

Maintenance Goals

One of the most critical decisions of the carpet maintenance program is not only HOW you plan to maintain the carpet once it is installed, but WHO will be maintaining the carpet. Choosing an in-house person or a company with certified commercial carpet cleaning technicians is crucial. The best products and best installation will not perform as intended if maintained improperly.

- The goals for any good carpet maintenance program should include the following:
- Keep the floors looking as close to new as possible.
- Design a cleaning program that is safe and the least disruptive to the occupants.
- Maintain good indoor air quality.
- Extend the useful life of the carpet.
- Provide more environmentally friendly cleaning products and processes. Select the Carpet and Rug Institute's (CRI) Seal of Approval certified cleaning solutions.

Why is Regular, Planned Carpet Maintenance Important?

- People spend about 90% of their time indoors. According to the EPA, air inside facilities are two to five times more polluted than the air outside the buildings. Companies want to provide a healthy and pleasant work environment for their employees. Healthful work environments have been shown to improve employee attitudes and a reduction in sick days, which increase productivity by approximately 10%.
- Carpet acts like a filter and can actually reduce airborne pollutants including volatile organic compounds compared to hard-surface floors, provided that they are maintained properly. On the other hand, poorly maintained carpet can harbor bacteria and mold, which can cause an increase in indoor air pollution, allergies, breathing issues, foul odors, and can reduce productivity.

A Comprehensive Maintenance Plan

A regular routine of carpet maintenance helps prevent soil buildup that can damage carpet fiber, which, in turn, can cause color loss and loss of resiliency. A well-planned maintenance routine can maximize a carpet installation's useful life and forestall the need for replacement because of premature wear or because the carpet "uglies out."

Routine maintenance involves a planned approach of methodical daily care such as vacuuming and spot cleaning, in addition to periodic interim and restorative cleaning performed as soiling becomes apparent.

Excessive soiling, stubborn spots or spills may require different methods or combination of methods. Please keep in mind when maintenance is neglected or performed at irregular intervals, carpet can deteriorate to a level that will be difficult or impossible to restore to its original luster and beauty—no matter what cleaning methods are used.

Persistent, thorough maintenance and daily-care routines will keep carpet looking its best, as well as enable carpet fiber to perform as intended. This planned approach to maintenance needs to begin immediately following installation.

When installation is performed in conjunction with other construction projects, the carpet must be protected with a covering such as re-enforced craft paper that allows the carpet to breathe as adhesives continue to cure. **Plastic sheeting, specifically plastic sheeting that incorporates applied adhesive, should be avoided as a means of carpet protection.** Trapping adhesive off-gassing underneath plastic sheeting can cause permanent discoloration of new carpet.

Properly trained technicians armed with the proper tools are essential to correctly performing the five key elements of any successful maintenance program.

Five Key Elements of Any Successful Maintenance Program

Preventive Maintenance Outside Your Facility

- Capture or contain the soil before it reaches the building by regularly sweeping the parking lot, parking garage, and sidewalks. At building entryways use an adequate system of barrier mats. An adequate barrier system includes mats installed both inside and outside the building, as well as strategically placing mats at funnel areas where traffic loads become more concentrated, or in highly trafficked interior areas.
- A system of appropriate “scrape, scrub, and wipe” mats will remove up to 10 times more soil than carpet mats alone.
- With an appropriate walk-off system the first five feet can remove approximately 37% of the soil, 10 feet 52%, 15 feet 71%, 20 feet 86% and 30 feet almost 100% of the exterior soil.

Note: In areas of the country where ice melts are used, please take into consideration, there are different types of ice melts and some are more difficult to remove than others. The volume and frequency of use may have a big impact on your carpet maintenance plan.

Caution: Asphalt parking lots and driveways coated with inexpensive sealers may “walk off,” causing discoloration of all flooring including the carpet. Once the damage is done, it is permanent.

Vacuuming/Pile Lifting Inside Your Facility

- Regular vacuuming is the single most important part of a maintenance program. If the soil is removed before it becomes attached to the carpet fiber through proper vacuuming, overall maintenance costs are greatly reduced.
- Vacuuming is designed to remove dry soil before it becomes attached to the fiber. Pile lifting will enhance routine vacuuming as well as cleaning effectiveness. It should be added as part of the overall maintenance program. The more aggressive pile lifter will help remove more stubborn, embedded soil, as well as working more effectively to lift and separate fiber so that routine vacuuming is more effective.

