



Occupied Workplace Logistics Furniture Lift Manual

Table of Contents

Introduction	3
Project Information Profile	4
Understanding Furniture	5
Initial Walk-Thru	7
Project Sequence	9
Ready the customer for installation	10
Preparing for intallation	13
Lift Project Challenges	14
Important Questions to Ask	16
Ready the space	16
Installation and Furniture Lifting	21
Button Up Every Night	22
Tools of the Trade	25
Safety	27
Furniture Terminology	28
Furniture Systems	31
Haworth	32
Herman Miller	37
Steelcase	44
Knoll	53
Forms & Support Materials	54



Introduction

Occupied Workplace Logistics/Lift Installation Manual

Occupied Workplace Logistics is a system that addresses the planning, coordination, communication and installation requirements necessary when renovating an occupied work environment.

Lift Installation is a process that assists in the facilitation of carpet replacement in an occupied space that uses systems office furniture. The tools (jacks, clips, etc.) referenced in this manual refer to the Renovisions® patented equipment used by many Fuse Alliance Member Companies, however, the processes and procedures presented in this manual may be used in conjunction with other "lift" systems.

This manual is provided as a guide to assist in the interaction between you, your customer and your on-site crew to provide the best experience for all involved with the project. Helful hints and other supporting materials have been provided for your use.

For information or assistance with Renovisions® tools, please contact:

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The Project Information Profile

Before beginning any lift project, the sales person/project manager or someone qualified from your team will need to complete a Project Information Profile. This sheet contains important information regarding the customer's occupied office.

Items that the Project Information Profile addresses include:

The 5 major parts of a lift project

- * Subfloor and rip-up
- * Type of furniture
- * Filing cabinets/storage
- ★ Wiring/power cabling
- ★ Phones and equipment

It is very important that this information is as accurate as possible. It is encouraged that someone who understands the lift process and has been on lift projects be involved with filling out the sheet for the success of the project.

A copy of this form is provided in **Support Materials** section of this manual.



Bad information could lead to the following:

- * Not knowing the correct furniture:

 This could lead to lower yardages, damaging furniture or even worse not being able to lift furniture the 1st couple of nights until you get the correct tools.
- * Rip Up/Subfloor

 This is always a big one. Running into a bad rip-up could mean the different between 250 yards a night or 100 yards a night. Now you are affecting the bottom line. \$\$\$\$\$. If your subfloor is in bad shape this again this slows down the installation crew.
- * Keep in mind that all being done in and around furniture & equipment and conventional floor prep and rip-up does not always apply to a lift project.



Understanding Furniture

Systems Furniture

Most of your projects involving furniture lift will be working with systems furniture. Systems furniture normally consist of what is called a panel. The panels can be attached to one another in a number of different ways.

It is important that you understand the differences between a panel & post and a rigid connection. Keep in mind that very few panels can be lifted from the bottom.

Panels start normally around 32" high and can go up to 80" high. There are some systems that will go from floor to ceiling. These panels can also have what is called "hang on" components. These components may consist of overhead storage, lower storage and even worksurfaces being hung from the panels. All this adds to what you have to lift when performing carpet replacement.

Knowing your furniture can greatly cut down on your preparation/training time when you get on the jobsite.

Freestanding/Casegoods

Most freestanding furniture/casegoods (desks) will be located in the private offices. These will take a fair amount of time when working around them. Keep in mind they tend to be a wood veneer or laminate finish. You may find in some cases this would be a good situation to use your furniture skates to slide things around as little as possible.

There will be times that you will need what is called a push pad to make the lift due to the size.

Storage and Filing

There are different types of storage and filing. Lateral files, vertical files and pedestals (peds) can be found in various places around the office. There may also be storage in and under the workstations. In some cases these files could be attached to the worksurfaces making them a bit more challenging while performing the lift.

Lateral/vertical files: When there are a large number of files (lateral/vertical) on a project make sure before the 1st night of the project to determine whether they are ganged together. If files are ganged together, you should recommend to the customer that they use either in-house labor if available or bring in their local furniture labor to have the files de-ganged each day prior to getting started. This will greatly improve down time on the project.

Make sure they get someone the next morning to re-gang the files. It is very important have this done for safety reasons. Files are ganged together to keep them from falling over on someone.

Pedestals (Peds) Normally found in the workstations under the worksurfaces. Sometimes there are peds that are floor supported. This means that the worksurface is being supported by the pedestal which means you would have to lift the pedestal and panel at the same time in order to make the lift in these areas.



Moveable/Demountable Wall Systems

These walls have been around for many years but with the push for LEED are being used more frequently. They are a very ridged systems that can range from 2" thick up to 4" thick. They can be solid or glass and can weight from 100 lbs. to 400 lbs. per panel. They <u>normally</u> run from floor to ceiling and many times are built right on top of the carpet.

Every manufacturer is a little different as far as how they handle the wall connections. **Some of the systems have a floor track and these systems <u>must</u> be handled with care.**

If you have questions or concerns regarding the furniture in your customer's facility, you may choose to contact the local dealer or manufacturer's representative for assistance.



Initial Walk-thru

The initial walk-thru provides an opportunity to explain the lift process to your customer. This is a good time to evaluate the project and complete or review the Project Information Profile.

The time during the walk-thru with your customer is important. It can help your customer feel more relaxed with you, the crew and the lift process.

There are many things to look for when walking a job that will determine the amount of yardage the crew will be able to install each night.

- **★** The two most important factors as in any carpet replacement are
 - Difficulty in the rip-up
 - Amount of floor prep

Difficult rip-ups are much more challenging in an occupied environment. With the close proximity of the furniture and equipment you will need to use small striping machines. Therefore make sure you do a pull test (using a carpet knife and pliers) when doing the 1st job walk-thru. The pull test will need to be done in a number of places. You are attempting to determine how taxing the rip-up will be as well as get an idea of what the sub-floor looks like. Try not to perform the pull test in a high traffic areas where the carpet generally comes up the easiest.

- * Find an area in a corner or under a desk, for two reasons:
 - Areas that do not get foot traffic are typically the toughest to get up.
 - There will not be an unsightly area or trip hazard until the carpet is replaced.

The amount of floor prep needed cannot typically be determined until the carpet is actually up and out of the way. All you can do is make your best educated guess from the information acquired during the pull-up and try to prepare yourself accordingly. This is another reason to perform the pull test in multiple locations - the sub-floor can vary from area to area.

