

# MONTGOMERY COUNTY HAWK SIGNALS

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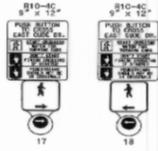
- First HAWK signal installed at 600 East Gude Drive (Men's Shelter) March 2010
- East Gude Drive Primary Arterial with 35000ADT
- Approved by MSHA as Experimental Traffic Control Device
- Termed as MOHAWK(Modified/Montgomery HAWK)
- 4- Section Signal Display
- Two Stage Ped Crossing
- Modified to flash Yellow instead of Dark
- Signal Operation: Flashing Yellow –Quick Flash Yellow - Solid Yellow – Red-RED

# East Gude Drivers and Fishers Lumber





PROPOSED SIGNS

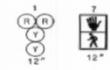


EAST GUIDE DRIVE

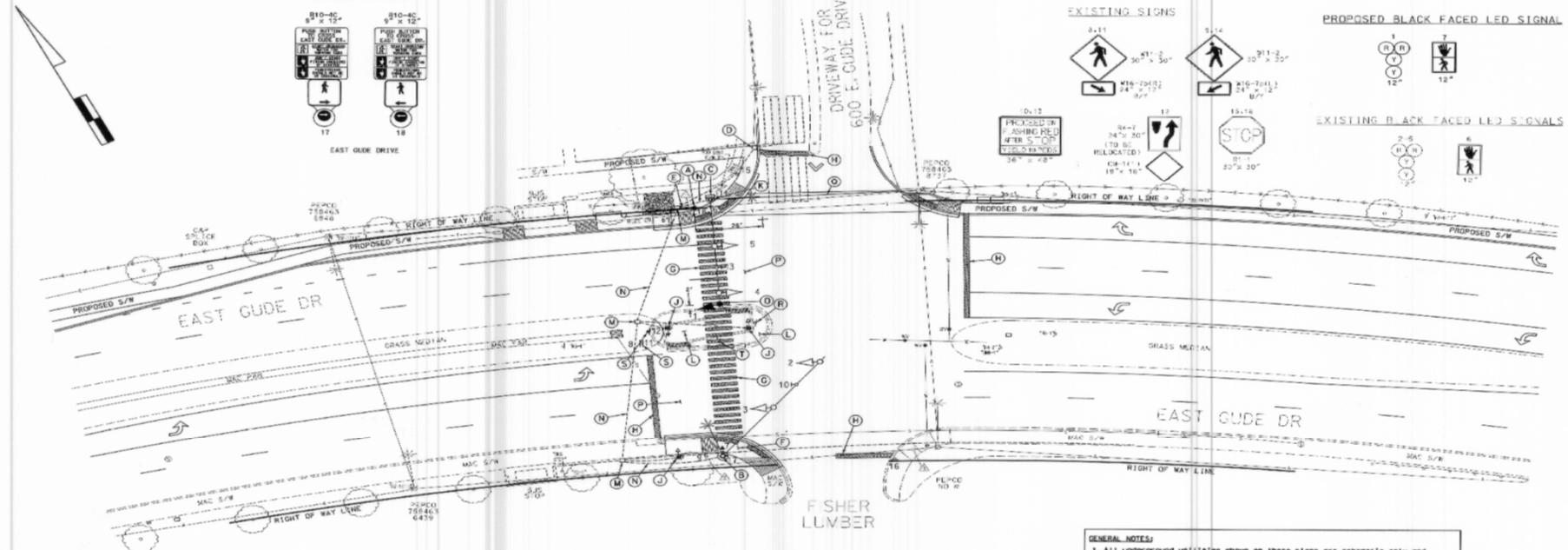
EXISTING SIGNS



PROPOSED BLACK FACED LED SIGNAL



EXISTING BLACK FACED LED SIGNALS



CONSTRUCTION DETAILS

- A. Install 5' pedestal pole (with breakaway coupling system, modified foundation, and pushbutton with pedestrian education sign as shown. (Notes: 1-2" polyvinyl chloride (Schedule 80) bend.)
- B. Install pedestrian signal head and pushbutton with pedestrian education sign onto existing mast arm pole as shown.
- C. Use existing NEMA size "5" pole-mounted cabinet and controller with electrical utility service equipment, 2-wire APS Control Unit and all necessary equipment as shown.
- D. Adjust existing handnote to new sidewalk grade.
- E. Install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
- F. Install proposed sidewalk ramp (Note: See Sheet 2 of 3 "ADA Ramp Detail Plan").
- G. Install 18" white, heat applied permanent preformed thermoplastic ladder bar pavement marking (crosswalk).
- H. Remove existing stopline pavement marking and install 24" white, heat applied permanent preformed thermoplastic ladder bar pavement marking (stopline).
- J. Remove existing pedestal pole, all attached signal equipment and foundation 12" below grade.
- K. Remove existing outside pushbutton and pedestrian education sign from mast arm pole.
