

## Appendix C- Certification Letter

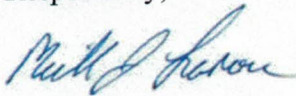
To whom it concerns:

This letter is to certify that the subject barrier, Traffic Impact Bollard Model TIB-67-SA was tested using ASTM C40 P1 parameters regarding passenger car weight and impact velocity.

Crash Test # 117 was performed at Barrier1 System's facility on April 25, 2019. The Traffic Impact Bollard Model TIB-67-SA was impacted by a passenger car vehicle weighing 2342 lbs. traveling at 42.6 mph. Post-test measurements of the dynamic penetration of the test vehicle showed the leading edge of the vehicle was stopped at about 22 inches from the front of the bollard. As such, based on the vehicle mas, impact velocity and penetration into the protected zone, Traffic Impact Bollard Model TIB-67-SA meets parameters of ASTM C40 P1.

As the Engineer of Record (EOR) for this bollard and the crash test, I am certifying that Traffic Impact Bollard Model TIB-67-SA was tested in accordance with the parameters discussed above.

Respectfully,



Michael J. Lamore, P.E.

