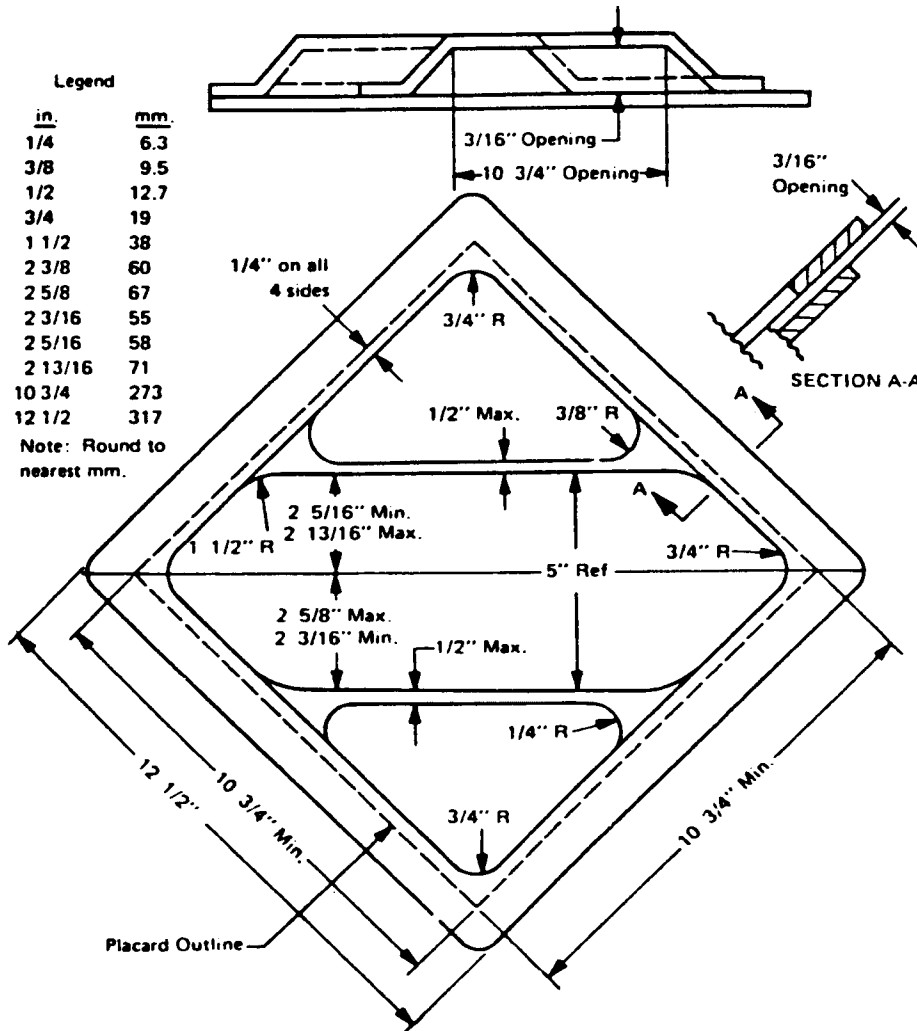


APPENDIX C TO PART 172—DIMENSIONAL SPECIFICATIONS FOR RECOMMENDED PLACARD HOLDER



APPENDIX D TO PART 172—RAIL RISK ANALYSIS FACTORS

A. This appendix sets forth the minimum criteria that must be considered by rail carriers when performing the safety and security risk analyses required by §172.820. The risk analysis to be performed may be quantitative, qualitative, or a combination of both. In addition to clearly identifying the hazardous material(s) and route(s) being analyzed, the analysis must provide a thorough

description of the threats, identified vulnerabilities, and mitigation measures implemented to address identified vulnerabilities.

B. In evaluating the safety and security of hazardous materials transport, selection of the route for transportation is critical. For the purpose of rail transportation route analysis, as specified in §172.820(c) and (d), a route may include the point where the carrier takes possession of the material and all track and railroad facilities up to the point

where the material is relinquished to another entity. Railroad facilities are railroad property including, but not limited to, classification and switching yards, storage facilities, and non-private sidings; however, they do not include an offeror's facility, private track, private siding, or consignee's facility. Each rail carrier must use best efforts to communicate with its shippers, consignees, and interlining partners to ensure the safety and security of shipments during all stages of transportation.

C. Because of the varying operating environments and interconnected nature of the rail system, each carrier must select and document the analysis method/model used and identify the routes to be analyzed.

D. The safety and security risk analysis must consider current data and information as well as changes that may reasonably be anticipated to occur during the analysis year. Factors to be considered in the performance of this safety and security risk analysis include:

1. Volume of hazardous material transported;
2. Rail traffic density;
3. Trip length for route;
4. Presence and characteristics of railroad facilities;
5. Track type, class, and maintenance schedule;
6. Track grade and curvature;
7. Presence or absence of signals and train control systems along the route ("dark" versus signaled territory);
8. Presence or absence of wayside hazard detectors;
9. Number and types of grade crossings;
10. Single versus double track territory;
11. Frequency and location of track turn-outs;
12. Proximity to iconic targets;
13. Environmentally sensitive or significant areas;
14. Population density along the route;
15. Venues along the route (stations, events, places of congregation);
16. Emergency response capability along the route;
17. Areas of high consequence along the route, including high consequence targets as defined in §172.820(c);
18. Presence of passenger traffic along route (shared track);
19. Speed of train operations;
20. Proximity to en-route storage or repair facilities;
21. Known threats, including any non-public threat scenarios provided by the Department of Homeland Security or the Department of Transportation for carrier use in the development of the route assessment;
22. Measures in place to address apparent safety and security risks;
23. Availability of practicable alternative routes;

24. Past incidents;
25. Overall times in transit;
26. Training and skill level of crews; and
27. Impact on rail network traffic and congestion.

[73 FR 20772, April 16, 2008]

## PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

### Subpart A—General

#### Sec.

- 173.1 Purpose and scope.
- 173.2 Hazardous materials classes and index to hazard class definitions.
- 173.2a Classification of a material having more than one hazard.
- 173.3 Packaging and exceptions.
- 173.4 Small quantity exceptions.
- 173.4a Excepted quantities.
- 173.5 Agricultural operations.
- 173.5a Oilfield service vehicles and mechanical displacement meter provers.
- 173.5b Portable and mobile refrigeration systems.
- 173.6 Materials of trade exceptions.
- 173.7 Government operations and materials.
- 173.8 Exceptions for non-specification packagings used in intrastate transportation.
- 173.9 Transport vehicles or freight containers containing lading which has been fumigated.
- 173.10 Tank car shipments.
- 173.12 Exceptions for shipment of waste materials.
- 173.13 Exceptions for Class 3, Divisions 4.1, 4.2, 4.3, 5.1, 6.1, and Classes 8 and 9 materials.

### Subpart B—Preparation of Hazardous Materials for Transportation

- 173.21 Forbidden materials and packages.
- 173.22 Shipper's responsibility.
- 173.22a Use of packagings authorized under special permits.
- 173.23 Previously authorized packaging.
- 173.24 General requirements for packagings and packages.
- 173.24a Additional general requirements for non-bulk packagings and packages.
- 173.24b Additional general requirements for bulk packagings.
- 173.25 Authorized packagings and over-packs.
- 173.26 Quantity limitations.
- 173.27 General requirements for transportation by aircraft.
- 173.28 Reuse, reconditioning and remanufacture of packagings.
- 173.29 Empty packagings.
- 173.30 Loading and unloading of transport vehicles.