- L. Remove entire concrete switch-back island and excavate 16" below road surface. Remove off existing grass median nose, backfill and seed. Install 5" aggregate base, 5" bituminous concrete base and 3" bituminous concrete roadway surface as shown.
- M. Use existing handbox.
- N. Use existing conduit.
- O. Install traffic signal head onto existing mast arm as shown.
- P. Remove existing crosswalk pavement markings.
- Q. Existing overhead electrical service to be maintained by PEPCO.
- R. Relocate R4-77 DM1-11 signs and post 45' West to proposed location as shown.
- S. Relocate sign and post.
- T. Relocate 811-27/ 811-7P signs (back to back) with post 30' West to proposed location as shown.

OVERHEAD HEIGHTS

ITEM	HEIGHT
1. PEDESTAL POLE	5'-0"
2. PEDESTAL POLE	5'-0"
3. PEDESTAL POLE	5'-0"
4. PEDESTAL POLE	5'-0"
5. PEDESTAL POLE	5'-0"
6. PEDESTAL POLE	5'-0"
7. PEDESTAL POLE	5'-0"
8. PEDESTAL POLE	5'-0"
9. PEDESTAL POLE	5'-0"
10. PEDESTAL POLE	5'-0"
11. PEDESTAL POLE	5'-0"
12. PEDESTAL POLE	5'-0"
13. PEDESTAL POLE	5'-0"
14. PEDESTAL POLE	5'-0"
15. PEDESTAL POLE	5'-0"
16. PEDESTAL POLE	5'-0"
17. PEDESTAL POLE	5'-0"
18. PEDESTAL POLE	5'-0"
19. PEDESTAL POLE	5'-0"
20. PEDESTAL POLE	5'-0"
21. PEDESTAL POLE	5'-0"
22. PEDESTAL POLE	5'-0"
23. PEDESTAL POLE	5'-0"
24. PEDESTAL POLE	5'-0"
25. PEDESTAL POLE	5'-0"
26. PEDESTAL POLE	5'-0"
27. PEDESTAL POLE	5'-0"
28. PEDESTAL POLE	5'-0"
29. PEDESTAL POLE	5'-0"
30. PEDESTAL POLE	5'-0"
31. PEDESTAL POLE	5'-0"
32. PEDESTAL POLE	5'-0"
33. PEDESTAL POLE	5'-0"
34. PEDESTAL POLE	5'-0"
35. PEDESTAL POLE	5'-0"
36. PEDESTAL POLE	5'-0"
37. PEDESTAL POLE	5'-0"
38. PEDESTAL POLE	5'-0"
39. PEDESTAL POLE	5'-0"
40. PEDESTAL POLE	5'-0"
41. PEDESTAL POLE	5'-0"
42. PEDESTAL POLE	5'-0"
43. PEDESTAL POLE	5'-0"
44. PEDESTAL POLE	5'-0"
45. PEDESTAL POLE	5'-0"
46. PEDESTAL POLE	5'-0"
47. PEDESTAL POLE	5'-0"
48. PEDESTAL POLE	5'-0"
49. PEDESTAL POLE	5'-0"
50. PEDESTAL POLE	5'-0"

