LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEMS 678.15 - TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION(VT ROUTE 15 & VT ROUTE 128)	QUANTITY	REMARKS	PROCUREMENT
NEMA P44 BASE-MOUNTED CONTROLLER CABINET WITH 15-INCH EXTENDED BASE ON AN EXISTING CONCRETE FOUNDATION INCLUDING TRAFFIC SIGNAL CONTROLLER (NEMA TS2), BIU, SMART MALFUNCTIONING MONITORING UNIT (MMU), CONTROLLER IDENTIFICATION PLAQUE, AND GPS CLOCK	1	FLAT BLACK WITH ANCILLARY EQUIPMENT, FACING AWAY FROM TRAFFIC. CONTROLLER SHALL BE ECONOLITE COBALT. MMU SHALL BE ECONOLITE MMU2-16LE SMARTMONITOR. BIU SHALL BE ECONOLITE BIU-64.	TO BE PROVIDED BY AGENCY, INSTALLED BY CONTRACTOR
STOP BAR DETECTOR ASSEMBLY (FLAT BLACK)	4	ECONOLITE AUTOSCOPE ENCORE	
ADVANCED DETECTOR ASSEMBLY	2	WAVETRONIX SMARTSENSOR ADVANCE	
STOP BAR DETECTION PROCESSOR (CARDS)	1	ECONOLITE AUTOSCOPE TIP	
STOP BAR DETECTION PROCESSOR (CARDS)	1	ECONOLITE AUTOSCOPE TAP	
ADVANCE DETECTION PROCESSOR (CARDS)	1	WAVETRONIX CLICK 650	
DETECTION CABINET RACK	2		
DETECTOR BRACKET FOR MAST ARM OR POLE	6	FLAT BLACK	
NEW 12-INCH LED SIGNAL HEADS (ONE-WAY 3-SECTION, VISORS, DISCONNECT HANGERS, 5 INCH LOUVERED BACKPLATES WITH 2 INCH RETRO-REFLECTIVE BORDER AND MOUNTING HARDWARE)	7	FLAT BLACK	TO BE PROVIDED AND INSTALLED BY CONTRACTOR
NEW 12-INCH LED SIGNAL HEADS (ONE-WAY 5-SECTION, VISORS, DISCONNECT HANGERS, 5 INCH LOUVERED BACKPLATES WITH 2 INCH RETRO-REFLECTIVE BORDER AND MOUNTING HARDWARE)	1	FLAT BLACK	
SIGNAL HEAD BRACKETS AND ANCILLARY EQUIPMENT	8	FLAT BLACK	
ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES POLE MOUNTED WITH LOCATOR TONE, R10-3e SIGN	8		
ACCESSIBLE PEDESTRIAN SIGNAL HEADS COUNTDOWN STYLE	8		
PEDESTRIAN PEDESTAL POST ON EXISTING FOUNDATION	8		
OPTICAL PREEMPTION DETECTORS (FLAT BLACK)	2	**TOMAR DETOC OR OPTICOM INFRARED**	
OPTICAL PREEMPTION SIGNAL PROCESS CARD & CAGE	2	**TOMAR OSPOCx OR OPTICOM INFRARED**	
PREEMPTION AC STROBE - RED	2		
NEW LED BLANK OUT SIGN	4		
HARDENED NETWORK SWITCH	1	CISCO IE 2000	TO BE PROVIDED AND INSTALLED BY OTHERS
DIRECTIONAL WIRELESS INTERCONNECT ANTENNA	1		
WIRELESS INTERCONNECT PROCESSOR CARD	1		

NOTE:
THE NETWORK SWITCH, WIRELESS ANTENNA, AND PROCESSOR CARD ARE FOR INFORMATION PURPOSES REGARDING THE INSTALLATION AND CONFIGURATION OF THE CABINET. THESE ITEMS WILL BE PURCHASED AND INSTALLED UNDER A SEPARATE CONTRACT. THE CONTRACTOR IS RESONSIBLE FOR ENSURING THAT THERE IS ADEQUATE ROOM FOR THESE ITEMS INSIDE THE CABINET.

PREEMPTION TIMINGS

	PREEMPTOR			
	1	2	3	4
DIRECTION	EB	WB		
HOLD PHASE	2	8		
DET LOCK	YES	YES		
DURATION TIME	18.5	18.5		
MIN GREEN	8	8		
HOLD GREEN	12	12		
HOLD YELLOW	4.5	4.5		
HOLD RED	2	2		

ACTION PLAN

PLAN NO.	PATTERN	FLASH	REFERNCE
1	1	NO	MAX 1
2	2	NO	MAX 2
3	3	NO	MAX 3
4	254 - FREE	NO	FREE

WEEKDAY PEAKS

	HOURS		
MAX 2 - AM PEAK	6:00 AM	TO	9:00 AM
MAX 1 - OFF PEAK	9:00 AM	TO	3:00 PM
	7:00 PM	TO	10:00 PM
MAX 3 - PM PEAK	3:00 PM	TO	10:00 PM
FREE	10:00 PM	TO	6:00 AM

