TRAFFIC SIGNAL SYSTEM NOTES

A. NEW SIGNAL EQUIPMENT

1. ALL SIGNAL HEADS SHALL BE 12" POLYCARBONATE. THE SIGNAL HEAD COLOR SHALL MATCH EXISTING AND INCLUDE VISORS.
2. ALL EAST/WEST SIGNAL HEADS SHALL HAVE FLAT BLACK LOUVERED BACKPLATES.
3. THE TRAFFIC SIGNAL EQUIPMENT SHALL BE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS, INC, OR NAZTEC, INC (OR APPROVED EQUAL). THE CONTROLLERS SHALL BE AN ASC/3-2100 (NEMA TS2) IN A NEMA P44 (OR APPROVED EQUAL) TRAFFIC CONTROL CABINET WITH A 15-INCH BASE EXTENSION INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SUCH THAT THE DOOR DOES NOT FACE THE ROADWAY.
4. ALL SIGNAL HEADS SHALL HAVE RED, YELLOW AND GREEN L.E.D. SIGNALS WITH A VISIBLE BEAM SPREAD OF 80 DEGREES OFF AXIS.
5. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE PAINTED FLAT BLACK IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
6. ALL TRAFFIC SIGNAL EQUIPMENT AND SPAN WIRE MOUNTED SIGNS SHALL HAVE SAFETY CABLES.
7. 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.

B. SIGNAL OPERATION

1. SWITCH-OVER TO THE NEW TRAFFIC SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK TRAFFIC OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING THE SWITCH-OVER.
2. ALL SIGNALS SHALL DWELL ON VT ROUTE 2A UNLESS OTHERWISE NOTED.
3. THE VT ROUTE 2A THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.
4. SIGNAL TIMING SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC OBSERVATION AND/OR ADDITIONAL FIELD STUDIES.

C. PULLBOXES AND JUNCTION BOXES

1. PULLBOXES AND JUNCTION BOXES ARE DETAILED ON VTRANS STANDARD E-173. MINIMUM JUNCTION BOX SIZE SHALL BE 18" X 12" X 12", OR LARGER AS REQUIRED BY THE ELECTRICAL CODE.
2. THE LOGO ON PULLBOX AND JUNCTION BOX COVERS SHALL BE "TRAFFIC SIGNAL."
3. ALL PULLBOXES AND JUNCTION BOXES SHALL BE INSTALLED IN ACCORDANCE WITH VTRANS' "STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED 2011, SECTION 678.

D. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL CONDUIT SHALL BE SCHEDULE 80 PVC.
2. WHEN CONDUIT IS PLACED BELOW THE ROADWAY OR ACROSS SIDE ROADS, IT SHALL BE PLACED IN A SLEEVE, SIZE SHOWN ON THE PLANS.
3. ALL TRAFFIC SIGNAL CONDUIT WORK SHALL BE PERFORMED IN ACCORDANCE WITH VTRANS' "STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED 2011, SECTION 678.

E. VIDEO DETECTION EQUIPMENT

1. VIDEO VEHICLE DETECTORS SHALL BE PLACED SO THAT OCCLUSION IS MINIMIZED AND PHASING IS NOT AFFECTED.
2. VIDEO VEHICLE DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR.
3. VIDEO VEHICLE DETECTION SYSTEM SHALL BE INCLUDED IN INSYNC ATC SYSTEM.
4. SEE THE PLANS AND/OR THE SPECIAL PROVISIONS FOR A DETAILED LIST OF EQUIPMENT.

F. GENERAL

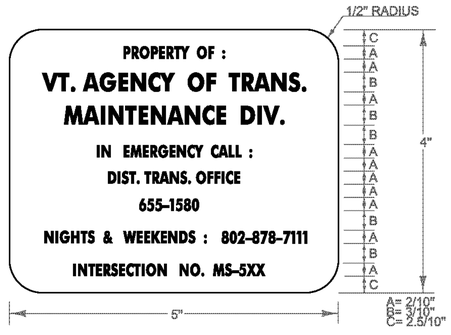
1. A UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.
2. THE CONTRACTOR SHALL ACQUIRE ALL THE NECESSARY PERMITS AND MAKE ALL NECESSSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE TRAFFIC SIGNAL EQUIPMENT, IF APPLICABLE. THE ROUTING OF POWER TO THE INTERSECTION SHALL BE SUCH THAT THE STATE HAS FULL RESPONSIBILITY FROM THE TRANSFORMER THROUGH THE SIGNAL SYSTEM. NO INTERVENING OWERSHIP/RESPONSIBILITY SHALL BE ALLOWED.
3. ALL ELECTRICAL WIRING SHALL BE DONE BY A LICENSED ELECTRICAN AND OVERSEEN BY A MASTER ELECTRICIAN.
4. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO VTRANS' "STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED 2011, WITH CURRENT MODIFICATIONS.
5. IF REQUIRED, OVERHEAD SIGN/SIGNAL SUPPORTS SHALL CONFORM TO AASHTO'S "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", DATED 2009, AND IT'S LATEST REVISIONS.
6. SEE STANDARD E-171A FOR ADDITIONAL NOTES.
7. CONTRACTOR SHALL SCHEDULE FINAL INSPECTION AND OBTAIN WRITTEN APPROVAL OF WORK FROM VTRANS TRAFFIC SIGNAL TECHNICIAN.

