

# montgomery

**ELEVATORS / ESCALATORS / POWER WALKS AND RAMPS**



montgomery® elevator company • moline, illinois 61265

montgomery elevator co., limited, toronto, canada  
offices in principal cities of north america



## FOR 75 YEARS

The Montgomery Elevator Company has maintained the highest standard of quality in design and manufacture of vertical transportation equipment.

### *industry "first"*

The introduction, by Montgomery, of the V-Groove Traction Hoisting Machine in 1913 was one of the most important developments in the elevator industry. That design, a complete departure from the cable winding-drum type machine, is the basis of modern high-rise elevators.

Montgomery has introduced many other 'firsts' that are now 'industry standards':

- Close-Coupled Geared Hoist Machine
- Simplified Push Button Controls
- Permanent Magnet Floor Levelling Device
- Oil-Cushioned Car Safety
- Measured Demand Group Supervisory Control

The Measured Demand Group Supervisory Control is the forerunner of the current Montgomery ESP-Electronic Sensor Pack System.

### *products*

Montgomery's full product line includes:

- Electric Elevators
  - Gearred, Gearless & Oil Hydraulic
  - Passenger & Freight
- Escalators
- Power Walks and Power Ramps
- Electric Dumbwaiters
- Automatic Parking Garage Elevators
- Stage, Sidewalk and Other Special Lifts
- Cross Over Bridges
- Intricate Electrical Controls

### *research & development*

A continuing program of Research and Development is a major Montgomery effort. A recent addition to this effort is Montgomery's high-rise research tower shown here. Specialized equipment in this tower laboratory, the tallest in North America, provides facilities for engineered-testing of existing and proposed elevator equipment. Montgomery's search for improved design, greater safety and more economical operation is unending.

### *sales & service*

The Montgomery Sales and Service organization, second largest in the industry, has more than 120 offices (over 85 factory branches and 40 authorized Representatives) throughout North America (U.S., Canada, Mexico, Caribbean) and overseas. Montgomery is the largest independent exclusive elevator and escalator manufacturer in the Western Hemisphere.

Montgomery's six manufacturing facilities, each fully staffed for the manufacture and assembly of elevator and escalator equipment are: Moline, Illinois (3); San Jose, California; Vancouver and Toronto, Canada.

The Roelofson division of Montgomery has served Eastern Canada for over 50 years. Roelofson division has greatly expanded manufacturing capabilities to produce the full Montgomery line, including escalators and ESP Group Supervisory Control elevator systems.

The Peterson & Cowan division, established in 1919 in Vancouver, has always enjoyed a leading position in the elevator/escalator industry in Western Canada.



Del Webb's TowneHouse, Phoenix, Arizona. 12 Montgomery Elevators move people and equipment at speeds up to 700 FPM in this striking new twenty-three floor tower. Montgomery E.S.P.\* Measured Demand® controls traffic flow on the local and express banks of elevators.

\*Electronic Sensor Programing

## SELECTION

The selection of vertical transportation equipment to suit specific needs should be made after careful analysis of project requirements. Determination of these requirements include the type, location and size of building, building population and traffic patterns. For assistance in the selection of functional and economical equipment, consult your local Montgomery Sales Office.

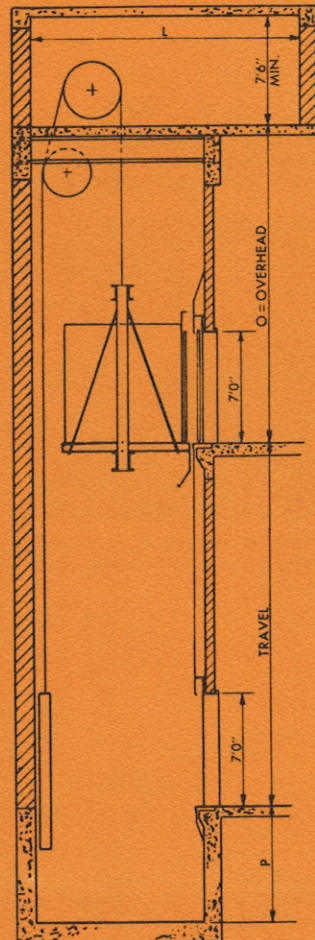


Ontario Centre of Science & Technology, Don Mills, Ontario. 4 - 48" Escalators, 5 Geared Passenger Elevators and 1 Geared Freight Elevator.

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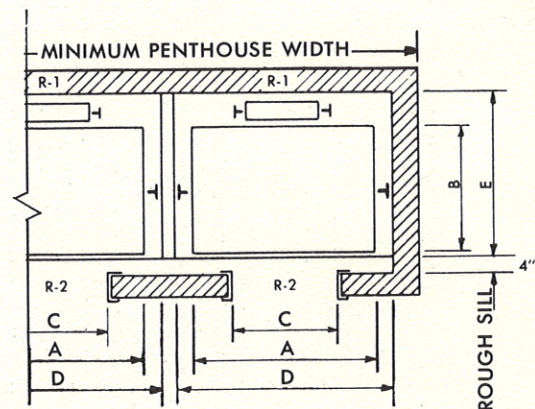
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## PASSENGER ELEVATORS



## HIGH SPEED TRACTION

High-Speed Traction Elevators meet the need for high quality performance, with speeds to 1200 fpm. Heavy traffic demands are served by ESP Group Supervisory Control Systems.



PLAN FOR ONE OR MORE ELEVATORS

RECOMMENDED SIZES AND CAPACITIES							
TYPE BUILDING	AVERAGE OFFICE HOTEL			LARGE OFFICE OR STORE			
CAPACITY	2500#		3000#	3500#			
A	7'-0"		7'-0"	7'-0"			
B	5'-0"		5'-6"	6'-2"			
C	3'-6"		3'-6"	3'-8"			
D	8'-4"		8'-4"	8'-4"			
E	6'-6"		7'-0"	7'-8"			
MINIMUM PIT—OVERHEAD & MACHINE ROOM DIMENSIONS							
SPEED	400	500	600	700	800	1000	1200
L	23'-0"	23'-0"	23'-0"	23'-0"	24'- 0"	26'- 0"	28'-0"
O	17'-7"	18'-4"	19'-5"	21'-6"	21'-11"	25'- 6"	27'-0"
P	7'-4"	8'-8"	8'-11"	12'-6"	12'- 6"	12'-10"	15'-2"

### NOTES:

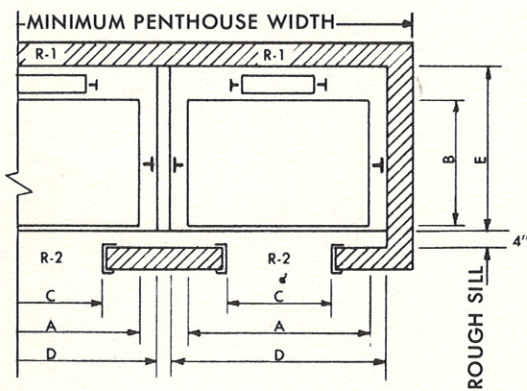
1. Reactions include allowances for impact but DO NOT include weight of concrete slab.
2. Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
3. Layouts and dimensions shown are for center opening type entrances.
4. Consult your Montgomery Representative for specific recommendations where space is limited or other conditions may necessitate further study.

OVERHEAD LOADS/LBS. APPROXIMATE PER ELEVATOR			
CAPACITY	SPEED	R-1	R-2
2500#	400	25000	15000
	500	26000	16000
	600	28000	18000
	700	29000	19000
	800	30000	20000
	1000	31000	21000
	1200	32000	22000
3000#	400	26000	15000
	500	27000	16000
	600	29000	18000
	700	30000	19000
	800	31000	20000
	1000	32000	21000
	1200	33000	22000
3500#	400	30000	21000
	500	32000	22000
	600	34000	23500
	700	36000	25000
	800	39000	27500
	1000	42000	29000
	1200	44000	30000

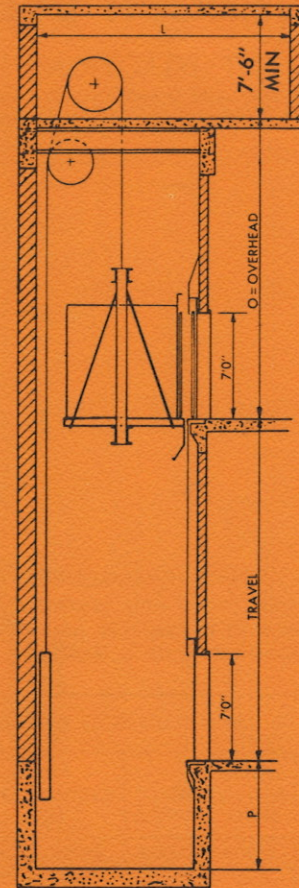


## MEDIUM AND LOW SPEED TRACTION

Medium and Low Speed Traction Elevators perform efficiently and economically when serving traffic demands in medium and low rise buildings.



PLAN FOR ONE OR MORE ELEVATORS



RECOMMENDED SIZES AND CAPACITIES					
TYPE BUILDING	SMALL APART-MENT	SMALL OFFICE	AVERAGE OFFICE HOTEL		LARGE OFFICE OR STORE
CAPACITY	1200#	2000#	2500#	3000#	3500#
A	5'-0"	6'-4"	7'-0"	7'-0"	7'-0"
B	4'-0"	4'-5"	5'-0"	5'-6"	6'-2"
C	2'-6"	3'-0"	3'-6"	3'-6"	3'-8"
D	6'-4"	7'-8"	8'-4"	8'-4"	8'-4"
E	5'-4"	5'-9"	6'-6"	7'-0"	7'-8"

MINIMUM PIT—OVERHEAD & MACHINE ROOM DIMENSIONS						
SPEED	100	200	250	300	350	400
L	12'-6"	12'-6"	12'- 6"	13'- 6"	13'-6"	18'-0"
O	16'-6"	16'-6"	16'-11"	16'-11"	17'-3"	17'-7"
P	4'-0"	5'-6"	5'-10"	6'- 4"	6'-9"	7'-4"

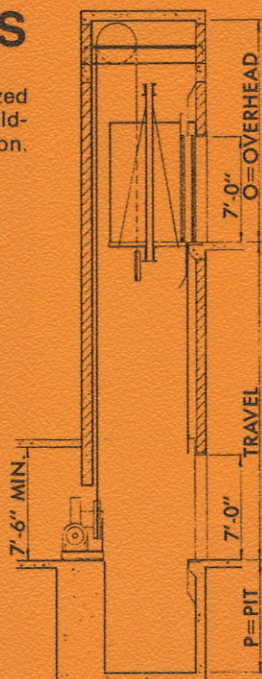
### NOTES:

1. Reactions include allowances for impact but DO NOT include weight of concrete slab.
2. Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
3. Layouts and dimensions shown are for center opening type entrances.
4. Consult your Montgomery Representative for specific recommendations where space is limited or other conditions may necessitate further study.

OVERHEAD LOADS/LBS. APPROXIMATE PER ELEVATOR			
CAPACITY	SPEED FPM	R-1	R-2
1200#	100	12000	6500
	100	12500	8800
	200	15200	9900
	250	15500	10800
	300	15800	11000
2000#	350	19800	12000
	400	24000	14500
	100	14900	10300
	200	16700	11500
	250	17200	12300
2500#	300	17500	12500
	350	20400	12800
	400	25000	15000
	100	17100	12100
	200	19400	12200
3000#	250	19800	12600
	300	20200	13200
	350	20400	13300
	400	26500	16000
	100	18300	13300
3500#	200	21000	14100
	250	21300	14400
	300	21800	14700
	350	25200	15100
	400	28000	16800

## PASSENGER ELEVATORS

**BASEMENT TRACTION** elevators are utilized for limited overhead conditions in new and existing buildings. This type of elevator facilitates future floor expansion.



