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## VAOT STANDARDS FOR CONSTRUCTION

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## TRAFFIC DATA

CULVERT	LOCATION	2008 AADT
RICHMOND BR. 59-2 I-89	MILE MARKER 79.5	26,900
WILLISTON BR. 59-4S I-89	MILE MARKER 81.5	26,900

## GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

2. ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS SHOWN ON THE PLANS.

3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

4. IT IS EXPECTED THAT CULVERT LINING OR PAVING, HEADWALLS AND STONE FILL WILL BE THE EXTENT OF THE WORK, AS NOTED FOR EACH SITE. DURING THE COURSE OF CONSTRUCTION IF THE CONTRACTOR SEES AN AREA OF CONCERN, SUCH AS VOIDS AROUND THE EXISTING CULVERT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE ENGINEER WILL MAKE A DETERMINATION AS TO THE NEED FOR FURTHER EXPLORATION. IF FURTHER EXPLORATION IS NEEDED TEST BORINGS SHALL BE CONDUCTED IN THE AREA OF CONCERN. THIS WORK SHALL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (TEST BORINGS)".

5. HAND PROBES TAKEN IN THE VICINITIES OF NEW HEADWALLS DID NOT INDICATE THE PRESENCE OF BEDROCK. IF BEDROCK IS ENCOUNTERED, IT SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE ADVANCING THE WORK.

## PIPE REHABILITATION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ACCESS TO ALL CULVERT REHABILITATION SITES. ALL RESULTING DISTURBED EARTH SHALL BE STABILIZED AND RESTORED UPON COMPLETION OF CONSTRUCTION. PAYMENT SHALL BE MADE UNDER CONTRACT ITEM 900.645, "SPECIAL PROVISION (TEMPORARY ACCESS ROAD AND STAGING AREAS)".

2. AT EACH LOCATION SPECIFIED IN THESE PLANS, THE EXISTING CULVERT SHALL REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION OF THE EXISTING PIPE TO THE SATISFACTION OF THE ENGINEER. IT IS ANTICIPATED THAT IT WILL BE NECESSARY FOR THE CONTRACTOR TO REMOVE SEDIMENT, LARGE STONES, AND/OR DEBRIS FROM INSIDE THE EXISTING CULVERT, AND TO FILL AND REPAIR LARGE HOLES IN THE EXISTING CULVERT PRIOR TO INSTALLING THE NEW LINER OR INVERT PAVING. PAYMENT FOR THIS WORK WILL BE MADE UNDER THE CULVERT LINER PAY ITEMS.

3. THE CONTRACTOR SHALL FILL ANY VOIDS UNDER THE CULVERT FROM WITHIN THE CULVERT BEFORE INSTALLING THE LINER OR INVERT PAVING. PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM 541.31, "CONCRETE, CLASS D".

4. THE EXISTING CONCRETE CRADLE WALL AT EACH PIPE INLET SHALL BE RETAINED AT EACH CULVERT. A NEW CONCRETE HEADWALL SHALL BE CONSTRUCTED UPSTREAM OF THE EXISTING CRADLE WALL AT CULVERT NO. 59-2. THE EXISTING CONCRETE CRADLE WALL AT THE OUTLET OF CULVERT NO. 59-2 SHALL BE REMOVED AND REPLACED. PAYMENT FOR REMOVAL OF EXISTING CRADLE WALLS WILL BE PAID FOR UNDER ITEM 529.25 "REMOVAL OF CONCRETE OR MASONRY".

5. NEW CONCRETE HEADWALLS SHALL BE CONSTRUCTED IN THE DRY. CONTROL OF WATER WILL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM)".

## CONCRETE NOTES

1. CONCRETE PAYMENT AND CLASSIFICATION WILL BE AS FOLLOWS:  
 HEADWALL:  
 ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B  
 FILLING VOIDS BELOW PIPE FLOW LINE:  
 ITEM 541.31, CONCRETE CLASS D  
 FILLING VOIDS ABOVE PIPE FLOW LINE:  
 ITEM 900.608, SPECIAL PROVISION (CONTROLLED DENSITY (FLOWABLE) FILL)

2. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH, UNLESS OTHERWISE NOTED.

3. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

4. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES. PAYMENT WILL BE MADE UNDER ITEM 514.10, "WATER REPELLENT, SILANE".

## REINFORCING STEEL NOTES

1. ALL REINFORCING STEEL SHALL BE GRADE 60.

2. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:  
 ALONG BACK FACES OF WALLS AGAINST EARTH: 2"  
 ELSEWHERE UNLESS OTHERWISE INDICATED: 3"

3. REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE:  
 SPACING = +/- 1 INCH  
 CLEARANCE = +/- 1/4 INCH

## TRAFFIC CONTROL NOTES

1. ALL TRAFFIC CONTROL MEASURES FOR THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH TYPICAL APPLICATIONS TA-5, TA-33, TA-34, TA-42 AND TA-44 OF THE 2003 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE VTRANS STANDARD DRAWINGS, AS NEEDED. CONFLICTS BETWEEN THE MUTCD AND THE VTRANS STANDARD DRAWINGS WILL DEFER TO THE MUTCD.

2. TWO WEEKS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A SPECIFIC TRAFFIC CONTROL PLAN FOR EACH CONSTRUCTION SITE TO THE ROADWAY, TRAFFIC AND SAFETY ENGINEER FOR APPROVAL PER SUBSECTION 105.03. PAYMENT FOR THIS WORK WILL BE INCLUDED IN TRAFFIC CONTROL ITEMS.

3. LARGE CONSTRUCTION VEHICLES MAY BE REQUIRED TO BACK DOWN THE TEMPORARY ACCESS ROADS AT EACH CULVERT LOCATION. THESE VEHICLES WILL LIKELY NOT HAVE ADEQUATE SPACE AT THE INTERSECTION OF THE ACCESS ROADS AND THE INTERSTATE TO PERFORM THE NECESSARY TURNING MOVEMENTS. AT THE OPTION OF THE CONTRACTOR, A TEMPORARY CLOSURE OF THE INTERSTATE TRAVEL LANE AND SHOULDER WILL BE ALLOWED FOR ACCESS TO THE PROJECT SITES. THIS WORK WILL BE PAID FOR UNDER ITEM 641.10, "TRAFFIC CONTROL".

4. TEMPORARY LANE AND/OR SHOULDER CLOSURES WILL BE ALLOWED DURING WORKING HOURS ONLY. IN ADDITION, TEMPORARY LANE CLOSURES WILL NOT BE ALLOWED DURING THE HOURS OF 7 AM TO 8:30 AM AND 4 PM TO 6 PM. THE INTERSTATE SHALL BE RESTORED TO FULL CAPACITY AT THE CLOSE OF DAILY CONSTRUCTION ACTIVITIES.

5. TEMPORARY BARRIER, IF USED, SHALL MEET THE REQUIREMENTS OF SECTION 621. BARRIER ENDS FACING ONCOMING TRAFFIC SHOULD BE TAPERED BEYOND THE CLEAR ZONE. IF NECESSARY, PAYMENT FOR INSTALLING, RESETTING, AND REMOVING ANY TEMPORARY TRAFFIC BARRIER WILL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".

6. ENERGY ABSORPTION ATTENUATORS, IF USED, SHALL MEET THE REQUIREMENTS OF SECTION 621. PAYMENT FOR INSTALLING AND REMOVING ANY ENERGY ABSORPTION ATTENUATORS WILL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".

7. SIGNS, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE CLEANED WEEKLY AND THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 641.10, "TRAFFIC CONTROL".

8. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS), ITEM 641.15, SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.55 OF THE MUTCD. THE PCMS SHALL READ "LEFT (OR RIGHT) LANE CLOSED AHEAD, PLEASE MERGE EARLY".

9. THE ARROW BOARD, ITEM 641.16, SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, OR IF PRACTICAL FURTHER FROM THE TRAVELED LANE AT THE END OF THE SHOULDER TAPER.

PROJECT NAME: RICHMOND - WILLISTON

PROJECT NUMBER: IM CULV(16)

FILE NAME: ...\\plot files\02-note sheet.dgn PLOT DATE: 2/25/2010

PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING

DESIGNED BY: M. CHENETTE CHECKED BY: G. BOGUE

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