DRILL HOLES

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BORDER REV: DATE: June 1, 2004

NOTE: MD 355 IS CONSIDERED TO RUN IN A NORTH-SOUTH DIRECTION.

PROPOSED SIGNS

24 SOUTH MARYLAND 355 — M1-5(6) ASSOCIATED SHIELD ASSEMBLY 30" x 48"

25 NORTH MARYLAND 355 — M1-5(6) ASSOCIATED SHIELD ASSEMBLY 48" x 72"

30 NORTH MARYLAND 355 — M1-5(6) ASSOCIATED SHIELD ASSEMBLY 30" x 48"

31 SOUTH MARYLAND 355 — M1-5(6) ASSOCIATED SHIELD ASSEMBLY 48" x 72"

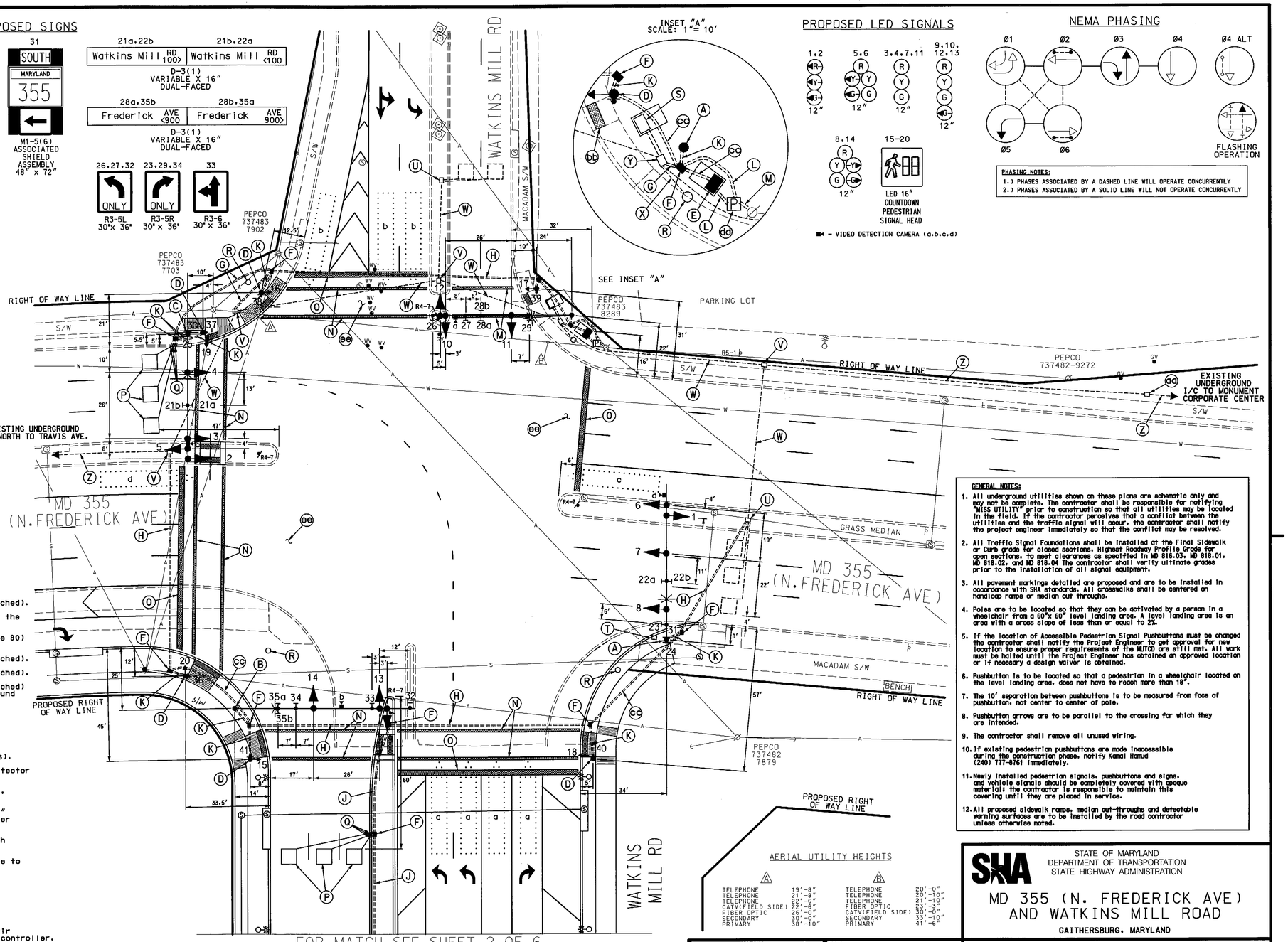
21a,22b: Watkins Mill RD <100>
21b,22a: Watkins Mill RD <100
D-3(1) VARIABLE X 16" DUAL-FACED

