

# Transit-Oriented Development Wayfinding Master Plan

## Phase 2 Design and Documentation



December 13, 2021

City and County of Honolulu,  
Department of Planning and Permitting

TWO TWELVE PBR HAWAII

# PROJECT OVERVIEW

## Transit-Oriented Development Wayfinding Master Plan Phase 1 Planning

City and County of Honolulu,  
Department of Planning and Permitting

TWO TWELVE  
TRANSITSCREEN  
PBR HAWAII  
July 17, 2019

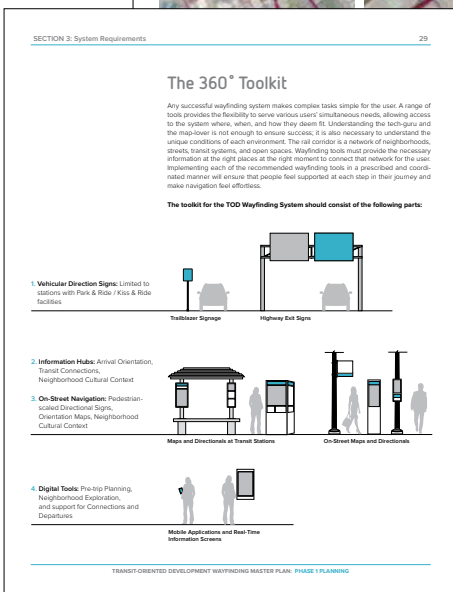
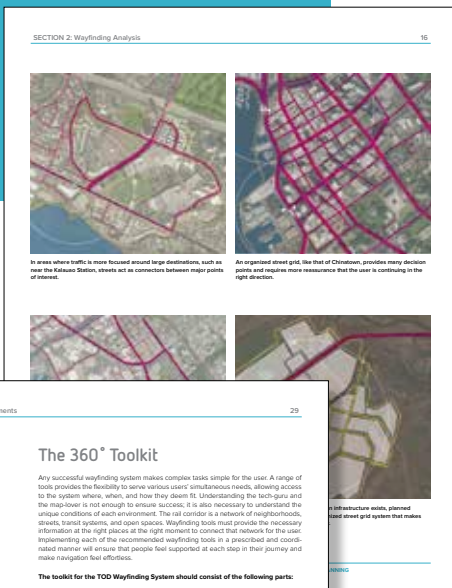
In 2018, the City and County of Honolulu Department of Planning and Permitting (DPP) engaged Two Twelve, together with PBR Hawai'i and TransitScreen, to develop a wayfinding master plan to support the transit-oriented development (TOD) goal of creating a more sustainable future for O'ahu by increasing the number of people who live, work, and visit within a short walk of transit. Wayfinding contributes to this goal by creating a seamless experience between all transportation modes, making it easy and desirable for people to walk, bike, and/or use public transit. By encouraging walking and wheeling as mode choices, wayfinding empowers residents to explore neighborhoods, contributing to their vitality and boosting local economies by increasing foot traffic in front of businesses. Walking also leads to improved public health and reduces vehicular congestion and air pollution, further contributing to sustainability goals.

The Wayfinding Master Plan is a multi-phase project. In 2019, the team completed Phase 1 with a Planning Report that included a system analysis and strategy for rolling out coordinated static and digital wayfinding tools. It provided foundational recommendations based upon an in-depth analysis of the rail station areas and the surrounding communities as well as wayfinding best practices. It considered the unique rider experience during the phased opening of the rail line and the opportunities for pedestrian wayfinding to contribute to both ridership and the development of the enhanced neighborhoods.

The Planning Report concluded that a strategic roll-out of signs planned to ensure complete paths of travel for pedestrians was required. By deploying signs in a wide area of a given neighborhood, rather than the installation of a single sign at a time, the City can build a reliable and trustworthy source of information along the pedestrian network on public lands. Ideally, this system would be expanded by linking into pedestrian networks created by private developers and destinations. For this to be a seamless user experience, these entities would be required to utilize standards set by the City's system.

The Phase 1 report proposed a "First Roll-Out" scenario to address the information needs of rail users for the first stations that come on-line from East Kapolei to Aloha Stadium. It also describes the benefit of providing pedestrian wayfinding improvements in select neighborhoods in the urban core ahead of the completion of the rail as part of this roll-out strategy.

Phase 2 included more detailed design and planning of signage and delivery of complete packages for the City's use in procurement of the proposed strategic roll-out. During this phase, Two Twelve worked with the DPP TOD Division and staff from the Department of Transportation Services, Department of Facility Maintenance, Department of Information Technology, and the Honolulu Authority for Rapid Transportation (HART), to design the system components recommended by the Planning Report. The focus has been on the vehicular and pedestrian static signage components of the system, while the digital considerations are an on-going effort. This related effort to develop a digital wayfinding component, as outlined in the Planning Report, will be integrated with the design and functionality of the overall wayfinding system.



Pages from the Phase 1 Planning Report

The signage design has undergone multiple iterations of development and refinement, with review and input from stakeholders. Critical components of the design included the detailing of a flexible, additive system; the development of neighborhood base maps; and finalization of the destination inclusion and nomenclature. The work culminated with design intent documentation packages to support “First Roll-Out” projects for targeted areas that provide orientation within the immediate area outside of the first nine rail stations scheduled for service and more extensive pedestrian support within five of the more destination-heavy TOD neighborhoods.

The documentation packages include:

- Design Documentation and Sign Location Plans of Vehicular Trailblazers to Park & Ride / Kiss & Ride Stations (Kualaka’i, Keone’ae, Hō’ae’ae, Pouhala, Waiawa, Hālawā)
- Design Documentation of Pedestrian Wayfinding Signs
- Sign Location Plans and Messaging for 1-block area around Kualaka’i Station
- Sign Location Plans and Messaging for 1-block area around Keone’ae Station
- Sign Location Plans and Messaging for 1-block area around Honouliuli Station
- Sign Location Plans and Messaging for 1-block area around Hō’ae’ae Station
- Sign Location Plans and Messaging for 1-block area around Pouhala Station and within Waipahu Neighborhood
- Sign Location Plans and Messaging for 1-block area around Hālaulani Station
- Sign Location Plans and Messaging for 1-block area around Waiawa Station
- Sign Location Plans and Messaging for 1-block area around Kalauao Station and within Pearlridge Neighborhood
- Sign Location Plans and Messaging for 1-block area around Hālawā Station
- Sign Location Plans and Messaging for Downtown neighborhood (future Kuloloia Station)
- Sign Location Plans and Messaging for Civic Center neighborhood (future Ka’ākaukui Station)
- Sign Location Plans and Messaging for Kaka’ako neighborhood (future Kūkuluāe’o Station)
- Map Design Guidelines and Base Map Artwork for above neighborhoods

*The Phase 1 Planning Report is available at [www.honolulu.gov/tod/projects/planning-initiatives/wayfinding](http://www.honolulu.gov/tod/projects/planning-initiatives/wayfinding).*

*Private developers and other parties interested in the implementation of this plan may request more information about these packages from the DPP TOD Division at [tod@honolulu.gov](mailto:tod@honolulu.gov).*

Because a critical factor to a successful roll-out is in ensuring complete paths of travel for pedestrians, it is highly recommended that each of these packages be implemented in their entirety. It is also possible to gain efficiencies by combining packages, as described at the end of this document. Rough order of magnitude budgetary pricing has been developed for reference and implementation planning purposes. With these documents in hand, the City is well positioned to identify funding sources and begin a systematic roll-out of components as the rail stations come on line.

This Phase 2 Design Detail Report is a summary of the work undertaken to develop these packages and describes the System Design and its key design elements.

*This project was made possible with funding from Hawaii Department of Transportation (HDOT) Transportation Alternatives Program and Ulupono Initiative.*

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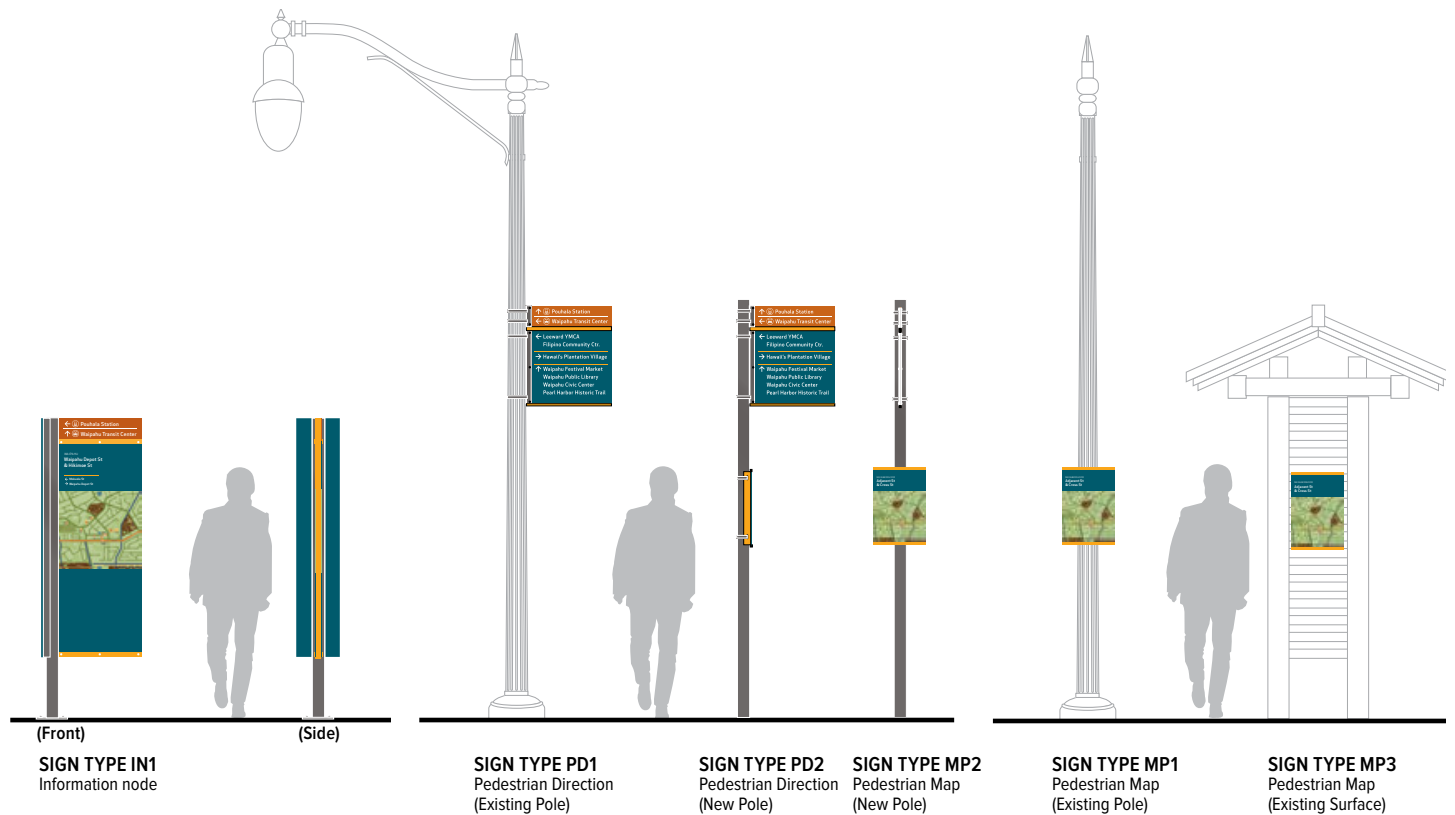
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# 1. UNIFIED AESTHETIC

