

WIRED CONDUIT (PVC)			
NO.	DIAM.	REMARKS	
PP-1 TO PP-2	1 50 mm	SIGNAL	
PP-2 TO JB-1	1 50 mm	SIGNALS	
JB-1 TO SP-1/CONTROLLER	2 50 mm	SIGNALS AND LOOPS	
SP-1/CONTROLLER TO PP-3	2 50 mm	SIGNALS AND LOOPS	

ELECTRICAL CONDUIT SLEEVE	
LOCATION	DIAM.
US RTE. 7 0+157.05 - 6.57M RT.	150 mm
0+157.34 - 7.48M LT.	120 mm
VT RTE. 140 1+091.5 - 5.12M LT.	150 mm
5.12M RT.	150 mm

**Metric**

**JUNCTION BOX**

LOCATION AND DESCRIPTION

1+091.5, 5.6 m LT. JB - 1

VEHICLE DETECTOR LOOPS												
LOOP NO.	LANE	CALL #	SIZE (M)	TYPE & NO. TURNS	DELAY OR PRESENCE	INDUCTANCE		RESISTANCE		LEAKAGE TO GROUND	LOCKING MEMORY	EST. QUANT. (M)
						CALC.	ACT.	CALC.	ACT.			
A	S. N. T. H. EASTBOUND	140 4 + 8	1.8x9.0	QUAD - 2	PRESENCE	281		0.771			NO	
A	VT RTE. WESTBOUND	140 4 + 8	1.8x9.0	QUAD - 2	PRESENCE	266		0.580			NO	

CALCULATIONS ARE BASED ON LOOPS DESIGNED IN PARALLEL  
ALL CALCULATED VALUES ARE AT THE CONTROLLER.  
MEASURED VALUES MUST BE FILLED IN PRIOR TO TEST PERIOD.

SEQ. 11+P	PHASE 2+6 (DWELL)				PHASE 4+8				PHASE PED.			
	CLEAR TO:				CLEAR TO:				CLEAR TO:			
	B	W	0 4+8	0 PED	B	W	0 2+6	0 PED	B	W	0 2+6	0 PED
VEH EXT	-	-	-	-	2	-	-	-	-	-	-	-
MINIMUM	-	-	-	-	8	-	-	-	-	-	-	-
MAX 1	27	4	2	-	21	4	2	-	-	-	-	-
PED	27	4	2	4	21	4	2	4	2	5	2	
VEH EXT	-	-	-	-	2	-	-	-	-	-	-	-
MINIMUM	-	-	-	-	8	-	-	-	-	-	-	-
MAX 2	33	4	2	-	15	4	2	-	-	-	-	-
PED	33	4	2	4	15	4	2	4	2	5	2	
VEH EXT	-	-	-	-	2	-	-	-	-	-	-	-
MINIMUM	-	-	-	-	8	-	-	-	-	-	-	-
MAX 3	29	4	2	-	19	4	2	-	-	-	-	-
PED	29	4	2	4	19	4	2	4	2	5	2	
FACE 2	G	Y	R	Y	R	R	R	R	R	R	R	R
FACE 4	R	R	R	R	R	G	Y	R	Y	R	R	R
FACE 6	G	Y	R	Y	R	R	R	R	R	R	R	R
FACE 8	R	R	R	R	R	G	Y	R	Y	R	R	R
PED	DW	DWDW	DWDW	DWDW	DW	DWDW	DWDW	DWDW	DWDW	W	DWDW	

**NOTES:**

PRIOR TO COLD PLANNING, ANY EXISTING VEHICLE DETECTOR LOOPS SHALL BE DISCONNECTED IN THE CONTROLLER CABINET AND CUT AT THE CURB.

ONCE A LOOP IS DISCONNECTED, THE SIGNAL PHASE THAT IT WAS CALLING SHALL BE PUT ON MAX RECALL OR THE SIGNAL PUT ON FLASH AND TRAFFIC CONTROLLED BY A UNIFORMED TRAFFIC OFFICER.

