F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A HAZARD IDENTIFICATION BEACON AND NEAR-SIDE LEFT-TURN SIGNAL ON EASTBOUND U.S. 50 AT MD 452/SEAHAWK ROAD IN WORCESTER COUNTY. U.S. 50 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

1. NORMAL OPERATION

   THE INTERSECTION OPERATES IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUACTED MODE WITH U.S. 50 APPROACHES RUNNING CONCURRENTLY AND MD 452/SEAHAWK ROAD APPROACHES RUNNING CONCURRENTLY. EXCLUSIVE LEFT-TURN PHASES EXIST FOR EAST AND WESTHBOUND U.S. 50 APPROACHES.

2. SPECIAL OPERATION

   THE INTERSECTION WILL OPERATE AS INDICATED ABOVE, EXCEPT DURING PEAK PERIODS WHEN SCHOOL IS IN SESSION. DURING THIS SESSION, THE SEAHAWK ROAD APPROACH OPERATES WITH A LEADING LEFT-TURN PHASE.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER WILL BE USED. A TWO CIRCUIT FLASHER UNIT WILL BE INSTALLED FOR THE HAZARD IDENTIFICATION BEACON.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. DONNIE DREWER
DISTRICT ENGINEER
PHONE: (410) 543-6715

MR. GENE COFIELL
ACTING, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 543-6715

MR. JAMES WRIGHT
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 543-6715

MR. BRUCE POOLE
DISTRICT UTILITIES ENGINEER
PHONE: (410) 543-6715

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9012	2 EACH	12 IN., ONE-WAY, ONE-SECTION (Y) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9028	1 EACH	12 IN., ONE-WAY, THREE-SECTION (RA,YA,GA) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR PEDESTAL TOP MOUNTING.
9068	1 EACH	TWO-CIRCUIT FLASHER UNIT.
9089	23 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 1 EACH W3-3 SIGN (48 IN. X 48 IN.) - MAST ARM MOUNT - 1 EACH R5-1 SIGN (30 IN. X 30 IN.) - GROUND MOUNT

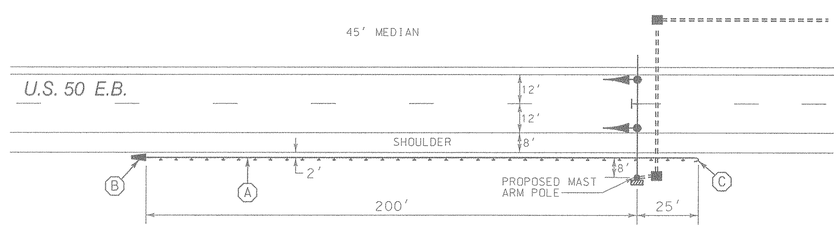
* NOTE: SHA SIGNAL SHOP WILL BE RESPONSIBLE FOR INSTALLING FLASHER UNIT AND PROGRAMMING CONTROLLER FOR SPECIAL OPERATION.

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2001	1 C.Y.	TEST PIT EXCAVATION
5002	200 L.F.	6 IN. WHITE PERMANENT PERFORMED PAVEMENT MARKING TAPE
6003	225 L.F.	TRAFFIC BARRIER W-BEAM
6004	1 EACH	TRAFFIC BARRIER W-BEAM TRAIL END ANCHORAGE
6005	1 EACH	SPECIAL TRAFFIC BARRIER W-BEAM END TREATMENT
6007	1 EACH	SPARE PARTS PACKAGE FOR SPECIAL TRAFFIC BARRIER W-BEAM END TREATMENT
6008	4 EACH	FURNISH AND INSTALL W-BEAM MOUNTED MARKERS
8001	4 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8003	1 EACH	FURNISH AND INSTALL 14 FT. BREAKAWAY PEDESTAL POLE
8011	3 EACH	INSTALL SIGNAL HEAD
8017	1 EACH	FURNISH AND INSTALL MICRO-LOOP PROBE SET WITH 1000 FT. LEAD-IN
8021	240 L.F.	SAWCUT FOR SIGNAL (LOOP DETECTOR)
8023	15 L.F.	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT, FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	410 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8025	50 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	4 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	2 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
8040	500 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8041	410 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 A.W.G.) ALUMINUM SHIELDED
8043	50 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G.)
8044	400 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
8049	950 L.F.	FURNISH AND INSTALL NO. 6 A.W.G STRANDED BARE COPPER GROUND WIRE
8053	7 S.F.	INSTALL GROUND MOUNTED SIGN
8054	16 S.F.	INSTALL OVERHEAD SIGN
8061	LUMP SUM	REMOVE AND DISPOSE OF EXISTING EQUIPMENT AND MATERIALS
8064	LUMP SUM	USE EXISTING DISK AND AS-BUILT TRAFFIC CONTROL DEVICES
8065	1 EACH	INSTALL CONDUIT BEND IN EXISTING BASE
8073	1 EACH	FURNISH AND INSTALL PHOTOCELL
8082	1 EACH	FURNISH AND INSTALL MAST ARM POLE AND 50 FT. MAST ARM
8000	1400 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 12 A.W.G.)

