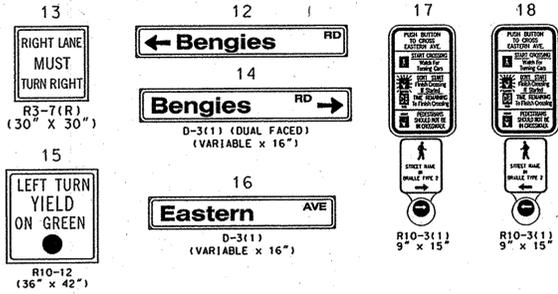


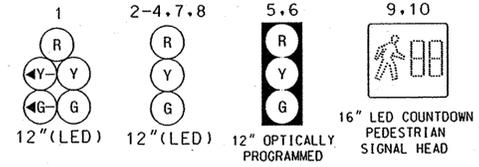
MD 150 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

**SIGNS**

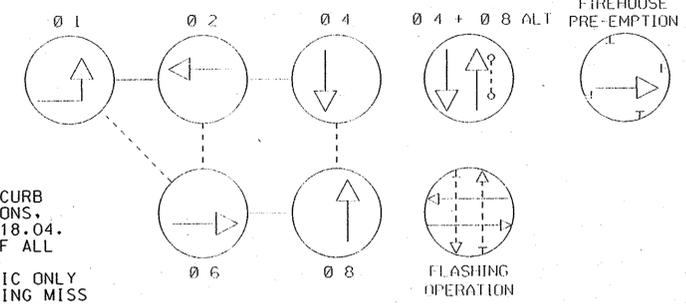


**PROPOSED VIDEO DETECTION CAMERA**      **PROPOSED OPTICOM DETECTOR EYE**

**SIGNAL HEADS**



**NEMA PHASING**

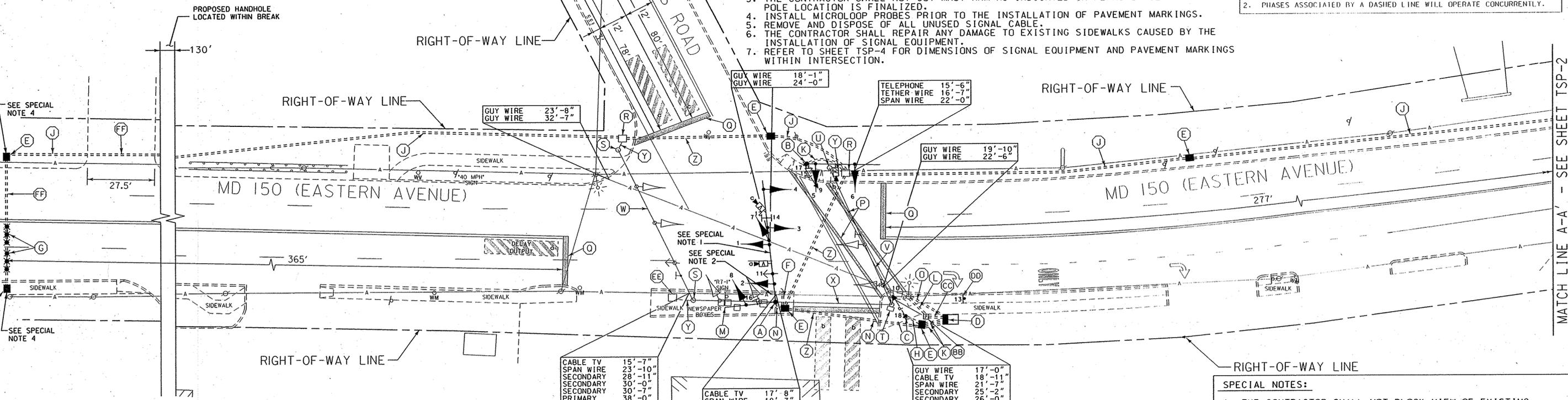


**GENERAL NOTES**

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCE 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. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO THE CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
3. THE CONTRACTOR SHALL NOT CUT MAST ARM AS INDICATED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.
4. INSTALL MICROLOOP PROBES PRIOR TO THE INSTALLATION OF PAVEMENT MARKINGS.
5. REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
6. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
7. REFER TO SHEET TSP-4 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