The better informed and prepared the installation crew, the less likely unexpected floor prep will slow the project to a crawl. Which if not bid accordingly can seriously affect the success and profitability of the project.

When initially walking the floor with the facility manager, the more imperfections you bring to his or her attention, the shorter the nightly punch list and the better off you will be at the end of the project. Many of these projects have had things that are not correct and gone unnoticed until the installation of the new carpet. Then everything sticks out like a sore thumb. These things can be easily pointed out during the initial walk-thru, but obviously everything cannot be detected. Therefore, it is the crew leader's responsibility to walk the area to be completed the next night and point out any of imperfections to the customer before the crew ever gets started.





These type of rip-ups are tough when you are working around furniture systems. Make sure to allow enough time for the crews to rip it up.



Project Sequence

Ready the Customer for Installation

- The customer is always first
- Form solid relationship with the customer
- Understanding your customer's expectations
- Explain approximate time frame, nightly yardage and schedule

Preparing for Installation

- Lift Project Challenges
- Important questions to ask
- Pre-installation walk-thru
- Plan your layout

Ready the Space

- Daily job walks
- Check and double check
- Map and tag
- Removal of loose furniture

Remove the Old Carpet

- Removing the broadloom/carpet Tile
- Do not pass go until you know what is below
- Neatness counts Remember vacuum only keep dust to a minimum
- Follow manufacturer's recommended installation instructions

Installation and Furniture Lifting

- Select the correct fittings
- Gently lift the furniture (remember only lifting ½" maximum)
- Work together as a team

Button up Every Night

- Clean behind yourself
- Leave the area finished and safe
- Create your own punch list each night
- Plan ahead for tomorrow night
- Keep a job log
- Alert customer to problems and reminders



Ready The Customer for Installation

The customer is always first

Customers satisfaction should be our goal each and every night. Open and regular communication is of the utmost importance in the success of any project. During lift projects, you will need to make sure there is some form of communication **daily**, there are many projects where it becomes necessary to communicate at the end of each night and again in the morning when the customer arrives at the office. Keep in mind you and your crews will be performing nightly with little to **NO Supervision** from the end user. Always ask questions, know what areas are OFF LIMITS and make sure your crews are aware of these areas.

Form a solid relationship with your customer

The first night of any project is very important and should be performed with precision. The crew's pace/schedule is important and should always be communicated with the customer on a nightly/daily basis. You should consider the customer as part of your team and work together for a successful project. The last night of any lift project is your second most important night. Making sure all loose ends are tied up and your crews leave with a satisfied customer.

Understanding Your Customer's Expectations

Taking the time in the beginning of each project to understand your customer's expectations makes the project move along much smoother. Plan on arriving to the job site the 1st day of a project 1 to 3 hours early (depending on the project scope). You want to spend time walking the project to better understand the customer's expectations. During the walk thru you are looking and pointing out things helping them better understand how you will be performing the lift process.

It is important that everyone has the same project/scope expectations during this 1st meeting.

Below you will find a few things that can become issues during the 1^{st} couple of nights and should be clarified during the 1^{st} night walk-thru.

* Reduced Yardage:

Make sure everyone is clear just how many yards you will attempt to complete the $\mathbf{1}^{\text{st}}$ few nights.

***** Unrealistic nightly yardages:

Always try and keep your yardages within reason, do not oversell what your crews are capable of completing each night.

* Bad Rip Ups:

Have an understanding what your rip will be before you start to help gauge you nightly production.

★ Work hours and Conditions:

Your team and the customer should be clear about the schedule your crew will be working. Make sure the customer is clear as to what areas your crews are allowed to access.



* Walk and talk with your Customer

- The first night of every job is the "Getting to know you night"
- Spend time getting acquainted with the furniture, the floor prep, etc. Make every effort to meet your customer contact and thoroughly walk the space. Ask about everything from disposal to where to find the vending machines and security. Walk in and out of several workstations together, point out things you see that can help your customer better understand what you will need from them to make the project successful. Point out damages or concerns and discuss how to handle communications for any situations that may arise in the future. Exchange phone numbers and discuss your installation strategy for the next few nights. Also make sure to keep your team informed and updated. Discuss the customer's concerns and anything else that may be related to their duties. Together your team and the customer set the pace and clear the way for a successful installation.
 - ► Candy Jars This is a big one to watch the crews on make sure the crews don't empty out the CANDY Jars on the desks



Explain approximate time frame, nightly yardage and schedule

Remember customers have no idea what you are capable of ripping up and installing in one night. The first few nights of any project should be scheduled for a lowered yardage so that the crew can get familiar with the routine, the location and especially the rip-up.

The routine will consist usually of start time, bringing carpet to the site, sign-in procedures, and location of smoke rooms, break rooms, washrooms, building rules and regulations.

Finally there is the dreaded rip-up. The best case scenario is carpet tile to carpet tile installed with releasable adhesive. The first few days will give you a more accurate idea of what your nightly yardage potential will be. The following is a list of problems that can lower your nightly yardage.

- Carpet tile installed wet
- Broadloom installed with hi-performance adhesive
- Broadloom over pad
- Old cutback that has not been sealed
- VCT or worse VAT that is coming up with the old carpet



Preparing for Installation

You are Judged Every Night

Things that can cause the unwanted call in the morning could be as small as cabinets not in the correct place, one phone unplugged, glue on some wires, knife blades left lying on a desk or the best one is you put the wrong chair at a workstation. By punching the work each night, you can eliminate these unwanted calls. This means vacuuming each night, looking for things out of place, checking the lights under the overhead bins and even checking for dial tones on the phones. Unfortunately there are times when mistakes will be made on the jobsite. The important thing is to learn from those mistakes.

If there are issues at a particular desk make sure the issue is corrected if possible and leave a note letting them know what happened. Also make sure you let the contact person know what is going on as well. Remember you want this to be a team.

REPORT ALL PROBLEMS EVEN IF YOU FIXED THEM. DO NOT TRY AND HIDE ANYTHING. THEY WILL FIND OUT EVENTUALLY.

Design a system for leaving and getting messages from your customer and your company. The goal is to get your message to the customer before the employee does.

When in doubt, leave a message! Remember, if a call has to be made you should be the one making it.



Lift Projects can be full of new challenges nightly

Here are a few of the basic things that will make things go much smoother if performed nightly by members of your crews.