**1:1 ROPING ARRANGEMENT** is used when only moderate overhead clearance is available, and only when a shallow pit depth is feasible.

**2:1 ROPING ARRANGEMENT** permits a minimum overhead installation. Because of the sheave arrangement, it is necessary to have a greater pit depth than for a comparable 1:1 installation.

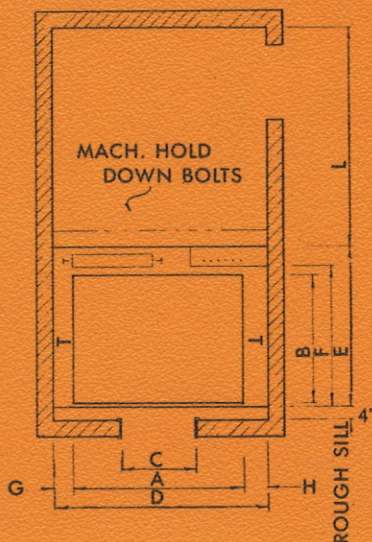
RECOMMENDED SIZES & CAPACITIES					
TYPE BUILDING	SMALL APART-MENT	SMALL OFFICE	AVERAGE OFFICE HOTEL		LARGE OFFICE OR STORE
CAPACITY	1200#	2000#	2500#	3000#	3500#
A	5'-0"	6'-4"	7'-0"	7'-0"	7'-0"
B	4'-0"	4'-5"	5'-0"	5'-6"	6'-2"
C	2'-6"	3'-0"	3'-6"	3'-6"	3'-10"
D	6'-4"	7'-8"	8'-4"	8'-4"	8'-4"
E	5'-4"	5'-9"	6'-6"	7'-0"	7'-8"
F	4'-5"	4'-10"	5'-5"	5'-11"	6'-7"
G	8"	8"	8"	8"	8"
H	8"	8"	8"	8"	8"

RECOMMENDED SIZES & CAPACITIES				
TYPE BUILDING	SMALL APART-MENT	SMALL OFFICE	AVERAGE OFFICE HOTEL	
CAPACITY	1200#	2000#	2500#	3000#
A	5'-0"	6'-4"	7'-0"	7'-0"
B	4'-0"	4'-5"	5'-0"	5'-6"
C	2'-6"	3'-0"	3'-6"	3'-6"
D	6'-10"	8'-2"	8'-10"	8'-10"
E	5'-4"	5'-9"	6'-6"	7'-0"
F	4'-5"	4'-10"	5'-5"	5'-11"
G	10"	10"	10"	10"
H	12"	12"	12"	12"

RECOMMENDED MACHINE ROOM OVERHEAD & PIT DIMENSIONS					
SPEED	100	200	250	300	350
L	9'-6"	12'-0"	12'-0"	12'-0"	12'-0"
O	16'-7"	17'-1"	17'-5"	17'-6"	17'-9"
P	4'-0"	5'-8"	6'-0"	6'-6"	6'-11"

### NOTES:

- Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
- Layouts and dimensions shown are for center opening type entrances.
- Consult your Montgomery Representative for specific recommendations where space is limited or other conditions may necessitate further study.
- The overhead dimension can be reduced 1'-0" if the cab selected is kept to a minimum height.



RECOMMENDED MACHINE ROOM OVERHEAD & PIT DIMENSIONS				
SPEED	100	200	250	300
L	9'-6"	12'-0"	12'-0"	12'-0"
O	12'-10"	13'-0"	13'-5"	13'-6"
P	5'-1"	6'-6"	6'-11"	7'-4"

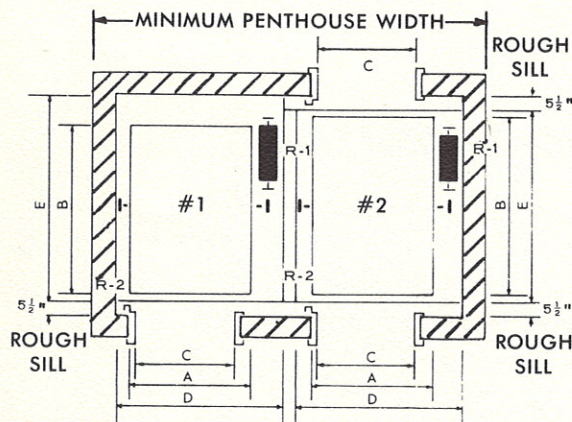
### NOTES:

- Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
- Layouts and dimensions shown are for center opening type entrances.
- Consult your Montgomery Representative for specific recommendations where space is limited or other conditions may necessitate further study.

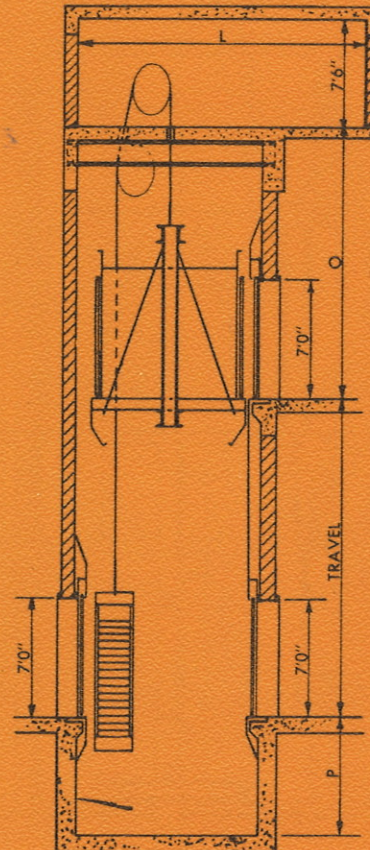


## HOSPITAL TRACTION

Hospital Traction Elevators are designed in a wide range of speeds for individual applications. Emergency and independent service as well as auxiliary power features are available.



FRONT ONLY, FRONT AND REAR OPENINGS—  
ONE OR MORE ELEVATORS



### RECOMMENDED SIZES & CAPACITIES

CAPACITY	3500#		4000#		5000#	
	#1	#2	#1	#2	#1	#2
A	5'-4"	5'-4"	5'-8"	5'-8"	6'-4"	6'-4"
B	8'-4"	8'-9½"	8'-8"	9'-1½"	8'-10"	9'-3½"
C	3'-8"	3'-8"	4'-0"	4'-0"	4'-6"	4'-6"
D	7'-5"	7'-5"	7'-9"	7'-9"	8'-5"	8'-5"
E	8'-9"	9'-2"	9'-1"	9'-6"	9'-3"	9'-8"

MINIMUM PIT, OVERHEAD AND MACHINE ROOM DIMENSIONS					
SPEED	75	100	200	350	500
L	13'-6"	13'-6"	13'-6"	13'-6"	24'-0"
O	16'-6"	16'-6"	16'-6"	17'-3"	18'-4"
P	4'-0"	4'-0"	5'-6"	6'-9"	8'-8"

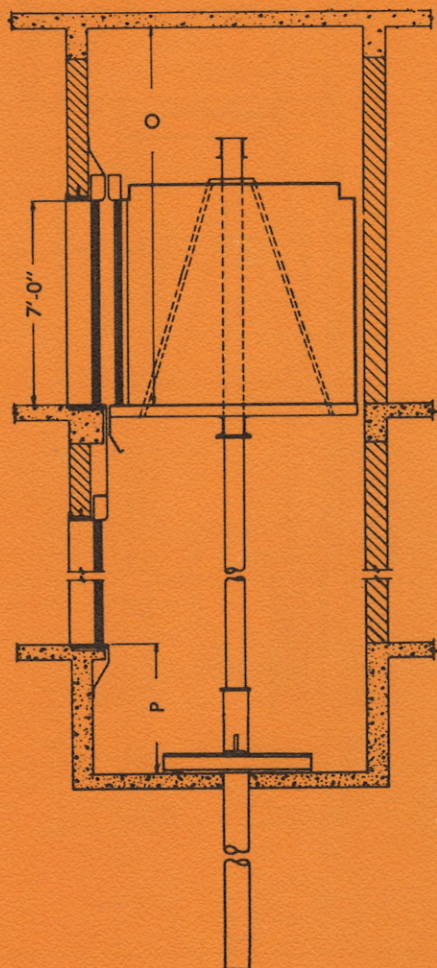
### APPROXIMATE OVERHEAD LOADS IN LBS. PER PASSENGER ELEVATOR

CAPACITY	SPEED	R-1	R-2
3500#	75	19300	13700
	100	19500	14000
	200	23000	15000
	350	27400	16000
4000#	500	33000	23000
	75	20600	14800
	100	20900	15200
	200	23900	15800
5000#	350	27900	17700
	500	34000	24000
	200	25600	17300
	350	29500	19600
	500	35200	26000

#### NOTES:

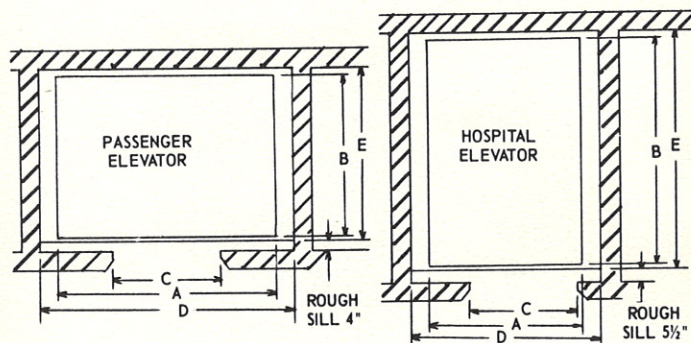
- Reactions include allowances for impact but DO NOT include weight of concrete slab.
- Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
- Layouts and dimensions shown are for two speed type entrances.
- Consult your Montgomery Representative for specific recommendations where space is limited or other conditions may necessitate further study.

## PASSENGER ELEVATORS



## OIL HYDRAULIC

Oil Hydraulic Elevators are designed to meet varying performance requirements with car speeds to 200 feet per minute and maximum travel to 70 feet. They are easily adapted to most low rise buildings and frequently produce economic advantages over hoist rope traction elevators.