- GENERAL NOTES:**
- All underground utilities shown on these plans are schematic only and may not be complete. The contractor shall be responsible for locating "MISS" UTILITIES prior to construction so that all utilities are covered in the plan. If the contractor perceives that a conflict between the utilities and the traffic signal will occur, the contractor shall notify the project engineer immediately so that the conflict may be resolved.
  - All Traffic Signal Foundations shall be installed at the final sidewalk or curb grade for closed sections. Highest Roadway Profile Grade Design sections, to meet clearances as specified in MD 816.02, MD 816.01, MD 816.02, and MD 816.03. The contractor shall verify utility grades prior to the installation of all signal equipment.
  - All pavement markings detailed are proposed and are to be installed in accordance with Montgomery County Standard. All crosswalks shall be defined on historical maps of median cut throughs.
  - The contractor shall remove all unused wiring.
  - For all General Notes concerning ADA ramps, crosswalk locations and pedestrian pole and pushbutton locations, see Sheet 2 of 3.
  - Sidewalk, curbing and ADA ramp installation on the north side of the intersection shall be done by Montgomery County.

**GEOMETRIC LEGEND**

PROPOSED: ———

EXISTING: - - - - -

**LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES**

SEWER	—
ELECTRIC	—
TELEPHONE	—
GAS	—
WATER	—
CABLE TV	—
FIBER OPTIC	—



NO.	REVISION	BY	DATE	APP'D	DATE	DESIGNED BY	R R ZACHERL	DATE	2-3-10
1	REMOVE CONCRETE SWITCH ISLAND, INSTALL NEW ADA RAMP, CROSSWALK AND PEDESTAL SIGNAGE	RRZ	9/15/16			DRAWN BY	W J RIES	DATE	2-3-10

DEPARTMENT OF TRANSPORTATION  
DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS  
MONTGOMERY COUNTY, MARYLAND

TRAFFIC SIGNAL PLAN

EAST GUIDE DRIVE  
AND FISHER LUMBER

SCALE: 1" = 20'

# MSHA- HAWK SIGNAL

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- First MSHA HAWK in County Installed at East West Highway (MD410) and Bethesda Chevy Chase High School Midblock crosswalk on October 5, 2017
- Standard HAWK with 3 Signal Display (Bottom Yellow and top 2 Reds)
- Signal Operation: Rests in Dark- Quick Flash- Solid Yellow –Red-Dark

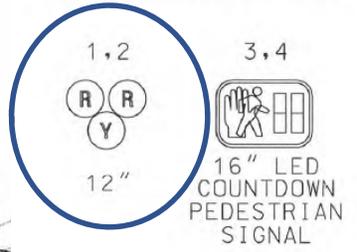
**MSHA HAWK. EAST WEST HIGHWAY  
AND BETHESDA CHEVY CHASE HIGH  
SCHOOL ENTRANCE**



LINE HEIGHTS (LH 1)

PRIMARY	- 35'+
SECONDARY	- 27'-3"
COMM	- 23'-2"
COMM	- 21'-5"
COMM	- 18'-8"
COMM	- 16'-9"
COMM	- 14'-11"

