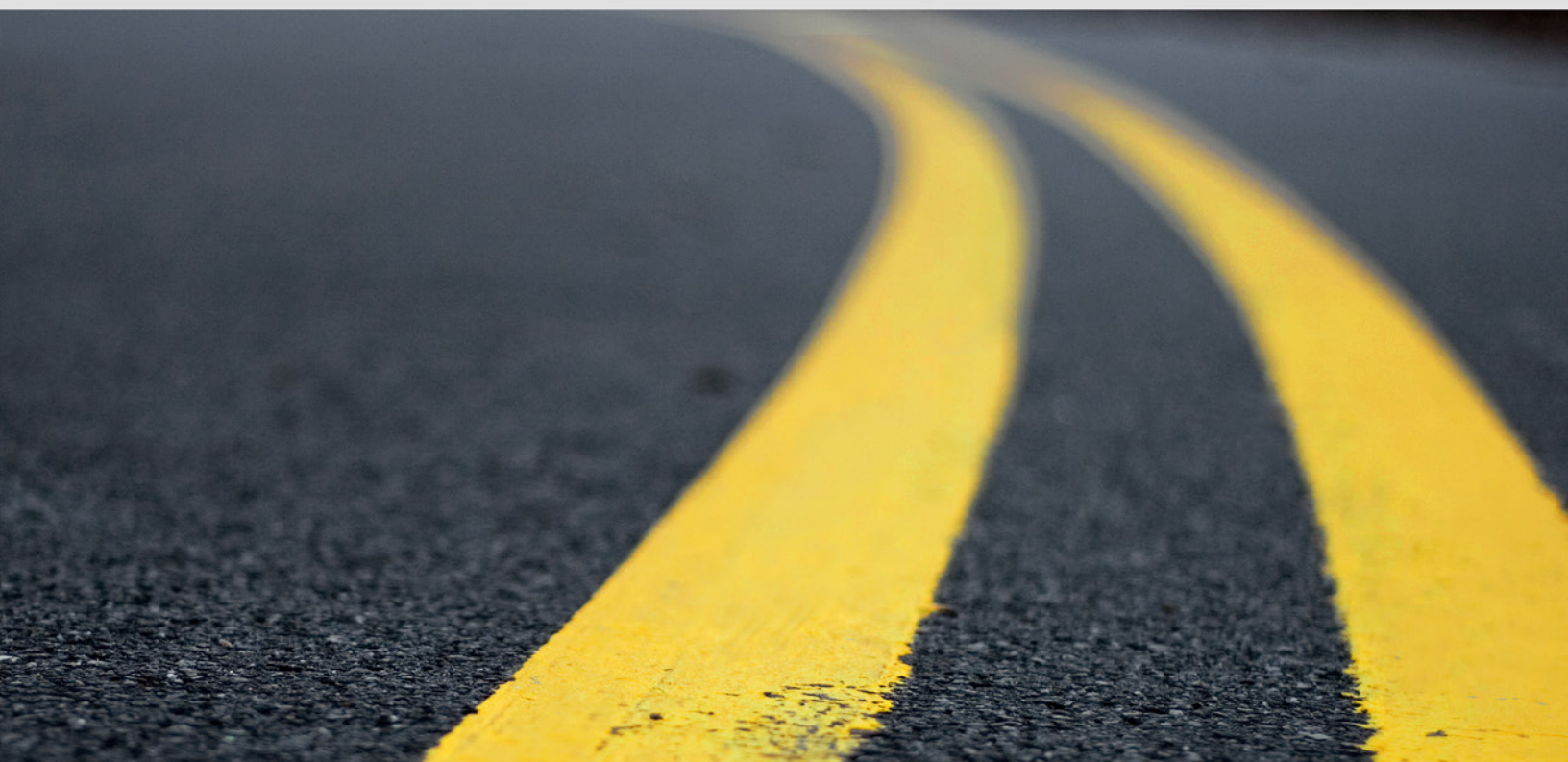




Everything for Roads

Environmentally Friendly Pavement Preservation Solutions



ABOUT ASPHALT MAINTENANCE SOLUTIONS

Asphalt Maintenance Solutions LLC is an American owned and operated family company serving the Mid-Atlantic for over 10 years.

