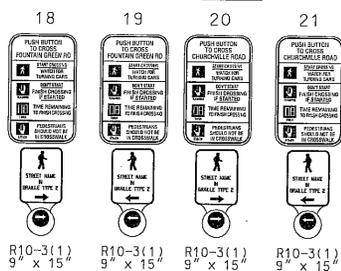


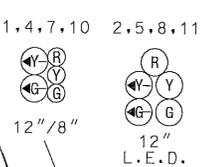
EXISTING SIGN



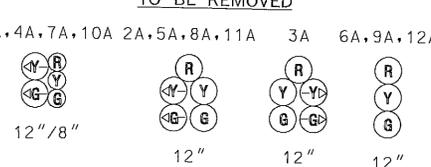
PROPOSED SIGNS



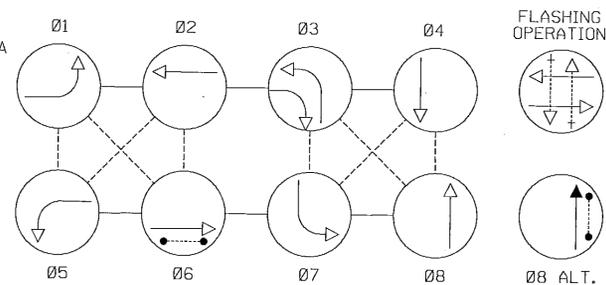
PROPOSED SIGNALS



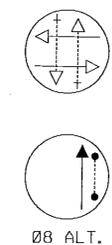
EXISTING SIGNALS TO BE REMOVED



NEMA PHASING

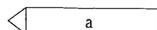


FLASHING OPERATION



MD 22 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

VIDEO ZONE DETECTION



PROPOSED VIDEO DETECTION CAMERA

a, b, c, d

SPECIAL NOTE:

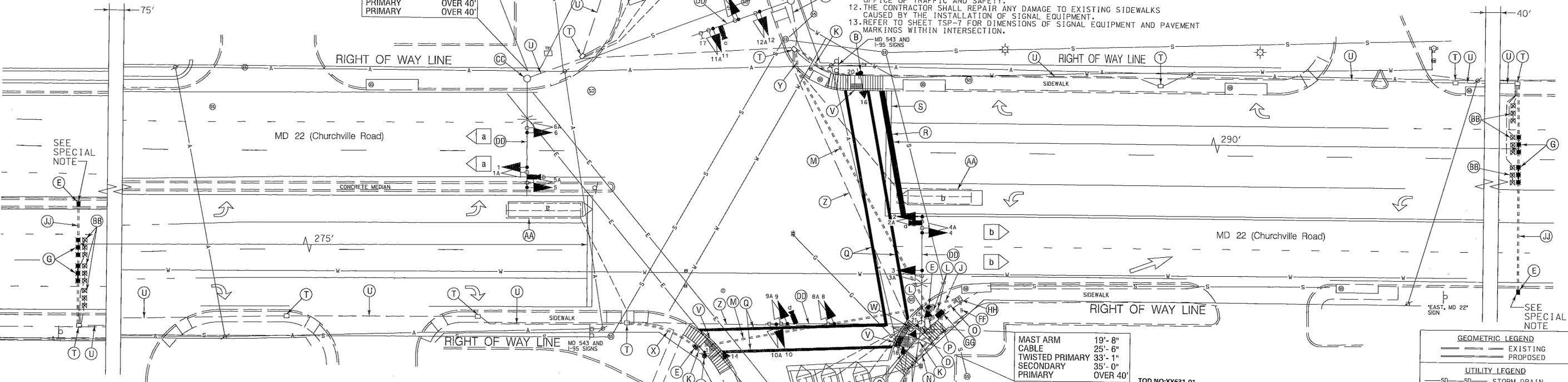
INSTALL HANDHOLE WITH LONG DIMENSION PERPENDICULAR TO TRAVEL WAY FOR INSTALLATION OF NON-INVASIVE PROBES. EXTEND CONDUIT A MINIMUM OF 2 IN. AND MAXIMUM OF 3 IN. INTO HANDHOLE.

