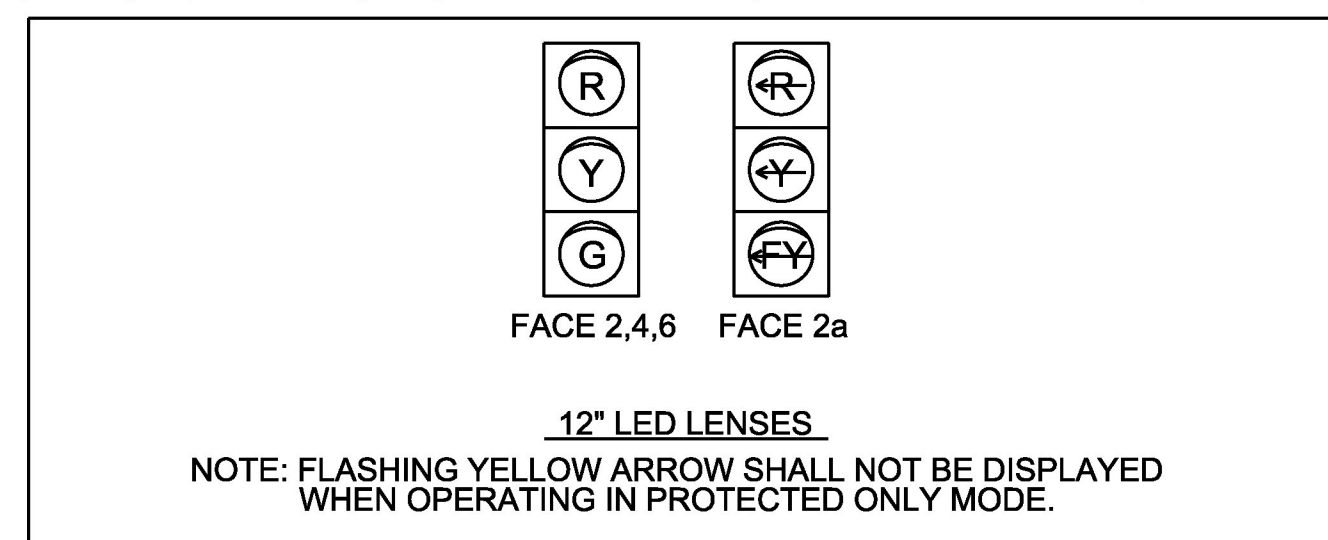


LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15 - (US ROUTES 7 & VT ROUTE 22A)	QUANTITY	REMARKS
METER DISCONNECT BREAKER	1	WITH BYPASS
GPS TIME CLOCK	1	INSTANTANEOUS UPDATING
TRAFFIC SIGNAL CONTROLLER (NEMA TS2)	1	SALVAGE EXIST. TO AOT DIST. SIGNAL TECH
NEW 12-INCH POLYCARBONATE LED SIGNAL HEADS (TWO-WAY, 3-SECTION, VISORS, DISCONNECT HANGERS, 5" LOUVERED BACKPLATES WITH 1-1/2" RETROREFLECTIVE TAPE AND MOUNTING HARDWARE	2	FLAT BLACK FINISH SALVAGE EXIST. TO AOT DIST. SIGNAL TECH
NEW 12-INCH POLYCARBONATE LED SIGNAL HEADS (ONE-WAY, 3-SECTION, VISORS, DISCONNECT HANGERS, 5" LOUVERED BACKPLATES WITH 1-1/2" RETROREFLECTIVE TAPE AND MOUNTING HARDWARE	3	FLAT BLACK FINISH SALVAGE EXIST. TO AOT DIST. SIGNAL TECH
NEMA P44 BASE MOUNTED CONTROLLER CABINET WITH 15-INCH EXTENDED BASE ON A CONCRETE FOUNDATION, PAINTED FLAT BLACK WITH ANCILLARY EQUIPMENT	1	SEE STD E-171B SALVAGE EXIST. POLE MOUNTED TO AOT DIST. SIGNAL TECH
DETECTOR ASSEMBLY	4-6	AS REQUIRED
VEHICLE DETECTOR PROCESSOR (CARDS)	1-4	AS REQUIRED
STRAIN POLE CAP	2	SALVAGE EXIST. LIGHT ASSEMBLY TO AOT DIST. SIGNAL TECH
SPAN WIRE	160	SEE STD E-171A
SIGNAL REWIRING	500	#12 GAUGE

