



NYC Department of Buildings
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Patricia Lancaster, FAIA, Commissioner
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Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

MEA 416-07-E

Manufacturer: Edison Parking Corporation, 100 Washington Street, Newark, N.J. 07102

Trade Name(s): Edison Parking

Product: Four-level parking car lift

Pertinent Code Section(s): 27-990, 27-991, Reference Standards RS 18-3

Prescribed Test(s): Computations and Load Tests witnessed and sealed by Dr. Ahmed Shaaban, P.E., New York State P.E., License No. 0627341.

Test Report(s): Computations and tests performed and witnessed by Dr. Ahmed Shaaban, P.E., letter dated December 3, 2007.

On October 22, 2007, three specific tests were conducted on Model EDLIFT-E06, a four-level lift with three lifting platforms.

Test 1 – Load Test Summary

Description of test: Each of the three pans was individually and simultaneously loaded with I-beams and metal plates to a weight of 6,093 lbs. (total of 18,279lbs.). The machine was operated and observed to assure proper operation.

All safeties, connections, welds, bolts, structural elements and platforms functioned adequately during this test. No significant deformations were observed during this test.

**Test Report(s):
(Continued)**

Test 2 – Seismic Load Test-Sideways

In this test, a horizontal/sideways load of 3,200 lbs. was placed on the center of the lift. In the second sub-test, a forward pulling motion of 3,200 lbs. was placed on the center of the lift. The machine is observed under load for a very short period of time to assure the machine does not structurally fail. This is conducted while each pan is fully loaded holding 6,093 lbs. each or 18,279 lbs total.

A forklift supports a metal a-frame structure. The large square weight in front of the forklift (3,200 lbs.) is completely suspended by a cable. This cable travels from the weight, over a pulley on the a-frame, and is tied directly into the second lift pan.

All safeties, connections, welds, bolts, structural elements and platforms functioned adequately during this test. No significant deformations were observed during this test.

Test 3 – Seismic Load Test-Forward

In this test, a horizontal/forward load of 3,200 lbs. was placed on the center of the lift. In the second sub-test, a forward pulling motion of 3,200 lbs. was placed on the center of the lift. The machine is observed under loan for a very short period of time to assure the machine does not structurally fail. This is conducted while each pan is fully loaded holding 6,093 lbs. each or 18,279 lbs. total.

A forklift supports a metal a-frame structure. The large square weight in front of the forklift (3,200 lbs.) is completely suspended by a cable. This cable travels from the weight, over a pulley on the a-frame, and is tied directly into the second lift pan.

All safeties, connections, welds, bolts, structural elements and platforms functioned adequately during this test. No significant deformations were observed during this test.

Description: A four-level, 29 feet high automatic lifting device consisting of three platforms and four braced support columns. Each platform is capable of lifting one car or van weighing 4,000 lbs. for a total working load capacity of 12,000 lbs. on the device. When all three platforms are lifted, a space below is left to allow a van or a truck to be parked at ground level.

The model EDLIFT-E06 is a four-level automobile lifting device that converts one-ground parking space into four. It consists of three (3) lifting platforms – top, middle and lower level, leaving a parking space underneath at ground level for a fourth car. The platforms

are capable of lifting three vehicles (one at a time), when in the lowermost ground level position, nested one on top of the other.

In operation, one car can be parked at ground level on top of the three-nested platforms. In a two-car parking scenario, the upper platform loaded with the ground-parked car is lifted seventy-five inches (75") off the ground to the first position, allowing another car to be parked below it on top of the nested middle and bottom platforms. For a three-car scenario, the middle platform loaded with a second car is then lifted together with the loaded top platform eighty inches (80"), leaving space below for a third car to be parked on the lower platform at ground level. The elevation of the top platform will be one hundred and fifty-inches (155") from the ground. Finally, in the four-car scenario, the lower platform loaded with the third car together with the loaded middle and top platforms are lifted another eighty inches (80") to the third level, leaving a space below for the parking of the fourth car on the ground level. The elevation of the top platform will then be two hundred thirty-five inches (235") from the ground.

Lifting is achieved using four (4) each nine-sixteenth inch (9/16") galvanized steel cables, each with a minimum breaking strength of 26,200 lbs. These steel cables are coupled over sheaves through a main block assembly to a hydraulic cylinder.

The main structure consists of four (4) AISC W8x25 columns braced at the top by knee braces in all vertical planes. Each column is fixed at the base by four-3/4" AISC A-325 mechanical wedge bolts.

The top horizontal beams are made of ASTM A500 Grade B steel ensuring a minimum of 46 ksi yield stress.

Standard safety features are: Personal protection beam devices, over-size device, overload device, fail-to-safe device for rope and brake failure, and lifting and travel limits.

Terms and Conditions: The EDLIFT-E06 is accepted for indoor and outdoor use with the following conditions:

Indoor Use

1. Installation of the lifts shall be in sprinklered garages, which also have side wall sprinklers to protect the lower vehicle parked on the lift. The sidewall sprinklers shall be protected from mechanical injury. The sprinkler pipe sizes shall be adequate to supply the additional side wall sprinklers.
2. Plans shall be filed and approved by the Department of Buildings for the alteration of the existing sprinkler system and tie-in of the additional sprinklers. Hydrostatic tests of the sprinkler system components shall be witnessed and approved by the Fire Department and the Department of Buildings.
3. The floor loads shall be recalculated for the additional weight of the lift and the cars, and filed with the Department of Buildings by a structural Professional Engineer for adequacy.
4. The indoor use shall be limited to garages with a minimum of 24'-6" ceiling height plus adequate distance for sprinkler coverage.

5. In garages that do not have pre-existing sprinklers, the sprinkler system shall be designed for "High Piled Storage".

Outdoor Use

1. The requirements of Section 27-4080 of the Administrative Code shall be complied with.
2. Each proposed use of the car lift shall be submitted to the Department of Buildings to determine whether it complies with the Zoning Resolution and whether the soil conditions are adequate. Each unit shall have suitable anchorage of its structural members and integral base plates into concrete footings, the strength, size and depth of which shall be based on an assumed weight of 6,000 lbs. for each car.
3. Where the property is located in or about residentially zoned districts, this device shall not be located at the first row of cars or within 20 feet of the property line, whichever distance is greater.

For Both Indoor and Outdoor Use

1. All regulations of Department of Consumer Affairs shall be complied with.
2. Each proposed use of the car lifts shall be submitted to the Department of Buildings to determine whether it complies with the Zoning Resolution.
3. The lifts shall not be used to park or store any vans, trucks, recreational vehicles or any other type of vehicle other than passenger cars capable of seating up to 6 persons and weighing a maximum of 6,000 lbs. each car.
4. Drawings and specifications shall be filed with the Department of Buildings Elevator Division for each site.

All shipments and deliveries of such equipment shall be provided with a metal tag, suitably placed, certifying that the equipment shipped or delivered is equivalent to that tested and accepted for use, as provided in Section 27-131 of the New York City Building Code.

Note: In accordance with Section 27-131(d), all materials tested and accepted for use shall be subject to periodic retesting as determined by the Commissioner; and any material which upon retesting is found not to comply with Code requirements or the requirements set forth in the approval of the Commissioner shall cease to be acceptable for the use intended. During the period for such retesting, the Commissioner may require the use of such material to be restricted or discontinued if necessary to secure safety.

Final Acceptance

Examined By

January 4, 2008

