



Towable Trailer Mounted Attenuator (TTMA-100)

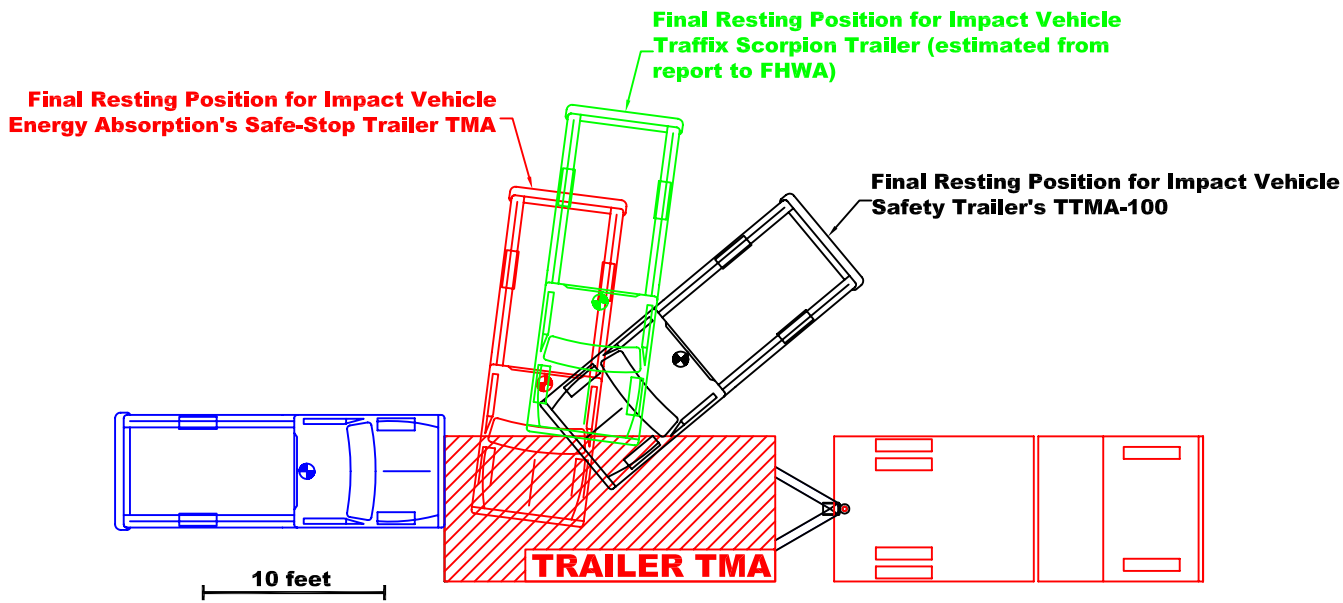
Safety Trailer's new Towable Trailer Mounted Attenuator (TTMA-100) is set to **revolutionize** the truck mounted attenuator (TMA) market. The TTMA-100 is an attenuation trailer that **attaches directly to a standard pintle-hook and trailer wiring harness**. This simple connection allows the trailer to be **attached or removed from a tow-vehicle in minutes** and, equipped with an optional **arrow panel** or VMS sign mount, the TTMA-100 **eliminates** the need for a **dedicated support vehicle**. This simple attachment allows the TTMA-100 to be quickly attached directly to work vehicles, such as snowplows, sanding trucks, as well as striping and sweeping trucks, thereby **eliminating** the need for costly **shadow vehicles**. Because **no vehicle modification** is required, practically **any vehicle with a 8-ton pintle-hook** in your fleet can utilize the TTMA-100, improving safety for your workers, vehicles, and the motoring public.

The **patented feature** that makes a simple **pintle-hook** connection work so well is the way the TTMA-100 **engages a vehicle**. The TTMA-100's rear impact plate is designed to **capture the front of a vehicle** such that, the trailer becomes locked between the impacting vehicle and the support truck. The pintle-hook connection allows the trailer to rotate to remain aligned with the impacting vehicle. Hence, the trailer and pintle-hook connection **eliminates the need for costly TMA mounting and actuation equipment** and allow the trailer to **align itself** to an impact from any direction to **maximize energy dissipation** (*see attached figure, showing the final vehicle resting positions for the various trailer TMA's*). Thus, the TTMA-100 both greatly **simplifies TMA installation**, and provides significantly improved safety performance for all tow vehicles. When a motorist strikes a TMA, the support truck to which it is mounted will roll ahead, reducing the severity of the crash. Light support trucks allow greater roll ahead and minimize the severity of a crash. **Until now**, all TMA's relied on this roll ahead to reduce the severity of large passenger car impacts. For this reason, users should never attach a TMA to a truck that is heavier than that used during full-scale crash testing.