- * Tonight's the night cards: The night before you begin in a new area you should place the "tonight's the night" cards out. This will give the end user an opportunity to get their area ready for the crews.
- * Map and tag all items: Anything that will be getting moved or slid out of the workstations or hallways like filling cabinets, chairs, boxes and yes even trash cans should be tagged. Using painters tape, devise a numbering system in which you can mark the item being moved with the location that it is being moved from.
- * Remove all carpet that is not pinned by the furniture: When removing broadloom you will leave a 4" to 6" "ribbon" under the panel systems and under some cabinets in the workstations. This requires careful "trace" cutting around all panels, under desks, etc. Carpet tile removal leaves only tiles under panels and files.
- * Floor preparation is at best a vacuum and glue: At worst it makes the job painfully slow if significant floor patching is required. Different tile backings require different floor preparations. Clarify any floor preparation concerns immediately. Read and follow the manufacturer's recommended installation procedures.
- * **Spread glue with care.** Rushing the spreading of the glue could cause the glue to get all over the furniture. Keep the glue 6" from the furniture, walls, wires, and electronics that are on the floor.
- * Layout of the installation is done in the walkways of the space: Checking for square lines and carpet gain is a <u>MUST</u>. Install along both chalk lines and into the workstations. Work through the workstations in sequence, checking for square and gain often. Use of a laser square is very helpful to keep lines square.
- * Jacks: Make sure prior to starting with the lift that the jacks are fitted with the correct fittings. Distribute the jacks around the furniture systems closest to the chalk line intersection. Install new carpet tile up to the panels. Begin lifting the furniture and removing the old carpet. Lift as little as possible. NEVER exceed 1/2" in your lift. Use care when choosing a lift site. Never lift in the middle of a panel or on the kickplate. Know your furniture but do not hesitate to contact the customer's furniture manufacturer if you have any questions.
- * Thank you cards: Always place a thank you card on the desk of each end user thanking them for helping you get the area ready for your crews. This is a very nice touch. It is also a good idea to leave a mint with the card. This puts the end user at ease when they come in and are less apt to start looking for things that are wrong.
- * Button-up neatly every night: Your work is judged every day (usually before the customer even drinks a cup of coffee in the morning). The goal is to eliminate the bad calls in the morning. If there is a situation in which the customer must be involved, notify them via voicemail or by leaving a note on their desk. This will depend on the method you worked out with your customer prior to beginning work.

Things to Look for When Examining Systems Furniture

Un-level or snaking of the panels:

Look across the top of the panels and point out any un-level high or low spots. Point out any snaking or zig-zagging of the panels that you see. Assure the client that you will attempt to correct that during your lift process. You will not always be able to get it perfect but you will do your best with it. Rest assured that if this is not pointed out that in most cases your crew will be blamed for doing it during the lift process.

Pointing out these things during your walk-thru must done very diplomatically, you do not want the customer to think that will not take ownership for anything that goes wrong.

Overloaded binder bins/storage:

The added weight can cause undo stress on the hinge configuration that hold the panels together. Once a panel is lifted all the extra weight pulling at the top of the panels can cause the bottom to kick out and the hinge is not made to support that type of tension. With that type of tension on the panels it could cause the panels to become separated during the lift. Look for loose or incomplete connections between each panel. This needs to be pointed out during the walk thru that way if they do become separated during the lift the customer understands you may not be at fault.

Other furniture items to look for during the walk thru may include:

- * Any other noticeable furniture defects
- ★ Defects either from improper installation or damage
- * Bowed work surfaces (are the proper supports under each worksurface and are they attached correctly)
- * Improperly cantilevered components, pedestals, worksurfaces or binder bins look to see if any teeth are showing or if they are supported by any foreign objects.
- * Chipped or scratched wood finishes
- ★ Tears in panel fabric cracked or hanging kick plates
- ★ Dented or scratched steel filling cabinets
- * Missing nuts, bolts, clips (this is a sign that short cuts were taken in the furniture assembly)
- **★** Leaning walls (usually binder bins only on one side of wall)
- * Foot prints on the fabric panels under the worksurfaces and in the walk ways.



Important Questions to Ask

Loading Dock

Is there one? If so, is it same or correct height to allow for easy off loading of trucks? If not, allow for extra labor needed to load the material into the building.

Storage Area:

Is there an area to store carpet? If so, how much carpet can it hold? Is there a secured area for tools to be stored?

Freight Elevator

Is there one? If not, can the public elevator be used? If not, allow for the additional labor to perform a stair carry of material.

Computer servers and other sensitive equipment

Is there an in-house computer specialist? Is so, coordinate a night when the specialist can be on site when the carpet replacement is being performed for those sensitive areas.

Copiers and vending machines

Are they owned or leased? If owned, make the customer aware that you will install up to the copiers or vending machines and you would like in-house support to have the items moved so the installers to install under the equipment.

If these items are leased many times the companies that own them have to move them. Make sure the customer reviews there lease to make sure whom will need to move these items.

HVAC

Can they leave it on? Pulling up the carpet causes added dust particles to float around no matter how much you vacuum. The added filtration from the HVAC will cut down on the dust buildup the next morning. This also aids in the adhesive setup and the comfort of the installation crew.

Filing Cabinets

Are they gang bolted? If so, can the facility people/local furniture installers unbolt them ahead of the installers beginning that area? It is important that they be re-ganged the next morning after the new carpet has been installed under the files. This is done for SAFETY reasons.

Spare Parts

Find out if there are any spear parts on-site for the furniture. This could be helpful if something is installed incomplete or needs to be fixed.

These are just some of the questions that when asked at the beginning stages of a project can drastically cut down on hidden costs and headaches that can come from not being prepared. Also, these questions and attention to detail may just be what sways the facility manager's favor and wins you the job



Pre-Installation Walk-thru

When planning your layout try to keep the following things in mind and look for problem areas that need to be addressed with the customer.

- ★ Plan areas to go through in complete sets of furniture workstations
- * Are there a lot of filing cabinets and are they gang bolted.
 - If they are gang bolted now they are full and can be nearly impossible to move or perform a lift on.
- * Are there areas that will need extra time for the customer to get ready?
 - Avalanche areas (stacks of lose paper and books piled on furniture that will be moved and could potentially end up on the floor)

* Bookshelves

- Poor quality bookshelves can fall apart or when moved need to be down loaded or emptied.
- Some companies have gang bolted bookshelves that will require more advance time to deal with.

* Libraries

- Most library shelves do not like to be lifted or moved they tend to be very top heavy
- There is special equipment available for moving and/or lifting library shelving.

* Utility shelves

■ These are the metal shelves that have shelves that are held in place by gravity hooks - these must be down loaded.

