PROJECT DESCRIPTION

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE EASTBOUND MD 32 RAMP/DORSEY RUN ROAD INTERSECTION IN HOWARD COUNTY. MD 32 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION. DORSEY RUN ROAD IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION SHALL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC ACTUATED MODE, WITH THE DORSEY RUN ROAD APPROACHES RUNNING CONCURRENTLY. EASTBOUND MD 32 AND WESTBOUND HENKEL'S LANE SHALL BE SPLIT PHASED.

THE SIGNAL SHALL BE INTERCONNECTED TO THE WESTBOUND MD 32/DORSEY RUN ROAD AND THE DORSEY RUN/GUILFORD ROAD SIGNALIZED INTERSECTIONS.

CONTROLLER REQUIREMENTS

INSTALL A FULL TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER AND ASSOCIATED EQUIPMENT IN A NEMA "6" BASE MOUNTED CABINET. THE PRESENCE AND SAMPLING DETECTION REGIONS SHALL BE MONITORED/ACTUATED WITH VIDEO-DETECTION CAMERAS, AND THE ADVANCED DETECTION REGIONS SHALL BE MONITORED/ACTUATED WITH MICRO-LOOP PROBE DETECTORS.

EQUIPMENT LIST "A"

A. Equipment to be Furnished by the Adminstration

Item No.	Item Code	Quantity	Description
	971017	1 EA	Eight Phase (fully Actuated) Controller and NEMA Size 6 Cabinet - Base Mount
	973023	96 SF	Sheet Aluminum Signs
	900000	1 EA	Video Interface Equipment (5 to 8 Cameras)

EQUIPMENT LIST "B"

B. Equipment to be Furnished and/or installed by the Contractor

Item No.	Item Code	Quantity	Description
1001	100000	3 EA	Maintenance of Traffic
6004	655104	185 SF	4 Inch Concrete Sidewalk
8001	800000	11 CY	F & I Concrete for Signal Foundation
8021	801106	32 LF	F & I Wood Sign Support 4 Inch x 6 Inch
8022	802501	500 LF	F & I No. 6 AWG Stranded Bare Copper Ground Wire
8024	805011	20 LF	F & I 1 Inch Electrical Conduit - Galvanized Sleeve
8031	805135	490 LF	F & I 3 Inch Schedule 80 Rigid PVC Conduit - Trenched
8032	805140	50 LF	F & I 4 Inch Schedule 80 Rigid PVC Conduit - Trenched
8035	805155	510 LF	F & I 4 Inch Schedule 80 Rigid PVC Conduit - Slotted
8038	807400	1 EA	F & I Electrical Utility Service Equipment 120/240 Volts 60 AMPS
8041	810550	3 EA	F & I Microloop Probe, 500 FT lead in Cable
8045	812002	7 EA	F & I Electrical Handhole
8047	813014	26 SF	Install Ground Mounted sign
8048	813015	70 SF	Install Overhead Signs
8049	816005	5 EA	F & I Video Detection Camera
8050	816005	5 EA	F & I 250' Foot Video Cable to Controller
8060	818051	2 EA	F & I Steel Pole with a Twin 50' And 70' Mast Arm
8064	831010	2 EA	F & I 250 Watt H.P.S. Lamp & Luminaire Rectangular
8069	837001	4 EA	F & I Ground Rod - ¾" Diameter x 10 Foot Length
8070	860270	6 EA	F & I 8 Inch Vehicular Traffic Signal Head Section
8071	860272	40 EA	F & I 12 Inch Vehicular Traffic Signal Head Section
8074	860292	4 EA	Cut, Clean, Galvanize and Cap Traffic Signal Structure
8079	861107	1300 LF	F & I Electrical Cable - 5 Conductor (No. 14 AWG)
8080	861108	900 LF	F & I Electrical Cable - 7 Conductor (No. 14 AWG)
8081	861116	340 LF	F & I Electrical Cable - 2 Conductor (No. 12 AWG) Tray Cable
8083	862102	170 LF	F & I Saw Cut for Signal (Loop Detector)
8085	866103	2 EA	F & I 15' Foot Bracket Arm for Signal Structure
8090	871202	1 EA	Install Controller and Cabinet-Base Mount