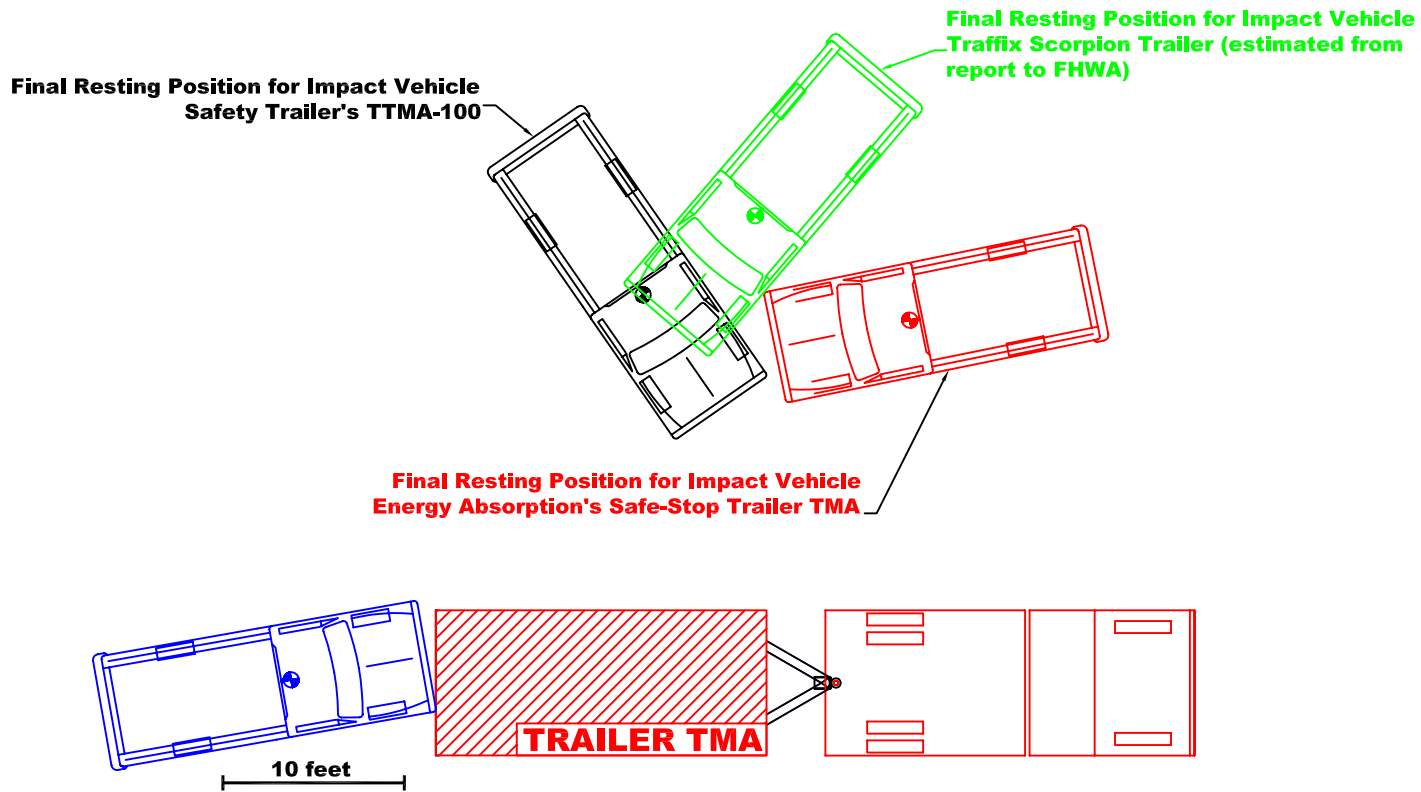
The TTMA-100 is the **only truck mounted attenuator** to successfully pass all required and optional Report 350 crash tests with the **support truck blocked** to prevent vehicle roll ahead - simulating an **infinitely heavy truck**. Although other TMA systems have passed the required tests from Report 350 with a blocked truck, optional tests involving low angle and offset impacts have been conducted with a 20,000 lb support truck. Therefore, **only the TTMA-100 has been proven to be truly safe using a support truck weighing more than 20,000 lb**. In fact, there is **no upper limit on the weight of the support truck** used with the TTMA-100.

The TTMA-100 **utilizes tube bursting technology** to allow the trailer's frame elements to be used as the primary energy absorbers. As a result, the entire attenuator is manufactured from **heavy gage steel** to prevent fatigue. Further, the entire trailer steel is **galvanized** to eliminate corrosion problems. This **durable construction and easy attachment** allow the TTMA-100 to be safely used with snow **plows as well as sanding, salting, and chemical treatment operations**.

In summary, the TTMA-100 offers a **major improvement** in work zone safety, while at the same time **reducing the cost** and inconvenience associated with conventional TMA's.



NCHRP Report 350 Optional Test 3-52



NCHRP Report 350 Optional Test 3-53