PROPOSED SIGNS

30 — R3-6(1) 30"X30"

27,41 — W. Patrick ST (WEST 40 EAST) — M1-5(4) 78"X36"

31a,32b — Willowdale DR — D-3(1) 96"X16" (DUAL FACE)

34,36,38,40 — ONE WAY — R6-1L 54"X18"

29 — ONLY — R3-5L 30"X36"

28,42 — W. Patrick ST (EAST 40 WEST) — M1-5(4) 78"X36"

31b,32a — Willowdale DR — D-3(1) 96"X16" (DUAL FACE)

33,35,37,39 — ONE WAY — R6-1R 54"X18"

US 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

EXISTING SIGNS TO BE REMOVED

PUSH BUTTON TO CROSS W. PATRICK ST — 9"X12" (2 EA.)

Willowdale Drive — 96"X16" (2 EA.)

ONLY — 30"X36" (1 EA.)

30"X36" (1 EA.)

ONE WAY — 36"X12" (2 EA.)

ONE WAY — 36"X12" (2 EA.)

EXISTING SIGNALS TO BE REMOVED

16" (2 EA.)

12" (4 EA.)

12" (2 EA.)

12" (6 EA.)

PROPOSED LED SIGNALS

1,2,5,6 — 12"

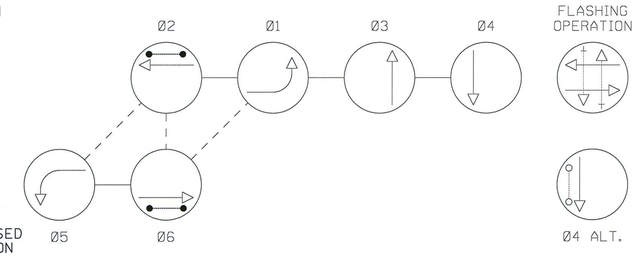
3,4,7, 8,10,12 — 12"

9,11 — 12"

13,14,15, 16,17,18 — 16"

a,b,c,d — PROPOSED IP-BASED VIDEO DETECTION

NEMA PHASING



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

CONSTRUCTION DETAILS (CONT.)

DD. INSTALL ELECTRICAL HANDHOLE.

EE. REMOVE EXISTING GROUND MOUNTED SIGN AND SUPPORT(S).

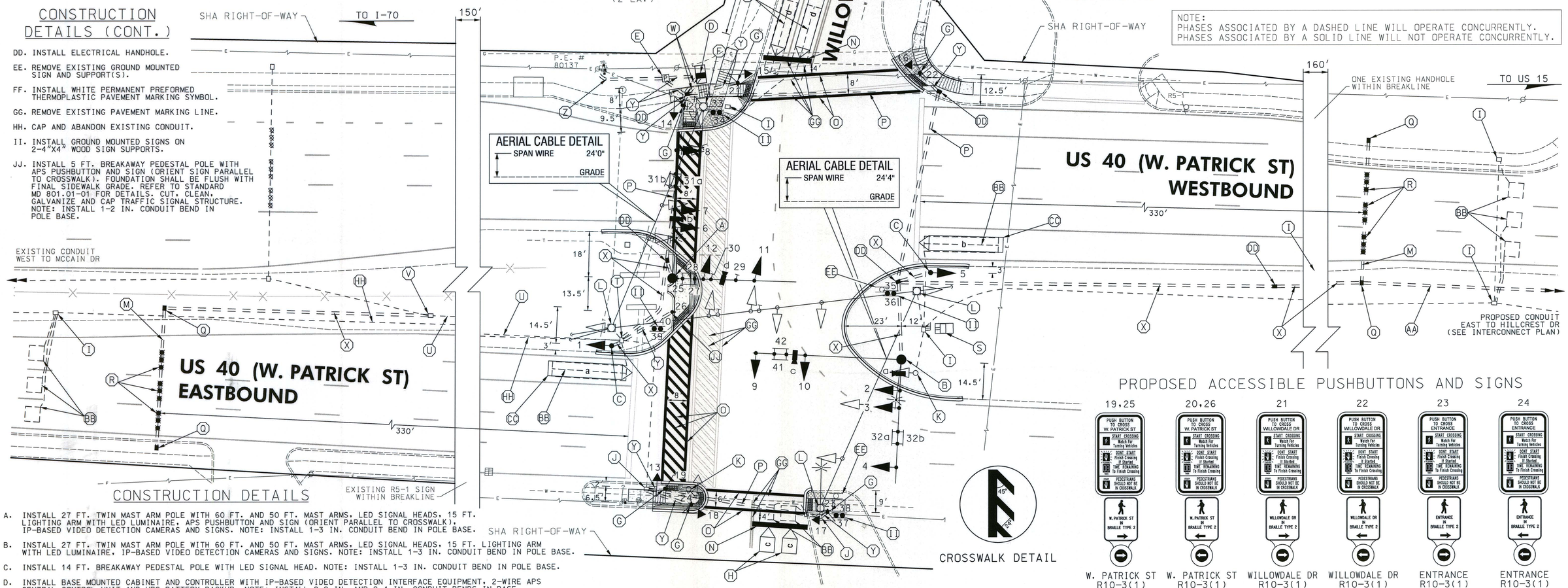
FF. INSTALL WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING SYMBOL.

