PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A TRAFFIC SIGNAL AT MD 414 (OXON HILL ROAD)/ NB I-95/495 OFF-RAMP. THIS INTERSECTION WILL BE INTERCONNECTED WITH MD 414/LIVINGSTON ROAD AND MD 414/MD 210 VIA COMMUNICATION CABLE. INTERSECTION LIGHTING WILL ALSO BE PROVIED AT THIS LOCATION. IT IS ASSUMED THAT MD 414 (OXON HILL ROAD) RUNS IN AN EAST-WEST DIRECTION. THE POSTED SPEED LIMIT IS 30 MPH.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE OPERATION, FULL-TRAFFIC ACTUATED MODE. MD 414 (OXON HILL ROAD) AND NB I-95/I-495 OFF RAMP WILL OPERATE IN SEPARATE PHASES. AN EXCLUSIVE LEFT-TURN PHASE WILL BE PROVIDED FOR THE EASTBOUND MD 414 (OXON HILL ROAD) APPROACH. THE SOUTHBOUND RIGHT-TURN FROM THE NB I-95/I-495 OFF-RAMP WILL OVERLAP WITH THE EASTBOUND MD 414 (OXON HILL ROAD) LEFT-TURN PHASE. PEDESTRIAN SIGNALS WILL OPERATE CONCURRENTLY WITH THE WESTBOUND MD 414 (OXON HILL ROAD) PHASE.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, SOLID STATE EIGHT-PHASE CONTROLLER WITH TELEMETRY MODULE AND VIDEO TRAFFIC DETECTION SYSTEM HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT 3 ARE AS FOLLOWS:

MR.MAJID SHAKIB
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-513-7358

MR.AUGUSTINE REBISH
ASSISTANT DISTRICT ENGINEER - UTILITIES
301-513-7350

~~MR.RALEIGH WEDLEY~~ MR. WAYNE MOWDY [1]
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

THE CONTACT PERSONS FOR THE OFFICE OF TRAFFIC AND SAFETY ARE AS FOLLOWS:

MR.RICHARD DAFF
DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR.ROBERT SYNDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7631

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7652

MR EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7676

THE POWER COMPANY REPRESENTATIVE IS:

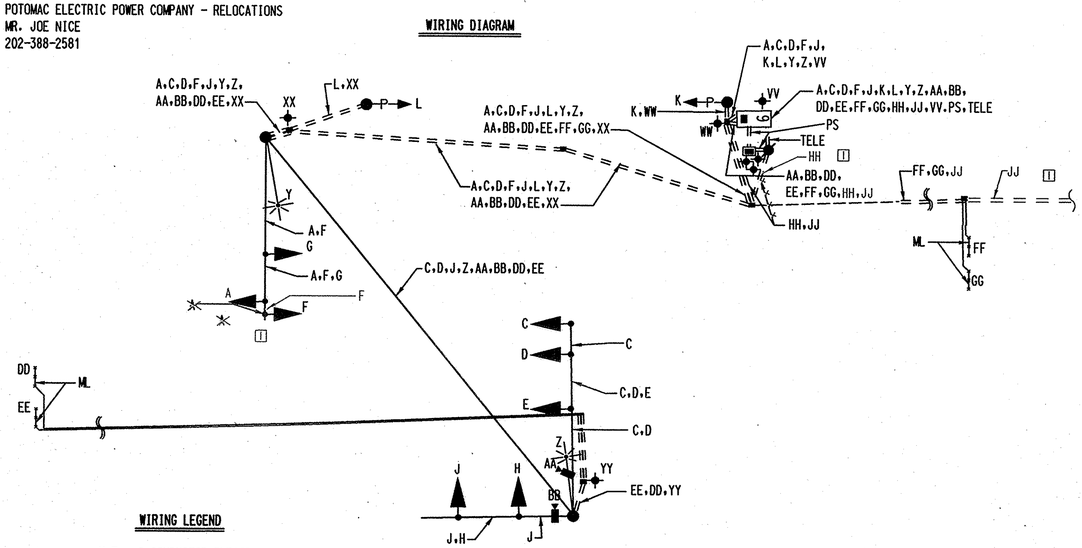
POTOMAC ELECTRIC POWER COMPANY - ELECTRIC SERVICE
MR. RICHARD CHILCOAT
301-967-5805

POTOMAC ELECTRIC POWER COMPANY - RELOCATIONS
MR. JOE NICE
202-388-2581

MD 414 OXON HILL ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

N

WIRING DIAGRAM



WIRING LEGEND

Y,Z - 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
K,L - 3 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
[1] ~~X,X~~,D,E,~~F,G~~,H - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
A,C,F,J - 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
AA,BB - VIDEO DETECTION CAMERA CONTROL CABLE
VV,WW,XX,YY - STRANDED BARE COPPER GROUND WIRE
PS - PROPOSED POWER SERVICE FEED (3)- 1 CONDUCTOR ELECTRICAL CABLES (NO. 4 A.W.G.)
⏚ - GROUND ROD ¾" x 10'
DD,EE,FF,GG - MICRO-LOOP PROBE LEAD-IN
ML - MICRO-LOOP PROBE SET
TELE - TELEPHONE DROP
HH,JJ - INTERCONNECT CABLES