Phase 1 of the Wayfinding Master Plan determined the need for a consistent information system with a single wayfinding graphic aesthetic that is unified across all neighborhoods. Maintaining standards and consistency allows people to move from one neighborhood to another, using one or multiple modes of travel, and intuitively know where to find directions to destinations or make transit choices. This is especially important in the denser urban neighborhoods where station area boundaries overlap and the system reads more as a single stream than individual station neighborhoods. With unified wayfinding tools, people transitioning from one neighborhood to the next, through any mode of travel, can easily follow the thread of information taking them to their destinations.

During Phase 2, the design team investigated form, colors, materials, typography, iconography, nomenclature and content hierarchy and to develop the unified aesthetic and information hierarchy for the TOD wayfinding sign types. Each component was studied to ensure the complete system employs an easy to understand hierarchy and achievable constructibility. The design aesthetic is key to imbuing a sense of place in the signage. For Honolulu specifically, this aesthetic is derived from a combination of sustainable thinking and cultural context.

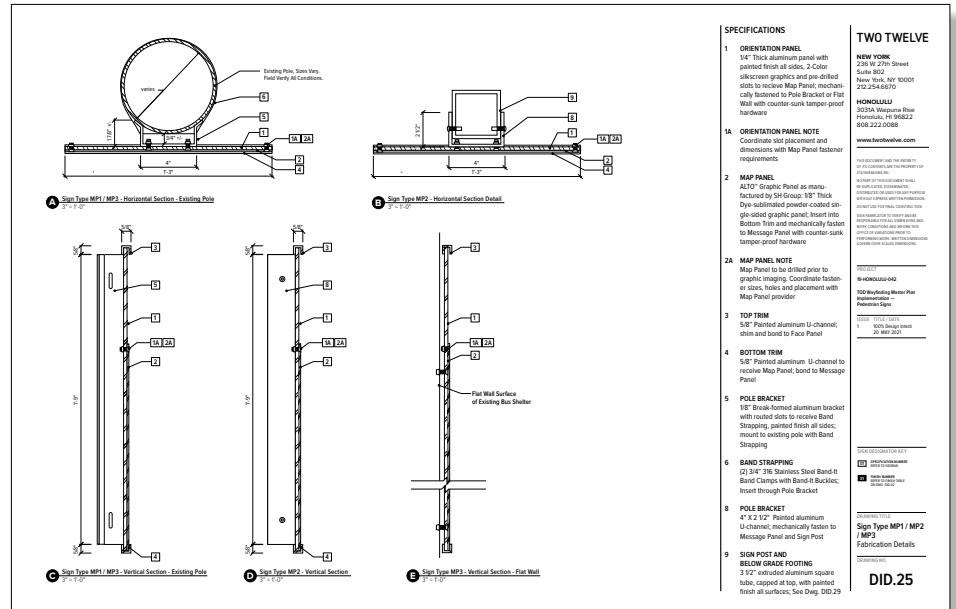
## TOD Wayfinding Pedestrian Sign System



**FORM**

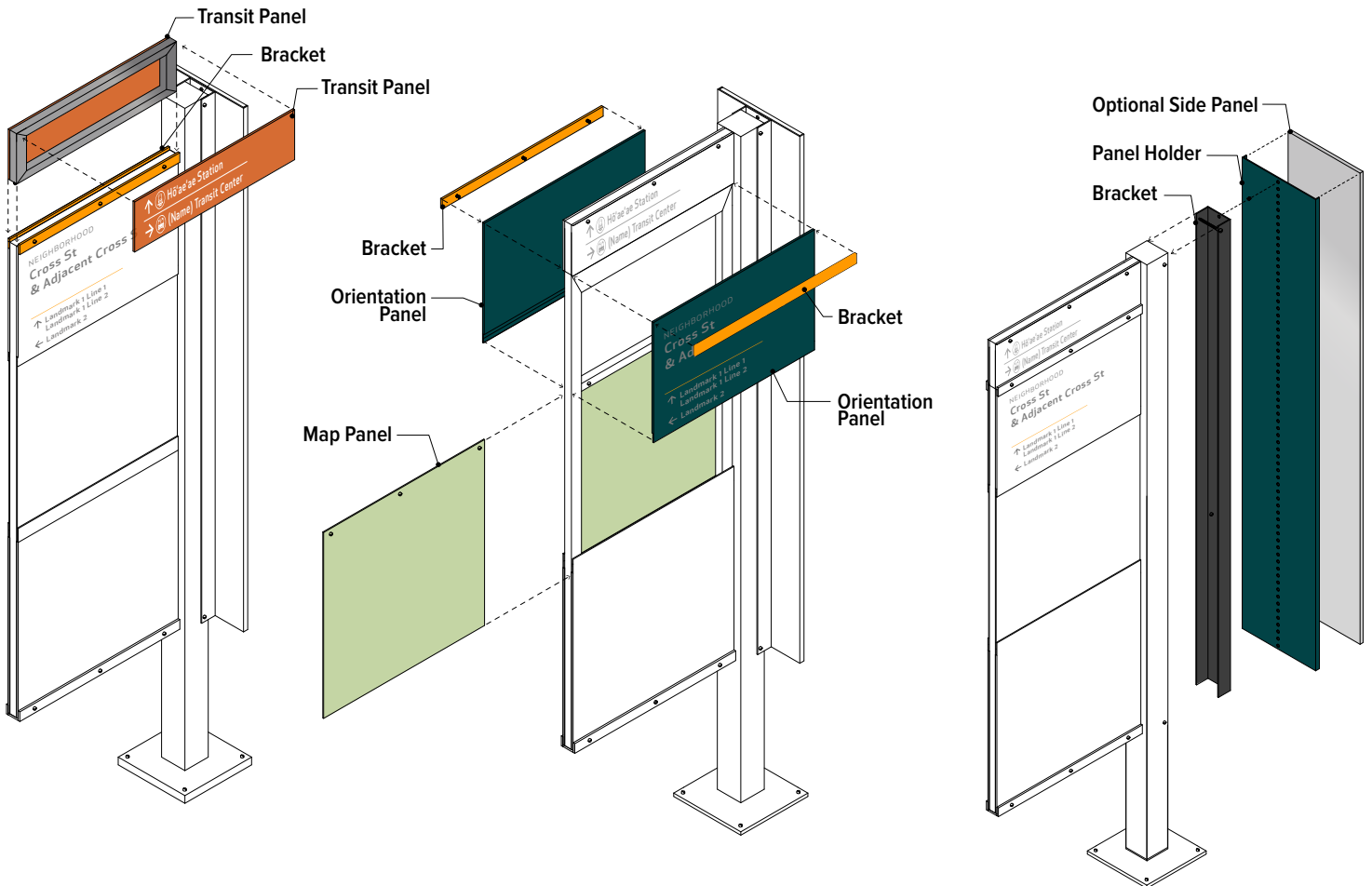
The final design is a post and panel system that can be constructed out of standard aluminum extrusions and panels. It is designed to use minimal materials with components capable of being fabricated on-island.

- Signs that include direction to transit are designed so that the **Transit Panel** can be “added-on” as rail stations come on line.
- **Map panels** are replaceable, making the system easy to update.
- Destination directional signs are designed to be installed onto existing street poles whenever possible, minimizing impact to the streetscape and saving fabrication and installation costs.



