

# Port Authority Wayfinding Manual



# 1 Introduction

- 1.1 About This Manual
- 1.2 How To Use This Manual

# 1.1 About This Manual

As a passenger, finding your way is a critical aspect of the airport experience. A great wayfinding experience allows you to seamlessly enjoy every step of the journey — and a negative experience can ruin an entire trip. With this manual, the Port Authority of New York and New Jersey (Port Authority) ensures that a cohesive, consistent wayfinding experience is provided across all Port Authority Aviation facilities.

This manual provides guidance on all factors that help passengers find their way. It outlines key principles of wayfinding and provides detailed specifications for developing, implementing, and maintaining our signage and information system. With a multitude of facilities, parties, and processes involved, it's critical that all stakeholders follow these guidelines to provide a cohesive experience for passengers, visitors, and employees navigating to, from, and through all our airport facilities.

The success of a wayfinding system lies not only in its design, but in its ongoing maintenance. The use, expansion, and continuous updating of this manual is critical. It requires input from all stakeholders who serve passengers at Port Authority Aviation facilities. As new situations arise, this manual will be updated so it remains useful and applicable to all situations.



## 1.1.1 Intent

This manual provides standards, direction, and regulations for the wayfinding system at Port Authority Aviation facilities. All stakeholders responsible for providing wayfinding should refer to this document when undertaking plans to design new or updated spaces. This ensures that wayfinding signage is planned and designed consistently regardless of the architect or information designer.

It does not provide detailed plans tailored to every facility. It is the responsibility of facility operators to determine how to apply these standards to each specific situation.

This manual is a living document intended to be responsive to current and future challenges. Users of this manual should have a general overview of all sections and in-depth understanding of relevant sections that address their needs. Make sure to check periodically to ensure it reflects current situations and processes. If issues arise that conflict or are not covered by the manual, contact the Port Authority Program Manager of Wayfinding and Connections Solutions (Wayfinding Program Manager).

The manual is divided into ten chapters:

### **Introduction**

Overview and purpose of the manual, explaining its intent, guidelines on its usage, and the process of implementing wayfinding elements in a facility, whether adding one sign or implementing the system in an entirely new terminal.

### **Wayfinding Vision**

This section outlines key tenets upon which a successful wayfinding system is based. Our wayfinding vision sets a high-level understanding of top priorities when shaping an exceptional wayfinding experience that meets the needs of users.

### **Wayfinding Guidelines**

Here we provide an overview of the primary factors informing wayfinding design. These include spatial zoning (positioning of wayfinding, art, branding, and advertising in the environment), terminology, numbering, and information strategy.

### **Programming & Placement**

You'll find guidance here on how to determine the optimal sign type, content, and placement of all elements based on passenger flow and information need at each step of the journey.

### **Graphic Design**

This chapter provides guidelines for all elements necessary to the design of signs and other wayfinding elements.

### **Sign Types**

This section includes guidelines for both static and dynamic elements, organized by sign type. Detailed graphic templates illustrate how grid, layout, and sizing are applied.

### **Construction**

This chapter provides design-intent level guidance on the structure design and fabrication of signs.

### **Reviews & Approvals**

Here we outline the relevant application processes for approval.

### **Governance**

This chapter outlines management, proper maintenance, and enforcement expectations of the wayfinding system.

### **Resources**

Find links to additional manuals and references related to the wayfinding system.

## 1.1.2 Who This Manual Is For

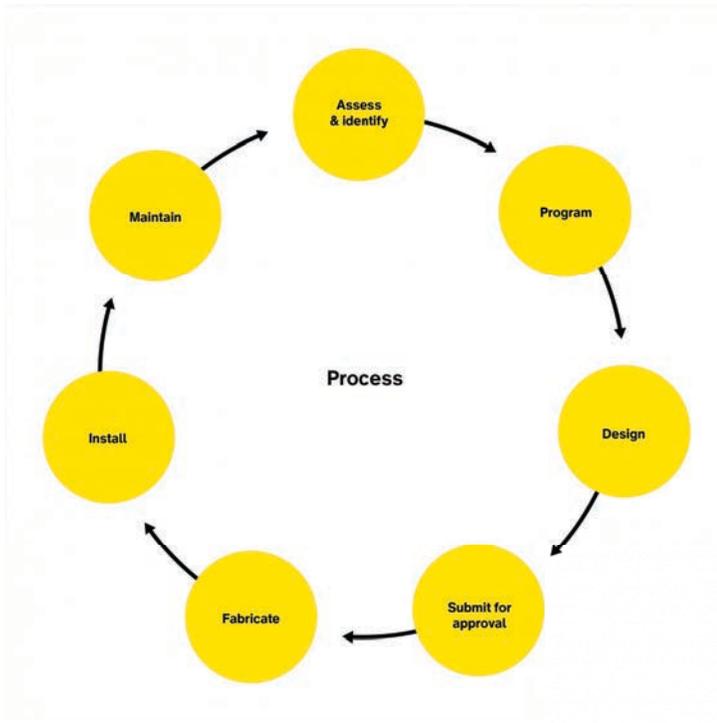
This manual serves as the standards and reference for designers, stakeholders, and operators of Port Authority Aviation facilities. Users may include:

- **Management** involved in wayfinding-related decisions
- **Developers and architects** developing plans for airport facilities, AirTrain stations, and connecting services to Port Authority airports
- **Terminal operators** responsible for operations within a facility
- **Designers** developing signage and elements for Port Authority Aviation facilities
- **Fabricators and contractors** responsible for constructing and supplying wayfinding signage, elements, plans, services, and technologies
- **Maintenance staff** responsible for upkeep of signage and wayfinding elements
- **Airport operations users** such as airlines, enforcement agencies, commercial entities, and advertising providers

## 1.2 How To Use This Manual

The implementation and maintenance of any wayfinding system is an ongoing process. If you are responsible for adding, monitoring, updating, or maintaining wayfinding in any Port Authority Aviation facility, refer to this manual often to ensure the wayfinding experience is always consistent and as user friendly as possible.

## 1.2.1 Process Steps



1. Assess environment & identify needs
2. Program signs in sign plan
3. Design signs
4. Submit to Port Authority for review & approval
5. Fabricate signs
6. Install
7. Maintain

A new facility presents a unique opportunity to embed natural wayfinding. Lessening complex user flows in the planning phase will reduce the need for wayfinding elements. When approaching a new development or significant renovation, involve a wayfinding expert early in the design process to help assess and define optimal flows and messaging.

For existing facilities with less substantive changes, maintenance is critical to ensure the wayfinding system remains effective. Changes in passenger flows, construction that affects visibility, or the addition of new elements in the environment from other parties may affect the logic of the wayfinding system. If additional signage or information is needed, follow the relevant process to implement the new intervention.

## 2 Wayfinding Vision

- 2.1 What is Wayfinding?
- 2.2 Wayfinding Journey
- 2.3 Inclusive Design
- 2.4 Natural Wayfinding
- 2.5 Wayfinding Identity
- 2.6 Dynamic Signage

## 2.1 What is Wayfinding?

In order to navigate an airport, passengers and visitors perform a task called wayfinding. This refers to the process of navigating to a destination using direct and indirect cues. In this manual, wayfinding refers to the process as well as the information sources and indications provided.

Wayfinding is more than just signage. It includes subtle cues from light and architectural forms, voice announcements and staff directions, mental maps from past experiences and media, and activity and flow patterns of other passengers.

Each passenger experiences wayfinding in their own personal way. They are influenced by a range of factors, such as stress level, familiarity with travel, cultural background, physical and mental abilities, and emotions. This means there are infinite ways for passengers to experience finding their way in an airport.

## Ensuring that users can navigate with ease is at the core of world-class customer experience.



People who are comfortable and confident in finding their way reach their destinations efficiently. This makes them more open to new experiences. It unleashes the potential for smoother operations for airline tenants, increased engagement with retail and restaurants, and higher satisfaction with the airport facility. Ensuring that users can navigate with ease is at the core of world-class customer experience.

This manual offers a comprehensive approach and resources based on the Wayfinding Journey. By approaching wayfinding from the passenger's perspective, you can ensure that you anticipate real scenarios and address

passenger needs.

## 2.1.1 Three Pillars

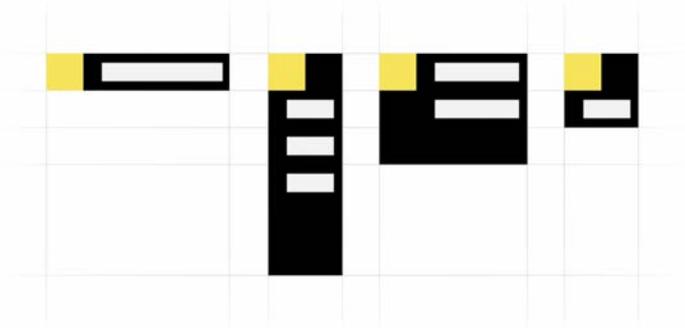
Three pillars form the foundation of a world-class wayfinding experience: **Brilliant Basics**, **Less is More**, and **Surpass Expectations**.

By focusing on consistent basic elements, a restrained approach to providing information, and creating moments of delight, these pillars ensure an exceptional wayfinding experience.

### Brilliant Basics

Wayfinding content and design should be based on international standards and best practices. It must be clear, comprehensive, consistent, conspicuous, and contextual.

Getting the basics right—like clarity of information, consistent visuals, and conspicuous placement—is hard to do. Investing in this fundamental practice will help cement Port Authority airports in the top ranks of airport experience.

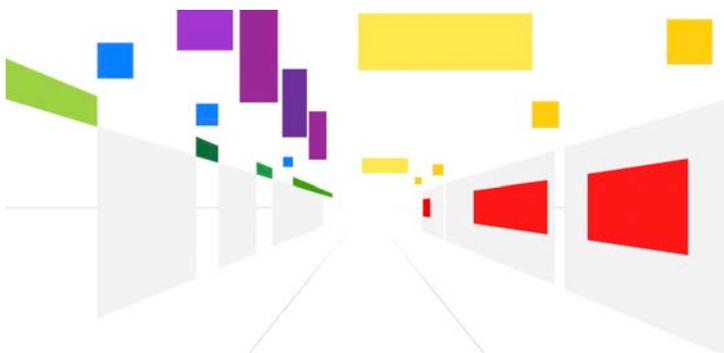


Wayfinding should be clear, comprehensive, consistent, conspicuous, and contextual.

### Less is More

The key to successful wayfinding is a streamlined, easy-to-perceive environment. It should be free of visual clutter to allow optimal balance of architecture, art, interior, branding, and commercial activities. Wayfinding elements must be carefully designed and integrated into the architectural design and scale. Do not place more signs than necessary to provide the right information at the right time.

Keeping wayfinding up-to-date is crucial to providing a reliable, enjoyable experience. Often this means limiting and removing information, rather than adding new information.

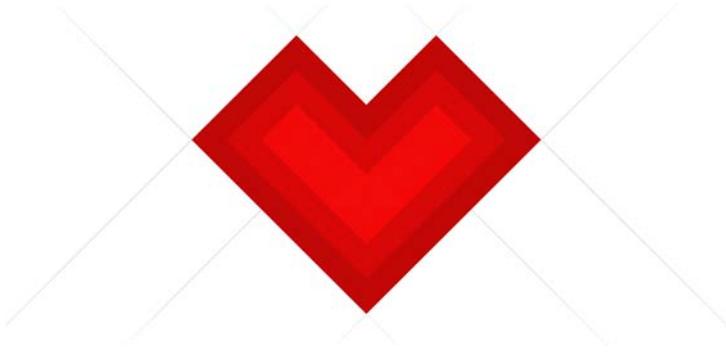


Having less to look at often means people see more, more clearly.

### Surpass Expectations

Getting the basics right ensures that passengers are relaxed, clear minded, and well informed. This unlocks the

opportunity to introduce delightful, only-in-NY/NJ “wow” experiences that they’ll love, inspiring them to come back to the New York/New Jersey region soon.



## 2.2 Wayfinding Journey

## 2.2.1 Customer Experience

Customer experience is the sum of all interactions and perceptions along a journey. It is influenced by all touchpoints a passenger engages with. This begins with preparing at home and spans the full journey of going to, navigating through, and leaving a facility.

Touchpoints along this journey can be online, on a roadway, on public transit, at parking, at check-in, at security, while waiting at the gate, and through all moments in between. Many of these touchpoints are interlinked, contributing to the perception of the overall experience.



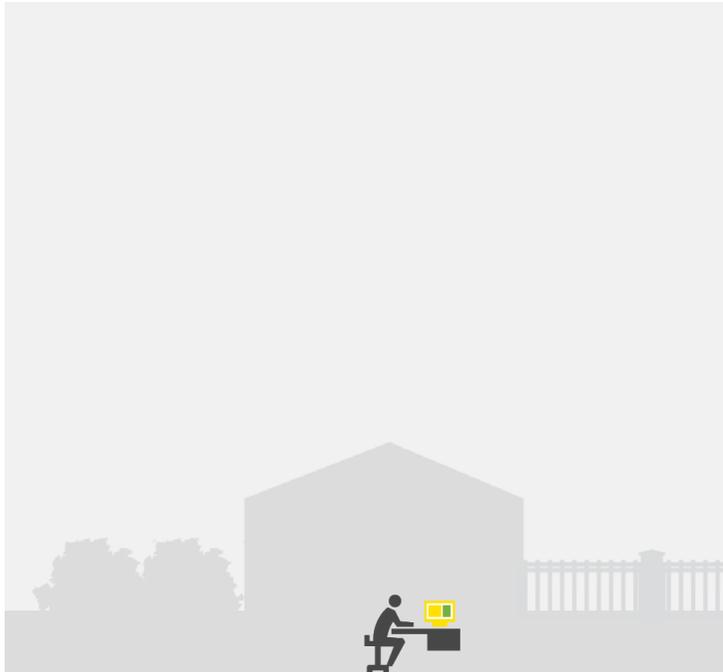
Aspects of the entire passenger experience

The wayfinding journey is a critical portion of the passenger experience and has a significant impact on how an airport is perceived. To define the wayfinding journey and understand decisions made along the way, always consider the range of users, their needs, and the stages through which they progress.

## 2.2.2 The Departing Journey

The departing journey starts at home. It takes the passenger to the airport, through check-in and security, past leisure facilities, to the gate, and onto the plane. Each stage, and the incremental steps in between, comes with different information needs.

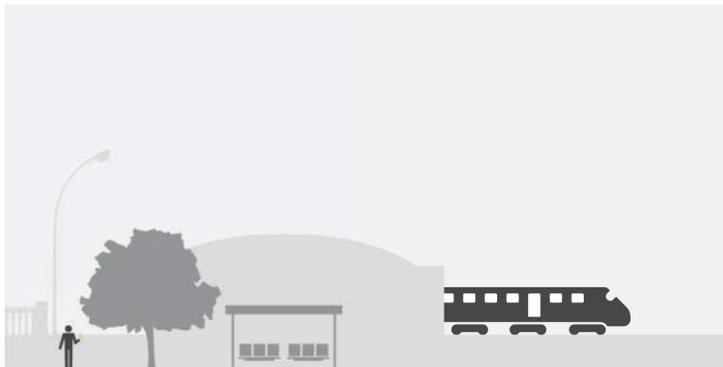
*Please note: The following graphics are for illustrative purposes only. They are not actual sign designs. For actual sign designs, see [Sign System](#).*



### 1. At Home

#### Wayfinding Consideration

Integrated datasets (flights, traffic, parking, wait times) shared across multiple touchpoints (web, mobile) ensure consistent and accurate information, so passengers can make informed decisions about how and when to leave for the airport.



### 2. Getting There

#### Wayfinding Consideration

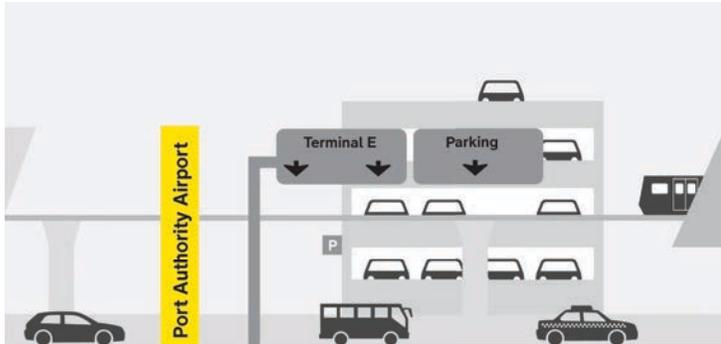
Empowering passengers with information allows them to make informed decisions about getting to the airport. A cab or rideshare may be the most convenient, but not be the fastest. Transparent information, such as costs, helps demystify the options.



### 3. AirTrain Station

#### Wayfinding Consideration

This is the first point of entry for many airport users. Strong identification of the airport establishes a sense of arrival to the airport campus. Ease of use can be enhanced by a strengthened connection between public transportation, ground transportation, and the airport. This can be done through consistent naming and terminology, accurate flight information, and seamless payment (or even free usage).



### 4. Roadways

#### Wayfinding Consideration

Create a sense of arrival to the airport campus with an identifying landmark. This identifier can be a sculpture, installation, message, or a combination, and prompts excitement for the trip. Identify terminals and entrances with intuitive naming and numbering clearly visible from the roadways.



### 5. Arriving to the Terminal

#### Consideration

Sense of arrival is crucial, regardless of mode of transport. It harnesses passengers' excitement for travel, instead of reinforcing it as a stressful process.

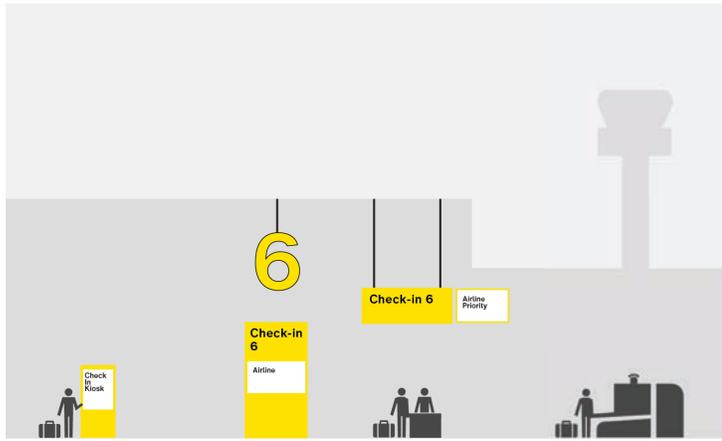


### 6. Departures Hall

#### Wayfinding Consideration

Passengers have different needs; services at this step should be organized by level of engagement. Long sight lines make it easy for all passengers to scan the area and find the right check-in service.

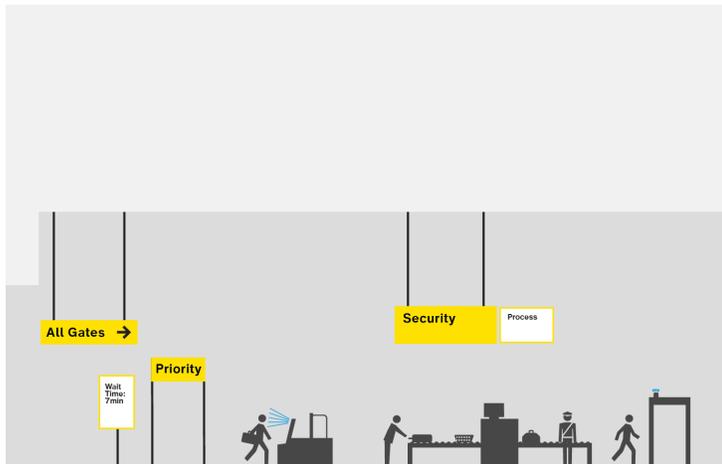
- **Low engagement:** Checked in online, no baggage to drop
- **Medium engagement:** Checked in online, need to drop baggage and/or get boarding pass
- **High engagement:** Have additional requests and/or need documents reviewed



### 7. Check-in

#### Wayfinding Consideration

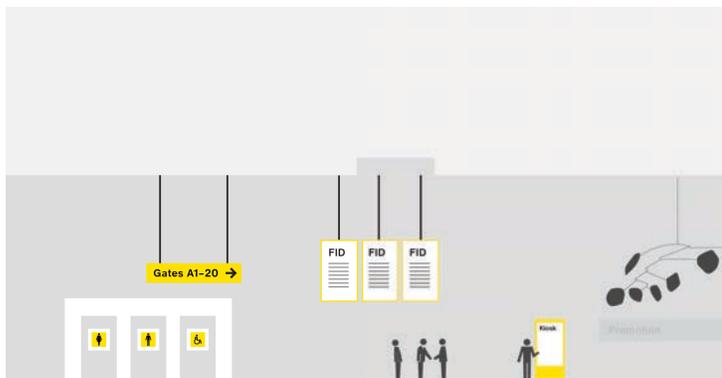
Whether behind a counter or roaming at kiosks, check-in should have staff available to assist passengers. With new technologies, like biometric and facial scanning, passengers can check-in and drop baggage themselves.



### 8. Security

#### Wayfinding Consideration

Providing real-time wait times (not just at the terminal) for security queues ensures passengers can arrive at the airport and get in line with enough time to get to their gate.

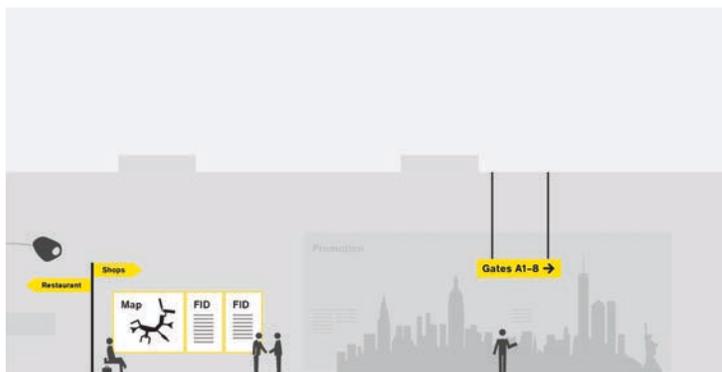


### 9. Post-security

#### Wayfinding Consideration

Passengers' first question: *Where's my gate?* To answer, provide clear directionals. Second question: *Is my flight on time?* For this, include walking times on FIDs in dwell areas after security so passengers can budget their time.

A combination of digital and physical tools allows passengers to curate their own leisure time and discover what's around them.

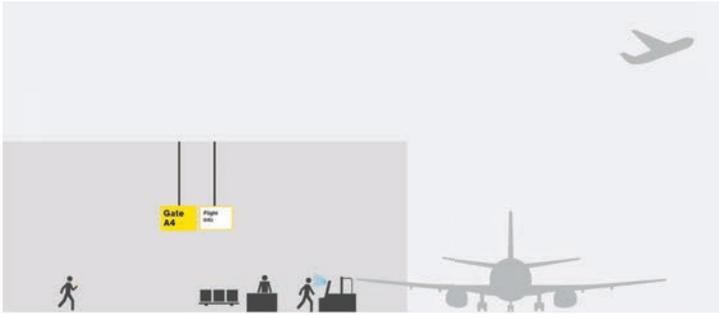


### 10. Concourse

#### Wayfinding Consideration

At this point, passengers know where they are going, so wayfinding plays a secondary role. Take this opportunity to highlight sense of place or commercial opportunities.

Provide tools to learn what's nearby and choose what to do—whether reading at the seating area, drinking coffee at a cafe, using the restroom, or buying souvenirs at a gift shop. Digital tools can be tailored to user preferences (including languages and legibility) to ensure optimal communication.



## 11.Boarding

### Wayfinding Consideration

In the gate area, passengers expect flight status information. In waiting periods, they can also be engaged with dynamic entertainment and advertising. When boarding time is imminent, dynamic screens should display flight and boarding status information.

## 2.2.3 The Arriving Journey

The arriving journey begins at the gate. International passengers get passports checked, collect luggage, and clear customs. At this point, they may need information on their destination before finding ground transportation and leaving the airport. Domestic passengers have a simpler journey, but there still are several touchpoints requiring clarity, including baggage claim, ground transportation, and parking.

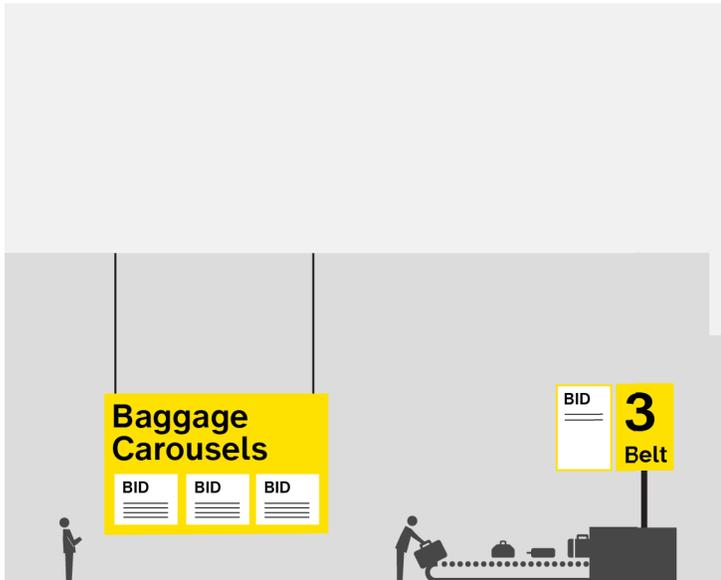
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### 1. Arrival

#### Consideration

Provide a warm welcome to the airport with a clear welcome message or enjoyable physical experience. Passengers can be groggy or tired or confused from the flight. Their first interaction with the airport should improve their mood and provide a sense of arrival to the region.



### 2. Baggage Claim

#### Consideration

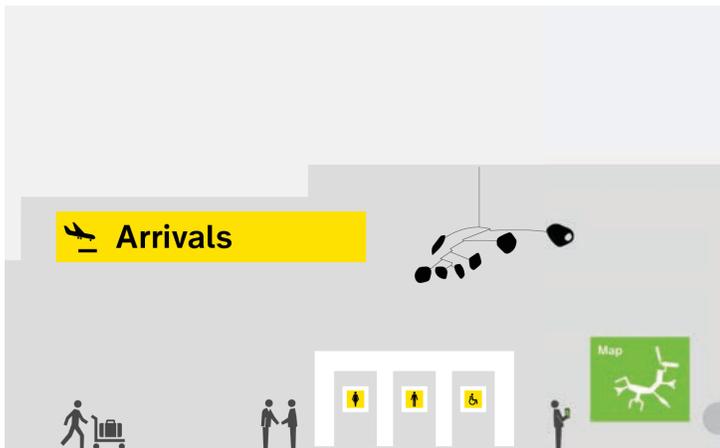
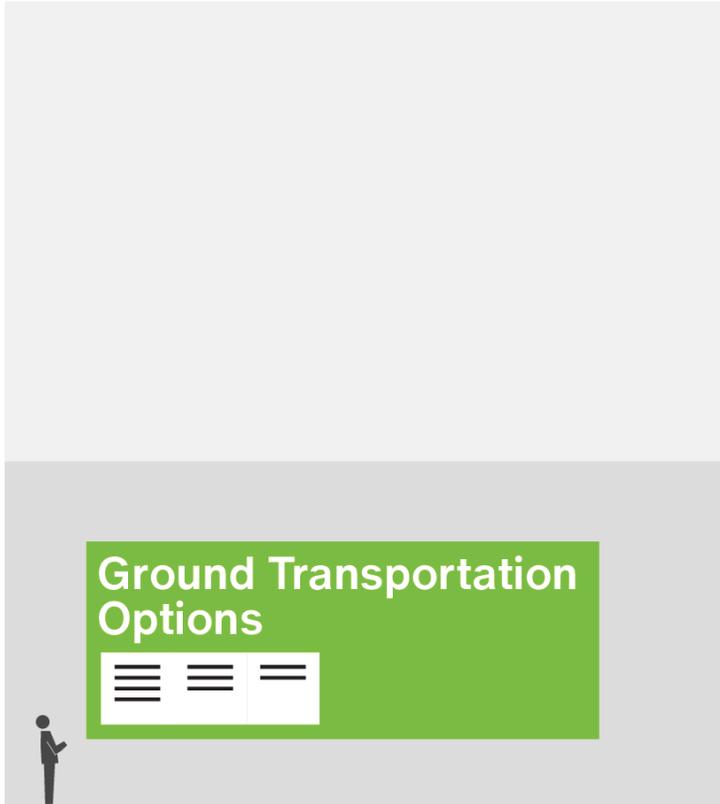
Passengers are already planning their exit from the airport, potentially looking up rideshare information, AirTrain schedules, or taxi wait times.

The ideal baggage experience requires no waiting, with digital tracking throughout. Provide relevant information and wait-time estimates to give confidence and streamline future steps.

### 3. Transportation Options

#### Consideration

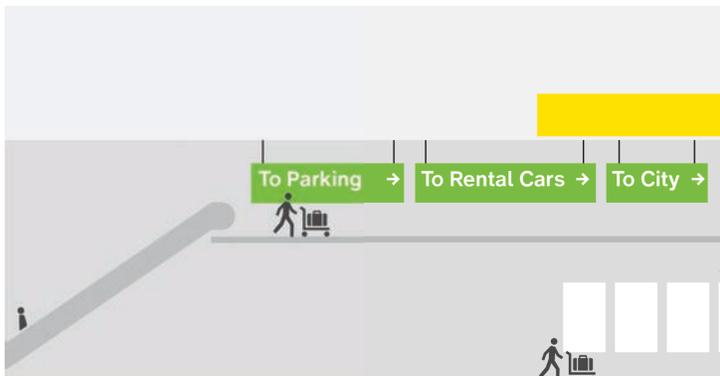
Present a clear and impartial list of options with enough information to choose a preferred mode.



### 4. Arrivals Hall

#### Consideration

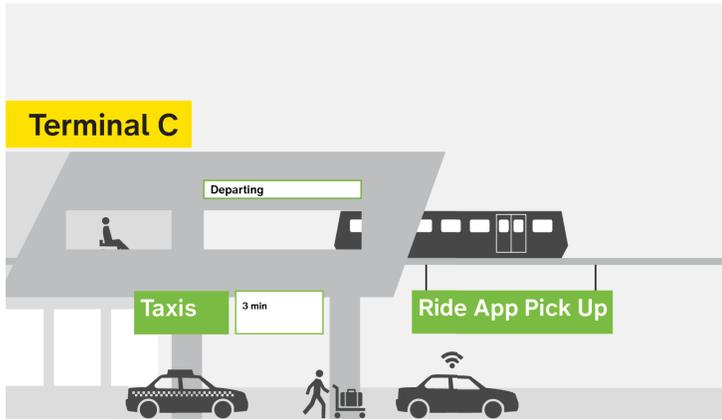
Passengers exiting to ground transportation may need assistance to make the right decision. For example, taxis may seem the most prominent, but may not be the best option for everyone. Information about options can ensure passengers feel empowered they are making the right choice, setting a great first impression of the region.



### 5. Connection to AirTrain

#### Consideration

Directions should focus on the destinations reached, not the process to get to them. No one comes to New York to visit the AirTrain. They use it to get to where they want to go. Therefore, prioritize destinations and paired with secondary AirTrain information.



## 6. Connection to Ground Transportation

### Consideration

Knowing where to go is as important as choosing a transportation option. Clearly marked zones for each type of pick up reduce stress, as does real-time information on taxi wait times.



## 7. Roadway Exit

### Consideration

Passengers pass an identifying marker that confirms they have arrived in New York City. This identifier can be a sculpture, installation, message, or a combination.



## 8. Connections to Transit

### Consideration

A clear welcome message confirms passengers have left the airport and have arrived in New York City. This identifier can be a sculpture, installation, message, or a combination.

Ease of use can be enhanced by a strengthened connection between public transportation, ground transportation, and the airport. This can be done through consistent naming and terminology, accurate transit information, and fees built into the cost of a transit ticket—or even free usage.

## 2.2.4 The Connecting Journey

The connecting journey is similar to arriving and departing, as the transfer process involves both. Transfer passengers need to be informed about their next flight, potentially seek a transfer desk, and find their new gate. International passengers need to claim and re-check bags, as well as clear customs.

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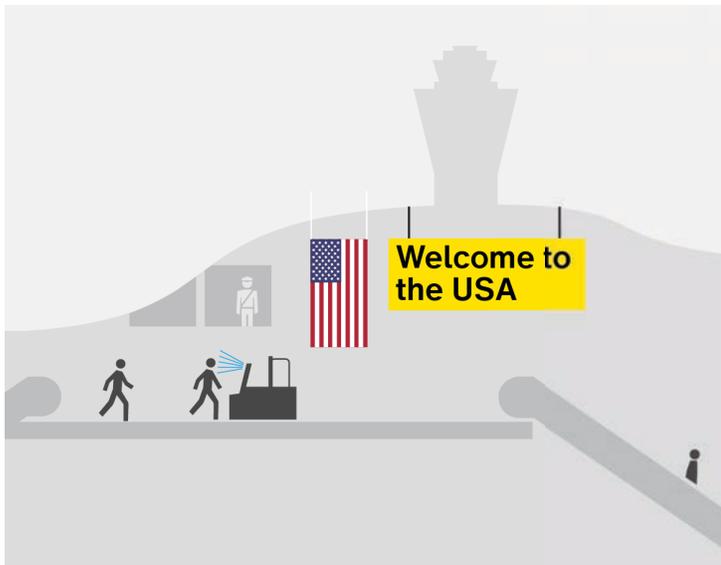


### 1.Arrival

#### Wayfinding Consideration

Provide a warm welcome to the airport with a clear welcome message or enjoyable physical experience. Passengers are groggy or tired or confused from the flight. Their first interaction with the airport should improve their mood and provide a sense of arrival to the region.

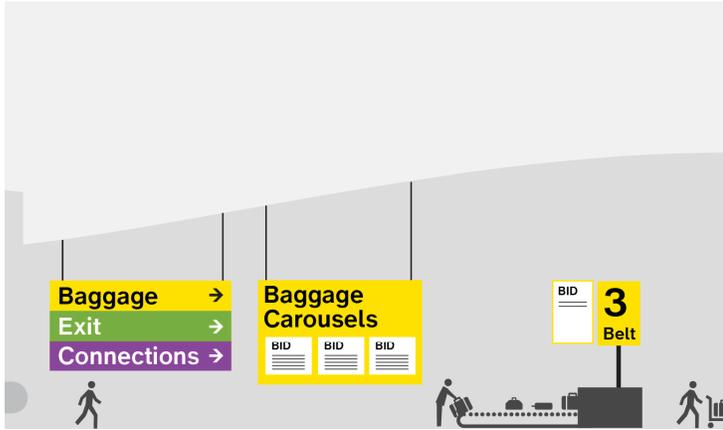
Passengers are presented relevant connecting flight data as soon as they deplane. The distance to their next gate is clearly conveyed through the wayfinding strategy and terminal map, providing confidence in planning activities.



### 2.Passport Control

#### Wayfinding Consideration

While this may fall outside the purview of the terminal operator, flows can be optimized and delineated to ensure passengers pass through this area efficiently. Elevate the passenger experience along the walk to CBP facilities with art and sense-of-place elements to confirm they've arrived in New York.



### 3. Baggage Claim

#### Wayfinding Consideration

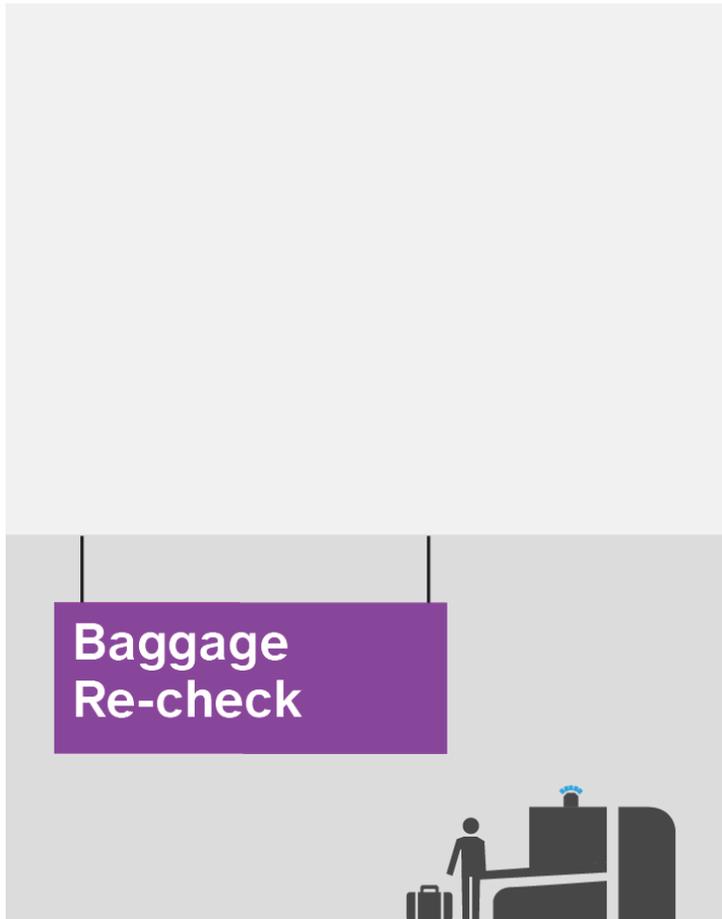
The ideal baggage experience involves no waiting, with digital tracking throughout. Provide relevant information and wait-time estimates to give confidence and streamline future steps.



### 4. Customs

#### Wayfinding Consideration

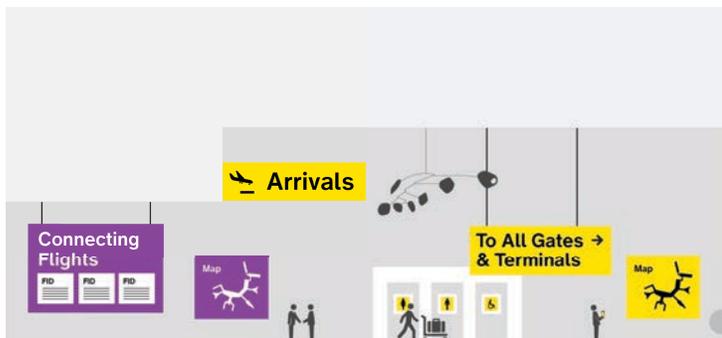
While the ease of traveling through is getting faster with technology, the physical environment is often quite sterile and uncomfortable. Consider ways to make this step warm and unobtrusive.



## 5. Baggage Re-check

### Wayfinding Consideration

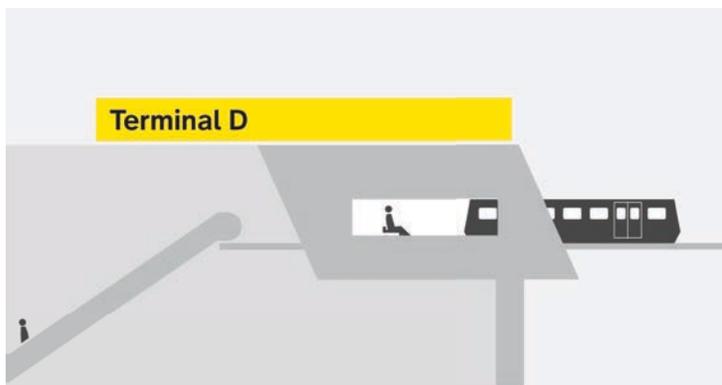
This can be an unfamiliar step. Passengers need to understand where along the journey they need to re-check their bag and make their connection. The process must be clearly communicated to mitigate misunderstandings.



## 6. Connecting Flights

### Wayfinding Consideration

Passengers are presented once more with relevant connecting flight data. Their next flight's terminal and gate, as well as distance to it, is clearly conveyed through the wayfinding strategy and terminal map, providing confidence in planning activities.



## 7. AirTrain to Terminals

### Wayfinding Consideration

At this point, a connecting passenger becomes a departing passenger, having been armed with the relevant information to reach their next flight.

## 2.3 Inclusive Design

Inclusive design is not just about making services accessible to people with disabilities. It's about making services accessible to everyone by taking a proactive, diversity-aware approach to design.

Inclusive design ensures the needs of all users are accounted for—especially those who may be excluded from a traditional design process. Users of varying needs and abilities are identified and solutions are designed to support them and make everyone feel welcome.

As airports become larger and more complex, all travelers can benefit from providing information in multiple formats and through multiple pathways. This manual provides guidelines to help design the wayfinding experience for users with a range of needs based on different levels of ability, understanding, and circumstance.

## 2.3.1 User Groups

It's important to understand the varying conditions and backgrounds that affect user journeys. Individual users have different needs and requirements when traveling to, from, and through the airport. Additionally, the amount of information and knowledge that they have access to will vary.

Airport user groups include:

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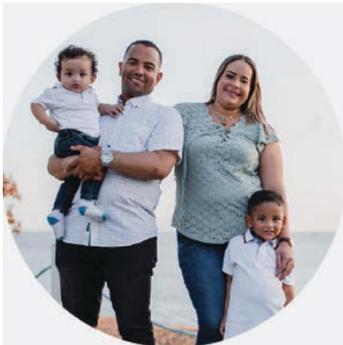
### Foreign Passengers



Limited English and differing cultural backgrounds

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### Family Passengers



Traveling with children

### **Assisted Passengers**



Accompanied by families, caretakers, or skycaps or porters

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### **Senior Passengers**



With a range of abilities

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### **Leisure Passengers**



Traveling on vacation

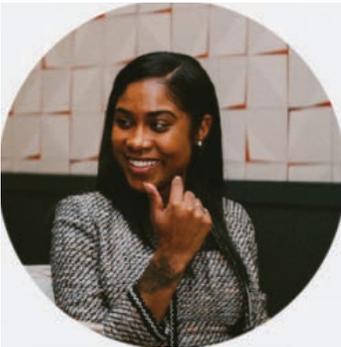
### **Business Passengers**



Very familiar with airport environments

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### **Premium Passengers**



Seeking luxury experiences

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### **Connecting Passengers**



Transferring to another flight

### Meeters & Greeters



Collecting arriving passengers

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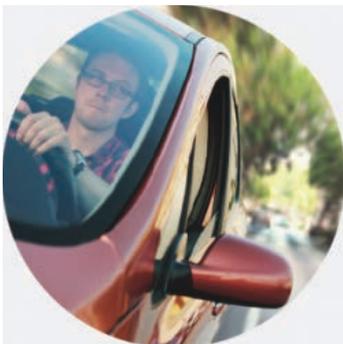
### Well Wishers



Seeing off loved ones

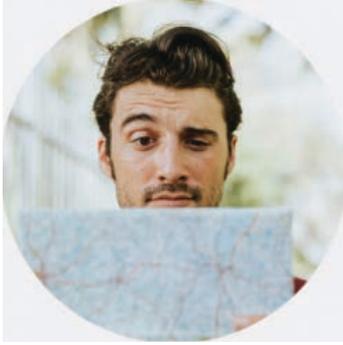
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### Drivers



Picking up arriving passengers (incl. loved ones and customers of app-based rides)

## Airport Visitors



Interested in their local airport facilities and amenities

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## Employees



Including airline crew and airport staff (to be coordinated with Branding Guidelines)

These user groups are broad categorizations. In reality, users may belong to multiple groups. For example, leisure passengers and families, may have overlapping needs. Passengers in any of these user groups can have additional needs and requirements due to varying physical, visual, auditory, and cognitive abilities.

## 2.3.2 Abilities

Airports are public spaces. World-class passenger experiences embrace everyone regardless of physical and cognitive abilities. It's important to consider how people perceive space and how differing abilities may impact their wayfinding experiences.

Abilities to consider include:

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### Visual



For individuals with visual impairments

- Maximize legibility of words, colors, and pictograms
- 

### Auditory



For individuals with hearing loss

- Consider assistive technology

## Physical / Ambulatory / Dexterity



For individuals challenged by walking or performing physical tasks

- Position wayfinding elements so they are visible and accessible to people in wheelchairs.
- Vertical transit modes (e.g. elevators, stairs, escalators) should be adjacent to each other, so users are not diverted from the main route.

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## Cognitive / Stress



For individuals with varying ability to learn, remember, perceive, and problem solve

- Consider mnemonic devices, consistency of visual and textual information, and supplemental communications, such as pamphlets, online trip planning, and pre-flight information.

## Language



For foreign-language speakers and individuals with low literacy

- Use pictograms that are clear and universally recognizable
- Use dynamic information to provide targeted translations based on passengers' destination or arrival country **in the event that critical communication is needed, like with vaccination requirements.**

## 2.4 Natural Wayfinding

Natural wayfinding is based on quick perception and direct interpretation of a space, without consciously thinking about it. Natural wayfinding reduces the need for signage, using it in a limited way to confirm users' intuition.

This section explains how lighting, architectural, and interior design enhance spatial legibility and provide navigation and orientation cues.

Natural wayfinding has many benefits.

- **It is more inclusive**, relying on human intuition rather than understanding of text and symbols. It also requires lower cognitive processing so passengers can concentrate on other tasks, like check-in, passport control, or leisure activities.
- **It reduces the need for signage**. This helps present an orderly, uncluttered environment, allowing more opportunity for other media, such as branding, advertising, and art. Fewer signs also require less funding for purchase, installation, and ongoing maintenance.
- **It gives users confidence** in navigating, creating a smoother and more enjoyable experience.



A large, centrally-located, well-lit entrance needs no sign to identify itself as the main entrance. © Murat German

## 2.4.1 General Guidelines

A clearly structured environment contributes to natural wayfinding and sense of comfort. These guidelines help create a legible environment in both legacy and new terminals.

### Maximize views and sightlines

Open spaces with unobstructed sight lines help passengers to understand their position/orientation and the layout of the overall space. This allows them to see where they are, and literally see their way to a destination—an especially reassuring and low-effort way to navigate an airport.

If sight lines are clear, and identification elements are appropriately placed and sized to be readable, a space could require no directional signage at all!



Wide perspective allows passengers to identify their destination without directional signs for a clean, uncluttered space.

### Create obvious flow areas

The flow area is where the main passenger movement takes place. People naturally move towards them, knowing they will connect to central locations with directions and information. Create recognizable flow areas to make it easy to follow the correct route, so fewer confirmation signs are needed.

There are many ways to delineate and emphasize flow areas, including:

- differences in lighting intensity/temperature, as well as light fixture shape and arrangement
- contrasting materials and colors on the floors, walls, and ceilings
- the presence/absence, arrangement, and orientation of furniture and fixtures in space
- use of shapes and patterns (e.g. lines or subliminal arrows pointing with flow)



Ceiling height, repetition of structural elements, and lighting design clearly define the passenger flow area.

## Use light to steer movement

People are naturally attracted to light, making it a very powerful and intuitive wayfinding cue. Light (especially sunlight) can be used as a beacon to pull passengers into or through a space.

Generally, do not obstruct windows to maximize natural light and views. Maximizing daylight improves visibility and enhances cognitive performance and mood. Views of the with airfield, skyline, and natural environment help to orient passengers.

Use artificial lighting to subtly support spatial understanding. Differences in intensity, temperature, diffusion, and direction can mark different areas. For example, bright, cool, lighting fits spaces characterized by movement, alertness, and decision-making; dimmer, warmer lights create a more relaxed and private atmosphere in dwell zones.

The shape and arrangement of light fixtures can also be used to direct people. For example, lights arranged in a line might convey a clear direction and path for people to look down and follow. Clusters of lights or a dramatic luminaire might indicate an important decision point, landmark, or destination.



Bright, open spaces draw people toward them; once they've arrived, the spaciousness encourages them to slow down and relax. Here, linear lights and large side curtain walls also entice guests to spread outwards from the flow path. Photo courtesy LaGuardia Gateway Partners.

## Place landmarks as reference points

Unique landmarks, such as prominent architectural features or art installations, become memorable reference points for orientation and navigation. They help build a mental map of a space.

Place landmarks at prominent locations, like major intersections, significant process steps, central dwell or commercial areas, and meeting places. Landmarks at decision points make navigation decisions more memorable—"we turned right at this sculpture." To avoid confusing returning passengers, do not relocate landmarks unless absolutely necessary.

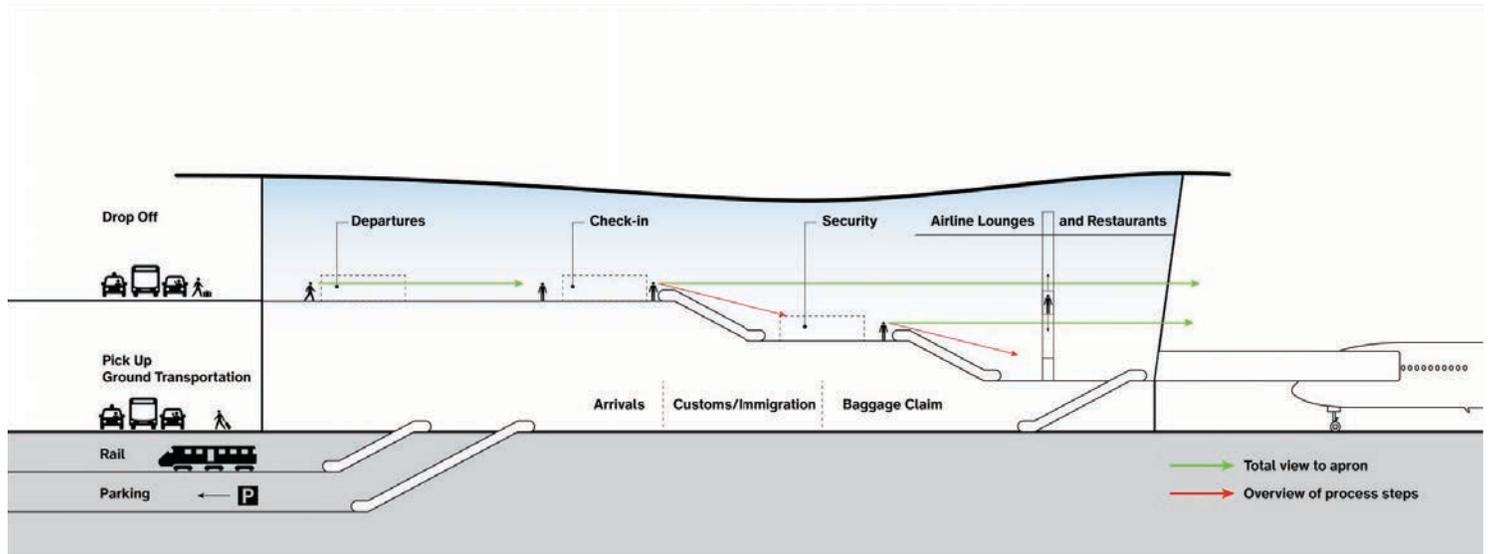
Landmarks should be easily describable, so they can be referenced in verbal or written directions. Visualize landmarks on maps to help clarify the connection between the environment and its graphic representation.



Art installations or remarkable objects are easy to remember and make good meeting points. They act as navigational landmarks and add to the sense of place.

## 2.4.2 Natural Wayfinding in New Terminals

New (or significantly renovated) terminals provide an outsized opportunity to embed natural wayfinding from the earliest stages. Wayfinding can be fully integrated with the architecture as a complementary system, rather than supplementary layer.



The ideal airport layout illustrates key natural wayfinding concepts: views of the entire departing journey, a clear overview of steps in the process, and a sense of progression.

When planning a new terminal, start with the core General Guidelines above in addition to the new-building-specific guidelines below. For best results, include a wayfinding expert on the design team from the outset.

### Focus space planning and design around flows

Facilitating passenger Flows through an intuitive building is the foundation of good wayfinding. It is critical that spaces and functions are organized and laid out in accord with airport processes, to make the passenger experience as simple and predictable as possible.

Concurrent steps in a journey (e.g. Check-in and Security Checkpoint) should be planned in close proximity with each other. Secondary services (e.g. lounges, restrooms) should be adjacent to corresponding steps.

Keep distinct flows (e.g. arrivals or departures) separate from each other—ideally, on different levels or in different halls. Minimizing cross-overs leads to fewer decision points, and therefore a more straightforward passenger journey. In particular, queuing areas should be organized to prevent other flows from crossing them.



A clear, well-organized layout means areas and levels are related, taking into account passenger processes and experience. This avoids complex, difficult-to-navigate spaces.  
© Grimshaw

### Use architectural form to encourage flows

Building design has the greatest influence on ease of wayfinding; signage comes after. The simpler a building's layout and shape, the more predictable it is to navigate. For example, a linear concourse is more intuitive to navigate than one with many angles and forks.

The shape, scale, and proportion of spaces subliminally provide direction. For instance, a rectangle automatically implies a direction that a square does not. Employ shapes with a dominant axis, like rectangles and ellipses.

### Ensure that passengers can see spatial organization and connections

Thoughtful building design and space planning only go so far; passengers must also be able to see and recognize a building's areas and structures in order to comprehend their journey through a space. Manifest the following elements clearly:

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#### Levels



Views to different levels (mezzanines, bridges, etc.) help people understand the vertical composition of a building.

## Entrances and exits



Conspicuous entrances and exits help define boundaries and transitions between spaces, as well as steps in the journey.

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## Ascent and descent points



People are naturally inclined to stay on the same level. If their journey requires them to go to a different level, make this as clear and obvious as possible. Stairs, escalators, and elevators must be visible and located near each other. It makes alternate modes self-explanatory, so additional directional signs are not required.

## Facades



Transparent facades link passengers with the outside environment. This aids orientation and sense of place. Natural light also improves passengers' moods to create a comfortable atmosphere. Keep glass facades free of media and avoid elements that block views to the exterior.

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## Structural elements



Structural elements in the architecture, like columns, beams, and thresholds help define spaces. Repetition of these elements creates predictable rhythm and familiarity.

### **Avoid long corridors**

Avoid long, monotonous corridors, because they reinforce an unpleasant impression of long distance. If a long corridor is unavoidable, provide pleasant distraction and sense of place to make interesting experiences and convey a sense of progress. Consider transparent facades, media installations, or architectural details.



Undulation of the ceiling panels encourages movement. Asymmetry of the corridor helps give a sense of direction.

### **Choose calming colors and materials**

Use soft, natural colors to provide a neutral background for interior design elements, landmarks, art, media, and wayfinding. Avoid glossy surfaces and contrast lighting, which negatively impact legibility. Use materials with good acoustic properties to reduce noise and ease communication. The interplay of scale, natural light, color, materials, greenery, and sound can reinforce each airport's distinctiveness.



Clean, neutral interior design and restrained use of accents can lend much-needed calm to often-hectic airport environments. © Yuri Molodkovets



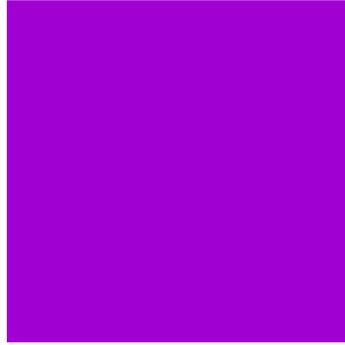
## 2.5.1 Color

Colors have been chosen to bring vitality to the airport experience and to serve as beacons from sign to sign, helping connect people to their destinations. In addition, the colors unify all elements of wayfinding, from signs and printed materials to websites and handheld devices.

For wayfinding signs, the four color codes are illuminated targets that will stand out to passengers. In conjunction with the illuminated white-on-black text that is high contrast and legible at a distance, the color beacons attract the eye and are clearly distinguishable in the environment.



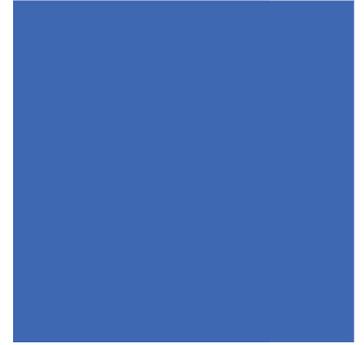
**Yellow**  
Flights & Operations



**Purple**  
Connecting Flights



**Green**  
Exit & Ground Transportation



**Blue**  
Services & Amenities

## 2.5.2 Typography

Helvetica is the typographic voice of the International Style and mid-century Modernism—a period that was also the golden age of flight. Helvetica has also become the typographic vernacular of wayfinding in the city—from riding the subway to walking down the street or taking a ferry. It is a natural choice to convey the bold and confident personality of the New York/New Jersey region at our airports.

A custom version of Helvetica Now, *Helvetica Now for PANYNJ*, is optimized for wayfinding at Port Authority airports.

**Helvetica Now  
for PANYNJ  
ABCDEFGHIJKLMN  
OPQRSTUVWXYZ  
abcdefghijklmnop  
qrstuvwxyz  
1234567890  
&-,. .**

### 2.5.3 Form

The system employs a distinctive color beacon, the design of which is unlike any other major airport in the world. The illuminated color on the front face of the sign wraps around the sides, top, and bottom of the sign. This makes the information recognizable from broader angles than just perpendicular.



## 2.6 Dynamic Signage

Technological developments make it possible to provide an ever increasing amount of wayfinding information to the passenger with dynamic signage, i.e., signage that displays variable messages and content. As with all wayfinding solutions, the main driver of the application of dynamic signage must be the end user. The aim of dynamic signage is to make it easier for a passenger to find their way around the airport and to follow the steps of the passenger process. Dynamic signage should remove friction and enhance the user experience during their stay and interactions at the airport.

One of the advantages of dynamic signage is that it can omit information at moments when that information is not relevant. An example would be not displaying directions to an airline check-in desk on days that a specific airline is not operating, or omitting directions to facilities that are temporarily closed for cleaning or maintenance. By omitting information the cognitive load of the passenger will be decreased, which will make it easier to find and interpret the information that is displayed and relevant to them.



Delta Parallel Reality Experience at Detroit Metropolitan Airport

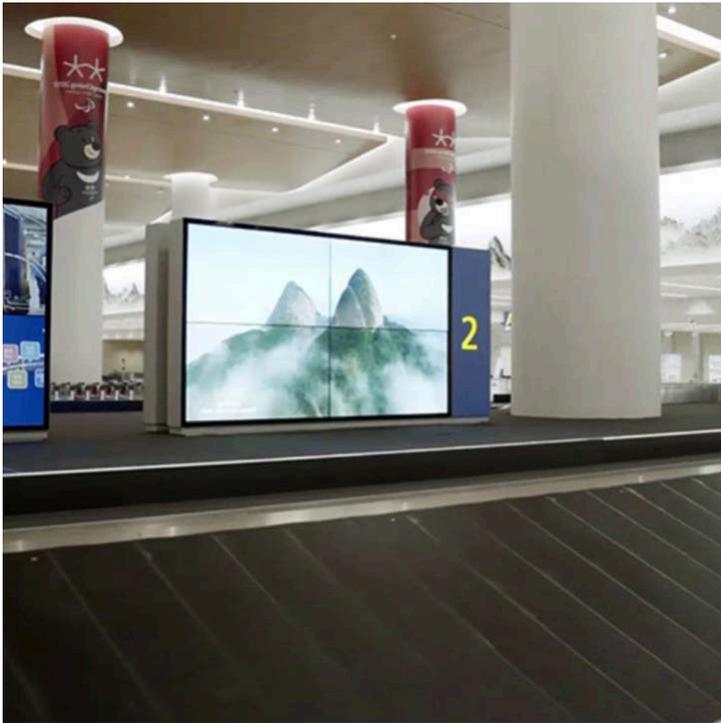
Another advantage of dynamic signage is that it can add status information for facilities and the airport processes which can help passengers make informed decisions. A simple but still helpful application of this principle is using dynamic signage to show the availability of parking spots per floor, sector, and lanes in parking garages. The addition of real-time boarding status to flight information displays and gate IDs is already widespread which enables passengers to use commercial offerings outside the boarding areas as long as possible, improving the quality of their stay and increasing the airport's revenue.

Any dynamic status information that is shown must be relevant to the passenger at the place and time they see it, and they should be able to use the information in a meaningful way. Information of security waiting times is only relevant for passengers that are on their way to security screening after check in, or if they already have a boarding pass. With this added information, they can make a choice between staying landside a little longer, heading directly to their gate or finding an alternate security area which may have a shorter wait time. Information on the waiting times at different

security areas only makes sense if the passenger also knows how far away the other areas are, and how this will influence the total travel time to the gate.

Dynamic signage can also provide extra information that will deepen the connection between the passenger and the origin or destination airport. It is possible to show weather information and tourist highlights of the destination airport, to inspire the passenger even before they board the plane. Local scenery, specialities, news, and art can be shown to add to a 'Sense of Place'. Adding these extra layers of inspiring information makes sense in areas where passengers have the time and state of mind needed to process and appreciate extra information, for instance at gate waiting areas and at baggage carousels.

The volatile character of dynamic signage is both its strong point and its weak point. When dynamic signage is malfunctioning because of user error, software problems, or hardware defects, no content or incorrect content may be displayed. These risks and effects can be mitigated by ensuring proper staff training, by following standardized security practices and by having replacement units on stock for all hardware components.



Baggage Claim at Incheon Airport in Seoul, South Korea

## 2.6.1 The Investment in Dynamic Signage

When incorporating digital signage into a sign system it is important to understand the long-term cost and investment associated with implementation.

Some factors to consider, and expectations to have, when deciding on dynamic signage:

- Digital signs have a lifespan of approximately 10 years before their systems become outdated and obsolete. Signage replacement is recommended and necessary if signs cannot function as they are intended to, malfunction due to outdated technical systems, or become inconspicuous or imperceptible among newer digital sign solutions.
- Visual coordination and cohesiveness is optimal for sign systems and beneficial to manage user expectations as they navigate. As digital signage continues to be introduced to a space, it is ideal that the digital displays appear similar, if not of the same display type or family. If displays have substantial visual differences, in elements such as display colors, display housing, and display sizes, it can impact a user's ability to easily and quickly recognize wayfinding signage amongst other types of signage and messaging.
- Digital sign errors and malfunctions are inevitable. It is important to ensure a space can function properly if a digital sign is out of order for an extended period of time. Plans should be created in the event of an error when installing digital signage to ensure that users can navigate spaces properly without it, this can mean a plan for temporary signage or a terminal employee helping to compensate for this sign's absence.

## 2.6.2 Third Party Technology

Terminal operators and airlines have invested in the development of tools and applications to provide passengers a better airport experience. The Port Authority actively encourages continued use and development of those third-party applications and tools.

To help enable that development, the Port Authority has put significant resources towards the development of a robust wi-fi network across its terminals. The free service makes it easier for passengers to use data-intensive applications without worrying about a data plan.

To better ensure accuracy in the information provided, the Port Authority has been developing numerous datasets that can also be utilized in third-party applications.

# 3 Wayfinding Guidelines

- 3.1 Spatial Zoning
- 3.2 Terminology
- 3.3 Numbering
- 3.4 Information Strategy

## 3.1 Spatial Zoning

In a complex environment like an international airport, multiple parties communicate different messages through various media. To prevent elements from competing for space, effect, and attention, it is important they are organized spatially.

The guidelines in this section allow all of these elements to coexist optimally. Organizing information by type allows users to scan an environment and receive different messaging. Consistently placing similar information in predictable locations helps build an understanding of the airport environment, allowing users to more easily perceive the space and find information.

The goals of spatial zoning are:

- Assign the most effective location for different types of information and media
- Ensure the location of information is expected and predictable
- Create clear lines of sight on the main path and wayfinding elements
- Ensure all media enhance the overall airport experience
- Guarantee visibility by preventing different types of media from interfering with each other

Spatial zoning guidelines apply to:

---

### Wayfinding

e.g.

- Directional signage
- Identification signage

---

### Information

e.g.

- FIDs, GIDs, BIDs, TIDs
- Airport indexes and maps
- Information kiosks
- Welcome centers

---

### Instructions, Rules & Regulations

e.g.

- Security and enforcement messaging (e.g. TSA, CBP)
- Instructions

## **Art & Events**

e.g.

- Exhibitions and installations
  - Immersive experiences
  - Performances
  - Landmarks
- 

## **Branded Media**

e.g.

- Port Authority branding, PSAs
  - Airport & AirTrain branding, PSAs
  - Terminal branding
  - Airline branding
  - Services branding (e.g. CLEAR, Global Entry)
- 

## **Commercial Media**

e.g.

- Advertising (e.g. immersive, dynamic, static ads)
- Retail (e.g. restaurant branding, store identifications)
- Promotional displays

### 3.1.1 Spatial Zones

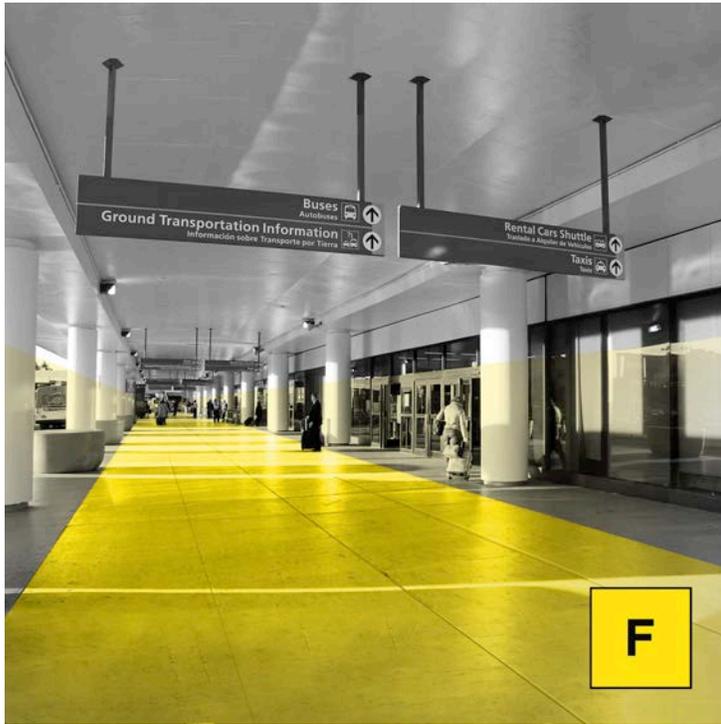
The process of spatial zoning divides all areas of a building into 3D zones. Different types of information and media are then designated to reside in each zone.

The spatial zones defined here should be standardized as much as possible throughout an airport, though some customization may be necessary to fit them to the architecture.



Graphical example of the various zones that are used in spatial zoning

Each of the zones designated for information and media are described below.



### Flow Zone

#### Where people move

The **flow zone** is made up of “corridors” where main passenger movements take place. It should always be kept free of visual and physical obstructions.



### Wayfinding Zone

#### Directly above flow to maximize visibility

The **wayfinding zone** is placed within users’ natural field of vision at a consistent height. It is reserved for overhead **wayfinding** elements, such as directional signage and identification signage perpendicular to the flow. No other media is allowed in this zone.

The wayfinding zone spans from 8’-0” to 12’-0” above the ground.

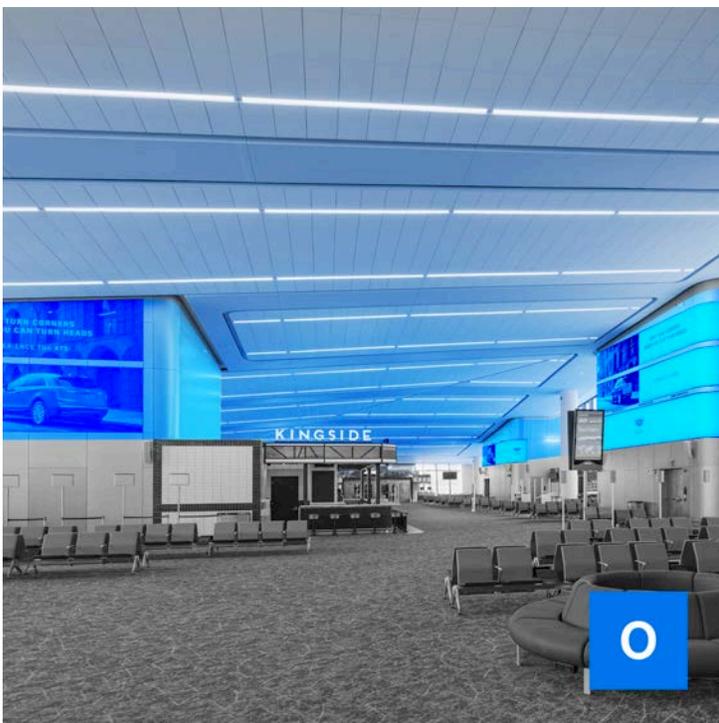


## Buffer Zone

### Separation between wayfinding and media zones

A **buffer zone** is free of visual or physical obstructions. It ensures users can easily distinguish the **wayfinding zone** from **overhead media** elements. A secondary buffer zone also applies around **information** and **instructions, rules & regulations** placed in **lateral** and **central zones**. This zone is important because it provides a visual resting point and helps maintain visual harmony.

The buffer zone is typically 2'-0" in height, and a minimum of 1'-0" in constrained spaces.



