PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A TRAFFIC SIGNAL AT MD 355 AND MD 914(STADIUM DRIVE)/WALSER DRIVE IN CONJUNCTION WITH REALIGNING THE RAMPS FROM WESTBOUND I-70.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE OPERATION, FULL-TRAFFIC ACTUATED MODE, WITH MD 355 APPROACHES OPERATING CONCURRENTLY AND STADIUM DRIVE/WALSER DRIVE APPROACHES OPERATING CONCURRENTLY. THIS INTERSECTION WILL BE INTERCONNECTED WITH THE MD 355 AT EASTBOUND I-70 RAMP SIGNAL AND THE WESTBOUND I-70 AND STADIUM DRIVE SIGNAL VIA COMMUNICATION CABLE.

EXCLUSIVE LEFT TURN PHASES WILL BE PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 355. AN EXCLUSIVE/PERMISSIVE PHASE WILL BE PROVIDED FOR EASTBOUND STADIUM DRIVE. THERE WILL ALSO BE A RIGHT TURN OVERLAP ON EASTBOUND STADIUM DRIVE AND MD 355.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TELEMETRY, ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT 7 ARE AS FOLLOWS:

ROBERT L. FISHER
DISTRICT ENGINEER
301-624-8101

JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-624-8141

JOHN WRIGHT
ASSISTANT DISTRICT ENGINEER - UTILITIES
301-624-8106

LEON KERNS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-624-8106

THE CONTACT PERSON FOR ALLEGHENY POWER IS:

BRIAN E. MANVILLE
301-694-4474

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
9001	1	EA	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH TELEMETRY AND SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9002	3	EA	FOUR CHANNEL, TIME DELAY OUTPUT, LOOP DETECTOR AMPLIFIER

