

Technical Brief

Best Practices for Subdivision Paving



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Place it to the top of curb, but do we build a crown?

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When placing HMA in a subdivision, parking lot or for that matter adjacent to any curb and gutter, what is the "Best Practice" for assuring the materials placed will have the desired visual appearance at the end of construction? This is a question that has been debated for a long time. Some developers have chosen to build the roadway section and leave the top one to one and half inches of asphalt off during construction. At the completion of the major construction processes, they have the paving contractor return to "Top" the street or lot. What does this do to the structure of the roadway/lot? Is the structure of the pavement adversely affected decreasing the life of the roadway or

parking lot? The short answer is YES!

According to Geotechnical Pavement Design Engineers, this practice could be a disaster in the long term life of the pavement. The problem: When a designer is using the data collected to design a pavement they consider all of the factors available. These factors include the intended use of the pavement, will it be a residential street, mi-



Placement of HMA to top edge of curb.

nor collector, major collector, or other high traffic roadway. In a parking lot will it be parking or drives and will the drives be restricted to passenger vehicles or will it be delivery truck lanes. loading or traffic

which will be using the pavement including the types of vehicles anticipated on a daily, weekly and annual basis. "Some developers prefer to pave the streets low, allowing for a final overlay after residential construction is completed. From a serviceability and long term performance perspective, it is critical that the full design section be initially

constructed. Construction traffic is the heaviest loading a residential pavement will handle during its life cycle. If a 'thinner' section is constructed and exposed to **development/construction** traffic, with the intent to place the final lift near buildout, the asphalt pavement service life will be drastically reduced. The roadway may likely require maintenance (patching due to rutting and alligator

Is it okay to leave the Asphalt low and place the top lift after construction has been completed?

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During the construction period when the loading is by far greater than any other time in the pavement life, ...



Final lift being placed

How do we create a roadway that looks new, and still has the structural life left?

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cracking)

prior to placement of the final lift.”

It appears many localities have requirements which require the full section to be constructed prior to preliminary acceptance of the roadways for the warranty period. Many of the same localities will not issue building permits or maintain the

roadways unless the requirements are satisfied.

One Colorado city has put in place a procedure to address both of the issues discussed. They require the developer build the street section to the approved requirements for depth

and lift thicknesses. The difference here is they have them either build it with less crown (Slope) than designed initially or build it with the required crown for the initial acceptance period. Near the end of the initial acceptance period, or at a specified percentage of built out they require the



paving contractor to return, perform any required repairs, edge mill for 2 to 4 feet from the curb and place a 1.5 to 2 inch overlay on the roadway. If the required crown had not been established during the initial construction, they are now required when doing the final paving to establish the appropriate crown.



Typical Residential collector

This procedure will provide for all of the necessary elements for a long life Hot Mix Asphalt pave-

ment. During the construction period when the loading is by far greater than any other time in the pavement life, all of the structural element are present. The locality will be afforded the opportunity to have repairs made to damaged pavement from construction activities at the end of the initial acceptance period, and it allows for the



comfort level the street they have just accepted into the tax payer ownership roll will prospective residents of the plan to re-surface the streets within a given time period based on their time table of project build out. More information is available on the CAPA [Web site](http://www.co-asphalt.com) www.co-asphalt.com.

homeowners to feel as though they have a new street in the subdivision they have just moved into a new home. The locality should have a

form for the period designed. The benefit to the developer/builder is they will be able to tell the