* Copiers

- Small copier are usually not too bad unless they have a sorter attached then they can be tricky as you have to be careful not to dislodge or misalign it when moving it around.
- Large and expensive copies need to be moved by qualified personal as if you move it and something goes wrong it could void the manufactures warranty. Most companies have service contracts on this type of equipment.



Plan Your Layout

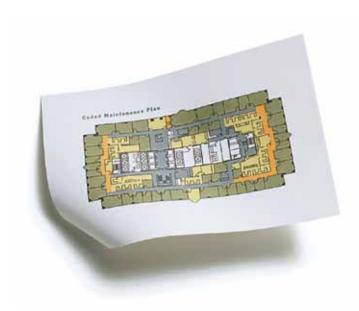
A very important part of the process involves the layout. By doing a preliminary layout, you can plan the progress of your job nightly. Taking the time to do a preliminary layout will also let you take advantage of combining tough areas with easy ones, helping you set the pace and production of the lift project.

If the project is mainly a large open area, plan your layout with your control lines as close to the center of the room as possible. Breaking the room into four sections would be recommended.

If the job has an inner core, such as an elevator lobby, that must be wrapped completely around. Place your control lines near the core.

Go through the furniture in complete clusters of workstations. Do not stop halfway through a workstation as it could create one of the following problems.

- The person in the unfinished workstation will have to pack and unpack twice.
- You will have to move the furniture twice inside the workstation.
- You will have to lift the furniture twice which increases the possibility of damage of problems.





Ready the Space

Walk the Job

Walk all areas where carpet will be installed, checking for any conditions that may require the customer's attention. Things to look for: swaying panels, un-level panels, bowed work surfaces, dirt or tears in chairs or panels, or kickplates damaged or missing.

Check and Double Check

Check for locked file drawers (if those drawers are needed in order to unbolt files), existing clip inserts, damage, or any other areas that may require input from the customer. Be sure to spot any reasons to involve your customer contact before they leave for the day. If something comes up that you did not have a chance to cover with them prior to them leaving, leave them a voicemail or note.

Map and Tag

As an important part of any lift project, furniture systems and equipment must be put back in their original places at the end of each evening. It is important that you accurately identify where things belong. With painter's masking tape and pen, you will want to go around the room and tag all the furniture that will be slid away on furniture skates. This includes all loose items, such as chairs, credenzas and filing cabinets. When tagging workstations and its contents it is important to label each station and its contents at same time. For example workstation "A" has 3 items to move out of the station: the chair A1, the filing cabinet A2 and the credenza A3. If you are moving a freestanding piece of furniture that butts against a wall, you will also want to mark the place on the wall where the furniture belongs. If filing cabinets are located under a desk or work surface, be sure to place your tag on top of the surface, so you can properly align the cabinets at the end of each evening. It is important to note that one person should do all the tagging. In addition, a hand drawn plan or blueprint might be necessary. You may even want to take pictures of areas you think you will have trouble remembering the location of certain items.

► The facility manager/office coordinator may be able to provide you with a plan that includes the current furniture layout.



Removing the old carpet

Removing Broadloom Carpet

Removing broadloom carpet is often the most difficult part of the process. Cuts must be made around all panels and fixed objects such as filing cabinets. If file cabinet extends to floor, removing them will make the job go faster.

Be very careful around wiring! If there's enough slack in the wiring, ease the wires away from panel being careful not to unplug them. Cut the carpet as close to the panel as possible. If there is little or no slack in the wiring, gather the wires as close to the panel as possible before cutting out the carpet from under the desk/worksurface. Cut the carpet with one hand while restraining the wire mass with the other. Cut carpet into small sections. Remove the carpet from workstations keeping dirt and debris in the carpet being removed not on the floor. The end result should be a ribbon of broadloom under the panel with the wire gathered on and along the ribbon. The ribbon of remaining carpet can be removed before or during the carpet installation. If the job is extra dirty and dusty take the time to vacuum before removing the ribbon of old carpet from under the workstation. This will make the installation of new carpet much easier and faster.

Removing Carpet tile

The process of removing carpet tile is very similar to that of removing broadloom carpet. One basic difference is that you are not cutting any carpet out from under workstations, so the risk of severing a wire is less. **Do not try to remove one tile and simply replace it with a new one.**

Do not pass go until you know what is below.

Do not pass go until you know exactly what is expected in terms of floor preparation and cost. Scraping, patching and leveling compounds greatly reduces productivity, hence adding greatly to the cost. The best-case scenario involves replacing carpet tile with carpet tile over a raised floor. No prep is required and the rip-up is easy. The worst-case scenario shuts the building down due to the fracturing of vinyl asbestos tile during rip-up.

Neatness Counts

Aggressive rip-up can cause unnecessary dust. To control the amount of dust generated keep the broadloom folded as much as possible. It is best to roll-up broadloom waste, so the dust stays contained within the carpet. Also do not sweep the floor with a broom. Always use a vacuum with filter making sure to clean the floor thoroughly. Cleanup should begin as soon as areas become open. This will allow you to begin spreading glue in the areas you have already cleaned.

Follow Manufacturer's Recommended Installation Instructions

Different backing systems may have different floor preparation requirements. Remember from a manufacturer's viewpoint, if the product is defective or curls, it will always be your floor prep that is at fault. Getting signed approval for your prep the first few nights can be an invaluable insurance policy.

Spreading Adhesive

Once the floor is **vacuumed**, the adhesive can be spread. Use only the manufacture's recommended adhesive. The best method for spreading is a medium nap 9" roller (some retailers sell adhesive rollers). Keep the adhesive 6" away from the furniture, walls, wire and computers/floor mounted equipment.

Wait for the adhesive to fully setup before you proceed. The use of a fan will speed up the setup time of the adhesive. If you do not wait you could end up working in wet glue which you could get on yourself, your shoes and then the new carpet.

► This would be a good time to take a lunch break.



Installation and Furniture Lifting

Select the Correct Fittings

Each furniture system may require a different setup. Consult the Project Information Profile for information to choose the correct fittings for the jacks based on the systems furniture installed for the particular project you are working on. Distribute the jacks to the crew members. The team lead should make certain everyone on the team understands where and how to use the jacks/tools.

