

Appendix A-5  
Sample Projects

**Signing and Marking Plans:**

US 29 & E. Randolph Road/Cherry Hill Road Intersection ..... SN-1  
..... SN-2.1  
..... SN-2.2  
..... SN-2.3  
..... SN-2.4  
..... SN-3.1  
..... SN-4  
..... SN-11.1  
..... SN-11.2

**Signal Plans:**

*Signal Modification:*

US29 (Georgia Ave) & Wayne Avenue ..... Plan Sheet  
..... General Information Sheet

*Signal Reconstruct:*

MD 193 & NASA Entrance/Cipriano Shopping Center ..... Plan Sheet  
..... General Information Sheet-1  
..... General Information Sheet-2

*New Construction:*

MD 28 & Wintergate Drive ..... Plan Sheet  
..... Interconnect Sheet  
..... General Information Sheet

**Lighting Plans:**

*Interchange Lighting:*

Sample Lighting Plan ..... Plan Sheet

*Intersection Lighting:*

MD 2 and MD 423/Jewell Road Lighting Plan ..... Plan Sheet

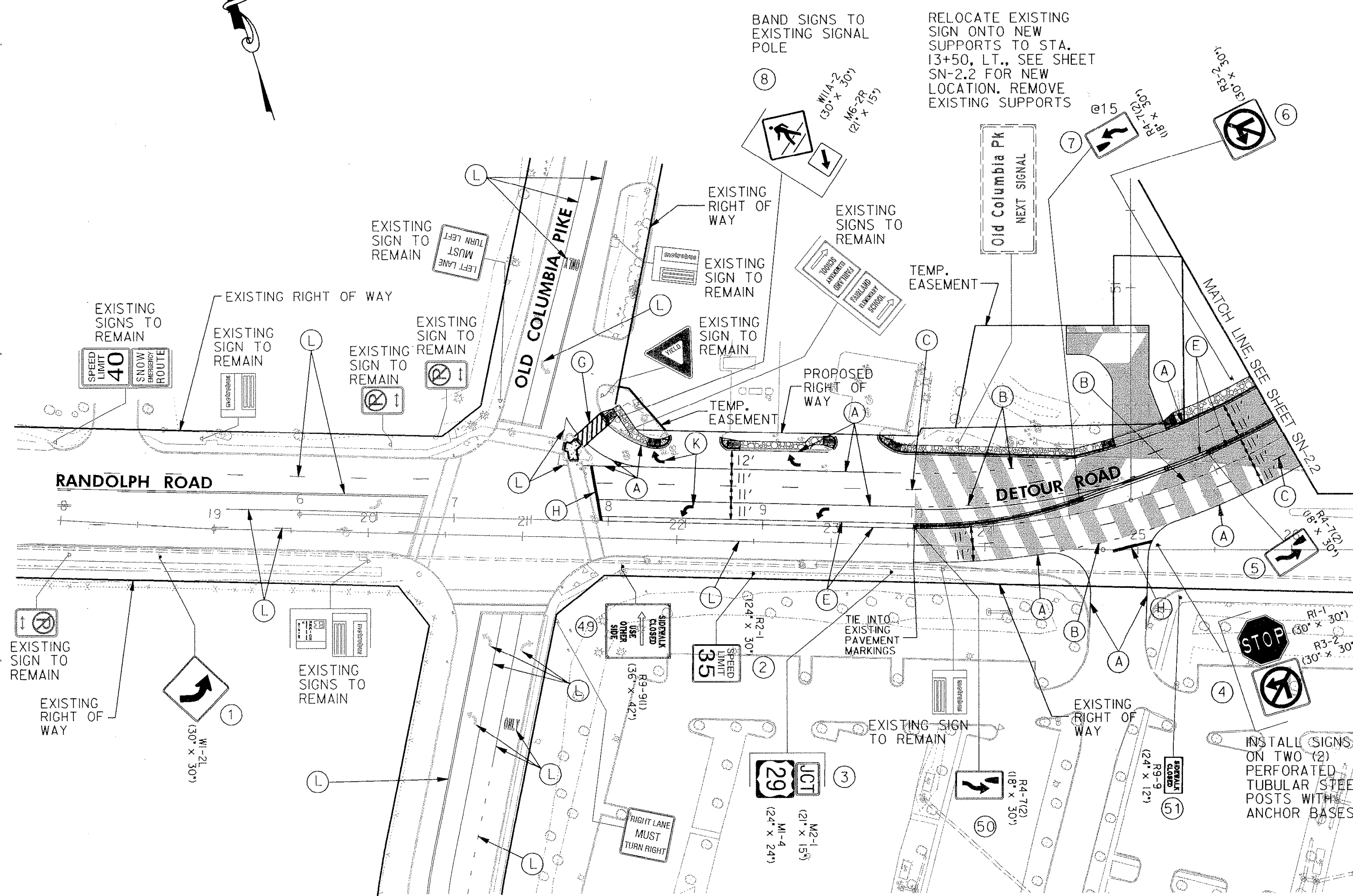
*Pedestrian Lighting:*

MD 235 from North of Pegg Rd to South of MD 246 ..... Plan Sheet  
..... Detail Sheet



TO ROCKVILLE

TO COLLEGE PARK



**REMOVAL OF EXISTING PAVEMENT MARKINGS**  
DETOUR ROAD  
STA. 7+90 TO STA. 10+00, LT.

5" SOLID WHITE LINE	490 L.F.
5" WHITE LANE LINE (10' STRIPE, 30' SPACE)	60 L.F.
5" SOLID YELLOW LINE	430 L.F.
24" SOLID WHITE LINE FOR STOP BARS	40 L.F.
ARROWS	2 EA.
LETTERS	4 EA.

**SIGNING AND PAVEMENT MARKING GENERAL NOTES**

- ALL EXISTING SIGNS WITHIN THE LIMITS OF WORK SHALL BE REMOVED UNLESS OTHERWISE NOTED OR AS DIRECTED BY THE ENGINEER.
- ALL PROPOSED LONGITUDINAL PAVEMENT MARKINGS SHALL BE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS.
- ALL PROPOSED TRANSVERSE LINES AND ARROWS SHALL BE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.
- ALL PROPOSED PAVEMENT MARKINGS SHALL TIE INTO EXISTING PAVEMENT MARKINGS.
- METROBUS SIGNS IMPACTED UNDER THIS CONTRACT SHALL BE RELOCATED BY THE CONTRACTOR. THE CONTRACTOR MUST NOTIFY MR. DAVE BRLANSKI OF WMATA AT (202)-926-1937 ONE (1) WEEK BEFORE RELOCATION IS TO OCCUR.
- REFER TO SIGNAL PLANS FOR EXACT LOCATIONS OF STOP BARS AND CROSSWALKS AT SIGNALIZED INTERSECTIONS.
- RAISED PAVEMENT MARKERS SHALL BE INSTALLED BETWEEN PROPOSED 5" WHITE LANE LINES (10' STRIPE, 30' SPACE) ON DETOUR ROAD AND U.S. 29 WITHIN PROJECT LIMITS, IN ACCORDANCE WITH FIGURES 3B-1a AND 3B-2a IN THE MARYLAND SUPPLEMENT TO THE MUTCD.
- FOR PLACEMENT OF R4-7(2) IN LANE SEPARATOR CURB MEDIAN REFER TO DETAIL ON SHEET DE-1.
- INSTALL ALL "SIDEWALK CLOSED" SIGNS ON TYPE II BARRICADE FOR MAINTENANCE OF TRAFFIC.

**PAVEMENT MARKING LEGEND**

- (A) 5" SOLID WHITE LINE
- (B) 5" WHITE AUXILIARY LANE LINE (3' STRIPE, 9' SPACE)
- (C) 5" WHITE LANE LINE (10' STRIPE, 30' SPACE)
- (D) 10" SOLID WHITE LINE
- (E) 5" SOLID YELLOW LINE
- (F) 5" YELLOW CENTER TURN LANE LINE (10' STRIPE, 30' SPACE)
- (G) 12" SOLID WHITE LINE FOR CROSSWALKS
- (H) 24" SOLID WHITE LINE FOR STOP BARS
- (J) 12" SOLID YELLOW LINE FOR HATCHING
- (K) ARROWS
- (L) EXISTING PAVEMENT MARKINGS

**SIGNING LEGEND**

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE RELOCATED
- PROPOSED SIGN

**PAVEMENT LEGEND**

- FULL DEPTH PAVING
- 2" MILL & 2" RESURFACING (WITH WEDGE & LEVEL AS REQUIRED)
- WEDGE & LEVEL
- ASPHALT SIDEWALK
- CONCRETE PAVEMENT

**CONSULTANT  
LOGO  
IF  
APPLICABLE**

<b>MARYLAND DOT - STATE HIGHWAY ADMINISTRATION</b> <i>Office of Traffic &amp; Safety</i> <b>TRAFFIC ENGINEERING DESIGN DIVISION</b> SIGNING AND MARKING PLANS DETOUR ROAD/UTILITY CORRIDOR FOR US 29 & E. RANDOLPH ROAD/CHERRY HILL ROAD INTERSECTION				
DESIGNED BY: JCR	F.A.P. NO.	SEE TITLE SHEET	PLAN	SHEET NO.
CHK. BY: BLB	S.H.A. NO.	M06145170	SN-2J	53 OF 77
SCALE: 1" = 50'	COUNTY	MONTGOMERY		

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TO ROCKVILLE

TO COLLEGE PARK

**REMOVAL OF EXISTING PAVEMENT MARKINGS**

US ROUTE 29 - SOUTHBOUND  
STA. 331+30 TO STA. 338+00

5" SOLID WHITE LINE	900 L.F.
5" WHITE LANE LINE (10' STRIPE, 30' SPACE)	420 L.F.
5" SOLID YELLOW LINE	670 L.F.
12" SOLID WHITE LINE FOR CROSSWALKS	510 L.F.
24" SOLID WHITE LINE FOR STOP BARS	60 L.F.

US ROUTE 29 - NORTHBOUND  
STA. 329+00 TO STA. 335+65

5" SOLID WHITE LINE	900 L.F.
5" WHITE LANE LINE (10' STRIPE, 30' SPACE)	420 L.F.
5" SOLID YELLOW LINE	670 L.F.
12" SOLID WHITE LINE FOR CROSSWALKS	420 L.F.
24" SOLID WHITE LINE FOR STOP BARS	75 L.F.

**SIGNING LEGEND**

	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE RELOCATED
	PROPOSED SIGN

**PAVEMENT LEGEND**

	FULL DEPTH PAVING
	2" MILL & 2" RESURFACING (WITH WEDGE & LEVEL AS REQUIRED)
	WEDGE & LEVEL
	ASPHALT SIDEWALK
	CONCRETE PAVEMENT

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(K)	ARROWS
(L)	EXISTING PAVEMENT MARKINGS

**SIGNING AND PAVEMENT MARKING GENERAL NOTES**

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CONSULTANT LOGO IF APPLICABLE

REVISIONS

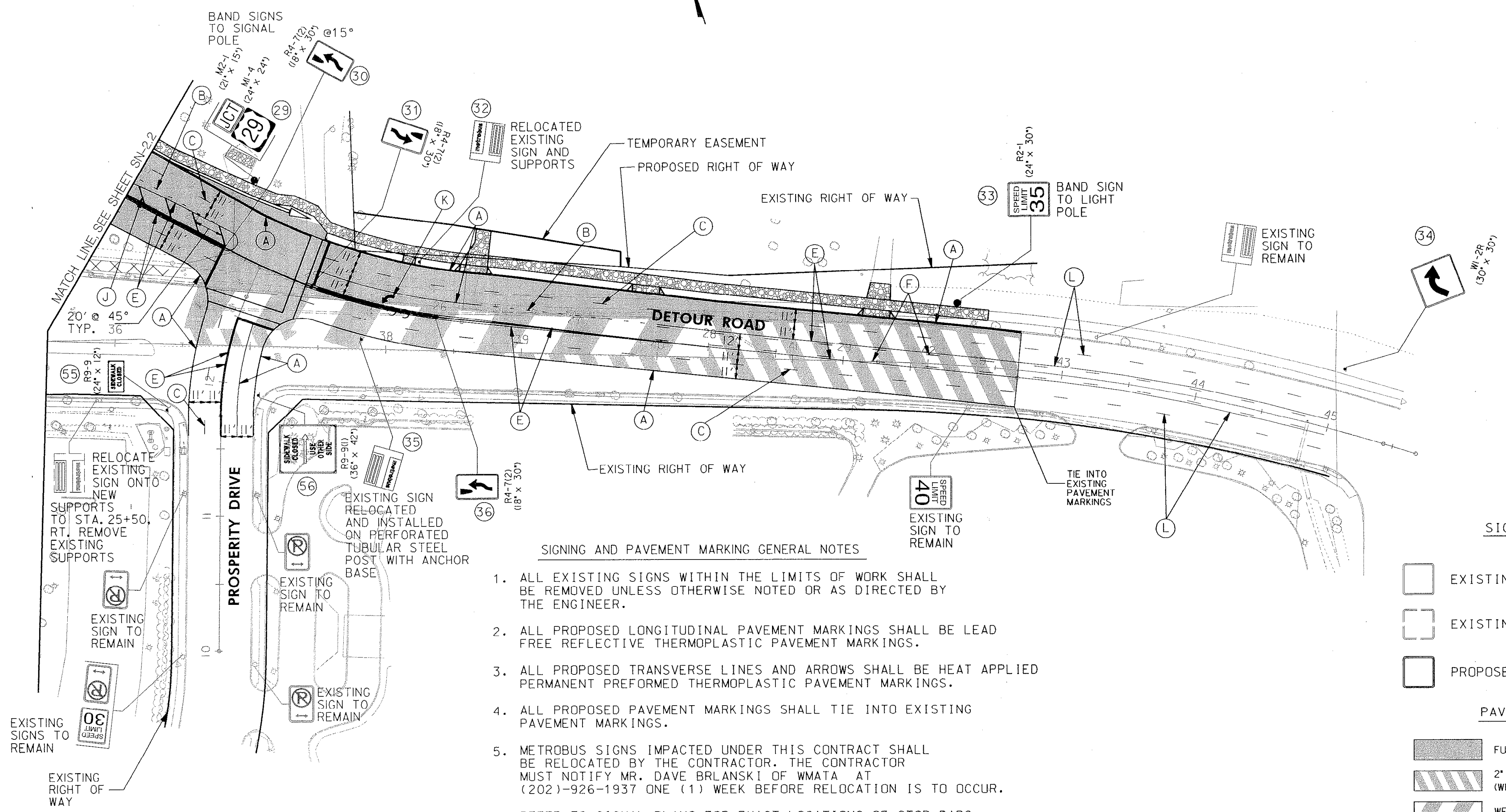

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
*Office of Traffic & Safety*  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
 SIGNING AND MARKING PLANS  
 DETOUR ROAD/UTILITY CORRIDOR FOR  
 US 29 & E. RANDOLPH ROAD/CHERRY HILL ROAD INTERSECTION

DESIGNED BY: JGR	SEE TITLE SHEET	PLAN SHEET NO.:	SHEET NO.
CHK. BY: BLB	MOG45170	SN-2.2	54 OF 77
SCALE: 1" = 50'	COUNTY: MONTGOMERY		

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TO ROCKVILLE

TO COLLEGE PARK



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CONSULTANT LOGO IF APPLICABLE

REVISIONS		MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION SIGNING AND MARKING PLANS DETOUR ROAD/UTILITY CORRIDOR FOR US 29 & E. RANDOLPH ROAD/CHERRY HILL ROAD INTERSECTION	
DESIGNED BY: JCR	F.A.P. NO.		
CHK. BY: BLB	S.H.A. NO.	M06145170	SHEET NO.:
SCALE: 1" = 50'	COUNTY	MONTGOMERY	SN-2.3 55 OF 77

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TO SILVER SPRING

TO COLUMBIA

REMOVAL OF EXISTING PAVEMENT MARKINGS

US ROUTE 29 - SOUTHBOUND  
 STA. 338+00 TO STA. 344+55  
 5' SOLID WHITE LINE ..... 660 L.F.  
 5' WHITE LANE LINE (10' STRIPE, 30' SPACE) ..... 350 L.F.  
 5' SOLID YELLOW LINE ..... 660 L.F.

US ROUTE 29 - NORTHBOUND  
 STA. 338+00 TO STA. 341+55  
 5' SOLID WHITE LINE ..... 360 L.F.

