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U.S. Department
of Transportation

Federal Highway
Administration

400 Seventh St., S.W.
Washington, D.C. 20590

July 10, 1998

Refer to: HNG-14

Mr. Dave Gertz
Director of Engineering
TraFFix Devices Inc.
220 Calle Pinteroesco
San Clemente, California 92672

(FEDERAL
APPROVAL
I)

Dear Mr. Gertz:

In your June 9 letter to Mr. Richard Powers of my staff, you requested the Federal Highway Administration (FHWA) to accept your TraFFix Devices sand barrel system as a National Cooperative Highway Research Program (NCHRP) Report 350 non-redirecting crash cushion at test level 3 (TL-3). To support this request, you included a copy of a report dated May 18, 1998, that was prepared by KARKO Engineering, entitled "Crash Test Report for TraFFix Sand Barrel Modules Tested to NCHRP 350 Recommendations for TL-3 Nonredirective Crash Cushions" and 16-mm films of the crash tests that were run. You later sent Mr. Powers a video tape of the same tests and additional drawings and material specifications upon his request.

The TraFFix Devices sand barrels are made from rotomolded high density polyethylene plastic in four sizes. The largest barrel is 1220-mm tall and will hold 950 kg of sand. The second largest is 915-mm high and will hold 640 kg of sand. The third barrel is assembled on site by locking two different sizes of half-barrels together and is also 915-mm high. In one orientation, the third barrel will hold 320 kg of sand; when inverted, it can be filled with 180 or 90 kg of sand. All modules are 900-mm wide (outside diameter) at the top and have a wall thickness of 7.62 mm. Each is covered with a plastic lid. Drawings of the three component modules and of the tested 12-module array are shown in Enclosure 1.

The NCHRP Report 350 recommends five tests for a non-redirective crash cushion, specifically, tests 3-40 through 3-44. These tests were all run and their results are summarized in Enclosure 2.

Based on our review of the information you presented, we agree that the Traffix sand barrels, in the twelve-module array that was tested, satisfy the evaluation criteria for a TL-3 crash cushion and may be used on the National Highway System (NHS) when selected by a highway agency. This acceptance is based only on the crash performance of the tested array and the assumption that the modules you produce will be manufactured to the same dimensions and specifications as the tested modules. Since this product is patented, its use on Federal-aid projects, except exempt, non-NHS projects, is subject to the conditions listed in Title 23, Code of Federal Regulations, Section 635.411 when its use is specified by the contracting authority. Enclosure 3 is a copy of this regulation for your ready reference. Please call Mr. Powers at (202) 366-1320 if you have any questions regarding this action.

Sincerely yours,

Dwight A. Horne
Dwight A. Horne
Chief, Federal-Aid and Design Division

3 Enclosures