

# FOUNDATIONS

## FOR ARIZONA



## Just The Cracks, Man!

### Winning the Battle on Pavement Deterioration

by Jon Baggett, Director of Marketing

It's been a long day in the office and you're tired. You walk out to your car, fumble through your purse or pockets to find your keys, and happen to glance down at the parking lot. You notice a rather large crack traveling underneath your car. Curious, you turn around and notice the crack sprawls out across the parking lot like a "spider web" of multi-sized fractures—fairly large in some areas, smaller in others, with no rhyme or reason as to their pattern. If you don't own or manage the facility, the thought may pass quickly as you get in your car and drive home. However, if you do, additional concerns may surface such as: *Why is my parking lot cracking? What could have been done to prevent this? Once I repair those cracks, how long until they re-surface?*

As a company specializing in the diagnosis and repair of pavement deterioration, we hear these questions daily from concerned owners and managers. Understanding the causes for cracks and other symptoms, as well as the advantages and limitations of the arsenal of potential solutions available, is the first step in winning the battle against these forces.

### THE BATTLEGROUND

Your fiercest enemies in the battle for your parking lot are the oxidation of asphalt and sub-grade moisture. From Day 1 of your parking lot's life, oxygen from the air and UV rays from the sun combine to break apart the chemical bonds that give pavements their strength. As these bonds break apart, the pavement fades in color, becomes brittle, and small fractures in the surface will become vulnerable to rain, sprinkler overspray, and the force of vehicles. As this deterioration process continues, more and more of the asphalt depth becomes exposed to oxidation, eventually allowing cracks to break through the asphalt to the sub-grade underneath. Water then enters through these cracks and begins to weaken the foundation. At this point, your pavement will no longer be able to hold the traffic loads and major pavement failures such as raveling and pot holes will follow. At best, these failures are cosmetically unattractive. However, and more importantly, they are serious safety hazards for vehicular and pedestrian traffic.

### THE ARSENAL

#### Easy, No-Cost Tools

- o Adjust any sprinklers leaking or over-spraying the pavement
- o Ensure you have no leaking pipes below or near the asphalt
- o Maintain a clean, debris-free surface
- o *Cost Scale: (nothing except your time)*

#### Crack Fill

- Crack filler is an elastic material used to seal joints or cracks.
- o Recommended to fill cracks ¼" or greater (lesser sized cracks won't hold crack-fill and wastes your precious capital)
  - o Prevents water from entering sub-grade
  - o Slows oxidation of exposed pavement depths
  - o Service when needed
  - o 2-3 year life span improvement\*\*
  - o *Cost Scale: \$*

#### Patching

- Large areas of surface deterioration or pavement failure can be maintained by either a Skin Patch (new layer on top of asphalt) or an R&R Patch (remove poor layer and replace asphalt).
- o Prevents water from entering sub-grade
  - o Service as needed
  - o 2-3 year life span improvement\*\*
  - o *Cost Scale: \$*

#### Seal Coats

- This layer of protection contains anti-oxidation additives which help to minimize raveling and shield against moisture and the elements.
- o Black coating keeps asphalt visually pleasing
  - o Slows the oxidation effect
  - o Service every 2-4 years\*
  - o 2-3 year life span improvement\*\*
  - o *Cost Scale: \$\$*

#### Slurry Seal

- Similar to a seal coat, slurry is thicker due to the addition of aggregates and other additives. Various mix designs can be used depending on the use and condition of the pavement.
- o Penetrates small surface imperfections
  - o Improves severely worn & rough surfaces
  - o 5-7 year life span improvement\*\*
  - o *Cost Scale: \$\$ - \$\$\$*

#### Asphalt Overlay/Fabric Overlay

- With any overlay, typically the asphalt is placed at 1½ - 2 inches in thickness. With a fabric option, a geo-textile material is placed between the existing surface and new asphalt.
- o New surface prevents sub-grade moisture
  - o Improved skid resistance
  - o 10-12 year life span improvement\*\*
  - o *Cost Scale: \$\$\$ - \$\$\$\$*

#### Removal and Replacement

- For severely damaged asphalt at the end of its useful life, sometimes the only solution is a complete removal and replacement.
- o Excavate soft soil, replaced and compacted new base
  - o Creates the opportunity to correct drainage problems
  - o New parking lot properly maintained could last 20+ years\*\*
  - o *Cost Scale: \$\$\$\$\$*

\* Years between seal coats depend on pavement condition.

\*\*Life span improvements are based off pavements that are regularly maintained and depend on condition of pavement prior to the method used and other factors.



### 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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