FOR OFFICE BUILDINGS, HOTELS, MOTELS APARTMENTS, BANKS, STORES, LIBRARIES, ETC.						HOSPITALS AND INSTITUTIONS				1 - Single Entrance 2 - Double Entrance		
CAPACITY	1500#	2000#	2500#	3000#	3500#	CAPACITY	3500#		4000#		5000#	
							1	2	1	2	1	2
A	5'-4"	6'- 4"	7'-0"	7'- 0"	8'- 0"	A	5'-4"	5'-4"	5'-8"	5'-8"	6'- 4"	6'-4"
B	4'-2"	4'- 5"	5'-0"	5'- 6"	5'- 6"	B	8'-4"	8'-9½"	8'-8"	9'-1½"	8'-10"	9'-3½"
C	2'-8"	3'- 0"	3'-6"	3'- 6"	4'- 0"	C	3'-8"	3'-8"	4'-0"	4'-0"	4'- 6"	4'-6"
D	6'-8"	7'- 8"	8'-4"	8'- 4"	9'- 4"	D	6'-9"	6'-9"	7'-3"	7'-3"	8'- 0"	8'-0"
E	4'-7"	4'-10"	5'-5"	5'-11"	5'-11"	E	8'-9"	9'-2"	9'-1"	9'-6"	9'- 3"	9'-8"
O	13'-0"	13'- 0"	13'-0"	13'- 0"	13'- 0"	O	13'-0"	13'-0"	13'-0"	13'-0"	13'- 0"	13'-0"
P	4'-0"	4'- 0"	4'-0"	4'- 0"	4'- 0"	P	4'-0"	4'-0"	4'-0"	4'-0"	4'- 0"	4'-0"

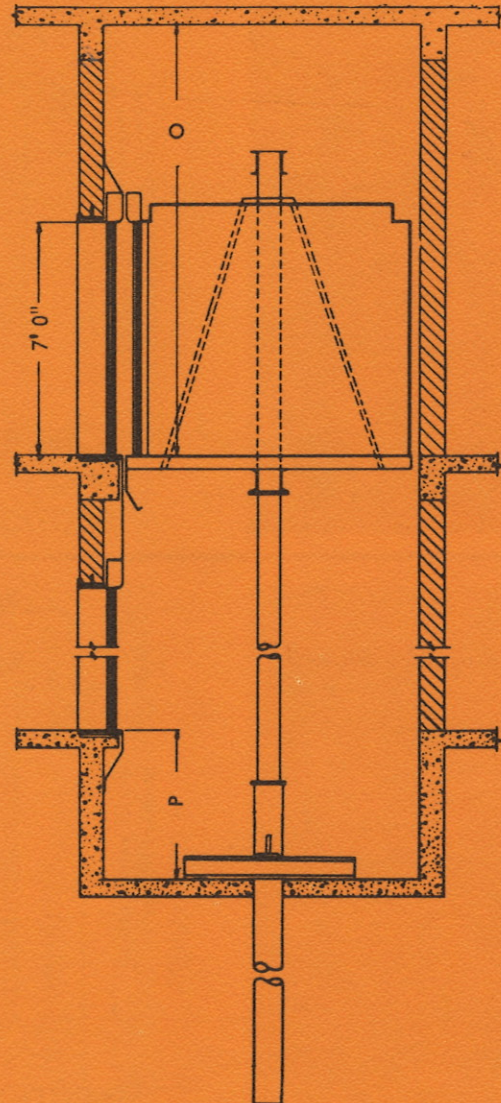
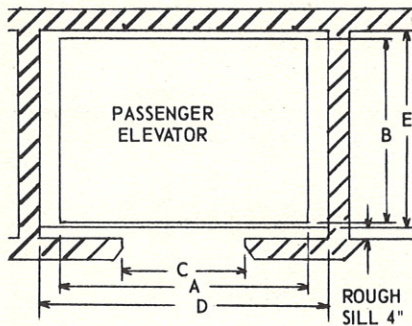
### NOTES:

- Machine room sizes vary with car capacity and speed should be within 20 feet of the hoistway at the lowest landing.
- Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
- Layout and dimensions shown for passenger elevators based on center opening type entrances and for hospital elevators based on two-speed type entrances.
- Consult your local Montgomery office for more information regarding Notes 1 and 2.



## SPM OIL HYDRAULIC

SPM Oil Hydraulic Elevators meet Montgomery's rigid standards of quality. STANDARD equipment is PRE-MANUFACTURED in three sizes, with the advantages of quick delivery, low cost and reliable service. SPM's offer travel to five floors, car speeds to 125 fpm, flexibility in entrance and fixture selection, and optional decor and finishes.

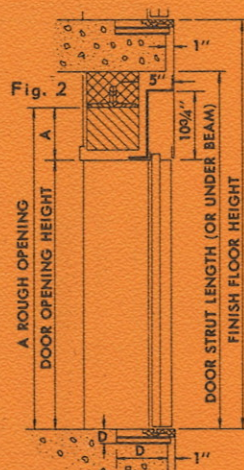
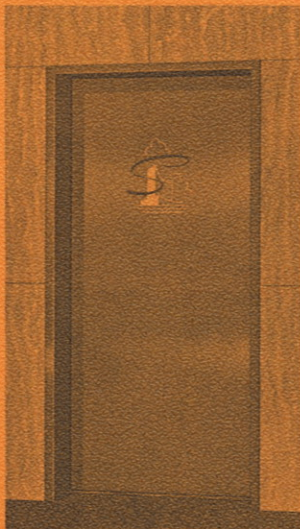


OFFICE BUILDINGS, HOTELS, APARTMENTS, ETC.			
HOISTWAY	SPM-1500	SPM-2000	SPM-2500
DIMENSIONS	CAP 1500#	CAP 2000#	CAP 2500#
A	5'-4"	6'- 4"	7'-0"
B	4'-2"	4'- 5"	5'-0"
C	2'-8"	3'- 0"	3'-6"
D	6'-8"	7'- 8"	8'-4"
E	4'-7"	4'-10"	5'-5"
O	13'-0"	13'- 0"	13'-0"
P	4'-0"	4'- 0"	4'-0"

### NOTES:

1. Machine room sizes vary with car capacity and speed, and should be within 20 feet of the hoistway at the lowest landing.
2. Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
3. Plan shown is based on center opening entrances. Single slide entrances are also available.
4. Dimensions "O" and "P" may be reduced to suit individual project requirements.
5. Consult your local Montgomery office for more information regarding Notes 1, 2, and 3.

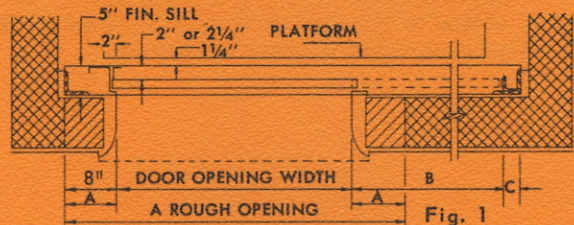
## ENTRANCES



SECTION

## SINGLE SPEED SLIDE

**FEATURES**—Maximum opening width approximately  $\frac{1}{2}$  width of car. Opening width should not exceed 3'-6". Adaptable for manual or power operation. Provides a sliding door at moderate cost.



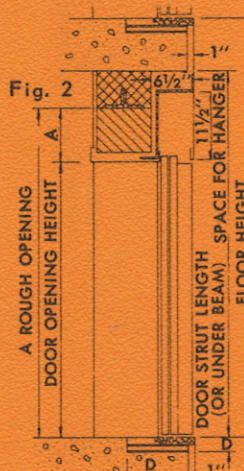
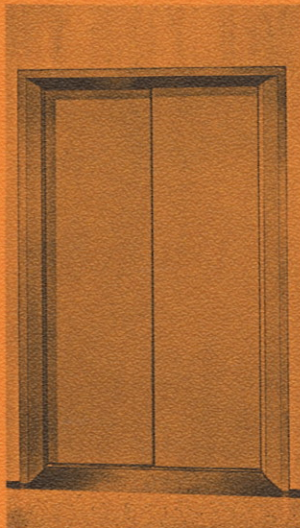
**DIMENSION KEY**—Wherever possible, front hoistway walls should not be erected until after door equipment is installed.

A—Rough openings for standard Unit-type frames to be: Width—door opening plus 8" on each side, Height—door opening plus 8" above.

B—Landing door opening plus  $1\frac{1}{2}$ ".

C—5" for power operated doors, 3" for manual operated doors.

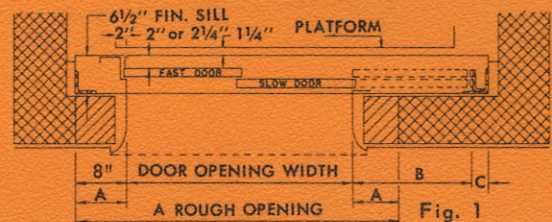
D—2" x 8" sill pocket entire width of hatch.



SECTION

## TWO SPEED SLIDE

**FEATURES**—Door opening approximately  $\frac{2}{3}$  width of car. For manual or power operation (Power operation recommended).



**DIMENSION KEY**—Wherever possible, front hoistway walls should not be erected until after door equipment is installed.

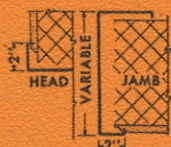
A—Rough openings for standard Unit-type frames to be: Width—door opening plus 8" on each side, Height—door opening plus 8" above.

B— $\frac{1}{2}$  landing door opening plus  $1\frac{1}{8}$ ".

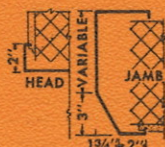
C—5" for power and manually operated door.

D—2" x 9 1/2" sill pocket entire width of hatch.

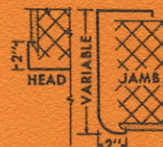
## DOOR FRAME PROFILES



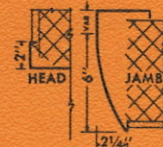
TYPE 1



TYPE 2



TYPE 3



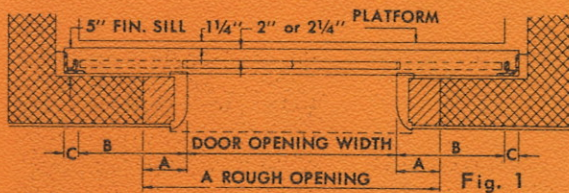
TYPE 4

TYPICAL PROFILES FOR SLIDING TYPE ENTRANCES

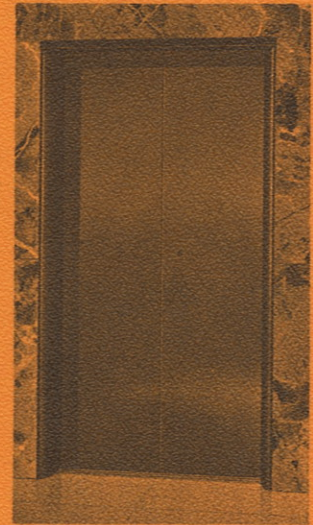
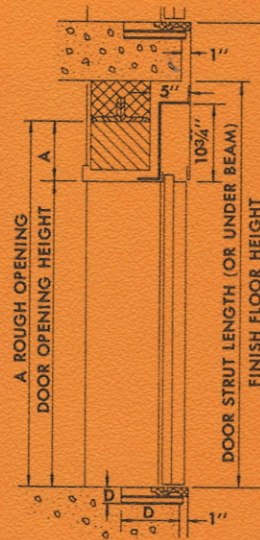


## CENTER OPENING SLIDE

**FEATURES**—Provides opening approximately  $\frac{1}{2}$  width of car. Designed for power operation. Symmetrical design permits attractive architectural treatment. Simultaneous opening of each door panel, at equal speed, reduces opening time to  $\frac{1}{2}$  that required for other types of sliding doors.

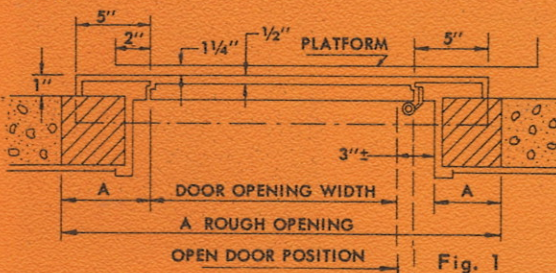


**DIMENSION KEY**—Wherever possible, front hoistway walls should not be erected until after door equipment is installed.  
 A—Rough openings for standard Unit-type frames to be: Width—door openings plus 8" on each side. Height—door opening plus 8" above.  
 B— $\frac{1}{2}$  landing door opening plus  $\frac{3}{4}$ ".  
 C—5" for power operated doors, 3" for manual operated doors.  
 D—2" x 8" sill pocket entire width of hatch.

