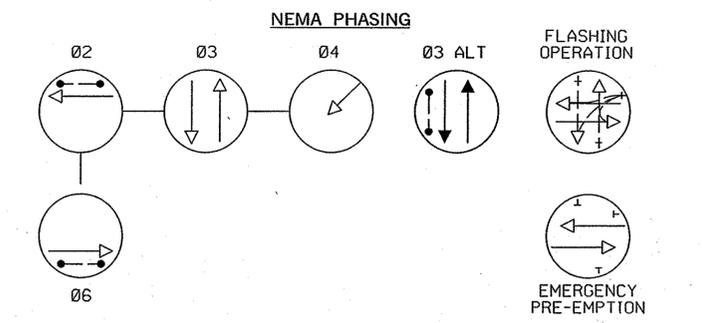
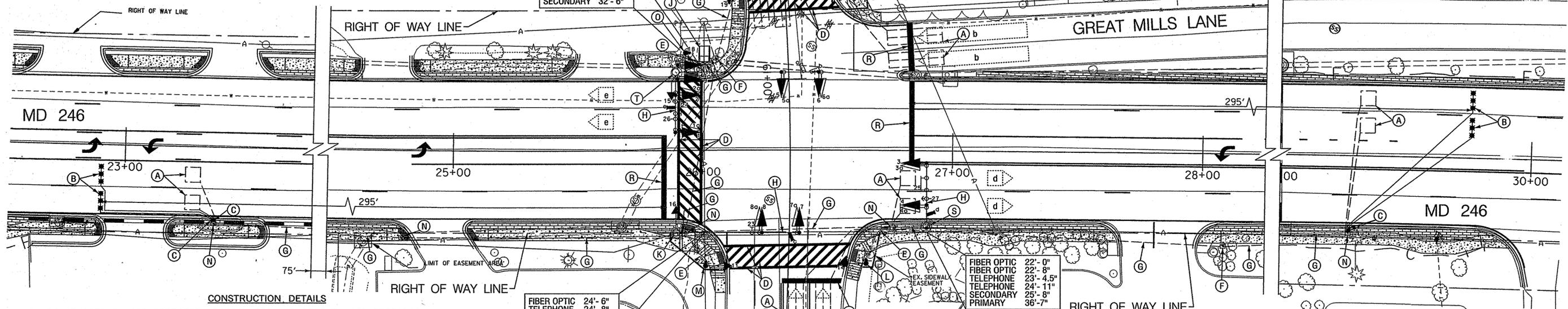
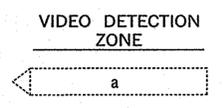
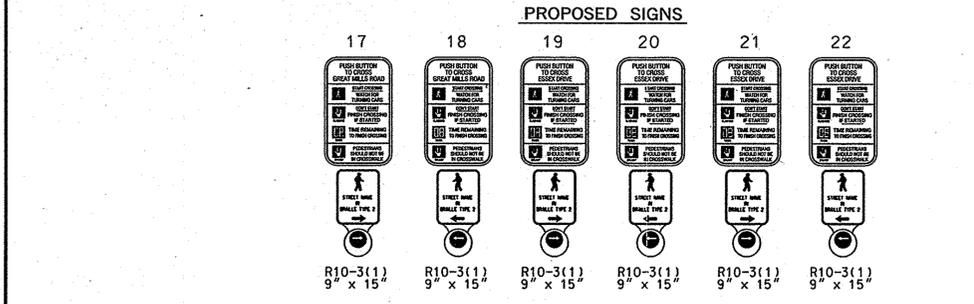


**SPECIAL NOTES:**

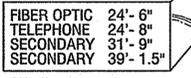
- CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
- DISCONNECT EXISTING ELECTRICAL CABLE FROM EXISTING SIGNAL HEADS TO BE REMOVED AND RE-CONNECT TO PROPOSED SIGNAL HEADS. ANY SIGNAL OUTAGE SHALL BE SCHEDULED DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
- EXISTING SIGNAL HEAD LOCATIONS SHOWN IN APPROXIMATE LOCATION. PROPOSED SIGNAL HEADS ARE TO BE INSTALLED AS DIMENSIONED ON PLAN. ANY ADDITIONAL ELECTRICAL CABLE REQUIRED DUE TO INSUFFICIENT SLACK IN EXISTING CABLES SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.



