16-284 EXHIBIT "A"

SPECIFICATIONS FOR FULL SERVICE ELEVATOR MAINTENANCE FOR 5 ELEVATORS at DJFS BUILDINGS

The Contractor is required to read carefully the specifications for all parts of the work so as to become familiar with the work covered by the contract. The contractor shall visit the site and familiarize himself with the existing conditions before submitting his bid. No additional compensation will be awarded due to unfamiliarity. It shall be assumed that he has full knowledge of existing conditions and accepts then as is.

SCOPE OF WORK

This specification covers five (5) year full maintenance service coverage on the following Summit County elevators;

Summit County DJFS - BLDG 2 37 N. Main St. Akron, OH 44308

> Otis Elevator - Freight State #10854 2000# Capacity

Otis Elevator - Passenger State #14882 2500# Capacity

Otis Elevator - Passenger State #14883 2500# Capacity Summit County DJFS - BLDG 3 25 N. Main St. Akron, OH 44308

> Mont / Kone - Passenger State #32930 2500# Capacity

Summit County DJFS – TRUTH BLDG 37 N. High St. Akron, OH 44308

> Otis Elevator - Passenger State #31890 2000# Capacity

The service company shall provide full maintenance service by journeyperson elevator mechanics and helpers in the regular employment of the elevator installer. Include weekly preventative maintenance performed during normal working hours. Include repair/replacement of worn or defective parts or components and lubrication, cleaning, and adjusting as required for proper elevator operation in conformance with specified requirements including manufacturer's recommendations. Include 24 hour/day 7 week emergency callback service at no additional cost.

The service company will respond within forty-five (45) minutes in an emergency during any hours and within ninety (90) minutes in a non-emergency situation during working hours. Exclude only repair/replacement due to misuse, abuse, accidents, or neglect caused by other than service company's personnel

GENERAL SPECIFICATIONS

GENERAL

It is understood and agreed that the following conditions shall be part of the contract. These general specifications shall be binding upon the contractor.

DEFINITIONS

Where the word "bidder" is used in the specification, it shall be understood to mean any contractor submitting a bid to perform the work and supply the materials as defined in these specifications. Where the word "Contractor or Service Company" is used in these specifications, it is understood to mean the successful bidder to whom the service contract is awarded.

Where the word "Owner" is used in these specifications, it shall be understood to mean the County of Summit and the duly authorized representative thereof.

QUALIFICATIONS

- A. Elevator Service Company will have no less than five (5) years successful experience with the completion of similar projects. The Service Company must have maintenance capability to meet requirements of this specification in the local area and be able to place a service technician at the building within ninety (90) minutes after notification except for emergency calls which shall be answered within forty-five (45) minutes.
 - List at least five (5) service contracts held in Akron for the past five (5) years.
 - a. List contacts and telephone numbers of contracts similar to this one.
 - b. Identify which of the contracts service similar units (capacity, speed, control).

- The elevators covered by this contract shall be maintained in a satisfactory and safe operating condition in accordance with the requirements of these specifications and be capable of providing their contract speed, capacity, and performance at all times. The Owner reserves the right to request or make such tests as and when advisable to assure that the requirements of these conditions are being fulfilled.
 - This contract includes all material, parts and labor to maintain the elevators as outlined in these specifications, manufacturer's recommendations and local, state and federal codes.
- The Elevator Service Company shall maintain the elevator equipment, appurtenances of accessories so as to comply with the requirements of the applicable ASME/ANSI A.17.1 safety codes for elevators and escalators any other rules, ordinances, or building codes that may apply.

The ANSI elevator inspection manual A17.2 shall be used as a guide to establish that the equipment is operating safely. The original specifications and/or NEII standards of performance shall be the guide for performance criteria as modified herein.