Above: Fabrication detail drawing page for Map Panel sign type

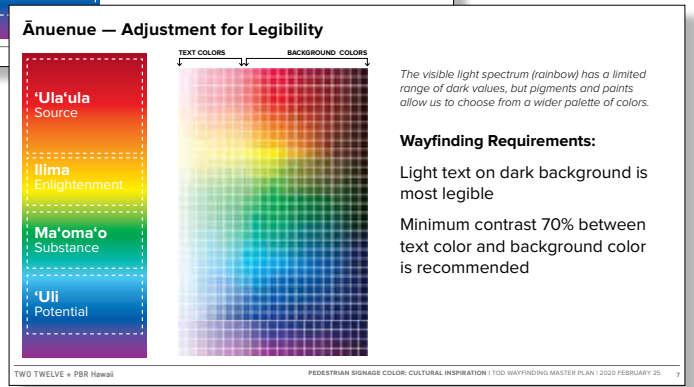
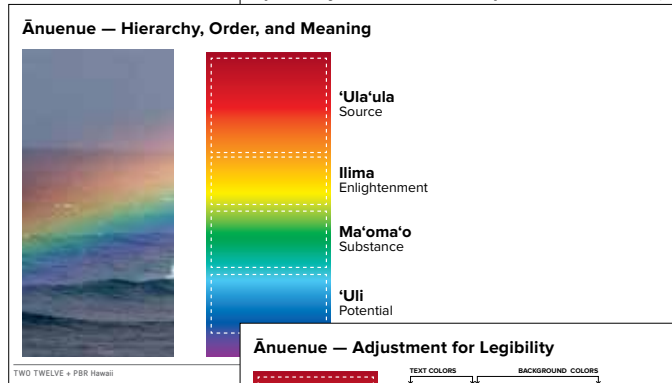
Below: Exploded views of Information Node sign type, illustrating removable panels



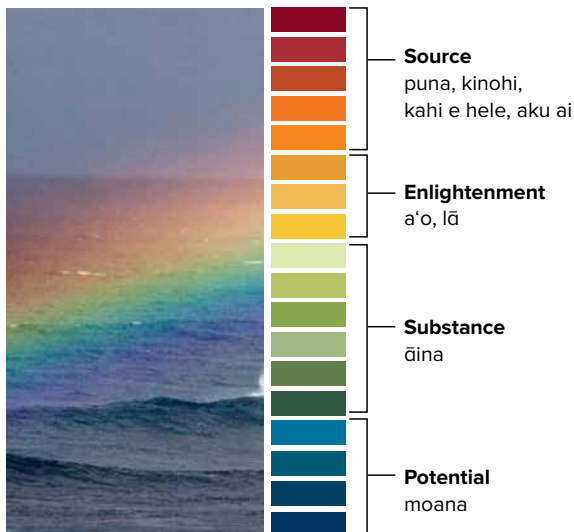
**COLOR**

The signage color palette is essential to conveying the information hierarchy. PBR’s Cultural Sustainability Planner consulted with the team, including the Mayor’s Office of Culture and the Arts, to ensure the color palette of the signs was developed out of a cultural narrative that is reflective of concepts that resonate with the island of O’ahu.

While the concept is rooted in the symbology of ānuenuē, the practicality of accessibility and legibility needed to be considered for the final color palette. The visible light spectrum was translated into pigments and paints that have a greater range of dark values and saturation levels. The application of these colors to the information hierarchy was based on the context provided by the cultural narrative.



**Substance (āina) lives in the Holding Environment (moana)**



**Paths (Green) live on the Container (Blue)  
 The Source (Transit) leads to Enlightenment (Destinations)**



## MATERIALS

During the design process, multiple rounds of nuanced testing were conducted to ensure the color concept translated correctly to painted surfaces in both the bright sunlight and tree-shaded conditions of O'ahu.

All of the aluminum sign parts are to be painted and have an overall clear coat to be graffiti resistant. Polyester powder-coating is recommended for longevity and inherent UV-resistance. Message panels are specified as 1- or 2-color silkscreen and map graphics are digitally printed in full color.

Two types of graphic panel products were investigated for the Map Panels. The products were compared for durability, print quality, cost, and fabrication lead time. The selected product, ALTO™ by SH Group, is a dye-sublimation process that embeds graphics into powder-coated aluminum. The product is highly durable, has rich color depth, is vandal and graffiti resistant, and is manufactured with environmentally friendly processes.



Top: Once initial paper paint swatches were selected, additional rounds of fine tuning were conducted on actual painted metal to ensure color depth in the sun was as expected.

Bottom: Comparison tests of graphic panel products. ALTO™ is pictured on the right.

**TYPOGRAPHY**

The selected typeface for the system is Apex New. It is a humanist sans-serif typeface that brings an organic and friendly quality to the signage design. Its high x-height and availability in multiple weights makes it highly legible at various sizes. It is also available in the cross-platform OpenType format and includes built-in glyphs for Hawaiian diacritical markings (kahakō and ‘okina).

**ICONOGRAPHY**

Consideration was taken to ensure the maps, which are the foundation of the sign system, are always visually clear. Symbol use is therefore limited to transit and select public services, as shown here. These symbols are then consistently applied alongside their respective destinations on the directional sign message panels. Symbol artwork shown here has been specifically tailored for application on pedestrian directional signs. A second version of the same set of symbols has also been developed for legibility at a small size when printed on the selected map product.

T1 - APEX NEW BOOK

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz  
 1234567890 āēīōū

T1 - EXAMPLE LETTER SPACING  
 ALL CAPS

WAIPAHU

T2 - APEX NEW MEDIUM

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz  
 1234567890 āēīōū

T2 - EXAMPLE LETTER SPACING  
 UPPER AND LOWER CASE

Hō‘ae‘ae Pearl Harbor Historic Trail

T3 - APEX NEW BOOK ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz  
 1234567890 āēīōū

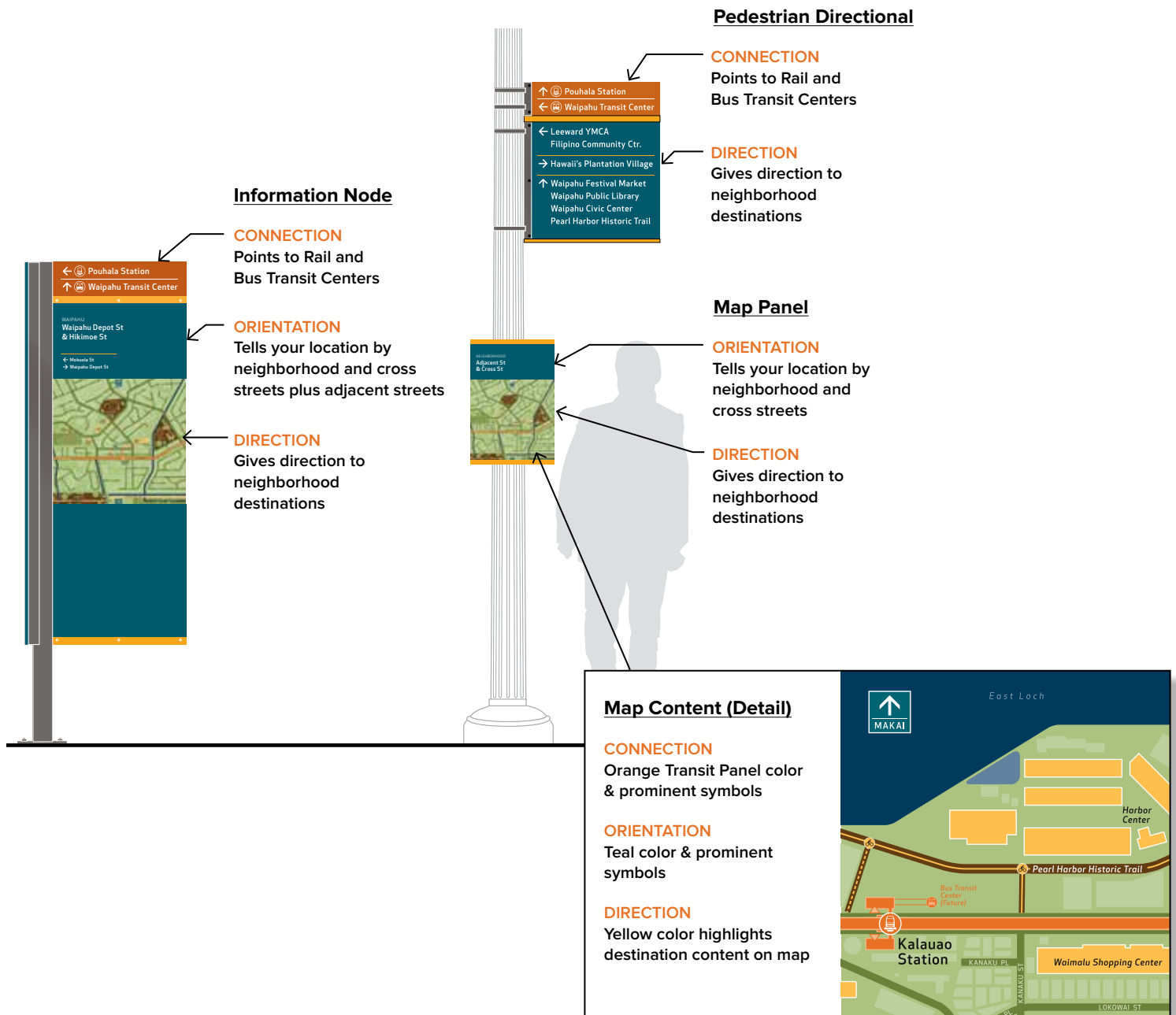
T3 - EXAMPLE LETTER SPACING  
 UPPER AND LOWER CASE

*Pedestrian*



## 2. INFORMATION HIERARCHY

There are three sign types within the pedestrian sign system — **Information Node**, **Pedestrian Directional**, and **Map Panel**. The sign types provide three kinds of information— Orientation, Direction, and Connection— structured around a consistent information hierarchy, with priority given to transit connections and neighborhood destinations. Color and content placement is used to establish the hierarchy and continuity across the system. On a macro level, the panel background colors take on a color specific to information type. On a micro level, each element on the map graphic is weighted and colored to follow the same hierarchy.



