PORT OF OAKLAND
OAKLAND INTERNATIONAL AIRPORT

SIGN DESIGN STANDARDS

OAKLAND INTERNATIONAL AIRPORT

PORT OF OAKLAND

January 28, 2004
Version 1.1

REVISION HISTORY

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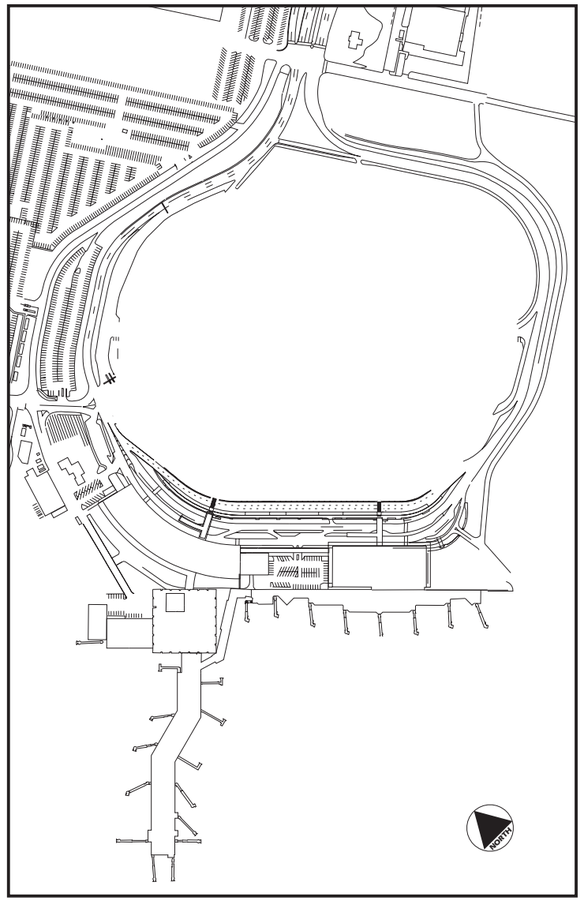

This manual establishes sign design standards for the Oakland International Airport. Any deviations from this manual must be approved in writing by Port of Oakland. Requests can be sent to:

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This manual will be updated as necessary. Please contact the person above for the most current version prior to starting any signage design.

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SECTION A

Executive Summary

OVERVIEW

Designing an information system for the Oakland International Airport could not be done without considering the complexity of the existing Airport facility and the changes in the facility's physical layout and operations in the future. The Port of Oakland has considered all elements that have contributed to the present state of the facility. By understanding the architecture, learning the types of passengers who use the architecture, and how they use it, the Port has determined why certain aspects of the existing information system are a success or failure. A general understanding of spatial organization, traffic patterns, information offered, and information not available to the terminal passenger is essential for an effective sign system.

The primary purpose of an Airport sign system is to move the traveling public through a myriad of roadways and corridors using a concise and comprehensible system of directional, information, regulatory, and identification messages.

Consistent use of standard terminology within the Oakland International Airport system will simplify the process of making the transition from the ground mode to the air mode (and vice versa) for the traveling public.

Understanding the needs of the traveling public and how it will react to a system of graphic displays is as much a study of human behavior as it is a study of graphic design. In order to obtain the desired results from a sign system, a logical method of thinking on the part of Airport management, graphic consultants and design engineers has been employed.

It is important for this sign system to adhere to a basic guideline of copy styles and sizes, consistent terminology, recognizable and universally acceptable symbols, and uniform colors for standard functions. Message content must be in layman's language, understandable by the unsophisticated, as well as the sophisticated traveler.

Information gathered through observation, interviewing, and using the facility provided a sketch of the volume of information required for an infrequent or first-time user to successfully navigate through the terminal to a destination.

The Port has gathered, reviewed, and integrated this information into our analysis process. The Sign Design Standard demonstrates our understanding of the data and provides information pertinent to the sign system.

This manual will address the following issues listed in order of importance:

Flexibility – Must be able to deal with frequent change as well as possible future reconfiguration or expansion.

ADA Requirements – Must comply with standards of the Americans with Disabilities Act.

Visibility – Assure that all signs are in locations that are visible to every traveler. A clear separation between signage, art and advertising must be established.

Clarity – Must be understood by wide range of business and leisure travelers.

Maintenance – Evaluate in-house and outsource vendors for sign system maintenance.

Aesthetics – Should be coordinated with master planning activities and integrated with the architecture where possible.

SIGNING PHILOSOPHY

Signing must be designed with the objective of developing a concise and informative series of nonverbal messages which will aid the majority of passengers. The basic criteria of an effective communications system includes thorough programming of all aspects of vehicular and pedestrian traffic flow, and the appropriate delivery of all pertinent information to the traveler, visitor, or employee. It is important for the following three categories of messages to be communicated through signing and graphics:

Directional
Directional signing is of greatest importance in an Airport terminal complex. All other signs are subordinate. Proper directional signing is necessary because the rapid movement of vehicles, people, and particularly the passenger is essential for maximum utilization of the Airport. At any transition point between air and ground transportation, success or failure of terminal operations and its signing is largely measured by the ease, speed, and comfort of access to and from the various destinations within the terminal. In addition to traditional signing considerations for the conventional passenger, directional signing is paramount to those persons arriving late for a flight, persons with disabilities, foreign visitors, non-English speaking passengers, and those passengers experiencing disorientation common after leaving the highway signage system.

Informational
Information signing is secondary and of considerably less importance than directional signing. These signs provide specific details about Airport services and functions such as restaurants, restrooms, telephones, snack bars, gift shops, newsstands, postal facilities, "You Are Here" maps, operational offices, police, and many others. The intent of these signs is to help individuals satisfy needs not directly related to aircraft boarding, bag claim functions, or exiting the Airport.

Regulatory, Advertising Identification and Arts Program
These signs fall into a tertiary level of message priority. Regulatory signs relate to local, state, and federal requirements and recommendations for providing passengers with travel advice warnings.* Advertising signs reflect promotional needs of the tenants and various off-Airport businesses, as well as establish a source of revenue for the Airport from advertising displays. Identification signs provide tenants with appropriate public exposure in leased spaces and other areas established by the Airport management. Public arts program may install signs, banners or other artifacts for arts purposes.

* This standard does not address the design of regulatory signs.

HIERARCHY

There is a need to establish a uniform hierarchy of messages and information throughout the Airport terminal complex. By using the standard terminology, one is able to categorize the messages into three levels: primary, secondary, and tertiary. The three levels of classification relate to the various functions occurring simultaneously in any given Airport facility.

Clear and concise information presented by either "primary" or "secondary" sign systems greatly improves the efficient passenger flow, both on the roadway and within the terminal. Secondary and tertiary signs must be coordinated with primary signs and interior design elements. They are often distinguished from primary messages by various graphic methods.

Care in developing this system for organizing information is critical to the success of any sign program. The method selected for displaying a hierarchy of information is a total separation of the type or classification of information from one sign panel to the next.

NOTE:
Based on the Airport's location, local services, intermodal operations and facilities, other specific terms may need to be incorporated into one of the three basic categories. While these terms may not be needed for the existing facility, they may be required in the long term planning process for future growth and expansion.

The following three lists categorize standard sign items into their primary, secondary, and tertiary classification within the terminal:

1. PRIMARY – *Directional and Identification*
   This information should be the most visible information on any given sign face.
   - All directional information
   - Terminals
   - Ticketing/Check-In
   - Concourses
   - Gate identifiers
   - Security checkpoints
   - Parking
   - Bag Claim
   - Ground Transport
   - Information centers

2. SECONDARY – *Auxiliary services and support functions*
   This information supplements or reinforces information already transmitted by the primary messages and signs.
   - Directories
   - Concessions
   - Types of ground transport
   - Parking
   - Rental cars/Corporate identity
   - Corporate identity (lounges, offices, and baggage services)
   - Restrooms
   - Telephones
   - Lockers
   - Police
   - First Aid

3. TERTIARY – *Third level information*
   - Room numbers
   - Tenant names
   - Regulatory
   - Non-public (airline spaces)
   - Equipment labeling
   - Advertising
   - Employee information
   - Safety and hazard related signs

It is important to understand that the same message may fall under a different category, depending upon where it is used. For example, a passenger on the Airport roadway approaching the ticketing/check-in area would find the term PARKING as a primary message. However, if that individual is in the bag claim area, the same term PARKING could be secondary.

In general terms, emphasis should be placed on the reduction of signs and sign content where possible. In addition, sign systems should progress from general (GROUND TRANSPORT) to more specific terminology (TAXI-BUS-LIMO) as a passenger traverses the terminal.

The established major areas of concern at Oakland International Airport are the approach roadway, ticketing/check-in, lobby, public corridors, security, concourses, gate areas, bag claim, parking lots, parking garage, ground transport and the exiting roadway.

The approach roadway overhead signs that show direction to areas used principally by the public contain primary messages; those that show direction to areas generally considered non-public are secondary messages. Roadside signing, including regulatory, is considered secondary. When airline names are on a system of roadway signs, the individual names will be presented in a consistent manner relative to their actual terminal location, or in alphabetical order. In any case, the presentation must be consistent.

When the passenger is using the exiting roadway sign system, the primary messages are: Airport exit, return to terminal, cities, towns, highways, and freeways. Other secondary messages include: rental car return, air cargo, and other non-public buildings and remote areas/facilities.

By implementing these basic thoughts in a professional and functional design, a uniform standard of terminal message and information hierarchy can be established to assist the traveling public. The need for visual continuity among messages and information is critical to the smooth flow and processing of passengers. This helps to eliminate any elements that may interrupt the thought process or confuse the passenger.

LANGUAGE

An English-only sign system is preferred within the Oakland International Airport facility. Instructional handouts can be distributed where necessary. International symbols for all Airport services will be used to aid non-English speaking travelers.

Should specific areas be determined to require bilingual information, the use of dynamic signs will be considered. This technology can be used to represent any language. Typically these dynamic signs are used within an F.I.S. facility and at information booths to supplement English statements.

COLORS

The Port of Oakland requires the use of a blue background color with white lettering for both interior and exterior signing. Color coding has been reserved for use only in the future parking garage.

EXTERIOR
The standard Oakland International Airport roadway sign face background color, navy blue, allows drivers to easily separate highway and interstate destinations from specific and clearly defined destinations in the Airport complex. The standard green background color used for highway sign systems is to be used for off Airport destinations on the Airport roadway signing system. This application of the "highway green" directional signs on the Airport roadway sign system advises departing motorists of directions to surrounding cities, towns, or frequently used highways. The Port has extended Airport messages and color schemes as much as possible to the adjacent external highway system.

The selected Airport roadway color background, navy blue, starts the orientation of the drivers to specific approach lanes for each Airport function as far in advance as possible. Close coordination with the appropriate City of Oakland and Caltrans departments is important, because this crosses jurisdictional lines.

Color selection takes into consideration the regional location of the Airport, weather, temperatures and other environmental concerns. Exterior color selection also provides excellent contrast as required by ADA.

CONTENT

1) Use terminology established in this manual consistently throughout the facility.

2) Follow text height standards established in this manual to insure easy identification of destinations, allowing for the fewest quantity of signs.

3) A symbol and its accompanying message should always be perceived by users as belonging together, not as two separate elements.

4) Overhead directional and identification signs are to be illuminated where required by ADA.

5) Temporary signs are sometimes required to meet immediate needs by filling in gaps in the current wayfinding system. These signs must match the graphic standards established in this manual regardless of duration of implementation.

6) At the gates, deplaning passengers will be directed to:
   - Gates
   - Bag Claim
   - Terminal (other)
   - Ground Transport
   - Restrooms

7) In the terminal, enplaning passengers will be directed to:
   - Gates
   - Ticketing
   - Security Checkpoints
   - Ground Transport
   - Restrooms
   - Exit
   - Parking

8) At the curbside, passengers will be directed to:
   - Ticketing
   - Bag Claim
   - Terminal
   - Specific Ground Transport services
   - Parking

SECTION B

Wayfinding Philosophy

ROADWAY

The standards for roadway signs are based on the use of a consistent set of graphic components generally taken from Caltrans and US DOT highway sign design standards. Sign types, sign sizes and sign colors have been designed specifically for use on Airport property and have been designed to begin the educational process required for a passenger or visitor to successfully use the wayfinding system. Sign panel sizes have been developed to allow for high visibility and readability when used with the appropriate copy sizes.

The use of Airport standards terminology on the roadway signs is required. Use of airline names, while allowed, will be minimized and used in a limited number of locations.

Modifications and improvements planned for Oakland International Airport will affect the existing roadway wayfinding system. These changes, including the relocation of the rental car (RAC) facility, changes in parking lot designations and locations will require numerous modifications to nearly every directional sign along the roadway.

The Airport Roadway Project will also change traffic circulation in and around Oakland International Airport.

The Airport recently installed 60 primary signs as part of the Terminal Expansion Program to provide direction to or information for:

- Terminals
- Parking
- Rental Car Pickup
- Rental Car Return
- Freeway (I-880)
- Advisory Radio 1700 AM

In addition, signs planned to accommodate the location change of the RAC and the Airport Roadway Project will provide direction to:

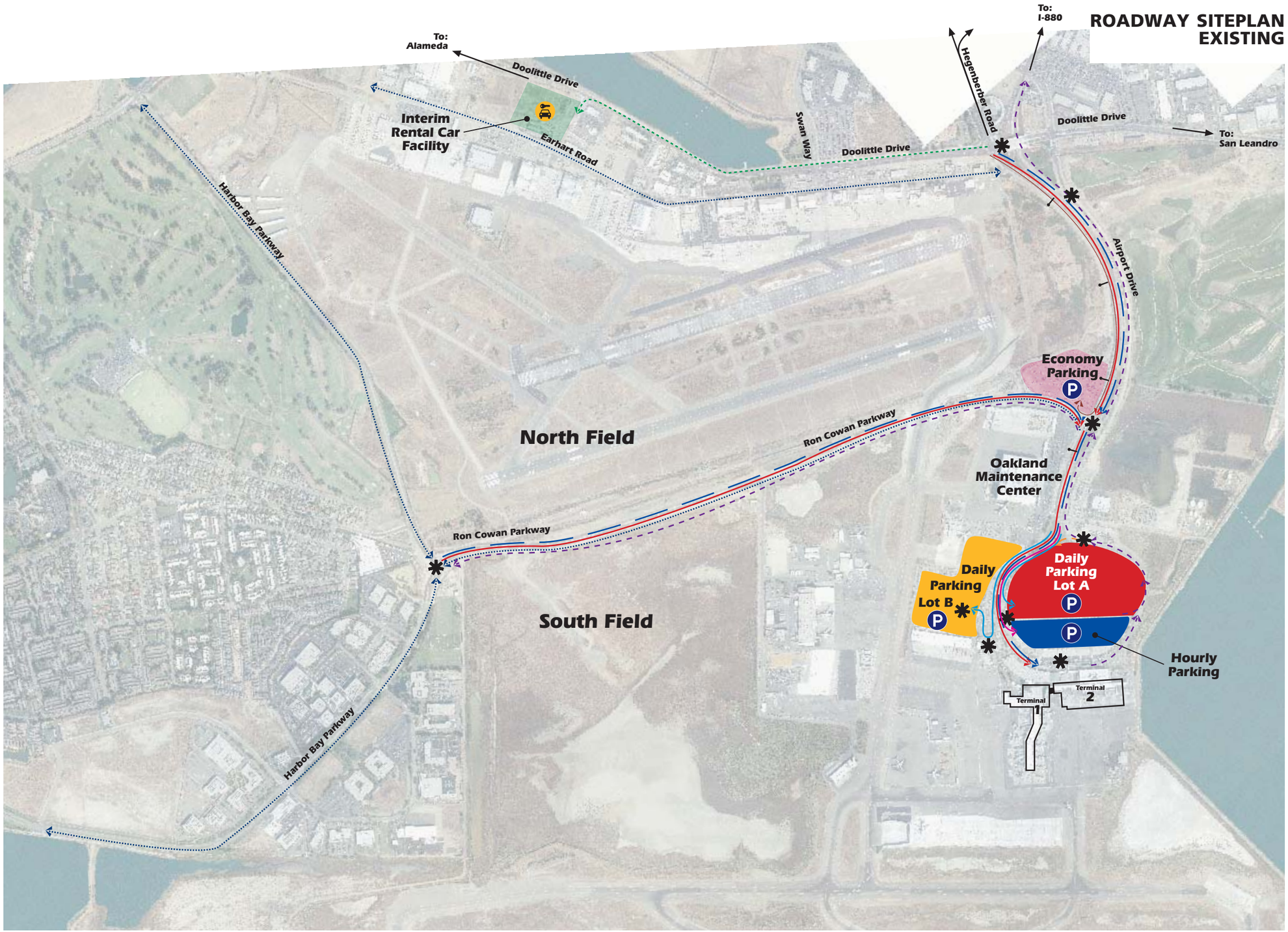
- Ron Cowan Parkway
- Air Cargo Road
- Hegenberger Road
- Economy Parking
- Hourly Parking
- Daily Parking Lot A
- Daily Parking Lot B
- North Field
- General Aviation Terminals (North Field)
- Harbor Bay
- San Leandro
- Alameda
- I-880
- Named Streets

Currently, the RAC Facility is located remotely along Earhart Road. Hourly, Daily and Economy surface parking are available.

Two daily parking lots are designated as Lots A & B, while terminals are designated as Terminals 1 and 2.

The area located north of Ron Cowan Parkway is referred to as North Field, while the area south is South Field.

ROADWAY SITEPLAN EXISTING



LEGEND

- Ticketing/Check-In
- Bag Claim
- Airport Exit
- Return to Terminal Re-Circulation
- Rental Car Return
- Hourly Parking
- Daily Parking
- Economy Parking
- Remote Facilities
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

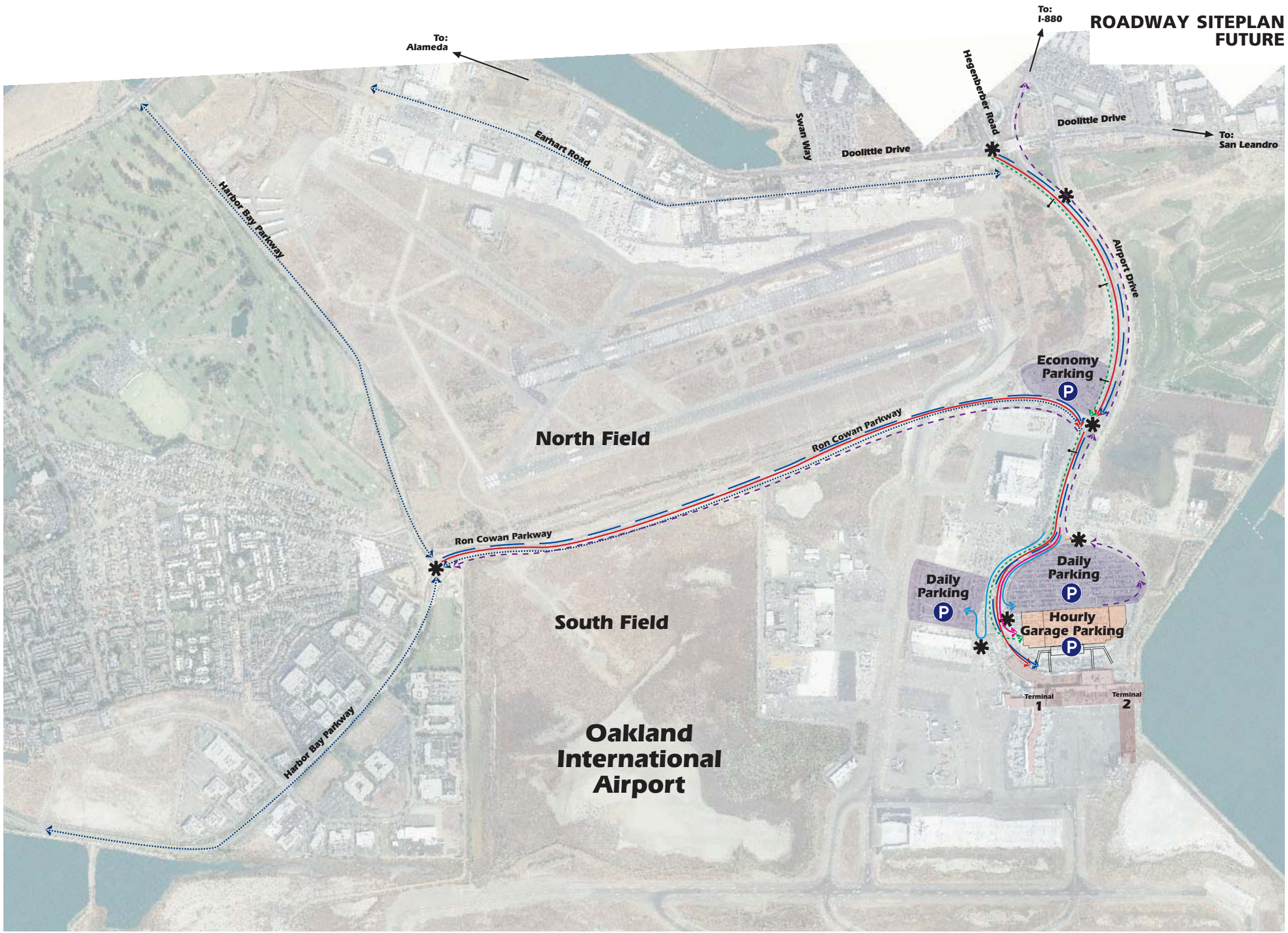
NORTH

Upon completion of the Parking Garage, the Rental Car Facility will move to the new terminal parking garage in front of existing Terminals 1 and 2. Daily and Economy surface parking are still available.

The terminal designations remain as they exist today (Terminals 1 and 2).

This exhibit is for example only showing typical decision points and will be refined as design is completed.

ROADWAY SITEPLAN FUTURE



LEGEND

- Ticketing/Check-In
- Bag Claim
- Airport Exit
- Return to Terminal Re-Circulation
- Rental Car Return
- Hourly Parking
- Daily Parking
- Economy Parking
- Remote Facilities
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

ENTRY ROADWAY EXISTING

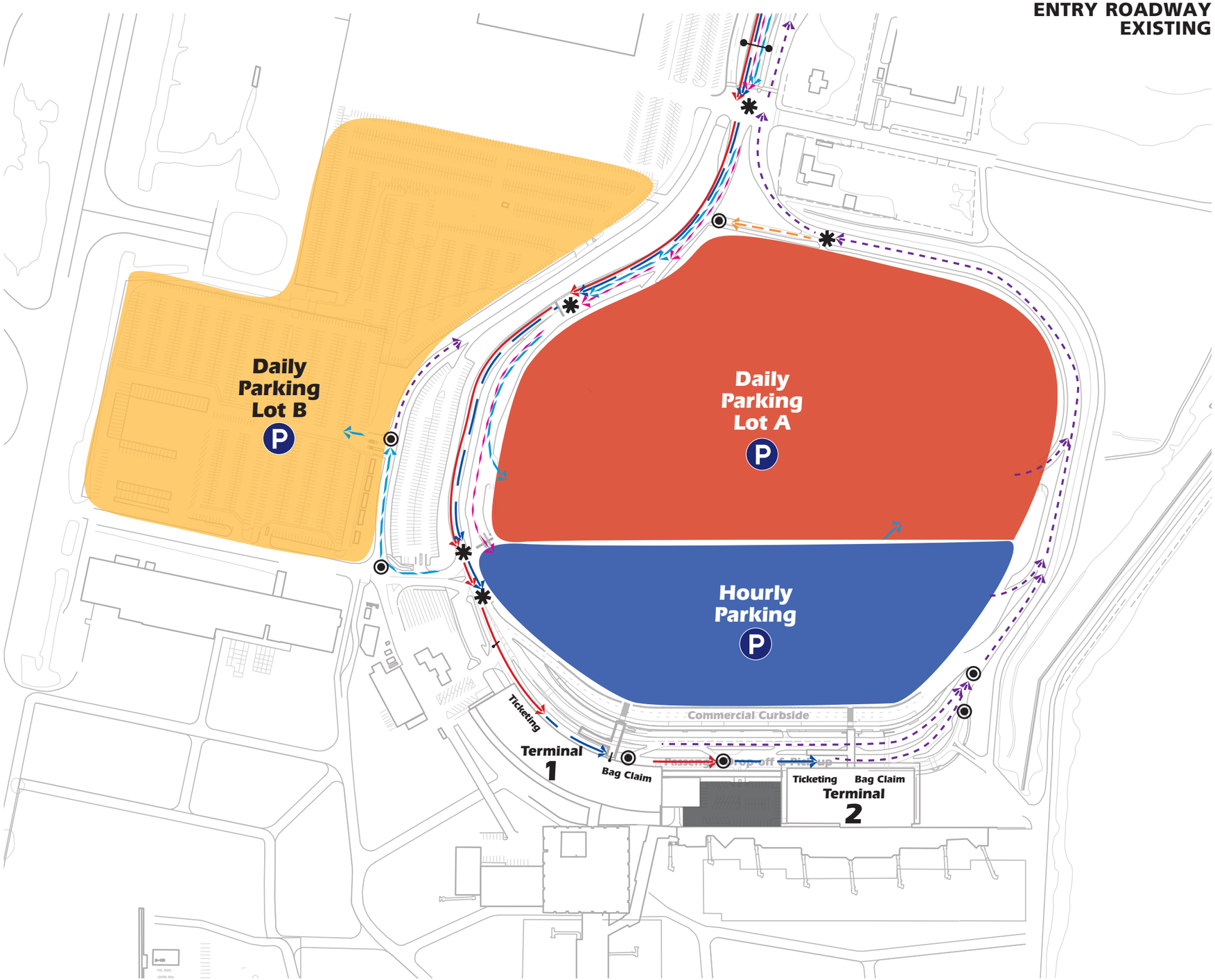
Currently, the Rental Car facility is located remotely along Earhart Road. Hourly, Daily and Economy surface parking are available.

The two daily parking lots are designated as Lots A & B, while terminals are designated as Terminals 1 and 2.

Parking is currently color coded:

- Economy - Bright Green
- Daily Parking Lot A - Cardinal Red
- Daily Parking Lot B - Imitation Gold
- Hourly - Intense Blue
- Valet - Black & White

The area located north of Ron Cowan Parkway is referred to as North Field, while the commerical airport area is South Field.