- 4. The Elevator Service Company shall maintain the original contract speed for each elevator car, in feet per minute, and the original performance time which includes acceleration and retardation as designed and installed by the manufacturer. The Service Company shall perform the necessary adjustments as required to maintain the original door opening and closing time within limits of applicable code and shall be charted and provided in a report quarterly.
- 5. The Elevator Service Company shall not be required to make renewals or repairs made necessary by reason of negligence or misuse of the equipment by persons other than the Elevator Service Company, its representatives and employees, or by reason of any other cause beyond the control of the elevator company, except ordinary wear and tear.
 - a. The Elevator Service Company shall not be responsible for floor coverings, air conditioning, power upstream of the main disconnect switch, light fixtures and lamps, cleaning of cab interiors, damage to panels, sills and doors, and call box unless such repairs are required as a result of the Service Company's actions.
 - b. The Elevator Service Company will not be responsible for any loss, damage, detention or delay caused by strikes, lockouts, labor troubles or disputes, fire, explosion, theft,

earthquake, embargo, malicious mischief, war, governmental orders, acts of God, or by any other cause beyond their control.

- 6. Safety Tests The Elevator Service Company shall perform periodic safety tests required as of the effective date of this agreement. Due to the inconvenience of the 5 year test, this operation will be performed on a scheduled Holiday or weekend without additional charge. Damage to the building structure as a result of these tests will not be the responsibility of the Service Company.
- 7. Cleaning Elevator Service Company is required to maintain machine room, hoistway and pit equipment in a neat and clean condition at all times. Cleaning supplies and lubricants are to be stored only in an approved container/cabinet. Machine room floor and equipment to be painted as required.
- 8. Major Delays Failure of the Elevator Service Company to restore an elevator to service within twenty-four (24) hours of failure shall be reason for concern by both parties of this contract. Failure to restore the unit to operation within seventy-two (72) hours shall be reason for cancellation or reduction in payment unless outside forces have intervened as described in paragraph 5-B.
- 9. Scheduled Maintenance The Elevator Service Company shall provide check charts (or computer printouts) listing all parts of the elevator and the frequency with which they are to be serviced. Space will be provided on this chart in which the servicing mechanic can indicate the date on which each item is serviced. At the time of each visit, the servicing mechanic shall check in and out with the owner's representative.

Regular routine exams and maintenance examinations shall be performed at a frequency of not less than monthly. During these examinations, the components are to be checked and all necessary work performed relative to cleaning, lubrication and adjustment of the equipment. At a minimum, the components must be checked in accordance with the schedule shown in Appendix One.

10. Call Back Service – The Elevator Company shall provide call-back service when requested by the Owner. Call-back service consists of responding (within ninety (90) minutes, forty-five (45) minutes if an emergency) to request from the Owner by telephone or other means and at any hour, Monday through Sunday. Overtime emergency call-back service shall be provided at no additional cost to the Owner. Records to be supplied by Owner – Any available drawings can be obtained from the Owner on signed receipt for use and such drawings shall be retained on Owner's premises.

Applicable changes shall be noted on drawings and they shall be maintained up to date at all times. On termination or expiration of the contract, they shall be returned to the Owner.

12. Elevator Supplies, Materials and Replacement Parts – The Elevator Service Company shall furnish all labor, supplies, parts and materials necessary to perform cleaning, maintenance, inspection, repairs or replacements or elevators, equipment appurtenance and accessories. A stock of replacement parts shall be maintained at the building where the elevator maintenance services are to be performed. It is imperative that replacement parts be immediately available so the elevator service will not be subject to interruptions and stoppages. Any mechanical or electrical part, component, or assembly that must be replaced, repaired or renewed as a result of normal wear or breakage, but that is unavailable from the manufacturer due to obsolescence still remains the Contractor's responsibility to replace, repair, or renew from another available, reliable source.

