



U.S. Department
of Transportation

**Federal Highway
Administration**

Mr. Brent Carney
R& P Products
12559 Lincoln Street, SE.
Paris, Ohio 44669

November 3, 1999

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

HMHS-B59

Dear Mr. Carney:

On October 26, I received your response to my July 23 request for additional information on your recycled plastic block. Your original letter on July 7 requested the Federal Highway Administration's (FHWA) acceptance of your product for use with strong post, metal beam guardrail on the National Highway System (NHS).

You conducted pendulum tests of your product using a 1347 kg (2970 pound) weight dropped through a 3-meter (10-foot) vertical distance to strike your recycled block bolted to a standard W150 X 13.5 steel post set in compacted soil. The videotape and supplemental information you provided indicate that in all tests the posts failed near ground line and the offset blocks remained essentially intact. Your R&P offset block is comprised of 60-70 percent ground rubber from used tires, 30-40 percent polypropylene, and 1 and 1/4 percent carbon black/UV stabilizer. You also reported that the blocks are formed in a process that is a combination of injection and extrusion molding. The dimensions of the R&P block are nominally 150 mm x 200 mm x 360 mm (6 inches x 8 inches x 14 inches) with a 110-mm (4.3-inch) wide x 7-mm (1/4-inch) deep routing on the back side to fit against the flange of the steel support post. When used with rectangular or round wood posts, the routing is not needed. In the latter case, the block is produced with a curved back side to match the round post.

Based on our review of the information you provided, the R&P Block is considered acceptable for use on the NHS when molded to the same dimensions and composed of the same materials as the tested blocks. As with all other recycled blocks we have reviewed, this FHWA acceptance is based solely on the reported impact behavior of your product and does not address the long-term performance or durability of the product. Since the R&P Block is proprietary, 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. A copy of this regulation is enclosed for your ready reference. If you have any questions, please call Mr. Richard Powers at (202) 366-1320.

Sincerely yours,

Dwight A. Horne
Director, Office of Highway Safety Infrastructure

Enclosure

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.