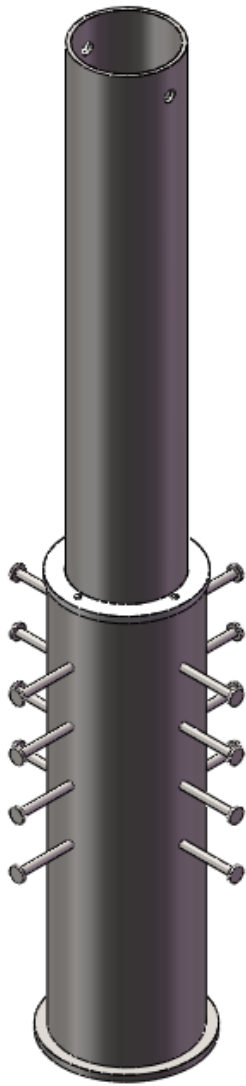
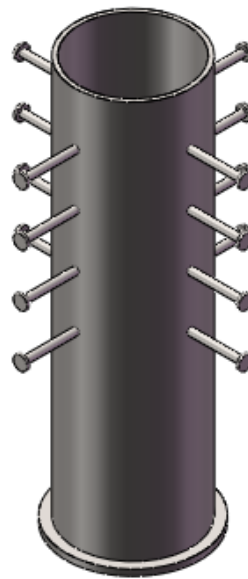


150/C40RM 900

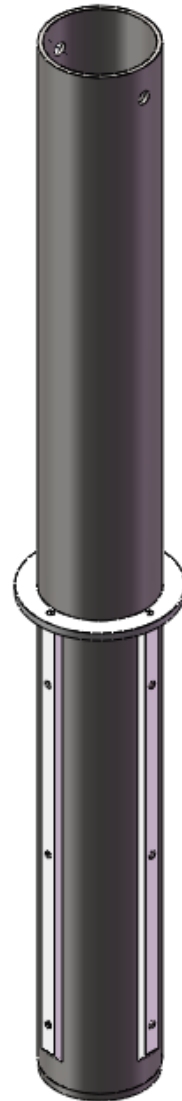
Proudly designed, engineered and manufactured in Canada, the fixed 150/C40RM 900 bollard exceeds the ASTM F2656-P1 standard and has been awarded a SC40-P1 certification.



Complete Assembly



In Ground Receiver



Removable Cylinder

150/C40RM 900

4455 Genesee Street, Buffalo, New York 14225 | Phone: 716.632.7500 | Fax: 716.631.6969 | www.calspan.com



Calspan Test No.:	BR0111
Test Standard:	ASTM F2656-20
Impact Condition Designation:	SC40
Client:	Ontario Bollards
Model:	Bollard 150/C40RM 900
Product Rating:	SC40 – P1

April 12, 2022

To whom it may concern:

This letter is to certify that the subject barrier, the model Bollard 150/C40RM 900 provided by Ontario Bollards, was tested to the requirements of the ASTM standard F2656-20, with SC40 impact condition designation. This was the standardized Test Method for Vehicle Crash Testing of Perimeter Barriers, at the time the barrier test was performed.

Testing performed at Calspan Corporation, on April 12, 2022, for Ontario Bollards. The Ontario Bollards, model Bollard 150/C40RM 900 was impacted by an SC small car, weighing 1095.7 kg (2,415 lbs.) travelling at 66.6 kph (41.4 mph). Post-test measurements of the dynamic movement of the test vehicle's leading edge of the base of the "A" pillar show that the left and right leading edge of the base of the "A" pillar, were stopped at .083 meters and .126 meters respectively, after the leading edge (reference line) of the impacted test article. As such, based on the test vehicle mass, impact velocity and penetration into the protected zone, the barrier rating per the ASTM standard F2656-20, is SC40 – P1.

Calspan accredited to ISO/IEC 17025:2017 to perform ASTM F2656-20 testing by Perry Johnson Laboratories Accreditation, Inc. (PJLA) under Certificate Number L18-546-R2 and Accreditation Number 76654.

Respectfully,

A handwritten signature in blue ink that reads "David Casey".

David Casey
Test Director

Safer Highways...Safer Skies

Aerospace Sciences | Crash Research | Flight Research | Transportation Research

150/C40RM 900

BOLLARD MATERIAL	NORMAL STEEL / OPTIONAL GALVANIZED STEEL
REMOVABLE CYLINDER DIAMETER	168 MM
REMOVABLE CYLINDER HEIGHT (TOTAL)	1625 MM
REMOVABLE CYLINDER HEIGHT (ABOVE GRADE)	900 MM
RECEIVER DIAMETER	219 MM
RECEIVER HEIGHT (BELOW GRADE)	775 MM
COVER OPTIONS	PAINTED ANY RAL COLOR
	HDPE PLASTIC BOLLARD COVER
	BRUSHED GRADE 316 STAINLESS STEEL COVER
	AVAILABLE IN, FLAT, ROUNDED, SLOPED TOPS
IMPACT RESISTANCE (WITHOUT DEFORMATION)	175,000 J
BREAKOUT RESISTANCE	525,000 J

ASTM standard test method for perimeter barriers designates C40 as the rating for a barrier that stops a 1,100 kg vehicle moving at 64 Km/h. It is tested with a compact-car equivalent test vehicle.

Many parking lots have curbs, speed bumps, or parking stops and are generally busy. In these conditions, the average vehicle speed is slow. The installation of C40 bollards, will generally be enough to stop accidents caused by driver inattention, medical issue, or pedal confusion.

Similarly, provided that there are very few straight segments where a car can pick up speed, and if the area is inaccessible to large vehicles, then the C40 bollards can be used to protect store front against driver error or intentional ram raid. ANNT C40 bollards are tested and certified to ASTM F2656-20 standards and have achieved a SC40-P1 certification.

ANNT C40 bollards are proudly designed, engineered and manufactured in Canada.