



LERCH BATES

Building Insight

# RETURN TO TRAVEL

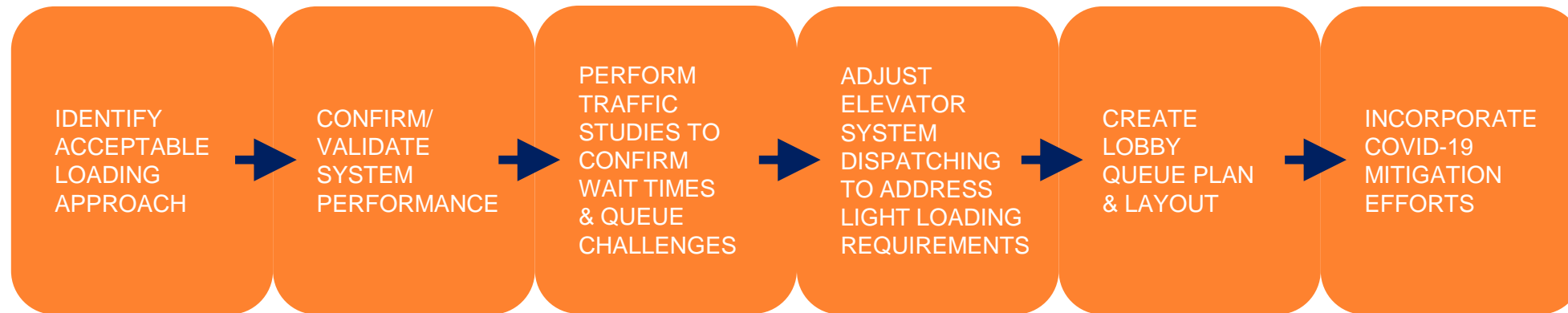
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Considerations with Vertical Transportation and Hospitality

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# Process for Executing an Effective Return to Travel Program



# Hotel Return to Travel Plans

## Lobby Optimization

Staggering guest arrival and departure times may be critical to controlling lobby overcrowding and optimizing elevator queue lengths.

Hotel lobby staging and metering may be required during peak arrival and departure times, to maintain social distancing.



# Hotel Return to Travel Plans

## Lobby Optimization cont.

A thorough understanding of building specific protocols and guest sensitivities must be gained to accommodate all vertical transportation users in a lobby queue plan.

Each building and building type (Select Service, Full Service, Resort, Convention, etc.) will need to develop customized redensification plans and processes suitable for their guests and the facility.

Understanding property specific populations by floor, arrival times, building management patterns (conventions or concierge amenities and gym facilities, for example) and hours of use will be critical to developing a proper analysis of the use of the facility.



# Hotel Return to Travel Plans

## Lobby Optimization cont.

A thorough lobby plan may lead to checking in within pre-determined time slots:

- Consider expanding check-in times
- Communicate that elevator wait times may be longer than normal
- Use existing apps to register in advance to schedule arrival or to check in and avoid the check-in desk altogether

Enhance communication of “contact-less” check-out plans to further decrease lobby loading.

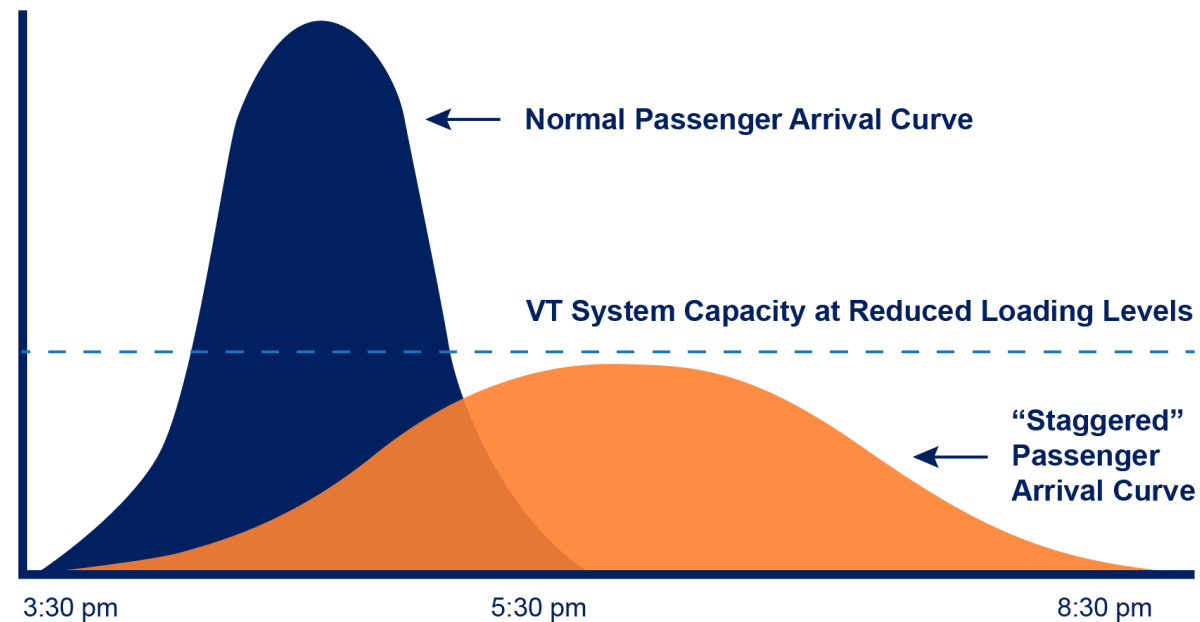


# Hotel Return to Travel Plans

## Lobby Optimization cont.

Gaining commitment from guests to stagger arrival times will play a large role in addressing potential long check-in and elevator lines.