Our core strength lies in the strong family values on which the company was built. These values permeate into every corner of our business, from our employees to the subcontractors and suppliers we utilize and to the relationship we have with our customers.

Asphalt Maintenance Solutions (AMS) specializes in the application of pavement maintenance and decorative surfacing products for municipalities, DOTs, school districts, commercial lots and private individuals.

AMS offers preventative maintenance applications of High Performance Chip Seals, Cape Seals, Nova-Surfacing, Slurry Seal, Grip Tight Fog Seal, Polymer Modified Crack Seal and PolyPatch.

We also provide and install highly flexible paving materials of FB-Modified, FB-3 Wearing and CP-2 Bituminous Binder Course. AMS also installs the innovative Hot Mix Resurfacing Systems of Hot Chip Seal and Ultra-Thin Friction Course.

AMS MANUAL SKIN PATCHING

This process puts your dollars exactly where they are needed and allows municipal equipment and manpower to be utilized if desired.

Manual Skin Patching is an inexpensive process whereby areas of the surface are sealed before they become problems. Typically this type of work is done in spring and fall.



Asphalt Distributor - two people, rented equipment & labor



Dump Truck - three people, municipal equipment & labor

AMS MECHANIZED SKIN PATCHING

Mechanized Skin Patching is similar to Manual Skin Patching, except equipment does the work. This process is utilized when the work to be done is too extensive for manual labor.



Road surface before Mechanized Skin Patching



Road surface after Mechanized Skin Patching

AMS POLYMER MODIFIED CRACK SEALING

Polymer Modified Crack Sealing is the most economical pavement maintenance tool available for both asphalt and concrete pavements.

Crack Sealing is most effective when done in newer pavements (3-5 years) when the cracks are first starting to appear. Pavements which have been neglected and are exhibiting severe cracking should be considered for some type of surface maintenance or pavement overlay after large cracks are sealed with the Polymer Modified Sealant.



Applying Crack Sealer and immediately spraying De-Tack



Close up of air cleaning cracks



Front of unit with driver and air cleaning

High production rates are achievable with contractor's equipment, as all operations are contained on a single vehicle, thus saving labor and equipment costs.

AMS POLYPATCH - REPAIR MASTIC

PolyPatch is a polymer repair mastic designed for repairing cracks which are too large for Crack Sealing and areas misaligned within the surrounding cartway.

PolyPatch will fill distressed areas and remain flexible. This versatile material is a hot-applied, pourable, self-adhesive polymer modified asphalt binder containing select aggregate with good load-bearing and skid resistant characteristics.



Flowing PolyPatch around manhole to make smooth transition from street to manhole



Cleaning surface in preparation of repair



Completing patch by ironing joint

PolyPatch is great for repairing misaligned areas within the cartway. These areas create a hazard for snow plow operations and can be repaired without the need for sawing, digging and replacing asphalt, therefore eliminating needless traffic disruption.



*Second application of a Double Chip Seal
(note tight pattern of equipment)*

AMS CHIP SEALS

Chip Seal is very inexpensive, however its sealing qualities are top rated among maintenance processes due to the high application rate of soft flexible asphalt applied directly on an existing surface.

Should the surface crack during cold weather there is a high probability that the heat of summer will soften the asphalt and reseal the surface.

Choice of cover aggregate is of the utmost importance. It requires the consideration of existing surface conditions, finished appearance, safety and last but not least, the life cycle cost.

