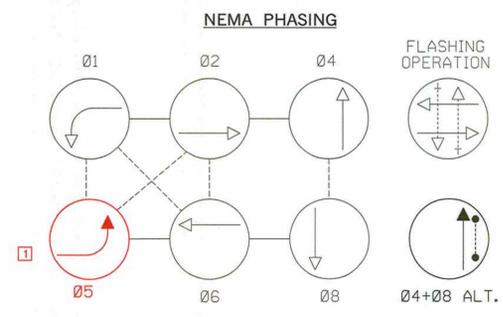
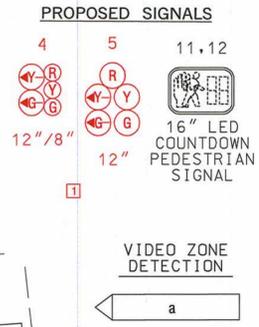
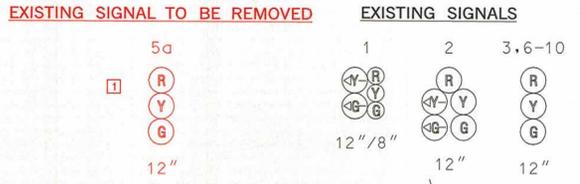
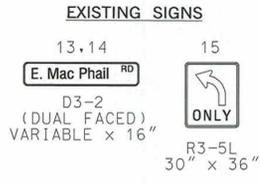


MD 924 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION

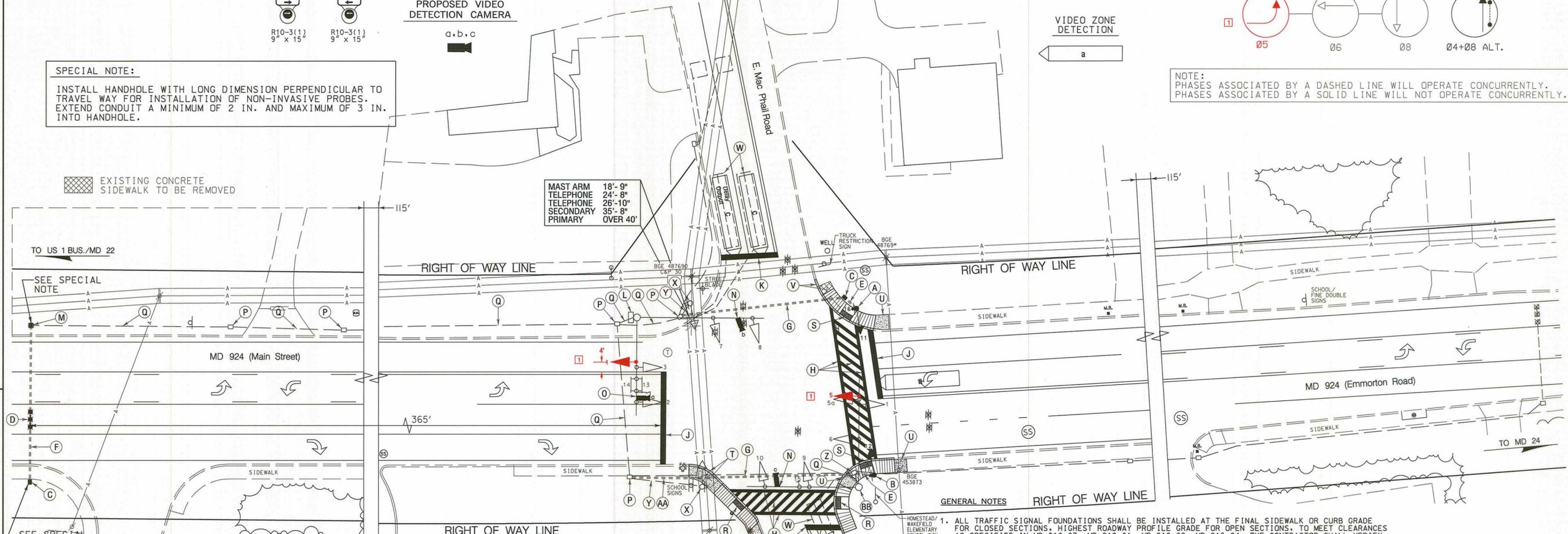
**SPECIAL NOTE:**  
INSTALL HANDHOLE WITH LONG DIMENSION PERPENDICULAR TO TRAVEL WAY FOR INSTALLATION OF NON-INVASIVE PROBES. EXTEND CONDUIT A MINIMUM OF 2 IN. AND MAXIMUM OF 3 IN. INTO HANDHOLE.

