

Concrete: Bringing Families Home

The Berkley Spring multi-family housing complex of Lawrenceburg, Tennessee was completed in 2009.

Mr. Mike Brant, owner and developer, had the challenging task of building a public housing complex during some very tough economic conditions. According to the U.S. Department of Housing and Urban Development, "Housing market conditions showed some signs of stabilizing during the second quarter of 2009, after a fairly steady decline since peaking during 2005." Mr. Brant needed to build the Berkley Spring Condominiums within his budget as well as develop an eye-catching place to attract families to live there.

Mr. Brant was approached by Mr. Greg Lunn, concrete contractor for New South Concrete Construction, about the possibility of using concrete instead of asphalt for his parking areas and drives lanes. Mr. Lunn stated, "I told Mr. Brant that I could save him money on the front end as well as for the life of the pavement." The five inch thick concrete installed by New South Concrete was provided by Mid South Concrete. By choosing concrete, the curb and gutter was placed monolithically as the rest of the parking lot was paved, less excavation was needed, and only one crew was needed for the project.

Conversely, asphalt would require at least eight or more inches of material to equal the load carrying capacity of the five inch thick concrete pavement. A concrete contractor would have to place the curb and gutter, and then an asphalt crew would have



to mobilize and pave up to the curb. Therefore, the developer saved time and money by choosing concrete because he did not have to pay two contractors for his parking area and his tenants were able to move in a month earlier than planned.

Another reason for selecting a concrete pavement is that it is a rigid pavement and does not require a crushed stone subbase for support. Concrete pavements spread a load over a large area without stress-

ing the subgrade. In contrast, when that same load is applied to a flexible asphalt pavement, it emits about ten times the load on the subgrade; thus causing the asphalt to rut and form pot-holes, which results in costly maintenance over the life of the pavement. "The initial cost of the concrete vs. asphalt for this particular job was negligible. A selling point for the developer was that the tenants were not going to have to pay down the road to maintain their parking lot. This was not going to come out of their association dues. They could spend their money on things to fix up the complex and not have to worry about their pavement. Considering that asphalt resealing and resurfacing costs are anywhere from \$0.75-\$1.50 per square foot depending upon which process you use, this can be significant," said Mr. Lunn.

Another benefit of concrete is its light color. During the summer months, the concrete pavement surface can be as much as twenty degrees cooler than an asphalt pavement surface. The reduced temperature of the building envelope means that air conditioning units will not need to work as hard to cool the complex; thus, lowering cooling (energy) costs. All of this translates into significant cost savings for the owner and tenants. It is

easy to see that the earth's natural resources can be conserved by simply using concrete pavement, a stronger and long-lasting alternative to asphalt.

Reasons to use concrete pavement on your multi-family development:

- Low maintenance to tenants and owners
- No need for improved subbase such as crushed stone
- Installed first and can be used as a working platform for construction
- Curb and gutters can be placed monolithically with pavement
- High reflectivity can result in up to 50% energy savings
- Improves visibility at night
- Environmentally friendly components are cement, air, water, and sand
- Is recyclable
- Is locally produced and does not contain foreign products such as oil
- Light color equals a cooler pavement, reducing urban heat islands around the building



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