Chip Seals are the most widely used pavement preservation processes due to the low cost and their superior sealing qualities. The cost-effectiveness of the product allows you to stretch your shrinking road budget dollars. Significant advancements in equipment and materials have occurred over the past 5 years. The entire AMS Chip Seal Fleet is computerized, ensuring precise, consistent application of materials. Our equipment is hydraulically expandable to 22 feet, allowing us to cover most roads in a single pass and thereby eliminating seams.

AMS CHIP SEALS (CONT.)

The three variations of Chip Seal presently utilized by AMS include “Single Chip Seal,” “Double Chip Seal” and the most popular, “High Performance Chip Seal.”

SINGLE CHIP SEAL consists of an application of liquid asphalt and an application of aggregate (normally ½” aggregate).

DOUBLE CHIP SEAL consists of a Single Chip Seal immediately overlaid with a second Single Chip Seal (normally both applications utilize ½” aggregate, however the aggregate size of each Single Chip Seal can vary).

HIGH PERFORMANCE CHIP SEAL is superior to the above, mainly due to a higher asphalt application rate and high quality of the aggregate utilized. The performance, appearance and anti-hydroplaning qualities are superior, however the biggest advantage is the low life cycle cost.



*Single Chip Seal Aggregate
(irregular size & elongated aggregate)*



*Single Size Cubical Aggregate utilized
in High Performance Chip Seal*

High Performance Chip Seal Aggregate, being single size and cubical in shape, allows the aggregate to embed in the asphalt layer during placement. In contrast, Single Chip Seal Aggregate, having irregular size and elongated pieces of aggregate, will not embed into the asphalt layer.

The advantages of High Performance Chip Seal include minor aggregate loss, and because aggregate is embedded in asphalt during placement, cleanup of loose aggregate can be accomplished sooner.

Future savings can be expected as the open texture allows for a fog/rejuvenating application to be applied at a fraction of the cost of other maintenance processes.

AMS GRIP TIGHT FOG SEAL

Grip Tight Fog Seal is comprised of quick setting, hard asphalt with high polymer content. This process provides a fast setting, flexible finish to reseal your roads.

Grip Tight is economical, quick setting and user friendly compared with other maintenance products. It is also utilized in Chip Seals to lock down loose material, increase the visibility of pavement markings, eliminate fugitive dust from the aggregate and provide a rich black appearance.



Close up of surface prior to Grip Tight Fog Seal



Close up of surface after Grip Tight Fog Seal



*Grip Tight Fog Seal being applied to High Performance Chip Seal
(City of Allentown)*



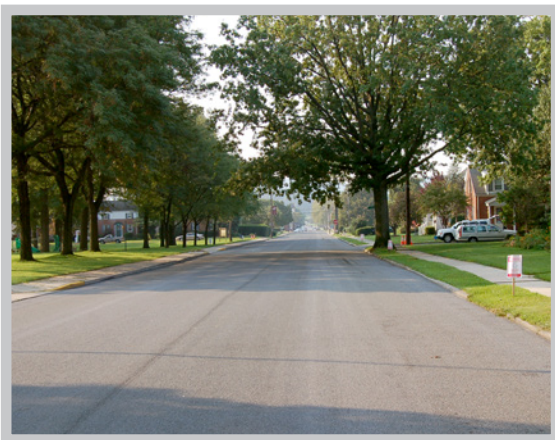
*Completed Grip Tight Fog Seal
(City of Allentown)*

NOTE: Road surfaces to be treated with Grip Tight Fog Seal must have an open texture to allow the material to penetrate and reseal the surface so as to stop water penetration. Tight surfaces normally cannot be treated with this method. Surfaces such as High Performance Chip Seal and Ultra-Thin Friction Course are examples of surfaces that can be treated effectively with Grip Tight Fog Seal.

AMS CAPE SEAL

Cape Seal is a two step process combining the flexible sealing quality of a Chip Seal with the texture of a Slurry Seal.

