

# WHY CEMSTONE

## Concrete Paving

**Problem:** As asphalt prices continue to rise, the concept of concrete paving becomes more prevalent. Combine this with a reduction in maintenance/long term costs, increased aesthetics and being more sustainable concrete is beginning to be a viable option for paving. In addition, asphalt and concrete pavements are often designed incorrectly. Asphalt is often under designed where as concrete is over designed. Using the concept of structural equivalents, the following pavements have the same load carrying capabilities:



**5"  
Concrete**

**Structural Equivalent**

**2" Asphalt**

**5" Black  
Base**

**3" Asphalt**

**10" Crushed  
Stone**

### Things to Consider:

#### Initial costs

For the above example:

5" concrete – \$2.75 – \$3.00 per square foot

2" asphalt, 5" black base - \$3.00 - \$4.00 per square foot

3" asphalt, 10" class 5 - \$3.00 - \$3.25 per square foot

When using concrete as a paving material, the amount of Class 5 can be reduced and or eliminated. This could result in a savings of up to \$1.00/sf. In addition, excavation costs would also be lessened since the sub-grade does not need to be removed. This could result in a savings of \$3.50/yd<sup>3</sup>.



#### Long Term Costs

Concrete is virtually maintenance free where as asphalt will require seal coating and resurfacing.

Seal coating – \$0.25/sf

Resurfacing - \$0.50/sf

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### Environmental Standpoint

The use of concrete reduces the **heat island affect**, which can increase the temperature around a building by as much as 5° to 10°F. This can result in increased cooling costs for the building. The use of concrete pavements is recognized by the United States Green Build Council as one method for obtaining a Sustainable Site Credit (SS 7.1).

Concrete uses **recycled materials**, thus removing products from the waste stream.

**Concrete pavements are brighter** resulting in a safer environment and the ability to reduce the amount of lights thus reducing initial and energy costs.

The reduction in maintenance costs results in less materials being used.

Unlike asphalt pavements, there is **no runoff materials**, i.e. seal coats, from concrete. It has been shown in Austin, Texas that the seal coat runoff has affected the quality of the storm water run off.

**Solution:** Along with our customers and A/E firms, jointly sell the concept of concrete paving.

**Result:** Customer – Increase in the amount of work for a particular project.

Owner – A better parking lot (see above)

Cemstone – Increased ready-mix sales

