



U.S. Department
of Transportation
**Federal Highway
Administration**

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

February 12, 1998

Refer to: HNG-14

AIRMAIL

Mr. L. Cicinnati
METALMECCANICA FRACASSO spa
Research and Development
Via Barbariga N.7
30032 Fiesso d'Artico
Venezia/Italia
ITALY

Dear Mr. Cicinnati:

In response to your letter of May 2, 1997, wherein you requested that the 1180-mm high Fracasso 3N Median barrier be accepted as a National Cooperative Highway Research Program (NCHRP) Report 350 test level (TL) 5 or 6 traffic barrier, I requested additional information to assist in our review process. Specifically, in my June 17, 1997, response to you, I requested information on passenger compartment intrusion on the vehicle used in test FRA/BSI-01-006, and on the dimensions and ballast center of gravity on the tractor-trailer unit used in test FR BSI 06-741.

In your January 30 response, you provided occupant compartment intrusion information for crash test no. BAST/94 7 D 001/ELL, which was a 20-degree impact at 100 km/h with a 900-kg automobile into your 1150-mm high 3N barrier, rather than your 1180-mm high 3N Double Space Safety Barrier. However, in comparing the geometry of the two systems, we have concluded that the 3N barrier appears to be the more critical design because its single lower rail has a greater lateral offset from the face of the upper rail, thus increasing the likelihood of the small car under riding the top rail. Therefore, we are willing to consider the results of the reported test to be applicable to the 3N Double Space Safety Barrier. You reported that the maximum passenger compartment deformations in no case exceeded 10 percent of the selected pre-crash interior dimensions shown in Appendix E of the NCHRP Report 350.

Rather than providing dimensions for the truck used in test FR BSI-06-741, you submitted information on a new test, BAST/97 7 D 07/SCHE, which was a 20 degree impact at 65 km/h with a 38 000-kg tractor trailer into the 3N Double Space Safety Barrier. Although the impact speed was less than the 80 km/h recommended in the NCHRP Report 350 for a TL-5 impact, the increased impact angle (from 15 degrees to 20 degrees) produced a higher Impact Severity (IS) than recommended under the NCHRP Report 350. This fact, plus the similarity in dimensions of your test vehicle to the NCHRP Report 350 test vehicle, including the height of the ballast center of gravity above the ground, will allow us to accept this test as approximately equivalent to the NCHRP Report 350 test.

Based on our analysis of the data you sent us, we consider the 1180-mm high 3N Double Space Safety Barrier as shown in Enclosure 1 to be acceptable for use as a TL-5 barrier on the National Highway System in the U.S. if such use is requested by a State transportation agency. As noted in our November 17, 1994, acceptance letter for the 3N barrier, Section 635.410 of Title 23 CFR requires steel products used in highway construction to be made in the U.S. from domestic steel. Section 635.411 of the same regulations addresses the use of patented or proprietary products on highway construction projects. Since both of these provisions will apply to the 3N Double Space Safety Barrier, copies of each are enclosed for your reference.

