

## **8 SECRETS HIDDEN IN A GREAT TENNIS COURT**

**IT'S WHAT YOU DON'T SEE THAT SEPARATES A GREAT COURT FROM THE MEDIOCRE AND THE TERRIBLE**

By R. Mark Montemayor  
Published 2014  
All Rights Reserved

At first glance, all new tennis courts look pretty much the same. The surface is covered with fresh, vibrant new colors, the lines are bright white, and the fence is straight and shiny. Unfortunately, the items I have just described, the most noticeable first impressions, are but a façade. They tell you as much about the true quality and integrity of a tennis court as the paint on a house tells you about its foundation and structure. The secrets of a great tennis court are hidden beneath the façade. If you will study these secrets and incorporate them into your tennis court project, you will never regret spending the little extra they may cost.

### **Secret #1: Plan First**

The selection of the site for your court is perhaps the most important decision you will make. It will determine the cost and complexity of the entire project. With few exceptions it is therefore extremely important to enlist the services of a civil engineer or landscape architect to help guide you through the land mines of site selection. He will not only help you select the best location, but will also prepare the construction drawings and a pretty good estimate of the expected cost of the entire project.

### **Secret #2: A Strong Foundation**

The first step is to clear the land of trees and other vegetation, including their roots systems, and strip away top-soil. It is very important to remove all of this organic material. Left on site it will decay, causing settlement of your court for years to come. Never allow any of this material to be buried under or near the court. Having cleared your site of all vegetation and other specified items, it is now time to build retaining walls (if necessary), and begin shaping the sub-base pad on which your court will be built and the areas surrounding the court. Your engineer or architect will have identified and submitted specifications for removal and replacement of all unsuitable materials found on site. Replacement materials, and on-site fill must be placed in layers not to exceed 6", and must be properly compacted with a vibratory roller weighing not less than 5 tons. This is a critical step in the process. While this method of adding fill to the site may seem slow and expensive, it is the only way to prevent settlement of the fill and thus the court. When the site is properly filled and compacted your contractor should be able to drive a loaded tandem dump truck (50,000 – 60,000 pounds) over any area of the court pad without causing ruts deeper than one inch. Do not proceed beyond this point until the pad passes this test. Poorly compacted fill is one of the most common causes of court surface failure, resulting in cracking and settlement.

### **Secret #3: Build It High and Dry**

Asphalt and concrete tennis courts do not like excessive moisture from above or below. Water that gets under the court can seriously undermine its structural integrity and can cause blistering and peeling of the

acrylic surface coating. Water that is allowed to flow over the court, from surrounding areas will carry with it minerals, fertilizers, and silt which will stain and degrade the surface.

This can all be easily prevented with a little planning and design the beginning. If your engineer or landscape architect identified any water migrating under your tennis court pad an appropriate subterranean drainage system should be specified to remedy the problem. Surface drainage problems can be prevented with just a little common sense. Never allow the tennis court to be used to drain water from areas around it at higher elevations. A drainage swale (a soft sloping ditch), not less than 5 feet in width, should be placed between the court and the higher surrounding ground, routing the water around the court. The tennis court area should always be at least a foot above all areas surrounding it.

## **THE TENNIS COURT**

### **Secret #4: A Consistent Rock Base**

The most important secret to learn about the rock base is; make sure you have one. I know that may sound silly but you would be amazed to know just how many courts have been built over the years with have no rock base. The asphalt course sits right on top of the dirt. This method will usually hold up for a few years but will eventually cause major structural cracking in the asphalt.

If you prepare your site and sub-grade following secrets 1 through 4, a consistent 4" of D.O.T. approved crusher-run stone is quite adequate. If you do not follow the secrets above, no amount of stone can guarantee a sound court.

### **Secret #5: The Great Asphalt Equation (1 + 1 is greater than 2)**

The typical asphalt specification for tennis court construction in most of the U.S. calls for a compacted thickness of 2 inches. You can check with these trade associations for asphalt specifications in your area:

The Asphalt Institute - Phone: (859) 288-4960 - Website: <https://www.asphaltinstitute.org>

National Asphalt Pavement Association – Phone: (888) 468-6499 – Web:

<http://www.asphaltpavement.org/>

Our secret to sound asphalt is: be sure the asphalt is placed in two separate (1" - 1-1/2") layers. The first layer is called a leveling course, consisting of a fairly large aggregate to give the court strength. It should be evenly placed and properly compacted prior the application of the second and final layer of asphalt (the finish course). The finish course is made up of a much finer aggregate, providing a smooth tight surface with which to apply the color system. It is, however, the method by which these two separate layers of asphalt are laid that causes their whole to be greater than the sum of their parts. As the second layer (the finish course) is applied, the paving seams should be staggered or offset from the joints of the leveling course by at least 12 inches. This allows each layer to support the seams of its counterpart, preventing or at least minimizing seam cracking as the court ages. The paving seams (or joints as they are called in the industry) are the weakest points in an asphalt pad and a very common cause of cracking tennis courts in our area. In tropical climates such as South Florida and the Caribbean, where 1 inch of asphalt placed in one lift (layer) is considered adequate, this technique is obviously not applicable, as it is possible to lay ½" of asphalt.

