PROPOSED SIGNS

12: ← Baltimore AVE (0000) — D-3(1) (VAR.x16") DUAL FACE

13: Falmouth → RD (0000) — D-3(1) (VAR.x16") DUAL FACE

15: (0000) AVE Baltimore → — D-3(1) (VAR.x16") DUAL FACE

14: ← Falmouth (0000) RD — D-3(1) (VAR.x16") DUAL FACE

16,19: Massachusetts AVE — D-3(1) (VAR.x16") DUAL FACE

17,18: Massachusetts AVE — D-3(1) (VAR.x16") DUAL FACE

20, 21: R10-3(1) 9" x 15" — R10-3(1) 9" x 15"

PROPOSED SIGNALS

1,2: R, Y, G — 12"

3-9: R, Y, G — 12"

10,11: 16" LED COUNTDOWN PEDESTRIAN SIGNAL

NEMA PHASING

Ø1, Ø2, Ø4, Ø6, Ø8, Ø8 ALT.

FLASHING OPERATION

MD 396 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

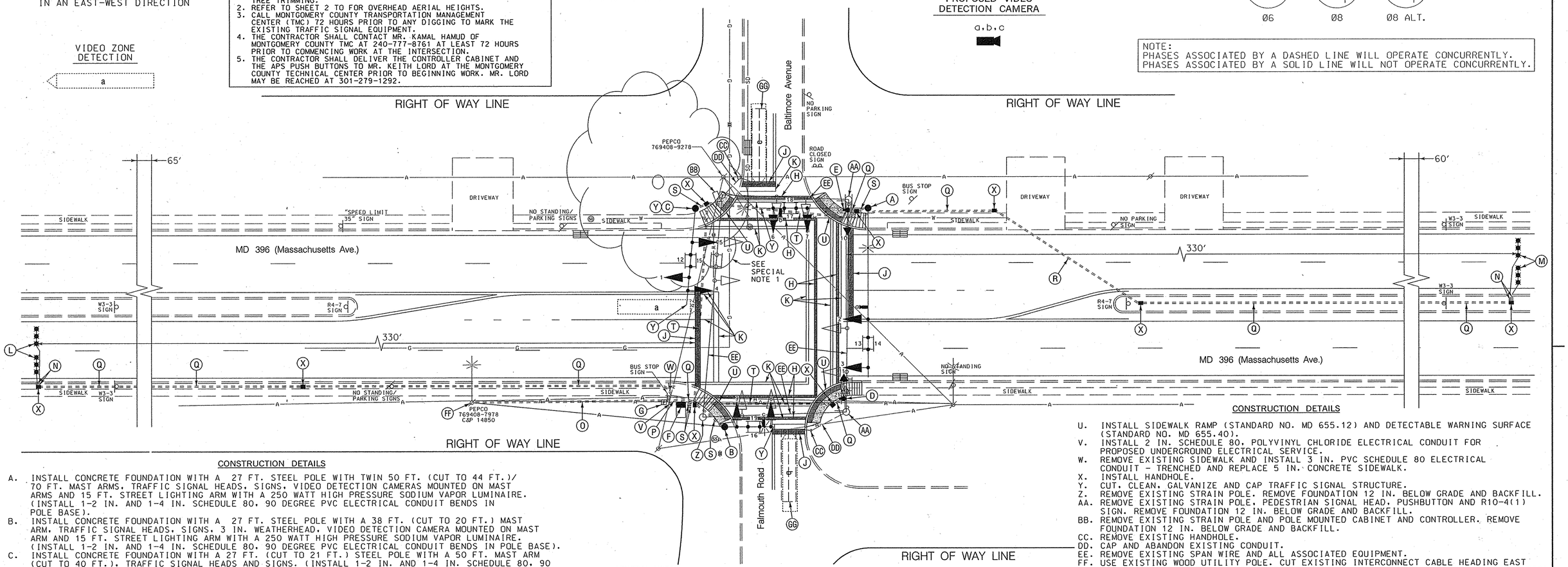
VIDEO ZONE DETECTION: a

PROPOSED VIDEO DETECTION CAMERA: a,b,c

SPECIAL NOTES:

1. SELECTIVE TREE TRIMMING WILL BE REQUIRED FOR INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT. MR. STEVE HARTMAN (301-572-5166) OF DISTRICT 3 MAINTENANCE FORCES WILL DO THE SELECTIVE TREE TRIMMING.
2. REFER TO SHEET 2 TO FOR OVERHEAD AERIAL HEIGHTS.
3. CALL MONTGOMERY COUNTY TRANSPORTATION MANAGEMENT CENTER (TMC) 72 HOURS PRIOR TO ANY DIGGING TO MARK THE EXISTING TRAFFIC SIGNAL EQUIPMENT.
4. THE CONTRACTOR SHALL CONTACT MR. KAMAL HAMUD OF MONTGOMERY COUNTY TMC AT 240-777-8761 AT LEAST 72 HOURS PRIOR TO COMMENCING WORK AT THE INTERSECTION.
5. THE CONTRACTOR SHALL DELIVER THE CONTROLLER CABINET AND THE APS PUSH BUTTONS TO MR. KEITH LORD AT THE MONTGOMERY COUNTY TECHNICAL CENTER PRIOR TO BEGINNING WORK. MR. LORD MAY BE REACHED AT 301-279-1292.

NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.



CONSTRUCTION DETAILS

A. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH TWIN 50 FT. (CUT TO 44 FT.)/ 70 FT. MAST ARMS, TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERAS MOUNTED ON MAST ARMS AND 15 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
B. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH A 38 FT. (CUT TO 20 FT.) MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, 3 IN. WEATHERHEAD, VIDEO DETECTION CAMERA MOUNTED ON MAST ARM AND 15 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
C. INSTALL CONCRETE FOUNDATION WITH A 27 FT. (CUT TO 21 FT.) STEEL POLE WITH A 50 FT. MAST ARM (CUT TO 40 FT.), TRAFFIC SIGNAL HEADS AND SIGNS. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
D. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS MASSACHUSETTS AVE."). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
E. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS MASSACHUSETTS AVE."). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
F. INSTALL NEMA SIZE "6" BASE MOUNTED CONTROLLER AND CABINET WITH CONCRETE PAD. (INSTALL 2-2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE.)
G. INSTALL BASE MOUNTED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS IN PEDESTAL BASE.
H. INSTALL 12 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.
J. INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
K. REMOVE EXISTING PAVEMENT MARKINGS.
L. INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN (TO BE PLACED IN THRU LANE ONLY).
M. INSTALL MICROLOOP PROBE SET WITH 1,000 FT. LEAD-IN (TO BE PLACED IN THRU LANE ONLY).
N. INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE)
O. INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.
P. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
Q. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
R. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
S. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
T. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.

CONSTRUCTION DETAILS

U. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
V. INSTALL 2 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
W. REMOVE EXISTING SIDEWALK AND INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED AND REPLACE 5 IN. CONCRETE SIDEWALK.
X. INSTALL HANDHOLE.
Y. CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.
Z. REMOVE EXISTING STRAIN POLE. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
AA. REMOVE EXISTING STRAIN POLE, PEDESTRIAN SIGNAL HEAD, PUSHBUTTON AND R10-4(1) SIGN. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
BB. REMOVE EXISTING STRAIN POLE AND POLE MOUNTED CABINET AND CONTROLLER. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
CC. REMOVE EXISTING HANDHOLE.
DD. CAP AND ABANDON EXISTING CONDUIT.
EE. REMOVE EXISTING SPAN WIRE AND ALL ASSOCIATED EQUIPMENT.
FF. USE EXISTING WOOD UTILITY POLE. CUT EXISTING INTERCONNECT CABLE HEADING EAST AND RE-FEED OVERHEAD TO PROPOSED STEEL POLE AND BASE MOUNTED CABINET. CONTRACTOR SHALL CUT THE EXISTING INTERCONNECT CABLE TO ALLOW FOR SUFFICIENT LENGTH OF CABLE TO BE RE-FED TO NEW CABINET TO MAINTAIN COMMUNICATION CONNECTION TO THE WEST. REMOVE AND DISPOSE OF ALL UNUSED INTERCONNECT CABLE. (SEE WIRING DIAGRAM FOR ADDITIONAL INTERCONNECT DETAILS)
GG. ABANDON EXISTING LOOP DETECTOR

GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
3. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
4. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
5. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
7. THE CONTRACTOR SHALL NOT CUT MAST ARM AS INDICATED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.
8. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
10. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
11. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
12. INSTALL CONDUIT PRIOR TO THE INSTALLATION OF PAVEMENT MARKINGS.
13. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
14. REFER TO SHEET 2 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

TOD NO: XX444-10
SHA NO: MO526A55/B55
MD 396@ FALMOUTH RD/BALTIMORE AVE

GEOMETRIC LEGEND: EXISTING / PROPOSED

UTILITY LEGEND: SD — STORM DRAIN; G — GAS MAIN; W — WATER MAIN; S — SEWER MAIN; E — ELECTRIC CABLES; A — AERIAL CABLES; T — TELEPHONE CABLES; F — FIBER-OPTIC

WR&A
Whitman, Requardt and Associates, LLP
Engineers, Architects and Planners
801 South Caroline Street
Baltimore, Maryland 21231
410-235-3450

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

MD 396 (Massachusetts Avenue) and
Falmouth Road /Baltimore Avenue

TRAFFIC SIGNALIZATION PLAN

APPROVALS: TEAM LEADER; ASST. DIV. CHIEF; DIVISION CHIEF; OFFICE DIRECTOR — ORIGINAL ON FILE FROM MONTGOMERY COUNTY

REVISIONS: (A) REBUILD TRAFFIC SIGNAL CONTRACT NO. XX4445185 — 08/08/2008

SRB | NML

SCALE 1" = 20' ADVERTISED DATE 10/8/2008 CONTRACT NO. XX4445185

DESIGNED BY Montgomery Co. COUNTY Montgomery
DRAWN BY Montgomery Co. LOGMILE 15039601.72
CHECKED BY Montgomery Co. TIMS NO. H569
F.A.P. NO. TOD NO.

TS NO. 4639A | DRAWING – OF | SHEET NO. 1 OF 3

PLOTTED: 09-03-2008
FILE: n:\31556-024\cadd\pSG-P001_H569.dgn

BY: jrasmussen