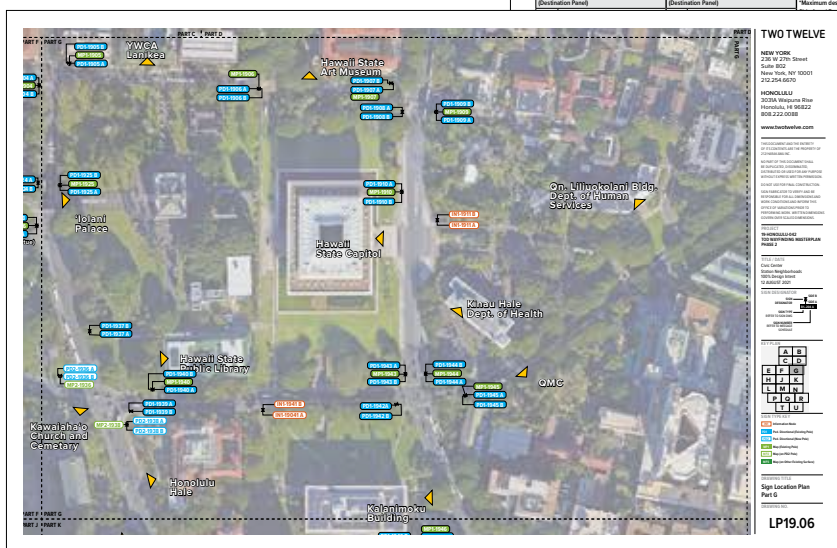
### 3. PEDESTRIAN SIGN TYPES AND LOCATION PLANNING

Sign location planning for the TOD neighborhoods was undertaken with two goals in mind. The first is to provide people direction to local attractions and businesses, hopefully alerting them to ones they may not have been aware of before. The second is to use the sign network to prioritize the use of key streets and ensure people are walking along the most accessible and pedestrian friendly paths.

Choosing precise locations for the signs is not an exact formula. Every neighborhood has potential unique circumstances that will require common sense considerations, especially when primarily utilizing existing poles. Start with the intersections of key streets and include signs mid-block when there are longer distances between intersections. Consider locations of bus stops in these situations and ensure signs are visible to arriving transit users.

Once the paths are identified, the determination of which destinations to include on each sign becomes fairly straightforward. The rule of thumb is to push pedestrians in the general direction of a destination, and then provide specific turn-by-turn information only when at a critical decision point for that destination.

Sign Location Plan and Messaging Documentation examples



PO1918 A (Destination Panel)	PO1918 B (Destination Panel)	Notes
UP	UP	1001 Ala Moana Hotel Center
DOWN	DOWN	
CIVIC CENTER S. Stevens St.	CIVIC CENTER S. Stevens St.	
UP	UP	Punchbowl St.
DOWN	DOWN	Maui St.
PO1918 A (Destination Panel) <td>PO1918 B (Destination Panel)</td> <td>Maximum destinations on Side A and B</td>	PO1918 B (Destination Panel)	Maximum destinations on Side A and B
RIGHT	LEFT	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation
RIGHT	LEFT	Post Office (mail) Ala Moana Hotel Solomon Palace Hawaii State Public Library Honolulu Hale Hawaii State Capitol Hawaii State Art Museum
PO1918 C (Destination Panel) <td>PO1918 D (Destination Panel)</td> <td>Notes</td>	PO1918 D (Destination Panel)	Notes
UP	UP	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation Waterfront Plaza Kalahele Plaza
PO1919 A (Destination Panel) <td>PO1919 B (Destination Panel) <td>Notes</td> </td>	PO1919 B (Destination Panel) <td>Notes</td>	Notes
UP	UP	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation
PO1920 A (Destination Panel) <td>PO1920 B (Destination Panel) <td>Notes</td> </td>	PO1920 B (Destination Panel) <td>Notes</td>	Notes
UP	UP	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation
PO1921 A (Destination Panel) <td>PO1921 B (Destination Panel) <td>Notes</td> </td>	PO1921 B (Destination Panel) <td>Notes</td>	Notes
UP	UP	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation
PO1922 A (Destination Panel) <td>PO1922 B (Destination Panel) <td>Notes</td> </td>	PO1922 B (Destination Panel) <td>Notes</td>	Notes
UP	UP	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation
PO1923 A (Destination Panel) <td>PO1923 B (Destination Panel) <td>Notes</td> </td>	PO1923 B (Destination Panel) <td>Notes</td>	Notes
UP	UP	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation
PO1924 A (Destination Panel) <td>PO1924 B (Destination Panel) <td>Notes</td> </td>	PO1924 B (Destination Panel) <td>Notes</td>	Notes
UP	UP	Prince Kihikihi Fed. Building Kalahele Building Dept. of Taxation

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Honolulu, HI 96822  
808.222.0088

www.twotwelveten.com

PO1912 A  
(Destination Panel)

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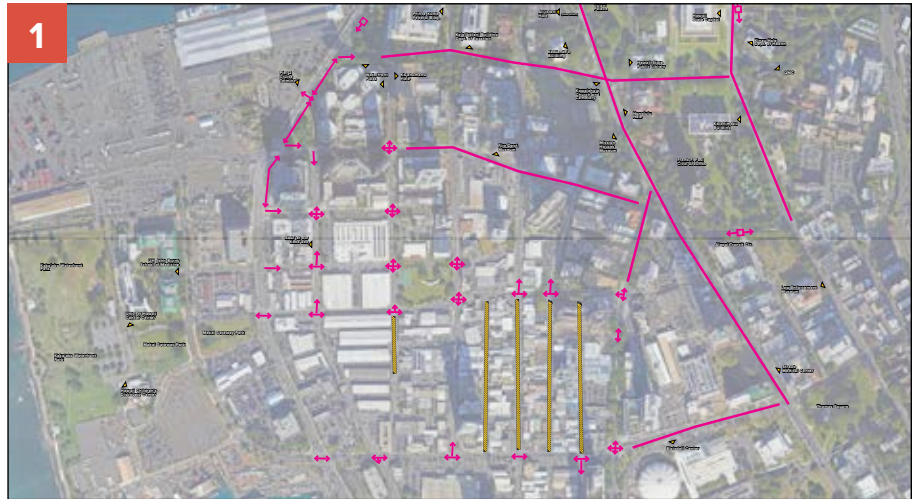
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**DIRECTIONAL SIGN  
LOCATION PLANNING BASICS**

1. Determine ideal pedestrian pathways. Consider site conditions, sidewalks, crosswalks, accessible routes. Mark out the streets that define the extents of the TOD area and determine if any intersections or streets should be avoided. Generally, direction of travel will be inward from the streets that define these extents to the destinations. Start plotting sign locations along these routes.
2. A 10-minute walk time is generally equal to 2,400 feet. Draw a circle with a 2,400 foot radius and place it with the center point at the potential sign location. Any destination that falls within the circle and meets the specified criteria (see page 20) can be included on the sign.
3. Prioritize inclusion by distance. Since the path of travel will not be a straight line, calculate walk distances by measuring the distance along the pedestrian-friendly route. Divide the distance by 240 (the average distance in feet walked in one minute) and round to the nearest minute. (Google Maps Measure Distance Tool is a recommended method of measurement.)
4. When panel is full, a second sign in very close proximity can cover more destinations. Adding the Map Panel sign type will also help alert pedestrians to additional near-by destinations.

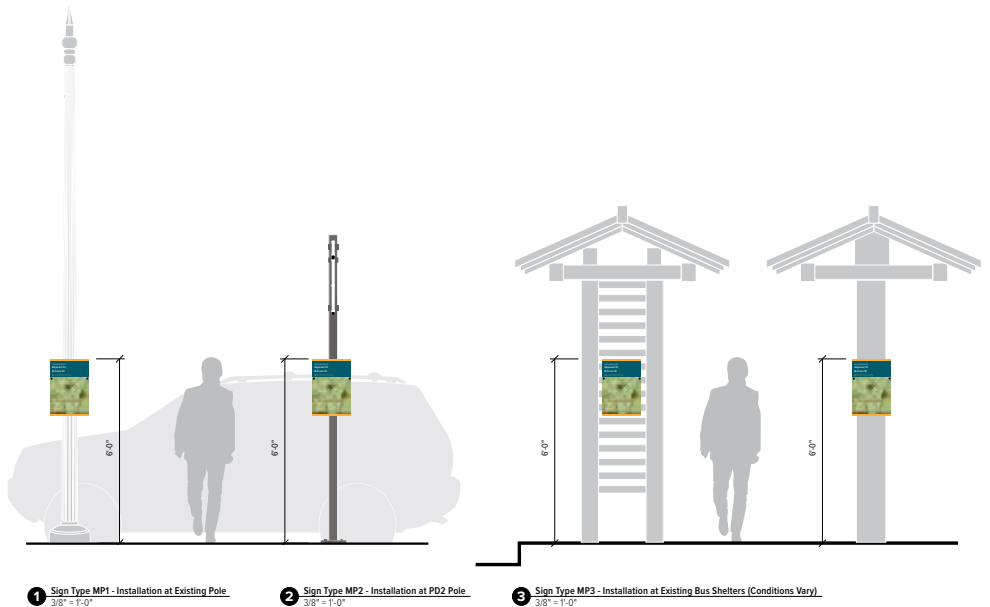




**SIGN TYPE: MAP PANELS**

Map Panels can be installed throughout neighborhoods to provide orientation. In particular, they should be included at major intersections with transit modes and along designated complete or key street pedestrian networks to further support the development of these critical corridors.

The system includes multiple mounting configurations in order to take advantage of installation onto existing street poles and bus shelters. They can be installed in tandem with a Pedestrian Directional or on their own based upon the specific needs of the area. For instance, locations that do not have enough destinations nearby to warrant a Pedestrian Directional can still benefit from a map to provide overall neighborhood information. Or if an existing pole cannot accommodate both Pedestrian Directional and Map Panel, a nearby bus shelter could include a neighborhood map.



**Fabrication and installation details for the Map Panel sign type**

SPECIFICATIONS	
See DID 04 for Finish Specifications	
1	<b>ORIENTATION PANEL</b> 1/4" Thick aluminum panel with painted finish of silver. 1/4" Clear die screen graphics and pre-drilled slots to receive Map Panel. Mechanically fastened to Pole Bracket with counter-sink tamper proof hardware
2	<b>MAP PANEL</b> ALU7 Graphic Panel as manufactured by CH Group. 1/8" Thick Dye-sublimated powder-coated aluminum graphic panel. Insert into Bottom Trim and mechanically fasten to Message Panel with counter-sink tamper proof hardware
3	<b>TOP TRIM</b> 1/8" Powder aluminum. U-shaped, slip and bond to Face Panel
4	<b>BOTTOM TRIM</b> 1/8" Powder aluminum. U-shaped to receive Map Panel, bond to Message Panel
5	<b>POLE BRACKET</b> See Dep. DID.25
6	<b>BAND STRAPPING</b> See Dep. DID.25
<b>NOTES</b>	
1. All exposed hardware shall be tamper-proof. Paint to match adjacent surface unless otherwise noted.	
2. All painted surfaces to receive UV Anti-graffiti clear coat.	