ALL BITUMINOUS AREAS TO RECEIVE NEW VEHICLE DETECTOR LOOPS SHALL BE LEVELED WITH TYPE IV BITUMINOUS CONCRETE PAVEMENT AS DIRECTED BY THE RESIDENT ENGINEER PRIOR TO THE INSTALLATION OF THE NEW DETECTOR LOOPS. LOOPS SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF THE WEARING COURSE.

IF WATER VALVES, DROP INLETS OR OTHER OBSTRUCTIONS ARE ENCOUNTERED WITHIN THE AREA OF A PROPOSED LOOP, THE CONTRACTOR SHALL TAKE SPECIAL CARE TO AVOID THE OBSTRUCTION DURING LOOP INSTALLATION. IF LOOP SIZES OR SHAPES ARE TO BE MODIFIED DUE TO OBSTRUCTIONS THE RESIDENT ENGINEER MUST APPROVE LAYOUT PRIOR TO INSTALLATION.

AFTER THE NEW LOOPS ARE INSTALLED, THE INDUCTANCE, RESISTANCE AND LEAKAGE TO GROUND SHALL BE TESTED USING PROPERLY CALIBRATED EQUIPMENT. THE TEST RESULTS SHALL BE COMPARED WITH THE CALCULATED VALUES AND RECORDED ON THE PLANS. ALL LOAD TESTING SHALL BE PERFORMED AS PER VTrans STANDARD E-172M.

CALCULATED VALUES AT CONTROLLER ARE BASED ON DIRECT CONDUIT ROUTING TO THE NEAREST SIGNAL POLE AND CROSSING THE SPAN WIRE OR EXISTING CONDUIT AS NECESSARY TO THE EXISTING CONTROLLER LOCATION. ANY SIGNAL MODIFICATION AND OR CONTROLLER RELOCATION PRIOR TO LOOP CONNECTION WILL REQUIRE RECALCULATION OF THESE VALUES.

AFTER ACCEPTANCE OF THE LOOP INSTALLATION BY THE RESIDENT ENGINEER, RETURN THE SIGNAL TO NORMAL OPERATION.

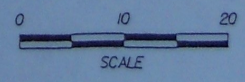
AN EMERGENCY VEHICLE PREEMPTION SYSTEM IS TO BE INSTALLED AT THIS INTERSECTION. SEE SHEET 16 FOR NOTES AND DETAILS CONCERNING THIS SYSTEM.

FOR ADDITIONAL DETAILS, SEE VTrans STANDARDS E-172M AND E-172M.

EXISTING	NEW	LEGEND
		UTILITY POLE
		LUMINAIRE
		LIGHT OR WOOD POLE
		STRAIN POLE/CANTILEVER
		CONTROLLER CABINET
		PULLBOX/JUNCTION BOX
		SIGNAL HEAD
		CONDUIT
		VEHICLE LOOPS
		PEDESTAL POST

2003 "AVERAGE WEEKDAY" HOURLY VOLUMES

TIME	VT ROUTE 140	U.S. ROUTE 7	U.S. ROUTE 7
AM OFF PM	11 12 13 14 15 16 17 18 19 20 21 22 23 24	5 1 5 5 226 21 1 294 26 24 26	13 1 20 2 1 134 12 0 2 1 1 294 47 37 67
AM OFF PM	11 12 13 14 15 16 17 18 19 20 21 22 23 24	5 1 5 5 226 21 1 294 26 24 26	13 1 20 2 1 134 12 0 2 1 1 294 47 37 67



**DH**  
Dufresne-Henry

PROJECT NAME: WALLINGFORD  
PROJECT NUMBER: NHG SGNL(26)S/STP ADAS(2)

FILE NAME: ic294frm.dgn  
PROJECT LEADER: GAS  
DESIGNED BY: RAW/JCO  
TRAFFIC SIGNAL DETAIL PLAN

PLOT DATE: 01/28/02  
DRAWN BY: WBL  
CHECKED BY: GAS  
SHEET 13 OF 25