

CONSTRU-GUÍA al día

Early Spring 2010

English translation of content

Cover:

Constru-Guía al Dia

We're building professionals

6 Steps to Install an Attic Fan
How to Repair Stucco
Estimate every job

Plus new in this issue:

Best practices in bathroom remodeling
Dressing for success

MiConstruGuia.com

TABLE OF CONTENTS p. 3

EARLY SPRING 2010 In This Issue

**John Mooncotch
Royal Crane Service**

Cover picture by Todd Winters for Constru-Guía al Día.

Constru-Guía al Día is published by Silver Lake Media Group LLC and The Cloud Peak Firm in cooperation with Reed Construction Group Custom Media. ©2009 The Cloud Peak Firm. All rights reserved. Constru-Guía al Día, 3162 Johnson Ferry Rd., Suite 260-943, Marietta, GA 30062
Please contact info@cgaldia.com with questions or comments. English translations of all articles can be found on www.MiConstruGuia.com

For advertising opportunities: Contact Kevin Kilpatrick at (770) 615-3585 or Kilpatrick@cgaldia.com.

Notes to the Reader:

Due to differing conditions, tools and individual skills, Silver Lake Media Group, The Cloud Peak Firm, Reed Business Information and The Home Depot assume no responsibility for any damages, injuries suffered or losses incurred as the result of following the information published in this magazine. Before beginning any work, review all instructions carefully, and if any doubts or questions remain, consult local experts or authorities. Because codes and regulations vary across the country, check with local authorities to ensure the work complies with all applicable codes and regulations. Always read and observe all safety precautions provided by manufacturers of any tools, equipment or supplies, and follow all accepted safety procedures.

BITS, p. 5

EVER WONDER WHY?

Did you ever wonder how each issue of Constru-Guia brings you ideas, suggestions, how-to advice and other information specifically about the work you do? Here's how: Constru-Guia has an editorial advisory board of Hispanic professionals from around the country providing insight and guidance to the editorial staff on what is important to you and your business.

Our current advisory board includes Ernie Barberie, Director, Contractors State License Services, Los Angeles; Ashley Bosch, Managing Director of Blok Urban Development Group, Miami; Ricardo Carlo, Executive Director, AMCA, Phoenix; Victor Ignacio Dziekiewicz, AIA, LEED AP – Designbridge, Chicago; Chris Escobedo, Phillips/May Corp., Dallas; and David Lefkovits, Partner, Lefko Group, Atlanta.

If you know someone that (or if you) would be a valuable addition to this advisory board – or if you'd like to suggest topics you'd like to see included in upcoming issues of the magazine, please let us know by sending an email to info@CGaldia.com.

NEW IN CONSTRU-GUIA

To be sure you are making a profit on the work you do, you need to estimate each job accurately. Even if you have been doing the same type of work for years, if you are guessing, rather than doing a formal estimate, you can over-price a job and risk losing it, or under-bid and lose money on the project.

For a step-by-step approach to effective estimating, turn to page 10 for a new Constru-Guia al dia feature: For Your Business. Then watch upcoming issues for more valuable information dedicated to helping you be more successful and profitable.

OSHA TARGETS RECORDKEEPING

The Occupational Safety and Health Administration (OSHA) has launched a National Emphasis Program on recordkeeping to determine the accuracy of data recorded by employers on employee injuries and illnesses. Under the program, OSHA will inspect occupational injury and illness records prepared by businesses and take legal action when employers are found to be under-recording injuries and illnesses.

OSHA considers recordkeeping in the construction industry to have "a long history of complexity and questions raised due to the nature of the workforce associated with mobile worksites." The new program will conduct inspections of construction employers to better understand how to approach this industry on a broad scale.

Employers will not be cited for failure to keep records if there have been no injuries or illnesses. For more information, visit www.osha.gov/OshDoc/Directive_pdf/CPL_02_09-08.pdf.

6 TIPS TO EXTEND THE LIFE OF YOUR EQUIPMENT

1. Replace oil and filters at the recommended intervals specified for the application and grade. Off-the-shelf oils should be replaced after 250 hours of operation. Replace the oil and fuel filters at the same time.
2. Check coolant fluid every 500 hours to ensure the prescribed DCA4 additive level is maintained. This additive helps avoid cavitation.
3. Maintain the crankcase breather assembly. If is soaked with oil, plugged or dented, the suction of the turbocharger will actually attempt to siphon engine oil out of the crankcase.
4. Check the air cleaner daily. A plugged air filter will cause the turbocharger to suck the air out of the crankcase, or the engine's fuel injection system to compensate for the lack of air with an increase in fuel injection, which will cause the engine to overheat and eventually fail.
5. Check and replace fuel injectors every 3,000 hours to avoid worn out and dripping injector nozzles, which can cause over-fueling and piston damage.
6. Replace hydraulic fluid and filters at the recommended intervals to avoid premature failure and expensive component repair. Fill and bleed hydraulic pumps or motors after replacement to prevent a dry run, which can destroy the component in minutes.

Source: Constructionbusinessowner.com

WHAT'S IN YOUR TOOLBOX? p. 7

What's In Your Toolbox?

Edgar Dominguez, Construction Framing Specialist

Framing may be one of the most labor-intensive phases of the construction process, but it is also one of the most exciting. Floors, walls and roof come together like a puzzle as the framing components of a house are completed. "I get a big sense of pride and satisfaction out of my job," says Edgar Dominguez, a framing specialist in the Los Angeles area. "Every new project is a new challenge."

As a carpenter, Dominguez has learned to work with different contractors and subcontractors. "Teamwork and flexibility are important parts of the job," he says. "You need to rely on your team members and keep the communication channels open to be successful."

Dominguez believes the secrets to a job well done are good-quality well-maintained tools. "I can tell you from experience, it is very important that contractors provide their workers the best possible tools," he says.

Irwin 100-foot Chalk & Reel Combo w/bonus level. "This is the chalk line I like, because the line holds enough chalk for repeated use, and if you use it right, it doesn't tangle."

Estwing 22-ounce milled face framing hammer with shock reduction grip. "I believe this is a framer's tool of choice. This framing hammer is very strong, yet it has the perfect size and weight to allow for some fast pounding."

