



1994

CONNECTICUT IMPACT-ATTENUATION SYSTEM (CIAS)



Connecticut Department of Transportation  
 Bureau of Engineering and Construction  
 2800 Berlin Turnpike  
 Newington, CT 06111

SCI07

SHEET NO.	DATE:
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## INTENDED USE

The Connecticut Impact-Attenuation System (CIAS) is a unique crash cushion that dissipates energy by plastically deforming a cluster of steel cylinders. The CIAS has three cylinders connected to a concrete back-up structure at the rear, five rows of two cylinders each, and a single nose cylinder in the front. Internal stiffening elements in the rear cylinders provide a unique entrapment/redirection response. The CIAS traps errant vehicles when impacted on the side, unless the impact point is so close to the back of the system that sufficient energy dissipation and deceleration responses are unattainable because of the proximity of the rigid hazard. Only in this situation will the CIAS redirect the vehicle back into the traffic flow direction.

The CIAS was first installed, and has been in service since 1984. The cylinders are 48 in. [1219 mm] and 36 in. [914 mm] in diameter, 48 in. [1219 mm] high, and have various wall thicknesses that were carefully selected to reduce the risk of injury to occupants of impacting vehicles. The cylinders are securely connected to form a wedge-shaped array, which rests on steel rails, and is attached to a pre-constructed concrete back-up structure. The CIAS is a non-proprietary system. Complete construction drawings and specifications are available upon request.

The CIAS has been tested and accepted in accordance with NCHRP Report 350, Test Level 3.

## APPROVALS

Federal Highway Administration (FHWA) Acceptance Letter CC-77, April 9, 2002.

## CONTACT INFORMATION

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