

CASE STUDY

Innovative Waste Management Program Saves Money



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Challenges and Solutions

Prior to opening the new Seattle-Tacoma International Airport (SEA) Consolidated Rental Car (ConRAC) facility, each on-airport rental car company (RAC) was responsible for removing its own trash and sharing one open dumpster inside the Quick Turn-Around (QTA) area. This decentralized waste management model was accepted as the industry standard.

Unfortunately, it was this model that steered the design of the new SEA facility, with two compactors planned for each of the four QTA areas. In planning a trash program for the new facility, CS Operators conducted a detailed time-motion study of the practices at the old facility.

Applying that data to the layout at the new facility, revealed RAC employees would collectively spend 12.5 hours per day just walking across the large QTAs to dispose of trash while putting employees in unnecessary risk and increasing QTA congestion. This would create an unsanitary, unsightly and unsafe working environment in addition to failing to capture the benefits of a recycling program.

Opportunities for Improvement

CS Operators created a new waste management method for consolidated facilities based on three steps which reduce costs and deliver cleaner results:

1. Centralize handling to gain efficiencies
2. Compact waste to reduce hauling fees
3. Recycle materials to reduce dumping fees

Centralize

Using custom-outfitted mobile dumpsters, CS Operators waste management program minimizes waste handling time and maximizes waste collection. This solution reduces RAC employee time and effort to almost nothing by centralizing the bulk of the waste



Trained Bins:

- Large wheeled bins were purchased and outfitted with special hardware to meet the needs of the site. The bins are hygienic and water tight, eliminating the need for expensive and cumbersome liners.
- The mobile dumpsters were designed to be coupled with one another and the facility's small utility vehicle is able to tow a "train" of up to eight fully-loaded bins at a time.

management into the scope of the facility manager's responsibilities. Today, the whole facility can be emptied in six hours. Compared to the previous model, the new facility is cleaner, safer, and more efficient.

Compact

Trash is bulky. Much of the cost of disposal is from hauling all that bulk. CS Operators installed a set of two compactors, one for trash and one for recyclables in QTA one to serve the entire site. With compactors, the cost of trash hauling was compressed by 85 percent, resulting in total savings of over \$50,000 per year in reduced hauling fees.

“We are able to offer a system that is cleaner, safer, and more efficient—at a much lower cost than traditional QTA waste management systems.”

- Scott Anderson,
Managing Director, CS Operators

Recommendations for Future Sites

These methods can be applied after construction is complete at most ConRAC sites, but designing a ConRAC facility that will utilize the CS Operators method from the beginning can save on the total project cost and ensure optimal space planning. Because the innovative mobile system allows easy and efficient transit to a centralized location, just two compactors were needed at the SEA facility, saving the initial installation and maintenance cost of an additional six design-specified compactors, but leaving vacant spaces in each QTA. That space could have been used for additional car washes, maintenance bays, offices, parking, or storage. Alternatively, that part of the structure could have been omitted entirely, allowing for significant savings on design and construction.

Recycle

The simpler a system is for the user, the more likely the program is to succeed. CS Operators created a system with easy-to-identify, blue recycle bins that accept commingled recycling and are posted near each car prep station, so the employee can focus on prepping the car with minimal effort to collect the recyclable materials.

Recycling can also be an avenue for keeping operation costs low. In Seattle, recycling is a free service. When recyclable materials are diverted from the trash bins, it results in lower trash hauling charges. At a recycle rate of 30%, the savings for the RACs operating at the SEA facility is \$44,000 per year.

Safety Concerns

- In the previous QTA, employees would have to cross a highly-trafficked and congested area to dispose of the trash several times per shift.
- Additionally, the size and position of the dumpster required employees to either climb a ladder, or throw the bag of trash over the top of the dumpster eight feet into the air.

Cost Savings for SEA Facility

Category	Annual Savings	30-Year Savings
Centralizing Management	\$ 59,000	\$ 1,770,000
Compacting Waste	\$ 50,000	\$ 1,500,000
Recycling Materials	\$ 44,000	\$ 1,320,000
Installation Savings		
2 vs. 8 compactors (\$390K/10 yr. life)	\$ 39,000	\$ 1,170,000
Projected Site Build-Out Savings *		\$ 950,000 *
TOTAL		\$ 6,710,000*

Background

The Consolidated Rental Car Facility in SeaTac, Washington is a Port of Seattle facility, housing operations of 11 Rental Car brands. Open to the public for full operations May 17, 2012, the facility measures 2.1 million square feet, and includes four Quick Turn-Around areas outfitted with 96 prep and fueling stations, 15 car wash bays, and six

maintenance bays. It is a working environment for over 600 employees. Each of the six underground gasoline fuel storage tanks have a capacity of 20,000 gallons, with RACs utilizing an allocated number of the 96 nozzles that dispense fuel from the shared tank system.

Conrac Solutions is an innovative sector leader pioneering the delivery of consolidated rent-a-car facility projects, operations and finance in the infrastructure and aviation sectors. Conrac Solutions is owned by Meridiam, an independent investment Certified B Corporation and an asset manager that specializes in development, financing, and long-term management of sustainable infrastructure assets. Developed to address the unique combined needs of airports and their partners, CS methodology provides a collective solution for on-airport stakeholder requirements, an enhanced traveler experience, and reduced environmental footprint. ***conracsolutions.com***

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