WORK TO “FLATTEN THE CURVE” OF THE CHECK-IN PEAK



RETURN TO TRAVEL

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# Elevator Loading During Social Distancing



# Local & National Regulatory Requirements

Lerch Bates is developing flexible plans which can evolve as the requirements are published and/or changed.

- It is anticipated that social distancing requirements will include local criteria beyond the simple maintenance of a 6-foot boundary between pedestrians.
- These new rules for social interaction will play a large role in the establishing best practices for Building Redensification.
- To date, national standards for elevator loading **have not been identified** by:

*Center for Disease Control (CDC)*

*Occupational Safety & Health Administration (OSHA)*

*Building Owners and Managers Association (BOMA)*

*The American Society of Mechanical Engineers (ASME)*

*Council on Tall Buildings and Urban Habitat (CTBUH)*

*National Guidelines for “Opening Up America”*

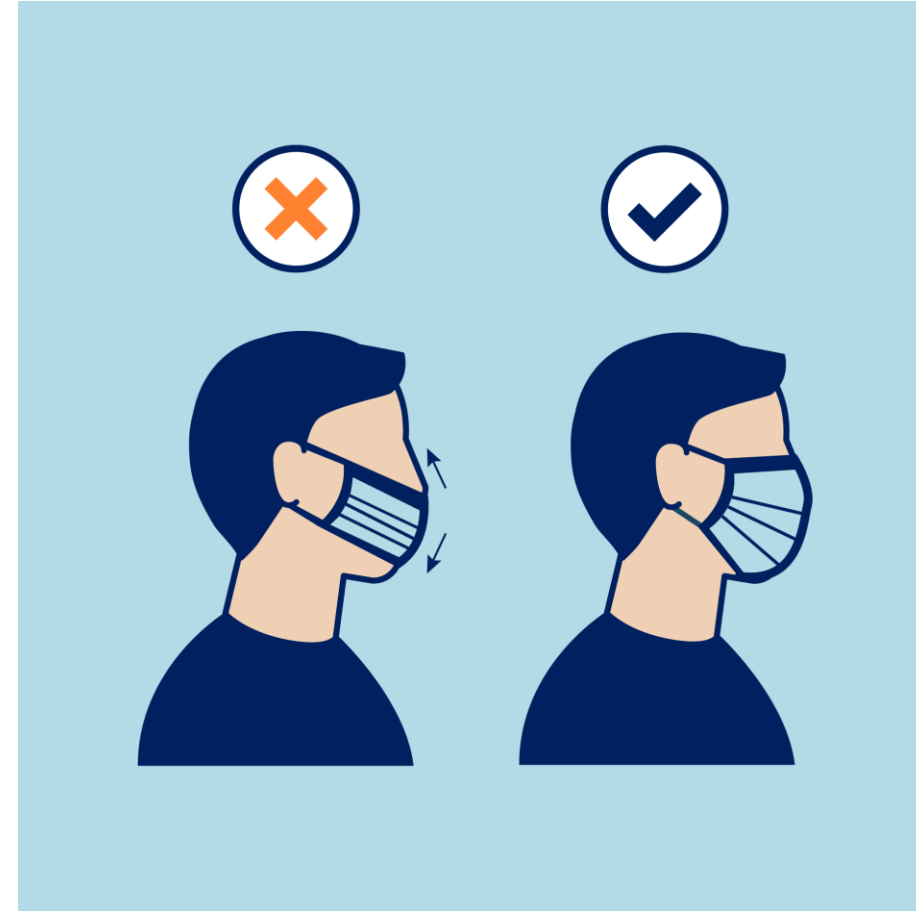
Lerch Bates continues to monitor both national and local guidelines & requirements.

# Social Distancing Guidelines

The Center for Disease Control and Prevention (CDC) recommends use of cloth face coverings to help slow the spread of COVID-19.

## Cloth face coverings should:

- Fit snugly but comfortably against the side of the face
- Be secured with ties or ear loops
- Cover mouth and nose fully making sure there are no gaps
- Include multiple layers of fabric
- Allow for breathing without restriction
- Be able to be laundered and machine dried without damage or change to shape



