

**PROJECT DESCRIPTION**

**GENERAL**

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 268 (NORTH STREET) AND RAILROAD AVENUE IN CECIL COUNTY, MARYLAND. MD 268 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**INTERSECTION OPERATION**

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 268 APPROACHES OPERATING CONCURRENTLY AND THE RAILROAD AVENUE/MUNICIPAL BUILDING PARKING LOT APPROACHES OPERATING CONCURRENTLY.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE SOUTH LEG OF MD 268 AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS RAILROAD AVENUE.

**TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS**

**RAILROAD AVENUE - SOUTH LEG**

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS RAILROAD AT NORTH" \*

WALK: RAPID TICK

**NORTH STREET - WEST LEG**

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS NORTH AT RAILROAD." \*

WALK: RAPID TICK

\* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'

\*\* MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

**CONTROLLER REQUIREMENTS**

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS), INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

**PHONE DROP**

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

**MAINTENANCE OF TRAFFIC**

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-102.02-01 (SHOULDER WORK)

STANDARD NO. MD-104.02-14 (FLAGGING OPERATION)

**PROJECT CONTACTS**

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. ROBERT L. KIEL  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (410) 810-3240

MR. BARRY CLOTHIER  
DISTRICT UTILITY ENGINEER  
PHONE: (410) 810-3275

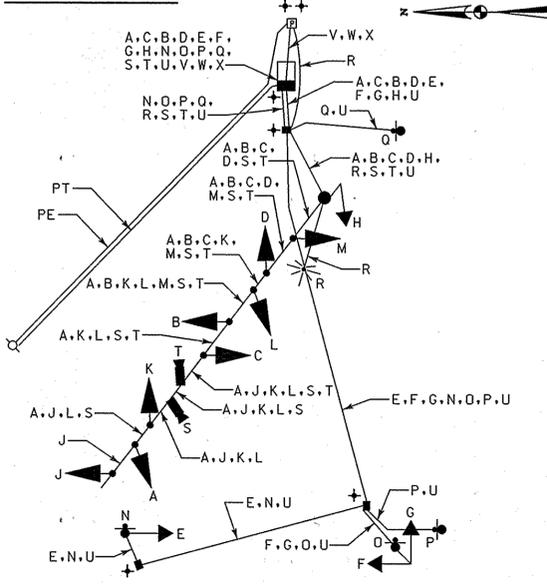
MR. TERRY O. WRIGHT  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (410) 810-3250

MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

**WIRING KEY**

- A, B, C, D } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- E, F, G, H, J, K, L, M } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- N, O, P, Q } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- R } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) - TRAY CABLE
- S, T } VIDEO CAMERA DETECTION LEAD-IN CABLE
- U } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- V, W, X } 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)

