

# Technical Brief



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## “BEST PRACTICES” FOR THE USE OF ASPHALT DRIVEWAYS

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**IT'S A SAFE BET** that probably everyone involved with hot mix asphalt (HMA) pavements has been asked for advice on residential driveways. Whether you're a producer, contractor, engineer or owner, people outside the business look at you as a "blacktop expert" and often ask for information on building a new driveway or repairing or sealing an old one. There is general consensus on how to answer these inquiries. First, you can assure homeowners that a properly designed, constructed and maintained HMA driveway will provide years of excellent service and will add appeal and value to the property. A well-designed driveway will give trouble-free service for up to 20 years.

Also, a properly designed, constructed and maintained HMA driveway will provide years of excellent service and will add appeal and value to the property.

Here are some considerations that should be thought through as part of your next driveway project:

- Good design
- Good materials
- Good construction

**Design** - Before giving advice, it's wise to look at the actual site conditions and understand the subgrade soil type, drainage, presence of utilities, type of loads, etc. The subgrade should be graded smooth, made free of organic materials, and weak spots undercut and replaced with suitable material. Proper drainage provisions along with the final crown and slopes need to be addressed. A base course of 6 to 8 inches of crushed aggregate is usually adequate. For best results, the ordinary residential HMA driveway pavement should consist of a 2-inch bottom course covered with a 1.5-inch surface course.

**Materials** - In regard to HMA, conventional mixes will provide satisfactory service. Densely graded surfaces work well for driveways. It's important that the mix be provided by an established, reputable producer that services the location in question. CAPA members can provide specific mix recommendations for driveway applications.

**Construction** - Good construction practice is critical in providing a satisfactory, durable end result. Work on the subgrade is important. Often backfill or fill areas around new homes are prone to future settlement. In some instances it's wise to wait a few months before driveway installation. Base course aggregate should be spread evenly to the proper thickness, line and grade, and compacted with suitable rollers and compactors. Weed killer is sometimes applied to help prevent weeds from propagating through the section. Paving should be done only when weather conditions are good. Avoid cold rainy days. HMA should be delivered and used at the proper temperature. Avoid cold rainy days. HMA should be delivered and used at the proper temperature. HMA be machine placed - avoid hand work to the extent possible. Rolling and compaction with proper equipment and techniques are essential to ensuring

a good job.

The process of getting a good HMA driveway isn't really that complex or scary.

***Overlaying an existing driveway:***

Existing driveways can be overlaid with HMA to improve condition, strengthen and extend service life. Again, before giving advice, inspect the site to determine conditions. Prior to overlaying, address any distressed areas such as weak spots, holes and large cracks. These need to be cut out and patched with HMA. An overlay of 1.5 to 2 inches thick of a surface mix is usually sufficient. The surface should be clean and dry prior to placing the overlay. A tack coat is recommended for old weathered surfaces. Care should be taken in paving to get a smooth surface that won't pond water.

***Maintaining the driveway:***

A high-grade bituminous liquid sealer applied every two to five years can extend service life of the driveway and will improve appearance. Don't apply sealer until the driveway is at least several months old. Some sealers contain small aggregate filler that can enhance traction if needed. Small holes and cracks can be filled with driveway maintenance products readily available to homeowners in hardware or building supply stores.

***Tips for homeowners:***

- Deal only with reputable paving contractors. Don't deal with "fly-by-night" operators.
- Get more than one written quote. Get references and check them. Look at some of the contractor's older completed work. Check with the Better Business Bureau. Note that the lowest quote may not be the best one.
- Make sure everything is spelled out in the contract. e.g. - starting and completion dates, dimensions, material types and thicknesses, drainage provisions, utility provisions, need for permits, extra work if needed, damage to adjacent areas, etc.
- Ask for a written warranty for a couple of years. Address remedial work responsibility. Reputable contractors will stand behind their work.
- While new HMA can be driven on soon after placement, it's best to wait a few days before opening. For instance, new homeowners shouldn't let a heavy moving truck drive on a fresh mat.



Finally, you should assure the homeowner that the process of getting a good HMA driveway isn't really that complex or scary. While it seems there are a number of things to address, an informed homeowner working with a reputable contractor will ensure success.

For more information, or for a referral for a reputable asphalt contractor, contact the Colorado Asphalt Pavement Association at 303-741-6150.

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