

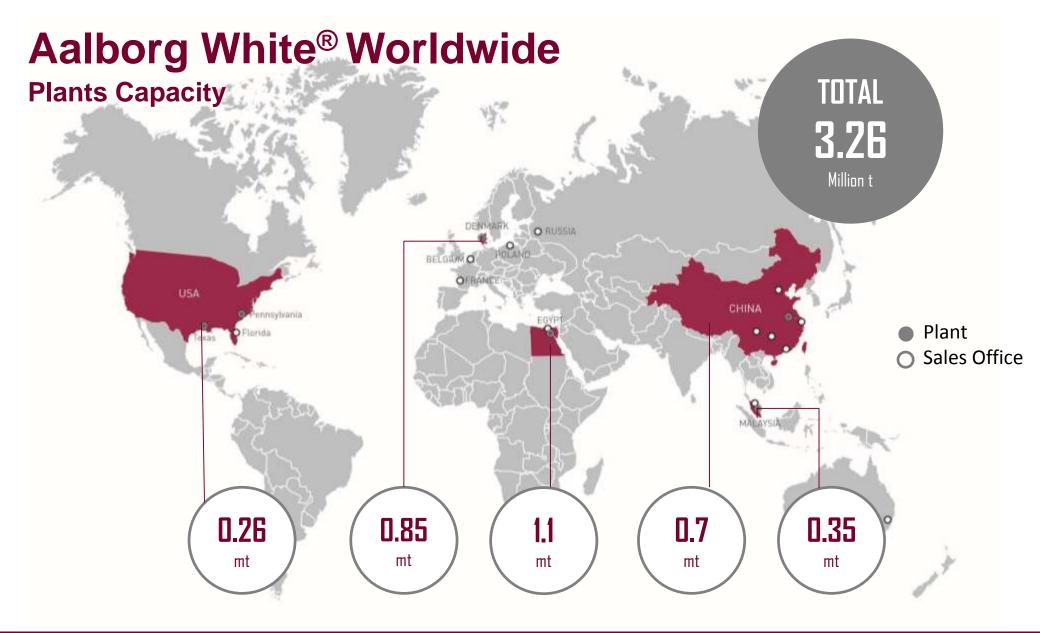
SMCD March 2019

















### **Aalborg Portland In White Cement**

125+

year's history as a global leading player in White Cement.

70+

countries worldwide are served under the global AALBORG WHITE® brand from production plants in Denmark, Egypt, Malaysia, China as well as US 3.26 mt

capacity and production facilities strategically located in four continents.

## We provide:

- A reliable white cement supply of consistent quality for all cement features
- Value-adding services into the customers' supply chain
- Extensive technical and customer support
- Potential cooperation in (co)developing new applications using white cement

# Cementir Holding:

is the mother company of Aalborg Portland, an international Group with operations in **17 countries**, with over **3,000 employees**, active in white and grey cement, ready mix concrete, aggregates, concrete products, waste management.





### **Unlimited Possibilities of White Cement**

#### Segments:

1.Pre-stressed and Ordinary Reinforced Precast

2.Precast Products

3. Artificial Stones

4.GRC (Glass Fiber Reinforced Concrete)

5.UHPC (Ultra High-Performances Concrete)

6.Dry Mix Mortars

7.RMC



1. Pre-stressed concrete façade: Chengdu Jingchuan Office Building, China







3. Artificial stone: Villa façade application, France



4. GRC façade: Changsha Meixihu Art Museum, China Zaha Hadid Architects



5.UHPC staircase in Per Aarslefl office building, Denmark



6. Skim coat | Tile Adhesives Self levelling floor screed | Stucco



7. Cast in-situ concrete: Huai'an Shilian Chemical Plant, China | Architect: Alvaro Siza

















White cement is the same as.... grey cement without iron

	Grey cement	AALBORG WHITE®
C <sub>2</sub> S	28 %	22 %
C <sub>3</sub> S	48 %	<b>65</b> %
C <sub>3</sub> A	2 %	5 %
C <sub>4</sub> AF	14 %	1 %
Alkali eq.	0.48 %	0.23 %























