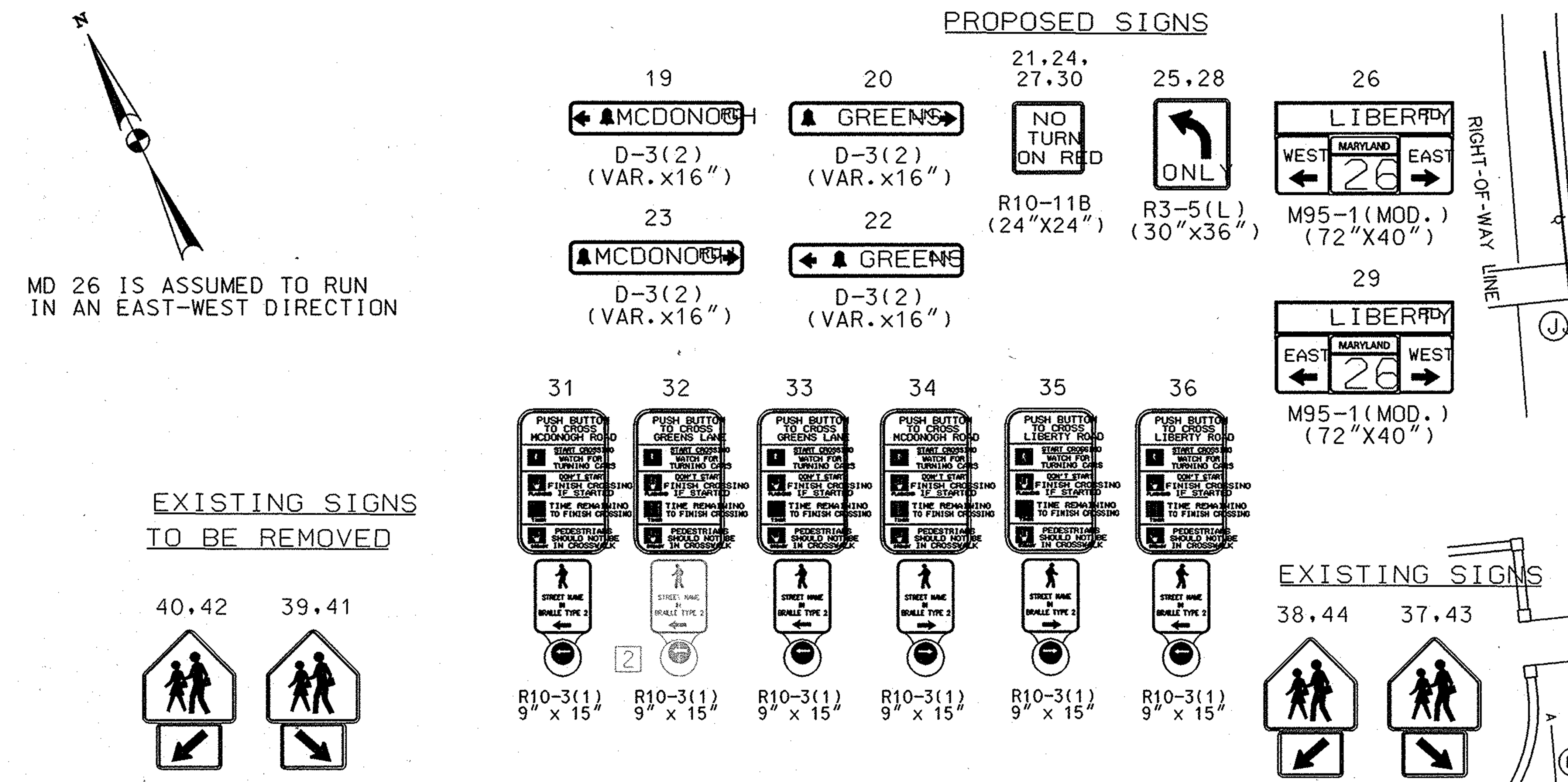

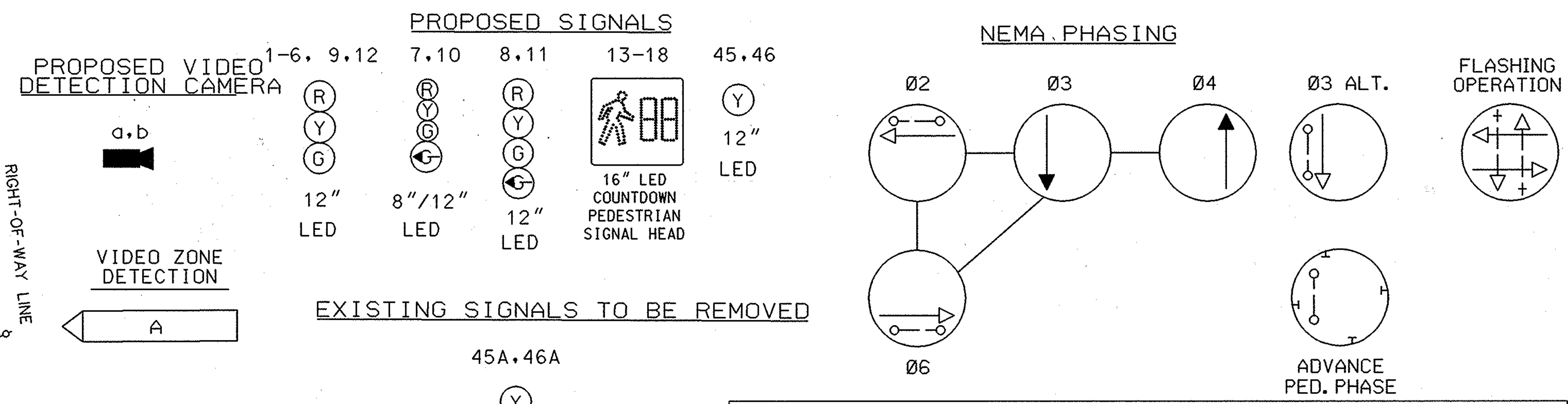

NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

GENERAL NOTES

1. 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.
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. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
4. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
5. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
7. THE CONTRACTOR SHALL NOT CUT MAST ARM AS INDICATED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.

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. 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.

CONSTRUCTION DETAILS

A. INSTALL CONCRETE FOUNDATION WITH A 16 FT. (15'-0" T) STEEL POLE WITH TWIN 50 FT. (CUT TO 40 FT./70 FT. MAST ARMS, TRAFFIC SIGNAL HEADS, SIGNS, COUNTDOWN PEDESTRIAN SIGNAL HEADS, AND 3 IN. WEATHERHEAD. 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).

2 B. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH TWIN 50 FT./70 FT. MAST ARMS, TRAFFIC SIGNAL HEADS, SIGNS AND COUNTDOWN PEDESTRIAN SIGNAL HEAD, 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).

2 C. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO 5 FT.) WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS McDONOGH ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

D. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, 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 LIBERTY ROAD"), AND TYPE 'G'.CABINET. SHA SIGNAL SHOP TO INSTALL PUSHBUTTON FOR POINT CONTROL PERSON IN AUXILIARY CABINET. (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE). CONTRACTOR SHALL INSTALL PEDESTAL POLE AFTER REMOVAL OF STRAIN POLE AND FOUNDATION.

2 E. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO ~~6~~ 5 FT.) WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS LIBERTY ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

F. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT ABOVE R10-3(1) SIGN) WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS GREENS LANE"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE). CONTRACTOR SHALL INSTALL PEDESTAL POLE AFTER REMOVAL OF STRAIN POLE AND FOUNDATION.

2 G. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO ~~6~~ 5 FT.) WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS McDONOGH ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

2 H. INSTALL NEMA SIZE "6" BASE MOUNTED CONTROLLER AND CABINET. WITH CONCRETE BASE ~~EXISTING SIDEWALK TO BE USED AS CONCRETE PAD~~ (NOTE: ELEVATE CONCRETE BASE SO THE CUT INTO THE HILL IS MINIMIZED).(INSTALL 2-2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE.)

J. INSTALL BASE MOUNTED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS IN PEDESTAL BASE.

K. INSTALL HANDHOLE.

L. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

M. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

N. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

O. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.

P. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.

Q. INSTALL 4 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.

R. INSTALL 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.

S. INSTALL 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND TELEPHONE SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.

T. INSTALL 12 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.

U. INSTALL 24 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.

V. INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 1,000 FT. LEAD-IN IN PROPOSED 3 IN. CONDUIT.

W. INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 500 FT. LEAD-IN IN PROPOSED 3 IN. CONDUIT.

X. REMOVE EXISTING HANDHOLE.

Y. CAP AND ABANDON EXISTING CONDUIT.

Z. ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE MICROLOOP PROBE CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.

AA. REMOVE EXISTING SPAN WIRE AND ALL ASSOCIATED EQUIPMENT.