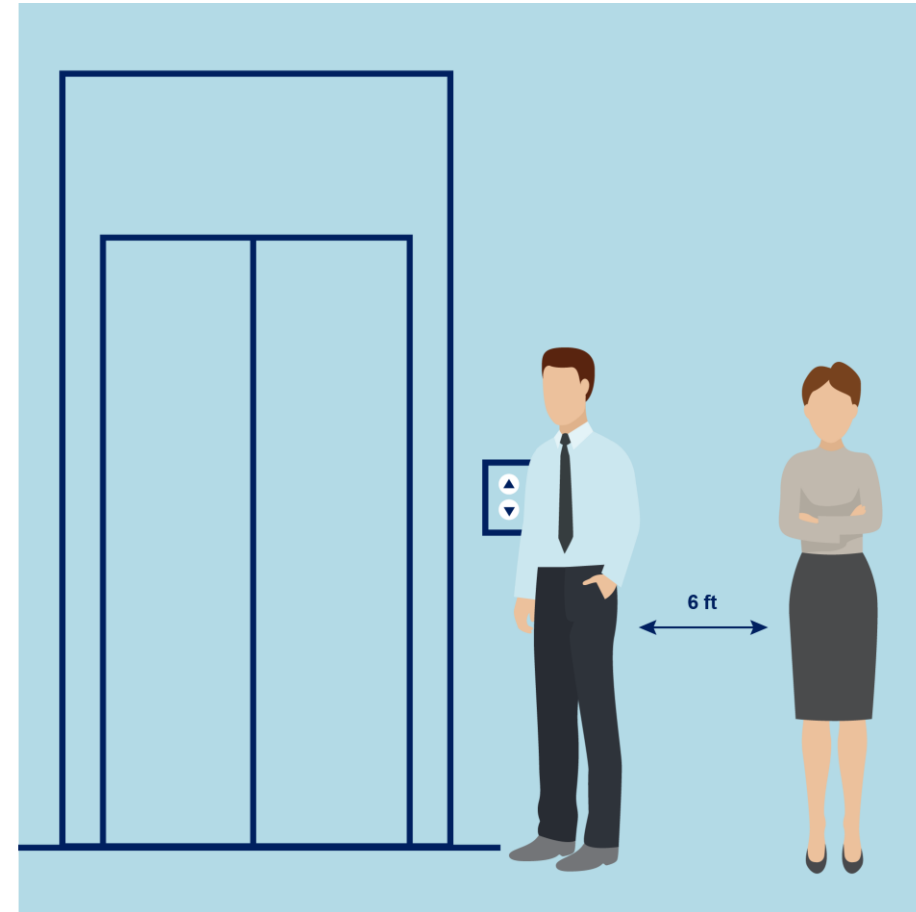
*This information was provided by the Centers for Disease Control and Prevention website.*

# Social Distancing for Elevators

Adhere to CDC Social Distancing Guidelines, maintain 6 feet between people not equipped with PPE.

Load elevators in accordance with published State and local standards or social distancing standards in absence of local guidance.

Monitor industry for best practices and continuously adjust for maximum benefit to building operations.



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# Elevator Traffic Simulation

# Confirm Current System Performance Capabilities

In order to perform accurate traffic simulation, it may be necessary to document current Vertical Transportation system operational abilities. The following metrics may be surveyed:

- Elevator Interior Sizes/Capacities
- Elevator System Availabilities
- Actual Elevator Speed
- Landings Served
- Travel Distances
- Door Sizes
- Door Timing
- Floor to Floor Timing
- Confirm Control System Capabilities
- Confirm Capability to Retrofit Enhanced Hygiene Devices/Systems

ELEVATOR INFORMATION				
PROJECT NAME:		OWNER ID NO.: 1-10	ELEVATOR NO.: 1-10	REVIEW DATE:
PROJECT LOCATION:		PERMIT ID NO.: STATE ID NO:	ELEVATOR GROUP: PASSENGER ELEVATORS 1-11	
CITY AND STATE:		MACHINE TYPE: GEARLESS TRACTION		
LB PROJECT NUMBER:		ELEVATOR TYPE: PASSENGER		
MANUFACTURER (OEM):		FLOORS SERVED: 14    FRONT: 14    REAR: 0		
CONTRACTOR:		CAPACITY: 3,500 LBS    CONTRACT SPEED: 1,000 FPM		
DATE OF INSTALLATION:		SAFETY TESTS:    ANNUAL TEST    5 YEAR TEST		DATE COMPLETED    3/17/2017 DATE COMPLETED    2/9/2016
TYPICAL FLOOR HEIGHT: 12'-0"		BETWEEN FLOORS: 12 AND 14		DOOR OPERATOR SPEED: MEDIUM
DOOR TYPE: SSCO		DOOR WIDTH: 3'-6" AND HEIGHT: 7'-0"		PRE-OPENING: YES
MEASURED	CAR EMPTY	TARGET CRITERIA	MEETS CRITERIA	COMMENTS
UP SPEED (FPM)	1,013 FPM	950 TO 1,050 FPM	YES	MEETS CRITERIA
DOWN SPEED (FPM)	1,008 FPM	950 TO 1,050 FPM	YES	MEETS CRITERIA
PERFORMANCE UP (- 0.2 SEC; 0.0)		8.00 SEC	NO	
PERFORMANCE DOWN (0.0; +0.2 SEC)		8.00 SEC	NO	
STOPPING ZONE	¼"	¼"	YES	MEETS CRITERIA

# Perform Traffic Simulations

Utilizing social distancing requirements, simulations can be performed for late afternoon or early evening periods with varying arrival and departure rates and timeframes.

Traffic flow simulations may include patrons checking in, checking out, and entering or exiting meeting or convention spaces.

Study reports based on simulations aim to provide Maximum Queue Lengths along with associated performance times, varying demand levels and arrival and departure timeframes.