Milwaukee Tilt Lok circular saw. "I've use this versatile saw a lot. It has more than enough power to perform almost any cut I have ever needed at the jobsite, and it does it well and straight every time. It is very reliable, sturdy and well-balanced."

DeWalt 18V ½-inch hammer drill/driver. "Having a good, powerful and reliable drill is a must at the jobsite. This drill has excellent battery life and is very powerful."

Klein Tools Journeyman framer gloves. "Every framer should invest in a good pair of gloves like these. The fingerless design gives you freedom when handling small parts, while the palm protects you and improves your grip."

Paslode 30 Degree Paper Collated Stick Framing Nailer (model F350-s). "This framing nailer lets me work fast. Nails are loaded from the top, which helps you move faster. What I like about this nailer is its depth adjustment feature. It is very precise and easy to use."

Empire 78-inch True Blue Magnetic Aluminum Level (model EM41.78). "Creating perfectly straight surfaces and walls starts with a good quality level like this one. It's sturdy, easy to read and magnetic, which comes in handy when I am working with steel studs."

Irwin Speedbor 8-piece Pro Set (model 341008). "The last thing you want is a drill bit that bites through wood. These bits make clean holes and the case keeps them in top shape."

– *By Adriana Sibaja*

THE BUILDERS ASSOCIATION OF SOUTH FLORIDA, p. 9

Developing Professionals

Dedicated to helping the south Florida building industry prosper.

The Builders Association of South Florida (BASF) has an impressive resume that spans 65 years of service to the building industry. Its strong member support and representation in the public and the private sectors helps promote and further the local building industry and serve the community. BASF's award-winning government affairs department provides its members advocacy at all levels of government.

"We help our members network and do business, and we protect our industry's needs in the local market," says Ashley Bosch, immediate past president of BASF.

The backbone of BASF is its member volunteers. From legislative to hands-on volunteer work, the association's 650-plus members are involved in all aspects of their community. "Our volunteers are our strength," says Bosch. "They are committed to giving their time and being engaged participants in our community and our industry,"

Q: Who can join?

A: "Our members are builders, developers, general contractors, remodelers and individuals from different backgrounds," says Bosch. "Anyone who is looking for networking potential possibilities and has an interest or deals with our industry is welcome to join."

Q: What are the benefits of joining?

A: BASF helps members access an array of programs and services at a low cost. "When you join BASF, you automatically become a member of the Florida Home Builders Association (FHBA), as well as the National Association of Home Builders (NAHB)," says Bosch, "giving members access to powerful tools, including access to expert advisors and nationally recognized educational programs."

Q: What type of educational sessions are available?

A: "Right now, we are focusing on getting people back to work and putting money back into their pockets," says Bosch. BASF recently completed a series of informative sessions with major procurement and government directors who provided members a thorough understanding of how a government contract is awarded. BASF also provides courses for continuing education credits so general contractors can maintain their licenses.

"We are an eclectic group so sessions are in English," says Bosch. "However, we have held sessions in Spanish in the past. We provide as much language help as we can to make our events as friendly as possible."

Q: Are non-members welcome to BASF events?

A: Most events are open to members and non-members. "The construction industry is a major player in the local, state and national economy," says Bosch, "and has a direct impact on how our community will grow in the future, so we welcome everyone in the industry or anyone who wants to learn about it. We encourage non-members to get involved and become future leaders in our organization."

Q: What are BASF's most popular programs and services?

A: "We offer excellent discount programs to our members with major corporations, like The Home Depot," says Bosch. "Our discounted insurance program, offered in conjunction with the State of Florida, is another great benefit for members."

For additional information and a complete list of BASF programs, services and educational sessions, visit www.basfonline.org or call (305) 556-6300.

-By Adriana Sibaja

FOR YOUR BUSINESS, p. 10

Estimate Every Job

You can't make money if you don't know your costs.

Whether you are preparing an estimate for a competitively bid project or just trying to figure out costs for the work you want to do, use the following steps to assure your estimates are organized, accurate and complete.

Before you start, review any plans and specifications, and see if you'll need suppliers or contractors to complete the work. If so, get them the information they need to price their work as soon as possible. Waiting until the last minute usually results in pricing that is inaccurate.

To be sure you have enough time to receive and review your subcontractor and supplier prices, make their due date at least a day before your bid is due. Request detailed written proposals from subcontractors and suppliers. If time does not allow, take detailed notes for bids you take over the phone.

Whenever possible, get at least three bids. Subcontractor bids often range significantly, and if you have three bids for each trade, you can make a better-informed decision about what number to use in your bid. As the bid process proceeds, be sure your subcontractors receive any changes or revisions.

When you have the bids, create a bid comparison sheet and list the key items the subcontractors will include. Many times contractors bidding the same work will include different things in their proposals. Use the bid comparison as a guide to review the bids you receive and help you equalize the bids. Add money to a bid for something one bidder has excluded, but other bidders included.

Create an estimate recap for all your costs and bids. Divide all costs into three basic categories:

- Production Costs include all material, labor, equipment, etc. to actually put a building component in place (i.e. foundations, windows, roof)
- Non-Production Costs, also called General Conditions costs or Direct Overhead, include all material, equipment, and costs that are directly attributable to completing the work, but are not an actual part of it (i.e. temporary toilets, dumpsters, supervision costs, the cost of electricity to build the project)
- Indirect Overhead include other costs needed to maintain your business that are not directly attributable to the project (i.e. rent, phone, electricity costs for office). Identify and quantify these costs, and then increase your hourly rate for manpower to cover them or add a line item for each project you estimate

General Conditions (non-production costs) may include 20 or 30 line items, depending on the complexity of the project. Create a recap sheet and list the various items and costs you anticipate. Many of these are directly related to how long a job takes, so you need to have an idea of how long the project will last. For example, if you estimate you'll need two temporary toilets per week, you need to know how many weeks you'll use them to determine the total cost.

When you have the General Conditions and Production Costs, subtotal. Your profit, indirect overhead, and insurance costs are often calculated as a percentage of that total. Combine those costs with your subtotal, and you have the cost of the entire estimate.

Now estimate the work

Read any written specifications, before you start any quantity take-offs on the plans. Many times, key differences or special requirements are included in the specification book, and you should note these before proceeding.