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

CAT. CODE	QUANT.	UNIT	DESCRIPTION
900000	1	EA	VIDEO INTERFACE EQUIPMENT
971017	1	EA	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH TELEMETRY AND VIDEO TRAFFIC DETECTION SYSTEM HOUSED IN A NEMA SIZE "6 " BASE MOUNTED CABINET
973023	107	SF	SHEET ALUMINUM SIGNS CONSISTING OF: -2 EACH R3-5L (30"X36") - MAST ARM MOUNT -1 EACH D3-2 (VAR.X16") - MAST ARM MOUNT -2 EACH W3-3 (48"X48") W/"NEW" PANEL (30"X30") AND FLAGS - GROUND MOUNT -1 EACH ASSOCIATED SHIELD ASSEMBLY (30"X51") - POLE MOUNT -1 EACH ASSOCIATED SHIELD ASSEMBLY (48"X75") - POLE MOUNT
963010	1	EA	FOUR CHANNEL, TIME DELAY OUTPUT, LOOP DETECTOR AMPLIFIER

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

CAT. CODE	QUANT.	UNIT	DESCRIPTION
203030	5	CY	TEST PIT EXCAVATION
585620	180	LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
585624	110	LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
801004	12	CY	CONCRETE FOR SIGNAL FOUNDATION
801106	70	LF	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
802501	300	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805011	50	LF	1 INCH ELECTRICAL CONDUIT -GALVANIZED SLEEVE
805050	2	EA	WEATHER HEAD, 3 INCH
805125	50	LF	2 INCH SCHEDULE80 PVC CONDUIT-TRENCHED
805135	400	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	200	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
807405	1	EA	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 100 AMPS
810010	200	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
810550	2	EA	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE
810555	2	EA	MICROLOOP PROBE, 1000 FOOT LEAD IN CABLE
811001	6	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	45	SF	INSTALL GROUND MOUNTED SIGN
813015	62	SF	INSTALL OVERHEAD SIGN
816001	2	EA	VIDEO DETECTION CAMERA
816010	2	EA	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
818004	2	EA	10 FOOT BREAKAWAY PEDESTAL POLE
818041	1	EA	STEEL POLE WITH SINGLE 60 FOOT MAST ARM
818051	1	EA	STEEL POLE WITH TWIN 50 FOOT AND 70 FOOT MAST ARMS
822500	1	EA	AS-BUILT FOR TRAFFIC SIGNAL
831010	2	EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
833062	30	LF	4 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER
837001	7	EA	GROUND ROD -¾ INCH DIAMETER X 10 FOOT LENGTH
860272	26	EA	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860282	4	EA	12 INCH PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT
861106	300	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
[1]861107	900 ~~2100~~	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
[1]861108	1750 ~~550~~	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	800	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
862102	800	LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
866104	2	EA	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
869102	200	LF	STEEL SPAN WIRE -⅜ INCH DIAMETER
871117	1	EA	INSTALL EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT

C. ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR. NO ITEMS TO BE REMOVED.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	
	WK FL WK	WK FL WK	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G WK FL WK			
PHASE 1 & 6	~~G~~	~~G~~	G	G	R	R	R	R/~~G~~	DW	DW	
1 CHANGE	~~Y~~	~~Y~~	G	G	R	R	R	R/~~Y~~	DW	DW	
PHASE 2 & 6	~~R~~	~~R~~	G	G	G	G	R	R	WK	WK	
PED CLEAR	~~R~~	~~R~~	G	G	G	G	R	R	FL/DW	FL/DW	
2 & 6 CHANGE	~~R~~	~~R~~	Y	Y	Y	Y	R	R	DW	DW	
PHASE 4	~~R~~	~~R~~	R	R	R	R	G	G/~~G~~	DW	DW	
4 CHANGE	~~R~~	~~R~~	R	R	R	R	Y	Y/~~Y~~	DW	DW	
FLASHING	FL/~~R~~	FL/~~R~~	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	

SP-2 OF SP-3

REVISIONS
[1] REDLINE NO. 1 FEBRUARY 25, 2004
[2] ADDENDUM NO. 2 REPLACE SHEET NOVEMBER 24, 2003
MP

KCI TECHNOLOGIES
ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
10 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
21030-1888
(410) 316-7800

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

MD 414 (OXON HILL ROAD) AT NB I 95/ 495 RAMPS F-1 AND G

GENERAL INFORMATION SHEET

DRAWN BY: M. PIERRE	F.A.P. NO. DPWW-M013 (37)N	TS NO. 4135	SHEET NO.
CHECKED BY: J. LAWRENCE	S.H.A. NO. PG3605173		
SCALE: 1"=20'	COUNTY: PRINCE GEORGE'S	T.I.M.S. NO.	314 OF 374
DATE: NOVEMBER 2003	LOG MILE: 16041400.J6		

PLOTTED: 10:19 AM on Friday, February 13, 2004
BY: Manoj Mittal Divisions Transportation
FILE: m:\1998\0198405\0\0ge001.dgn