### **Secret #6: Where Fencing Is Concerned MORE IS MORE**

When looking at new fencing, it would be very difficult for the average person to distinguish a good strong fence and a weak inferior one. Assuming both were installed properly, they look virtually identical at first glance. A closer look will reveal the glaring difference between the two. An expert will look at four key areas to determine the true quality of the fence. The first test will be the depth and width of the fence post foundations. A good fence will have foundation measuring not less than 9" in diameter, with terminal posts set three feet deep and line posts buried at least two feet. The next item for inspection will be the fence framework. Good fence framework will be a thick wall SS40 weight pipe. Inferior fence will have only thin wall tubing for framework. Good heavy post foundations and framework are your best insurance against costly wind damage.

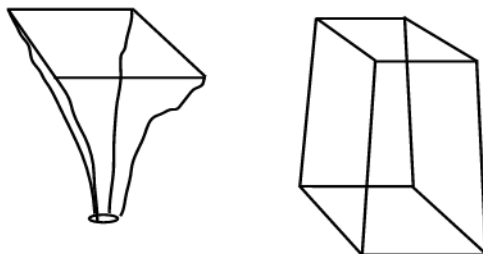
The last area the expert will check will be the chainlink part of the fence (we call it fence fabric in the industry). He will first measure the wire thickness beneath that beautiful vinyl coating. The wire thickness should be at least 10 gauge. In order to get this wire thickness you must ask for a heavy 8 gauge vinyl coated fabric. The difference between an 8 gauge vinyl coated fence fabric and a lighter 9 gauge is substantial, and will make all the difference in the world in the durability of your fence. If you play a lot of tennis at different courts, I'll bet you have seen more than one facility with the fence curling so badly at the bottom that balls actually rolled under the fence. Now you know what causes it.

### **Secret #7: Your Net Posts Must Hold an 800 Pound Gorilla**

When the net is properly tensioned, each net post must withstand the same stress as that of a 800 pound gorilla hanging from it 24 hours a day – seven days a week. Anything less than the heaviest net posts and the stoutest foundations will eventually yield to the gorilla.

Net posts should be constructed from a full schedule 40 pipe, and must have a removable handle. If you do not remove the handle after the net is properly tensioned you will one day find your net posts bending to the stress of a net tightened to over 1000 pounds.

The net post foundations must have minimum dimensions of 24" square at the top by 36" square at the bottom by 36" deep. Take a look at the drawings below. The one on the left is very typical of some of the crazy foundations we find when replacing foundations that have failed. To the right is a properly constructed foundation. When you look at each of them from the surface of a new court, the inferior foundation actually looks better. You would have no trouble picking the good foundation if you could see beneath the surface. If you have ever seen net posts leaning towards the net and the outer edge of the foundation raised above the court surface you now know why.



### **Secret #8: Your Acrylic Surface Is More Than a Pretty Face**

The most noticeable feature of a new court is the freshly coated surface and bright white playing lines. At first glance almost all new court surfaces look good. However, to truly judge the quality of the acrylic surface you must first look beneath this eye-catching façade, down into the patchwork that was done prior to coloring. No matter how good the paving, a tennis court will always need to be patched. Patching

eliminates standing water that degrades the surface as water remains on the surface after a rain. It also eliminates surface irregularities that can cause stress or injury to the knees or ankles, as well as bad ball bounces. Two standards must be met before you can say your court has been patched properly. No water left standing on the court surface deeper than the thickness of a nickel, one hour after a heavy rain, and no area should vary more than ¼" along a ten foot straightedge placed anywhere on the court.

Once the court is patched properly, the surface coatings are applied. The function of these coatings (besides the obvious aesthetic value) is to fill the porous asphalt, hide the patchwork, and provide an evenly textured playing surface for a consistent ball bounce. A total of four coats for new asphalt and two coats for new concrete are typical, but not always adequate. You should apply as many coats as is necessary to accomplish these goals.

Unfortunately, there is a broad range of the quality of tennis court coatings. Competition in the industry has motivated some manufacturers to lower the quantities of the two most important and most expensive ingredients in their coatings: latex polymer and pigment. Quality tennis court paint must have a high concentration of both. High pigment strength will keep the court color looking deep and vibrant after years in the hottest, sunniest climates. Rich latex concentration prevents the coatings from wearing away prematurely from harsh weather and heavy play. All of the coatings we manufacture at The Court Store, Inc. meet the highest standards of pigment and latex loading in the sport coating industry. This gives us the confidence to back our coatings with the only 3 year warranty, against fading and degradation, in the industry.

We hope this article has armed you with a little more knowledge in your quest to build a quality low-maintenance tennis court that will look great for decades. If you have any questions or comments, please give us a call?