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## ASTM F2656-07 TEST M30 ON THE RSS-3000 DROP BEAM SYSTEM

by

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1

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16. Abstract

The objective of the test reported herein was to determine if the RSS-3000 Drop Beam System was capable of arresting a 15,000 lb truck traveling between 28.0-37.9 mi/h according to Condition Designation M30 of *ASTM F2656-07*. This condition designation requires the RSS-3000 Drop Beam System to withstand kinetic energy of 451,000 ft-lb.

The 2000 International 4700 single-unit flatbed truck impacted the security device at 90.2 degrees, with the centerline of the vehicle aligned with the centerline of the RSS-3000 Drop Beam System. The acceptable range for impact speed for this M30 test was at 28.0-37.9 mi/h, and the actual impact speed was 30.8 mi/h. The RSS-3000 Drop Beam System brought the vehicle to a complete stop. The cargo remained onboard the vehicle; however, the hood and other parts of the vehicle were thrown beyond the protected edge of the security device. The vehicle was disabled. The leading edge of the cargo bed did not penetrate beyond the inside edge of the RSS-3000 Drop Beam System.

ASTM F2656-07 provides a range of vehicle test designations and penetration levels that allow agencies to select perimeter security devices that satisfy their specific facility needs. The amount of vehicle penetration of the security device at the required impact velocity determines the dynamic penetration rating for each condition designation.

The leading edge of the cargo bed did not penetrate beyond the inside edge of the RSS-3000 Drop Beam System. According to *ASTM F2656-07*, the RSS-3000 Drop Beam System meets Condition Designation/Penetration Rating M30/P1, which allows penetration of less than 3.3 ft when impacted by the medium duty truck at 28.0-37.9 mi/h.

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