PART 1 - GENERAL

1.1 DESCRIPTION

A. This section covers a four post drive-on lift. Equipment furnished shall consist of:
   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

SPEC WRITER NOTE: Delete non-applicable items.

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. Motor vehicle lifts shall meet the requirements of ALI ALCTV-2006.

1.5 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.
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.

1.6 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 damage, from handling, weather and construction operations before, during and after installation.

1.7 APPLICABLE PUBLICATIONS
A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
B. Automotive Lift Institute (ALI):
   ALI ALCTV-2006 .......... Safety Requirements for Automotive Lifts – Construction, Testing and Validation

PART 2 – PRODUCTS

2.1 DESCRIPTION OF INSTALLED EQUIPMENT
A. Capacity: 13,607.76 kg (30,000 lbs).
B. Wheelbase: 5,969 mm (235”) standard.
C. Power Unit: 2 hp 208-230V, 3 phase.
D. Overall Height: 2,146.3 mm (84-1/2”).
E. Overall Width: 3,752.85 mm (12’-3-3/4”).

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F. Overall Length: 7,926.07 mm (26'-0-1/2").
G. Distance Between Columns: 3,378.2 mm (133") minimum to provide adequate side clearance for wide vehicles.
H. Runway Length: 6,426.2 mm (21'-1").
I. Runway Width: 609.6 mm (24") (each).
J. Tread Width: 1,041.4 mm (41") minimum from inside edge of runways, 2,438.4 mm (96") maximum from outside edge of runways.
K. Lifting Height: 1,727.2 mm (68") (from floor to top of runway).

2.2 HYDRAULIC CYLINDERS
A. The fixed runway shall contain one full hydraulic cylinder factory installed underneath. Cylinder shall be a single acting design and contain an automatic air vent located on the upper end of the cylinder. The minimum bore shall be 127 mm (5") with a minimum 44.45 mm (1-3/4") diameter piston. Piston stroke shall be not less than 1,524 mm (60").

2.3 MECHANICAL LIFTING AND EQUALIZATION SYSTEM
A. System shall be lifted and equalized by adjustable cables and sheaves for smooth operation. The hydraulic cylinder shall be factory assembled in the fixed runway. Overhead cylinder locations and beams are not acceptable. The cables shall be 15.875 mm (5/8") diameter plastic filled valley, lubricated wire rope.

2.4 RUNWAYS
A. Provide front wheel stops at front of runways.
B. Each runway shall be supported by two 203.2 mm (8") beams.
C. Provide with approach ramps that automatically swing to rear check position when lift is raised. Ramps shall be minimum 1,092.2 mm (43") long to provide easy drive on capability and minimum breakover angle.
D. Provide tracks to support optional rolling jacks, oil drain pans and rolling trays.
E. Equip each drive-up ramp end with boldered 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 shall contain a spring loaded locking latch mechanism which automatically sets at 101.6 mm (4") increments after the first 635 mm (25") of travel, continuing through full rise. Locking latch release to be by constant pressure air operated push button at power unit. Provide no less than 10 locking positions per column.
Manufacture columns of non-welded roll formed minimum .135" steel channels.

2.6 POWER UNITS

A. Provide self contained power unit with 2 hp. //208-230v three phase 60hz// motor. The fluid system shall have a capacity of 14 quarts and must be filled with a hydraulic fluid that is biodegradable and non-toxic. The 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. The fluid shall be viscosity grade ISO 32 Base and specially formulated to include both anti-wear and anti-rust agents. Controls shall be deadman type push button “up” and lowering lever for descent. Lowering valve shall be designed to restrict descent speed to a maximum of 20 feet per minute.

2.7 STANDARDS

A. The construction of the lift system shall 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 shall 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 CFR 661.

PART 3 – EXECUTION

3.1 INSTALLATION GENERAL

A. Installation of motor vehicle lift and components shall be by 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 shall be 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. After installation all items shall be cleaned as recommended by the manufacturer and protected from damage until completion of the project.

B. All movable parts shall 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 shall 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 shall report in writing that the installation meets the requirements and shall include information concerning minor adjustments and minor repairs which may be required before final acceptance by the Resident Engineer.

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