PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal at the intersection of MD 170 and Benton Avenue. The ground mounted Hazard Identification Beacon on the east leg of Benton Avenue shall be upgraded to a mast arm mounted firehouse signal and the westbound signal heads at MD 170 and Benton Avenue will be changed to optically programmed heads.

II. INTERSECTION OPERATION

1. The intersection is to operate in a four-phase mode, with the MD 170 approaches running concurrently. A Hazard Identification Beacon shall be modified on the east leg of Benton Avenue and shall flash Red when the signal is pre-empted from the firehouse. The westbound Benton Avenue approach shall be activated in the pre-emption phase.

2. The existing eight-phase controller housed in a pole-mounted cabinet shall remain in use at this intersection.

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables to the appropriate terminals and shall properly label each cable.

2. All 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 LIST

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

ITEM NO.	DESCRIPTION	QUANTITY
9089	Sheet aluminum signs to consist of:	18 SF
	W11-8 "FIREHOUSE SIGNAL" sign, (36" x 72') mast arm mounted.	1 EA

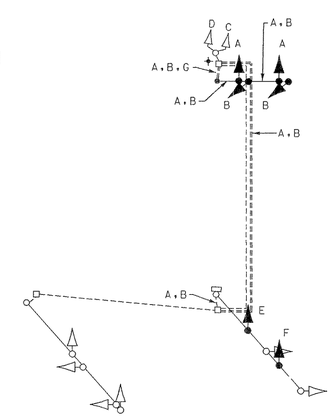
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
2001	Test pit excavation.	1 C.Y.
5004	24" white heat applied permanent preformed thermoplastic pavement marking.	15 L.F.
5007	Remove existing pavement markings - any width.	15 L.F.
6001	4" concrete sidewalk.	80 S.F.
8001	Furnish and install concrete for signal foundation.	3 C.Y.
8002	Adjust existing handhole to grade.	1 EA
8006	Cut, clean, galvanize and cap traffic signal structure.	1 EA
8027	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched	30 L.F.
8028	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - slotted	210 L.F.
8034	Furnish and install ground rod -3/4" x 10'.	1 EA
8044	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	1040 L.F.
8048	Furnish and install No. 6 AWG stranded bare copper ground wire.	30 L.F.
8053	Install overhead sign.	18 S.F.
8057	Remove and dispose of existing foundation 12" below grade.	1 EA
8060	Remove and dispose of existing material and equipment per assignment.	1 EA
8076	Furnish and install mast arm pole and 38' (cut to 24') mast arm.	1 EA
8084	Furnish and install 12" vehicular traffic signal head section	8 EA
8085	Furnish and install 8" vehicular traffic signal head section.	4 EA
8086	Furnish and install 12" optically programmed traffic signal head section.	9 EA
Neg.	Remove existing concrete sidewalk	60 S.F.
Neg.	Relocate existing pole mounted sign	1 EA

PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11	12	
12"	R	R	R	R	R	R	R	R	R	R	R	R	12"
12"	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	12"
8"	Y	Y	Y	Y	G	G	Y	Y	Y	Y	Y	Y	8"
					12"	12"							
NORMAL OPERATION	FL/Y 8"	FL/Y 8"	FL/Y 8"	FL/Y 8"	FL/R	FL/R	FL/R	FL/R	FL/Y 8"	FL/Y 8"	FL/R	FL/R	
PRE-EMPT WARNING	QFL/Y 8"	QFL/Y 8"	QFL/Y 8"	QFL/Y 8"	R	R	R	R	QFL/Y 8"	QFL/Y 8"	R	R	
PRE-EMPT WARNING CHANGE	Y 12"	Y 12"	Y 12"	Y 12"	R	R	R	R	Y 12"	Y 12"	R	R	
PRE-EMPT	R	R	R	R	G	G	FL/Y 8"	FL/Y 8"	R	R	FL/Y 8"	FL/Y 8"	
PRE-EMPT CHANGE	R	R	R	R	Y 12"	Y 12"	Y 12"	Y 12"	R	R	Y 12"	Y 12"	
FLASHING OPERATION	FL/Y 12"	FL/Y 12"	FL/Y 12"	FL/Y 12"	FL/R	FL/R	FL/R	FL/R	FL/Y 12"	FL/Y 12"	FL/R	FL/R	

WIRING DIAGRAM



WIRING KEY

A, B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

C, D, E } EXISTING 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G) WIRED TO NEW SIGNAL HEAD.

G - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

✦ - GROUND ROD

REVISION "A"

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy. N.W.
Glen Burnie, MD 21061
Ph (410) 590-5500
Fax (410) 590-6637

TASK440I.dgn

REVISIONS

Ⓐ 8-28-00 ADD FIREHOUSE SIGNALS ALONG BENTON AVE

SHA NO.:
RRZ

APPROVALS

ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, TRAFFIC & SAFETY

ORIGINAL ON FILE

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 170 AND BENTON AVENUE
(LINTHICUM FIRE STATION)

DRAWN BY: F.A. FORRESTER	F.A.P. NO.	TS NO. 2133A	SHEET NO. 2 OF 2
CHECKED BY: D.DODA	S.H.A. NO. AA683A541B54		
SCALE: 1" = 20'	COUNTY: ANNE ARUNDEL	T.I.M.S. NO.	
DATE: JULY 1986	LOG MILE: 02017009.83		