28a,35b: Frederick AVE <900
28b,35a: Frederick AVE 900>
D-3(1) VARIABLE X 16" DUAL-FACED

26,27,32 — R3-5L 30"x 36"
23,29,34 — R3-5R 30" x 36"
33 — R3-6 30" x 36"

R10-3(1) 9" x 15" — PUSH BUTTON TO CROSS FREDERICK AVE — 36, 37
R10-3(1) 9" x 15" — PUSH BUTTON TO CROSS WATKINS MILL RD. — 38,40, 39,41

FREDERICK AVE (MD 355) — WATKINS MILL ROAD



PROPOSED LED SIGNALS

1,2 — 12"
5,6 — 12"
3,4,7,11 — 12"
9,10, 12,13 — 12"
8,14 — 12"
15-20 — LED 16" COUNTDOWN PEDESTRIAN SIGNAL HEAD

■4 - VIDEO DETECTION CAMERA (a,b,c,d)

NEMA PHASING

Ø1 Ø2 Ø3 Ø4 Ø4 ALT Ø5 Ø6

FLASHING OPERATION

PHASING NOTES:
1.) PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY
2.) PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY

CONSTRUCTION DETAILS

A. Install 27' steel pole with a 60' mast arm, traffic signal heads, signs, video detection camera and 15' lighting arm with 250 W HPSV luminaire. (Note: 1-3" 90° polyvinyl chloride (Schedule 80) bend.)

B. Install 27' steel pole with a 70' mast arm, traffic signal heads, signs, video detection camera and 15' lighting arm with 250 W HPSV luminaire. (Note: 1-3" 90° polyvinyl chloride (Schedule 80) bend.)

C. Install 27' steel pole with a 50' mast arm, traffic signal heads, signs, video detection camera and 15' lighting arm with 250 W HPSV luminaire. (Note: 1-3" 90° polyvinyl chloride (Schedule 80) bend.)

D. Install 10' breakaway pedestal pole with countdown pedestrian signal head and APS pushbutton with pedestrian education sign (R10-3(1). (Note: 1-3" 90° polyvinyl chloride (Schedule 80) bend.)

E. Install NEMA size "6" base-mounted cabinet and controller with all necessary equipment as shown.

F. Install handhole.

G. Install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).

H. Install 2-4" polyvinyl chloride electrical conduit (Schedule 80) (in the same bore).

J. Install 1-4" and 1-3" polyvinyl chloride electrical conduit (Schedule 80) (in the same trench).

K. Install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).

L. Install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).

M. Install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched) with 50' of 3 wire 1 conductor (No. 250 KCMIL) for proposed underground electrical power service by PEPCO to base of utility pole.

N. Install 12" white heat applied preformed thermoplastic pavement marking.(Crosswalk)

O. Install 24" white heat applied preformed thermoplastic pavement marking.(Stopline)

P. Install 6' x 6' loop detector encased in 1/4" flexible tubing (4-turns).

Q. Install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).

R. Contractor shall remove existing strain pole, all attached equipment, and foundation 12" below grade and backfill.

S. Contractor shall remove existing base mounted cabinet, foundation 12" below grade and backfill. (Note:SHA Forces shall remove the controller and all other auxiliary equipment.)

