



Delivering Concrete Solutions



MasterPark Garage, SeaTac, WA

CASE STUDY

MasterPark Garage

SeaTac, WA

Eliminating Trafficable Coatings Generates \$1.9MM Lifetime Savings for MasterPark

Structure:	Parking garage
Application:	Post-tensioned parking deck
Owner:	Mada, LLC
General Contractor:	PCL Construction Services, Inc.
Architect:	Integrus Architects
Engineer:	KPFF Consulting Engineers
Concrete Contractor:	McClone Construction
Ready Mix Provider:	Cadman

Introduction

The MasterPark Garage is a six level parking garage adjacent to SeaTac Airport with over 1,100 parking spaces.

Challenge

The MasterPark Garage required a long term solution capable of withstanding water and chloride attack. Salts are used to de-ice the top deck, making the steel reinforcing susceptible to corrosion. Also, it was critical that customers' cars be protected from exposure to water.

Solution

Hycrete System W offered superior performance to other waterproofing solutions and eliminated the need for traffic coatings, which require periodic re-application. Hycrete System W saved PCL Construction Services, Inc. approximately \$57,000 up-front in material costs compared to the alternative coating.

Material Savings

Location	Type	Membrane		Hycrete System W	
		Area (ft ²)	\$/ ft ²	\$/ ft ²	Savings
Podium Deck	Traffic Coating	70,000	\$3.60	\$2.78	\$57,556

Total Material Savings = \$57,556

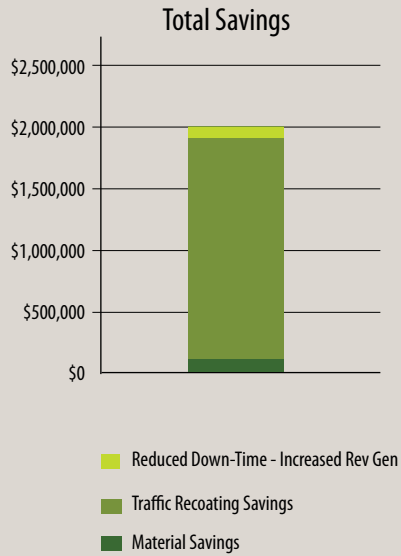
Hycrete System W is a long-term, durable solution that does not need to be re-applied and does not wear out over time. The alternative traffic coating that was considered would have needed to be re-applied every 3-5 years. Assuming a 30 year building life, the maintenance associated with removing old traffic coatings and re-applying a new coating is approximately \$1.8M. With Hycrete all of this expense is avoided.



From an installation standpoint, Hycrete is the best waterproof mix I have installed. Concrete with Hycrete pumps like normal concrete, it finishes as well as typical concrete, but best of all, it is odorless. This is a real advantage over competitors' products. I would recommend Hycrete to any contractor looking for an integral waterproof concrete.



Mike Jones, Superintendent
PCL Construction Services, Inc.



Traffic Recoating Savings

Building Life	30 years
Traffic Coatings:	
Re-application frequency	Every 5 years
Number of re-applications	5
Cost of replacement - multiple of original cost	1.5 x
Original installed cost of traffic coating	\$3.60
Area (square feet)	70,000
Cost per re-application	\$378,000
Traffic Recoating Savings	\$1,890,000

The time required to periodically replace the traffic coating would mean that the top deck could not be used for customer parking, preventing the owner from generating revenue. Assuming five days of down time per re-application the owner would lose the opportunity to earn as much as \$62,000.

Reduced Maintenance Down-Time and Increased Revenue

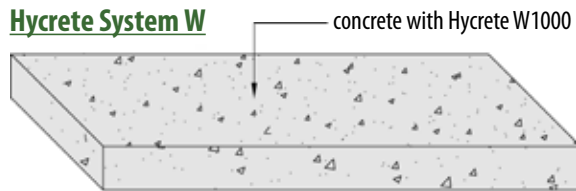
Days of unavailable parking per re-application	5 days
Total days of unavailable parking	25 days
Parking spaces on top deck	166
Daily parking cost per space	\$15.00
Red. Maintenance Down-Time - Increased Rev Gen	\$62,250

Results

The top deck and exposed ramps of MasterPark Garage are waterproof and protect the cars beneath. In addition, the structure has enhanced corrosion protection, reducing future maintenance requirements. MasterPark has a long-term, worry-free solution that does not require re-application or replacement and anticipates savings of over \$1.9M over a 30 year building life.

Deck coating details

Hycrete System W



Membrane System