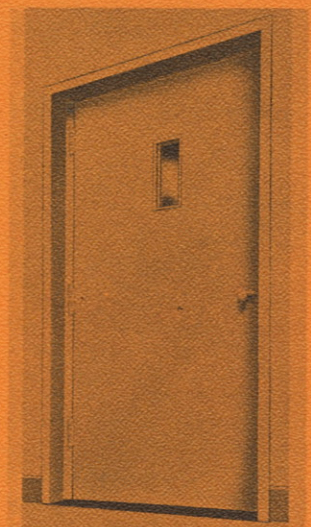
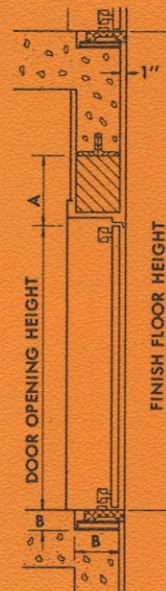


## SINGLE SWING

**FEATURES**—Lowest initial and maintenance cost. Suitable for automatic elevators, small apartments, hospitals and office buildings. Not recommended for intensive service requirements. Provides maximum opening width for small elevators. Recommended maximum width of swing door opening not to exceed 3'-6". Not suitable for power operation. Usually equipped with standard closer and check.




**DIMENSION KEY**—Wherever possible, front hoistway walls should not be erected until after door equipment is installed.  
 A—Rough openings for standard Unit-type frames to be: Width—door opening plus 8" on each side. Height—door opening plus 8" above.  
 B—2" x 8" sill pocket entire width of hatch.



Entrance designs shown are available in a wide range of finishes and materials—baked enamel, stainless steel, bronze, duranodic aluminum and plastic laminate. Jamb profiles are optional. Special design arrangements such as three speed slide opening or two speed center opening slide can be furnished. Other features such as transom panels, monograms, and kickplates are optional.

## ESP GROUP SUPERVISORY CONTROL SYSTEM

A Registered Trade Mark of the  
Montgomery Elevator Company

Montgomery's ESP  Group Supervisory Control with Measured Demand System and Electronic Sensor Programming provides tomorrow's ultimate in elevator service, today.

ESP anticipates each demand for service throughout the building and positions the elevators in the system for immediate response. ESP automatically adjusts to the constantly changing traffic demands, fully utilizing each elevator in the system, under every condition in the wide variation of traffic requirements from heavy incoming traffic to heavy outgoing traffic and to every possibility between these extremes.

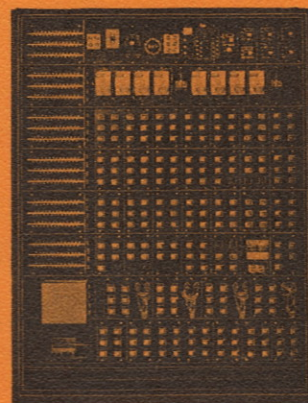
ESP with ZS (Zones of Service) automatically parks the elevators within selected zones throughout the building during periods of light traffic demand. This system assures immediate response to any demand for service, with minimum car movement. ZS reduces power consumption and equipment wear by limiting car movement only to that necessary to service traffic demand.

The flexibility of ESP permits engineered adjustment to the precise requirements of each building. Montgomery engineers carefully determine these requirements and assemble the basic module of the ESP system to exactly match the traffic demand.

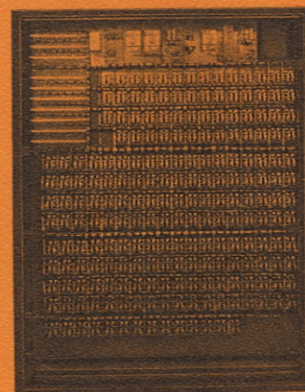


The Master Control and Indicator Panel monitors the overall operation of the entire elevator system. This panel is normally located in the lobby of the building adjacent to elevators. Each panel is custom designed and engineered for that particular project. The panel shown is typical. Intercom is optional.

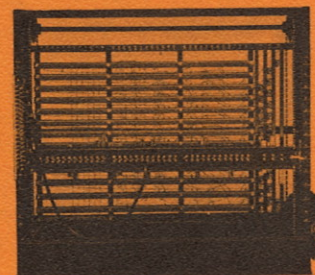
Typical Master Module. This electronic brain of the ESP Group Supervisory Control system is custom designed and built for each project. Its function is to evaluate traffic demand and coordinate the movement of the group of elevators. Panel is enclosed in steel cabinet with double door access in front and removable panels in rear.



Typical Supervisory Module. Custom designed and built for each elevator of each project. The Supervisory Panel controls the movement of its individual car in response to commands from the Master Panel. Panel is enclosed in steel cabinet with double door access in front and removable panels in rear.

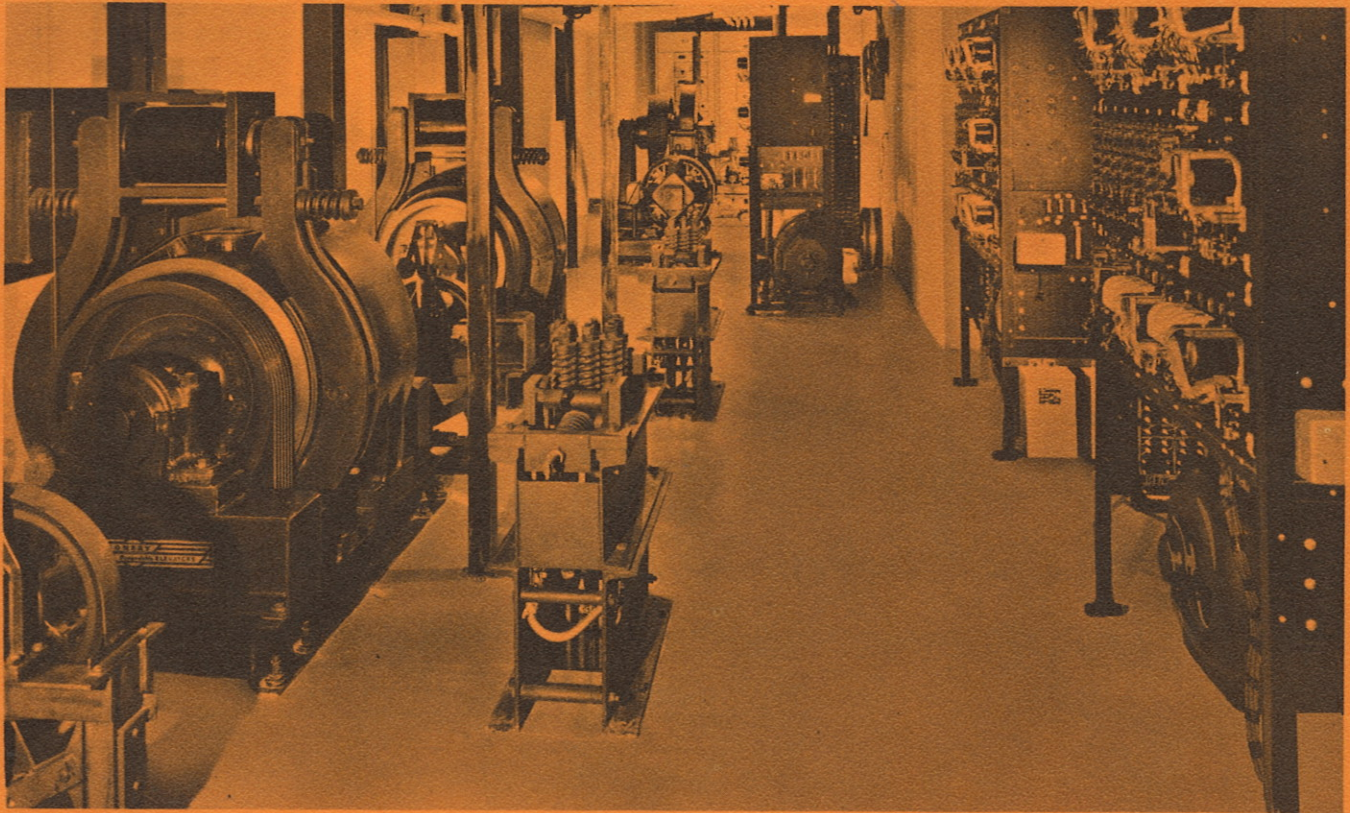


Typical Selector Module. Selector is constructed with fixed ratio proportion allowing accurate adjustments that remain set. Cut-off points preset at factory. The main function of the selector is to sense the position and direction of travel of the car in the hoistway and to provide the slow down command signal to the car prior to making a stop.





## TYPICAL EQUIPMENT ROOM ARRANGEMENT and LOBBY ELEVATOR ENTRANCES



This is a typical Montgomery Equipment Room showing the arrangement of Control Panels, Motor Generators, Gearless Hoist Machines, Lode-master Weighing Devices and Floor Selectors.



Petersen Harned Von Maur Department Store, Davenport, Iowa. Geared Passenger Elevators, Geared Freight Elevators.

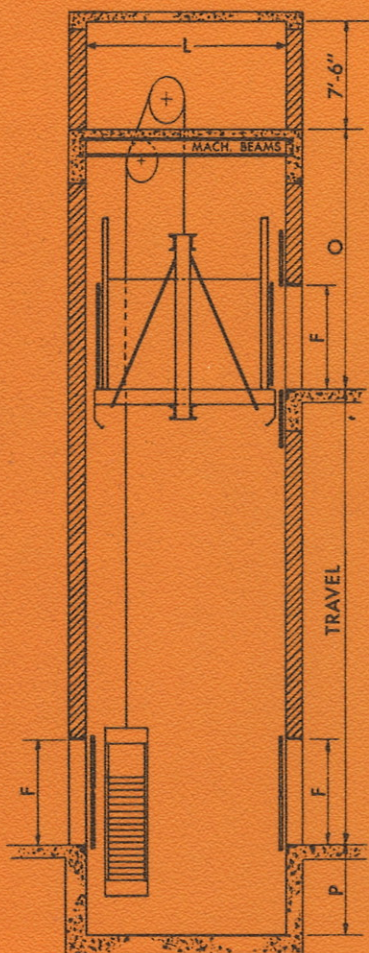


Arizona Title Building, Phoenix, Arizona. 4 Passenger Elevators with Measured Demand Group Supervisory Control, 1 Passenger Elevator, 1 Service Elevator.



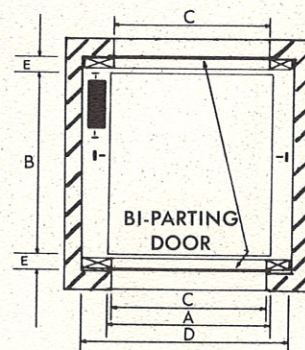
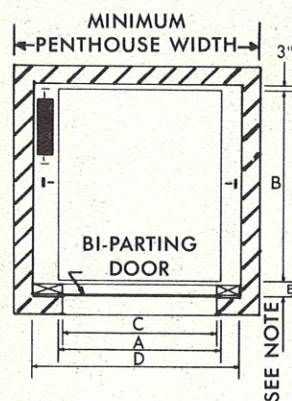
Traders National Bank, Kansas City, Missouri. 4 Montgomery Gearless Passenger Elevators, 1 Montgomery Oil Hydraulic Service Elevator.

## FREIGHT ELEVATORS



## TRACTION

Traction Freight Elevators meet and exceed the heavy duty requirements of freight type loading. Special applications are available to meet unusual and hazardous conditions. As an optional feature we recommend our Lodemaster, an automatic load weighing device, which warns against overloading. Also recommended are power operated hoistway doors and car gates for medium and heavy duty installations.