EQUIPMENT LIST "C"

C. Equipment to be Remove and Discard

NONE

EQUIPMENT LIST "D"

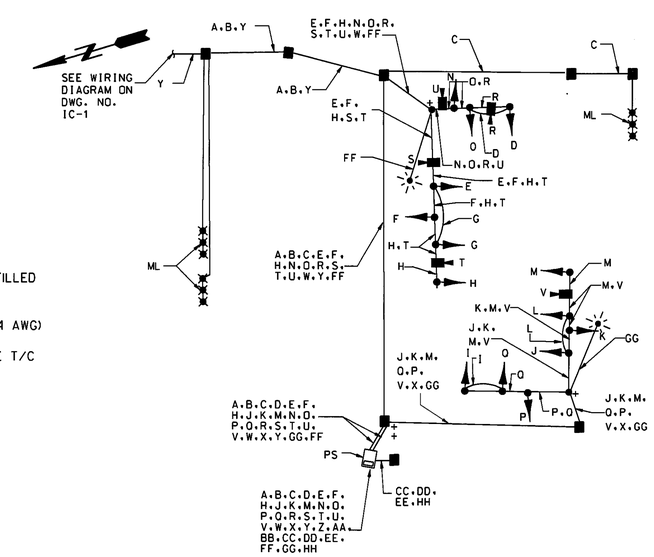
D. Equipment that is to be returned to the Administration

NONE

WIRING KEY

A,B,C,	MICRO-LOOP PROBE LEAD-IN
D,E,F,G,H, I,J,K,L,M	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
N,O,P,Q	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
R,S,T,U,V	VIDEO DETECTION LEAD-IN CABLE
W,X,HH	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
Y	12 PAIR COMMUNICATION CABLE, JELLYFILLED (NO. 19 A.W.G.)
Z,AA,BB,CC,DD,EE	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)
FF,GG	2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 AWG)
ML	MICRO LOOP
+	¾ IN. X 10 FT. GROUND ROD
●	METERED SERVICE PEDESTAL
PS	POWER SOURCE FROM BGE

WIRING DIAGRAM



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 & 5	←G	←G	R	R	←G	←G	R	R	R	R	R	R	R	R
1 & 5 CHANGE	←Y	←Y	R	R	←Y	←Y	R	R	R	R	R	R	R	R
PHASE 1 & 6	←G	←G	G	G	R	R	R	R	R	R	R	R	R	R
1 & 6 CHANGE	←Y	←Y	Y	Y	R	R	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	R	←G	←G	G	G	R	R	R	R	R	R
2 & 5 CHANGE	R	R	R	R	←Y	←Y	Y	Y	R	R	R	R	R	R
PHASE 2 & 6	R	R	G	G	R	R	G	G	R	R	R	R	R	R
2 & 6 CHANGE	R	R	Y	Y	R	R	Y	Y	R	R	R	R	R	R
PHASE 4	R	R	R	R	R	R	R	R	R	R	R	G ←G	G ←G	G
4 CHANGE	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y
PHASE 8	R	R	R	R	R	R	R	R	G ←G	G ←G	G	R	R	R
8 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	R	R	R
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

DWG. NO. SG-06

WHITNEY BAILEY COX MAGNANI
CONSULTING ENGINEERS
849 FAIRMOUNT AVENUE
SUITE 100
BALTIMORE, MD 21286
(410) 512-4500

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

GENERAL NOTES AND PROPOSAL ITEMS
EASTBOUND MD 32 RAMPS
AT DORSEY RUN ROAD

DRAWN BY: W.J.M./E.N.B	F.A.P. NO. AC-STPG-0005(904)E	TS NO. 4882 42.52	SHEET NO.
CHECKED BY: M.J.A.	S.H.A. NO. HO/085/03/B03		
SCALE: N.T.S.	COUNTY: HOWARD	T.I.M.S. NO. D469	6 OF 7
DATE: MAY 2003	LOG MILE: 13003200.66		

FILE: P:\1997\9100260\Drawings\08-Traffic\Dwgs & Maps\sp06drrd.dgn
DATE: 20-May-03 15:25