SPRINGVILLE STREETS DEPARTMENT

CHIP SEAL PROGRAM

CHIP SEALING - A Proven Process

What is Chip Sealing?

Chip sealing is the most economical method of street resurfacing. It is a commonly used process by municipalities across the nation.

Chip sealing is comparable to other resurfacing methods in durability and effectiveness, but costs far less, (15-25% of the cost of pavement overlays).

Chip Seal cost = $0.75 Square yd.

Asphalt Overlay cost = $10.00 Square yd.

Total Rebuild = $28.00 Square Yd.

Chip seals are economical surface treatments designed to protect and prolong the lives of pavements.

Why Chip Seal?

Asphalt roads are like the new paint on your house. The moment the application process ends the deterioration process starts. Much like paint, asphalt is subject to oxidation, sunlight, rain, freeze and thaw cycles. Pavement is also subject to a wide array of different traffic loads, use of equipment for snow removal and additional stresses by normal ground movement.

Chip seals can be used on new pavements to increase traction, or to prolong the life of a pavement that is structurally sound but is beginning to age and may have some surface distress.

Benefits of Chip Sealing:

- Improve surface texture.
- Waterproof the surface.
- Protect the underlying pavement from oxidation, aging and traffic wear.
- Give new life to dry, weathered surfaces.
- Seal small cracks and imperfections.
- Economic way to resurface roads.

The Process:

Chip sealing involves spraying an asphalt emulsion on the pavement, then immediately spreading a layer of uniformly sized aggregate chips. The new surface is rolled to seat the aggregate. After a twenty-four hour curing period excess chips will be swept up.

LIFE OF A CHIP SEAL

- 5 - 8 years Initial application of Chip Seal over new asphalt pavement.
- 5-8 years Cycle between Chip Seal applications.

Note: In conjunction with chip sealing applications other routine maintenance will continue such as crack sealing, small pavement repairs, curb and sidewalk repairs, And Emergency repairs.

This process of street maintenance is done by most of the surrounding city's combining man power, trucks and equipment. This chip seal application usually starts in July and is complete by August.

SLURRY SEALS

Asphalt pavements over 5 years of age will be considered for a slurry seal. More than 100,000 square yards of pavement are slurry sealed each year.

What is slurry seal?
Slurry seal is a mixture of aggregate (small rock), asphalt emulsion, cement, and water. The asphalt emulsion serves as a binder, holding the crushed aggregate together and adhering the new slurry surface to the old surface which it is being applied over. Mixing and spreading are accomplished in one continuous operation, with the applied surface being ready for traffic within a few hours. This is similar to a chip seal but, mainly used on low volume traffic roads.

Preparation:
A Street that has been selected for slurry seal must first be prepared. The process begins with a herbicide application early in the year to prevent vegetation growth in the pavement. Next, any pavement distortions such as potholes, bumps or depressions are corrected. All cracks wider than 1/4" are filled with a sealant. Curb and gutter in poor condition is replaced. Finally, trees and vegetation are pruned for machine clearance.

How is slurry seal applied?
The process begins with notification to residents of the street closing. Contractors will attempt to personally contact each resident in order to provide an explanation of the activity and answer any questions. Each resident will receive a door hanger one week prior, that explains the process and advises when the work will be done.

The street is closed to all traffic. A thorough street cleaning follows to insure a good bond. Next slurry seal is applied to the road surface using truck mounted application equipment. Approximately 5 hours is required after application to cure the slurry seal. The street is then re-opened.

Benefits:
The Street Division has been using this product. Slurry seal has been very effective in extending pavement life. Its most notable features are:

- It seals out moisture over the entire pavement.
- It stops the oxidation process on the original pavement.
- It fills minor voids and depressions.
- It provides a non-skid surface.
- Its comparatively low cost makes it an effective alternative in street maintenance today.

Pavements that have deteriorated to a point that slurry seal would be of little benefit will be considered for major renovation by outside contractors. The Street Division cooperates with Engineering in making this decision.