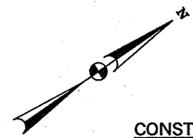


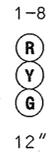
MD 147 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.



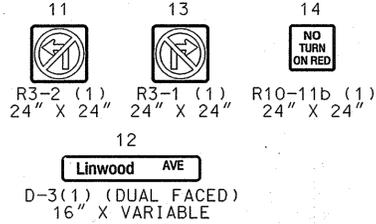
CONSTRUCTION DETAILS

- A. INSTALL OVERHEAD VIDEO DETECTION CAMERA ON EXISTING MAST ARM.
- B. REMOVE EXISTING PUSH BUTTON, PEDESTRIAN EDUCATION SIGN AND PEDESTRIAN SIGNAL. INSTALL LED COUNTDOWN PEDESTRIAN SIGNAL, AND APS STATION, AND PEDESTRIAN EDUCATION SIGN ON EXISTING SIGNAL POLE.
- C. USE EXISTING CONDUIT.
- D. INSTALL A NEMA SIZE 6 BASE-MOUNTED CABINET AND CONTROLLER WITH CONCRETE PAD AND ELECTRICAL UTILITY SERVICE EQUIPMENT FOR UNDERGROUND SERVICE. (NOTE: TWO-4 IN. PVC, AND TWO-2 IN. PVC SCHEDULE 80 CONDUIT BENDS IN CABINET BASE). RUN ALL EXISTING AND PROPOSED SIGNAL CABLES THROUGH EXISTING PULLBOX INTO NEW CABINET.
- E. INSTALL 4" PVC SCHEDULE 80 ELECTRICAL CONDUIT FOR ELECTRICAL SERVICE - BORED. STUB OUT CONDUIT BEND AT BASE OF UTILITY POLE.
- F. INSTALL 4" PVC SCHEDULE 80 ELECTRICAL CONDUITS - TRENCHED PRIOR TO FINAL SIDEWALK POUR.
- G. REMOVE EXISTING POLE MOUNTED CABINET AND CONTROLLER.
- H. USE EXISTING HANDHOLE.

