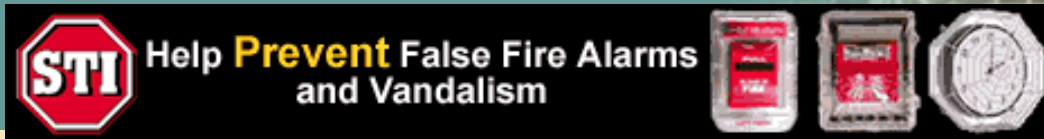


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## MAINTENANCE

### CARPET CARE Walking on the Edge

For many schools and universities, the summer months are the prime floor and carpet cleaning season. Areas such as hallways, classrooms, and meeting rooms that are difficult to close down because of the amount of time necessary to clean them and their heavy use during the regular school year are now freely available with little or no use or foot traffic.

Astute facility managers are well aware of cleaning patterns in their facilities. They know that certain areas require more attention than others simply by how they are used, where they are located, or the number of people using them. Interestingly, another pattern that is also often noted, in both light-use and high-traffic areas, is referred to as pathway soiling. This is especially noticeable on carpeted floors and refers to the gray or darkened area usually found in the center of hallways or the key walkways into classrooms, halls and other locations.

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*Many are aware of the eye-opening studies that were released by ISSA, which found that building users can track in up to 24 pounds of dirt through a building's key entries during a 20-day work period.*

The rest of the carpet may look perfectly clean. In fact, often when carpeting is replaced the outer edges look almost brand new while the center pathways are compressed, soiled, and possibly even torn. Because of the costs involved to replace the carpet, facility managers often wish there was a way to get building users to walk on the edges of hallways, and not the centers, and change their traffic patterns in other areas.

Pathway soiling occurs because of food and drink spills as well as water-soluble soils such as “gray” moisture that collect on shoes. In addition, solvent-soluble soils such as grease, oil, or tar can collect on shoe bottoms as well, and these are then transported onto carpeted areas, especially in those areas near building entries. Further, dust, sand, grit, and clay gather on shoe bottoms from both inside and outside of a facility, only to be pounded into the pathway as building occupants walk on the carpets.

Removing the pathway soiling with spotters and other chemical surfactants without actually extracting the carpet with extractors can prove to be difficult. One reason for this is that the different types of soils—oil based, water based, sand, and grit—get pressed into carpet fibers and mixed together. Solvents made to remove oil-based stains become less effective if the stains have also mixed with other contaminants. And once the problem starts, it can grow considerably

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because dirt attracts dirt. Soil and contaminants in the carpet fibers act as magnets attracting more soil.

### **Preventive Strategies**

There are steps managers and housekeeping staff can take to minimize pathway soiling, and the most significant one involves prevention— keeping the soils and contaminants from entering the facility in the first place. Many are aware of the eye-opening studies that were released by ISSA, the largest cleaning association in the world, which found that building users can track in up to 24 pounds of dirt through a building’s key entries during a 20-day work period. However, it is believed that as much as 90 percent of this soiling can be stopped at the door by effective, high-performance matting systems.

“It all starts with catching the big stuff,” says Christopher Tricozzi, vice president of sales and marketing for Crown Mats and Matting, the oldest matting manufacturer in the United States. “This means that we have at least five feet of ‘scraper matting’ outside all building entries to scrape off larger debris from shoe bottoms.”

Once inside the door, Tricozzi says that 5’ of scraper/wiper matting systems are needed. These will capture what grit is left on shoes and also help collect moisture from shoe bottoms. A high- performance matting system may hold up to one and a half gallons of water per square yard. “Many of these [high-performance] matting systems are designed with bi-level construction. This way, soils and moisture collect underneath the surface of the mat so that they cannot be reattached to shoe bottoms.”

The final line of defense, as it is often referred to, is placement of five feet of wiper mats. Wiper mats capture and trap remaining dust, debris, and moisture. “These mats are referred to as high performance because they are much more effective and are a much higher-quality mat than typical ‘rental mats.’ [The higher quality] is often reflected in their warranty,” says Tricozzi. “A rental or poor-quality mat may have only a 90- day warranty, whereas a high-performance matting system may have a warranty of one or more years. Ultimately, they often prove to be a cost savings as well.”

