

CITY OF COLUMBUS ADOPTS FULL DEPTH ASPHALT PAVEMENT DESIGN

Residential Street Pavement Design Policy Revised

For almost 40 years, the City of Columbus Street Design Standards included only two options: a total concrete section or an asphalt surface on a concrete base. This philosophy carried over to freeway type facilities where the standard design was an asphalt surface on a concrete base for the driving lanes and a total concrete section for the berms. Columbus is Ohio's largest city with a population of over 1 million people.

With the election of Mayor Michael B. Coleman things started to change. One of the Mayor's top priorities was to entice people to move into the city limits of Columbus. Part of the strategy to accomplish this was to make housing more affordable. A Blue Ribbon Committee was established to recommend ways to reduce home prices while still providing quality housing. One of the recommenda-

tions from the panel was to allow developers to build roads in new housing subdivisions with full depth and/or deep strength asphalt. The cost of building the streets are reflected in home prices because developers must pay to construct them and then turn them over to the city for maintenance and repair. The city hired Resource International of Westerville to develop the new standards. Resource estimated that asphalt pavements would be 27% more economical over a 30-year life than residential streets built with concrete.

The new updated standards, which became effective February 28, 2003, are shown in the table below. Asphalt pavement will not only provide the City of Columbus with more economical streets initially, but will provide for a longer life pavement with less maintenance.

Table 1. Residential Pavement Design Options						
Average Daily Traffic	Typical Application	Pavement Component	Standard			
			FD Asphalt	Concrete	Composite	Flexible
0 - 500	Typically minigreens streets and cul-de-sac streets with no future extensions possible	Item 404	1.25		1.50	1.25
		Item 402	1.50			1.50
		Item 301	5.25			3.25
		Item 304				6.00
		Item 306			6.00	
		Item 452		6.00		
		Constructed Thickness	8.00	6.00	7.50	12.00
501 - 1,500	Typically short one to two-block long loop streets with no future extensions possible	Item 404	1.25		1.50	1.25
		Item 402	1.50			1.50
		Item 301	5.75			3.75
		Item 304				6.00
		Item 306			6.00	
		Item 452		6.00		
		Constructed Thickness	8.50	6.00	7.50	12.50
1,501 - 3,500	Typically through streets serving one or more neighborhoods or abutting properties, but no non-residential uses	Item 404	1.25		1.25	1.25
		Item 402	1.50		1.50	1.50
		Item 301	7.25			5.25
		Item 304				6.00
		Item 305			7.00	
		Item 452		7.50		
		Constructed Thickness	10.00	7.50	9.75	14.00
> 3,500	Use ODOT Design Method for Ultimate Design ADT					

404 - HMASurface
304 - Aggregate Base

402 - HMAIntermediate
306 - PCC 2,500 psi

301 - HMABase
452 - PCC 4,000 psi