Chapter 6

Safety of Domestic High Speed Passenger Rail Operations:
Safety Is Good Business

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ABSTRACT

This chapter examines safety related to high and higher speed inter-city passenger rail operations. Generally, most risk related to rail travel is associated with collisions between on-track equipment and vehicles and pedestrians at level crossings. A larger amount of fatalities, but not necessarily systemic risk, is due to trespassing on the rail right-of-way. A third aspect of risk related to rail operations lies in rail to rail collisions and derailments, some of which may be catastrophic. A discussion of safety programs implemented by the rail industry at national and international levels concludes the chapter.

INTRODUCTION

All transportation operations pose safety risks to the users of the transportation system, as well as to the general public; railway operations are no exception. The introduction provides a general overview of transportation safety in the United States in order to set the stage for a more detailed examination of America’s only inter-city rail passenger operation – the National Railroad Passenger Corporation.
(Amtrak). For the Introduction, data was obtained from the United States Department of Transportation’s Bureau of Transportation Statistics (BTS) for three ten-year intervals of 1990, 2000 and 2010. The BTS provides a wide variety of data covering all modes of transport in the U.S.

In the United States in 2010, 32,999 persons were fatally injured on the highway system; of these, Figure 1 indicates 12,491 were passenger car occupants (BTS, 2014).

On the general railway network of the United States, 600 people were killed in 2010; of these, 134 were involved in collisions with Amtrak operated passenger trains or were casualties related to Amtrak operations (FRA, 2014). The general railway network of the United States, as defined by the Federal Railroad Administration (FRA), “refers to the network of standard gage track over which goods may be transported throughout the nation and passengers may travel between cities and within metropolitan and suburban areas” (CFR, 2014). The general railway network comprises about 140,000 route miles and is generally privately owned by seven major railroads, referred to as Class 1 railroads due their having annual revenue greater than $433.2 million, along with 21 regional and 510 local railroads (STB, 2014).

To round out the introductory summary, in 2010, 473 people were killed in general aviation incidents and 232 were killed in transit operations (bus, light rail, trolley) as reported to the Federal Transit Administration (FTA) as illustrated in Table 1 (BTS, 2014).

Table 1 indicates that since 1990, fatalities in the highway, transit and air modes have decreased significantly, yet fatalities due to Amtrak operations have remained
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