



# VEHICLE ACTIVATED TRAFFIC CALMING SIGNS (VATCS)

SOLE SOURCE SUPPLIER CONSULTATION  
DOCUMENT  
FOR  
CITY OF INNOVATION

ISSUE 1.0

0.1 Title

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### 0.3 Amendment Table

The amendment record should be completed when an amendment is incorporated into this document.

Issue	Date	Change Description	Author
01	24 <sup>th</sup> March 2010	Original Issue	JSB

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**0.4 Distribution**

<b>Copy Number</b>	<b>Issued To</b>	<b>Position/Location</b>
01	Dorman Varitext	Master Register
02	Traffic Technologist	City of Innovation

The most current issue of this document shall be distributed to those listed in the above table.

## 1. Introduction

This document has been produced to assist the City of Innovation in identifying the unique benefits of the Dorman Varitext VATCS product portfolio to support the business case to sole source the procurement of the technology for deployment in the Cities Traffic Calming program.

Dorman Varitext are the only manufacturer of the VATCS product in North America.

The City of Innovation recognizes the challenge of addressing the dangers and costs of excessive motorist speed within the community to attaining a safe environment for all.

The document provides consultation on the:

- Unique VATCS technical approach criteria
- Unique Independent long term/large scale test data

## **2. Unique VATCS Technical Approach Criteria**

The following section provides details of the key unique technical features of the VATCS product that differentiates its performance from that of any other radar speed feedback sign available on the North American market at present.

### 2.1 Display Format and Philosophy

The TAC and FHWA MUTCD was produced as a guideline to allow Cities across the nation to attain a minimum standard of uniformity and consistency for road traffic devices.

The basis of the Dorman Varitext VATCS design is built on this founding statement like no other speed radar board on the market today.

The VATCS utilises the all ready established, recognized and nationwide understood regulatory and/or warning diagrams from the TAC or FHWA MUTCD to create its clear and consistent traffic calming message.

This message format approach is unique to the VATCS and is hazard specific, reasoned and educational.

See diagrammatic example overleaf

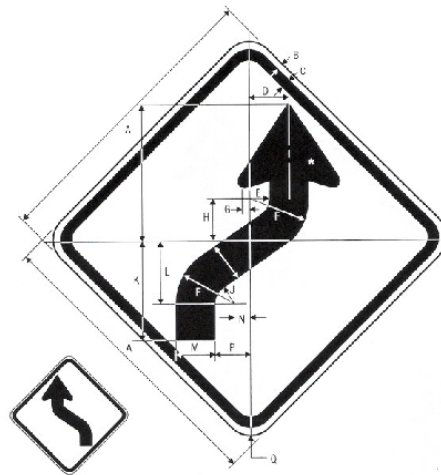
## Posted Speed Limit VATCS

Figure 5.1 – Sign Pattern Template for Rb-1

Maximum Speed		Rb-1	
		100	
		100*	
		130	
		200**	
		150	
		(750)	
Sign No. & Cut Image Ref.	Blank	Special Notes	
Rb-1 (0409 x 0750)	B-62	*Must comply with MTA and Regulations. **Meets Bilingual requirements.	
Sign Element	Colour	Min. Refl. (ARTD)	Font
Background	White	Type I	*Series "C"
Border/Inner / Outer	Black / White	None / Type I	**Series "D"
Text	Black	None	(11 style required, see Series "C")
Symbol	N/A	N/A	



## Dynamic Advance Hazard/Curve Warning VATCS



W1-4L

W1-4R

REVERSE CURVE

\*See page C-2 for symbol design.

A	B	C	D	E	F	G	H	J	K	L	V
18	3.75	.625	2.375	1	3.875	.25	2.625	8.875	6.25	4	2.625
24	3.75	.625	3.125	1.5	5	.313	3.6	11.25	8.25	5.25	3.6
30	.5	.75	3.875	1.875	6.25	.375	4.375	14.063	10.625	6.563	4.375
36	.625	.875	4.719	2.25	7.5	.429	5.25	16.875	12.375	7.875	5.25
42	.75	1.25	6.313	3	10	.525	7	22.5	16.5	10.5	7

N	P	Q
.875	2	1.5
1.125	2.625	1.5
1.406	3.281	1.875
1.688	3.938	2.25
2.25	5.25	3

WARNING SIGN COLORS:  
 SYMBOL — BLACK  
 BACKGROUND — YELLOW (RETROREFLECTIVE)

TTC SIGN COLORS:  
 SYMBOL — BLACK  
 BACKGROUND — ORANGE (RETROREFLECTIVE)

#### Letter Style

The letter style of the VATCS message is in exact accordance with MUTCD alphabet font. This is unique to the VATCS, whereas other radar speed signs utilise everyday seven segment or 7 x 5 dot matrix fonts which are used in anything from watch displays to advertising boards.

The letter style is unique to the MUTCD and VATCS and more importantly uniquely identifiable to the targeted audience, the road user.

#### Colour

The colour of the display is an exact inversion of the colours in the MUTCD, again allowing clear correlation for the driver between the VATCS message and that of a fixed regulatory sign. All other radar speed signs use amber as the main display colour.

#### Character Size

The VATCS message size/dimensions are in exact accordance with MUTCD hence visibility and readability are uniquely automatically correct for chosen road posted speed limit.

## 2.2 Unique Independent Long term/large scale test data

A Unique fact that allows VATCS to stand apart from the speed feedback competition in North America is the independent large scale field evaluation tests that were conducted by the Transport Research Laboratory over a 3 to 5 year period and published in 2002.

It has been independently proven on a large scale field test that the VATCS message and approach does not diminish in its speed management effect after 5 years of operation, which again is unique and something that no other speed radar display on the market can offer.

The VATCS were independently field tested on a large scale involving 60 signs over 3 to 5 year period and have been shown to maintain the following speed management results

A **4MPH** reduction of average speed in speed limit zones

A **7MPH** reduction of average speed in advance of specific hazards

A **1/3** reduction in expected accidents recorded over the 3 year period

VATCS technology was first introduced to North America by Dorman Varitext in the Spring of 2006, the technology has all ready replaced/superseded the dated radar speed feedback sign SFD technology in the early 2000's in the United Kingdom.

### **TRL548 Independent large scale field evaluation of VATCS**

The TRL 548 report is internationally recognized as the only large scale evaluation of the deployment of vehicle activated displays in traffic calming applications and sets the VATCS technology apart from other inferior display solutions.

A copy of the TRL548 report is appended as a separate PDF document in Appendix A of this document.

Dorman Varitext now also have numerous case studies from North America which show the same initial first year results as the TRL548 report which further supports the translation of this unique approach. The case studies can be viewed at our website using the following link.

[http://www.dormanvaritext.com/north\\_america/research.html](http://www.dormanvaritext.com/north_america/research.html)

### **3. Executive Summary**

This consultation report concludes that the VATCS technology offers a Unique and superior long term deterrent over the standard radar speed feedback display to excessive road speed above the posted speed limit within the community.

This is supported both by the only long term large scale independent field evaluation, client case studies and the fact that the UK DOT who have one of the top 3 safest road networks in the world today have incorporated the VATCS technology into its MUTCD with policy for deployment.

It is also evident that progressive proponents of traffic calming within both Canada and the USA are all ready switching from SFD to VATCS in recognition of the long term excessive speed management benefits.

## **Appendix A**

A1 TRL548 Independent Report