

prepared to supplement the measures specified by the local ordinances to achieve the ultimate control objectives. With increased local training and enforcement comes a greater emphasis on the performance of the grading and erosion and sediment control plans. Unfortunately, erosion and sediment control plans are often the last thing designed and the first thing installed. Installation is haphazard or incomplete, and maintenance is limited to responding to complaints and inspections.

Although the landowner ultimately has responsibility for the proper management and control of the construction site, it is the site manager that has day-to-day control. The design professional is often called upon to modify the erosion and sediment control plan to meet site conditions or to address failures. The development of the erosion and sediment control plan should include the management of the facilities for the duration of the entire project, not simply the start and end of the project. As with any element of a project, it should be planned, responsibility and resources assigned, and performance expectations communicated, and then performance should be monitored and confirmed from time to time. Of the eight causes of failure listed in Table 3.8, the site manager actually has control over only three; compensating for seasonal differences, installation, and maintenance of facilities (Figs. 3.34 and 3.35). Most of the causes of failure are related to design. Even the best management plan cannot overcome a design problem or extreme weather conditions.

Erosion and sediment controls are often designed without regard for the dynamics of a construction site. Designs tend to address specific moments in the course of the site work and not the constantly changing site conditions. The contractor should review the erosion and sediment control plan to be sure that there is adequate room to store topsoil or excess material. If storage is required, is there a practical pattern for the use of heavy equipment?

Temporary drainage conditions may also present a problem if not planned for. The installation of sediment traps and basins may have to consider an interim step or two if significant changes in grade are proposed. Are these interim steps provided for in the plan? Most important to the contractor, does the plan make sense? A dialogue between the designer and the contractor to exchange ideas and solutions can be an important step in the successful erosion and sediment control plan. The designer is in the best position to initiate this meeting. If a

**TABLE 3.8 Common Causes of Erosion and Sediment Control Failure**

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Poor site analysis
Design incompatible with site
Inadequately sized facilities
Wrong materials specified or used
Poor installation
Poor maintenance
Failure to compensate for seasonal differences or extreme weather conditions

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