SIGNING LEGEND

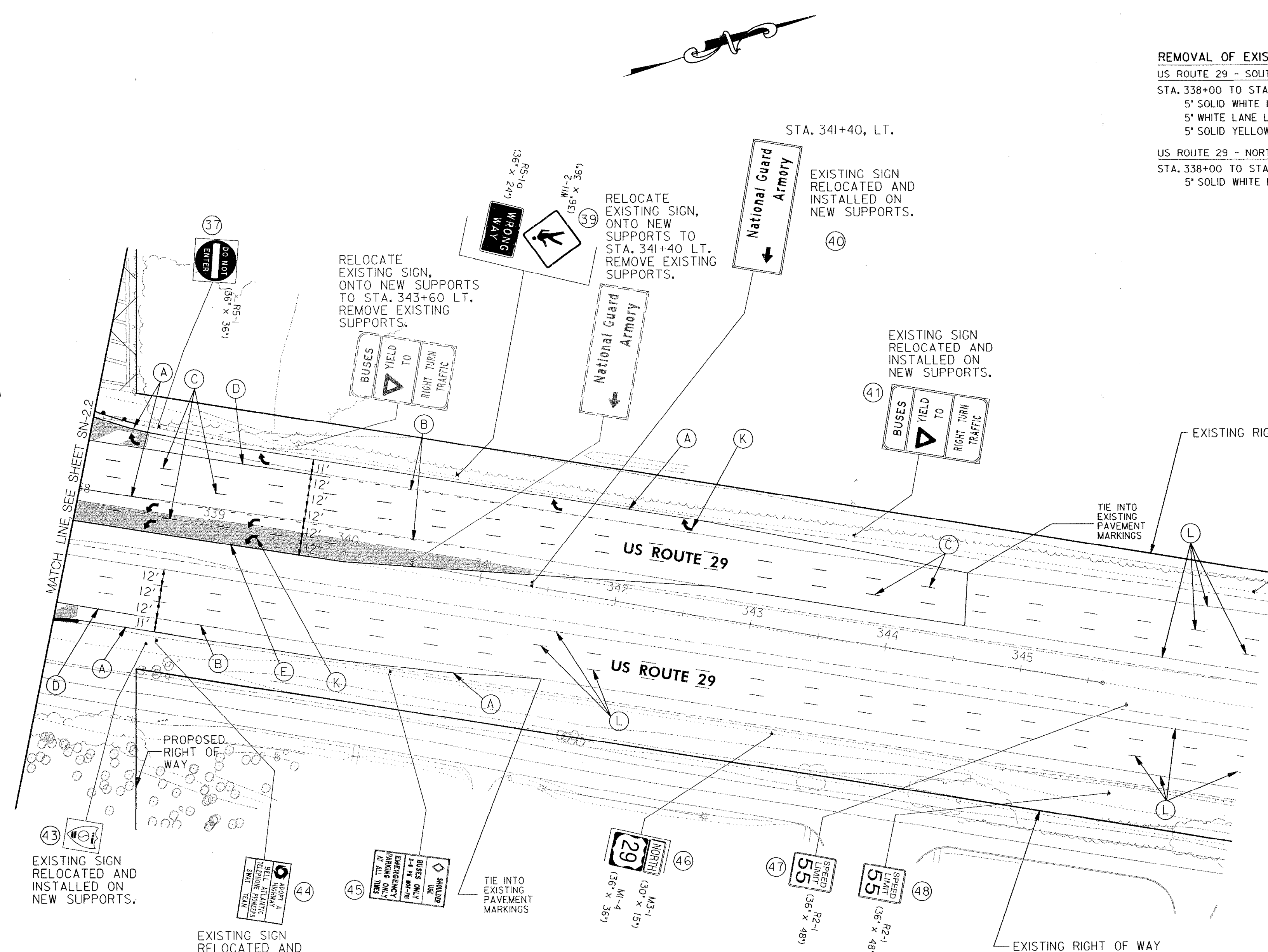
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CONSULTANT LOGO IF APPLICABLE

<b>MARYLAND DOT - STATE HIGHWAY ADMINISTRATION</b> <i>Office of Traffic &amp; Safety</i> <b>TRAFFIC ENGINEERING DESIGN DIVISION</b> SIGNING AND MARKING PLANS DETOUR ROAD/UTILITY CORRIDOR FOR US 29 & E. RANDOLPH ROAD/CHERRY HILL ROAD INTERSECTION			
DESIGNED BY: JCR	F.A.P. NO. SEE TITLE SHEET	PLAN SHEET NO.: SN-2.4	SHEET NO. 56 OF 77
CHK. BY: BLB	S.H.A. NO. M06145170	COUNTY MONTGOMERY	
SCALE: 1" = 50'			

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PANEL DESIGNATION	SHEET NO.	QUANTITY	LEGEND	SIZE			COLOR		BORDER			SHIELD	REMARKS	PANEL DESIGNATION	SHEET NO.	QUANTITY	LEGEND	SIZE			COLOR		BORDER			SHIELD	REMARKS
				AREA	WIDTH	HEIGHT	LEGEND	BORDER	BCKGRND	WIDTH	RADIUS							ARROW	AREA	WIDTH	HEIGHT	LEGEND	BORDER	BCKGRND	WIDTH		
42	SN-2.4	1		31.5 <sup>sq</sup>	4'-6"	2'-0"	W	W	B	2'	3'	-	-	- SHEET ALUMINUM													
45	SN-2.4	1		31.5 <sup>sq</sup>	4'-6"	2'-0"	W	W	B	2'	3'	-	-	- SHEET ALUMINUM													
NOTES: 1. COLORS: B=BLACK, BL=BLUE, BR=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW, R=RED.																											

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CONSULTANT  
LOGO  
IF  
APPLICABLE

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION <i>Office of Traffic &amp; Safety</i> <b>TRAFFIC ENGINEERING DESIGN DIVISION</b> DETAILS & DIMENSIONS DETOUR ROAD/UTILITY CORRIDOR FOR US 29 & E. RANDOLPH ROAD/CHERRY HILL ROAD INTERSECTION			
DESIGNED BY: JCR	SEE TITLE SHEET	PLAN SHEET NO.:	SHEET NO.
CHK. BY: BLB	S.H.A. NO. MOG145170	SN3-1	57 OF 77
SCALE: NONE	COUNTY: MONTGOMERY		

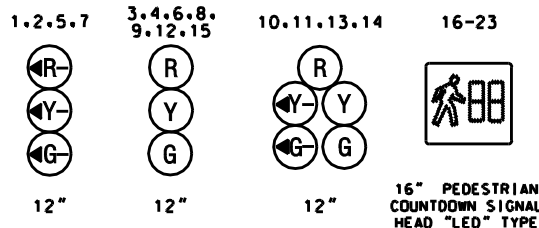




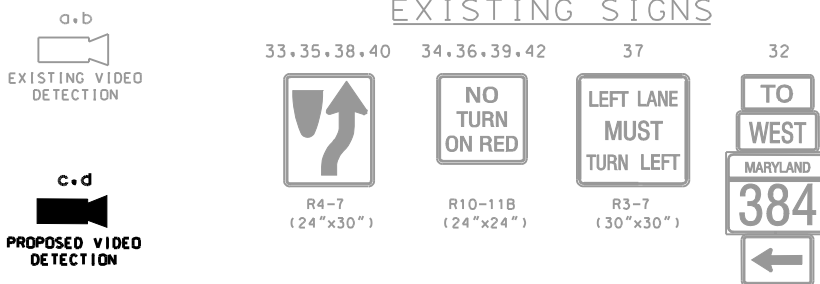




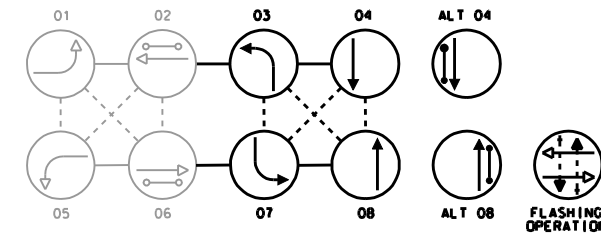
**PROPOSED LED SIGNALS**



**EXISTING SIGNS**



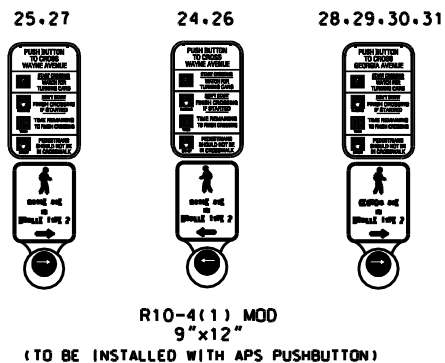
**NEMA PHASING**



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

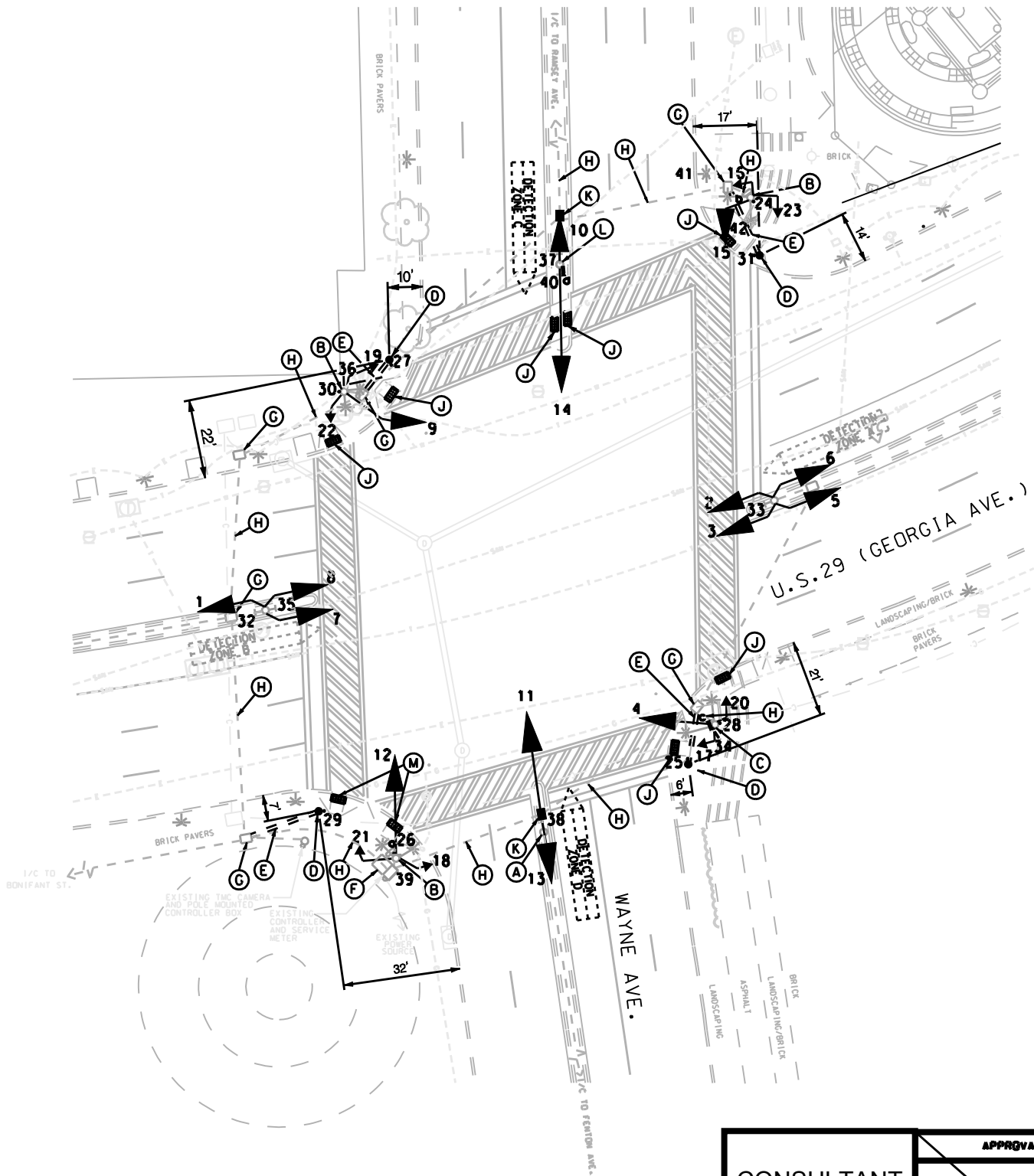
U.S. 29 (GEORGIA AVENUE) IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.

**PROPOSED SIGNS**

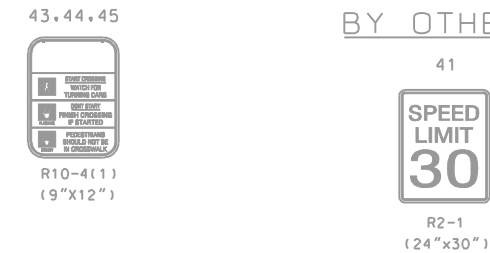


**CONSTRUCTION DETAILS**

- USE EXISTING STEEL POLE. REMOVE EXISTING TRAFFIC SIGNAL HEAD. INSTALL NEW TRAFFIC SIGNAL HEADS AS SHOWN ON PLAN AND RUN NEW WIRE FOR BOTH HEADS.
- USE EXISTING STEEL POLE. REMOVE EXISTING PEDESTRIAN SIGNALS AND PEDESTRIAN EDUCATION SIGN. INSTALL NEW COUNTDOWN PEDESTRIAN SIGNALS, PEDESTRIAN EDUCATION SIGN AND WELD APS STATION TO EXISTING POLE.
- USE EXISTING STEEL POLE. REMOVE EXISTING PEDESTRIAN SIGNALS AND PEDESTRIAN EDUCATION SIGN. INSTALL NEW COUNTDOWN PEDESTRIAN SIGNALS, VIDEO DETECTION, PEDESTRIAN EDUCATION SIGN AND WELD APS STATION TO EXISTING POLE.
- INSTALL 5' BREAKAWAY PEDESTAL POLE WITH APS STATION AND PEDESTRIAN EDUCATION SIGN (NOTE: 1-3" 90° POLYVINYL CHLORIDE (SCHEDULE 80) CONDUIT BEND.)
- INSTALL 3" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) TRENCHED. REMOVE AND RESET EXISTING BRICK PAVERS.
- USE EXISTING BASE MOUNTED CABINET.
- USE EXISTING HANDHOLE.
- USE EXISTING CONDUIT.
- INSTALL DETECTABLE WARNING SURFACES.
- REMOVE EXISTING HANDHOLE AND INSTALL NEW HANDHOLE IN SAME PLACE.
- USE EXISTING STEEL POLE. REMOVE EXISTING TRAFFIC SIGNAL HEAD. INSTALL NEW TRAFFIC SIGNAL HEADS AS SHOWN ON PLAN AND RUN NEW WIRE FOR BOTH HEADS. INSTALL VIDEO DETECTION CAMERA.
- EXISTING DETECTABLE WARNING SURFACE.



EXISTING SIGNS TO BE REMOVED      EXISTING SIGN TO BE RELOCATED BY OTHERS



- GENERAL NOTES**
- ALL UNDERGROUND AND OVERHEAD 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 240-777-2101 AT MONTGOMERY COUNTY 72 HOURS PRIOR TO ANY CONSTRUCTION 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 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.
  - SEE PLAN SHEETS 11 OF 12 AND 12 OF 12 FOR INTERCONNECT DETAILS AND QUANTITIES.
  - THE CONTRACTOR SHALL REMOVE ALL UNUSED WIRING.
  - PROPOSED POLES WILL BE PAINTED BROWN BY OTHERS.

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
US 29 (GEORGIA AVENUE)  
AND WAYNE AVE.  
SILVER SPRING, MARYLAND

CONSULTANT LOGO IF APPLICABLE	APPROVALS TEAM LEADER ASST. DIV. CHIEF DIVISION CHIEF OFFICE DIRECTOR	REVISIONS	SCALE 1" = 20'	DATE 08/09/2002	CONTRACT NO. BW996M82
		[ ] E/P PHASING FOR WAYNE AVE 6/09/06 AND INSTALL APS TMS# H588 SHA NO. BW996M82 KMP B REPLACE LOOP DETECTION WITH VIDEO CAMERAS 7/23/04 MAR DAZ BRK SHA NO. MQ775185 A REPLACE TRAFFIC SIGNAL POLES DUE TO CONSTRUCTION ON THE N.W. CORNER. MAR DAZ BRK TH	DESIGNED BY WJCA	COUNTY MONTGOMERY	
			DRAWN BY CT	LOCAL# 15002900.87	T.I.M.S. NO. H588
			CHECKED BY	TOD NO.	
			T.S. NO. 4195C	DRAWING NO. 1 OF 2	SHEET NO. 7 OF 12

BY: \$USERNAME\$

**GEOMETRIC LEGEND**

Existing  
Proposed

**UTILITY LEGEND**

Signal Cable  
Gas Main  
Water Main  
Sewer Main  
Storm Sewer  
Electric Conduit  
Telephone Conduit  
Fiber Optic Cable  
Cable TV Conduit  
Fire Alarm Conduit  
Data Conduit

PLOTTED: \$DATE\$ TIME: \$TIME\$ FILE: \$FILE\$

# PROJECT DESCRIPTION

## I. GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US29 (GEORGIA AVE) AND WAYNE AVENUE IN MONTGOMERY COUNTY. EXCLUSIVE PERMISSIVE LEFT TURNS WILL BE ADDED FOR BOTH WAYNE AVE APPROACHES. NEW PEDESTAL POLES WITH COUNTDOWN PEDESTRIAN SIGNALS AND APS STATIONS SHALL BE INSTALLED. EXISTING INTERCONNECT AND FIBER FOR A MONTGOMERY COUNTY SURVEILLANCE CAMERA SHALL BE REROUTED. US 29 (GEORGIA AVE) IS ASSUMED TO RUN IN THE NORTH-SOUTH DIRECTION.