Spot and Spill Removal Inside Your Facility

- Promptly addressing spills is the key to preventing the spill from getting into the carpet backing and

causing stubborn spots that are far more difficult to clean. Quickly addressing spills helps minimize the chance of that spill becoming a stubborn stain.

Interim Cleaning Inside Your Facility

- Several different methods can be utilized. If used regularly, interim cleaning can prolong the need for restorative cleaning.

Restorative Cleaning Inside Your Facility

- Deep cleaning is designed to remove trapped soils. Hot water extraction is the most effective method and the only restorative method recommended by CPI.

Identifying Specific Maintenance Needs

Just as various areas of an office or building are subject to different uses, each type of area demands a different level of maintenance and care. Heavy-traffic areas and areas where traffic is more concentrated, such as entrances and corridors, require more frequent vacuuming and cleaning. Areas around vending machines or kitchen areas and desks need daily attention to spills and stains. Some areas may require different types of equipment for effective maintenance or cleaning.

A comprehensive maintenance program should have a color-coded diagram of the building's floor space and furniture layout plan indicating appropriate cleaning frequency rates for vacuuming, spot cleaning, pile lifting, and interim and restorative cleaning, based on the nature and concentration of traffic flow.

Maintenance Techniques

The ideal maintenance program is designed to help prevent soil from reaching the carpet and to remove soil before it causes damage. Once soil becomes compacted, vacuuming becomes less effective and more aggressive pile lifting becomes necessary.

When soil is allowed to build-up and become compacted deep within the fiber, the abrasive combination of heavy foot traffic and compacted soil can scratch and damage the best, most durable fiber, causing color and fiber loss. Deeply compacted soil will affect cut-pile fiber twist levels and cause fiber ends to splay outward, losing resiliency and causing matting.

Neglecting carpet maintenance results in color or fiber twist loss, whereby full restoration may become impossible.

To keep carpet clean and looking as new as possible, the ideal maintenance program should use a combination of methods and frequencies tailored to a facility's specific needs. Those needs should be evaluated by a trained maintenance professional and based on the specific nature of soiling, traffic load, and traffic concentrations.

For instance, the first floor of a building will have maintenance needs that vary significantly from those on the fifth floor. A restaurant or a busy retail outlet will have an even greater variation of maintenance needs.

Note: Poor maintenance can cut short carpet life and adversely affect its long term performance. Failing to adhere to these guidelines in a regular routine that includes interim maintenance as well as restorative cleaning can cause irreparable damage that falls outside warranty coverage.

Preventive Maintenance

Maintaining carpet appearance means more than choosing the right cleaning method. Selecting a suitable carpet color, style and construction for the application with careful consideration of traffic load and performance expectations is the best possible start for an effective maintenance program that emphasizes prevention.

Concrete sidewalks, parking lots, and hard-surface floors do very little to remove soil from the bottoms of shoes or from the wheels of rolling traffic.

Barrier mats are essential in keeping as much soil and moisture as possible from ever entering the building.

Outside mats are designed to scrape dirt and debris off shoes while interior mats are designed to remove smaller soil particles as well as help absorb moisture.

Interior barrier mats should extend a minimum of six feet inside the entrance. A planned system of barrier mats, which also requires regular maintenance, is an essential part of any sound maintenance program.

Mats can also be effective in other interior areas including elevators, food station areas, and at stair thresholds. Barrier matting should be maintained the same way as interior carpet with severe traffic as illustrated by the frequency chart in this document. Rubber-backed mats should never be placed on carpet.

Vacuum Essentials

There is no substitute for slow, methodical vacuuming performed at the appropriate frequency with an approved vacuum cleaner. The appropriate speed for high traffic areas should be 1.8 feet per second, with a minimum of four passes total, two north and south, and two east and west. For moderate traffic areas, a minimum of two passes at the same speed is ideal. This step is not a race to see how fast the area can be vacuumed. When writing a vacuum spec, it is not enough to give frequencies of certain areas, you must specify the type of vacuum cleaner to use and the rate of production.