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

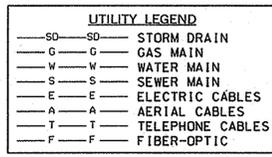


- CONSTRUCTION DETAILS**
- ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES, AND CONTROLLER.
  - INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN.
  - INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).
  - INSTALL 12 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES FOR CROSSWALKS.
  - INSTALL 3 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
  - USE EXISTING HANDHOLE.
  - USE EXISTING CONDUIT.
  - USE EXISTING MAST ARM AND INSTALL VIDEO DETECTION CAMERA AS NOTED.
  - USE EXISTING CABINET AND CONTROLLER AND INSTALL AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON BASE UNIT.
  - SHA FORCES TO UPGRADE VIDEO INTERFACE EQUIPMENT.
  - USE EXISTING STEEL POLE AND INSTALL COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS GREAT MILLS ROAD").
  - 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, AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS ESSEX DRIVE"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE WITH 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 ESSEX DRIVE"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
  - USE EXISTING HANDHOLE AND ADJUST TO FINAL GRADE.
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO 5 FT.) WITH BREAKAWAY BASE (SEE MODIFIED PEDESTAL POLE FOUNDATION DETAIL ON DRAWING NO. TSP-10), AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS GREAT MILLS ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS ESSEX DRIVE"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE WITH 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 ESSEX DRIVE"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
  - INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
  - USE EXISTING STEEL POLE.
  - USE EXISTING STEEL POLE AND INSTALL COUNTDOWN PEDESTRIAN SIGNAL HEAD.
  - CAP AND ABANDON EXISTING CONDUIT.
  - REMOVE EXISTING HANDHOLE.
  - INSTALL HANDHOLE.
  - INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (BORED).



- 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 SHA ENGINEER.
  - VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
  - THE CONTRACTOR SHALL CONTACT SHA TO SCHEDULE RETROFITTING OF THE CONTROLLER EQUIPMENT IN ORDER TO OPERATE VIDEO DETECTION EQUIPMENT.
  - THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
  - ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
  - REMOVE AND DISPOSE OF ALL UNUSED SIGNAL 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.

- GENERAL NOTES (CONTINUED)**
- FOR FINAL PAVEMENT MARKINGS REFER TO THE PAVEMENT MARKING PLANS, OTHER THAN THOSE DETAILED ON THE PLAN. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH SHA STANDARDS.
  - INSTALL CONDUIT AND LOOP DETECTORS PRIOR TO THE INSTALLATION OF PAVEMENT MARKINGS. REFER TO SIGNING AND PAVEMENT MARKING PLANS FOR ADDITIONAL DETAILS.
  - VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
  - ALL HANDHOLES SHALL BE INSTALLED AT FINAL GRADE.
  - THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
  - THE SIGNAL CONTRACTOR SHALL DETERMINE IF ANY WORK BY OTHER CONTRACTORS CAN NOT BE COMPLETED UNTIL INSTALLATION OF SIGNAL EQUIPMENT IS COMPLETE. THE SIGNAL CONTRACTOR SHALL NOTIFY OTHER CONTRACTORS OF THIS WORK.
  - REFER TO DRAWING NO. TSP-07 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.



**WR&A**

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 Baltimore, Maryland 21231  
 410-235-3450

**APPROVALS**

TEAM LEADER: [Signature]

ASSIST. DIR. CHIEF: [Signature]

DIR. CHIEF: [Signature]

OFFICE DIRECTOR: [Signature]

**REVISIONS**

NO.	DESCRIPTION	DATE
1	ADD INDICATIONS ADDED ACROSS MD 246 AND ESSEX DR. CONTRACT NO. SM804A21 11/18/08	
2	INSTALL UNDERGROUND FEED SHA NO. 1 SM-740-501-576 12/21/08	
3	RELOCATE AND UPDATE EQUIPMENT FOR GEOMETRIC IMPROVEMENTS	10/04/08

**SHA** STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION

MD 246 @ ESSEX DRIVE

**TRAFFIC SIGNALIZATION PLAN**

SCALE 1" = 20' DATE NOVEMBER 18, 2008 CONTRACT NO. SM804A21

DESIGNED BY P.A.H. COUNTY ST. MARY'S

DRAWN BY D.A.J. LOGMILE 1924602.710

CHECKED BY K.J.B. TMS NO. G888

F.A.P. NO. TOD NO.

TS NO. 1357-C DRAWING TSP-02 OF 10 SHEET NO. 59 OF 112

BY: jrasmusen