EXISTING CONCRETE SIDEWALK TO BE REMOVED



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

**MAST ARM TELEPHONE**  
18'-9"  
**TELEPHONE**  
24'-8"  
**SECONDARY**  
26'-10"  
**PRIMARY**  
35'-8"  
OVER 40'



- CONSTRUCTION DETAILS**
- INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801-01-01. 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 EMMORTON ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE). CONTRACTOR SHALL RE-GRADE AND/OR ADD CRIBBING FOR INSTALLATION OF PEDESTAL POLE TO PROVIDE FOR LEVEL GRADE AROUND FOUNDATION. GRADING/CRIBBING WILL NOT BE MEASURED BUT BE INCIDENTAL TO THE INSTALLATION OF THE PEDESTAL POLE.
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801-01-01. 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 EMMORTON ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
  - INSTALL HANDHOLE.
  - INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 500 FT. LEAD-IN IN PROPOSED 3 IN. CONDUIT.
  - INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
  - INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
  - INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
  - 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.
  - REMOVE EXISTING AND INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
  - USE EXISTING POLE MOUNTED CABINET AND CONTROLLER. INSTALL AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON BASE UNIT. (NOTE: SHA FORCES SHALL RETROFIT CONTROLLER EQUIPMENT TO OPERATE NEW VIDEO DETECTION EQUIPMENT).
  - REMOVE EXISTING HANDHOLE AND RE-INSTALL IN-KING ROTATING HANDHOLE 90 DEGREES TO ROADWAY ON TOP OF EXISTING CONDUIT HEADING SOUTH LEAVING 6 IN. PROTRUDING INTO HANDHOLE. REMOVING HANDHOLE AND RE-INSTALLING WILL NOT BE MEASURED BUT BE INCIDENTAL TO OTHER PERTINENT ITEMS IN THE CONTRACT.
  - USE EXISTING MAST ARM AND INSTALL OVERHEAD VIDEO DETECTION CAMERA AS SHOWN.
  - USE EXISTING MAST ARM AND REMOVE EXISTING VIDEO DETECTION CAMERA AND INSTALL NEW OVERHEAD VIDEO DETECTION CAMERA AND A NEW SIGNAL HEAD AS SHOWN AS SHOWN.
  - USE EXISTING CONDUIT.
  - INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE CLAY BRICK PAVERS WITH THE PLACEMENT IN ACCORDANCE WITH STANDARD NO. MD 655.40.
  - REMOVE EXISTING SIDEWALK RAMP AND INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE CLAY BRICK PAVERS WITH THE PLACEMENT IN ACCORDANCE WITH STANDARD NO. MD 655.40.
  - REMOVE EXISTING SIDEWALK RAMP AND INSTALL 5 IN. CONCRETE SIDEWALK AND COMBINATION CONCRETE CURB AND GUTTER (STANDARD NO. MD 620.02 TYPE 'A').
  - REMOVE EXISTING SIDEWALK AND INSTALL 5 IN. CONCRETE SIDEWALK.
  - REMOVE EXISTING SIDEWALK RAMP. INSTALL COMBINATION CONCRETE CURB AND GUTTER (STANDARD NO. MD 620.02 TYPE 'A'). BACKFILL, SEED AND MULCH.
  - ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.
  - REMOVE EXISTING PEDESTAL POLE. REMOVE AND DISPOSE OF FOUNDATION 12 IN. BELOW GRADE.
  - CAP AND ABANDON EXISTING CONDUIT.
  - USE EXISTING HANDHOLE AND ADJUST TO FINAL GRADE.
  - INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
  - USE EXISTING STEEL POLE REMOVE SIGNAL HEAD NO. 5A AND REPLACE AS SHOWN.

- 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 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.
  - ALL SIDEWALK RAMP SHALL BE INSTALLED AS PER STANDARDS MD 655.11 AND MD 655.12.
  - REFER TO SHEET 2 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

**REDLINE REVISION NO. 1**  
6.16.12  
TEDD APPROVAL

**REDLINE REVISION NO. 2**  
3/16/12  
OOTS APPROVAL

APPROVALS	REVISIONS								
<table border="1"> <tr><td>TEAM LEADER</td><td></td></tr> <tr><td>ASST. DIR./CHIEF</td><td></td></tr> <tr><td>DIVISION CHIEF</td><td></td></tr> <tr><td>OFFICE DIRECTOR</td><td></td></tr> </table>	TEAM LEADER		ASST. DIR./CHIEF		DIVISION CHIEF		OFFICE DIRECTOR		<p>ADDED APS/CPS, UPGRADED RAMPS AND REPLACED DETECTION DUE TO RESURFACING SHA NO. HA3815117 T1M5# K824 5/3/2011</p> <p>SIGNAL SHOP FORCES ADD E/P LEFT TURN PHASE ON NB MD 924 9/22/2006</p> <p>REPLACED FAILED LOOP DETECTOR SHA NO.: AW-579-501-085 5/9/4</p>
TEAM LEADER									
ASST. DIR./CHIEF									
DIVISION CHIEF									
OFFICE DIRECTOR									

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 924 (Main Street/Emmorton Road) and E. Mac Phail Road  
Bel Air, Maryland

TRAFFIC SIGNALIZATION PLAN	
SCALE 1" = 20'	ADVERTISED DATE 05/05 CONTRACT NO. H.869-509-485
DESIGNED BY D. Distance	COUNTY Harford
DRAWN BY D. Distance	LOGMILE 12092404.81
CHECKED BY	TIMS NO. N/A
F.A.P. NO.	TOD NO.
TS NO. 2063C	DRAWING TSP-1 OF 3 SHEET NO. 219 OF

PLOTTED: Thursday, August 16, 2012 AT 12:00 PM  
FILE: J:\DATA\K824\PSG-P001\_md924\_Defaut.dgn

BY: hogallo