Effective daily vacuuming can help reduce the need for more rigorous methods to maintain the carpet's appearance. Vacuuming removes soil while lifting carpet fiber. In addition to removing soil, the vacuum's lifting action enhances resiliency and helps the vacuum work more effectively on subsequent vacuuming.

The Right Equipment

- Vacuums with horizontal cylindrical brushes should be used and set so that brushes are always in full contact with the carpet surface. Twin-motor vacuums with independent motors dedicated to suction and brushing are preferred. ☒
- Vacuums with top-loading soil bags and HEPA filters to further contain dust are highly recommended.
- Canister and backpack vacuum without motorized rotating brushes should be avoided, as well as riding sweepers with rotary brushes.
- The Carpet and Rug Institute's Seal of Approval program certifies a variety of maintenance equipment, including vacuum cleaners.

Note: For a list of certified vacuum units, please visit: <http://www.carpet-rug.org/commercialcustomers/cleaning-and-maintenance/seal-of-approval-products/index.cfm>

- Vacuuming frequency should be determined by visual inspection and performed at least once daily. ☒
- Heavy-traffic areas such as lobbies, entryways, funnel areas, barrier mats, and areas in the direct path of weather influences may require more frequent vacuuming. Keen attention to weather vulnerable areas will help prevent wet soil from being tracked throughout the building.
- The proper technique for thorough vacuuming depends upon using slow, overlapping strokes and making sure that the entire carpet surface is covered. Strokes should be no longer than two to three feet in length to avoid unnecessary back strain for the operator.

Pile Lifting

Pile lifting is an effective method for lifting crushed pile and loosening dry soil. Heavily trafficked cut-pile products need more frequent pile lifting than loop pile products. Pile lifting should always be used to precondition carpets for general cleaning. Pile lifting improves cleaning effectiveness. For best results, apply the pile-lifter machine against the lay of the pile.

Spot Cleaning

Daily removal of spots and spills helps maintain the carpet's appearance between scheduled cleaning. Immediate action against spots and spills also reduces the probability of a permanent stain. Spotting solutions should be selected as appropriate for the specific type of spot or spill. For more information visit xlnorth.com.

The appropriate chemistry should be selected for water-based and oil-based spills or spots. A different chemical will be necessary for solids, including gum. Always use spotting solutions sparingly. If the spill is wet, remove as much moisture as possible with a dry, white towel or a hand-held extractor before applying any spotter. Try to remove the spot with water on a white towel or by using a hand-held extractor before using a spotting agent.



Treating Water-Based Spots

Liquid spills should be blotted with a clean, white cloth to remove as much of the liquid as possible. If the spill is semisolid or has hardened, gently scrape away with a spoon or spatula and then blot the spot with a damp white cloth. Always work from the edge of the spot towards the center. Never rub across a wet spill in a manner that causes the stain or contamination to be spread outward from the original area. If the spot remains, try XL Carpet Spotter or go to the Carpet and Rug Institute's "Spot Solver" <https://carpet-rug.org/resources/spot-solver/> for an excellent reference that should have an approach to help safely remove the spot.

Apply a minimal amount of the recommended solution. Use a soft-bristle brush and gently agitate the solution by hand. Rinse the affected area with water and allow the area to dry for about one hour and then vacuum. Prevent traffic on the freshly cleaned area until the carpet is completely dry. Please remember to blot the spot. Do not brush the spot aggressively.

Treating Oil-Based Spots

When removing oily stains such as grease, tar, or asphalt, try Grab Grease and Oil Remover from XL North. Always check for color fastness by testing in an inconspicuous area of the carpet. Apply Grab Grease and Oil Remover directly onto the spot. Do not rub across the spill. Wipe gently from the outer edge toward the center of the spot. Repeat the procedure until the spot has been removed. Rinse with water and allow the area to dry approximately one hour and then vacuum. Protect the freshly cleaned area until the carpet is completely dry.

Note: A small, portable hand-held extractor can simplify the task of flushing residual solution from spots and spills.

Spot Removal Guide

Please refer to the Carpet and Rug Institute's "Spot Solver" to remedy a wide range of the most typical causes of carpet spotting. The Spot Solver can be found here: <https://carpet-rug.org/resources/spot-solver/>. If you have further questions, please call CPI at 714-716-1667.