Until utilized, parts will remain the property of the Elevator Service Company. All parts replaced under the provisions of this contract shall be identical to original equipment or the equipment manufacturer's recommended replacement parts. The Elevator Company shall own and store at the building where work is to be performed, in suitable storage cabinets, a minimum of one of each size and type used of the following parts. The Elevator Service Company shall also replenish the stock as used.

- Generator and motor brush sets.
- All electrical and mechanical parts for controllers and selectors.
- All selector contacts, brushes and switches.
- Door interlocks, pick-up rollers, contacts, rods, and spring
- e. Car door phone electric safety device and other door protection equipment, including safety edge replacement parts.
- f. Car and hoistway door relating cable.
- g. Hanger rollers for both car and hall doors.

- h. Limit switch and terminal stopping switches, contacts and spring.
- Roller guide wheels and bearings or replaceable inserts for slide guides for car and counterweight, whichever is applicable.
- Capacitors, resistors, miscellaneous relay springs, fuses and light bulbs.
- k. Replacement parts for contacts, sockets, switches and buttons in car operating panel and all signal fixtures.
- I. Solid state controls, power packs, and printed circuit boards.

The Elevator Service Company shall be able to provide the following parts for each type and size of elevator within twenty-four (24) hours of established need for such part:

- Transformers and rectifiers.
- b. Door operator motor.
- c. Car door safety edge complete.
- d. Electric timer circuit boards.
- e. Speed regulator or damping motor.
- f. Supply special tools that are required to make repairs without undue delay.
- 13. Third Party Inspections The County reserves the right to employ an elevator consultant/inspector to verify conditions under this contract.

14. Rights

a. The Owner has the right to obtain competitive quotes for any work beyond the scope of this contract. If such work results in the need to increase the maintenance price, the Elevator Service Company may propose revised pricing and the Owner can accept or reject the proposal. If the parties cannot agree on the new price, the contract can then be terminated by either party upon thirty (30) days written notice. b. The Owner has the right to cancel this contract upon thirty (30) days written notice at any time upon determination by the Owner that the Elevator Service Company is not performing per the contract and giving the company thirty (30) days notice to make the correction.

Responsibilities

- a. Possession and control of the equipment shall remain with the Owner who will retain his/her normal responsibility and liability as Owner, lessor, lessee, possessor or custodian of the equipment.
- b. The Elevator Service Company shall be responsible for maintaining the equipment in a safe, dependable condition.
- c. The Elevator Service Company will advise the Owner in writing of any deficiencies or code violations which exist with the equipment.
- The Elevator Service Company has the responsibility to make replacements, adjustments and repairs required under this agreement.

16. Term

- a. This agreement will continue in full force and effect for a period of five (5) years from the effective date.
- b. The contract may be extended on a month to month basis at the current price by mutual agreement. The extension can be terminated by either party by means of a thirty (30) day written notice.

17. Cure

If either party shall default in the performance of any of its obligations, the non-defaulting party may send a written notice reasonably describing the default. If the defaulting party within a reasonable time (not to exceed thirty (30) days) does not commence to take reasonable steps to cure the default or if having timely commenced, fails to carry the cure to reasonable and timely completion, the non-defaulting party, by further thirty (30) days written notice may terminate the agreement.

APPENDIX ONE

ELEVATOR PM SCHEDULE

Electric and Hydraulic Elevators

On Each Visit	(At least one hour per unit)			
	(1)	Contact responsible building personnel regarding elevator complaint(s). Correct all complaints.		
	(2)	Ride cars, checking for unusual noise or operation.		
	(3)	Correct any malfunctions noted.		
Controller	0.35	e are minimum requirements. Elevator Service any is to meet or exceed this work.)		
Per Visit	(1)	Observe dispatching, times, and relays for proper operation.		
Quarterly	(2)	Clean and check all controller and supervisory relays, contacts, and printed circuit boards.		
Quarterly	(3)	Check settings and operation of overloads.		
Quarterly	(4)	Check controller voltages.		
Quarterly	(5)	Check resistor tubes, grids and condensers.		
Semi-Annually	(6)	Clean and check fuses and fuse holders.		
Semi-Annually	(7)	Check and tighten all controller connections and components.		
<u>Selector</u>				
Per Visit	(1)	Adjust and/or replace selector brushes and contracts.		
Quarterly	(2)	Lubricate selector cable sheaves. Clean/adjust electronic selectors.		
Semi-Annual	(3)	Clean and lubricate selector chains, guides, drives and drums.		

