



Guide to Buying Ready Mixed Concrete

By Anne Balogh, The Concrete Network



With all the equipment, tools, and materials you need to purchase for your decorative concrete work, it's easy to neglect the obvious—the concrete itself. Yet ordering concrete should never be an afterthought. Because the material serves as the foundation for all your artistry, its quality and suitability for the job are paramount. By not making this purchase a top priority, you are inviting disaster and risk botching the entire project. [*Continue >*](#)





Your first step is to find a reputable ready mix supplier (through sources such as ConcreteProductsWeb.com) who can supply the material you need at the right time and at a fair price. But that's only the beginning. Placing the actual order is where things get complicated, since concrete is not an off-the-shelf product you can simply shop for out of a catalog.

If you're hoping to find one mix design that will work perfectly for every job and every application, there's no such thing, says Alan Sparkman, executive director of the Tennessee Concrete Association. However, with some basic knowledge and good communication with your supplier, you can get the perfect mix for each job, he maintains.

Determine what you need the mix to do

Once you choose a ready mix supplier, it's your responsibility to communicate your performance requirements for the concrete, both in its plastic and hardened states. Only then can the supplier work with you to provide a mix that will achieve the desired results.

When placing concrete on a large stamped concrete project, for example, you may need to slow the setting time to permit enough time for stamping. Your supplier also needs to know the anticipated exposure and service conditions of the concrete once it's in place, so he can supply you with a material strong enough for the application and advise you on admixtures to use to enhance concrete performance, such as water reducers and air entrainers.

Other ingredients you might want to include in your mix recipe include fiber reinforcement (for slabs on grade), integral colors, decorative aggregates, or special-purpose admixtures such as set accelerators or corrosion inhibitors. "Today's concrete can be engineered to meet almost any requirement, no matter how far out you might think it is," says Sparkman. "The key is to communicate your needs to your supplier so he can help you design a solution tailored to your situation."



Photo courtesy of Decorative Concrete Institute.





Understand mix design basics, but leave the proportioning up to the experts

You should know the fundamentals of concrete mix design, but it's best to leave the exact proportions to your ready mix producer, says Sparkman. Then if your supplier gets the formula wrong, you will at least have a basic understanding of how the components in a mix interact so you can help troubleshoot the problem. A reputable supplier will welcome your feedback and modify the mix to meet your needs. In some cases, even slight modifications can make a big difference in how the concrete performs.

An indispensable reference book on concrete mix design is *Design and Control of Concrete Mixtures*, published by the Portland Cement Association (available at www.cement.org).

Good online resources include:

The National Ready Mixed Concrete Association (www.nrmca.org/aboutconcrete)
PCA's Cement & Concrete Basics website (www.cement.org/basics)

Figure out how much concrete you need

Once you work with your supplier to come up with the best mix for your application, the next step is to order the right amount. Errors on the plus or minus side can be equally difficult to remedy. Buying too much concrete is not only a waste of money, but also necessitates finding an environmentally safe way to dispose of the excess. If you're too conservative with your estimate and don't buy enough concrete, you'll be forced to put the project on hold until an emergency delivery arrives—if you're lucky enough to get one on short notice. NRMCA recommends tacking an extra 4% to 10% onto your total estimate to allow for possible errors as well as spillage or over-excavation.





Ready mixed concrete is usually sold by the cubic yard, with the typical truck mixer holding 9 to 11 cubic yards of material. Determining how many yards you need for square or rectangular slabs is fairly straightforward (you can use this [concrete calculator](#) to help you do the math). Figuring out how much concrete you need for irregular slab shapes is trickier. When in doubt, ask your ready mix supplier to help you with the calculations.

Plan ahead to ensure timely delivery

Ask the ready mix supplier how many days of lead time are necessary for an order and whether the concrete can be delivered at the time of day you want it (such as before dawn or early evening to avoid placements during the heat of the day). Giving your supplier ample notice will help to ensure priority service and on-time delivery. For additional reassurance, be sure to confirm your order the day before the pour.

For larger projects requiring several truckloads of concrete, also discuss with your supplier the best time sequence for truck arrival. For example, if you estimate it will take your crew an hour to place a full truckload of concrete, then schedule the trucks to arrive an hour apart. Fresh concrete is perishable and will lose quality if it sits in the truck too long. ASTM C 94, “Standard Specification for Ready Mixed Concrete,” says that concrete should be discharged within 90 minutes and before 300 revolutions of the mixer after water has been added to the cement.

Use a local supplier to save hauling costs

As you might expect, you’ll generally pay higher transportation costs the farther the ready mix plant is from your work site. But that’s not the only reason to go local, whenever possible. The farther the truck has to travel, the greater the chance of it arriving late to the job.

If you’re on a remote jobsite or prefer to use a supplier across town, avoid scheduling deliveries during rush hour and recommend alternate routes in case of road construction or traffic congestion.





Make sure you get what you pay for

All the materials in a mix will contribute to the characteristics of the concrete that arrives at your jobsite. Some qualities, such as workability and ease of finishing, are readily apparent as you place the concrete. But others, such as compressive strength and air content, can't be observed. That's why onsite testing of the delivered concrete is important. These tests will assure you that the material you ordered is the same material that arrives in the truck.



Photo Courtesy of [Decorative Concrete Institute](#).