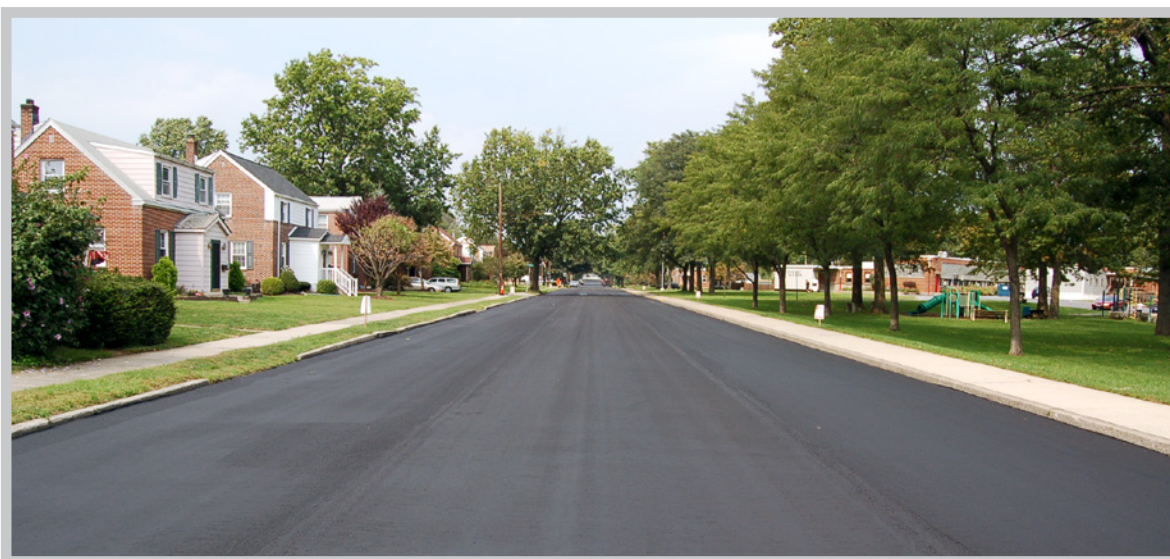
A High Performance Chip Seal is utilized, allowing for a high application rate of asphalt emulsion to effectively seal the surface and which can then be swept within 24 hours. The second application is a quick set slurry, which is used to fill the voids between the cubical aggregate of the Chip Seal, thus providing a durable, finished surface with an aesthetically pleasing appearance.



Completed High Performance Chip Seal



Slurry applied over High Performance Chip Seal



Cape Seal finished product

Cape Seal is resistant to reflective cracking and is well suited for both residential and higher ADT roads.



Special paver placing Ultra-Thin Friction Course followed immediately with steel finishing roller. Traffic can return as soon as the roller makes a single pass.

AMS ULTRA-THIN FRICTION COURSE

Ultra-Thin Friction Course provides a superior finished surface compared with other maintenance processes.

The material is placed with a paver capable of applying a highly polymerized asphalt emulsion tack coat and within 3 seconds applying the Hot Mix Asphalt paving material.

Benefits include no displacement of tack coat from trucks delivering material to the paver. The Hot Mix Asphalt causes the water from the tack coat to be vaporized, and the tack coat to be expanded into the new Hot Mix Asphalt surface, thereby creating a superior bond between the existing surface and the new asphalt overlay.

The macrotexture of the finished product creates benefits such as anti-hydroplaning/anti-splash from tires, superior skid resistance and high asphalt content, all of which create a longer lived product. The next maintenance requirement could be a low cost fog/rejuvenating seal, as the texture of the finished surface will allow the fog/rejuvenating seal to penetrate into the surface.

AMS ULTRA-THIN FRICTION COURSE (CONT.)