Hoist Machine

Semi-Annual

(5)

Per Visit	(1)	Clean dirt and dust from exterior surface of machines.		
Per Visit	(2)	Check sleeve bearing oil.		
Per Visit	(3)	Renew or reseat brushes as required.		
Quarterly	(4)	Observe worms and gears for end play, back lash, thrust, and any bearing wear.		
Quarterly	(5)	Clean and/or turn and undercut commutator.		
Semi-Annual	(6)	Inspect brake, brake drum, drive sheave, remove, clean and lubricate DC brake cores. Clean or replace brake shoes if necessary. Check pivot pins for free movement.		
Semi-Annual	(7)	Grease roller bearings.		
Semi-Annual	(8)	Check motor connections.		
Semi-Annually	(9)	Change sleeve bearing oil.		
Semi-Annually	(10)	Check armature or rotor clearance – Record measurements in thousandths on Check Charts.		
Semi-Annually	(11)	Check hoist machine drive sheave, regroove when required by Owner or designated representatives.		
Annually	(12)	Blow out machine with air pressure.		
MG Sets/Motor Dr	<u>ive</u>			
Per Visit	(1)	Clean dirt and dust from exterior.		
Per Visit	(2)	Renew or reseat brushes as required. Surface of MD sets.		
Quarterly	(3)	Clean and/or turn and undercut commutators.		
Semi-Annual	(4)	Grease roller bearings.		

if necessary.

Check MG/Motor Drive set connections and tighten

Semi-Annually	(6)	Blow out machine with air pressure.		
Semi-Annually	(7)	Check armature or rotor clearance, record measurements in thousandths on Check Charts.		
Semi-Annually	(8)	Clean dirt and carbon dust from the interior around fields and windings.		
Annual	(9)	Change oil in sleeve bearings.		
Signal and Dispat	<u>ching</u>			
Per Visit	(1)	Replace any burned out lamps in the starters control indicator panel, car operating panel, etc.		
Per Visit	(2)	Observe operation of car arrival lanterns and gongs. Correct any malfunctions noted.		
Per Visit	(3)	Observe dispatching, dispatching intervals, high and low call reversal circuits. Make corrections where necessary.		
Emergency Opera	tion			
Per Visit	(1)	Activate fireman's recall system, Phases I and II. Minimum one floor operation on Phase II. Record test in log.		
Quarterly	(2)	Test car emergency lights.		
Semi-Annual	(3)	Test each elevator's emergency service, if provided.		
Semi-Annual	(4)	Activate emergency hospital service systems and any special circuits, if provided.		
Semi-Annual	(5)	Test emergency power system, if provided.		
Governors				
Semi-Annual	(1)	Clean, lubricate and test for free movement of all governors. Manually extend governor weights to make sure there is no restriction in motion.		

Ropes Quarterly (1) Check all ropes, grooves, hitches and equalize tension. Lubricate where necessary. Shorten ropes when requested. Replace ropes with "red rouge" showing. Quarterly Check rope, clamps and shackles. (2) Quarterly (3)Check compensating chain or rope and hitches. **Hydraulic Machines** Pumping Units Per Visit (1) Maintain oil tank at proper level. Per Visit (2)Check for excessive leakage around valves and pumps. Per Visit (3)Wipe up any oil residue around machine. Eliminate cause of leakage. Quarterly (4) Check tension and war of V belts. Quarterly (5)Inspect flexible hoses and connections. Replace when required by inspection or code. Semi-Annual (6)Lubricate motor bearings. Jack Assembly Per Visit (1) Check packing gland for excessive oil leakage. tighten or repack if necessary. Per Visit (2)Check plunger for signs of leakage or deterioration. Report any oil leakage to Owner in writing. Quarterly (3)Check platen bolts for cracks and tightness. Car Per Visit

Check alarm bell and communication system.