- When you start to review the plans to determine the material and labor required to do the job, these tips will help keep you organized:
- Look through all the plans and get a sense of the work first.
- As you proceed with your detailed take-off, use highlighters or colored pencils to mark up the plans. This way you'll know when you have included something.
- There are many ways to collect the quantities you'll need to prepare estimates. Some contractors use software programs, many use specialized forms and others have created their own forms. Whatever you use, note the plan sheet number on the item. This serves four purposes:
 1. If you estimate all material quantities first, it's easier to go back and assign your labor costs if you know what detail you were looking at. A 2x4 around a window opening at grade requires much less labor to install than one 40 feet in the air under an eave.
 2. The added sheet and detail description makes it easier for someone else to review your work
 3. If a plan revision is issued, you can easily compare the new detail to the old one and verify the impact of the change.
 4. When you are building the project, you can compare actual field labor and material costs more accurately. If the work in your estimate is lumped together, it's impossible to see where you under- or over-estimated.

As you estimate quantities, make sure you know what scale is used on the drawing or detail. Check the scale with other plan sheets; sometimes the incorrect scale is written on the plans by the architect. If you think you're looking at ¼-inch scale drawings, and they're actually 3/16-inch, you quantities will be wrong, and that will significantly influence your material and labor costs.

Once you've estimated the material quantities, add an appropriate amount for wasted material. Next, determine the cost of the materials, the cost of the labor to install then, and any related equipment costs.

Contact your source for the materials you need and if they won't give you a price for the total quantity, get their unit prices and determine your total material costs. For example, you need 434 feet of pressure-treated 2x4 studs. Your supplier sells those in 16-foot lengths for \$15 each. Divide 434 lineal feet by 16 feet, and round up to the nearest full piece. In this case, you would need 28 16-foot 2x4s for a total of \$420. Don't forget things like screws, glue, sales tax, delivery charges and other incidental costs. Once your material cost is calculated, move on to the labor cost.

Calculating labor costs takes experience. Focus on the larger line items first, since an error on these can make a big difference to your total estimated cost. Using your material quantity, try to determine your rate of production. For example, your job has 1,250 lineal feet of wood base. You

estimate your carpenter can measure, cut and install 20 feet of base per hour. Divide 1,250 feet by 20 to determine you'll need 63 hours. Remember someone will unload the material and distribute it to the various parts of the project. That requires time, as well, and you need to add this additional time to the hours you calculated to install the base.

Multiply your hours by your hourly rate. Hourly rates vary widely, but the basics are gross hourly wage, plus benefits, and state and local taxes. Many contractors add a value to cover a portion of their indirect overhead costs to the hourly rate. Once you have total hours for each line item, total the hours and multiply to get you labor cost.

The next item to consider is equipment costs. Do you need to buy or rent scaffolding or perhaps an aerial lift? Once again, time is key. Determine how long you'll need the equipment to correctly estimate the cost.

When your material, labor and equipment costs are completed, total them for that section of the estimate. The goal is to get everything in a format you can follow later, or use on future estimates as a comparison.

Finally, have someone check your math on both the material and labor take-offs sheets and prepare your bid. – *By Bruce Webb*

If there are bid documents...

When you get the bid documents, verify that you have everything you should have, including instructions to bidders, the plans, the specifications, any addenda that may have been issued, and the geotechnical report if any below-grade work is required.

Confirm the bid date and time, so your bid will be on time. Look for dates and times of any mandatory walk-throughs, so you don't miss them. Verify who will pay for the permit, if a bid bond or performance/payment bond is required, and if liquidated damages or unusual insurance are contract requirements.

Find out when the work is scheduled to start, and if any premium time work is required. This will help you determine if any special winter conditions cost should be included in your estimate.

Look at the bid form – if there is one – to see what information must be provided. Many times a bid will required unit prices, costs for bid alternates, or other costs or items that need to be determined. Fill out any parts of the bid form that you can ahead of time.

Try to get a feel for the duration of the project. Most bid forms require that you state your intended time to complete the work, and many other costs are related to the time required.

On bid day, make sure you have followed the required instructions, such as number of copies of the bid to be submitted, whether sealed envelopes are required etc. And finally, make sure you know where the bid is going and allow enough time to get it there. Factor in traffic so you know you'll be on time.

Check the scale with other plan sheets; sometimes the incorrect scale is written on the plans by the architect. If you think you're looking at ¼-inch scale drawings, and they're actually 3/16-inch, you quantities will be wrong, and that will significantly influence your material and labor costs.

How to Install an Attic Fan

A properly installed attic fan will increase the life of a home and cut energy demands.

The importance of venting the attic cannot be overstated. As heat builds up in the attic, the attic can reach temperatures as high as 150 degrees Fahrenheit. Even if the attic is insulated, the hot attic air will gradually heat the home and increase the amount of air conditioning and energy needed to keep it cool.

In dry climates, a hot attic can dry out the roof framing and shorten the life of the roof shingles. In colder climates, poor attic ventilation can lead to a moisture build-up that creates a place for mold to grow and increases the possibility of wood rot. In extreme cases, ice can form in the attic.

An attic fan works by drawing in cooler outside air through vents in the roof or the gable end, and blowing out the hotter air within the attic. A properly installed attic fan is quiet, uses little electricity and can save as much as 30 percent on cooling costs. The added benefits of increasing the life of the roof and prohibiting mold growth make the attic fan the important addition to the home.

Going solar

Solar-powered attic fans are gaining popularity, although engineers and manufacturers recommend they be used in smaller attic spaces because of the limited volume of air they can move. Installation is similar to a standard attic fan with the exception of the wiring.

Step 1 - Select the correct attic fan size

Measure the attic and then use the chart below to select the proper size fan. Note: this chart is based on a roof pitch of 4/12. If the roof is framed more steeply, you have more cubic feet of air to move, and you should consider increasing the attic fan size to the next larger fan in the chart. Be sure to check the fan sizing guide provided by the manufacturer of the attic fan you plan to buy.