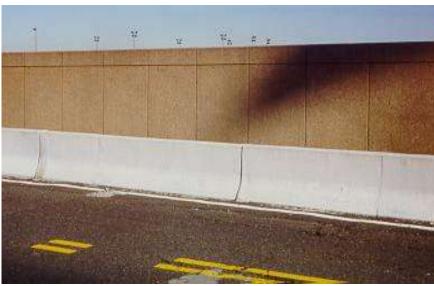
















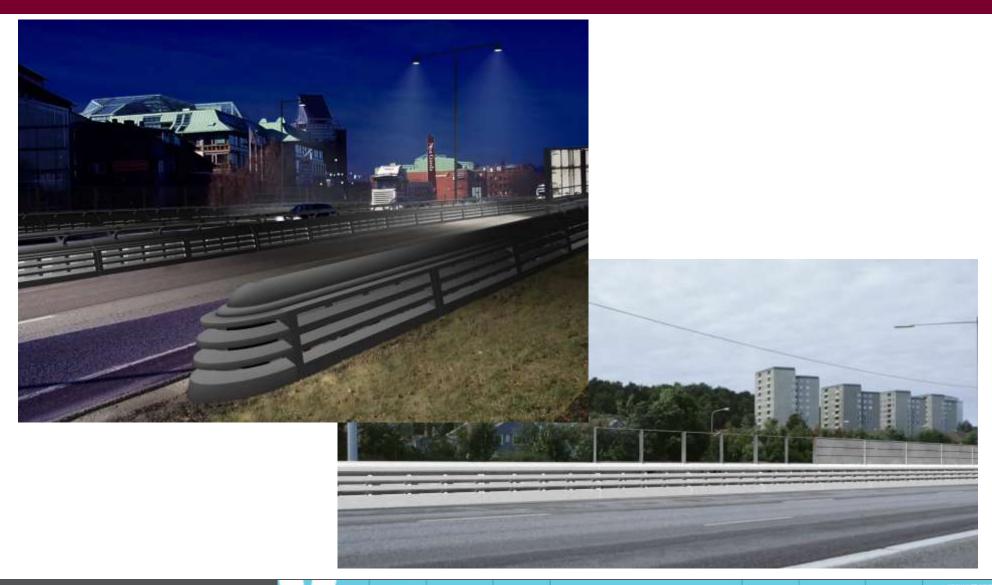






























Grey Cement, Regular Sand White Cement, White Sand

Grey Cement, Slag & Regular Sand

White Cement Regular Sand

Grey Cement, Natural Pozzolan & Regular Sand









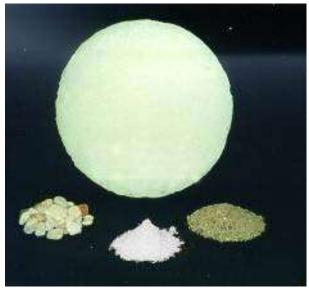


**Grey Cement Natural Sand** 

L Values -

Dry: 54.1

Wet: 29.6



White Cement Natural Sand

L Values -

Dry: 89.1

Wet: 77.5



White Cement White Sand

L Values -

Dry: 91.0

Wet: 82.6









- Grey cement
- Dark aggregates
- Light sand

- White cement
- Dark aggregates
- Light sand

- White cement
- Dark aggregates
- White sand

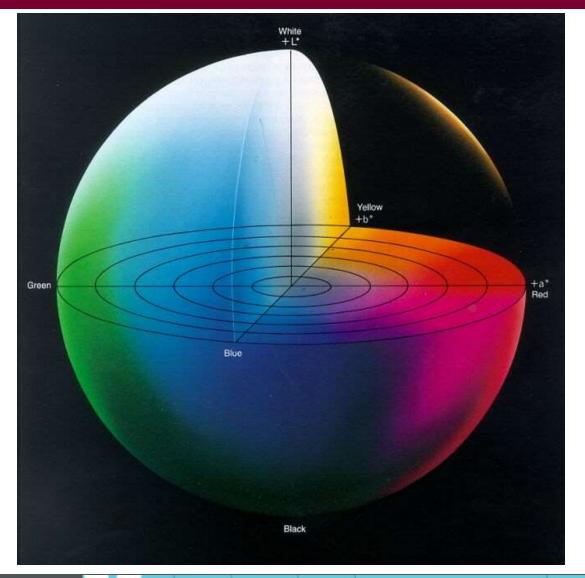
- White cement
- White aggregates
- White sand