Inspect car door operator. Clean, adjust or replace

(1)

(2)

Per Visit

		brushes. Lubricate where required.
Per Visit	(3)	Clean door guide channels.
Per Visit	(4)	Check leveling units.
Quarterly	(5)	Check retiring cam devices, chain, dash pots, pivots, fastenings, etc.
Quarterly	(6)	Check all reopening devices and obstruction timing devices.
Quarterly	(7)	Inspect and clean car door or gate and related parts.
Semi-Annual	(8)	Replace non-rechargeable emergency light batteries.
Semi-Annual	(9)	Check load weighing devices with weights in cars.
Semi-Annual	(10)	Clean car tops and related hardware.
Semi-Annual	(11)	Check and adjust car door up-thrusts.
Semi-Annual	(12)	Inspect guide shoes and roller guides.
Semi-Annual	(13)	Inspect broken tape or cable switches.
Semi-Annual	(14)	Check and test all safety devices.
Semi-Annual	(15)	Check clearance for car safety shoes.
Semi-Annual	(16)	Check stile channels for bends or cracks. Also, car frame and supports.
Semi-Annual	(17)	Check car operating panel, controls and switches. Clean and lubricate when necessary.
Annually	(18)	Check car enclosure steadying device.
<u>Hoistway</u>		
Per Visit	(1)	Check hall button operation.
Per Visit	(2)	Check leveling switches and leveling operation.
Quarterly	(3)	Lubricate sheave bearings.

pulleys, shifts, key ways, belts, cams, and motor

Quarterly	(4)	Check hoistway lighting. Replace bulbs where necessary.		
Semi-Annual	(5)	Inspect limit switches, contacts, cam alignment.		
Semi-Annual	(6)	Check sheave fastenings, grooves, lubricate grease type bearings.		
Semi-Annual	(7)	Check stiles for cracks, bends, loose nuts, etc.		
Semi-Annual	(8)	Clean door hangers, tracks and rollers. Adjust upthrust.		
Semi-Annual	(9)	Clean and inspect counter weights, counter weight rope fastenings, roller guides, guide shoes, etc.		
Semi-Annual	(10)	Inspect hoistway door guides and door closers.		
Semi-Annual	(11)	Check wear and insulation on travel cables. Check junction box connections.		
Semi-Annual	(12)	Clean hoistway, separator beams, guide rails, door guide channels, etc.		
<u>Pit</u>				
Per Visit	(1)	Clean pit, iron work located within the pit.		
Per Visit	(2)	Empty drip pan(s).		
Semi-Annual	(3)	Clean and lubricate governor tail sheave. Adjust position as required.		
Semi-Annual	(4)	Check oil levels in buffers.		
Semi-Annual	(5)	Clean and lubricate compensating sheave, selector tail sheave.		

END OF SECTION

APPENDIX A EQUIPMENT INVENTORY SUMMIT COUNTY DJFS – BUILDING 2

BUILDING NAME	TYPE	PM Schedule		Estimated PM Visits/Year
		Monthly	Quarterly	
Summit County DJFS – Building 2	One (1) Traction - Passenger		One (1) Hour/Unit	Four (4) visit plus One Annual Safety Test
Summit County DJFS – Building 2	One (1) Traction - Passenger		One (1) Hour/Unit	Four (4) visit plus One Annual Safety Test
Summit County DJFS – Building 2	One (1) Traction- Freight		One (1) Hour/Unit	Four (4) visit plus One Annual Safety Test

Preventative Maintenance (PM) hours are inspection time only and DO NOT include callbacks, repairs, upgrades or code mandated testing. Estimated PM hours are minimum requirements for this agreement.

