

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING SIGNAL FROM SPAN WIRE TO MAST ARM DESIGN AT THE INTERSECTION OF US 301 AT MD 381 IN PRINCE GEORGE'S COUNTY, MARYLAND.

INTERSECTION OPERATION

THERE WILL BE NO CHANGE IN THE INTERSECTION OPERATION.

PROJECT CONTACTS:

1. THE FOLLOWING CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

- MR. CHARLIE WATKINS, DISTRICT ENGINEER
PHONE: (301) 513-7300
- MR. MAJID SHAKIB, ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: (301) 513-7300
- MR. DENNIS MCMAHAN, ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: (301) 513-7300
- MR. AUGIE REBISH, ASSISTANT DISTRICT ENGINEER-UTILITY
PHONE: (301) 513-7300
- MR. RICHARD L. DAFF, SR., CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00 - 104.30, 104.44.01, 104.45.01, 104.48.01.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

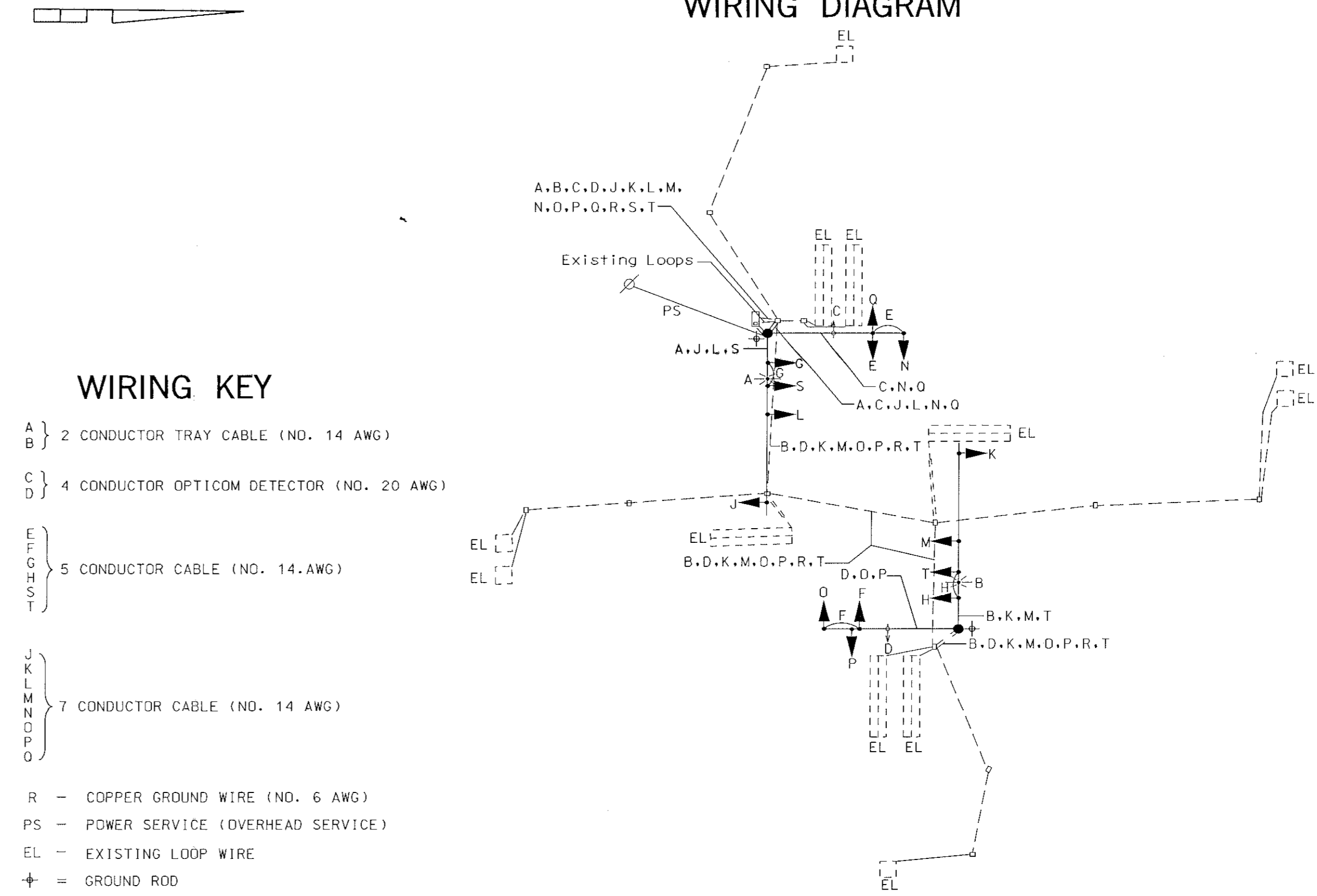
ITEM NO.	QUANTITY	DESCRIPTION
9090	66 SF	FLAT SHEET ALUM. SIGN-BLUE OR GREEN (SF) 2 EA R10-12 (36" x 42") 2 EA R3-5 (L) (30" x 36") 2 EA D3-2 (Variable x 16")
9113	2 EA	TWIN MAST ARM POLE 27' 50'/60' - 70' SERIES W/ ANCHOR