# Anticipated Recommendations

1. Guest level/floor level staggered arrivals and departures.
2. Technology enhancements.
3. Stairwell utilization, such as designated one stairwell for up and the other down, to prevent or avoid near contact scenarios.
4. Elevator system operational improvements, such as fine-tuning door times, acceleration and deceleration rates, and elevator speed.

# Lobby Arrangement & Operation Planning

Careful study of the elevator systems and lobby capacity with social distancing will prevent unwanted overcrowding or extended elevator queue lines.

Care must also be taken for additional COVID-19 safeguards, such as Temperature Screening and Medical Stations at building entryways, to ensure a safe environment for your patrons.





# Lobby Arrangement & Operation Planning cont.



Lobby Absolute Max Capacity : 465

Queued Capacity 162

## BUILDING EXIT 1 & 2

Due to building lobby layout, exits must be available at both street entrance locations.

## TEMPERATURE CHECK 1 & 2

If provided, should be located directly at both entrances.

## LOW/HIGH-RISE ENTRANCE

Both Low & High-Rise Tenants may enter at this location, lower doors. Tenants & Staff may exit at upper doors.

## LOW/HIGH-RISE QUEUE ZONE 1A

Either Queue Zone on Myrtle Ave. may accommodate **19 people** per zone. Each lane is 6' wide and starts from the entry door. Upon temperature check, if tenant is found to have a fever, tenant can be directed out immediately.

## MYRTLE AVE. TURNSTILES

Due to location of Low-Rise Queue Zone 2, only two turnstiles may remain operative, adjacent to each other. One shall serve outgoing while the lower will serve incoming.

## LOW-RISE QUEUE ZONE 2

Low-Rise Queue Zone 2, located directly across from the Low-Rise bank, can accommodate up to **48 people**.

## HIGH-RISE QUEUE ZONE 2

High-Rise Queue Zone 2, located directly across from the High-Rise bank, can accommodate up to **52 people**.

## ESCALATORS SERVING LEVEL 2

Escalators are believed to be an operational requirement if the Cafeteria and Starbucks are to remain open. All tenants desiring access to Level 2 must enter/exit from Willoughby Street.

## VISITORS CHECK-IN / OUT

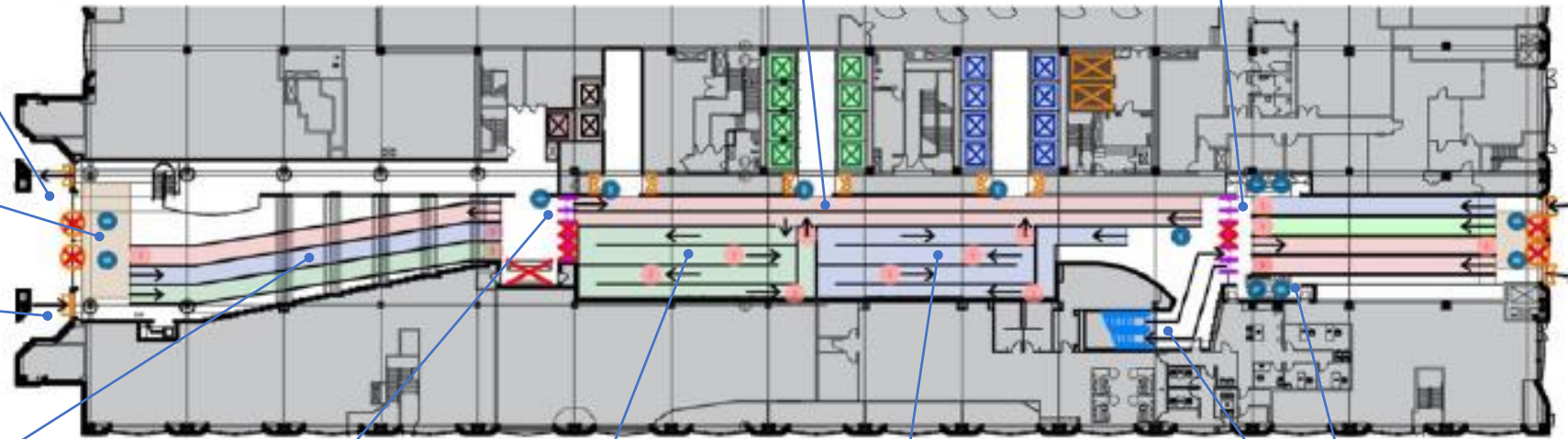
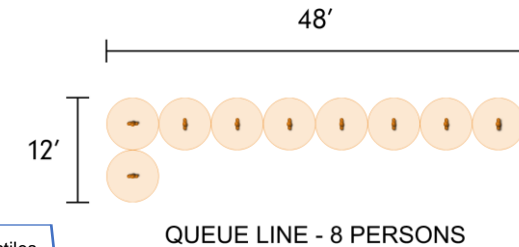
Visitors may enter from Willoughby Street via the red lane, approach the Security Desk, then join either Queue Zones 2 or 1A/1B depending on Queueing scenario.

## CROSS-ZONE WALKWAY

Due to the building lobby layout, a walkway is necessary to transverse the space. Additionally, this allows tenants leaving Level 2 to enter queueing Zones 1A or 1B.

## MYRTLE AVE. TURNSTILES

Due to location of escalators, four turnstiles must remain operative. Two shall serve Low/High Rise tenant entry, two shall serve people accessing Level 2 or exiting the building.