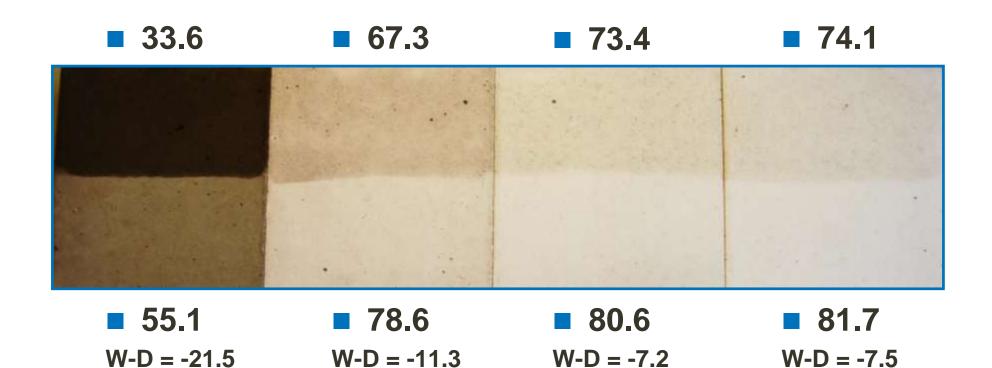


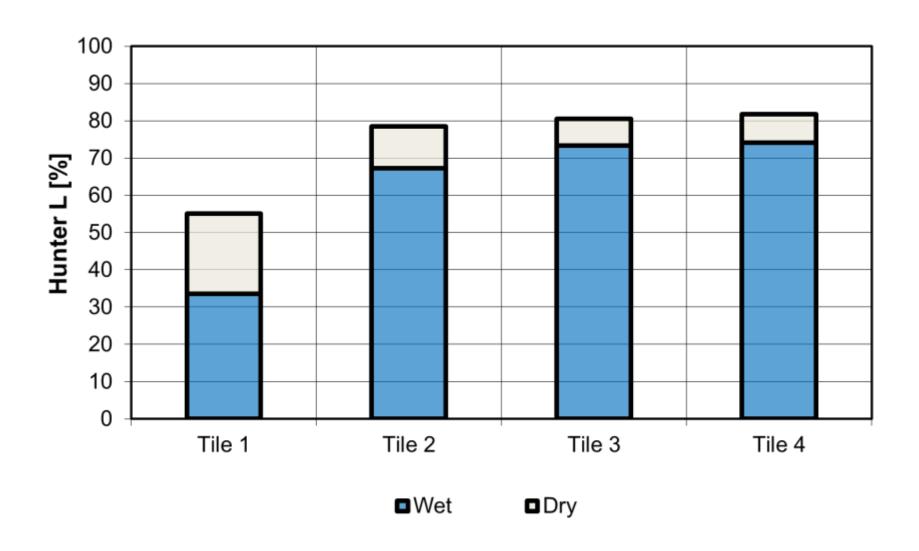
























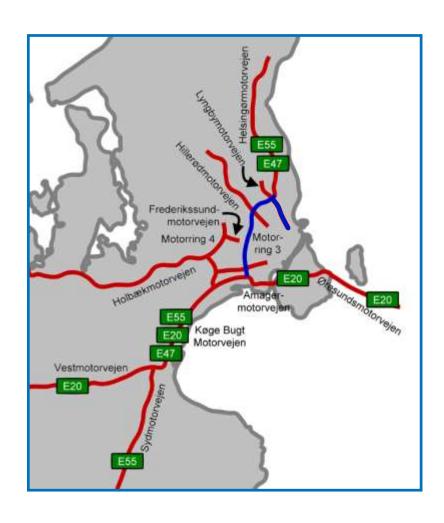












- During 2006 to 2008 white concrete road barriers was placed on Highway M3 and Lyngby Highway.
- 100.000 cars pr. day on each highway.
- 21 km highway renovated with road barriers.
- 14.000 concrete barrier elements and 14.000 concrete barrier cover elements.