Product Benefit Highlights

- Sealing qualities of a Chip Seal with advantages of a thin Hot Mix overlay in one process
- Saves on curb reveal, laid at an average depth of $\frac{3}{4}$ "
- Proven service life of 10–15 years
- Quick, clean application with very little disruption to residents or the traveling public
- Superior sealing, waterproofing and leveling of the pavement
- Open texture provides for future maintenance to be an inexpensive Grip Tight Fog Seal

Ultra-Thin Friction Course can be applied on many types of road surfaces, from housing developments to interstate highways. The integrated tack coat and hot paving material set quickly, allowing for traffic to return to normal as soon as the material is rolled, thereby causing very little traffic disruption.



Polymer Modified Tack directly in front of Hot Mix



Busy intersection with no traffic disruption



12 year old Ultra-Thin Friction Course



12 year old Ultra-Thin Friction Course after Fog Seal



*Fine aggregate spread across Paver-Placed course
aggregate after application of asphalt binder.*



AMS CP-2 BITUMINOUS BINDER COURSE

CP-2 is an extremely flexible/draining base course which is able to accept any type of surface course, from Double Chip Seal to Hot Mix Asphalt Wearing Course.

Low ADT roads require minimal preparation, as the material design allows water to flow through the CP-2. The material is a great value and is able to be used in most any area with higher traffic count roads being overlaid with Hot Mix Asphalt.

CP-2 is the original Stress Absorbing Membrane Interlayer (SAMI). The size and gradation of the aggregate creates a strong, flexible base that is ready to accept any type of wearing course.

CP-2 deters cracking. It can also be easily recycled and requires low energy consumption in its production, placement and reuse. This product was “Sustainable” before that became a “buzz word.”

AMS CP-2 BITUMINOUS BINDER COURSE (CONT.)

CP-2 has been successfully used since the 1960s. The product continues to gain popularity as budgets shrink and costs rise. CP-2 is an extremely cost-effective, long-term solution for low to medium volume roads.



Course aggregate is Paver-Placed to correct profile



Emulsion applied at 1.5 gallons per SY



Fine aggregate placed with chip spreader



Rolled with 10 ton static roller



New finished surface with Double Chip Seal



The same Double Chip Seal 5 years later



Plant calibrated with DOT present and production of material with dedicated plant onsite.



AMS COLD MIX PAVING

Dense-graded Cold Mixes are a custom blend of coarse and fine aggregate combined with soft emulsified asphalt. They are used for paving courses on low volume rural and secondary roads.

FB Materials are produced in a portable pugmill which is quickly set up on or close to the job site. FB Materials are produced and placed at ambient temperatures, thus reducing our carbon footprint compared to using Hot Mix Asphalt.

Custom mix designs are developed according to project-specific conditions. Material can be designed to provide flexible or rigid pavements. Conventional paving equipment is used to place the material.

AMS COLD MIX PAVING (CONT.)

Cold Mix Paving offers an economical, long-life alternative to Hot Mix for low volume roads. Dense-graded Cold Mix materials combine the early strength necessary for a quick return of traffic with the flexibility necessary to perform extremely well over pavements with a deficient or severely deteriorated base.

FB-Modified is a combination binder/wearing course, placed in a single pass to a 3" compacted depth, whereas FB-3 is a 1.5" compacted depth wearing course or used as a Scratch/Leveling Course to correct minor surface deficiencies prior to a Chip Seal.



Delivered to paver for placement



Compacted with 10 ton static roller

FB Materials can be bid as a complete in place project or be bid as rental of equipment and purchase of materials, whereby a municipal entity can utilize their equipment and labor at a cost savings to the municipality.

AMS HOT CHIP SEAL

Hot Chip Seal is a two step process that begins with the application of a High Performance Chip Seal, followed by a $\frac{3}{4}$ " open-graded Hot Mix overlay.

Hot Chip Seal is used to both seal and level roadways which exhibit moderate to heavy cracking and which are also in need of reprofiling. Candidates for this process must be structurally sound; any areas exhibiting base failure should first be repaired. Hot Chip Seal is a less expensive alternative to placing a $1\frac{1}{2}$ " Superpave Overlay.



