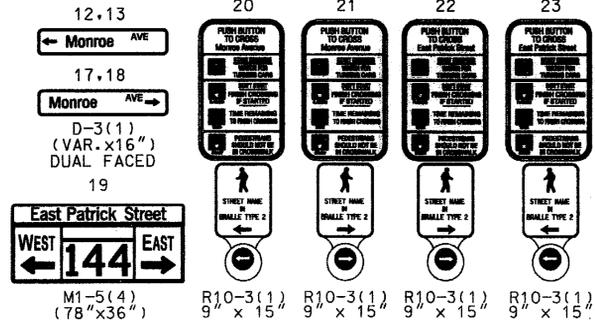


MD 144 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

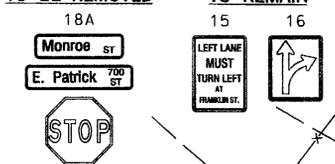
GENERAL NOTES

- 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.
- 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.
- VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
- 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%.
- THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
- PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- 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.
- ALL SIDEWALK RAMP SHALL BE INSTALLED AS PER STANDARDS MD 655.11, MD 655.12 AND MD 655.13.
- THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
- REFER TO SHEET 2 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.
- STREET NAME AND ROUTE MARKER SIGNS TO BE INSTALLED PARALLEL TO ROADWAY.

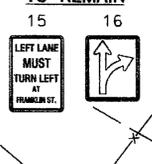
PROPOSED SIGNS



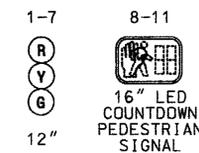
EXISTING SIGNS TO BE REMOVED



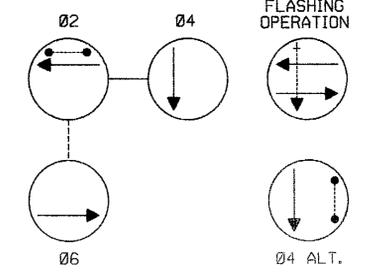
EXISTING SIGNS TO REMAIN



PROPOSED SIGNALS

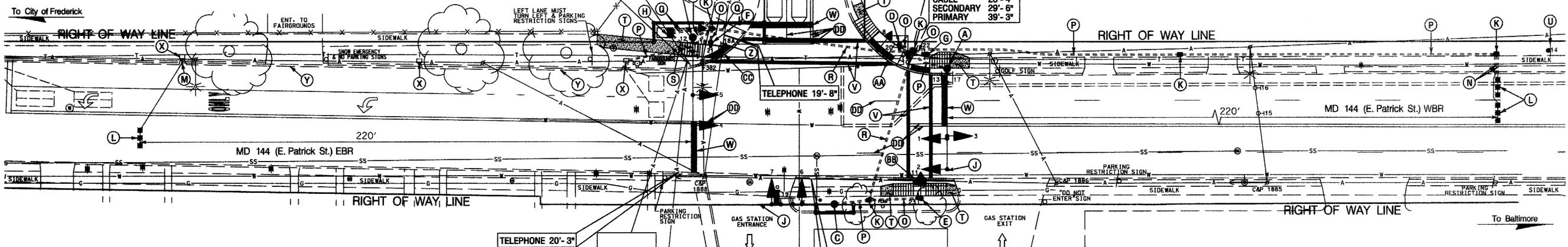
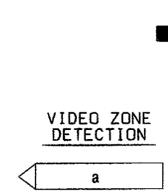


NEMA PHASING



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

PROPOSED VIDEO DETECTION CAMERA



CONSTRUCTION DETAILS

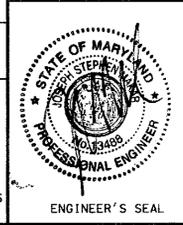
- INSTALL CONCRETE FOUNDATION WITH A 16.5 FT. (15'-0" T) STEEL POLE WITH A 50 FT. (CUT TO 40 FT.) MAST ARM, TRAFFIC SIGNAL HEADS AND SIGN. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
- INSTALL CONCRETE FOUNDATION WITH A 16.5 FT. (15'-0" T) STEEL POLE WITH A 38 FT. MAST ARM, TRAFFIC SIGNAL HEADS, COUNTDOWN PEDESTRIAN SIGNAL HEAD AND SIGN. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
- INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH A 38 FT. (CUT TO 30 FT.) MAST ARM, TRAFFIC SIGNAL HEADS, SIGN AND VIDEO DETECTION CAMERA MOUNTED ON MAST ARM. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
- INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01 WITH TWO-WAY - COUNTDOWN PEDESTRIAN SIGNAL HEADS, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS MONROE AVENUE"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
- INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01 WITH ONE-WAY - 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 EAST PATRICK STREET"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
- INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01 WITH AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS MONROE AVENUE"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
- INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01 WITH AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS EAST PATRICK STREET"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
- INSTALL NEMA SIZE "6" BASE MOUNTED CONTROLLER AND CABINET (P-44 TS-2 CITY OF FREDERICK CABINET) WITH CONCRETE PAD. (INSTALL 2-3 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE.)
- CUT, CLEAN, GALVANIZE AND CAP SIGNAL STRUCTURE.
- INSTALL HANDHOLE.
- INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN (TO BE PLACED IN THRU LANE ONLY).
- INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE)
- INSTALL 1 IN. GALVANIZED ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE)
- INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.
- INSTALL 3 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.
- INSTALL 5 IN. CONCRETE SIDEWALK.
- INSTALL W3-3 "SIGNAL AHEAD" SIGN (36 IN. X 36 IN.) WITH "NEW" PANEL AND FLAGS ON ONE 4 IN. X 6 IN. TREATED WOOD POST APPROXIMATELY 450 FT. IN ADVANCE OF THE INTERSECTION ON WESTBOUND MD 144.
- INSTALL 12 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.
- INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
- USE EXISTING HANDHOLE.
- USE EXISTING CONDUIT.
- REMOVE EXISTING R1-1, "E. PATRICK ST." AND "MONROE ST." SIGNS AND SUPPORT.

CONSTRUCTION DETAILS

- INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
- INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.13) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
- INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.11) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
- REMOVE EXISTING PAVEMENT MARKINGS BEYOND STOPLINE.

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



CITY OF FREDERICK
APPROVED FOR CONSTRUCTION

John P. E. P.E. 6/9/11
 CITY ENGINEER DATE

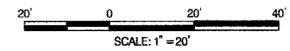
Construction approval by City Engineer is valid for a period of two (2) years from date of approval. If a bona fide attempt to commence construction has not begun in this 2-year period, City approval shall be null and void.

APPROVALS	REVISIONS
<i>[Signature]</i> 5/14/11 TRAFFIC ENGINEER	
<i>[Signature]</i> 5/19/11 ASSISTANT CITY ENGINEER	
<i>[Signature]</i> 5.23.11 OFFICE DIRECTOR	

TRAFFIC SIGNALIZATION PLAN			
SCALE: 1" = 20'	ADVERTISED DATE: 5/6/2011	CONTRACT NO.:	XX4245185
DESIGNED BY: S. Bloss	COUNTY: Frederick		
DRAWN BY: S. Bloss	LOGMILE: 10A14403.98		
CHECKED BY: N. Leary	TRMS NO. 1797		
F.A.P. NO.:	TOD NO.:		
TS NO. 4761	DRAWING TSP-3	OF 4	SHEET NO. 1 OF 4

WR&A
WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, Maryland 21201

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 MD 144 (E. Patrick Street) and Monroe Avenue
 Frederick, MD



PLOTTED: 06-06-2011
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