LEGEND

- Ticketing/Check-In
- Bag Claim
- Airport Exit
- Return to Terminal Re-Circulation
- Rental Car Return
- Hourly Parking
- Daily Parking
- Economy Parking
- Remote Facilities
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

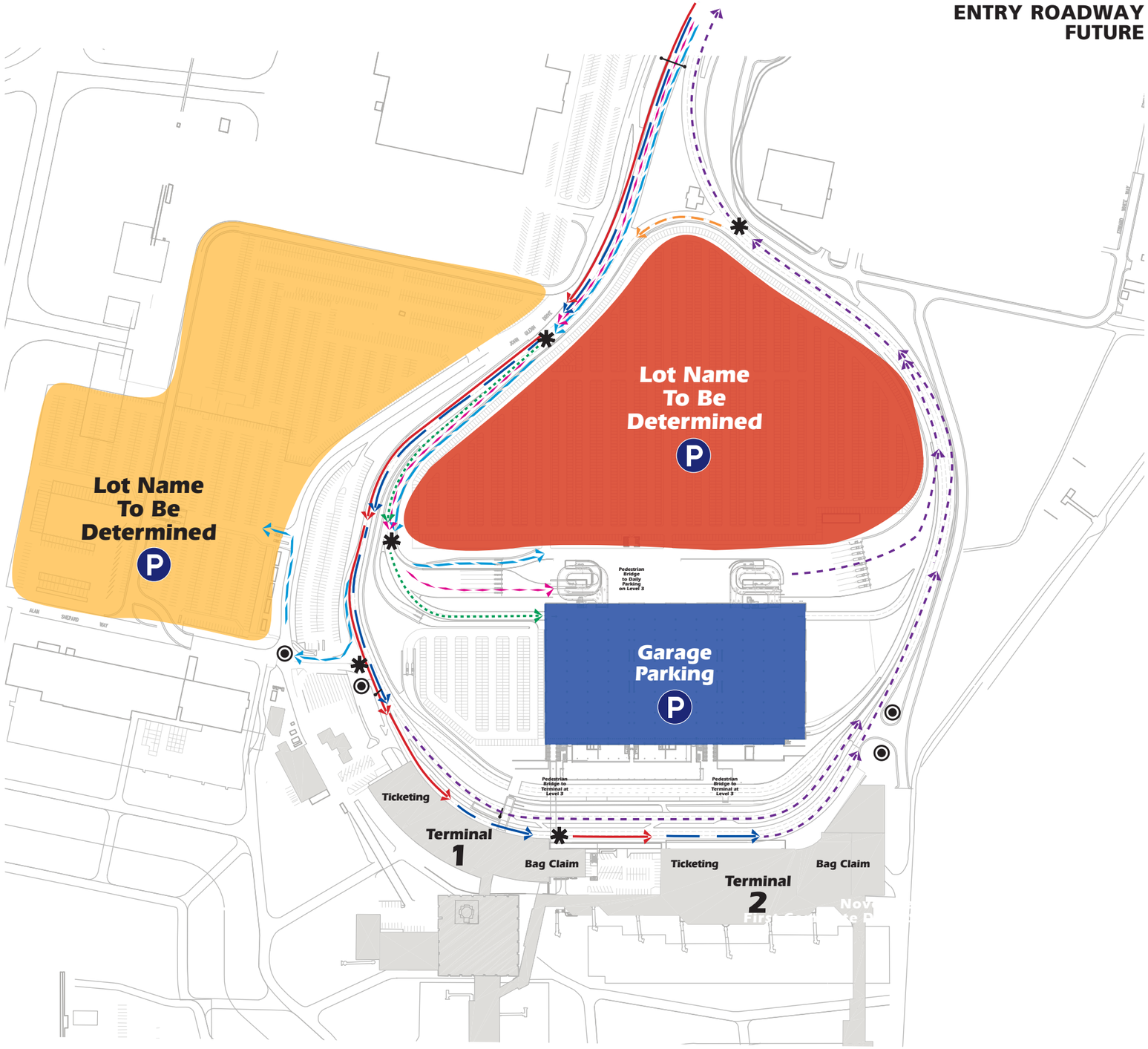
ENTRY ROADWAY FUTURE

Future condition moves the RAC facility to Levels 1 and 2 of the new parking garage. Daily and Economy surface parking are still available.

The new parking garage, offering over 5,000 spaces on 5 levels, will allow travelers easy access to daily lots behind via pedestrian bridges.

The terminal designations remain as they exist.

This exhibit is for example only showing typical decision points and will change as design is completed.



LEGEND

- Ticketing/Check-In
- Bag Claim
- Airport Exit
- Return to Terminal Re-Circulation
- Rental Car Return
- Hourly Garage Parking
- Daily Parking
- Economy Parking
- Remote Facilities
- ✱ Primary Decision Point
- ◉ Secondary Decision Point
- △ Tertiary Decision Point

NORTH

PARKING

Currently, parking at Oakland International Airport consists of Hourly, Daily, Economy and Valet parking.

Parking lots are part of the sequence of alphanumeric location identifiers used at Oakland International Airport. The existing daily surface lots are designated as Lot A and Lot B with parking rows described by numbers. The lots are further described by a color as a tertiary means for the passenger to remember the location of a vehicle.

The new parking garage, offering approximately 5,000 spaces within 5 levels, will allow travelers easy access to the daily lot behind via pedestrian bridges.

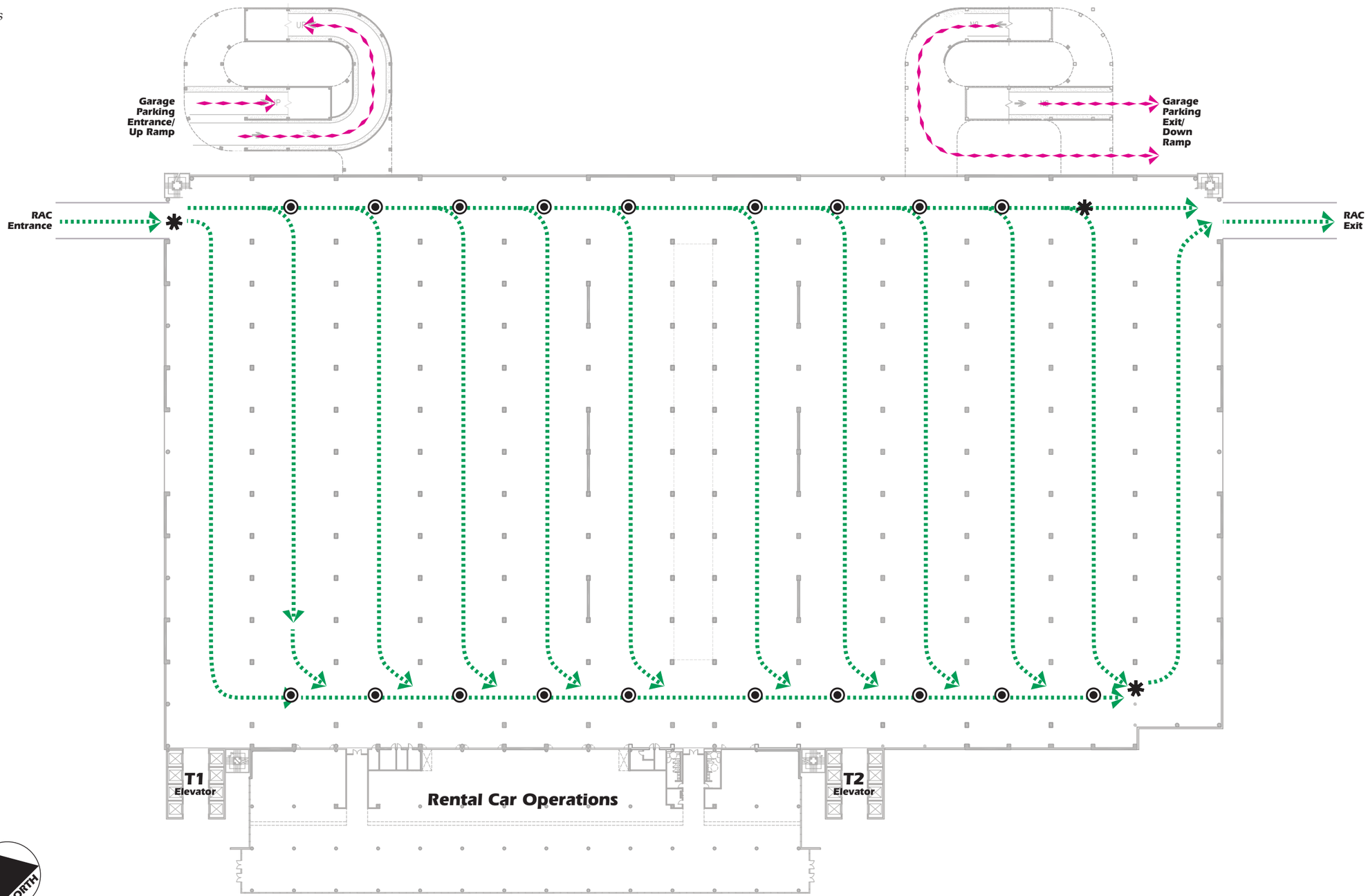
The standard alphanumeric sequence will be continued in the parking garage by using G as the primary identifier for the structure, through level numbers (G2) and row letters A-K (G2B). Each level in the structure will be described by a color coding system to further assist in renumbering the location of a vehicle (G2B-Orange).

The sign family for the parking facilities has been designed as a part of the overall wayfinding system and as such uses standard fonts, symbols and type sizes regardless of sign face color. It is critical that the sign standards started on the roadway system be continued and reinforced in the parking lots.

The family of signs for surface parking lots consists of two (2) sub-families that provides direction to the vehicle driver and the pedestrian entering or exiting the terminal. Vehicular directional signs will have the standard blue background color. Pedestrian directional and informational signs will be color coded by floor to reinforce the location of the vehicle.

PARKING GARAGE
RENTAL CAR (RAC) LEVELS

Signing for the rental car facility will be defined after design for the facility is complete.



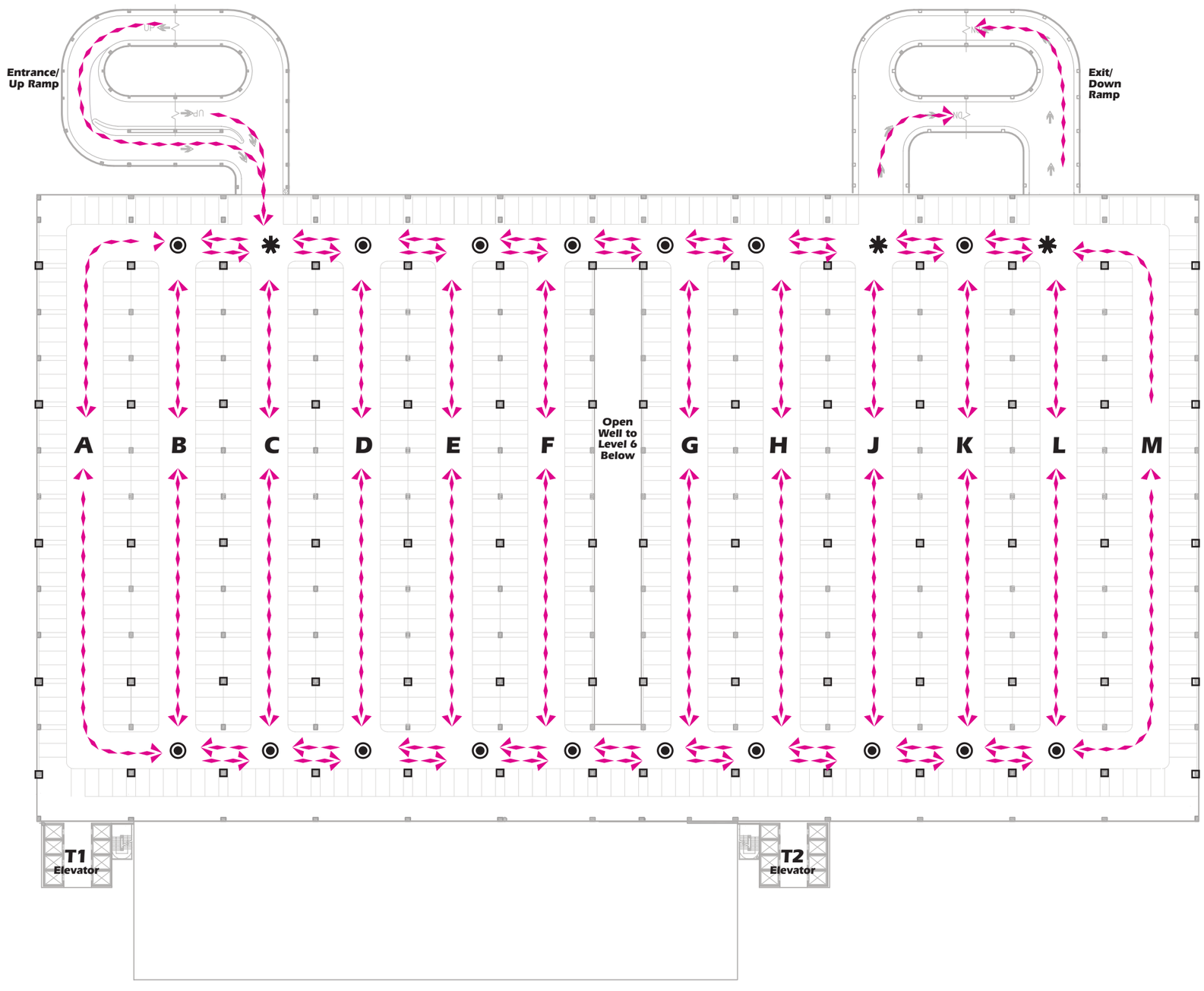
LEGEND

- Rental Car Return
- Garage Parking
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

PARKING GARAGE

Signing for the parking garage will be defined after design for the facility is complete.



LEGEND

- Garage Parking
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

CURBSIDE

With travelers arriving and leaving by a variety of public and private transportation modes, the curbside can be a busy and chaotic operation.

The passenger needs to be drawn to the proper location on the public inner curb. Information displayed overhead should be provided strategically and repeated to encourage drop-offs along the entire length of the curb. This will allow vehicles picking up passengers at the bag claim curbside a quicker, less frustrating trip past the enplaning traffic.

Overhead directional signs have been developed to move traffic through the process and are part of the roadway sign family. Curbside identity signs have been developed to maximize the identification of each terminal and each airline along the curbside. Airline names will be displayed at the door closest to the airlines ticketing counter.

Bag claim and ticketing identifiers have been developed to strengthen the two-function nature of the terminals' single level.

Sign types have been developed to assist the deplaning passenger in finding the proper ground transport destination. The listings for shuttle and taxi/limo services expands as the passengers move away from the terminal, providing less cluttered sign faces and specific information only where it is needed.

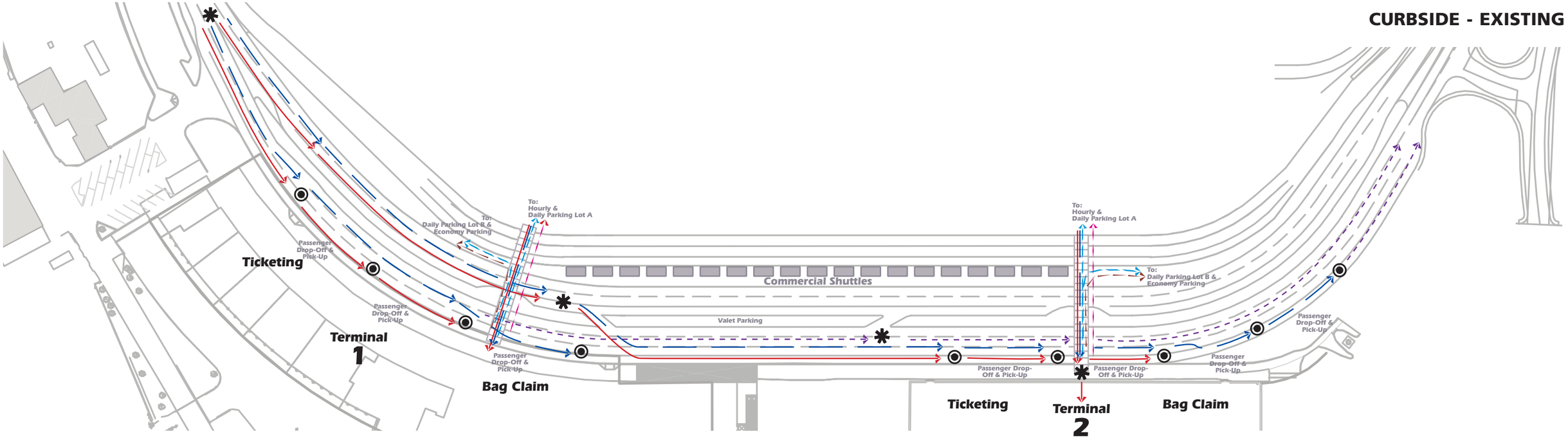
The commercial curbside accommodates the following:

- Taxis
- Hotel Shuttles
- Rental Car Shuttles
- Scheduled Shuttles
- Valet Parking
- Door-to-Door Shuttles
- On-Airport Parking Shuttle
- Off-Airport Parking Shuttle
- Charter Buses

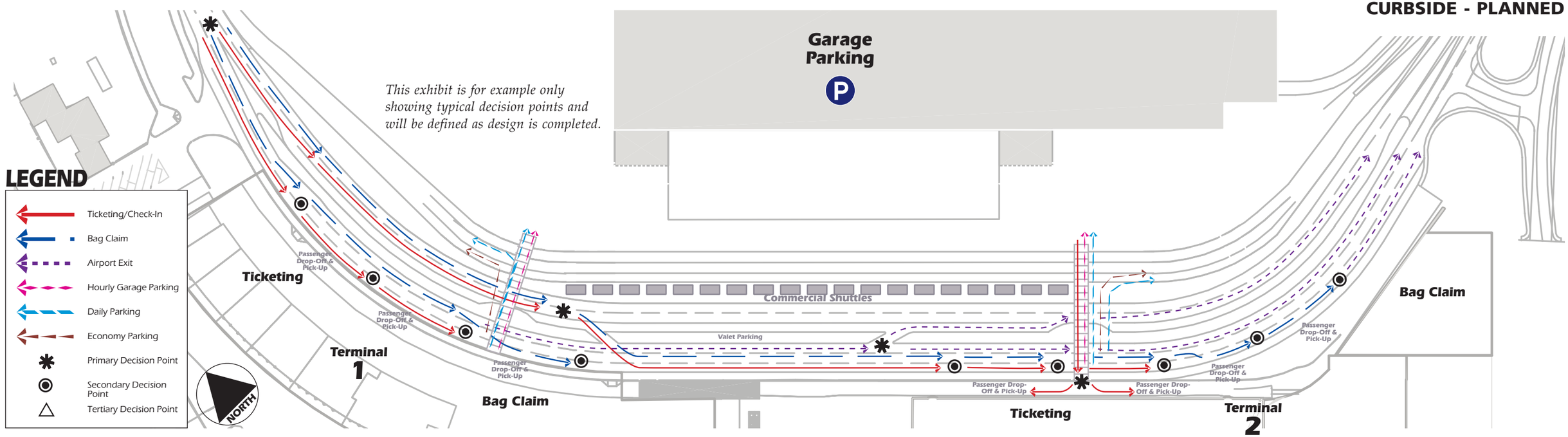
AirBART - AirBART (scheduled buses) connects passengers from OAK to the Coliseum BART Station where they can transfer to BART and the regional rail system.

AC Transit - Alameda Contra Costa Transit Route 58 connects passengers from OAK to Oakland, Amtrak and Alameda/Oakland Ferry

CURBSIDE - EXISTING



CURBSIDE - PLANNED



TERMINAL

The planned changes in the terminal facilities provide the opportunity to maximize the effectiveness of the Airport's interior wayfinding system. The standards developed in this manual provide the graphic elements and wayfinding components that will allow the designer to produce a visually strong, accessible, code compliant set of signs to assist in the navigation of the terminal.

These standards prescribe the size of signs, the size and format for arrows, symbols, colors and standard messages to be used on all signs. The designer will be required to develop a wayfinding program within the standards and within the constraints of the architectural context that will drive sign box configuration and detailing.

Gate numbers and primary messages are already determined. Secondary and tertiary messages may require revisions. Existing messages should be kept as long as they are appropriate and new messages should be kept to the minimum number possible.

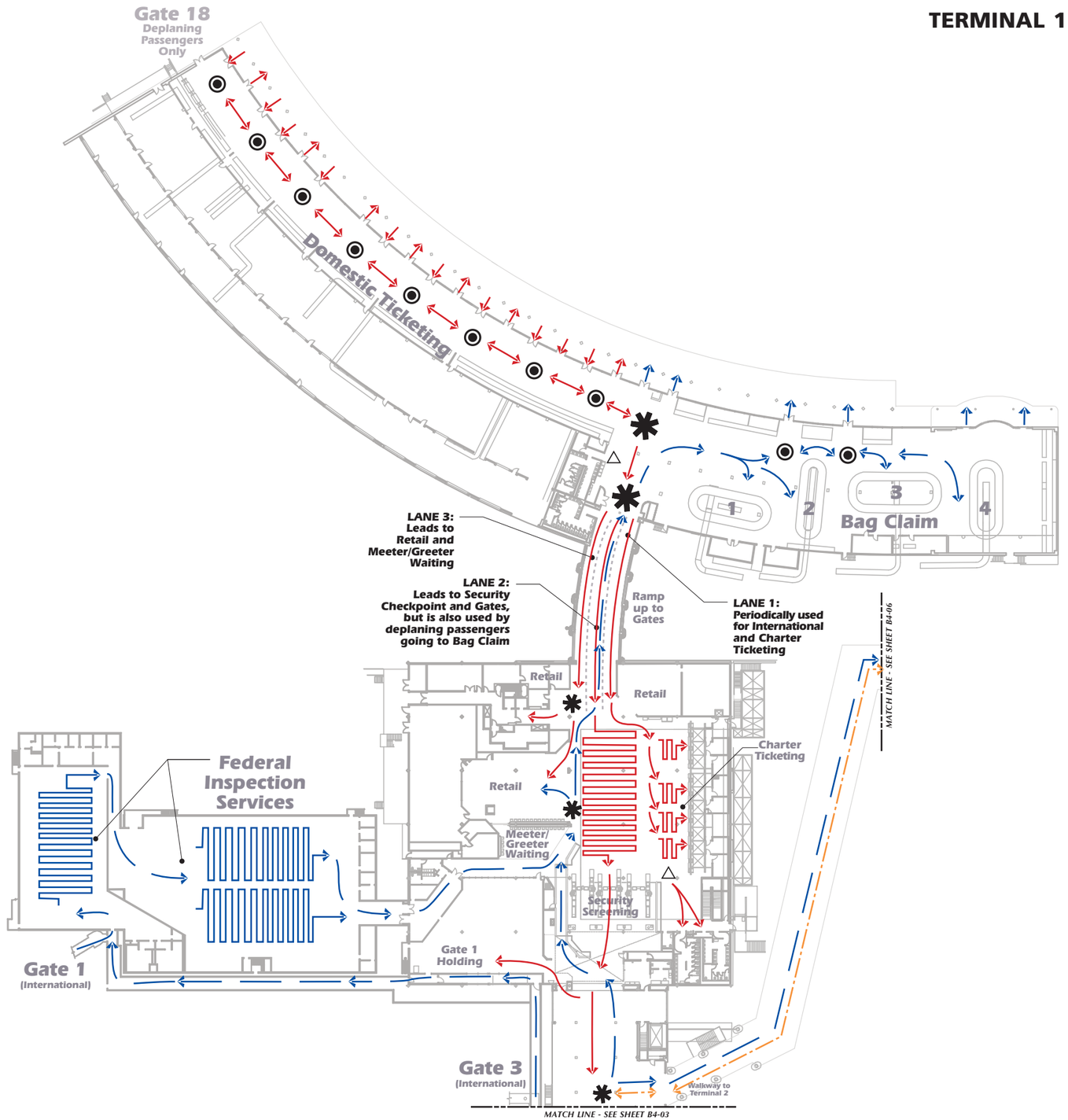
A family of sign types has been developed and made flexible enough to allow incorporation of the standard signs into future changes to the terminals.

The wayfinding sign system has been developed to be the primary visual information system in the terminal facility. The Port recognizes the presence and the necessity of various other visual information systems. Kept in proper relationship to each other, all of the visual information systems will allow the wayfinding system to dominate the visual environment and at the same time afford access to advertising, concession identity and information signs, public art displays as well as electronic information systems, such as Flight Information Displays and Bag Claim Information displays.

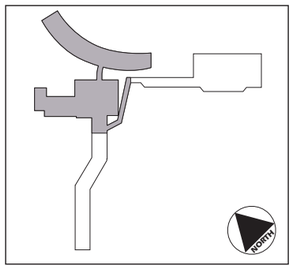
When programming locations for any sign or visual display, priority will be given to the wayfinding component, which will be placed directly in the flow of passenger traffic. Visual access to the wayfinding signs will, if necessary, displace or relocate any other display that restricts sightlines. It is critical that the designer research and coordinate the relative position of all visual elements while determining the proper locations of directional and identity signs.

Typically zones for each type of visual information are pre-determined. This allows concession signs to work with wayfinding signs and public art to have a setting befitting its importance without taking away from the wayfinding path. The zones are highly dependent upon the architectural context and require the coordination of architecture, advertising, concession management, concession tenants and others.