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

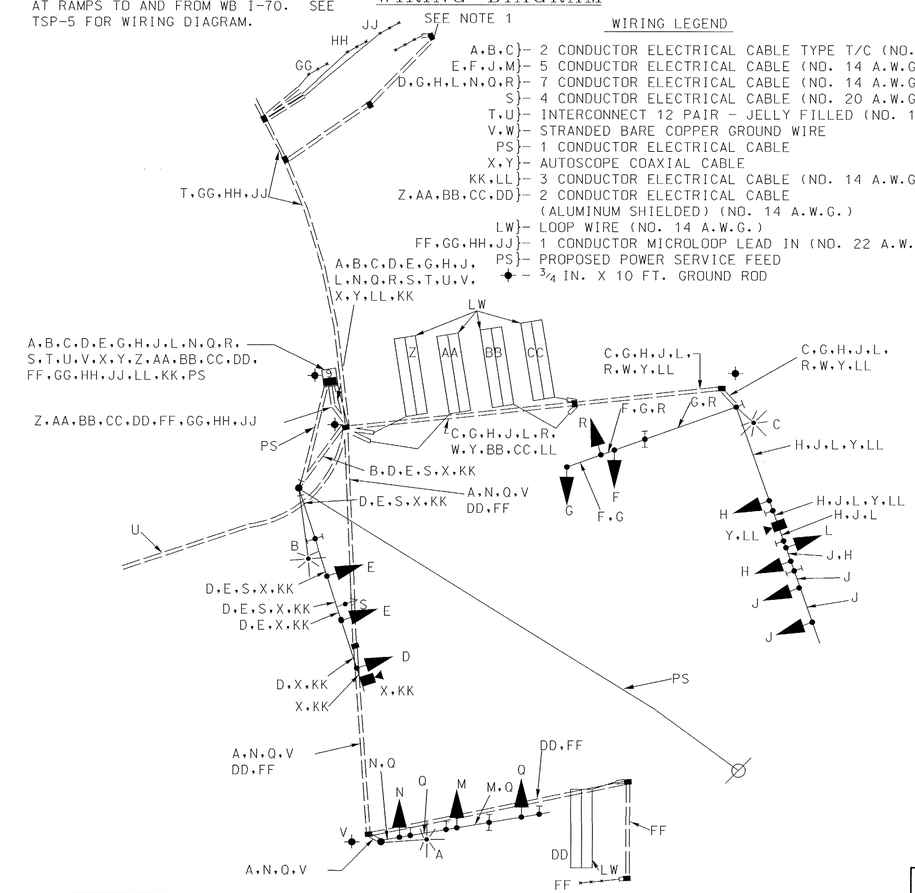
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
2001	3	CY	TEST PIT EXCAVATION
5002	200	LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING TAPE
8001	14	CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8002	300	LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8003	1	EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
8004	8	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8005	133	SF	FURNISH AND INSTALL OVERHEAD SIGN - 2 EACH R3-5L (30" X 36")-MAST ARM MOUNT - 1 EACH R10-12 (36" X 42")-MAST ARM MOUNT - 2 EACH R3-5R (30"X36")-MAST ARM MOUNT - 1 EACH M1-1 (24" X 24")-POLE MOUNT - 1 EACH M1-4 (24" X 24")-POLE MOUNT - 1 EACH M3-4 (24" X 12")-POLE MOUNT - 1 EACH M4-5 (24" X 12")-POLE MOUNT - 1 EACH M6-1 (21" X 15")-POLE MOUNT - 4 EACH D-3(1) DUAL FACED (VAR."X16")-MAST ARM MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY (30"X51")-POLE MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY (48"X75")-POLE MOUNT
8006	23	SF	FURNISH AND INSTALL GROUND MOUNTED SIGN - 1 EACH W3-3 (48" X 48")-WOOD POST MOUNT - 1 EACH D95-25 (30" X 30")-WOOD POST MOUNT
8007	36	LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS (4 INCH X 4 INCH)
8008	1	LS	REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED
8009	4	EA	FURNISH AND INSTALL GROUND ROD-3/4 INCH DIAMETER X 10-FOOT LENGTH
8010	48	EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION-MAST ARM MOUNT
8012	680	LF	FURNISH AND INSTALL ELECTRICAL CABLE -2 CONDUCTOR (ALUMINUM SHIELDED) (NO 14 AWG)
8013	500	LF	FURNISH AND INSTALL ELECTRICAL CABLE -2 CONDUCTOR TRAY CABLE (NO 12 AWG)
8014	260	LF	FURNISH AND INSTALL ELECTRICAL CABLE -3 CONDUCTOR (NO 14 AWG)
8015	120	EA	FURNISH AND INSTALL ELECTRICAL CABLE -4 CONDUCTOR OPTICOM DETECTOR CABLE
8016	1900	LF	FURNISH AND INSTALL ELECTRICAL CABLE-5 CONDUCTOR (NO 14 AWG)
8017	1000	LF	FURNISH AND INSTALL ELECTRICAL CABLE-7 CONDUCTOR (NO 14 AWG)
8018	350	LF	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)
8019	1	EA	FURNISH AND INSTALL 10 FOOT LIGHTING ARM
8020	2	EA	FURNISH AND INSTALL 20 FOOT LIGHTING ARM
8021	1	EA	INSTALL CONTROLLER AND CABINET-BASE MOUNT
8022	1	EA	FURNISH AND INSTALL 27-FOOT STEEL POLE WITH A SINGLE 60-FOOT MAST ARM
8023	1	EA	FURNISH AND INSTALL 27-FOOT STEEL POLE WITH A SINGLE 50-FOOT MAST ARM
8024	1	EA	FURNISH AND INSTALL 27-FOOT STEEL POLE WITH TWIN 50-FOOT AND 70-FOOT MAST ARMS
8025	285	LF	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT TRENCHED
8026	375	LF	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8027	200	LF	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
8028	30	LF	FURNISH AND INSTALL 4" SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8029	3	EA	CUT, CLEAN AND CAP TRAFFIC SIGNAL STRUCTURE
8030	3	EA	FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCELL
8031	1	EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12" BELOW GRADE
8032	1	EA	FURNISH AND INSTALL OPTICOM DISCRIMINATION MODULE
8033	1	EA	FURNISH AND INSTALL OPTICOM DETECTOR EYE
8034	2875	LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 INCH FLEXIBLE TUBING (NO 14 AWG)
8035	725	LF	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)
8036	110	LF	FURNISH AND INSTALL 1 INCH LIQUID TIGHT NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8037	3	EA	FURNISH AND INSTALL MICROLOOP PROBE SET (500 FOOT LEAD-IN)
8038	1	EA	FURNISH AND INSTALL MICROLOOP PROBE SET (1000 FOOT LEAD-IN)
8039	2	EA	AUTOSCOPE PACKAGE WITH 2 CAMERAS
8040	1	LS	DELIVERY OF SALVAGED EQUIPMENT