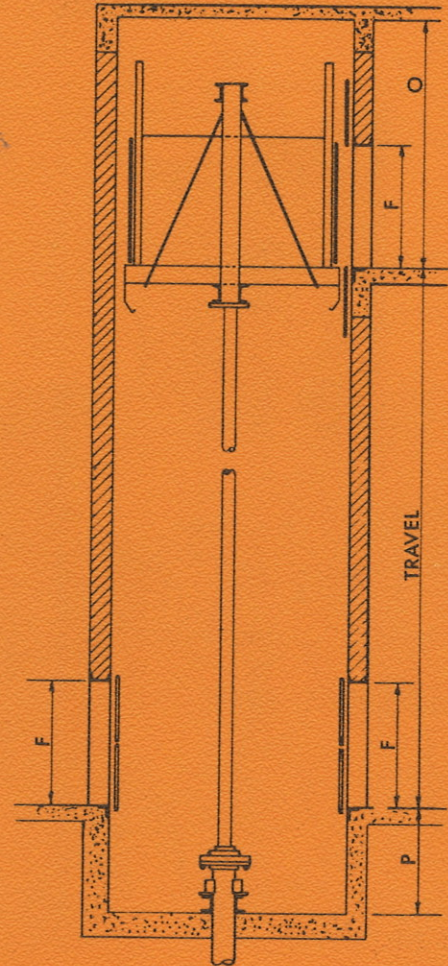
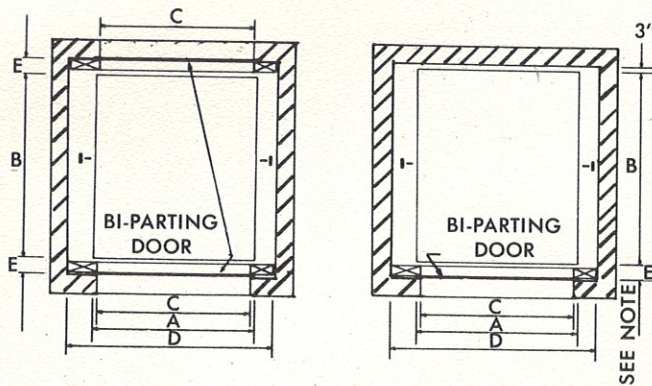


LIGHT AND MEDIUM DUTY FREIGHT ELEVATORS							HEAVY DUTY POWER TRUCK FREIGHT ELEVATORS											
CAPACITY	2500#	3000#	4000#	6000#	8000#	10,000#	CAPACITY	10,000#	12,000#	16,000#	18,000#	20,000#						
A	5'-4"	6'-4"	6'-4"	8'-4"	8'-4"	10'-4"	A	8'-4"	10'-4"	10'-4"	10'-4"	12'-4"						
B	7'-0"	8'-0"	8'-0"	10'-0"	10'-0"	14'-0"	B	12'-0"	14'-0"	14'-0"	16'-0"	20'-4"						
C	5'-0"	6'-0"	6'-0"	8'-0"	8'-0"	10'-0"	C	8'-0"	10'-0"	10'-0"	10'-0"	12'-0"						
D	7'-4"	8'-4"	8'-4"	10'-4"	10'-10"	12'-10"	D	11'-4"	13'-6"	14'-0"	14'-2"	16'-6"						
L	13'-0"	14'-0"	14'-0"	14'-0"	14'-0"	15'-0"	L	14'-0"	15'-0"	15'-0"	17'-0"	21'-0"						
MINIMUM PIT & OVERHEAD DIMENSIONS							NOTES: 1. Pit depths, overhead clearances and penthouse sizes are in accordance with A.S.A. and C.S.A. requirements. Local codes may vary these requirements. 2. For capacities over 20,000 lbs. or speeds over 200 fpm, consult your Montgomery Representative. 3. Dimensions E = 5" for regular type counter balanced hoistway doors and 6 3/4" for pass type counter balanced hoistway doors. 4. Pass type hoistway doors are required when floor heights are less than 11'-6" for 7'-3" openings and less than 14'-6" for 9'-3" openings. 5. Dimension F = 7'-0" on light and medium duty; 8'-0" or as required for heavy duty doors. Doors higher than 8'-0" require additional overhead height.											
CAR SPEED	50	75	100	200														
O	16'-0"	16'-0"	16'-0"	16'-0"														
P	5'-6"	5'-6"	5'-6"	6'-0"														



## OIL - HYDRAULIC

Oil Hydraulic Freight Elevators are recommended for nominal speed and travel requirements. Features of this type elevator include minimum shaft clearances, economical design of the hoistway, and elimination of the overhead machine room. The recommended machine room location is at the lowest landing adjacent to the hoistway, but can be located in a semi-remote area from the hoistway.



LIGHT AND MEDIUM DUTY HYDRAULIC FREIGHT ELEVATORS								HEAVY DUTY POWER TRUCK HYDRAULIC FREIGHT ELEVATORS					
CAPACITY	2000#	3000#	4000#	5000#	6000#	7500#	10,000#	CAPACITY	10,000#	12,000#	16,000#	18,000#	20,000#
A	5'-0"	5'-6"	6'-6"	8'-6"	8'-6"	8'-6"	10'-6"	A	10'-6"	10'-6"	10'-6"	10'-6"	12'-6"
B	6'-0"	7'-0"	8'-0"	10'-0"	12'-0"	12'-0"	14'-0"	B	14'-0"	14'-0"	16'-0"	16'-0"	20'-0"
C	4'-8"	5'-2"	6'-2"	8'-2"	8'-2"	8'-2"	10'-2"	C	10'-2"	10'-2"	10'-2"	10'-2"	12'-2"
D	6'-4"	6'-10"	7'-10"	9'-10"	10'-6"	10'-6"	12'-6"	D	12'-6"	12'-6"	12'-6"	12'-6"	14'-6"

PIT & OVERHEAD DIMENSIONS				
SPEED FPM	25	50	75	100
P	4'-6"	4'-6"	5'-0"	5'-0"
O (7'-0" Door)	13'-2"	13'-2"	13'-2"	13'-2"
O (8'-0" Door)	14'-2"	14'-2"	14'-2"	14'-2"

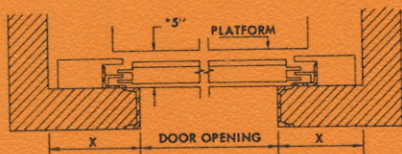
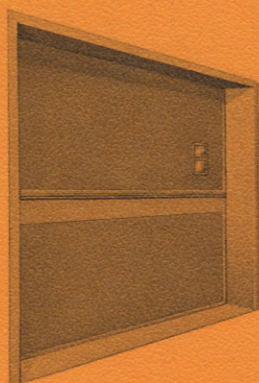
### NOTES:

- Machine room sizes vary with car capacity and speed and should be within 20 feet of the hoistway at the lowest landing.
- Pit depths, overhead clearance and penthouse sizes are in accordance with A.S.A. code requirements. Local codes may vary these requirements.
- Layout and dimensions shown for freight elevators based on bi-parting counter-balanced type hoistway doors.
- Consult your local Montgomery office for more information regarding Notes 1 and 2.

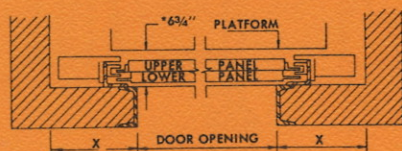
### NOTES:

- Dimension E=5" for regular type counter balanced hoistway doors and 6 3/4" for pass type counter balanced hoistway doors.
- Pass type hoistway doors are required when floor heights are less than 11'-6" for 7'-3" openings and less than 14'-6" for 9'-3" openings.
- Dimension F=7'-0" on light and medium duty, 8'-0" or as required for heavy duty.
- For capacities over 20,000 lbs. and for large heavy duty doors, consult your Montgomery Representative.

## FREIGHT DOORS



### REGULAR TYPE



### PASS TYPE

#### DIMENSION KEY

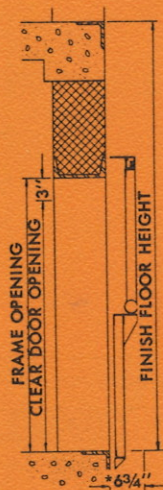
X - 13" minimum return required for motorized door of either type shown.

X - 9" minimum return required for manual door of either type shown. Minimum pit depth 1/2 door height plus 6". Door frames must extend to floor beam above unless walls are other than poured concrete or brick.

\*Dimension varies with Mfr's. requirements.

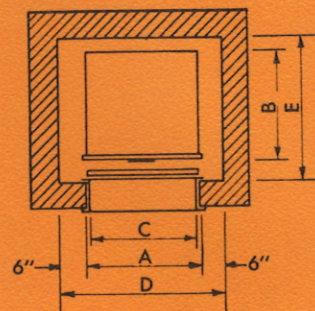
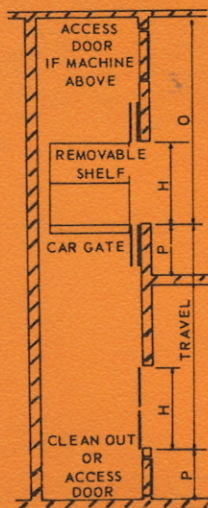
MINIMUM FLOOR HEIGHT accdng to opening height of door		
opening height of door*	regular	pass
6 ft.	9 ft. 6 in.	6 ft. 10 in.
6 ft. 6 in.	10 ft. 3 in.	7 ft. 4 in.
7 ft.	11 ft.	7 ft. 10 in.
7 ft. 6 in.	11 ft. 9 in.	8 ft. 4 in.
8 ft.	12 ft. 6 in.	8 ft. 10 in.
8 ft. 6 in.	13 ft. 3 in.	9 ft. 4 in.
9 ft.	14 ft.	9 ft. 10 in.
10 ft.	15 ft. 6 in.	10 ft. 10 in.
11 ft.	17 ft.	11 ft. 10 in.
12 ft.	18 ft. 6 in.	12 ft. 10 in.

\*opening height of frame = clear opening height + 3 in.



## DUMBWAITERS-electric

Are available in various speeds and capacities. Optional features include automatic levelling, power operated doors, and various automatic operations.



LOAD	100	200	300	400
A	20"	24"	30"	36"
B	24"	24"	30"	36"
*C	18"	22"	28"	34"
D	32"	36"	42"	48"
**E	28"	28"	34"	40"
H	28"	36"	36"	48"
O	9'-0"	9'-0"	9'-0"	10'-0"
***P	30"	30"	30"	30"

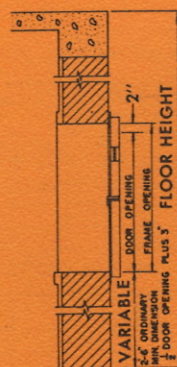
  

	UP TO 3 STOPS	4 TO 6 STOPS	OVER 6 STOPS
SPEED FPM	50	100	150

\*\*\*If Machine below "P" at lowest landing is 34" minimum.

\*\*If rear door add 2". Add 1 1/4" for each car gate required.

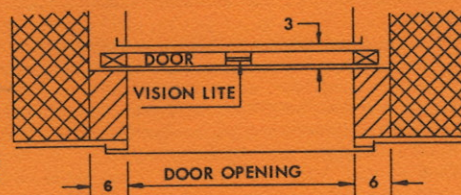
\*One door large enough for removal of car.



### BI-PARTING DUMBWAITER ENTRANCES

ALL DIMENSIONS ARE SHOWN ON DIAGRAM

DIMENSION KEY - One opening must be larger than the car so the assembled car can be placed into the hatch. Front walls to be left out until door frames are installed.



