

Ballast Certifications for Truck Mounted Attenuator Trucks

Various Locations | New Jersey



Van Cleef has performed design services for several various Contractors to provide engineering certifications of the added ballast to shadow vehicles with Truck Mounted Attenuators (TMA). This is to show that the TMA will function properly, and to certify that the truck meets the requirements pursuant to New Jersey Department of Transportation (NJDOT) Standard Specifications for Road and Bridge Construction 2019, Section 159.03.02(6).

NJDOT Specifications require that the TMA be mounted on a vehicle with a gross weight of at least 10 tons (20,000 lbs.). Since trucks used as TMA platforms often weigh less than 10 tons, it is common practice in the industry to add a ballast to the truck to bring its final tare weight into conformance with this requirement. NJDOT Specification Section 159.03.02(6) requires that the method of attachment of the ballast to the truck be certified by a Professional Engineer.

The ballast type and where it is installed can vary depending on the type of truck, but is typically located at the truck bed, and is typically constructed utilizing one of the following various methods:

- Welded steel plates and I-beams
- Concrete filled steel angles, channels and / or plates
- Precast concrete blocks / barrier sections
- Review and assessment of the attachments includes design checks for all welds, bolts, U-bolts, tie-downs or various specialized connections

As part of the design checks, Van Cleef also analyzes the connection of the truck body to the truck frame, which typically consists of U-bolts or welded steel plates.

Our analyses performed provide certification that the attachment of the various ballast types to the TMA shadow vehicle body is capable of withstanding the anticipated impact forces resulting from a full design rated impact to the Truck Mounted Attenuator.

CLIENT CONTACT

Various Clients

PROJECT HIGHLIGHTS

- Structural Design
- Work with Contractors