Gently Lift the Furniture

It is not a weight lifting contest – so go slow and easy on the jacks. Apply gradual force and gently lift the panel. When using the jack, you will feel how the furniture is reacting to the force. Usually one or two pumps would be enough to relieve the pressure on the furniture glide. Once you can see that there is a clear space between the glide and the old carpet you will able to proceed. Be sure to remove the old carpet first to identify any carpet still pinned down by the furniture. Reposition your jacks as needed and repeat the process as required. **Never lift the furniture more than 1/2".**

Working together as a Team

Working as a team you will find your projects will move along a lot smoother, thus allowing your crews to install more yardage each night.

Good team work and communication will improve the safety on your project as well.



Button-up every Night

Clean up Behind Yourself

Through the installation process there should be a routine of cleaning up after yourself. As you complete each workstation, begin "buttoning-up" the area. This will help eliminate phone calls from the customer the following morning.

Leave the Area Finished and Safe

Make sure that you leave no gaps (tight cut) between the old and the new carpet. If you leave gaps it could case a trip hazard and gaps also look unprofessional. Do not use tape on the seams as it can be hard to get off the next night and it also leaves a sticky residue on the new carpet that will attract dirt.

Create Your Own "Punch List" Each Night

Since you are judged every morning, you must be your own critic each night before you go home. **You are strongly advised to bring your own vacuum and use it.** If you use the customer's vacuum, please be sure to get permission first and empty the bag at the end of each night. You will also want to dust major surfaces, if that was previously agreed upon by you and the customer. **It might by necessary to involve the customer's maintenance staff.** Check all perimeter tile cuts and correct any visible defects at this point. Encourage your customer to perform a daily critique of your crews work. They may find cabinets slightly out of place, etc. by correcting these when you start each evening you avoid a long list of touch ups that are to be done at the end of the job.

A Note About Security: Make an effort to "check-out" with security each night. Establish a habit of opening your tool box on the way out each night. **Good communication with security is very helpful in strict environments.** You may need to establish a check-in/check-out procedure to eliminate any possible concerns that could be directed at "the carpet people"



Plan Ahead for Tomorrow Night

Before leaving each day, map out the following day's work. Use the "Tonight's the Night" cards, which are designed to notify employees that you will be working in their office areas. This communication helps you control the pace while informing the customer of progress and intentions for the next night's work. You will also want to note any unusual situations that might require assistance from the customer. The customer will have time to help you prior to the next night's work. Both you and the customer should constantly check your work and look ahead. This will make your job much easier and allow the customer to stay in control of their environment.





Before you leave the jobsite, place a thank you card and mint on each desk of the area you have completed .



Keep a Job Log

A collection of the pre-installation and nightly checklist and worksheets.

Alert Customers to Problems

If any problems occur during the job that night let someone know. **Do not hide anything. If you do, they will find out.** Tell the lead on the job and he will relay it to his contact at the facility about the problem.

- Examples of things that can happen:
 - Cut phone cords or electrical wires
 - Hidden flat wire under the carpet cut
 - Damage to furniture or other articles
 - Major cracks in the floor (could be sign of major structural damage)
 - Anything that could get back to the facility contact that could cause a problem

Even if you or your lead fix the problem, let the facility contact know because there might be a further problem you did not detect. Some phone systems and electronics lock out if they detect any problem and the facility person may need to contact someone to fix it. This will also let the facility contact know that you are honest and professional. Most facility people realize things do happen, they just want to be aware. Leave a note on the person's desk were the problem occurred that you have contacted the facility person about the possible problem.

Before leaving for the night, the lead should leave a voicemail or note for the facility person.

- That there was a problem
- Location of the problem
- Able or unable to correct problem
- How problem was corrected.
- If no problems occur and everything went well, let the facility contact now. You might want to let them know the yardage that was installed. Keep them in the loop. It is a good practice for the lead to keep a daily log of events. This shows that you are professional and could help if questions arise in the future.



Tools of the Trade

As previously mentioned in the Introduction to this manual, the tools reference within this manual are from the Renovisions® patented system.

The Tool Box

Lift tools are a series of jacks and clips that are designed to lift the most common furniture systems, including freestanding desks and files. Additional tools are available to help with the rip-up of carpet from under the furniture.

A variety of jack fittings have also been developed to work with specific furniture systems. Special fittings are included for furniture manufactured by Herman Miller, Haworth, Steelcase, Knoll and other miscellaneous manufacturers.

As with any precision tool, **a trained operator is critical.** A surgeon becomes a surgeon through extensive training – not by buying a knife. Your training and understanding of the tools, furniture, and carpet tile installation will help you tackle the many different obstacles in the occupied office.

Knowledge: The most important tool

Understanding your customers along with their office environment is as important as having the right tools for the job. Furniture systems, how they are assembled, how wires are ran through the systems, as well as the do's and don'ts are all covered in this manual. Hands-on training is also crucial to understanding the details of the lift process.

Your customer is an invaluable source of knowledge about their furniture and office environment. Many times your customer knows the furniture better than you do. Be sure to extract as much information as possible during the introductory days and nights of the project.



Renovisions® Tool Box Contents

Items

Tool Box	01	Custom made Tool Box with wheels
Jacks	06	Lift Jacks
Extensions	04	Jack Shaft Extensions
Fittings	05	Universal Shoe
_	04	Haworth Saddle Shoe
	05	Universal Center Clip
	01	Universal Left Clip
	01	Universal Right Clip
Jack Lube	01	3 oz. pump spray lube
Cleaning Pad	01	Pad
Allen Wrenches	02	1 -1/8" 1 - 3/16"

Other Recommended Tools

Laser Products Laser Square or LeveLite Accu-Square Dasco 640 Ripper Sinclair Duro Stripper





Safety

Keep your fingers out from under kickplates, panels, glides, desks and file cabinets, in the event you overload the jacks and it kicks out. If you have to put your fingers under things, use multiple jacks to hold the load.

Keep glue 6" away from panels or jack locations, so jacks are not sitting in glue. The glue will promote the jack to slide.

When working in hallways or walkways remove handles after jacking to avoid a possible trip hazard. A rolling cart or someone's leg could displace the jack causing injury or damage.

When not working on the furniture make sure to lower the jacks to prevent any unnecessary strain on the furniture.

Ensure that the jack head is positioned **tight** to the panel and the fitting is locked into the panel to promote a straight and vertical lift.

Watch out not to pinch your fingers in the climbing mechanism of the jacks

Keep your lift to a maximum of 1/2" - any higher and you are asking for trouble

Wear proper safety equipment

Care and Maintenance

The lift jacks require very little care to maintain proper working condition. Remember if you keep the jacks in good working condition it will reduce your down time from failed equipment.