## Overhead Media Zone

### Flexible space high above wayfinding

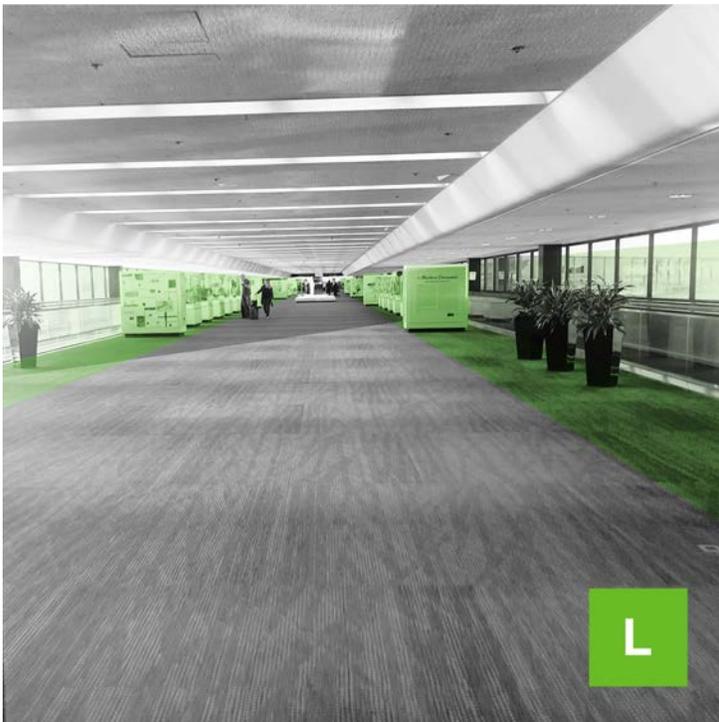
If the ceiling is high enough, an **overhead media zone** can be defined above the wayfinding zone (and separated from it by a **buffer zone**). This zone is reserved for overhead **branded media**, **commercial media**, and **art**. It is located high above the flow, so it will be in users' natural field of vision from a far distance, making it ideal for big statements. For best visibility, media in this zone should be oriented perpendicular to the flow.



## Central Zone

### Median between distinct flows

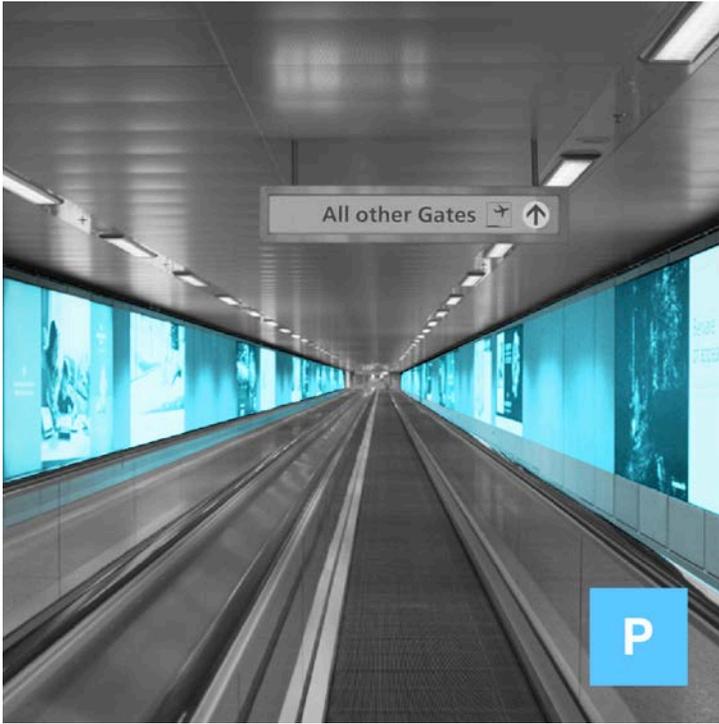
A **central zone** can be defined, if the space is wide enough and if there are distinct flows on the left and the right side. **Information** and **instructions, rules & regulations** have priority here over **branded media**, **commercial media**, and **art**. Do not use other messages or media here. Elements can be placed both parallel and perpendicular to the flow.



## Lateral Zone

### On the sides of a wide flow area

If the space is wide enough, a **lateral zone** can be defined to one or both sides of the main flow area. **Information** and **instructions, rules & regulations** have priority here over **branded media**, **commercial media**, and **art**. No other messages or media should be used here. Elements can be placed both parallel and perpendicular to the flow.



## Parallel Media Zone

### Content on the side walls of a flow area

A **parallel media zone** is reserved for **branded media**, **commercial media**, and **art**, all oriented parallel to the flow. It is ideal for narrow corridors where there is no space to define **lateral** or **central zones**.

### 3.1.2 Media Reception Along the Journey

Airport users go through different areas and steps throughout their journey. Information needs, mental state, and attention levels vary along the way. Receptiveness to environmental stimuli, like **commercial media**, varies as well.

Certain points in the journey offer the best opportunities for **commercial media**, **art**, **events**, and navigational landmarks. Areas where less attention is required—such as long corridors or waiting areas—are suitable for **branded media** or **commercial media**. Commercial messaging will be better received and have more impact here.

At other points in the journey, such stimuli should be avoided, as users are likely to take little notice or even get stressed by it. This mainly concerns points where passengers must make decisions or focus on the process, e.g. main decision points or security checkpoints. Prioritize **wayfinding** elements here.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● No priority
Branded Media	● Limited
Commercial Media	● Limited
Art	● Limited
Events	● Limited

#### AirTrain platforms

##### Departing from the platform

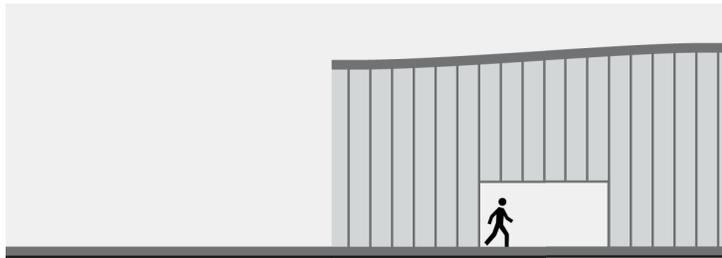
- User focused on process and time (i.e. getting on the right AirTrain)

##### Arriving at the platform

- User focused on confirming they’ve arrived at the right station
- Focused on next step (e.g. enter terminal, transfer to other transport mode, find hotel shuttles)

#### Guidelines

- **Wayfinding** and **information** are of primary importance.
- Very limited **art & events**, **branded media**, and **commercial media** are allowed (in the media zones) to improve ambiance and provide distraction and sense of place. It should be subdued to avoid causing stress or information overload.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● No priority
Branded Media	● Primary importance
Commercial Media	● Not allowed
Art	● Limited
Events	● Not allowed

**Terminal facade and entrances**

**Departing Passengers**

- Users are excited about starting their journey
- Focused on getting through the process
- Possibly stressed by unfamiliar airport or time pressure

**Arriving Passengers**

- Users are excited about arriving in NY/NJ
- Focused on next step (connecting flight or ground transportation)
- Possibly tired after flight

**Well-Wishers**

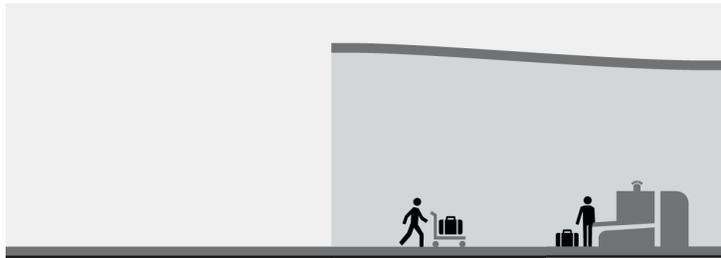
- Users are focused on finding drop-off location
- Possibly stressed by unfamiliar airport or time pressure

**Meeters & Greeters**

- Users are focused on finding family and friends
- Possibly stressed by unfamiliar airport or time pressure

**Guidelines**

- **Airport branding** is of primary importance. It provides a sense of place and adds to the excitement. It reduces stress by confirming arrival at the right terminal. Size and placement are based on architectural scale, viewing direction and reading distance.
- **Airline branding** on wayfinding elements (curbside identification signs) is of primary importance, if different entrances are associated with different airlines.
- **Wayfinding** and **information** are of primary importance, directing to and identifying ground transportation.
- Very limited **art** is allowed (in the media zones) to improve ambiance and provide sense of place.
- **Commercial media** and **events** are not allowed.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● No priority
Branded Media	● Primary importance
Commercial Media	● Limited
Art	● Limited
Events	● Not allowed

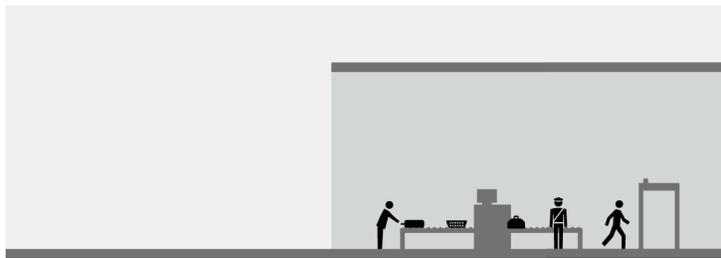
## Departures hall

### Departing Passengers

- Users are possibly stressed by unfamiliar airport or time pressure
- Focused on checking in or proceeding towards airside

### Guidelines

- **Airline branding** is of primary importance for passengers to find and identify the correct check-in desks.
- **Wayfinding** and **information** are of primary importance, including FIDs, directional signs, and identification.
- Limited **art** and **commercial media** are allowed (outside the buffer zone) around & above check-in desks.
- **Events** are not allowed.



Wayfinding	● No priority
Information	● No priority
Instructions	● Primary importance
Branded Media	● Limited
Commercial Media	● Not allowed
Art	● Not allowed
Events	● Not allowed

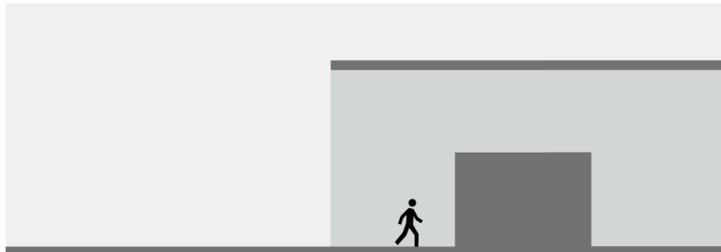
## Security checkpoint

### Departing Passengers

- Users are often stressed by unfamiliar airport or time pressure
- Anxious about process
- Focused on rules and procedures

### Guidelines

- **Instructions, rules & regulations** are of primary importance.
- Limited **branded media** is allowed for services (such as CLEAR and TSA Pre✓) and airport or Port Authority PSAs, especially regarding security.
- **Commercial media, art, and events** are not allowed.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● No priority
Branded Media	● Opportunity
Commercial Media	● Opportunity
Art	● Opportunity
Events	● Opportunity

## Concourse

### Departing Passengers

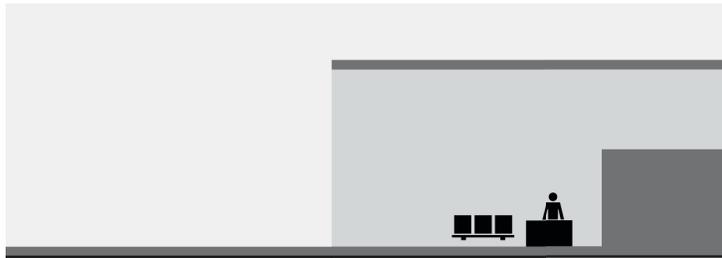
- Users are more relaxed, having passed security and getting close to the departure gate (depending on time pressure)
- Focused on keeping track of time and getting to gate
- Open to exploring what the terminal has to offer, including shopping, eating, drinking, art, events (if time allows)

### Arriving/Connecting Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Often seeking restrooms
- Focused on next step

### Guidelines

- **Wayfinding** and **information** are of primary importance, especially FIDs, directional signs, and restroom identification.
- Excellent opportunity for experiential **art & events** and immersive installations to improve passenger experience. These are allowed and encouraged, provided the main flow and lines of sight are not impeded.
- Excellent opportunity for **branded** and **commercial media** (outside the buffer zone) to promote concourse retail and restaurants, airport services, and engaging advertising.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● No priority
Branded Media	● Opportunity
Commercial Media	● Opportunity
Art	● Opportunity
Events	● Limited

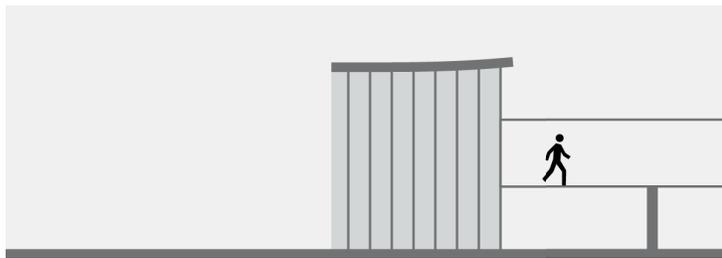
### Gate Area

#### Departing Passengers

- Users are more relaxed, having reached the gate on time
- Focused on the next step (boarding)
- Open to diversion while waiting

#### Guidelines

- **Wayfinding** (gate identification) and flight **information** are of primary importance.
- Opportunities for **art, branded media, and commercial media** until one hour before boarding starts; at that time, real-time boarding **information** should be of primary importance.
- Leave a lasting impression. Waiting time is an excellent opportunity to engage passengers in an immersive, dynamic experience that connects with the NY/NJ region (to leave a final impression) or with their destination (to build excitement).
- Limited **events** are allowed to entertain waiting passengers.



Wayfinding	● No priority
Information	● No priority
Instructions	● No priority
Branded Media	● Opportunity
Commercial Media	● Opportunity
Art	● Opportunity
Events	● Not allowed

### Jet Bridge

#### Departing Passengers

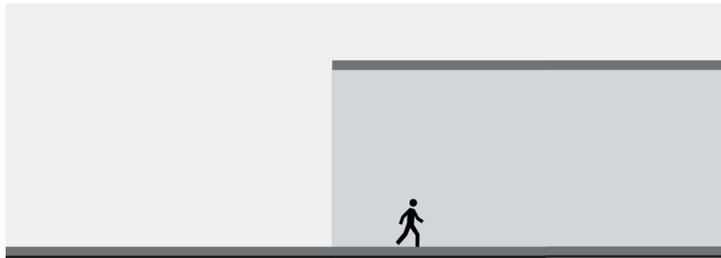
- Users are excited about getting on board
- Relaxed, they've made it on time

#### Arriving/Connecting Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ

#### Guidelines

- The jet bridge environment is limited. Still, there are opportunities for **art, branded media, and commercial media** (in the media zones) to make first or last NY/NJ impression, improve ambiance, and provide distraction and sense of place.
- **Events** are not allowed.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● Primary importance
Branded Media	● Limited
Commercial Media	● Limited
Art	● Limited
Events	● Not allowed

### Sterile Corridor

#### Arriving/Connecting Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Often seeking restrooms
- Focused on next step

#### Guidelines

- **Wayfinding, information, and instructions** are of primary importance, especially FIDs (for connecting passengers), directional signs, and restroom identification.
- Limited **art, branded media, and commercial media** are allowed (in the media zones) to improve ambiance and provide distraction and sense of arrival to the region.
- **Events** are not allowed.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● Primary importance
Branded Media	● Limited
Commercial Media	● Limited
Art	● Limited
Events	● Not allowed

### Passport Control

#### Arriving Passengers

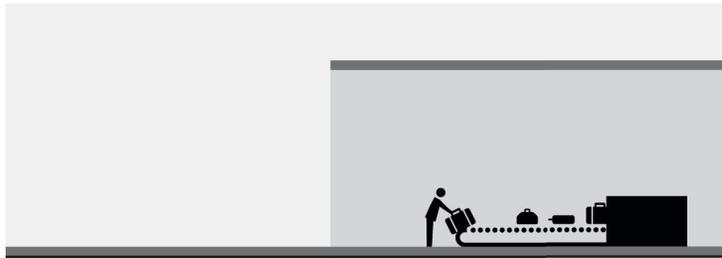
- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Possibly nervous about immigration procedure
- Focused on next step

#### Connecting Passengers

- Users are possibly tired after flight
- Possibly stressed about connection, depending on timing and familiarity with process/airport
- Possibly stressed about process
- Focused on next step

#### Guidelines

- **Wayfinding, information, and instructions, rules & regulations** are of primary importance.
- Very limited **art, branded media, and commercial media** are allowed (in the media zones) to improve ambiance and provide distraction and sense of place. These should be subdued, so they do not cause stress or information overload.
- **Events** are not allowed.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● Primary importance
Branded Media	● Limited
Commercial Media	● Limited
Art	● Limited
Events	● Not allowed

### Baggage Claim

#### Arriving Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Focused on next step

#### Connecting Passengers

- Users are possibly tired after flight
- Possibly stressed about connection, depending on timing and familiarity with process/airport
- Possibly stressed about process
- Focused on next step

#### Guidelines

- **Wayfinding, information, and instructions, rules & regulations** are of primary importance. Information on next steps, such as transportation options, is especially valuable while passengers await their baggage.
- **Art, branded media, and commercial media** are allowed (in the media zones) to provide distraction and entertainment.
- **Events** are not allowed.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● Primary importance
Branded Media	● Not allowed
Commercial Media	● Not allowed
Art	● Not allowed
Events	● Not allowed

### Customs

#### Arriving Passengers

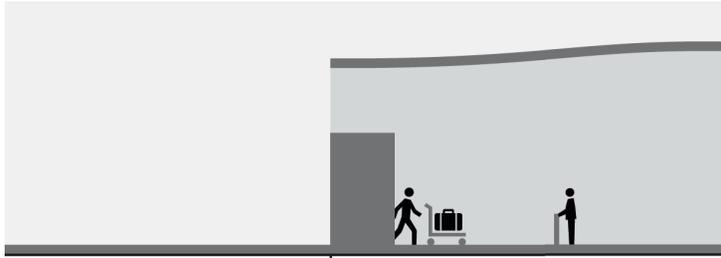
- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Looking for exit

#### Connecting Passengers

- Possibly tired after flight
- Possibly stressed about connection, depending on timing and familiarity with process/airport
- Possibly stressed about process
- Focused on next step

#### Guidelines

- **Wayfinding, information, and instructions, rules & regulations** are of primary importance.
- **Art & events, branded media, and commercial media** are not allowed.



Wayfinding	● Primary importance
Information	● Primary importance
Instructions	● No priority
Branded Media	● Opportunity
Commercial Media	● Opportunity
Art	● Opportunity
Events	● Opportunity

## Arrivals Hall

### Arriving Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Focused on next step

### Meeters & Greeters

- Users are excited to see family and friends soon
- Possibly anxious about the process
- Interested in pleasant ways to kill time, e.g. restaurants, shopping, art

### Guidelines

- **Wayfinding** and **information** are of primary importance.
- **Art & events, branded media, and commercial media** are encouraged (in the media zones) to improve ambiance and provide users with a warm, exciting local arrival.

### 3.1.3 Media Design & Content Guidelines

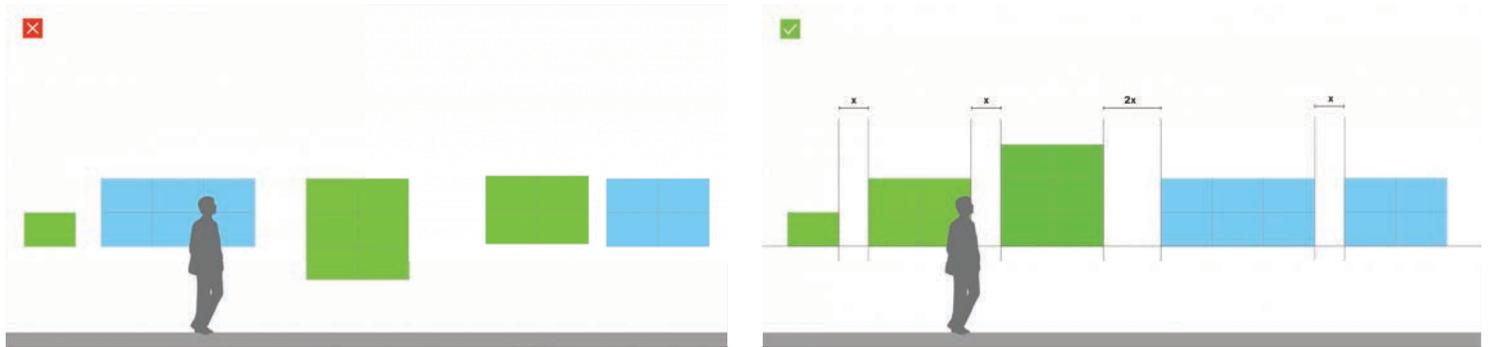
Within each zone, information and media should be well organized and visually appealing. A pleasant and engaging media environment maximizes opportunities for revenue without overwhelming or confusing. The following guidelines pertain to media planning and placement.

#### Distinguish Between Media Types

Passengers should be able to find the information they need quickly and easily. It's important to very clearly distinguish wayfinding and information from commercial media.

##### *Physical Location*

By giving each media type its own space and creating a buffer zone next to it, a physical distinction can be easily achieved.



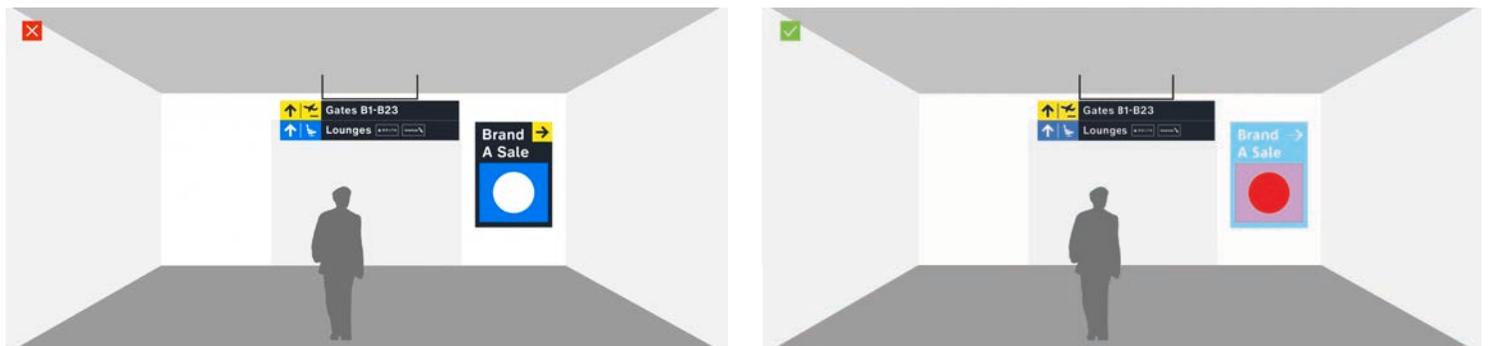
Consistency in buffer space and clear alignment between media types makes the media elements more conspicuous.

##### *Color*

Color is one fundamental way of making this distinction. It is critical that prominent colors in commercial elements are different from our wayfinding color coding. Avoid the use of red as a dominant color; red is reserved for emergency messaging.

##### *Visual Style*

Wayfinding information should never appear in another entity's branding. Users expect it in the system style. Using a different visual style can cause confusion. If wayfinding information needs to be added, the stakeholder should follow the sign application process rather than adding it independently.



Commercial messages should differ as much from the regular wayfinding system as possible.

#### Quality in Design

All Port Authority Aviation facilities should be of world-class quality in architecture, concessions, information, and

media. It is important to safeguard the quality of experience down to the furniture, shops and restaurants, signage, and instructions.

### *Technology*

When adding to the existing program, we encourage use of technology, such as dynamic displays. It contributes to visibility, flexibility, and the perception of quality.

### *Quality in Ideas*

Offer innovative options to advertisers. Displays, exhibits, experiential activations, and immersive installations attract attention, add to ambiance, and contribute to the success of advertising. Unique offerings can also be newsworthy and encourage positive social media engagement.

### *Quality Brands*

Allow brands occupy/takeover to certain areas, such as with lounges or concessions, if the scale of the space allows clear separation of wayfinding information and other branding information. Brand takeover makes for a more cohesive, singular experience and allows brands to make a bigger impact. A singular brand also unifies a space visually and minimizes the visual chaos that several brands would create

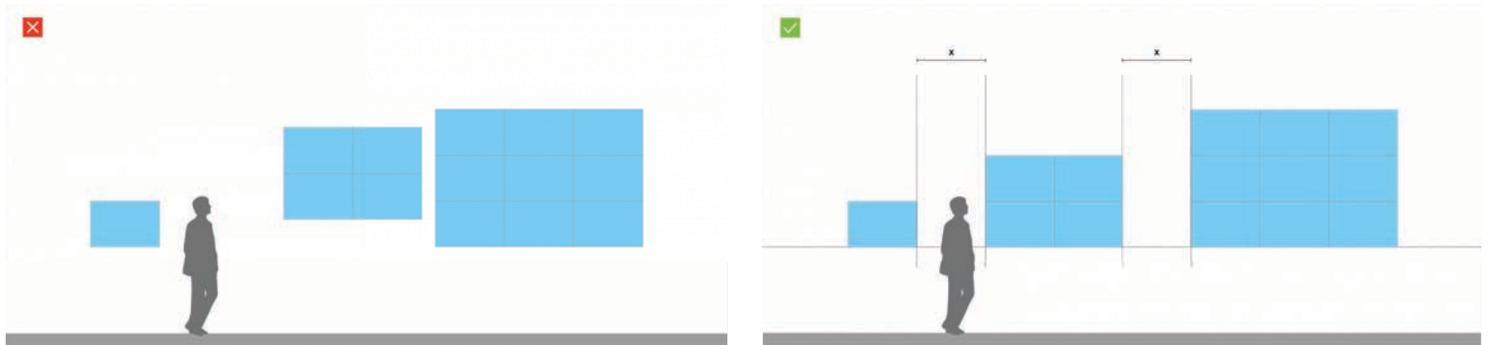
## **Positioning Standards**

### *Horizontal Alignment*

Define one (or two) standard baseline(s) where all elements should be positioned. It achieves both horizontal alignment and visual harmony. When determining the horizontal baseline(s), be sure to consider surrounding media and architectural elements.

### *Vertical Buffer & Alignment*

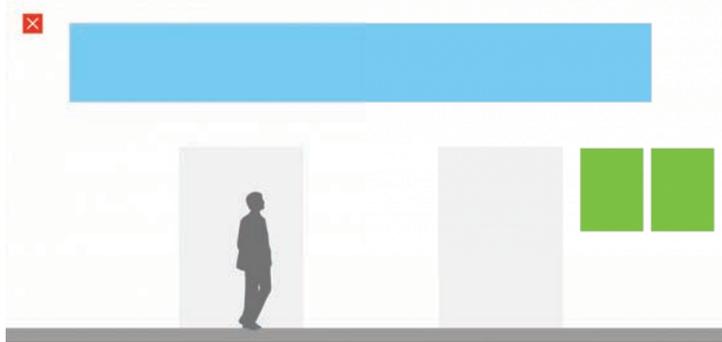
In addition to the prescribed horizontal buffer zone, reserve vertical buffer space between different media elements. The proper space between two elements is relative to the sizes of the objects themselves and the architectural scale. Within one area, choose one standard vertical buffer size. Vertical alignment also contributes to visual harmony and quality of the environment.



Aligned media appear ordered and are appealing to the eye.

## **Relate to Architecture**

The size and rhythm of the architecture is the starting point in defining the size and rhythm of media placement. In large spaces, media elements or artwork of the same scale creates landmarks. The relationship between media and architecture can create impressive, memorable environments.



Align media elements with the architecture to strengthen the rhythm of the space.



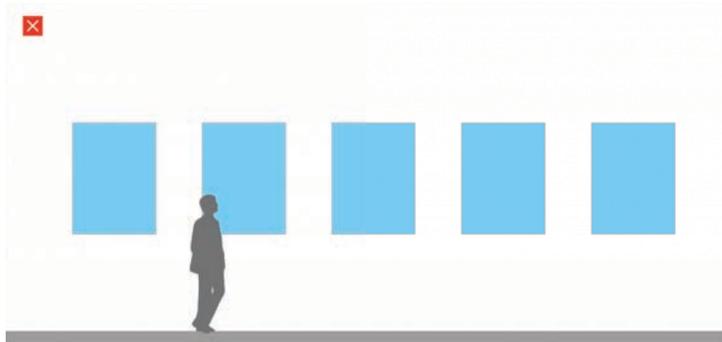
### Think Big

#### Visual Harmony

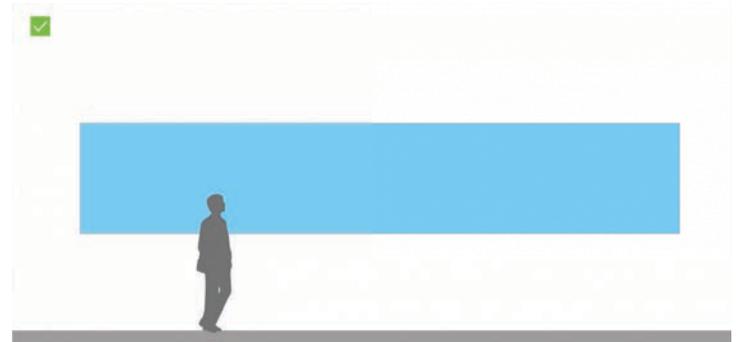
Visual harmony and impact can be increased by large media elements, where applicable. Art and commercial media become more than just decoration when they responsively integrate with the space.

#### Takeovers

By using one large element, advertisers can “take over” a space without interfering with wayfinding or usability. This contributes to the overall attractiveness of the environment, increases revenue opportunities, and allows innovative concepts to showcase memorable advertising.



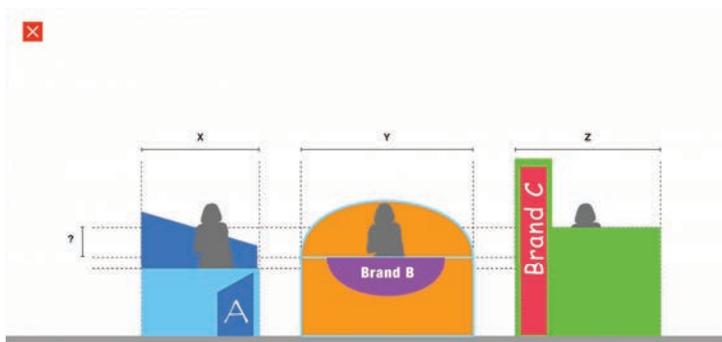
Think big! One large statement creates visual harmony and makes more of an impact.



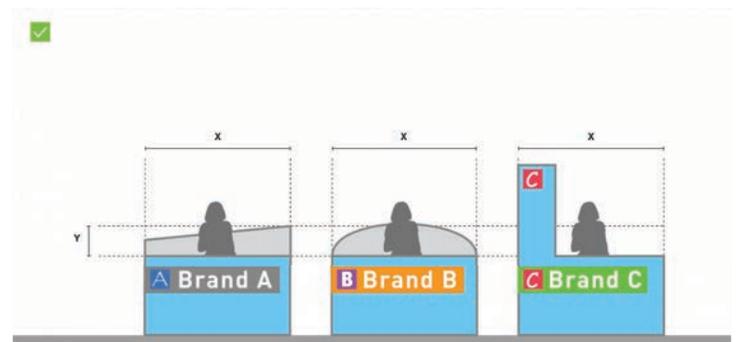
### Media Structures

A cohesive design family for media structures (including advertising light boxes and frames) aids visual consistency. Create and offer a standard set of elements with corresponding sizes, forms, colors, and materials.

Exceptions are allowed in cases where innovative new media or technology would improve the experience of the airport, increase revenue opportunities, and improve the efficacy of advertising.



Standardization in size, form, color and materials creates visual consistency.



## Mixed Digital Content

Digital displays often mix different types of content (e.g. departure information, process information, and advertisements). Advertising breaks spatial zoning rules, but can be a way to recoup investment. When informational and promotional messages share the same display or kiosk:

- Never transition through different types of content or messaging. That means content should not alternate between wayfinding and non-wayfinding content such as advertisements, branding, promotional messages, or rules/regulatory information. People classify a display as information or advertising at first glance. They will not look again for content they do not expect.
- Separate different types of messages spatially. Make this difference consistent across situations. For example, always show an ad on the bottom of the screen, or on the same displays on every kiosk.



Separate different types of media spatially to create a clear and legible system.

## Dynamic Digital Content

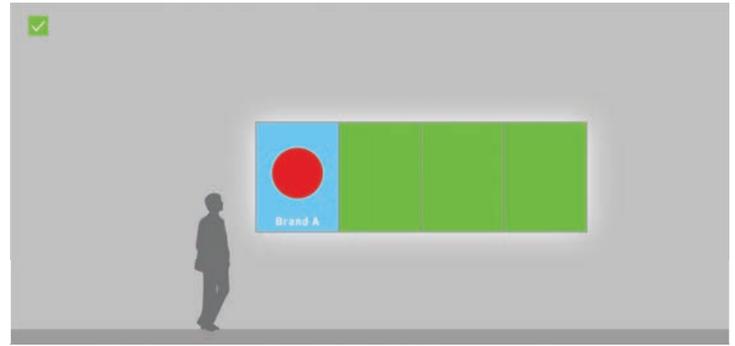
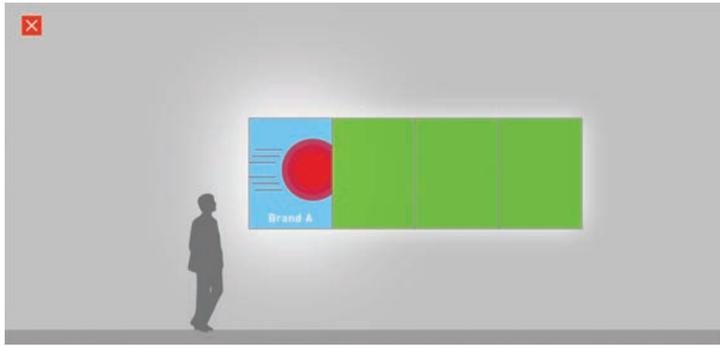
Two main factors make dynamic media more distracting than static media.

*Brightness* of digital screens makes it hard to see the environment and other messages nearby, especially at night when ambient light is low.

- Brightness control should be automatic and react to ambient light.
- Brightness can also be used as an asset. Large displays can lighten up the entire space, lowering the need for ambient lighting.
- Content effects brightness. Dark messages on a light background are much brighter than light messages on a dark background. Use a dark background, where possible.

*Movement* distracts people. The more dynamic the content, the greater the distraction.

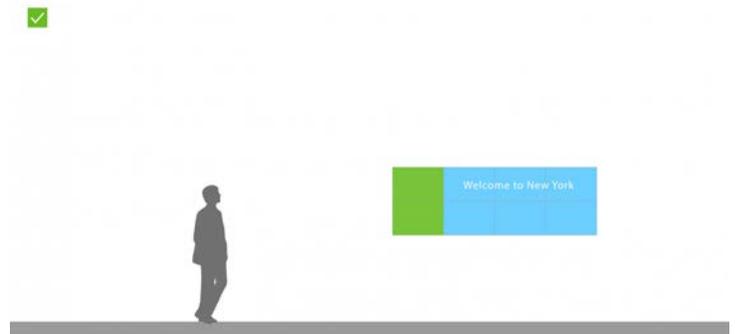
- Dynamic displays with static images (shown for at least 10 minutes) can be placed according to spatial zoning guidelines. No additional rules apply.
- Dynamic displays with frequently changing content (animation, live video, advertising) should only be placed in zones that can accommodate large-scale advertising (mainly large overhead zones and walls outside the main passenger flow).



Static media and moderate illumination are suited along main flow areas.

### Sense of Place

Using digital media to create a 'sense of place' is a way to incite the feeling of a place, whether that is the local feel of the airport, city, or destination. Sense of place can be purely aesthetic or it can be functional, providing information such as weather conditions. Sense of place imagery can take the place of blank signs when they are not in use, such as on baggage carousel signage. Ensure that sense of place media does not distract from, mimic, or replace wayfinding information.



In certain cases, sense of place media can be used in the place of blank displays.

## 3.2 Terminology

Terminology should be clear, simple, and intelligible to the largest possible number of people. It should be consistent on signage and in related applications, such as third-party websites, mapping apps, marketing materials, airline messaging, voice announcements, tourism information, and all other communications to passengers, visitors, and employees.

To ensure consistency, this manual contains a list of airport terminology. All wayfinding information must be in compliance. Airline, Port Authority, and third-party communications should conform, too.

Using consistent terminology across this breadth of touchpoints helps maintain continuity and provide an exceptional customer experience well beyond the bounds of the airport.

### **3.2.1 Language**

All wayfinding information is provided in English, in line with international best practices. The use of additional languages is not allowed unless authorized by the Port Authority.

The wayfinding system seeks to provide universal information through the use of pictograms. The sign program also features high contrast in its design, which can easily be interpreted by visual translation technologies such as Google Translate. Lastly, consider staffing or operational solutions to provide language services to a wide swath of passengers.

Only in the event that there are critical communications needs, such as with vaccination requirements or in times of emergency should another language be used on wayfinding signage.

## 3.2.2 Grammar

### Capitalization

All text on signs should be written in lowercase letters with an initial capital, i.e. sentence case.

Capitalize the first letter of the first word of a sentence.

*Thank you for visiting our airport!*

~~*Thank You for Visiting our Airport!*~~

Capitalize the first letter of standard airport terminology.

- *Departures*
- *Restrooms*

Capitalize the first letter of each word of compound airport terminology.

- *Connecting Flights*
- *Baggage Claim*

Capitalize the first letter of each word of a proper name.

- *Newark Liberty International Airport*
- *American Airlines*

Capitalize alphanumeric names of sections, rows, areas, etc.

- *Gates A, B, C*
- *Gate A12*
- *Terminal A*

Write acronyms in all capital letters. Do not use periods or any other characters for separation.

- *JFK*
- *LGA*
- *EWR*
- *ATM*
- *KLM*

If a hyphen is used, typically the second word has no initial capital.

Prepositions, conjunctions, and definite articles (such as “the”) are not capitalized unless they begin a sentence. The following words are uncapitalized except where specifically noted: and, for, in, of, the, to.

Raised type for ADA components of ADA-compliant signage must be all capitals. This is according to [ADA](#) requirements and supersedes all other capitalization rules.

### Abbreviations

In general, abbreviations are to be avoided. They are often misunderstood by international users and make reading harder.

Some exceptions can be made for widely known abbreviations to solve space limitations (e.g. Blvd for Boulevard). Such exceptions are added accordingly in the [Terminology List](#). There are no periods in abbreviations unless specified in the standard airport terminology.

### Hyphens

Hyphens are sometimes used to bind a preposition to a specific noun or verb.

- *Check-in*
- *Off-airport Parking*

As there are no specific rules for the use of hyphens in compound words, consult a dictionary before adding to the approved terminology.

Note that the following terminology should not be hyphenated:

- *Pick Up (not Pick-up)*
- *Drop Off (not Drop-off)*

### **Punctuation**

Ampersands (&) are sometimes used to indicate two combined, related services, especially when space is constrained.

- *Shops & Restaurants*

For a continuous series of three or more numbers, use a hyphen. While this is contrary to typical grammatical rules, it is used in the wayfinding system to optimize space and visual harmony on signs.

- *Gates A1-A20*

If two destinations are combined or for enumerations, use a comma.

- *Gates A, B*
- *Check-in 1, 6, 12*

In all other cases “and” should be used.

- *Lost and Found*

Use of dashes ( - ) and slashes ( / ) is permitted only in rare cases for specific applications where sign size is restricted. There is no space before or after the dash or slash.

- *Meeter/Greeter Area*

### **Branding**

At certain moments of the journey, branding and commercial information are important as wayfinding cues. For example, passengers typically seek the correct check-in area based on their airline. However, commercial information, such as company names, logos, and branding, is otherwise not allowed on wayfinding elements.

To determine what commercial information is allowed in wayfinding, reference the guidelines on integrating branding with wayfinding. This ensures that the elements can be perceived as wayfinding foremost. It will ensure standardization, continuity and will minimize any distractions.

### **Terminals & Gates**

A single terminal or gate listed on a sign is shown as the word, followed by its letter and number designation.

- *Terminal B*
- *Gate A12*

A collection of gates belonging to a single concourse building is shown with the term “Gates” followed by the letter. This is contrary to grammatical rules in American English, but is commonplace at other international airports.

- *Gates A, B, C*
- *Walk to Gates A*

The total collection of multiple terminal or gate area letters or numbers are shown as the word followed by the letters in alphabetical series. When written as text, use commas between terminal letters. When included on signage, use the

graphic treatment outlined in the guidelines in composing signs.

- *Terminals A, B, C*

### 3.2.3 Terminology List

Term	Pictogram	Category	Location			Sign Type				Notes
			Airside	Landside	Frontage	Directional	ID	Info	Regulatory	
Accessible			•	•			•	•	•	Can be used with additional words, such as "Accessible Restroom"
Accessible Changing Place			•	•		•	•	•		
Accessible Changing Place with Hoist			•	•		•	•	•		
Agricultural Inspection			•			•	•	•		
Airline Directory			•	•			•	•		
Airport Directory			•	•			•	•		
All Gates			•	•		•				Right-facing and left-facing versions
All Gender			•	•		•	•	•		
Arrivals			•	•	•	•	•	•		Do not use "Arrivals Hall" or "Arriving Flights"  Right-facing and left-facing versions
Assistive Listening Systems										
ATM			•	•		•	•	•		
Auditorium			•	•		•	•	•		
Automated Passport Control			•					•		
Baby Changing Area			•	•			•	•		

Baggage Carts										
Baggage Claim										
Baggage Drop										
Baggage Information										Used on Baggage Information Displays (BIDs)
Baggage Inspection										
Baggage Re-check										
Baggage Repack										
Baggage Services										
Baggage Storage										
Bar(s)										
Bars & Restaurants										
Bus & Taxi										
Bus(es)										
Business Center										
Cafe										
Cashier										
CDC Quarantine Station										
Chapel										
Charging Point										
Check-in										
Connecting Flights										Right-facing and left-facing versions

Crew			•	•		•				
Crosswalk				•			•			Right-facing and left-facing versions
Curbside Check-in				•		•	•			
Currency Exchange			•	•		•	•	•		
Defibrillator			•	•			•			
Dentist			•	•		•	•	•		
Department of Homeland Security Customs and Border Protection			•				•	•		
Department of Homeland Security Transportation Security Administration			•				•	•		
Departures			•	•	•	•	•	•		Do not use "Departures Hall" or "Departing Flights" Right-facing and left-facing versions
Domestic Arrivals				•		•	•	•		Right-facing and left-facing versions
Door				•			•	•		Door 1, Door 2, etc.
Drinking Water			•	•			•	•		
Duty Free			•			•		•		
Electric Vehicle Charging and Parking				•		•	•	•		
Elevator			•	•		•	•	•		
Escalator			•	•		•	•	•		

Exit										Right-facing and left-facing versions
Exit Only										
Express Buses (to ...)										
Fire Extinguisher										
Fire Hose										
First Aid										
Food Court										
Gate (A1; B1; C2; etc.)										Right-facing and left-facing versions
Gates (A, B, C; A1-A9, B10-B19, etc.)										Right-facing and left-facing versions
Global Entry										
Ground Transportation										
Ground Transportation Information										
Help Phone										
Hotel										
Hotel Information										Includes reservations and hotel shuttle information
Hotel Shuttles										Right-facing and left-facing versions
In Case of Fire Use Stair										
Information										

International Arrivals				•		•	•	•		Right-facing and left-facing versions
Level (1, 2, 3, 4, etc.)			•	•			•	•		
Long-term Parking				•	•	•	•	•		
Lost and Found				•		•	•	•		
Lounge(s)			•			•		•		
Low Vision										
Medical Office			•	•		•	•	•		
Meditation Room			•	•		•	•	•		
Meeting Point				•		•	•	•		
Men			•	•		•	•	•		
Mobile Passport Control			•				•			
Mosque			•	•		•	•	•		
Moving Walkway			•	•			•			Use the term "End of Moving Walkway" when cautioning passengers.
No Baggage Claim										
No Carts			•	•					•	
No Entry			•	•	•				•	
No Pets			•	•						
No Phones			•						•	For use in CBP area
No Photos			•						•	For use in CBP area
No Smoking			•	•					•	

Nursing Room										
Off-airport Parking										
Off-airport Parking Shuttles										Right-facing and left-facing versions
Office(s)										
Oversize Baggage										
Parking										e.g. Terminal A Parking, Terminal B Parking
Parking Shuttles										Right-facing and left-facing versions
Passenger Drop Off										Do not use "Drop-off" or "Dropoff"
Passenger Pick Up										Do not use "Pick-up" or "Pickup"
Passport Control										Do not use "Immigration"
Pet Check-in										
Pet Relief Area										Right-facing and left-facing versions
Play Area										
Police										
Porter Service										
Post Office										
Prayer Room(s)										Use for individual prayer rooms or a group of multiple prayer facilities, such as Chapel, Synagogue, or Mosque.

Quiet Room										
Reduced Mobility										
Rental Car Information										
Rental Car Shuttles										Right-facing and left-facing versions
Rental Cars										
Restaurants										
Restrooms										
Ride App Pick Up										Do not use "Pick-up" or "Pickup"
Security Checkpoint										
Self Check-in										
Sensory Room										
Shoe Shine										
Shops										
Shops & Restaurants										
Short-term Parking										
Shuttle										
Shuttle (Airside)										
Smoking Area										
Staff Only										
Stairs										
Subway										
Synagogue										

Taxis				•		•	•	•		
Telephones							•	•		
Terminal (A; B; C; etc.)				•	•	•	•	•		
Terminals (A, B, C; etc.)						•				
Terrace			•	•		•	•	•		
Ticketing				•		•	•	•		
Trains				•		•		•		
Transit to City				•		•				New Jersey and New York versions
US Citizens, Permanent Residents and Diplomats			•	•		•				
via AirTrain				•		•		•		Use as secondary messaging after ground transportation related destinations.
via AirTrain				•		•		•		Use as secondary messaging after flight-related destinations.
Waiting Area			•	•		•	•	•		
Welcome to xxx Airport				•	•		•			
WiFi			•	•				•		
Women			•	•		•	•	•		

## 3.3 Numbering

Naming and numbering play an important role in wayfinding throughout the passenger journey. During their trip, passengers need to remember and process many pieces of information—from *What time is my flight?* to *Where did I park my car?* It is important to make each piece of information as logical, simple, and concise as possible.

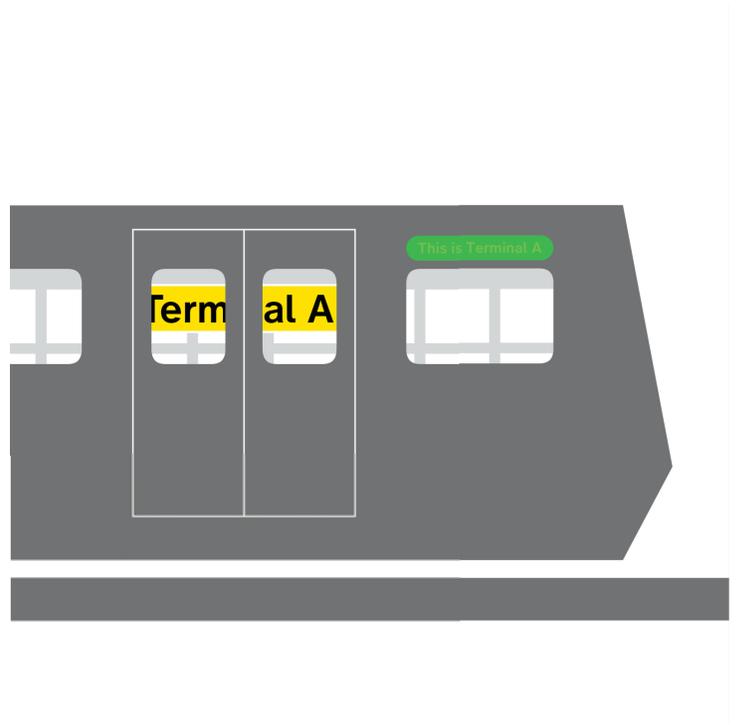
A harmonized, airport-wide numbering system serves as a positioning tool for all users—especially connecting passengers—to understand and navigate the entire airport campus. Terminals and gates must follow a logical, sequential numbering strategy. An integrated terminal-gate numbering system is the foundation. Other elements in the system (e.g. AirTrain stations, parking garages, check-in rows, baggage claims) complement the experience.

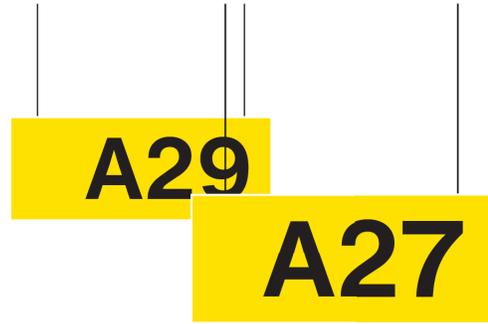
There are numerous ways to integrate terminals into gate identification. Numeric and alphanumeric are the primary methods. The alphanumeric approach keeps numbers to a manageable range.

### 3.3.1 Touchpoints

Passenger touchpoints that may require numbering include:

- Transit Station
- AirTrain Station
- Terminal
- Check-in Area
- Security Checkpoint
- Concourse
- Gate
- Baggage Claim
- Parking Structure
- Parking Spot (level, row)



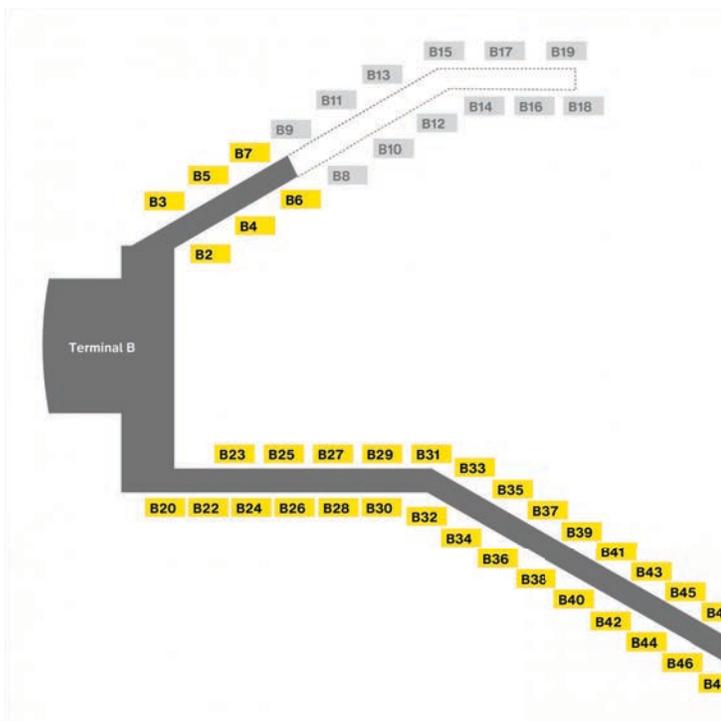


Examples of numbering touchpoints (For illustrative purposes only—not actual sign designs)

### 3.3.2 Principles

Numbering systems should be easily understandable by all user groups.

- Make sure numbering starts at a logical place. Determine this using flow analyses—not birds-eye perspective maps—to ensure the numbers make sense based on the way users encounter them.
  - **For terminal numbering**, consider the sequence in which users of different modes of transport and connecting passengers will encounter the terminal buildings.
  - **For interior numbering systems**, start numbering near the building entrances. On other levels, start numbering from elevator cores or primary vertical circulation points. Increase the numbering from entrance or elevator core to the periphery.
- Divide long numbers into distinct alphabetical and numerical parts (e.g. B24 instead of 2.24).
- Base numbering systems on architectural structure and user flows, not on building or section functions, as these might change.
- Allow for the possibility of future expansion by adding breaks in sequences at natural points. (e.g. If in a “Terminal B” there were 6 gates in one concourse and 33 in another, number them B2–B7 and B20–B53. This allows room for the addition of 12 gates in the first concourse.)



Breaks in sequences will allow for future expansion (For illustrative purposes only—not actual sign designs)

- Avoid using letters that may be confused with numbers (O, I, Q) or with functions (P for parking).
- Test the understandability of numbering of below-ground levels with users, as there is not a clear international standard.
- Be consistent in numbering system and layout across the entire airport campus, including all buildings, locations, and floors.

## 3.4 Information Strategy

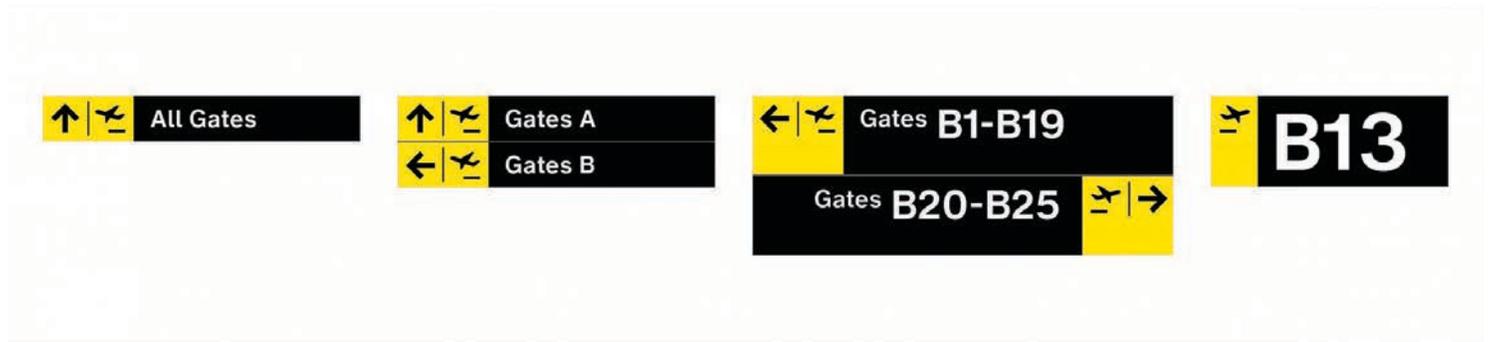
Passengers seek different information at key steps along their journey through the airport. It is important to anticipate these needs and provide the right information at the right time.

The overarching information strategy for wayfinding in the facility must be considered holistically. This section outlines the principles that govern design, placement, and programming of information in the wayfinding system.

### 3.4.1 General to Specific

Passengers seek information to proceed in the correct direction for their destination. They scan directional signs for the information necessary to continue. Too much information is almost as bad as too little. Surplus information adds visual clutter and will be ignored by passengers.

To ensure information on directional signs is complete but as concise as possible, present it progressively with increasing specificity. For example, use general terms like “Ground Transportation” if passengers seeking various types of transportation all proceed in one direction.



Progression of signs: All Gates > Gates A, Gates B > Gates B1-19, Gates B 20-25 > Gate B13

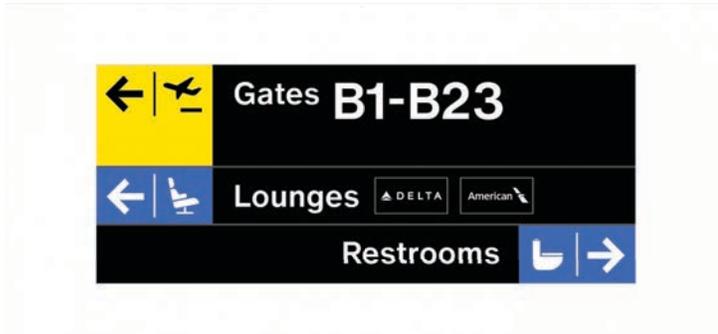
Further along, more specific information is introduced. For example, at a decision point where the route to various destinations diverges, more detail is added.

The final level of specificity is at the destination itself, where an identification sign signals completion of the journey.

## 3.4.2 Direct and Confirm

Signage and other wayfinding cues inform and direct passengers at decision points (i.e. locations where a choice between different possible directions must be made).

All destinations that are part of the destination list will be included on **directional** and **identification** elements.



Directionals provide directions on which way to go

### Directional Elements

A directional element is the combination of text, pictogram, and arrow. At decision points, they tell people which way to go to reach a certain destination. Relevant destinations that are not directly visible need to be indicated by directional elements. In some cases, such as lengthy corridors and concourses, directional elements should be repeated simply for confirmation purposes. Once a specific destination is mentioned on a directional element, it must be included on all consecutive directional elements up to the destination.



Identification signs are used to identify the final destination

### Identification Elements

Identification elements show passengers where a particular destination is located. All destinations included on directional elements must be identified to confirm upon arrival. This also applies to destinations which are not clearly delineated areas, such as the arrivals area.

Identification elements can do more than just confirm arrival. When visible and legible from decision points, they serve the same purpose as directional elements, i.e. providing information on which way to go. Therefore, choosing a large enough scale and clearly visible placement may mean that fewer directional signs are necessary.

### 3.4.3 Categorize Information

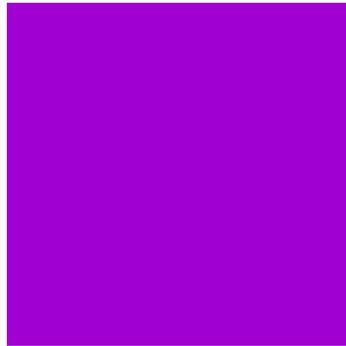
At main decision points, directional elements include many different destinations. To help passengers find what they're looking for, destinations are divided into four categories:

- **Flights & Operations** include Check-in, Gates, and Baggage Claim
- **Connecting Flights** for passengers arriving on international flights, used only from arrival to Baggage Re-check
- **Exit & Ground Transportation** include Exit, Parking, and Ground Transportation
- **Services & Amenities** include Restrooms, Shops, and Lounges

In order to clearly distinguish between categories on all signage and information, each category is coded with a different Color. All destinations are assigned a category in the [Terminology List](#).



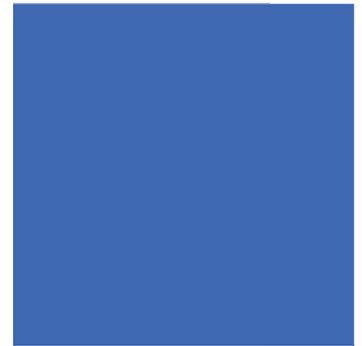
**Flights & Operations**  
Yellow



**Connecting Flights**  
Purple



**Exit & Ground Transportation**  
Green



**Services & Amenities**  
Blue

Color coding helps passengers scan signage and find the destination they're looking for. For instance, when hurrying towards their gate, passengers quickly learn to ignore information that is color coded green or blue, focusing solely on directions coded in yellow.

For color coding to work effectively, a maximum of four colors may be used.

#### **Process-based vs. Location-based Color Coding**

People quickly learn to use a color-coded signage system, when different colors are used to distinguish between process-based categories. Color coding to distinguish between different locations has proven to be much less effective.

For instance, using colors to distinguish between different building levels does not work well. This type of color coding requires conscious attention and information processing. Users need to be aware that the color is meaningful and must remember in order to find their destination.

### 3.4.4 Focus on Destinations

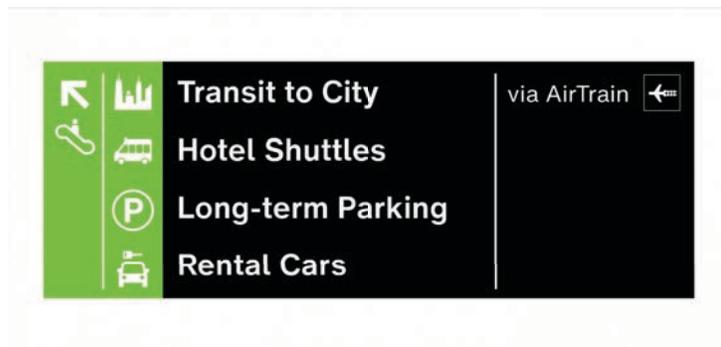
Passengers focus on finding destinations rather than a particular mode or means to get there.

For instance, once landside, connecting passengers will look for the gate and/or terminal of their next flight, and arriving passengers will look for cues to get to the city. Directional information referring to “Terminals” and “City” destinations will better match their expectations than signage directing only to “AirTrain” — a term not universally understood. So all signage and wayfinding cues direct to the destinations themselves, instead of mode of transport (which is included as secondary information).

Similarly, international arriving passengers have no choice but to pass through Passport Control and Customs as they find their way out of the airport. Therefore, Passport Control and Customs need not be included on directional signage; simply “Exit” is included.

For more examples of how this strategy is applied, see Information Diagram guidance.

The only exception to this is Connecting Flights.



Prioritize destinations over the process

### 3.4.5 Connecting Flights

One important exception to Focus on Destinations is Connecting Flights. Though not a specific destination, “Connecting Flights” has its own color-coded category. This is because the process required (claiming and re-checking baggage before proceeding to a connecting flight) is unlike other international standards and is, therefore, unexpected.

Dedicated treatment brings attention and prominence to the unusually complex steps of the process, easing passenger experience at a time of potentially increased stress.



This treatment is only applied to the most unique and complex steps of the connecting process. The Connecting Flights “destination” and color treatment is only included in the international arriving journey: from arrival until the Baggage Re-check step. After Baggage Re-check, the color is no longer used. Connecting passengers join the departing flow, following yellow-coded destinations to navigate to their next flight.

For examples on how the Connecting Flights treatment appears throughout the international arriving journey, see Information Diagram guidance.

# 4 Programming & Placement

- 4.1 Wayfinding Elements
- 4.2 Programming
- 4.3 Location Strategy
- 4.4 Placement

## 4.1 Wayfinding Elements

Successful navigation is about receiving the right information at the right time. It is the foundation for an exceptional airport experience, ensuring customers don't have to worry about finding their way.

To meet customer needs, wayfinding information must be clearly visible, located where customers expect it, and convey the information they are looking for. This requires an understanding of both their needs and the environment. Along the way, user needs are tied to processes, decisions they must make, and conditions of the environment. This information serves as tools and cues to guide users to their destination.

Programming is the process of determining the content and general location of each wayfinding element. Placement strategy pinpoints the physical location of each element. These processes are highly dependent on the facility. They must be coordinated between developers, architects, operators, designers, and fabricators.

## 4.1.1 Overview of Elements

The overview is arranged by type of sign and possible alternatives. It includes standard sizes and mounting options to accommodate a variety of architectural conditions.

Signs are categorized by:

- **Type:** Top-level description.
- **Function:** Purpose(s) of the sign. Some have multiple functions, e.g. Gate identification signs indicate flight status and destination, so they are both Identification and Information.
- **Location:** Where the sign is typically found.
- **Graphic:** How the information is presented.
- **Structure:** Mounting, fabrication and placement.
- **Size:** describes the measurement of a sign, typically the size of the graphic face. Sizes will differ amongst sign types. Note: Standard dimensions are not available for all sign types.
- **Lines:** On some signs, height can be expressed by how many lines of messaging it contains.

This overview is intended as a general guideline.

Type	Function				Location			Graphic						Mounting						Size					Line																
	Identification	Directional	Information	Regulation	Interior	Exterior	Interior AirTrain (platform)	Static	Dynamic	Illuminated (internal)	Non-illuminated	ADA compliance	Wall	Suspended	Ceiling	Caniliever	Post	Podium (e.g. on carousel)	Freestanding (totem)	Movable	Architectural integration	Vinyl (e.g. on glass)	Wall plaque	Special	X-Large	Large	Medium	Small	Wall Plaque	1-Line	2-Line	3-Line	4-Line	Variable/other							
Terminal ID	•					•		•		•			•								•			•	•																
Station ID	•					•	•	•		•			•	•	•						•			•	•	•															
Door ID	•					•		•		•			•								•	•				•	•														
Curb ID	•					•		•	•	•				•	•		•									•	•														
Check-in ID	•				•			•	•	•			•	•	•	•					•					•	•														
Gate ID	•				•			•	•	•			•	•	•	•					•					•															
Facility	•				•			•	•	•			•	•	•	•					•					•	•	•													
Bag Claim ID	•				•			•	•	•				•	•			•			•					•	•														
Room ID	•				•		•	•			•	•	•										•															•			
Lane Sorting		•			•			•	•	•			•	•	•		•		•		•	•				•	•	•	•												
Directional		•			•	•	•	•	•	•			•	•	•	•	•				•	•				•	•	•	•												
Trailblazer		•			•	•	•	•	•	•								•		•																				•	
Wait Time			•		•				•					•			•		•								•	•	•												
Directory			•		•		•	•	•	•	•		•	•							•					•	•													•	
Hours			•		•			•	•		•											•				•	•	•												•	
Information/ Interactive Kiosk			•		•		•	•		•		•	•						•		•					•	•	•												•	
FIDs			•		•		•	•		•			•	•	•	•	•	•	•		•					•	•	•	•												•
BIDs			•		•			•		•			•	•	•			•	•		•					•	•	•	•												•
GIDs			•		•			•		•			•	•	•			•	•		•					•	•	•	•												•
Elevator Directory			•		•		•	•		•		•											•			•	•														•
Bus Directory			•		•	•	•	•	•	•							•		•							•	•														•
Airline/Check-in Directory			•		•			•	•	•							•		•							•	•														•
Maps			•		•	•	•	•	•	•	•	•	•				•		•		•					•	•	•	•												•
Regulatory Curb (vehicular)				•	•			•		•				•			•										•	•													•
Regulatory				•	•	•	•	•		•	•		•				•			•	•	•	•																		•
Emergency				•	•	•	•	•		•	•		•				•			•	•	•	•																		•

Overview of signs in the wayfinding system

## 4.1.2 Choosing a Display Type

While the function of a sign will ultimately determine if the content should be static or digital, there are recommendations based on typical conditions that can help to inform this choice. Generally, digital signage should not be used in situations where the information being presented does not or should not change. This is common along routes and at destinations. Along the route, the directionals provide users the information and reassurance that the route they are using will reach their intended destination. The identification signage at destination points serve as the final confirmation that the user has successfully reached their destination. In both of those situations, consistency is critical to dispel any doubt and the messages should be fixed.

### Using Static Signs

Use a static signage solution if:

- Information is not expected to change
- Information needs a more reliable graphic display

Use static signage for these wayfinding purposes:

- Directing (directionals)
- Identification of spaces (check-in numbers, gate numbers, door numbers, facilities)
- Directories (elevators)
- Decision making (walk times)
- Emergency (routing information)
- Regulations (hours, rules)

### Using Digital Signs

Use a digital signage solution if:

- Information fluctuates or is presented temporarily
- Information changes based on the needs of the user
- Information changes based on operations

Use digital signage for these wayfinding purposes:

- Messaging (visual paging, general communication, marketing, foreign language and PSAs)
- Flight-related information (FIDs, GIDs, BIDs)
- Airline-related information (check-in counter and baggage)
- Directories (for description of amenities, orientation at check-in, interactive kiosks)
- Decision making (wait times to influence journey)
- Directing (flexible message directionals)
- Sorting (lane sorting IDs)
- Navigation (contextual directions, information about changing routes)
- Transit information (train status, schedules)

Digital signage should not be used in situations where the information being presented does not or should not change. This is common along routes and destinations. Along the route, the directionals provide users the information and reassurance that the route they are using will reach their intended destination. The identification signage at destination points serve as the final confirmation that the user has successfully reached their destination. In both of those situations, consistency is critical to dispel any doubt.

If a digital display has been implemented for a directional sign or an identification sign, the primary wayfinding messaging displayed on the display must not change. The display should not fluctuate with non-wayfinding related content, such as advertising, branding, promotional messages, or rules/regulatory information. The display should not display any content or messaging not approved by the Port Authority, including ornamentation and animation.

One additional benefit of digital displays is that during times of emergency, these displays may change to provide emergency information and/or emergency routing. There is a very important need to carefully coordinate any emergency conveyance system so that during time of need, these systems work effectively. Due to this very critical coordination, and infrequent use, these emergency information systems should be tested regularly.

## 4.2 Programming

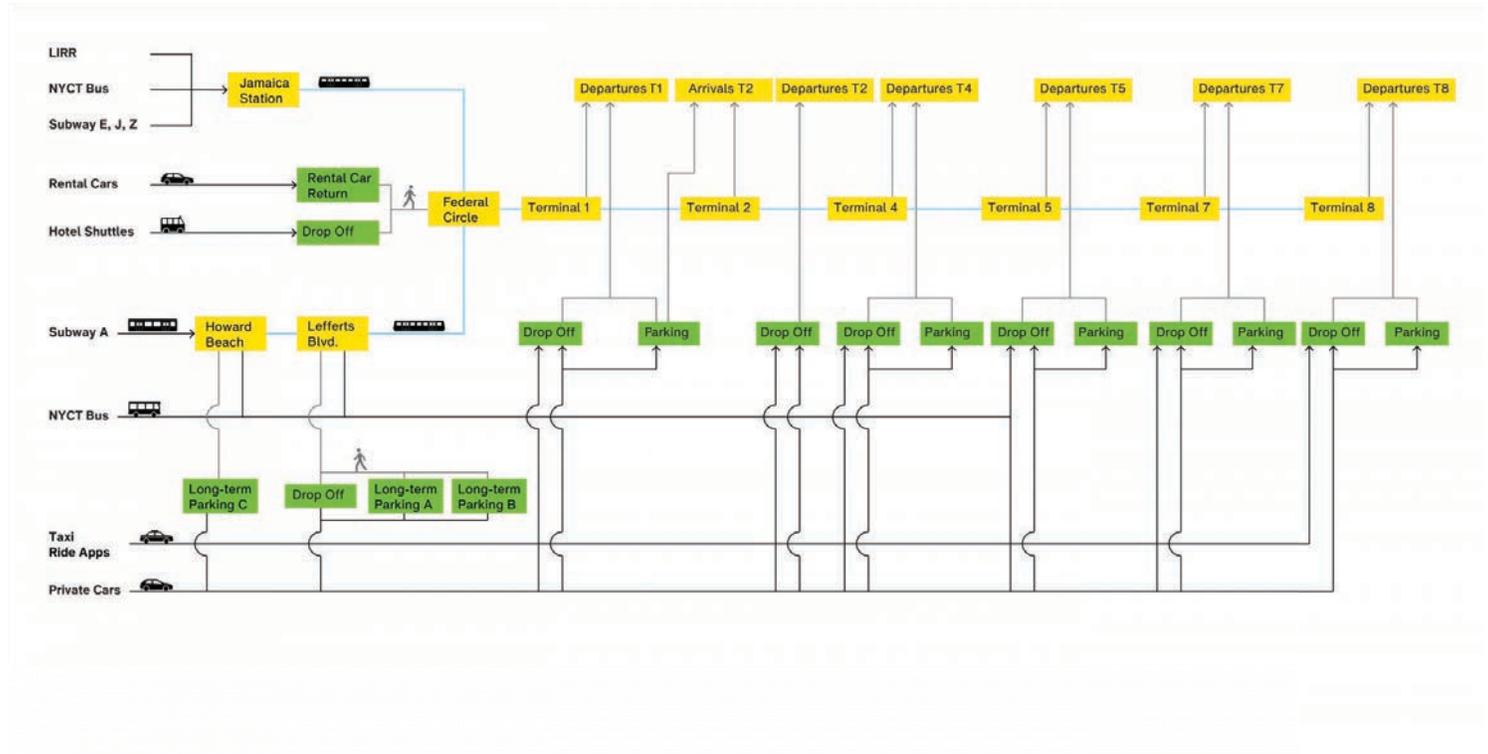
Programming is the first step of every sign project to assess and identify needs. Programming determines what information is needed and the sign types, locations, and messaging to convey it. It is a critical part of establishing a new wayfinding program, and is useful in the future for adding, replacing, or removing signs as needs change.