DeltaBlock® road barriers Hunter L [%], details, dry & wet 9 months of exposure

Road side

68.2 Dry: Wet: 63.8 Change: -4.4

Dry: 68.6 64.5 Wet: Change: -4.1

Dry:

Wet:

Change: -17.5

69.0 Dry: Wet: 63.7

61.0

43.6

Change: -5.3

67.7 Dry: wet: 62.9

Change: -4.8





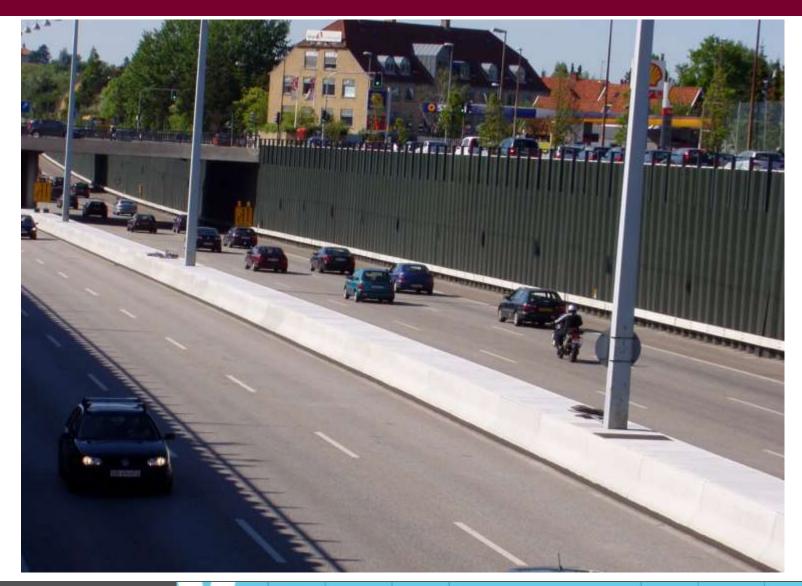




