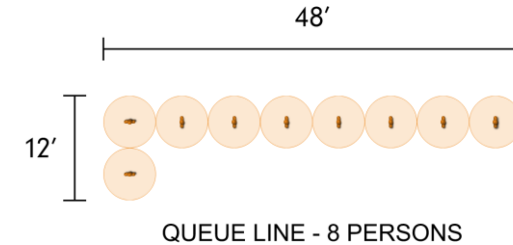
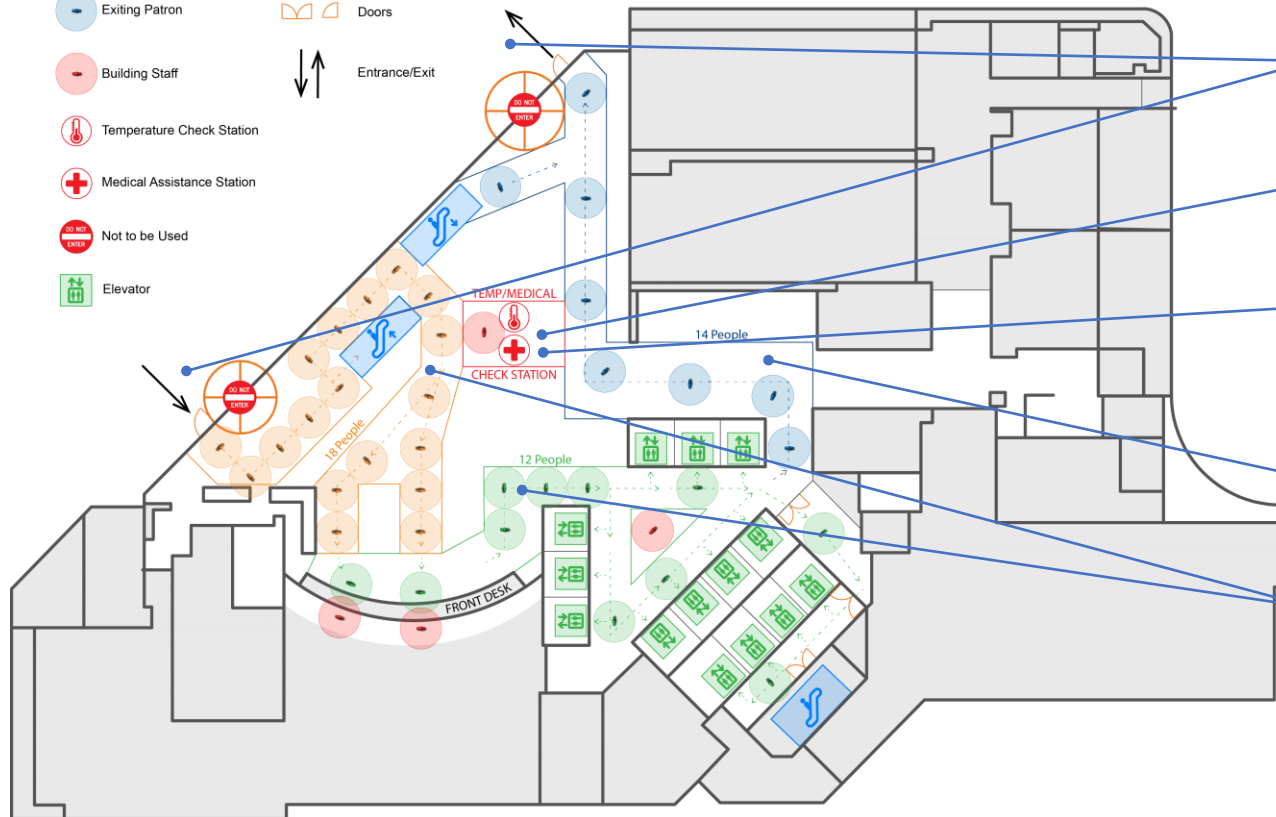
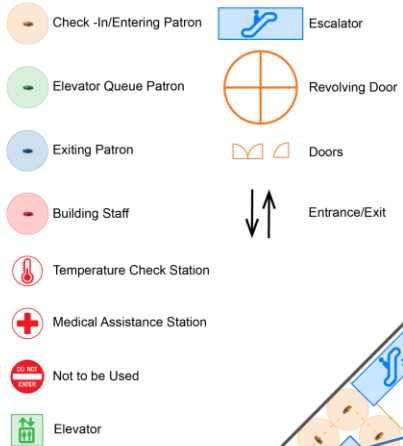


# Lobby Arrangement & Operation Planning cont.

Lobby Absolute Max Capacity : 465

Queued Capacity 162

## LEGEND



## BUILDING ENTRY/EXIT

The building lobby is arranged that each entrance can be designated as either entry or exit, providing segregation between the types of lobby guests. Circular doors should not be used during the entry or exit process.

## TEMPERATURE CHECK

If provided, should be located directly adjacent to the medical station, allowing those guests presenting elevated temperatures the ability to wait and be monitored, or to exist the facility..

## MEDICAL STATION

If provided, a medical recovery station may be provided inside the building lobby. This location may provide immediate care to those guests entering the facility which require assistance, as a temporary hold location for guests waiting for ambulance service, or temperature monitoring for guests entering the facility which demonstrate elevated temperatures.

