PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES RECONSTRUCTION OF AN EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF RANDOLPH ROAD AT CHAPMAN AVENUE/ MAPLE AVENUE IN MONTGOMERY COUNTY. RANDOLPH ROAD IS ASSUMED TO RUN IN AN EAST WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A FULLY-ACTUATED MODE USING SIX NEMA PHASES. EXCLUSIVE LEFT TURNS WILL BE PROVIDED FOR EASTBOUND, WESTBOUND RANDOLPH ROAD.
SPLIT PHASING WILL BE PROVIDED FOR NORTHBOUND MAPLE AVENUE AND SOUTHBOUND CHAPMAN AVENUE.

PEDESTRIAN OPERATION

NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTON MOVEMENTS TO CROSS THE EAST, WEST NORTH AND SOUTH LEGS OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSH BUTTON FOR AN EXTENDED TIME, THE PUSH BUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:
NORTH : "WAIT TO CROSS CHAPMAN AT RANDOLPH."
SOUTH: "WAIT TO CROSS MAPLE AT RANDOLPH."
EAST AND WEST: "WAIT TO CROSS RANDOLPH AT CHAPMAN."

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

   PROJECT CONTACTS:

   MR. JEFFREY WENTZ, ASSISTANT DISTRICT ENGINEER - TRAFFIC
   PHONE: (301) 513-7358
   MR. DUANE BERNDARD, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
   PHONE: (301) 513-7336
   MR. VERNON STINNETT, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
   PHONE: (301) 513-7304
   MR. AUGIE REBISH, UTILITY ENGINEER
   PHONE: (301) 513-7350
   MR. ROBERT SNYDER, SR. CHIEF TRAFFIC OPERATIONS DIVISION
   PHONE: (410) 787-7630

   MR. KAMAL HAMUD
   MONTGOMERY COUNTY
   240-777-8761

   MR. STEVE CUSTER
   PEPCO CUSTOMER DESIGN
   201 W. GUIDE DR.
   ROCKVILLE, MD 20850
   PHONE: (301) 548-4333

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00 - 30, 104.12 - 01, 104.13 - 01, 104.31 - 01, 104.32 - 01, 104.81- 02

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
816110	TRAFFIC SIGNAL CABINET NEMA SIZE 6	EA	1
900000	TRAFFIC SIGNAL CONTROLLER WITH VIDEO DETECTION INTERFACE EQUIPMENT,(FOR 5-8 CAMERAS).	EA	1
900000	MONTGOMERY COUNTY INTERCONNECT SPLICE CABINET	EA	3
963010	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT	EA	1
973023	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: R3-5(L) (30"X 36") MAST ARM MOUNT - 3 EACH R3-5(R) (30"X 36") MAST ARM MOUNT - 1 EACH D3-1(1) (96" X 16) MAST ARM MOUNT - 4 EACH (DUAL FACED), (CONFIRM MONTROSE PARKWAY BLOCK NUMBER) R10-1B (24"X24") MAST ARM MOUNT - 2 EACH R10-3(1)(9"X15") POLE MOUNT SIGN TO READ "PUSH BUTTON TO CROSS" - 8 EACH R3-6(MOD) (30"X 36") MAST ARM MOUNT - 1 EACH	SF	100

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

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
120500	MAINTENANCE OF TRAFFIC	LS	1
203030	TEST PIT EXCAVATION	CY	6
114035	12" WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT	LF	240
114045	24" WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT	LF	60
800000	AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTON STATION AND SIGN (5"X7" WITH BRAILLE DENOTING CROSSING STREET)	EA	8
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT	EA	16
800000	METERED SERVICE PEDESTAL	EA	1
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	16
801607	INSTALL SHEET ALUMINUM SIGN	SF	100
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	755
805155	4" SCHEDULE 80 RIGID PVC CONDUIT -SLOTTED	LF	560
805135	3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	150
805140	4" SCHEDULE 80 RIGID PVC CONDUIT -TRENCHED	LF	50
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	9
813015	INSTALL OVERHEAD SIGNS	SF	92
818004	10 FOOT BREAKAWAY PEDESTAL POLE (MD. STD. NO. 801.01-01 AND 816.16-01)	EA	7
818030	STEEL POLE WITH A SINGLE 38 FOOT MAST ARM	EA	2
818036	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM	EA	2
831010	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE	EA	2
832017	ELECTRICAL CABLE - 1 CONDUCTOR, NO 4 AWG, TYPE USE, 600V	LF	700
833062	4 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER	LF	40
837001	GROUND ROD - 3/4 INCH DIAMETER X 10-FOOT LENGTH	EA	7
860265	RELOCATE EXISTING SIGNAL HEAD	EA	3
860284	12" VEHICULAR LED TRAFFIC SIGNAL HEAD SECTION	EA	44
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	1070
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1200
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1500
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TRAY CABLE	LF	310
866103	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	2
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) ALUMINUM SHIELDED	LF	1450
866103	ELECTRICAL CABLE - 1 CONDUCTOR (250 KCMIL)	LF	150

