

**PROJECT DESCRIPTION**

**GENERAL**

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF A TEMPORARY TRAFFIC CONTROL SIGNAL AND INTERSECTION LIGHTING AT THE INTERSECTION OF US 29 AND TEMPORARY RAMP #2 IN HOWARD COUNTY. US 29 RUNS IN A NORTH/SOUTH DIRECTION.

**INTERSECTION OPERATION**

A SYSTEM READY CONTROLLER WITH FIVE (5) DETECTOR AMPLIFIERS RACK MOUNT HOUSED IN A POLE MOUNTED CABINET ARE TO BE INSTALLED AT THIS LOCATION. THE INTERSECTION IS TO OPERATE IN A NEMA FOUR (4) PHASE MODE. THERE WILL BE EXCLUSIVE LEFT TURN FOR THE NORTHBOUND MOVEMENT OF US 29. US 29 THROUGH MOVEMENTS WILL RUN CONCURRENTLY, AND SIDE ROAD MOVEMENT WILL OPERATE ALONE. A FIRE HOUSE PRE-EMPTION PHASE WILL BE PROVIDED FOR NEMA PHASE 4 WITH THE SIDE ROAD GREEN PHASE AND ALL OTHER PHASES WILL BE RED.

**PROJECT CONTACTS:**

MR. R. FISHER, DISTRICT ENGINEER  
PHONE: (301) 624-8101  
MR. JOHN CONCANNON, ASSISTANT DISTRICT ENGINEER- TRAFFIC  
PHONE: (301) 624-8141  
MR. LEON KEENE, ASSISTANT DISTRICT ENGINEER- MAINTENANCE  
PHONE: (301) 624-8106  
MR. JAMES BUCLALEW, ASSISTANT DISTRICT ENGINEER- UTILITY  
PHONE: (301) 624-8116  
MR. RICHARD L. DUFF, SR., CHIEF TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

**MAINTENANCE OF TRAFFIC**

MAINTENANCE OF TRAFFIC SHALL BE COORDINATED WITH THE PRIME ROADWAY CONTRACTORS WORK SCHEDULE AT ALL TIMES.

**CONSTRUCTION NOTES**

1. ALL TRAFFIC SIGNAL WORK SHALL BE COORDINATED WITH THE ROADWAY CONTRACTOR'S SCHEDULE.
2. ALL PROPOSED FOUNDATIONS SHALL BE INSTALLED TO FINAL GRADE ELEVATION.
3. THE SIGNAL CONTRACTOR MUST VERIFY THE LOCATIONS OF THE TEMPORARY GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
4. UNLESS NOTED ON THE SIGNAL PLANS, ALL TEMPORARY PAVEMENT MARKINGS WILL BE INSTALLED BY THE ROADWAY CONTRACTOR.
5. ALL TEMPORARY SIGNAL EQUIPMENT SHALL BE REMOVED AND SALVAGED BY THE CONTRACTOR, AT THE DIRECTION OF THE ENGINEER.

**EQUIPMENT LIST**

**A. EQUIPMENT TO BE FURNISHED BY THE ADMINISTRATION.**

ITEM NO.:	DESCRIPTION	SPECIFICATION SECTION	UNIT	QUANTITY
	12" ONE-WAY, THREE SECTION (R,A,Y,G) POLYCARBONATE SIGNAL HEAD WITH SPAN WIRE MOUNTING HARDWARE	814	EA	2
	12" ONE-WAY, THREE SECTION (R,Y,G) POLYCARBONATE SIGNAL HEAD WITH SPAN WIRE MOUNTING HARDWARE	814	EA	6
	12" ONE-WAY, THREE SECTION (R,Y,G) SIGNAL HEAD WITH POLE MOUNTING HARDWARE	814	EA	1
	A SYSTEM READY S.H.A. TRAFFIC SIGNAL CONTROLLER, POLE MOUNTED AND FIVE(S) DETECTOR AMPLIFIERS RACK MOUNT	816	EA	1
	SHEET ALUMINUM SIGNS	813	SF	122.5
	30" x 36" R3-5(L) SIGN - SPAN WIRE MOUNTING		EA	2
	60" x 60" R3-3 SIGN WITH TEMP PANEL AND FLAGS GROUND MOUNTING		EA	4
	30" x 36" R3-5(R) SIGN - SPAN WIRE MOUNTING		EA	1
	OPTICOM DETECTOR WITH 500 FT. LEAD-IN CABLE	SP	EA	1
	LIGHT EMITTER	SP	EA	3