T. Remove existing handhole and adandon all conduit runs associated with this handhole.

U. Use existing handhole. The contractor is to splice existing loop wire to proposed 2-conductor, aluminum shielded cable and route to proposed cabinet. (See Wiring Diagram).

V. Use existing handhole.

W. Use existing conduit.

X. Cap and abandon existing conduit.

Y. Use existing handhole. Disconnect and pull back both pieces of 50-pair interconnect cable from existing controller and reroute to proposed controller.

Z. Existing conduit to remain.

aa. Existing handhole to remain.

bb. Install Detectable warning surface (60"x 24") standard No. MD 655.40 onto existing sidewalk ramp.

cc. Install 2-4" polyvinly chloride electrical conduit trenched (Schedule 80) (Note: 2nd conduit in the same trench).

dd. Install metered pedestal for electrical utility service equipment.

ee. Remove existing crosswalk and/or stopline pavement marking.

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 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, 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 SHA standards. All crosswalks shall be centered on handicap ramps or median cut throughs.
4. Poles are to be located so that they can be activated by a person in a wheelchair from a 60"x 60" level landing area. A level landing area is an area with a cross slope of less than or equal to 2%.
5. If the location of Accessible Pedestrian Signal Pushbuttons must be changed the contractor shall notify the Project Engineer to get approval for new location to ensure proper requirements of the MUTCD are still met. All work must be halted until the Project Engineer has obtained an approved location or if necessary a design waiver is obtained.
6. 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".
7. The 10' separation between pushbuttons is to be measured from face of pushbutton, not center to center of pole.
8. Pushbutton arrows are to be parallel to the crossing for which they are intended.
9. The contractor shall remove all unused wiring.
10. If existing pedestrian pushbuttons are made inaccessible during the construction phase, notify Kamal Hamud (240) 777-8761 immediately.
11. Newly installed pedestrian signals, pushbuttons and signs, and vehicle signals should be completely covered with opaque material; the contractor is responsible to maintain this covering until they are placed in service.
12. All proposed sidewalk ramps, median cut-throughs and detectable warning surfaces are to be installed by the road contractor unless otherwise noted.

AERIAL UTILITY HEIGHTS

A		B	
TELEPHONE	19'-8"	TELEPHONE	20'-0"
TELEPHONE	21'-8"	TELEPHONE	20'-10"
TELEPHONE	22'-6"	TELEPHONE	21'-10"
CATV(FIELD SIDE)	22'-6"	FIBER OPTIC	23'-3"
FIBER OPTIC	26'-0"	CATV(FIELD SIDE)	30'-0"
SECONDARY	30'-0"	SECONDARY	33'-10"
PRIMARY	38'-10"	PRIMARY	41'-6"

GEOMETRIC LEGEND
PROPOSED
EXISTING

LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES
AERIAL CABLE — A — A —
ELECTRIC — E — E —
TELEPHONE — T — T —
GAS — G — G —
SEWER — S — S —
WATER — W — W —
CABLE TV — TV — TV —

REVISION "B"

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

REVISIONS
B 11/2/09 RECONSTRUCT TRAFFIC SIGNAL ADDING VIDEO DETECTION, APS/CPS SHA NO. 13B2306002
RRZ

PLOTTED: #DATETIME#
FILE: #FILE#

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 355 (N. FREDERICK AVE) AND WATKINS MILL ROAD

GAITHERSBURG, MARYLAND

TRAFFIC SIGNAL PLAN

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

DESIGNED BY N/A COUNTY MONTGOMERY
DRAWN BY N/A LOGMILE 15035516.03
CHECKED BY TIMS NO. J905
F.A.P. NO. TOD NO.

TS NO. 2083B | DRAWING NO. 1 OF 6 | SHEET NO. OF

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