PROPOSED SIGNAL FACE ARRANGEMENTS



TRAFFIC SIGNAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION(S(VAOT) "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DATED 2011, WITH CURRENT MODIFICATIONS.
- THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR TRAFFIC SIGNAL EQUIPMENT PLACEMENT. THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS IN THE FIELD WITH THE ENGINEER PRIOR TO INSTALLATION. LOCATIONS MAY BE REVISED AS A RESULT OF THE SITE SURVEY.
- ALL SIGNAL EQUIPMENT AND SIGNS SHALL HAVE SAFETY CABLES.
- VEHICLE DETECTORS SHALL BE PLACED SO THAT OCCLUSION IS MINIMIZED AND PHASING IS NOT AFFECTED.
- STOP BAR AND ADVANCED VEHICLE DETECTOR LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S GUIDANCE FOR THE TYPE OF DETECTOR SUPPLIED. THE CONTRACTOR SHALL SUBMIT PROPOSED MOUNTING LOCATIONS AND DOCUMENTATIONS OF CONFORMANCE WITH THE MANUFACTURER'S GUIDANCE TO THE ENGINEER FOR APPROVAL.
- THE ACTUAL STOP BAR DETECTION LOCATIONS WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR THE TYPE OF DETECTOR SELECTED. FINAL LOCATIONS TO BE APPROVED BY THE ENGINEER.
- STOP BAR VEHICLE DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE FINAL, PERMANENT STOP BAR.
- ADVANCED VEHICLE DETECTION AREAS SHALL BE A MINIMUM OF 350 TO 400 FEET UPSTREAM OF THE FINAL, PERMANENT STOP BAR.
- ADVANCED VEHICLE ZONE DETECTION SHALL EXTEND THE GREEN TIME BY TWO SEC.
- VEHICLE DETECTION SYSTEM SHALL BE ECONOLITE ACCUSCAN BRAND, SMARTMICRO TRAFFIC RADAR BRAND OR WAVETRONIX SMARTSENSOR BRAND.
- THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2) IN A NEMA (3R) P44 TRAFFIC CONTROL CABINET WITH 15" BASE EXTENSION INSTALLED AT THE LOCATION SHOWN ON PLANS. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
- EXISTING SIGNAL TIMINGS SHALL BE UTILIZED. FOR EXISTING SIGNAL TIMING INFORMATION OR OTHER INFORMATION ABOUT THE EXISTING SYSTEM, PLEASE CONTACT THE TRAFFIC SIGNAL OPERATIONS ENGINEER, DEREK LYMAN AT 802-249-5079.
- THE CONCRETE BASE FOR THE CONTROLLER CABINET SHALL HAVE A 18" X 12" OPENING FOR CONDUIT LOCATED IN THE CENTER. THE OPENING SHALL BE FILLED WITH STONE AND UNUSED CONDUIT PLUGGED WITH STEEL WOOL BEFORE PLUG SEAL IS INSTALLED, PAID FOR UNDER EACH INDIVIDUAL CONTRACT ITEM 678.15 - TRAFFIC SIGNAL SYSTEM, INTERSECTION.

- THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT AND CONTROLLER FOR SIGNAL/DETECTION CABLE AND EQUIPMENT. THE CONTRACTOR SHALL CONTACT THE ENGINEER IF SUFFICIENT SPACE IS NOT AVAILABLE OR TO GET ACCESS FOR CHECKING THE AVAILABILITY OF ENOUGH SPACE. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED ALL WORK ASSOCIATED WITH INSTALLATION WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678 & 679. ALL TRAFFIC SIGNAL/STREET LIGHTING CONDUIT SHALL BE SCHEDULE 80 PVC.
- ALL WIRE FROM CONTROLLER CABINET TO SIGNAL HEADS TO BE NEW #12 GAUGE.
- PHASES TO BE WIRED PER NEMA REQUIREMENTS.
- THERE SHALL BE NO WIRING SPLICES BETWEEN THE SIGNAL CABINET AND THE VEHICLE DETECTORS, UNLESS MADE IN A MANUFACTURER APPROVED JUNCTION.
- A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R), LOCKED CABINET ON A STANCHION NEXT TO OR BELOW THE METER SOCKET.
- ALL ELECTRICAL WIRING SHALL BE PERFORMED BY A LICENSED ELECTRICIAN AND OVERSEEN BY A MASTER ELECTRICIAN.
- ANY OTHER MISC. EQUIPMENT NECESSARY TO PROVIDE FULLY FUNCTIONAL DILEMMA ZONE DETECTION SYSTEMS WILL BE CONSIDERED INCIDENTAL TO ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A).
- ANY OTHER MISC. EQUIPMENT NECESSARY TO PROVIDE FULLY FUNCTIONAL VEHICLE STOPBAR DETECTION SYSTEMS WILL BE CONSIDERED INCIDENTAL TO ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A).
- REMOVAL OF THE EXISTING SIGNAL SYSTEM SHALL BE PAID FOR UNDER ITEM #678.15, TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A).
- ALL WORK RELATED TO PROVIDING A FULLY FUNCTIONAL TRAFFIC SIGNAL SYSTEM, INCLUDING ALL DETECTION EQUIPMENT, WILL BE PAID FOR UNDER ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION UNLESS OTHERWISE SPECIFIED.
- A UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.
- IF EXISTING VEHICLE DETECTION LOOPS ARE DAMAGED PRIOR TO INSTALLATION OF NEW STOP BAR DETECTION, TEMPORARY DETECTION WILL BE PROVIDED BY THE CONTRACTOR WITHIN 72 HOURS AT NO ADDITIONAL COST TO THE AGENCY.