Spray lube on the brown pad that was provided in the tool box, rub the pad with the Dura-Lube on the shaft until the rust is removed. Remove the contaminated lube with a rag, with a clean rag spray a light coat of Lube on the rag and wipe the shift down. (Do not spray too much lube as it will get on your hands and then on the furniture).

Do not use WD-40 as it contains water and will promote rust and corrosion.

Perform maintenance on the jacks once a week. Once a month remove the covers and clean out the dirt and carpet fuzz from the internal parts using an air hose. Lube lightly the upper and lower cams on the jacks.

Make sure the bottom leg on the jack body is horizontal to the jack shaft. Put the jack in a vice and straighten with a hammer if needed.



Furniture Terminology

Accent Panels:



Accent panel with attachments that install over current panels. Can be vertical and horizontal in nature.

Base Covers or Kick Plates:



Trim cover that many times covers the electrical system.

Base Power-in (BPI)



Location where building power enters the furniture system. Average one BPI per every 6 workstations.



Assembly Unit:

Normally consists of a desk/credenza unit with overhead unit attached.

Cantilevers:

Support brackets under worksurfaces or other panel supported elements.

Glide:



Used to level panel systems/files/peds/desks

Panel, Non-Tackable:

This would indicate that the panel would be a hard surface even if it had fabric.

Panel, Tackable Acoustical:

Fabric-covered with a soft core that allows for sound absorption and tacking or hanging things on.

End panels:



These are used as a option to support worksurfaces. Some times they can attach to panels, make sure these are re-attached after lift.



Power Pole:

Vertical cable/power track that allows power and cable to distributed from the ceiling to panels systems.

Race Way:



Channel that allows for cable/power to be distributed through out panel system.

Service Module:

Attach to the top of unit assembly desks and credenzas to provide overhead storage.

Slotted Channel:

This is a vertical track that typically is on the end of each panel, some times the track is a shared track that is used between each panel.

Top Cap/Cover:



These caps/covers can be metal, wood or plastic. Some panels are designed to allow for voice/data cables to travel through these top caps.



Furniture Systems

The following pages address specific furniture systems and the tools necessary for each product by manufacturer and product series. Additional information has been provided to assist with the specific issues that may come along when lifting these furniture systems.

If you have any concerns regarding a specific furniture system, you may want to contact the manufacturer or the local product dealer in your market.



Haworth UniGroup

Haworth UniGroup is particularly sensitive to lifting. Do not lift from the panel channel slots. The channel slots are independent from the panels. If you attempt to lift on the channel, you could cause the vertical channel/hinge to dislodge causing the panels to fall.

In working with the Haworth Unigroup system Renovisions® has designed a special Haworth Saddle Shoe exclusively for the Haworth Unigroup. The fitting is designed to lift the Unigroup at the raceway location after removing the kick plates. Using the special shoe will reduce the potential for damage to the electrical system.







Lifting Haworth UniGroup Panels

Haworth UniGroup is an extremely sensitive furniture system that requires the electrical base covers to be detached prior to lifting. The site is also unusual. Typically panels are lifted at the vertical channel slots. The special designed Saddle Shoe supports and protects the electrical track on both sides of the track. Use Jacks in pairs to balance the weight at he hinge, this reduces the load on the "H" Clips as well

Tools Required:

5 each Jacks 5 each Saddle Shoes

Other Tools:

Scraper Bar Skates Haworth Saddle Shoe*

*This has been designed to protect the Electrical Raceway



Using Multiple Jacks

When you are ready to begin lifting Haworth Panels, first detach the base covers and distribute the jacks around the lift sites. Have each jack matched by another jack that is lifting the adjacent panel. This helps eliminate pressure on the small locking "H"clips at the base of the panels.

Remember: Use more jacks than usual. Support the head against the panel with a Skate or Carpet time to protect the panel from damage. Use one Jack per panel. Lift as little as possible, and watch the panel-locking "H" clips for stress to avoid shearing.



Haworth Premise and Race

The Premise panel system has several modified features, including new panel connections and channel slot attachment detail. The small clips used to lock the panels together have also changed making the hinge location much friendlier to upward lifting. The electrical connectors are still the same which means the same location is available for lifting with the Haworth Shoe.

Haworth Race series functions much like Steelcase Context which uses separate power trucks as the foundation for the panels.

Haworth Premise: This system can also be used in a floor to ceiling application. This is what you see in the back of this photo. This system can also use wood finish skins adding weight to the system.





Haworth Race

You will not see a lot of this product out there, but when you do proceed slowing. This is not a panel base - it has an open base post and beam system that has power almost at belt line height. Do not attempt to over lift just using the worksurfaces. This could cause the worksurfaces to dislodge and fall to the floor. It is strongly advised that you call a lift technician for advice prior to starting the lift project.





Haworth Compose

Compose is a rigid hinge system the should not give you too many issues during the lift. This system is considered a rigid frame and tile system. The frames are bolted together inside the panels. One thing to keep and eye on would be the top caps as they can in some cases be continuous which means that the top cap can span the length of 2 panels. Like on all lifts you do not want to over lift. If this system is loaded and you attempt to over lift you could damage the top cap beyond repair. The top caps are extruded aluminum.

You will be lifting with the universal clips (center, right and lift)







Herman Miller



Action Office

Ethospace

Vivo

Resolve



Herman Miller Action Office

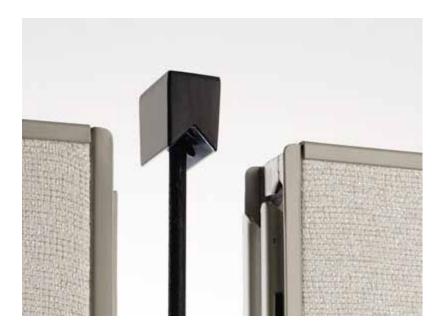
The Action Office 1, 2 and 3 series manufactured by Herman Miller is another common furniture system. Action Office was introduced in the mid 1960's and since that time it has experienced several evolutions and improvements.

Action Office is considered a rigid hinge system and can be very smooth to go through if the system has been installed correctly. It would not hurt to randomly check a number of the hinge connections to make sure the are connected tightly. If they appear lose or not connected tightly you may want to use an allen wrench to tighten things up.

Your components will be panel hung with this system and will in many cases create some challenges for jack placement. Take your time and you will find them.

You will be lifting with mostly the universal clips (center, left and right). You may find some rare times that you will need the universal shoe. Your universal clips are a little longer for this system. In order to lock your clips in place, you will be placing them in at a slight angle.

