

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF MD 150 (EASTERN BOULEVARD) AND RELOCATED OLD EASTERN AVENUE/SEAMASTER ROAD. MD 150 (EASTERN BOULEVARD) IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION. THE EXISTING SIGNAL AT MD 150 (EASTERN BOULEVARD) AND FENWAY/OLD EASTERN AVENUE WILL BE REMOVED.

INTERSECTION OPERATION

THIS INTERSECTION WILL OPERATE IN A NEMA SIX (6) PHASE FULL-TRAFFIC-ACTUATED MODE. AN EXCLUSIVE LEFT-TURN PHASE IS PROVIDED ON EASTBOUND AND WESTBOUND MD 150. OLD EASTERN AVENUE AND SEAMASTER ROAD WILL OPERATE CONCURRENTLY. A PEDESTRIAN PHASE WILL OPERATE CONCURRENTLY WITH EASTBOUND AND WESTBOUND MD 150 (EASTERN BOULEVARD) TRAFFIC. AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE WEST LEG OF THE INTERSECTION. THIS INTERSECTION WILL BE INTERCONNECTED TO ADJACENT TRAFFIC SIGNALS.

CONTROLLER REQUIREMENTS

USE A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL, TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIERS, VIDEO INTERFACE EQUIPMENT AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PROJECT CONTACTS

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THE POWER COMPANY REPRESENTATIVE IS:

BALTIMORE GAS AND ELECTRIC (BGE)
SUE GEISLER
410-859-9334

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY THE ADMINISTRATION

ITEM	QUANTITY	UNITS	DESCRIPTION
9003	1	EA	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT
9004	1	EA	VIDEO INTERFACE EQUIPMENT
9005	180	SF	SHEET ALUMINUM SIGNS, SUPPLIED BY SHA
			1 - R3-6(1) MOD, 30"X54"
			1 - R3-5(2), 30"X54"
			1 - R3-6, 30"X36"
			1 - R3-5(R), 30"X36"
			4 - D-3(1), VAR X16"
			4 - D-3(1), VAR X32"
			2 - ASSOCIATED SHIELD ASSEMBLY SIGN 48"X75"
			2 - ASSOCIATED SHIELD ASSEMBLY SIGN 30"X51"
90011	1	EA	EIGHT-PHASE FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET

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

ITEM	QUANTITY	UNITS	DESCRIPTION
9001	1	EA	RELOCATE EXISTING TRAFFIC SIGNAL HANDBOX (PULLBOX)
9002	72	SF	BAND SIGN TO POLE
9006	2	EA	UNI-STRUT TUBULAR STEEL POST AND BASE
9007	1	LS	REMOVE AND SALVAGE EXISTING EQUIPMENT
9008	2	EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
9009	2	EA	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
9010	4	EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
9012	1	EA	FURNISH AND INSTALL STEEL POLE WITH A SINGLE 38 FOOT MAST ARM
9013	1	EA	FURNISH AND INSTALL STEEL POLE WITH A SINGLE 50 FOOT MAST ARM
9014	2	EA	FURNISH AND INSTALL STEEL POLE WITH A SINGLE 70 FOOT MAST ARM
9015	2	EA	FURNISH AND INSTALL 20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
9016	16	CY	FURNISH AND INSTALL CONCRETE FOUNDATION, MIX NO. 6
9017	4	EA	INSTALL 12 INCH 1 WAY 3 SECTION (R,Y,G) SIGNAL HEAD-MAST ARM MOUNT
9018	9	EA	INSTALL 12 INCH 1 WAY 3 SECTION (R,Y,G) SIGNAL HEAD-MAST ARM MOUNT
9019	1	EA	INSTALL 12 INCH 1 WAY 5 SECTION (R,Y,G,YA,GA) SIGNAL HEAD-MAST ARM MOUNT
9020	4	EA	FURNISH AND INSTALL 1 WAY 1 SECTION PEDESTRIAN SIGNAL HEAD-POLE MOUNT
9021	4	EA	FURNISH AND INSTALL 2 WAY 1 SECTION PEDESTRIAN SIGNAL HEAD-POLE MOUNT
9022	30	LF	FURNISH AND INSTALL 2" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED
9023	375	LF	FURNISH AND INSTALL 3" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED
9024	120	LF	FURNISH AND INSTALL 4" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED
9025	20	LF	FURNISH AND INSTALL 1" LIQUID TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT
9026	3	EA	FURNISH AND INSTALL TRAFFIC SIGNAL HANDBOX (PULLBOX)
9027	500	LF	FURNISH AND INSTALL GROUND WIRE - 1 CONDUCTOR (NO. 6 AWG, STRANDED BARE COPPER)
9028	560	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
9029	550	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
9030	230	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
9031	2560	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
9032	900	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
9033	2000	LF	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE, JELLY FILLED (UNDERGROUND)
9034	100	LF	FURNISH AND INSTALL COPPER GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
9035	4	EA	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
9036	2	EA	FURNISH AND INSTALL PUSHBUTTON AND SIGN
9037	2	EA	FURNISH AND INSTALL MICROLOOP PROBE SET (500 FOOT LEAD IN CABLE)
9038	2	EA	FURNISH AND INSTALL MICROLOOP PROBE SET (1000 FOOT LEAD IN CABLE)
9039	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
9040	1	EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIP (120/240V, 1PHASE 3 WIRE SYSTEM)
9041	67	SF	FURNISH AND INSTALL SHEET ALUMINUM SIGNS
9042	80	LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH X 4 INCH
9043	136	SF	INSTALL OVERHEAD SHEET ALUMINUM SIGN (INCLUDES HARDWARE)
9044	2	EA	FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCCELL
9045	1	LS	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT
1	400	LF	FURNISH AND INSTALL 4 CONDUCTOR OPTICOM DETECTOR CABLE
1	1	EA	INSTALL (RELOCATED) DISCRIMINATOR MODULE 4-CHANNEL
1	1	EA	INSTALL (RELOCATED) OPTICOM DETECTOR EYE