The **Process Diagram** is the starting point, providing a high-level understanding of general user needs along the steps of their journey. Then the **Information Diagram** adds details of information needed at key points. The **Flow Plan** maps user routes through a space. Finally, all this information comes together and is precisely mapped to the facility environment on the **Sign Plan**.

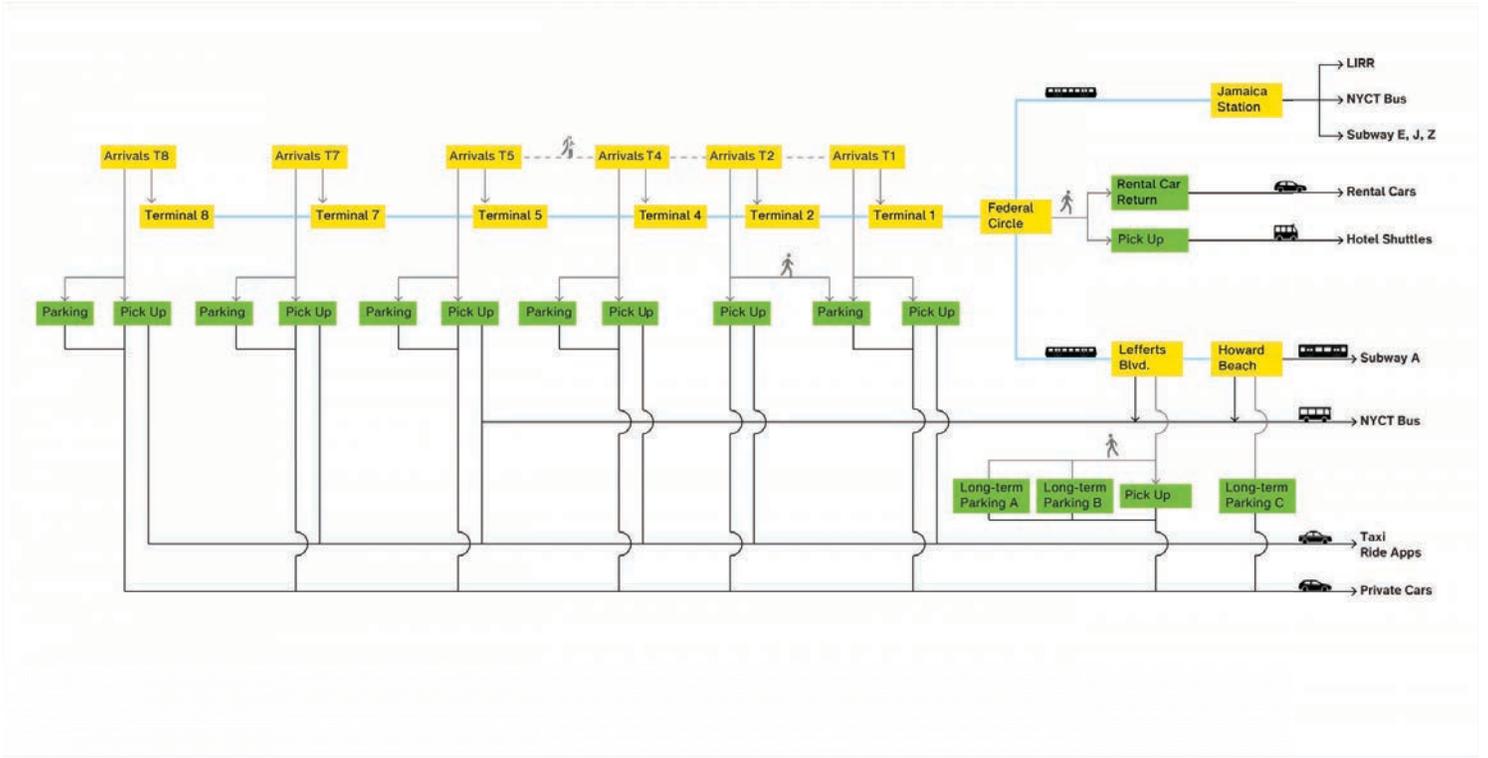
## 4.2.1 Process Diagram

The Process Diagram is an abstract representation of the user journey. Each process step is identified, indicating a destination or decision point and options available at each step.

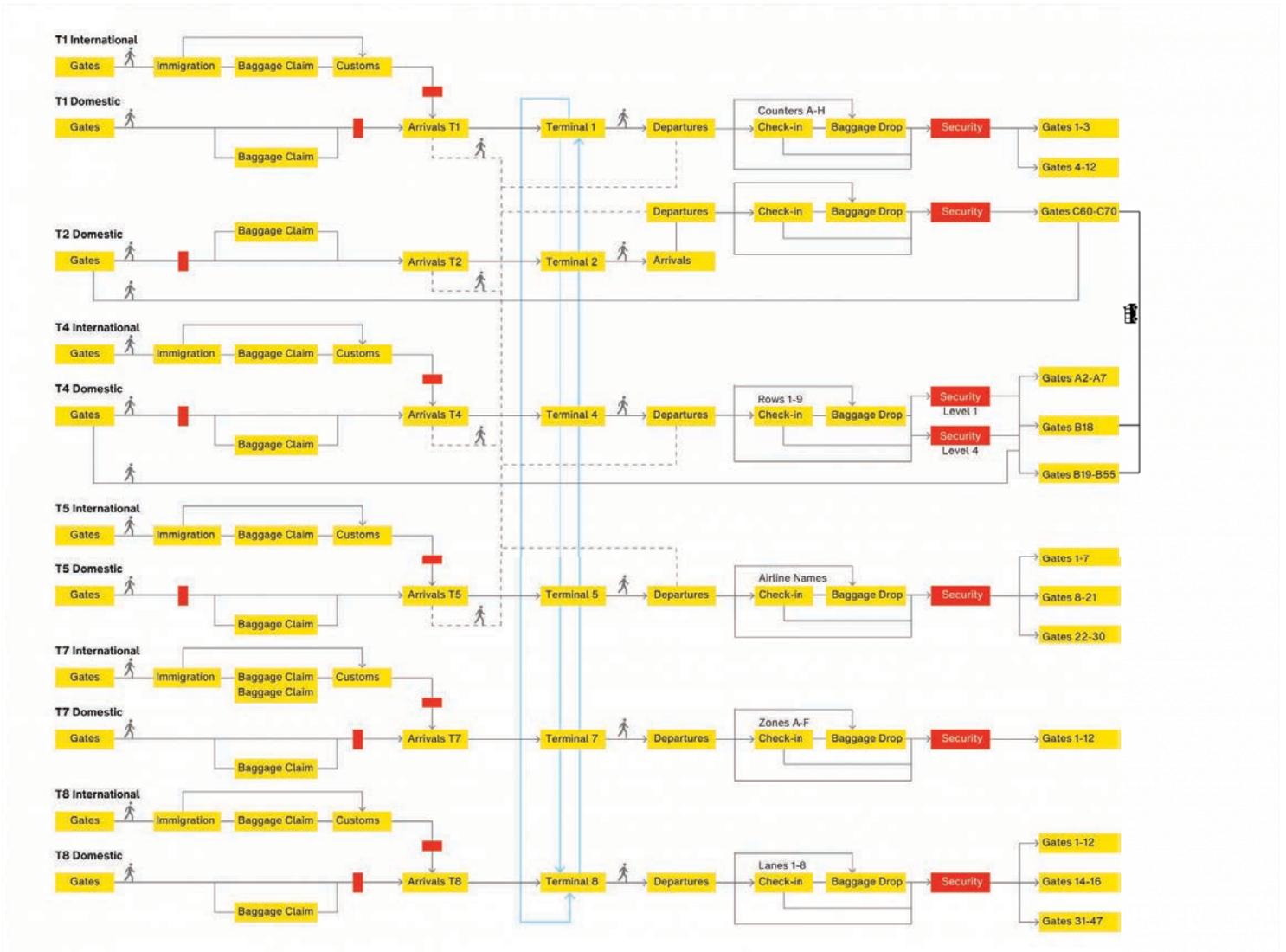
A typical Process Diagram for arriving passengers shows the steps from gate to ground transportation.



An example of a JFK-specific process diagram, showing the passenger departure process



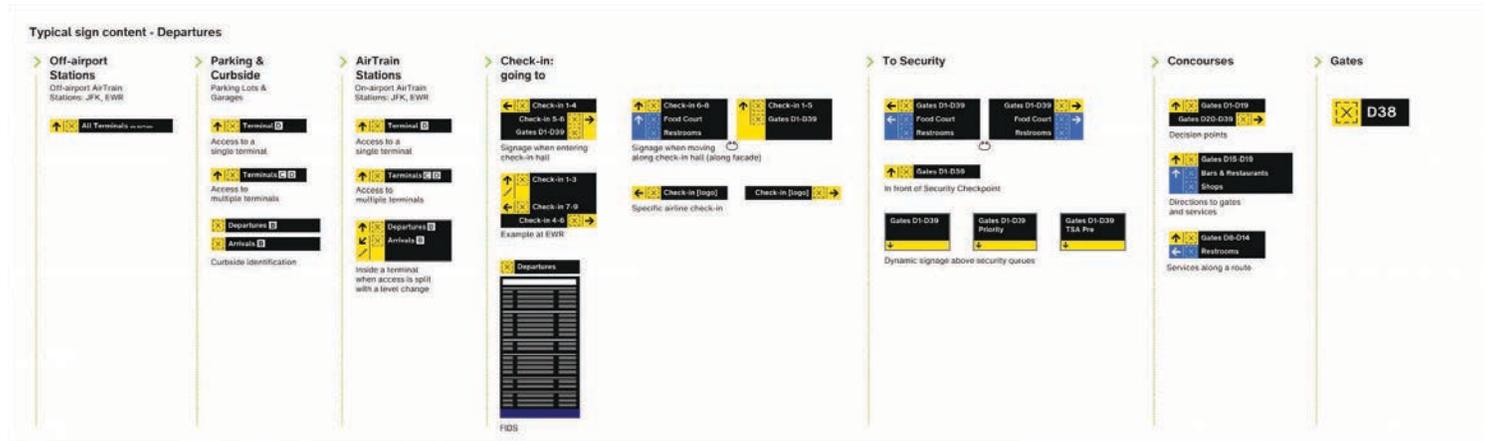
An example of a JFK-specific process diagram, showing the passenger arrival process



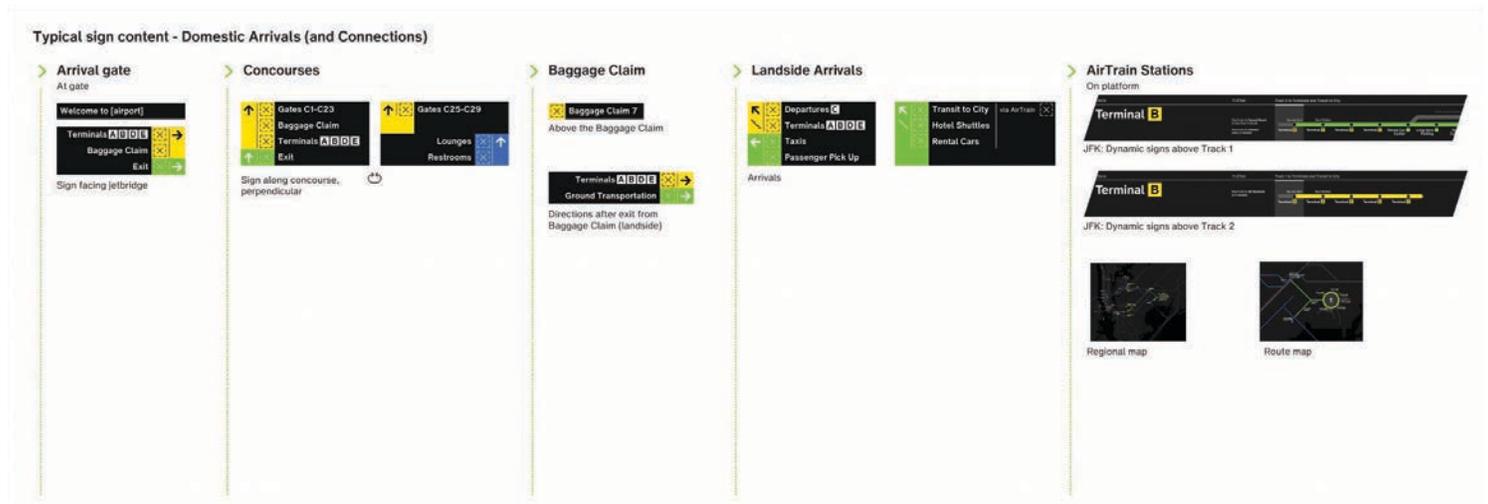
An example of a JFK-specific process diagram, showing the connections process

## 4.2.2 Information Diagram

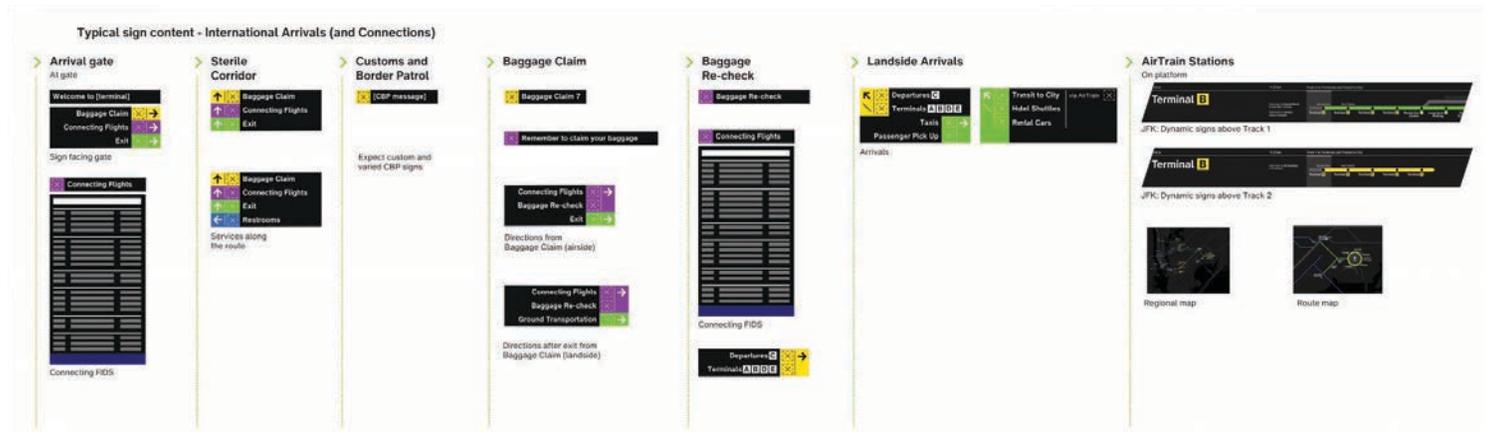
Building upon the Process Diagram, the Information Diagram is developed to understand the information needed at each point. It takes into account the Information Strategy, specifying the information conveyed and where it is provided.



Information Diagram showing the Departure flows.



Information Diagram showing the Domestic Arrivals (and Connection) flows



Information Diagram showing the International Arrivals (and Connection) flows

## 4.2.3 Flows

A *flow* is the path a user takes between two destinations. **Main flows** are primary routes. **Alternate flows** and **special flows** are secondary, such as detours through commercial areas, priority lanes, and paths that a minority of passengers use. To ensure a smooth and comfortable process, information should be provided according to flows.

Overhead signage allows passengers to view wayfinding information while continuing along a main flow. Placing signage and wayfinding elements in a structured, predictable way, according to Spatial Zoning guidelines, helps passengers find information where they expect it.

### Mapping Flows

To determine position, orientation, and content of wayfinding signs, the first step is to determine the passenger flow.

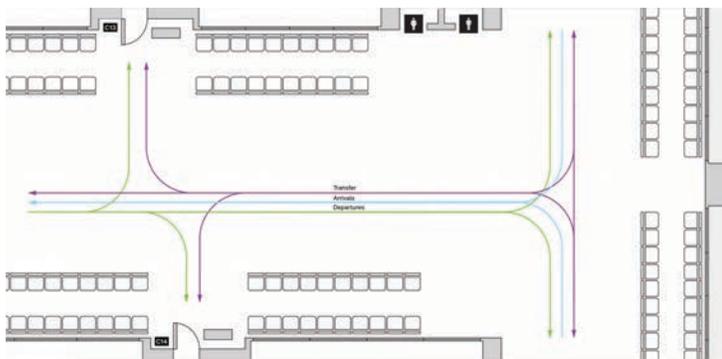
Passenger flows are drawn on terminal plans to show the movement of people through space. These are known as Flow Plans. Flows are shown as lines with directional arrows. Flows are colored to differentiate between user types, e.g. Arriving, Departing, and Connecting Passengers. Subsets of these users can also be identified, e.g. Arriving Passengers picking up baggage or Departing Passengers with carry-on baggage only.

Ensure all relevant flows are included.

- **Main flows**  
Primary routes from one destination to another, e.g. check-in to departure gate, arrival gate to baggage claim
- **Alternative flows**  
Secondary routes, e.g. shortcuts, detours through commercial areas
- **Special flows**  
Secondary routes used by some, e.g. accessible routes for wheelchairs, priority security checkpoints
- **Facility flows**  
From main flows to facilities, e.g. restrooms, lounges, pet relief areas

Flows that are not followed by passengers are typically omitted.

- Routes that are not part of any passenger's process, e.g. to 'Special assistance' or 'Tour operators'
- Routes for employees and crew, e.g. to crew gates, airport offices

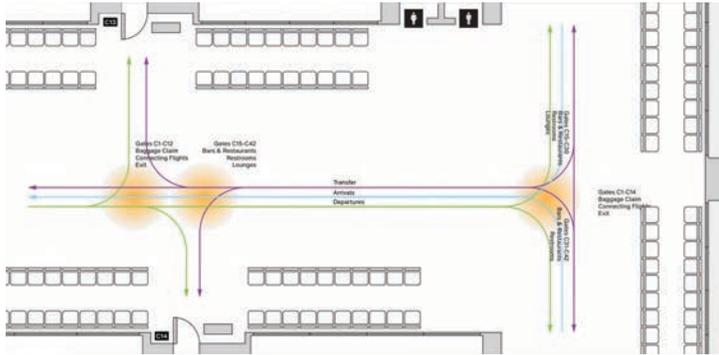


Flows are shown color coded on the plan and identified by user type.

## 4.2.4 Decision Points

Passengers encounter points where they must make a decision on which direction to go to reach their destination. These are known as *decision points*. There should always be a directional sign, so passengers are quickly able to proceed. The only exception is for destinations that are clearly visible from the decision point, which helps keep the environment uncluttered by unnecessary information.

Using the flows, identify decision points by circling each one on the flow line and identify the destinations that are reachable.



Decision points are shown on the plan, where a passenger has to confirm or change course. The destinations that can be reached are shown at each decision point.

### Programming Digital Signage

Digital signs are to be placed at decision points along corridors, dwell areas, and near destinations. A digital signage program must take into consideration passenger types and usage, and recognize the reliance on personal mobile technologies. This offsets the number of displays needed at dwell areas or along corridors.

When determining the size of a digital sign, future use must be taken into account. I.e., it must be able to display destinations that may be changed or added over time.

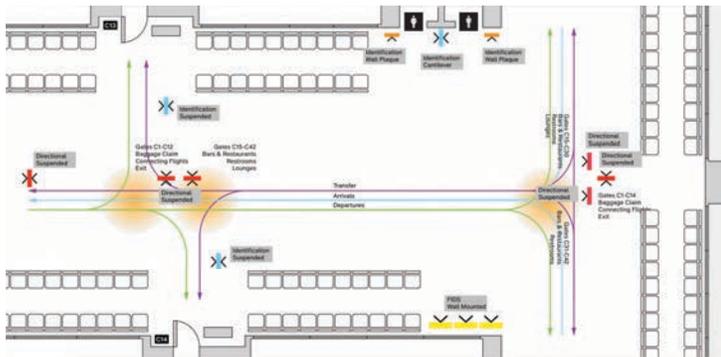
To prevent excessive display installation, the spatial zoning guidelines define areas in the terminal suitable for displaying dynamic data, and also those for advertising media.

## 4.2.5 Sign Plan

The Sign Plan details every sign needed in a specific space, where they should be located, and what their content should be.

Using Flow Plans with identified decision points, determine the exact location and content of each sign. Typically there is a directional sign at every decision point, oriented perpendicular to the passenger flow direction. Signs are placed just in advance of physical points, such as doors or gateways, where a choice must be made.

At each decision point, the wayfinding sign or element needs to communicate available destinations. Use Flow Plans to understand user routes and destinations in an area. Note the flows that cross each decision point and list the destinations reached by those flows on the plan. Determine the correct sign content for each sign using the approved Terminology List.



Signs are shown at each decision point to display the information that is required.

Not every destination accessible at a decision point must be listed on the sign. Passengers only seek information needed at that point. Destinations reached by primary flows should always be prioritized, with secondary destinations included wherever possible.

When there is a high volume of destinations at a decision point, consider:

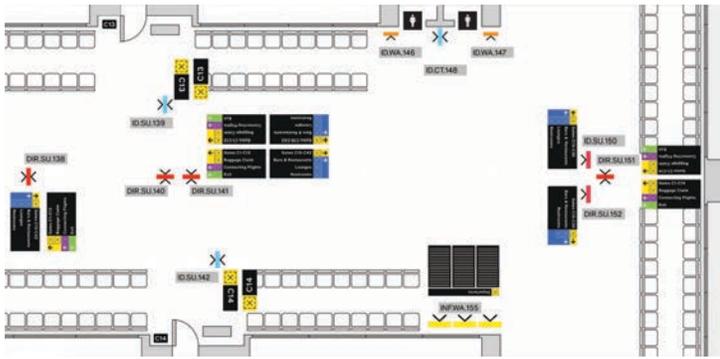
- Destinations to a later stage of the route can be skipped on signs, if logical to the passenger journey, but they must be picked up again on later signs.
- Providing signs later in the path, within sight of the decision point if room for multiple signs does not allow, and in such a way that they reinforce the direction of travel, and do not cause backtracking or confusion.
- Do not omit destinations in the middle or the end of a route. Once a destination has been signed to along a flow, it must be signed for the remainder of the route- though they do not have to be on each sign.

With the content of each sign determined, preliminary sizes and quantities can also be determined.

Depending on the architectural conditions and limitations of the space, it may not be possible to locate enough signs to accommodate all required destinations. Alternate placement of signs or specially designed signs may be considered. Programming is an iterative process that balances the needs, quantity, and location of signs to best inform the user.

### Visual Sign Plan

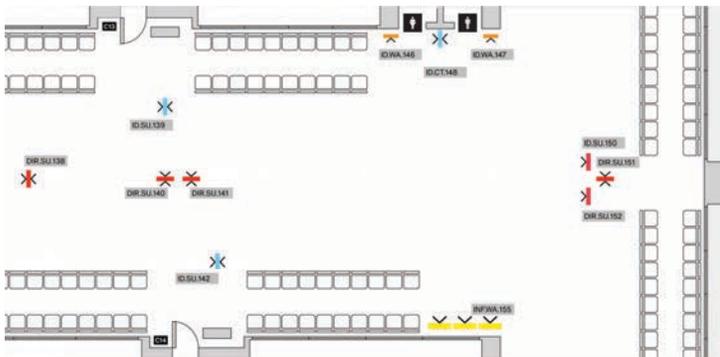
To prepare the document for review, include prototypical sign layouts on the plans. This provides a comprehensive document and enables easier understanding and review of the sign which are programmed. Use preliminary or final layouts featuring the appropriate terminology, pictograms, and arrows to illustrate the signage program.



Preliminary layouts shown in location on a plan for content verification

### Final Sign Plan

Once all sign types, messages, and locations have been determined, final sign codes can be assigned. (Placeholder codes can be assigned during the process, as it may be more efficient to wait for final agreement before assigning sign codes, as the addition or removal of signs may necessitate renumbering.)



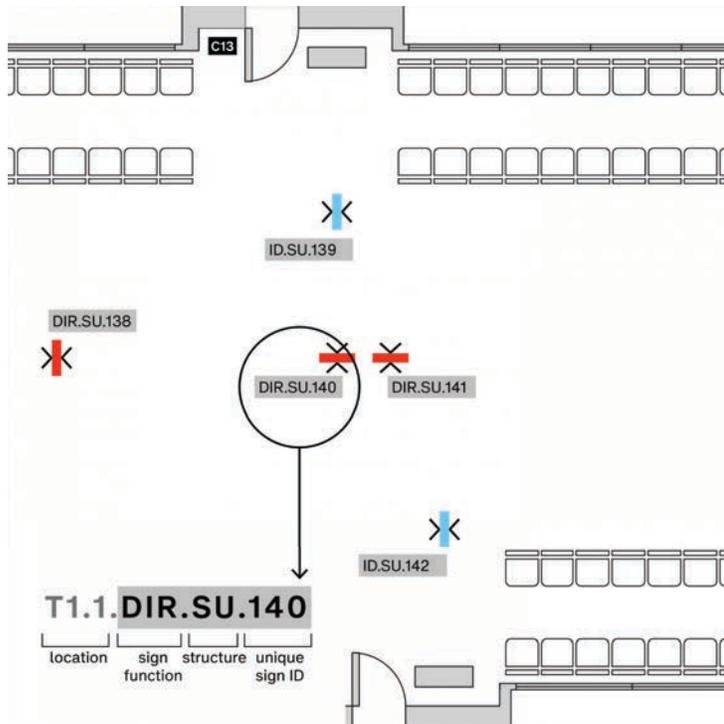
Sign plan showing the sign locations

## 4.2.6 Using Sign Codes

Sign codes give shorthand information on the purpose of a sign. It is also used to identify the sign for tracking purposes. The code is used for cataloguing signs in an inventory and database, as well as noting them on a sign plan.

Each sign code is made up of four elements:

- Sign function
- Structure
- Location and level
- Unique ID



Sign codes use shorthands that indicate the purpose of a sign.

### Sign Code Numbering Guidelines

- Use first digit number to indicate a level.
- Assign a consistent number of digits to account for the estimated number of signs per level. For example, if you anticipate more than 99 signs, use three digits, i.e. 001 to 999.
- If a level is very large, consider subdividing the numbering. Group areas of the building and provide a key.
- Number the signs in a continuous pattern (e.g. clockwise), so that signs are easier to find on the Sign Location Plan.
- Leave gaps in numbering to allow for the addition of future signs. This allows more intuitive groupings to direct to, e.g. 101, 102, 103, 104 (101–104); 110, 111, 112, 113, 114, 115, 116, 117 (110–117); 120, 121, 122 (120–122)

## 4.3 Location Strategy

Location strategy is the process by which a wayfinding element is located in space.

## 4.3.1 Location

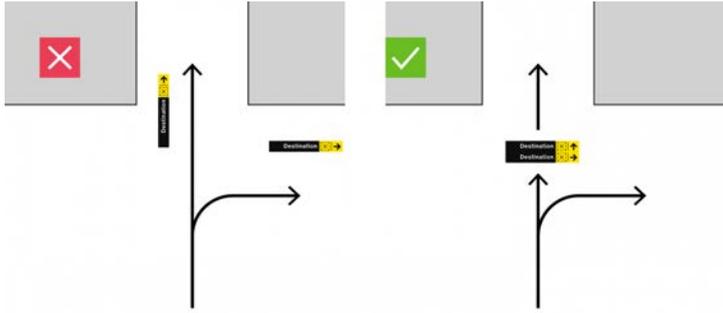
Three types of information must be considered when determining the location of a sign:

- **Decision points:** where do people need information?
- **Field of view:** where will it be visible and legible?
- **Architecture:** are there structures or constraints (such as ceiling heights) that restrict viewing?

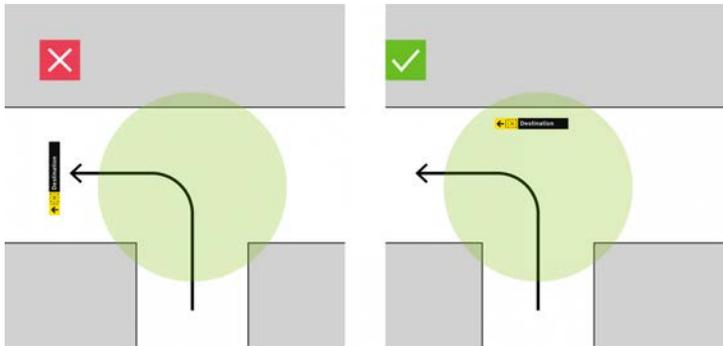
Using this information, identify specific locations for each sign on the map, indicating the orientation (noted by symbol orientation) and unique sign number.

### 4.3.2 Intersections and Elevation Changes

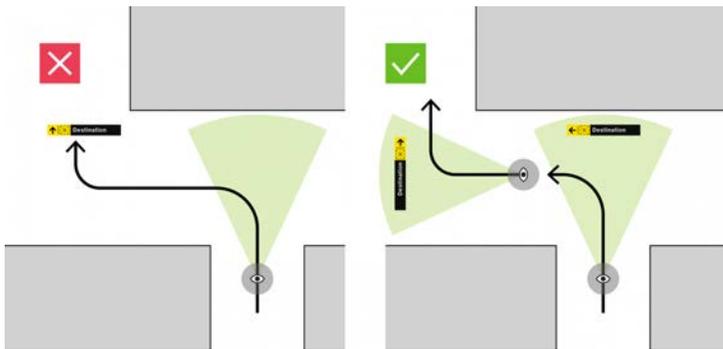
Special consideration is required for visibility of wayfinding elements when user flows turn corners or change levels.



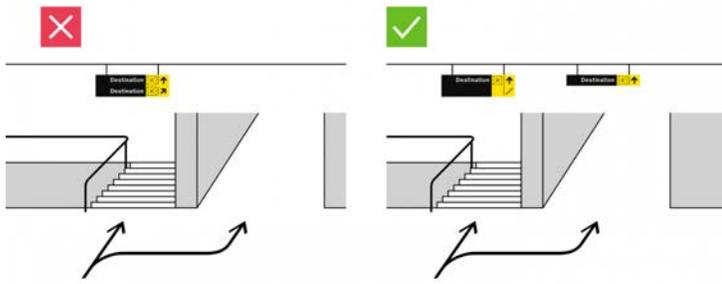
Signs should be perpendicular to the passenger flow.



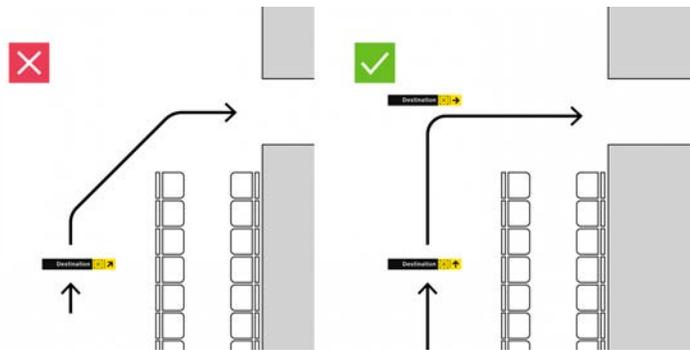
Signs should be visible when entering a decision area



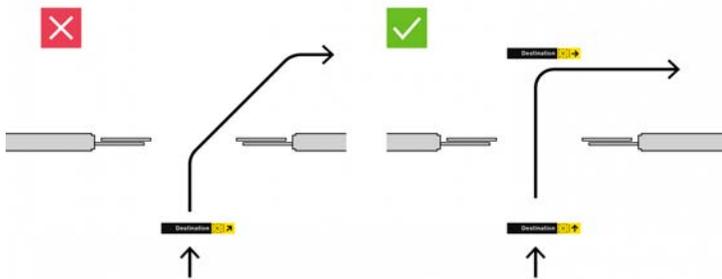
Use directional signs for destinations that are not within the visual field.



Because slanted arrows mean 'keep going left(right)', they can easily be confused with 'going up' (to the next level). This type of arrow should be avoided, unless absolutely necessary/

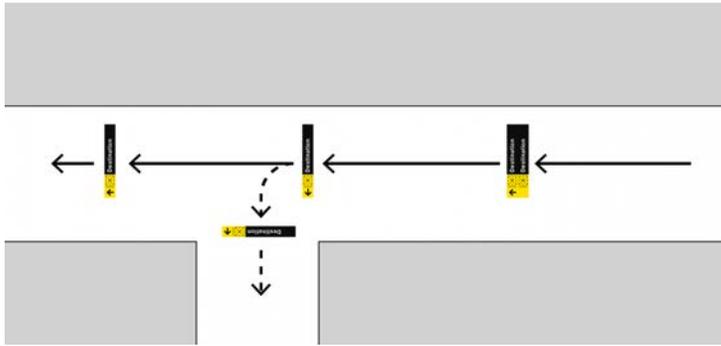


Never combine two steps of routing information on one sign by using a slanted arrow (45°) to communicate 'go straight for a short distance, then turn!' In this case, two signs should be used, to indicate 'go straight' and the next at the decision point to turn.



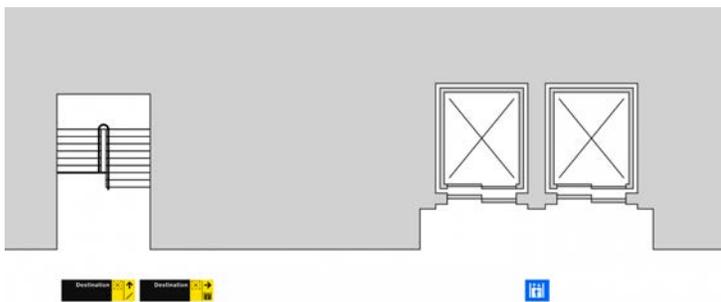
A similar situation occurs when a directional sign is at an exit, but directs users to a destination that is beyond the actual exit.

**Corridors:** if there are no decision points on long paths such as corridors, directional signs should be repeated for confirmation. Confirmation signs should occur approximately every 150 feet, if conditions allow and the destination is not clearly visible.



Confirmation is needed along a long corridor.

**Vertical movement:** signs should be positioned at all points that offer vertical movement (elevator, escalator, or stairs) with directional signs and directories confirming the destinations accessible by the vertical mode.



Always identify vertical circulation options.

**Central locations:** information nodes should be provided in central areas where a variety of information is needed. These nodes may include FIDs, airport maps, and information kiosks, depending on information needs.

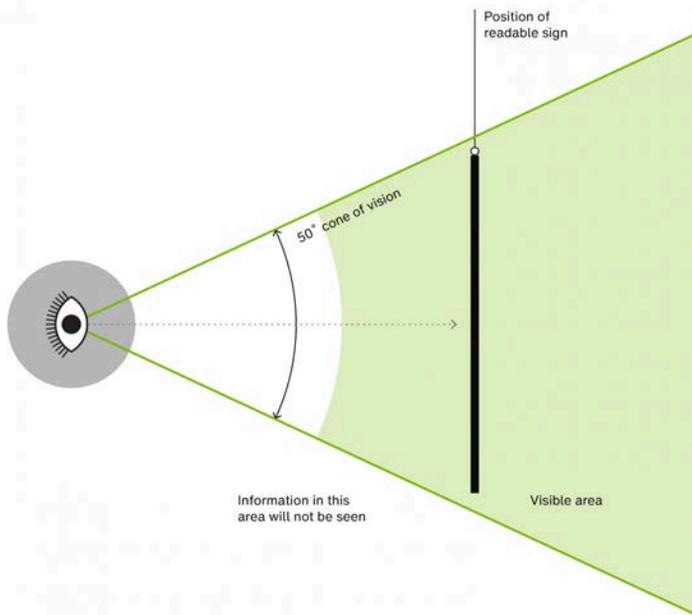
**Destinations:** an identification sign should confirm arrival at a destination.

### 4.3.3 Field of View

People tend not to turn their heads and regularly miss information that is close by, but outside their field of vision. The field of view (or visual field) is the area in which objects can be easily seen by the average person. This explains why people often stumble over low objects like curbs. Signs that are installed very high can also be missed even when they fit into one's field of vision.

#### Horizontal Field of View

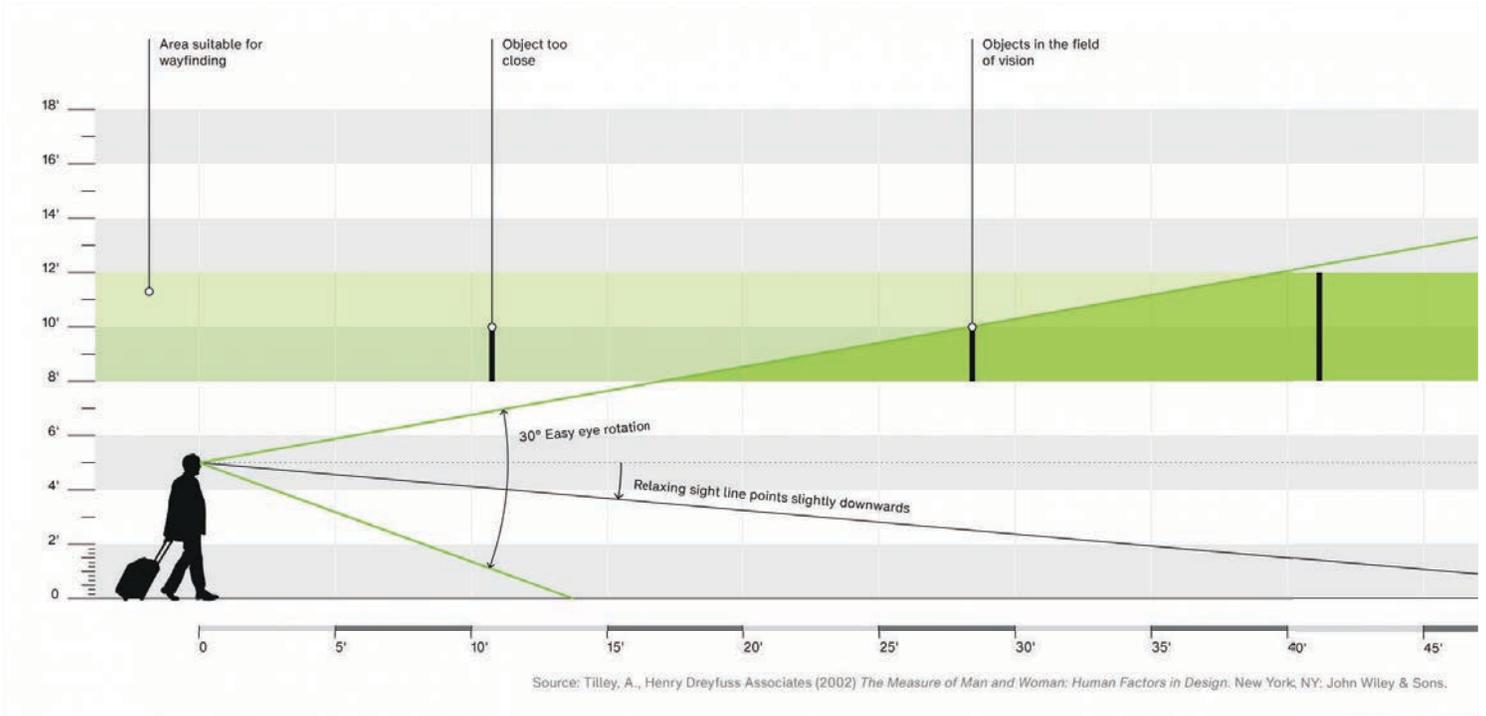
When looking straight ahead, people only see 25° to the left and 25° to the right. Anything that falls outside this 50° spread will not be seen.



The horizontal field of vision is measured left and right from the perspective of the viewer. It covers 50° in front of the viewer. Anything outside the field will not be seen.

#### Vertical Field of View

The average eye level of a person standing is about 60" (43"–51" for passengers in wheelchairs). From this height, the visual field is a cone extending vertically 10° up from the horizon and 20° down. (The cone has a larger area downward because the center of the gaze tends to point 5° down.) Any objects placed outside this vertical visual field can easily be overlooked—or “underlooked,” in the case of overhead signs.



Horizontal field of vision is angled above and below users' comfortable sightline. Any elements out of view are not seen.

## Height

Place all information so it is easily seen by all passengers, including those in wheelchairs and those with visual impairments.

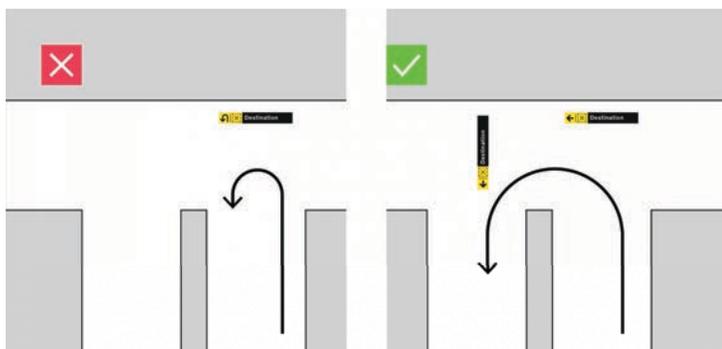
- **8'-0" and higher**  
Large format graphics and text (e.g. directional signage, identification signage, branding)
- **7'-0" to 8'-0"**  
Graphics and text with moderate details or shorter text (e.g. directories, instructions, headers)
- **3'-0" to 7'-0"**  
Graphics and text with fine details or longer text, such as maps, indexes, and rules and regulations
- **2'-0" to 3'-0"**  
Non-critical information, only when space is constricted
- **2'-0" and below**  
No information is allowed in this zone.



Vertical zones allow information to be seen at a comfortable height

### Other Considerations

- Signs that instruct users to make a U-turn for a destination are difficult to understand. Use them only if no other options are available.



Do not use u-turn arrows

- Locate signs to avoid glare. Bright overhead light sources too close to the face of a sign will create a “hot spot,” making the rest of the sign dark by comparison.
- Place signs so they are accessible for maintenance. Placement should be avoided in areas where they can not be easily maintained, such as over moving walkways or escalators.
- Wayfinding elements should not block each other. Allow enough distance between them to avoid clipping information on signs behind.
- Do not obscure other pertinent information, such as emergency signs or exits.

## 4.4 Placement

Placement takes into account three-dimensional space, considering vertical placement to ensure proper visibility and a common baseline for the placement of wayfinding information. Below are a few scenarios showing how the combination and placement of these elements create clarity for the user.



Sample wayfinding elements for placement

### Vertical placement

All suspended and cantilevered signage will be placed such that the bottom elevation is 8'-0" above finished floor. At this height signs are easy to identify – higher placed signs can be overlooked, or 'underlooked' in the case with signs located too high. At this height, signs will also be outside of reach of most passengers, limiting those who can touch them. By lining up all signage at one bottom elevation a continuous plenum or signage zone will be created, and the wayfinding signs will also be visually separated from commercial messages.

Identifications signs that are placed on totems, such as gate identification, will also have to main identifying element located at 8'-0" above finished floor. This will further strengthen the wayfinding zone.

In large spaces, where long viewing lines can be guaranteed, the bottom elevation may be increased to 10'-0" above finished floor. Please note that this does mean that all signage in that area will have to bottom align at 10'-0", this may not be limited to individual signs or sign types.

### Architectural Integration

Advances in display technology allow for a variety of sizes and forms. So displays can be specified to complement the architecture of the terminal. Displays can be integrated into walls and contour to the forms of the environment. This can create a cleaner look minimizing visual distractions. It also decreases the need for freestanding structures that potentially impede passenger flow. It is important to note that when a display is being integrated into a wall or another architectural element, it should be done in a way that allows for the display to be easily removed from its position for maintenance purposes or replacement without damaging the wall or structure. Displays can not always be replaced 1:1, so flexibility with size is important, especially long-term, when planning for architectural integration of displays.

In situations where displays cannot be integrated into the wall, or a freestanding or suspended sign is more ideal, refer to the guidelines for mounting.



Example of an integrated screen in the architectural environment (Munich)

**Monitors**

Ceiling mounted Gate IDs and digital displays should also be placed at 8'-0" above finished floor. When digital displays are wall mounted, they can be placed a bit lower to increase legibility. Do not place digital displays below 6'-0" above finished floor, to prevent passengers blocking the view for other passengers.

**ID signs above doors**

Wall mounted identification signs, such as elevator identification or the identification of an exit door, need to be center mounted above the door or opening.

When multiple elevators, entrances or doors are present, then the sign will be centered between the doors. This will be a common occurrence with restrooms that have adjacent entrances for men and women.

**Floor mounted signs**

Freestanding post mounted signs should be placed outside the flow area, so to avoid passengers running into them or hitting them with carts or luggage as much as possible.

Likewise, totems must be placed outside the main flow, and perpendicular to the path of travel. When using totems for Gate IDs, this means that these will be placed inside the bounds of the hold room area, outside the main concourse walking area.

**Information signs**

Information signs, such as directories or maps, which are intended for passengers to interact with or walk up to, should be mounted at a comfortable height. The area for this information is between 3'-0" and 7'-0" above finished floor, though there are some exceptions as noted in [Field of View](#).

**Super graphics**

Super graphics should be mounted as high as possible, but may not extend beyond 8'-0" above finished floor, to prevent them disturbing the wayfinding zone.

**Landside curbs**

Landside curb signs should take vehicle traffic into account. This means that signage in this area must either be placed outside the area where cars, and other tall vehicles such as vans and shuttles, will be present, or must be placed at such a height that vehicles can move underneath.

Since drivers are more likely to miss signs that are placed too high – because looking high up is dangerous while driving a vehicle – it is best to place landside signs outside the car flow. Signs may be placed higher if there is sufficient distance to look at a sign from, such as long roadways.

**ADA room identification**

In compliance with the Americans with Disabilities Act (ADA), all room identification signs are to be placed 60 inches from the floor to the top of the sign, so that the tactile information is within the proper area. Additional information regarding the ADA is provided in Resources.

**Signs at elevators**

Egress maps indicating fire evacuation routes are mounted above elevator call buttons.

# 5 Design Elements

- 5.1 Color
- 5.2 Typography
- 5.3 Arrows
- 5.4 Pictograms
- 5.5 Brands

# 5.1 Color

Wayfinding information must stand out in a busy environment. Along with illumination, color is one of the strongest tools to achieve this. The color palette has been chosen to ensure wayfinding elements are conspicuous, provide optimal contrast for legibility, and bring a sense of place to the airport environment.

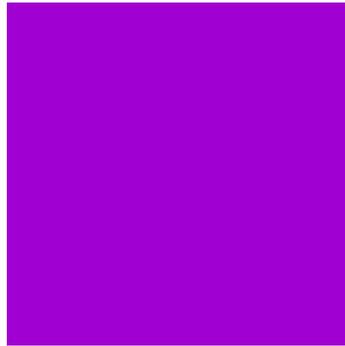
Color is also an organizing tool to categorize destinations for easier scanning of information. Text is always accompanied by a color field based on the category of the text. The color field complements an otherwise neutral palette of white text on a black background for maximum contrast.

Primary color specifications are defined by application and category:



**Yellow**  
Flights & Operations

sRGB 255 225 0  
HEX #FFFE100  
CMYK 2 1 99 0  
PMS 108C  
3M 3630-15



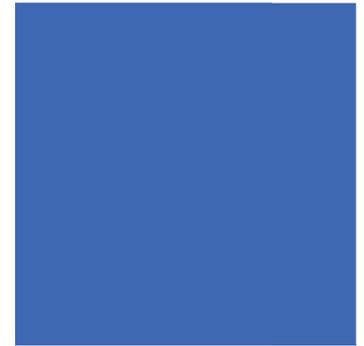
**Purple**  
Connecting Flights

sRGB 160 0 209  
HEX #A000D1  
CMYK 65 94 0 0  
PMS 266C  
3M 3630-158



**Green**  
Exit & Ground Transportation

sRGB 78 168 45  
HEX #4EA82D  
CMYK 57 0 100 0  
PMS 368C  
3M 3630-106



**Blue**  
Services & Amenities

sRGB 0 102 245  
HEX #0066F5  
CMYK 88 48 0 0  
PMS 300C  
3M 3630-97

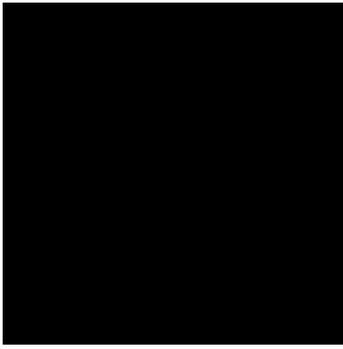
For secondary messaging found on emergency and regulatory signage, the color specifications are as follows:



**Red**  
Emergency & Regulatory

sRGB 238 22 21  
HEX #F03013  
CMYK 0 93 100 0  
PMS 032C  
3M 3630-43

The system is accompanied by tertiary colors used for background, text, and dividers:



**Black**  
 Background  
 sRGB 0 0 0  
 HEX #000000  
 CMYK 0 0 0 100  
 PMS Neutral Black  
 3M 3630-22



**Dark Gray**  
 Separator  
 sRGB 113 114 115  
 HEX #717273  
 CMYK 0 0 0 65  
 PMS Cool Gray 9  
 3M 3630-61

**White**  
 Messaging  
 sRGB 255 255 255  
 HEX #FFFFFF  
 CMYK 0 0 0 0  
 PMS -  
 3M n/a

[Download Adobe CC Swatch Library \(.ai and .ase\)](#)

The color-coded category of each destination can be found in the [Terminology List](#). Each destination belongs to only one category.

To achieve the same appearance across multiple applications—such as illuminated signs, non-illuminated directories, and digital screens—the color palette is defined in multiple color specifications for illuminated, non-illuminated, print, and digital applications. Make sure to use the correct format for the application.

For more guidance on where and how to use color, please refer to [Sign System – Usage](#).

# 5.2 Typography

## 5.2.1 Typeface

The wayfinding system at Port Authority airports exclusively uses *Helvetica Now for PANYNJ*, which is available in two weights, Semibold and Regular. No other typefaces or weights may be used for wayfinding applications

### Helvetica Now for PANYNJ Semibold

The dominant and default weight used in all wayfinding and identification signage. The semibold weight is optimized for legibility.

### Helvetica Now for PANYNJ Regular

A companion to Semibold for clarification or to indicate a break in the message structure. It used for all secondary text as well as ADA-compliant room Identification signage.



Some of the more distinctive characteristics of Helvetica Now PA

### Helvetica Now for PANYNJ Bold

A weight to be used in a supporting role only, in limited, text-heavy wayfinding elements, such as Rules & Regulations, Digital displays, etc.

In particular, do not use any commercially available versions of Helvetica or Helvetica Now. These fonts have not been optimized for wayfinding use.

The optimization balances the boldness and definition needed for white-on-black illuminated text. It also features more open counters in characters like C, c, e, and 3, which makes each character more distinct and improves legibility from a distance.

**Helvetica N**

**ow**

**for PANYN**

**J**

**ABCDEFGFG**

**HIJKLMNO**

**PQRSTUVWXYZ**

**WXYZ**

**abcdefghijkl**

**klmnopqrs**

**tuvwxyz**

**12345678**

90

&- ,•

Sizes for illustrative purposes only

[Download Fontset](#)

## 5.2.2 Type Size

For simplicity of execution and coherence of the system, standard type sizes have been defined to correlate with standard messaging and sign types.

Standard Type Sizes	
5/8"	OFFICE Forward to New York State Code
1"	End of Moving Walkway    No Smoking within 25ft of this sign
2"	Family Restroom    Passenger Pick Up    ⤴ 10-20 min
3"	Shops & Restaurants    Gates
4.5"	<b>B43-B55</b>
5"	<b>C70-C99</b>
8"	<b>9</b>
10"	<b>E25</b>

These sizes are always measured from the height of the cap-height (the cap-height is the height of a capital letter, such as B or E), in inches.

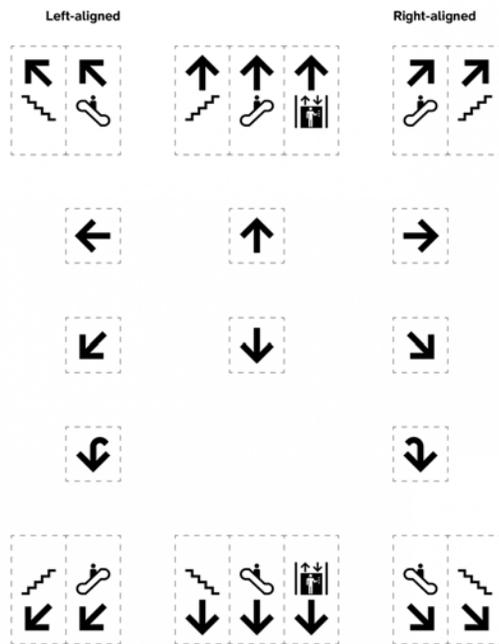
The type sizes for dynamic screens are defined in relative heights. For a similar overview for dynamic displays, refer to the [digital standard type sizes chart in digital and dynamic layouts](#).

## 5.3 Arrows

The standard arrow is used in most instances, which guarantees a consistent size, design, placement, and orientation across all wayfinding applications. The standard arrow can be oriented up, down, left, right, and diagonally at a 45 degree angle.

### Animated Arrows

Standard arrows should not be animated. Animation of arrows may reduce the clarity and readability of an arrow, and potentially distract from the other information on the display.



Arrow family

### Diagonal Arrows

The diagonal arrow is used in very limited circumstances. To direct up or down levels, accompanied by the stair or escalator pictogram and to direct to a destination immediately adjacent to the sign (signaling “Here is...” instead of “To...”). Always use diagonal arrows pointing down for this purpose. Never use diagonal arrows pointing up, on their own.

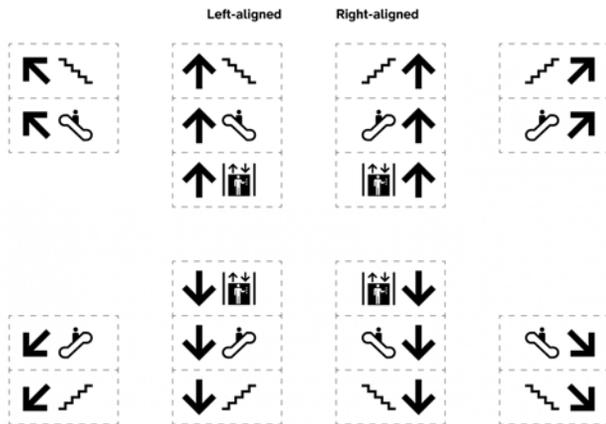
The diagonal arrows Left Up and Left Right may only be used for level changes, i.e. when directing through stairs or an escalator.

The diagonal arrows Left Down and Right Down can be used for level changes, in which case they will be accompanied by a pictogram of an escalator or stairs. In limited circumstances, these arrows can be used without an accompanying pictogram to identify a location that is nearby but just out of sight, such as an ATM machine in an alcove.

### U-turn Arrows

Signs that instruct users to make a U-turn for a destination are difficult to understand. U-turn arrows should never be used, except in extremely limited circumstances. Use them only if no other options are available.

In these cases, use the left-facing U-turn arrow when left aligned and the right-facing version when right aligned.



Single-line, vertical circulation arrow family

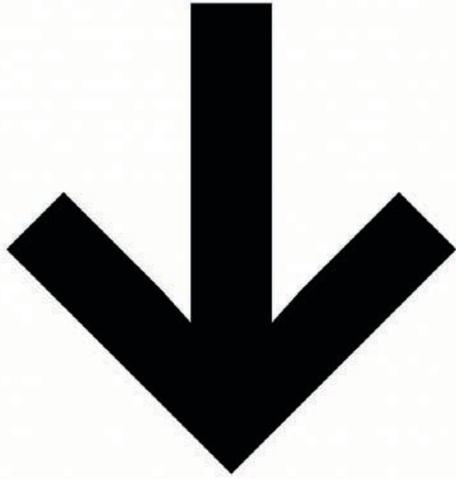
### Vertical Circulation Arrows

Vertical circulation arrows direct users to different levels while specifying which mode of vertical transportation to take. Two-line vertical circulation arrows are the default and preferred layout for directional signage. Single-line vertical circulation arrows should only be used when vertical space is limited; for instance, when ceiling height is low.

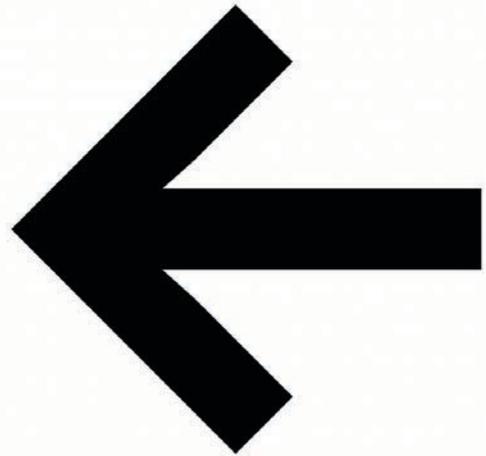
For more guidance on where and how to use which arrow, please refer to [Sign System – Directional](#). For downloadable arrow assets, please see [Sign System – Graphic Layouts toolkits](#).

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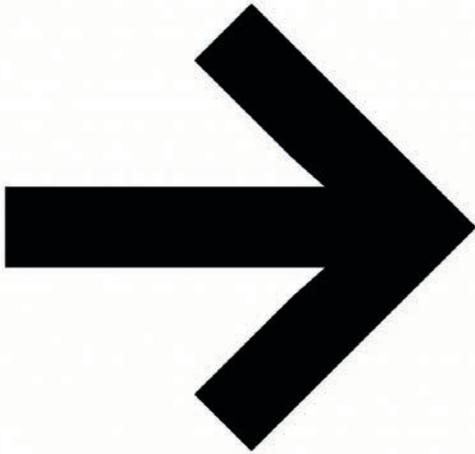
Directional



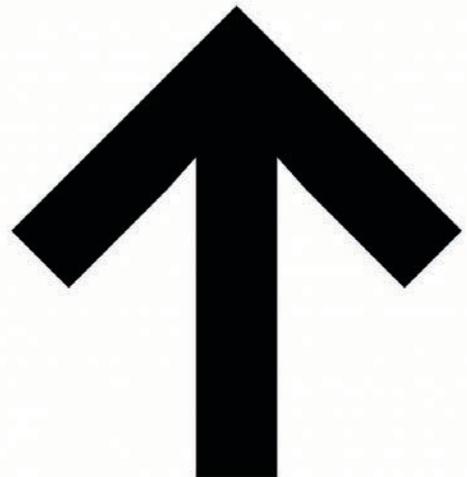
**Down**  
Arrow



**Left**  
Arrow



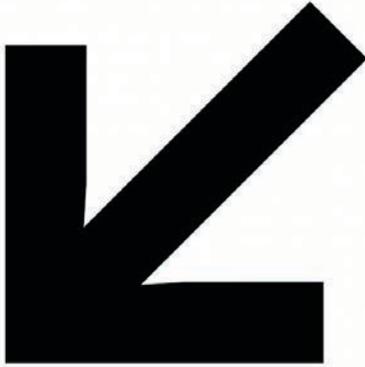
**Right**  
Arrow



**Up**  
Arrow

---

**Identification**



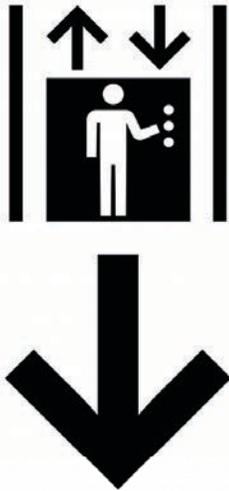
**Here to the Left**  
Arrow



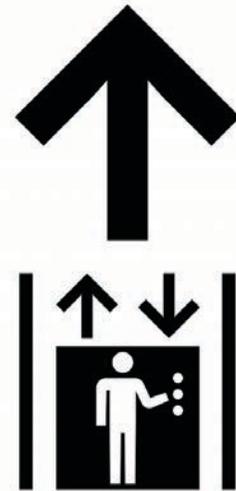
**Here to the Right**  
Arrow

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**Vertical Circulation**



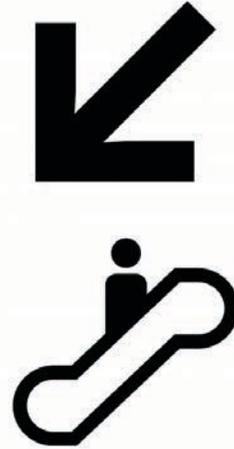
**Elevator Down**  
Arrow



**Elevator Up**  
Arrow



Escalator Down  
Arrow



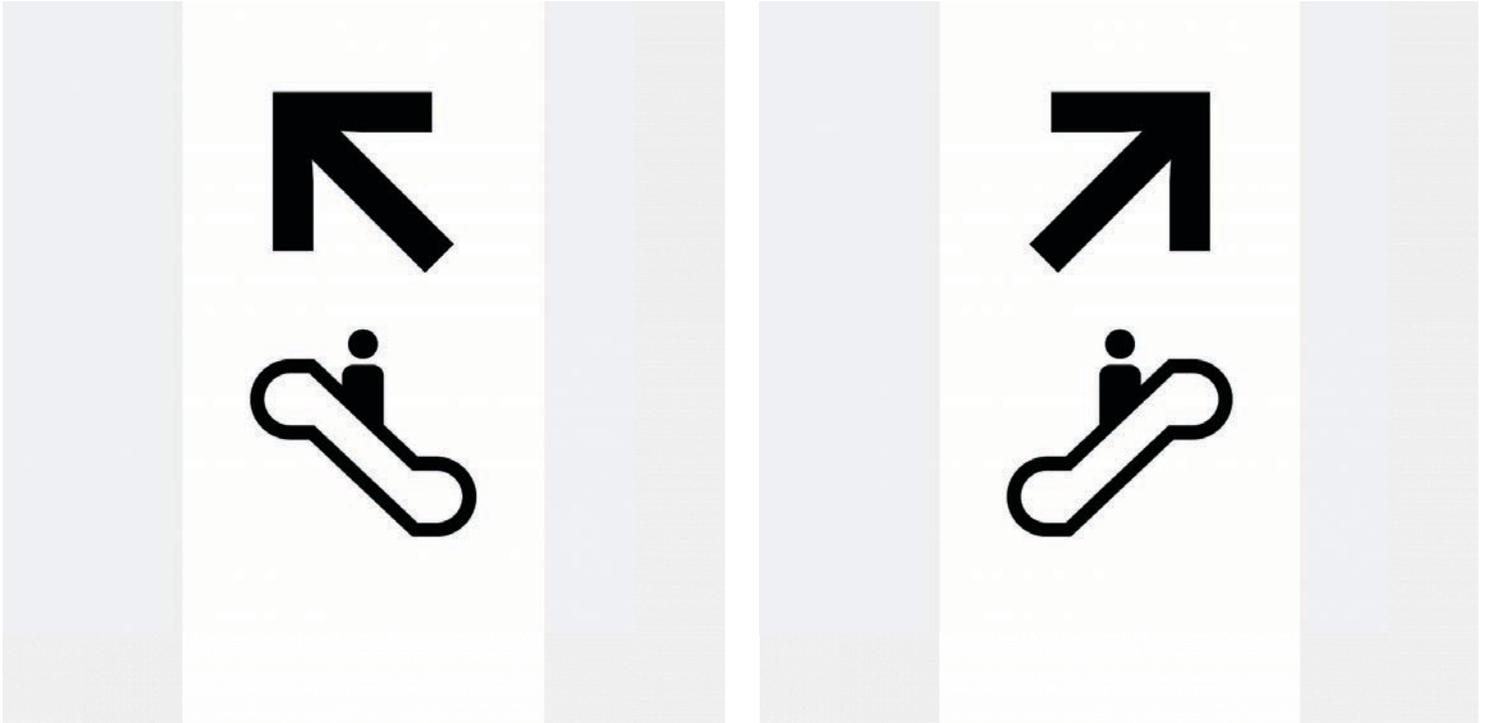
Escalator Down Left  
Arrow



Escalator Down Right  
Arrow

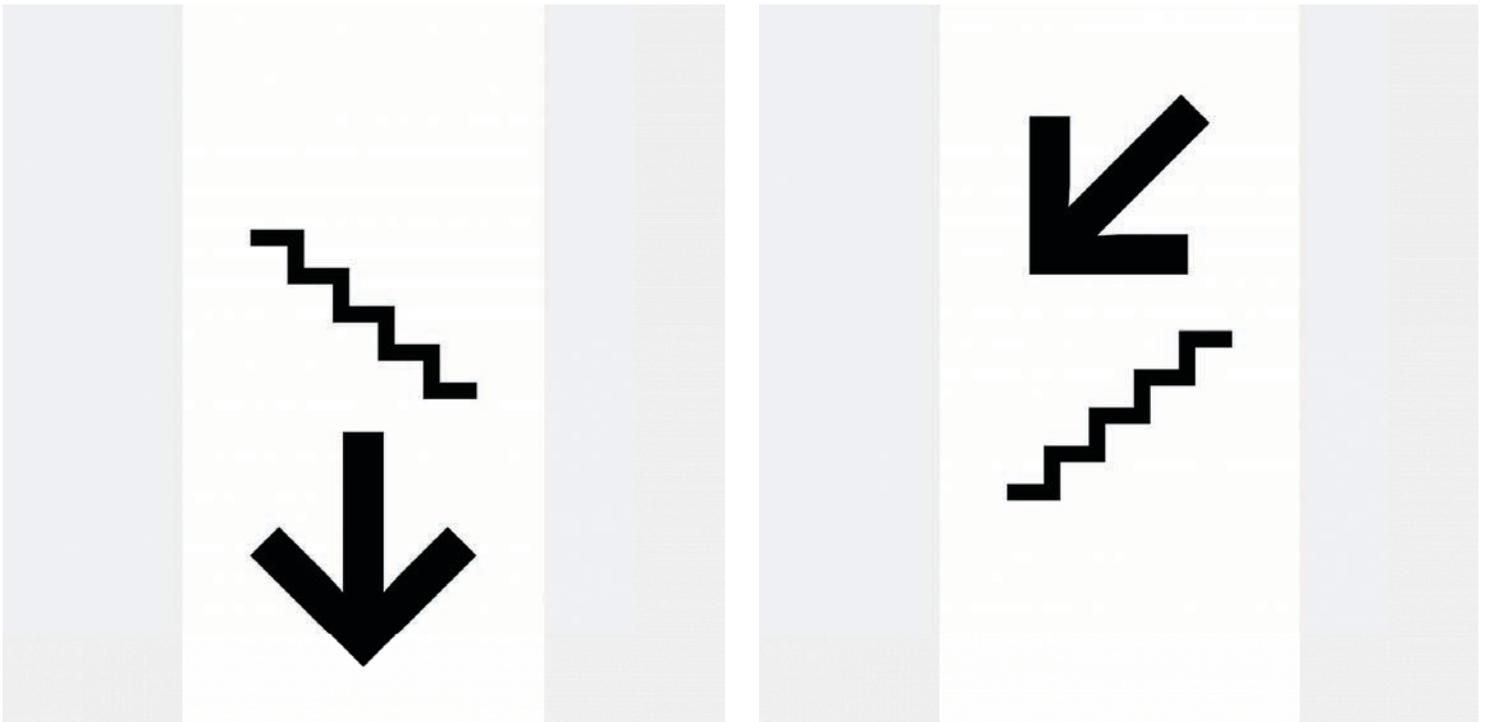


Escalator Up  
Arrow



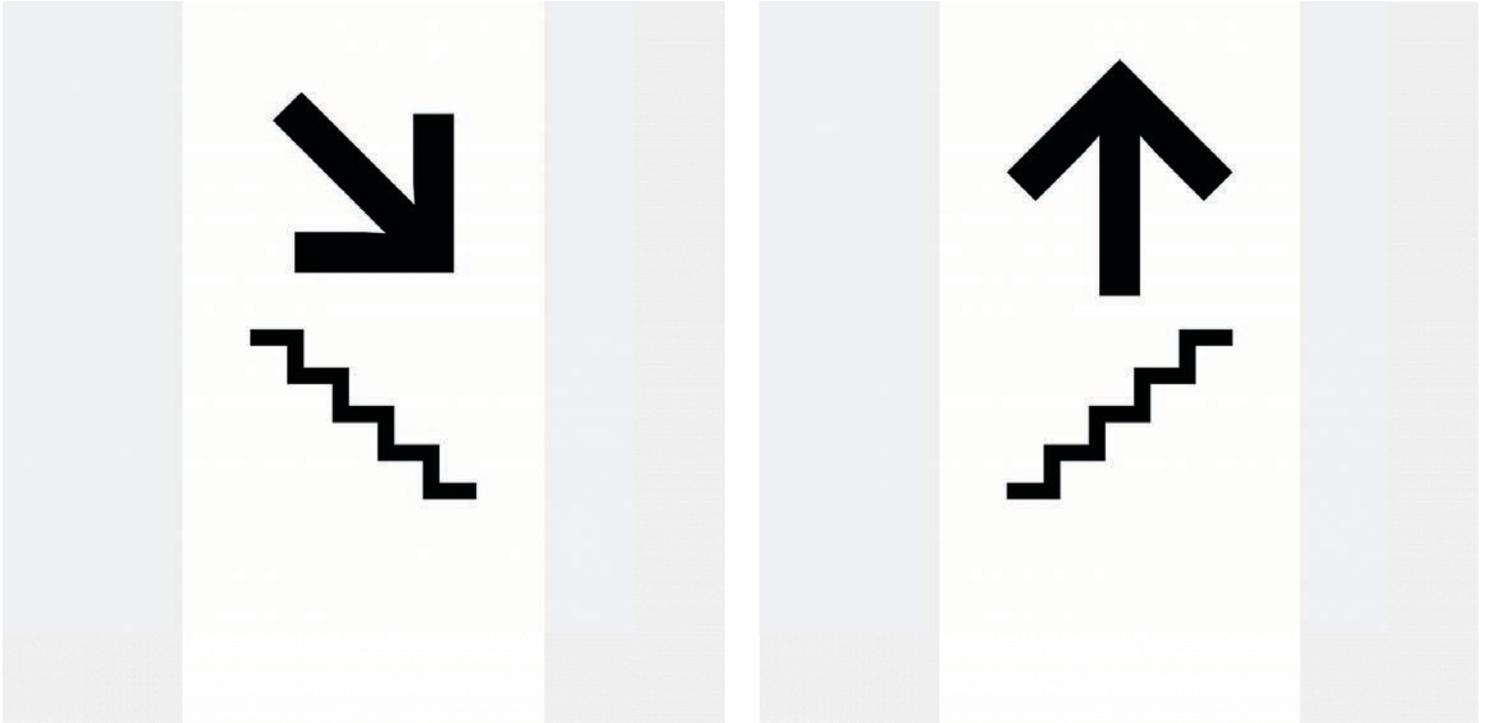
**Escalator Up Left**  
Arrow

**Escalator Up Right**  
Arrow



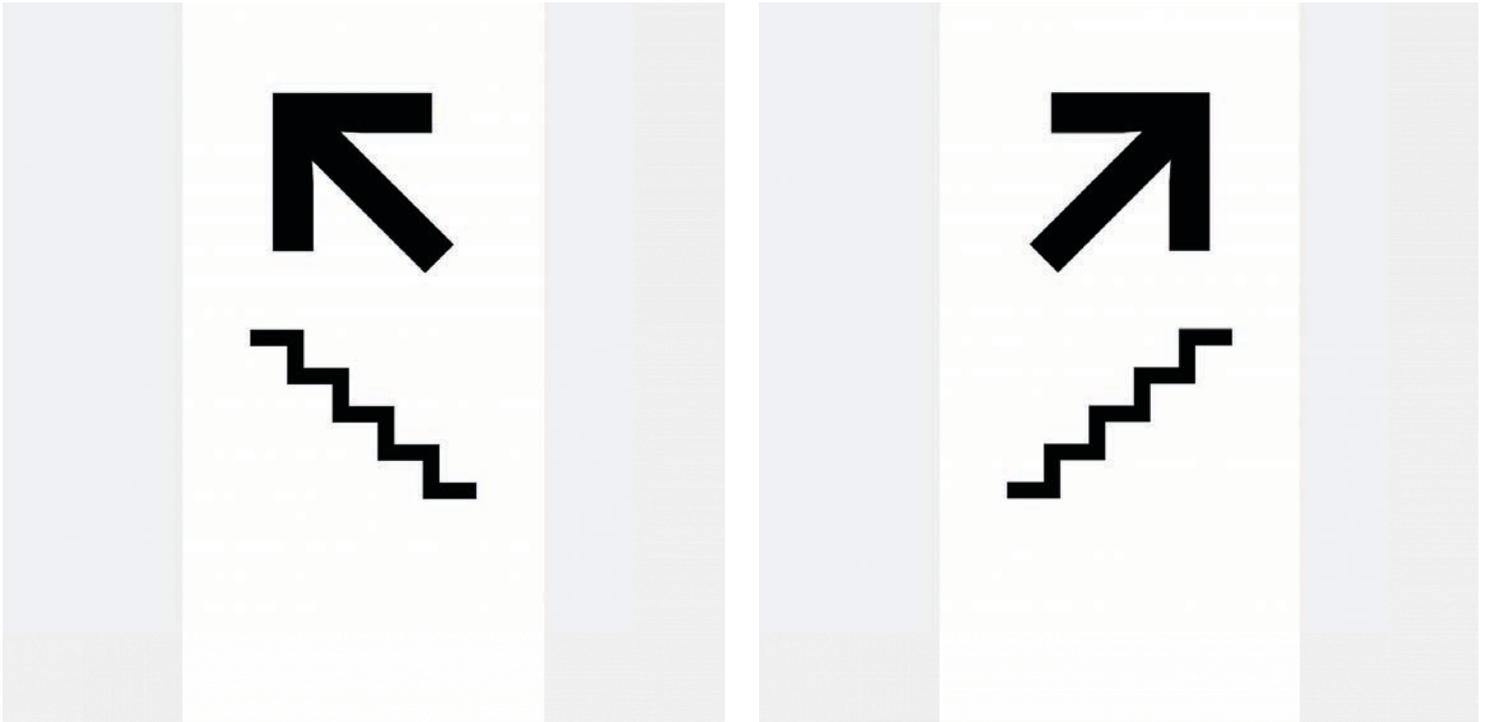
**Stairs Down**  
Arrow

**Stairs Down Left**  
Arrow



**Stairs Down Right**  
Arrow

**Stairs Up**  
Arrow

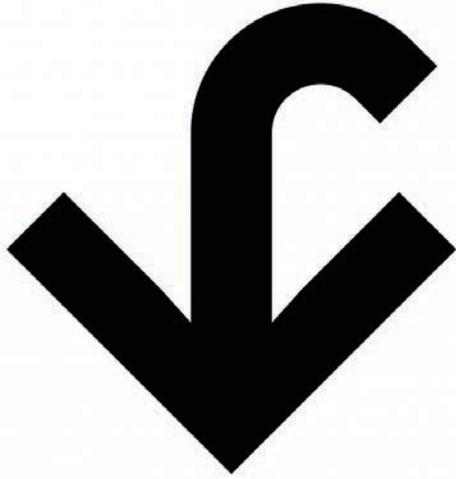


**Stairs Up Left**  
Arrow

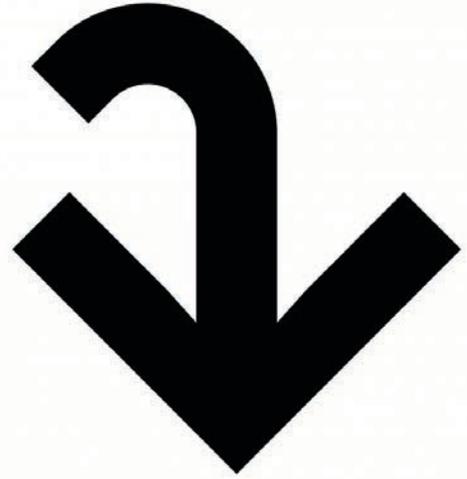
**Stairs Up Right**  
Arrow

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**Directional (Limited Use Only)**



