MD 2 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION

PROPOSED SIGNS

24: Balto. Annap. Blvd. SOUTH ← MARYLAND 648 → NORTH — M1-5 (4) (78"x36")

26: Balto. Annap. Blvd. NORTH ← MARYLAND 648 → SOUTH — M1-5 (4) (78"x36")

31: Gov. Ritchie Hwy SOUTH ← MARYLAND 2 → NORTH — M1-5(4) (78"x36")

34: Gov. Ritchie Hwy NORTH ← MARYLAND 2 → SOUTH — M1-5(4) (78"x36")

35: ONLY — R3-5(L) (30"x36")

37,39 / 38,40 / 41,43 / 42,44: PUSH BUTTON TO CROSS GOV. RITCHIE HWY / PUSH BUTTON TO CROSS BALT. ANNAP. BLVD — R10-3(1) 9" x 15"

EXISTING SIGNS TO BE RELOCATED (SHOWN AT FINAL LOCATION)

27,29,32,36 — 21,25,28,33

23: BALT. ANNAP. BLVD

30: MD 2 GOV. RITCHIE HWY

EXISTING SIGN TO REMAIN

22

PROPOSED SIGNALS

1,2,5,6 — 12"

3,4,7,8,9,10,11,13 — 12"

12 — 12"

14 — 12"

15-20: 16" LED COUNTDOWN PEDESTRIAN SIGNAL

VIDEO ZONE DETECTION

a

PROPOSED VIDEO DETECTION CAMERA a,b,c,d

PROPOSED OPTICOM DETECTOR EYE e,f

NEMA PHASING

Ø1 (LEAD), Ø2, Ø3, Ø4, Ø6, Ø5 (LAG), Ø8, Ø8 ALT.

FLASHING OPERATION

OPTICOM PRE-EMPTION W/B

OPTICOM PRE-EMPTION E/B

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

SPAN WIRE	18'-6"
SPAN WIRE	23'-6"
SECONDARY	30'-3"
SECONDARY	31'-3"
SECONDARY	31'-9"
PRIMARY	36'-1"

NEUTRAL	29'0"
SECONDARY	29'-5"
PRIMARY	33'-8"

SPECIAL NOTE 1 — SPECIAL NOTE 2 — SPECIAL NOTE 3

MD 2 ROUTE MARKERS

RIGHT OF WAY LINE

MD 2 (Governor Ritchie Highway) — 300'

MD 648 (Baltimore Annapolis Blvd)

MD 2 (Governor Highway) — 300'

SIDEWALK

SOUTH MD 648

NORTH MD 2

STREET BLADE SIGN

SHA RIGHT OF WAY

120' — 110' — 40'

CONSTRUCTION DETAILS

A. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH A 50 FT./70 FT. MAST ARMS. TRAFFIC SIGNAL HEADS. SIGNS. VIDEO DETECTION CAMERAS MOUNTED ON MAST ARMS. OPTICOM DETECTOR EYE. AND 15 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE AND AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS GOV. RITCHIE HWY"). (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).

B. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH A 70 FT. (CUT TO 64 FT.) MAST ARM. TRAFFIC SIGNAL HEADS. SIGNS. VIDEO DETECTION CAMERAS MOUNTED ON MAST ARM. AND 15 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINIAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).

C. INSTALL CONCRETE FOUNDATION WITH 14 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE. TRAFFIC SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS GOV. RITCHIE HWY"). (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 MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01. COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS BALT. ANNAP. BLVD"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

1 E. INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE 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 GOV. RITCHIE HWY"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

F. INSTALL CONCRETE FOUNDATION WITH 14 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE. TRAFFIC SIGNAL HEAD. COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS BALT. ANNAP. BLVD"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

1 G. INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS BALT. ANNAP. BLVD"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

1 H. INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE 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 BALT. ANNAP. BLVD"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

J. INSTALL HANDHOLE. PRIOR TO POURING THE NEW SIDEWALK.
K. BGE FORCES SHALL DISCONNECT ELECTRICAL SERVICE AND REMOVE LEASE LIGHTING.
L. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. PRIOR TO POURING THE NEW SIDEWALK.
M. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
N. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
O. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.
P. USE EXISTING BASE MOUNTED CABINET AND CONTROLLER. INSTALL AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON BASE UNIT. (NOTE: SHA FORCES SHALL RETROFIT CONTROLLER EQUIPMENT TO OPERATE VIDEO DETECTION EQUIPMENT).
Q. INSTALL 12 IN. HEAT APPLIED. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.
R. USE EXISTING HANDHOLE.
S. USE EXISTING CONDUIT.
T. EXISTING S1-1 AND M6-2 SIGNS (#29) TO BE RELOCATED ONTO ONE 4 IN. x 4 IN. TREATED WOOD SUPPORT (L=17 FT.) AS SHOWN.
U. REMOVE EXISTING STRAIN POLE. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
V. REMOVE EXISTING STRAIN POLE. RELOCATE EXISTING SIGN (#25) ON ONE 4 IN. x 4 IN. TREATED WOOD SUPPORT (L=17 FT.) AS SHOWN. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

SPECIAL NOTES:

1. CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
2. THE CONTRACTOR SHALL COORDINATE WITH SHA FORCES TO SHUTDOWN SIGNAL OPERATION TO PULL BACK EXISTING SIGNAL CABLES AND RE-FEED PROPOSED SIGNAL CABLES THROUGH EXISTING HANDBOX AND CONDUITS INTO CABINET BASE. THIS SHALL BE DONE IN ONE NIGHTTIME SHIFT.
3. 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 CONTINUED