PLOTTED: "09:34 AM on Tuesday, March 03, 2009"
BY: Ardalan Faghri Division: 0101 Transportation
FILE: M:\2007\0107770.db\drawings\pSG-N260_MD355.dgn

MONTROSE PARKWAY/ RANDOLPH ROAD RUN IN A EAST/WEST DIRECTION

SEQUENCE OF OPERATION SHEET
TRAFFIC OPERATIONS SECTION
DIVISION OF TRAFFIC ENGINEERING
MONTGOMERY COUNTY, MARYLAND

INTERSECTION: MONTROSE PARKWAY/ RANDOLPH ROAD AND CHAPMAN AVENUE/ MAPLE AVENUE

NO._____ SHT. OF

SIGNAL HEAD INDICATIONS				
SIGNAL NO.	1,2,4,5	3,6,9,12	7,8,10,11	13,14,15,16,17,18,19,20
TOTAL:	4	4	4	8
LEGEND □ OPTICALLY LIMITED R RED Y YELLOW G GREEN ← ARROW F FLASHING	R, ←Y, Y, ←G, G 12"	R, Y, G 12"	R, Y, G, ←G 12"	12" LED COUNTDOWN PEDESTRIAN SIGNAL

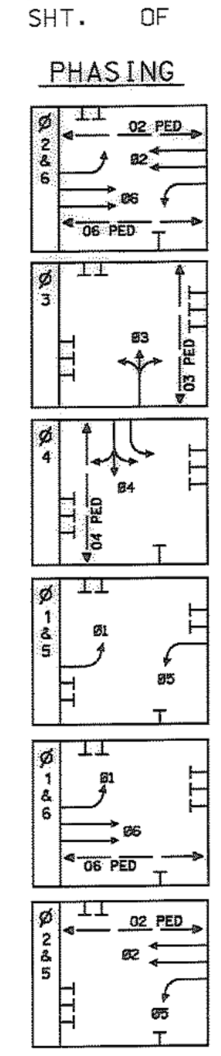
SEQUENCE OF OPERATION

SIGNAL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	FLASH
1	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	←G-R	←Y-R	R	←G-G	←Y-G	G	R	R	R	FL/Y
2	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	←G-R	←Y-R	R	←G-G	←Y-G	G	R	R	R	FL/Y
3	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	R	R	R	FL/Y
4	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	←G-R	←Y-R	R	R	R	R	←G-G	←Y-G	G	FL/Y
5	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	←G-R	←Y-R	R	R	R	R	←G-G	←Y-G	G	FL/Y
6	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	FL/Y
7	R	R	R	R	←G-G	←G-G	←G-G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FL/R
8	R	R	R	R	←G-G	←G-G	←G-G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FL/R
9	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FL/R
10	R	R	R	R	R	R	R	R	R	←G-G	←G-G	←G-G	Y	R	R	R	R	R	R	R	R	R	R	FL/R
11	R	R	R	R	R	R	R	R	R	←G-G	←G-G	←G-G	Y	R	R	R	R	R	R	R	R	R	R	FL/R
12	R	R	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	FL/R
13	DW	F/DW	DW	DW	DW	DW	DW	DW	DW	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
14	DW	F/DW	DW	DW	DW	DW	DW	DW	DW	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
15	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	DW	DW	DW	DARK
16	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	DW	DW	DW	DARK
17	DW	DW	DW	DW	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
18	DW	DW	DW	DW	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
19	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	WK	DARK
20	WK	F/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	WK	WK	DARK
PHASE	2&6			ALL RED	3				ALL RED	4				ALL RED	1&5		ALL RED	1&6		ALL RED	2&5		ALL RED	

NOTES:

