

- CONSTRUCTION DETAILS**
- A. REMOVE EXISTING SIDEWALK AND RAMPS. CONSTRUCT NEW SIDEWALK AND RAMPS TO DETECTABLE WARNING SURFACE PER SHA STD. MD 655.40 (SEE DETAIL ON SG-02).
- B. REMOVE EXISTING SIDEWALK AND RAMP. CONSTRUCT NEW SIDEWALK AND RAMP PER SHA STD. MD 655.12 AND DETECTABLE WARNING SURFACE PER SHA STD. MD 655.40 (SEE DETAIL ON SG-02).
- C. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED (NOTE: 1-3 IN. 90 DEGREE PVC BEND).
- D. REMOVE EXISTING CUT-THROUGH AND INSTALL NEW CUT-THROUGH AND DETECTABLE WARNING SURFACE PER MD STD. 655.40 (SEE DETAIL ON SG-02).
- E. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01. BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW RIGHT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS GUNNERS BRANCH ROAD" (NOTE: 1-2 IN. 90 DEGREE PVC BEND).
- F. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01. BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW LEFT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS GUNNERS BRANCH ROAD" (NOTE: 1-2 IN. 90 DEGREE PVC BEND).
- G. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01. BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW RIGHT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS SHOPPING CENTER ENTRANCE" (NOTE: 1-2 IN. 90 DEGREE PVC BEND).
- H. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01. BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW LEFT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS SHOPPING CENTER ENTRANCE" (NOTE: 1-2 IN. 90 DEGREE PVC BEND).
- I. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01. BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW RIGHT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS FREDERICK ROAD" (NOTE: 1-2 IN. 90 DEGREE PVC BEND).
- J. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01. BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW LEFT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS FREDERICK ROAD" (NOTE: 1-2 IN. 90 DEGREE PVC BEND).
- K. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01. BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW RIGHT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS FREDERICK ROAD" (NOTE: 1-2 IN. 90 DEGREE PVC BEND).
- L. INSTALL A 16.5 FT. STEEL POLE WITH A 15 FT. "T" DIMENSION, 38 FT. MAST ARM. FOUNDATION, LED TRAFFIC SIGNAL HEADS, SIGNS, AND VIDEO DETECTION CAMERA (NOTE: 1-3 IN. 90 DEGREE PVC BEND).
- M. INSTALL A 27 FT. STEEL POLE WITH A 60 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, VIDEO DETECTION CAMERAS, SIGNS AND 20 FT. LIGHTING ARM WITH A 250 WATT HPS LAMP AND LUMINAIRE (NOTE: 1-3 IN. 90 DEGREE PVC BEND).
- N. INSTALL A 16.5 FT. STEEL POLE WITH A 15 FT. "T" DIMENSION, 50 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, VIDEO DETECTION CAMERAS AND SIGNS (NOTE: 1-3 IN. 90 DEGREE PVC BEND).
- O. INSTALL A 16.5 FT. STEEL POLE WITH A 15 FT. "T" DIMENSION, 38 FT. MAST ARM. FOUNDATION, LED TRAFFIC SIGNAL HEADS, SIGNS AND VIDEO DETECTION CAMERA (NOTE: 1-3 IN. 90 DEGREE PVC BEND).
- P. INSTALL SIZE "S" BASE MOUNTED CABINET AND CONTROLLER WITH ALL NECESSARY EQUIPMENT (NOTE: 2-2 IN. AND 2-4 IN. 90 DEGREE BENDS).
- Q. INSTALL METERED SERVICE PEDESTAL (NOTE: 1-4 IN. AND 2-2 IN. 90 DEGREE BENDS).
- R. INSTALL ELECTRICAL HANDHOLE.
- S. INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
- T. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
- U. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED (SEE NOTE 24).
- V. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
- W. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) - FOR PROPOSED UNDERGROUND POWER SERVICE. CAP AND MARK CONDUIT, AND LEAVE A 1 FT. STUB WITH PULL STRING AT UTILITY POLE FOR USE BY OTHERS.
- X. DISCONNECT, PULL BACK AND REROUTE EXISTING INTERCONNECT CABLES FROM EXISTING CABINET TO PROPOSED SPLICE CABINET. SEE WIRING DIAGRAM ON SHEET SG-02 FOR DETAILS (SEE NOTE 27).
- Y. USE EXISTING HANDHOLE.
- Z. INSTALL 3 IN. DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER AND A 3 IN. WEATHER HEAD ON EXISTING UTILITY POLE FOR USE BY MONTGOMERY COUNTY (NOTE: 1-3 IN. 90 DEGREE PVC BEND).
- AA. REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. CAP AND ABANDON EXISTING CONDUIT.
- BB. REMOVE EXISTING HANDHOLE AND BACKFILL. CAP AND ABANDON EXISTING CONDUIT.
- CC. REMOVE EXISTING PAVEMENT MARKINGS (SEE NOTE 28).
- DD. INSTALL 12 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES FOR CROSSWALK (SEE NOTE 28).
- EE. INSTALL 24 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES FOR STOPLINE (SEE NOTE 28).
- FF. INSTALL WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGEND OR SYMBOL (SEE SG-03 FOR DIMENSION).
- GG. INSTALL WHITE HEAVY DUTY PERMANENT PAVEMENT MARKING LINE.
- HH. INSTALL OBJECT MARKER ON ONE (1) 4 IN. X 4 IN. WOOD POST SUPPORT (SEE NOTE 26).
- II. INSTALL GROUND MOUNTED SIGN ON ONE (1) 4 IN. X 4 IN. WOOD POST SUPPORT.
- JJ. INSTALL GROUND MOUNTED SIGN ON ONE (1) 4 IN. X 6 IN. WOOD POST SUPPORT.
- KK. REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT. THE CONTRACTOR SHALL CONTACT PEPCO TO PERFORM A "WORK WITH" TO DISCONNECT THE EXISTING POWER FEED. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. CAP AND ABANDON EXISTING CONDUIT.
- NN. INSTALL MONTGOMERY COUNTY SPLICE CABINET ON EXISTING UTILITY POLE (NOTE: 1-3 IN. AND 1-4 IN. 90 DEGREE PVC BENDS).
- PP. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED (SEE NOTE 24).