## II. INTERSECTION OPERATION

1. THE INTERSECTION SHALL OPERATE IN A NEMA EIGHT-PHASE, FULL TRAFFIC ACTUATED MODE. THE US 29 APPROACHES SHALL OPERATE CONCURRENTLY AS WILL THE WAYNE AVENUE APPROACHES. THE EXISTING EXCLUSIVE LEFT TURN PHASE SHALL REMAIN FOR US 29. AN EXCLUSIVE PERMISSIVE LEFT TURN PHASE SHALL BE PROVIDED FOR WAYNE AVENUE. COUNTDOWN PEDESTRIAN PHASES WITH AUDIBLE PUSHBUTTON ACTUATION SHALL OPERATE ACROSS US 29 AND ALSO ACROSS WAYNE AVENUE.

2. USE EXISTING FULL TRAFFIC ACTUATED, EIGHT PHASE CONTROLLER WITH L.A.U. AND L.A.U. PANEL HOUSED IN A NEMA SIZE "6" BASE-MOUNTED CABINET. INSTALL APS CENTRAL CONTROL UNIT.

## III. SPECIAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES, EXCLUDING INTERCONNECT, TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.

2. DISCONNECTING AND SPLICING OF INTERCONNECT CABLE SHALL BE PERFORMED BY MONTGOMERY COUNTY FORCES. THE CONTRACTOR SHALL RUN THE INTERCONNECT CABLE INTO THE BASE OF EACH CABINET AND PROPERLY TAG THE CABLE. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT KAMAL HAMUD AT (240) 777-8761 SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK.

3. ALL UNDERGROUND AND OVERHEAD 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.

## EQUIPMENT LIST (CONT'D)

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

ITEM NO.	DESCRIPTION	QUANTITY
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	1490 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	1365 LF
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	810 LF
873001	REMOVAL AND SALVAGE OF ANY SIGNAL HEAD	21 EA
873001	REMOVAL AND SALVAGE OF SIGNS LESS THAN 50SF	3 EA

The following contact persons for District #3 are as follows:

Kamal Hamud  
Engineer III (Montgomery County)  
Phone #240) 777-8761

Mr. Jeff Wentz  
Assistant District Engineer-Traffic  
Phone #301) 513-7358

Mr. Wayne Mowdy  
Asst. District Engineer-Maintenance  
Phone #301) 513-7304

Mr. Augustine Rebish  
District Engineer-Utility  
Phone #301) 513-7350

Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone #410) 787-7630

Mr. Ed Rodenhizer  
Signal Shop Supervisor  
Phone #410) 787-7652

Mr. Steve Custer  
PEPCO Customer Design  
201 W. Guide Dr.  
Rockville, MD 20850  
Phone #301) 548-4333

## EQUIPMENT LIST

### A. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
	NONE	

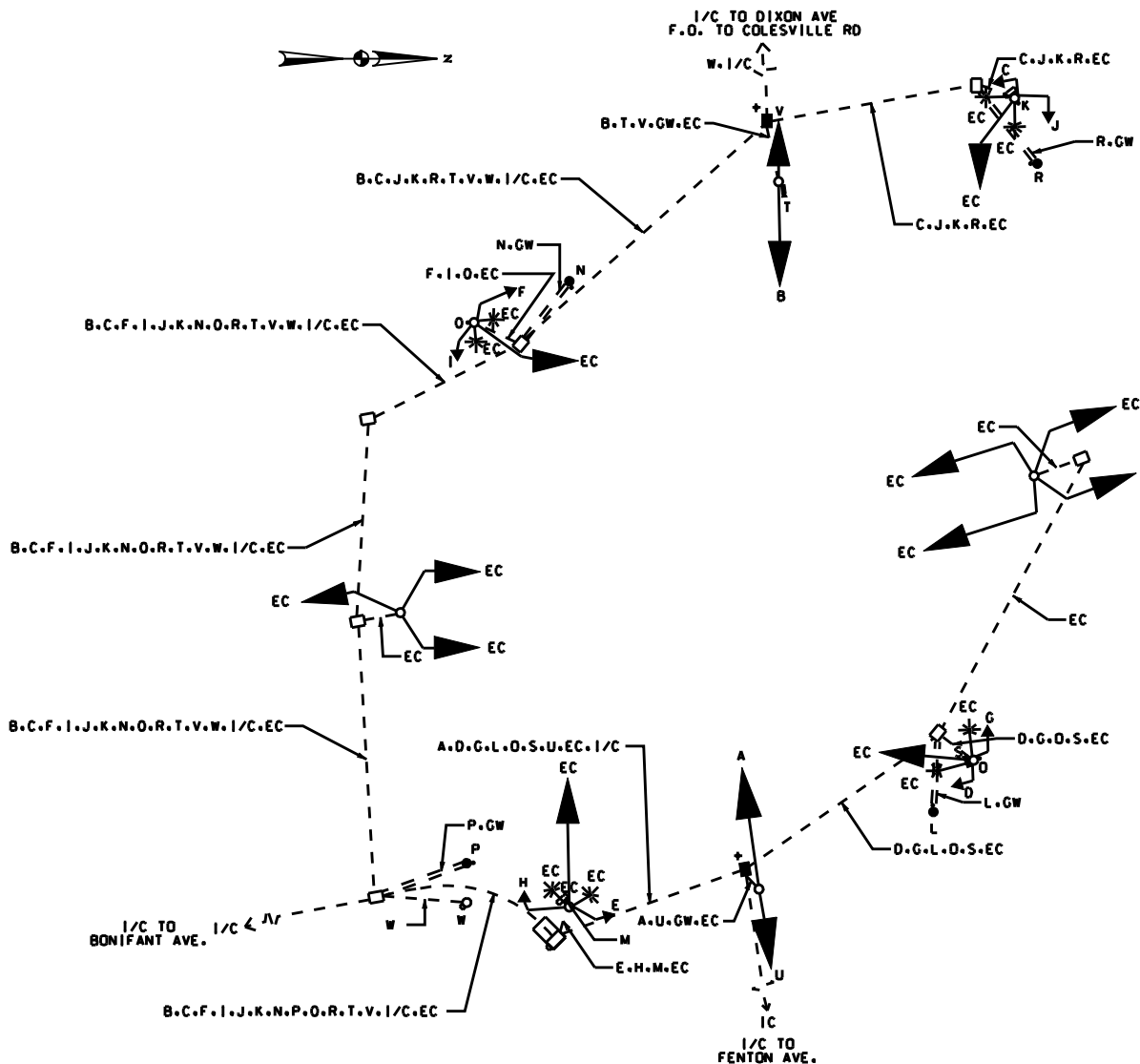
### B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
203030	TEST PIT EXCAVATION	2 CY
600000	REMOVE & RESET BRICK PAVERS	145 SF
655120	DETECTABLE WARNING SURFACES	56 SF
800000	16 INCH PEDESTRIAN COUNTDOWN SIGNAL HEAD - POLE MOUNTED	8 EA
800000	F&I APS PUSHBUTTON AND ASSY.	8 EA
800000	FURNISH & DELIVER 2-WIRE APS CENTRAL CONTROL UNIT	1 EA
800000	REMOVE AND DISPOSE OF EXISTING MATERIALS AND EQUIPMENT	1 LS
801004	CONCRETE FOR SIGNAL FOUNDATION	4 CY
801605	PEDESTRIAN EDUCATION R10-4(1) MOD SIGN. (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS GEORGIA AVENUE")	4 EA
801605	PEDESTRIAN EDUCATION R10-4(1) MOD SIGN. (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS WAYNE AVENUE")	4 EA
801607	INSTALL SHEET ALUMINUM SIGN	8 EA
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	80 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	70 LF
811001	F&I ELECTRICAL HANDHOLE	2 EA
811002	REMOVAL OF HANDHOLE	2 EA
816001	VIDEO DETECTION CAMERA	2 EA
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	1 EA
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	1 EA
818004	5 FOOT BREAKAWAY PEDESTAL POLE	4 EA
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	2 EA
860284	FURNISH AND INSTALL 12 INCH VEHICULAR LED TRAFFIC SIGNAL HEAD (R, Y, G)	7 EA
860284	FURNISH AND INSTALL 12 INCH VEHICULAR LED TRAFFIC SIGNAL HEAD (R, Y, G, YA, GA) (LEFT)	4 EA
860284	FURNISH AND INSTALL 12 INCH VEHICULAR LED TRAFFIC SIGNAL HEAD (R, YA, GA) (LEFT)	4 EA

## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PHASE 1 & 5	←	←	R	R	←	R	←	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																							
PHASE 1 & 6	←	←	G	G	←	R	←	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 & 6 CHANGE	←	←	G	G	←	R	←	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 5	←	←	R	R	←	G	←	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
5 CHANGE	←	←	R	R	←	G	←	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 & 6	←	←	G	G	←	R	←	R	R	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR COUNTDOWN	←	←	G	G	←	R	←	R	R	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	←	←	G	G	←	R	←	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 & 7	←	←	R	R	←	G	←	G	←	R	R	←	←	R	R	DW	DW	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 3 & 8, 4 & 7 OR 4 & 8																							
PHASE 3 & 8	←	←	R	R	←	R	←	R	R	R	R	←	←	G	DW	DW	DW	DW	DW	DW	DW	DW	DW
3 & 8 CHANGE	←	←	R	R	←	R	←	R	R	R	R	←	←	G	DW	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 7	←	←	R	R	←	R	←	R	R	←	←	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
7 CHANGE	←	←	R	R	←	R	←	R	R	←	←	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	←	←	R	R	←	R	←	R	R	←	←	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	←	←	R	R	←	R	←	R	R	←	←	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	←	←	R	R	←	R	←	R	R	←	←	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR COUNTDOWN	←	←	R	R	←	R	←	R	R	←	←	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	←	←	R	R	←	R	←	R	R	←	←	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/←	FL/←	FL/Y	FL/Y	FL/←	FL/Y	FL/←	FL/Y	FL/Y	FL/←	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

## WIRING DIAGRAM



## WIRING KEY

A,B,U,V	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) (FOR PEDS)
C,D,E,F,G,H,I,J	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
K,L,M,N,O,P,O,R	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
S,T	VIDEO DETECTION CONTROL CABLE
W	6 PAIR FIBER OPTIC CABLE (SHA SOC CAMERA)
I/C	12 PAIR VOICEGRADE INTERCONNECT CABLE (JELLY FILLED)
EC	EXISTING CABLE/CONDUIT
GW	NO. 6 STRANDED BARE COPPER GROUND WIRE
+	GROUND ROD

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
US 29 (GEORGIA AVENUE)  
AND WAYNE AVE.  
SILVER SPRING, MARYLAND

## TRAFFIC SIGNAL PLAN

SCALE	NONE	DATE	08/09/2008	CONTRACT NO.	BW996M82
DESIGNED BY	KMP	COUNTY	MONTGOMERY		
DRAWN BY	DG	LOGFILE	15002900.87		
CHECKED BY	KMP	T.I.M.S. NO.	H588		
F.A.P. NO.		TOD NO.			

CONSULTANT  
LOGO  
IF  
APPLICABLE

DRILL HOLES

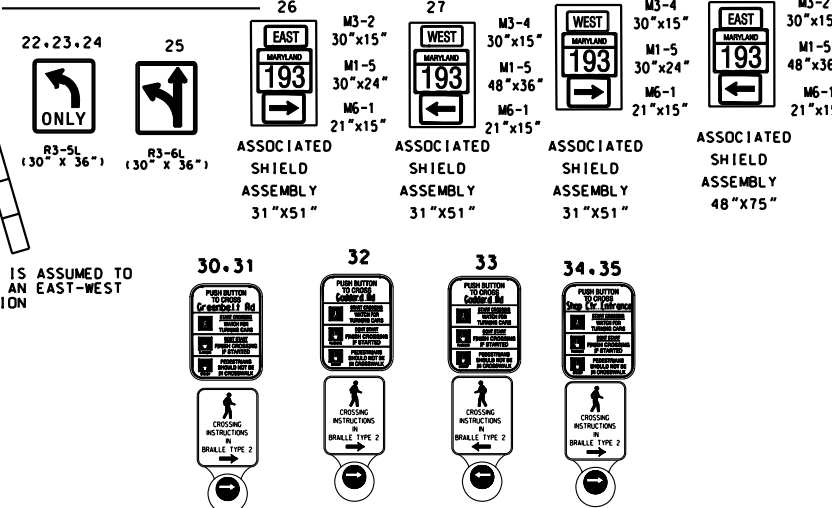
DRILL HOLES

DRILL HOLES

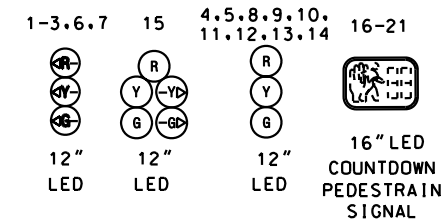
DRILL HOLES

BY: \$USERNAME\$

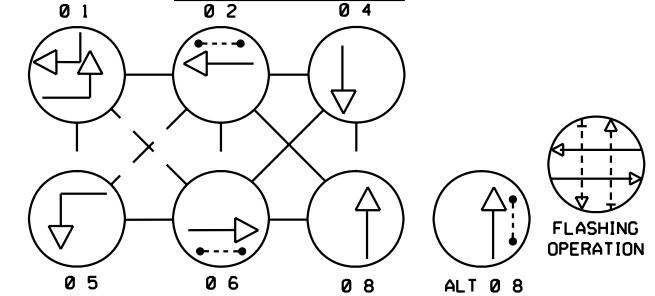
PROPOSED SIGNS



PROPOSED SIGNALS



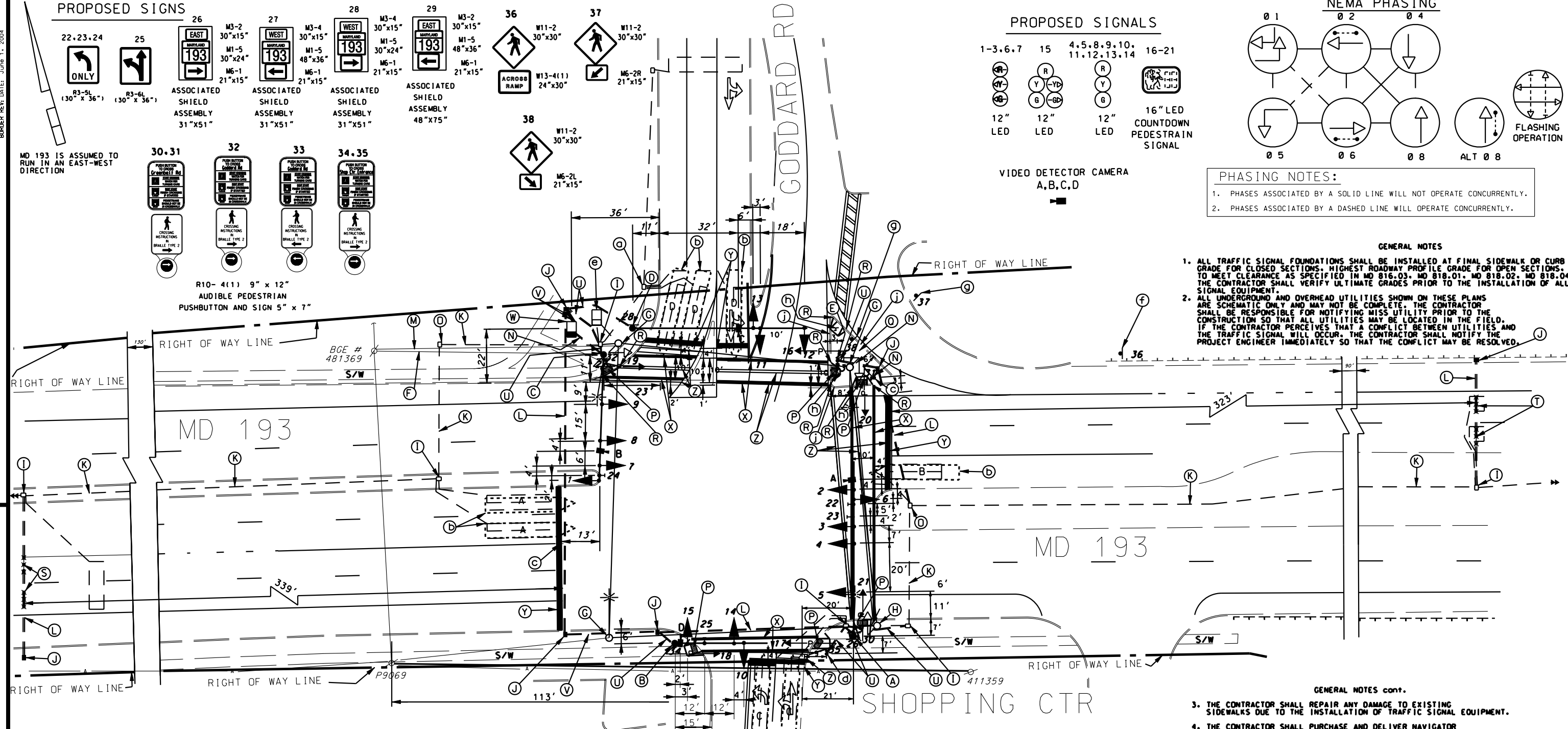
NEMA PHASING



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

GENERAL NOTES

- 1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS... 2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY...