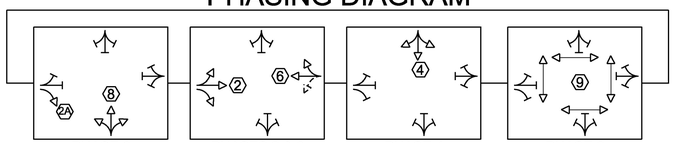
DAY PLAN

PLAN NO.	EVENT	ACTION PLAN	START TIME
1	1	254	12:00 AM
1	2	2	6:00 AM
1	3	1	9:00 AM
1	4	3	3:00 PM
1	5	1	7:00 PM
1	6	254	10:00 PM
2	1	254	12:00 AM
2	2	1	6:00 AM
2	3	254	8:00 PM

ELECTRICAL WIRING	LENGTH	DESCRIPTION
EXISTING MAP WIRING		
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO SIGNAL HEAD	75'	PHASE
POLE BASE TO LED SIGN	75'	NO RIGHT TURN ON RED
POLE BASE TO LED SIGN	75'	NO RIGHT TURN ON RED
POLE BASE TO LED SIGN	75'	NO RIGHT TURN ON RED
POLE BASE TO LED SIGN	75'	NO RIGHT TURN ON RED
PP-24 WIRING		
POLE BASE TO PEDESTRIAN HEAD	125'	CROSSING VT 15
POLE BASE TO PEDESTRIAN BUTTON	125'	CROSSING VT 15
PP-25 WIRING		
POLE BASE TO PEDESTRIAN HEAD	105'	CROSSING TOWERS RD
POLE BASE TO PEDESTRIAN BUTTON	105'	CROSSING TOWERS RD
PP-26 WIRING		
POLE BASE TO PEDESTRIAN HEAD	220'	CROSSING VT 15
POLE BASE TO PEDESTRIAN BUTTON	220'	CROSSING VT 15
PP-27 WIRING		
POLE BASE TO PEDESTRIAN HEAD	45'	CROSSING TOWERS RD
POLE BASE TO PEDESTRIAN BUTTON	45'	CROSSING TOWERS RD
PP-28 WIRING		
POLE BASE TO PEDESTRIAN HEAD	40'	CROSSING VT 128
POLE BASE TO PEDESTRIAN BUTTON	40'	CROSSING VT 128
PP-29 WIRING		
POLE BASE TO PEDESTRIAN HEAD	155'	CROSSING VT 15
POLE BASE TO PEDESTRIAN BUTTON	155'	CROSSING VT 15
PP-30 WIRING		
POLE BASE TO PEDESTRIAN HEAD	105'	CROSSING VT 128
POLE BASE TO PEDESTRIAN BUTTON	105'	CROSSING VT 128
PP-31 WIRING		
POLE BASE TO PEDESTRIAN HEAD	90'	CROSSING DRIVEWAY
POLE BASE TO PEDESTRIAN BUTTON	90'	CROSSING DRIVEWAY
SUBTOTAL	2670'	
ROUNDING	30'	
TOTALS	2700'	

ELECTRICAL WIRING IS SHOWN FOR ESTIMATING PURPOSES ONLY. PAYMENT FOR THIS ITEM WILL BE INCIDENTAL TO PAY ITEM 678.15 - TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (VT ROUTE 15 & VT 128).

PHASING DIAGRAM



PHASE 8
OVERLAP 2A: SHALL COINCIDE WITH PHASE 8

PHASES 2 & 6

PHASE 4

PHASE 9
EXCLUSIVE PEDESTRIAN PHASE

SCHEDULE PLAN

SCHEDULE NO.	DAY PLAN	DAYS	DATES
1	1	MON, TUE, WED, THU, FRI	1-31
1	2	SAT, SUN	1-31

COORDINATION PLAN

				SPLIT PHASES / SPLIT TIMES								
PATTERN	COS	CYCLE	OFFSET	1	2	3	4	5	6	7	8	9
1	111	92	24		28		15		28		49	1
2	211	98	76		27		19		27		52	1
3	311	110	80		35		14		35		61	1

CONTROLLER TIMING CHART

PHASE	1	2	3	4	5	6	7	8	9
IN USE		X		X		X		X	X
TRAFFIC MOVEMENT		→		↓		←		↓	↓
MIN. GREEN		5		5		5		8	1
MAX 1 - GREEN (OFF)		21		8		21		42	23
MAX 2 - GREEN (AM)		20		12		20		45	23
MAX 3 - GREEN (PM)		28		7		28		54	23
YELLOW CLEARANCE		4.5		4.5		4.5		4.5	3.0
ALL RED CLEARANCE		2.5		2.5		2.5		2.5	1.0
VEHICLE EXTENSION		2.0		2.0		2.0		3.0	0.0
DELAY GREEN		0.0		0.0		0.0		0.0	0.0
WALK									7
PEDESTRIAN CLEAR									16
RECALL MODE								SOFT	
COORDINATED								X	

REVISION	DATE	DESCRIPTION	BY
1	5/10/17	CHART REVISED	KAR

MS 557: VT ROUTE 15 & VT ROUTE 128

PROJECT NAME: WILLISTON-ESSEX
PROJECT NUMBER: STPG SGNL(46)

FILE NAME: t15t017sig.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: K. RECORD
TRAFFIC SIGNAL LAYOUT SHEET 14B

PLOT DATE: 5/10/2017
DRAWN BY: K. RECORD
CHECKED BY: M. LACROIX
SHEET 46 OF 66