- GENERAL NOTES CONTINUED**
- THE CONTRACTOR IS TO REPLACE ONLY THE BRICK CUT-THROUGH WITH CONCRETE. DECORATIVE BRICK IN THE REMAINING PORTIONS OF THE CHANNELIZATION ISLAND AND MEDIAN SHALL BE REMOVED AND RESET.
  - ALL PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
  - THE CONTRACTOR SHALL ENSURE THE EXISTING TRAFFIC SIGNAL REMAINS OPERATIONAL UNTIL RECONSTRUCTED TRAFFIC SIGNAL IS OPERATIONAL.
  - THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO LOCATE ANY EXISTING CONDUIT RUNS WHERE NEW SLOTTED CONDUIT IS PROPOSED IMMEDIATELY ADJACENT.
  - THE CONTRACTOR SHALL NOTIFY MR. MICHAEL KINNEY AT 240-777-8760 TWO WEEKS PRIOR TO CONSTRUCTION FOR THE RELOCATION OF THE MONTGOMERY COUNTY SURVEILLANCE CAMERA AND CABINET.
  - WOOD SUPPORTS INSTALLED IN CONCRETE/BRICK SHALL BE INSTALLED WITH SLEEVED FOUNDATIONS AS PER STANDARDS MD 812.05-01 AND MD 812.05-02.
  - DISCONNECTING AND SPLICING OF INTERCONNECT CABLES IN THE TRAFFIC SIGNAL CABINETS SHALL BE PERFORMED BY MONTGOMERY COUNTY FORCES. THE CONTRACTOR SHALL RUN INTERCONNECT CABLES INTO THE CABINET AND PROPERLY LABEL THEM. CONTACT MR. KAMAL HAMUD AT 240-777-8761 FORTY EIGHT (48) HOURS IN ADVANCE PRIOR TO INSTALLING INTERCONNECT CABLES.
  - THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS THAT ARE WITHIN PROPOSED CROSSWALKS AND BETWEEN PROPOSED CROSSWALKS AND PROPOSED STOPLINES.
  - SEE GENERAL INFORMATION SHEET (3 OF 3) FOR CABINET, SIGNAL POLE AND MAST ARM DETAIL LAYOUTS.
  - ALL ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO MONTGOMERY COUNTY FOR TESTING PRIOR TO INSTALLATION. CONTACT MR. ROBERT RICKETTS TO COORDINATE AT 301-279-1291.

**LINE HEIGHTS (LH) 1**

TETHER	- 15'-7"
SPAN	- 20'-0"

**LINE HEIGHTS (LH) 2**

GUY	- 23'-6"
FIELD SPUN PRIMARY	- 32'-2"
PRIMARY	- 35'-0"

**LINE HEIGHTS (LH) 3**

GUY	- 18'-9"
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**UTILITY LEGEND**

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

**GEOMETRIC LEGEND**

---	EXISTING
---	PROPOSED

**LINE HEIGHTS (LH) 4**

TETHER	- 17'-11"
SPAN	- 21'-5"

**LINE HEIGHTS (LH) 5**

TETHER	- 18'-9"
SPAN	- 24'-2"