## OUTGOING QUEUE LINE

While not necessarily a queue line, the blue path provides access to building exit from either the second floor via escalator, from the building lobby. This path prevents guests exiting to interfere with incoming guests if a queue line exists.

## INCOMING QUEUE LINE

For those Guests checking in or requiring concierge service, the tan queue line is provided from the building entrance to the lobby desks and can support up to 18 guests while maintaining social distancing guidelines. Following this queue, if guests require vertical transportation, the green queue line has been laid as shown and is available to support up to 12 guests while maintaining social distancing guidelines. NOTE: Escalator access to Level 2 should be limited to times when queue lines are not present or of a length allowing direct access.

# Hotel Return to Travel Plans

Multiple banks of elevators  
will allow floor loading  
to be calculated differently.

AFTERNOON / EVENING PERIOD	
Hotel ABC	
Floors Occupied	27
Normal Occupancy	88%
Projected Occupancy May-July	14%
Projected Occupancy Aug - Oct	25%
Projected Occupancy Nov- Jan	60%
Groups Expected?	Yes
% Arrival from 2-3	5%
% Arrival from 3-4	10%
% Arrival from 4-5	20%
% Arrival from 5-6	20%
% Arrival from 6-7	20%
% Arrival from 7-8	10%
% Arrival after 8pm	15%

RETURN TO TRAVEL

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# Operational Enhancements for Limited Cab Loading

# Operational Enhancements

## Destination Dispatch Systems

Reprogram car assignment algorithms to limit car loading in accommodation of regulatory requirements.

Enable “touch free” destination assignments through proximity devices or Smart Phone integration (where available).

Add Self-Cleaning Antimicrobial film to touchpad surfaces where “touch free” destination assignments cannot be provided.

Designate riding areas or positions for passengers within elevator cabs.



# Operational Enhancements

## Conventional Dispatch Systems

Utilize building personnel to register demand and direct traffic to available cars and “police” car loading.

If available, use remote call logging technology.

Designate riding areas or positions for passengers within elevator cabs.

Install Antimicrobial Elevator Button Covers on all hall push buttons and car push buttons.

2-Way operation and Return to Lobby will rely on “Self-Policing” effort and may lead to additional elevator demand. Where possible, update software to prevent assigning one elevator for multiple floor demand requests.

## Limiting assignments may be provided by:

- Adjustment of Load-Weighing Systems (depending on level of elevator technology)
- Dispatch Algorithm software modification

# Operational Enhancements

## Medical Planning

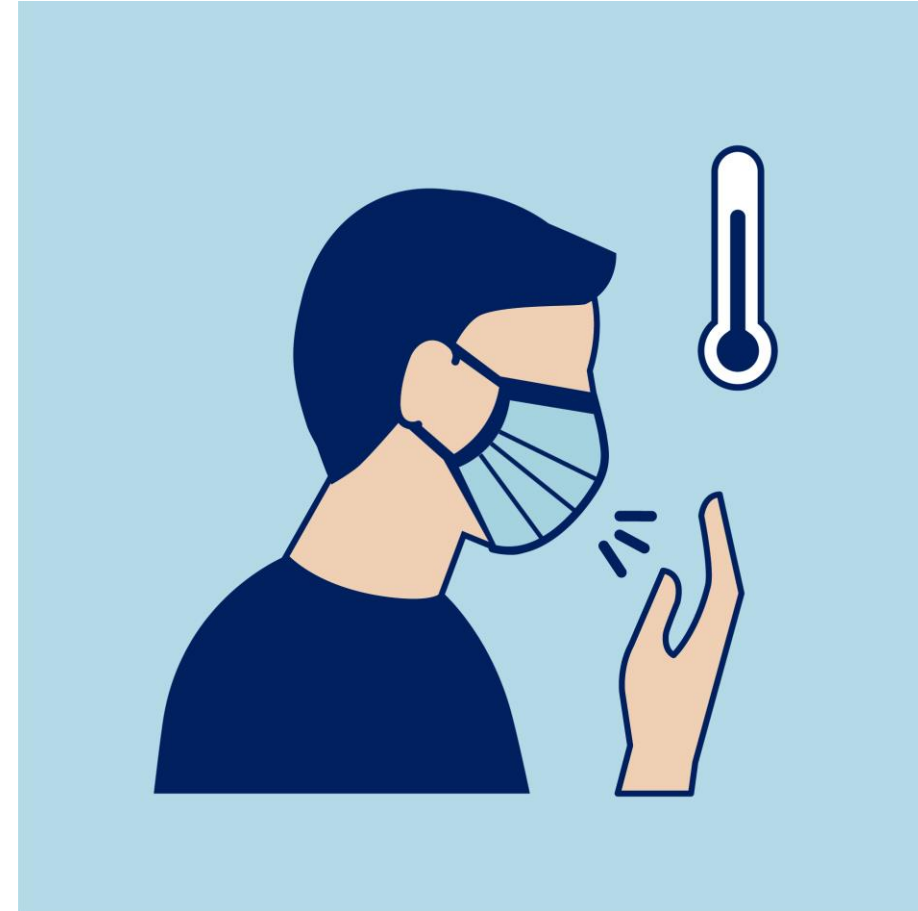
Establish strategy for removing potentially infected guests from facility when sickness occurs during stay.

