PROJECT DESCRIPTION

GENERAL

THESE INTERSECTION IMPROVEMENTS INCLUDE ADDING A THROUGH LANE ON EASTBOUND MD 124, A LEFT LANE ON NORTHBOUND MD 355, AND CHANGING WESTBOUND MONTGOMERY AVE. RIGHT TURN LANE TO A RIGHT/THROUGH LANE. THE INTERSECTION SIGNALS ARE TO BE RECONSTRUCTED DUE TO GEOMETRIC IMPROVEMENTS. EAST LEG AND WEST LEG WILL BE CHANGED TO HAVE ACTUATED PEDESTRIAN PHASES. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE EXISTING PHASING, CABINET AND CONTROLLER ARE TO BE UTILIZED.

THIS INTERSECTION IS TO OPERATE IN A NEMA SEVEN-PHASE, SEMI-TRAFFIC-ACTUATED MODE.

PROJECT CONTACTS

MR. CHARLIE WATKINS
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(301) 513-7311

MR. JOSEPH GECKLE
DISTRICT UTILITY ENGINEER
(301) 513-7350

MR. MAJID SHAKIB
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- TRAFFIC
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MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATION
DIVISION
(410) 787-7630

MR. RANDY BROWN
ASSISTANT DISTRICT ENGINEER
- MAINTENANCE
(301) 513-7304

MR. ROBERT GONZALES
MCDPW
(240) 777-8761

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION

QUANTITY	UNIT	SPEC. SECTION	DESCRIPTION
213	SF		SHEET ALUMINUM SIGN TO CONSIST OF:
	-	- 6 EA	R3-5(L) SIGN (30"x 36") - SPAN WIRE MOUNT
	-	- 2 EA	D3-2 SIGN (16"x VARIABLE), "Mount. Village AVE (XXXX)". - SPAN WIRE MOUNT
	-	- 2 EA	D3-2 SIGN (16"x VARIABLE), "Frederick RD (XXXX)" - SPAN WIRE MOUNT
	-	- 2 EA	R3-2 SIGN (24"x 24") - SPAN WIRE MOUNT
#51	-	- 1 EA	ASSOCIATED SHIELD ASSY. (30" X 51") "NORTH"/ "MD 124"/"RIGHT ARROW" - POLE MOUNT
#55	-	- 1 EA	ASSOCIATED SHIELD ASSY. (30 "X 51") "SOUTH" "MD 124"/"RIGHT ARROW" - POLE MOUNT
#54	-	- 1 EA	ASSOCIATED SHIELD ASSY. (48" X 75") "NORTH"/ "MD 124"/"LEFT ARROW" - POLE MOUNT
#52	-	- 1 EA	ASSOCIATED SHIELD ASSY. (48" X 75") "SOUTH"/ "MD 124"/"LEFT ARROW" - POLE MOUNT
#53	-	- 1 EA	ASSOCIATED SHIELD ASSY. (30" X 51") "SOUTH"/ "MD 124"/"RIGHT ARROW" - POLE MOUNT

EQUIPMENT LIST "B"

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

QUANTITY	UNIT	SPEC. SECTION	DESCRIPTION
1	CY	201	TEST PIT EXCAVATION
6	CY	801	FURNISH AND INSTALL CONCRETE SIGNAL FOUNDATION
10	LF	805	FURNISH AND INSTALL 2 IN. (SCHEDULE 80) PVC CONDUIT - TRENCHED
20	LF	805	FURNISH AND INSTALL 3 IN. (SCHEDULE 80) PVC CONDUIT - TRENCHED
30	LF	805	FURNISH AND INSTALL 4 IN. (SCHEDULE 80) PVC CONDUIT - TRENCHED
2	EA	SP	FURNISH AND INSTALL 12 IN. x 30 FT. STRAIN STEEL POLE (1 3/4" x 90" ANCHOR BOLTS)
3	EA	806	FURNISH AND INSTALL 20 FT. LIGHTING BRACKET FOR TRAFFIC SIGNAL STRUCTURE
3	EA	806	FURNISH AND INSTALL 250 WATT HPS LAMP AND LUMINAIRE
131	SF	813	INSTALL SHEET ALUMINUM SIGN - OVERHEAD MOUNT
82	SF	813	INSTALL SHEET ALUMINUM SIGN - POLE MOUNT
3	EA	804	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER x 10 FT. LENGTH
500	LF	810	FURNISH AND INSTALL 2 CONDUCTOR ELECTRICAL TRAY CABLE (NO. 12 A.W.G.)
2050	LF	810	FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
440	LF	810	FURNISH AND INSTALL 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
1080	LF	810	FURNISH AND INSTALL 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
3360	LF	810	FURNISH AND INSTALL 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
460	LF	819	FURNISH AND INSTALL 3/8 IN. STEEL SPAN WIRE
120	LF	810	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
3	EA	817	INSTALL PEDESTRIAN PUSH BUTTON AND R10-4(I) SIGN
LS	LS	SP	REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT
54	EA	SP	FURNISH AND INSTALL TRAFFIC SIGNAL HEAD, 12 IN. SECTION - SPAN WIRE MOUNT
1	EA	SP	FURNISH AND INSTALL PEDESTRIAN SIGNAL HEAD, 12 IN. SECTION - POLE MOUNT
660	LF	SP	12 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
230	LF	SP	24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING

PHASE CHART

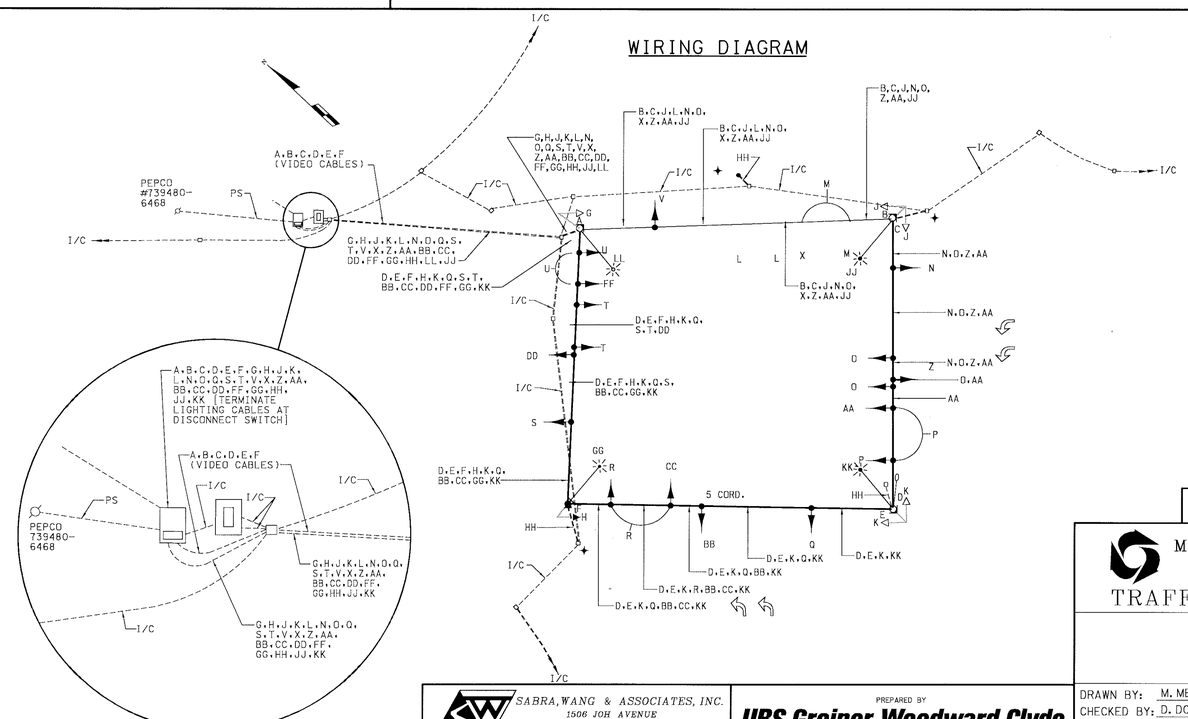
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	←R Y ←G	R Y G	←R ←Y ←G	←R ←Y ←G	R Y G	R Y G	←R ←Y ←G	R Y G	←R ←Y ←G	←R ←Y ←G	R Y G	R Y G	←R ←Y ←G	R Y G	←R ←Y ←G	←R ←Y ←G	R Y G	R Y G	R Y G	R Y G	R Y G	✋	✋	✋	✋	✋	✋
PHASE 1 & 6	←G—	G	←G—	←G—	G	G	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 CHANGE	←Y—	G	←Y—	←Y—	G	G	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 6	←R—	G	←R—	←R—	G	G	←R—	G	←R—	←R—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 & 6 CHANGE	←R—	Y	←R—	←R—	Y	Y	←R—	Y	←R—	←R—	Y	Y	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 ALT. & 6	←R—	G	←R—	←R—	G	G	←R—	G	←R—	←R—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	WK	DW	DW	WK	DW	DW
PED. CLEARANCE	←R—	G	←R—	←R—	G	G	←R—	G	←R—	←R—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	FL/DW	DW	DW	FL/DW	DW	DW
2 ALT. & 6 CHANGE	←R—	Y	←R—	←R—	Y	Y	←R—	Y	←R—	←R—	Y	Y	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 6 ALT.	←R—	G	←R—	←R—	G	G	←R—	G	←R—	←R—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	DW	WK	WK	DW	DW	DW
PED. CLEARANCE	←R—	G	←R—	←R—	G	G	←R—	G	←R—	←R—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	DW	FL/DW	FL/DW	DW	DW	DW
2 & 6 ALT. CHANGE	←R—	Y	←R—	←R—	Y	Y	←R—	Y	←R—	←R—	Y	Y	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 ALT & 6 ALT.	←R—	G	←R—	←R—	G	G	←R—	G	←R—	←R—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED. CLEARANCE	←R—	G	←R—	←R—	G	G	←R—	G	←R—	←R—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 ALT. & 6 ALT. CHANGE	←R—	Y	←R—	←R—	Y	Y	←R—	Y	←R—	←R—	Y	Y	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 5	←R—	R	←R—	←R—	R	R	←G—	G	←G—	←G—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
5 CHANGE	←R—	R	←R—	←R—	R	R	←Y—	G	←Y—	←Y—	G	G	←R—	R	←R—	←R—	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 7	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	←G—	G	←G—	←G—	G	R	R	R	R	DW	DW	DW	DW	DW	DW
7 CHANGE	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	←Y—	G	←Y—	←Y—	G	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	←R—	G	←R—	←R—	G	G	G	G	G	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	←R—	Y	←R—	←R—	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT. & 8	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	←R—	G	←R—	←R—	G	G	G	G	G	DW	DW	DW	DW	WK	WK
PED. CLEARANCE	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	←R—	G	←R—	←R—	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
4 ALT. & 8 CHANGE	←R—	R	←R—	←R—	R	R	←R—	R	←R—	←R—	R	R	←R—	Y	←R—	←R—	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/ ←R—	FL/Y	FL/ ←R—	FL/ ←R—	FL/Y	FL/Y	FL/ ←R—	FL/Y	FL/ ←R—	FL/ ←R—	FL/Y	FL/Y	FL/ ←R—	FL/R	FL/ ←R—	FL/ ←R—	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE SYSTEMS TECHNICAL CENTER, 1283 SEVEN LOCKS ROAD, BUILDING "C",ROCKVILLE, MD. 20852. A TWENTY-FOUR (24) HOUR NOTICE IS REQUIRED PRIOR TO DELIVERY. CONTACT MR. EMIL WOLONIN AT (301) 271-2208.