W. USE EXISTING STRAIN POLE. REMOVE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSHBUTTON AND INSTALL TRAFFIC SIGNAL HEAD, COUNTDOWN PEDESTRIAN SIGNAL HEADS AND AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS GOV. RITCHIE HWY"). INSTALL 1-2 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN POLE BASE. RELOCATE EXISTING SIGN (#27) ON ONE 4 IN. x 4 IN. TREATED WOOD SUPPORT (L=17 FT.) AS SHOWN.
X. USE EXISTING STRAIN POLE. REMOVE EXISTING PEDESTRIAN SIGNAL AND PUSHBUTTON AND INSTALL COUNTDOWN PEDESTRIAN SIGNAL HEADS AND RELOCATED SIGNS (#28 AND #36). INSTALL 1-2 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN POLE BASE.
Y. CAP AND ABANDON EXISTING CONDUIT.
Z. REMOVE EXISTING PEDESTAL POLE. RELOCATE EXISTING SIGN (#21) ON ONE 4 IN. x 4 IN. TREATED WOOD SUPPORT (L=17 FT.) AS SHOWN.
AA. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
BB. REMOVE EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.
CC. REMOVE EXISTING SIDEWALK RAMP AND INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
DD. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40). (SEE SHEET 2 FOR SIDEWALK RAMP DETAILS).
EE. REMOVE EXISTING CONCRETE RAMP AND SIDEWALK AND INSTALL MEDIAN CUT-THROUGH AND STANDARD TYPE A COMBINATION CURB AND GUTTER PAN.
FF. REMOVE EXISTING SIDEWALK AND INSTALL 5 IN. CONCRETE SIDEWALK.
GG. EXISTING S1-1AND M6-2 SIGNS (#28 AND #36) TO BE RELOCATED ONTO EXISTING STRAIN POLE AS SHOWN.
HH. EXISTING S1-1AND M6-2 SIGNS (#32 AND #33) TO BE RELOCATED ONTO ONE 4 IN. x 4 IN. TREATED WOOD SUPPORT (L=17 FT.).
JJ. EXISTING STREET BLADE SIGNS (#30) AND SUPPORT TO BE RELOCATED.
KK. REMOVE EXISTING SIDEWALK. BACKFILL. SEED. AND MULCH.
LL. REMOVE EXISTING HANDHOLE.
MM. REMOVE EXISTING PEDESTAL POLE. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
NN. REMOVE EXISTING PEDESTAL POLE. RELOCATE EXISTING SIGN (#23) ONTO ONE 4 IN. x 4 IN. TREATED WOOD SUPPORT (L=17 FT.) AS SHOWN.
1 OO. INSTALL CONCRETE FOUNDATION WITH 14 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE AND TRAFFIC SIGNAL HEAD. (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
PP. INSTALL MICROLOOP PROBE SET WITH 1.000 FT. LEAD-IN (TO BE PLACED IN THRU LANE ONLY).
QQ. REMOVE EXISTING PAVEMENT MARKINGS.
RR. INSTALL DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
SS. REMOVE EXISTING PAVEMENT MARKING LETTERS "ONLY".
TT. INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 1.000 FT. LEAD-IN IN PROPOSED 3 IN. CONDUIT.
UU. INSTALL 1 IN. GALVANIZED ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE)
VV. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. PRIOR TO POURING THE NEW SIDEWALK.

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 CONTACT SHA TO SCHEDULE RETROFITTING OF THE CONTROLLER EQUIPMENT IN ORDER TO OPERATE VIDEO DETECTION EQUIPMENT.
5. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
6. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
7. ALL PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
9. REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
10. THE CONTRACTOR SHALL NOT CUT MAST ARM AS INDICATED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.
11. ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. ED RODENHIZER 410-787-7652 TO COORDINATE.
12. 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%.
13. THE SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON. NOT CENTER TO CENTER OF POLE.
14. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
15. 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.
16. ALL SIDEWALK RAMPS SHALL BE INSTALLED AS PER STANDARDS MD 655.11, MD 655.12. AND MEDIAN CUT-THROUGH.
17. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
18. REFER TO SHEET 2 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

WR&A
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

APPROVALS

TEAM LEADER
ASST. DIV. CHIEF
DIVISION CHIEF
OFFICE DIRECTOR

ORIGINAL ON FILE

REVISIONS

1 REDLINE REVISION NO. 1 — CONTRACT NO. XX3535168 11/17/2010 — SRB — NML

H TRAFFIC SIGNAL RECONSTRUCTION AND APS/CPS INSTALLATION — CONTRACT NO. XX3535168 9/29/2010 — BRD — NML

G UPGRADE EXISTING PEDESTRIAN INDICATIONS AND PUSHBUTTONS — CONTRACT NO. AA6915184 06/16/08 — JHR — NML

PLOTTED: 11-23-2010
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BY: sbloss

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 2 (Governor Ritchie Highway) and MD 648 (Baltimore Annapolis Blvd)

Glen Burnie, MD

TRAFFIC SIGNALIZATION PLAN

SCALE 1" = 20' ADVERTISED DATE _____ CONTRACT NO. _____

DESIGNED BY _____ COUNTY Anne Arundel

DRAWN BY C. ALSTON /B. THOMPSON — LOGMILE 02000229.91

CHECKED BY _____ TIMS NO. K591

F.A.P. NO. _____ TOD NO. _____

TS NO. 791H | DRAWING TSP-1 OF 4 | SHEET NO. 1 OF 4