[1] 805011	~~235~~ 295 L.F.	Furnish and install 1" galvanized steel electrical conduit (detector wire sleeve).
805160	140 L.F.	Furnish and install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
870116	572 L.F.	Furnish and install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
870119	5955 L.F.	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
[1] 805118	~~450~~ 1300 L.F.	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (bored).
[1] 870122	~~840~~ DELETED L.F.	~~Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched prior to final road surface).~~
870122	110 L.F.	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
838003	3 Each	Furnish and install control and distribution equipment Type B-10.
811001	65 Each	Furnish and install handhole (frame and cover).
832020	1025 L.F.	Furnish and install stranded bare copper ground wire (No. 6 A.W.G.).
822002	7700 L.F.	Furnish and install 12-pair, voice grade interconnect cable (No. 19 A.W.G.) (jelly-filled).
[1] 862101	~~13402~~ 15345 L.F.	Furnish and install loop wire (No. 14 A.W.G.) encased in ¼" flexible tubing.
[1] 861104	~~15630~~ 17495 L.F.	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) (aluminum shielded).
861107	4420 L.F.	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).
[1] 861108	~~2380~~ 3825 L.F.	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).
861116	1095 L.F.	Furnish and install 2-conductor electrical cable (No. 12 A.W.G.) type THHN tray cable.
861117	60 L.F.	Furnish and install 3-wire electrical cable (No. 4 A.W.G.).
831010	6 Each	Furnish and install 250W-HPS luminaire.
866101	4 Each	Furnish and install 10' lighting arm.
866103	2 Each	Furnish and install 15' lighting arm.
800000	10 Each	Remove and chip foundation 12" below grade.
800000	2 Each	Remove and delivery of existing cabinet.
800000	Lump Sum	Removal and salvage of existing signal equipment.
800000	8 Each	Backguy existing poles for construction
805115	932 L.F.	Furnish and install 3" polyvinyl chloride electical conduit (Schedule 80) (bored).
801106	90 L.F.	Furnish and install wood sign supports (4" x 6").
813014	73 S.F.	Install ground mounted sheet aluminum signs.

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO: STATE HIGHWAY ADMINISTRATION, OFFICE OF TRAFFIC AND SAFETY, SIGNAL OPERATIONS WAREHOUSE, 7941 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. CONTACT MR. DAVID SCHWARTZ @ (410) 787-7667, FORTY-EIGHT (48) HOURS IN ADVANCE OF RETURNING EQUIPMENT.

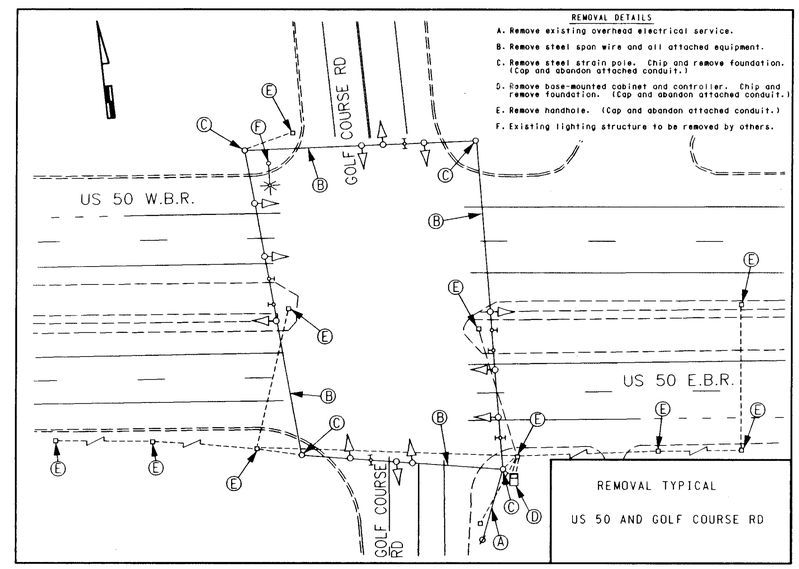
QUANTITY	DESCRIPTION
2 Each	8-phase controller and base-mounted cabinet.

NOTE: All equipment and/or materials to be removed by the Contractor but not listed above are to become the property of the Contractor.



REMOVAL TYPICAL

US 50 AND MD 611



REMOVAL TYPICAL

US 50 AND GOLF COURSE RD

[1] - REVISED 3-22-99

STREET TRAFFIC STUDIES, LTD.
Gateway International
1302 Concourse Drive, Suite 104
Linthicum, Maryland 21090
Ph (410) 859-3553
Fax (410) 859-3579

TASK578G1.DGN

REVISIONS	
[1]	Loops + CONDUIT 3/99

APPROVALS

ASST. CHIEF TEBD SECTION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION
US 50: MD 707 EAST TO SHANTYTOWN ROAD

DRAWN BY: THACKER	COUNTY: WORCESTER	TS NO.	SHEET NO.
CHECK BY:	LOG MILE:		
DATE: 10-16-98	F.A.P. NO.	T.I.M.S. NO.	48 OF 63
SCALE: N/A	S.H.A. NO. W07355176		

MAY 15 1999