

# Logan Airport West Garage

Boston, MA



Project Profile (2015)



## Project Summary

In order to increase parking capacity at Logan International Airport, the MPA chose to expand the West Garage. The project, utilizing mostly precast concrete with topping slabs, provided an additional 2,050 much needed parking spaces.

Most of the structural concrete was precast concrete, largely because it expedited the construction timeline. However, the topping slabs, slabs on metal deck, and slab on grade were delivered via conventional concrete. Shrinkage cracking is a concern for all of these applications. The structure is located in a harsh environment, due to proximity to the coastline, freeze-thaw deterioration and deicing chemicals. Combined with the shrinkage cracking, this created a large concern of early deterioration and high maintenance costs for the remainder of the structure's lifecycle.

In order to reduce the required future maintenance and try to preserve the structure as much as possible, PREvent-C500 shrinkage-reducing/compensating admixture was chosen to provide a dual-mechanism shrinkage-mitigation technology. Concrete that normally would experience significant shrinkage cracking due to the highly-restrained nature of the application, instead was nearly crack-free. This results in higher owner satisfaction, less liability, decreased construction timeline, extended life structure and reduced maintenance.

**Owner:** Massachusetts Port Authority

**Engineer:** Parsons Brinckerhoff

**Contractor:** Turner Construction Co.

**Ready-Mix Producer:** Aggregate Industries, Northeast Region, Inc.

**Products:** PREvent-C®500 Shrinkage-Reducing/Compensating Admixture



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