PROPOSED LED SIGNALS



BETHESDA CHEVY-CHASE  
HIGH SCHOOL ENTRANCE

PARKING LOT  
PEPCO POLE #  
774419-440590

SEE INSET A  
THIS SHEET

EX. RIGHT-OF-WAY

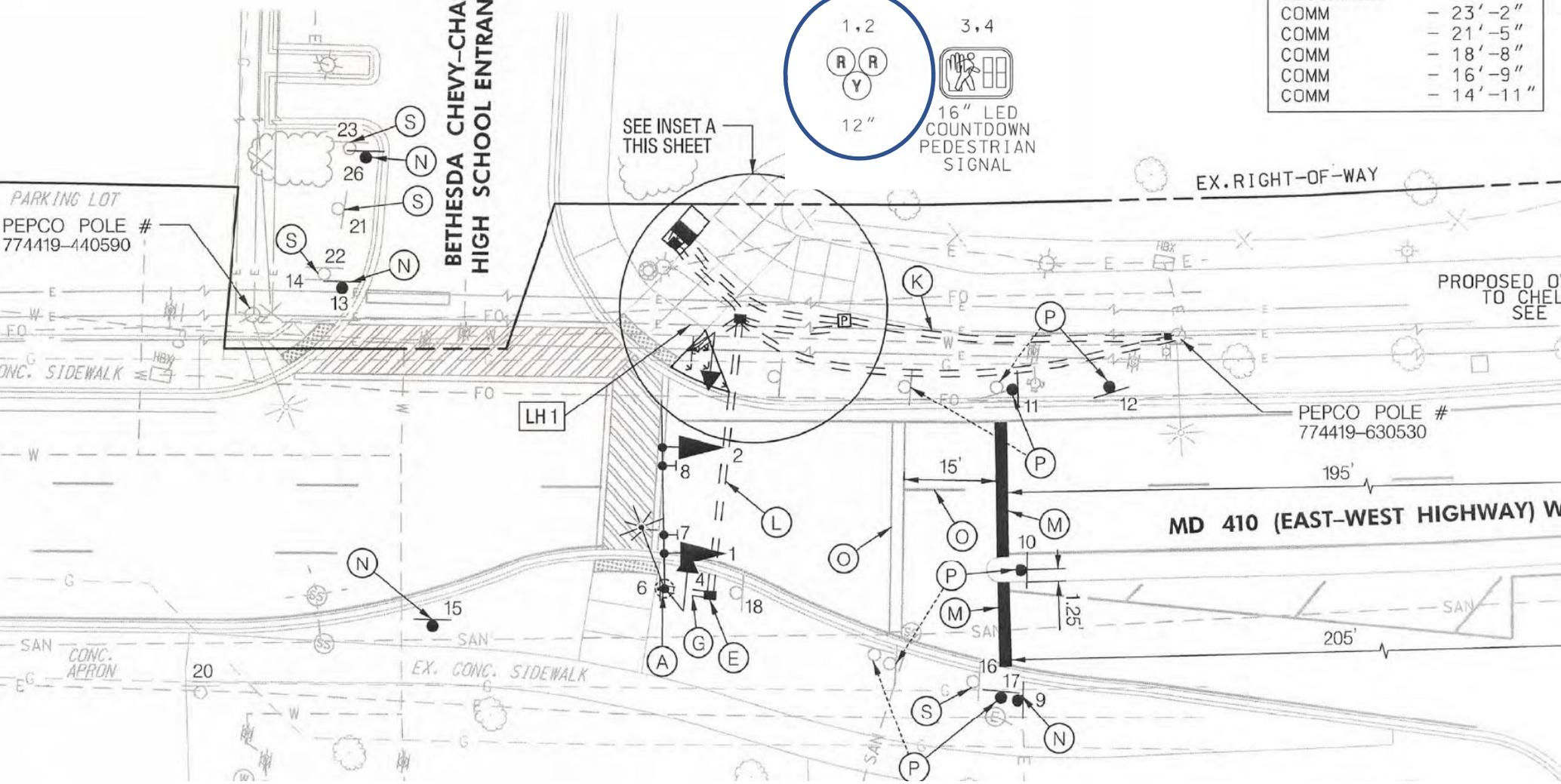
PROPOSED OV  
TO CHEL  
SEE

PEPCO POLE #  
774419-630530

MD 410 (EAST-WEST HIGHWAY) W

SAN  
CONC.  
APRON

EX. CONC. SIDEWALK



# MUDDY BRANCH HAWK

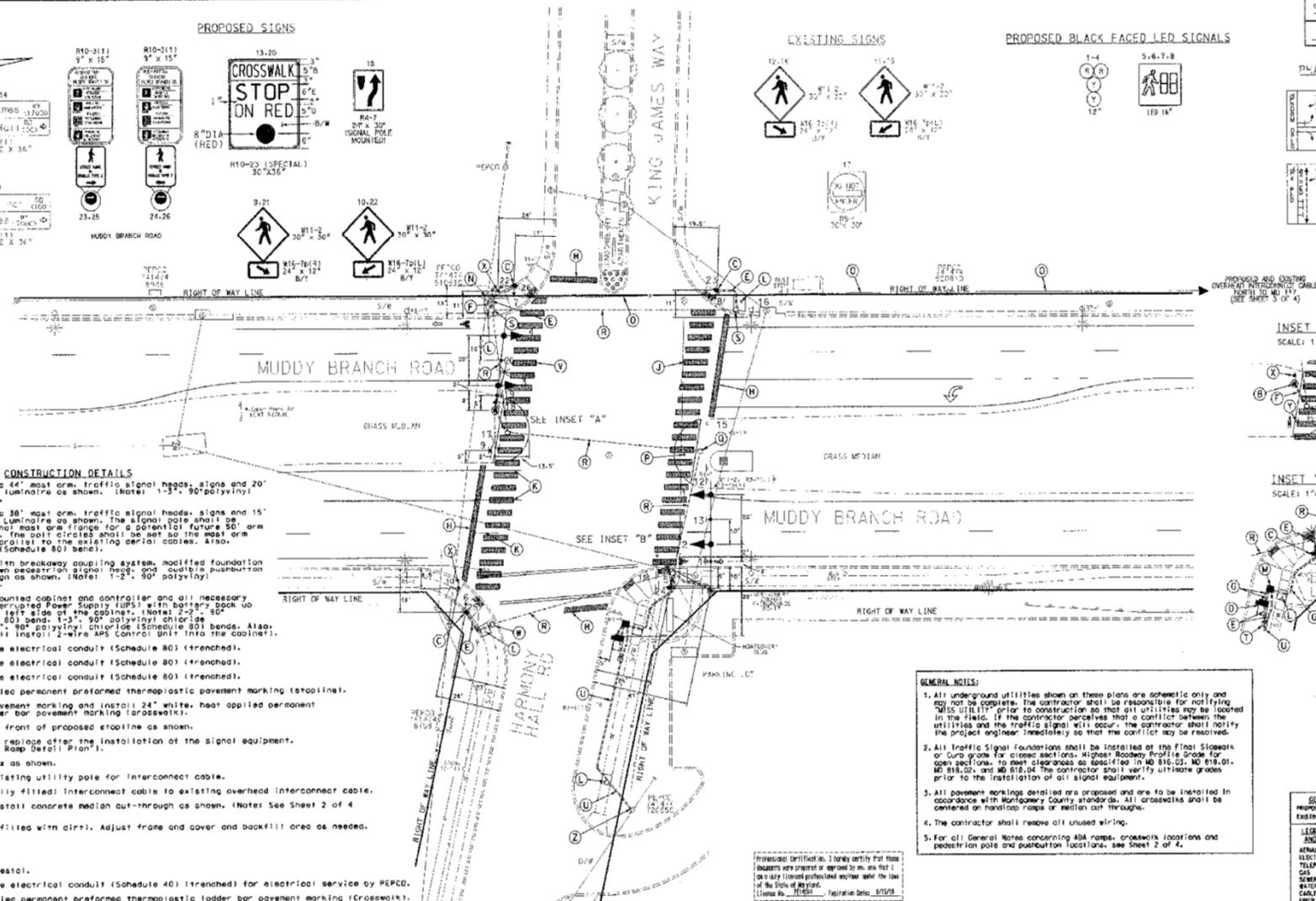
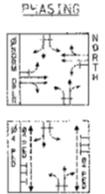
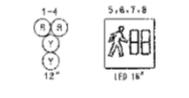
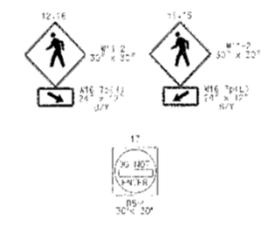
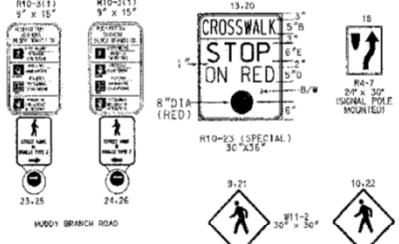
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- First pedestrian activated HAWK County Signal
- Installed at the intersection of Muddy Branch Road and Harmony Hall on October 24, 2018
- 4- Section Signal Display. Yellow- Yellow and Two Reds
- Signal Operation: Rests in Dark–Quick Flash Yellow - Solid Yellow – Red- Dark
- Slated to be modified to standard 3 section signal head configuration.