QUANTITY	UNIT	DESCRIPTION
1	EA	STEEL STRAIN POLE
1	EA	STEEL STRAIN POLE WITH LUMINAIRE
14	EA	TRAFFIC SIGNAL - 3 SECTION HEADS
2	EA	PEDESTRIAN SIGNAL - 2 SECTION HEADS
14	EA	OVERHEAD MOUNTED SIGN
8	EA	POLE MOUNTED SIGN

WIRING DIAGRAM



WIRING KEY

A D, B E, C F — 2 CONDUCTOR CABLE (NO. 14 A.W.G.)

G, H — 3-CONDUCTOR CABLE (NO. 14 A.W.G.)

J O T, K P U, L Q BB, M R DD, N S — 5-CONDUCTOR CABLE (NO. 14 A.W.G.)

V AA, X CC, Z DD, FF — 7-CONDUCTOR CABLE (NO. 14 A.W.G.)

GG, JJ, KK, LL — 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)

HH – BARE COPPER STRANDED GROUND WIRE (NO. 6 A.W.G.)

PS – POWER SERVICE

✦ – 3/4 IN. X 10 FT. GROUND ROD

I/C – INTERCONNECT CABLES

MAINTENANCE OF TRAFFIC SIGNAL - PHASE II

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

GENERAL INFORMATION PLAN

MD 355 AND MD 124

SABRA, WANG & ASSOCIATES, INC.
1506 JOH AVENUE
SUITE 180
BALTIMORE, MD 21227
(410) 737-6564

PREPARED BY
URS Greiner Woodward Clyde
HUNT VALLEY, MARYLAND

DRAWN BY: M. MEARS	F.A.P. NO.	TS NO. 28E	SHEET NO.
CHECKED BY: D. DODA	S.H.A. NO.		
SCALE:	COUNTY: MONTGOMERY	T.I.M.S. NO. D124	33 OF 56
DATE:	LOG MILE: 150355\5.55		