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 & 5	G	G	R	R	G	G	R	R	R	R	R	B/G	R	R
1 & 5 CHANGE	TO PHASES 1-6 OR 2-5 OR 2-6													
PHASE 1 & 6	G	G	G	G	R	R	R	R	R	R	R	B/G	R	R
1 CHANGE	Y	Y	G	G	R	R	R	R	R	R	R	B/Y	R	R
PHASE 2 & 5	R	R	R	R	G	G	G	G	R	R	R	R	R	R
5 CHANGE	R	R	R	R	Y	Y	G	G	R	R	R	R	R	R
PHASE 2 & 6	R	R	G	G	R	R	G	G	R	R	R	R	R	R
2 & 6 CHANGE	R	R	Y	Y	R	R	Y	Y	R	R	R	R	R	R
PHASE 4 & 7	R	R	R	R	R	R	R	R	G/G	G/G	G	G/G	R	R
4 & 7 CHANGE	R	R	R	R	R	R	R	R	G/Y	G/Y	G	G/Y	R	R
PHASE 4 & 8	R	R	R	R	R	R	R	R	G	G	G	G	G	G
4 & 8 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y
PRE EMPTION	R	R	R	R	G	G	G	G	R	R	R	R	R	R
PRE EMPTION CHANGE	R	R	R	R	Y	Y	Y	Y	R	R	R	R	R	R
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	FL/R	FL/R

NOTE 1. PROBE SET FOR MD 914 (STADIUM DRIVE) AT RAMPS TO AND FROM WB I-70. SEE TSP-5 FOR WIRING DIAGRAM.

WIRING DIAGRAM



WIRING LEGEND

- A,B,C} - 2 CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 A.W.G.)
- E,F,J,M} - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- D,G,H,L,N,Q,R} - 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- S} - 4 CONDUCTOR ELECTRICAL CABLE (NO. 20 A.W.G.)
- T,U} - INTERCONNECT 12 PAIR - JELLY FILLED (NO. 19 A.W.G.)
- V,W} - STRANDED BARE COPPER GROUND WIRE
- PS} - 1 CONDUCTOR ELECTRICAL CABLE
- X,Y} - AUTOSCOPE COAXIAL CABLE
- KK,LL} - 3 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- Z,AA,BB,CC,DD} - 2 CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED) (NO. 14 A.W.G.)
- LW} - LOOP WIRE (NO. 14 A.W.G.)
- FF,GG,HH,JJ} - 1 CONDUCTOR MICROLOOP LEAD IN (NO. 22 A.W.G.)
- PS} - PROPOSED POWER SERVICE FEED
- ✦ - 3/4 IN. X 10 FT. GROUND ROD

TSP-2

REVISIONS	APPROVALS
(A) RELOCATE I/C TO WEST SIDE OF MD 355 8-11-99 NL	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
(B) REDESIGN SIGNAL FOR REALIGNING OF WB I-70 RAMPS FR8665572	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
3 REDLINE REVISION NO.3 NEW SHEET 2/15/2000 JFL	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

ORIGINAL ON FILE

KCI TECHNOLOGIES

KCI TECHNOLOGIES INC.
ENGINEERS AND PLANNERS
10 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
21030-1846
(410) 316-7800

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
INTERSTATE ROUTE 70
INTERSTATE ROUTE 270 INTERCHANGE (PHASE IA)
MD 355 AT MD 914 (STADIUM DRIVE)/WALSER DRIVE
GENERAL INFORMATION SHEET

DRAWN BY: S. BLOSS	F.A.P. NO. SEE TITLE SHEET	TS NO. 3929B-GI	SHEET NO.
CHECKED BY: N. LEARY	S.H.A. NO.		
SCALE:	COUNTY: FREDERICK	T.I.M.S. NO. D496	718 OF 737
DATE: 8-12-99	LOG MILE:		