Herman Miller has a rigid panel connection. Panels are attached using a set of wedge blocks that can be loosened or tighten using an alien wrench.





Action Office Thin Base







Action Office Worksurface with Hanging Pedestal Storage.



Action Office Call center workstation







Page 39

Lifting Action Office Series 2 & 3

The primary difference between Series 1 and 2 is that the latter incorporates the base covers and electrical tracks into the panel system. The base covers are wider than the panel and everything lifts when the panel system is raised. Be aware of the fact that base covers become dislodged easily. Lifting under the large base cover is not recommended since it is both hollow and fragile. Insert the universal clip into the slotted channel above the base cover (the jack will require the shaft extension due to the height of the base cover). Remember to turn the stabilizing head to meet the panel. Most of the channel slots on both Series 2 and 3 are still curved.

Series 3 panels are the same except the base covers are taller and narrower. The channel slots may be straight (as opposed to curve). The same lift procedures apply using the lift system universal clips.

Tools Required for lifting Action Office:

06 Jacks

07 Universal Clips (Centers, Left and Right)

02 Universal Shoes

03 Shaft Extensions

Other Tools Required:



Herman Miller Ethospace



Ethospace is an elegant upgrade to most office systems furniture. Introduced in the mid-1980's, Ethospace takes full advantage of the panel-hung concept. Like the Action Office series the panels are connected by a wedge blocks and a draw rod that extents from the base of the panel to the top. The panel connection provides a solid locking system.

The Ethospace furniture system considered a frame and tile system that most of the components hang from. Those components that do not hang like pedestals are mobile and can be easily moved during the carpet replacement process.

Ethospace has very thick skins that are about 3/4" thick and you need to use care when inserting the clips into the panels not to cut the fabric on the skins.

Tools Required:

06 Jacks

04 Universal Clips (Center, Left and Right)

Universal ShoesShaft Extensions

Other Tools Required:





Herman Miller Vivo



This system was introduced by Herman Miller in late 2006. You are starting to see a lot of the product in the market place. The Vivo is very similar to the Haworth Compose system.

It tends to be a very rigid system from a lift stand point. The one thing you really must watch out for would be the system is sold with a lot of wing panels that do not go down the floor. There is about a 7" gap from the floor the where the panel starts. You will need to use your jack extensions in order to get the height during the Lift.

Storage can be a something to keep an eye on. Herman Miller tends to be sold with more hang on storage than most systems. This may be something you would want the customer to down load some of the content in order to help make the lift go smoother.





Herman Miller Resolve

There is not a lot to this system. The thing that can get a little tricky with this system would the overhead power ways. Keep in the mind the system can be deceiving when you first look at it. Make sure the crews are given a couple of days to become familiar with moving through it.

The system will normally have a lot of canopies that are over the top of the system make sure they are secure before beginning your Lift.







Steelcase



9000 Movable Wall / Avenir Answer Kick Montage Context Pathways Tech Wall



Steelcase 9000

The Steelcase 9000 panel system has been around for some time. Steelcase introduced an enhanced version of the system in the early 90's. Panels are compatible and are attached via the hinge system that involves a flexible plastic "slip-joint". Panels hung worksurfaces, overhead storage and filling cabinets are common. Free standing assembles including desks and filling units are also commonly found inside a workstation. Electrified panels are the most popular. The power distribution is found in the raceway or base of the panels. Terminal connections (whips) can be disrupted from improper lifting sites as well as over aggressive lifting. Keep lifts to a minimum - no more than ½".

Tools Required:

06 Jacks

9000 Panel Locks9000 Corner Locks

06 Universal Clips (Center, Left and Right)

04 Universal Shoes

Other Tools Required:





Steelcase 9000



Steelcase 9000 Enhanced



Steelcase 9000 Conventional





Steelcase 9000 Floor supported pedestal

Lift Sites:

The slotted channels at the hinge are the only method of lifting 9000. You are strongly encouraged to use corner locks as wells as the panel locks when lifting this system. This will keep the panels for sliding up and down between one another as well protecting your power system. Ensure that the jack heads are adjusted properly and the universal clips teeth are engaged correctly to promote a good vertical lift.

Pedestals attached below work surfaces often present a challenge. Use the universal shoe to provide support for the peds and lift it just high enough to remove the carpet from underneath. Make sure you place your jacks on the inside corners of the peds where there is more support.



Steelcase Moveable Wall/Avenir

This was one of Steelcase's first furniture systems. This systems has evolved from panels with no power (Moveable Wall) to what is seen more of today and that is Avenir. Some of the most noticeable changes are the system would be the new power system and now the skins are removable.

The system is a rigid hinge system with hang on components i.e. overhead storage and worksurfaces. The lower storage can be a bit challenging. Lower storage is all floor supported.

In some cases you may find it easier to remove the worksurface/storage together. This could greatly speed up you install. It is recommended that you have a crew that is good with furniture and has had experience with furniture systems in the past.

Tools Required:

05 Jacks

06 Universal Clips (Center, Left and Right)

07 Universal Shoes

Other Tools:



Steelcase Avenir Low and High Panels Floor supported pedestals.



Steelcase Avenir Team Station with Floor support pedestals.



Steelcase Kick

Steelcase Kick was introduced in 2001. It has for the most part replaced the Moveable Wall/Avenir product.

The system still has the same type of rigid hinge system. Steelcase in hopes of cutting some cost in the system made a few changes. You will still employ all the same lifting techniques used for the Moveable Wall/Avenir system.

Tools Required:

06 Jacks

06 Universal Clips (Center, Left and Right)

06 Universal Shoes

Other Tools Required:





Steelcase Montage

Montage has been around for a number of years now. Montage can be installed from low height up to ceiling height. The panels themselves can be very heavy and when you start adding in all of the components and storage this system can be challenging to lift.

Do not attempt to slide the early version of this system or you will tear the carpet. The system has leveling spikes that are designed to go thru the carpet and hit the slab. This would also be considered a frame and tile system.

Tools Required:

06 Jacks

06 Universal Clips (Center, Left and Right)

02 Universal Shoes

Other Tools Required

Scraper Bar







Steelcase Answer

Answer has been in the field for almost 10 years and is a frame and tile system. The interesting thing about these frame are they are fully assembled in the field by the installers. As you walk this system, you will see a lot of bowing and leaning of the panels. This would not be considered a very rigid system. Care must be taking while lifting this system when loaded, unlike most systems the vertical channel you will be lifting from is a shared channel. In other words, the panel to the left and the right both share the channel.