**LINE HEIGHTS (LH) 6**

GUY	- 18'-11"
COMM 1	- 21'-0"
COMM 2	- 22'-8"
COMM 3	- 23'-3"
SECONDARY	- 28'-0"
PRIMARY	- 35'+

**LINE HEIGHTS (LH) 7**

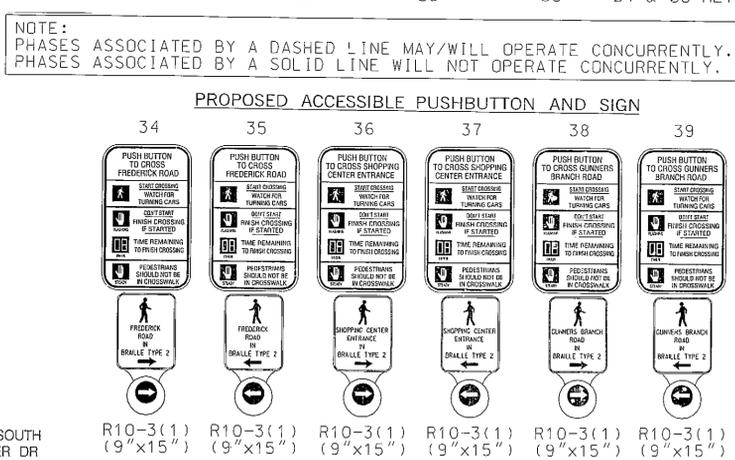
GUY	- 20'-7"
COMM 1	- 22'-2"
COMM 2	- 24'-2"
GUY	- 27'-4"
FIELD SPUN PRIMARY	- 27'-10"
PRIMARY	- 35'+

**LINE HEIGHTS (LH) 8**

GUY	- 19'-10"
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**LINE HEIGHTS (LH) 9**

FIELD SPUN PRIMARY	- 28'-8"
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- GENERAL NOTES**
- MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MSHA STANDARD TYPICALS FOR TRAFFIC CONTROL.
  - THE CONTRACTOR SHALL CONTACT MISS UTILITY TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
  - WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
  - 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 INTEGRATE PROPOSED/EXISTING CONCRETE FOUNDATIONS WITH NEW CURB/SIDEWALK RAMP WHERE NECESSARY.
  - MONTGOMERY COUNTY WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING AND DISCONNECTING AND SPLICING OF INTERCONNECT CABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING, TERMINATING (EXCLUDING INTERCONNECT) AND PROPERLY LABELING ALL SIGNAL CABLES.
  - THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED ELECTRICAL CABLES.
  - THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AT 240-777-8761 OF THE MONTGOMERY COUNTY DOT SEVENTY-TWO (72) HOURS PRIOR TO BEGINNING CONSTRUCTION.
  - MONTGOMERY COUNTY FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
  - THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE AND CABINET LOCATION(S) PRIOR TO INSTALLATION.
  - THE CONTRACTOR SHALL CENTER THE PROPOSED CROSSWALKS ON NEWLY CONSTRUCTED RAMPS.
  - ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MSHA STANDARDS.
  - THE CONTRACTOR SHALL REFER TO FIGURE 3B-17c OF THE 2006 MARYLAND M.U.T.C.D. FOR CROSSWALK PAVEMENT MARKING DETAIL.
  - VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
  - LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND 4E.21 AND THE NCHRP PUBLICATION "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL THE CONFLICT HAS BEEN RESOLVED. IF NEEDED, A DESIGN WAIVER SHALL BE OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
  - PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR FROM A 60 IN. X 60 IN. LEVEL LANDING AREA AND DOES NOT HAVE TO REACH MORE THAN 18 IN. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
  - THE 10 FT. MINIMUM SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
  - PUSHBUTTON ARROWS ARE TO BE TURNED PARALLEL TO THE CROSSWALK FOR WHICH THEY ARE INTENDED.
  - ALL TRAFFIC SIGNAL MODIFICATIONS SHALL BE CONSTRUCTED PRIOR TO SIDEWALK CONSTRUCTION.
  - THE CONTRACTOR SHALL REMOVE AND REPLACE CONCRETE SIDEWALK AT THE NEAREST JOINT.

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

MD 355 (FREDERICK ROAD) AT GUNNERS BRANCH ROAD/  
FOX CHAPEL SHOPPING CENTER  
GERMANTOWN, MARYLAND

**TRAFFIC SIGNALIZATION PLAN**

SCALE: 1" = 20', ADVERTISED DATE: N/A, CONTRACT NO.: N/A

DESIGNED BY: S. RENZI, COUNTY: MONTGOMERY  
DRAWN BY: N/A, LOGMILE: 15035517.82  
CHECKED BY: N/A, TMS NO.:  
F.A.P. NO.: , TOD NO.:

TS NO. 3395B, DRAWING SG-1 OF 3, SHEET NO. 1 OF 3

APPROVALS: ORIGINAL ON FILE

REVISIONS: ① FULL SIGNAL RECONSTRUCTION

SHA NO. XX439-20, TMS # K902, 09/2012  
STV, KXT, MF, JTB, MPA, CTW  
A REBUILD TO NEW GEOMETRICS  
SHA NO. M 611-501-3/1, 11/09/2008  
JD

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BY: tamovk

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