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

ITEM NO.:	DESCRIPTION	SPECIFICATION SECTION	UNIT	QUANTITY
	MAINTENANCE OF TRAFFIC	104	LS	LUMP SUM
	MOBILIZATION	108	LS	LUMP SUM
	TEST PIT	205	EA	4
	24" WIDE TEMPORARY PAVEMENT MARKING - WHITE FOR STOP LINE	SP	LF	115
	TEMPORARY LEFT ARROW - WHITE	SP	EA	6
	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT	801	CY	13
	12" x 32" GALVANIZED STEEL POLE (FOUR-2 1/2" x 96" ANCHOR BOLTS)	818	EA	3
	HANDHOLE	811	EA	9
	SAWCUT FOR SIGNAL LOOP DETECTOR	815	LF	705
	1" LIQUID TIGHT FLEXIBLE NON-METALIC CONDUIT FOR LOOP DETECTOR SLEEVE	805	LF	55
	2-CONDUCTOR (ALUMINUM SHIELED) ELECTRICAL CABLE (NO.: 14 A.W.G.)	810	LF	3500
	2-CONDUCTOR ELECTRICAL TRAY CABLE (NO.: 12 A.W.G.)	810	LF	400
	2" POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - TRENCHED	805	LF	1110
	3-WIRE (NO.: 4 A.W.G.) ELECTRICAL CABLE	810	LF	20
	3" POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - TRENCHED	805	LF	35
	4" POLYVINYL CHLORIDE [SCHEDULE 80] ELECTRICAL CONDUIT - TRENCHED	805	LF	60
	5-CONDUCTOR ELECTRICAL CABLE (NO.: 14 A.W.G.)	810	LF	700
	7-CONDUCTOR ELECTRICAL CABLE (NO.: 14 A.W.G.)	810	LF	420
	3/8" STEEL SPAN WIRE	804	LF	355
	1/2" STEEL SPAN WIRE	804	LF	200
	BARE COPPER STRANDED GROUND WIRE (NO. 6 A.W.G.)	804	LF	80
	GROUND ROD - 3/4" DIAMETER x 10' LENGTH	804	EA	3
	15' LUMINAIRE ARM	806	EA	1
	250 WATT H.P.S. LAMP AND LUMINAIRE WITH PHOTOCELL	806	EA	2
	4" x 6" WOOD SIGN SUPPORTS	812	LF	84
	CONTROL AND DISTRIBUTION EQUIPMENT	807	EA	1
	LOOP DETECTOR WIRE (NO.: 14 A.W.G.) ENCASED IN FLEXIBLE TUBING	810	LF	2350