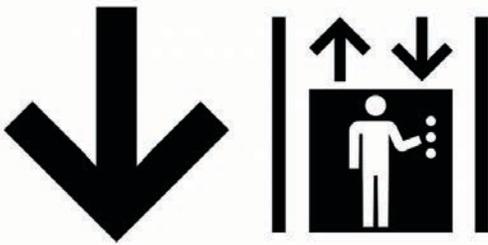
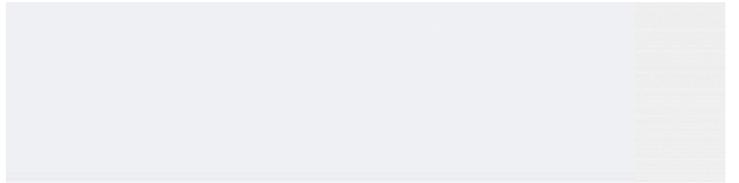
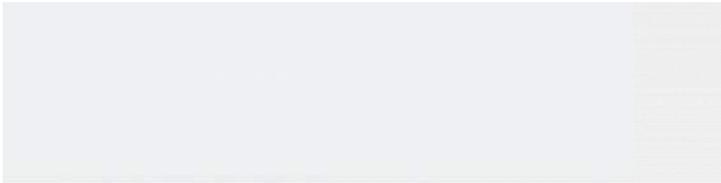
**U-turn Left**  
Arrow



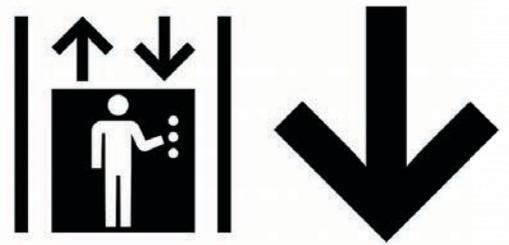
**U-turn Right**  
Arrow

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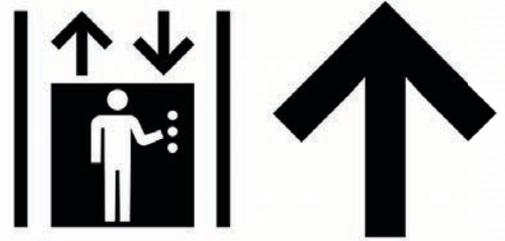
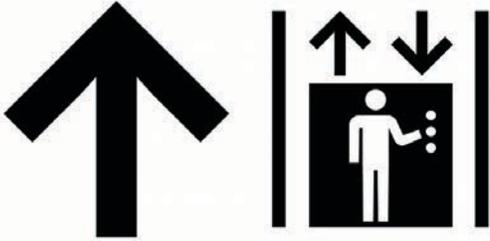
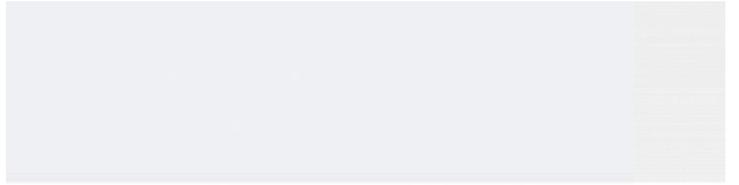
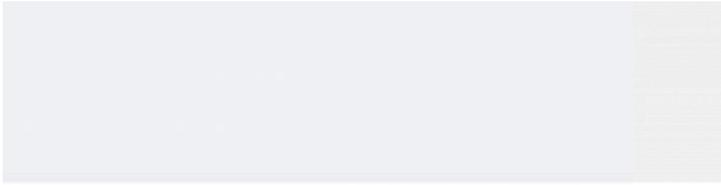
**Single Line (Limited Use Only)**



**Elevator Down (Left-Aligned)**  
Arrow

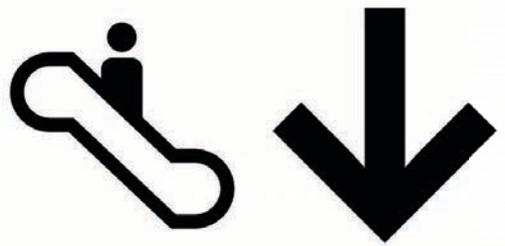
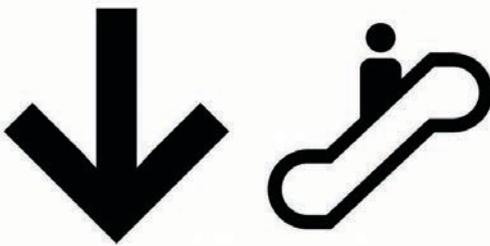
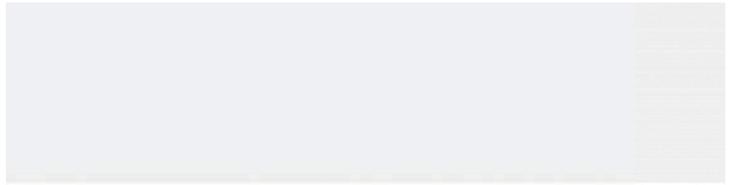
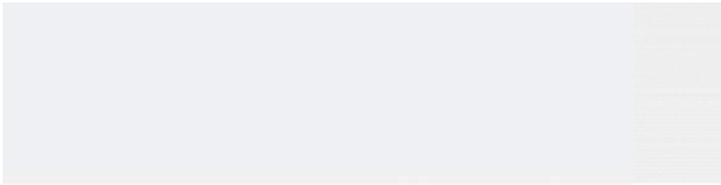


**Elevator Down (Right-Aligned)**  
Arrow



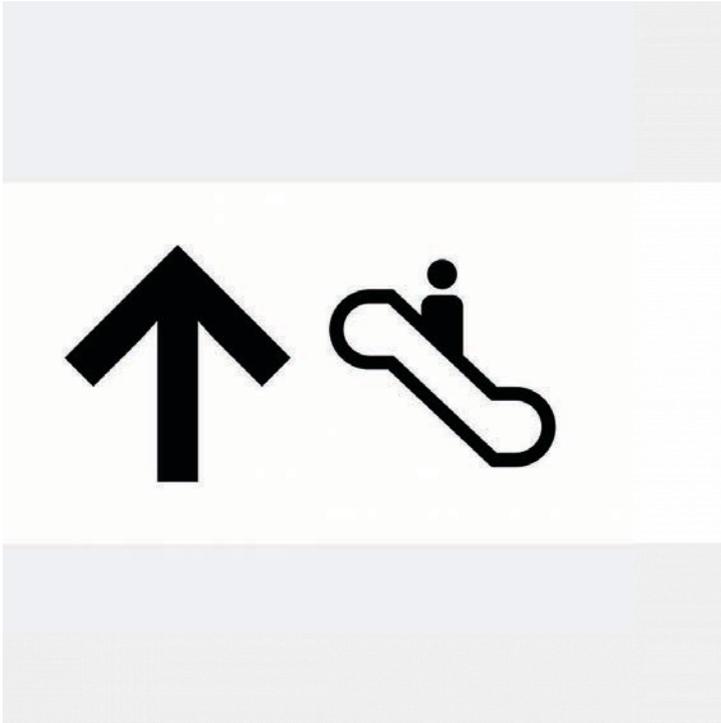
**Elevator Up (Left-Aligned)**  
Arrow

**Elevator Up (Right-Aligned)**  
Arrow

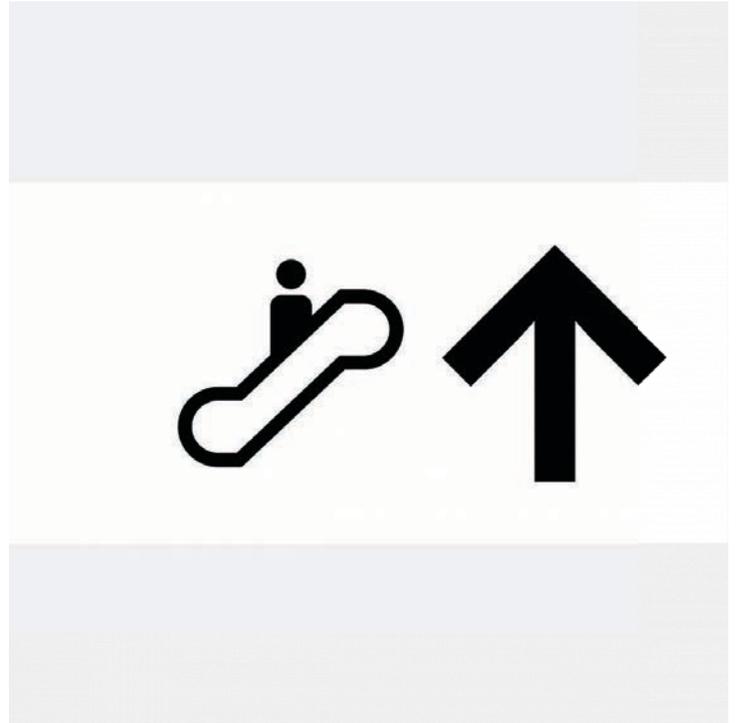


**Escalator Down (Left-Aligned)**  
Arrow

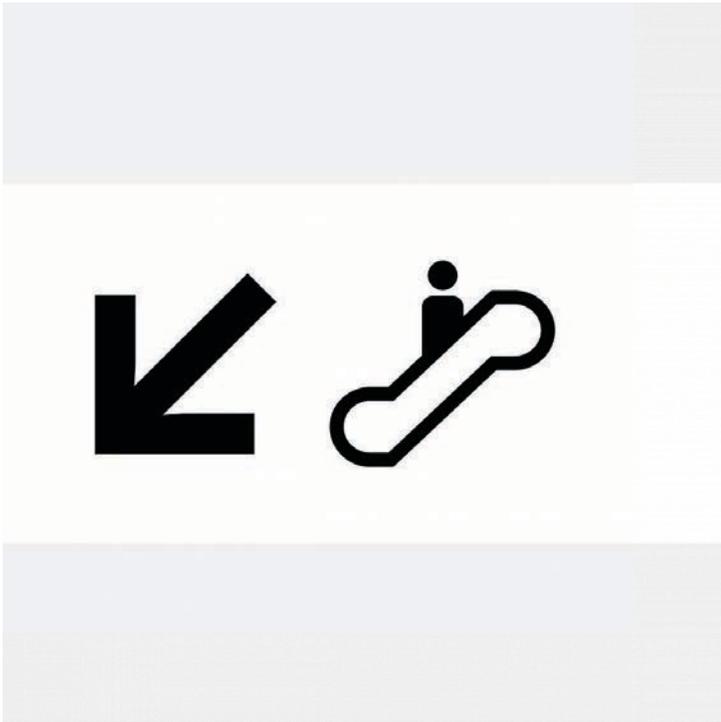
**Escalator Down (Right-Aligned)**  
Arrow



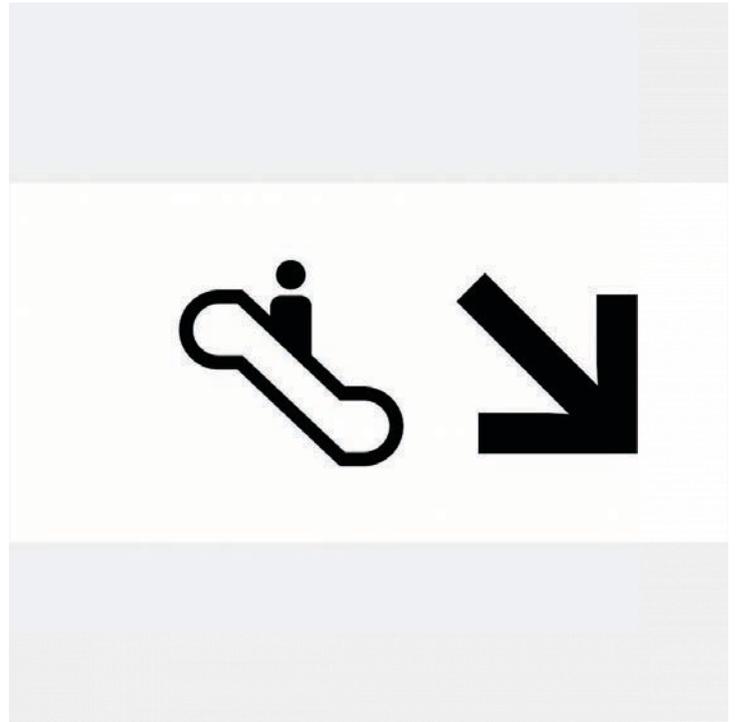
Escalator Up (Left-Aligned)  
Arrow



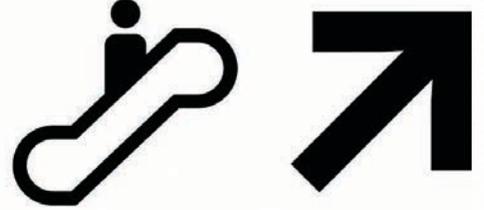
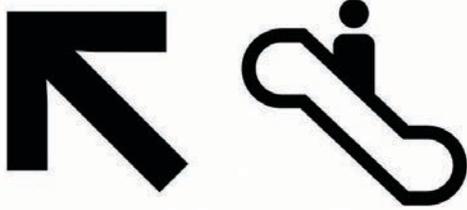
Escalator Up (Right-Aligned)  
Arrow



SL Escalator Down Left  
Arrow

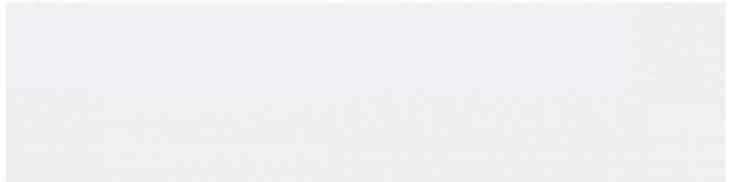
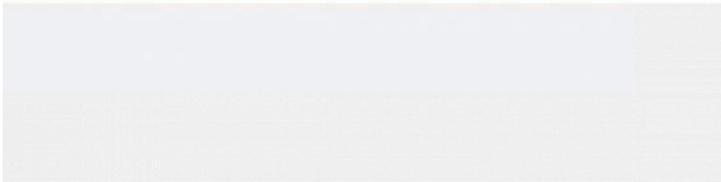
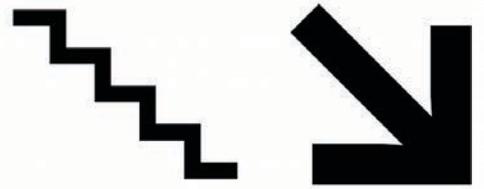
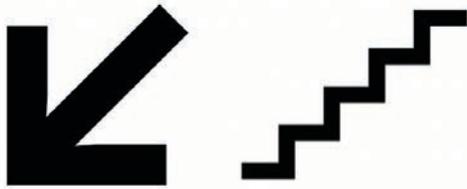
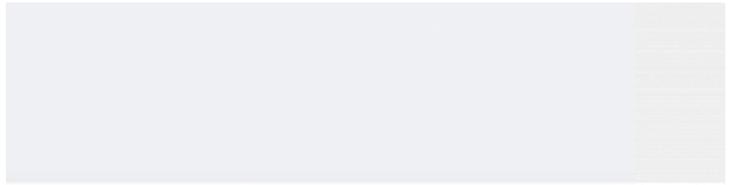
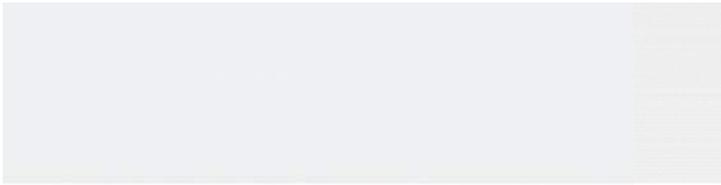


SL Escalator Down Right  
Arrow



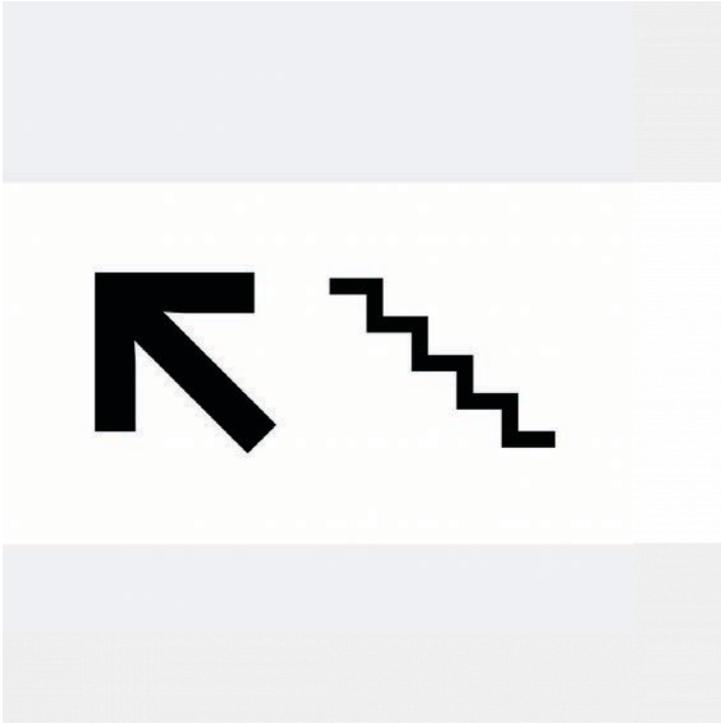
**SL Escalator Up Left**  
Arrow

**SL Escalator Up Right**  
Arrow

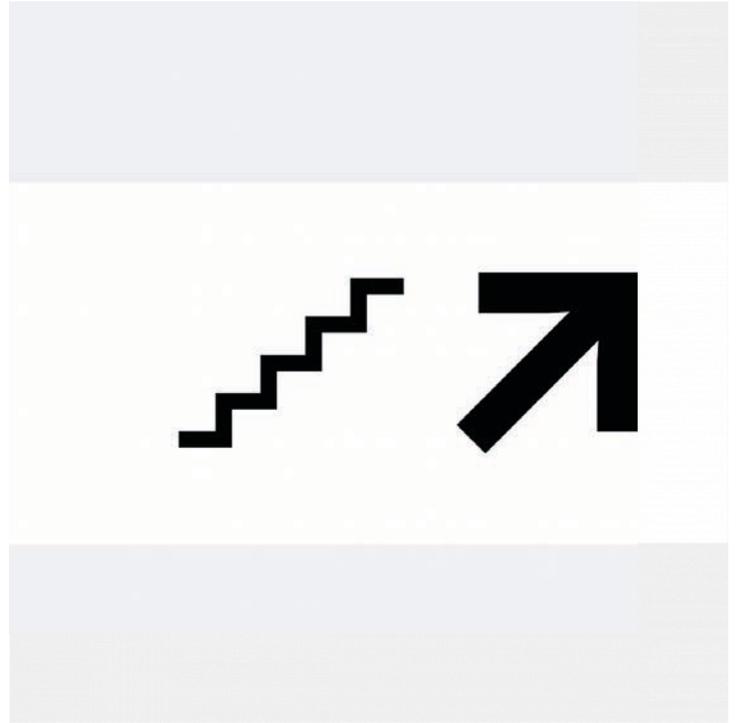


**SL Stairs Down Left**  
Arrow

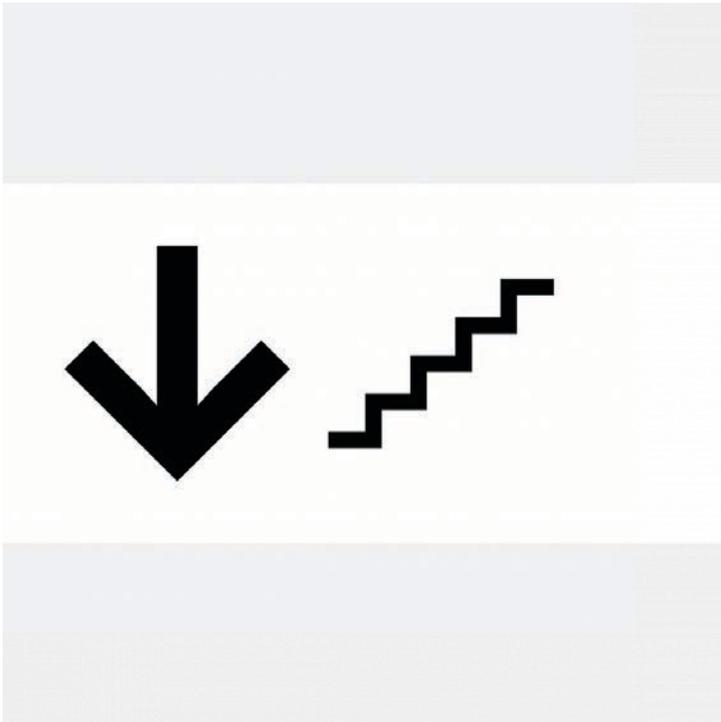
**SL Stairs Down Right**  
Arrow



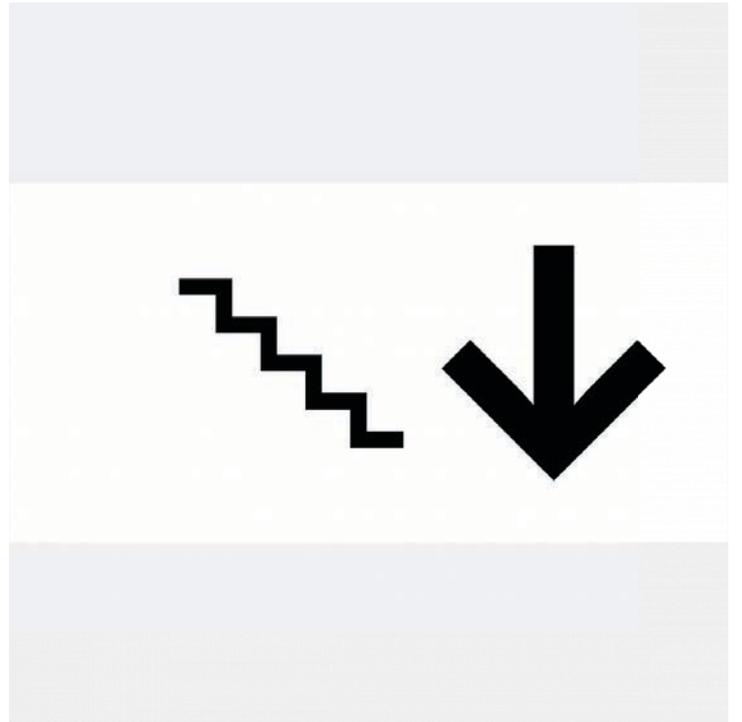
**SL Stairs Up Left**  
Arrow



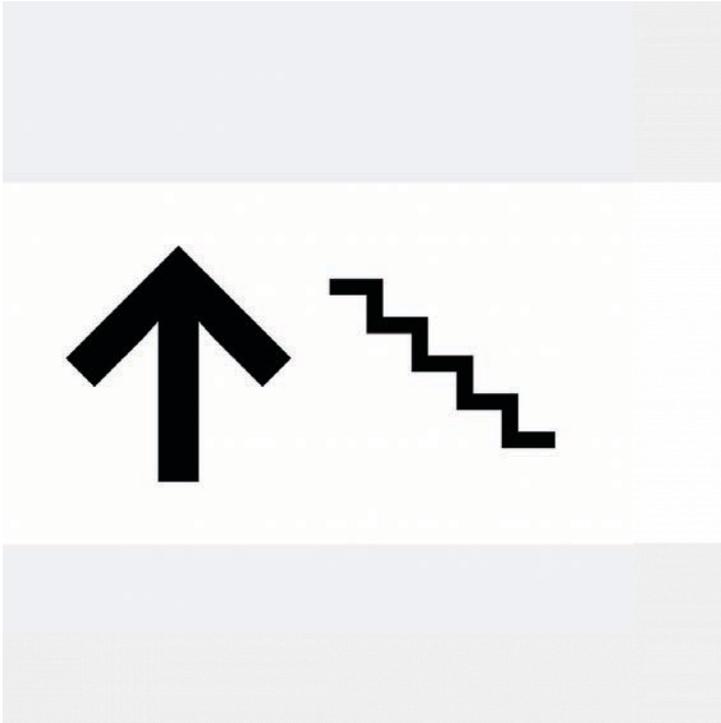
**SL Stairs Up Right**  
Arrow



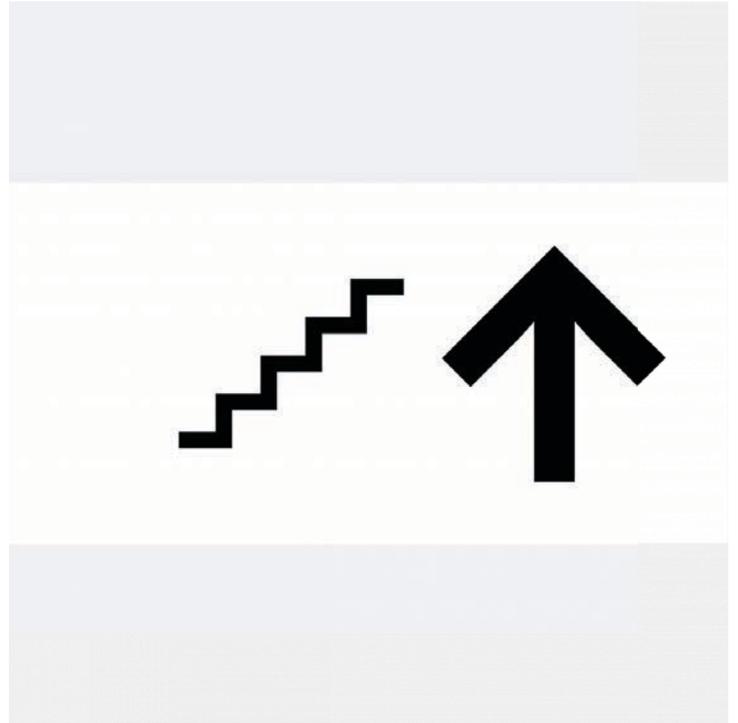
**Stairs Down (Left-Aligned)**  
Arrow



**Stairs Down (Right-Aligned)**  
Arrow



**Stairs Up (Left-Aligned)**  
Arrow



**Stairs Up (Right Aligned)**  
Arrow

## 5.4 Pictograms

The wayfinding system uses text accompanied by pictograms. Pictograms are a strong visual tool to reinforce information: they are easy to recognize, require no literacy, and enable quick scanning of directional signs and directories.

The pictogram set has been developed in accordance with national and international best practices, while also featuring styling enhancements that result in a cohesive, customized language. Taking cues from the *Helvetica Now for PANYNJ* typeface, the pictograms exhibit geometric forms, such as perfect circles and sharp, 90° corners, paired with humanist elements that bring warmth to the set.

Pictograms for destinations are included in the [Terminology List](#).

Some pictograms have strong directionality, such as those for Departures, Shuttles, and Exit. These pictograms have left-facing and right-facing versions. The right-facing version should be used in all cases except directional signs. For directional signs, use the left-facing version when paired with a left arrow or left-aligned straight ahead arrow. Use the right-facing version when paired with a right arrow or right-aligned straight ahead arrow.

### Multiple Color Applications

The background color for certain pictograms changes based on their use. The rules for these color applications are as follows:

Terminal identifiers (A, B, C, D, E) should not be used as in the pictogram field, meaning next to an arrow on a directional sign or on in an anchor position on an identification sign. In these cases, use the white background pictograms following ‘Terminal’, ‘Terminals’ and ‘Departures’ destination messages. On identification and informational signs without a pictogram field, use the yellow terminal identifier following ‘Terminal’, ‘Terminals’ and ‘Departures’ destination messages, or on their own for identification purposes. For visual guidelines on how to use these identifier pictograms on signs see [Use of Color 6.9.1](#) and [Use of Pictograms 6.9.2](#).

The Accessibility Services identifiers are the Accessible, Assistive Listening Systems, Low Vision, and Reduced Mobility pictograms. On directional and identification signs with a pictogram field, use the transparent, white outline application following “Accessibility Services” destination messages for these identifiers. On identification and information signs with no pictogram field, use the blue color application. For visual guidelines on accessible services pictogram use, see [Accessibility Services 6.2.6](#).



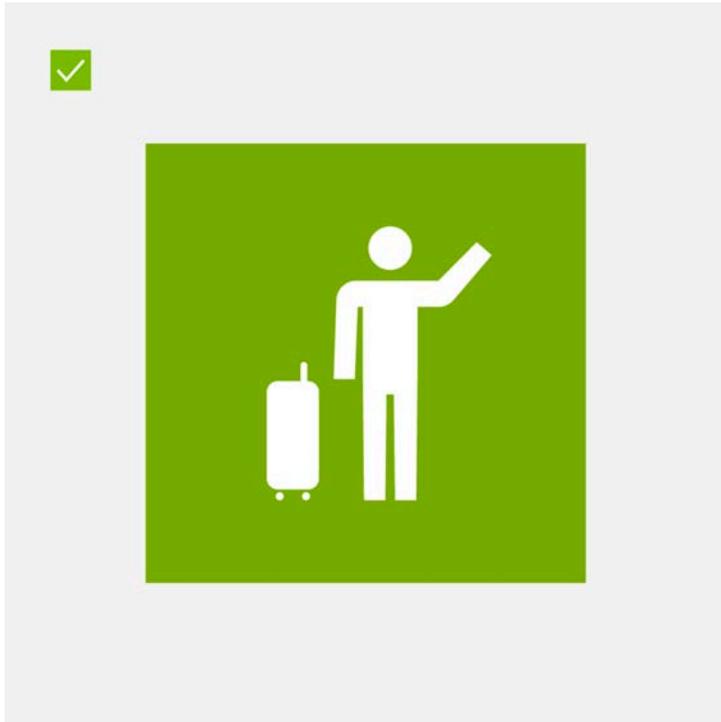
Pictograms with multiple background color applications

### Animated Pictograms

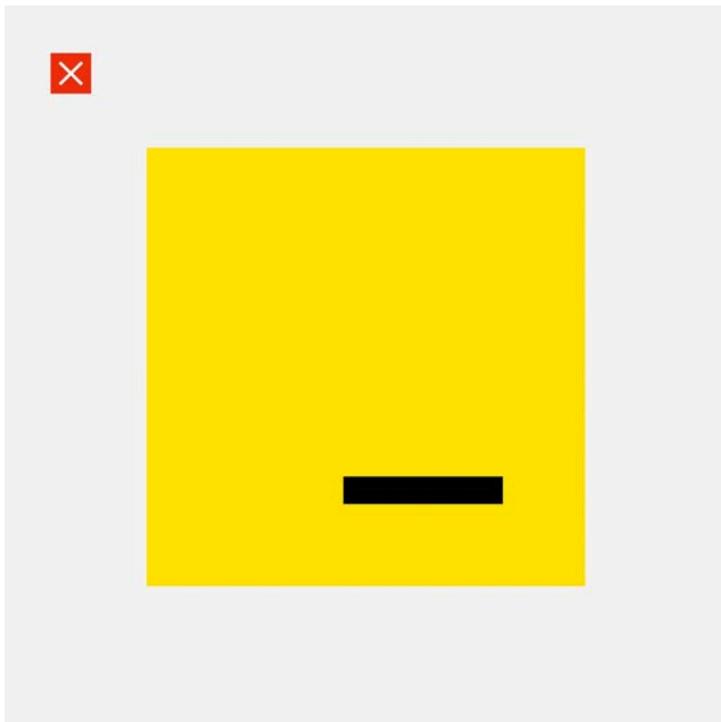
Only animated pictograms provided or approved by the Port Authority Wayfinding Manual should be used. These specific animated pictograms should be used only under the following conditions:

The animation will enhance the signage by introducing a playful, lighthearted design element and/or allowing readers to better recognize or understand a message.

There is an opportunity and space to watch the animation without inconveniencing other passengers. Good places for placement include waiting areas and areas with long queues, where the animation can provide entertainment.



Animated pictogram maintains critical elements in frame, utilizes existing visual elements of the pictogram to create movement.

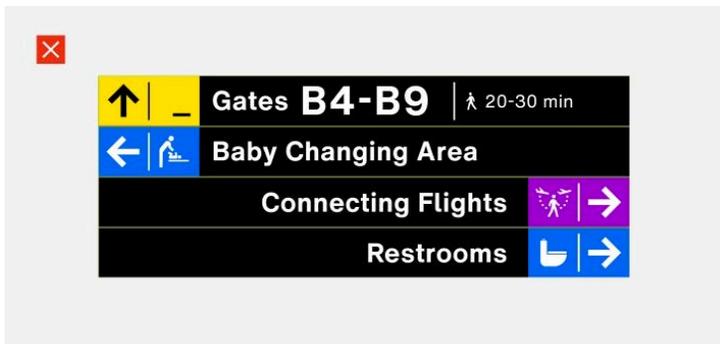


Critical elements of the pictogram do not stay in frame

- The animation should not pause or linger too long in a state that prevents or interrupts the legibility of a message. Timing and movement of the animation must allow sufficient time for viewers to read and process the sign.
- The main elements of a pictogram design should always remain visible in frame during the animation loop. This will ensure that pictograms are still legible if a display is frozen due to a malfunction.
- The animation should not last longer than 4 seconds in a loop, ensuring a minimum of 10 second pause on the static version of the pictogram. After displaying the static version, the loop can return to the animation again.
- Only one animated pictogram can be used per digital sign in order to limit distraction



Animated pictogram used in the arrivals flow, at a point in which stress is reduced and waiting occurs



Animated pictograms should not be used on directional signage or at key decision points that can be stressful for navigating passengers

[Download Pictogram Set](#)

**Flights & Operations**



Agricultural Inspection



Airline Directory



Airport Directory



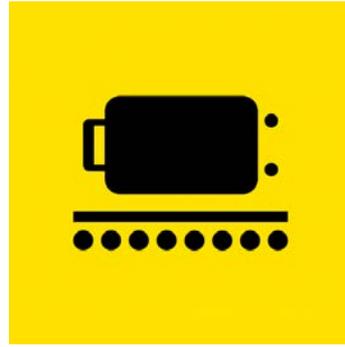
All Gates



Arrivals



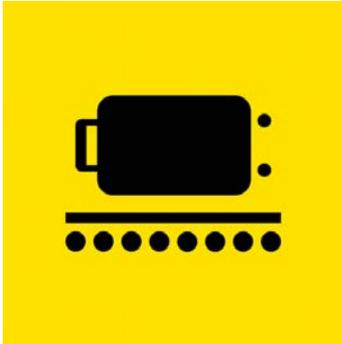
Baggage Carts



Baggage Claim



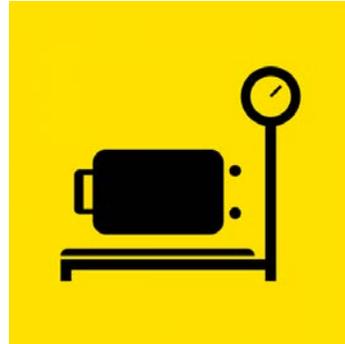
Baggage Drop



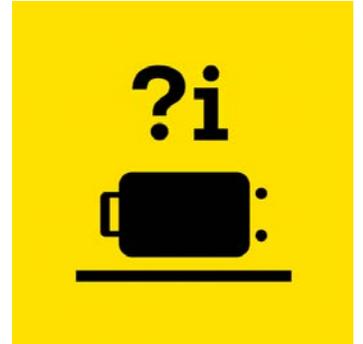
Baggage Information



Baggage Inspection



Baggage Repack



Baggage Services



Check-in



Curbside Check-in



Departures



Domestic Arrivals



Door



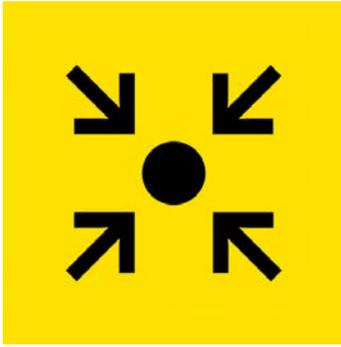
Gate (A1; B1; C2; etc.)



Gates (A, B, C; A1-A9, B10-B19, etc.)



International Arrivals



Meeting Point



Oversize Baggage



Passport Control



Pet Check-in



Porter Service



Security Checkpoint



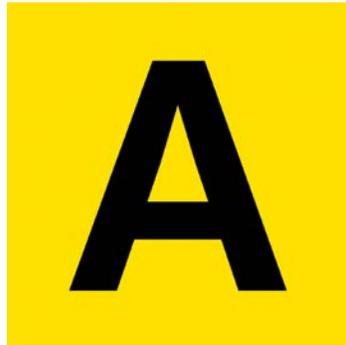
Self Check-in



Shuttle (Airside)



Terminal (A; B; C; etc.)



Terminal A



Terminal B



Terminal C



Terminal D



Terminal E



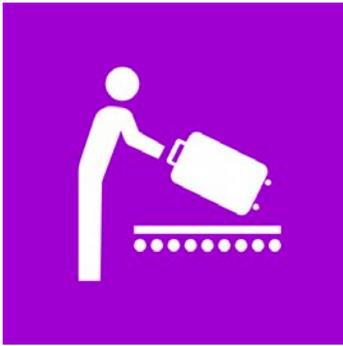
Terminals (A, B, C; etc.)



Ticketing

---

Connecting Flights



Baggage Re-check



Connecting Flights

Exit & Ground Transportation



Bus & Taxi



Bus(es)



Crosswalk



Electric Vehicle Charging and Parking



Exit



Ground Transportation



Ground Transportation Information



Hotel Shuttles



Long-term Parking



Off-airport Parking



Off-airport Parking Shuttles



Parking



Parking Shuttles



Passenger Drop Off



Passenger Pick Up



Rental Car Information



Rental Car Shuttles



Rental Cars



Ride App Pick Up



Short-term Parking



Shuttle



Subway



Taxis



Trains



Transit to City

---

Services & Amenities



Accessible



Accessible Changing Place



Accessible Changing Place with Hoist



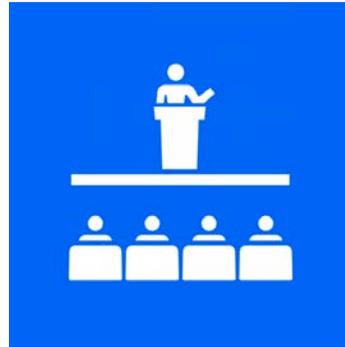
All Gender



Assistive Listening Systems



ATM



Auditorium



Baby Changing Area



Baggage Storage



Bar(s)



Bars & Restaurants



Business Center



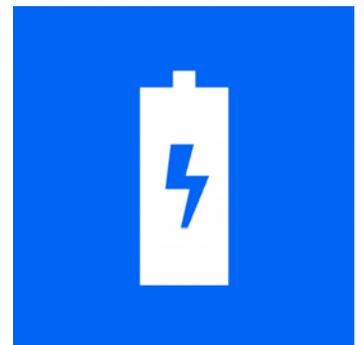
Cafe



Cashier



Chapel



Charging Point



Currency Exchange



Dentist



Drinking Water



Duty Free



Elevator



Escalator



Food Court



Help Phone



Hotel



Hotel Information



Information



Lost and Found



Lounge(s)



Low Vision



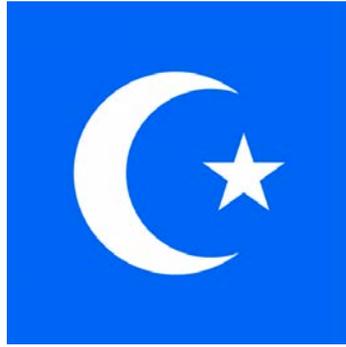
Medical Office



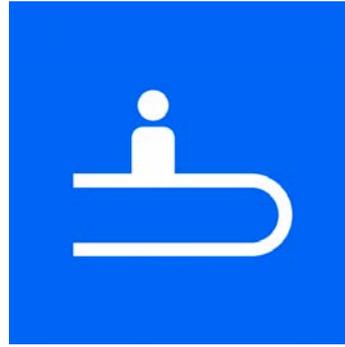
Meditation Room



Men



Mosque



Moving Walkway



Nursing Room



Office(s)



Pet Relief Area



Play Area



Post Office



Prayer Room(s)



Quiet Room



Reduced Mobility



Restaurants



Restrooms



Sensory Room



Shoe Shine



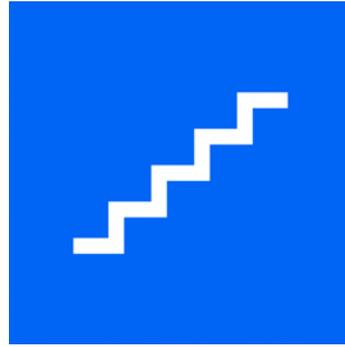
Shops



Shops & Restaurants



Smoking Area



Stairs



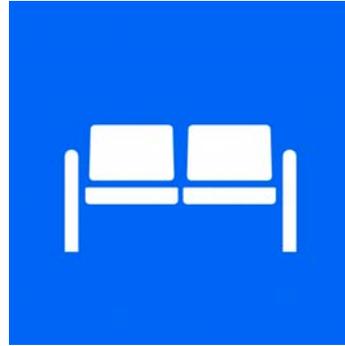
Synagogue



Telephones



Terrace



Waiting Area



WiFi



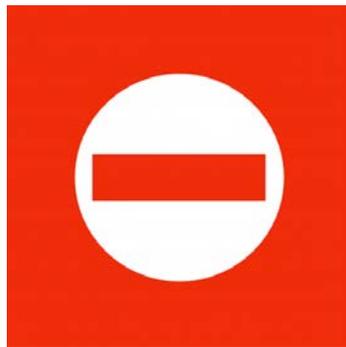
Women

---

Emergency & Regulatory



Defibrillator



Exit Only



Fire Extinguisher



Fire Hose



First Aid



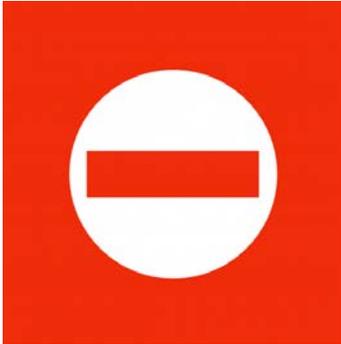
In Case of Fire Use Stair



No Baggage Claim



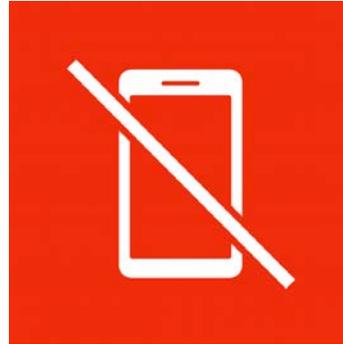
No Carts



No Entry



No Pets



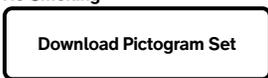
No Phones



No Photos



No Smoking



The pictograms defined herein were created for the destinations present or already expected at the airports. As new developments are planned or implemented, there may be a need for new pictograms for destinations not yet present at the airport. The need for new pictograms, along with the appropriate terminology, should be discussed with the The Port Authority Customer Experience team for development and inclusion. [contact](#)

## 5.5 Brands

Commercial entities—such as airlines, lounges, rental cars, and hotels—will have a branded presence throughout the airports. The visual manifestations of brand identities vary greatly, in terms of color, use of logo, and wordmarks. They play a useful part in the passenger journey, often serving as a destination or filter for a given activity. To ensure clarity and reduce the visual clutter in the airport environment, these guidelines aim to establish consistency on their manifestation, based on application.

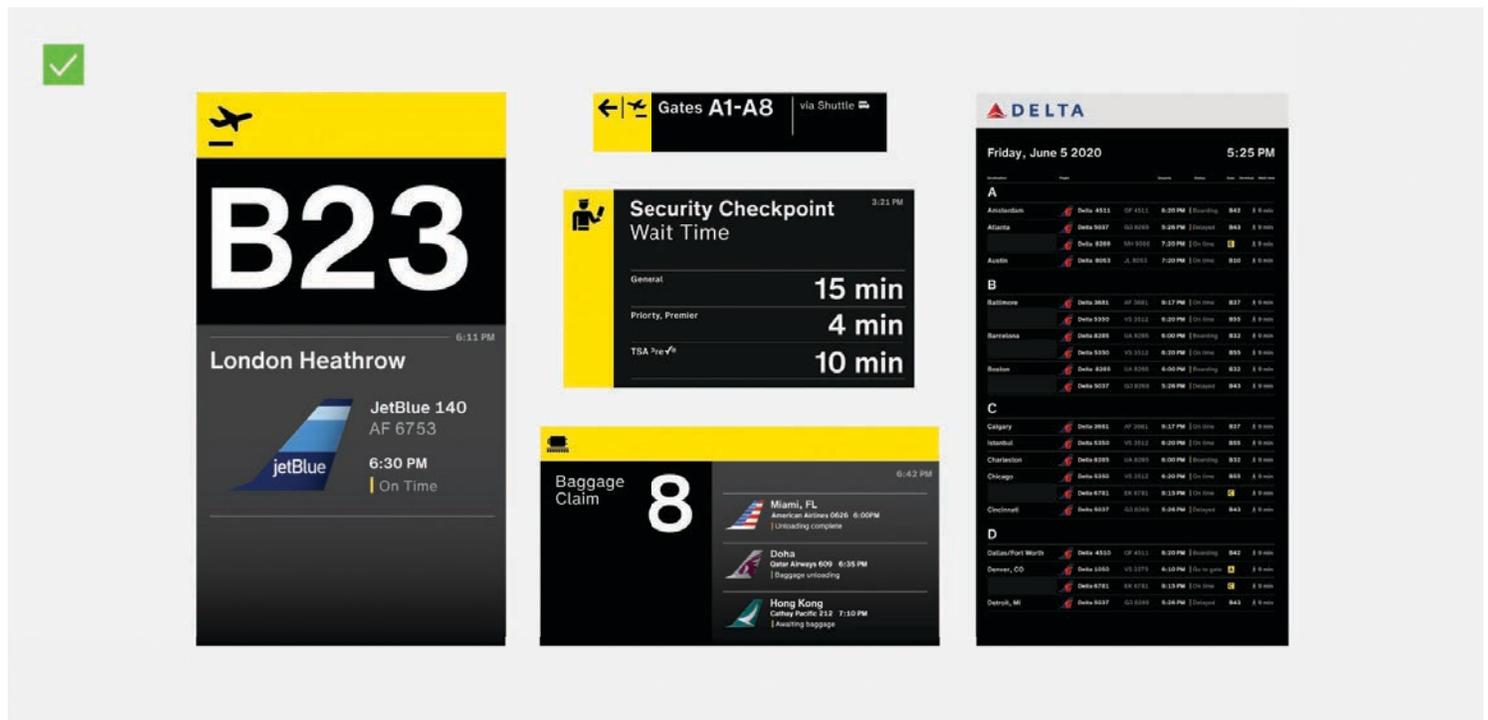
Some of these instances occur on wayfinding elements, such as a lounge logo on a directional sign. When integrated in the wayfinding system, branding must be clearly organized and consistently implemented. Simultaneously, wayfinding (with or without branding) lives alongside advertising coordinated by spatial zoning guidelines.

Wayfinding elements that integrate branding include:

- Curbside Signage: Ideally digital, and may include airline sub-brands (e.g. World Club, Sky Priority, Polaris)
- Airline Directory
- Check-in Desk
- FIDs, GIDs, and BIDs
- Directional Signage: To high-level destinations including lounges, hotels, etc.
- Gate Area: Airlines in dedicated terminals may have branded graphics that conform with spatial zoning guidelines
- Baggage Re-Check: Airport maps/kiosks/directories

Branded elements without wayfinding information, such as retail storefronts and lounge signage, should not follow the wayfinding design guidelines. However, their placement should abide by spatial zoning guidelines.

*While brands will appear on wayfinding signs, other brand design standards should never replace the Port Authority Wayfinding Design Standards on wayfinding signage.*





**jetBlue** **B23**

**London Heathrow**  
AF 6753

Departure time:  
**6:00PM**  
| ON TIME

Shuttle to A1-A8

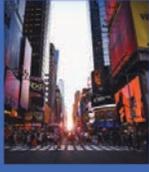
**SECURITY WAIT TIMES** 11:41AM

GENERAL <b>15</b> MINUTES	TSA Pre <b>10</b> MINUTES
---------------------------------	---------------------------------

6:42 PM American Airlines

**Baggage Claim 8**

From	Flight	Arrival
Miami, FL	AA 0626	6:00PM
Doha	QA 609	6:35PM
Hong Kong	CP 212	7:10PM



**DELTA** 5:25 PM

Departures	Operator	Partner	Sched	Status	Gate
Amsterdam	DL 4511	QF 4511	6:20p	Boarding	B42
Atlanta	DL 8259	G3 8259	5:26p	<del>Delayed</del>	B43
Doha	DL 9698	9M 9698	7:20p	On time	A2
Austin	DL 8053	JL 8053	7:20p	On time	B10
Baltimore	DL 3681	AF 3681	9:17p	On time	B37
Istanbul	DL 3512	VS 3512	6:20p	On time	B55
Barcelona	DL 8285	UA 8285	6:00p	Boarding	B32
Istanbul	DL 3512	VS 3512	6:20p	On time	B55
Boston	DL 8285	UA 8285	6:00p	Boarding	B32
Boston	DL 8299	G3 8299	5:26p	<del>Delayed</del>	B43
Calgary	DL 3681	AF 3681	9:17p	On time	B37
Istanbul	DL 3512	VS 3512	6:20p	On time	B55
Charleston	DL 8285	UA 8285	6:00p	Boarding	B32
Chicago	DL 3512	VS 3512	6:20p	On time	B55
Chicago	DL 6781	DK 6781	8:15p	On time	A6
Cincinnati	DL 8299	G3 8299	5:26p	<del>Delayed</del>	B43
Dallas/Fort Worth	DL 4510	QF 4511	6:20p	Boarding	B42
Denver, CO	DL 3275	VS 3275	6:10p	At gate	A8
Denver, CO	DL 6781	DK 6781	8:15p	On time	A6
Detroit, MI	DL 8299	G3 8299	5:26p	<del>Delayed</del>	B43
Edinburgh	DL 9008	AF 3681	9:17p	On time	B37
Fort Lauderdale, FL	DL 1401	AD 7039	4:30p	Departed	B16
Fort Myers, FL	DL 1709	KE 7029	5:30p	Boarding	B45
Frankfurt	DL 8205	FI 8100	7:40p	On time	B20

## 5.5.1 Brand Treatments

Three brand treatments are acceptable for use in conjunction with wayfinding information. Which treatment is used will depend on the sign type used.



The three main treatments: Tail Fin, White Logo, and Full-Color Logo

### Full-Color Logos

Full-color logos are graphically complex and do not reduce well. They can be used when they are dominant on the sign and can appear at a large size.

e.g. Curbside ID, Check-in Desk, Baggage Re-Check



Sample treatments of using full-color logos on Check-in Identification signage

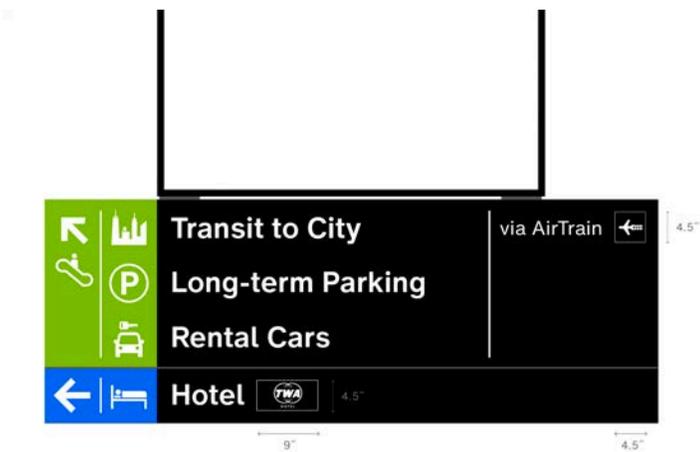


Sample treatments of using full-color logos on Curbside Identification signage

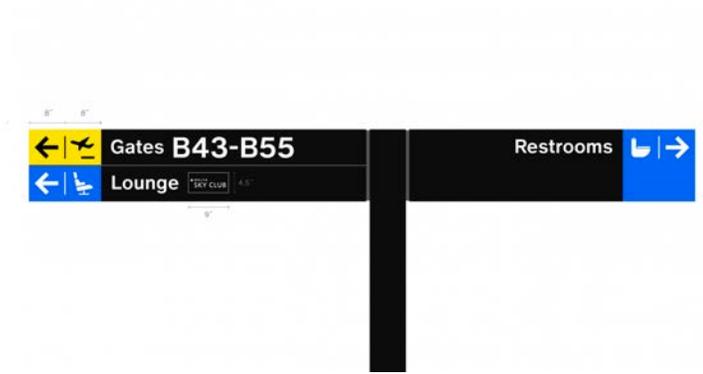
### White Logos

White logos are used in directional signage and other contexts where color would distract from the primary wayfinding information, especially color coding.

e.g. Directional to Lounges, Hotels, destinations via AirTrain



Sample white logo treatments on directional signage

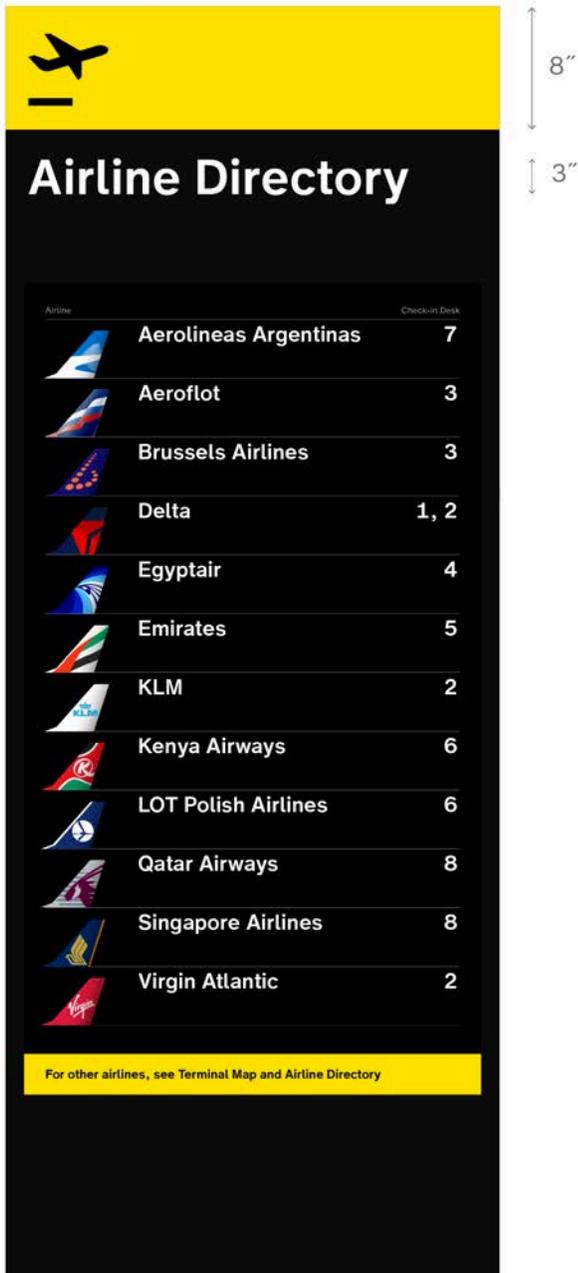


Sample white logo treatments on directional signage

### Tail Fin

Used as an element to convey flight information, the tail fin connects passengers with their ultimate destination: the plane. It is a consistent visual cue used in digital contexts, providing a streamlined yet flexible outlet to include airline branding. The common treatment across all digital touchpoints adapts to many screen sizes, ratios, and quantities of elements.

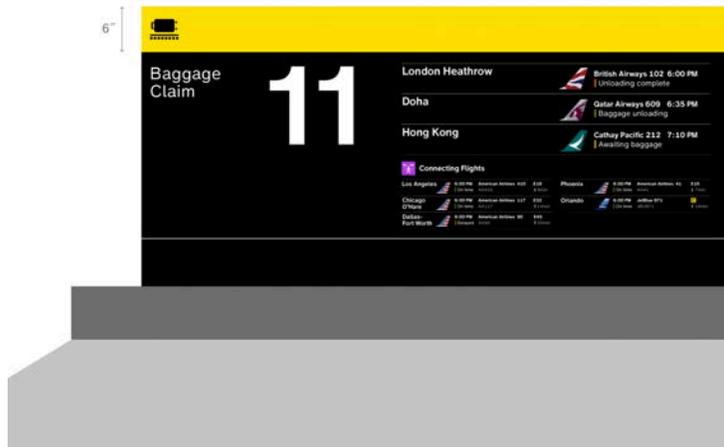
e.g. Check-in Hall Directory; FIDs, GIDs, and BIDs



Examples of tail fin branding, typically digital.



Examples of tail fin branding, typically digital.



Examples of tail fin branding, typically digital.

## 5.5.2 Airport and Port Authority Branding

In most cases, airport and Port Authority branding will exist in the form of posters, PSAs, and other touchpoints. For these applications, follow the spatial zoning guidelines for branded media.

There are limited instances where airport and Port Authority branding can integrate with wayfinding elements, such as on an unused FID or BID screen during a period of less need. Airport and Port Authority branding should never replace the Port Authority Wayfinding Design Standards on any wayfinding signage.

Other applications of branding will be best incorporated into wayfinding elements when it:

- complements, not distracts from, information
- is clearly separated from wayfinding information for clarity
- integrates well and naturally into the object

Because directional signage contains complex levels of information, airport and Port Authority branding should be avoided in this application.

# 6 Sign System

- 6.1 Overview
- 6.2 Directional
- 6.3 Identification
- 6.4 Informational
- 6.5 Maps
- 6.6 Regulatory
- 6.7 Dynamic
- 6.8 AirTrain
- 6.9 Usage
- 6.10 Graphic Layouts

# 6.1 Overview

The hierarchy of graphic elements on a sign determines how easily passengers can find the information they need. Reference the [Graphic Layouts](#) to support the composition process.

## 6.1.1 Sign Type Family

In order to present a visually coherent system, a flexible and comprehensive family of sign types has been created. With the correct elements installed at the right moments, they contribute to a seamless customer experience throughout the Wayfinding Journey.



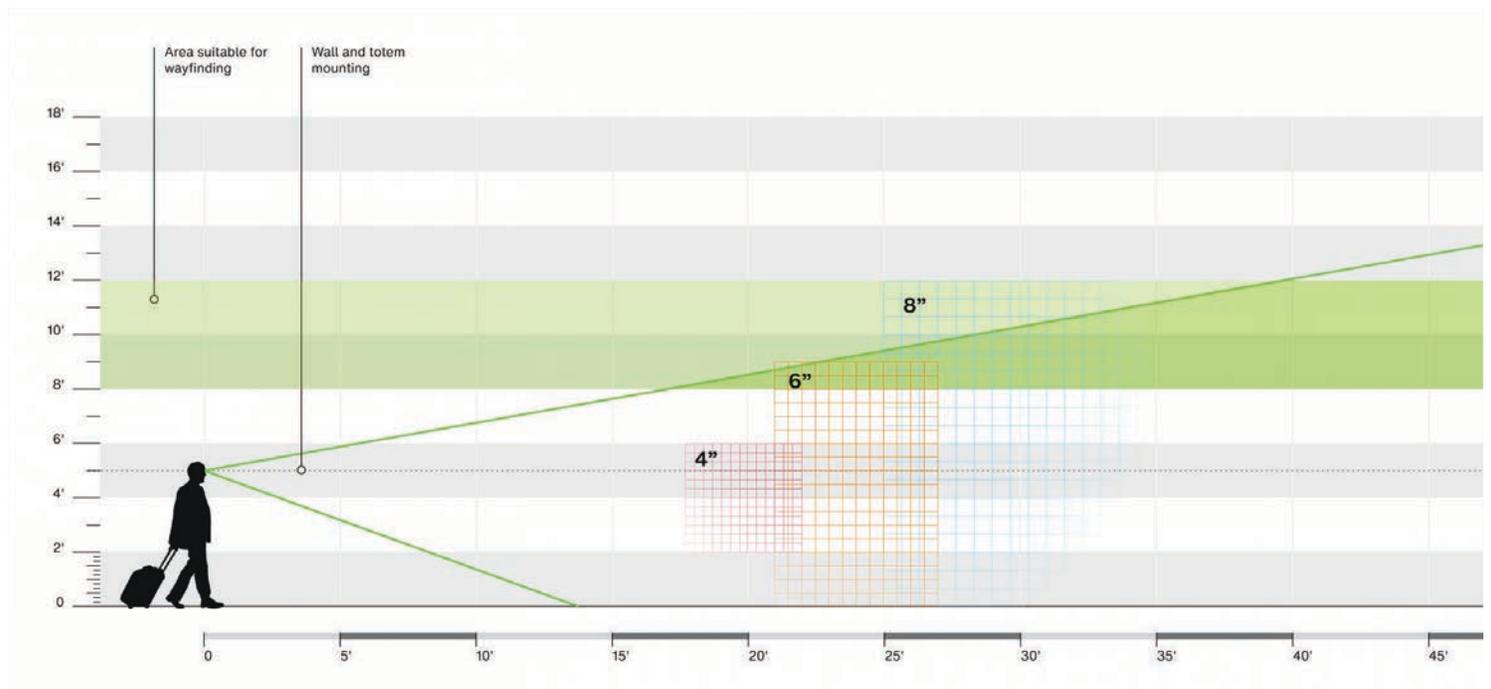
An overview of the sign type family

## 6.1.2 Grid Units

A grid provides a compositional tool to consistently position, size, and align all graphic elements. It also brings coherence to disparate objects and is therefore essential to a system of this scale. Beyond the sizing of elements, the grid also informs the size of typography, the size and construction of wayfinding elements, and the relative distance and spacing between elements, when relevant.

While the grid is the foundation upon which all elements are built, it is never made visible.