CONSTRUCTION DETAILS

- A. INSTALL 27' STEEL POLE WITH 70' MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, COUNTDOWN PEDESTRIAN SIGNAL HEADS, AUDIBLE PUSHBUTTON STATION AND SIGN NO. 31... B. INSTALL 27' STEEL POLE WITH 50' MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, COUNTDOWN PEDESTRIAN SIGNAL HEADS, AUDIBLE PUSHBUTTON STATION AND SIGN NO. 35...

CONSTRUCTION DETAIL cont.

- O. USE EXISTING HANDHOLE PULL BACK THE INTERCONNECT CABLE FROM THE CONTROLLER TO HANDHOLE AND COL NEATLY TO BE RE-ROUTED UNDERGROUND TO THE PROPOSED CONTROLLER AND CABINET... P. INSTALL DETECTABLE WARNING SURFACES... R. REMOVE EXISTING CURB AND GUTTER AND INSTALL CURB AND GUTTER COMBINATION STANDARD NO. MD 620.03...

CONSTRUCTION DETAIL cont.

- c. INSTALL 10' PEDESTAL MOUNT POLE, COUNTDOWN PEDESTRIAN SIGNAL HEADS, AUDIBLE PUSHBUTTON STATION AND SIGN NO. 30, PEDESTRIAN EDUCATION SIGN (SIGN TO READ "PUSH BUTTON TO CROSS GREENBELT RD").... d. INSTALL 10' PEDESTAL MOUNT POLE, COUNTDOWN PEDESTRIAN SIGNAL HEADS, AUDIBLE PUSHBUTTON STATION AND SIGN NO. 34, PEDESTRIAN EDUCATION SIGN (SIGN TO READ "PUSH BUTTON TO CROSS SHOP CTR ENTRANCE")....

GENERAL NOTES cont.

- 3. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS DUE TO THE INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT. 4. THE CONTRACTOR SHALL PURCHASE AND DELIVER NAVIGATOR CENTRAL CONTROL UNIT FOR THE CONTROLLER TO SHA SIGNAL SHOP AT 7491 CONNELLEY DRIVE, HANDOVER, MARYLAND 21076... 5. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7631 TO ARRANGE FOR THE PHONE DROP LINE INSTALLATION...

LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES table with symbols for Aerial Cable, Electrical, Telephone, Gas, Sewer, Storm Drain, Water, Cable TV.

- G. REMOVE EXISTING STRAIN POLE AND FOUNDATION 12' BELOW GRADE. REMOVE EXISTING SPAN WIRE AND ALL ATTACHED EQUIPMENT, CAP AND ABANDON EXISTING CONDUIT. I. USE EXISTING HANDHOLE. J. INSTALL HANDHOLE. K. USE EXISTING CONDUIT. L. INSTALL 4" RIGID SCHED 80 PVC CONDUIT - BORED. M. REMOVE EXISTING SERVICE FEED. N. INSTALL 2" RIGID SCHED 80 PVC CONDUIT - TRENCHED.

CONSULTANT LOGO IF APPLICABLE, STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION, OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION, MD 193 AT NASA AND CIPRIANO SO SC ENTRANCE'S GODDARD, MARYLAND. Includes REVISIONS table and APPROVALS table.

APPROVALS table with fields for TEAM LEADER, ASST. DIV. CHIEF, DIVISION CHIEF, OFFICE DIRECTOR.

REVISIONS table with columns for No, Date, Description, and Initials.

Project information table including SCALE (1"=20'), DATE (06/06/1978), CONTRACT NO., DESIGNED BY (ROBERT TYSON), COUNTY (PRINCE GEORGE'S), DRAWN BY (ROBERT TYSON), LOGMILE (16019308.45), CHECKED BY, T.I.M.S. NO. (G767), F.A.P. NO., TOD NO., TS NO. (1768C), SHEET NO. (1 OF 3).

PLOTTED: \$DATE\$ TIME: \$FILE\$

DRILL HOLES

DRILL HOLES

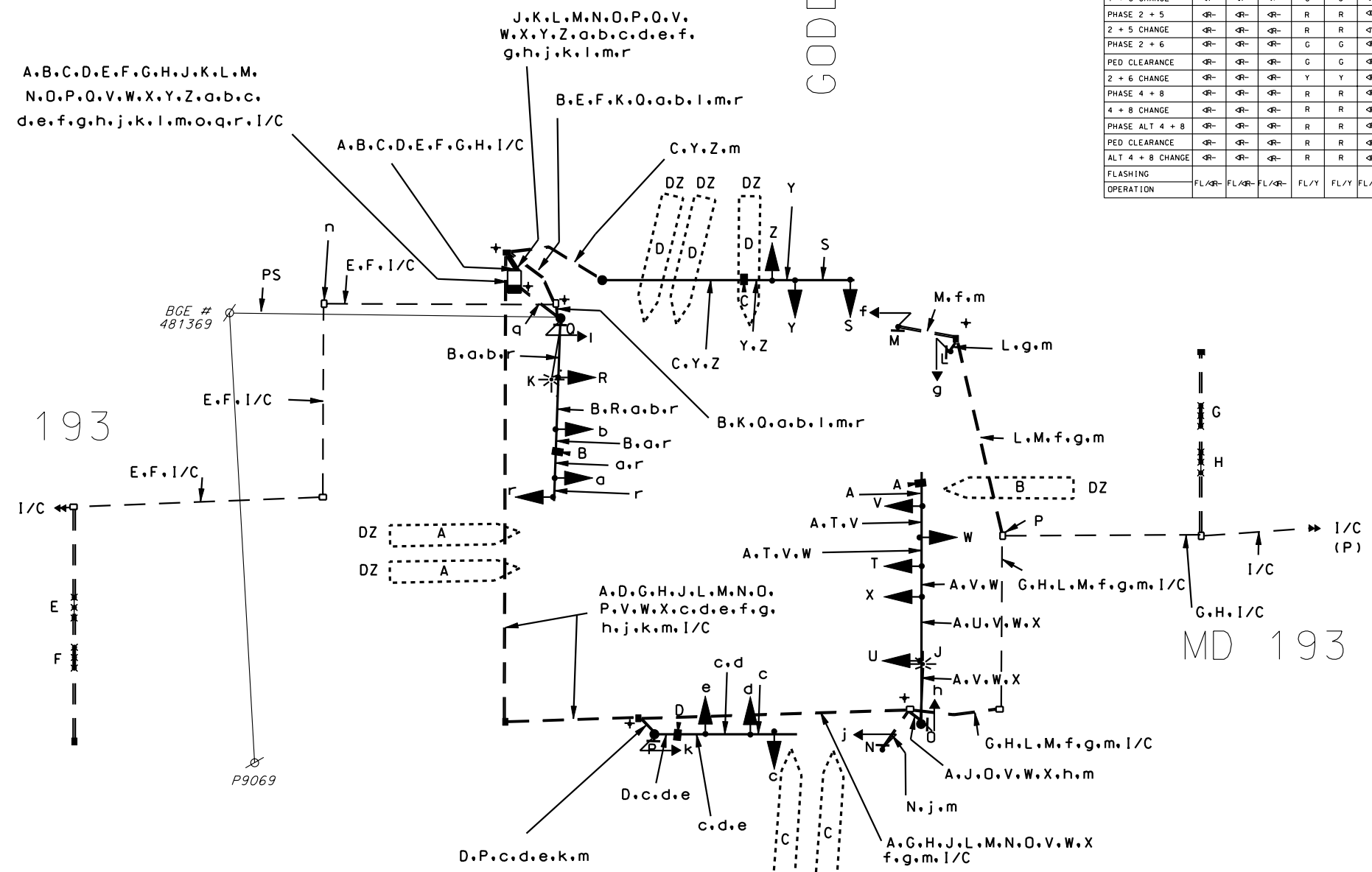
DRILL HOLES

BORDER REV. DATE: June 1, 2004

BY: \$USERNAME\$

# WIRING DIAGRAM

GODDARD RD



## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
PHASE 1 + 5	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
1 + 5 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PHASE 1 + 6	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
1 + 6 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PHASE 2 + 5	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
2 + 5 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PHASE 2 + 6	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
2 + 6 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PHASE 4 + 8	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
4 + 8 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PHASE ALT 4 + 8	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PED CLEARANCE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
2 + 6 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PHASE 4 + 8	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
4 + 8 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PHASE ALT 4 + 8	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
PED CLEARANCE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
ALT 4 + 8 CHANGE	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	
FLASHING	FL/GR	FL/GR	FL/GR	FL/Y	FL/Y	FL/GR	FL/GR	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R
OPERATION	FL/GR	FL/GR	FL/GR	FL/Y	FL/Y	FL/GR	FL/GR	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

## WIRING KEY

- A - CAMERA W/ 200' LEAD-IN TO CONTROLLER
- B - CAMERA W/ 300' LEAD-IN TO CONTROLLER
- C - CAMERA W/ 400' LEAD-IN TO CONTROLLER
- D - CAMERA W/ 500' LEAD-IN TO CONTROLLER
- E-F - PROPOSED MICROLOOP PROBE SET WITH 500' LEAD IN
- G-H - PROPOSED MICROLOOP PROBE SET WITH 1,000' LEAD IN
- J-K - 2-CONDUCTOR ELECTRICAL CABLE NO.12 AWG TC
- L-O } 5-CONDUCTOR ELECTRICAL CABLE NO.14 AWG
- f-h } 5-CONDUCTOR ELECTRICAL CABLE NO.14 AWG
- j-l } 5-CONDUCTOR ELECTRICAL CABLE NO.14 AWG
- + 3/4" x 10' GROUND ROD
- R-U } 5-CONDUCTOR ELECTRICAL CABLE NO.14 AWG
- V-Z } 7-CONDUCTOR ELECTRICAL CABLE NO.14 AWG
- o-e,r
- m - NO.6 AWG STRANDED BARE COPPER GROUND WIRE
- o - (3-WIRES) 1-CONDUCTOR ELECTRICAL CABLE NO.4 AWG
- n,p - EXISTING UNDERGROUND INTERCONNECT CABLE, PULLED-BACK RE-ROUTED UNDERGROUND
- q - 1-CONDUCTOR ELECTRICAL CABLE NO.4 AWG
- I/C - EXISTING COMMUNICATION CABLE
- DZ - CAMERA DETECTOR ZONE
- PS - PROPOSED OVERHEAD SERVICE FEED

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF TRAFFIC & SAFETY  
 TRAFFIC ENGINEERING DESIGN DIVISION  
 MD 193 AT NASA AND  
 CIPRIANO SO 3C ENTRANCE'S  
 GODDARD, MARYLAND

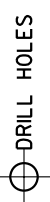
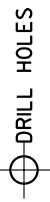
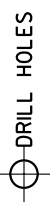
SCALE N/A DATE 07/01/2005 CONTRACT NO. A77185185  
 DESIGNED BY D. L. A. COUNTY PRINCE GEORGE'S  
 DRAWN BY D. L. A. LOGMILE 16019308.45  
 CHECKED BY T. M. H. T. I. M. S. NO. 6767  
 F. A. P. NO. \_\_\_\_\_ TOD NO. \_\_\_\_\_

CONSULTANT  
 LOGO  
 IF  
 APPLICABLE

PLOTTED: \$DATE\$TIME\$  
 FILE: \$FILE\$

TS NO. 1168C DRAWING OF SHEET NO. 3 OF 3

BORDER REV. DATE: June 1, 2004



BY: \$USERNAME\$

PROJECT DESCRIPTION

GENERAL: THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT MD 193 AND THE ENTRANCES OF NASA GODARD, AND CIPRIANO SHOPPING CENTER IN PRINCE GEORGE'S COUNTY. MD 193 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION: THE INTERSECTION OPERATES A NEMA SIX PHASE, FULL-ACTUATED MODE. MD 193 THROUGH MOVEMENT OPERATE CONCURRENTLY, WITH AN EXCLUSIVE/PERMISSIVE LEFT TURN FOR BOTH APPROACHES AND CONCURRENT NAVIGATOR PEDESTRIAN MOVEMENTS TO CROSS BOTH LEGS OF ENTRANCE TO NASA, AND THE ENTRANCE TO CIPRIANO SHOPPING CENTER MOVEMENTS OPERATE CONCURRENTLY, WITH AN ALTERNATE NAVIGATOR PUSHBUTTON PEDESTRIAN PHASE TO CROSS THE EAST LEG OF MD 193.

CONTROLLER INFORMATION: A NEMA EIGHT-PHASE, FULL-ACTUATED CONTROLLER WITH ALL NECESSARY EQUIPMENT HOUSED IN A BASE-MOUNTED CABINET SHALL BE INSTALLED AT THE INTERSECTION. SEE GENERAL NOTES FOR INSTRUCTIONS IN REGARD TO THE NAVIGATOR PEDESTRIAN EQUIPMENT.

CONTACT PERSONS FOR DISTRICT 3 ARE AS FOLLOWS: CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

- MR. MAJID SHAKIB ASSISTANT DISTRICT ENGINEER - TRAFFIC 301-513-7318
MR. KEVIN NOWAK ASSISTANT DISTRICT ENGINEER - CONSTRUCTION 301-513-7336
MR. WAYNE MOWDY ASSISTANT DISTRICT ENGINEER - MAINTENANCE 301-513-7304
MR. AUGIE REBISH ASSISTANT DISTRICT ENGINEER - UTILITIES 301-513-7350
MR. RICHARD DAFF SR. CHIEF, TRAFFIC OPERATIONS 410-787-7630
MR. ED RODENHIZER SECTION CHIEF SIGNAL OPERATIONS 410-787-7650
CONTACTS FOR BALTIMORE GAS ELECTRIC BILL DOHERTY 7317 PARKWAY DRIVE SOUTH HANOVER, MARYLAND 21076 (410) 859-9426 (THE EXISTING METER ON THE CONTROLLER IS BGE 57442282)

EQUIPMENT LIST "B"

Table with 3 columns: ITEM NO., QUANTITY, DESCRIPTION. Lists equipment items 1001 through 8112 including maintenance of traffic, test pit excavation, pavement markings, sidewalks, foundations, signal heads, control units, cables, cameras, pedestals, conduits, and signs.

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

Table with 3 columns: ITEM NO., QUANTITY, DESCRIPTION. Lists specific equipment items 9016 through 9571 including detector amplifiers, controllers, signs, and shield assemblies.

EQUIPMENT LIST "C"

C. MATERIAL TO BE REMOVED AND RETURNED TO THE STATE HIGHWAY ADMINISTRATION ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.

NONE

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION MD 193 AT NASA AND CIPRIANO SO SC ENTRANCE'S GODDARD, MARYLAND

Project information form including SCALE (N/A), DATE (07/01/2005), CONTRACT NO. (A77185185), DESIGNED BY (D. L. A.), COUNTY (PRINCE GEORGE'S), DRAWN BY (D. L. A.), LOGMILE (16019308.45), CHECKED BY (T. M. H.), T.I.M.S. NO. (6767), F.A.P. NO., and TOD NO.