Interim Cleaning: Dry Extraction

Dry compound extraction, such as Grab Dry from XL North, is a safe, easy, and effective method for performing maintenance on a regular basis. The procedure uses a moist, powder-like compound that does not leave the carpet excessively wet, thus allowing immediate access and traffic once the procedure is complete. Dry compound cleaning eliminates wicking and does well with oily spots and soils. It is considered the safest cleaning method.

The technique for dry compound extraction is as follows:

- Thoroughly vacuum the carpet two passes at 1.8 feet per second at 2 to 3 feet in length.

- If needed, use a pre-spray like XL Carpet Spotter and allow 10 minutes dwell time. Spray evenly and heavy enough to stay damp for 20 minutes using a pump-up or electric sprayer. Do not over spray onto other surfaces, walls, or furniture.
- Agitate carpet with counter rotating brush machine with the appropriate brush stiffness at 1.5 feet per second in a V or W pattern. The soil load will determine the number of passes. Continue this step until you can visually see the soil separation from the fiber.
- Spread the dry compound evenly on carpet making sure not to clump the product. Use one pound of product for every 150 square feet. Apply in a small area not to exceed 30 ft x 30 ft. The dry compound must stay moist until it can be agitated into the carpet.
- Agitate the compound into the carpet at 1.5 feet per-second at 2 to 3 feet in length in a V or W pattern.
- Allow compound to completely dry approximately 30-60 minutes ☒ Vacuum up the dry compound with two to three very slow passes, 1 foot per second, making sure all visible compounds is removed.

Note: Prior to spreading the dry extraction compound, this process can be even more effective when the carpet is first pile lifted and vacuumed.

Low-Moisture Cleaning: Encapsulation Application

The Encapsulation (or crystallizing) method of maintenance uses a liquid (like Liquid Grab Green) that breaks down and encapsulates sticky soils, then dries to a crystal-like powder that is easily vacuumed away. Encapsulation cleaners should be applied and used as follows:

- Thoroughly vacuum the carpet two passes at 1.8 feet per-second at 2 to 3 feet in length.
- Spray evenly and heavy enough to stay wet for roughly 20 minutes using a pump-up or electric sprayer. Carpet must stay wet until the agitation process can be completed. Do not over-spray onto other surfaces, walls or furniture.
- Agitate carpet with counter rotating brush machine with the appropriate brush stiffness at 1.5 feet per second in a V or W pattern. The soil load will determine the number of passes. Continue this step until you can visually see the soil separation from the fiber.
- Thoroughly vacuum the carpet two passes at 1.8 feet per-second at 2 to 3 feet in length.

Bonnet Cleaning

Avoid bonnet cleaning. Using a bonnet or any other type of oscillating machine that rotates in a motion parallel to the flooring surface to clean or dry carpet is not recommended and may void warranty coverage. Low-speed rotary cleaning methods must be approved by the carpet manufacturer.

Hot Water Extraction Truck-Mount/Box Extractors



This method of cleaning has the ability to remove the most amount of soil (up to 95%), depending on the type of equipment and process used. This method can be slow and labor intensive, with more challenges compared to other methods.

- Before starting this method of cleaning make sure the HVAC system remains on until the carpet is totally dry.
- Check for any occupants that may have a chemical sensitivity before using any carpet pre-spray.
- Always vacuum and pile lift thoroughly before beginning any carpet cleaning method. This is especially important with hot water extraction in order to remove as much dry, loose soil as possible prior to adding water to the carpet.
- Place wet floor signs at all transition points, from carpet to hard surface.
- Pre-spray with a traffic lane cleaner such as XL Nylon Pre-Spray Advanced (a pH between 4.5 and 9.9). Spray heavy enough to keep carpet wet until the carpet can be extracted. Use a pump-up type or electric sprayer with no more than 60 psi (so pre-spray will not aerosolize). Do not over spray on furniture, walls, or other floor surfaces.
- Allow to dwell for 10 minutes.
- Agitate using a counter-rotating brush machine with the appropriate brushes at a 1.5 feet per second rate, use 2 to 3 foot long strokes in a V or W pattern. Continue this process until you can visually see the soil separate from the fiber.
- Extract using a carpet wand with straight forward and backward passes (NO V or W pattern) at a rate of 1.8 feet per second, overlapping each stroke by 1 inch. Use Grab Crystallizing Acid Rinse in fresh water tank when using high pH (9.0-9.9) cleaners (All portable extractors should be plugged into a ground fault circuit interrupter).
- For restorative cleaning, use multiple passes and finish with 1 dry pass.
- Continue to pull the wand toward you another 3 inches after releasing the spray trigger to insure all water removal.
- Use air movers to help dry the carpet, especially at transition points from carpet to hard surface.

