

- Very few respondents suggested mandatory requirements in this regard.
- Some of the respondents suggested regulations on use of life-cycle costing to make policy-level decisions on choice of highway material.

When asked if “user-cost” could be a useful factor in decisionmaking for alternative project designs, about 10 percent of the respondents who provided comments on specific questions in the ANPRM said no; 10 percent did not respond; 1 percent of the responses were unclear; while an overwhelming majority of 79 percent said yes. Of the respondents that said yes, 85 percent belonged to DOTs, 4 percent were from private agencies, 10 percent represented trade associations, and 2 percent did not indicate their agency affiliations. When asked if analytical tools should be used for the evaluation of various work zone design alternatives and their estimated impacts, 1 percent said no; 39 percent did not respond; 18 percent of the responses were unclear; while 42 percent said yes. Of the respondents that said yes, 79 percent belonged to DOTs, 3 percent were from private agencies, 14 percent represented trade associations, and 3 percent did not indicate their agency affiliations.

When asked whether utility delays have been cited as obstacles to efficient project delivery, several respondents said yes; while a smaller number said no. Several suggestions were made on how best to address utility delays in project design.

*ANPRM “Project Design for Construction and Maintenance”
Section—FHWA Response and
Proposed Action*

The ANPRM comments led the FHWA to conclude that the respondents acknowledge the need to account for work zone impacts of projects and the associated costs to the public; and to consider alternative strategies in project design and decisionmaking such as, choice of longer-lasting materials, complete road-closures, work during night-time and off-peak hours, innovative contracting techniques, and utility coordination. It is also clear that the respondents prefer guidance in this regard rather than regulation, and that very restrictive regulations may affect innovation and creativity in the development of work zone impact mitigation strategies. Therefore, the FHWA proposes to amend the current regulation by introducing a new section on work zone impacts analysis that will govern decisionmaking on project design strategies and work zone impacts mitigation alternatives. These proposed

amendments provide flexibility to States in scaling the level of detail required for the impacts analysis and evaluation of alternative project options according to the unique characteristics of each project and their respective program goals.

*ANPRM “Managing for Mobility and Safety In and Around Work Zones”
Section—Comments Summary*

Technology is constantly evolving and there are many methods that can be applied to managing traffic in and around work zones. The application of Intelligent Transportation Systems (ITS) for purposes, such as, traffic management, automated enforcement, and traveler information is a useful method to improve transportation safety and mobility. The current and future safety and mobility challenges presented by work zones may require Traffic Control Plans (TCPs) to include traffic management, enforcement and operations considerations (such as ITS based traffic control and traveler information, speed management and enforcement, incident and emergency management, *etc.*), security considerations, and other considerations (for example, utility location and coordination information). The purpose of the managing for mobility and safety section was therefore to identify the need for expanding the content of TCPs and to outline improved methods and strategies to manage, operate, and enforce work zones.

In general, several respondents indicated the need for comprehensive traffic mitigation planning for work zones across all stages of project development and delivery that would reduce the safety and mobility impacts of work zones, by incorporating appropriate mitigation strategies.

About 70 percent of the respondents who commented on specific questions in the ANPRM indicated that the scope of TCPs should be expanded to consider sustained traffic management, operations and enforcement; about 12 percent said no; 12 percent did not respond; while 6 percent of the responses were unclear. Of the respondents that stated that the scope of TCPs should be expanded, 77 percent belonged to DOTs, 2 percent were from other public agencies, 4 percent were from private agencies, 15 percent represented trade associations, and 2 percent did not indicate their agency affiliations. Based on the general preference of the respondents to the ANPRM, and on subsequent outreach sessions conducted by the FHWA, it is evident that the scope of TCPs should be expanded to account for sustained

traffic management, operations and enforcement for some projects.

With respect to the deployment of uniformed police officers in work zones, it was evident from the ANPRM comments that several States have increasingly been deploying uniformed police officers on roadway construction projects. Respondents indicated that these practices are successful in increasing motorist compliance, regulating work zone travel speeds, and in reducing crashes.

When asked if TCPs should consider the security aspects of the construction of critical transportation infrastructure, about 30 percent of the respondents who commented on specific questions in the ANPRM said no; 15 percent did not respond; 9 percent of the responses were unclear; while 46 percent said yes. Further, when asked if TCPs should consider the security aspects of work zone activity in the vicinity of critical transportation or other critical infrastructure, 33 percent of the respondents said no; 13 percent did not respond; 6 percent of the responses were unclear; while 48 percent said yes. Several respondents commented that TCP's may not be the most appropriate vehicles for security considerations. Security considerations, where applicable, need to be addressed to the extent possible in other comprehensive security planning efforts. Such security plans should involve work zone considerations. At the same time, many respondents also indicated that emergency-related traffic management implications do apply to work zones, *e.g.*, keeping work zone lanes open during emergency evacuations such as hurricanes, and other natural or man-made disasters.

When asked if more flexibility should be allowed in the development of TCPs, 30 percent of the respondents who commented on specific questions in the ANPRM said no; about 25 percent did not respond; 7 percent of the responses were unclear; while 37 percent said yes. Of the respondents that said yes, 80 percent belonged to DOTs, 4 percent were from other public agencies, 8 percent represented trade associations, and 8 percent did not indicate their agency affiliations. While a significant percentage of the respondents said “no”—they qualified their assertion by stating that flexibility should be allowed in terms of allowing participation from law enforcement, public, and contractors in TCP development, but it should ultimately be the project owner—State DOT or other transportation agency who should develop and approve TCPs. Further, it may be noted that § 630.1010(a)(4) of the