Sincerely yours,



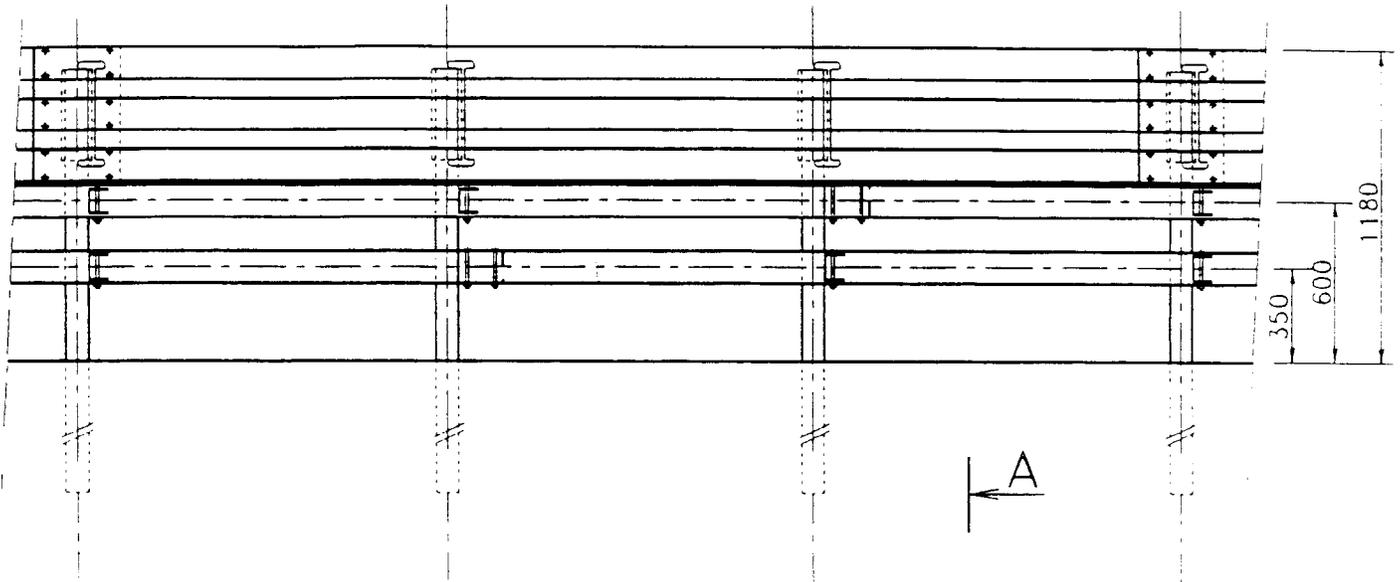
Dwight A. Horne
Chief, Federal-Aid and Design Division

3 Enclosures

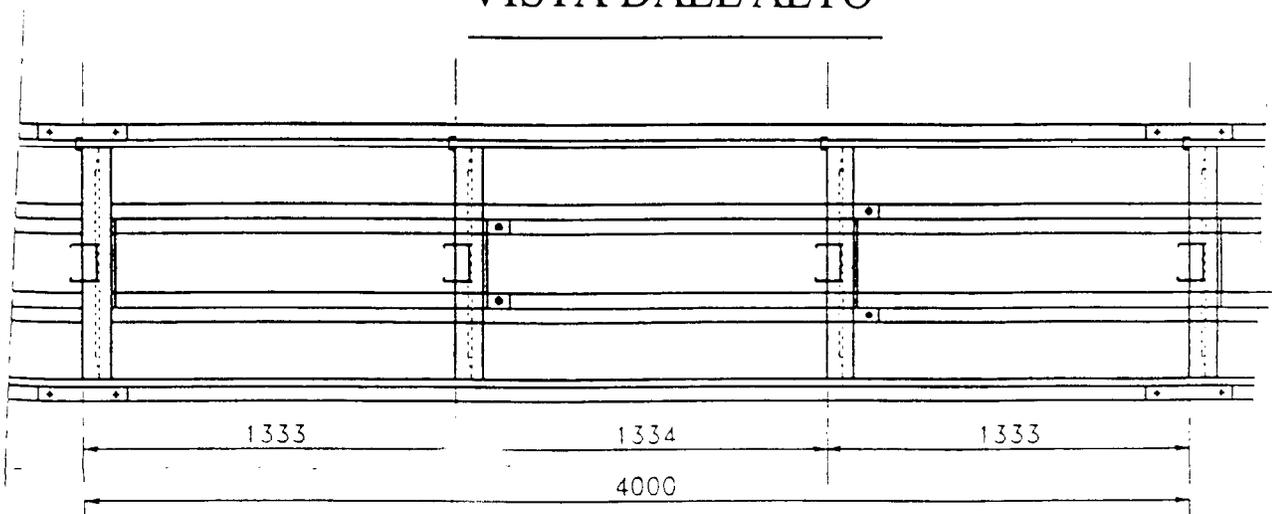
FRA/BSI-01/006

A. CARATTERISTICHE GEOMETRICHE DEL DISPOSITIVO

VISTA LATERALE



VISTA DALL'ALTO



Sec. 635.410 Buy America requirements.

(a) The provisions of this section shall prevail and be given precedence over any requirements of this subpart which are contrary to this section. However, nothing in this section shall be construed to be contrary to the requirements of Sec. 635.409(a) of this subpart.

(b) No Federal-aid highway construction project is to be authorized for advertisement or otherwise authorized to proceed unless at least one of the following requirements is met:

(1) The project either: (i) Includes no permanently incorporated steel or iron materials, or (ii) if steel or iron materials are to be used, all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes which protect or enhance the value of the material to which the coating is applied.

