the materials cost to extend one guardrail an additional 30 inches (760 mm) will be less than the present value of the benefits of making the change. Further, the costs of any design changes can be amortized over the number the bunk beds manufactured after the design change is made. Thus, the costs of any design change will be nominal.

3. Lower bunk end structures. The Commission is aware of a death, involving entrapment in the end structures of the lower bunk, occurring in a scenario not currently addressed by the voluntary standard. This death would be addressed by extending the voluntary standard’s lower bunk end structures entrapment provisions from 9 inches above the lower bunk’s sleeping surface to the bottom of the upper bunk and by also including a test for neck entrapment in this area. The Commission expects the costs of this requirement to be design-related only, and small. Indeed, for some bunk beds, materials costs may decrease since less material may be required to comply with these requirements than is currently being used. Again, the design costs for these modifications to the end structures can be amortized over the subsequent production run of the bed.

4. Effect on market. The small additional costs from any wall-side guardrails and end-structure modifications are not expected to affect the market for bunk beds, either alone or added to the costs of compliance to ASTM’s provisions.

5. Conclusion. The Commission has no reason to conclude that any of the standard’s requirements will have costs that exceed the requirement’s expected benefits. Further, the total effect of the rule is that the benefits expected from the rule bear a reasonable relationship to its costs.

E. The rule imposes the least burdensome requirement that presents or adequately reduces the risk of injury for which the rule is being promulgated. 1. The Commission considered relying on the voluntary standard, either alone or combined with a third-party certification program. However, the Commission concluded that a mandatory program will be more effective in reducing these deaths, each of which is caused by an unreasonable risk of entrapment. Accordingly, these alternatives would not prevent or adequately reduce the risk of injury for which the rule is being promulgated.

2. The Commission also considered a suggestion that bunk beds that conformed to the voluntary standard be so labeled. Consumers could then compare conforming and nonconforming beds at the point of purchase and make their purchase decisions with this safety information in mind. This, however, would not necessarily reduce injuries, be-
with these products. The ban is applicable to those refuse bins having an internal volume one cubic yard or greater by actual measurement, which will tip over when subjected to either of the forces described in §1301.7 and which are in commerce or being distributed in commerce on or after the effective date of the ban.

(c) When such refuse bins are the subject of rental or lease transactions between owners of refuse bins or between refuse collection agencies and persons who make such refuse bins available for use by the public, such transactions are considered to be distributions in commerce and therefore come within the scope of this ban. Refuse collection agencies or owners of refuse bins who rent or lease refuse bins to persons who make them available for use by consumers are considered to be distributors; the persons to whom refuse bins are rented or leased are not considered to be distributors.

(d) On or after the effective date of this rule it shall be unlawful to manufacture for sale, offer for sale, or distribute in commerce, the unstable refuse bins described in this rule.

(e) This rule, effective November 13, 1981, is partially revoked and therefore does not apply to front-loading, straight-sided refuse bins without trunnion bars having an internal volume capacity of 1, 1½, or 2 cubic yards, of the following external dimensions:

<table>
<thead>
<tr>
<th>Internal volume</th>
<th>Length (inches)</th>
<th>Width (inches)</th>
<th>Height¹</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cubic yard</td>
<td>70–72</td>
<td>21–23</td>
<td>29–31</td>
<td>29–31</td>
</tr>
</tbody>
</table>

¹ Does not include height of wheels.


The purpose of this rule is to ban those refuse bins which come under the scope of this ban because they present an unreasonable risk of injury due to tip-over that can result in serious injury or death from crushing.

§ 1301.3 Findings.

(a) Risk of injury. The Commission has studied 19 in-depth investigation reports of accidents associated with tip-over of unstable refuse bins. The 19 accidents, which involved 21 victims, resulted in 13 deaths. Of the 21 victims, 20 were children 10 years of age and under. Additionally, Commission records show three death certificates for victims, under 5 years of age, who were killed by refuse bins tipping over. Therefore, the Commission finds that unreasonable risks of injury or death from crushing due to tip-over are associated with certain unstable refuse bins having an internal volume one cubic yard or greater, which unreasonable risk this banning rule is designed to eliminate or reduce.

(b) Products subject to this ban. (1) The Commission finds that the types of products subject to this ban are those manufactured metal receptacles known in the solid waste collection trade as containers, refuse bins, buckets, boxes or hoppers, with actual internal volumes of one cubic yard or greater, used for the storage and transportation of solid waste. They are fabricated in numerous sizes and configurations for use with rear, side, front, hoist and roll-off loaded trash collection trucks and are used by private firms and public agencies.

(2) Although unstable refuse bins subject to this ban may be in various forms and shapes, the Commission’s in-depth investigations into accidents associated with metal refuse containers indicate that most accidents have occurred with slant-sided metal refuse bins which are used by rear and side-loaded trucks. Therefore, the Commission bases its economic analysis of the potential impact of the ban upon the population of these bins. Certain refuse bins such as front loaded, roll-off, box and other types of large or broad based bins, because of their configuration, bulk and weight are likely to be inherently stable and are therefore not included in the population of potentially unstable bins studied in this economic analysis.