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND RETURNED TO SHA

THE TRAFFIC SIGNAL POLES, MAST ARMS AND THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT SHALL BE SALVAGED AND RETURNED TO MDSA. ALL REMAINING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS SHOWN ON THE SIGNAL REMOVAL PLAN.

PHASE CHART

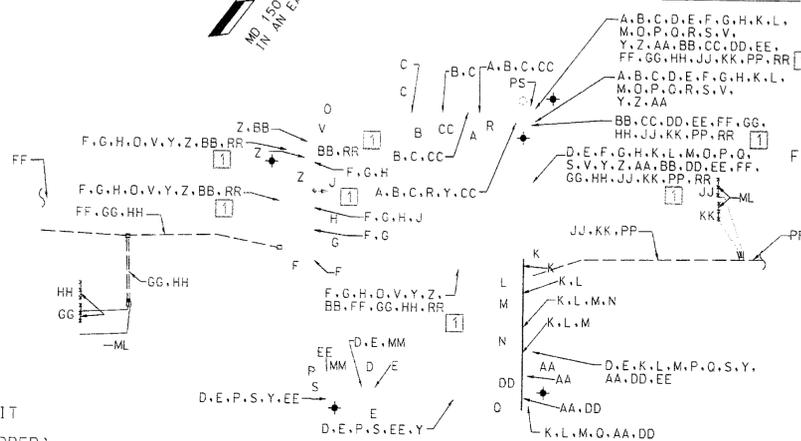
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1 & 2	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
1 & 2 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 3 & 4	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
3 & 4 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 5 & 6	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
5 & 6 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 7 & 8	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
7 & 8 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 9 & 10	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
9 & 10 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 11 & 12	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
11 & 12 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 13 & 14	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
13 & 14 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 15 & 16	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
15 & 16 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 17 & 18	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
17 & 18 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PHASE 19 & 20	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
19 & 20 CHANGE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
FIREHOUSE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
PRE-EMPTION	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
WASHING OPERATION	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←

GENERAL NOTES

REMOVE AND REPLACE BRICK PAVERS AS NECESSARY TO COMPLETE CONSTRUCTION. IF BRICK PAVERS ARE DAMAGED BY THE CONTRACTOR, THEY SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. REMOVAL, REPLACEMENT AND PROVISION OF NEW PAVERS SHALL BE INCIDENTAL TO THE WORK.

ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT CONSIDERED TO BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES CAN BE FIELD LOCATED. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY.

WIRING DIAGRAM



WIRING LEGEND

- A,B,C,D,E - 7 CONDUCTOR ELECTRICAL CABLE (No. 14 A.W.G.)
- F,G,H,J,K,L,M,N,O,P,MM - 5 CONDUCTOR ELECTRICAL CABLE (No. 14 A.W.G.)
- Q,R - 3 CONDUCTOR ELECTRICAL CABLE (No. 14 A.W.G.)
- S,V - 2 CONDUCTOR ELECTRICAL CABLE (No. 14 A.W.G.)
- Z,AA - 2 CONDUCTOR ELECTRICAL TYPE T/C (No. 12 A.W.G.)
- Y - STRANDED BARE COPPER GROUND WIRE
- GG,HH,JJ,KK - MICROLOOP PROBE LEAD-IN
- BB,CC,DD,EE - VIDEO DETECTION CABLE
- FF,PP - INTERCONNECT 12 PAIR-JELLY FILED
- PS - PROPOSED POWER SERVICE FEED
- + - 3/4 INCH X 10 FOOT GROUND ROD
- ML - MICROLOOP PROBE
- 1 RR - 4 CONDUCTOR OPTICOM DETECTOR CABLE

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 150 (EASTERN BOULEVARD) AT
OLD EASTERN AVENUE/SEAMASTER ROAD

DRAWN BY: A.M.H.	F.A.P. NO.	TS NO.
CHECKED BY: J.F.L.	S.H.A. NO.	4241-6J
SCALE: NONE	COUNTY: BALTIMORE	T.I.M.S. NO.
DATE: 6/2003	LOG MILE: Q3015005.40	F557

SHEET NO. 2 OF 3

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS - PLANNERS
32 WEST ROAD
TOWSON, MARYLAND 21284

1 REDLINE #1
5/1/2004