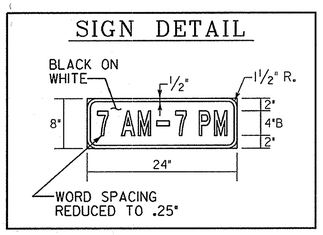
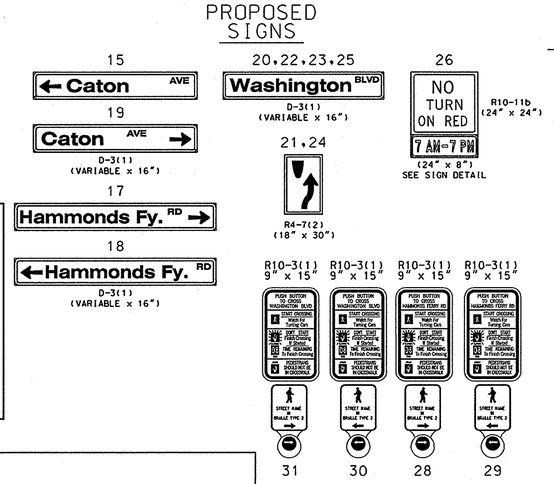
U.S. ALT. 1 IS ASSUMED TO RUN IN A EAST-WEST DIRECTION

SIGN DETAIL



PROPOSED SIGNS

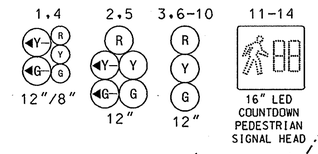


PROPOSED VIDEO DETECTION CAMERA

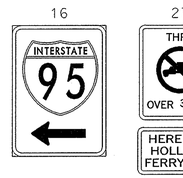
a,b,c,d

VIDEO DETECTION ZONE

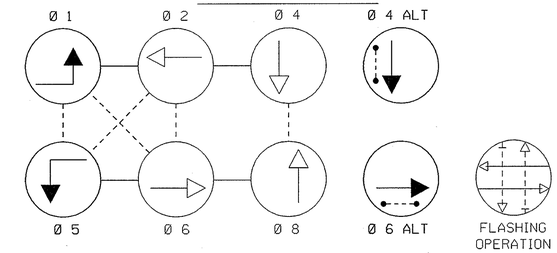
SIGNAL HEADS (LED)



EXISTING SIGNS TO BE RELOCATED (SHOWN AT FINAL LOCATION)



NEMA PHASING

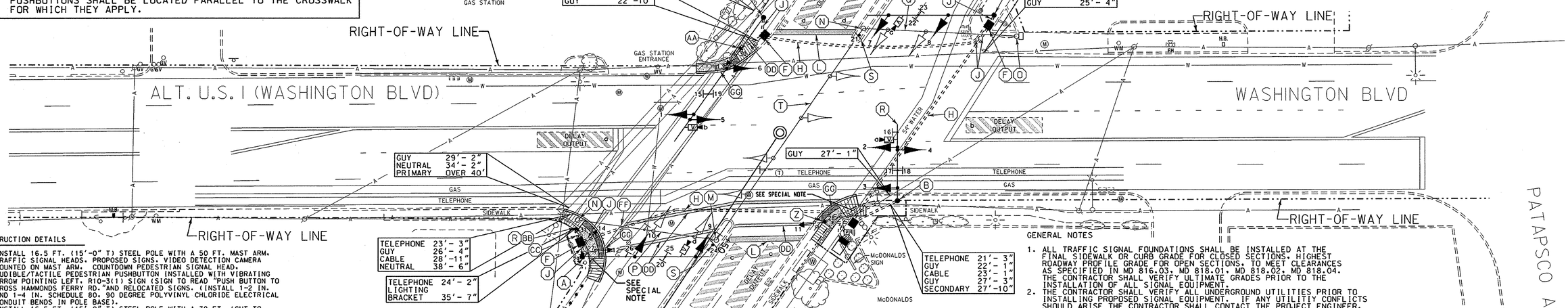


PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SPECIAL NOTES:

1. CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
2. THE TACTILE ARROWS FOR THE AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS SHALL BE LOCATED PARALLEL TO THE CROSSWALK FOR WHICH THEY APPLY.



CONSTRUCTION DETAILS CONT.

AA. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE (SEE MODIFIED PEDESTAL POLE FOUNDATION DETAIL ON SHEET 2) WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT. R10-3(1) SIGN (SIGN TO READ "PUSH BUTTON TO CROSS WASHINGTON BLVD.". (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
BB. INSTALL 10 FT. (TO BE CUT JUST ABOVE R10-3(1) SIGN) BREAKAWAY PEDESTAL POLE (SEE MODIFIED PEDESTAL POLE FOUNDATION DETAIL ON SHEET 2) WITH AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT. R10-4(1) SIGN (SIGN TO READ "PUSH BUTTON TO CROSS WASHINGTON BLVD.". (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE.)
CC. INSTALL 3 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
DD. REMOVE EXISTING SIDEWALK. INSTALL 3 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) AND REPLACE 4 IN. SIDEWALK.
EE. INSTALL 12 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (CROSSWALK).
FF. REMOVE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED CROSSWALK.
GG. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).