**NOTES**

- Installation to comply with all requirements of METCO and HCDT standards.
- Fabricator to verify mounting conditions and provide a detail drawing of any a typical mounting condition prior to fabrication. The fabricator shall meet all engineering criteria as established by the typical loadings. (i.e. wind loads)
- Where site conditions dictate as a proposed location, the sign shall be indicated in a location deemed appropriate by the City.

**TWO TWELVE**

NEW YORK  
230 W 27th Street  
Suite 802  
New York, NY 10001  
212-234-6570

HONOLULU  
2025A Hahaione Road  
Honolulu, HI 96822  
808-222-0088

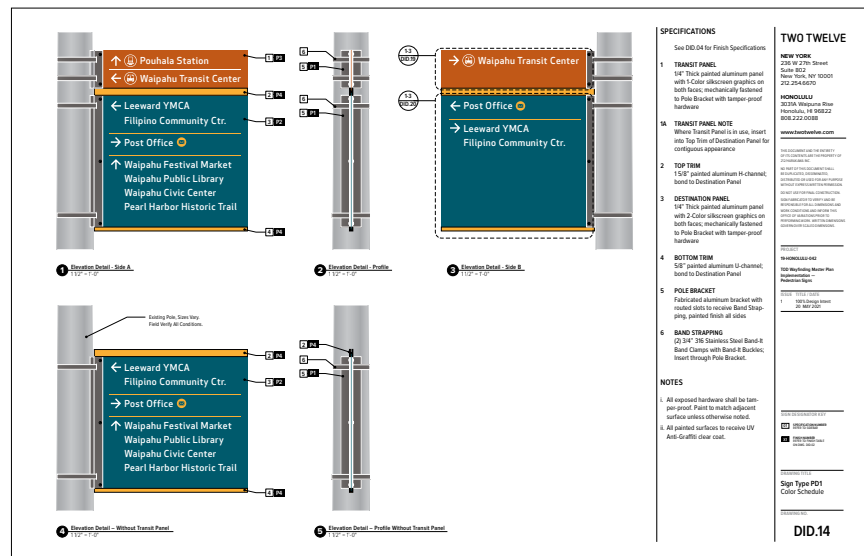
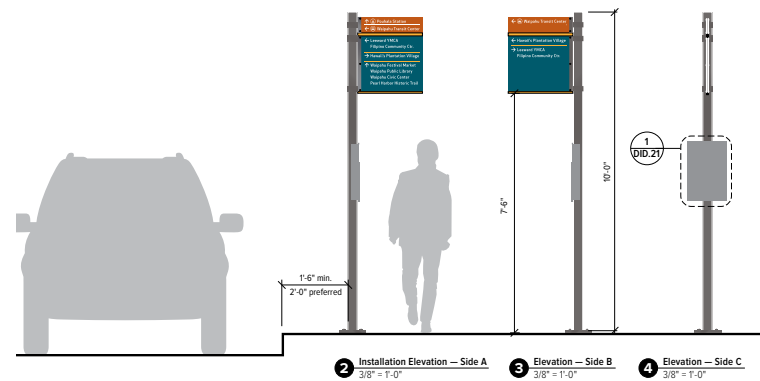
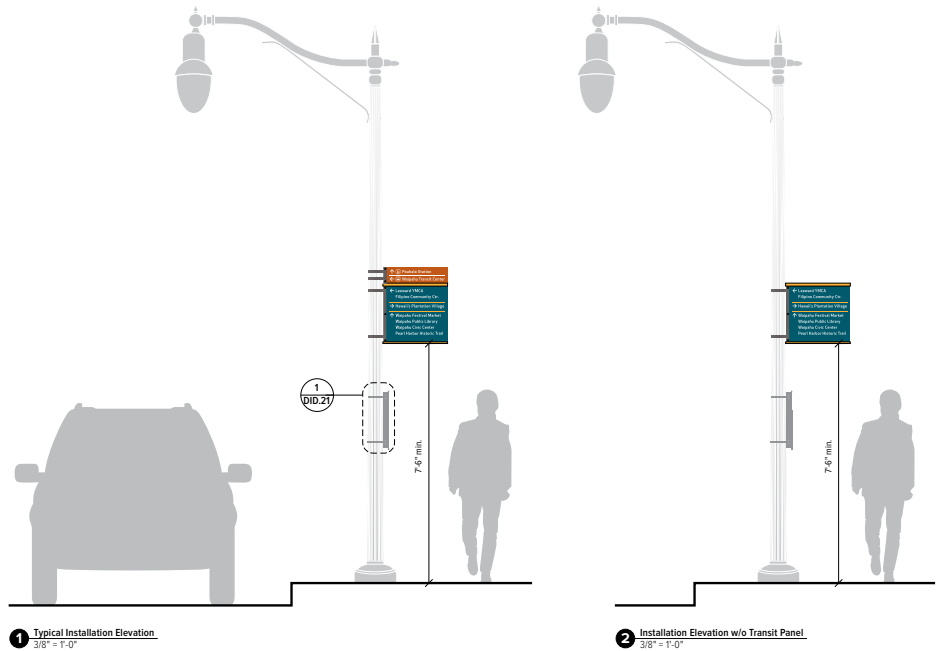
**DID.22**

**SIGN TYPE: PEDESTRIAN DIRECTIONAL**

Pedestrian Directional signs are installed throughout neighborhoods to provide direction to specific destinations. They should be installed at major intersections and along designated complete or key street pedestrian networks.

The sign is constructed in two parts, the Transit Panel and the Destination Direction Panel. For neighborhoods where rail stations are not yet active, the Transit Panel can be used to direct to bus transit centers, or the panel installation can wait until there is a rail station or bus transit center.

Pedestrian Directional signs are designed to be installed onto existing street poles or on their own custom poles when street pole installation is not feasible. They can be installed in tandem with a Map Panel or on their own based upon the specific needs of the area. When there are several Pedestrian Directional signs in close proximity to each other the Map Panel can be omitted from some to help manage costs and maintenance.



Fabrication and Installation details for the Pedestrian Directional sign type

## 4. VEHICULAR SIGN TYPE AND LOCATION PLANNING

Roadway signage that leads to rail stations with vehicular facilities will increase their visibility and make them easy to find, promoting the use of rail transit. Vehicular signage is limited to transit stations that have dedicated parking facilities or drop-off areas — Kualaka'i, Keone'ae, Hō'ae'ae, Pouhala, Waiawa, Hālawā, and Kūwili. The system includes a trailblazer sign type that can be installed along surface roads to aid motorists in locating Park & Ride and Kiss & Ride entrances. During the design process, the City also met with Hawaii Department of Transportation (HDOT) to

determine the feasibility of adding messaging on highway signs, which are under its purview, to mark the correct exits to connect to Park & Ride facilities.

The trailblazer color, scale and placement recommendations provided in this phase's deliverables conform to the Federal Highway Administration requirements, as outlined in the Manual for Uniform Traffic Control Devices (MUTCD). In the absence of final rail branding, an icon was developed to resemble the front view of the rail, consistent with what is allowed by MUTCD. A version of this rail icon also appears on pedestrian signs and maps to create a consistent vocabulary to represent the rail stations. Installation recommendations were also provided, with the understanding that final implementation is to be determined by DTS or HDOT for highway signs.



MUTCD Standard for Light Rails



Customized symbol for Honolulu

**1. MESSAGE PANEL**  
1/4" Thick router cut aluminum panel w/ painted faces and letters, applied printed vinyl graphics and anti-graffiti UV clearcoat overall

**2. PANEL FACE**  
3M Scotchlite Silver Direct printed to 3000 reflective vinyl (shining with 3M approved UV) graphic vinyl over laminate, screen printed onto printed Message Panel per 3M requirements.

**NOTES**

- All exposed hardware shall be temper-proof. Paint to match adjacent surface unless otherwise noted.
- Do not etch or engrave graphics from this document. Obtain official electronic vector artwork file for Transit Signage from Honolulu Department of Planning and Permitting, Transit-Oriented Development Division.

**TWO TWELVE**  
NEW YORK  
225 W 27th Street  
Suite 602  
New York, NY 10001  
212.242.0000  
www.two12.com

**HONOLULU**  
180 Pu'uhonua Avenue  
Honolulu, HI 96817  
808.222.0000  
www.honolulu.gov

**RECOMMENDED SIGN LOCATIONS**

**SIGN LOCATION AND MESSAGE SCHEDULE**

LOCATION NUMBER	MESSAGE	MESSAGE LAYOUT
01-01	[Park-Ride] PARK-RIDE	811
01-02	[Park-Ride] PARK-RIDE	811
01-03	[Park-Ride] PARK-RIDE	811
01-04	[Park-Ride] PARK-RIDE	811
01-05	[Park-Ride] PARK-RIDE	811
01-06	[Park-Ride] PARK-RIDE	811
01-07	[Park-Ride] PARK-RIDE	811

**TWO TWELVE**  
NEW YORK  
225 W 27th Street  
Suite 602  
New York, NY 10001  
212.242.0000  
www.two12.com

**HONOLULU**  
180 Pu'uhonua Avenue  
Honolulu, HI 96817  
808.222.0000  
www.honolulu.gov

**01-01**  
KUALAKA'I PARK-RISE

**01-02**  
KUALAKA'I PARK-RISE

**01-03**  
KUALAKA'I PARK-RISE

**01-04**  
KUALAKA'I PARK-RISE

**01-05**  
KUALAKA'I PARK-RISE

**01-06**  
KUALAKA'I PARK-RISE

**01-07**  
KUALAKA'I PARK-RISE

**DID.07**

Fabrication Documentation and example Sign Location Plan for Vehicular Trailblazer sign type

# 5. MAP DESIGN AND STANDARDS

The TOD neighborhood map is not only a key component of the TOD wayfinding system but is also intended as a “base map” that can allow other transit and destination partners to apply their own specific content as an overlay. TOD welcomes the opportunity for increased connectivity between all forms of mobility and each neighborhood’s unique destinations and offerings. Third parties are encouraged to utilize existing base maps and can incorporate their own use-specific content layers. In this way, visitors can quickly understand and find each neighborhood’s unique offerings. However, third parties will need to adhere to the map design standards. The use of these materials should also be accompanied by an agreement to ensure compatibility with the City’s wayfinding system.