Self-Contained Water Extraction Equipment (Walk Behind, Pull Back, Ride On)

This water extraction cleaning method has average-to-good soil removal somewhere between low moisture and hot water truck mount/box extractors. However, it has a much higher production rate compared to truck-mount or box extractors and about the same as low moisture encapsulation cleaning.

- Before starting this method of cleaning, make sure the HVAC system remains on until the carpet is totally dry.
- Check for any occupants that may have a chemical sensitivity before using any carpet pre-spray.
- Always vacuum and pile lift thoroughly before beginning any carpet-cleaning method. This is especially important with water extraction in order to remove as much dry, loose soil as possible prior to adding water to the carpet.
- Place wet floor signs at all transition points from carpet to hard surface.
- Pre-spray with a traffic lane cleaner such as XL Nylon Pre-Spray Advanced with a pH between 4.5 and 9.9. Spray heavy enough to keep carpet wet until the carpet can be extracted. Do not over spray on furniture, walls or other floor surfaces.
- Allow to penetrate for 10 minutes.
- Extract. (All portable extractors should be plugged into a ground fault circuit interrupter). Overlap

each pass at least 3 to 3-1/2 inches depending on how soiled the carpet is.

- Use an XL Crystallizing Acid Rinse in fresh water tank when using high pH (9.0-9.9) pre-sprays. For best results do not add cleaning solution to fresh water tank.
- Use air movers to help dry carpets, especially at transition points from carpet to hard surfaces.

The Right Cleaning Solutions

CPI recommends the carpet-care system by XL North. However, if you choose to use others please consider the following:

- Some commercial carpet cleaning solutions are very harsh and can damage carpet fiber.
- Only use cleaning chemicals that meet the basic standards outlined here.
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It is important to evaluate each product to prevent the possibility of damage. First apply in a small, inconspicuous area, and evaluate prior to widespread use. Bentley carpet can be maintained using a number of widely recognized carpet cleaning agents that are readily available, however, cleaning solutions that have earned the Carpet & Rug Institute's Seal of Approval are preferred.

The Carpet and Rug Institute uses an independent testing laboratory to evaluate cleaning chemistry based on the following criteria:

- Overall cleaning effectiveness; this ensures that the product removes soil and spots better than plain water.
- Rate of re-soiling; this ensures that the product does not attract dirt to the cleaned areas faster than the rest of the carpet.
- Chemical pH; a more neutral pH ensures that carpet dyes and fibers are not adversely affected.
- Surface texture change; the product must leave the carpet pile minimally changed after repeated cleanings.
- Optical brighteners; none are allowed, as they can leave some patches of carpet lighter than the rest.
- Colorfastness; products must not be so aggressive that they cause a color change in the carpet.

Note: For a list of these certified cleaning solutions visit the Carpet & Rug Institute's website: <https://carpet-rug.org/testing/seal-of-approval-program/certified-cleaning-solutions/>

Words of Caution

- Avoid products with pH levels over 9.9 for nylon and a maximum of 8.5 for wool.
- Make sure that cleaning solutions for either nylon or wool are free of toxic or flammable solvents.
- Detergents designed for use in hot water extraction equipment should not contain an oil-based de-foamer and caution should be used with the amount of detergent added. Oil-based de-foamers have the potential to leave oily residues and adding too much detergent could leave excess detergent on the carpet. Both scenarios will lead to rapid re-soiling and create a need for more frequent cleanings.
- Cleaning solutions containing optical brighteners should not be used. Optical brighteners can

- adversely affect the coloration of carpet and lead to premature aging or yellowing of the carpet.
- Cleaning solutions used for interim and/or restorative cleaning should be tested for sticky residues that may cause re-soiling. To test a solution, pour a small amount in a clean glass dish. Allow the solution to air dry completely (24 hours minimum). Break up any hard residue on the surface of the glass dish and examine it. If the residue can be characterized as dry powder, dry flakes, or dry crystals, the solution is acceptable. If the residue appears oily, greasy, sticky, or in waxy flakes, the solution is not acceptable since it would likely contribute to rapid re-soiling.
 - Spotting solutions should be used as needed and should be flushed out with clean water once the spot has been treated.