GG. REMOVE EXISTING PAVEMENT MARKING LINE.

HH. CAP AND ABANDON EXISTING CONDUIT.

II. INSTALL GROUND MOUNTED SIGNS ON 2-4"X4" WOOD SIGN SUPPORTS.

JJ. INSTALL 5 FT. BREAKAWAY PEDESTAL POLE WITH APS PUSHBUTTON AND SIGN (ORIENT SIGN PARALLEL TO CROSSWALK). FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. REFER TO STANDARD MD 801.01-01 FOR DETAILS. CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE. NOTE: INSTALL 1-2 IN. CONDUIT BEND IN POLE BASE.



CONSTRUCTION DETAILS

A. INSTALL 27 FT. TWIN MAST ARM POLE WITH 60 FT. AND 50 FT. MAST ARMS, LED SIGNAL HEADS, 15 FT. LIGHTING ARM WITH LED LUMINAIRE, APS PUSHBUTTON AND SIGN (ORIENT PARALLEL TO CROSSWALK), IP-BASED VIDEO DETECTION CAMERAS AND SIGNS. NOTE: INSTALL 1-3 IN. CONDUIT BEND IN POLE BASE.

B. INSTALL 27 FT. TWIN MAST ARM POLE WITH 60 FT. AND 50 FT. MAST ARMS, LED SIGNAL HEADS, 15 FT. LIGHTING ARM WITH LED LUMINAIRE, IP-BASED VIDEO DETECTION CAMERAS AND SIGNS. NOTE: INSTALL 1-3 IN. CONDUIT BEND IN POLE BASE.

C. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE WITH LED SIGNAL HEAD. NOTE: INSTALL 1-3 IN. CONDUIT BEND IN POLE BASE.

D. INSTALL BASE MOUNTED CABINET AND CONTROLLER WITH IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT, 2-WIRE APS CENTRAL CONTROL UNIT AND UPS BATTERY BACKUP. NOTE: INSTALL 2-2 IN. AND 2-4 IN. CONDUIT BENDS IN BASE.

E. INSTALL 100 AMP EMBEDDED METERED SERVICE PEDESTAL. NOTE: INSTALL 1-4 IN. AND 3-2 IN. CONDUIT BENDS IN BASE.

F. REMOVE EXISTING STRAIN POLE, ASSOCIATED SIGNAL EQUIPMENT AND SIGNS. EXISTING ELECTRICAL SERVICE EQUIPMENT TO BE REMOVED BY UTILITY CO. CAP AND ABANDON CONDUITS. REMOVE EXISTING FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

G. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND SIGN (ORIENT PARALLEL TO CROSSWALK). FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. REFER TO STANDARD MD 801.01-01 FOR FOUNDATION DETAILS. NOTE: INSTALL 1-2 IN. CONDUIT BEND IN POLE BASE.

H. PROPOSED VIDEO DETECTION ZONE. VIDEO DETECTION ZONE SHALL NOT EXTEND OUTSIDE OF THE EXISTING RIGHT-OF-WAY. THE MAXIMUM LENGTH OF THE DETECTION ZONE SHALL BE 10 FT. TO AVOID DETECTING PARKED VEHICLES ON THE GAS STATION PROPERTY, RESULTING IN FALSE CALLS TO THE CONTROLLER.