: Fan Sizing Chart

Fan Diameter <i>inches</i>	CFM <i>cubic feet per minute</i>	Attic Size <i>square feet</i>
8	550	up to 500
10	625	up to 800
12	1200	up to 1300
14	1800	up to 2500
16	3000	up to 3500

Step 2 – Position the fan

The two most common locations to install an attic fan are either on the roof, or behind a gable end vent. Since the purpose of the attic fan is to draw as much air as possible through the attic, position the fan as far away as possible from a roof or gable end vent. If the new fan is installed near a vent (incoming air source), the fan will draw in the air from that source and immediately exhaust it. This is sometimes called “short-cycling” or “short-circuiting.” It defeats the purpose of the fan and won’t make much of a difference in the attic air temperature. By keeping the new fan and vent far away from each other, cooler air will pass through the entire attic space, as hotter air is exhausted.

Step 3 – Frame the opening

Typically an attic fan is made to fit between and attach to rafters for a roof-mounted application or between wall studs for a gable-end application. Either way, most fans will mount to the studs or rafters, which are 16 inches on-center (o.c.). Additional framing should only be required if the rafters or studs are not spaced 16 inches o.c. or if the fan is too large to fit between the framing members. In this case, it may be advisable to install two smaller fans rather than alter a load-bearing member to make a larger fan fit.

Step 4 – Install the fan

Prior to starting any work, turn off the electrical circuit you will be working on.

- To install a roof-mounted attic fan, drill a pilot hole through the roof from inside the attic in the approximate location you plan to mount the fan. Then from on top of the roof, cut a round hole that matches the diameter of the attic fan. Spread a generous amount of tar or roof mastic around the opening, slide the flange of the fan housing underneath the upper row of shingles, and press it firmly into the mastic. If necessary, replace shingles around the flange. Note: if the roof is clay tile, metal or flat, consult a professional roofer; these types of roofs require more complex techniques to make an installation that won’t leak. When the fan housing is in position, nail down the four corners of the flange, and dab tar or mastic over the nails to make them watertight.
- To install a gable-end attic fan, mount it between studs behind the gable-end vent. Install short wood studs (2 x 4 or 2 x 6) above and below the fan between the studs on which the fan is mounted to block any areas around the fan housing that air can pass through. If the gable-end vent is square or rectangular, use rigid insulation to cover the gaps around the fan housing.

Step 5 – Install the thermostatic fan regulator

Mount the thermostatic fan regulator to the stud or rafter nearest the fan and remove the cover. Then remove the knockout hole for the incoming power supply. Consult the manufacturer’s instructions before proceeding. Typically, you’ll connect the three white wires together. Make all the connections with wire nuts — not electrical tape. Then connect the black power supply wire to the black wire from the regulator, connect the black wire from the fan to the red wire from the regulator and connect the copper or green ground wires to each other or to a ground screw.

Step 6 – Test the fan

Install the cover on the thermostat and set it to 95 degrees Fahrenheit. Turn the circuit breaker on. If the fan doesn’t start, lower the thermostat setting until it does. If the fan still won’t start, turn off the power and recheck the wiring connections.

– *By Bruce Webb*

Tip: When possible, install an attic fan that has a firestat. The firestat senses when there is a house fire and shuts off the attic fan so it doesn't draw the fire and smoke into the attic.

Warning: Before installing an attic fan, determine whether the home has gas appliances, such as a water heater or furnace, installed in the attic. If it does, the attic fan can cause a negative air situation that can draw exhaust fumes back into the attic. This can result in a fire or fill the attic with carbon dioxide. You may need to make additional intake openings elsewhere in the roof or at a gable end that doesn't have a vent already.

Drill a pilot hole through the roof from inside the attic in the approximate location you plan to mount the fan. Then, cut a round hole that matches the diameter of the attic fan.

The fan slips under the shingles around the top half of the hole, and rests on top of the bottom-half shingles.

At a louvered opening in the attic, secure the fan by driving screws through its mounting brackets and into studs.

Attach the fan's thermostat to a nearby joist in the direct path of the air flow.

Wire the grounds, the whites, and the black wires, fold the wires into the thermostat box, and replace the cover.

For information on how to calculate how much ventilation an attic needs, read "Ventilate an Attic" at MiContruGuia.com.

PROBLEM/SOLUTION: REPAIRING STUCCO, p. 17

Repairing Damaged Stucco

How to repair cracking and other common stucco siding problems.

While stucco siding requires little maintenance, cracks and other problems should be repaired as soon as they appear.

Problem: Small cracks in siding

Solution: Small cracks caused by hot, dry weather are normal. Mist the surface with clean water to minimize or remove them.

Problem: Cracks $\frac{3}{4}$ to 1 inch wide

Solution: To fill cracks this size use products specifically designed for this application; be sure they are non-shrinking. Follow the manufacturer's directions. Never use traditional or pre-mixed stucco to repair this size crack. The material will shrink, and the crack will re-appear.

Problem: Cracks larger than 1 inch wide

Solution: Remove all the cracked stucco with a claw hammer or chisel, being careful not to damage the wood lath. Chip away the stucco until you reach stucco that is still firmly adhered to the lath. Use metal snips to cut and remove wire mesh in the area to be patched. Cut a piece of builder's paper to fit the area to be patched, and nail it to the lath. Then add a second layer of builder's paper over the first. Cut a piece of galvanized metal lath, and nail it over the second layer of paper. Try to get a tight fit between the metal lath and the edge of the existing stucco surface. Using snips with offset handles can make trimming the metal lath easier. **Tip: Use the builder's paper you've cut to fit the opening as a template to cut the metal lath.**

Now you're ready to apply the stucco. Use a pre-mixed dry stucco product. Add water slowly, and mix to a smooth paste-like consistency. The repair will take three coats of mix – scratch, brown and finish. If you plan to paint the repaired area, use the same grey pre-mix for all three coats. However, if you plan to add a colored pigment or leave the patch white, use a white pre-mix for the finish coat. Always wear eye protection and gloves when you work with stucco. If you get any on your skin, rinse it off with water immediately.

Depending on the temperature, you'll have 45 to 90 minutes before the mix hardens. Never work in temperatures below 40 degrees Fahrenheit and avoid making repairs when it's hot. High temperatures will cause the stucco to cure improperly by drawing out the moisture too quickly. Between coats, cover the patch with plastic to keep it moist.