Establish temporary holding area for those guests arriving and showing symptoms or fever.

Utilize a single designated “COVID-19 Elevator” to remove or transport a potentially infected guest, preventing contamination of other guest elevators.

Provide in-elevator isolation procedure.

Define elevator cab interior cleaning process following medical transport.



RETURN TO TRAVEL

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# Operational Recommendations



# Understand COVID-19 Contract Amendment

Lerch Bates worked with a number of hospitality clients to help secure COVID related discounts.

- Minimum of 3 months beginning with their April (or May) invoices.
- These agreements were often retroactive to the beginning of the previous month.
- Verify with your account representative, but generally they are amenable to short paying the invoice rather than issuing new invoices.

The agreements had language in them to protect from “restart fees.”

- Exercising the equipment per the instructions provided is the responsibility of the property.
- These exercise runs need to be documented.

DO NOT sign proposals for “restart fees” or for damage caused for “inactivity.”

If you are asked to pay for repairs or upgrades due to the COVID-19 amendment, engage your Lerch Bates team. Let us help!

# Engineering & Managing Tips

1. Continually clean and disinfect pushbuttons and handrails. When surfaces appear to be dirty, thoroughly clean prior to disinfection.
2. Disinfect on a regular documented schedule.
3. Use disinfecting wipes to clean pushbutton and faceplate materials to avoid damage to sensitive electrical components. DO NOT spray directly.
4. It is important to increase air circulation while performing cleaning activities when possible. Keeping the doors in the open position will help alleviate accumulation of cleaning odors.



# Engineering & Managing Tips cont.

Expect additional trouble calls due to use of foreign objects to push elevator buttons.

Signage can help.

Hold broken button calls for regular time to minimize the cost impact.

Most Lerch Bates contracts have language that will help to limit this cost for clients, let us review invoices for rates, travel charges, etc.



# Engineering & Managing Tips cont.

## Future Considerations

- Vandal resistant button upgrades
- Reduce the number of broken buttons due to use of foreign objects being used to press the buttons
- Stainless steel is easier to clean and disinfect than plastic
- Hands Free operation using key card interfaces or remote call features
- Destination control fixtures often have additional features to lessen the number of touches required

## Other

- Posts the cleaning schedule to provide visual verification
- Hand sanitizers in the lobby
- Consider repurposing doormen/concierge/butlers to call and send elevators
- Consider installation of cab air purifiers
- Consider installation of escalator handrail cleaning equipment

RETURN TO TRAVEL

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# Further Considerations

*Technology in the Marketplace is provided for consideration only. Lerch Bates neither endorses or recommends these product as the nature of this pandemic has not allowed us to review these products for efficacy, safety or code compliance.*

*Owners are advised to confirm compatibility of this technology with the existing equipment.*

# Lobby & Elevator Car Signage

## Passengers should:

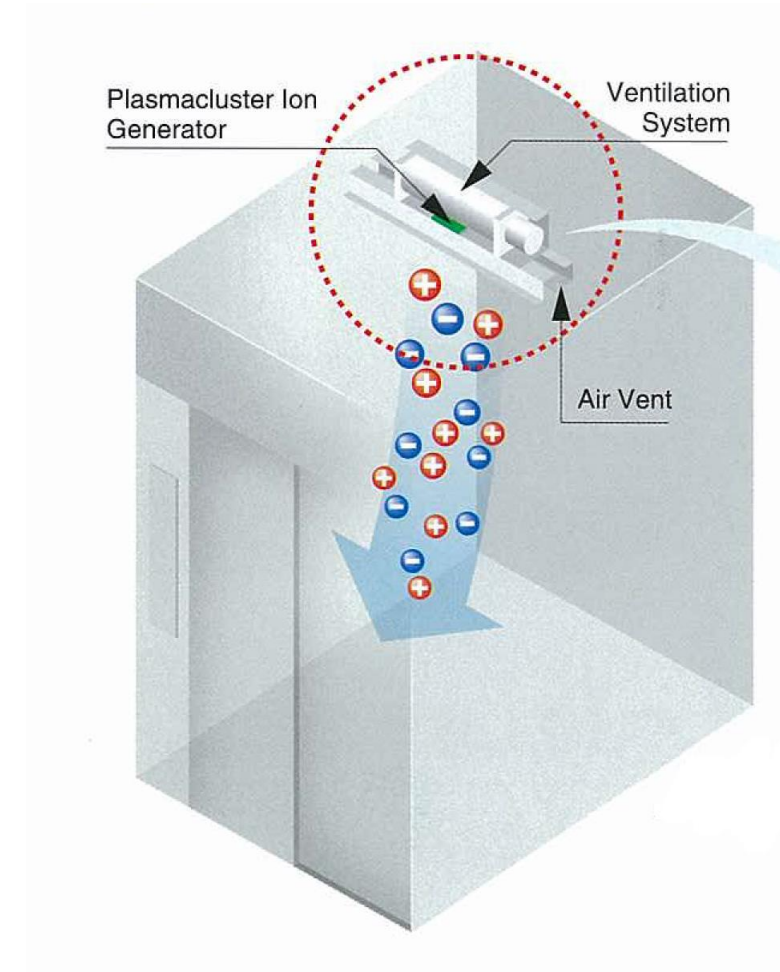
- Clean hands frequently
- Avoid contact with handrails
- Use gloves when touching hall and car pushbuttons
- Be gentle when pushing buttons with foreign objects