The three grid unit sizes (4-, 6-, and 8-inch) are used based on their vertical proximity to the user. A 4-inch notice may be within reach of the passenger, while a 6-in identification may be above it, all under an 8-inch unit grid directional sign.



4-, 6-, and 8-inch grid extends ver use based on height and placement

### **8" – Typical identification and directional 12 feet and under, mostly above 8 feet high**

The standard grid is built on 8" square elements, and can be comprised of multiples thereof. It applies to all elements within the Wayfinding Zone, including all directional signage, but can also extend below in the case of freestanding wayfinding structures.

Large IDs: some contexts call for larger identification signage, for instance gate numbers or Passenger Pick Up stations. Those will use multiples of 8", typically 16", but otherwise use the same grid system.

Alternative square grids of 4" and 6" apply to smaller elements, mostly identification signage that, either given the scale of the environment or the proximity to the user, would appear out of proportion if fitting with the standard 8" grid.

### **6" – ADA-compliant Signage 9 feet and under**

Used in ADA-compliant room identification as well as smaller scale signage.

### **4" – Regulatory Signage 6 feet high and under**

Used in all notices, regulatory and signage that is generally within the physical reach of the passenger.

## 6.2 Directional

Directional signs contain the most variables and are the most complex to compose. They combine arrows, text, and pictograms. Content determines the scale and structure of each sign.

Signs should not exceed four destinations. Five or more destinations become unwieldy and are harder to scan. When there are five or more destinations, split messages across additional signs.

## 6.2.1 General Principles



Align text, arrow, and pictogram based on the direction of the destination.

### Text

Text is always aligned with the arrow and pictogram based on the direction of the destination: left-aligned for destinations to the left and right-aligned for destinations to the right. Center-aligned text is never used.



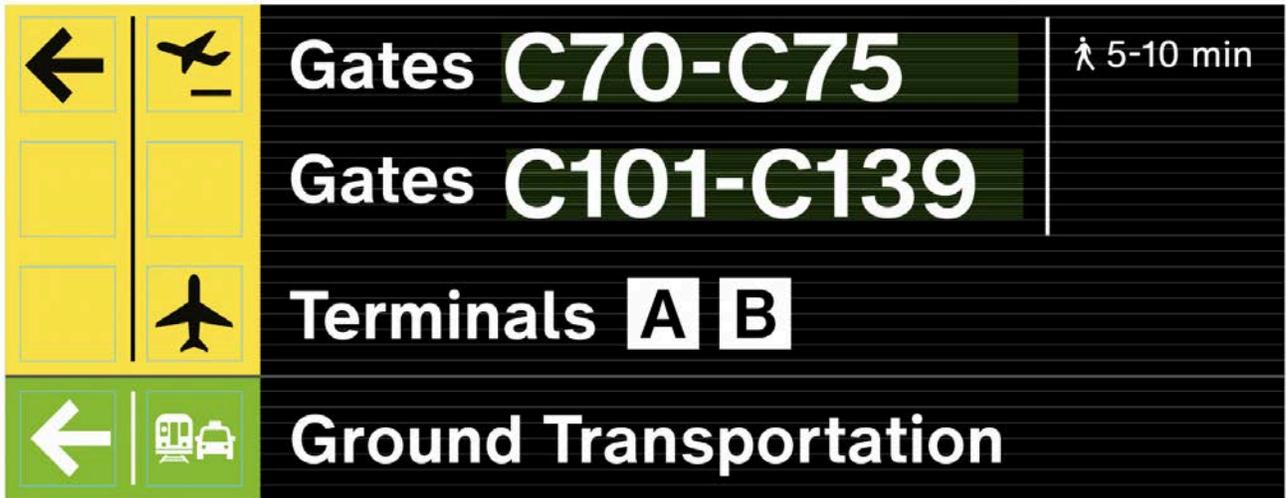
Compact and Expanded Gate number signage.

### Gate Text

Passengers tend to be most stressed when trying to find their gate, making gates some of the most important wayfinding information. In our system, gates are prioritized on directional signage due to this importance. In addition to always being listed first in the Information Strategy, they are also given greater prominence through larger type size. Gate numbers can appear in two sizes:

1. 5.5-inch characters, aligned with the top of the standard 3-inch message. This treatment should be used whenever possible, especially at key decision points.
2. 4.5-inch characters are the alternative for more compact signs. In this case, gate numbers are vertically centered with standard message line.

Gate messaging is the only instance where larger type is allowed on directional signs. No other use cases are allowed.



Directional Sign - Compact Form - Unidirectional

Compact Directionals can expand and adjust to a larger canvas

### Secondary Text

Secondary text is used in limited circumstances to provide supplementary information, such as the mode or process to reach a destination (e.g. walking times, “via AirTrain”).

Secondary text is delineated from the main text with a vertical divider. This divider creates a visual connection between the main text and corresponding secondary text. The height of the vertical divider is determined by the height of the text: it is as tall as the main destination text(s) or the secondary text, whichever is higher. Reference [Graphic Layouts](#) for exact line heights.

Secondary text is always set in 2-inch cap-height text, in Regular weight.





The vertical line between primary and secondary text is as tall as the main destination text to which it refers. If the secondary text is higher, then the line height is based on the secondary text.

### Pictograms

The size of pictograms on overhead directional signs is 8x8". They fill exactly one 8" line vertically, and half of the 16" color field horizontally.

Some pictograms have strong directionality, such as those for Departures, Shuttles, and Exit. These pictograms have left-facing and right-facing versions. For directional signs, use the left-facing version when paired with a left arrow or left-aligned straight ahead arrow. Use the right-facing version when paired with a right arrow or right-aligned straight ahead arrow.



How to apply left- and right-facing pictograms

Only use approved pictograms from this manual. A full set of pictogram assets, including left- and right-facing versions, is available for [download](#).

### Arrows

Arrows are always placed at the outermost edge of the color field based on the direction of the destination. Destinations straight ahead use a left-aligned up arrow.



Arrows directing straight ahead are typically aligned left.

Exceptions when straight-ahead destinations can be right aligned:

- To create a clearer distinction between destinations to the left and straight ahead
- To encourage passenger flow to keep right, e.g. in a narrow corridor with counter flow

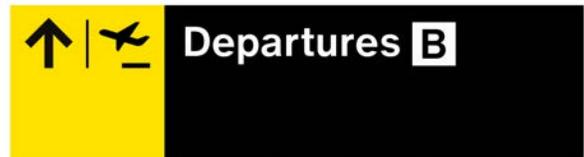
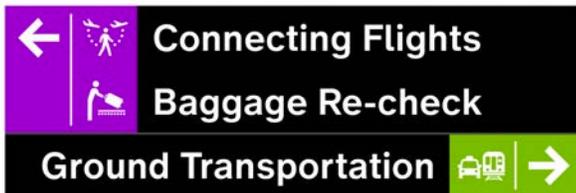


Exceptions when the straight ahead arrow can be right aligned

### Vertical Divider

A vertical line creates a clear visual connection between the arrow(s) and pictogram(s) in a color field.

The size of the vertical line depends on the height of the adjacent arrow and pictogram fields. The line extends from the top to the bottom of the arrow and pictogram.





A vertical line delineates the arrows and pictograms in each color field.

### Multiple Directions

Directional signs often direct to more than one destination. To reduce visual complexity, group destinations in the same category and direction with a single arrow aligned with the topmost destination.



A single arrow used for two destinations in the same category and destination

Ideally, each direction has its own sign to maximize distinction between directions. If space is limited, combine multiple directions on one sign.

When combining straight ahead and left directions on one sign, consider right aligning the straight ahead destinations to create a clearer visual distinction.



Best practice alternative:  
 Directional signs for separate directions

Separate signs maximize distinction between directions, but destinations can be combined on one sign if space is limited.

If there is more than one directional sign at a single point, they must match each other to maintain visual consistency.

- All signs must be bottom aligned.
- All signs must be of equal height.
- The minimum horizontal space between signs is 16".



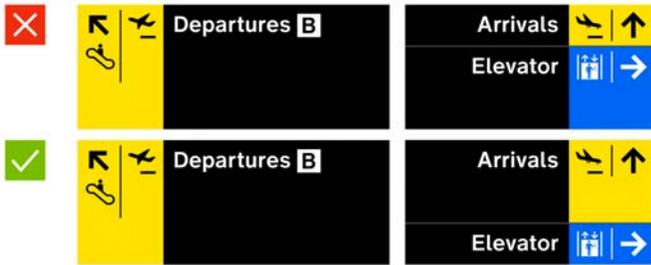
Multiple directional signs placed at one decision point must maintain visual consistency.

The color field(s) should always fill the entire height of a directional sign. If a sign contains more lines than destinations, group the empty lines at the bottom and extend the color field to the bottom of the sign.



If a sign contains empty lines, position them at the bottom and extend the color field to the bottom of the sign.

When one side of a double-sided sign has fewer messages than the other, extend the color field of the most important message based on the moment of the journey.



Arrivals is a more important message than Elevator, and therefore this message is extended to fill the height of the sign

## 6.2.2 Digital and Dynamic Layouts

The design of layouts for dynamic media follows the design rules set for static signage. However, since the exact height of a dynamic display is determined by the technical specifications of the display technology used, the grids on these layouts are defined relative to the height of the display, and not in absolute (inch) measurements.

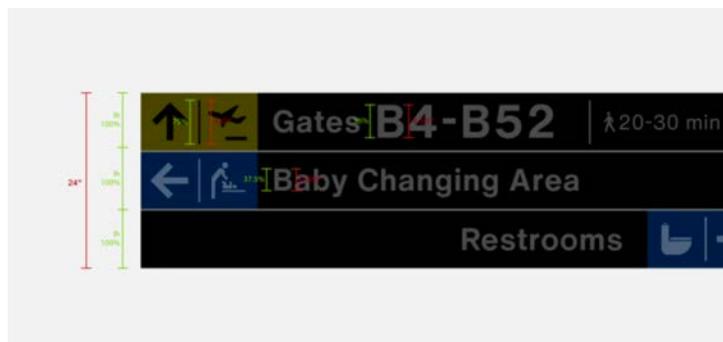
Using a relative grid has the following advantages:

- Easy re-use of identical layouts on displays with varying dimensions
- No excess or insufficient vertical adjacent black space on displays with vertical dimensions that are not multiples of 8"
- Easy to set-up in CMS that support HTML5

Dimensions in the layouts for dynamic signs have been defined as a percentage (%) of the line height (lh). The line height defines both the vertical and horizontal spacing of the elements of the layout. The line height (lh) does not define the width or aspect ratio of the signs. The width of dynamic signage required should be determined before purchasing signage. The width should be based on the approximate length of the content of the sign, architectural constraints, technical limitations, and other signage needs.



Standard size layout per line.



How directional digital display height impacts layout dimensions proportionally

Please note that the layouts described in this manual are ADA compliant only when they are used at the appropriate minimum sizes. The wayfinding will no longer be ADA compliant when the entire layout or parts of the layout are scaled down, or when modifications are made to the fonts or symbols used. Generally, cap-height for text should not be smaller than 2” for smaller secondary text and 3” for primary text.

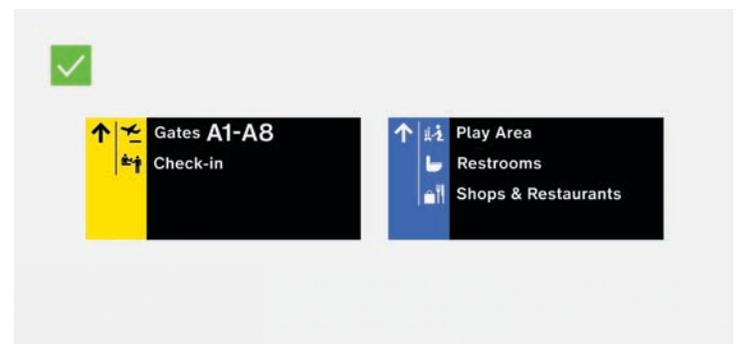
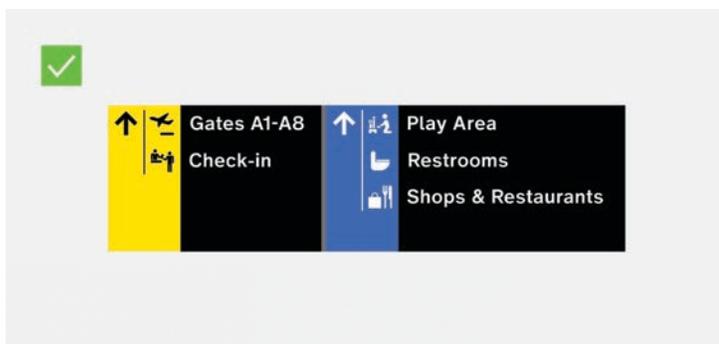
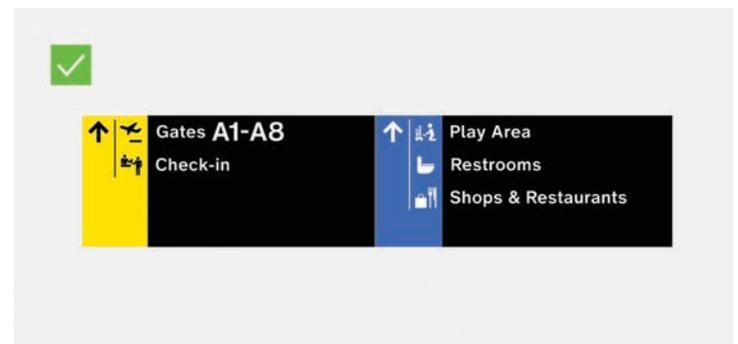
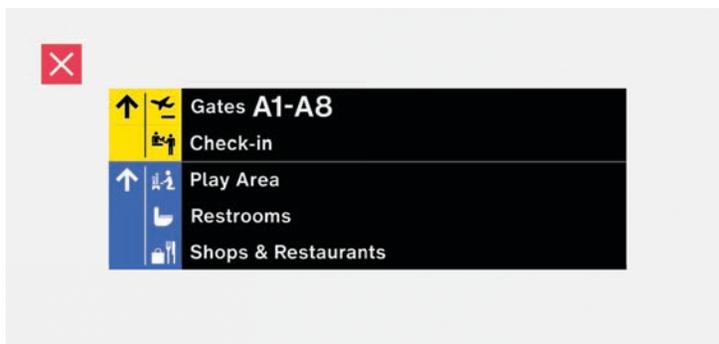
Standard Type Sizes Digital		
Cap height as percentage of line height		Cap heights on supported displays
25%	Family Restroom  10-20 min	2" - 2.5"
37.5%	Shops & Restaurants Gates	3" - 3.75"
56%	<b>B43-B55</b>	4.5" - 4.625"
70%	<b>C70-C99</b>	5" - 6.25"

For dynamic directional signage three principal configurations can be used:

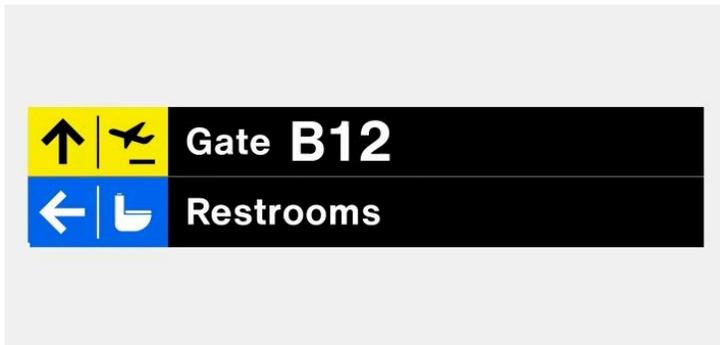
- A two line sign, with a height between 16” and 20”
- A three line sign, with a height between 24” and 30”
- A four line sign, with a height between 32” and 40”

The usage of single line dynamic signs is not advised, since a single line sign offers little flexibility in directing to varying destinations.

Signs with more than four lines of destinations will be harder to read because the top lines will be further away from passengers. When there is a need to direct to more than four dynamic destinations it is better to use a wider display that can be divided horizontally in multiple four line signs, or to use multiple displays.



In the event that more lines are needed on a digital directional sign than are possible due to minimum cap-height requirements and/or dimensional constraints, messages can be rotated through on different pages at a fixed time interval according to the digital guidelines provided in [guidelines for dynamic directional signage](#).



Rotating through messages on a directional sign should include a loading bar to communicate when the message will change.

## Layout

The general layout rules, such as the use of arrows and pictograms, order of destinations, alignment of texts and images etc., all follow the same principles as the static layouts. These generic principles are explained in section [Graphic Layouts](#).

### Specific layout rules

Because directions on dynamic signage will not be adjusted by a human hand, and because they often have to fit in a constrained area, some minor adaptations have been made in the dynamic base layouts:

- Besides the standard way of displaying gate numbers (3" Cap height on static signage) and the opportunity to show gate numbers even larger (5.5" Cap height on static signage) a third size for gate numbers can be used. Gate numbers can be shown at the same size as the regular sign text. In this way more gate numbers can be displayed, at the expense of conspicuity of the directions to gates and the legibility of these gate numbers.
- Walking times and smaller secondary text will be aligned with the primary text, left for left aligned signs and right for right aligned signs. On static signs these messages would have a fixed position. The new made-for-digital alignment makes it possible to fit more text in the small messages, and will also prevent accidental visual connections between the small text and other directions on the signs.
- Alignment and sizes of vertical dividers have been adapted to fit better within a percentage grid.

### Gate number size options

Static signs

Dynamic signs



Difference between static and digital in text size and layout for directional signage

### Alignment of secondary text

Static signs



Dynamic signs



Alignment and spacing differences for secondary text

For more detailed diagrams on dynamic directional layouts, see [graphic layouts](#).

### 6.2.3 Information Hierarchy

Information is organized according to a hierarchy. This allows users to find the highest priority destinations first and provides a consistent structure. Consistent placement and ordering of information on directional signs allows users to scan quickly.

The listing of destinations is determined in the following order:

#### Color Category

1. Flights & Operations (Yellow)
2. Connecting Flights (Purple)
3. Exit & Ground Transportation (Green)
4. Services & Amenities (Blue)

If there are multiple destinations within a single category, take arrow direction into account.

#### Direction

1. Straight ahead (arrow pointing up)
2. Left (arrow pointing left)
3. Right (arrow pointing right)

If there are multiple destinations within a single category and direction, take name into consideration.

#### Name

1. Alphabetical

Exceptions: Gates always appear at the top of the yellow category; “Transit to City” always appears first of destinations reached by AirTrain, followed by the rest alphabetically.



Destinations are sorted first by color.



Within a color category, destinations are sorted by arrow direction.



Within a group of destinations, lines are sorted alphabetically (with the exception of gates, which always come first).

## 6.2.4 Vertical Circulation

If an immediate level change is needed to reach a destination, the arrow is complemented by a pictogram depicting the means of vertical circulation (elevator, stairs or escalators). The pictogram must match the actual direction of the stairs or escalators. For example, a right arrow pointing to stairs must be accompanied by a stairs pictogram that descends to the right.



At level changes, the arrow must be accompanied by a pictogram of the means of vertical transport.

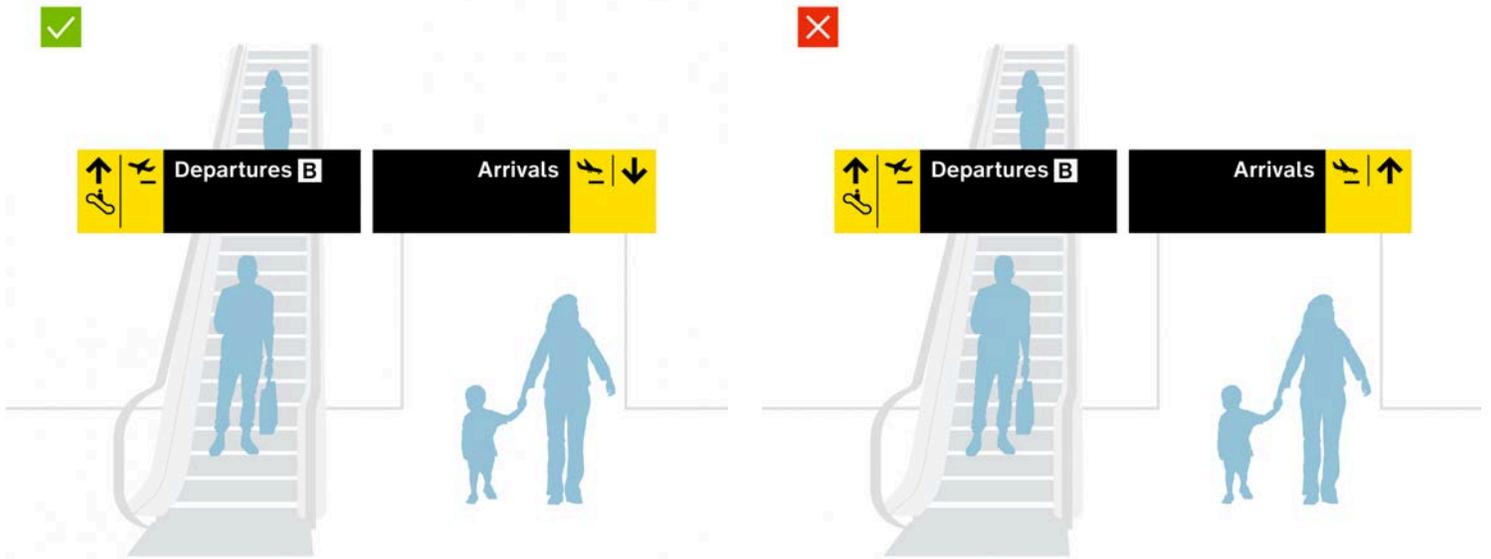
If the destination is the means of vertical circulation itself—for example, when directing to an elevator as an alternative to the default route—the pictogram is placed in the pictogram field, not the arrow field.



Vertical circulation can be a destination in its own right. In this case, the pictogram is placed according to standard placement in the pictogram field.

### Vertical Circulation + Straight Ahead

In certain conditions, users may misinterpret the up arrow as direction to change levels rather than continue straight ahead. This typically happens when stairs or escalators are located near a flow that also continues straight ahead. In this situation, a down arrow can be used for straight ahead destinations to distinguish the directions.



If stairs or escalators are located near a flow that continues straight ahead, the down arrow can be used.

### Diagonal Arrows

Diagonal arrows are used in limited circumstances.

- To direct up or down levels, accompanied by the stairs or escalator pictogram.
- To point to a destination immediately adjacent to the sign (signaling “Here is...” instead of “To...”) when the destination is especially difficult to see. For this instance, always use diagonal arrows pointing down, never pointing up.



Diagonal arrows are only used in limited circumstances: to indicate level changes or point to a hard-to-find destination adjacent to the sign.

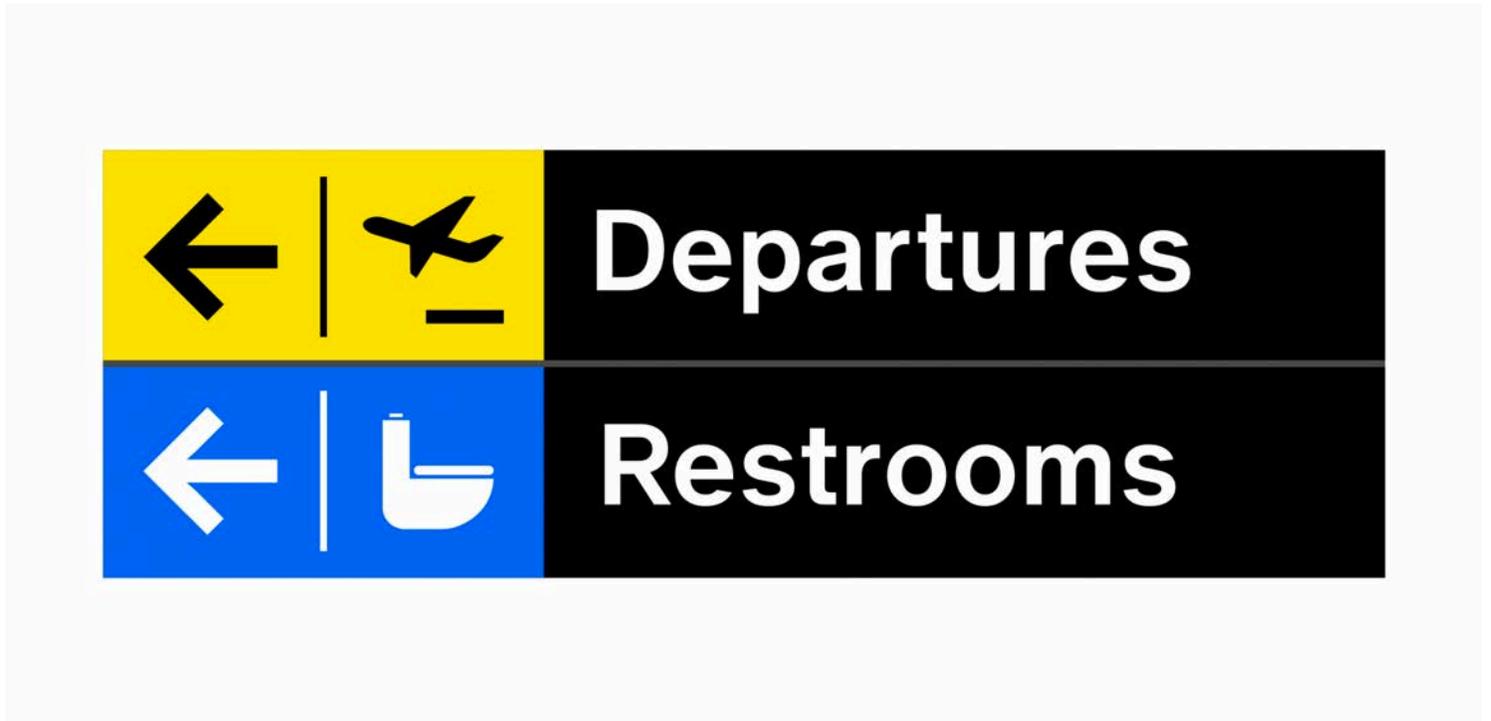
## 6.2.5 Dividers

Horizontal dividers make groups of destinations combined on a single sign distinct from each other. The divider helps distinguish multiple directions or multiple colors.



A gray horizontal line separates groups of directions.

The horizontal divider is a 0.25" gray horizontal line, and always extend the full width of the sign.



The horizontal dividers separates different colors...

## 6.2.6 AirTrain Destinations

Following the information strategy to Focus on Destinations, destinations reached by AirTrain are listed on directional signs with “via AirTrain” as secondary information, which reinforces the mode.

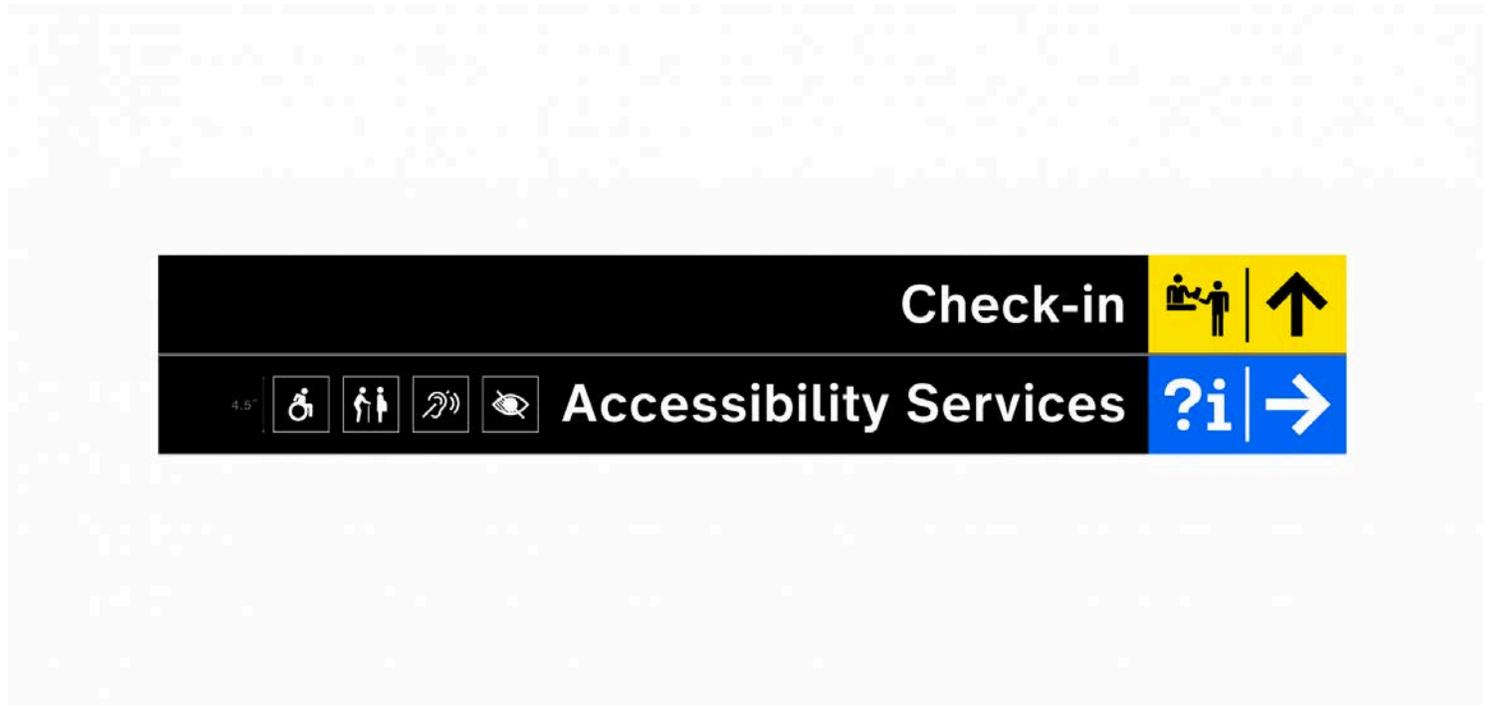
Include “via AirTrain” as secondary text on the same line directly following the destination name. The AirTrain logo follows “via AirTrain” in a 4.5” square bounding box.

When listing destinations reached by AirTrain, list “Transit to City” first, followed by the rest alphabetically.

Never use the AirTrain logo as an arrow.

## 6.2.7 Accessibility Services

As the Port Authority introduces Accessibility Services, for travelers with disabilities and reduced mobility, this message and pictogram design will serve to identify the areas where these services are offered – such as in lounges and at information desks.



Accessibility Services pictograms are formatted in white on directional signage.

## 6.2.8 Walking Times

Walking times are reassuring for passengers so they can understand how long they have to reach their destination gate. Armed with this information, they can be more at ease and inclined to explore the shops, restaurants, and other amenities at the airport.

Walking times are calculated using a comfortable walking speed of 3mph (265ft/min) to consider passengers that may be carrying baggage, or with children or seniors.

Walking times should not be included on every directional sign, which would introduce too much complexity to the environment. Walking times should only be added to signage at major decision points. For example, walking times would be present on the first signs visible after the Security Checkpoint, and again where concourses connect to leisure areas.



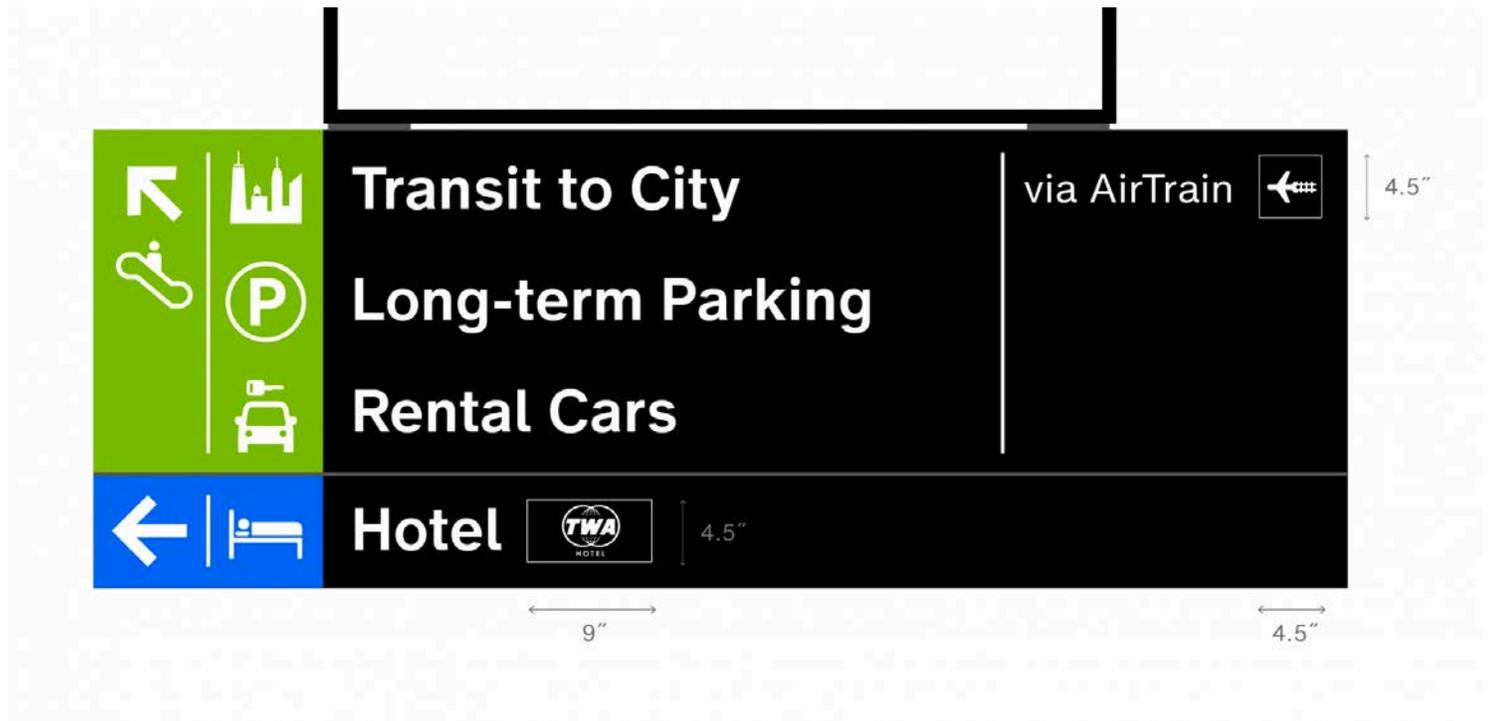
Walking times added to the Gates range on a sign at the start of a concourses

## 6.2.9 Branding

White monochrome logo treatments are used in directional signage and other contexts where color would distract from the primary wayfinding information, its color coding in particular.

The logos are placed in an outlined box following the relevant destination. This ensures the information does not distract from functional color coding, but is still clearly found. Logos should be provided by the commercial entity.

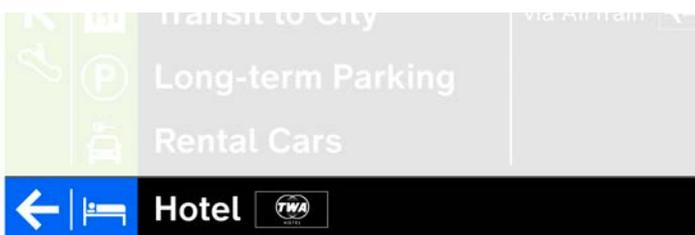
All brand element treatments are discussed in Brands.



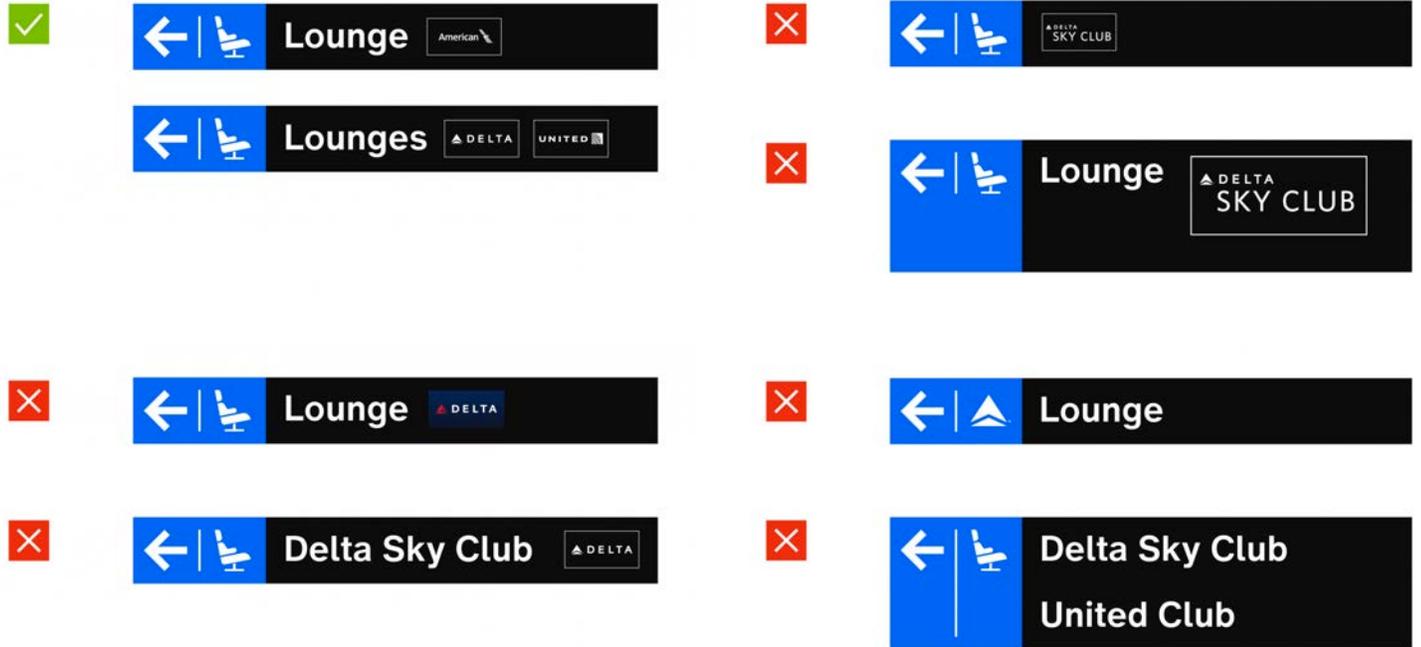
Sample white logo treatments on directional signage



When multiple logos must be used, they can flow onto next line in the same fashion as flowing text, depending on the width of the sign.



A single destination may often have multiple sub-destinations. When space allows, fully describing these destinations may be useful for passengers.



Don't: use a brand treatment without a message; enlarge the white logo beyond standard 9x4.5" rectangle; use a full-color logo on directional signage; combine branded destination text with a logo; use a logo only as a pictogram; use a branded name as destination message

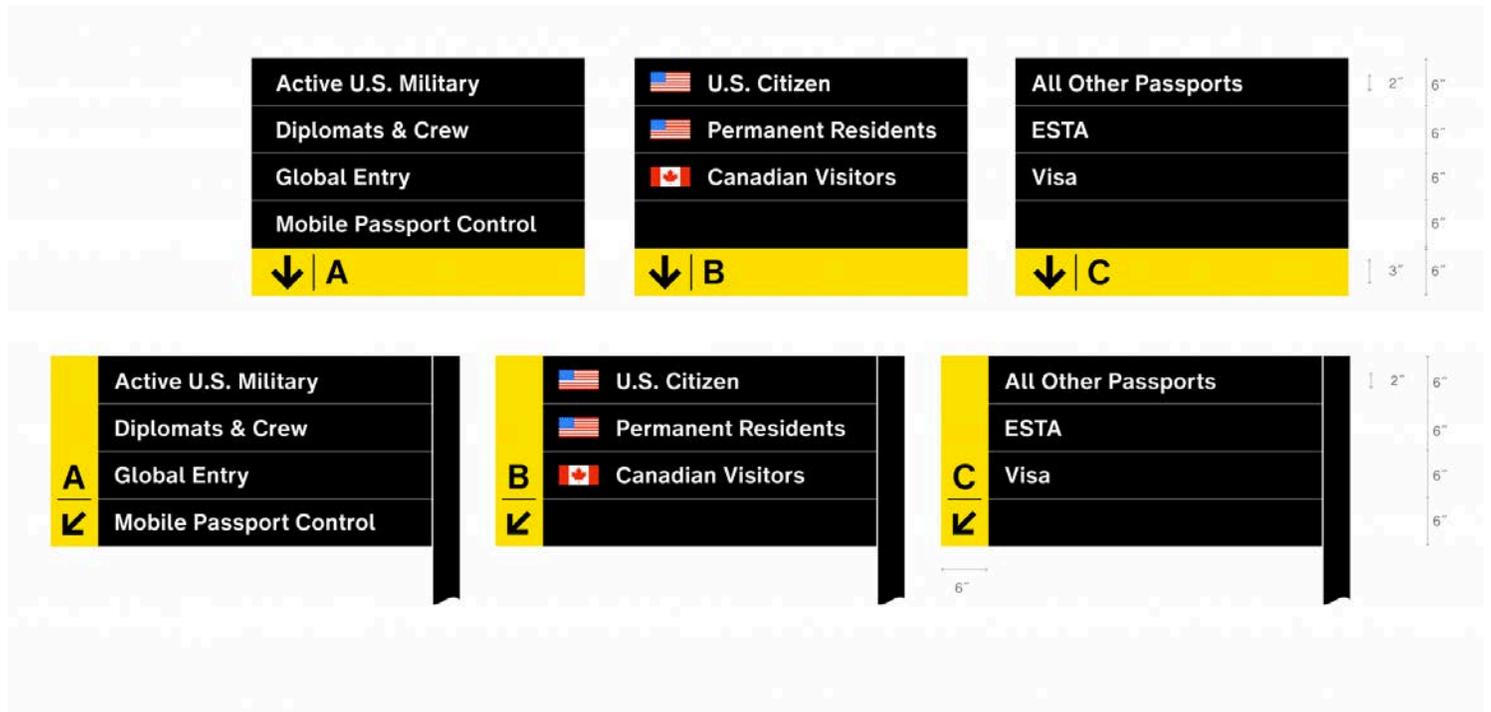
## 6.2.10 Lane Sorting

Lane sorting is essential where passengers must be divided into distinct groups, such as at the Security Checkpoint and Passport Control. Lane sorting signage operates similarly to directional signage, though it typically indicates a more immediate destination. Signs that support lane sorting may be analog or digital, and the logic herein applies to both.

Arrow placement will vary based on the composition of messages, but should always be consistent within an array. If all messages within a lane use the same pictogram, then the pictogram should be used alongside the arrow, left aligned with corresponding messages above. When one lane contains multiple messages that use different pictograms, the arrow should be centered with the lane with no pictogram.

Lane sorting signs follow the convention of the color field with arrow. However, they use a more compact layout (on a 6" scale grid) to fit more content in a smaller sign area.

For signs that appear directly above a lane, the color field appears at the bottom of the sign. For pole-mounted signs adjacent to a lane, the yellow band appears at the side of the sign, directed away from the pole.

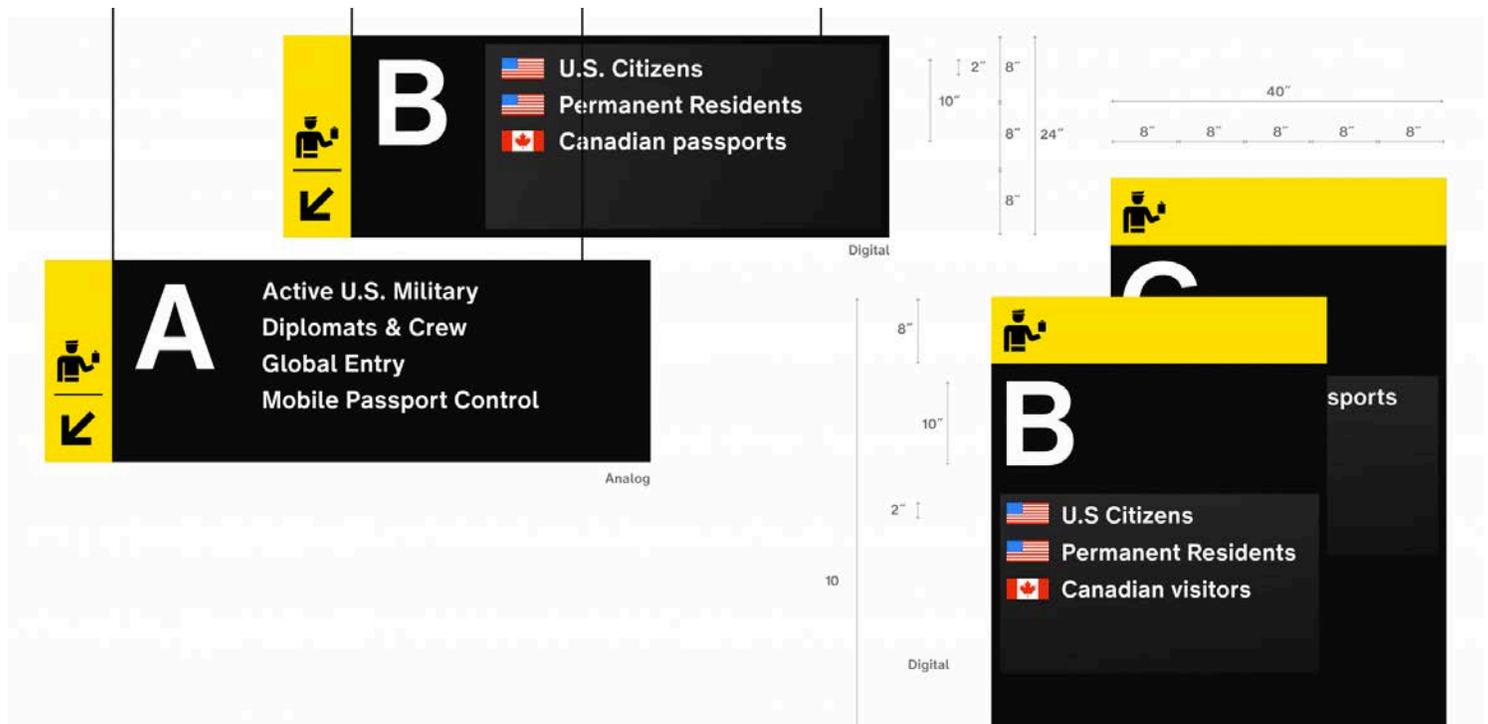


Lane sorting signage (pole-mounted and wall-mounted, on a 6" grid)



When lanes are not numbered or lettered, the arrow should stand centered above the walk path

If lanes are numbered or lettered, they should lead to a numbered or lettered destination. The destination should be clearly identified through either a large totem or a suspended sign, depending on what the architecture of the space allows.



Lane sorting signs for Passport Control areas (overhead and totem, both on an 8" grid)

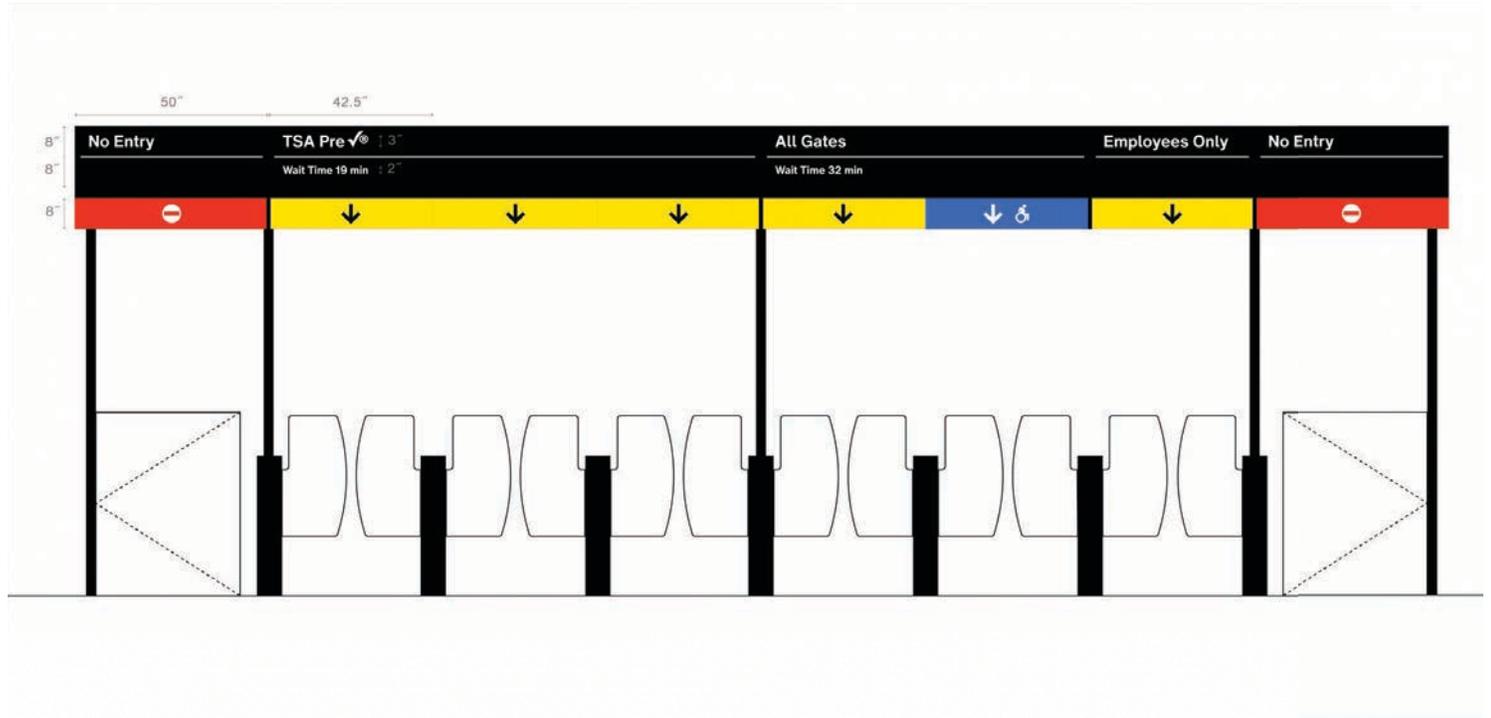
Standalone lane identification signs, also called totems, are useful to organize a large space and can more clearly serve as landmarks around which stanchions will be organized. They need enough space between them to be seen at a distance on approach (i.e. not block one other), and could be staggered for that purpose.

If not enough space is available, then suspended signage should be considered, if ceiling height sufficient.

## 6.2.11 Dynamic Lane Sorting

In the case of an ultra-wide dynamic display used for lane sorting, configuration of the display is driven by how passengers are expected to queue. The layout should be dynamically driven to adapt to function of the lanes.

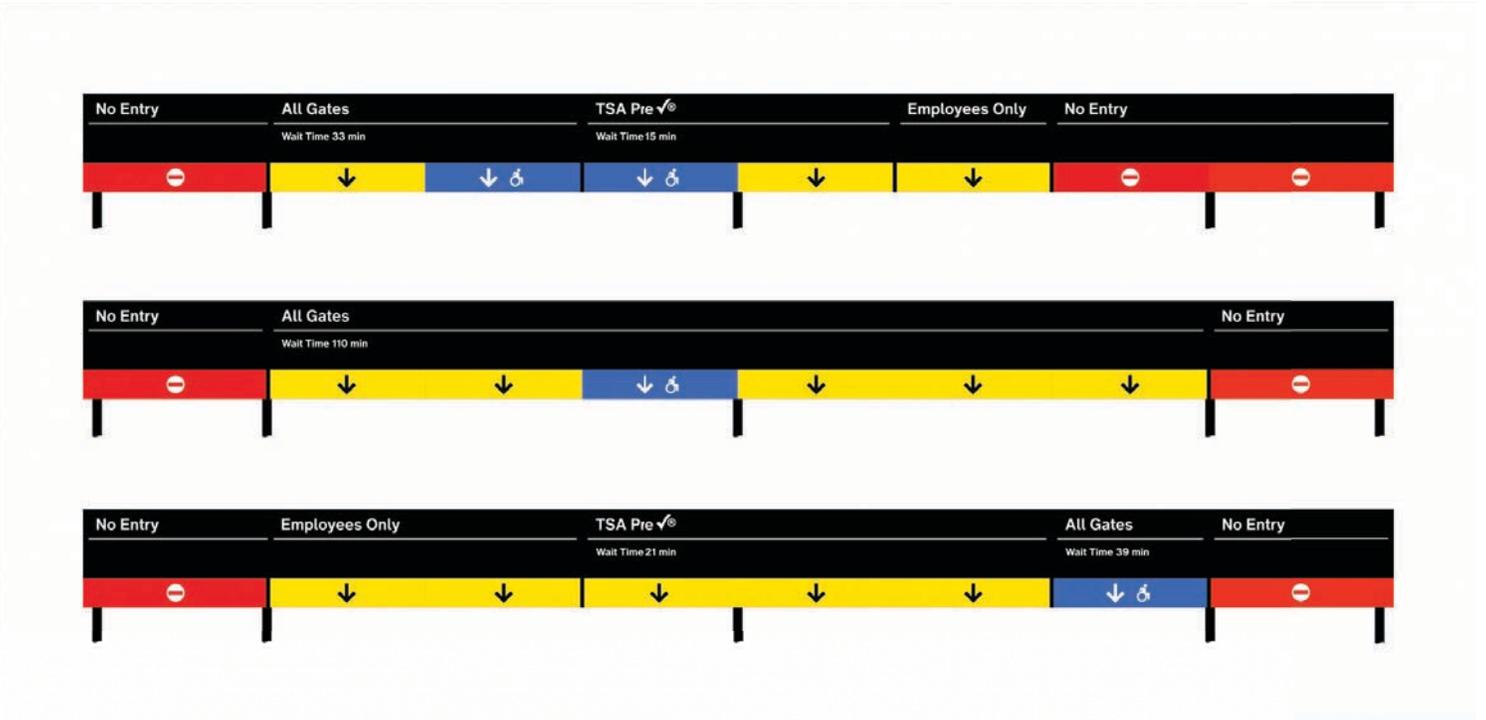
Apply an appropriate grid size to the screen, considering viewer distance and established grid sizes within the manual. For special entry doors or lanes exceptions to the grid may be necessary.



Dynamic lane sorting signage on a modified 8" grid.

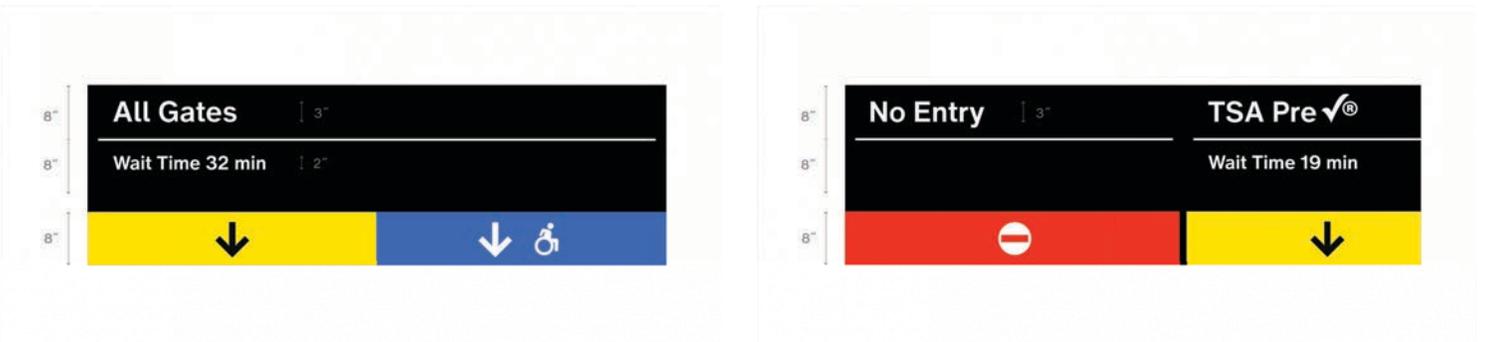
Lanes should be grouped under one, left-aligned label to identify lane function – indicating which individuals pass are expected to queue at each lane. Where applicable, a dynamic wait time for a queue can be included as a subheading, beneath the divider.

Color fields should span the width of each individual lane. Combine color fields when adjacent lanes are for the same passenger type, separate with a divider when they are different. Arrows and pictograms should be centered in the color field above each lane to clearly indicate where to pass through.



Dynamic lane sorting signage examples.

Accessible lanes are indicated by using a blue color field and a wheelchair pictogram centered with an arrow. No entry lanes should be identified with a red color field and a no entry pictogram.



Accessible lanes do not need a color field divider when the lane function is the same as adjacent lanes.

## 6.3 Identification

Identification signs confirm a destination. They act as a visual title or heading in their environment. They can be placed on a facade, a canopy, or near a portal or door. For large spaces such as Check-in or Baggage Claim, the dimension of the identification sign should match the scale of the space.

### 6.3.1 General Principles

All identification signage is anchored with a pictogram at its top left corner, or, in the case of reverse sides of double-sided signs, top right corner.

The pictogram area is placed in a color field, which can take three forms:

1. A simple square, for signs that are long and have a simple message
2. Vertical band, for signs that are wall- or ceiling-mounted and have the color band facing the main passenger flow
3. Horizontal band along the top, for signs that are bottom-mounted (to the floor or to an object, e.g. baggage claim identification)

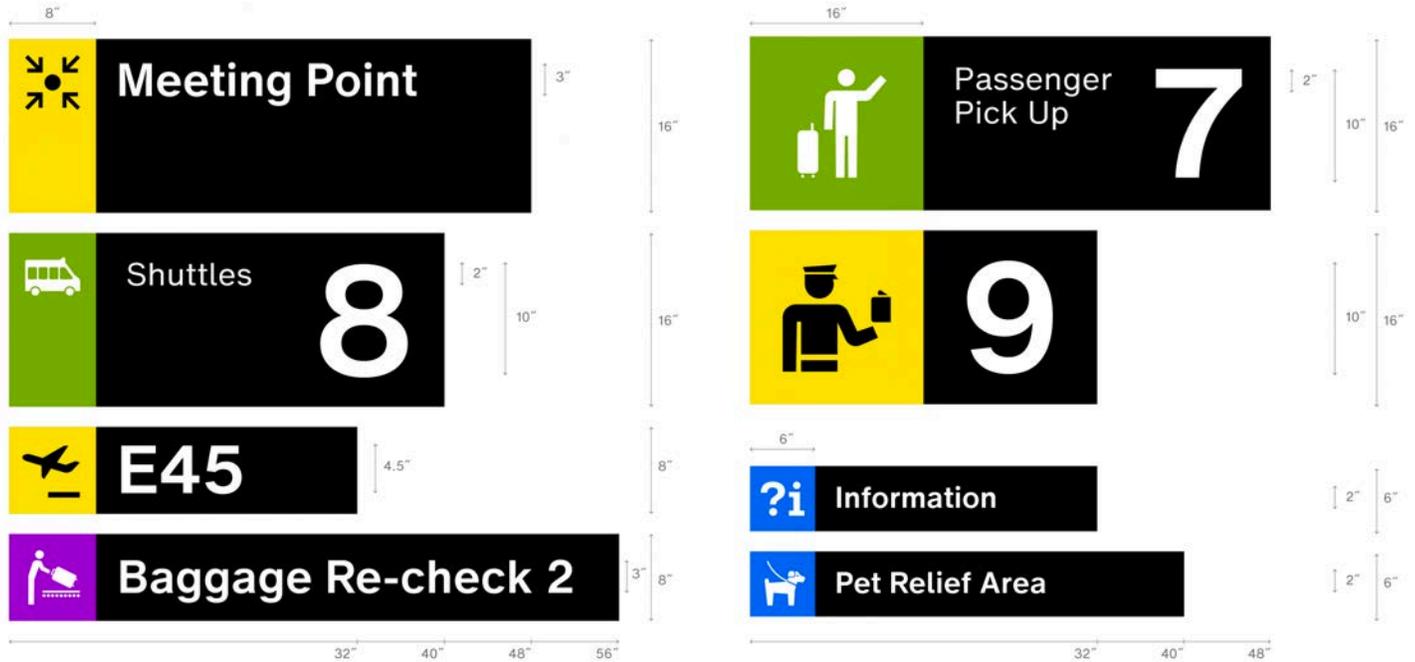
The design and layout of identification signage will depend on its anchoring and position.



Basic principles of identification signage

### 6.3.2 Suspended and Wall-mounted

For suspended and wall-mounted signage, the band faces the main passenger flow. To make it stand out in the environment, the color band extends the height of the sign. It wraps around the edge, consistent with the Design Language, serving as a beacon.



Various suspended or wall-mounted signs in both 8- and 6-inch scales

The pictogram area is typically 8 inches wide, but depending on the environment, it may be as wide as 16 inches or as narrow as 6 inches.

#### Branding

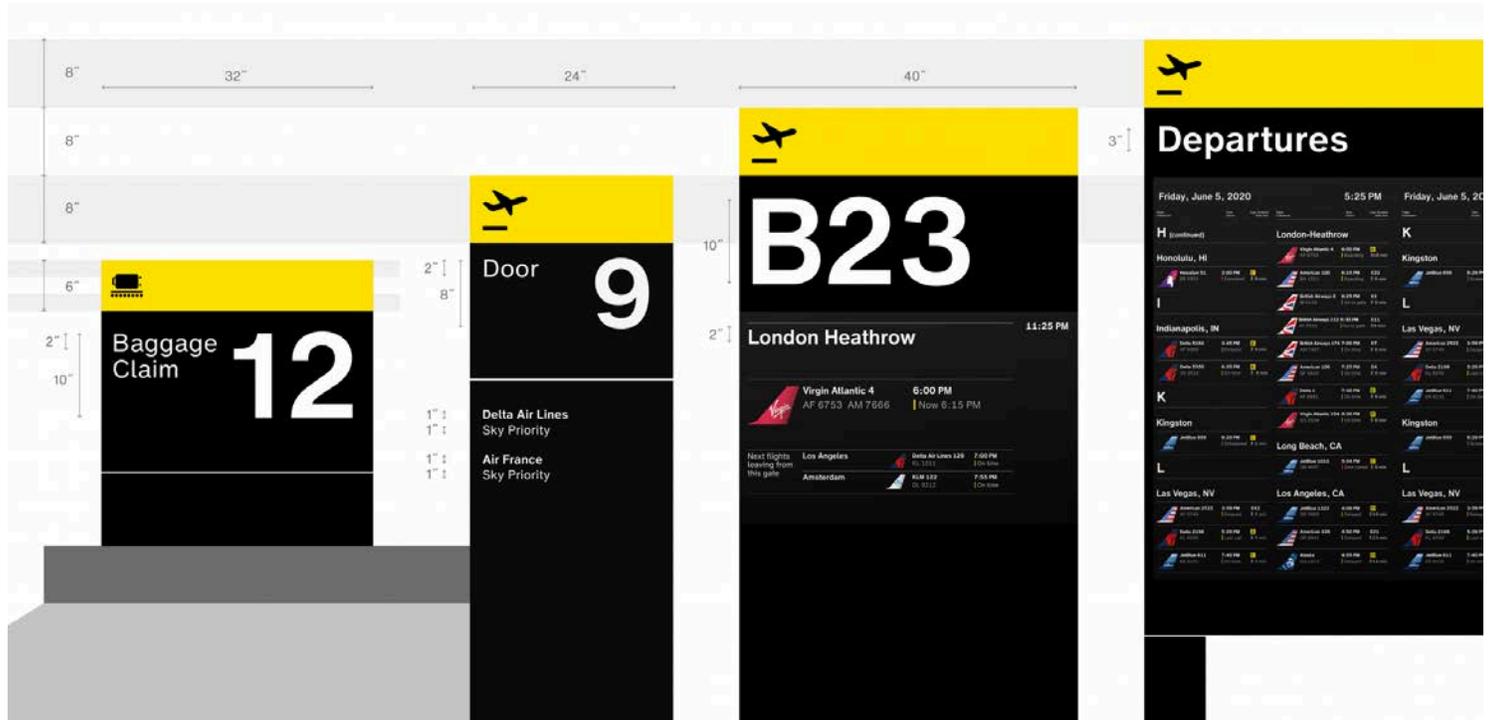
Some suspended and wall-mounted signs, such as curbside identification signs, feature airline branding. Full-color logos are used in these contexts to maximize recognizability with passengers. Full-color logos can appear on these elements since they are at a large size; otherwise, full-color logos are graphically complex and do not reduce well, so other Brand Treatments must be used.



The three branding treatments

### 6.3.3 Freestanding Signs

Freestanding signage is used for large statement objects, such as totems or groups of FIDs. To further emphasize these objects, the color band extends the full width of the object.



Examples of freestanding signage: baggage claim ID, curbside door ID totem, combination GID and gate ID totem, and FID array

### 6.3.4 Room and Amenity Identification

Room and amenity identification signs use a similar layout to bottom-mounted signs. They use 6- and 4-inch sizes.

#### 6-inch band: ADA-compliant room identification

This sign complies with the Americans with Disabilities Act (ADA) for identifying permanent rooms and stairs. It features a six inch color band, visual high-contrast room name, braille, and raised text (same color as background). For additional information on ADA compliant signs, see [References](#).

#### 4-inch band

This smaller sign size is for most other uses where they can easily be read up close. These are not intended for room identification as set forth in the ADA Guidelines, but as secondary identification. These signs only have a visual high-contrast identification name.



Sample room and amenity identification signage

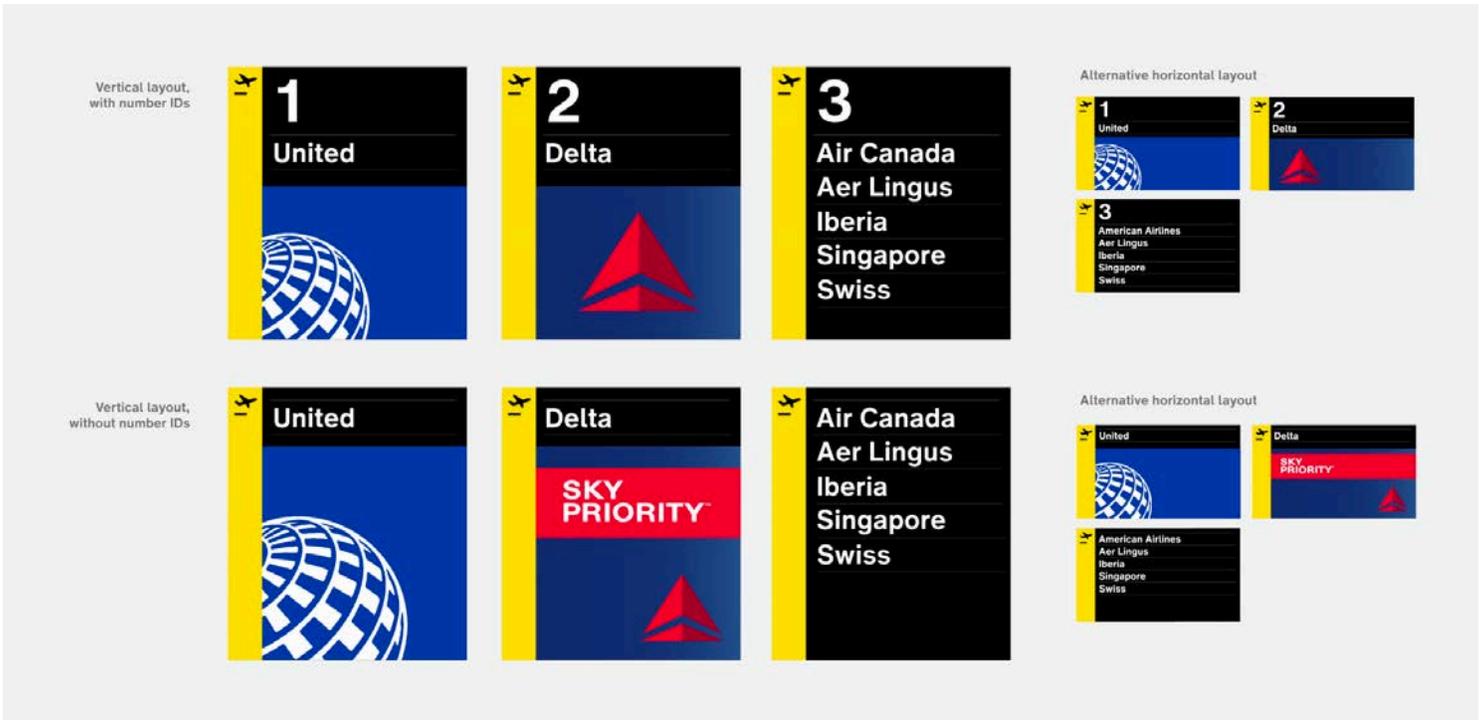
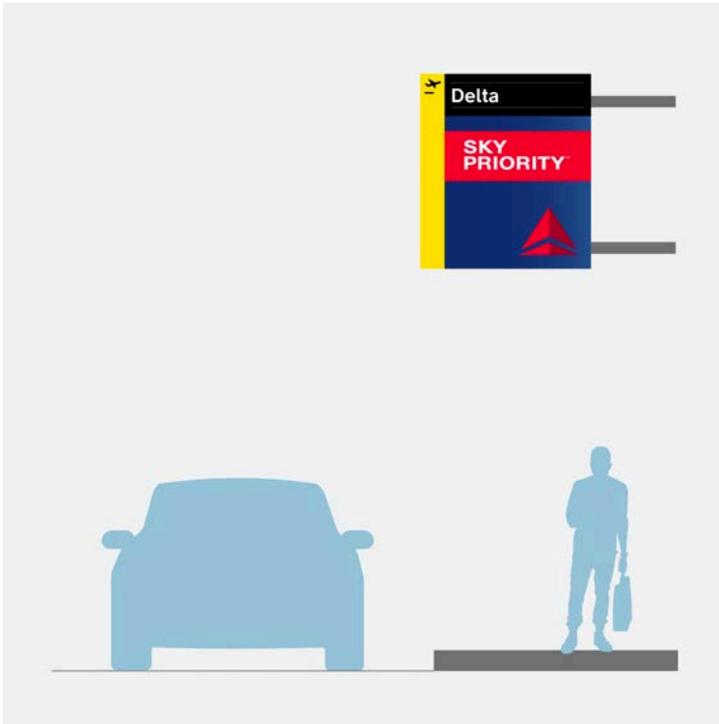
## 6.3.5 Curbside Identification

Curbside identification signs where possible, should contain no more than five airlines in a list. This manual's typography rules should be maintained for airline names for optimal visibility and legibility, since users will have varying familiarity with airline logos and brand styles and thus may not be able to recognize them easily or at all. Graphic logos should only be incorporated alongside the airline name when there is one airline on an identification sign, to avoid visual overload.



