W. INSTALL NON-INVASIVE MICRO PROBES.

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 80 (FINGERBOARD ROAD) AND SINGLETON DRIVE/ PONTIUS COURT IN FREDERICK COUNTY. ALSO, A BASE MOUNTED CABINET, STREET LIGHTING, PAVEMENT MARKINGS AND SIGNS WILL BE INSTALLED AT THE INTERSECTION.

MD 80 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION SHALL OPERATE IN A NEMA (8) EIGHT PHASE, FULL TRAFFIC ACTUATED MODE, WITH A PUSHBUTTON ACTUATED PEDESTRIAN MOVEMENT ACROSS THE WEST LEG OF MD 80 (FINGERBOARD ROAD) AND CONCURRENT MOVEMENTS ALONG THE NORTH AND SOUTH LEGS OF SINGLETON DRIVE/PONTIUS COURT. THE INTERSECTION IS INTERCONNECTED WITH CAMPUS DRIVE. THE SIGNAL SHALL HAVE A FLASHING MODE. ALSO, A NEMA EIGHT PHASE, FULL TRAFFIC ACTUATED CONTROLLED HOUSED IN A SIZE '6' BASE-MOUNTED CABINET SERVICED BY A METERED PEDESTAL POLE WITH AN UNDERGROUND UTILITY FEED.

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE COUNTY

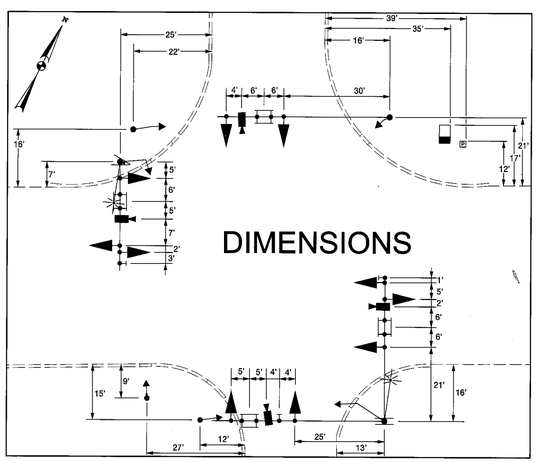
QUANTITY	DESCRIPTION
1 EA	[UPDATED] (CONT/CAB/ADD) DETECTOR RACK POWER SUPPLY
1 EA	(CONT/CAB/ADD) DETECTOR AMPLIFIER 4-CH RACK MT
1 EA	(CONT/CAB/ADD) DETECTOR RACK POWER SUPPLY
1 EA	[UPDATED] 4 CHANNEL DETECTOR AMPLIFIER
1 EA	CABINET W/ TELEMETRY, SIZE 6
1 EA	CONTROLLER ASC II W/ TELEMETRY
236 SF	[UPDATED] SHEET ALUMINUM SIGN
2 EA	W3-3 (New Signal Ahead sign with panel and flags)

* THE CONTRACTOR SHALL SUBMIT THE CABINET + CONTROLLER TO SHA FOR TESTING PRIOR TO INSTALLATION. THE CONTRACTOR SHALL CONTACT MR. ED. ROBENHILER AT 410-787-7650 TO MAKE THE NECESSARY ARRANGEMENTS.

EQUIPMENT LISTS (cont.)

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

ITEM	QUANTITY	DESCRIPTION
1001	2 EA	MAINTENANCE OF TRAFFIC
2002	5 CY	TEST PIT EXCAVATION
5005	420 LF	F&I 12 IN WHT HEAT APP PREFORMED THERMO PAVE MARK
5006	120 LF	F&I 24 IN WHT HEAT APP PREFORMED THERMO PAVE MARK
6004	750 SF	F&I 4 INCH CONCRETE SIDEWALK
8001	15 CY	F&I CONCRETE FOUNDATION
8002	6 EA	F&I 12 IN PED SIG HEAD SECTION
8007	1 EA	F&I CONTROL CABLE, 100', VIDEO DETECTION
8008	3 EA	F&I CONTROL CABLE, 200', VIDEO DETECTION
8018	3 EA	F&I PED POLE (ANY SIZE)
8027	32 SF	F&I DETECTABLE WARNING SURFACES
8030	66 LF	F&I WOOD SIGN SUPPORTS 4" X 6"
8031	370 LF	F&I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8037	130 LF	F&I 3" SCHEDULE 80 RIGID PVC CONDUIT - BORED
8038	290 LF	F&I 4" SCHEDULE 80 RIGID PVC CONDUIT - BORED
8039	50 LF	F&I 2" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8040	860 LF	F&I 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8041	50 LF	F&I 4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8046	1 EA	F&I METERED SERVICE PEDESTAL
8047	1 EA	F&I ELECTRICAL UTILITY SERVICE EQUIPMENT
8048	30 LF	F&I ELECTRICAL CABLE 1-COND. NO. 4 AWG- THHN/THWN
8052	2 EA	F&I NON-INVASIVE DETECTOR, 500' LEAD-IN CABLE
8053	2 EA	F&I NON-INVASIVE DETECTOR, 1000' LEAD-IN CABLE
8054	10 EA	F&I ELECTRICAL HANDHOLE
8056	126 SF	INSTALL GROUND MOUNTED SIGN
8057	155 SF	INSTALL OVERHEAD SIGN
8058	4 EA	F&I VIDEO DETECTION CAMERA
8063	1 EA	F&I STEEL POLE WITH A SINGLE 38' MAST ARM
8065	1 EA	F&I STEEL POLE WITH A SINGLE 60' MAST ARM
8066	1 EA	F&I STEEL POLE WITH TWIN 50' AND 60' MAST ARMS
8071	2 EA	F&I 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
8075	7 EA	F&I GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8076	6 EA	F&I 8" VEHICULAT TRAFFIC SIGNAL HEAD SECTION
8077	32 EA	F&I 12" VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8080	3 EA	CUT, CAP, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8083	470 LF	F&I ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG)
8085	1160 LF	F&I ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8086	1240 LF	F&I ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8087	165 LF	F&I ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TC
8090	2 EA	F&I PUSHBUTTON AND SIGN
8091	2 EA	F&I 15' LIGHTING ARM, CLAMP ON
8096	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT



MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.00 - 104.00-30
STANDARD NO. MD-104.31-01 (FLAGGING OPERATION)
STANDARD NO. MD-104.33-01 (SHOULDER WORK)
STANDARD NO. MD-104.35 (LANE SHIFT)
STANDARD NO. MD-104.32-01 (INTERSECTION FLAGGING OPERATION)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. ROBERT FISHER
DISTRICT ENGINEER
PHONE: (301) 624-8140

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8141

MS. ANDREA ABEND
DISTRICT UTILITIES ENGINEER
PHONE: (310) 624-8116

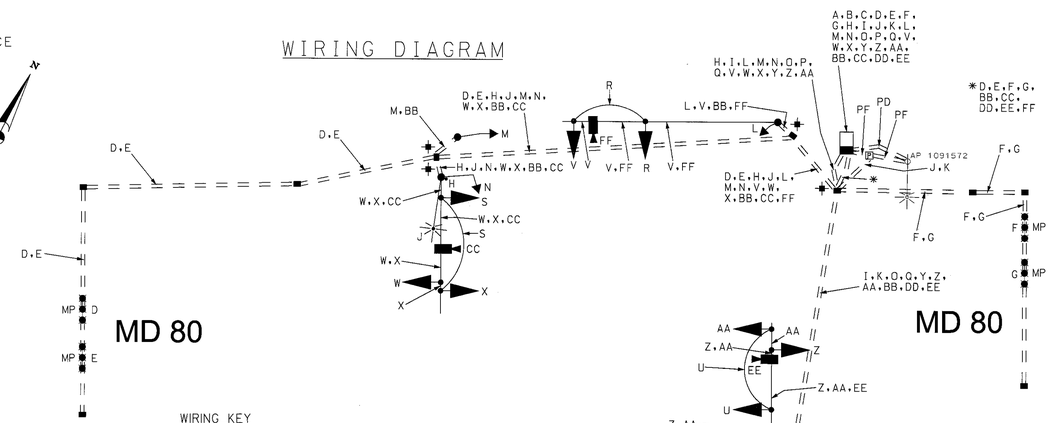
MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. DAVE COYNE
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 624-8106

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase 1 & 5	G G	G G	R	G G	G G	R	R	R	R	R	DW	DW	DW	DW	DW	DW
CHANGE TO PHASES 1+6 OR 2+5 OR 2+6																
Phase 1 & 6	G G	G G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 & 6 Change	G Y	G Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 2 & 5	R	R	R	G G	G G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
2 & 5 Change	R	R	R	G Y	G Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW
Ped Clear	G	G	G	G	G	G	R	R	R	R	FL/WK	FL/WK	FL/WK	FL/WK	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
Phase 4 Alt.	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	WK	WK
Ped Clear	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/WK	FL/WK
4 Alt. Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A.B.C — 1 CONDUCTOR COPPER WIRE (NO.4 AWG)
D.E.F.G — NON-INVASIVE MICRO-LOOP LEAD-IN
H.I — 2 CONDUCTOR (NO. 14 AWG)
J.K — 2 CONDUCTOR TRAY CABLE (NO.12 AWG)
L.M.N.O.P
Q.R.S.T.U — 5 CONDUCTOR (NO. 14 AWG)
V.W.X.Y.Z.AA — 7 CONDUCTOR (NO. 14 AWG)
BB — STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
CC.DD.EE.FF — VIDEO DETECTION CABLE
MP — NON-INVASIVE MICRO PROBES
PF — PROPOSED UNDERGROUND FEED - BY ALLEGENY POWER COMPANY
PD — PROPOSED PHONE DROP
— GROUND ROD

BAI BRUDIS & ASSOCIATES, INC.
CONSULTING ENGINEERS
9220 RUMSEY ROAD: SUITE 110
COLUMBIA, MARYLAND 21045
(410)-884-3607

APPROVALS	REVISIONS
TEAM LEADER	
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

SURVEY BOOK NO.

PLOTTED: #DATE#
FILE: #FILE#

BY: #USERNAME#

BY/WM83

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
TRAFFIC ENGINEERING DESIGN DIVISION
OFFICE OF TRAFFIC & SAFETY

MD 80 (FINGERBOARD ROAD) AND SINGLETON DRIVE /PONTIUS COURT

GENERAL INFORMATION SHEET

SG-02

SCALE 1" = 20' DATE 2/25/05 CONTRACT NO.

DESIGNED BY M.A. MEARS
DRAWN BY CJP
CHECKED BY RJM
COUNTY FREDERICK

TS NO. 4383
T.I.M.S. NO. G795
F.A.P. NO.
LOGMILE 10008006.23

DRAWING NO. 2 OF 3

SHEET NO. 2 OF 3

INDEXED