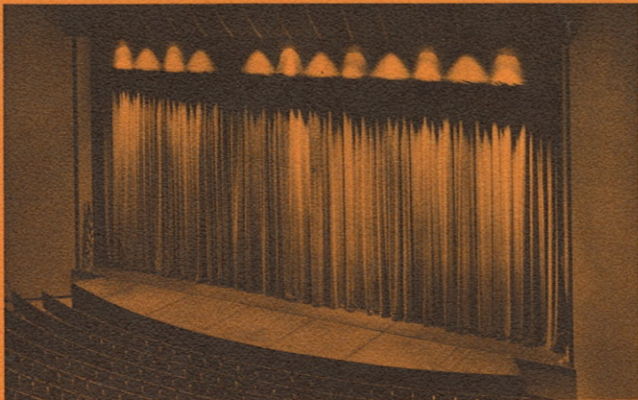


## SPECIAL APPLICATIONS

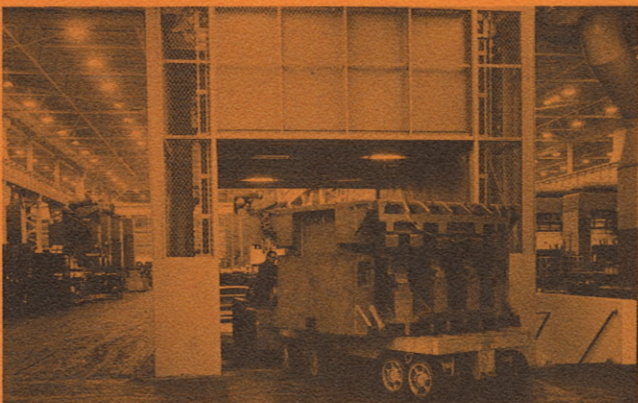
The engineering skills and master craftsmanship of the Montgomery Elevator Company have produced special efficiently operating equipment for many unusual applications, uses and unique designs. Each project required both special engineering and manufacturing.



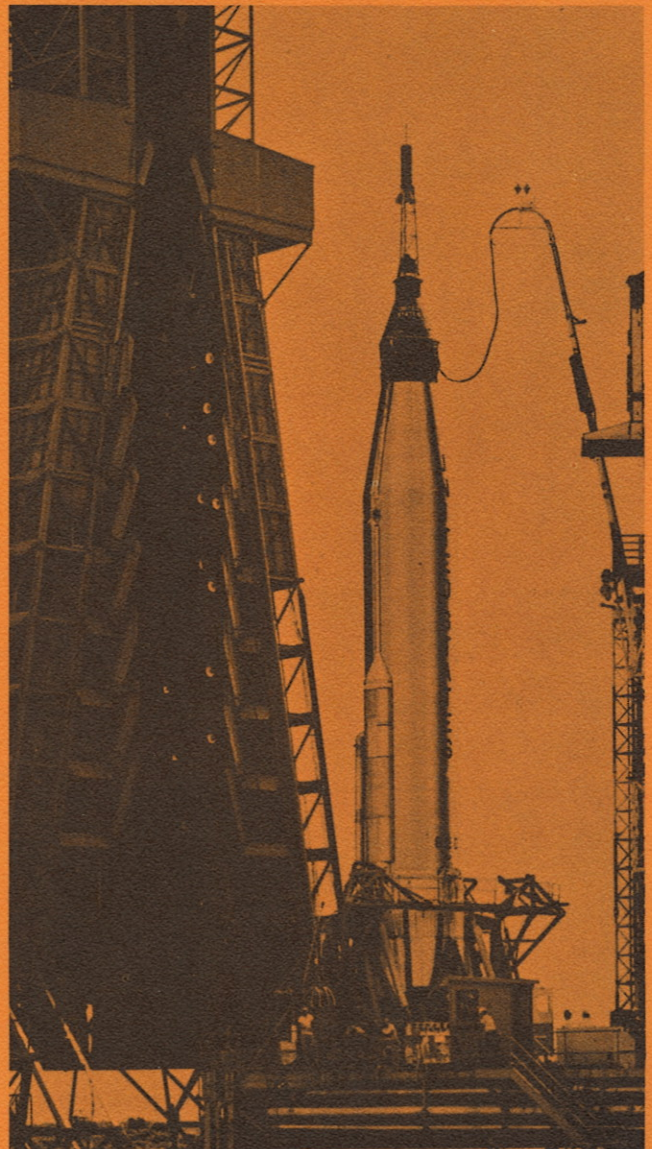
Spectacular Stainless Steel Arch of the Jefferson National Expansion Memorial—St. Louis, Missouri—is the tallest monument in the world. Each triangular leg contains a Montgomery Elevator. Due to the 78 degree angle of the legs, a unique feature, while rising (or descending) the 386 feet of travel, each elevator moves 82 feet horizontally.



Wichita Cultural Center State Lift in Concert Hall. The Center is also served by six other lifts used for supporting services and by two Hydraulic Passenger Elevators.



100,000 Lb. Capacity Montgomery Hydraulic Freight Elevators for the Chrysler Corporation Stamping Plant, Detroit, Michigan. These 3 heavy duty hydraulic freight elevators with 14' x 25' platforms were custom designed for handling the enormous (100,000 lb.) stamping dies used in the manufacture of Chrysler cars. Each elevator weighs 40,000 lb. and was pre-assembled and tested at the Montgomery factory, then dis-assembled for shipment to the job site.



Cape Kennedy, Florida, served by 14 Montgomery Elevators, installed in various projects and complexes.

## PARKING GARAGES

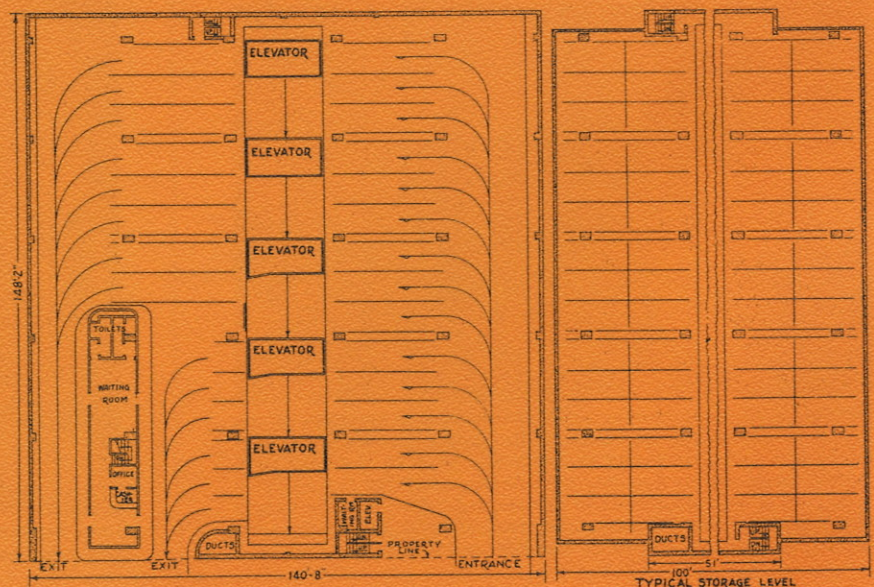
The Montgomery Elevator Company has been a supplier of elevator equipment for elevator crane type parking garages for many years—and NOW includes, in its line, a complete crane elevator system for multiple story parking garages.

Montgomery Elevator Parking Garages are readily adaptable to the small or limited parking site in congested areas. This type of parking does not destroy the visual continuity of retail trade districts, nor does it distort the municipal tax base, nor depreciate nearby properties. Rather, the parking facility attracts traffic to the area because of the ease, speed and convenience of parking and the proximity of major office buildings, banks, department stores and other business establishments.

Parking Garage Elevators are designed by the same engineering talent that designs Montgomery dependable elevator equipment. Standard elevator equipment has the best safety record of any type of transportation. Floor plans, receiving areas and internal traffic flow for parking garages are engineered with the same safety and operational detail.

Parking Garage Elevators increase earning capabilities by - 1, lower total labor cost - 2, more efficient use of small parking sites - 3, engineered use of 'air space' - 4, greater convenience in location of garage - 5, faster operation.

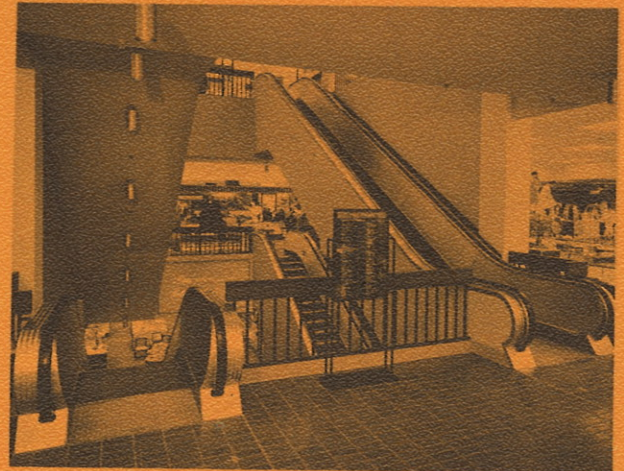
The high-speed operation of Montgomery elevators cut customer waiting time to a minimum both into and out of the parking facility. This feature is a definite attraction to the customer, and it is not limited to the small low-rise parking site, but may include parking facilities for 500 or more cars.



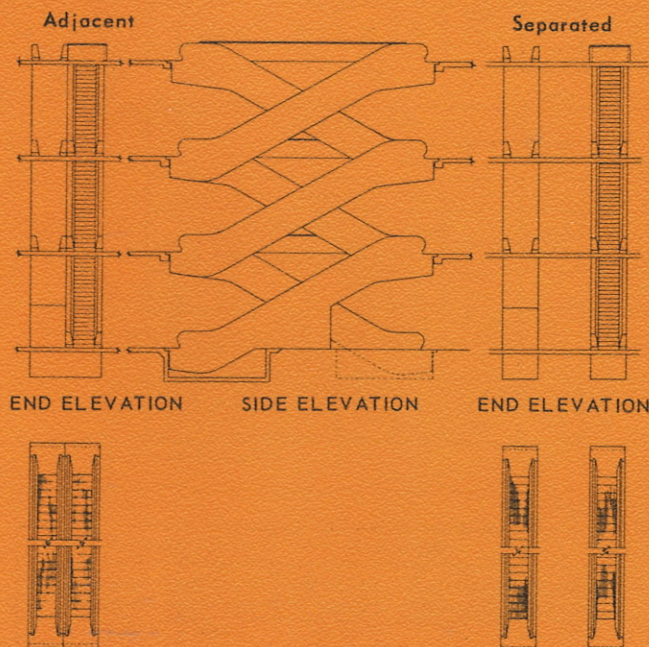
# ELEVATORS / ESCALATORS / POWER WALKS AND RAMPS



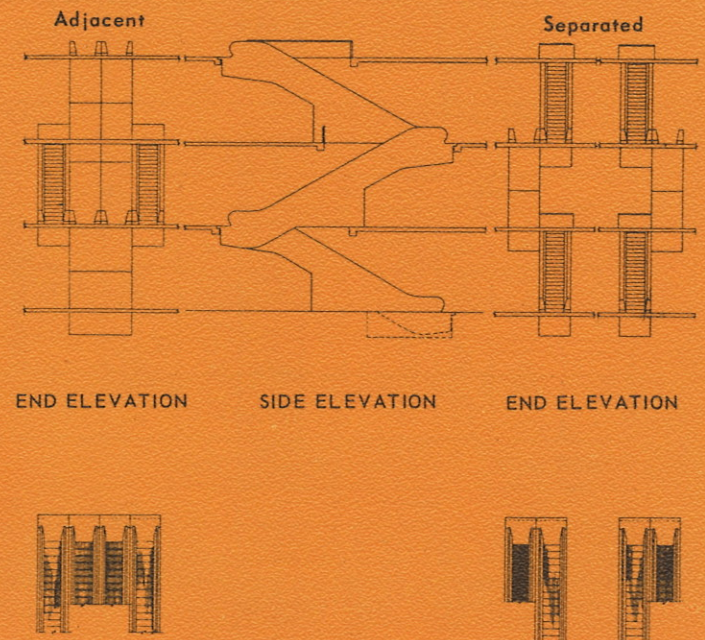
The Hecht Co., Division May Department Stores, Montgomery County, Md.  
2 - 48" Crystal Balustrade Escalators, 1 Oil Hydraulic Passenger Elevator,  
1 Oil Hydraulic Freight Elevator.



