

# TRAFFIC SIGNAL NOTES

## A. NEW EQUIPMENT

- ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED ON CANTILEVER ARMS AND SHALL BE BLACK POLYCARBONATE. ALL LENSES SHALL BE LED'S WITH A VISIBLE BEAM SPREAD OF EIGHTY DEGREES OFF-AXIS. ALL SIGNAL HEADS SHALL INCLUDE DISCONNECT HANGERS (WHERE NEEDED), AND BACKPLATES SHALL BE INCLUDED AS SPECIFIED ON THE PLANS.
- THE CONTROLLER SHALL BE ECONOLITE BRAND, MODEL ASC/2S-2100 (TS-2 TYPE 2). THE ECONOLITE GROUND MOUNTED CABINET SHALL BE TYPE P44 WITH A BASE EXTENSION.
- A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R) LOCKED CABINET ON A STANCHION. CONSIDER USING OPTION #2 ON STD. E-175.
- THE CONTROLLER CABINET SHALL BE EQUIPPED WITH A PULL-OUT SHELF CAPABLE OF SUPPORTING A LAPTOP COMPUTER.

## B. SIGNAL OPERATION

- SWITCH-OVER FROM EXISTING TO REPLACEMENT SIGNALS SHALL NOT BE DONE DURING PEAK TRAFFIC PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
- THE SIGNAL SHALL DWELL ON THE US 7 MOVEMENT (PHASE 2 & 6).
- THE US 7 PHASE (2 & 6) SHALL BE USED FOR THE START-UP PHASE FOLLOWING A FLASH OPERATION, IF USED. ALL PHASES WILL START ON ALL RED INDICATION FOR FIVE SECONDS.

## C. JUNCTION / PULL BOXES

- JUNCTION/PULL BOXES ARE DETAILED ON STD E-173. MINIMUM JUNCTION BOX SIZE SHALL BE 18" X 12", OR LARGER AS REQUIRED BY THE ELECTRICAL CODE.
- THE LOGO ON PULLBOXES/JUNCTION BOXES SHALL BE "SIGNAL".
- POLYMER CONCRETE & REINFORCED FIBERGLASS UL LISTED PULL BOXES SHALL BE INSTALLED WITH HEAVY DUTY COVERS.

## D. TRAFFIC SIGNAL CONDUIT

- ALL TRAFFIC SIGNAL CONDUIT SHALL BE PVC.
- MINIMUM CONDUIT SIZE SHALL BE:  
1-1/2" FOR INTERCONNECT CABLE AND LOOP WIRE.  
2" FOR SHIELDED LEAD-IN CABLE, SIGNAL CABLE, POWER CABLE AND ALL OTHERS, UNLESS SPECIFIED OTHERWISE ON THE PLANS.  
SEE CHART ON STD E-172 FOR DESIGN VALUES.
- THE OPEN CUT FOR BITUMINOUS CONCRETE PAVEMENT AT 175+75 LT - 176+77 LT REQUIRED TO PLACE THE 8" ELECTRICAL CONDUIT SLEEVE SHALL BE PERFORMED USING THE VERMONT STANDARD SHEET D-20. A SAWCUT SHALL BE PERFORMED IN THE EXISTING PAVEMENT SURFACE PRIOR TO EXCAVATION. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 490.30. THE BITUMINOUS CONCRETE PAVEMENT SHALL BE PLACED SUBSEQUENT TO THE INSTALLATION OF THE 8" ELECTRICAL SLEEVE AND BACKFILL.  
  
1-1/2" WEARING COURSE, TYPE III-S; LEVELING COURSE, TYPE III-S OR IV-S (AS DIRECTED BY RESIDENT ENGINEER)  
4" BINDER COURSE, TYPE III-S OR IV-S (AS DIRECTED BY RESIDENT ENGINEER)  
3" BASE COURSE TYPE I-S
- WHEN CONDUIT IS PLACED BELOW THE ROADWAY OR ACROSS SIDE ROADS, IT SHALL BE PLACED IN A PVC ELECTRICAL CONDUIT SLEEVE, SIZE AS SHOWN ON THE PLANS (8" MINIMUM).

## E. STREET LIGHTING

- MAST ARMS #1 AND #2 SHALL HAVE A 250 WATT HIGH PRESSURE SODIUM LUMINAIRE AS SHOWN ON THE PLANS, INSTALLED WITH A 34' +/- MOUNTING HEIGHT ABOVE THE EDGE OF PAVEMENT WITH 15' ARM. THE LUMINAIRE SHALL HAVE THE MEDIUM CUTOFF DISTRIBUTION SHOWN SHEET 19. ARM ORIENTATION IS SHOWN ON SHEET 18.
- PAYMENT IS INCIDENTAL TO ITEM #678.15

## F. VEHICLE LOOP DETECTORS

- SEE STANDARD E-172. LOOPS SHALL EXTEND 5 FEET AHEAD OF STOP BAR UNLESS OTHERWISE NOTED ON THE PLANS.