Each element, color, and style has been coordinated with the overall system information hierarchy. These styles are documented in the Map Design Guidelines document for use by anyone updating maps or creating base maps. Base maps have been drawn for more than half of the station neighborhoods, which allowed for testing styles across a wide variety of neighborhood typologies. These maps are now the established precedent for the graphic design of the remaining maps.

The artwork originates from a Geographic Information System (GIS) background map, and is accurate in terms of relative distances. However, the TOD neighborhood maps are not intended to be cartographically precise. Features such as land masses, waterways, roadways, and building footprints are simplified and made uniform to be easier to read and allow important destinations to stand out. All maps in the exterior environment are installed “heads-up” and also include mauka and makai references for orientation. Since “heads-up” mapping requires the map to be rotated to face the direction of the viewer, each rotation requires unique representation of the artwork so that the labels are always reading right-side-up. Four orientations have been drawn for each of the completed base maps — Mauka-Up, Makai-Up, Mauka-Left, and Mauka-Right.

More information about the map design and standards is available in a separate document titled **Transit-Oriented Development Wayfinding System Map Design Guidelines**.

TRANSIT-ORIENTED DEVELOPMENT WAYFINDING SYSTEM

MAP DESIGN GUIDELINES



City and County of Honolulu  
Department of Planning and Permitting  
December 13, 2021


01 OCTOBER 2021

ELEMENT	COLOR	APPEARANCE
<b>Park Land</b>	<b>Blue 1</b>	0.25 in round corners
<b>Private Land</b>	<b>Green 1</b>	0.25 in round corners
<b>Park Details</b>	<b>Blue 2</b>	0.02 in round corners and 0.01 in weight lines
<b>Swimming Pools</b>	<b>Blue 2</b>	


  

SYMBOL / LABEL	APPEARANCE	DIAMETER
	Available in TOD Symbol Library Do Not Alter	Tree (Large) 0.8 in Tree (Medium) 0.58 in Tree (Small) 0.3 in
<b>Label</b>	17 pt Medium Italic, 18 pt heading, track 50 Title Case, White or Black as required for legibility	


**DESTINATION PARK**  
District, Community, or Neighborhood Park that is a Destination according to the TOD Criteria for Destination Inclusion  
Include simplified outlines of key details such as buildings and amenities



**PUBLIC PARK LAND**  
City owned or managed park space that does not meet the TOD Criteria for Destination Inclusion  
No label, and minimal detail



**PRIVATE LAND**  
Privately owned or managed or green spaces  
Labels are only included if the space is also a Wayfinding Destination



TRANSIT-ORIENTED DEVELOPMENT WAYFINDING SYSTEM: MAP DESIGN GUIDELINES 23

**3 | MAP GRAPHIC STANDARDS**

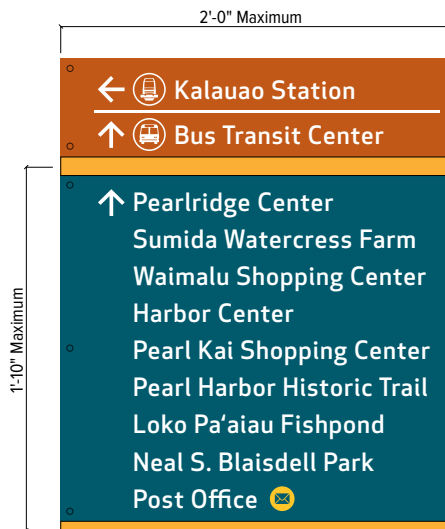
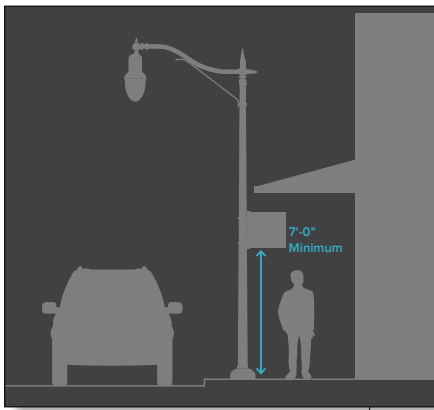
**SYMBOLS**

Symbols for map artwork have been specifically developed to coordinate with symbols on signage. Artwork for symbols is available as an Adobe Illustrator Symbol Library file. Symbols in the library should not be altered or scaled. Only the symbols in this library should be applied to the Base Map for the uses specified.

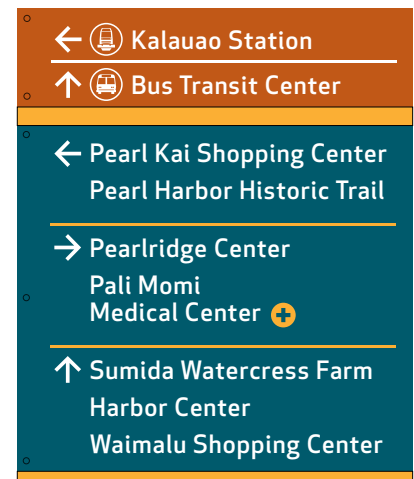
TRANSPORTATION	USE	SIZE	TREES	USE	SIZE
	Bus Station	0.6 in		Tree (Large)	0.9 in
	Bus Transit Center	0.6 in		Tree (Medium)	0.58 in
	Park and Ride	0.6 in		Tree (Small)	0.3 in
	Comer Terminal	0.6 in			
	Future Bus Station	0.3 in			
	Future Bus Transit Center	0.3 in			
<b>DESTINATIONS</b>					
	Public Building	0.3 in			
	Post Office	0.3 in			
	Hospital	0.3 in			
	Multi-modal Recreational Trail	0.3 in			
	Pedestrianized Commercial Street of 3 blocks or more	0.3 in			

## 6. NOMENCLATURE AND DESTINATION INCLUSION

While maps can generally accommodate the full spelling of a destination name, pedestrian directional signs have a limited amount of space to legibly display information. Pedestrian signage also needs to balance the needs of legibility for pedestrians without becoming a hazard or distraction for drivers. During design development, panel dimensions and copy sizes for the Pedestrian Directional sign type were fine tuned to ensure these practical concerns were met, while providing the greatest amount of information possible. These technical concerns establish the message lengths achievable on the signs and set the basis for determining the official nomenclature used on signs for each destination name. This includes spelling, line breaks, and abbreviations.



The maximum number of destinations possible with one arrow direction.



The maximum number of destinations reduces when double line messages and multiple arrow directions are required.

### SYMBOLS

To provide quick-read and recognition of common public services, symbols are included for restrooms, medical services, and post offices.

### SPELLING

For the TOD wayfinding system, all destination listings and map labels will include Hawaiian diacritical marks. This is in keeping with the work undertaken by the HART to develop culturally authentic and accurate station names, as well as the on-going efforts of the Hawai'i State Board on Geographic Names.

**RECOMMENDED ABBREVIATIONS**

**University** → **Univ.**

**Department** → **Dept.**

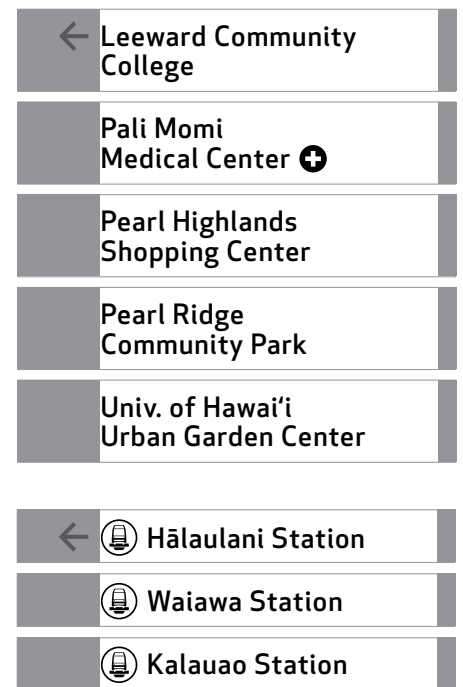
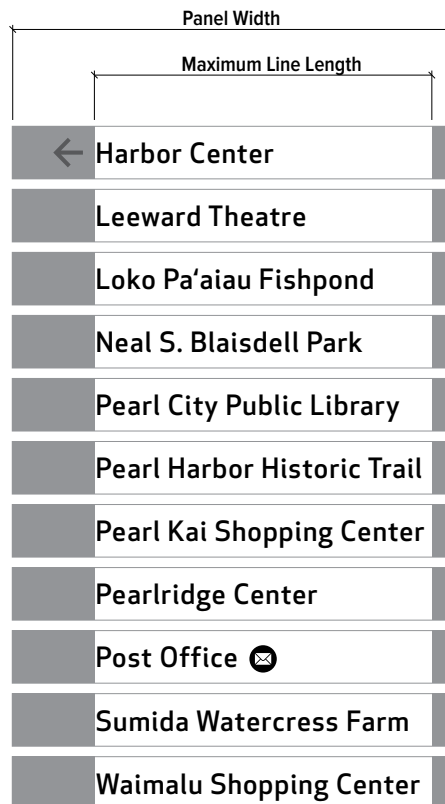
**International** → **Intl.**

**Center** → **Ctr.**

**LINE BREAKS AND ABBREVIATIONS**

The number of destinations that require double-line messages should be as few as possible in order to fit more overall content on each directional sign. Longer destination names can fit on single lines by abbreviating common words. These should be limited to recognizable abbreviations.