Using a consistent cap-height maintains visibility/legibility from a moving vehicle.

The use of digital displays to create dynamic curbside identification signage is beneficial for airports and terminals where airlines frequently change operational spaces that affect curbside identification. For more information on creating flexible messaging and designs, see [Dynamic Signage](#).



Curbside identification layout examples

## 6.3.6 Supergraphics

Throughout the passenger experience, opportunities will arise to take advantage of the architectural context and augment a wayfinding function through a “supergraphic”. A supergraphic is any use of oversize graphic elements (pictogram, arrow, text, etc.).

These are most likely to be called upon for identification purposes, for example:

- in gate areas (gate number),
- restrooms gendered pictograms for distinction),
- terminal arrival and departure (terminal and door numbers), and
- elevator (floor numbers).

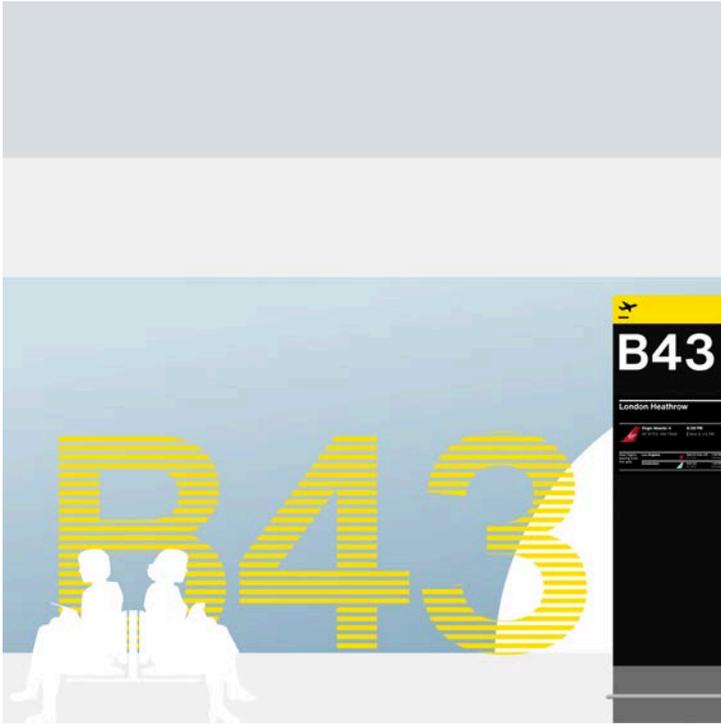
Since these serve wayfinding functions and are always used in addition to the standard wayfinding signage, they must align with the wayfinding standards in terms of color and typography.

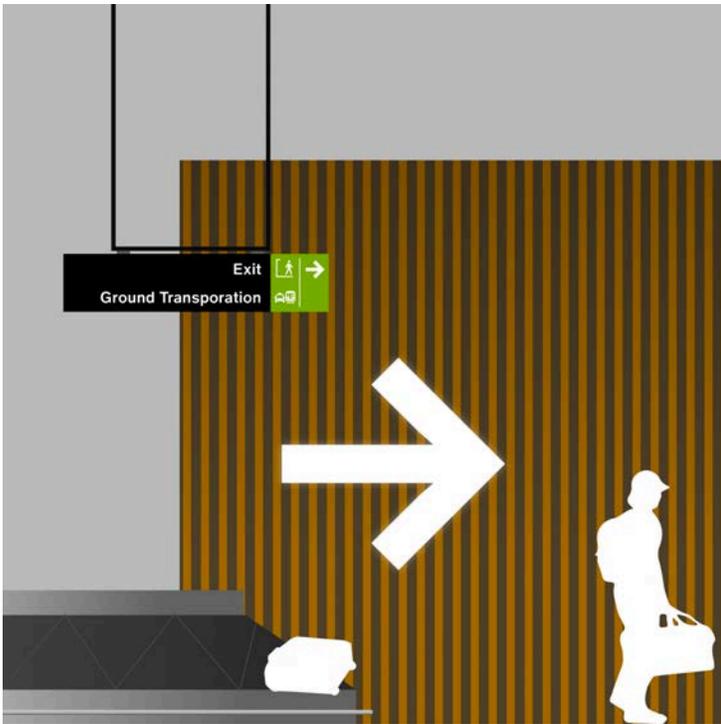
They may also serve as a bridge between the architecture of the terminal and wayfinding, and therefore offer more flexibility in use of materials and textures that for an improved architectural alignment and an opportunity for more creative treatments. For example, a gate number (set in Helvetica Now for PANYNJ) cut out of a slatted wood wall cladding or using perforated metal to create the floor number near an elevator.

Maximize available real estate to create a pleasant use of scale. Do not use supergraphic when space is insufficient, or where existing conditions are already visually busy.



A sample of possible supergraphic treatments



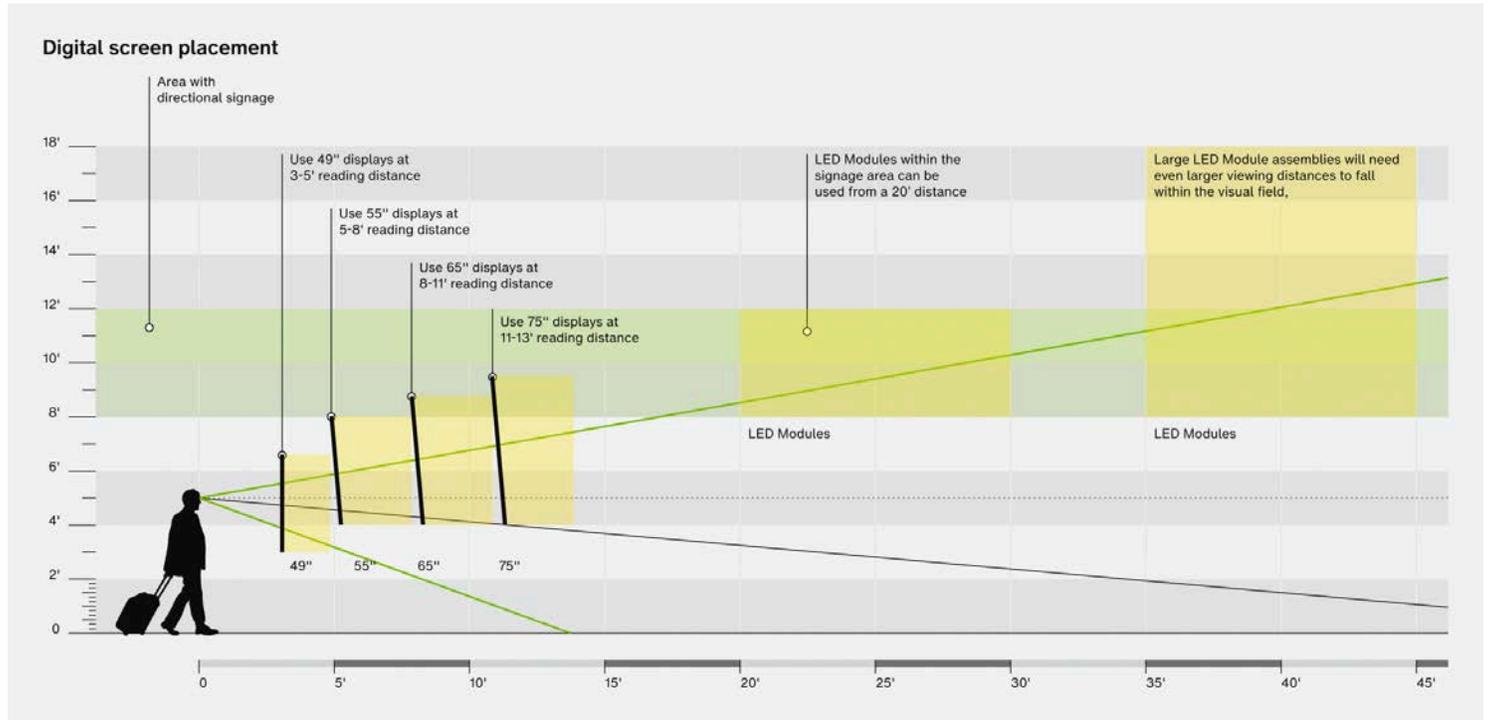


## 6.4 Informational

Information delivery is critical to maintaining the passenger's confidence from point to point. While some passengers may be increasingly reliant on their personal devices, principles of Inclusive Design call for the airport to still be able to distribute critical information at key moments.

## 6.4.1 Digital and Dynamic Displays

The following guidelines should be used to determine display size requirements. Following these guidelines helps to ensure passengers will be able to read the content of a sign without difficulty.



Placement guidelines for digital informational signage

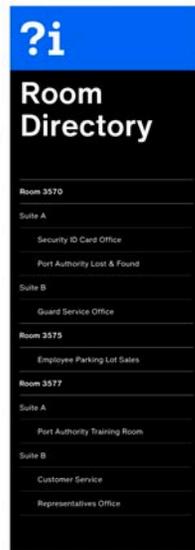
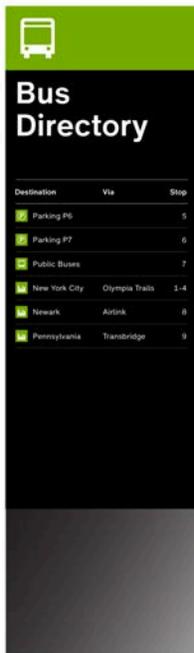
## 6.4.2 Directories

Directories are used to provide an overview of destinations at major decision points, e.g., which airline can be found at specific check-in and ticketing counters, gates, etc.

### General Directories

Directories are placed at entrances to buildings or areas to show what can be found there. They can be used, for example, in terminals, concourses, and food courts.

A generic template is available that can be adapted to the needs of the specific application. For instance, when more destinations need to be displayed, the sign size can be increased to accommodate additional lines.



Sample general directories

### Elevator Directories

Elevator directories are placed next to all elevators accessible to the public. They list the main destinations that can be reached on every level.

Since the number of levels and destinations can vary considerably, this template may be adapted. However, text size cannot be decreased as it will impede legibility.

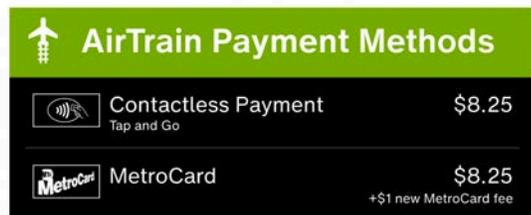
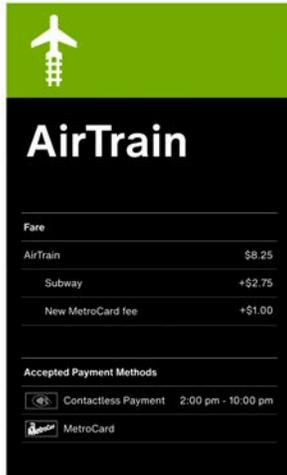


Sample Floor Directory



### 6.4.3 Transportation Information

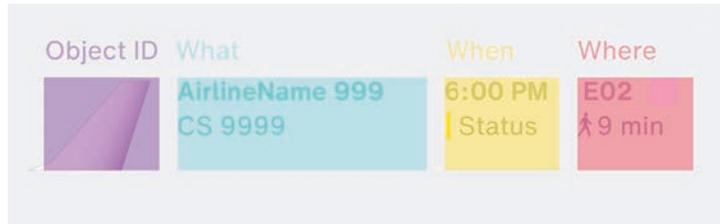
Informational panels can be used to further inform users about transportation options, operations, fares, service times, and other important service details.



Sample informational panels

## 6.4.4 FIDs, GIDs, and BIDs

Information displays play a key function in the airport environment by providing up-to-the-minute updates on flight information (FIDs), gate information (GIDs) and baggage information (BIDs). A modular, responsive content block unifies these varied elements, regardless of screen size or technology.



Modular content blocks are responsive to the screen size, format, and resolution.

### Tail Fin

The tail fin provides a simpler canvas than a full logo, while still providing a recognizable cue for passengers and a flexible branded space for airlines. Artwork should be provided by each airline (within the bounds of the asset), and should always include the airline's name.

As the initial marker of the content block, the tail fin is a common treatment across all digital touchpoints that can adapt to many screen sizes, ratios, and quantities of elements.

### Flight Information

The full name of the airline followed by the flight number complements the Object ID/tail fin to define the destination. Flight information is always shown and cannot alternate with other information. Codeshare flight information (using the codeshare airline's two-character code and flight number) is included as secondary information on the second line in gray. This can alternate between multiple codeshares.

### Time and Status

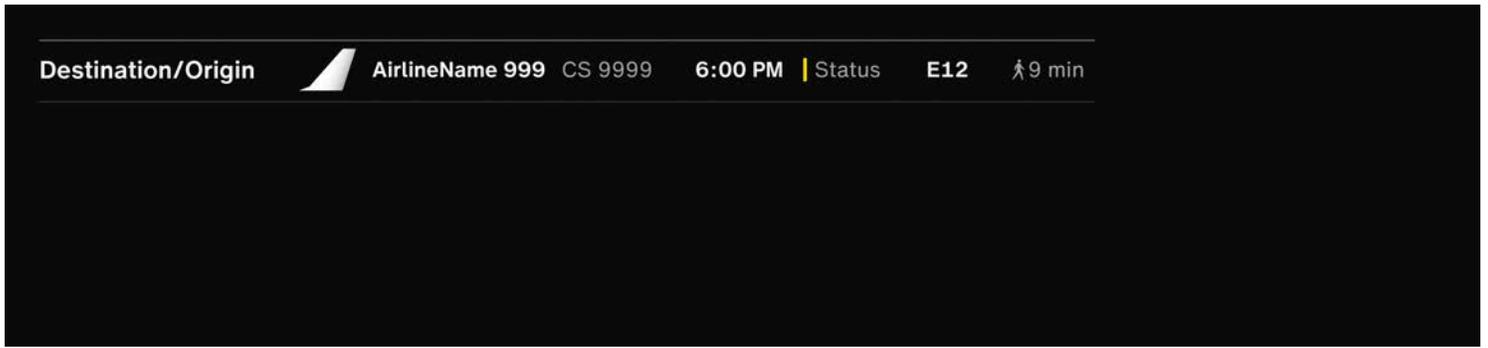
It is critical and best practice to provide timing and status updates on FIDs and BIDs to keep passengers informed and ensure their journey runs smoothly. The departure or arrival time is shown with one of the following statuses and corresponding color marker.

#### FIDs and GIDs:

- ■ Scheduled
- ■ On time
- ■ Delayed
- ■ Now 0:00 AM
- ■ Canceled
- ■ Go to gate
- ■ Boarding
- ■ Last call (pulsating text)
- ■ Door closed
- ■ Departed

#### BIDs:

- ■ Awaiting baggage
- ■ Baggage delivering
- ■ Complete
- ■ See Baggage Services



FIDs elements in most compact form

## Location

FIDs also include information on how to reach the proper gate, which is especially critical for passengers with a connecting flight. Gate information includes:

- Gate Number prioritized with a highlighted black-on-yellow treatment
- Terminal depicted in the standard square treatment, like directional signs
- Walk time based on standard walking time from the location of the FID

By employing a consistent treatment of information, FIDs, GIDs, and BIDs can adapt to various formats based on the format, distance, resolution and type of device they are displayed on.

Friday, June 5, 2023

5:25 PM

Destination	Flight	Departs	Status	Gate	Walk time
Amsterdam	 KLM 116 QF 4511	6:20 PM	Boarding	B42	9 min
Atlanta	 JetBlue 5037 G3 8269	5:26 PM	Delayed	B43	9 min
	 Delta 702 MH 9066	7:20 PM	On time	B12	9 min
Austin	 American 204 JL 8053	7:20 PM	On time	B10	9 min
Baltimore	 Delta 208 AF 3681	9:17 PM	On time	B37	9 min
	 Delta 5350 VS 3512	6:20 PM	On time	B55	9 min
Barcelona	 Iberia 2 UA 8285	6:00 PM	Boarding	B32	9 min
	 Aer Lingus 53 VS 3512	6:20 PM	On time	B55	9 min
Boston	 JetBlue 2 UA 8285	6:00 PM	Boarding	B32	9 min
	 Delta 5037 G3 8269	5:26 PM	Delayed	B43	9 min
Calgary	 Air Canada 2 AF 3681	9:17 PM	On time	B37	9 min
	 Air Canada 8 VS 3512	6:20 PM	On time	B55	9 min
Charleston	 Delta 304 UA 8285	6:00 PM	Boarding	B32	9 min
Chicago	 American 535 VS 3512	6:20 PM	On time	B55	9 min
	 Southwest 97 EK 6781	8:15 PM	On time	B27	9 min
Cincinnati, OH	 United 5037 G3 8269	5:26 PM	Delayed	B43	9 min
Dallas/Fort Worth	 Southwest 16 QF 4511	6:20 PM	Boarding	B42	9 min
Denver, CO	 Delta 1050 VS 3275	6:10 PM	Go to gate	B30	9 min
	 JetBlue 97 EK 6781	8:15 PM	On time	B20	9 min
Detroit, MI	 JetBlue 371 G3 8269	5:26 PM	Delayed	B43	9 min
	 American 506 G3 8269	5:26 PM	Delayed	B43	9 min
Edinburgh	 Delta 208 AF 3681	9:17 PM	On time	B37	9 min
Fort Lauderdale, FL	 JetBlue 1401 AD 7639	3:30 PM	Departed	B14	9 min
	 Delta 830 KE 7329	3:40 PM	Departed	B17	9 min
Fort Myers, FL	 JetBlue 1729 EI 5135	5:39 PM	Last call	B20	9 min
Frankfurt	 Singapore 25 UA 7222	7:43 PM	On time	B7	9 min
Geneva	 Swiss 23 UA 9719	7:25 PM	On time	B44	9 min

1-column compact

		Flight Codeshare	Time Status	Gate Terminal	Walk time
<b>F</b>					
<b>Fort Lauderdale, FL</b>					
	<b>JetBlue 1401</b> AD 7639	<b>3:30 PM</b>   Departed	<b>C16</b> ↑ 9 min		
	<b>Delta 830</b> KE 7329	<b>3:42 PM</b>   Departed	<b>A</b> ↑ 9 min		
<b>Fort Myers, FL</b>					
	<b>JetBlue 1729</b> EI 6135	<b>5:39 PM</b>   Last call	<b>C25</b> ↑ 9 min		
<b>Frankfurt</b>					
	<b>Singapore 25</b>	<b>7:43 PM</b>   On time	<b>B</b> ↑ 9 min		
<b>G</b>					
<b>Geneva</b>					
	<b>Swiss 23</b> UA 9719	<b>7:25 PM</b>   On time	<b>B</b> ↑ 9 min		
<b>H</b>					
<b>Helsinki</b>					
	<b>Finnair 6</b> AA 8986	<b>7:05 PM</b>   On time	<b>E</b> ↑ 9 min		
<b>Hong Kong</b>					
	<b>Cathay Pacific 831</b> CS 9999	<b>7:00 PM</b>   On time	<b>E</b> ↑ 9 min		
<b>Honolulu, HI</b>					
	<b>Hawaiian 51</b> B6 5851	<b>2:00 PM</b>   Canceled	<b>C30</b> ↑ 9 min		
<b>I</b>					
<b>Indianapolis, IN</b>					
	<b>Delta 5184</b> AF 6889	<b>3:45 PM</b>   Delayed	<b>B</b> ↑ 9 min		
	<b>Delta 5350</b> VS 3512	<b>6:20 PM</b>   On time	<b>B</b> ↑ 9 min		
<b>Istanbul</b>					
	<b>Turkish 2</b> LH 8285	<b>6:00 PM</b>   Boarding	<b>A</b> ↑ 9 min		

WiFi? Why yes!

BJFK\_Free\_WiFi

 **John F. Kennedy**  
International Airport

1-column

Friday, June 5, 2020 5:25 PM

Flight Codeshare	Time Status	Gate Terminal Walk time	Flight Codeshare	Time Status	Gate Terminal Walk time
<b>H (continued)</b>					
<b>Honolulu, HI</b>			<b>London-Heathrow</b>		
Hawaiian 51 B6 5851	2:00 PM Canceled	C 9 min	Virgin Atlantic 4 AF 6753	6:00 PM Boarding	B 18 min
Delta 5184 AF 6889	3:45 PM Delayed	B 9 min	American 100 BA 1511	6:15 PM Boarding	E22 9 min
Delta 5350 VS 3512	6:20 PM On time	B 9 min	British Airways 2 IB 6133	6:25 PM Go to gate	E1 9 min
<b>I</b>					
<b>Indianapolis, IN</b>			<b>British Airways 112</b> 6:30 PM AY 5512   Go to gate E11 9 min		
Delta 5184 AF 6889	3:45 PM Delayed	B 9 min	British Airways 174 AM 7667	7:00 PM On time	E7 9 min
Delta 5350 VS 3512	6:20 PM On time	B 9 min	American 106 GF 6616	7:25 PM On time	E4 9 min
<b>K</b>					
<b>Kingston</b>			<b>Virgin Atlantic 154</b> 8:30 PM SQ 2534   On time B 9 min		
JetBlue 659	8:29 PM Scheduled	C 9 min	<b>Long Beach, CA</b>		
<b>L</b>					
<b>Las Vegas, NV</b>			<b>JetBlue 1013</b> 5:34 PM QR 4097   Door closed C 9 min		
American 2522 AY 5749	3:59 PM Delayed	E42 9 min	<b>Los Angeles, CA</b>		
Delta 2198 KL 6290	5:29 PM Last call	A 9 min	JetBlue 1323 QR 3969	4:09 PM Delayed	D 18 min
JetBlue 611 EK 6131	7:40 PM On time	C 9 min	American 428 QR 8841	4:50 PM Delayed	E21 23 min
Alaska SQ 1415	4:55 PM Delayed	D 14 min			

WiFi? Why yes! @JFK\_Free\_WiFi

John F. Kennedy International Airport

2-columns

Flight Codeshare	Time Status	Gate Terminal Walk time	Flight Codeshare	Time Status	Gate Terminal Walk time	Flight Codeshare	Time Status	Gate Terminal Walk time
<b>H Honolulu, HI</b>			<b>Las Vegas (continued)</b>			<b>London-Heathrow (continued)</b>		
Hawaiian 51 B6 5851	2:00 PM Canceled	C 9 min	Delta 2198-29 PM KL 6290	Last call	A 9 min	American 106 GF 6616	7:25 PM On time	B 9 min
Delta 5184 AF 6889	3:45 PM Delayed	B45 9 min	JetBlue 611 EK 6131	7:40 PM On time	C 9 min	Delta 1 AF 8991	7:30 PM On time	B22 9 min
Delta 5350 VS 3512	6:20 PM On time	B55 9 min	<b>London-Heathrow</b>			Virgin Atlantic 154 SQ 2534	8:30 PM On time	B27 9 min
<b>K Kingston</b>						<b>Long Beach, CA</b>		
JetBlue 659	8:29 PM Scheduled	C 9 min	American 100 BA 1511	6:15 PM Boarding	E 20 min	JetBlue 1013 QR 4097	5:34 PM Door closed	C 9 min
<b>L Las Vegas</b>						<b>Los Angeles, CA</b>		
American 2522 AY 5749	3:59 PM Delayed	E 9 min	British Airways 112 AY 5512	6:30 PM Go to gate	E 9 min	JetBlue 1323 QR 3969	4:09 PM Delayed	D 18 min
British Airways 174 AM 7667	7:00 PM On time	E 9 min				Alaska SQ 1415	4:55 PM Delayed	D 14 min

5:25 PM Friday, June 5, 2020

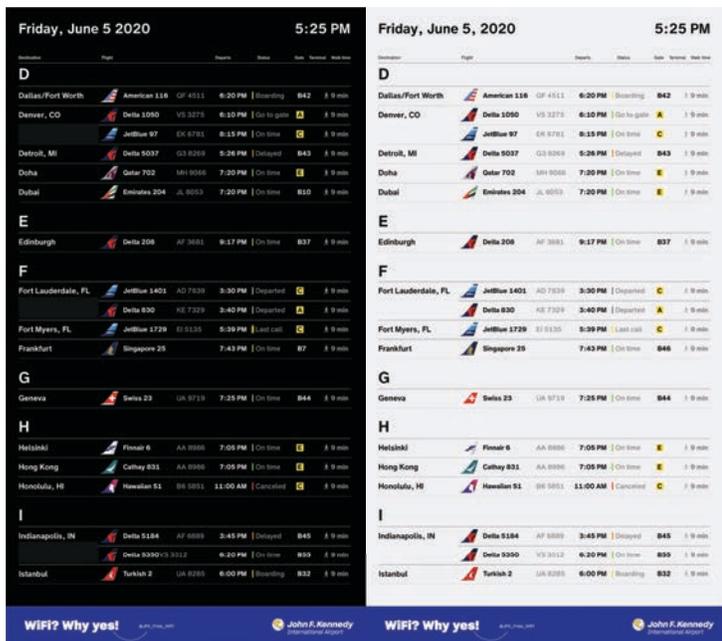
3-columns



4-columns

The format is meant to be flexible and responsive to its environment, but keep consistent elements throughout.

While in most contexts a black background will work best, especially in situations where OLED screens are used (See Performance Specification), some situations may call for a light background version, in which case all the same conventions and rules should apply.



FIDs can be used with a light mode, depending on the environment

Standard GIDs and BIDs follow the same format.

# Destination/Origin



**AirlineName 999**  
CS 9999

**6:00 PM**  
| Status

Next flights  
from this gate

**Destination/Origin**



**AirlineName 999**  
CS 9999

**6:00 PM**  
| Status

GID with standard elements rearranged for the needs of the Gatehold area

## Flight 1 Origin



**AirlineName 999 6:00 PM**  
| Unloading complete

## Flight 2 Origin



**AirlineName 999 6:35 PM**  
| Baggage unloading

## Flight 3 Origin



**AirlineName 999 7:10 PM**  
| Awaiting baggage



### Connecting Flights

**Destination** **6:00 PM** | On time **AirlineName 999** CS 9999 **E32** 14min

**Destination** **6:00 PM** | On time **AirlineName 999** CS 9999 **E32** 14min

**Destination** **6:00 PM** | On time **AirlineName 999** CS 9999 **E32** 14min

**Destination** **6:00 PM** | On time **AirlineName 999** CS 9999 **E32** 14min

**Destination** **6:00 PM** | On time **AirlineName 999** CS 9999 **E32** 14min

BID with standard elements rearranged for the needs of the baggage claim area

## 6.4.5 Wait Time Indicators

Along the passenger journey, some queuing and wait time is inevitable. Setting expectations for that wait time provides users with confidence and peace of mind. A flexible visual framework allows this information to be presented consistently with all other wayfinding.



Example of a simple, three-line wait time indicator for a Security Checkpoint



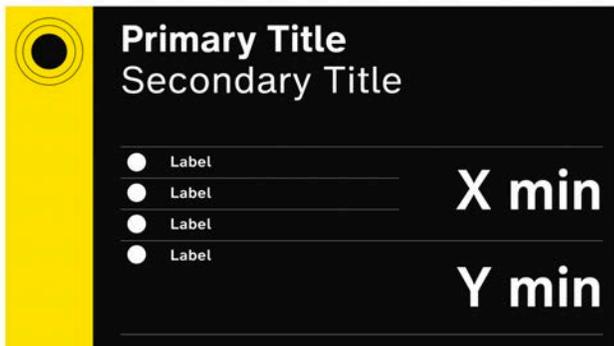
Example of a simple, three-line wait time indicator for a Security Checkpoint



A black rectangular sign with a yellow vertical bar on the left. The yellow bar contains a white icon of a person with a suitcase. The sign text is as follows:

Passport Control Wait Times	
U.S. Citizen	12 min
U.S. Permanent Resident	
Canadian Visitor	
All other Passports	5 min
ESTA	
Visa	

Example of a more complex wait time indicator, where multiple options are merged into a single line



A black rectangular sign with a yellow vertical bar on the left. The yellow bar contains a white circular icon with a black dot in the center. The sign text is as follows:

Primary Title Secondary Title	
● Label	X min
● Label	
● Label	
● Label	
	Y min

Example of a more complex wait time indicator, where multiple options are merged into a single line

## 6.5 Maps

Maps are an essential tool to help passengers locate themselves in an environment and inform their decisions. Maps should include only enough information to allow a user to make the required decision.

Two map scales are available:

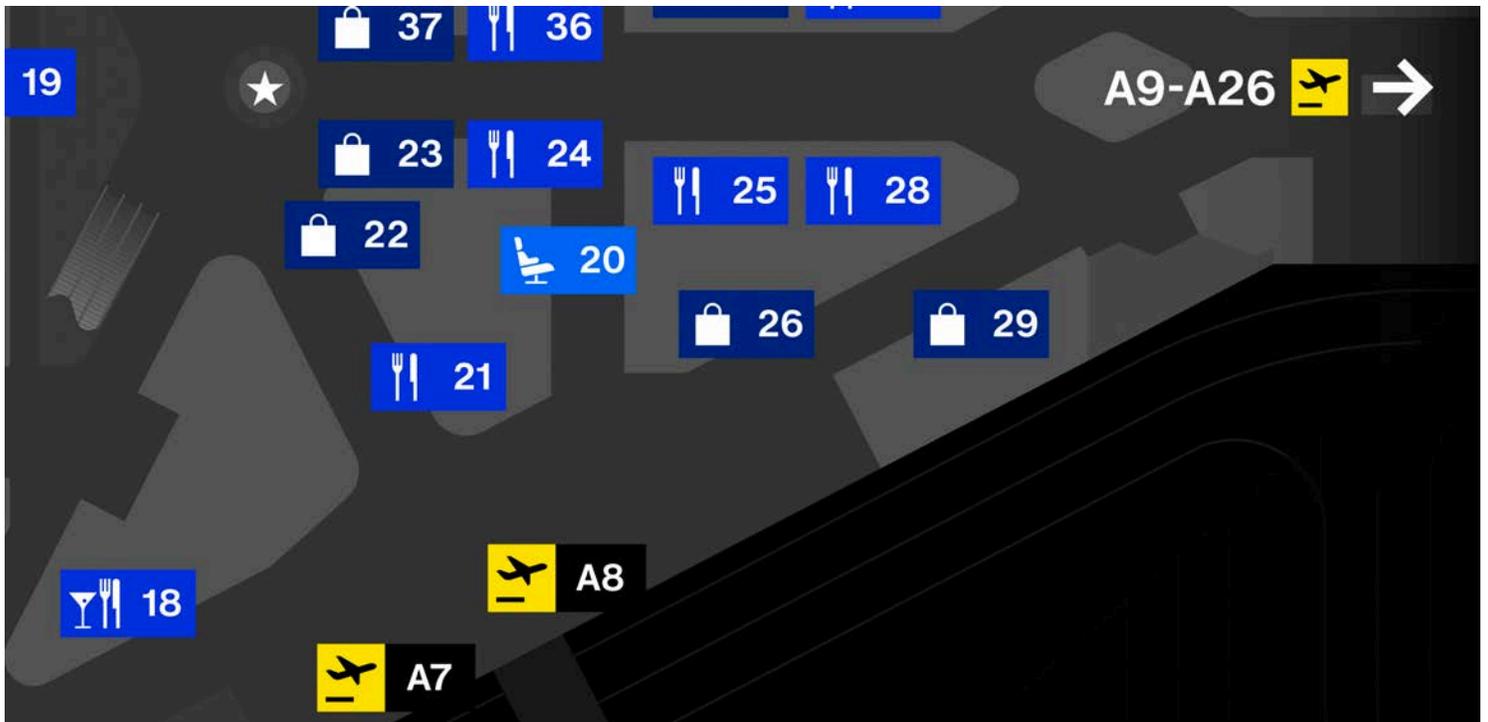
### Terminal map

- How do I reach a specific destination in the airport?
- Where can I eat/drink/etc.?
- How long will it take to get there?

### Regional map

- How do I reach my final destination?
- What is the optimal transit route to get me there?
- How long will it take and how much will it cost?

Both maps include an overview of the airport campus map, creating a visual link between the two.

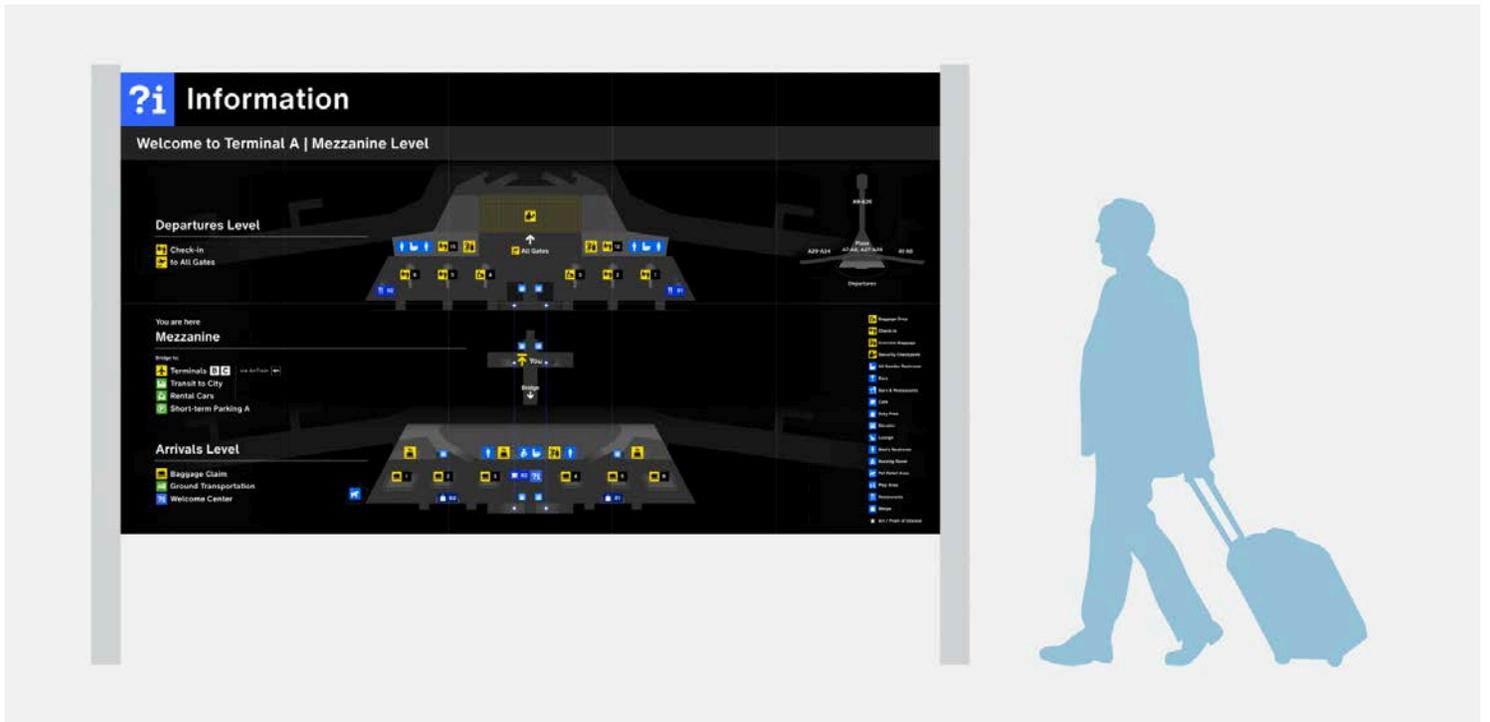


Terminal view

### Terminal Map *Graphic Style*

Set on a dark background, it is optimized to let the main outline of the building and the shops that passengers are navigating stand out. Destinations are highlighted in the relevant color code and a directory is included for reference. For stores that have highly recognizable brands and sufficient square footage, the store logo can be used directly on the map in lieu of the markers.





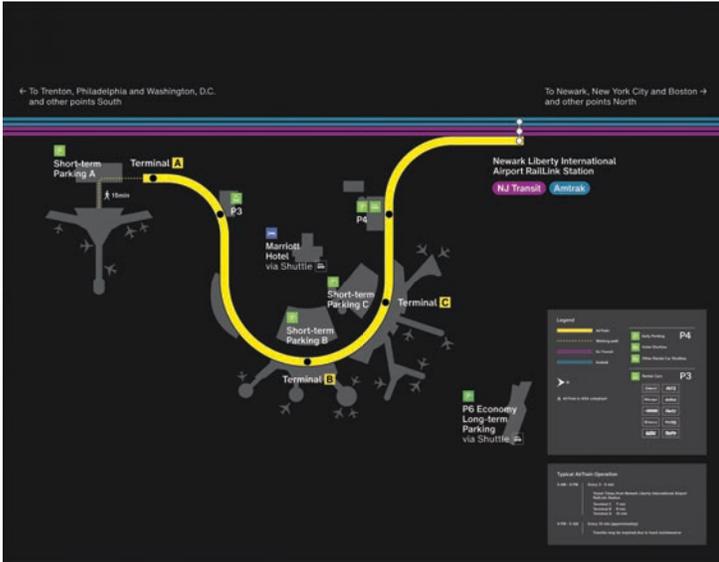
### Campus Map

#### Graphic

The campus map gives an overview of the campus, including terminals, landmarks, services and transit connections. It also highlights which destinations may require payment on AirTrain.



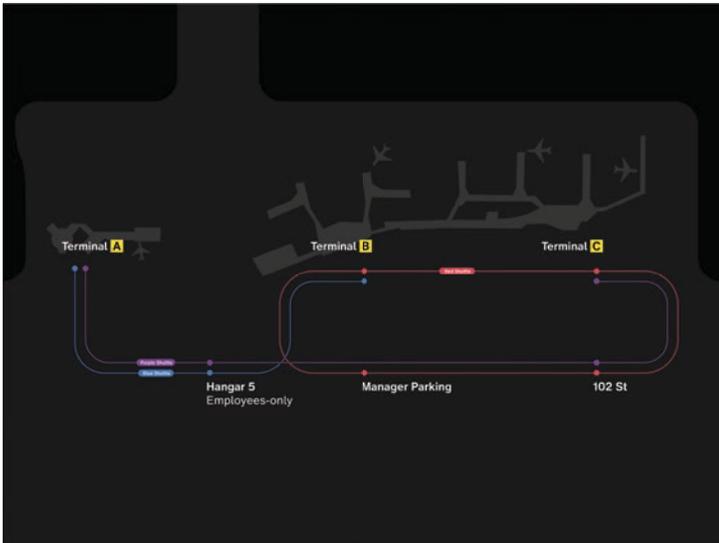
JFK AirTrain Map



EWR AirTrain Map



LGA Shuttles Map



LGA Access Map

All maps leverage the same graphic language for each type of service.

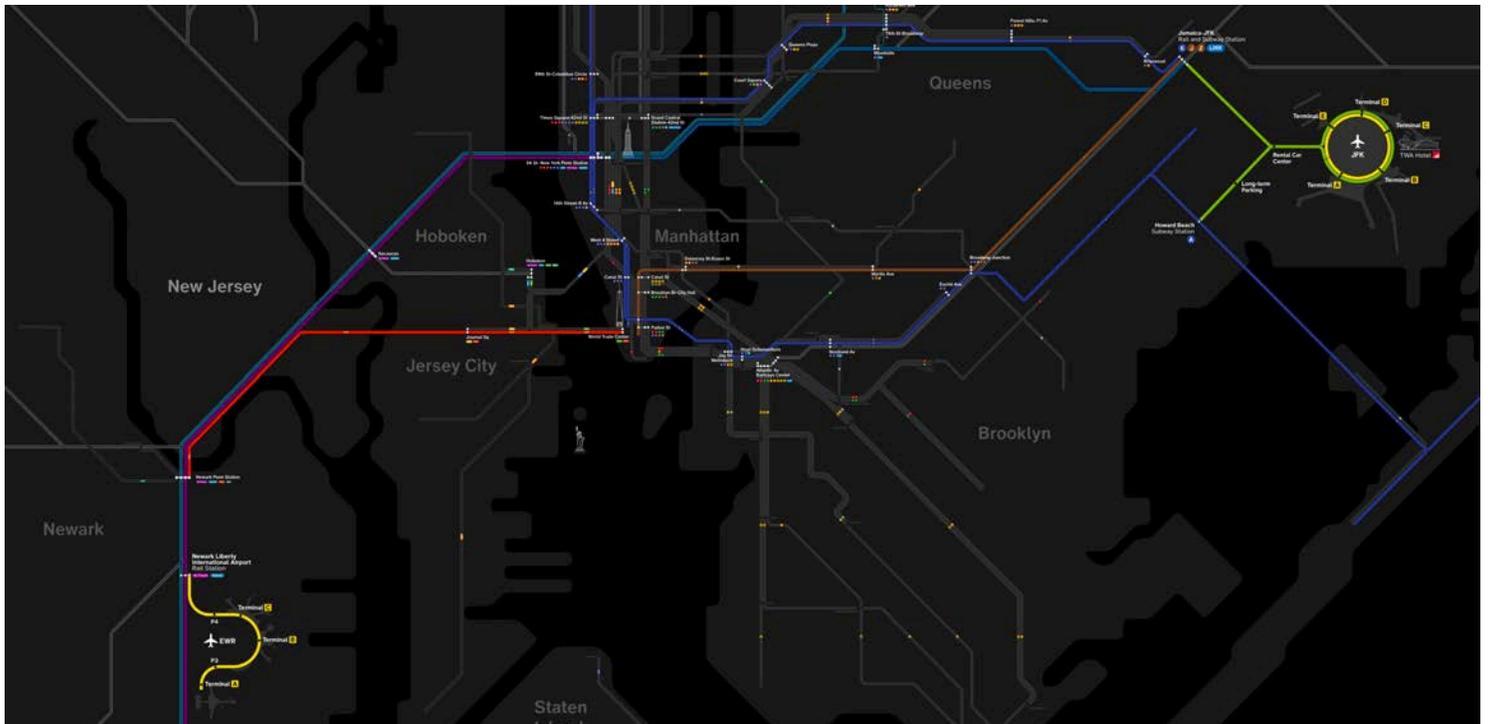


Sample legend showing a range of transportation options, with the respective treatments

### Regional Map

#### Graphic Style

Also set on a dark background to allow transit lines to stand out, this map makes it easy to consult the available connections. Transit lines highlighted in colors are those with direct connections to the airport. Subsequent connections are shown grayed out, allowing the user to understand the general density of the transportation network and possible connections. All lines follow a simplified, geometric pattern, which simplifies the information density of the map. Text labels highlight key stations where connections are available.



Regional Overview

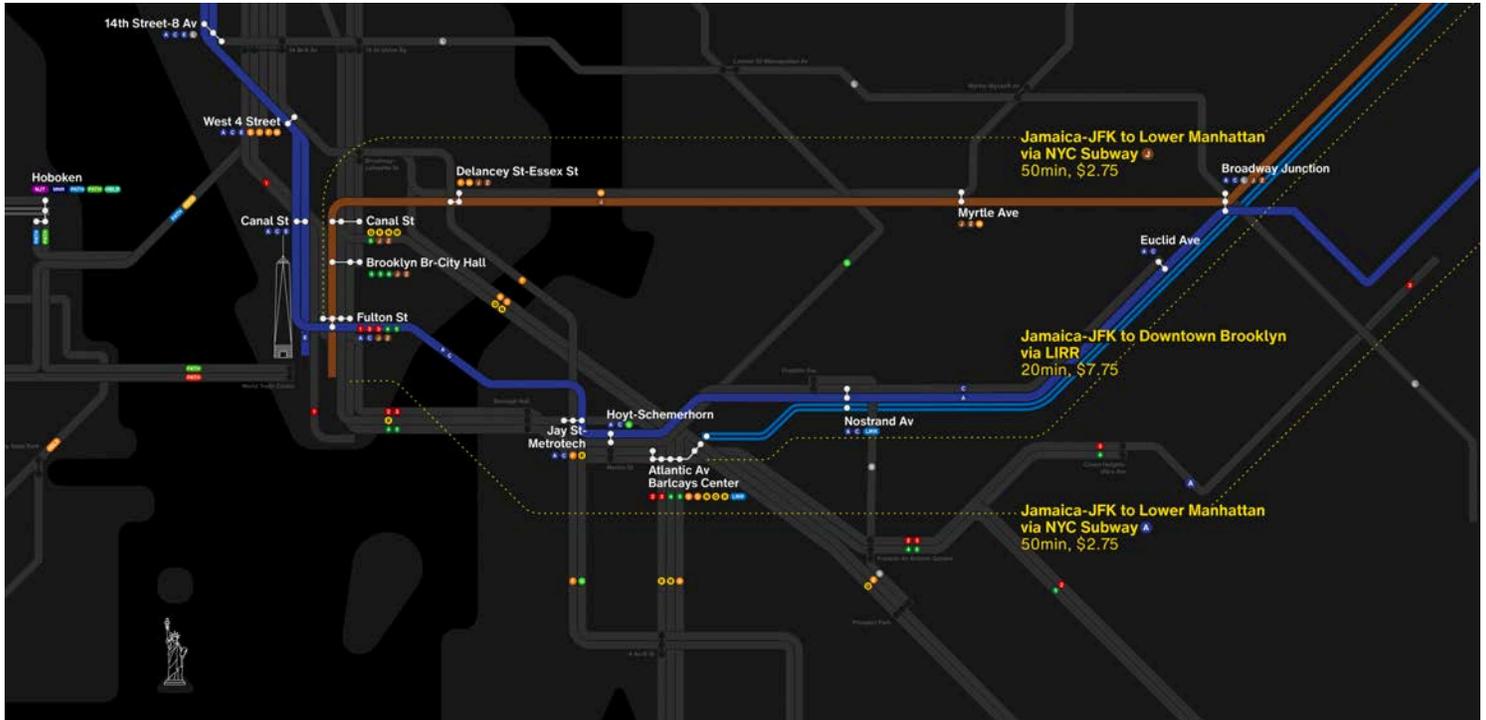
#### Positioning

The geography is simplified and the angle adjusted to create a more symmetric arrangement with Manhattan, the region’s economic core, positioned vertically. The map of each airport campus is superimposed on the map to give context.

#### Guidance

Since this map is about conveying the various options to reach destinations beyond the airport campus, a legend is

added highlighting distances to key transit hubs via various lines, with time and pricing information. This allows users to choose the route best suited to them.



Detail of main transit journey options from JFK to Queens, Brooklyn, and Manhattan

Regional Overview Transit Map

JFK Transit Connections Map

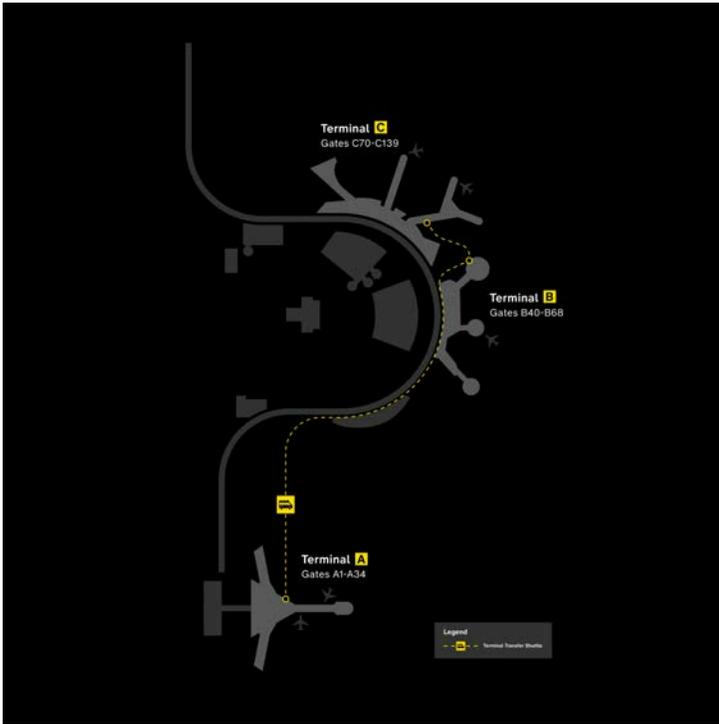
### Airside Shuttle Buses

*Content is pending review and revision.*

Some terminals offer airside shuttle bus services to ease inter-terminal connections. Since these airside shuttles are extensions of the connection journey, they use the purple connections color.

Some shuttle services will connect specific gates within the same terminal, so they are indicated as the main destinations. Note the contrast between bus (thin line) and AirTrain service (thick).

Due to the layout of the respective terminals, some services allow access to the entire terminal and some allow access to only a subset of gates. This distinction can be conveyed by using the purple color as the background color to the accessible zones.



Airside Shuttle Bus path at EWR



Airside shuttle bus service at JFK

EWR Transit Connections Map

## 6.6 Regulatory

Appropriate communication through regulatory and emergency signs is a vital component of a sign program, whether the signs are permanent or temporary.

## 6.6.1 Regulatory

Regulatory sign types include all signage that provides information for rules and regulations applicable to a facility.

Throughout all facilities, especially construction areas, regulatory signs are also used to warn visitors and employees of dangers, restricted areas, or other possible hazardous conditions.

It is important that regulatory signage follows the same graphic language as other signage in the facility. Following the same layout principles makes them easier to comprehend, as passengers are used to them. This also lends authority, making it clear that regulatory signage is official messaging to be followed.

Regulatory signage that prohibits certain acts—such as No Entry or No Smoking—use a red color field, and white text on a black background.

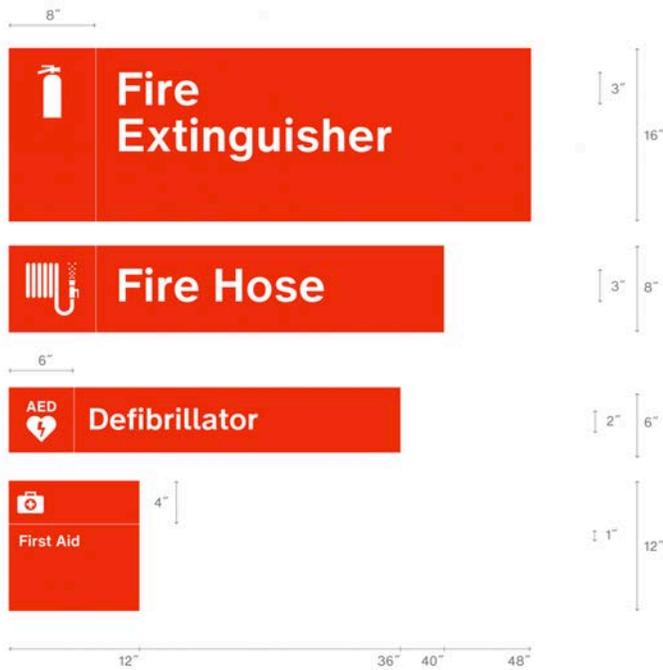


Sample regulatory signage at 16-, 8-, 6-, and 4-inch scale, respectively.

## 6.6.2 Emergency

Emergency signs are used to alert users to services that are vital in emergencies. These include defibrillators, fire extinguishers and hoses, and emergency exits. Please note that these elements do not supersede and must complement any elements required by fire and safety codes.

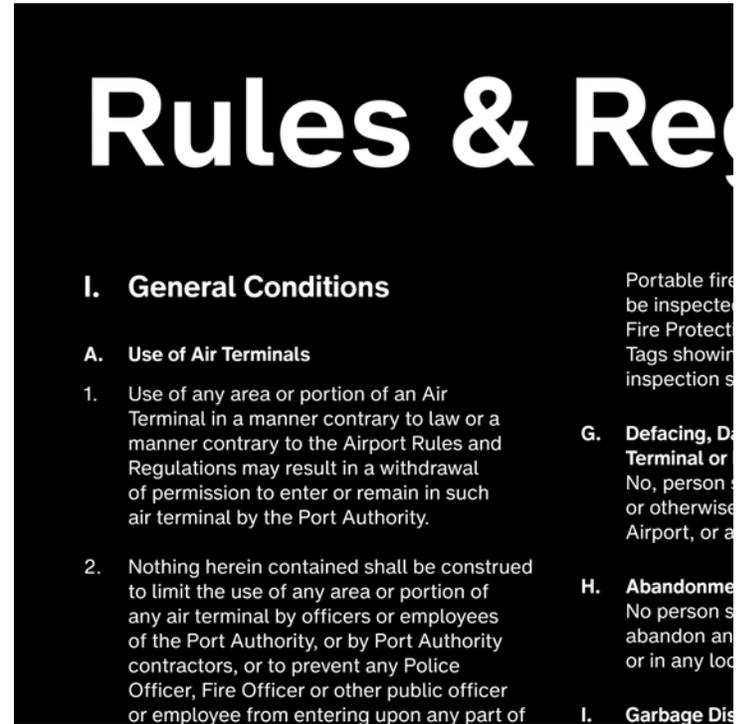
Emergency signage uses white text on an entirely red color field to attract more attention. This treatment is strictly reserved for emergency signage.



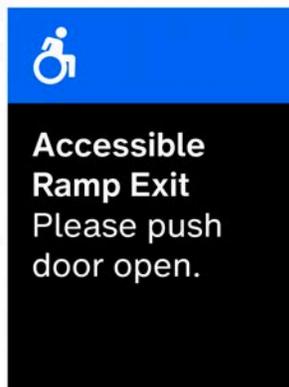
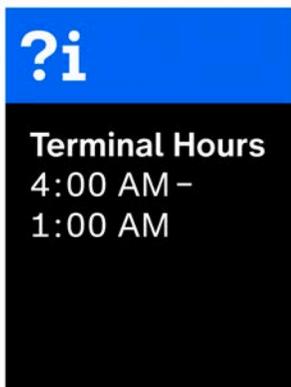
Sample emergency signage at 16-, 8-, 6-, and 4-inch scale, respectively.

### 6.6.3 Notices

Other information must, by law or regulation, be delivered. The same standards will apply to these applications as well.



Rules and Regulations are an example of a text-heavy application requiring the use of the bold weight of Helvetica Now for PANYNJ



Other notices following the 4-inch grid

## 6.7 Dynamic

Digital signs are based on the same wayfinding strategy as their static counterparts. They share the same graphic design use of Typography, Color, Pictograms, and Arrows. This shared design language is important to visually distinguish from other types of messaging (e.g. Port Authority branding and PSAs, advertising, and airline branding). It ensures consistent and trustworthy wayfinding messaging across all mediums.

As technology has evolved in recent years, it's now possible to have digital signage virtually indistinguishable from analog signage in terms of text resolution, color range, contrast, and even form. To ensure consistency and quality of experience across terminals and airports, we aim to streamline and centralize digital touchpoints that relate to wayfinding or flight-related information.

Dynamic information will – per definition – change over time. To maintain consistency within the wayfinding system and to guarantee that the dynamic information is easy to use by all passengers, guidelines have been set up for the temporal aspects of dynamic information. And because dynamic information is often divided over multiple displays, guidelines for multi-display applications have been set up as well.

For graphic layouts for informational signs, see Informational.

For graphic layouts for directional signs, see Directional.



A general overview of dynamic sign types and configurations

## 6.7.1 Guidelines for Informational Dynamic Signs

### Refreshing Content

A display which shows dynamic live information, such as flight status, acquires information from a server / API. It is important that all displays are updating simultaneously because it ensures that all displayed information remains consistent across all information carriers. When information is updated on the server, it is in the best interest of the users that it gets displayed to them as quickly as possible (for example a flight status changes from On Time to Canceled). The earlier this information is shown, the more time users will have to take action upon it.

### Rotating Through Multiple Pages on a Single Display

When there is too much content to display in a single layout, content can be divided across multiple pages which change with a fixed time interval. Generally, the content on a single display should remain static for a minimum duration of 10-20 seconds before going to the next layout. Displays with more information require more live time than those with less information. The general rule of thumb is that a person should be able to read the displayed information twice before it changes, which ensures that users have enough time to read and comprehend the information without missing information or feeling rushed. When displays show longer texts or complex layouts then the layouts and timing must be tested on users. This will ensure that the timing of the display allows for comfortable reading of the content.



The security wait time sign has less information, and therefore pages can be rotated through more quickly than a FID.



### Number of Pages per Display

Displays that rotate through multiple pages should display no more than three pages of content. With more pages, passengers can easily miss their information of interest, or will be forced to spend too much time waiting for their information to appear.

### Page Indicator

A simple indicator, such as '1 of 3', '2 of 3' and '3 of 3' should be presented within the layout on the display so that the viewer will understand that there is a sequence of pages, and where in that sequence they are. A loading bar, a commonly used UX element which will be intuitively understood by the majority of users, may also be added to indicate the duration of visibility for each page of information, and to indicate the number of pages in the sequence.



Side by side FIDs should use a circular loading bar

	<b>Egyptair</b>	<b>4</b>
	<b>Emirates</b>	<b>5</b>
	<b>Hawaiian Airlines</b>	<b>6</b>
	<b>JetBlue</b>	<b>8</b>
	<b>KLM</b>	<b>2</b>
	<b>Kenya Airways</b>	<b>6</b>

1 of 2

C						
Calgary		Air Canada 2	AF 3681	9:17 PM	On time	B37 ↑ 9 min
		Air Canada 8	VS 3512	6:20 PM	On time	B55 ↑ 9 min
Charleston		Delta 304	UA 8285	6:00 PM	Boarding	B32 ↑ 9 min
Chicago		American 535	VS 3512	6:20 PM	On time	B55 ↑ 9 min
		Southwest 97	EK 6781	8:15 PM	On time	B27 ↑ 9 min
Cincinnati, OH		United 5037	G3 8269	5:26 PM	Delayed	B43 ↑ 9 min
D						
Dallas/Fort Worth		Southwest 16	QF 4511	6:20 PM	Boarding	B42 ↑ 9 min
Denver, CO		Delta 1050	VS 3275	6:10 PM	Go to gate	B30 ↑ 9 min
		JetBlue 97	EK 6781	8:15 PM	On time	B20 ↑ 9 min
Detroit, MI		JetBlue 371	G3 8269	5:26 PM	Delayed	B43 ↑ 9 min
		American 506	G3 8269	5:26 PM	Delayed	B43 ↑ 9 min

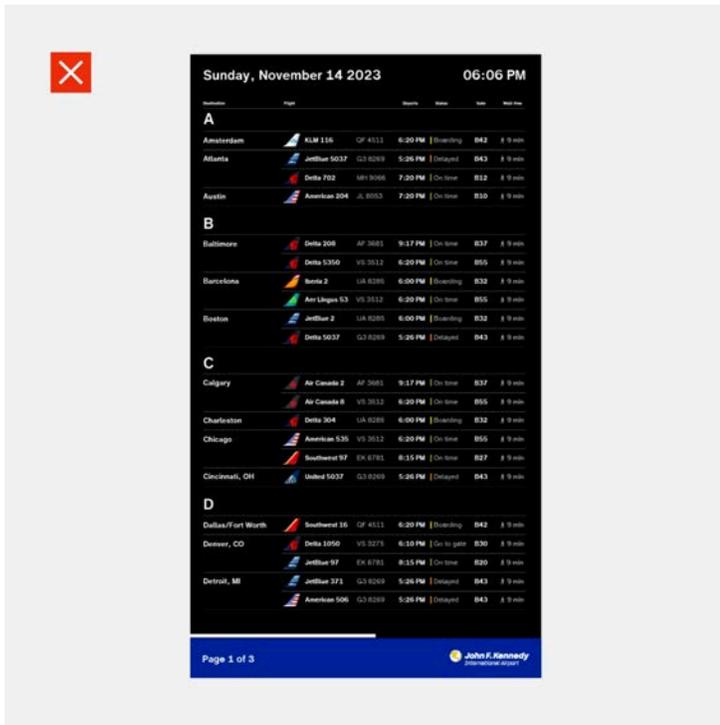
Page 1 of 3 

Different ways to communicate number of pages and duration of each page with a loading bar.

### Transitions

Transitions can be used when the displayed information is updated, but not when the displayed information gets replaced completely. The goal of the transition should be to notify the viewers of the display of the change, not to draw attention to the display itself. An animated transition may distract passengers from the information, as well as extend the duration of each page, or conversely occupy the time needed for passengers to read the information. These transitions should therefore use little to no movement. Transitions that move the entire display, such as push-ins or rotations are not allowed.

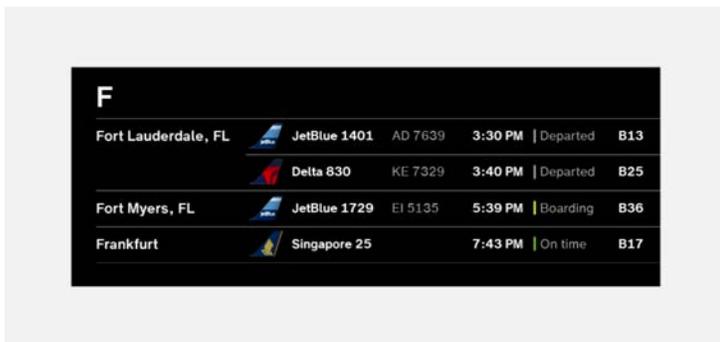
When pages contain operational information (such as identification of primary destinations, gate and boarding information, information related to processes such as immigration and security) transitions must not use the entire display.



No transitions between pages of information should be used.

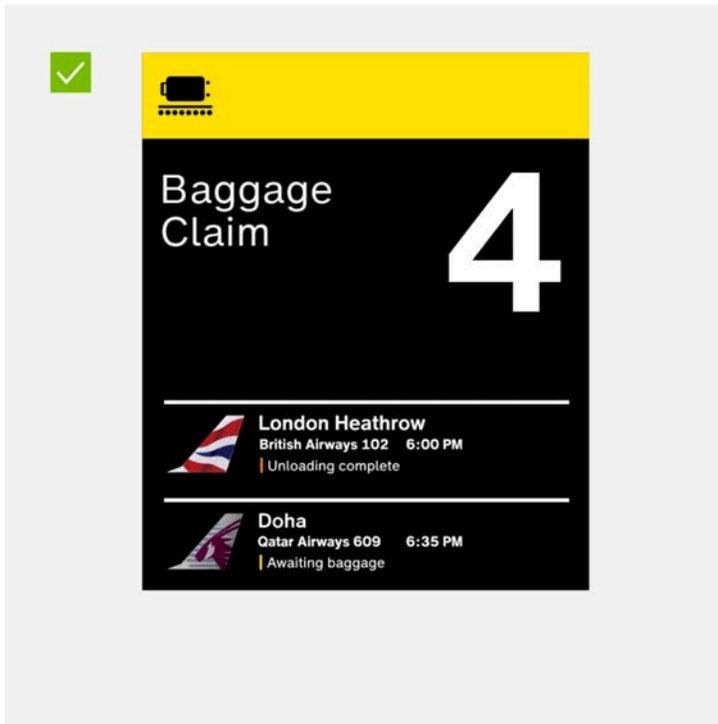
### Animated Content

Limited transitions of particular individual elements can help to attract the eye of the user to local changes and improve legibility and user reaction time. For example, the animation of a flight status change can attract the attention of passengers, especially when they are not actively watching the FID at the time of the status update.

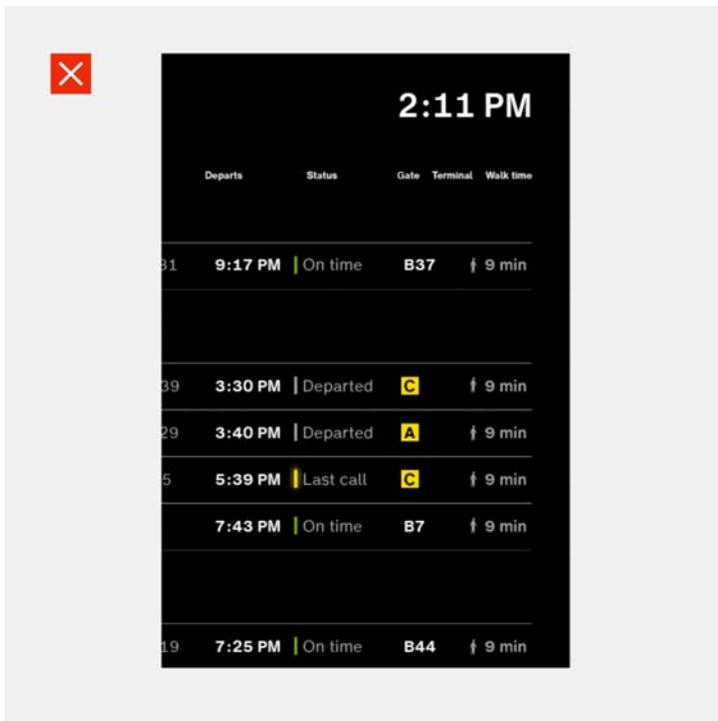


Status changes on FIDs can use limited animation to indicate change.

Content on the displays should only be animated when the animation supports or enhances the information on display. A good example would be a baggage belt pictogram that starts moving as soon as baggage arrives on the belt, doubling down on the status messages. A bad example would be using a 'walking figure' animation on every walking time indicator.



Animation is appropriate to use on signage in limited instances.



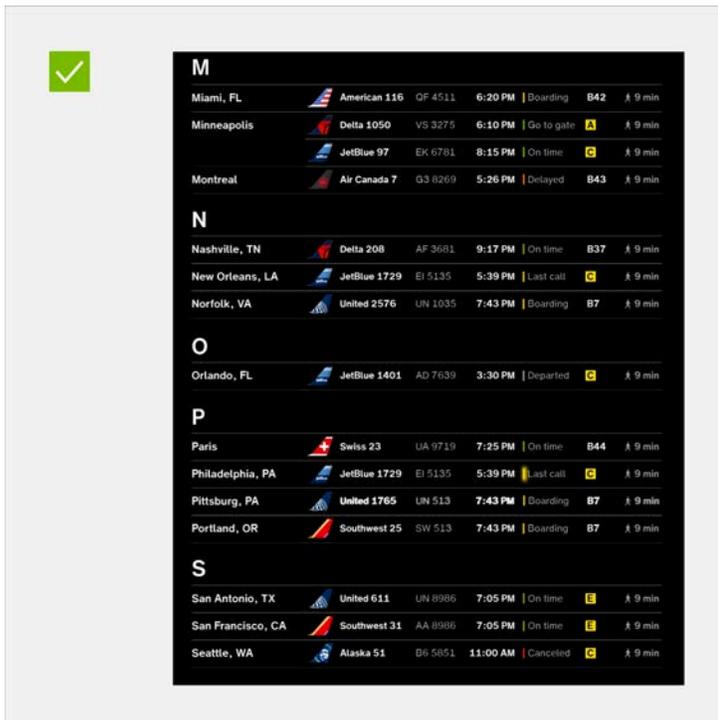
Large elements and backgrounds should never be animated. This will reduce the legibility and recognizability of the wayfinding, attracting attention to the background or a single element instead of the information provided. For instance, a heavy video background placed under typographical elements may reduce their color contrast and therefore legibility. A large animated pictogram can attract too much attention, away from important information. In addition, a visually complex display will demand more cognitive power from the users to read it, to understand the information, and to make decisions.



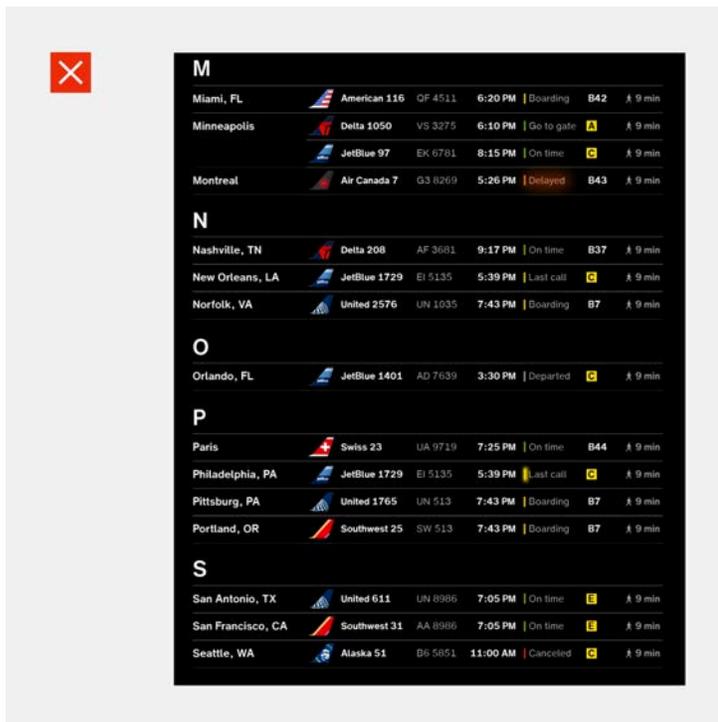
Animation obscures critical messages and can be distracting.

On any display only a single element can be animated, though this could be a repeating element, such as the indicator of boarding status on a FID. When a repeating element is animated, all animations must play in sync.