I. REMOVE EXISTING HANDHOLE. CAP AND ABANDON EXISTING CONDUIT(S). BACKFILL TO GRADE.

J. USE EXISTING HANDHOLE. ADJUST TO FINAL SIDEWALK GRADE. REPLACE FRAME AND COVER.

K. REMOVE EXISTING PEDESTAL POLE, ASSOCIATED SIGNAL EQUIPMENT AND SIGNS. CAP AND ABANDON CONDUIT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

L. REMOVE EXISTING STRAIN POLE, ASSOCIATED SIGNAL EQUIPMENT AND SIGNS. CAP AND ABANDON CONDUIT. REMOVE EXISTING FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

M. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED FOR CARRIER PIPE.

N. INSTALL 24 IN. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINE.

O. INSTALL 12 IN. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINE.

P. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED.

Q. INSTALL ELECTRICAL HANDHOLE WITH LONG DIMENSION PERPENDICULAR TO ROADWAY.

R. INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH LEAD-IN CABLE. CENTER IN TRAVEL LANE.

S. REMOVE EXISTING BASE MOUNTED CABINET AND CONTROLLER. CAP AND ABANDON EXISTING CONDUITS. REMOVE EXISTING FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

T. USE EXISTING HANDHOLE. DISCONNECT, PULLBACK AND REROUTE EXISTING INTERCONNECT CABLE.

U. USE EXISTING CONDUIT. SEE INTERCONNECT PLAN TS NO. 12479A-IC AND TRAFFIC SIGNAL PLAN TS NO. 1347B FOR DETAILS.

V. USE EXISTING HANDHOLE. SEE INTERCONNECT PLAN TS NO. 12479A-IC AND TRAFFIC SIGNAL PLAN TS NO. 1347B FOR DETAILS.

W. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

X. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

Y. INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

Z. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED. STUB AT UTILITY POLE FOR POWER FEED.

AA. PROPOSED CONDUIT. SEE INTERCONNECT PLAN FOR DETAILS.

BB. ABANDON EXISTING LOOP DETECTOR.

CC. PROPOSED VIDEO DETECTION ZONE.

GEOMETRIC LEGEND
- EXISTING
- PROPOSED

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

PROPOSED ACCESSIBLE PUSHBUTTONS AND SIGNS

19,25 — W. PATRICK ST — R10-3(1) 9"X15"

20,26 — W. PATRICK ST — R10-3(1) 9"X15"

21 — WILLOWDALE DR — R10-3(1) 9"X15"

22 — WILLOWDALE DR — R10-3(1) 9"X15"

23 — ENTRANCE — R10-3(1) 9"X15"

24 — ENTRANCE — R10-3(1) 9"X15"

2 REDLINE NO. 2
JULY 2013
INSERT SHEET

APPROVAL:

8-5-13
TRAFFIC ENGINEERING DESIGN DIVISION

Rummel, Klepper & Kahl, LLP
81 MOSHER STREET | BALTIMORE, MD 21217
PH: (410) 728-2900 FAX: (410) 728-3160
Engineers Construction Managers Planners Scientists
www.rkk.com

APPROVALS

TEAM LEADER

ASST. DIV. CHIEF — ORIGINAL ON FILE

DIVISION CHIEF

OFFICE DIRECTOR

REVISIONS

D	SIGNAL RECONSTRUCTION, INSTALL APS/CPS SHA NO. XX6505185.TIMS NO. L537					07-2013
WFW	BJG	WM	DJD	RDB	MLP	CJW
C	INSTALL CPS SHA NO. AT3585185					11-12-2004
JWA	CJS	WRB	DAB	BRK	TH	
B	INSTALL SIDE STREET SPLIT PHASING					10-1990
DBD		DAB			TH	

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

US 40 (W. PATRICK STREET) AT WILLOWDALE DRIVE
FREDERICK, MARYLAND

TRAFFIC SIGNAL PLAN

SCALE 1"=20' DATE CONTRACT NO. F-889-501-785

DESIGNED BY J.GORDON
DRAWN BY J.GORDON
CHECKED BY
FAP NO.

COUNTY FREDERICK
LOGMILE 10004012.28
TIMS NO.
TOD NO.

TS NO. 907D | DRAWING SP-1 OF 2 | SHEET NO. 1A OF 5

PLOTTED: Monday, August 05, 2013 AT 08:45 AM
FILE: \\balsrv03\v2008\2008\08148_toddes\Task 118_US 40 Signals\CADD\L537 (WILLOWDALE)\pSG-0001_US40@Willowdale_R2-Lead-Lag.dgn

BY: BJG