G. ADAPTIVE TRAFFIC CONTROL (ATC) SYSTEM

1. CONTRACTOR TO COORDINATE WITH RHYTHM ENGINEERING FOR INSTALLATION OF ATC SYSTEM (SEE CONTRACT DOCUMENTS).
2. INSYNC ATC SYSTEM TO BE INSTALLED IN CONTROLLER CABINET.
3. CABINET TO BE SUPPLIED WITH VIDEO DETECTOR CARD RACK.
4. CONTRACTOR IS RESPONSIBLE FOR MOUNTING AND CABLING CAMERAS INCLUDING SUPPLYING BRACKETS AND EXTENSION POLES AS SPECIFIED BY RHYTHM ENGINEERING AND CATEGORY 5E (COMSCOPE 2003 SHIELDED/OUTDOOR RATED) DETECTOR CABLE.
5. CONTRACTOR TO PROVIDE POWER TO ATC SYSTEM (IMSA 20-1 TRAFFIC CONTROL CABLE 14-3 STRANDED COPPER).
6. CONTRACTOR TO COORDINATE WITH ROBERT WHITE OF VTRANS (828-2781) TO PROVIDE ETHERNET ACCESS AT CABINET FOR SIGNAL INTERCONNECT AND INTERNET ACCESS FOR RHYTHM ENGINEERING PRIOR TO ATC INSTALLATION.