PROPOSED SIGNS

EXISTING SIGNS

PROPOSED BLACK FACED LED SIGNALS

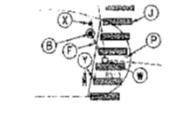


CONSTRUCTION DETAILS

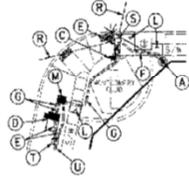
- A. Install 27' steel pole with a 44" mast arm, traffic signal heads, signs and 20' lighting arm with a 150W-LED luminaire as shown. (Notes: 1-3', 90° polyvinyl chloride (Schedule 80) bends).
- B. Install 27' steel pole with a 38" mast arm, traffic signal heads, signs and 15' lighting arm with a 150W-LED luminaire as shown. The signal pole shall be manufactured with an additional mast arm flange for a potential future 50' arm to cover the side streets. The bolt circles shall be set so the mast arm crossing Muddy Branch runs parallel to the existing aerial cables. Also, 1-3', 90° polyvinyl chloride (Schedule 80) bends.
- C. Install 10' pedestal pole (with breakaway coupling system, modified foundation STD No. 801-01-01), Countdown pedestrian signal head, and double pushbutton with pedestrian education sign as shown. (Notes: 1-2', 90° polyvinyl chloride (Schedule 80) bends).
- D. Install NEMA size "6" base-mounted cabinet and controller and all necessary equipment as shown. An uninterrupted Power Supply (UPS) with battery back up shall be piggy backed to the left side of the cabinet. (Notes: 2-2', 90° polyvinyl chloride (Schedule 80) bends; 1-3', 90° polyvinyl chloride (Schedule 80) bend and a 2-4', 90° polyvinyl chloride (Schedule 80) bends. Also, Montgomery County Forces shall install 2-wire APS Control Unit into the cabinet).
- E. Install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
- F. Install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
- G. Install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
- H. Install 24" white, heat applied permanent preformed thermoplastic pavement marking (stapoline).
- I. Remove existing crosswalk pavement marking and install 24" white, heat applied permanent preformed thermoplastic ladder bar pavement marking (crosswalk).
- J. Remove existing lane line in front of proposed stopline as shown.
- K. Remove existing sidewalk and replace after the installation of the signal equipment. (Notes: See Sheet 2 of 4 - ADA Ramp Detail Plan).
- L. Install 24"x 30"x 36" handbox as shown.
- M. Install 3" PVC riser onto existing utility pole for interconnect cable.
- N. Loos 12-pair voice grade (jelly filled) interconnect cable to existing overhead interconnect cable.
- O. Excavate existing median, install concrete median cut-through as shown. (Notes: See Sheet 2 of 4 - ADA Ramp Detail Plan).
- P. Clean out existing handbox (filled with dirt). Adjust frame and cover and backfill area as needed.
- Q. Use existing conduit.
- R. Use existing handbox.
- S. Install embedded metered pedestal.
- T. Install 4" polyvinyl chloride electrical conduit (Schedule 40) (trenched) for electrical service by PEPCO.
- U. Install 24" white, heat applied permanent preformed thermoplastic ladder bar pavement marking (Crosswalk).

- GENERAL NOTES:**
1. All underground utilities shown on these plans are schematic only and may not be complete. The contractor shall be responsible for notifying "MISS-UTILITY" prior to construction so that all utilities may be located in the field. If the contractor perceives that a conflict between the utilities and the traffic signal will occur, the contractor shall notify the project engineer immediately so that the conflict may be resolved.
  2. All Traffic Signal Foundations shall be installed at the Final Sloewalk or Curb grade for cross sections. Highest Roadway Profile Grade for open sections, to meet clearances as specified in MD 818.01, MD 818.01, MD 818.02, and MD 818.04. The contractor shall verify ultimate grades prior to the installation of all signal equipment.
  3. All pavement markings detailed are proposed and are to be installed in accordance with Montgomery County standards. All crosswalks shall be centered on handicap ramps or median cut throughs.
  4. The contractor shall remove all unused wiring.
  5. For all General Notes concerning ADA ramps, crosswalk locations and pedestrian pole and pushbutton locations, see Sheet 2 of 4.

