

# FOUNDATIONS FOR ARIZONA



## The Monsoon vs. The Parking Lot: The Outcome is Up to You

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Every Arizonan knows that summers in Arizona are just plain hot. Even the low humidity of the desert gives little relief when the temperature outside climbs above 110 degrees in June and July. In fact, the three highest temperatures ever recorded in Phoenix (122, 121, 120) have all taken place in the months of June and July. And it isn't only June and July that bring us heat from the aggressive Arizona sun. According to the National Weather Service, the average annual number of days with maximum temperatures of 100 degrees or higher in Phoenix is 89 – that's 24% of the year – typically ranging from mid May to late September.

With summer temperatures soaring well into the 100s and often beyond, many Arizonans (myself included) look forward to the Monsoon months of August and September to bring much needed relief from the blistering, dry heat. But did you know that the Arizona Monsoon has as harsh (or harsher) an effect on the integrity of your parking lot and other paved surfaces as the summer sun?

### The Adversaries - Sunlight, Heat & Rain:

The North American Monsoon, known to many here in Arizona as the *Summer* or *Desert Monsoon*, originates in late May or early June over Mexico and extends into the American Southwest by mid-July. While the correct definition of a Monsoon is "any wind that reverses its direction seasonally", most of us in Arizona associate this time period with thunderstorms and heavy rain. This "rainy" season is connected with an area of high pressure called the subtropical ridge that moves northward during the early summer months and an area of low pressure which develops from the intense surface heating of the desert floor. As much as 33% of all rainfall in Phoenix occurs during the summer Monsoon season.

While your parking lot is being weathered by ultraviolet rays, and the heat of the Arizona sun during the early summer months, it also has to endure a quick shift to the seasonal thunderstorms in mid to late summer that bring torrential rains and occasional flooding. This period of climatic change can dramatically alter the appearance and effectiveness of your asphalt pavement system, both on the surface where you can visibly identify many signs of deterioration, and within underlying pavement base where signs may not be visible to an untrained eye.

### Asphalt & Water Don't Play Well Together

- The key to long term pavement flexibility is protection of the asphalt binder.
- Flexibility is lost over time as asphalt is oxidized by the elements.
- As the pavement deteriorates, water enters through surface cracks, seeps into the sub grade, and begins to erode the foundation.
- An unstable foundation can result in large sink holes.



### You Decide the Outcome:

The most effective solutions to the effects of the Monsoons are those done in advance of the season. Seal coats may be the best method of all to defend against Monsoon damage because of their ability to both protect the asphalt binder and by placing a water resistant seal over slight surface imperfections. Certain types of sealants also include ingredients designed to slow down the degradation effects of UV. Crack sealing is also a very necessary tool in the battle against the Monsoons, especially for paved surfaces that have cracks ¼ inch wide or greater, or those that penetrate all the way through the pavement to the base underneath. Crack sealing is applied hot (about 300 degrees) and consists of a highly elastic material that bonds to the sides of a crack and is designed to flex with the pavements movement. On older paved surfaces, a slurry seal or asphalt overlay may be required to give the surface and the base adequate protection to maintain their strength and water resistance.

If your parking lot is showing any signs of deterioration or poor drainage, it's important to have it checked well in advance of the Monsoons. The months leading up to the Monsoons tend to be the busiest of the year for pavement maintenance companies. It is not abnormal to see schedules booked up months in advance during this critical time, in the rush to have work finished before the rains begin. Being aware of the current condition of your asphalt surface is the first step in protecting it. A professional estimator can give you an assessment of where your surface is in its life cycle. Proper maintenance such as crack sealing, seal coats, and repair of individual areas will go a long way in not only extending the life of your parking lot, but also in creating a safer environment for customers and visitors, all while saving you money in the long run.



### About Us

In 1966, a company called Parking Stripes Inc. was started in Butler, Wisconsin. With growing sales and opportunities, John Drexler brought his company to Arizona and in 1981, Ace Asphalt of Arizona, Inc. was formed. Today, Ace Asphalt

is setting the standard in our industry for quality customer service through our reliability, responsiveness, and results. As the largest private grading, paving, and paving maintenance company in the state, we pave or resurface over 180 million square feet per year.

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