PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing traffic control signal at the intersection of MD 410 (East West Highway) and Toledo Terrace/Ent. to Home Depot in Prince George's County. The existing signal has no pedestrian facilities. The modification will install pedestrian crosswalks and pedestrian countdown signals with audible push buttons at the southbound approach and the westbound approach.

II. INTERSECTION OPERATION

1. The intersection shall continue to operate a NEMA six-phase full-actuated mode, with MD 410 (East West Hwy) approaches continuing to run concurrently. Exclusive/permissive left-turn phases shall be provided for the eastbound and westbound approaches of MD 410 (East West Hwy). The side street shall continue to run concurrently.

2. SHA signal shop shall install APS control unit into the controller cabinet. The contractor shall deliver the control unit and audible pushbuttons to the SHA signal shop for testing and programming.

III. APS WILL FUNCTION AS FOLLOWS:
TO CROSS EAST-WEST HIGHWAY

A. When a pedestrian locates and presses the pushbutton for an extended time, the pushbutton message will be "Wait to cross East-West Highway at Toledo Terrace and Home Depot".

B When the "WALK" phase begins, the message will be a rapid tick, which will last for the duration of the ":WALK" phase.

TO CROSS TOLEDO TERRACE

A When a pedestrian locates and presses the pushbutton for an extended time, the pushbutton message will be "Wait to cross Toledo Terrace at East-West Highway".

B When the "WALK" phase begins, the message will be a rapid tick, which will last for the duration of the ":WALK" phase.

EQUIPMENT LIST

A. EQUIPMENT LIST TO BE SUPPLIED BY THE STATE OF MARYLAND

SPEC NO.	DESCRIPTION	UNIT	QUANTITY
	NONE		

B. EQUIPMENT LIST TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

SPEC NO.	DESCRIPTION	UNIT	QUANTITY
104	Maintenance of traffic per assignment	Each	1
100	Test Pit Excavation	CY	3
556	24" White heat applied permanent preformed thermoplastic pavement marking	L.F	125
556	12" White heat applied permanent preformed thermoplastic pavement marking	L.F	376
816	2 wire central control unit	Each	1
817	Audible/tactile pedestrian pushbutton stations and signs.	Each	4
818	Breakaway pedestal pole (10 FT)	Each	4
814	LED 16" countdown pedestrian signal heads	Each	4
805	Schedule 80 rigid PVC conduit up to 4" - trenched	L.F	400
	Detectable warning surfaces	SF	400
805	1. Schedule 80 rigid PVC conduit 4" - bored	L.F	~~XX~~ 125
811	1. Electrical Handhole	Each	~~XX~~ 3
810	Electrical cable - 2 conductor (No. 14 AWG)	L.F	500
810	1. Electrical cable - 5 conductor (No. 14 AWG)	L.F	~~XXX~~ 700
810	1. Electrical cable - 7 conductor (No. 14 AWG)	L.F	~~XXX~~ 700
810	1. Video Detection Camera Cable	L.F	500
810	Ground Rod - 3/4" Diameter x 10' lengths	Each	4
810	Micro-loop probe	Each	3
	Relocate existing ground mounted sign	Each	1
	Relocate existing overhead mounted sign	Each	2
813	SHEET ALUMINIUM OVERHEAD MAST ARM/POLE MOUNTED SIGN	Each	10
	Pedestrian Education Sign R10-3(1) [Note: Sign to read "PUSHBUTTON TO CROSS EAST-WEST HWY"]	Each	2
	Pedestrian Education Sign R10-3(1) [Note: Sign to read "PUSHBUTTON TO CROSS TOLEDO TERRACE"]	Each	2
	R3-7 (R) (30" x 30")	Each	4
	R3-5 (R) (30" x 36")	Each	3

CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

PROJECT CONTACTS:
MR. BRIAN YOUNG, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7358
MR. WAYNE MOWDY, ASSISTANT DISTRICT ENGINEER- MAINTENANCE
PHONE: (301) 513-7300
MR. AUGIE REBISH, UTILITY ENGINEER
PHONE: (301) 513-7300
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. ROBERT SNYDER, ASSISTANT CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7631
MR. ED RODENHIZER, CHIEF OF SIGNAL SHOP
PHONE: (410) 787-7650