EQUIPMENT SUMMARY

Unit No.	1 - PUBLIC	2 - PUBLIC	3-FREIGHT	
Туре:	Otis Elevator Company State Reg. #14882 Electric Drum/Traction - Passenger	Otis Elevator Company State Reg. # 14883 Electric Drum/Traction- Passenger	Otis Elevator Company State Reg. #10854 Electric Drum/Traction- Freight	
Operation	Duplex Selective/Collective	Duplex Selective/Collective	Simplex Selective/Collective	
Capacity	2500 lbs.	2500 lbs.	2000 lbs.	
Stops	5 Stops	5 Stops	5 Stops	
Installation Contractor	Otis Elevator Co.	Otis Elevator Co.	Otis Elevator Co.	
Door Type	Single Slide	Single Slide	Single Slide	
Door Size	4'0" x 7'0"	4'0" x 7'0"	4'0" x 7'0"	
Door Protection	IR Detector	IR Detector	IR Detector	

MAINTENANCE SPECIFICATIONS

APPENDIX B EQUIPMENT PERFORMANCE

Unit Type	One Floor Run Up or down (12"-0" floor to floor)	Rated Speed±	Leveling±	Accel/Decel
Passenger – Traction - 200 fpm	10.0/10.5 Seconds	3%	1/4	3.0 ft/sec ²
Freight – Traction 75 fpm	unknown	Unknown	n/a	n/a

Floor to Floor Performance Time: Measured from the instant the doors begin to close until doors are 3/4 open (1/2 open for side opening doors) and car is stopped at next successive floor under any loading condition or travel direction.

Elevator Speed: Elevator speed is measured with a tachometer while the elevator makes a full run through the hoistway with no load in the car. Contract speed (to be found on the governor rating plate or the cross head on the car) should be maintained within criteria range indicated on individual performance evaluations under any load condition or travel direction.

Unit Type	Door Opening	Door Closing	Closing Pressure	Car Call Dwell Time	Hall Car Dwell Time	Nudging
Passenger	2.0/2.5 Seconds	2.5/3.0 Seconds	Less Than 30 lbs.	3.0/3.5 Seconds	5.0/6.0 Seconds	20.0/25.0 Seconds
Freight	Manual	Manual	n/a	n/a	n/a	n/a

Door Open Time: Measured from the instant the doors begin to open until the doors are fully open. Door opening time should be as fast as possible to provide optimum adjustment of efficient elevator service. Our recommended door times are based on the door operator equipment installed while providing smooth operation and long equipment life.

APPENDIX A EQUIPMENT INVENTORY SUMMIT COUNTY DJFS – BUILDING 3

BUILDING NAME	TYPE	PM Schedule		Estimated PM Hours/Year
		Monthly	Quarterly	
Summit County DJFS – BLDG 3	One (1) Hydraulic		One (1) Hour/Unit	Four (4) visit plus One Annual Safety Test

Preventative Maintenance (PM) hours are inspection time only and DO NOT include callbacks, repairs, upgrades or code mandated testing. Estimated PM hours are minimum requirements for this agreement.

EQUIPMENT SUMMARY

Unit No.	1
Туре:	Montgomery Kone State #32930 Hydraulic Passenger 125 fpm
Control	
Operation	Simplex Selective/Collective
Capacity	2500 lbs.
Stops	4 stops
Installation Contractor	Montgomery Kone
Door Type	Single Speed Side Opening – High Speed
Door Size	3'6" x 7'0"
Door Protection	IR Detector

SUMMIT COUNTY – PREVENTATIVE MAINTENANCE SPECIFICATIONS

APPENDIX B EQUIPMENT PERFORMANCE

Unit Type	One Floor Run Up or down (12"-0" floor to floor)	Rated Speed±	Leveling±	Accel/Decel
Hydraulic	10.0/10.5 Seconds	3%	1/4	3.0 ft/sec ²

Floor to Floor Performance Time: Measured from the instant the doors begin to close until doors are 3/4 open (1/2 open for side opening doors) and car is stopped at next successive floor under any loading condition or travel direction.