Wet the surrounding edge of the existing stucco, so the moisture in the new stucco patch won't wick into the dry stucco surrounding it. Scoop up baseball sized clumps of stucco and sling it onto the metal lath until the patch is completely covered. Use a finishing trowel (and more material as needed) to smooth the stucco, until the surface of this coat is $\frac{1}{2}$ inch lower than the surface of the surrounding stucco. When the wet sheen has faded, lightly score (scratch) the surface of this layer with the tip of the trowel. These small scratches will help the next coat of stucco bond to the first coat. Tape a plastic sheet over the patch.

After seven days, remove the plastic, mix a second batch of stucco, wet the edges around the patch and trowel on a coat about $\frac{3}{8}$ -inch thick, working from the bottom to the top. When the wet sheen

fades, smooth the second coat with the trowel until it is 1/8 inch lower than the surrounding stucco. Cover with a plastic sheet.

For the finish coat, wait three days, remove the plastic and mix the stucco. Wet the edge of the patch and trowel on the final layer. Use a finishing technique that matches the texture and pattern of the original siding. When you complete the finish coat, let the patch cure for seven days. Mist the patch lightly with water every day. When the repair is completely dry, apply a breathable, alkaline-tolerant acrylic paint or stain to the patch.

Problem: Efflorescence

Solution: Efflorescence is a white, dust-like deposit that forms on the surface of stucco. To remove efflorescence brush a solution of white vinegar (or another approved diluted acid solution) onto the effected area, and then rinse thoroughly with water. If the efflorescence appears near the ground, you may need to dig down along the wall, and seal the stucco that meets the soil. Several sealer products are available for this. If the efflorescence does not appear to be caused by groundwater, look for other sources of moisture, such as irrigation heads.

Problem: Fuzzy growth on surface

Solution: As plants and mulches in flowerbeds decay, the microscopic organisms combine with water and cause mildew to form on adjacent stucco surfaces. To remove mildew on the stucco surface, brush lightly with household bleach and then rinse thoroughly with water.

– By Bruce Webb

Warning: If you plan to use a power washer to mist, clean or flush the stucco, be sure to keep the nozzle a safe distance away from the wall and keep the nozzle at a 45-degree angle. Direct spray from an incorrectly adjusted power washer can damage the surface of the stucco.

Tip: Paint will not adhere to damp stucco. It may look okay initially, but after the first rainfall, the paint will lift from the surface. The stucco repair must be completely dry.

Synthetic stucco

Synthetic stucco, commonly called EIFS, was used widely in the United States during the 1980s and 1990s. However, the synthetic stucco is no longer used widely because of long-term problems related to moisture. The materials and techniques required to repair synthetic stucco are not the same as for conventional stucco.

Remove all the cracked stucco with a claw hammer or chisel, being careful not to damage the wood lath.

Use a finishing trowel (and more material as needed) to smooth the stucco, until the surface of this coat is ½ inch lower than the surface of the surrounding stucco.

Wet the edges around the patch and trowel on a coat about 3/8-inch thick, working from the bottom to the top until it is 1/8-inch lower than the surrounding stucco.

For the finish coat, wet the edge of the patch and trowel on the final layer. Use a finishing technique that matches the texture and pattern of the original siding.

Use a pre-mixed dry stucco product. Add water slowly, and mix to a smooth paste-like consistency.

Photographs: QUIKRETE Guide to Concrete/Creative Publishing Int.

THE HOME DEPOT, p. 20

Volume Pricing at The Home Depot

A free program designed to help professionals spend less on large projects.

The Home Depot is constantly working to provide its professional customers specialized services and support to ensure they have all the tools and supplies they need to get the job done right. The Home Depot's Volume Pricing Program does just that. With Volume Pricing, professionals get volume discounts, fast quotes, job-lot quantities and even select direct-to-jobsite delivery on some products.

"Volume Pricing provides our lowest possible pricing on large quantities," says Terry Flanagan, The Home Depot Volume Pricing Program Manager.

Easy and straightforward

The Volume Pricing Program makes it easy for contractors to qualify for the best prices available on the volumes they purchase. Most purchases of \$2,500 or larger qualify for volume pricing and that can include a combination of items.

"I thought volume discounts were only for very large orders, but now I know I can also get a discount for my smaller projects, as long as they are over \$2,500," says Manuel Ornelas, owner of Dallas-based Coor Contractors, "even if my order has a little bit of everything."

Nearly any item can qualify for the Volume Pricing Program, and with an inventory of thousands of different building materials, home improvement supplies, and landscaping products, chances are contractors will easily meet the \$2,500 threshold to qualify for volume pricing.

"Our most popular categories are roofing, lumber, any kind of millwork, and wire, but we do everything," says Flanagan.

"The Home Depot has the best assortment," says Ornelas. "As a contractor, I need to purchase all kinds of materials and supplies, and what can be better than getting everything I need in the same place at a discount."

"My volumes are large, so I get a pretty good discount, and if I don't, I still know I am getting a good deal," says Jose Hernandez, general manager of JM Hernandez in Houston, Texas.

Getting a quote is simple and quick. Simply go to the Pro Desk at one of the hundreds of The Home Depot stores across the country and speak to an associate. They will submit the order electronically to the Volume Pricing team. On most stock merchandise, customers can expect to get a quote back in less than five minutes.

"We've automated the process considerably," says Flanagan. "Approximately 70 percent of quotes take less than five minutes."

If customers are ordering very large quantities, such as truckloads of lumber or large loads of wire, the process can take a little longer because the Volume Pricing team contacts the manufacturers to

negotiate the discount. However, even with very large orders, the quote is usually returned the same day.

"For larger orders or special orders, I usually submit my order at the Pro Desk a day in advance and they call me back with the discount, usually within hours," says Ornelas.

Additional benefits

On larger projects, sometimes purchases need to be spread out over a longer period. The Volume Pricing Program considers these orders for volume pricing, as long as they are attached to an initial qualifying bid.

Volume Pricing also offers jobsite delivery of some items at no additional cost, reducing handling and lead-time. Volume Pricing can also be combined with one of Home Depot's commercial credit programs.

"I would encourage all contractors to take advantage of the Volume Pricing Program and create a long-term relationship with their local Home Depot," says Hernandez. "My Pro Desk representatives know me and how I work, and they are always very helpful and proactive. They know when I am working on a project and check in with me regularly to see if I need any additional material. They go the extra mile."

For more information on this and other programs available at Home Depot, visit the contractor services website at www.homedepot.com/pro (English only).