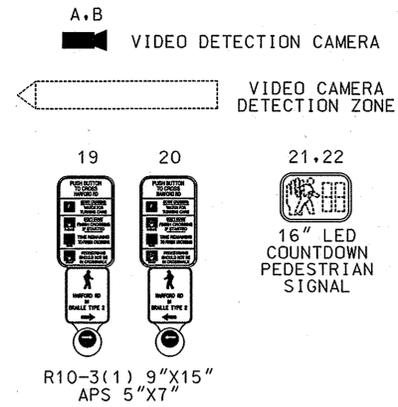
EXISTING SIGNALS TO REMAIN



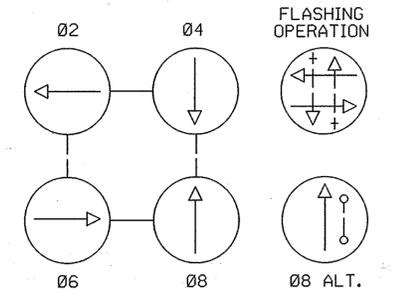
EXISTING SIGNS TO REMAIN



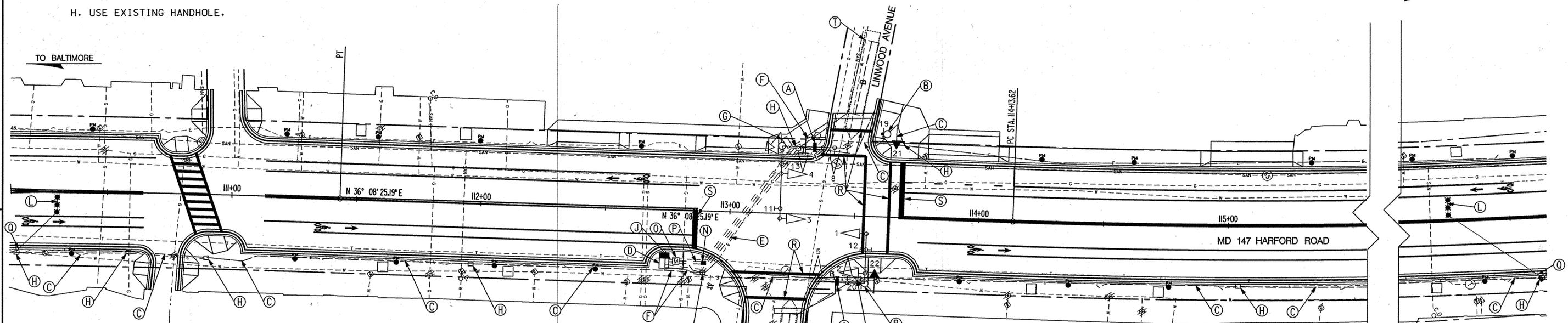
PROPOSED EQUIPMENT



NEMA PHASING



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



CONSTRUCTION DETAILS (cont.)

- J. INSTALL 2-2" PVC SCHEDULE 80 CONDUITS - TRENCHED PRIOR TO FINAL SIDEWALK POUR.
- K. INSTALL 3" PVC SCHEDULE 80 CONDUIT - TRENCH PRIOR TO FINAL SIDEWALK POUR.
- L. INSTALL MICROLOOP PROBE WITH 500' LEAD-IN TO CABINET.
- O. INSTALL METERED SERVICE PEDESTAL (NOTE: 1-4" 90° PVC BEND WITH 4" CONDUIT TO UTILITY POLE. 1" STUB AT POLE BASE WITH PULL STRING AND 2-2" 90° PVC BENDS.)
- P. INSTALL 2" PVC SCHEDULE 80 CONDUIT FOR ELECTRICAL SERVICE - TRENCH PRIOR TO FINAL SIDEWALK POUR.
- Q. INSTALL 1" LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE).
- R. INSTALL 12" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.
- S. INSTALL 24" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.
- T. DISCONNECT AND ABANDON EXISTING LOOP DETECTOR. REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
2. 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.
3. 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.
4. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
5. ALL UNUSED SIGNAL CABLES SHALL BE REMOVED AND DISPOSED.
6. THE TACTILE ARROW FOR THE AUDIBLE PEDESTRIAN SIGNAL PUSHBUTTONS SHALL BE LOCATED PARALLEL TO THE CROSSWALK FOR WHICH THEY APPLY.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SIGNAL OPERATION DURING THE COMPLETE CONSTRUCTION PERIOD.
8. 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%.
9. 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.
10. 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.

SPECIAL NOTES:

1. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON # 19 TO BE INSTALLED WITH VIBRATING ARROW POINTING RIGHT WITH R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS HARFORD ROAD")
2. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON # 20 TO BE INSTALLED WITH VIBRATING ARROW POINTING LEFT WITH R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS HARFORD ROAD")

BY: sbloss



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UTILITY LEGEND	
—SD—SD—	STORM DRAIN
—G—G—	GAS MAIN
—W—W—	WATER MAIN
—S—S—	SEWER MAIN
—E—E—	ELECTRIC CABLES
—A—A—	AERIAL CABLES
—T—T—	TELEPHONE CABLES
—F—F—	FIBER-OPTIC

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 147 HARFORD ROAD AND
LINWOOD AVENUE

APPROVALS		REVISIONS		TRAFFIC SIGNAL PLAN	
TEAM LEADER	ASST. DIV. CHIEF	JRL	AJM PAT	SCALE 1" = 20'	DATE 3-31-20
ORIGINAL ON FILE		SHA NO. BA6835184 ADDENDUM NUMBER 5 12/12/08		DESIGNED BY	FLANIGAN
		C. ADDENDUM TO B-909-501-377 DATED 4/22/92		COUNTY	BALTIMORE
DIVISION CHIEF		JUD	EMM DGZ	DRAWN BY	LOGMILE
OFFICE DIRECTOR		B. RECONSTRUCT DUE TO MD 147 WIDENING. S.H.A. NO.: B-909-501-477 5/26/91		CHECKED BY	T.I.M.S. NO.
		JUD	EMM	F.A.P. NO.	TOD NO.
		DRAWING NO. SG - 2.3 OF 2.12		SHEET NO. 237 OF 291	

PLOTTED: 08-09-2008
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