

**SECTION 11 11 14  
MOTOR VEHICLE LIFTS**

SPEC WRITER NOTES:

1. This spec is for NCA projects only.
2. Delete or add information between // --- // and any other items applicable to project. Cover any item added to the text under Applicable Publications and Products and renumber the paragraphs.

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

A. This section covers four-post drive-on lift equipment including:

SPEC WRITER NOTES:

1. Delete non-applicable items.

1. Four column assemblies.
2. Two continuous cross support yoke assemblies.
3. One self-contained power unit.
4. Four equalizer/lifting cables.
5. Two runways.
6. One hydraulic cylinder installed in fixed runway assembly.
7. Two runway ramp chocks with protective plastic inserts.
8. Two front wheel stops.
9. One can touch-up paint, all necessary assembly bolts, hoses and fittings and miscellaneous parts for standard installation.
10. Rolling jack with 6803.89 kg (15,000 pound) capacity.
11. Ramps equipped for drive-thru operation.
12. 113.56 liter (30 gallon) oil drain pan.
13. In-rack fluorescent light kit - 8 lamps.

**1.2 RELATED WORK**

- A. Section 01 00 00, GENERAL REQUIREMENTS.
- B. Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
- C. Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS.

**1.3 MANUFACTURERS QUALIFICATIONS**

- A. Approval by Contracting Officer is required of products or service of proposed manufacturer, or supplier, and will be based upon submission by Contractor of certification that:
  1. Manufacturer regularly and presently manufactures motor vehicle lifts of the type specified as one of its principal products.
  2. Manufacturer's products submitted have been in satisfactory and efficient operation on three installations, similar and equivalent

to the motor vehicle lift specified, for three years. Submit list of installations.

**1.4 PHYSICAL REQUIREMENTS**

A. Meet the requirements of ALI ALCTV-2011.

**1.5 SUSTAINABILITY REQUIREMENTS**

- A. Materials in this section may contribute towards contract compliance with sustainability requirements. See Section 01 81 11, SUSTAINABLE DESIGN REQUIRMENTS, for project // local/regional materials, // low-emitting materials, // recycled content, // certified wood, // \_\_\_\_\_// requirements.
- B. Hydraulic fluid products shall comply with following standards for biobased materials:

Material Type	Percent by Weight
Hydraulic Fluid	25 percent biobased material

The minimum-content standards are based on the weight (not the volume) of the material in the insulating core only.

**1.6 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
- B. Shop Drawings:
  - 1. Showing details of construction, materials and finish, installation details, location, size and characteristics of services and components.
  - 2. Provide complete dimensioned and detailed shop drawings for the pit and all other concrete work.
    - a. Include shop drawings for all required reinforcing steel.
- C. Setting Drawings: As specified in Paragraph INSTALLATION, GENERAL.
- D. Manufacturers Literature and Data:
  - 1. Indicating type of lift specified.
  - 2. Maintenance, operating and parts manuals.
  - 3. Installation instructions.
- E. Certificates: Stating that lift meets the requirements specified.

**1.7 STORAGE AND PROTECTION**

- A. Store lift and all components in weather tight and dry storage facility and in accordance with manufacturer’s instructions. Protect from



- C. Provide cylinders with minimum bore of 127 mm (5 inches); minimum 44.45 mm (1-3/4 inch) diameter piston.
- D. Piston stroke must be minimum 1,524 mm (60 inches).

### **2.3 MECHANICAL LIFTING AND EQUALIZATION SYSTEM**

- A. System to be lifted and equalized by adjustable cables and sheaves for smooth operation.
- B. The hydraulic cylinder must be factory assembled in the fixed runway; overhead cylinder locations and beams are not acceptable.
- C. Cables: Minimum 15.875 mm (5/8 inch) diameter plastic filled valley, lubricated wire rope.

### **2.4 RUNWAYS**

- A. Provide front wheel stops at front of runways.
- B. Support each runway by two 203.2 mm (8 inch) beams.
- C. Provide with approach ramps that automatically swing to rear check position when lift is raised; ramps to be minimum 1,092.2 mm (43 inches) long to provide easy drive on capability and minimum break-over angle.
- D. Provide tracks to support optional rolling jacks, oil drain pans and rolling trays.
- E. Equip each drive-up ramp end with bolded plastic strips to prevent floor gouging.
- F. Paint top of runways with factory applied epoxy base non-skid surface.

### **2.5 COLUMN ASSEMBLIES**

- A. Column assemblies to contain a spring loaded locking latch mechanism which automatically sets at 101.6 mm (4 inch) increments after the first 635 mm (25 inches) of travel, continuing through full rise.
- B. Locking latch release to be by constant pressure air operated push button at power unit.
- C. Provide no less than 10 locking positions per column.
- D. Manufacture columns of non-welded roll formed minimum .135 inch steel channels.

### **2.6 POWER UNITS**

- A. Provide self-contained power unit with 2 hp //208-230v three phase 60 hz// motor.
- B. Provide fluid system capacity of 14 quarts and fill with a hydraulic fluid that is biodegradable and non-toxic; fluid must have passed or exceeded the Environmental Protection Agency requirements for Aerobic

Aquatic Biodegradation as per Procedure CG-2000 and the Fish Acute Toxicity as per EPA procedure EG-9.

- C. The fluid viscosity grade ISO 32 Base and specially formulated to include both anti-wear and anti-rust agents.
- D. Provide deadman type controls; push button "up" and lowering lever for descent.
- E. Provide lowering valve designed to restrict descent speed to a maximum of 20 feet per minute.

## **2.7 STANDARDS**

- A. Construction of the lift system to be in accordance with applicable sections of American National Standard ANSI B153.1 and lift must bear the Automotive Lift Institute label for compliance.
- B. Equipment must comply with the requirements of Section 165(a) of the Surface Transportation Assistance Act of 1982, as amended by the Surface Transportation and Uniform Relocation Assistance Act of 1987 and the regulations in 49 DFR 661.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION GENERAL**

- A. Install motor vehicle lift and components with experienced mechanics capable of installing each item in accordance with the drawings and specifications, the shop and erection drawings, and the manufacturer's instructions.
- B. Set work accurately, in alignment and where shown; items plumb, level, free of rack and twist, and set parallel or perpendicular as required to line and plane of surface.
- C. Furnish setting drawings and instructions for installation of casings, recesses, and other items to be preset into concrete and for the positioning of items having anchors and sleeves to be built into concrete construction; provide temporary bracing for such items until concrete is set.

### **3.2 CLEANING AND ADJUSTING**

- A. Clean installed equipment as recommended by the manufacturer and protected from damage until completion of the project.
- B. Movable parts to be cleaned and adjusted to operate as designed without binding or deformation of the members, and where applicable, to have all contact surfaces fit tight and even without forcing or warping the components.

**3.3 INSPECTION**

- A. Upon completion of the installation, the manufacturer or supplier must examine the lift, check the operation of the equipment and components for operation and performance as specified, and examine the finish for damage.
- B. Manufacturer must report in writing that the installation meets specified requirements and include information concerning minor adjustments and minor repairs which may be required before final acceptance by the RE/COR.

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