Maintenance Equipment

Using the right equipment is as important as using the right cleaning solution and the best techniques. These guidelines are intended to provide a proper framework for minimum basic maintenance designed to maximize a carpet investment. Equipment should be selected from those units tested and certified by the Carpet and Rug Institute's Seal of Approval program. Visit: <https://carpet-rug.org/testing/seal-of-approval-program/>

Vacuums

Select a dual-motor, commercial-grade vacuum cleaner bearing the Carpet and Rug Institute's Seal of Approval Certification label. Top-loading dust bag machines with HEPA filters are strongly recommended. Battery-powered vacuum cleaners are not recommended.

Low-moisture Applicator

Use only those units with counter-rotating brushes bearing the Carpet and Rug Institute's Seal of Approval.

Hot Water Extractor

Truck-mounted extraction units generally provide optimal performance, but self-contained units are more mobile and can be highly effective in most commercial applications. Use only those units bearing the Carpet and Rug Institute's Seal of Approval.

Recommended Preventive Products

Chair Pads

CPI does not require the use of chair pads with its carpet products. CPI's applicable warranties for any of our loop or cut/loop pile carpet products will remain in force with or without the use of chair pads.

Chair pads although not required, are recommended, and will enhance the long term performance of carpets. The concentrated, back and forth motion of a person in a typical office chair environment can create fiber distortion especially on cut pile products; therefore, cut pile carpets are not recommended



for applications under rolling chairs.

Carpet-type chair casters minimize the distortion effects in conjunction with low, dense loop or cut/loop carpet constructions. Routine maintenance including daily vacuuming and regularly scheduled extractions are required to maintain the general appearance of the carpet. Absent the use of chair pads, more intensive maintenance will be required for areas in direct contact with chair caster traffic, and some degree of appearance change is to be expected.

DESCANSO SERIES: CARPET MAINTENANCE GUIDELINES



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Maintenance Frequency Chart

Traffic, Soil Rating	Carpet Owner Site Maintenance		Professional Cleaning Restoration Service	
	Vacuuming	Spot Cleaning	Interim Maintenance	Restoration Maintenance
Light <ul style="list-style-type: none"> Private Offices Cubicles 500 traffics or less daily 	Twice or more each week	Perform when vacuuming as spots, spills occur	Once per year <i>should include pile lifting</i>	Once per year <i>should include pile lifting</i>
Moderate <ul style="list-style-type: none"> Secondary Hallways Shared Offices Conference Rooms Classrooms 500-1,000 traffics daily 	Once daily	Perform when vacuuming as spots, spills occur	Twice per year <i>should include pile lifting</i>	Twice per year <i>should include pile lifting</i>
Heavy <ul style="list-style-type: none"> Common Entrances Elevators & Lobbies Main Hallways Break Rooms & Mail Rooms Patient Rooms Waiting Areas 1,000-2,500 traffics daily 	At least once daily; some areas will require more	Perform when vacuuming as spot, spills occur	Monthly <i>should include pile lifting</i>	Four times per year <i>should include pile lifting</i>
Severe <ul style="list-style-type: none"> Common entrances when snow and rain are factors Cafeterias and any food-service areas Heavy-traffic load funneled into concentrated areas 2,500 or more traffics daily 	At least once daily; some areas will require more	Perform when vacuuming as spots, spills occur	Weekly <i>should include weekly pile lifting. More frequent pile lifting may be needed to contain tracked soiling</i>	Monthly <i>should include pile lifting</i>

Note: This grid is intended as a guideline that should apply as a general minimum in most commercial applications. There will be exceptions where frequencies will need to be adjusted based on site conditions.