CONSULTANT LOGO IF APPLICABLE

PLOTTED: \$DATE\$ TIME: \$FILE\$

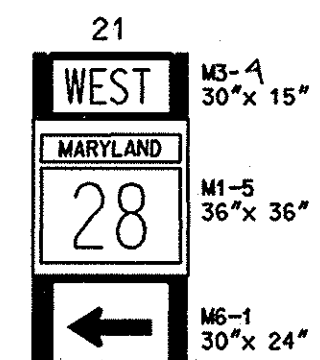
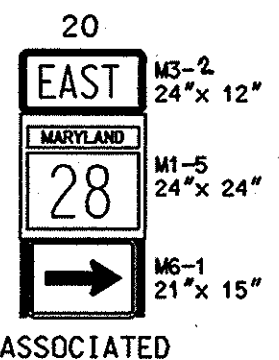
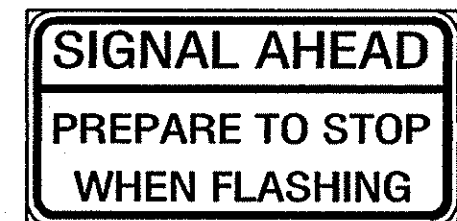
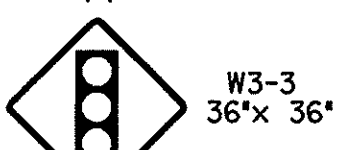
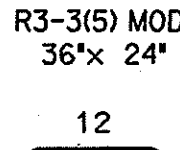
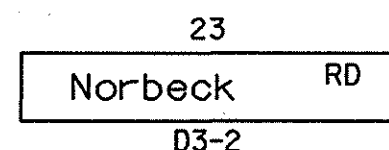
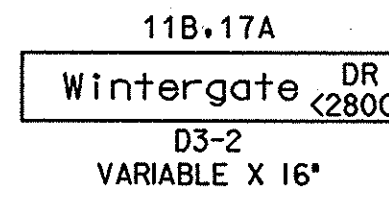
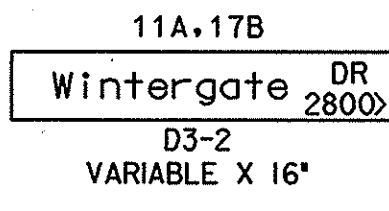
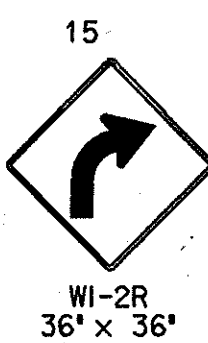
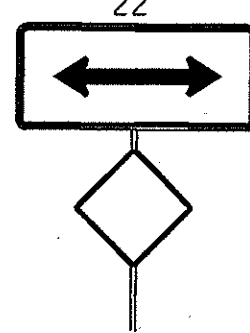
BORDER REV. DATE: June 1, 2004

DRILL HOLES

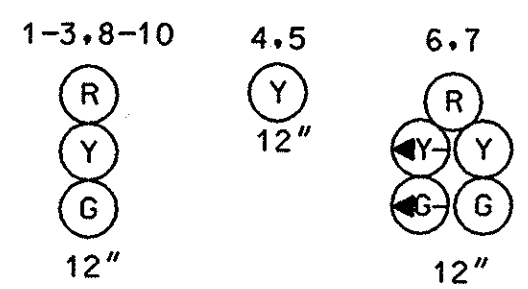
DRILL HOLES

DRILL HOLES

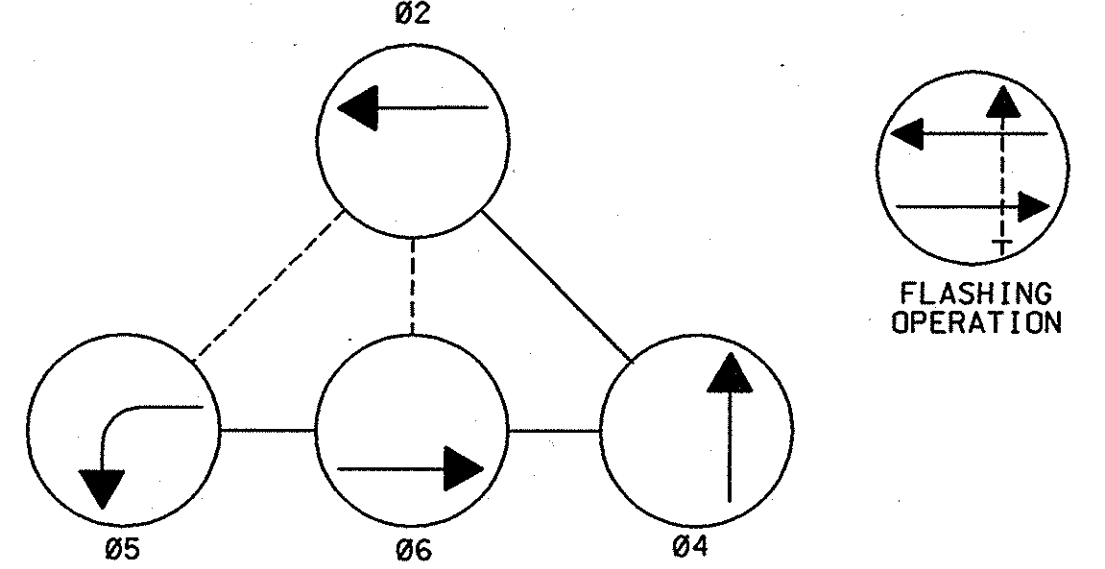
EXISTING SIGNS



PROPOSED SIGNALS



NEMA PHASING

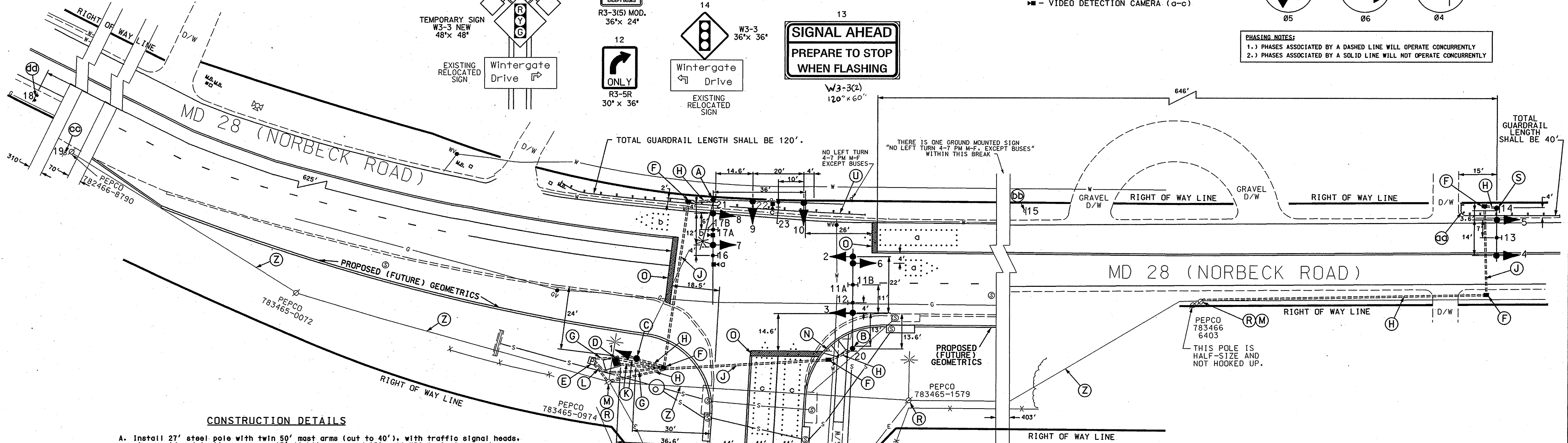


PHASING NOTES: 1.) PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY 2.) PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY

PROPOSED CAMERAS

VIDEO DETECTION CAMERA (a-c)

NOTE: MD 28 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.



CONSTRUCTION DETAILS

- A. Install 27' steel pole with twin 50' mast arms (cut to 40'), with traffic signal heads, signs, video detection cameras, 15' lighting arm and 250 watt HPS luminaire as shown.
B. Install 27' steel pole with a 38' mast arm with traffic signal heads and signs as shown.
C. Install 14' pedestal pole with 3 section signal head stacked as shown.
D. Install NEMA size "6" base-mounted cabinet, controller with all necessary equipment as shown.
E. Install metered pedestal for electrical utility service equipment as shown.
F. Install handhole.
G. Install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
H. Install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
J. Install 4" polyvinyl chloride electrical conduit (Schedule 80) (bored).
K. Install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
L. Install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched) with 35' of 3 wire, 1 conductor (No. 250 KCMIL) for power service coiled at base of utility pole for proposed underground electrical service.
M. Contractor shall install 3" PVC riser to existing utility pole.
N. Remove existing ground mounted sign.
O. Install 24" white heat applied preformed thermoplastic pavement marking (stopline).
P. Install 5" white heat applied preformed thermoplastic pavement marking.
Q. Install 5" double yellow heat applied preformed thermoplastic pavement marking (centerline).
R. Use existing wood pole to install 3/8" span wire with 5 conductor (No. 12 AWG).
S. Install 21' steel pole with 60' mast arm (cut to 20') with traffic signal heads and sign.
T. Use existing wood pole to install 12 pair overhead interconnect cable as shown.
U. Install guardrail with Type C end treatment (STD MD 605.03) as shown.
Z. See interconnect plan for detail.
aa. Install guardrail with Type C end treatment (STD MD 605.03) as shown.
bb. Contractor shall remove existing warning sign, replace it with new W1-2R(Curve Sign) on existing sign support and relocate existing ground mounted (Wintergate Drive sign) to proposed H1B as shown.
cc. Contractor shall remove existing warning sign, relocate existing (Wintergate Drive sign) to New W3-3 sign, and install new W1-2R(Curve Sign) on existing support as shown.
dd. Install proposed W3-3 on 2 - 4" x 6" wood post.

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.
2. All pavement markings detailed are proposed and are to be installed in accordance with SHA standards. Contractor shall grind existing centerline on Wintergate Drive.
3. 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.

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

MD 28 AND WINTERGATE DRIVE

Table with project information: SCALE 1"=20', DATE 6-15-05, CONTRACT NO. AT7185185, DESIGNED BY J. ALLEN JR., COUNTY MONTGOMERY, DRAWN BY D. A. NIES, LOGMILE 15002828.33, CHECKED BY, TMS NO. 0536, F.A.P. NO. AC STPG-000S(934)E, TOD NO., TS NO. 4351, DRAWING NO., OF, SHEET NO. 1 OF 3

CONSULTANT LOGO IF APPLICABLE

Table for APPROVALS and REVISIONS. APPROVALS: J. Allen Jr. (DESIGNER), D. A. Nies (DRAWN BY), [Signature] (DIVISION CHIEF). REVISIONS: empty.

GEOMETRIC LEGEND: PROPOSED (solid line), EXISTING (dashed line). LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES: AERIAL CABLE, ELECTRIC, TELEPHONE, GAS, SEWER, WATER, CABLE TV.

Vertical text on the right edge of the page.





DRILL HOLES

DRILL HOLES

DRILL HOLES

BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

- I. GENERAL
- This project involves the installation of a new Traffic Control Signal with street lighting and interconnect at the intersection of MD 28 (Norbeck Rd) and Wintergate Drive in Montgomery County. Hazard Identification Beacons shall be installed on the westbound approach of Norbeck Road in advance of this intersection. Video detection shall be used at this intersection. MD 28 (Norbeck Rd) is assumed to run an east-west direction.
- II. INTERSECTION OPERATION
- The intersection is to operate in a NEMA four-phase, semi-actuated mode, with the MD 28 (Norbeck Rd) approaches running concurrently. An Exclusive/Permissive left turn phase shall be provided for the westbound approach of MD 28 (Norbeck Rd). Far-side sampling stations shall be provided on both legs of MD 28 (Norbeck Rd) at this intersection. The Wintergate Drive approach shall run in its own phase.
  - A full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.
- III. SPECIAL NOTES
- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
  - Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Dr. Wilhelm Derminassian (240) 777-8795 seventy-two hours in advance of intended work.
  - All underground and overhead 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.

The contact persons for District #3 (Montgomery County) are as follows:

- |   |   |
|---|---|
| Mr. Lee Starkloff<br>Assistant District Engineer - Traffic<br>Phone: (301) 513-7318     | Mr. Sonny Bailey<br>Sign Shop<br>410-787-7670   |
| Mr. Wayne Mowdy<br>Assistant District Engineer - Maintenance<br>Phone: (301) 513-7304   | Dr. Wilhelm Derminassian<br>Montgomery County<br>240-777-8795   |
| Mr. Augie Rebish<br>District Engineer - Utility<br>Phone: (301) 513-7350                | The power company representative is:<br>Mr. Steve Custer<br>PEPCO Customer Design<br>201 W Guide Dr.,<br>Rockville, MD 20850<br>Phone: 301 548-4333 |
| Mr. Richard L. Daff, Sr.<br>Chief, Traffic Operations Division<br>Phone: (410) 787-7630 |   |
| Mr. Ed Rodenhizer<br>Signal Shop<br>410-787-7652  |   |

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A. AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	QUANTITY
9042	Controller ASC II with telemetry	1 EA
9044	Controller cabinet, size "6"	1 EA
9086	Video detection interface equipment + 4 cameras (To be installed by signal shop).	1 EA
9570	Sheet aluminum signs to consist of: (ground mount)	34 SF
	W1-2R "CURVE AHEAD (Symbolic)" sign, (36" x 36") with hardware.	1 EA
	W1-2L "CURVE AHEAD (Symbolic)" sign, (36" x 36") with hardware.	1 EA
	W3-3 NEW "SIGNAL AHEAD" sign, (48" x 48") with hardware.	1 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	132 SF
	D3-2 "Wintergate Dr. 2800'" sign, (variable x 16") mast arm.	1 EA
	D3-2 "Wintergate Dr. 2800'" sign, (variable x 16") mast arm.	1 EA
	D3-2 "Norbeck Rd" sign, (Variable x 16") mast arm	1 EA
	R3-3(5) mod "NO LEFT TURN (Symbolic) / 4PM-7PM MONDAY-FRIDAY EXCEPT BUSES" sign (36"x24") mast arm.	1 EA
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36") mast arm.	1 EA
	W3-3 "SIGNAL AHEAD" sign, (36" x 36") pole mount.	1 EA
	W3-3(2) "SIGNAL AHEAD/PREPARE TO STOP WHEN FLASHING" sign, (120" x 60") mast arm.	1 EA
	GUIDE SHIELD ASSEMBLY (36"x75") pole mounted.	1 EA
	M3-4 "WEST" (30"x15")	
	M1-5 "MD 28" (36"x36")	
	M6-1 "left arrow" (30"x24")	
	GUIDE SHIELD ASSEMBLY (24"x51") pole mounted.	1 EA
	M3-2 "EAST" (24"x12")	
	M1-5 "MD 28" (24"x24")	
	M6-1 "right arrow" (21"x15")	

EQUIPMENT LIST (CONT.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	3 EA
2002	Test Pit Excavation	6 C.Y.
5001	5" white heat applied permanent preformed thermoplastic pavement marking.	105 L.F.
5002	5" yellow heat applied permanent preformed thermoplastic pavement marking.	410 L.F.
5003	Removal of existing permanent pavement line markings	400 L.F.
5006	24" white heat applied permanent preformed thermoplastic pavement marking.	65 L.F.
6006	Traffic barrier w Beam using 6' Post	160 L.F.
6008	Type C traffic barrier end treatment.	3 EA
8001	Furnish and install concrete for signal foundation.	21 C.Y.
8014	Pre-manufactured camera to controller (200' length) cable	3 EA
8027	Furnish and install breakaway pedestal pole (14').	1 EA
8028	Relocate sign.	36 SF
8034	3" electrical conduit riser (PVC).	15 LF
8035	Furnish and install electrical cable - 5 conductor (No. 12 AWG)	1150 LF
8037	Furnish and install electrical cable - 1 conductor (No. 250 KCMIL)	140 L.F.
8043	Wood sign supports 4"x6".	40 L.F.
8044	Furnish and install No. 6 AWG stranded bare copper ground wire.	285 L.F.
8047	Weatherhead, 3 inch	1 EA
8050	Furnish and install 4" schedule 80 rigid polyvinyl chloride - bored.	170 L.F.
8051	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched.	45 L.F.
8052	Furnish and install 3" schedule 80 rigid polyvinyl chloride - trenched.	185 L.F.
8053	Furnish and install 4" schedule 80 rigid polyvinyl chloride - trenched.	60 L.F.
8058	Metered pedestal service.	1 EA
8061	Furnish and install electrical cable 1-conductor No. 4 AWG THHN/THWN.	35 L.F.
8067	Furnish and install electrical handhole.	5 EA
8069	Install ground mounted sign.	34 SF
8070	Install overhead sign.	132 SF
8071	Video detector camera.	3 EA
8075	27' steel pole and twin 50' (cut to 40')/50' mast arms.	1 EA
8076	Furnish and install 27' mast arm pole and 38' mast arm.	1 EA
8078	Furnish and install 27' mast arm pole and 60' (cut to 20') mast arm.	1 EA
8082	Furnish and install 12-pair communication cable, self-supporting (overhead).	3660 L.F.
8084	Furnish and install 250 watt HPS Luminaire with photocell.	1 EA
8091	Furnish and install ground rod - 4" x 10'.	8 EA
8093	Furnish and install 12" vehicular traffic signal head section	30 EA
8096	Cut, clean, galvanize and cap traffic signal structure.	2 EA
8101	Furnish and install electrical cable -5 conductor (No. 14 AWG).	80 L.F.
8102	Furnish and install electrical cable -7 conductor (No. 14 AWG).	515 L.F.
8103	Furnish and install tray cable - 2 conductor (No. 12 AWG).	130 L.F.
8107	Furnish and install 15' lighting arm for traffic signal structure.	1 EA

EQUIPMENT LIST (CONT.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
8110	Furnish and install steel span wire, 3/8" diameter.	750 L.F.
8112	Install controller and cabinet base mount.	1 EA