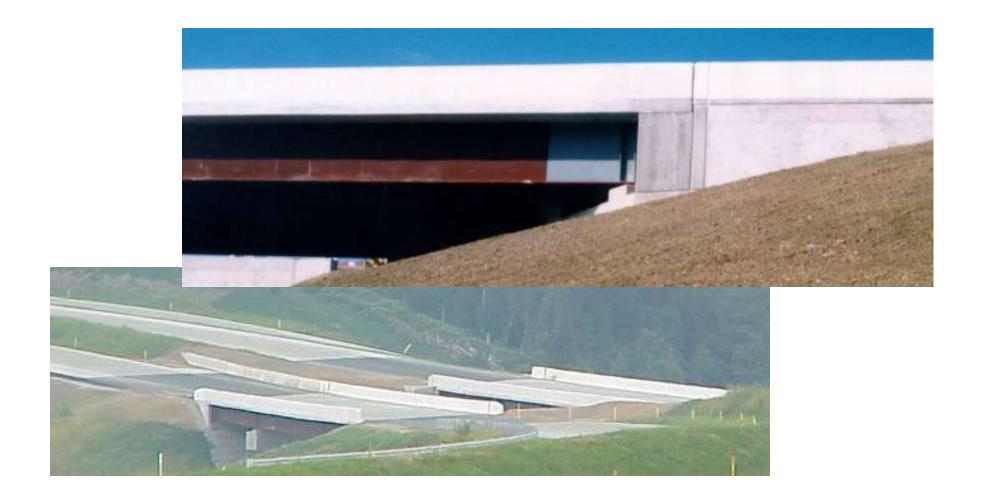






























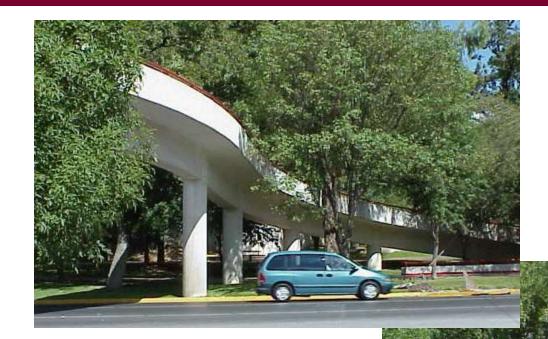


















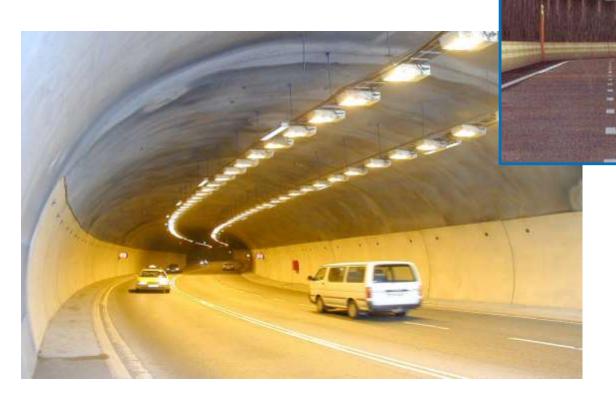
















































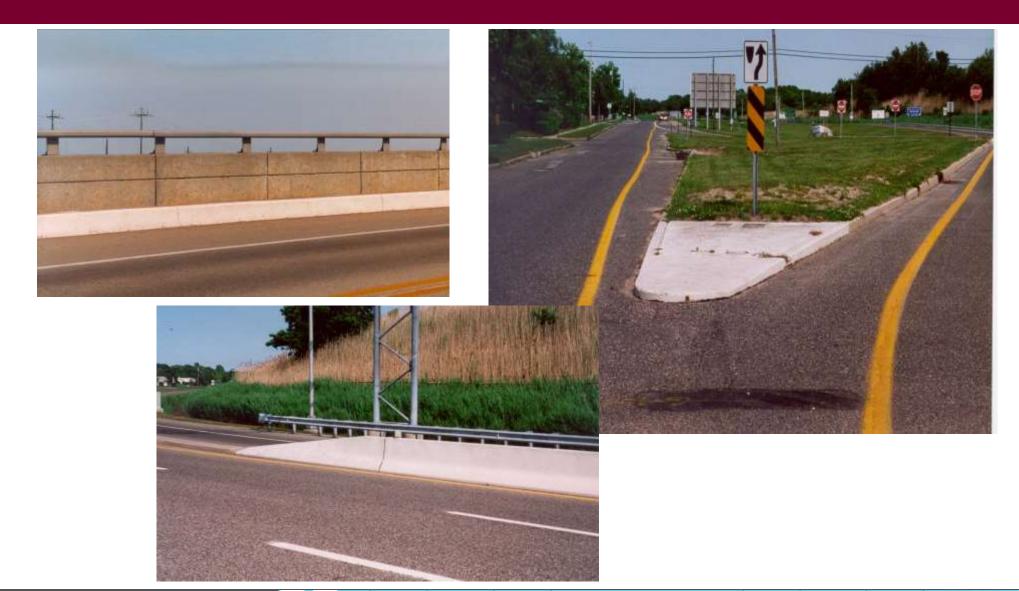


