--By Adriana Sibaja

Volume Pricing Easy as 1-2-3	
1	your Home Depot Pro Desk and submit a \$2,500+ purchase for a quote.
2	volume discount should be available in less than five minutes on most stock merchandise. (Very large or special orders may require a few hours, and Pro Desk associates may contact you by phone.)
3	your merchandise at the best possible price.

Getting a quote is simple and quick. On most stock merchandise, customers can expect to get a quote back in less than five minutes.

Most purchases of \$2,500 or larger qualify for volume pricing.

SAFETY ON THE JOBSITE, p. 22

Accidents Happen

The right response can save lives in the case of trench collapse, fall or electrical accident.

No one expects an accident, but for your safety, as well as your employees, you need to know how to respond when a fall, trench collapse or electrical accident occurs.

Before a job begins, create an emergency response plan. Identify local rescue and medical services, and post emergency numbers in a prominent location on the site or have employees keep them with them. If it would take more than three or four minutes to reach a hospital, you are required to designate a first-aid responder for the job.

When a worker falls

Falls are the leading cause of death in construction work and the second most common cause of non-fatal injuries. Federal law requires workers be protected with an appropriate fall-protection system if they are working at heights of 6 feet or more, and employers are required to be able to provide rescue within six minutes.

Not all falls are serious but always call for emergency help if the person is in a lot of pain; has an obvious deformity, such as a broken bone; is unconscious; or appears grey in color.

While waiting for help, stop bleeding by applying pressure to the wound with a small bandage. Wash your hands and wear gloves if they are available. Immobilize the injured area and apply a splint if necessary and if you have been trained to do so. Apply ice packs to limit swelling. If breathing is faint or the victim is short of breath, lie the victim down and elevate his legs. Keep the victim warm. Don't move a victim you think may have a neck or spinal injury, and don't give the victim any food or drink.

Fall victims in a harness can lose consciousness if the harness puts too much pressure on arteries, a condition called suspension trauma or orthostatic intolerance. Have conscious victims move their legs in the harness and push against any footholds. If the victim is unconscious, try to keep his legs as high as possible and his head as close to horizontal as possible.

When electricity strikes

Approximately 350 fatalities occur each year in construction from electrical accidents. When victims can't free themselves from the circuit, even relatively low voltages can be deadly.

Response time is critical. If a victim is still in contact with an energized circuit, turn off the current. If you can't do that quickly, pry the victim from the circuit with something that doesn't conduct electricity, such as a piece of dry wood. Don't touch the victim until the source of power has been removed. Call emergency personnel.

It's common for victims to go into shock following an electrical accident. Keep the victim lying down, keep his head low and cover him with blankets. Don't give him anything to eat or drink. Don't move the victim if you suspect a head or neck injury. If the victim is not breathing, have someone trained

in cardio pulmonary resuscitation (CPR) begin artificial breathing. To be effective, CPR must be performed within four minutes of the shock.

If the victim has an electrical burn, check for shock. If there are no signs of shock, begin treating the burned area. Cover the burn with a dry, sterile dressing, but don't cool the burn or removed burned clothing.

When a trench collapses

A fast-moving wall of dirt can break bones, cause internal hemorrhaging, initiate shock and set the stage for cardiac arrest. Even victims buried only waist deep have little chance of survival.

If a trench collapses, get everyone who is mobile out of the trench. Then call 911 for emergency assistance. Turn off any construction equipment and, if necessary, redirect traffic in the area to reduce vibration and avoid further collapse. Have someone record critical facts for rescue personnel, including the time of the collapse, type of soil, depth of the excavation, location of utilities and location of the victim.

Don't remove hand tools or other material that can be used to locate a victim. If the victim is conscious, consider tying a digging tool to a rope and tossing it to the victim so he can try to dig himself out.

Don't try to dig or lift a victim out, as both can result in further injury. Many deaths from trench cave-ins involve co-workers or would-be rescuers who enter the trench without understanding the danger. When a trench collapses, there is a 98 percent chance of a second collapse.

When rescue crews arrive, keep everyone away from the collapse area so rescue workers can work without distraction. Remember: rescuers won't be able to just run in and get the victim; they must first shore up the trench and select the right method of retrieval.

While it's important to focus on preventing falls, trench collapses and electrical accidents, the fact is they do happen. A few minutes spent learning how to respond could very well save a life.

—By J. Costin

Don't touch the victim until he's away from the power source..

If a victim is still in contact with an energized circuit, turn off the current. If you can't do that quickly, pry the victim from the circuit with something that doesn't conduct electricity, such as a piece of dry wood.

SAVE A LIFE

Ideally, CPR involves two elements: chest compressions combined with mouth-to-mouth rescue breathing. However, if you're not trained in CPR, do hands-only CPR – the difference between doing something and doing nothing could save a life. **Here's how:**

1. Place the heel of one hand over the center of the person's chest, between the nipples.
2. Place your other hand on top of the first. Keep your elbows straight and position your shoulders directly above your hands.
3. Use your upper body weight to push straight down on the chest about 2 inches. Push hard and fast — about two compressions per second.

Source: Mayo Clinic

Help prevent accidents on your jobsites, read "Preventing accident" at MiConstruGuia.com. Or find out what first aid supplies should be on your jobsite, read "First Aid Kits" also at MiConstruGuia.com.

BEST PRACTICES, p. 25

Best Practices for Bathroom Remodeling and Repair

Use these products to deliver a superior remodel or repair.

With housing sales at record lows, more homeowners are turning to remodeling to make their houses more comfortable, and top among remodeling projects today is the bathroom. Whether you are gutting a bathroom and starting from scratch, or simply replacing or repairing outdated toilets, vanities or fixtures, trust these recommended products to help you deliver the best possible results.

REPLACING FAUCETS

American Standard

Speed Connect Bath Faucets

Simply install the mounting plate to the wall using the screws provided and snap the bath hardware onto the mounting plate.

Kohler

Forté Faucet with Sculpted Lever Handles

Provides outstanding performance and simplified installation, and complements both classic and contemporary décor. Premium material for durability and reliability. Resists corrosion and tarnish.

Moen

Adler Showerhead and Faucet

Delivers solid performance and quality in an attractive, dependable faucet. The Adler features matching tub/shower faucet with a 2-function showerhead and a bonus handle that will fit any bathroom décor.