(2) The State has standard contract provisions that require the use of domestic materials and products, including steel and iron materials, to the same or greater extent as the provisions set forth in this section.

(3) The State elects to include alternate bid provisions for foreign and domestic steel and iron materials which comply with the following requirements. Any procedure for obtaining alternate bids based on furnishing foreign steel and iron materials which is acceptable to the Division Administrator may be used. The contract provisions must (i) require all bidders to submit a bid based on furnishing domestic steel and iron materials, and (ii) clearly state that the contract will be awarded to the bidder who submits the lowest total bid based on furnishing domestic steel and iron materials unless such total bid exceeds the lowest total bid based on furnishing foreign steel and iron materials by more than 25 percent.

(4) When steel and iron materials are used in a project, the requirements of this section do not prevent a minimal use of foreign steel and iron materials, if the cost of such materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the steel and iron products as they are delivered to the project.

(c) (1) A State may request a waiver of the provisions of this section if;

(i) The application of those provisions would be inconsistent with the public interest; or

(ii) Steel and iron materials/products are not produced in the United States in sufficient and reasonably available quantities which are of a satisfactory quality.

(2) A request for waiver, accompanied by supporting information, must be submitted in writing to the Regional Federal Highway Administrator (RFHWA) through the FHWA Division Administrator. A request must be submitted sufficiently in advance of the need for the waiver in order to allow time for proper review and action on the request. The RFHWA will have approval authority on the request.

(3) Requests for waivers may be made for specific projects, or for certain materials or products in specific geographic areas, or for combinations of both, depending on the circumstances.

(4) The denial of the request by the RFHWA may be appealed by the State to the Federal Highway Administrator (Administrator), whose action on the request shall be considered administratively final.

(5) A request for a waiver which involves nationwide public interest or availability issues or more than one FHWA region may be submitted by the RFHWA to the Administrator for action.

(6) A request for waiver and an appeal from a denial of a request must include facts and justification to support the granting of the waiver. The FHWA response to a request or appeal will be in writing and made available to the public upon request. Any request for a nationwide waiver and FHWA's action on such a request may be published in the Federal Register for public comment.

(7) In determining whether the waivers described in paragraph (c)(1) of this section will be granted, the FHWA will consider all appropriate factors including, but not limited to, cost, administrative burden, and delay that would be imposed if the provision were not waived.

(d) Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section.

[48 FR 53104, Nov. 25, 1983, as amended at 49 FR 18821, May 3, 1984; 58 FR 38975, July 21, 1993]

Editorial Note: For a waiver document affecting Sec. 635.410 see 60 FR 15478, Mar. 24, 1995.

Sec. 635.411 Material or product selection.

(a) Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- (1) Such patented or proprietary item is purchased or obtained through competitive bidding with equally suitable unpatented items; or
- (2) The State highway agency certifies either that such patented or proprietary item is essential for synchronization with existing highway facilities, or that no equally suitable alternate exists; or
- (3) Such patented or proprietary item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.

(b) When there is available for purchase more than one nonpatented, nonproprietary material, semifinished or finished article or product that will fulfill the requirements for an item of work of a project and these available materials or products are judged to be of satisfactory quality and equally acceptable on the basis of engineering analysis and the anticipated prices for the related item(s) of work are estimated to be approximately the same, the PS&E for the project shall either contain or include by reference the specifications for each such material or product that is considered acceptable for incorporation in the work. If the State highway agency wishes to substitute some other acceptable material or product for the material or product designated by the successful bidder or bid as the lowest alternate, and such substitution results in an increase in costs, there will not be Federal-aid participation in any increase in costs.

(c) A State highway agency may require a specific material or product when there are other acceptable materials and products, when such specific choice is approved by the Division Administrator as being in the public interest. When the Division Administrator's approval is not obtained, the item will be nonparticipating unless bidding procedures are used that establish the unit price of each acceptable alternative. In this case Federal-aid participation will be based on the lowest price so established.

(d) Appendix A sets forth the FHWA requirements regarding (1) the specification of alternative types of culvert pipes, and (2) the number and types of such alternatives which must be set forth in the specifications for various types of drainage installations.

(e) Reference in specifications and on plans to single trade name materials will not be approved on Federal-aid contracts.