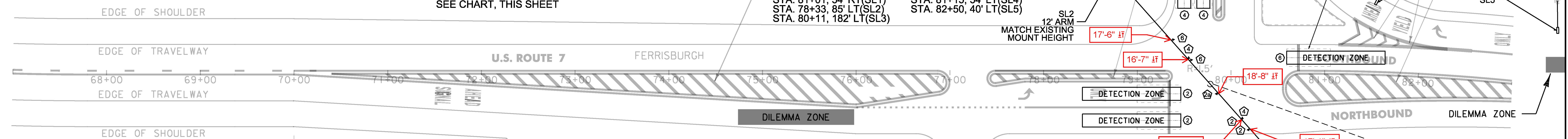
TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A)
SEE LIST OF MAJOR EQUIPMENT, THIS SHEET

CONSTRUCT CONTROLLER CABINET (BASE-MOUNTED)
STA. 80+36, 62' RT(CC1)

WIRED CONDUIT
SEE CHART, THIS SHEET

BRACKET ARM
STA. 81+01, 54' RT(SL1)
STA. 78+33, 85' LT(SL2)

SPECIAL PROVISION (LUMINAIRE, LED)
STA. 81+01, 54' RT(SL1) STA. 81+15, 54' LT(SL4)
STA. 78+33, 85' LT(SL2) STA. 82+50, 40' LT(SL5)
STA. 80+11, 182' LT(SL3)



WIRED CONDUIT	CONDUIT SIZE		DESCRIPTION
	2"	4"	
COMB TO CC1	30'	4"	FUTURE USE
xSTANCHION TO CC1	30'		POWER
CC1 TO xSTP1	30'		SIGNAL & DETECTOR
CC1 TO xSTP1	30'		FUTURE USE
SUBTOTAL	120'		
ROUNDING	120'		
TOTALS	120'		

LEGEND

- MAST ARM & POLE
- CC CONTROLLER CABINET
- JB □ PB JUNCTION BOX / PULLBOX
- ⊕ ⊙ SIGNAL HEAD WITH PHASE NO.
- WIRED CONDUIT
- ==== WIRED CONDUIT IN ELECTRICAL CONDUIT SLEEVE
- ⊕ ⊙ VEHICLE STOPBAR DETECTOR
- ⊕ ⊙ VEHICLE STOPBAR DETECTION AREA
- ⊕ ⊙ PREEMPTION STROBE LIGHT & DETECTOR
- ⊕ ⊙ DILEMNA ZONE DETECTOR
- ⊕ ⊙ DILEMNA ZONE DETECTION AREA
- ⊕ ⊙ LUMINAIRE

PROPERTY OF :
VT. AGENCY OF TRANS.
MAINTENANCE DIV.

IN EMERGENCY CALL :
DIST. TRANS. OFFICE

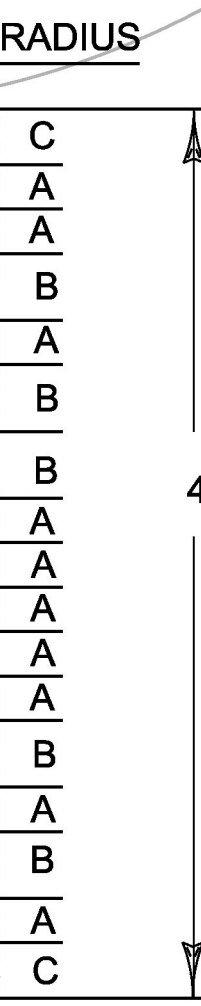
802-655-1580

NIGHTS & WEEKENDS : 802-878-7111

INTERSECTION NO. MS-502

CONTROLLER PLAQUE DETAIL

NOT TO SCALE



LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

NOTES:

- THE PLAQUE SHALL BE MOUNTED ON ALL TRAFFIC SIGNAL CONTROLLER CABINETS. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.
- THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
- THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

⊕ ⊕ = TRAFFIC SIGNAL CLEARANCE IS MEASURED FROM ROADWAY SURFACE TO BOTTOM OF SIGNAL HEAD.

NOTES:

- CALL DIG SAFE PRIOR TO PERFORMING ANY EXCAVATION WORK. 1-888-DIG-SAFE
- CALL DISTRICT 5 SIGNAL TECH PRIOR TO PERFORMING ANY EXCAVATION. 802-655-1580
- SEE UTILITIES SPECIAL PROVSIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

MS-502

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME:	i5v015_sig01.dgn
PROJECT LEADER:	L. BULLOCK
DESIGNED BY:	S. PALMER
TRAFFIC SIGNAL PLAN	
PLOT DATE:	12-APR-2016
DRAWN BY:	S. PALMER
CHECKED BY:	D. LYMAN
SHEET	78 OF 88