First Step: Place High Performance Chip Seal



Second Step: Pave utilizing Open Graded Friction Course



Note: 5/8" depth of paving & polymers in High Performance Chip Seal



Note: Combined, they create exceptional sealing and flexible pavement



Open texture retains salt and may not require pre-treatment for next storm

AMS NOVA-SURFACING

Asphalt Maintenance Solutions is committed to searching for new and improved, cost-effective products and processes for maintaining America's infrastructure. This lead us to the introduction of Nova-Surfacing, a process employed in Germany for many years.

Nova-Surfacing is placed with conventional equipment presently utilized in the United States. In comparison with current systems, Nova-Surfacing benefits include increased skid resistance, reduced reflective cracking and good anti-hydroplaning qualities.



Nova-Surfacing application



Close up of Nova-Surfacing product



The macrotexture of the material creates a more flexible surface with improved skid resistance compared with Microsurfacing

The open texture of Nova-Surfacing has many benefits, including the possibility of utilizing an inexpensive Fog Seal at the next maintenance cycle.

AMS ASPHALT EMULSION SUPPLIER

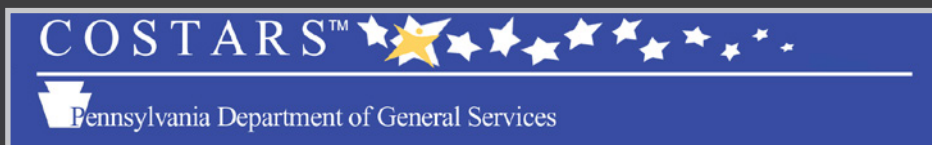
AMS is a distributor of asphalt emulsions and cut-back asphalt products for Eastern Pennsylvania, New Jersey and Delaware.

These materials are certified and approved for DOT use in Pennsylvania, New Jersey and Delaware. AMS is able to deliver the materials in tanker load quantities of 5,500 gallons or smaller quantities by asphalt distributor.

Asphalt Emulsion Products

AET (Tack Coat) • CNTTC (Trackless Tack Coat) • AEP (Prime Coat)
Grip Tight (Quick Set Fog Seal) • CRS-2 (Chip Seal) • CRS-2PM (Polymer Modified Chip Seal) • CSS-1H (Slurry Seal-Cold In-Place Recycle) • LBM (Cold Mix Paving)
CSS-1HPM (Microsurfacing) • UTFCEM (Ultra-Thin Friction Course Tack)
RC-250 W/A (Skin Patching) • MC-70 (Cut Back Prime Coat)

Asphalt Emulsion Products above in red are available to members of COSTARS



AMS EQUIPMENT RENTAL

AMS has a new fleet of computerized asphalt distributors, chip spreaders, Microsurfacing and slurry equipment, a portable pugmill for production of paving grade materials, a spray paver and rollers. The equipment is available for rent with a team of highly trained operators and laborers.

You can receive a **free quote** online by visiting <http://amsroads.com/contractor-services> or by calling us at **610-797-2645**. **Find out how our experienced operators can help you to win and successfully complete your project today!**

WHAT IS A CARBON FOOTPRINT?

A carbon footprint is a measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced. This is measured in units of carbon dioxide.

A carbon footprint is made up of the sum of two parts. The primary footprint is a measure of our direct emissions of CO₂ from the burning of fossil fuels. The secondary footprint is a measure of the indirect CO₂ emissions from the whole life cycle of products we use, i.e. those associated with their manufacture and eventual breakdown.



Asphalt Maintenance Solutions (AMS) is a pavement preservation and rehabilitation contractor providing products and services to federal, state and local governments. We recognize that our operations will have an affect on the local and global environment so we are committed to the continuous exploration and development of procedures, systems and working practices that reduce pollution and the impact generated during the course of our business, while ensuring our products remain of the highest quality.