During the documentation phase of work, destination lists were developed for each TOD neighborhood based upon specific criteria for inclusion (see page 20). These lists were then evaluated against the design requirements of the Pedestrian Directional sign type to establish line breaks and abbreviations for each individual destination. These are the official standard nomenclature for use on Pedestrian Directional signs. This process of holistically reviewing all currently allowable destinations resulted in the ability to consistently apply abbreviations in the Sign Location Plans and Messaging documents created for the five selected TOD neighborhoods (Waipahu, Pearl Ridge, Downtown, Civic Center, and Kaka’ako). While consistency is preferred, it may not be practical in all neighborhoods, or for long-term maintenance as new destinations meet the criteria and need to be added. As long as the abbreviations are limited to common words, the majority of viewers will be able to easily understand their meaning, even if the same word is abbreviated on one line of a sign but not on another.



Example nomenclature list for the Aiea-Pearl City TOD neighborhood based on the destination inclusion criteria (see page 20). Wayfinding names, spelling, abbreviations, and line breaks are shown according to the established nomenclature standards.

**DESTINATION INCLUSION CRITERIA**

Preliminary destination inclusion criteria was developed in Phase 1 and further refined during Phase 2. Because static signage has a limited amount of space to legibly display information, the criteria was used to establish a baseline for which destinations will appear in the system. It also further breaks down which destinations will appear on directional signs and which will only appear on maps. A complementary digital map component can present more flexibility and additional opportunities for destinations if implemented.

Additional and updated information about the destination criteria may be obtained from the DPP TOD Division.

DESTINATION TYPE	DESCRIPTION	SIGN TYPE INCLUSION	
<b>CIVIC</b>	<b>Government Buildings / Courthouses</b>	A government-owned building, structure, or complex used by a Federal, State, or Municipal government for the purpose of providing services to the general public and/or serving as a venue for public meetings.	For Inclusion on Static Maps: Must provide services to the general public (i.e., small claims court, family court, licensing, etc.).  For inclusion on Static Directional Signs: Must provide services to the general public (i.e., small claims court, family court, licensing, etc.) and be capable of handling a large amount of traffic.
	<b>Public Library</b>	A repository for literary and artistic materials such as books, periodicals, newspapers, recordings, films, and electronic media, systematically arranged for use and reference by the public. A library must be part of the Hawai'i State Public Library System.	Included on All Sign Types
	<b>Military Base</b>	A facility operated by the State or Federal government for training or support of military troops that has pedestrian access to the public through the main gate.	Included on All Sign Types
	<b>Post Office</b>	A United States Postal Service facility that provides on-site services with retail hours at least 5 days a week.	Included on All Sign Types
<b>CULTURAL</b>	<b>Botanical Garden</b>	A facility, often with greenhouses, for the culture, study, and exhibition of special plants and that provide educational and outreach services for the general public.	Included on All Sign Types
	<b>Cultural Education Center</b>	A 501c non-profit establishment dedicated to the education and representation of a specific culture or indigenous people through classes, immersive environments, reenactments, and/or other interpretive services by on-site personnel.	Included on All Sign Types
	<b>Exhibition Hall</b>	A publicly owned flexible facility with the ability to hold more than 500 people that hosts large publicized events such as trade shows, consumer shows, or fundraising parties year round.	Included on All Sign Types
	<b>Museum</b>	A 501c non-profit facility in which multiple works of artistic, historical, or scientific value are cared for and exhibited to the general public.	Included on All Sign Types
	<b>Observatory, Nature Center, or Discovery Center</b>	A large facility that provides educational activities to the public on specialized topics through the use of immersive environments and/or interactive exhibits.	Included on All Sign Types
	<b>Performing Arts Center</b>	Includes theaters, auditoriums, and concert halls with seating for a minimum of 1,200 people that provide fine arts programming and other live entertainment.	Included on All Sign Types
	<b>Stadiums</b>	Includes arenas and stadiums with the ability to hold more than 6,000 people.	Included on All Sign Types

DESTINATION TYPE	DESCRIPTION	SIGN TYPE INCLUSION	
COMMERCIAL / RETAIL	<b>Commerce/ Business Park</b>	An area at least 9,500 square feet in size that incorporates a group of office or commercial facilities. The site should be identified by a unique place name and have boundaries or entrances marked by identification signage bearing such name.	Included on All Sign Types
	<b>Farmers' Market</b>	A stationary retail sales establishment operated by one or more farmers for the purpose of selling farm and food products directly to consumers.	For Inclusion on Static Maps: Must be open at least 2 days per week throughout the harvest season or year.  For inclusion on Static Directional Signs: Must be open at least 5 days per week throughout the harvest season or year.
	<b>Food Hall</b>	A mix of local artisan restaurants, butcher shops, or other food-related establishments operating under one overarching place-name.	For Inclusion on Static Maps: Must have at least 5 food-related offerings and be open at least 5 days a week.  For inclusion on Static Directional Signs: Must have at least 10 food-related offerings, be open at least 5 days a week, and provide seating for at least 150 people.
	<b>Pedestrian Mall</b>	A publicly owned or fully accessible street without general vehicular traffic that provides access to adjacent businesses and identified by a moniker familiar to the residents of the community.	Included on All Sign Types
	<b>Shopping Plaza or Mall</b>	A group of retail or dining establishments operating under one overarching place-name and with a shared resource such as a building, pedestrian walk, or parking lot.	For Inclusion on Static Maps: Must have 10 or more retail or dining establishments.  For inclusion on Static Directional Signs: Must have 50 or more retail or dining establishments, or be designated as a wayfinding landmark by local officials.
	<b>Specialty Shopping</b>	A group of 10 or more specialty shops (antique, craft, outlet, farmers' market, etc.) or retail stores concentrated within a single street, intersection, or building.	For Inclusion on Static Maps: Must offer goods or services of unique interest to visitors, and which derives the major portion of its income during the normal business season (defined by local officials) from visitors that do not reside in the immediate area.  For inclusion on Static Directional Signs: Must offer goods or services of unique interest to visitors, and which derives the major portion of its income from visitors that do not reside in the immediate area. The goods or services must be readily available to visitors without the need for scheduling appointments or return trips.

DESTINATION TYPE	DESCRIPTION	SIGN TYPE INCLUSION	
COMMUNITY	<b>College or University</b>	An educational institution that is nationally accredited and grants degrees with an enrollment of 2,500 or more students on an annual basis.	Included on All Sign Types
	<b>School</b>	Primary or secondary educational institution under the purview of the State.	For inclusion on Static Maps: A school that has a publicly accessible component with seating for public events, such as an athletic field, cafeteria, or auditorium/theater.  Schools will not be permitted on Static Directional Signs.
	<b>Community Center</b>	A building or establishment of at least 40,000 square feet that is governmental or owned and operated by a 501c non-profit organization, where people from surrounding neighborhoods meet for social, educational, or recreational activities.	Included on All Sign Types
RECREATIONAL	<b>Public Park</b>	An area of land or open space, maintained for the enjoyment of the general public, having facilities for rest and recreation.	Always included on Static Maps  For inclusion on Static Directional Signs: Must offer at least one amenity such as a playground, pool, or ball court and have a service area of 1 mile or larger, such as community, district, or regional parks.
	<b>National or State Park</b>	An area designated and under the jurisdiction of the Hawai'i Department of Land and Natural Resources, the National Park Service, or U.S. Department of the Interior, with facilities open to the general public.	Included on All Sign Types
	<b>Natural Attraction</b>	A site or phenomenon that is not man-made and has significant enough appeal to the general public to be granted status to protect its surroundings and is provided facilities for its viewing by the public.	Included on All Sign Types
	<b>Sports Facilities</b>	Regional (multi-jurisdictional) facilities such as minor league and little league baseball fields, youth recreational fields, BMX courses, skateboard parks, etc. open to the general public.	Included on All Sign Types
	<b>Multi-Purpose Community Space</b>	An open space activity center that is larger than 1 acre and is available for daily public recreational use and/or scheduled community activities.	Included on All Sign Types
	<b>Multi-modal Recreational Corridor</b>	A maintained pathway that can be used for recreational activities such as biking or walking that is at least 5 miles in length.	Included on All Sign Types
SERVICES	<b>Medical Care Facility</b>	An institution providing primary health services and medical or surgical care. The facility must be open 7 days a week and have 24-hour emergency care with a doctor on duty at all times.	Included on All Sign Types
	<b>Public Restrooms</b>	A room or stand-alone building containing one or more toilets available for use by the general public and open year round for at least 12 hours a day.	Included on All Sign Types
	<b>Visitor Information Centers</b>	A facility where the primary purpose of its operation is to provide information and tourist support. The facility must be approved by the Hawai'i Tourism Authority.	Included on All Sign Types

