

# TRAFFIC SIGNAL SYSTEM NOTES

## A. NEW TRAFFIC SIGNAL EQUIPMENT

1. ALL SIGNAL HEAD HOUSINGS SHALL BE 12" POLYCARBONATE. THE SIGNAL HEAD EQUIPMENT SHALL BE FLAT BLACK AND INCLUDE FLAT BLACK VISORS.
2. ALL SIGNAL HEADS SHALL HAVE RED, YELLOW, AND GREEN L.E.D. INDICATORS WITH A VISIBLE SPREAD OF 80 DEGREES OFF AXIS.
3. ALL SIGNAL HEADS SHALL BE MOUNTED ON THE BRACKET SUCH THAT THE MIDDLE ONE-THIRD OF THE SIGNAL HEAD ALIGNS WITH THE MAST ARM.
4. RELATED TRAFFIC SIGNAL EQUIPMENT SUCH AS THE BUS INTERFACE UNIT (BIU) AND THE MALFUNCTION MANAGEMENT UNIT (MMU) SHALL BE ECONOLITE BRAND.
5. ALL SIGNAL EQUIPMENT AND SIGNS MOUNTED ON CANTILEVERED MAST ARMS SHALL HAVE SAFETY CABLES.
6. 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. IF STREET LIGHTING IS PRESENT, THE TRAFFIC SIGNAL CIRCUITS MUST BE SEPARATE FROM THE STREET LIGHTING CIRCUITS.

## B. TRAFFIC SIGNAL OPERATIONS

1. SIGNAL TIMINGS SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC OBSERVATIONS AND/OR ADDITIONAL FIELD STUDIES.
2. SWITCH-OVER TO INSTALLED SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK TRAFFIC PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING THE SWITCH-OVER.
3. ALL SIGNALS SHALL DWELL ON US ROUTE 2 UNLESS OTHERWISE NOTED.
4. THE US ROUTE 2 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASH OPERATIONS.

## C. VEHICLE DETECTION

1. 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 DOCUMENTATION OF CONFORMANCE WITH THE MANUFACTURER'S GUIDANCE TO THE ENGINEER.
2. ALL VEHICLE DETECTORS SHALL BE PLACED SUCH THAT OCCLUSION IS MINIMIZED AND PHASING IS NOT NEGATIVELY AFFECTED.
3. STOP BAR VEHICLE DETECTION ZONES SHALL EXTEND FIVE FEET PAST THE FINAL, PERMANENT STOP BAR.
4. ADVANCED VEHICLE DETECTION ZONES SHALL BE A MINIMUM OF 350 TO 400 FEET UPSTREAM OF THE FINAL, PERMANENT STOP BAR.
5. THERE SHALL BE NO WIRING SPLICES BETWEEN THE VEHICLE DETECTORS AND THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT.
6. THE VEHICLE DETECTION SYSTEM SHALL BE ECONOLITE ENCORE AND WAVETRONIX MATRIX/SMART SENSOR ADVANCED BRANDS.
7. SEE THE PLANS OR THE SPECIAL PROVISIONS FOR A DETAILED LIST OF EQUIPMENT.

## D. EMERGENCY PRE-EMPTION

1. EMERGENCY PRE-EMPTION RECEIVER AND STROBE LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S GUIDANCE, IF AVAILABLE. THE CONTRACTOR SHALL SUBMIT PROPOSED MOUNTING LOCATIONS AND DOCUMENTATION OF CONFORMANCE WITH THE MANUFACTURER'S GUIDANCE TO THE ENGINEER.



2. EMERGENCY PREEMPTION EQUIPMENT SHALL BE PLACED ON MAST ARMS TO THE EXTENT POSSIBLE. THE OPTICAL SHALL BE UNOBSTRUCTED BY EXISTING INFRASTRUCTURE, NATURAL ELEMENTS, AND OTHER PROPOSED TRAFFIC SIGNAL AND STREET LIGHTING EQUIPMENT.

## E. MAST ARM POLE FOUNDATIONS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOUNDATION DESIGN. FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE MREI 10-01 GUIDELINES. IN ADDITION TO FABRICATION DRAWINGS, THE BORING LOGS DESIGN CRITERIA, AND DESIGN CALCULATIONS SHALL BE SUBMITTED AS WORKING DRAWINGS IN ACCORDANCES WITH SECTION 105.03. ADDITIONAL REQUIREMENTS CAN BE FOUND IN THE TRAFFIC SIGNAL GENERAL NOTES IN THIS PLAN SET.

## F. JUNCTION BOXES

1. THE LOGO ON JUNCTION BOXES SHALL BE "TRAFFIC SIGNAL."

## G. TRAFFIC SIGNAL CONDUIT

1. WHEN CONDUIT IS PLACED BELOW THE ROADWAY OR ACROSS SIDE ROADS, IT SHALL BE PLACED IN A STEEL OR HDPE SLEEVE, SIZE AND PAYMENT METHOD AS SHOWN ON THE PLANS.