Unnecessary animation will distract the user from key information. In general, animation should have a purpose and should not be used for animation's sake.



Elements of FIDs should only be animated if a status change is being communicated.



Animations should not distract users.

For more specific guidelines on animated pictogram use, see [pictograms](#).

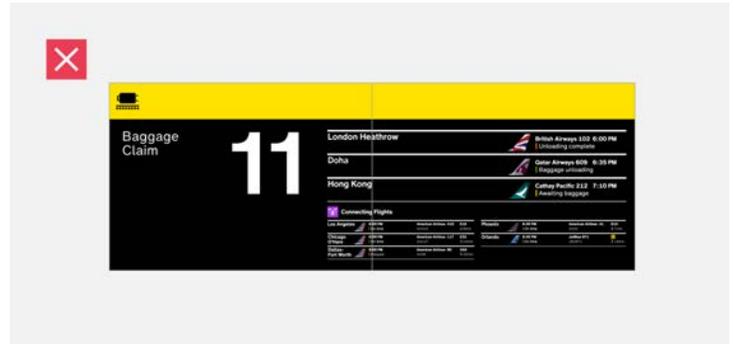
### Consistent Layout on Multiple Displays

Multiple displays can be used to display similar information, such as on an arrangement of FIDS, or on a series of check-in desks. In such situations a consistent graphic layout must be maintained across all displays. Users should be able to easily identify the location of key information, such as flight numbers, destinations, and departure times, regardless of the specific display they are viewing.

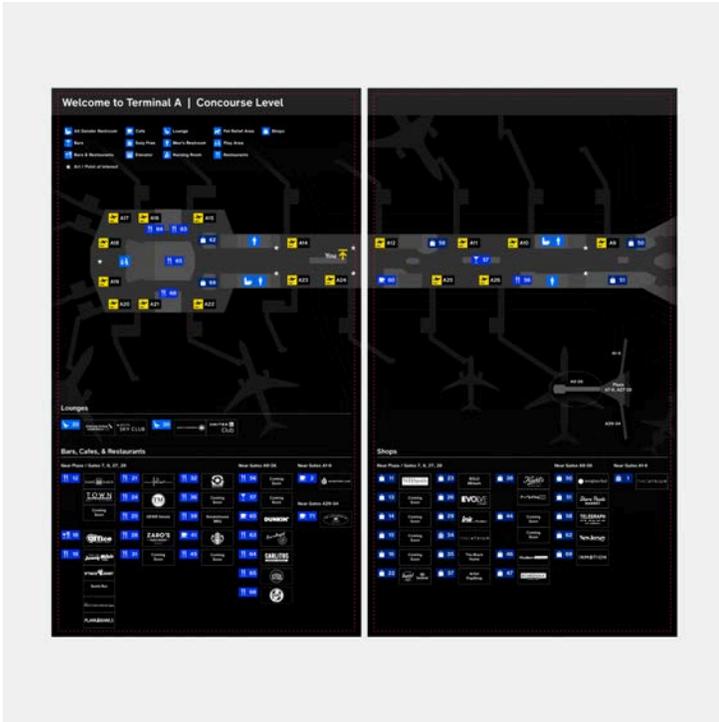
### Composite/Tile Displays

Sometimes large displays are built up from smaller modules that show visible seams. With new installations these seams can and should be avoided by sourcing seamless LED modules, but for existing installations that still have visible seams the following guidelines exist:

- Use a contiguous background and maintain it across all displays, with continuous colors and visual elements. A contiguous background will ensure a cohesive visual experience and will minimize the visibility of the seams.
- Try to minimize the amount of seams by finding the best suiting displays and hardware for this content type.
- Design the layout with the seams in mind. Consider the positions of the seams when designing the layouts for the display. Avoid using patterns, lines, or imagery that can accentuate the seams, or that create visual distractions when the displays do not perfectly align.
- Establish a safe content area and do not display information on or near visible seams outside of this area. Placing critical elements away from the seams helps prevent important information from either being cut off or visually disrupted. Ensure that important text, images, or elements, such as flight numbers, gate numbers, or departure times, which might be compromised by visible seams remain reasonably placed in the safe content area.
- If it is unavoidable to have a seam collide with content, ensure that it does not render crucial text or elements illegible by either minimizing the visible footprint of the seam (and therefore reducing the safe content area) or by splitting the information apart in a way that no seam visually overlaps with it.



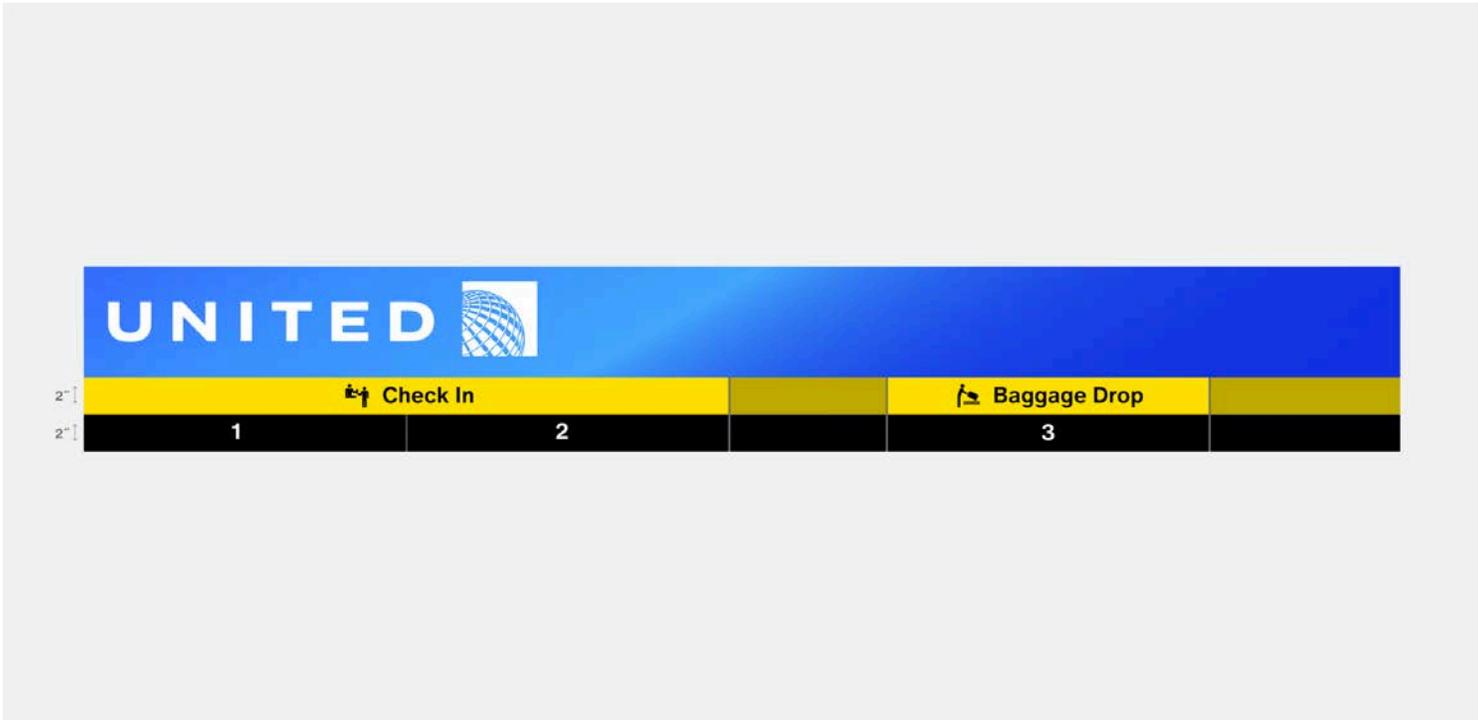
Critical information should not fall on the seams in between the displays.



A safe content area is established to ensure no critical information gets cut off on a display.

### Ribbon Displays

In the case of long displays, used for Identification or Lane Sorting, the design of the layout should visually divide information to more quickly and easily sort through information.

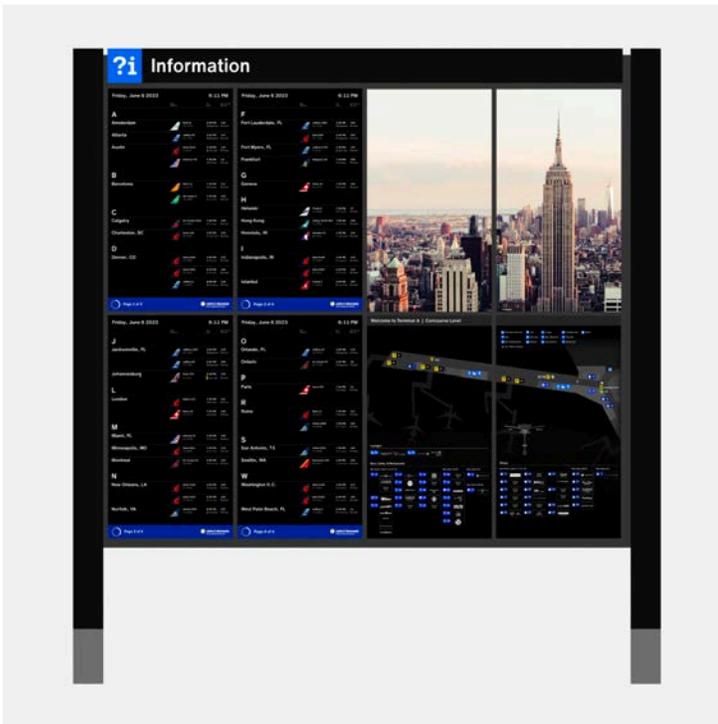


Possible Desk Identification layout configurations

### Information Kiosks

An information kiosk may consist of multiple physical displays, each with a dedicated information type. For instance an interactive digital map of the terminal can be combined with an informational entertainment display showing the amenities nearby and FIDs displaying flights from the current concourse. A typical configuration could contain a digital map, directory, informational entertainment, flight information, and possibly limited advertisements.

In these configurations it must be clear what the function of each display is, and all displays should be consistent with the wayfinding. If advertisements or informational entertainment are a part of a kiosk, then they should not visually overwhelm and distract passengers from operational information. An information hierarchy strategy should always be followed to ensure that operational information is placed at the most visible and accessible parts of the module. For more information on hierarchy and spatial zoning with different types of information across displays in a kiosk, see [spatial zoning](#).



If any display is interactive, then it must be placed at a comfortable height for all passenger groups, including passengers with disabilities. This can be achieved in many ways, including, but not limited to:

- A display where digital information can shift vertical location, adjusting to a higher or lower height on a display
- Multiple interactive displays, at different heights
- A display that can be adjusted in height (operable by individuals with disabilities)

## 6.7.2 Guidelines for Directional Dynamic Signs

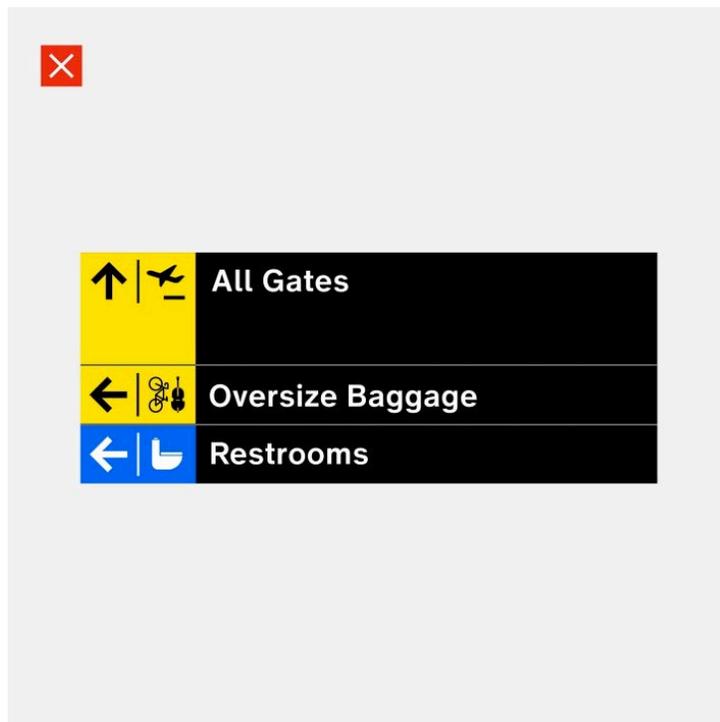
The information provided by directional signage is typically static, however there are multiple occasions where dynamic directional signage can help improve the wayfinding at an airport and where it is a necessity.

Situations where directional signage would be considered suitable for digital applications includes:

- To fulfill the need for capacity management. Dynamic route assignment can help spread crowds through or around congested areas.
- To make it possible to change flows based on operational needs and processes, for instance for daytime and nighttime routes, or when immigration desks are dynamically assigned to incoming flows.
- To display critical information in an additional language or script, only in critical situations. Helpful when special procedures need to be followed by foreign nationals – for instance vaccination requirements.
- To be able to display more information than would fit on a static sign by rotating through destinations. Note: this should only be done in exceptional situations, such as very narrow or very low corridors where there is no physical possibility to install larger signs.

### No Mixing Sign Content Types

A dynamic directional sign should only display directional information. Other information, such as status messages, placemaking, or commercials will distract passengers and increase the potential to miss vital information.



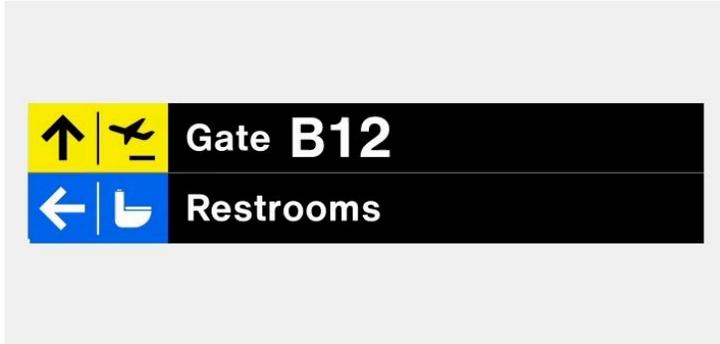
Mixing sign content types is not permitted, even if it is two different types of wayfinding information.

### Rotating Through Multiple Messages

When the information on a dynamic sign alternates through different messages in a constant loop, for instance when there are too many destinations in one direction on a sign than can fit vertically, then there should only be one line that changes dynamically.

The reasoning for this is that in a fast-paced environment where directional signage makes up most of the sign communication, users need to make decisions quickly. Limiting dynamic information to 1 row at a time will ensure that the amount of circulating information will not overwhelm users and they will be able to process all required information quickly.

If the messages on a sign point to similar destinations, i.e., different transportation options or different security services, multiple connected lines can rotate together.



Rotating through messages on a directional sign should include a loading bar to communicate when the message will change.

### Cycling Through Content

When dynamic information is limited to 1 row of information at the time, the content should remain static for a minimum duration of 8 seconds and maximum duration of 12 seconds before going to the next layout, depending on the length of the message and its complexity. There can be a maximum of 2 alternating layouts in a sequence at a time per dynamic sign.

It is recommended that user testing be conducted to ensure that viewers have sufficient time to read the content before it changes.

### Progress Bar Indicator

A visual indicator should be presented within the layout on the display so that viewers will understand that there is a sequence of messages and that they are not looking at a static sign. The proposed solution for this would be to add a small progress bar on the display. A progress bar is a common UX element which will be familiar to most passengers. This bar should be at a consistent location in all dynamic displays.



Rotating through messages with translations should only be used in very limited cases when communicating critical information like vaccination requirements, etc.

### Transitions

No transitions should be shown between pages on dynamic directional signage. A transition will distract passengers and extend the duration of each page and the entire display loop.

### Animated Content

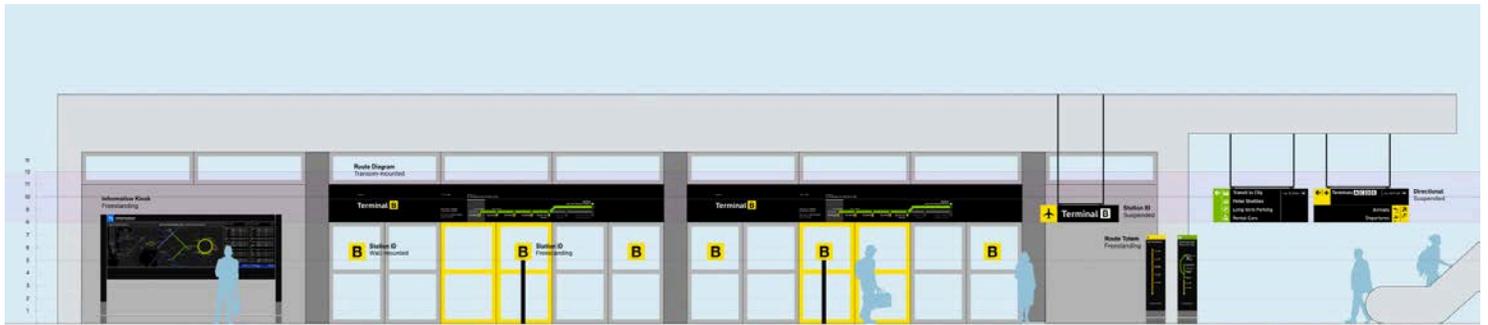
Dynamic directional signage should not contain animated content.

## 6.8 AirTrain

AirTrain is an integral aspect of the passenger experience for departing, connecting, and arriving passengers alike. AirTrain wayfinding should align seamlessly with the rest of the airport wayfinding to ensure a consistent and cohesive passenger experience throughout the entire journey.

To advance this goal, improvements to the AirTrain system should be implemented and regularly revisited, such as: renaming stations names to reflect their functions, upgrading technologies, and reducing visual clutter in stations.

AirTrain platforms are interim environments that help passengers reach their final destination, whether that's ultimately their gate or their hotel. AirTrain platform signage plays a critical role in getting passengers to the next step of their journey with confidence. Given the unique complexities of the AirTrain system, the goal of this signage is to help passengers choose the correct route and direction for their intended destination.



Overview of AirTrain wayfinding elements

Site-specific signage customized for the AirTrain platform environment includes Route Fork Signs, Station Identification Signs, Digital Ribbons, and Maps. Standard wayfinding elements, such as Directional, Identification, and Regulatory signs, are also present in the environment.

## 6.8.1 Route Fork Signs

Route fork signs communicate every destination reachable from each platform. It is located at the threshold to the platform to help inform passengers of the available options, especially regarding which route to take. These signs are the only ones that show the full line route.



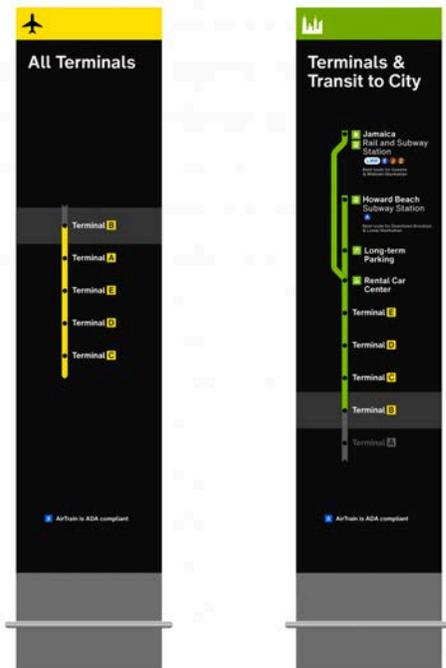
Fork Sign at Howard Beach Subway Station



Detail of Fork Sign with measurements



Fork Sign at Rental Car Center Station



Fork Sign at Terminal B Station

### Header

Sign headers confirm the two main journey types aboard AirTrain: Access to Terminals (Yellow) and to Transit to City (Green).

The fork sign can be affixed to the wall or be a standalone structure based on the architectural environment of the platform approach.

### **Supporting Captions**

Supporting captions are added for major transit stations. These captions help explain why one route may be preferable to another to a passenger. In the case of JFK, they can help distinguish the two transit stations.

## 6.8.2 Station Identification Signs

Clear station identification helps passengers within a station orient themselves, and also helps passengers in AirTrain cars identify where to disembark.

Multiple station identification sign types are included at AirTrain platforms to support different vantages:

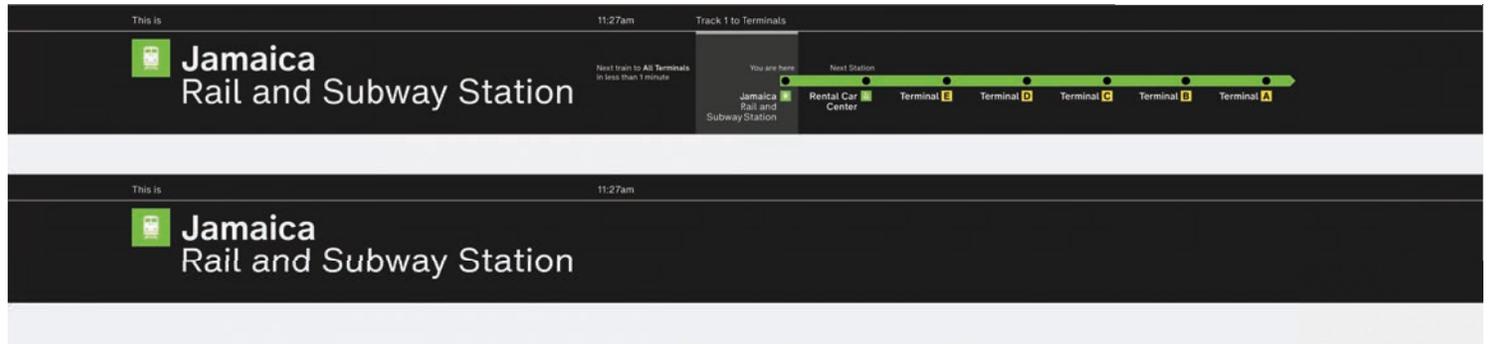
- Suspended station identification sign (visible from the platform)
- Decals (visible from AirTrain cars)



Various station ID treatments

### 6.8.3 Platform Digital Ribbons

Digital ribbons are positioned above platform doors to convey real-time AirTrain information. The digital ribbons should be embedded into the architecture of the station, which reduces visual clutter elsewhere on the platform, and positioned within the wayfinding zone.



Digital Ribbon at Jamaica Rail and Subway Station – only one platform in use

#### Station ID

The digital ribbons also serve as station identification to confirm the user’s current location.

#### Route Map

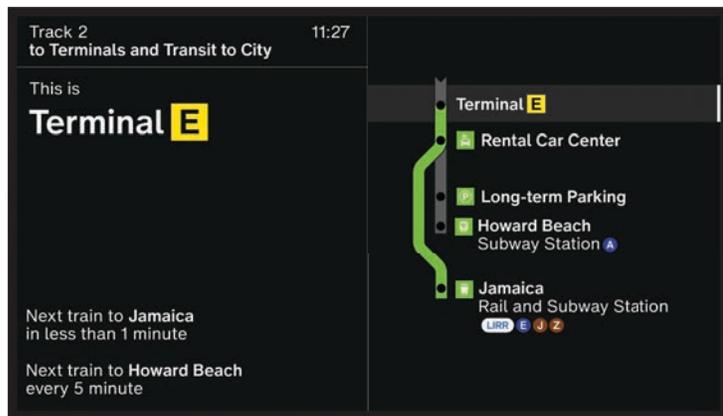
Ribbons show all upcoming stops. In the case of forked routes, where trains with different destinations stop at the same platform, the route highlights the current location and future destinations. The route map is always aligned with the arriving train’s direction.

#### Platform Digital Screens (Legacy)

For stations where using LCD screens is more practical, the linear diagram is presented vertically.

LCD screens and ribbons are not meant to be used together at the same station, and ideally not within the same AirTrain network outside of a phased implementation.

LCD screens are positioned perpendicular to the arriving train’s direction, above doorways, double sided and angled 15 degrees towards the flow. The diagram aligns with upcoming stations as the fork signs do.



Track 1  
to All Terminals 11:27

This is  
**Terminal E**

- Terminal E
- Terminal D
- Terminal C
- Terminal B
- Terminal A

Next train in less than 1 minute

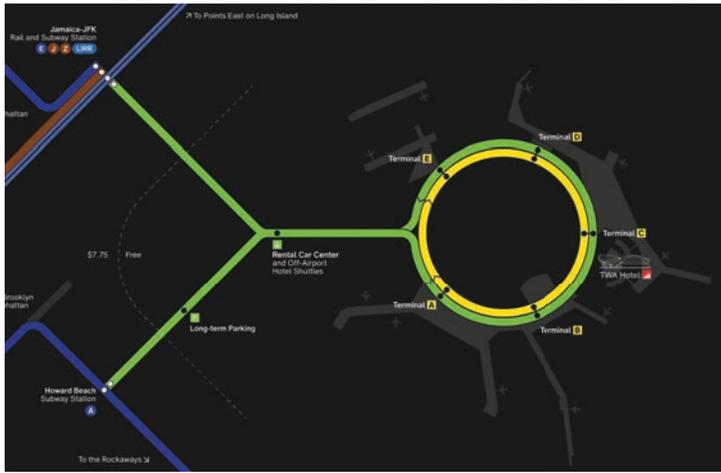
Track 2  
to All Terminals 11:27

This is  
**Jamaica Rail and Subway Station**  
LIRR E J Z

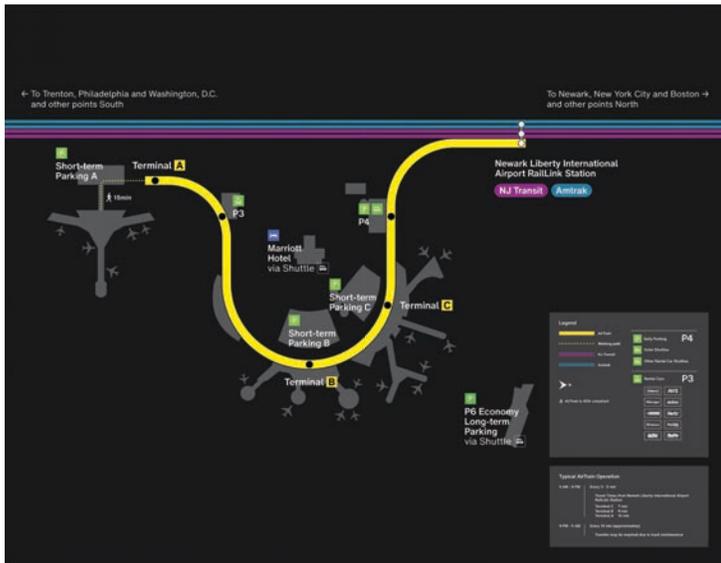
- Jamaica Rail and Subway Station
- Howard Beach Subway Station
- Long-term Parking
- Rental Car Center
- Terminal A
- Terminal B
- Terminal C
- Terminal D
- Terminal E

Next train to All Terminals in less than 1 minute

### 6.8.4 Maps



JFK AirTrain Map

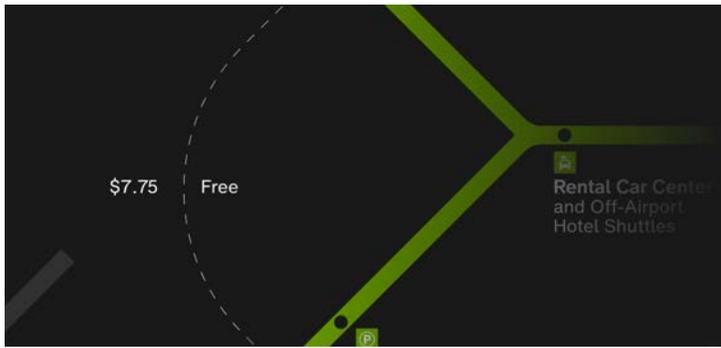


EWR AirTrain Map

The maps have been designed to be visually consistent with each other, the overall wayfinding system, and complementary to regional transit systems, providing a recognizable, familiar experience from gate to city street.

### Fare Structure

Fare payment is unfamiliar aspect of the AirTrain system, especially for new users. To clarify this, a dashed line on the map indicates which destinations can be accessed via AirTrain for free and which require payment.



Detail of fare structure treatment, with a dashed line and the fare price

Platform identification (Platform 1, 2, A, B, etc.) is a vestige of wayfinding systems that were unable to dynamically offer dynamic and relevant information where the user may look for it. As such, existing signage referring to tracks, door numbers, etc. should be deprecated as it only adds clutter to the experience.

## 6.9 Usage

The wayfinding system has been designed with flexibility to accommodate a wide range of situations. The design of wayfinding elements should always be done in accordance with the specifications set forth in this manual. Incorrect usage of the color, typography, pictograms, arrows, brand treatments, and layouts will weaken the consistency and strength of the system, ultimately eroding passenger trust.

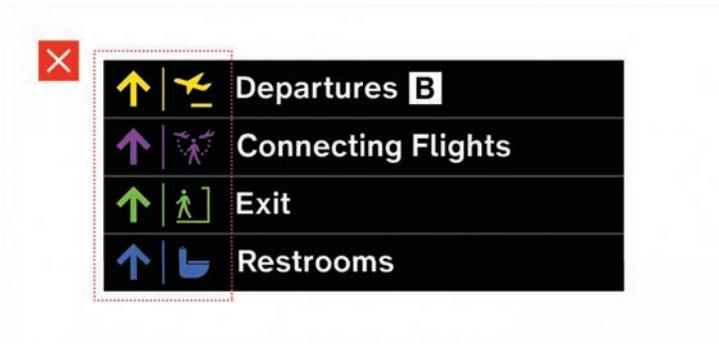
The guidance in this section outlines common treatments to avoid when composing signs. For additional usage guidance specific to each sign type, reference the guidelines for Directional, Identification, Informational, Regulatory, Digital, and AirTrain sign types.

For further technical guidance, the [Graphic Layouts](#) provide a variety of approved layouts and elements to support the composition process.

## 6.9.1 Use of Color



Do not change the order of elements against the Information Hierarchy guidelines



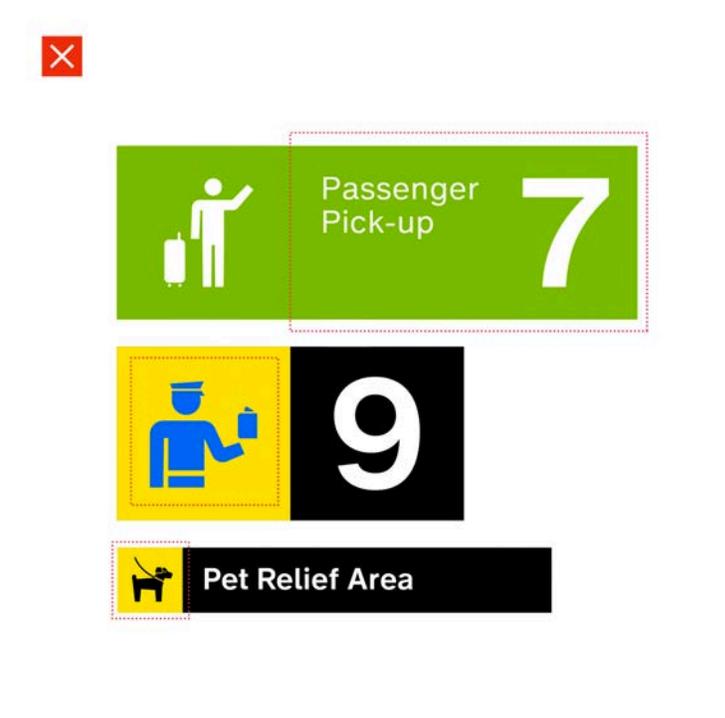
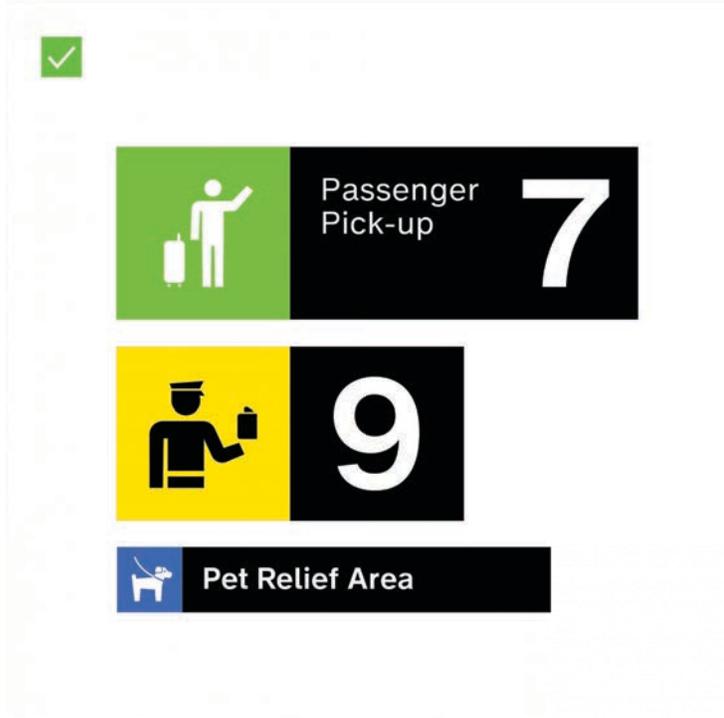
Do not use pictograms without a color field



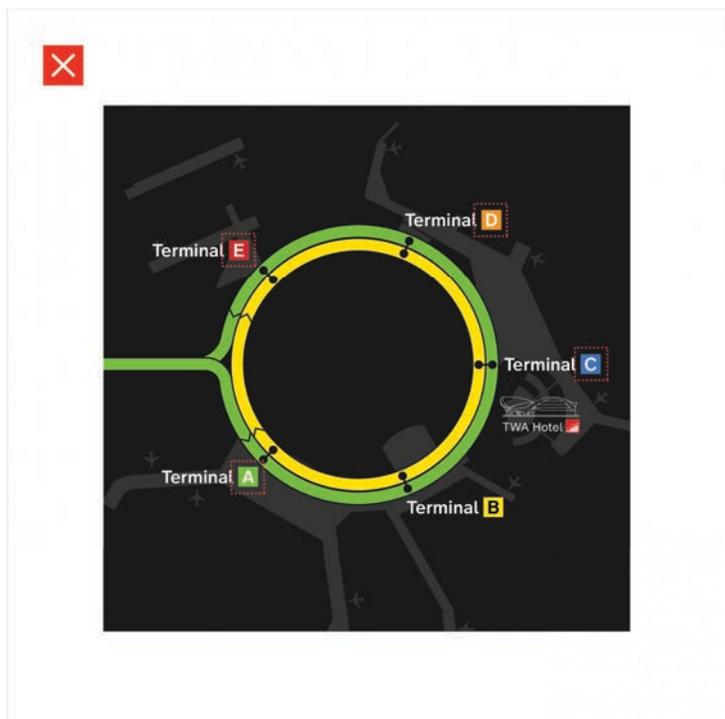
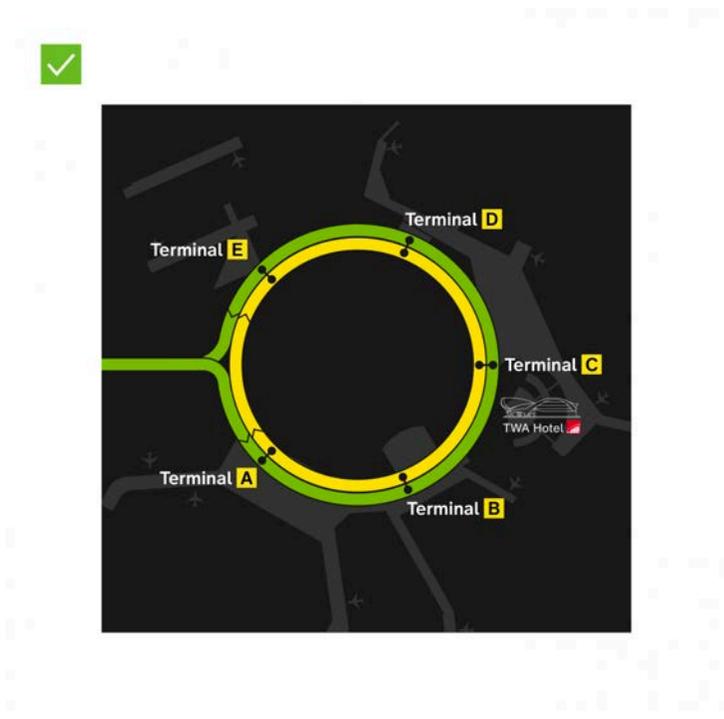
Do not extend the color field across the message



Do not change the color of elements from the approved categories



Do not change the color of elements



Do not apply different colors to terminal identifiers

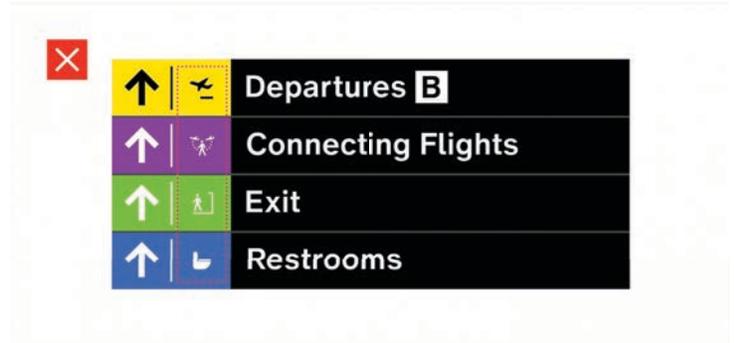


Do not apply different colors to terminal identifiers



Do not apply colors as backgrounds or other statements outside of the approved applications

## 6.9.2 Use of Pictograms



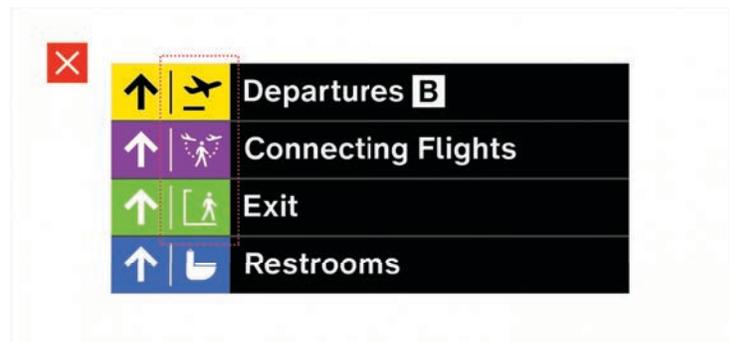
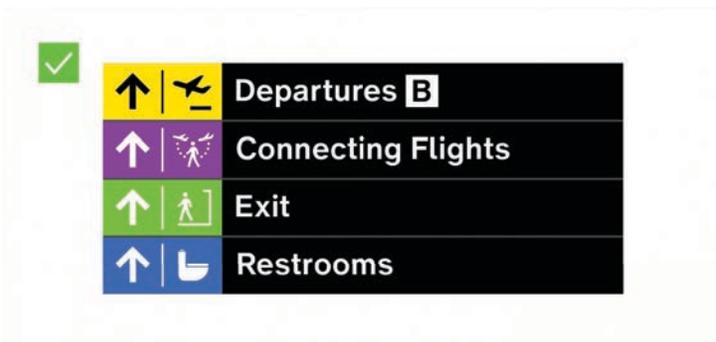
Do not change the scale of the pictograms



Do not use incorrect or unsanctioned pictograms



Do not use terminal identifiers in the pictogram field



Pictograms noted with strong directional qualities should be oriented to reinforce the direction

### 6.9.3 Use of Typography



Do not increase the tracking (letter spacing) of messages



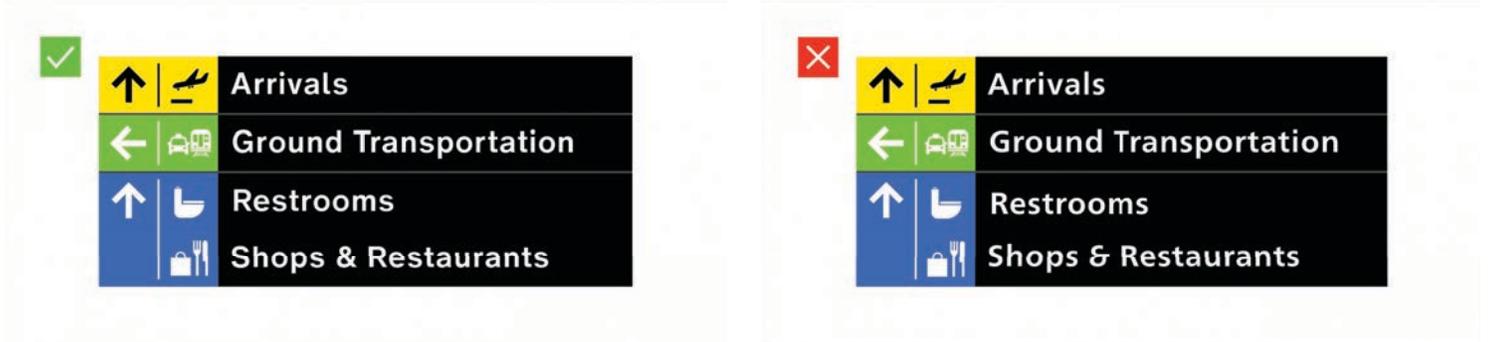
Do not decrease the tracking (letter spacing) of messages



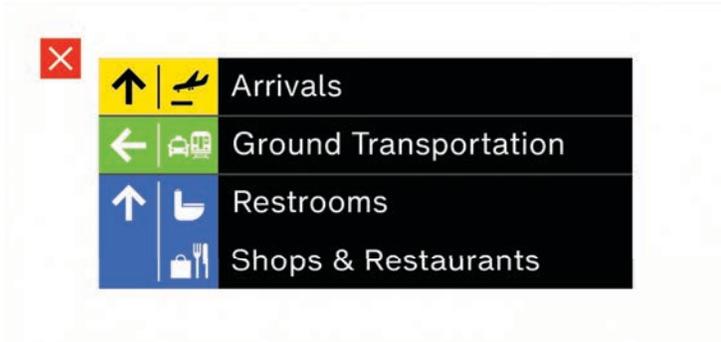
Do not change the size of elements



Do not change the case of messages

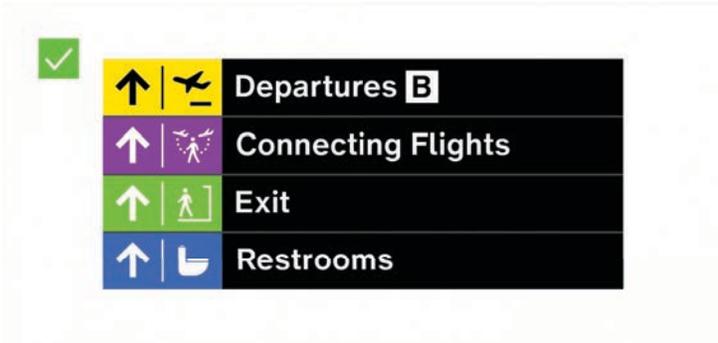


Do not use any typeface other than Helvetica Now for PANYNJ



Do not use any weight other than Semibold for primary messages

### 6.9.4 Use of Messaging



Do not use unapproved nomenclature



Do not use brand names in directional labels



Do not change the position of secondary messages



Do not squeeze secondary languages within the lines. Secondary languages should seldom be used.

# 6.9.5 Use of Brands



Do not use incorrect brand treatments, especially in digital applications



Do not use logos in directional messages. Do not use brand colors as message backgrounds.

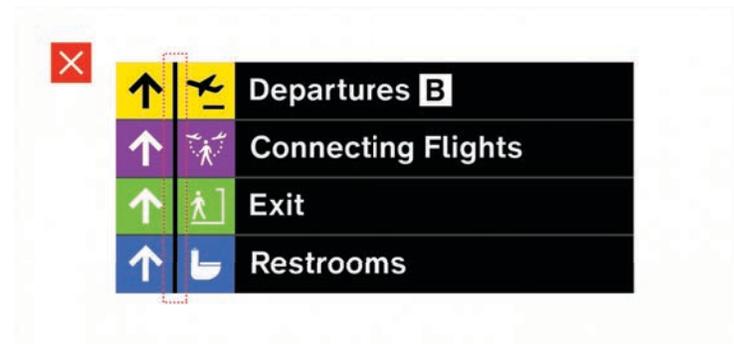


Do not change the color of elements to match branding

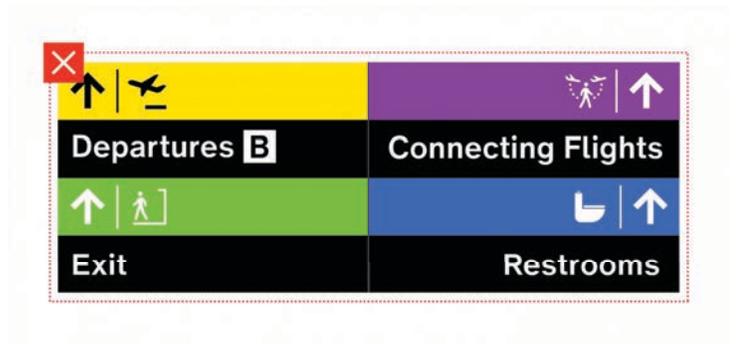
### 6.9.6 Use of Graphic Layout



Do not apply selective changes to the signs in a way where the previous message is still visible



Do not break the color field



Do not change the layout of signs



Do not change the ordering of messages. Follow the information hierarchy.



Left and right directionals should always be placed on the respective side of the sign



When one side of a double-sided sign has fewer messages than the other, extend the color field of the most important message based on the moment of the journey.



A minimum of 8" padding should be applied to all primary directional messages. The only exception to this rule is when a secondary message is included, such as "via AirTrain."

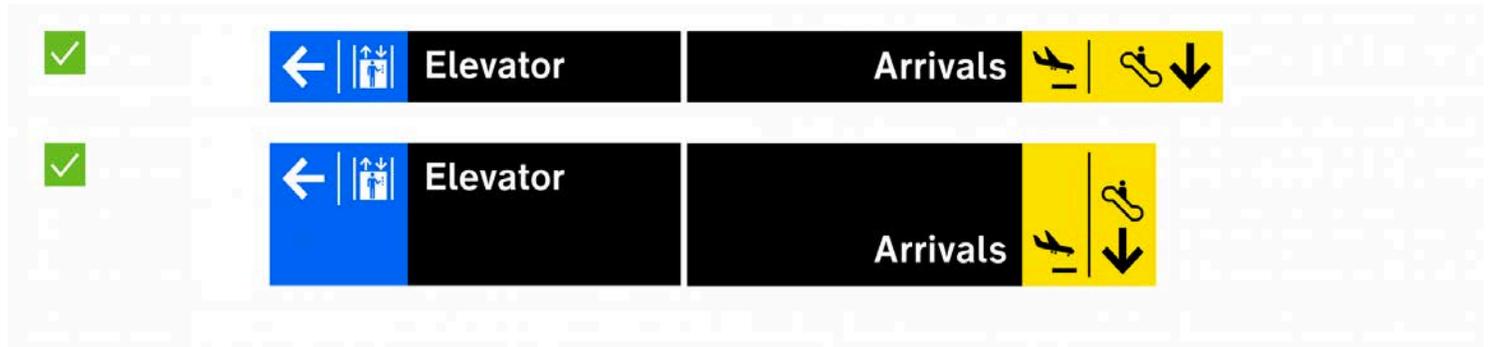


Complex sign configurations should be split onto two signs where possible.

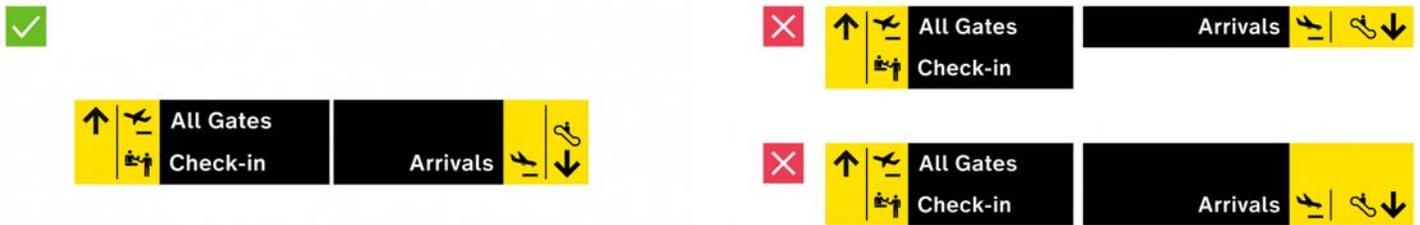


Signs with numerous messages and directions can reduce the clarity of the message. Complex sign configurations should be spilt onto two signs.

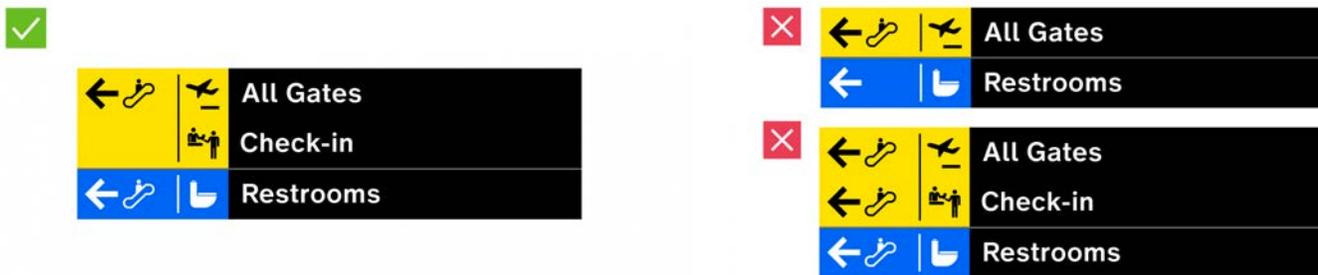
### 6.9.7 Use of Vertical Circulation Arrows



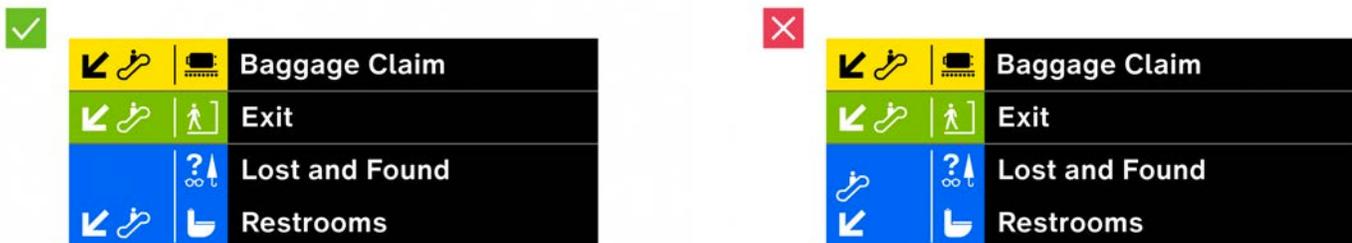
Single line vertical circulation arrows should only be used when vertical sign space is limited.



Don't use single line vertical circulation arrows when vertical space is available.



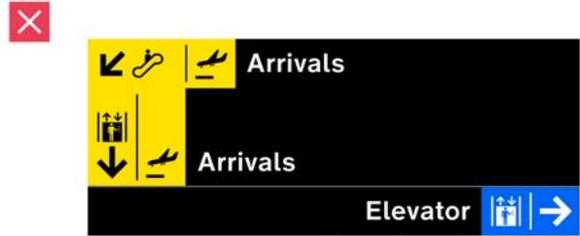
Don't include more or less than one vertical circulation arrow per color field when destinations follow the same directions.



.Do not use single and double line vertical circulation arrows in the same sign.



Double and single line vertical circulation arrows can be used on adjacent signs as long as the color fields are different.

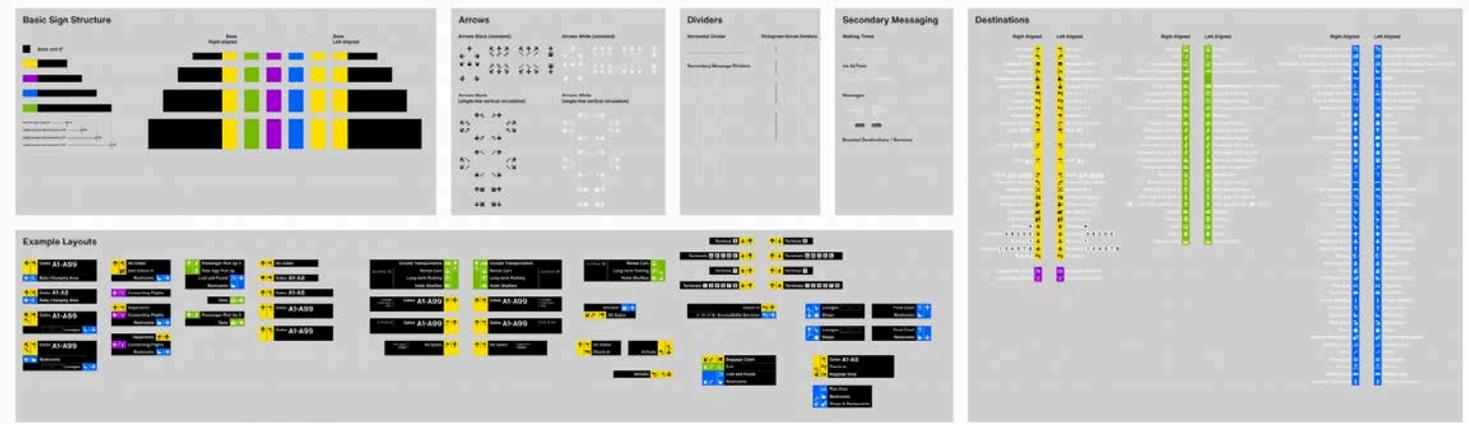


Do not stack two and three column color fields. Do not use single and double line vertical circulation on a sign.

## 6.10 Graphic Layouts

The following is a preview of the toolkit to help designers develop graphic layouts for the sign program. The toolkit provides all the necessary components to assemble sign types with the relevant messaging.

# 6.10.1 Directional



[Download Directional Toolkit](#)

# 6.10.2 Identification

**Graphic Layouts Toolbox**  
Identification Signage

colors NOT manual standard, change before production

**Basic Sign Structure 8"**  
Back side 8" Front Left aligns

**Basic Sign Structure 6"**  
Back side 6" Front

**Basic Sign Structure 4"**  
Back side 4" Front

**Destinations**  
Pictogram icons With label Pictogram icons With label Pictogram icons With label

**Example Layouts**  
Identification with overlaid numbers  
Identification with standard typography

[Download Identification Toolkit](#)

# 6.10.3 Lane Sorting

**Basic Sign Structure**

Base width 6"

Base - parallel  
Center aligned 48" 64"

Base - Rag mounted  
Right aligned 48" 64"

Base - Rag mounted  
Left Aligned 48" 64"

**Arrows**

Arrows Back

↑  
↓ & ↕

**Lane letters**

A

**Destinations**

**SPC**

- 1.0000
- 1.0001
- 1.0002
- 1.0003
- 1.0004
- 1.0005
- 1.0006
- 1.0007
- 1.0008
- 1.0009
- 1.0010
- 1.0011
- 1.0012
- 1.0013
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- 1.0050
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- 1.0052
- 1.0053
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- 1.0089
- 1.0090
- 1.0091
- 1.0092
- 1.0093
- 1.0094
- 1.0095
- 1.0096
- 1.0097
- 1.0098
- 1.0099
- 1.0100

**Security**

**Example Layouts**

**All Other Routes**  
1776  
1776  
1776

**All Other Routes**  
1776  
1776  
1776

**All Other Routes**  
1776  
1776  
1776

**Dividers**

Horizontal Divider

Photogram/Arrow Dividers

[Download Lane Sorting Toolkit](#)

# 6.10.4 Dynamic Lane Sorting

**Basic Sign Structure**

- Base unit 8"
- 50" lane width: Left aligned text, Center aligned pictogram, 30" screen height
- 42.5" lane width: Left aligned text, Center aligned pictogram, 30" screen height
- 32" screen height
- 36" screen height

**Arrows and Pictograms**

- Black: Down arrow
- White: Right arrow, Left arrow, Up arrow

**Color Fields**

- Yellow
- Blue
- Red

**Destinations**

- All Gates
- Employees Only
- No Entry
- TSA Pre/SP
- Other Information

**Example Layouts**

Horizontal Divider: |

Color Field Divider: |

[Download Dynamic Lane Sorting Toolkit](#)

## 6.10.5 Measurement Cheat Sheets



[Download Signage Dimensions Cheat Sheet](#)

# Dynamic Signage Cheat Sheet

The cheat sheet displays several dynamic signage layouts for different directions and gate areas:

- Two line Directional:** Shows two horizontal panels. The top panel has an upward arrow, an airplane icon, and the text "Gates B4-B9". The bottom panel has a leftward arrow and a restroom icon with the text "Restrooms".
- Three line Directional:** Shows three horizontal panels. The top panel has an upward arrow, an airplane icon, and "Gates B4-B52 | 10-30 min". The middle panel has a leftward arrow, a baby changing icon, and "Baby Changing Area". The bottom panel has a restroom icon and a rightward arrow with "Restrooms".
- Four line Directional:** Shows four horizontal panels. The top panel has an upward arrow, an airplane icon, and "Gates B4-B9 | 10-30 min". The second panel has a leftward arrow, a baby changing icon, and "Baby Changing Area". The third panel has a connecting flights icon and "Connecting Flights". The bottom panel has a restroom icon and a rightward arrow with "Restrooms".
- Standard size layout per line:** Shows two horizontal panels. The top panel has an upward arrow, an airplane icon, and "Hxpks B4-B9 | 10-20 min". The bottom panel has an upward arrow, an airplane icon, and "Hxpks B1-B3, C60-C64".
- Alternative layout - Small Gate Numbers:** Shows two horizontal panels. The top panel has an upward arrow, an airplane icon, and "Gates B4-B9". The bottom panel has a leftward arrow, a baby changing icon, and "Baby Changing Area".
- Alternative layout - Large Gate Numbers:** Shows two horizontal panels. The top panel has an upward arrow, an airplane icon, and "Hxpks B4-B52". The bottom panel has a leftward arrow, a baby changing icon, and "Baby Changing Area".
- Line Separators:** Shows a horizontal panel with an upward arrow, an airplane icon, and "Gates B4-B9".

[Download Dynamic Signage Dimensions Cheat Sheet](#)

# 7 Construction & Product Specifications

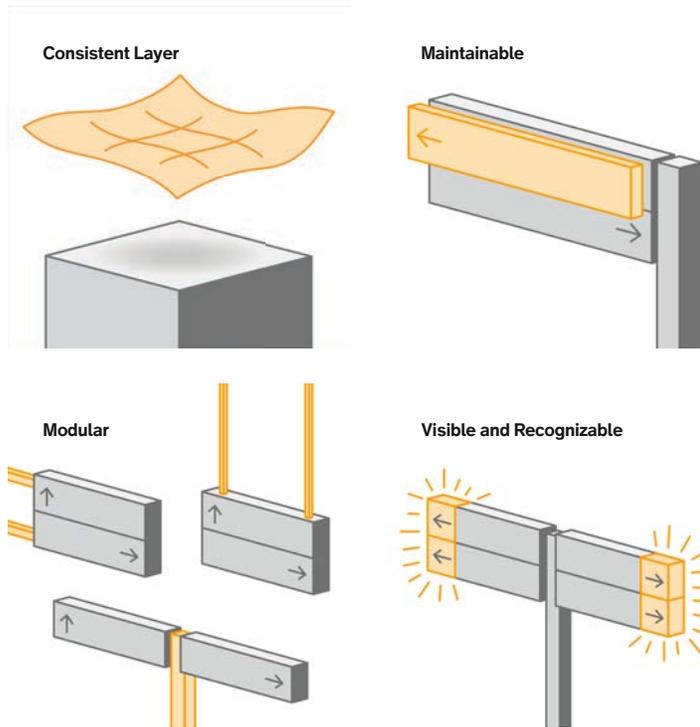
- 7.1 3D Design
- 7.2 Components
- 7.3 Mounting
- 7.4 Specifications
- 7.5 Digital Displays

# 7.1 3D Design

3D design concerns the three-dimensional design of wayfinding elements. This includes construction, materiality, finishes, mounting types, and overall performance. This chapter presents the design intent and guidelines to execute it across all sign types in the system.

Objects should be designed and considered as part of the architectural environment. They should be coordinated and integrated into their surroundings as much as possible.

## 7.1.1 Design Principles



### Design Principles

#### Consistent Layer

An airport is a diverse architectural environment with a range of volumes, materials, finishes, lighting conditions, and colors. Wayfinding is a consistent layer present throughout. To maintain consistency, wayfinding must be highly flexible and neutral, i.e. able to adapt to a variety of conditions.

#### Maintainable

Signage elements can last for decades, but information changes. Allow for easy maintenance and modification. Objects are designed so that a sign face can be changed without replacing the entire structure.

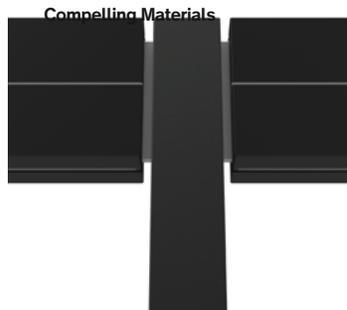
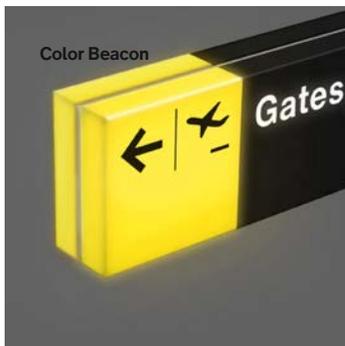
#### Modular

The range of architectural environments and building layouts demands different mounting options. For example, when a ceiling is too high to suspend a sign, a free-standing sign can be used instead. Modularity ensures wayfinding

#### Visible and Recognizable

All directional signs are internally illuminated and many signs contain digital displays. Color is a fundamental aspect of a functional and recognizable wayfinding system, so the consistent appearance of colors is critical. The design of illuminated or digital signs should account for wiring and connections for data and electricity. These should be included in an inconspicuous way for a uniform, professional appearance.

## 7.1.2 Design Language



### Design Language

#### Color Beacon

The design of our color beacon is unlike any other airport in the world. An illuminated color on the front face wraps around the sides, top, and bottom of the sign. This makes the information recognizable from broader angles.

#### Reveal

The reveal is a physical divider that breaks up the elements of the sign unit. It appears between the front and the back of a sign box, as well as between the sign box and the mounting or main body. This allows for modularity, emphasizes the illuminated color beacon, and slims the appearance of the object.

#### Soft Rectilinear Geometry

Rectilinear shapes are made with rounded edges, which softens the strong, monolithic forms. This allows the color beacon to be even more striking against a sober backdrop.

#### Compelling Materials

The illuminated information area features bright translucent colors and a subtle glowing black. Non-illuminated elements—such as mounting features and object bodies—are made of robust materials with a matte texture. The reveal is medium-dark gray to contrast with the matte black.



## 7.1.3 Architectural Considerations

An ideal wayfinding system is architecturally integrated, while also having elements that make it conspicuous and visible. Much like interior furnishings and finishes, how wayfinding elements work within an environment is critical to creating a comfortable and welcoming experience. Wayfinding should appear intentional in the environment, rather than an afterthought.

Wayfinding elements require consistency and uniformity so they can be recognized. However, there are some opportunities to aesthetically align with architecture.

Opportunities in new facilities are different than those in legacy facilities. The ability to architecturally integrate is easier with new construction and can dovetail with natural wayfinding. Legacy facilities may be hindered by space constraints or complex passenger flows, resulting in less freedom to customize wayfinding elements. In these cases, standard structure design is typically called for.

Integration with architecture is discouraged if:

- It detracts from the visibility of a wayfinding element.
- It requires a wayfinding element to be placed in a suboptimal location, such as too high or obscured by other architectural elements.
- It alters the materials or finishes prescribed in this manual.

### Materials

This manual stipulates materials and methods for the construction of wayfinding elements. In limited cases, some flexibility in mounting materials is allowed, if it improves architectural integration. This requires approval from the Port Authority.



The sign box must conform to guidelines. Custom mounting may be allowed to improve architectural integration.

### Mounting

Mounting options vary to best integrate with different architectural conditions.

### Visibility

Wayfinding elements should always have clear sightlines and be conspicuous in the environment. Placement and treatment should maximize visibility.

### Approvals

The Port Authority will require lessees, airlines, operators to present designs for approval. Those designs which depart from the standards presented in the Port Authority Wayfinding Guidelines Manual, will require additional approval prior to implementation.

## 7.2 Components

Guidelines for construction of elements are included at a design intent level. Fabricators should review and adhere to these guidelines when constructing signs to ensure a high level of quality.

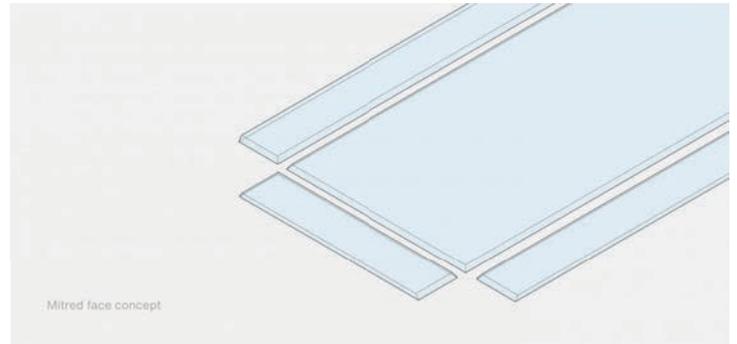
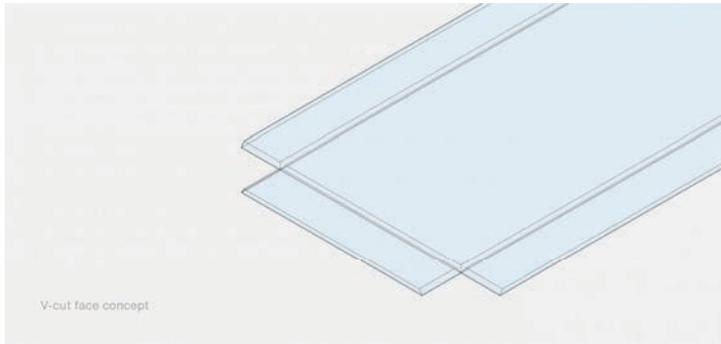
Specifications include internal and external sign components, mounting options per sign type, dimensions, and performance specifications. Together, these guidelines ensure a consistent look and feel of all elements across the wayfinding system.

These guidelines are intended to be the foundation upon which fabrication is fully detailed. The detailed fabrication design, together with structural and lighting engineering, enables the production of signs.

## 7.2.1 Acrylic Sign Face

Acrylic sign faces are used for all suspended, post and wall mounted signs. Fabricators should be experienced with the methods outlined here in order to produce signs of the quality and consistency required.

The intent of the sign is to provide illumination on all sides of the sign cabinet- fronts, sides, top & bottom depending on the layout of the sign. In most conditions, when a sign is hung close to a ceiling or would not be visible from above, the top of the sign does not require illumination. In those cases the fabrication intent can be modified to have a non-illuminated top face. In all other applications, the faces should be illuminated. The following concepts show how this can be achieved.



Fabrication methods for sign faces.

There are two similar methods for the fabrication of the sign face.

### V-cut sign box faces

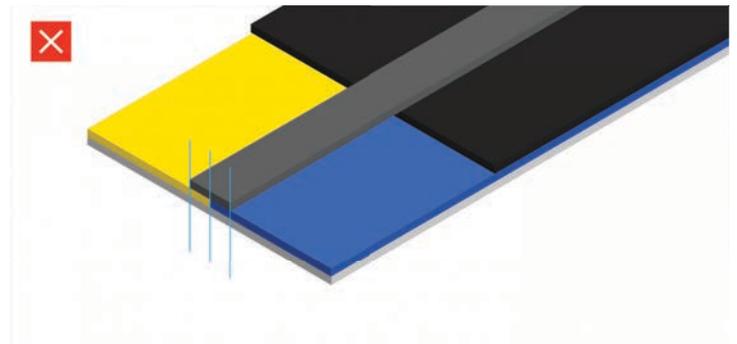
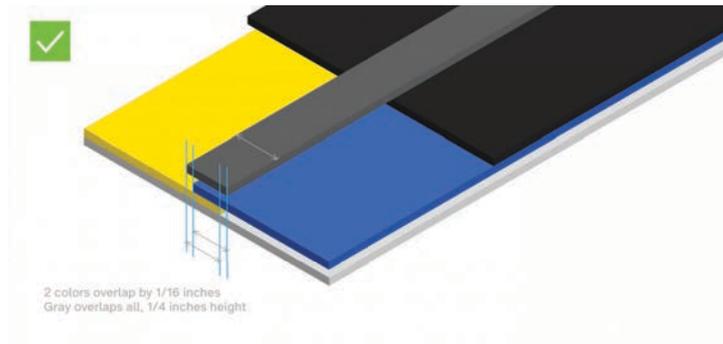
The recommended option is to v-cut the acrylic face, so that when folded, the faces are perfectly aligned. A single acrylic sheet is cut to shape, and v-cuts are then made so that each side/top/bottom plane can be heated and bent to create the 5-sided box. Heating the folded edge is required in order to bring the cut edges as tightly together as possible. The closer the v-cut is cut through to the other side of the acrylic, the tighter the bend, and the less of a rounded edge is achieved. Experimenting with the amount of bonding agent required is recommended, whether all (long and short) edges are bonded or only the short edges that are required to be bonded together.