Price Pfister

Pasadena Faucet

2-handle faucet in brushed nickel finish features a high arc spout and 4-inch centers. Certified at 1.5 gallons per minute and fixed copper inlets.

Danco

Faucet Extenders

Danco's Faucet Extenders are designed for use on faucets that are mounted on thick countertops, such as granite or tile. Package contains a pair of extenders.

FAUCET CONNECTION

Skarkbite

Faucet Connection System

Join copper, CPVC or PEX pipe in any combination with no soldering, clamps, unions or glue. Just insert the pipe and the stainless steel teeth bite down and grip tight, while a specially formulated O-ring compresses to create a perfect seal.

REPLACING SHOWERHEADS

Delta

Water-Efficient Showerheads

H2Okinetic Technology manipulates water droplet size, velocity, spray and thermal dynamics to deliver a warm, drenching shower using 36 percent less water. Flow rate is 1.5 gpm.

Kohler

Forté 1.75 Gpm Showerhead

Three-function spray saves up to 30 percent water consumption vs. conventional handshowers. MasterClean sprayface resists hard water buildup.

Moen

Adler Showerhead and Faucet

Delivers solid performance and quality in an attractive, dependable faucet. The Adler features matching tub/shower faucet with a 2-function showerhead and a bonus handle that will fit any bathroom décor.

Price Pfister

Drill-Less Slidebar Shower System

System includes a 3-function showerhead, 3-function handshower and 60-inch hose. Installs onto existing showerarm in less than 5 minutes.

Waterpik

Ecoflow Hand-held Showerhead

Engineered to perform like full-flow showerheads while saving 1 gallon of water per minute. Features pause control on handle that reduces flow from 1.5 to .5 gpm and five spray options.

INSTALLING BATH FAN

NuTone

Decorative Fan/Light

Provides powerful, yet quiet ventilation for any room. Elegant vine in the base provides vent openings for the hidden exhaust fan. Measure 13-5/8 inches X 6½ inches.

REPLACING TOILETS AND TOILET SEATS

American Standard

Champion 4 Toilets

4-inch Accelerator Flush Valve pushes water into the bowl faster. The toilet also features the industry's largest siphon outlet – 2-3/8 inches – with no choke points and the EverClean surface.

Bemis

Easy Clean & Change Toilet Seat

Durable molded wood toilet seat has an Easy Clean & Change hinge system that's easy to install and clean. Just twist the hinge caps and lift the seat. Fits all elongated bowls.

Kohler

Wellworth Round-Front Toilet

Adds graceful design and superior functionality with extraordinary flushing power. DryLock attachment plate reduces installation time 40 percent and prevents leaks. 1.6 gallons per flush.

REPAIRING TOILETS

Fluidmaster

2 Piece Toilet Repair Kit

Fix the two most common toilet problems at one time. This easy to install kit, available exclusively at The Home Depot, includes an ultra-quiet Whisper Fill Valve and rugged Dura-Flush flapper. Fill valve has anti-siphon design and water level adjustment screw.

Korky

Red Korky Plus Flapper

Withstands harsh chlorine treatments and features a universal design and stainless-steel chain for strength.

REPLACING VANITIES, TOWEL BARS & ACCESSORIES

American Standard

Williamsburg Towel Bar

Simply install the mounting plate to the wall using provided screws and snap bath hardware onto the mounting plate.

Liberty Hardware

Futura Bath Accessories

Combining casual style and exceptional value, this bath accessory collection offers subtle design that always looks clean and relaxed.

Woodcrafters/Glacier Bay

2-Piece Vanity Combo

Fully assembled 24-inch-wide vanity combo features traditional design, elegant white finish, and premium white cultured marble vanity top with integral sink. Faucet sold separately.

NEW PRODUCTS, P. 33

High-Powered Planer Kit

Get excellent power in a 5-1/2-pound kit.

The 3-1/4-inch Planer Kit from Makita features a 6.5-amp motor that delivers more output in a compact size. Planes can be made to 3-1/4 inches wide and 3/32-inches deep in one pass. The two-blade cutter head with 17,000 rpm delivers a smooth finish and fast stock removal. The machined aluminum planer drum is balanced to reduce vibration and add durability.

Makita

Mr. Clean Professional

A total cleaning solution.

Mr. Clean Professional combines professional-grade formulations with cleaning power for your total cleaning solution. The Professional line includes

- Disinfecting Multi-Purpose Cleaner*
- Disinfecting Cleaner with Bleach*
- Heavy Duty Degreaser
- Glass Cleaner
- No-Rinse Floor Cleaner
- Greasy Floor Cleaner
- Disinfecting Floor Cleaner*
- Disinfecting Restroom Cleaner*

*Effective against pandemic 2009 H1N1 Influenza A virus

Proctor & Gamble

Attic Ladders Solved

Quick access to small attic openings.

Your homeowners may have an access panel to the attic but no way to get through it safely. Werner has a solution in the Televator Telescoping Attic Ladder. Its universal design is perfect for 8-to-10-foot ceilings. Capacity is 250 pounds.

Werner

Bringing Furniture-Grade to the Vanity

Introducing the Valencia three-piece combo.

Woodcrafters' valencia euro three-piece combo is a unique combination of furniture-style vanity cabinet, premium white porcelain sink and a solid wood wall mirror. This all-in-one bath solution will help save time and money. Available exclusively at the home depot.

Woodcrafters

Quickfire Speeds Things Up

Work upside or down – either way it's faster.

With a 40-percent height reduction, Quickfire's design adds maneuverability and control in tight spaces for multiple applications. The Bernzomatic torch has a high-intensity swirl flame for a hotter, more efficient flame for 30-percent faster soldering. It has an instant on/off trigger and is ready to go with only a quarter turn on the canister. It uses Max Power Propylene fuel, which is 20 percent hotter than propane fuel.

Bernzomatic

Fiber Cement Cuts Like Butter

New PCD blade has diamond-tipped teeth for longer life and faster cuts.

The Irwin Marathon Polycrystalline Diamond (PCD) Fiber Cement Blade incorporates diamond tipped teeth to deliver up to 15 times longer cutting life compared to standard carbide fiber cement blades. Laser cut body provides a stronger tooth bond and greater cutting accuracy on the job, while the thin kerf blade design produces less dust than a continuous rim blade. Available in 7-¼ inch 4T, 10-inch 6T and 12-inch 8T blades.