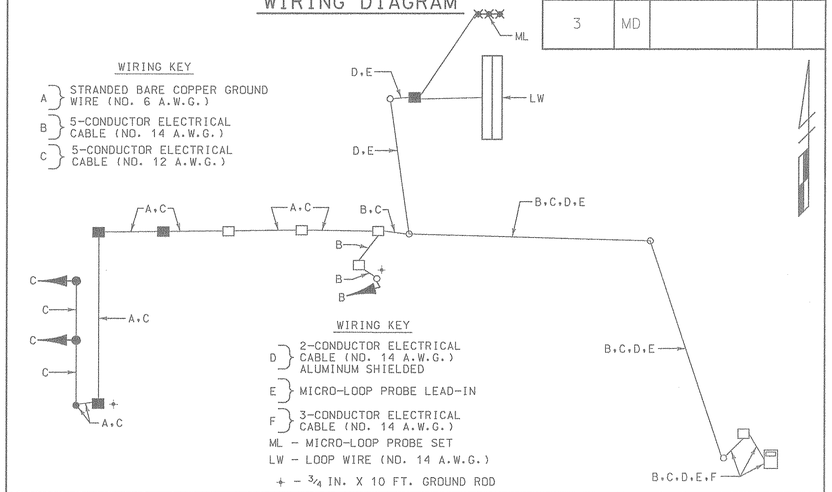
TRAFFIC BARRIER DETAIL



CONSTRUCTION DETAILS

A. INSTALL TRAFFIC BARRIER W-BEAM.
B. INSTALL SPECIAL TRAFFIC BARRIER W-BEAM END TREATMENT.
C. INSTALL W-BEAM TRAIL END ANCHORAGE.

WIRING DIAGRAM



PHASE CHART

1. NORMAL OPERATION

	3	4	5	6	7	8	9	10	11	12	13	14
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G
PHASE 1 + 5	←G—	←G—	R	R	←G—	←G—	R	R	R	R	R	R
1 + 5 CHANGE	1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6											
PHASE 1 + 6	←G—	←G—	G	G	←R—	←R—	R	R	R	R	R	R
1 + 6 CHANGE	←Y—	←Y—	G	G	←R—	←R—	R	R	R	R	R	R
PHASE 2 + 5	←R—	←R—	R	R	←G—	←G—	G	G	R	R	R	R
2 + 5 CHANGE	←R—	←R—	R	R	←Y—	←Y—	G	G	R	R	R	R
PHASE 2 + 6	←R—	←R—	G	G	←R—	←R—	G	G	R	R	R	R
2 + 6 CHANGE	←R—	←R—	Y	Y	←R—	←R—	Y	Y	R	R	R	R
PHASE 4 + 8	←R—	←R—	R	R	←R—	←R—	R	R	G	G	G	G
4 + 8 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	Y	Y
FLASHING OPERATION	←FL/R—	←FL/R—	FL/Y	FL/Y	←FL/R—	←FL/R—	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

2. SPECIAL OPERATION

	3	4	5	6	7	8	9	10	11	12	13	14
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G
PHASE 1 + 5	←G—	←G—	R	R	←G—	←G—	R	R	R	R	R	R
1 + 5 CHANGE	1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6											
PHASE 1 + 6	←G—	←G—	G	G	←R—	←R—	R	R	R	R	R	R
1 + 6 CHANGE	←Y—	←Y—	G	G	←R—	←R—	R	R	R	R	R	R
PHASE 2 + 5	←R—	←R—	R	R	←G—	←G—	G	G	R	R	R	R
2 + 5 CHANGE	←R—	←R—	R	R	←Y—	←Y—	G	G	R	R	R	R
PHASE 2 + 6	←R—	←R—	G	G	←R—	←R—	G	G	R	R	R	R
2 + 6 CHANGE	←R—	←R—	Y	Y	←R—	←R—	Y	Y	R	R	R	R
PHASE 3	←R—	←R—	R	R	←R—	←R—	R	R	←G/G—	G	R	R
3 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	Y	Y	R	R
PHASE 7	←R—	←R—	R	R	←R—	←R—	R	R	R	R	←G/G—	G
7 CHANGE	←R—	←R—	R	R	←R—	←R—	R	R	R	R	Y	Y
FLASHING OPERATION	←FL/R—	←FL/R—	FL/Y	FL/Y	←FL/R—	←FL/R—	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

REVISIONS	APPROVALS	REVISIONS
	ASSISTANT DIVISION CHIEF	
	ASST. DISTRICT ENGINEER, TRAFFIC	
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION	
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY	

WR&A
Whitman, Requardt and Associates
Engineers and Planners
2315 Saint Paul Street
Baltimore, Maryland 21218
(410) 235-3450

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
U.S. 50 AND MD 452/SEAHAWK ROAD

DATE: 8-15-97	DRAWN BY: S.BLOSS	F.A.P. NO. STPG-000S(587)E		PLAN SHEET NO.:	SHEET NO.
SCALE: NONE	DESIGNED BY: N.LEARY	S.H.A. NO. AW276A52/B52		TS-506D	2 OF 2
APPROVED BY:	CHECKED BY: T.HANNAN	COUNTY WORCESTER			

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