**PHASING NOTES:**

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



**CONSTRUCTION DETAILS**

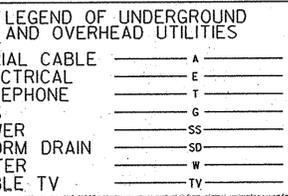
- INSTALL 16.5 FT. (15'-0" T) STEEL POLE WITH A 50 FT. (CUT TO 20 FT.) / 50 FT. MAST ARMS, TRAFFIC SIGNAL HEADS, SIGNS, OPTICOM DETECTOR EYE AND VIDEO DETECTION CAMERAS MOUNTED ON MAST ARM. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
- INSTALL 16.5 FT. (15'-0" T) STEEL POLE WITH A 38 FT. MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN (SIGN TO READ "PUSHBUTTON TO CROSS EASTERN AVENUE") 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).
- INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS EASTERN AVENUE" (INSTALL 2-2 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
- 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.)
- INSTALL HANDHOLE.
- INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).
- INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 500 FT. LEAD-IN IN PROPOSED 3 IN. CONDUIT. REMOVE EXISTING SIDEWALK. INSTALL 2 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 3 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
- REMOVE EXISTING SIDEWALK. INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE AND REPLACE SIDEWALK. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.
- CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.
- REMOVE EXISTING SIDEWALK. INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) AND REPLACE SIDEWALK.
- REMOVE EXISTING SIDEWALK. INSTALL 2 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED UNDERGROUND TELEPHONE SERVICE AND REPLACE SIDEWALK. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE ON UTILITY FOR USE BY OTHERS.
- INSTALL 12 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (CROSSWALK).
- INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE).

**CONSTRUCTION DETAILS CONT.**

- USE EXISTING HANDHOLE.
- REMOVE EXISTING STRAIN POLE. REMOVE FOUNDATION 12 IN. BELOW GRADE.
- REMOVE EXISTING STRAIN POLE. PEDESTRIAN SIGNAL HEAD AND POLE MOUNTED CABINET. SHA FORCES TO REMOVE CONTROLLER AND ALL AUXILIARY EQUIPMENT. REMOVE FOUNDATION 12 INCHES BELOW GRADE.
- REMOVE EXISTING STRAIN POLE AND PEDESTRIAN SIGNAL HEAD. REMOVE FOUNDATION 12 IN. BELOW GRADE.
- REMOVE EXISTING SPAN WIRE, TETHER WIRE, SIGNAL HEADS AND SIGNS.
- REMOVE EXISTING SPAN WIRE AND SIGNAL HEADS, SIGNS AND OPTICOM RECEIVER.
- REMOVE EXISTING SPAN WIRE AND SIGNAL HEADS.
- CAP AND ABANDON EXISTING CONDUIT.
- INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SLOTTED).
- INSTALL BASE MOUNTED METERED SERVICE PEDESTAL WITH 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE CONDUIT BENDS IN PEDESTAL BASE.
- INSTALL 2 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
- INSTALL R3-7(R) SIGN (30 IN. X 30 IN.) ON ONE 4 IN. X 4 IN. WOOD SIGN SUPPORT.
- REMOVE EXISTING HANDHOLE.
- INSTALL 3 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (BORED).

**SPECIAL NOTES:**

1. THE CONTRACTOR SHALL NOT BLOCK VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF MAST ARM. IF NEW MAST ARM CANNOT BE INSTALLED DUE TO CONFLICT WITH EXISTING SIGNAL INDICATIONS OR SPAN WIRES, A SIGNAL OUTAGE SHALL OCCUR DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
2. THE EXISTING CABLE TV AERIAL LINE IS BEING RAISED BY COMCAST FORCES TO ELIMINATE OVERHEAD UTILITY CONFLICT.
3. THE TACTILE ARROWS FOR THE AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS SHALL BE LOCATED PARALLEL TO THE CROSSWALK FOR WHICH THEY APPLY.
4. 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.



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REVISIONS		APPROVALS	
①	RECONSTRUCT TRAFFIC SIGNAL CONTRACT NO. BA358A561856 9/15/2006		
②	MODIFY SIGNAL FOR NEW GEOMETRICS SHA NO. BW996MB2 11/21/2004		
③	ADD PEDESTRIAN SIGNALS AND ADA RAMPS FOR MD 150 3/14/1999		
④	AS - BUILT SHA NO. AW 103-501-485 4/29/1997		

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
Office of Traffic & Safety  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
TRAFFIC SIGNALIZATION PLAN  
MD 150 (EASTERN AVENUE) AND BENGIES RD

DRAWN BY: RICHARDSON  
CHECKED BY: KILIAN/ZAFIRIS  
SCALE: 1" = 20'  
DATE: 2-3-77 06

F.A.P. NO. BA358A561856  
S.I.L.A. NO. BALTIMORE  
LOG MILE: 03015007.85

TS NO. TS-1487  
T.I.M.S. NO. H376

SHEET NO. OF

TSP-1