Macy's, Serramonte Shopping Center, Daly City, California.  
4 - 48" Escalators, 2 Oil Hydraulic Passenger Elevators,  
1 Oil Hydraulic Freight Elevator.



CRISS-CROSS ARRANGEMENT



PARALLEL ARRANGEMENT

## ESCALATORS

### STANDARD EQUIPMENT INCLUDES

complete truss fabricated of seamless steel tubes; precision worm gear drive; roller and ball bearings throughout; flange mounted motor; portable controller; complete electrical and mechanical safety system; reversing rotations; interchangeable precision assembled steps with cleated risers; matched endless step chains; accurately aligned track system; complete balustrade including skirts; inner panels, decks and endless moving neoprene rubber handrail; floor access covers to upper and lower machinery well both within truss area. Decorator panel exterior covering of balustrade, truss and soffit is optional. Crystal balustrades are optional.

### REQUIREMENTS

1. Floor around escalator is not to be laid until escalator is installed.
2. Flooring within 8" of escalator floor access doors (top and bottom) is not to be laid until floor access doors are in place.
3. Electric conduits, sprinkler pipes or soffit lights must be installed entirely outside of truss at all points except where codes require sprinkler protection of escalator machinery. Consult Montgomery for location within truss.
4. No walls or other parts of building structure are to be carried on truss.
5. Fill and finish flooring for access doors.

### OWNER TO PROVIDE AND INSTALL THE FOLLOWING

1. All escalator supports including bearing plates if concrete beams are used.
2. 3 phase, 60 cycle power supply and 110 volt light supply to controller.
3. Combination lamp receptacle and convenience outlet in machine room and lower reversing station.
4. Paper backed wire lath or its equivalent to be used for plaster enclosure of escalator.
5. All items marked "by others."

### SUGGESTED WIRING ARRANGEMENT

10 H.P.																				
32" #3E ESCALATOR - 90 FPM.....												9'-10" TO 18'-1" FLOOR HEIGHT								
40" OR 48" #5E ESCALATOR - 90 FPM.....												9'-10" TO 16'-5" FLOOR HEIGHT								
208-220V 3 PHASE 60 CYCLE							440-480V 3 PHASE 60 CYCLE							550-600V 3 PHASE 60 CYCLE						
NO. OF ESCALATORS	SWITCH	FUSE SIZE	FUSE-TRON SIZE	BRANCH CIRCUIT & FEEDER	WIRE TYPE RH	CONDUIT	SWITCH	FUSE SIZE	FUSE-TRON SIZE	BRANCH CIRCUIT & FEEDER	WIRE TYPE RH	CONDUIT	SWITCH	FUSE SIZE	FUSE-TRON SIZE	BRANCH CIRCUIT & FEEDER	WIRE TYPE RH	CONDUIT		
1	1A M	90 90	45 45	B F1	#6 #6	1" 1"	1A M	45 45	25 25	B F1	#8 #8	¾" ¾"	1A M	40 40	20 20	B F1	#12 #12	½" ½"		
2	1A-2A M	90 150	45 90	B F2	#6 #2	1" 1¼"	1A-2A M	45 70	25 45	B F2	#8 #6	¾" 1"	1A-2A M	40 60	20 40	B F2	#12 #10	½" ¾"		
3	1A-2A-3A M	90 175	45 125	B F3	#6 #0	1" 2"	1A-2A-3A M	45 90	25 70	B F3	#8 #4	¾" 1¼"	1A-2A-3A M	40 80	20 60	B F3	#12 #8	½" ¾"		
4	1A-2A 3A-4A M	90 200	45 175	B F4	#6 #00	1" 2"	1A-2A 3A-4A M	45 100	25 90	B F4	#8 #2	¾" 1¼"	1A-2A 3A-4A M	40 80	20 80	B F4	#12 #6	½" 1"		

1 A

2 A

3 A

4 A

F1-F2-F3-F4

SWITCH BOARD M

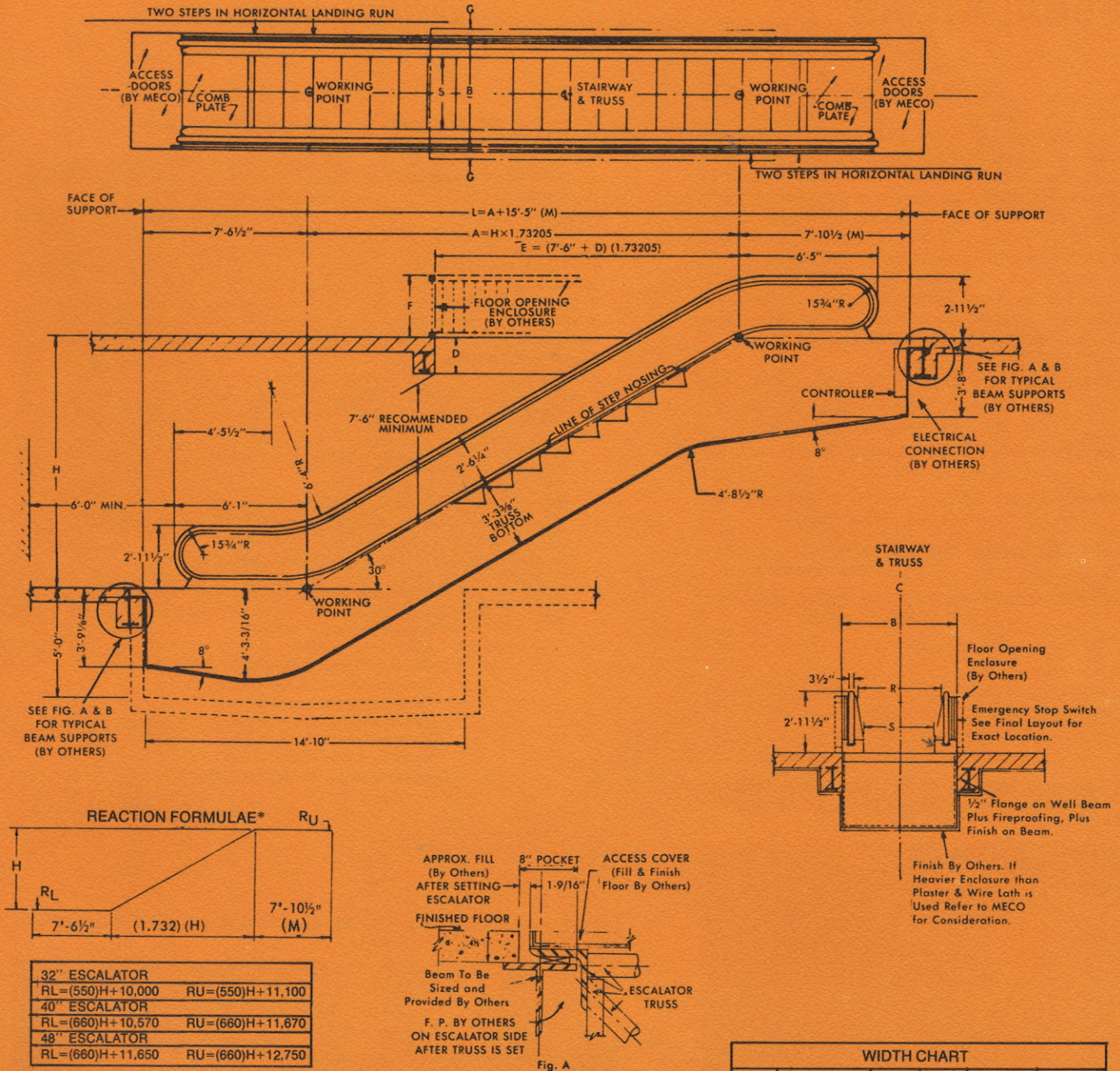
15 H.P.																				
32" #3E ESCALATOR-90 FPM.....												18'-1" TO 21'-4" FLOOR HEIGHT								
40" (#4E) OR 48" (#5E) ESCALATOR-90 FPM.....												16'-5" TO 21'-4" FLOOR HEIGHT								
208-220V 3 PHASE 60 CYCLE							440-480V 3 PHASE 60 CYCLE							550-600V 3 PHASE 60 CYCLE						
NO. OF ESCALATORS	SWITCH	FUSE SIZE	FUSE-TRON SIZE	BRANCH CIRCUIT & FEEDER	WIRE TYPE RH	CONDUIT	SWITCH	FUSE SIZE	FUSE-TRON SIZE	BRANCH CIRCUIT & FEEDER	WIRE TYPE RH	CONDUIT	SWITCH	FUSE SIZE	FUSE-TRON SIZE	BRANCH CIRCUIT & FEEDER	WIRE TYPE RH	CONDUIT		
1	1A M	125 125	60 60	B F1	#4 #4	1¼" 1¼"	1A M	60 60	30 30	B F1	#6 #6	1" 1"	1A M	50 50	25 25	B F1	#10 #10	¾" ¾"		
2	1A-2A M	125 175	60 150	B F2	#4 #0	1¼" 2"	1A-2A M	60 90	30 70	B F2	#6 #4	1" 1¼"	1A-2A M	50 80	25 60	B F2	#10 #6	¾" 1"		
3	1A-2A-3A M	125 250	60 200	B F3	#4 #000	1¼" 2"	1A-2A-3A M	60 125	30 90	B F3	#6 #2	1" 1¼"	1A-2A-3A M	50 100	25 80	B F3	#10 #3	¾" 1¼"		
4	1A-2A 3A-4A M	125 300	60 250	B F4	#4 250 CM	1¼" 2½"	1A-2A 3A-4A M	60 150	30 125	B F4	#6 #0	1" 2"	1A-2A 3A-4A M	50 120	25 100	B F4	#10 #1	¾" 1½"		

### POWER DATA

VALID ONLY FOR 3 PHASE, 60 CYCLE									
208 VOLTS		220 VOLTS		440 VOLTS		480 VOLTS		550 VOLTS	
HORSE POWER	STARTING CURRENT	RUNNING CURRENT	STARTING CURRENT	RUNNING CURRENT	STARTING CURRENT	RUNNING CURRENT	STARTING CURRENT	RUNNING CURRENT	STARTING CURRENT
10	118A	36.2A	112A	34.2A	56A	17.1A	51A	15.6A	45A
15	174A	53.5A	165A	50.6A	83A	25.3A	75A	23.2A	66A

CONTACT ANY OF OUR SALES AND SERVICE OFFICES TO OBTAIN EXPERT PLANNING ASSISTANCE INCLUDING COMPLETE LAYOUT AND SPECIFICATIONS

# ELEVATORS / ESCALATORS / POWER WALKS AND RAMP



## LAYOUT NOTE:

The following information, when available, must be shown on all layouts for use of the balustrade manufacturer.  
 D—Dimension from finished floor to the finished plaster ceiling or bottom of smoke guard.  
 E-F-G—Detail and kind of wellway railings or fire shutter enclosures which are not furnished by the balustrade manufacturer.

K—Dimension from bottom of truss to finished soffit. Lower soffit for lighting and sprinkler as required.