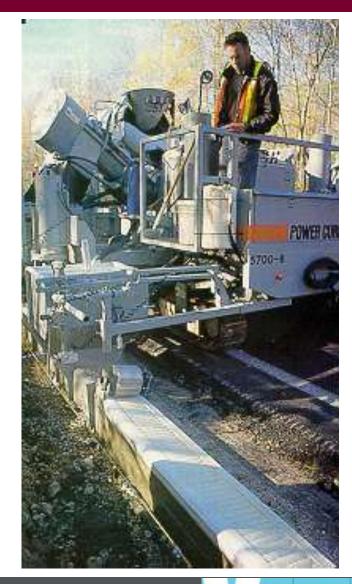


























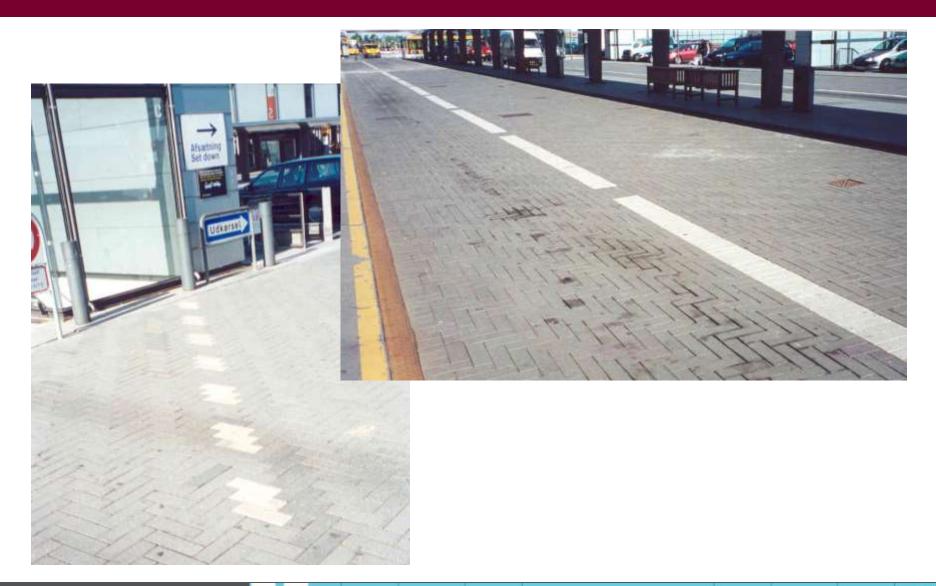










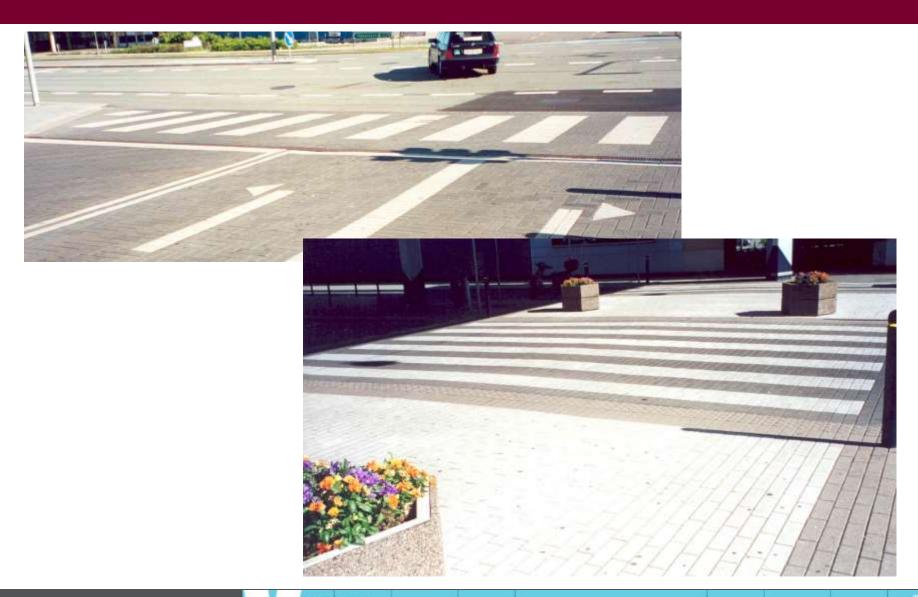


















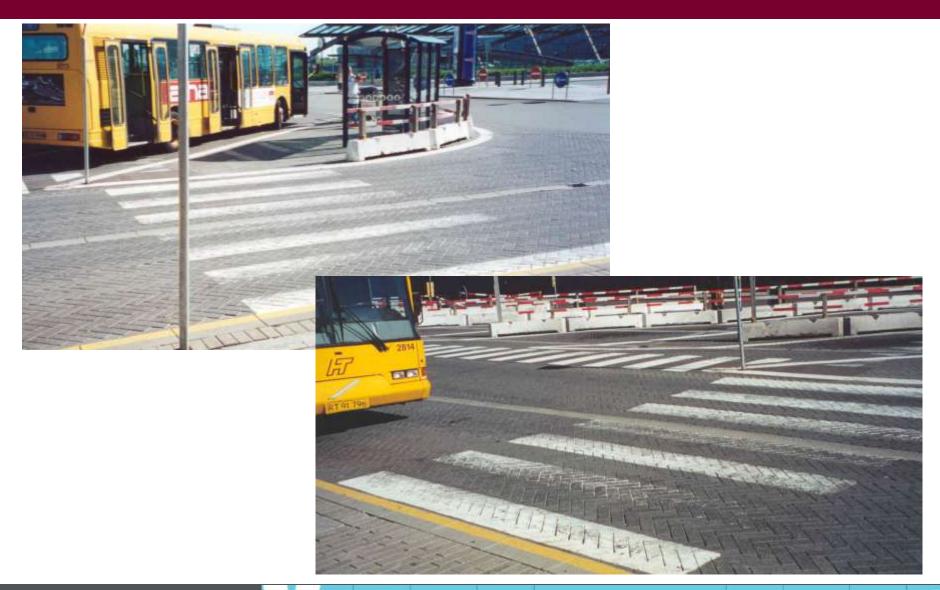










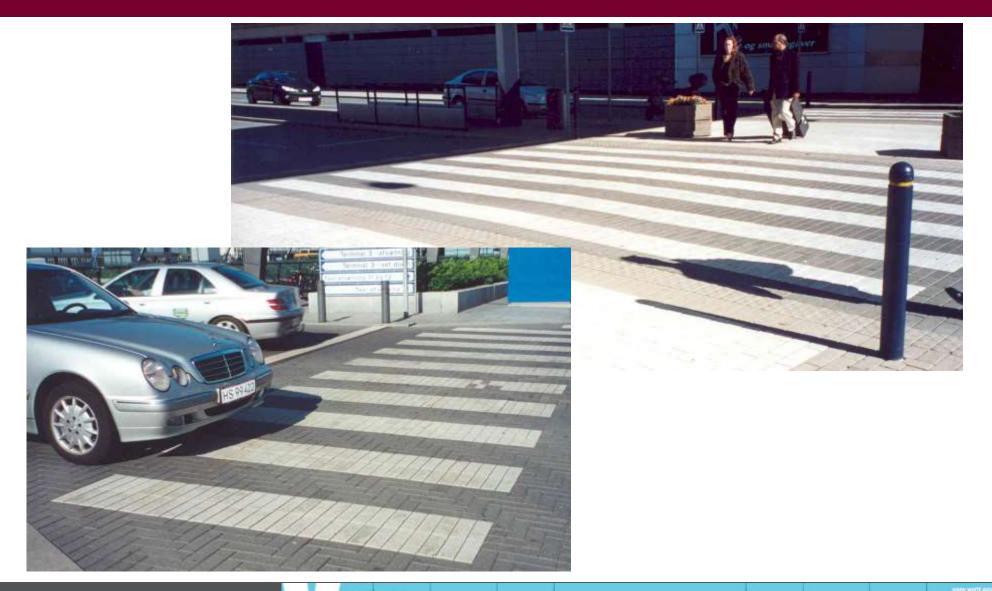










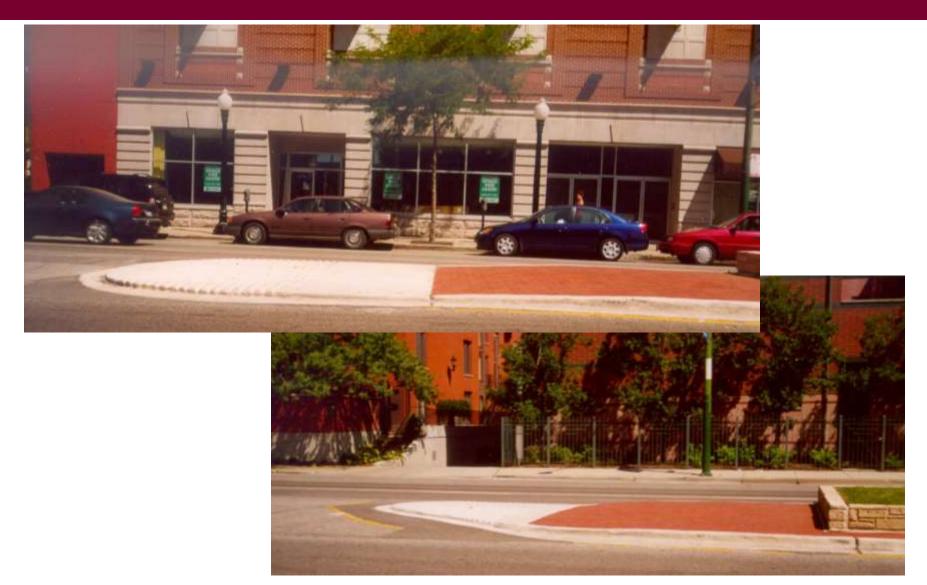








