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)~~ APS PUSHBUTTONS AND LED PEDESTRIAN COUNTDOWN SIGNALS ACROSS THE WEST LEG OF MD 80 (FINGERBOARD ROAD), PONTIUS COURT ~~AND SINGLETON DRIVE~~ [2] [1] 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.

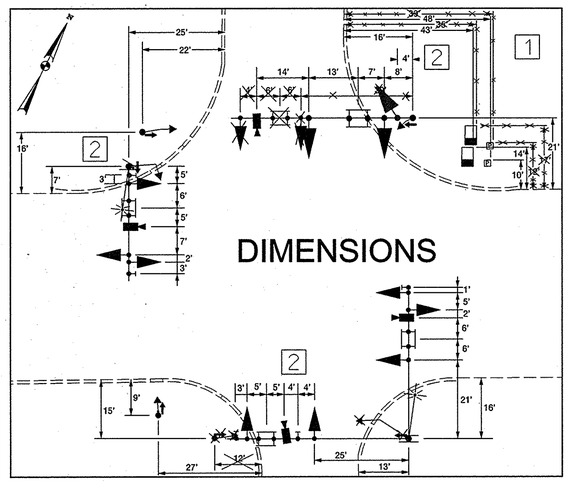
HIBs SHALL BE INSTALLED ALONG EB AND WB MD 80 AND SHALL FLASH DURING SCHOOL HOURS. THE LED SIGNS SHALL OPERATE WHEN THE HIB ARE IN OPERATION.

EQUIPMENT LISTS

~~A. EQUIPMENT TO BE SUPPLIED BY THE COUNTY~~

A. EQUIPMENT TO BE SUPPLIED BY THE STATE HIGHWAY ADMINISTRATION (SHA). [1]

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
242 ~~236~~ SF	[UPDATED] SHEET ALUMINUM SIGN
2 EA	W3-3 (New Signal Ahead sign with panel and flags)
2 EA	LED SIGN "NO TURN ON RED", 30" x 30"



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

(cont.)

EQUIPMENT LISTS

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	[2] 600 ~~880~~ ~~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	16 ~~15~~	CY	F&I CONCRETE FOUNDATION
8002	0 ~~6~~	EA	F&I 12 IN PED SIG HEAD SECTION
8007	1	EA	[2] F&I CONTROL CABLE, 100', VIDEO DETECTION
8008	[1] 3	EA	2 F&I CONTROL CABLE, 200', VIDEO DETECTION
8018	~~3~~	EA	F&I PED POLE (ANY SIZE)
8020	1	EA	REMOVE CONCRETE FOUNDATION 12"
8027	32	SF	F&I DETECTABLE WARNING SURFACES
8030	[2] 66	LF	F&I WOOD SIGN SUPPORTS 4" X 6"
8031	360 ~~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	161 ~~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	[2] 6 ~~7~~	EA	F&I GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8076	9 ~~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	1140 ~~470~~	LF	F&I ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG)
8085	[2] 890 1280 ~~160~~	LF	F&I ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8086	1290 ~~240~~	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
8099-A	[2] 4 ~~6~~	EA	F&I 16" 1 WAY LED COUNTDOWN PEDESTRIAN SIGNAL
8103-A	4 ~~6~~	EA	[1] F&I APS PUSHBUTTON AND ASSEMBLY
8104-A	1	EA	F&I APS CENTAL CONTROL UNIT
NEG	1	EA	REMOVE AND SALVAGE ELECTRICAL PEDESTAL

PHASE CHART

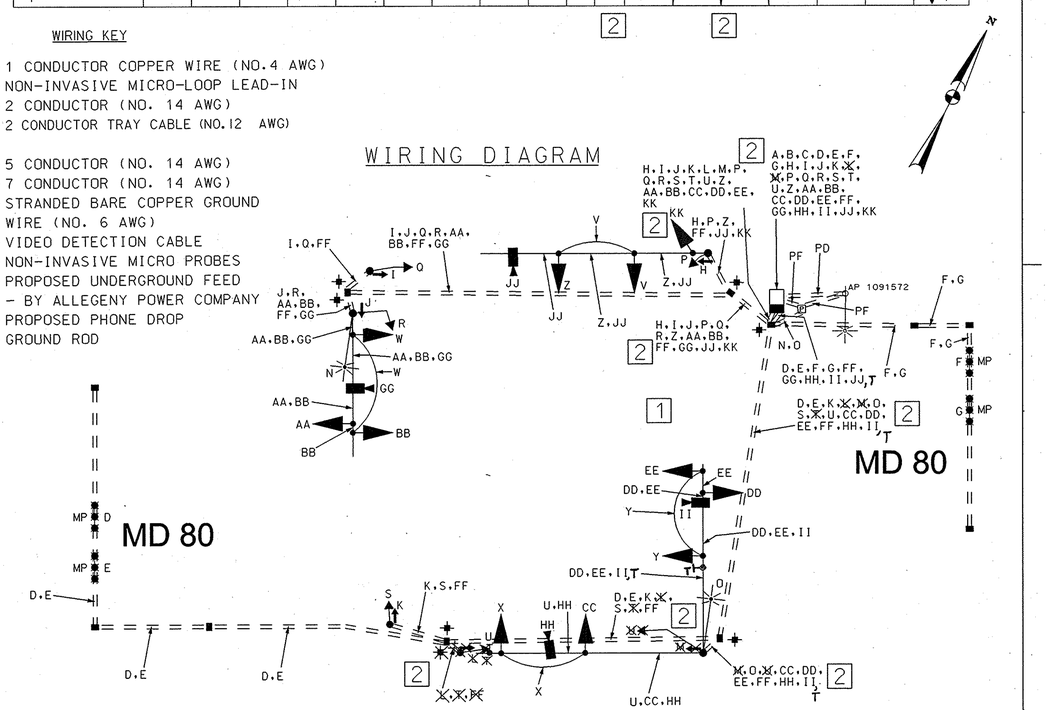
	1	2	3	4	5	6	7	8	9	10	12	11	12	13	14	15	16	[2] 14,15,16 11 ~~13~~ [1]
Phase 1 & 5	G ◄G-	G ◄G-	R	G ◄G-	G ◄G-	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	
CHANGE TO PHASES 1+6 OR 2+5 OR 2+6																		
Phase 1 & 6	G ◄G-	G ◄G-	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	
1 & 6 Change	G ◄Y-	G ◄Y-	Y	R	R	R	R	R	R	R	R	DW	DW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

[2] [2]

WIRING KEY

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

WIRING DIAGRAM



REVISIONS	
[1] REVISION #1 1/5/06 RELOCATE CABINET, PEDESTAL POLE / ADD APS SIGNALS	CJP
[2] REVISION #2 7/20/06 INSTALL HIB, SIGNAL/REMOVE PONTIUS CT. PED. CROSSING	RJM

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

SURVEY BOOK NO.

PLOTTED: $DATE$
FILE: $FILE$

INDEXED

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COLUMBIA, MARYLAND 21045
(410)-884-3607

SHA V8 CAD Standards Version: 0.0 Border Rev. Date: March 26, 2004
BY: $USERNAME$