TERMINAL 1 - LEVEL 1
EXISTING



KEY PLAN

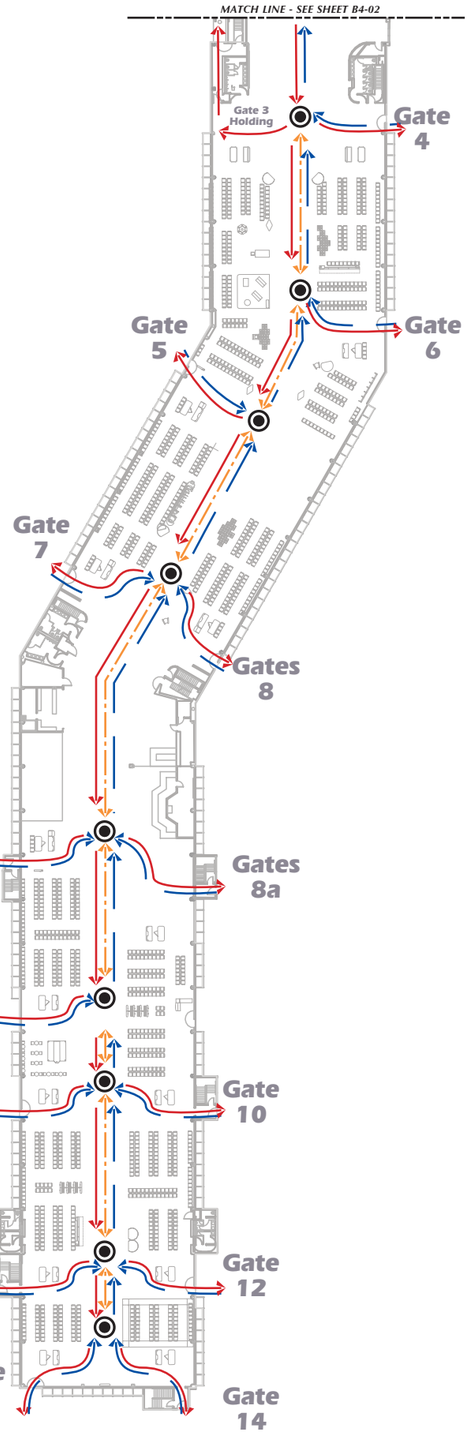


LEGEND

- Ticketing/Check-In Enplaning (Departures
- Bag Claim Deplaning (Arrivals)
- Connecting Passengers
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

TERMINAL 1 - LEVEL 2
EXISTING



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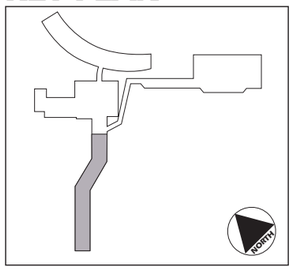
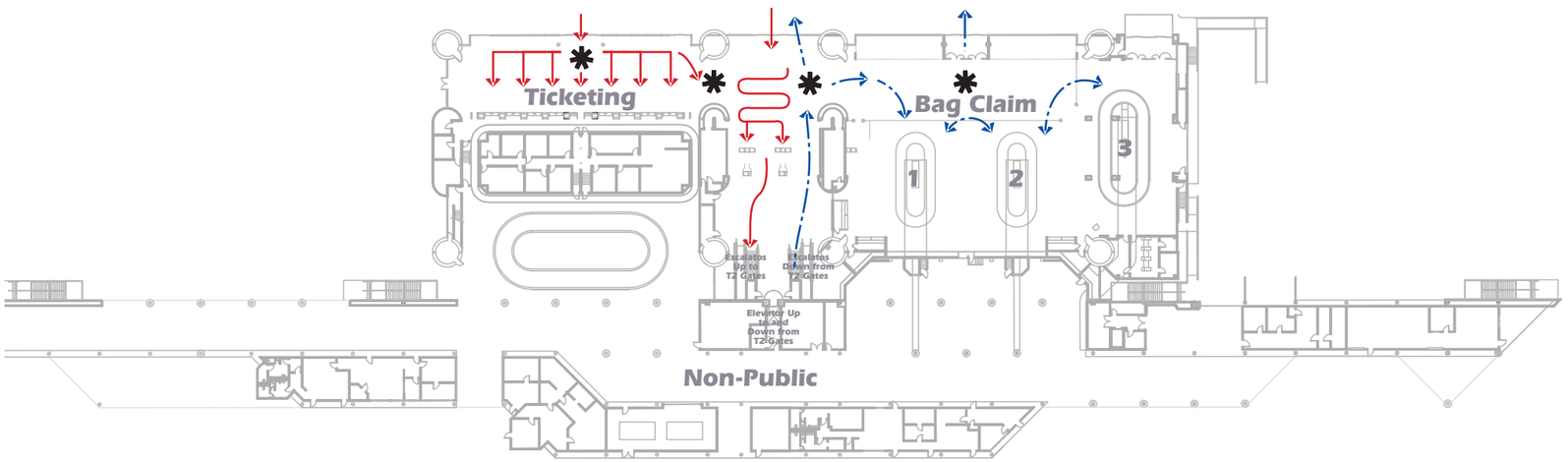


LEGEND

- Ticketing/Check-In Enplaning (Departures
- Bag Claim Deplaning (Arrivals)
- Connecting Passengers
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

TERMINAL 2 - LEVEL 1
EXISTING



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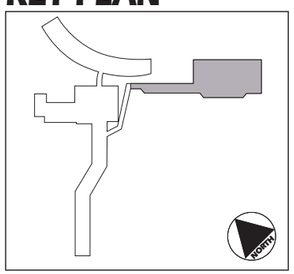
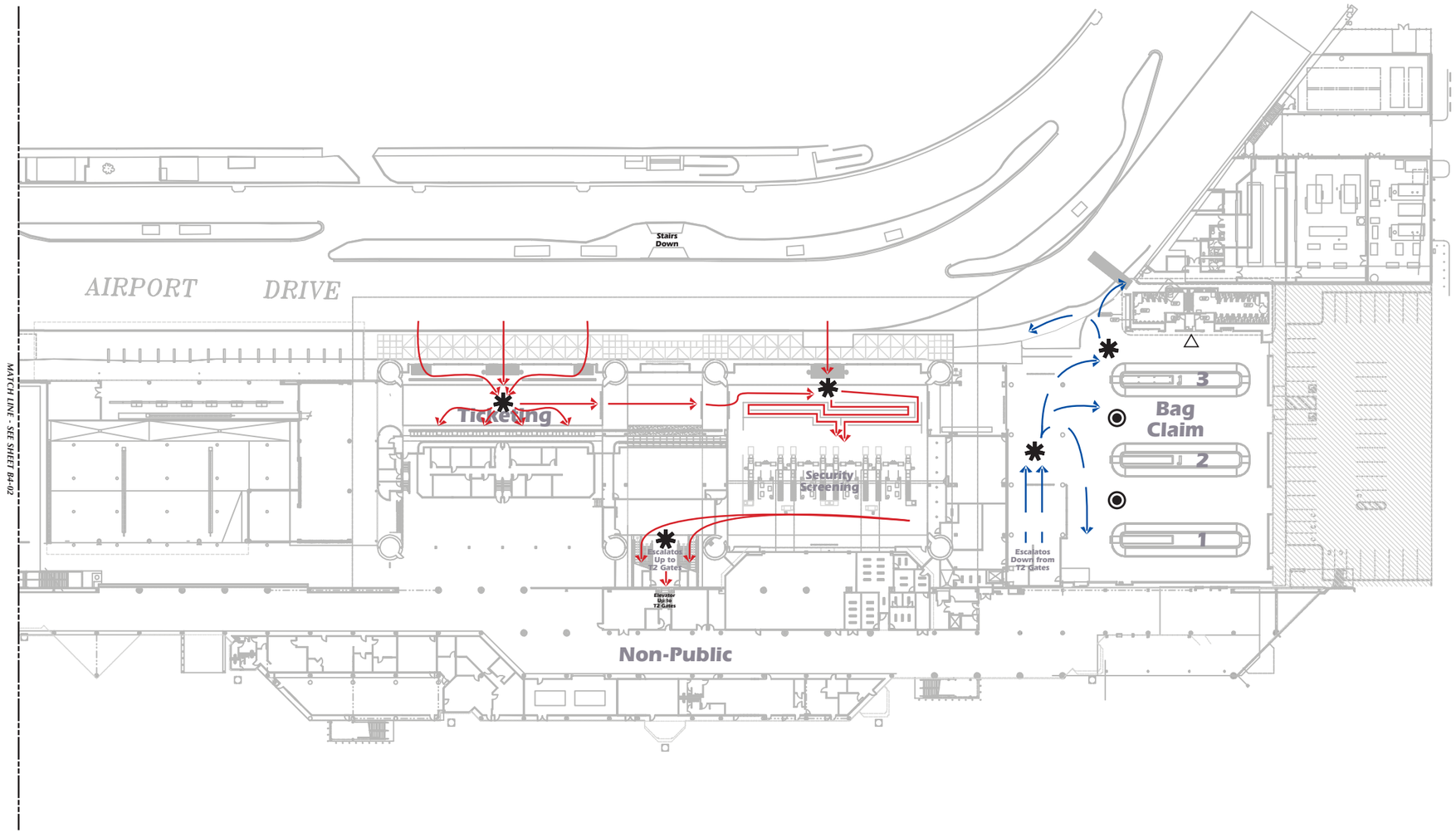


LEGEND

- Ticketing/Check-In Enplaning (Departures
- Bag Claim Deplaning (Arrivals)
- Connecting Passengers
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

TERMINAL 2 - LEVEL 1
RENOVATED



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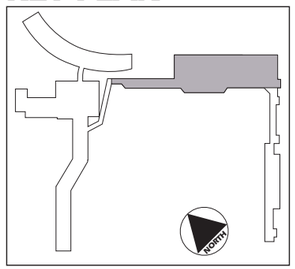


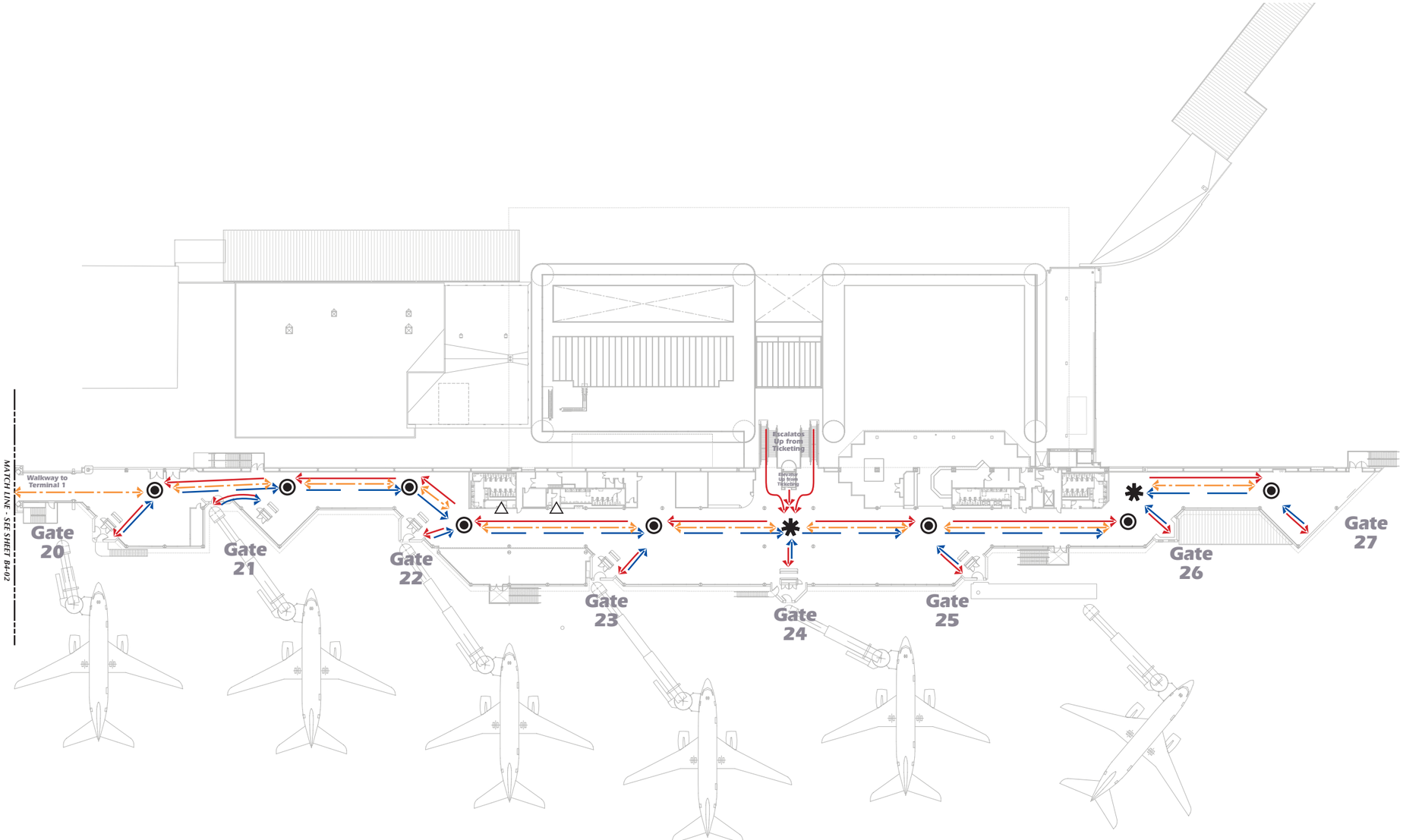
LEGEND

- Ticketing/Check-In Enplaning (Departures
- Bag Claim Deplaning (Arrivals)
- Connecting Passengers
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

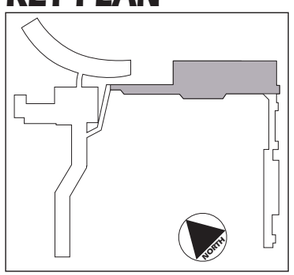
NORTH

This exhibit is for example only showing typical decision points and will be refined as design is completed.

TERMINAL 2 - LEVEL 2
EXISTING



KEY PLAN

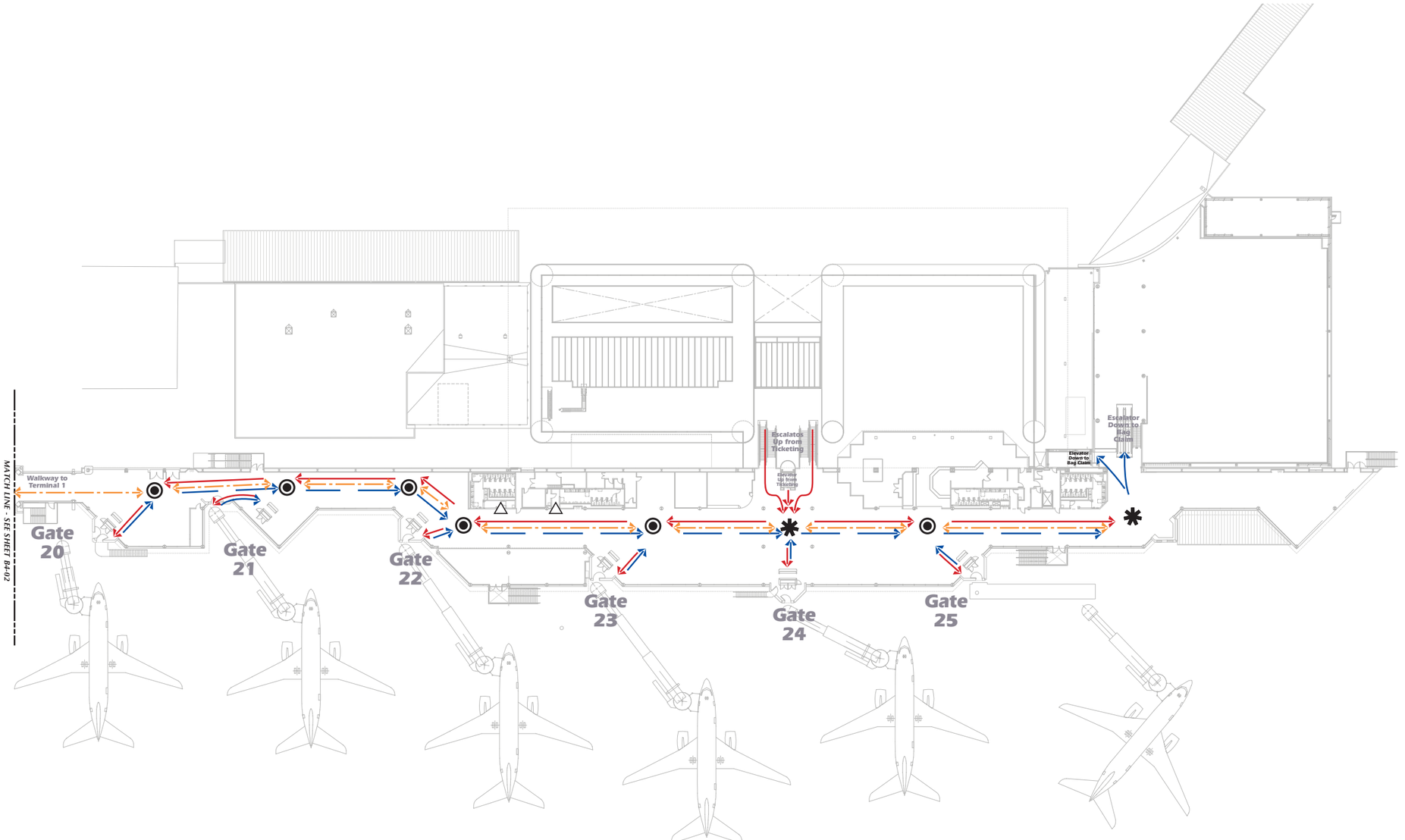


LEGEND

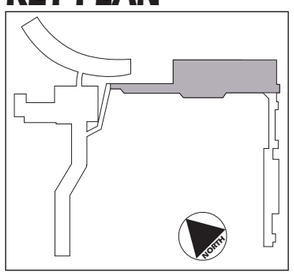
- Ticketing/Check-In Enplaning (Departures
- Bag Claim Deplaning (Arrivals)
- Connecting Passengers
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

TERMINAL 2 - LEVEL 2
RENOVATED



KEY PLAN



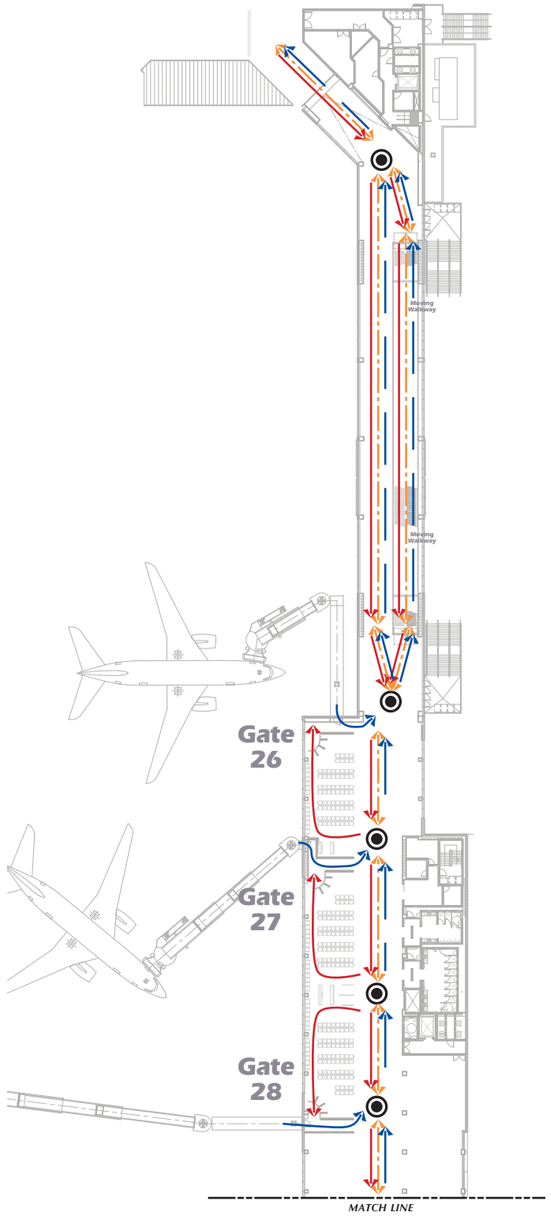
LEGEND

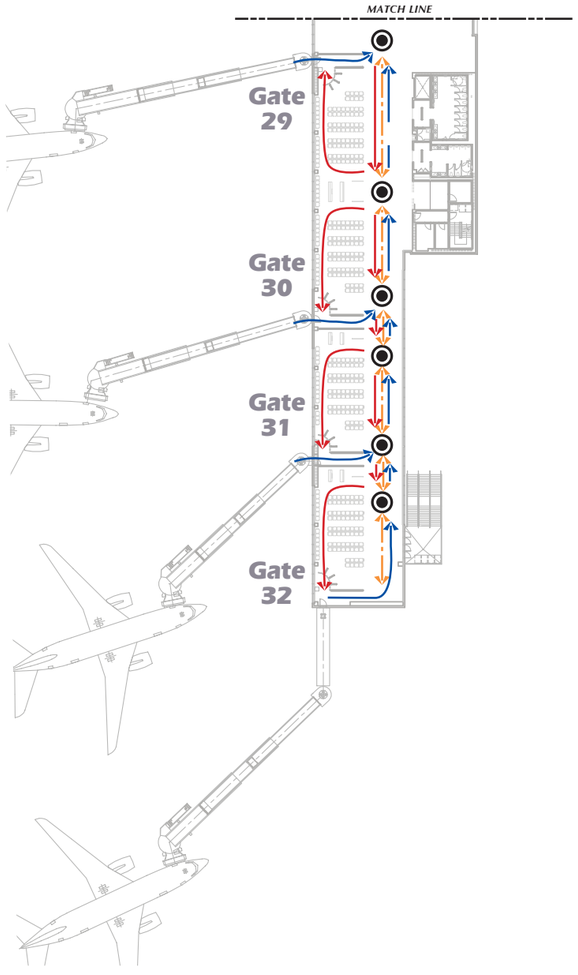
- Ticketing/Check-In Enplaning (Departures
- Bag Claim Deplaning (Arrivals)
- Connecting Passengers
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

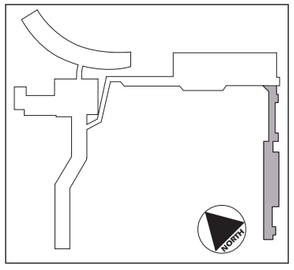
This exhibit is for example only showing typical decision points and will be refined as design is completed.

TERMINAL 2 - LEVEL 2
FUTURE/EXPANSION





KEY PLAN



LEGEND

- Ticketing/Check-In Enplaning (Departures
- Bag Claim Deplaning (Arrivals)
- Connecting Passengers
- Primary Decision Point
- Secondary Decision Point
- Tertiary Decision Point

NORTH

This exhibit is for example only showing typical decision points and will be refined as design is completed.

SECTION C

Graphic Standards

TERMINAL SIGNAGE COLOR CHART:

BACKGROUND:
NAVY BLUE
Color-Match PMS 2768
3M Scotchcal Translucent Film #3630-87
3M Scotchcal Opaque Film #3650-37
Matthews Paint #MP13740

SYMBOLS:
GOLDEN YELLOW
Color-Match PMS 1235C
3M Scotchcal Translucent Film #3630-125
3M Scotchcal Opaque Film #3650-25

BORDERS & TEXT:
WHITE
Color-Match PMS WHITEC
3M Scotchcal Translucent Film #3630-20
3M Scotchcal Opaque Film #3650-10

SYMBOLS:
CARDINAL RED
Color-Match PMS 485C 2X
3M Scotchcal Translucent Film #3630-53
3M Scotchcal Opaque Film #3650-53

SYMBOLS:
DARK GREEN
Color-match PMS 3435C
3M Scotchcal Translucent Film #3630-126
3M Scotchcal Opaque Film #3650-56

MISCELLANEOUS:
BLACK (MATTE FINISH)
Color-match PMS BLACK-C
3M Scotchcal Translucent Film #3630-22
3M Scotchcal Opaque Film #3650-22

MISCELLANEOUS:
MEDIUM GREY
Color-match PMS 422C
3M Scotchcal Translucent Film #3630-51
3M Scotchcal Opaque Film #3650-31

ROADWAY SIGNAGE COLOR CHART:

BACKGROUND:
DARK BLUE
3M Diamond Grade VIP Reflective Sheeting #3995
3M Series 1170 Electrocut Film #1175
3M Series 880I Ink #883
FHWA PMS #294

SYMBOLS:
YELLOW
3M Diamond Grade VIP Reflective Sheeting #3991
3M Series 1170 Electrocut Film #1171
3M Series 880I Ink #884
FHWA PMS #116

BORDERS & TEXT:
WHITE
3M Diamond Grade VIP Reflective Sheeting #3990

TERMINAL SYMBOL:
LEMON YELLOW
3M Series 880I Ink #894
3M Scotchlite Reflective Sheeting #580-81
3M Scotchlite Plus Reflective Sheeting #s 680-81 & 690-81

NON-AIRPORT DESTINATION BACKGROUND:
GREEN
3M Diamond Grade VIP Reflective Sheeting #3997
3M Series 1170 Electrocut Film #1177
3M Series 880I Ink #888
FHWA PMS #342

GRAPHIC ELEMENTS - COLORS

Background Color:
The background color of signs at Oakland International Airport Terminal or roadway will be navy blue, color-matching Pantone Matching System Color PMS 2768. This color will contrast with and compliment the surrounding architecture for maximum viewing effectiveness.

Text Color:
Text on all signage will be white. White provides crisp easy-to-read messages/graphics on the background color, dark blue, and is in compliance with the ADA requirement of 70% minimum contrast.

Symbol Colors:
Symbols on the terminal and roadway signage are black on a yellow or golden yellow background. Each symbol will have a white border. For specific color numbers see the Terminal and roadway signage color charts. On the Terminal symbol for the roadway signs, a lemon yellow will be used. Some regulatory symbols will use red as a background color or have a red prohibitive circle with a slash.

Color Reproduction:
The actual method of color reproduction will determine the best specification to use in the varying sign fabrication types. Typical material colors for paint or vinyl will be referred to, and samples will be required for submittal to the Port for approval.

Translucent, Opaque and Reflective Uses:
Reflective and Translucent materials shall be used on the roadway and parking lot signage. Within the garage and terminal all opaque material will be used except for illuminated signs.

PARKING LOT SIGNAGE COLOR CHART:

BORDERS & TEXT:
WHITE
3M High Intensity Reflective Sheeting #3870

DAILY PARKING LOT A:
RED
3M High Intensity Reflective Sheeting #3872
3M Series 1170 Electrocut Film #1172
3M Series 880I Ink #882
FHWA PMS #187

DAILY PARKING LOT B:
IMITATION GOLD
3M Scotchlite Reflective Sheeting #s 480-64 & 580-64
3M Scotchlite Plus Reflective Sheeting #680-64

HOURLY PARKING:
BLUE
3M Series High Intensity Reflective Sheeting #3875
3M Series 1170 Electrocut Film #1175

ECONOMY PARKING:
LEMON YELLOW
3M Scotchlite Reflective Sheeting #580-81
3M Scotchlite Plus Reflective Sheeting #s 680-81 & 690-81

MISCELLANEOUS:
BLACK (MATTE FINISH)
Color-match PMS BLACK-C
3M Scotchcal Translucent Film #3630-22
3M Scotchcal Opaque Film #3650-22

PARKING GARAGE SIGNAGE COLOR CHART:

LEVEL 7:
BLUE
Color-match PMS 3005C

LEVEL 6:
PURPLE
Color-match PMS 2593C

LEVEL 5:
RED
Color-match PMS 206C

LEVEL 4:
ORANGE
Color-match PMS 1585C

LEVEL 3:
GREEN
Color-match PMS 347C

RENTAL CAR LEVELS 1 and 2:
NAVY BLUE
Matthews Paint #13740
3M Scotchcal Translucent Film #3630-87
3M Scotchcal Opaque Film #3650-37

Non-Illuminated Airport Signage
Typeface Frutiger 75 Black
(For gate numbering, select symbols and copy on small signs which is less than 1" high.)

ABCDEFGHIJ
KLMNOPQR
STUVWXYZ

abcdefghij
klmnopqr
stuvwxyz

0123456789

Non-Illuminated Airport Signage
Typeface Frutiger 65 Bold
(Standard Signage Typestyle)

ABCDEFGHIJ
KLMNOPQR
STUVWXYZ

abcdefghij
klmnopqr
stuvwxyz

0123456789

Illuminated Airport Signage
Typeface Frutiger 55 Roman

ABCDEFGHIJ
KLMNOPQR
STUVWXYZ

abcdefghij
klmnopqr
stuvwxyz

0123456789

GRAPHIC ELEMENTS - RECOMMENDED TYPEFACE

The official typeface for Oakland International Airport signage is the Frutiger type family. This typeface has been selected for it's readability. Frutiger's open forms make it suitable for use in various wayfinding media and in large format displays.

Three stroke weights of the font are made available:

- Frutiger 75 Black is for use on select non-illuminated signage applications such as gate numbering, some symbols and copy on small signs which less than 1" high.
- Frutiger 65 Bold is for use on all non-illuminated directional signs.*
- Frutiger 55 Roman is for use on all illuminated sign applications. The lighter stroke weight of Frutiger 55 will reduce the impact of halation and letter bleed when a sign is read from a distance.

* Within the terminal and on roadways.

TABLE OF USE FOR TYPESTYLES

SIGN TYPE	TYPE SIZE: *RECOMMENDED*	*MINIMUM*
ROADWAY SIGNAGE:		
See page C1-10 for Roadway type use.		
PARKING GARAGE SIGNAGE:		
Overhead Directional	6"	4"
Wall Plaque	1"	5/8"
TERMINAL / CURBSIDE SIGNAGE:		
Overhead Directional	4"	3"
Overhead Identification	6"	4"
Wall Plaque	1"	5/8"

Airport Typeface for Signage Applications
Frutiger 65 Bold

ABCDEFGHIJ
KLMNOPQR
STUVWXYZ

abcdefghij
klmnopqr
stuvwxyz

0123456789

Airport Typeface for Print Applications
Palatino Linotype Bold

ABCDEFGHIJ
KLMNOPQR
STUVWXYZ

abcdefghij
klmnopqr
stuvwxyz

0123456789

Airport Typeface for Print Applications
Palatino Linotype

ABCDEFGHIJ
KLMNOPQR
STUVWXYZ

abcdefghij
klmnopqr
stuvwxyz

0123456789

GRAPHIC ELEMENTS - PRINT-APPLICATION TYPEFACE

The recommended companion type face for Oakland International Airport is Palatino Linotype. This companion typestyle will be used for print material only.