Slump (a measure of consistency), air content, unit weight, and compressive strength tests are the most common field tests for determining the quality of freshly mixed concrete. The following [ASTM standards](#) give procedures and acceptable time frames for performing these tests, which should be conducted by certified technicians:

- ASTM C 172: Standard Practice for Sampling Freshly Mixed Concrete
- ASTM C 143: Standard Test Method for Slump of Hydraulic Cement Concrete
- ASTM C 138: Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
- ASTM C 231: Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

The unit weight test will also tell whether you're getting the amount of concrete you paid for because it determines the yield of a sample of the ready mixed concrete as delivered, according to PCA. This is a simple calculation, but requires you to know the unit weight of all materials batched. The total weight information may be shown on the delivery ticket or can be provided by your supplier.

Based on the results of these field tests or external factors, such as long delivery times or hot weather conditions, it may be necessary to add air entraining, water reducing, set retarding, or other admixtures to the concrete prior to discharge. Let your ready mix supplier advise you in such circumstances and take responsibility for fine-tuning of the mix. Your supplier can't be held accountable for the quality of concrete that you alter yourself, such as by adding more water.





Sherpa info

HOW YOU CAN USE THIS DOCUMENT

You have unlimited right to print, distribute, and use this guide. E-mail it to a friend, put it on your website, or any other ideas you see fit. You can print it and post it on a job, at your favorite coffee shop, in your office, or get creative and engrave it in concrete. Please share freely, the only things you may not do is alter it or charge for it.

COPYRIGHT INFORMATION

The copyright in this work belongs to the ConcreteNetwork.com. Please direct questions regarding feedback, use, permission and screw-ups to dan@ConcreteNetwork.com.

DOWNLOAD GUIDE

This guide is available on line at <http://www.concretesharpa.com/buyreadymix>.

EMAIL TO A FRIEND

Click here to pass the guide along to someone cool.
<http://www.ConcreteSherpa.com/email/buyreadymix>

SUBSCRIBE

Learn about the latest Sherpa Guides and other concrete information available in the Concrete Network's Newsletter. <http://www.ConcreteNetwork.com/newsletter.htm>





Sherpa info

SUMMIT DATE

This document reached the summit (was created) on March 10, 2006 and is based on the best information available to the Sherpa at that time. To check for updates please click here <http://www.ConcreteSherpa.com/buyreadymix>.

NAVIGATION & USER TIPS

You can move around this guide by using your mouse or keyboard arrows. Left mouse button goes to the next page, right mouse button goes to previous page. Click on the right arrow (→) for the next page and the left arrow (←) to go the previous page.

KEYBOARD SHORT CUTS

	PC	MAC
Zoom in (Larger)	[Ctrl] [+]	[⌘] [+]
Zoom out	[Ctrl] [-]	[⌘] [-]
Full screen/normal screen view	[Ctrl] [L]	[⌘] [L]

ABOUT THE CONCRETE SHERPA

The Concrete Sherpa is a team of people that represent the experience, teaching and learning of our team members and other industry leaders *on a mission to make life better for the concrete contractor*. We are an idea center striving to deliver thought provoking ideas based on “Concrete Advice for Business and Life” to stimulate you to reach new heights. As a user, you should remember to consider all information you receive, here at the Concrete Sherpa or elsewhere, not as a *cast in concrete* recommendation, but rather as an idea for you to consider and ponder.



Sherpa info

THE JOURNEY LEADING TO THE CONCRETE SHERPA PROJECT

The Concrete Sherpa Project (A [Sherpa](#) is a “guide”) was born at The Concrete Network in mid 2004. Here is how it happened:

The biggest surprise, or gift, since starting The Concrete Network in 1999 has been the concrete contractor friends from around the country we’ve made and witnessing the passion they have for what they do. These people include Dave Pettigrew, up in the San Francisco Bay Area, or the Verlennich brothers in Minnesota, or Bob Harris in Georgia, the list goes on and on. It’s quite inspiring.

We were once asked, “How are you so excited every day about concrete?” Well the answer is simple, it is impossible to not be excited about concrete when you have the job we do—interacting with hundreds of concrete contractors from every state in the country.

The thing we’ve learned about concrete contractors is that most are passionate *craftsmen*—they are often less passionate and experienced in the “office stuff”. Human nature channels us to do what we are most comfortable with; learning how to use a new saw-cutting tool is comfortable; learning and implementing a new estimating strategy, or job management tool, is not so comfortable.



Sherpa info

THE JOURNEY CONTINUES...

So Sherpa was born to provide FREE and easy to use information on topics many contractors are not too comfortable with.

- Concrete Sherpa is here to provide help to contractors who are often 'Lone Rangers' and don't have anyone to get solid business advice from.
- Concrete Sherpa is here to provide help for contractors who have to work too hard and too many hours in their business, and one day realize they need to work *on their business, not in their business*.
- Have fun with Concrete Sherpa and go faster towards reaching success than you might have on your own.
- To skeptics who think something free can't be valuable, or there must be a trick- visit Concrete Sherpa and decide for yourself.

We hope you make great use of the Concrete Sherpa and it helps you to become an awesome success for yourself, your family, your church, and your community.

VISIT THE CONCRETE SHERPA

To visit the Concrete Sherpa click here <http://www.ConcreteSherpa.com>.