### **Pathway Extraction**

As referenced earlier, the most effective way to remove deeply embedded soils, which are at the root of pathway soiling, is through hot-water extraction. Interim carpet cleaning systems, such as shampoo and bonnet cleaning and even encapsulation, which is similar to the dry method of carpet cleaning, can help eliminate surface-level soiling to a point, but eventually the carpets will need to be cleaned via extraction.

The methods for cleaning carpets, including the extractors have changed in recent years. For instance, instead of filling the solution tank with chemical and water, many technicians pre-spray soiled areas, including pathways, with chemicals and detergents. During the process, the chemical is allowed “contact time” to dwell on the carpet, allowing it to begin dissolving pathway soils and contaminants to make them easier to remove. Additionally, this method tends to use fewer chemicals, making it more environmentally responsible; however, if the soiling is particularly heavy, this prespray process may need to be repeated.

#### Heat on the Hot Seat

We have known for nearly a century that heat improves the effectiveness of cleaning chemicals, especially carpet cleaning chemicals. Although some Green cleaning advocates are concerned that heated cleaning solution may release fumes into the air, negatively impacting indoor air quality, the Institute of Inspection, Cleaning and Restoration Certification (IICRC), says that effective carpet cleaning is dependent on four elements: time, agitation, chemical—and temperature. Many carpet cleaning technicians believe heat is so important to carpet cleaning that some manufactures have developed “perfect heat” systems that ensure the water/solution is maintained at a constant temperature throughout the carpet cleaning process.

“The extractor combines solution flow, pressure, agitation, and recovery,” says Jolynn Kennedy marketing manager with Tornado, manufacturers of professional cleaning equipment including carpet extractors. “It allows the water to get deep enough into the carpet’s fibers to remove the soil and other contaminants, but not so deep that it can cause damage to carpet.”

Also, the look of portable extractors has changed recently and for good reason. Many machines now have a vertical, upright design instead of the “box on four wheels” common for years. The upright design improves maneuverability and storage and improves airflow through the machine. This also helps improve “waterlift,” which helps remove moisture from the carpet. The vacuum system should generate approximately 150” of waterlift to improve drying times and protect the indoor environment.

## Color Zoning

One way facilities deal with pathway cleaning is to try to prevent it from becoming so noticeable. Referred to as “color zoning”, this involves selecting a darker color carpet, which does not show stains as much as a lighter color carpet. Although this can help delay cleaning, managers should be aware that the problem exists and is probably growing. Allowing the carpet to become too soiled can damage the fibers, make it hard to deep clean the carpet, and negatively impact the environment.

According to Kennedy, it is typically the pushing and then pulling of the wand over the carpet that helps agitate the surface area as it applies cleaning solution and then, in the same movement, removes dirty water. If pathway soiling is excessive, some carpet cleaning technicians may even shampoo the pathway areas first and then extract.

In recent years, carpet cleaning technicians have also come to realize that heat plays a more crucial role in effective carpet cleaning than they might have understood before. Heat improves the effectiveness of the cleaning chemicals, which helps reduce the amount of chemical necessary for cleaning. It also helps break down oily residues, common in pathway soiling. Today, virtually all of the leading carpet manufacturers recommend that carpets be professionally cleaned using hotwater extraction equipment—and some even require it to maintain the carpet’s warranty.

### Beating the Path

Although there are preventive strategies and carpet cleaning systems that can help alleviate pathway soiling, facility managers/ housekeepers are advised to treat existing pathway soiling quickly and decisively. The soiled pathway attracts more soil and because the pathways are heavily trafficked areas, the soil gets pushed further into carpet fibers as it is walked on. “This can damage the carpet, significantly curtailing its life span,” says Kennedy. “Ultimately, the goals of effective carpet cleaning are to keep carpets healthy, to keep them looking their best and to extend their life span, which can be a major savings for facility owners.”

*Robert Kravitz is with AlturaSolutions Communications*

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