### Mitre cut sign box faces

A lesser recommended method for fabrication is to produce individual sign face facets to be assembled into a sign face. By this method the tightest face edges will be achieved, resulting in no edge roundness. This method requires more precision in cuts and greater care in assembly.

## 7.2.2 Vinyl Application

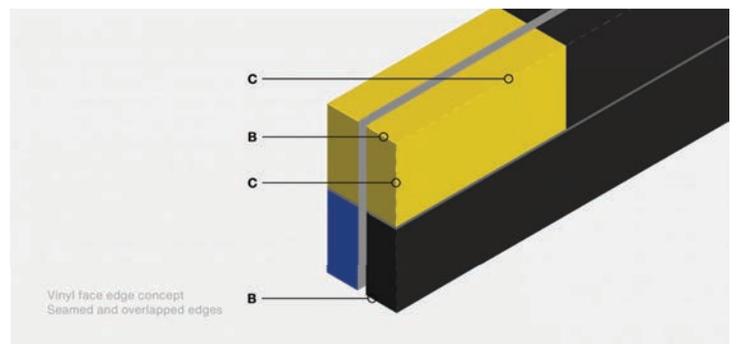
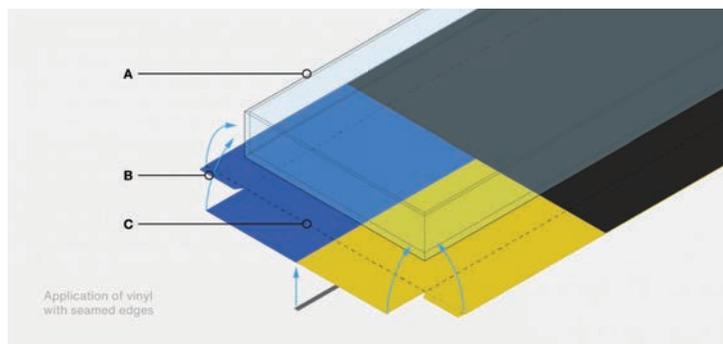
The method for applying vinyls is outlined in this section. Pre-cast vinyl sheets are used to apply all colors to signs. For colors and vinyl reference numbers see Color.



Proper and improper overlap of vinyl on sign faces.

Vinyl must be properly applied to the sign faces so that no light leaks are present or develop over time. Vinyl is a material that is subject to aging and changes in temperature. As vinyl ages and experiences ambient changes in temperature it will contract and thus proper application with overlaps is recommended to ensure that when it shrinks, light leaks do not develop.

Each sign face must be wrapped with vinyl properly to ensure no light leaks along the edges. The cut vinyl is brought up to the sides/top/bottom of the sign face and overlapped as shown. Using this method will minimize the chance for seams to separate and like leaks to develop over time.



### A. Overlap and wrapping of vinyl over acrylic sign face

Edge of vinyl overlaps so that during final construction, this edge is under the sign face against the center sign structure.

**B. Overlapped vinyl edges**

The short edges of the sign faces have overlapped, seam edges to prevent light leaks in the case the vinyl contracts.

---

**C. Wrapped vinyl edge**

Vinyl is “folded over” along the long edges of the sign face.

## 7.2.3 Luminous Panel

The light for the sign face is provided by a full face “luminous” panel. A luminous panel is an acrylic sheet which has a treated surface that allows light to travel and “refract” (disperse) through the front face of the sheet. By etching the face and providing a reflective surface behind the sheet, light shining from the edge travels through the sheet and refracts out illuminating the face of the sheet.

The benefit of this over the traditional linear LED placement:

1. It provides an even distribution of light to the sign face, minimizing points of light (or bright spots) along the face;
2. It allows to have the face of the sign closer to the light source, producing thinner signs; and
3. It minimizes the manual labor involved with linear LEDs



Showing different LED light application.

---

### A. LED light source

The luminous acrylic panel is edge lit with a continuous LED strips along each side of the panel. The LED strips cast light to the panel which is then refracted out to the face of the acrylic.

---

### B. Illuminating acrylic panel

The acrylic panel refracts light out the face with the aid of the etching on the face of the panel. This etching can be manipulated so that more light is refracted along the center of the panel and less is refracted along the edges where the light sources is the strongest. Additionally the acrylic panel should be backed by a reflective surface to help reflect the light outward to the face of the acrylic.

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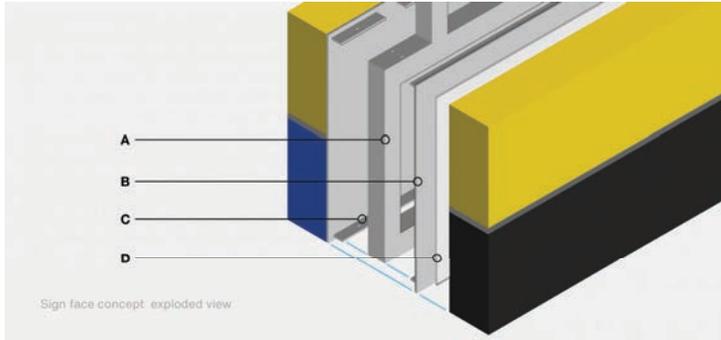
### C. Linear LED configuration

Linear LEDs are traditionally used to illuminate the sign face. The advantage of LED modules is that they can be mounted only where needed, only behind areas which require illumination. The disadvantage of this method is that there is more labor and planning required to located the required LEDs in the sign box, and the LEDs unless mounted uniformly may result in hot spots or uneven lighting along the face and between sign boxes.

## 7.2.4 Sign Face Component Assembly

The sign face is attached to the center structure so that the shadowing is minimized. The center luminous sign panel will evenly distribute light to the front, sides and top/bottom of the sign face. The lighting components for the luminous panels can be located behind the black, non-messaged sections of the sign face.

This diagram shows how the components are secured to the center sign structure.



Sign box with sign faces, exploded view

---

### A. Internal sign frame

The sign frame holds the front and back faces and suspends the sign (in case of a double sided suspended sign). The sign frame has the depth required to attach the sign faces and to be structurally sound for the maximum size panels in the system.

---

### B. Face panel rear support

The rear of the sign face attaches to the acrylic face and carries the luminous panel.

---

### C. Securing flange for sign face

A securing flange will hold the sign face to the sign structure. The securing flange runs is attached with mechanical fasteners.

C. Luminous light panel  
A full coverage luminous sign panel will illuminate the entire sign face evenly. The luminous sign panel is recommended vs. individual LEDs as it will provide even illumination, avoid bright points of light and will reduce fabrication time. to the sign structure from above and below the sign box.

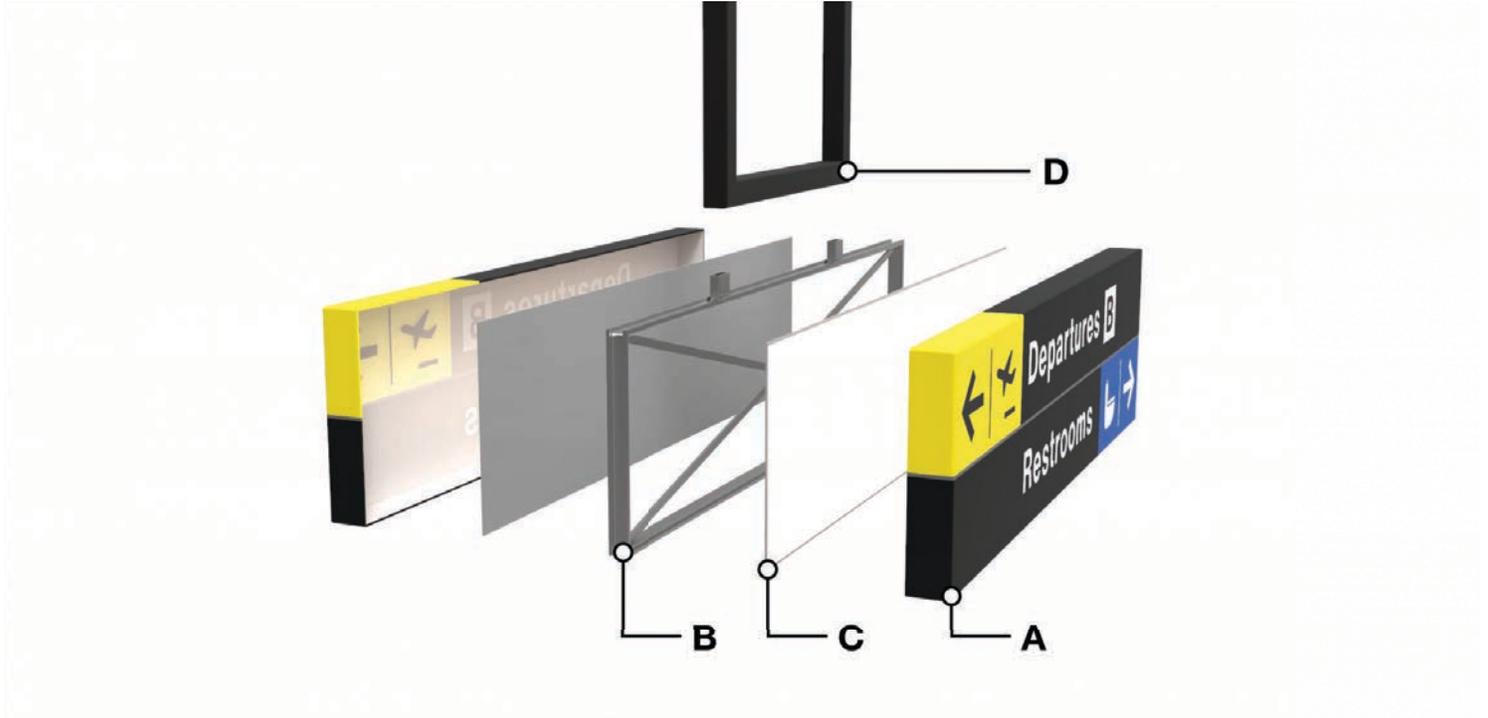
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### D. Luminous light panel

A full coverage luminous sign panel will illuminate the entire sign face evenly. The luminous sign panel is recommended vs. individual LEDs as it will provide even illumination, avoid bright points of light and will reduce fabrication time.

## 7.2.5 Suspended Sign Box

Suspended signs are typically attached to a ceiling or other overhead structure. They have common components with cantilever structures.



Anatomy of a suspended sign

---

### A. Sign Face

The sign face is a substrate with information graphics applied to its outer surface. The base material is a milky white, translucent acrylic. Thickness is determined by fabrication requirements according to strength and size. Adhesive vinyl sheets are applied for color, messaging, and graphics.

---

### B. Frame & External Reveal

The frame brings the front and rear faces together, provides structural rigidity, and acts as a visual reveal. It carries the internal components (e.g. lighting) and attaches to the mounting. Vent or weep holes should be provided, if necessary for heat dissipation.

---

### C. Lighting

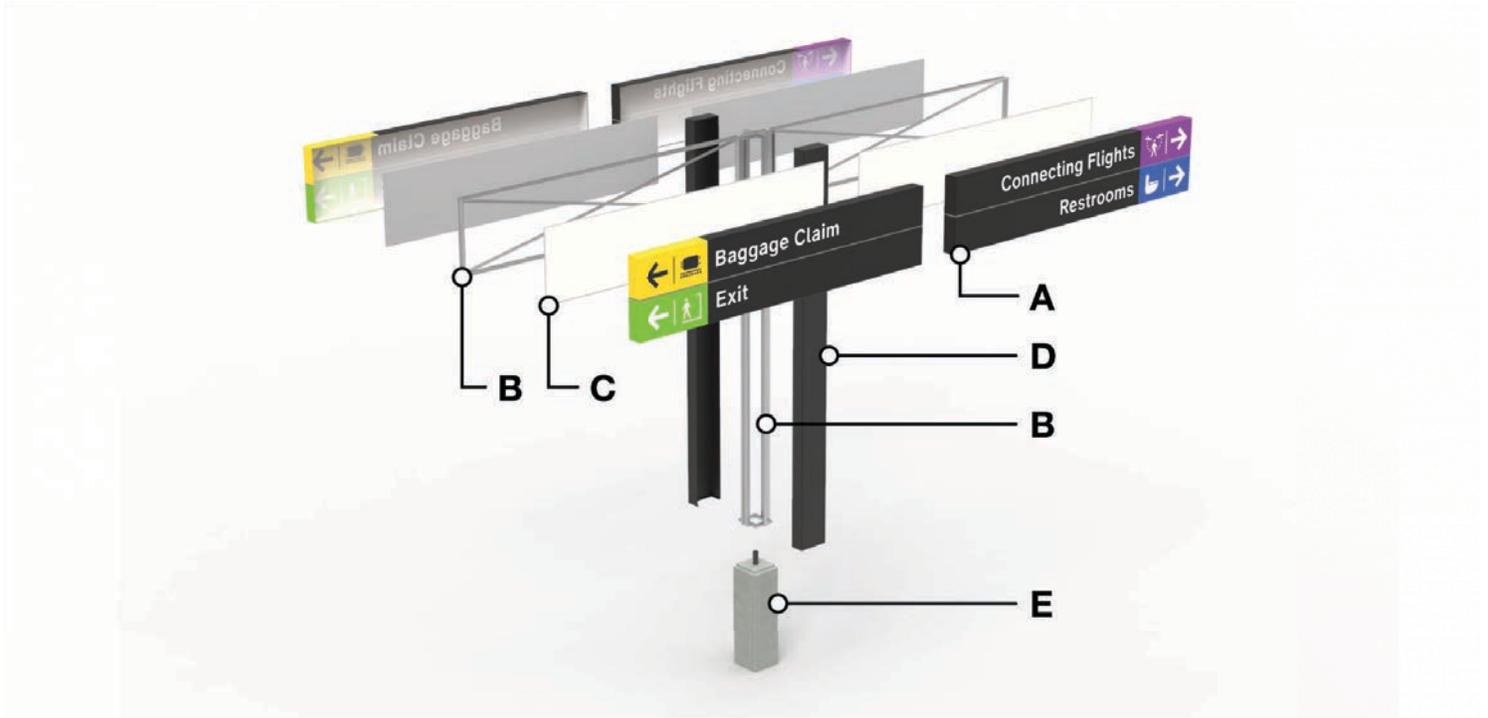
The sign box is internally illuminated using LEDs. They can be applied as an array or luminous sheet to achieve uniformity and brightness, and avoid internal shadows. LEDs require an on-board driver or transformer (depending on the power supply) housed in the sign box.

## **D. Mounting**

The mounting allows for placement of the information in space. It must allow for electrical wiring to reach internal components without being visible. For suspended signs, mounting elements are made of square tubular metal pipe.

## 7.2.6 Post-Mounted Sign Box

Post-mounted signs are located where overhead ceilings are too high to suspend a sign. Post-mount signs can have one or two posts.



Anatomy of a post mounted sign

---

### A. Sign Face

The sign face is a substrate with information graphics applied to its outer surface. The base material is a milky white, translucent acrylic. Thickness is determined by fabrication requirements according to strength and size. Adhesive vinyl sheets are applied for color, messaging, and graphics.

---

### B. Frame & External Reveal

The frame brings the front and rear faces together, provides structural rigidity, and acts as a visual reveal. It carries the internal components (e.g. lighting) and attaches to the mounting. Vent or weep holes should be provided, if necessary for heat dissipation.

For the floor post, the reveal is also where the vertical, structural support cladding is attached.

### **C. Lighting**

The sign box is internally illuminated using LEDs. They can be applied as an array or luminous sheet to achieve uniformity and brightness, and avoid internal shadows. LEDs require an on-board driver or transformer (depending on the power supply) housed in the sign box.

---

### **D. Mounting**

Mounting options should allow for electrical wiring to reach internal components without being visible. For post-mounted signs, a bent steel shape is attached to the frame. A matte, powder-coated finish provides protection and durability.

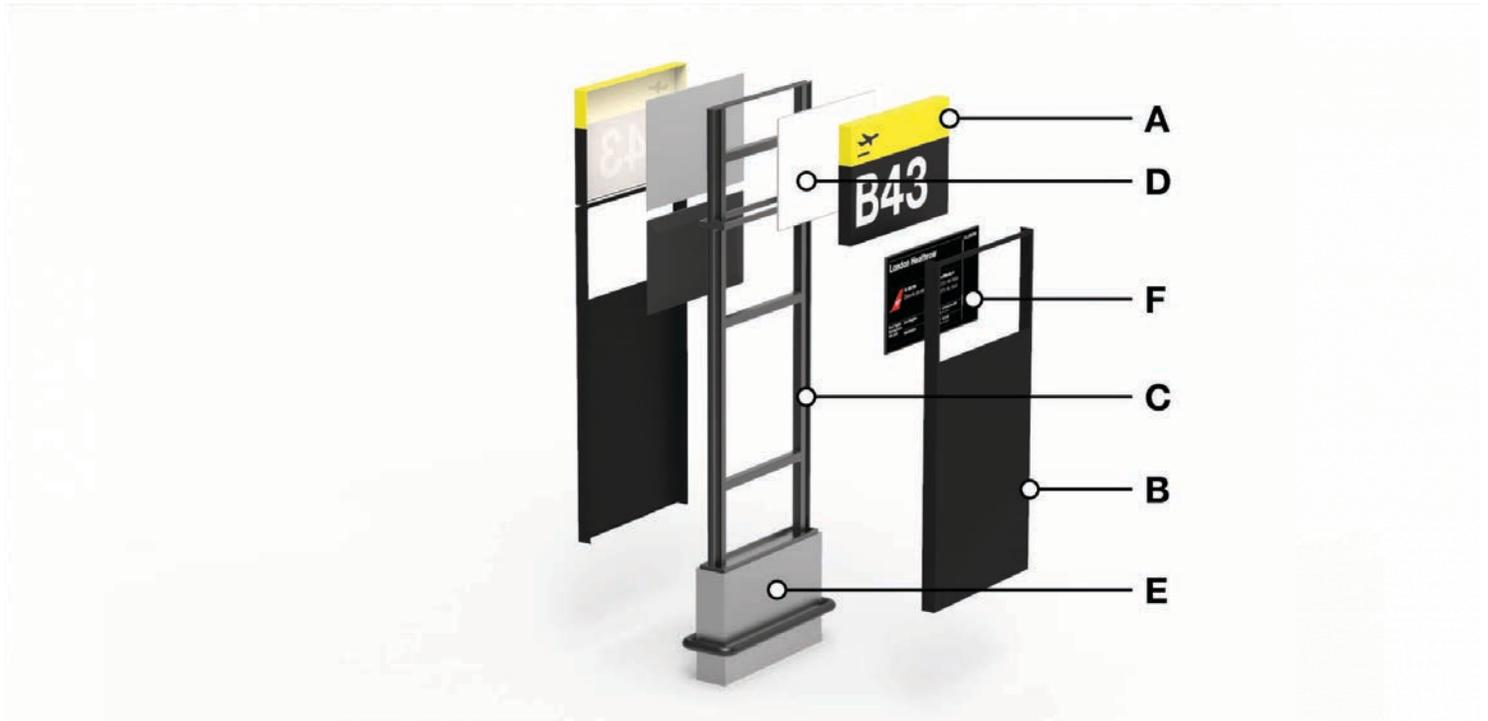
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### **E. Base**

A base attaches a sign to the floor. The base must be able to withstand high impact and provide a rigid connection with the ground. To protect against damage, the base must be stainless steel.

## 7.2.7 Totem

Totem signs are used for identification. Totems can be used as digital display enclosures.



Anatomy of a floor mounted totem - please note that totem is still under development

---

### A. Sign Face, illuminated

The sign face is a substrate with information graphics applied to its outer surface. The base material is a milky white, translucent acrylic. Thickness is determined by fabrication requirements according to strength and size. Adhesive vinyl sheets are applied for color, messaging, and graphics.

---

### B. Lower Face, non-illuminated

The lower portion of the totem is fabricated as a bent steel shape and attached to the frame. A matte, powder-coated finish provides protection and durability.

---

### C. Frame & External Reveal

The frame brings the front and rear faces together, provides structural rigidity, and acts as a visual reveal. It carries the internal components (e.g. lighting) and attaches to the mounting. Vent or weep holes should be provided, if necessary for heat dissipation.

## **D. Lighting**

The top of the totem is internally illuminated using LEDs. They can be applied as an array or luminous sheet to achieve uniformity and brightness, and avoid internal shadows. LEDs require an on-board driver or transformer (depending on the power supply) housed in the sign box.

---

## **E. Base**

A base attaches a sign to the floor. The base must be able to withstand high impact and provide a rigid connection with the ground. To protect against damage, the base must be stainless steel.

---

## **F. Display**

OLEDs should be used for digital displays. They provide good contrast, deep blacks, and less energy consumption. Integration is required to ensure a flush and seamless appearance. Access for maintenance and replacement is also required.

## 7.2.8 General Dimensions

### Sign Boxes

Face dimensions are determined by the Graphic Design guidelines. The depth of each box face is 3" with a 1" reveal frame — resulting in an overall sign cabinet depth of approximately 7".



Sign box showing typical dimensions.

### Sign Post

The sign post is also 7" deep to match the overall depth of the sign cabinet. The width is variable depending on design and engineering needs.



Sign post showing typical dimensions.

### Totem

Face dimensions of the totem and possible integrated display are determined by the Graphic Design guidelines. The depth of the totem is conforming to the measurements of the sign box, two sides of 3" and a reveal of 1". However, the depth can increase if internal components or construction requirements demand so.



## 7.2.9 Back Side of Signs

There are situations where a double-sided sign has information on only one side, so the back panel appears empty. This back panel covers up the unused side of the sign but can be replaced by a panel with messaging if ever needed. Since the back panel is not supporting any routing or color wrap it has less depth and is fully opaque so no light leakage occurs. The panel on the back has the same color and appearance as the black part of the front panel.



# 7.3 Mounting

### 7.3.1 Directional

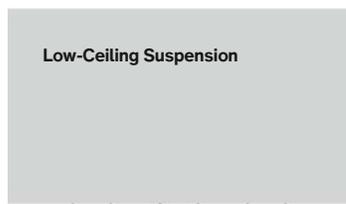
Directional signs guide users to a destination. Mounting method depends on the situation.



#### Suspended

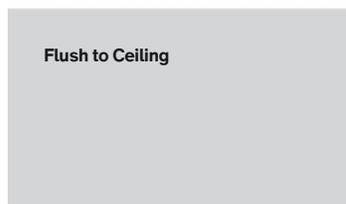
##### Full Suspension

Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.



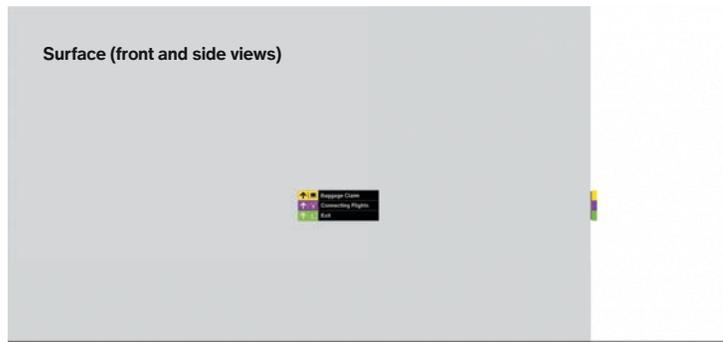
##### Low-Ceiling Suspension

This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8'-0" minimum height.



##### Flush to Ceiling

If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.



#### Wall-mounted

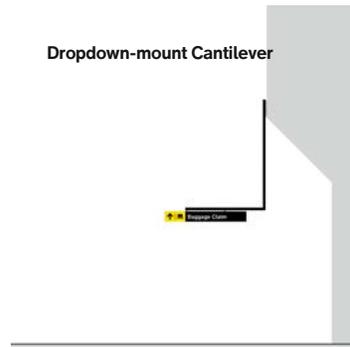
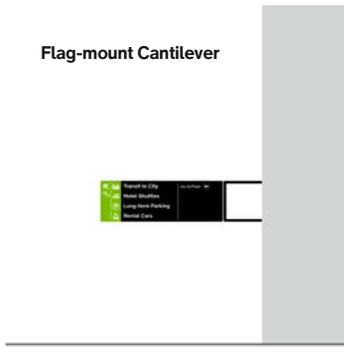
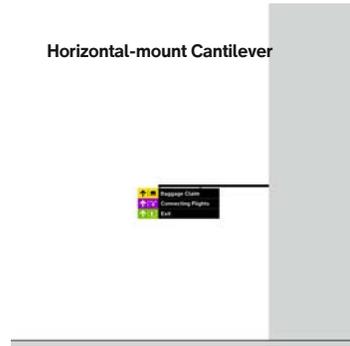
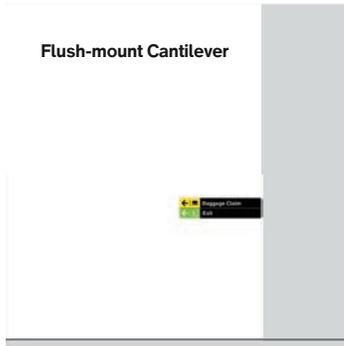
##### Surface

A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.



##### Recessed

Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.



## Cantilevered

### Flush-mount Cantilever

This allows information to be presented above the passenger flow without extending far into the environment.

### Horizontal-mount Cantilever

A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

### Flag-mount Cantilever

A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

### Dropdown-mount Cantilever

A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.



## Freestanding

### Single-post Mount (single or double box)

One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.

### Double-post Mount

Recommended for multiple sign boxes that cannot be suspended or post mounted.

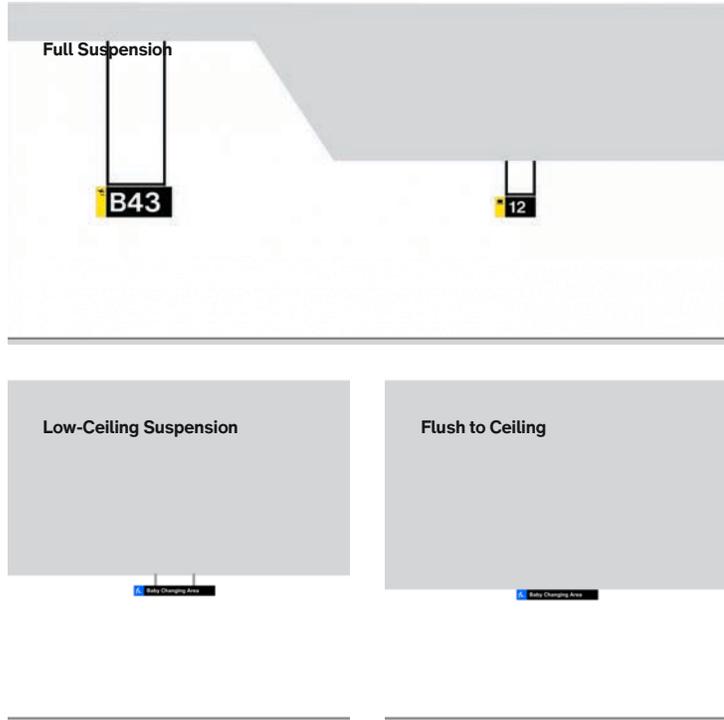
Single-post Mount, double box

Double-post Mount



## 7.3.2 Identification

Identification signs confirm a destination. They are intended to be read from a distance and are typically mounted in the overhead wayfinding zone.



### Suspended

#### Full

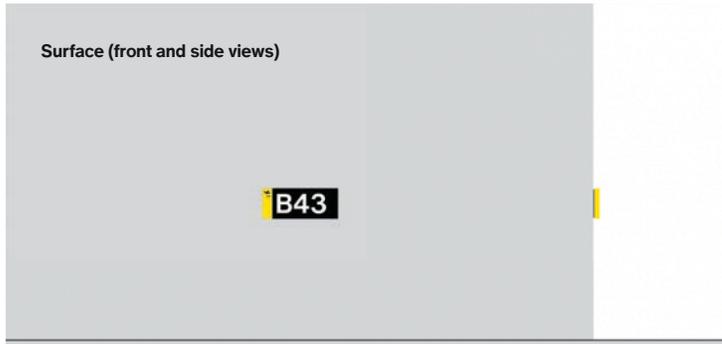
Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.

#### Low-Ceiling

This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8'-0" minimum height.

#### Flush to Ceiling

If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.



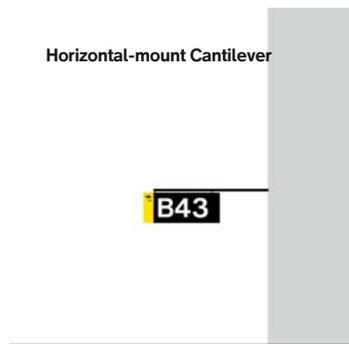
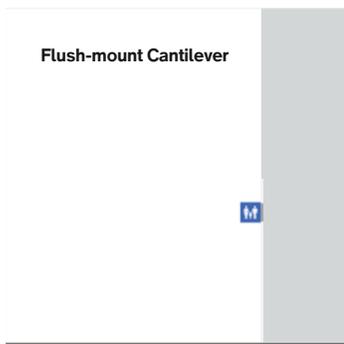
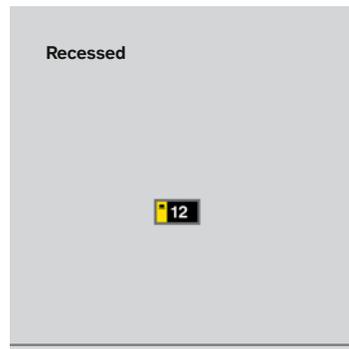
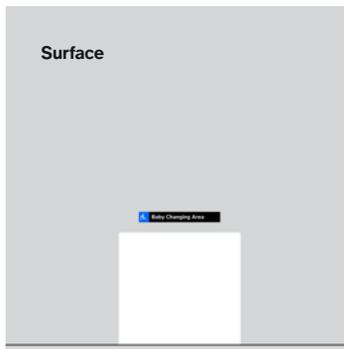
### Wall-mounted

#### Surface

A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.

#### Recessed

Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.



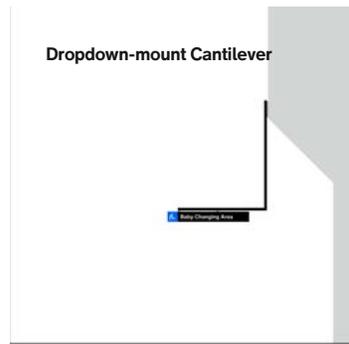
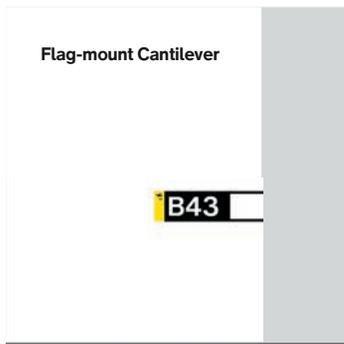
### Cantilever

#### Flush-mount

This allows information to be presented above the passenger flow without extending far into the environment.

#### Horizontal-mount

A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

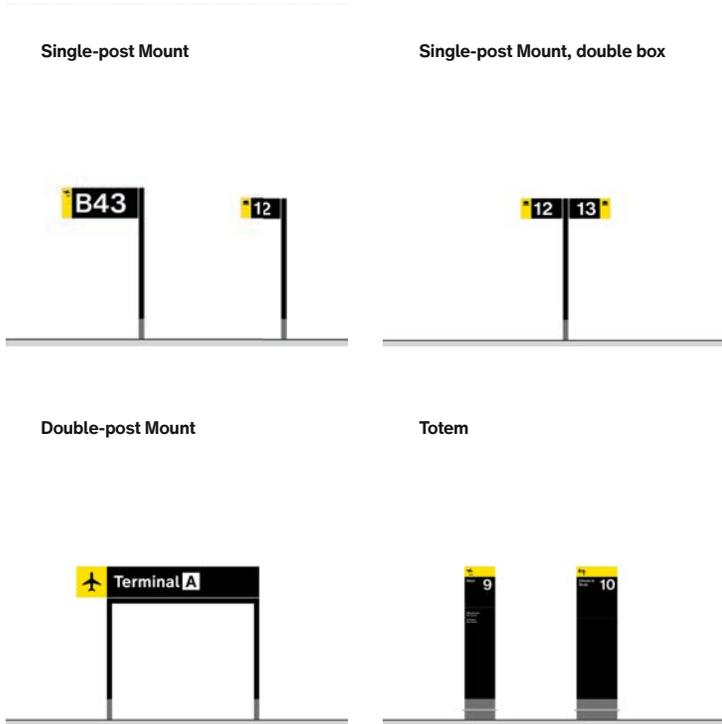


#### Flag-mount

A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

#### Dropdown-mount

A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.



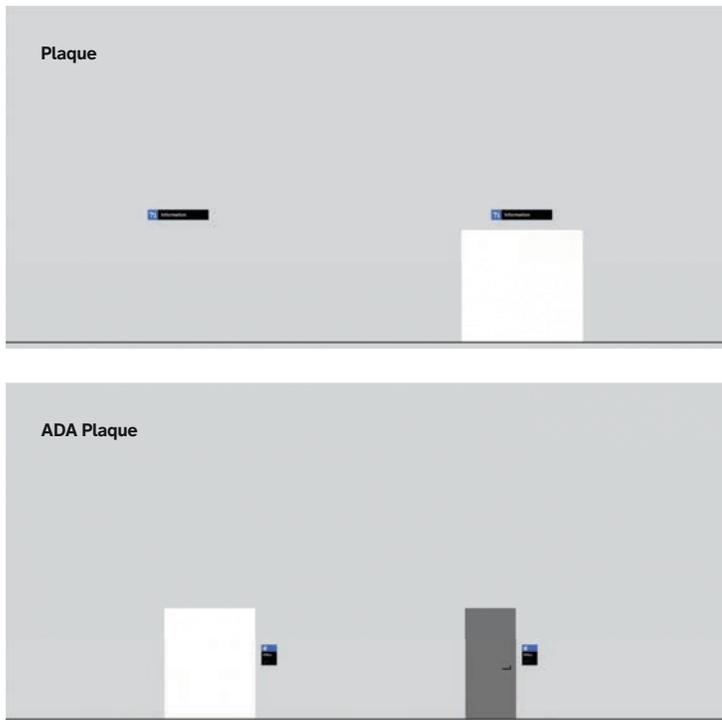
## Freestanding

### Single-post

One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.

### Double-post

Recommended for multiple sign boxes that cannot be suspended or post mounted.



## Plaque

### Plaque

Wall plaques are fabricated of a rigid polycarbonate material with silkscreen graphics. They are non-illuminated and secured with VHB tape and silicone. Larger panels should be stud mounted.

### ADA Plaque

ADA wall plaques are non-illuminated signs, fabricated of a rigid polycarbonate material with silkscreen graphics. Dimensional graphics for ADA compliance are thermoformed to minimize vandalism. Braille should be (recessed) bead braille. Plaques are secured with VHB tape and silicone. Larger panels should be stud mounted.

### 7.3.3 Information

Signs which give instruction or convey information to passengers or other users.



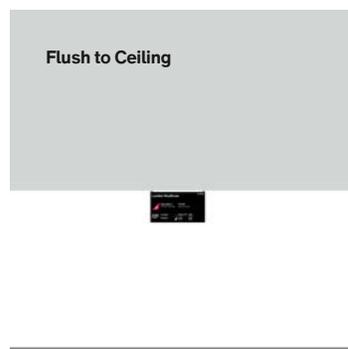
#### Suspended

##### Full Suspension

---

Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.

---

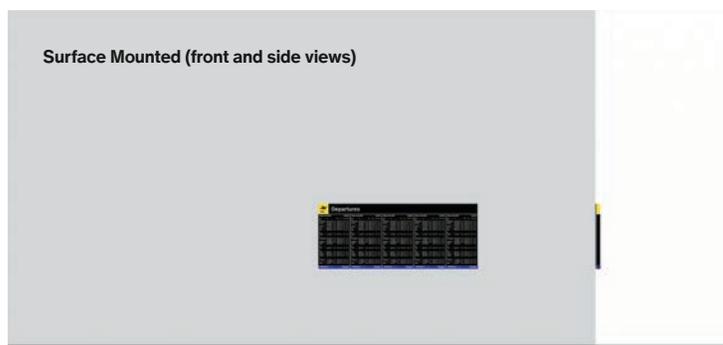


##### Low-Ceiling Suspension

This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8'-0" minimum height.

##### Flush to Ceiling

If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.



#### Wall-mounted

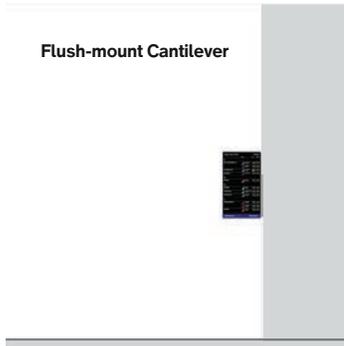
##### Surface

A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.

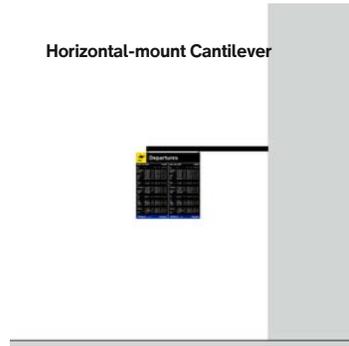
##### Recessed

Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.

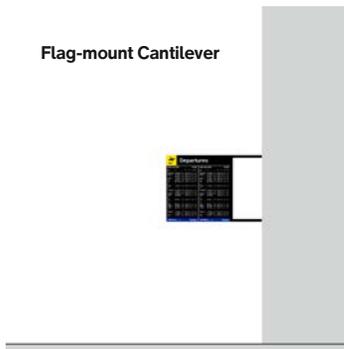




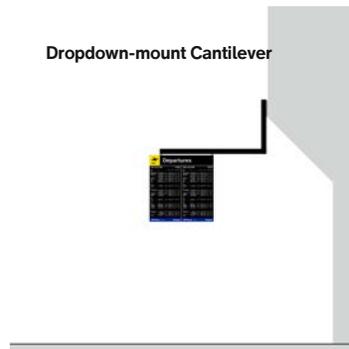
Flush-mount Cantilever



Horizontal-mount Cantilever



Flag-mount Cantilever



Dropdown-mount Cantilever

### Cantilevered

#### Flush-mount

This allows information to be presented above the passenger flow without extending far into the environment.

#### Horizontal-mount

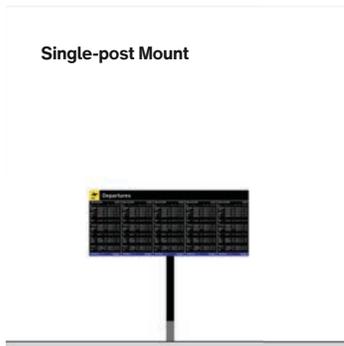
A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

#### Flag-mount

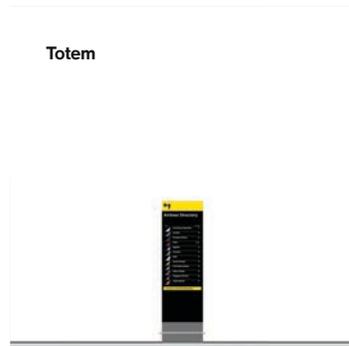
A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

#### Dropdown-mount

A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.



Single-post Mount



Totem

### Freestanding

#### Single-post

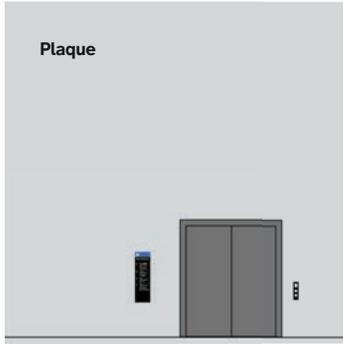
One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.

#### Double-post

Recommended for multiple sign boxes that cannot be suspended or post mounted.



Double-post Mount



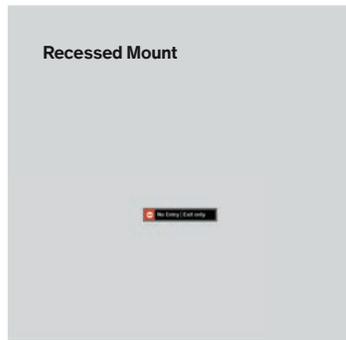
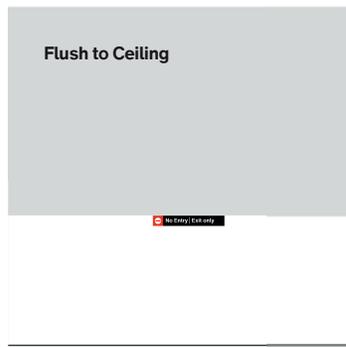
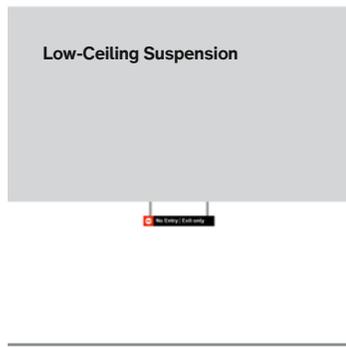
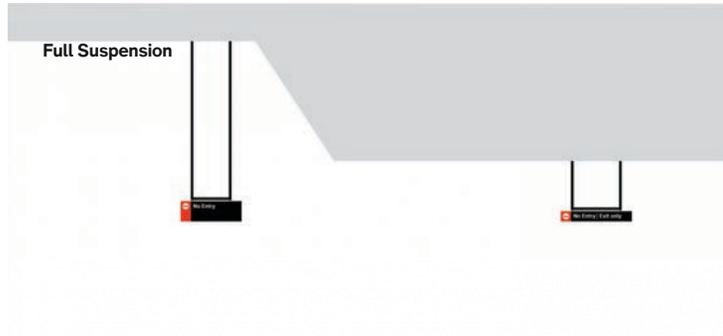
## Plaque

### Plaque

Wall plaques are fabricated of a rigid polycarbonate material with silkscreen graphics. They are non-illuminated and secured with VHB tape and silicone. Larger panels should be stud mounted.

## 7.3.4 Regulatory

Signs which provide rules and regulations.



### Suspended

#### Full

---

**Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.**

#### Low-Ceiling

This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8'-0" minimum height.

#### Flush to Ceiling

If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.

### Wall-mounted

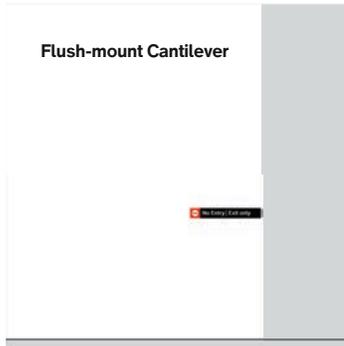
#### Surface

---

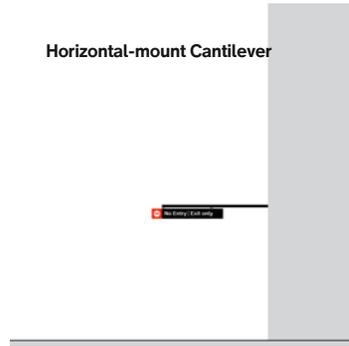
A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.

#### Recessed

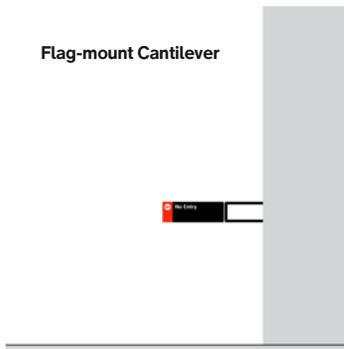
Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.



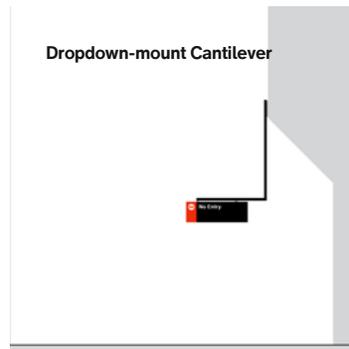
Flush-mount Cantilever



Horizontal-mount Cantilever



Flag-mount Cantilever



Dropdown-mount Cantilever

### Cantilevered

#### Flush-mount

This allows information to be presented above the passenger flow without extending far into the environment.

#### Horizontal-mount

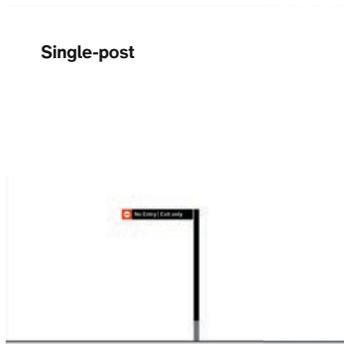
A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

#### Flag-mount

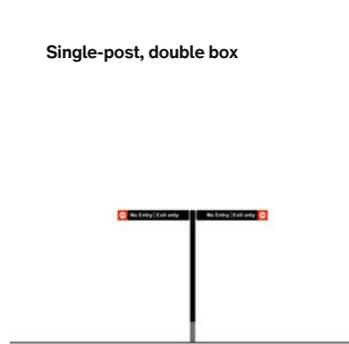
A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

#### Dropdown-mount

A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.



Single-post

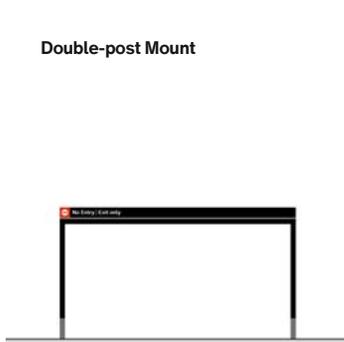


Single-post, double box

### Freestanding

#### Single-post

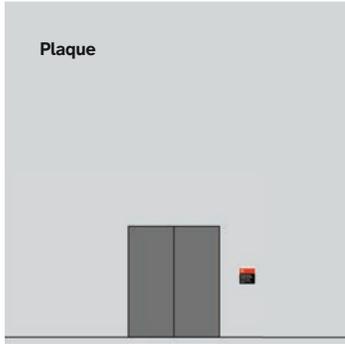
One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.



Double-post Mount

#### Double-post

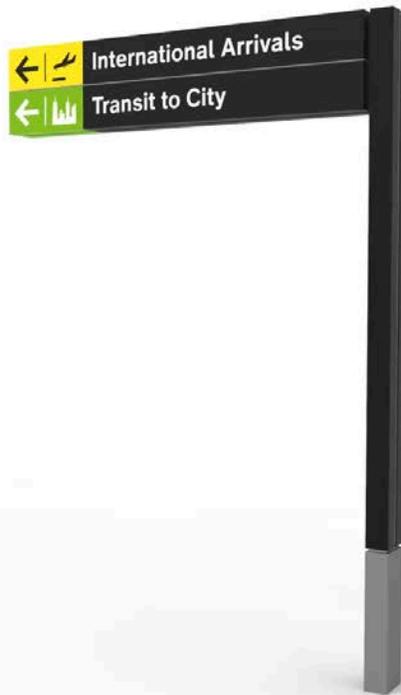
Recommended for multiple sign boxes that cannot be suspended or post mounted.



## Plaque

### Plaque

Wall plaques are fabricated of a rigid polycarbonate material with silkscreen graphics. They are non-illuminated and secured with VHB tape and silicone. Larger panels should be stud mounted.



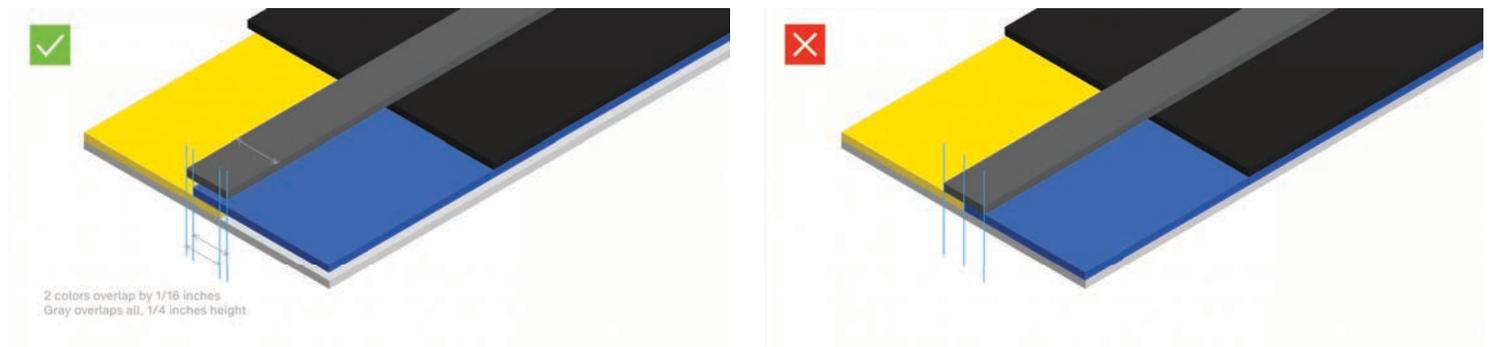
Mounting options

# 7.4 Specifications

## 7.4.1 Performance Specifications

Performance specifications set minimum requirements for materials, manufacturing, and installation of signs and wayfinding elements. They ensure uniformity and help create a world-class wayfinding system. Architects, designers, and developers must review and adhere to these performance specifications when establishing or revising the wayfinding system at Port Authority Aviation facilities.

If not specified, methods of manufacturing, assembly, and placement are to be determined by the manufacturer or contractor. It is imperative that the design is in accordance with this manual. All signage elements must comply with city, state, and legal regulations and standards that govern any built element in an airport facility.



The application of the color vinyl should overlap to ensure no gap of light can come across the gray line separator.

### Color

- Colors should be consistent throughout all terminals and stations.
- Colors should be reproducible. Use stock manufacturer formulas.
- Different applications require specific color formulas. Formulas are provided for vinyl, paint, print and digital. Do not translate them to other applications.
- Colors should be stable and color-fast over time.

### Finish

- Surfaces should be matte, not gloss.
- Surfaces should be clean, unmarked, and undamaged.
- Surfaces should not fade due to UV radiation.

### Construction

- Sign faces should be flat.
- Signs should be resistant to humidity.
- Signs should be adjustable to ensure horizontal (level) and vertical (plumb) alignment.
- Power systems (e.g. electrical wiring, transformers, UL labels) must be hidden from view.
- Fasteners should be hidden from view, as much as possible.
- Provide adequate ventilation to allow for passive cooling of signs (air flow).
- Provide weep holes for drainage, if signs may be exposed to wet conditions.
- Signs should have a factory finish. On-site painting is permitted only for touch ups.
- Internal illumination elements must be easily replaceable, in whole or in part.
- All electronics should be contained inside the sign cabinet, or mounted in an easily accessible location nearby.

### Maintenance

- Operational status of elements must be easy to verify and monitor.
- Provide on/off switches as prescribed by local building or electrical code(s) for maintenance of signs.

- Sign faces must be easily removed and replaced on site with minimal tools, minimizing the need for fasteners.
- Avoid edges, lips or other horizontal surfaces where dirt can accumulate.
- Signs must be easy to clean without disassembly or removal.

### **Illumination**

- Internal illumination should be even, with no hot spots.
- No internal shadows (due to internal supports or fabrication) should be noticeable on sign faces.
- Illuminated signs should have a luminance of 500 lumens (TBC)
- Signs should be dimmable, either at installation or using a remote dimming system.
- The temperature of color in illuminated signs should be 5,000K (TBC).

### **Sustainability**

- Energy consumption of wayfinding elements should be as low as possible.
- Use of harmful materials should be avoided.
- Recyclable materials should be used as much as possible.

# 7.5 Digital Displays

## 7.5.1 Performance Specifications

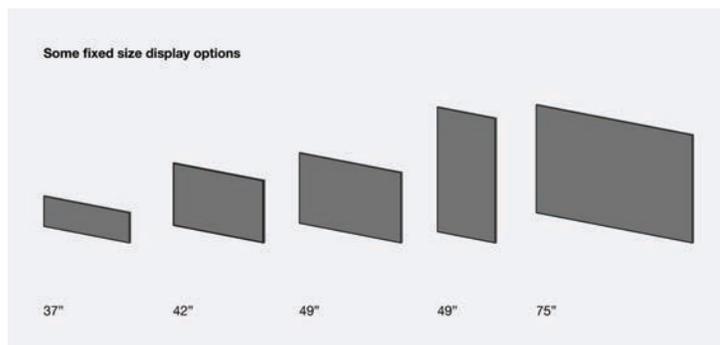
This chapter outlines the specifications that should be considered and consulted when choosing, purchasing, and maintaining digital signage. Before signage is purchased, it is recommended to determine approximate sign size requirements of a message and other content in order to ensure a display will fit all required information and maintain legibility and ADA size requirements. Architects, designers, and developers responsible for construction of airport facilities must review these performance specifications as a baseline when establishing or revising the wayfinding system at Port Authority Aviation facilities. For more information about dynamic layouts and text size requirements, see chapters Directional, Informational, and Dynamic.

Today's digital displays are available in a variety of sizes, and configurations. There are two ways to source a dynamic display. Either using a fixed size display, not unlike the displays used as televisions and desktop monitors, or building up a display from separate modules, like LEGO blocks.

### Fixed Size Displays

Fixed size displays usually have a width to height proportion of 16:9, though wide or ultra wide displays may have different proportions, such as to 32:9. Display sizes are defined in inches, which is the diagonal measurement of the visible display area. The most used resolution for large displays is currently 4K (3840 x 2160 pixels), though HD displays (1920 x 1080) and 8K displays exist as well. For information that is read at an average distance, from 8 to 15 feet (or further), a HD display suffices. For information that is read from closer by (such as maps) 4K is preferred.

Manufacturing of fixed size displays is centralized. There are many brands but each sources their hardware from a handful of suppliers. It is therefore not guaranteed that display sizes that are offered now will still be available in even a couple years' time. It is possible to make custom size displays, but these are costly and have a very limited lifespan.

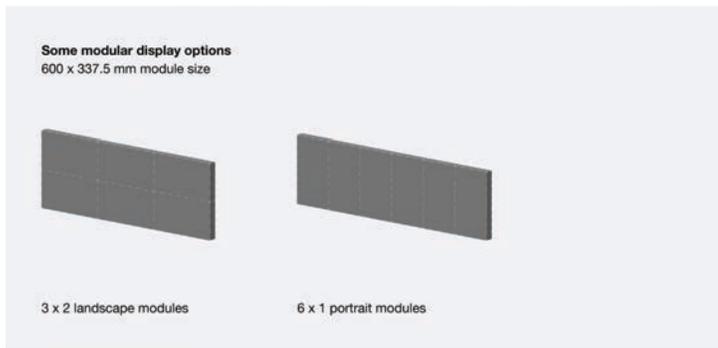


### Modular Displays

Modular displays are made by combining LED tiles, which are offered by multiple manufacturers, though they are not interchangeable. The tiles are configured together in a grid system to make larger, contiguous displays that do not have fixed proportions or dimensions. The pitch (how close the LED diodes are to each other) varies and it is recommended that smaller pitch sizes (tighter LED spacing) are specified for displays that can be viewed at a closer distance. These types of displays can in theory approach the resolution of 4K displays when using so-called microLEDs or nanoLEDs, but the costs of these nano/microLEDs is still prohibitive for wayfinding applications.

Where previously every manufacturer had unique tile sizes, there has more recently been a convergence to tiles measured 600x337.5mm (16:9 proportion). A disadvantage of LED tiles is that the LEDs are easy to damage when they are not protected by a transparent layer. Replacement of single LED modules however can be very easy if they are 'front serviceable'. For this purpose, having replacement extra units in reserve is encouraged.

It should be noted as with many other building systems, technologies are often proprietary and non-interchangeable. As technologies improve and change, careful planning on selecting products that are serviceable and replaceable is encouraged.



## Resolution & Size

- Fixed size displays: HD or 4K resolution to ensure clarity and legibility of graphic information
- Fixed size displays: Preference for OLED (organic light-emitting diode) display panels (if possible) for energy efficiency, color fidelity, and contrast
- Fixed size displays: Able to display at least 99% of the sRGB color space.
- Modular displays: 2.5mm pixel pitch or smaller for overhead signs / for smaller, detailed eye-level signs like FIDs, maps, or directories, pixel pitch must be tested according to smallest cap height to ensure legibility
- Consistent display sizes per grouping and function
- Brightness optimized to minimize text halation
- Colors optimized and calibrated to match static signage program
- Display size based on the distance at which it will be viewed

## Construction

- Power systems (e.g. electrical wiring, transformers) must be hidden from view.
- Cables, power, and ventilation should be hidden by the enclosure or mounting surface.
- Displays should occupy minimal footprint and utilize architecture for mounting and integration,(i.e. wall-mounted displays should be flush where possible).
- Displays and enclosures should have minimal bezel to minimize footprint and separation between multiple displays:
  - Having a minimal distance between display areas will make maps and wayfinding signs appear as a single contiguous surface.
  - Typically manufacturers have “zero bezel” displays that can be put together so closely that the joints between displays are fairly negligible, creating a contiguous display, with the distance between the display area can be as small as 1/8.” These are ideal to minimize distance between displays.
- Display protection promotes longevity:
  - Display casing should be robust enough to avoid accidental damage from collision with people or hand carried objects.
  - Touch displays, or displays placed outdoors should be resistant to water damage by means of water-resistant coating and/or hermetic casing.
  - Displays which could become a subject to vandalism must have a protective anti-vandal surface coating which would prevent the paint from bonding with the display

## Cybersecurity

The signage system of a major international airport hub will be a prime target for outside parties that want to gain unlawful access to IT systems, because of the effects a denial of service attack or a system takeover can have. The least effect of such an attack will be international media attention, at its worst it can lead to disruptions to the national and international flight schedules because passengers and crew will be unable to reach their flights in time. Therefore digital signage systems must be developed with a high level of security in mind.

To address the risks inherent in operating a digital signage system the NIST Cybersecurity Framework (CSF) should be followed. Suppliers of all hardware and software – including sensors, displays, media controllers and network

equipment – must be in compliance with Section 889 of the National Defense Authorization Act (NDAA).

### **Environmental constraints**

To prevent premature wear or malfunctioning of hardware, the environmental operating constraints of hardware should fall well within the planned or observed characteristics of the environment. These operating constraints are for instance (but not limited to) minimum and maximum temperatures, humidity and dew point, operating voltage, and consecutive operating hours.

Hardware that is installed outside climate controlled environments should be treated as if it were installed in an outdoor environment. Hardware that is used in an outdoor environment should be rainproof, leakproof, weatherproof, UV-stable, and corrosion-resistant. Measures should be taken to prevent freezing, overheating, and condensation.

### **Accessibility**

- Freestanding signage is minimum 27" and maximum 80" off the ground.
- Enclosures housing a touchscreen display are maximum 48" off the ground within 10" of arm's reach. Displays should be angled 15-20° for ease of use.
- Wall-mounted displays do not protrude more than 4" from the wall. (Ideally, they should be flush with the wall.)

## 7.5.2 Display Management and Maintenance

### Management & Maintenance

- Displays are networked (hard-wired or have a wireless connection) for data and management.
- Access panels (to network ports and on-board hardware) must be easily accessible.
- Management software should support location mapping to easily monitor operational status.
- Management software should allow real-time updates, content delivery, and targeting to specific displays.
- If a display is integrated into a wall or another architectural element, it should be done in a way that allows for the display to be easily removed from its position for maintenance purposes or replacement without damaging the wall or structure.

### Progressive Enhancements

Displays should be replaced every five to ten years, or as needed based on burn-in or technology evolution.

### Local processing power

- If there is a need to attach a local processing power unit (e.g., a media player or a minicomputer) to a display (for example an interactive touch display), it must be verified and tested that this unit has sufficient computing power to run the display's content without lag or crashing.
- If there is a new display installed with higher specs, or drastically new content is going to be displayed, the performance stability of the local processing power unit needs to be re-verified. In case the performance is not optimal, the unit must be accordingly upgraded.

### Display Errors

If a display breaks, malfunctions, has an error, or for any reason cannot fully and clearly display messages, the display should be shut off temporarily and replaced as soon as possible. These kinds of errors should not be ignored, as broken displays can reflect on passenger perception of airport quality.

Use a temporary sign to replace the message while waiting for a replacement if the message is critical to passenger wayfinding. If the broken display contains a dynamic message, only replace the message, if its content rarely or infrequently changes. Temporary signs should follow the temporary sign guidelines in [section 8.2](#) of this manual.

Procedures should be in place to guarantee a timely replacement of malfunctioning hardware. Ideally, a plan should also be in place for if a display malfunctions or has an error that outlines how to fill in the wayfinding gaps in a sign's absence. Should a digital sign need to be turned off temporarily, solutions such as temporary signage, temporary adjustment of nearby digital signage, or an employee facilitating wayfinding can help users navigate as the process of replacement proceeds.

### 7.5.3 Datasets

Accurate information helps passengers set realistic expectations and guides their behaviors. The mitigation of inaccurate, duplicative, or inconsistent data is essential to reduce the risk of disappointment and negative impression of the airport.

The best way to accomplish this is through a centralized repository of datasets owned and managed by the Port Authority. This ensures airlines and terminal operators can access every non-critical dataset, such as terminal maps, locations, travel times, flight data, baggage data, etc.

Standardization and uniformity of data ensures passengers access the same accurate and timely information, regardless of airport, terminal, or concourse.

Datasets accessible to terminal operators are:

Security and customs wait times:

- Walking times
- AirTrain status
- Flight status
- Taxi wait times
- Parking availability
- More to come

To request access to these datasets, contact the Wayfinding Manager.

# 8 Reviews & Approvals

- 8.1 Sign Application & Review Process
- 8.2 Temporary Signage

# 8.1 Sign Application & Review Process

After determining whether new or replacement signs are necessary, the sign manager is responsible for the request process.

For **digital signage**, message and layout changes that do not require any construction should still be submitted for review as if they were new physical signage.

Type of Project	Read Manual	Consultation with Wayfinding Program Manager	Minor Works Application (MWA)	Tenant Construction and Alteration Process (TCAP)
Simple	●	●		
Minor	●	●	●	
Complex	●	●	●	●

For **simple projects**, installation is allowed without a Minor Works Application (MWA) or Tenant Construction and Alteration Process (TCAP). However, consultation with the Port Authority Program Manager of Wayfinding and Connections Solutions (Wayfinding Program Manager) is encouraged. Projects in this category include the addition of signage that has already been designed and approved according to these standards, like a new restroom identification sign, replacing an existing sign with an identical sign, or replacing outdated messaging.

For **minor projects**, follow the Minor Works Application process (for instructions, reference the TCAP Manual). Consultation with the Wayfinding Program Manager is also strongly encouraged to support the process. Projects in this category include the addition of signage that requires messaging review, in response to a changed flow or route or new signs placed at decision points.

For **complex projects**, follow the TCAP process. Consultation with the Wayfinding Program Manager is also strongly encouraged to support the process. Projects in this category include those that require engineering review, like wayfinding for an entirely new concourse or the addition of FIDs.

Once approval has been received, have the new or replacement signs designed according to these standards. This can be done by architects, graphic design companies, or wayfinding consultants.

Before fabrication and installation, the sign package (including graphics of the old and new signs) must be sent to the Wayfinding Program Manager for review. The Wayfinding Program Manager may also coordinate with Port Authority Redevelopment and/or Traffic Engineering departments to provide feedback and comments to move the project forward as quickly as possible.

For **all projects**, regardless of type, adherence to this Wayfinding Manual is required per lease agreements.

## 8.2 Temporary Signage

Temporary signage reflects the overall quality of the airport and should not be overlooked. Remember, a temporary sign isn't temporary from the perspective of a visitor who won't be back again.

Temporary signage ensures correct information is always available when there is a temporary alteration to the passenger flow, such as during periods of construction work. The most appropriate temporary sign type should be determined based on the circumstances.

A single, temporary alteration of a physical space may have ripple effects along an entire passenger flow. It may be necessary to assess the entire length of multiple passenger flows when implementing temporary signage.

## 8.2.1 Temporary Sign Design

Temporary signage should look as close to the permanent system as possible. This maintains users' trust in the wayfinding system, which is especially important during temporary disruptions.

Temporary signs should adhere to all graphic design, compositional, and programming & placement guidelines in order to maximize consistency with the permanent system. However, temporary signs may use alternative material and/or fabrication techniques, for example temporary signs are not expected to be internally illuminated. This helps minimize the time and cost needed to produce and implement them. Temporary signage must be removed as soon permanent solutions are implemented.

Options for temporary signs are:

- Overheads
- Wall vinyls
- Door vinyls

# 9 Governance

- 9.1 Roles & Responsibilities
- 9.2 Management
- 9.3 Maintenance

# 9.1 Roles & Responsibilities

This manual has been written to facilitate a clear understanding of Port Authority wayfinding standards. All wayfinding signage and elements must comply with the standards.

Questions? Contact the Port Authority Program Manager of Wayfinding and Connections Solutions (Wayfinding Program Manager) regarding development, implementation, and maintenance of the wayfinding system.

Tenants are ultimately responsible for compliance with these standards as well as all Port Authority requirements, including but not limited to those outlined in the RPW, lease agreements, and Port Authority manuals.

## 9.1.1 Port Authority

The Port Authority Customer Experience team is responsible for overseeing and managing the wayfinding program across all Port Authority Aviation facilities. They are the first point of contact for wayfinding implementation questions. Operators should consult with the Wayfinding Program Manager for any forthcoming changes that may affect flows or communication of information to visitors at their respective facilities.

The Customer Experience team oversees the entirety of the wayfinding system by approving content, messaging, and execution in accordance with this manual. The Port Authority Wayfinding Program Manager also has the purview to remove unauthorized signs, including advertising or other visual items that conflict with the spatial zoning guidelines.

This team is also responsible for updating the manual and its implementation in order to respond to new situations.

Additional Port Authority departments are also involved in wayfinding implementation and maintenance. For example, the Advertising, Engineering, and Planning departments should all be familiar with and adhere to this manual.

## 9.1.2 Operators

Terminal operators are responsible for ensuring the wayfinding system is properly implemented and maintained. An individual dedicated to wayfinding should be appointed at each facility. They will maintain a sign plan for the facility, prepare sign applications, act as point person for all maintenance issues, and liaise with the Port Authority team as necessary.

## 9.2 Management

The Wayfinding Program Manager and Customer Experience team are also responsible for enforcement of wayfinding standards. They are supported by other Port Authority departments, such as Planning and Properties, to help support adherence.

PA Role	Mechanism	PA Party
Consult	Inquiries from operators	Wayfinding Program Manager; Customer Experience
Review Applications	MWA; TCAP	Wayfinding Program Manager; Tenant Liaison Office; Planning Department
Review in Situ	Walkthroughs; Quarterly facility inspections	Customer Experience; Facilities/Maintenance
Communicate	Written notification of non-compliance	Properties
Correction	Replacement of non-compliant element	Facilities/Maintenance

## 9.3 Maintenance

As with any system, maintenance is critical for ongoing functionality and success. Operators should conduct regular reviews of lighting, sightlines, and structural integrity of wayfinding elements to document and address maintenance issues.

Operators should establish and document processes for requesting maintenance. This may include: new signs, alteration or removal of existing signs, cleaning, and removal of other elements that impede flows or wayfinding.

Communicate the maintenance request process to facility and airline employees in the event of a maintenance need or wayfinding concern. Streamlining information and decluttering is critical to maintaining a successful wayfinding system.

If the maintenance request includes a new sign or alteration, consult with the Port Authority Wayfinding Program Manager and follow the sign application process.

### 9.3.1 Maintenance Process

A sign plan is a fundamental resource that allows sign managers to assess, implement, and maintain a successful wayfinding system.

After developing an initial sign plan through the Programming process, a facility's sign manager should refer to it as needs change. It is the tool to assess if signs must be added, replaced, or removed.

To assess the wayfinding system for maintenance :

1. Audit the inventory of existing signs.
2. Analyze sign requirements, i.e. sign code, sign type, content, location (which may include drawings), measurements, notes (including power requirements), and a photo (optional).
3. Evaluate the inventory in the environment:
  - Are any signs missing?
  - Are signs in good condition?
  - Are signs in compliance with standards?
  - Are any signs no longer necessary/appropriate?
  - Are signs in the proper place?
  - Are signs accurate in messaging?
4. Determine if new signs are required and/or if signs need to be removed, repaired, or replaced.
5. For any additional signs, follow the sign application process.

# 10 Resources

The wayfinding guidelines in this manual do not supersede any applicable policies or requirements set forth by the Port Authority, the States of New York and New Jersey, or the City of New York.

A number of resources to ease compliance with applicable policies and requirements are included below. However, it is ultimately incumbent upon the operators and designers to be aware of the latest applicable requirements for each project.

## 10.0.1 ADA Compliance

The Americans with Disabilities Act (ADA) Standards for Accessible Design were adhered to in developing the room plaque design. Guidelines for such items were followed, including size, typeface proportioning, braille, and spacing.

ADA Standards must be adhered to. The latest version can be found [here](#).

Specific sections that should be referenced include, but are not limited to:

Section 216: Signs

[Section 703: Signs](#)

## **10.0.2 Port Authority Policies & Procedures**

The guidelines set forth in this manual should be implemented in accordance with existing Port Authority policies and procedures including, but not limited to:

Tenant Construction and Alteration Process Manual

Airport Planning Standards

Airport CX Performance and Standards Manual

Airport Roadway Sign Design Manual

### **10.0.3 Department of Homeland Security Compliance**

Reference the Department of Homeland Security’s intellectual property policy when using any of their intellectual property including, but not limited to: logos, wordmarks, and seals for the Transportation Security Administration (TSA), U.S. Customs and Border Protection (CBP), Global Entry, and TSA Pre✓.