## G. GENERAL

- THE CONTRACTORS SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL AND STREET LIGHTING EQUIPMENT. IF APPLICABLE, THE ROUTING OF POWER TO THE INTERSECTION SHALL BE SUCH THAT THE STATE HAS FULL RESPONSIBILITY FROM THE TRANSFORMER THROUGH THE SIGNAL. NO INTERVENING OWNERSHIP/RESPONSIBILITY SHALL BE ALLOWED.
- AN ID PLAQUE AS DETAILED ON SHEET 19 SHALL BE AFFIXED TO THE CONTROLLER.
- THE CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE COMPANY TO PROVIDE A PHONE DROP AT THE CONTROLLER LOCATION. COST OF PHONE DROP HOOKUP TO BE COVERED UNDER ITEM 678.15.

## G. REMOVAL OF EXISTING EQUIPMENT

- EXISTING SIGNAL EQUIPMENT CONSISTING OF SIGNAL HEADS, THE CABINET AND ALL CONTROLLER COMPONENTS WITHIN, SHALL BE RETURNED BY THE CONTRACTOR TO THE TRAFFIC SHOP FACILITY ON THE BARRE/MONTEPELIER ROAD WITHIN 48 HOURS OF REMOVAL. PAYMENT IS INCIDENTAL TO ITEM # 678.15.

LOCATION	WIRED CONDUIT				ELECTRICAL CONDUIT		DESCRIPTION
	1/2"	2"	2 1/2"	2"	2 1/2"		
POLE 703/5-1 TO STANCHION	-	105	-	-	-	-	POWER *
STANCHION - CONTROLLER	-	25	-	-	-	-	POWER *
ER - PB5	7	-	-	-	-	-	LOOPS 2A 2C
PB5 - PB4	176	-	-	-	-	-	LOOPS 2A 2C
ER - PB4	7	-	-	-	-	-	LOOPS 2B 2D
PB4 - PB3	-	243	-	-	-	-	LOOPS 2A 2B 2C 2D
ER - PB3	19	-	-	-	-	-	LOOP 4
PB3 - PB2	-	70	-	-	-	-	LOOPS 2A 2B 2C 2D 4
ER - PB6	6	-	-	-	-	-	LOOP 1
MA2 - PB6	7	-	-	-	-	-	POWER-SIGNAL
PB6 - PB2	122	-	-	-	-	-	POWER-SIGNAL LOOP 1
PB2 - PBI	15	81	-	-	-	-	POWER-SIGNAL, LOOPS 2A 2B 2C 2D 4
ER - PB8	19	-	-	-	-	-	LOOPS 6A 6C
PB8 - PB7	175	-	-	-	-	-	LOOPS 6A 6C
ER - PB7	16	-	-	-	-	-	LOOPS 6B 6D
PB7 - PBI	-	432	-	-	-	-	LOOPS 6A 6B 6C 6D
PBI - CONTROLLER	-	15	-	-	-	-	LOOPS 6A 6B 6C 6D POWER-SIGNAL LOOPS 2A 2B 2C 2D 4
ER - CONTROLLER	25	-	-	-	-	-	LOOP 8
SIGNAL BRDG/MAI - CONTROLLER	15	-	-	-	-	-	POWER - SIGNAL
SUBTOTALS	609	971	-	-	-	-	
ROUNDING	41	29	-	-	-	-	
TOTALS	650	1000	-	-	-	-	

NOTE: ER=EDGE OF ROAD  
PB= PULL BOX

EQUIPMENT	ITEM NO.	UNIT	QUANTITY	
ELECTRICAL CONDUIT (2''), PVC	678.21	FT	50	EST.
VEHICLE LOOP DETECTORS	678.22	FT	1620	
WIRED CONDUIT (1-1/2''), PVC	678.23	FT	650	
WIRED CONDUIT (2''), PVC	678.23	FT	1000	
WIRED CONDUIT (2-1/2''), PVC	678.23	FT	100	EST.
ELECTRICAL WIRING	678.24	FT	100	
PULLBOX (SINGLE)	678.25	EA	8	
ELECTRICAL CONDUIT SLEEVE (8'')	678.30	FT	255	

LIST OF MAJOR EQUIPMENT	
EQUIPMENT ITEM - 678.15	QUANTITY
SIGNAL BRIDGE W/MAST ARM	2
POWER DROP STANCHION	1
NEW 12" TRAFFIC SIGNAL HEADS W/ TUNNEL VISORS, MOUNTING HARDWARE	
A. TWO-WAY 3-SEC./5-SEC	-
B. TWO-WAY 3-SEC.	-
C. ONE-WAY 5-SEC.	-
D. ONE-WAY 3-SEC.	10
D. THREE-WAY 3-SEC.	-
INTERSECTION CONTROLLER/CABINET	1
LUMINAIRE & BRACKET ARM (EACH)	2
REMOVAL OF EXISTING FLASHING BEACON	1

NOTE: Back plates to be installed on all heads

## TRAFFIC SIGNAL NOTES

PROJECT: Clarendon	PROJECT NO.: SGNL 024
DESIGN FILE NAME: /traf/02b240/tb240sig.dgn	PLOT DATE: 05-APR-2005
IPARM FILE NAME: /traf/02b240/tb240not.i	SURVEY DATE:
SURVEYED BY:	DRAWN BY: Jfg
SQUAD LEADER: nyquist	SHEET: 17 OF 37

REVISION DATE: 04/05/05