TELEPHONE 19'-1"  
TELEPHONE 20'-9"  
FIBER 22'-9"  
TWISTED PRIMARY 27'-2"  
TWISTED PRIMARY 28'-7"  
SECONDARY 32'-4"  
PRIMARY OVER 40'  
PRIMARY OVER 40'

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. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
3. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
4. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
6. REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
7. 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%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
9. 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.
11. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
12. REFER TO SHEET TSP-7 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

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



MAST ARM 19'-8"  
CABLE 25'-6"  
TWISTED PRIMARY 33'-1"  
SECONDARY 35'-0"  
PRIMARY OVER 40'

TOD NO: X631-01  
SHA NO: HA63A51/D51  
MD 22 @ JOHN CARROLL HS to MD 543

GEOMETRIC LEGEND: EXISTING (solid line), PROPOSED (dashed line). 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).

- A. 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 LEFT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS FOUNTAIN GREEN ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
B. 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, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS CHURCHVILLE ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
C. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO 5 FT.) WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801-01-01, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS FOUNTAIN GREEN ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
D. USE EXISTING STEEL POLE, REMOVE EXISTING POLE MOUNTED CABINET AND CONTROLLER, AND ELECTRICAL SERVICE EQUIPMENT. SHA SIGNAL SHOP SHALL BE NOTIFIED TO REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CABINET. INSTALL COUNTDOWN PEDESTRIAN SIGNAL HEADS, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS CHURCHVILLE ROAD"). INSTALL 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN EXISTING FOUNDATION.
E. INSTALL HANDHOLE.
F. INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN (TO BE PLACED IN THRU LANE ONLY).
G. INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 1,000 FT. LEAD-IN IN PROPOSED 3 IN. CONDUIT.
H. INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE)
I. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
J. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
K. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
L. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.
M. INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE AND 2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND TELEPHONE SERVICE IN COMMON TRENCH. CAP AND MARK CONDUITS 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.

- O. INSTALL 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
P. INSTALL 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND TELEPHONE SERVICE.
Q. INSTALL 12 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.
R. INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
S. REMOVE EXISTING PAVEMENT MARKINGS.
T. USE EXISTING HANDHOLE.
U. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) BRICK PAVEMENT DETECTABLE WARNING SURFACE (SEE BRICK PAVEMENT INSTALLATION DETAIL ON SHEET TSP-6). SEE SHEET TSP-5 FOR RAMP DIMENSION DETAILS.
V. REMOVE EXISTING SIDEWALK.
W. REMOVE EXISTING SIDEWALK AND INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. REPLACE 4 INCH CONCRETE SIDEWALK.
X. REMOVE EXISTING SIDEWALK AND INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. REPLACE 4 INCH CONCRETE SIDEWALK.
Y. CAP AND ABANDON EXISTING CONDUIT.
Z. ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.
AA. ABANDON EXISTING MICROLOOP PROBE SET. DISCONNECT AND REMOVE MICROLOOP PROBE CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.
CC. USE EXISTING STEEL POLE.
DD. USE EXISTING MAST ARM. REMOVE EXISTING SIGNAL HEADS AND INSTALL NEW L.E.D. SIGNAL HEADS AND VIDEO DETECTION CAMERA MOUNTED ON MAST ARM.
EE. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
FF. INSTALL 4 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
GG. INSTALL NEMA SIZE #6 BASE MOUNTED CONTROLLER AND CABINET AND MASTER CONTROLLER. EXISTING SIDEWALK TO BE USED AS CONCRETE PAD. (INSTALL 2-2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE.)
HH. INSTALL EMBEDDED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS IN PEDESTAL BASE.
JJ. INSTALL 3 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - BORED.



801 South Caroline Street  
Baltimore, Maryland 21231  
410-235-3450



OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 22 (Churchville Road) and MD 543 (Fountain Green Road)  
Churchville, MD

APPROVALS: TEAM LEADER, ASST. DIV. CHIEF, DIVISION CHIEF, OFFICE DIRECTOR. REVISIONS: 1. REPLACED CABINET, UPGRADED SIGNAL HEADS AND ADDED VIDEO DETECTION AND APS. 2. REDLINE REVISION NO. 1. 3. REPLACE DETECTION FOR NORTHBOUND MD 543.

TRAFFIC SIGNALIZATION PLAN. SCALE: 1" = 20'. ADVERTISED DATE: 4/27/2008. CONTRACT NO.: DESIGNED BY: COUNTY: HANFORD. DRAWN BY: G. Simmers. LOGMILE: 12002205.5. CHECKED BY: G. Simmers. TMS NO.: G780. F.A.P. NO.: SEE TITLE SHEET. TOD NO.: TS NO.: 263L. DRAWING TSP-4 OF 12. SHEET NO.: 4 OF 12.