SIGNAGE EXAMPLE

# Elevator Car Enclosure Air Purification Systems

- Technology is referred to as Plasmacluster Ion Generation
- Purifies air by inactivating airborne molds and viruses
- Can be installed on existing elevators in conjunction with exhaust fan
- Owners are advised to confirm compatibility of this technology with the existing equipment



*This image was provided by Fujitec Ionful brochure.*



# Escalator Handrail Sterilizers

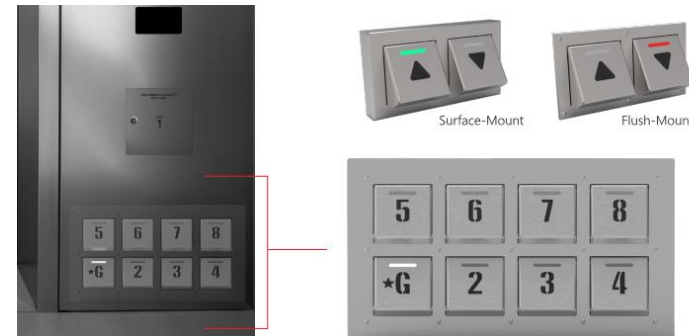
- Available from multiple sources
- Utilizes UV light technology
- Can be installed on existing escalators
- 10,000 hours of germicidal lamp life





# Elevator Direction or Destination Input Devices

- Available from multiple sources
- Eliminates touching surfaces with hands/fingers
- Input registered via foot or holographic display
- Can be installed on existing elevator equipment



# Walk-Through Body Temperature Detectors

- Unitizes an infrared detection system to detect body temperature
- Noncontact temperature measurement
- Alarm sounds for notification of elevated body temperature
- Repeated measurement and time interval of .05 seconds



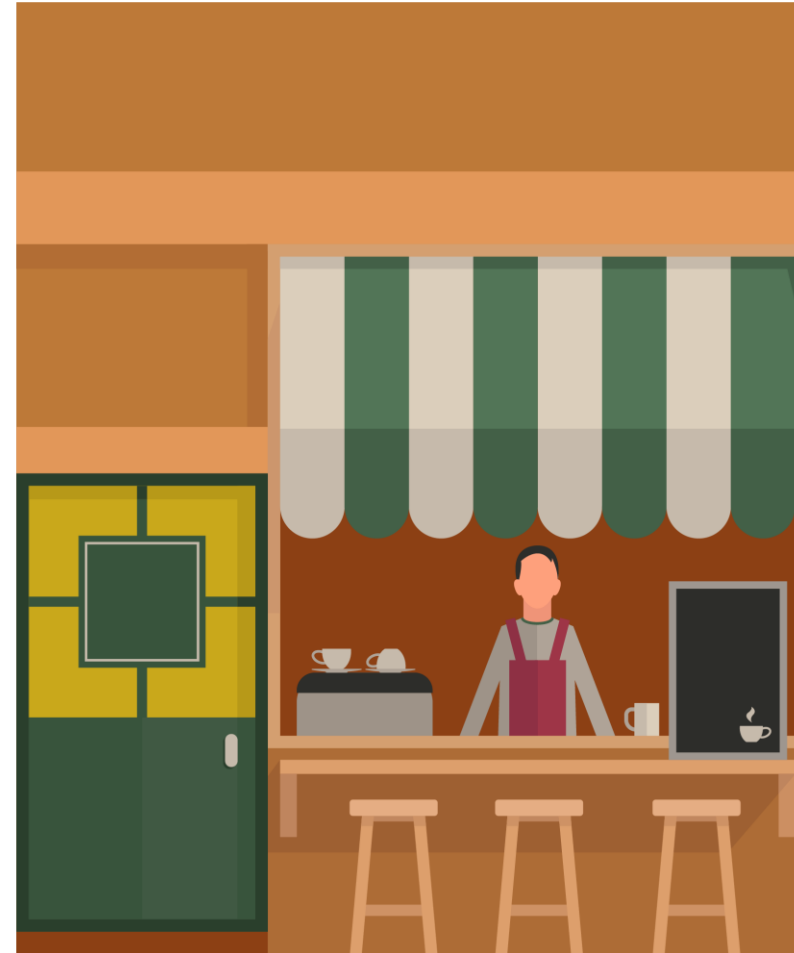
# Elevator Preventative Maintenance Program

- Elevator systems to be under very heavy usage, due to greater numbers of trip per hour
- Maximizing equipment availability is critical
- Removing cars for routine PM during peak guest arrival hours will exacerbate delays
- Consider shifting PM activities to off peak/afterhours time frames -**This action will generate an operating expense impact**



# Food Service Challenge

- If guests leave the building, it will generate additional usage of the elevators.
- Expanding Service/Delivery within each facility will shift traffic from guest elevators to service elevators, lessening guest impact.
- Consider impact of service for convention/meeting groups.



# Thank You

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Please let us know if you have any questions or comments related to this information.

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