Irwin

DUROCK Cement Board

Now lighter and more durable.

The next generation of DUROCK cement board from USG features advanced cement technology and a unique recycled content that reduces board weight up to 25 percent. With this lighter weight board, more board goes on the truck.

USG

Stone Work Touch-Ups

For veneers and tuck-pointing stone and thin brick.

QUIKRETE's new Veneer Stone Mortar is specifically formulated for veneer applications and tuck-pointing of stone and thin brick. Available nationwide in 80-pound bags or 3,000-pound super sacks, the mortar is grey or can be colored. Perfect for multiple applications including mortar joint applications, a bonding coat to adhere stone to a wall and as a 3/8 to ½-inch scratch coat applied to expanded metal lath.

QUIKRETE

Clean Wet or Dry

Convert buckets into a powerful vacuum.

Bucket Head wet/dry vacuum turns a Home Depot bucket (sold separately) into a wet/dry vacuum perfect for cleaning as you go. The kit includes a blowing port, 4-foot hose, filter and 6-foot power cord. When one bucket is full, simply swap the Bucket Head to another bucket and keep working.

Bucket Head

Perfect for Close Work

Weighs just 5 pounds.

RIDGID's new compact 4-1/2-inch Angle Grinder weighs only 5 pounds, making it perfect for use in confined areas. The kit includes a R1005 angle grinder, auxiliary handle, grinding wheel, wrench, backing flange, flange nut, heavy-duty contractor bag, and operator's manual.

RIDGID

Tunes on the Job

72 hours of runtime per charge.

The Tek4 All-Play MP3 Player from Ryobi is powered by the company's Tek4 battery line. The MP3 player with an intuitive interface is easy to use and is rugged enough to survive in the toughest jobsite conditions.

Ryobi

Designed for Performance

New DeWalt drill-drivers and hammerdrills.

DeWalt's new DCD760KL compact drill-driver and DCD775KL compact hammerdrills (shown) deliver more speed to complete a wider range of applications. The DCD775KL is equipped with a high-power, high-efficiency frameless motor for drilling and fastening applications.

DeWalt

Get an Edge

New painter's tape from 3M delivers sharp lines.

Scotch-Blue Painter's Tape for Delicate Surfaces (#2080) now features 3M's new Edge-Lock Protector to deliver super sharp paint lines on smooth or slightly textured surfaces. The tape is ideal for decorative painting projects like striping, faux-finishing and painting on accent walls. The low-adhesion technology allows for clean removal without adhesive transfer or surface damage up to 60 days.

3M

Sealed Up Fast

PVA Primer seals drywall in fewer topcoats for a professional look.

L204005 PVA Primer by Kilz is a fast-drying, interior latex primer formulated to prime and seal new, uncoated drywall surfaces more effectively. With PVA, you'll achieve a uniform professional quality finish using fewer topcoats. This primer produces a whiter finish for truer topcoat color on unfinished drywall.

Kilz

Easier Bath/Shower Replacement

New 32-inch bath/shower simplifies installation.

Designed to be easily installed in a 5-foot alcove, the new Sterling Accord bath/shower is 60 inches long, 32 inches wide and 74 inches tall, including an overall bath height of 18 inches. The Accord can be specified as a whirlpool bath/shower or with an above-floor drain. ADA-compliant configurations are also available.

Sterling

Tough Enough to Carry It All

More than 140 ways to organize your tools.

Constructed of 1680 Denier SpunTuff heavy-duty, water-resistant material, Husky's new 14-inch tool bag can take pretty much anything you can throw in it. With the unique design, there are more than 140 ways (72 inside and 68 outside) to store and organize your tools. Two bonus part bins, shoulder strap and a steel-and-PVC grip are included.

Husky

YOUR BUSINESS. YOUR LIFE., p. 41

Dress for Success

What every contractor should know about dressing for extreme temperatures.

Dressing for extreme heat or cold is a matter of safety, as well as comfort. The right gear provides protection from frostbite, hypothermia, heat stroke and heat exhaustion.

Hot-Weather Gear

In extreme heat, wear light-colored clothing to minimize heat absorption and enhance heat dissipation. Loose fitting clothes enhance sweat evaporation, but avoid clothing that could become entangled in machines and tools. Instead, wear form-fitting clothing, such as Under Armour heat gear, which removes perspiration from the skin to keep you cool and dry.

Natural materials improve heat dissipation. For example, Blaklader pants in 100 percent canvas cotton are perfect for hot weather. The pants have reinforced utility pockets; lightweight Cordura kneepads of foam or gel, four bellowed pockets that keep tools from cutting into the legs; pockets for pencils, wallet and cell phone; a hammer loop; and detachable screwdriver pocket.

A cooling vest or Carhartt cool reflective t-shirt eliminate the need to wear a safety vest. Wear a hat in the sun or to keep cool under a hard hat, fit it with a shade, sweatbands and other cooling product. Try lighter weight gloves coated in polymetric materials that are cooler and more comfortable than leather. Work in non-insulated boots with breathable uppers.

Cold-Weather Gear

When it's cold, layer your clothing, without restricting mobility. The first layer should fit snug against the skin and be made of a non-absorbent material, such as polypropylene, silk or wool. For the middle layers, choose synthetic or wool pants, shirts and sweaters.

Dickies quilt-lined coveralls, for example, are lined with Arctic-weight quilted nylon polyester fabric for warmth in extreme conditions. Two-way leg zippers make it easy to get boots on and off. The outer layer should be insulated down, Polarguard, Thinsulate or Permaloft, covered by a wind-repellant shell that adds 25 to 50 degrees F of warmth.

Protect ears, noses, hands and feet from frostbite. Hats and neck gaiters help avoid heat loss and prevent frostbite. When hard hats are required, consider the MSA Safety Works Hard Hat Winter liner, which is a soft, two-ply liner that fits inside any hard hat.

Waterproofed, insulated work boots with slip-resistant soles and extra tread offer protection against cold, and slippery and wet surfaces. To protect hands, choose heavy-duty gloves with the right amount of flexibility, insulation and waterproofing for the job.

–By J. Costin