



## ABC's of Conventional Tennis Court Construction

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Below, please find a detailed outline on the ABC's of conventional tennis court construction, explaining necessary qualifications, basics of construction, and maintenance/issues with tennis court instruction.

### 1. Qualifications

- a. **Designer** – Adequate experience and knowledge in the construction of tennis court facilities, including soils analysis, drainage (basic and interceptor), base construction, asphalt paving, surfacing, and accessories.
- b. **Contractor** – Adequate experience and knowledge as described above and hopefully, significant experience with laser technology.
- c. **Bid Qualifications** – As New Jersey relies on low qualified bidders, it is important to know that this policy does little to protect an owner. Quite often you have contractors entering the market with little or no experience, especially in difficult economic times, that have the appropriate bonding and documents, but no ability to complete the job as designed or intended. It is not only an owner's right, but his or her obligation to protect the taxpayer and ensure that the project is performed to optimal standards. To do this, it is extremely important that the owner include requirements in the bid qualifications that best protect their interest without unreasonably or unfairly minimizing the bidder pool. One example of good qualifications might be, **"...Contractor must be in good standing as a member of the American Sports Builders Association (ASBA) and have constructed, at minimum, 10 complete tennis courts each year over the past 3 years. In addition, it is required that the contractor have significant experience with laser-controlled technology and be able to verify that they have constructed, at minimum, 20 tennis courts utilizing laser-controlled technology."**

\*This is a good example of a bid qualification that is not **"unduly restrictive"** (a core goal of public bidding philosophy) as there are many ASBA members nationwide who construct thousands of courts each year.

### 2. Construction Basics

- a. **Soils Analysis** – Hire an independent testing firm to evaluate the existing site conditions and determine if any modifications need to be made for an optimal, free-draining site.
- b. **Drainage** – Construct as per independent testing firm recommendations. May consider typical storm drainage with an interceptor component.
- c. **Base Construction** – Stone base construction (of 6-8”) utilizing laser-controlled equipment.
- d. **Asphalt Pavement Construction** – Heavy duty asphalt pavement specification (**Minimum 4” base asphalt and 1.5” surface asphalt utilizing local DOT asphalt mixtures**) constructed utilizing laser-controlled equipment.
- e. **Surfacing** – Application of appropriate water-based and sand-filled acrylic latex products that will give protection, high performance, and longevity.
- f. **Expansion Joints** – Although the majority of asphalt tennis courts are constructed with no expansion joints, there are some engineers/designers who believe strongly that including saw-cut expansion joints help control the cracking that tennis courts inevitably experience. Contractor’s should have experience with whatever method the engineers/designers opt for.
- g. **Accessories** – Items such as fencing, bleachers, lighting, walkways, wind-screens, etc. can be added to enhance the facility and the experience.

\*A properly built tennis court facility should adhere to the construction basics of **smoothness, planarity, and optimal density** as designated by the ASBA construction guidelines. To achieve these guidelines, it is not only imperative to employ an experienced and knowledgeable contractor, but it would also be prudent to hire an independent testing firm to verify, at minimum, material types, quantities, and, most importantly, achieved density. **Tennis courts that are built properly to these guidelines should give many years of satisfactory use and enjoyment.**

### 3. Maintenance

- a. **Resurface** - Resurface every 3-7 years, depending upon use of the facility.
- b. **Crack Repair** – Although there is no permanent solution to crack repair, there are products in the marketplace that either fill the crack, cover the crack, or cover the entire tennis facility to act as a buffer between the continual contraction and expansion of the cracks and the playing surface. Some of these systems are relatively successful and may want to be considered as an alternative to significant renovation or reconstruction. Please view some of these product documents on our website, under the Tennis Courts Project Resources tab in the Smart Start Toolbox!
- c. **Grass Encroachment** – In many cases, grass and turf have a habit of growing higher than the asphalt or concrete curb edge, resulting in ponding at the edge of the courts towards the low end. It is important for an owner to adjust the turf as necessary to ensure proper runoff of the facility.

\*There are various levels of maintenance and remediation for tennis courts. We have provided them in a document on our website in PDF form, titled “Levels of Tennis Court Remediation”, in the Smart Start Toolbox page under Resources. Please click the White Pages dropdown under the Tennis Courts Project Resources to access it.

#### 4. A Major Issue Associated with Asphalt Tennis Court Construction

- a. **Contaminants** – Contaminants in the asphalt mixture, such as clay balls, silt balls, pyrites, oil, etc. that cannot be controlled by the contractor can reduce the performance and longevity of your new tennis court facility. When a contractor buys local DOT approved asphalt for highways and parking lots, it may have these contaminants, which will be detrimental for the relatively thin layers of coatings that the tennis court will receive. These contaminants will result in small holes, etc. and through the freeze-thaw cycles they will result in the reduced longevity, performance, and aesthetics of the facility. The best way to safeguard against contaminant issues is to contact the asphalt supplier, explain your needs for a high quality “virgin mix” with no use of recycled products and clean or washed raw materials. These suppliers should understand exactly what you’re talking about and be willing to assist you.

Overall, these are some basic guidelines on what to look out for when having work done on a tennis court. The engineer/designer should always have experience with this type of work as should the contractor. Furthermore, the contractor should be skilled in using laser technology to assist their precision in construction along with performing the rest of the services mentioned in the **Construction Basics** section above. As it shouldn’t be difficult to find companies with these types of experience, it is vital that you make sure you find a qualified organization.

Following this, it is important that the project specifications are written in a way that, while not being “unduly restrictive”, allows for contractors that have more experience and produce better quality work to perform the job over those that have little to no experience. Once the job is awarded to a contractor, testing should be done to verify the absence of contaminants and that the quality of the materials conforms to local DOT guidelines along with the project specifications.

Finally, after construction is completed, repairs and maintenance will be required at some point. The facility and its surrounds should be properly maintained, while it should be resurfaced every 3-7 years depending on the intensity and frequency of use. As mentioned above, there are no permanent solutions to cracks! There are a variety of temporary fixes, but eventually the facility will need to be renovated.

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