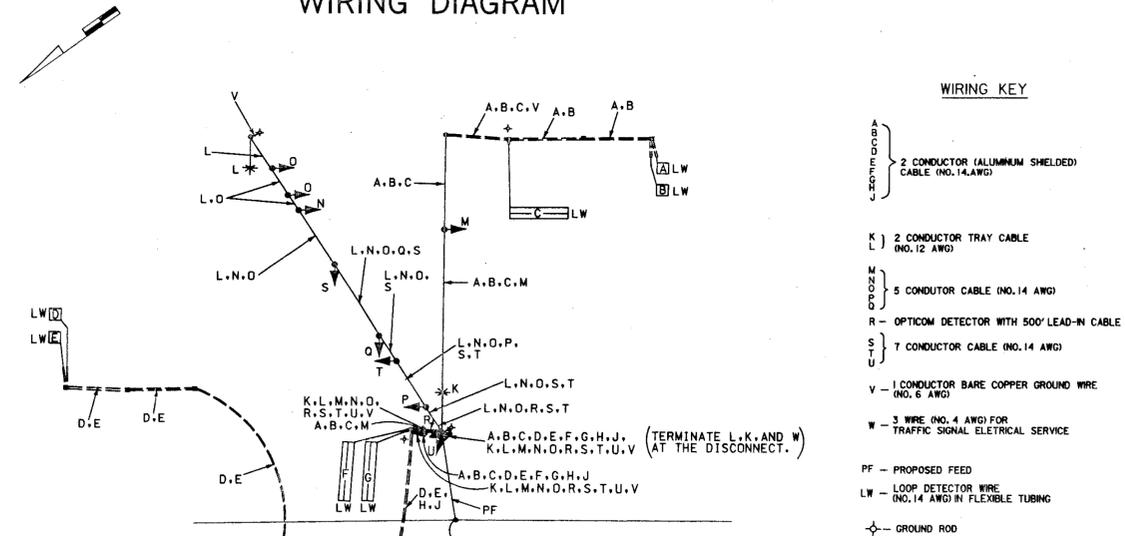
**B. EQUIPMENT TO BE FURNISHED AND /OR INSTALLED BY THE CONTRACTOR.**

ITEM NO.:	DESCRIPTION	SPECIFICATION SECTION	UNIT	QUANTITY
	20' LUMINAIRE ARM	806	EA	1
	INSTALL SIGNAL HEADS	814	EA	8
	INSTALL POLE MOUNTED SIGNAL HEAD	814	EA	1
	INSTALL GROUND MOUNTED SIGN	813	SF	100
	INSTALL OVERHEAD SIGN - SPAN WIRE MOUNT	813	SF	22.5
	INSTALL OPTICOM DETECTOR-SPAN WIRE MOUNTED	SP	EA	1
	REMOVAL AND SALVAGE OF ENTIRE SIGNAL	SP	LS	LUMP SUM
	* DELIVERY OF REMOVED EQUIPMENT	SP	EA	1

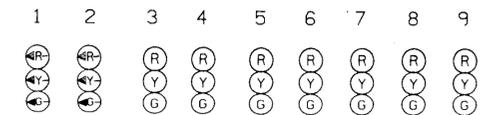
**\* C. EQUIPMENT TO BE REMOVED AND RETURNED TO THE SHA SIGNAL WAREHOUSE.**

DESCRIPTION  
ALL SHA FURNISHED MATERIALS LISTED IN EQUIPMENT LIST "A"

**WIRING DIAGRAM**



**PHASE CHART**



	1	2	3	4	5	6	7	8	9
PHASE 5	←G	←G	R	R	R	R	R	R	R
5 CHANGE	←Y	←Y	R	R	R	R	R	R	R
PHASE 2 AND 6	←R	←R	G	G	G	G	R	R	R
2 AND 6 CHANGE	←R	←R	Y	Y	Y	Y	R	R	R
PHASE 4	←R	←R	R	R	R	R	G	G	G
4 CHANGE	←R	←R	R	R	R	R	Y	Y	Y
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R
PRE-EMPTION PHASE φ4	DARK	DARK	R	R	R	R	G	G	G
PRE-EMPTION CLEARANCE			R	R	R	R	Y	Y	Y

REVISIONS APPROVALS ASST. TRAFFIC ENGINEERING DESIGN DIVISION ASST. DISTRICT ENGINEER, TRAFFIC CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION DIRECTOR, OFFICE OF TRAFFIC & SAFETY		MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION (GENERAL INFORMATION PLAN) US 29 AND TEMPORARY RAMP #2 (RAMP 'F')	
DRAWN BY: M.A. MEARS CHECKED BY: S. RENZI SCALE: NONE DATE: NOVEMBER, 1998	F.A.P. NO. H03065370 S.H.A. NO. HOWARD COUNTY: HOWARD LOG MILE: 13002901.21	TS NO. ET 3852 T.I.M.S. NO. C-826 SHEET NO. 161 OF 254	