This typestyle has been selected to complement the Frutiger typestyle. Palatino Linotype was selected because it has many similarities to Frutiger. They are similar in the formation of the letterforms, and in the x-height of the lower case letters. The only major difference in these two typestyles is the form of the lower case letter "g".

GRAPHIC ELEMENTS - SPACING

When assembling letters into words careful consideration must be given to the kerning (spaces between characters); too great an interletter space and words begin to fall apart into their component letters; too tight a space will create a blurring together of the individual letterforms.

Today the industry standard for creating large-scale letterforms is the computer-driven signmaker, a device fitted with a cutting stylus which produces standardized, pre-spaced and pre-cut vinyl adhesive lettering for applications to the sign panel. Spacing conventions (normal) for fonts such as Frutiger have been incorporated into the machine's memory, however, for distance reading it has been shown that a more open spacing is needed.

Back-illuminated or reflective letters on a dark background require even more interletter spacing to compensate for halation, or the blurring of letters due to light diffusion.

Also it is a general rule that messages that appear in upper case require proportionally more spacing than the corresponding upper and lower case messages since these words read as a monolithic block. This increase in spacing for all-caps messages can be generalized as an additional 2% for non-illuminated messages and an additional 3% for illuminated messages.

Non-Illuminated Sign Letter Spacing

All sizes of Non-Illuminated Sign copy uses the Frutiger 65 Bold or Frutiger 75 Black typeface. Word-to-word and letter-to-letter kerning should be set to 105%.

3" Illuminated Sign Letter Spacing

3" Illuminated Sign copy uses the Frutiger 55 Roman typeface. Word-to-word and letter-to-letter kerning should be set to 100%.

4" Illuminated Sign Letter Spacing

4" Illuminated Sign copy uses the Frutiger 55 Roman typeface. Word-to-word and letter-to-letter kerning should be set to 100%.

GRAPHIC ELEMENTS - LETTER HEIGHT

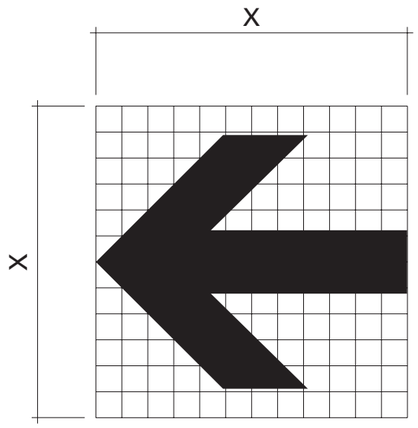
The letter height is based on uppercase letters, such as "E". Some letters like "k" and all rounded letters or numbers like "5" or "9" will slightly exceed the guidelines. Standard letter capital height on overhead directional signs is 4" (capital/number height) with accompanying symbols of 6" x 6" and 7" arrows. The minimum requirements of the Americans with Disabilities Act (ADA) for overhead directional signs is 3" capital height with accompanying 6" x 6" symbols.

Wall mounted signs such as directories, maps, room identification plaques, etc. will use 1" typical capital height or smaller text if necessary, with a minimum capital height of 5/8" as required by the ADA.

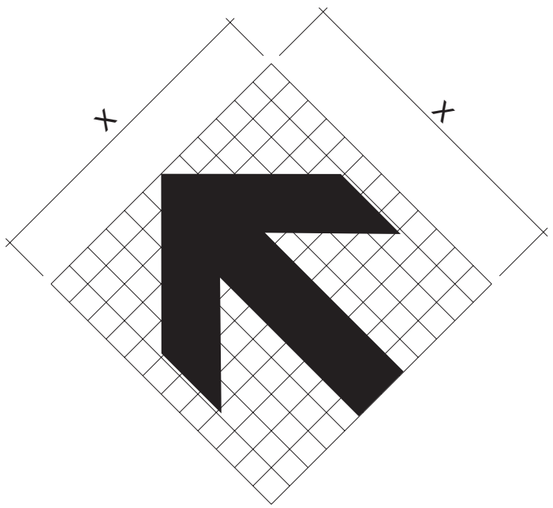
If a secondary message is required to give additional information, a slightly smaller letter height (approximately 60%) can be used if it will fit within the available space. If two lines of text are required on a larger sign, a larger pictogram height can be used.

All related signs in a series should maintain the same letter height and layout for consistency and clarity.

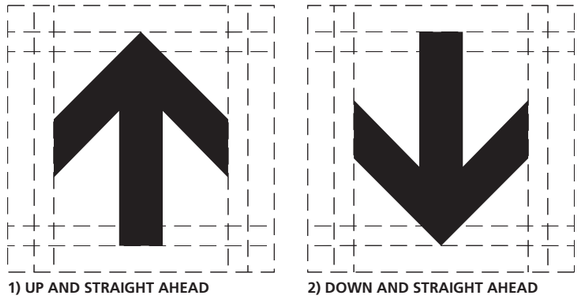
GRAPHIC ELEMENTS - ARROW MEASUREMENT



The arrow is always measured from point to end as shown in the above illustration, even when the arrow is at a 45 angle as shown below.

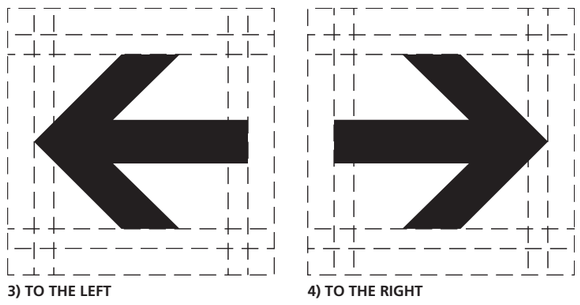


GRAPHIC ELEMENTS - DIRECTIONAL INDICATIONS



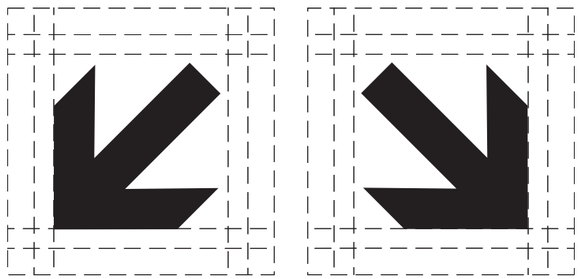
1) UP AND STRAIGHT AHEAD

2) DOWN AND STRAIGHT AHEAD



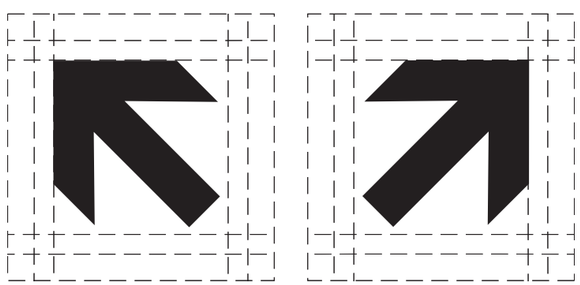
3) TO THE LEFT

4) TO THE RIGHT



5) DOWN TO THE LEFT

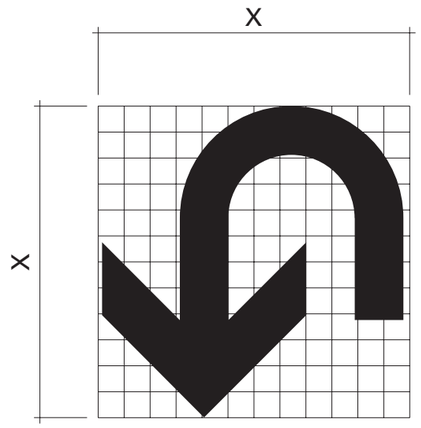
6) DOWN TO THE RIGHT



7) UP TO THE LEFT

8) UP TO THE RIGHT

GRAPHIC ELEMENTS - U-TURN ARROW



GRAPHIC ELEMENTS - DIRECTIONAL ARROW

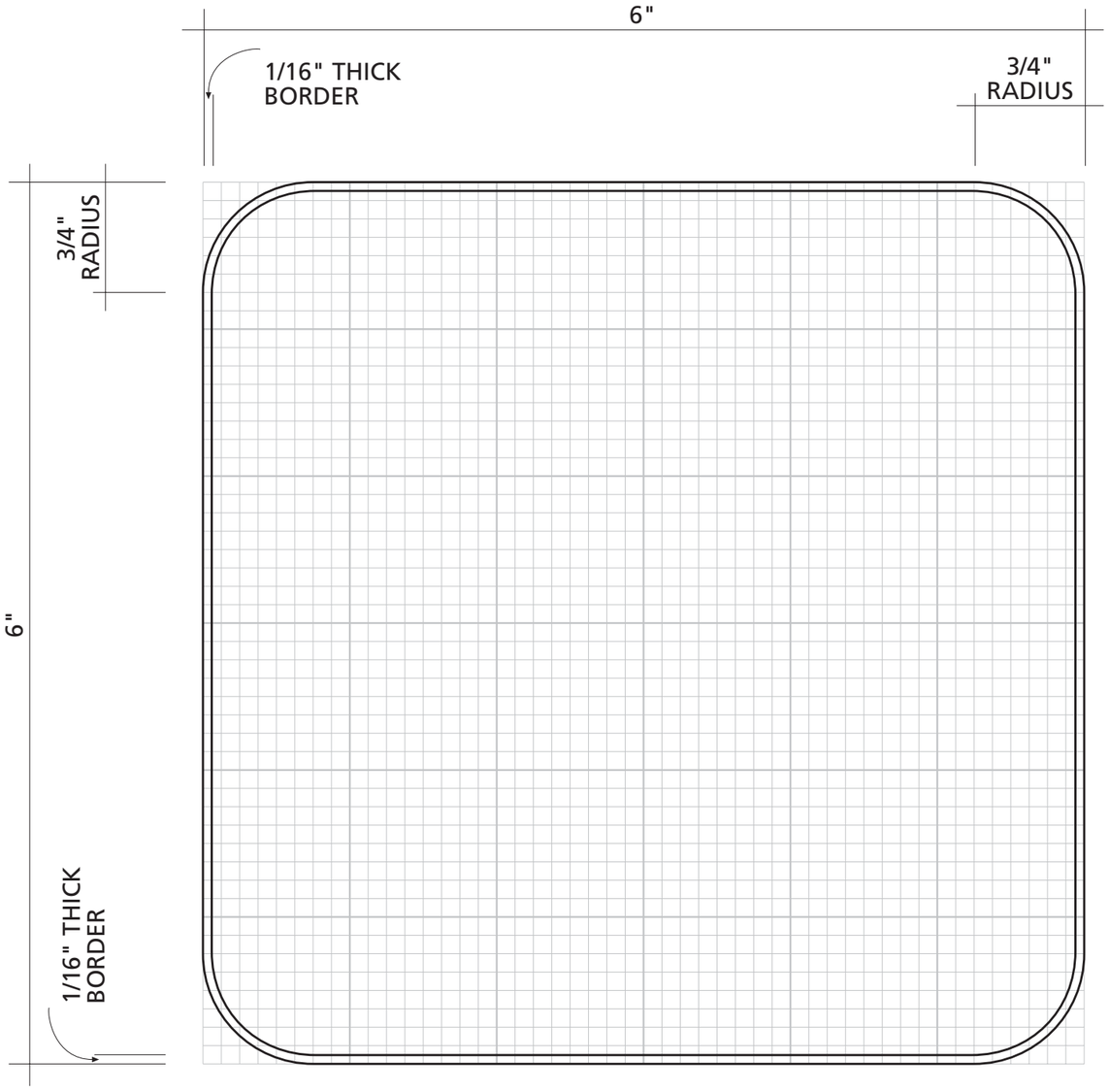
The arrow is the most universally accepted and understood graphic symbol which is used to indicate a direction. It is usually accompanied by a symbol and informational text. The directional arrow has been designed to complement the style and proportions of the symbols and typestyle.

The arrow should never point toward the text; it must precede left hand messages and succeed right hand messages. When a sign panel has left, center and right messages and the center message indicates direction either ahead or ahead and to the left, this message should maintain the spacing parameters of a left message; a right message format should only be utilized in the center panel if the direction indicated is ahead and to the right. The exception to this rule will only be allowed on multiple-destination roadway signs where there may be cases when the left-pointing arrows succeed left turn messages.

To establish a relationship between arrow, symbol and lettering, the arrow is thought of as being placed in a square module. The arrow in the eight directions to which it points are referenced within the square as shown in the illustration to the left. The module is enlarged or reduced depending on sign type or grid being followed. The established size variations are illustrated in the layout guidelines and will remain consistent throughout the signage system.

The standard arrow direction on terminal signage for a straight-ahead destination is "up." If the sign is directly above an escalator, and is directing passengers down, a "down" arrow may be used. On roadway signs, lane destinations will use a down arrow. Exiting indicators will be an arrow up and to the right.

The use of diagonal arrows should be avoided if possible. However, if the sign is located in an open area, and an orthagonal arrow would be misleading, a diagonal arrow may be used.



GRAPHIC ELEMENTS - TERMINAL SYMBOL/BORDER RELATIONSHIP

To establish a relationship between the terminal symbol size and border thickness, the symbol is thought of as being placed in a square module. The module is enlarged or reduced depending on sign type or grid being followed. The established size variations are illustrated in the layout guideline and will remain consistent throughout the signage system.

Using the module shown here, 6" symbols will have a 1/16' thick PSM White border and a 3/4" radius corner. When doubled in size to 12", symbols will have a 1/8" thick PSM White border and a 1-1/2" radius corner. Similarly, 10" symbols will have a PSM White obrder that is approximately 3/32" thick and a 1-1/4" radius corner.

GRAPHIC ELEMENTS - TERMINAL SYMBOLS

Internationally recognized symbols are an effective communication tool when they are thoughtfully and consistently applied to a sign system. This sign system incorporates symbols which have been selected from collections provided by the U.S. Department of Transportation and the International Standardization Organization (ISO).

Additional symbols may be selected or developed as needs occur. Specific identifiers for airline operations may be created using the white square and letter or number designation. These special identifiers will only appear in this manner. The size and location for these identifiers will be determined by the airline within their leasehold and must be approved by the Port.

The symbols will be displayed at a minimum 6" x 6" on terminal overhead directional signs and on any ADA-required wall mounted braille plaques.

The pictograms must be displayed on signs exactly as shown in the sign face layouts section regardless of the direction of the sign. The consistency and clarity of the sign system depend on strict adherence to this guideline with the exception of the following: the symbols for stairs, escalators or moving walkways may be flipped to match the direction of an accompanying arrow.

GRAPHIC ELEMENTS - TERMINAL SYMBOLS CONTINUED

05 - Non-Carrier Flights Symbol TBD

55 - Emergency Communications

56 - Rental Cars

57 - Restaurant

58 - Bar / Cocktails

59 - Shoeshine

60 - Shops

61 - Data Port

62 - Accessible Elevator

63 - Volume Telephone

64 - Assistive Hearing

65 - Text Telephone

66 - Accessible Symbol

67 - Ramp

68 - Defibrillator

69 - Pay On Foot (LOGO)

70 - Courtesy Telephone Symbol TBD

71 - Vehicular Do Not Enter

72- No Cars

73- General Aviation Terminal

73 - Port of Oakland Logo -
Shown here as graphic information.
Logo will not be used as a "symbol."

TERMINAL IDENTIFIERS:

Any additional symbols needed will be created if additional terminals are built. These identifiers will use the Frutiger 75 Black typestyle for the numbers.

Terminal 1

Terminal 2

SOUTHWEST AIRLINES BOARDING GROUP IDENTIFIERS:

Any additional symbols needed will be created if necessary. These identifiers will use the Frutiger 75 Black typestyle for the letters.

Group A

Group B

Group C

04 - Terminal, Gates

05 - Non-Carrier Flights Symbol TBD

06 - Bag Claim

46 - Parking

56 - Rental Cars

66 - Accessible Symbol

74 - Highway Advisory Radio Symbol

TABLE OF ARROW, SYMBOL AND TYPE SIZES FOR APPLICATION TO ROADWAY SIGNAGE

Sign Type	Design Speed	Secondary Copy Size	Symbol Size	Terminal Identifier Size	Arrow Size	Banner Copy Size	Interstate Route Shield Size	State Route Shield Size
Overhead w/13" Copy	35 mph or greater	10"	18" Dia (Border = 0.37")	18" x 18"	24"	6"	45" x 38"	45" x 36"
Overhead w/10" Copy	Less than 35 mph	8"	15" Dia (Border = 0.31")	15" x 15"	18"	5"	30" x 25"	28" x 25"
Roadside w/6" Copy	_	5"	12" Dia (Border = 0.25")	12" x 12"	10"	4"	14" x 12"	15" x 11"

TERMINAL IDENTIFIERS:

Any additional symbols needed will be created if additional terminals are built.

Terminal 1

Terminal 2

GRAPHIC ELEMENTS - ROADWAY SYMBOLS

The symbols shown here are used specifically on the roadway signs and have been selected from collections provided by the U.S. Department of Transportation and the International Standardization Organization (ISO).

Additional symbols may be selected or developed as needs arise.

The symbols must be displayed on signs exactly as shown in the sign face layouts section regardless of the direction of the sign. The consistency and clarity of the sign system depend on strict adherence to this guideline.

PRIMARY ENPLANING MESSAGES:

- Terminal 1
- Terminal 2
- Ticketing / Check-in
- Gates
- Restrooms
- Security Check Point
- International Departures
- Charter Departures
- Elevator
- Escalator

SECONDARY ENPLANING MESSAGES:

- Men
- Women
- Telephones
- Information
- Restaurants
- Shops
- ATM
- Currency Exchange
- Business Center
- Airline Clubs

PRIMARY DEPLANING MESSAGES:

- Bag Claim
- Restrooms
- Ground Transport
- Parking
  - Daily Parking Lot A
  - Daily Parking Lot B
  - Hourly Parking
  - Economy Parking
- Meeting Place
- Gates
- Elevator
- Escalator

SECONDARY DEPLANING MESSAGES:

- Men
- Women
- Telephones
- Rental Cars
- Shuttles
- Courtesy Shuttles
- Taxi
- Air-Bart
- Vans
- Limos
- Information
- Restaurants
- Shops
- ATM
- Currency Exchange
- Business Center

TERTIARY MESSAGES:

- On-Airport Parking Shuttle
- Off-Airport Parking Shuttle
- Hotel Shuttles
- Valet Parking
- Door-to-Door Shuttles
- Scheduled Shuttle Services
- Charter Buses
- Travel Insurance
- Nursery / Changing Room
- Baggage Lockers
- Stairway
- Data Port
- Duty Free
- Lost and Found

NOMENCLATURE - STANDARD TERMINOLOGY

A uniform hierarchy of messages and information throughout the airport terminal complex is necessary for a successful information system. By consistently using standard terminology, one is able to categorize the messages into three levels: primary, secondary, and tertiary. These three levels of classification relate to the various functions occurring simultaneously in any given airport facility.

Clear and concise information presented by either “primary” or “secondary” sign systems greatly improves the efficient passenger flow, both on the roadway and within the terminal. Secondary and tertiary signing must be coordinated with primary signs and interior design elements. They are often distinguished from primary messages by various graphic methods.

Care in developing this system for organizing information is critical to the success of any sign program. Two successful methods for determining a hierarchy of information are:

1) the use of larger character heights for primary information, or,
2) a total separation of the type or classification of information from one sign panel to the next.

Both techniques are successful in airports that consistently implement and maintain either one or the other of these two methods.

NOTE:
Other specific terms related to the airport location, local services, intermodal operations and facilities may need to be incorporated into one of the three basic categories. While these terms may not be needed for the existing facility, they may be required in the long term planning process for future growth and expansion.

NOMENCLATURE - SPELLING GUIDELINES

1. All text is spelled in lower case letters except:
   a. The first word (initial) of a sentence, e.g.:
      USE: Thank you for visiting.
      NOT: Thank You For Visiting.

   b. The initial of each work of a proper name or noun, e.g.:
      Holiday Inn
      International Terminal

   c. The initial of standard terminal terminology, e.g.:
      Restrooms
      Elevator
      Escalator
      Exit

   d. Each noun of compound terminal terminology, e.g.:
      Bag Claim
      Car Rental
      All Gates

   e. Alphabetical names of sections, areas, etc.:
      Gates A, B
      Gates A1-A54

2. All capitals are used for abbreviated names:
   OAK
   ATM
   TDD

3. Abbreviations are to be avoided, especially for international patrons. However, if certain abbreviations are required in case of space limitations, they will be added accordingly in this Airport Standard Nomenclature.

4. Hyphens are sometimes used to bind a preposition to a specific verb:
   Check-in (counter)

   If a hyphen is used, the second word has no initial capital. There are no specific rules for the use of hyphens in compound words, so the dictionary reigns here as it is not included in the list of standard airport terminology.

NOMENCLATURE - SPELLING AND PUNCTUATION

5. Ampersands and punctuation marks.

   a. The Ampersand (&) can only be used to indicate two combined related services:
      Ticketing & Check-in

   b. For a continuous series the use of "-" should be used.
      Gates A1-A35

   c. If more than two services are combined or for enumerations, a comma should be used:
      Gates A, B
      Check-in 1, 6, 12

   d. In all other cases "and" should be used:
      Lost and Found

   e. The use of slashes (Check-in / Ticketing) should be reserved for specific applications only when space is restricted.

* All references to Gates and their numbers are for illustration purposes only in this submittal. The next submittal will include references true to the terminal.

SECTION D

Sign Types and Layout Standards

ROADWAY SIGN TYPES OVERVIEW

Refer to Section D2 for further description of the roadway sign types.

TERMINAL SIGN TYPES OVERVIEW

GENERAL OVERVIEW:
All overhead signs suspended from the ceiling or mounted on special supports (poles or cables) are preferred to be mounted at the same height of 8 feet clearance from bottom of the sign to the floor.

Multiple signs placed together must be separated by a 10" margin.

Overhead signs placed together on a sign support structure should have their placement organized by size. It is preferable to place signs next to each other that are similar in height and width than to place signs haphazardly on a support structure, which presents an unorganized appearance for a terminal. The rule applicable on sign placement is as follows:

- Signs placed next to each other should have the same width and height.
- If signs placed next to each other do not have the same width, at least signs sign similar height, if possible, should be placed next to each other.

Wall mounted signs, notices and warnings are fixed at 6'-6" from the top of the sign to the floor with a minimum distance of 27" from bottom of the sign to the floor.

ILLUMINATION:
Illuminated signs significantly increase the read-ability of signing and the following standards for illumination apply:

Illumination levels on the sign surface shall be in the 100 to 300 lux range (10 to 30 footcandles) and shall be uniform over the sign surface. Signs shall be located such that the illumination level on the surface of the sign is not significantly exceeded by the ambient light or visible bright lighting source behind or in front of the sign.

BLANK SIDE OF SIGNS:
If a sign does not require a primary directional message on one side, use one of the following messages to avoid a blank side:

- This is a Smoke-Free Facility
- Welcome to Oakland
- Location confirmation / identifier

Under no circumstances will the blank side of a sign be used for art or advertising messages.

LOW CEILINGS:
In the case of low ceilings, a minimum clearance of 6'-8" from bottom of the sign to the floor is required. In this case, there is a priority of reducing the overall size of a sign:

- First - Reduce the horizontal margins and text line spacing.
- Second - Consider the use of abbreviations.
- Third - Reduce the Letter / Symbol / Arrow heights proportionally. The minimum letter height is 3".

ADA COMPLIANCE:
All signs must be ADA compliant in regards to the minimum height of letters and symbols and satis-factory contrast between text and background colors.

ADA requires:

- Minimum letter height for overhead/ceiling suspended signs is 3" with 6" symbol height. Standard letter height for Oakland International Airport overhead/ceiling suspended signs is 4".
- Maximum mounting height for wall mounted tactile-braille signs is 5'-0" from the finished floor to the center of the signs. Wall mounted signs at Oakland International Airport are to be a mounting height of 6’-6" to the top of sign to finished floor. These signs will not exceed a height of 2'-8".
- In no case will the distance from finished floor to bottom of sign be less than 2'-3".

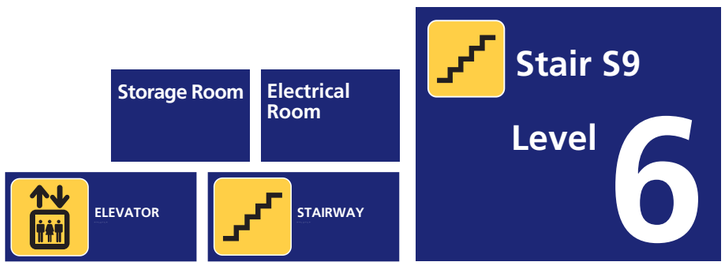
Braille and tactile information:

- Tactile-braille information on wall mounted sign is used for airport service location sign such as restroom identification signs and elevator directories.
- Text is to be all uppercase and raised letters, with a letter height of 5/8".
- Braille is to be 1/4", raised.

PARKING GARAGE SIGN TYPE FAMILY

The Sign Family for the Parking Garage will include but not be limited to the following sign types:

- Overhhead Directional Signs
- Wall Mounted Directional Signs
- Column Wrap Identification Signs
- Wall Mounted Plaques
  - Information Signs
  - Identification Signs
  - Regulatory Signs

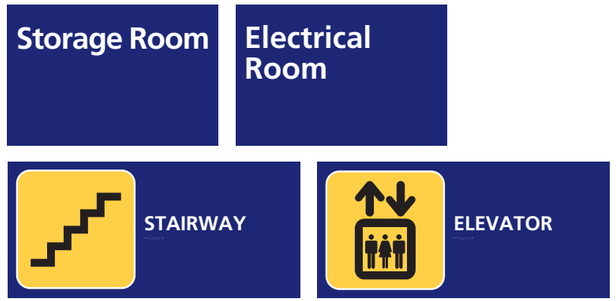


PARKING GARAGE SIGN TYPE FAMILY
DIRECTIONAL SIGNS

The following layouts represent standards for overhead direction signs as well as potential overhead identification or regulatory signs in the parking garage at Oakland International Airport.

