

**2015 ACE AWARDS**

**Balfour at Riverfront Park**

Category 10: Best Building Project  
(\$40 –\$70 Million—General Contractor)

---

<b>PROJECT TEAM</b>	<b>OWNER’S REPRESENTATIVE</b>	<b>ELECTRICAL ENGINEER</b>
<b>OWNER</b>	Bear Management Advisors	BCER
Balfour Senior Living	<b>STRUCTURAL ENGINEER</b>	<b>LANDSCAPE ARCHITECT</b>
	JVA Inc.	Eric Crotty Landscape Architect, Inc.
<b>GENERAL CONTRACTOR/ CONSTRUCTION MANAGER</b>	<b>CIVIL ENGINEER</b>	
JE Dunn Construction	68 West Engineering Inc.	
<b>ARCHITECT</b>	<b>MEP ENGINEER</b>	
gkkworks	MDP Engineering	

---

**PROJECT NARRATIVE**

**Project overview**

Balfour at Riverfront Park is a one-of-a-kind project. An urban location for a large senior living community with independent, assisted, and memory care units is a rarity nation wide. In Colorado, it is positively unique.

Almost universally, such facilities have been placed on mid-sized suburban sites or large exurban ones. Balfour is located in the Denver’s Central Platte Valley adjacent to Commons Park. With its close proximity to Denver’s entertainment and sports venues, restaurants, and biking paths, the facility is home to seniors eager to enjoy the urban lifestyle.

The 281,000 square foot Balfour community is a creative example of the adaptive reuse of prime real estate in downtown Denver. The facility is situated on a long neglected, two-acre brownfield site that was once used as a railroad terminal. It is comprised of two new buildings (5-story and 3-story) that flank the 2,600 square foot landmark Moffat Depot, which now serves as the community room for the residents.

Balfour has all of the amenities of a high-end hotel: upscale suites, fine dining areas, numerous common areas, a library, roof-top garden with panoramic mountain views, a salon, a high-end spa with an indoor swimming pool and exercise facilities, and below-grade parking.

**Solutions of special projects**

Balfour at Riverfront Park was erected on land that was once an abandoned train depot and rail yard, unoccupied for 30 years, ravaged by arson and covered by at least seven layers of graffiti. With large portions of its roof open to the sky and colonies of pigeons living inside, the Moffat Depot was slowly but steadily disintegrating. Running underneath the site were live and abandoned power and utility lines as well as a COMCAST pedestal and cable line that provided

cable TV service to the residents of the adjacent condominium apartments. Several of these lines had not been identified prior to construction.

28,989 cubic yards of coal ash had to be removed from the site before construction could begin. Much of the top ten feet of the site had coal-based fill mixed with debris, requiring JE Dunn to have two full-time environmental consultants on-site to oversee the process of hauling off the contaminated fill to designated landfills.

The team also unearthed old concrete footings from the 15th Street Viaduct and adjacent railroad warehouse, which required excavation. Through collaboration with the subconsultants and the owner, site work activities were resequenced to ensure that the overall construction schedule was not impacted.

The team also faced significant site access challenges. Like many downtown Denver projects, Balfour is built on a tight, urban site. Access to the project was available at only one point— Little Raven Street. Nearly all the material deliveries, concrete trucks, and dump trucks had to enter and exit through the same access point.

### **Working with neighborhood groups**

Although the project was developed within the guidelines of the master developer's subdivision covenants, neighborhood concerns were raised about the project's height and proximity to existing buildings. As a result, modifications were made to the project's design, which gained the support of the neighborhood groups.

### **Excellence in project execution and management/team approach**

JE Dunn relied on a Lean construction philosophy and approach for the delivery of Balfour. Our team used the Last Planner System of Pull Planning, along with daily stand up meetings, to coordinate work and create a cohesive and reliable plan for delivery.

All of the building structure and systems were modeled in 3D and shared through BIM 360 Glue, a cloud-based platform for interactive BIM coordination between all project stake holders. This enabled our team to relay critical project information to the field staff and workers building the project. We utilized electronic posted contract documents and facilitated the use of these documents by the workers through jobsite WiFi and electronic drawings stations.

### **Construction innovations/state-of-the-art advancement**

Built in 1906 by railroad tycoon David Moffat, the Moffat Depot had fallen into great disrepair. Without the use of existing blueprints or plans, the project team turned to historic black and white photographs as a guide for the restoration of this designated Denver historic landmark. During the renovation, the team discovered that the fragmented interior brick walls could not be removed without the crumbling of the exterior walls. The extensive renovation required restoring the interior brick and mortar walls, reconstructing the roof with ten spherical pommels that anchored the top of the building, and rebuilding the steps leading into the Depot.

## **Environmental/Safety**

Wood-framed construction has its challenges with regards to safety. The majority of wood-framing contractors have a challenge of even meeting OSHA's minimum standards, let alone exceeding them. JE Dunn tackled those issues in the pre-planning stage of the project. A highly qualified wood framing contractor was selected based on the company's safety record, safety training and safety plan.

The Balfour Safety Plan included pre-installation meetings with subcontractors that started with safety issues; site specific safety orientations in both English and Spanish; weekly foreman's meetings that started with safety; and most importantly, the team's daily "stand-up" meetings that always lead with safety issues.

Safety was integrated into our Lean building process in the daily "stand-up" meetings with each subcontractor foreman. Foreman identify their hazards and controls related to their tasks. Co-located hazards were identified at this meeting and administrative controls were adjusted to prevent contractors from exposing each other to hazards. Weekly safety audits were conducted using an electronic safety observation program that tracks corrective actions. In addition to the weekly safety audits, each project and field supervisor shared their daily unsafe condition and behavior observations using "One Note" with their iPads. This helped the team track any leading indicator trends that could result in injuries.

The safety of the public was a top priority for the project team. A well illuminated, protective covered sidewalk was constructed to ensure the public's protection from falling objects and slip and fall hazards. The covered sidewalk conditions were monitored by the team throughout the day to ensure that the public was not exposed to any hazards.

## **Excellence in client service and/or contribution to the community**

While no public monies were used to develop and build Balfour, the substantial infusion of public funds to redevelop Union Station, construct the Millennium Bridge, remove the unsightly viaducts that long crisscrossed the area between the Platte River and downtown Denver, and the recent site work that created Commons Park, have all added immeasurably to the revitalization of Riverfront Park.

The addition to this urban neighborhood of a great piece of architecture and the infusion of a previously missing segment of the population with significant resources to spend on local goods and services will continue to revitalize the Riverfront Park neighborhood and make the initial public investment even more beneficial to the City of Denver and State of Colorado.

Furthermore, since historically 50% of the residents living in Balfour communities move from out of state to be close to their adult children and grandchildren who have settled in Colorado, much of the monies being spent in Colorado by the residents of Balfour represent new funds coming into the market.