SUBMITTED:_____ CHECKED:_____ APPROVED:_____
IN SERVICE BY:_____ DATE:_____ TIME:_____

PHASING

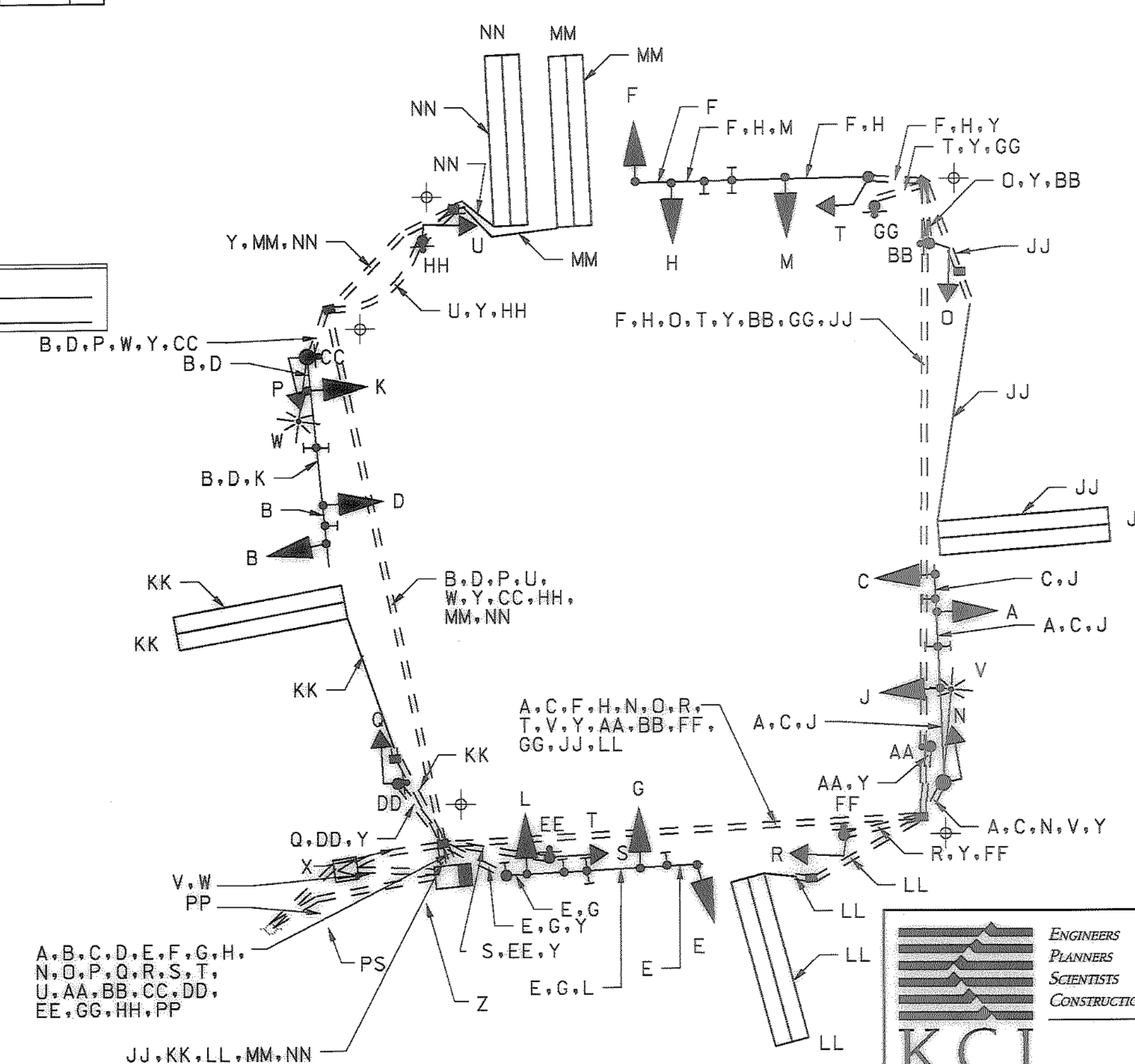


SHEET NO. ____OF____

KEY

A,B,C,D, E,F,G,H	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J,K,L,M, N,O,P,Q, R,S,T,U	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
V,W	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
AA,BB,CC,DD, EE,FF,GG,HH	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
JJ,KK,LL, MM,NN	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) ALUMINIUM SHIELDED
X	1-12 PAIR SELF-SUPPORTING INTERCONNECT CABLE
Y	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
Z	POWER SERVICE UNDERGROUND 3 WIRE 1 CONDUCTOR (NO.4 AWG)
⊕	GROUND ROD
PS	3-1 CONDUCTOR ELECTRICAL CABLES (250 KCMIL)
PP	1 - 12 PAIR INTERCONNECT CABLE

MONTROSE PARKWAY/ RANDOLPH ROAD IS ASSUMED TO RUN IN AN EAST/WEST DIRECTION



ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
KCI TECHNOLOGIES

NO.	REVISION	BY	APP'D	DATE
1	MD 355 INTERCHANGE MO 8305171			7/17/09

DESIGNED BY:	AMH	DATE N/A
DRAWN BY:	YRJ/JVB	DATE N/A
CHECKED BY:	JFL	DATE N/A
DRAWING NO.:		

Approved: _____
Chief, Division of Traffic Engineering

Reviewed: _____
Manager, Traffic Engineering Studies

Reviewed: _____
Manager, Transportation Systems Engineering

Recommended: _____
Engineer, Transportation Systems Engineering

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING & OPERATIONS
MONTGOMERY COUNTY, MARYLAND

MD 355 AT MONTROSE RD./RANDOLPH RD.
FROM 'OLD' OLD GEORGETOWN RD. TO MAPLE/CHAPMAN AVE.
(DESIGN-BUILD)

MONTROSE PARKWAY/RANDOLPH ROAD AT MAPLE AVE./CHAPMAN AVE.
TEMPORARY TRAFFIC SIGNAL PLAN
STAGE 4

TIMS # G248
TS 10895A

SP - 37 OF 41 SHEET 41 OF 84