DO NOT attempt to lift this system using the universal shoes! You will cause the horizontal supports to come apart thus possibly bringing down that section of the panels.



Steelcase Answer panels with freestanding worksurfaces and Mobile Peds



Steelcase Context

Context is not a panel based system. Context is freestanding worksurfaces with screens on top of the worksurfaces.

There are a number of different versions of this system. If you run across one of the earlier versions care must be taking when lifting if the system has power in the base. During the lift the power will become disconnected for the system. You will need more jacks and one extra man during these types of projects. Regardless of the version that you are lifting you should use push pads in conjunction with the jacks.

Tools Required:

07 Jacks

08 Universal Shoes

05 Push Pads

Other Tools:



Steelcase Context with high screens and no power trunks in the base



Knoll



Equity

Morrison

Currents



Support Materials & Forms

The following pages provide information on the Occupied Workplace Logistics support materials and forms currently available.

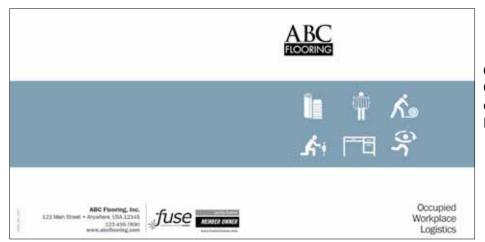
- **★** Ocuppied Workplace Logisitics Brochure
- * Project Information Profile
- * Tonight's the night cards
- ★ Thank you cards
- ★ Furniture Skates
- * Renovisions® Tools

For more information or to order these materials, please contact Kris Keller at (407) 574-6600 or kkeller@fusealliance.com.



Occupied Workplace Logistics Brochure

The Occupied Workplace Logisitics Brochure is available in the two versions shown below.



Cover

Customize brochure cover with your company logo and informaton.

Carpet Replacement Services

This version of the brochure provides information regarding replacing carpet in the occupied work environment.





Additional Services

In addition to the carpet replacement services information provided in the version above this brochure allows the dealer to incorporate the availability of other services including painting, window treatments and cabling.



Project Information Profile

Dealer Information:	Customer Information: Name:	
Name:		
Address:		
City, ST Zip:		
Contact Name:		
Phone:		
Fax:		
Areas to Carpet:	Type of Rip-Up: (Please describe	1
Under Systems Furniture: sq. yds		
Corridors (hard walled); sq. yds	(include any pre-existing conditions such as cut back, broken VCT, etc.)	
	Other Beer Berninger	
	Other Prep Requirements	
Total Sq. Yards	Border Work Required?	☐Yes (sq. yds) ☐No
Existing Floor Conditions: (Circle those that apply.)	Accents / Other Designs? Dumpster Provided by Client?	☐Yes (sq. yds) ☐No ☐Yes ☐No
Flooring Type: Broadloom / Carpet Tile / Other:	Recycle Needed?	□Yes □No
Installation Type: Direct Glue / Over Pad / Other:	Supply and Install Cove Base?	
SubFloor: Concrete / VCT / VAT / Wood / Raised Flooring /	Onsite Storage?	□Yes □No
Other:	Floor Plan Provided?	□Yes □No
Furniture & Filing Systems:		
Workstations: Qty Manufacturer:	Model/Series:	Panel Height:
Qty Manufacturer:	Model/Series:	Panel Height:
Furniture Layout Provided?		Managara and a
Electrified Panels? ☐Yes ☐No	File Cabinets:	
Paper Density? Heavy / Medium / Low	Cabinets Bolted Together?	□Yes □No
Book Shelves? ☐Yes (Qty) ☐No	Customer to Unbolt?	□Yes □No
Freestanding in Private Offices?	Vertical Files: (2-3 drawers)Qty.	(4-5 drawers)Qty.
Freestanding Components inside Workstations?		
Types of Freestanding: Desk / Credensa / Custom Wood /	Lateral Files: (2-3 drawers)	(4-5 drawers)
Other:		ally.
	- 1/ L	21
Wiring & Office Equipment:	4.40	to
Primary Wiring Systems: (Check all that apply.)		
☐ Wiring under Carpet / Flat Wire ☐ Wiring Molding on Carpet	DC Terminals:	Deete II On Floor II Noon
☐ Electrified Panels	PC Terminals:	
☐ Raised Floor or Trench	List any additional significant / sensitive equipment:	
□ Poke Thru		
☐ Power Poles ☐ Tombstone Electrical Boxes: Qty.	Is there an In-House Computer Service Person?	
Other: (Please describe.) Ex. Fiber Optic	Name:	Phone:
Phone and Wire Mass: (Loose under Stations) Heavy / Medium / Low		-G 100

Any Pre-existing Electrical / Wiring Conditions or Problems?

☐Yes ☐No (If any, please give details.) ___



Tonight's the night for your new carpet!

(see other side)









Tonight's the night for your new carpet!

(see other side)













New carpet will arrive under your desk tonight.

Before you go home tonight, please put away or box any significant personal belongings. Place files, papers, and other items which are located on the floor in boxes, they do not have to be removed from your workstation.

Desktop computers and PCs located on the floor should be turned off.









If you have any questions or need boxes, please contact your facilities manager or office coordinator.

THANK YOU!

\$\infty\$ PLEASE RETURN THIS CARD TO YOUR OFFICE COORDINATOR FOR REUSE.





Before you go home tonight, please put away or box any significant personal belongings. Place files, papers, and other items which are located on the floor in boxes, they do not have to be removed from your workstation.

Desktop computers and PCs located on the floor should be turned off.









If you have any questions or need boxes, please contact your facilities manager or office coordinator.

THANK YOU!

Page 58

LHANK YOU

LHANK YOU

for your cooperation in preparing

your office area for new carpet.

for your cooperation in preparing your office area for new carpet.



















PLEASE RETURN THIS CARD TO YOUR





THANK YOU

TANK YOU

for your cooperation in preparing your office area for new carpet.

for your cooperation in preparing your office area for new carpet.

















PLEASE RETURN THIS CARD TO YOUR OFFICE COLORGIANT

OFFICE COORDINATOR FOR REUSE.



Furniture Skates

Furniture skates can be purchased from XL North. To place an order, please call XL North at (888) 530-2259.



Renovisions® Tools

For information or assistance with Renovisions® tools, please contact: Mike Hutton Interface Services (770) 975-4823 mike.hutton@interfaceglobal.com