BB. REMOVE EXISTING STRAIN POLE AND PEDESTRIAN SIGNAL HEAD(S). REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

CC. REMOVE EXISTING STRAIN POLE AND POLE MOUNTED CABINET AND CONTROLLER. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. SHA SIGNAL SHOP SHALL BE NOTIFIED TO REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CABINET.

DD. REMOVE EXISTING STRAIN POLE, AUXILIARY CABINET AND PEDESTRIAN SIGNAL HEADS. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

EE. REMOVE EXISTING SIGNS AND SUPPORT.

FF. REMOVE EXISTING POLE MOUNTED TYPE 'G' CABINET. DISCONNECT EXISTING ELECTRICAL SERVICE AND REMOVE CONTROL AND DISTRIBUTION EQUIPMENT. REMOVE EXISTING SIGNAL HEADS AND INSTALL LED SIGNAL HEADS AND NEW 5-CONDUCTOR ELECTRICAL CABLE TO NEW SIGNAL HEADS. INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN POLE BASE. (SEE WIRING DIAGRAM FOR ADDITIONAL DETAILS).

GG. REMOVE EXISTING PUSHBUTTON POLE.

HH. INSTALL HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW.

JJ. INSTALL HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LETTERS ("ONLY").

KK. REMOVE EXISTING PERMANENT PAVEMENT MARKING ARROW.

LL. REMOVE EXISTING PERMANENT PAVEMENT MARKING LETTERS ("ONLY").

MM. USE EXISTING WOOD UTILITY POLE. CUT EXISTING INTERCONNECT CABLE HEADING EAST AND RE-FEED OVERHEAD TO PROPOSED STEEL POLE AND BASE MOUNTED CABINET. CONTRACTOR SHALL CUT THE EXISTING INTERCONNECT CABLE TO ALLOW FOR SUFFICIENT LENGTH OF CABLE TO BE RE-FED TO NEW CABINET TO MAINTAIN COMMUNICATION CONNECTION TO THE WEST. REMOVE AND DISPOSE OF ALL UNUSED INTERCONNECT CABLE. (SEE WIRING DIAGRAM FOR ADDITIONAL INTERCONNECT DETAILS)

2 NN. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO 5 FT.) WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO GREENS LANE").

GENERAL NOTES

8. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR FROM A 60"x60" LEVEL LANDING AREA. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
9. PUSHBUTTON IS TO BE LOCATED SO THAT A PEDESTRIAN IN A WHEELCHAIR LOCATED ON THE LEVEL LANDING AREA, DOES NOT HAVE TO REACH MORE THAN 18 IN.
10. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
11. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
12. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E-02 AND THE LATEST EDITION OF THE NCHRP PUBLICATION, 'ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE.' IF NOT MET, THE CONTRACTOR IS TO STOP WORK UNTIL THE CONFLICT IS RESOLVED. IF NECESSARY, A WAIVER SHALL BE OBTAINED, SIGNED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
13. INSTALL CONDUIT PRIOR TO THE INSTALLATION OF PAVEMENT MARKINGS.
14. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
15. REFER TO SHEET 3 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

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

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 26 (LIBERTY ROAD) AND MCDONOGH ROAD/GREENS LANE

TRAFFIC SIGNALIZATION PLAN

SCALE 1" = 20' DATE 7/29/1969 CONTRACT NO. S-1609

DESIGNED BY	FLANIGAN	COUNTY	BALTIMORE
DRAWN BY	FLANIGAN	LOGMILE	03002005.30
CHECKED BY	N/A	TIMS NO.	U337
FAP NO.		TOD NO.	N/A

TS NOTS-447H DRAWING 1 OF 1 SHEET NO. 18A OF 27

APPROVALS
TEAM LEADER
ASST. DIV. CHIEF
DIVISION CHIEF
OFFICE DIRECTOR
ORIGINAL ON FILE

REVISIONS
2 GREENLINE REVISION 2 SHA CONTRACT NO. BA4335177 REPLACES SHEET 18 OF 27 7/3/2008 PEI
H SIGNAL RECONSTRUCTION SHA CONTRACT NO. BA4335177 2/28/2008 PEI

PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420-A Joh Avenue
BALTIMORE, MARYLAND 21227
(410) 247-8833 FAX 247-9397

PLOTTED$DATETIME$
FILE$FILE$

BY: $USERNAME$

DRILL HOLES
DRILL HOLES
DRILL HOLES