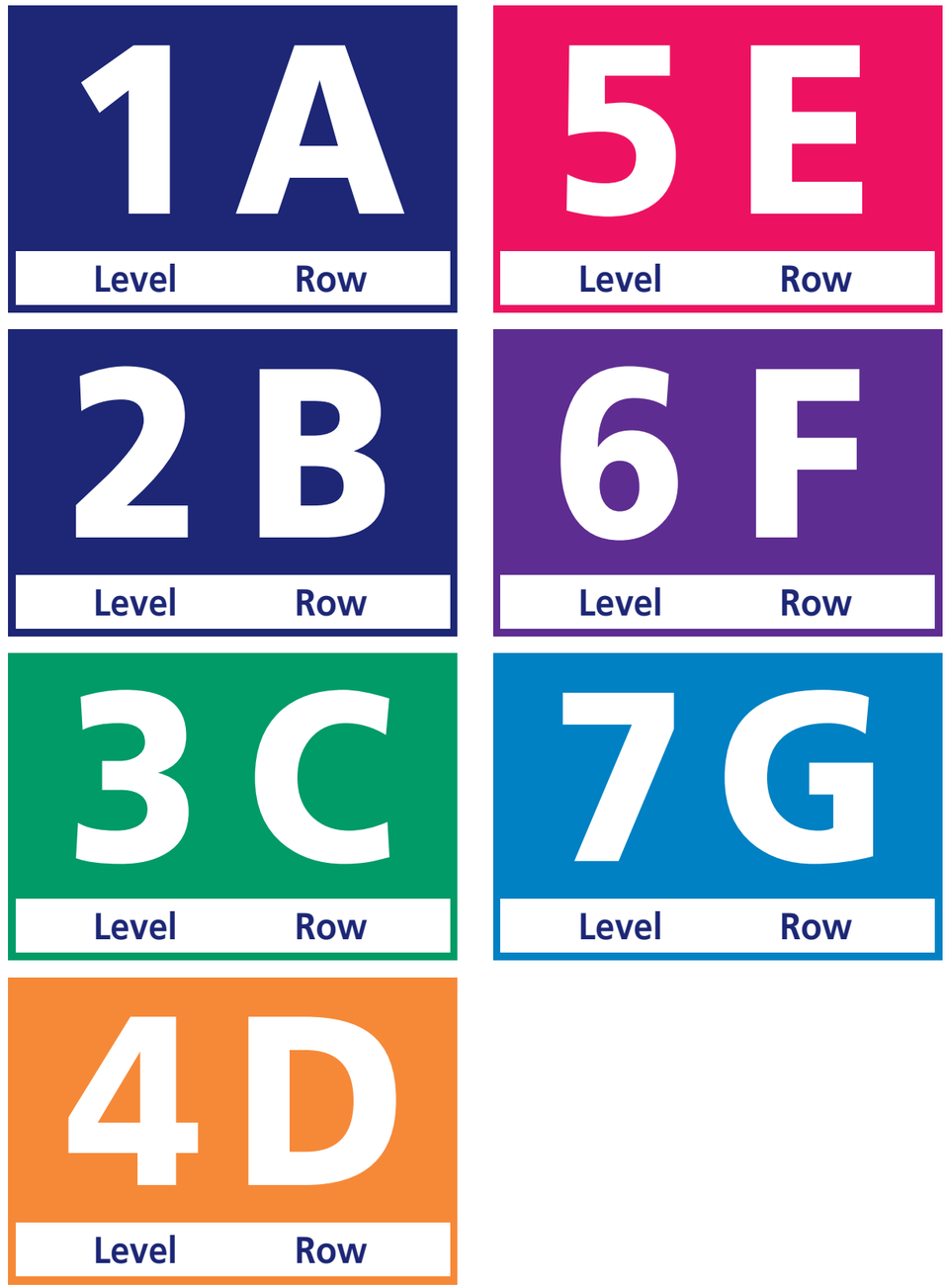
PARKING GARAGE SIGN TYPE FAMILY IDENTIFICATION / INFORMATION SIGNS

The following layouts represent standards for identification and information signs in the parking garage at Oakland International Airport.



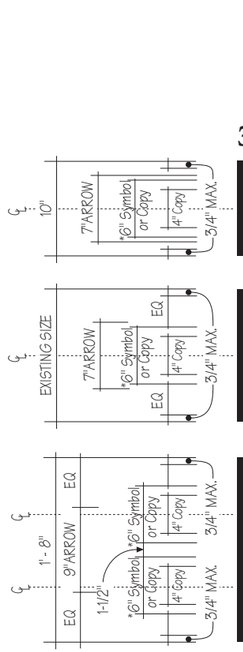
PARKING GARAGE SIGN TYPE FAMILY
COLUMN-WRAP IDENTIFICATION SIGNS

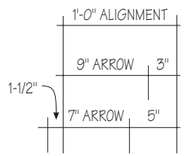
The following layouts represent standards for column-wrap identification signs in the parking garage at Oakland International Airport.



PARKING GARAGE SIGN LAYOUT STANDARDS- HEIGHTS & WIDTHS

The following layouts represent standards for the parking facilities at Oakland International Airport.



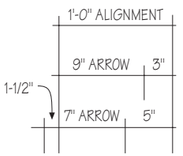


3'-0" - 4'-0" length

Primary

Primary

Primary
Primary

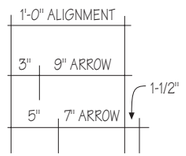


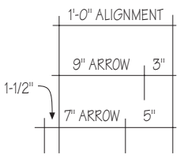
6'-0" length

Destination

Destination

Destination
Destination





8'-0" length
12'-0" length
18'-0" length

Primary Destination

Primary Destination

Primary Destination
Destination

PARKING GARAGE TYPICAL SIGN APPLICATION EXAMPLES

Parking garages and lots are identified with letters and colors and specific identifiers like: Garage, Hourly, Daily, Economy and Valet.

Identification of parking locations will follow an alphanumeric sequence to divide parking facilities into smaller, more memorable units.

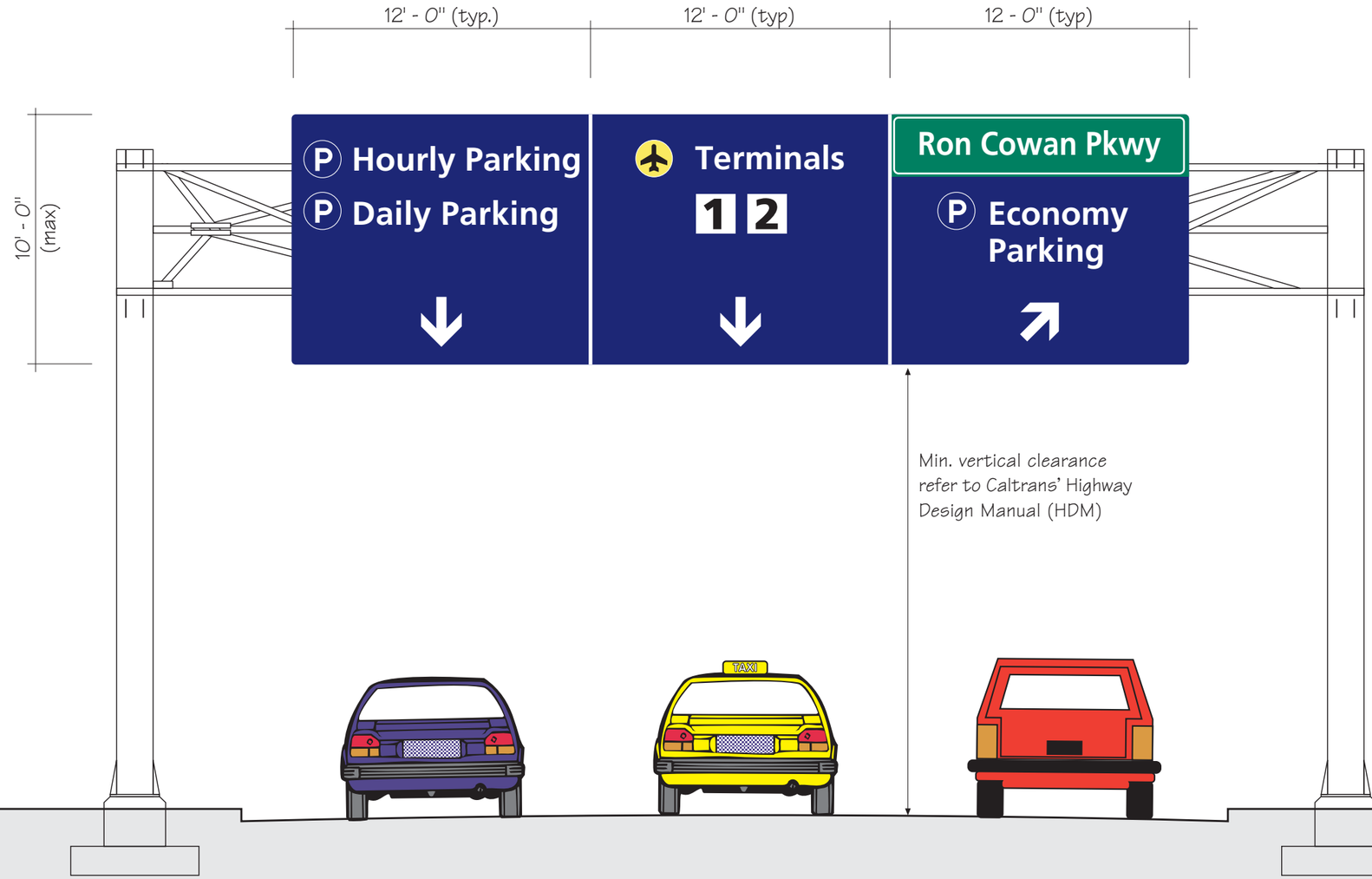
The levels of the garage are identified by level numbers starting with 1 at the ground level. Color coding by level is added as an additional description.

No color used for the garage may be used for the surface lot designators.

The alphanumeric sequence in the garage will be as follows:

Gargage Parking
Hourly Parking
Level Number 1-7
Row Letter

ROADWAY SIGN TYPE FAMILY



The Sign Family for the Roadway will include but not be limited to the following sign types:

Overhhead Structure Directional Signs
Overhead sign panels should be 10′ tall. This provides flexibility for future changes if the needs arise. The span of the overhead structures will vary, and the number of panels will depend upon the corresponding number of lanes in specific locations. The panels will typically be either a single-lane width or a double lane width, but can be revised depending upon the required message.

Standard California Department of Transportation (Caltrans) overhead sign structures shall be used where possible.

If roadway signs are illuminated, uplighting should be used. However, in certain locations a upward facing light will cause confusion or conflict for aircraft. In these locations the sign lighting shall point downward without creating a glare problem for roadway drivers. The Port will verify the use of upward or downward facing sign lighting.

Clearance panels and labeled heights shall be placed before any obstruction that does not provide the minimum vertical clearance. Minimum vertical clearances can be found in the Caltrans Highway Design Manual.

ROADWAY SIGN TYPE FAMILY

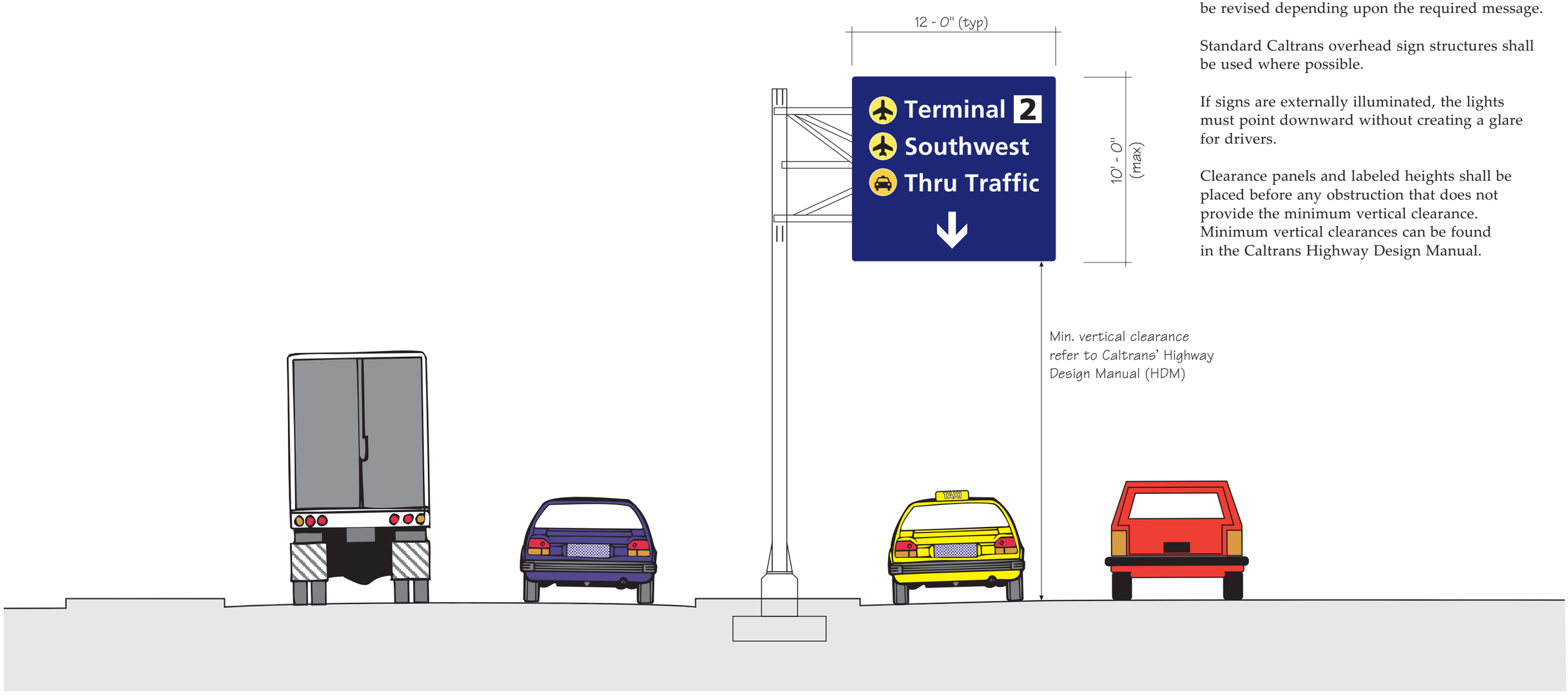
The Sign Family for the Roadway will include but not be limited to the following sign types:

Cantilever Directional Signs
The span of the overhead structures will vary, and the number of panels will depend upon the corresponding number of lanes in specific locations. The panels will typically be either a single-lane width or a double-lane width, but can be revised depending upon the required message.

Standard Caltrans overhead sign structures shall be used where possible.

If signs are externally illuminated, the lights must point downward without creating a glare for drivers.

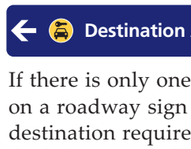
Clearance panels and labeled heights shall be placed before any obstruction that does not provide the minimum vertical clearance. Minimum vertical clearances can be found in the Caltrans Highway Design Manual.



The following sign typical layout & order for Roadway Signs is illustrated below.

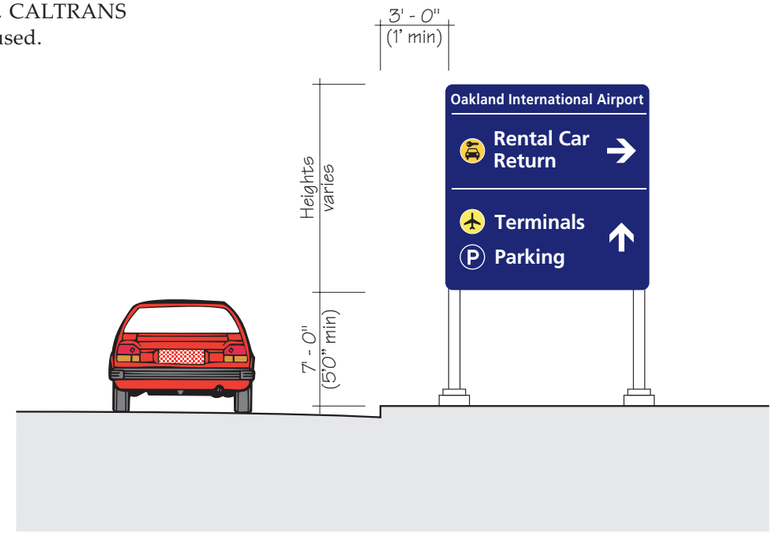
Note:
- ← movement top
- → movement
- ↑ middle

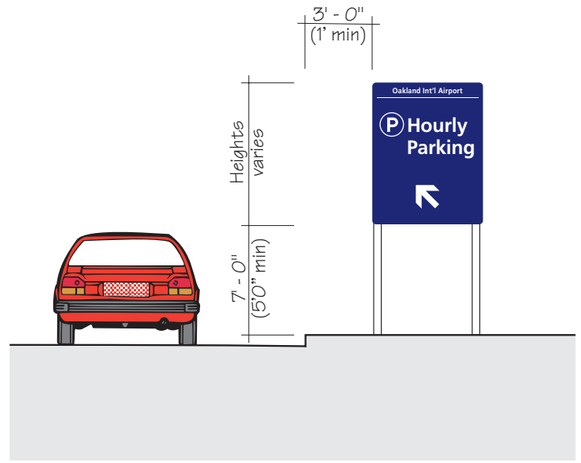
This sign order shall be used on only blue Airport signs. For green signs, CALTRANS standard methods should be used.



If there is only one destination on a roadway sign and the destination requires a left-turn, the left arrow shall be placed on the left side as shown in the example directly above.

If two destinations occur within a single directional arrow, the closest destination shall be placed on top (with one arrow only).





Typical exit type signage only.

Example Layout Styles

ROADWAY SIGN TYPE FAMILY

The Sign Family for the Roadway will include but not be limited to the following sign types:

Ground Mounted Directional Signs
Ground Mounted Identification Signs
Both of these sign types will vary in size.
All ground mounted signs will have two posts.

Oakland International Airport banner is not needed within South Field south of Doolittle Drive or within North Field. Spell out "Oakland International Airport" if enough sign width is available. [If not enough width exists, the abbreviated "Oakland Int'l Airport" will be used.]

For roadway signs, blue shall be on top of green. The only exception to this is for overhead signs. If the overhead sign has a thru arrow in the green field, the green will be on top of the blue.

All non-airport specific destination should be shown in green consistent with Caltran's Traffic Manual except that sizes, fonts and arrows should follow this standard. No white border shall be used for airport destination signs.

LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR OVERHEAD DIRECTIONAL PANELS

The following layouts represent standard overhead directional panels along the entrance and exit roadway at Oakland International Airport when 13" high copy is used.

Center 13" copy at center lines of symbols for one & two lines of text

LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR OVERHEAD DIRECTIONAL PANELS

The following layouts represent standard overhead directional panels along the entrance and exit roadway at Oakland International Airport when 13″ high copy is used.

Interstate route shield size to use with overhead sign panels with 13″ high copy is 45″ by 38″ (width by height).

Center 13″ copy at center lines of symbols for one & two lines of text

LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR OVERHEAD DIRECTIONAL PANELS

The following layouts represent standards for the overhead directional panels along the entrance and exit roadway at Oakland International Airport when 10″ high copy is used.

Interstate route shield size to use with overhead sign panels with 13″ high copy is 30″ by 25″ (width by height).

Center 10″ copy at center lines of symbols for one & two lines of text

LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR OVERHEAD DIRECTIONAL PANELS

The following layouts represent standards for the overhead directional panels along the entrance and exit roadway at Oakland International Airport when 10″ high copy is used.

Center 10″ copy at center lines of symbols for one & two lines of text

LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR OVERHEAD DIRECTIONAL PANELS

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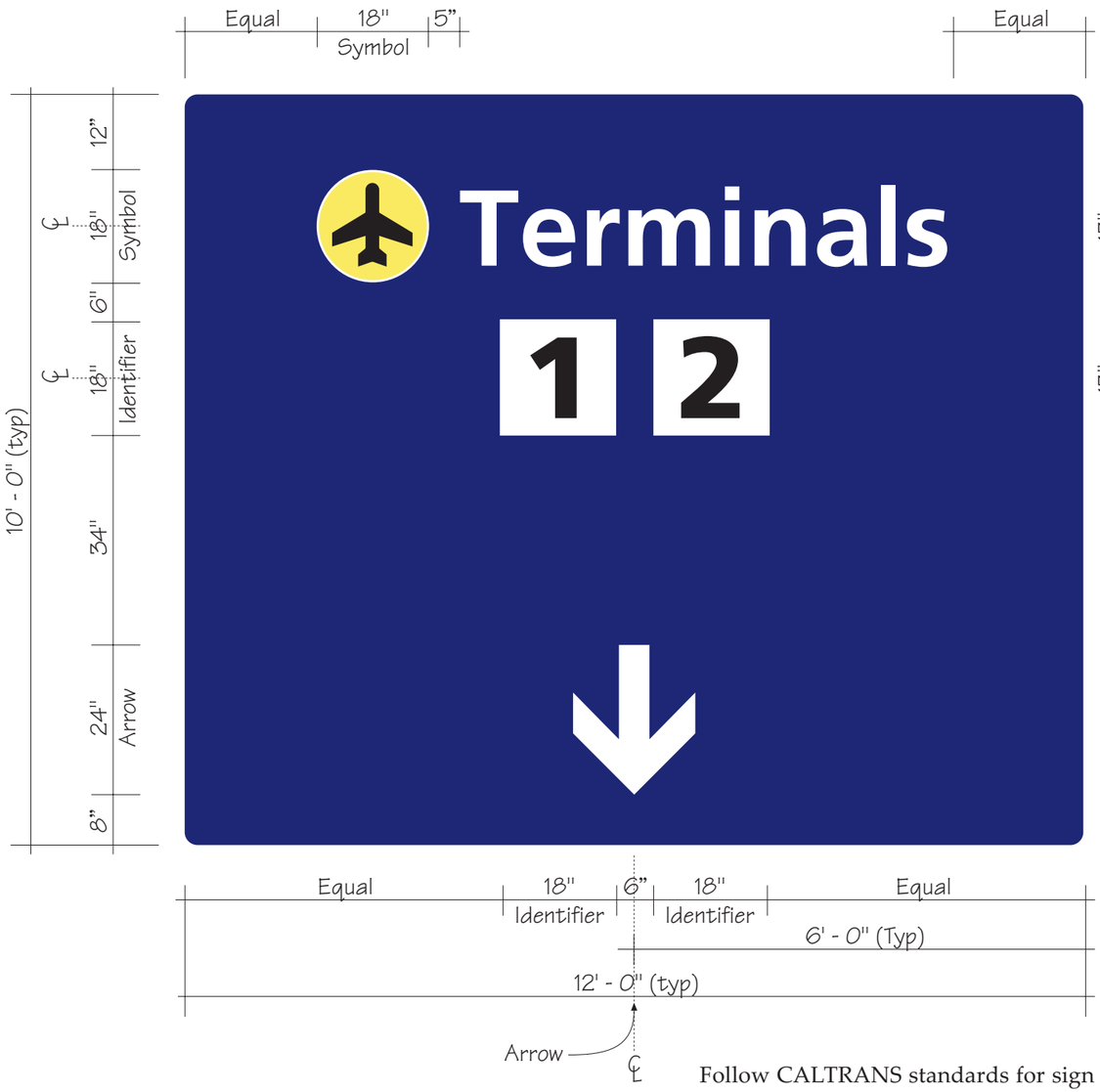
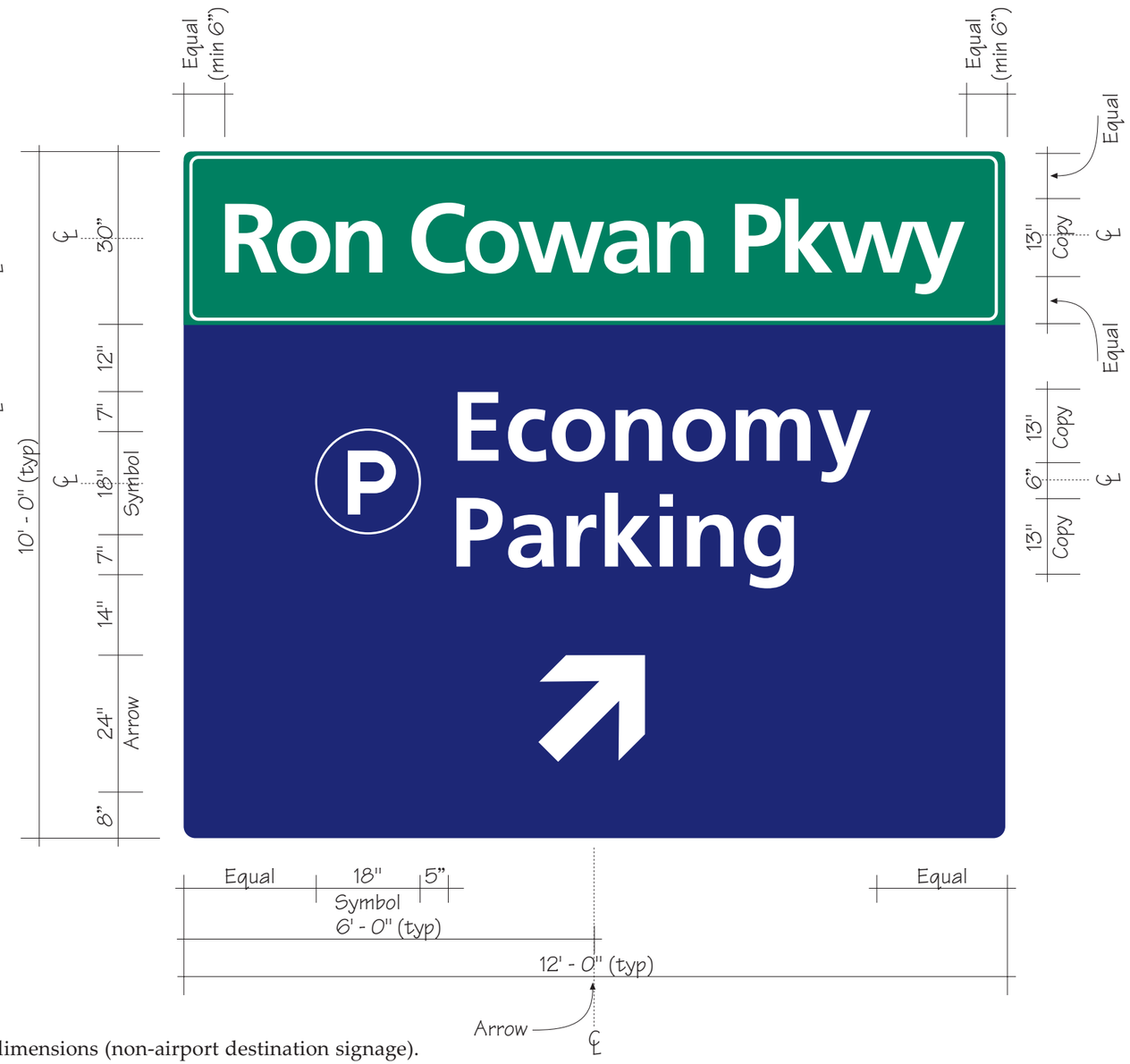
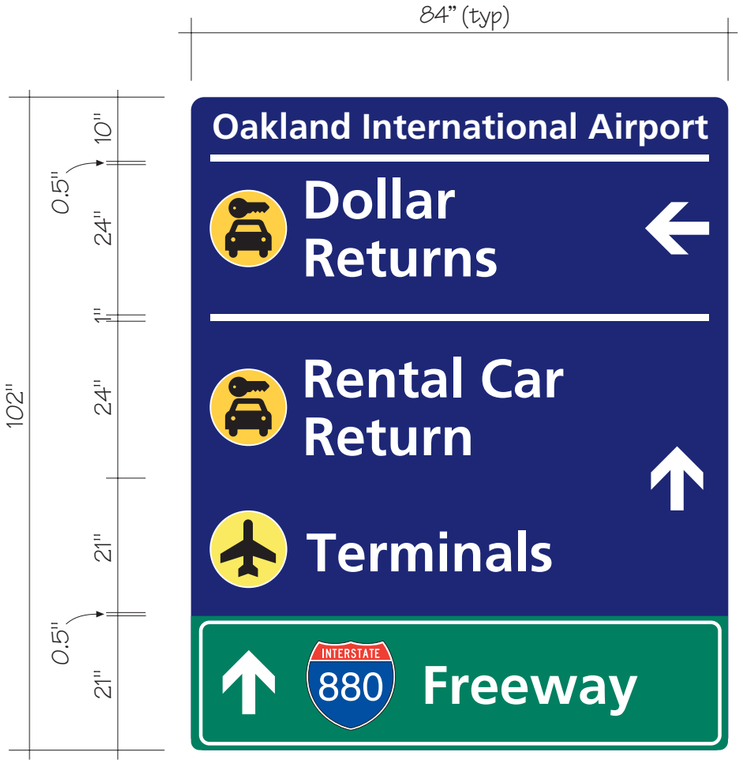
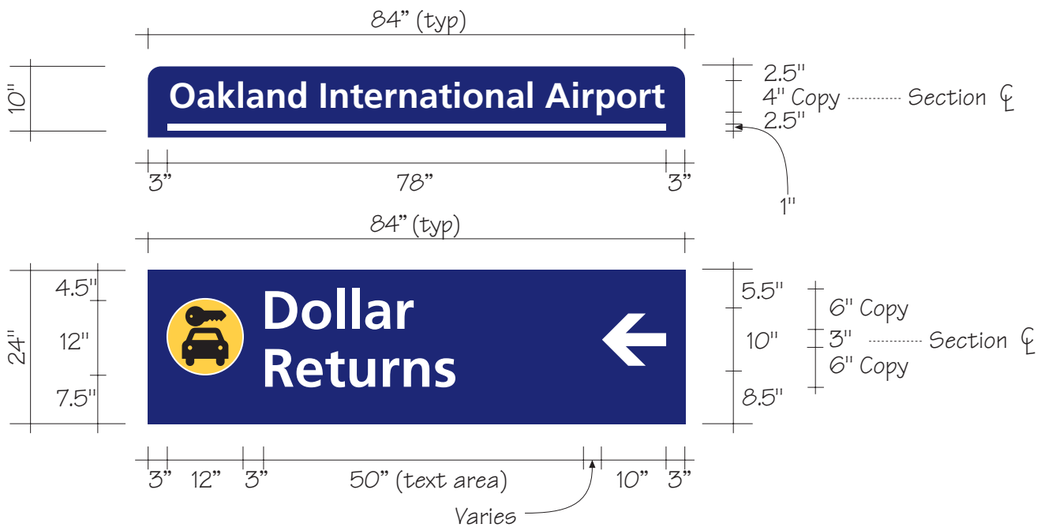
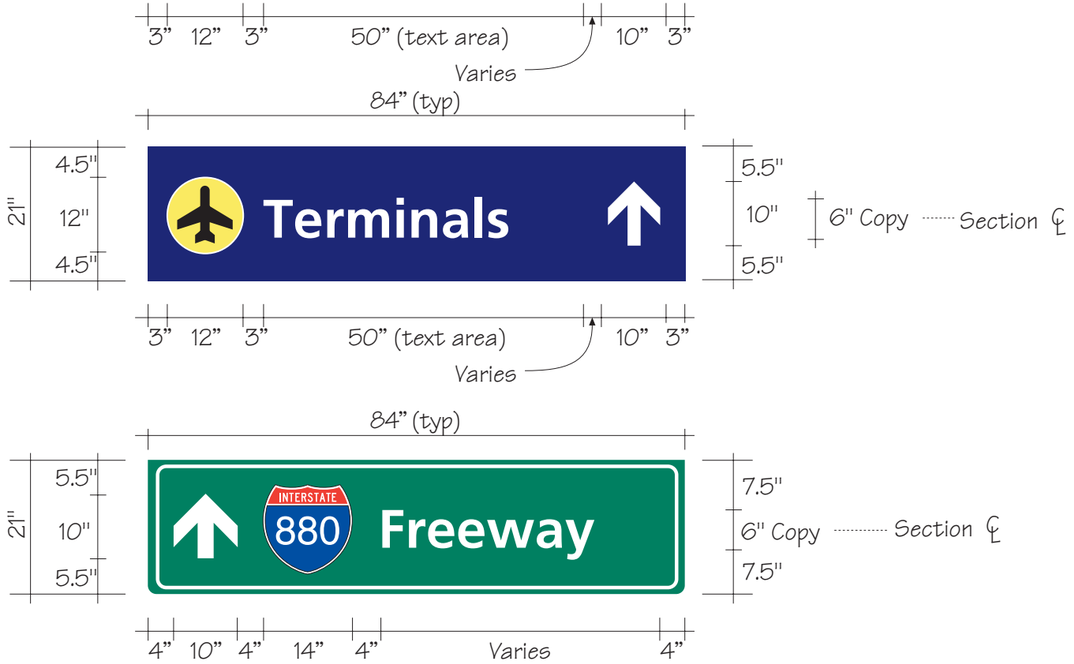




Follow CALTRANS standards for sign borders dimensions (non-airport destination signage).







LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR ROADSIDE SIGN PANELS

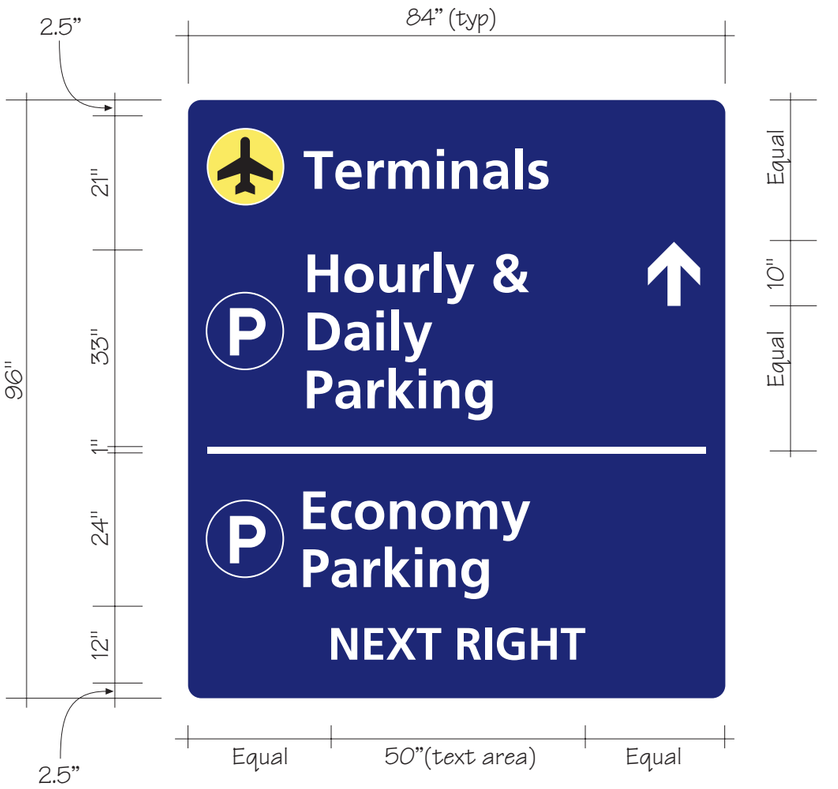
The following layouts represent standards for the roadside sign panels along the entrance and exit roadway at Oakland International Airport when 6" high copy is used.

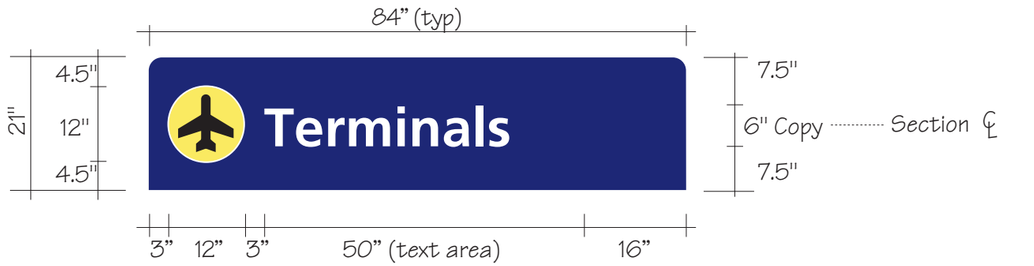
Interstate route shield size to use with roadside sign panel is 14" by 12" (width by height).

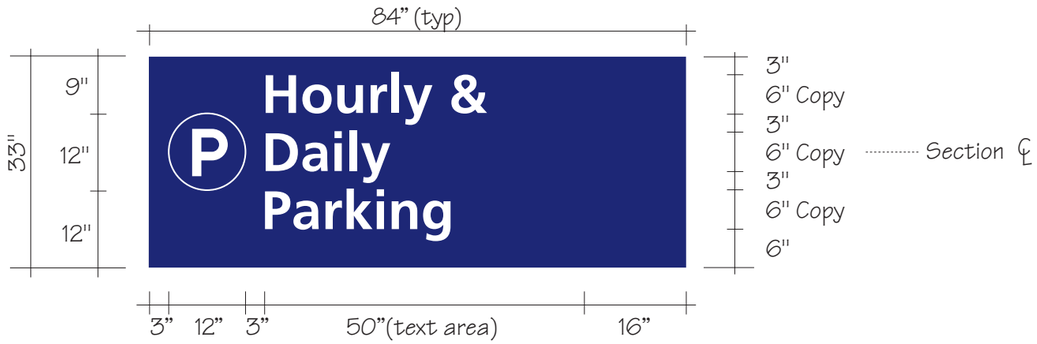
Each sign height is based upon the sign content. With the exception of the "Oakland Int'l Airport" banner at the top of signs, the minimum vertical dimension between the top or bottom of the sign shall be the height of the copy used. Panels of different colors within a sign are considered separate signs for this purpose.

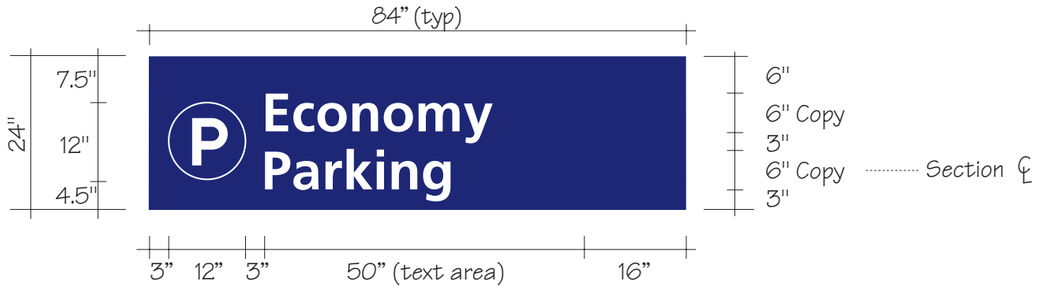
Sign panel heights shall be rounded up to the nearest 6" increments. Redistribute any extra panel height at the top and bottom of the sign due to rounding up the sign panel size.

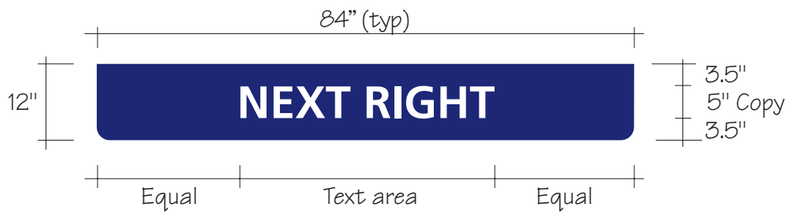
LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR ROADSIDE SIGN PANELS





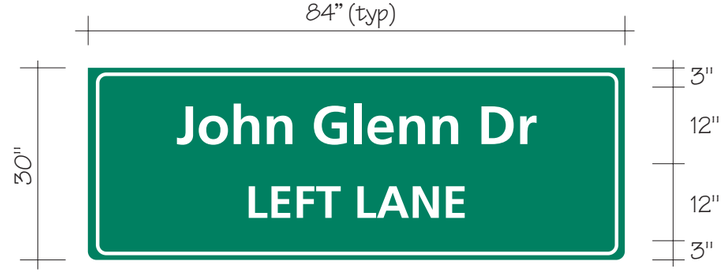


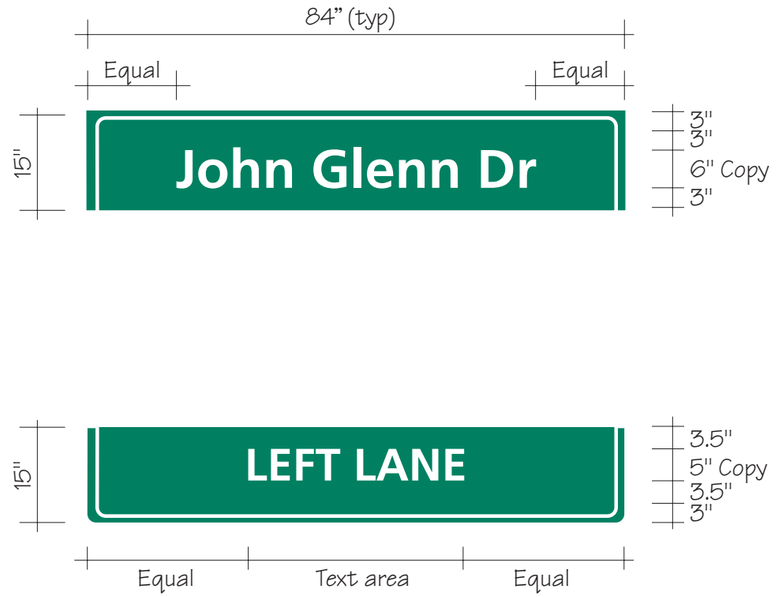




Use secondary copy size for all CAPS wording on roadside signs.

LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR ROADSIDE SIGN PANELS

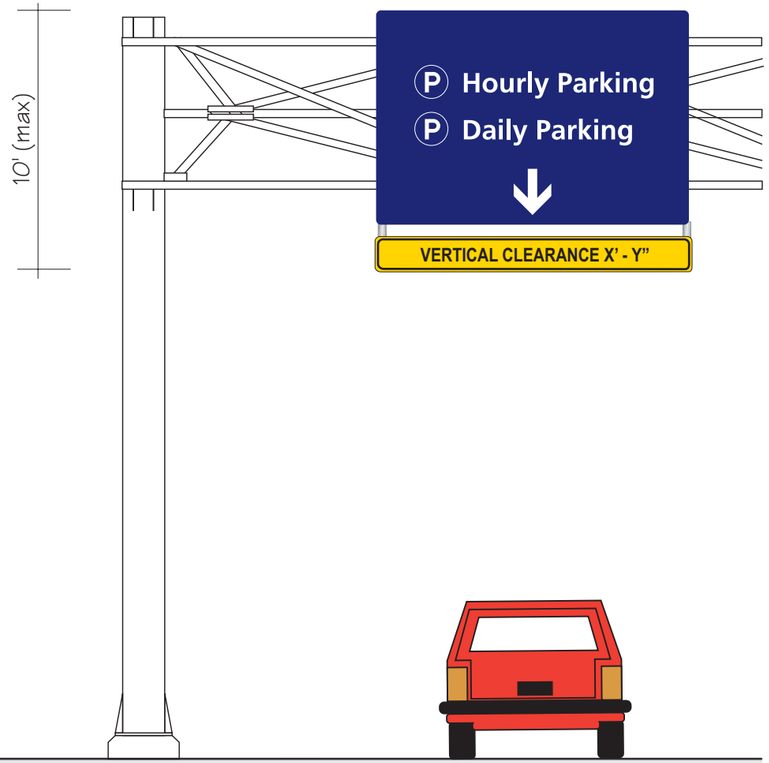


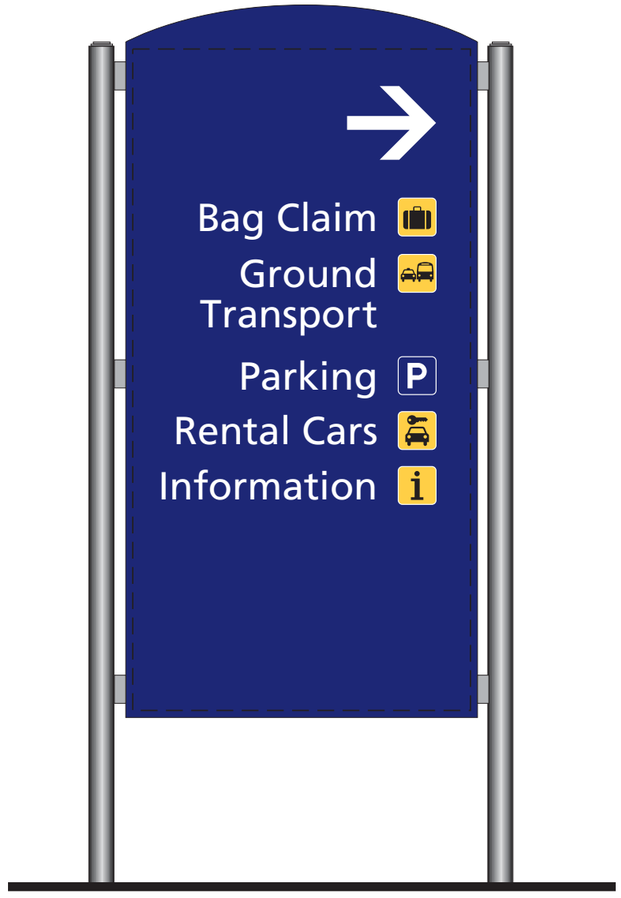


TYPICAL SIGN APPLICATION EXAMPLE ROADWAY

The following sign layout represents an overhead sign panel with 10" copy with a vertical clearance panel.

The Low Clearance sign shall be used to warn motorists of low structure clearances. If the clearance is less than 14' 9", the sign shall be mounted over the roadway on the structure. The actual clearance is normally shown on the sign to the nearest inch not exceeding the actual clearance.





TERMINAL AND CURBSIDE SIGN TYPE FAMILY

The Sign Family for the terminals and curbside will include but not be limited to the following sign types:

Overhhead Directional Signs
- Illuminated
- Non-Illuminated

Cantilever Curbside Identification Signs

Wall Mounted Directional Signs
- Illuminated
- Non-Illuminated

Wall Mounted Plaques
- Information Signs
- Identification Signs
- Regulatory Signs

Gate Signage
- Flag Mounted Identification at Corridor
- Over-door Wall Mounted Identification
- Jetbridge Gate Number Identification
- Deplaning Directional Signage

Typical Concourse Signage
- Flag Mounted Identification
- Floor Mounted Directional Pylon

TERMINAL AND CURBSIDE SIGN TYPE FAMILY - DIRECTIONAL SIGNS

Directional signs use arrows to direct users to one or more destinations.

Each directional sign can have one or more destinations on it. The arrow should never point toward the text; it must precede left hand messages and succeed right hand messages. When a sign panel has left, center and right messages and the center message indicates direction either ahead or ahead and to the left, this message should maintain the spacing parameters of a left message; a right message format should only be utilized in the center panel if the direction indicated is ahead and to the right.

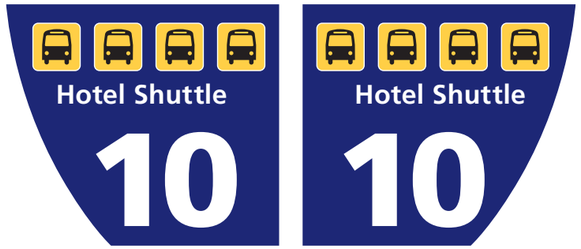
As a guideline, each directional arrow and associated group of destinations should have its own column. In cases of limited width, multiple directions may be combined vertically in the same signbox, separated by a thin white line of 1/4" thickness as shown in the example to the left.

TERMINAL AND CURBSIDE SIGN TYPE FAMILY - IDENTIFICATION SIGNS

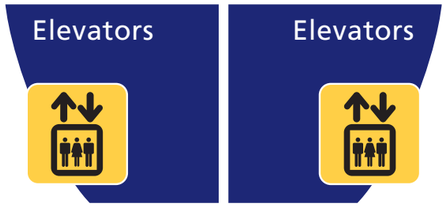
The following layouts represent standards for identification signs in the terminal and curbside areas at Oakland International Airport.

The minimum horizontal clearance for all signs is two feet. This clearance is measured from the face of curb/shoulder edge to the edge of the sign panel.

Gate Identification
Flag Mounted Signs



Bus Shelter
Flag Mounted Signs



Elevator Identification
Flag Mounted Signs

Telephone Identification
Flag Mounted Signs

Room Identification
Wall Mounted Signs

Gate Identification Over-Door
Wall Mounted Signs

Curbside Identification Signs

Jetbridge Gate Number Identification Sign

TERMINAL AND CURBSIDE SIGN TYPE FAMILY - PYLON DIRECTIONAL SIGNS

The following layouts represent standards for pylon directional signs in the terminal and curbside areas at Oakland International Airport.

TERMINAL AND CURBSIDE SIGN TYPE FAMILY - DIRECTORIES

Directories are used to provide an overview of destinations at major decision points, showing where airlines can be found, specific check-in and ticketing counters, gates, concessions, etc.

Directories can also be used to indicate airline clubs, elevator levels, etc.

Directories should be illuminated. Since airlines change their locations frequently, the directories will need to be easily changed as well.

With the use of arrows, directories can double as secondary directional signs.

The configuration and detailing of the directories will recall the detailing for the wayfinding signs.

DIRECTORY MAPS

The orientation of the directory map should be from the user's point of view. For example, if the user is looking south, the southern orientation, should be at the top of the sign, and if the user is facing north, the northern orientation should be at the top of the sign. It is also recommended for all directories to be oriented either north and south only or east and west only. This way the map will be either vertical or horizontal in all locations, saving cost on design and application.

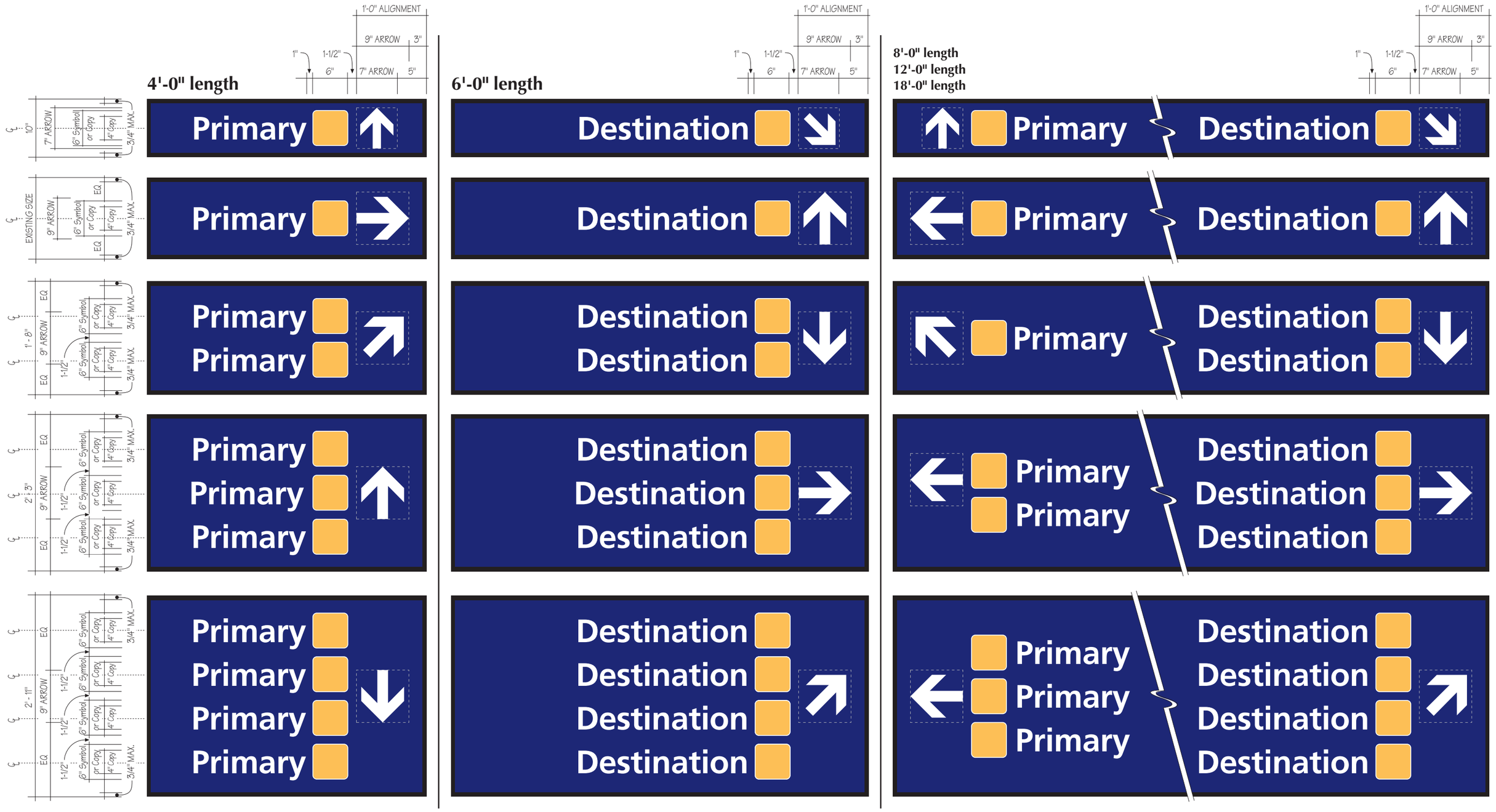
The locations chosen for the Directory Map displays should be perpendicular to the major adjacent traffic flow to increase visual accessibility. The locations should also be chosen so that the user of the map and the directory unit itself does not interrupt or slow down passing traffic. The map is more likely to be properly used if the user feels comfortable stopping to look for the required information.

The primary function of the maps will be the display of wayfinding information and destinations. Location of other services offered related to the terminal concessions will be a secondary priority in the overall information hierarchy.

Map configurations should be developed based on the directory cabinet and architectural context. The footprint of the building for which the map is designed will determine orientation with in the cabinet. Map graphics will be designed for readability at normal reading distance of 18 inches. No copy on the map will be smaller than 24 point type or 1/4 inch. Symbols used on the map to identify services and destinations such as restrooms and gates should match the symbols used on the wayfinding sign system and be displayed at 1/2 inch or larger. A hierarchy of relationships between wayfinding destinations and concession information will be developed so the more important information is clearly dominant on the map. Color coding of destinations and categories may be used keeping in mind that the colors will need to be primary to assure clear distinctions between colors and that the number of colors must be kept low.

The methods for producing the map may vary. The selected method should allow for either cost effective replacement due to changes in services and in building layout.

LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR DIRECTIONAL SIGNS



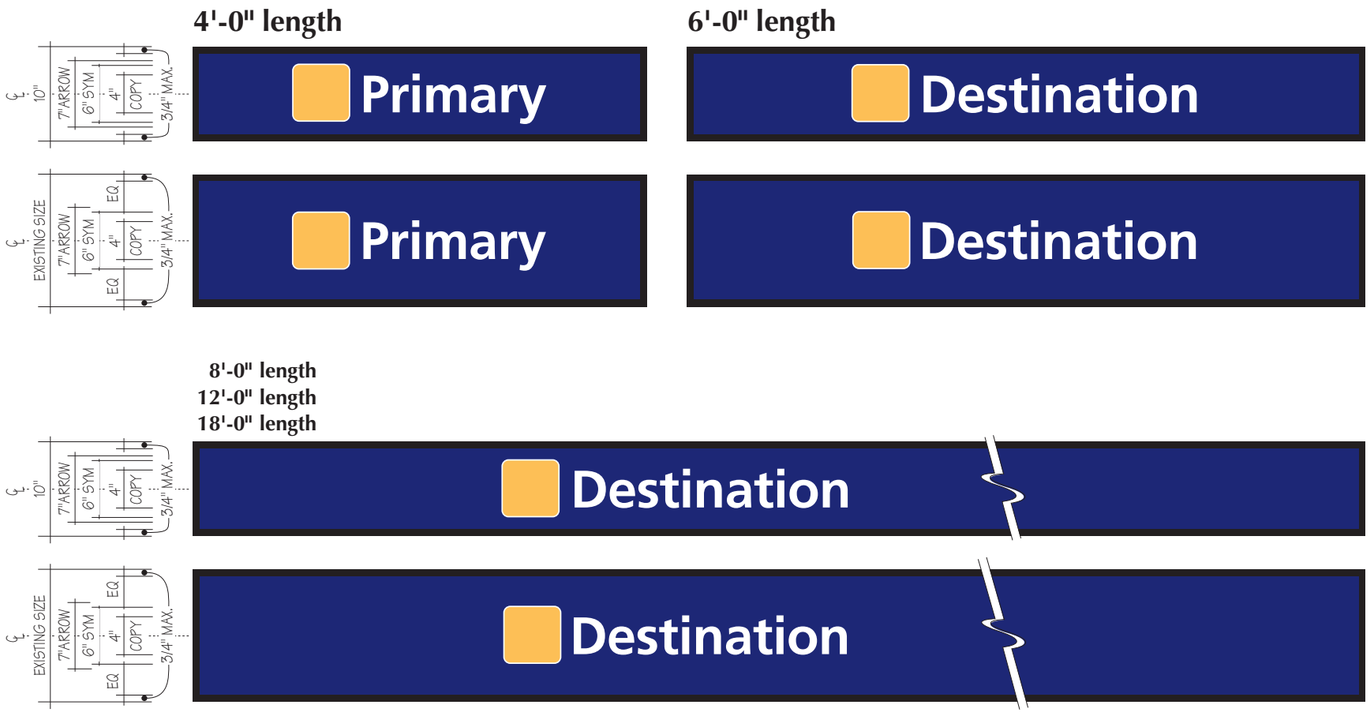
LAYOUT STANDARDS - HEIGHTS & WIDTHS FOR NON-DIRECTIONAL SIGNS

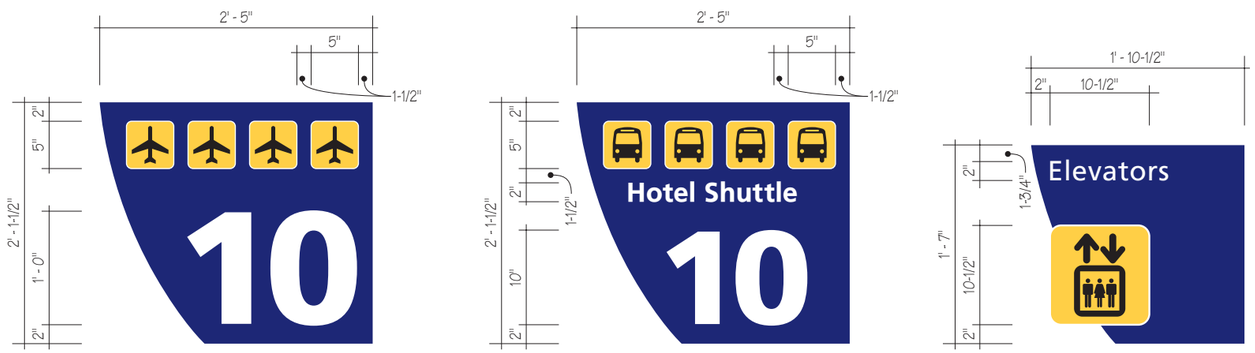
For signs without an arrow, such as location signs, the message should be centered vertically and horizontally. Directory signs where multiple destinations are listed, the message should be left aligned, starting at the top left of the sign.

The alignment of signs with directional arrows is addressed in section C3.

An exception to the above are “flag" mounted signs, such as gate numbers along the corridor. The alignment of the message will be away from the mounting hardware. For example, if you are looking at the sign and the hardware is at the left, the message will be
right aligned starting at the top right of the signface. When the hardware is at the right, the message will be left aligned starting at the top left of the signface.

Wall mounted signs over doors can also be an exception where the alignment should correspond with the actual location of the destination.





TYPICAL SIGN APPLICATION EXAMPLE CURBSIDE

Curbside standards provide identity and directional functions for both departing and arriving passengers.

Departing passengers require information related to the location of airline ticketing/check-in counters. Airline identity signs will be located overhead along the public curbside to draw traffic to the proper entries in to the terminal. Vestibules will name the terminal and function inside the building and will not list airline names.

Opportunities will exist over the terminal roadway along the terminal frontage. Signs located over the roadway will function as additional airline identity signs and assist in sorting traffic to the proper curbside area.

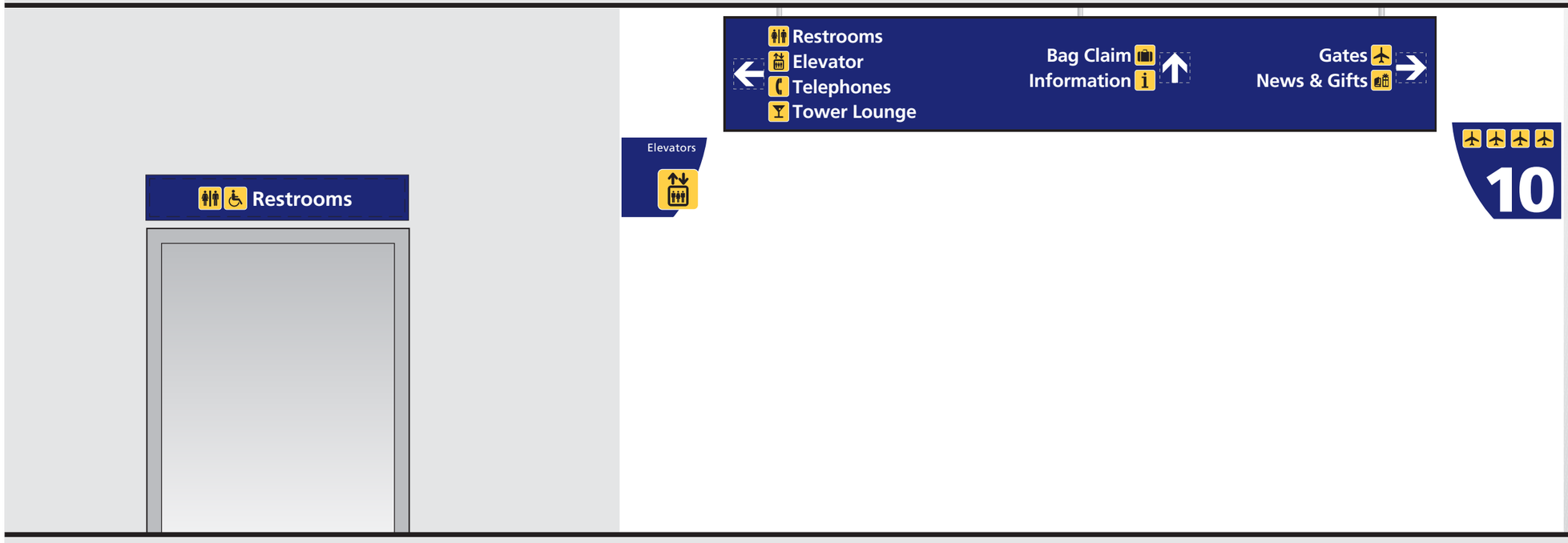
Arriving passengers will be directed from the building to the various public and commercial curb destinations with overhead directional signs taken from the terminal sign type family.

TYPICAL SIGN APPLICATION EXAMPLE TERMINAL

Terminal signage has been developed to allow flexibility in meeting the contextual constraints of the existing architecture and to assure adherence to these standards when programming and design are undertaken for future renovation, expansion and construction. The terminal sign family standards will allow for the consistent display of wayfinding information regardless of sign box detailing or architectural configuration.

Whether ceiling or wall mounted, illuminated or not, the sign face layouts can be formatted to emulate the initial installations.

Sign types are described for the basic needs of the terminal. Shape and size of the sign types will finally be determined by the design as the physical elements around a sign's location are fully understood.



SECTION E

Typical Sign Fabrication Concept Details

TEMPORARY SIGNS

The Airport undergoes ongoing maintenance, renovation and modification. This will require the use of temporary signs for wayfinding. In order to maintain consistent use of terminology and maintain sign standards, all temporary signs shall be designed to comply with this standard unless noted otherwise. However, the construction of these signs may differ inorder to control cost and provide a scheduling flexibility.

TERMINAL
If the signs are to be used for a limited duration, the use of alternative sign materials can be considered and are summarized below.

DURATION OF SIGN	*FABRICATION MATERIAL*	*BOARD THICKNESS*	*GRAPHIC APPLICATION*
< 7 days	High Density Foam Board	1/8"	Vinyl
7 days - 3 months	High Density Foam Board	1/8"	Vinyl
3 - 6 months	High Density Foam Board	1/4"	Vinyl
> 6 months	High Density Foam Board	1/4"	Vinyl

ROADWAY
If the signs are to be used for a limited duration, the use of alternative colors and/or materials can be considered and are summarized below.

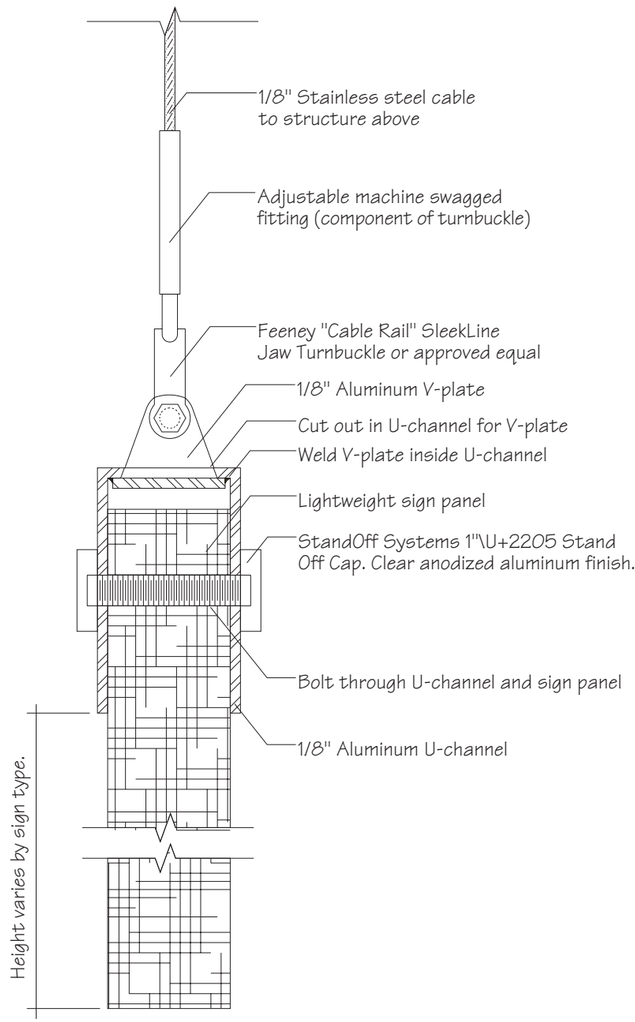
DURATION OF SIGN	*BACKGROUND COLOR*	*REFLECTIVE SHEETING*	*3M DIAMOND GRADE*	*CLEAR OVERLAY*
< 7 days	Can be orange	Yes	Not necessary	Not necessary
7 days - 3 months	Comply with standards	Yes	Not necessary	Not necessary
3 - 6 months	Comply with standards	Yes	Necessary	Not necessary
> 6 months	Comply with standards	Yes	Necessary	Necessary

ROADWAY SIGNAGE TYPICAL FABRICATION DETAILS

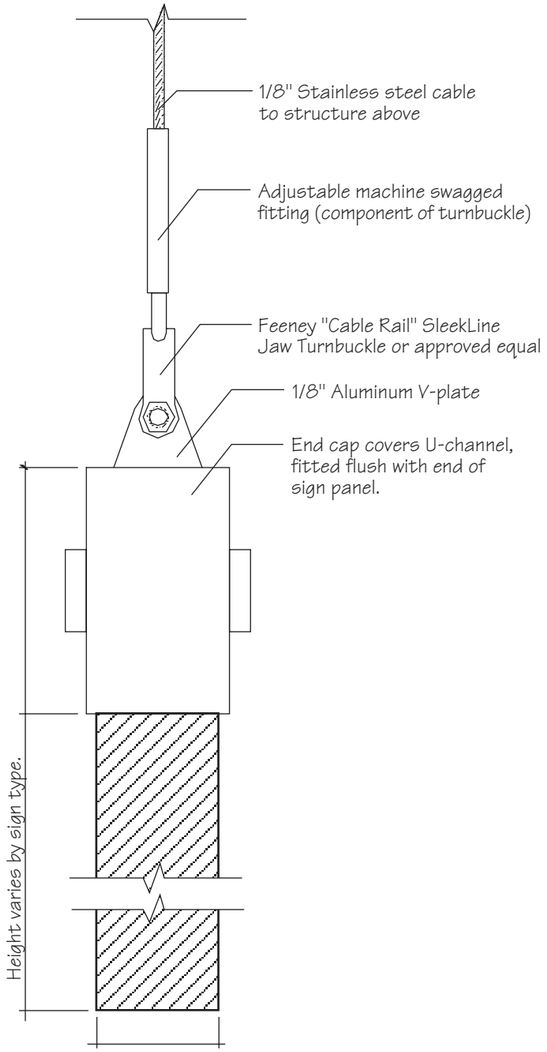
The fabrication details for the roadway signage at Oakland International Airport will follow the standards set by the California Department of Transportation.

PARKING GARAGE SIGNAGE TYPICAL FABRICATION DETAILS

The fabrication details shown on this sheet are conceptual detailing only, and represent the design intent for the parking garage signage at Oakland International Airport.



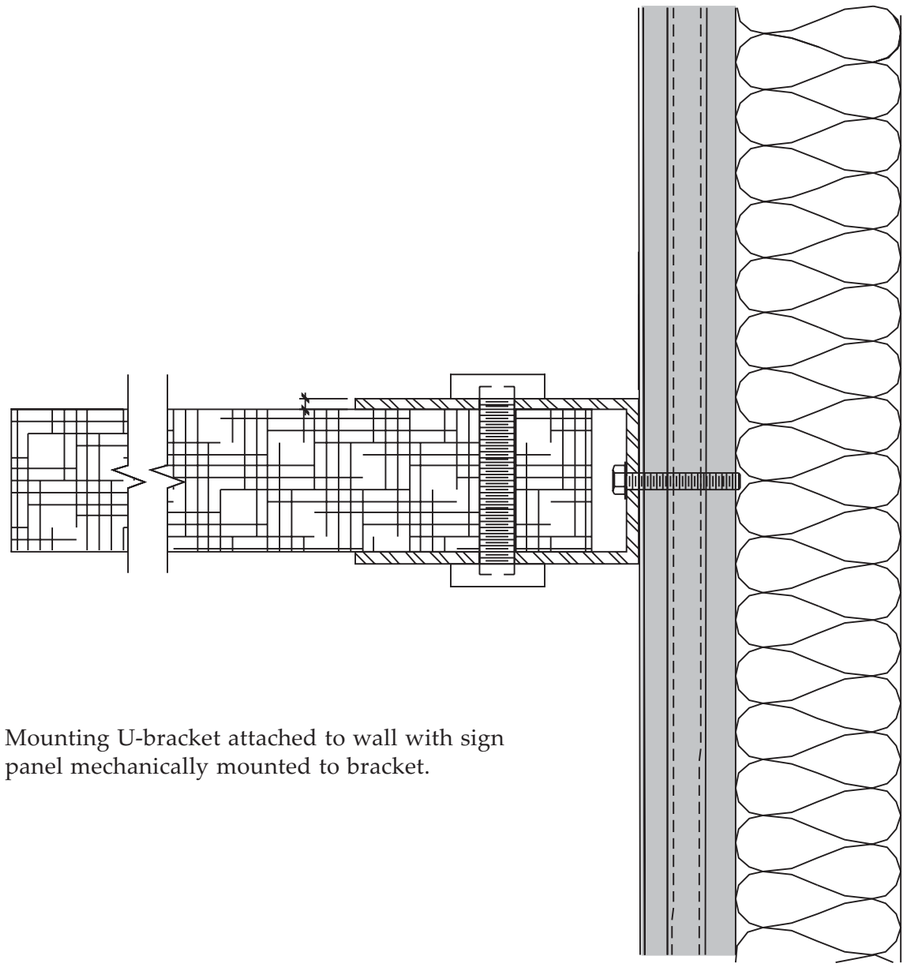
Overhead Non-Illuminated Signs Section View



Overhead Non-Illuminated Signs Side View

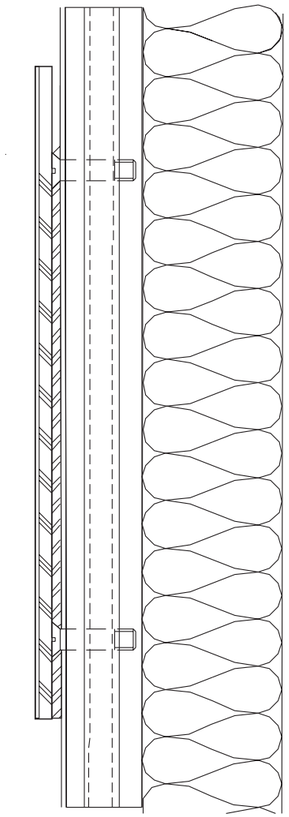
PARKING GARAGE SIGNAGE TYPICAL FABRICATION DETAILS

The fabrication details shown on this sheet are conceptual detailing only, and represent the design intent for the parking garage signage at Oakland International Airport.



Mounting U-bracket attached to wall with sign panel mechanically mounted to bracket.

Flag Mounted Signs Top Section View



Sub-surface screen printed acrylic panel laminated to 1/4" thick acrylic backer, mechanically mounted to wall.

Wall Mounted Acrylic Signs Side View

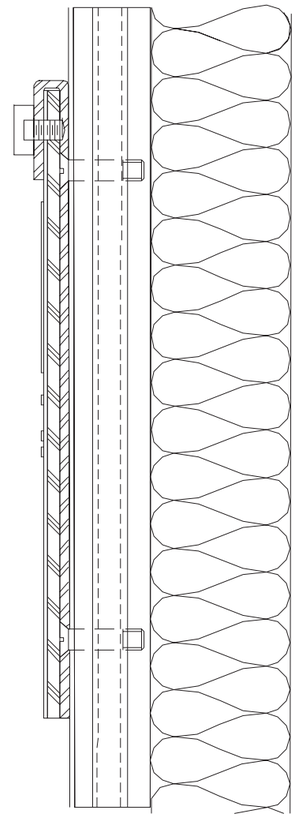
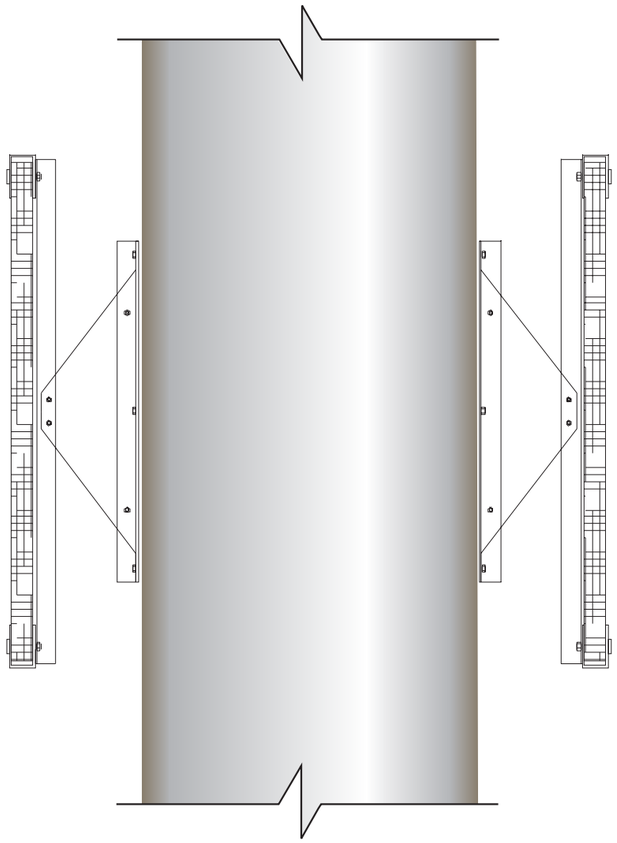


Photo-polymer panel laminated to 1/4" thick acrylic backer, mechanically mounted to wall.

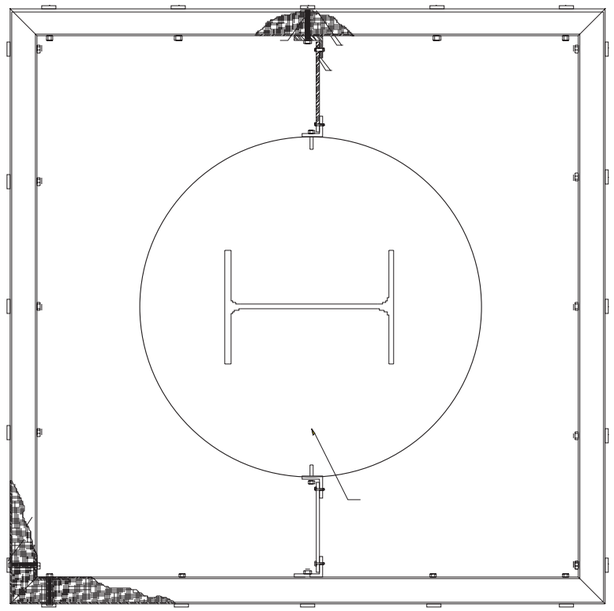
Wall Mounted Tactile Signs Side View

PARKING GARAGE SIGNAGE TYPICAL FABRICATION DETAILS

The fabrication details shown on this sheet are conceptual detailing only, and represent the design intent for the parking garage signage at Oakland International Airport.



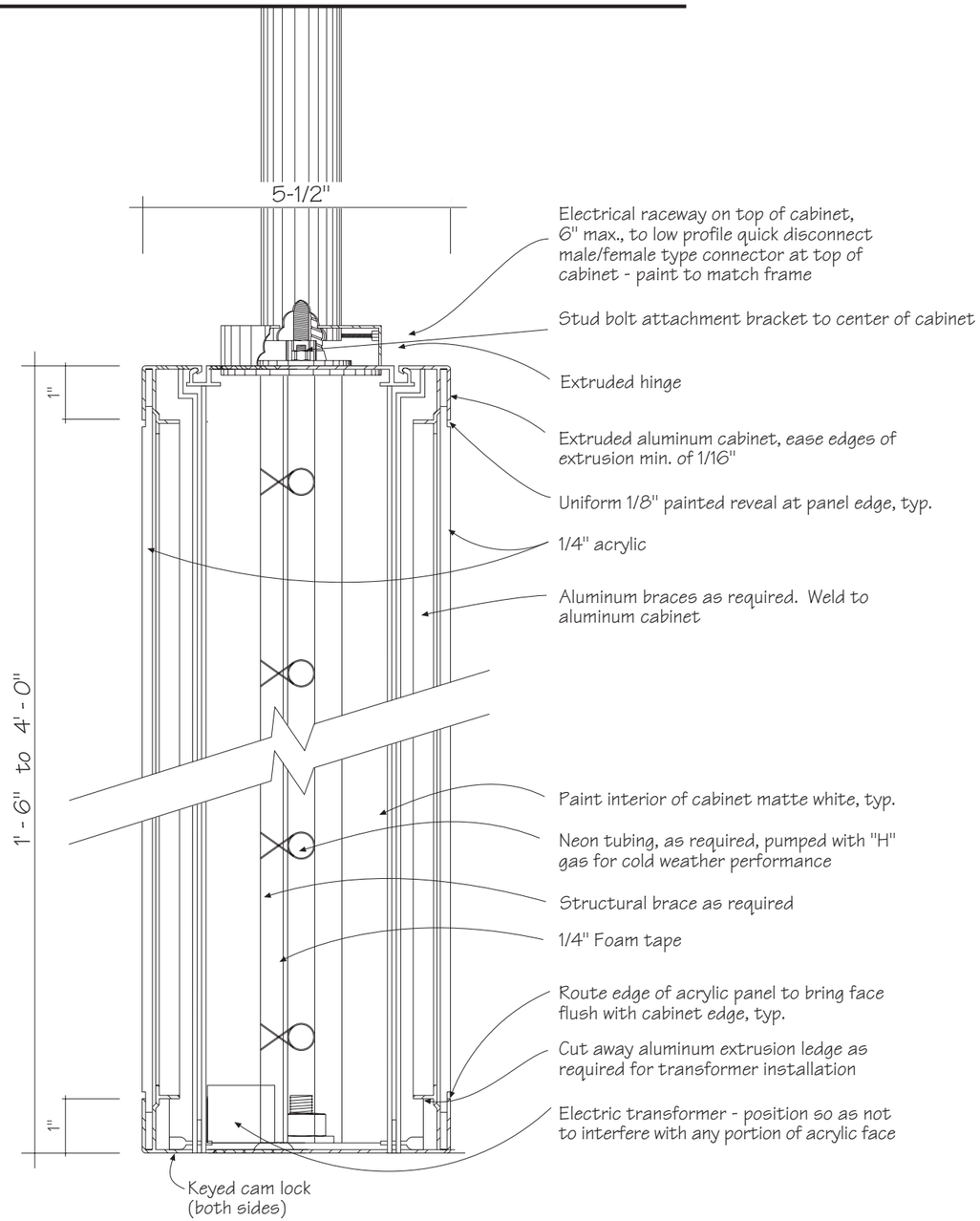
Column Mounted Wrap Signs
Section View



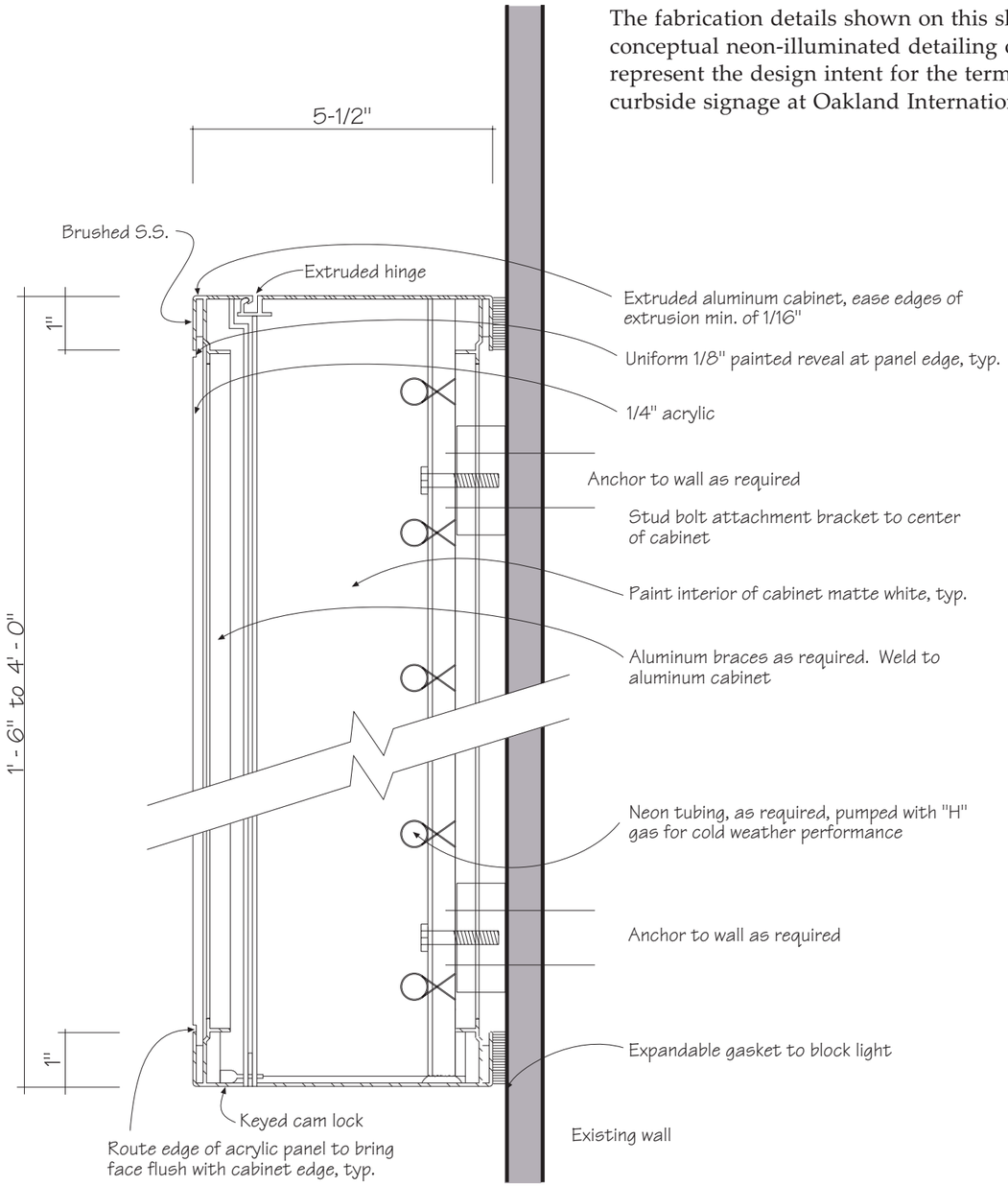
Column Mounted Wrap Signs
Plan View

TERMINAL AND CURBSIDE SIGNAGE TYPICAL FABRICATION DETAILS

The fabrication details shown on this sheet are conceptual neon-illuminated detailing only, and represent the design intent for the terminal and curbside signage at Oakland International Airport.