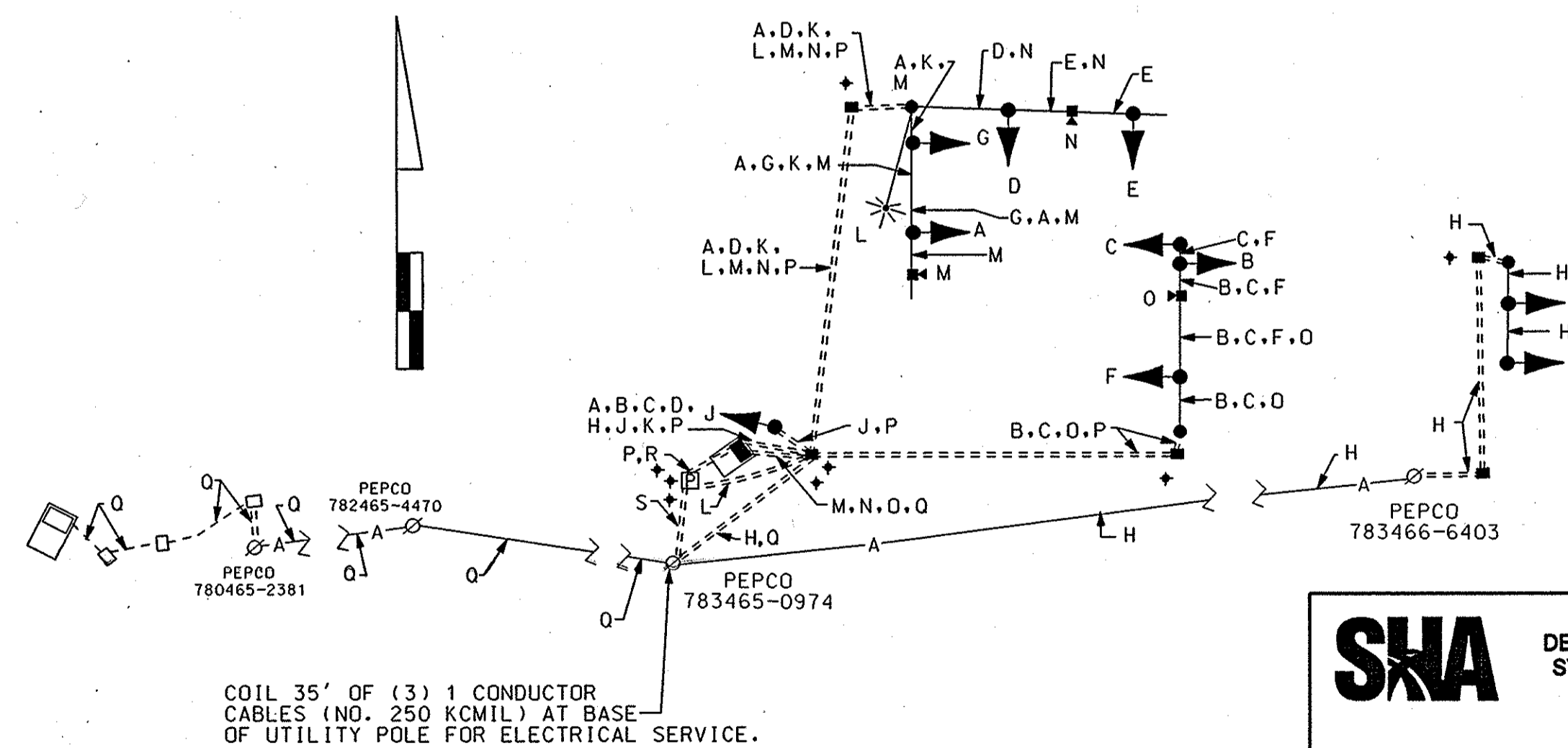
C. EQUIPMENT TO BE REMOVED

There is no signal equipment to be removed.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10
PHASE 2 & 6	G	G	G	DARK	DARK	G	G	G	R	R
2 & 6 CHANGE	Y	Y	Y	DARK	DARK	G	G	G	R	R
PHASE 2 & 5	R	R	R	DARK	DARK	G-G/G	G-G/G	G	R	R
WB RED WARNING	R	R	R	FL/Y	FL/Y	G-G/G	G-G/G	G	R	R
2 & 5 CHANGE	R	R	R	FL/Y	FL/Y	Y-Y/Y	Y-Y/Y	Y	R	R
PHASE 4	R	R	R	FL/Y	FL/Y	R	R	R	G	G
4 CHANGE	R	R	R	FL/Y	FL/Y	R	R	R	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	DARK	DARK	FL/Y	FL/Y	FL/Y	FL/R	FL/R

WIRING DIAGRAM



WIRING KEY

A	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
D	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
J	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
O	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
H	5-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
K	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
L	2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
M	PRE MANUFACTURED CAMERA TO CONTROLLER CABLE (200')
O	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
P	12-PAIR VOICE GRADE INTERCONNECT CABLE (SELF SUPPORTING)
R	2-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
S	3 - 1 CONDUCTOR ELECTRICAL CABLE (NO. 250 KCMIL)
+	GROUND ROD

COIL 35' OF (3) 1 CONDUCTOR CABLES (NO. 250 KCMIL) AT BASE OF UTILITY POLE FOR ELECTRICAL SERVICE.

CONSULTANT LOGO IF APPLICABLE

**SHA** STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

MD 28 AND WINTERGATE DR.

SCALE NONE DATE 6/15/05 CONTRACT NO. AIT185185

DESIGNED BY J.A. COUNTY MONTGOMERY

DRAWN BY R.C. LOGMILE 15002828.33

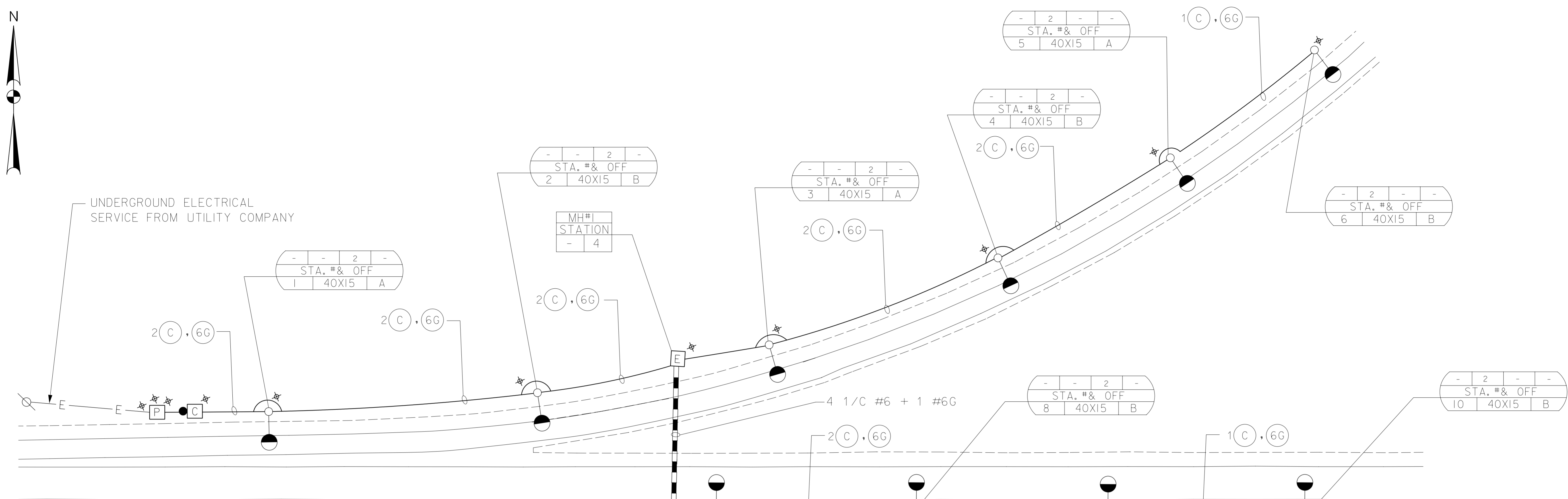
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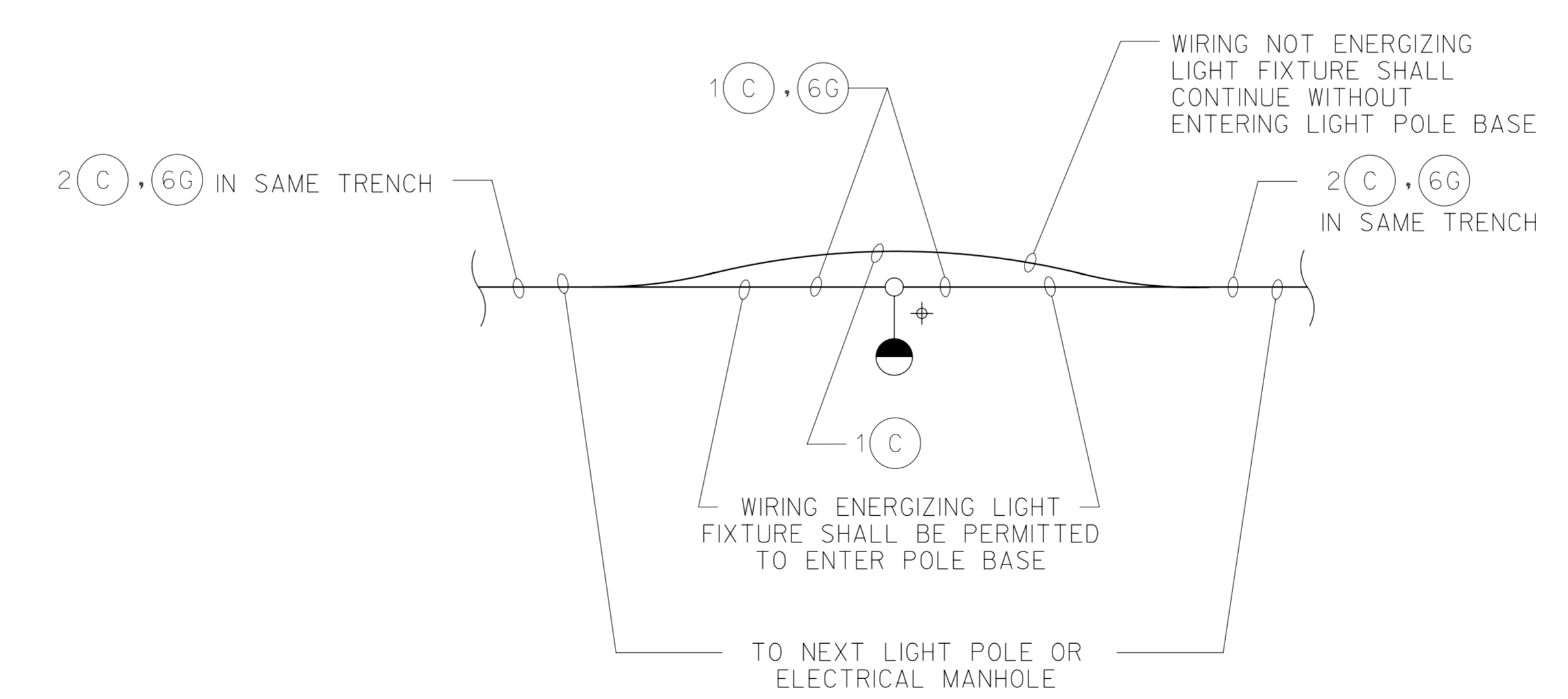
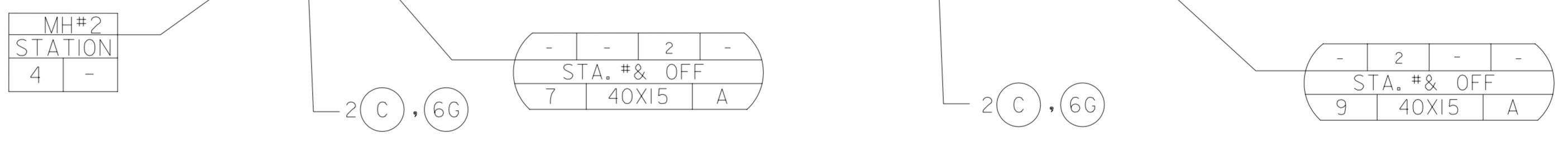


**LIGHTING LEGEND**

- |        |       |       |       |
|--------|-------|-------|-------|
| TYP#1  | TYP#2 | TYP#3 | TYP#4 |
| STA. # | OFF   |       |       |
| POL    | MH    | CIR   |       |

 QUANTITY OF CONNECTOR KITS  
 STATION NUMBER & OFFSET  
 CIRCUIT NUMBER
- MOUNTING HEIGHT X MAST ARM LENGTH  
 POLE NUMBER
- 2 (C) . 6G — GROUND WIRE DESIGNATION  
 DUCT CABLE DESIGNATION  
 TYPE & SIZE OF CABLE(S) OR WIRE IN TRENCH  
 TOTAL NUMBER OF CABLES IN TRENCH
- (6G) #6 AWG BARE COPPER GROUND WIRE  
 (C) 2/C #6 AWG DUCT CABLE
- |         |  |
|---------|--|
| MH#     |  |
| STATION |  |

 MANHOLE ID NUMBER  
 - MANHOLE ID TAG
- # OF 'Y' SPLICES - TYPE 4  
 # OF INLINE SPLICES - TYPE 1
- 250 WATT COBRAHEAD LUMINAIRE (RELOCATED)
- UNDERGROUND ELECTRICAL DUCT CABLE
- ELECTRICAL MANHOLE
- GROUND ROD
- 4 INCH SCHEDULE 80 RIGID POLYVINYL CHLORIDE ELECTRICAL CONDUIT (BORED)
- LIGHTING CABINET - POLE MOUNT  
 120/240V - 3 WIRE, 100 AMP
- METERED SERVICE PEDESTAL



TYPICAL LIGHT POLE WIRING DETAIL  
NOT TO SCALE

**CONSULTANT  
LOGO  
IF  
APPLICABLE**

<b>MARYLAND DOT - STATE HIGHWAY ADMINISTRATION</b> <i>Office of Traffic &amp; Safety</i> <b>TRAFFIC ENGINEERING DESIGN DIVISION</b> SAMPLE LIGHTING PLAN	
REVISIONS	
DRAWN BY: _____ CHECK BY: _____ SCALE: _____	F.A.P. NO. _____ S.H.A. NO. _____ COUNTY _____
PLAN SHEET NO.: _____ SHEET NO. _____ OF _____	

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

NONE

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

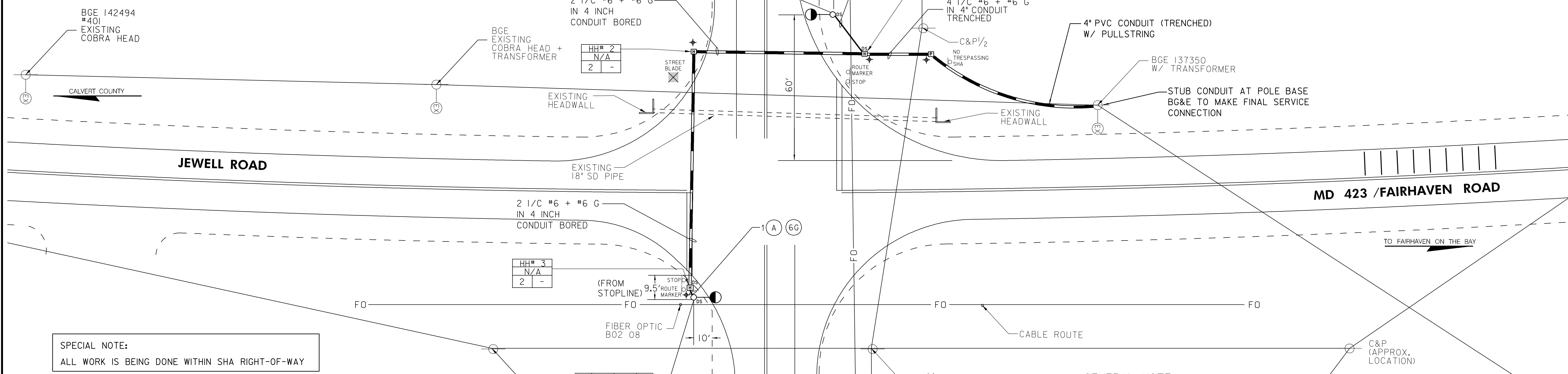
ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
8001	4.20 CY	CONCRETE FOR TRAFFIC CONTROL DEVICES
8002	4 EA	CABLE DUCT END SEALS
8010	210 LF	NO. 6 AWG STRANDED BARE COPPER GROUND
8012	200 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8014	75 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8016	1 EA	METERED SERVICE PEDESTAL
8020	2 EA	40 FOOT LIGHT STRUCTURE - 15 FOOT BRACKET ARM
8021	3 EA	FURNISH AND INSTALL ELECTRICAL HANHOLE
8023	2 EA	BREAKAWAY BASE SUPPORT SYSTEM FOR LIGHTING STRUCTURE
8024	2 EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
8026	40 EA	DUCT CABLE - 2 CONDUCTOR, NO 4 AWG, 600V
8028	480 LF	CABLE - 1 CONDUCTOR, NO 6 AWG, TYPE USE 600V
8029	240 LF	CABLE - 1 CONDUCTOR, NO 10 AWG, TYPE THWN/THHN, 600V
8030	8 EA	CONNECTOR KIT - TYPE I
8031	4 EA	CONNECTOR KIT - TYPE II
8034	4 EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH

C. MATERIAL TO BE REMOVED AND RETURNED TO SHA

NONE

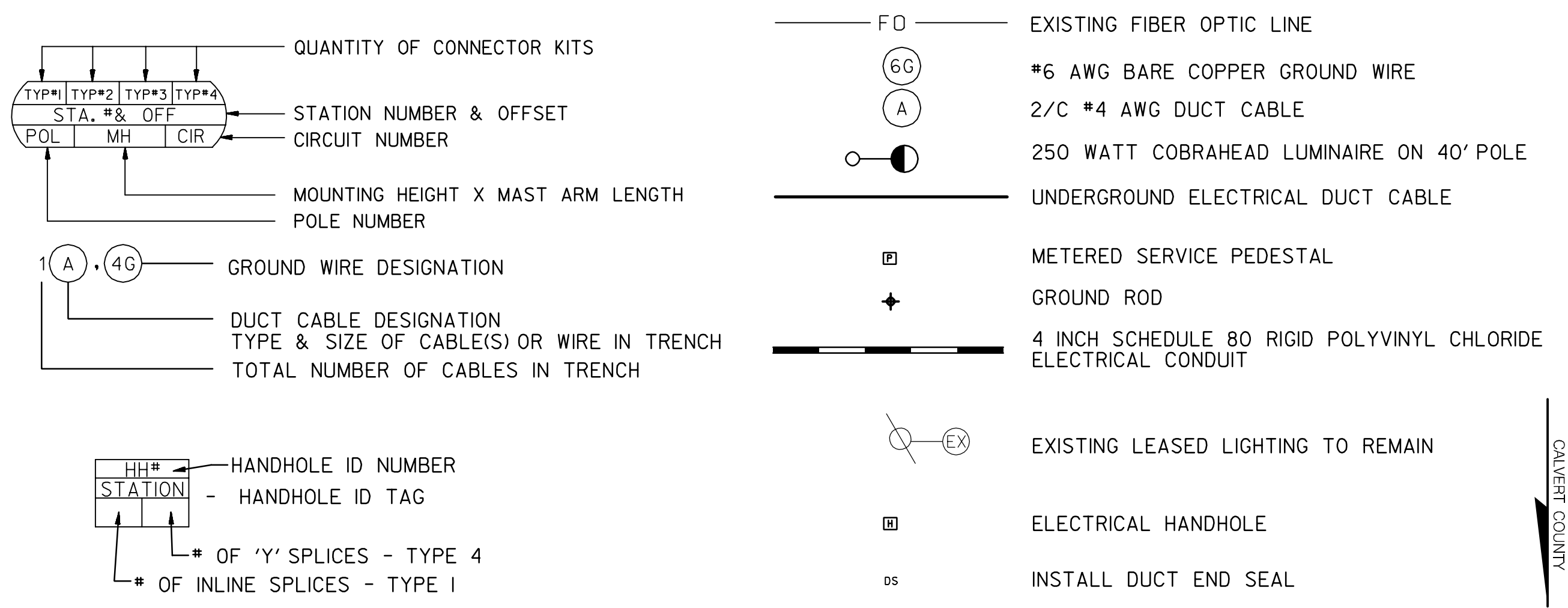
SCHEDULE OF PANEL "A"

CIRCUIT NUMBER	EQUIPMENT SERVED	CONNECTED LOAD		PHASE AND VOLTS	BREAKERS			REMARKS
		KW	AMPS		BRANCH CIRCUIT BREAKERS	TRIP SIZE		
1.	LP-1	0.312	1.3	1/240	2	100	20	1- 250W HPS
2.								
3.	LP-2	0.312	1.3	1/240	2	100	20	1- 250W HPS
4.								
TOTAL		0.624	2.6					



SPECIAL NOTE:  
ALL WORK IS BEING DONE WITHIN SHA RIGHT-OF-WAY

LIGHTING LEGEND



GENERAL NOTE  
1. ALL UNDERGROUND UTILITIES ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL CONTACT "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 LIGHTING STRUCTURES WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED.

PROJECT DESCRIPTION:  
THE PURPOSE OF THE PROJECT IS TO INSTALL INTERSECTION LIGHTING FOR THE STOP CONTROLLED INTERSECTION OF MD 2 AT MD 243 / JEWELL ROAD

**PROJECT APPROVALS**  
APPROVALS ARE FOR LIGHTING  
SHEETS: LT-1 THRU LT-1  
A TOTAL OF 1 SHEETS

APPROVALS	REVISIONS
TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION	
ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION	
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION	
DIRECTOR, OFFICE OF TRAFFIC & SAFETY	

CONSULTANT  
LOGO  
IF  
APPLICABLE

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
*Office of Traffic & Safety*  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
INTERSECTION LIGHTING PLAN  
MD 2 AND MD 423/JEWELL ROAD  
DEALE, MARYLAND

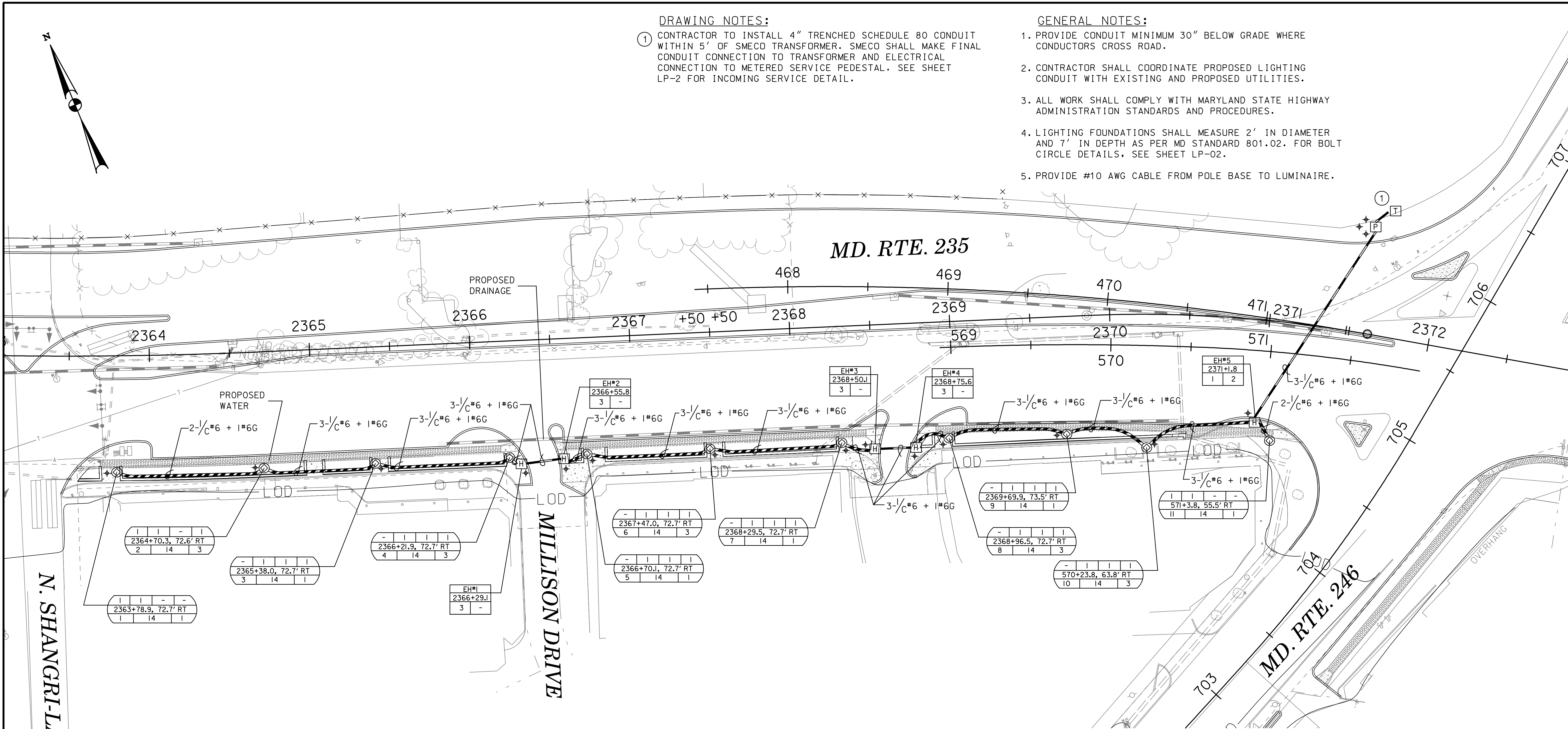
DRAWN BY: MRB	F.A.P. NO. -	PLAN SHEET NO.: LT-1	SHEET NO. 1 OF 1
CHECK BY: EBY	S.H.A. NO. AT6055185		
SCALE: 1"=20'	COUNTY ANNE ARUNDEL		

**DRAWING NOTES:**

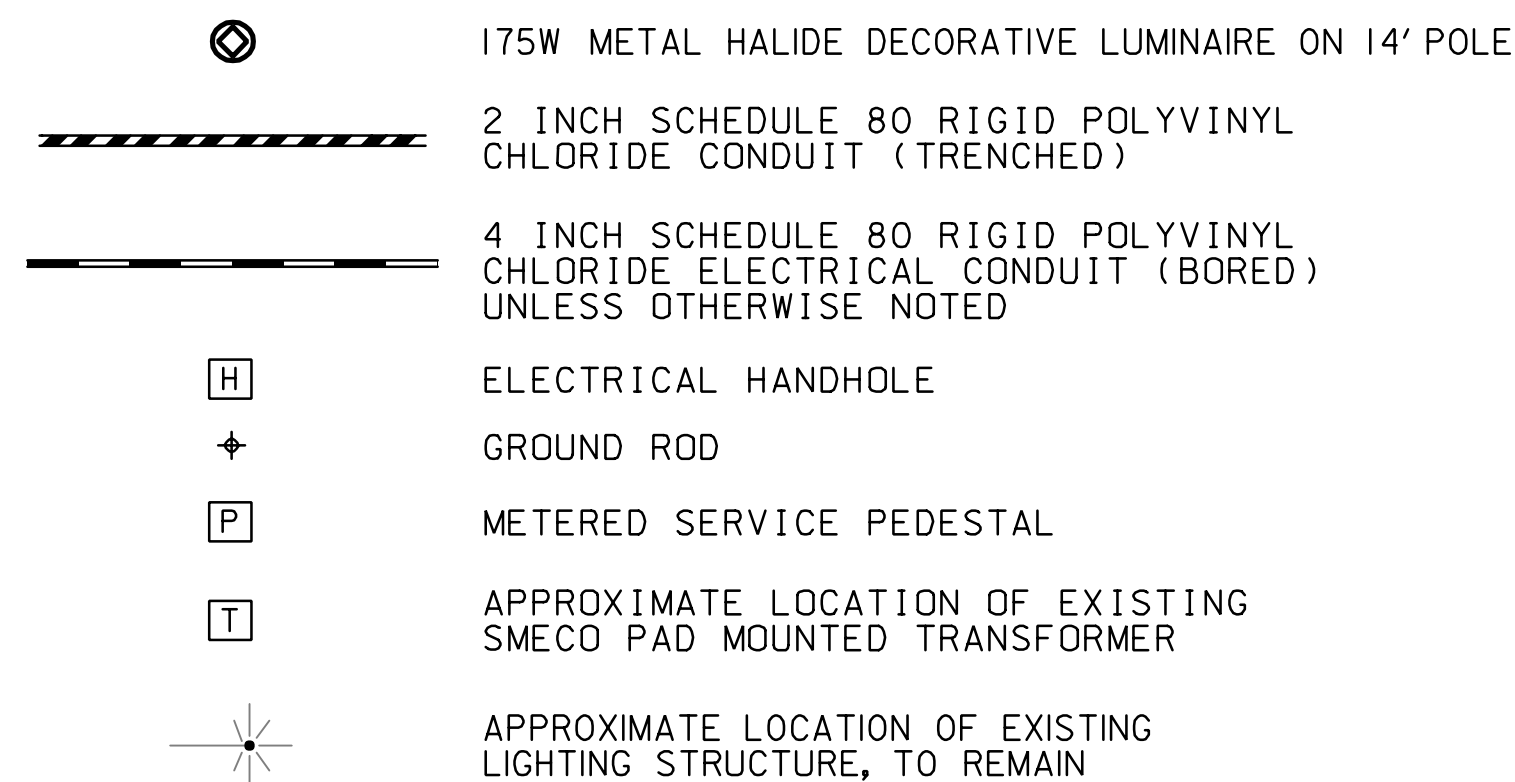
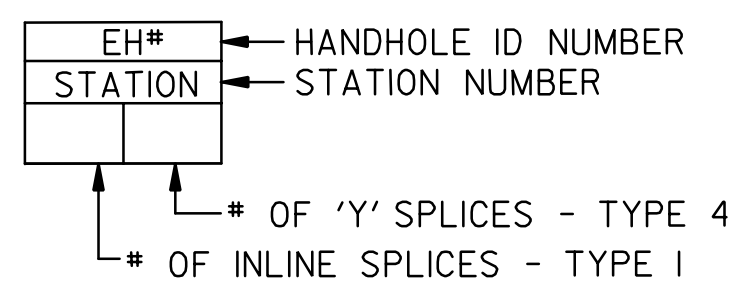
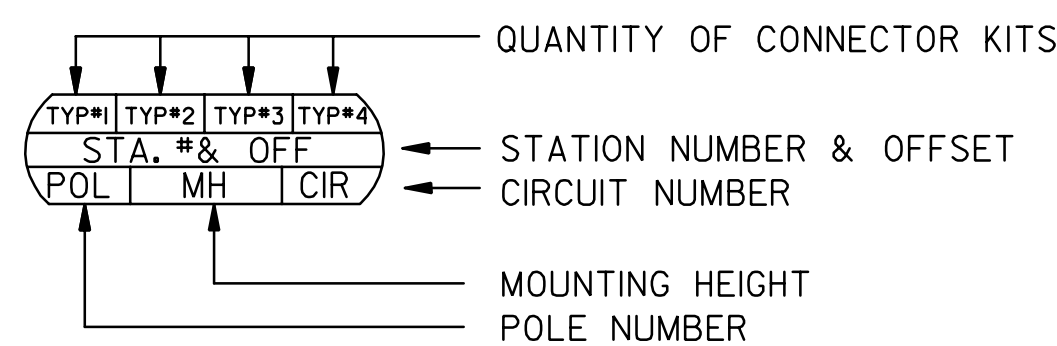
- ① CONTRACTOR TO INSTALL 4" TRENCHED SCHEDULE 80 CONDUIT WITHIN 5' OF SMECO TRANSFORMER. SMECO SHALL MAKE FINAL CONDUIT CONNECTION TO TRANSFORMER AND ELECTRICAL CONNECTION TO METERED SERVICE PEDESTAL. SEE SHEET LP-2 FOR INCOMING SERVICE DETAIL.

**GENERAL NOTES:**

- 1. PROVIDE CONDUIT MINIMUM 30" BELOW GRADE WHERE CONDUCTORS CROSS ROAD.
- 2. CONTRACTOR SHALL COORDINATE PROPOSED LIGHTING CONDUIT WITH EXISTING AND PROPOSED UTILITIES.
- 3. ALL WORK SHALL COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS AND PROCEDURES.
- 4. LIGHTING FOUNDATIONS SHALL MEASURE 2' IN DIAMETER AND 7' IN DEPTH AS PER MD STANDARD 801.02. FOR BOLT CIRCLE DETAILS, SEE SHEET LP-02.
- 5. PROVIDE #10 AWG CABLE FROM POLE BASE TO LUMINAIRE.