DESTINATION TYPE	DESCRIPTION	SIGN TYPE INCLUSION	
TRANSPORTATION	<b>Airport</b>	A public use facility licensed by the Hawai'i Department of Transportation for landing and take-off of aircraft, and for receiving and discharging passengers and cargo.	Included on All Sign Types
	<b>Bikeshare Dock</b>	A fixed location, operated by a non-profit organization, at which bicycles are made available for shared use to individuals on a short-term basis for a price or for free.	For inclusion on Static Maps: May be included only when the fixed location is directly adjacent to a rail station or bus transit center.  For inclusion on Static Directional Signs: Not permitted (because bikeshare docks can be easily moved and are not permanent street fixtures).
	<b>Bus Transfer Center</b>	A terminal building or concentration of bus stops for multiple routes within a single street, utilized for discharging and picking up bus passengers, and must be designated and managed by a public agency.	Included on All Sign Types
	<b>Ferry Terminal</b>	A terminal building, pier, or dock, utilized for discharging and picking up ferry passengers.	Included on All Sign Types
	<b>Festival Street</b>	A street designated for special use/event closure that includes placemaking or other features to further distinguish it from other streets.	Included on All Sign Types
	<b>Pedestrian Path</b>	A maintained pathway that can be used for walking or biking, follows the street grid but is separate from a sidewalk, and is at least 1 block in length.	Always included on Static Maps  For inclusion on Static Directional Signs: May be included if there are additional features beyond only serving as a pedestrian walkway, such as seating or tables for gathering space.
	<b>Rail Station</b>	An area with a platform for discharging and picking up train passengers.	Included on All Sign Types
HISTORICAL	<b>Historic Site</b>	A structure or place of historical, archaeological, or architectural significance listed on the National Register of Historic Places maintained by the U.S. Department of Interior or otherwise designated by the Hawai'i Register of Historic Places. Historic Sites may include the following: houses, commercial buildings, farms, barns, religious sites/places of worship, cemeteries, monuments, mills, factories, bridges, canals, railroads.	For Inclusion on Static Maps: Must be accessible to the general public and provide educational/interpretive services to visitors either through on-site personnel or installed displays.  For inclusion on Static Directional Signs: Must be accessible to the general public at least 32 hours per week, provide educational/interpretive services to visitors either through on site personnel or installed displays.
	<b>Historic District:</b>	A district or zone listed on the National Register of Historic Places maintained by the U.S. Department of Interior or otherwise designated by the Hawai'i Register of Historic Places. Historic Districts may include the following: historic residential streets, historic commercial streets, rail or canal corridors.	For Inclusion on Static Maps: Must provide a kiosk or welcome center where visitors can obtain information concerning the historic district.  Historic Districts will not be included on Static Directional Signs.

## 7. BUDGET INFORMATION

Estimated fabrication costs were reviewed several times during the design process. The first review was conducted during the Schematic Design stage to ensure the proposed post and panel system was the most cost effective. The next review was in tandem with the selection of the ALTO product for the maps to ensure cost versus quality was taken into consideration. The final estimating was conducted after the design and sign location planning was completed and includes cost for both fabrication and installation.

Final rough order of magnitude (ROM) estimates are based on information obtained from both on-island and off-island sources for comparison. The estimates were obtained based on the total cost of fabrication and installation of two (2) Information Node sign types and ten (10) each of all other sign types as a single procurement. On-island sources were about 4.7% less expensive in this particular scenario. However, a side-by-side comparison by sign type shows that other combinations of sign types and quantities could lead to different outcomes (see chart below).

The following assumptions were factored by both on- and off-island sources:

- Installation of Information Nodes (IN-1) and Pedestrian Sign on New Pole (PD-2) are assumed to be into hardscape and bolted to the ground without foundations. If foundations are required, costs will increase.
- Installation is assumed to be during regular business hours with typical labor rates and does not include fees for street closures or permitting.
- Unit costs listed are based on purchasing a quantity of 10, except as noted for IN-1. Purchasing fewer units may result in a higher cost per unit and purchasing more may result in a lower cost per unit.

\* Pricing was obtained during the COVID-19 pandemic. Material costs have been fluctuating dramatically. Pricing should be used for informational purposes only.

\*\* Average was calculated as (Vendor 1 price + Vendor 2 price / 2) / Quantity and does not reflect the increased cost of ordering a single sign versus the sample project total of 52 signs.

### BUDGET PRICING COST COMPARISON (EXAMPLE SCENARIO) \*

TYPE	DESCRIPTION	UNITS	FABRICATION AND INSTALLATION		
			VENDOR 1 (On-Island)	VENDOR 2 (Off-Island)	AVERAGE COST FOR 1 UNIT **
IN-1	Information Node – Three sided	2	\$12,250	\$16,250	\$7,125
	(Alternate without Transit Panel)		(\$11,350)	(\$15,660)	(\$6,753)
PD-1	Pedestrian Directional – Double sided on existing pole	10	\$22,500	\$21,000	\$2,175
	(Alternate without Transit Panel)		(\$17,250)	(\$18,450)	(\$1,785)
PD-2	Pedestrian Directional – Double sided on new pole	10	\$33,150	\$37,000	\$3,508
MP-1	Map Panel on existing pole	10	\$14,150	\$15,000	\$1,458
MP-2	Map Panel on same pole as PD-2	10	\$14,150	\$15,000	\$1,458
MP-3	Map Panel on existing structure	10	\$14,150	\$11,500	\$1,283
<b>SAMPLE PROJECT TOTAL</b>		<b>52</b>	<b>\$110,350</b>	<b>\$115,750</b>	

**PRICING SCENARIOS**

The following example projects were developed for illustration purposes and demonstrate how potential implementation projects can be packaged and procured. Estimates account for only the initial fabrication and installation of the unit quantities shown in each table. The quantities are per the sign location plans documented during this phase of work. Other typical items that may be required during an implementation such as this are not included — for example, demolition or removal of existing signs, attic stock of sign blanks, remediation of sidewalks and landscaping, contracting of on-going management or maintenance of the system.

**Notes:**

1. "Average Cost Per Unit" shown in these tables is based on the data gathered and shown for the cost comparison described on page 24 and are inclusive of fabrication and installation.
2. Example 1 includes quantities based on the sign location planning completed for the area immediately outside of the station, but does not extend further into neighborhoods. The pricing is for the total number of signs for the stations from Kualaka'i to Hālawā implemented as a single procurement.
3. Examples 2 and 3 include quantities based on the sign location planning completed for the entire TOD neighborhood, including signs in the area immediately outside of the stations from Example 1. Implementing these in the same procurement as Example 1 would reduce the cost by four (4) IN-1, nine (9) PD-1, nine (9) PD-2, four (4) MP-1, five (5) MP-2, and one (1) MP-3.
4. Examples 4, 5, and 6 include quantities based on the sign location planning completed for the entire TOD neighborhood, using the alternate versions of IN-1 and PD-1, since the rail is not yet in these neighborhoods.

<b>EXAMPLE 1: Immediate Station Area at First 9 Stations</b>			
TYPE	UNITS	AVERAGE COST PER UNIT	UNIT COST EXTENSION
IN-1	13	\$7,125	\$92,625
PD-1	16	\$2,175	\$34,800
PD-2	12	\$3,500	\$42,000
MP-1	10	\$1,460	\$14,600
MP-2	8	\$1,460	\$11,680
MP-3	7	\$1,285	\$8,995
SUBTOTAL			\$204,700
GENERAL CONDITIONS (15%)			\$30,705
CONTINGENCY (10%)			\$20,470
TOTAL			\$255,875

<b>EXAMPLE 2: Immediate Station Area at Pouhala Plus Waipahu Neighborhood within TOD boundary</b>			
TYPE	UNITS	AVERAGE COST PER UNIT	UNIT COST EXTENSION
IN-1	2	\$7,125	\$14,250
PD-1	18	\$2,175	\$39,150
PD-2	11	\$3,500	\$38,500
MP-1	12	\$1,460	\$17,520
MP-2	8	\$1,460	\$11,680
MP-3	3	\$1,285	\$3,855
SUBTOTAL			\$124,955
GENERAL CONDITIONS (15%)			\$18,743
CONTINGENCY (10%)			\$12,495
TOTAL			\$156,193

<b>EXAMPLE 3: Immediate Station Area at Kaluaao Plus Pearlridge Neighborhood within TOD boundary</b>			
TYPE	UNITS	AVERAGE COST PER UNIT	UNIT COST EXTENSION
IN-1	2	\$7,125	\$14,250
PD-1	22	\$2,175	\$47,850
PD-2	12	\$3,500	\$42,000
MP-1	12	\$1,460	\$17,520
MP-2	8	\$1,460	\$11,680
MP-3	2	\$1,285	\$2,570
SUBTOTAL			\$135,870
GENERAL CONDITIONS (15%)			\$20,380
CONTINGENCY (10%)			\$13,587
TOTAL			\$169,837

**EXAMPLE 4: Downtown Neighborhood within TOD boundary**

TYPE	UNITS	AVERAGE COST PER UNIT	UNIT COST EXTENSION
IN-1	4	\$6,750	\$27,000
PD-1	49	\$1,785	\$87,465
PD-2	9	\$3,100	\$27,900
MP-1	23	\$1,460	\$33,580
MP-2	6	\$1,460	\$8,760
MP-3	1	\$1,285	\$1,285
SUBTOTAL			\$185,990
GENERAL CONDITIONS (15%)			\$27,898
CONTINGENCY (10%)			\$18,599
TOTAL			\$232,488

**EXAMPLE 5: Civic Center Neighborhood within TOD boundary**

TYPE	UNITS	AVERAGE COST PER UNIT	UNIT COST EXTENSION
IN-1	3	\$6,750	\$20,250
PD-1	55	\$1,785	\$98,175
PD-2	11	\$3,100	\$34,100
MP-1	30	\$1,460	\$43,800
MP-2	6	\$1,460	\$8,760
MP-3	0	\$1,285	\$0
SUBTOTAL			\$205,085
GENERAL CONDITIONS (15%)			\$30,763
CONTINGENCY (10%)			\$20,509
TOTAL			\$256,356

**EXAMPLE 6: Kaka'ako Neighborhood within TOD boundary**

TYPE	UNITS	AVERAGE COST PER UNIT	UNIT COST EXTENSION
IN-1	2	\$6,750	\$13,500
PD-1	46	\$1,785	\$82,110
PD-2	6	\$3,100	\$18,600
MP-1	35	\$1,460	\$51,100
MP-2	4	\$1,460	\$5,840
MP-3	2	\$1,285	\$2,570
SUBTOTAL			\$173,720
GENERAL CONDITIONS (15%)			\$26,058
CONTINGENCY (10%)			\$17,372
TOTAL			\$217,150

**TWO TWELVE**  
PBR HAWAII