2. ALL UNUSED CONDUIT SHALL BE FILLED WITH STEEL WOOL PRIOR TO BEING CAPPED.

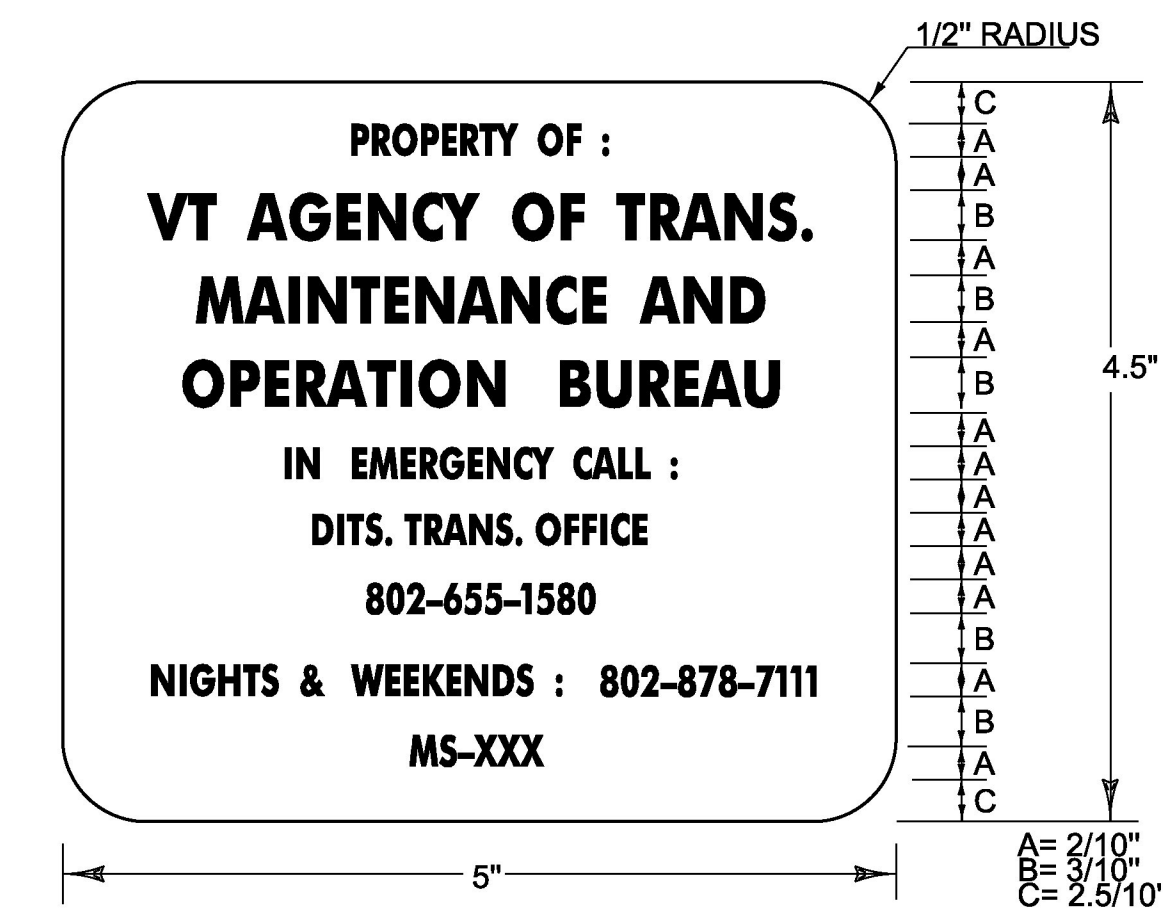


3. ALL TRAFFIC SIGNAL CONDUIT WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 678.

4. PULL CORDS SHALL BE INCLUDED FOR ALL CONDUIT DESIGNATED FOR FUTURE USE. THIS SHALL BE PAID FOR UNDER CONTRACT ITEM 678.21 - ELECTRICAL CONDUIT.

## H. GENERAL

1. AN UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.
2. THE CONTRACTOR SHALL ACQUIRE ALL THE NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE TRAFFIC SIGNAL EQUIPMENT, IF APPLICABLE. THE ROUTING OF POWER TO THE INTERSECTION SHALL BE SUCH THAT THE AGENCY OF TRANSPORTATION HAS FULL RESPONSIBILITY FROM THE TRANSFORMER THROUGH THE TRAFFIC SIGNAL SYSTEM. NO INTERVENING OWNERSHIP OR RESPONSIBILITY SHALL BE ALLOWED.



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

### CONTROLLER IDENTIFICATION PLAQUE NOTES:

1. THE PLAQUE SHALL BE MOUNTED ON ALL NEW 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 FASTENERS.
2. THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
3. THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 1/16".
4. FOR NORTH BROWNELL RD/SOUTH BROWNELL RD/U.S. ROUTE 2 USE MS-567 FOR BLAIR PARK RD./HARVEST LANE/U.S. ROUTE 2 USE MS-565

### CONTROLLER IDENTIFICATION PLAQUE

NOT TO SCALE

REVISION	DATE	DESCRIPTION	BY
1	04/04/2017	NOTES REVISED OR ADDED	DKB

PROJECT NAME: SOUTH BURLINGTON-WILLISTON  
PROJECT NUMBER: NH 2944(1)

FILE NAME: zild340de+alls.dgn PLOT DATE: 4/3/2017  
PROJECT LEADER: G. EDWARDS DRAWN BY: D. DRAPER  
DESIGNED BY: D. DRAPER CHECKED BY: J. LITTLE  
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