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

ITEM NO.	QUANTITY	DESCRIPTION
0	500 PA	UTILITY UNIT
1001	2 EA	MAINTENANCE OF TRAFFIC
2001	3 CY	TEST PIT EXCAVATION
8001	10 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8012	1 EA	FURNISH AND INSTALL 3M OPTICOM #721 DETECTOR EYE
8024	15 LF	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8027	25 LF	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8034	2 EA	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8037	400 LF	FURNISH AND INSTALL 4 CONDUCTOR OPTICOM DETECTOR CABLE
8044	650 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8045	1000 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8046	330 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TYPE IN. TC IN.
8048	350 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8053	66 SF	INSTALL OVERHEAD SIGN
8055	2 EA	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8056	2 EA	FURNISH AND INSTALL 15 FOOT LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
8057	4 EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCH BELOW GRADE
8060	1 EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
8064	30 LF	FURNISH AND INSTALL 2 INCH ELECTRICAL CONDUIT SCHEDULE 80 PVC RISER
8065	30 LF	FURNISH AND INSTALL 1 INCH RIGID METAL ELECTRICAL GALVANIZED CONDUIT RISER
8066	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (120/240 V, 1 PHASE 3 WIRE SYSTEM)
8075	2 EA	INSTALL STEEL POLE AND TWIN MAST ARM (ANY SIZE)
8084	38 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8085	12 EA	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
NEG.	4 EA	REMOVE AND RELOCATE EXISTING SIGN

C. MATERIALS TO BE REMOVED AND RETURNED TO SHA.
ALL EXISTING SIGNAL MATERIAL ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.

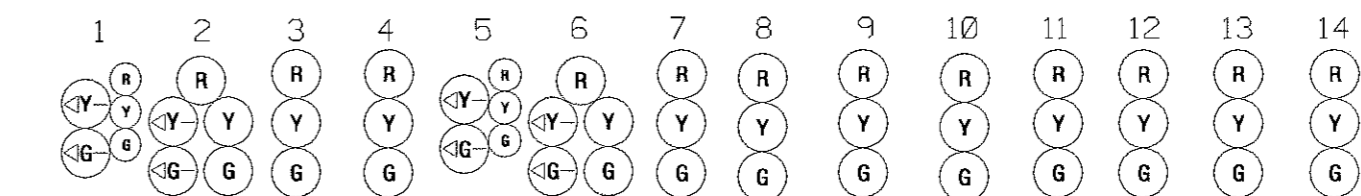
WIRING DIAGRAM



WIRING KEY

- A } 2 CONDUCTOR TRAY CABLE (NO. 14 AWG)
- B } 4 CONDUCTOR OPTICOM DETECTOR (NO. 20 AWG)
- C } 5 CONDUCTOR CABLE (NO. 14 AWG)
- D } 7 CONDUCTOR CABLE (NO. 14 AWG)
- E } 7 CONDUCTOR CABLE (NO. 14 AWG)
- F } 7 CONDUCTOR CABLE (NO. 14 AWG)
- G } 7 CONDUCTOR CABLE (NO. 14 AWG)
- H } 7 CONDUCTOR CABLE (NO. 14 AWG)
- J } 7 CONDUCTOR CABLE (NO. 14 AWG)
- K } 7 CONDUCTOR CABLE (NO. 14 AWG)
- L } 7 CONDUCTOR CABLE (NO. 14 AWG)
- M } 7 CONDUCTOR CABLE (NO. 14 AWG)
- N } 7 CONDUCTOR CABLE (NO. 14 AWG)
- O } 7 CONDUCTOR CABLE (NO. 14 AWG)
- P } 7 CONDUCTOR CABLE (NO. 14 AWG)
- R - COPPER GROUND WIRE (NO. 6 AWG)
- PS - POWER SERVICE (OVERHEAD SERVICE)
- EL - EXISTING LOOP WIRE
- + = GROUND ROD

PHASE SEQUENCE CHART



PHASE 1 AND 5	←G/R-←G/R-	R	R	←G/R-←G/R-	R	R	R	R	R	R	R	R	R	R	R	R	R
PHASE 1 AND 5 CHANGE	PHASE 1 AND 6, 2 AND 5, OR 2 AND 6																
PHASE 1 AND 6	←G/G-←G/G-	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PHASE 1 CHANGE	←Y/G-←Y/G-	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PHASE 2 AND 5	R	R	R	R	←G/G-←G/G-	G	G	R	R	R	R	R	R	R	R	R	R
PHASE 5 CHANGE	R	R	R	R	←Y/G-←Y/G-	G	G	R	R	R	R	R	R	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R
PHASE 2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	R	R
PHASE 4 AND 8	R	R	R	R	R	R	R	R	G	G	G	G	G	G	G	G	G
PHASE 4 AND 8 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

FIRE HOUSE PRE-EMPTION

PRE EMPTION 1	R	R	R	R	R	R	R	R	G	G	G	R	R	R	R	R	R
PRE EMPTION 1 CLEARANCE	R	R	R	R	R	R	R	R	Y	Y	Y	R	R	R	R	R	R
PHASE 2 AND 6 NORMAL OPERATION	G	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R

FIRE HOUSE PRE-EMPTION

PRE EMPTION 2	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G
PRE EMPTION 2 CLEARANCE	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y
PHASE 2 AND 6 NORMAL OPERATION	G	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
US 301 (ROBERT S. CRAIN HIGHWAY)
AT MD 381 (BRANDYWINE ROAD)

DRAWN BY: M. RAFFLE	F.A.P. NO. S.H.A. NO. XX 53-56	TS. NO. 596-F	SHEET NO.
CHECKED BY: D. PETERS/Z. SABRA	COUNTY: PRINCE GEORGE'S	T.I.M.S. NO. E614	2 OF 2
SCALE: NTS	LOG MILE: 16030103.12		
DATE: SEPTEMBER, 2000			