INSET "A" SCALE: 1" = 20'



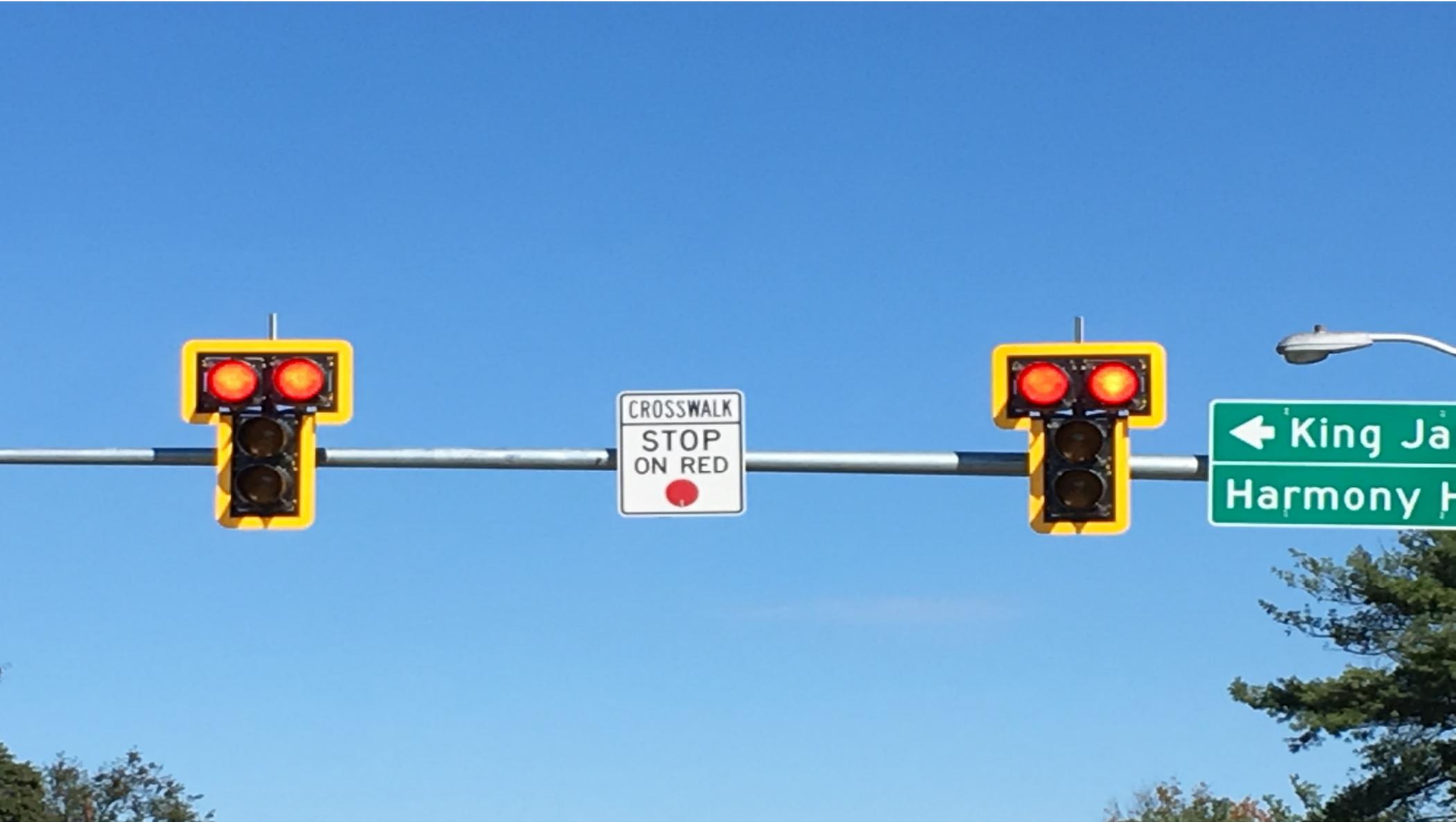
INSET "B" SCALE: 1" = 20'



Professional Engineer, I hereby certify that these drawings were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. PE000001, Registration Date: 01/25/18

**SYMBOLIC LEGEND**

PROPOSED	---
EXISTING	---
<b>LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES</b>	
AERIAL CABLE	---
ELECTRIC	---
TELEPHONE	---
CABLE TV	---
SEWER	---
WATER	---
CABLE TV	---



CROSSWALK  
STOP  
ON RED  
●

← King Ja  
Harmony H