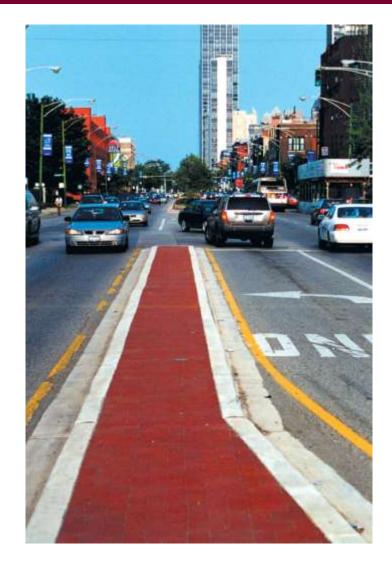




























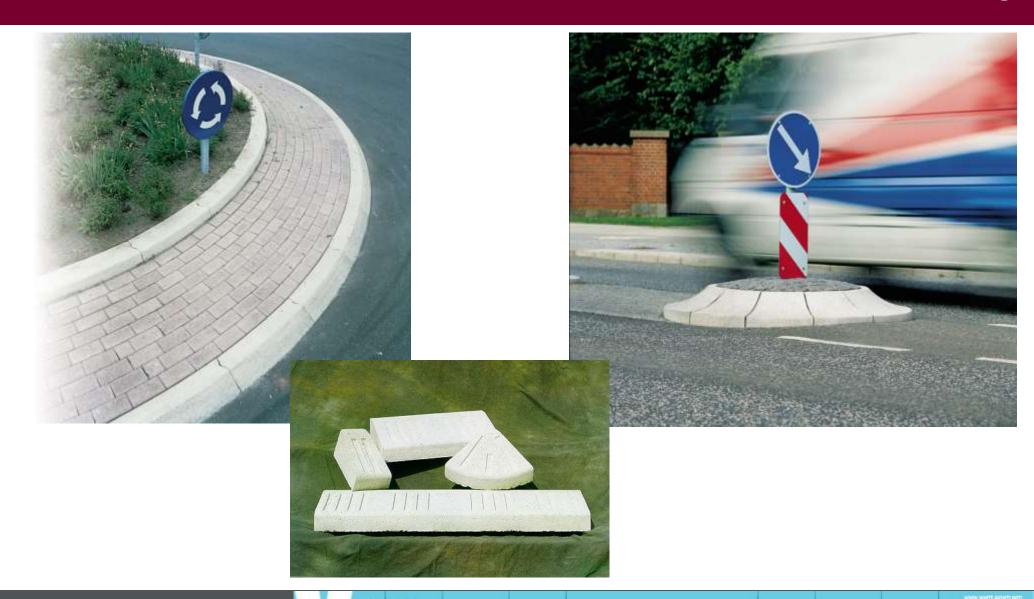






































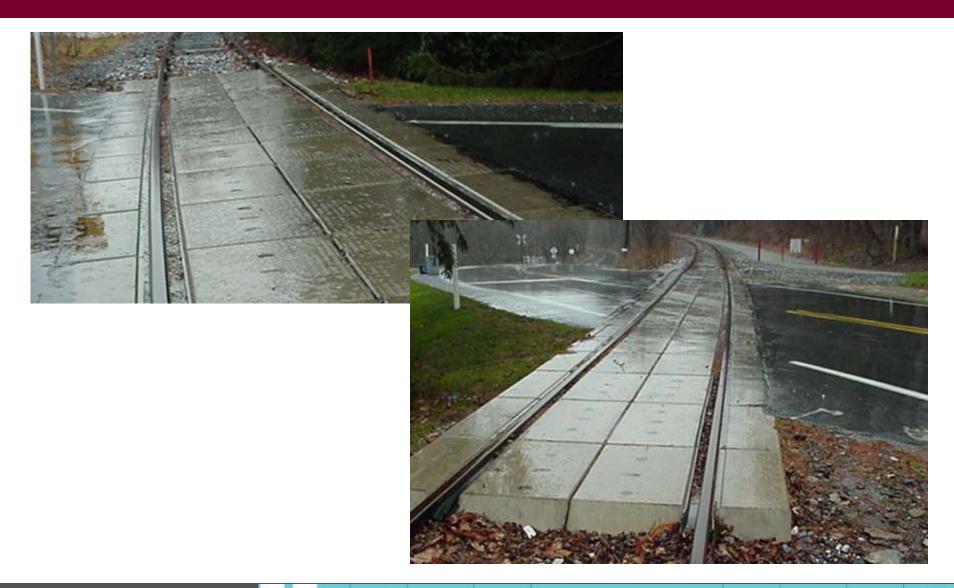




















































#### **Features**

Color Consistency

Less 'darkening' in rain

Aesthetically pleasing

Reflective

Cost effective

Environmentally friendly

Versatility

Very low alkali

#### **Benefits**

Uniform, vibrant colors

More visible

Beautifies roadways

Increased visibility / safety

Eliminates painting

Cleaner environment

Many options / products

Resistance to ASR

(Alkali Silica Reactivity













