

Roof Mounted Mobile Construction Crane

In the spring of 1990, The Boston Edison Company initiated a Balanced Draft Modification Project at their New Boston Power Station. The location of the power plant, at a congested downtown Boston site with limited access, presented major constructibility challenges for the project team. Installation of materials and equipment weighing as much as 35,000 pounds was required at levels from 134 feet to 330 feet above the street and at various locations above and within the building. Black & Veatch and Townsend & Bottum worked together with Boston Edison to develop a unique solution that significantly reduced safety concerns, lowered overall project cost, and allowed construction to be completed within the required schedule. The solution was to mount a conventional mobile construction crane on rails on the roof. With this arrangement, materials and equipment could be picked off a truck on the street below and moved to a final location within the building using only one operation. Because of the rails, the crane could traverse 220 feet across the roof and reach out a distance of 190 feet to make the required lifts. The concept of a roof-mounted mobile construction crane proved to be invaluable at the New Boston site. Variations of this concept can be utilized on other similar projects to resolve safety, budget, schedule and constructibility concerns.

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