M—Upper working distance is 10'-3" for California installations only. Total wellway length ( $L = A + 17'-9\frac{1}{2}"$ ).

WIDTH CHART					
Model No.	Capacity Per Hour At 90fpm 120fpm	Rated Width R	Step Width S	Over-All Width B 2	Well Width Rough Opening
3E	5,000	6,500	32"	24"	4'-4"
4E	7,000	9,000	40"	32"	5'-0"
5E	8,000	10,000	48"	40"	5'-8"

1. Other speeds available.

2. Includes exterior decorator panels (fire-rated) rigidly fastened and trimmed with color anodized aluminum shapes by Montgomery or lath and plaster by others.

## ESCALATORS

move more people at lower cost per passenger than any other form of vertical transportation. They may be the primary carrier in retail buildings, in transportation terminals and in highly populated office buildings, or can effectively augment elevator systems, especially in the high rise office buildings. Operating from main floors to: lower parking levels, mezzanine or second floor shops and restaurants, or top elevator floor to penthouse restaurants. Escalators provide the most efficient transportation in these heavy traffic locations, allowing elevator systems to serve other areas of the building more efficiently.

**EFFICIENCY**—two steps on the same level at entry and exit speeds and safeguards traffic "a montgomery exclusive."

**SAFETY**—more and better safety devices than any other escalator.

**APPEARANCE**—durable modern materials retain attractive appearance.

**LOW COST MAINTENANCE**—attained by high quality equipment.

**DEPENDABILITY**—quickly and easily serviced—less "down" time.

Woodhaven Stamping Plant, Ford Motor Company, Woodhaven, Michigan. Served by: 4 - 48" Montgomery Escalators.

## TYPICAL MONTGOMERY ESCALATOR USERS

### RETAIL

Simpsons-Sears Ltd.-Canada  
Federated Department Stores  
F. W. Woolworth Company  
J. C. Penney Company, Inc.  
J. J. Newberry Company  
May Company  
Marshall Field & Company  
Montgomery Ward & Company  
R. H. Macy Company  
Sears Roebuck & Company  
T. Eaton Company, Ltd.  
Woodward & Lothrop, Inc.  
Woodward Dept. Stores, Canada  
Mercantile Stores Co., Inc.  
Associated Dry Goods Company  
Hudson Bay Co.-Canada  
City Stores Co.

### OFFICE - BANK - HOTEL

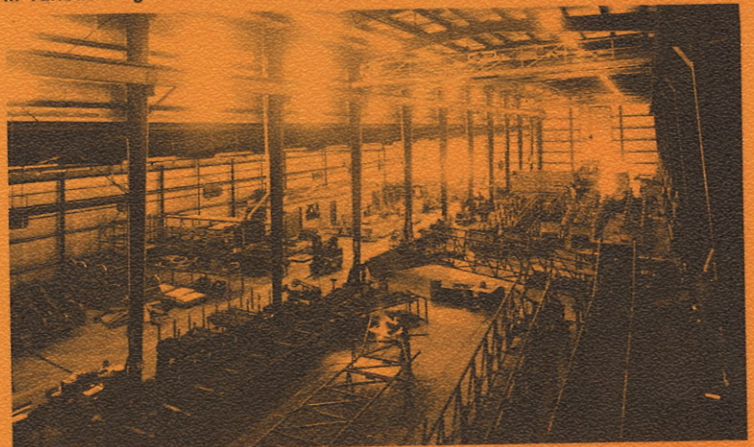
General Motors Corporation  
Hilton Hotels Company  
San Diego Imperial Corp.  
Hotel Vancouver  
Blue Cross - Blue Shield  
U.S. House of Representatives Office Bldg.  
LTV Tower-NBC Office Bldg., Dallas  
Lockheed California Co.  
Houston First Federal Savings-Loan Assn.  
Wichita Plaza Office Bldg.  
Federal Office Building, Kansas City  
Exchange Park Building, Dallas  
Muehlebach Hotel, Kansas City  
Caterpillar Tractor Co.  
Ford Motor Company  
Connecticut General Insurance Co.  
Sheraton-Brock Hotel, Niagara Falls

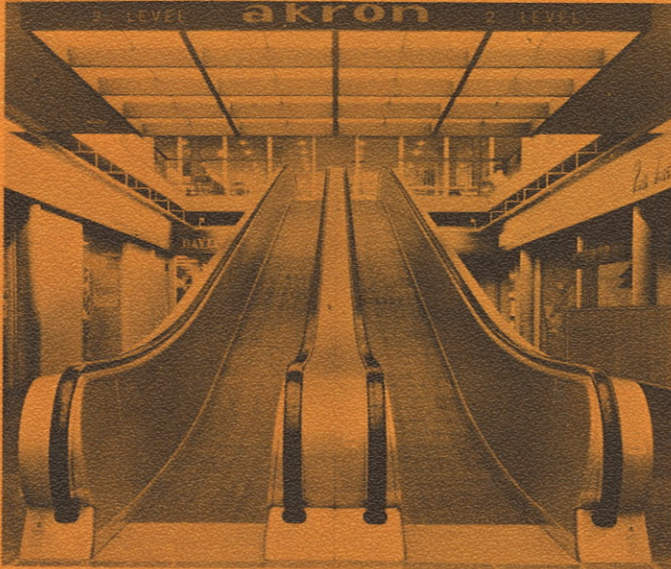
### TRANSPORTATION & PUBLIC

Montreal Forum  
Ottawa, Canada Union Station  
San Francisco International Airport  
Montreal Mass Transit System  
Boston Subway, Mass. Transit Authority  
Detroit Cobo Hall  
Victoria Museum-Exhibit Center  
New Orleans International Exhibit Center  
Denver Stapleton Airport  
Dallas Love Field  
Chicago Transit Authority  
Toronto Science & Technology Center  
Tampa International Airport  
Detroit Metropolitan Wayne County Airport  
Toronto Transit Commission  
Honolulu International Airport  
San Francisco-Rapid Transit-BARTD



Interior view of new Montgomery Escalator Factory showing escalator trusses in various stages of manufacture.

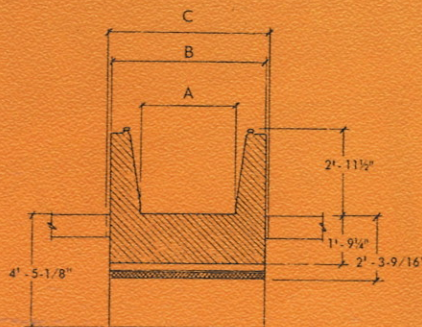
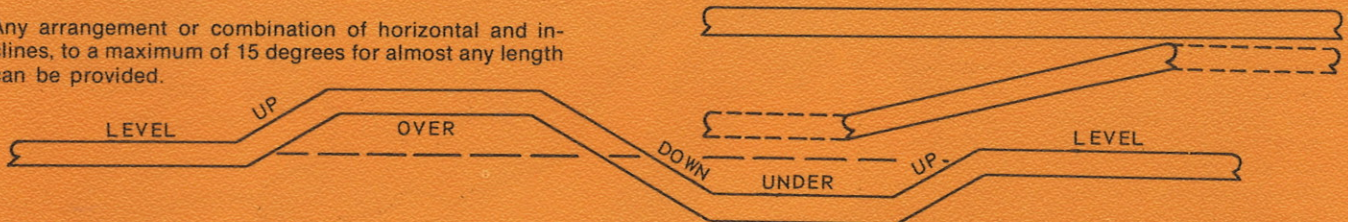




North Point Shopping Center, San Francisco, California, served by two (2) 40" Montgomery Power Ramps and Montgomery Elevators.

## ARRANGEMENTS

Any arrangement or combination of horizontal and inclines, to a maximum of 15 degrees for almost any length can be provided.



## POWER WALKS & POWER RAMPS

provide fast safe, high-volume horizontal, or combined horizontal and inclined (to 15 degrees) transportation of people within buildings, or outdoors. Exposition centers, stadiums, auditoriums, transportation terminals, parking lots to buildings and in or out of buildings are a few walk-ramp applications to transport people where walking is not advantageous.

### STANDARD EQUIPMENT INCLUDES

complete truss fabricated of seamless steel tubes; precision worm gear drive; roller and ball bearings throughout; flange mounted motor; portable controller; complete electrical and mechanical safety system; reversing stations; interchangeable precision assembled treadway pallets with interlocking treads on adjacent pallets; matched endless pallet chains; accurately aligned track system; complete balustrades including inner panels; decks with endless moving neoprene rubber hand rail (color available); and floor access covers to upper and lower machinery wells both within truss area. Decorator panel exterior covering of balustrade, truss and soffit is optional.

### CONSULT MONTGOMERY

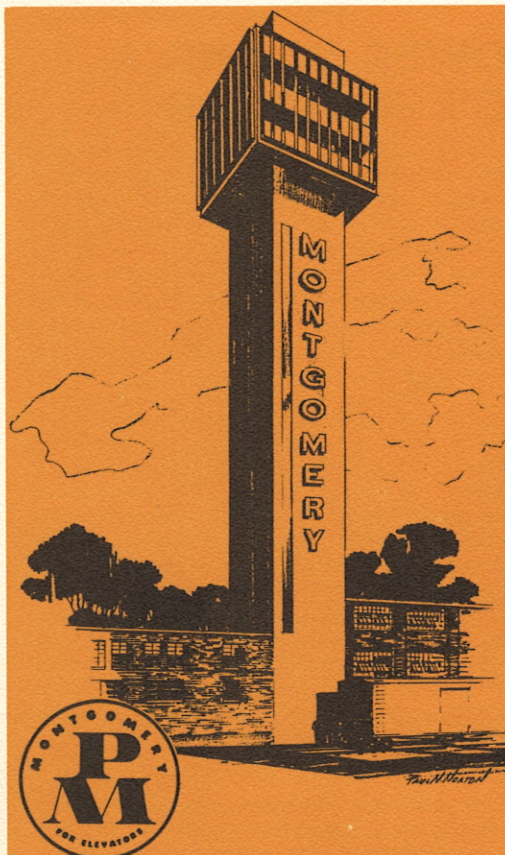
Contact your local Montgomery representative or the Montgomery Elevator Company, Moline, Illinois, for application data, and layout or specification data needed to plan a complete installation.

### WIDTHS:

Three standard tread widths are 24", 32" and 40". The 24" width accommodates one adult; the 32" width provides ample room for adult and child or adult and shopping cart; the 40" width accommodates two adjacent adults or adult with luggage.

MODEL NO.	TREAD WIDTH	OVERALL WIDTH DECORATOR PANEL OR LATH & PLASTER EXTERIOR COVERING	WELL WIDTH ROUGH OPENING
	<b>A</b>	<b>B</b>	<b>C</b>
3W	24"	4'-4"	OVERALL WIDTH B + 2"
4W	32"	5'-0"	
5W	40"	5'-8"	

# montgomery®



## PREVENTIVE MAINTENANCE

Montgomery's Preventive Maintenance Program employs service men who are factory trained specialists. They check and inspect all safety devices, electrical controls and make necessary mechanical adjustments—on a regularly scheduled basis under competent technical supervision. A complete record of each elevator and escalator is kept. In the event of a breakdown, prompt service and complete repair is assured. Montgomery's PM program provides the finest service at lower costs.

\* ANCHORAGE, ALASKA  
\* HONOLULU, HAWAII  
\* MANILA, P.I.



Montgomery International Sales and Service organization facilities are located throughout North America (United States, Canada, Mexico, and the Caribbean area) and overseas.

# montgomery®

Montgomery Elevator Company, Moline, Illinois 61265  
Montgomery Elevator Co. Limited, Toronto, Canada  
Offices in principal cities of North America