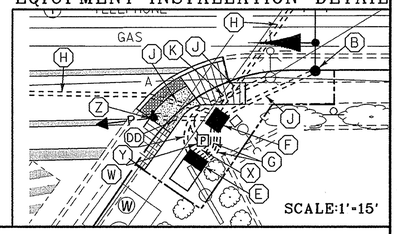
CONSTRUCTION DETAILS

A. INSTALL 16.5 FT. (15'-0" T) STEEL POLE WITH A 50 FT. MAST ARM. TRAFFIC SIGNAL HEADS. PROPOSED SIGNS. VIDEO DETECTION CAMERA MOUNTED ON MAST ARM. COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT. R10-3(1) SIGN (SIGN TO READ "PUSH BUTTON TO CROSS HAMMONDS FERRY RD."AND RELOCATED SIGNS. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
B. INSTALL 16.5 FT. (15'-0" T) STEEL POLE WITH A 38 FT. (CUT TO 30 FT.) MAST ARM. TRAFFIC SIGNAL HEADS. PROPOSED SIGNS AND RELOCATED SIGN. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
C. INSTALL 16.5 FT. (15'-0" T) STEEL POLE WITH A 50 FT. MAST ARM. TRAFFIC SIGNAL HEADS. SIGNS AND VIDEO DETECTION CAMERA MOUNTED ON MAST ARM. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
D. INSTALL 16.5 FT. (15'-0" T) STEEL POLE WITH A 60 FT. MAST ARM. TRAFFIC SIGNAL HEADS AND SIGNS. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
E. INSTALL NEMA SIZE "6" BASE MOUNTED CABINET AND CONTROLLER WITH CONCRETE PAD. (INSTALL 2-2 IN. AND 2-4 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN CABINET BASE.)
F. INSTALL HANDHOLE.
G. INSTALL 4 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
H. INSTALL 4 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SLOTTED).
J. REMOVE EXISTING SIDEWALK. INSTALL 4 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) AND REPLACE 4 IN. SIDEWALK.
K. REMOVE EXISTING SIDEWALK AND INSTALL 4 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE AND 2 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND TELEPHONE SERVICE IN COMMON TRENCH. CAP AND MARK CONDUITS 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.
L. INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE).
M. REMOVE EXISTING STRAIN POLE AND RELOCATE EXISTING SIGNS TO PROPOSED STEEL POLE AS NOTED. REMOVE FOUNDATION 12 IN. BELOW GRADE.
N. REMOVE EXISTING STRAIN POLE. REMOVE FOUNDATION 12 IN. BELOW GRADE.
O. REMOVE EXISTING STRAIN POLE AND POLE MOUNTED CABINET AND CONTROLLER. REMOVE FOUNDATION 12 IN. BELOW GRADE.
P. REMOVE EXISTING SPAN WIRE, SIGNAL HEADS AND SIGN.
Q. REMOVE EXISTING SPAN WIRE AND SIGNAL HEADS.
R. CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.
S. INSTALL R4-7(2) (18" x 30") SIGN ON ONE 4 IN. x 4 IN. TREATED WOOD POST (L=15').
V. REMOVE EXISTING SPAN WIRE AND SIGNAL HEADS AND RELOCATE SIGN TO NEW MAST ARM AS NOTED.
W. INSTALL BASE MOUNTED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80. 90 CONDUIT BEND IN PEDESTAL BASE.
X. INSTALL 2 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
Y. INSTALL 2 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED UNDERGROUND TELEPHONE SERVICE.
Z. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE (SEE MODIFIED PEDESTAL POLE FOUNDATION DETAIL ON SHEET 2) WITH 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 HAMMONDS FERRY RD.". (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).

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 UTILITIY 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 FROM A 60"x60" LEVEL LANDING AREA. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
9. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E-02 AND THE LATEST EDITION OF THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK UNTIL THE CONFLICT IS RESOLVED. IF NECESSARY, A WAIVER SHALL BE BE OBTAINED, SIGNED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFEY.
10. THE CONTRACTOR SHALL DELIVER APS CONTROL UNIT TO SHOP FOR TESTING AND PROGRAMMING.
11. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
12. THE CONTRACTOR SHALL DELIVER APS CONTROL UNIT TO SHOP FOR TESTING AND PROGRAMMING.
13. REFER TO SHEET 2 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

EQUIPMENT INSTALLATION DETAIL



LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES

AERIAL CABLE	A
ELECTRICAL	E
TELEPHONE	T
GAS	G
SEWER	SS
STORM DRAIN	SD
WATER	W
CABLE TV	TV

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

REVISIONS

1	REVISION NO. 1 ADDED SIDEWALK RAMPS CONTRACT NO. AT9125185	11/16/2007	
A	REBUILD TRAFFIC SIGNAL CONTRACT NO. AT9125185	6/07/2007	

SRB NML

APPROVALS

TEAM LEADER - TRAFFIC ENGINEERING DESIGN DIVISION
ASST. TRAFFIC ENGINEERING DESIGN DIVISION
CHIEF - TRAFFIC ENGINEERING DESIGN DIVISION
DIRECTOR, TRAFFIC & SAFETY

ORIGINAL ON FILE

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNALIZATION PLAN
U.S. 1 ALT. (WASHINGTON BLVD) AND HAMMONDS FERRY RD./CATON AVE.

DRAWN BY:		F.A.P. NO.		TS NO. 4587A	SHEET NO.
CHECKED BY:		S.H.A. NO.			
SCALE:	1" = 20'	COUNTY:	BALTIMORE	T.I.M.S. NO. E554	1 OF 2
DATE:		LOG MILE:	0300IAL002.68		

m:\20008\usl&ham_ferry\g203gp01.dgn