**WIRING DIAGRAM**

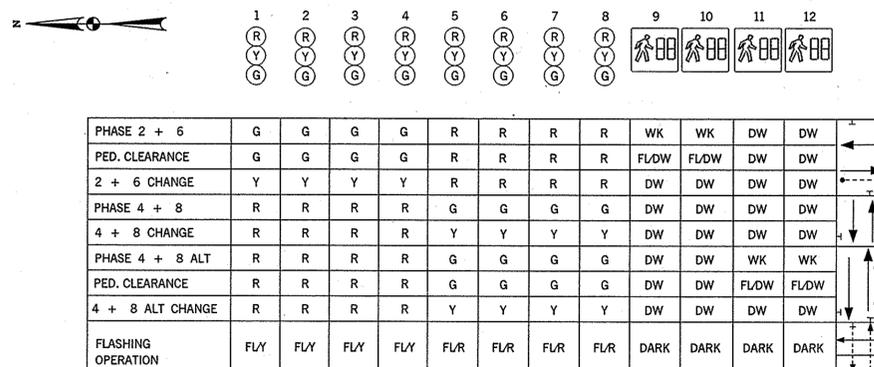


**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

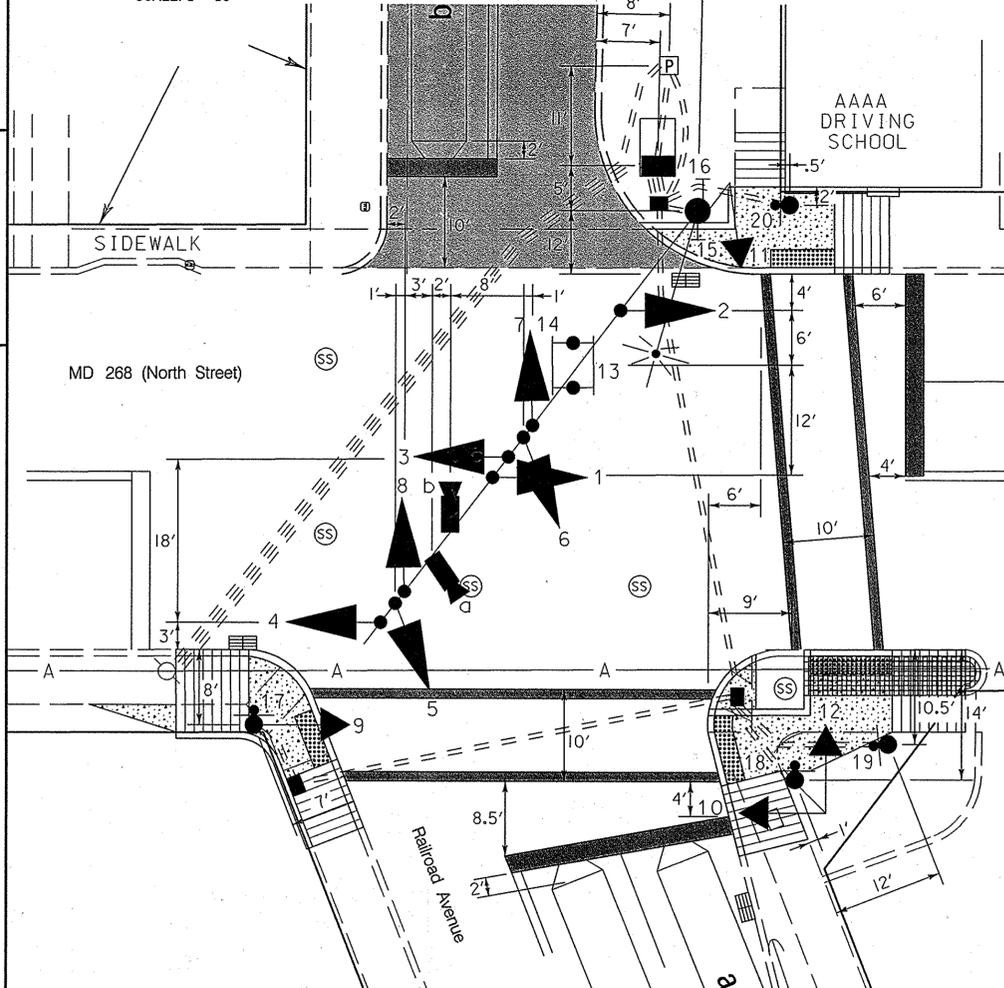
ITEM NO.	QUANTITY	DESCRIPTION
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
9571	37 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 3 EACH D-3(1) SIGN (VARIABLE X 16 IN.) DUAL FACED - MAST ARM MOUNT - 2 EACH R10-3(1) SIGN (9 IN. X 15 IN.) TO READ "PUSHBUTTON TO CROSS NORTH STREET" - 2 EACH R10-3(1) SIGN (9 IN. X 15 IN.) TO READ "PUSHBUTTON TO CROSS RAILROAD AVENUE"

**PHASE CHART**



**DIMENSION DIAGRAM**

SCALE: 1"=10'



**EQUIPMENT LIST "B"**

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EACH	MAINTENANCE OF TRAFFIC
2001	10 C.Y.	CLASS 2 EXCAVATION
2002	7 C.Y.	TEST PIT EXCAVATION
5002	410 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5003	1 EACH	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING LETTERS, SYMBOLS, ARROWS AND NUMBERS
5004	180 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	60 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	10 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	660 S.F.	4 INCH CONCRETE SIDEWALK
8001	24 EACH	12 INCH LED SIGNAL HEAD SECTION
8002	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8007	1 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
8008	4 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8009	4 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8014	4 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8017	1 EACH	MAST ARM POLE & 60 FT MAST ARM ANY 'T' DIMENSION
8022	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8026	2 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8033	205 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8034	110 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8037	60 S.F.	DETECTABLE WARNING SURFACES
8038	53 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8040	230 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8042	1 EACH	METERED SERVICE PEDESTAL EMBEDDED
8044	75 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
8046	3 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	2 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8053	445 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	545 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	365 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8057	70 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC
8064	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

**EQUIPMENT LIST "C"**

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA  
SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 268 (North Street) and Railroad Avenue  
Elkton, MD

TOD # AT909-31  
SHA# CE399A56/B56

**GENERAL INFORMATION SHEET**

SCALE	NONE	DATE	5/7/2008	CONTRACT NO.	AT9095185
DESIGNED BY	S. Bloss	COUNTY	Cecil		
DRAWN BY	S. Bloss	LOGMILE	07026800.23		
CHECKED BY	N. Leary	TIMS NO.	1422		
FAP NO.	See Title Sheet	TOD NO.			
TS NO.	61 D	DRAWING	-	OF	SHEET NO. 2 OF 2

**WR&A**  
Whitman, Reardon and Associates, LLP  
Engineers, Architects and Planners  
801 South Caroline Street  
Baltimore, Maryland 21231  
410-235-3450