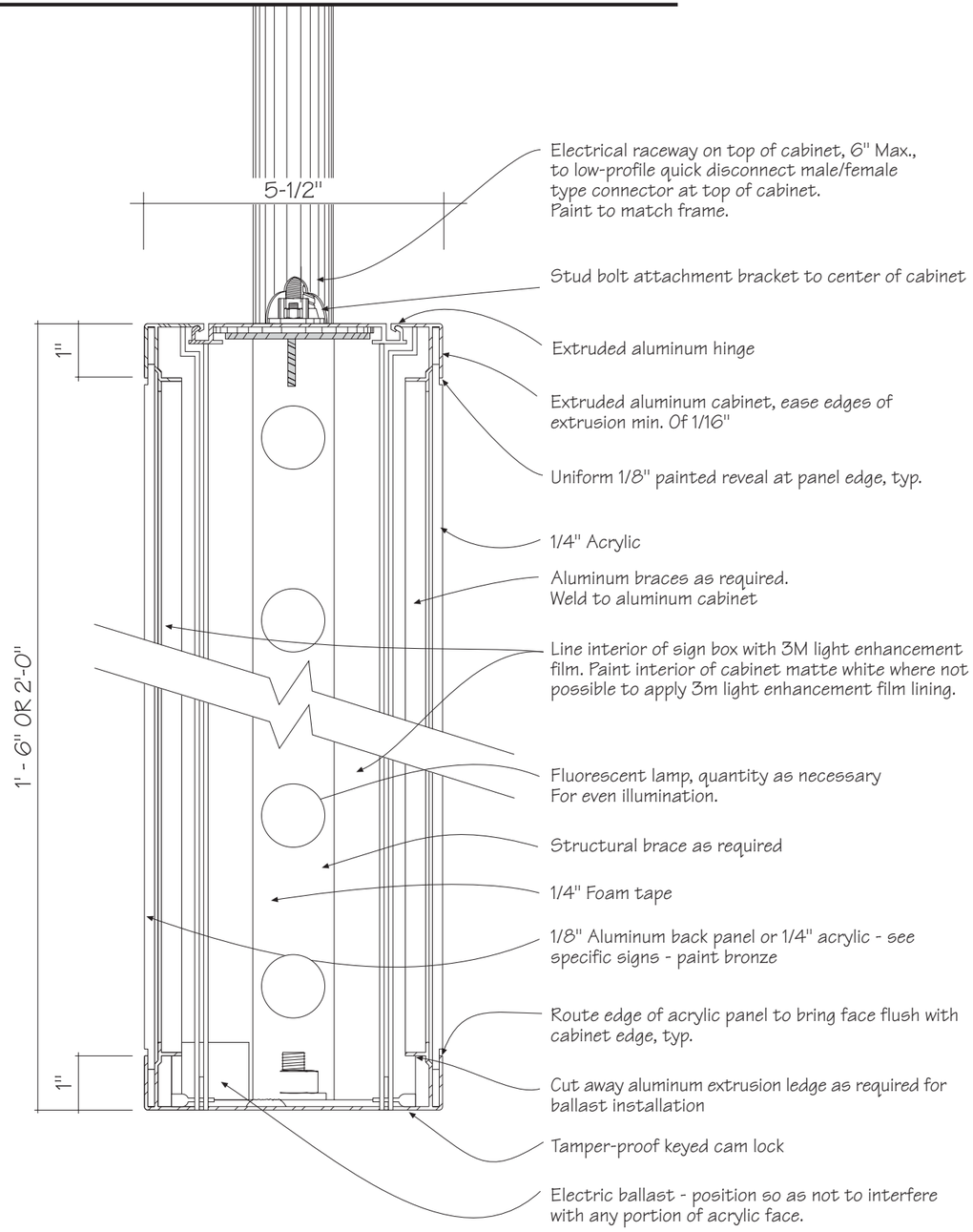
Overhead Neon-Illuminated Signs Section View



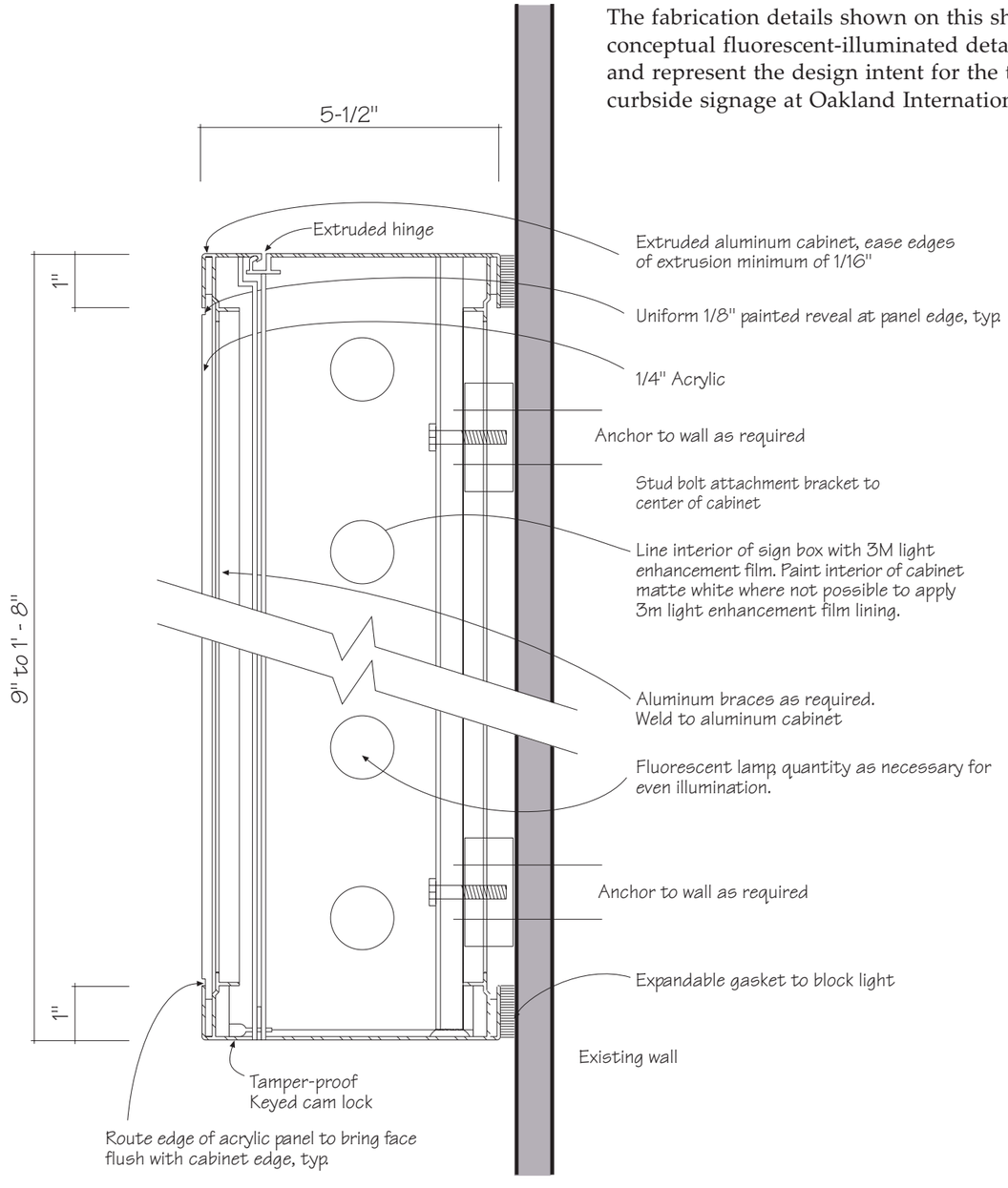
Wall Mounted Neon-Illuminated Signs Section View

TERMINAL AND CURBSIDE SIGNAGE TYPICAL FABRICATION DETAILS

The fabrication details shown on this sheet are conceptual fluorescent-illuminated detailing only, and represent the design intent for the terminal and curbside signage at Oakland International Airport.



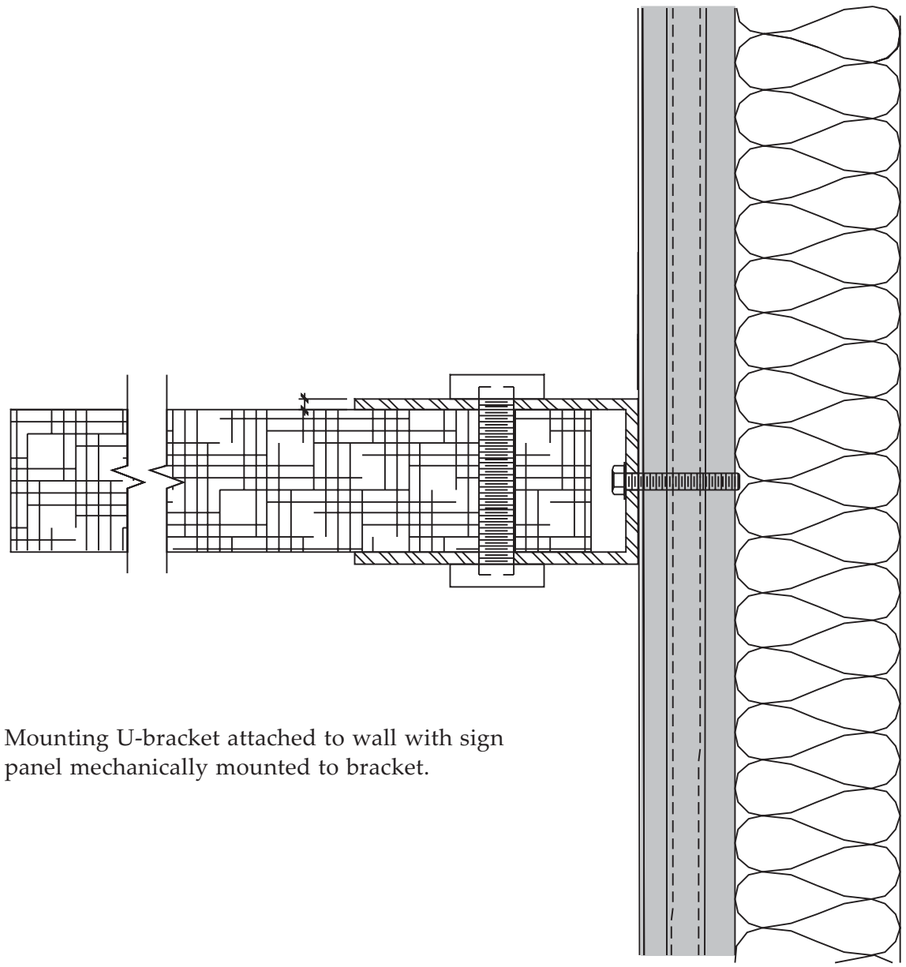
Overhead Fluorescent-Illuminated Signs
Section View



Wall Mounted Fluorescent-Illuminated Signs
Section View

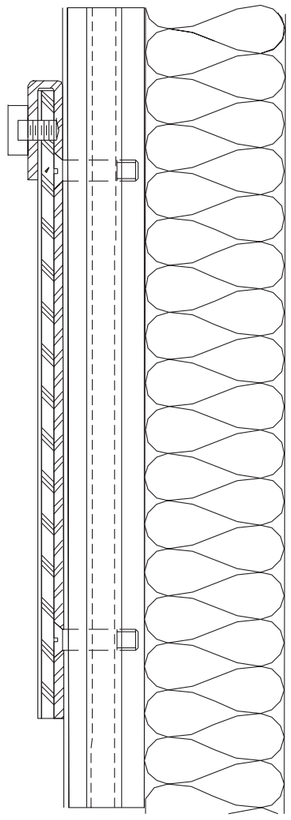
TERMINAL AND CURBSIDE SIGNAGE TYPICAL FABRICATION DETAILS

The fabrication details shown on this sheet are conceptual non-illuminated sign detailing only, and represent the design intent for the terminal and curbside signage at Oakland International Airport.



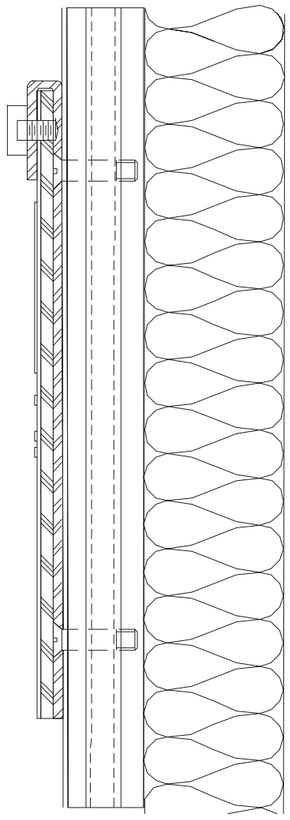
Mounting U-bracket attached to wall with sign panel mechanically mounted to bracket.

Flag Mounted Signs Top Section View



Mounting bracket attached to wall with sub-surface screen printed acrylic panel inserted into top band. Panel to be attached to brack with mechanical mount at top and foam tape at bottom.

Wall Mounted Acrylic Signs Side View

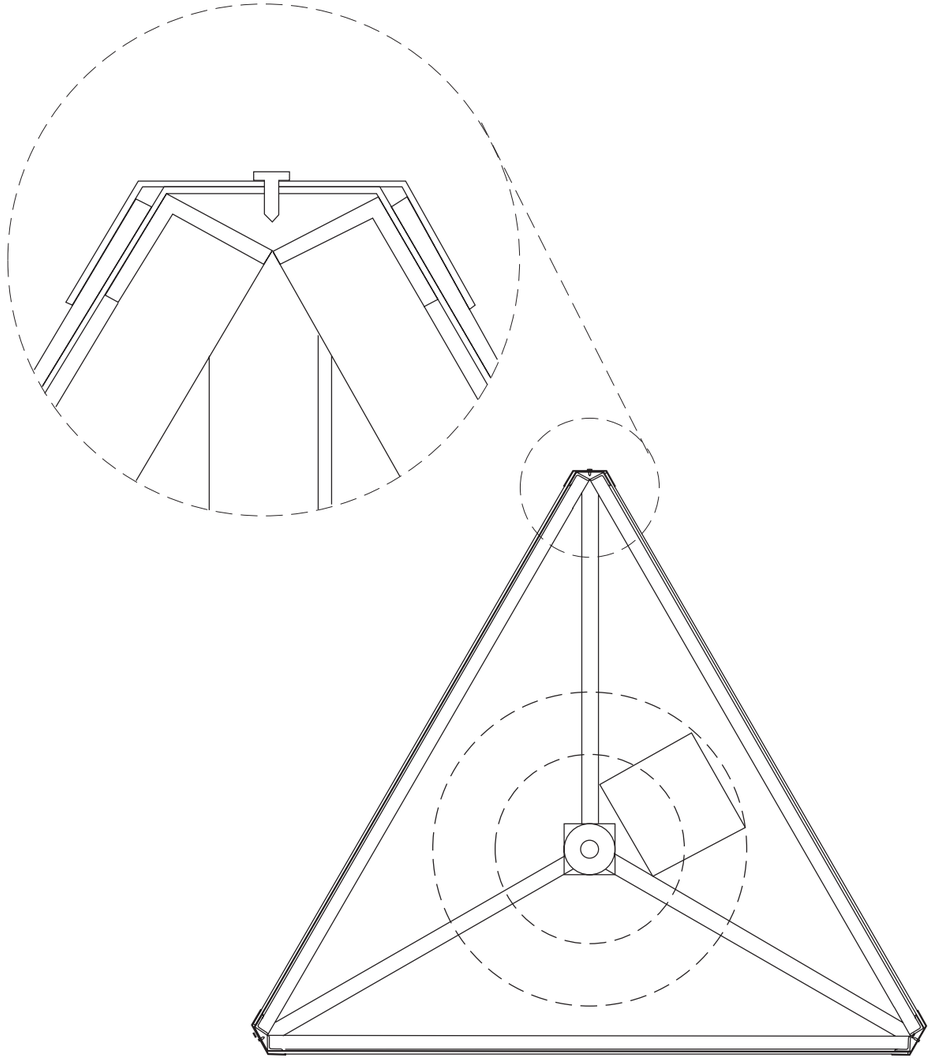


Mounting bracket attached to wall with photo-polymer tactile panel inserted into top band. Panel to be attached to brack with mechanical mount at top and foam tape at bottom.

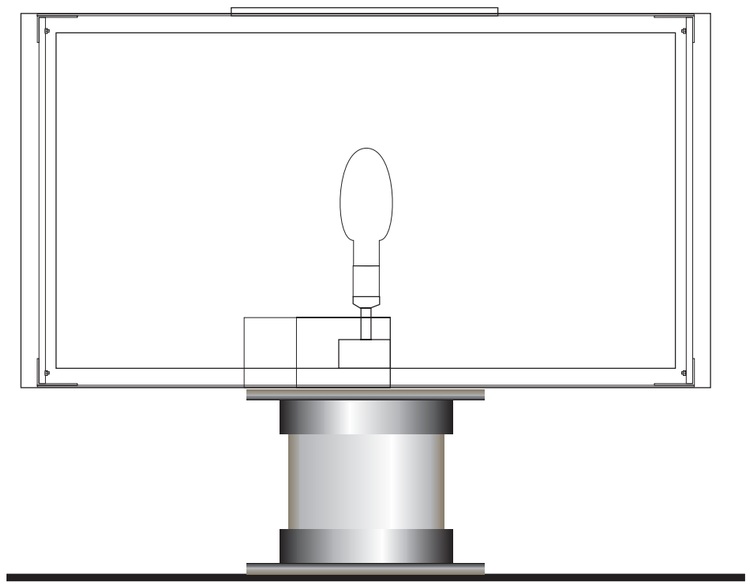
Wall Mounted Tactile Signs Side View

TERMINAL AND CURBSIDE SIGNAGE TYPICAL FABRICATION DETAILS

The fabrication details shown on this sheet are conceptual non-illuminated sign detailing only, and represent the design intent for the terminal and curbside signage at Oakland International Airport.

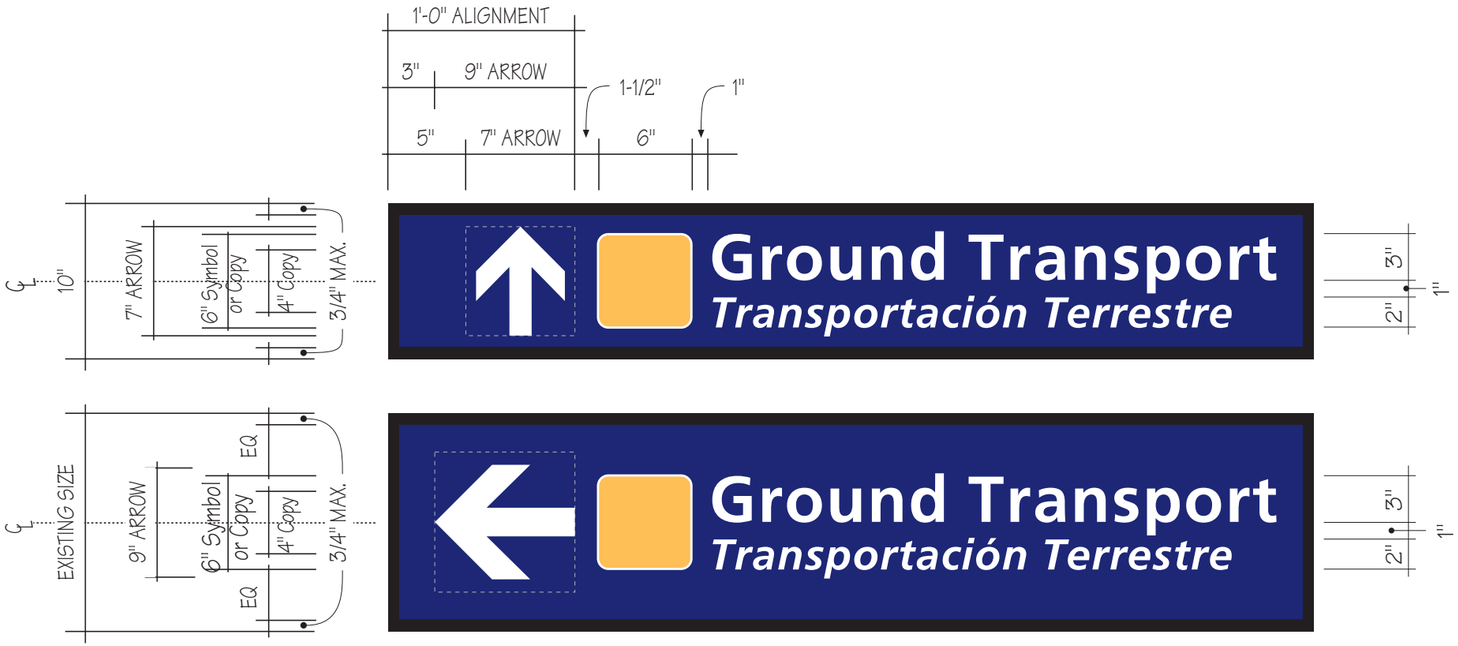


Jetbridge Gate Identification Sign Plan View



Jetbridge Gate Identification Sign Section View

Appendix



Multilingual Message Sign Layout Standards

MULTILINGUAL MESSAGES - SIGN LAYOUT STANDARDS

When determined necessary, the signs may have multilingual messages.

The english copy will be 3" high and aligned at the top of the corresponding symbol.

The foreign language will be 2" high and it's baseline will be aligned with the bottom of the symbol.

This will leave a remaining 1" space between the foreign language message and the baseline of the english message.

The standard arrow and symbol relationships established in Section D4 will also be used for any sign requiring multilingual messages.

Sample Application Of Multilingual Message Sign Layout Standards

Room Identification
Wall Mounted Signs

PRIMARY ENPLANING MESSAGES:

- Terminal 1
- Terminal 2
- Ticketing / Check-in
- Gates
- Restrooms
- Security Check Point
- International Departures
- Charter Departures
- Elevator
- Escalator

SECONDARY ENPLANING MESSAGES:

- Men
- Women
- Telephones
- Information
- Restaurants
- Shops
- ATM
- Currency Exchange
- Business Center
- Airline Clubs

PRIMARY DEPLANING MESSAGES:

- Bag Claim
- Restrooms
- Ground Transport
- Parking
  - Daily Parking Lot A
  - Daily Parking Lot B
  - Hourly Parking
  - Economy Parking
- Meeting Place
- Gates
- Elevator
- Escalator

SECONDARY DEPLANING MESSAGES:

- Men
- Women
- Telephones
- Rental Cars
- Shuttles
- Courtesy Shuttles
- Taxi
- Air-Bart
- Vans
- Limos
- Information
- Restaurants
- Shops
- ATM
- Currency Exchange
- Business Center

TERTIARY MESSAGES:

- On-Airport Parking Shuttle
- Off-Airport Parking Shuttle
- Hotel Shuttles
- Valet Parking
- Door-to-Door Shuttles
- Scheduled Shuttle Services
- Charter Buses
- Travel Insurance
- Nursery / Changing Room
- Baggage Lockers
- Stairway
- Data Port
- Duty Free
- Lost and Found

NOMENCLATURE - STANDARD TERMINOLOGY

A uniform hierarchy of messages and information throughout the airport terminal complex is necessary for a successful information system. By consistently using standard terminology, one is able to categorize the messages into three levels: primary, secondary, and tertiary. These three levels of classification relate to the various functions occurring simultaneously in any given airport facility.

Clear and concise information presented by either “primary” or “secondary” sign systems greatly improves the efficient passenger flow, both on the roadway and within the terminal. Secondary and tertiary signing must be coordinated with primary signs and interior design elements. They are often distinguished from primary messages by various graphic methods.

Care in developing this system for organizing information is critical to the success of any sign program. Two successful methods for determining a hierarchy of information are:

1) the use of larger character heights for primary information, or,
2) a total separation of the type or classification of information from one sign panel to the next.

Both techniques are successful in airports that consistently implement and maintain either one or the other of these two methods.

NOTE:
Other specific terms related to the airport location, local services, intermodal operations and facilities may need to be incorporated into one of the three basic categories. While these terms may not be needed for the existing facility, they may be required in the long term planning process for future growth and expansion.

NOMENCLATURE - SPELLING GUIDELINES

1. All text is spelled in lower case letters except:
   a. The first word (initial) of a sentence, e.g.:
      USE: Thank you for visiting.
      NOT: Thank You For Visiting.

   b. The initial of each work of a proper name or noun, e.g.:
      Holiday Inn
      International Terminal

   c. The initial of standard terminal terminology, e.g.:
      Restrooms
      Elevator
      Escalator
      Exit

   d. Each noun of compound terminal terminology, e.g.:
      Bag Claim
      Car Rental
      All Gates

   e. Alphabetical names of sections, areas, etc.:
      Gates A, B
      Gates A1-A54

2. All capitals are used for abbreviated names:
   OAK
   ATM
   TDD

3. Abbreviations are to be avoided, especially for international patrons. However, if certain abbreviations are required in case of space limitations, they will be added accordingly in this Airport Standard Nomenclature.

4. Hyphens are sometimes used to bind a preposition to a specific verb:
   Check-in (counter)

   If a hyphen is used, the second word has no initial capital. There are no specific rules for the use of hyphens in compound words, so the dictionary reigns here as it is not included in the list of standard airport terminology.

NOMENCLATURE - SPELLING AND PUNCTUATION

5. Ampersands and punctuation marks.
   a. The Ampersand (&) can only be used to indicate two combined related services:
      Ticketing & Check-in

   b. For a continuous series the use of "-" should be used.
      Gates A1-A35

   c. If more than two services are combined or for enumerations, a comma should be used:
      Gates A, B
      Check-in 1, 6, 12

   d. In all other cases "and" should be used:
      Lost and Found

   e. The use of slashes (Check-in / Ticketing) should be reserved for specific applications only when space is restricted.

* All references to Gates and their numbers are for illustration purposes only in this submittal. The next submittal will include references true to the terminal.