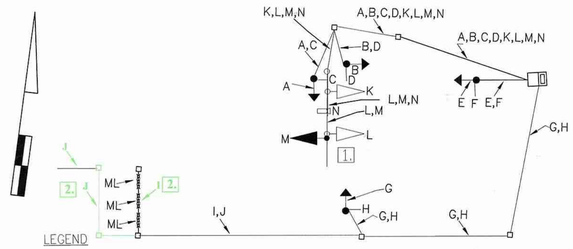
1. REV 04/07/2009

2. REV 06/24/2009

PHASE DIAGRAM

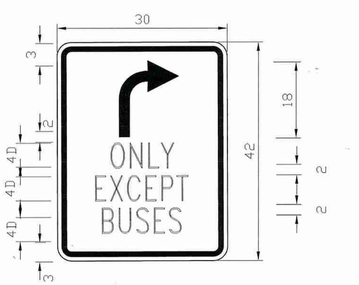
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1+5	◄G-R	◄G-R	R	◄G-R	◄G-R	R	R	R	R	R	R	R	DW	DW	DW	DW
CHANGES TO PHASE 1+6, PHASE 2+5, OR PHASE 2+6																
PHASE 1+6	◄G-G	◄G-G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 CHANGE	◄Y-G	◄Y-G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2+5	R	R	R	◄G-G	◄G-G	G	R	R	R	R	R	R	DW	DW	DW	DW
5 CHANGE	R	R	R	◄Y-G	◄Y-G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEAR/COUNTDOWN	G	G	G	G	G	G	R	R	R	R	R	R	FL/WK	FL/WK	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	WK	WK
PED CLEAR/COUNTDOWN	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	FL/WK	FL/WK
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

WIRING DIAGRAM

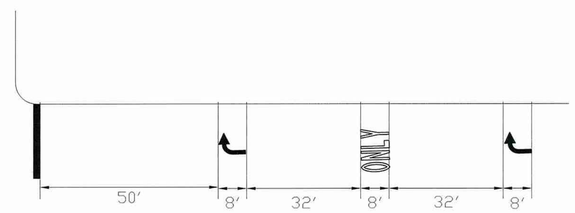


LEGEND

A,B,E,G 5-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G) [FOR PEDS]
C,D,F,H 2-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G) [FOR PEDS]
I MICRO-LOOP PROBE LEAD-INS
J INTERCONNECT CABLE
K,L,M 7-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G)
N VIDEO DETECTION CAMERA LEAD-IN CABLE
ML MICRO-LOOP PROBE
EML EXISTING MICRO-LOOP PROBE



MAST-ARM MOUNTED DIRECTIONAL SIGNAGE
(ALL SIZES IN INCHES)



PAVEMENT "ARROW" AND "ONLY" MARKINGS
(TYPICAL)

REDLINE REVISION 04/07/09
TEDD APPROVAL: _____
GREENLINE REVISION 06/24/2009
TEDD APPROVAL: [signature] 7/17/09

O. R. GEORGE & ASSOCIATES, INC.
Traffic Engineers - Transportation Planners
10210 Greenbelt Road, Suite 310
Lanham, MD 20706
(301) 794-7700

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 410 (EAST-WEST HIGHWAY)
AND
TOLEDO TERRACE/ENT.TO HOME DEPOT

GENERAL INFORMATION SHEET

SCALE N.T.S	DATE 09-09-1976	CONTRACT NO.	
DESIGNED BY M.A.MEARS		COUNTY PRINCE GEORGE'S	
DRAWN BY BOB TYSON		LOGMILE 16041002.35	
CHECKED BY		TIMS NO. 1501	
F.A.P. NO.		TOD NO.	
TS NO. 278 D	DRAWING NO. 2 OF 2	SHEET NO. OF	