Elevator Speed: Elevator speed is measured with a tachometer while the elevator makes a full run through the hoistway with no load in the car. Contract speed (to be found on the governor rating plate or the cross head on the car) should be maintained within criteria range indicated on individual performance evaluations under any load condition or travel direction.

Unit Type	Door Opening	Door Closing	Closing Pressure	Car Call Dwell Time	Hall Car Dwell Time	Nudging
Hydraulic	2.0/2.5 Seconds	2.5/3.0 Seconds	Less Than 30 lbs.	3.0/3.5 Seconds	5.0/6.0 Seconds	20.0/25.0 Seconds

Door Open Time: Measured from the instant the doors begin to open until the doors are fully open. Door opening time should be as fast as possible to provide optimum adjustment of efficient elevator service. Our recommended door times are based on the door operator equipment installed while providing smooth operation and long equipment life.

SUMMIT COUNTY - PREVENTATIVE MAINTANANCE SPECIFICATIONS

APPENDIX A EQUIPMENT INVENTORY SUMMIT COUNTY DJFS – TRUTH BUILDING

BUILDING NAME	TYPE	PM SCHEDULE	ESTIMATED PM HOURS/YEAR	
		Quarterly	200000	
Summit County DJFS – TRUTH BLDG	One (1) Hydraulic	One (1) Hour/Unit	Four (4) visit plus One Annual Safety Test	
Total	One (1) Unit	One (1) Hour/Unit	Four (4) visit plus One Annual Safety Test	

Preventative Maintenance (PM) hours for inspection time only and DO NOT include callbacks, repairs, upgrades or code mandated testing. Estimated PM hours are minimum requirements for this agreement.

EQUIPMENT SUMMARY

Unit No.	1 - PUBLIC	
Туре:	Otis Elevator Company State Reg. # 31890 Hydraulic – Passenger	
Operation	Simplex	
Capacity	2000 lbs.	
Stops	2 stops	
Installation Contractor	Otis Elevator Company	
Door Type	Single Slide	
Door Size	3'6" x 7'0"	
Door Protection	IR Detector	

SUMMIT COUNTY - PREVENTATIVE MAINTENANCE SPECIFICATIONS

APPENDIX B EQUIPMENT PERFORMANCE

Unit Type	One Floor Run Up or down (12"-0" floor to floor)	Rated Speed±	Leveling±	Accel/Decel
Hydraulic-100 fpm	15.0/15.5 Seconds	10%	1/4	2.5 ft/sec²

Floor to Floor Performance Time: Measured from the instant the doors begin to close until doors are 3/4 open (1/2 open for side opening doors) and car is stopped at next successive floor under any loading condition or travel direction.

Elevator Speed: Elevator speed is measured with a tachometer while the elevator makes a full run through the hoistway with no load in the car. Contract speed (to be found on the governor rating plate or the cross head on the car) should be maintained within criteria range indicated on individual performance evaluations under any load condition or travel direction.

Unit Type	Door Opening	Door Closing	Closing Pressure	Car Call Dwell Time	Hall Car Dwell Time	Nudging
Hydraulic 100 fpm	2.0/2.5 Seconds	2.5/3.0 Seconds	Less Than 30 lbs.	3.0/3.5 Seconds	5.0/6.0 Seconds	20.0/25.0 Seconds

Door Open Time: Measured from the instant the doors begin to open until the doors are fully open. Door opening time should be as fast as possible to provide optimum adjustment of efficient elevator service. Our recommended door times are based on the door operator equipment installed while providing smooth operation and long equipment life.