TRAFFIC CONTROL NOTES FOR TRAFFIC SIGNAL SYSTEM WORK

1. THE FOLLOWING NOTES APPLY TO TRAFFIC CONTROL NECESSARY FOR THE INSTALLATION OR MODIFICATION OF THE TRAFFIC SIGNALS ONLY. FOR OVERALL PROJECT TRAFFIC CONTROL MANAGEMENT REQUIREMENTS REFER TO NOTES ON SIGNAL PLANS AND SECTION 641 OF THE STANDARD SPECIFICATIONS.
2. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON VT ROUTE 2A AND SUSIE WILSON BYPASS. AT THE DISCRETION OF THE RESIDENT ENGINEER, UNIFORMED TRAFFIC OFFICERS SHALL DIRECT TRAFFIC, WHENEVER REQUIRED.
3. TRAFFIC CONTROL SIGNING AND CHANNELIZING DEVICES SHALL BE IN ACCORDANCE WITH THE APPROPRIATE STANDARD DRAWINGS (E-101, E-102, E-106, E-107, E-110, E-111) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN.
4. AFTER SIGNAL INSTALLATION, ALL HEADS MUST BE COVERED (TURNING SHALL NOT BE ALLOWED) UNTIL TURNED ON. THE METHOD OF COVERING SHALL BE AS FOLLOWS:
   - ALL NEW TRAFFIC AND PEDESTRIAN SIGNAL HEADS WHICH HAVE BEEN INSTALLED BUT NOT PLACED IN EITHER FLASHING OR FULL OPERATION SHALL BE COVERED. EXISTING SIGNAL HEADS WHICH ARE PLACED OUT OF SERVICE IN ORDER TO PERFORM WORK ON THE SIGNAL SYSTEM SHALL ALSO BE COVERED. EXCEPT WHEN SUCH WORK CAN BE COMPLETED IN A RELATIVELY SHORT PERIOD OF TIME (SEVERAL HOURS) AND TRAFFIC CONTROL HAS BEEN PROVIDED FOR.
   - THE SIGNAL COVERS SHALL CONSIST OF A ONE-PIECE PLASTIC BAG HAVING A MINIMUM THICKNESS OF 4 MIL. THE BAG SHALL BE OPAGUE. THE COVER SHALL SLIP OVER THE ENTIRE SIGNAL HEAD AND SHALL BE SECURELY TIED AT THE OPENING WITH A ROPE OF SUFFICIENT SIZE AND STRENGTH TO SECURE THE COVER. AN INTERMEDIATE ROPE OF THE SAME MATERIAL SHALL BE DRAWN AROUND THE CENTER OF THE COVER TO PREVENT EXCESS FLAPPING IN THE WIND.
   - A DRAIN HOLE SHALL BE MADE AT THE BOTTOM OF THE BAG TO ALLOW THE ESCAPE OF MOISTURE. NO TAPE OR ADHESIVE WILL BE ALLOWED TO BE ATTACHED TO ANY SURFACE OF THE SIGNAL HOUSING OR LENSES. ALL COVERS SHALL BE PLACED IN A NEAT WORKMANLIKE MANNER, ANY COVER WHICH IS TORN OR MISSING SHALL BE IMMEDIATELY REPLACED. PAYMENT FOR THE COVERS, THEIR REPLACEMENT, AND REMOVAL AND ALL INCIDENTALS FOR COMPLETION OF THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE TRAFFIC SIGNAL.
5. WHERE TWO-WAY TRAFFIC IS MAINTAINED DURING CONSTRUCTION, THE SIGN PACKAGE SHOWN ON STD. E-100 SHOULD BE USED. APPROACH CONSTRUCTION SIGNING SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PERIOD. OTHER SIGNING SHALL BE REMOVED OR COVERED WHEN NOT APPLICABLE.
6. VARIATIONS IN THE SIGNING PACKAGES MAY BE DICTATED BY UNIQUE GEOMETRY AND/OR TRAFFIC CONDITIONS.
7. THE CONTRACTOR SHALL NOT WORK WITHIN THE HIGHWAY RIGHT-OF-WAY WITHOUT THE APPROPRIATE CONSTRUCTION SIGNING IN PLACE AS SHOWN ON STD. E-100.
8. AT LOCATIONS WHERE SIGNALS CURRENTLY EXIST, A WORKING SIGNAL SYSTEM SHALL BE IN PLACE AT THE END OF EACH DAY. IF THE SIGNAL SYSTEM IS NOT WORKING AT THE END OF THE DAY, THE CONTRACTOR SHALL PROVIDE UNIFORMED TRAFFIC OFFICERS TO CONTROL TRAFFIC, AT NO COST TO THE STATE OF VERMONT, UNTIL SUCH TIME THAT THE EXISTING OR NEW SIGNAL SYSTEM IS IN OPERATION.
9. "SIGNAL UNDER CONSTRUCTION" SIGN PANELS SHALL BE MOUNTED UNDER "ROAD WORK AHEAD" SIGNS ANYTIME SIGNAL SYSTEM WORK IS BEING PREFORMED. SEE SIGN DETAIL ON THIS SHEET. COST FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 641.10.
10. TEMPORARY TRAFFIC BARRIER TO BE USED AT DISCRETION OF RESIDENT ENGINEER. TEMPORARY TRAFFIC BARRIER USED ON THIS PROJECT SHALL NOT BE PAID SEPERATELY, BUT SHALL BE INCIDENTAL TO ITEM 641.10 AND SHALL MEET THE REQUIREMENTS OF SECTION 621 OF THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.



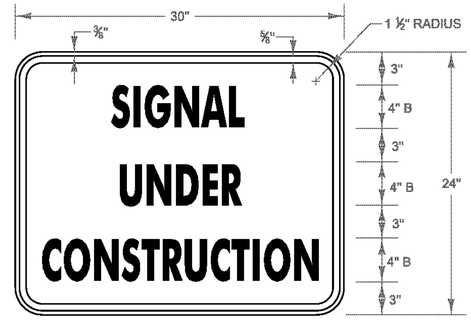
LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

CONTROLLER IDENTIFICATION PLAQUE NOTES:

1. THE PLAQUE SHALL BE MOUNTED ON ALL 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.
2. THE LETTERS SHALL BE PUNCHED OR STAMPTED, SUCH STAMPING SHALL PENETRATE AT LEAST ½ THE BASE MATERIAL THICKNESS.
3. THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 1/10".
4. THE FOLLOWING INTERSECTION DESIGNATION SHALL BE ADDED TO EACH PLAQUE AS SHOWN ABOVE:

   2A/SUSIE WILSON ROAD = MS562
   2A/289 WB OFF RAMP = MS563

CONTROLLER IDENTIFICATION PLAQUE
NOT TO SCALE



MATERIALS: SEE STD. E-144
COLORS: TEXT & BORDER - BLACK
BACKGROUND - ORANGE (RETROREFLECTIVE SHEETING)

CONSTRUCTION SIGN DETAIL
NOT TO SCALE

Stantec

PROJECT NAME:	ESSEX
PROJECT NUMBER:	STPG SGNL(41)
FILE NAME: ...\plotfiles\project notes.dgn	PLOT DATE: 7/10/2012
PROJECT LEADER: T. LUTHER	DRAWN BY: C. GENDRON
DESIGNED BY: D. DEBAIE	CHECKED BY: T. LUTHER
PROJECT NOTES PN-1	SHEET 3 OF 9