

indicates that system safety is mostly concerned with operations and procedures, and implies that safety can be 'audited' into a system. While the APTA Manual does mention that system safety is needed during the design phases, the emphasis is clearly on later phases \* \* \*. Another potential concern with the APTA Manual is that it describes the audit process in terms of determining whether or not the transit agency is following its system safety program, but is silent on the issue of determining whether or not that program can be expected to accomplish its goals. While this is appropriate for an organization such as APTA, it may not be appropriate for an Oversight Agency. It may be important for the Oversight Agency to review the Transit Agencies' plans with an eye toward trying to determine whether or not the plan is likely to result in an effective system safety program \* \* \*.

This commenter also noted that MIL-STD 882C incorporates changes concerning "Software Safety."

**FTA Response.** This commenter has certainly made a convincing case for the adoption of MIL-STD 882B or 882C, and we emphasize that, although we have adopted the proposal as published in the NPRM, we have not precluded the use of either of those Military Standards. Instead, we have adopted the APTA Guidelines as a minimum standard the oversight agency must meet or exceed; because the APTA Guidelines were derived from MIL-STD 882B, an oversight agency that bases its system safety program standard on either MIL-STD 882B or 882C should meet or exceed the requirements of the APTA Guidelines. Moreover, by adopting the APTA Guidelines as a minimum standard, we accomplish two objectives: establishing a nation-wide baseline standard and giving a State more flexibility and control in developing its own program.

We do, in fact, urge the oversight agency to assess the APTA Guidelines in relation to MIL-STD 882B or 882C and decide which one best addresses its needs. We believe that an oversight agency that uses either MIL-STD 882B or 882C as a basis for its system safety program standard is well served, and we urge an oversight agency to at least consider those Military Standards in developing its own oversight program.

Although we have not mandated the use of MIL-STD 882B or 882C, we have addressed one of the concerns of this commenter, by adding a provision in the rule to require the oversight agency to determine the efficacy of the transit agency's system safety program plan and require the transit agency to update it, if necessary.

This commenter also commented that the MIL-STD 882C's section on

"Software Safety" is "of critical importance to modern transit systems"; we recommend that both the oversight agency and the transit agency assess whether that section meets the safety needs of the "rail fixed guideway system."

#### *C. System Safety Program Plan—the Six Factors.*

As mentioned above, under the NPRM the transit agency was to develop a system safety program plan that complied with the oversight agency's system safety program standard. In the preamble to the NPRM, we suggested that the system safety program plan should: (1) be endorsed by top management; (2) establish the safety goals and objectives of the transit agency; (3) identify safety issues; (4) require cooperation within the transit agency to address the identified safety issues; (5) recognize that achieving safety goals and objectives may require the involvement of entities other than the transit agency; and (6) provide a schedule for the implementation and revision of the system safety program plan. We then asked for comment on whether we should require these six factors in the final rule.

Only seven commenters responded to this issue, and none of them opposed the general concept of the six factors. Several of the commenters noted, however, that all six factors are included in the APTA Guidelines, making them unnecessary if FTA incorporates the APTA Guidelines into the final rule.

**FTA Response.** Since the six factors are included in the APTA Guidelines, which we have incorporated by reference into the final rule, the oversight agency must require the transit agency to address all six factors in its system safety program plan.

#### *D. Planning, Design, and Construction.*

In the preamble to the NPRM, we noted that section 5330 may be read

To apply only to the operation of rail fixed guideway systems, which would lead to the conclusion that the NPRM covers only those rail fixed guideway systems already in existence, or other systems only when they commence operations. On the other hand, if we were to interpret section [5330] to apply during the planning, design, and construction phases of a system, we would then have to decide when the State would be required to comply with this proposed rule. This would be especially difficult for those States where systems are in the planning stage, which can be a lengthy process, and it would be difficult to specify at what point the oversight agency would have to be established.

Of the commenters that responded to this issue, only a few favored covering the pre-operational phases of the rail fixed guideway system's life cycle. One of these commenters stated that "[t]o ensure that the design of facilities and systems results in optimal safety, the system safety approach has been shown to be highly effective and cost efficient."

The vast majority of the commenters were against covering the planning, design, and construction phases in this rule, stating in effect, that other mechanisms, *i.e.*, FTA's Program Management Oversight (PMO) process and the construction contract itself can ensure that safety is planned, designed, and constructed into new rail fixed guideway systems.

**FTA Response.** Although we agree that a system safety program plan should cover the planning, design, and construction of a "rail fixed guideway system," the language of section 5330 leads us to conclude that it covers only operating systems or systems about to commence operations. Section 5330 directs a State to establish and carry out a "safety program plan for each [rail] fixed guideway mass transportation system in the State," never mentioning the planning, design, and construction phases of a system's life cycle. Moreover, because of the lengthy planning, design, and construction phases of a system's life cycle, we believe that it is impractical, especially for a State planning its first "rail fixed guideway system," to require that a State create a bureaucracy years before a single passenger is served, when there are other mechanisms available to ensure that safety is designed, planned, and constructed into a new "rail fixed guideway system." This does not mean, however, that a State is precluded from creating an oversight agency that oversees the planning, design, and construction of a "rail fixed guideway system." On the contrary, we encourage the States to do so, although we do not, under this rule, require it. Also, we encourage the oversight agencies to work with PMOs to ensure that safety is designed, planned, and constructed into new "rail fixed guideway systems."

#### *E. Accountability Factor.*

While drafting the NPRM, we were concerned that the development of a State Safety Oversight Program would not be complete without some mechanism to ensure transit agencies' commitment to safety. To "institutionalize" this commitment and to meet the requirements of section 5330, we developed the "accountability factor," in which the oversight agency would require a transit agency to