**LIGHTING LEGEND**



**PROJECT APPROVALS**

APPROVALS ARE FOR LIGHTING  
SHEETS: LP-1 THRU LP-2  
A TOTAL OF 2 SHEETS

APPROVALS	REVISIONS
TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION	5 REDLINE REVISION JULY, 2003 NEW SHEET
ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION	
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION	
DIRECTOR, OFFICE OF TRAFFIC & SAFETY	

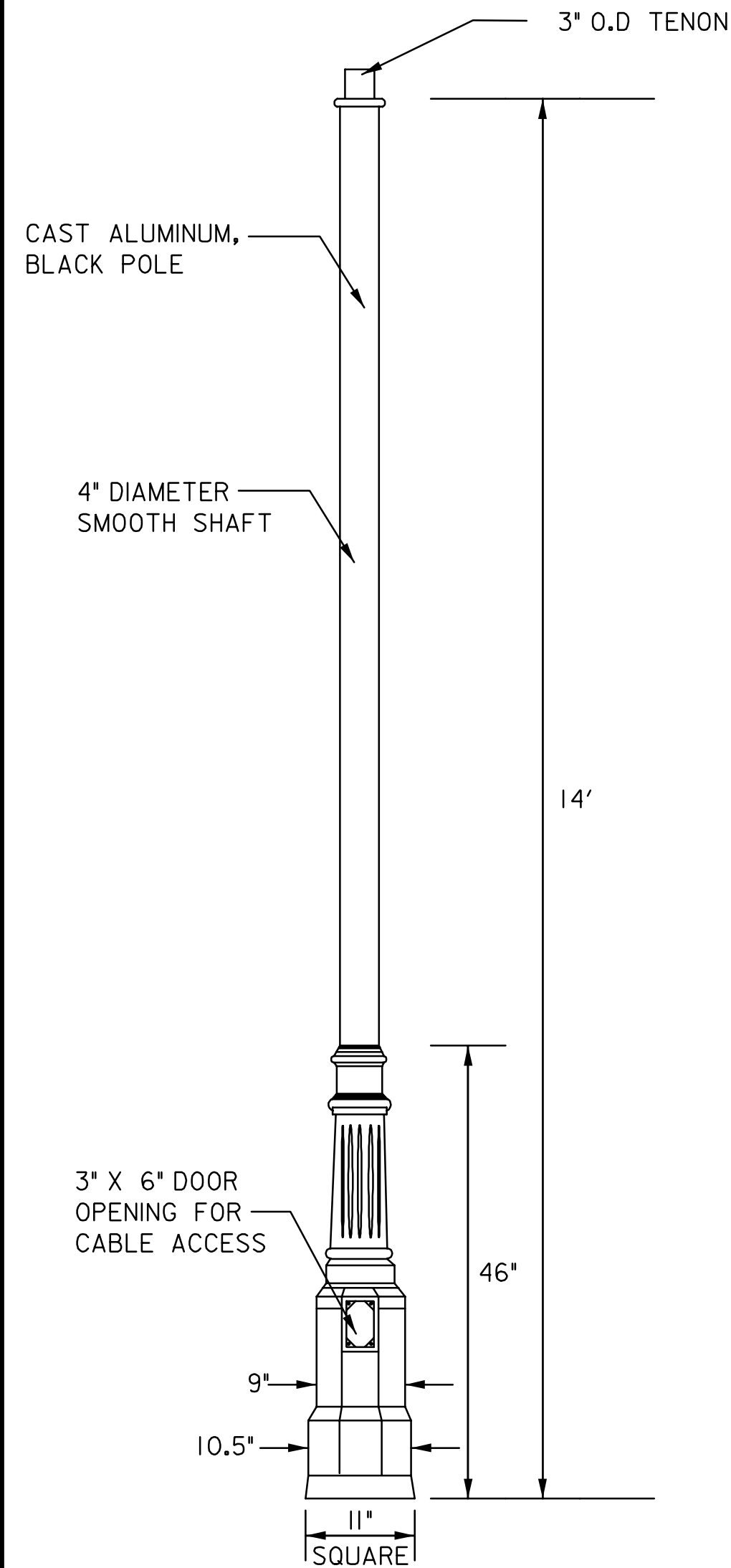
**CONSULTANT  
LOGO  
IF  
APPLICABLE**

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
*Office of Traffic & Safety*  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
MARYLAND ROUTE 235 FROM NORTH OF  
PEGG ROAD TO SOUTH OF MARYLAND ROUTE 246  
PEDESTRIAN LIGHTING PLAN

DRAWN BY: JH	F.A.P. NO.	SEE TITLE SHEET	PLAN SHEET NO.:	SHEET NO.
CHECK BY: BLB/DAE	S.H.A. NO.	SM7685370	LP-1	125B OF 154
SCALE: 1" = 30'	COUNTY	ST. MARY'S COUNTY		

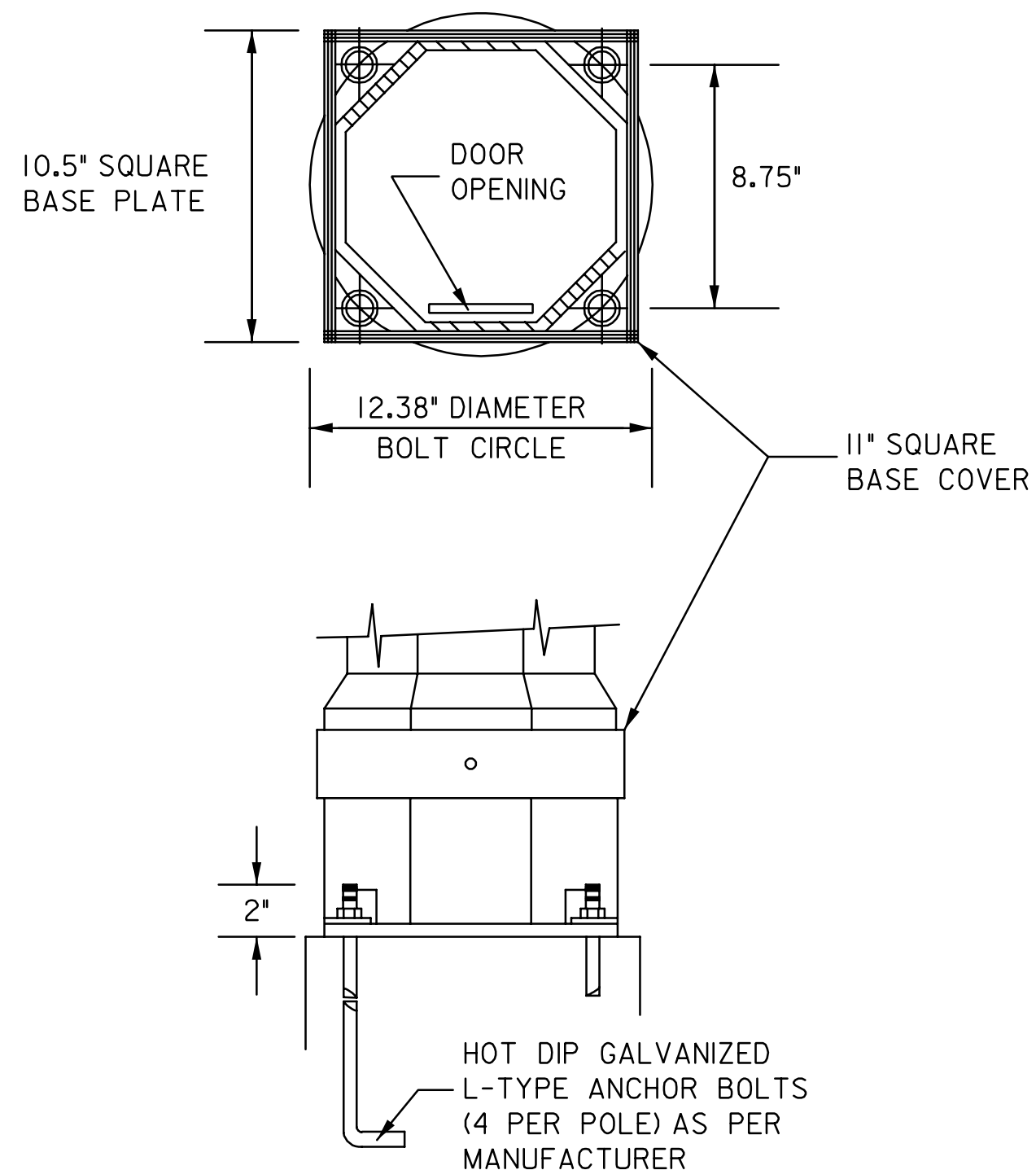
LOGMILE 180235011.97 TO 180235012.15

5/26/2005  
K:\PROJECTS\102-046\Task22\DMN\2999LPO1.dgn



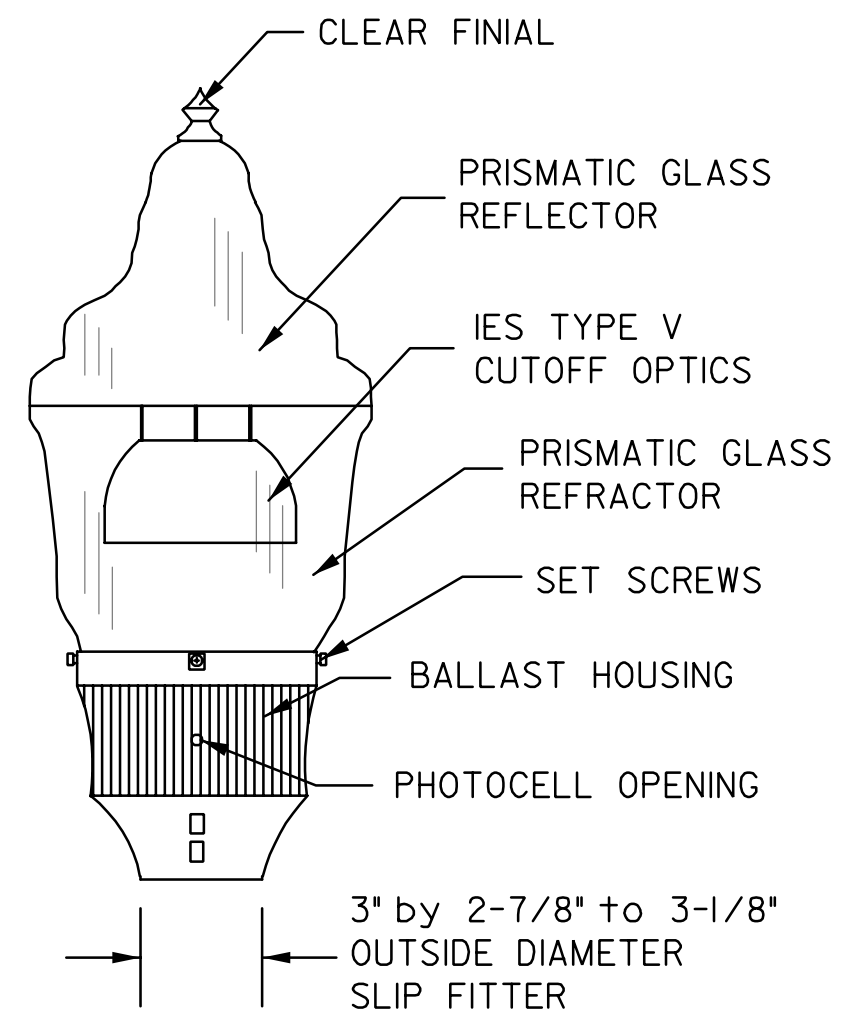
**LIGHT POLE DETAIL**  
NOT TO SCALE

NOTE: SEE SPECIFICATIONS FOR LIGHT POLE DETAILS.

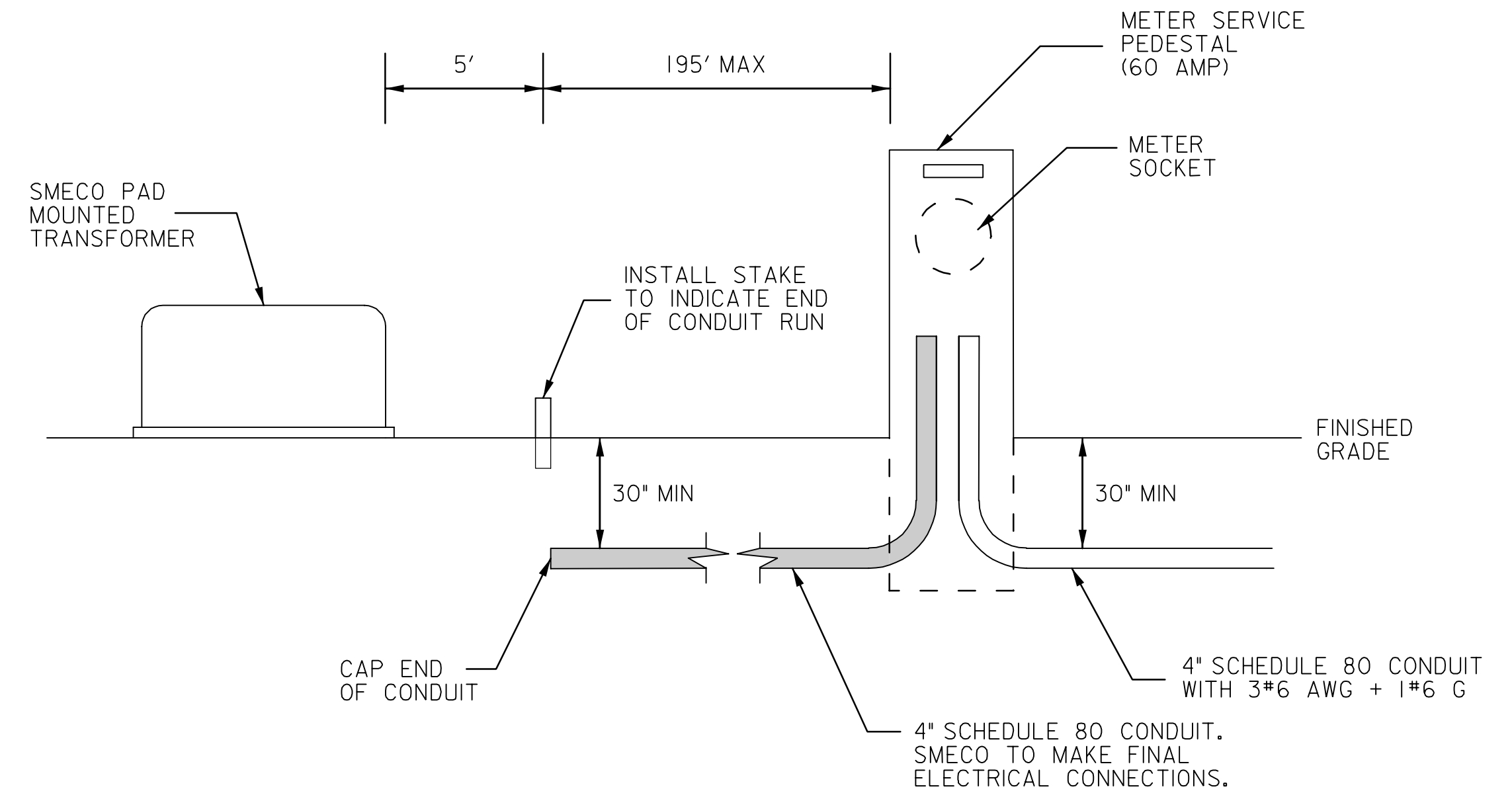


**ANCHORAGE DETAIL**  
NOT TO SCALE

NOTE: LUMINAIRE TO BE EQUIPPED WITH PHOTOCELL AND SHALL HAVE A BLACK FINISH TO MATCH POLE. SEE SPECIFICATIONS FOR LUMINAIRE DETAILS.



**175W MH LUMINAIRE DETAIL**  
NOT TO SCALE



**INCOMING SERVICE DETAIL**  
NOT TO SCALE

SCHEDULE OF POLES					
POLE NUMBER	TYPE OF POLE	POLE HEIGHT	LUMINAIRE WATTAGE	TYPE OF BASE	POLE LOCATION
* 1	ROUND	14'	175W/MH	NON-BREAKAWAY	SEE PLAN SHEETS
* 2	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 3	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 4	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 5	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 6	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 7	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 8	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 9	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 10	ROUND	14'	175W/MH	NON-BREAKAWAY	
* 11	ROUND	14'	175W/MH	NON-BREAKAWAY	

\* LUMINAIRE SHALL BE EQUIPPED WITH AN INDIVIDUAL PHOTOCELL

SCHEDULE OF SERVICE PEDESTAL								
CIRCUIT NUMBER	EQUIPMENT SERVED	CONNECTED LOAD		PHASE AND VOLTS	BRANCH CIRCUIT BREAKERS			REMARKS
		KW	AMPS		NUMBER OF POLES	FRAME SIZE	TRIP SIZE	
1	POLES: 1, 3, 5, 7, 9, 11	1.3	10.8	1/120	1	100	20	
3	POLES: 2, 4, 6, 8, 10	1.1	9.0	1/120	1	100	20	
TOTAL		2.4	19.8					

LOGMILE 180235011.97 TO 180235012.15

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**CONSULTANT LOGO IF APPLICABLE**

REVISIONS  
6 REDLINE REVISION  
OCTOBER 16, 2003  
NEW SHEET

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
*Office of Traffic & Safety*  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
MARYLAND ROUTE 235 FROM  
PEGG ROAD TO SOUTH OF MARYLAND ROUTE 246  
LIGHTING DETAILS SHEET

DRAWN BY: JH	F.A.P. NO. SEE TITLE SHEET	PLAN SHEET NO.: LP-2	SHEET NO. 125C OF 154
CHECK BY: BLB/DAE	S.H.A. NO. SM7685370		
SCALE: NONE	COUNTY ST. MARY'S COUNTY		